

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313A	(94-17)CR	WARREN	57*	1
		ILLINOIS	CONTRACT NO. 68E43	

*57 + 1 = 58 TOTAL SHEETS

FOR INDEX OF SHEETS, SEE SHEET NO. 2

PROPOSED HIGHWAY PLANS

FAP ROUTE 313A (US 34 /IL 110)
SECTION (94-17)CR
PROJECT NHPP-DAPC(863)
TYPE of IMP. - CULVERT REPLACEMENT
WARREN COUNTY

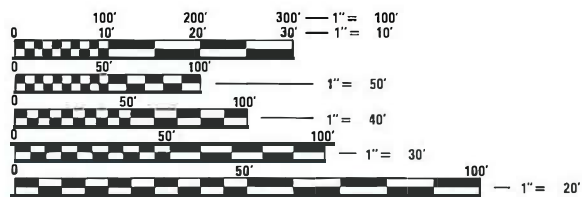
C-94-078-18

HIGHWAY STANDARDS

001001-02	701400-11
280001-07	701401-13
420001-10	701402-12
421001-03	701406-13
442001-04	701428-01
483001-06	701901-08
515001-04	704001-08
601001-05	720011-01
601101-02	
635001-02	
642001-03	

US RTE 34 DESIGN DESIGNATION

FREEWAY /EXPRESSWAY
CLASS 1 TRUCK ROUTE
AADT = 10,150
MU = 13.3%
SU = 3.2%

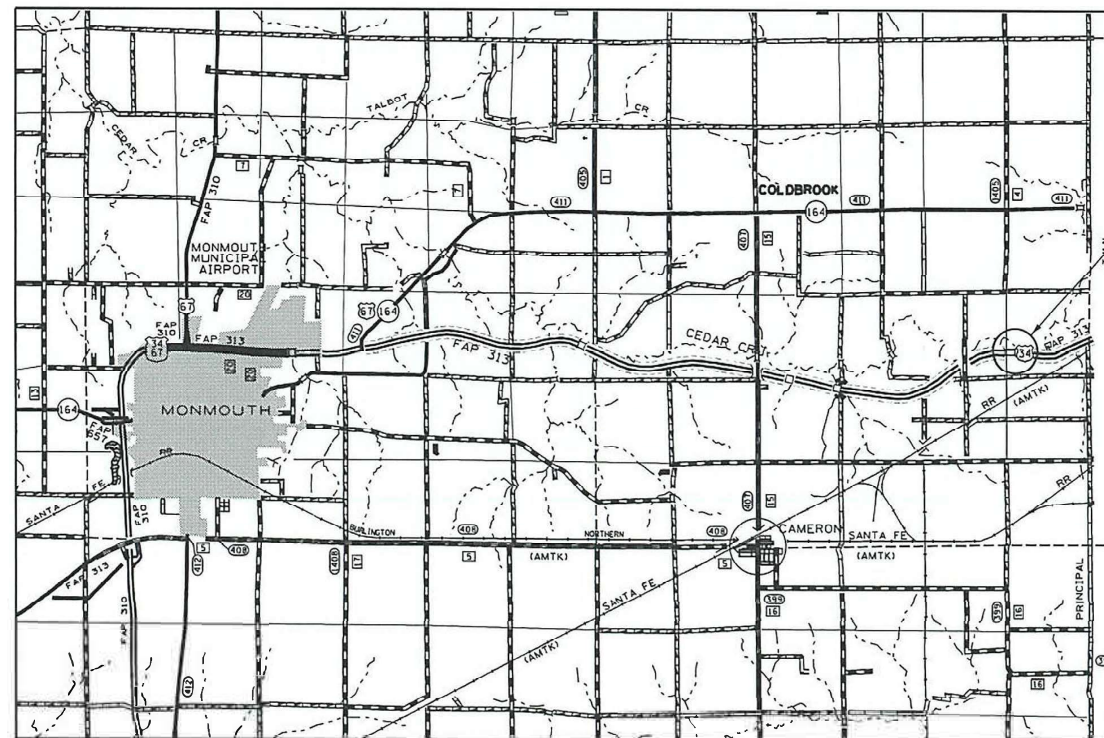


FULL SIZE PLANS HAVE BEEN PREPARED USING STANDARD ENGINEERING SCALES. REDUCED SIZED PLANS WILL NOT CONFORM TO STANDARD SCALES. IN MAKING MEASUREMENTS ON REDUCED PLANS, THE ABOVE SCALES MAY BE USED.

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATORS
1-800-892-0123
OR 811

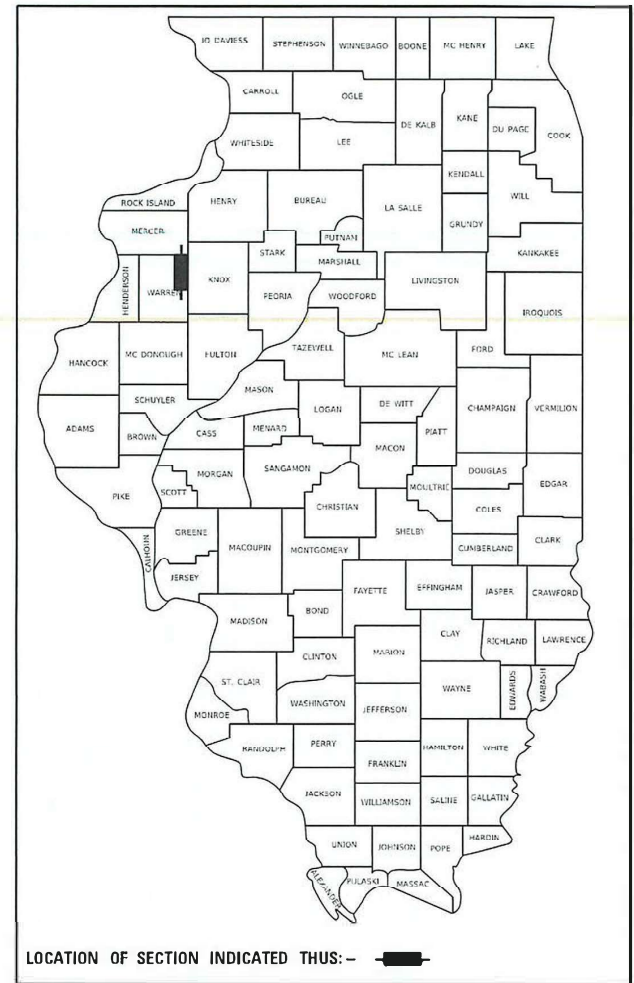
PROJECT ENGINEER: RICH DOTSON 309.671.3455
PROJECT MANAGER: RON NOLTE 309.671.3470

CONTRACT NO. 68E43



PROJECT LOCATION
(3.5 MILES WEST OF
RTE 164; 0.9 MILE
WEST OF KNOX CO.)
GALESBURG

D-94-056-18



LOCATION OF SECTION INDICATED THIS: - [black rectangle]

DESCRIPTION OF WORK

THIS PROJECT IS LOCATED JUST WEST OF GALESBURG AND CONSISTS OF REPLACING A DOUBLE 14'-2" x 9'-10" STEEL PLATE ARCH CULVERT (SN 094-2004) WITH A DOUBLE 12' x 12' PRECAST CONCRETE BOX CULVERT (SN 094-2019) CARRYING US 34 /IL 110 OVER THE SOUTH BRANCH OF CEDAR CREEK.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUBMITTED August 25 2022
[Signature] REGIONAL ENGINEER

October 14, 2022
[Signature] ENGINEER OF DESIGN AND ENVIRONMENT

October 14, 2022
[Signature] DIRECTOR OF HIGHWAYS PROJECT IMPLEMENTATION

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OF THE STATE OF ILLINOIS

GROSS LENGTH = 600 FT. = 0.1 MILE
NET LENGTH = 92 FT. = 0.02 MILE

AVAILABILITY OF ELECTRONIC FILES

MicroStation and GEOPAK files of this project will be made available to the Contractor after contract award. If there is a conflict between the electronic files and the printed contract plans and documents, the printed contract plans and documents shall take precedence over the electronic files. The Contractor shall accept all risk associated with using the electronic files and shall hold the Department harmless for any errors or omissions in the electronic files and the data contained therein. Errors or delays resulting from the use of the electronic files by the Contractor shall not result in an extension of time for any interim or final completion date or shall not be considered cause for additional compensation. The Contractor shall not use, share, or distribute these electronic files except for the purpose of constructing this contract. Any claims by third parties due to use or errors shall be the responsibility of the Contractor. The Contractor shall include this disclaimer with the transfer of these electronic files to any other parties and shall include appropriate language binding them to similar responsibilities.

PLAN ELEVATIONS – U.S.G.S. MEAN SEA LEVEL DATUM

All elevations shown on the plans are established from U.S.G.S. mean sea level datum.

COMMITMENTS

There are no commitments for this contract

TREE REMOVAL RESTRICTION

Due to the potential presence of endangered bats no tree removal will be allowed on this project between April 1st and September 30th.

ENVIRONMENTAL REVIEWS

Prior to the use of any proposed borrow areas, use areas (temporary access roads, detours, run-arounds, etc.) and/or waste areas, the Contractor shall file the required environmental resource request surveys according to Section 107.22 of the Standard Specifications. These surveys are required in order for the Department to conduct cultural and biological resource surveys for the proposed site.

The required environmental resource documentation shall include the following:

- * BDE Form 2289 (Borrow Site Review)
- * BDE Form 2290 (Waste/Use Area Review)
- * A location map showing the size limits and location of the use area
- * Color photographs depicting the use area
- * Borrow Area Entry Agreement form – D4 P10101

Prior to any waste materials being removed from the construction site the required environmental resource surveys shall be obtained and filed by the Contractor. Excess waste products removed from the construction site shall be disposed of as required in Section 202.03 of the Standard Specifications.

Any protruding metal bars shall be removed prior to the disposal of broken concrete at approved disposal sites.

Please note that a minimum of four weeks shall be allowed for the District to obtain the required waste site environmental clearances and six weeks for the required borrow site environmental clearances.

ORDERING LENGTH CONFIRMATION – DRAINAGE ITEMS

The Contractor shall consult with the Engineer in regard to the exact length of the box/pipe culverts, storm sewers, and/or pipe drains required prior to ordering these items.

ADDITIONAL SUPPLEMENTAL TRAFFIC CONTROL

The Department reserves the right at any time to add additional Traffic Control Systems or devices within the active contract limits, by means of an additional contract. All terms of Article 105.08 of the Standard Specifications shall be followed by each Contractor.

JOB SPECIFIC NOTES

THE CONTRACTOR SHALL PERFORM FINAL SAW CUTS AT PATCH LIMITS AFTER BACKFILLING PROPOSED CULVERT, PRIOR TO PLACEMENT OF CLASS A PATCH. THESE CUTS SHALL BE LOCATED 2.5 FEET OUTSIDE OF THE ORIGINAL CUTS MADE FOR REMOVAL AND INSTALLATION OF NEW PRE-CAST BOX CULVERTS IN STAGES I & II. THIS WILL ASSURE A CLEAN, UNBROKEN EDGE AND UNBROKEN EXISTING REBAR FOR TYING THE CLASS A PATCH INTO EXISTING PAVEMENT.

STAGE I REQUIRES PATCHING THE INSIDE SHOULDER AND A PORTION OF THE ADJACENT LANE IN ONE OPERATION. STAGE II REQUIRES PATCHING THE REMAINDER OF THE LANE AND OUTSIDE SHOULDER IN ONE OPERATION. JOINTS SHALL BE ESTABLISHED AT THE CENTERLINE AND EOP'S. THESE SHALL BE A LONGITUDINAL SAWED JOINT AS DETAILED ON STANDARD 420001; HOWEVER THE GROOVE MAY BE EITHER PREFORMED OR SAWED. THE CONSTRUCTION JOINT SHALL BE PER STANDARD 420001 AS APPROVED BY THE ENGINEER.

IDOT OPERATIONS WILL PLACE PERMANENT PAINT PAVEMENT MARKINGS UPON COMPLETION OF THE PROJECT. THE CONTRACTOR SHALL CONTACT THE OPERATIONS SUPERVISOR AT 309.734.3721 UPON COMMENCEMENT OF THIS PROJECT AND GIVE NOTIFICATION OF AN ESTIMATED COMPLETION DATE SO THAT ARRANGEMENTS CAN BE MADE

THE CONTRACTOR SHALL VERIFY EXISTING PAVEMENT ELEVATIONS PRIOR TO REMOVAL TO ASSURE ACCURACY OF ELEVATIONS GIVEN IN THE PLANS. THE LOCATION IS SUPERELEVATED AND SMOOTH TRANSITIONS MUST BE ACCOMPLISHED WITH PLACEMENT OF THE CLASS A PATCH

IF PIPE UNDERDRAINS, PIPE UNDERDRAIN (SPECIAL) OR HEADWALLS FOR PIPE UNDERDRAINS ARE ENCOUNTERED DURING EXCAVATION, THE REMOVAL, REPLACEMENT AND/OR REPAIR SHALL BE PAID FOR IN ACCORDANCE TO ARTICLE 109.04 OF THE STANDARD SPECIFICATIONS.

STATUS OF UTILITIES

Illinois Department of Transportation
Status of Utilities

Name of Utility Company: CMS
Route: FAP 313 (US 34/L110)
Section: 04-17/CR
County: Warren
Contract No.: 68E43
Catalog No.: 035633-000

Route	Offset	Location	Type of Utility	Type of Conflict	Disposition
US 34	Rt 130'	731+90 to 733+00	Fiber	Rip Rap	Caution

HMA REQUIREMENTS– IF CONTRACTOR CHOOSES TO CONSTRUCT TEMPORARY BASE COURSE WIDENING WITH HMA, USE MIX DESIGN BELOW

The following mixture requirements are applicable for this project:

Location(s):	Mainline Temp Pavt.	Mainline Temp Pavt.					
Mixture Use(s):	Surface 1.75"	Lower Lifts (4", 2.25")					
AC/PG:	PG 58-28	PG 58-28					
Design Air Voids:	4.0% @ N=70	4.0% @ N=70					
Mixture Composition: (Mixture Gradation)	IL 9.5	IL 19.0					
Friction Aggregate:	Mix D	N.A.					
Quality Management Program:	QCQA	QCQA					
MTD:	No	No					

Note:
1) Individual lift thickness of each mix type will be no less than 3 times nominal maximum aggregate size and no more than 8 times nominal maximum aggregate size, unless otherwise approved by the Engineer.
2) For design purposes, mixture weight for all mixes is determined to be 112.0 lb/cy/m, unless otherwise noted.
3) Sublot sizes for PFP and OCP mixes will be 500 tons, unless otherwise approved by the Engineer and the paving contractor.

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PLOT DATE = 8/25/2022	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**GENERAL & JOB SPECIFIC NOTES
STATUS OF UTILITIES**

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-17)CR	WARREN	57	2
			CONTRACT NO. 68E43	
ILLINOIS FED. AID PROJECT				

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTR. CODE	
				0010	BOX CULVERT
				80% FEDERAL	20% STATE
				SN 094-2004 (OLD)	SN 094-2019 (NEW)
20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	30	30	
20200500	EARTH EXCAVATION (WIDENING)	CU YD	79	79	
20300100	CHANNEL EXCAVATION	CU YD	188	188	
20700220	POUROUS GRANULAR EMBANKMENT	CU YD	3739	3739	
21001000	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	SQ YD	1067	1067	
25000210	SEEDING CLASS 2A	ACRE	0.5	0.5	
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	43	43	
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	43	43	
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	43	43	
** 25000750	MOWING	ACRES	4	4	
25100630	EROSION CONTROL BLANKET	SQ YD	2246	2246	
28000305	TEMPORARY DITCH CHECKS	FOOT	84	84	
28000400	PERIMETER EROSION BARRIER	FOOT	1000	1000	
31100500	SUBBASE GRANULAR MATERIAL, TYPE A 6"	SQ YD	858	858	

** 100% STATE FUNDS

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PLOT SCALE = 100.0000' / in.	DRAWN -	REVISED -						313A	(94-17)CR	WARREN	57	3
PLOT DATE = 8/26/2022	CHECKED -	REVISED -		SCALE:	SHEET	OF	SHEETS	STA.	TO	STA.	CONTRACT NO. 68E43	
	DATE -	REVISED -									ILLINOIS FED. AID PROJECT	

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTR. CODE	
				0010	BOX CULVERT
				80% FEDERAL	20% STATE
				SN 094-2004 (OLD)	SN 094-2019 (NEW)
35650300	BASE COURSE WIDENING, 8"	SQ YD	634	634	
44004250	PAVED SHOULDER REMOVAL	SQ YD	634	634	
44200614	CLASS A PATCHES, TYPE IV, 13 INCH	SQ YD	858	858	
44213000	PATCHING REINFORCEMENT	SQ YD	858	858	
44213200	SAW CUTS	FOOT	706	706	
48102100	AGGREGATE WEDGE SHOULDER, TYPE B	TON	234	234	
51500100	NAME PLATES	EACH	1	1	
52200020	TEMPORARY SOIL RETENTION SYSTEM	Sq Ft	2576	2576	
54001001	BOX CULVERT END SECTIONS, CULVERT NO. 1	EACH	2	2	
64200116	SHOULDER RUMBLE STRIPS, 16 INCH	FOOT	386	386	
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6	6	
67100100	MOBILIZATION	L SUM	1	1	
70107005	PAVEMENT MARKING BLACKOUT TAPE, 5"	FOOT	3855	3855	
70107007	PAVEMENT MARKING BLACKOUT TAPE, 7"	FOOT	500	500	

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PLOT DATE = 8/26/2022	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-17)CR	WARREN	57	4
			CONTRACT NO. 68E43	
		ILLINOIS	FED. AID PROJECT	

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTR. CODE	
				0010	BOX CULVERT
				80% FEDERAL	20% STATE
				SN 094-2004 (OLD)	SN 094-2019 (NEW)
70300100	SHORT TERM PAVEMENT MARKINGS	FOOT	13055	13055	
70300150	SHORT TERM PAVEMENT MARKINGS REMOVAL	SQ FT	6250	6250	
70400100	TEMPORARY CONCRETE BARRIER	FOOT	1525	1525	
70400125	PINNING CONCRETE BARRIER	EACH	354	354	
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	1525	1525	
70600250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TL3	EACH	2	2	
70600350	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TL3	EACH	2	2	
X0322584	REVTMENT MAT REMOVAL	SQ YD	107	107	
X0327366	TEMPORARY AGGREGATE WEDGE	TON	92	92	
X1200090	TRANSVERSABLE PIPE GRATES, SPECIAL	EACH	4	4	
X2020410	EARTH EXCAVATION (SPECIAL)	CU YD	6622	6622	
X2110104	TOPSOIL FURNISH AND PLACE, 4" (SPECIAL)	SQ YD	1039	1039	
X2600002	RECOVERABLE DELINEATOR	EACH	2	2	
X2810108	STONE DUMPED RIPRAP, CLASS A4 (SPECIAL)	SQ YD	120	120	

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PLOT DATE = 8/26/2022	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SUMMARY OF QUANTITIES

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-17)CR	WARREN	57	5
CONTRACT NO. 68E43				
ILLINOIS FED. AID PROJECT				

DRAINAGE QUANTITIES

STATION TO STATION	20700220	21001000	X2810108	31102000	52200020	54001001	X5401212	Z0054500	X0322584	X1200090
	POUROUS GRANULAR EMBANKMENT	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	STONE DUMPED RIPRAP, CLASS A4 (SPECIAL)	SUBBASE GRANULAR MATERIAL, TYPE A 6"	TEMPORARY SOIL RETENTION SYSTEM	BOX CULVERT END SECTIONS, CULVERT NO. 1	PRECAST CONCRETE BOX CULVERTS 12'X12' (SPECIAL)	ROCK FILL	REVTMENT MAT REMOVAL	TRANSVERSABLE PIPE GRATES, SPECIAL
	CU YD	SQ YD	TON	SQ YD	SQ FT	EACH	FOOT	TON	SQ YD	EACH
STAGE 1										
731+85	732+76	1920.0	339	-	429	1015	-	176	311.7	-
STAGE 2										
731+85	732+76	1819.0	728	120	429	1561	2	200	354.3	107
TOTAL		3739	1067	120	858	2576	2	376	666	107

EROSION CONTROL SCHEDULE

STATION TO STATION	25000210	25000400	25000500	25000600	25100630	28000400	28000305
	SEEDING CLASS 2A	NITROGEN FERTILIZER NUTRIENT	PHOSPHORUS FERTILIZER NUTRIENT	POTASSIUM FERTILIZER NUTRIENT	EROSION CONTROL BLANKET	PERIMETER EROSION BARRIER	TEMPORARY DITCH CHECKS
	ACRE	POUND	POUND	POUND	SQ YD	FOOT	FOOT
STAGE 1							
731+80	732+80	0.10	9.0	9.0	9.0	490	1000
Phase 2							
731+00	733+00	0.37	33.3	33.3	33.3	1756	-
TOTAL		0.5	43	43	43	2246	1000

TREE REMOVAL SCHEDULE

LOCATION		20100110
		6 to 15 UNIT DIAMETER
STATION	OFFSET	UNITS
732+04	128' L	8
732+51	110' R	12
732+56	131' L	10
TOTAL		30

JOBSITE QUANTITIES

LOCATION	25000750	51500100	67000400	67100100	X7010216	Z0013798
	MOWING	NAME PLATE	ENGINEER'S FIELD OFFICE, TYPE A	MOBILIZATION	TRAFFIC CONTROL AND PROTECTION (SPECIAL)	CONSTRUCTION LAYOUT
	ACRES	EACH	CAL MO	L SUM	L SUM	L SUM
JOBSITE						
725+00	TO	740+00	4	-	-	-
TOTAL		4	1	6	1	1

FENCE REMOVAL SCHEDULE

LOCATION		Z0022800
		FENCE ROMOVAL
STATION	OFFSET	FEET
Upstream	West	30
Upstream	East	20
Downstream	West	30
Downstream	East	45
TOTAL		125

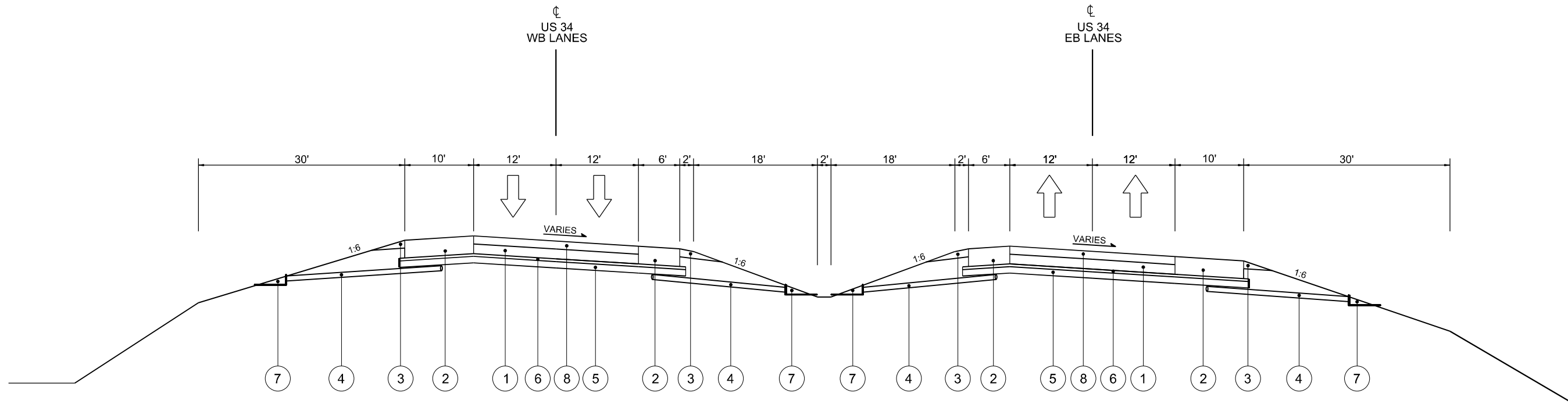
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PLOT DATE = 8/23/2022	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

SCHEDULE OF QUANTITIES			
SCALE:	SHEET	OF	SHEETS
	STA.	TO	STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-17)CR	WARREN	57	9
CONTRACT NO. 68E43				
ILLINOIS FED. AID PROJECT				



EXISTING TYPICAL SECTION
US 34
STA 685+75.73 TO STA 741+03.49

EXISTING

- ① CONTINUOUSLY REINFORCED CONCRETE PAVMENT 9"
- ② BITUMINOUS SHOULDERS 12.75"
- ③ AGGREGATE SHOULDER, TYPE B
- ④ PIPE UNDERDRAINS 4" OR 6"
- ⑤ LIME MODIFIED SOIL 12"
- ⑥ STABILIZED SUBBASE 4"
- ⑦ CONCRETE HEADWALL FOR PIPE DRAINS
- ⑧ HMA OVERLAY 3.75"

NOTE:
 #6 REBAR WERE USED IN CONSTRUCTION OF CLASS A PATCHES
 ON PREVIOUS PATCHING AND OVERLAY CONTRACT

*NOT TO SCALE

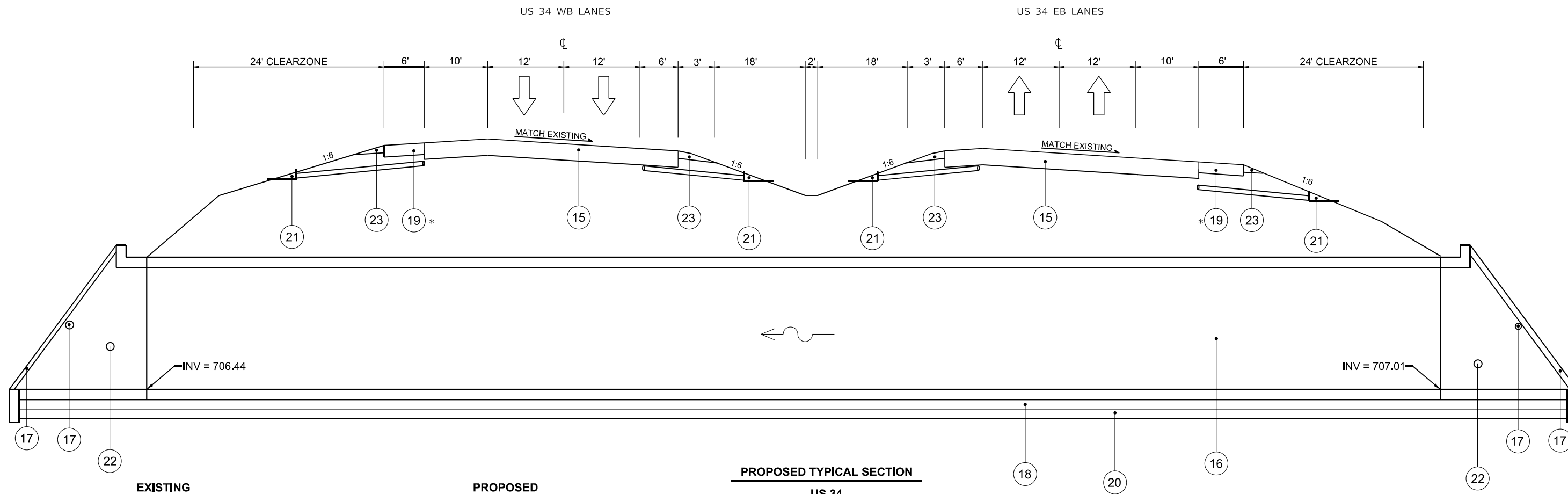
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PLOT DATE = 8/23/2022	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCALE:		TYPICAL SECTIONS	
		SHEET OF SHEETS	STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-17)CR	WARREN	57	10
CONTRACT NO. 68E43				
ILLINOIS FED. AID PROJECT				



EXISTING

PROPOSED

PROPOSED TYPICAL SECTION

**US 34
STA 731+84 TO STA 732+76
AT PROPOSED CULVERT**

- ① CONTINUOUSLY REINFORCED CONCRETE PAVMENT 9"
- ② BITUMINOUS SHOULDERS 12.75"
- ③ PIPE UNDERDRAINS 4" OR 6"
- ④ LIME MODIFIED SOIL 12"
- ⑤ STABILIZED SUBBASE 4"
- ⑥ CONCRETE HEADWALL FOR PIPE DRAINS
- ⑦ HMA OVERLAY 3.75"
- ⑸ CLASS A PATCH 13"
- ⑹ DOUBLE 12' x 12' PRECAST BOX CULVERT
- ⑺ TRANSVERSIBLE PIPE GRATE
- ⑻ PROPOSED 2' UNDERCUT (SEE EXCAVATION & CULVERT DETAIL)
- ⑿ PROPOSED 6' WIDENING, 8"
- ⓫ PROPOSED 1' ROCKFILL (SEE EXCAVATION & CULVERT DETAIL)
- ⓬ CONCRETE HEADWALL FOR PIPE DRAINS
- ⓭ PRE-CAST MULTI-CELL END SECTION
- ⓮ AGGREGATE WEDGE SHOULDER, TYPE B

