3-7-08 Letting, Item 105

CONTRACT NO. 74040

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	*	WAYNE	140 +1 141	1

* SECTION (10BR-2, 10BR-3, 8BR-2)B-1

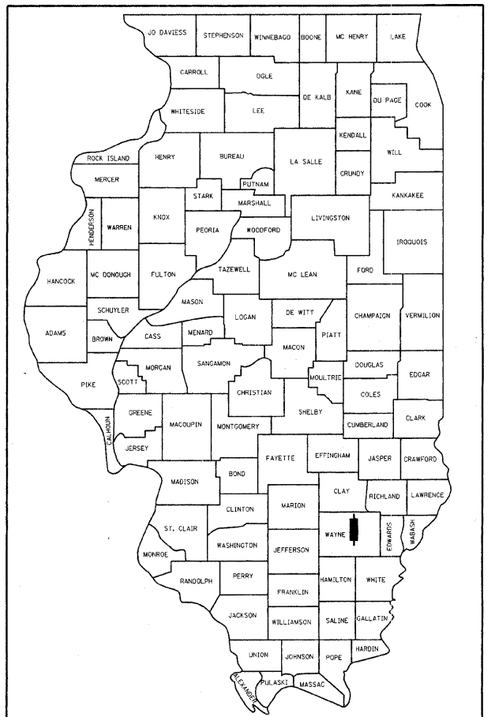
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROPOSED HIGHWAY PLANS

F.A.P. ROUTE 328 (U.S. ROUTE 45)
SECTION (10BR-2, 10BR-3, 8BR-2)B-1
PROJECT: BRF-0328(023)
WAYNE COUNTY
C-97-139-06

FOR INDEX OF SHEETS, SEE SHEET NO. 2

D-97-139-06

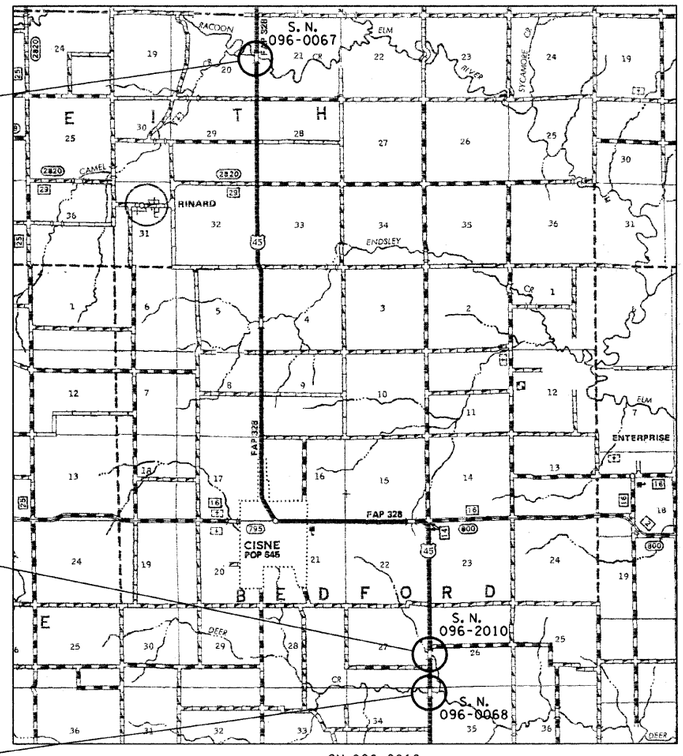


LOCATION OF SECTION INDICATED THUS: –

PROJECT BEGINS STA. 884+90.00
PROJECT ENDS STA. 892+30.00
SECTION (8BR-2)B-1
STATION 888+60.00
WAYNE COUNTY
SN 096-0067
RACCOON CREEK

PROJECT BEGINS STA. 408+70.00
PROJECT ENDS STA. 411+30.00
SECTION (10BR-3)B-1
STATION 410+21.00
WAYNE COUNTY
SN 096-2010
BRANCH OF DEER CREEK

PROJECT BEGINS STA.
PROJECT ENDS STA.
SECTION (10BR-2)B-1
STATION 384+58.40
WAYNE COUNTY
SN 096-0068
DEER CREEK

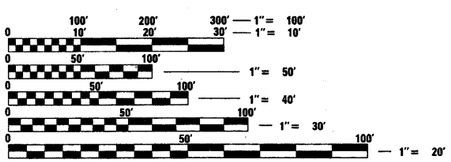


SN 096-2010
GROSS LENGTH OF PROJECT = 260.00 FEET = 0.05 MILE
NET LENGTH OF PROJECT = 260.00 FEET = 0.05 MILE

SN 096-0067
GROSS LENGTH OF PROJECT = 740.00 FEET = 0.14 MILE
NET LENGTH OF PROJECT = 740.00 FEET = 0.14 MILE

SN 096-0068
GROSS LENGTH OF PROJECT = 900.00 FEET = 0.17 MILE
NET LENGTH OF PROJECT = 900.00 FEET = 0.17 MILE

ADT 2007 AT SN 096-2010 = 2549
ADT 2007 AT SN 096-0067 = 2711
ADT 200 AT SN 096-0068 = 2322



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

CONTRACT NO. 74040

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED October 26 20 07
Christine M. Reed
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER
December 7, 20 07
Eric E. Harm (R)
Interim ENGINEER OF DESIGN AND ENVIRONMENT
December 7, 20 07
Christine M. Reed (R)
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

PROJECT ENGINEER: BILL STANLEY
SQUAD LEADER: MYRA OLTMAN
TELEPHONE: 217-342-8320

CONTRACT NO. 74040

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	•	WAYNE	140	2
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

• (10BR-2, 10BR-3, 8BR-2)B-1

INDEX OF SHEETS

THE FOLLOWING STANDARDS ARE A PART OF THESE PLANS AND ARE INCLUDED FOLLOWING SHEET NUMBER 140.

STD NO.	DESCRIPTION
000001-05	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
001001-01	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
280001-04	TEMPORARY EROSION CONTROL SYSTEMS
420401-06	BRIDGE APPROACH PAVEMENT
515001-02	NAME PLATE FOR BRIDGES
542401	METAL END SECTIONS FOR PIPE CULVERTS
606201-01	TYPE B GUTTER (INLET, OUTLET AND ENTRANCE)
630001-07	STEEL PLATE BEAM GUARDRAIL
630101-07	GUARDRAIL MOUNTED ON EXISTING CULVERTS
630201-05	PCC/BITUMINOUS STABILIZATION AT STEEL PLATE BEAM GUARDRAIL
630301-04	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631031-06	TRAFFIC BARRIER TERMINAL, TYPE 6
631032-03	TRAFFIC BARRIER TERMINAL, TYPE 6A
635006-02	REFLECTOR AND TERMINAL MARKER PLACEMENT
635011-01	REFLECTOR MARKER AND MOUNTING DETAILS
666001	RIGHT OF WAY MARKERS
701001-01	OFF ROAD OPERATIONS, 2L, 2W, MORE THAN 15' AWAY
701006-02	OFF ROAD OPERATIONS, 2L, 2W, 15' TO 24' FROM PAVEMENT EDGE
701201-02	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS >= 45 MPH
701301-02	LANE CLOSURE - SHORT TERM OPERATIONS
701306-01	LANE CLOSURE, 2L, 2W, SLOW MOVING OPERATIONS DAY ONLY, FOR SPEEDS >= 45 MPH
701316-03	LANE CLOSURE, 2L, 2W, BRIDGE REPAIR, FOR SPEEDS >= 45 MPH
701311-02	LANE CLOSURE - MOVING OPERATIONS - DAY ONLY
701321-09	LANE CLOSURE 2L, 2W BRIDGE REPAIR WITH BARRIER
701326-02	LANE CLOSURE 2L, 2W PAVEMENT WIDENING, FOR SPEED > 45 MPH
701901	TRAFFIC CONTROL DEVICES
704001-04	TEMPORARY CONCRETE BARRIER
780001-01	TYPICAL PAVEMENT MARKINGS
781001-02	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS
886001	DETECTOR LOOP INSTALLATIONS
601101	

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

INDEX OF SHEETS

SCALE: VERT. HORIZ.

DATE

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PLOT DATE = 10/25/2007
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CONTRACT NO. 74040

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	•	WAYNE	140	3
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

• (10BR-2, 10BR-3, 8BR-2)B-1

GENERAL NOTES

1. UTILITIES:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING UTILITY PROPERTY FROM CONSTRUCTION OPERATIONS AS OUTLINED IN ARTICLE 107.31 OF THE STANDARD SPECIFICATIONS. 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 CONTRACTORS' PROGRESS

2. EXISTING FACILITIES - VARIATIONS

IN ADDITION TO FILED SURVEYS AND AERIAL SURVEYS, PLAN DIMENSIONS AND DETAILS RELATIVE TO THE EXISTING HAVE BEEN TAKEN FROM EXISTING PLANS AND ARE SUBJECT TO CONSTRUCTION VARIATIONS. IT SHALL BE THE CONTRACTORS 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 THE WORK. HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.

3. STATION/OFFSET REFERENCES AND 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 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 THE 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 HT-MIX ASPHALT:		
-ON PAVEMENT	0.1	GAL / SQ YD
-ON COLD MILLED SURFACES	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 SURFACES	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 SS-1HP.

8. AGGREGATE SURFACE COURSE, TYPE B

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

9. ACCESS DURING CONSTRUCTION

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

10. BARRICADE STABILIZATION

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

11. INTERNET ACCESSIBILITY

THE CONTRACTOR SHALL PROVIDE INTERNET ACCESSIBILITY TO THE BITUMINOUS PLANT QUALITY CONTROL LAB SO THAT THE BITUMINOUS PLANT REPORTS CAN BE E-MAILED TO THE DISTRICT HEADQUARTERS. THIS WORK SHALL BE INCLUDED IN THE COST OF ALL BITUMINOUS ITEMS.

12. THICKNESS OF RESURFACING

THE THICKNESS OF HOT-MIX ASPHALT MIXTURE SHOWN ON THE PLANS IS THE NOMINAL THICKNESS. DEVIATIONS FROM THE NOMINAL THICKNESS WILL NOT BE PERMITTED WHEN SUCH DEVIATIONS OCCUR DUE TO IRREGULARITIES IN EXISTING SURFACE OR BASED ON WHICH THE BITUMINOUS MIXTURE IS PLACED.

13. 4" PAINT PAVEMENT MARKING

THE PROPOSED 4" SOLID YELLOW AND 4" SOLID WHITE 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 7800111O PAINT PAVEMENT MARKING- LINE 4"

14. SAW CUTTING FOR REMOVAL ITEMS

SAW CUTTING ON ALL EDGES FOR REMOVAL ITEMS SHALL BE INCLUDED IN THE COST OF THE REMOVAL ITEMS AS INDICATED AND IN ACCORDANCE WITH SECTION 440 OF THE STANDARD SPECIFICATIONS.

