

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	**	***	68	1
* FAP 332 (IL 1); FAP 328 (US 45)				
** 101B-1; (8BR-1)B-1				
*** WABASH / WAYNE				

D-97-037-03

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

**PROPOSED
HIGHWAY PLANS**

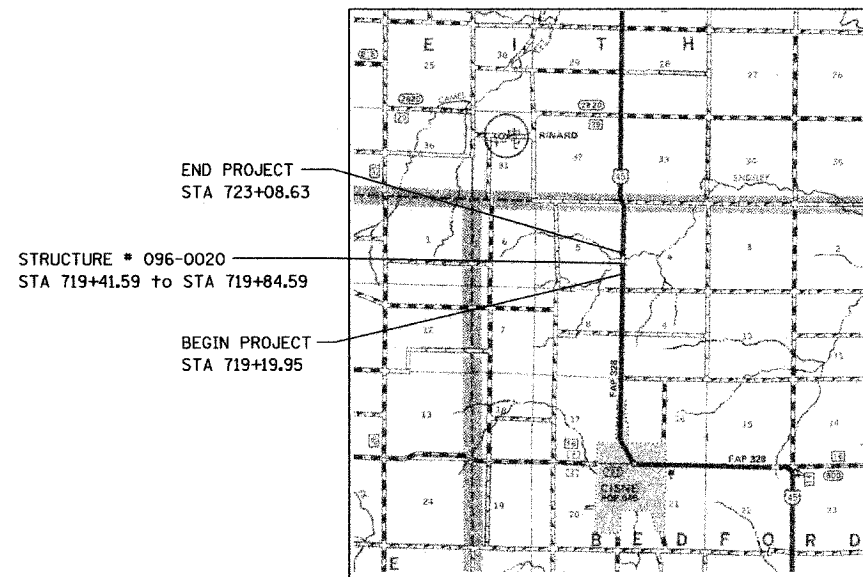
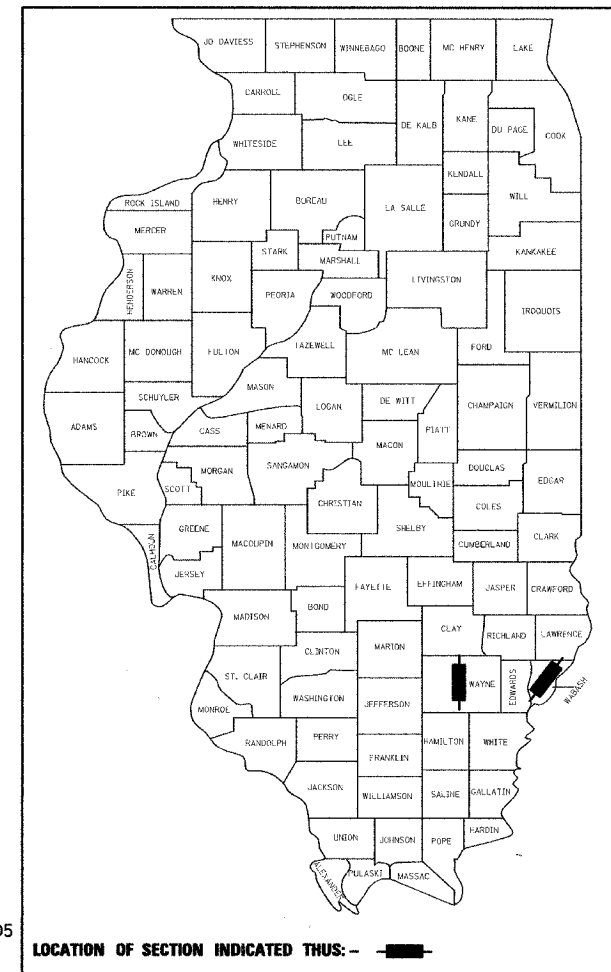
FAP ROUTE 332 (IL 1); FAP ROUTE 328 (US 45)
SECTION 101B-1; (8BR-1)B-1
PROJECT: BHF-000S(544)
WAYNE & WABASH COUNTIES
C-97-050-03

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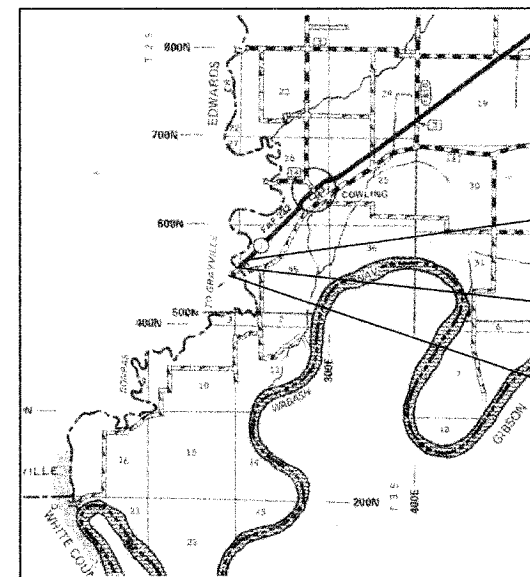
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| 001006 | 701201-02 |
| 280001-03 | 701306-01 |
| 515001-02 | 701321-08 |
| 542401 | 701326-02 |
| 630001-07 | 702001-06 |
| 630201-04 | 704001-03 |
| 630301-04 | 780001-01 |
| 631032-03 | 781001-02 |
| 635006-02 | |



LOCATION MAP

WAYNE COUNTY
US 45

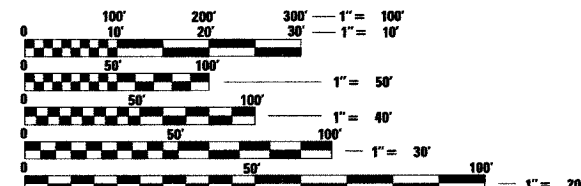
GROSS LENGTH OF PROJECT = 588.68 FEET (0.11 MILES)
NET LENGTH OF PROJECT = 588.68 FEET (0.11 MILES)



LOCATION MAP

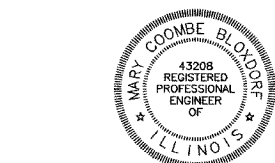
WABASH COUNTY
IL 1

GROSS LENGTH OF PROJECT = 584.29 FEET (0.11 MILES)
NET LENGTH OF PROJECT = 584.29 FEET (0.11 MILES)



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

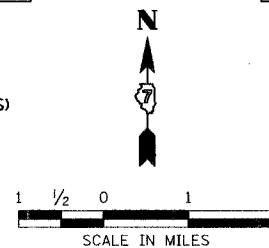
J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123



Mary Coombe Bloxdorf 3/16/07
MARY COOMBE BLOXDORF, P.E. Date
License Expires 11/30/2007

THIS SEAL IS VALID FOR THE FOLLOWING SHEETS IN THESE PLANS WHICH WERE PREPARED UNDER MY DIRECT SUPERVISION:

SHEETS 43 TO 51
SHEETS 63 TO 68



PLANS PREPARED BY
HORNER & SHIFRIN, INC.
ENGINEERS

640 PIERCE BOULEVARD SUITE 200 • O'FALLON, ILLINOIS 62269
5200 OAKLAND AVENUE • ST. LOUIS, MISSOURI 63110
www.hornershifrin.com



Stephanie S. Muentnich 3/15/07
STEPHANIE S. MUENTNICH, P.E. Date
License Expires 11/30/2007

THIS SEAL IS VALID FOR THE FOLLOWING SHEETS IN THESE PLANS WHICH WERE PREPARED UNDER MY DIRECT SUPERVISION:

SHEETS 1 TO 18
SHEETS 32 TO 42

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED *March 22nd* 2007

Christine M. Rade
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

Eric E. Hara
ENGINEER OF DESIGN AND ENVIRONMENT

Milton R. Seay
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

**PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	**	***	68	2
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
* FAP 332 (IL 1); FAP 328 (US 45)				
** 101B-1; (8BR-10B-1)				
*** WABASH / WAYNE				

1. UTILITIES

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING UTILITY PROPERTY FROM CONSTRUCTION OPERATIONS AS OUTLINED IN ARTICLE 107.31 OF STANDARD SPECIFICATION. THE J.U.L.I.E. NUMBER IS 1-800-892-0123. A MINIMUM OF FORTY-EIGHT HOURS ADVANCE NOTICE IS REQUIRED.

THE LOCATION OF ALL UTILITIES ARE BASED ON INFORMATION PROVIDED BY OTHERS AND ARE INTENDED TO BE APPROXIMATE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE HIS CONSTRUCTION ACTIVITIES WITH THE VARIOUS UTILITY OWNERS. ALL POTENTIAL CONFLICTS SHALL BE INVESTIGATED AND REMEDIAL ACTION TAKEN PRIOR TO INTERRUPTION OF THE CONTRACTOR'S PROGRESS.

2. EXISTING FACILITIES - VARIATIONS

IN ADDITION TO FIELD SURVEYS AND AERIAL SURVEYS, PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING FACILITIES HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO CONSTRUCTION VARIATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY SUCH DIMENSIONS AND DETAILS IN THE FIELD. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION DUE TO CHANGE IN THE SCOPE OF WORK. HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.

3. STATION /OFFSET REFERENCES & HORIZONTAL CONTROL

ALL STATIONS AND OFFSET REFERENCES ARE TO THE ROADWAY CENTERLINE UNLESS OTHERWISE NOTED. THE STATE PLANE COORDINATE SYSTEM HAS BEEN USED FOR THE HORIZONTAL CONTROL.

4. VERTICAL CONTROL

ALL ELEVATIONS SHOWN ON THE PLANS ARE BASED ON U.S.G.S. MEAN SEA LEVEL DATUM.

5. HIGHWAY STANDARDS

ANY REFERENCE WITHIN THESE PLANS TO A STANDARD SHALL BE INTERPRETED TO MEAN THE EDITION INDICATED BY THE SUB-NUMBER LISTED ON THE PREVIOUS SHEET OR THE COPY INCLUDED IN THESE PLANS.

6. APPLICATION RATES

FACTORS USED FOR ESTIMATING PLAN QUANTITIES ARE AS FOLLOWS AND SHALL NOT BE USED FOR THE BASIS OF FINAL QUANTITIES.

HOT-MIX ASPHALT BASE COURSE	0.056	TON / SQ YD / IN
HOT-MIX ASPHALT SURFACE COURSE	0.056	TON / SQ YD / IN
AGGREGATE (SURFACE, BASE, & BACKFILL)	2.05	TON / CU YD
HOT-MIX ASPHALT MATERIALS:		
PRIME COAT FOR HOT-MIX ASPHALT:		
- ON PAVEMENT	0.0002	TON / SQ YD
- ON COLD MILLED SURFACE	0.0004	TON / SQ YD
- FOG COAT ON NEW BINDER	0.00012	TON / SQ YD
AGGREGATE (PRIME COAT):		
- ON EXISTING PAVEMENT	0.002	TON / SQ YD
- ON COLD MILLED SURFACE	0.002	TON / SQ YD
- FOG COAT ON NEW BINDER	0.001	TON / SQ YD

7. BITUMINOUS MATERIALS (PRIME COAT)

FOR THE PAY ITEM BITUMINOUS MATERIALS (PRIME COAT), THE CONTRACTOR SHALL USE EITHER RC-70 OR AN EMULSIFIED POLYMER PRIME SS-1HP.

8. AGGREGATE SURFACE COURSE, TYPE B

AGGREGATE SURFACE COURSE, TYPE B SHALL BE CRUSHED STONE OR CRUSHED CONCRETE

9. AGGREGATE SHOULDERS, TYPE B

AGGREGATE SHOULDERS, TYPE B SHALL BE CRUSHED STONE, CRUSHED CONCRETE OR RAP.

10. ACCESS DURING CONSTRUCTION

ACCESS TO ENTRANCES, AND SIDEROADS SHALL BE MAINTAINED AT ALL TIMES.

11. BARRICADE STABILIZATION

FOR STABILIZATION, ALL TYPE III BARRICADES SHALL REQUIRE A MINIMUM OF FOUR SAND BAGS PER BARRICADE.

12. SAW CUTS

WHERE PROPOSED CONSTRUCTION ABUTS EXISTING APPURTENANCES, A SAW CUT SHALL BE MADE TO ACHIEVE A NEAT BUTT JOINT. SAWED JOINTS FOR REMOVALS AND BUTT JOINTS SHALL BE CONSIDERED INCLUDED IN ITEM BEING REMOVED OR CONSTRUCTED.

13. THICKNESS OF RESURFACING

THE THICKNESS OF HOT-MIX ASPHALT MIXTURE SHOWN ON THE PLANS IS THE NOMINAL THICKNESS, DEVIATIONS FROM THE NOMINAL THICKNESS WILL BE PERMITTED WHEN SUCH DEVIATIONS OCCUR DUE TO IRREGULARITIES IN EXISTING SURFACE OR BASED ON WHICH THE BITUMINOUS MIXTURE IS PLACED.

14. 4" PAINT PAVEMENT MARKING

THE PROPOSED 4" SOLID YELLOW AND 4" SOLID WHITE PAINT PAVEMENT MARKING SHOWN IN THE SCHEDULE OF QUANTITIES ARE PROVIDED FOR THE CLARIFICATION OF THE CONTRACTOR. ALL 4" PAINT PAVEMENT MARKING SHOWN IN THE PLANS IS CONSIDERED AS PART OF THE PAY ITEM FOR 78001110 PAINT PAVEMENT MARKING - LINE 4"

MIXTURE DESIGN		
MIXTURE USE	SURFACE COURSE	BINDER COURSE
AC/PG:	PG 64-22	PG 64-22
DESIGN AIR VOIDS:	4.0% @ NDES=70	4.0% @ NDES=70
MIXTURE COMPOSITION (GRADATION MIXTURE)	IL 9.5 OR 12.5	IL 19.0
VOLUMETRIC REQUIREMENTS		
FRICTION AGGREGATE:	MIX "C"	N/A
FIELD DENSITY		

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
**GENERAL NOTES
&
MIXTURE DESIGNS**

SCALE: VERT. NONE
HORIZ. NONE
DATE 03/15/07
DRAWN BY KMO
CHECKED BY SSM

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 Plot Time: 9:40:03 AM
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	**	***	68	3
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
* FAP 332 (IL 1); FAP 328 (US 45)				
** 101B-1; (BSR-1)B-1				
*** WABASH / WAYNE				

CODED PAYITEM	DESCRIPTION	UNIT	TOTAL QUANTITY	SN 096-0020 (US 45)		SN 093-0005 (IL 1)	
				WAYNE COUNTY 80% FEDERAL / 20% STATE STP RURAL STATE FUNDS CONSTRUCTION TYPE CODE		WABASH COUNTY 80% FEDERAL / 20% STATE STP RURAL STATE FUNDS CONSTRUCTION TYPE CODE	
				I000-2A	X080-2A	I000-2A	X080-2A
20200100	EARTH EXCAVATION	CU YD	233	134		99	
20400800	FURNISHED EXCAVATION	CU YD	96			96	
25001000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.5	0.5			
28000300	TEMPORARY DITCH CHECKS	EACH	6	3		3	
28000400	PERIMETER EROSION BARRIER	FOOT	2126	746		1380	
28000500	INLET AND PIPE PROTECTION	EACH	2	2			
35650500	BASE COURSE WIDENING 10"	SQ YD	504	354		150	
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	31	31			
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	223	58		165	
40600300	AGGREGATE (PRIME COAT)	TON	2	1		1	
40600990	TEMPORARY RAMP	SQ YD	28	28			
40603085	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N70	TON	13	5		8	
40603315	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N70	TON	47	10	9	28	
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	295	116		179	
42000500	PORTLAND CEMENT CONCRETE PAVEMENT 10"	SQ YD	24				24
42001400	BRIDGE APPROACH PAVEMENT (SPECIAL)	SQ YD	146		146		
44000198	HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH	SQ YD	89				89
44000700	APPROACH SLAB REMOVAL	SQ YD	1016	1016			
48203021	HOT-MIX ASPHALT SHOULDERS, 6"	SQ YD	554	297		257	
50101500	REMOVAL OF EXISTING SUPERSTRUCTURES	EACH	2		1		1
50102400	CONCRETE REMOVAL	CU YD	9			9	
50105220	PIPE CULVERT REMOVAL	FOOT	60	60			
50300260	BRIDGE DECK GROOVING	SQ YD	753		144		609
50300255	CONCRETE SUPERSTRUCTURE	CU YD	1.6		1.6		
50300300	PROTECTIVE COAT	SQ YD	763		154		609
50400105	PRECAST CONCRETE BRIDGE SLAB	SQ FT	299				299
50400305	PRECAST PRESTRESSED CONCRETE DECK BEAMS (17" DEPTH)	SQ FT	1383		1383		
50400505	PRECAST PRESTRESSED CONCRETE DECK BEAMS (27" DEPTH)	SQ FT	4156				4156
50800205	REINFORCEMENT BARS (EPOXY COATED)	POUND	11040		3250		7790
50800515	BAR SPLICERS	EACH	216		42		174
50900905	REMOVING AND RE-ERECTING EXISTING RAILING	FOOT	82		82		

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REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SHEET 1 OF 3

SCALE: VERT. N/A
 HORIZ. N/A
 DATE 03/15/07

DRAWN BY KMO
 CHECKED BY SSM

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	**	***	68	4
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
* FAP 332 (IL 1); FAP 328 (US 45)				
** 101B-1; (8BR-1)B-1				
*** WABASH / WAYNE				

CODED PAYITEM	DESCRIPTION	UNIT	TOTAL QUANTITY	SN 096-0020 (US 45)		SN 093-0005 (IL 1)	
				WAYNE COUNTY 80% FEDERAL / 20% STATE STP RURAL STATE FUNDS CONSTRUCTION TYPE CODE		WABASH COUNTY 80% FEDERAL / 20% STATE STP RURAL STATE FUNDS CONSTRUCTION TYPE CODE	
				I000-2A	X080-2A	I000-2A	X080-2A
50901050	STEEL RAILING, TYPE SM	FOOT	458		126		332
51500100	NAME PLATES	EACH	2		1		1
54200220	PIPE CULVERTS, CLASS D, TYPE 1 15"	FOOT	70	70			
54213450	END SECTIONS 15"	EACH	4	4			
59000200	EPOXY CRACK INJECTION	FOOT	45				45
* 63000000	STEEL PLATE BEAM GUARD RAIL, TYPE A	FOOT	900	500		400	
* 63100087	TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	8	4		4	
* 63100167	TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (TANGENT)	EACH	8	4		4	
63200310	GUARDRAIL REMOVAL	FOOT	875	404		471	
67000500	ENGINEER'S FIELD OFFICE, TYPE B	CAL MO	6	3		3	
67100100	MOBILIZATION	L SUM	1	0.5		0.5	
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	2	1		1	
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	0.5		0.5	
70100460	TRAFFIC CONTROL AND PROTECTION, STANDARD 701306	L SUM	1	0.5		0.5	
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1	0.5		0.5	
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	10	5		5	
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	2	1		1	
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	2369	1591		778	
70400100	TEMPORARY CONCRETE BARRIER	FOOT	925	350		575	
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	1000	450		550	
* 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	4829	2895		1934	
* 78001130	PAINT PAVEMENT MARKING - LINE 6"	FOOT	242			242	
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	22	10		12	
* 78200410	GUARDRAIL MARKERS, TYPE A	EACH	26	8		18	
* 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	8	4		4	
78300100	PAVEMENT MARKING REMOVAL	SQ FT	1900	1206		694	
X0300136	BRIDGE APPROACH SHOULDER REMOVAL	SQ YD	281	281			
X0320047	REMOVAL OF EXISTING PRECAST PRESTRESSED CONCRETE DECK BEAMS	SQ FT	252		252		
X0324744	REMOVAL OF EXISTING PRECAST CONCRETE UNITS	SQ FT	598		299		299

*SPECIALTY ITEMS

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
SUMMARY OF QUANTITIES
SHEET 2 OF 3

SCALE: VERT. N/A
HORIZ. N/A
DATE: 03/15/07
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	***	***	68	6
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
* FAP 332 (IL 1); FAP 328 (US 45)				
** 101B-1; (8BR-1)B-1				
*** WABASH / WAYNE				

PAVING

LOCATION	SIDE	WIDTH	BASE COURSE WIDENING 10"	AGGREGATE SURFACE COURSE, TYPE B	BITUMINOUS MATERIALS (PRIME COAT)	AGGREGATE (PRIME COAT)	TEMPORARY RAMP	HOT-MIX ASPHALT BINDER COURSE IL-19, N70	HOT-MIX ASPHALT SURFACE COURSE MIX "C", N70	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH	HOT-MIX ASPHALT SHOULDERS 6"	PORTLAND CEMENT CONC PAVEMENT 10"
STATION TO STATION		FEET	SQ YD	TON	GALLON	TON	SQ YD	TON	TON	SQ YD	SQ YD	SQ YD	SQ YD
SN 096-0020 (US 45) ENDSLEY CREEK													
STA 717+19.95 TO STA 719+21.59	LT		75										
STA 717+29.89 TO STA 719+21.59	LT											66	
STA 716+99.69	LT			23									
STA 717+37.25	RT			8									
STA 717+44.42 TO STA 719+21.59	RT		75									62	
STA 719+01.59 TO STA 719+21.59	LT/RT	26		29	0.2	14	2.5	5	58				
STA 720+04.59 TO STA 720+24.59	LT/RT	26		29	0.2	14	2.5	5	58				
STA 720+04.59 TO STA 723+08.63	LT		119									103	
STA 720+04.59 TO STA 722+06.52	RT		85									66	
SUBTOTAL			354	31	58	1	28	5	10	116		297	
SN 093-0005 (IL 1) BONPAS CREEK													
STA 146+22.46 (BK) TO STA 148+46.92 (AH)	LT/RT		75									119	24
STA 147+83.00 (AH) TO STA 148+46.92 (AH)	LT/RT			92	0.4				16				
STA 147+83.00 TO STA 148+13.00	LT/RT									87			
STA 148+13.00 TO STA 148+46.92	LT/RT	26						5					
STA 148+46.92 TO STA 148+66.84	LT/RT	10									44.5		
STA 149+93.16 TO STA 150+13.08	LT/RT	10									44.5		
STA 150+13.08 TO STA 150+63.08	LT/RT								12				
STA 150+13.08 TO STA 152+06.75	LT/RT		75									138	
STA 150+13.08 TO STA 150+31.08	LT/RT	26						3					
STA 150+31.08 TO STA 150+63.08	LT/RT	26		73	0.3					92			
SUBTOTAL			150	0	165	1		8	28	179	89	257	24
PROJECT TOTAL			504	31	223	2	28	13	38	295	89	554	24

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES
SHEET 1 OF 3

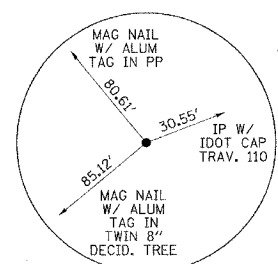
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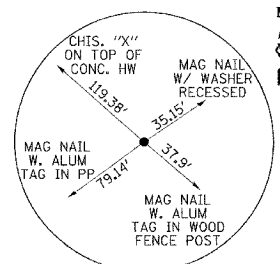
F.A.P. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	**	***	68	9
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
* FAP 332 (IL 1); FAP 328 (US 45)				
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*** WABASH / WAYNE				

ALIGNMENT TIES:

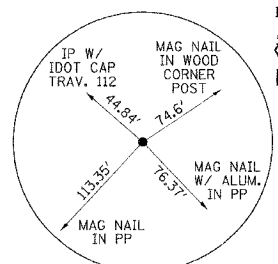
US 45



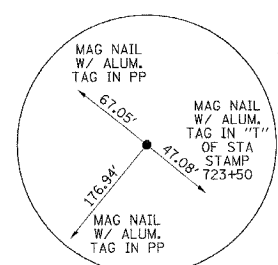
FAP 328 (US 45)
ALIGNMENT TIE
P.O.T. STA 708+15.31



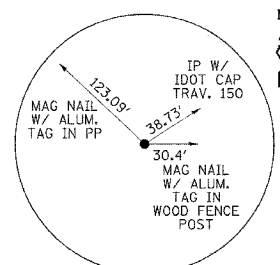
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ALIGNMENT TIE
P.C. STA 723+04.45



FAP 328 (US 45)
ALIGNMENT TIE
P.I. STA 728+04.45



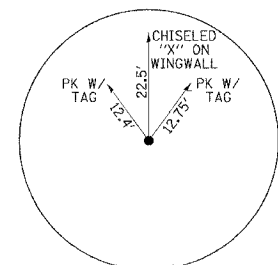
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ALIGNMENT TIE
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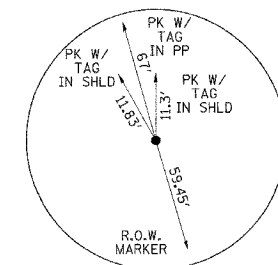
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ALIGNMENT TIE
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ALIGNMENT TIES:

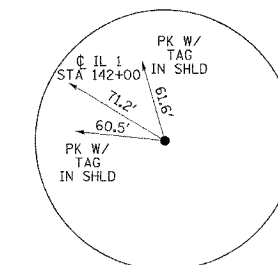
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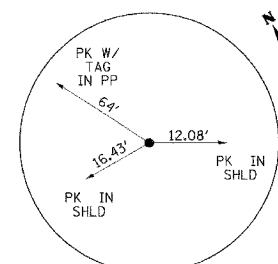
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ALIGNMENT TIE
P.O.T. STA 130+31.19



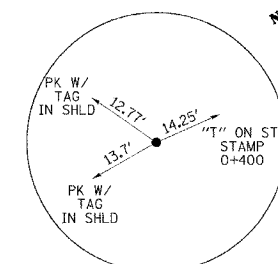
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ALIGNMENT TIE
P.C. STA 136+58.55



FAP 332 (IL 1)
ALIGNMENT TIE
P.I. (BOLT FOUND)



FAP 332 (IL 1)
ALIGNMENT TIE
P.T. STA 147+24.37



FAP 332 (IL 1)
ALIGNMENT TIE
P.O.T. STA 162+32.80

BENCHMARKS:

FAP 328 (US 45)

- BM 217 - RR SPIKE IN POWER POLE WEST OF US 45. STA 729+00, 29.9' LT. ELEVATION - 455.286
- BM 218 - CHISELED SQUARE ON NW CORNER OF BRIDGE SN 093-096-0020. STA 719+90, 16.1' LT. ELEVATION - 439.18
- BM 219 - RR SPIKE IN POWER POLE WEST OF US 45. STA 719+90, 29.6' LT. ELEVATION - 438.448
- BM 220 - RR SPIKE IN POWER POLE WEST OF US 45. STA 689+92, 30.7' LT. ELEVATION - 457.68

BENCHMARKS:

FAP 332 (IL 1)

- BM 516 - RR SPIKE IN POWER POLE EAST SIDE. STA ± 153+59. ELEVATION - 395.978
- BM 517 - CHISELED SQUARE ON SW WINGWALL OF BRIDGE SN 093-0005. ELEVATION - 390.496
- BM 518 - RR SPIKE IN 30" DIAMETER TREE ON SOUTH SIDE OF IL 1. STA ± 139+98, 43' RT. ELEVATION - 403.720

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

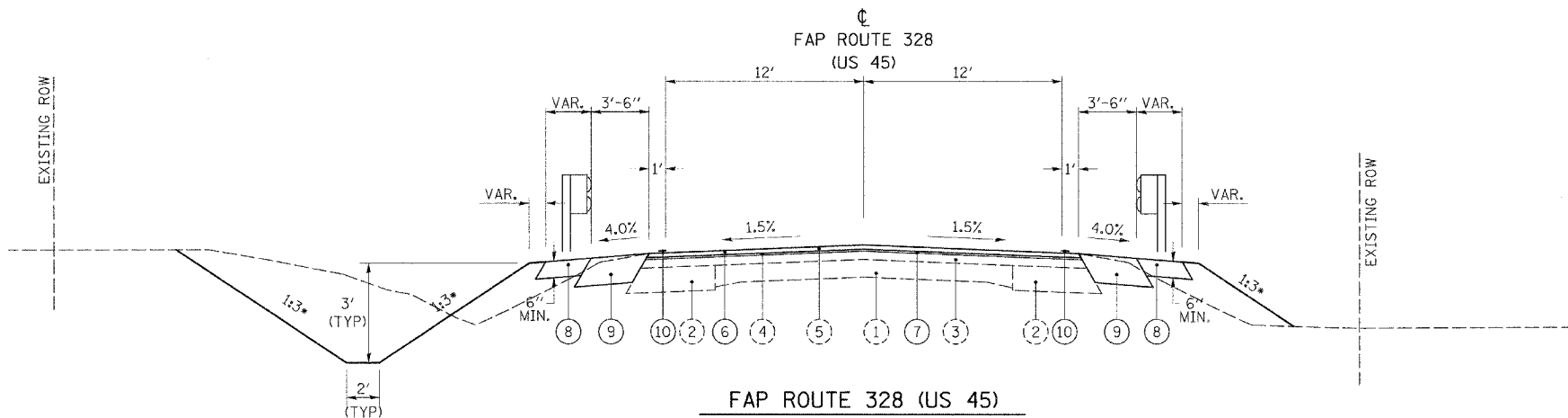
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HORIZ. N/A
DATE 03/15/07

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*	**	***	68	10
STA. TO STA.				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				
* FAP 332 (IL 11); FAP 328 (US 45)				
** 101B-1; 18BR-11B-1				
*** WABASH / WAYNE				

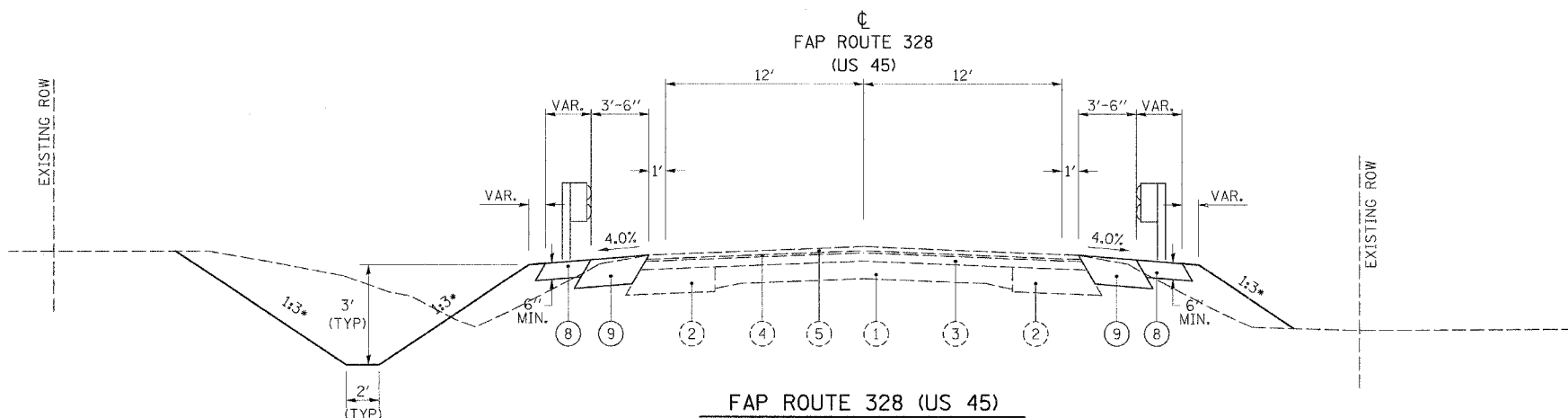


FAP ROUTE 328 (US 45)
PROPOSED TANGENT SECTION
 - TO APPLY -
 STA 719+01.59 TO STA 720+24.59
 BRIDGE OMISSION
 STA 719+21.59 TO STA 720+04.59

* OR AS SHOWN ON CROSS SECTIONS

MATERIALS LEGEND

- ① EXISTING PCC PAVEMENT
- ② EXISTING WIDENING
- ③ EXISTING HOT-MIX ASPHALT BINDER (VARIABLE DEPTH)
- ④ EXISTING HOT-MIX ASPHALT LEVELING BINDER (MACHINE METHOD) TYPE 2, 3/4"
- ⑤ EXISTING HOT-MIX ASPHALT SURFACE COURSE, MIXTURE D, CLASS I, TYPE 2, 1 1/2"
- ⑥ PROPOSED HOT-MIX ASPHALT SURFACE COURSE, MIXTURE "C", N70, (1 1/2")
- ⑦ PROPOSED HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N70, (3/4 ")
- ⑧ PROPOSED HOT-MIX ASPHALT SHOULDERS, 6"
- ⑨ PROPOSED BASE COURSE WIDENING, 10"
- ⑩ PROPOSED PAVEMENT MARKING



FAP ROUTE 328 (US 45)
PROPOSED TANGENT SECTION
 - TO APPLY -
 STA 717+19.95 LT TO STA 719+01.59 LT
 STA 717+43.80 RT TO STA 719+01.59 RT
 STA 720+24.59 LT TO STA 723+08.63 LT
 STA 720+24.59 RT TO STA 722+06.52 RT

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS
 US 45

SCALE: VERT. N/A
 HORIZ. N/A
 DATE 03/15/07

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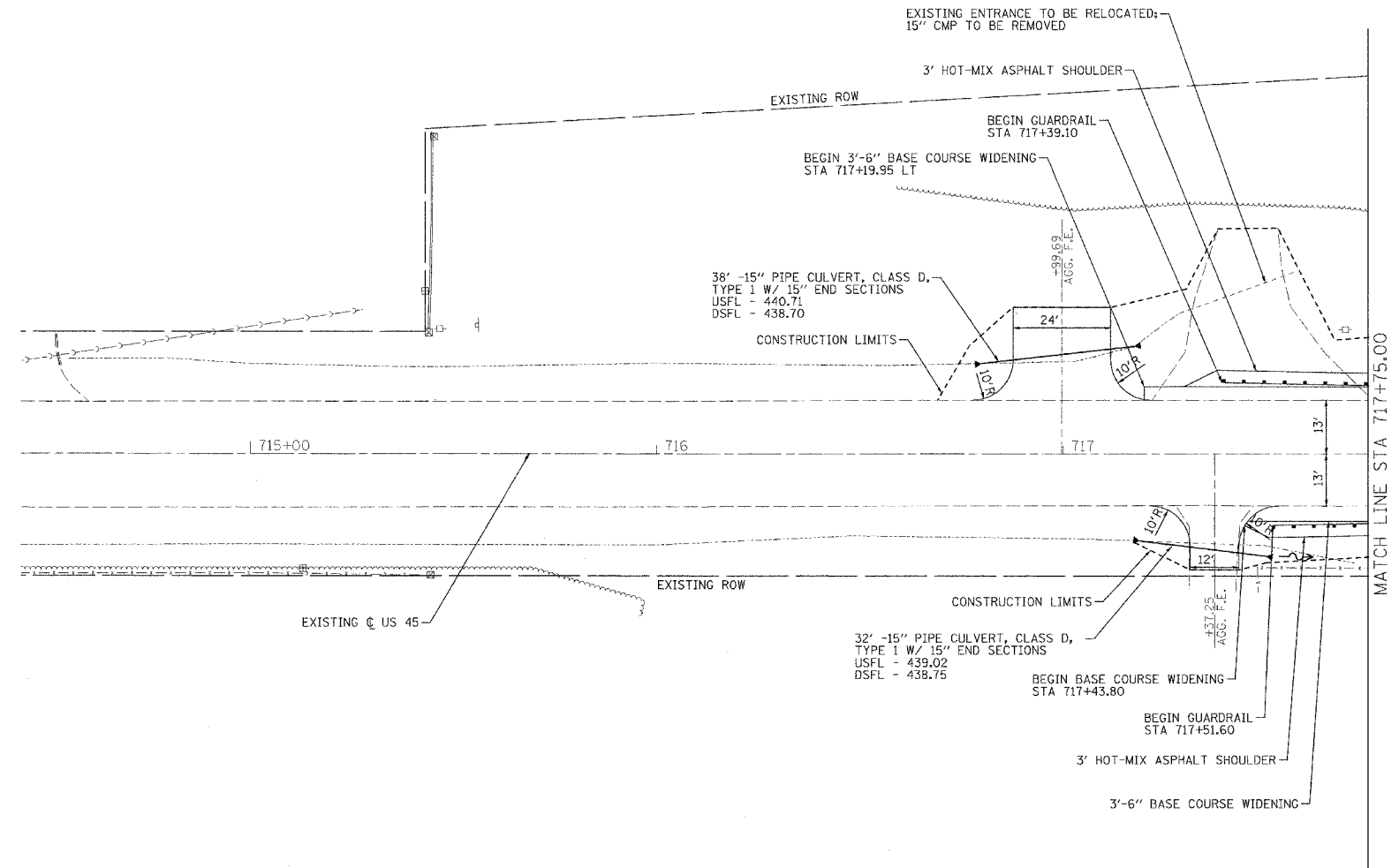
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* FAP 332 (IL 1); FAP 328 (US 45)				
** 101B-1; 68B-1B-1				
*** WABASH / WAYNE				

PLAN

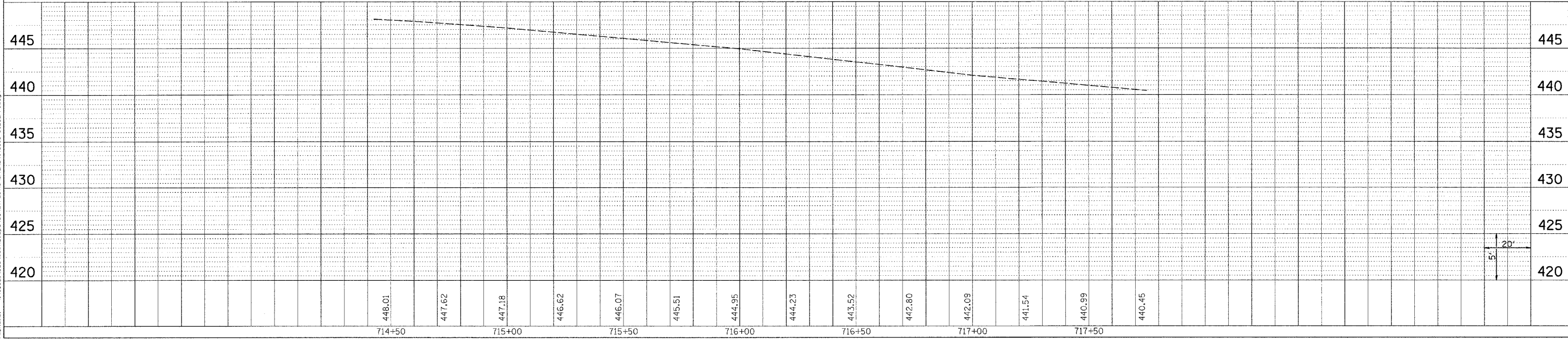
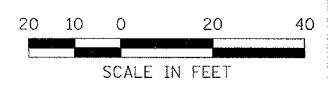
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REVISIONS CHECKED	
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NOTE BOOK NO.	

PROFILE

SURVEYED	DATE
ADJUSTED	BY
REVISIONS CHECKED	
RT. OF WAY CHECKED	
CADD FILE NAME	
NOTE BOOK NO.	