NOTE:
#6 REBAR WERE USED IN CONSTRUCTION OF CLASS A PATCHES ON PREVIOUS PATCHING AND OVERLAY CONTRACT

SEE PROPOSED PLAN SHEET FOR CULVERT AND RIPRAP INFORMATION
*TO BE REMOVED IN STAGE II

NOT TO SCALE

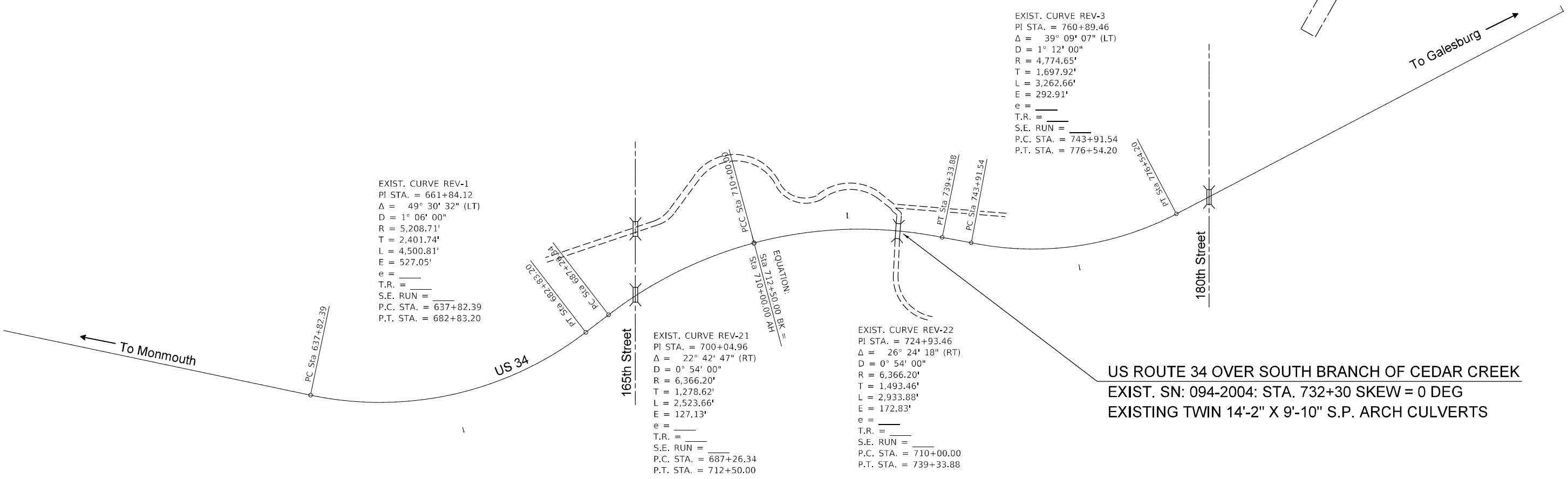
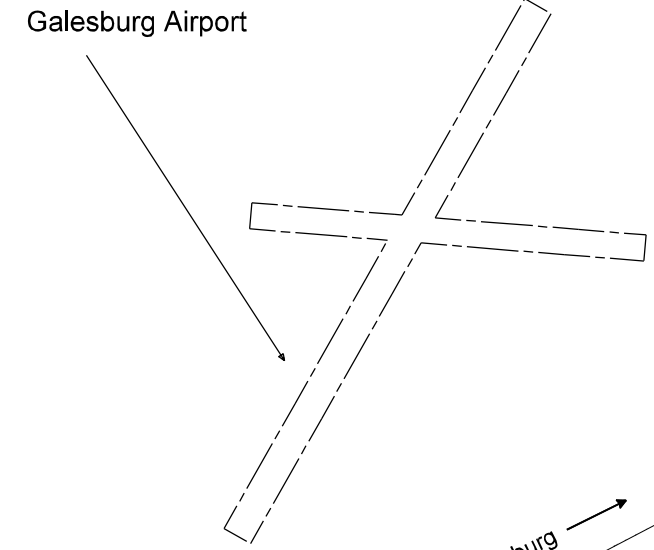
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PLOT DATE = \$DATES	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

TYPICAL SECTIONS	
SCALE:	SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313A	(94-17)CR	WARREN	57	11
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				



EXIST. CURVE REV-1
 PI STA. = 661+84.12
 $\Delta = 49^\circ 30' 32''$ (LT)
 $D = 1^\circ 06' 00''$
 $R = 5,208.71'$
 $T = 2,401.74'$
 $L = 4,500.81'$
 $E = 527.05'$
 $e =$
 T.R. =
 S.E. RUN =
 P.C. STA. = 637+82.39
 P.T. STA. = 682+83.20

EXIST. CURVE REV-21
 PI STA. = 700+04.96
 $\Delta = 22^\circ 42' 47''$ (RT)
 $D = 0^\circ 54' 00''$
 $R = 6,366.20'$
 $T = 1,278.62'$
 $L = 2,523.66'$
 $E = 127.13'$
 $e =$
 T.R. =
 S.E. RUN =
 P.C. STA. = 687+26.34
 P.T. STA. = 712+50.00

EXIST. CURVE REV-22
 PI STA. = 724+93.46
 $\Delta = 26^\circ 24' 18''$ (RT)
 $D = 0^\circ 54' 00''$
 $R = 6,366.20'$
 $T = 1,493.46'$
 $L = 2,933.88'$
 $E = 172.83'$
 $e =$
 T.R. =
 S.E. RUN =
 P.C. STA. = 710+00.00
 P.T. STA. = 739+33.88

EXIST. CURVE REV-3
 PI STA. = 760+89.46
 $\Delta = 39^\circ 09' 07''$ (LT)
 $D = 1^\circ 12' 00''$
 $R = 4,774.65'$
 $T = 1,697.92'$
 $L = 3,262.66'$
 $E = 292.91'$
 $e =$
 T.R. =
 S.E. RUN =
 P.C. STA. = 743+91.54
 P.T. STA. = 776+54.20

EQUATION:
 $Sta\ 712+50.00\ AH$
 $Sta\ 710+00.00\ BH$

US ROUTE 34 OVER SOUTH BRANCH OF CEDAR CREEK
 EXIST. SN: 094-2004: STA. 732+30 SKEW = 0 DEG
 EXISTING TWIN 14'-2" X 9'-10" S.P. ARCH CULVERTS

*Not to Scale

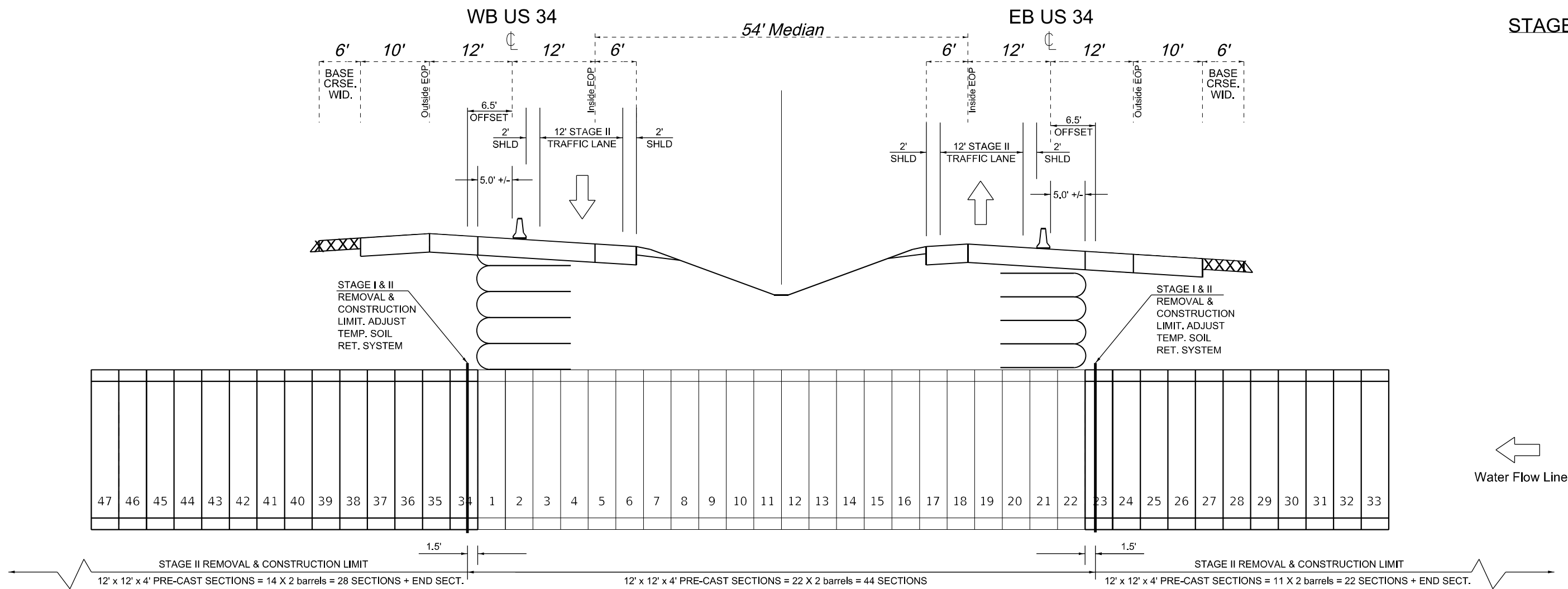
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	DRAWN -	REVISED -
PLOT SCALE = 100,0000' / in.	CHECKED -	REVISED -
PLOT DATE = 8/23/2022	DATE -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

ALIGNMENT INFORMATION & LINE DIAGRAM				
SCALE:	SHEET	OF	SHEETS	STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-17)CR	WARREN	57	12
CONTRACT NO. 68E43				
ILLINOIS FED. AID PROJECT				



STAGE II

PURPOSE

Remove existing and complete construction of proposed culvert to Stage II limits.

CONSTRUCTION

1. Remove Base Course Widening, 8" and temporary aggregate shoulder throughout job limits.
2. Remove Stage II pavement, excavate, and remove dry side of existing culvert.
3. Install one barrel of precast box culvert sections up to Stage II construction line on EB & WB sides.
4. Re-direct flow solely into newly completed barrel.

5. Excavate, remove existing, and construct second precast barrel section on EB & WB sides, thus completing the proposed culverts.

6. Install precast multicell end sections and riprap.

7. Reduce height of temporary soil retention system.

8. Backfill while releasing material from temporary soil retention system placed on top of newly constructed culvert sections in Stage I.

9. Remove additional 2.5' if pavement on each side and complete class A patch.

TRAFFIC

Complete this work utilizing Traffic Control and Protection Standards 701400, 701402, & 701428.

NOT TO SCALE

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PLOT SCALE = 100,0000' / in.	CHECKED -	REVISED -
PLOT DATE = 8/23/2022	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

STAGE II SEQUENCE

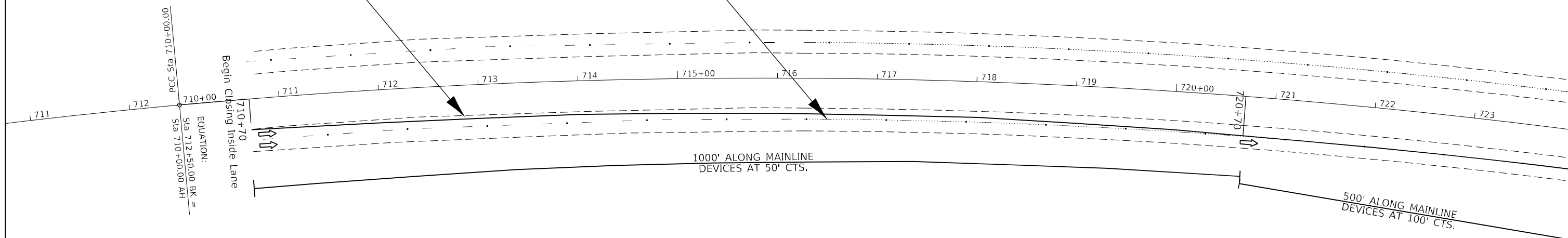
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-17)CR	WARREN	57	15
CONTRACT NO. 68E43				
ILLINOIS FED. AID PROJECT				



STA. 710+70 TO 734+00
YELLOW 4" SHORT TERM
PAVEMENT MARKING

STA. 710+70 TO 720+70
7" BLACKOUT TAPE



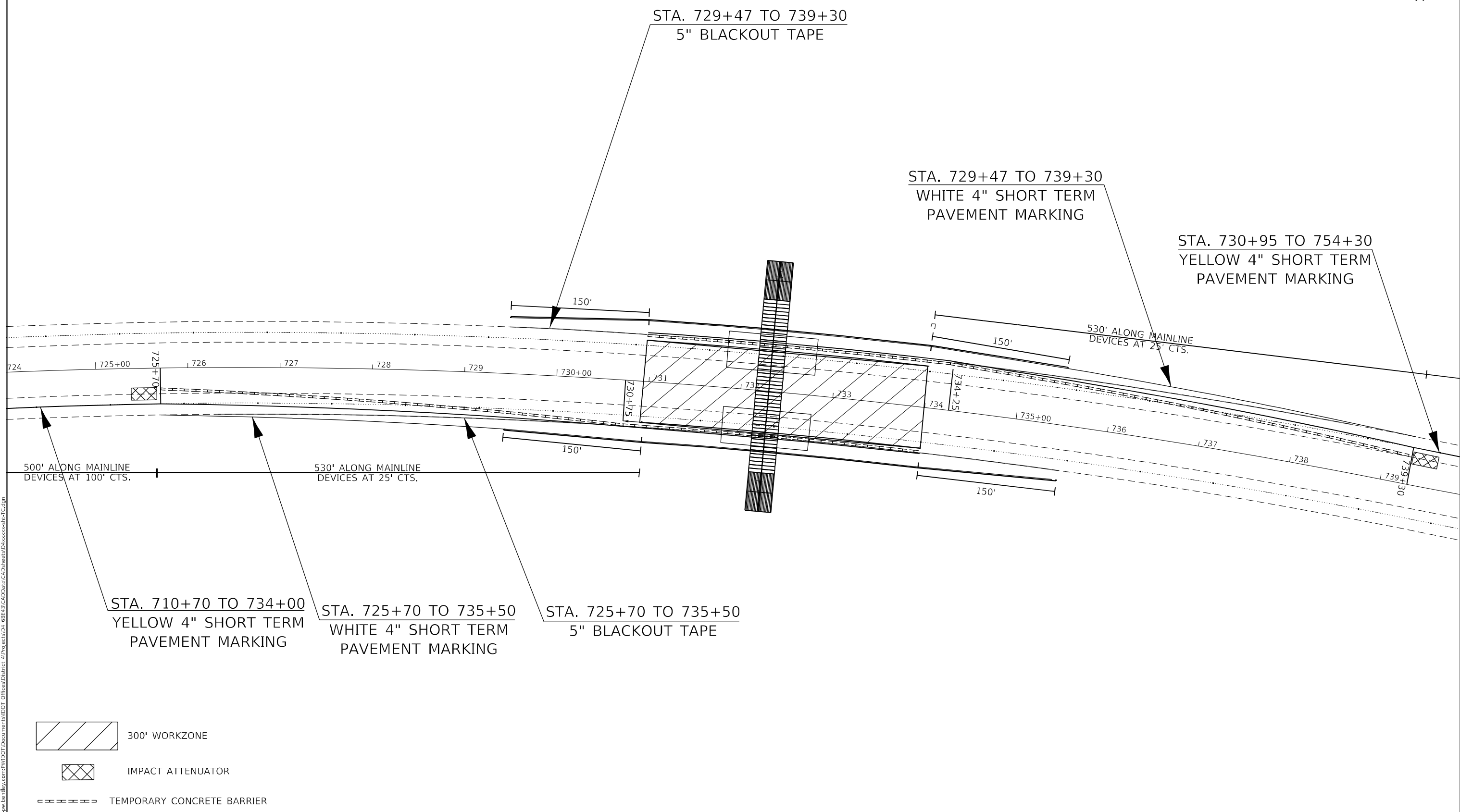
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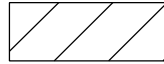

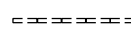
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	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

STAGE I TRAFFIC CONTROL				
SCALE:	SHEET	OF	SHEETS	STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-17)CR	WARREN	58	16
CONTRACT NO. 68E43			ILLINOIS FED. AID PROJECT	



-  300' WORKZONE
-  IMPACT ATTENUATOR
-  TEMPORARY CONCRETE BARRIER

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DRAWN -	REVISOR -	
PLOT SCALE = 100,0000' / in.	CHECKED -	REVISED -
PLOT DATE = 8/25/2022	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE I TRAFFIC CONTROL			
SCALE:	SHEET	OF SHEETS	STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-17)CR	WARREN	58	17
CONTRACT NO. 68E43				
ILLINOIS FED. AID PROJECT				

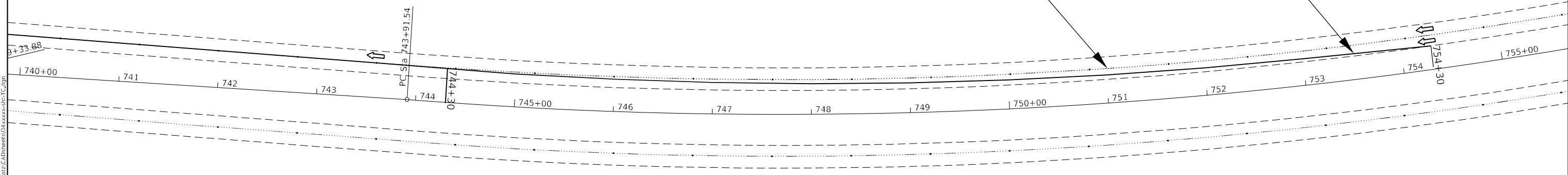


STA. 744+30 TO 754+30
7" BLACKOUT TAPE

STA. 730+95 TO 754+30
YELLOW 4" SHORT TERM
PAVEMENT MARKING

500' ALONG MAINLINE
DEVICES AT 100' CTS.

1000' ALONG MAINLINE
DEVICES AT 50' CTS.



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PLOT DATE = 8/23/2022	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

STAGE I TRAFFIC CONTROL

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE. 313	SECTION (94-17)CR	COUNTY WARREN	TOTAL SHEETS 58	SHEET NO. 18
CONTRACT NO. 68E43			ILLINOIS FED. AID PROJECT	

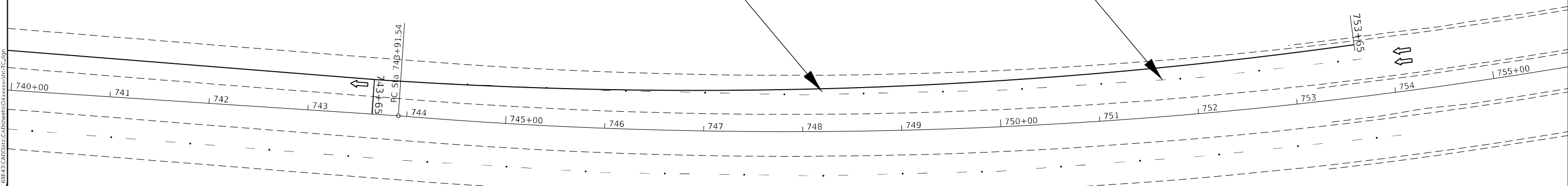


STA. 743+65 TO 753+65
7" BLACKOUT TAPE

STA. 730+95 TO 753+65
WHITE 4" SHORT TERM
PAVEMENT MARKING

500' ALONG MAINLINE
DEVICES AT 100' CTS.

1000' ALONG MAINLINE
DEVICES AT 50' CTS.



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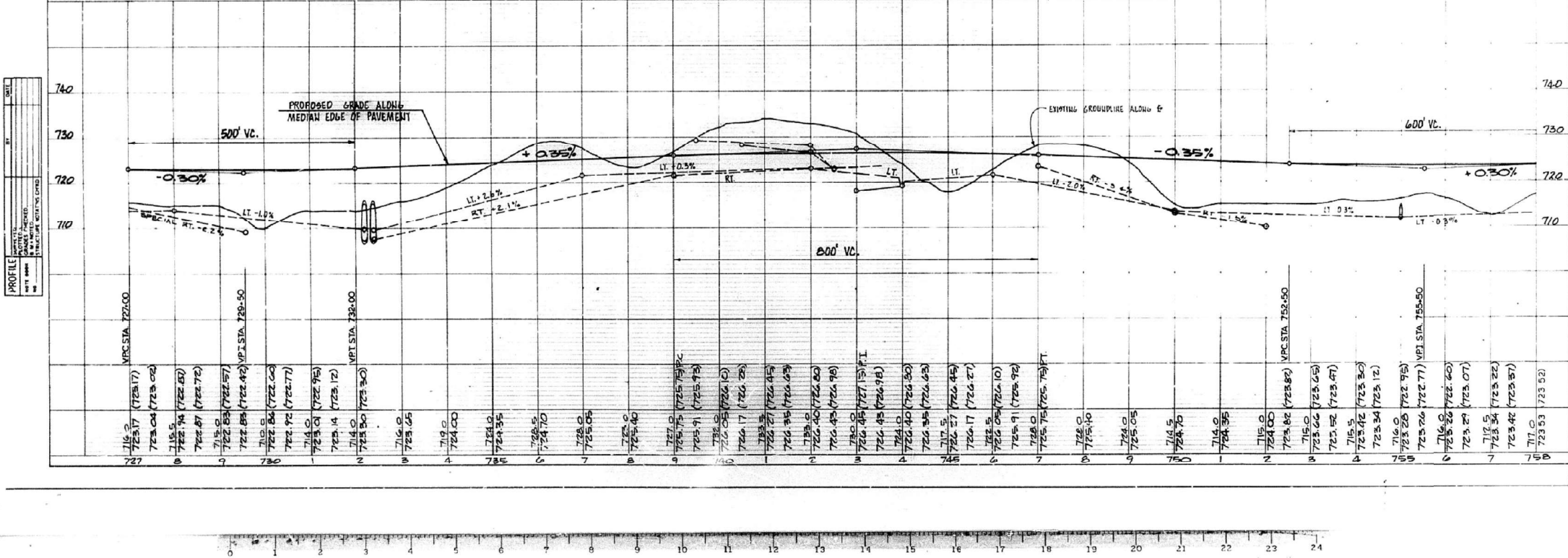
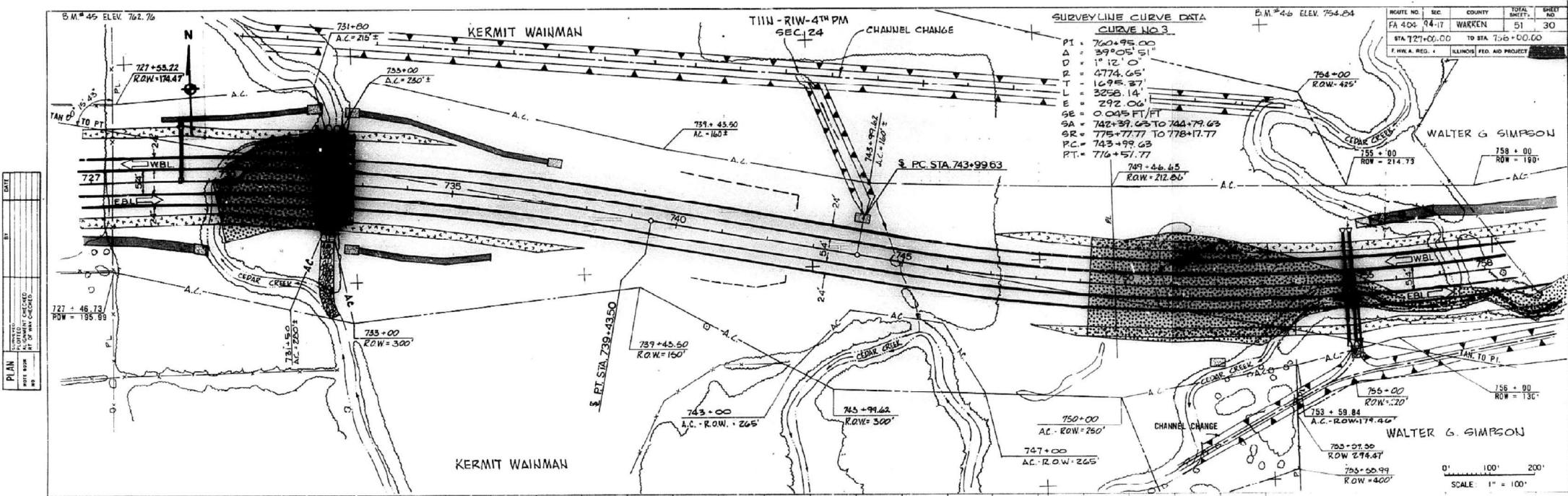
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PLOT DATE = 8/25/2022	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

STAGE II TRAFFIC CONTROL

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE. 313	SECTION (94-17)CR	COUNTY WARREN	TOTAL SHEETS 58	SHEET NO. 21
CONTRACT NO. 68E43			ILLINOIS FED. AID PROJECT	



USER NAME	= kelthor
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PLOT DATE	= 12/15/2017

DESIGNED	-	REVISED	-
DRAWN	-	REVISED	-
CHECKED	-	REVISED	-
DATE	-	REVISED	-

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**EXISTING PLAN AND PROFILE
FOR INFORMATION ONLY**

F.A.P.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	94116,17RS,48117,18RS	WARREN-KNOX		24
RTE US 34/IL 110				
ILLINOIS FED. AID PROJECT				

USER NAME	= sarah_kierzi
PLOT SCALE	= 100,0000" / in.
PLOT DATE	= 8/23/2022

DESIGNED	-	REVISED	-
DRAWN	-	REVISED	-
CHECKED	-	REVISED	-
DATE	-	REVISED	-

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

EXISTING STRUCTURE PLAN

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-17)CR	WARREN	57	24
CONTRACT NO. 68E43				
ILLINOIS FED. AID PROJECT				

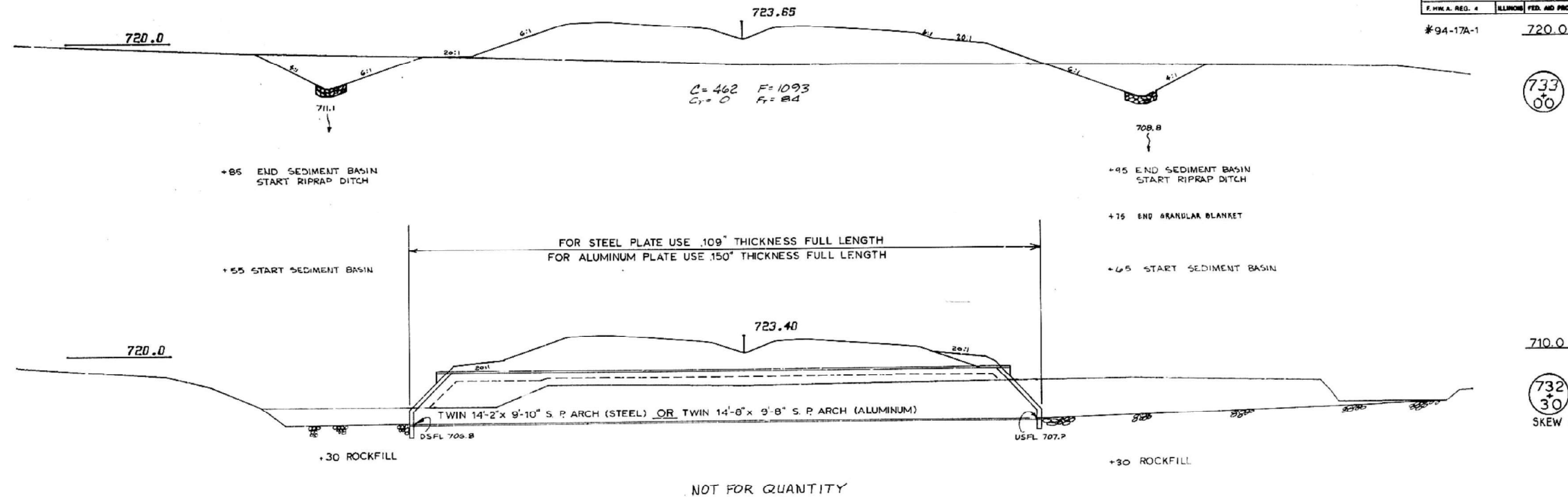
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EA 404	*	WARREN	144	125
STA 731+00		TO STA 733+00		
F.H.W.A. REG. #		ILLINOIS FED. AID PROJECT		

