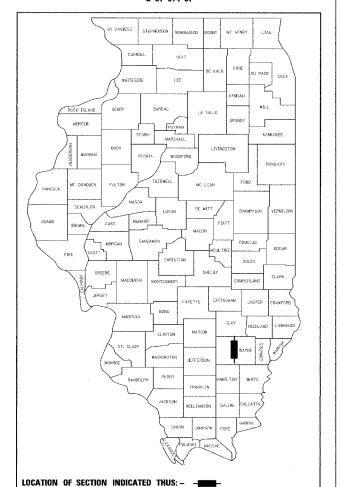
SECTION COUNTY (8BR-1)B-1 WAYNE

D-97-074-07



STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS

June 25 20 07 Churt M. R. 1881 / M. REGION ENGINEER

Saterin Engineer of Design and Environment

Milton R. Sees. P.E. 180

OF THE STATE OF ILLINOIS

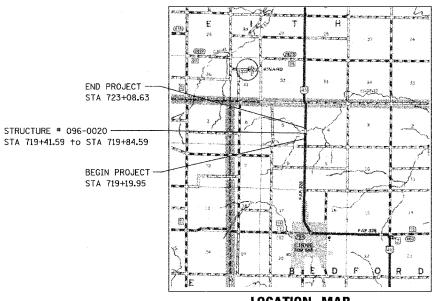
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STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION **DIVISION OF HIGHWAYS**

PROPOSED HIGHWAY PLANS

FAP ROUTE 328 (US 45) SECTION (8BR-1)B-1

> **WAYNE COUNTY** C-97-113-07



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)

INDEX OF SHEETS

SUMMARY OF QUANTITIES SCHEDULE OF QUANTITIES

15-16 EROSION CONTROL PLAN 17-29 STRUCTURE PLANS SN 096-0020

INDEX OF IDOT HIGHWAY STANDARDS

635011-01 701201-02 701306-01

701321-08

701326-02

702001-06 704001-03

780001-01

781001-02

TYPICAL SECTIONS
PLAN & PROFILE 11-14 STAGE CONSTRUCTION PLAN

30-39 CROSS SECTIONS

000001-04 001001-01

515001-0%

630001-07

630301-04

631032-03

001006 280001-03

COVER GENERAL NOTES

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.

JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION 1-800-892-0123

CONTRACT NO. 74041

640 PIERCE BOULEVARD SUITE 200 - O'FALLON, ILLINOIS 62269 5200 OAKLAND AVENUE - ST. LOUIS, MISSOURI 63110

2:062-056990 License Expires 11/30/2007

SCALE IN MILES

PLANS PREPARED BY

www.hornershifrin.com

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 HOT-MIX ASPHALT SURFACE COURSE AGGREGATE (SURFACE, BASE, & BACKFILL) HOT-MIX ASPHALT MATERIALS: PRIME COAT FOR HOT-MIX ASPHALT:	0.056 0.056 2.05	TON / TON / TON /	sa	YD / IN YD / IN YD
- ON PAVEMENT - ON COLD MILLED SURFACE - FOG COAT ON NEW BINDER	0.0002 0.0004 0.00012	TON / TON / TON /	SQ	ΥD
AGGREGATE (PRIME COAT): - ON EXISTING PAVEMENT - ON COLD MILLED SURFACE - FOG COAT ON NEW BINDER	0.002 0.002 0.001	TON / TON / TON /		YD YD 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	IL 9.5 OR 12.5	IL 19.0							
(GRADATION MIXTURE)									
VOLUMETRIC REQUIRMENTS									
FRICTION AGGREGATE:	MIX "C"	N/A							
FIELD DENSITY									

REVISIONS	3	THE THORE OF CHARLES AND TRANSPORTED TO A TRANSPORTED TO
NAME	DATE	ILLINOIS DEPARTMENT OF TRANSPORTATION
:		GENERAL NOTES
		&
		MIXTURE DESIGNS
		SCALE: VERT. NONE DRAWN BY KMO
<u> </u>		DATE 06/20/07 CHECKED BY SSM

CONTRACT NO. 74041

39

COUNTY TOTAL SHEE NO.

WAYNE

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

F.A.P. SECTION

328 (8BR-1)B-1

STA.

			CON	111/0	· .	140.	רטדו
F.A.P. RTE.	SECTION	١. [COUNT	ſΥ	SH	OTAL HEETS	SHEE.
328	(8BR-1)E	3~1	WAYN	E	Γ	39	3
STA.		TO	STA.				
FED. RO	AD DIST, NO.	TELINOIS	FED.	AID	PR	OJECT	

				SN 09600	20 (US 45)
CODED PAYITEM	DESCRIPTION	UNIT	TOTAL QUANTITY	WAYNE COUNTY 1001 STATE STP RURAL STATE FUNDS CONSTRUCTION TYPE CODE 1000-2A X080-	
20200100	EARTH EXCAVATION	CU YD	134	134	
25001000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0. 25	0. 25	
28000300	TEMPORARY DITCH CHECKS	EACH	3	3	
28000400	PERIMETER EROSION BARRIER	FOOT	746	746	
28000500	INLET AND PIPE PROTECTION	EACH	2	2	Annual Control Company Control
35650500	BASE COURSE WIDENING 10"	SQ YD	354	354	
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	31	31	
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	58	58	
40600300	AGGREGATE (PRIME COAT)	TON	1	1	
40600990	TEMPORARY RAMP	SQ YD	28	28	
40603085	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N70	TON	5	5	
40603315	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N70	TON	19	10	9
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	116	116	
42001400	BRIDGE APPROACH PAVEMENT (SPECIAL)	SQ YD	146		146
44000700	APPROACH SLAB REMOVAL	SQ YD	1016	1016	
48203021	HOT-MIX ASPHALT SHOULDERS, 6"	SQ YD	297	297	
50101500	REMOVAL OF EXISTING SUPERSTRUCTURES	EACH	1		1
50105220	PIPE CULVERT REMOVAL	FOOT	60	60	THE COLUMN ASSOCIATION ASSOCIATION TO A STREET WAS ASSOCIA
50300260	BRIDGE DECK GROOVING	SQ YD	144		144
50300255	CONCRETE SUPERSTRUCTURE	CU YD	1.6		1.6
50300300	PROTECTIVE COAT	SQ YD	154		154
50400305	PRECAST PRESTRESSED CONCRETE DECK BEAMS (17" DEPTH)	SQ FT	1383		1383
50800205	REINFORCEMENT BARS (EPOXY COATED)	POUND	3250		3250
50800515	BAR SPLICERS	EACH	42		42
- 50900905	REMOVING AND RE-ERECTING EXISTING RAILING	FOOT	82		82
50901050	STEEL RAILWGTYPE SM	FOOT	126		126
51500100	NAME PLATES	EACH	1		1
542D0220	PIPE CULVERTS, CLASS D, TYPE 1 15"	FOOT	70	70	
54213450	END SECTIONS 15"	EACH	4	4	

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION
NAME	DATE	TEETHOTS DELIANTIMENT OF THANSFORTATION
		SUMMARY OF QUANTITIES
		SHEET 1 OF 2

SCALE: VERT. N/A HORIZ. N/A DATE 06/20/07

DRAWN BY KMO CHECKED BY SSM

iot Date: 6/2/2007 of Time: 8/29/20 AM offed By: koldendorph of Toble: Idof-190 isones: IAACOANO-AMAGESTA

			CONTRA	CI NO.	1404
F.A.P. RTE.	SECTION		COUNTY	TOTAL SHEETS	SHEE. NO.
328	(8BR-1)B	-1	WAYNE	39	4
STA.		TO	STA.		
FED. ROA	AD DIST. NO.	ILLINOIS	FED. AID	PROJECT	

				SN 096002	20 (US 45)	
CODED PAYITEM	DESCRIPTION		TOTAL QUANTITY	WAYNE COUNTY 100', STATE STP RURAL STATE FUNDS CONSTRUCTION TYPE CODE 1000-24 X080-24		
* 63000000	STEEL PLATE BEAM GUARD RAIL, TYPE A	FOOT	500	500		
* 63100087	TRAFFIC BARRIER TERMINAL, TYPE 6A	EACH	4	4		
* 63100167	TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (TANGENT)	EACH	4	4		
63200310	GUARDRAIL REMOVAL	FOOT	404	404		
67000500	ENGINEER'S FIELD OFFICE, TYPE B	CAL MO	3	3		
67100100	MOBILIZATION	L SUM	1	1		
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	1	1		
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	1		
70100460	TRAFFIC CONTROL AND PROTECTION, STANDARD 701306	L SUM	1	1		
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1	1		
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	5	5		
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	1		
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	1591	1591		
70400100	TEMPORARY CONCRETE BARRIER	FOOT	350	350		
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	450	450		
* 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	2895	2895		
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	10	10		
* 78200410	GUARDRAIL MARKERS, TYPE A	EACH	8	8		
* 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4	. 4		
78300100	PAVEMENT MARKING REMOVAL	SQ FT	1206	1206		
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 UNIT	SQ FT	299		299	
X5030305	CONCRETE WEARING SURFACE		154			
20013798	CONSTRUCTION LAYOUT	SQ YD	134		154	
X0325826	PRECAST PRESTRESSED CONCRETE DECK BEAMS (17" DEPTH) SPECIAL	SQ FT	252		252	

* SPECIALTY ITEMS

REVISIONS	ILLINOIS DEPARTMENT OF TRANSPORTATION
NAME DATE	ILLINOIS DELANTMENT OF THANSFORTATION
	SUMMARY OF QUANTITIES SHEET 2 OF 2
	SCALE: VERT. N/A DRAWN BY KMO
	HORIZ. N/A
	DATE 06/20/07 CHECKED BY SSM

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 SHOULDERS 6"
STATION TO STATION		FEET	SQ YD	TON	GALLON	TON	SQ YD	TON	TON	SQ YD	SQ YD
SN 096-0020 (US 45) ENDSLEY CREEK										The state of the s	
STA 717+19.95 TO STA 719+21.59	LT		75								
STA 717+29.89 TO STA 719+21.59 STA 716+99.69	LT			23							66 -
STA 717+37.25	RT RT		7,5	8							
STA 717+44.42 TO STA 719+21.59 STA 719+01.59 TO STA 719+21.59	LT/RT	26	75		29	0.2	14	2, 5	5	58	62
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 .
TOT	TAL		354	31	58	1	28	5	10	116	297

		PAVEMEN	MARKING	ì		
	AND DESCRIPTION OF THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS NAMED IN COLUM	PAINT PAVEN	MENT MARKING	RAISED		
·				REFLECTIVE	PAVEMENT	WORK ZONE
LOCATION	SIDE	LINE 4"	LINE 4"	PAVEMENT	MARKING	PAVEMENT
				MARKER	REMOVAL	MARKING
		SOLID	SOLID			REMOVAL
		WHITE	YELLOW			
STATION TO STATION	····	FOOT	FOOT	EACH	SQ FT	SQ FT
SN 096-0020 (US 45) ENDSLEY CREEK						
STA 716+01.34 TO STA 717+88.09	RT					187
STA 716+01.34 TO STA 718+88.09	LT					230
STA 716+01.34 TO STA 723+24.84	LT/RT	1448		10	482	71
STA 716+01.34 TO STA 723+24.84	CL		1447		724	24
STA 717+19.95 TO STA 722+01.10	LT/RT					321
STA 717+24.53 TO STA 722+06.52	LT/RT				~ 22 400 - 1971	321
STA 720+38.09 TO STA 723+74.84	L, T					250
STA 721+38.09 TO STA 723+24.84	RT					187
TOTAL		1448	1447	10	1206	1591