15. R.O.W. MARKERS

RIGHT-OF-WAY MARKERS SHALL BE ERECTED WITH THE BACK FACE OF THE MARKER ON THE RIGHT-OF-WAY LINE UNLESS THE NEW RIGHT-OF-WAY LINE HAS BEEN SURVEYED AND PINNED, IN WHICH INSTANCE THE RIGHT-OF-WAY MARKER WILL BE ERECTED 12 INCHES INSIDE THE NEW RIGHT-OF-WAY LINE.

16. SECTION OR SUB-SECTION MONUMENTS

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

17. BASE COURSE WIDENING

THE BASE COURSE WIDENING SHALL, AT THE CONTRACTOR'S OPTION BE CONSTRUCTED OF EITHER PORTLAND CEMENT CONCRETE 8" THICK, OR BITUMINOUS CONCRETE, 10" THICK. ANY EXCAVATION AND PAVED SHOULDER REMOVAL REQUIRED FOR PLACEMENT OF THE BASE COURSE WIDENING SHALL BE INCLUDED IN THE COST OF BASE COURSE WIDENING.

18. TREE REPLACEMENT

THE TREES LISTED IN THE TREE SCHEDULE SHALL BE APPROVED AND HAND PLANTED AT LOCATIONS AS DIRECTED BY THE ROADSIDE MAINTENANCE TECHNICIAN, TOM WILSON, (217)-342-8270. THE CONTRACTOR SHALL BE REQUIRED TO GIVE TWO WEEKS NOTICE TO SCHEDULE A TIME FOR THE LOCATIONS TO BE STAKED AND ON THE SAME DAY THE TREES SHALL BE DELIVERED TO THE JOBSITE FOR ACCEPTANCE OF THE PLANTING MATERIAL BY THE ROADSIDE MAINTENANCE TECHNICIAN

19. THE CHANNEL EXCAVATION SHALL BE DISPOSED OF OFF STATE R.O.W. THIS WORK SHALL BE INCLUDED IN THE COST OF CHANNEL EXCAVATION.

20. MIXTURE DESIGN

MIXTURE USE:	SURFACE COURSE
APPLICATION:	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N70
PG GRADE:	PG 64-22
DESIGN AIR VOIDS:	4.0% @ NDESIGN = 70
MIXTURE COMPOSITION:	IL-9.5
FRICTION AGGREGATE:	MIXTURE C
MIXTURE USE:	BINDER COURSE
APPLICATION:	HOT-MIX ASPHALT BINDER COURSE, IL 19.0, N70
PG GRADE:	PG 64-22
DESIGN AIR VOIDS:	4.0% @ NDESIGN = 70
MIXTURE COMPOSITION:	IL-19.0
FRICTION AGGREGATE:	N/A
MIXTURE USE:	BASE COURSE
APPLICATION:	HOT-MIX BASE COURSE
PG GRADE:	PG 64-22
DESIGN AIR VOIDS:	4.0% @ NDESIGN = 70
MIXTURE COMPOSITION:	IL-19.0
FRICTION AGGREGATE:	N/A
MIXTURE USE:	SHOULDERS
APPLICATION:	HOT-MIX ASPHALT SHOULDERS, 1 1/2"
PG GRADE:	PG 58-22
DESIGN AIR VOIDS:	3.0% @ NDESIGN = 30
MIXTURE COMPOSITION:	IL-9.5L
FRICTION AGGREGATE:	N/A
MIXTURE USE:	FLEXIBLE CONNECTOR
APPLICATION:	FLEXIBLE CONNECTOR
PG GRADE:	PG 64-22
DESIGN AIR VOIDS:	4.0% @ NDESIGN = 70
MIXTURE COMPOSITION:	IL-19.0
FRICTION AGGREGATE:	N/A
MIXTURE USE:	SHOULDERS
APPLICATION:	HOT-MIX ASPHALT SHOULDERS (ANY LIFT OVER 2 1/4")
PG GRADE:	PG 58-24.0% @ NDESIGN = 30
MIXTURE COMPOSITION:	IL-19.0L
FRICTION AGGREGATE:	N/A

REVISED 11-5-07

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

GENERAL NOTES

SCALE: VERT. HORIZ.
DATE
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CONTRACT NO. 74040

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	*	WAYNE	140	4
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (10BR-2, 10BR-3, 8BR-2)B-1

SUMMARY OF QUANTITIES

SUMMARY OF QUANTITIES

80% FED./ 20% STATE

CODE NO	ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION TYPE CODE SN 096-0067 X071-2A	SN 096-2010 X080-2A	SN 096-0068 X071-2A
X0325826	PRECAST PRESTRESSED CONCRETE DECK BEAMS (17" DEPTH), SPECIAL	SQ FT	97		97	
20100110	TREE REMOVAL (6 TO 15 UNITS DIAMETER)	UNIT	104	104		
20100210	TREE REMOVAL (OVER 15 UNITS DIAMETER)	UNIT	272	272		
20100500	TREE REMOVAL, ACRES	ACRE	0.26	0.25	0.01	
20200100	EARTH EXCAVATION	CU YD	1594	150	660	784
20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	110		110	
20300100	CHANNEL EXCAVATION	CU YD	1027		247	780
20400800	FURNISHED EXCAVATION	CU YD	3702	1245		2457
20700220	POROUS GRANULAR EMBANKMENT	CU YD	110		110	
20700400	POROUS GRANULAR EMBANKMENT, SPECIAL	CU YD	197	85		112
* 25001000	SEEDING, CLASS 2 (SPECIAL)	ACRE	1.8	0.5	0.3	1
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	202	50	50	102
28000300	TEMPORARY DITCH CHECKS	EACH	14	3	5	6
28000400	PERIMETER EROSION BARRIER	FOOT	3997	1177	707	2113
28000500	INLET AND PIPE PROTECTION	EACH	4		1	3
28100107	STONE RIPRAP, CLASS A4	SQ YD	1953	1256	463	234
28200200	FILTER FABRIC	SQ YD	2280	1533	513	234
35501308	HOT-MIX ASPHALT BASE COURSE, 6"	SQ YD	211		211	
35650700	BASE COURSE WIDENING	SQ YD	1691	640	663	388
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	162		8	154
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	428	150	75	203
40600300	AGGREGATE (PRIME COAT)	TON	13.1	3	2	8.1
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	866	174	174	518
40600990	TEMPORARY RAMP	SQ YD	357	28	28	301
40603085	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N70	TON	1022	152	29	841
40603315	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N70	TON	440	126	70	244
40800050	INCIDENTAL HOT-MIX ASPHALT SURFACING	TON	44			44
42001165	BRIDGE APPROACH PAVEMENT	SQ YD	534	267		267
42001430	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)	SQ YD	108	54		54
44000100	PAVEMENT REMOVAL	SQ YD	386			386
44000152	HOT-MIX ASPHALT SURFACE REMOVAL, 3/4"	SQ YD	578		578	
44000198	HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH	SQ YD	1288	721		567

* SPECIALTY ITEMS

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SHEET 1 OF 4

SCALE: VERT. HORIZ. DRAWN BY

DATE CHECKED BY

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CONTRACT NO. 74040

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	•	WAYNE	140	5
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

• (10BR-2, 10BR-3, 8BR-2)8-1

SUMMARY OF QUANTITIES

SUMMARY OF QUANTITIES

80%FED./20% STATE

CODE NO	ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION TYPE CODE SN 096-0067 X071-2A	SN 096-2010 X080-2A	SN 096-0068 X071-2A
44000400	GUTTER REMOVAL	FOOT	59		59	
44000700	APPROACH SLAB REMOVAL	SQ YD	289	142	147	
44002500	GUTTER OUTLET REMOVAL	EACH	1		1	
48101200	AGGREGATE SHOULDERS, TYPE B	TON	182			182
48203003	HOT-MIX ASPHALT SHOULDERS, 1 1/2"	SQ YD	229	229		
48203021	HOT-MIX ASPHALT SHOULDERS, 6"	SQ YD	1010	489	521	
48203100	HOT-MIX ASPHALT SHOULDERS	TON	472	91		381
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	3	1	1	1
50104400	CONCRETE HEADWALL REMOVAL	EACH	3		1	2
50105220	PIPE CULVERT REMOVAL	FOOT	92			92
50200100	STRUCTURE EXCAVATION	CU YD	1319	347		972
50300100	FLOOR DRAINS	EACH	38	20		18
50300225	CONCRETE STRUCTURES	CU YD	251.3	133.8		117.5
50300255	CONCRETE SUPERSTRUCTURE	CU YD	437.0	226.9	0.1	210
50300260	BRIDGE DECK GROOVING	SQ YD	1246	676		570
50300280	CONCRETE ENCASEMENT	CU YD	22.4	12.6		9.8
50300300	PROTECTIVE COAT	SQ YD	1559	846		713
50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1	0.58		0.42
50500505	STUD SHEAR CONNECTORS	EACH	5688	3294		2394
50800105	REINFORCEMENT BARS	POUND	32,680		32680	
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	128,250	71440		56,810
50800515	BAR SPLICERS	EACH	1431	732	106	593
51201600	FURNISHING STEEL PILES HP12X53	FOOT	1583			1583
51201610	FURNISHING STEEL PILES HP12X63	FOOT	1088	1088		
51202305	DRIVING PILES	FOOT	2671	1088		1583
51203600	TEST PILE STEEL HP12X53	EACH	4			4
51203610	TEST PILE STEEL HP12X63	EACH	2	2		
51204650	PILE SHOES	EACH	64	36		28
51205200	TEMPORARY SHEET PILING	SQ FT	1690			1690
51500100	NAME PLATES	EACH	3	1	1	1
52100520	ANCHOR BOLTS, 1"	EACH	96	48		48
54000900	BOX CULVERT END SECTIONS, SPECIAL	EACH	1		1	
54003000	CONCRETE BOX CULVERTS	CU YD	148.6		148.6	

REVISIONS NAME	DATE

Rev.

ILLINOIS DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SHEET 2 OF 4

SCALE: VERT. HORIZ.

