1-21-11 LETTING ITEM 044

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
732	07-00090-00-BR	MACOUPIN	77	1
FED. ROAD DIST. NO. 7	ILLINOIS	CONTRACT NO. 93538		

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
PLANS FOR PROPOSED
HIGHWAY BRIDGE PROGRAM
MACOUPIN COUNTY
SECTION 07-00090-00-BR
F.A.S. 732 (CH 12) OVER HICKS CREEK AND JOES CREEK
PROJECT NO. BRS-0732(148)
JOB NUMBER C-96-238-09

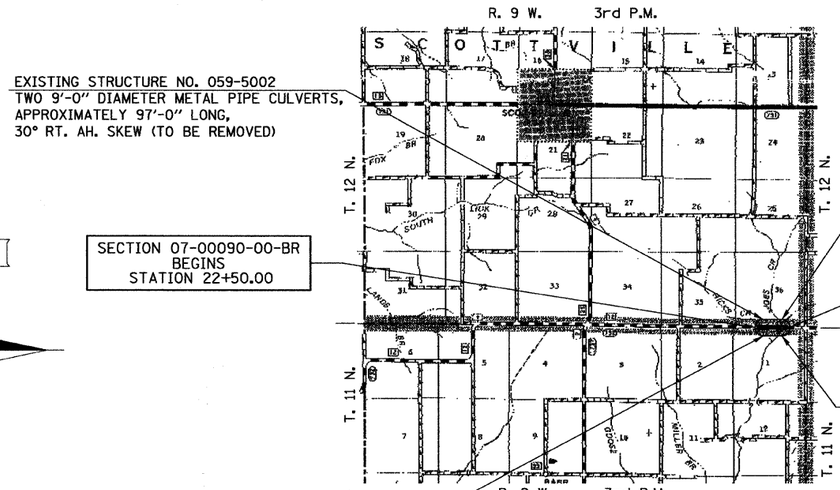
INDEX OF SHEETS

REQUIRED HIGHWAY STANDARDS

000001-06
280001-05
420401-08
515001-03
601101-01
630001-09
630301-05
631011-07
631032-06
635006-03
635011-02
701006-03
701901-01
780001-02
BLR 21-8

SCALES
- PLAN, PROFILE HORIZ. — 50′ 0 50′
- PROFILE VERT. — 10′ 0 10′
- CROSS SECTIONS HORIZ., CROSS SECTIONS VERT. — 5′ 0 5′

LOCATION OF SECTION INDICATED THUS: –■–



EXISTING STRUCTURE NO. 059-5002
TWO 9′-0″ DIAMETER METAL PIPE CULVERTS, APPROXIMATELY 97′-0″ LONG, 30° RT. AH. SKEW (TO BE REMOVED)

SECTION 07-00090-00-BR BEGINS STATION 22+50.00

PROPOSED STRUCTURE NO. 059-3557
THREE SPAN PPC I-BEAM WITH CONCRETE DECK STRUCTURE ON CONCRETE INTEGRAL ABUTMENTS AND CONCRETE ENCASED PILE BENT PIERS, 146′-6″ BK. TO BK., AND 36′-0″ O. TO O. DECK, NO SKEW

SECTION 07-00090-00-BR ENDS STATION 48+00.00

EXISTING STRUCTURE NO. 059-5003
THREE BARREL 12′x10′ REINFORCED CONCRETE BOX CULVERT APPROXIMATELY 51′ LONG, 5° RT. AH. SKEW (TO BE REMOVED)

PROPOSED STRUCTURE NO. 059-3556
SINGLE SPAN PPC I-BEAM WITH CONCRETE DECK STRUCTURE ON CONCRETE INTEGRAL ABUTMENTS, 91′-0″ BK. TO BK., AND 36′-0″ O. TO O. DECK, 30° RT. AH. SKEW

LOCATION MAP

1 MI 0 1 MI
APPROXIMATE SCALE

UTILITY COMPANIES

MJM ELECTRIC
CARLINVILLE, ILLINOIS

SCOTTVILLE RURAL WATER CO.
SCOTTVILLE, ILLINOIS

VERIZON
JACKSONVILLE, ILLINOIS

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

NET LENGTH OF PROJECT = 2550.00 FEET = 0.483 MILES

DESIGN CLASSIFICATION: MAJOR COLLECTOR (NON-URBAN)
DESIGN ADT = 635 (2029)
DESIGN SPEED = 50 MPH

Hutchison Engineering, Inc.
JACKSONVILLE ILLINOIS

2010 JOB#2576-I & 2576-2

JOSEPH E. HUTCHISON 58335 REGISTERED PROFESSIONAL ENGINEER OF ILLINOIS 2/17/2010

SIGNATURE

ENGINEER'S SEAL

APPROVED March 4 2010
Thomas A Rinehart
MACOUPIN COUNTY ENGINEER

PASSED APRIL 21 2010
Terrence H Fountain P.E.
DISTRICT SIX ENGINEER OF LOCAL ROADS & STREETS

PASSED April 21 2010
Ron Verhamberen
DISTRICT SIX ENGINEER OF CONSTRUCTION

Released For Bid Based on Limited Review APRIL 21 2010
Roger L Driskell P.E.
DEPUTY DIRECTOR OF HIGHWAYS, REGION FOUR ENGINEER

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

2576E001

CONTRACT NO. 93538

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 NEW BRIDGE 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.

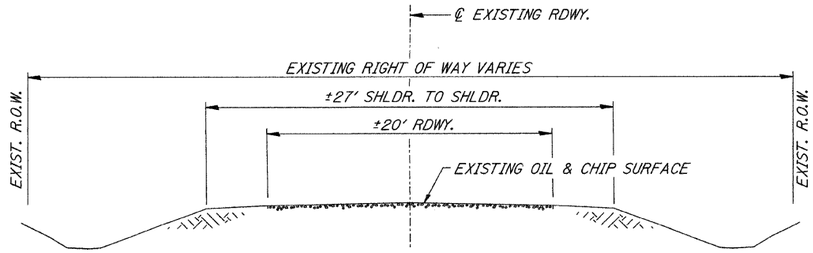
ANY REFERENCE TO STANDARDS THROUGHOUT THE PLANS SHALL BE INTERPRETED TO BE THE LATEST STANDARDS OF THE ILLINOIS DEPARTMENT OF TRANSPORTATION

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.

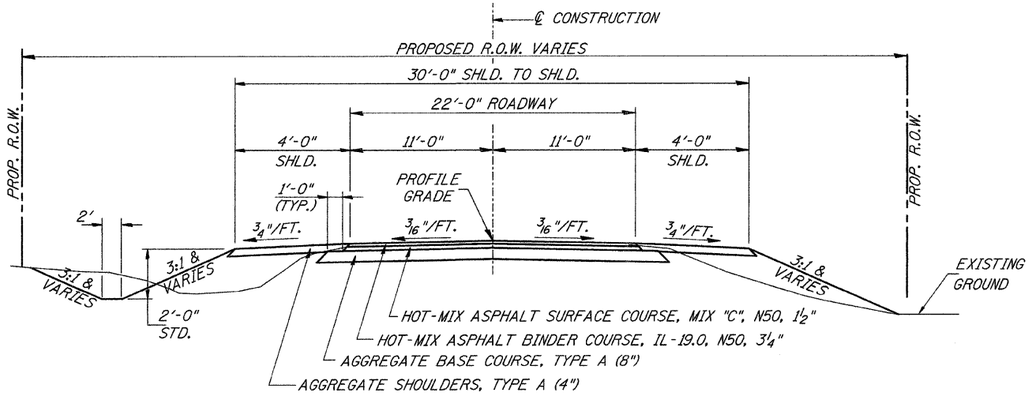
THE CONTRACTOR MAY BE REQUIRED TO CONDUCT SOME OF HIS GRADING AND TRENCHING OPERATIONS AROUND TRANSMISSION POLES AND UNDER TRANSMISSION LINES. THE ADDED COST OF SO DOING SHALL BE INCLUDED IN THE COST OF EARTH EXCAVATION.

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

CONSTRUCT GUARDRAIL SHOULDER WIDENING IN ACCORDANCE WITH STD 630301

STA. 22+50.00 TO STA. 26+74.92
STA. 28+35.92 TO STA. 42+73.99
STA. 44+90.49 TO STA. 48+00.00
EXCEPT TRANSITIONS

BRIDGE APPROACH PAVEMENT
STA 26+79.92 TO STA 27+09.92
STA 28+00.92 TO STA 28+30.92
STA 42+78.99 TO STA 43+08.99
STA 44+55.49 TO STA 44+85.49

BRIDGE APPROACH PAVEMENT CONNECTOR
STA. 26+74.92 TO STA. 26+79.92
STA. 28+30.92 TO STA. 28+35.92
STA. 42+73.99 TO STA. 42+78.99
STA. 44+85.49 TO STA. 44+90.49

BRIDGE OMISSION
STA. 27+09.92 TO STA. 28+00.92
STA. 43+08.99 TO STA. 44+55.49

HOT-MIX ASPHALT MIXTURE REQUIREMENTS

MIXTURE USE	BINDER	SURFACE (MIX "C")	SHOULDERS
AC/PG	PG 64-22	PG 64-22	PG 58-22
DESIGN AIR VOIDS	4% @ N50	4% @ N50	2% @ N50
MIX COMPOSITION	IL-19.0	IL-12.5 OR IL-9.5	IL-19.0

If RAP option is selected, the asphalt cement grade may need to be adjusted. This will be determined by the Engineer.

STRUCTURAL DESIGN INFORMATION
COUNTY HIGHWAY 12

ROAD CLASSIFICATION: CLASS III 80,000 lb./20 YEAR DESIGN
STRUCTURAL DESIGN TRAFFIC:
PV = 506 SU = 40 MU = 29
PERCENT OF STRUCTURAL DESIGN TRAFFIC IN DESIGN LANE:
P = 88% S = 7% M = 5%
MINIMUM SUBGRADE SUPPORT RATING: GRANULAR
FLEXIBLE PAVEMENT DESIGN: MINIMUM TF = 0.156
ASPHALT PAVEMENT THICKNESS: 4.75"
AGGREGATE BASE COURSE, TYPE A: 8"

FILE NAME = V:\Bridge\2576-1 Macoupin\2576t001.dgn	USER NAME = cthomas	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 1.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 3/1/2010	DATE -	REVISED -

MACOUPIN COUNTY
COUNTY HIGHWAY 12 OVER
HICKS CREEK AND JOES CREEK

GENERAL NOTES, TYPICAL SECTIONS & PAVEMENT DESIGN INFORMATION

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. 22+50.00 TO STA. 48+00.00

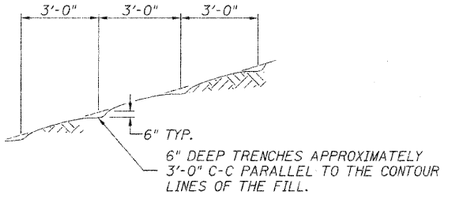
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
732	07-00090-00-BR	MACOUPIN	77	2
		CONTRACT NO. 93538		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		

SUMMARY OF QUANTITIES

	CODE NO.	ITEM	UNIT	QUANTITY
	20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	2,024
	20100210	TREE REMOVAL (OVER 15 UNITS DIAMETER)	UNIT	585
	20100500	TREE REMOVAL, ACRES	ACRE	0.3
	20200100	EARTH EXCAVATION	CU YD	32,400
	20300100	CHANNEL EXCAVATION	CU YD	2,475
①	X2070304	POROUS GRANULAR EMBANKMENT, SPECIAL	CU YD	311
①	X2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	6.4
	25100630	EROSION CONTROL BLANKET	SQ YD	433
	28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	3,500
①	28000305	TEMPORARY DITCH CHECKS	FOOT	1,486
	28000400	PERIMETER EROSION BARRIER	FOOT	1,015
	28000500	INLET AND PIPE PROTECTION	EACH	4
	28100207	STONE RIPRAP, CLASS A4	TON	1,140
①	28200200	FILTER FABRIC	SQ YD	3,225
	28300400	AGGREGATE DITCH	TON	942
	35100100	AGGREGATE BASE COURSE, TYPE A	TON	2,580
	40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	426
	40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	2,989
	40603080	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N50	TON	993
	40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	450
	42001165	BRIDGE APPROACH PAVEMENT	SQ YD	320
	42001430	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)	SQ YD	56
	44004000	PAVED DITCH REMOVAL	FOOT	981
	48100100	AGGREGATE SHOULDERS, TYPE A	TON	373
	48203021	HOT-MIX ASPHALT SHOULDERS, 6"	SQ YD	292
①	50100300	REMOVAL OF EXISTING STRUCTURES NO. 1	EACH	1
①	50100400	REMOVAL OF EXISTING STRUCTURES NO. 2	EACH	1
①	XX008385	CONCRETE REMOVAL (SPECIAL)	EACH	1
	50105220	PIPE CULVERT REMOVAL	FOOT	284
	50200100	STRUCTURE EXCAVATION	CU YD	595
	50300225	CONCRETE STRUCTURES	CU YD	265.4
	50300255	CONCRETE SUPERSTRUCTURE	CU YD	307.2
	50300260	BRIDGE DECK GROOVING	SQ YD	1,218
	50300280	CONCRETE ENCASEMENT	CU YD	16.0
	50300300	PROTECTIVE COAT	SQ YD	1,345
	50400805	FURNISHING AND ERECTING PRECAST PRESTRESSED CONCRETE I-BEAMS, 36 IN.	FOOT	858
	50401105	FURNISHING AND ERECTING PRECAST PRESTRESSED CONCRETE I-BEAMS, 54 IN.	FOOT	535
①	50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	89,470
	50800515	BAR SPLICERS	EACH	96
*	50901050	STEEL RAILING, TYPE SM	FOOT	475
	51201600	FURNISHING STEEL PILES HP12X53	FOOT	2,130
	51201610	FURNISHING STEEL PILES HP12X63	FOOT	550
①	51202305	DRIVING PILES	FOOT	2,680
①	51203600	TEST PILE STEEL HP12X53	EACH	4
①	51203610	TEST PILE STEEL HP12X63	EACH	2
	51500100	NAME PLATES	EACH	2
	52100540	ANCHOR BOLTS, 1 1/2"	EACH	8
①	542D0220	PIPE CULVERTS, CLASS D, TYPE 1 15"	FOOT	36
①	542D1060	PIPE CULVERTS, CLASS D, TYPE 2 15"	FOOT	28
①	542D1063	PIPE CULVERTS, CLASS D, TYPE 2 18"	FOOT	70
①	542D1069	PIPE CULVERTS, CLASS D, TYPE 2 24"	FOOT	58
	59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	167
①	Z0046304	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	317
*	63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	850.0
* ①	63100045	TRAFFIC BARRIER TERMINAL, TYPE 2	EACH	1
* ①	63100087	TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	8
*	63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	7
	67100100	MOBILIZATION	L SUM	1
①	70103700	TRAFFIC CONTROL COMPLETE	L SUM	1
*	78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	10,200
* ①	78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	7
* ①	78202000	TERMINAL MARKER - POST MOUNTED	EACH	1
* ①	78203000	TERMINAL MARKER POSTS	EACH	1
①	X5020501	UNDERWATER STRUCTURE EXCAVATION PROTECTION, LOCATION 1	EACH	1
①	X5020502	UNDERWATER STRUCTURE EXCAVATION PROTECTION, LOCATION 2	EACH	1
①	X5080600	MECHANICAL SPLICERS	EACH	88
①	Z0013798	CONSTRUCTION LAYOUT	L SUM	1
	67000500	ENGINEERS FIELD OFFICE, TYPE B	CAL MO	8

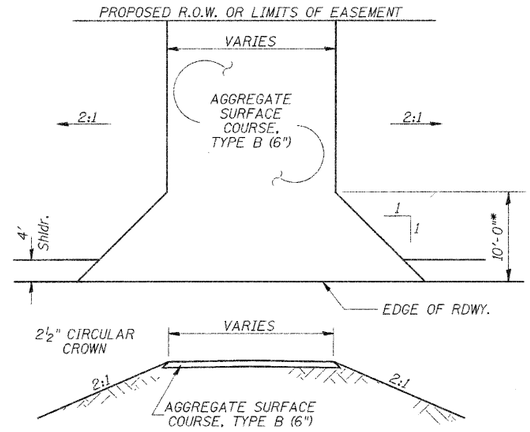
* SPECIALTY ITEMS

① SEE SPECIAL PROVISIONS



NOTE: ALL SLOPES 3:1 OR STEEPER AND GREATER THAN 5' IN HEIGHT SHALL BE CONTOUR PLOWED AS SHOWN IN DETAIL. COST SHALL BE INCLUDED WITH SEEDING, CLASS 2 (SPECIAL).

DETAIL OF CONTOUR PLOWING

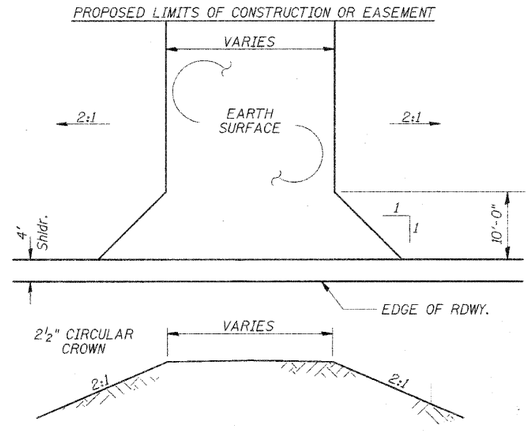


PROPOSED FIELD ENTRANCES

STA 26+62 RT (32' WIDE)
STA 36+00 RT (30' WIDE)
STA 40+50 LT (30' WIDE)

* TAPER IS 16' FOR THE ENTRANCES AT STA 36+00 RT AND 40+50 LT

SEE SHEET NO. 10 FOR HORIZONTAL LAYOUT OF ENTRANCES STATION 36+00 RT AND STATION 40+50 LT



PROPOSED FIELD ENTRANCES

STA 23+50 LT (30' WIDE)
STA 33+74 LT (16' WIDE)

FILE NAME = V:\Bridge\2576-1 Macoupin\2576d001.dgn	USER NAME = cthomas	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 1.2000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 3/2/2010	DATE -	REVISED -

MACOUPIN COUNTY
COUNTY HIGHWAY 12
OVER HICKS CREEK AND JOES CREEK

SUMMARY OF QUANTITIES & SPECIAL DETAILS

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. 22+50.00 TO STA. 48+00.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
732	07-00090-00-BR	MACOUPIN	77	3
		CONTRACT NO. 93538		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		

PAVEMENT SCHEDULE

STATION TO STATION	WIDTH	LENGTH	AGGREGATE BASE COURSE, TYPE A TON	PRIME COAT GALLON 0.50 GAL/SQ YD	HOT-MIX ASPHALT BINDER CSE TON 112#/SQ YD/IN	HOT-MIX ASPHALT SURF CSE TON 112#/SQ YD/IN	BRIDGE APPROACH PAVEMENT SQ YD	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE) SQ YD
22+50.00 - 23+00.00	24.66' AVG.	50.00'	58					
23+00.00 - 26+74.15	25.46'	374.15'	446					
28+36.69 - 42+73.99	25.46'	1,437.30'	1,710					
44+90.49 - 47+50.00	25.46'	259.51'	309					
47+50.00 - 48+00.00	24.40' AVG.	50.00'	57					
22+50.00 - 23+00.00	24.00' AVG.	50.00'		67				
23+00.00 - 26+74.15	24.79'	374.15'		517				
28+36.69 - 42+73.99	24.79'	1,437.30'		1,981				
44+90.49 - 47+50.00	24.79'	259.51'		358				
47+50.00 - 48+00.00	23.75' AVG.	50.00'		66				
22+50.00 - 23+00.00	21.72' AVG.	50.00'			22			
23+00.00 - 26+74.15	22.52'	374.15'			172			
28+36.69 - 42+73.99	22.52'	1,437.30'			658			
44+90.49 - 47+50.00	22.52'	259.51'			119			
47+50.00 - 48+00.00	21.48' AVG.	50.00'			22			
22+50.00 - 23+00.00	21.32' AVG.	50.00'				10		
23+00.00 - 26+74.15	22.13'	374.15'				78		
28+36.69 - 42+73.99	22.13'	1,437.30'				298		
44+90.49 - 47+50.00	22.13'	259.51'				54		
47+50.00 - 48+00.00	21.08' AVG.	50.00'				10		
26+79.92 - 27+09.92	24.00'	30.00'					80	
28+00.92 - 28+30.92	24.00'	30.00'					80	
42+78.99 - 43+08.99	24.00'	30.00'					80	
44+55.49 - 44+85.49	24.00'	30.00'					80	
26+74.15 - 26+79.92	24.00'	5.77'						15
28+30.92 - 28+36.69	24.00'	5.77'						15
42+73.99 - 42+78.99	24.00'	5.00'						13
44+85.49 - 44+90.49	24.00'	5.00'						13
		TOTAL	2,580	2,989	993	450	320	56

HOT-MIX ASPHALT SHOULDERS, 6"

STATION TO STATION	SIDE	WIDTH	SQ YD
26+43.65 - 26+55.78	LEFT	5.5' AVG	8
26+55.78 - 26+65.49	LEFT	7.0'	8
26+65.49 - 27+01.26	LEFT	6.0'	24
26+83.70 - 27+18.58	RIGHT	6.0'	23
27+92.26 - 28+28.03	LEFT	6.0'	24
28+28.03 - 28+34.28	LEFT	7.0'	5
28+34.28 - 28+46.41	LEFT	5.5' AVG	8
28+09.58 - 28+45.35	RIGHT	6.0'	24
28+45.35 - 28+55.06	RIGHT	7.0'	8
28+55.06 - 28+67.19	RIGHT	5.5' AVG	8
42+53.11 - 42+65.24	LEFT	5.5' AVG	8
42+65.24 - 42+73.99	LEFT	7.0'	7
42+73.99 - 43+08.99	LEFT	6.0'	23
42+53.11 - 42+65.24	RIGHT	5.5' AVG	8
42+65.24 - 42+73.99	RIGHT	7.0'	7
42+73.99 - 43+08.99	RIGHT	6.0'	23
44+55.49 - 44+90.49	LEFT	6.0'	23
44+90.49 - 44+99.24	LEFT	7.0'	7
44+99.24 - 45+11.37	LEFT	5.5' AVG	8
44+55.49 - 44+90.49	RIGHT	6.0'	23
44+90.49 - 44+99.24	RIGHT	7.0'	7
44+99.24 - 45+11.37	RIGHT	5.5' AVG	8
		TOTAL	292

AGGREGATE SHOULDERS, TYPE A

STATION TO STATION	SIDE	WIDTH	LENGTH	TON
22+50.00 - 23+00.00	LEFT	3.66' AVG.	50.00'	4
22+50.00 - 23+00.00	RIGHT	3.50' AVG.	50.00'	4
23+00.00 - 26+43.65	LEFT	4.00'	343.65'	32
23+00.00 - 26+37.70	RIGHT	4.00'	337.70'	31
28+46.41 - 40+21.07	LEFT	4.00'	1,174.66'	109
28+67.19 - 35+71.01	RIGHT	4.00'	703.82'	65
36+28.98 - 42+53.11	RIGHT	4.00'	624.13'	58
40+78.95 - 42+53.11	LEFT	4.00'	174.16'	16
45+11.37 - 47+50.00	LEFT	4.00'	238.63'	22
45+11.37 - 47+50.00	RIGHT	4.00'	238.63'	22
47+50.00 - 48+00.00	LEFT	4.25' AVG.	50.00'	5
47+50.00 - 48+00.00	RIGHT	3.80' AVG.	50.00'	5
			TOTAL	373

AGGREGATE DITCH**

STATION TO STATION	SIDE	WIDTH	TON	FILTER FABRIC (SQ YD)
22+77 - 26+29	RIGHT	6'	129	250
26+98 - 27+30	RIGHT	6'	11	22
27+85 - 33+57	LEFT	6'	210	407
31+00 - 33+00	RIGHT	6'	74	142
39+00 - 40+26	LEFT	6'	46	89
40+00 - 43+25	RIGHT	6'	121	234
40+84 - 43+25	LEFT	6'	89	172
41+42 - 41+62	LEFT	4.5' AVG.	6	11
44+50 - 48+00	LEFT	6'	128	248
44+50 - 48+00	RIGHT	6'	128	248
		TOTAL	942	1,823

** Aggregate Ditch shall conform to material type B-3 of the Standard Specifications

PAVED DITCH REMOVAL

STATION TO STATION	SIDE	FOOT
22+77 - 23+98	RIGHT	121
28+28 - 29+60	LEFT	132
31+27 - 32+71	RIGHT	147
39+10 - 41+55	LEFT	245
44+66 - 46+51	RIGHT	185
45+02 - 46+52	LEFT	151
	TOTAL	981

PAINT PAVEMENT MARKING - LINE 4"

STATION TO STATION	SIDE	DESCRIPTION	FOOT
22+50 - 48+00	LEFT	WHITE EDGE LINE	2,550
22+50 - 48+00	℄	DOUBLE YELLOW	5,100
22+50 - 48+00	RIGHT	WHITE EDGE LINE	2,550
		TOTAL	10,200

EROSION CONTROL BLANKET

STATION TO STATION	SIDE	WIDTH	LENGTH	AREA (SQ YD)
33+00 - 34+50	RIGHT	6'	150'	100
37+00 - 39+00	LEFT	6'	200'	133
37+00 - 40+00	RIGHT	6'	300'	200
			TOTAL	433

EARTHWORK SUMMARY

STATION TO STATION	EARTH EXCAVATION CU YD	CHANNEL EXCAVATION CU YD	STRUCTURE EXCAVATION CU YD	FILL CU YD	WASTE (SHORTAGE) CU YD
RDWY 22+50.00 - 27+09.92	584			5,553	(5,115)
RDWY 28+00.92 - 43+08.99	29,132			7,235	14,614
RDWY 44+55.49 - 48+00.00	2,687			2,953	(938)
HICKS CREEK CHANNEL		1,425			
JOES CREEK CHANNEL		1,050			
HICKS CREEK STRUCTURE			300		
JOES CREEK STRUCTURE			295		
TOTAL	32,403	2,475	595	15,741	14,485
USE	32,400	2,475	595	-	-

(@ 25% SHRINKAGE)

AGGREGATE SURFACE COURSE, TYPE B

STATION TO STATION	WIDTH	LENGTH	TON
ENTR. - 26+62 RT	32' & VAR.	82'	97
ENTR. - 36+00 RT	30' & VAR.	139'	157
ENTR. - 40+50 LT	30' & VAR.	154'	172
		TOTAL	426

TERMINAL MARKER POSTS

℄ STATION	OFFSET	SIDE	EACH
26+85	20'	RIGHT	1
		TOTAL	1

PIPE CULVERT REMOVAL

℄ STATION	SIZE	SIDE	FOOT
22+60	12"	RIGHT	26
26+62	12"	RIGHT	64
31+23	24"	CL	140
33+74	12"	LEFT	28
41+67	18"	LEFT	26
		TOTAL	284

TREE REMOVAL, ACRES

STATION TO STATION	SIDE	ACRES
29+14 - 34+11	LEFT	0.3
	TOTAL	0.3

INLET & PIPE PROTECTION

STATION	SIDE	EACH
22+49	RIGHT	1
26+29	RIGHT	1
33+93	LEFT	1
40+26	LEFT	1
	TOTAL	4

TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT

SIDE	STATION TO STATION	EACH
LEFT	25+56.15 - 26+06.15	1
RIGHT	29+04.69 - 29+54.69	1
LEFT	30+96.41 - 31+46.41	1
RIGHT	40+65.60 - 41+15.60	1
LEFT	41+03.11 - 41+53.11	1
LEFT	46+11.37 - 46+61.37	1
RIGHT	46+11.37 - 46+61.37	1
	TOTAL	7

TRAFFIC BARRIER TERMINAL, TYPE 6A

SIDE	STATION TO STATION	EACH
LEFT	26+55.78 - 27+02.28	1
RIGHT	26+79.50 - 27+23.06	1
LEFT	27+87.78 - 28+34.28	1
RIGHT	28+08.56 - 28+55.06	1
RIGHT	42+65.24 - 43+11.74	1
LEFT	42+65.24 - 43+11.74	1
RIGHT	44+52.74 - 44+99.24	1
LEFT	44+52.74 - 44+99.24	1
	TOTAL	8

TEMPORARY DITCH CHECKS

STATION TO STATION	SIDE	EACH	FOOT EACH	TOTAL FOOT
23+00 - 27+30	RIGHT	16	12	192
26+15 - 27+03	LEFT	2	9	18
27+85 - 29+00	LEFT	8	9	72
31+00 - 34+86	RIGHT	15	10	150
31+50 - 32+50	LEFT	8	12	96
33+03 - 34+86	LEFT	2	10	20
36+44 - 40+05	LEFT	10	10	100
36+76 - 40+67	RIGHT	12	12	144
40+80 - 43+25	RIGHT	13	9	117
41+05 - 41+71	LEFT	4	14	56
41+62	LEFT	1	9	9
41+93 - 43+25	LEFT	7	9	63
44+50 - 46+44	LEFT	17	9	153
44+50 - 46+54	RIGHT	16	9	144
46+62 - 47+85	LEFT	8	10	80
46+69 - 47+75	RIGHT	6	12	72
			TOTAL	1,486

PERIMETER EROSION BARRIER

STATION TO STATION	SIDE	FOOT
22+50 - 25+25	LEFT	370
26+29 - 27+00	RIGHT	75
28+14 - 31+00	RIGHT	315
33+55 - 33+93	LEFT	60
35+75 - 37+00	RIGHT	160
41+64 - 41+71	LEFT	35
	TOTAL	1,015

CONCRETE REMOVAL (SPECIAL)

STATION TO STATION	SIDE	WIDTH	EACH
41+94 - 42+94	LEFT	23.5'	1
		TOTAL	1

PIPE CULVERTS, CLASS D, TYPE 2

STATION	SIDE	15" FOOT	18" FOOT	24" FOOT
22+60	RIGHT	28		
26+62	RIGHT		70	
40+50	LEFT			58
	TOTAL	28	70	58

PIPE CULVERTS, CLASS D, TYPE 1

STATION	SIDE	15" FOOT
33+74	LEFT	36
	TOTAL	36

TRAFFIC BARRIER TERMINAL, TYPE 2

SIDE	STATION TO STATION	EACH
RIGHT	26+78.87 - 26+79.50	1
	TOTAL	1

STEEL PLATE BEAM GUARDRAIL, TYPE A, 6' POSTS

SIDE	STATION TO STATION	FOOT
LEFT	26+06.15 - 26+55.78	50.0
LEFT	28+34.28 - 30+96.41	262.5
RIGHT	28+55.06 - 29+04.69	50.0
RIGHT	41+15.60 - 42+65.24	150.0
LEFT	41+53.11 - 42+65.24	112.5
RIGHT	44+99.24 - 46+11.37	112.5
LEFT	44+99.24 - 46+11.37	112.5
	TOTAL	850.0

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		DRAWN -	REVISED -
	PLOT SCALE = 1.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 3/1/2010	DATE -	REVISED -

MACOUPIN COUNTY
COUNTY HIGHWAY 12 OVER
HICKS CREEK AND JOES CREEK

SCHEDULES OF QUANTITIES

SCALE: NONE | SHEET NO. 1 OF 2 SHEETS | STA. 22+50.00 TO STA. 48+00.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
732	07-00090-00-BR	MACOUPIN	77	4
		CONTRACT NO. 93538		

FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT BRS-0732(148)

TREE REMOVAL

STATION	OFFSET & SIDE	TREE REMOVAL	
		6 TO 15 UNITS	OVER 15 UNITS
24+06.8	50.7' RT	10	
24+06.8	50.7' RT	10	
24+06.8	50.7' RT		18
24+21.3	45.8' RT	6	
24+32.5	36.5' RT	6	
24+60.8	31.5' RT	6	
24+98.2	51.2' RT		24
25+08.9	51.7' RT	10	
25+14.7	36.8' RT	6	
25+28.1	53.5' RT	8	
25+36.1	54.2' RT	12	
25+58.9	44.1' RT	12	
25+62.9	43.0' RT	14	
25+66.7	45.3' RT	6	
25+74.4	45.5' RT	6	
25+92.6	43.1' RT	8	
26+24.0	56.2' RT	8	
26+29.1	48.8' RT		24
26+58.1	54.2' RT	10	
26+91.6	41.5' RT		22
26+91.6	41.5' RT		26
27+35.5	47.0' RT		22
27+60.8	36.7' RT	6	
28+07.7	47.3' RT	8	
28+13.5	50.0' RT	8	
28+16.8	48.2' RT	6	
28+16.8	48.2' RT	10	
28+20.0	50.0' RT	10	
28+30.3	54.0' RT		26
28+47.0	50.7' RT	14	
28+47.0	50.7' RT	6	
28+47.0	50.7' RT	6	
28+47.0	50.7' RT	6	
28+47.1	65.4' RT	7	
28+65.5	49.6' RT	14	
28+65.5	49.6' RT		18
28+90.7	41.7' RT	6	
29+08.4	45.7' RT	15	
29+13.4	42.6' RT	6	
29+13.4	42.6' RT	6	
29+17.8	41.1' RT	6	
29+20.7	47.1' RT	10	
29+41.5	43.9' RT	12	
29+42.3	35.0' RT	8	
29+45.0	46.9' RT	6	
29+51.6	43.1' RT	7	
29+57.9	39.8' RT	7	
29+61.8	39.5' RT	6	
29+62.0	46.6' RT		18
29+86.4	39.2' RT	6	
29+86.4	39.2' RT	8	
29+93.6	42.1' RT	6	
30+00.9	39.8' RT	6	
30+00.9	39.8' RT	6	

STATION	OFFSET & SIDE	TREE REMOVAL	
		6 TO 15 UNITS	OVER 15 UNITS
30+11.6	44.1' RT	7	
30+20.4	42.1' RT	7	
30+20.4	42.1' RT	7	
30+33.8	43.6' RT	8	
30+34.7	39.7' RT	8	
30+82.5	40.0' RT	6	
30+87.2	38.8' RT	6	
30+89.9	71.5' RT	6	
30+89.9	71.5' RT	6	
30+99.1	71.0' RT	10	
30+99.1	71.0' RT	6	
31+07.4	42.2' RT	10	
31+07.4	42.2' RT	10	
31+18.3	39.4' RT	6	
31+28.7	49.0' RT	6	
31+35.2	45.7' RT	10	
31+46.0	43.9' RT	10	
31+49.1	46.6' RT	10	
31+54.3	42.8' RT	10	
31+60.0	43.7' RT	6	
31+60.9	40.4' RT	6	
31+62.3	50.7' RT	8	
31+63.1	40.8' RT	6	
31+66.4	48.9' RT	6	
31+69.2	48.8' RT	8	
31+75.3	46.6' RT	6	
31+75.3	46.6' RT	8	
31+77.4	49.2' RT	10	
31+79.2	46.4' RT	6	
31+94.5	51.7' RT	10	
32+08.5	51.7' RT	7	
32+11.5	48.4' RT	6	
32+11.5	48.4' RT	7	
32+32.7	51.6' RT	8	
32+36.7	50.5' RT	8	
32+43.0	52.6' RT	9	
32+44.4	47.9' RT	6	
32+44.4	47.9' RT	6	
32+76.2	54.6' RT	6	
32+76.2	54.6' RT	10	
32+79.6	42.2' RT	6	
33+09.1	53.7' RT	6	
33+09.3	51.8' RT	6	
33+16.8	56.5' RT	10	
33+16.8	56.5' RT	10	
33+29.1	55.8' RT	6	
33+39.9	56.9' RT	13	
33+67.5	55.9' RT		22
33+77.4	52.9' RT	6	
33+87.9	63.1' RT		19
33+93.9	51.5' RT	6	
33+98.4	47.6' RT	6	
34+01.7	54.5' RT	6	
34+03.2	47.8' RT	8	

STATION	OFFSET & SIDE	TREE REMOVAL	
		6 TO 15 UNITS	OVER 15 UNITS
34+04.0	51.3' RT	6	
34+11.2	48.7' RT	8	
34+15.5	54.7' RT	12	
34+22.9	50.4' RT	6	
34+35.2	51.4' RT	6	
34+39.8	50.3' RT	8	
34+40.2	51.5' RT	12	
34+40.9	47.7' RT	12	
34+56.2	50.8' RT	12	
34+86.1	48.6' RT	8	
34+86.7	46.4' RT	6	
35+10.6	46.2' RT	12	
35+11.5	43.4' RT	8	
35+43.9	43.7' RT	6	
35+43.9	43.7' RT	6	
35+43.9	43.7' RT	6	
35+43.9	43.7' RT	6	
35+62.0	45.7' RT	6	
35+62.0	45.7' RT	6	
35+62.0	45.7' RT	8	
35+81.3	45.2' RT	12	
35+81.3	45.2' RT	12	
35+81.3	45.2' RT	12	
35+92.3	39.7' RT	6	
36+07.6	44.4' RT	8	
36+07.6	44.4' RT	8	
36+07.6	44.4' RT	8	
36+07.6	44.4' RT	8	
36+81.9	43.9' RT	12	
36+83.7	45.6' RT	8	
36+93.4	44.4' RT	8	
36+98.2	43.5' RT	6	
37+03.5	42.2' RT	6	
37+03.5	42.2' RT	10	
37+13.0	47.0' RT		16
37+20.6	47.6' RT	7	
37+32.2	45.4' RT		16
37+32.6	42.4' RT	12	
37+32.9	40.4' RT	7	
37+41.1	44.7' RT	13	
37+41.1	44.7' RT	6	
37+57.3	44.2' RT	6	
37+57.3	44.2' RT		18
37+70.0	43.2' RT	7	
37+70.3	39.2' RT	15	
37+76.2	42.2' RT	12	
37+94.0	53.3' RT		36
38+71.2	50.5' RT		28
39+28.7	30.6' RT	14	
40+54.3	39.6' RT	8	
40+69.7	36.8' RT	8	
40+69.7	36.8' RT	8	
40+69.7	36.8' RT	8	
40+84.5	33.8' RT	6	

STATION	OFFSET & SIDE	TREE REMOVAL	
		6 TO 15 UNITS	OVER 15 UNITS
40+84.5	33.8' RT	6	
41+09.3	34.1' RT	8	
41+09.3	34.1' RT	8	
41+20.4	47.7' RT		22
41+20.4	47.7' RT		22
41+20.4	47.7' RT		22
41+20.4	47.7' RT		22
44+16.8	42.0' RT		16
44+35.3	38.6' RT	8	
44+36.3	48.5' RT	15	
44+68.1	33.3' RT	6	
44+68.1	33.3' RT	6	
44+68.1	33.3' RT	6	
45+04.8	34.0' RT	6	
45+04.8	34.0' RT	8	
45+21.4	40.0' RT	10	
45+21.4	40.0' RT	10	
45+21.8	44.0' RT	10	
45+26.8	51.9' RT	13	
45+34.8	57.7' RT	15	
45+40.0	30.7' RT	7	
45+53.9	56.6' RT	8	
45+53.9	56.6' RT	12	
45+60.1	61.2' RT	8	
45+60.1	61.2' RT	8	
45+65.2	32.5' RT	12	
45+68.5	47.7' RT	6	
45+68.5	47.7' RT	6	
45+70.9	59.3' RT	8	
45+72.2	65.2' RT	12	
45+81.0	71.2' RT	14	
46+03.5	54.8' RT	8	
46+04.6	59.6' RT	8	
46+13.1	49.0' RT	6	
46+13.1	49.0' RT	6	
46+17.7	65.0' RT	12	
46+29.0	66.5' RT	13	
46+29.0	66.5' RT	13	
46+32.6	43.8' RT	6	
46+32.6	43.8' RT	6	
46+32.7	69.3' RT	10	
46+34.7	63.5' RT	10	
46+36.1	50.9' RT		20
46+56.1	40.6' RT	8	
46+63.5	68.0' RT	8	
46+72.0	38.7' RT	7	
46+74.3	66.1' RT	8	
46+80.5	40.5' RT	6	
46+80.5	40.5' RT	10	
46+80.8	65.4' RT	8	
46+80.8	65.4' RT	8	
46+89.4	35.3' RT	6	
47+00.5	63.9' RT	10	
47+03.1	62.5' RT	7	

STATION	OFFSET & SIDE	TREE REMOVAL	
		6 TO 15 UNITS	OVER 15 UNITS
47+03.1	62.5' RT	7	
47+03.1	62.5' RT	7	
47+04.3	39.5' RT	10	
47+06.3	36.3' RT	6	
47+06.3	36.3' RT	6	
47+07.7	33.4' RT	6	
47+14.6	55.7' RT		16
47+18.8	34.5' RT	10	
47+25.9	54.3' RT	6	
47+25.9	54.3' RT	6	
47+55.0	32.8' RT	6	
47+55.7	47.8' RT	8	
47+61.8	32.3' RT	12	
47+62.5	48.7' RT	12	
47+69.9	47.8' RT	12	
47+73.9	43.0' RT	10	
47+77.7	32.2' RT	12	
47+84.4	45.7' RT	6	
28+72.8	61.2' LT		24
39+91.8	66.4' LT	12	
40+11.2	67.8' LT	10	
40+23.7	64.8' LT	8	
40+23.7	64.8' LT	8	
40+46.5	65.6' LT	14	
40+67.5	65.1' LT	6	
40+67.5	65.1' LT	8	
40+73.8	68.7' LT	12	
41+08.3	73.2' LT	15	
45+13.2	57.6' LT	8	
45+27.5	63.8' LT	6	
45+27.5	63.8' LT	6	
45+30.2	63.9' LT	12	
45+39.2	62.4' LT	10	
45+44.7	61.9' LT	7	
45+50.8	68.2' LT		24
45+54.6	66.6' LT	13	
45+56.0	64.8' LT	8	
45+61.8	67.7' LT	8	
45+67.5	69.6' LT	8	
45+68.8	69.4' LT	6	
45+68.8	69.4' LT	8	
45+80.7	68.3' LT	10	
45+90.4	67.7' LT	10	
45+91.3	63.3' LT	6	
46+01.0	66.9' LT	8	
46+04.5	63.6' LT	11	
46+16.0	67.6' LT		16
46+44.7	71.5' LT	8	
46+65.1	73.7' LT	8	
46+94.0	69.6' LT		28
47+08.2	72.7' LT	11	
47+14.1	64.1' LT	11	
47+70.7	64.5' LT	8	
	TOTAL	2,024	585

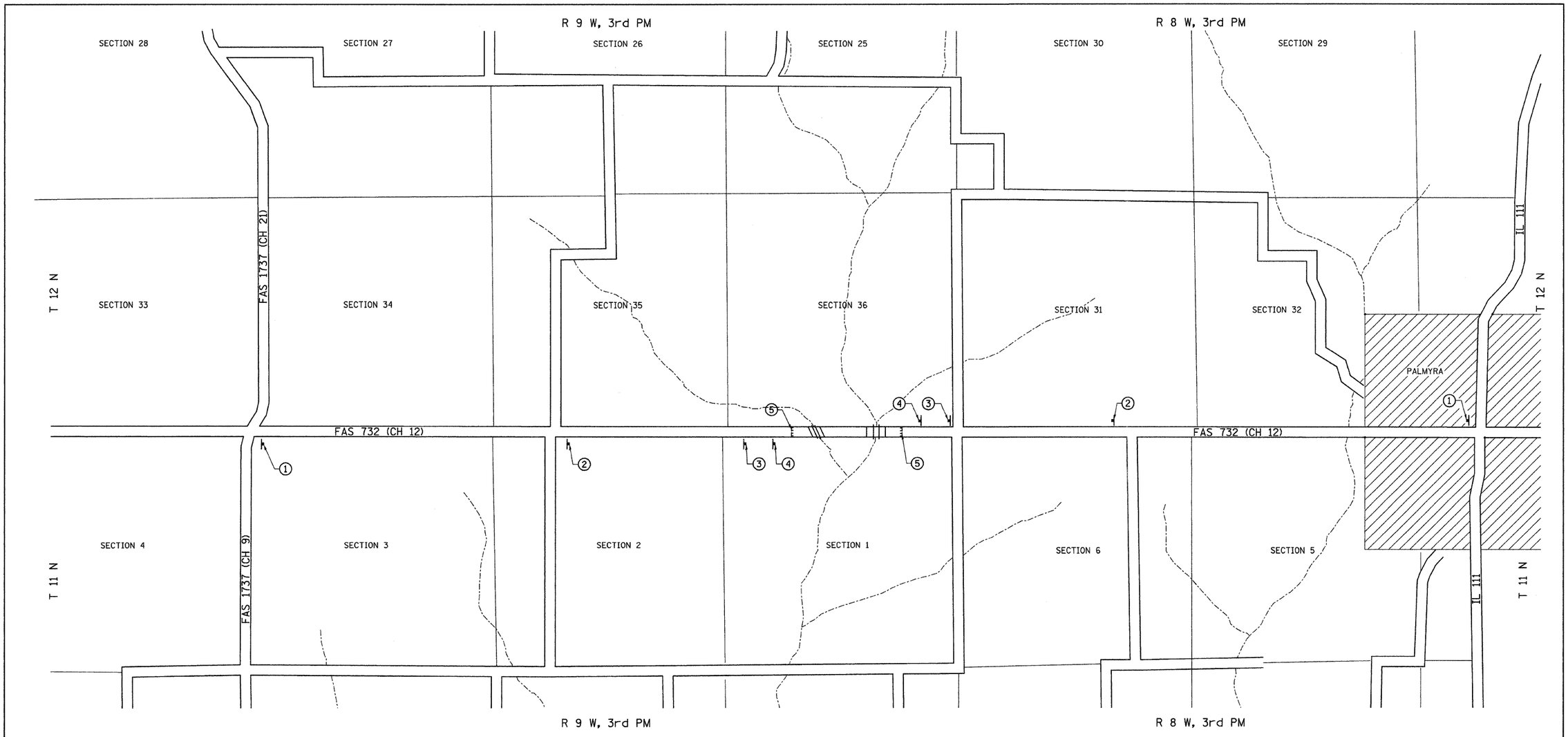
FILE NAME = V:\Bridge\2576-1 Macoupin\2576002.dgn	USER NAME = cthomas	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 1.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 3/1/2010	DATE -	REVISED -

MACOUPIN COUNTY
COUNTY HIGHWAY 12 OVER
HICKS CREEK AND JOES CREEK

SCHEDULES OF QUANTITIES

SCALE: NONE | SHEET NO. 2 OF 2 SHEETS | STA. 22+50.00 TO STA. 48+00.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
732	07-00090-00-BR	MACOUPIN	77	5
		CONTRACT NO. 93538		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		



① ROAD CLOSED 2 1/2 MILES AHEAD LOCAL TRAFFIC ONLY (R11-3) — ROAD CLOSED 2 1/2 MILES AHEAD LOCAL TRAFFIC ONLY

② ROAD CLOSED 1 MILE AHEAD LOCAL TRAFFIC ONLY (R11-3) — ROAD CLOSED 1 MILE AHEAD LOCAL TRAFFIC ONLY

③ ROAD CLOSED AHEAD (W20-3) — ROAD CLOSED AHEAD

④ ROAD CLOSED 500 FT (W20-3) — ROAD CLOSED 500 FT

⑤ TYPE III BARRICADES

SEE STANDARD BLR 21
AND SPECIAL PROVISIONS

1/2 MI 0 1/2 MI
GRAPHIC SCALE IN MILES

FILE NAME = V:\Bridge\2576-1 Macoupin\2576H001.dgn	USER NAME = othomas	DESIGNED -	REVISED -
		DRAWN -	REVISED -
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	PLOT DATE = 3/1/2010	DATE -	REVISED -

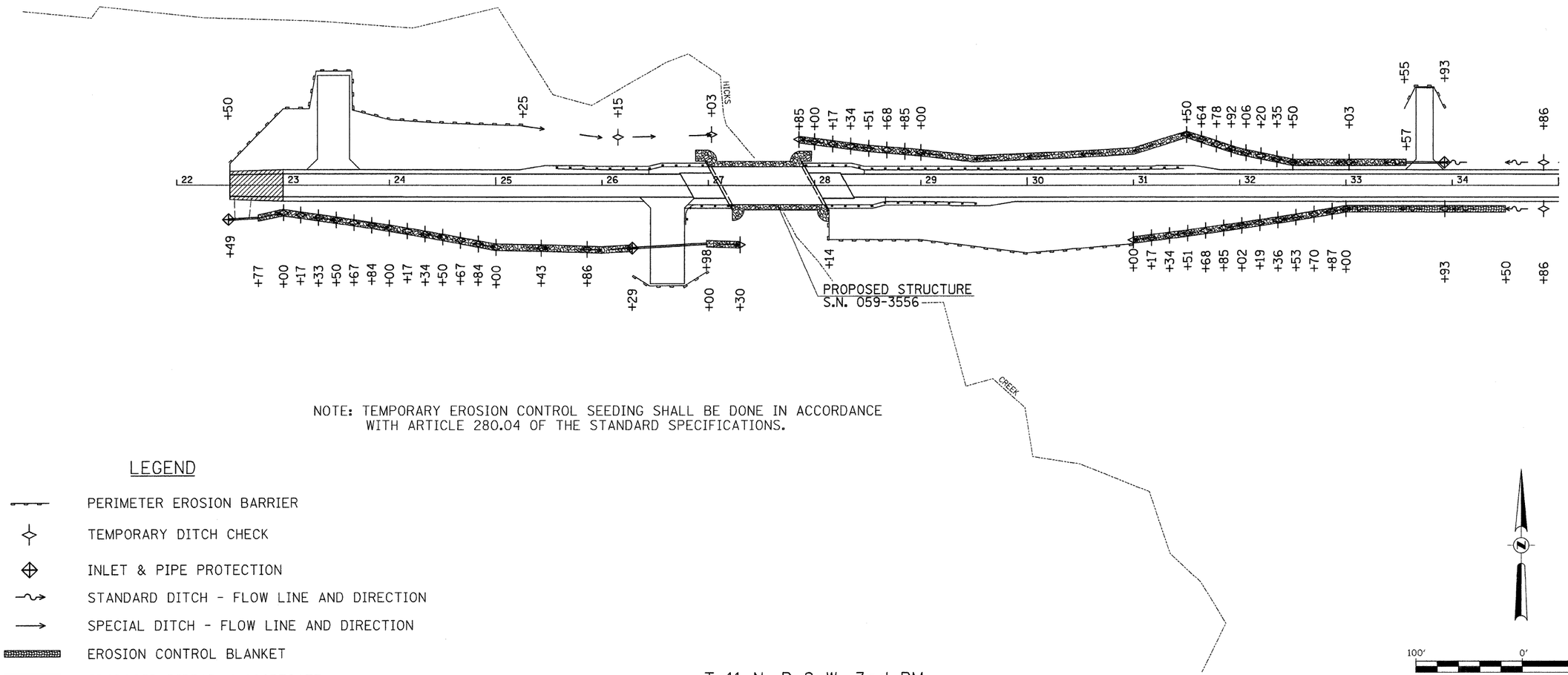
MACOUPIN COUNTY
COUNTY HIGHWAY 12
OVER HICKS CREEK AND JOES CREEK

TRAFFIC CONTROL PLAN

SCALE: NONE | SHEET NO. 1 OF 1 SHEETS | STA. 22+50.00 TO STA. 48+00.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
732	07-00090-00-BR	MACOUPIN	77	6
		CONTRACT NO. 93538		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(48)		

T 12 N, R 9 W, 3rd PM
SECTION 36



NOTE: TEMPORARY EROSION CONTROL SEEDING SHALL BE DONE IN ACCORDANCE WITH ARTICLE 280.04 OF THE STANDARD SPECIFICATIONS.

LEGEND

- PERIMETER EROSION BARRIER
- TEMPORARY DITCH CHECK
- INLET & PIPE PROTECTION
- STANDARD DITCH - FLOW LINE AND DIRECTION
- SPECIAL DITCH - FLOW LINE AND DIRECTION
- EROSION CONTROL BLANKET
- PROPOSED RIPRAP / AGGREGATE DITCH PLACEMENT

T 11 N, R 9 W, 3rd PM
SECTION 1

100′ 0′ 100′
GRAPHIC SCALE IN FEET

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		DRAWN -	REVISED -
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	PLOT DATE = 3/1/2010	DATE -	REVISED -

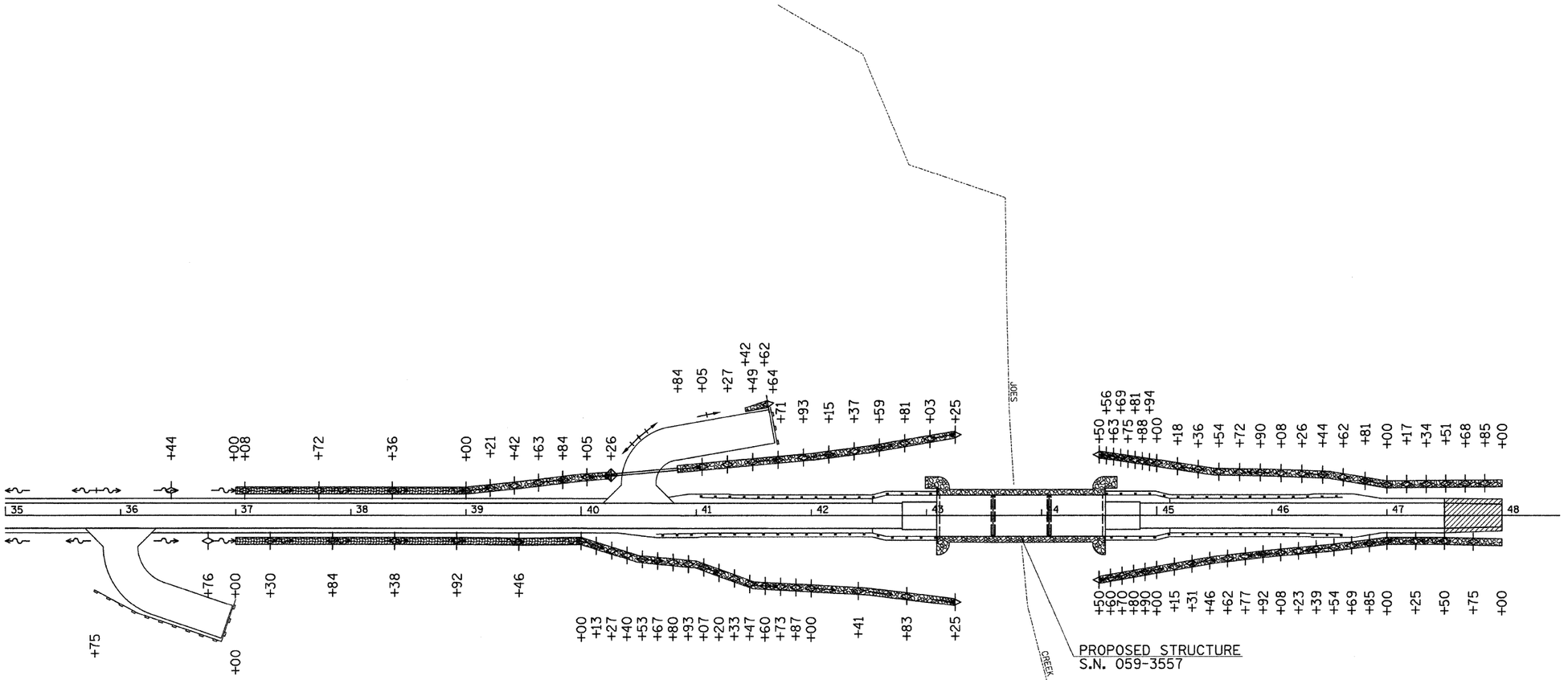
MACOUPIN COUNTY
COUNTY HIGHWAY 12
OVER HICKS CREEK AND JOES CREEK

STORM WATER POLLUTION PREVENTION PLAN

SCALE: 1″=50′ | SHEET NO. 1 OF 2 SHEETS | STA. 22+50.00 | TO STA. 35+00.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
732	07-00090-00-BR	MACOUPIN	77	7
		CONTRACT NO. 93538		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		

T 12 N, R 9 W, 3rd PM
SECTION 36



NOTE: TEMPORARY EROSION CONTROL SEEDING SHALL BE DONE IN ACCORDANCE WITH ARTICLE 280.04 OF THE STANDARD SPECIFICATIONS.