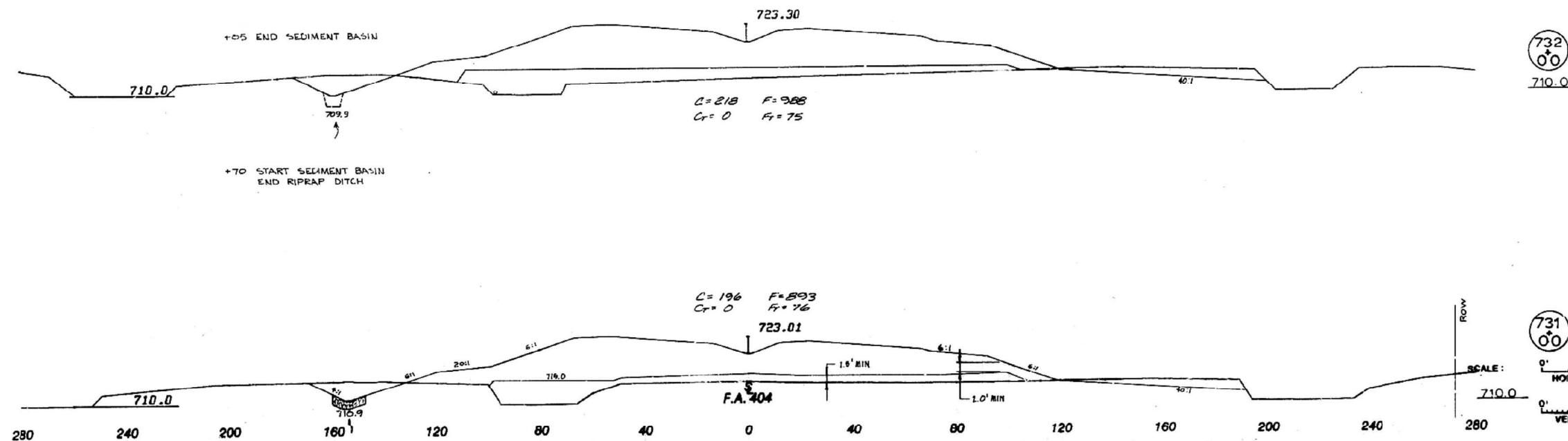
#94-17A-1 720.0



733
+00

710.0

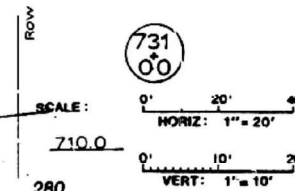
732
+30
SKEW 0°



732
+00

710.0

731
+00



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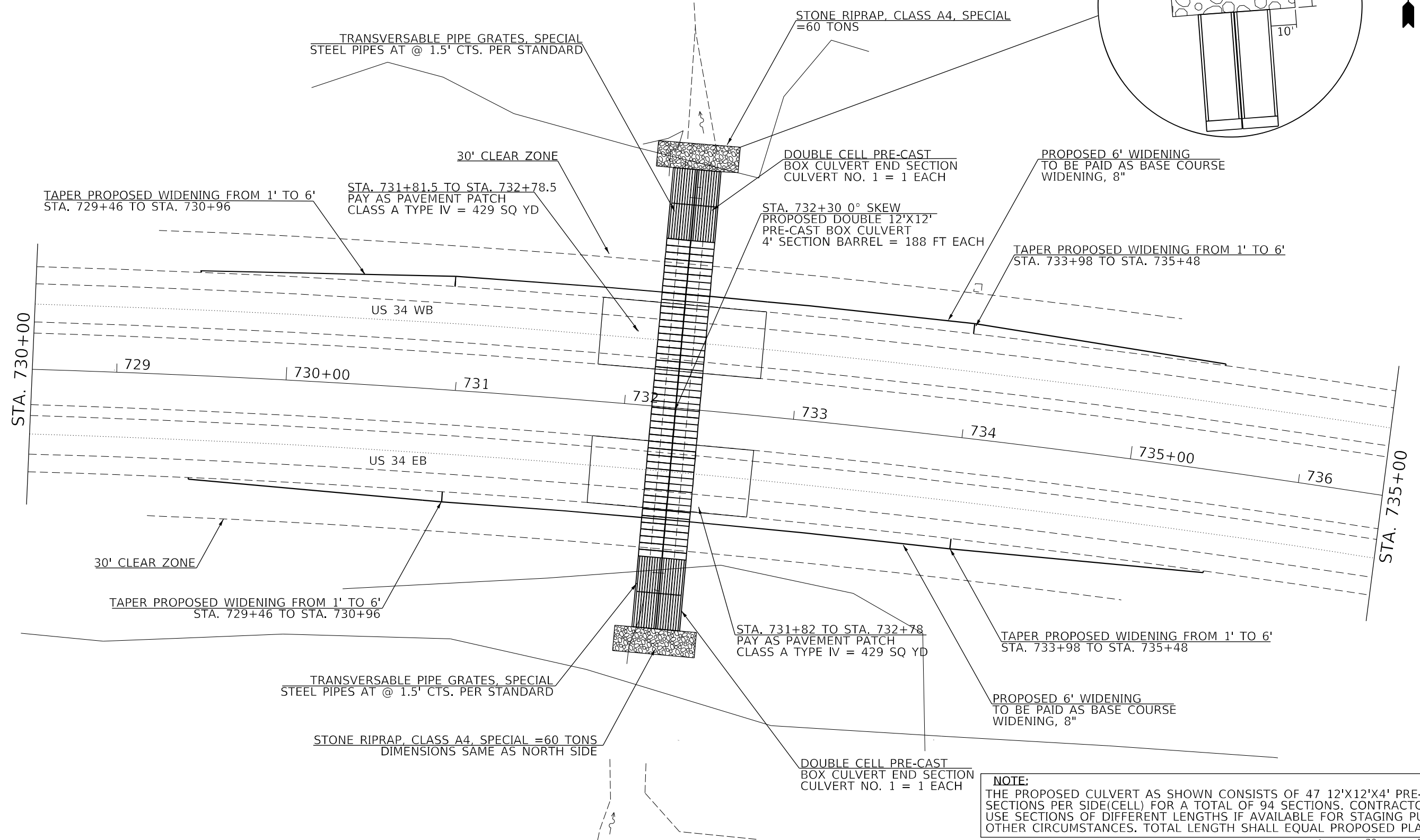
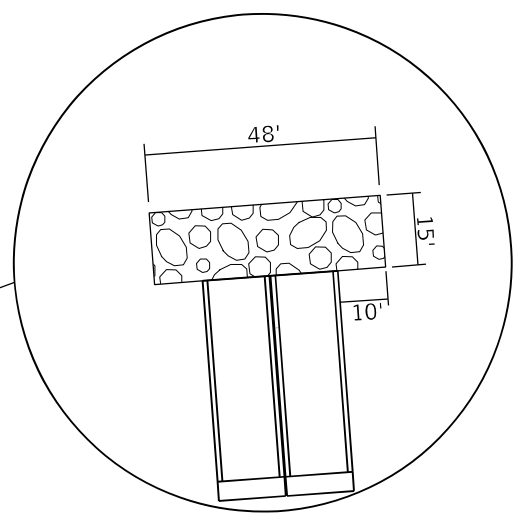
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PLOT DATE = 8/25/2022	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING STRUCTURE PLAN

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-17)CR	WARREN	57	27
CONTRACT NO. 68E43				
ILLINOIS FED. AID PROJECT				



NOTE:
 THE PROPOSED CULVERT AS SHOWN CONSISTS OF 47 12'X12'X4' PRE-CAST SECTIONS PER SIDE(CELL) FOR A TOTAL OF 94 SECTIONS. CONTRACTOR MAY USE SECTIONS OF DIFFERENT LENGTHS IF AVAILABLE FOR STAGING PURPOSES OR OTHER CIRCUMSTANCES. TOTAL LENGTH SHALL EQUAL PROPOSED PLAN LENGTH.



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PLOT DATE = 8/23/2022	DATE -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

PROPOSED PLAN

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-17)CR	WARREN	57	28
CONTRACT NO. 68E43				

ILLINOIS FED. AID PROJECT

SEE GENERAL PLAN SHEET FOR ADDITIONAL FORMATION

STA. 732+30
CENTER OF DOUBLE
12' X 12' PRE-CAST
BOX CULVERT
@ 0° SKEW

DOUBLE CELL PRECAST BOX
CULVERT END SECTION
WITH TRANSVERSIBLE PIPE GRATE

Clear Zone 34' TYP.

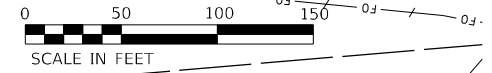
US 34 WB LANES

US 34 EB LANES

0.3% CULVERT SLOPE

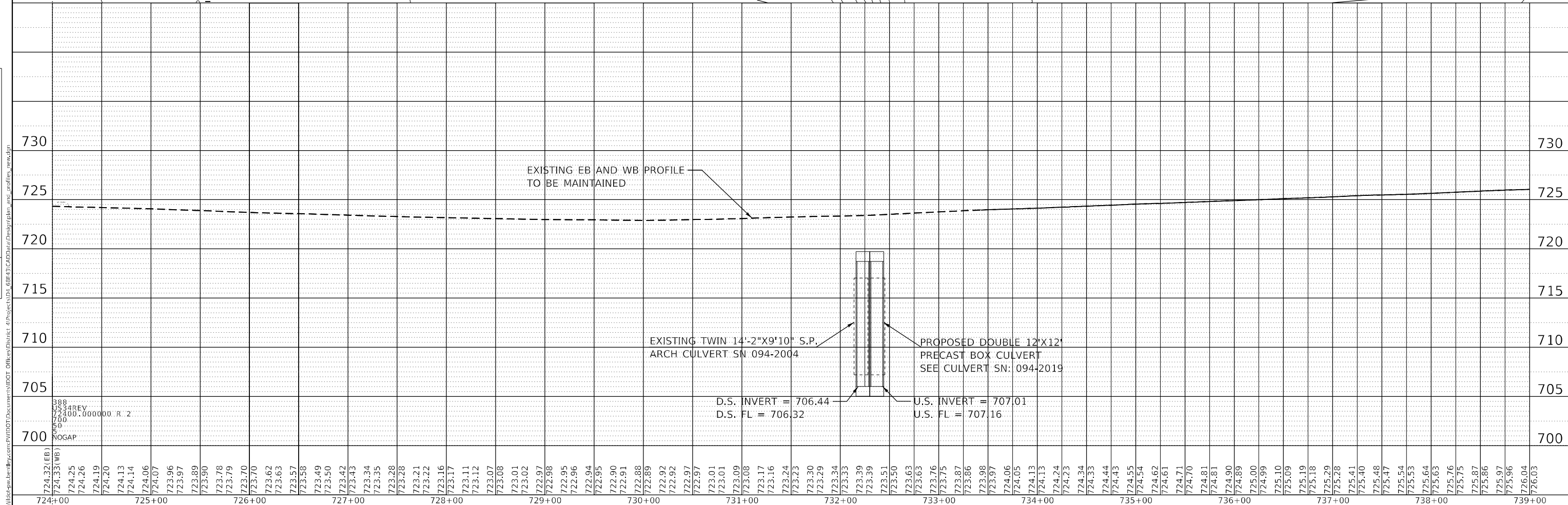
Proposed 6' Widening TYP.

EXIST. CURVE REV-22
PI STA. = 724+93.46
Δ = 26° 24' 18" (RT)
D = 0° 54' 00"
R = 6,366.20'
T = 1,493.46'
L = 2,933.88'
E = 172.83'



DATE	
BY	
PLAN	
NO.	
NOTE BOOK	
NO.	
STRUCTURE	
NO.	
DESIGNED	
DATE	
CHECKED	
DATE	
DRAWN	
DATE	
REVISIONS	

DATE	
BY	
PROFILE	
NO.	
NOTE BOOK	
NO.	
STRUCTURE	
NO.	
DESIGNED	
DATE	
CHECKED	
DATE	
DRAWN	
DATE	
REVISIONS	



724+00	724.32 (EB)	724.33 (WB)	724.25	724.26	724.19	724.20	724.13	724.14	724.06	724.07	723.96	723.97	723.89	723.90	723.78	723.79	723.70	723.62	723.63	723.57	723.58	723.49	723.50	723.42	723.43	723.34	723.35	723.28	723.28	723.21	723.22	723.16	723.17	723.11	723.12	723.07	723.08	723.01	723.02	722.97	722.98	722.96	722.96	722.94	722.95	722.90	722.91	722.88	722.89	722.92	722.92	722.97	722.97	723.01	723.01	723.09	723.08	723.17	723.16	723.23	723.30	723.29	723.34	723.33	723.39	723.39	723.51	723.50	723.63	723.63	723.76	723.75	723.87	723.86	723.98	723.97	724.06	724.05	724.13	724.13	724.24	724.23	724.34	724.33	724.44	724.43	724.55	724.54	724.62	724.61	724.71	724.70	724.81	724.81	724.89	724.99	725.10	725.09	725.19	725.18	725.29	725.28	725.41	725.40	725.47	725.47	725.53	725.53	725.64	725.63	725.76	725.75	725.87	725.86	725.97	725.96	726.04	726.03
724+00	725+00	726+00	727+00	728+00	729+00	730+00	731+00	732+00	733+00	734+00	735+00	736+00	737+00	738+00	739+00																																																																																																							

USER NAME = sarah_merzi	DESIGNED -	REVISIONS
PLOT SCALE = 100,0000' / in.	CHECKED -	REVISIONS
PLOT DATE = 8/23/2022	DATE -	REVISIONS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EXISTING /PROPOSED
PLAN & PROFILE

SCALE:	SHEET	OF	SHEETS	STA.	TO STA.
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-17)CR	WARREN	57	29
CONTRACT NO. 68E43				
ILLINOIS FED. AID PROJECT				

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xxx - xxx - xxx -	TEMPORARY DITCH CHECKS
— — — — —	PERIMETER EROSION BARRIER
	AREAS OF SEEDING AND EROSION CONTROL BLANKETS

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
**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

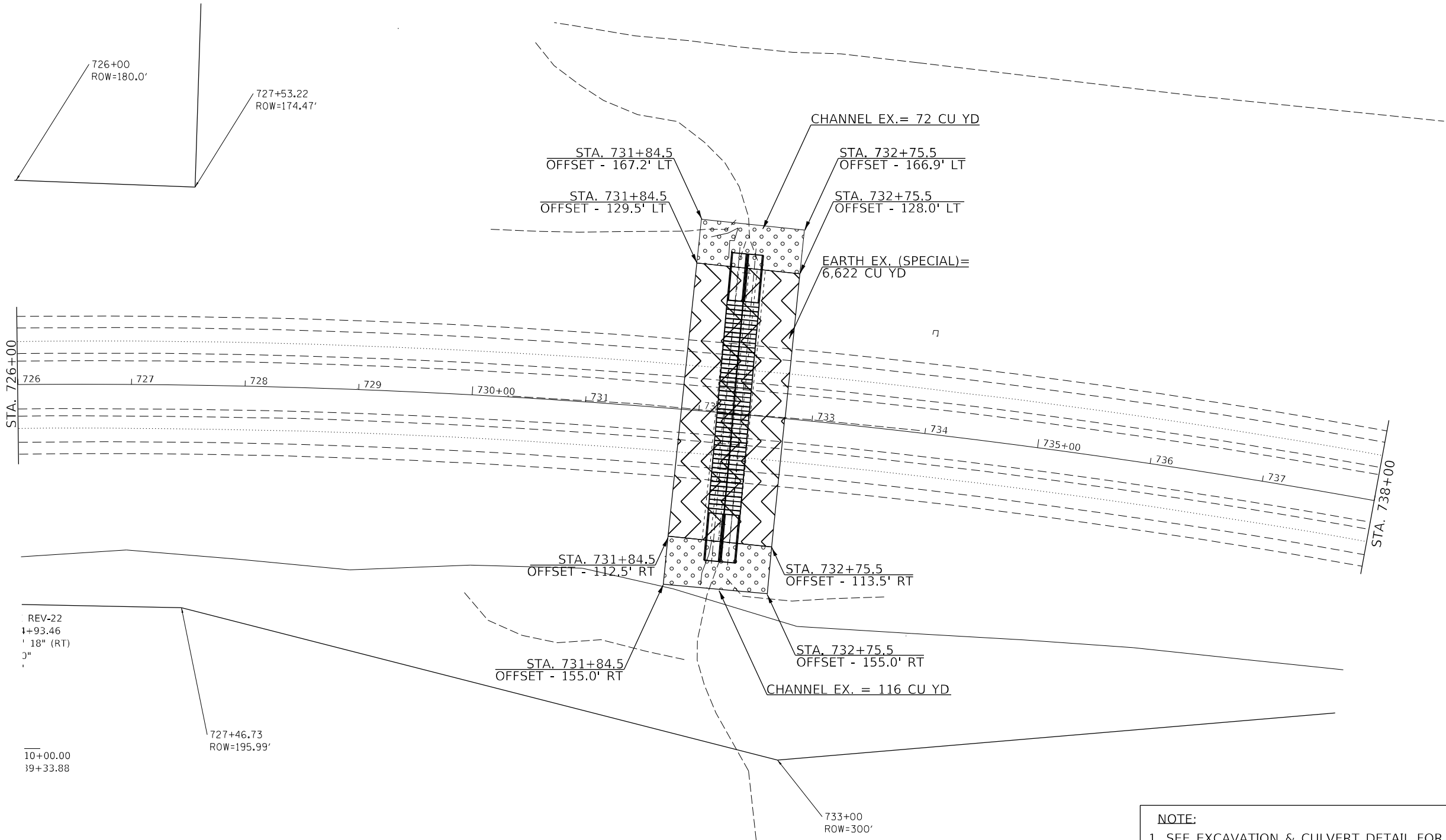
EROSION CONTROL PLAN

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313A	(94-17)CR	WARREN	57	30
ILLINOIS FED. AID PROJECT			CONTRACT NO. 68E43	



 EARTH EX. (SPECIAL)
 SEE NOTES 1 & 2
 CHANNEL EX.



NOTE:

- SEE EXCAVATION & CULVERT DETAIL FOR EXCAVATION AND BACKFILL SHAPES.
- INCLUDE ALL EARTHWORK TO ATTAIN FINAL FORESLOPE GRADES- SEE CROSS SECTIONS



MODEL: Cross Sections
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DRAWN -	REVISED -	
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PLOT DATE = 8/23/2022	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EARTHWORK PLAN

SCALE: SHEET OF SHEETS STA. TO STA.

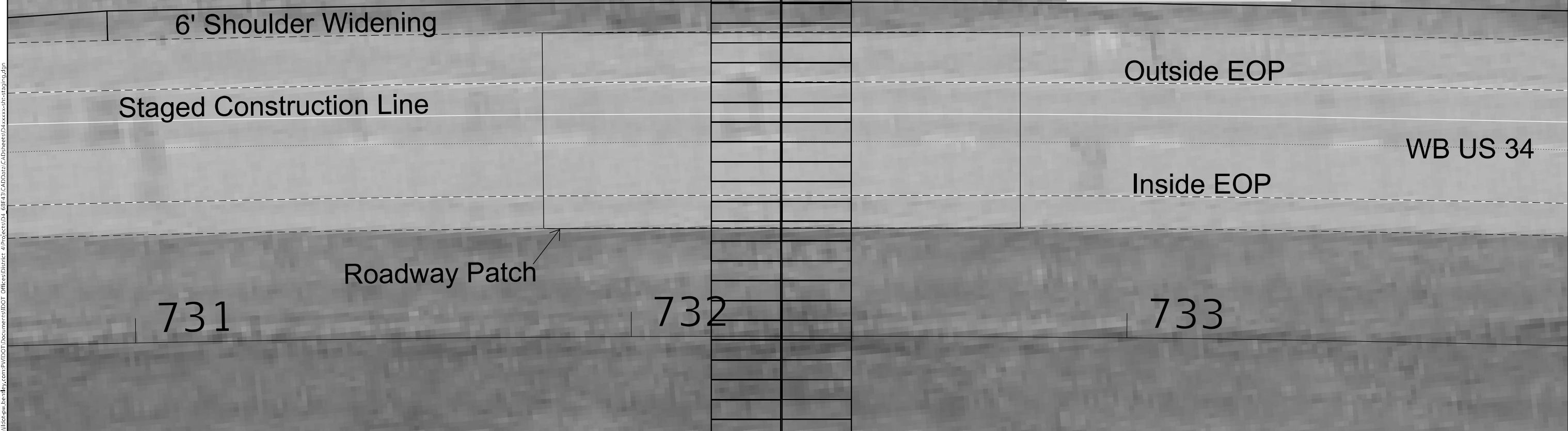
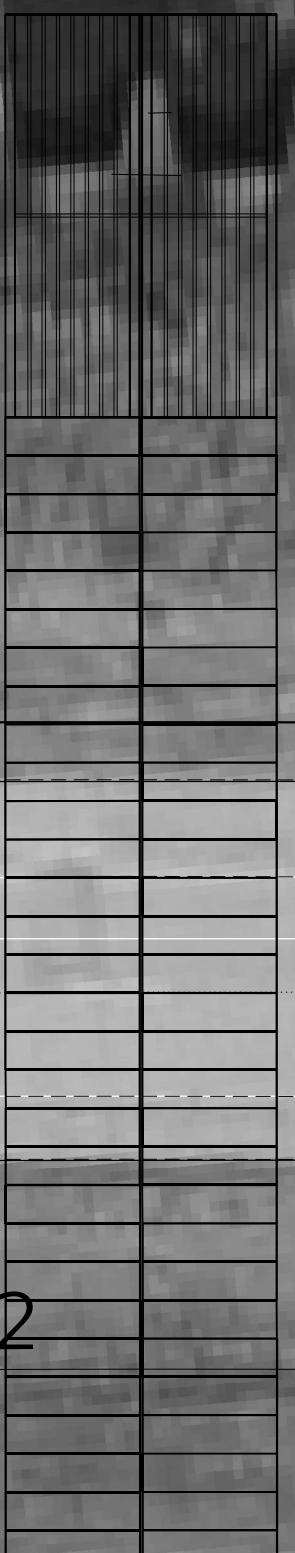
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-17)CR	WARREN	57	31
CONTRACT NO. 68E43				
ILLINOIS FED. AID PROJECT				



WB_Inside_EOP	
STA	ELEV (FT)
731+00	723.1498
731+10	723.1734
731+20	723.1981
731+30	723.2272
731+40	723.2755
731+50	723.3233
731+60	723.3653
731+70	723.4047
731+80	723.4405
731+90	723.4604
732+00	723.4798
732+10	723.4933
732+20	723.5033
732+30	723.5228
732+40	723.602
732+50	723.6805
732+60	723.7509
732+70	723.8164
732+80	723.878
732+90	723.9149
733+00	723.9517

WB_Constr. Line	
STA	ELEV
731+00	723.7632
731+10	723.7912
731+20	723.8216
731+30	723.8535
731+40	723.893
731+50	723.9319
731+60	723.9717
731+70	724.0109
731+80	724.0478
731+90	724.0772
732+00	724.1064
732+10	724.1275
732+20	724.1442
732+30	724.1685
732+40	724.2347
732+50	724.2998
732+60	724.3639
732+70	724.4271
732+80	724.4876
732+90	724.5311
733+00	724.5739

WB_Outside_EOP	
STA	ELEV
731+00	723.9482
731+10	723.981
731+20	724.0186
731+30	724.0568
731+40	724.0958
731+50	724.1352
731+60	724.1751
731+70	724.2157
731+80	721.2525
731+90	724.284
732+00	724.315
732+10	724.3361
732+20	724.3529
732+30	7243789
732+40	724.441
732+50	724.5031
732+60	724.567
732+70	724.6315
732+80	724.6919
732+90	724.7378
733+00	724.7833



731

732

733

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	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Super Elevation Tables			
SCALE:	SHEET	OF SHEETS	STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-17) CR	WARREN	54	32
CONTRACT NO. 68E43				
ILLINOIS FED. AID PROJECT				



731

732

733

Roadway Patch

Inside EOP

EB US 34

Staged Construction Line

Outside EOP

6' Shoulder Widening

EB_Inside_EOP	
STA	ELEV
731+00	723.0865
731+10	723.1183
731+20	723.1519
731+30	723.1836
731+40	723.2098
731+50	723.2354
731+60	723.2615
731+70	723.2874
731+80	723.3103
731+90	723.3237
732+00	723.3364
732+10	723.3584
732+20	723.3826
732+30	723.4121
732+40	723.4603
732+50	723.5089
732+60	723.5573
732+70	723.6068
732+80	723.6567
732+90	723.7068
733+00	723.7574

EB_Constr. Line	
STA	ELEV
731+00	722.4645
731+10	722.4895
731+20	722.5135
731+30	722.5382
731+40	722.5618
731+50	722.585
731+60	722.6067
731+70	722.6265
731+80	722.6461
731+90	722.6665
732+00	722.6864
732+10	722.7134
732+20	722.7447
732+30	722.782
732+40	722.8384
732+50	722.8942
732+60	722.9475
732+70	723.0016
732+80	723.0548
732+90	723.1052
733+00	723.1504

EB_Outside_EOP	
STA	ELEV
731+00	722.201
731+10	722.2238
731+20	722.2445
731+30	722.2654
731+40	722.2887
731+50	722.3114
731+60	722.3301
731+70	722.3465
731+80	722.3634
731+90	722.3864
732+00	722.4086
732+10	722.4358
732+20	722.4645
732+30	722.4996
732+40	722.5614
732+50	722.6225
732+60	722.6829
732+70	722.7428
732+80	722.8004
732+90	722.8507
733+00	722.9004

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PLOT SCALE = 20,0000 * / in.	DRAWN -	REVISED -
PLOT DATE = 8/23/2022	CHECKED -	REVISED -
	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

Super Elevation Table

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE. 313	SECTION (94-17)CR	COUNTY WARREN	TOTAL SHEETS 54	SHEET NO. 33
CONTRACT NO. 68E43				
ILLINOIS FED. AID PROJECT				

Benchmark:

Existing Structure: SN 094-2004 is a Double 14'-2" x 9'-10" steel plate arch culvert, built at 0 degree skew.

INDEX OF SHEETS

1. General Plan and Elevation

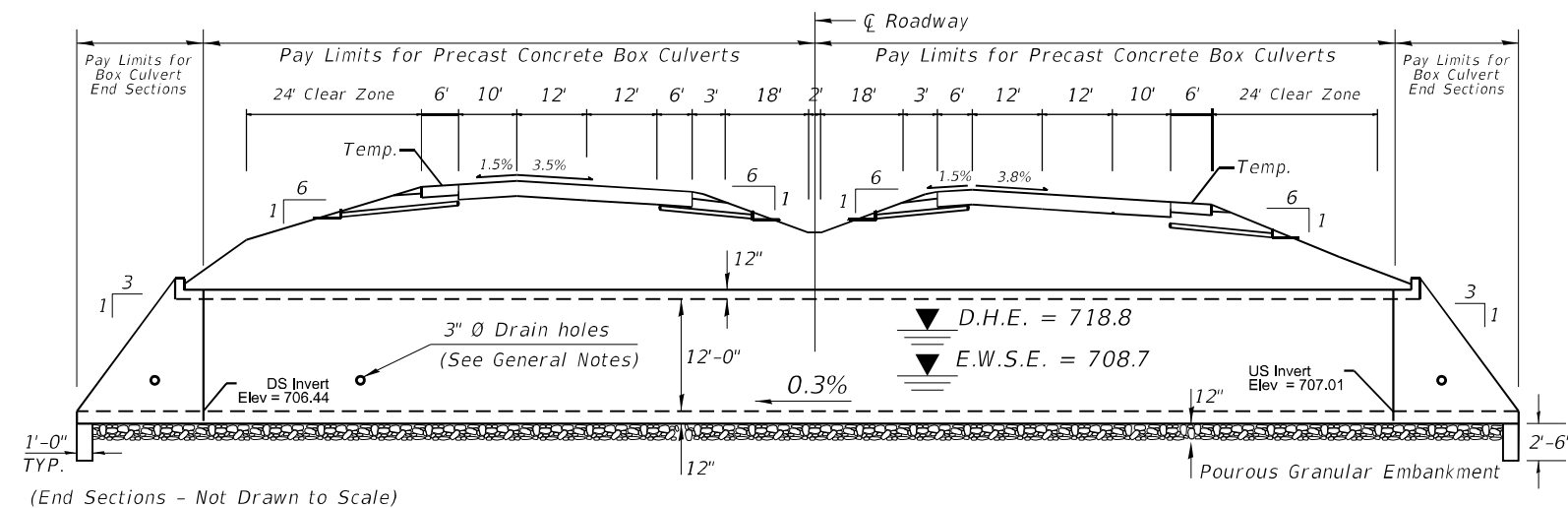
GENERAL NOTES

The design fill height for this box is 2.1 ft (min.) to 4.8 ft (max.). The precast box culvert sections shall conform to the requirements of ASTM C 1577.