DATE

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CONTRACT NO. 74040

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	*	WAYNE	140	6
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (10BR-2, 10BR-3, 8BR-21B-1

SUMMARY OF QUANTITIES

SUMMARY OF QUANTITIES

	CODE NO	ITEM	UNIT	TOTAL QUANTITIES (80% FED./20% STATE)	CONSTRUCTION TYPE CODE: SN 096-0067 X071-2A	SN 096-2010 X080-2A	SN 096-0068 X071-2A
	54010202	PRECAST CONCRETE BOX CULVERT 2' X 2'	FOOT	11.5		11.5	
	54215553	METAL END SECTIONS 18"	EACH	2			2
	54215559	METAL END SECTIONS 24"	EACH	4			4
	54248515	CONCRETE COLLAR	EACH	1		1	
	542D0223	PIPE CULVERTS, CLASS D, TYPE 1 18"	FOOT	50			50
	542D0229	PIPE CULVERTS, CLASS D, TYPE 1 24"	FOOT	126			126
	59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	130	62		68
	60109580	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	248	121		127
	60600095	CLASS SI CONCRETE (OUTLET)	CU YD	3.6		3.6	
*	63000000	STEEL PLATE BEAM GUARD RAIL, TYPE A	FOOT	1675	725	675	275
*	63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	8	4		4
*	63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	12	4	4	4
	63200310	GUARDRAIL REMOVAL	FOOT	1317	400	513	404
	66600105	FURNISHING AND ERECTING RIGHT-OF-WAY MARKERS	EACH	17	4	8	5
	67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	10	3.3	3.3	3.4
	67100100	MOBILIZATION	L SUM	1	0.34	0.33	0.33
	70100100	TRAFFIC CONTROL AND PROTECTION, STANDARD 701316	EACH	1			1
	70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	3	1	1	1
	70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	0.34	0.33	0.33
	70100460	TRAFFIC CONTROL AND PROTECTION, STANDARD 701306	L SUM	1	0.5	0.5	
	70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1	0.34	0.33	0.33
	70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	42	14	14	14
	70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	4	1	1	2
	70300100	SHORT-TERM PAVEMENT MARKING	FOOT	345	128	45	172
	70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	3035	1195	893	947
	70400100	TEMPORARY CONCRETE BARRIER	FOOT	1582.5	630	340	612.5
	70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	1582.5	630	340	612.5
*	78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	4836	1665	845	2326
*	78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	53	30	10	13
*	78100105	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	EACH	40	7		33

* SPECIALTY ITEMS

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SHEET 3 OF 4

SCALE: VERT. HORIZ.

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CONTRACT NO. 74040

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	*	WAYNE	140	7
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (10BR-2, 10BR-3, 8BR-2)B-1

SUMMARY OF QUANTITIES

SUMMARY OF QUANTITIES

80% FED./20% STATE

	CODE NO	ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION TYPE CODE SN 096-0067 X071-2A	SN 096-2010 X080-2A	SN 096-0068 X071-2A
*	78200410	GUARDRAIL MARKERS, TYPE A	EACH	31	10	11	10
*	78200420	GUARDRAIL MARKERS, TYPE B	EACH	4			4
*	78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	16	4	4	8
	78300100	PAVEMENT MARKING REMOVAL	SQ FT	1357	556	282	519
*	A2001016	TREE, ACER RUBRUM (RED MAPLE), 2" CALIPER, BALLED AND BURLAPPED	EACH	6	3		3
*	A2005316	TREE, LIQUIDAMBAR STYRACIFLUA (AMERICAN SWEETGUM), 2" CALIPER, BALLED AND BURLAPPED	EACH	8	4		4
	A2006516	TREE, QUERCUS BICOLOR (SWAMP WHITE OAK), 2" CALIPER, BALLED AND BURLAPPED	EACH	7	4		3
*	A2007616	TREE, TAXODIUM DISTICHUM (COMMON BALD CYPRESS), 2" CALIPER, BALLED AND BURLAPPED	EACH	7	3		4
*	B2001116	TREE, CERCIS CANADENSIS (EASTERN REDBUD) 2" CALIPER, TREE FORM, BALLED AND BURLAPPED	EACH	7	3		4
*	D2002972	EVERGREEN, PINUS STROBUS (EASTERN WHITE PINE), 6' HEIGHT, BALLED AND BURLAPPED	EACH	8	4		4
	X0320047	REMOVAL OF EXISTING PRECAST PRESTRESSED CONCRETE DECK BEAMS	SQ FT	99		99	
	X0321781	MECHANICAL SPLICE	EACH	48	48		
	X0323988	TEMPORARY SOIL RETENTION SYSTEM	SQ FT	1084	435	649	
	X4024000	TEMPORARY ACCESS (FIELD ENTRANCE)	EACH	7	2	1	4
	X5020501	UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION 1	EACH	1	1		
	X5020502	UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION 2	EACH	1	1		
	X5020503	UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION 3	EACH	1			1
	X5020504	UNDERWATER STRUCTURE EXCAVATION PROTECTION - LOCATION 4	EACH	1			1
	X7050167	TEMPORARY TRAFFIC BARRIER TERMINAL, TYPE 1, SPECIAL (TANGENT)	EACH	4			4
	Z0001900	ASBESTOS BEARING PAD REMOVAL	EACH	22	22		
	Z0022800	FENCE REMOVAL	FOOT	1714	205	241	1268
	Z0030250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	6	2	2	2
	Z0030350	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	EACH	8	2	2	4
	Z0073400	TEMPORARY SUPPORT SYSTEM	EACH	1			1
⊙	Z0076600	TRAINEES	HOUR	500	200	100	200

⊙ Y080
* SPECIALTY ITEMS

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

SHEET 4 OF 4

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CONTRACT NO. 74040

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	•	WAYNE	140	8
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

• (10BR-2, 10BR-3, 8BR-2)B-1

PAVING SCHEDULE

LOCATION	SIDE	BASE COURSE WIDENING	AGGREGATE SURFACE COURSE, TYPE B	BITUMINOUS MATERIALS, (PRIME COAT)	AGGREGATE (PRIME COAT)	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	TEMPORARY RAMP	HOT-MIX ASPHALT BINDER COURSE IL-19, N70	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N70	HOT-MIX ASPHALT SURFACE REMOVAL, 3/4"	HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH	HOT-MIX ASPHALT SHOULDERS 1 1/2"	HOT-MIX ASPHALT SHOULDERS 6"	HOT-MIX ASPHALT SHOULDERS	HOT-MIX ASPHALT BASE COURSE 6"	AGGREGATE SHOULDERS
STATION TO STATION		SQ YD	TON	GALLON	TON	SQ YD	SQ YD	TON	TON	SQ YD	SQ YD	SQ YD	SQ YD	TON	SQ YD	TON
SN 096-0067 RACCOON CREEK																
STATION 884+50.00 TO STATION 892+63.00	LT	178											350	22		
STATION 884+50.00 TO STATION 892+63.00	RT	462											139	69		
STATION 884+90.00 TO STATION 892+30.00	LT/RT			150	3	174	28	152	126		721					
SUB-TOTAL		640	0	150	3	174	28	152	126	0	721	0	489	91	0	0
SN 096-2010 BRANCH OF DEER CREEK																
STATION 407+07.10 TO STATION 413+06.64	LT	460										73	132			
STATION 407+35.39 TO STATION 413+06.64	RT	203										156	389			
STATION 408+70.00 TO STATION 411+30.00	LT/RT			75	2	174	28	29	63	578					211	
STATION 408+96.34	LT		8													
OVER PRE-STAGE 1 BEAM REPLACEMENT									7							
SUB-TOTAL		663	8	75	2	174	28	29	70	578	0	229	521	0	211	0
SN 096-0068 DEER CREEK																
STATION 380+00.00 TO STATION 383+61.90	LT/RT			104.3	4.2			449.6	125.5							
STATION 385+56.90 TO STATION 389+00.00	LT/RT			98.9	3.9			391.1	118.9							
STATION 380+00.00 TO STATION 382+73.70	LT													41.7		
STATION 380+00.00 TO STATION 381+83.70	RT													36.5		
STATION 381+83.70 TO STATION 383+61.90	RT													92.7		
STATION 382+73.70 TO STATION 382+88.70	LT													3.8		
STATION 382+88.70 TO STATION 383+61.90	LT													23.6		
STATION 385+56.90 TO STATION 386+30.00	LT													23.6		
STATION 385+56.90 TO STATION 387+70.00	RT													74.6		
STATION 386+30.00 TO STATION 383+45.00	LT													3.8		
STATION 386+45.00 TO STATION 388+00.00	LT													24.5		
STATION 387+70.00 TO STATION 388+00.00	RT													0.1		
STATION 388+00.00 TO STATION 388+50.00	LT/RT													12.5		
STATION 388+00.00 TO STATION 389+00.00	LT/RT															
STATION 382+83.00 TO STATION 383+46.90	RT/ST 2						142.0									
STATION 385+71.90 TO STATION 386+26.00	RT/ST 2						120.2									
STATION 380+00.00 TO STATION 380+06.70	STAGE IV						19.3									
STATION 388+93.30 TO STATION 389+00.00	STAGE IV						19.3									
STATION 380+99.50 TO STATION 381+19.80	LT/ST 1	3.9														
STATION 381+19.80 TO STATION 383+90.00	LT/ST 1	75.1														
STATION 385+28.70 TO STATION 387+06.01	LT/ST 1	42.0														
STATION 380+99.20 TO STATION 382+83.00	RT/ST 2	88.8														
STATION 386+26.00 TO STATION 388+01.80	RT/ST 2	152.4														
STATION 388+01.80 TO STATION 388+54.80	RT/ST 2	25.6														
STATION 380+00.00 TO STATION 381+10.00	LT/RT					259										
STATION 380+10.00 TO STATION 381+08.00	LT/RT										282					
STATION 387+91.00 TO STATION 388+90.00	LT/RT										285					
STATION 388+90.00 TO STATION 389+00.00	LT/RT					259										
STATION 380+00.00 TO STATION 389+00.00	LT/RT															182
SUB-TOTAL		388	0	203.2	8.1	518	300.8	840.7	244.4	0	567	0	0	337.4	0	182
PROJECT TOTAL		1691	8	428	13.1	866	356.8	1022	440	578	1288	229	1010	428	211	182

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES
SHEET 1 OF 4

SCALE: VERT.
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CONTRACT NO. 74040

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	•	WAYNE	140	9
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

• (10BR-2, 10BR-3, 8BR-2)B-1

EROSION CONTROL SCHEDULE

LOCATION	SIDE	TEMPORARY DITCH CHECKS (EACH)	PERIMETER EROSION BARRIER (FOOT)	INLET AND PIPE PROTECTION (EACH)	STONE RIPRAP, CLASS A4 (SQ YD)	FILTER FABRIC (SQ YD)	TEMPORARY EROSION CONTROL SEEDING (POUND)
SN 096-0067 RACCOON CREEK							
STATION 884+50.00 TO STATION 887+64.09	RT		314				
STATION 884+50.00 TO STATION 887+75.79	LT		305				
STATION 887+64.09 TO STATION 888+33.22	RT				119	119	
STATION 887+75.79 TO STATION 888+45.55	LT				121	121	
STATON 889+90.00 OFFSET, 44.9'	RT	1					
STATION 889+08.71 TO STATION 889+44.38	RT				60	60	
STATION 889+24.29 TO STATION 889+55.78	LT				59	59	
STATON 889+40.00 OFFSET, 48.4'	RT	1					
STATION 889+55.78 TO STATION 892+63.00	LT		309				
STATION 889+90.00 OFFSET, 48.5'	RT	1					
STATION 889+25.00 TO STATION 892+63.00	RT		249				50
STRUCTURE 096-0067					897	1174	
SUB-TOTAL		3	1177	0	1256	1533	50
SN 096-2010 BRANCH OF DEER CREEK							
STATION 406+83.10 TO STATION 407+50.00	LT		74				
STATION 407+32.81 TO STATION 407+78.40	RT				29	29	
STATION 407+35.31 TO STATION 409+76.64	RT		247				
STATION 407+71.00 OFFSET, 36.0'	LT			1			
STATION 408+25.00 OFFSET, 30.0'	LT	1					
STATION 408+75.00 OFFSET, 25.0'	LT	1					
STATION 409+11.62 TO STATION 410+14.00	LT				89	89	
STATION 409+82.38 TO STATION 410+30.38	RT				89	89	
STATION 410+14.00 TO STATION 410+59.62	LT				89	89	
STATION 410+28.60 TO STATION 413+06.64	RT		292				
STATION 410+75.00 OFFSET, 45.0'	LT	1					
STATION 411+25.00 OFFSET, 35.0'	LT	1					
STATION 411+75.00 OFFSET, 35.0'	LT	1					
STATION 412+18.0 TO STATION 413+06.64	LT		94				50
STRUCTURE 096-2010					167	167	
SUB-TOTAL		5	707	1	463	463	50
SN 096-0068 DEER CREEK							
SW QUANDRANT			573				42.1
SE QUANDRANT			502				10.2
NW QUANDRANT			514				40.6
NE QUANDRANT			524				8.6
STATION 380+40	LT			1			
STATION 381+51.7	LT			1			
STATION 382+50	LT	1					
STATION 383+95	LT	1					
STATION 385+25	LT	1					
STATION 387+00	LT	1					
STATION 388+25.7	LT			1			
ENGINEER DISCRETION	LT	2					
STRUCTURE 096-0068					234	234	
SUB-TOTAL		6	2113	3	234	234	102
PROJECT TOTAL		14	3997	4	1953	2230	202