LEGEND

- PERIMETER EROSION BARRIER
- TEMPORARY DITCH CHECK
- INLET & PIPE PROTECTION
- STANDARD DITCH - FLOW LINE AND DIRECTION
- SPECIAL DITCH - FLOW LINE AND DIRECTION
- EROSION CONTROL BLANKET
- PROPOSED RIPRAP / AGGREGATE DITCH PLACEMENT

T 11 N, R 9 W, 3rd PM
SECTION 1

100' 0' 100'
GRAPHIC SCALE IN FEET

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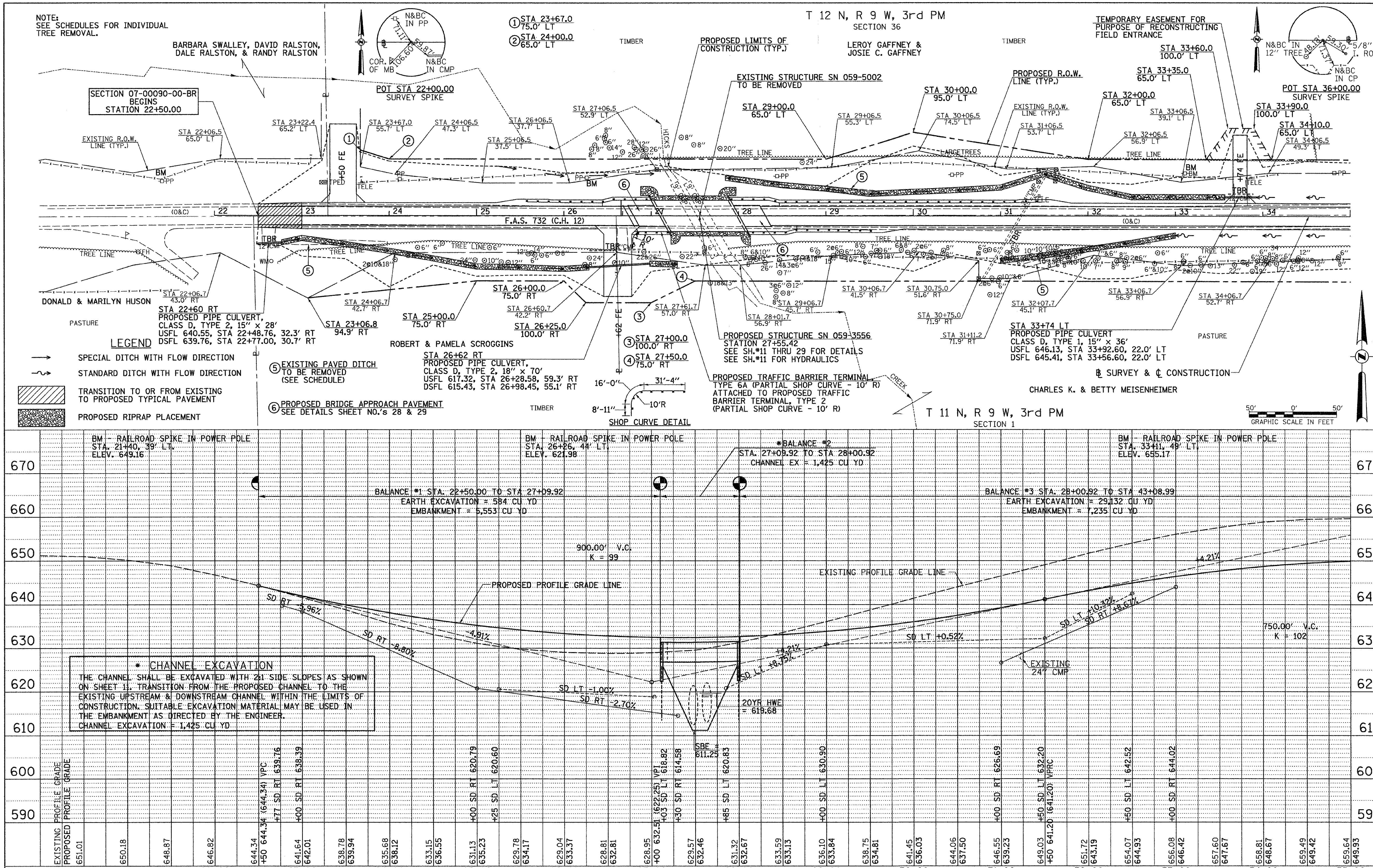
		DRAWN -	REVISED -
	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 3/1/2010	DATE -	REVISED -

MACOUPIN COUNTY
COUNTY HIGHWAY 12
OVER HICKS CREEK AND JOES CREEK

STORM WATER POLLUTION PREVENTION PLAN

SCALE: 1"=50' | SHEET NO. 2 OF 2 SHEETS | STA. 35+00.00 | TO STA. 48+00.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
732	07-00090-00-BR	MACOUPIN	77	8
		CONTRACT NO. 62538		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		


NOTE:
SEE SCHEDULES FOR INDIVIDUAL TREE REMOVAL.
BARBARA SWALLEY, DAVID RALSTON, DALE RALSTON, & RANDY RALSTON
SECTION 07-00090-00-BR BEGINS STATION 22+50.00
POT STA 22+00.00 SURVEY SPIKE
① STA 23+67.0 75.0' LT
② STA 24+00.0 65.0' LT
TIMBER
PROPOSED LIMITS OF CONSTRUCTION (TYP.)
T 12 N, R 9 W, 3rd PM
SECTION 36
LEROY GAFFNEY & JOSIE C. GAFFNEY
EXISTING STRUCTURE SN 059-5002 TO BE REMOVED
PROPOSED R.O.W. LINE (TYP.)
EXISTING R.O.W. LINE (TYP.)
TEMPORARY EASEMENT FOR PURPOSE OF RECONSTRUCTING FIELD ENTRANCE
POT STA 36+00.00 SURVEY SPIKE
TREE LINE
F.A.S. 732 (C.H. 12)
DONALD & MARILYN HUSON
PASTURE
STA 22+60 RT
PROPOSED PIPE CULVERT, CLASS D, TYPE 2, 15" x 28'
USFL 640.55, STA 22+48.76, 32.3' RT
DSFL 639.76, STA 22+77.00, 30.7' RT
ROBERT & PAMELA SCROGGINS
STA 26+62 RT
PROPOSED PIPE CULVERT, CLASS D, TYPE 2, 18" x 70'
USFL 617.32, STA 26+28.58, 59.3' RT
DSFL 615.43, STA 26+98.45, 55.1' RT
③ STA 27+00.0 100.0' RT
④ STA 27+50.0 75.0' RT
SHOP CURVE DETAIL
PROPOSED STRUCTURE SN 059-3556
STATION 27+55.42
SEE SH.#11 THRU 29 FOR DETAILS
SEE SH.#11 FOR HYDRAULICS
PROPOSED TRAFFIC BARRIER TERMINAL, TYPE 6A (PARTIAL SHOP CURVE - 10' R) ATTACHED TO PROPOSED TRAFFIC BARRIER TERMINAL, TYPE 2 (PARTIAL SHOP CURVE - 10' R)
STA 33+74 LT
PROPOSED PIPE CULVERT, CLASS D, TYPE 1, 15" x 36'
USFL 646.13, STA 33+92.60, 22.0' LT
DSFL 645.41, STA 33+56.60, 22.0' LT
℞ SURVEY & ℄ CONSTRUCTION
CHARLES K. & BETTY MEISENHEIMER
T 11 N, R 9 W, 3rd PM
SECTION 1
GRAPHIC SCALE IN FEET
LEGEND
SPECIAL DITCH WITH FLOW DIRECTION
STANDARD DITCH WITH FLOW DIRECTION
TRANSITION TO OR FROM EXISTING TO PROPOSED TYPICAL PAVEMENT
PROPOSED RIPRAP PLACEMENT
⑤ EXISTING PAVED DITCH TO BE REMOVED (SEE SCHEDULE)
⑥ PROPOSED BRIDGE APPROACH PAVEMENT SEE DETAILS SHEET NO.'s 28 & 29
BM - RAILROAD SPIKE IN POWER POLE STA. 21+40, 39' LT. ELEV. 649.16
BM - RAILROAD SPIKE IN POWER POLE STA. 26+26, 44' LT. ELEV. 621.98
BM - RAILROAD SPIKE IN POWER POLE STA. 33+11, 49' LT. ELEV. 655.17
*BALANCE #2 STA. 27+09.92 TO STA 28+00.92 CHANNEL EX = 1,425 CU YD
BALANCE #1 STA. 22+50.00 TO STA 27+09.92 EARTH EXCAVATION = 584 CU YD EMBANKMENT = 5,553 CU YD
BALANCE #3 STA. 28+00.92 TO STA 43+08.99 EARTH EXCAVATION = 29,132 CU YD EMBANKMENT = 7,235 CU YD
900.00' V.C. K = 99
750.00' V.C. K = 102
PROPOSED PROFILE GRADE LINE
EXISTING PROFILE GRADE LINE
EXISTING 24" CMP
20YR HWE = 619.68
SBE = 611.25
* CHANNEL EXCAVATION
THE CHANNEL SHALL BE EXCAVATED WITH 2:1 SIDE SLOPES AS SHOWN ON SHEET 11. 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 = 1,425 CU YD
EXISTING PROFILE GRADE
PROPOSED PROFILE GRADE
22+00
23+00
24+00
25+00
26+00
27+00
28+00
29+00
30+00
31+00
32+00
33+00
34+00
35+00

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USER NAME = cthomas | PLOT SCALE = 50.0000 ' / IN. | PLOT DATE = 5/17/2010

DESIGNED - | DRAWN - | CHECKED - | DATE -

REVISED - | REVISED - | REVISED - | REVISED -

MACOUPIN COUNTY
COUNTY HIGHWAY 12
OVER HICKS CREEK AND JOES CREEK

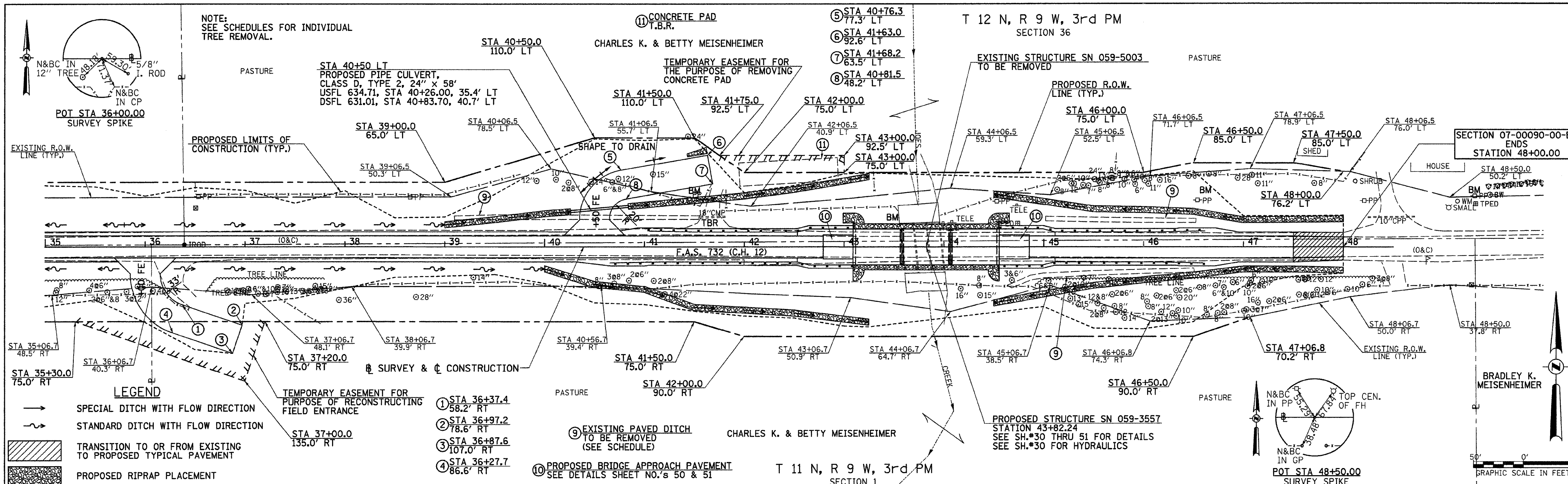
PLAN AND PROFILE

SCALE: 1"=50' | SHEET NO. 1 OF 2 SHEETS | STA. 22+50.00 TO STA. 35+00.00

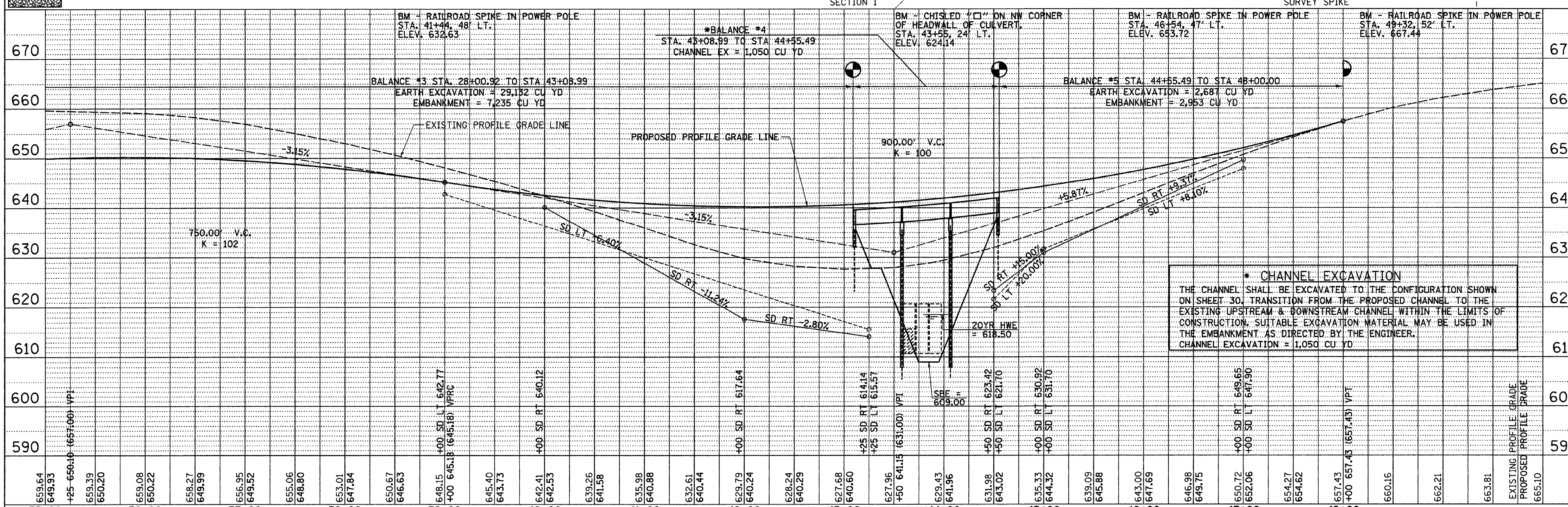
F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
732	07-00090-00-BR	MACOUPIN	77	9

CONTRACT NO.

FED. ROAD DIST. NO. 7 | ILLINOIS | FED. AID PROJECT BRS-0732(148)



NOTE:
SEE SCHEDULES FOR INDIVIDUAL TREE REMOVAL.
T 12 N, R 9 W, 3rd PM
SECTION 36
T 11 N, R 9 W, 3rd PM
SECTION 1
N&BC IN 12" TREE
5/8" I. ROD
N&BC IN CP
POT STA 36+00.00
SURVEY SPIKE
PASTURE
STA 40+50 LT
PROPOSED PIPE CULVERT,
CLASS D, TYPE 2, 24" x 58'
USFL 634.71, STA 40+26.00, 35.4' LT
DSFL 631.01, STA 40+83.70, 40.7' LT
STA 40+50.0
110.0' LT
(11) CONCRETE PAD
T.B.R.
CHARLES K. & BETTY MEISENHEIMER
TEMPORARY EASEMENT FOR THE PURPOSE OF REMOVING CONCRETE PAD
(5) STA 40+76.3
77.3' LT
(6) STA 41+63.0
92.6' LT
(7) STA 41+68.2
63.5' LT
(8) STA 40+81.5
48.2' LT
EXISTING STRUCTURE SN 059-5003
TO BE REMOVED
PROPOSED R.O.W.
LINE (TYP.)
SECTION 07-00090-00-BR
ENDS
STATION 48+00.00
EXISTING R.O.W. LINE (TYP.)
PROPOSED LIMITS OF CONSTRUCTION (TYP.)
SHAPE TO DRAIN
F.A.S. 732 (C.H. 12)
HOUSE
SHED
BM
TBR
TELE
(O&C)
SURVEY & CONSTRUCTION
LEGEND
SPECIAL DITCH WITH FLOW DIRECTION
STANDARD DITCH WITH FLOW DIRECTION
TRANSITION TO OR FROM EXISTING TO PROPOSED TYPICAL PAVEMENT
PROPOSED RIPRAP PLACEMENT
TEMPORARY EASEMENT FOR PURPOSE OF RECONSTRUCTING FIELD ENTRANCE
(1) STA 36+37.4
58.2' RT
(2) STA 36+97.2
78.6' RT
(3) STA 36+87.6
107.0' RT
(4) STA 36+27.7
86.6' RT
(9) EXISTING PAVED DITCH
TO BE REMOVED
(SEE SCHEDULE)
(10) PROPOSED BRIDGE APPROACH PAVEMENT
SEE DETAILS SHEET NO.'s 50 & 51
CHARLES K. & BETTY MEISENHEIMER
PROPOSED STRUCTURE SN 059-3557
STATION 43+82.24
SEE SH.#30 THRU 51 FOR DETAILS
SEE SH.#30 FOR HYDRAULICS
CREEK
BRADLEY K. MEISENHEIMER
N&BC IN PP
TOP CEN. OF FH
N&BC IN GP
POT STA 48+50.00
SURVEY SPIKE
GRAPHIC SCALE IN FEET



BM - RAILROAD SPIKE IN POWER POLE
STA. 41+44, 48' LT.
ELEV. 632.63
*BALANCE #4
STA. 43+08.99 TO STA 44+55.49
CHANNEL EX = 1,050 CU YD
BM - CHISLED "□" ON NW CORNER OF HEADWALL OF CULVERT.
STA. 43+55, 24' LT.
ELEV. 624.14
BM - RAILROAD SPIKE IN POWER POLE
STA. 46+54, 47' LT.
ELEV. 653.72
BM - RAILROAD SPIKE IN POWER POLE
STA. 49+32, 52' LT.
ELEV. 667.44
BALANCE #3 STA. 28+00.92 TO STA 43+08.99
EARTH EXCAVATION = 29,152 CU YD
EMBANKMENT = 7,235 CU YD
BALANCE #5 STA. 44+55.49 TO STA 48+00.00
EARTH EXCAVATION = 2,687 CU YD
EMBANKMENT = 2,953 CU YD
EXISTING PROFILE GRADE LINE
PROPOSED PROFILE GRADE LINE
900.00' V.C.
K = 100
750.00' V.C.
K = 102
20YR HWE = 618.50
SBE = 609.00
* CHANNEL EXCAVATION
THE CHANNEL SHALL BE EXCAVATED TO THE CONFIGURATION SHOWN ON SHEET 30. 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 = 1,050 CU YD
EXISTING PROFILE GRADE
PROPOSED PROFILE GRADE

FILE NAME = V:\Bridge\2576-1 Macoupin\2576pp2.dgn	USER NAME = cthomas	DESIGNED -	REVISED -	MACOUPIN COUNTY COUNTY HIGHWAY 12 OVER HICKS CREEK AND JOES CREEK	PLAN AND PROFILE
		DRAWN -	REVISED -		
	PLOT SCALE = 50.0000 ' / IN.	CHECKED -	REVISED -		
	PLOT DATE = 3/1/2010	DATE	REVISED -		SCALE: 1"=50' | SHEET NO. 2 OF 2 SHEETS | STA. 35+00.00 TO STA. 48+00.00

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
732	07-00090-00-BR	MACOUPIN	77	10
		CONTRACT NO. 93538		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		

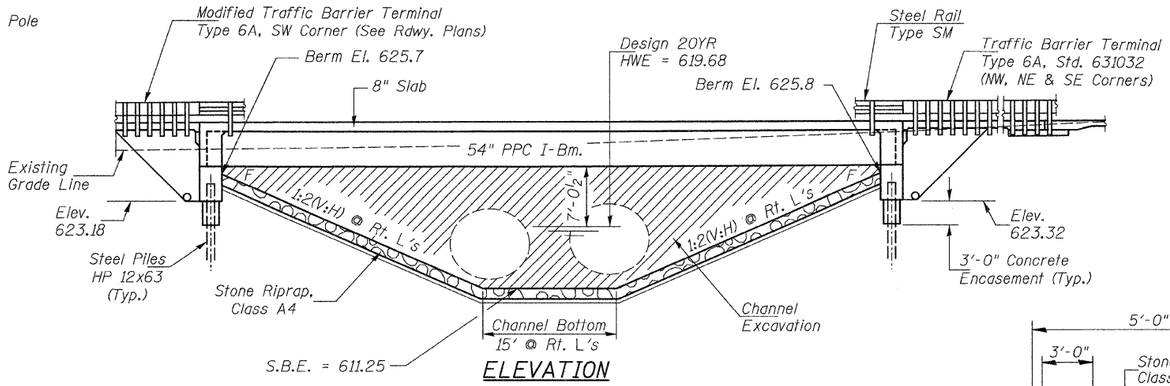
BM - RR Spike in Power Pole
Sta. 21+40, 39' Lt.
Elev. 655.17

BM - RR Spike in Power Pole
Sta. 26+26, 44' Lt.
Elev. 621.98

Existing Structure:
Two 9' diameter corrugated metal pipe culverts.
The culverts are approximately 97' in length and are placed under ±8' of fill. The barrels are on a 30° right ahead skew.
The culverts were placed in 1956.
Exist. S.N. 059-5002

Salvage: See Special Provisions

Road to be closed to traffic during construction.



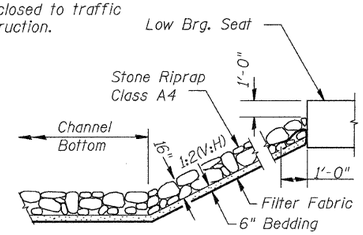
ELEVATION

NOTE:
For Bill of Material and General Notes, See Sheet 2 of 19.

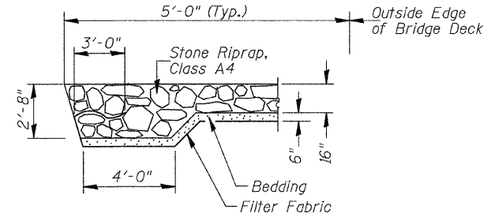
HICKS CREEK
BUILT 20__ BY
MACOUPIN COUNTY
SEC. 07-00090-00-BR
C.H. 12 STATION 27+55.42
F.A. PROJ. BRS-0732(148)
STR. NO. 059-3556 LOADING HL-93

NAME PLATE

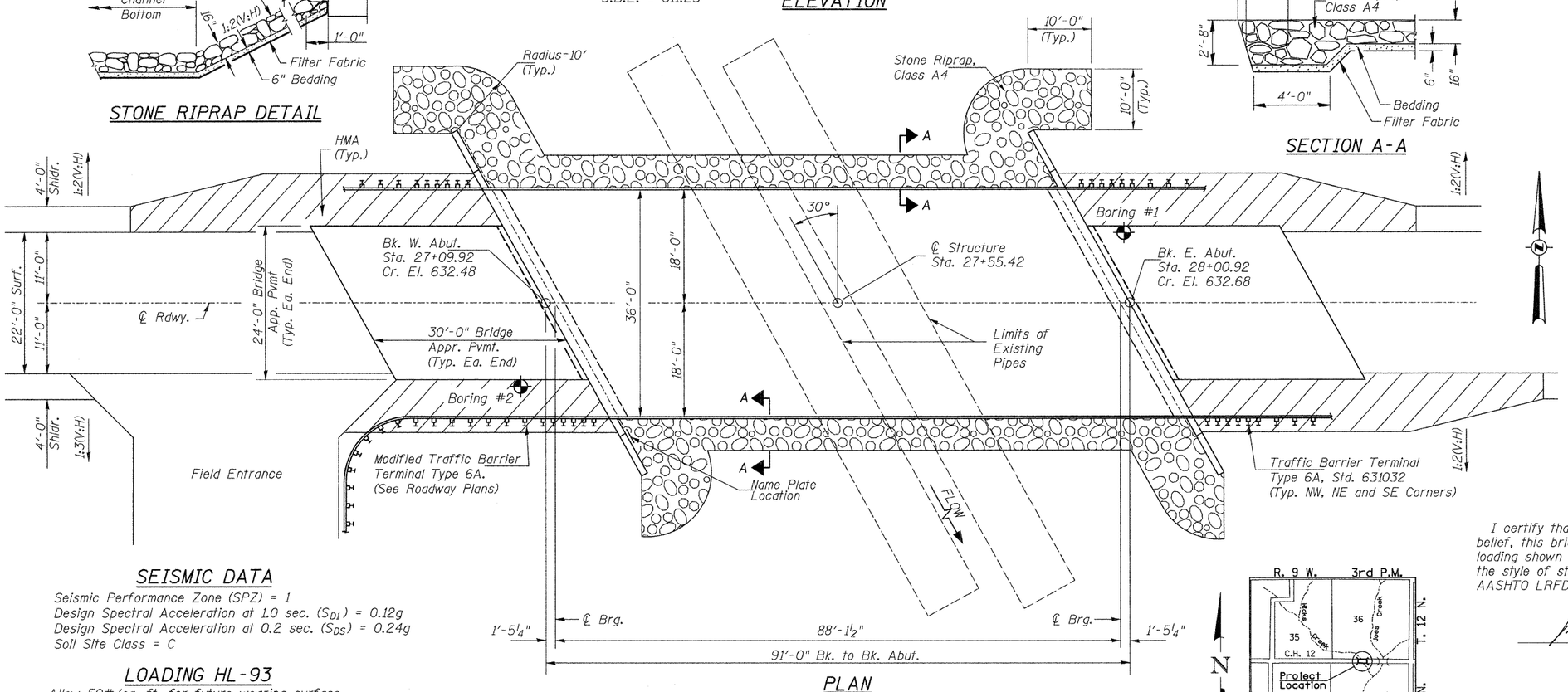
Locate Name Plate on Face of Wingwall S.W. Corner of Bridge (See Std. 515001)



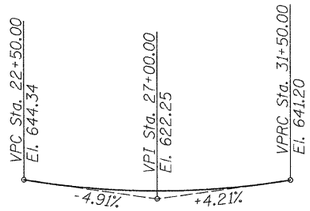
STONE RIPRAP DETAIL



SECTION A-A



PLAN



PROFILE GRADE

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.12g
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.24g
Soil Site Class = C

LOADING HL-93

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

DESIGN SPECIFICATIONS

2007 AASHTO LRFD Bridge Design Specifications with Interims

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)

PRECAST PRESTRESSED UNITS

f'c = 6,000 p.s.i.
f'ci = 5,000 p.s.i.
f's = 270,000 p.s.i. (½" ϕ low relaxation strands)
f'si = 201,960 p.s.i. (½" ϕ low relaxation strands)

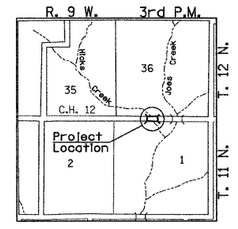
WATERWAY INFORMATION

Drainage Area = 2.42 Sq. Mi. Low Grade Elev. = 632.45 @ Sta. 27+34.38

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
Design	20	1,226	103	269	619.68	4.75	0.00	624.43	619.68
Base	100	1,840	119	332	620.92	8.44	0.01	629.36	620.93

DESIGN SCOUR TABLE

Location	W. Abut	E. Abut
Design Scour Elevation	623.18	623.32



LOCATION SKETCH

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 AASHTO LRFD Bridge Design Specifications.

3/2/2010
Illinois Structural No. 6527
Expires 11/30/2010

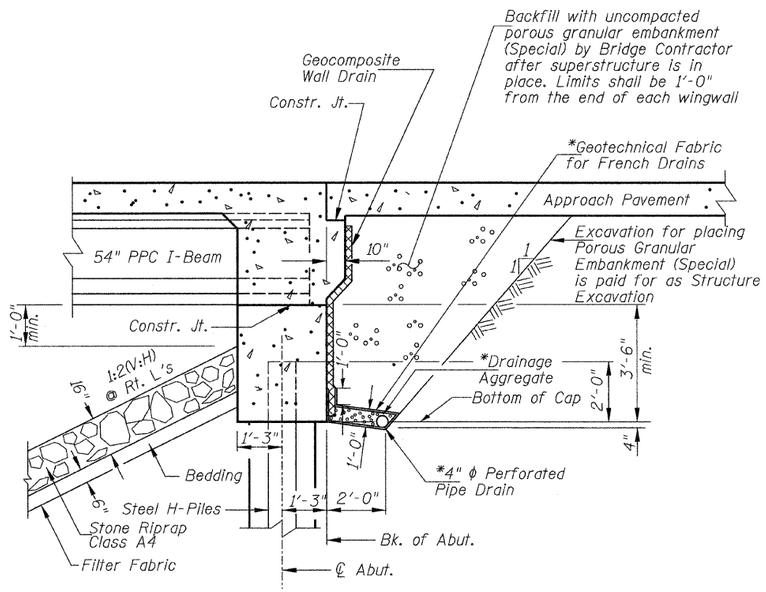
BENJAMIN A. NEREM
081-006527
LICENSED
STRUCTURAL
ENGINEER
OF
JACKSONVILLE,
ILLINOIS
Lic Exp. 11/30/2010

DESIGNED	BAN
CHECKED	JOH
DRAWN	TC
CHECKED	BAN

GENERAL PLAN AND ELEVATION
C.H. 12 OVER HICKS CREEK
SECTION 07-00090-00-BR
MACOUPIN COUNTY
STATION 27+55.42
STR. NO. 059-3556

SHEET NO. 1	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
19 SHEETS	CH 12	07-00090-00-BR	MACOUPIN	77	11
		SN 059-3556	CONTRACT NO. 93538		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		

2576-1B001



*Included in the cost of Pipe Underdrains for Structures. All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into *concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101)

SECTION THRU INTEGRAL ABUTMENTS

(Horiz. dim. ℄ Rt. L's)

GENERAL NOTES

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60.

Reinforcement bars designated (E) shall be epoxy coated.

All embedded and separate bearing plates, side retainers, anchor bolts, nuts, washers and pintles shall be galvanized according to AASHTO M111 or M232 (as applicable).

Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.

For Soil Borings, See Special Provisions.

The Contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at substructures specified or approved by the Engineer before ordering the remainder of piles.

Protective Coat shall be applied to the top of the deck, edge of deck, and approach pavement.

Bridge Deck Grooving is figured 1'-0" from rail face and includes the approach pavements.

TOTAL BILL OF MATERIAL

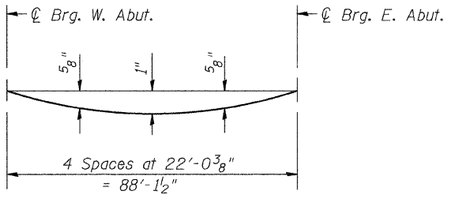
	ITEM	UNIT	SUPER	SUB	TOTAL
ⓘ	Removal of Existing Structures No. 1	EACH	——	——	1
	Structure Excavation	CU YD	——	300	300
	Channel Excavation	CU YD	——	1,425	1,425
	Concrete Superstructure	CU YD	127.1	——	127.1
	Concrete Structures	CU YD	——	39.7	39.7
	Concrete Encasement	CU YD	——	4.2	4.2
	Furnishing and Erecting Precast Prestressed Concrete I-Beams, 54"	FOOT	535	——	535
ⓘ	Reinforcement Bars, Epoxy Coated	POUND	23,920	6,160	30,080
	Stone Riprap, Class A4	TON	——	430	430
ⓘ	Filter Fabric	SQ YD	——	535	535
	Steel Railing, Type SM	FOOT	182	——	182
	Furnishing Steel Piles HP12x63	FOOT	——	550	550
ⓘ	Driving Piles	FOOT	——	550	550
ⓘ	Test Pile Steel HP12x63	EACH	——	2	2
	Protective Coat	SQ YD	553	——	553
	Bridge Deck Grooving	SQ YD	504	——	504
	Name Plates	EACH	——	1	1
ⓘ	Pipe Underdrains for Structures, 4"	FOOT	——	174	174
	Bridge Approach Pavement	SQ YD	——	——	160
ⓘ	Porous Granular Embankment (Special)	CU YD	——	196	196
	Geocomposite Wall Drain	SQ YD	——	101	101
	Bar Splicers	EACH	48	——	48

ⓘ See Special Provisions

GENERAL NOTES, DETAILS, AND BILL OF MATERIALS C.H. 12 OVER HICKS CREEK SECTION 07-00090-00-BR MACOUPIN COUNTY

SHEET NO. 2	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
19 SHEETS	CH 12	07-00090-00-BR	MACOUPIN	77	12
	SN 059-3556		CONTRACT NO. 93538		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		

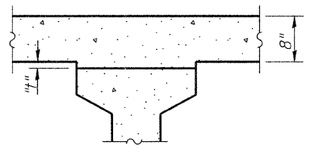
2576-1B002



DEAD LOAD DEFLECTION DIAGRAM

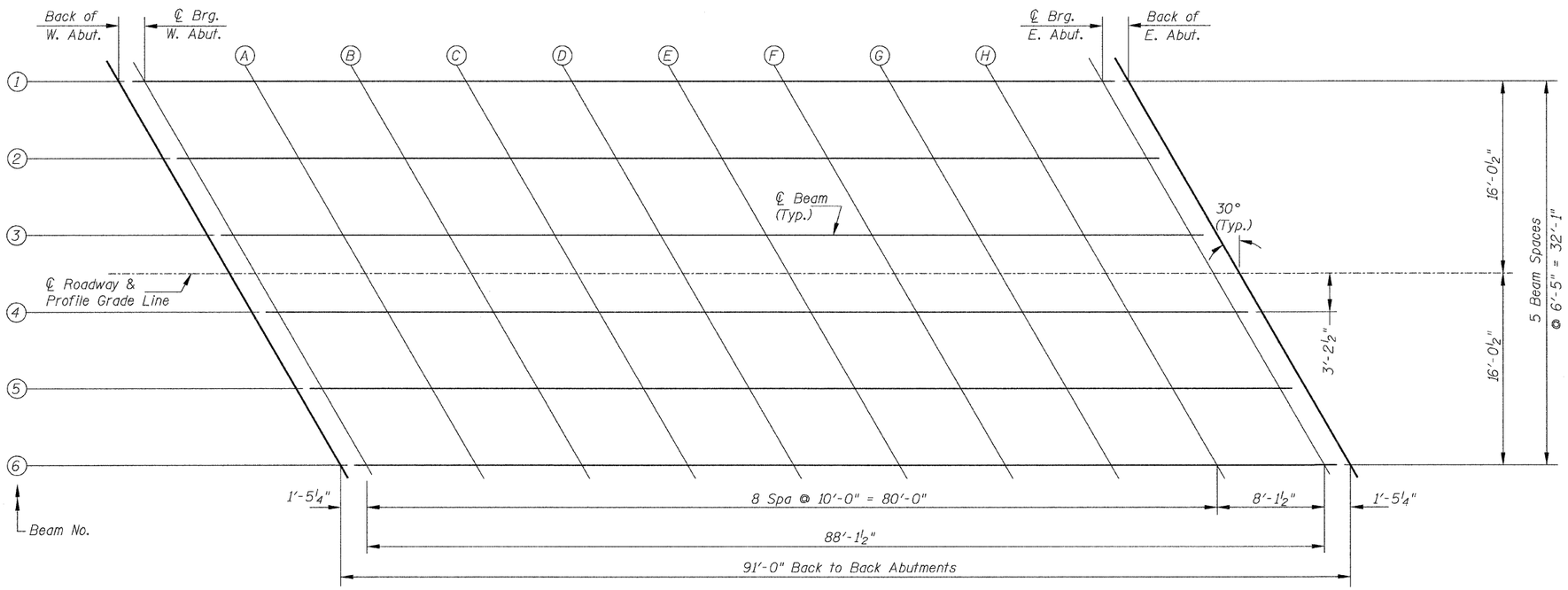
(Includes weight of concrete, excluding beams).

Note:
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on Sheet 4 of 19.



To determine "t": After all precast prestressed beams have been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflections" shown on Sh. 4 of 19, minus slab thickness, equals the fillet heights "t" above top flanges of beams.

FILLET HEIGHTS



PLAN (DECK ELEVATIONS)

TOP OF SLAB ELEVATIONS
C.H. 12 OVER HICKS CREEK
SECTION 07-00090-00-BR
MACOUPIN COUNTY

SHEET NO. 3	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
19 SHEETS	CH 12	07-00090-00-BR	MACOUPIN	77	13
	SN 059-3556		CONTRACT NO. 93538		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		

2576-1B003

BEAM #1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflections
Bk W. Abutment	2700.66	-16.04	632.24	632.24
CL Brg W. Abut.	2702.10	-16.04	632.23	632.23
A	2712.10	-16.04	632.20	632.23
B	2722.10	-16.04	632.19	632.24
C	2732.10	-16.04	632.18	632.25
D	2742.10	-16.04	632.18	632.26
E	2752.10	-16.04	632.20	632.27
F	2762.10	-16.04	632.22	632.29
G	2772.10	-16.04	632.25	632.30
H	2782.10	-16.04	632.30	632.32
CL Brg E. Abut.	2790.21	-16.04	632.34	632.34
Bk E. Abutment	2791.66	-16.04	632.35	632.35

BEAM #2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflections
Bk W. Abutment	2704.36	-9.63	632.35	632.35
CL Brg W. Abut.	2705.81	-9.63	632.34	632.34
A	2715.81	-9.63	632.32	632.35
B	2725.81	-9.63	632.30	632.36
C	2735.81	-9.63	632.30	632.37
D	2745.81	-9.63	632.31	632.39
E	2755.81	-9.63	632.32	632.40
F	2765.81	-9.63	632.35	632.42
G	2775.81	-9.63	632.39	632.44
H	2785.81	-9.63	632.44	632.46
CL Brg E. Abut.	2793.92	-9.63	632.48	632.48
Bk E. Abutment	2795.36	-9.63	632.49	632.49

BEAM #3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflections
Bk W. Abutment	2708.07	-3.21	632.44	632.44
CL Brg W. Abut.	2709.51	-3.21	632.43	632.43
A	2719.51	-3.21	632.41	632.44
B	2729.51	-3.21	632.40	632.46
C	2739.51	-3.21	632.40	632.47
D	2749.51	-3.21	632.41	632.49
E	2759.51	-3.21	632.43	632.51
F	2769.51	-3.21	632.46	632.53
G	2779.51	-3.21	632.50	632.55
H	2789.51	-3.21	632.56	632.58
CL Brg E. Abut.	2797.62	-3.21	632.60	632.60
Bk E. Abutment	2799.07	-3.21	632.61	632.61

℄ RDWY. & P.G.L.

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflections
Bk W. Abutment	2709.92	0.00	632.48	632.48
CL Brg W. Abut.	2711.36	0.00	632.48	632.48
A	2721.36	0.00	632.46	632.49
B	2731.36	0.00	632.45	632.51
C	2741.36	0.00	632.45	632.52
D	2751.36	0.00	632.47	632.55
E	2761.36	0.00	632.49	632.57
F	2771.36	0.00	632.52	632.59
G	2781.36	0.00	632.56	632.61
H	2791.36	0.00	632.62	632.64
CL Brg E. Abut.	2799.48	0.00	632.67	632.67
Bk E. Abutment	2800.92	0.00	632.68	632.68

BEAM #4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflections
Bk W. Abutment	2711.77	3.21	632.43	632.43
CL Brg W. Abut.	2713.22	3.21	632.42	632.42
A	2723.22	3.21	632.41	632.44
B	2733.22	3.21	632.40	632.45
C	2743.22	3.21	632.41	632.48
D	2753.22	3.21	632.42	632.50
E	2763.22	3.21	632.44	632.52
F	2773.22	3.21	632.48	632.55
G	2783.22	3.21	632.52	632.57
H	2793.22	3.21	632.58	632.60
CL Brg E. Abut.	2801.33	3.21	632.63	632.63
Bk E. Abutment	2802.77	3.21	632.64	632.64

BEAM #5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflections
Bk W. Abutment	2715.48	9.63	632.32	632.32
CL Brg W. Abut.	2716.92	9.63	632.32	632.32
A	2726.92	9.63	632.30	632.33
B	2736.92	9.63	632.30	632.35
C	2746.92	9.63	632.31	632.38
D	2756.92	9.63	632.33	632.41
E	2766.92	9.63	632.35	632.43
F	2776.92	9.63	632.39	632.46
G	2786.92	9.63	632.44	632.49
H	2796.92	9.63	632.50	632.52
CL Brg E. Abut.	2805.03	9.63	632.55	632.55
Bk E. Abutment	2806.48	9.63	632.56	632.56

BEAM #6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflections
Bk W. Abutment	2719.18	16.04	632.19	632.19
CL Brg W. Abut.	2720.63	16.04	632.19	632.19
A	2730.63	16.04	632.18	632.21
B	2740.63	16.04	632.18	632.23
C	2750.63	16.04	632.19	632.26
D	2760.63	16.04	632.21	632.29
E	2770.63	16.04	632.25	632.33
F	2780.63	16.04	632.29	632.36
G	2790.63	16.04	632.34	632.39
H	2800.63	16.04	632.40	632.43
CL Brg E. Abut.	2808.74	16.04	632.46	632.46
Bk E. Abutment	2810.18	16.04	632.47	632.47

TOP OF SLAB ELEVATIONS
C.H. 12 OVER HICKS CREEK
SECTION 07-00090-00-BR
MACOUPIN COUNTY

SHEET NO. 4
19 SHEETS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CH 12	07-00090-00-BR	MACOUPIN	77	14
	SN 059-3556	CONTRACT NO. 93538		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		

2576-1B004

NORTH EDGE OF APPROACH PAVEMENT

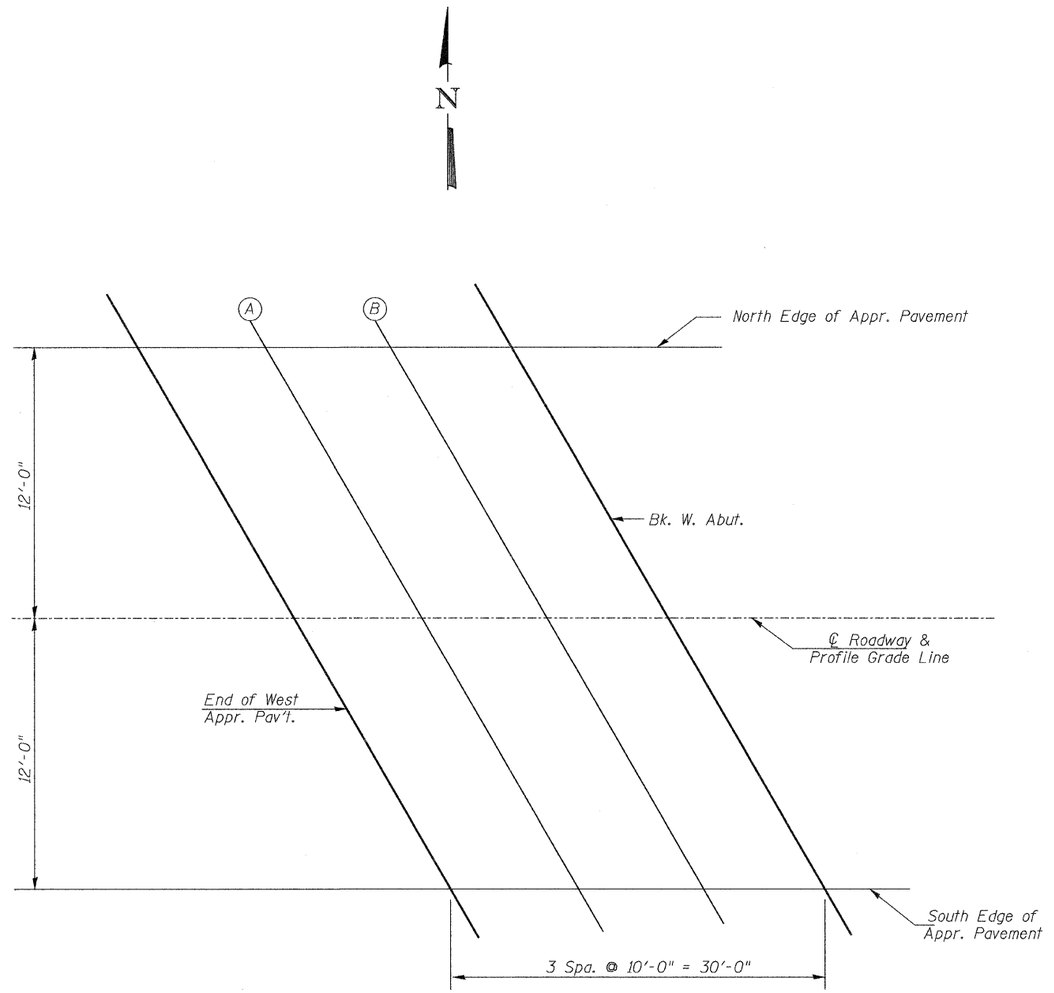
Location	Station	Offset	Theoretical Grade Elevations
End W. App. Pvmt.	2672.99	-12.00	632.45
A	2682.99	-12.00	632.40
B	2692.99	-12.00	632.35
Bk W. Abutment	2702.99	-12.00	632.31

PROFILE GRADE

Location	Station	Offset	Theoretical Grade Elevations
End W. App. Pvmt.	2679.92	0.00	632.60
A	2689.92	0.00	632.55
B	2699.92	0.00	632.51
Bk W. Abutment	2709.92	0.00	632.48

SOUTH EDGE OF APPROACH PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
End W. App. Pvmt.	2686.85	12.00	632.38
A	2696.85	12.00	632.34
B	2706.85	12.00	632.30
Bk W. Abutment	2716.85	12.00	632.28



PLAN WEST APPROACH PAVEMENT

TOP OF WEST APPROACH PAVEMENT ELEVATIONS
C.H. 12 OVER HICKS CREEK
SECTION 07-00090-00-BR
MACOUPIN COUNTY

SHEET NO. 5	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
19 SHEETS	CH 12	07-00090-00-BR	MACOUPIN	77	15
		SN 059-3556	CONTRACT NO. 93538		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		

2576-1B005

NORTH EDGE OF APPROACH PAVEMENT

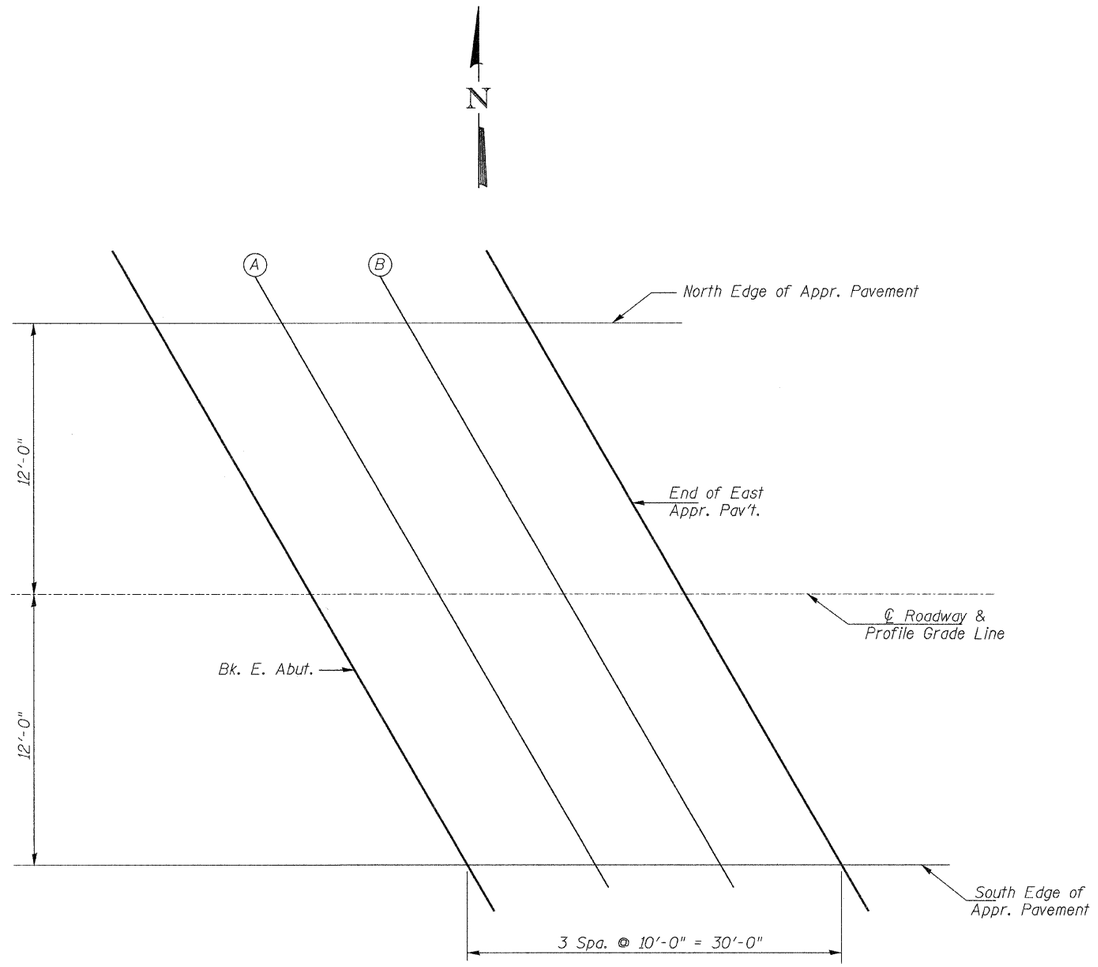
Location	Station	Offset	Theoretical Grade Elevations
Bk E. Abutment	2793.99	-12.00	632.44
A	2803.99	-12.00	632.51
B	2813.99	-12.00	632.59
End E. App. Pvmt.	2823.99	-12.00	632.67

PROFILE GRADE

Location	Station	Offset	Theoretical Grade Elevations
Bk E. Abutment	2800.92	0.00	632.68
A	2810.92	0.00	632.75
B	2820.92	0.00	632.83
End E. App. Pvmt.	2830.92	0.00	632.92

SOUTH EDGE OF APPROACH PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
Bk E. Abutment	2807.85	12.00	632.54
A	2817.85	12.00	632.62
B	2827.85	12.00	632.71
End E. App. Pvmt.	2837.85	12.00	632.81



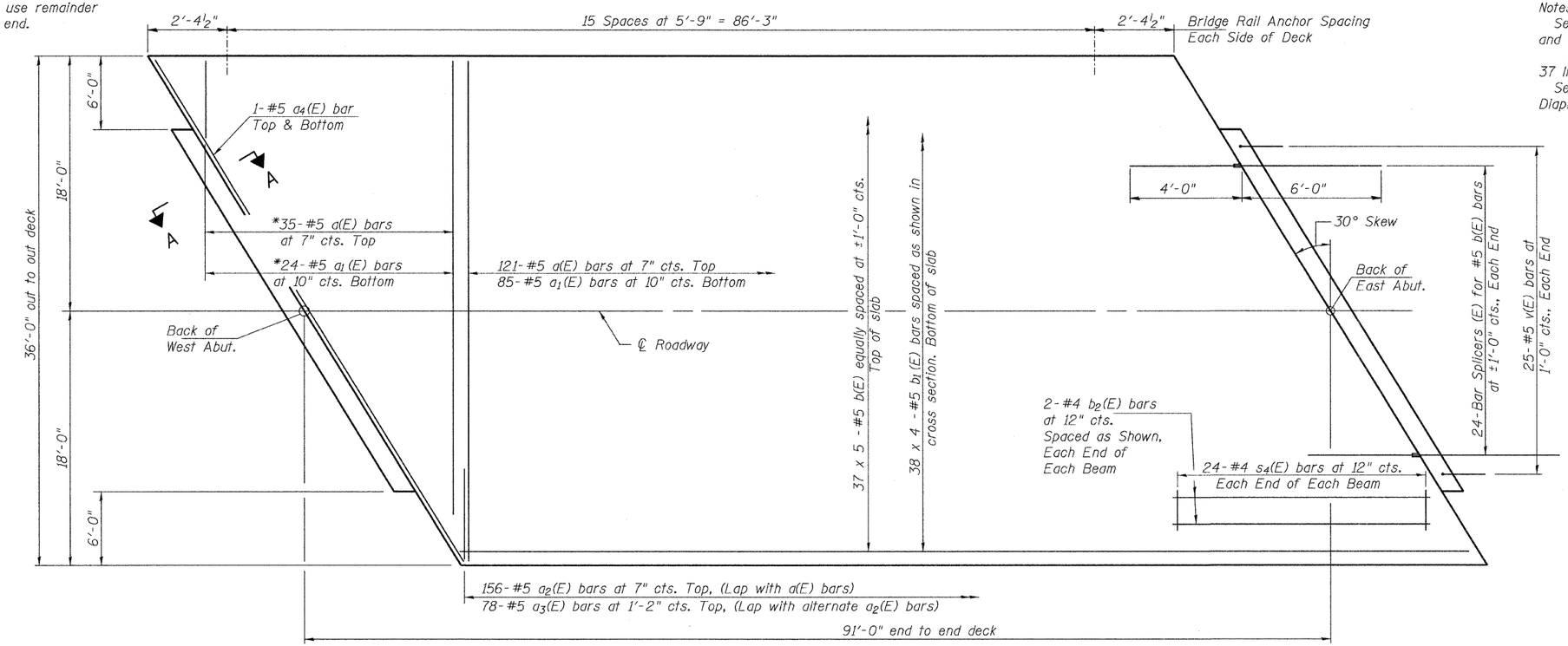
PLAN EAST APPROACH PAVEMENT

TOP OF EAST APPROACH PAVEMENT ELEVATIONS
C.H. 12 OVER HICKS CREEK
SECTION 07-00090-00-BR
MACOUPIN COUNTY

SHEET NO. 6	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
19 SHEETS	CH 12	07-00090-00-BR	MACOUPIN	77	16
	SN 059-3556		CONTRACT NO. 93538		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		

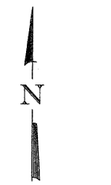
2576-1B006

*Order a(E) & a_1(E) bars full length.
Cut to fit skew and use remainder
of bars in opposite end.