EARTHWORK										
LOCATION	EARTH EXCAVATION	EARTH EXCAVATION ADJUSTED FOR SHRINKAGE	SHRINKAGE FACTOR	EMBANKMENT	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-)					
STATION TO STATION	CU YD	CU YD		CU YD	CU YD					
SN 096-0020 (US 45) ENDSLEY CREEK										
STA 716+69.16 TO STA 723+08.63	134	103	25	64	39					
TOTAL	134	103		64	39					

ILLINOIS DEPARTMENT OF TRANSPORTATION SCHEDULE OF QUANTITIES SHEET 1 OF 2 SCALE: VERT. NONE HORIZ. NONE DATE 06/20/07 DRAWN BY KMÔ

CHECKED BY SSM

111164					SHILLIS	
328 (8BR-1)B-		-1	WAYNE			
STA.		TO	STA.			
FED. ROAD DIST. NO.		ILL INOIS	FED.	AID	PROJECT	

GUARDRAIL							
LOCATION	SIDE	GUARDRAIL REMOVAL	STEEL PLATE BEAM GUARDRAIL, TYPE A	TRAFFIC BARRIER TERMINAL, TYPE 6A	TRAFFIC BARRIER TERMINAL TYPE 1, SPECIAL (TANGENT)	GUARDRAIL MARKERS, TYPE A	TERMINAL MARKER - DIRECT APPLIED
STATION TO STATION		FOOT	FOOT	EACH	EACH	EACH	EACH
SN 096-0020 (US 45) ENDSLEY CREEK							A A A A A A A A A A A A A A A A A A A
STA 717+89.10 TO STA 719+20.70	LT	Manager to the control of the contro	100	1	1	2	1
STA 718+20.70 TO STA 719+22.11	LT	101					
STA 718+01.60 TO STA 719+20.60	RT		87.5	1	1	2	1
STA 718+20.60 TO STA 719+21.87	RT	101					
STA 720+04.32 TO STA 721+04.32	LT	101					
STA 720+05.71 TO STA 722+49.58	LT		212.5	1	1	2	1
STA 720+03.93 TO STA 721+03.93	RT	101					:
STA 720+04.98 TO STA 721+37.08	RT		100	1	1	2	1
TOTA	AL	404	500	4	4	8	4

REMOVA	L ITEMS	
LOCATION	SIDE	PIPE CULVERT REMOVAL
STATION TO STATION		FOOT
SN 096-0020 (US 45) ENDSLEY CREEK		
STA 717+18.81 TO STA 717+48.77	RT	30
STA 717+28.61 TO STA 717+56.53	LT	30
FOTAL		60

	EROSION	CONTROL		
LOCATION	SIDE	TEMPORARY DITCH CHECKS	PERIMETER EROSION BARRIER	INLET AND PIPE PROTECTION
STATION TO STATION		EACH	FOOT	EACH
SN 096-0020 (US 45) ENDSLEY CREEK				
STA 717+11.69 TO STA 719+21.59	LT		240	
STA 716+79.86 STA 717+18.81	LT RT	Annual and restricted at the first hard the supplication of the second		1
STA 717+65.00	RT	1		
STA 717+75.00 TO STA 719+21.59 STA 720+04.59 TO STA 722+50.00	RT LT		148 246	
STA 720+04.59 TO STA 721+15.00	RT		112	
STA 721+25.00	RT LT	1		
STA 722+75.00	L1	1		
TOTAL		3	746	2

DRAINAGE							
LOCATION	SIDE	PIPE CULVERTS, CLASS D, TYPE 1 15"	END SECTIONS 15"				
STATION TO STATION		FOOT	EACH				
SN 096-0020 (US 45) ENDSLEY CREEK							
STA 716+79.86 TO STA 717+17.55	LT	38	2				
STA 717+18.81 TO STA 717+50,00	RT	32	2				
		4.17					
TOTAL		70	4				

REVISIONS
NAME DATE

SCHEDULE OF QUANTITIES

SHEET 2 OF 3

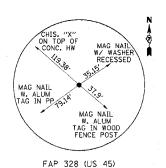
SCALE: VERT. NONE HORIZ. NONE DATE 06/20/07

DRAWN BY KMO CHECKED BY SSM

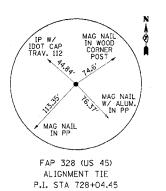
CONTRACT NO. 7404 COUNTY TOTAL SHEET NO. SECTION 328 (8BR-1)B-1 WAYNE 39 7 TO STA. STA. FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT

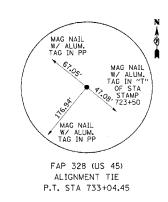


ALIGNMENT TIE P.O.T. STA 708+15.31



ALIGNMENT TIE P.C. STA 723+04.45







ALIGNMENT TIE P.O.T. STA 739+69.87

BENCHMARKS:

FAP 328 (US 45)

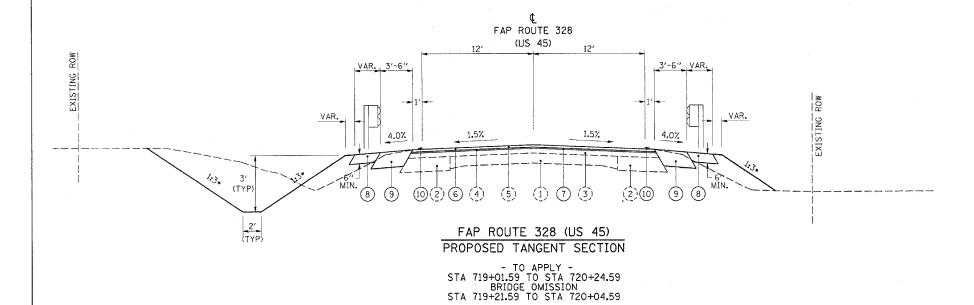
BM 217 - RR SPIKE IN POWER POLE WEST OF US 45. STA 729+00, 29.9' LT. ELEVATION - 455.286

BM 218 - CHISELED SQUARE ON NW CORNER OF BRIDGE SN 093-096-0020. STA 719+90, 16.1' LT. ELEVATION - 439.18

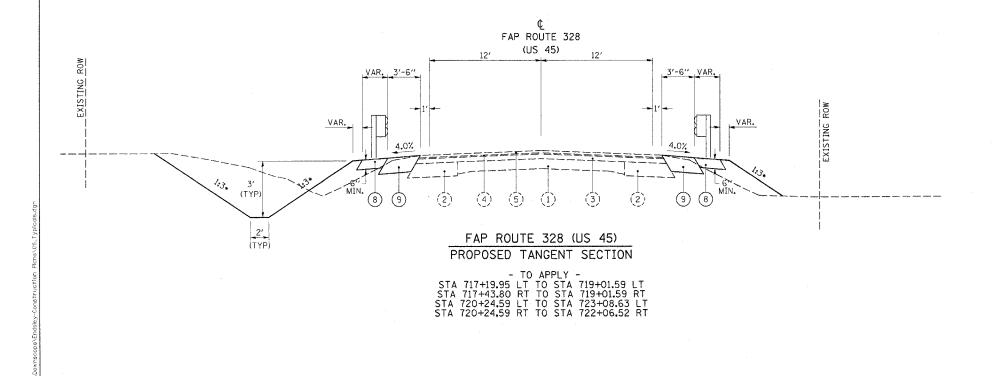
BM 219 - RR SPIKE IN POWER POLE WEST OF US 45. STA 719+90, 29.6' LT. ELEVATION - 438.448

BM 220 - RR SPIKE IN POWER POLE WEST OF US 45. STA 689+92, 30.7' LT. ELEVATION - 457.68

REVISIONS		THE INDIS DE	DADTMENT OF	TRANSPORTATI	ON
NAME	DATE	ILLINOIS DE	PARTMENT OF	. INANSCURIALI	ON
		ALIGNMEN	T TIES 8	& BENCHM	ARKS
		SCALE: VERT. N/A		DRAWN BY	KMO
		HURIZ. N/A		DIVAMIN DI	KINO
		DATE 06/20/07		CHECKED BY	SSM