MATCH LINE STA 717+75.00



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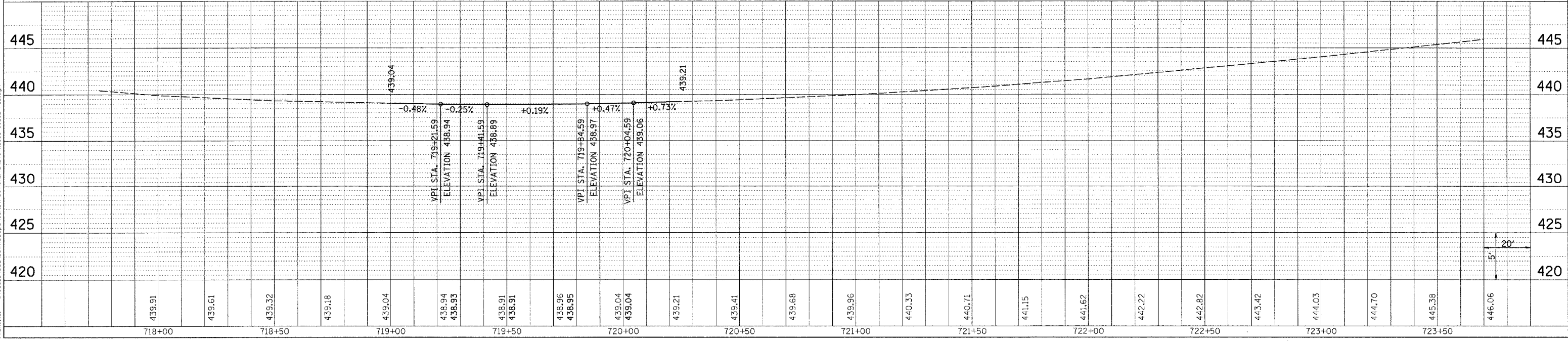
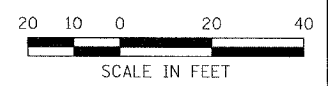
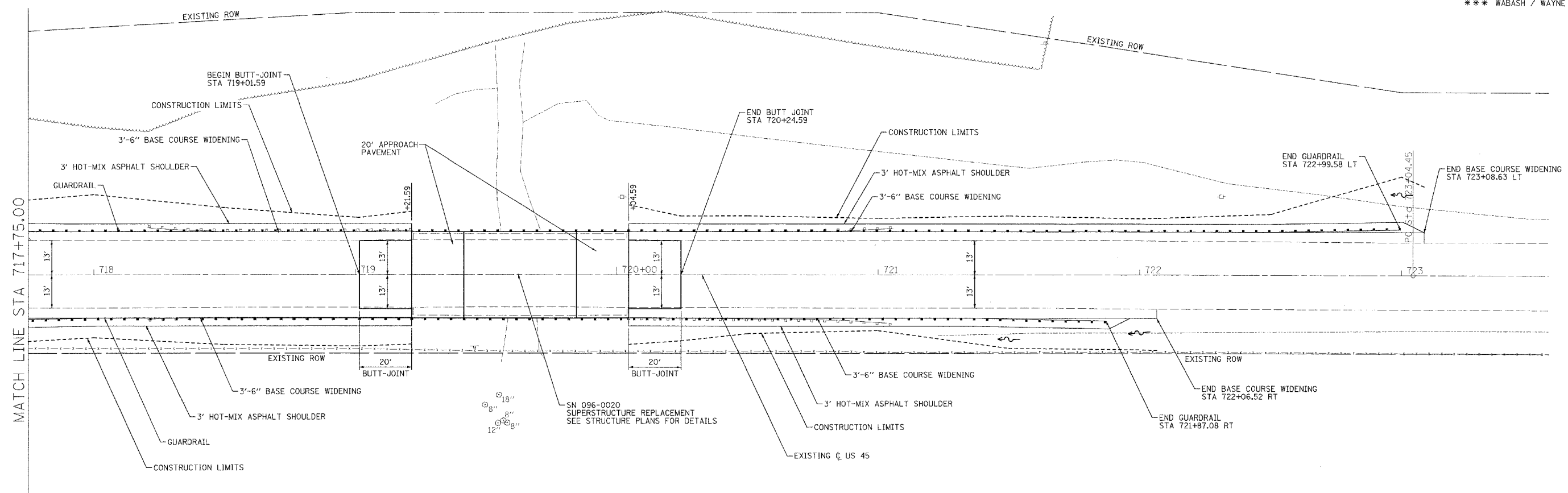
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FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				
* FAP 332 (IL 1); FAP 328 (US 45)				
** 101B-1; (8BR-1B-1)				
*** WABASH / WAYNE				

PLAN

SURVEYED	DATE
ADJUSTED	BY
CHECKED	
NO. OF WAYS CHECKED	
DATE FILED	
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PROFILE

SURVEYED	DATE
ADJUSTED	BY
CHECKED	
NO. OF WAYS CHECKED	
DATE FILED	
NO.	

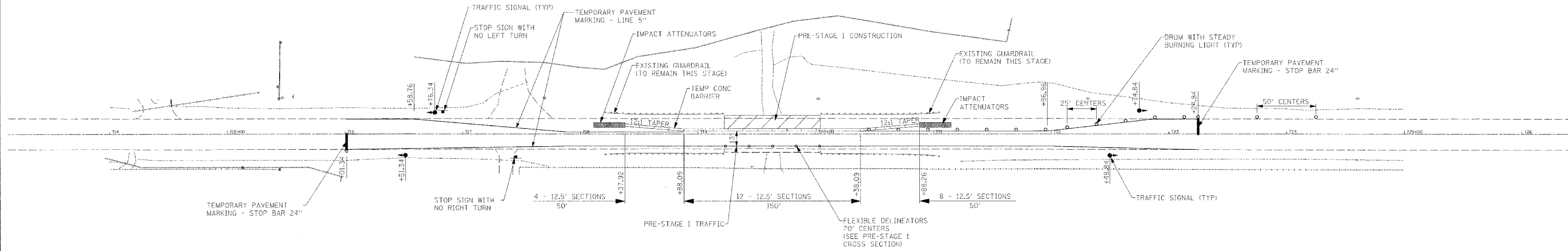


SN 096-0020 (ENDSLEY CREEK) PLAN & PROFILE

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FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

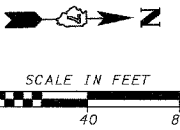
- * FAP 332 (IL 1); FAP 328 (US 45)
- ** 101B-1; (8BR-1B-1)
- *** WABASH / WAYNE



SEQUENCE OF CONSTRUCTION

1. SET-UP PRE-STAGE I TRAFFIC CONTROL.
2. INSTALL FLEXIBLE DELINEATORS ALONG RIGHT SIDE OF STRUCTURE.
3. REMOVE AND REPLACE TWO EXTERIOR BEAMS ON LEFT SIDE OF STRUCTURE
4. RESURFACE AREA OF BEAM REMOVAL & REPLACEMENT.
5. CHANGE TRAFFIC CONTROL TO STAGE I.

PRE-STAGE I

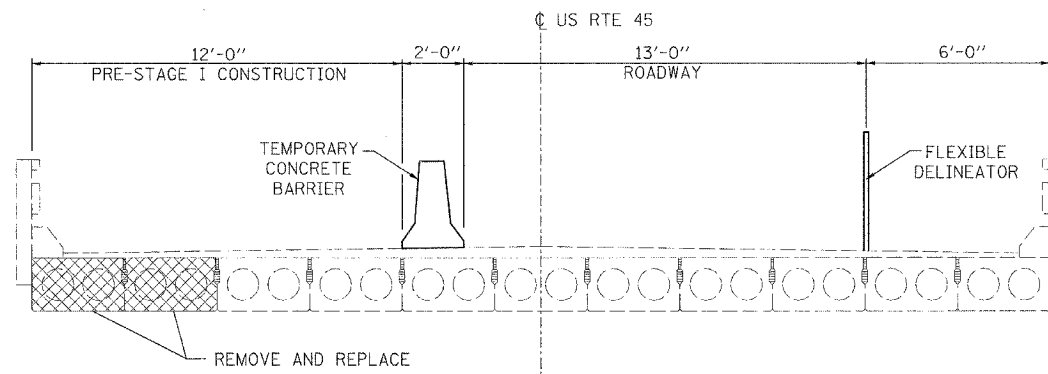


NOTES

ADVANCED WARNING SIGNS, TEMPORARY RUMBLE STRIPS, VERTICAL PANELS, PAVEMENT MARKERS, AND BARRICADE REFLECTORS SHALL BE LOCATED IN ACCORDANCE WITH TRAFFIC CONTROL AND PROTECTION STANDARD 701321.

SEE SPECIAL PROVISIONS, STAGING TYPICAL SECTIONS, AND HIGHWAY STANDARD 701321 FOR ADDITIONAL INFORMATION.

IMPACT ATTENUATORS SHALL CONFORM TO BDE PROCEDURE MEMORANDUM NO. 34-06 "IMPACT ATTENUATORS (CRASH CUSHIONS)"



PRE-STAGE I CROSS SECTION

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

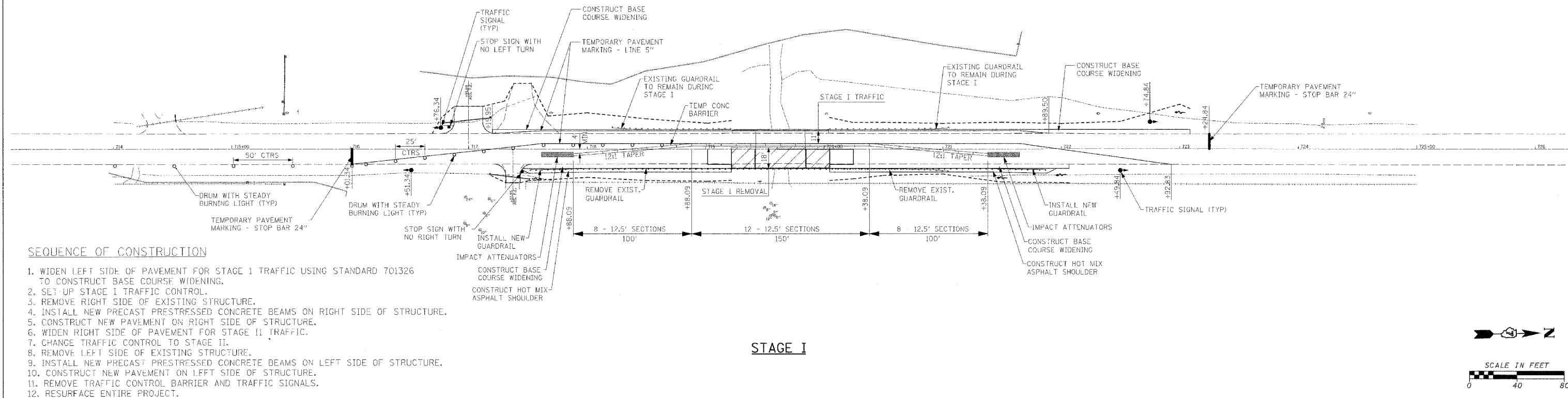
STAGING DETAILS
US ROUTE 45
OVER ENDSLEY CREEK

SCALE: VERT. N/A
HORIZ. 1" = 40'
DATE 03/15/2007

DRAWN BY KMO
CHECKED BY SSM

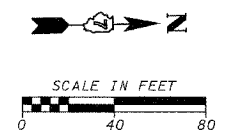
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•	••	•••	68	14
STA. 716+01.34 TO STA. 723+24.84				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

- FAP 332 (IL 1); FAP 328 (US 45)
- 101B-1; (8BR-1)B-1
- WABASH / WAYNE



SEQUENCE OF CONSTRUCTION

1. WIDEN LEFT SIDE OF PAVEMENT FOR STAGE 1 TRAFFIC USING STANDARD 701326 TO CONSTRUCT BASE COURSE WIDENING.
2. SET UP STAGE I TRAFFIC CONTROL.
3. REMOVE RIGHT SIDE OF EXISTING STRUCTURE.
4. INSTALL NEW PRECAST PRESTRESSED CONCRETE BEAMS ON RIGHT SIDE OF STRUCTURE.
5. CONSTRUCT NEW PAVEMENT ON RIGHT SIDE OF STRUCTURE.
6. WIDEN RIGHT SIDE OF PAVEMENT FOR STAGE II TRAFFIC.
7. CHANGE TRAFFIC CONTROL TO STAGE II.
8. REMOVE LEFT SIDE OF EXISTING STRUCTURE.
9. INSTALL NEW PRECAST PRESTRESSED CONCRETE BEAMS ON LEFT SIDE OF STRUCTURE.
10. CONSTRUCT NEW PAVEMENT ON LEFT SIDE OF STRUCTURE.
11. REMOVE TRAFFIC CONTROL BARRIER AND TRAFFIC SIGNALS.
12. RESURFACE ENTIRE PROJECT.

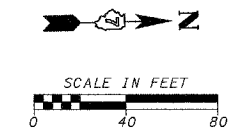
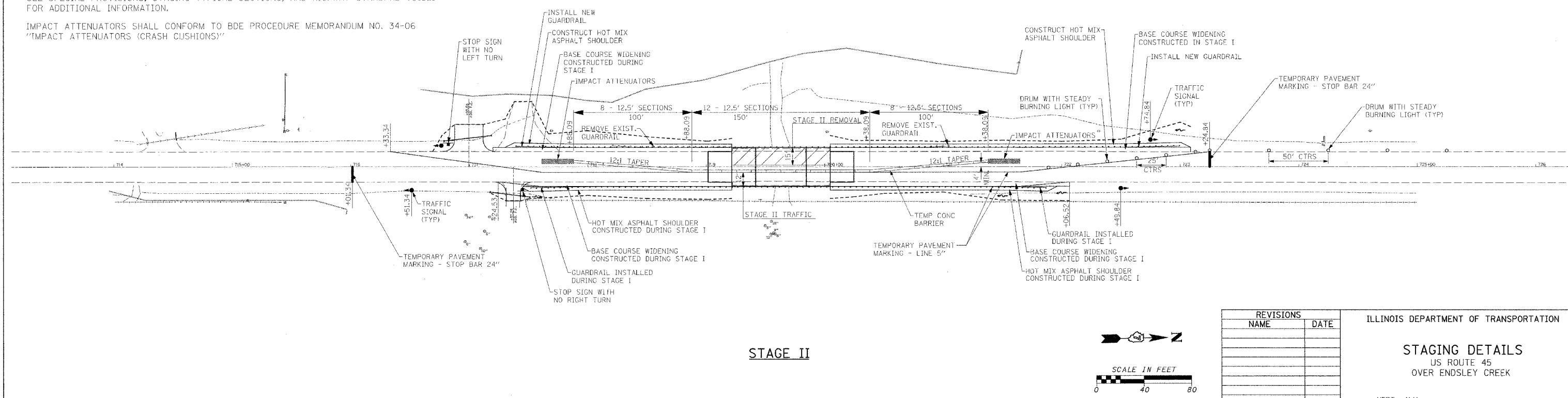


NOTES

ADVANCED WARNING SIGNS, TEMPORARY RUMBLE STRIPS, VERTICAL PANELS, PAVEMENT MARKERS, AND BARRICADE REFLECTORS SHALL BE LOCATED IN ACCORDANCE WITH TRAFFIC CONTROL AND PROTECTION STANDARD 701321.

SEE SPECIAL PROVISIONS, STAGING TYPICAL SECTIONS, AND HIGHWAY STANDARD 701321 FOR ADDITIONAL INFORMATION.

IMPACT ATTENUATORS SHALL CONFORM TO BDE PROCEDURE MEMORANDUM NO. 34-06 "IMPACT ATTENUATORS (CRASH CUSHIONS)"



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

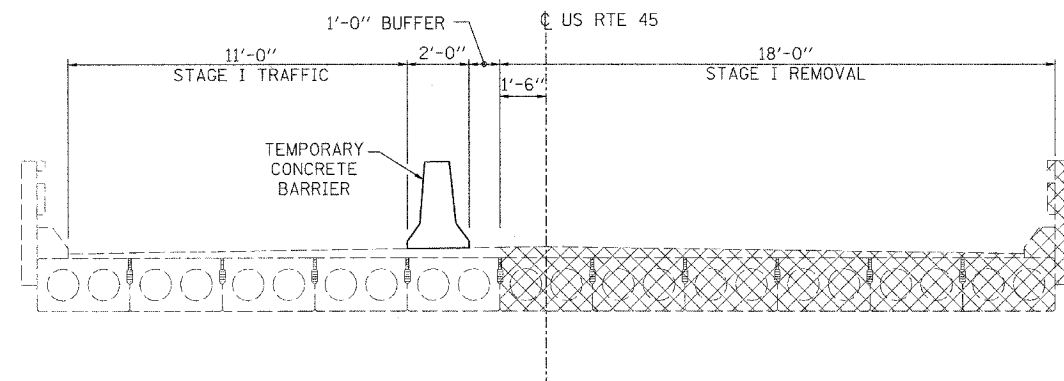
STAGING DETAILS
US ROUTE 45
OVER ENDSLEY CREEK

SCALE: VERT. N/A
HORIZ. 1" = 40'
DATE 3/15/2007

DRAWN BY TJQ
CHECKED BY RPJ

PLOT DATE = 3/15/07
FILE NAME = STAGEL028.DGN

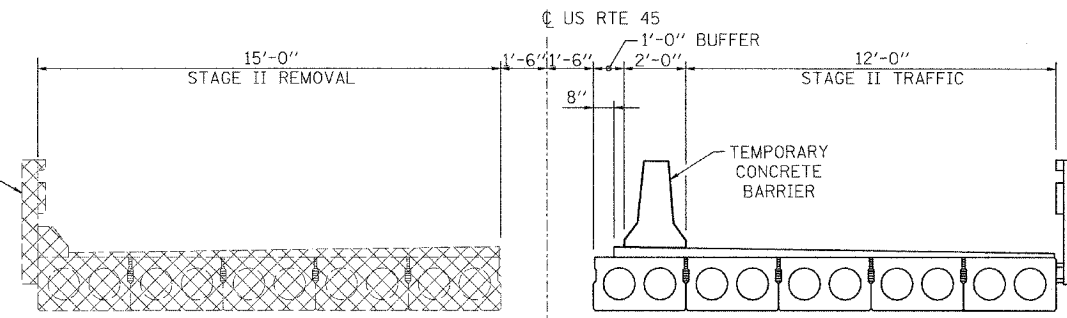
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STA. 716+01.34 TO STA. 723+24.84				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				
* FAP 332 (IL 1); FAP 328 (US 45) ** 101B-1 (8BR-11B-1) *** WABASH / WAYNE				



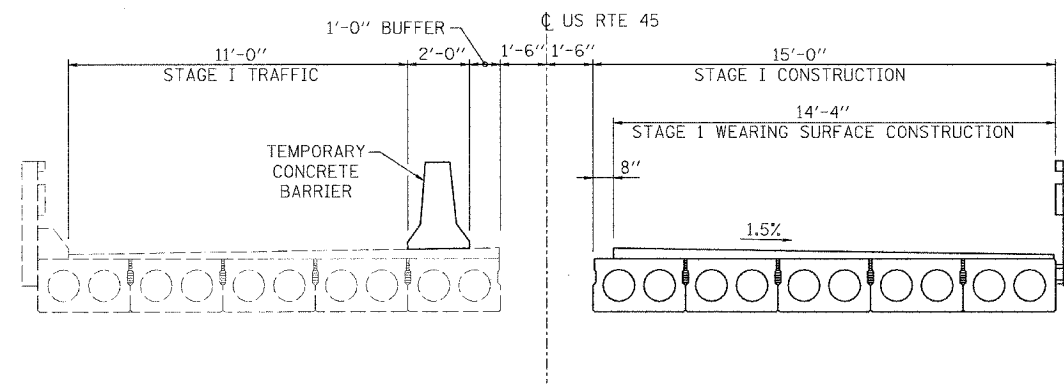
STAGE I REMOVAL

REMOVAL OF EXISTING STEEL BRIDGE RAIL IS INCLUDED WITH REMOVAL OF EXISTING SUPERSTRUCTURE

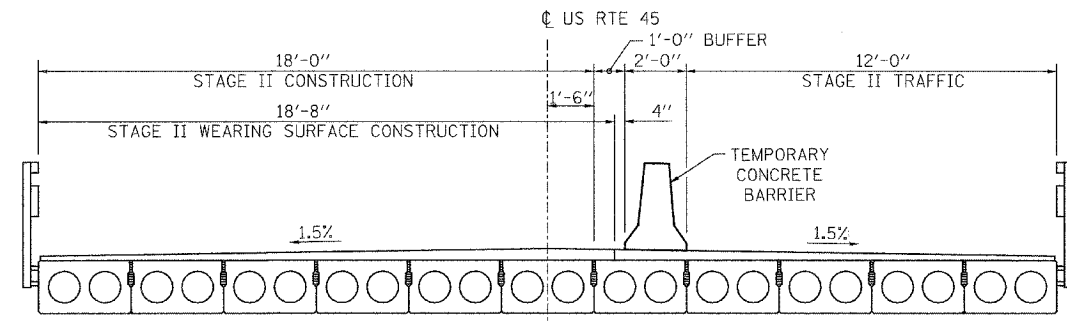
NOTE:
CROSS HATCHED AREAS INDICATE REMOVAL OF EXISTING SUPERSTRUCTURE.



STAGE II REMOVAL



STAGE I CONSTRUCTION



STAGE II CONSTRUCTION

PLOT DATE = 3/15/07
FILE NAME = STAGE1.XIS_022.DGN

REVISIONS	
NAME	DATE

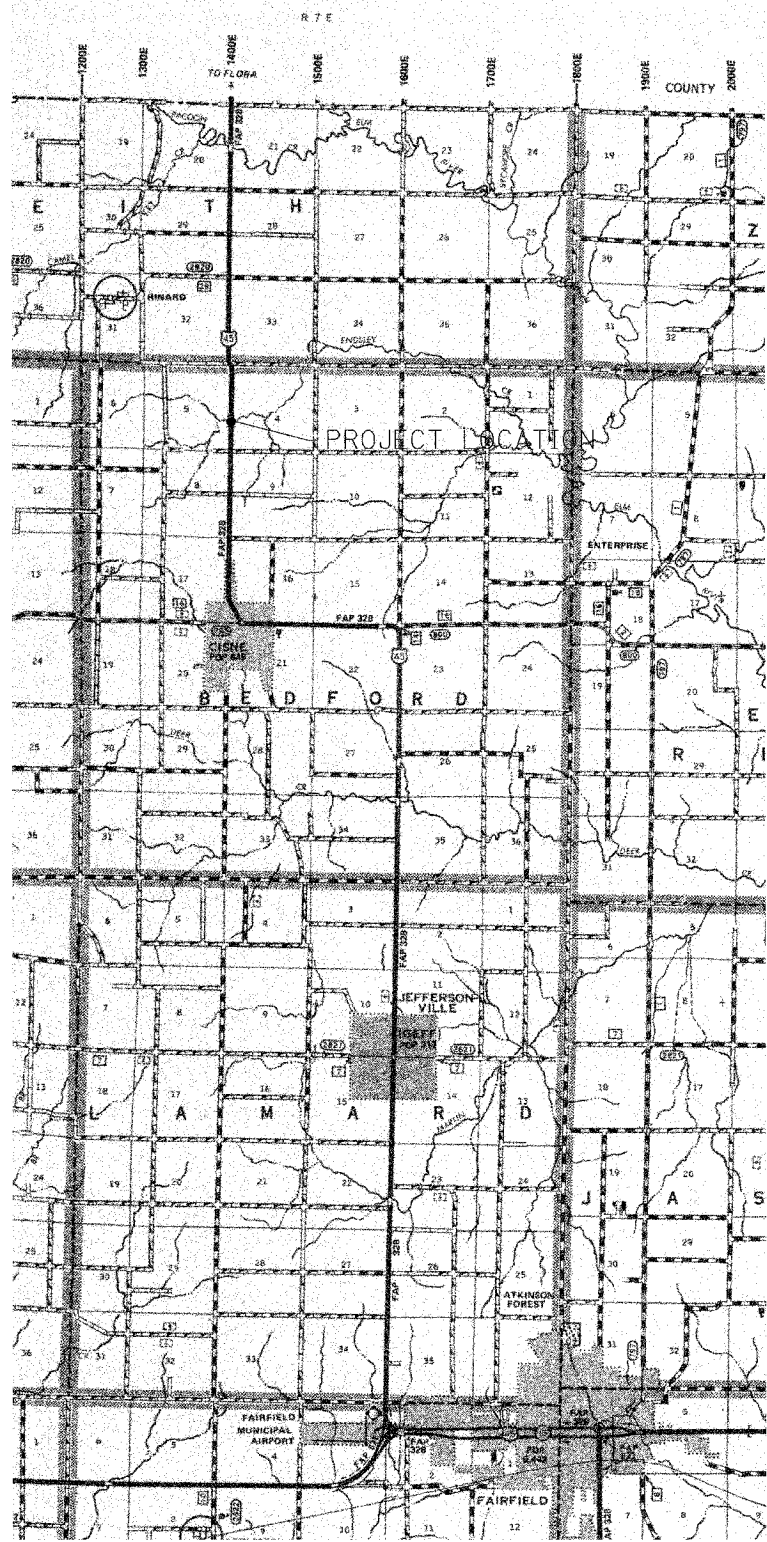
ILLINOIS DEPARTMENT OF TRANSPORTATION

STAGING CROSS SECTIONS
US ROUTE 45
OVER ENDSLEY CREEK

SCALE: VERT. NONE
HORIZ. NONE
DATE 3/15/07

DRAWN BY TJQ
CHECKED BY RPJ

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	••	•••	68	16
STA. 716+01.34		TO STA. 723+24.84		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
• FAP 332 (IL 1); FAP 328 (US 45) •• 101B-1 (8BR-1B-1) ••• WABASH / WAYNE				



LOCATION MAP

INSTALL WIDTH RESTRICTION SIGNS

1 - EACH (60"X48")
 "BRIDGE CONSTRUCTION"
 "14 MILES AHEAD"
 "MAXIMUM WIDTH"
 "9 FT - 6 IN"
 TO BE INSTALLED JUST NORTH OF
 THE US 45/IL 15 INTERSECTION
 WEST OF FAIRFIELD, ILLINOIS

1 - EACH (60"X48")
 "BRIDGE CONSTRUCTION"
 2 MILES AHEAD
 "MAXIMUM WIDTH"
 "9 FT - 6 IN"
 TO BE INSTALLED ALONG US 45
 JUST NORTH OF CH 16
 NORTH OF CISNE, ILLINOIS

1 - EACH (60"X48")
 "BRIDGE CONSTRUCTION"
 "9 MILES AHEAD"
 "MAXIMUM WIDTH"
 "9 FT - 6 IN"
 TO BE INSTALLED JUST SOUTH OF
 US 45/US 50 INTERSECTION
 EAST OF FLORA, ILLINOIS

1 - EACH (30"X12")
 "MAX WIDTH"
 AND
 1 - EACH (30"X12")
 "9 FT - 6 IN"
 TO BE INSTALLED UNDER EACH
 W20-4(O)-48
 "ONE LANE ROAD AHEAD"
 SIGN

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
**STAGING WIDTH RESTRICTION
 SIGNAGE**
 US ROUTE 45
 OVER ENDSLEY CREEK

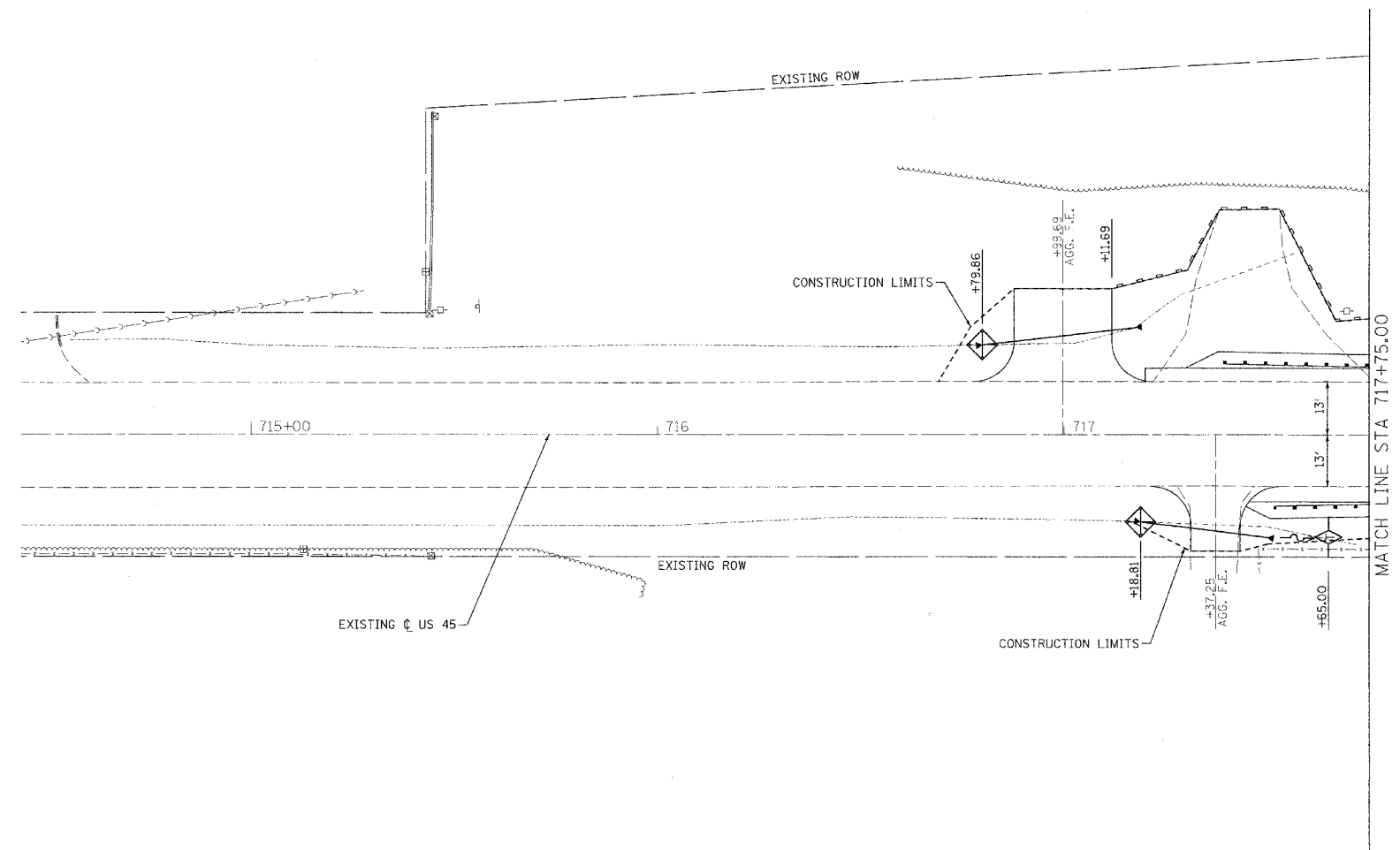
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 DATE 3/15/07

DRAWN BY TJQ
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*	**	***	68	17
STA. 716+50.00 TO STA. 722+50.00				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				
* FAP 332 (IL 1); FAP 328 (US 45)				
** 101B-1; 48BR-1B-1				
*** WABASH / WAYNE				

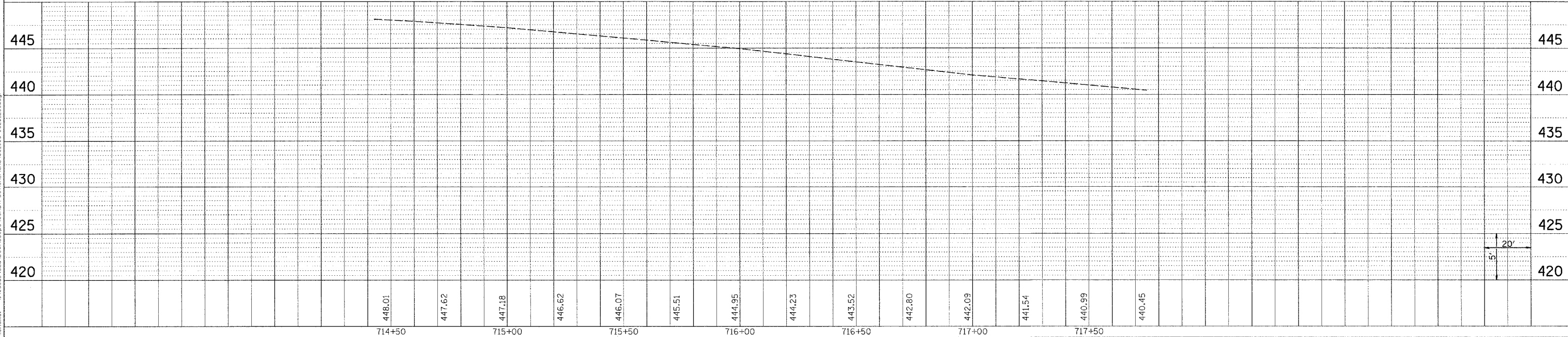
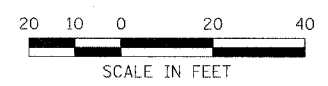
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SURVEYED	
GRADE CHECKED	
BY	
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STRUCTURE	
NO. CRK	



LEGEND

- INLET AND PIPE PROTECTION
- TEMPORARY DITCH CHECK
- PERIMETER EROSION BARRIER



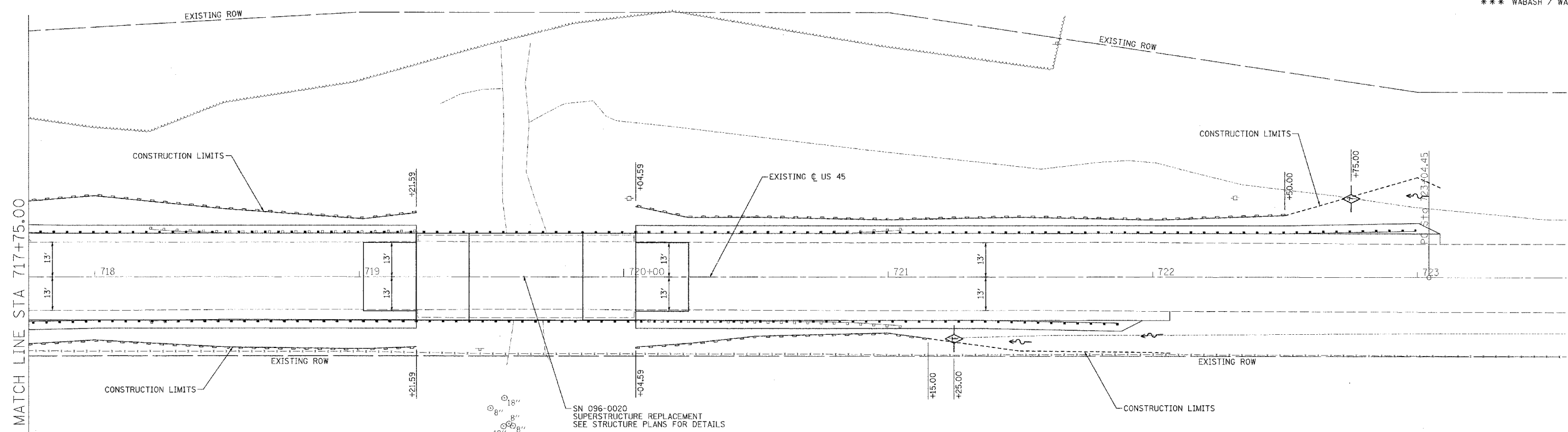
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FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				
* FAP 332 (IL 1); FAP 328 (US 45)				
** 101B-1; (8BR-1)B-1				
*** WABASH / WAYNE				

PLAN	DATE
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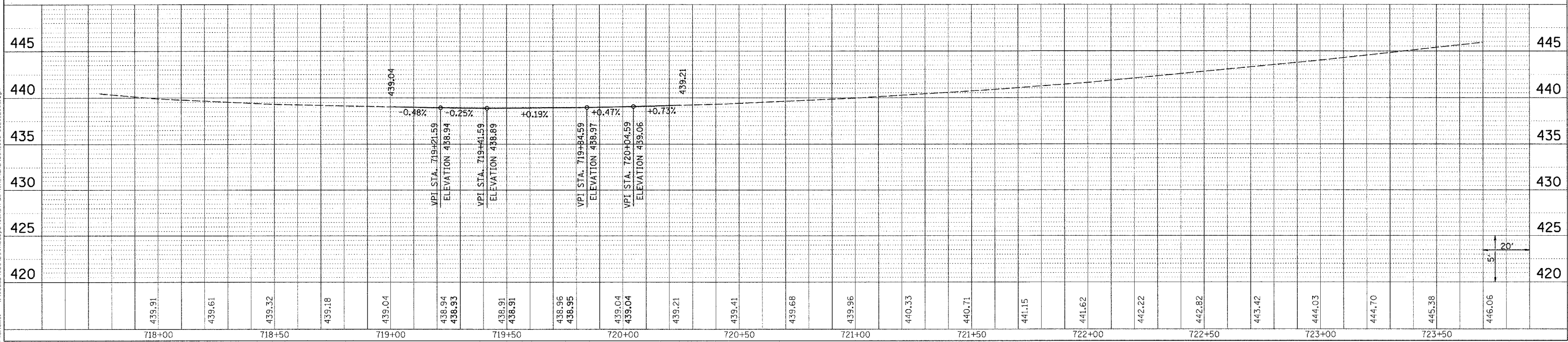
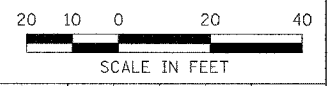
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LEGEND

- INLET AND PIPE PROTECTION
- TEMPORARY DITCH CHECK
- PERIMETER EROSION BARRIER



Bench Mark: RR Spike in Power Pole on West Side of US 45, Sta. 719+90.00 approximately 29.6' Loft, Elev. 438.45.

Existing Structure: S.N. 096-0020 was built in 1921 as S.B.I. Rte. 25 Sec. 8B at Sta. 719+63.00. In 1974 the superstructure was replaced, and the substructure widened. The existing single span structure consists of PPC deck beams on spread footing supported closed abutments. The bk. to bk. abts dimension measures 43'-0" while the O.-O. width measures 33'-0". The existing superstructure shall be replaced with PPC deck beams and the existing approach pavement shall be replaced with new Bridge Approach Pavement (Special). Staging shall be used during construction.

No Salvage.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

INDEX OF SHEETS

1. General Plan
2. Stage Construction Details
3. Temporary Concrete Barrier for Stage Construction
4. Type SM Steel Bridge Rail Side Mounted
5. Bridge Approach Pavement (Special)
- 6.-8. Superstructure Details
9. Abutments
10. Bar Splicer Assembly Details
- 11.-13. Pre-Stage I Details

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	"AS BUILT" SHEETS	SHEET NO.
F.A.P. 328	(8BR-1) B-1	WAYNE	68	19	13 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

Contract #74003

GENERAL NOTES

The minimum thickness of Concrete wearing surface shall be 5" and varies as required to adjust for the new profile grade and beam camber. Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price for the work. All Construction joints shall be bonded.

The cut strands at each beam end shall be given two coats of zinc dust spray or paint meeting the requirements of ASTM A 780. The zinc dust spray or paint shall be applied before corrosion appears and allowed to dry according to the manufacturer's specifications prior to another coat of zinc. A concrete sealer meeting the requirements of Section 587 of the Standard Specifications shall be applied to the exterior face and 9" in on the underside of the fascia beams. The sealer shall be applied after visible crack growth has subsided. This work shall be performed by the producer and included with the cost of the beam.

The contractor is advised that the existing Precast Prestressed Concrete Deck Beams are in a deteriorated condition with reduced load carrying capacity. It is the contractor's responsibility to account for the condition of the beams when developing construction procedures for removal and replacement of the superstructure.

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60 (IL Modified). See Special Provisions.

Reinforcement bars designated (E) shall be epoxy coated.

If the Contractor's procedure for existing beam removal or placement of new beams involves placement of cranes or other heavy equipment on new beams, a detailed procedure shall be submitted to the Engineer for approval. The procedure shall include calculations, prepared and sealed by an Illinois Licensed Structural Engineer, verifying that the equipment and procedure used will not overstress the new beams. To distribute load to multiple beams and protect the concrete, in all cases a double layer mat of heavy timbers shall be used at all times under crane tracks or wheels and any outriggers in the down position. If necessary, shims shall be used under the crane mat to ensure uniform contact with the underlying beams. Prior to placement of the timber mats, the following shall be done: placement and tightening of transverse tie assemblies, grouting and curing the dowel rods 24 hours minimum, and grouting and curing the shear keys. A temporary means of lateral restraint will be required for fascia beams at expansion ends of beams to prevent movement of the beams.

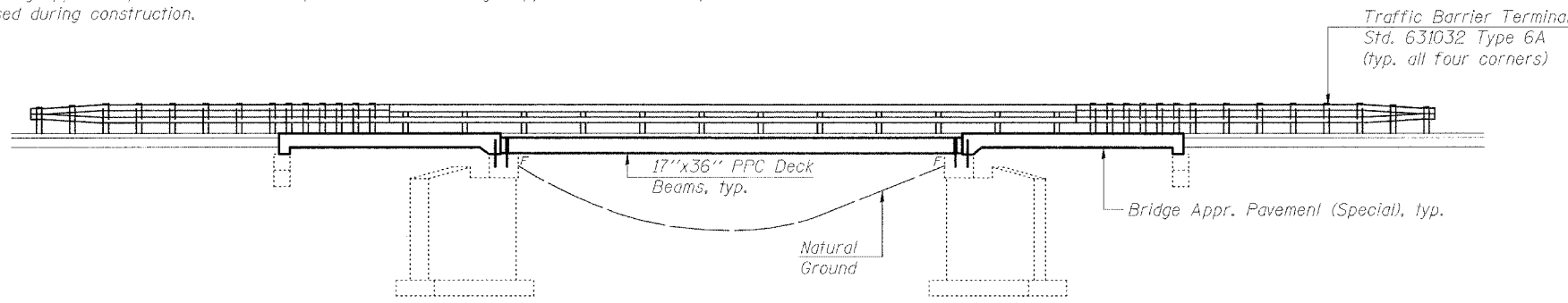
No in-stream work will be allowed on this project.

