

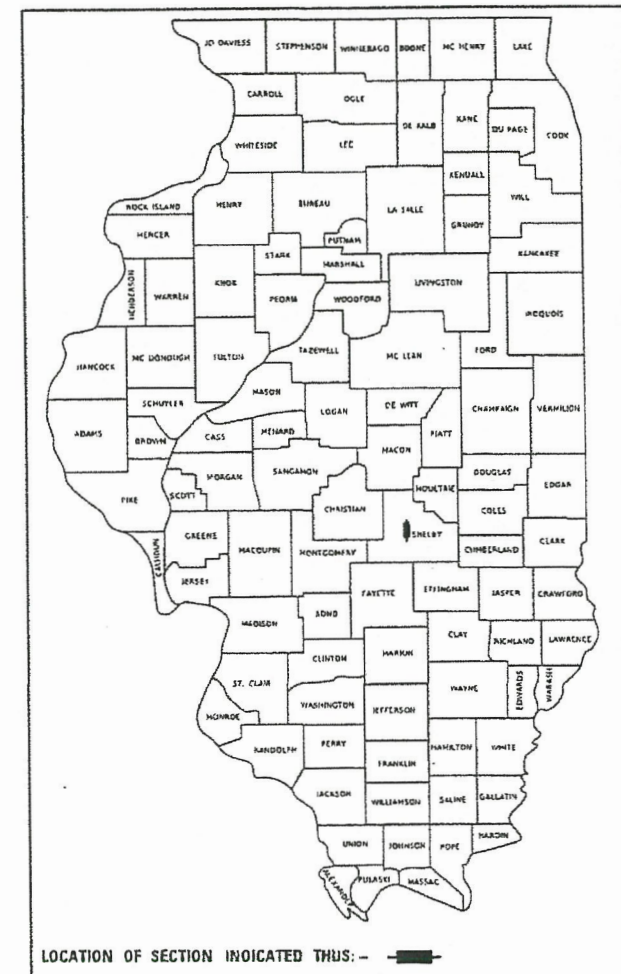
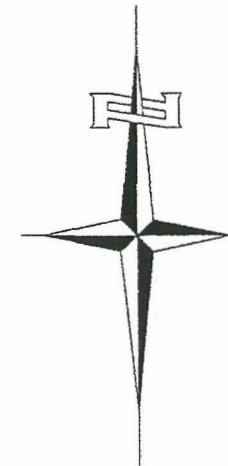
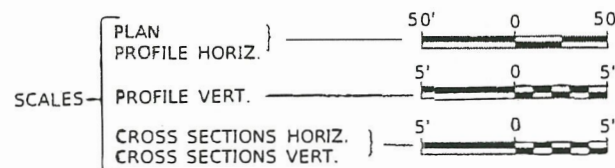
INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
1	COVER SHEET
2	GENERAL NOTES, TYPICAL SECTIONS, DETAILS
3	SUMMARY OF QUANTITIES, SCHEDULES OF QUANTITIES
4	TRAFFIC CONTROL PLAN
5	EROSION CONTROL PLAN
6	PLAN AND PROFILE
7-13	STRUCTURE PLANS
14-20	CROSS SECTIONS

06-11-2021 LETTING ITEM 198

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
PLANS FOR PROPOSED
SURFACE TRANSPORTATION PROGRAM-BRIDGE
SHELBY COUNTY
ROSE ROAD DISTRICT SECTION 17-18119-00-BR
TOWNSHIP ROAD 176 OVER SWAFFORD CREEK
PROJECT NO. L3Z9(012)
JOB NUMBER C-97-148-21

HIGHWAY STANDARDS

000001-08 STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
 280001-07 TEMPORARY EROSION CONTROL SYSTEMS
 515001-04 NAME PLATE FOR BRIDGES
 701901-08 TRAFFIC CONTROL DEVICES
 725001-01 OBJECT AND TERMINAL MARKERS
 BLR 21-9 TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS



UTILITY COMPANIES

EJ WATER COOPERATIVE, INC.
DIETERICH, ILLINOIS

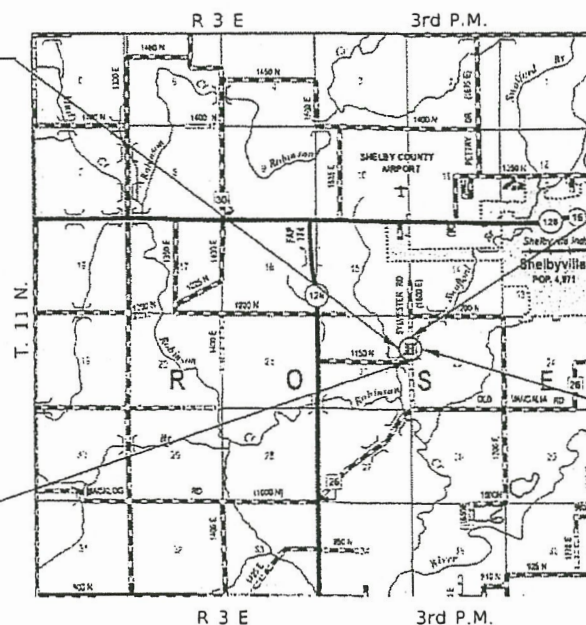
CONSOLIDATED COMMUNICATIONS
MATTOON, ILLINOIS

SHELBY ELECTRIC COOPERATIVE
SHELBYVILLE, ILLINOIS

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

PROPOSED STRUCTURE SN 087-3594
 SINGLE SPAN 27" PRECAST PRESTRESSED
 CONCRETE DECK BEAM SUPERSTRUCTURE
 ON CONCRETE SPILL-THRU ABUTMENTS,
 70'-0" BK TO BK, AND 24'-0" O TO O DECK,
 SKEW 30° RT. AH.

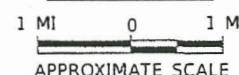
SECTION 17-18119-00-BR
 BEGINS
 STATION 17+25.00



SECTION 17-18119-00-BR
 ENDS
 STATION 22+75.00

EXISTING STRUCTURE SN 087-3135
 SINGLE SPAN STEEL GIRDER SUPERSTRUCTURE WITH
 A TIMBER DECK ON TIMBER CAPS AND TIMBER PILE
 CLOSED ABUTMENTS WITH TIMBER LAGGING.
 45'-0" BK TO BK, ±17'-10" O TO O DECK,
 SKEW 31° RT. AH. (TO BE REMOVED)

LOCATION MAP



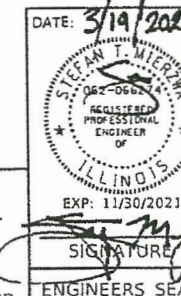
NET LENGTH OF PROJECT = 550.00 FEET = 0.104 MILES

DESIGN CLASSIFICATION: LOCAL ROAD (NON-URBAN)
 DESIGN ADT = 102 (2021)
 30 MPH DESIGN SPEED

Hutchison Engineering, Inc.
 JACKSONVILLE SHOREWOOD
 PEORIA-QUAD CITIES

2021

JOB#4348



APPROVED	3-29-21
James Altherr ROSE ROAD DISTRICT HIGHWAY COMMISSIONER	
APPROVED	3-29-21
S. An SHELBY COUNTY ENGINEER	
PASSED	04-12-21
Brett Walker DISTRICT SEVEN ENGINEER OF LOCAL ROADS & STREETS	
Released For Bid Based on Limited Review	04-12-21
Jeffrey Myers/BV REGION FOUR ENGINEER STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	

ROSE ROAD DISTRICT

CONTRACT NO. 95896

FILE NAME: V:\4348 - TR 176 over Swafford Creek (Shelby County)\CADD\00 Sheet\4348.dwg

GENERAL NOTES

PLAN QUANTITIES FOR TREE REMOVAL HAVE BEEN BASED ON ALL TREES WITHIN THE PROPOSED RIGHT OF WAY. THIS QUANTITY MAY BE REVISED DURING CONSTRUCTION, AT THE DIRECTION OF THE ENGINEER, BY DELETING FROM THE TREE REMOVAL QUANTITIES, SUCH TREES THAT DO NOT INTERFERE WITH THE PROPOSED CONSTRUCTION.

THE REMOVAL OF EXISTING OIL & CHIP SURFACE AND GRAVEL OR CRUSHED STONE BASE COURSE WHICH MAY BE NECESSARY FOR THE CONSTRUCTION OF THE PROJECT SHALL BE REMOVED AS EARTH EXCAVATION AND NO COMPENSATION WILL BE ALLOWED FOR ADDITIONAL LABOR OR EQUIPMENT REQUIRED.

ALL WASTE OR UNDESIRABLE MATERIAL AS IDENTIFIED BY THE ENGINEER SHALL BE DISPOSED OF OUTSIDE THE LIMITS OF THE RIGHT OF WAY AT THE CONTRACTOR'S EXPENSE.

ALL EXISTING PRIVATELY OWNED UTILITIES REQUIRING ADJUSTMENT WILL BE MADE BY THE UTILITY COMPANY INVOLVED. WHERE NO PROVISIONS HAVE BEEN MADE FOR ADJUSTMENTS ON THE PLANS, NO ADDITIONAL COMPENSATION WILL BE ALLOWED DUE TO DELAYS OR INCONVENIENCES CAUSED BY THE SAID UTILITY ADJUSTMENTS.

THE PROFILE GRADE ELEVATIONS SHOWN ON THE PLAN AND PROFILE SHEETS AND IN THE STATION CROSS SECTIONS ARE TO THE TOP OF THE FINISHED SURFACE.

ALL EXISTING DRAINAGE STRUCTURES NOT BEING REMOVED BY THE CONTRACTOR THAT ARE DAMAGED DURING CONSTRUCTION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

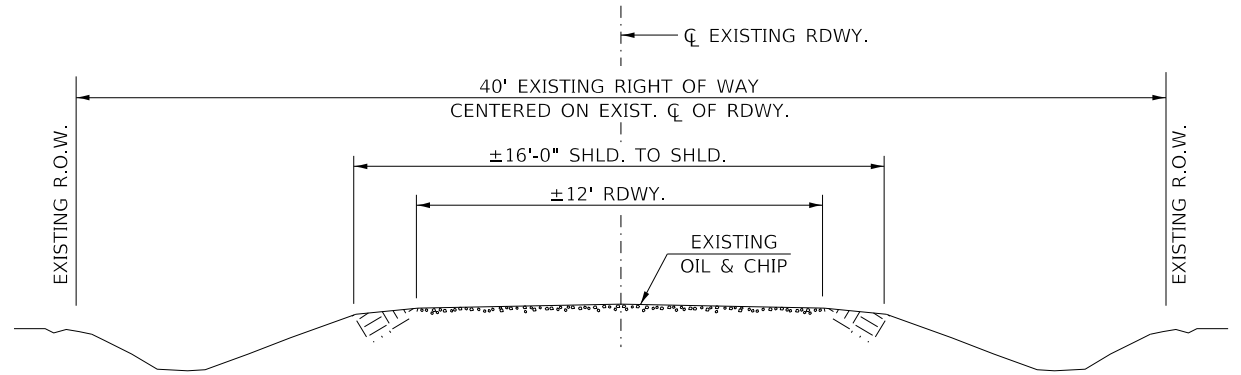
ANY REFERENCE TO STANDARDS THROUGHOUT THE PLANS SHALL BE INTERPRETED TO BE THE LATEST STANDARDS OF THE ILLINOIS DEPARTMENT OF TRANSPORTATION.

THE LOCATION OF UNDERGROUND UTILITIES SHOWN ON THE PLANS REPRESENTS THE BEST KNOWLEDGE OF THE COUNTY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATIONS OF UNDERGROUND INSTALLATIONS BEFORE STARTING CONSTRUCTION OPERATIONS. THE CONTRACTOR SHALL INDEMNIFY THE COUNTY, ITS OFFICERS AND EMPLOYEES AGAINST ALL CLAIMS DUE TO DAMAGE TO CORPORATE OR PRIVATE PROPERTY RESULTING FROM HIS CONSTRUCTION OPERATIONS AS DESCRIBED IN ARTICLES 107.20 AND 107.26 OF THE STANDARD SPECIFICATIONS.

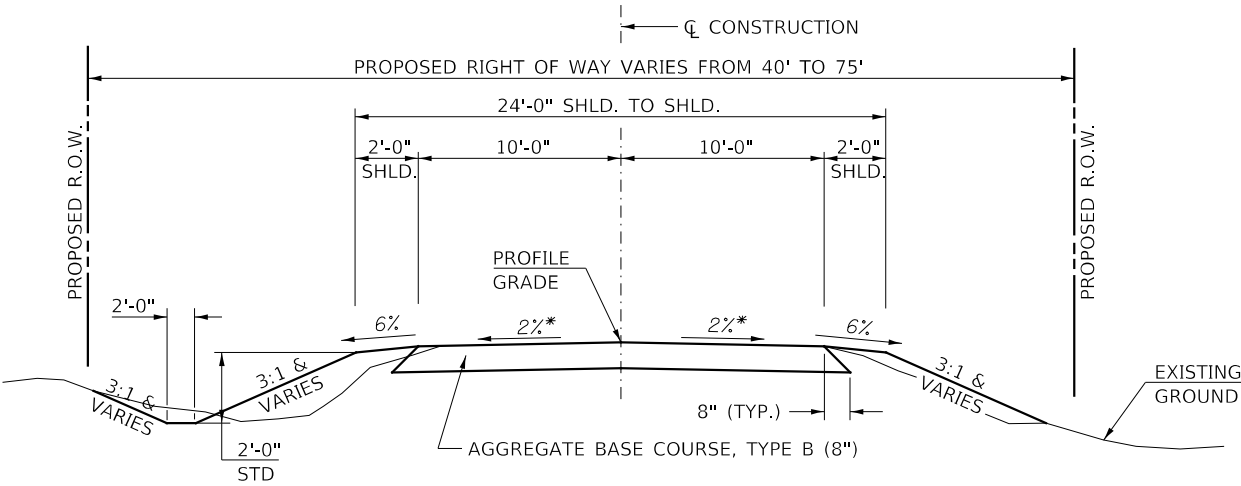
THE CONTRACTOR MAY BE REQUIRED TO CONDUCT SOME OF HIS GRADING AND TRENCHING OPERATIONS AROUND TRANSMISSION POLES AND UNDER TRANSMISSION LINES. THE ADDED COST OF SO DOING SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION.

WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND PRESERVE PROPERTY MARKERS UNTIL THE OWNER, AN AUTHORIZED SURVEYOR, OR AGENT, HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION.

ALL ELEVATIONS SHOWN REFER TO U.S.G.S. MEAN SEA LEVEL DATUM.



EXISTING TYPICAL SECTION



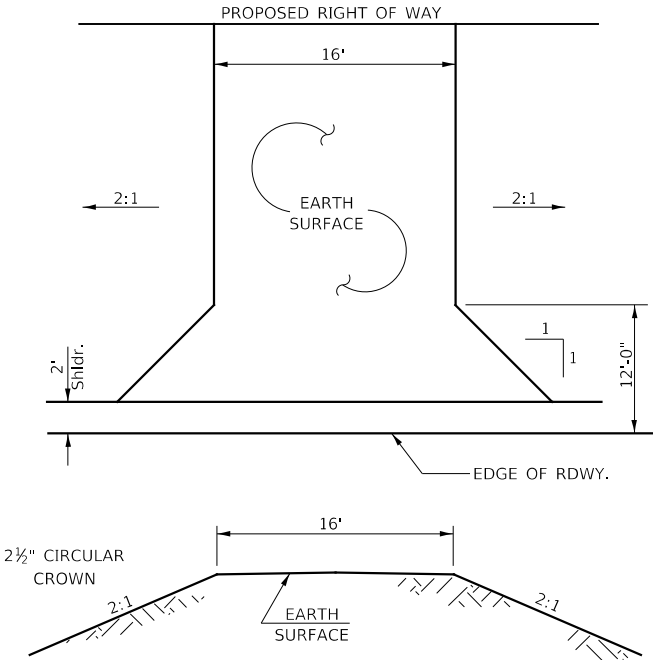
PROPOSED TYPICAL SECTION

* BRIDGE DECK SHALL BE SLOPED 3/16" PER FOOT. SEE BRIDGE PLANS.