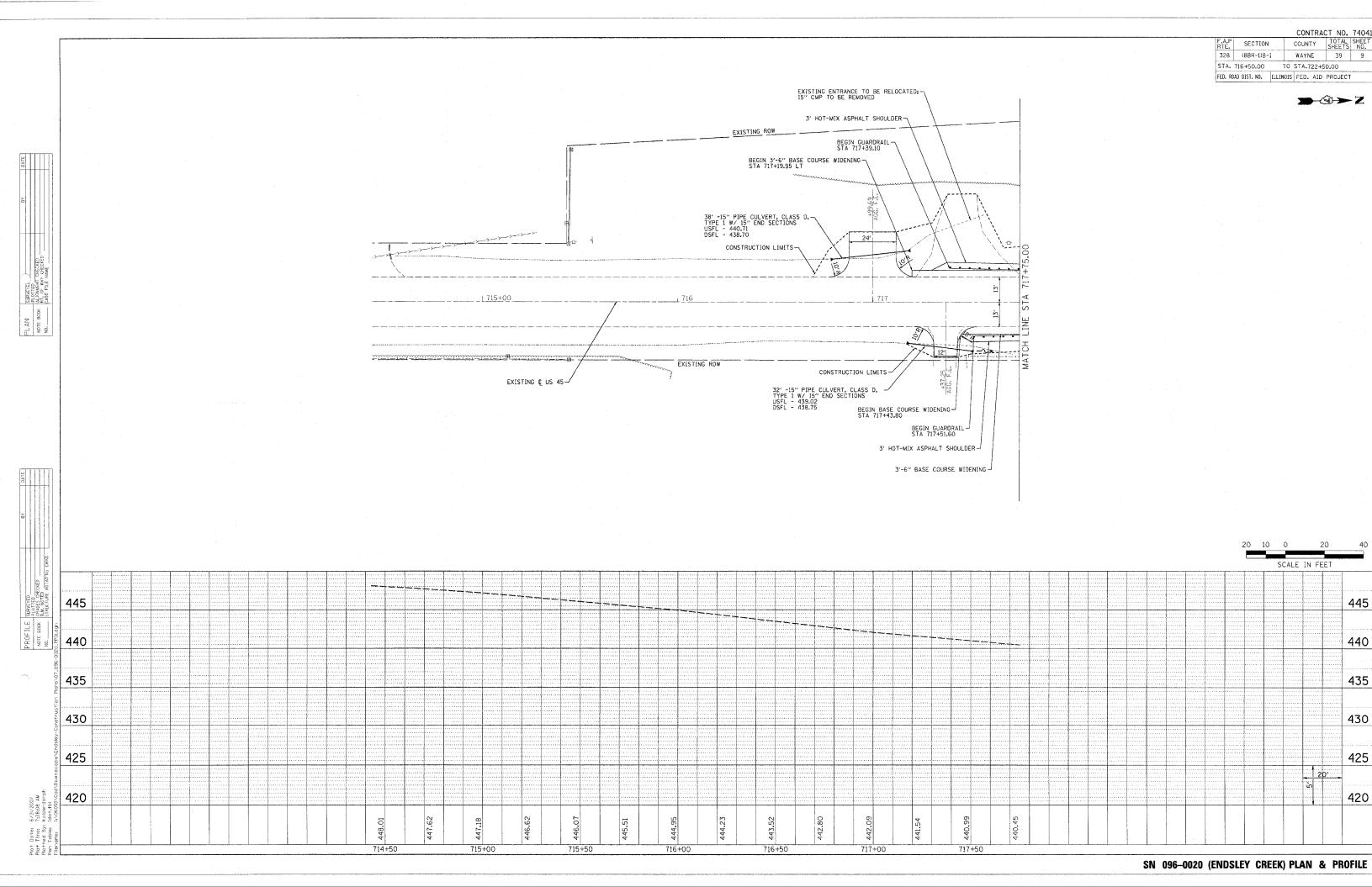
* OR AS SHOWN ON CROSS SECTIONS

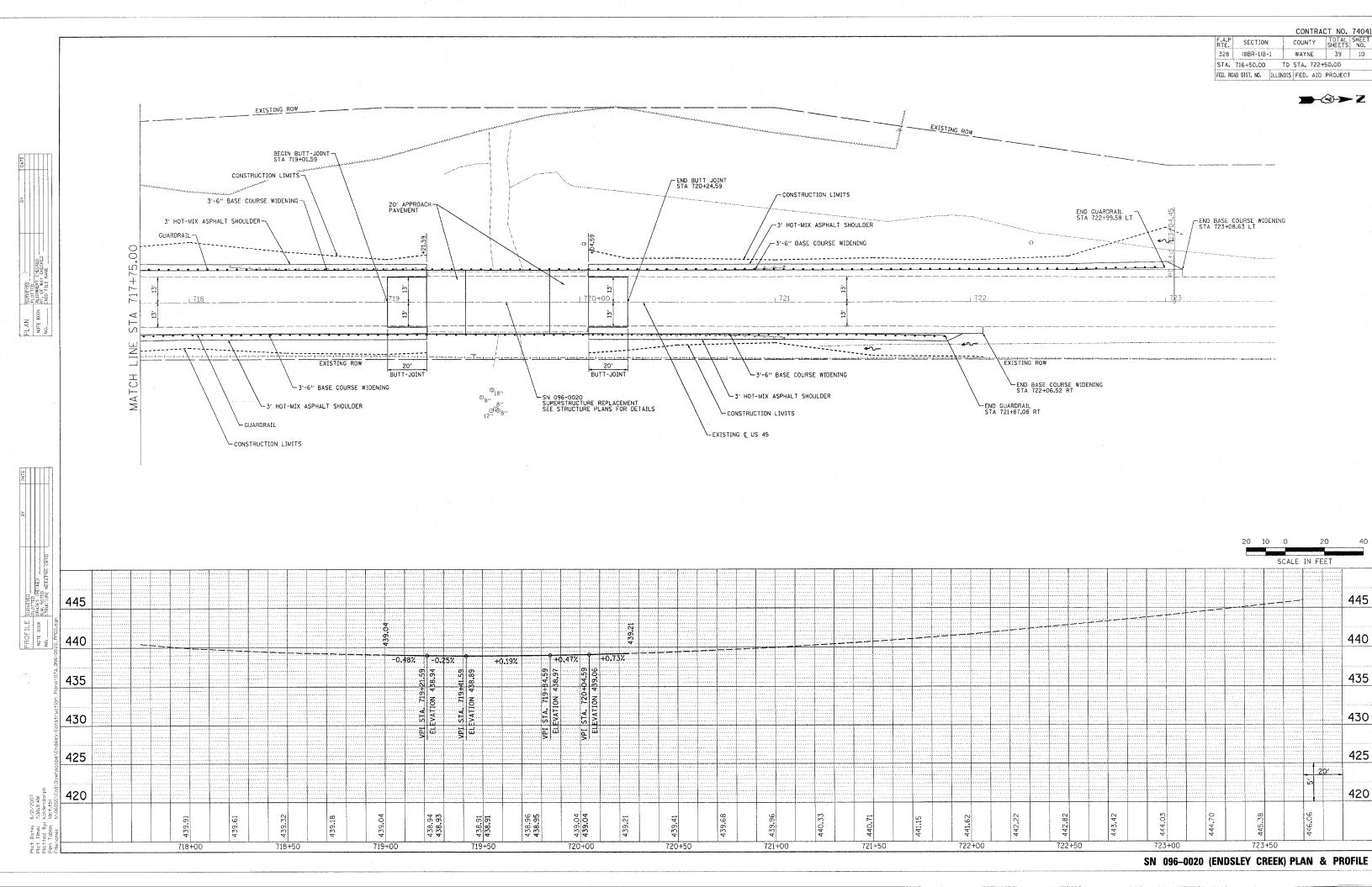


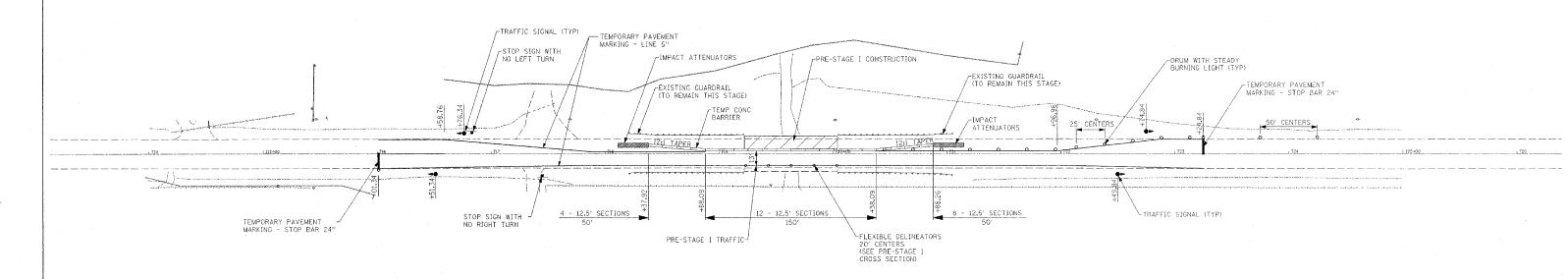
MATERIALS LEGEND

- (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, $1\frac{1}{2}$ "
- 6) PROPOSED HOT-MIX ASPHALT SURFACE COURSE, MIXTURE "C", N70, (11/2")
- 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

REVISIO	VS	THE THOIS DEDARTMENT	OF TRANSPORTATION
NAME	DATE	ILLINOIS DEPARTMENT	OF TRANSPORTATION
		TYPICAL	SECTIONS
		US	45
		SCALE: VERT. N/A HORIZ, N/A	DRAWN BY KMO
		DATE 06/20/07	CHECKED BY SSM







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.

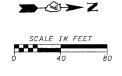
NOTES

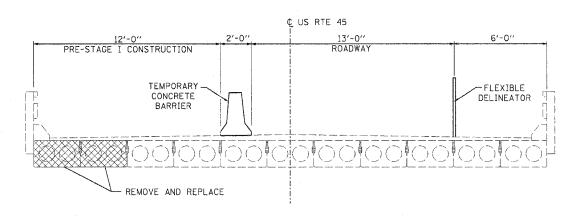
ADVANCED WARNING SIGNS, TEMPORARY RUMBLE STRIPS, VERTICAL PANELS, PAVEMENT MARKERS, AND BARRICADE REFLECTORS SHALL BE LOCATED IN ACCORDANCE WITH TRAFFIC CONTROL AND PROTECTION STANDARD 701321.

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)"