TOTAL BILL OF MATERIAL

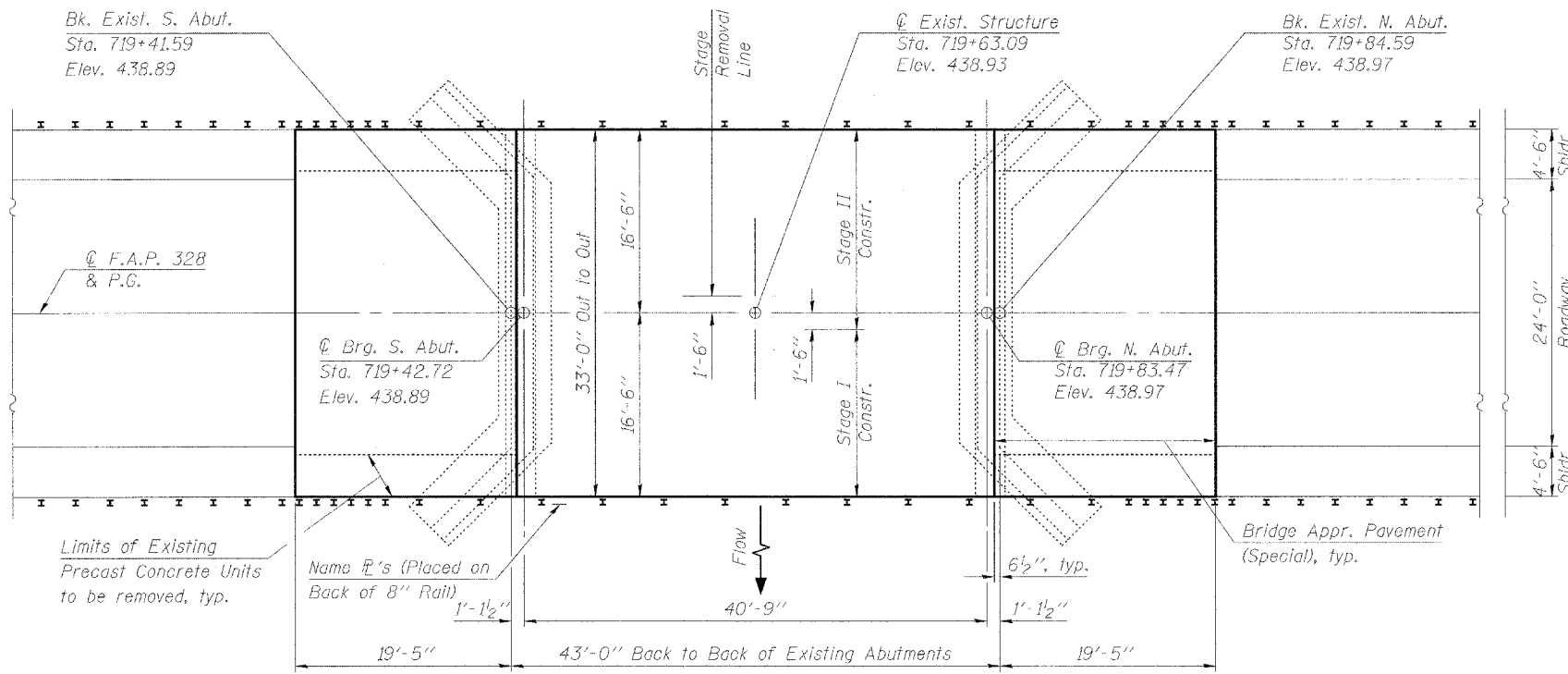
ITEM	UNIT	SUPER	SUB	TOTAL
Hot Mix Asphalt Surface Course, Mix "C", N70	Ton	9		9
Bridge Approach Pavement (Special)	Sq. Yd.		146	146
Removal of Existing Superstructures	Each	1		1
Concrete Superstructure	Cu. Yd.	1.6		1.6
Bridge Deck Grooving	Sq. Yd.	144		144
Protective Coat	Sq. Yd.	154		154
Precast Prestressed Concrete Deck Beams (17" Depth)	Sq. Ft.	1,383		1,383
Reinforcement Bars, Epoxy Coated	Pound	3,000	250	3,250
Bar Splicers	Each	42		42
Steel Railing, Type SM	Foot	126		126
Name Plates	Each	1		1
Removal of Existing Precast Prestressed Concrete Deck Beams	Sq. Ft.	252		252
Removal of Existing Precast Concrete Units	Sq. Ft.		299	299
Concrete Wearing Surface, 5"	Sq. Yd.	154		154
Precast Prestressed Concrete Deck Beams (17" Depth) Special	Sq. Ft.	252		252
Removing and Re-Erecting Existing Railing	Foot	82		82

GENERAL PLAN

US 45 OVER ENDSLEY CREEK
F.A.P. ROUTE 328 - SECTION (8BR-1)B-1
WAYNE COUNTY
STATION 719+63.09
STRUCTURE NO. 096-0020



ELEVATION



PLAN

-0.48%	-0.25%	0.19%	0.47%	0.73%
VPI Sta. 719+21.59 Elev. 438.94	VPI Sta. 719+41.59 Elev. 438.89	VPI Sta. 719+84.59 Elev. 438.97	VPI Sta. 720+04.59 Elev. 439.06	

PROFILE GRADE

Along Ø Roadway

DESIGNED	JJD
CHECKED	EML
DRAWN	JJD
CHECKED	EML

STATION 719+63.09
RE-BUILT 200 BY
STATE OF ILLINOIS
FAP RT 328 - SEC (8BR-1)B-1
LOADING HS20
STR. NO. 096-0020

NAME PLATE

See Std. 515001

LOADING HS20-44 (New Construction)

No Allowance for future wearing surface.

DESIGN SPECIFICATIONS (New Construction)

2002 AASHTO

DESIGN STRESSES

FIELD UNITS

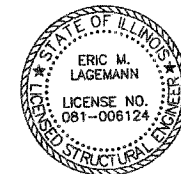
- $f_c = 5,000$ psi (Concrete Wearing Surface)
- $f_c = 3,500$ psi (All Other)
- $f_y = 60,000$ psi (reinforcement)

PRECAST PRESTRESSED UNITS

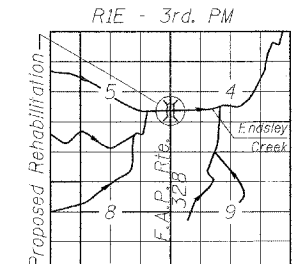
- $f_c = 5,000$ psi
- $f_{ci} = 4,000$ psi
- $f_s = 270,000$ psi (1/2" Ø low lax. strands)
- $f_{sl} = 201,960$ psi (1/2" Ø low lax. strands)

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

Robert E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES



Eric Lagemann 3/15/07
Expires 11/30/2008



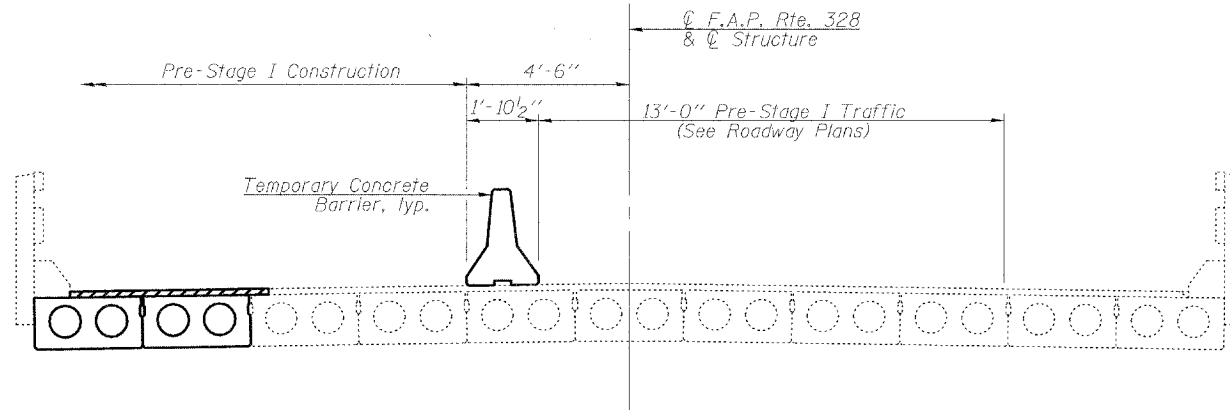
LOCATION SKETCH

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

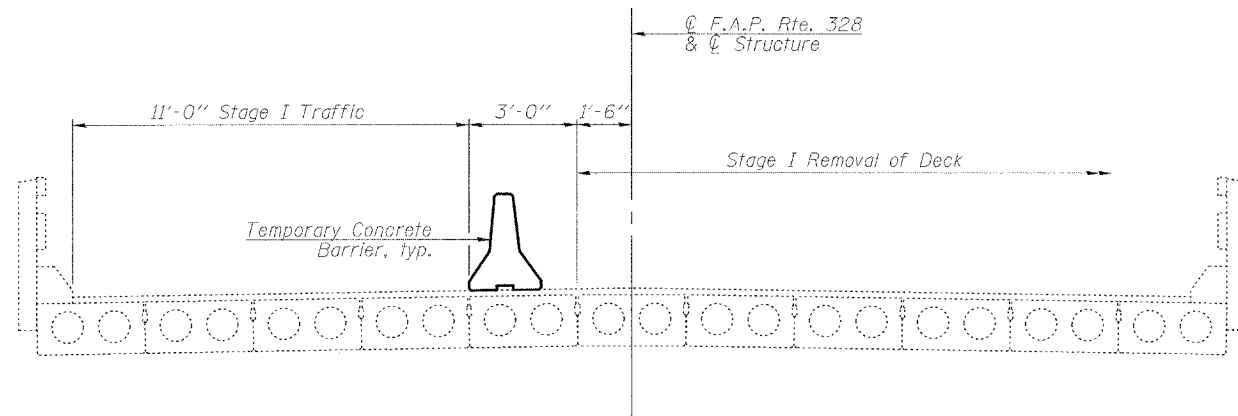
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 328	(8BR-1) B-1	WAYNE	68	20
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

SHEET NO. 2
13 SHEETS

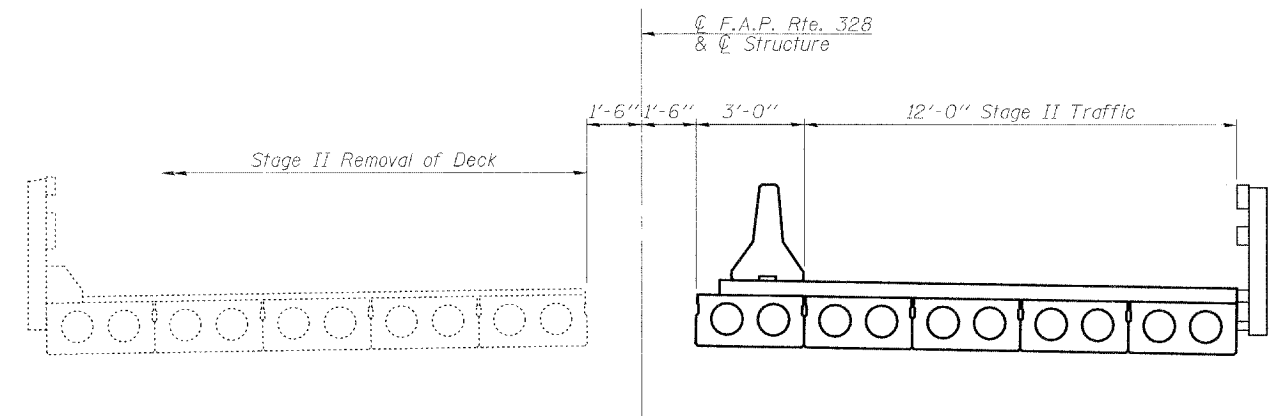
Contract #74003



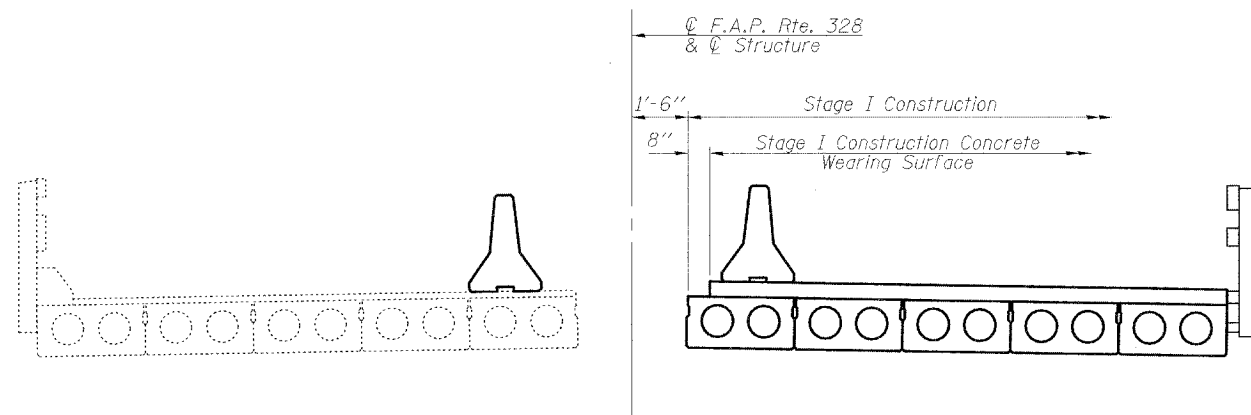
PRE-STAGE I CONSTRUCTION



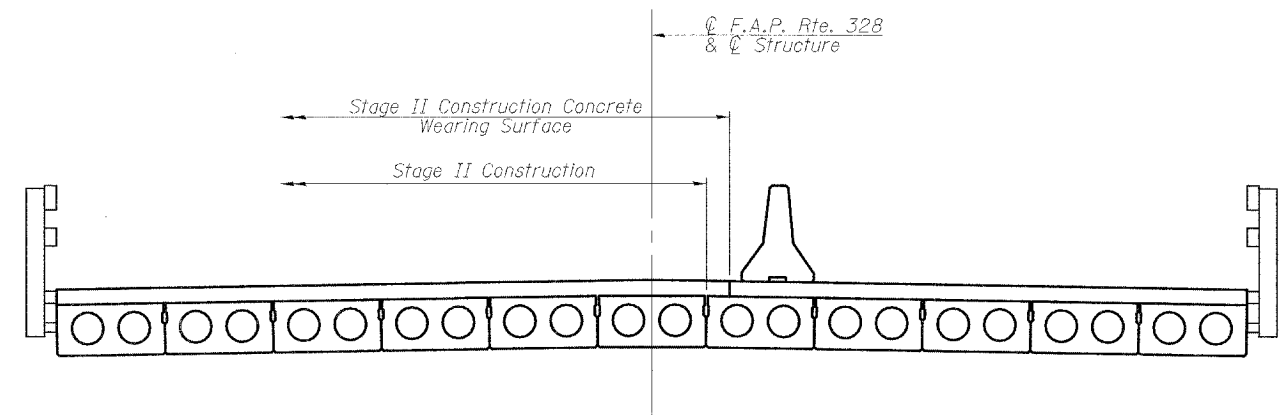
STAGE I REMOVAL



STAGE II REMOVAL



STAGE I CONSTRUCTION



STAGE II CONSTRUCTION

DESIGNED	JJD
CHECKED	EML
DRAWN	JJD
CHECKED	EML

Notes:
All sections are looking North.
For quantity of Temporary Concrete Barrier, see roadway plans.
For details of Temporary Concrete Barrier, see sheet 3 of 13.

**HORNER &
SHIFRIN, INC.**
ENGINEERS

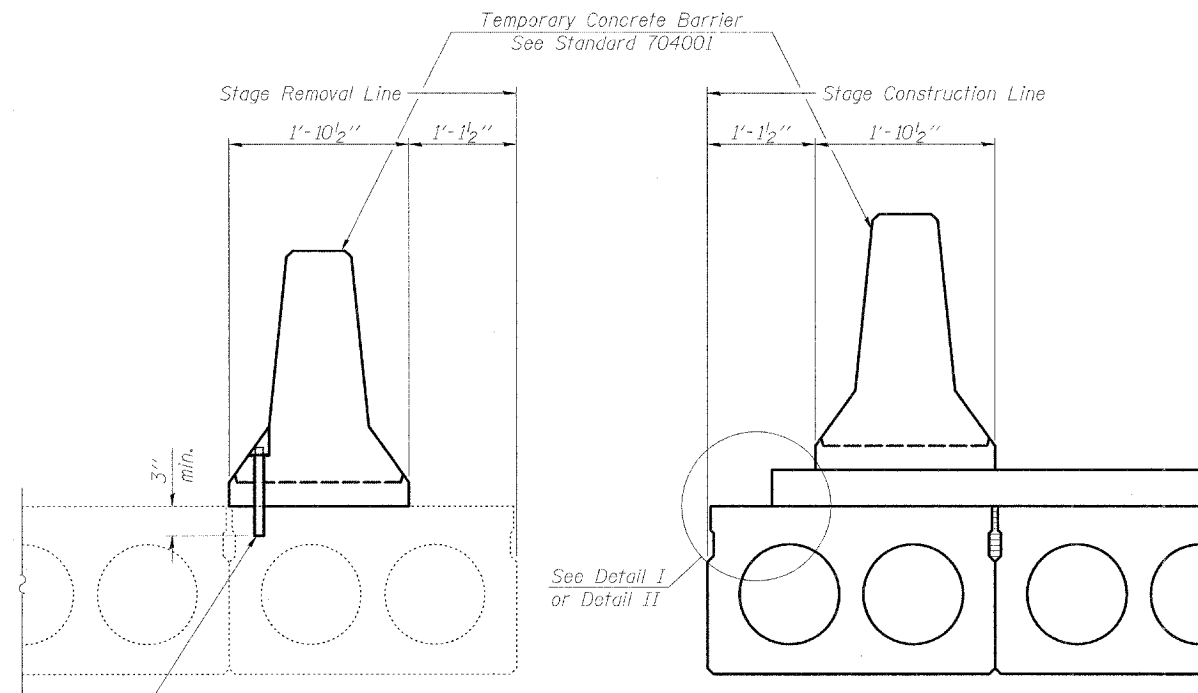
STAGE CONSTRUCTION DETAILS
F.A.P. ROUTE 328 - SECTION (8BR-1)B-1
WAYNE COUNTY
STATION 719+63.09
STRUCTURE NO. 096-0020

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	QUANTITY	15' SHEETS	SHEET NO.
F.A.P. 328	(BBR-1) B-1	WAYNE	68	21

SHEET NO. 3
13 SHEETS

Contract #74003



Drill 1/4" ϕ Holes in existing beam for 1" ϕ x 11" dowel bars. Traffic side only. Cost included with Temporary Concrete Barrier.

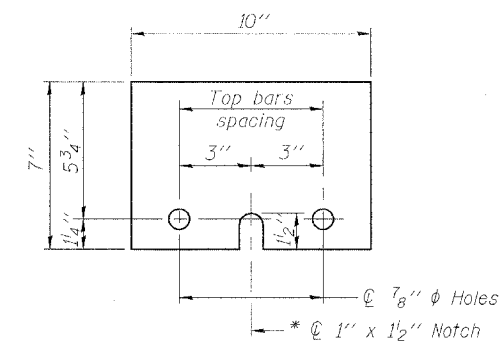
EXISTING PPC DECK BEAMS

NEW PPC DECK BEAMS

SECTIONS THRU PPC DECK BEAMS

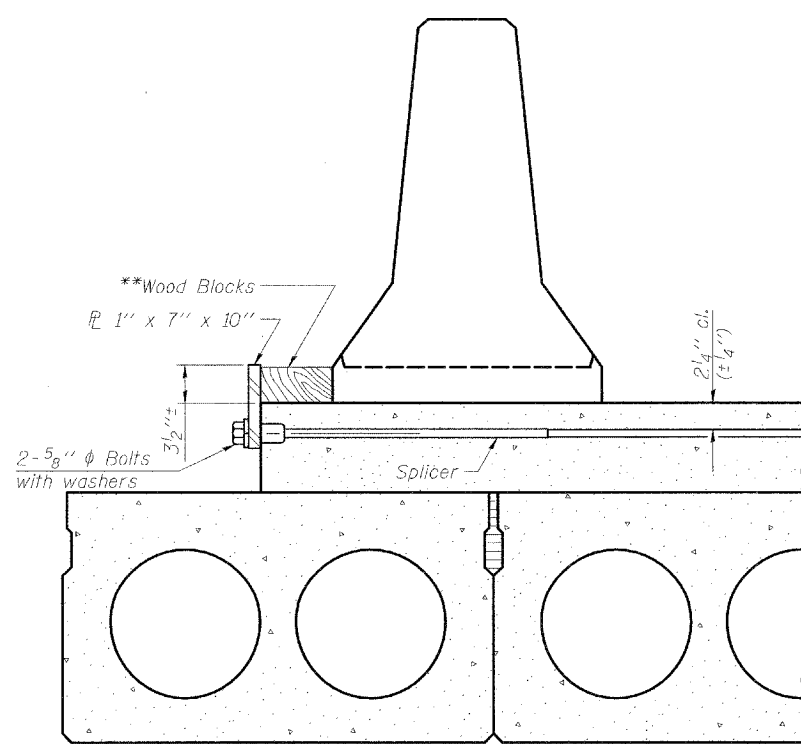
NOTES

- Detail I - With Bar Splicer or Couplers:
Connect one (1) 1"x7"x10" steel \bar{L} to the couplers with 2-5/8" ϕ bolts screwed to coupler at approximate \bar{C} of each barrier panel.
- Detail II - With Extended Reinforcement Bars:
Connect one (1) 1"x7"x10" steel \bar{L} to the concrete wearing surface with 2-5/8" ϕ Expansion Anchors or cast in place inserts spaced between the reinforcement at approximate \bar{C} of each barrier panel.
- Cost of anchorage is included with Temporary Concrete Barrier. The 1" x 7" x 10" plate shall not be removed until stage II construction PPC deck beams and all reinforcement bars are in place and the concrete is ready to be placed.

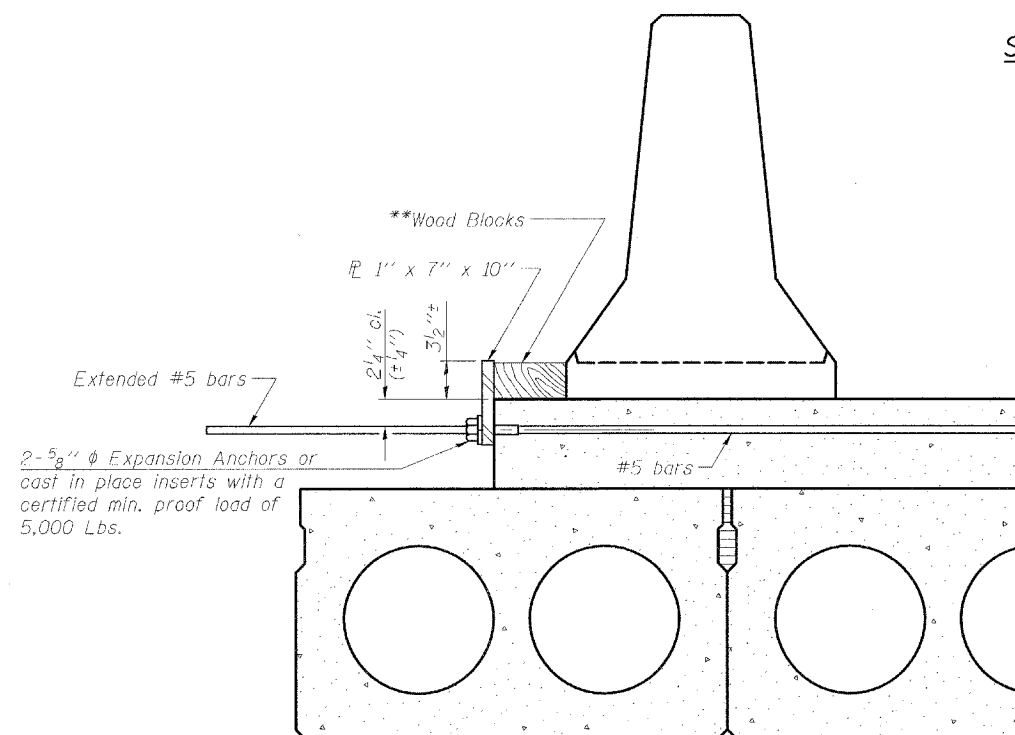


STEEL RETAINER \bar{L} 1" x 7" x 10"

* Required only with Detail II



DETAIL I



DETAIL II

TEMPORARY CONCRETE BARRIER
FOR STAGE CONSTRUCTION

F.A.P. ROUTE 328 - SECTION (BBR-1)B-1

WAYNE COUNTY

STATION 719+63.09

STRUCTURE NO. 096-0020

DESIGNED	JJD
CHECKED	EML
DRAWN	JJD
CHECKED	EML

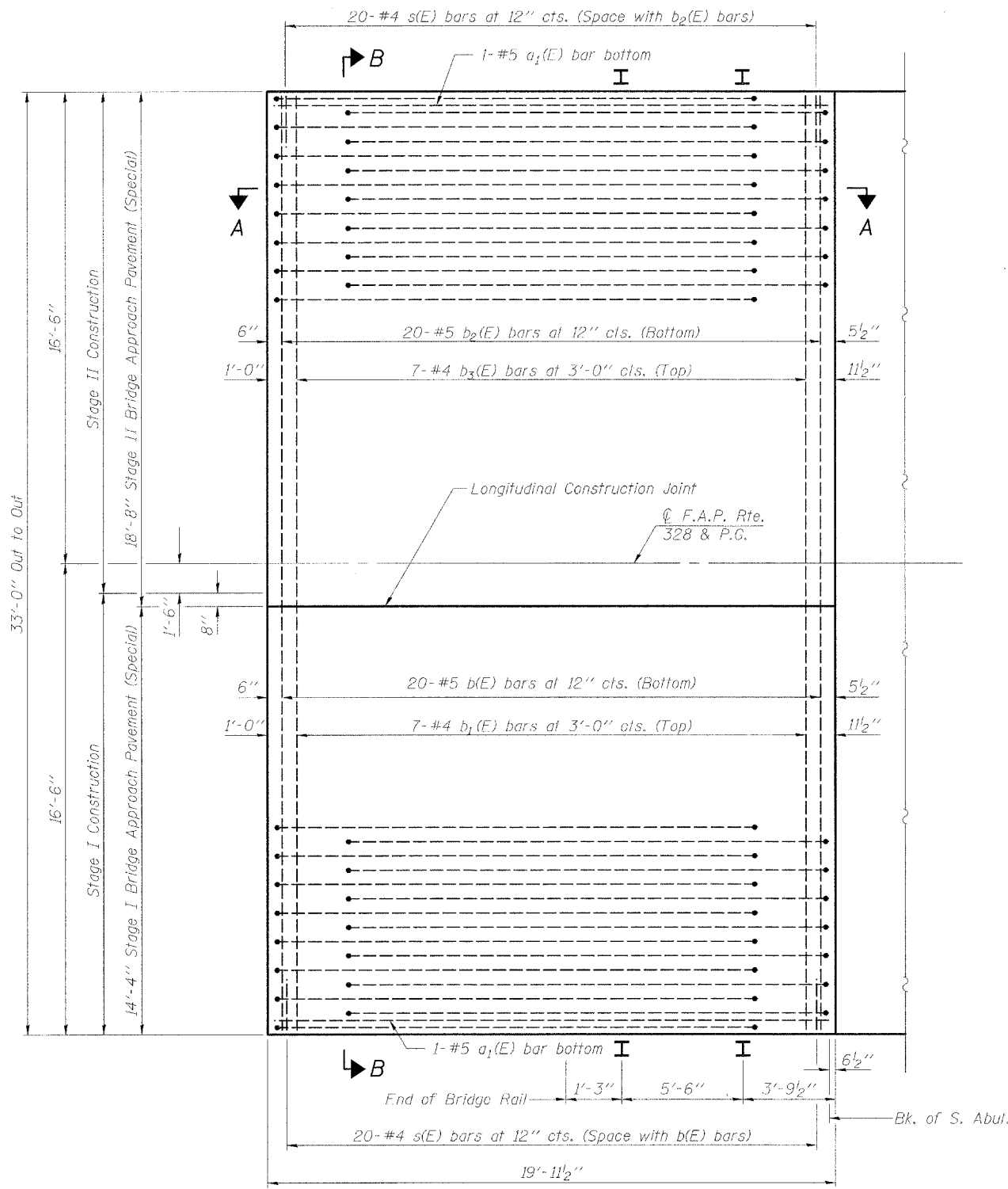
** Wood blocks may be omitted when required to provide minimum stage traffic lane width. When the wood blocks are omitted, the concrete barrier shall be in direct contact with the steel retainer plate.

**HORNER &
SHIFRIN, INC.**
ENGINEERS

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO. F.A.P. 328	SECTION (8BR-D) B-1	COUNTY WAYNE	TOTAL SHEETS 68	SHEET NO. 23	SHEET NO. 5 13 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		

Contract #74003



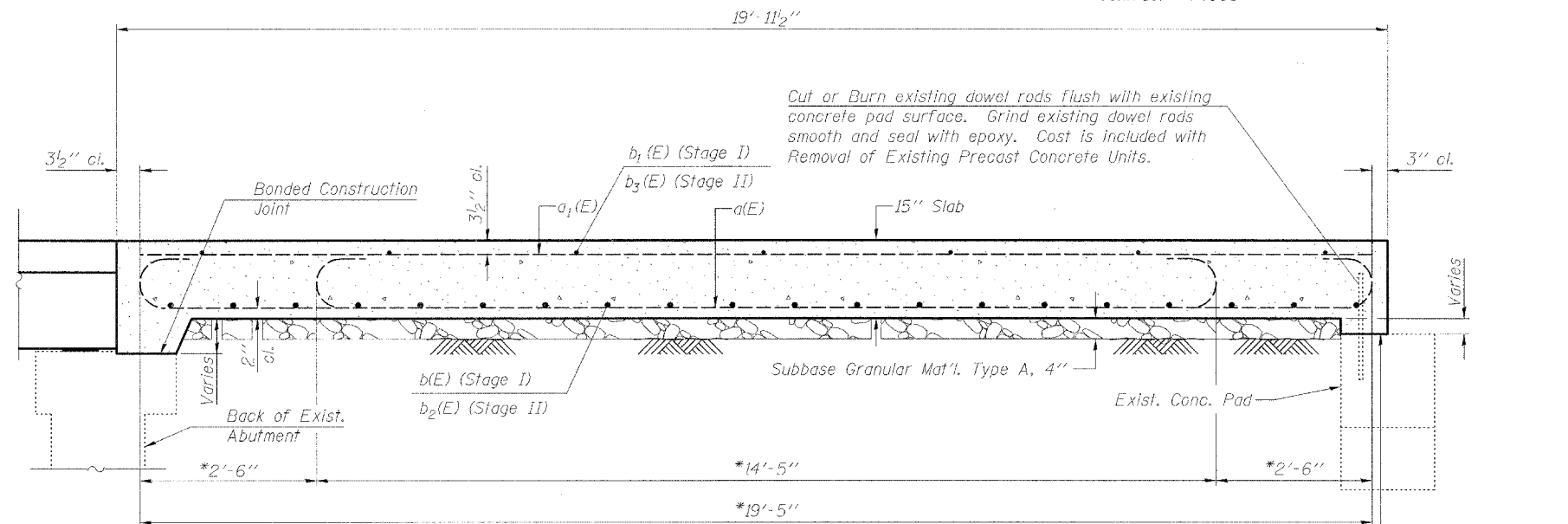
PLAN

(Approach Beam at N. Abut. is mirror image of S. Abut.)

DESIGNED	JJD
CHECKED	EML
DRAWN	JJD
CHECKED	EML

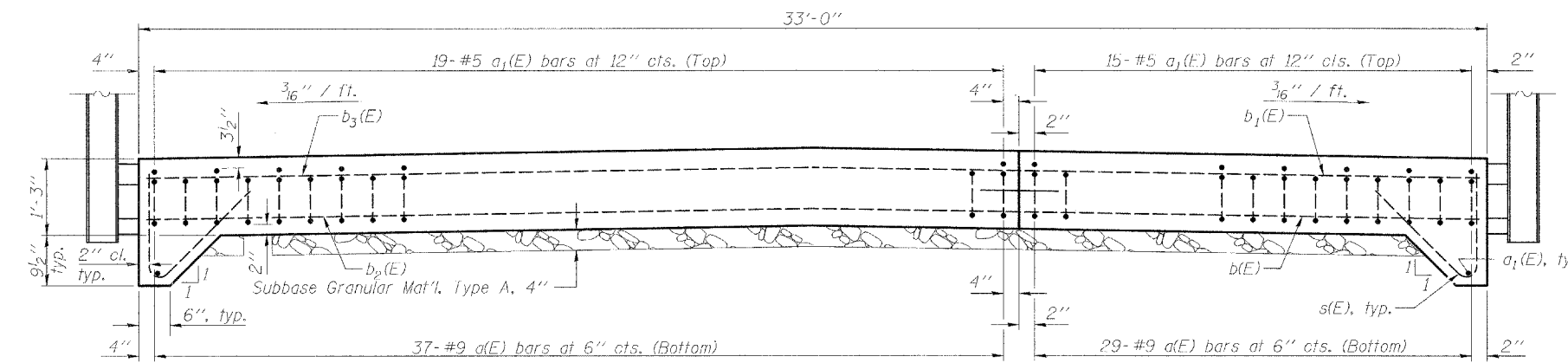
Notes:

- Removal of existing approach beams are included in Removal of Existing Precast Concrete Units.
- See roadway plans for Approach Slab Removal quantity.
- Removal of Existing Precast Concrete Units and Existing Bridge Approach Pavement shall occur during its respective stage construction and prior to placement of the new deck beams.
- See Special Provisions for Bridge Approach Pavement (Special).
- See sheet 4 of 13 for rail anchor device to be cast in approach pavement.



SECTION A-A

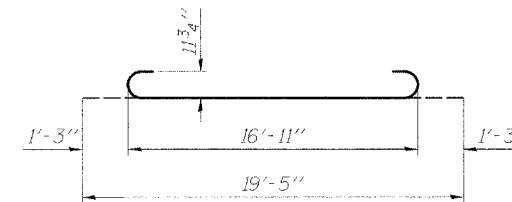
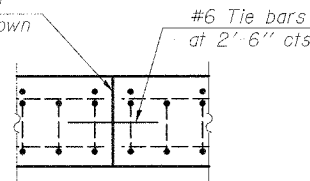
* Stagger No. 9 a(E) bars as shown on plan.



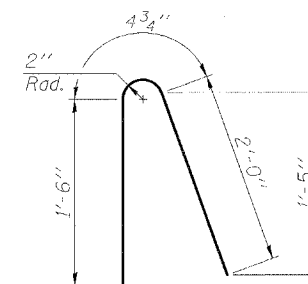
SECTION B-B

Longitudinal Construction Joint in accordance with details shown on Standard 420001

LONGITUDINAL CONSTRUCTION JOINT



BAR a(E)



BAR s(E)

BAR LIST

Bar	No.	Size	Length	Shape
a(E)	132	#9	19'-5"	U
a1(E)	72	#5	19'-5"	—
b(E)	40	#5	14'-0"	—
b1(E)	14	#4	14'-0"	—
b2(E)	40	#5	18'-4"	—
b3(E)	14	#4	18'-4"	—
s(E)	80	#4	3'-11"	N

BILL OF MATERIAL

Item	Unit	Total
Bridge Approach Pavement (Special)	Sq. Yd.	146
Removal of Existing Precast Concrete Units	Sq. Ft.	299

BRIDGE APPROACH PAVEMENT (SPECIAL)
F.A.P. ROUTE 328 - SECTION (8BR-D)B-1

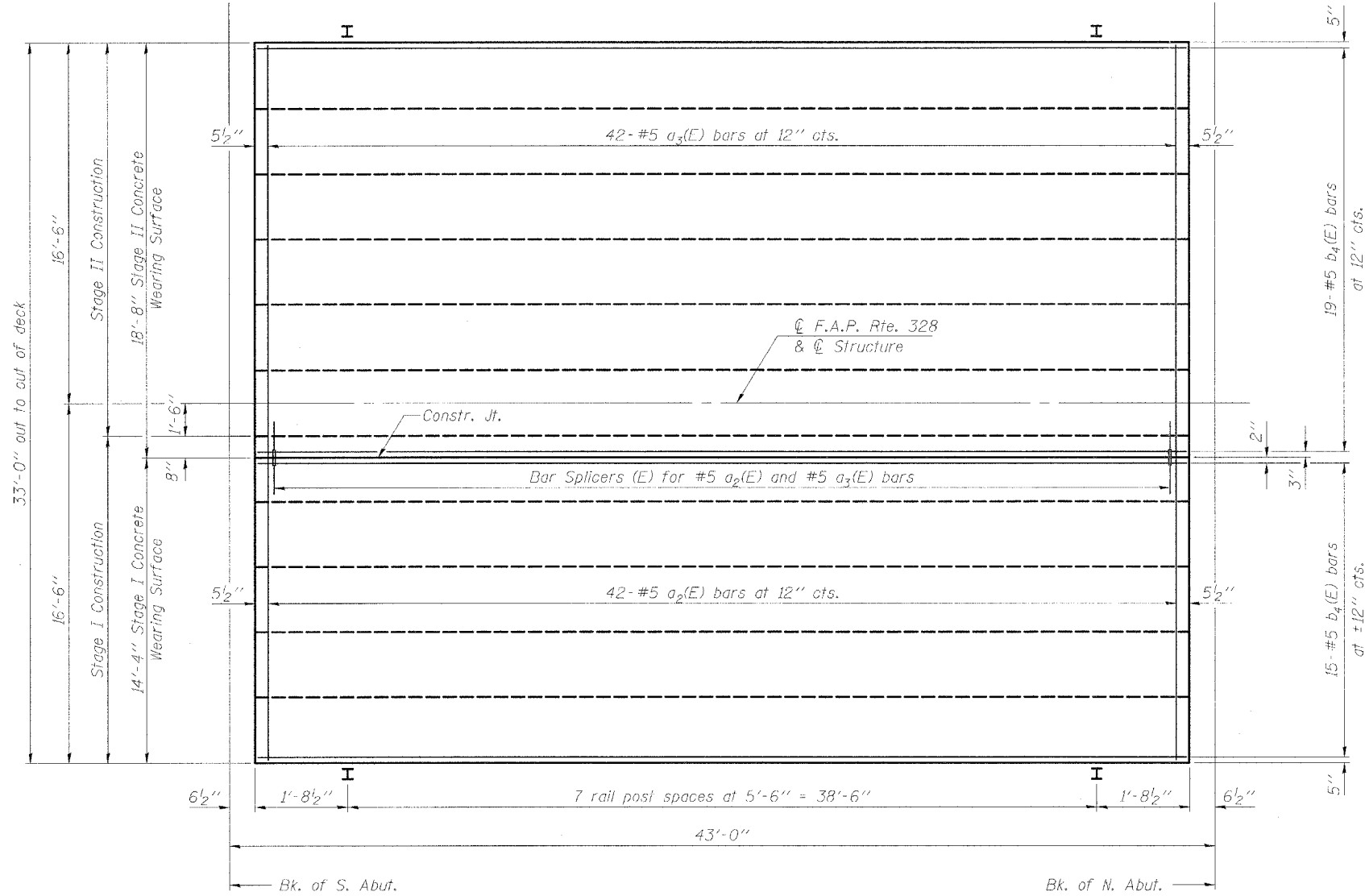
WAYNE COUNTY

STATION 719+63.09

STRUCTURE NO. 096-0020

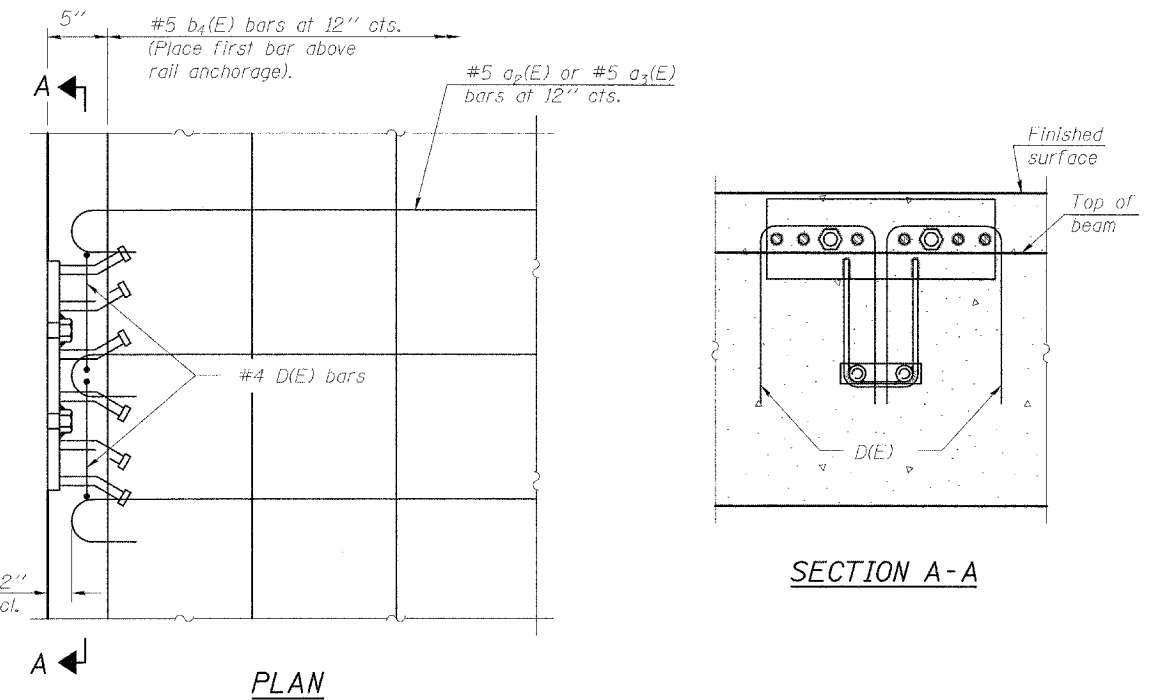
HORNER &
SHIFRIN, INC.
ENGINEERS

Contract #74003



Notes:
Rail spacing the same on both sides of the bridge.
See sheet 5 of 13 for end of bridge rail location.