EARTHWORK AND CHANNEL EXCAVATION SCHEDULE

LOCATION	EARTH EXCAVATION (CU YD)	EARTH EXCAVATION ADJUSTED FOR SHRINKAGE (CU YD)	SHRINKAGE FACTOR	EMBANKMENT (CU YD)	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-) (CU YD)	CHANNEL EXCAVATION (CU YD)
STATION TO STATION						
SN 096-0067 RACCOON CREEK						
STATION 884+50.00 TO STATION 892+50.00 STAGE I	125	95	25%	1270	-1175	
STATION 884+50.00 TO STATION 892+50.00 STAGE II	25	20	25%	90	-70	
SUB-TOTAL	150	115		1360	-1245	
SN 096-2010 BRANCH OF DEER CREEK						
STATION 407+00.00 TO STATION 413+00.00 STAGE I	630	475	25%	250	225	
STATION 407+00.00 TO STATION 413+00.01 STAGE II	30	20	25%	10	10	
STATION 410+00.00 TO STATION 410+58.00						247
SUB-TOTAL	660	495	0.5	260	235	247
SN 096-0068 DEER CREEK						
STATION 379+50.00 TO STATION 384+59.00 STAGE IV	482	1763	25%	1410	-1281	
STATION 381+25.00 TO STATION 383+91.90 STAGE II	19	67	25%	54	-48	
STATION 383+91.90 TO STATION 385+26.90						780
STATION 384+59.00 TO STATION 389+00.00 STAGE IV	245	1358	25%	1086	-1113	
STATION 385+26.90 TO STATION 388+50.00 STAGE II	38	53	25%	43	-15	
SUB-TOTAL	784	3241		2593	-2457	780
PROJECT TOTAL	1594	3851		4213	-3702	1027

CULVERT SCHEDULE

LOCATION	SIDE	CONCRETE HEADWALL REMOVAL (EACH)	PRECAST CONCRETE BOX CULVERT 2'x2' (FOOT)	BOX CULVERT END SECTION SPECIAL (EACH)	CONCRETE COLLAR (EACH)	PIPE CULVERT REMOVAL (FOOT)
SN 096-2010 BRANCH OF DEER CREEK						
STATION 407+70.18	LT	1	11.5	1	1	
SUB-TOTAL 096-2010		1	11.5	1	1	0
SN 096-0068 DEER CREEK						
STATION 380+52 TO STATION 380+71	LT					19.8
STATION 381+70 TO STATION 381+95	LT					25.8
STATION 387+83 TO STATION 388+03	RT	2				19.7
STATION 387+81 TO STATION 388+07	LT					26.2
SUB-TOTAL 096-0068		2	0	0	0	92
PROJECT TOTAL		3	11.5	1	1	92

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES

SHEET 2 OF 4

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CONTRACT NO. 74040

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	•	WAYNE	140	10
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

• (10BR-2, 10BR-3, 8BR-2)B-1

GUARDRAIL SCHEDULE

LOCATION	SIDE	GUARDRAIL REMOVAL FOOT	STEE PLATE BEAM GUARDRAIL, TYPE A FOOT	TRAFFIC BARRIER TERMINAL, TYPE 6 EACH	TRAFFIC BARRIER TERMINAL, TYPE 1, SPECIAL (TANGENT) EACH	GUARDRAIL MARKERS, TYPE A EACH	TERMINAL MARKER-DIRECT APPLIED EACH	GUARDRAIL MARKERS, TYPE B EACH	TEMPORARY TRAFFIC BARRIER TERMINAL, TYPE 1, SPECIAL (TANGENT) EACH
SN 096-0067 RACCOON CREEK									
STATION 885+64.67 TO STATION 887+77.17	RT		212.5	1	1	3	1		
STATION 885+35.67 TO STATION 887+85.67	LT		150	1	1	2	1		
STATION 886+73.76 TO STATION 887+74.65	LT	100							
STATION 886+74.19 TO STATION 887+74.94	RT	100							
STATON 889+34.40 TO STATION 890+84.41	RT		150	1	1	2	1		
STATION 889+45.03 TO STATION 890+45.68	RT	100							
STATON 889+42.76 TO STATION 891+55.22	LT		212.5	1	1	3	1		
STATION 889+44.70 TO STATION 890+46.03	LT	100							
SUB-TOTAL		400	725	4	4	10	4		
SN 096-2010 BRANCH OF DEER CREEK									
STATION 407+85.35 TO STATION 411+72.85	RT		387.5		2	6	2		
STATION 408+76.29 TO STATION 411+51.51	RT	275							
STATION 409+13.77 TO STATION 411+51.52	LT	237.5							
STATION 409+69.15 TO STATION 412+56.65	LT		287.5		2	5	2		
SUB-TOTAL		512.5	675	0	4	11	4		
SN 096-0068 DEER CREEK									
STATION 382+88.80 TO STATION 383+38.80	LT / STAGE I	50					1••		1
STATION 385+79.70 TO STATION 386+29.70	LT / STAGE I	50					1••		1
STATION 382+98.90 TO STATION 383+48.90	RT /STAGE II						1••		1
STATION 385+69.90 TO STATION 386+19.90	RT /STAGE II						1••		1
STATION 382+88.80 TO STATION 383+89.80	RT /STAGE IV	101							
STATION 383+38.80 TO STATION 383+89.90	LT /STAGE IV	51							
STATION 385+28.70 TO STATION 385+79.70	LT /STAGE IV	51							
STATION 385+28.70 TO STATION 386+29.70	RT /STAGE IV	101							
STATION 381+98.90 TO STATION 382+48.90	RT				1	1	1		
STATION 382+48.90 TO STATION 383+48.90	RT		100			1	1		
STATION 382+61.40 TO STATION 383+11.40	LT				1	1			
STATION 383+11.40 TO STATION 383+48.90	LT		37.5			1			
STATION 383+48.90 TO STATION 383+91.90	LT & RT			2		1			
STATION 383+91.90 TO STATION 385+26.90	LT & RT							4	
STATION 385+26.90 TO STATION 385+69.90	LT & RT			2		1			
STATION 385+69.90 TO STATION 386+69.90	LT		100			1			
STATION 385+69.90 TO STATION 386+07.40	RT		37.5			1			
STATION 386+07.40 TO STATION 386+57.40	RT				1	1	1		
STATION 386+69.90 TO STATION 387+19.90	LT				1	1	1		
SUB-TOTAL		404	275	4	4	10	8	4	4
PROJECT TOTAL		1317	1675	8	12	31	16	4	4

•• PLACED ON TEMPORARY TRAFFIC BARRIER TERMINAL, TYPE 1 SPECIAL (TANGENT)

REMOVAL SCHEDULE

LOCATION	SIDE	FENCE REMOVAL FOOT	TREE REMOVAL (6-15 UNITS DIAMETER) UNIT	TREE REMOVAL (OVER 15 UNITS DIAMETER) UNIT	TREE REMOVAL ACRES ACRE
SN 096-0067 RACCOON CREEK					
STATION 885+89.57 TO STATION 887+89.60	RT	205			
STATION 885+89.82 TO STATION 887+81.68	RT				0.027
STATION 885+90.83	29.4' RT			24	
STATION 885+98.91	28.2' RT		6		
STATION 886+49.59	31.1' RT			42	
STATION 886+59.16	30.5' RT			80	
STATION 886+61.84	29.6' RT		6		
STATION 886+66.70	30.0' RT		6		
STATION 886+91.78	31.1' RT			24	
STATION 887+01.89	32.2' RT		12		
STATION 887+16.31	31.6' RT			78	
STATION 887+25.92	33.8' RT		12		
STATION 887+26.60	30.9' RT		12		
STATION 887+37.73	30.6' RT		12		
STATION 887+61.83	29.7' RT		6		
STATION 887+78.72	38.2' RT		8		
STATION 888+78.05	46.6' RT		12		
STATION 888+83.24 TO STATION 892+48.61	RT				0.222
STATION 888+88.60	53.7' RT		12		
STATION 888+89.50	51.3' RT			24	
SUB-TOTAL		205	104	272	0.249
SN 096-2010 BRANCH OF DEER CREEK					
STATION 409+61.21 TO STATION 410+43.38	RT	82			
STATION 409+82.98 TO STATION 410+34.26	LT				0.004
STATION 409+85.79 TO STATION 410+31.51	RT				0.009
STATION 411+44.57 TO STATION 413+03.39	LT	159			
SUB-TOTAL		241	0	0	0.013
SN 096-0068 DEER CREEK					
STATION 379+90.00 TO STATION 384+00.00	RT	410			
STATION 382+00.00 TO STATION 384+00.00	LT	200			
STATION 385+25.00 TO STATION 389+00.00	LT	375			
STATION 385+25.00 TO STATION 388+08.00	RT	283			
SUB-TOTAL		1268	0	0	0.000
PROJECT TOTAL		1714	104	272	0.262

ENTRANCE SCHEDULE

LOCATION	SIDE	INCIDENTAL HMA SURFACING TON	AGGREGATE SURFACE COURSE, TYPE B TON	PIPE CULVERTS, CLASS D, TYPE 1-18" FOOT	PIPE CULVERTS, CLASS D, TYPE 1-24" FOOT	METAL END SECTIONS-18" EACH	METAL END SECTIONS-24" EACH
SN 096-0068 DEER CREEK							
STATION 380+61.18	LT	12.9	24.3	50		2	
STATION 381+83.71	LT	12.9	45.7		64		2
STATION 387+85.00	RT	4.9	36.2				
STATION 387+94.69	LT	12.9	47.5		62		2
PROJECT TOTAL		44	154	50	126	2	4

PAVEMENT REMOVAL SCHEDULE

LOCATION	SIDE	STAGE	PAVEMENT REMOVAL SQ YD
SN 096-0068 DEER CREEK			
STATION 383+58.90 TO STATION 383+90.00		STAGE II	44.9
STATION 385+28.70 TO STATION 385+59.90		STAGE II	45.1
STATION 380+99.50 TO STATION 381+19.80		STAGE III	3.9
STATION 381+19.80 TO STATION 383+90.00		STAGE III	75.1
STATION 383+58.90 TO STATION 383+90.00		STAGE III	44.9
STATION 385+28.70 TO STATION 385+59.90		STAGE III	45.1
STATION 385+28.70 TO STATION 387+06.10		STAGE III	42.0
STATION 380+99.20 TO STATION 381+92.00		STAGE IV	27.6
STATION 387+00.00 TO STATION 387+76.00		STAGE IV	28.2
STATION 387+94.80 TO STATION 388+54.80		STAGE IV	29.4
SUB-TOTAL			386.2
PROJECT TOTAL			386

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES

SHEET 3 OF 4

SCALE: VERT. HORIZ.