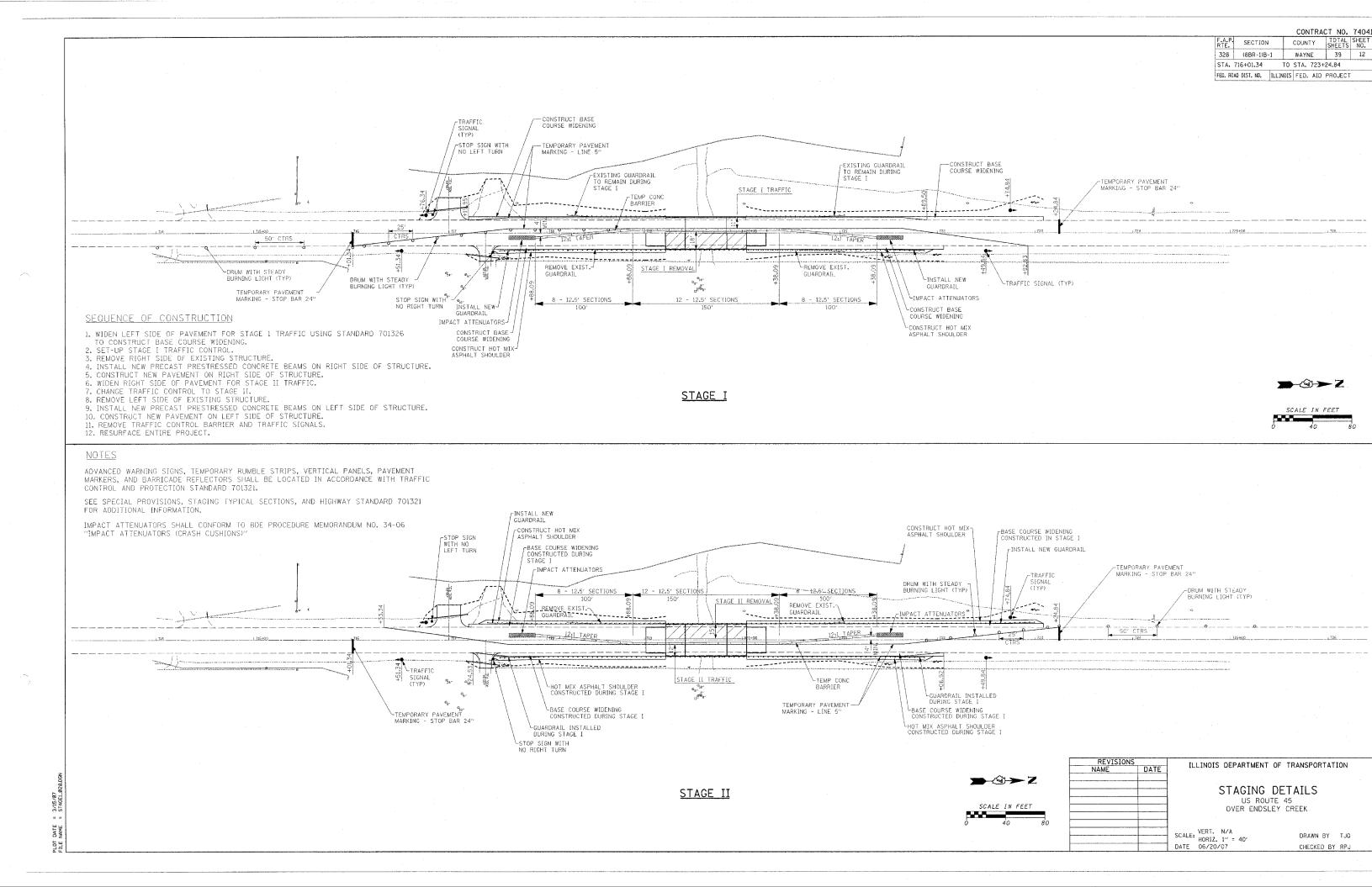
PRE-STAGE I

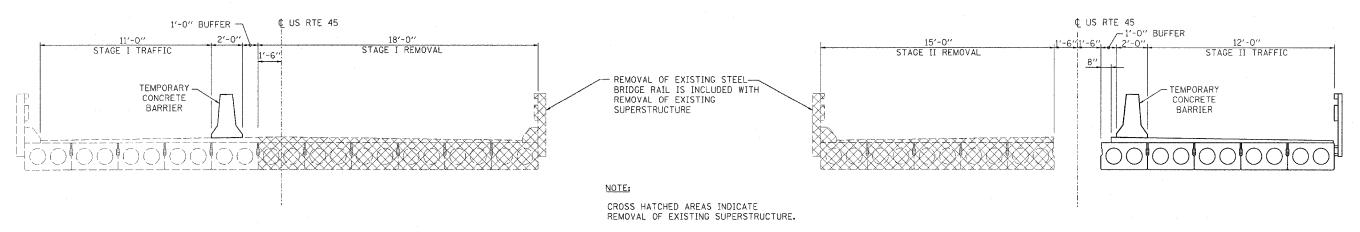




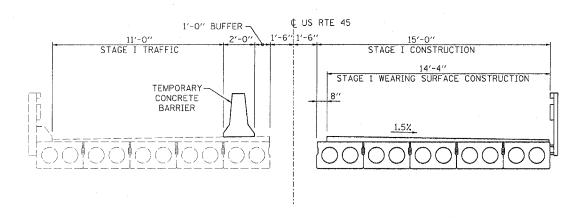
PRE-STAGE I CROSS SECTION

	·			
	REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION	 J
-	NAME	DATE	Table 1020 Day 1111 March 101 Million 011 1111 201	•
-				
-			STAGING DETAILS	
			US ROUTE 45	
	<u> </u>		OVER ENDSLEY CREEK	
-				
-			VERT. NZA	
			SCALE: VERT. N/A SCALE: HORIZ. 1" = 40' DRAWN BY KM	10
			DATE 06/20/07 CHECKED BY SS	ЗM

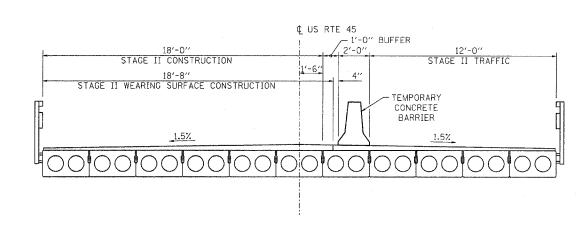




STAGE I REMOVAL



STAGE I CONSTRUCTION

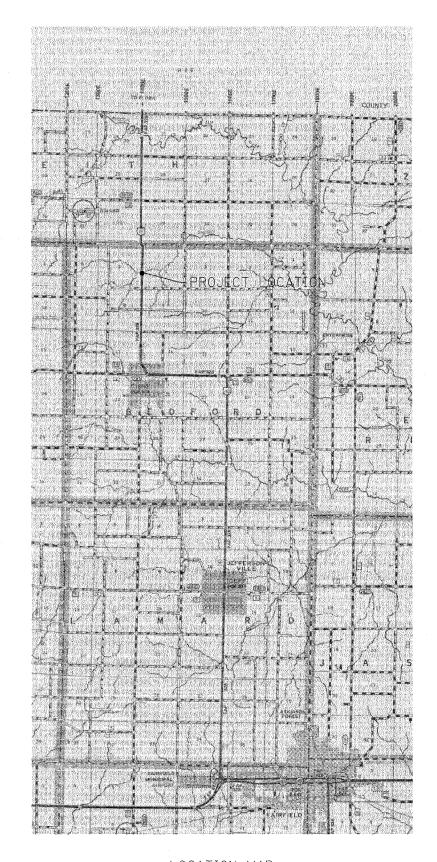


STAGE II REMOVAL

STAGE II CONSTRUCTION

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION	
NAME	DATE	TEETHOTO DEL ANTIMENT DI TRANSPONTATIO	Z14
		STAGING CROSS SECTIONS US ROUTE 45 OVER ENDSLEY CREEK	>
		HORIZ. NONE	TJQ RPJ

T DATE = 3/15/86



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

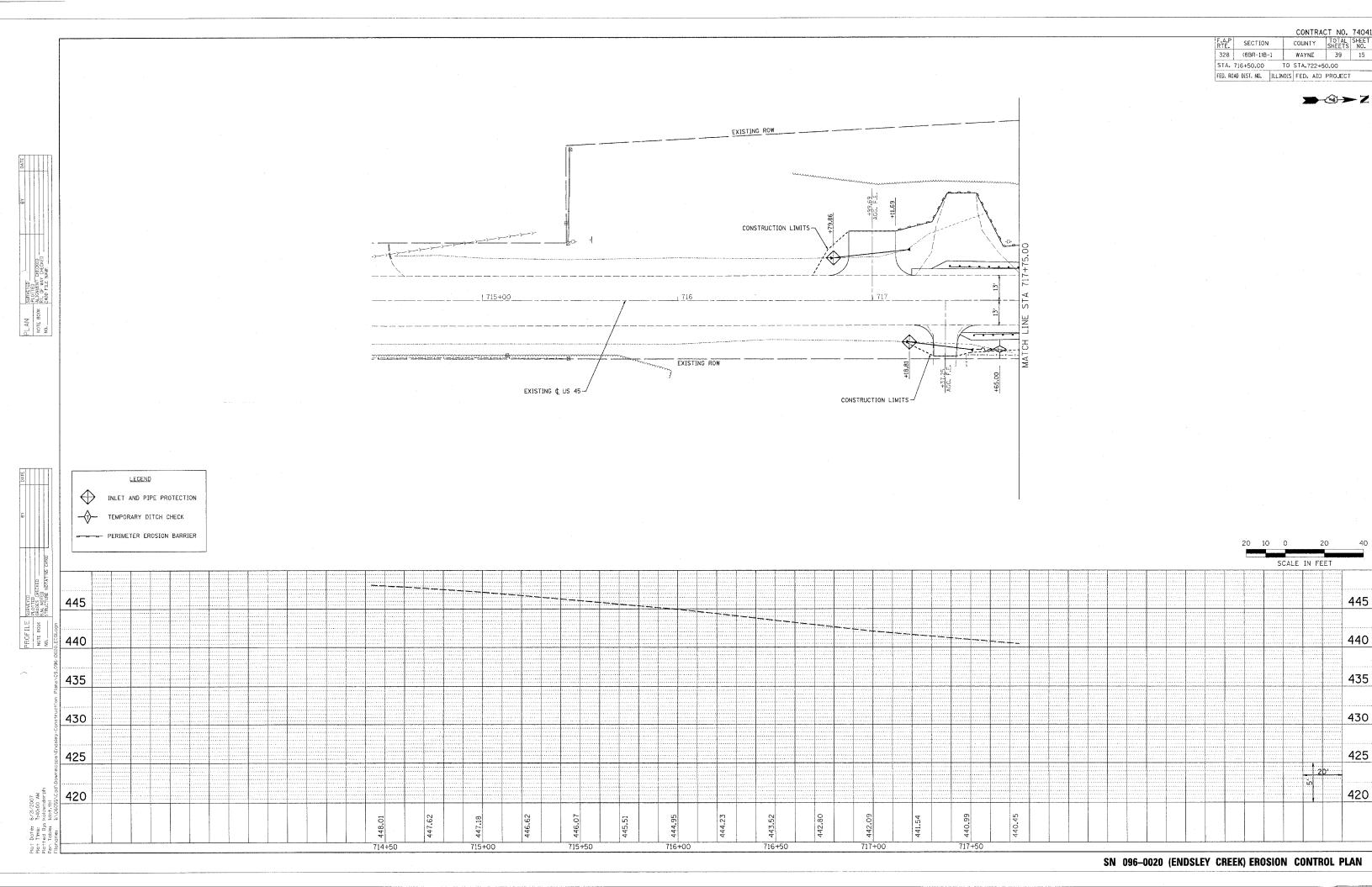
1 - EACH (60"X48") "BRIDGE CONSTRUCTION" "9 MILES AHEAD" "MAXIMUM WIDTH" "9 FT - 6 IN" TO BE INSTALLED JUST SOUTH OF US 45/US 50 INTERSECTION EAST OF FLORA, ILLINOIS

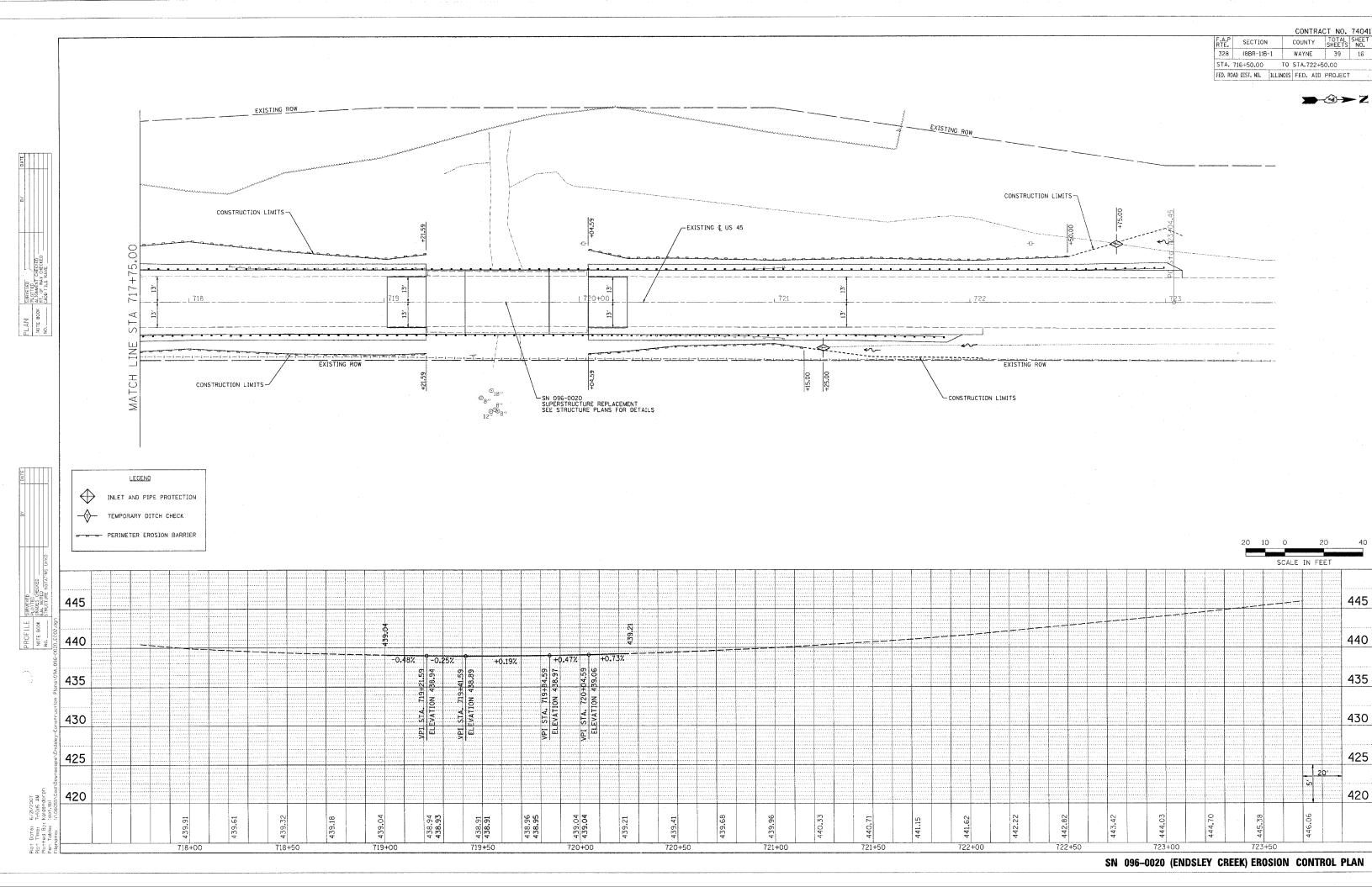
1 - EACH (30"X12") "MAX WIDTH" AND 1 - EACH (30"X12") "9 FT - 6 IN" TO BE INSTALLED UNDER EACH W20-4(0)-48
"ONE LANE ROAD AHEAD" SIGN