PLAN



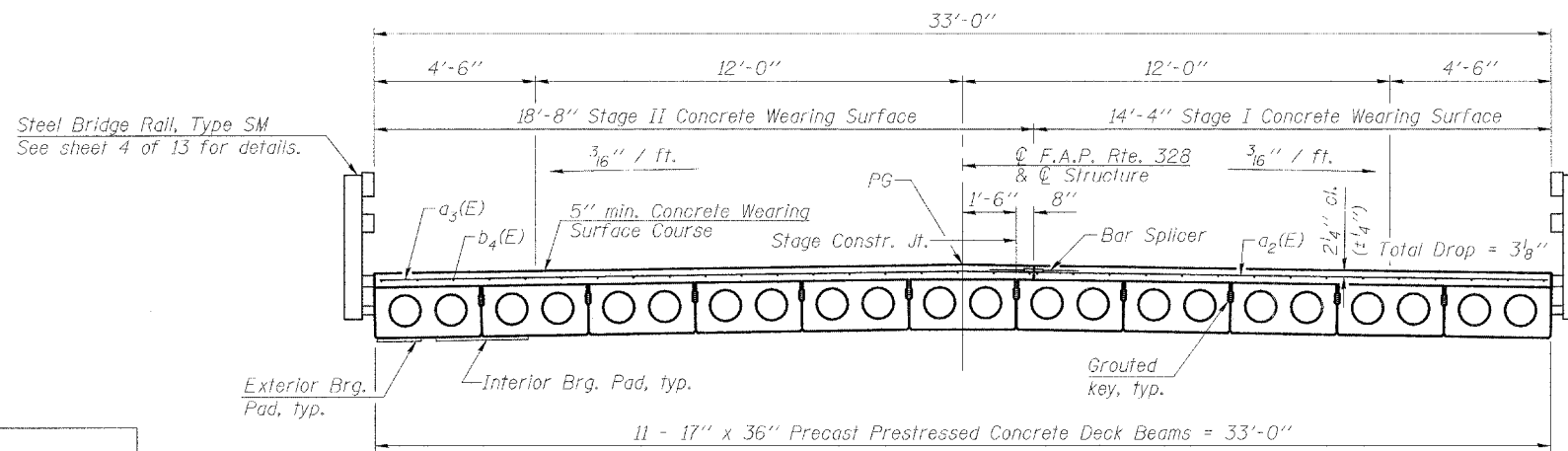
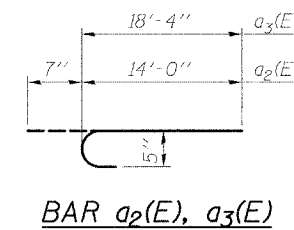
Notes:

The rail anchorage shall be cast with the beam and the wearing surface shall be cast in the field. Formwork necessary for the wearing surface may be secured utilizing the bottom rail anchorage inserts and/or additional inserts cast into the beam. Drilling into the beam will not be permitted.

PLAN

SUPERSTRUCTURE
BILL OF MATERIALS

Bar	No.	Size	Length	Shape
a ₂ (E)	42	#5	14'-7"	U
a ₃ (E)	42	#5	18'-11"	U
b ₄ (E)	34	#5	41'-7"	—
Reinforcement Bars, Epoxy Coated			Pound	2,940
Concrete Wearing Surface			Sq. Yd.	154



CROSS SECTION

DESIGNED	JJD
CHECKED	EML
DRAWN	JJD
CHECKED	EML

HORNER & SHIFRIN, INC.
ENGINEERS

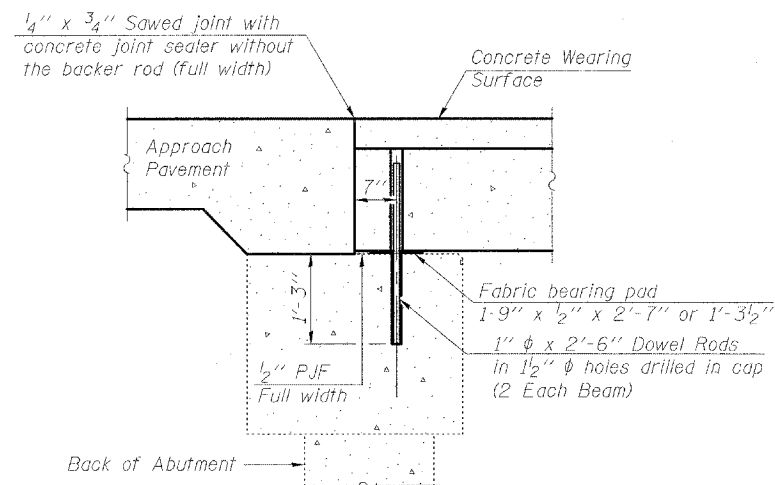
SUPERSTRUCTURE DETAILS
F.A.P. ROUTE 328 - SECTION (8BR-1)B-1
WAYNE COUNTY
STATION 719+63.09
STRUCTURE NO. 096-0020

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 328	(BBR-1) B-1	WAYNE	68	25
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 7
13 SHEETS

Contract #74003

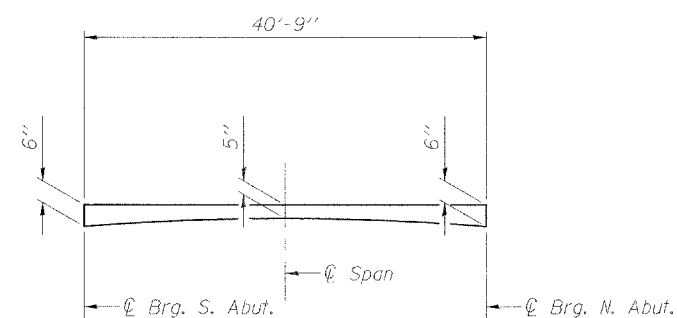


SECTION THRU ABUTMENT

Notes:

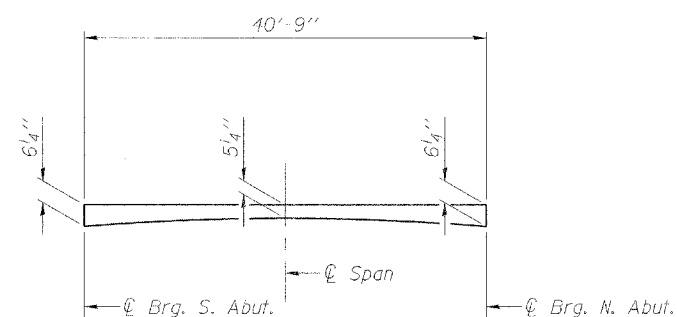
After beams have been erected, holes shall be drilled into substructure and anchor dowels placed. Dowel holes shall be filled with non-shrink grout to top of beam and allowed to cure min. 24 hrs. prior to grouting the shear keys.

All horizontal dimensions are at right angles to beam ends. See sheet 8 of 13 for bearing pad details.



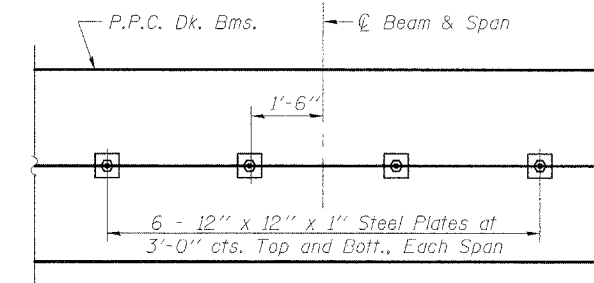
CONCRETE WEARING SURFACE COURSE PROFILE

(Concrete wearing surface course along edge of beams and at stage construction joint)

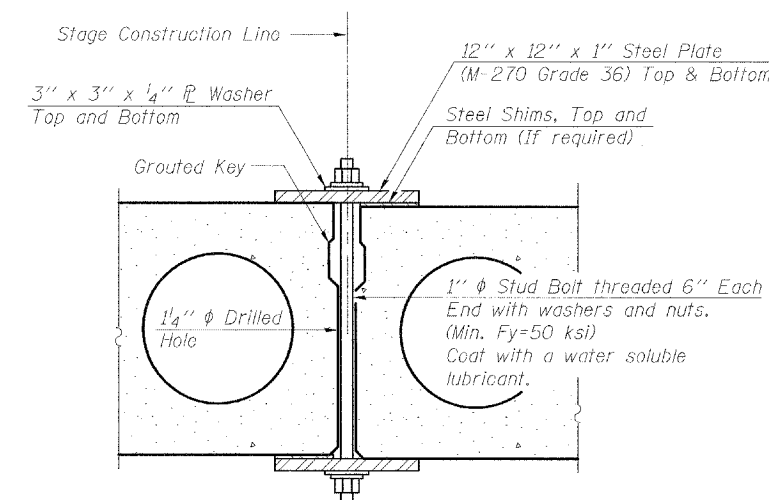


CONCRETE WEARING SURFACE COURSE PROFILE

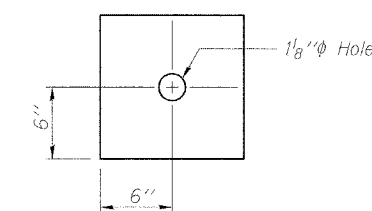
(Concrete wearing surface course along ϕ Roadway)



PLAN



SECTION



CLAMPING PLATE

SHEAR KEY CLAMPING DETAILS AT STAGE CONST. JT.

Cost included with "Precast Prestressed Concrete Deck Beams".
See Stage Construction Details for traffic lanes.

DESIGNED	JJD
CHECKED	EML
DRAWN	JJD
CHECKED	EML

SUPERSTRUCTURE DETAILS
F.A.P. ROUTE 328 - SECTION (BBR-1)B-1

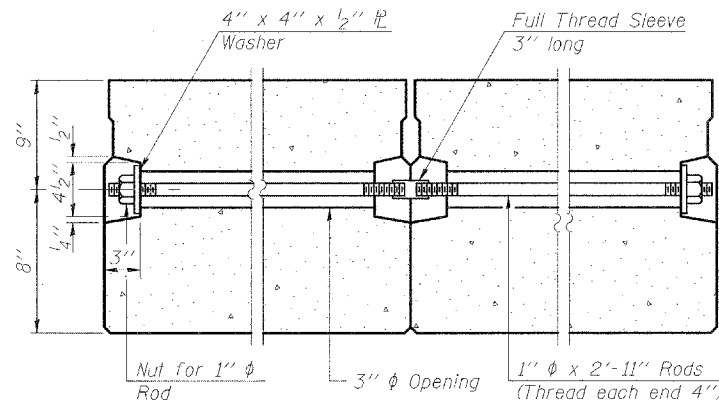
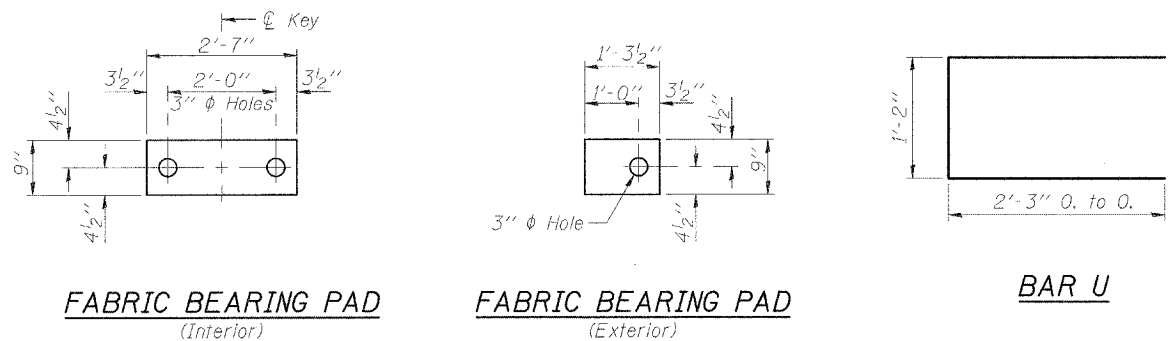
WAYNE COUNTY
STATION 719+63.09
STRUCTURE NO. 096-0020

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ENGINEERS

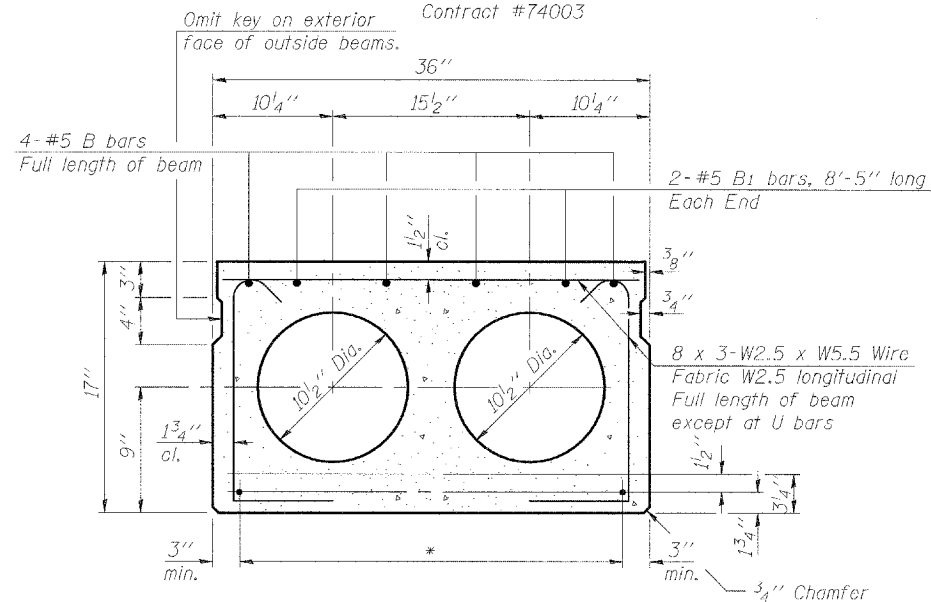
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 328	(8BR-1) B-1	WAYNE	68	26
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	

SHEET NO. 8
13 SHEETS



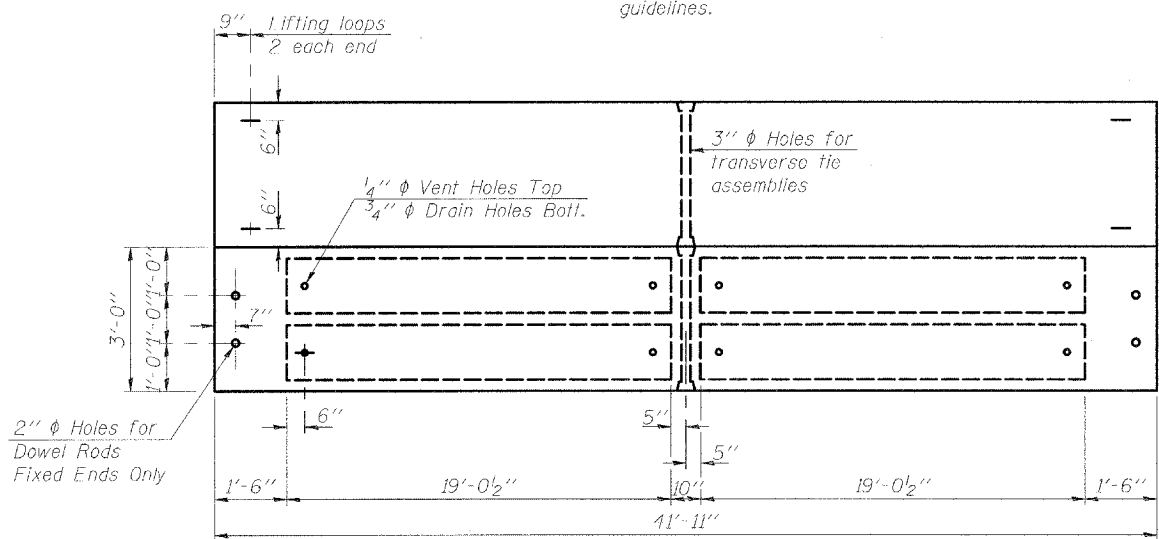
TYPICAL TRANSVERSE TIE ASSEMBLY



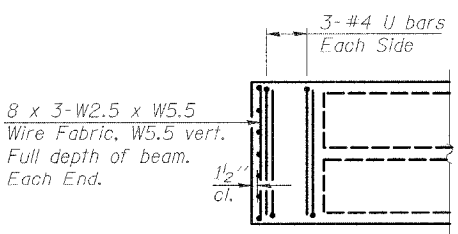
TYPICAL SECTION

- *Transverse Strand Placement Guidelines
1. Place strands symmetrically about centerline of beam.
 2. The minimum distance from center to center of strands in all directions shall be 2".
 3. The minimum clearance from strand to dowel hole shall be 1/2".
 4. The minimum clearance from strand to void shall be 1 1/2".

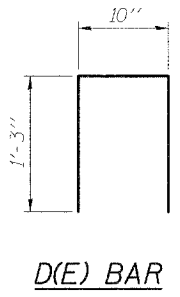
Vertical placement of strands shall not be adjusted to satisfy the above guidelines.



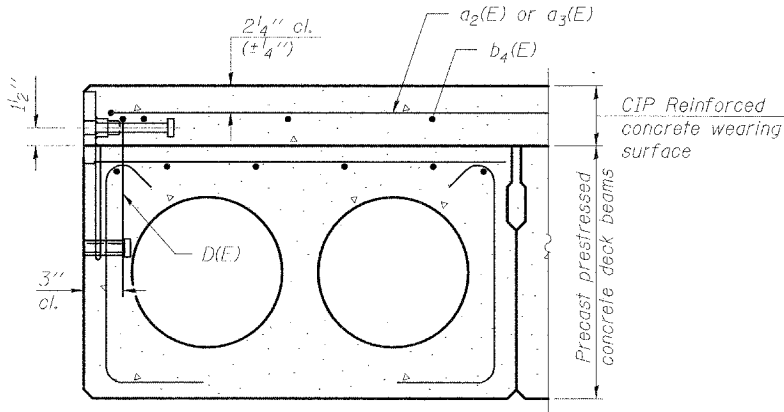
PLAN



END PLAN



D(E) BAR



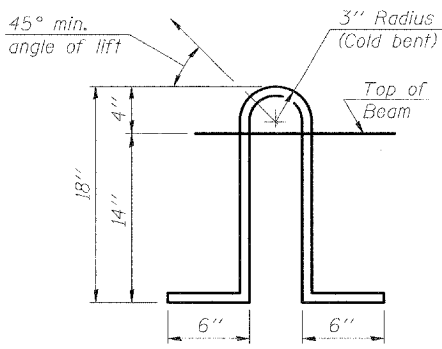
CROSS SECTION

BILL OF MATERIAL

Item	Unit	Total
Precast Prestressed Concrete Deck Beams (17" Depth)	Sq. Ft.	1383

NOTES

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in. Lifting loops shall be 2 - 1/2" diameter 270 ksi strands, as shown. The 1" diameter rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets that receive transverse tie bar on outside shall be filled with grout after transverse tie assembly is in place. Non prestressing steel shall conform to ASTM A 706 (IL MOD), Grade 60. The bearing seat surfaces shall be adjusted by shimming to assure firm and even bearing. Two 1/8" fabric adjusting shims of the dimensions of the Exterior Bearing Pad shall be provided for each bearing. Keyway surfaces shall be cleaned to remove form oil or other bond breaking material prior to shipment of the beams. Cleaning shall be done by sandblasting the keyway areas between top of the beam and the bottom edge of the key. Corrosion Inhibitor, per Article 1020.05(b)(12) of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams. Required Release Strength, f'ci, shall be 4,000 p.s.i. See sheet 4 of 13 for rail anchor device to be cast in precast beams. See sheet 6 of 13 for spacing of rail post. See sheet 7 of 13 for Shear Key Clamping Details at Stage Const. Jt.



LIFTING LOOP DETAIL

DESIGNED	JJD
CHECKED	EML
DRAWN	JJD
CHECKED	EML

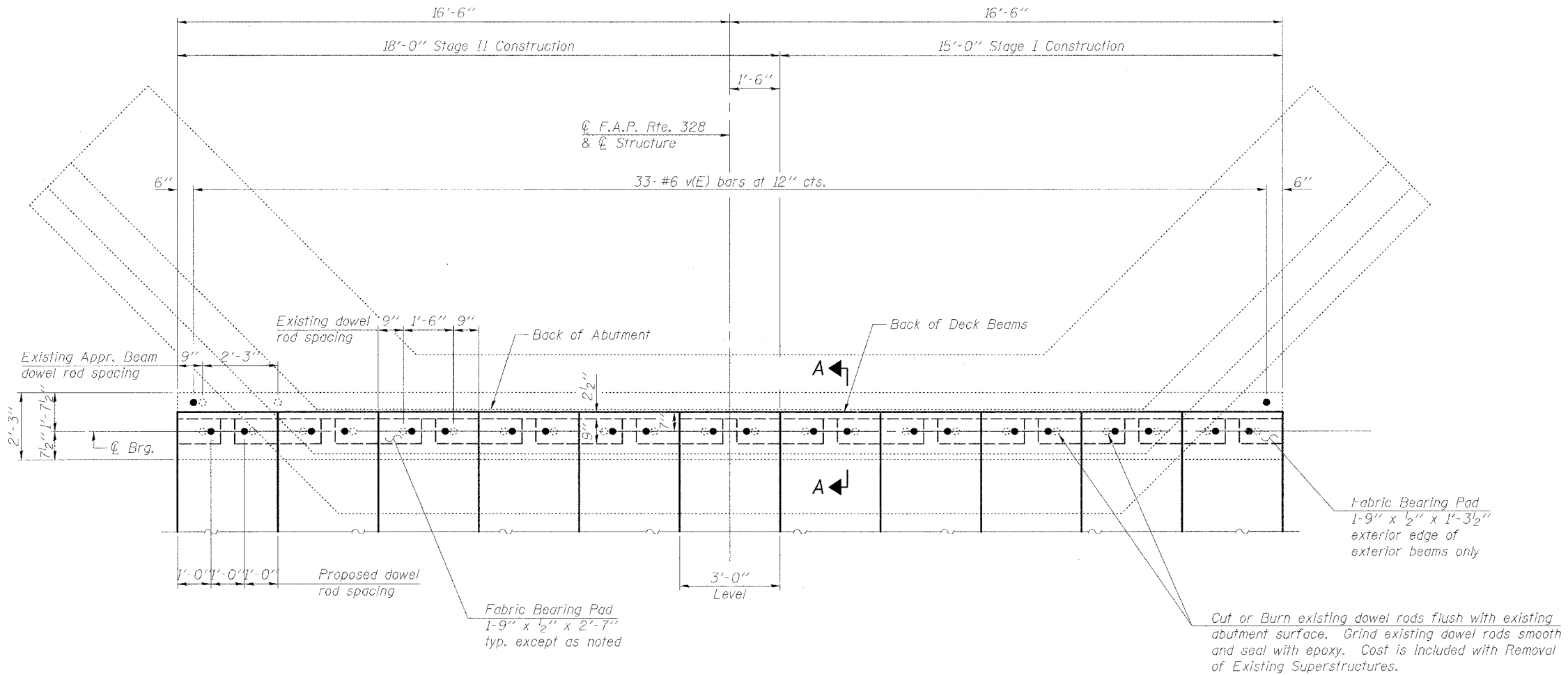
HORNER & SHIFRIN, INC.
ENGINEERS

SUPERSTRUCTURE DETAILS
F.A.P. ROUTE 328 - SECTION (8BR-1)B-1
WAYNE COUNTY
STATION 719+63.09
STRUCTURE NO. 096-0020

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 9 13 SHEETS
F.A.P. 328	(8BR-1) B-1	WAYNE	68	27	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

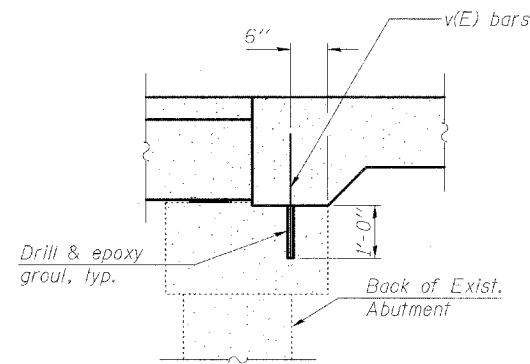
Contract #74003



Cut or Burn existing dowel rods flush with existing abutment surface. Grind existing dowel rods smooth and seal with epoxy. Cost is included with Removal of Existing Superstructures.

PLAN

(N. Abutment Shown, S. Abutment is a mirror image)
(Concrete wearing surface not shown)



SECTION A-A

BAR LIST

Bar	No.	Size	Length	Shape
v(E)	66	#6	2'-6"	—
Reinforcement Bars, Epoxy Coated			Pound	250

DESIGNED	JJD
CHECKED	EML
DRAWN	JJD
CHECKED	EML

HORNER & SHIFRIN, INC.
ENGINEERS

ABUTMENT DETAILS
F.A.P. ROUTE 328 - SECTION (8BR-1)B-1
WAYNE COUNTY
STATION 719+63.09
STRUCTURE NO. 096-0020

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	LISTING SHEETS	SHEET NO.
F.A.P. 328	(8BR-1) B-1	WAYNE	68	28
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 10
13 SHEETS

Contract #74003

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) = $1.25 \times f_y \times A_l$
- ② Minimum *Pull-out Strength (Tension in kips) = $0.66 \times f_y \times A_l$

Where f_y = Yield strength of lapped reinforcement bars in ksi.
 A_l = 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'-0"	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

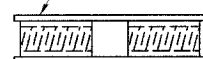
The diameter of this part is equal or larger than the diameter of bar spliced.
The diameter of this part is the same as the diameter of the bar spliced.

ROLLED THREAD DOWEL BAR



** ONE PIECE

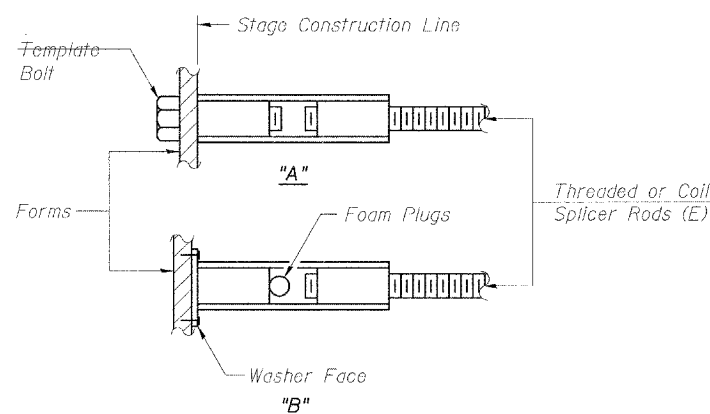
Wire Connector



WELDED SECTIONS

BAR SPLICER ASSEMBLY ALTERNATIVES

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

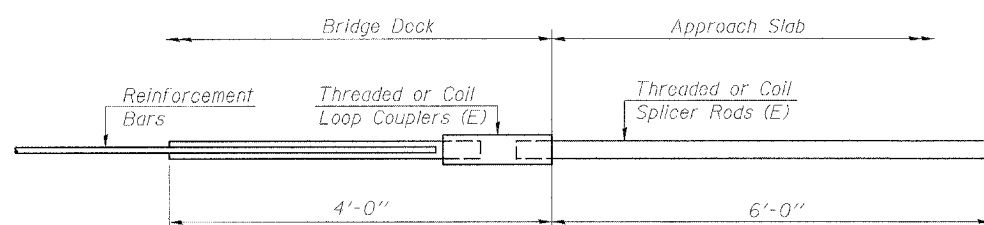


INSTALLATION AND SETTING METHODS

"A" : Set bar splicer assembly by means of a template bolt.

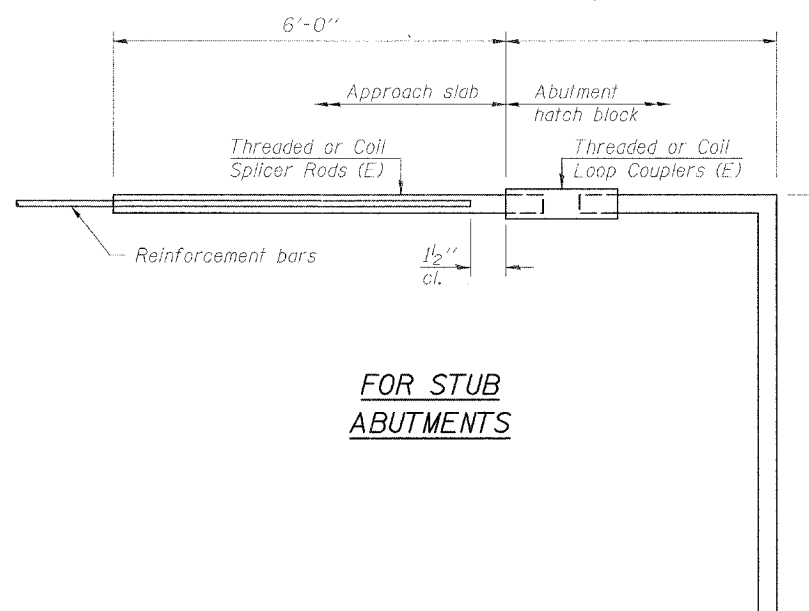
"B" : Set bar splicer assembly by nailing to wood forms or cementing to steel forms.

(E) : Indicates epoxy coating.



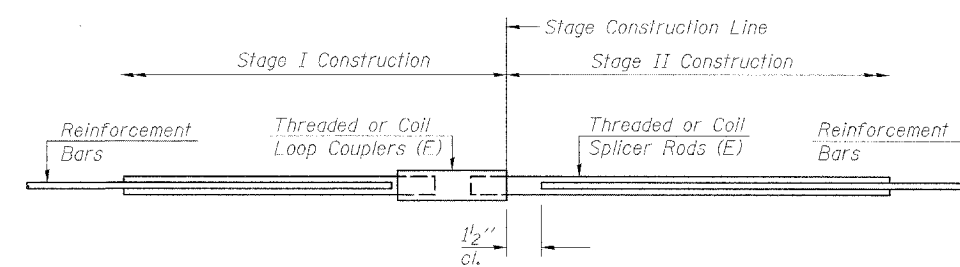
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

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



FOR STUB ABUTMENTS

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



STANDARD

Bar Size	No. Assemblies Required	Location
#5	42	Concrete Wearing Surface

BAR SPLICER ASSEMBLY DETAILS
F.A.P. ROUTE 328 - SECTION (8BR-1)B-1

WAYNE COUNTY
STATION 719+63.09
STRUCTURE NO. 096-0020

HORNER & SHIFRIN, INC.
ENGINEERS

DESIGNED	JJD
CHECKED	EML
DRAWN	JJD
CHECKED	EML

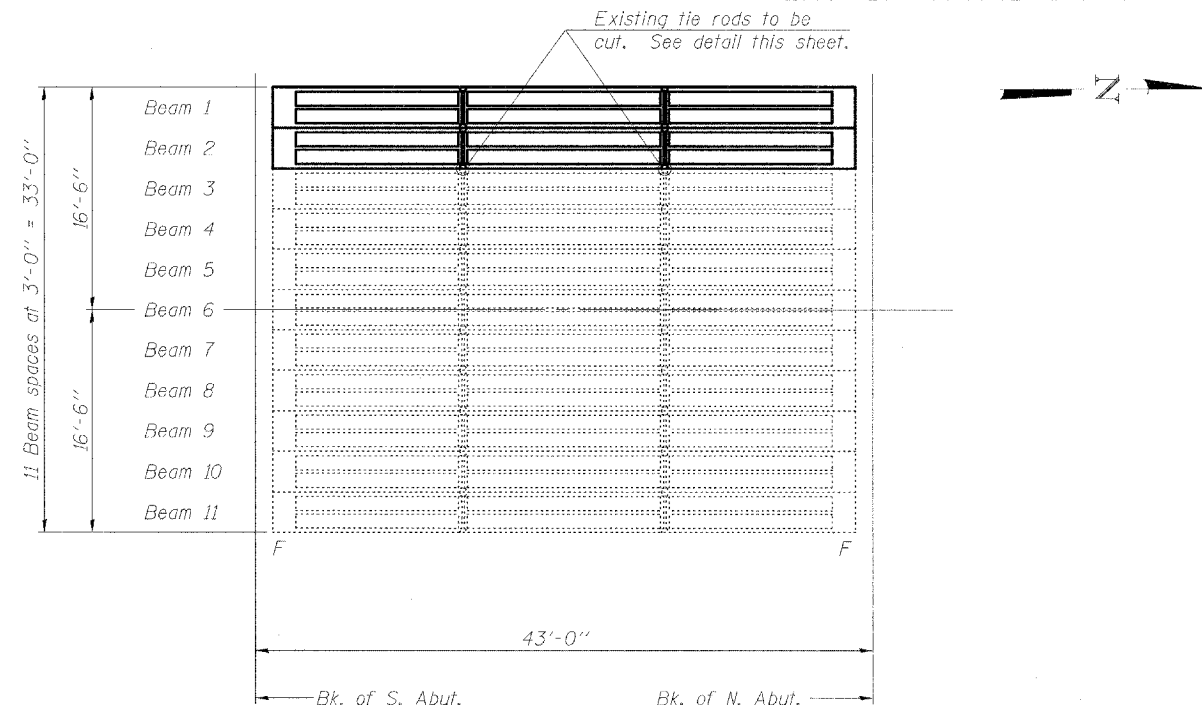
BSD-1

11-1-06

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 11 13 SHEETS
F.A.P. 328	(8BR-1) B-1	WAYNE	68	29	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

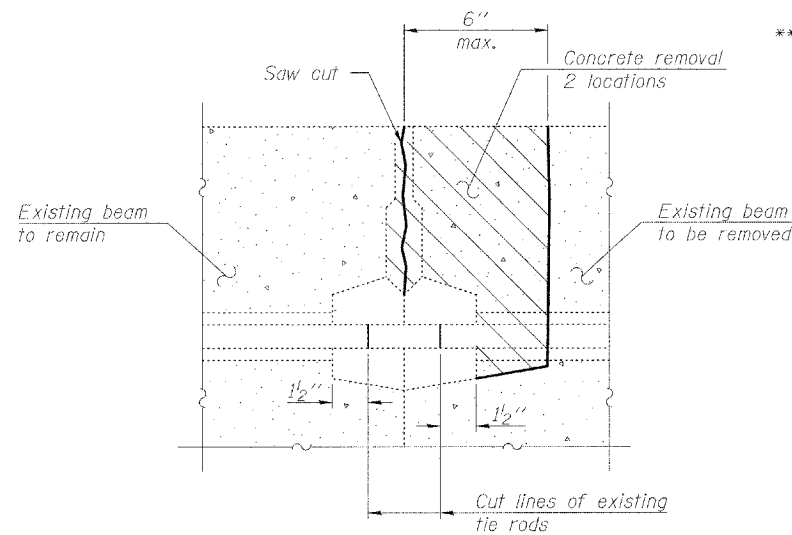
Contract #74003



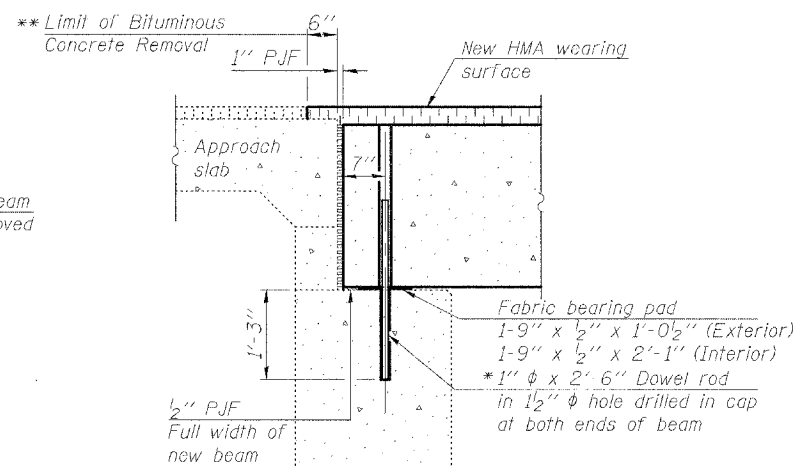
PLAN

GENERAL NOTES

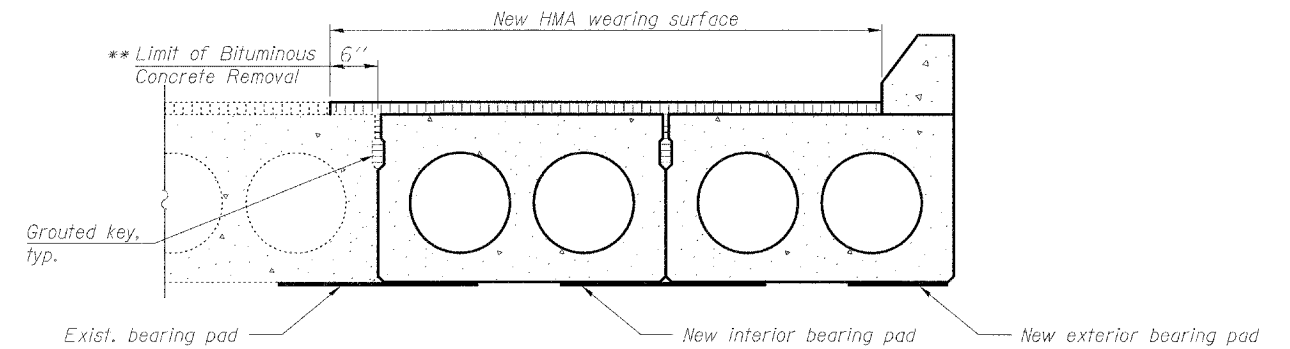
The thickness of Bituminous overlay shall match the existing thickness and shall be adjusted for the new expected beam camber.
Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in the scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price for the work.
The cut strands at each beam end shall be given two coats of zinc dust spray or paint meeting the requirements of ASTM A 780. The zinc dust spray or paint shall be applied before corrosion appears and allowed to dry according to the manufacturer's specifications prior to another coat of zinc. This work shall be performed by the producer and included with the cost of the beam.
The contractor is advised that the existing Precast Prestressed Concrete Deck Beams are in a deteriorated condition with reduced load carrying capacity. It is the contractor's responsibility to account for the condition of the beams when developing construction procedures for removal and replacement of the beam.
Any damage done to the bridge during beam removal shall be repaired by the Contractor. Cost to be included in the cost of "Removal of Existing P.P.C. Deck Beams".



BEAM REMOVAL DETAIL
AT TRANSVERSE TIES



SECTION THRU ABUTMENTS



PARTIAL CROSS SECTION

BILL OF MATERIAL

Item	Unit	Total
Removal of Existing P.P.C. Deck Beams	Sq. Ft.	252
Hot Mix Asphalt Surface Course, Mix "C", N70	Ton	9

- * Exist. dowel rods shall be cut off and ground flush with cap. New dowel rods to be grouted after beam is in place and allowed to cure (24 hrs. min.) prior to grouting the shear key.
- ** The cost of bituminous concrete removal shall be included with Removal of Existing PPC Deck Beams.