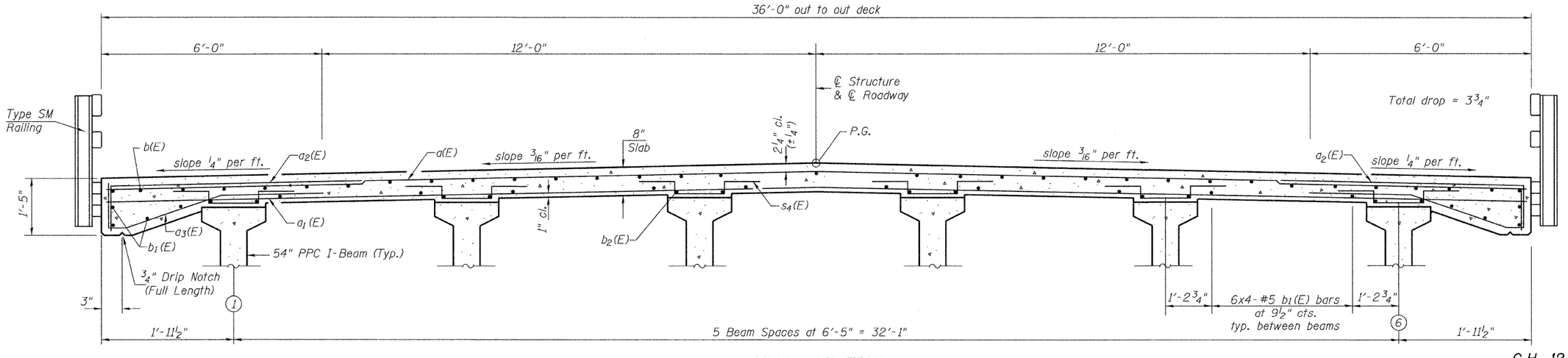
PLAN

Notes:
See sheet 8 of 19 for superstructure details, and Bill of Material.
Bars indicated thus 37 x 5-#5 etc. indicates 37 lines of bars with 5 lengths per line.
See sheet 9 of 19 for Section A-A & Diaphragm Details.



MIN. BAR LAP

#5 = 1'-8"

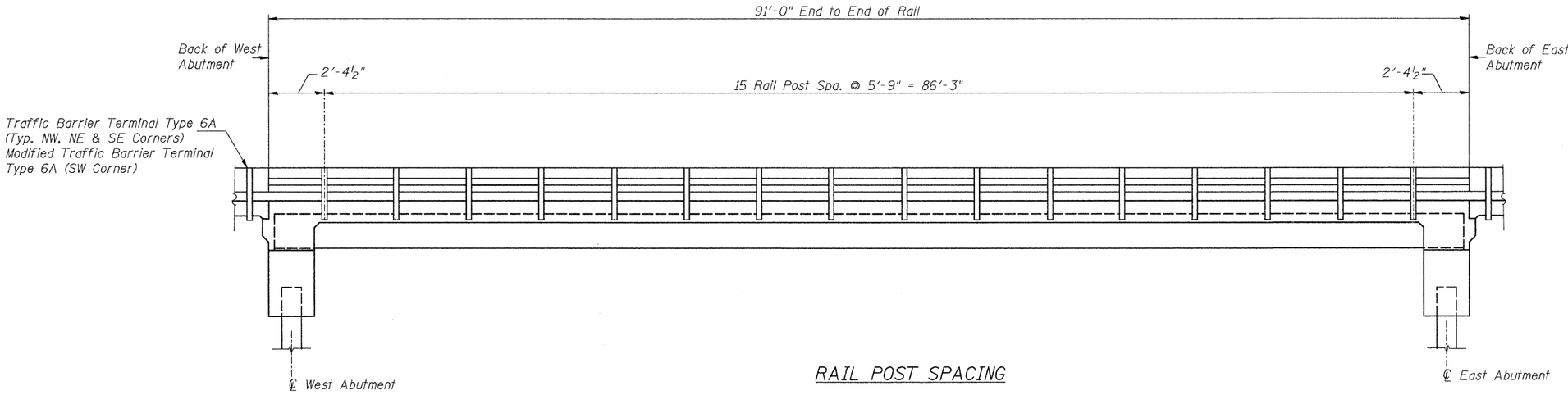


CROSS SECTION
(Looking East)

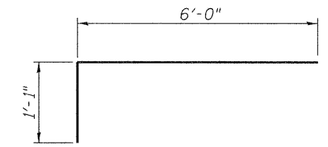
SUPERSTRUCTURE
C.H. 12 OVER HICKS CREEK
SECTION 07-00090-00-BR
MACOUPIN COUNTY

SHEET NO. 7	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
19 SHEETS	CH 12	07-00090-00-BR	MACOUPIN	77	17
		SN 059-3556	CONTRACT NO. 93538		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		

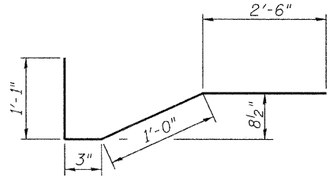
2576-1B007



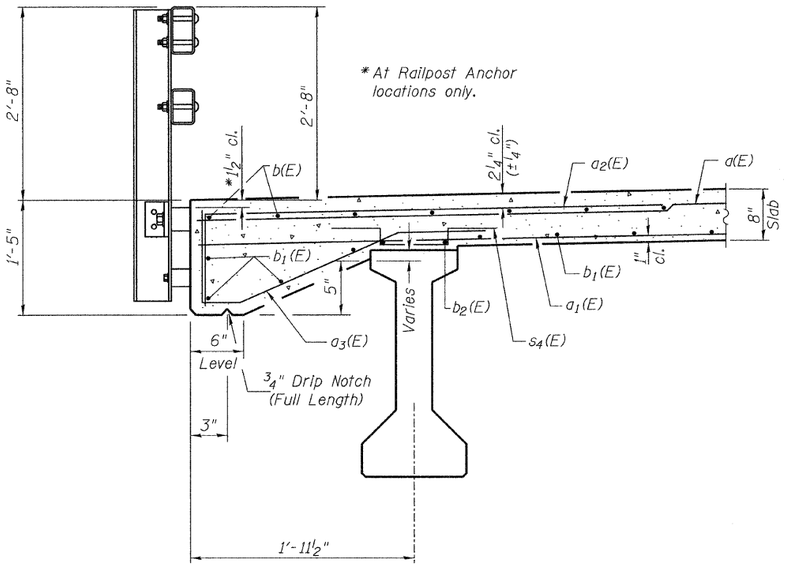
RAIL POST SPACING



BAR $a_2(E)$

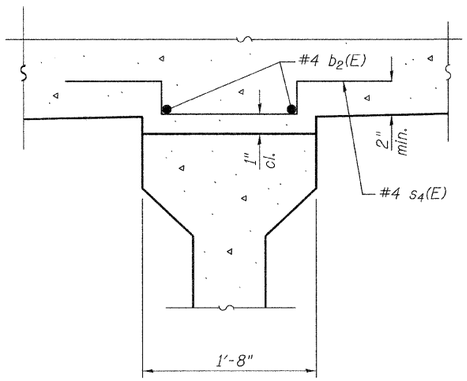


BAR $a_3(E)$



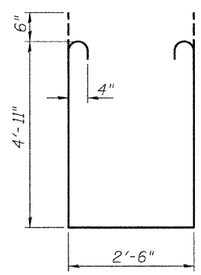
SECTION THRU PARAPET

See Sheet 10 of 19 for Rail Post Anchor Details

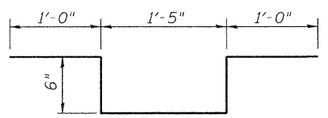


I-BEAM FILLET REINFORCEMENT

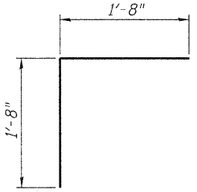
Reinforce 23'-0" from each end of beam with #4 $s_4(E)$ bars @ 12" cts. and 2-#4 $b_2(E)$ bars as shown above. (Typ. at all beams.)



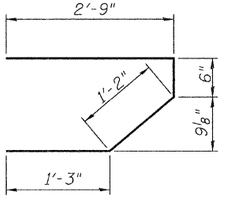
BAR $s_1(E)$



BAR $s_4(E)$



BAR v(E)



BAR s(E)

SUPERSTRUCTURE BILL OF MATERIAL

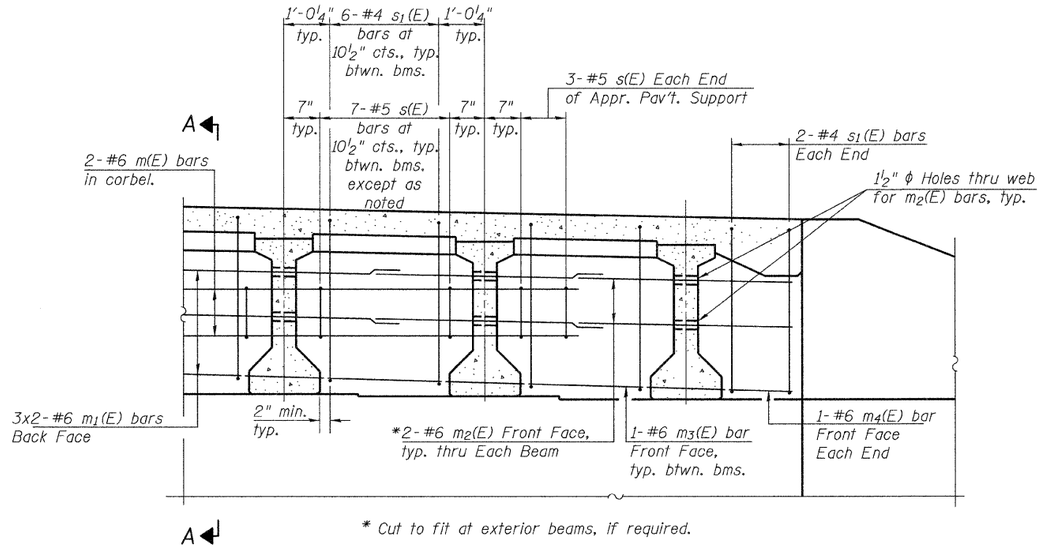
Bar	No.	Size	Length	Shape
a(E)	156	#5	35'-9"	
$a_1(E)$	109	#5	34'-9"	
$a_2(E)$	312	#5	7'-1"	
$a_3(E)$	156	#5	4'-10"	
$a_4(E)$	4	#5	41'-2"	
b(E)	185	#5	19'-6"	
$b_1(E)$	152	#5	24'-0"	
$b_2(E)$	24	#4	23'-0"	
m(E)	4	#6	27'-3"	
$m_1(E)$	12	#6	22'-0"	
$m_2(E)$	24	#6	10'-2"	
$m_3(E)$	10	#6	4'-11"	
$m_4(E)$	4	#6	11"	
s(E)	54	#5	5'-8"	
$s_1(E)$	68	#4	13'-4"	
$s_4(E)$	288	#4	4'-5"	
v(E)	50	#5	3'-4"	
(1) Reinforcement Bars, Epoxy Coated			Pound	23,920
Concrete Superstructure			Cu. Yds.	127.1

(1) See Special Provisions

SUPERSTRUCTURE DETAILS
C.H. 12 OVER HICKS CREEK
SECTION 07-00090-00-BR
MACOUPIN COUNTY

SHEET NO. 8	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
19 SHEETS	CH 12	07-00090-00-BR	MACOUPIN	77	18
	SN 059-3556		CONTRACT NO. 93538		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		

2576-1B008



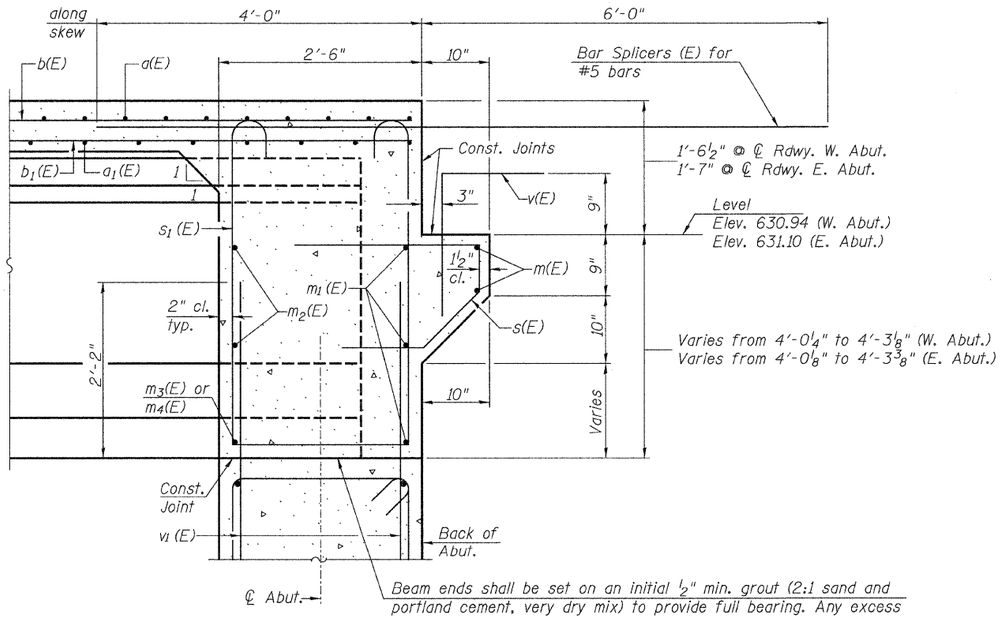
* Cut to fit at exterior beams, if required.

DIAPHRAGM ELEVATION AT ABUTMENT

Notes:
Reinforcement bars in diaphragm are billed with superstructure on sheet 8 of 19.
Concrete in diaphragm is included with Concrete Superstructure on sheet 8 of 19.
The s(E) and s_1(E) bars shall be placed parallel to beams. Spacing for these bars shall be at right angles to beams.
For details of bars s(E) and s_1(E) see sheet 8 of 19.
For placement of v(E) bars see sheet 14 and 15 of 19.
Bars indicated thus 37 x 5-#5 etc. indicates 37 lines of bars with 5 lengths per line.

MIN. BAR LAP

#6 bar = 2'-9"



Beam ends shall be set on an initial 1/2" min. grout (2:1 sand and portland cement, very dry mix) to provide full bearing. Any excess grout squeezed out from under the beam shall be removed. Cost included with Concrete Structures.

SECTION A-A

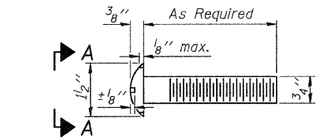
Dimensions at right angles to abutment, except as shown.

DIAPHRAGM DETAILS
C.H. 12 OVER HICKS CREEK
SECTION 07-00090-00-BR
MACOUPIN COUNTY

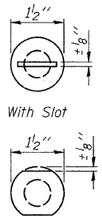
SHEET NO. 9	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
19 SHEETS	CH 12	07-00090-00-BR	MACOUPIN	77	19
	SN 059-3556		CONTRACT NO. 93538		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		

2576-1B009

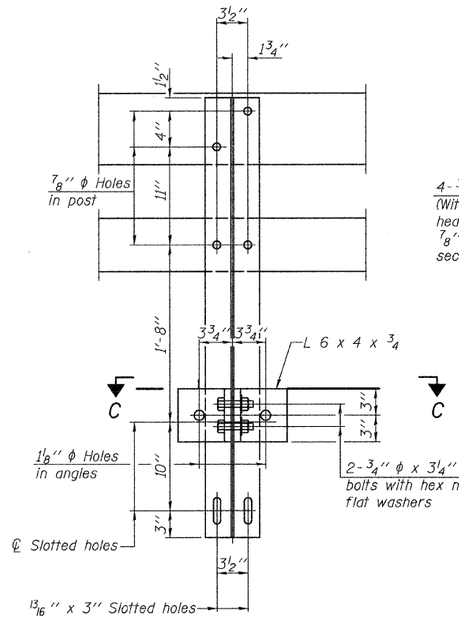
FOR RAIL POST SPACING SEE SH.#8 OF 19.



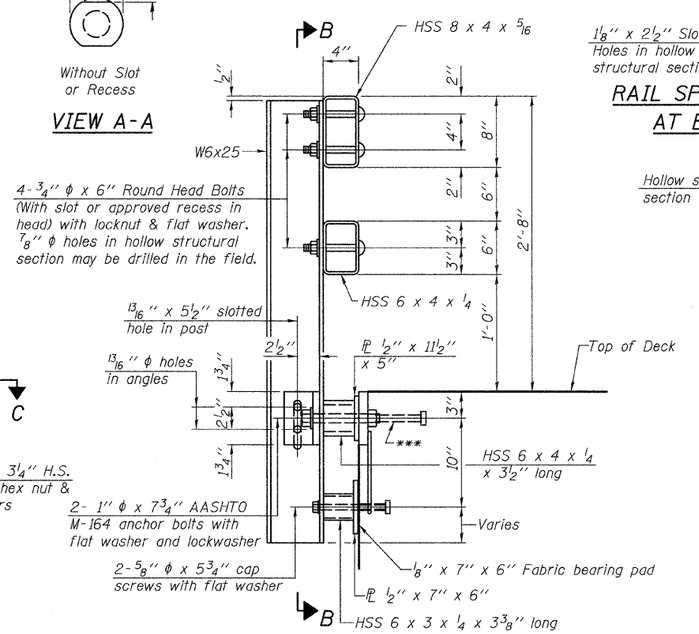
DETAIL OF 3/4" ϕ ROUND HEAD BOLT



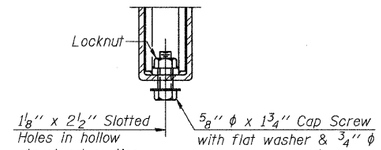
VIEW A-A



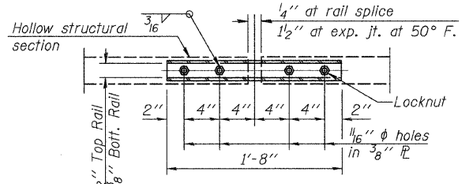
SECTION B-B



SECTION AT RAIL POST

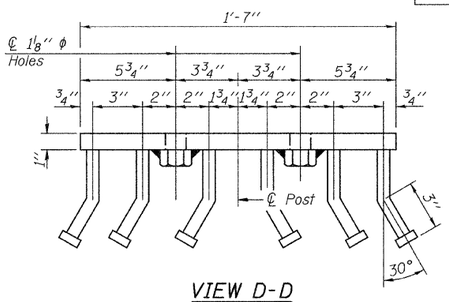


RAIL SPLICE CONNECTION AT EXPANSION JT.

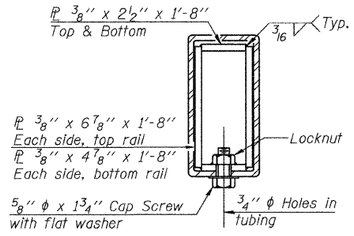


PLAN-BOTT. SPLICE ℄ TYPICAL

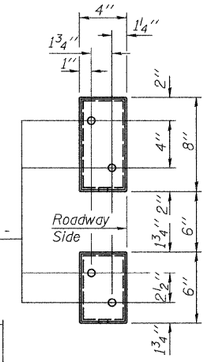
℄ - 5/8" reduced base welded studs. Provide 4 - 5/8" washers and self-locking nuts or nuts and jam nuts for guardrail connection shown on Std. 631032



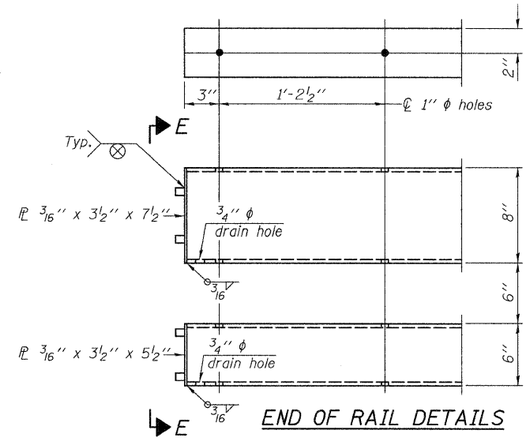
VIEW D-D



SECTION AT RAIL SPLICE



VIEW E-E



END OF RAIL DETAILS

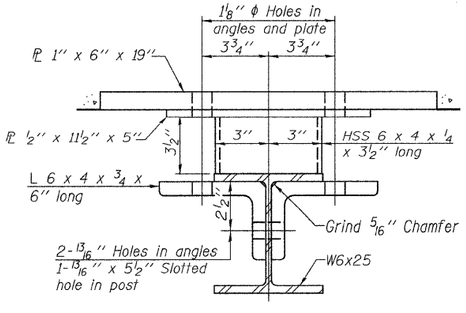
Notes:

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

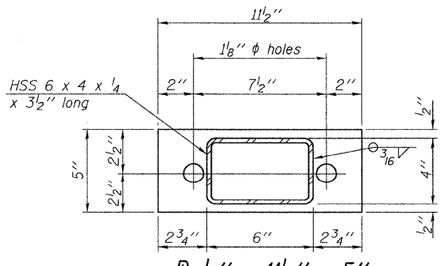
For multi-span bridges, sufficient 1/4" x 6" x 1'-2" galvanized steel shims shall be provided to align rail between adjacent spans. Cost included with Steel Railing, Type SM.

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

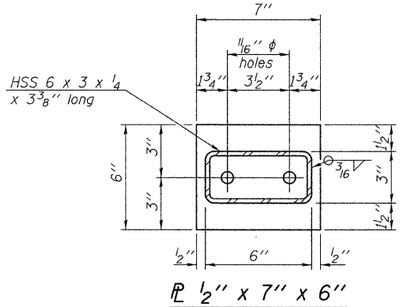
*** The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.



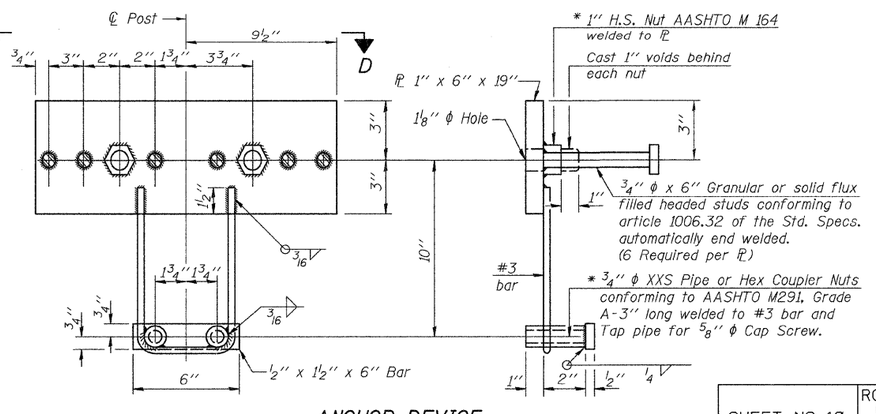
SECTION C-C



℄ 1/2" x 11 1/2" x 5"



℄ 1/2" x 7" x 6"



ANCHOR DEVICE

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

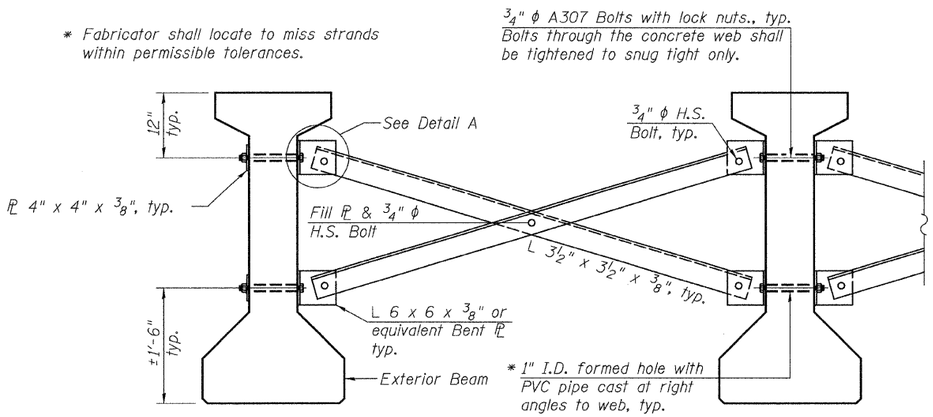
BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type SM	Foot	182

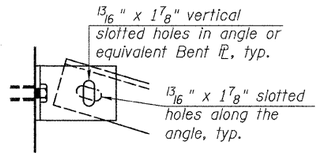
STEEL RAILING, TYPE SM
C.H. 12 OVER HICKS CREEK
SECTION 07-00090-00-BR
MACOUPIN COUNTY

SHEET NO. 10	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
19 SHEETS	CH 12	07-00090-00-BR	MACOUPIN	77	20
		SN 059-3556	CONTRACT NO. 93538		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		

2576-1B010



Notes:
All material for bracing shall be hot dip galvanized according to AASHTO M111 unless otherwise noted.
Two hardened washers are required for each set of oversized holes.
All holes shall be 15/16 "ϕ unless otherwise noted.
5/16" x 3" x 3" plate washers are required over all slotted holes.
All bolts shall be galvanized according to AASHTO M232.
Bracing shall be installed as beams are erected and tightened as soon as possible during erection.



DETAIL A

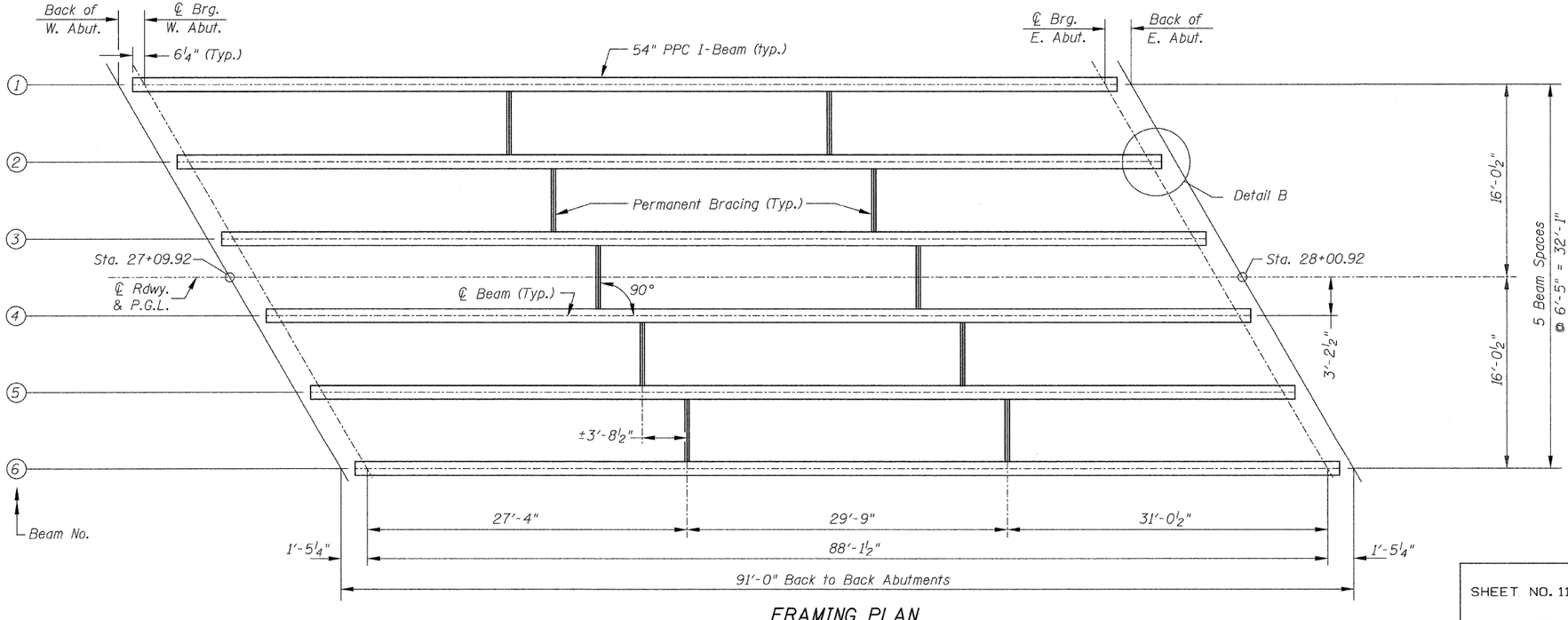
I: Non-composite moment of inertia of beam section ($in.^4$).
I': Composite moment of inertia of beam section ($in.^4$).
S_b: Non-composite section modulus for the bottom fiber of the prestressed beam ($in.^3$).
S_b': Composite section modulus for the bottom fiber of the prestressed beam ($in.^3$).
S_t: Non-composite section modulus for the top fiber of the prestressed beam ($in.^3$).
S_t': Composite section modulus for the top fiber of the prestressed beam ($in.^3$).
DC1: Un-factored non-composite dead load (kips/ft.).
M_{DC1}: Un-factored moment due to non-composite dead load (kip-ft.).
DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).
M_{DC2}: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).
DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).
M_{DW}: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft).
M_{L+IM}: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

INTERIOR BEAM MOMENT TABLE		
		0.5 Sp. 1
I	(in^4)	213,715
I'	(in^4)	503,707
S_b	(in^3)	8,559
S_b'	(in^3)	12,752
S_t	(in^3)	7,362
S_t'	(in^3)	34,739
DC1	(k/')	1.32
M_{DC1}	('k)	1,279
DC2	(k/')	0.03
M_{DC2}	('k)	32
DW	(k/')	0.32
M_{DW}	('k)	312
M_{L+Imp}	('k)	1,393

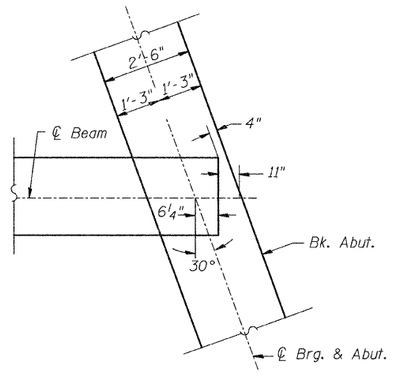
INTERIOR BEAM REACTION TABLE		
		Abut.
R_{DC1}	(k)	58.1
R_{DC2}	(k)	1.5
R_{DW}	(k)	14.1
R_{L+Imp}	(k)	89.0
R_{Total}	(k)	162.7

PERMANENT BRACING DETAILS

Permanent bracing shall not be paid for separately but shall be included with Furnishing and Erecting Precast Prestressed I-Beams, 54".



FRAMING PLAN

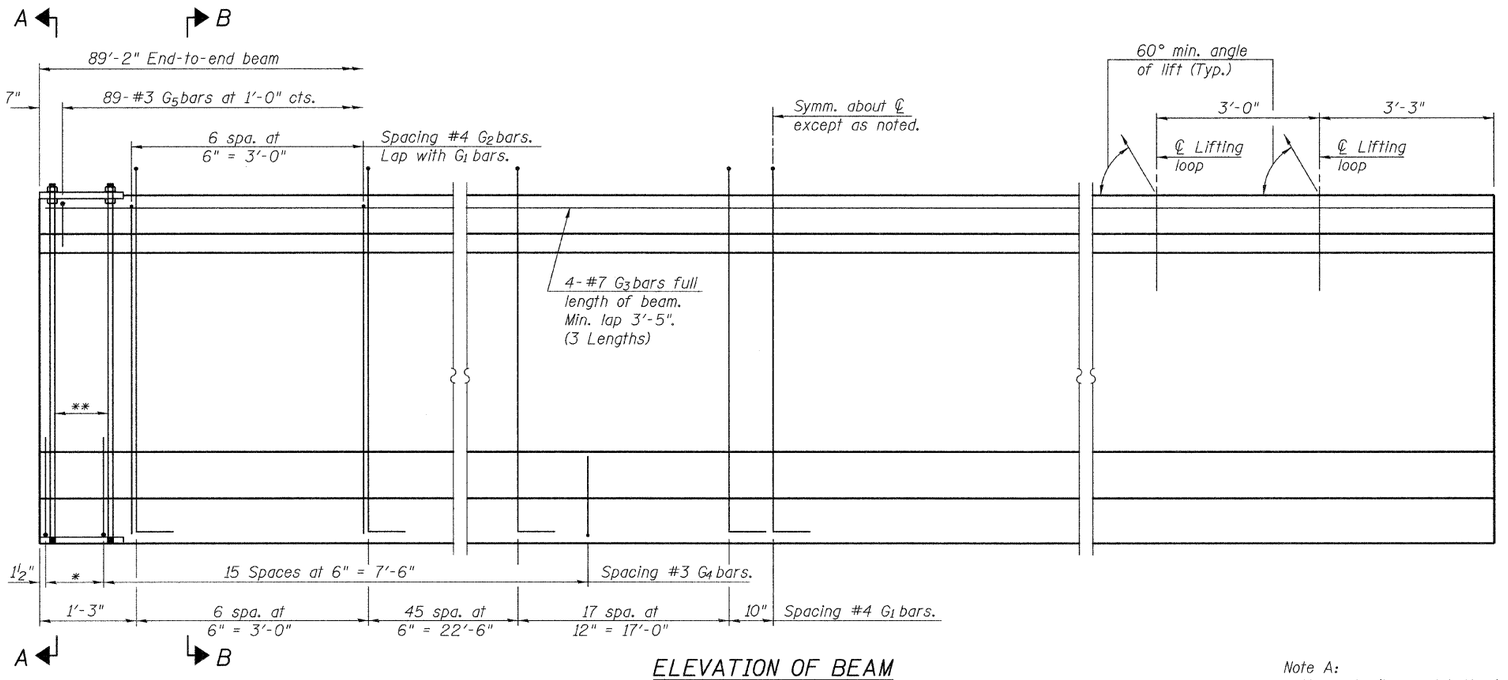


DETAIL B
(Typical @ Abutments)

FRAMING PLAN
C.H. 12 OVER HICKS CREEK
SECTION 07-00090-00-BR
MACOUPIN COUNTY

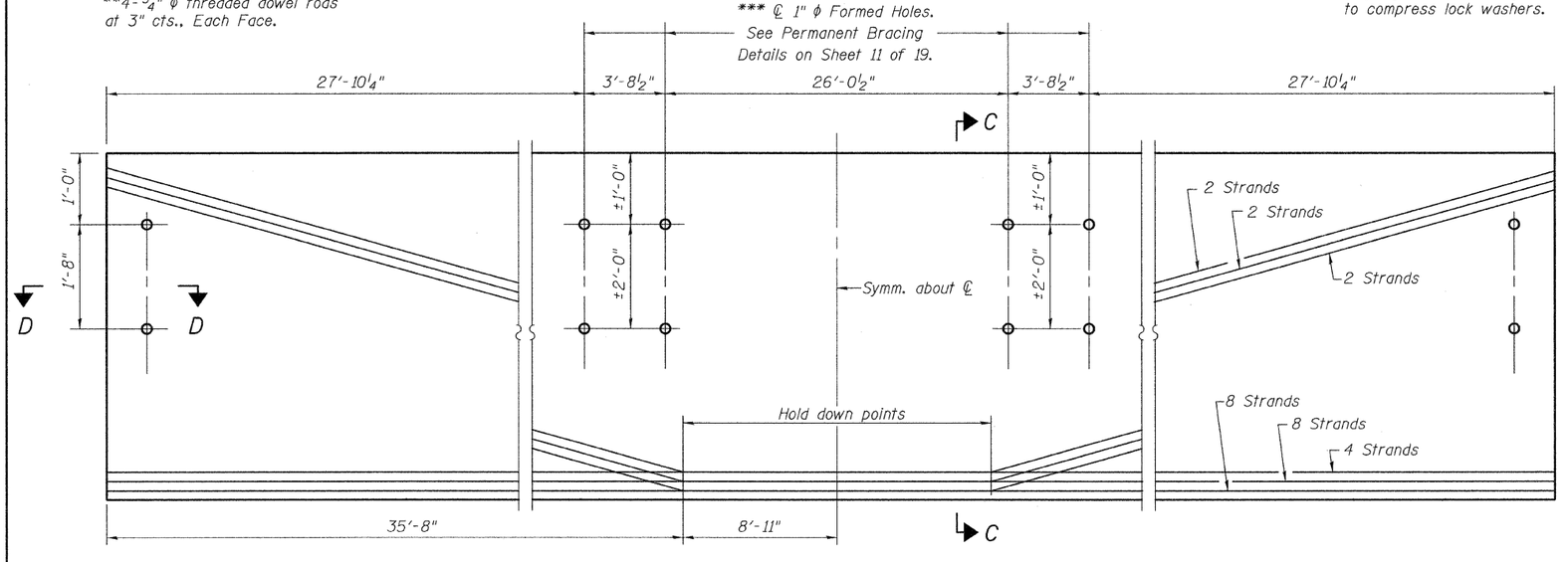
SHEET NO. 11	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
19 SHEETS	CH 12	07-00090-00-BR	MACOUPIN	77	21
	SN 059-3556		CONTRACT NO. 93538		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		

2576-1B011



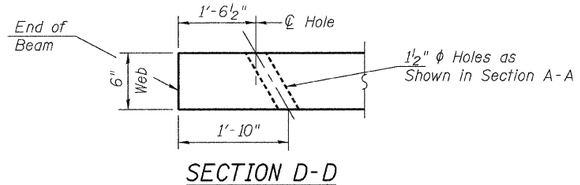
ELEVATION OF BEAM
(Showing reinforcement & dimensions)

*3 spaces at 3" = 9".
**4-¾" ϕ threaded dowel rods at 3" cts., Each Face.



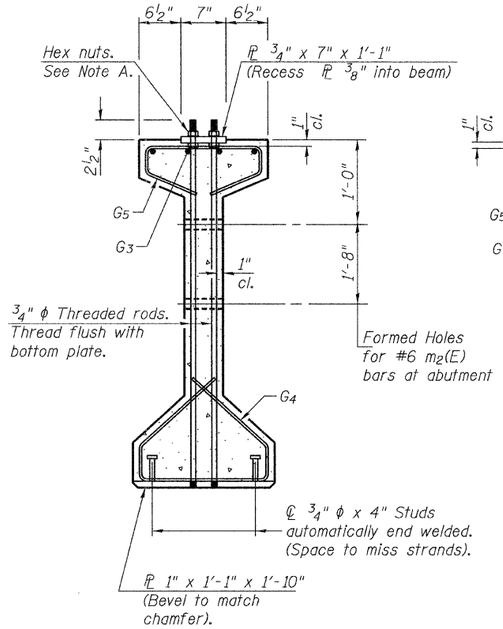
ELEVATION OF BEAM
(Showing prestressing steel)

*** Exterior beams require formed holes for only one diaphragm at each location. See Framing Plan on Sheet 11 of 19.

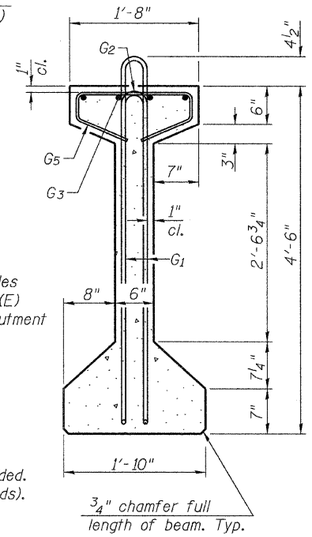


SECTION D-D

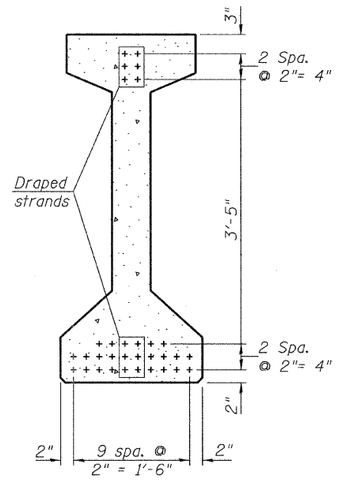
Note A:
Hex nuts (top and bottom) with lock washers (top). Only tighten sufficiently to compress lock washers.



SECTION A-A



SECTION B-B



SECTION C-C

****BAR LIST
ONE BEAM ONLY

Bar	No.	Size	Length	Shape
G_1	139	#4	10'-5"	⊓L
G_2	14	#4	8'-8"	⊓
G_3	12	#7	31'-11"	——
G_4	38	#3	4'-11"	⊐X⊏
G_5	89	#3	3'-5"	⊐⊐

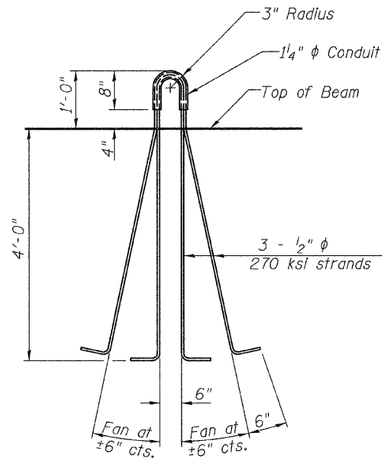
****For information only

Notes:
See sheet 13 of 19 for additional details and Bill of Material.
Required release strength, f'ci, shall be 5,000 psi.

2576-1B012

54" PPC I-BEAM
C.H. 12 OVER HICKS CREEK
SECTION 07-00090-00-BR
MACOUPIN COUNTY

SHEET NO. 12	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
19 SHEETS	CH 12	07-00090-00-BR	MACOUPIN	77	22
		SN 059-3556	CONTRACT NO. 93538		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		



LIFTING LOOP DETAIL

NOTES

Inserts for ¾" ϕ threaded dowel rods, when specified, are to be two strut, ferrule type for interior beams and single ferrule, flared loop type for exterior beams.

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be ½" and the nominal cross-sectional area shall be 0.153 sq. in.

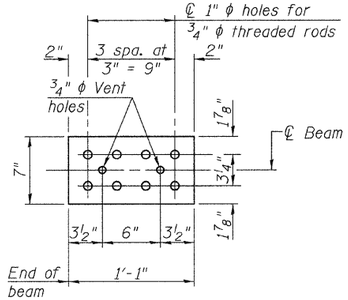
Reinforcement bars shall conform to ASTM A 706, Grade 60.

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

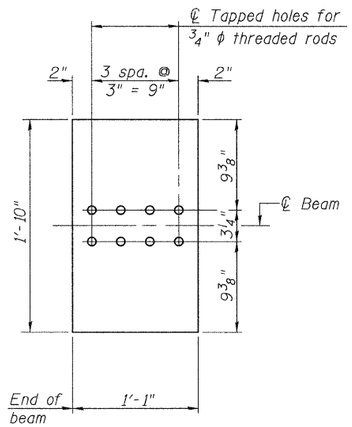
The top and bottom plates shall be AASHTO M270 Grade 50.

The bottom plates and studs shall be galvanized according to AASHTO M111.

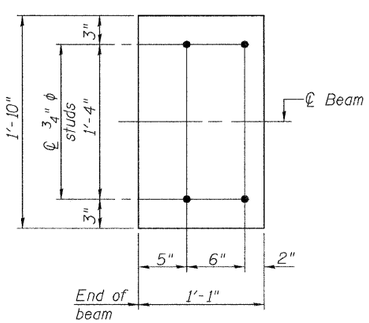
Threaded rods shall be ASTM F 1554 Grade 55.



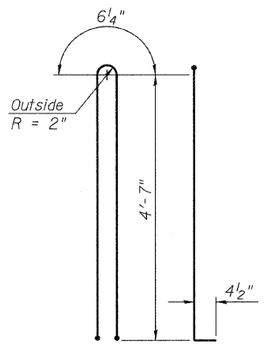
TOP PLATE



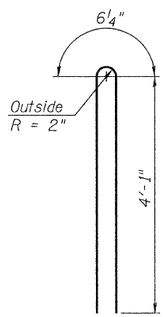
BOTTOM PLATE
(Showing threaded rods)



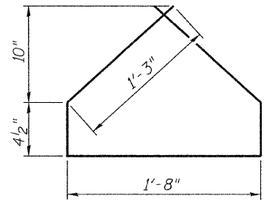
BOTTOM PLATE
(Showing studs)



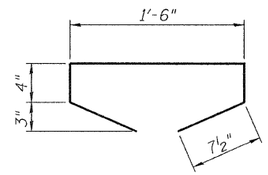
BAR G1



BAR G2



BAR G4



BAR G5

BILL OF MATERIAL

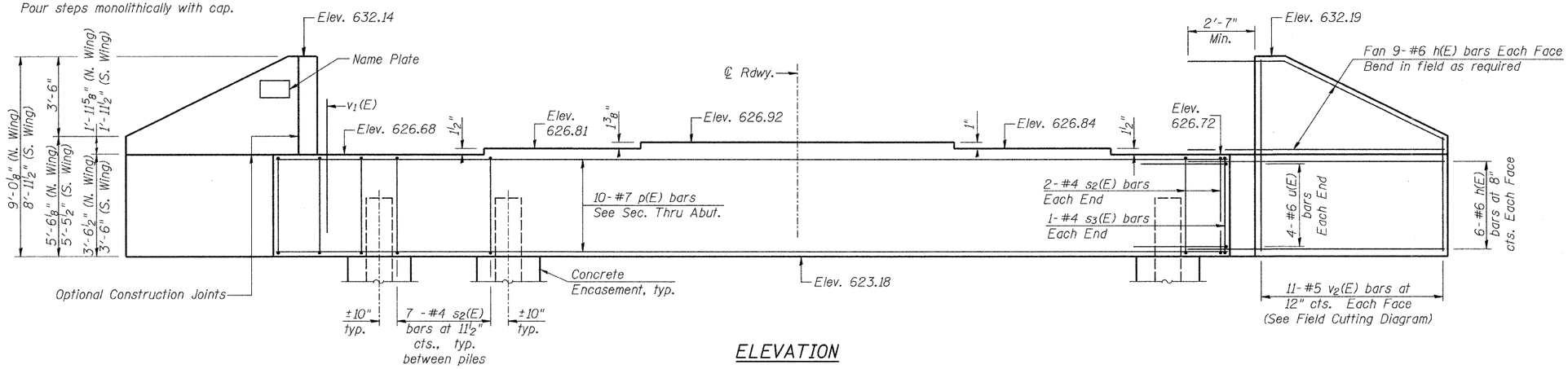
Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete I-Beams, 54"	Foot	535

54" PPC I-BEAM DETAILS
C.H. 12 OVER HICKS CREEK
SECTION 07-00090-00-BR
MACOUPIN COUNTY

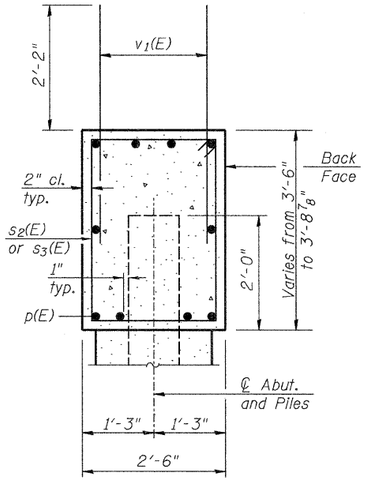
SHEET NO. 13	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
19 SHEETS	CH 12	07-00090-00-BR	MACOUPIN	77	23
	SN 059-3556		CONTRACT NO. 93538		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		

2576-1B013

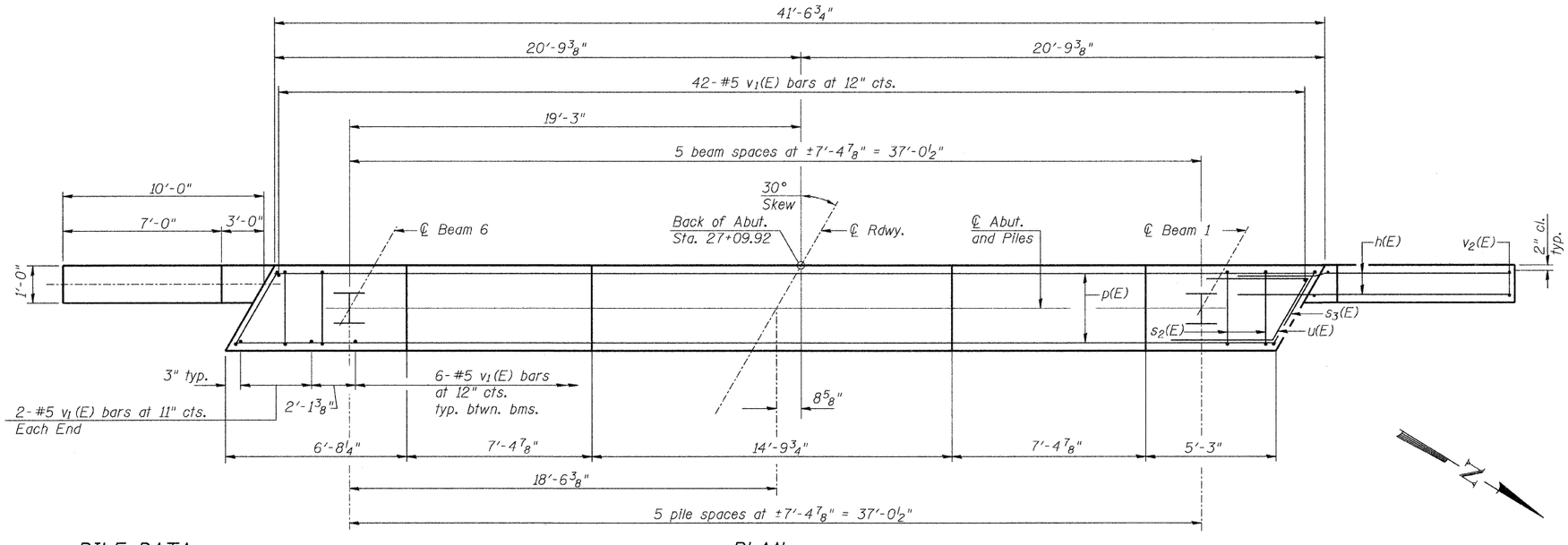
Notes:
Pour steps monolithically with cap.



ELEVATION



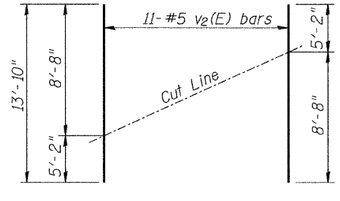
SEC. THRU ABUT.



PLAN

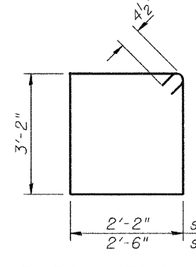
PILE DATA

Type: HP 12x63
Nominal Required Bearing: 460k
Factored Resistance Available: 230 k
Est. Length: 35'
No. Production Piles: 5
No. Test Piles: 1

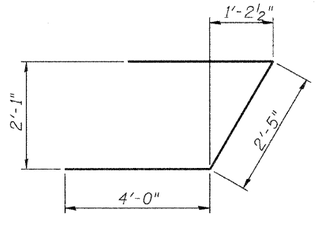


FIELD CUTTING DIAGRAM

Order v2(E) full length. Cut as shown and use remainder of bars in opposite face.