STA. 17+25.00 TO STA. 19+64.00
STA. 20+34.00 TO STA. 22+75.00

EXCEPT TRANSITIONS

BRIDGE OMISSION
STA. 19+64.00 TO STA. 20+34.00



FIELD ENTRANCE
STA 19+00 RT

MODEL: STMODEL.NAMES
FILE: NAME: 17-18119-00-01 - TR 176 over Swafford Creek (Shelby County)\\CADD\\CADD Sheets\\17-18119-00-01.dgn

USER NAME = MOgden	DESIGNED - S.T.M.	REVISED -
	DRAWN - C.E.T.	REVISED -
PLOT SCALE = 2,0000 ' / in.	CHECKED - S.T.M.	REVISED -
PLOT DATE = 3/19/2021	DATE - 3/19/2021	REVISED -

SHELBY COUNTY
TOWNSHIP ROAD 176
OVER SWAFFORD CREEK

GENERAL NOTES, TYPICAL SECTIONS, DETAILS

SCALE: NONE SHEET 1 OF 1 SHEETS STA. 17+25.00 TO STA. 22+75.00

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 176	17-18119-00-BR	SHELBY	20	2
CONTRACT NO. 95896				
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT NO. L329(012)		

MODEL: SHELBYXAMES
FILE NAME: V0328 - TR 176 over Swafford Creek (Shelby County)CADD: CADD Sheets\43486001.dgn

SUMMARY OF QUANTITIES				
	CODE NO.	ITEM	UNIT	QUANTITY
Δ SP	20100500	TREE REMOVAL, ACRES	ACRE	0.2
	20200100	EARTH EXCAVATION	CU YD	150
	20300100	CHANNEL EXCAVATION	CU YD	245
	20400800	FURNISHED EXCAVATION	CU YD	545
	25000200	SEEDING, CLASS 2	ACRE	0.4
	25000400	NITROGEN FERTILIZER NUTRIENT	POUND	36
	25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	36
	25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	36
SP	25100115	MULCH, METHOD 2	ACRE	0.4
	28000305	TEMPORARY DITCH CHECKS	FOOT	36
SP	28000400	PERIMETER EROSION BARRIER	FOOT	100
	28000500	INLET AND PIPE PROTECTION	EACH	1
	28100207	STONE RIPRAP, CLASS A4	TON	220
	28200200	FILTER FABRIC	SQ YD	320
	35101400	AGGREGATE BASE COURSE, TYPE B	TON	454
SP	50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
	50200100	STRUCTURE EXCAVATION	CU YD	75
	50300225	CONCRETE STRUCTURES	CU YD	24.1
	50300280	CONCRETE ENCASEMENT	CU YD	3.5
	50400505	PRECAST PRESTRESSED CONCRETE DECK BEAMS (27" DEPTH)	SQ FT	1,628
	50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	2,670
Δ	50900205	STEEL RAILING, TYPE S1	FOOT	140
	51201400	FURNISHING STEEL PILES HP10X42	FOOT	480
	51202305	DRIVING PILES	FOOT	480
	51203400	TEST PILE STEEL HP10X42	EACH	2
	51500100	NAME PLATES	EACH	1
	542D0220	PIPE CULVERTS, CLASS D, TYPE 1 15"	FOOT	30
	67100100	MOBILIZATION	L SUM	1
Δ	72501000	TERMINAL MARKER - DIRECT APPLIED	EACH	4

SP: SEE SPECIAL PROVISIONS

Δ: SPECIALTY ITEMS

EARTHWORK SUMMARY					
STATION TO STATION	EARTH EXCAVATION	CHANNEL EXCAVATION	STRUCTURE EXCAVATION	FILL	WASTE (SHORTAGE)
	CU YD				
RDWY 17+25.00 - 19+64.00	127			365	(270)
RDWY 20+34.00 - 22+75.00	21			289	(273)
CHANNEL		245			
STRUCTURE			75		
TOTAL	148	245	75	654	(543)
USE	150	245	75	-	(545)*

*CHANNEL AND STRUCTURE EXCAVATION ARE NOT INCLUDED INTO FURNISHED EXCAVATION BUT SUITABLE MATERIAL FROM EXCAVATION FOR CONSTRUCTION OF THE STRUCTURE MAY BE USED AS EMBANKMENT. (@ 25% SHRINKAGE)

AGGREGATE BASE COURSE, TYPE B					
STATION TO STATION		THICKNESS	WIDTH	LENGTH	TON
17+25.00	17+75.00	0.67'	18.57' AVG	50.00'	43
17+75.00	19+64.00	0.67'	20.67'	189.00'	182
20+34.00	22+25.00	0.67'	20.67'	191.00'	184
22+25.00	22+75.00	0.67'	19.33' AVG	50.00'	45
TOTAL					454

TREE REMOVAL, ACRES					
STATION	STATION	SIDE	WIDTH	LENGTH	AREA (ACRE)
18+25	21+90	RIGHT	21' AVG.	365'	0.18
TOTAL					0.18
USE					0.2

PIPE CULVERTS, CLASS D, TYPE 1 15"		
¢ STATION	SIDE	FOOT
19+00	RIGHT	30
TOTAL		30

INLET AND PIPE PROTECTION		
¢ STATION	SIDE	EACH
18+85	RIGHT	1
TOTAL		1

TEMPORARY DITCH CHECKS		
STATION	SIDE	FOOT
19+50	LEFT	12
19+55	RIGHT	12
19+95	RIGHT	12
TOTAL		36

PERIMETER EROSION BARRIER		
STATION TO STATION		FOOT
18+85	19+15	30
TOTAL		30

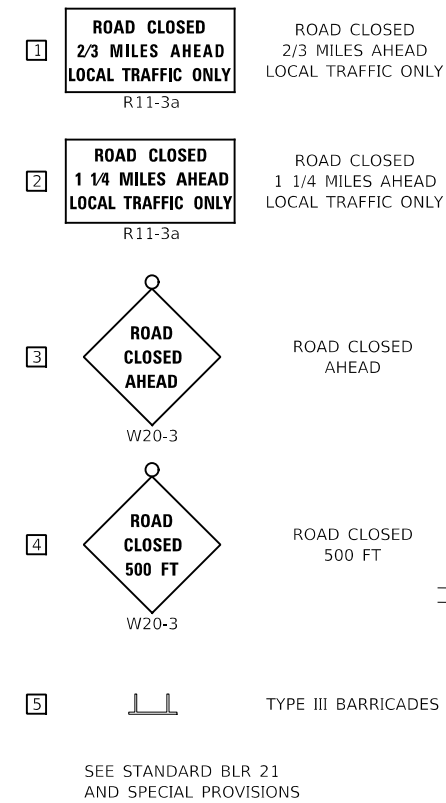
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PLOT DATE = 3/19/2021	DATE - 3/19/2021	REVISED -

SHELBY COUNTY
TOWNSHIP ROAD 176
OVER SWAFFORD CREEK

SUMMARY OF QUANTITIES,
SCHEDULES OF QUANTITIES

SCALE: NONE SHEET 1 OF 1 SHEETS STA. 17+25.00 TO STA. 22+75.00

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 176	17-18119-00-BR	SHELBY	20	3
CONTRACT NO. 95896				
FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT NO. L329(012)				



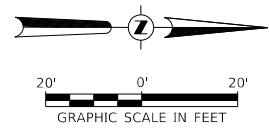
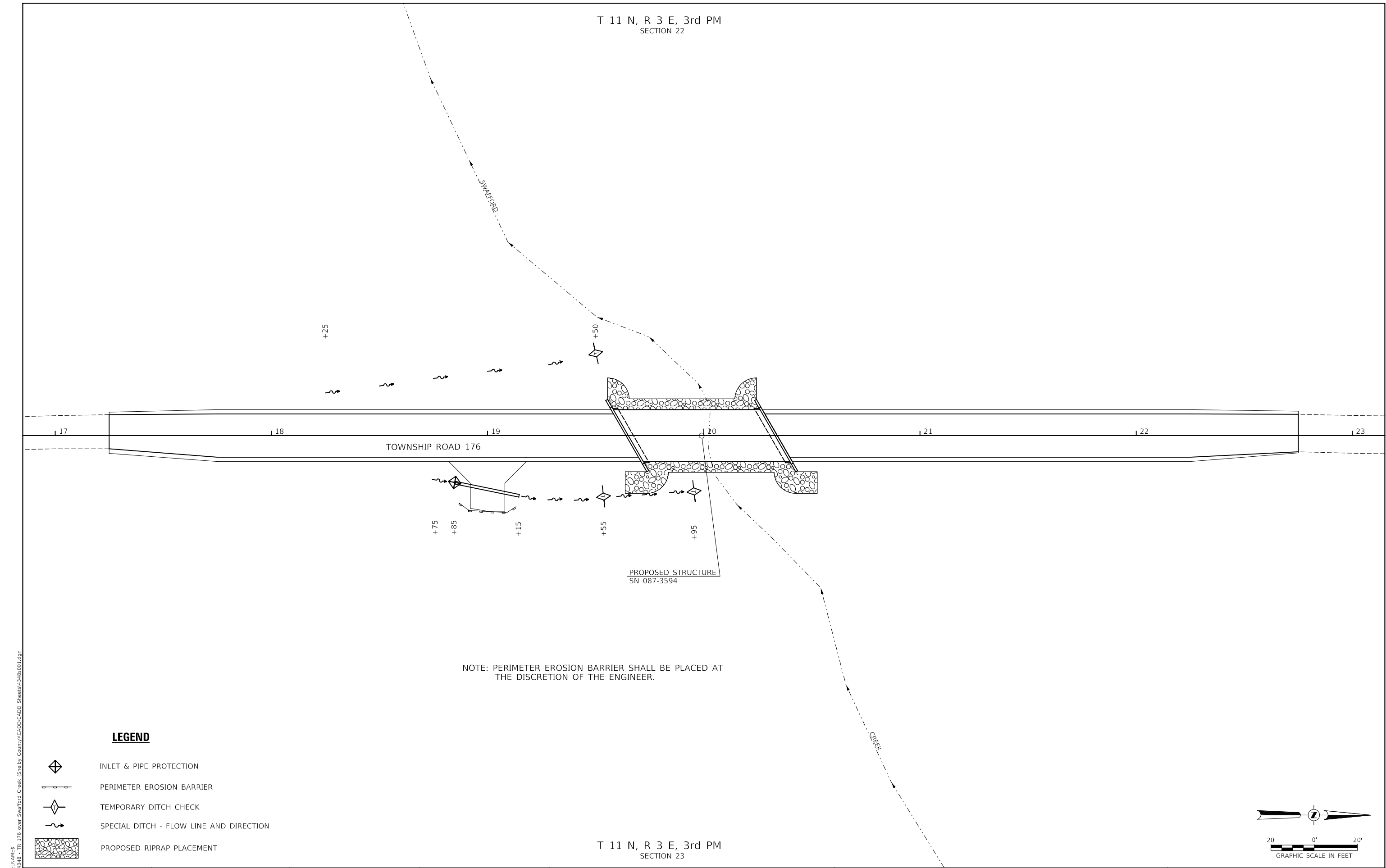
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PLOT DATE = 3/19/2021	DATE = 3/19/2021	REVISED -

**SHELBY COUNTY
TOWNSHIP ROAD 176
OVER SWAFFORD CREEK**

TRAFFIC CONTROL PLAN				
SCALE: NONE	SHEET 1	OF 1	SHEETS	STA. 17+25.00 TO STA. 22+75.00

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 176	17-18119-00-BR	SHELBY	20	4
			CONTRACT NO. 95896	
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT NO. 1329(012)	

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PLOT DATE	= 3/19/2021	DATE -	3/19/2021	REVISED -	

SHELBY COUNTY
TOWNSHIP ROAD 176
OVER SWAFFORD CREEK

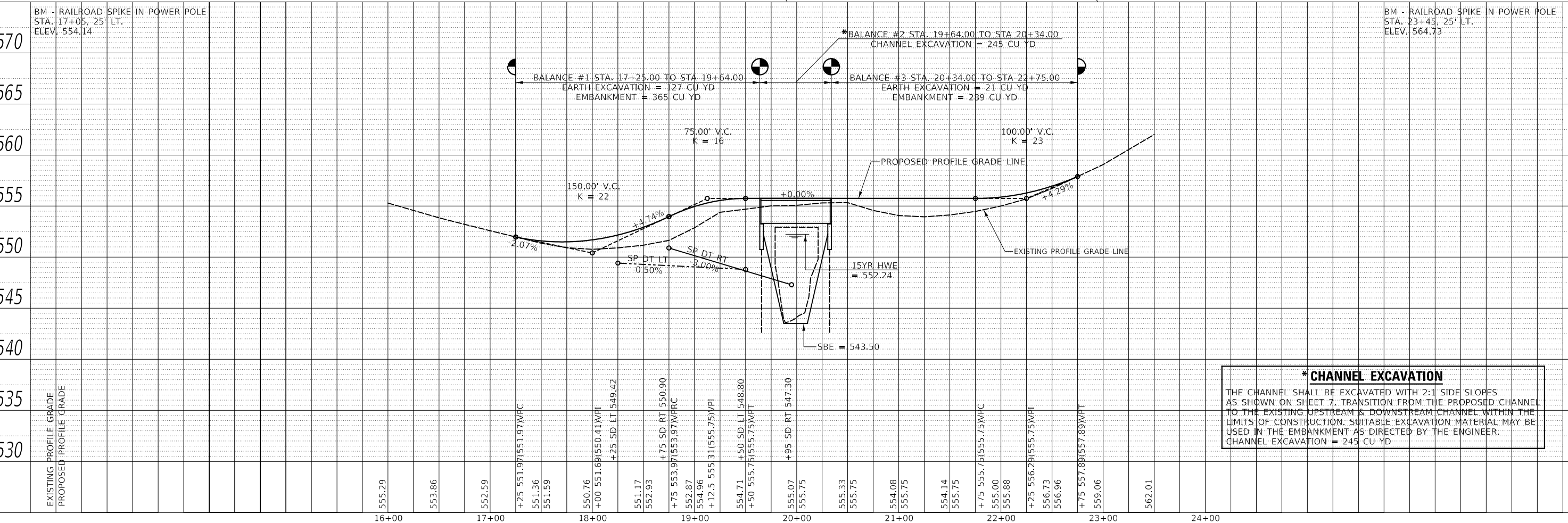
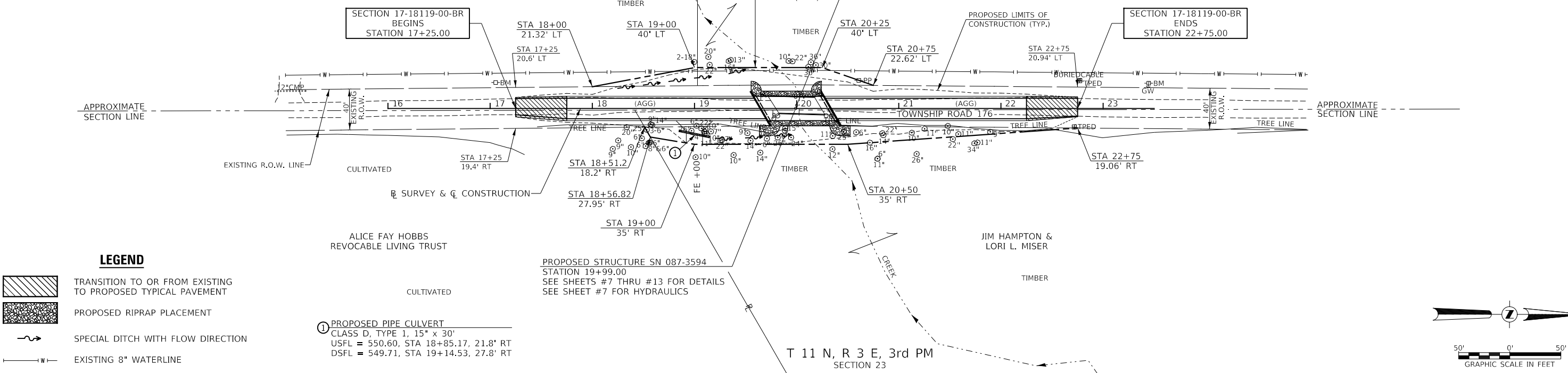
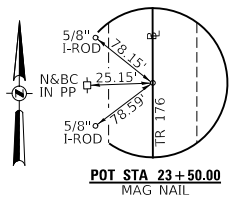
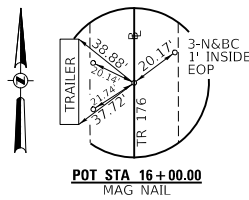
EROSION CONTROL PLAN			
SCALE: 1"=20'	SHEET 1	OF 1	SHEETS
STA. 17+25.00		TO STA. 22+75.00	

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 176	17-18119-00-BR	SHELBY	20	5
CONTRACT NO. 95896				
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT NO. L329(012)	

PLAN	DATE	BY
SURVEYED		
PLOTTED		
ALIGNMENT CHECKED		
PROPOSED CADD FILE NAME		
NOTE BOOK NO.		