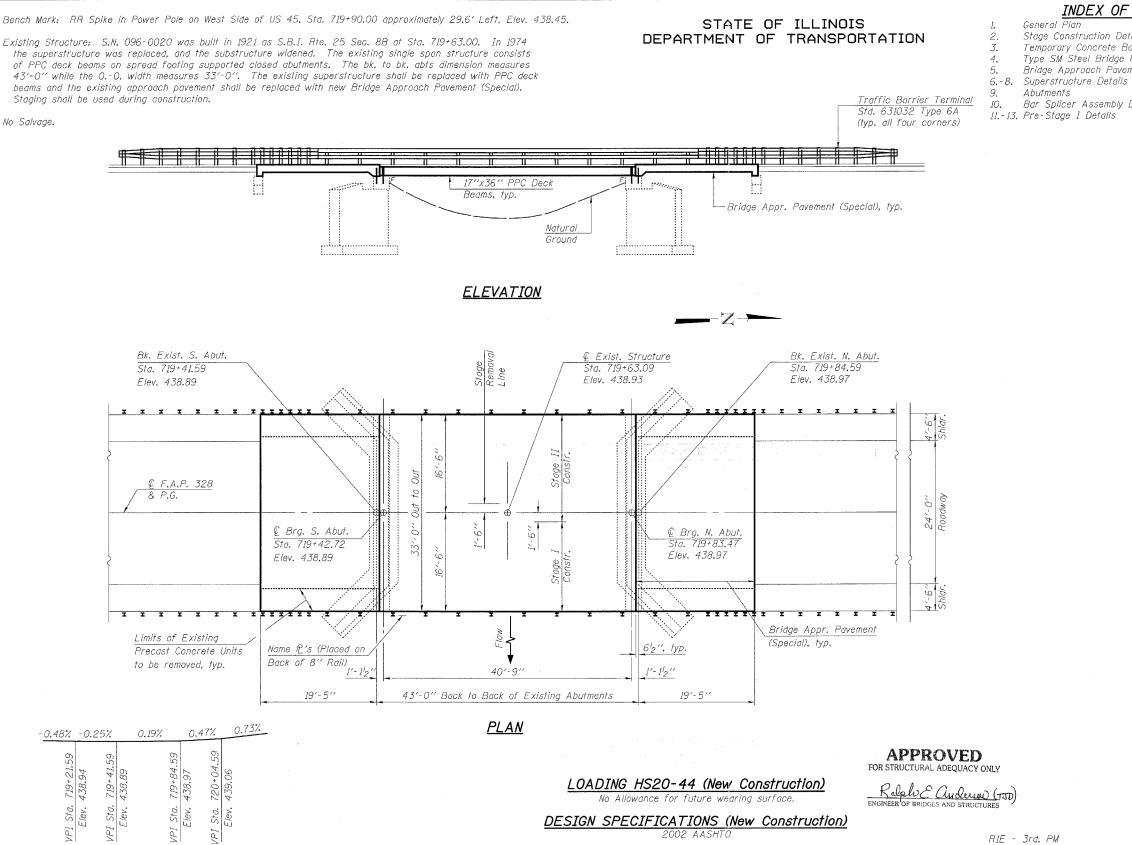
KE VISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION						
NAME	DATE	TELINOIS DEPARTMENT OF TRANSPORTATION						
		STAGING WIDTH RESTRICTION						
		SIGNAGE						
		US ROUTE 45						
		OVER ENDSLEY CREEK						

SCALE: VERT. NONE HORIZ. NONE DATE 06/20/07

DRAWN BY TJQ CHECKED BY RPJ







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

PROFILE GRADE

Along & Roadway

DESIGNED JJD

CHECKED EML

DRAWN JJD

CHECKED EML

NAME PLATE See Std. 515001

PRECAST PRESTRESSED UNITS

DESIGN STRESSES

FIELD UNITS

 $f_c' = 5,000 \text{ psi (Concrete Wearing Surface)}$

5,000 psi 4,000 psi

 $f'_c = 3,500 \text{ psi (All Other)}$

 $f_v = 60,000 \text{ psi (reinforcement)}$

270,000 psi ($^{l}_{2}$ "\$ low lax. strands) 201,960 psi (¹₂''¢ low lax. strands)

LICENSE NO. 081-006124 10/20/07 Cuc dogemann

Expires 11/30/2008

LOCATION SKETCH

HORNER & SHIFRIN, INC. ENGINEERS

ROUTE NO. TOTAL SHEET NO. 1 F.A.P. 328 (8BR - 1) WAYNE 39 17

13 SHEETS

Contract #74041

INDEX OF SHEETS

Type SM Steel Bridge Rail Side Mounted

Bridge Approach Pavement (Special)

Temporary Concrete Barrier for Stage Construction

General Plan

Abutments

Stage Construction Details

Bar Splicer Assembly Details

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 procedur 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", N7O	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"	Sg. Yd.	154		154
Precast Prestressed Concrete Deck Beams (17'' Depth) Special	Sq. Ft.	252		252
Removing and Re-Erecting Existing Railing	Foot	82		82

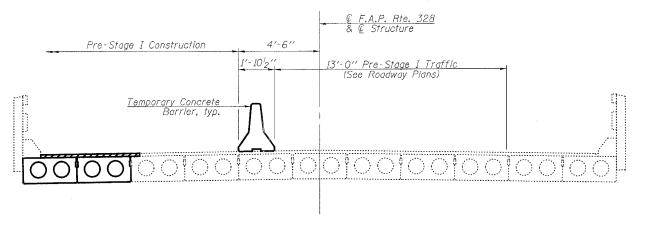
GENERAL PLAN

US 45 OVER ENDSLEY CREEK F.A.P. ROUTE 328 - SECTION (8BR-1)B-1

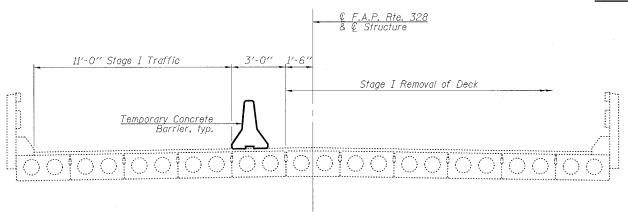
> WAYNE COUNTY STATION 719+63.09 STRUCTURE NO. 096-0020

ROUTE NO.	SECTION	cor	JNTY	TOTAL SHEETS	SHEET NO.	SHE	EΤ	NO.	2
F.A.P. 328	(8BR-1) B-1	WA	WAYNE		18	13	SHE	ETS	
FED. RDAG DIST. NO. 7		ILLINOIS	FED. AID PRI	OJECT~					

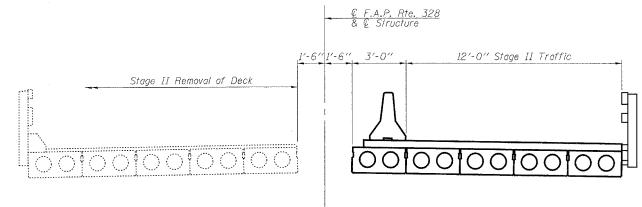
Contract #74041



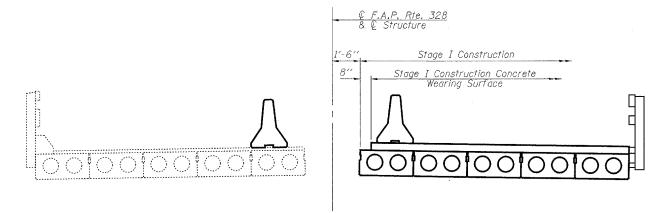
PRE-STAGE I CONSTRUCTION



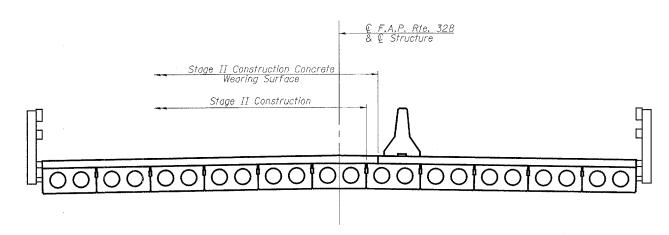
STAGE I REMOVAL



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.



STAGE CONSTRUCTION DETAILS

F.A.P. ROUTE 328 - SECTION (8BR-1)B-1

WAYNE COUNTY

STATION 719+63.09

STRUCTURE NO. 096-0020

Temporary Concrete Barrier

See Detail or Detail II

SECTIONS THRU PPC DECK BEAMS

Splicer

DETAIL I

**Wood Blocks -£ 1" x 7" x 10"-

2-58" \$ Bolts

Stage Removal Line

EXISTING PPC DECK BEAMS

See Standard 704001

Stage Construction Line 1'-10'2"

NEW PPC DECK BEAMS

RGUTE NO.	SECTION	co	UNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 3
F.A.P. 328	(8BR - 1) B - 1	WA	YNE	39	19	13 SHEETS
FED. ROAD DIST	NO. 7	ELLINGIS	FED. AID PR	DJECT-		

Contract #74041

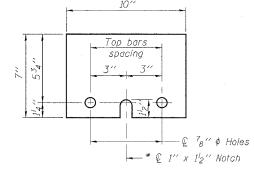
NOTES

Detail I - With Bar Splicer or Couplers: Connect one (1) I"x7"x10" steel £ to the couplers with 2-58" \$\phi\$ bolts screwed to

coupler at approximate € of each barrier

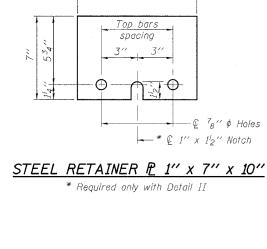
Connect one (1) 1"x7"x10" steel P to the concrete wearing surface with 2-58" ϕ Expansion Anchors or cast in place inserts spaced between the reinforcement at approximate

is ready to be placed.



Detail II - With Extended Reinforcement Bars:

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



É of each barrier panel.