BARS s2(E) & s3(E)



BAR u(E)

WEST ABUTMENT BILL OF MATERIAL

	Bar	No.	Size	Length	Shape
	h(E)	60	#6	12'-7"	———
	p(E)	10	#7	41'-2"	———
	s2(E)	39	#4	11'-5"	⌐¬
	s3(E)	2	#4	12'-1"	⌐¬
	u(E)	8	#6	10'-5"	⌐_¬
	v1(E)	76	#5	4'-4"	———
	v2(E)	22	#5	13'-10"	———
	Structure Excavation		Cu. Yd.	120	
	Concrete Structures		Cu. Yd.	19.8	
①	Reinforcement Bars, Epoxy Coated		Pound	3,080	
	Name Plates		Each	1	
	Furnishing Steel Piles HP12x63		Foot	175	
①	Driving Piles		Foot	175	
①	Test Pile Steel HP12x63		Each	1	
	Concrete Encasement		Cu. Yd.	2.1	

① See Special Provisions

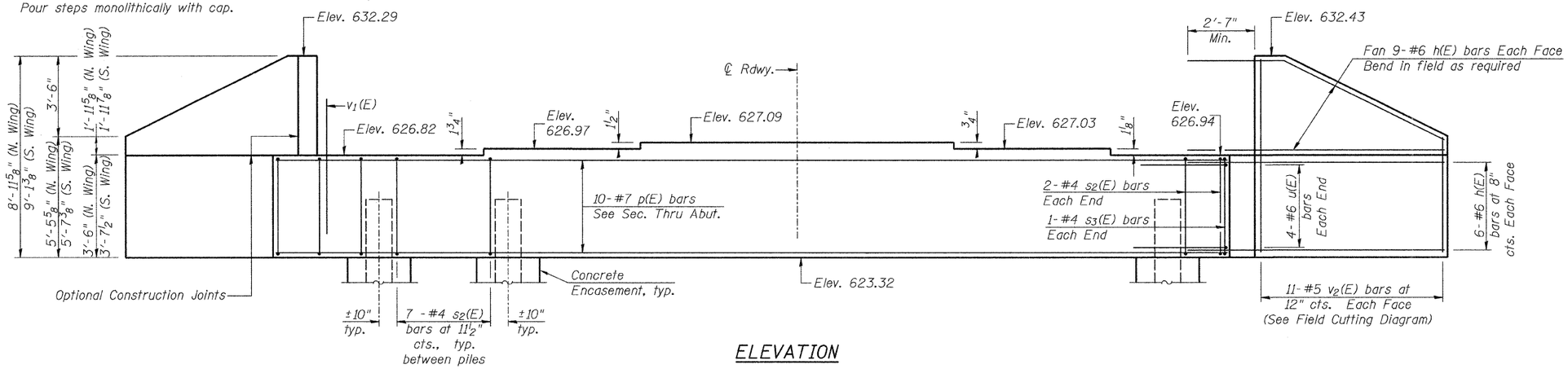
For details of Piles and Concrete Encasement, see sheet 17 of 19.

WEST ABUTMENT
C.H. 12 OVER HICKS CREEK
SECTION 07-00090-00-BR
MACOUPIN COUNTY

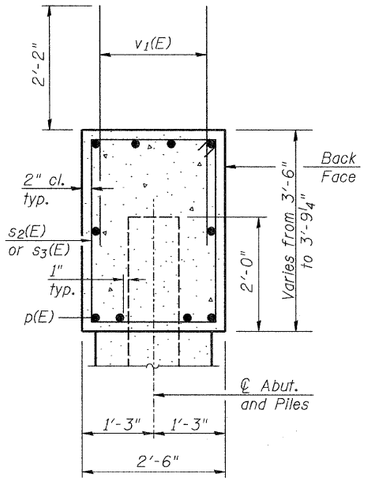
SHEET NO. 14	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
19 SHEETS	CH 12	07-00090-00-BR	MACOUPIN	77	24
	SN 059-3556		CONTRACT NO. 93538		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		

2576-1B014

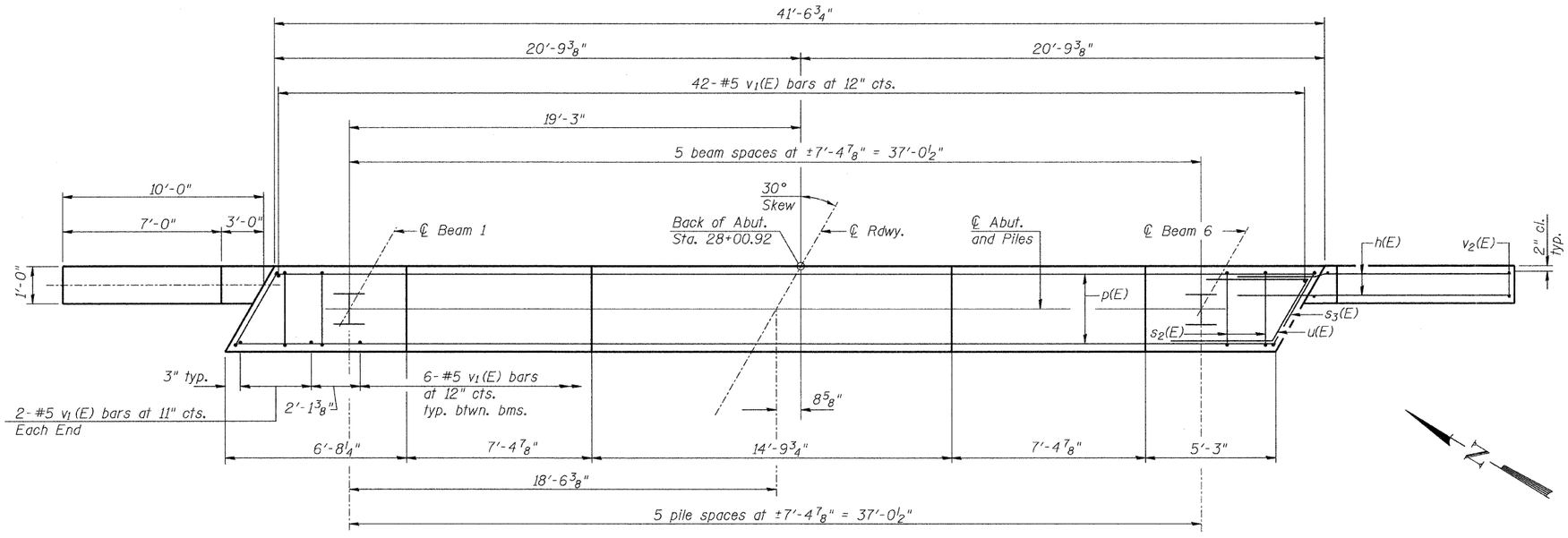
Notes:
Pour steps monolithically with cap.



ELEVATION



SEC. THRU ABUT.



PLAN

EAST ABUTMENT BILL OF MATERIAL

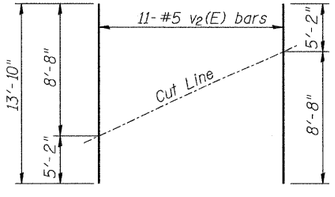
	Bar	No.	Size	Length	Shape
	h(E)	60	#6	12'-7"	——
	p(E)	10	#7	41'-2"	——
	s2(E)	39	#4	11'-5"	⌐
	s3(E)	2	#4	12'-1"	⌐
	u(E)	8	#6	10'-5"	⌐
	v1(E)	76	#5	4'-4"	——
	v2(E)	22	#5	13'-10"	——
	Structure Excavation		Cu. Yd.	180	
	Concrete Structures		Cu. Yd.	19.9	
①	Reinforcement Bars, Epoxy Coated		Pound	3,080	
	Furnishing Steel Piles HP12x63		Foot	375	
①	Driving Piles		Foot	375	
①	Test Pile Steel HP12x63		Each	1	
	Concrete Encasement		Cu. Yd.	2.1	

① See Special Provisions

For details of Piles and Concrete Encasement, see sheet 17 of 19.

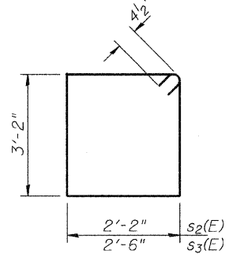
PILE DATA

Type: HP 12x63
Nominal Required Bearing: 460k
Factored Resistance Available: 230 k
Est. Length: 75'
No. Production Piles: 5
No. Test Piles: 1

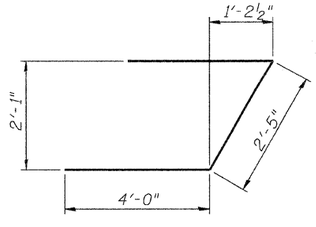


FIELD CUTTING DIAGRAM

Order v2(E) full length. Cut as shown and use remainder of bars in opposite face.



BARS s2(E) & s3(E)

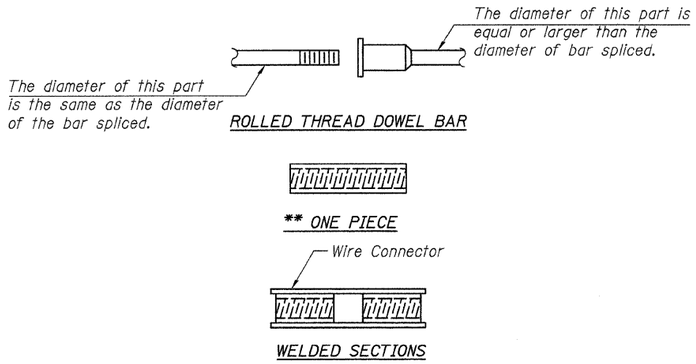


BAR u(E)

EAST ABUTMENT
C.H. 12 OVER HICKS CREEK
SECTION 07-00090-00-BR
MACOUPIN COUNTY

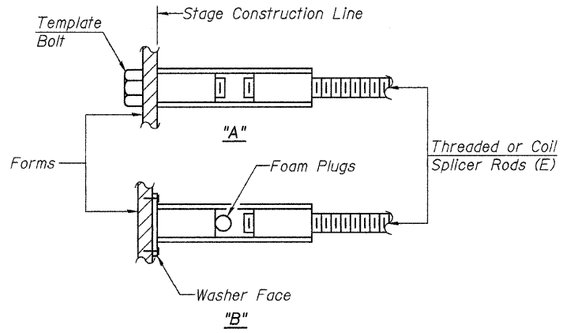
SHEET NO. 15	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
19 SHEETS	CH 12	07-00090-00-BR	MACOUPIN	77	25
		SN 059-3556	CONTRACT NO. 93538		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		

2576-1B015



BAR SPLICER ASSEMBLY ALTERNATIVES

**Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.



INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.

NOTES

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.

Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.

All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.

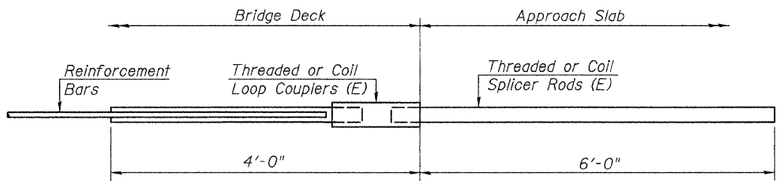
Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

① Minimum Capacity (Tension in kips) = 1.25 x fy x A_t

② Minimum *Pull-out Strength (Tension in kips) = 0.66 x fy x A_t

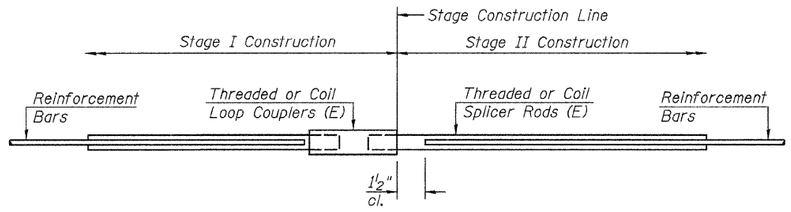
Where fy = Yield strength of lapped reinforcement bars in ksi.
A_t = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	7.9
#5	2'-2"	23.0	12.3
#6	2'-7"	33.1	17.4
#7	3'-5"	45.1	23.8
#8	4'-6"	58.9	31.3
#9	5'-9"	75.0	39.6
#10	7'-3"	95.0	50.3
#11	9'-0"	117.4	61.8



FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 12.3 kips - tension
No. Required = 48



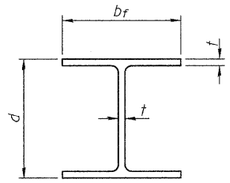
STANDARD

Bar Size	No. Assemblies Required	Location

BAR SPLICER ASSEMBLY DETAILS
C.H. 12 OVER HICKS CREEK
SECTION 07-00090-00-BR
MACOUPIN COUNTY

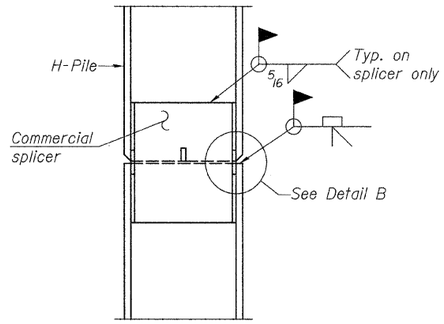
SHEET NO. 16	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
19 SHEETS	CH 12	07-00090-00-BR	MACOUPIN	77	26
	SN 059-3556		CONTRACT NO. 93538		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		

2576-1B016

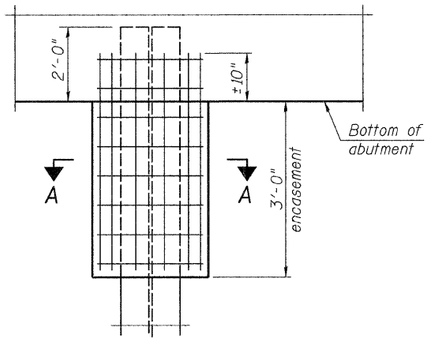


STEEL PILE TABLE

Designation	Depth d	Flange width b_f	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	13/16"	30"
x102	14"	14 3/4"	11/16"	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"	11/16"	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"

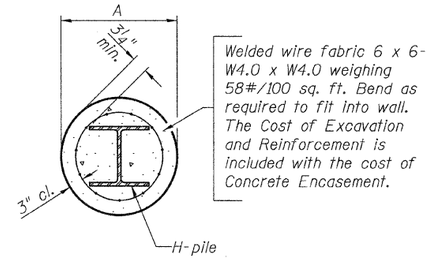


ELEVATION



ELEVATION

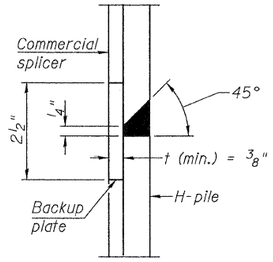
PILE ENCASEMENT



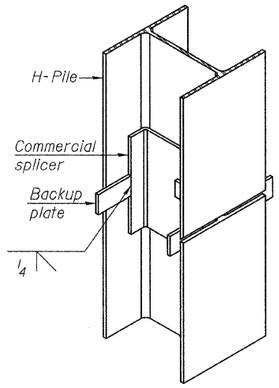
Welded wire fabric 6 x 6-W4.0 x W4.0 weighing 58#/100 sq. ft. Bend as required to fit into wall. The Cost of Excavation and Reinforcement is included with the cost of Concrete Encasement.

Note:
Forms for encasement may be omitted when soil conditions permit.

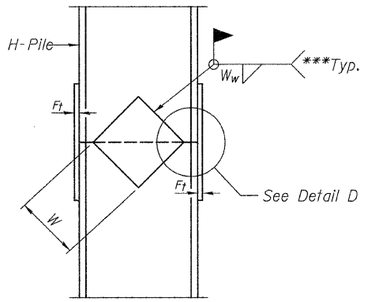
SECTION A-A



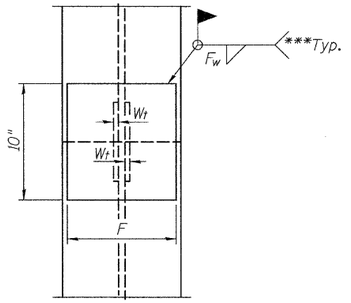
DETAIL "B"



ISOMETRIC VIEW

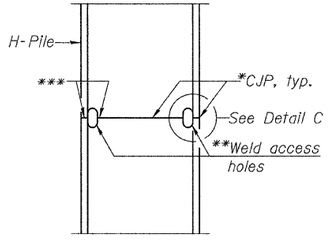


ELEVATION

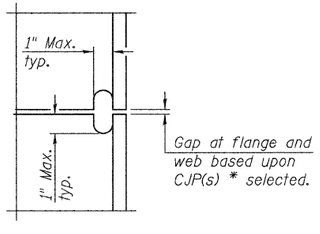


END VIEW

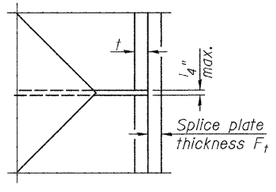
WELDED COMMERCIAL SPLICE



ELEVATION



DETAIL C



DETAIL D

Designation	F	F_t	F_w	W	W_t	W_w
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"	11/16"	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"	11/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	11/16"	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

COMPLETE PENETRATION WELD SPLICE

* Use joint conforming to Figure 3.4 in AWS D1.1, Structure Welding Code - Steel.

** Preparation per Fig. 5.2 in AWS D1.1, Structure Welding Code - Steel.

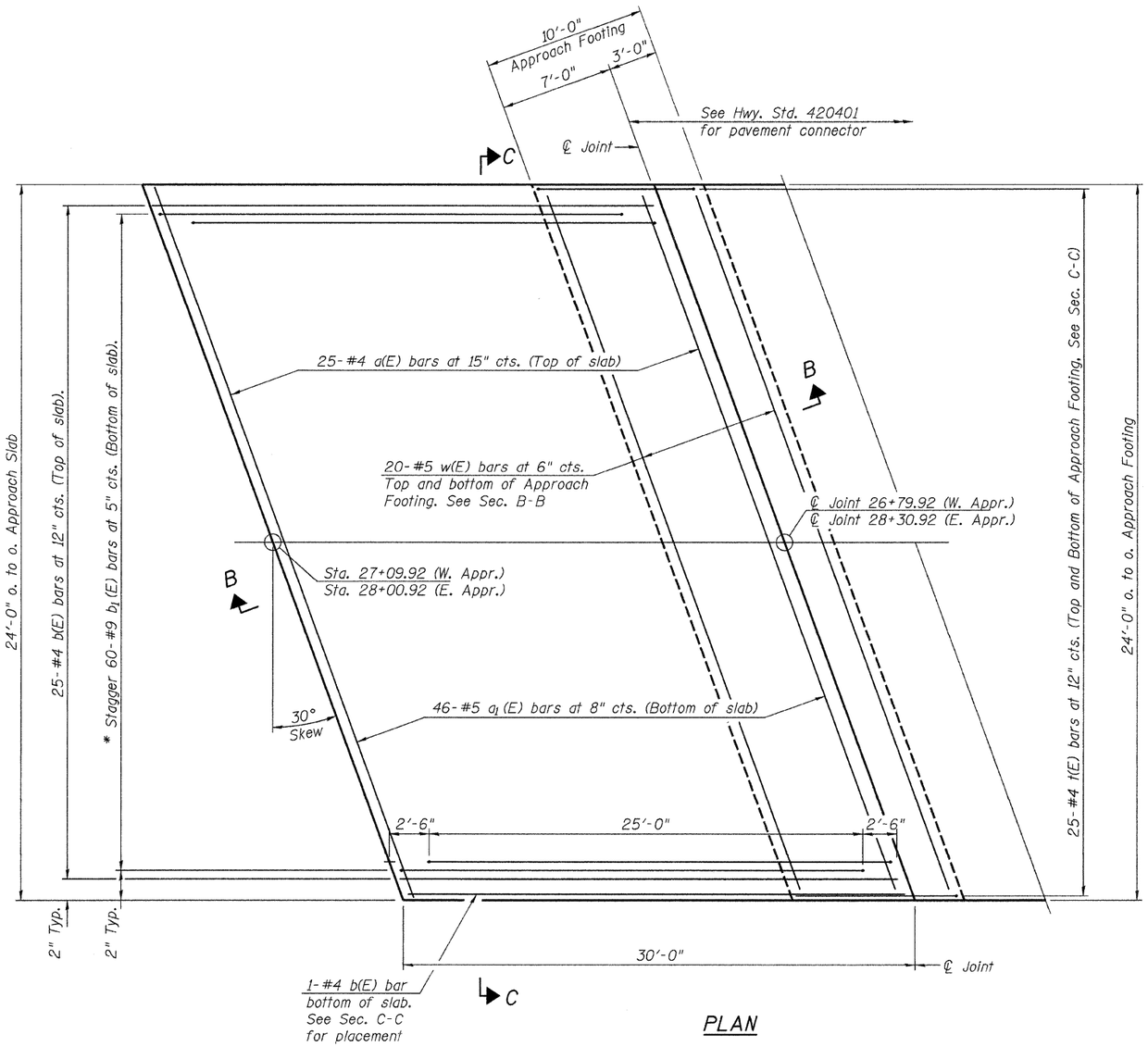
*** Interrupt welds 1/4" from end of each pile.

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

HP PILE DETAILS
C.H. 12 OVER HICKS CREEK
SECTION 07-00090-00-BR
MACOUPIN COUNTY

SHEET NO. 17	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
19 SHEETS	CH 12	07-00090-00-BR	MACOUPIN	77	27
	SN 059-3556		CONTRACT NO. 93538		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		

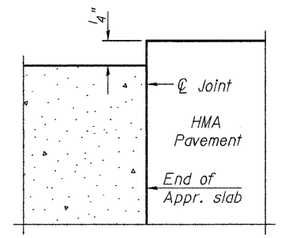
2576-1b017



PLAN

* Tlit #9 $b_1(E)$ bars as required to maintain clearance.

Notes:
See sheet 19 of 19 for Sections B-B & C-C.
a(E), $a_1(E)$, and w(E) bar spacings measured perpendicular to ℄ Rdwy.



FLEXIBLE PAVEMENT

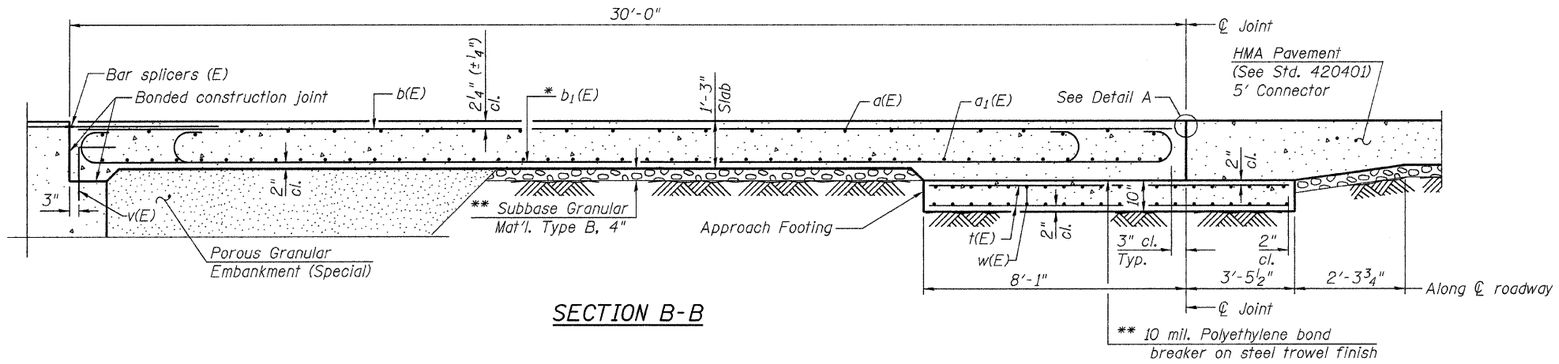
DETAIL A

(Sheet 1 of 2)

BRIDGE APPROACH PAVEMENT DETAILS
C.H. 12 OVER HICKS CREEK
SECTION 07-00090-00-BR
MACOUPIN COUNTY

SHEET NO. 18	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
19 SHEETS	CH 12	07-00090-00-BR	MACOUPIN	77	28
	SN 059-3556		CONTRACT NO. 93538		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		

2576-1B018



SECTION B-B

Notes:

See sheet 18 of 19 for Detail A.

For v(E) bar details, see sheet 8 of 19.

The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.

For bar splicer details, see sheet 16 of 19.

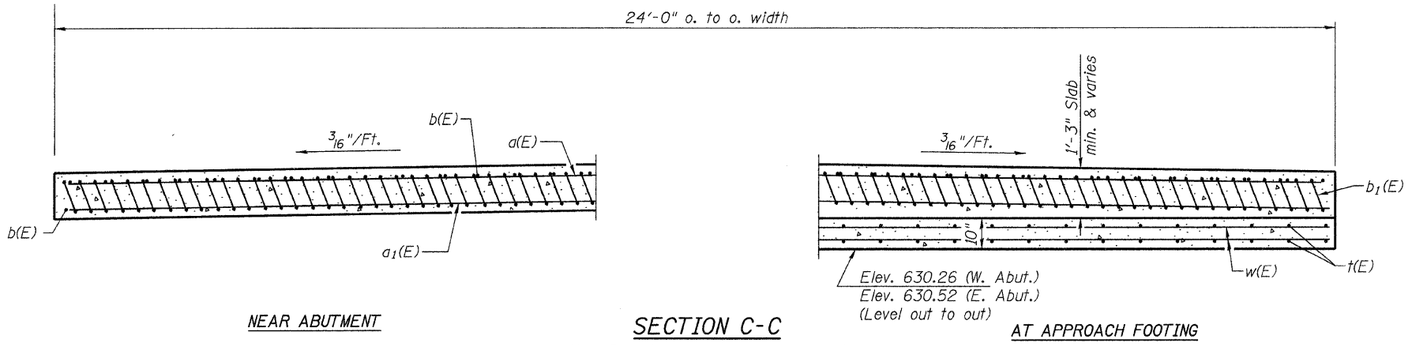
For Porous Granular Embankment (Special) and drainage treatment details, see sheet 2 of 19.

Approach slab concrete shall be Class BS.

Approach footing concrete shall be Class SI.

The cost of concrete and reinforcement in approach slab and footing are included with Bridge Approach Pavement.

The cost of Excavation for approach footing is included with Bridge Approach Pavement.



NEAR ABUTMENT

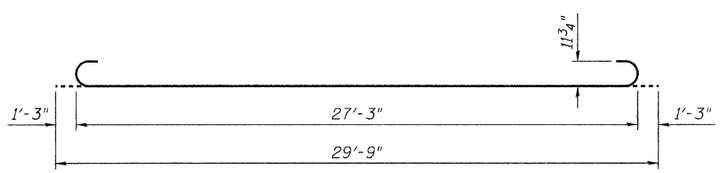
SECTION C-C

(See Plan for dimensions not shown)

AT APPROACH FOOTING

* Tilt #9 b1(E) bars as required to maintain clearance.

** Cost included with Bridge Approach Pavement.



BAR b1(E)

***BAR LIST

ONE APPROACH PAVEMENT

Bar	No.	Size	Length	Shape
a(E)	25	#4	27'-4"	——
a1(E)	46	#5	27'-4"	——
b(E)	26	#4	29'-8"	——
b1(E)	60	#9	29'-9"	⊂——⊃
t(E)	50	#4	11'-2"	——
w(E)	40	#5	27'-4"	——

***For information only

TWO APPROACHES

BILL OF MATERIAL

Item	Unit	Total
Bridge Approach Pavement	Sq Yd	160

(Sheet 2 of 2)

BRIDGE APPROACH PAVEMENT DETAILS

C.H. 12 OVER HICKS CREEK

SECTION 07-00090-00-BR

MACOUPIN COUNTY

SHEET NO. 19	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
19 SHEETS	CH 12	07-00090-00-BR	MACOUPIN	77	29
		SN 059-3556	CONTRACT NO. 93538		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		

2576-1B019

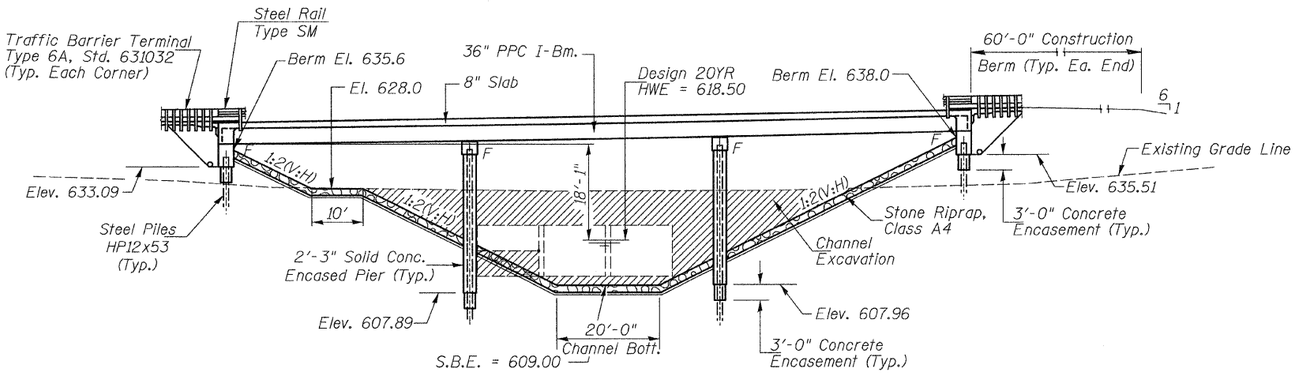
BM - Railroad Spike in Power Pole
Sta. 41+44, 48' Lt.
Elev. 632.63

BM - Railroad Spike in Power Pole
Sta. 46+54, 47' Lt.
Elev. 653.72

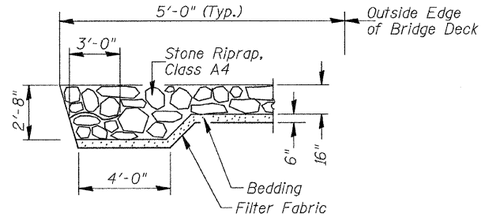
Existing Structure:
Triple 12'x10' reinforced concrete box culvert.
The structure is ±51' in length and skewed 5° right ahead.
The structure was constructed In 1918.
SN 059-5003

Salvage: See Special Provisions

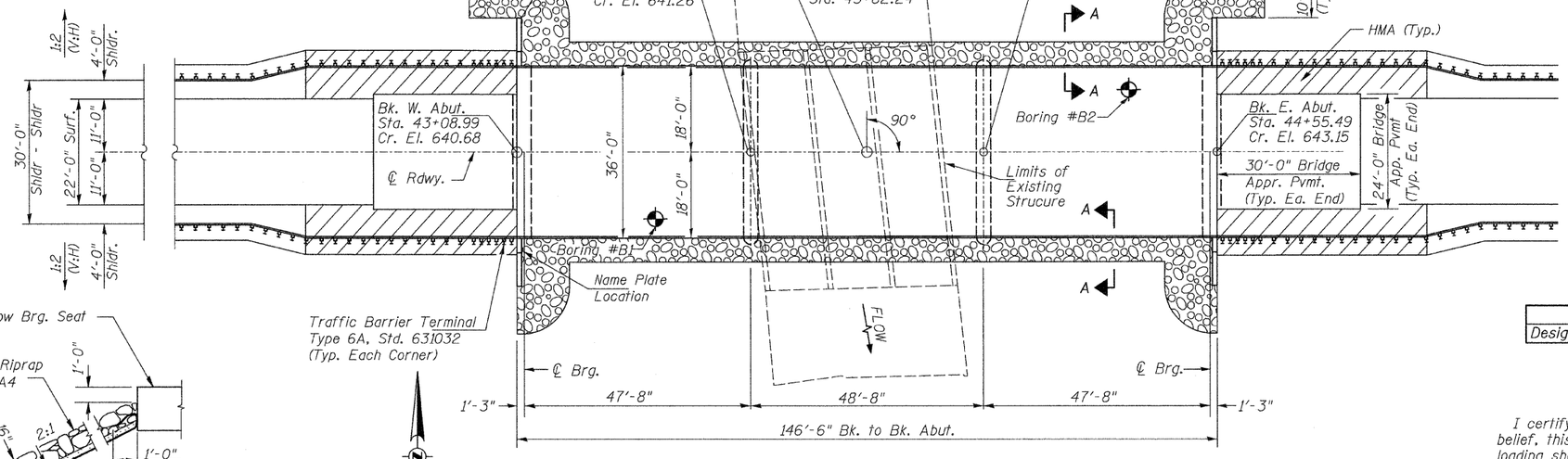
Road to be closed to traffic during construction.



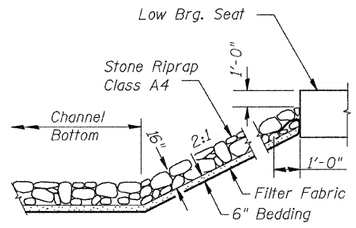
ELEVATION



SECTION A-A



PLAN



STONE RIPRAP DETAIL

WATERWAY INFORMATION

Drainage Area = 5.39 Sq. Mi. Low Grade Elev. = 640.23 @ Sta. 42+14.28

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
Design	20	1,965	227	359	618.50	1.86	0.02	620.36	618.52
Base	100	2,930	263	416	619.52	3.48	0.20	623.00	619.72

DESIGNED	JOH
CHECKED	BAN
DRAWN	TC
CHECKED	JOH

SEISMIC DATA

Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (S_{D1}) = 0.12g
Design Spectral Acceleration at 0.2 sec. (S_{DS}) = 0.24g
Soil Site Class = C

LOADING HL-93

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

DESIGN SPECIFICATIONS

2007 AASHTO LRFD Bridge Design Specifications with Interims

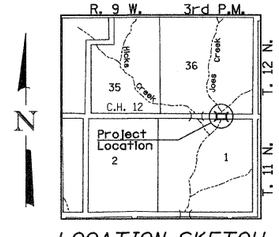
DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)

PRECAST PRESTRESSED UNITS

f'c = 6,000 p.s.i.
f'ci = 5,000 p.s.i.
f's = 270,000 p.s.i. ($\frac{1}{2}$" ϕ low relaxation strands)
f'si = 201,960 p.s.i. ($\frac{1}{2}$" ϕ low relaxation strands)



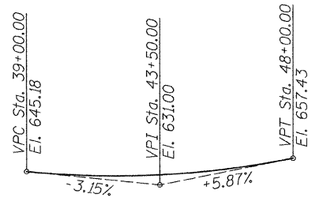
LOCATION SKETCH

NOTE:
For Bill of Material and General Notes, See Sheet 2 of 22.

JOES CREEK
BUILT 200_ BY
MACOUPIN COUNTY
SEC. 07-00090-00-BR
C.H. 12 STATION 43+82.24
F.A. PROJ. BRS-0732(148)
STR. NO. 059-3557 LOADING HL-93

NAME PLATE

Locate Name Plate on Face of Wingwall S.W. Corner of Bridge (See Std. 515001)



900' VC

PROFILE GRADE

DESIGN SCOUR TABLE

Location	W. Abut	Pier 1	Pier 2	E. Abut
Design Scour Elevation	633.09	607.89	607.96	635.51

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 AASHTO LRFD Bridge Design Specifications.

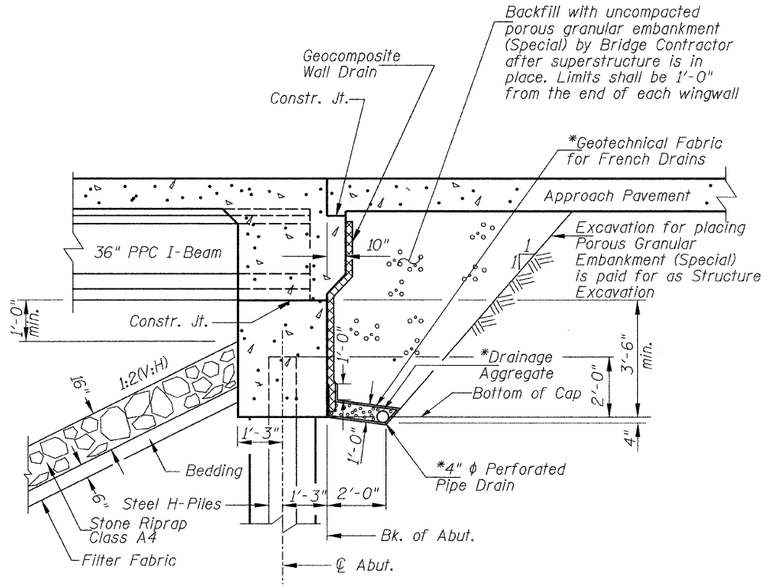
3/2/2010
Illinois Structural No. 6527
Expires 11/30/2010

BENJAMIN A. NEBEL
081-006527
LICENSED
STRUCTURAL
ENGINEER
OF
JACKSONVILLE
ILLINOIS
Lic. Exp. 11/30/2010

GENERAL PLAN AND ELEVATION
C.H. 12 OVER JOES CREEK
SECTION 07-00090-00-BR
MACOUPIN COUNTY
STATION 43+82.24
STRUCTURE NO. 059-3557

SHEET NO. 1	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
22 SHEETS	CH 12	07-00090-00-BR	MACOUPIN	77	30
		SN 059-3557	CONTRACT NO. 93538		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		

2576-2B001



*Included in the cost of Pipe Underdrains for Structures. All drainage system components shall extend to 2'-0" from the end of each wingwall except an outlet pipe shall extend until intersecting with the side slopes. The pipes shall drain into *concrete headwalls. (See Article 601.05 of the Standard Specifications and Highway Standard 601101)

SECTION THRU INTEGRAL ABUTMENTS

GENERAL NOTES

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60.

Reinforcement bars designated (E) shall be epoxy coated.

Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.

The Contractor shall drive test piles to 110% of the nominal required bearing specified in production locations at substructures specified or approved by the Engineer before ordering the remainder of piles.

For Soil Borings, See Special Provisions.

Protective Coat shall be applied to the top of the deck, edge of deck, and approach pavement.

Bridge Deck Grooving is figured 1'-0" from rail face and includes the approach pavements.

All embedded and separate bearing plates, side retainers, anchor bolts, nuts, washers and pintles shall be galvanized according to AASHTO M111 or M232 (as applicable).

The embankment configuration shown shall be the minimum embankment that must be constructed prior to construction of the abutments.

TOTAL BILL OF MATERIAL

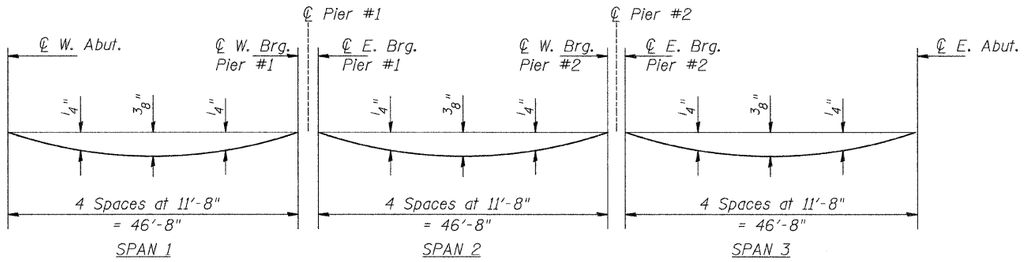
	ITEM	UNIT	SUPER	SUB	TOTAL
Ⓘ	Removal of Existing Structures No. 2	EACH	——	——	1
	Structure Excavation	CU YD	——	295	295
	Channel Excavation	CU YD	——	1,050	1,050
	Concrete Superstructure	CU YD	180.1	——	180.1
	Concrete Structures	CU YD	——	225.7	225.7
	Furnishing Steel Piles HP12x53	FOOT	——	2,130	2,130
Ⓘ	Driving Piles	FOOT	——	2,130	2,130
Ⓘ	Test Pile Steel HP12x53	EACH	——	4	4
	Concrete Encasement	CU YD	——	11.8	11.8
	Furnishing and Erecting Precast Prestressed Concrete I-Beams, 36"	FOOT	858	——	858
	Anchor Bolts, 1½"	EACH	——	8	8
Ⓘ	Reinforcement Bars, Epoxy Coated	POUND	39,660	19,730	59,390
Ⓘ	Mechanical Splicers	EACH	——	88	88
	Stone Riprap, Class A4	TON	——	710	710
Ⓘ	Filter Fabric	SQ YD	——	865	865
	Steel Railing, Type SM	FOOT	293	——	293
	Protective Coat	SQ YD	792	——	792
	Bridge Deck Grooving	SQ YD	714	——	714
	Name Plates	EACH	——	1	1
Ⓘ	Pipe Underdrains for Structures, 4"	FOOT	——	143	143
	Bridge Approach Pavement	SQ YD	——	——	160
Ⓘ	Porous Granular Embankment (Special)	CU YD	——	115	115
	Geocomposite Wall Drain	SQ YD	——	66	66
	Bar Splicers	EACH	48	——	48
Ⓘ	Underwater Structure Excavation Protection, Location 1 (Pier #1)	EACH	——	1	1
Ⓘ	Underwater Structure Excavation Protection, Location 2 (Pier #2)	EACH	——	1	1

Ⓘ See Special Provisions

GENERAL NOTES, DETAILS, AND BILL OF MATERIAL
C.H. 12 OVER JOES CREEK
SECTION 07-00090-00-BR
MACOUPIN COUNTY

SHEET NO. 2	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
22 SHEETS	CH 12	07-00090-00-BR	MACOUPIN	77	31
	SN 059-3557		CONTRACT NO. 93538		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		

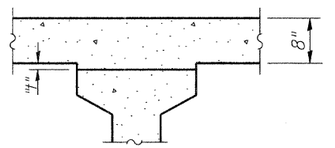
2576-2B002



DEAD LOAD DEFLECTION DIAGRAM

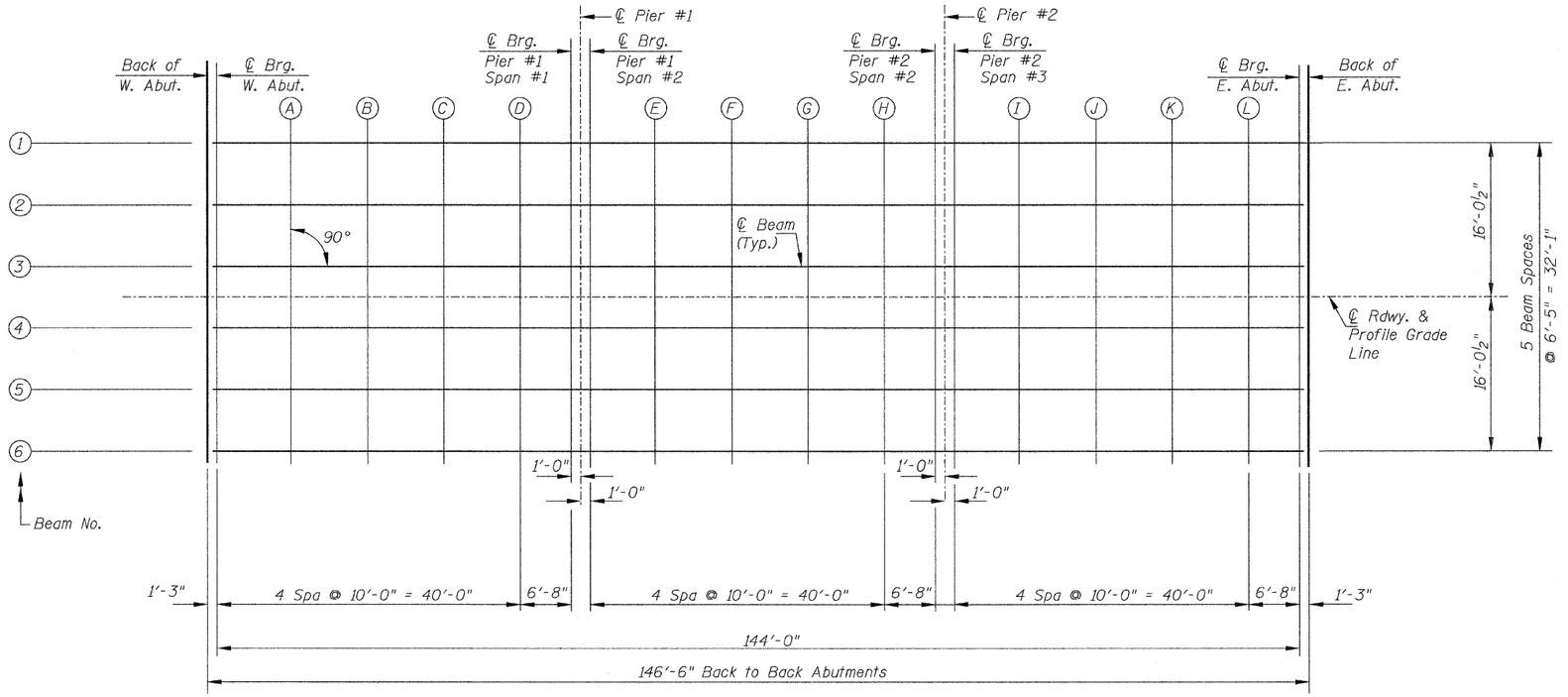
(Includes weight of concrete deck, excluding beams)

Note:
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on Sheet 4 of 22.



To determine "t": After all precast prestressed beams have been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflections" shown on Sh. 4 of 22, minus slab thickness, equals the fillet heights "t" above top flanges of beams.

FILLET HEIGHTS



PLAN (DECK ELEVATIONS)

TOP OF SLAB ELEVATIONS
C.H. 12 OVER JOES CREEK
SECTION 07-00090-00-BR
MACOUPIN COUNTY

SHEET NO. 3	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
22 SHEETS	CH 12	07-00090-00-BR	MACOUPIN	77	32
	SN 059-3557		CONTRACT NO. 93538		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		

2576-2B003

BEAM #1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflections
Bk W. Abutment	4308.99	-16.04	640.41	640.41
CL Brg W. Abut	4310.24	-16.04	640.42	640.42
A	4320.24	-16.04	640.52	640.54
B	4330.24	-16.04	640.63	640.66
C	4340.24	-16.04	640.75	640.78
D	4350.24	-16.04	640.88	640.90
CL Brg	4356.91	-16.04	640.98	640.98
CL Pier 1	4357.91	-16.04	640.99	640.99
CL Brg	4358.91	-16.04	641.01	641.01
E	4368.91	-16.04	641.16	641.17
F	4378.91	-16.04	641.32	641.34
G	4388.91	-16.04	641.49	641.51
H	4398.91	-16.04	641.67	641.68
CL Brg	4405.57	-16.04	641.79	641.79
CL Pier 2	4406.57	-16.04	641.81	641.81
CL Brg	4407.57	-16.04	641.83	641.83
I	4417.57	-16.04	642.03	642.05
J	4427.57	-16.04	642.24	642.26
K	4437.57	-16.04	642.46	642.48
L	4447.57	-16.04	642.69	642.70
CL Brg E. Abut	4454.24	-16.04	642.84	642.84
Bk E. Abutment	4455.49	-16.04	642.87	642.87

BEAM #2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflections
Bk W. Abutment	4308.99	-9.63	640.53	640.53
CL Brg W. Abut	4310.24	-9.63	640.54	640.54
A	4320.24	-9.63	640.64	640.66
B	4330.24	-9.63	640.75	640.78
C	4340.24	-9.63	640.87	640.90
D	4350.24	-9.63	641.01	641.02
CL Brg	4356.91	-9.63	641.10	641.10
CL Pier 1	4357.91	-9.63	641.11	641.11
CL Brg	4358.91	-9.63	641.13	641.13
E	4368.91	-9.63	641.28	641.29
F	4378.91	-9.63	641.44	641.46
G	4388.91	-9.63	641.61	641.63
H	4398.91	-9.63	641.79	641.80
CL Brg	4405.57	-9.63	641.91	641.91
CL Pier 2	4406.57	-9.63	641.93	641.93
CL Brg	4407.57	-9.63	641.95	641.95
I	4417.57	-9.63	642.15	642.17
J	4427.57	-9.63	642.36	642.39
K	4437.57	-9.63	642.58	642.60
L	4447.57	-9.63	642.81	642.82
CL Brg E. Abut	4454.24	-9.63	642.97	642.97
Bk E. Abutment	4455.49	-9.63	643.00	643.00

BEAM #3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflections
Bk W. Abutment	4308.99	-3.21	640.63	640.63
CL Brg W. Abut	4310.24	-3.21	640.64	640.64
A	4320.24	-3.21	640.74	640.76
B	4330.24	-3.21	640.85	640.88
C	4340.24	-3.21	640.97	641.00
D	4350.24	-3.21	641.11	641.12
CL Brg	4356.91	-3.21	641.20	641.20
CL Pier 1	4357.91	-3.21	641.21	641.21
CL Brg	4358.91	-3.21	641.23	641.23
E	4368.91	-3.21	641.38	641.39
F	4378.91	-3.21	641.54	641.56
G	4388.91	-3.21	641.71	641.73
H	4398.91	-3.21	641.89	641.90
CL Brg	4405.57	-3.21	642.01	642.01
CL Pier 2	4406.57	-3.21	642.03	642.03
CL Brg	4407.57	-3.21	642.05	642.05
I	4417.57	-3.21	642.25	642.27
J	4427.57	-3.21	642.46	642.49
K	4437.57	-3.21	642.68	642.70
L	4447.57	-3.21	642.91	642.92
CL Brg E. Abut	4454.24	-3.21	643.07	643.07
Bk E. Abutment	4455.49	-3.21	643.10	643.10

℄ RDWY. & P.G.L.