PROFILE	DATE	BY
SURVEYED		
GRADES CHECKED		
STRUCTURE NOTATIONS CHNGD		
NOTE BOOK NO.		

MODEL: \$MODELNAME\$
FILE NAME: V:\3248 - TR 176 over Swafford Creek (Shelby County)\CADD\CADD Sheets\3248p001.dgn



*** CHANNEL EXCAVATION**
THE CHANNEL SHALL BE EXCAVATED WITH 2:1 SIDE SLOPES AS SHOWN ON SHEET 7. TRANSITION FROM THE PROPOSED CHANNEL TO THE EXISTING UPSTREAM & DOWNSTREAM CHANNEL WITHIN THE LIMITS OF CONSTRUCTION. SUITABLE EXCAVATION MATERIAL MAY BE USED IN THE EMBANKMENT AS DIRECTED BY THE ENGINEER.
CHANNEL EXCAVATION = 245 CU YD

USER NAME = MOgden	DESIGNED - S.T.M.	REVISED -	SHELBY COUNTY TOWNSHIP ROAD 176 OVER SWAFFORD CREEK	PLAN AND PROFILE					RTe.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	DRAWN - C.E.T.	REVISED -							TR 176	17-18119-00-BR	SHELBY	20	6
PLOT SCALE = 100,0000 ' / in.	CHECKED - S.T.M.	REVISED -		CONTRACT NO. 95896									
PLOT DATE = 3/19/2021	DATE - 3/19/2021	REVISED -		SCALE: 1"=50'	SHEET NO. 1 OF 1 SHEETS	STA. 17+25.00	TO STA. 22+75.00	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT NO. L329(012)			

B.M.: RR Spike in Power Pole
Sta. 17+05, 25' Lt.
Elev. 554.14

RR Spike in Power Pole
Sta. 23+45, 25' Lt.
Elev. 564.73

Existing Structure:

Single span steel girder superstructure with a timber deck on timber caps and timber pile closed abutments with timber lagging. The structure is 45'-0" back to back of abutments, ±17'-10" out to out deck, and is skewed 31° Rt. Ah. Str. No. 087-3135

Salvage: None

Road to be closed to traffic during construction.

SWAFFORD CREEK
BUILT 202 BY
SHELBY COUNTY
SEC. 17-18119-00-BR
T.R. 176 STATION 19+99.00
F.A. PROJ. NO. L3Z9(012)
STR. NO. 087-3594 LOADING HL-93

NAME PLATE

Locate Name Plate at S.E. Wingwall
Corner of Bridge (See Std. 515001)

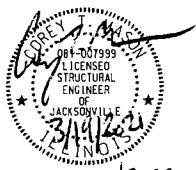
GENERAL NOTES

The Contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at the substructures specified or approved by the Engineer before ordering the remainder of the piles.
For Soil Boring Logs, See Special Provisions.
A Corrosion Inhibitor shall be used in the concrete for Precast Prestressed Concrete Deck Beams according to Articles 1020.05(b)(10) and 1021.07 of the Standard Specifications.
Reinforcement Bars designated (E) shall be epoxy coated.
Layout of the slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.
The top surface of the beams shall be finished according to the IDOT Manual for Fabrication of Precast Prestressed Concrete Products.
The existing structural steel coating may contain lead. The Contractor should take appropriate precautions to deal with the presence of lead on this project.

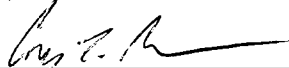
TOTAL BILL OF MATERIAL

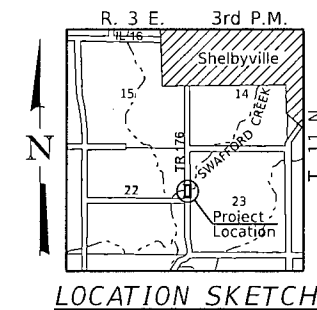
ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	CU YD	—	245	245
Stone Riprap, Class A4	TON	—	220	220
Filter Fabric	SQ YD	—	320	320
① Removal of Existing Structures	EACH	—	—	1
Structure Excavation	CU YD	—	75	75
Concrete Structures	CU YD	—	24.1	24.1
Concrete Encasement	CU YD	—	3.5	3.5
Precast Prestressed Concrete Deck Beams (27" Depth)	SQ FT	1,628	—	1,628
Reinforcement Bars, Epoxy Coated	POUND	—	2,670	2,670
Steel Railing, Type 51	FOOT	140	—	140
Furnishing Steel Piles HP10x42	FOOT	—	480	480
Driving Piles	FOOT	—	480	480
Test Pile Steel HP10x42	EACH	—	2	2
Name Plates	EACH	—	1	1
Terminal Marker - Direct Applied	EACH	4	—	4

① See Special Provisions


Lic. Exp. 11/30/2022

I certify that to the best of my knowledge, information and belief, this bridge design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current AA5HT0 Standard Specification for Highway Bridges.
This design complies with all requirements of the current AA5HT0 Guide Specifications for Seismic Design of highway bridges.

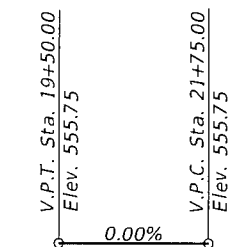

Illinois Structural No. 7999
Expires 11/30/2022



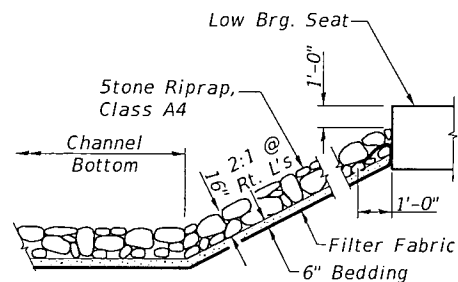
LOCATION SKETCH

GENERAL PLAN & ELEVATION
SHELBY COUNTY
SECTION 17-18119-00-BR
TOWNSHIP ROAD 176
OVER SWAFFORD CREEK

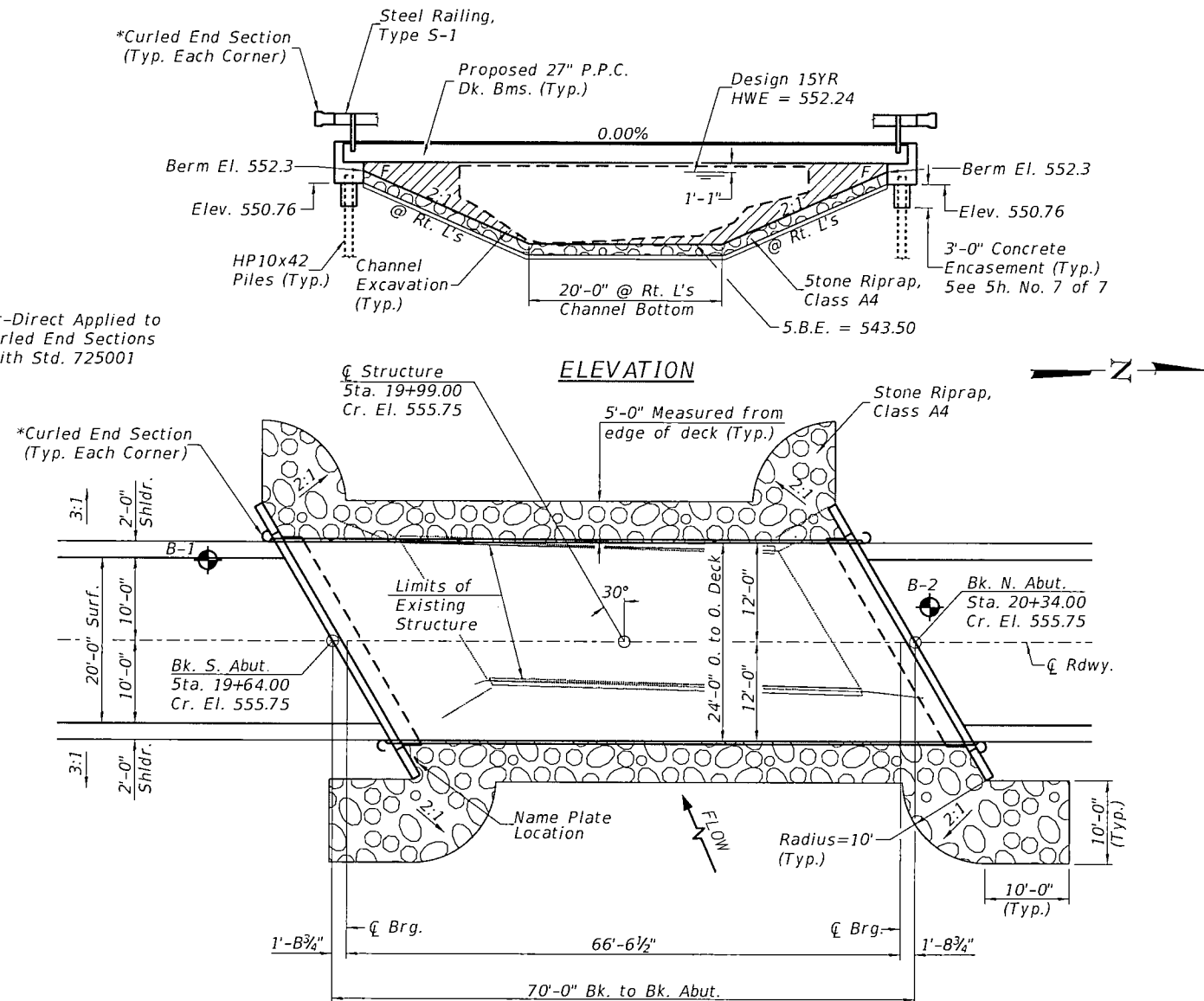
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 176	17-18119-00-BR	SHELBY	20	7
S.N. 087-3594		CONTRACT NO. 95896		
FED. ROAD DIST. NO. 7 ILLINOIS		FED. AID PROJECT NO. L3Z9(012)		



PROFILE GRADE



STONE RIPRAP DETAIL



ELEVATION

PLAN

DESIGN SCOUR TABLE

Location	S. Abut.	N. Abut.
Design Scour Elevation	550.76	550.76

WATERWAY INFORMATION

Drainage Area = 5.05 Sq. Mi.			Low Grade Elev. = 551.50 @ Sta. 17+75.00						
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	15	1,924	238	326	552.24	0.47	0.59	552.71	552.83
Base	100	3,046	262	368	553.01	0.60	0.69	553.61	553.70

DESIGN SPECIFICATIONS

2020 AA5HT0 LRFD Bridge Design Specifications, 9th Edition

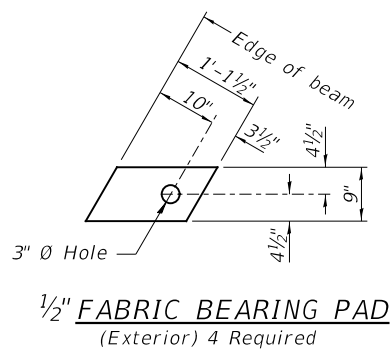
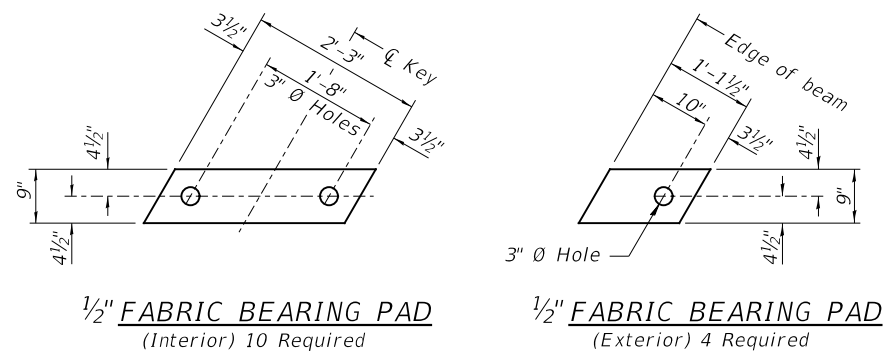
DESIGN STRESSES

(FIELD UNITS) (PRECAST PRESTRESSED UNITS)
 $f'_c = 3,500$ p.s.i. $f'_c = 6,000$ p.s.i.
 $f_y = 60,000$ p.s.i. (Rein.) $f_{ci} = 5,000$ p.s.i.
 $f'_s = 270,000$ p.s.i. ($1/2$ " Strands)
 $f_{si} = 201,960$ p.s.i. ($1/2$ " Strands)

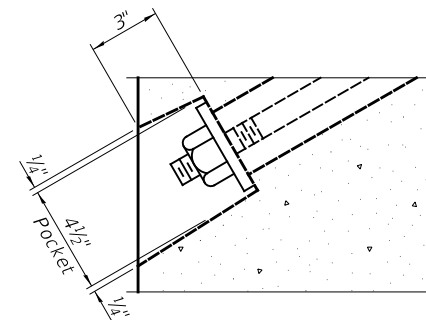
LOADING HL-93

Allow 50#/sq. ft. for future wearing surface.

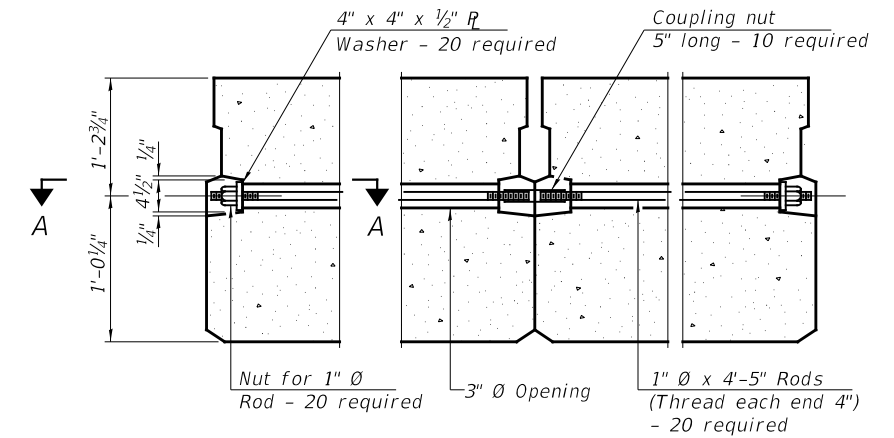
DESIGNED	S.T.M.
CHECKED	C.T.M.
DRAWN	S.T.M.
CHECKED	C.T.M.