DRAWN BY

DATE

CHECKED BY

PLOT DATE = 10/26/2007
FILE NAME = c:\projects\74040\sht\sht-sch_74040.dgn
PLOT SCALE = 2.0000 ' / IN.
USER NAME = swartzm

CONTRACT NO. 74040

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	•	WAYNE	140	11
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

• (10BR-2, 10BR-3, 8BR-2)B-1

PAVEMENT MARKING SCHEDULE

LOCATION	SIDE	PAINT PAVEMENT MARKING LINE 4" SOLID WHITE (FOOT)	PAINT PAVEMENT MARKING LINE 4" SOLID YELLOW (FOOT)	RAISED REFLECTIVE PAVEMENT MARKER (EACH)	PAVEMENT MARKING REMOVAL (SQ FT)	WORKZONE PAVEMENT MARKING REMOVAL (SQ FT)	SHORT TERM PAVEMENT MARKING (FOOT)	RAISED REFLECTIVE PAVEMENT MARKER, (BRIDGE) (FOOT)
SN 096-0067 RACCOON CREEK								
STATION 883+59.75 TO STATION 893+28.00	RT					348		
STATION 884+19.75 TO STATION 893+57.75	LT					340		
STATION 884+65.00 TO STATION 892+52.75	RT					263		
STATION 884+94.25 TO STATION 892+25.50	LT					244		
STATION 884+90.00 TO STATION 892+30.00	LT	740			247		30	
STATION 884+90.00 TO STATION 892+30.00	RT	740			247		30	
STATION 884+90.00 TO STATION 892+30.00	CL		185	30	62		68	7
SUB-TOTAL		1480	185	30	556	1195	128	7
SN 096-2010 BRANCH OF DEER CREEK								
STATION 406+66.75 TO STATION 413+70.00	RT					277		
STATION 407+07.50 TO STATION 413+85.00	LT					267		
STATION 407+77.20 TO STATION 412+70.35	LT					184		
STATION 407+98.33 TO STATION 412+61.73	RT					165		
STATION 408+70.00 TO STATION 411+30.00	LT	260			87		12	
STATION 408+70.00 TO STATION 411+30.00	RT	260			87		12	
STATION 408+70.00 TO STATION 411+30.00	CL		325	10	108		21	
SUB-TOTAL		520	325	10	282	893	45	0
SN 096-0068 DEER CREEK								
STATION 378+40.00 TO STATION 390+60.00	CL		310	13		103		
STATION 378+40.00 TO STATION 388+44.00	CL					92	92	
STATION 380+00.00 TO STATION 389+00.00	LT & RT	1800				599		
STATION 382+89.00 TO STATION 386+30.00	LT & RT					40	40	
STATION 388+44.00 TO STATION 390+60.00	CL		216			112	40	33
STATION 379+72.00 TO STATION 389+37.00	CL				114			
STATION 381+00.00 TO STATION 387+06.00	LT				202			
STATION 380+99.00 TO STATION 382+83.00	RT				61			
STATION 386+24.00 TO STATION 388+55.00	RT				77			
STATION 378+40.00 TO STATION 379+72.00	CL				13			
STATION 389+37.00 TO STATION 390+60.00	CL				51			
SUB-TOTAL		1800	526	13	519	947	172	33
PROJECT TOTAL		3800	1036	53	1357	3035	345	40

RIGHT-OF-WAY MARKER SCHEDULE

FURNISHING AND ERECTING RIGHT-OF-WAY MARKERS

LOCATION	OFFSET	EACH
SN 096-0067 RACCOON CREEK		
STATION 883+50.00	30.00' R	1
STATION 887+99.88	70.00' R	1
STATION 891+50.00	70.00' R	1
STATION 893+52.00	29.79' R	1
SUB-TOTAL		4
SN 096-2010 BRANCH OF DEER CREEK		
STATION 406+50.00	30.00' L	1
STATION 407+50.00	50.00' L	1
STATION 409+10.00	50.00' L	1
STATION 410+00.00	75.00' L	1
STATION 410+50.00	75.00' L	1
STATION 411+25.00	50.00' L	1
STATION 413+00.00	50.00' L	1
STATION 414+00.00	30.00' L	1
SUB-TOTAL		8
SN 096-0068 DEER CREEK		
STATION 379+00.00	30.00' L	1
STATION 381+00.00	65.00 LT	1
STATION 383+08.00	85.00 LT	1
STATION 387+50.00	85.00 LT	1
STATION 390+00.00	29.66' L	1
SUB-TOTAL		5
PROJECT TOTAL		17

GUTTER SCHEDULE

LOCATION	SIDE	GUTTER REMOVAL (FOOT)	GUTTER OUTLET REMOVAL (FOOT)	CLASS SI CONCRETE (OUTLET) (EACH)
SN 096-2010 BRANCH OF DEER CREEK				
STATION 406+83.10 TO STATION 407+42.45	LT	59		3.6
STATION 407+60.00	LT		1	
PROJECT TOTAL		59	1	3.6

SEEDING SCHEDULE

LOCATION	SIDE	SEEDING CLASS 2 (SPECIAL) (ACRE)
STATION TO STATION		
SN 096-0067 RACCOON CREEK		
STATION 884+50.00 TO STATION 892+63.00	LT	0.08
STATION 884+50.00 TO STATION 892+63.00	RT	0.37
SUB-TOTAL		0.45
SN 096-2010 BRANCH OF DEER CREEK		
STATION 406+83.10 TO STATION 413+06.64	LT	0.26
STATION 407+35.34 TO STATION 413+06.64	RT	0.06
SUB-TOTAL		0.32
SN 096-0068 DEER CREEK		
SW QUANDRANT		0.42
SE QUANDRANT		0.10
NW QUANDRANT		0.41
NE QUANDRANT		0.09
SUB-TOTAL		1.02
PROJECT TOTAL		1.80

BRIDGE APPROACH PAVEMENT SCHEDULE

LOCATION	BRIDGE APPROACH PAVEMENT (SQ YD)	BRIDGE APPROACH CONNECTOR (FLEXIBLE) (SQ YD)
SN 096-0067 RACCOON CREEK	1	2
STATION 887+46.92 TO STATION 887+53.92		27
STATION 887+49.92 TO STATION 887+79.92	133.3	
STATION 889+40.08 TO STATION 889+70.08	133.3	
STATION 889+67.08 TO STATION 889+73.08		27
SUB-TOTAL	267	53
SN 096-0068 DEER CREEK		
STATION 383+58.90 TO STATION 383+64.90		27
STATION 383+61.90 TO STATION 383+91.90	133.3	
STATION 385+26.90 TO STATION 385+56.90	133.3	
STATION 385+53.90 TO STATION 385+59.90		27
SUB-TOTAL	267	53
PROJECT TOTAL	534	108

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES

SHEET 4 OF 4

SCALE: VERT. HORIZ.

DATE

DRAWN BY

CHECKED BY

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PLOT SCALE = 20.0000 ' / IN.
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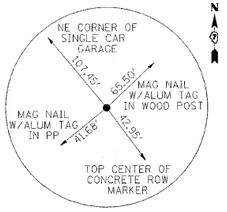
CONTRACT NO. 74040

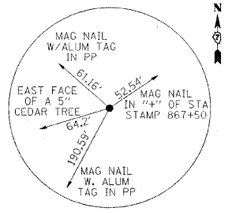
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	*	WAYNE	140	12
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (8BR-2.10BR-3)B-1

ALIGNMENT TIES: US ROUTE 45 OVER RACCOON CREEK (SN 096-0067)



FAP 328 (US 45)
ALIGNMENT TIE
P.O.T. STA 863+00.00



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ALIGNMENT TIE
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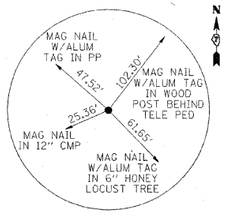

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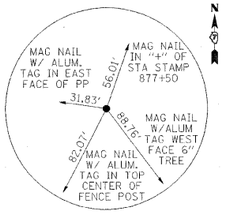

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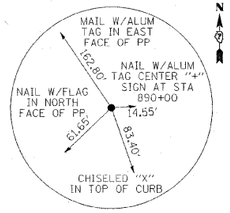
ALIGNMENT TIE
P.T. STA 877+00.00



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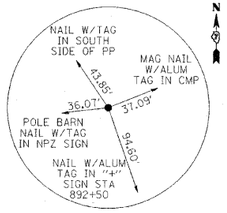
ALIGNMENT TIE
P.C. STA 890+02.00



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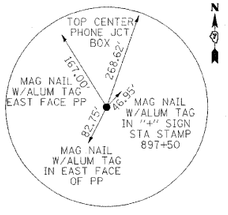
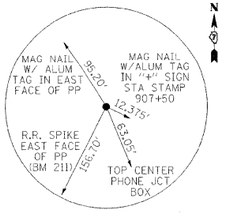


FAP 328 (US 45)
ALIGNMENT TIE
P.T. STA 897+02.00

FAP 328 (US 45)
ALIGNMENT TIE
P.C. STA 897+42.90

FAP 328 (US 45)
ALIGNMENT TIE
P.I. STA 902+42.90



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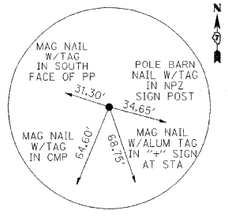
ALIGNMENT TIE
P.T. STA 907+42.89

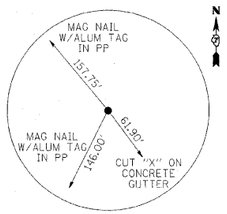


FAP 328 (US 45)
ALIGNMENT TIE
P.O.T. STA 910+67.00

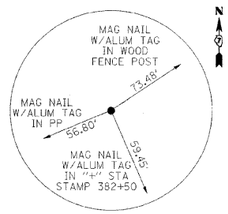
BENCHMARKS:

BM 211 - RR SPIKE IN POWER POLE NO. 280
WEST OF US 45. STA 906+06
ELEVATION - 438.46

ALIGNMENT TIES: US ROUTE 45 OVER BRANCH OF DEER CREEK (SN 096-2010)



FAP 328 (US 45)
ALIGNMENT TIE
P.O.T. STA 369+09.57



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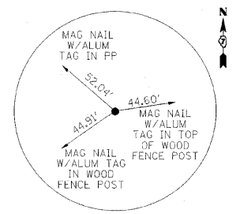
ALIGNMENT TIE
P.C. STA 383+08.00



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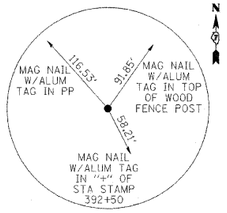
P.I. STA 388+08.00



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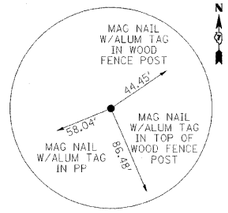
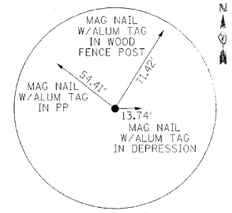
ALIGNMENT TIE
P.T. STA 393+08.00



FAP 328 (US 45)
ALIGNMENT TIE
P.C. STA 394+65.00



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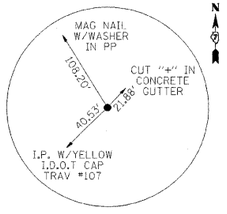
ALIGNMENT TIE
P.I. STA 399+65.00



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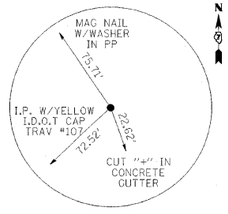
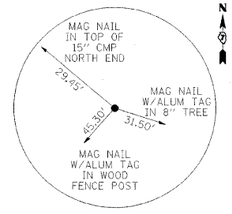
ALIGNMENT TIE
P.T. STA 404+64.99



FAP 328 (US 45)
ALIGNMENT TIE
P.I. STA 405+00.00 BK = 405+06.39 AH



FAP 328 (US 45)
ALIGNMENT TIE
P.O.T. STA 422+49.47

BENCHMARKS:

BM - CHISELED SQUARE ON NORTH WEST
CORNER OF SN 096-0022.
ELEVATION - 424.24

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

ALIGNMENT TIES & BENCHMARKS

SCALE: VERT. N/A
HORIZ. N/A
DATE 06/12/07

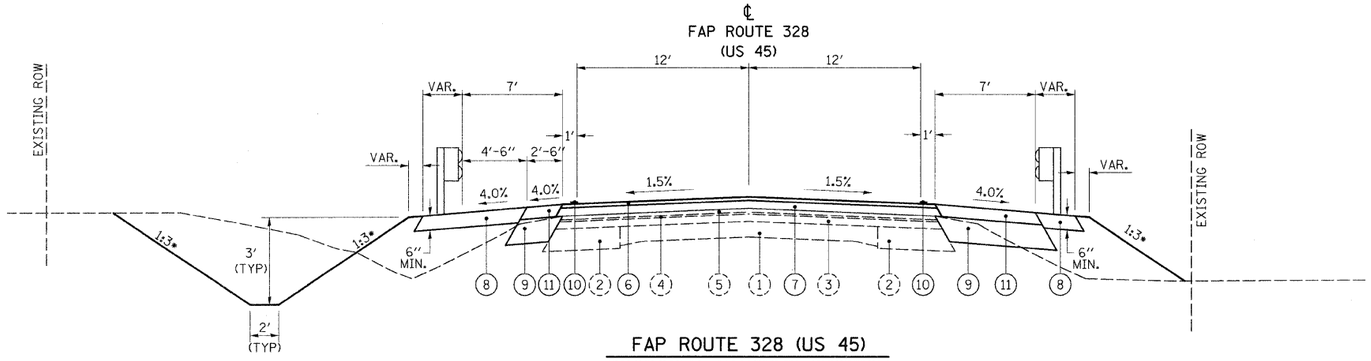
DRAWN BY NDB
CHECKED BY SSM

Plot Date: 9/17/2007
Plot Time: 09:03:37 AM
Plotted By: sdonohue
Pen Table:
Filename: I:\06055\cadd\replacement\construction_plans\05_Control.dgn

CONTRACT NO. 74040

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	*	WAYNE	140	13
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

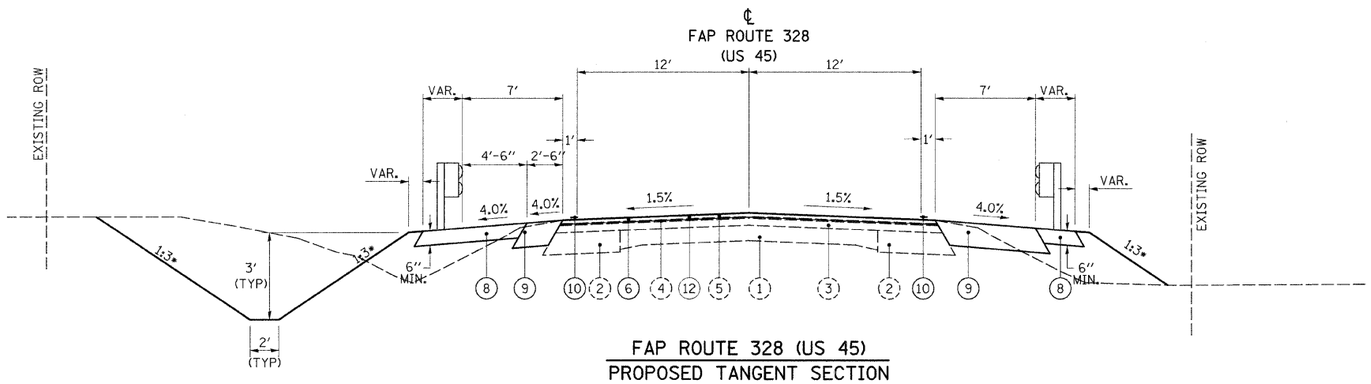
* (8BR-2,10BR-3)B-1



FAP ROUTE 328 (US 45)
PROPOSED TANGENT SECTION

- TO APPLY -
STA 884+90.00 TO STA 885+20.00
STA 886+72.72 TO STA 887+49.92
STA 889+70.08 TO STA 891+03.12
STA 892+00.00 TO STA 892+30.00
BRIDGE OMISSION
STA 887+79.92 TO STA 889+40.08

* OR AS SHOWN ON CROSS SECTIONS



FAP ROUTE 328 (US 45)
PROPOSED TANGENT SECTION

- TO APPLY -
STA 885+20.00 TO STA 886+72.72
STA 891+03.12 TO STA 892+00.00

* OR AS SHOWN ON CROSS SECTIONS

MATERIALS LEGEND

(1) EXISTING PCC PAVEMENT, 9"-6"-9"
(2) EXISTING WIDENING
(3) EXISTING HOT-MIX ASPHALT BINDER (VARIABLE DEPTH)
(4) EXISTING HOT-MIX ASPHALT LEVELING BINDER (MACHINE METHOD) TYPE 2, ¾"
(5) EXISTING HOT-MIX ASPHALT SURFACE COURSE, MIXTURE D, CLASS I, TYPE 2, 1½"
(6) PROPOSED HOT-MIX ASPHALT SURFACE COURSE, MIXTURE "C", N70, (1½")
(7) PROPOSED HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N70, (VARIABLE DEPTH)
(8) PROPOSED HOT-MIX ASPHALT SHOULDERS, 6"
(9) PROPOSED BASE COURSE WIDENING
(10) PROPOSED PAVEMENT MARKING
(11) PROPOSED HOT-MIX ASPHALT SHOULDERS, VARIABLE DEPTH
(12) PROPOSED HOT-MIX ASPHALT REMOVAL, VARIABLE DEPTH

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS
US ROUTE 45
OVER RACCOON CREEK

SCALE: VERT. N/A
HORIZ. N/A
DATE 06/12/07

DRAWN BY KMO
CHECKED BY SSM

Plot Date: 10/9/2007
Plot Time: 8:46:8
Plotted By: swatterw
Pen Table: PEN
Filename: $FILE$

SUB

US 45 OVER RACCOON CREEK (SN 096-0067) TYPICAL SECTIONS

CONTRACT NO. 74040

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	*	WAYNE	140	14
STA. 879+50.00		TO STA. 885+50.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (8BR-2,10BR-3)B-1

N

PLAN — DRAWN, PLOTTED, ALIGNMENT CHECKED, ALL MATCHLINES MET, CADD FILE NAME, NOTE BOOK, NO., BY, DATE

PROFILE — DRAWN, PLOTTED, GRADES CHECKED, ALL MATCHLINES MET, STRUCTURE NO(S) CK'D, NOTE BOOK, NO., BY, DATE

EXISTING ROW

EXISTING ℄ US 45

880+00 | 881 | 882 | 883 | 884 | 885+00

CONSTRUCTION LIMITS

+09.75 F.E.

2'-6" BASE COURSE WIDENING

BEGIN CONSTRUCTION STA 884+90.00

13'

13'

30'

BUTT JOINT

MATCH LINE STA 885+50.00

+50.00 30' RT

PROPOSED ROW

+50.00 40' RT

+00.00 40' RT

BEGIN GUARDRAIL STA 885+14.66

7'-0" BASE COURSE WIDENING

HOT-MIX ASPHALT SHOULDERS, 6"

CONSTRUCTION LIMITS

PAVED SHOULDER REMOVAL

X TREE REMOVAL

20 10 0 20 40

SCALE IN FEET

435 / 430 / 425 / 420 / 415 / 410

427.02

+0.05%

VPI STA. 885+20.00

ELEVATION 427.04

+0.00%

5'

20'

427.03	427.05	427.05	427.04	426.97	426.91	426.92	426.94	426.99	427.04	427.03	427.02	427.03	427.14	427.06
879+50	880+00	880+50	881+00	881+50	882+00	882+50	883+00	883+50	884+00	884+50	885+00		885+50	

US 45 OVER RACCOON CREEK (SN 096-0067) PLAN & PROFILE

CONTRACT NO. 74040

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	*	WAYNE	140	15
STA. 885+50.00		TO STA. 891+50.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (8BR-2,10BR-3)B-1

PLAN — CORRECTED, PLOTTED, ALIGNMENT CHECKED, MAP CHECKED, CADD FILE NAME, NOTE BOOK, NO.

PROFILE — CORRECTED, PLOTTED, GRADES CHECKED, MAP CHECKED, STRUCTURE NOTATIONS CHKD, NOTE BOOK, NO.