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflections
Bk W. Abutment	4308.99	0.00	640.68	640.68
CL Brg W. Abut	4310.24	0.00	640.69	640.69
A	4320.24	0.00	640.79	640.81
B	4330.24	0.00	640.90	640.93
C	4340.24	0.00	641.02	641.05
D	4350.24	0.00	641.16	641.17
CL Brg	4356.91	0.00	641.25	641.25
CL Pier 1	4357.91	0.00	641.26	641.26
CL Brg	4358.91	0.00	641.28	641.28
E	4368.91	0.00	641.43	641.44
F	4378.91	0.00	641.59	641.61
G	4388.91	0.00	641.76	641.78
H	4398.91	0.00	641.94	641.95
CL Brg	4405.57	0.00	642.06	642.06
CL Pier 2	4406.57	0.00	642.08	642.08
CL Brg	4407.57	0.00	642.10	642.10
I	4417.57	0.00	642.30	642.32
J	4427.57	0.00	642.51	642.54
K	4437.57	0.00	642.73	642.75
L	4447.57	0.00	642.96	642.97
CL Brg E. Abut	4454.24	0.00	643.12	643.12
Bk E. Abutment	4455.49	0.00	643.15	643.15

BEAM #4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflections
Bk W. Abutment	4308.99	3.21	640.63	640.63
CL Brg W. Abut	4310.24	3.21	640.64	640.64
A	4320.24	3.21	640.74	640.76
B	4330.24	3.21	640.85	640.88
C	4340.24	3.21	640.97	641.00
D	4350.24	3.21	641.11	641.12
CL Brg	4356.91	3.21	641.20	641.20
CL Pier 1	4357.91	3.21	641.21	641.21
CL Brg	4358.91	3.21	641.23	641.23
E	4368.91	3.21	641.38	641.39
F	4378.91	3.21	641.54	641.56
G	4388.91	3.21	641.71	641.73
H	4398.91	3.21	641.89	641.90
CL Brg	4405.57	3.21	642.01	642.01
CL Pier 2	4406.57	3.21	642.03	642.03
CL Brg	4407.57	3.21	642.05	642.05
I	4417.57	3.21	642.25	642.27
J	4427.57	3.21	642.46	642.49
K	4437.57	3.21	642.68	642.70
L	4447.57	3.21	642.91	642.92
CL Brg E. Abut	4454.24	3.21	643.07	643.07
Bk E. Abutment	4455.49	3.21	643.10	643.10

BEAM #5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflections
Bk W. Abutment	4308.99	9.63	640.53	640.53
CL Brg W. Abut	4310.24	9.63	640.54	640.54
A	4320.24	9.63	640.64	640.66
B	4330.24	9.63	640.75	640.78
C	4340.24	9.63	640.87	640.90
D	4350.24	9.63	641.01	641.02
CL Brg	4356.91	9.63	641.10	641.10
CL Pier 1	4357.91	9.63	641.11	641.11
CL Brg	4358.91	9.63	641.13	641.13
E	4368.91	9.63	641.28	641.29
F	4378.91	9.63	641.44	641.46
G	4388.91	9.63	641.61	641.63
H	4398.91	9.63	641.79	641.80
CL Brg	4405.57	9.63	641.91	641.91
CL Pier 2	4406.57	9.63	641.93	641.93
CL Brg	4407.57	9.63	641.95	641.95
I	4417.57	9.63	642.15	642.17
J	4427.57	9.63	642.36	642.39
K	4437.57	9.63	642.58	642.60
L	4447.57	9.63	642.81	642.82
CL Brg E. Abut	4454.24	9.63	642.97	642.97
Bk E. Abutment	4455.49	9.63	643.00	643.00

BEAM #6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflections
Bk W. Abutment	4308.99	16.04	640.41	640.41
CL Brg W. Abut	4310.24	16.04	640.42	640.42
A	4320.24	16.04	640.52	640.54
B	4330.24	16.04	640.63	640.66
C	4340.24	16.04	640.75	640.78
D	4350.24	16.04	640.88	640.90
CL Brg	4356.91	16.04	640.98	640.98
CL Pier 1	4357.91	16.04	640.99	640.99
CL Brg	4358.91	16.04	641.01	641.01
E	4368.91	16.04	641.16	641.17
F	4378.91	16.04	641.32	641.34
G	4388.91	16.04	641.49	641.51
H	4398.91	16.04	641.67	641.68
CL Brg	4405.57	16.04	641.79	641.79
CL Pier 2	4406.57	16.04	641.81	641.81
CL Brg	4407.57	16.04	641.83	641.83
I	4417.57	16.04	642.03	642.05
J	4427.57	16.04	642.24	642.26
K	4437.57	16.04	642.46	642.48
L	4447.57	16.04	642.69	642.70
CL Brg E. Abut	4454.24	16.04	642.84	642.84
Bk E. Abutment	4455.49	16.04	642.87	642.87

TOP OF SLAB ELEVATIONS
C.H. 12 OVER JOES CREEK
SECTION 07-00090-00-BR
MACOUPIN COUNTY

SHEET NO. 4	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
22 SHEETS	CH 12	07-00090-00-BR	MACOUPIN	77	33
	SN 059-3557		CONTRACT NO. 93538		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		

2576-2B004

NORTH EDGE OF APPROACH PAVEMENT

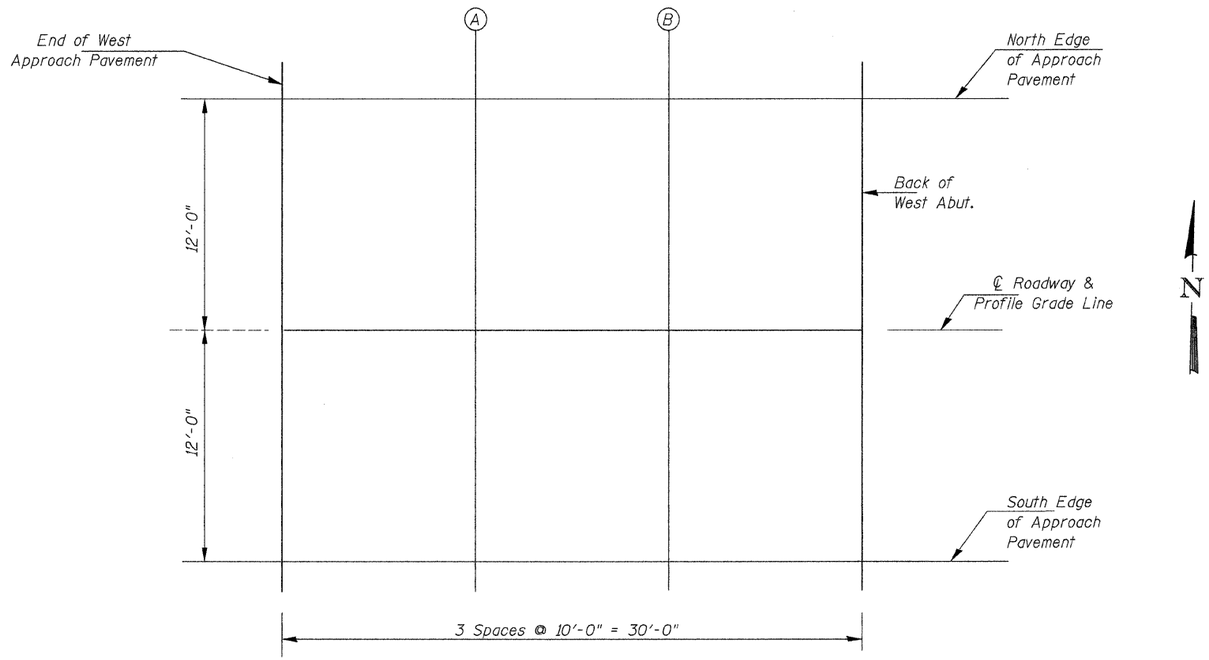
Location	Station	Offset	Theoretical Grade Elevations
End W. App. Pvmt	4278.99	-12.00	640.25
A	4288.99	-12.00	640.32
B	4298.99	-12.00	640.40
Bk W. Abutment	4308.99	-12.00	640.49

℄ ROADWAY & PROFILE GRADE

Location	Station	Offset	Theoretical Grade Elevations
End W. App. Pvmt	4278.99	0.00	640.44
A	4288.99	0.00	640.51
B	4298.99	0.00	640.59
Bk W. Abutment	4308.99	0.00	640.68

SOUTH EDGE OF APPROACH PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
End W. App. Pvmt	4278.99	12.00	640.25
A	4288.99	12.00	640.32
B	4298.99	12.00	640.40
Bk W. Abutment	4308.99	12.00	640.49



PLAN WEST APPROACH PAVEMENT

TOP OF WEST APPROACH PAVEMENT ELEVATIONS
C.H. 12 OVER JOES CREEK
SECTION 07-00090-00-BR
MACOUPIN COUNTY

SHEET NO. 5	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
22 SHEETS	CH 12	07-00090-00-BR	MACOUPIN	77	34
	SN 059-3557		CONTRACT NO. 93538		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		

2576-2B005

NORTH EDGE OF APPROACH PAVEMENT

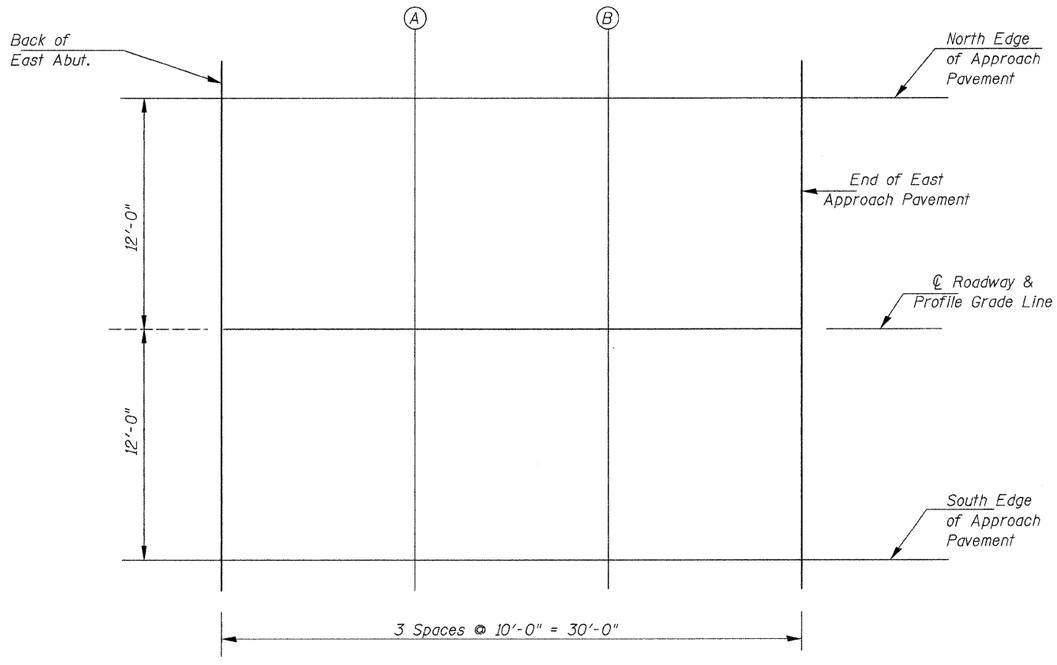
Location	Station	Offset	Theoretical Grade Elevations
Bk E. Abutment	4455.49	-12.00	642.96
A	4465.49	-12.00	643.21
B	4475.49	-12.00	643.46
End E. App. Pvmt.	4485.49	-12.00	643.73

℄ ROADWAY & PROFILE GRADE

Location	Station	Offset	Theoretical Grade Elevations
Bk E. Abutment	4455.49	0.00	643.15
A	4465.49	0.00	643.39
B	4475.49	0.00	643.65
End E. App. Pvmt	4485.49	0.00	643.92

SOUTH EDGE OF APPROACH PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations
Bk E. Abutment	4455.49	12.00	642.96
A	4465.49	12.00	643.21
B	4475.49	12.00	643.46
End E. App. Pvmt	4485.49	12.00	643.73

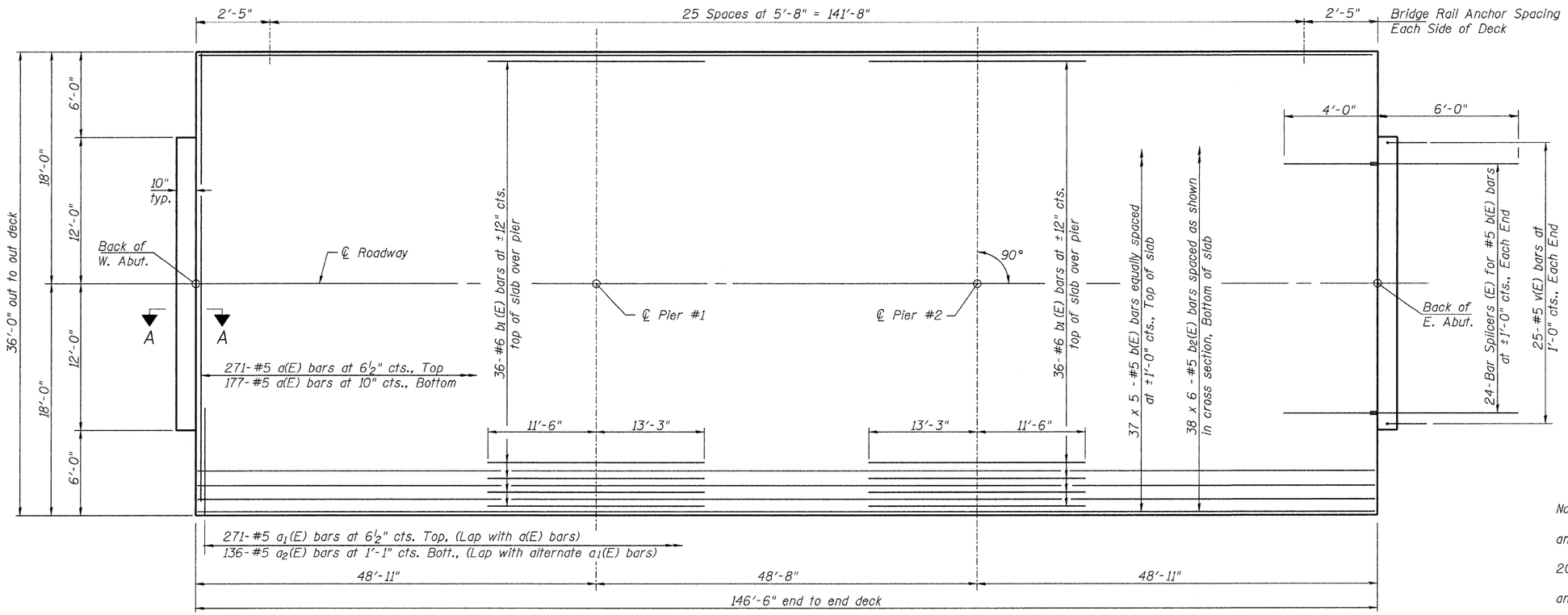


PLAN EAST APPROACH PAVEMENT

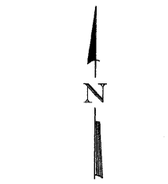
TOP OF EAST APPROACH PAVEMENT ELEVATIONS
C.H. 12 OVER JOES CREEK
SECTION 07-00090-00-BR
MACOUPIN COUNTY

SHEET NO. 6	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
22 SHEETS	CH 12	07-00090-00-BR	MACOUPIN	77	35
		SN 059-3557	CONTRACT NO. 93538		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		

2576-2B006



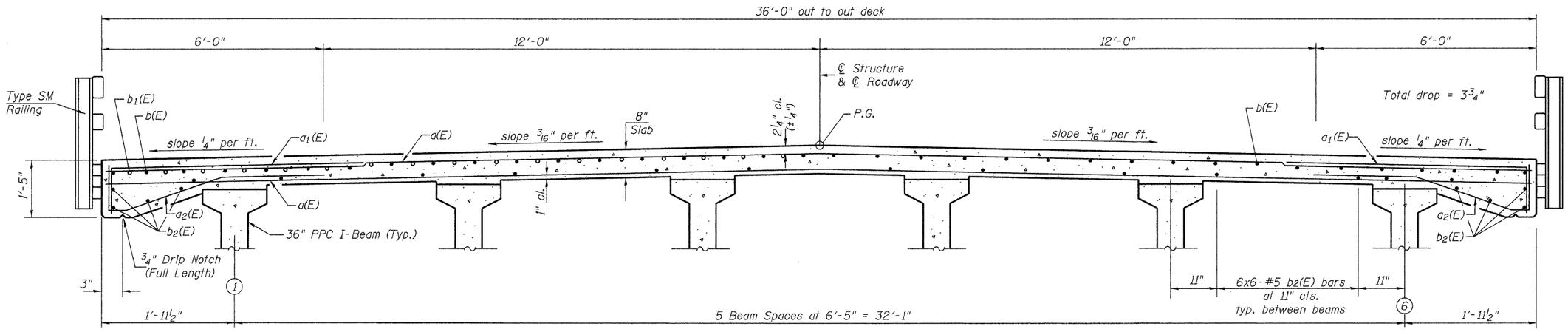
PLAN



MIN. BAR LAP

#5 = 1'-8"

Notes:
See Sheet 8 of 22 for Superstructure Details and Bill of Material.
Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
See Sheets 9 & 10 of 22 for Section A-A and Diaphragm Details.



NEAR PIER

CROSS SECTION

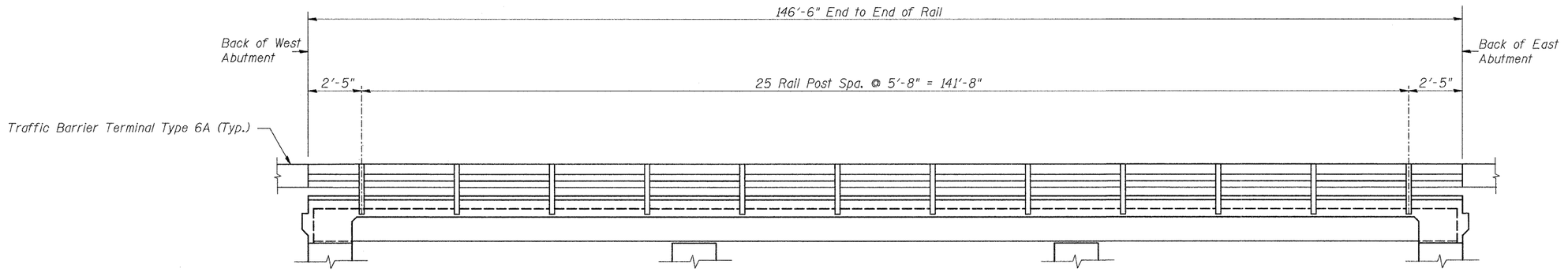
(Looking East)

NEAR MIDSPAN

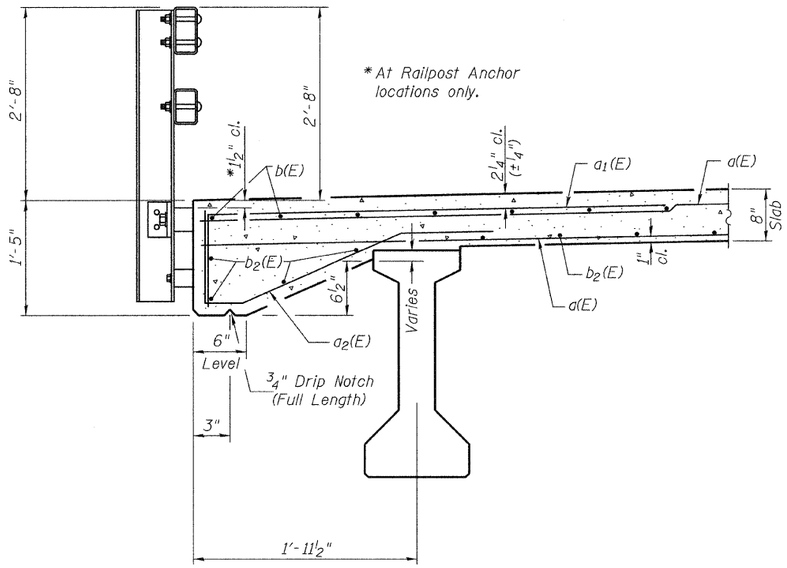
SUPERSTRUCTURE
C.H. 12 OVER JOES CREEK
SECTION 07-00090-00-BR
MACOUPIN COUNTY

SHEET NO. 7	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
22 SHEETS	CH 12	07-00090-00-BR	MACOUPIN	77	36
		SN 059-3557	CONTRACT NO. 93538		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		

2576-2B007



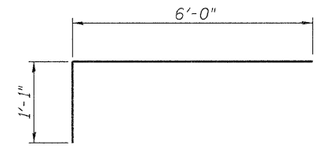
RAIL POST SPACING



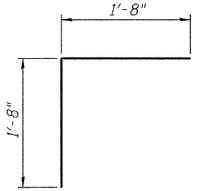
* At Railpost Anchor locations only.

SECTION THRU PARAPET

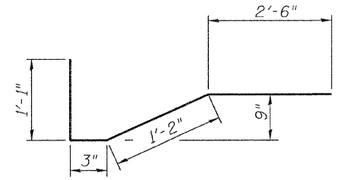
See Sheet 11 of 22 for Rail Post Anchor Details



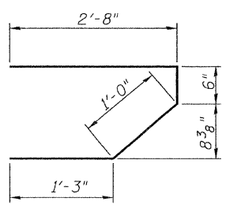
BAR a1(E)



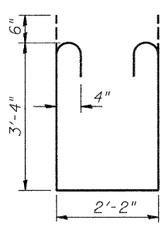
BAR v(E)



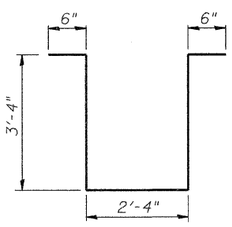
BAR a2(E)



BAR s(E)



BAR s1(E)



BAR s2(E)

SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	448	#5	35'-8"	
a1(E)	542	#5	7'-1"	
a2(E)	272	#5	5'-0"	
b(E)	185	#5	30'-7"	
b1(E)	72	#6	24'-9"	
b2(E)	228	#5	25'-10"	
m(E)	4	#6	23'-9"	
m1(E)	6	#6	35'-8"	
m2(E)	24	#6	9'-2"	
m3(E)	30	#6	4'-8"	
m4(E)	4	#6	0'-11"	
m5(E)	40	#6	5'-7"	
m6(E)	12	#8	5'-6"	
s(E)	54	#5	5'-5"	
s1(E)	68	#4	9'-10"	
s2(E)	60	#4	10'-0"	
v(E)	50	#5	3'-4"	
(1) Reinforcement Bars, Epoxy Coated			Pound	39,660
Concrete Superstructure			Cu. Yd.	180.1

(1) See Special Provisions

SUPERSTRUCTURE DETAILS
C.H. 12 OVER JOES CREEK
SECTION 07-00090-00-BR
MACOUPIN COUNTY

SHEET NO. 8	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
22 SHEETS	CH 12	07-00090-00-BR	MACOUPIN	77	37
	SN 059-3557		CONTRACT NO. 93538		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		

2576-2B008

Notes:

Reinforcement bars in diaphragm are billed with superstructure on sheet 8 of 22.

Concrete in diaphragm is included with Concrete Superstructure on sheet 8 of 22.

For details of bars s(E), s_1(E) and s_2(E) see sheet 8 of 22.

For placement of v(E) bars see sheet 15 and 16 of 22.

See sheet 10 of 22 for Sections A-A and B-B.

Cost of 90 Lb. roofing felt is included with Concrete Superstructure.

The side retainer shall be galvanized after shop fabrication according to AASHTO M 111.

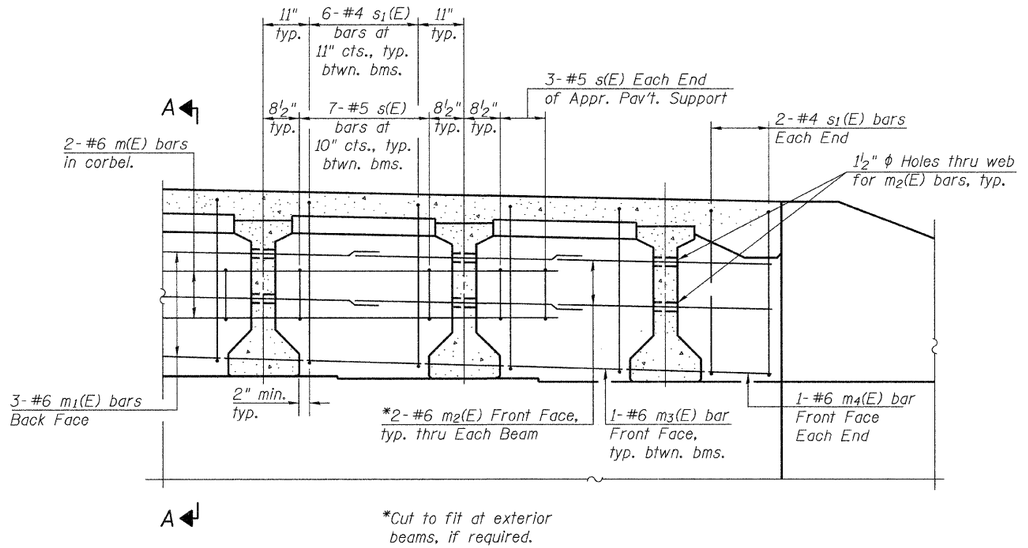
Anchor bolt assemblies shall be galvanized according to Article 1006.09 of the Standard Specifications.

Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.

Anchor bolts for side retainers may be either cast in place or installed in holes drilled after the supporting member is in place and prior to pouring the deck.

Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.

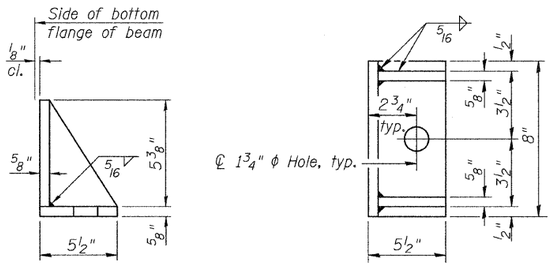
Cost of side retainers shall be included with Concrete Structures.



DIAPHRAGM ELEVATION AT ABUTMENT

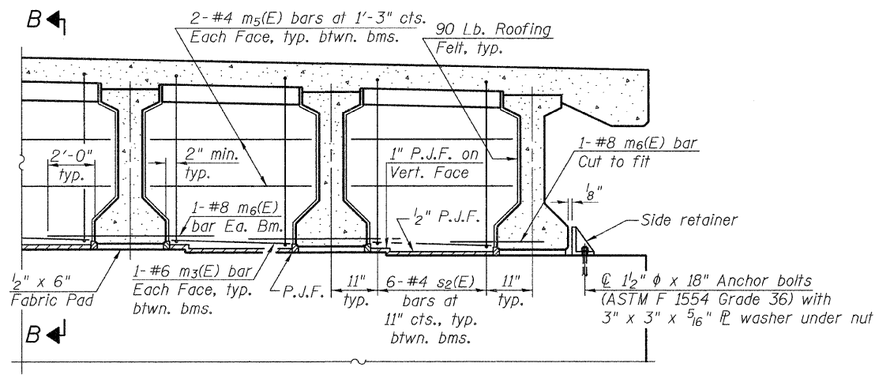
MIN. BAR LAP

#6 bar = 2'-9"



SIDE RETAINER

(2 required each side of each pier)
Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.

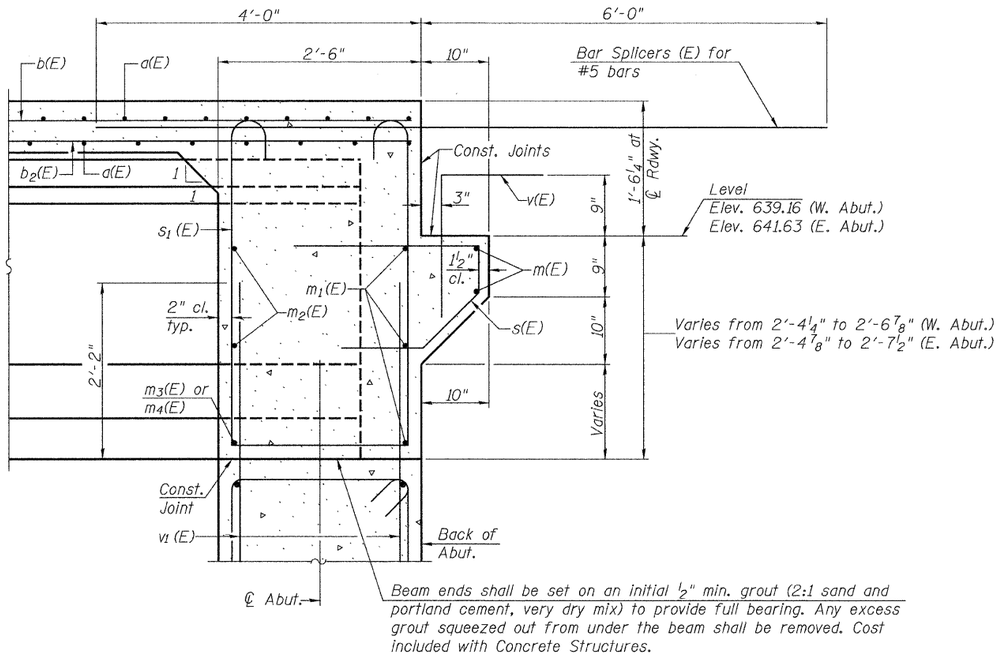


DIAPHRAGM AT PIERS

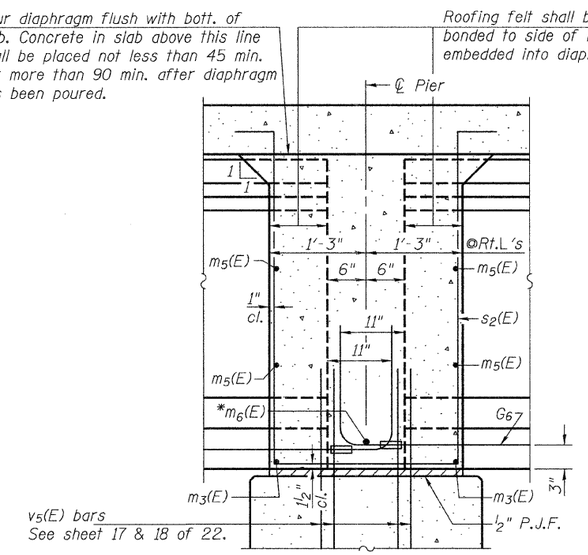
DIAPHRAGM DETAILS
C.H. 12 OVER JOES CREEK
SECTION 07-00090-00-BR
MACOUPIN COUNTY

SHEET NO. 9	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
22 SHEETS	CH 12	07-00090-00-BR	MACOUPIN	77	38
	SN 059-3557		CONTRACT NO. 93538		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		

2576-2B009

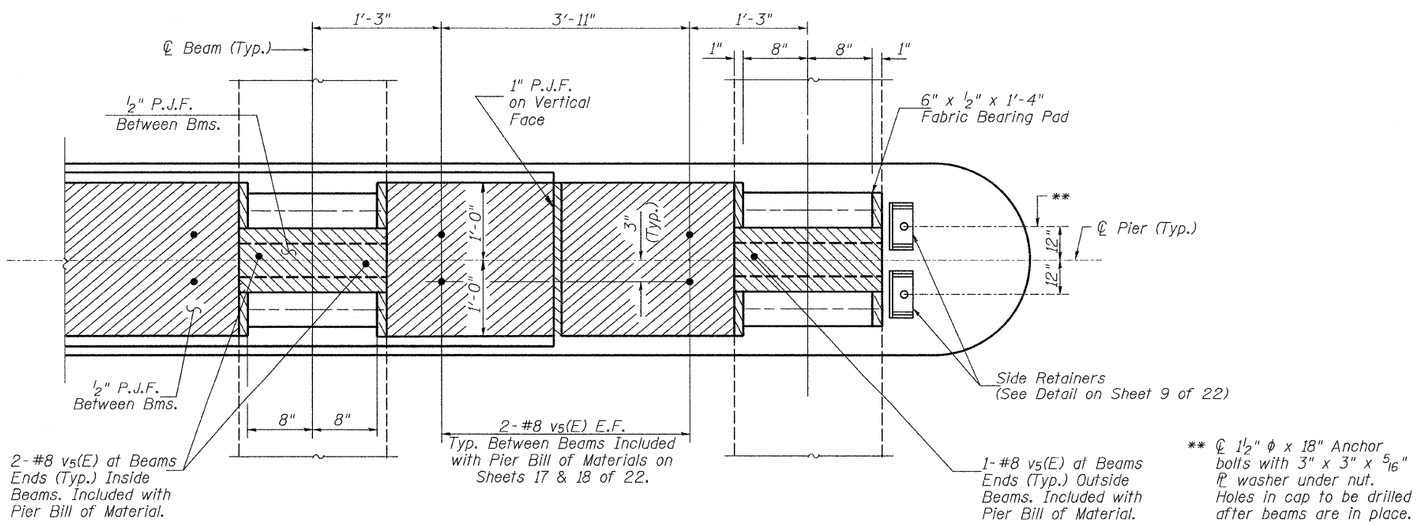


SECTION A-A



SECTION B-B

*Tightly fasten the #8 bars together with No. 9 wire ties.



** ℄ 1½" ϕ x 18" Anchor bolts with 3" x 3" x 5/16" ℗ washer under nut. Holes in cap to be drilled after beams are in place.

PLAN AT PIER
(Showing bearing pad and PJF details)

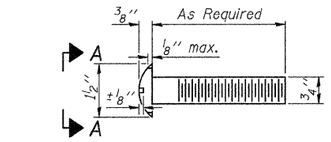
Note: See sheet 9 of 22 for location of Sections A-A and B-B.

DIAPHRAGM DETAILS
C.H. 12 OVER JOES CREEK
SECTION 07-00090-00-BR
MACOUPIN COUNTY

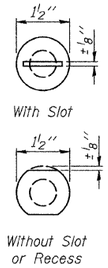
SHEET NO. 10	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
22 SHEETS	CH 12	07-00090-00-BR	MACOUPIN	77	39
	SN 059-3557		CONTRACT NO. 93538		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		

2576-2B010

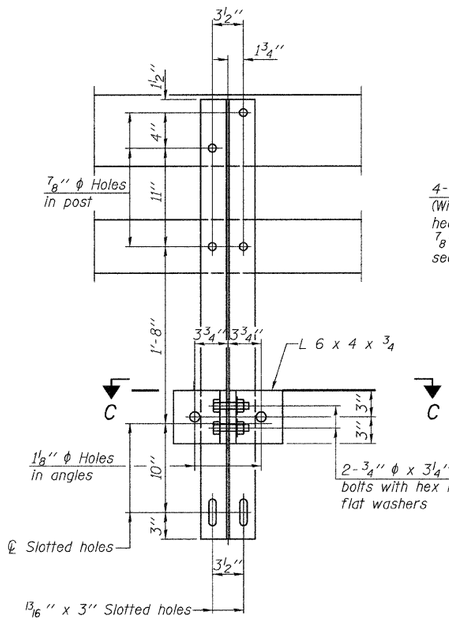
FOR RAIL POST SPACING SEE SH.#8 OF 22.



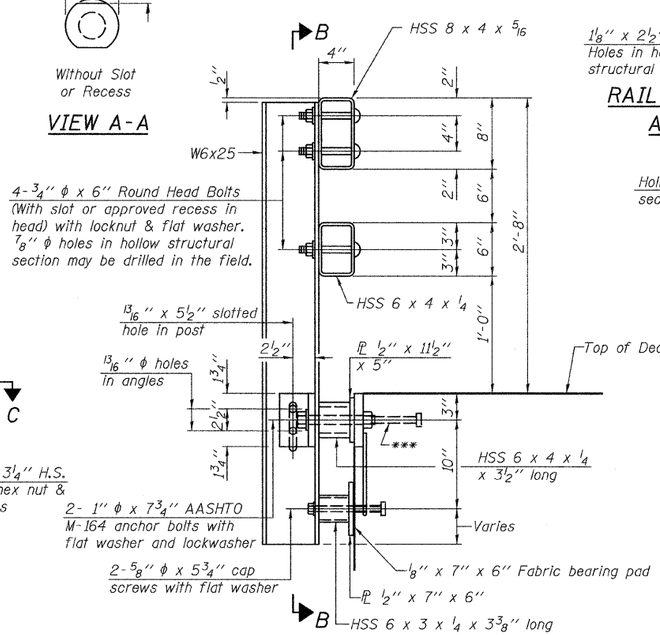
DETAIL OF 3/4" ϕ ROUND HEAD BOLT



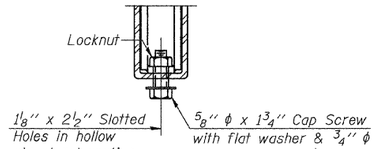
VIEW A-A



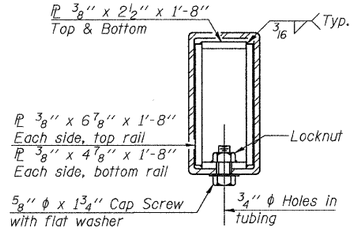
SECTION B-B



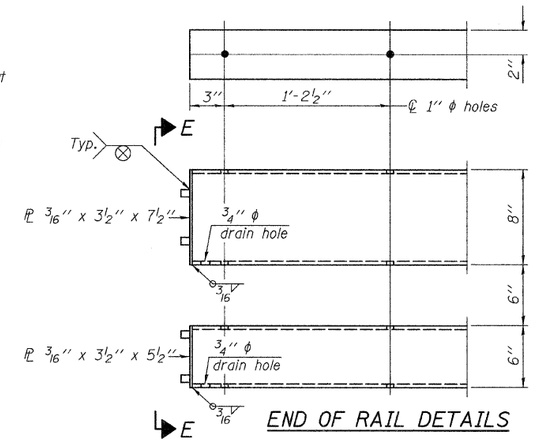
SECTION AT RAIL POST



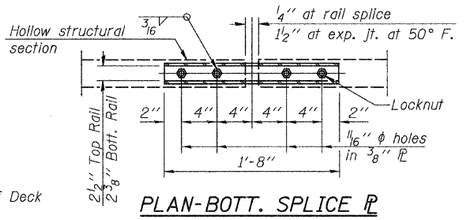
RAIL SPLICE CONNECTION
AT EXPANSION JT.



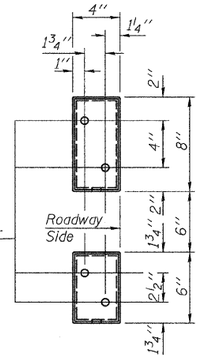
SECTION AT
RAIL SPLICE



END OF RAIL DETAILS

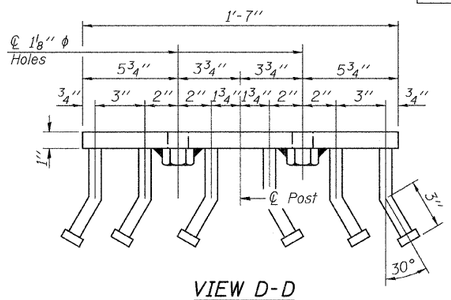


PLAN-BOTT. SPLICE ℄
TYPICAL

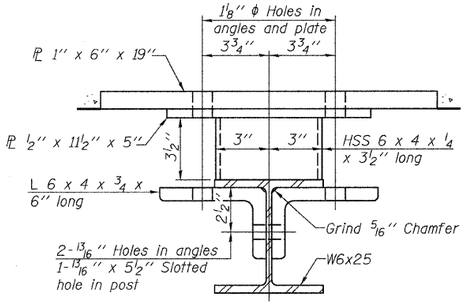


VIEW E-E

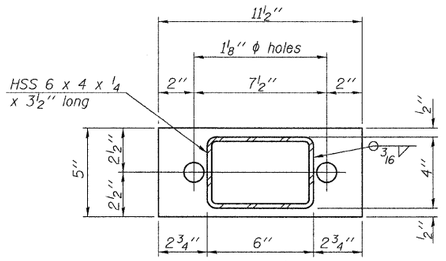
℄ -5/8" reduced base welded studs. Provide 4 - 5/8" washers and self-locking nuts or nuts and jam nuts for guardrail connection shown on Std. 631032

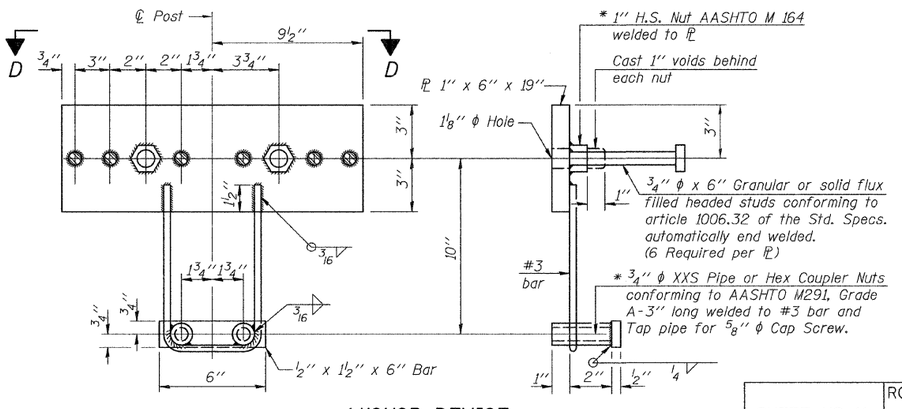


VIEW D-D



SECTION C-C





ANCHOR DEVICE

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

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 SM.

All steel rail members 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.*

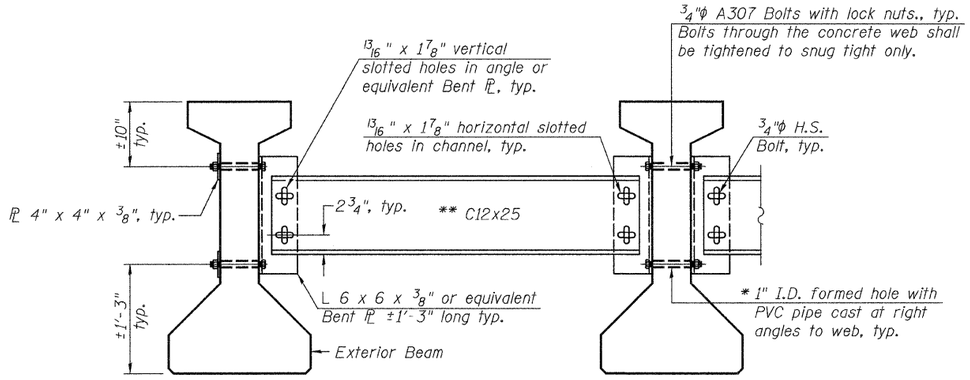
BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type SM	Foot	293

STEEL RAILING, TYPE SM
C.H. 12 OVER JOES CREEK
SECTION 07-00090-00-BR
MACOUPIN COUNTY

SHEET NO. 11	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
22 SHEETS	CH 12	07-00090-00-BR	MACOUPIN	77	40
		SN 059-3557	CONTRACT NO. 93538		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		

2576-2B011



Notes:

All material for bracing shall be hot dip galvanized according to AASHTO M111 unless otherwise noted.

Two hardened washers are required for each set of oversized holes.

All holes shall be $^{15}/_{16}$"ϕ unless otherwise noted.

$^{5}/_{16}$" x 3" x 3" plate washers are required over all slotted holes.

All bolts shall be galvanized according to AASHTO M232.

Bracing shall be installed as beams are erected and tightened as soon as possible during erection.

* Fabricator shall locate to miss strands within permissible tolerances.

** Alternate C12x30 channels are permitted to facilitate material acquisition. Calculated weight of structural steel is based on lighter section. The alternate, if utilized, shall be provided at no extra cost to the Department.

PERMANENT BRACING DETAILS

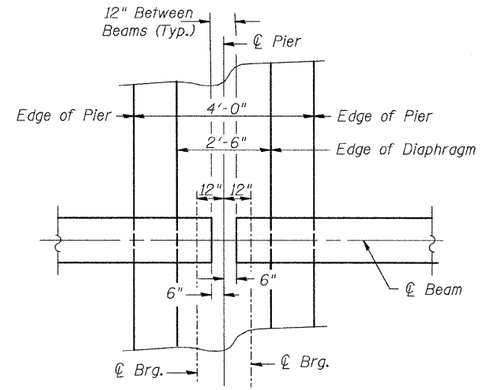
Permanent bracing shall not be paid for separately but shall be included with Furnishing and Erecting Precast Prestressed I-Beams, 36".

INTERIOR BEAM REACTION TABLE				
		Abut.	Pier 1 Span 1 Pier 2 Span 3	Pier 1 Span 2 Pier 2 Span 2
R_{DC1}	(k)	25.2	25.2	25.2
* R_{DC2}	(k)	0.6	0.8	0.8
* R_{DW}	(k)	6.4	8.8	8.8
* R_{L+IM}	(k)	61.1	50.3	50.3
R_{Total}	(k)	93.3	85.1	85.1

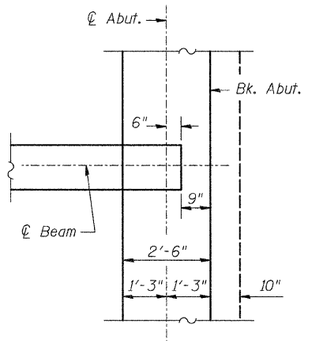
* The total R_{DC2}, R_{DW} and R_{L+IM} are assumed to be distributed evenly to each bearing line at a pier regardless of the span ratios. The bearing design at a pier is based on the maximum reactions of either span.

I: Non-composite moment of inertia of beam section ($in.^4$).
I': Composite moment of inertia of beam section ($in.^4$).
S_b: Non-composite section modulus for the bottom fiber of the prestressed beam ($in.^3$).
S_b': Composite section modulus for the bottom fiber of the prestressed beam ($in.^3$).
S_t: Non-composite section modulus for the top fiber of the prestressed beam ($in.^3$).
S_t': Composite section modulus for the top fiber of the prestressed beam ($in.^3$).
$DC1$: Un-factored non-composite dead load (kips/ft.).
M_{DC1}: Un-factored moment due to non-composite dead load (kip-ft.).
$DC2$: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).
M_{DC2}: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).
DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).
M_{DW}: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft).
M_{L+IM}: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

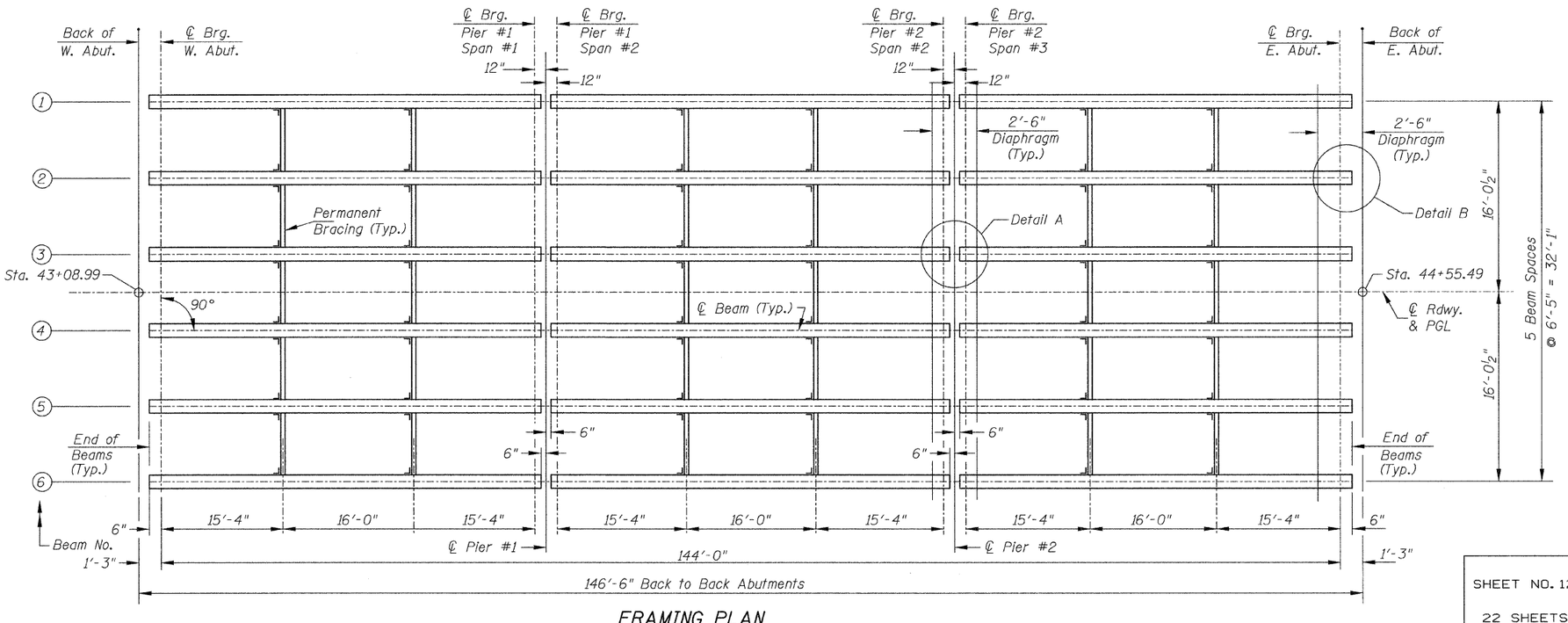
INTERIOR BEAM MOMENT TABLE				
		0.4 Sp. 1 0.6 Sp. 3	Pier 1 or 2	0.5 Sp. 2
I	(in^4)	48,648	-	48,648
I'	(in^4)	173,998	-	173,998
S_b	(in^3)	3,165	-	3,165
S_b'	(in^3)	5,930	-	5,930
S_t	(in^3)	2,358	-	2,358
S_t'	(in^3)	26,125	-	26,125
$DC1$	(k/')	1.04	-	1.04
M_{DC1}	('k)	276	-	287
$DC2$	(k/')	0.03	0.03	0.03
M_{DC2}	('k)	6	7	2
DW	(k/')	0.33	0.33	0.33
M_{DW}	('k)	61	77	20
M_{L+IM}	('k)	528	384	420



DETAIL A
(Typical @ Piers)



DETAIL B
(Typical @ Abutments)

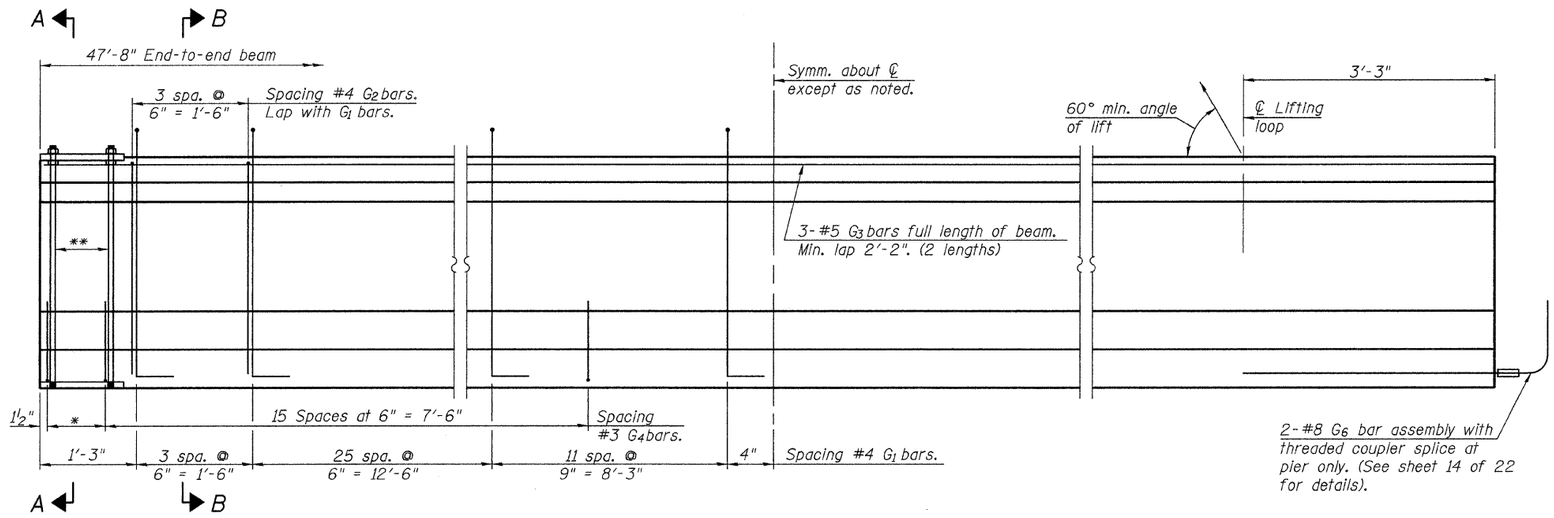


FRAMING PLAN

FRAMING PLAN
C.H. 12 OVER JOES CREEK
SECTION 07-00090-00-BR
MACOUPIN COUNTY

SHEET NO. 12 22 SHEETS	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	CH 12	07-00090-00-BR	MACOUPIN	77	41
	SN 059-3557		CONTRACT NO. 93538		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		

2576-2B012

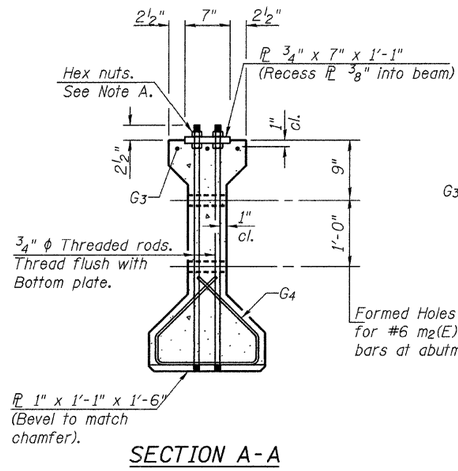


*3 spaces at 3" = 9".
**4-¾" ϕ threaded dowel rods at 3" cts., Each Face.

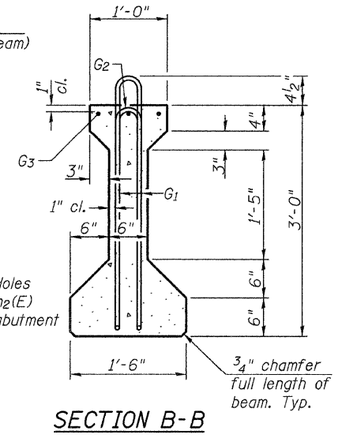
ELEVATION OF BEAM
(Showing reinforcement & dimensions)

2-#8 G6 bar assembly with threaded coupler splice at pier only. (See sheet 14 of 22 for details).

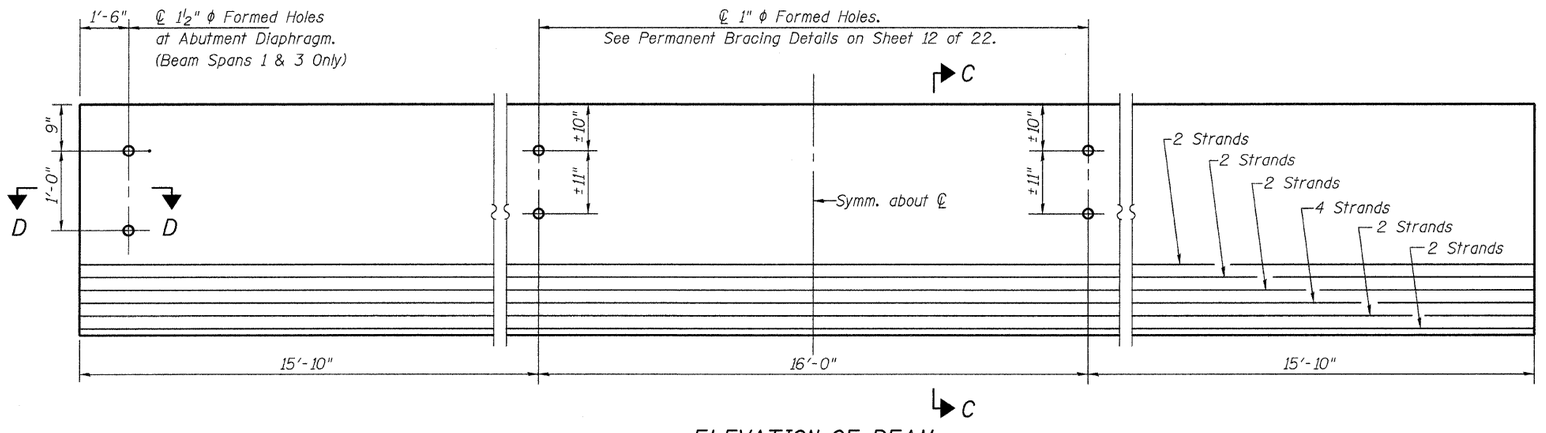
Note A:
Hex nuts (top and bottom) with lock washers (top). Only tighten sufficiently to compress lock washers.



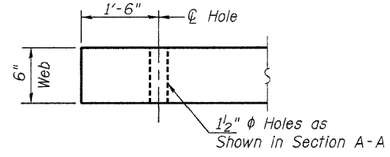
SECTION A-A



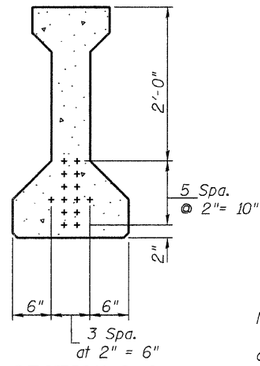
SECTION B-B



ELEVATION OF BEAM
(Showing prestressing steel)



SECTION D-D



SECTION C-C

***BAR LIST
ONE BEAM ONLY

Bar	No.	Size	Length	Shape
G_1	80	#4	7'-5"	⊓L
G_2	8	#4	5'-8"	⊓
G_3	6	#5	24'-10"	—
G_4	38	#3	4'-1"	⌓
G_6	N	#8	6'-6"	⌒

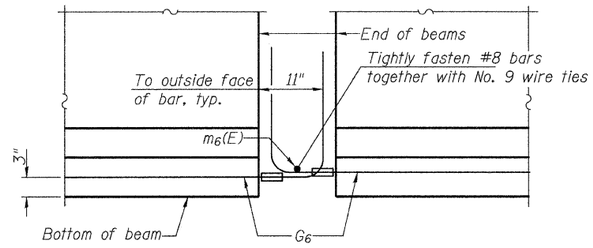
***For information only
N = 2 Spans 1 & 3
N = 4 Span 2

Notes:
See sheet 14 of 22 for additional details and Bill of Material.
Required release strength, f'ci, shall be 5,000 psi.

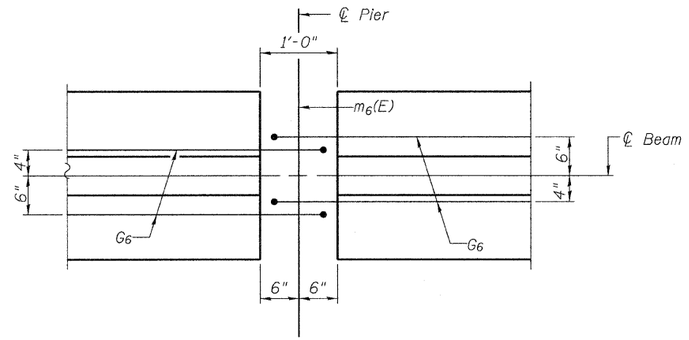
36" PPC I-BEAM
C.H. 12 OVER JOES CREEK
SECTION 07-00090-00-BR
MACOUPIN COUNTY

SHEET NO. 13	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
22 SHEETS	CH 12	07-00090-00-BR	MACOUPIN	77	42
		SN 059-3557	CONTRACT NO. 93538		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		

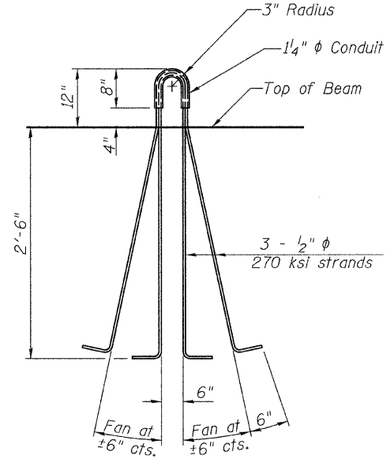
2576-2B013



ELEVATION OF BEAM AT PIER



PLAN OF BEAM AT PIER



LIFTING LOOP DETAIL

NOTES

Inserts for ¾" ϕ threaded dowel rods, when specified, are to be two strut, ferrule type for interior beams and single ferrule, flared loop type for exterior beams.