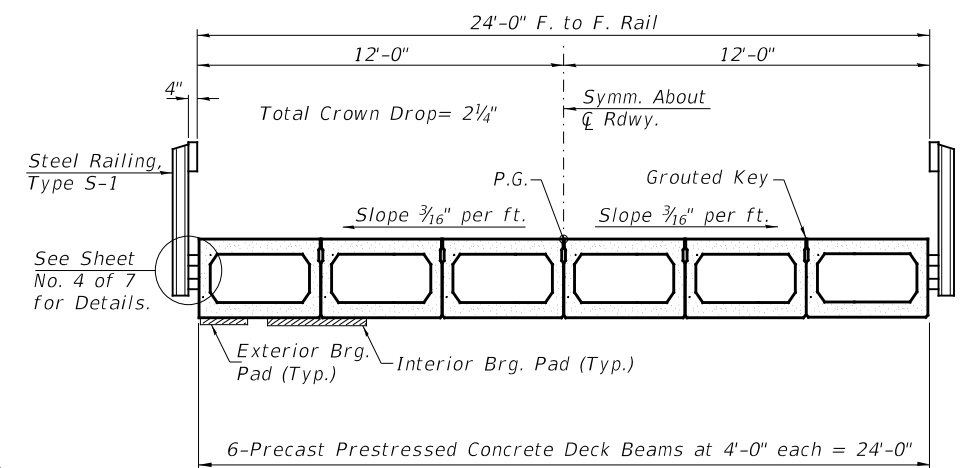
FIXED



SECTION A-A



TYPICAL TRANSVERSE TIE ASSEMBLY



PROPOSED CROSS SECTION

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Precast Prestressed Concrete Deck Beams (27" Depth)	SQ FT	1,628

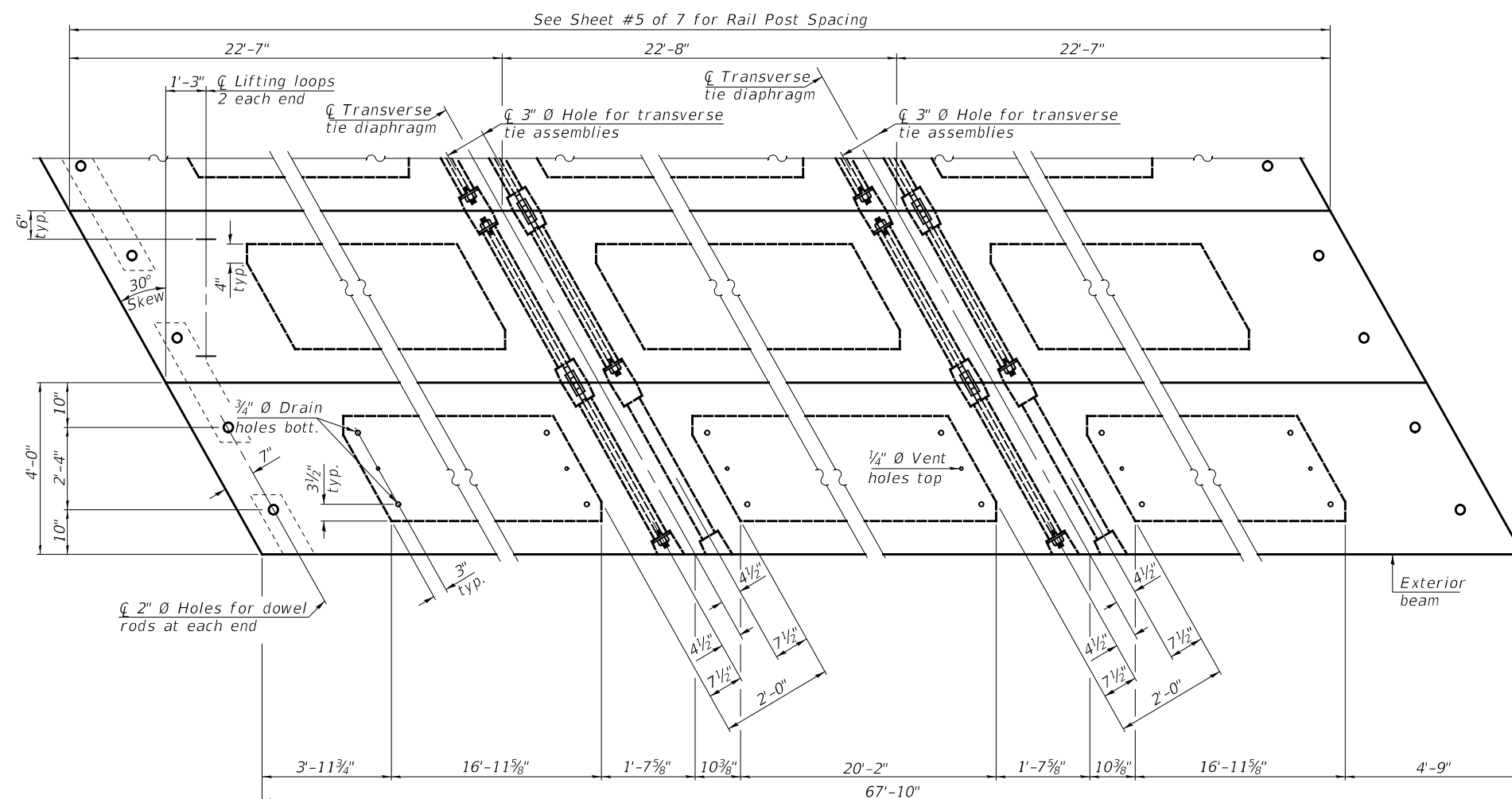
SUPERSTRUCTURE

SHELBY COUNTY

SECTION 17-18119-00-BR

TOWNSHIP ROAD 176

OVER SWAFFORD CREEK



PLAN VIEW

NOTES

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.

The nominal diameter shall be $\frac{1}{2}$ " and the nominal cross-sectional area shall be 0.153 sq. in.
The 1" $\varnothing$ rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.

Two $\frac{1}{8}$ " fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.

A minimum 2½" Ø lifting pin shall be used to engage the lifting loops during handling.

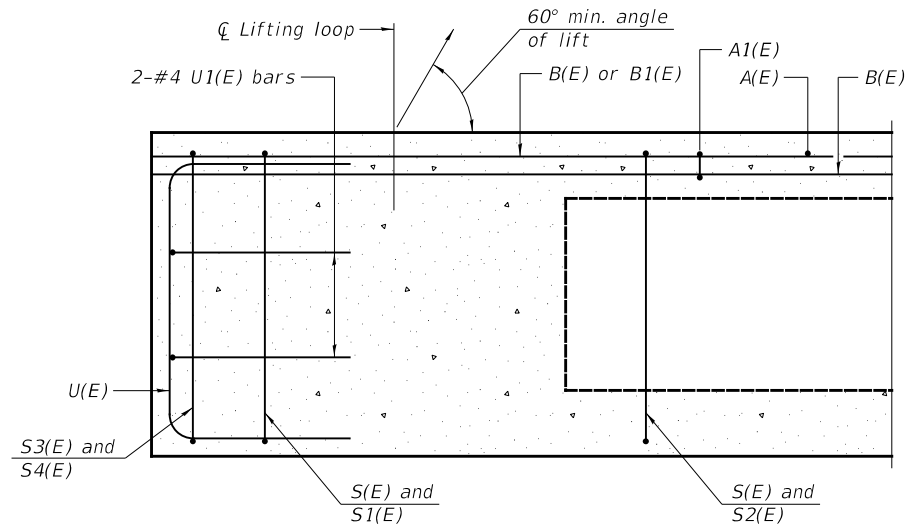
Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.

Compressive strength of prestressed concrete, f'_c , shall be 6000 psi.

Compressive strength of prestressed concrete at release, f'_{ci} , shall be 5000 psi.

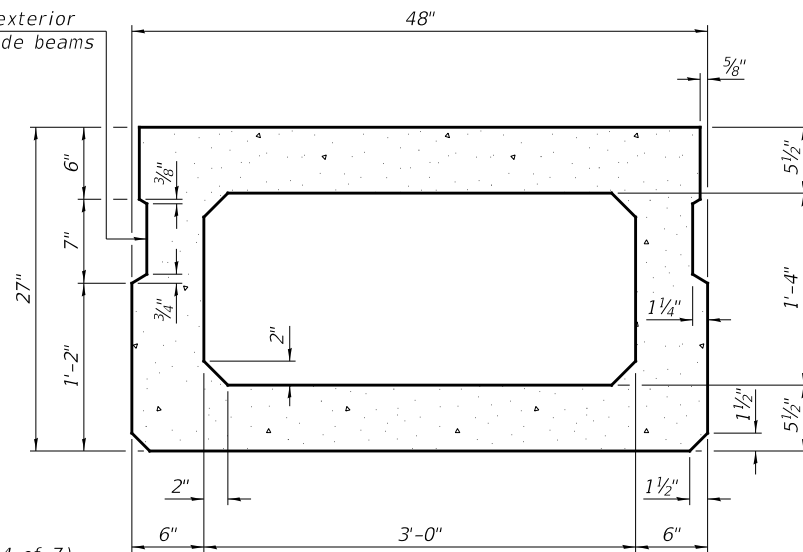
Note: Connect beams in pairs with the transverse tie configuration shown.

SHEET NO. 2 7 SHEETS	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	TR 176	17-18119-00-BR	SHELBY	20	8
	S.N. 087-3594		CONTRACT NO. 95896		
	FED. ROAD DIST. NO. 7 ILLINOIS		FED. AID PROJECT NO. L3Z9(012)		

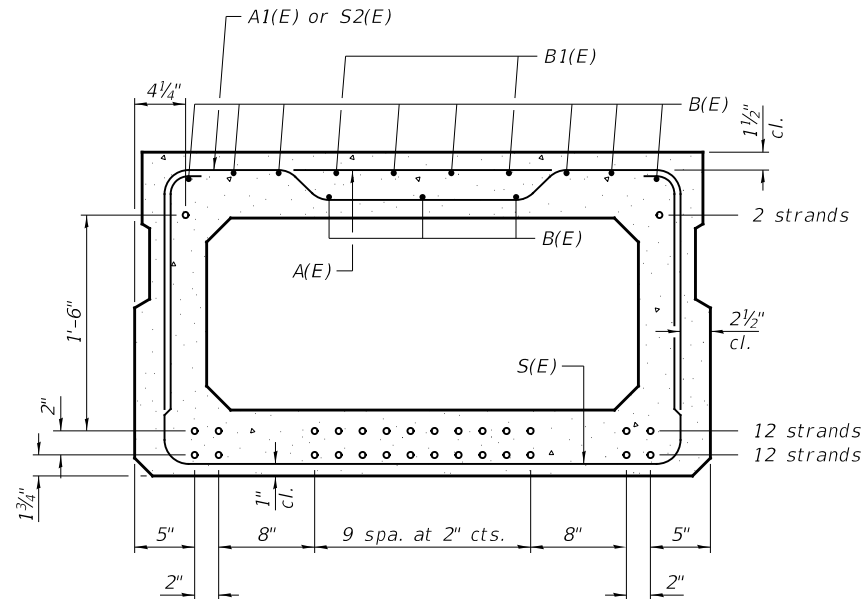


SECTION A-A

** Omit key on exterior face of outside beams



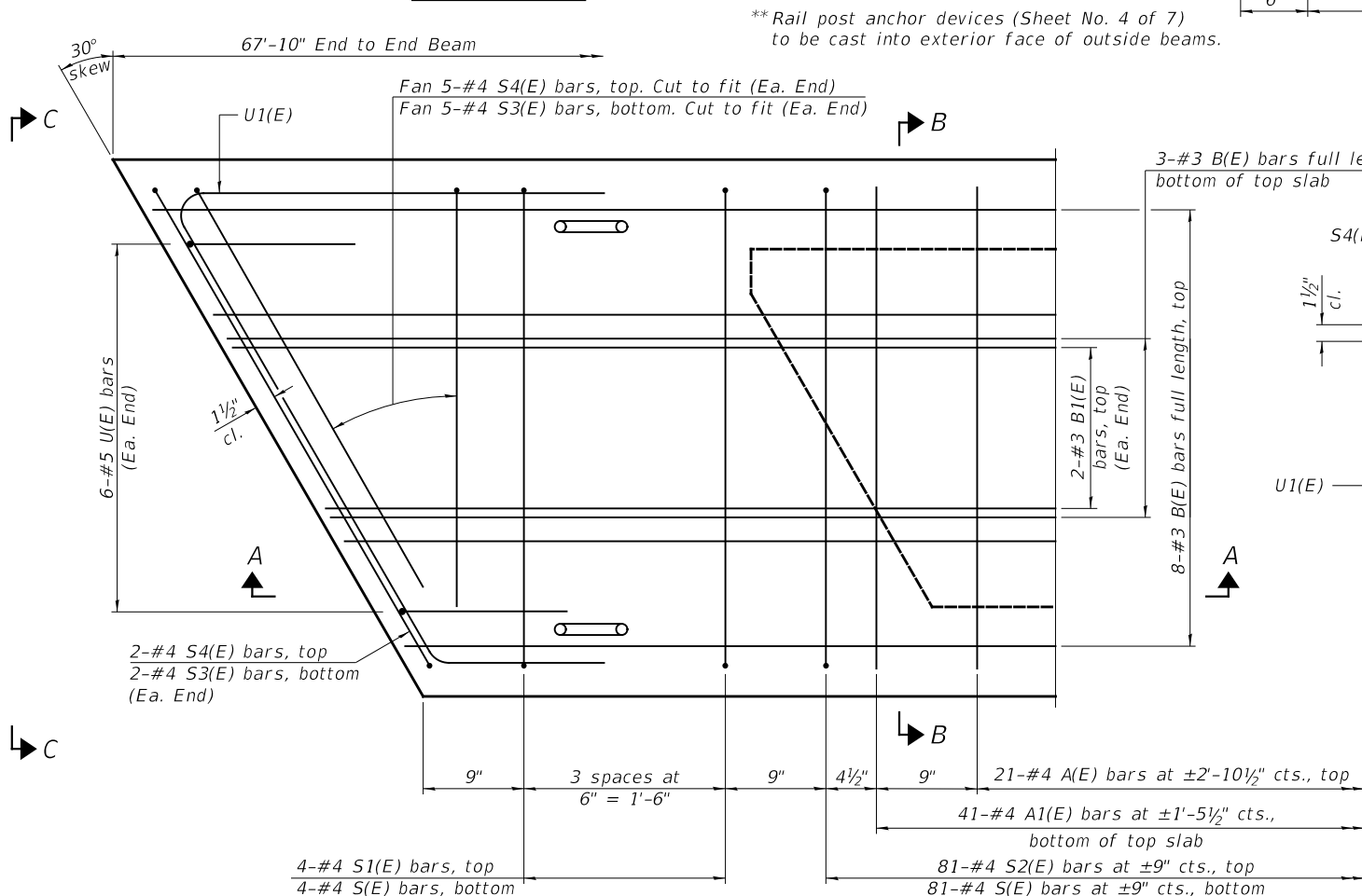
SECTION B-B
(Showing dimensions)