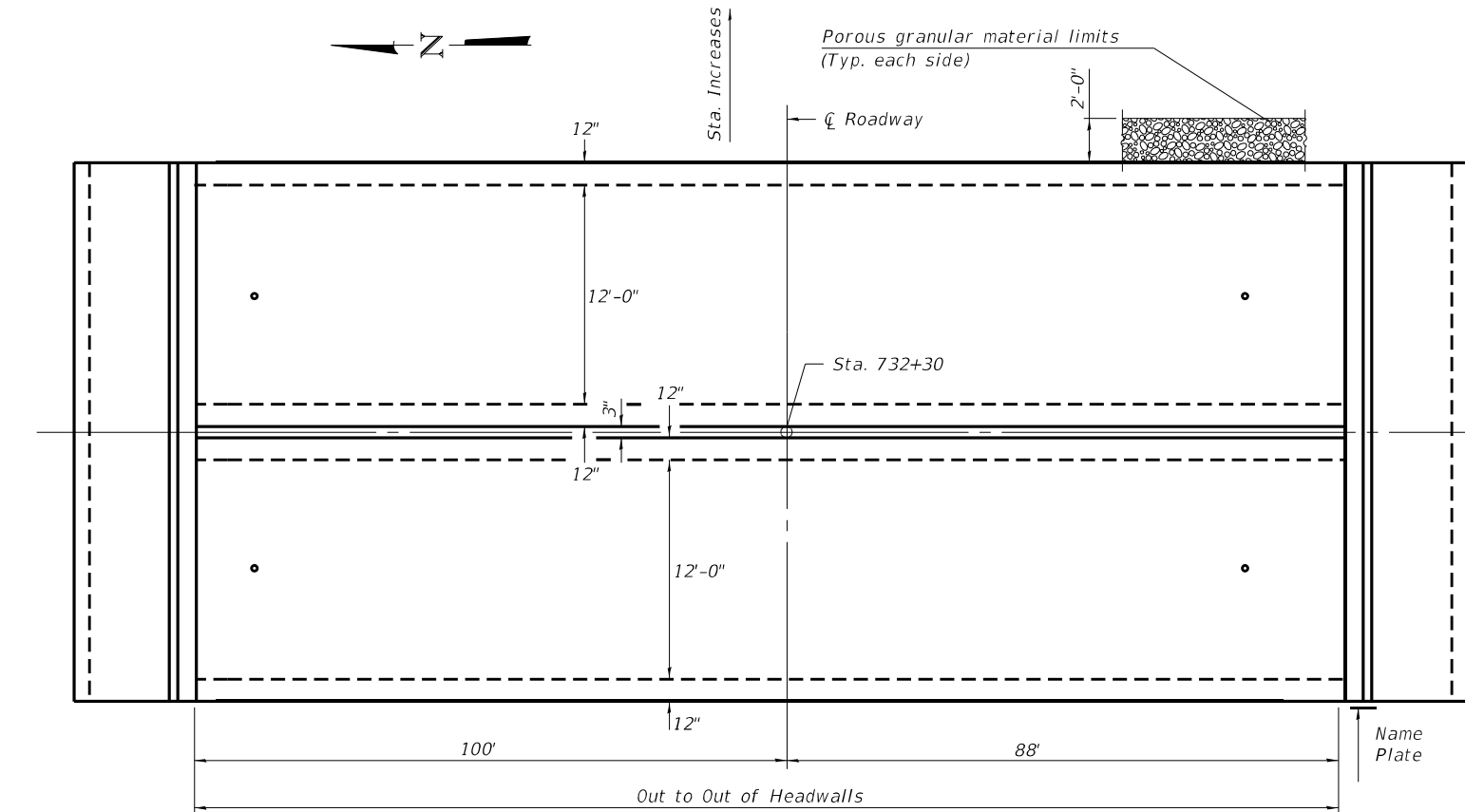
Drain holes shall be provided on exterior culvert walls for each precast box segment with a clear rise greater than 3 ft. The drain hole shall be located within 1/3 of the clear rise of the box culvert, shall not intercept the haunch, and shall conform to the requirements of Article 503.11 of the Standard Specification.

Nonwoven geotextile fabric shall conform to the requirements of Art. 1080.01 of the Standard Specifications. The minimum weight of the fabric shall be 6 ounces per square yard.

Precast concrete box culverts and box culvert end sections shall be backfilled with Porous Granular Embankment in the required excavation areas on the sides of the box culvert from the top of the box culvert to the bottom of the box culvert. This area of PGE is included in the Porous Granular Embankment pay item. The 6-inch thick layer of porous granular material required under the precast concrete box culvert, according to Section 540.06 of the standard specifications, shall also apply to the end sections. Cost of this porous granular material will not be paid for separately but shall be included in the unit price of the work for which it is required.



ELEVATION



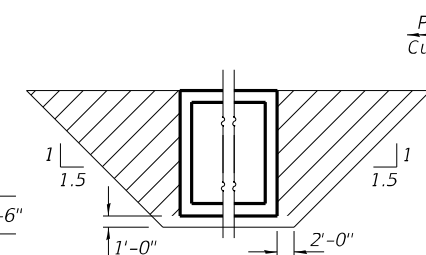
PLAN

WATERWAY INFORMATION

Drainage Area = 33.1 sq. mi.		Low Grade Elev. = 723.9 @ Sta. 728+90							
Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater El.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	10	771	218	244	717.6	1.2	0.9	718.8	718.5
Base	50	1107	218	272	718.8	1.9	1.3	720.7	720.1
Existing	100	1256	218	284	719.3	2.3	1.5	721.6	720.8
Overtopping	479	1655	218	NA	720.4	3.5	NA	723.9	NA
Max. Calc.	500	1696	NA	288	720.5	NA	2.4	NA	722.9

DCB-GPE

7-23-2021

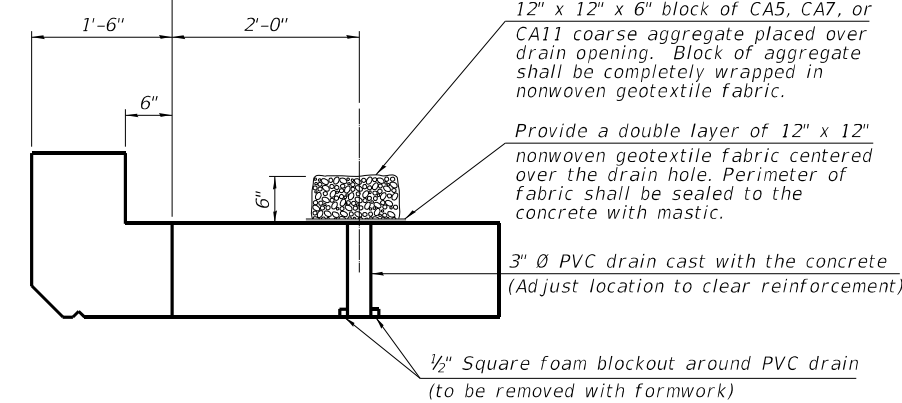


PAY LIMITS FOR POROUS GRANULAR EMBANKMENT

(Hatched area)

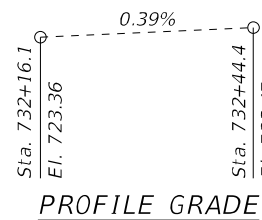
SEE EXCAVATION & CULVERT DETAIL

Pay Limits for Box Culvert End Sections and **Pay Limits for Precast Concrete Box Culverts**



DRAIN DETAIL

(All costs associated with furnishing and constructing the above drain detail will not be measured for payment but shall be included in the contract unit price for the associated work.)



PROFILE GRADE

DESIGN SPECIFICATIONS

2020 AASHTO LRFD Bridge Design Specifications
Customary U.S. Units, 9th Edition

LOADING HL-93

DESIGN STRESSES

PRECAST UNITS

$f'_c = 5,000$ psi
 $f_y = 65,000$ psi (Welded Wire Reinforcement)

FIELD UNITS

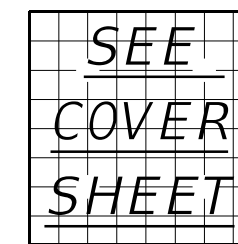
$f'_c = 3,500$ psi
 $f_y = 65,000$ psi (Welded Wire Reinforcement)

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Removal of Existing Structure, Special	Each	1
Name Plates	Each	1
Box Culvert End Sections, Culvert No. 1	Each	2
Precast Concrete Box Culverts 12"x12" (SPECIAL)	Foot	376
Porous Granular Embankment	Cu. Yd.	3739

STATION BUILT 202 BY STATE OF ILLINOIS F.A.P. RT. 313A SEC. (94-17)CR LOADING HL-93 STR. NO. 094-2019

NAME PLATE See Std. 515001



LOCATION SKETCH

GENERAL PLAN AND ELEVATION
IL RTE. 110 / US RTE. 34 OVER CEDAR CREEK
F.A.P. RTE. 313A SEC. (94-17)CR
WARREN COUNTY
STATION 732+30
S.N. 094-2019

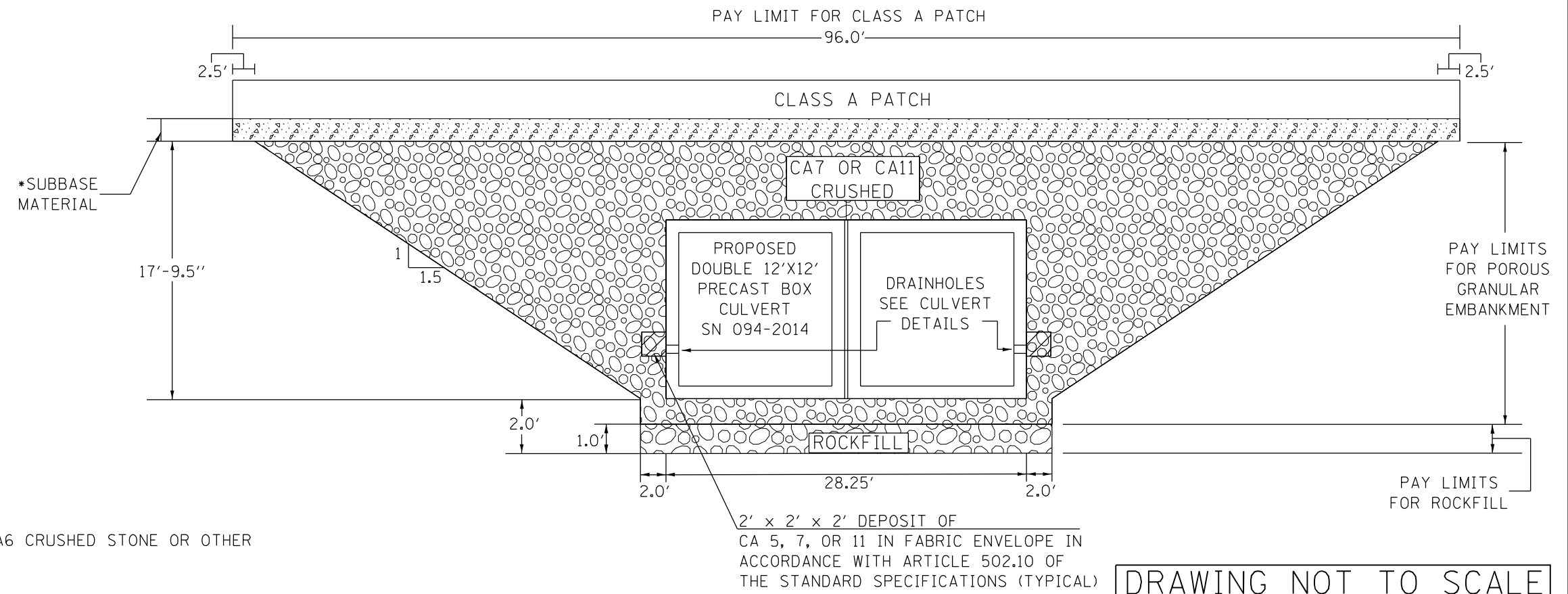
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCALE: SHEET OF SHEETS STA. TO STA.

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313A	(94-17)CR	WARREN	33A	33A

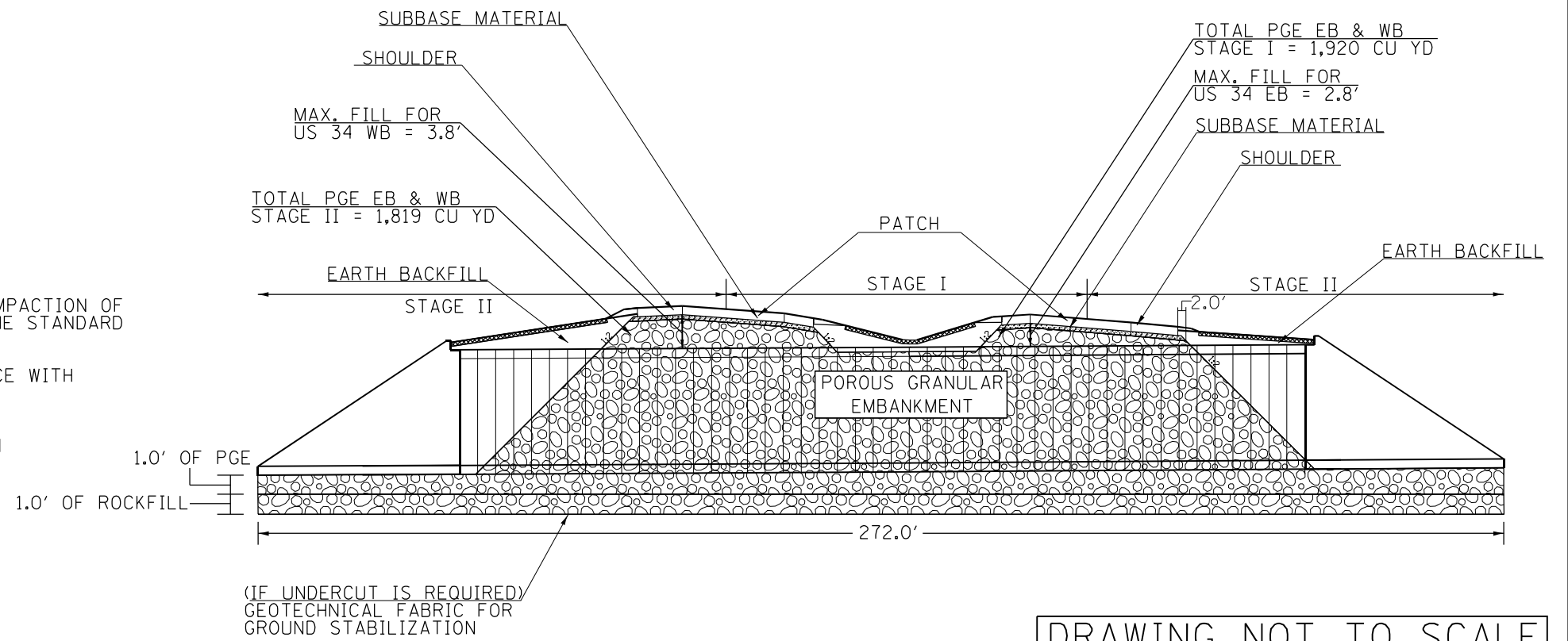
CONTRACT NO. 68E43
ILLINOIS FED. AID PROJECT

ROADWAY PROFILE VIEW



DRAWING NOT TO SCALE

ROADWAY CROSS SECTION VIEW



DRAWING NOT TO SCALE

NOTES:

- EXCEPT AS SPECIFIED IN THIS DETAIL, THE PLACEMENT AND COMPACTION OF BACKFILL SHALL BE IN ACCORDANCE WITH ARTICLE 502.10 OF THE STANDARD SPECIFICATIONS.
- POROUS GRANULAR EMBANKMENT SHALL BE PLACED IN ACCORDANCE WITH SECTION 207 OF THE STANDARD SPECIFICATIONS.
- IF NO UNDERCUT IS REQUIRED, A 6" MINIMUM LAYER OF POROUS GRANULAR EMBANKMENT SHALL BE PLACED BELOW THE ELEVATION OF THE BOTTOM OF BOX CULVERT.

MODEL Cross Sections
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PROJECT: I:\DOT\Documents\DOT Office\Director_68e43\68e43.dwg
DATE: 8/23/2022

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	DRAWN -	REVISED -
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PLOT DATE = 8/23/2022	DATE -	REVISED -



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

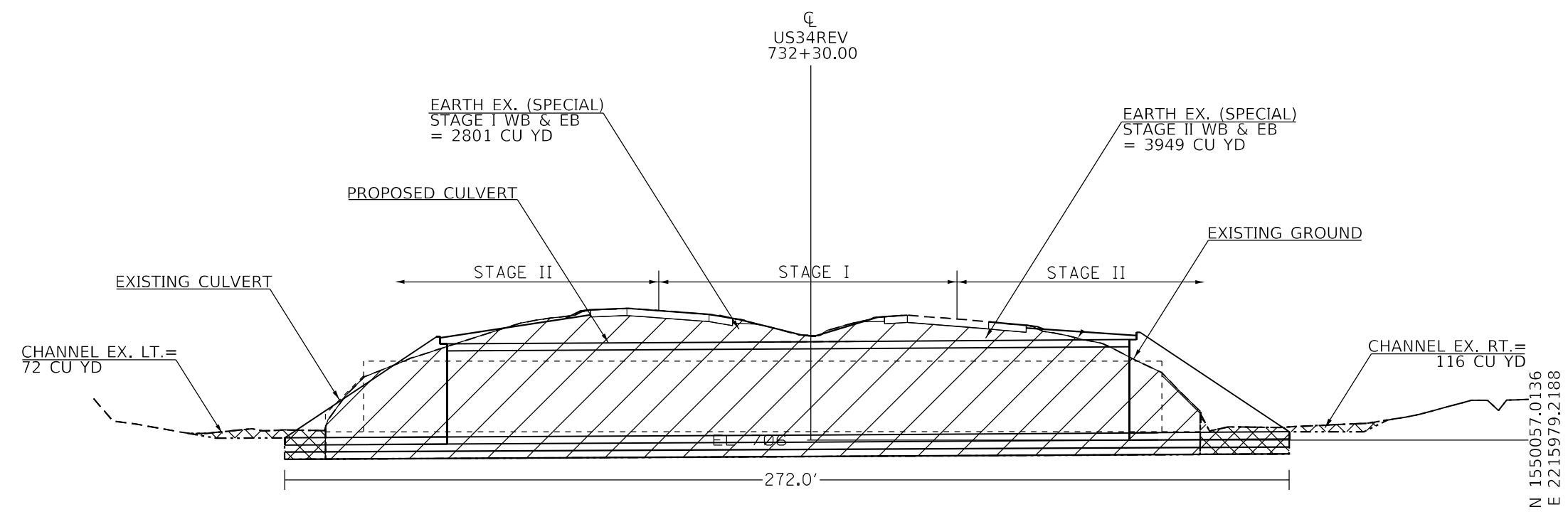
EXCAVATION & CULVERT DETAIL

SCALE:	SHEET	OF	SHEETS	STA.	TO	STA.
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-17)CR	WARREN	57	34
ILLINOIS FED. AID PROJECT			CONTRACT NO. 68E43	

CROSS SECTION VIEW

-  EARTH EXCAVATION SPECIAL
-  CHANNEL EXCAVATION SPECIAL



NOTE:
 EARTH EX. (SPECIAL) QUANTITIES MEASURED USING AVERAGE END AREA CALCULATIONS.
 AREAS MEASURED IN CADD.
 LIMITS OF EARTH EX. (SPECIAL): STA. 731+85.5 TO STA. 732+76.5

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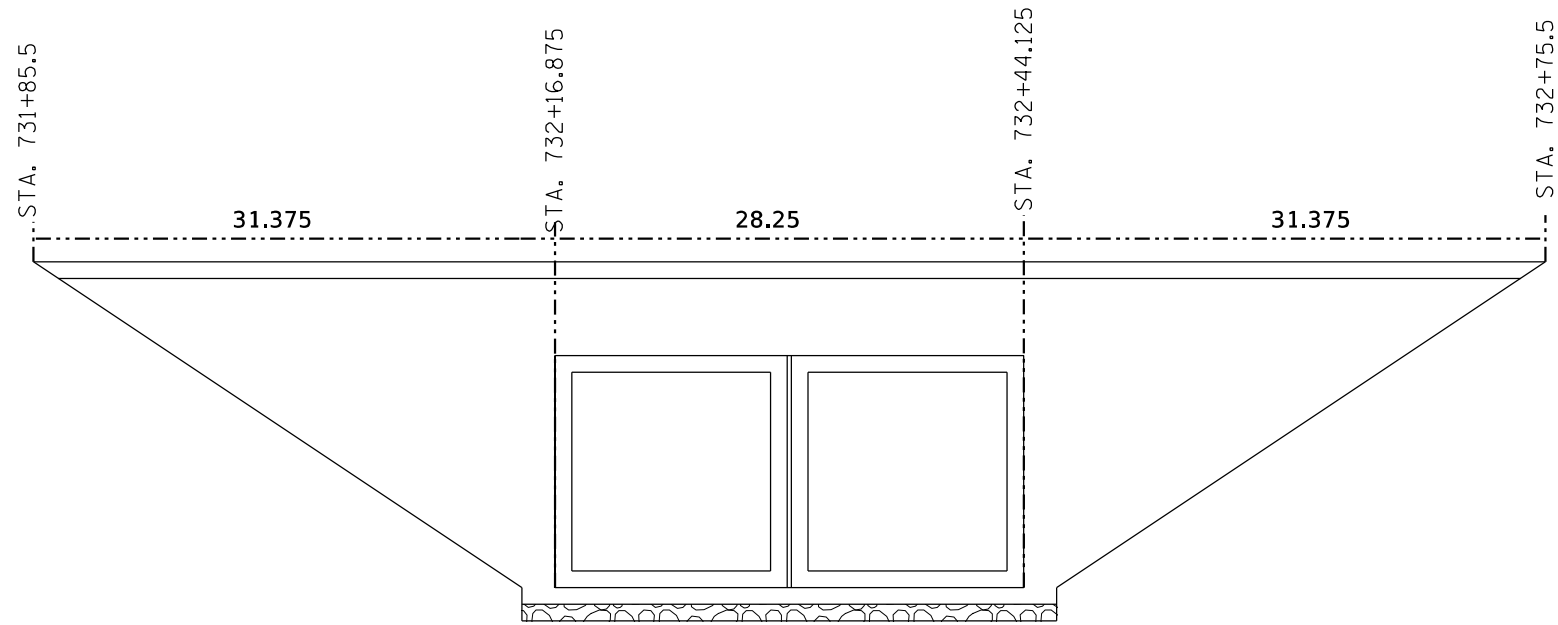
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PLOT DATE = 8/25/2022	DATE -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

EXCAVATION & CULVERT DETAIL

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-17)CR	WARREN	57	35
CONTRACT NO. 68E43				
ILLINOIS FED. AID PROJECT				



STAGE I:

EARTHWORK COMPUTATIONS							
STATION	END AREA SQ FT		DIST FT	AVG OF END AREAS SQ FT		EARTHWORK VOL CU YD	
	CUT	FILL		CUT	FILL	CUT	FILL
STA. 731 + 85	0						
STA. 732 + 16	1638		31	819	0	940.3	
STA. 732 + 16	804						
STA. 732 44	804		28	804	0	833.8	
STA. 732 44	1638						
STA. 732 + 76	0		32	819	0	970.7	
TOTAL CU YD =		2,745		0			

STAGE II EB:

EARTHWORK COMPUTATIONS							
STATION	END AREA SQ FT		DIST FT	AVG OF END AREAS SQ FT		EARTHWORK VOL CU YD	
	CUT	FILL		CUT	FILL	CUT	FILL
STA. 731 + 85	0						
STA. 732 + 16	958		31	479	0	550.0	
STA. 732 + 16	372						
STA. 732 44	372		28	372	0	385.8	
STA. 732 44	958						
STA. 732 + 76	0		32	479	0	567.7	
TOTAL CU YD =		1,503		0			

STAGE II WB:

EARTHWORK COMPUTATIONS							
STATION	END AREA SQ FT		DIST FT	AVG OF END AREAS SQ FT		EARTHWORK VOL CU YD	
	CUT	FILL		CUT	FILL	CUT	FILL
STA. 731 + 85	0						
STA. 732 + 16	1460		31	730	0	838.1	
STA. 732 + 16	648						
STA. 732 44	648		28	648	0	672.0	
STA. 732 44	1460						
STA. 732 + 76	0		32	730	0	885.2	
TOTAL CU YD =		2,375		0			

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PLOT DATE = 8/23/2022	DATE -	REVISED -



**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

EXCAVATION & CULVERT CALCULATION

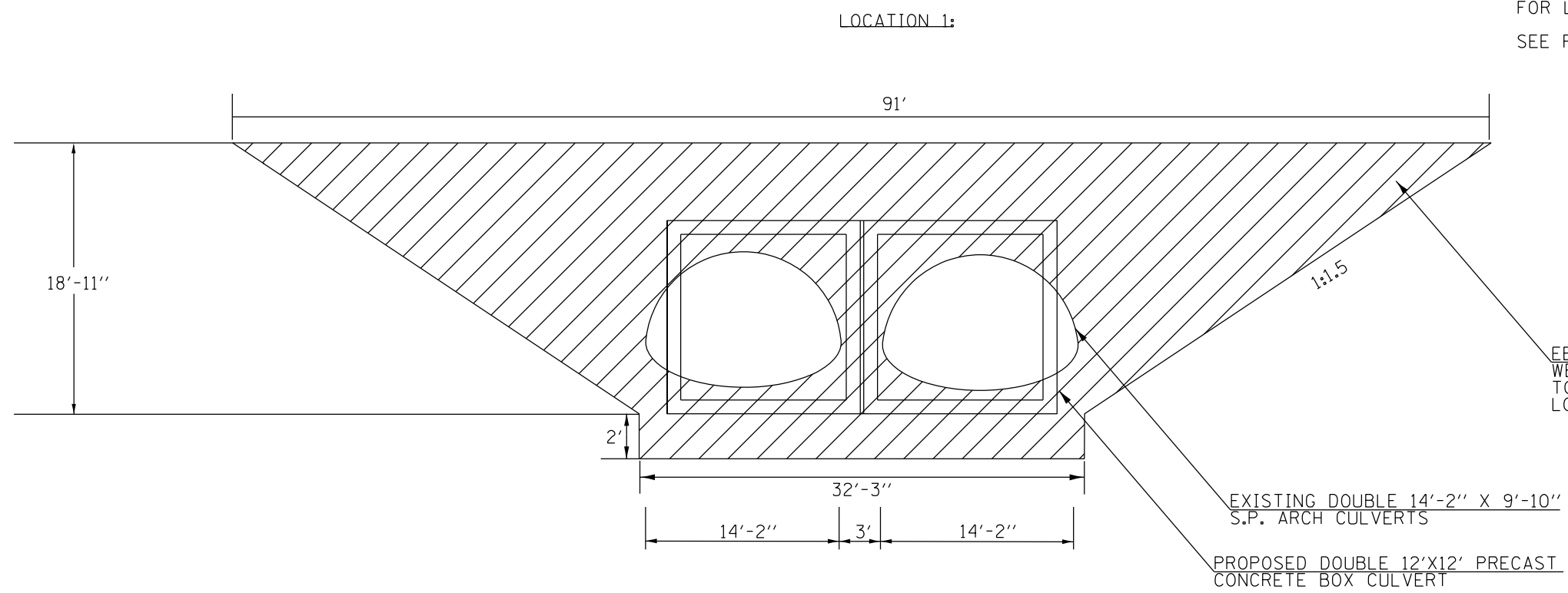
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313	(94-17)CR	WARREN	57	36
CONTRACT NO. 68E43				
ILLINOIS FED. AID PROJECT				

ROADWAY PROFILE VIEW

-  TEMPORARY SOIL RETENTION SYSTEM LOCATION 1 (EB & WB LANES)
-  TEMPORARY SOIL RETENTION SYSTEM LOCATION 2 (EB & WB LANES)

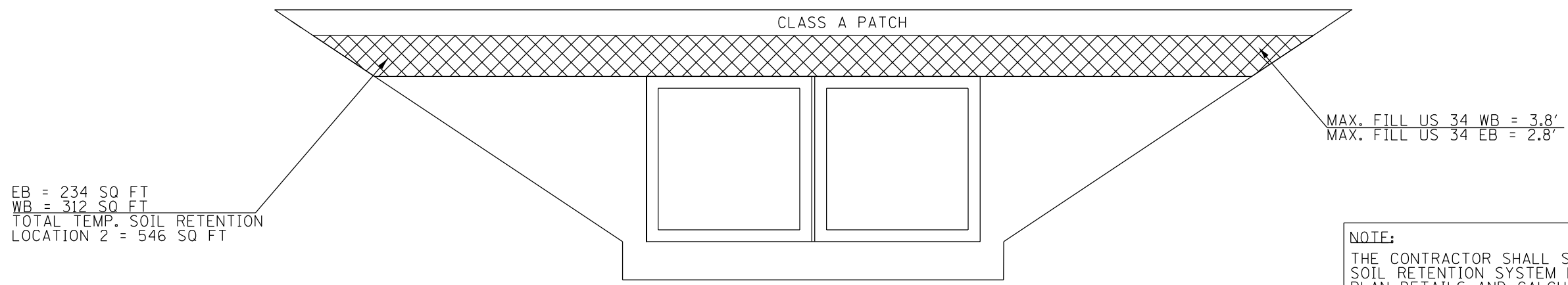
*SEE STAGING & TRAFFIC CONTROL SHEET FOR LOCATION OF TEMPORARY SOIL RETENTION
SEE PAGE 54 & 55 FOR SOIL BORINGS



EB = 1015 SQ FT
WB = 1015 SQ FT
TOTAL TEMP. SOIL RETENTION LOCATION 1 = 2030 SQ FT

EXISTING DOUBLE 14'-2" X 9'-10" S.P. ARCH CULVERTS
PROPOSED DOUBLE 12'X12' PRECAST CONCRETE BOX CULVERT

LOCATION 2:



EB = 234 SQ FT
WB = 312 SQ FT
TOTAL TEMP. SOIL RETENTION LOCATION 2 = 546 SQ FT

MAX. FILL US 34 WB = 3.8'
MAX. FILL US 34 EB = 2.8'

NOTE:
THE CONTRACTOR SHALL SUBMIT A TEMPORARY SOIL RETENTION SYSTEM DESIGN INCLUDING PLAN DETAILS AND CALCULATIONS FOR REVIEW AND ACCEPTANCE BY THE ENGINEER.
EB & WB QUANTITIES CALCULATED BASED ON MAXIMUM FILL LOCATION AT WB LANES.
AREA MEASURED IN CADD.