DESIGN STRESSES

PRECAST PRESTRESSED UNITS

$f'_c = 5,000$ psi
 $f'_{ci} = 4,000$ psi
 $f'_s = 270,000$ psi ($1/2$ " ϕ low lax. strands)
 $f_{si} = 201,960$ psi ($1/2$ " ϕ low lax. strands)

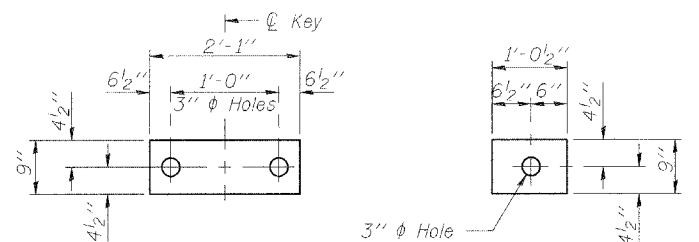
HORNER & SHIFRIN, INC.
ENGINEERS

PRE-STAGE I DETAILS I
F.A.P. ROUTE 328 - SECTION (8BR-1)B-1
WAYNE COUNTY
STATION 719+63.09
STRUCTURE NO. 096-0020

DESIGNED	JJD
CHECKED	EML
DRAWN	KLH
CHECKED	EML

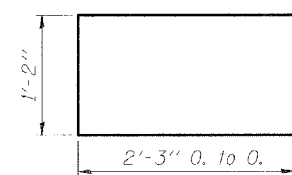
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO. F.A.P. 328	SECTION (8BR-1) B-1	COUNTY WAYNE	TOTAL SHEETS 68	SHEET NO. 30	SHEET NO. 12 13 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS	FED. RD. PROJECT		

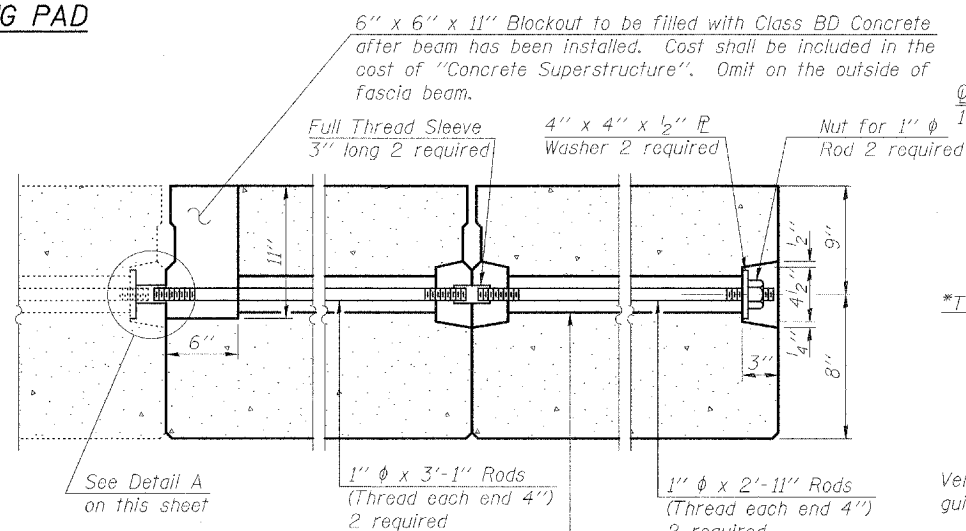
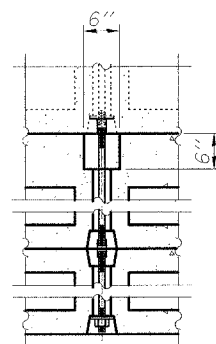


FABRIC BEARING PAD (Interior) **FABRIC BEARING PAD** (Exterior)

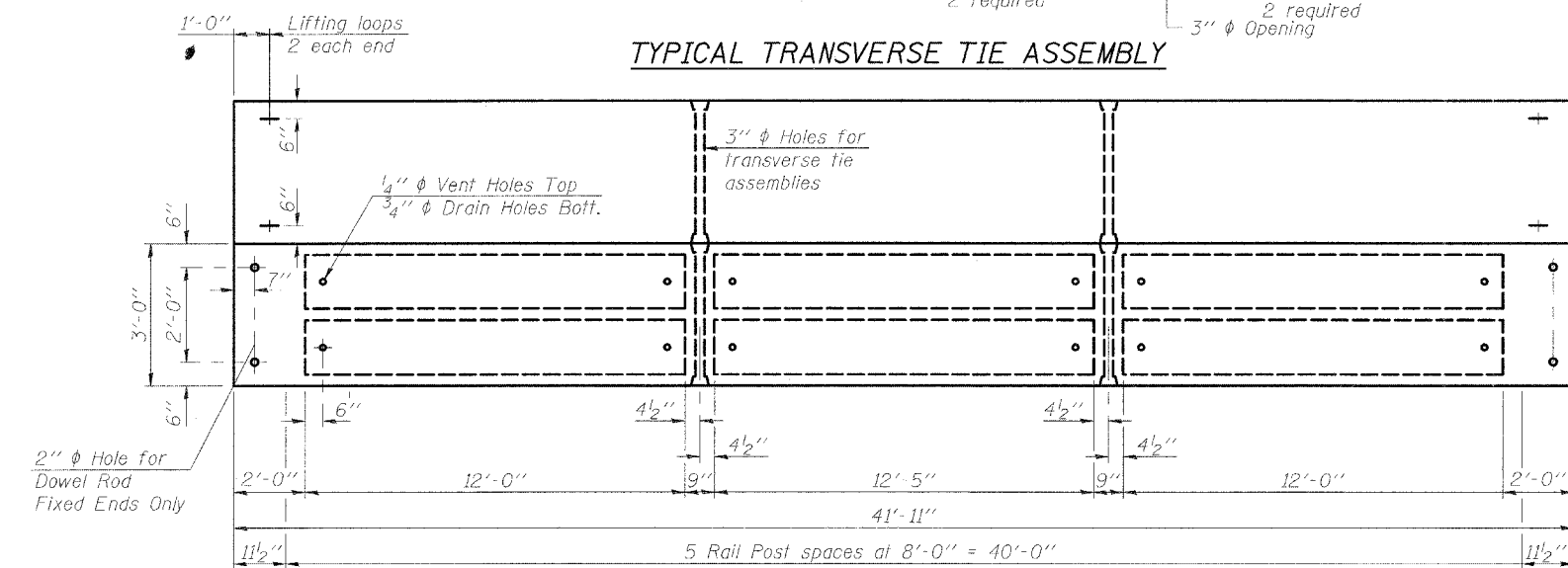
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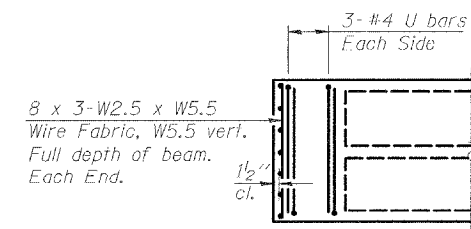
BAR U



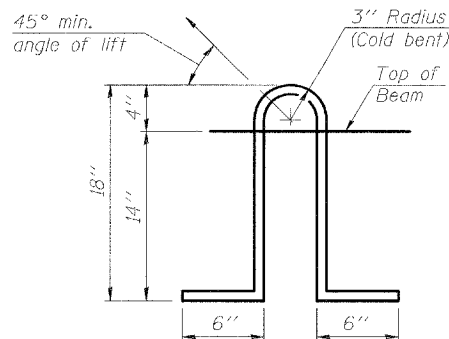
TYPICAL TRANSVERSE TIE ASSEMBLY



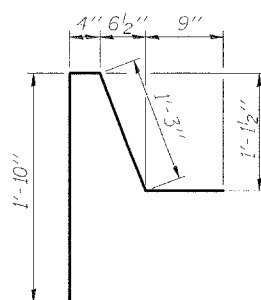
PLAN



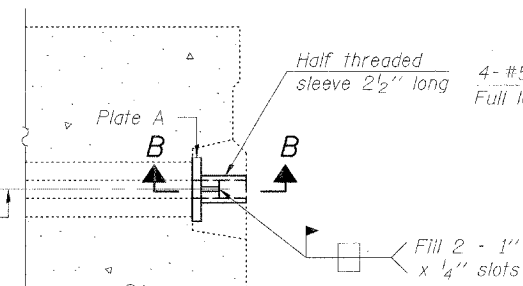
END PLAN



LIFTING LOOP DETAIL



BAR D

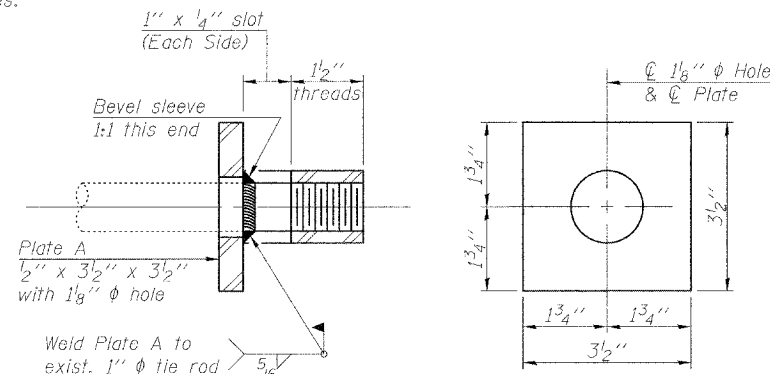


DETAIL A

*Transverse Strand Placement Guidelines

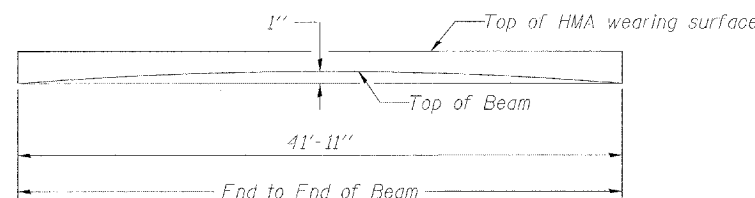
1. Place strands symmetrically about centerline of beam.
2. The minimum distance from center to center of strands in all directions shall be 2".
3. The minimum clearance from strand to dowel hole shall be 1/2".
4. The minimum clearance from strand to void shall be 1/2".

Vertical placement of strands shall not be adjusted to satisfy the above guidelines.

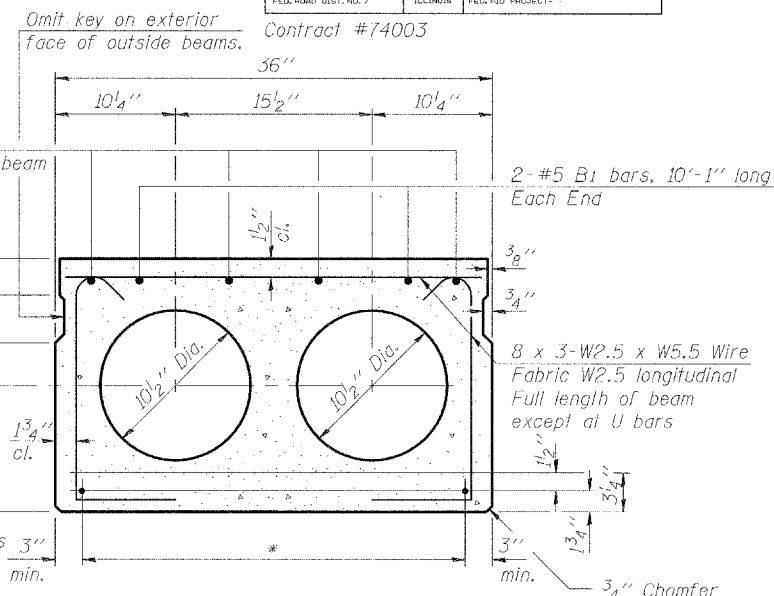


SECTION B-B

PLATE A

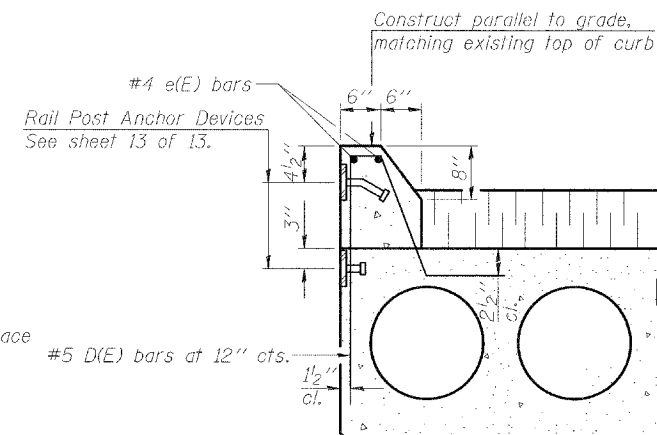


ANTICIPATED INITIAL CAMBER DIAGRAM



TYPICAL SECTION

1/2" dia Strands, Each Strand Stressed to 30,900 Lbs.
9-Strands 1 3/4" up, 4-Strands 3 1/4" up, 2-Strands 12" up



SECTION THRU CURB

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
e(E)	2	#4	41'-8"	
Concrete Superstructure			Cu. Yd.	1.6
Reinforcement Bars, Epoxy Coated			Pound	60
Precast Prestressed Concrete Deck Beams (17" Depth) Special			Sq. Ft.	252

DESIGNED	JJD
CHECKED	EML
DRAWN	KLH
CHECKED	EML

NOTES

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in. Lifting loops shall be 2'-2" dia-270 ksi strands, as shown. The 1" rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Non prestressing steel shall conform to ASTM A 706 (IL MOD), Grade 60. The bearing seat surfaces shall be adjusted by shimming to assure firm and even bearing. Two 1/8" fabric adjusting shims of the dimensions of the Exterior Bearing Pad shall be provided for each bearing. Keyway surfaces shall be cleaned to remove form oil or other bond breaking material prior to shipment of the beams. Cleaning shall be done by sandblasting the keyway areas between top of the beam and the bottom edge of the key. Corrosion Inhibitor, per Article 1020.05(b)(12) of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams. Required Release Strength, f'ci, shall be 4,000 p.s.i. See sheet 13 of 13 for rail anchor device to be cast in precast beams. See sheet 7 of 13 for Shear Key Clamping Details at Stage Const. Jt.

HORNER & SHIFRIN, INC. ENGINEERS

PRE-STAGE I DETAILS II
F.A.P. ROUTE 328 - SECTION (8BR-1)B-1
WAYNE COUNTY
STATION 719+63.09
STRUCTURE NO. 096-0020

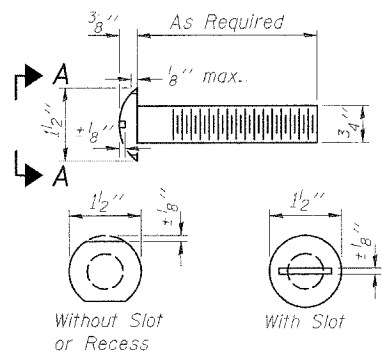
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	DISTRICT	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 328	(8BR-1) B-1	WAYNE	68	31
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

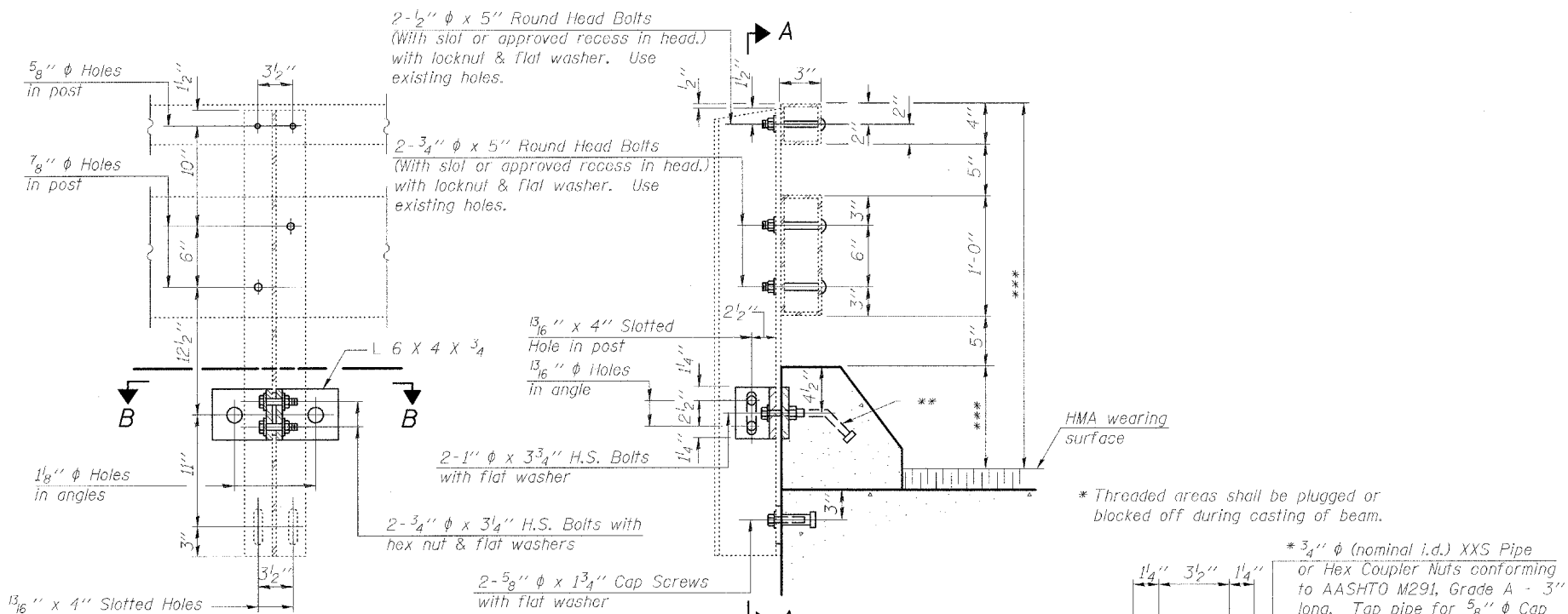
SHEET NO. 13

13 SHEETS

Contract #74003

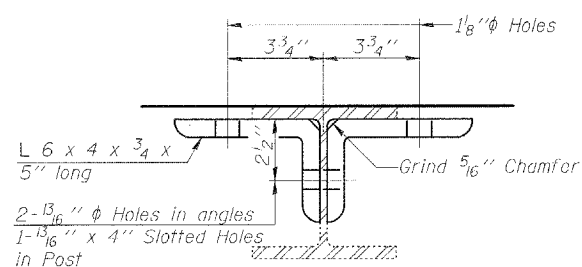


VIEW A-A
ROUND HEAD BOLT

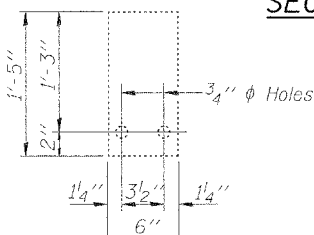


SECTION A-A

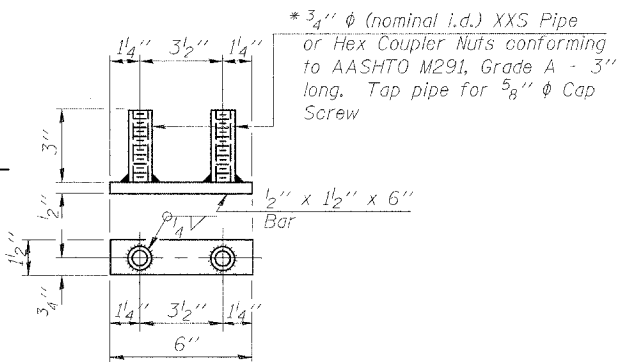
SECTION AT RAIL POST



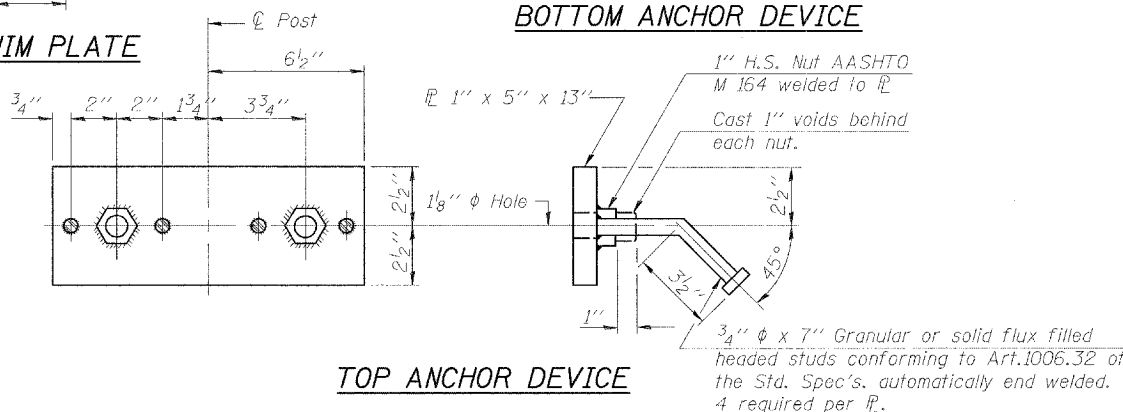
SECTION B-B



1/4" SHIM PLATE



BOTTOM ANCHOR DEVICE



TOP ANCHOR DEVICE

Notes:

- All field drilled holes shall be coated with an approved zinc rich paint before erection.
- For multi-span bridges, existing 1/4" x 6" x 1'-5" galvanized steel shims shall be re-used to align rail between adjacent spans.
- All steel rail elements shall be galvanized according to Article 509.05 of the Standard Specifications.
- ** The studs of the anchor devices shall be placed below the top reinforcement bars and the outermost longitudinal reinforcement bar shall be placed directly above the studs of the rail post anchor device.
- *** Match height of existing Bridge Railing.
- Cost of reinstalling existing posts and rails, anchor devices and all accessories shall be included with Removing and Re-Erecting Existing Railing.
- For rail post spacing, see sheet 12 of 13.

DESIGNED	JJD
CHECKED	EML
DRAWN	KLH
CHECKED	EML

HORNER & SHIFRIN, INC.
ENGINEERS

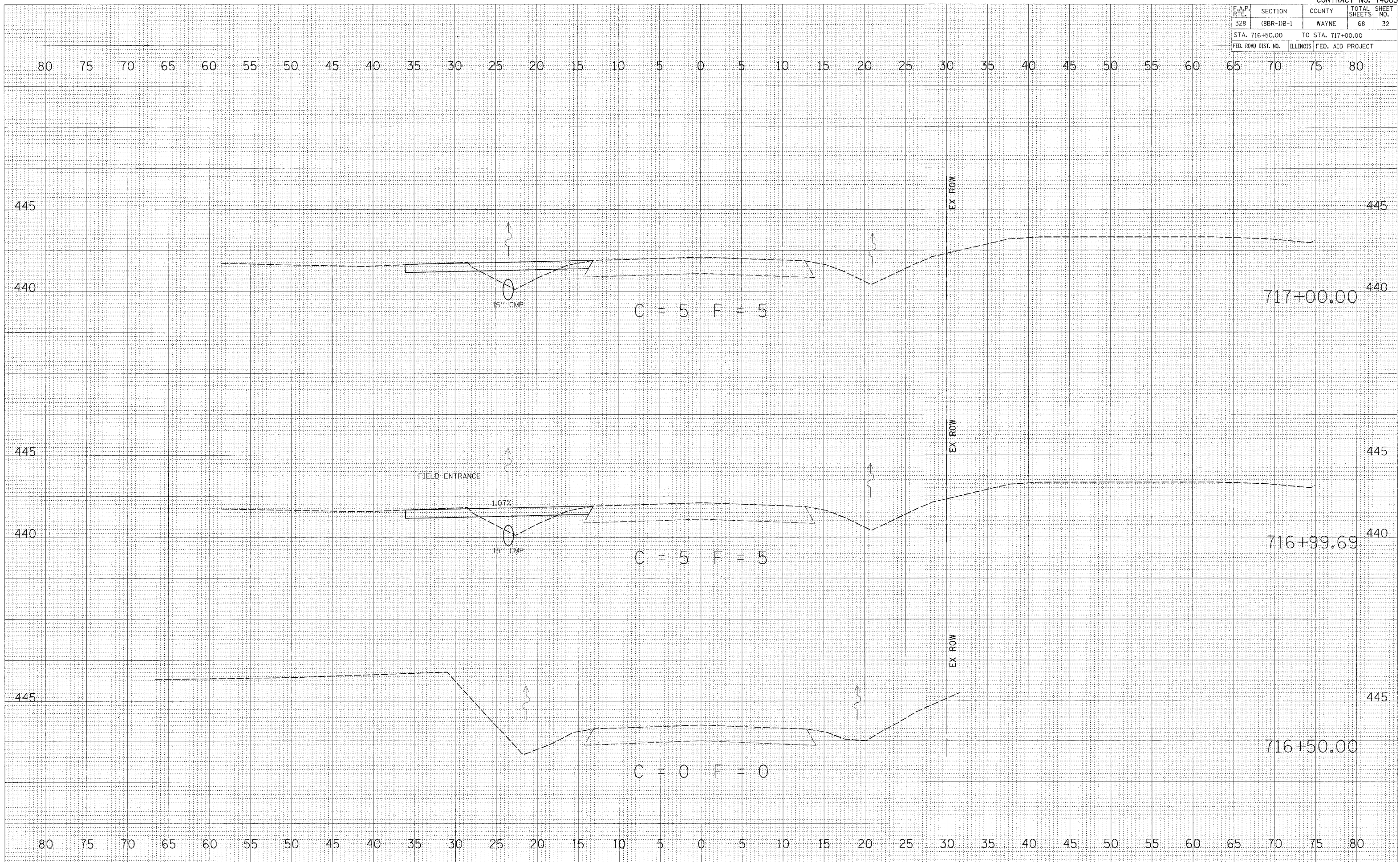
PRE-STAGE I DETAILS III
F.A.P. ROUTE 328 - SECTION (8BR-1)B-1
WAYNE COUNTY
STATION 719+63.09
STRUCTURE NO. 096-0020

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	(8BR-1)B-1	WAYNE	68	32
STA. 716+50.00		TO STA. 717+00.00		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

DATE	BY

DATE	BY

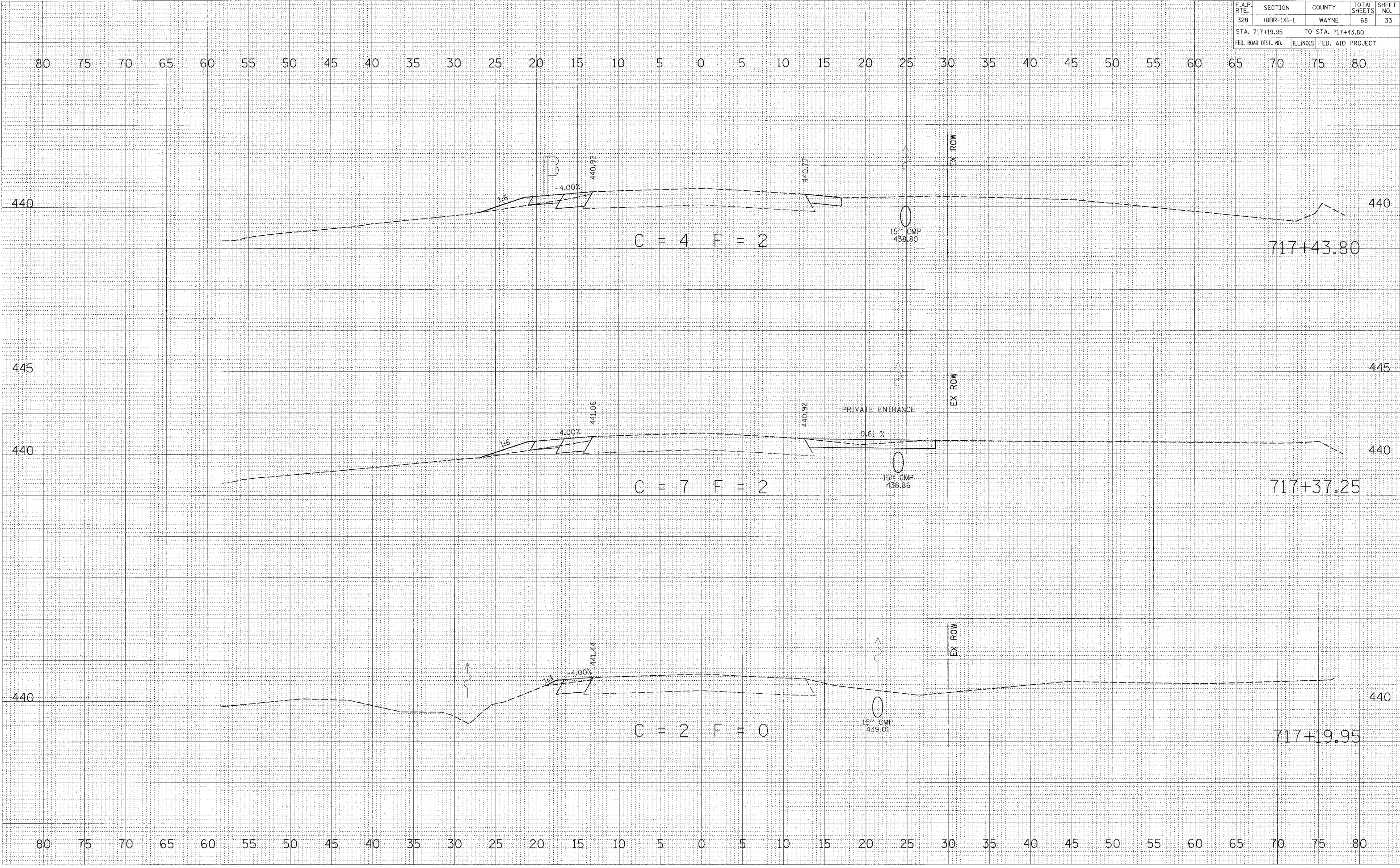
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 USER NAME = smurtnich



F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	(BBR-1)B-1	WAYNE	68	33
STA. 717+19.95		TO STA. 717+43.80		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

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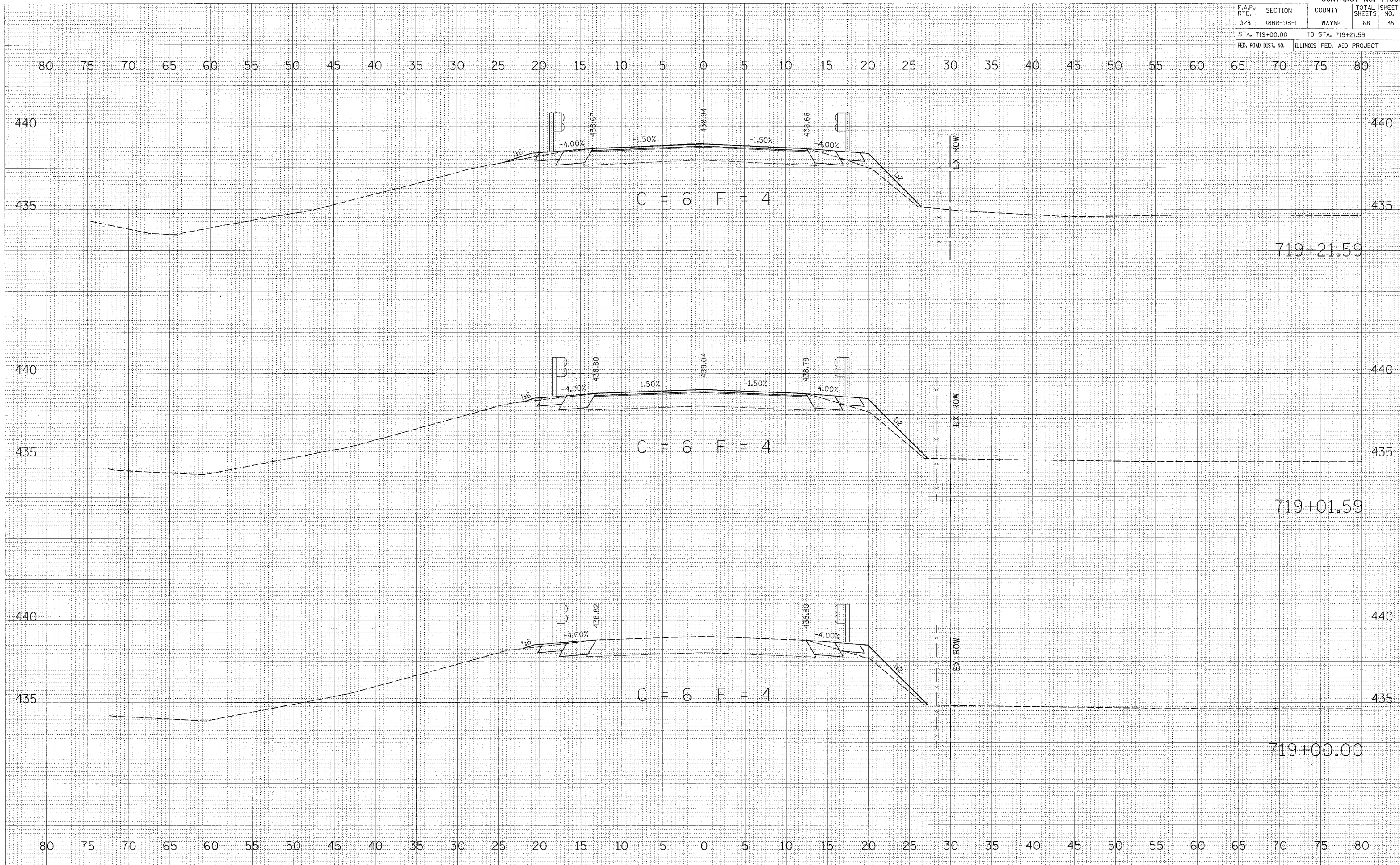
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	(8BR-DB-1	WAYNE	68	35
STA. 719+00.00		TO STA. 719+21.59		
FED. ROAD DIST. NO.		ILLINOIS		FED. AID PROJECT

DATE	
BY	
FINAL SURVEYED	
NOTE BOOK	
AREAS CHECKED	
NO.	

DATE	
BY	
ORIGINAL SURVEYED	
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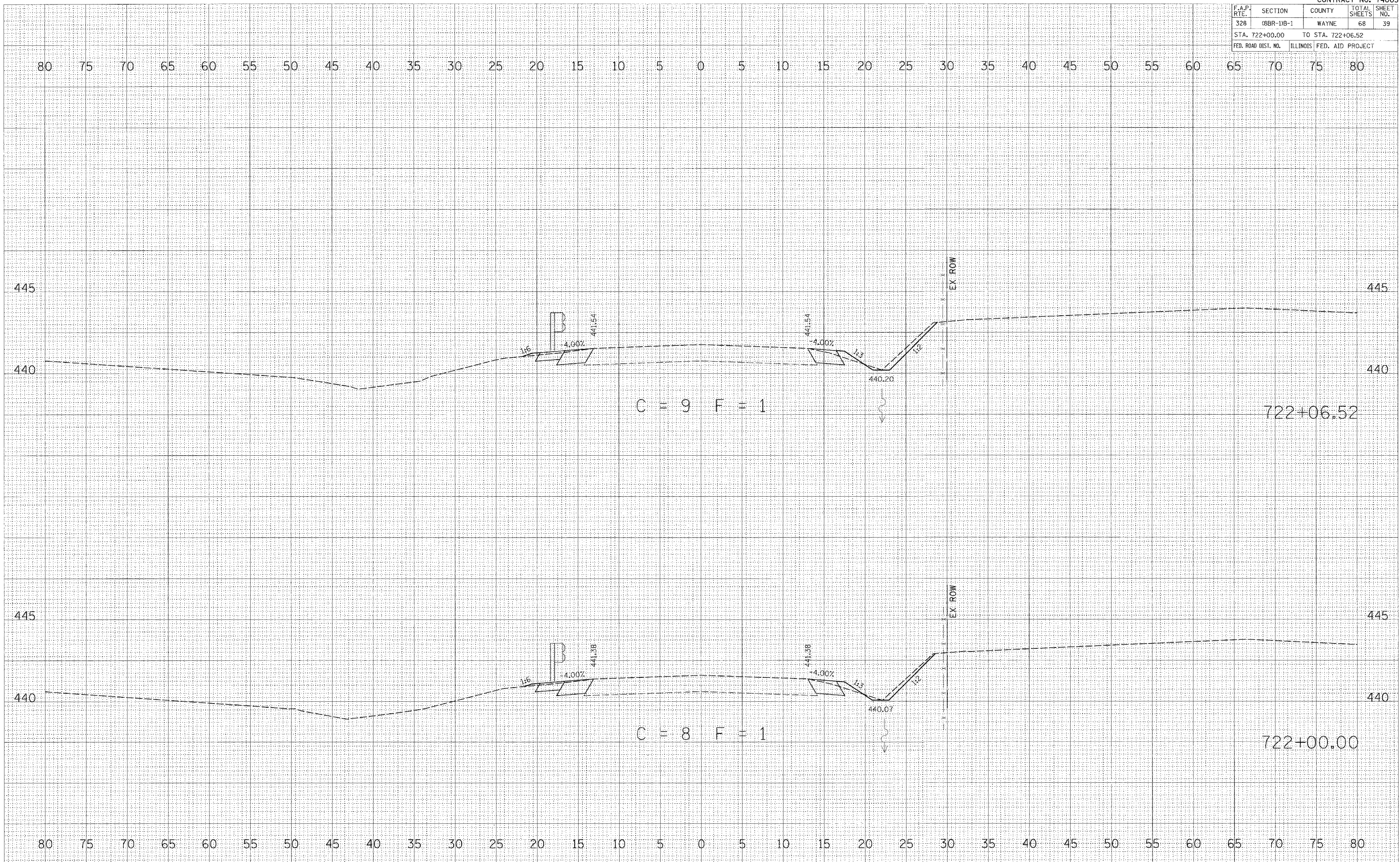


F.A.P. RITE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	18BR-1B-1	WAYNE	68	39
STA. 722+00.00		TO STA. 722+06.52		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

DATE	BY	FINAL SURVEYED	NO. OF
		DATE	AREAS CHECKED
		NO.	