SECTION B-B

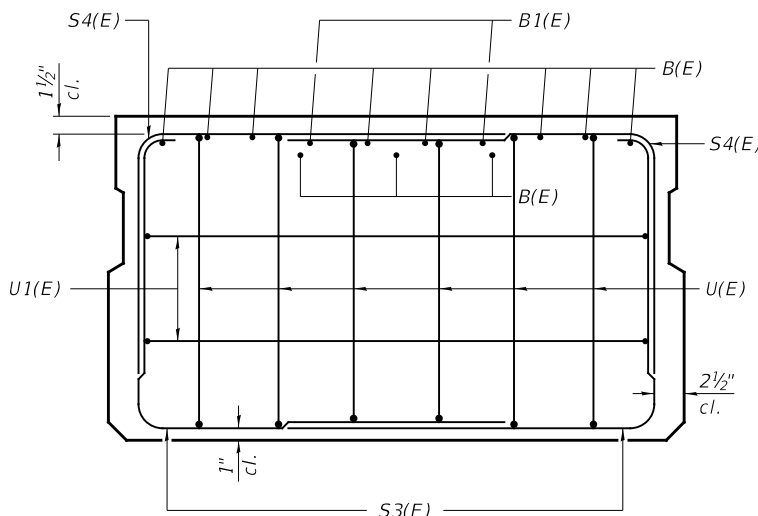
26-1/2" Ø Strands Each Strand Stressed to 30,900 Lbs.
12-Strands 1 3/4" up, 12-Strands 3 3/4" up,
2-Strands 21 3/4" up

Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

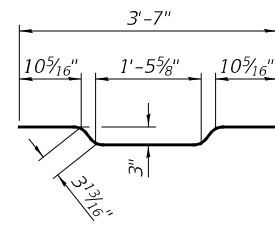


PLAN VIEW

3-#3 B(E) bars full length, bottom of top slab



VIEW C-C

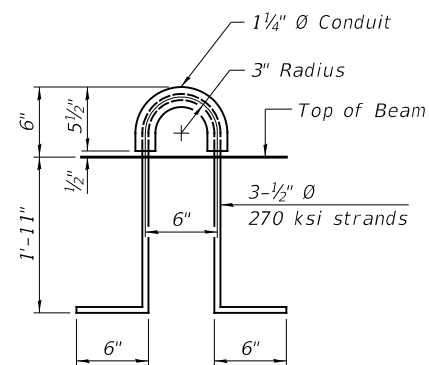


BAR A1(E)

BAR LIST
ONE BEAM ONLY
(For information only)

Bar	No.	Size	Length	Shape
A(E)	21	#4	3'-7"	—
A1(E)	41	#4	3'-10"	—
B(E)	11	#3	*67'-7"	—
B1(E)	4	#3	10'-0"	—
S(E)	89	#4	8'-5"	U
S1(E)	8	#4	6'-11"	U
S2(E)	81	#4	7'-2"	U
S3(E)	14	#4	6'-2"	U
S4(E)	14	#4	5'-5"	U
U(E)	12	#5	4'-6"	U
U1(E)	4	#4	8'-7"	U

Note: See Sheet 2 of 7 for additional details and Bill of Material.



LIFTING LOOP DETAIL

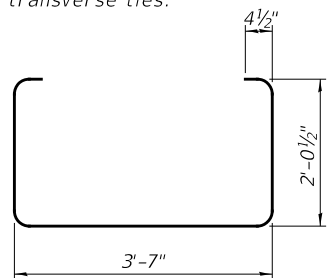
*Total length, lap as necessary.

MINIMUM BAR LAP
#3 bar = 1'-6"

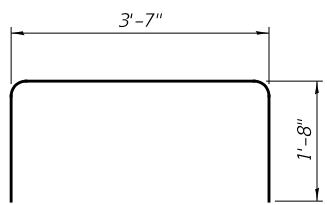
SUPERSTRUCTURE DETAILS
SHELBY COUNTY
SECTION 17-18119-00-BR
TOWNSHIP ROAD 176
OVER SWAFFORD CREEK

SHEET NO. 3 7 SHEETS	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	TR 176	17-18119-00-BR	SHELBY	20	9
	S.N. 087-3594		CONTRACT NO. 95896		
	FED. ROAD DIST. NO. 7 ILLINOIS		FED. AID PROJECT NO. L3Z9(012)		

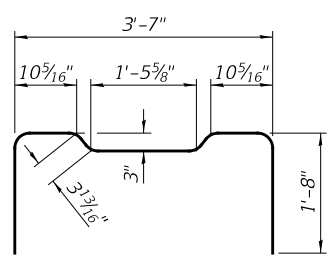
Note:
Spacing of S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.



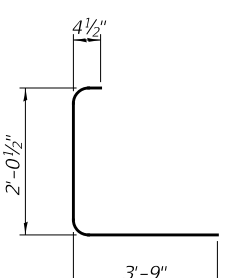
BAR S(E)



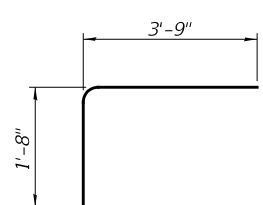
BAR S1(E)



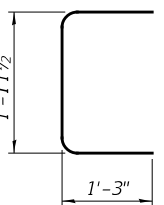
BAR S2(E)



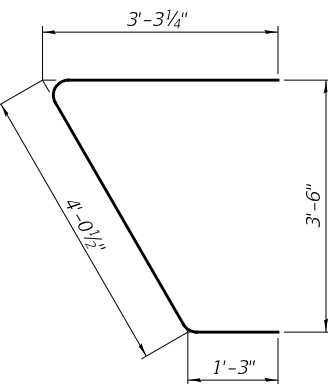
BAR S3(E)



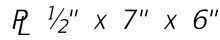
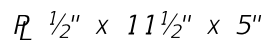
BAR S4(E)



BAR U(E)



BAR U1(E)



1 1/8" Ø Holes for 1" Ø x 4" Round head bolts. Provide 2 flat washers & locknuts for Curled End Section connection.

2" 1/4" 1" R 8" 12" 3/4" 3/4" Ø Drain Hole

3/16" 2" 1" 5" 1/4" 4" 3/4" Traffic side of rail

END OF RAIL DETAILS

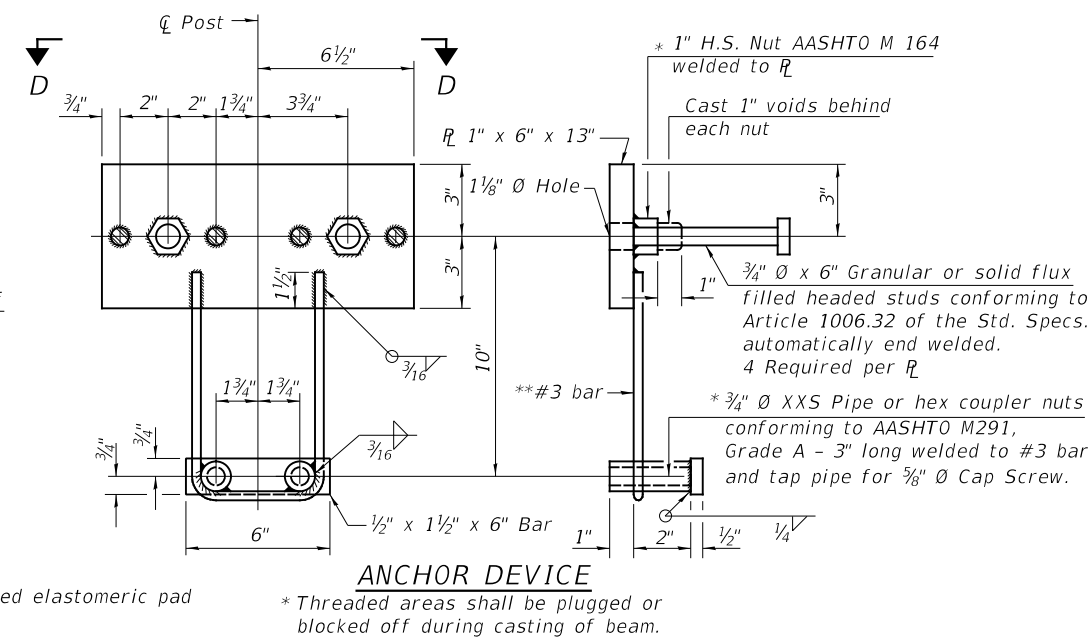
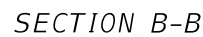
NOTES

All field drilled holes shall be coated with an approved zinc rich paint before erection.

For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing, Type S-1.

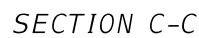
All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.

***The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.

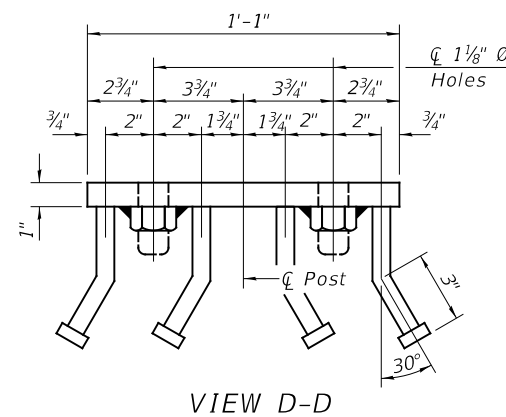


ANCHOR DEVICE

* Threaded areas shall be plugged or blocked off during casting of beam.



**** Whenever the lower insert assemblies interfere with strand locations, the #3 bars shall be cut and adjusted in order to allow raising or lowering of the lower inserts. Maximum adjustment not to exceed 1/2".**

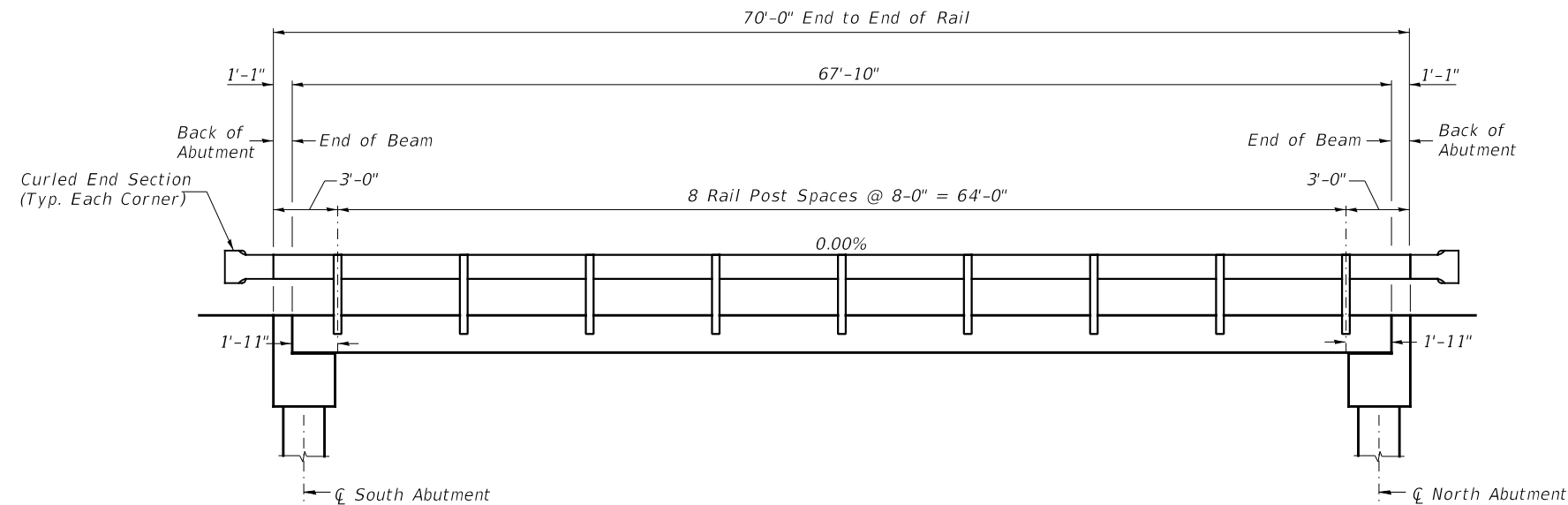


BILL OF MATERIAL

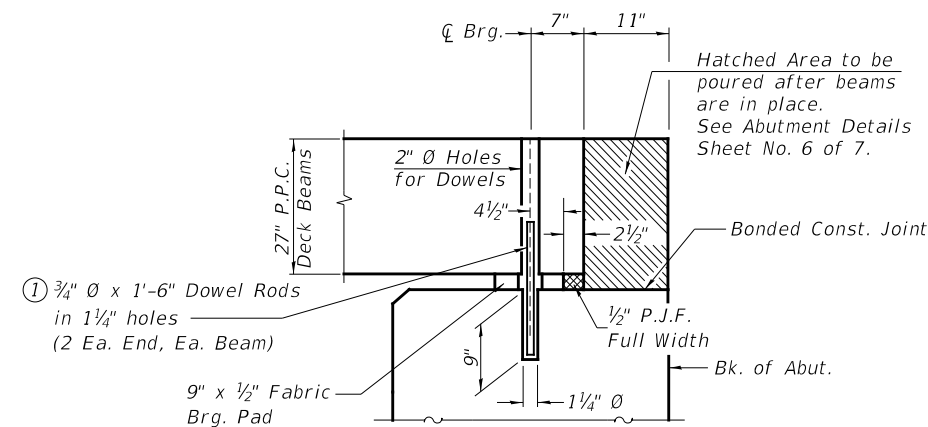
ITEM	UNIT	QUANTIT
Steel Railing, Type S-1	FOOT	140

STEEL RAILING, TYPE S-1
SHELBY COUNTY
SECTION 17-18119-00-BR
TOWNSHIP ROAD 176
OVER SWAFFORD CREEK

SHEET NO. 4 7 SHEETS	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	TR 176	17-18119-00-BR	SHELBY	20	10
	S.N. 087-3594		CONTRACT NO. 95896		
	FED. ROAD DIST. NO. 7 ILLINOIS		FED. AID PROJECT NO. L3Z9(012)		



RAIL POST SPACING

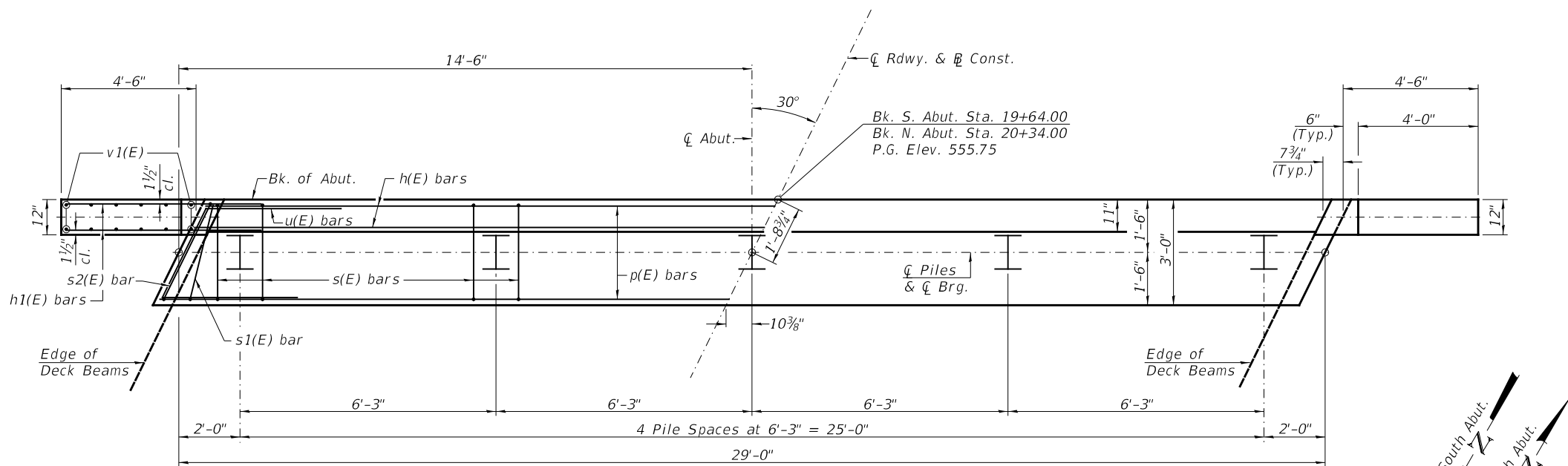


SECTION THRU ABUTMENTS
(At Right Angles)