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be ½" and the nominal cross-sectional area shall be 0.153 sq. in.

Reinforcement bars shall conform to ASTM A 706, Grade 60.

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

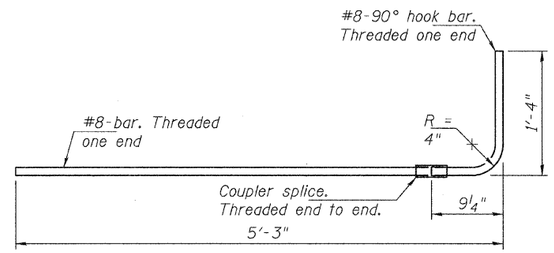
Tilt G_6 bars when necessary to maintain 1½" clearance.

The top and bottom plates shall be AASHTO M270 Grade 50.

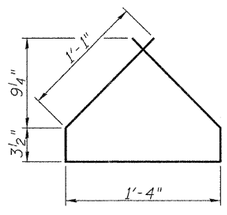
The bottom plates and studs shall be galvanized according to AASHTO M111.

Threaded rods shall be ASTM F 1554 Grade 55.

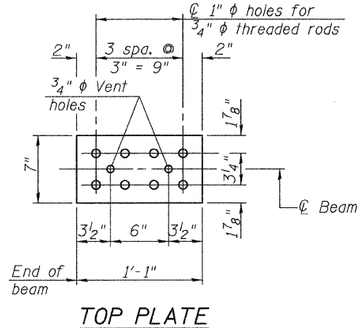
The G_6 bar assembly shall have the threaded ends oversized to ensure no reduction in cross sectional area after threading. The coupler splice shall be capable of developing 125 percent of the yield strength of the reinforcement bar.



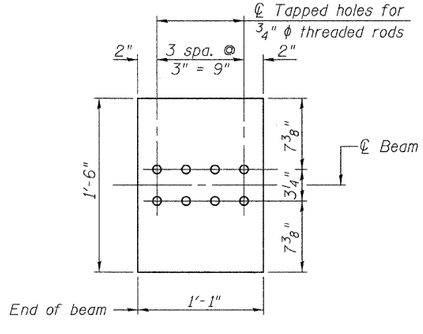
G6 BAR ASSEMBLY



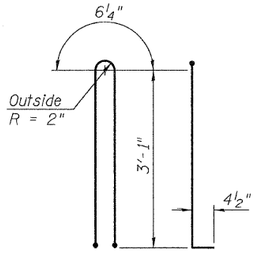
BAR G4



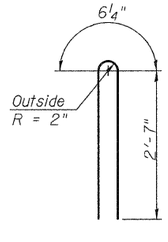
TOP PLATE



BOTTOM PLATE



BAR G1



BAR G2

BILL OF MATERIAL

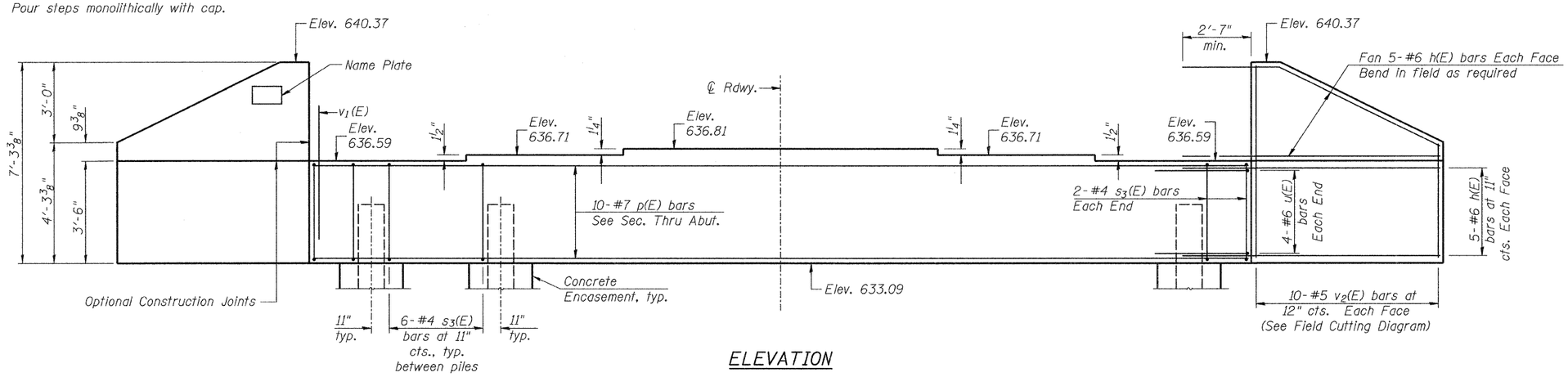
Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete I-Beams, 36"	Foot	858

36" PPC I-BEAM DETAILS
C.H. 12 OVER JOES CREEK
SECTION 07-00090-00-BR
MACOUPIN COUNTY

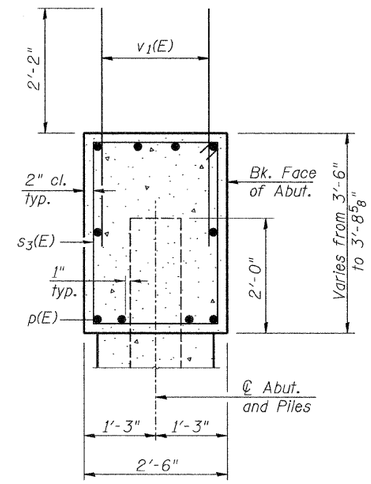
SHEET NO. 14	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
22 SHEETS	CH 12	07-00090-00-BR	MACOUPIN	77	43
		SN 059-3557	CONTRACT NO. 93538		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		

2576-2B014

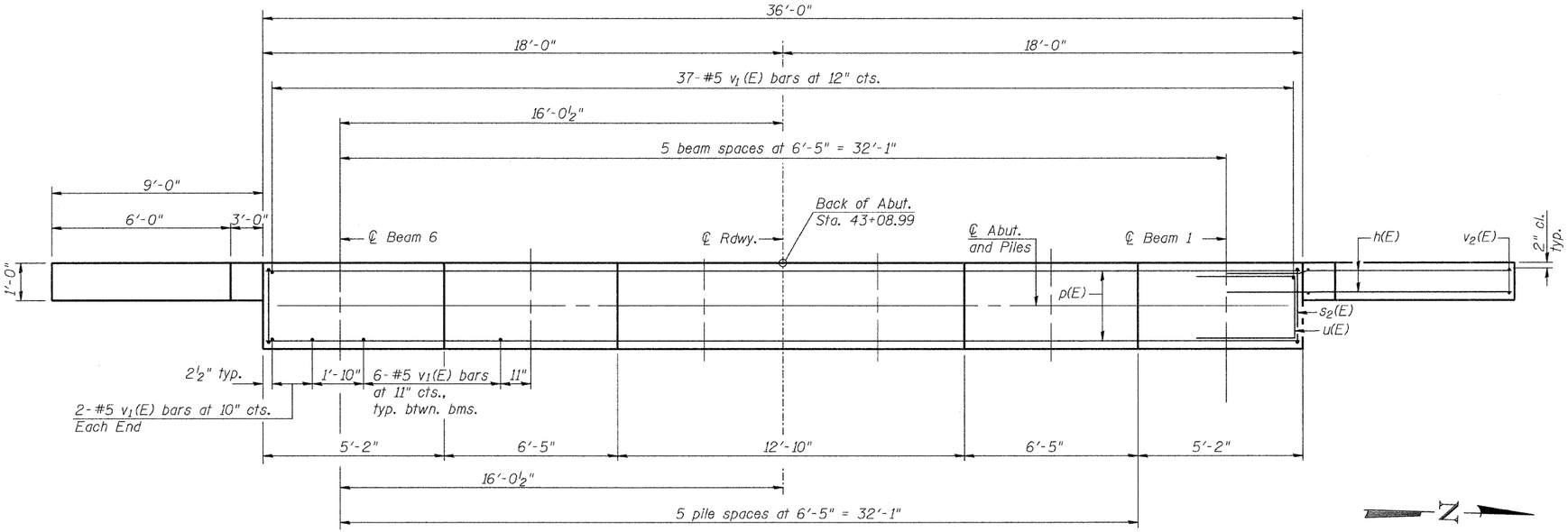
Notes:
Pour steps monolithically with cap.



ELEVATION



SEC. THRU ABUT.



PLAN

WEST ABUTMENT BILL OF MATERIAL

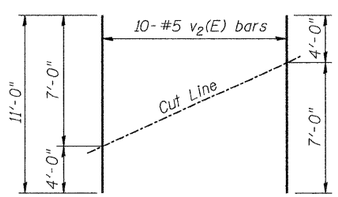
	Bar	No.	Size	Length	Shape
	h(E)	40	#6	11'-6"	——
	p(E)	10	#7	35'-8"	——
	s3(E)	34	#4	11'-5"	□
	u(E)	8	#6	10'-1"	⊐
	v1(E)	71	#5	4'-4"	——
	v2(E)	20	#5	11'-0"	——
	Structure Excavation			Cu. Yd.	70
	Concrete Structures			Cu. Yd.	16.3
①	Reinforcement Bars, Epoxy Coated			Pound	2,350
	Name Plates			Each	1
	Furnishing Steel Piles HP12x53			Foot	375
①	Driving Piles			Foot	375
①	Test Pile Steel HP12x53			Each	1
	Concrete Encasement			Cu. Yd.	2.1

① See Special Provisions

For details of Piles and Concrete Encasement, see sheet 20 of 22.

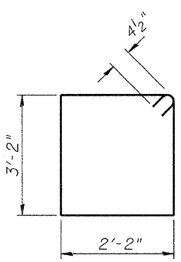
PILE DATA

Type: HP12x53
Nominal Required Bearing: 290 Kips
Factored Resistance Available: 145 Kips
Est. Length: 75'
No. Production Piles: 5
No. Test Piles: 1

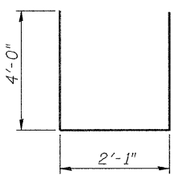


FIELD CUTTING DIAGRAM

Order v2(E) full length. Cut as shown and use remainder of bars in opposite face.



BAR s3(E)



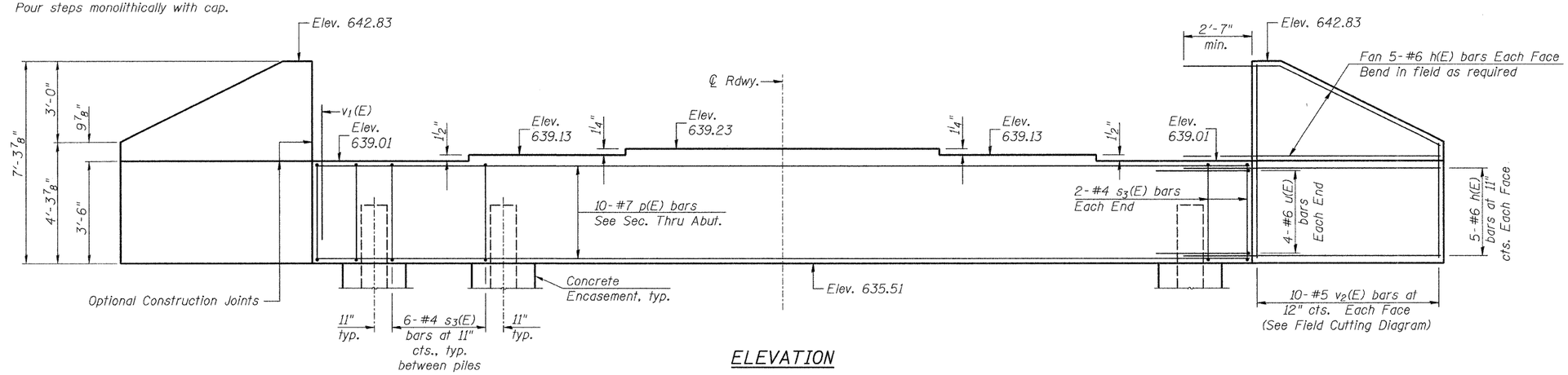
BAR u(E)

WEST ABUTMENT
C.H. 12 OVER JOES CREEK
SECTION 07-00090-00-BR
MACOUPIN COUNTY

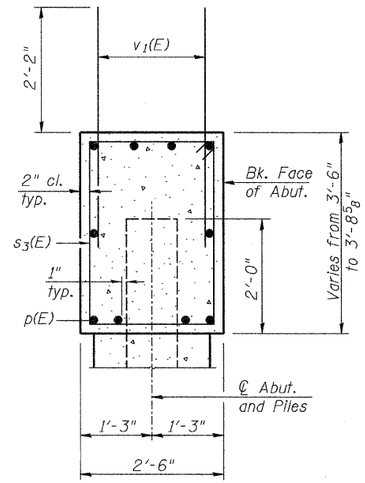
SHEET NO. 15	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
22 SHEETS	CH 12	07-00090-00-BR	MACOUPIN	77	44
		SN 059-3557	CONTRACT NO. 93538		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		

2576-2B015

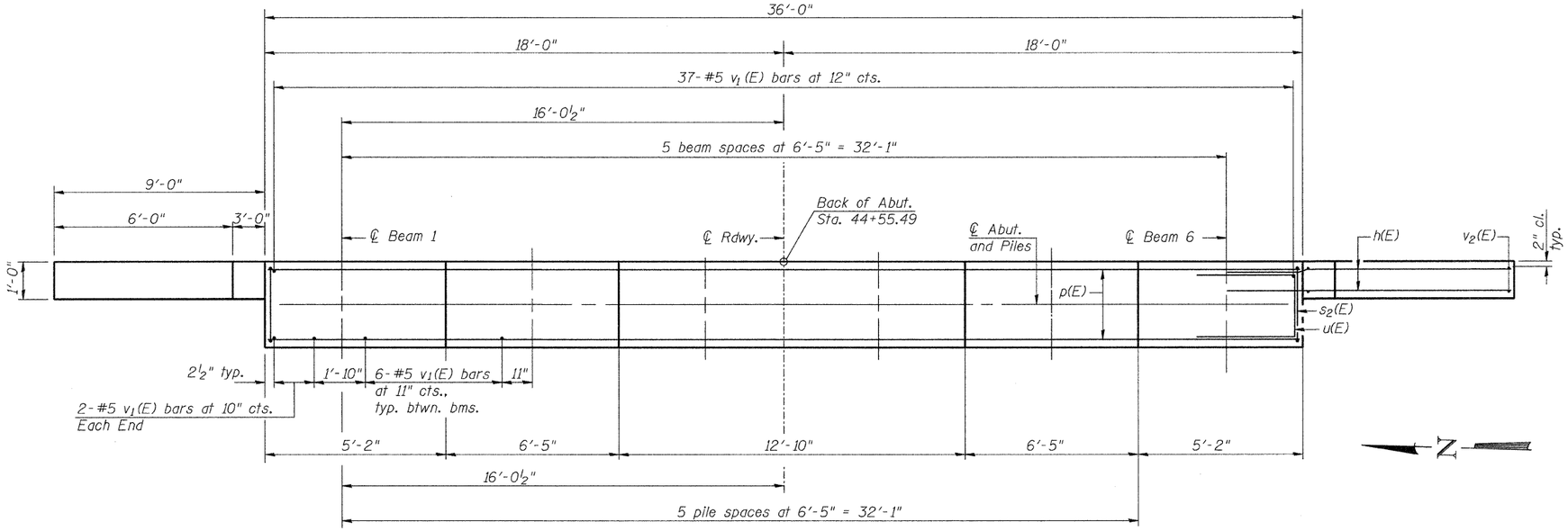
Notes:
Pour steps monolithically with cap.



ELEVATION



SEC. THRU ABUT.



PLAN

EAST ABUTMENT BILL OF MATERIAL

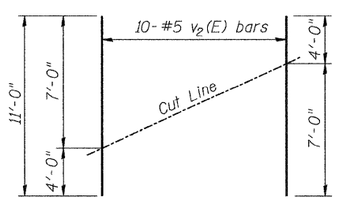
	Bar	No.	Size	Length	Shape
	h(E)	40	#6	11'-6"	
	p(E)	10	#7	35'-8"	
	s3(E)	34	#4	11'-5"	
	u(E)	8	#6	10'-1"	
	v1(E)	71	#5	4'-4"	
	v2(E)	20	#5	11'-0"	
	Structure Excavation		Cu. Yd.	70	
	Concrete Structures		Cu. Yd.	16.3	
①	Reinforcement Bars, Epoxy Coated		Pound	2,350	
	Furnishing Steel Piles HP12x53		Foot	325	
①	Driving Piles		Foot	325	
①	Test Pile Steel HP12x53		Each	1	
	Concrete Encasement		Cu. Yd.	2.1	

① See Special Provisions

For details of Piles and Concrete Encasement, see sheet 20 of 22.

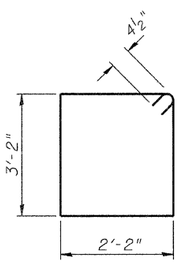
PILE DATA

Type: HP12x53
Nominal Required Bearing: 290 Kips
Factored Resistance Available: 145 Kips
Est. Length: 65'
No. Production Piles: 5
No. Test Piles: 1

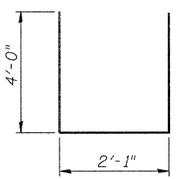


FIELD CUTTING DIAGRAM

Order v2(E) full length. Cut as shown and use remainder of bars in opposite face.



BAR s3(E)



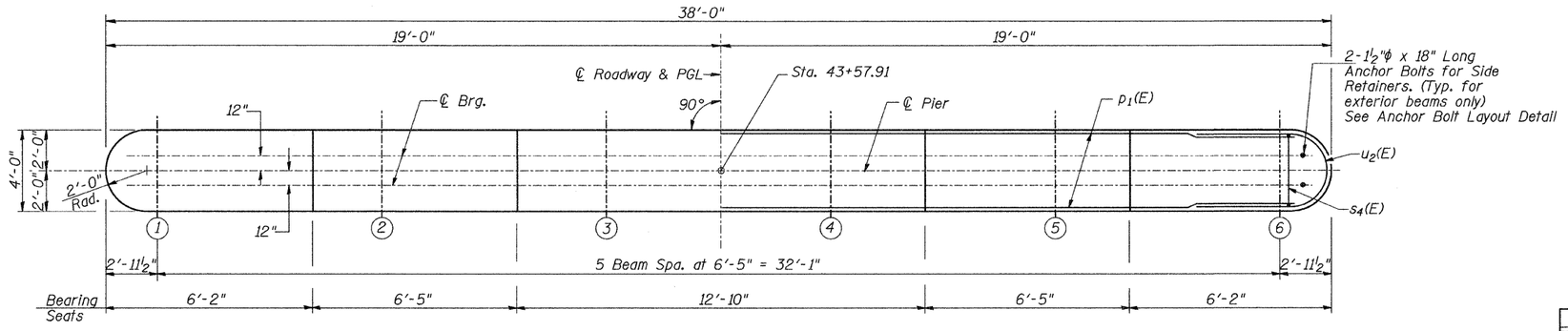
BAR u(E)

EAST ABUTMENT
C.H. 12 OVER JOES CREEK
SECTION 07-00090-00-BR
MACOUPIN COUNTY

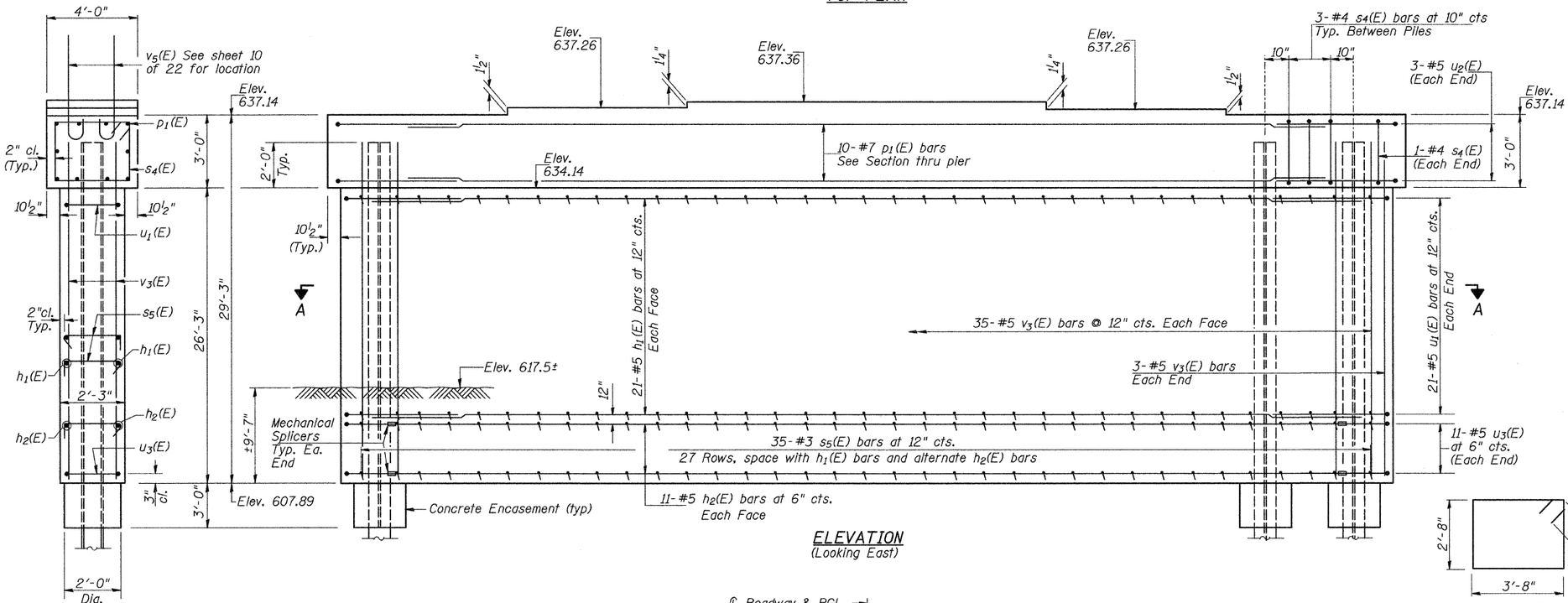
SHEET NO. 16	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
22 SHEETS	CH 12	07-00090-00-BR	MACOUPIN	77	45
		SN 059-3557	CONTRACT NO. 93538		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		

2576-2B016

Notes: Space reinforcement in cap to miss anchor bolts. Pour steps monolithically with cap.

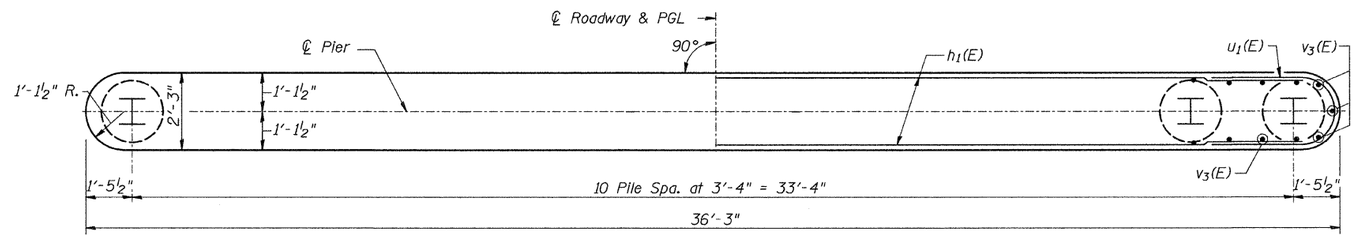


TOP PLAN



ELEVATION
(Looking East)

SECTION THRU PIER

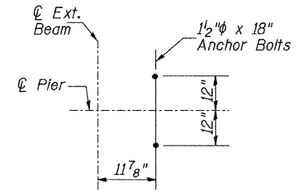


SECTION A-A

PILE DATA

Type: Steel HP12x53
Nominal Required Bearing: 320 kips
Factored Resistance Available: 160 kips
Est. Length: 76'
No. Production Piles: 10
No. Test Piles: 1

Notes: For details of Piles and Concrete Encasement, see sheet 20 of 22.
For Side Retainer Details, see sheet 9 of 22.
If a portion of the pier wall is under water, concrete shall be tremied under water into forms according to Article 503.08 of the Standard Specifications. Concrete shall be tremied to an elevation 1'-0" above the water level at the time of construction.

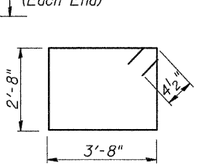


ANCHOR BOLT LAYOUT FOR SIDE RETAINER

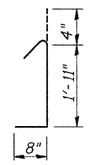
BILL OF MATERIAL - PIER #1

	Bar	No.	Size	Length	Shape
	h_1(E)	42	#5	34'-0"	
	h_2(E)	22	#5	31'-0"	
	p_1(E)	10	#7	34'-0"	
	s_4(E)	32	#4	13'-5"	
	s_5(E)	945	#3	2'-11"	
	u_1(E)	42	#5	9'-0"	
	u_2(E)	6	#5	11'-8"	
	u_3(E)	22	#5	6'-0"	
	v_3(E)	76	#5	28'-3"	
	v_5(E)	30	#8	4'-5"	
	Anchor Bolts, 1½"			Each	4
	Structure Excavation			Cu. Yd.	90
	Concrete Encasement			Cu. Yd.	3.8
	Concrete Structures			Cu. Yd.	95.4
①	Reinforcement Bars, Epoxy Coated			Pound	7,420
	Furnishing Steel Piles HP12x53			Foot	760
①	Driving Piles			Foot	760
①	Mechanical Splicers			Each	44
①	Test Pile Steel HP12x53			Each	1
①	Underwater Structure Excavation Protection, Location 1			Each	1

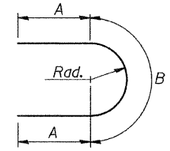
① See Special Provisions



BAR s_4(E)

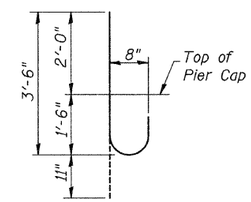


BAR s_5(E)



BAR u_1(E), u_2(E) & u_3(E)

BAR	A	B	Rad.
u_1(E)	3'-0"	3'-0"	11½"
u_2(E)	3'-0"	5'-7½"	1'-9½"
u_3(E)	1'-6"	3'-0"	11½"



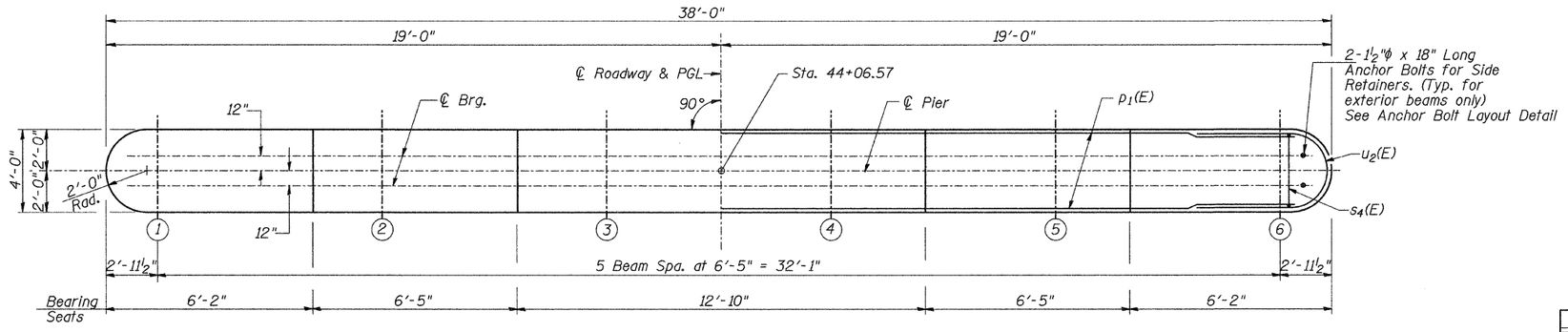
BAR v_5(E)

PIER #1
C.H. 12 OVER JOES CREEK
SECTION 07-00090-00-BR
MACOUPIN COUNTY

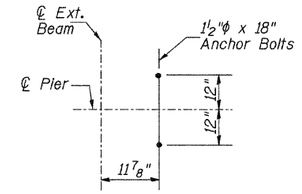
	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SHEET NO. 17	CH 12	07-00090-00-BR	MACOUPIN	77	46
22 SHEETS		SN 059-3557	CONTRACT NO. 93538		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		

2576-2B017

Notes: Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.



TOP PLAN

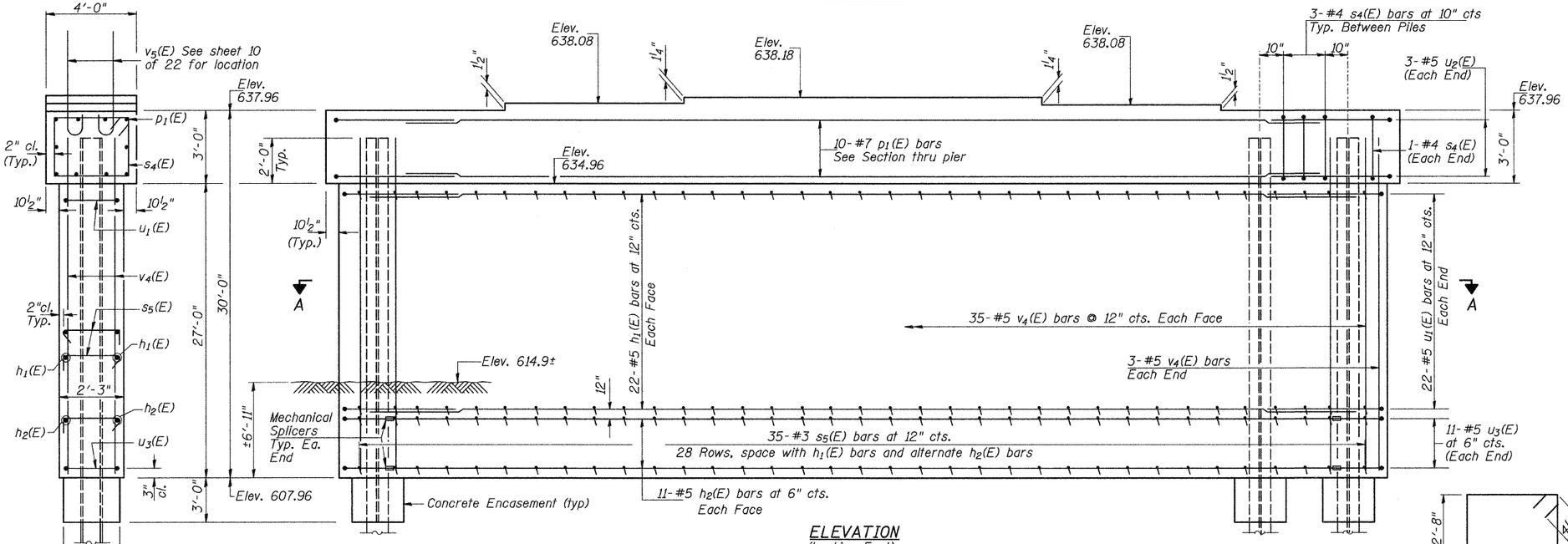


ANCHOR BOLT LAYOUT FOR SIDE RETAINER

BILL OF MATERIAL - PIER #2

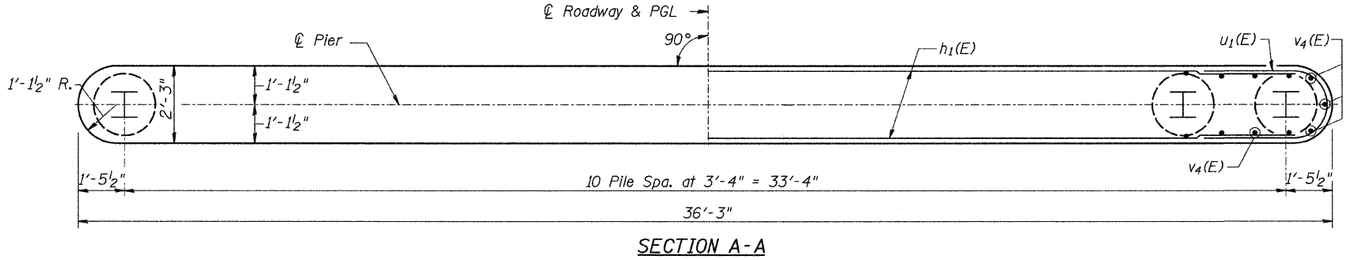
	Bar	No.	Size	Length	Shape
	h1(E)	44	#5	34'-0"	
	h2(E)	22	#5	31'-0"	
	p1(E)	10	#7	34'-0"	
	s4(E)	32	#4	13'-5"	
	s5(E)	980	#3	2'-11"	
	u1(E)	44	#5	9'-0"	
	u2(E)	6	#5	11'-8"	
	u3(E)	22	#5	6'-0"	
	v4(E)	76	#5	29'-0"	
	v5(E)	30	#8	4'-5"	
	Anchor Bolts, 1½"			Each	4
	Structure Excavation			Cu. Yd.	65
	Concrete Encasement			Cu. Yd.	3.8
	Concrete Structures			Cu. Yd.	97.7
①	Reinforcement Bars, Epoxy Coated			Pound	7,610
	Furnishing Steel Piles HP12x53			Foot	670
①	Driving Piles			Foot	670
①	Mechanical Splicers			Each	44
①	Test Pile Steel HP12x53			Each	1
①	Underwater Structure Excavation Protection, Location 2			Each	1

① See Special Provisions

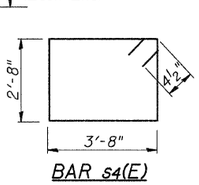


SECTION THRU PIER

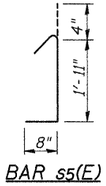
ELEVATION
(Looking East)



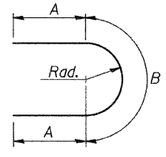
SECTION A-A



BAR s4(E)

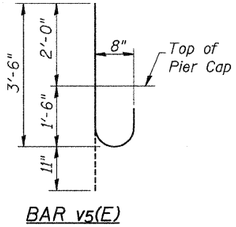


BAR s5(E)



BAR u1(E), u2(E) & u3(E)

BAR	A	B	Rad.
u1(E)	3'-0"	3'-0"	11½"
u2(E)	3'-0"	5'-7½"	1'-9½"
u3(E)	1'-6"	3'-0"	11½"



BAR v5(E)

PILE DATA

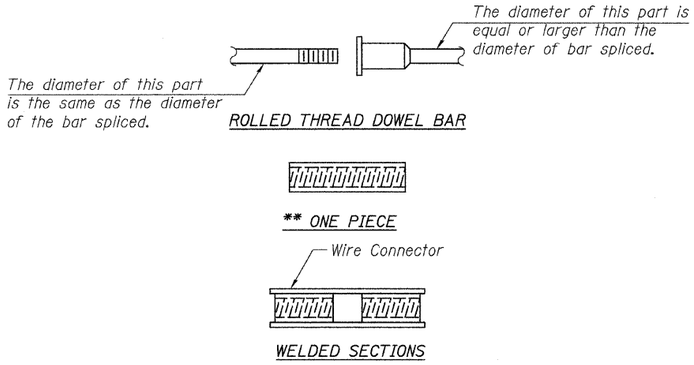
Type: Steel HP12x53
Nominal Required Bearing: 320 kips
Factored Resistance Available: 160 kips
Est. Length: 67'
No. Production Piles: 10
No. Test Piles: 1

Notes: For details of Piles and Concrete Encasement, see sheet 20 of 22.
For Side Retainer Details, see sheet 9 of 22.
If a portion of the pier wall is under water, concrete shall be tremied under water into forms according to Article 503.08 of the Standard Specifications. Concrete shall be tremied to an elevation 1'-0" above the water level at the time of construction.

PIER #2
C.H. 12 OVER JOES CREEK
SECTION 07-00090-00-BR
MACOUPIN COUNTY

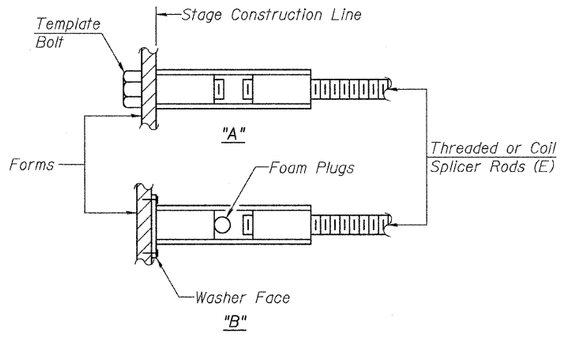
SHEET NO. 18	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
22 SHEETS	CH 12	07-00090-00-BR	MACOUPIN	77	47
		SN 059-3557	CONTRACT NO. 93538		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		

2576-2B018



BAR SPLICER ASSEMBLY ALTERNATIVES

**Heavy Hex Nuts conforming to ASTM A 563, Grade C, D or DH may be used.



INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.
(E) : Indicates epoxy coating.

NOTES

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.

Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.

All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.

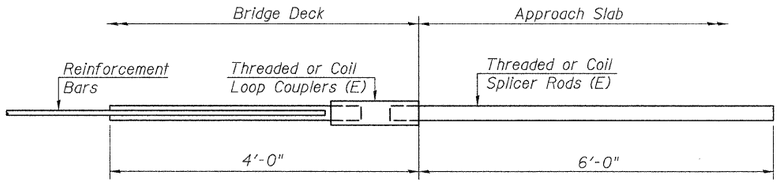
Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

① Minimum Capacity (Tension in kips) = $1.25 \times f_y \times A_t$

② Minimum *Pull-out Strength (Tension in kips) = $0.66 \times f_y \times A_t$

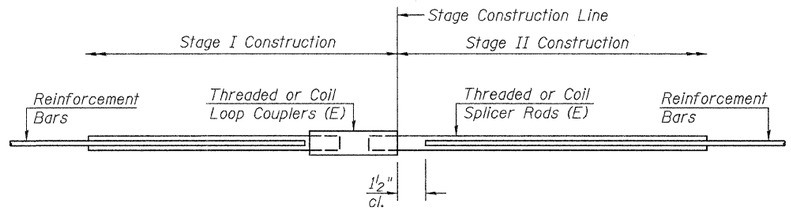
Where f_y = Yield strength of lapped reinforcement bars in ksi.
A_t = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	7.9
#5	2'-2"	23.0	12.3
#6	2'-7"	33.1	17.4
#7	3'-5"	45.1	23.8
#8	4'-6"	58.9	31.3
#9	5'-9"	75.0	39.6
#10	7'-3"	95.0	50.3
#11	9'-0"	117.4	61.8



FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 12.3 kips - tension
No. Required = 48



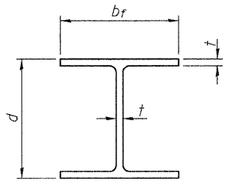
STANDARD

Bar Size	No. Assemblies Required	Location

BAR SPLICER ASSEMBLY DETAILS
C.H. 12 OVER JOES CREEK
SECTION 07-00090-00-BR
MACOUPIN COUNTY

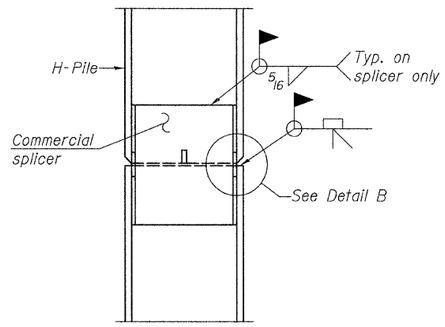
SHEET NO. 19	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
22 SHEETS	CH 12	07-00099-00-BR	MACOUPIN	77	48
	SN 059-3557		CONTRACT NO. 93538		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		

2576-2B019

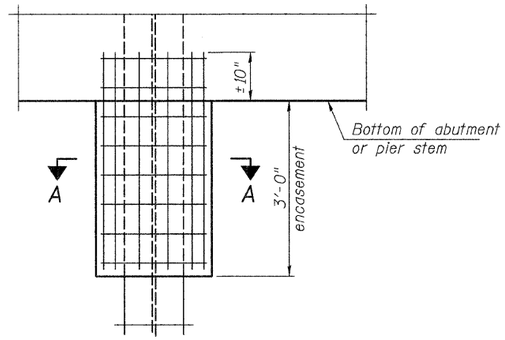


STEEL PILE TABLE

Designation	Depth d	Flange width b_f	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	13/16"	30"
x102	14"	14 3/4"	11/16"	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"	11/16"	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"



ELEVATION



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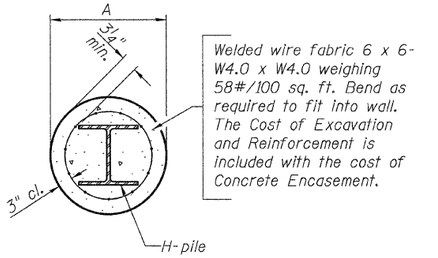
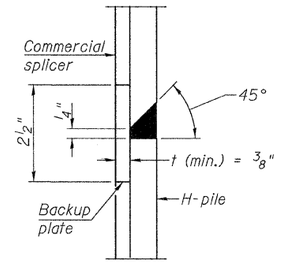


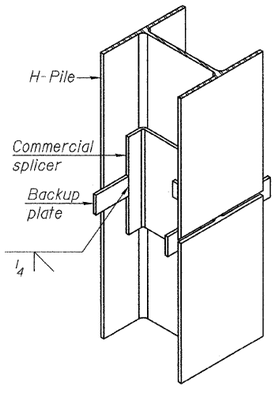
Note:
Forms for encasement may be omitted when soil conditions permit.

SECTION A-A

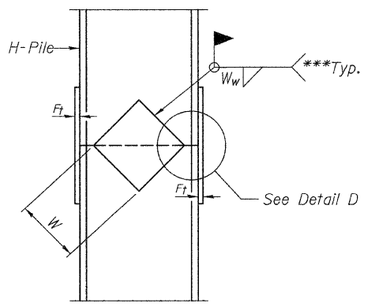
PILE ENCASEMENT



DETAIL "B"



ISOMETRIC VIEW



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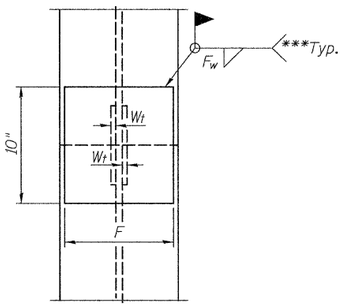
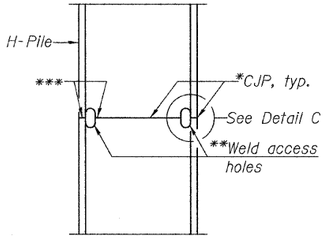


END VIEW

WELDED COMMERCIAL SPLICE



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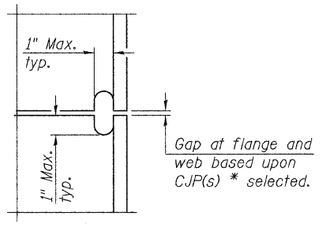
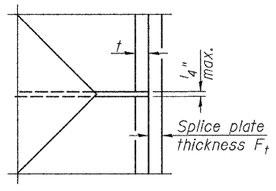


DETAIL C



DETAIL D

Designation	F	F_t	F_w	W	W_t	W_w
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"	11/16"	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"	11/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	11/16"	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

COMPLETE PENETRATION WELD SPLICE

* Use joint conforming to Figure 3.4 in AWS D1.1, Structure Welding Code - Steel.

** Preparation per Fig. 5.2 in AWS D1.1, Structure Welding Code - Steel.

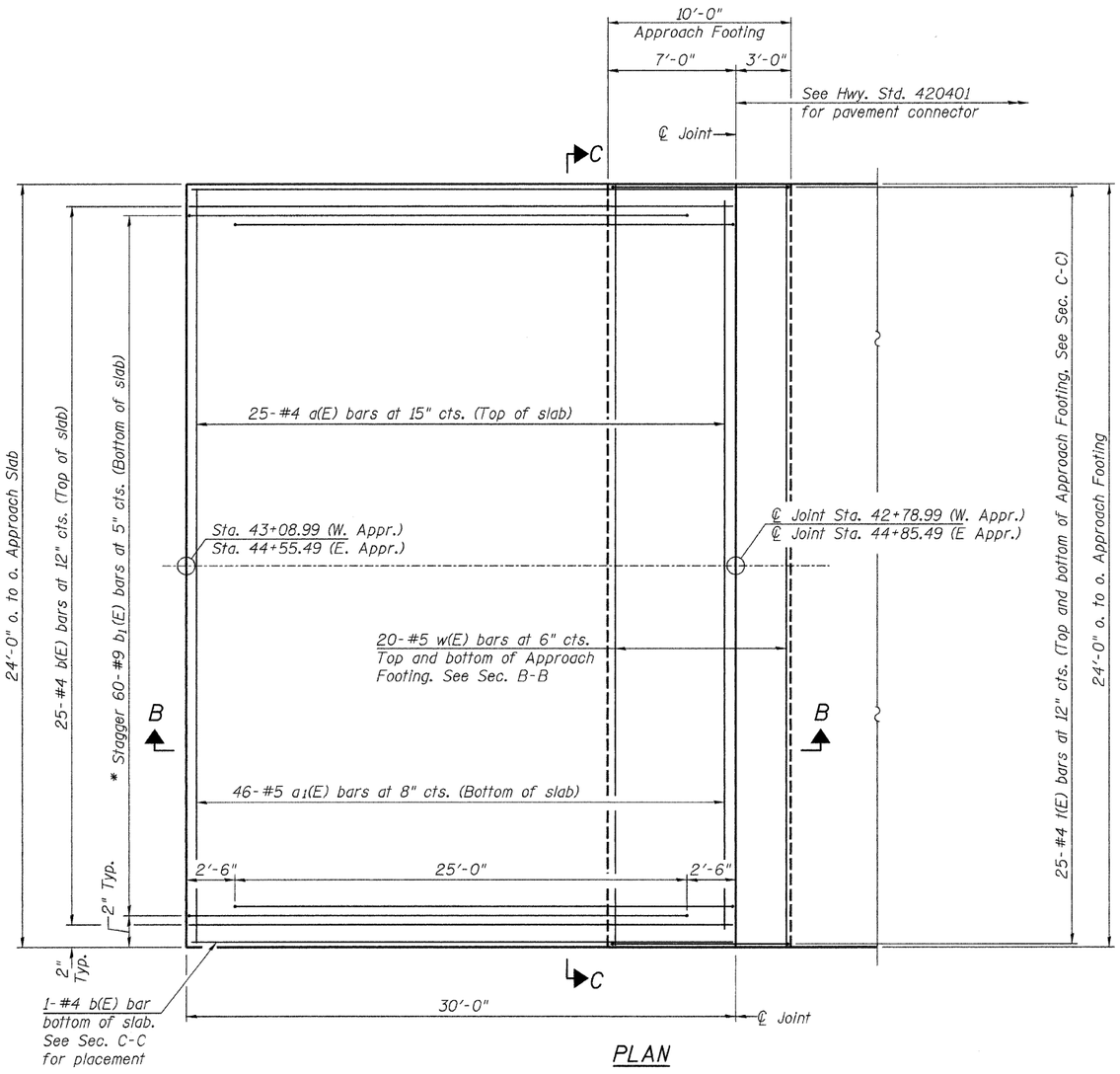
*** Interrupt welds 1/4" from end of each pile.

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

HP PILE DETAILS
C.H. 12 OVER JOES CREEK
SECTION 07-00090-00-BR
MACOUPIN COUNTY

SHEET NO. 20	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
22 SHEETS	CH 12	07-00090-00-BR	MACOUPIN	77	49
		SN 059-3557		CONTRACT NO. 93538	
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		

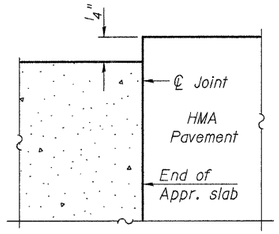
2576-2B020



PLAN

* Tilt #9 $b_1(E)$ bars as required to maintain clearance.

Notes:
See sheet 22 of 22 for Sections B-B & C-C.
a(E), $a_1(E)$, and w(E) bar spacings measured perpendicular to ℄ Rdwy.



FLEXIBLE PAVEMENT

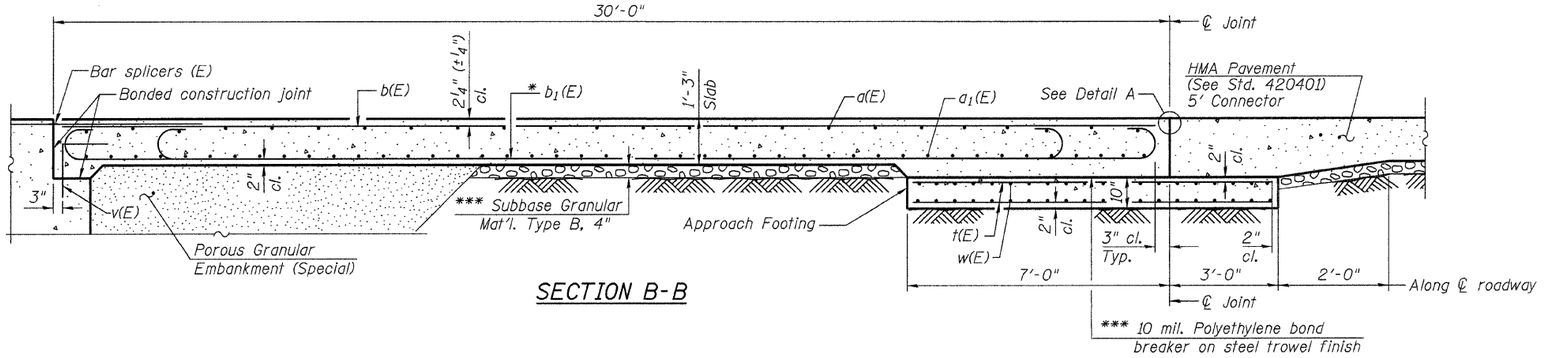
DETAIL A

(Sheet 1 of 2)

BRIDGE APPROACH PAVEMENT DETAILS
C.H. 12 OVER JOES CREEK
SECTION 07-00090-00-BR
MACOUPIN COUNTY

SHEET NO. 21	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
22 SHEETS	CH 12	07-00090-00-BR	MACOUPIN	77	50
		SN 059-3557	CONTRACT NO. 93538		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		

2576-2B021



SECTION B-B

Notes:

See sheet 21 of 22 for Detail A.

For v(E) bar details, see sheet 8 of 22.

The approach footing maximum applied service bearing pressure (Qmax) = 2.0 ksf.

For bar splicer details, see sheet 19 of 22.

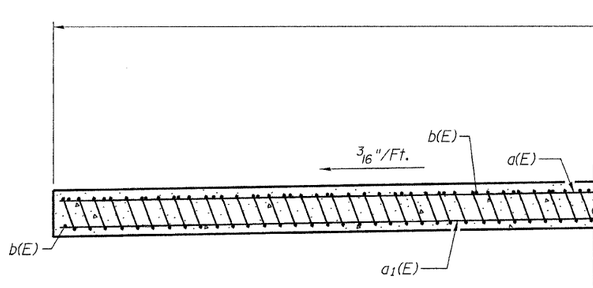
For Porous Granular Embankment (Special) and drainage treatment details, see sheet 2 of 22.

Approach slab concrete shall be Class BS.

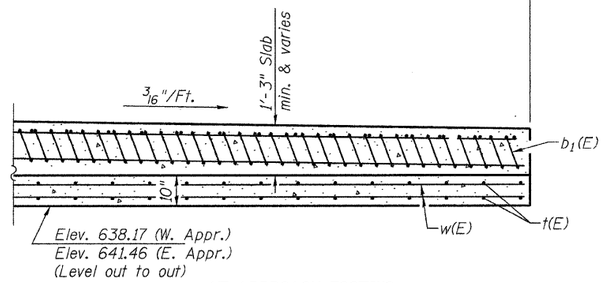
Approach footing concrete shall be Class SI.

The cost of concrete and reinforcement in approach slab and footing are included with Bridge Approach Pavement.

The cost of Excavation for approach footing is included with Bridge Approach Pavement.



NEAR ABUTMENT



AT APPROACH FOOTING

SECTION C-C

(See Plan for dimensions not shown)

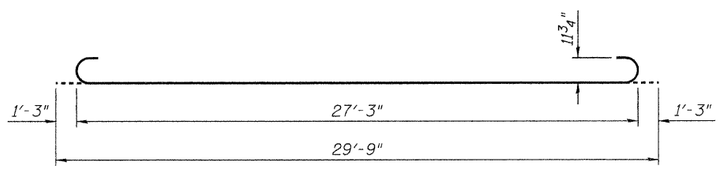
* Tilt #9 b1(E) bars as required to maintain clearance.