**Wood Blocks Extended #5 bars 2-5₈ " ∮ Expansion Anchors or cast in place inserts with a certified min. proof load of 5,000 Lbs.

DETAIL II

HORNER & SHIFRIN, INC. ENGINEERS

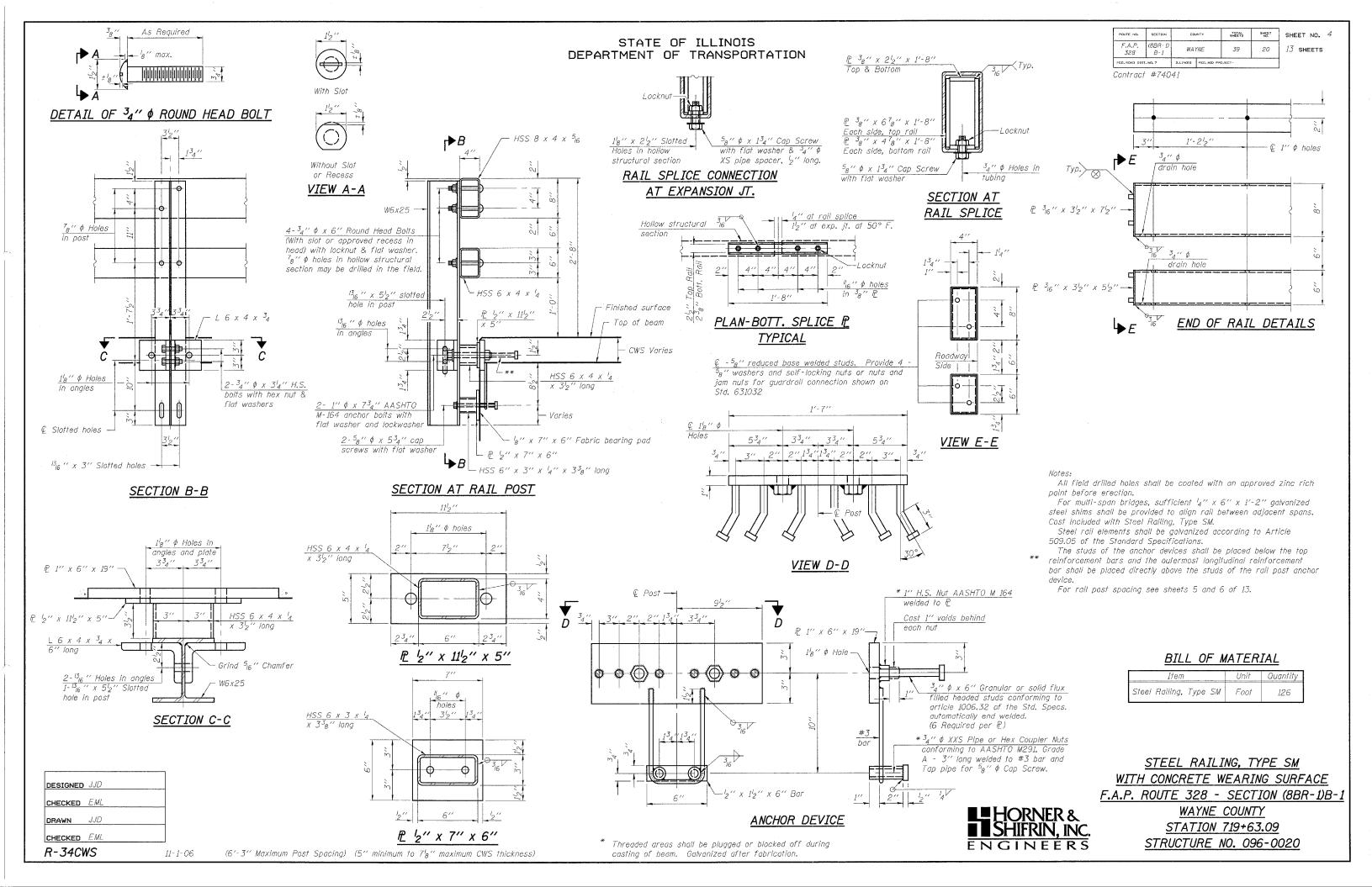
TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION F.A.P. ROUTE 328 - SECTION (8BR-1)B-1

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

DESIGNED JJD CHECKED EML DRAWN JJD CHECKED EML

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

> ** 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.

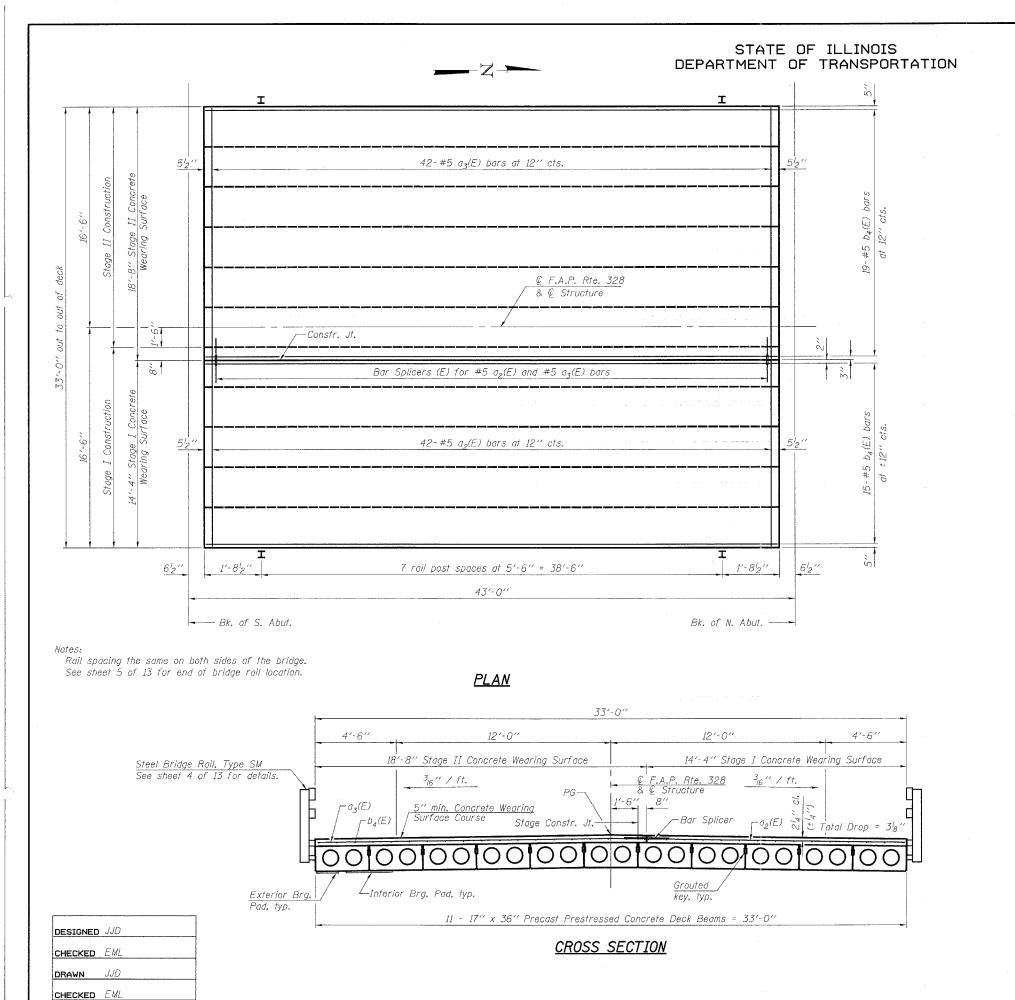


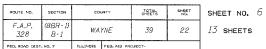
TOTAL SHEETS SHEET NO. SHEET NO. 5 STATE OF ILLINOIS F.A.P. 328 39 21 13 SHEETS WAYNE DEPARTMENT OF TRANSPORTATION B-1 FED. RGAD DIST. NO. 7 ILLINGIS FED. AID PROJECT Contract #74041 19'-11'2" 20-#4 s(E) bars at 12" cts. (Space with $b_2(E)$ bars) -#5 a₁(E) bar bottom I Cut or Burn existing dowel rods flush with existing ___ concrete pad surface. Grind existing dowel rods smooth and seal with epoxy. Cost is included with b_1 (E) (Stage I) Removal of Existing Precast Concrete Units. 3'' <u>cl.</u> 3½" cl. b₃(E) (Stage II) Bonded Construction —15′′ Slab 7 Stage II Bridge Approach Pav Stage II Construction 20-#5 b₂(E) bars at 12" cts. (Bottom) 512" Subbase Granular Mat'l. Type A, 4" -b(E) (Stage I) Exist. Conc. Pad-11/2" 1'-0'' 7-#4 b₃(E) bars at 3'-0" cts. (Top) b₂(E) (Stage II) Back of Exist. Abutment *19'-5" -Longitudinal Construction Joint * Stagger No. 9 a(E) bars as shown on plan. 10 mil. polyethylene bond breaker SECTION A-A 328 & P.G. 19-#5 a₁(E) bars at 12" cts. (Top) 15-#5 a₁(E) bars at 12" cts. (Top) 3₁₆ " / ft. b,(E)-20-#5 b(E) bars at 12" cts. (Bottom) 5/2" 11/2" 1'-0" 7-#4 b₁(E) bars at 3'-0" cts. (Top) $a_1(E)$, typb(E) ---/ s(E), typ. 6", typ. I Bridge 29-#9 a(E) bars at 6" cts. (Bottom) 37-#9 a(E) bars at 6" cts. (Bottom) BAR LIST SECTION B-B Size Length Shape No. Longitudinal Construction Joint #9 19'-5'' #6 Tie bars in accordance with details shown at 2'-6" cts. on Standard 420001 40 #5 14 #4 - 1-#5 a_1 (E) bar bottom $oldsymbol{\mathbb{T}}$ #5 18'-4" -40 $\triangleright B$ 16'-11'' 14 #4 18'-4'' End of Bridge Rail 19'-5" -Bk. of S. Abut. 80 #4 3'-11'' **N** <u>LONGITUDINAL CONSTRUCTION</u> 20-#4 s(E) bars at 12" cts. (Space with b(E) bars) BAR a(E) JOINT 19'-11'2" BILL OF MATERIAL PLAN (Approach Beam at N. Abut. is mirror image of S. Abut.) Removal of Existing Precast Sq. Ft. Concrete Units Removal of existing approach beams are included in Removal of Existing Precast Concrete Units. BRIDGE APPROACH PAVEMENT (SPECIAL. See roadway plans for Approach Slab Removal quantitiy. Removal of Existing Precast Concrete Units and Existing Bridge Approach Pavement DESIGNED JJD F.A.P. ROUTE 328 - SECTION (8BR-1)B-1 shall occur during its respective stage construction and prior to placement of the new CHECKED EML WAYNE COUNTY HORNER & SHIFRIN, INC. See Special Provisions for Bridge Approach Pavement (Special). DRAWN JJD STATION 719+63.09 See sheet 4 of 13 for rail anchor device to be cast in approach pavement. CHECKED EML

BAR s(E)

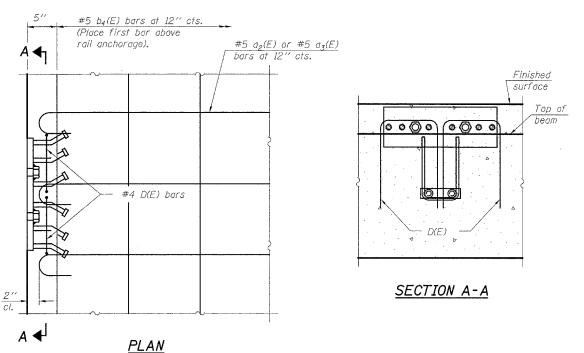
ENGINEERS

STRUCTURE NO. 096-0020





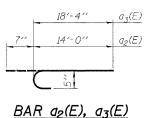
Contract #74041



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.