*DRAWING NOT TO SCALE

MODEL Cross Sections
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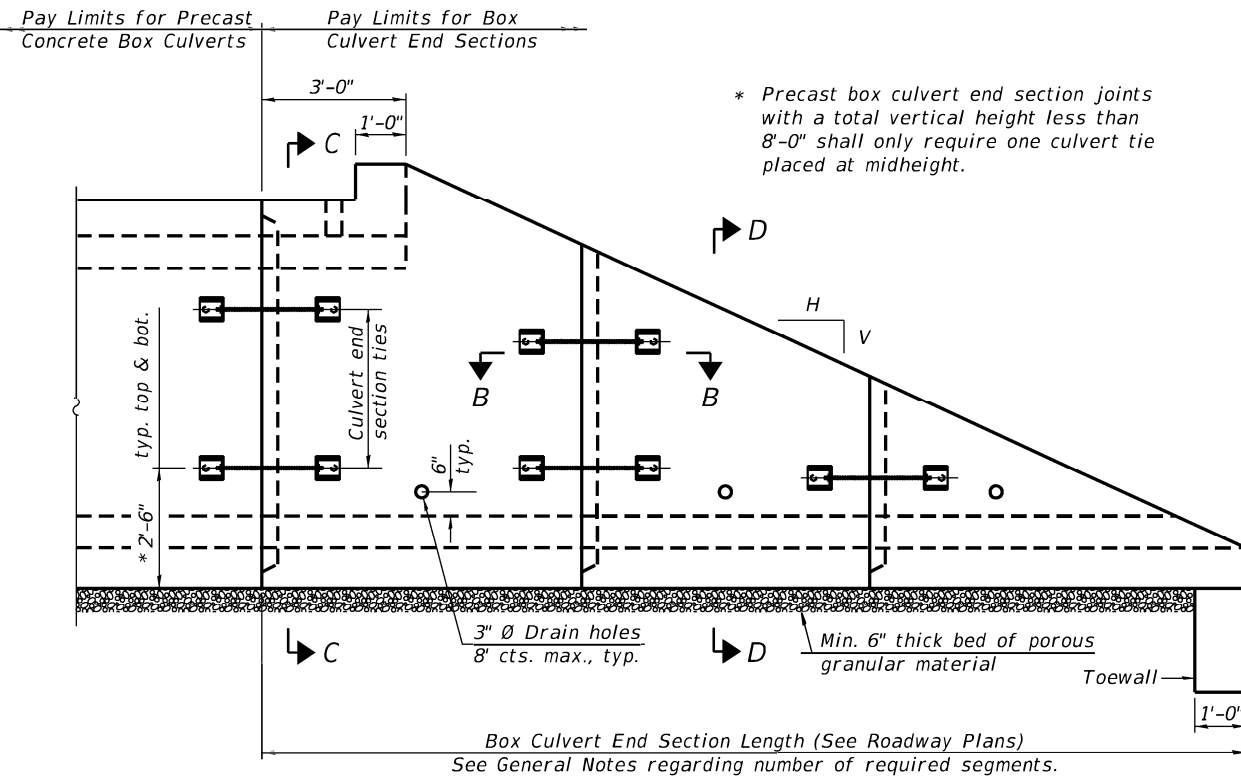
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PLOT DATE = 8/23/2022	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

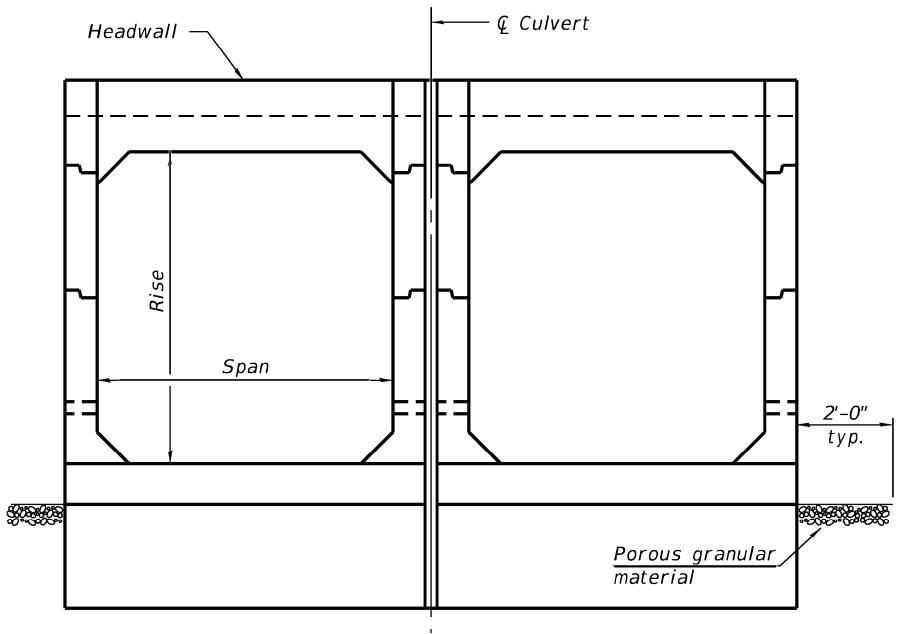
TEMPORARY SOIL RETENTION DETAIL

SCALE: SHEET OF SHEETS STA. TO STA.

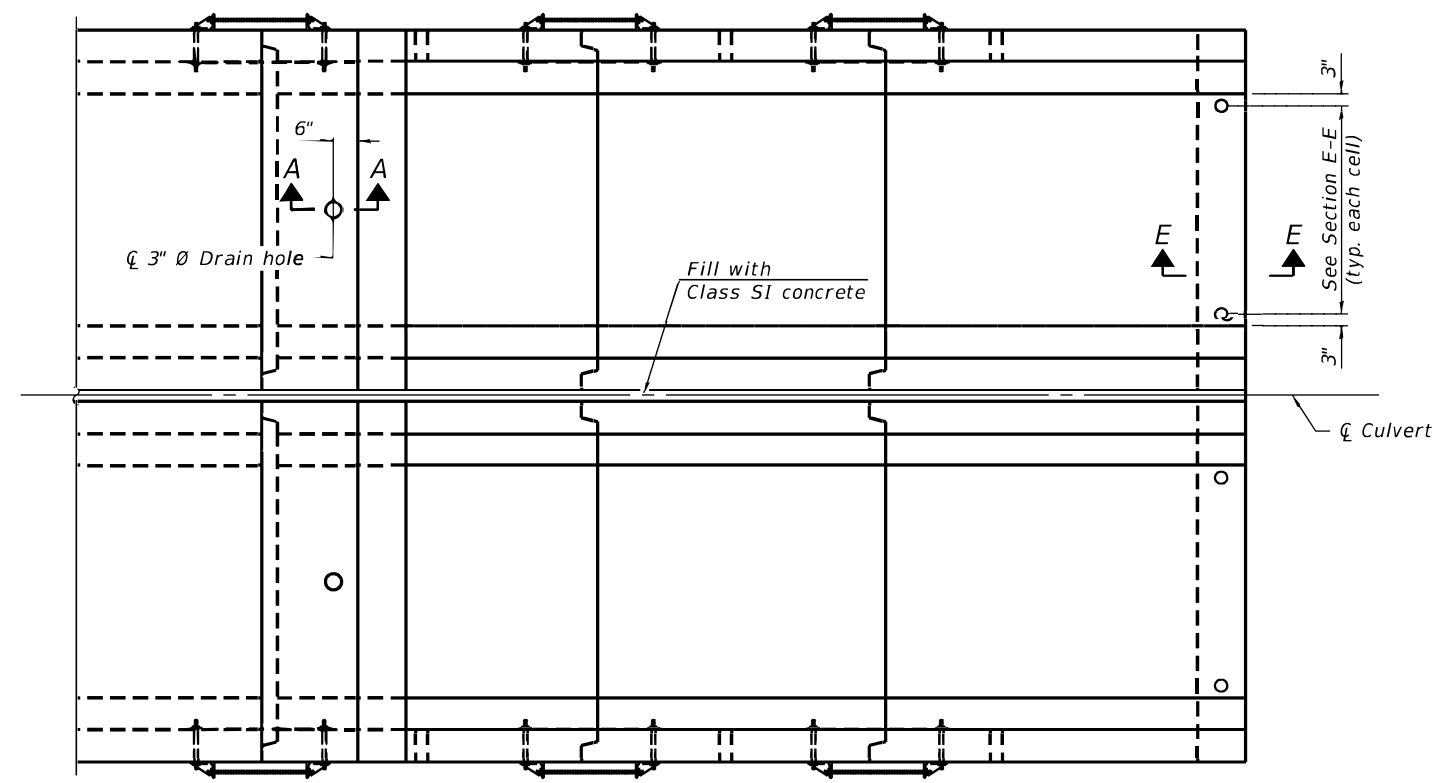
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-17)CR	WARREN	57	37
CONTRACT NO. 68E43				
ILLINOIS FED. AID PROJECT				



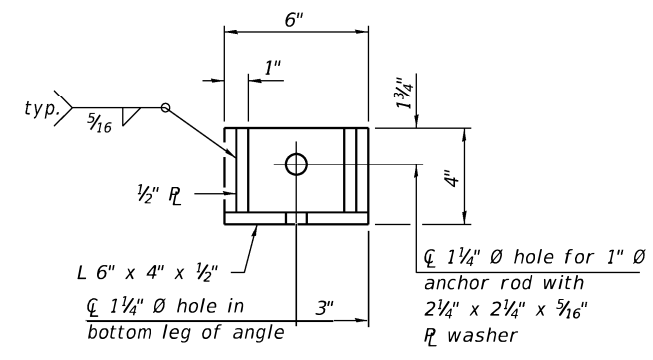
ELEVATION



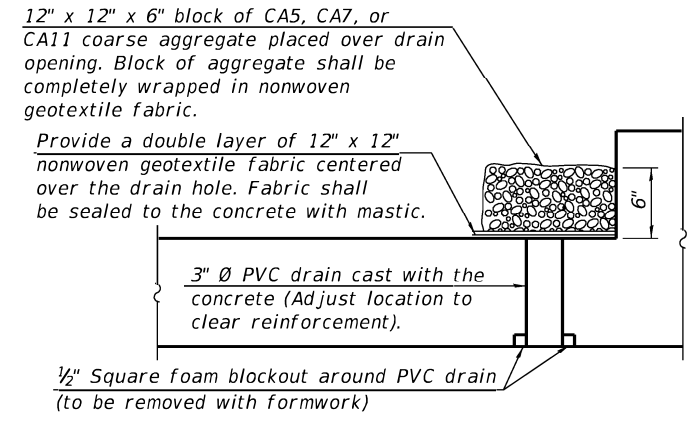
END VIEW



PLAN



RESTRAINT ANGLE DETAIL



SECTION A-A

(All costs associated with furnishing and constructing the above drain detail will not be measured for payment but shall be included in the contract unit price for the associated work.)

GENERAL NOTES

Box Culvert End Sections shall be constructed according to the requirements of Section 540 of the Standard Specifications except as modified herein. This work will be measured for payment as each, with each end of each culvert being one each. End sections will be paid for at the contract unit price per each for Box Culvert End Sections of the culvert number specified.

Typical box section dimensions, materials, and reinforcement details for Box Culvert End Sections shall be according to the requirements of ASTM C 1577 as required for the design of the portion of the culvert within the limits of Precast Concrete Box Culverts except as modified herein.

Number of segments shown in Elevation is for example only. Length and number of precast box sections required to construct Box Culvert End Sections shall be determined by the Contractor.

See roadway plans for embankment slope (V:H).

1" diameter anchor rods for the culvert ties shall conform to the requirements of ASTM F1554, Grade 105. Structural steel for tie plate and restraint angle shall conform to the requirements of Article 1006.04 of the Standard Specifications. All components of the culvert tie detail shall be galvanized according to the requirements of AASHTO M 111 or M 232 as applicable. 2 1/4" x 2 1/4" x 3/16" plate washers shall be provided under each nut required for the anchor rods. Anchor rods connecting precast sections shall be brought to a snug tight condition followed by an additional 1/2 turn on one of the nuts for anchor rods installed in the walls. Match marks shall be provided on the bolt and nut to verify relative rotation between the bolt and the nut. Holes in the walls for the culvert tie assembly may be drilled using core bits in lieu of using formed holes.

All costs associated with furnishing and installing or constructing the toewall and culvert ties will not be measured for payment but shall be included in the contract unit price for Box Culvert End Sections of the culvert number specified.

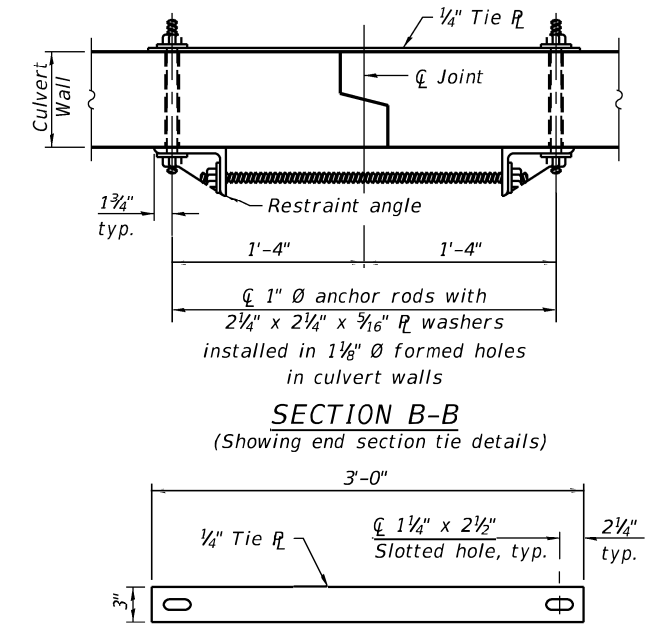
Drain holes shall conform to the requirements of Article 503.11 of the Standard Specifications unless noted otherwise.

Nonwoven geotextile fabric shall conform to the requirements of Article 1080.01. The minimum weight of the fabric shall be 6 oz. / sq. yd..

For end sections with traversable pipe grate systems, see grate detail sheet for required modifications.

The 3" nominal space between adjacent end sections shall be filled with Class SI concrete in accordance with Article 540.06 of the Standard Specifications. Cost included with Box Culvert End Sections.

Details for double cell box culvert shown. Details for other multi-cell box culverts similar.



TIE PLATE DETAIL

MCB-TES

2-17-2017

(Sheet 1 of 2)

USER NAME	DESIGNED -	REVISED
CHECKED -	REVISOR	
PLOT SCALE = 0.11 5/8" = 1'	DRAWN -	REVISOR
PLOT DATE	CHECKED -	REVISOR

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**MULTI-CELL PRECAST BOX CULVERT TAPERED END SECTIONS
STRUCTURE NO. 094-2019**

SHEET NO. OF SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-17)CR	WARREN	57	38
CONTRACT NO. 68E43				

ILLINOIS FED. AID PROJECT

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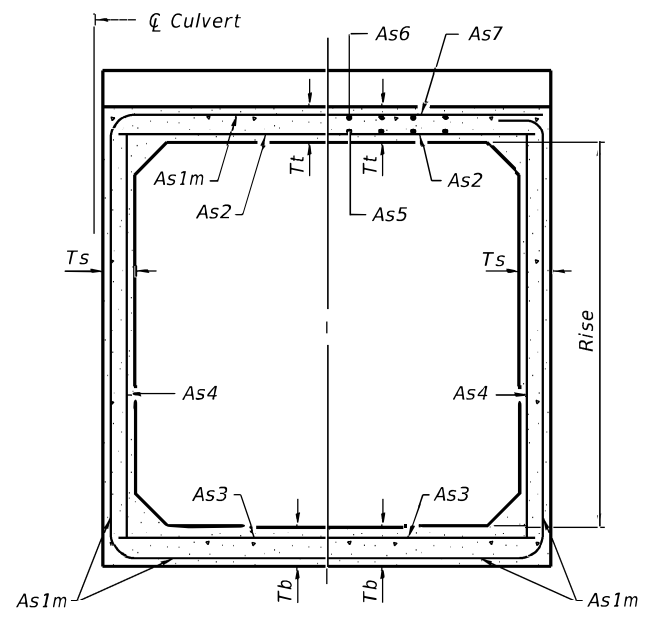
As1m REINFORCEMENT (in. ² /ft)											
Rise (ft) \ Ts (in.)	2	3	4	5	6	7	8	9	10	11	12
4	0.19	0.17									
5	0.26	0.21	0.18								
6	0.22	0.26	0.23	0.22							
7	0.25	0.33	0.59	0.27	0.28						
8	0.40	0.35	0.43	0.39	0.36	0.34	0.40				
9	0.44	0.39	0.35	0.43	0.40	0.37	0.36	0.48			
10	0.48	0.42	0.38	0.47	0.44	0.41	0.38	0.42	0.56		
11	0.52	0.45	0.54	0.50	0.46	0.44	0.41	0.46	0.50	0.65	
12	0.55	0.49	0.58	0.54	0.50	0.48	0.45	0.46	0.46	0.61	0.75

(As1m reinforcement based upon welded wire reinforcement conforming to AASHTO M 55 or M 221).

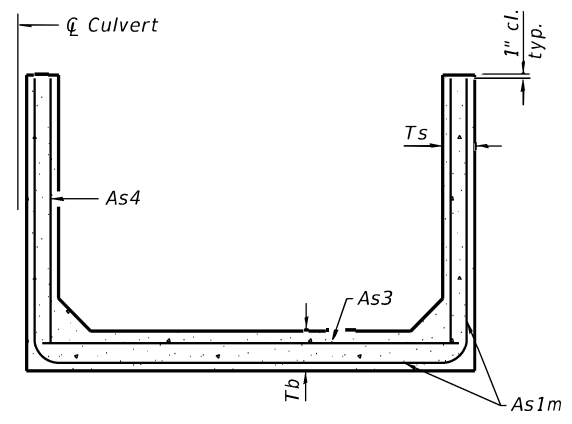
Notes:
 Alternate Section D-D is provided to allow the Contractor the option of casting the bottom slab of the end section first followed by construction of the sidewalls using conventional forming methods. Shop drawings that detail slab thickness and reinforcement layout shall be submitted to the Engineer for review and approval when using Alternate Section D-D.
 The size and spacing of the v2 bars shall provide a minimum reinforcement area along each face of the walls (in.²/ft.) equal to 1.10*(As1m). v2 bars may consist of #3 thru #6 size reinforcement bars and the longitudinal spacing shall not exceed the lesser of the wall thickness or 8 inches.
 Bonded construction joints shall be prepared according to Article 503.09 of the Standard Specifications.
 Sections C-C, D-D, and Headwall Elevation are symmetric about ϕ culvert through 180° rotation.

! 1 DIMENSION

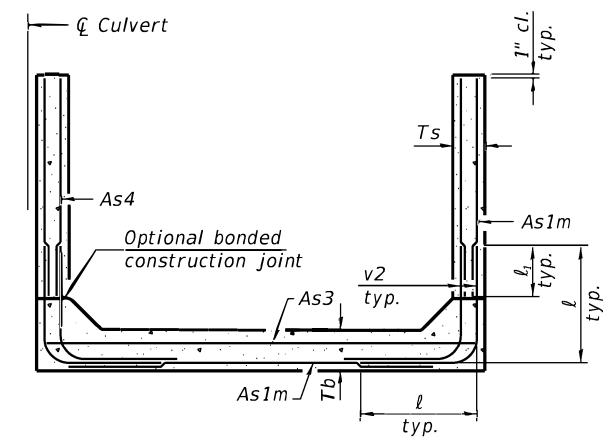
- #3 bar = 2'-0"
- #4 bar = 2'-8"
- #5 bar = 3'-4"
- #6 bar = 3'-11"



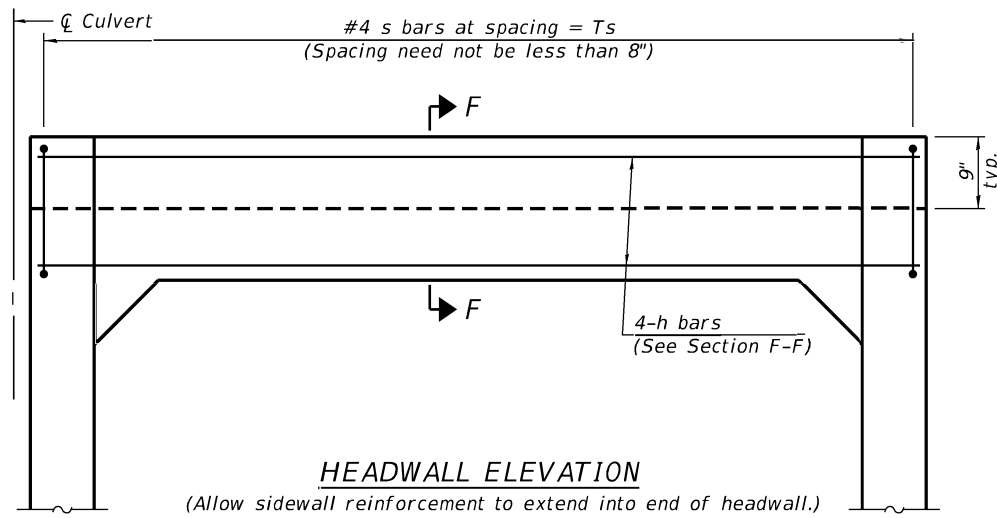
SECTION C-C



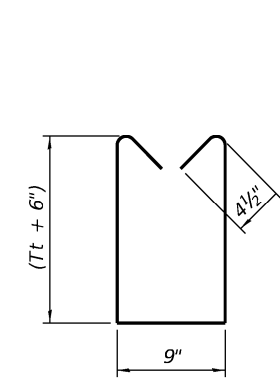
SECTION D-D



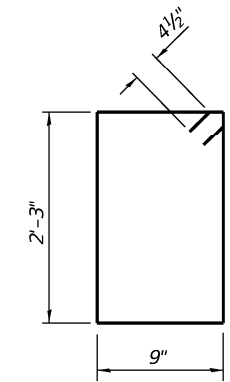
ALTERNATE SECTION D-D



HEADWALL ELEVATION



BAR s



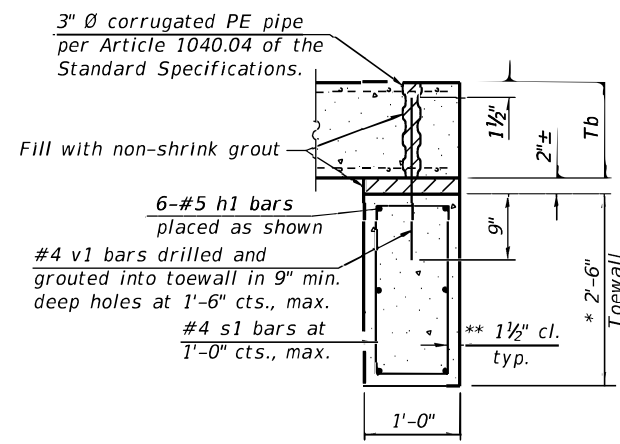
BAR s1

TOEWALL CONSTRUCTION SEQUENCE

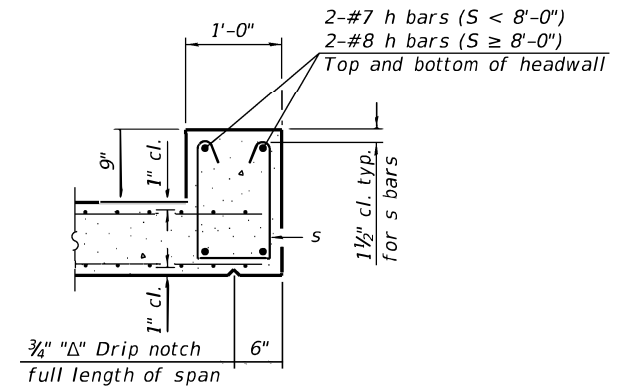
1. Perform excavation and construct toewall.
2. Backfill according to the applicable paragraphs of Article 502.10 of the Standard Specifications and place bedding for precast box culvert end sections.
3. Set precast box culvert end section.
4. Drill and epoxy grout reinforcement in toewall in accordance with Section 584 of the Standard Specifications.
5. Pressure grout voids using non-shrink grout conforming to Section 1024 of the Standard Specifications.

* The Contractor may furnish a precast or cast-in-place toewall. The Contractor shall be responsible for the strength and stability of the precast toewall during handling. Additional lifting points may be required depending upon the length of the toewall or the Contractor may need to modify the design of the toewall for the proposed handling the method.

** If soil conditions permit, the sides of the toewall may be poured directly against the soil. The clear cover on the sides of the toewall shall be increased to 3" by increasing the thickness of the toewall.