EXISTING ROW

STONE RIPRAP, CLASS A4

HOT-MIX ASPHALT SHOULDERS, 6"

2'-6" BASE COURSE WIDENING

EXISTING ℄ US 45

30' APPROACH PAVEMENT

BEGIN GUARDRAIL STA 885+85.67

MATCH LINE STA 885+50.00

886 | 887 | 888 | 889 | 890+00 | 891

13' 13'

℄ SN 096-0067 STA 888+60.00 (SEE STRUCTURE PLANS)

7'-0" BASE COURSE WIDENING

FENCE REMOVAL

+50.00 70' RT

CONSTRUCTION LIMITS

PROPOSED ROW

EXIST. CURVE C2
PI STA. = 893+52.00
Δ = 0° 08' 15" (RT)
D = 0° 01' 11"
R = 291,687.46'
T = 350.00'
L = 700.00'
E = 0.21'
e = -----
T.R. = -----
S.E. RUN = -----
P.C. STA. = 890+02.00
P.T. STA. = 897+02.00

PC Sta 890+02.00

CONSTRUCTION LIMITS

END GUARDRAIL STA 891+34.41

MATCH LINE STA 891+50.00

PAVED SHOULDER REMOVAL

X TREE REMOVAL

20 10 0 20 40
SCALE IN FEET

435 / 430 / 425 / 420 / 415 / 410

200.00' V.C.

VPI STA. 886+20.00
ELEVATION 427.04

+0.00% +0.90%

VPI STA. 888+60.00
ELEVATION 429.20

+0.90% -0.90%

280.00' V.C.

415.66

+0.36%
SPECIAL DITCH RT

416.26

VPI STA. 891+00.00
ELEVATION 427.04

-0.90% -0.15%

20'
5'

885+50	886+00	886+50	887+00	887+50	888+00	888+50	889+00	889+50	890+00	890+50	891+00	891+50
427.14 **427.06**	427.26 **427.18**	427.38 **427.42**	427.51 **427.77**	427.45 **428.18**	416.57 **428.45**	410.86 **428.57**	417.67 **428.52**	427.38 **428.31**	427.25 **427.94**	427.17 **427.54**	427.09 **427.23**	426.98 **427.01**

US 45 OVER RACCOON CREEK (SN 096-0067) PLAN & PROFILE

CONTRACT NO. 74040

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	*	WAYNE	140	16
STA. 891+50.00		TO STA. 897+50.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (8BR-2,10BR-3)B-1

EXIST. CURVE C2
PI STA. = 893+52.00
Δ = 0° 08′ 15″ (RT)
D = 0° 01′ 11″
R = 291,687.46′
T = 350.00′
L = 700.00′
E = 0.21′
e = _____
T.R. = _____
S.E. RUN = _____
P.C. STA. = 890+02.00
P.T. STA. = 897+02.00

EXISTING ROW
CONSTRUCTION LIMITS
HOT-MIX ASPHALT SHOULDERS, 6″
2′-6″ BASE COURSE WIDENING
END GUARDRAIL STA 892+05.25
END CONSTRUCTION STA 892+30.00
EXISTING ℄ US 45
MATCH LINE STA 891+50.00
892
893
894
895+00
896
897
PI Sta 897+02.00
PC Sta 897+42.90
13′
13′
30′ BUTT JOINT
+00.00 30′ RT
EXISTING ROW
7′-0″ BASE COURSE WIDENING
PROPOSED ROW
+00.00 70′ RT
CONSTRUCTION LIMITS

PAVED SHOULDER REMOVAL
TREE REMOVAL

20 10 0 20 40
SCALE IN FEET

PLAN — DRAWN / PLOTTED / ALIGNMENT CHECKED / GRADES CHECKED / CADD FILE NAME / NOTE BOOK / NO. / BY / DATE

PROFILE — DRAWN / PLOTTED / GRADES CHECKED / ALIGNMENT CHECKED / STRUCTURE NO(S). / CHKD

435
430
425
420
415
410
426.88
-0.15%
-0.03%
VPI STA. 892+00.00
ELEVATION 426.89
20′
5′

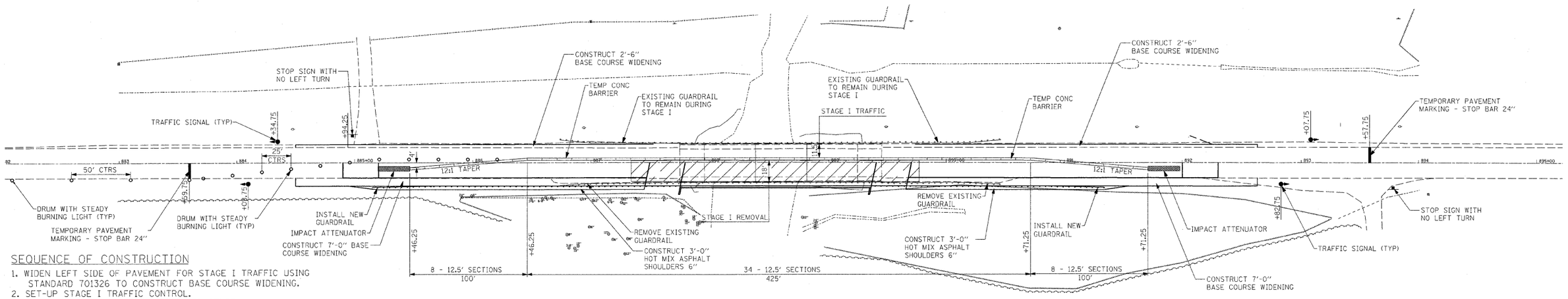
891+50	892+00	892+50	893+00	893+50	894+00	894+50	895+00	895+50	896+00	896+50	897+00	897+50
426.98	426.88	426.88	426.88	427.00	427.12	427.12	427.12	427.20	427.28	427.82	428.36	429.38
427.01	426.89											

US 45 OVER RACCOON CREEK (SN 096-0067) PLAN & PROFILE

CONTRACT NO. 74040

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	*	WAYNE	140	17
STA. 883+59.75		TO STA. 893+57.75		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (8BR-2,10BR-3)B-1



SEQUENCE OF CONSTRUCTION

1. WIDEN LEFT SIDE OF PAVEMENT FOR STAGE I TRAFFIC USING STANDARD 701326 TO CONSTRUCT BASE COURSE WIDENING.
2. SET-UP STAGE I TRAFFIC CONTROL.
3. REMOVE RIGHT SIDE OF EXISTING STRUCTURE.
4. CONSTRUCT RIGHT SIDE OF NEW BRIDGE.
5. WIDEN RIGHT SIDE OF PAVEMENT FOR STAGE II TRAFFIC.
6. REMOVE TRAFFIC CONTROL BARRIERS AND IMPACT ATTENUATORS.
7. CONSTRUCT PAVEMENT RESURFACING ON RIGHT SIDE AT EACH END OF NEW BRIDGE.
8. CHANGE TRAFFIC CONTROL TO STAGE II.
9. REMOVE LEFT SIDE OF EXISTING STRUCTURE.
10. CONSTRUCT LEFT SIDE OF NEW BRIDGE.
11. CONSTRUCT PAVEMENT RESURFACING ON RIGHT SIDE AT EACH END OF NEW BRIDGE.
12. REMOVE TRAFFIC CONTROL BARRIER AND TRAFFIC SIGNALS.
13. RESURFACE ENTIRE PROJECT.

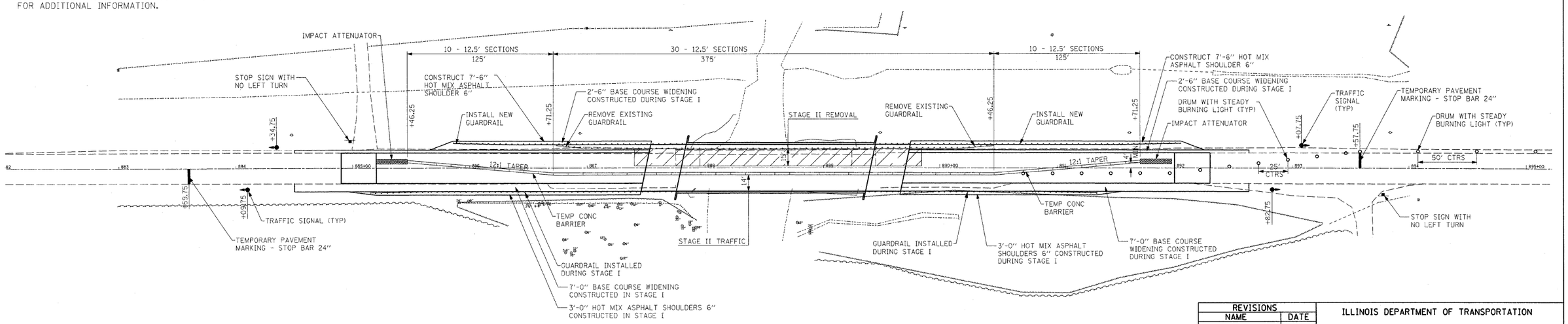
STAGE I

SCALE IN FEET
0 40 80

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.