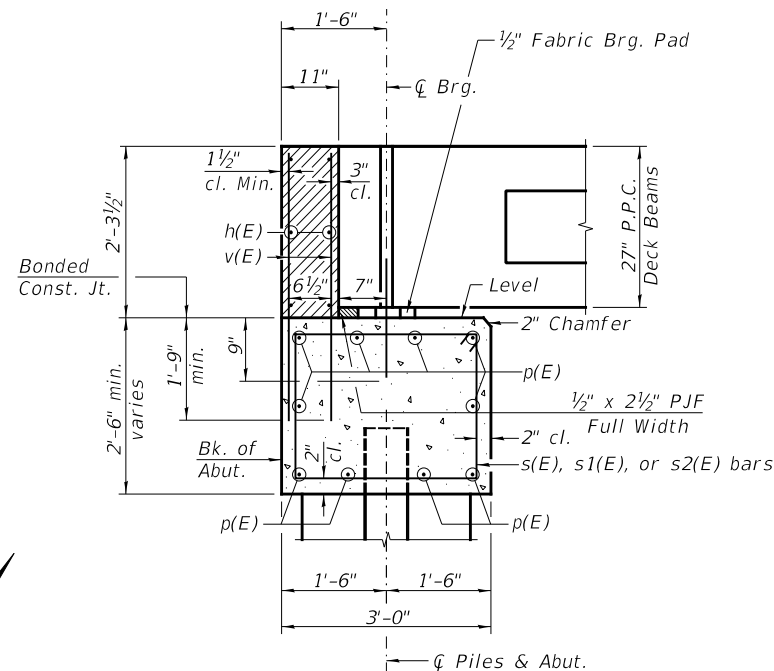
① Dowel Rods to be grouted after beams are in place and allowed to cure (Min. 24 hr.) prior to grouting the shear keys.

RAIL POST SPACING AND
SUPERSTRUCTURE DETAILS
SHELBY COUNTY
SECTION 17-18119-00-BR
TOWNSHIP ROAD 176
OVER SWAFFORD CREEK

SHEET NO. 5 7 SHEETS	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	TR 176	17-18119-00-BR	SHELBY	20	11
	S.N. 087-3594		CONTRACT NO. 95896		
	FED. ROAD DIST. NO. 7 ILLINOIS		FED. AID PROJECT NO. L3Z9(012)		



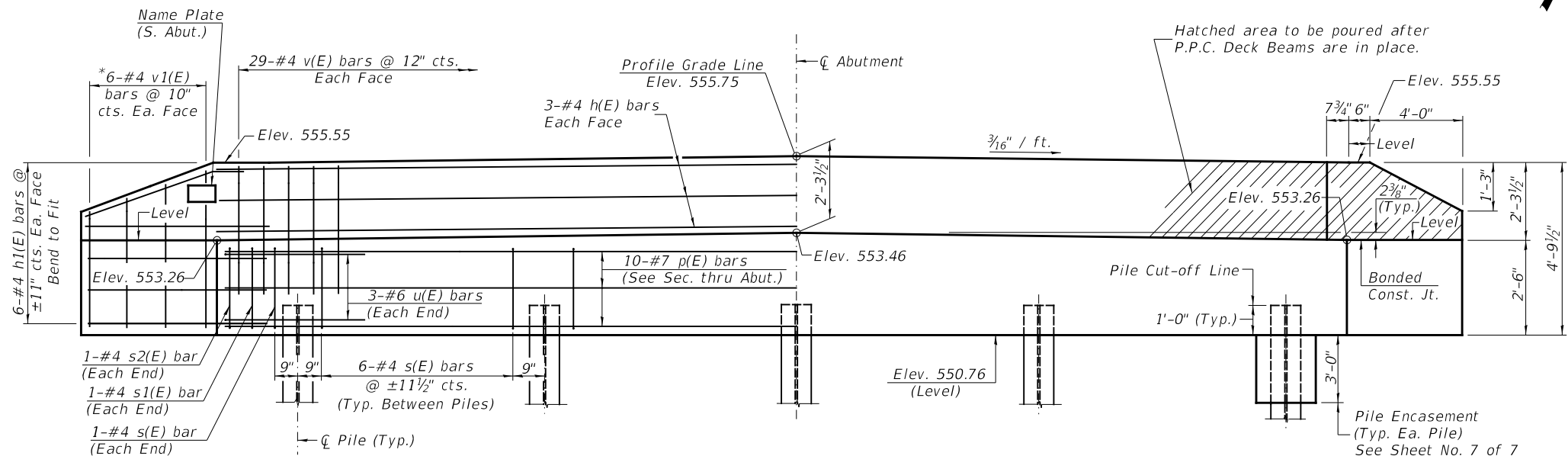
PLAN



SECTION THRU ABUT.
(At Right Angles)

TWO ABUTMENTS
BILL OF MATERIAL

BAR	NO.	SIZE	LENGTH	SHAPE
h(E)	12	#4	28'-9"	—
h1(E)	48	#4	6'-6"	—
p(E)	20	#7	28'-9"	—
s(E)	52	#4	10'-5"	□
s1(E)	4	#4	7'-8"	□
s2(E)	4	#4	8'-4"	□
u(E)	12	#6	12'-0"	▤
v(E)	116	#4	4'-0"	—
v1(E)	24	#4	7'-9"	—
Structure Excavation			CU YD	75
Concrete Structures			CU YD	24.1
Concrete Encasement			CU YD	3.5
Reinforcement Bars, Epoxy Coated			POUND	2,670
Furnishing Steel Piles HP10x42			FOOT	480
Driving Piles			FOOT	480
Test Pile Steel HP10x42			EACH	2
Name Plates			EACH	1



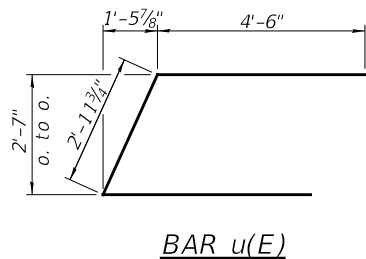
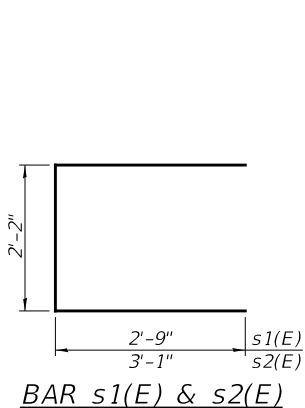
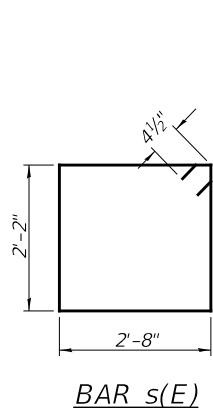
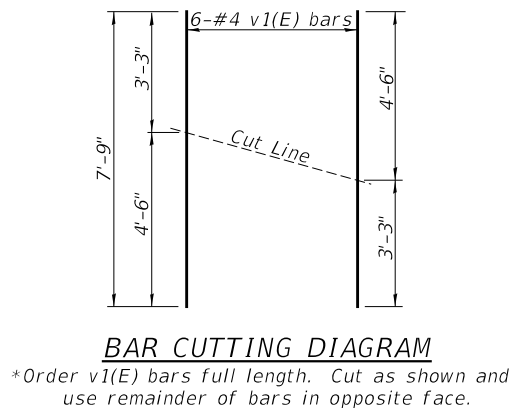
ELEVATION
(Front View of Abutment)

PILE DATA

Type & Size: Steel HP10x42
Nominal Required Bearing: 335 kips
Factored Resistance Available: 184 kips
Est. Length: 65' South Abutment
55' North Abutment
No. Req'd.: 10 (Includes 1 Test Pile at Each Abut.)

NOTES

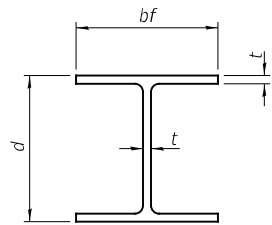
- The backwall and the portion of the wingwalls above the bonded construction joint shall be cast against the in-place beam.
- All edges shall have standard $\frac{3}{4}$ " chamfer.
- Reinforcement Bars, Epoxy Coated shall conform to ASTM A706 Grade 60.



SHEET NO. 6
7 SHEETS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 176	17-18119-00-BR	SHELBY	20	12
S.N. 087-3594		CONTRACT NO. 95896		
FED. ROAD DIST. NO. 7 ILLINOIS		FED. AID PROJECT NO. L3Z9(012)		

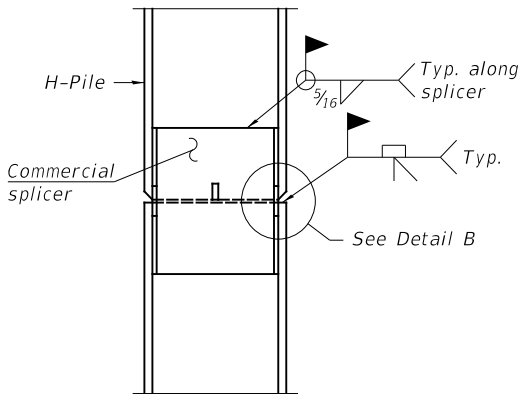
ABUTMENTS
SHELBY COUNTY
SECTION 17-18119-00-BR
TOWNSHIP ROAD 176
OVER SWAFFORD CREEK



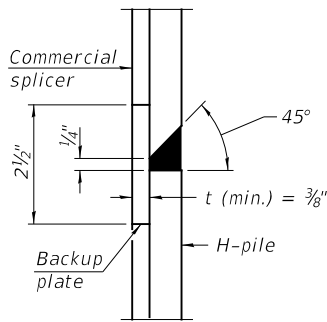
STEEL PILE TABLE

Designation	Depth d	Flange width bf	Web and Flange thickness t	Encasement diameter
HP 14x117	14 1/4"	14 7/8"	1 3/16"	30"
x102	14"	14 3/4"	1 1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1 1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	11 3/4"	12"	7/16"	24"
HP 10x57	10"	10 1/4"	9/16"	24"
x42	9 3/4"	10 1/8"	7/16"	24"
HP 8x36	8"	8 1/8"	7/16"	18"

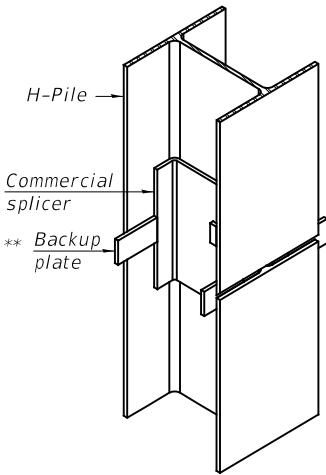
Note:
The steel H-piles shall be according to
AASHTO M270 Grade 50.



ELEVATION

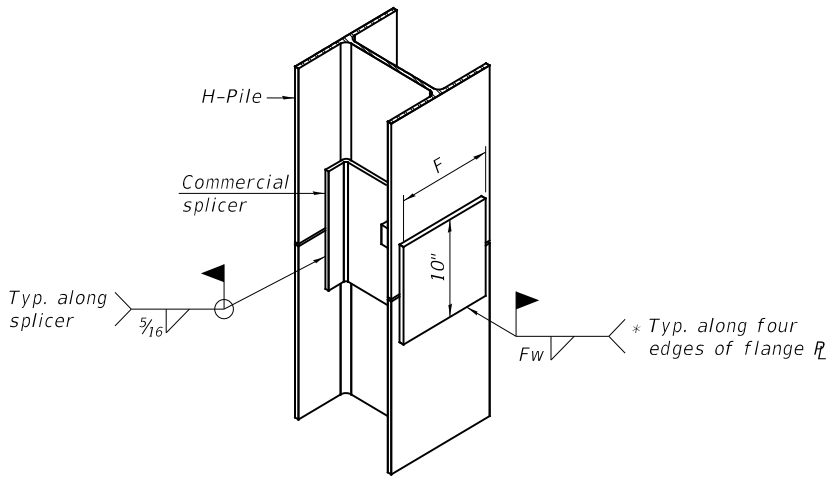


DETAIL "B"



ISOMETRIC VIEW

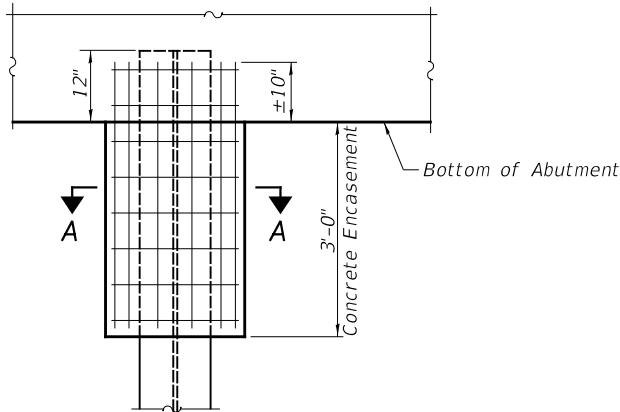
WELDED COMMERCIAL SPLICE



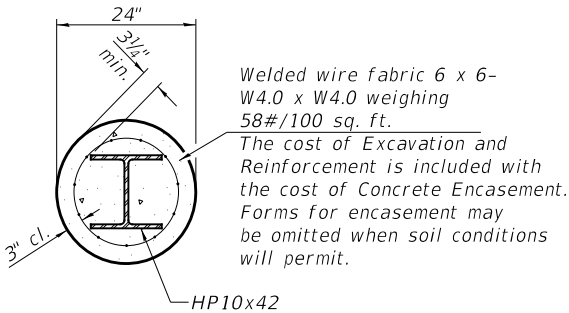
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

* Interrupt welds 1/4" from end of web and/or each flange.
** Remove portions of backup plates that extend outside the flanges.