*** Cost included with Bridge Approach Pavement.

**BAR LIST
ONE APPROACH PAVEMENT

Bar	No.	Size	Length	Shape
a(E)	25	#4	23'-8"	——
a1(E)	46	#5	23'-8"	——
b(E)	26	#4	29'-8"	——
b1(E)	60	#9	29'-9"	⊂——⊃
t(E)	50	#4	9'-8"	——
w(E)	40	#5	23'-8"	——

**For information only



BAR b1(E)

TWO APPROACHES
BILL OF MATERIAL

Item	Unit	Total
Bridge Approach Pavement	Sq Yd	160

(Sheet 2 of 2)

BRIDGE APPROACH PAVEMENT DETAILS
C.H. 12 OVER JOES CREEK
SECTION 07-00090-00-BR
MACOUPIN COUNTY

SHEET NO. 22	ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
22 SHEETS	CH 12	07-00090-00-BR	MACOUPIN	77	51
	SN 059-3557		CONTRACT NO. 93538		
	FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		

2576-2B022

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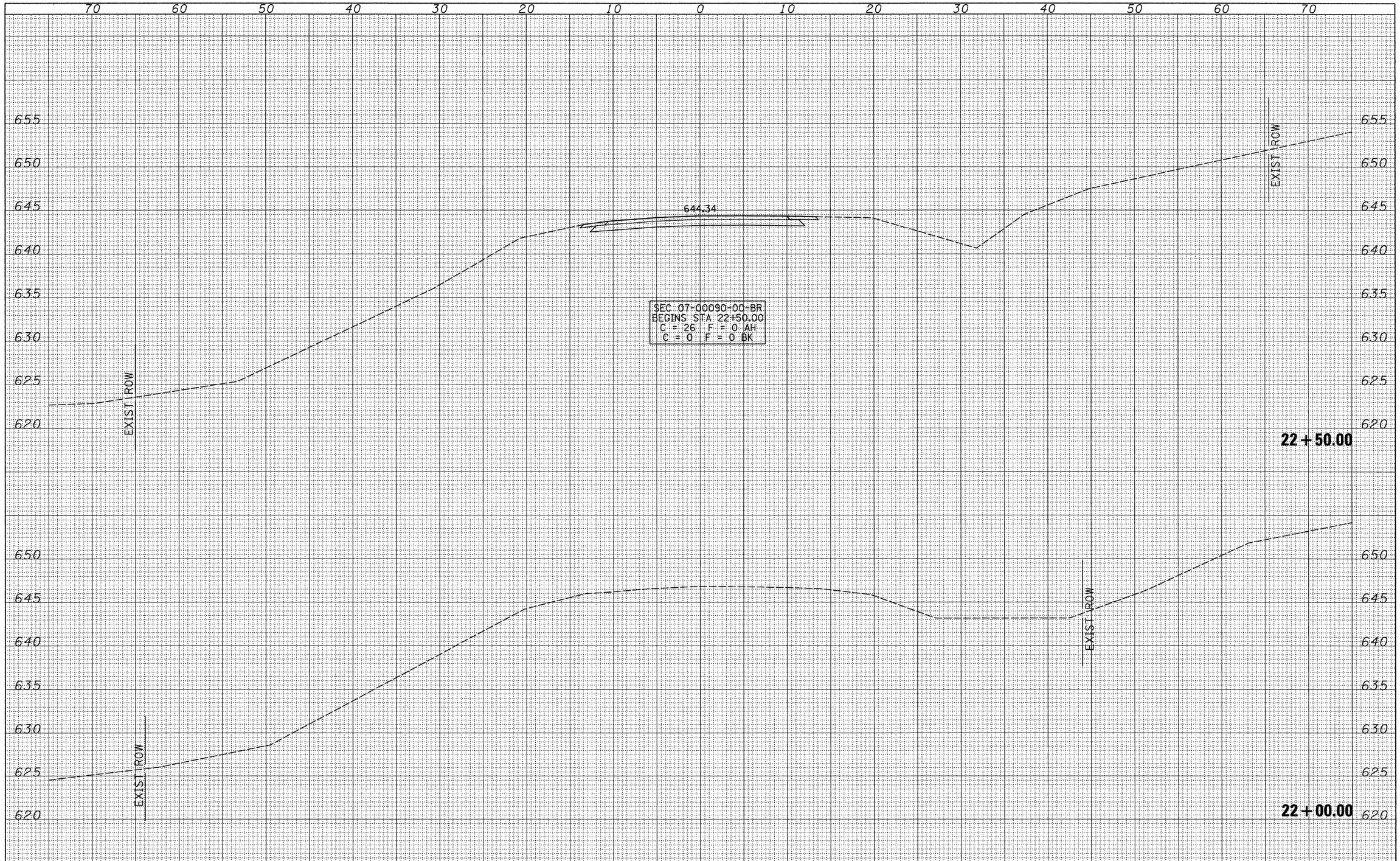
	AREAS	SURVEYED
	AREAS CHECKED	PLOTTED
		TEMPLATE
BY		
DATE		



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	AREAS CHECKED	PLOTTED
		TEMPLATE
BY		
DATE		

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	PLOT DATE = 5/17/2010	DATE -	REVISED -

MACOUPIN COUNTY
COUNTY HIGHWAY 12
OVER HICKS CREEK AND JOES CREEK

CROSS SECTIONS

SCALE: 1"=5' | SHEET NO. 1 OF 26 SHEETS | STA. 22+00.000 TO STA. 22+50.000

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
732	07-00090-00-BR	MACOUPIN	77	52
		CONTRACT NO.		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		

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

70 60 50 40 30 20 10 0 10 20 30 40 50 60 70

655 650 645 640 635 630 625

MATCH LINE

15%

639.94

C = 17 F = 28
ENT C = 0 F = 183

3:1

2:1

SD 634.0

90.4'

PROP ROW

EXIST ROW

MATCH LINE 630 625

100 90 80

23 + 50.00
FE LT

655 650 645 640 635 630 625 620

SP DT RT BEGINS
STA 23+00.00
GRADE = -8.80%
ELEV. 638.39

642.01

3:1

3:1

3:1

SD 638.4

91.3'

EXIST ROW

SP DT RT ENDS
STA 23+00.00
GRADE = -5.96%
ELEV. 638.39

C = 33 T = 192

SP DT RT BEGINS
STA 22+77.00
GRADE = -5.96%
ELEV. 639.76

EXIST ROW

23 + 00.00

70 60 50 40 30 20 10 0 10 20 30 40 50 60 70

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	PLOTTED		
NOTE BOOK	TEMPLATE		
	AREAS		
NO.	AREAS CHECKED		DATE

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	PLOT DATE = 5/17/2010	DATE -	REVISED -

MACOUPIN COUNTY
COUNTY HIGHWAY 12
OVER HICKS CREEK AND JOES CREEK

CROSS SECTIONS

SCALE: 1"=5' | SHEET NO. 2 OF 26 SHEETS | STA. 23+00.000 TO STA. 23+50.000

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
732	07-00090-00-BR	MACOUPIN	77	53
		CONTRACT NO.		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		

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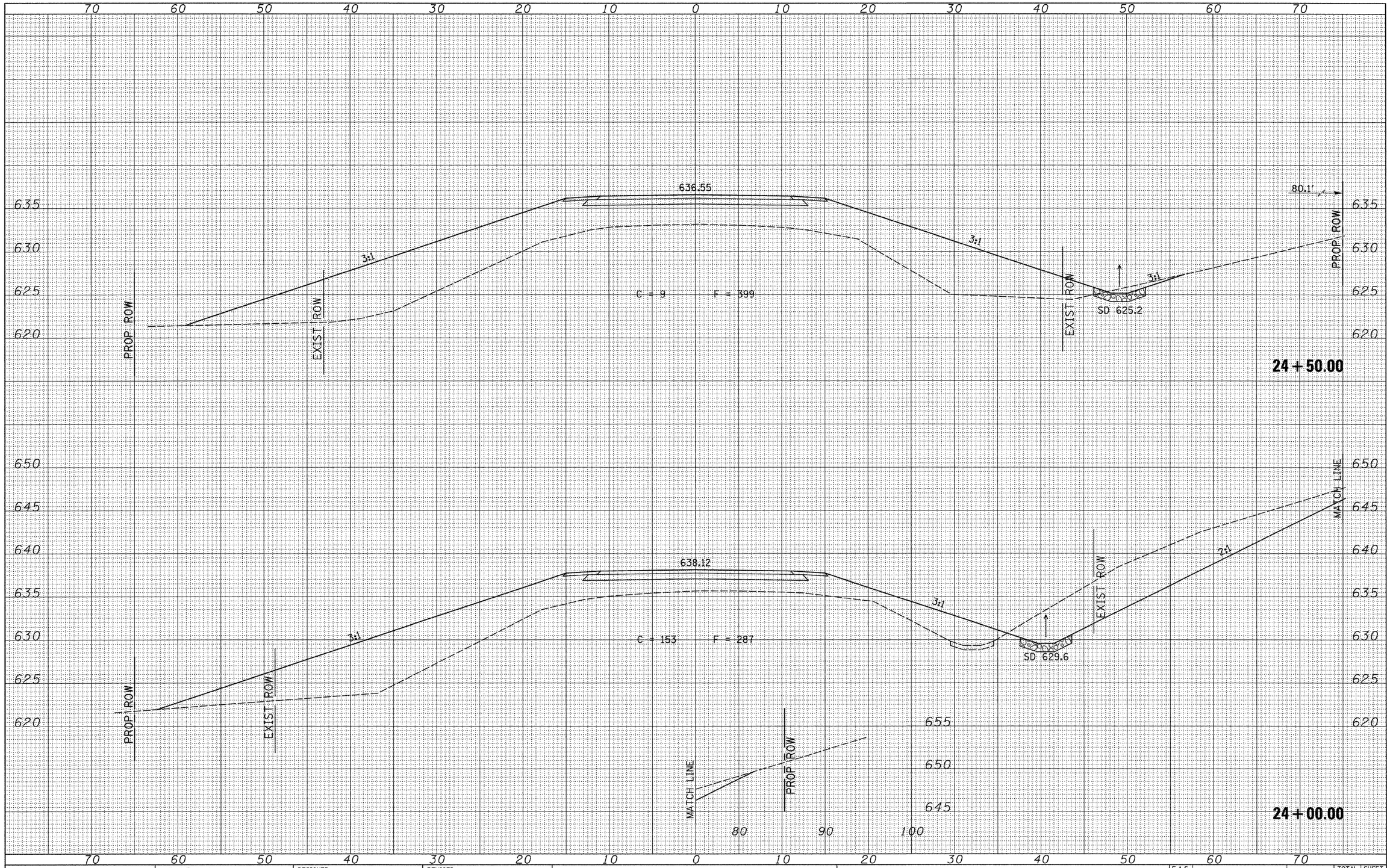
	AREAS CHECKED	



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	TYPED/PLATE	
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	AREAS CHECKED	

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MACOUPIN COUNTY
COUNTY HIGHWAY 12
OVER HICKS CREEK AND JOES CREEK

CROSS SECTIONS

SCALE: 1"=5' | SHEET NO. 3 OF 26 SHEETS | STA. 24+00.000 TO STA. 24+50.000

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
732	07-00090-00-BR	MACOUPIN	77	54
		CONTRACT NO. 93538		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		

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

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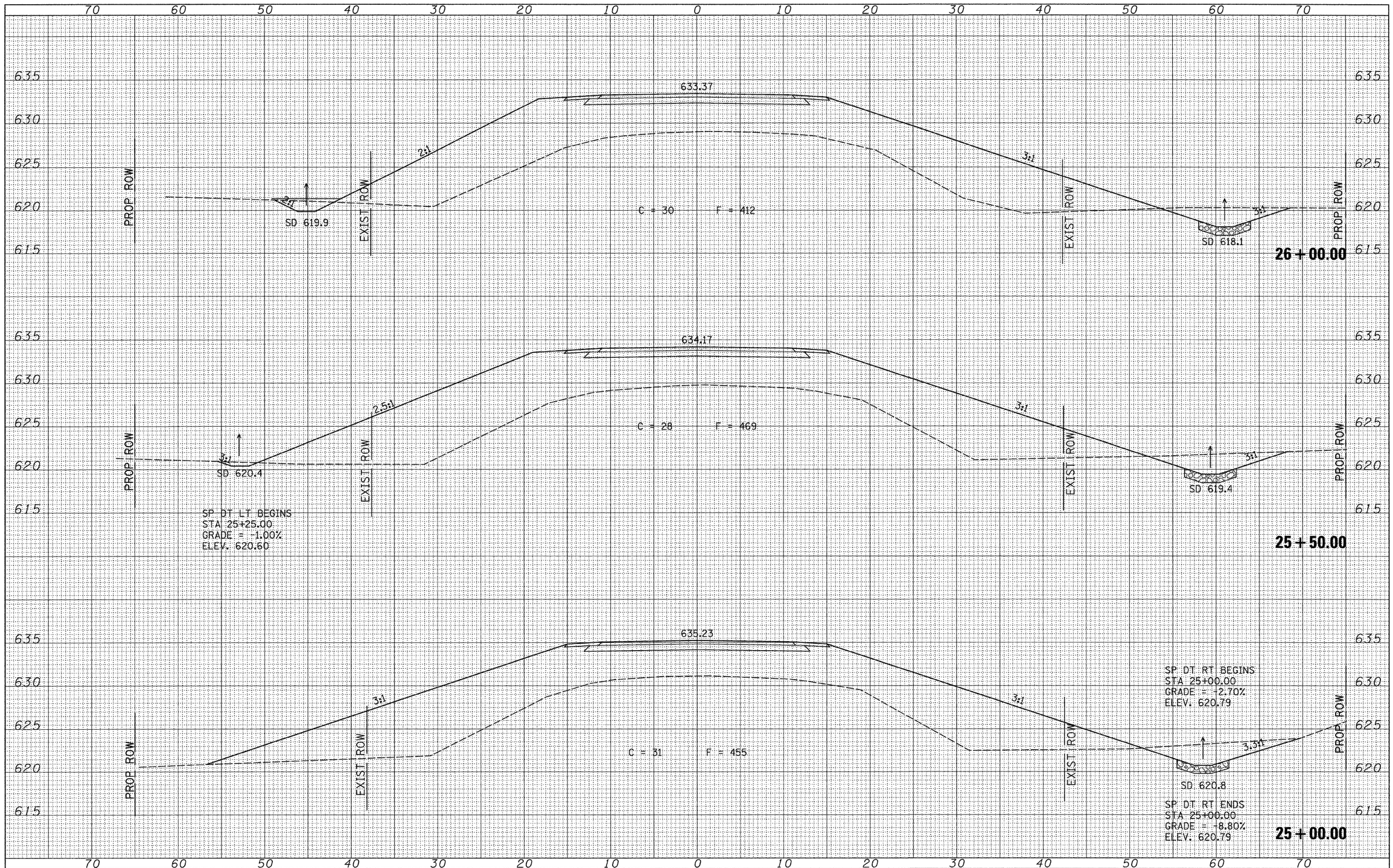
PLOTTED		
TYPED		
AREAS		
AREAS CHECKED		



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MACOUPIN COUNTY
COUNTY HIGHWAY 12
OVER HICKS CREEK AND JOES CREEK

CROSS SECTIONS

SCALE: 1"=5' | SHEET NO. 4 OF 26 SHEETS | STA. 25+00.000 TO STA. 26+00.000

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
732	07-00090-00-BR	MACOUPIN	77	55
		CONTRACT NO. 93538		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		

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

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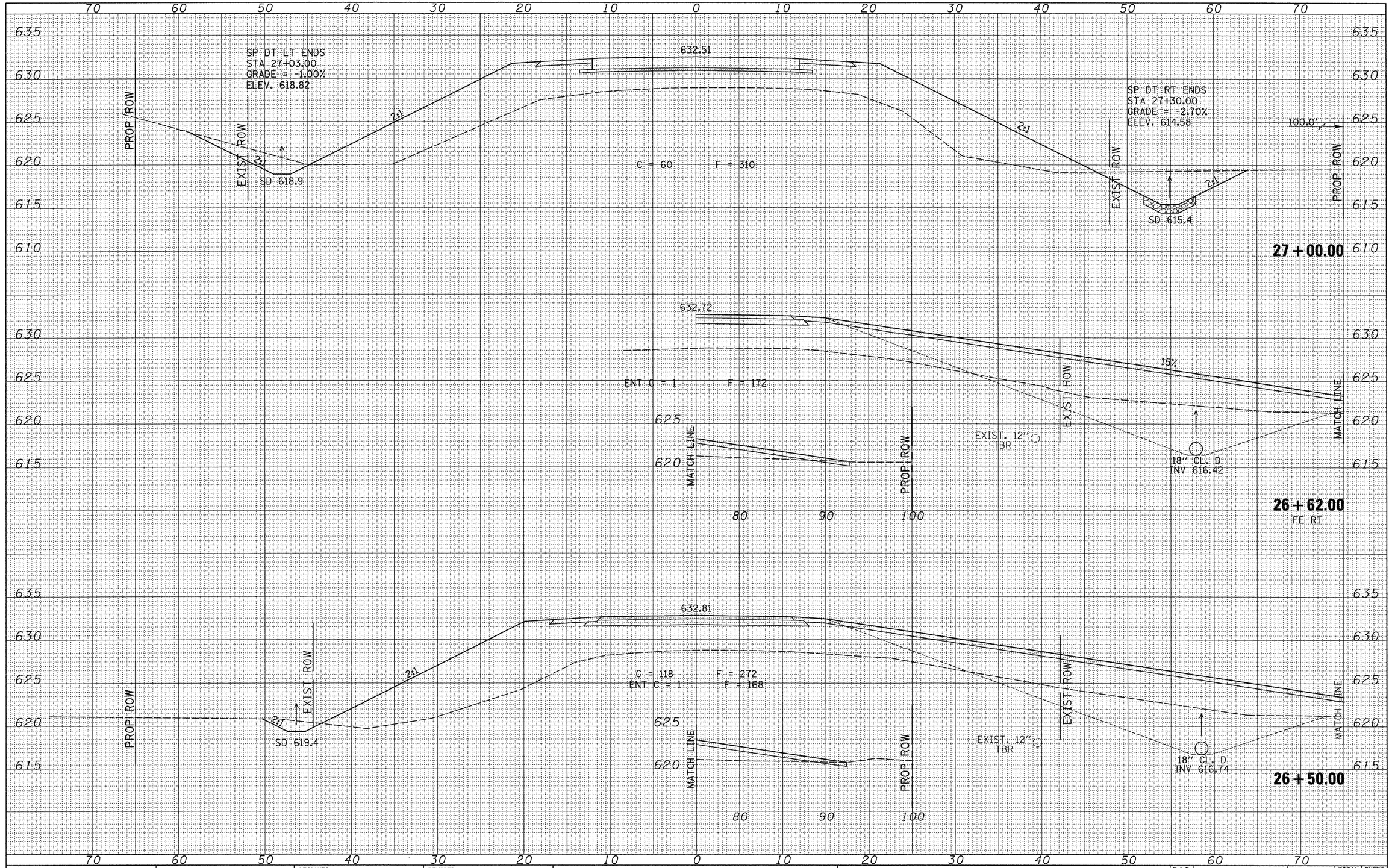
PLOTTED		
TEMPLATE		
AREAS		
AREAS CHECKED		



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MACOUPIN COUNTY
COUNTY HIGHWAY 12
OVER HICKS CREEK AND JOES CREEK

CROSS SECTIONS

SCALE: 1"=5' | SHEET NO. 5 OF 26 SHEETS | STA. 26+50.000 TO STA. 27+00.000

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
732	07-00090-00-BR	MACOUPIN	77	56
		CONTRACT NO. 93538		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		

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SURVEYED		
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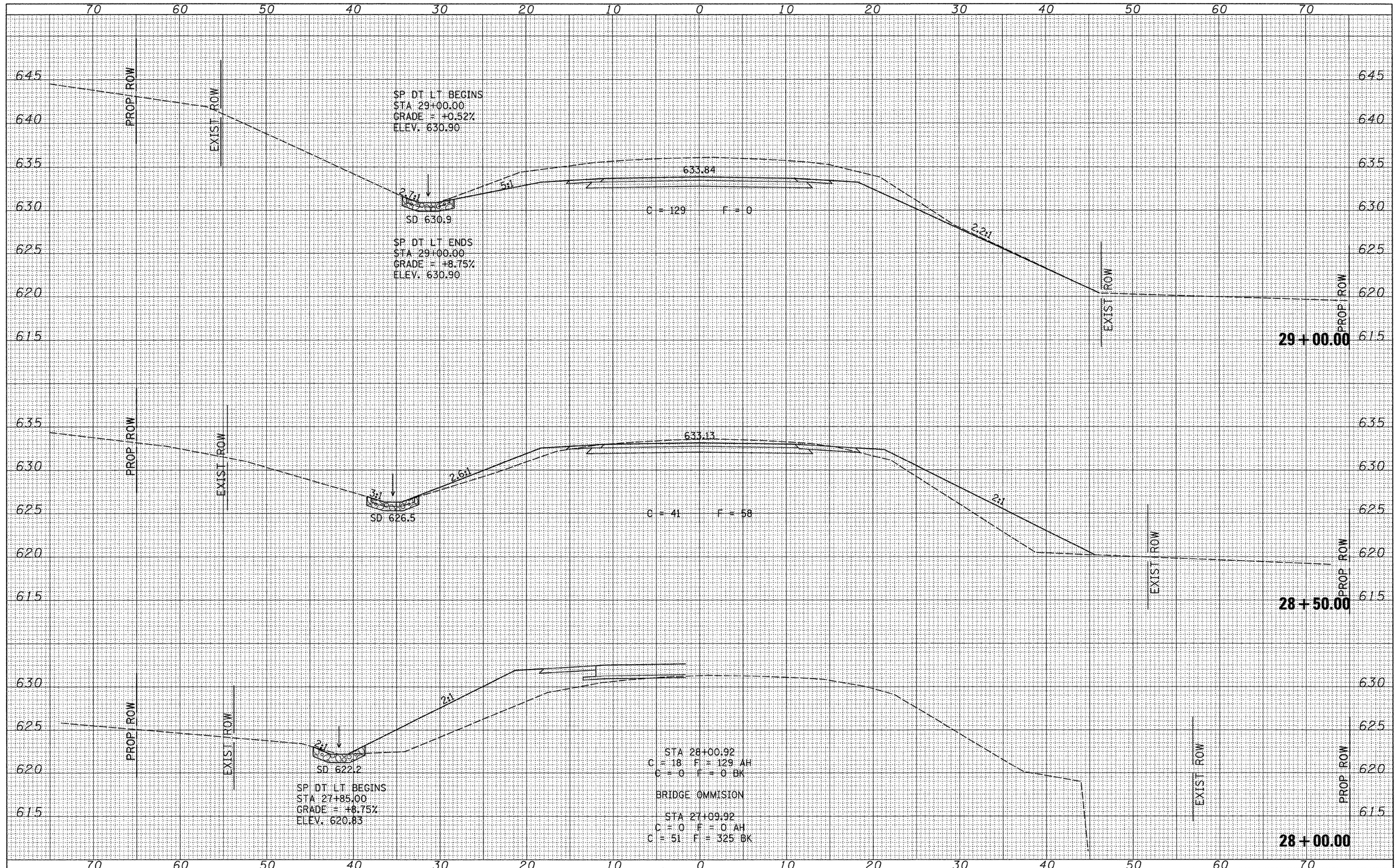
AREAS CHECKED		



ORIGINAL SURVEY	NOTE BOOK	NO.

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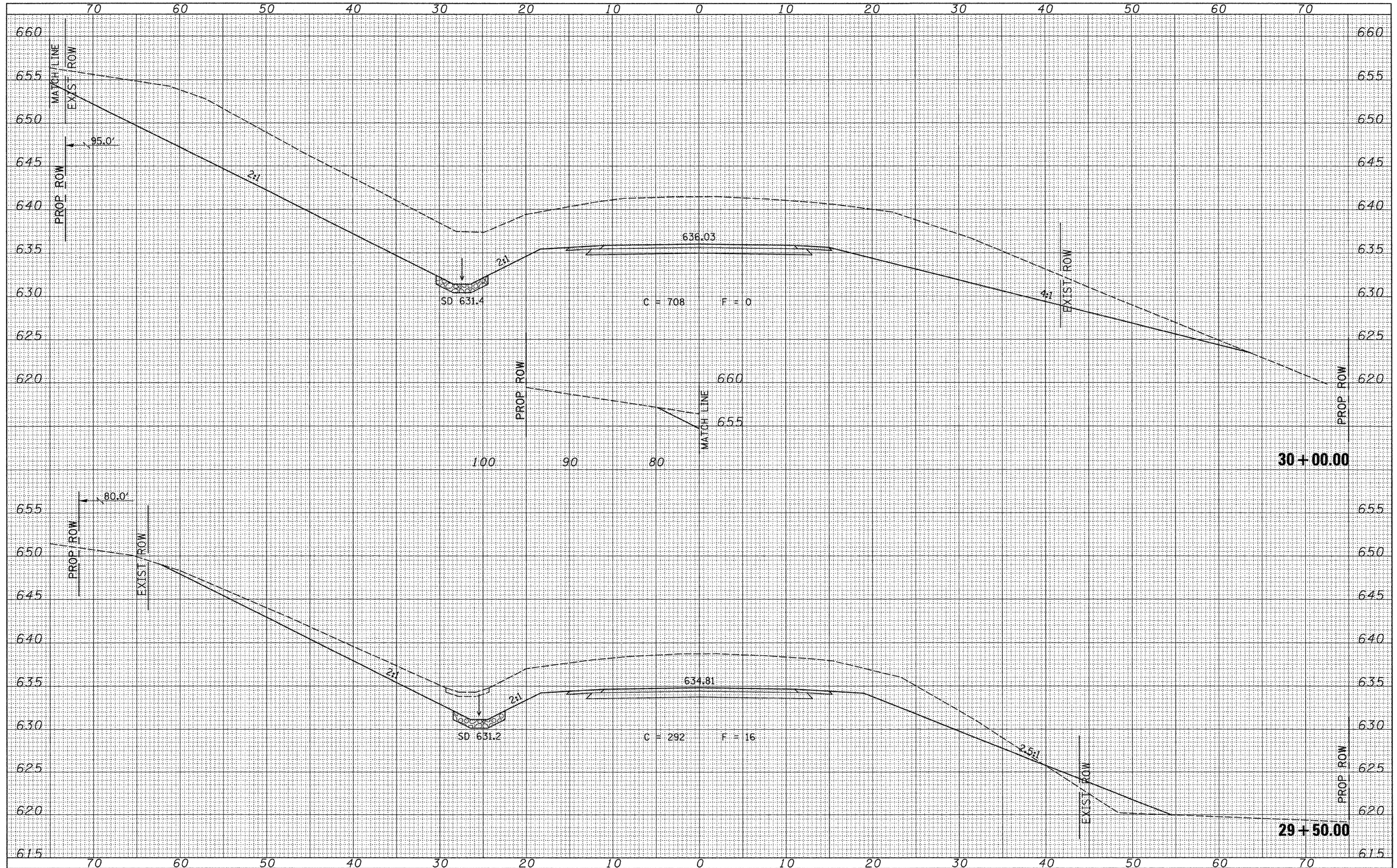
	PLOT DATE = 2/19/2010	DATE -	REVISED -

MACOUPIN COUNTY
COUNTY HIGHWAY 12
OVER HICKS CREEK AND JOES CREEK

CROSS SECTIONS

SCALE: 1"=5' | SHEET NO. 6 OF 26 SHEETS | STA. 28+00.000 TO STA. 29+00.000

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
732	07-00090-00-BR	MACOUPIN	77	57
		CONTRACT NO. 93538		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		



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

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

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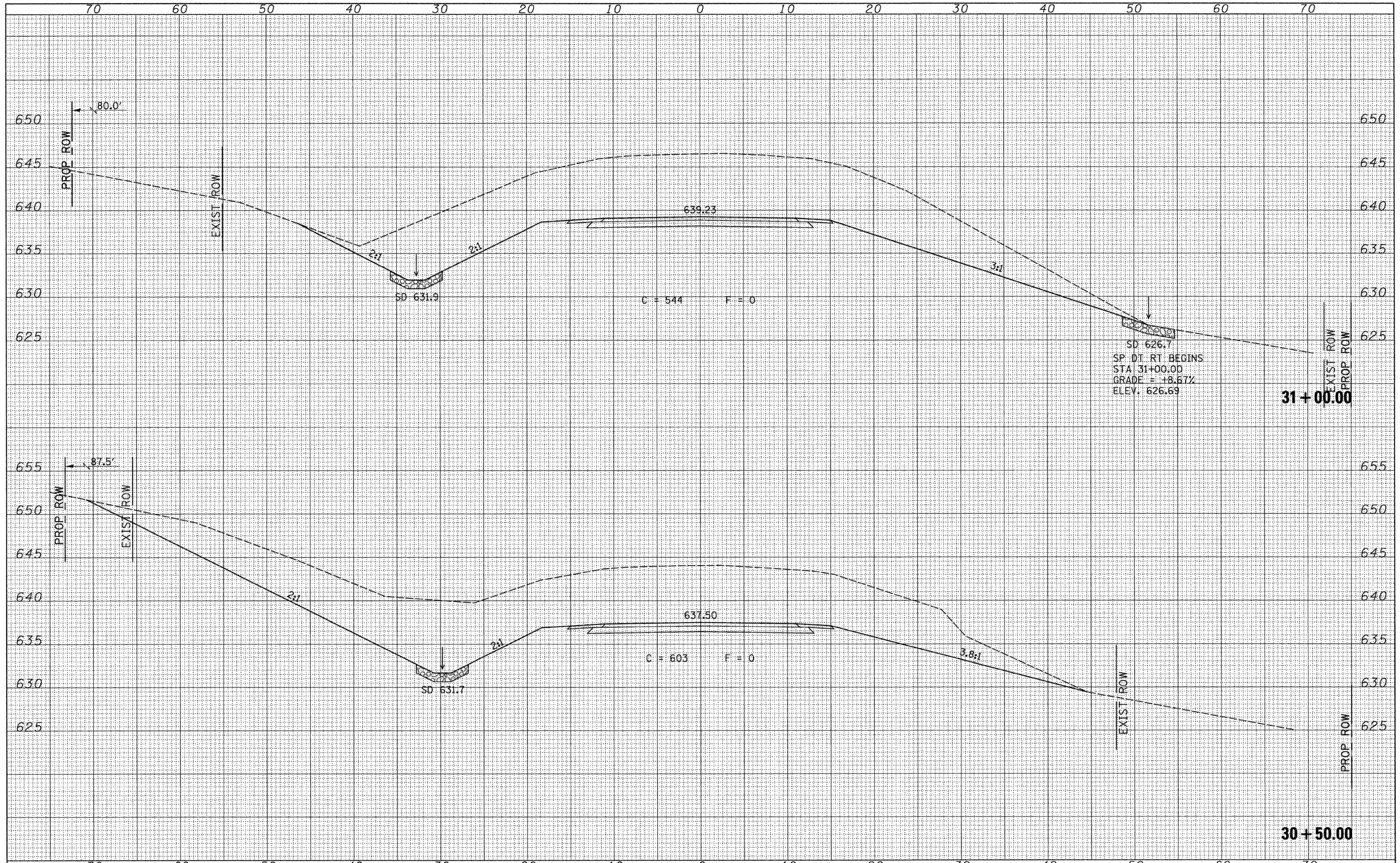
	PLOT DATE = 2/19/2010	DATE -	REVISED -

MACOUPIN COUNTY
COUNTY HIGHWAY 12
OVER HICKS CREEK AND JOES CREEK

CROSS SECTIONS

SCALE: 1"=5' | SHEET NO. 7 OF 26 SHEETS | STA. 29+50.000 TO STA. 30+00.000

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
732	07-00090-00-BR	MACOUPIN	77	58
		CONTRACT NO. 93538		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		



FINAL SURVEY	BY	DATE
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	AREAS	
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ORIGINAL SURVEY	BY	DATE
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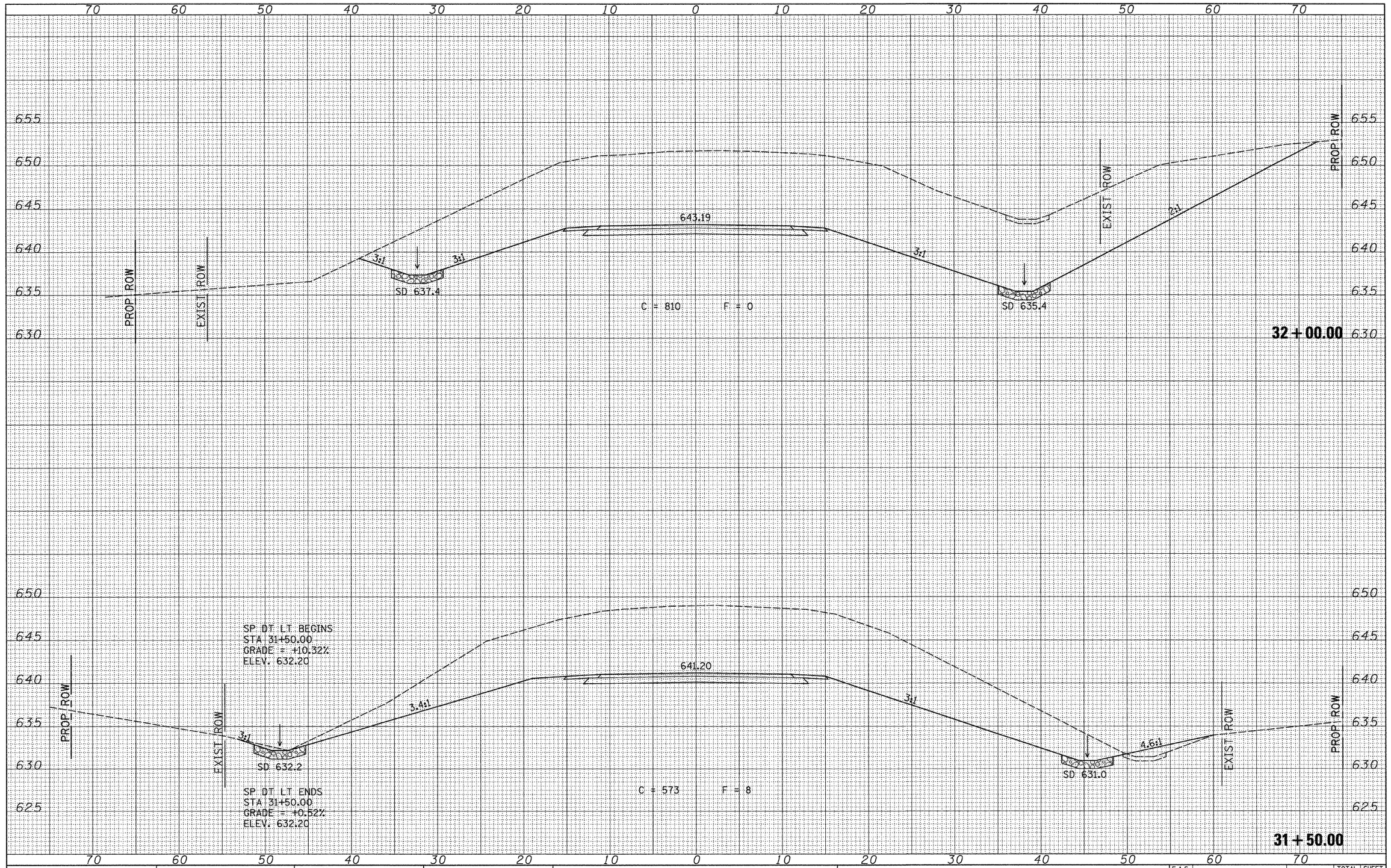
		DRAWN -	REVISED -
	PLOT SCALE = 5.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 2/19/2010	DATE -	REVISED -

MACOUPIN COUNTY
COUNTY HIGHWAY 12
OVER HICKS CREEK AND JOES CREEK

CROSS SECTIONS

SCALE: 1"=5' | SHEET NO. 8 OF 26 SHEETS | STA. 30+50.000 TO STA. 31+00.000

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
732	07-00090-00-BR	MACOUPIN	77	59
		CONTRACT NO. 93538		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		



FINAL SURVEY / ORIGINAL SURVEY

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

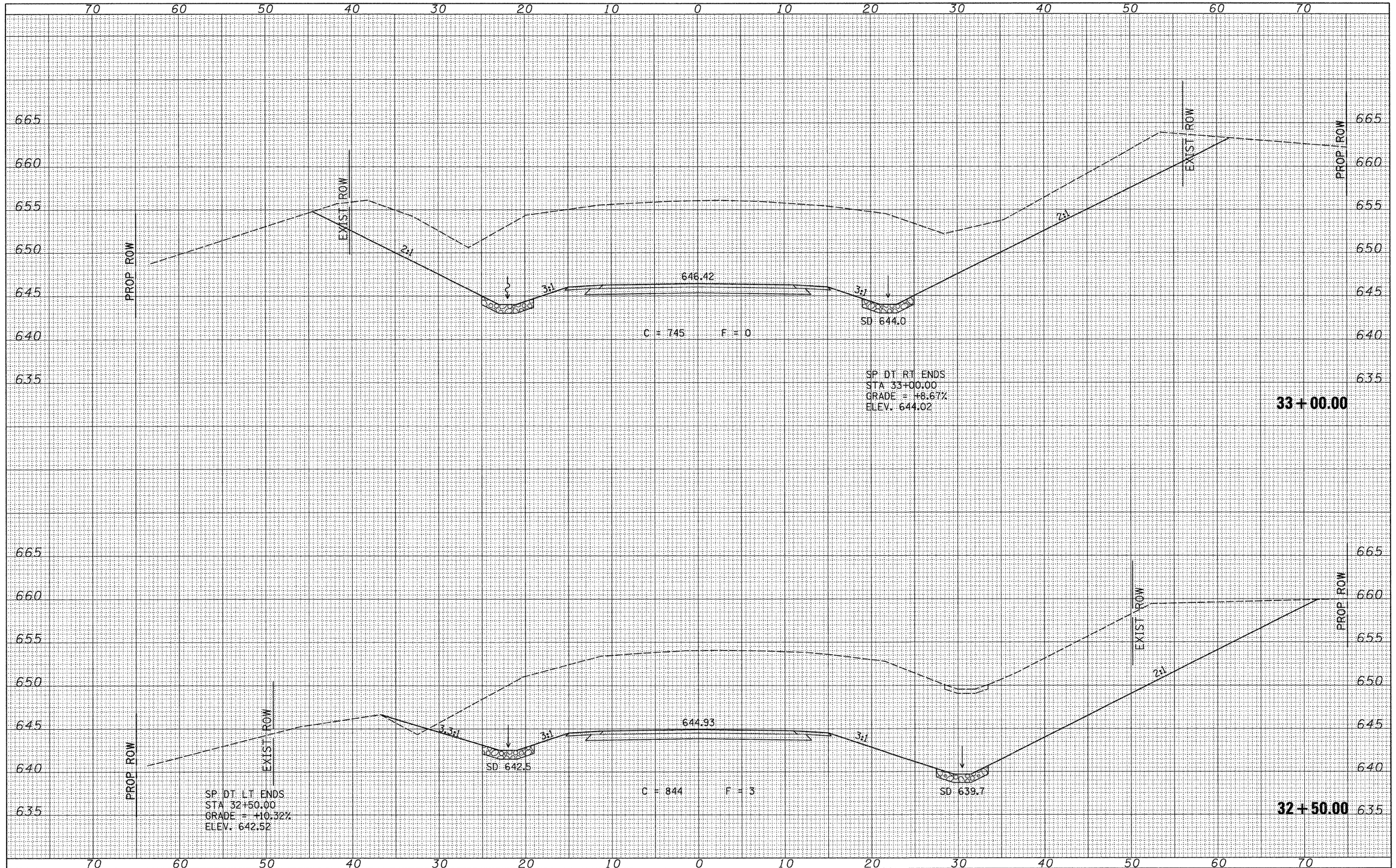
FILE NAME = V:\Bridge\2576-1 Macoupin\2576XSSHTS.dgn	USER NAME = othomas	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 5.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 2/19/2010	DATE -	REVISED -

MACOUPIN COUNTY
COUNTY HIGHWAY 12
OVER HICKS CREEK AND JOES CREEK

CROSS SECTIONS

SCALE: 1"=5' | SHEET NO. 9 OF 26 SHEETS | STA. 31+50.000 TO STA. 32+00.000

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
732	07-00090-00-BR	MACOUPIN	77	60
		CONTRACT NO. 93538		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		



FINAL SURVEY / ORIGINAL SURVEY

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

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V:\Bridge\2576-1 Macoupin\2576XSSHTS.dgn		DRAWN -	REVISED -
	PLOT SCALE = 5.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 2/19/2010	DATE -	REVISED -

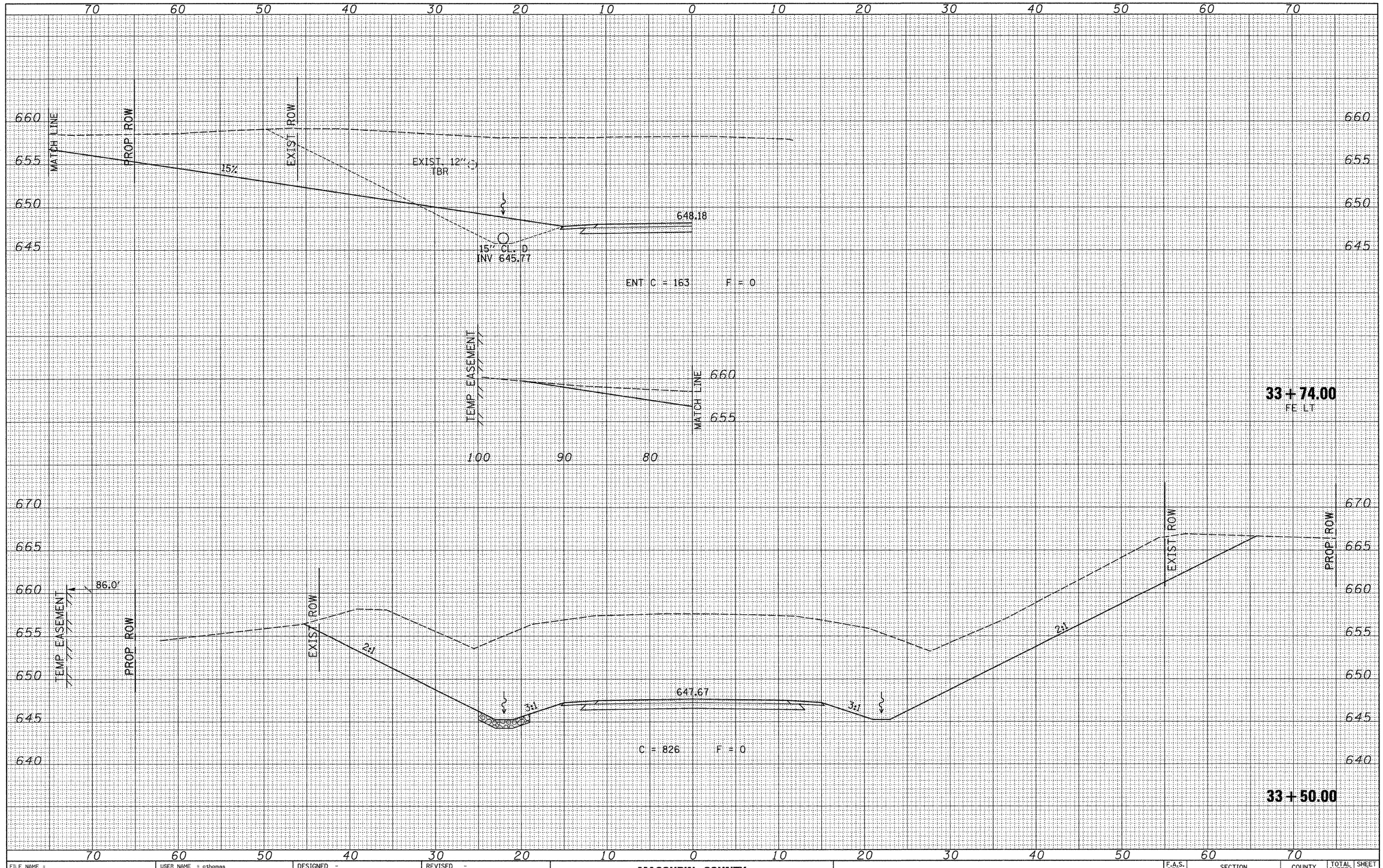
MACOUPIN COUNTY
COUNTY HIGHWAY 12
OVER HICKS CREEK AND JOES CREEK

CROSS SECTIONS

SCALE: 1"=5' | SHEET NO. 10 OF 26 SHEETS | STA. 32+50.000 TO STA. 33+00.000

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
732	07-00090-00-BR	MACOUPIN	77	61
		CONTRACT NO. 93538		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		

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



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

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		DRAWN -	REVISED -
	PLOT SCALE = 5.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 2/19/2010	DATE -	REVISED -

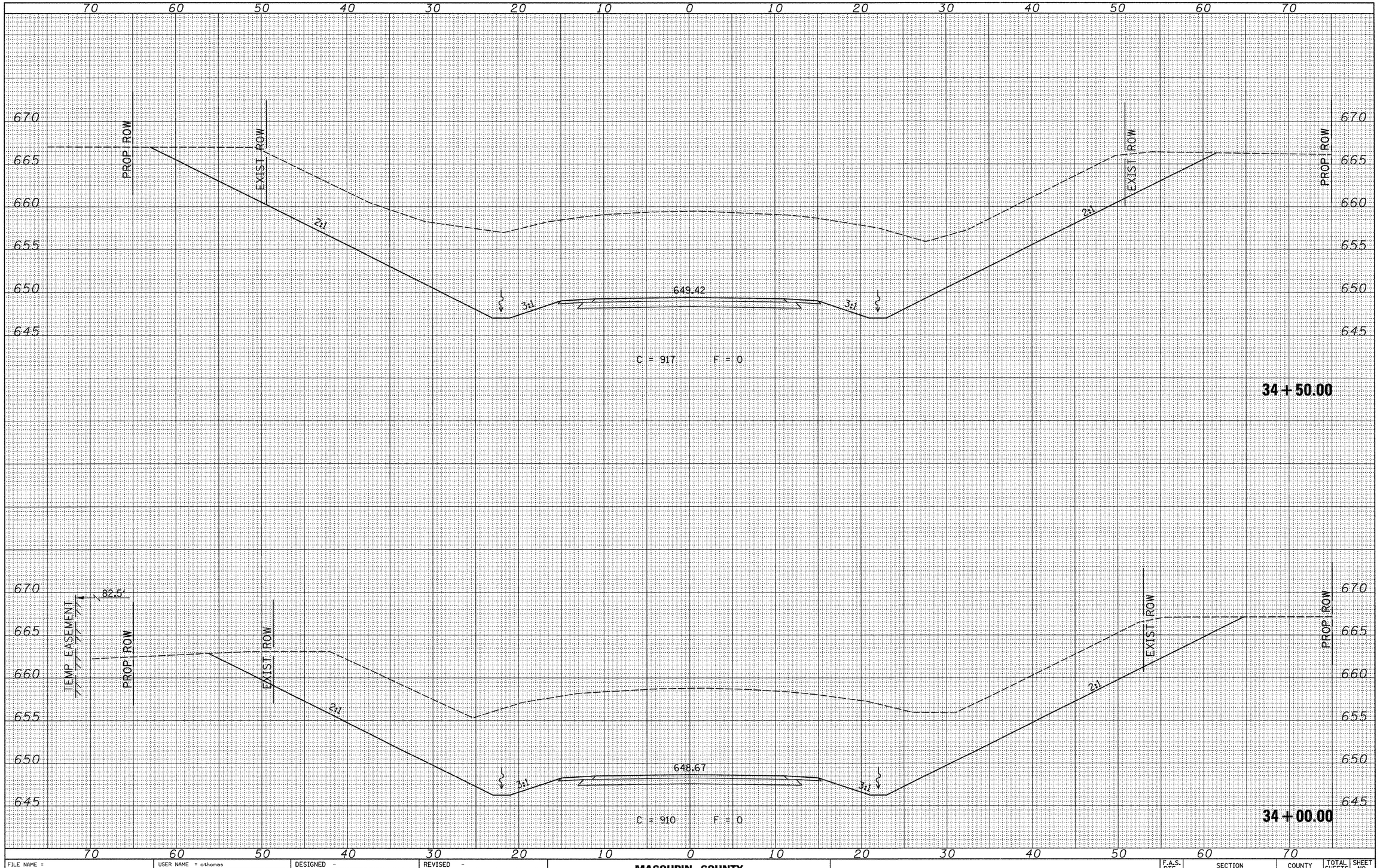
MACOUPIN COUNTY
COUNTY HIGHWAY 12
OVER HICKS CREEK AND JOES CREEK

CROSS SECTIONS

SCALE: 1"=5' | SHEET NO. 11 OF 26 SHEETS | STA. 33+50.000 TO STA. 33+74.000

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
732	07-00090-00-BR	MACOUPIN	77	62
		CONTRACT NO. 93538		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		

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



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

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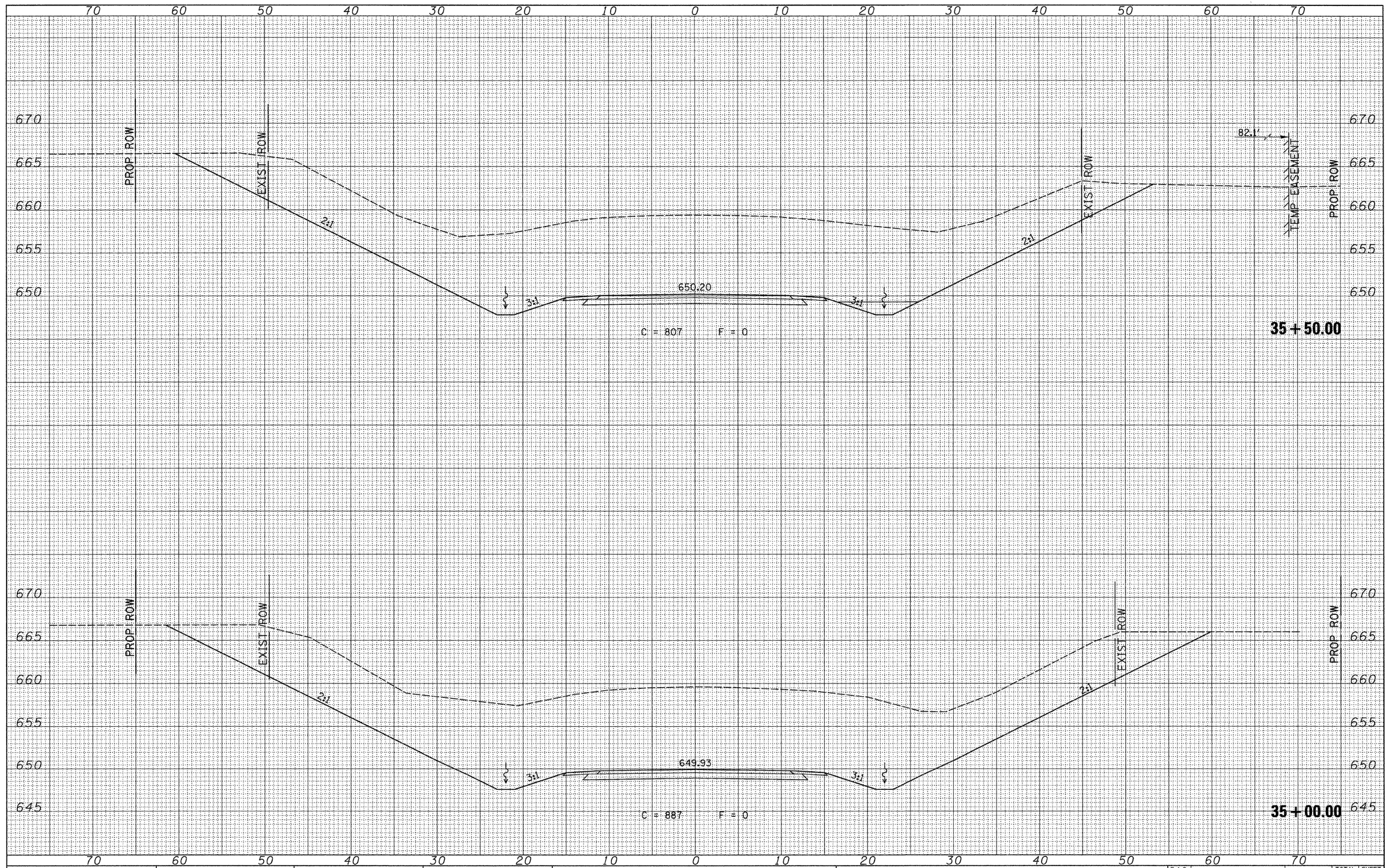
	PLOT SCALE = 5.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 2/19/2010	DATE -	REVISED -

MACOUPIN COUNTY
COUNTY HIGHWAY 12
OVER HICKS CREEK AND JOES CREEK

CROSS SECTIONS

SCALE: 1"=5' | SHEET NO. 12 OF 26 SHEETS | STA. 34+00.000 TO STA. 34+50.000

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
732	07-00090-00-BR	MACOUPIN	77	63
		CONTRACT NO. 93538		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		



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

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

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		DRAWN -	REVISED -
	PLOT SCALE = 5.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 2/19/2010	DATE -	REVISED -