SECTION E-E



SECTION F-F

BILL OF MATERIAL

Item	Unit	Total
Box Culvert End Sections, Culvert No. 1	Each	2

(Sheet 2 of 2)

FILE NAME = P:\092072\1167\4 CAD - DWG\4.4 Struc\0462008-68010-010-Multi-Cell Precast Box Culvert Tapered End Sections.dgn

MCB-TES

2-17-2017

USER NAME = jstein	DESIGNED - ALN	REVISED
	CHECKED -	REVISED
PLOT SCALE = 0.1 5/8" = 1'-0"	DRAWN	REVISED
PLOT DATE = 8/14/2018	CHECKED -	REVISED

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**MULTI-CELL PRECAST BOX CULVERT TAPERED END SECTIONS
STRUCTURE NO. 094-2019**

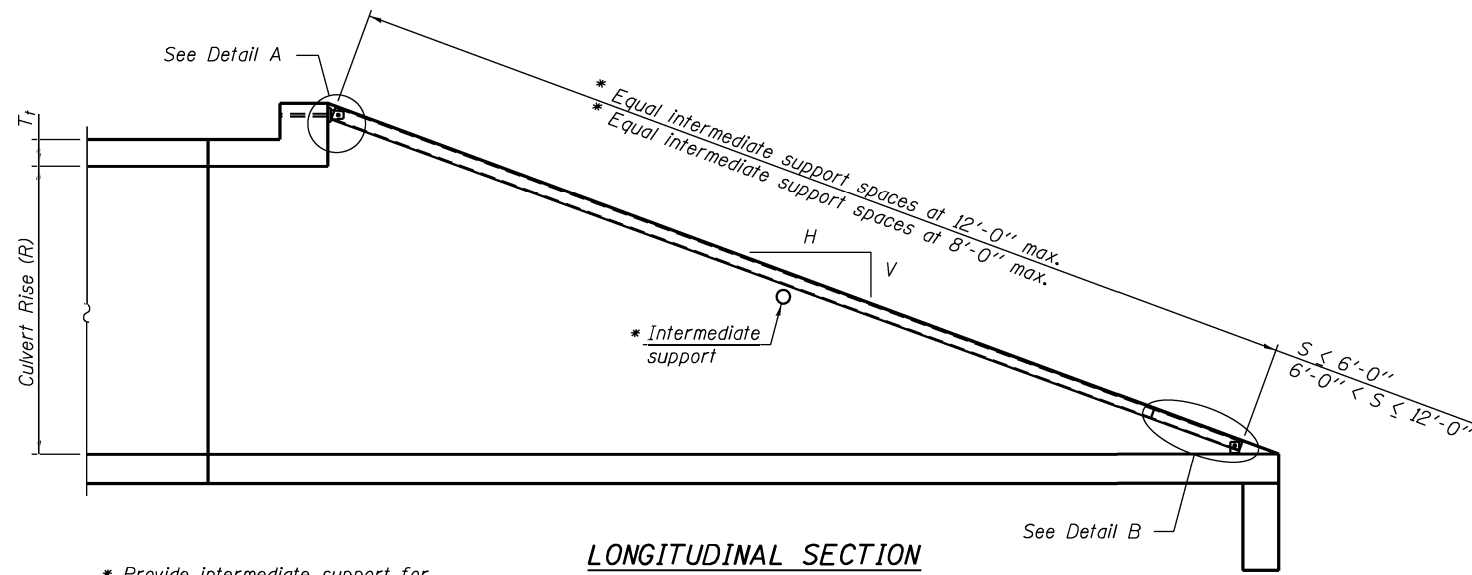
SHEET NO. OF SHEETS

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-7)CR	WARREN	57	39
				CONTRACT NO. 6BE43
				ILLINOIS FED. AID PROJECT

GENERAL NOTES

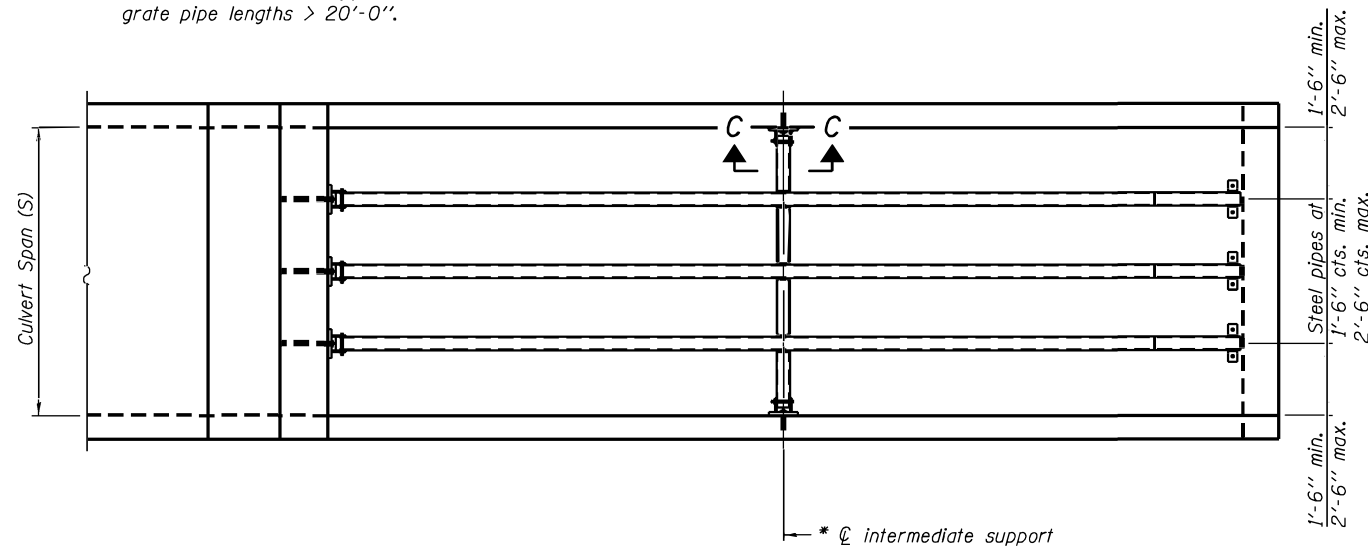
The minimum edge distance from the center of a hole to the free edge of a structural shape or plate shall be 1 1/2" unless noted otherwise.
 This standard shall only be used on concrete end sections not skewed more than ±15 degrees with roadway.

The Contractor may install the thru bolts using drilling and grouting in lieu of providing a formed hole using steel pipe. Installation shall be in accordance with Article 509.06 using a method that results in the annulus surrounding the bolt being completed filled with adhesive. The method of drilling shall not result in spalled concrete at the exit face. Epoxy grouted thru bolts shall be snug tightened followed by an additional 1/3 turn on the interior nut at final installation. Cost included with Traversable Pipe Grate.

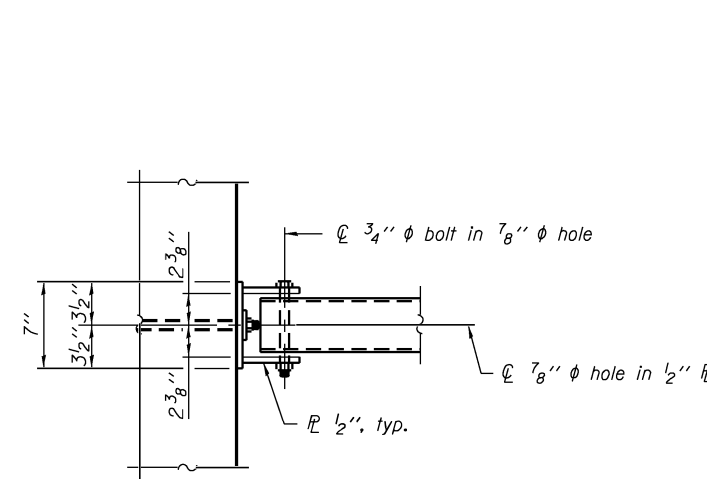


LONGITUDINAL SECTION

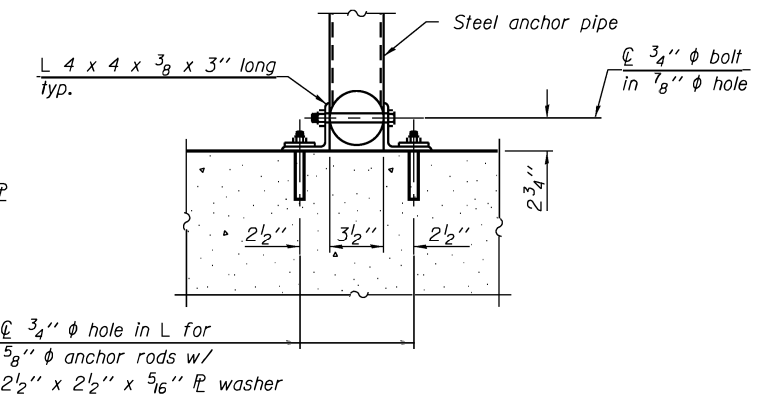
* Provide intermediate support for grate pipe lengths > 20'-0".



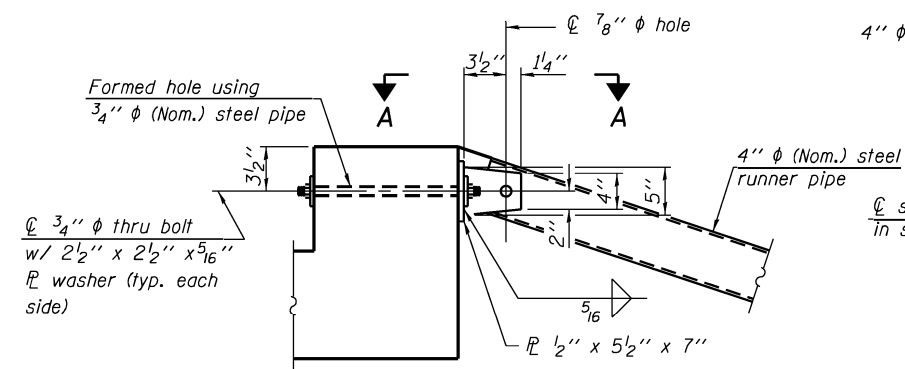
PLAN VIEW



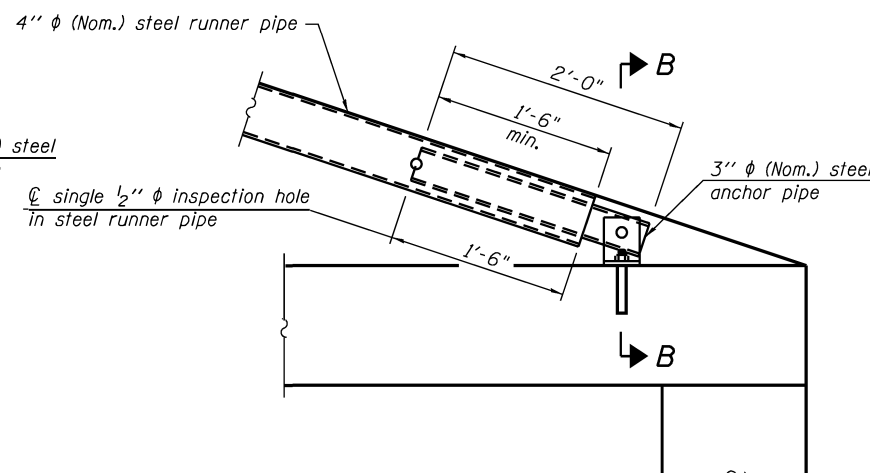
VIEW A-A



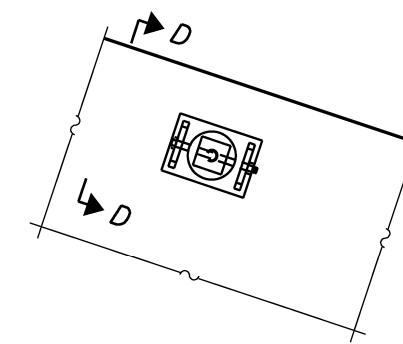
SECTION B-B



DETAIL A

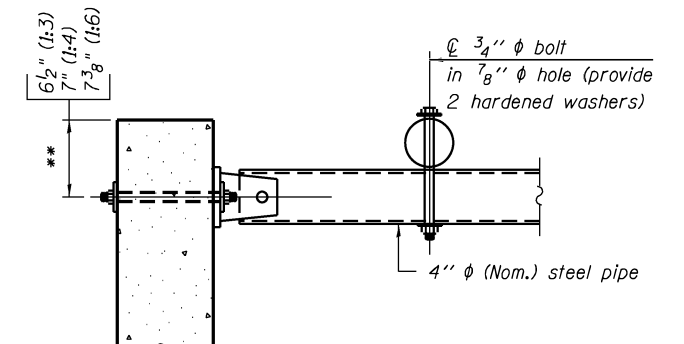


DETAIL B



VIEW C-C

(See Detail A for dimensions and details not shown.)



SECTION D-D

** Measured perpendicular to top of culvert wall. In addition, formed hole shall be located a minimum of 6" measured horizontally from any vertical joints necessary for construction of the culvert end section.

TPGBC-ZS-1

8-21-13

FILE NAME =	USER NAME =	DESIGNED -	REVISED
		CHECKED -	REVISED
		DRAWN -	REVISED
		CHECKED -	REVISED

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

TRAVERSABLE PIPE GRATE FOR BOX CULVERTS

(Sheet 1 of 2)

SHEET NO. OF SHEETS

F.A. RTÉ.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	(94-17)CR	WARREN	57	40
CONTRACT NO.				
ILLINOIS FED. AID PROJECT				

PIPE-GRATE SCHEDULE FOR BOX CULVERT END SECTIONS

Precast Box Culvert Dimensions			Slope of End Section								
			1:3			1:4			1:6		
S (ft)	R (ft)	T ₁ (in)	Main Pipe No. / Length	Int. Support No. / Length	Total Length of Pipe	Main Pipe No. / Length	Int. Support No. / Length	Total Length of Pipe	Main Pipe No. / Length	Int. Support No. / Length	Total Length of Pipe
4	2	7.5	1 @ 8'-10"	N/A	8'-10"	1 @ 11'-7"	N/A	11'-7"	1 @ 17'-2"	N/A	17'-2"
4	2	5	1 @ 8'-2"	N/A	8'-2"	1 @ 10'-8"	N/A	10'-8"	1 @ 15'-11"	N/A	15'-11"
4	3	7.5	1 @ 12'-0"	N/A	12'-0"	1 @ 15'-8"	N/A	15'-8"	1 @ 23'-3"	1 @ 3'-7"	26'-10"
4	3	5	1 @ 11'-4"	N/A	11'-4"	1 @ 14'-10"	N/A	14'-10"	1 @ 22'-0"	1 @ 3'-7"	25'-7"
4	4	7.5	1 @ 15'-2"	N/A	15'-2"	1 @ 19'-10"	1 @ 3'-7"	23'-5"	1 @ 29'-4"	2 @ 3'-7"	36'-6"
4	4	5	1 @ 14'-6"	N/A	14'-6"	1 @ 18'-11"	N/A	18'-11"	1 @ 28'-1"	2 @ 3'-7"	35'-3"
5	2	8	1 @ 8'-11"	N/A	8'-11"	1 @ 11'-9"	N/A	11'-9"	1 @ 17'-5"	N/A	17'-5"
5	2	6	1 @ 8'-5"	N/A	8'-5"	1 @ 11'-1"	N/A	11'-1"	1 @ 16'-5"	N/A	16'-5"
5	3	8	1 @ 12'-1"	N/A	12'-1"	1 @ 15'-10"	N/A	15'-10"	1 @ 23'-6"	1 @ 4'-7"	28'-1"
5	3	6	1 @ 11'-7"	N/A	11'-7"	1 @ 15'-2"	N/A	15'-2"	1 @ 22'-6"	1 @ 4'-7"	27'-1"
5	4	8	1 @ 15'-3"	N/A	15'-3"	1 @ 20'-0"	1 @ 4'-7"	24'-7"	1 @ 29'-7"	2 @ 4'-7"	38'-9"
5	4	6	1 @ 14'-9"	N/A	14'-9"	1 @ 19'-3"	N/A	19'-3"	1 @ 28'-7"	2 @ 4'-7"	37'-9"
5	5	8	1 @ 18'-5"	N/A	18'-5"	1 @ 24'-1"	2 @ 4'-7"	33'-3"	1 @ 35'-8"	3 @ 4'-7"	49'-5"
5	5	6	1 @ 17'-11"	N/A	17'-11"	1 @ 23'-5"	1 @ 4'-7"	28'-0"	1 @ 34'-8"	2 @ 4'-7"	43'-10"
6	2	8	2 @ 8'-11"	N/A	17'-10"	2 @ 11'-9"	N/A	23'-6"	2 @ 17'-5"	N/A	34'-10"
6	2	7	2 @ 8'-8"	N/A	17'-4"	2 @ 11'-5"	N/A	22'-10"	2 @ 16'-11"	N/A	33'-10"
6	3	8	2 @ 12'-1"	N/A	24'-2"	2 @ 15'-10"	N/A	31'-8"	2 @ 23'-6"	1 @ 5'-7"	52'-7"
6	3	7	2 @ 11'-10"	N/A	23'-8"	2 @ 15'-6"	N/A	31'-0"	2 @ 23'-0"	1 @ 5'-7"	51'-7"
6	4	8	2 @ 15'-3"	N/A	30'-6"	2 @ 20'-0"	1 @ 5'-7"	45'-7"	2 @ 29'-7"	2 @ 5'-7"	70'-4"
6	4	7	2 @ 15'-0"	N/A	30'-0"	2 @ 19'-8"	1 @ 5'-7"	44'-11"	2 @ 29'-1"	2 @ 5'-7"	69'-4"
6	5	8	2 @ 18'-5"	N/A	36'-10"	2 @ 24'-1"	2 @ 5'-7"	59'-4"	2 @ 35'-8"	3 @ 5'-7"	88'-1"
6	5	7	2 @ 18'-2"	N/A	36'-4"	2 @ 23'-9"	2 @ 5'-7"	58'-8"	2 @ 35'-2"	2 @ 5'-7"	81'-6"
6	6	8	2 @ 21'-7"	1 @ 5'-7"	48'-9"	2 @ 28'-3"	2 @ 5'-7"	67'-8"	2 @ 41'-9"	3 @ 5'-7"	100'-3"
6	6	7	2 @ 21'-4"	1 @ 5'-7"	48'-3"	2 @ 27'-11"	2 @ 5'-7"	67'-0"	2 @ 41'-3"	3 @ 5'-7"	99'-3"
7	2	8	2 @ 8'-11"	N/A	17'-10"	2 @ 11'-9"	N/A	23'-6"	2 @ 17'-5"	N/A	34'-10"
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7	4	8	2 @ 15'-3"	N/A	30'-6"	2 @ 20'-0"	2 @ 6'-7"	53'-2"	2 @ 29'-7"	3 @ 6'-7"	78'-11"
7	5	8	2 @ 18'-5"	N/A	36'-10"	2 @ 24'-1"	3 @ 6'-7"	67'-11"	2 @ 35'-8"	4 @ 6'-7"	97'-8"
7	6	8	2 @ 21'-7"	2 @ 6'-7"	56'-4"	2 @ 28'-3"	3 @ 6'-7"	76'-3"	2 @ 41'-9"	5 @ 6'-7"	116'-5"
7	7	8	2 @ 24'-9"	3 @ 6'-7"	69'-3"	2 @ 32'-4"	4 @ 6'-7"	91'-0"	2 @ 47'-10"	6 @ 6'-7"	135'-2"
8	2	8	3 @ 8'-11"	N/A	26'-9"	3 @ 11'-9"	N/A	35'-3"	3 @ 17'-5"	N/A	52'-3"
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12	12	12	4 @ 41'-8"	5 @ 11'-7"	224'-7"	4 @ 54'-4"	6 @ 11'-7"	286'-10"	4 @ 80'-3"	10 @ 11'-7"	436'-10"

TPGBC-ZS-2

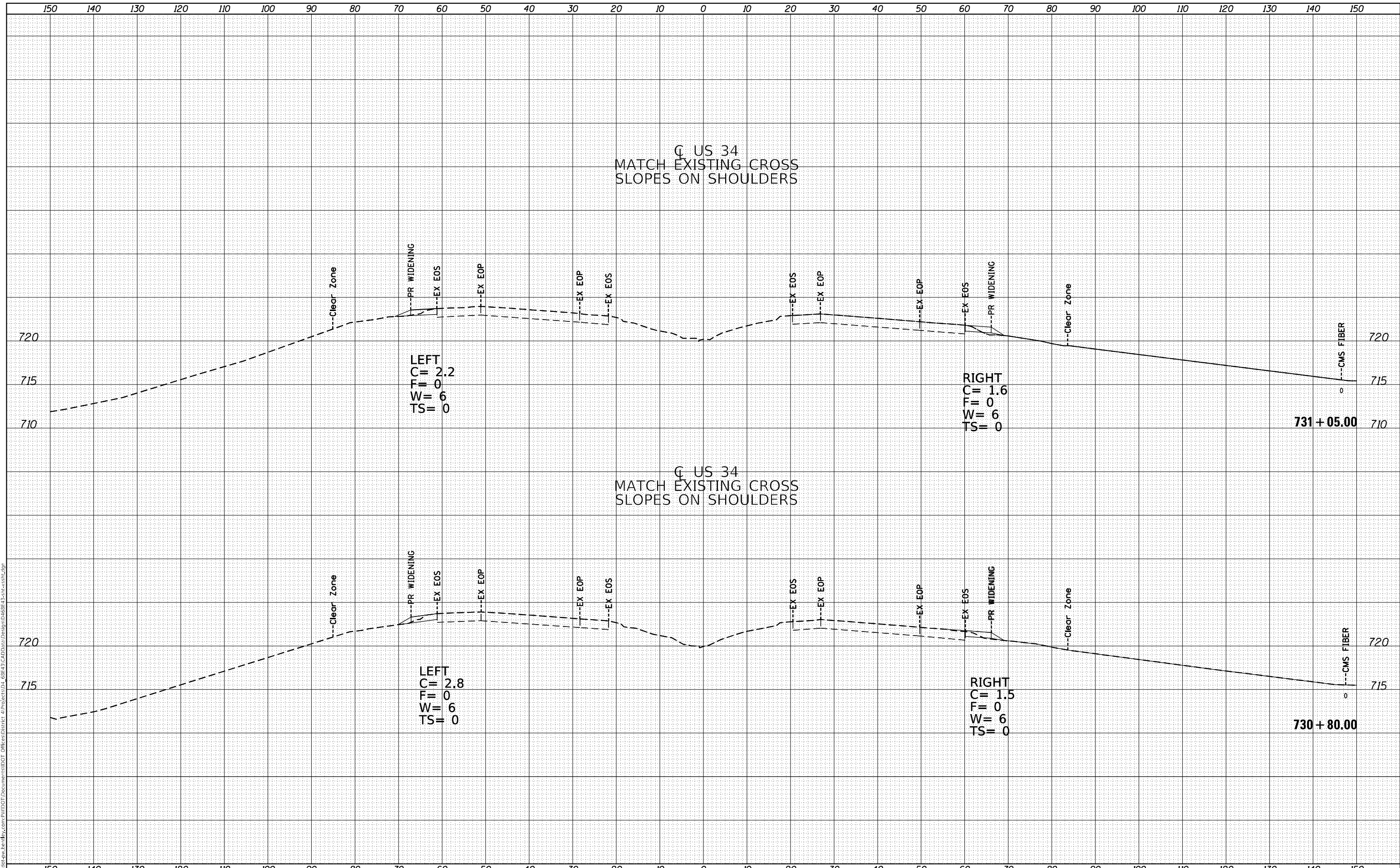
8-21-13

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PLOT DATE #DATE*	CHECKED -	REVISIED -			313	(94-17)CR	WARREN	57	41	
	DRAWN -	REVISIED -			CONTRACT NO. 68E43					
	CHECKED -	REVISIED -			SHEET NO. OF SHEETS					

FINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
NO.	TEMPLATE		
	AREAS CHECKED		

ORIGINAL SURVEY	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
NO.	TEMPLATE		
	AREAS CHECKED		

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Q US 34
 MATCH EXISTING CROSS
 SLOPES ON SHOULDERS

Q US 34
 MATCH EXISTING CROSS
 SLOPES ON SHOULDERS

LEFT
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 F = 0
 W = 6
 TS = 0

RIGHT
 C = 1.6
 F = 0
 W = 6
 TS = 0

LEFT
 C = 2.8
 F = 0
 W = 6
 TS = 0

RIGHT
 C = 1.5
 F = 0
 W = 6
 TS = 0

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS
 PROPOSED WIDENING**

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	DRAWN -	REVISED -
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PLOT DATE = 8/23/2022	DATE -	REVISED -

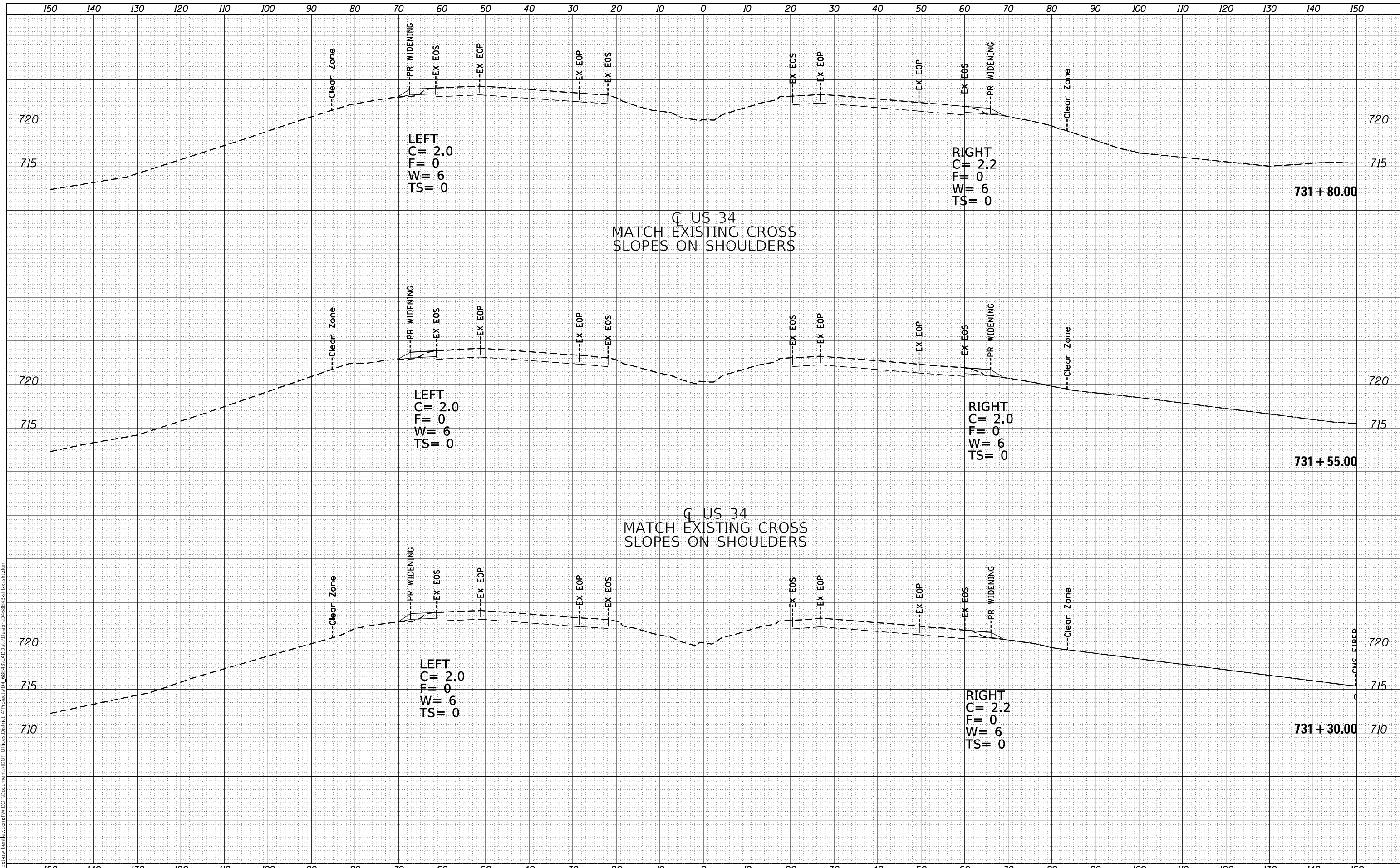
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F.A.P. RTE. 313	SECTION (94-17)CR	COUNTY WARREN	TOTAL SHEETS 57	SHEET NO. 42
CONTRACT NO. 68E43				
ILLINOIS FED. AID PROJECT				

FINAL	SURVEYED	DATE
SURVEY	PLOTTED	BY
NOTE BOOK	TEMPLATE	
NO.	AREAS CHECKED	

ORIGINAL	DATE
SURVEY	BY
NOTE BOOK	
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PLOT DATE = 8/23/2022	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