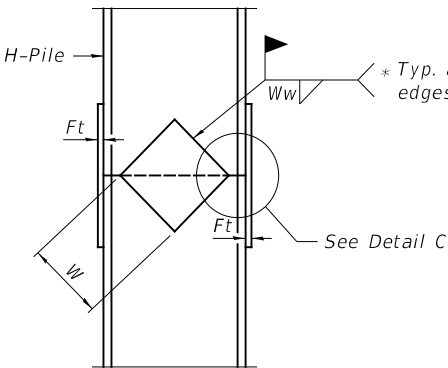


ABUTMENT ELEVATION

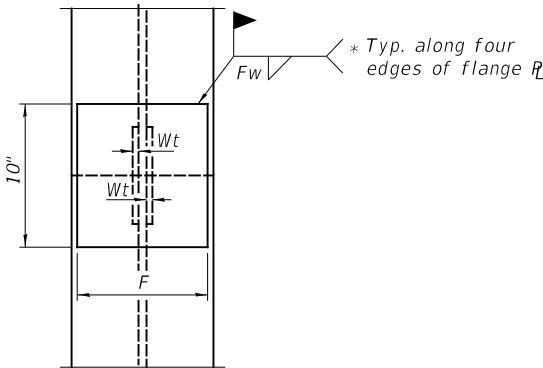


SECTION A-A

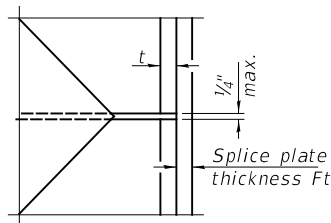
PILE ENCASEMENT



ELEVATION



END VIEW



DETAIL C

Designation	F	Ft	Fw	W	Wt	Ww
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5/8"	1/2"
x89	12 1/2"	3/4"	1 1/16"	7 3/4"	5/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5/8"	1/2"
HP 12x84	10"	7/8"	1 1/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	1 1/16"	6 1/2"	5/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"

WELDED PLATE FIELD SPLICE

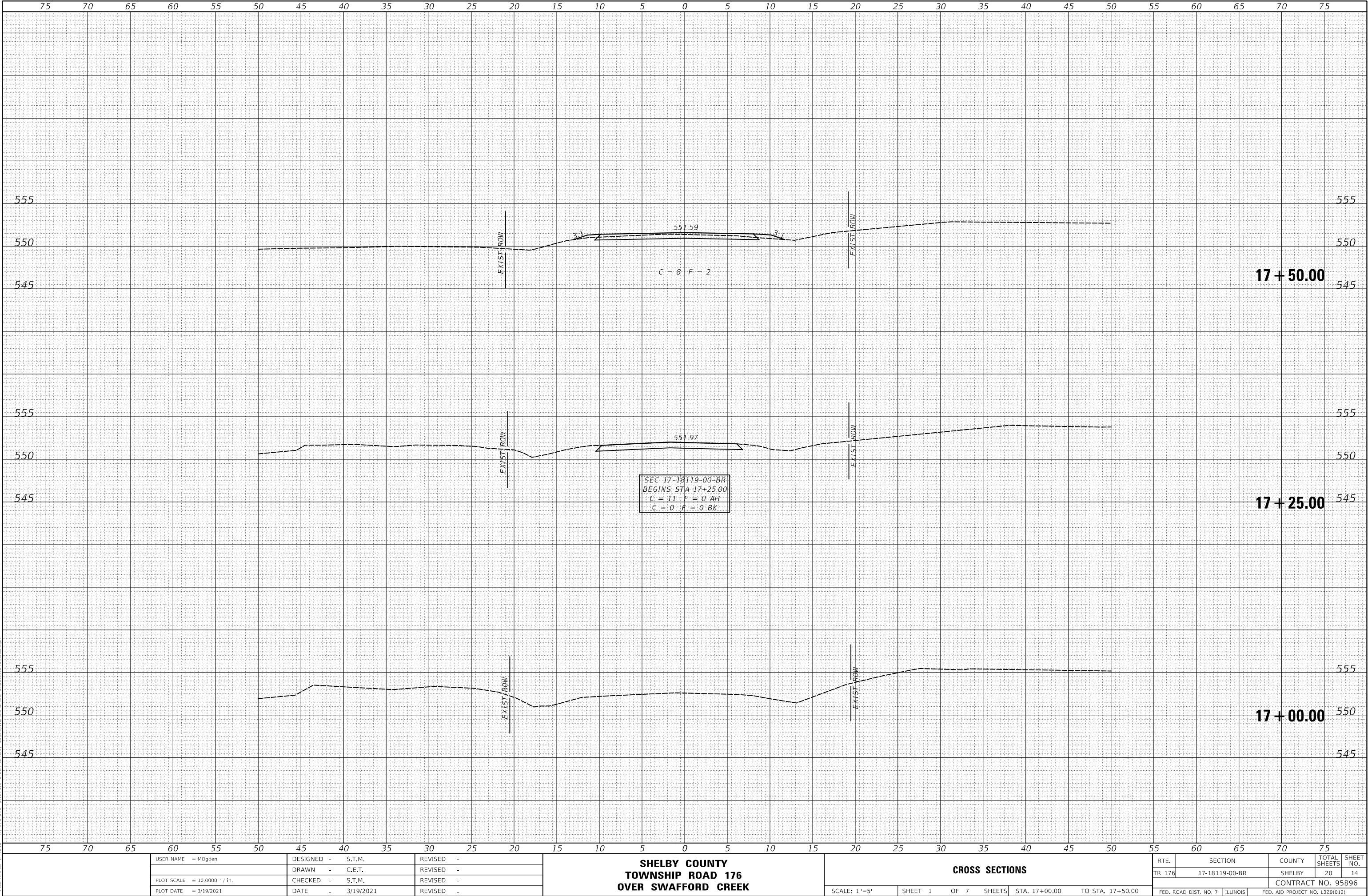
HP PILE DETAILS
SHELBY COUNTY
SECTION 17-18119-00-BR
TOWNSHIP ROAD 176
OVER SWAFFORD CREEK

SHEET NO. 7 7 SHEETS	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	TR 176	17-18119-00-BR	SHELBY	20	13
	S.N. 087-3594		CONTRACT NO. 95896		
	FED. ROAD DIST. NO. 7 ILLINOIS		FED. AID PROJECT NO. L3Z9(012)		

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

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

MODEL: SH06LNAME\$
FILE NAME: V18141 - TR 176 over Swafford Creek (Shelby County)CADD\CADD Sheets\176-18119-00.dgn



USER NAME = MOgden	DESIGNED - S.T.M.	REVISED -
	DRAWN - C.E.T.	REVISED -
PLOT SCALE = 10.0000 ' / in.	CHECKED - S.T.M.	REVISED -
PLOT DATE = 3/19/2021	DATE - 3/19/2021	REVISED -

**SHELBY COUNTY
TOWNSHIP ROAD 176
OVER SWAFFORD CREEK**

CROSS SECTIONS

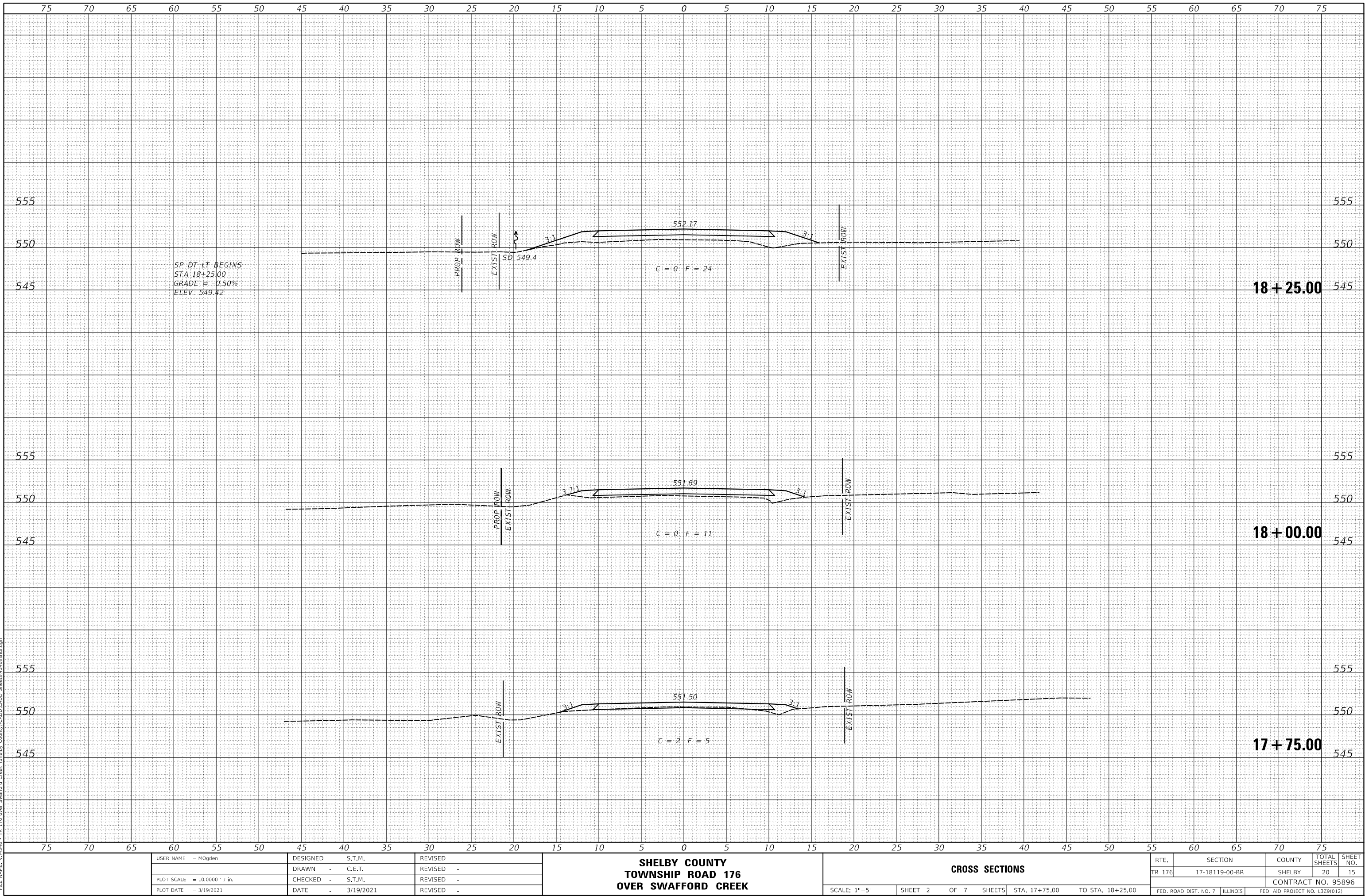
SCALE: 1"=5' SHEET 1 OF 7 SHEETS STA. 17+00.00 TO STA. 17+50.00

RT.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 176	17-18119-00-BR	SHELBY	20	14
CONTRACT NO. 95896				
FED. ROAD DIST. NO. 7		ILLINOIS		
FED. AID PROJECT NO. L329(012)				

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

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

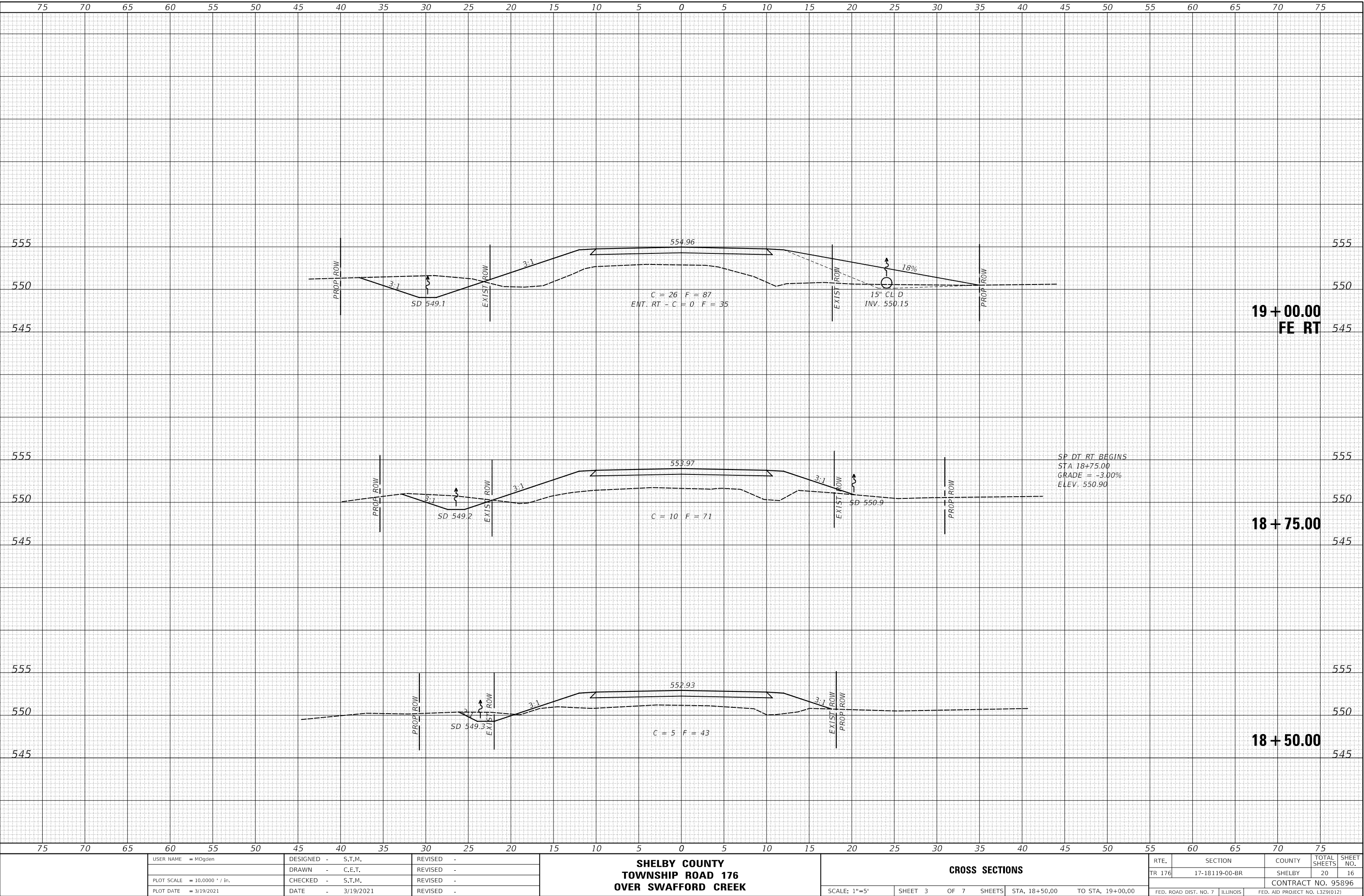
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FINAL	SURVEYED	DATE
SURVEY	PLOTTED	BY
NOTE BOOK	TEMPLATE	
NO.	AREAS CHECKED	

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

MODEL: SH06LNAME\$
FILE NAME: V18141 - TR 176 over Swafford Creek (Shelby County)CADD\CADD Sheets\18141-18142.dgn



**SHELBY COUNTY
TOWNSHIP ROAD 176
OVER SWAFFORD CREEK**

CROSS SECTIONS

USER NAME = MOgden	DESIGNED - S.T.M.	REVISED -
	DRAWN - C.E.T.	REVISED -
PLOT SCALE = 10,000 ' / in.	CHECKED - S.T.M.	REVISED -
PLOT DATE = 3/19/2021	DATE - 3/19/2021	REVISED -