<u>SUPERSTRUCTURE</u> BILL OF MATERIALS



Bar	No.	Size	Length	Shape
a ₂ (E)	42	#5	14'-7''	
a ₃ (E)	42	#5	18'-11''	
b ₄ (E)	34	#5	41'-7''	
Reinford Epoxy (cement E Coated	Pound	2,940	
Concret Surface	e Wearin	Sq. Yd.	154	

SUPERSTRUCTURE DETAILS

F.A.P. ROUTE 328 - SECTION (8BR-1)B-1

WAYNE COUNTY

WAYNE COUNTY

STATION 719+63.09

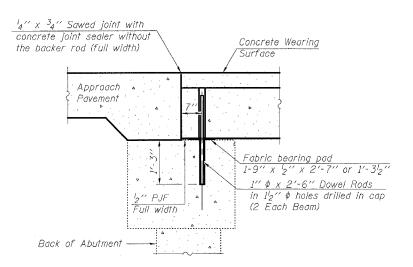
STRUCTURE NO. 096-0020





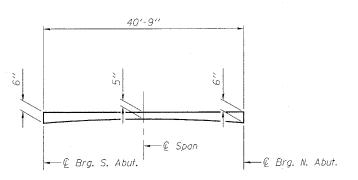
13 SHEETS

Contract #74041



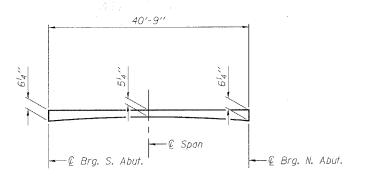
SECTION THRU ABUTMENT

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.



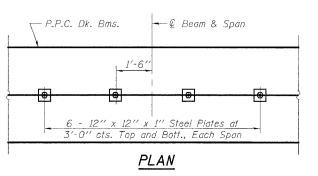
CONCRETE WEARING SURFACE COURSE PROFILE

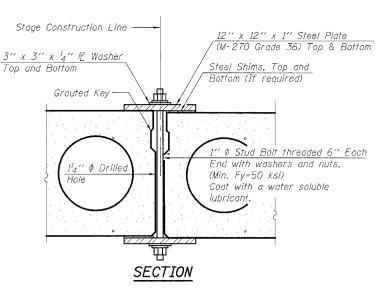
(Concrete wearing surface course along edge of beams and at stage construction joint)

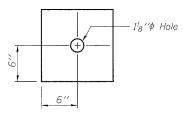


CONCRETE WEARING SURFACE COURSE PROFILE

(Concrete wearing surface course along @ Roadway)







CLAMPING PLATE

SHEAR KEY CLAMPING DETAILS AT STAGE CONST. JT.

Cost included with "Precast Prestressed Concrete Deck Beams".

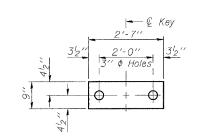
See Stage Construction Details for traffic lanes.

LHORNER & ENGINEERS

SUPERSTRUCTURE DETAILS F.A.P. ROUTE 328 - SECTION (8BR-1)B-1 WAYNE COUNTY

STATION 719+63.09 STRUCTURE NO. 096-0020

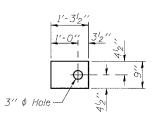
DESIGNED	JJD
CHECKED	EML
DRAWN	JJD
CHECKED	EML



FABRIC BEARING PAD

9" Lifting loops 2 each end

FIXED



FABRIC BEARING PAD

*Transverse Strand Placement Guidelines

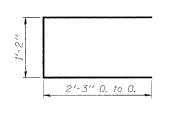
shall be 2".

guidelines.

Place strands symmetrically about centerline of beam.

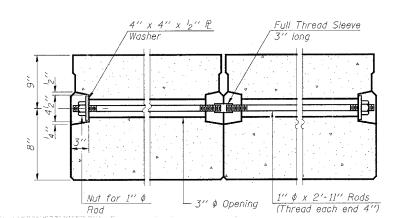
The minimum clearance from strand to dowel hole shall be $\frac{l_2}{2}$. The minimum clearance from strand to void shall be $1_2^{\prime\prime}$. Vertical placement of strands shall not be adjusted to satisfy the above

The minimum distance from center to center of strands in all directions



BAR U

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION



TYPICAL TRANSVERSE TIE ASSEMBLY



ROUTE NO.

F.A.P. 328

Omit key on exterior

FEO. ROAD DIST. NO. 7

Contract #74041

B-1

TOTAL

39

WAYNE.

SHEET NO.

24

SHEET NO. 8

13 SHEETS

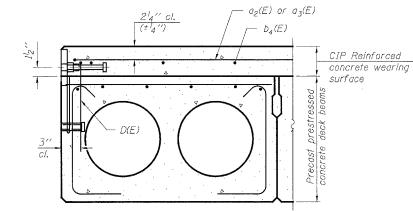
2-#5 B1 bars, 8'-5" long 8 x 3-W2.5 x W5.5 Wire Fabric W2.5 longitudinal Full length of beam except at U bars ∕— ¾″ Chamfer

1/2" \$ Strands, Each Strand Stressed to 30,900 Lbs.

TYPICAL SECTION

9-Strands 1^3 4" up, 4-Strands 3^1 4" up, 2-Strands 12" up

D(E) BAR



CROSS SECTION

BILL OF MATERIAL

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

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270. The nominal diameter shall be $\frac{1}{2}$ " and the nominal cross-sectional area shall be 0.153 sq. in. Lifting loops shall be $2 - \frac{1}{2}$ " ϕ -270 ksi strands, as shown.

The 1" ϕ 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 $l_8^{\prime\prime}$ 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.

See sheet 4 of 13 for rail anchor device to be cast in precast beams.

Required Release Strength, f'ci, shall be 4,000 p.s.i. **L**HORNER & SHIFRIN, INC. See sheet 6 of 13 for spacing of rail post. ENGINEERS

45° min END PLAN DESIGNED JJD CHECKED EML 6'' DRAWN JJD LIFTING LOOP DETAIL CHECKED EML

3″ <u>♦ Holes for</u> transverse tie '' ¢ Ve<u>nt Holes Top</u> assemblies " Φ Drain Holes Bott. 2" Ø Holes for Dowel Rods Fixed Ends Only 19'-012'' 19'-012' 1'-6' 41'-11" 3-#4<u>U bars</u> PLAN Each Side 8 x 3-W2.5 x W5.5 3'' Radius Wire Fabric, W5.5 vert. Full depth of beam. Each End.

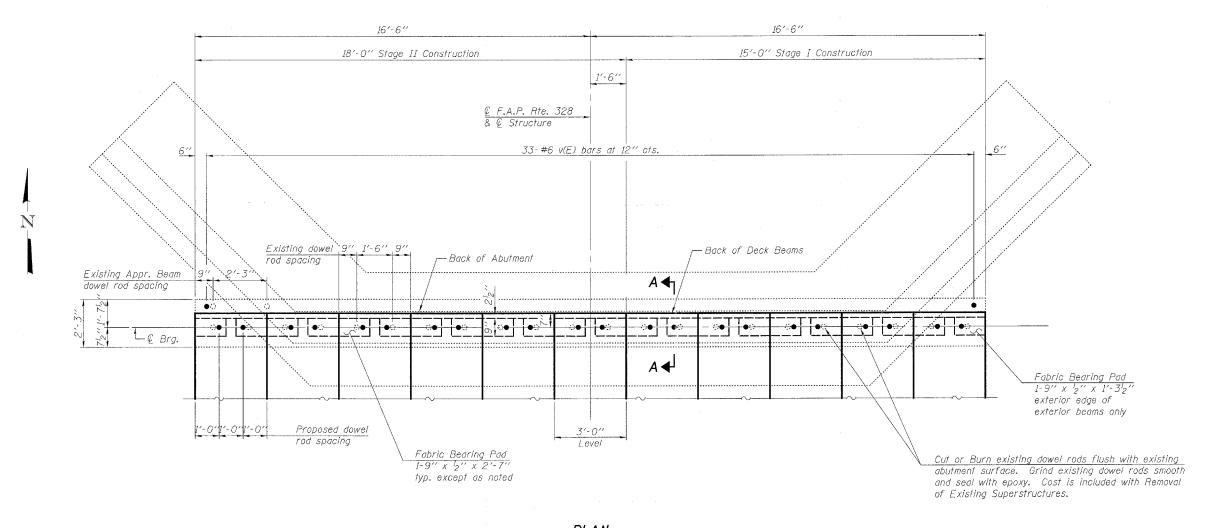
(Cold bent) Beam

See sheet 7 of 13 for Shear Key Clamping Details at Stage Const. Jt.

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

ROUTE NO.	SECTION	cau	JNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 9
F.A.P. 328	(8BR-1) B-1	WA	YNE	39	25	13 SHEETS
ED. ROAD DIST	. NG. 7	ILLINOIS	FEG. AID PR	DJECT-		

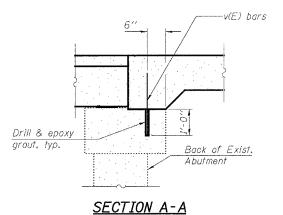
Contract #74041



PLAN

(N. Abutment Shown, S. Abutment is a mirror image)

(Concrete wearing surface not shown)



HORNER &
SHIFRIN, INC.
ENGINEERS

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

BAR LIST

ABUTMENT DETAILS

F.A.P. ROUTE 328 - SECTION (8BR-1)B-1

WAYNE COUNTY

<u>WAYNE COUNTY</u> <u>STATION 719+63.09</u> <u>STRUCTURE NO. 096-0020</u>

DESIGNED JJD

CHECKED EML

DRAWN JJD

CHECKED EML



Contract #74041

<u>NOTES</u>

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:

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

(Tension in App)

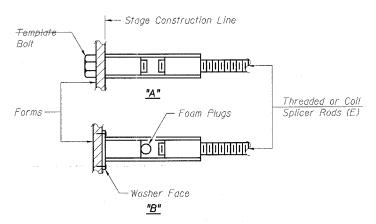
Minimum *Pull-out Strength = 0.66 x fy x A_f (Tension in kips)

Where fy = Yield strength of lapped reinforcement bars in ksi.

A_f = Tensile stress area of lapped reinforcement bars.

* = 28 day concrete

BAR SPLICER ASSEMBLIES								
		Strength Requirements						
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	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					



BAR SPLICER ASSEMBLY ALTERNATIVES

- The diameter of this part is

equal or larger than the

diameter of bar spliced.