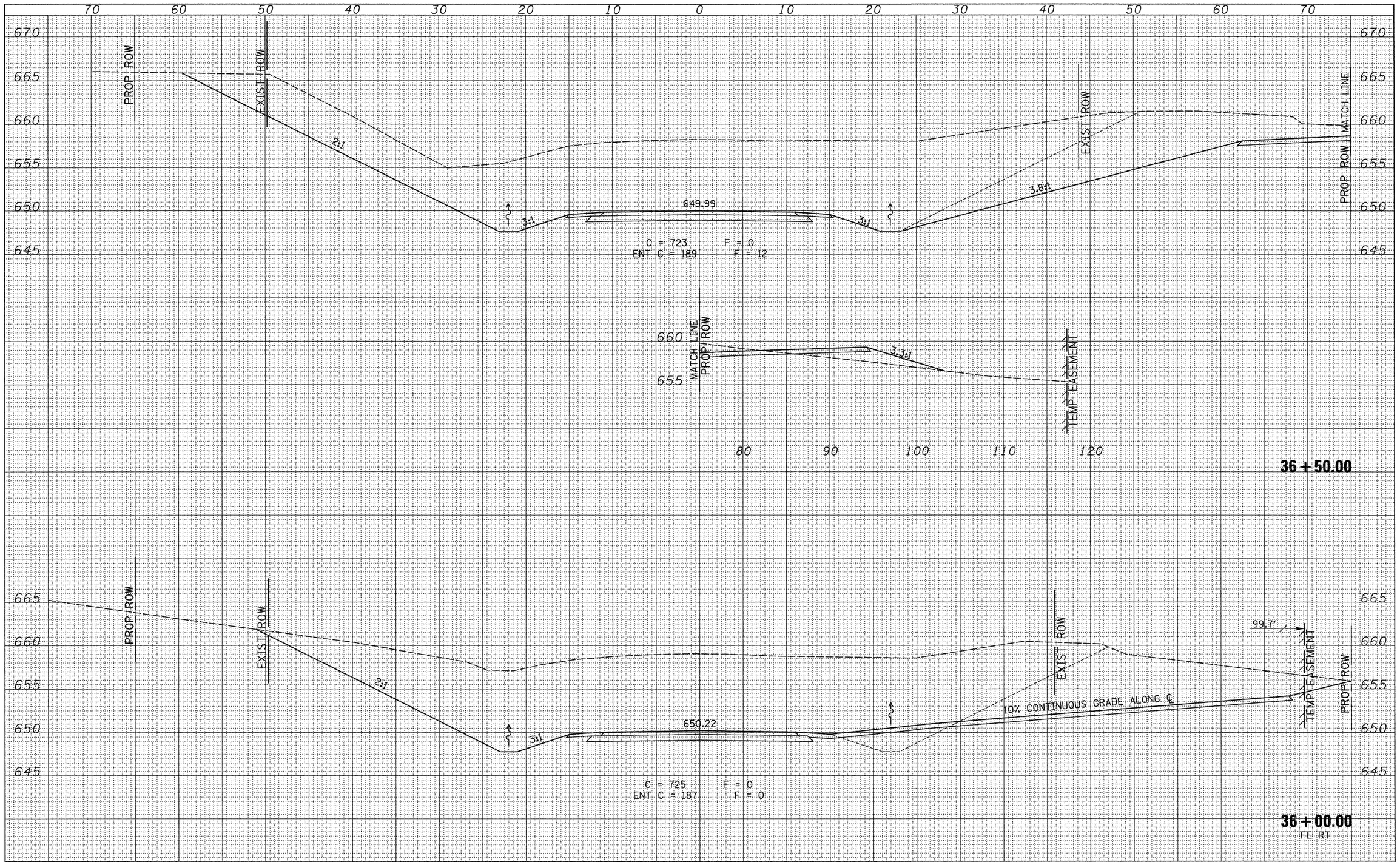
MACOUPIN COUNTY
COUNTY HIGHWAY 12
OVER HICKS CREEK AND JOES CREEK

CROSS SECTIONS

SCALE: 1"=5' | SHEET NO. 13 OF 26 SHEETS | STA. 35+00.000 TO STA. 35+50.000

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
732	07-00090-00-BR	MACOUPIN	77	64
		CONTRACT NO. 93538		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		

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



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

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	PLOT SCALE = 5.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 2/19/2010	DATE -	REVISED -

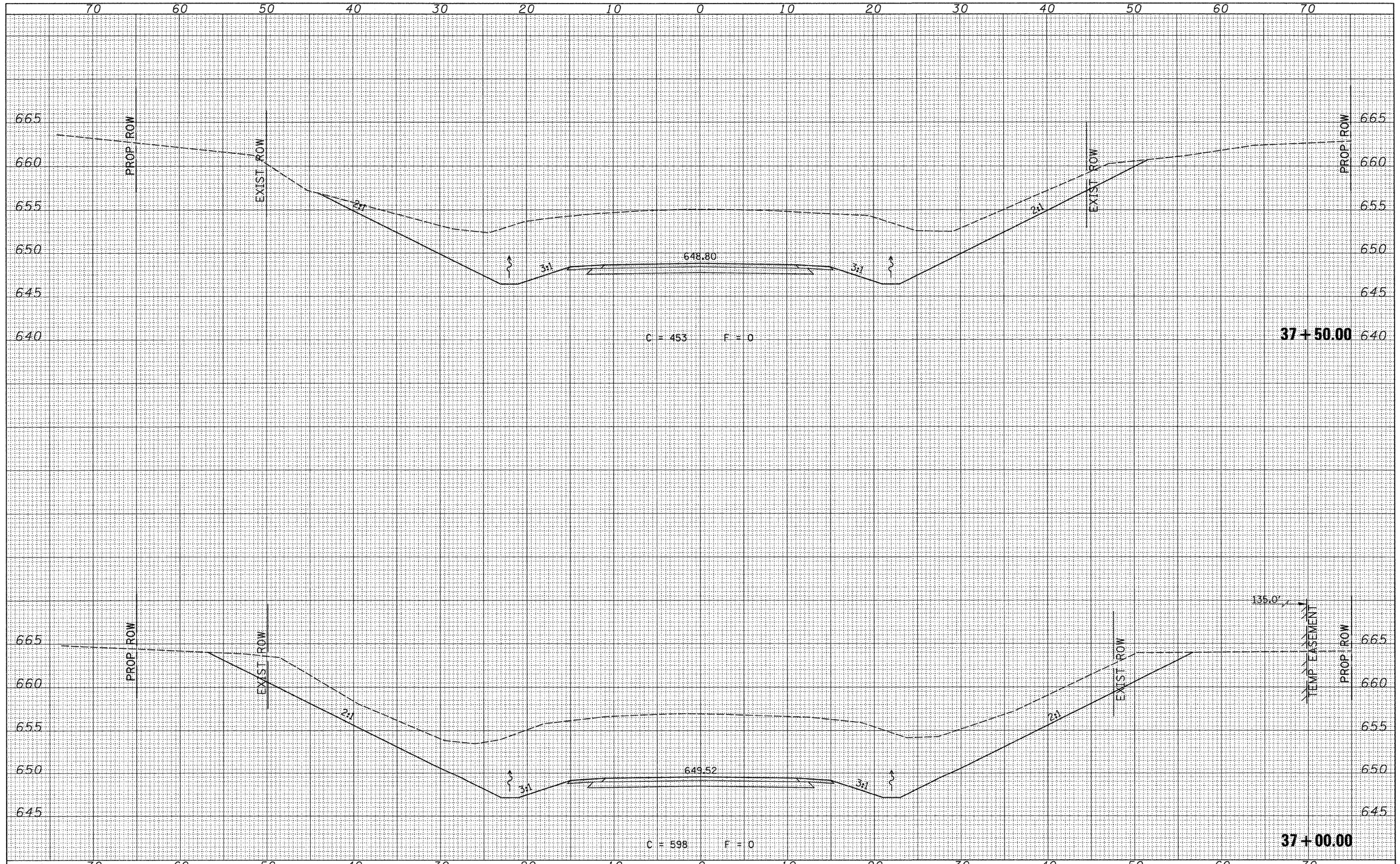
MACOUPIN COUNTY
COUNTY HIGHWAY 12
OVER HICKS CREEK AND JOES CREEK

CROSS SECTIONS

SCALE: 1"=5' | SHEET NO. 14 OF 26 SHEETS | STA. 36+00.000 TO STA. 36+50.000

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
732	07-00090-00-BR	MACOUPIN	77	65
		CONTRACT NO. 93538		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		

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



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

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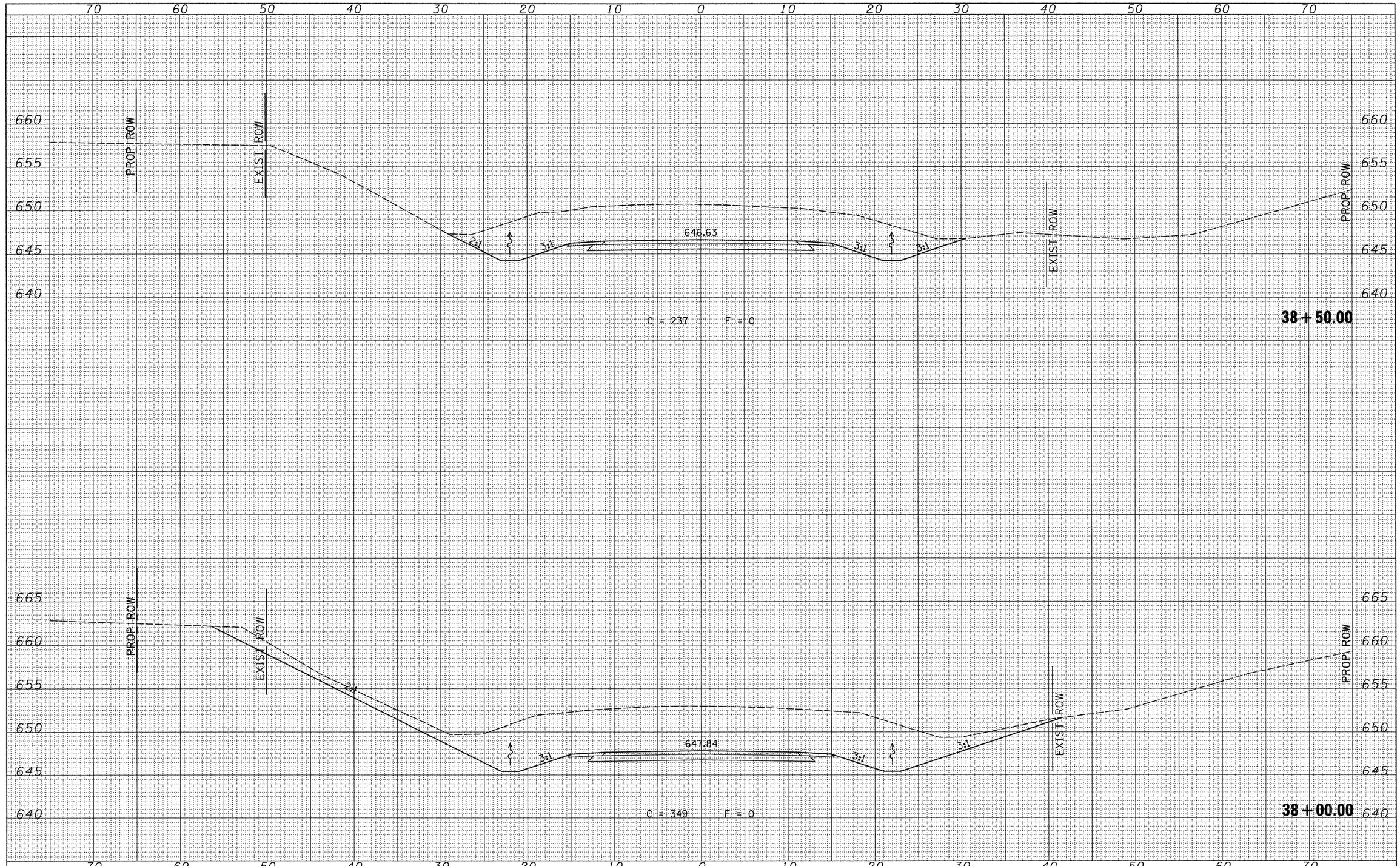
	PLOT SCALE = 5.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 2/19/2010	DATE -	REVISED -

MACOUPIN COUNTY
COUNTY HIGHWAY 12
OVER HICKS CREEK AND JOES CREEK

CROSS SECTIONS

SCALE: 1"=5' | SHEET NO. 15 OF 26 SHEETS | STA. 37+00.000 TO STA. 37+50.000

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
732	07-00090-00-BR	MACOUPIN	77	66
		CONTRACT NO. 93538		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		



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

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

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		DRAWN -	REVISED -
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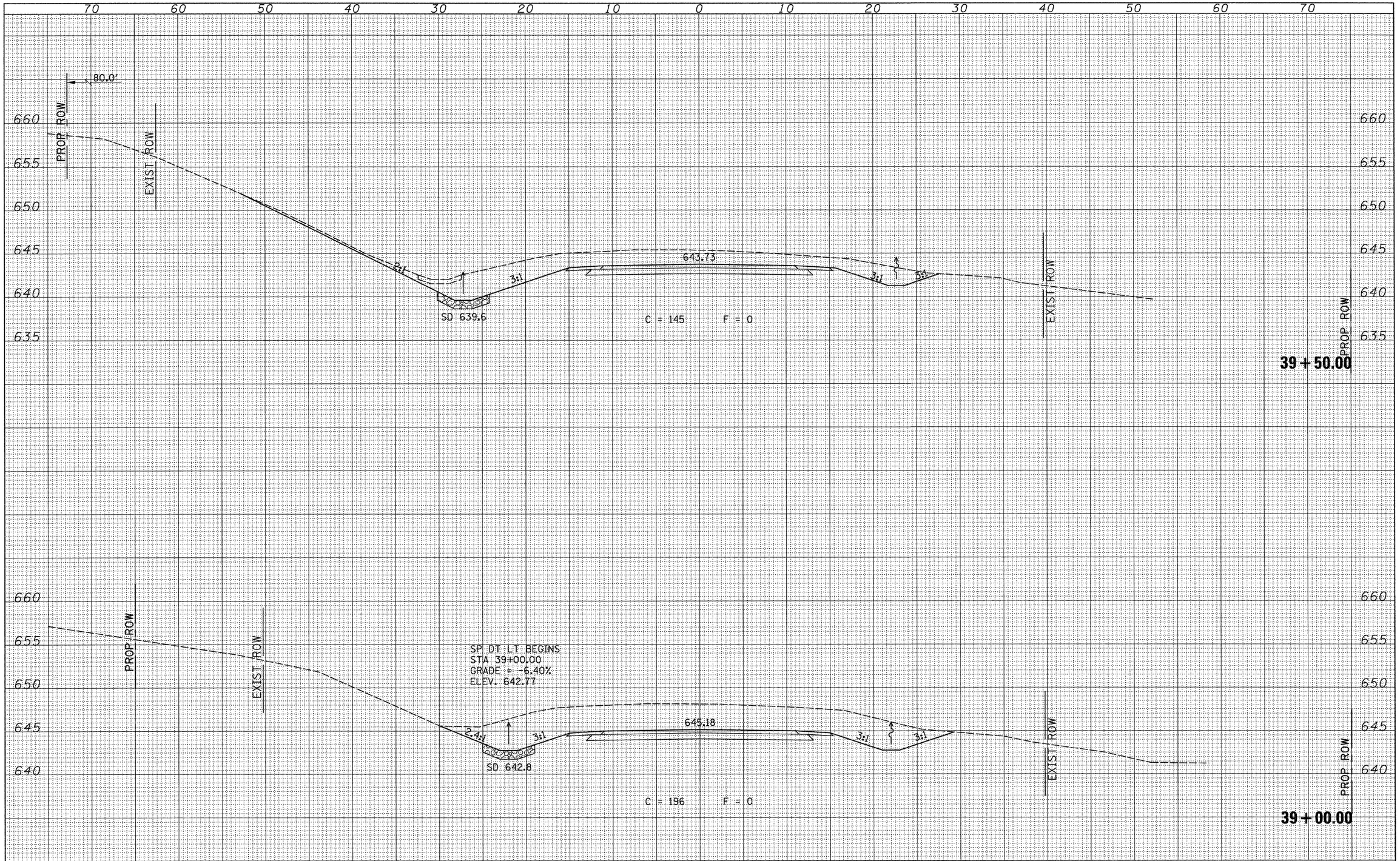
	PLOT DATE = 2/19/2010	DATE -	REVISED -

MACOUPIN COUNTY
COUNTY HIGHWAY 12
OVER HICKS CREEK AND JOES CREEK

CROSS SECTIONS

SCALE: 1"=5' | SHEET NO. 16 OF 26 SHEETS | STA. 38+00.000 TO STA. 38+50.000

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
732	07-00090-00-BR	MACOUPIN	77	67
		CONTRACT NO. 93538		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		



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

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

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		DRAWN -	REVISED -
	PLOT SCALE = 5.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 2/19/2010	DATE -	REVISED -

MACOUPIN COUNTY
COUNTY HIGHWAY 12
OVER HICKS CREEK AND JOES CREEK

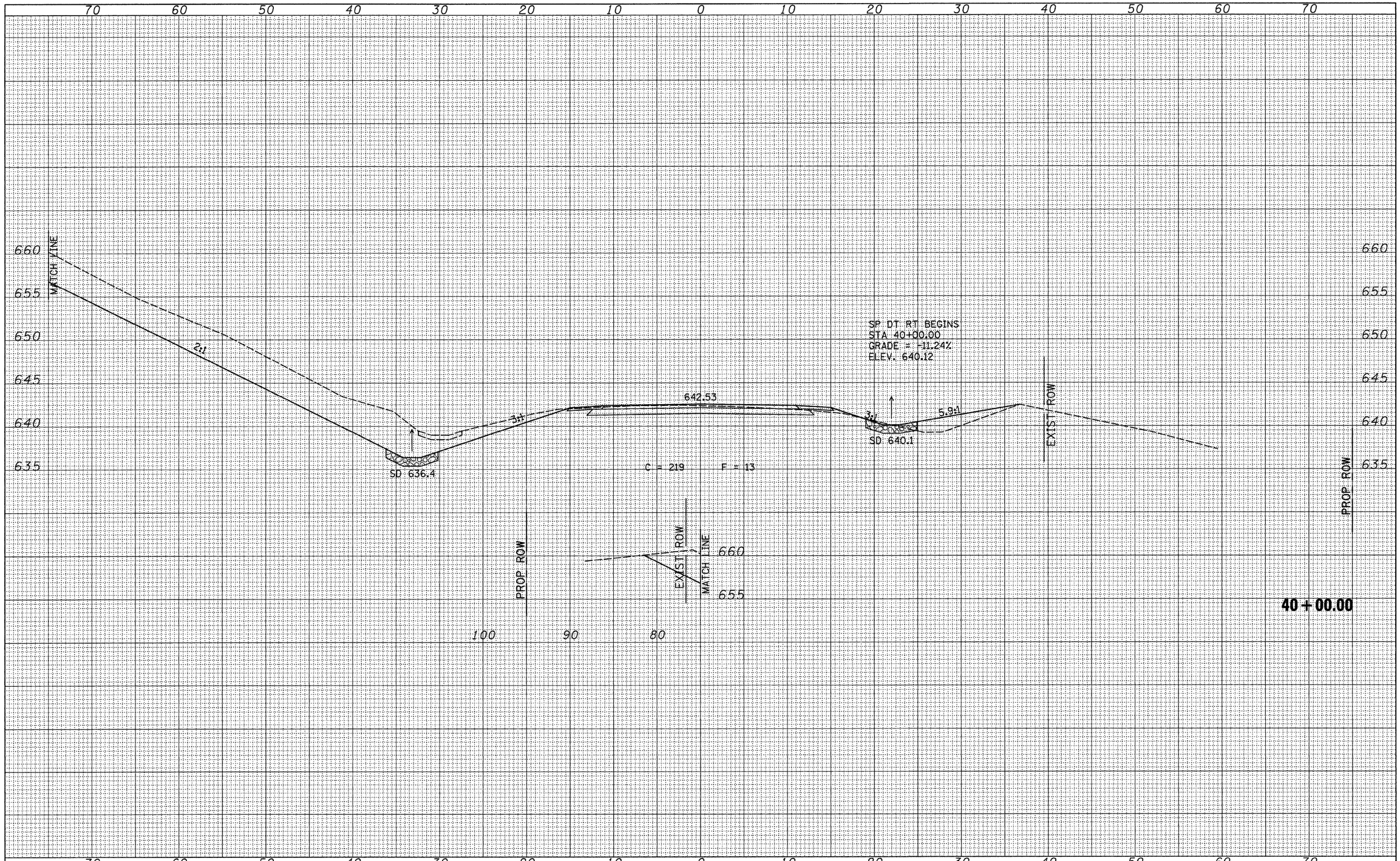
CROSS SECTIONS

SCALE: 1"=5' | SHEET NO. 17 OF 26 SHEETS | STA. 39+00.000 TO STA. 39+50.000

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
732	07-00090-00-BR	MACOUPIN	77	68
		CONTRACT NO. 93538		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		

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

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



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	PLOT DATE = 3/1/2010	DATE -	REVISED -

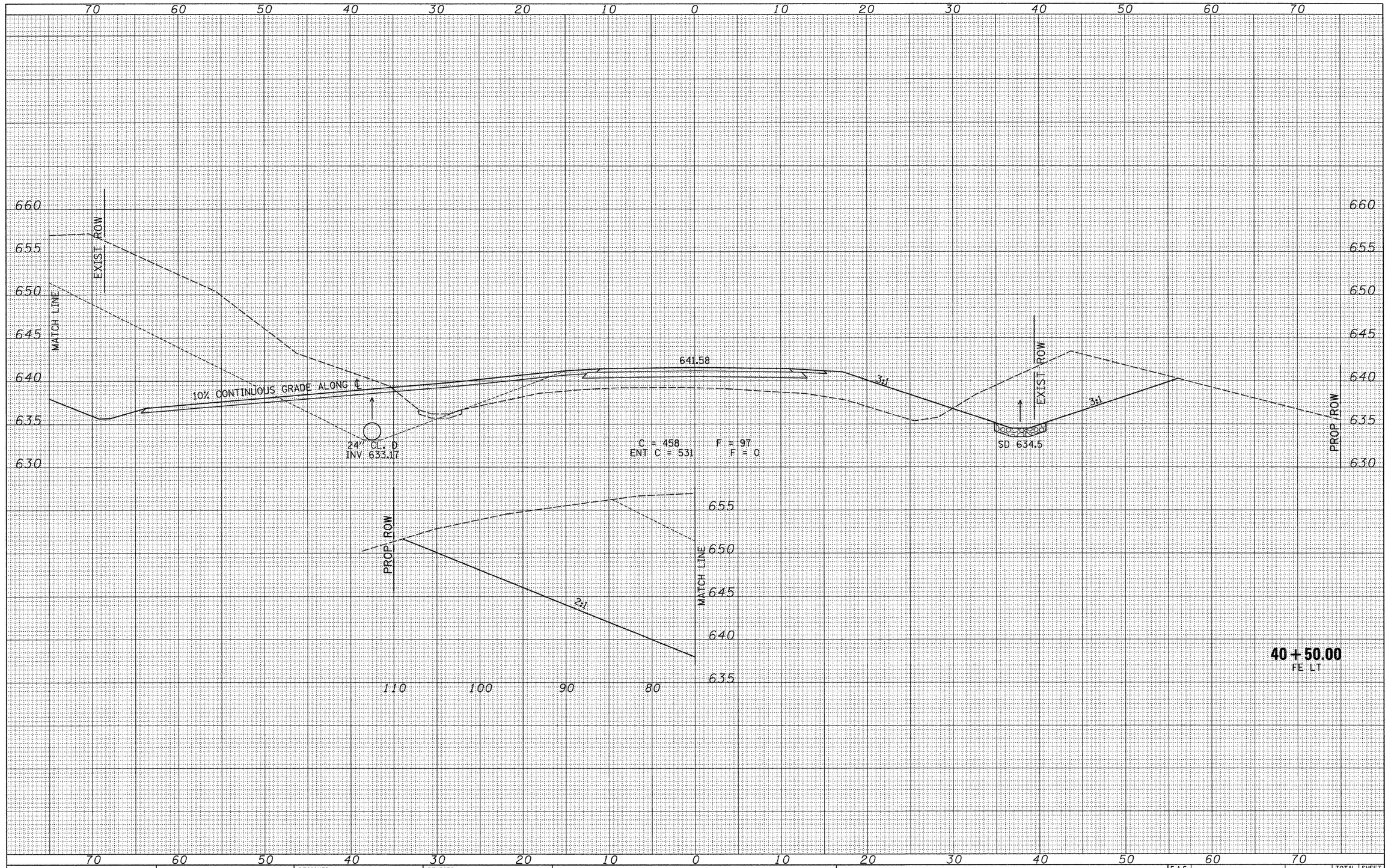
MACOUPIN COUNTY
COUNTY HIGHWAY 12
OVER HICKS CREEK AND JOES CREEK

CROSS SECTIONS

SCALE: 1"=5' | SHEET NO. 18 OF 26 SHEETS | STA. 40+00.000 TO STA. 40+00.000

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
732	07-00090-00-BR	MACOUPIN	77	69
		CONTRACT NO. 93538		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		

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



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

40 + 50.00
FE LT

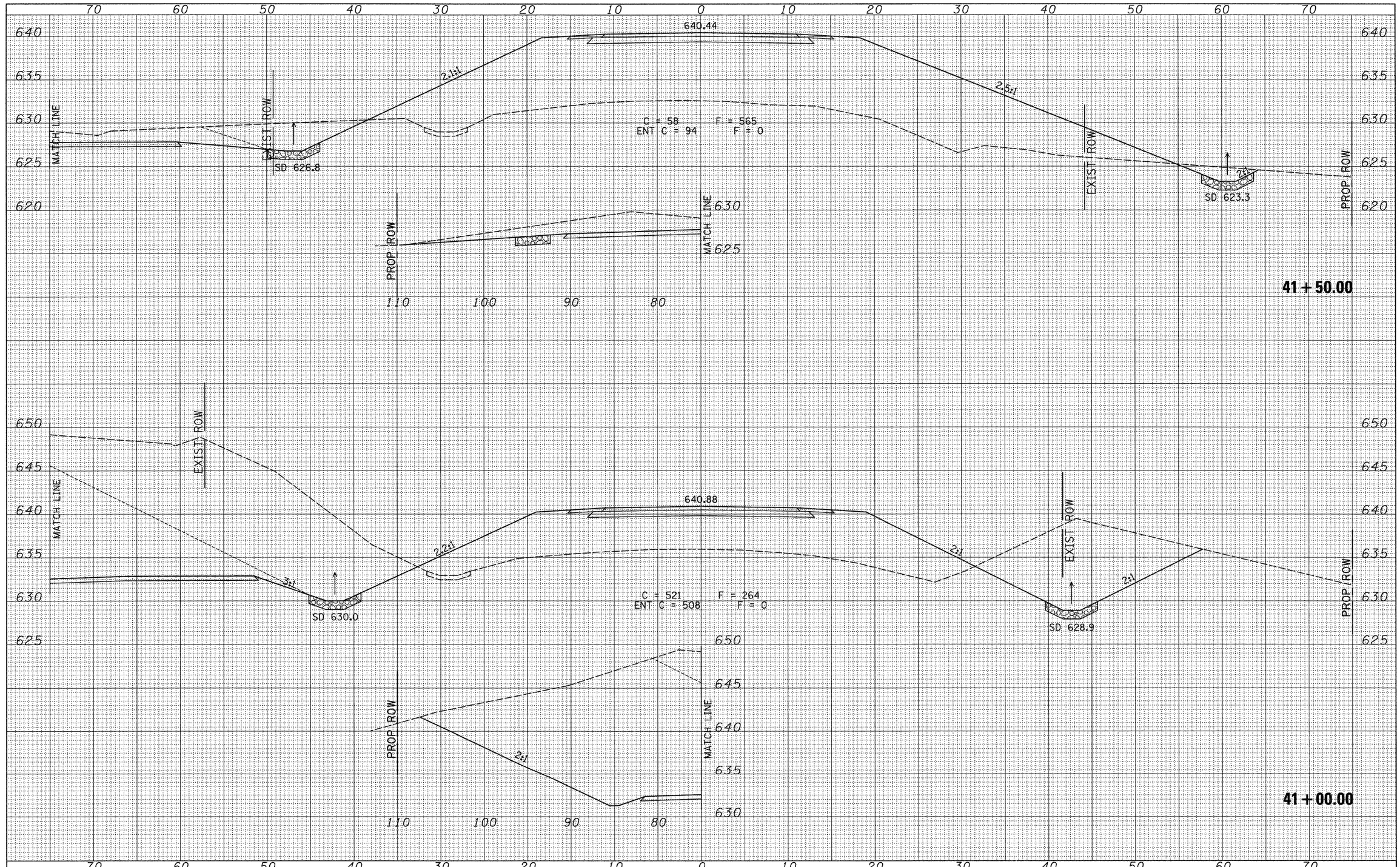
FILE NAME = V:\Bridge\2576-1 Macoupin\2576XSSHTS.dgn	USER NAME = athomas	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 5.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 2/19/2010	DATE -	REVISED -

MACOUPIN COUNTY
COUNTY HIGHWAY 12
OVER HICKS CREEK AND JOES CREEK

CROSS SECTIONS

SCALE: 1"=5' | SHEET NO. 19 OF 26 SHEETS | STA. 40+50.000 | TO STA. 40+50.000

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
732	07-00090-00-BR	MACOUPIN	77	70
		CONTRACT NO. 93538		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		



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

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

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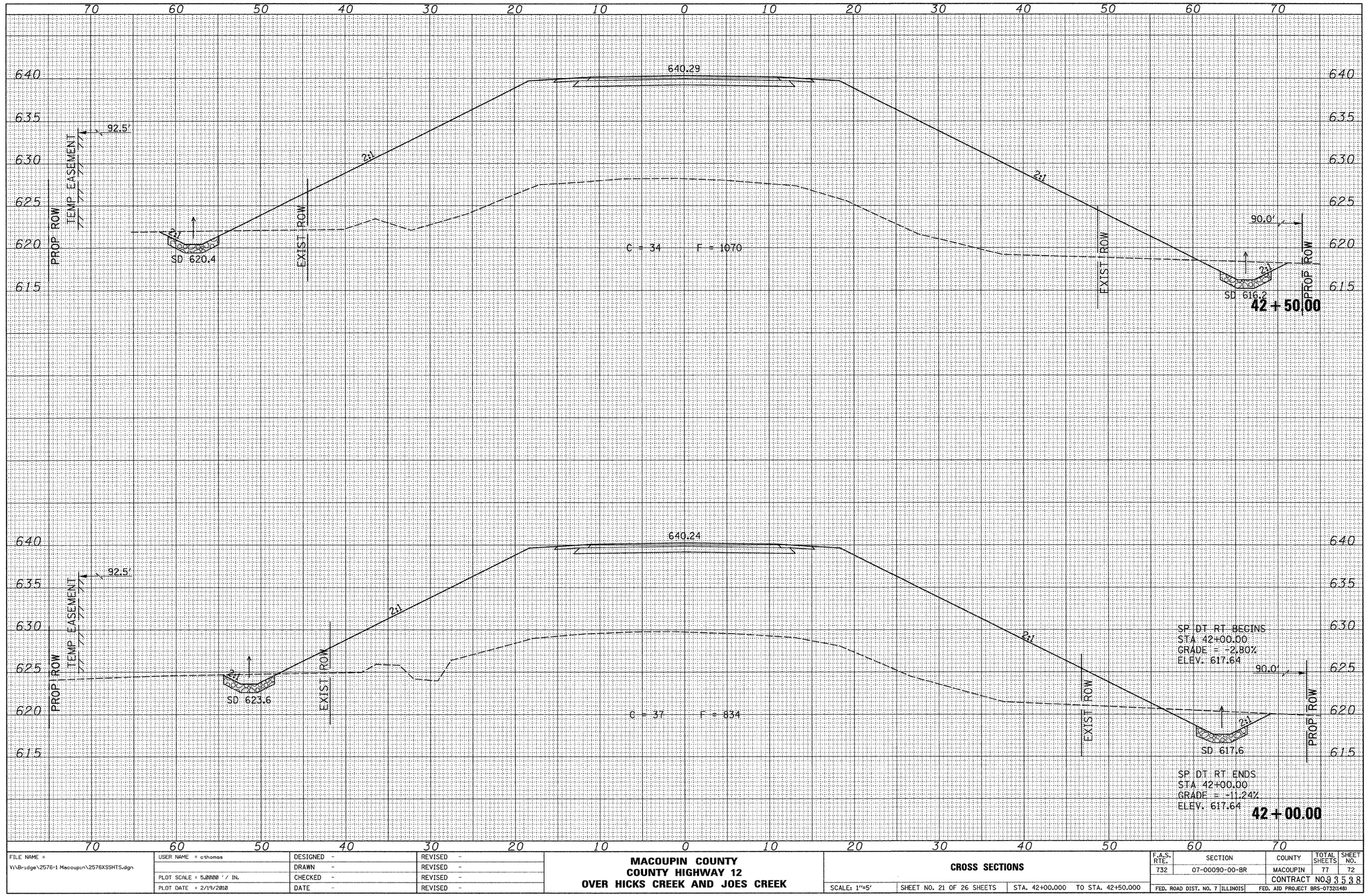
		DRAWN -	REVISED -
	PLOT SCALE = 5.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 2/19/2010	DATE -	REVISED -

MACOUPIN COUNTY
COUNTY HIGHWAY 12
OVER HICKS CREEK AND JOES CREEK

CROSS SECTIONS

SCALE: 1"=5' | SHEET NO. 20 OF 26 SHEETS | STA. 41+00.000 TO STA. 41+50.000

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
732	07-00090-00-BR	MACOUPIN	77	71
		CONTRACT NO. 93538		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		



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

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

FILE NAME =	USER NAME = cthomas	DESIGNED -	REVISED -
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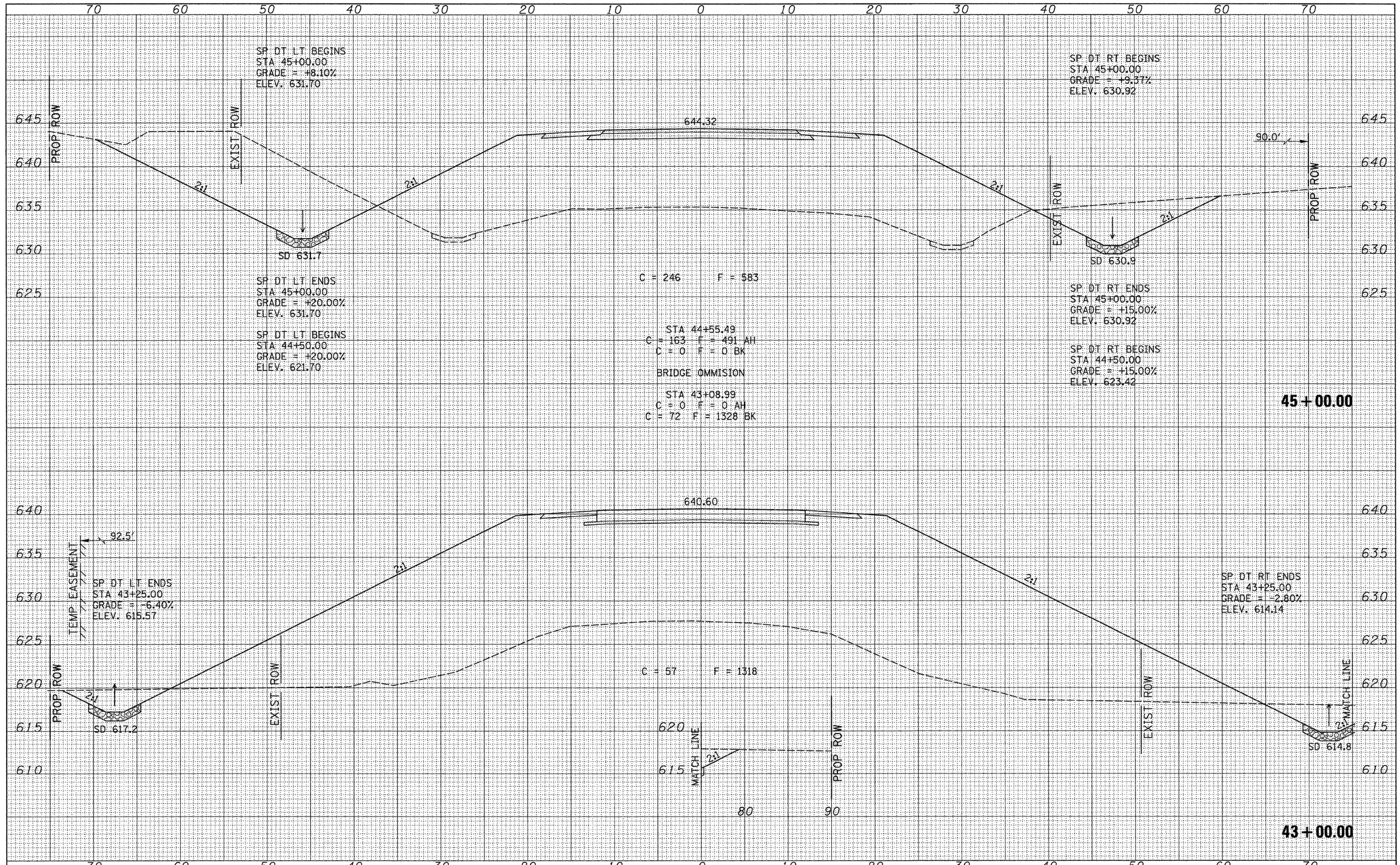
	PLOT SCALE = 5.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 2/19/2010	DATE -	REVISED -

MACOUPIN COUNTY
COUNTY HIGHWAY 12
OVER HICKS CREEK AND JOES CREEK

CROSS SECTIONS

SCALE: 1"=5' | SHEET NO. 21 OF 26 SHEETS | STA. 42+00.000 TO STA. 42+50.000

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
732	07-00090-00-BR	MACOUPIN	77	72
		CONTRACT NO. 93538		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		



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

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

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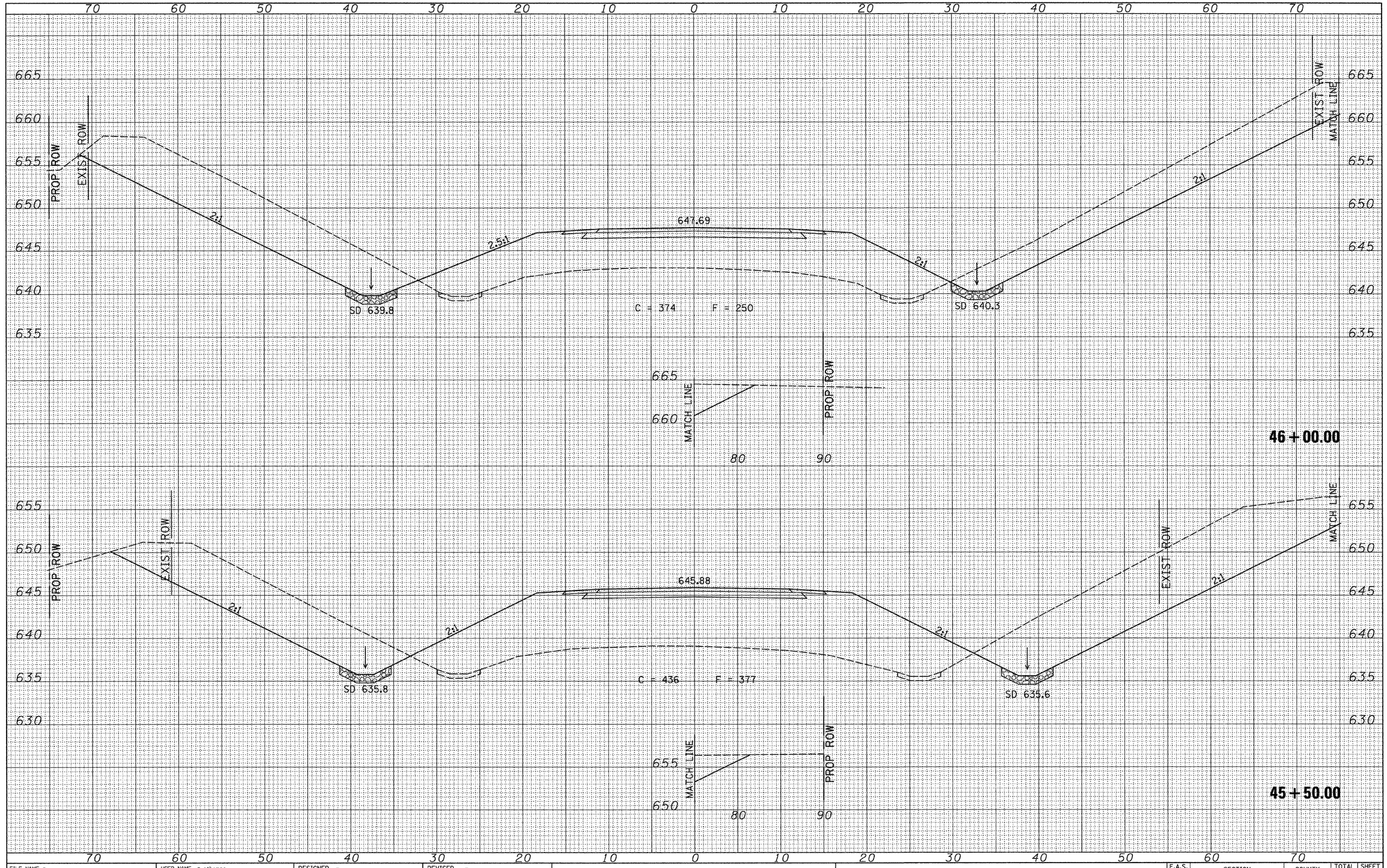
		DRAWN -	REVISED -
	PLOT SCALE = 5.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 2/19/2010	DATE -	REVISED -

MACOUPIN COUNTY
COUNTY HIGHWAY 12
OVER HICKS CREEK AND JOES CREEK

CROSS SECTIONS

SCALE: 1"=5' | SHEET NO. 22 OF 26 SHEETS | STA. 43+00.000 TO STA. 45+00.000

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
732	07-00090-00-BR	MACOUPIN	77	73
		CONTRACT NO. 93538		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		



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

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

FILE NAME = V:\Bridge\2576-1 Macoupin\2576XSSHTS.dgn	USER NAME = cthomas	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 5.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 2/19/2010	DATE -	REVISED -

MACOUPIN COUNTY
COUNTY HIGHWAY 12
OVER HICKS CREEK AND JOES CREEK

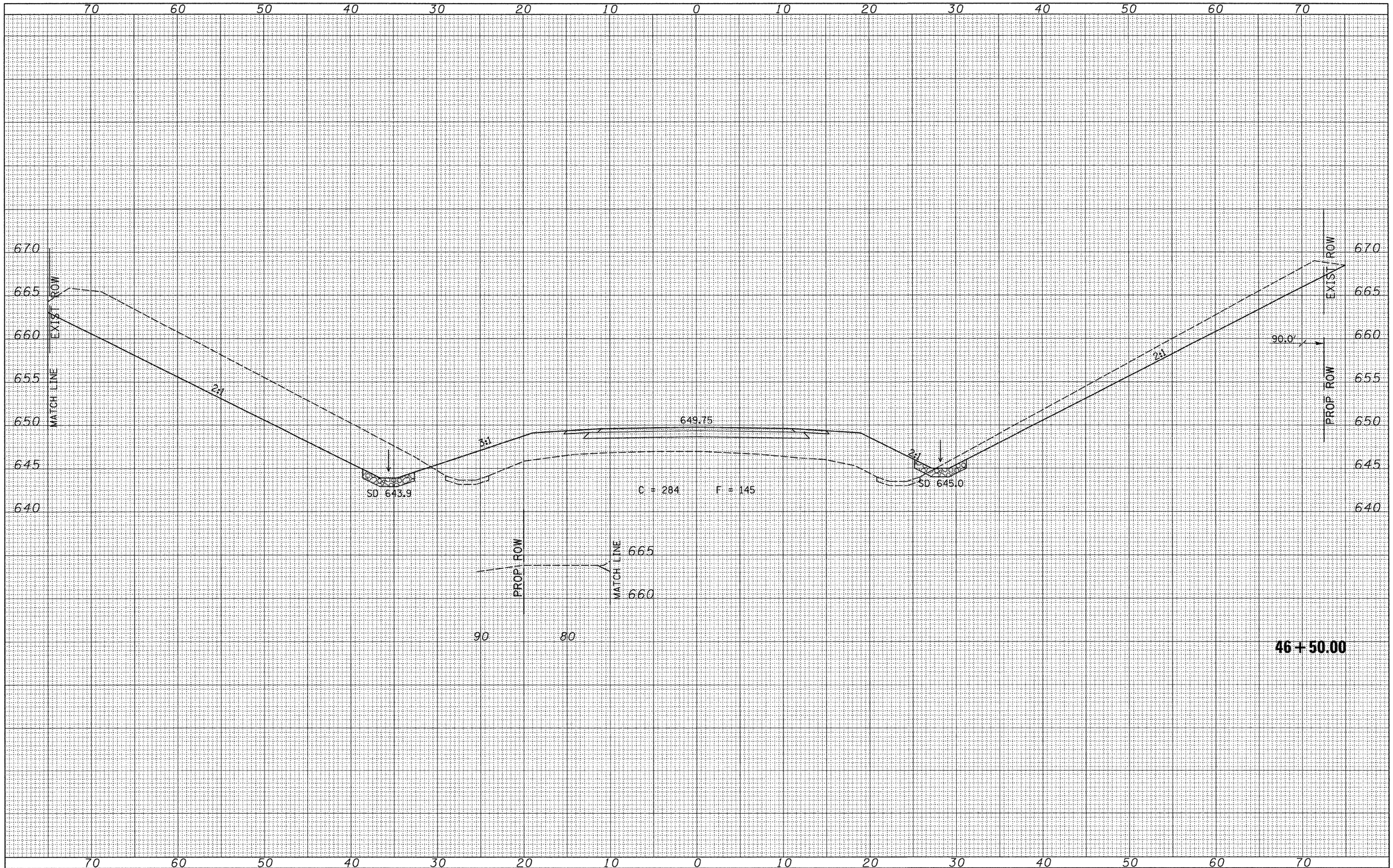
CROSS SECTIONS

SCALE: 1"=5' | SHEET NO. 23 OF 26 SHEETS | STA. 45+50.000 TO STA. 46+00.000

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
732	07-00090-00-BR	MACOUPIN	77	74
		CONTRACT NO. 93538		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		

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

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



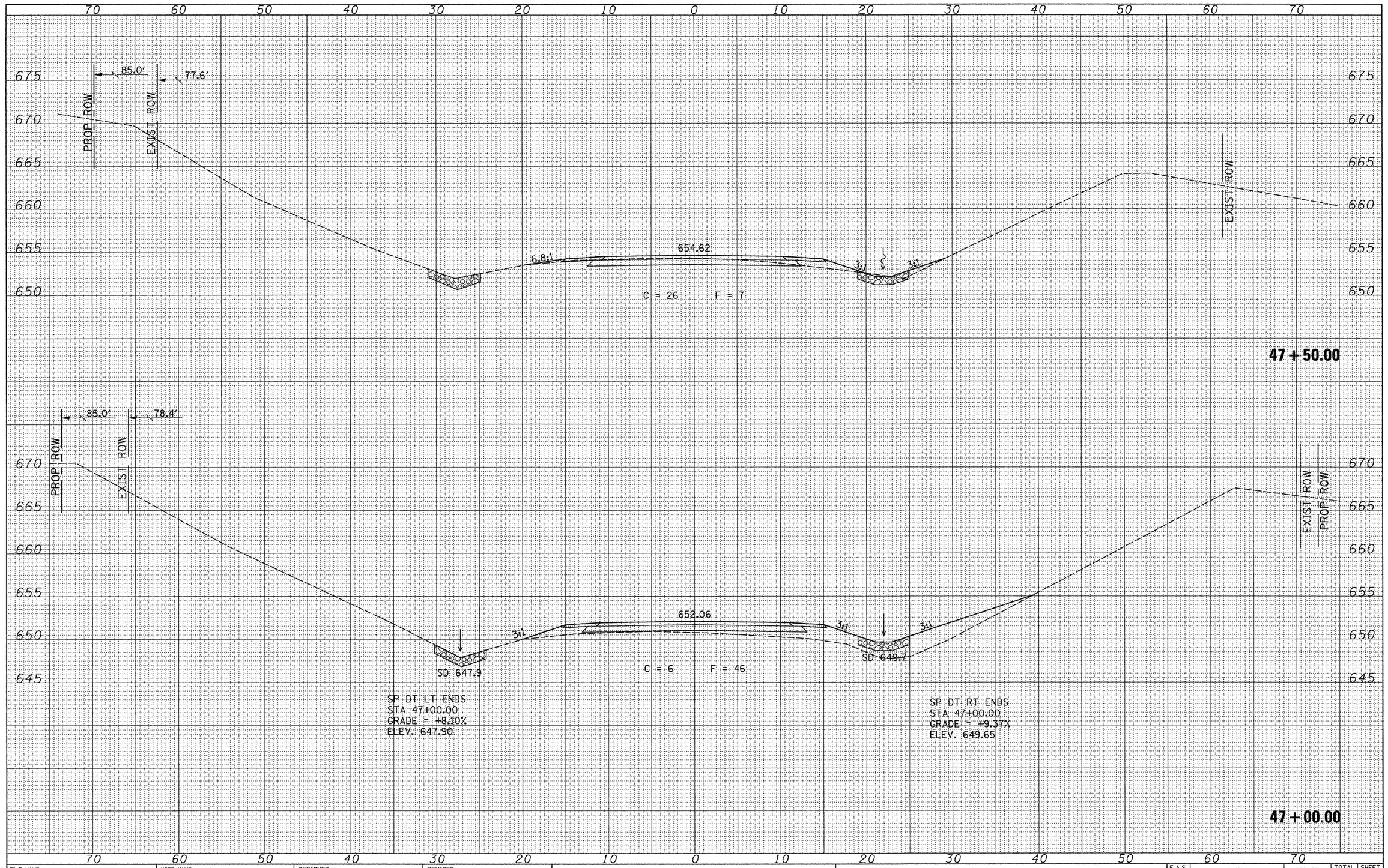
FILE NAME =	USER NAME = othomas	DESIGNED -	REVISED -
V:\Bridge\2576-1 Macoupin\2576XSSHTS.dgn		DRAWN -	REVISED -
	PLOT SCALE = 5.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 2/19/2010	DATE -	REVISED -

MACOUPIN COUNTY
COUNTY HIGHWAY 12
OVER HICKS CREEK AND JOES CREEK

CROSS SECTIONS

SCALE: 1"=5' | SHEET NO. 24 OF 26 SHEETS | STA. 46+50.000 TO STA. 46+50.000

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
732	07-00090-00-BR	MACOUPIN	77	75
		CONTRACT NO. 93538		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		



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

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

FILE NAME = V:\Bridge\2576-1 Macoupin\2576XSSHTS.dgn	USER NAME = othomas	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 5.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 2/19/2010	DATE -	REVISED -

MACOUPIN COUNTY
COUNTY HIGHWAY 12
OVER HICKS CREEK AND JOES CREEK

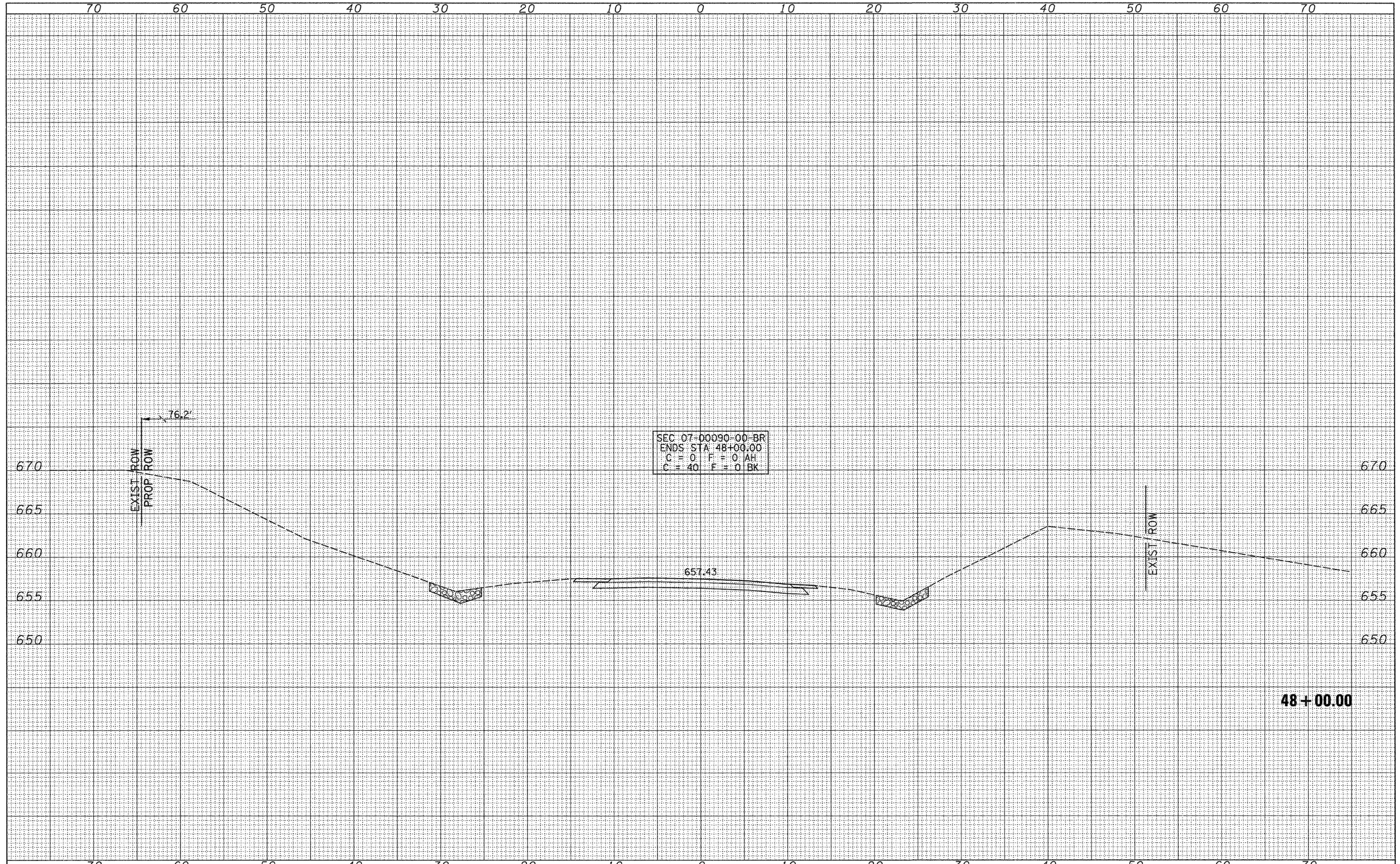
CROSS SECTIONS

SCALE: 1"=5' | SHEET NO. 25 OF 26 SHEETS | STA. 47+00.000 TO STA. 47+50.000

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
732	07-00090-00-BR	MACOUPIN	77	76
		CONTRACT NO. 93538		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		

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

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



FILE NAME = V:\Bridge\2576-1 Macoupin\2576XSSHTS.dgn	USER NAME = cthomas	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 5.0000 ' / IN.	CHECKED -	REVISED -
	PLOT DATE = 2/19/2010	DATE -	REVISED -

MACOUPIN COUNTY
COUNTY HIGHWAY 12
OVER HICKS CREEK AND JOES CREEK

CROSS SECTIONS

SCALE: 1"=5' | SHEET NO. 26 OF 26 SHEETS | STA. 48+00.000 TO STA. 48+00.000

F.A.S. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
732	07-00090-00-BR	MACOUPIN	77	77
		CONTRACT NO. 93538		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT BRS-0732(148)		