DATE	BY	ORIGINAL SURVEYED	NO. OF
		DATE	AREAS CHECKED
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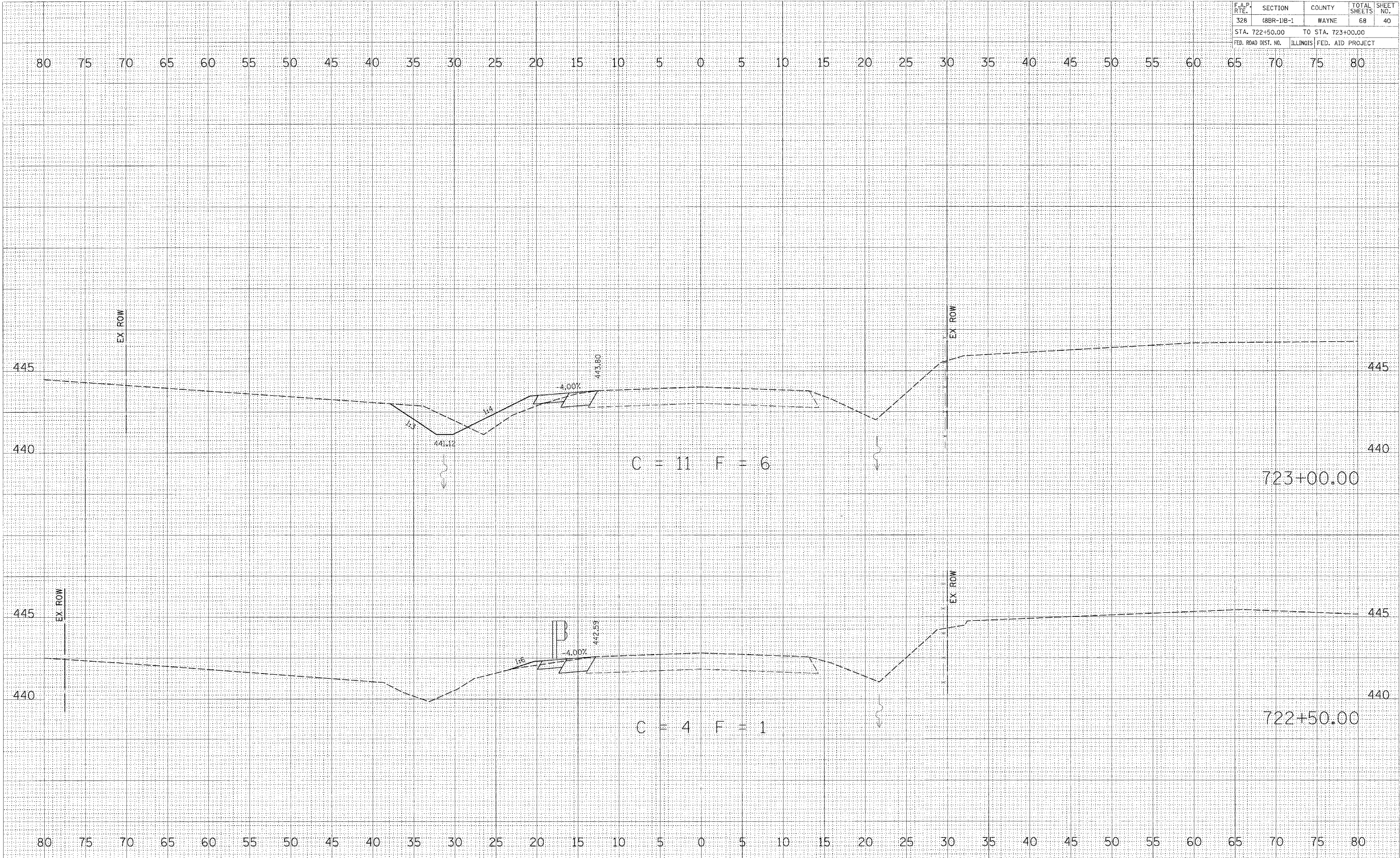


F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	(8BR-DB-1)	WAYNE	68	40
STA. 722+50.00		TO STA. 723+00.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

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

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 PLOT TIME = 10:55:00
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	(8BR-1)B-1	WAYNE	68	41
STA. 723+08.63		TO STA. 723+50.00		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

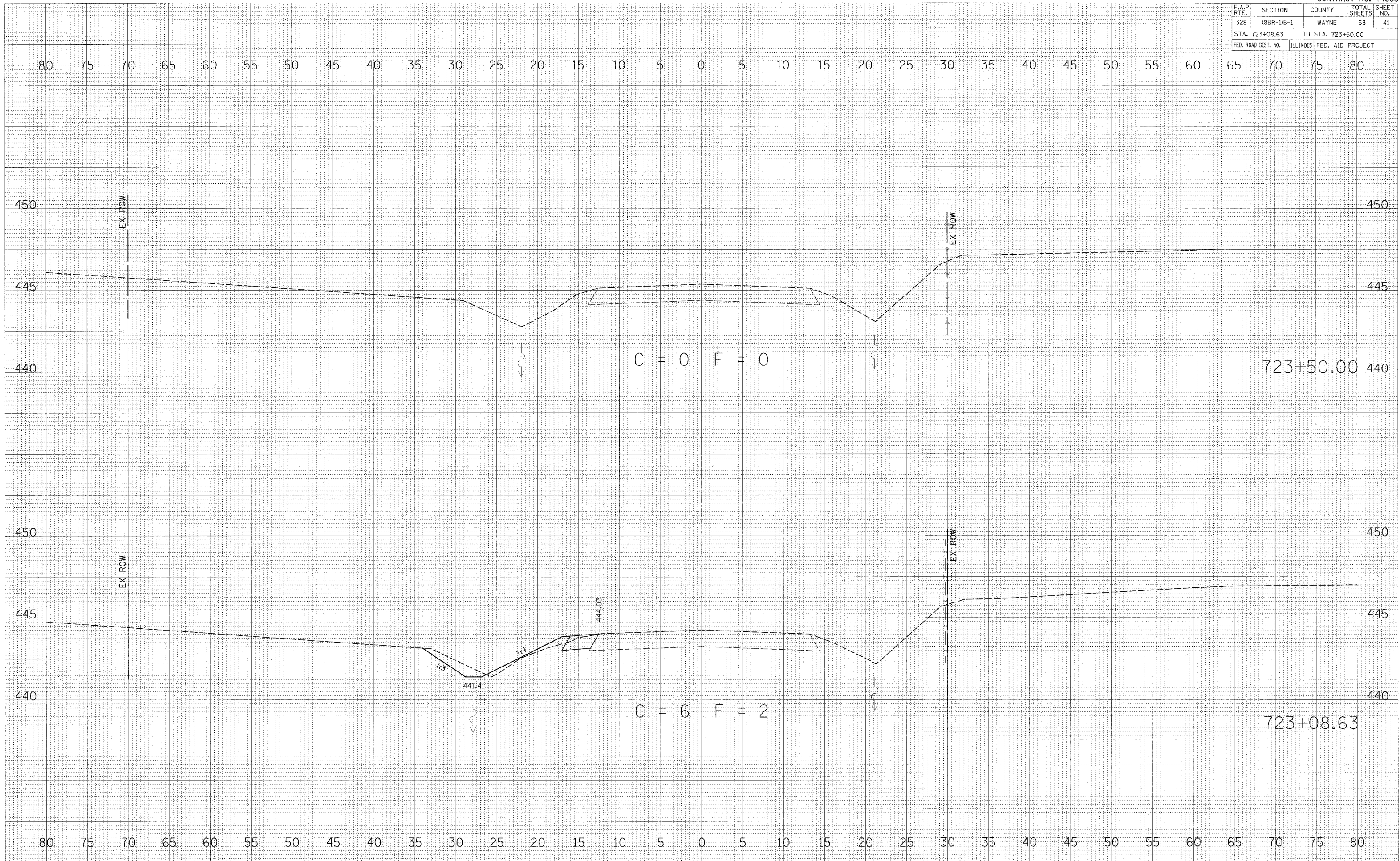
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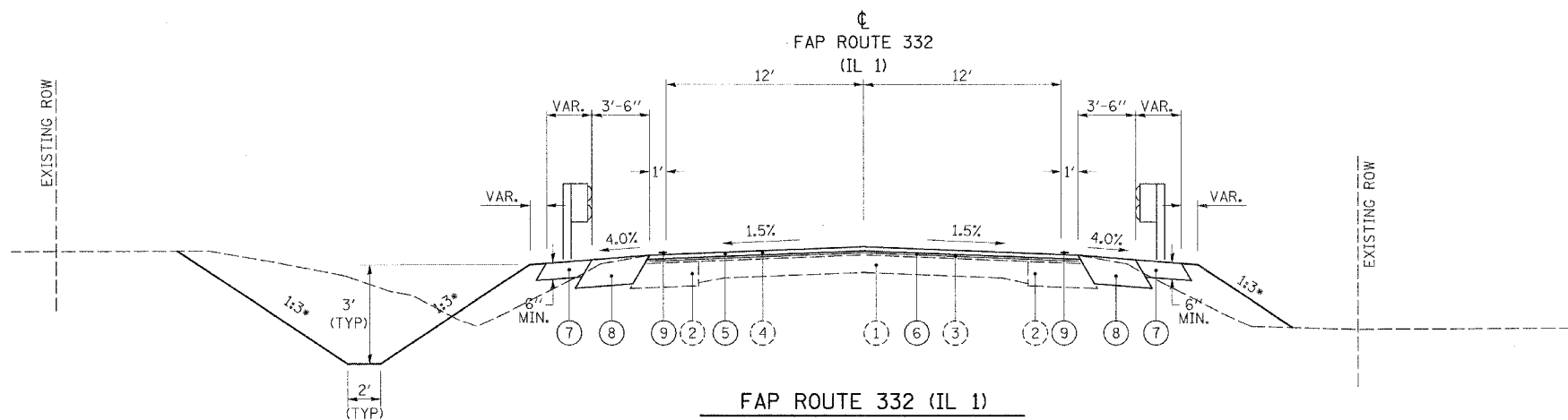
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 USER NAME = emuntzsch



F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	**	***	68	42
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
* FAP 332 (IL 1); FAP 328 (US 45)				
** 101B-1; (BBR-1B-1)				
*** WABASH / WAYNE				

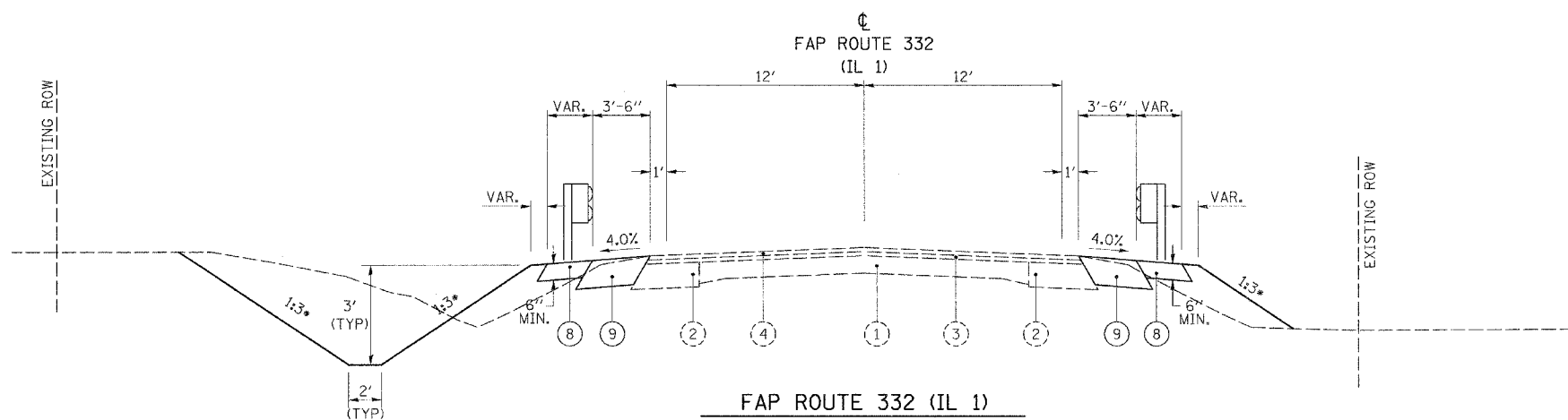


FAP ROUTE 332 (IL 1)
PROPOSED TANGENT SECTION
 - TO APPLY -
 STA 147+83.00 TO STA 150+63.08
 BRIDGE OMISSION
 STA 148+47.08 TO STA 150+13.09

* OR AS SHOWN ON CROSS SECTIONS

MATERIALS LEGEND

- ① EXISTING PCC PAVEMENT
- ② EXISTING WIDENING
- ③ EXISTING HOT-MIX ASPHALT BINDER COURSE, 1/2"
- ④ EXISTING HOT-MIX ASPHALT SURFACE COURSE, CLASS I, 1/2"
- ⑤ PROPOSED HOT-MIX ASPHALT SURFACE COURSE, MIXTURE "C", N70, (1/2")
- ⑥ PROPOSED HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N70, (VARIABLE DEPTH)
- ⑦ PROPOSED HOT-MIX ASPHALT SHOULDERS, 6"
- ⑧ PROPOSED BASE COURSE WIDENING, 10"
- ⑨ PROPOSED PAVEMENT MARKING



FAP ROUTE 332 (IL 1)
PROPOSED TANGENT SECTION
 - TO APPLY -
 STA 146+22.46 TO STA 147+83.00
 STA 150+63.08 TO STA 152+06.75

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS
 IL 1

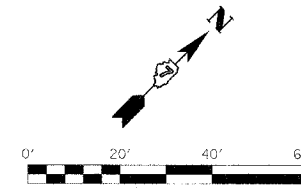
SCALE: VERT. N/A
 HORIZ. N/A
 DATE 03/15/07
 DRAWN BY KMO
 CHECKED BY SSM

Plot Date: 3/17/2007
 Plot Time: 02:05:54 AM
 Plotted By: smur-nlch
 Pen Table: idot.tbl
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	**	***	68	45

STA. 152+30.00 TO STA. 155+00.00
 FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT

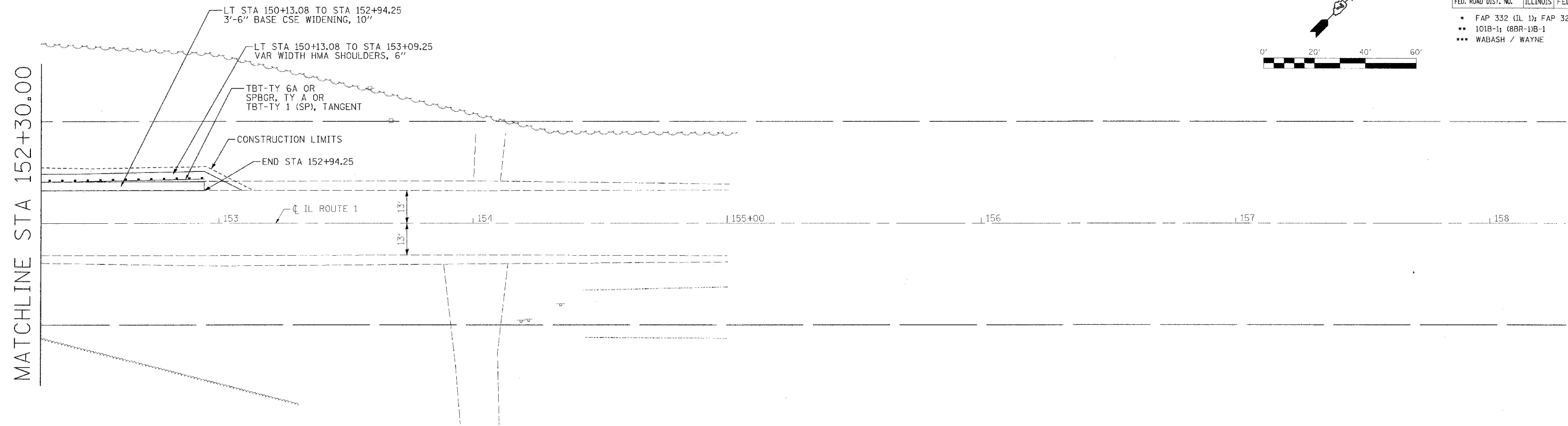
- FAP 332 (IL 1); FAP 328 (US 45)
- 101B-1; (8BR-1)B-1
- WABASH / WAYNE



PLAN

SURVEYED	BY	DATE
ALIGNED		
RT. OF WAY CHECKED		
PAID FILE MADE		

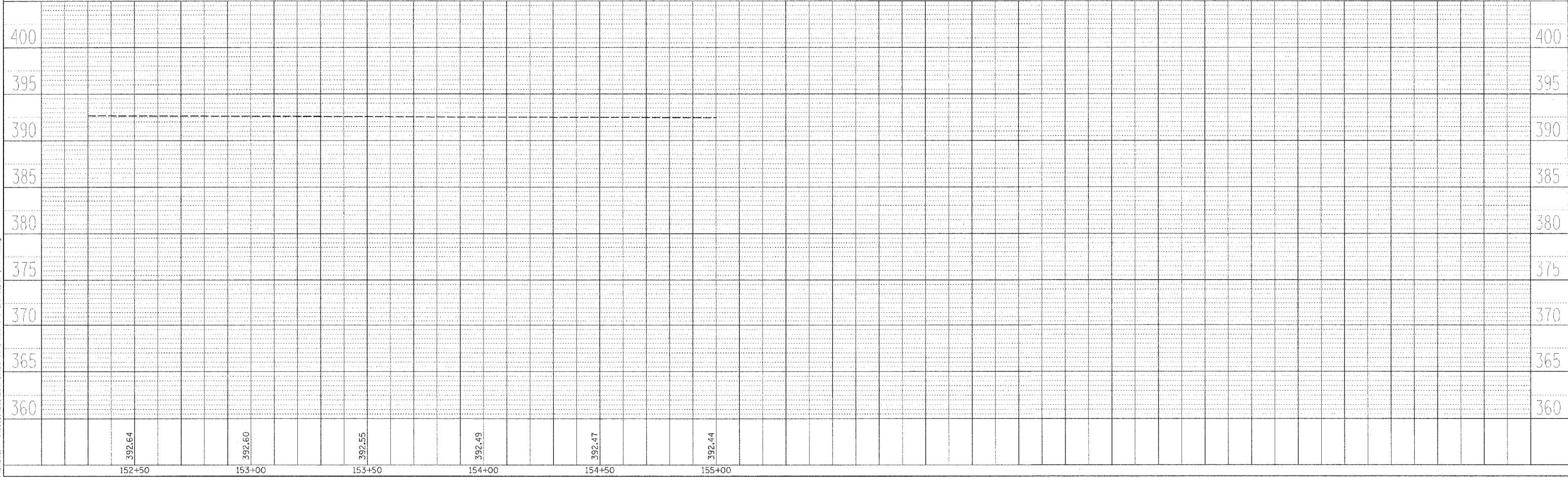
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PROFILE

DESIGNED	BY	DATE
CHECKED		
NOTED		
STRUCTURE NOTATIONS CR-CD		

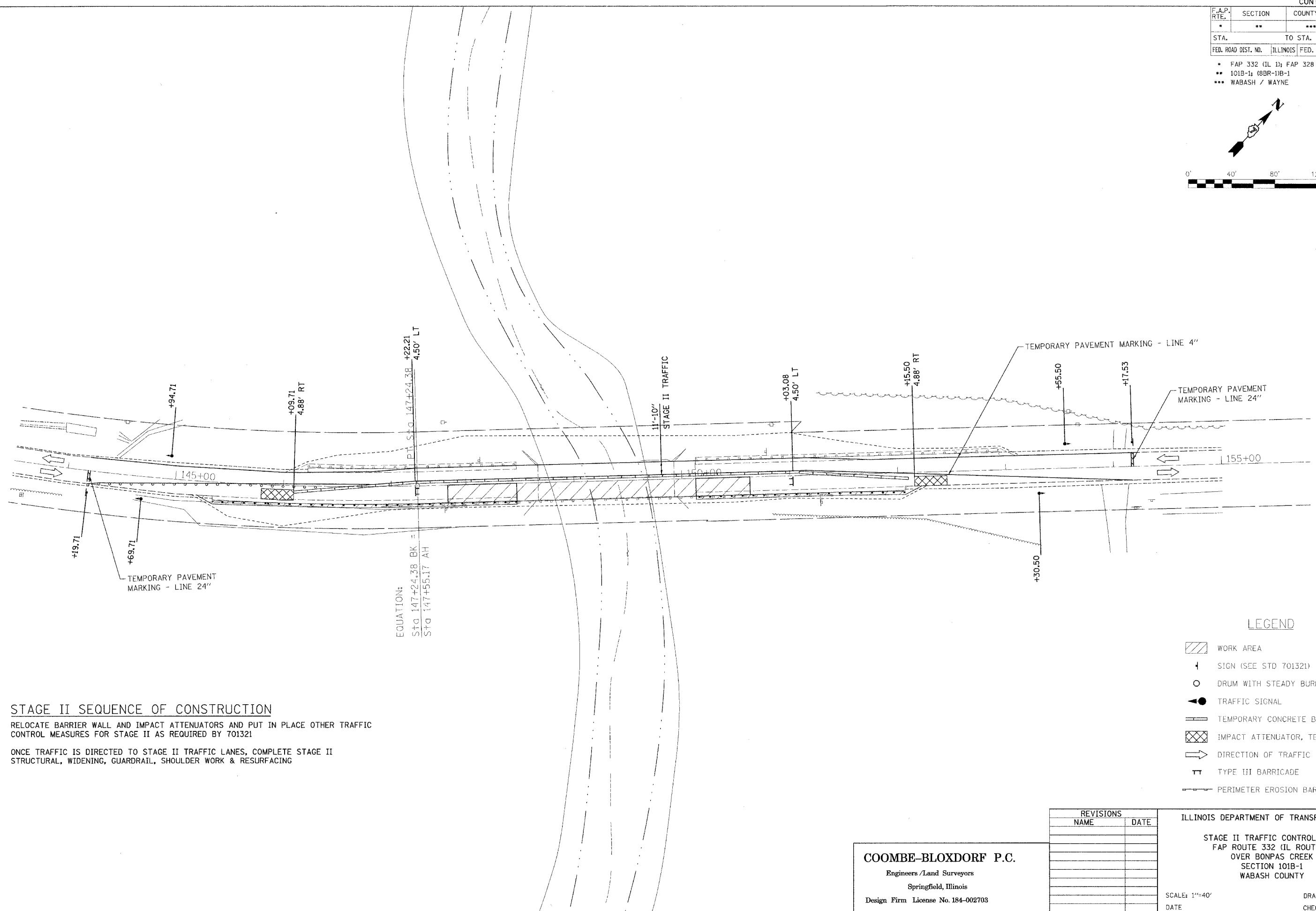
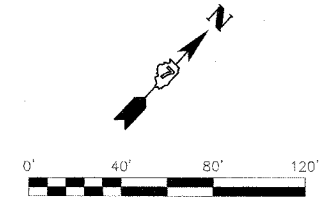
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	**	***	68	47
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

- * FAP 332 (IL 1); FAP 328 (US 45)
- ** 101B-1; (8BR-1)B-1
- *** WABASH / WAYNE



STAGE II SEQUENCE OF CONSTRUCTION
 RELOCATE BARRIER WALL AND IMPACT ATTENUATORS AND PUT IN PLACE OTHER TRAFFIC CONTROL MEASURES FOR STAGE II AS REQUIRED BY 701321
 ONCE TRAFFIC IS DIRECTED TO STAGE II TRAFFIC LANES, COMPLETE STAGE II STRUCTURAL, WIDENING, GUARDRAIL, SHOULDER WORK & RESURFACING

LEGEND

- WORK AREA
- SIGN (SEE STD 701321)
- DRUM WITH STEADY BURNING LIGHT
- TRAFFIC SIGNAL
- TEMPORARY CONCRETE BARRIER
- IMPACT ATTENUATOR, TEMPORARY
- DIRECTION OF TRAFFIC
- TYPE III BARRICADE
- PERIMETER EROSION BARRIER

REVISIONS	
NAME	DATE

COOMBE-BLOXDORF P.C.
 Engineers / Land Surveyors
 Springfield, Illinois
 Design Firm License No. 184-002703

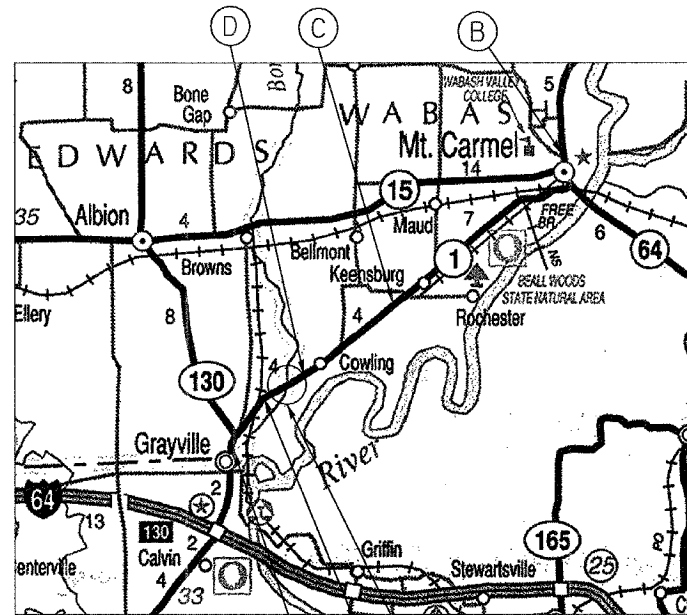
ILLINOIS DEPARTMENT OF TRANSPORTATION
 STAGE II TRAFFIC CONTROL PLAN
 FAP ROUTE 332 (IL ROUTE 1)
 OVER BONPAS CREEK
 SECTION 101B-1
 WABASH COUNTY
 SCALE: 1"=40'
 DATE _____ DRAWN BY _____
 CHECKED BY _____

Plot Date: 5/17/2007
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 Device: HPGL-RT

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	**	***	68	48
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
* FAP 332 (IL 1); FAP 328 (US 45) ** 101B-1; (BBR-1B-1) *** WABASH / WAYNE				

INSTALL WIDTH RESTRICTION SIGNS

- (A) 1 - EACH (60 x 48)
"BRIDGE CONSTRUCTION"
3 MILES AHEAD
MAXIMUM WIDTH
10 FT 4 IN"
TO BE INSTALLED JUST SOUTH OF IL 1/IL 130 INTERSECTION NORTH OF GRAYVILLE
- (B) 1 - EACH (60 x 48)
"BRIDGE CONSTRUCTION"
13 MILES AHEAD
MAXIMUM WIDTH
10 FT 4 IN"
TO BE INSTALLED JUST NORTH OF IL 1/IL 15 INTERSECTION AT MT CARMEL
- (C) 1 - EACH (60 x 48)
"BRIDGE CONSTRUCTION"
6 MILES AHEAD
MAXIMUM WIDTH
10 FT 4 IN"
TO BE INSTALLED SOUTH OF KEENSBURG ON IL 1
- (D) 1 - EACH (30 x 12)
"MAX WIDTH"
"9'-6"
INSTALLED UNDER EACH W20-4(0)-48-ONE LANE ROAD AHEAD SIGNS



PROJECT LOCATION

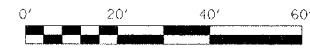
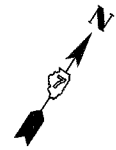
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COOMBE-BLOXDORF P.C.
 Engineers / Land Surveyors
 Springfield, Illinois
 Design Firm License No. 184-002703

REVISIONS	
NAME	DATE

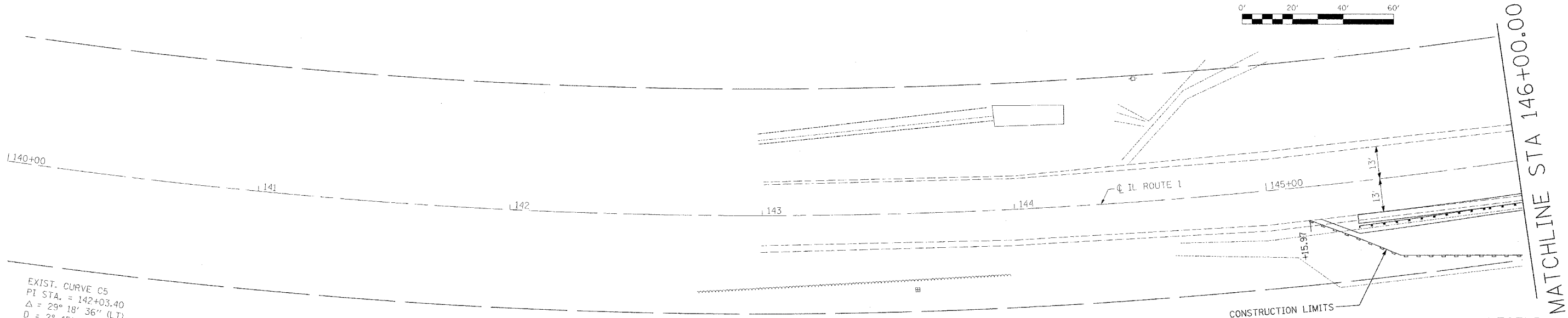
ILLINOIS DEPARTMENT OF TRANSPORTATION
 STAGING WIDTH RESTRICTION SIGNAGE
 FAP ROUTE 332 (IL ROUTE 1)
 OVER BONPAS CREEK
 SECTION 101B-1
 WABASH COUNTY
 SCALE: N.T.S.
 DATE: _____
 DRAWN BY CFC
 CHECKED BY _____

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	**	***	68	49
STA. 143+00.00		TO STA. 146+00.00		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
* FAP 332 (IL 1); FAP 328 (US 45) ** 101B-1; (8BR-1)B-1 *** WABASH / WAYNE				



PLAN	DATE
SURVEYED	
ALIGNED	
CHECKED	
BY	
DATE	

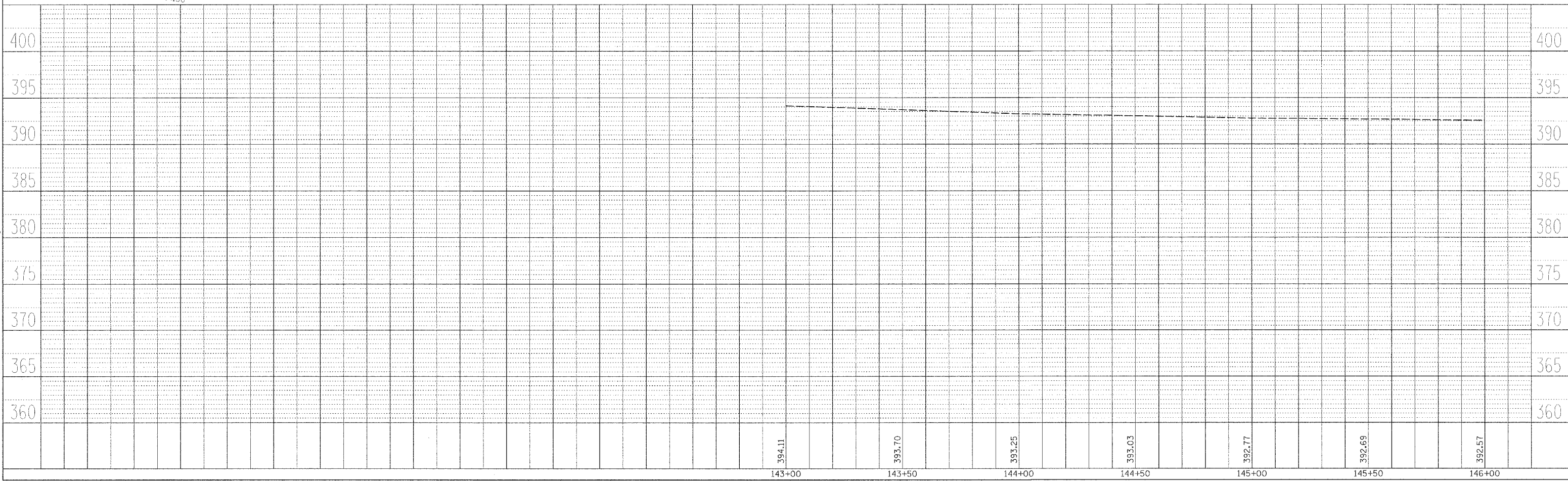
PROFILE	DATE
SURVEYED	
GRADES CHECKED	
BY	
DATE	



EXIST. CURVE C5
 PI STA. = 142+03.40
 $\Delta = 29^\circ 18' 36''$ (LT)
 $D = 2^\circ 45' 00''$
 $R = 2,083.48'$
 $T = 544.84'$
 $L = 1,065.82'$
 $E = 70.06'$
 $e =$
 $T.R. =$
 $S.E. RUN =$
 $P.C. STA. = 136+58.56$
 $P.T. STA. = 147+24.38$

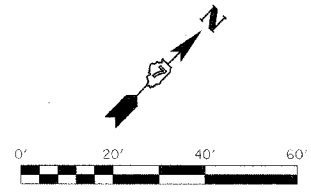
LEGEND

- PERIMETER EROSION BARRIER
- TEMPORARY DITCH CHECK



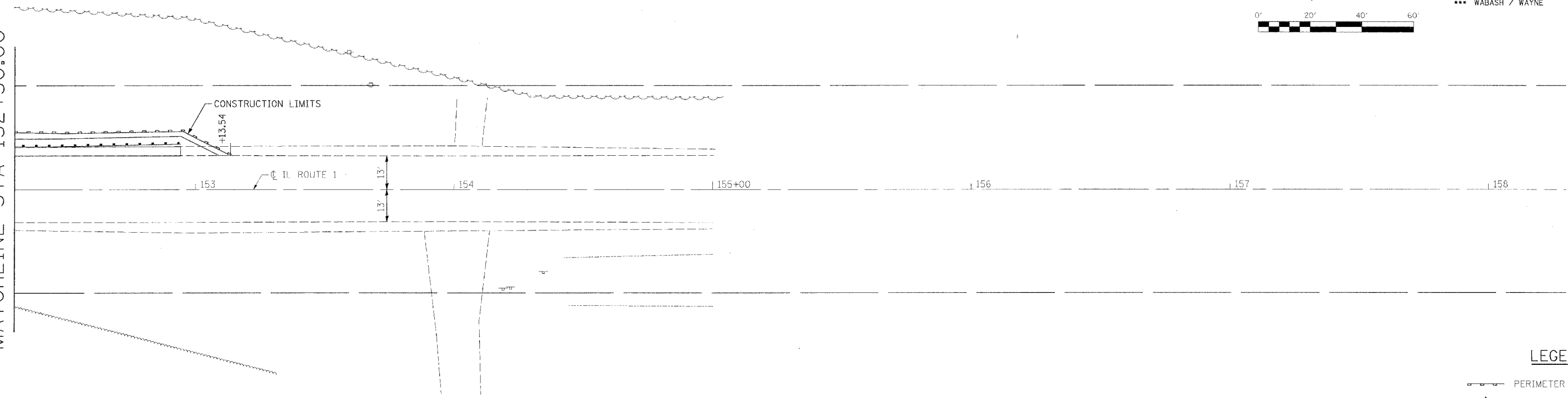
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 Plot Name: Erosion Control Plan
 Plot Scale: 1" = 40'

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	**	***	68	51
STA. 152+30.00 TO STA. 155+00.00				
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
• FAP 332 (IL 1); FAP 328 (US 45) • 101B-1; (8BR-1B-1) ••• WABASH / WAYNE				



PLAN	DATE
SURVEYED ALIGNED CHECKED RT. OF WAY CHECKED NO. _____ CARD FILE NAME _____	BY _____ DATE _____

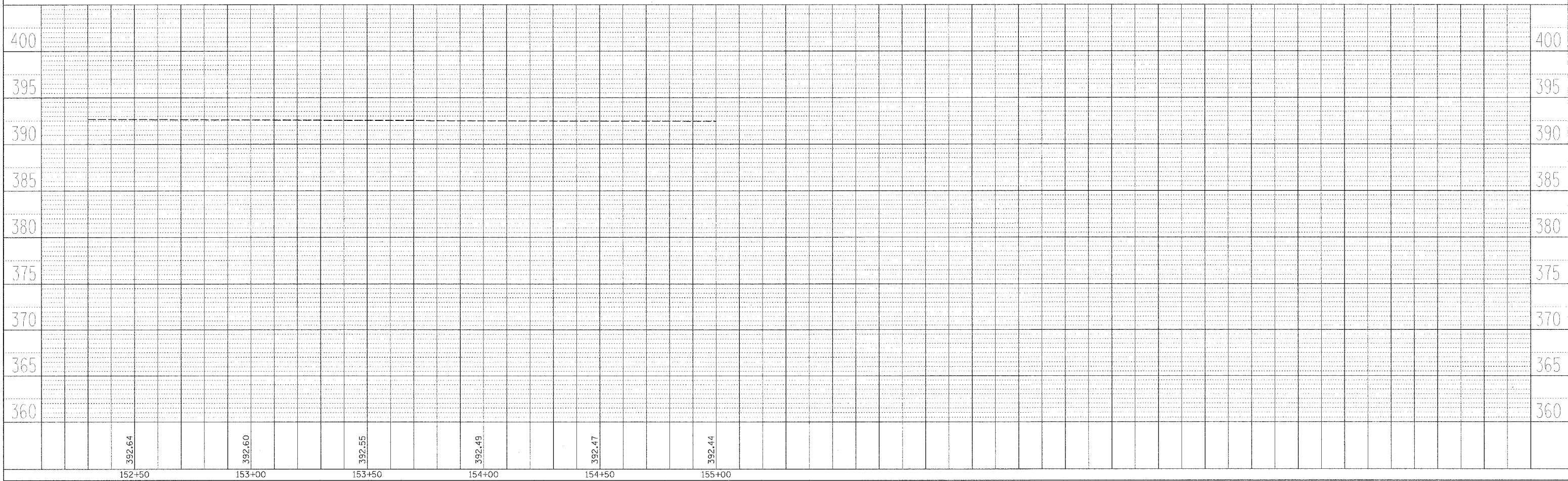
MATCHLINE STA 152+30.00



LEGEND

- PERIMETER EROSION BARRIER
- TEMPORARY DITCH CHECK

PROFILE	DATE
SURVEYED POINTS CHECKED RT. OF WAY CHECKED NO. _____ STRUCTURE NOTATING CHKD _____	BY _____ DATE _____



PLOT DATE = 3/17/2007
 FILE NAME = I:\B09255\Cad\Drawings\Construction\Plans\93_erosion-control.dwg
 PLOT SCALE = 20.0/1000 / IN.
 USER NAME = smurdoch

Benchmark: Chiseled "□" on N.E. corner of northeast abut. 15' Rt. Sta. 149+93, Elev. 394.00

Existing Structure: SN 093-0005 Built 1934 Sta. 149+30.00 as SBI Route 138. Rebuilt 1971 Sta. 149+30.00 as SBI Route 138, Section 101B-1. Structure is two span precast prestressed concrete deck beam superstructure 128'-3 3/4" Bk. to Bk. abutments and 33'-0" out to out deck on closed concrete abutments supported by untreated timber piles and solid concrete pier on spread footing embedded 6" into rock. Bridge superstructure shall be removed and replaced with new beams and reinforced concrete wearing surface. Stage construction will be utilized allowing one lane of traffic during construction.

No Salvage

LOADING HS20-44
No allowance for future wearing surface
DESIGN SPECIFICATIONS
2002 AASHTO
DESIGN STRESSES

FIELD UNITS-EXISTING $f_c = 1,000$ psi
 $f_y = 20,000$ psi (reinforcement)

FIELD UNITS-PROPOSED $f'_c = 5,000$ psi (concrete wearing surface)
 $f_y = 60,000$ psi (reinforcement)

PRECAST PRESTRESSED UNITS

$f'_c = 5,000$ psi
 $f_{ci} = 4,000$ psi
 $f'_s = 270,000$ psi (1/2" ϕ Low Relaxation Strands)
 $f_{si} = 201,960$ psi (1/2" ϕ Low Relaxation Strands)

PRECAST UNITS

$f'_c = 4,500$ psi
 $f = 60,000$ psi

ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET	SHEET NO.
FAP 332	101B-1	WABASH	68	52	11 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT	Contract # 74003		

GENERAL NOTES

Plan dimensions and details relative to the existing plans are subject to routine variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished based upon the unit price bid for the work.

The cut strands at each beam end shall be given two coats of zinc dust spray or paint meeting the requirements of ASTM A780. The zinc dust spray or paint shall be applied before corrosion appears and allowed to dry according to the manufacturer's specifications prior to another coat of zinc. A concrete sealer meeting the requirements of Section 587 of the Standard Specifications shall be applied to the exterior face and 9" in on the underside of the fascia beams. The sealer shall be applied after visible crack growth has subsided. This work shall be performed by the producer and included with the cost of the beam.

The Contractor is advised that the existing PPC Deck Beams are in a deteriorated condition with reduced load carrying capacity. It is the Contractor's responsibility to account for the condition of the beams when developing construction procedures for removal and replacement of the superstructure.

No drilling will be permitted into the existing precast deck beams to be used for Stage I traffic lane or the proposed deck beams.

If the Contractor's procedure for existing beam removal or placement of new beams involves placement of cranes or other heavy equipment on new beams, a detailed procedure shall be submitted to the Engineer for approval. The procedure shall include calculations, prepared and sealed by an Illinois Licensed Structural Engineer, verifying that the equipment and procedure used will not overstress the new beams. To distribute load to multiple beams and protect the concrete, in all cases a double layer mat of heavy timbers shall be used at all times under crane tracks or wheels and any outriggers in the down position. If necessary, shims shall be used under the crane mat to ensure uniform contact with the underlying beams. Prior to placement of the timber mats the following shall be done: placement and tightening of transverse tie assemblies, grouting and curing the dowel rods 24 hours minimum and grouting and curing the shear keys.

Any damage done to the bridge during beam removal shall be repaired by the Contractor. Cost to be included in the cost of Removal of Existing Superstructures.

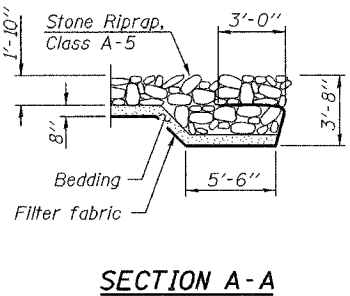
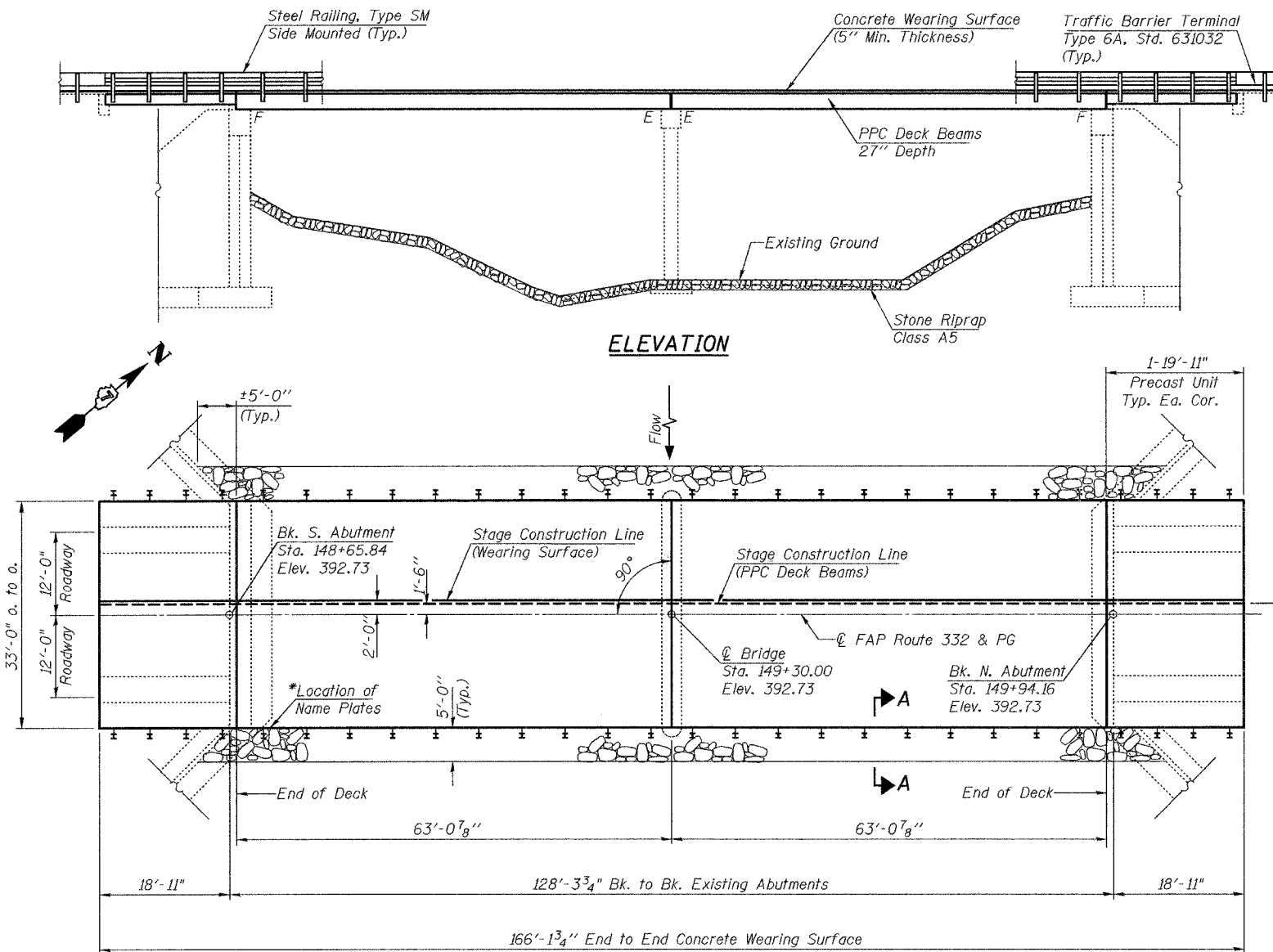
Layout of Slope Protection System may be varied to suit ground conditions in field as directed by the Engineer.