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

WELDED SECTIONS

ROLLED THREAD DOWEL BAR

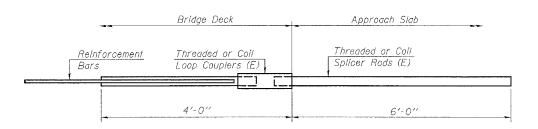
** ONE PIECE

- Wire Connector

ijijijijiji

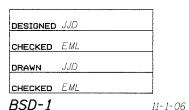
INSTALLATION AND SETTING METHODS

"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

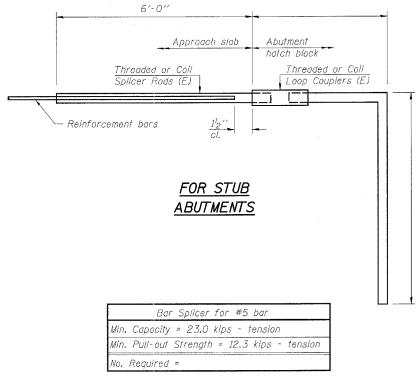
	Bar	Splicer	for #	5 bar		
Min.	Capacity	= 23.0	kips -	tensic	n	
Min.	Pull-out	Strength	= 12.	3 kips	-	tension
No.	Required					

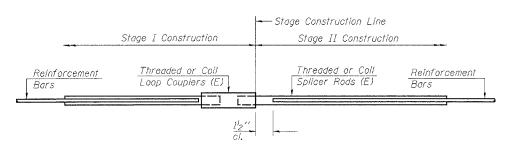


The diameter of this part

of the bar spliced.

is the same as the diameter





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

HORNER & SHIFRIN, INC. ENGINEERS

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

cut. See detail this sheet.

Bk, of N. Abut. -

43'-0"

PLAN

-Bk. of S. Abut.

SECTION THRU ABUTMENTS

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION Existing tie rods to be

ROUTE NO.	SECTION	cov	COUNTY		SHEET NO.	SHE	ET NO.	11
F.A.P. 328	(8BR-1) B-1	WA	YNE	39	27	13	SHEETS	i
FED. ROAD DIST		ILLINOIS	FEO. AID PRO	DJECT-				

Contract #74041

GENERAL NOTES

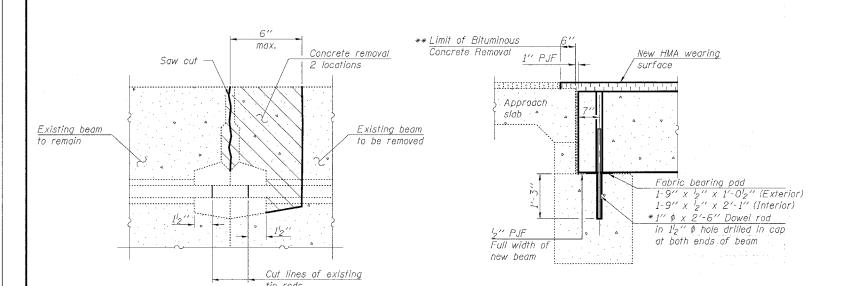
The thickness of Bituminous overlay shall match the existing thickness and shall be adjusted for the new expected beam camber.

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 deteriated 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

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 .

Beam 2

Beam 3

Beam 4

Ream 5

Beam e

Beam 7

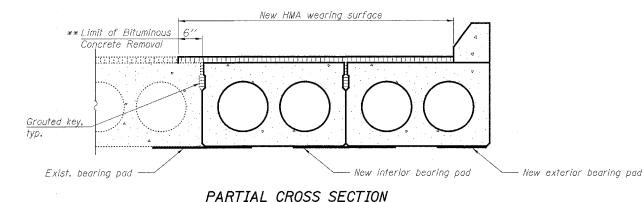
Beam 8

Beam 9

Beam 10

Beam 11

to



BILL OF MATERIAL

Item	Unit	Total
Removal of Existing P.P.C. Deck Beams	Sq. Ft.	252
Hot Mix Asphalt Surface Course, Mix ''C'', N7O	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

= 5,000 psi

 $f'_{ci} = 4,000 psi$ $f'_s = 270,000 \text{ psi } (\frac{1}{2})'' \text{ low lax. strands})$

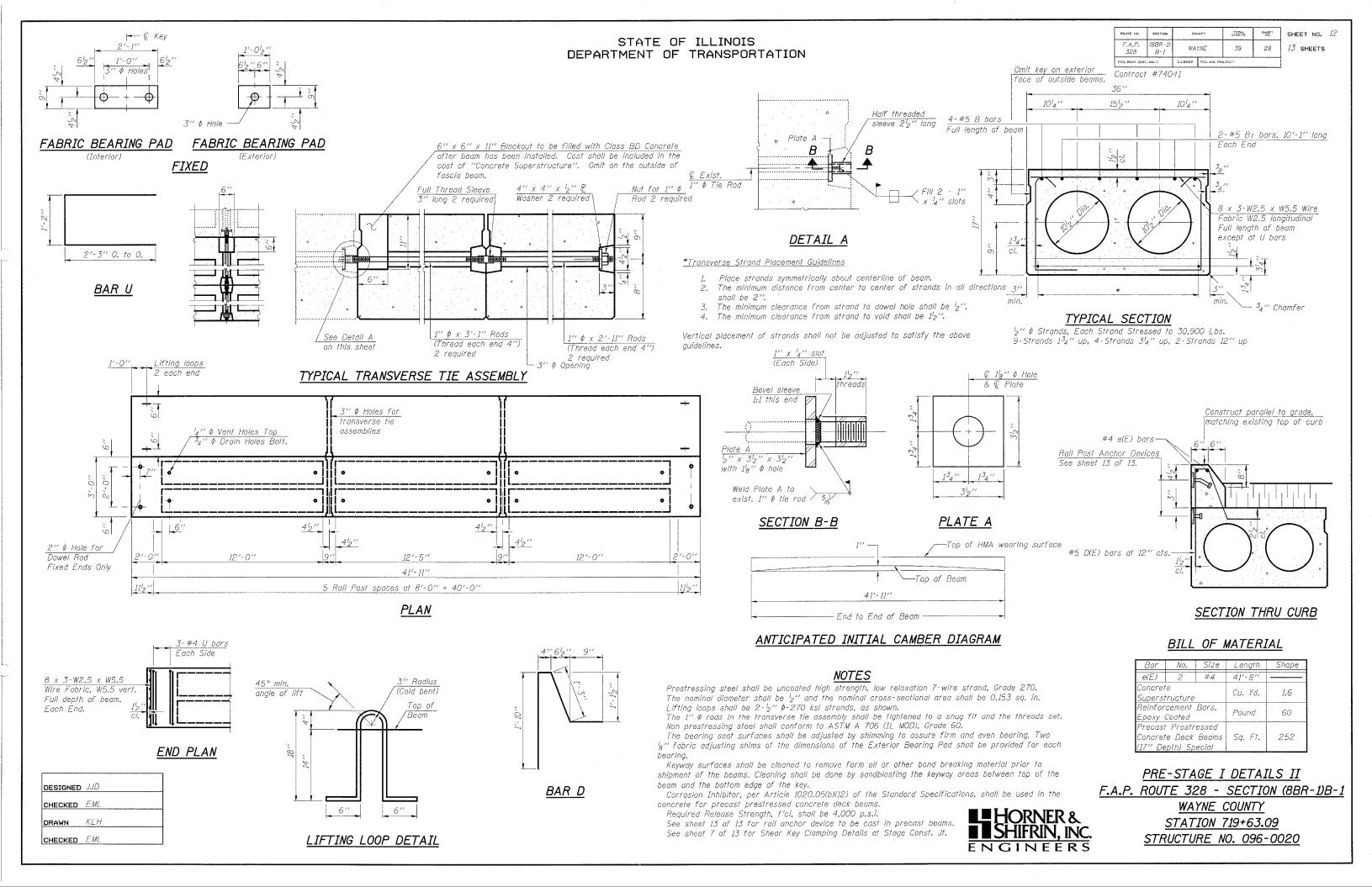
 $f_{si} = 201,960 \text{ psi } (\frac{1}{2})^{\prime\prime} \text{ low lax. strands})$

■■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

BEAM REMOVAL DETAIL AT TRANSVERSE TIES

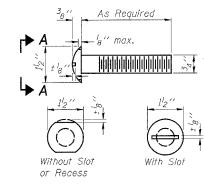


ROUTE NO. SECTION COUNTY TOTAL SHEET NO. 13

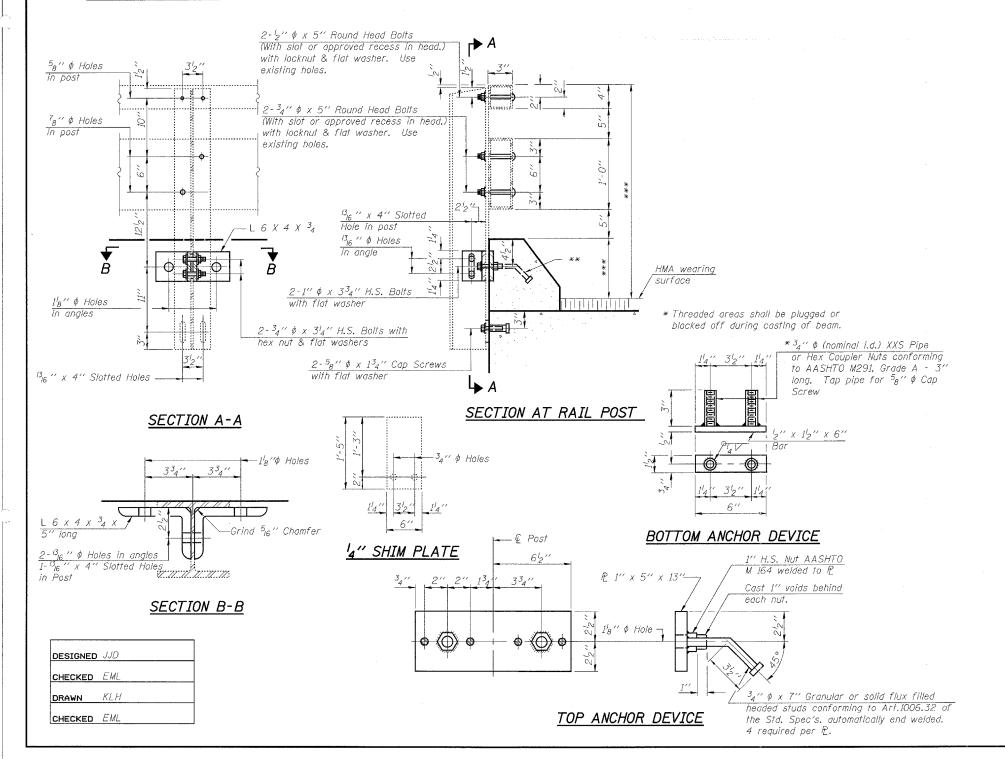
F.A.P. (8BR-1) WAYNE 39 29 13 SHEETS

FED. ROAD DIST. NO. 7 ILLINOIS FED. AID PROJECT-

Contract #74041



<u>VIEW A-A</u> ROUND HEAD BOLT



Notes:

L. HORNER &

ENGINEERS

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

For multi-span bridges, existing $\frac{1}{4}$ " 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.

PRE-STAGE I DETAILS III

F.A.P. ROUTE 328 - SECTION (8BR-1)B-1

WAYNE COUNTY

<u>WAYNE COUNTY</u> <u>STATION 719+63.09</u> <u>STRUCTURE NO. 096-0020</u>