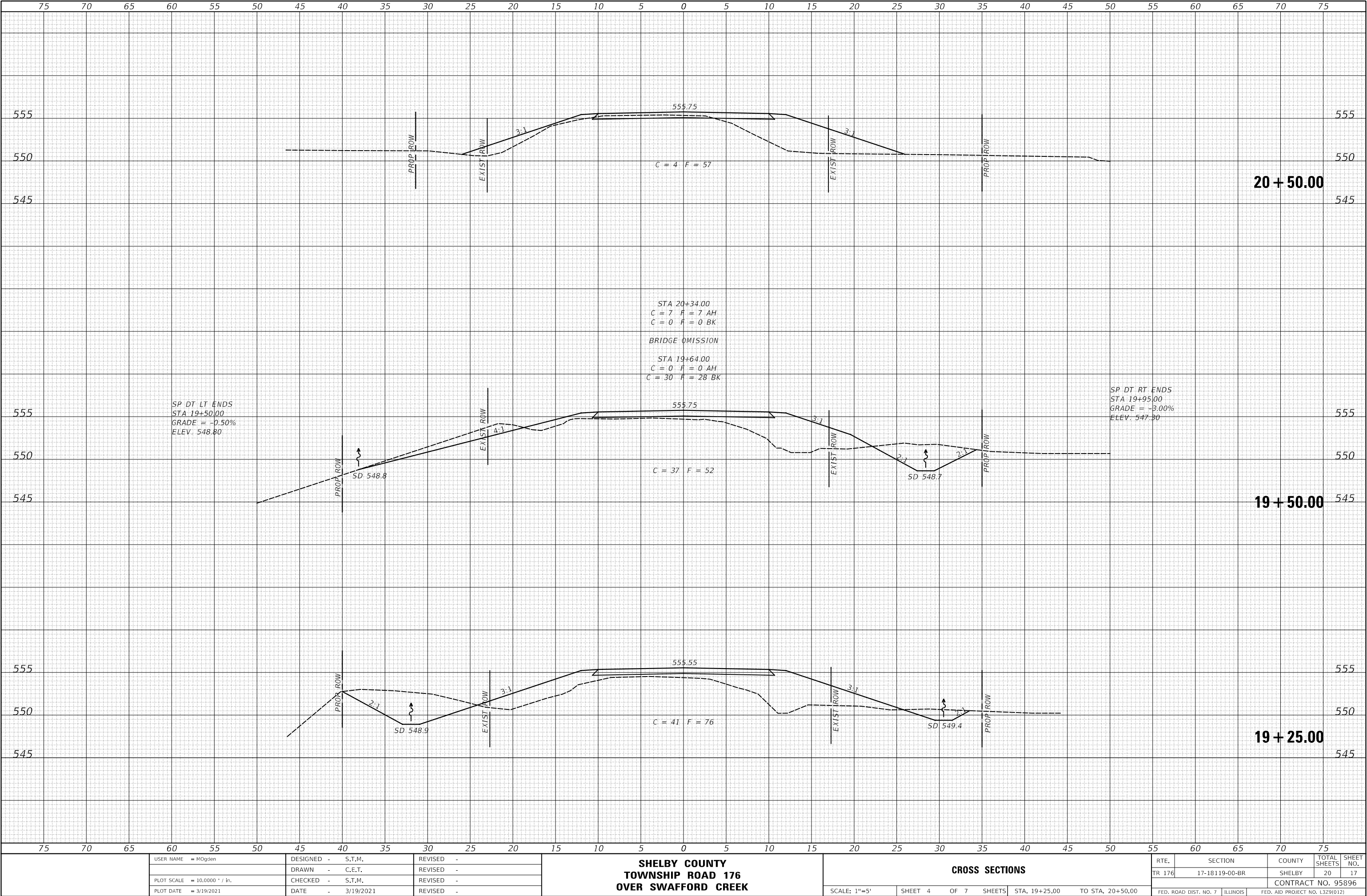
RT.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 176	17-18119-00-BR	SHELBY	20	16
CONTRACT NO. 95896				
FED. ROAD DIST. NO. 7		ILLINOIS		FED. AID PROJECT NO. L379(012)

SCALE: 1"=5' SHEET 3 OF 7 SHEETS STA. 18+50.00 TO STA. 19+00.00

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

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

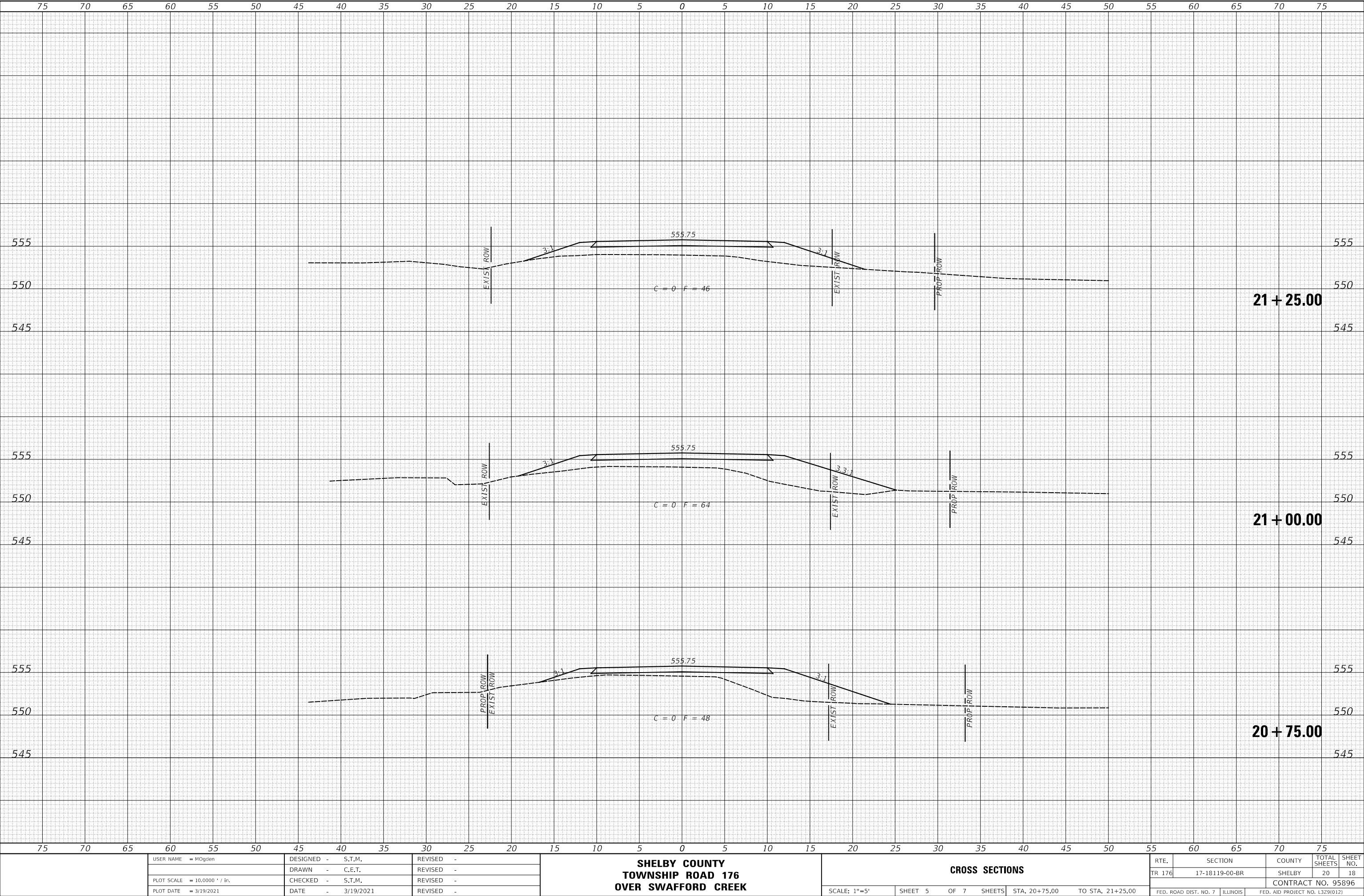
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FINAL SURVEY NO.	SURVEYED PLOTTED NO.	DATE

ORIGINAL SURVEY NO.	SURVEYED PLOTTED NO.	DATE

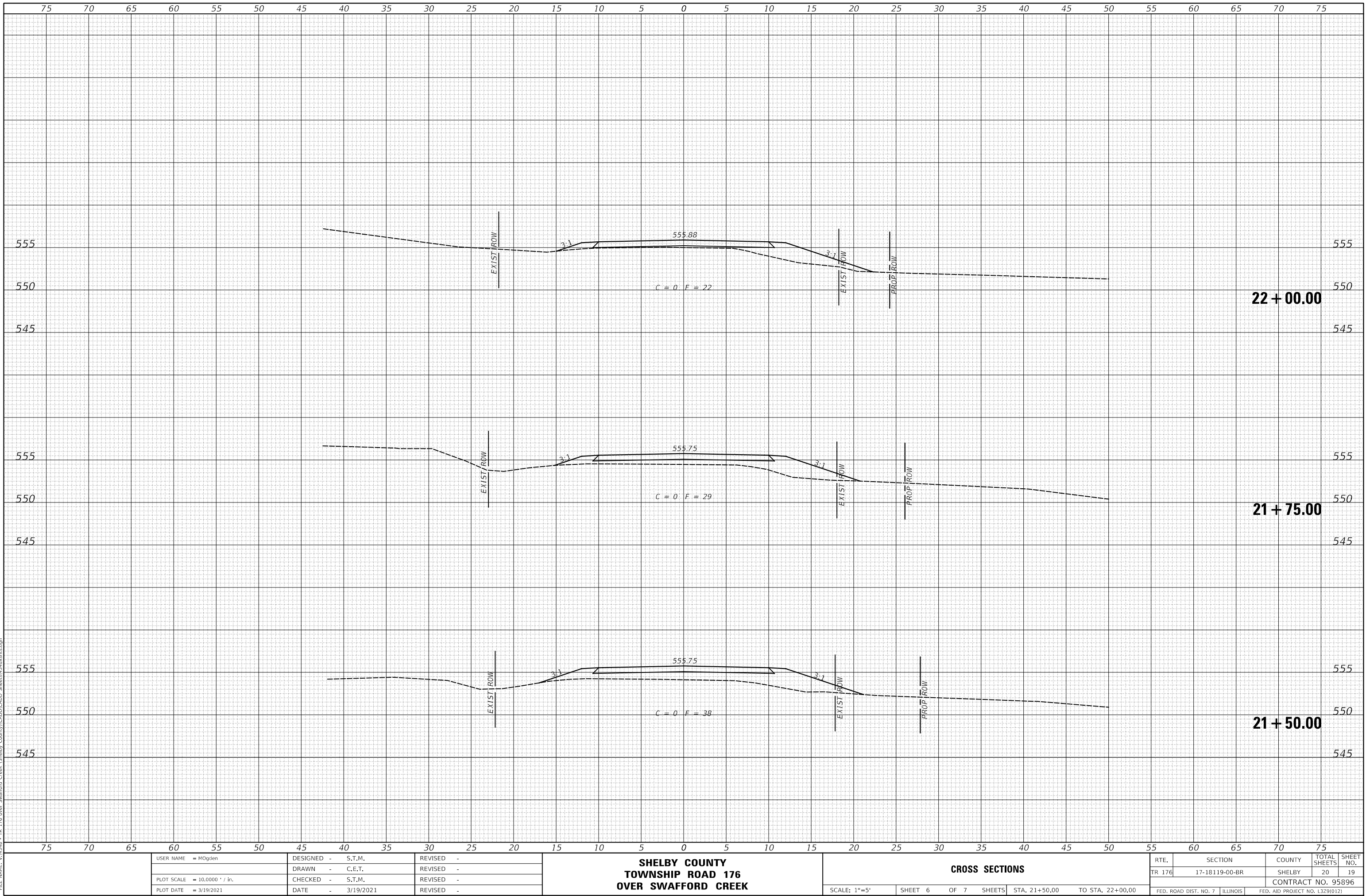
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FINAL SURVEY	SURVEYED _____	BY _____	DATE _____
	PLOTTED _____		
NOTE BOOK	TEMPLATE _____		
	AREAS _____		
NO. _____	AREAS CHECKED _____		

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

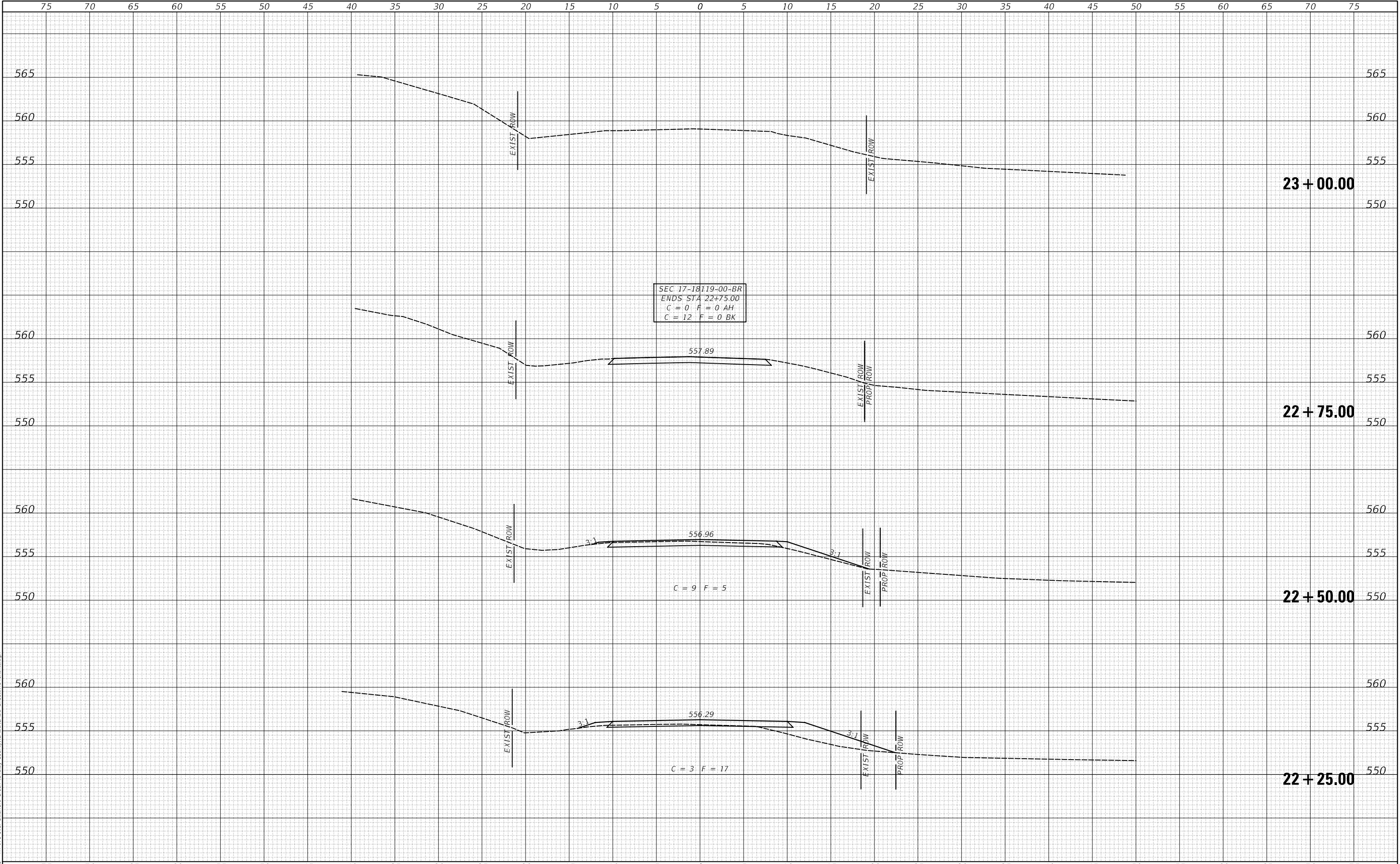
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FINAL SURVEY NO.	SURVEYED PLOTTED NOTE BOOK AREAS CHECKED	BY	DATE

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

MODEL SHODLNAME\$
FILE NAME: V1814 - TR 176 over Swafford Creek (Shelby County)CADD(CADD Sheets)1318x41c.dgn



USER NAME = MOgden	DESIGNED - S.T.M.	REVISED -
	DRAWN - C.E.T.	REVISED -
PLOT SCALE = 10.0000 ' / in.	CHECKED - S.T.M.	REVISED -
PLOT DATE = 3/19/2021	DATE - 3/19/2021	REVISED -

**SHELBY COUNTY
TOWNSHIP ROAD 176
OVER SWAFFORD CREEK**

CROSS SECTIONS

SCALE: 1"=5' SHEET 7 OF 7 SHEETS STA. 22+25.00 TO STA. 23+00.00

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 176	17-18119-00-BR	SHELBY	20	20
		CONTRACT NO. 95896		
FED. ROAD DIST. NO. 7		ILLINOIS		
FED. AID PROJECT NO. L379(012)				