Reinforcement bars designated (E) shall be epoxy coated.
Reinforcement bars shall conform to the requirements of ASTM A 706 Gr. 60 (IL Modified). See Special Provisions.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Superstructures	Each	1		1
Precast Prestressed Concrete Deck Beams (27" Depth)	Sq. Ft.	4157		4157
Reinforcement Bars, Epoxy Coated	Pound	7590		7590
Steel Railing, Type SM	Foot	332		332
Name Plates	Each	1		1
Bar Splicers	Each	168		168
Concrete Wearing Surface, 5"	Sq. Yd.	613		613
Protective Coat	Sq. Yd.	613		613
Bridge Deck Grooving	Sq. Yd.	611		611
Preformed Joint Strip Seal	Foot	33		33
Precast Concrete Bridge Slab	Sq. Ft.	299		299
** Removal of Existing Precast Concrete Unit	Sq. Ft.	299		299
Stone Riprap Class A5	Sq. Yd.		603	603
Filter Fabric	Sq. Yd.		603	603
Structural Repair of Concrete (Depth Greater Than 5")	Sq. Ft.		7	7
Epoxy Crack Injection	Foot		45	45

** Removal of existing Precast Concrete Unit shall be performed according to the requirements of Article 501 of The Standard Specifications.



PLAN

INDEX OF SHEETS

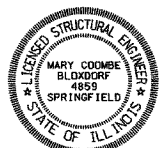
- 1) General Plan & Elevation
- 2) Staged Construction
- 3) Temporary Concrete Barrier For Stage Construction
- 4) Superstructure
- 5) Preformed Joint Strip Seal
- 6) Approach Beam Details
- 7) Beam Details
- 8) Steel Railing, Type SM With Concrete Wearing Surface
- 9) Abutment & Pier Details
- 10) Abutment Repair Details
- 11) Bar Splicer Assembly Details

STATION 149+30.00
REBUILT 20__ BY
STATE OF ILLINOIS
F.A.P. RTE 332 SEC. 101B-1
LOADING HS20
STRUCTURE NO. 093-0005

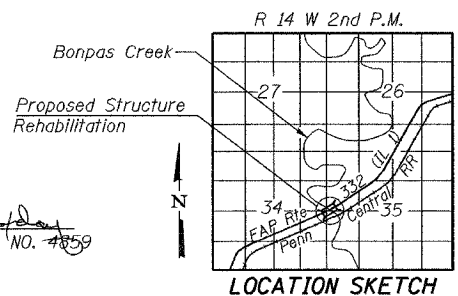
NAME PLATE
See Std. 515001

*The existing name plate shall be cleaned and relocated next to the new name plate. Both name plates shall be attached to the backside of the 8" rail element in the location shown. Cost included with Name Plates.

APPROVED
FOR STRUCTURAL ADEQUACY ONLY
Ralph E. Adams
ENGINEER OF BRIDGES AND STRUCTURES



Manoel B. Bloxdorf
ILLINOIS STRUCTURAL NO. 4859
EXPIRES: 11/30/08
DATE: 3/15/07



ILLINOIS DEPARTMENT OF TRANSPORTATION

SHEET TITLE: GENERAL PLAN & ELEVATION

PROJECT: FAP 332 OVER BONPAS CREEK
FAP ROUTE 332 (IL 1) SECTION 101B-1
WABASH COUNTY
STATION 149+30
SN 093-0005

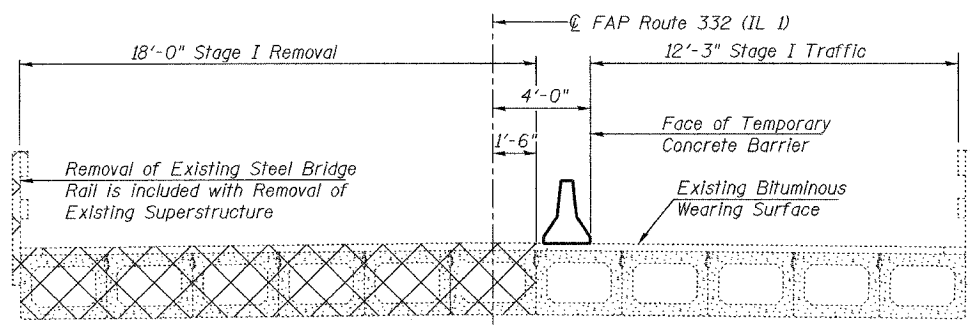
PROJECT NO. 06026
SCALE: 1" = 40'
DATE: 03/15/07
DRAWN BY: TFG
CHECKED BY: GB/CME/MCB
DRAWING NO. 1

COOMBE-BLOXDORF P.C.
Engineers / Land Surveyors
Springfield, Illinois
Design Firm License No. 184-002703

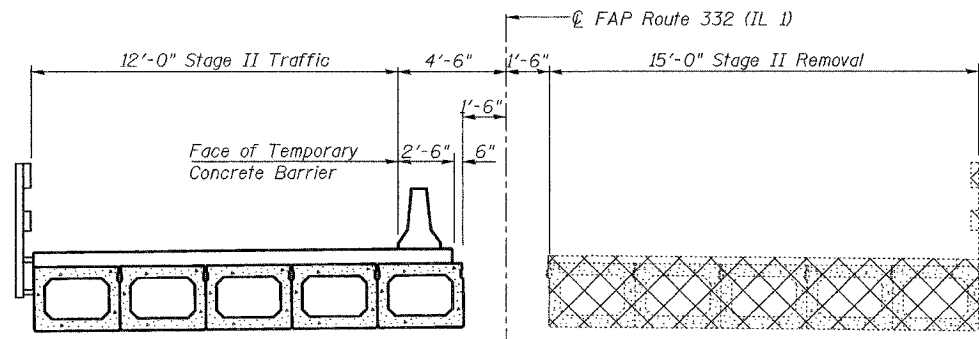
OF 11 SHETS

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USER NAME = TFG

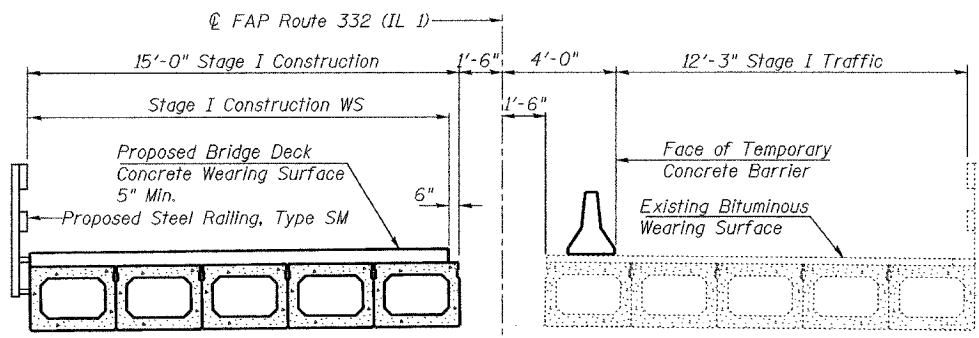
Contract # 74003



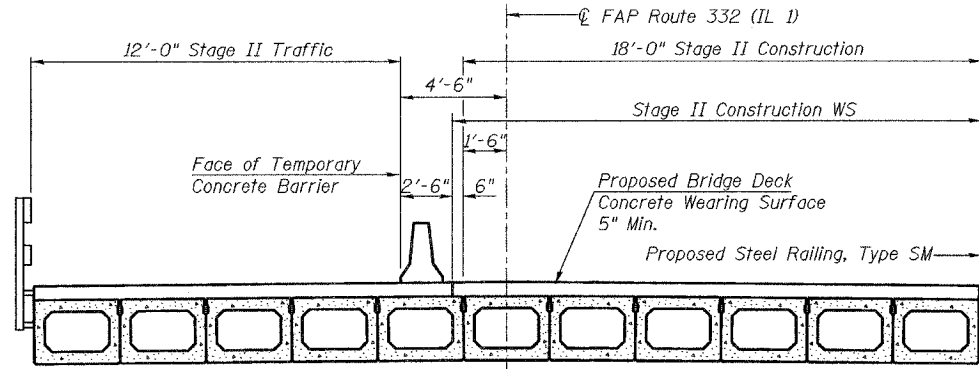
STAGE I REMOVAL
(Looking Northeast)



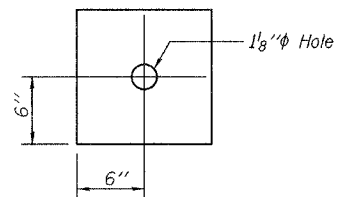
STAGE II REMOVAL
(Looking Northeast)



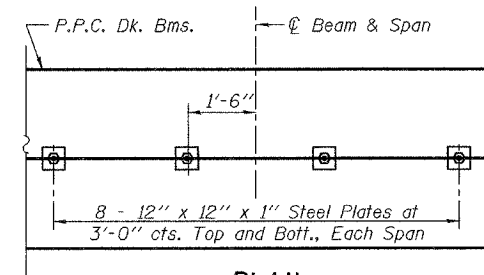
STAGE I CONSTRUCTION
(Looking Northeast)



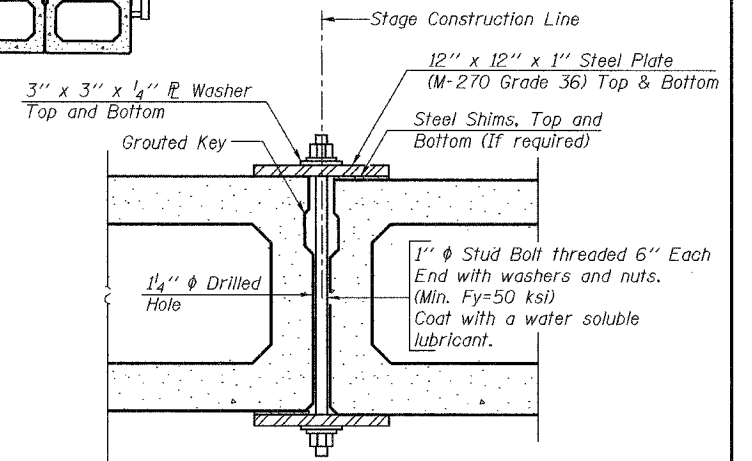
STAGE II CONSTRUCTION
(Looking Northeast)



CLAMPING PLATE



PLAN



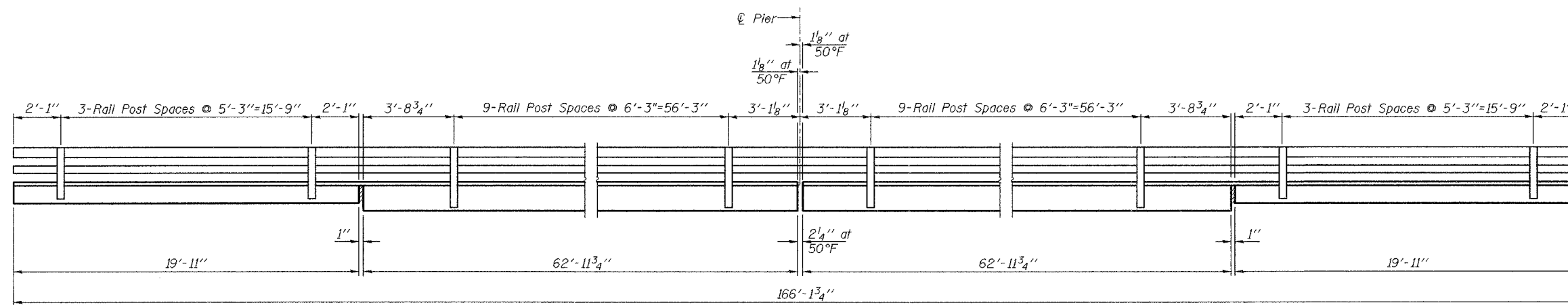
SECTION

SHEAR KEY CLAMPING DETAILS AT STAGE CONST. JT.

Cost of clamping device included in the cost of Precast Prestressed Concrete Deck Beams.

NOTES

Cross Hatched areas indicate Removal of Existing Superstructures. See Roadway plans for quantity of Temporary Concrete Barrier.

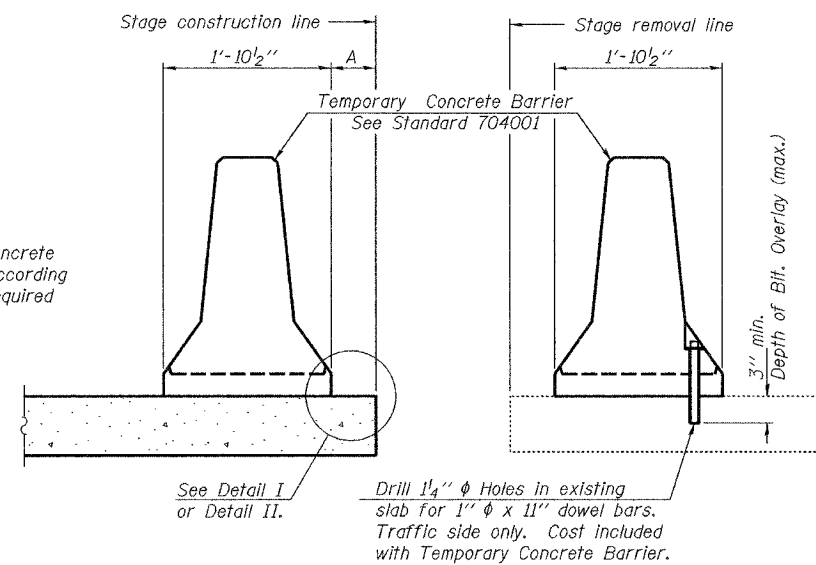


RAILING ELEVATION

ILLINOIS DEPARTMENT OF TRANSPORTATION			
SHEET TITLE			
STAGED CONSTRUCTION			
PROJECT	FAP 332 OVER BONPAS CREEK	PROJECT NO.	06026
	FAP ROUTE 332 (IL 1) SECTION 101B-1	SCALE	
	WABASH COUNTY	DATE	03/15/07
	STATION 149+30	DRAWN BY	TFG
	SN 093-0005	CHECKED BY	CB/OME/MCB
COOMBE-BLOXDORF P.C.			2
Engineers / Land Surveyors Springfield, Illinois			
Design Firm License No. 184-002703			OF 11 SHTS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 3 11 SHEETS
FAP 332	101B-1	WABASH	68	54	
FED. ROAD DIST. NO. 7		BILLINGS	FED. AID PROJECT		

Contract # 74003



When "A" is 3'-6" or less, the temporary concrete barrier shall be anchored to the new slab according to Detail I or Detail II. No anchorage is required when "A" is greater than 3'-6".

NEW SLAB EXISTING SLAB

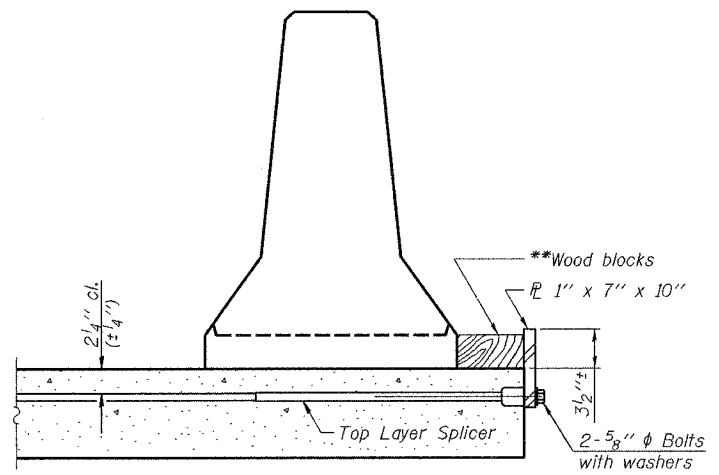
SECTIONS THRU SLAB

NOTES

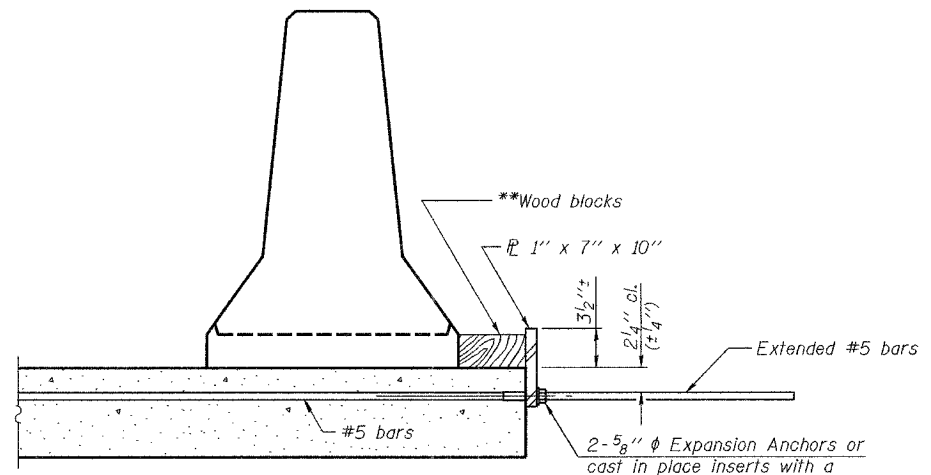
Detail I - With Bar Splicer or Couplers:
Connect one (1) 1"x7"x10" steel \bar{R} to the top layer of couplers with 2-5/8" ϕ bolts screwed to coupler at approximate \bar{C} of each barrier panel.

Detail II - With Extended Reinforcement Bars:
Connect one (1) 1"x7"x10" steel \bar{R} to the concrete slab with 2-5/8" ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate \bar{C} of each barrier panel.

Cost of anchorage is included with Temporary Concrete Barrier. The 1" x 7" x 10" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

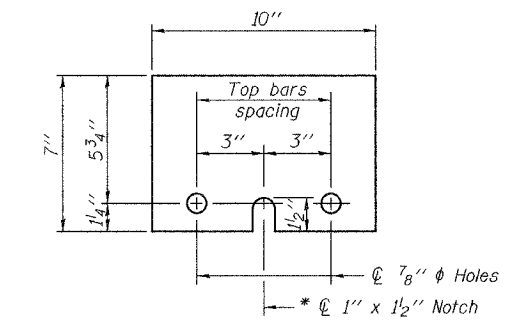


DETAIL I



DETAIL II

** Wood blocks may be omitted when required to provide minimum stage traffic lane width. When the wood blocks are omitted, the concrete barrier shall be in direct contact with the steel retainer plate.



STEEL RETAINER 1" x 7" x 10"
* Required only with Detail II

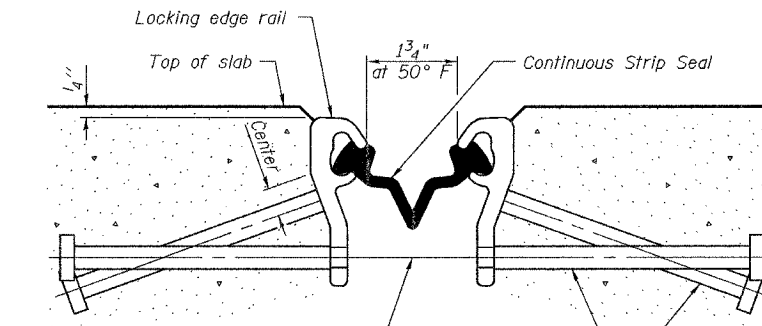
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 FILE NAME = R-27-TEMP-CONC-BARRIER.dgn
 PLOT SCALE = 0:1.0000 1" / IN.
 USER NAME = TFG

R-27 11-1-06

ILLINOIS DEPARTMENT OF TRANSPORTATION	
SHEET TITLE TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION	
PROJECT FAP 332 OVER BONPAS CREEK FAP ROUTE 332 (IL 1) SECTION 101B-1 WABASH COUNTY STATION 149+30 SN 093-0005	PROJECT NO. 06026 DATE 03/15/07 DRAWN BY TFG CHECKED BY GB/CME/MCB DRAWING NO.
COOMBE-BLOXDORF P.C. Engineers / Land Surveyors Springfield, Illinois Design Firm License No. 184-002703	3 OF 11 SHTS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 5 11 SHEETS
FAP 332	101B-1	WABASH	68	56	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

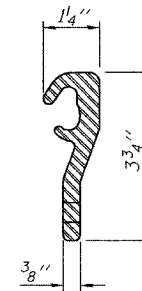
Contract # 74003



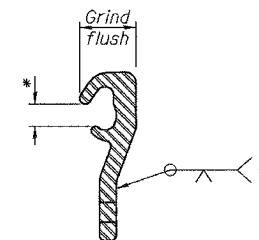
7/16" ϕ holes at 4'-0" cts. for 3/8" ϕ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.

Place 1/2" ϕ x 6" granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded at 1'-0" alt. cts. (130 required)

**SECTION THRU STRIP SEAL JOINT
FOR OVERLAY OVER DECK BEAMS**



LOCKING EDGE RAIL



LOCKING EDGE RAIL SPLICE

Notes:

The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails.

The height and thickness of the Locking Edge Rails shown are minimum dimensions. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed.

The inside of the Locking Edge Rail groove shall be free of weld residue. Locking Edge Rails may be spliced at slope discontinuities and stage construction joints.

The manufacturer's recommended installation methods shall be followed.

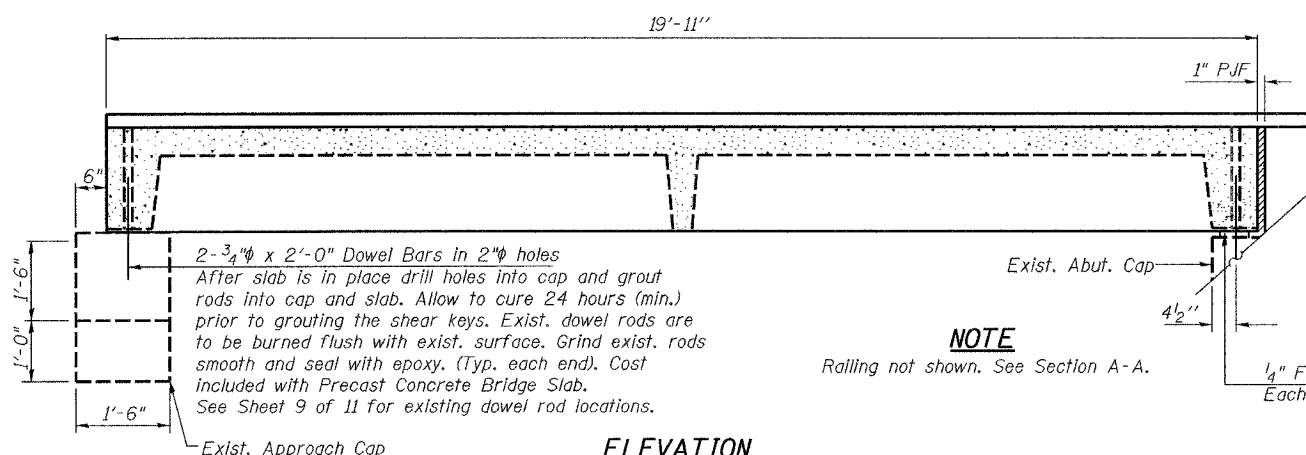
BILL OF MATERIAL

Item	Unit	Quantity
Preformed Joint Strip Seal	Foot	33

ILLINOIS DEPARTMENT OF TRANSPORTATION

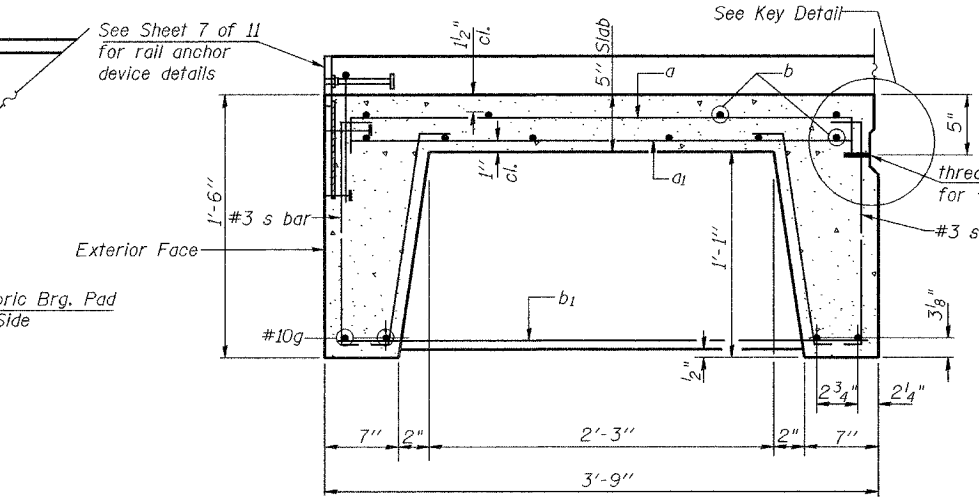
SHEET TITLE PREFORMED JOINT STRIP SEAL	
PROJECT FAP 332 OVER BONPAS CREEK FAP ROUTE 332 (IL 1) SECTION 101B-1 WABASH COUNTY STATION 149+30 SN 093-0005	PROJECT NO. 06026 SCALE DATE 03/15/07 DRAWN BY TFG CHECKED BY GB/CME/MCB DRAWING NO.
COOMBE-BLOXDORF P.C. Engineers / Land Surveyors Springfield, Illinois Design Firm License No. 184-002703	5 OF 11 SHTS

Contract # 74003



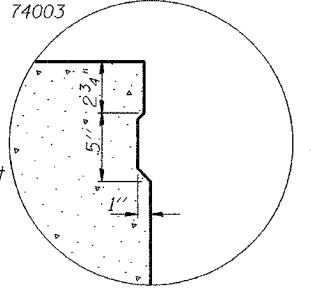
ELEVATION

Looking West at Southwest Approach Beam
Looking East at Northeast Approach Beam

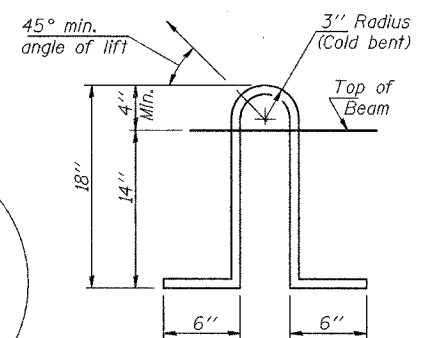


SECTION THRU UNIT

Weld ends of g bars to b1 bars with full bead weld

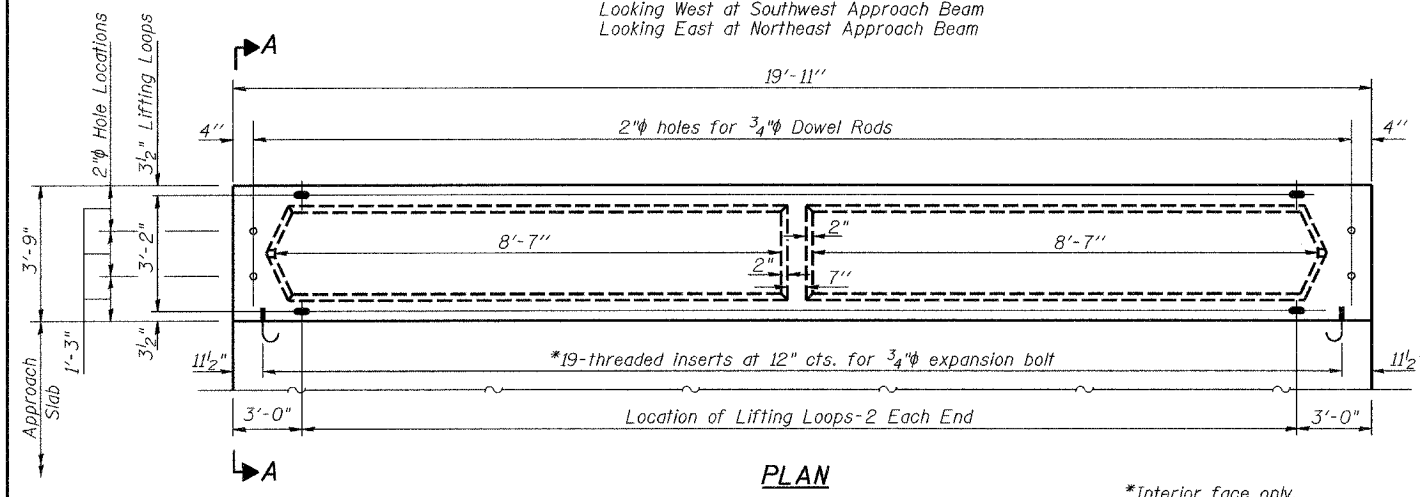


KEY DETAIL



LIFTING LOOP DETAIL

Lifting loops shall be 2-1/2" 270 ksi prestressing strands, as shown.

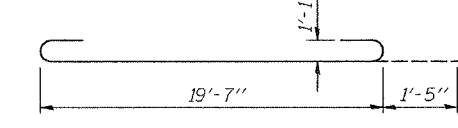


PLAN

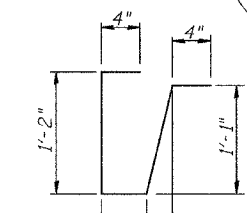
*Interior face only.

FABRIC BEARING PADS

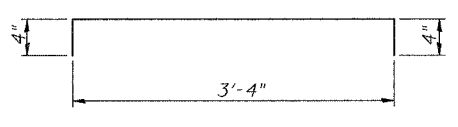
1/4" Thick Fabric Pads-16 Required



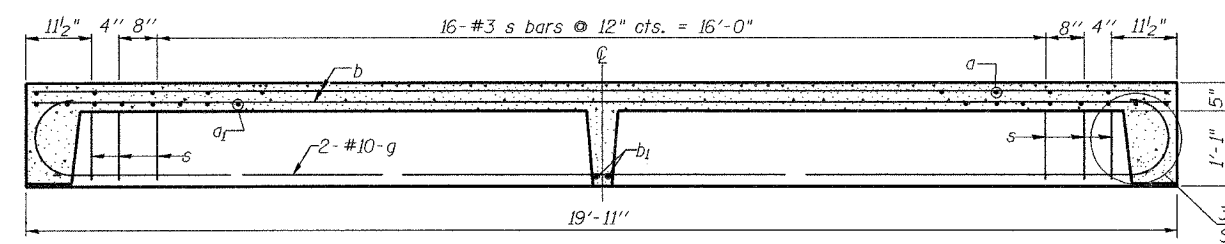
BAR g



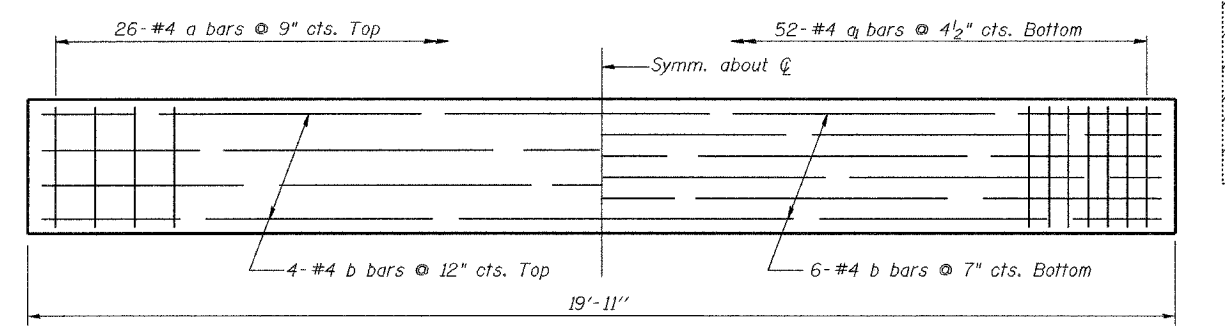
BAR s



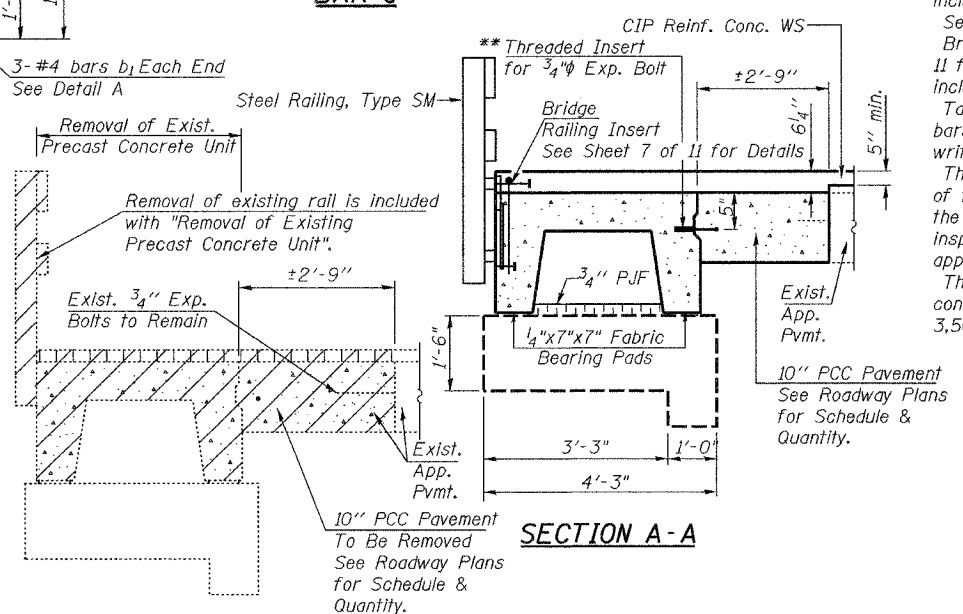
BAR a



SECTION ALONG C OF BEAM



PLAN SHOWING SLAB REINFORCEMENT



REMOVAL DETAIL

SECTION A-A

**Expansion bolts will be included in the cost of "Precast Concrete Bridge Slab".

BILL OF MATERIAL

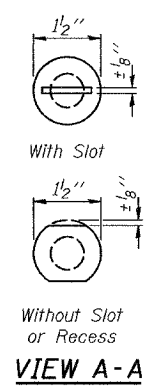
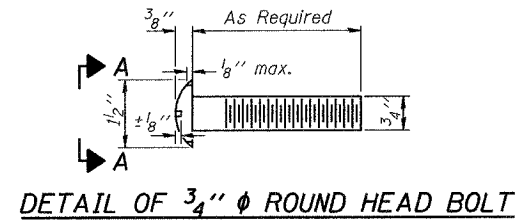
ITEM	UNIT	QUAN.
Precast Concrete Bridge Slab	Sq. Ft.	299
Removal of Existing Precast Concrete Unit	Sq. Ft.	299

NOTES

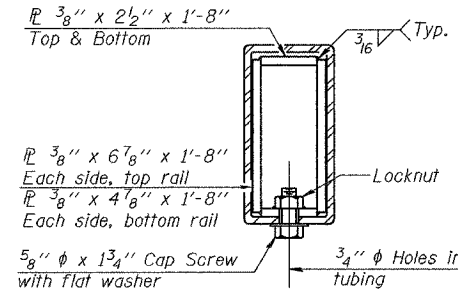
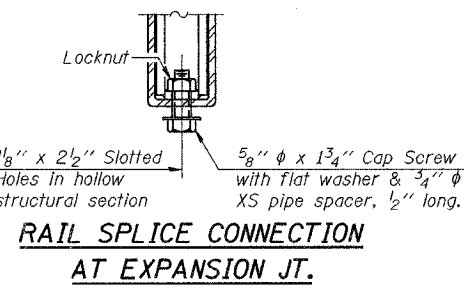
Cost of reinforcement and accessories cast into slab unit, bearing pads, furnishing, drilling for, placing and grouting anchor dowels is included in Unit bid price for "Precast Concrete Bridge Slab". See Roadway Plans for Approach Slab Details. Bridge rail inserts shall be cast in precast beams. See Sheet 2 of 11 for rail post spacing and Sheet 8 of 11 for rail details. Cost included with Precast Concrete Bridge Slab. Tack welding of stirrups to bottom longitudinal reinforcement bars will not be permitted except as otherwise authorized in writing by the Engineer. The surface of the member shall not deviate more than 1/1200 of the full length of the member from a straight line connecting the two end points on the member's surface. In addition to State inspection and prior to erection, the beam shall be tested and approved by the resident Engineer at the jobsite. The units shall remain on the bottom supporting forms until the concrete has attained a compressive strength of not less than 3,500 pounds per square inch.

ILLINOIS DEPARTMENT OF TRANSPORTATION	
SHEET TITLE APPROACH BEAM DETAILS	
PROJECT FAP 332 OVER BONPAS CREEK FAP ROUTE 332 (IL 1) SECTION 101B-1 WABASH COUNTY STATION 149+30 SN 093-0005	PROJECT NO. 06026 DATE 03/15/07 DRAWN BY TFG CHECKED BY CB/CME/MCB DRAWING NO.
COOMBE-BLOXDORF P.C. Engineers / Land Surveyors Springfield, Illinois Design Firm License No. 184-002703	
6 OF 11 SHTS	

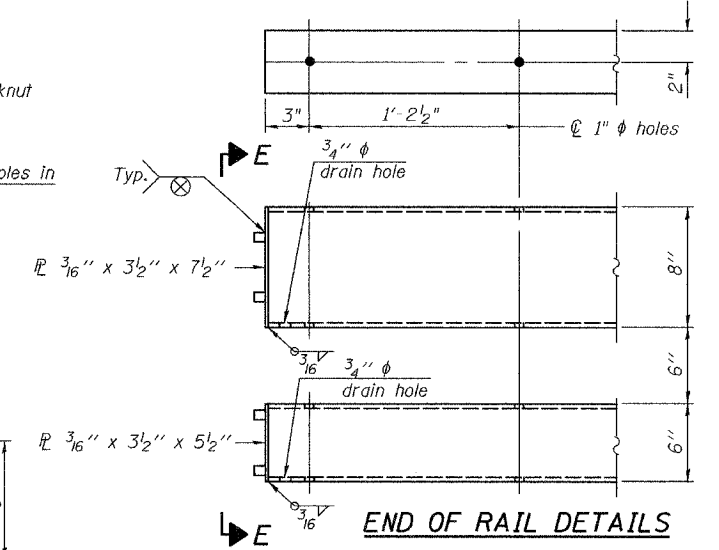
PLT DATE = 03/15/07
FILE NAME = R093-0005-ent-c-approach-beam-det.rvt
PLOT SCALE = 0.1/0.000 1" = 10'
USER NAME = TFG



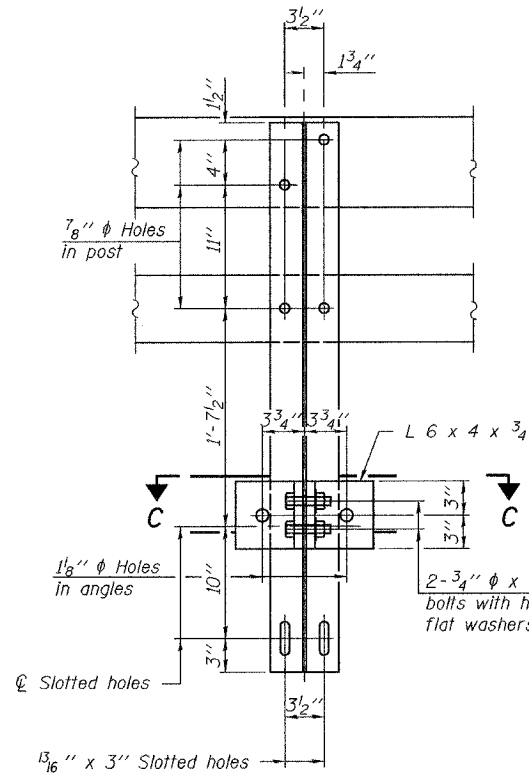
4-3/4" ϕ x 6" Round Head Bolts
(With slot or approved recess in head) with locknut & flat washer.
7/8" ϕ holes in hollow structural section may be drilled in the field.