CROSS SECTIONS PROPOSED WIDENING			
SCALE:	SHEET 2	OF 7 SHEETS	STA. 731+30.00 TO STA. 731+80.00

F.A.P. RTE. 313	SECTION (94-17)CR	COUNTY WARREN	TOTAL SHEETS 57	SHEET NO. 43
ILLINOIS			FED. AID PROJECT	

FINAL SURVEY NO.	SURVEYED	BY	DATE
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	AREAS CHECKED		

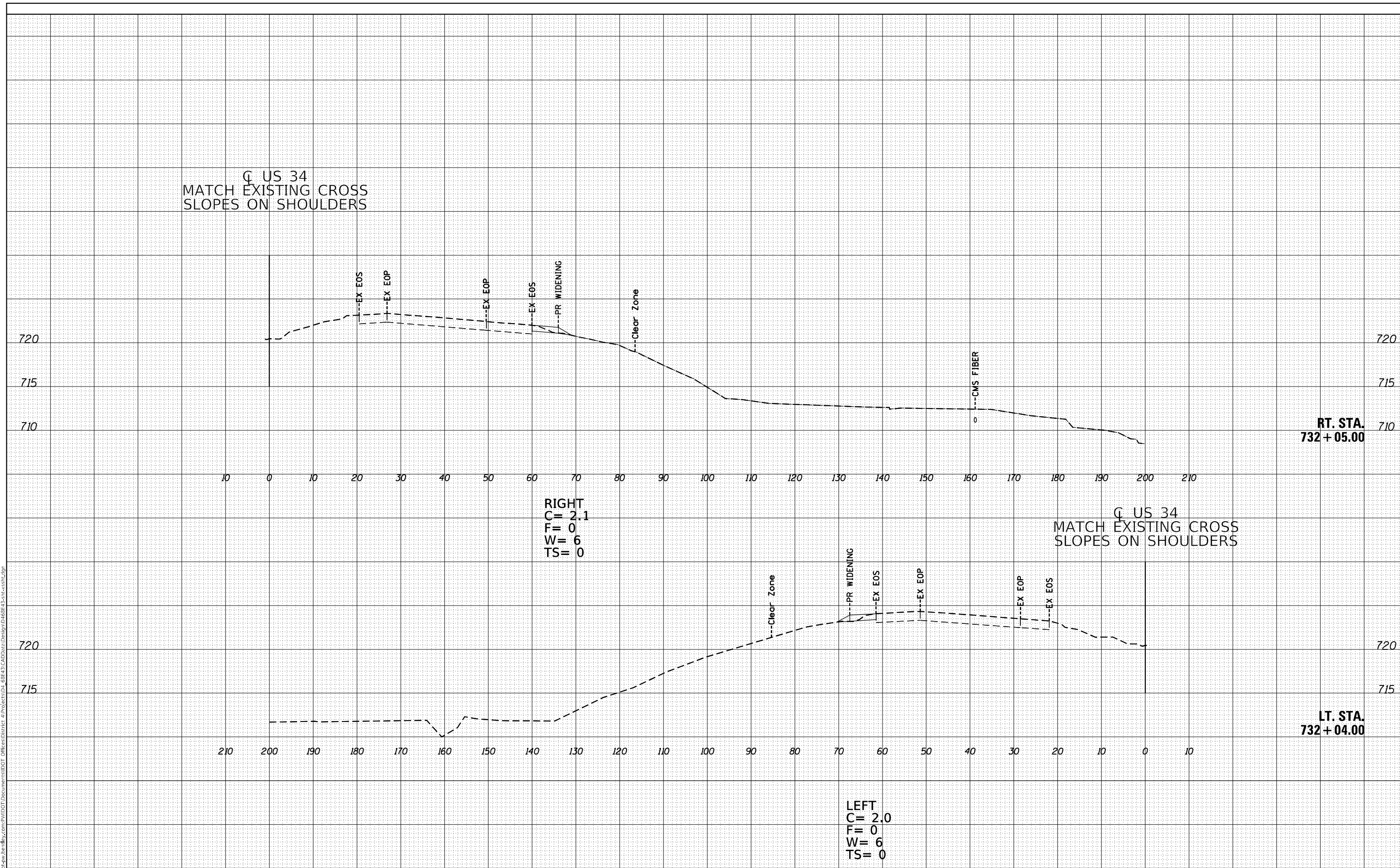
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Q US 34
MATCH EXISTING CROSS
SLOPES ON SHOULDERS

Q US 34
MATCH EXISTING CROSS
SLOPES ON SHOULDERS

RIGHT
C= 2.1
F= 0
W= 6
TS= 0

LEFT
C= 2.0
F= 0
W= 6
TS= 0



RT. STA.
732 + 05.00

LT. STA.
732 + 04.00

USER NAME = sarah_eiderzi	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 20,0000 * / in.	CHECKED -	REVISED -
PLOT DATE = 8/23/2022	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
PROPOSED WIDENING

SCALE: SHEET 3 OF 7 SHEETS STA. 732+04.00 TO STA. 732+05.00

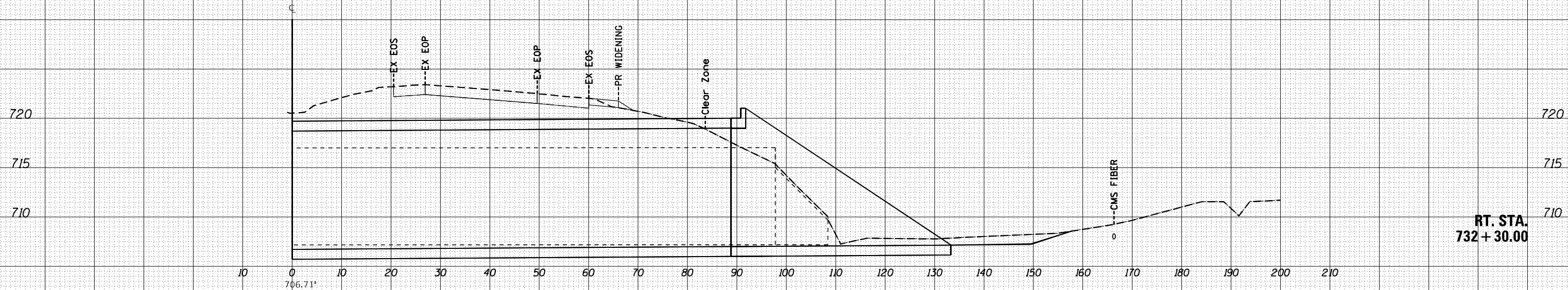
F.A.P. RTE. 313	SECTION (94-17)CR	COUNTY WARREN	TOTAL SHEETS 57	SHEET NO. 44
CONTRACT NO. 68E43				
ILLINOIS FED. AID PROJECT				

DATE	
BY	
FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED

DATE	
BY	
ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED

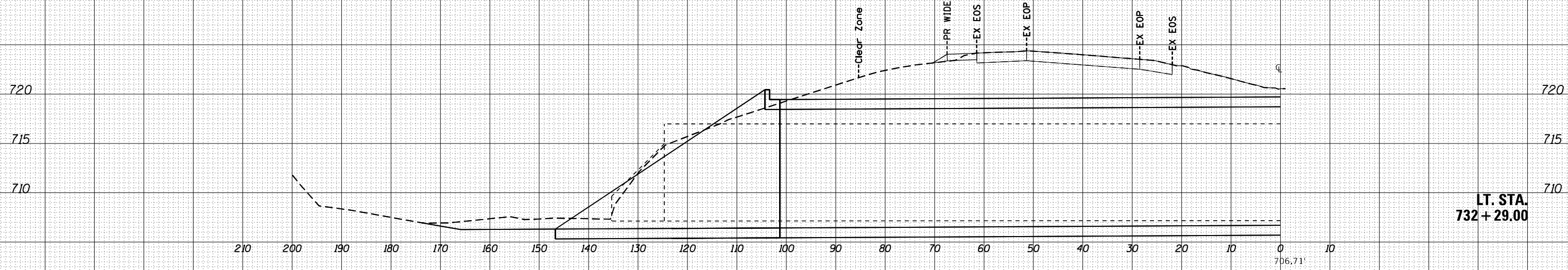
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PROJECT: 68E43 CAD Data Design D:\68E43\68E43.dwg
DRAWING: 68E43.dwg
DATE: 8/23/2022

Q US 34
MATCH EXISTING CROSS
SLOPES ON SHOULDERS



RIGHT
C= 1.9
F= 0
W= 6
TS= 0

Q US 34
MATCH EXISTING CROSS
SLOPES ON SHOULDERS



LEFT
C= 1.9
F= 0
W= 6
TS= 0

USER NAME = sarah_eiderzi	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 20,0000 * / in.	CHECKED -	REVISED -
PLOT DATE = 8/23/2022	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
PROPOSED WIDENING

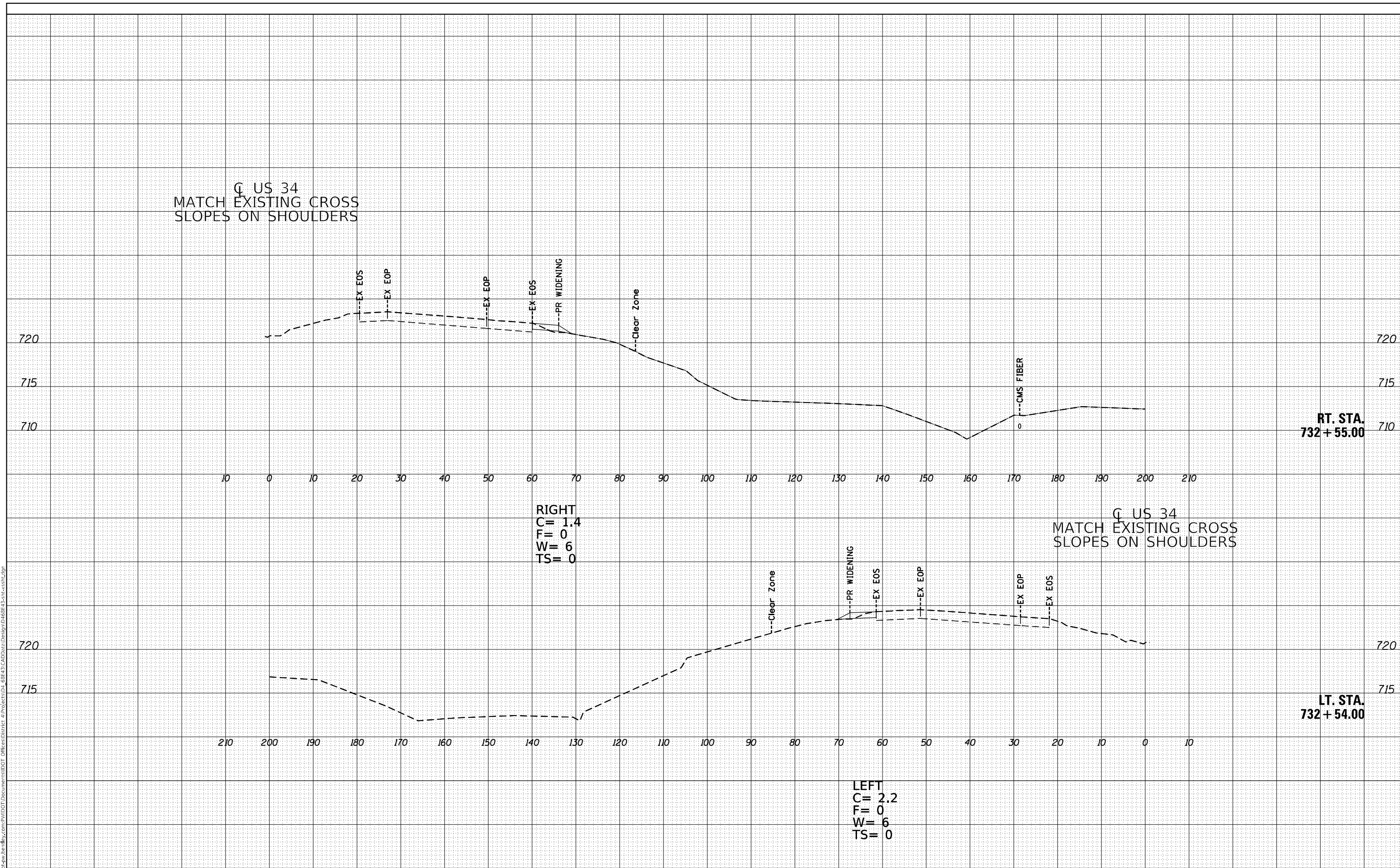
SCALE: SHEET 4 OF 7 SHEETS STA. 732+29.00 TO STA. 732+30.00

F.A.P. RTE. 313	SECTION (94-17)CR	COUNTY WARREN	TOTAL SHEETS 57	SHEET NO. 45
				CONTRACT NO. 68E43
ILLINOIS FED. AID PROJECT				

FINAL SURVEY NO.	SURVEYED	BY	DATE
NOTE BOOK	PLOTTED		
AREAS CHECKED	TEMPLATE		
	AREAS CHECKED		

ORIGINAL SURVEY NO.	SURVEYED	BY	DATE
	PLOTTED		
	TEMPLATE		
	AREAS CHECKED		

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PROJECT: 68E43 CAD Data Design D:\68E43\68E43.dwg
PROJECT: 68E43 CAD Data Design D:\68E43\68E43.dwg



Q US 34
MATCH EXISTING CROSS
SLOPES ON SHOULDERS

Q US 34
MATCH EXISTING CROSS
SLOPES ON SHOULDERS

RT. STA.
732 + 55.00

LT. STA.
732 + 54.00

USER NAME = sarah_riderzi	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 20,0000 * / in.	CHECKED -	REVISED -
PLOT DATE = 8/23/2022	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

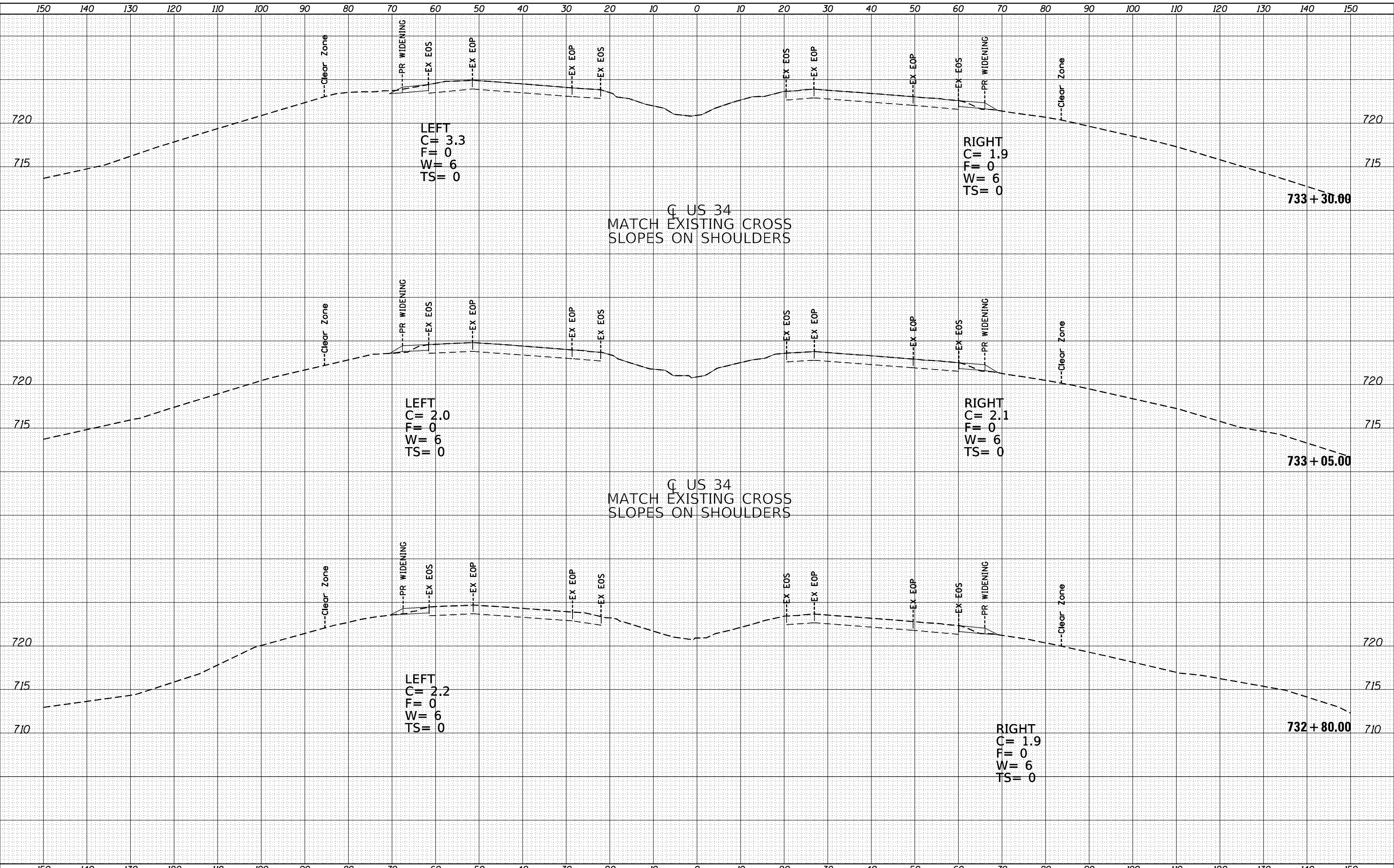
CROSS SECTIONS PROPOSED WIDENING			
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STA. 732+54.00		TO STA. 732+55.00	

F.A.P. RTE. 313	SECTION (94-17)CR	COUNTY WARREN	TOTAL SHEETS 57	SHEET NO. 46
CONTRACT NO. 68E43				
ILLINOIS FED. AID PROJECT				

DATE	
BY	
FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED

DATE	
BY	
ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
PROPOSED WIDENING

USER NAME = sarah_eterzi	DESIGNED -	REVISED -
	DRAWN -	REVISED -
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PLOT DATE = 8/23/2022	DATE -	REVISED -

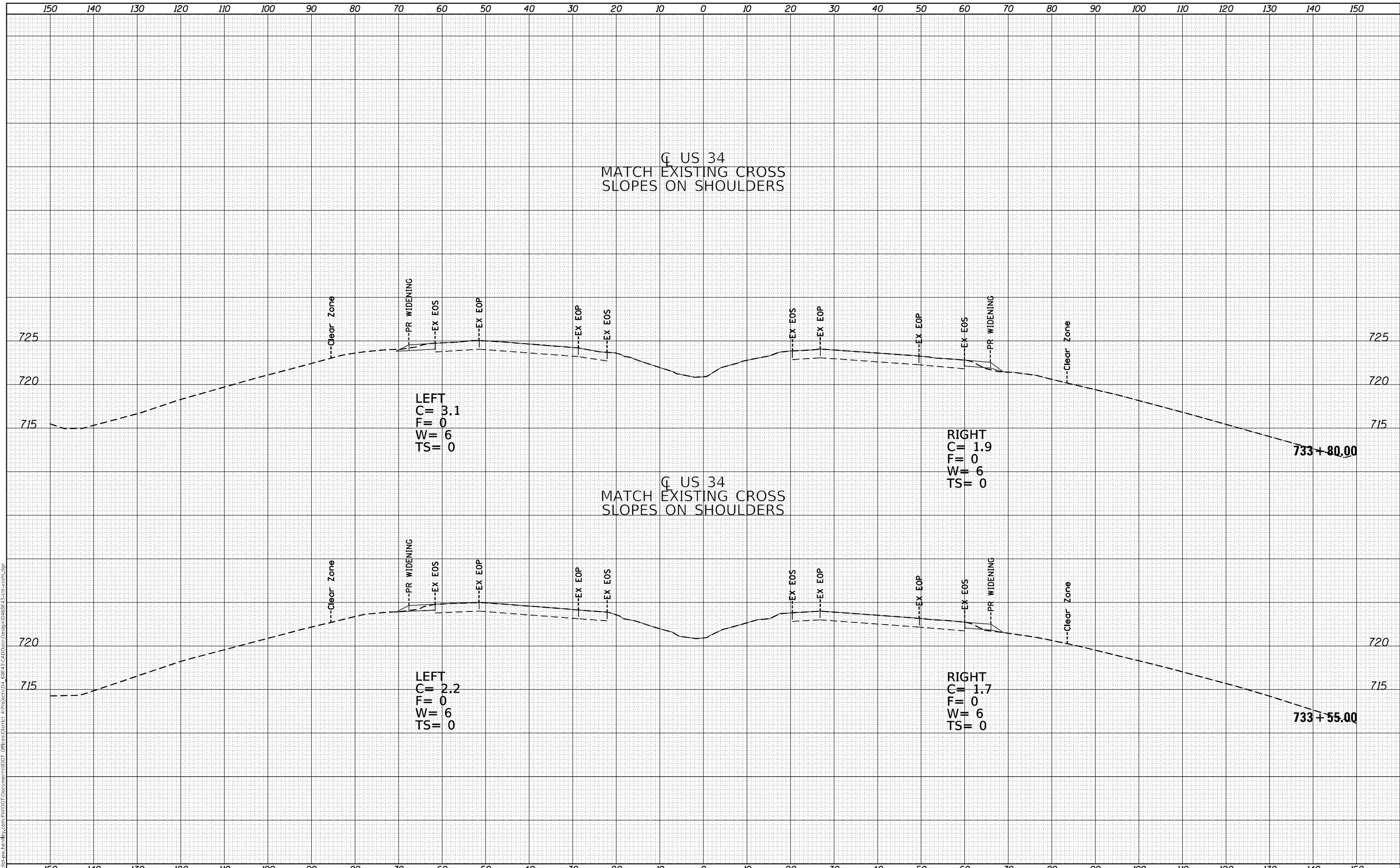
SCALE: SHEET 6 OF 7 SHEETS STA. 732+80.00 TO STA. 733+30.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-17)CR	WARREN	57	47
				CONTRACT NO. 68E43
ILLINOIS FED. AID PROJECT				

FINAL SURVEY	SURVEYED	DATE
NOTE BOOK	PLOTTED	BY
NO.	TEMPLATE	
	AREAS CHECKED	

ORIGINAL SURVEY	SURVEYED	DATE
NOTE BOOK	PLOTTED	BY
NO.	TEMPLATE	
	AREAS CHECKED	

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USER NAME = sarah_eterzi	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 20,0000 * / in.	CHECKED -	REVISED -
PLOT DATE = 8/23/2022	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

CROSS SECTIONS PROPOSED WIDENING			
SCALE:	SHEET 7	OF 7 SHEETS	STA. 733+55.00 TO STA. 733+80.00

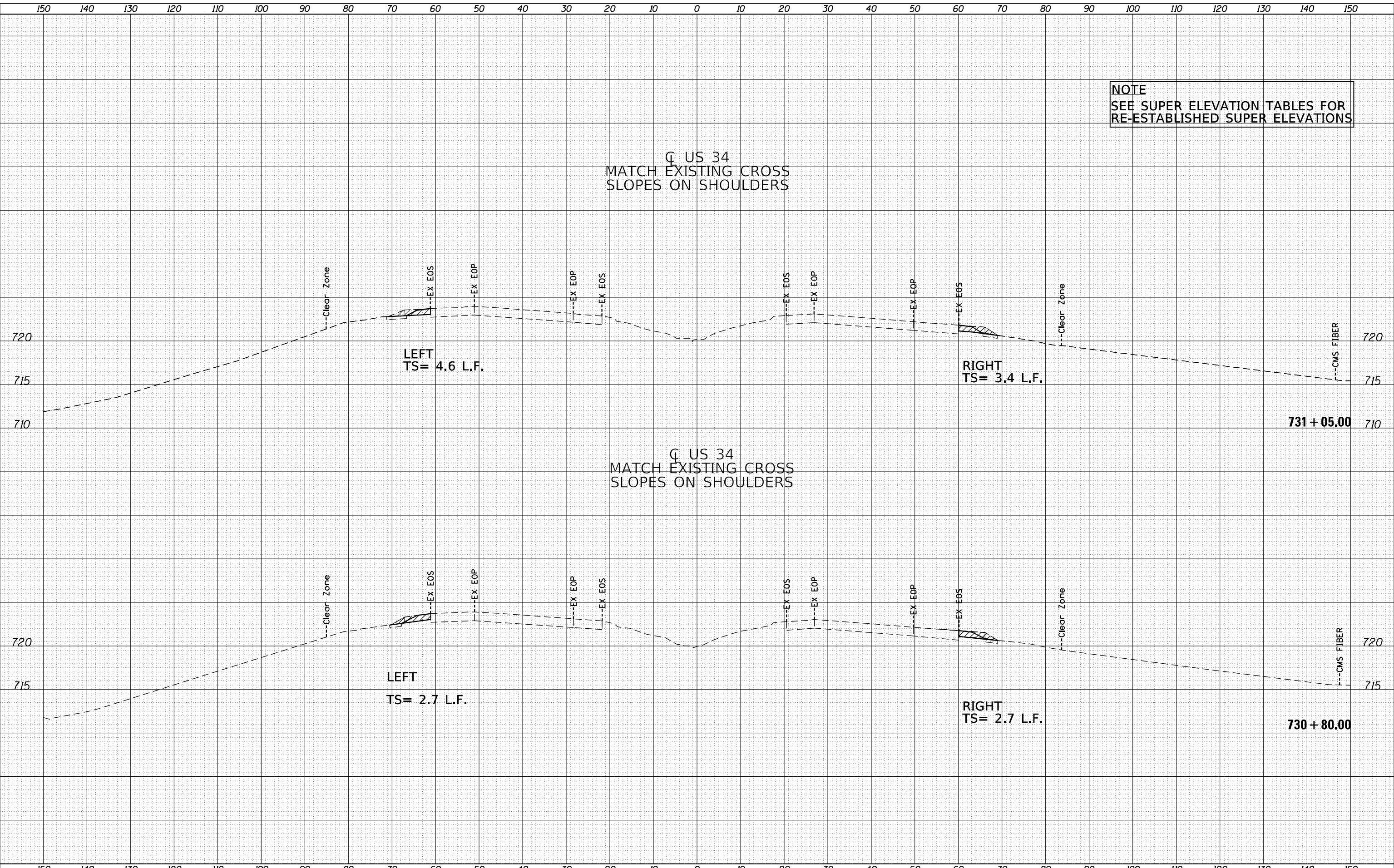
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313	(94-17)CR	WARREN	57	48
				CONTRACT NO. 68E43
				ILLINOIS FED. AID PROJECT

FINAL SURVEY	SURVEYED	DATE
NOTE BOOK	PLOTTED	BY
NO.	TEMPLATE	
	AREAS CHECKED	

ORIGINAL SURVEY	SURVEYED	DATE
NOTE BOOK	PLOTTED	BY
NO.	TEMPLATE	
	AREAS CHECKED	

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NOTE
SEE SUPER ELEVATION TABLES FOR
RE-ESTABLISHED SUPER ELEVATIONS



USER NAME = sarah_tierzi	DESIGNED -	REVISED -
PLOT SCALE = 20,0000 * / in.	DRAWN -	REVISED -
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	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

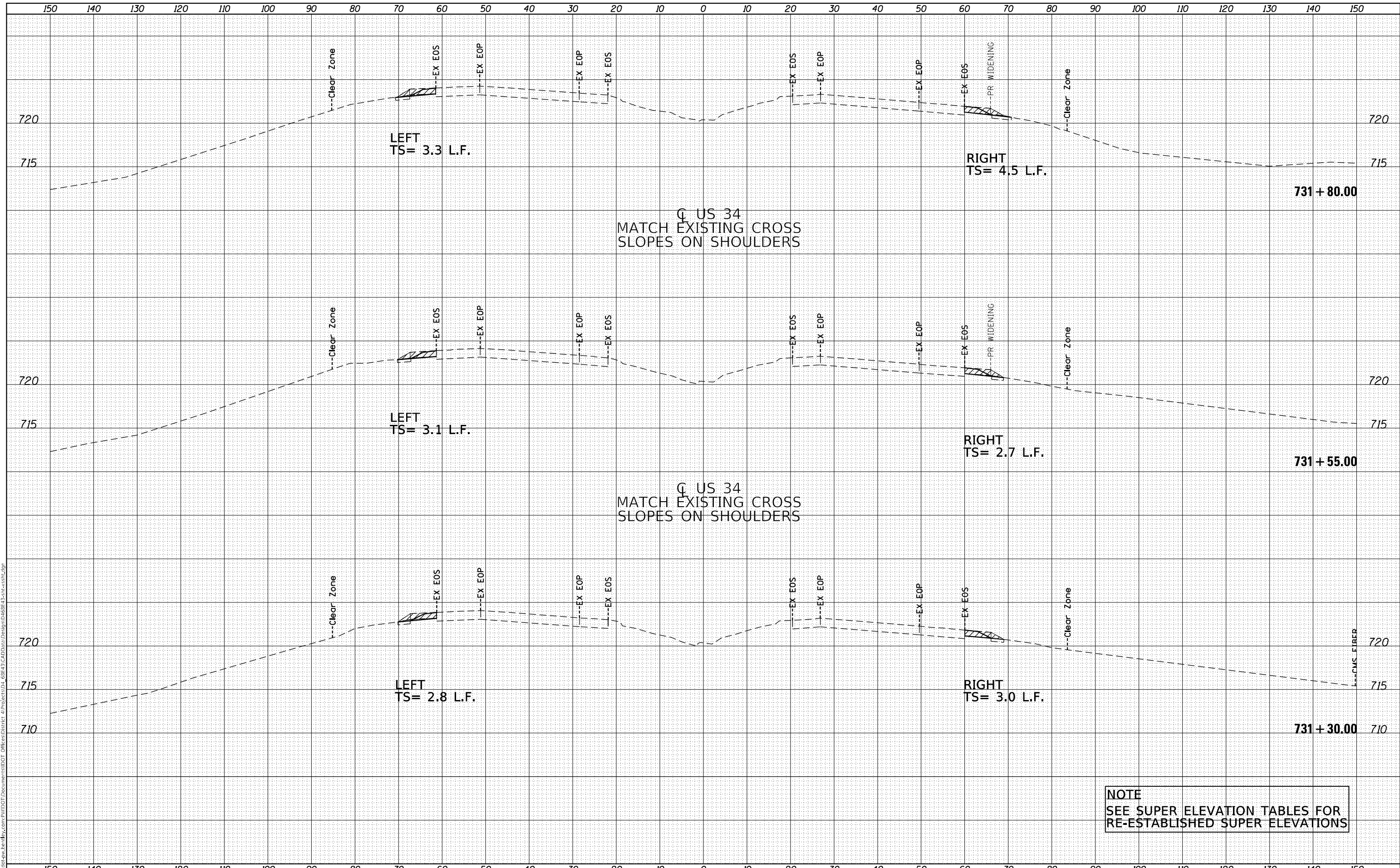
CROSS SECTIONS	
SCALE:	SHEET 1 OF 7 SHEETS
STA. 730+80.00 TO STA. 731+05.00	

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-17)CR	WARREN	57	49
				CONTRACT NO. 68E43
ILLINOIS FED. AID PROJECT				