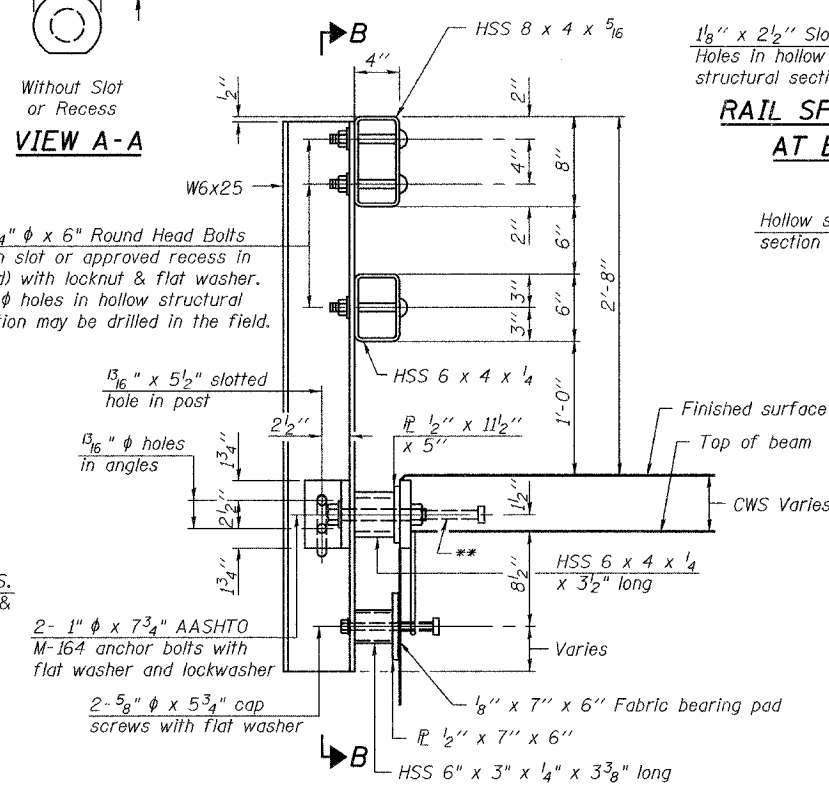
SECTION AT RAIL SPLICE



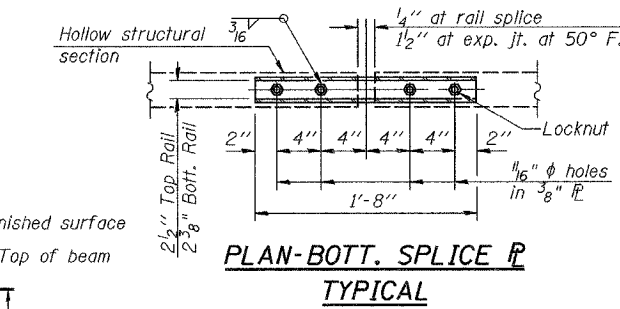
END OF RAIL DETAILS



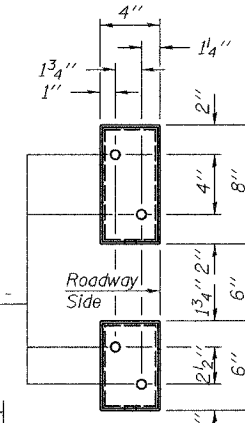
SECTION B-B



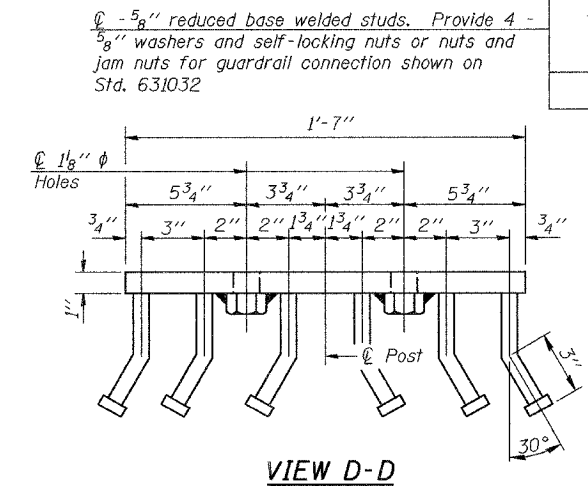
SECTION AT RAIL POST



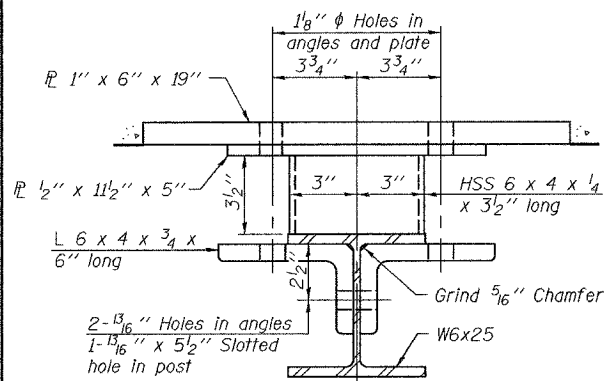
PLAN-BOTT. SPLICE TYPICAL



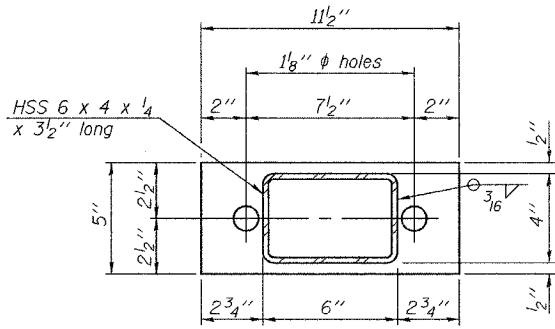
VIEW E-E



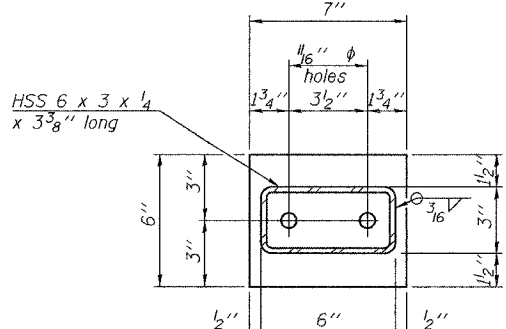
VIEW D-D



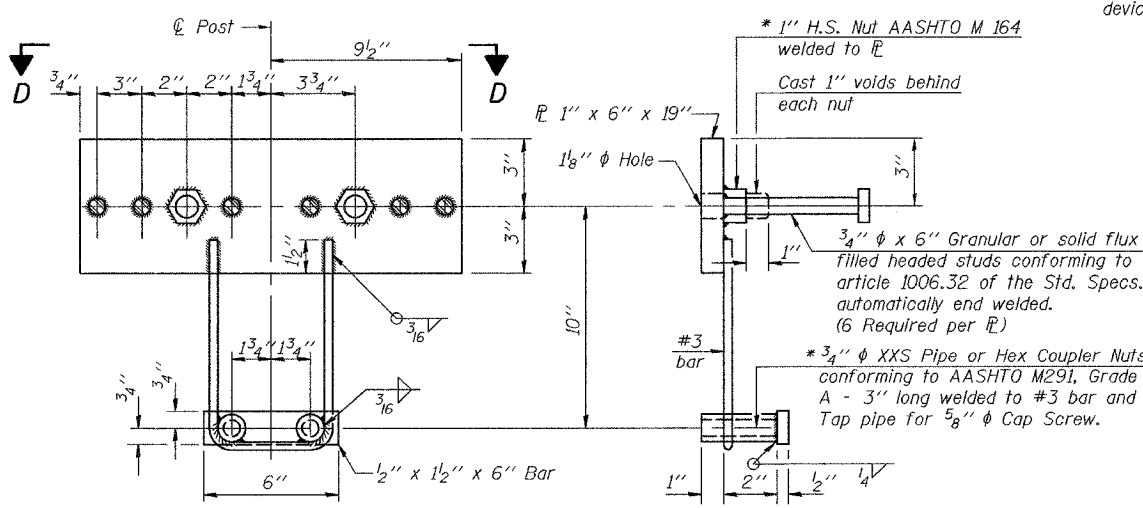
SECTION C-C



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.

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.

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

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

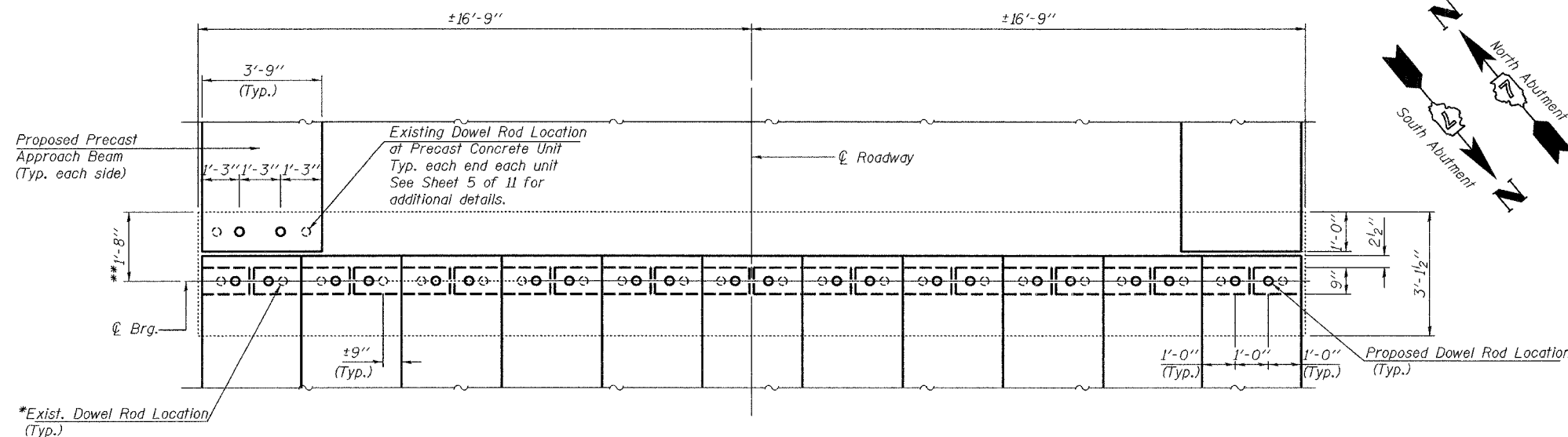
BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type SM	Foot	332

ILLINOIS DEPARTMENT OF TRANSPORTATION

SHEET TITLE STEEL RAILING, TYPE SM WITH CONCRETE WEARING SURFACE		PROJECT NO. 06026
PROJECT FAP 332 OVER BONPAS CREEK FAP ROUTE 332 (IL 1) SECTION 101B-1	DATE 03/15/07	DRAWN BY TFG
WABASH COUNTY STATION 149+30 SN 093-0005	CHECKED BY BG/CME/MCB	DRAWING NO.

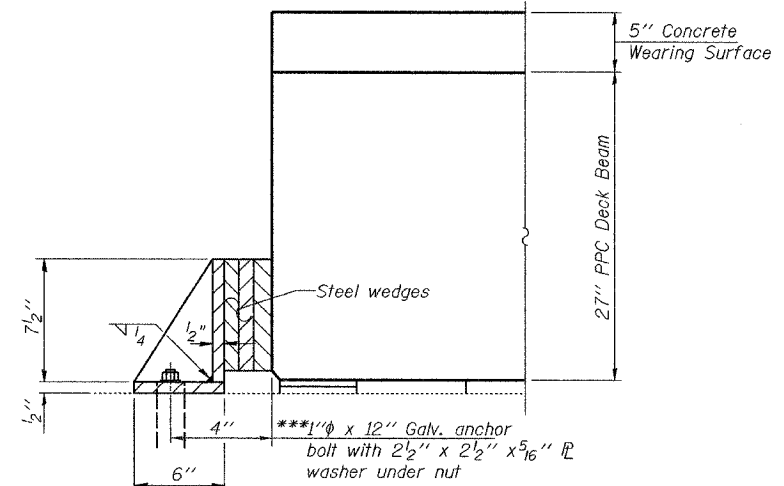
COOMBE-BLOXDORF P.C. Engineers / Land Surveyors Springfield, Illinois Design Firm License No. 184-002703	8 OF 11 SHTS
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ABUTMENT PLAN
(showing dowel rod and beam locations)

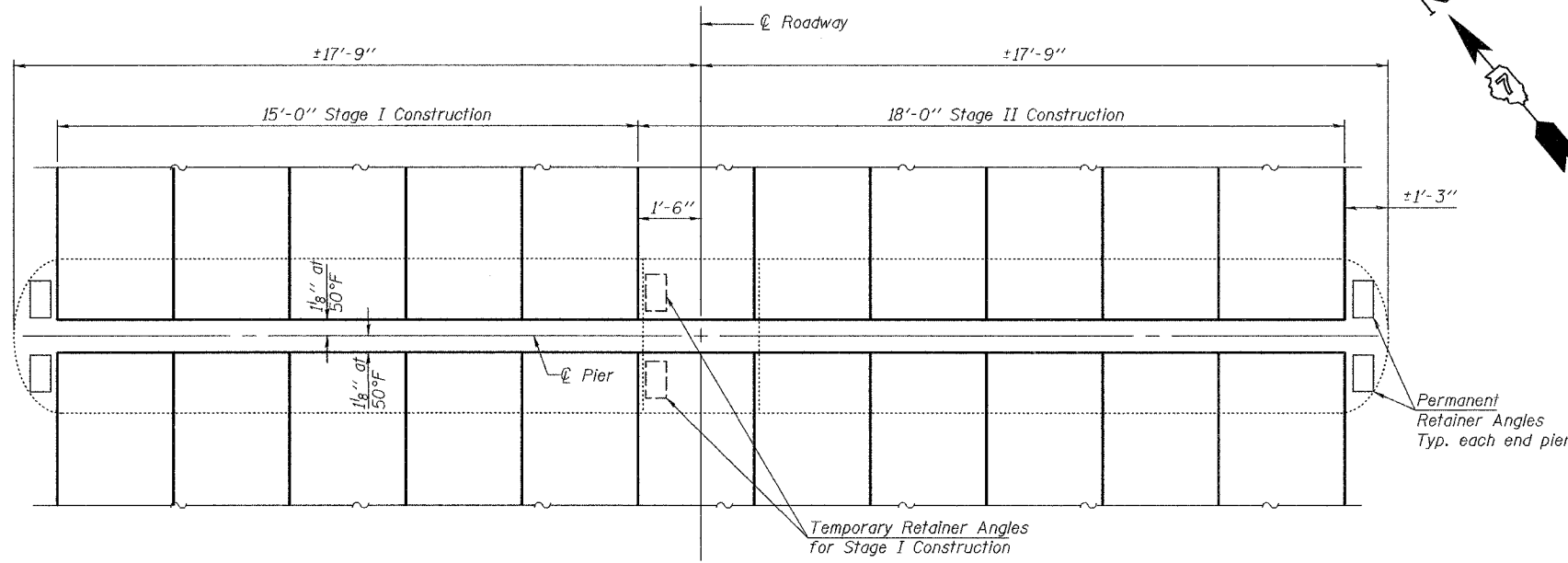
*Burn existing dowel rods flush with top of existing abutment cap. Grind existing dowel rods smooth and seal with epoxy. Cost is included with Removal of Existing Superstructures.

**Dimension may vary to accommodate tolerance in beam lengths.

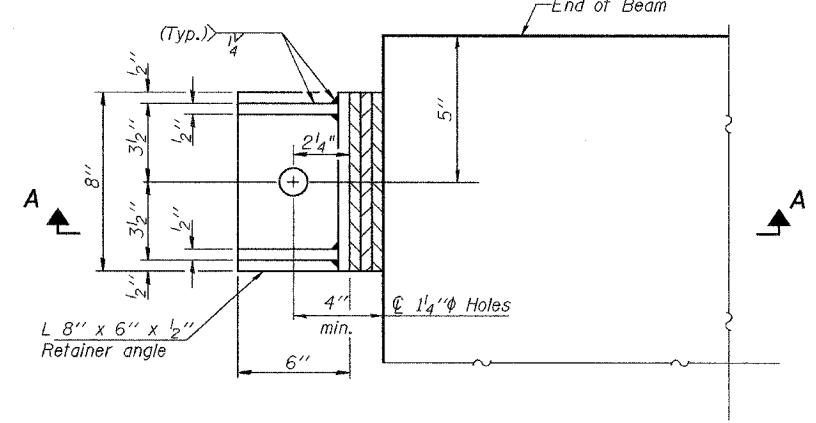


SECTION A-A

***Anchor bolts may be cast into the masonry or approved threaded rod may be placed in drilled holes and grouted in place. Cost included with Precast Prestressed Concrete Deck Beams.



PIER PLAN



PLAN RETAINER ANGLE
(Temporary and Permanent)

NOTES

Install permanent retainers at pier at west end of cap and temporary retainer at Stage Line prior to grouting Stage I shear keys. After Stage I concrete and concrete wearing surface is poured and cured the temporary retainer shall be removed. Burn existing anchor bolts flush with existing pier surface. Grind anchor bolts smooth and seal with epoxy. Install permanent retainer at east end of pier cap prior to grouting Stage II shear keys. The steel wedges shall be removed after the strip seal has been installed. Cost of retainers, accessories and removal of temporary retainer is included with Precast Prestressed Concrete Deck Beams.

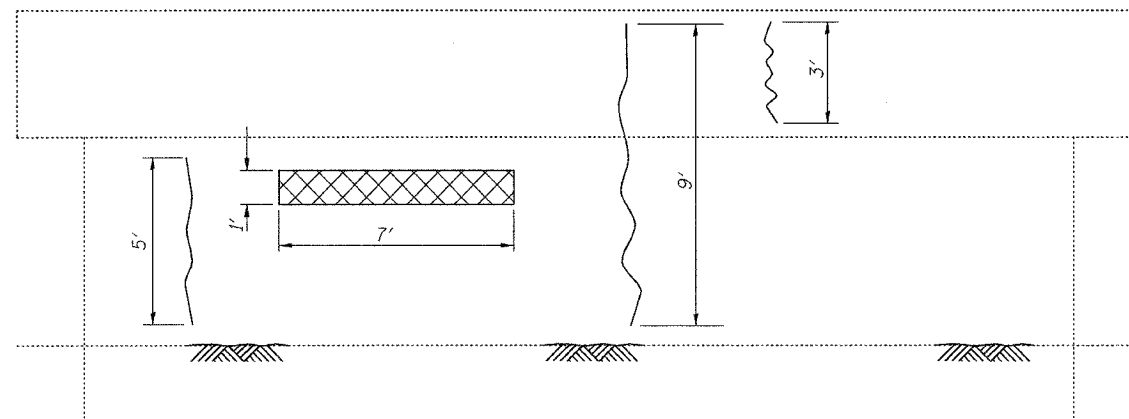
The side retainers shall be galvanized after shop fabrication according to AASHTO M111 and ASTM 385.

ILLINOIS DEPARTMENT OF TRANSPORTATION			
SHEET TITLE			
ABUTMENT & PIER DETAILS			
PROJECT	FAP 332 OVER BONPAS CREEK	PROJECT NO.	06026
	FAP ROUTE 332 (IL 1) SECTION 101B-1	SCALE	
	WABASH COUNTY	DATE	03/15/07
	STATION 149+30	DRAWN BY	TFG
	SN 093-0005	CHECKED BY	CME/MCB
COOMBE-BLOXDORF P.C.			DRAWING NO.
Engineers / Land Surveyors			9
Springfield, Illinois			
Design Firm License No. 184-002703			OF 11 SHTS

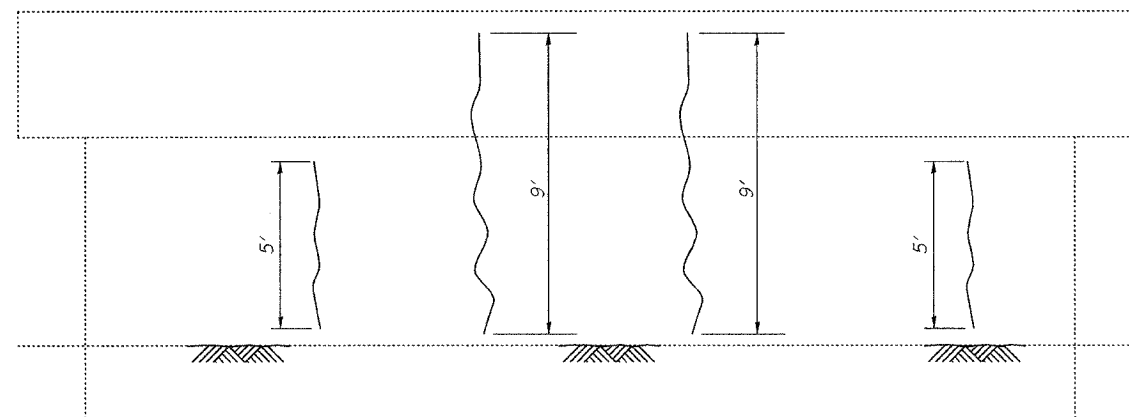
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PLOT SCALE = 28.0000 1" / IN.
USER NAME = TFG

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 10 11 SHEETS
FAP 332	101B-1	WABASH	68	61	
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT		

Contract # 74003



NORTH ABUTMENT
(Looking North)



SOUTH ABUTMENT
(Looking South)

- Structural Repair of Concrete (Depth Greater Than 5')
- Epoxy Crack Injection

BILL OF MATERIAL

Item	Unit	Quantity
Structural Repair of Concrete (Depth Greater Than 5')	Sq. Ft.	7
Epoxy Crack Injection	Foot	45

PLOT DATE = 03/15/07
 FILE NAME = I:\093-0005-ep1-10-abutment-repair-detail.dgn
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 USER NAME = TFG

ILLINOIS DEPARTMENT OF TRANSPORTATION	
SHEET TITLE ABUTMENT REPAIR DETAILS	
PROJECT FAP 332 OVER BONPAS CREEK FAP ROUTE 332 (IL 1) SECTION 101B-1 WABASH COUNTY STATION 149+30 SN 093-0005	PROJECT NO. 06026 SCALE DATE 03/15/07 DRAWN BY TFC CHECKED BY GB/CME/MCB DRAWING NO. 10
COOMBE-BLOXDORF P.C. Engineers / Land Surveyors Springfield, Illinois Design Firm License No. 184-002703	
OF 11 SHTS	

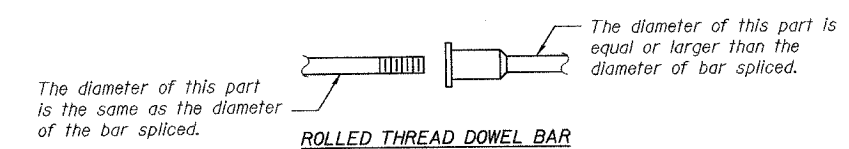
Contract # 74003

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 = $1.25 \times f_y \times A_t$
(Tension in kips)
 - ② Minimum *Pull-out Strength = $0.66 \times f_y \times A_t$
(Tension in kips)
- Where f_y = Yield strength of lapped reinforcement bars in ksi.
 A_t = Tensile stress area of lapped reinforcement bars.
 * = 28 day concrete

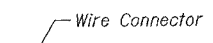
BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	7.9
#5	2'-0"	23.0	12.3
#6	2'-7"	33.1	17.4
#7	3'-5"	45.1	23.8
#8	4'-6"	58.9	31.3
#9	5'-9"	75.0	39.6
#10	7'-3"	95.0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



ROLLED THREAD DOWEL BAR



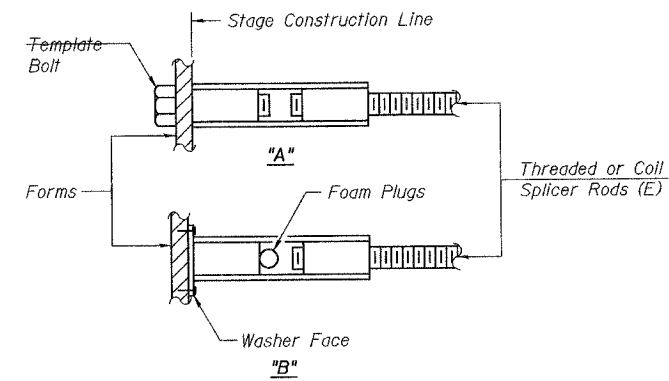
** ONE PIECE



WELDED SECTIONS

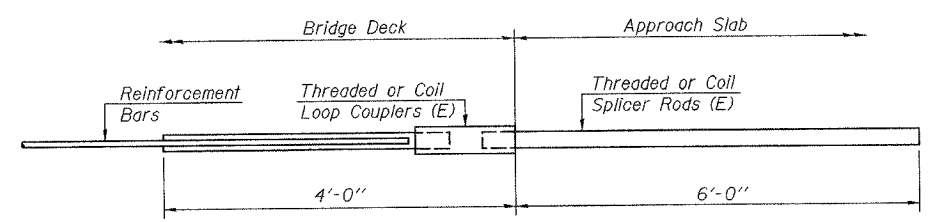
BAR SPLICER ASSEMBLY ALTERNATIVES

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



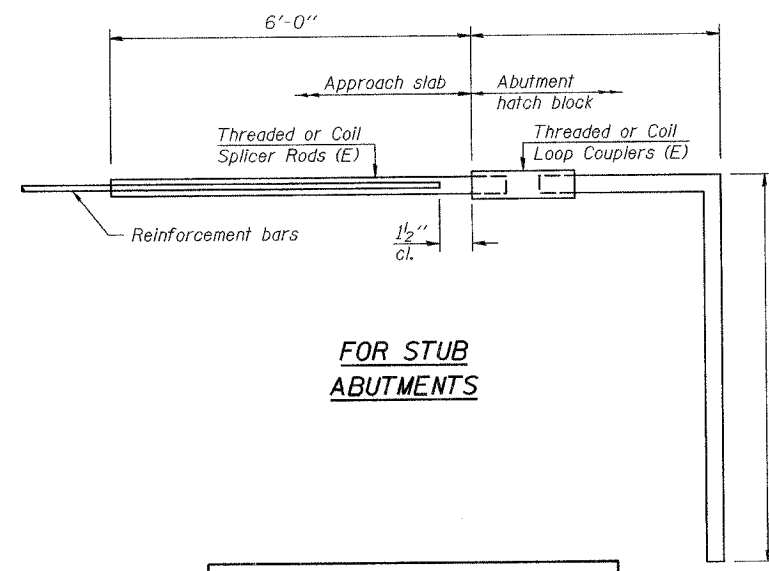
INSTALLATION AND SETTING METHODS

"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.



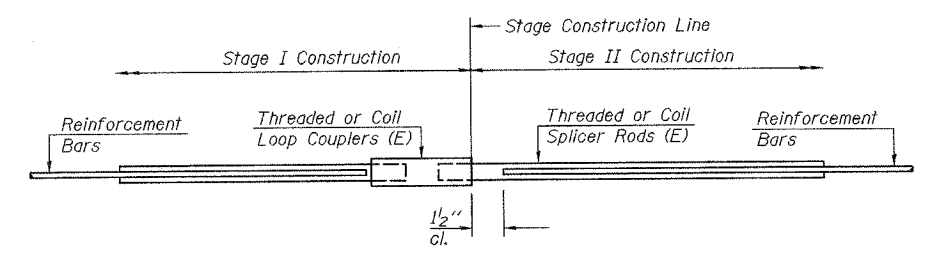
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

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



FOR STUB ABUTMENTS

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



STANDARD

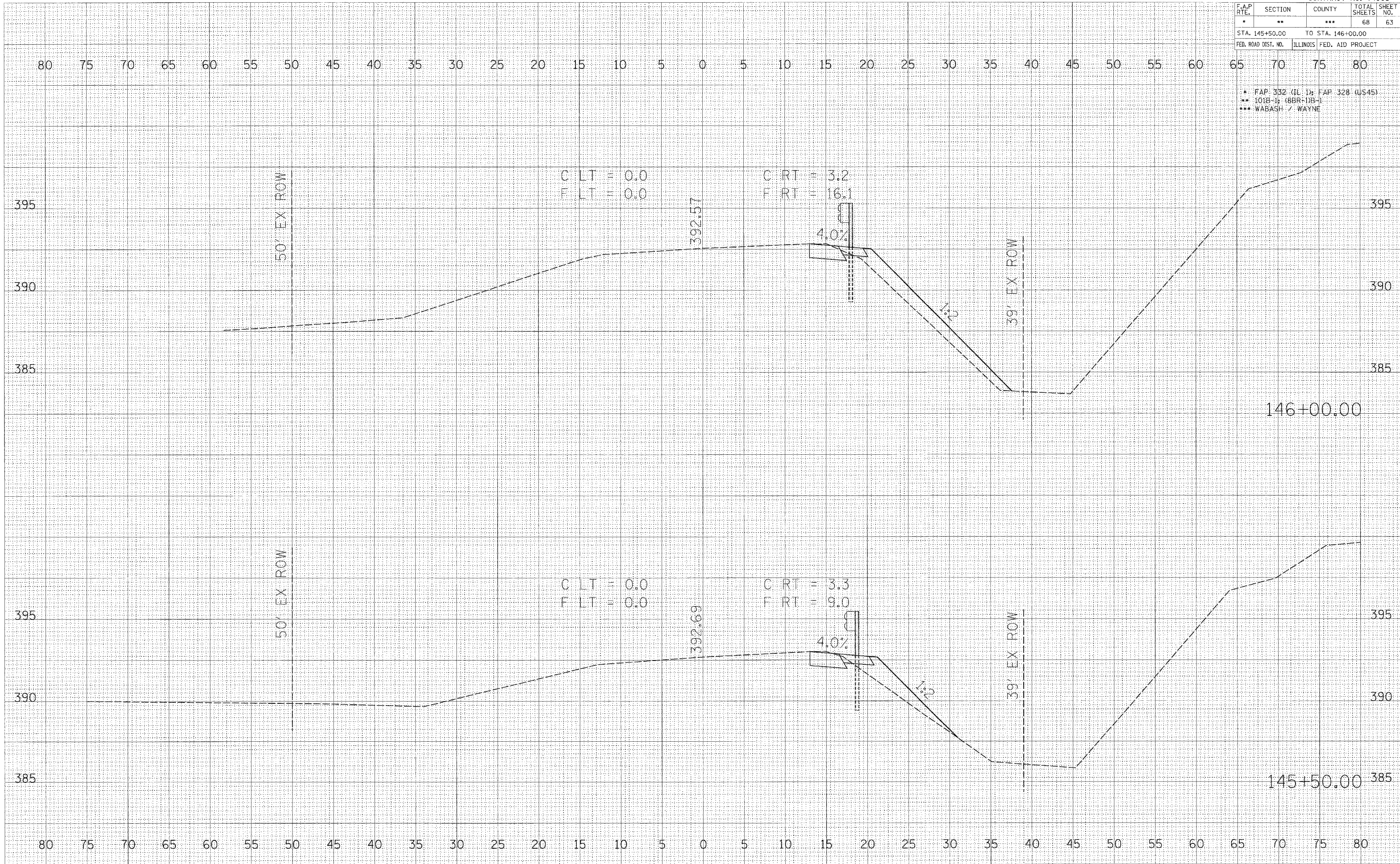
Bar Size	No. Assemblies Required	Location
#4	168	Conc. W.S.

ILLINOIS DEPARTMENT OF TRANSPORTATION	
SHEET TITLE BAR SPLICER ASSEMBLY DETAILS	
PROJECT FAP 332 OVER BONPAS CREEK FAP ROUTE 332 (IL 1) SECTION 101B-1 WABASH COUNTY STATION 149+30 SN 093-0005	PROJECT NO. 06026 DATE 03/15/07 DRAWN BY TEG CHECKED BY GB/CME/MCB DRAWING NO.
COOMBE-BLOXDORF P.C. Engineers / Land Surveyors Springfield, Illinois Design Firm License No. 184-002703	11 OF 11 SHTS

PLOT DATE = 03/15/2007
 FILE NAME = \\0093-0005-RYT-11-BSD-1-BAR-SPLICER.dwg
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 USER NAME = TEG

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	**	***	68	63
STA. 145+50.00		TO STA. 146+00.00		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

- * FAP 332 (IL 1); FAP 328 (US45)
- ** 101B-1; (8BR-1)B-1
- *** WABASH / WAYNE



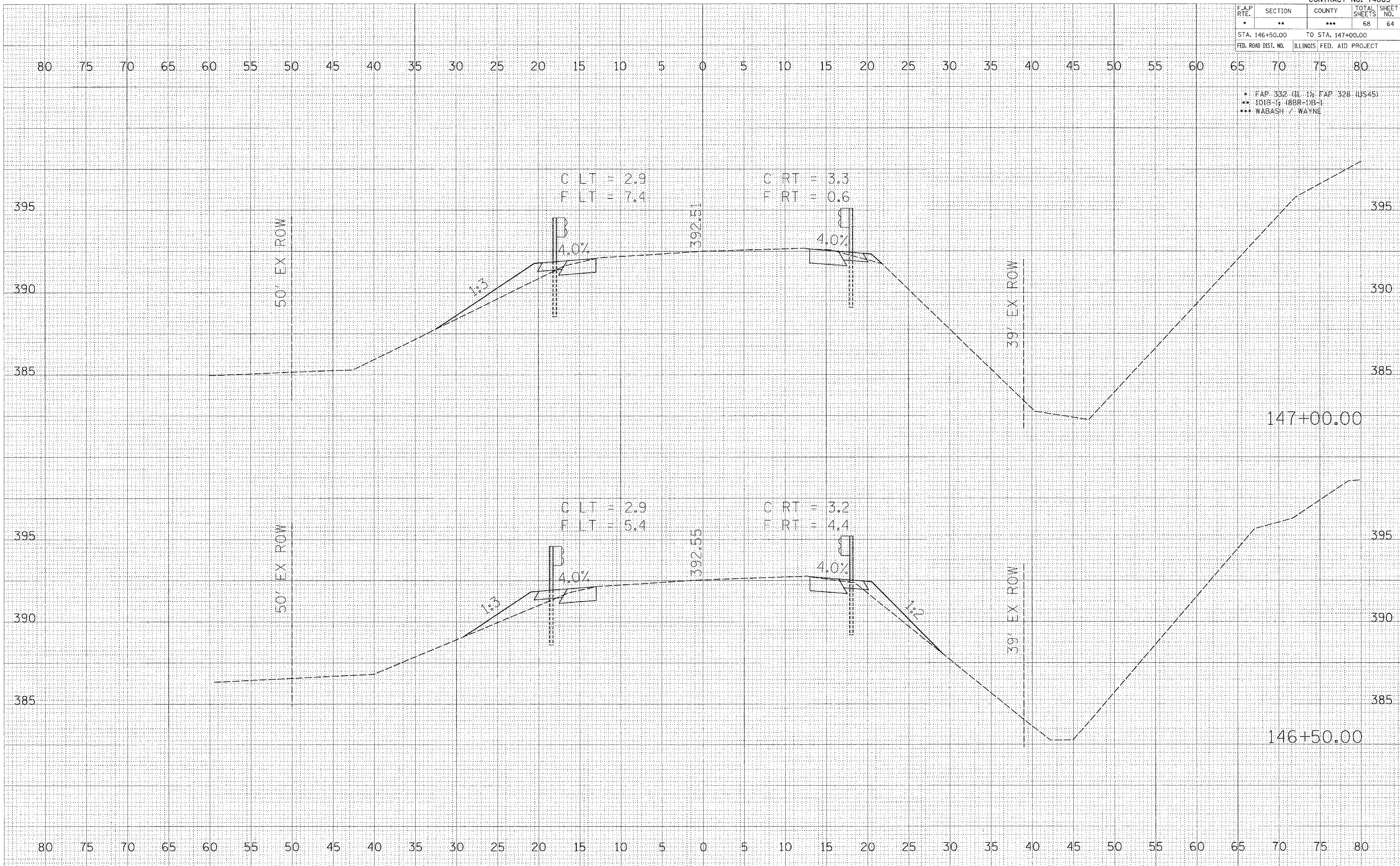
FINAL SURVEY BY DATE
 SURVEY PLOTTED
 NOTE BOOK NO.
 AREAS CHECKED

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

PLOT DATE = 9/17/2007
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 PLOT SCALE = 5/8" = 1' / IN.
 USER NAME = smurtrich

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	**	***	68	64
STA. 146+50.00 TO STA. 147+00.00				
FED. ROAD DIST. NO.			ILLINOIS FED. AID PROJECT	

- * FAP 332 (IL 1); FAP 328 (US45)
- ** I01B-1; (8BR-1)B-1
- *** WABASH / WAYNE



DATE: _____
 BY: _____
 SURVEYED: _____
 CHECKED: _____
 N.C.T.E. BOOK: _____
 AREAS CHECKED: _____
 NO. _____

DATE: _____
 BY: _____
 SURVEYED: _____
 CHECKED: _____
 N.C.T.E. BOOK: _____
 AREAS CHECKED: _____
 NO. _____

PLOT DATE = 3/17/2007
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 USER NAME = smunrtich

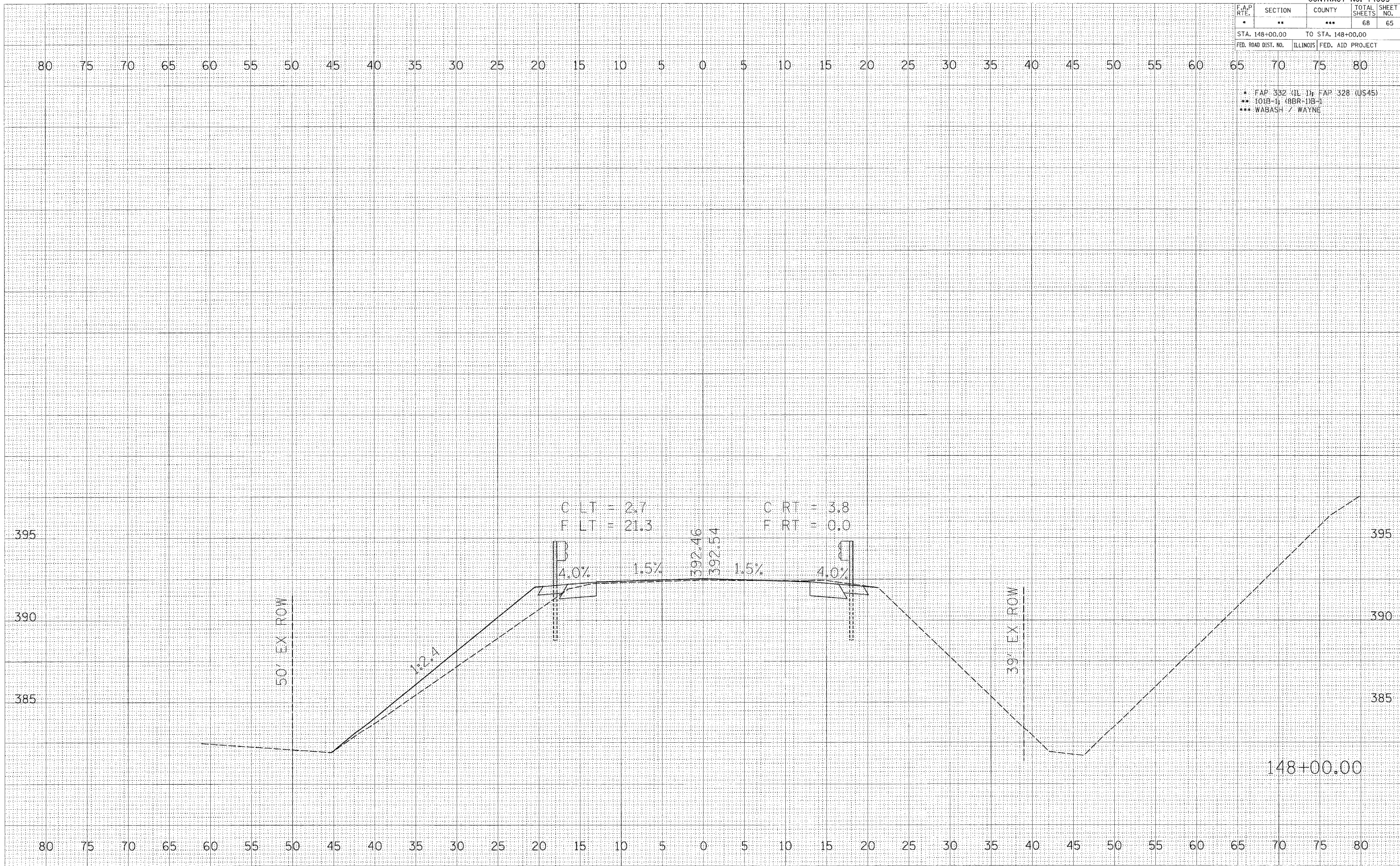
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	**	***	68	65
STA. 148+00.00 TO STA. 148+00.00				
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

- * FAP 332 (IL 1); FAP 328 (US45)
- ** 101B-1; (88R-1)B-1
- *** WABASH / WAYNE

DATE	
BY	
FINAL SURVEY	
NOTED BOOK	
NO. CHECKED	
AREAS CHECKED	

DATE	
BY	
ORIGINAL SURVEY	
NOTED BOOK	
NO. CHECKED	
AREAS CHECKED	

PLOT DATE = 9/17/2007
 FILE NAME = \\V6525R\Cad\Drawings\Projects\093-005\148+00.00.dwg
 PLOT SCALE = 5/8" = 1' IN.
 USER NAME = smurtnich



F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	**	***	68	68
STA. 152+50.00		TO STA. 153+00.00		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

- * FAP 332 (IL 1); FAP 328 (US45)
- ** 101B-1; (BBR-1)B-1
- *** WABASH / WAYNE

DATE	
BY	
DESIGNED	
CHECKED	
IN CHARGE	
NO.	

DATE	
BY	
DESIGNED	
CHECKED	
IN CHARGE	
NO.	

PLOT DATE = 3/17/2007
 PLOT SCALE = 1" = 20.00'
 USER NAME = amurphy