DATE	
BY	
FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED

DATE	
BY	
ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED

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NOTE
 SEE SUPER ELEVATION TABLES FOR
 RE-ESTABLISHED SUPER ELEVATIONS

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	DRAWN -	REVISED -
PLOT SCALE = 20,0000 * / in.	CHECKED -	REVISED -
PLOT DATE = 8/23/2022	DATE -	REVISED -

**STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION**

CROSS SECTIONS			
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	STA. 731+30.00	TO STA. 731+80.00	

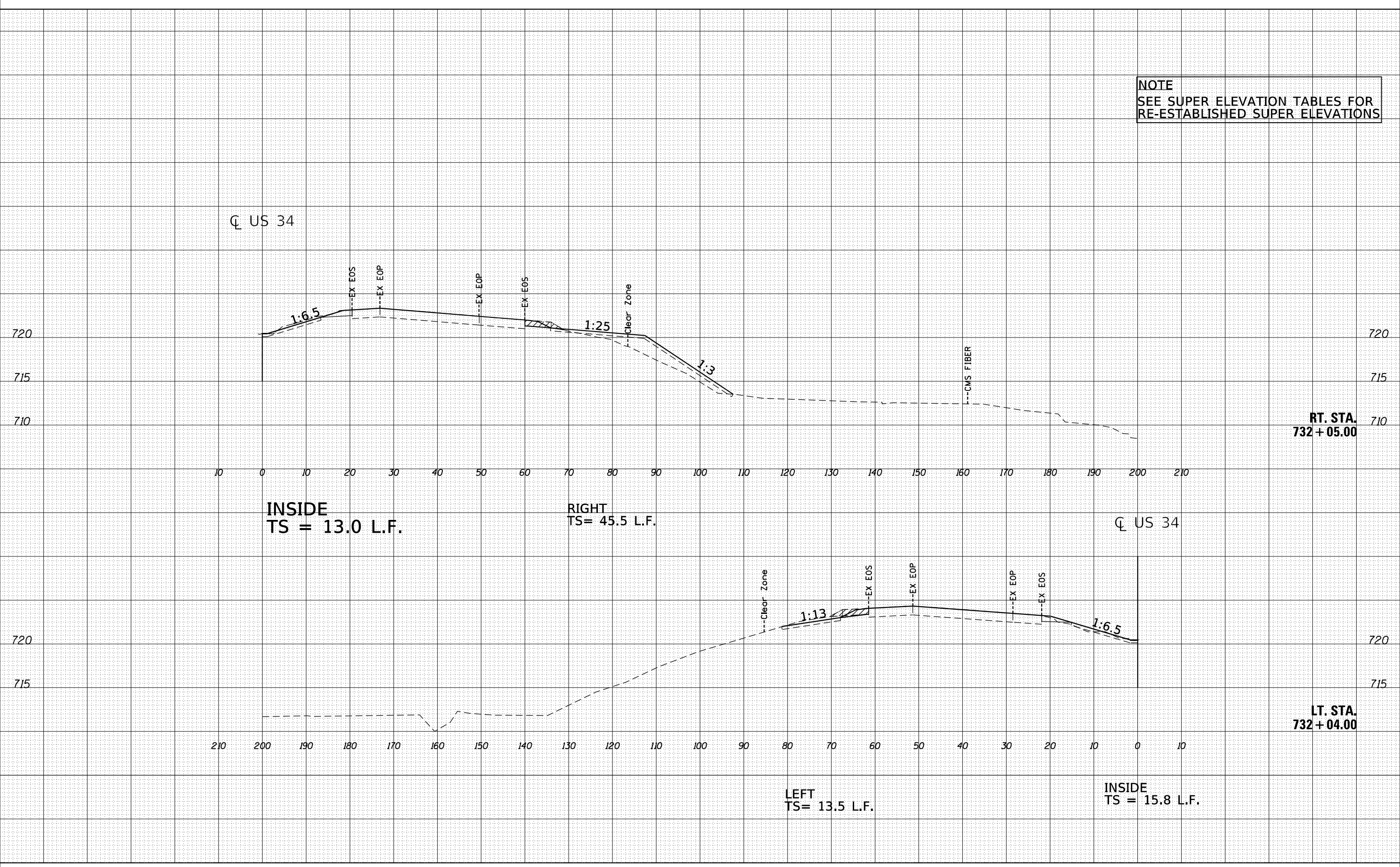
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313	(94-17)CR	WARREN	57	50
				CONTRACT NO. 68E43
				ILLINOIS FED. AID PROJECT

DATE	
BY	
FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	AREAS CHECKED

DATE	
BY	
ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	AREAS CHECKED

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NOTE
SEE SUPER ELEVATION TABLES FOR RE-ESTABLISHED SUPER ELEVATIONS



USER NAME = sarah_eiderzi	DESIGNED -	REVISED -
PLOT SCALE = 20,0000 * / in.	DRAWN -	REVISED -
PLOT DATE = 8/23/2022	CHECKED -	REVISED -
	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

CROSS SECTIONS

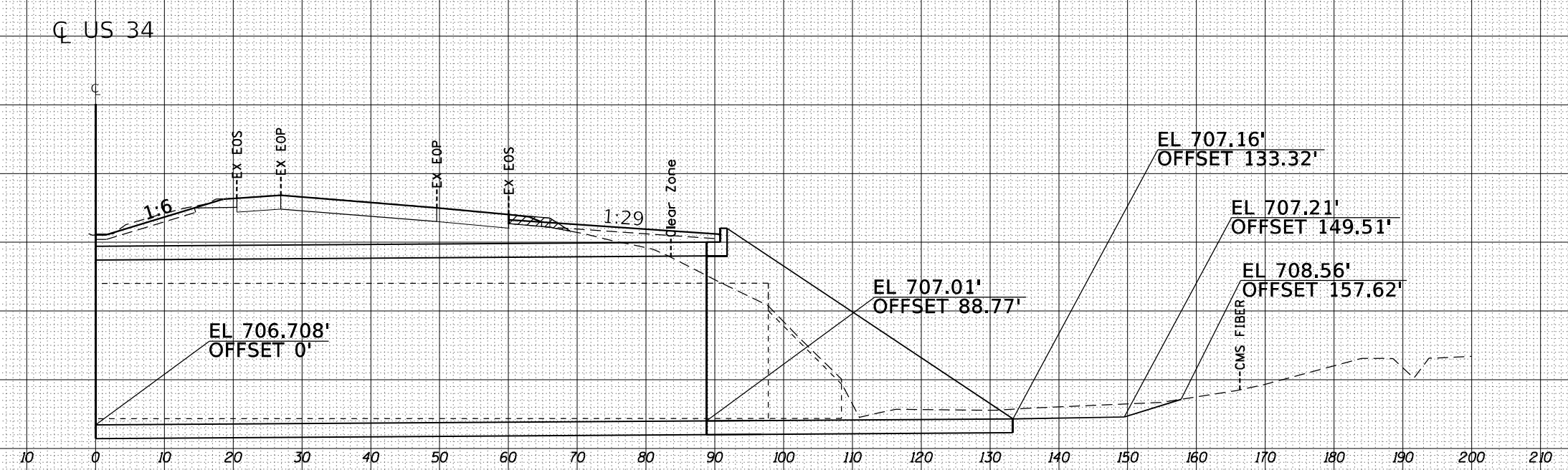
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F.A.P. RTE. 313	SECTION (94-17)CR	COUNTY WARREN	TOTAL SHEETS 57	SHEET NO. 51
			CONTRACT NO. 68E43	
ILLINOIS FED. AID PROJECT				

NOTE
SEE SUPER ELEVATION TABLES FOR
RE-ESTABLISHED SUPER ELEVATIONS

DATE	
BY	
FINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED

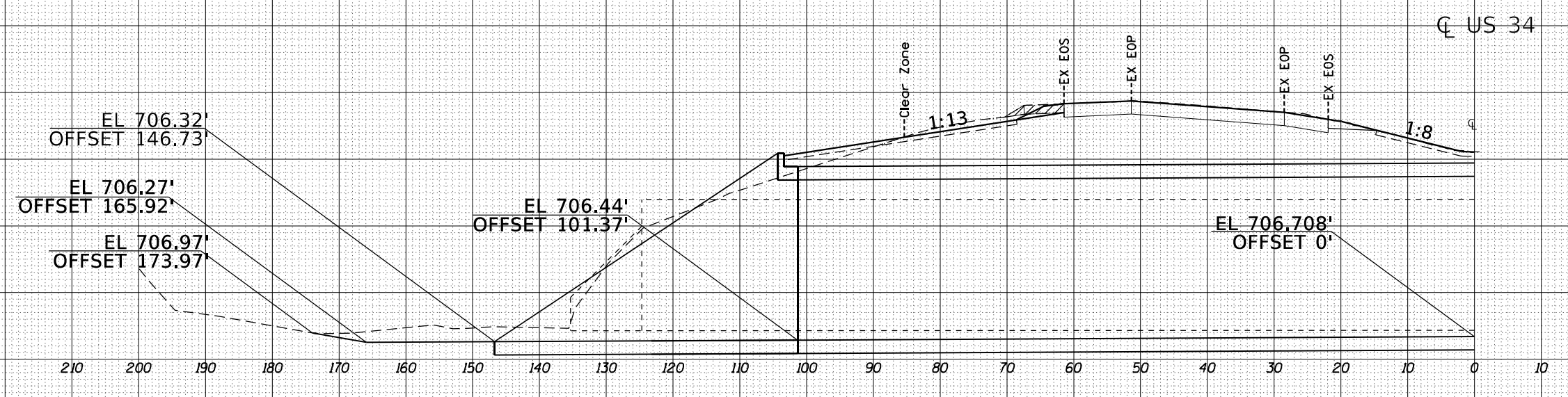
DATE	
BY	
ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	TEMPLATE
	AREAS CHECKED



INSIDE
TS = 15.1 L.F.

RIGHT
TS = 26 L.F.

RT. STA.
732 + 30.00



LEFT
TS = 35.3 L.F.

INSIDE
TS = 15.2 L.F.

LT. STA.
732 + 29.00

MODEL: Definit
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USER NAME = sarah_elderzi	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 20,0000 * / in.	CHECKED -	REVISED -
PLOT DATE = 8/23/2022	DATE -	REVISED -

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

**CROSS SECTIONS
PROPOSED WIDENING**

SCALE: SHEET 4 OF 7 SHEETS STA. 732+29.00 TO STA. 732+30.00

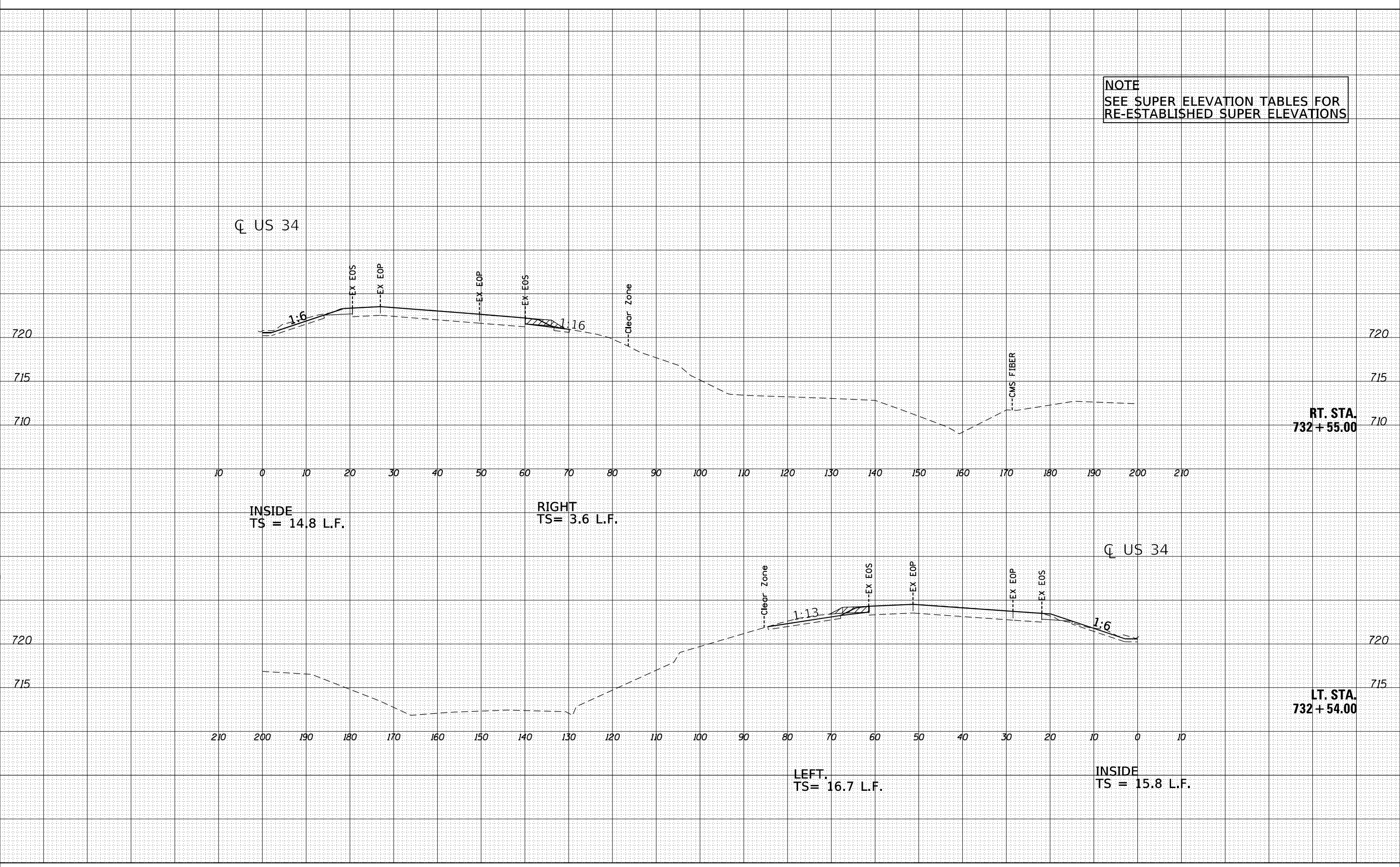
F.A.P. RTE. 313	SECTION (94-17)CR	COUNTY WARREN	TOTAL SHEETS 57	SHEET NO. 52
CONTRACT NO. 68E43				
ILLINOIS FED. AID PROJECT				

FINAL SURVEY NO.	SURVEYED BY	DATE

ORIGINAL SURVEY NO.	SURVEYED BY	DATE

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NOTE
 SEE SUPER ELEVATION TABLES FOR
 RE-ESTABLISHED SUPER ELEVATIONS



USER NAME	Sarah.elderzi	DESIGNED -	REVISED -
DRAWN -		DRAWN -	REVISED -
CHECKED -		CHECKED -	REVISED -
DATE -		DATE -	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

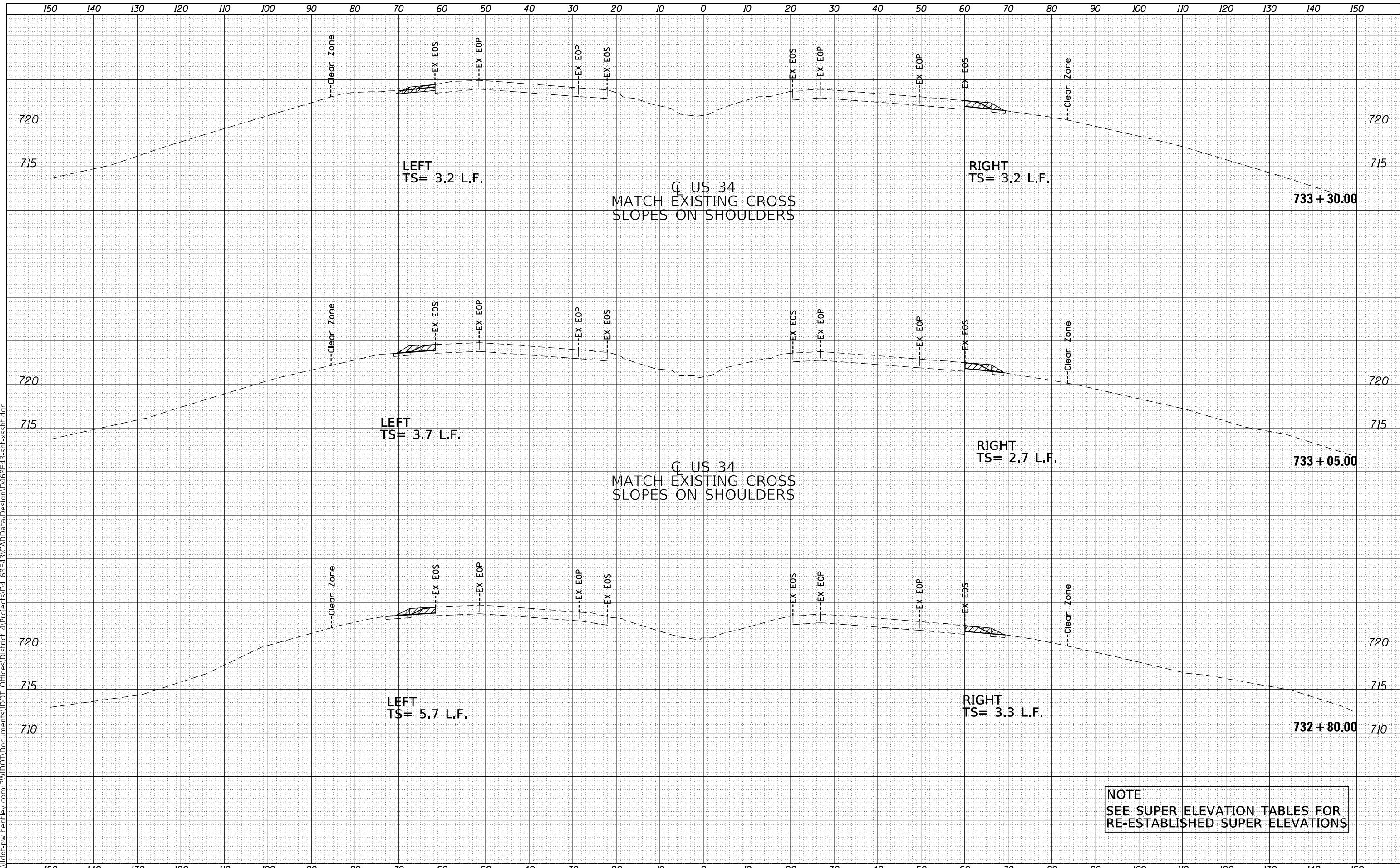
CROSS SECTIONS			
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STA. 732+54.00		TO STA. 732+55.00	

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-17)CR	WARREN	57	53
CONTRACT NO. 68E43				
ILLINOIS AID PROJECT				

BY	DATE

BY	DATE

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NOTE
SEE SUPER ELEVATION TABLES FOR RE-ESTABLISHED SUPER ELEVATIONS

USER NAME	sarah.elderzi	DESIGNED -	REVISED -
DRAWN -		REVISOR -	REVISED -
PLOT SCALE	20.0000' / in.	CHECKED -	REVISED -
PLOT DATE	8/23/2022	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

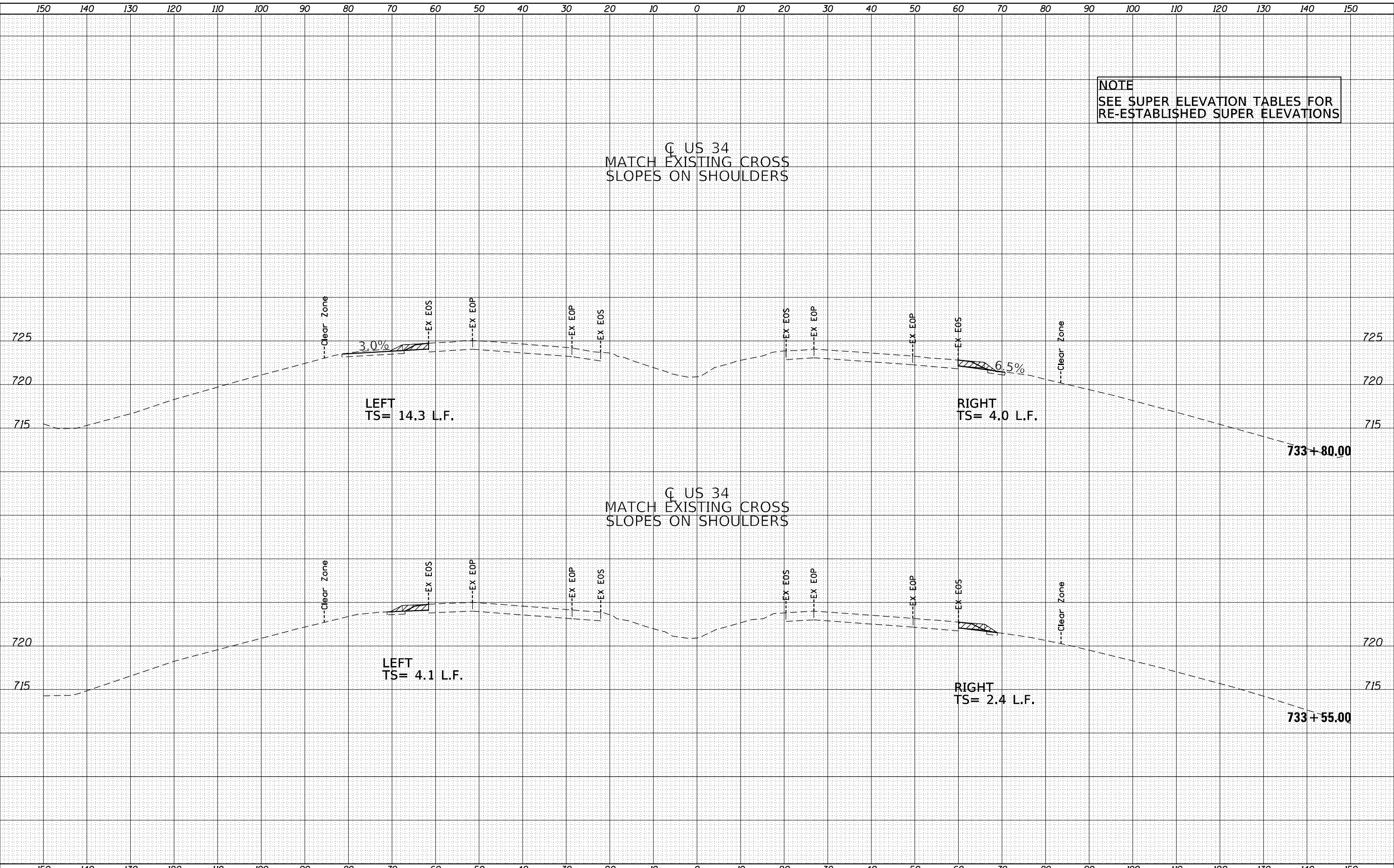
SCALE:	SHEET 6 OF 7	SHEET 5	STA. 732+80.00 TO STA. 733+30.00
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-17)CR	WARREN	57	54
CONTRACT NO. 68E43				
ILLINOIS AID PROJECT				

FINAL SURVEY NO.	SURVEYED BY	DATE

ORIGINAL SURVEY NO.	SURVEYED BY	DATE

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NOTE
 SEE SUPER ELEVATION TABLES FOR
 RE-ESTABLISHED SUPER ELEVATIONS

Q US 34
 MATCH EXISTING CROSS
 SLOPES ON SHOULDERS

Q US 34
 MATCH EXISTING CROSS
 SLOPES ON SHOULDERS

USER NAME	sarah.elderzi
DESIGNED	-
DRAWN	-
CHECKED	-
DATE	-

REVISED	-
REVISED	-
REVISED	-
REVISED	-

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS	
SCALE:	SHEET 7 OF 7 SHEETS STA. 733+55.00 TO STA. 733+80.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-17)CR	WARREN	57	55
CONTRACT NO. 68E43			ILLINOIS AID PROJECT	



SOIL BORING LOG

ROUTE FAP 313 (US 34) DESCRIPTION Structure boring for sheet pile design LOGGED BY BYZF (Terracon)

SECTION (94-17) CR LOCATION US 34 over Cedar Creek (WB), SEC. 24, TWP. 11 N, RNG. 1 W, 4th PM,
 Latitude 40.92319, Longitude -90.45812

COUNTY Warren DRILLING METHOD HSA to 10' then Mud Rotary HAMMER TYPE Automatic

STRUCT. NO. 094-2004 (EX)
094-2019 (PR)
 Station 732+30

BORING NO. SB-1
 Station 732+80 (see Note)
 Offset 65.0 ft LT
 Ground Surface Elev. 724.50 ft (ft) (/6") (tsf) (%)

DEPTH (ft)	SOIL DESCRIPTION	BLOWS (/6")	UNIFIED SOIL CLASSIFICATION (tsf)	MOISTURE (%)	DEPTH (ft)	SOIL DESCRIPTION	BLOWS (/6")	UNIFIED SOIL CLASSIFICATION (tsf)	MOISTURE (%)
723.50	Topsoil, approximately 12 inches					Medium stiff to V. Stiff, Gray, SANDY CLAY (continued)			
	Stiff to V. Stiff, brown, CLAY	2					3		
		3	Dist.	21			5	1.7	22
		3					7	B	
		2					3		
		6	1.0	19			5	1.3	
		-5	B				-25	B	
		3					3		
		6	Dist.	23			7	0.8	24
		10		22			9	B	
		3					3		
		5	1.2	25			5	0.8	22
714.50		-10	B				-30	B	
	Stiff, gray, SANDY CLAY	3							
		4	1.0	23					
		5	B						
711.50									
	Medium stiff to stiff, grayish brown, Moist, CLAY LOAM	2					6		
		2	1.3	19			7	2.1	20
		-15	B				-35	B	
		2							
		1	Dist.	24					
		2							
706.50									
	Medium stiff to V. Stiff, Gray, SANDY CLAY	5					11		
		5	2.7	22			17	NP	16
		-20	B				-40	25	

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, form 137 (Rev. 8-99)



SOIL BORING LOG

ROUTE FAP 313 (US 34) DESCRIPTION Structure boring for sheet pile design LOGGED BY BYZF (Terracon)

SECTION (94-17) CR LOCATION US 34 over Cedar Creek (WB), SEC. 24, TWP. 11 N, RNG. 1 W, 4th PM,
 Latitude 40.92319, Longitude -90.45812

COUNTY Warren DRILLING METHOD HSA to 10' then Mud Rotary HAMMER TYPE Automatic

STRUCT. NO. 094-2004 (EX)
094-2019 (PR)
 Station 732+30

BORING NO. SB-1
 Station 732+80 (see Note)
 Offset 65.0 ft LT
 Ground Surface Elev. 724.50 ft (ft) (/6") (tsf) (%)

DEPTH (ft)	SOIL DESCRIPTION	BLOWS (/6")	UNIFIED SOIL CLASSIFICATION (tsf)	MOISTURE (%)	DEPTH (ft)	SOIL DESCRIPTION	BLOWS (/6")	UNIFIED SOIL CLASSIFICATION (tsf)	MOISTURE (%)
	Medium dense to dense, gray, Moist, SILTY LOAM (continued)					End of Boring			
		8							
		9	NP	15					
		-45	10				-65		
		18							
		26	NP	23					
		-80	38				-70		
671.50									
	Very Dense, gray, Highly to Completely Weathered SHALE	37							
		50/4"	Dist.	22					
		-85					-75		
		50/5"	NP	21					
664.50									

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
 The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)

BBS, form 137 (Rev. 8-99)

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USER NAME = alex.jette	DESIGNED -	REVISED -
	DRAWN -	REVISED -
PLOT SCALE = 100,0000' / in.	CHECKED -	REVISED -
PLOT DATE = 8/25/2022	DATE -	REVISED -

STATE OF ILLINOIS
 DEPARTMENT OF TRANSPORTATION

SOIL BORINGS

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
313	(94-17)CR	WARREN	57	56
CONTRACT NO. 68E43				
ILLINOIS FED. AID PROJECT				