STAGE II

SCALE IN FEET
0 40 80

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

STAGING PLAN
US ROUTE 45
OVER RACCOON CREEK

SCALE: VERT. N/A
HORIZ. 1" = 40'
DATE 06/12/07

DRAWN BY TJQ
CHECKED BY RPJ

PLOT DATE = 04/25/07
FILE NAME = STAGE1.DGN

US 45 OVER RACCOON CREEK (SN 096-0067) STAGING PLAN

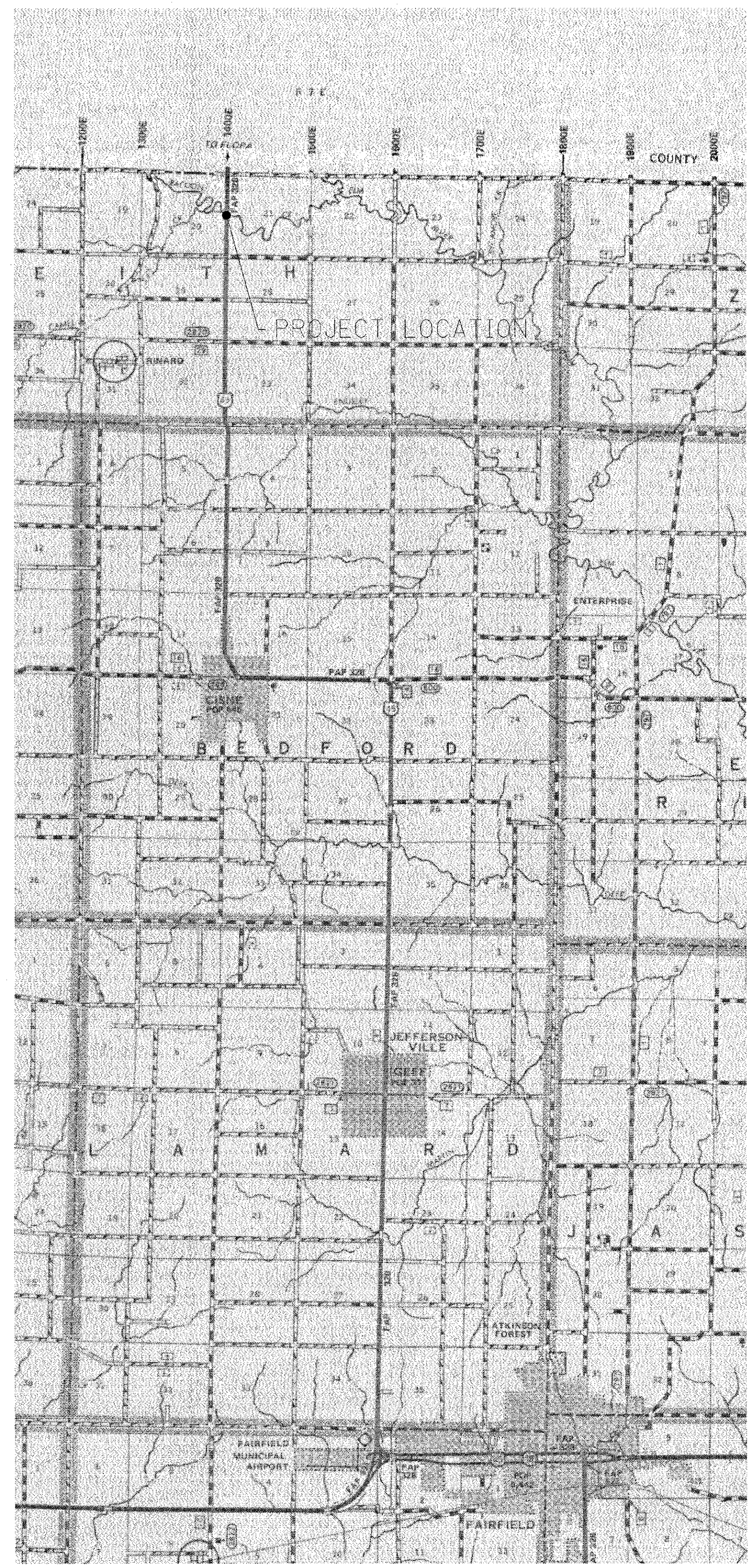
CONTRACT NO. 74040

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	*	WAYNE	140	18

STA. 883+59.75 TO STA. 893+57.75

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

* (8BR-2,10BR-3)B-1



LOCATION MAP

INSTALL WIDTH RESTRICTION SIGNS

1 - EACH (60"X48")
"BRIDGE CONSTRUCTION"
"6 MILES AHEAD"
"MAXIMUM WIDTH"
"10 FT - 0 IN"
TO BE INSTALLED JUST SOUTH OF
US 45/US 50 INTERSECTION
EAST OF FLORA, ILLINOIS

1 - EACH (60"X48")
"BRIDGE CONSTRUCTION"
5 MILES AHEAD
"MAXIMUM WIDTH"
"10 FT - 0 IN"
TO BE INSTALLED ALONG US 45
JUST NORTH OF CH 16
NORTH OF CISNE, ILLINOIS

1 - EACH (60"X48")
"BRIDGE CONSTRUCTION"
"18 MILES AHEAD"
"MAXIMUM WIDTH"
"10 FT - 0 IN"
TO BE INSTALLED JUST NORTH OF
THE US 45/IL 15 INTERSECTION
WEST OF FAIRFIELD, ILLINOIS

1 - EACH (30"X12")
"MAX WIDTH"
AND
1 - EACH (30"X12")
"10 FT - 0 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 RACCOON CREEK

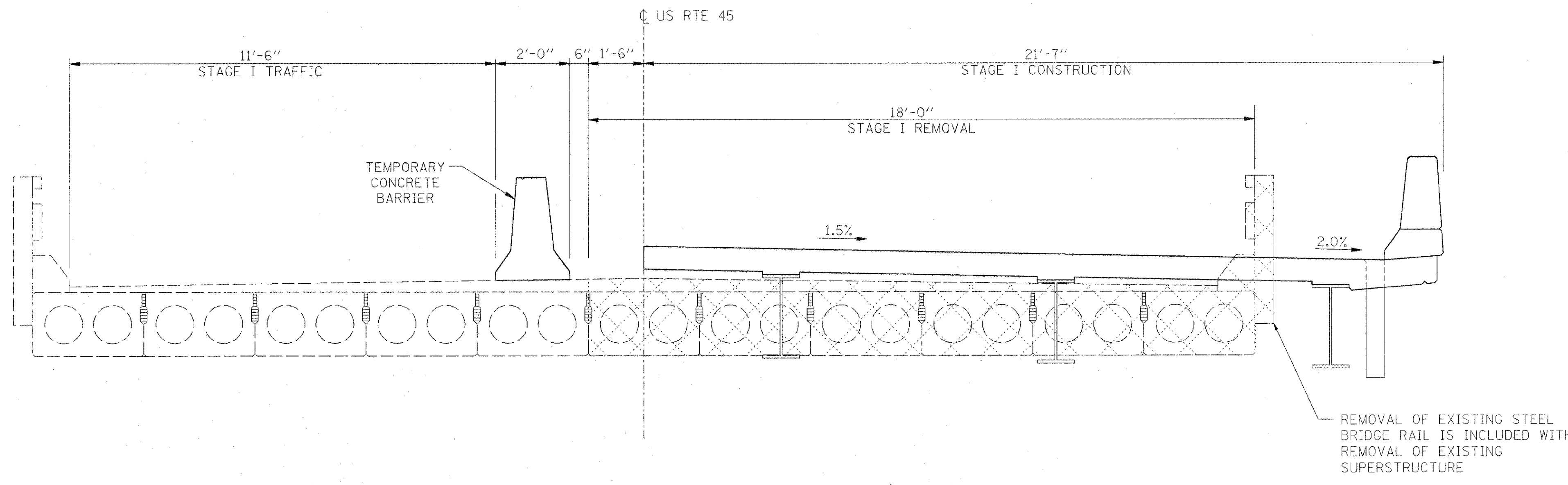
SCALE: VERT. NONE HORIZ. NONE
DATE 06/12/07
DRAWN BY TJO
CHECKED BY RPJ

US 45 OVER RACCOON CREEK (SN 096-0067) STAGING SIGNAGE

CONTRACT NO. 74040

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	*	WAYNE	140	19
STA. 883+59.75 TO STA. 893+57.75				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

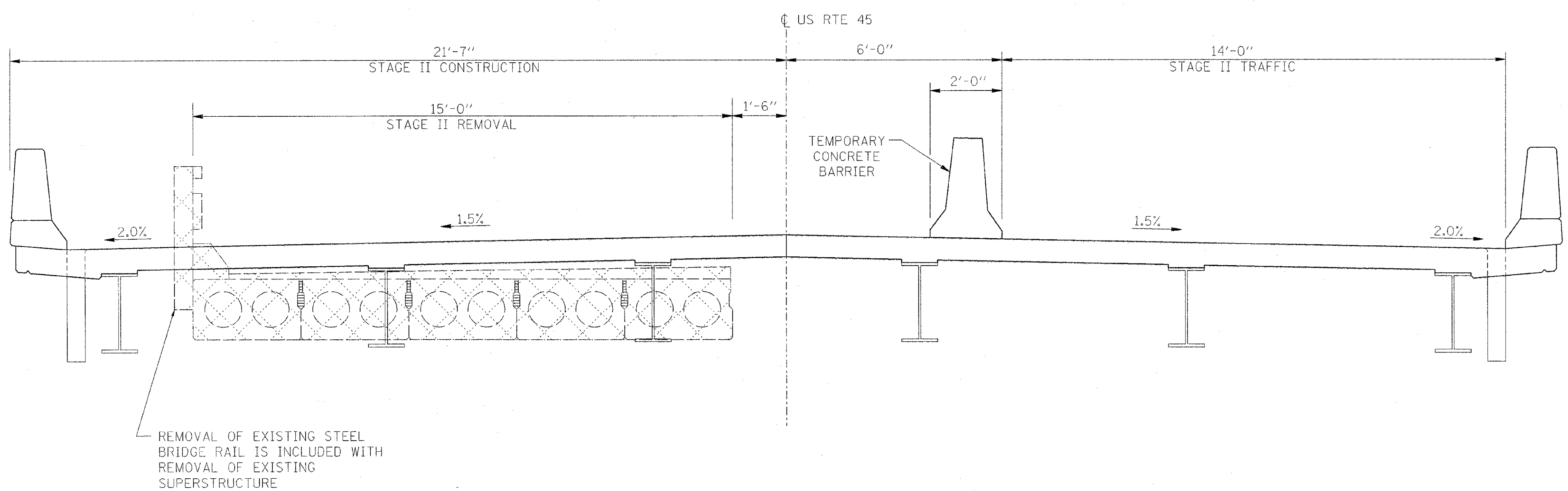
* (8BR-2,10BR-3)B-1



STAGE I

NOTE:

CROSS HATCHED AREAS INDICATE REMOVAL OF EXISTING SUPERSTRUCTURE.



STAGE II

Plot Date: 9/17/2007
Plot Time: 10:07:09 AM
Plotted By: sdonahue
...construction_plans\12_Staging_XSections_067.dgn

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

STAGING CROSS SECTIONS

US ROUTE 45
OVER RACCOON CREEK

SCALE: VERT. NONE HORIZ. NONE
DATE 06/12/07
DRAWN BY TJO
CHECKED BY RPJ

US 45 OVER RACCOON CREEK (SN 096-0067) STAGING CROSS SECTIONS

CONTRACT NO. 74040

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	*	WAYNE	140	20
STA. 879+50.00		TO STA.885+50.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (BBR-2,10BR-3)B-1

N

PLAN — DRAWN / PLOTTED / ALIGNMENT CHECKED / PLANS AND CHECKED / CADD FILE NAME / NOTE BOOK / NO. / BY / DATE

PROFILE — PLOTTED / GRADES CHECKED / NOTE BOOK / STRUCTURE NO(YA)NS C+KD / NO. / BY / DATE

CONSTRUCTION LIMITS

EXISTING ℄ US 45

+50.00

+409.75 E.L.

880+00 | 881 | 882 | 883 | 884 | 885+00

13'

13'

MATCH LINE STA 885+50.00

+50.00

CONSTRUCTION LIMITS

LEGEND

TEMPORARY DITCH CHECK

PERIMETER EROSION BARRIER

20 10 0 20 40

SCALE IN FEET

435 / 430 / 425 / 420 / 415 / 410

427.03 | 427.05 | 427.05 | 427.04 | 426.97 | 426.91 | 426.92 | 426.94 | 426.99 | 427.04 | 427.03 | 427.02 427.03 | 427.14 427.06

879+50 | 880+00 | 880+50 | 881+00 | 881+50 | 882+00 | 882+50 | 883+00 | 883+50 | 884+00 | 884+50 | 885+00 | 885+50

427.02

+0.05% VPI STA. 885+20.00 ELEVATION 427.04 +0.00%

20'

5'

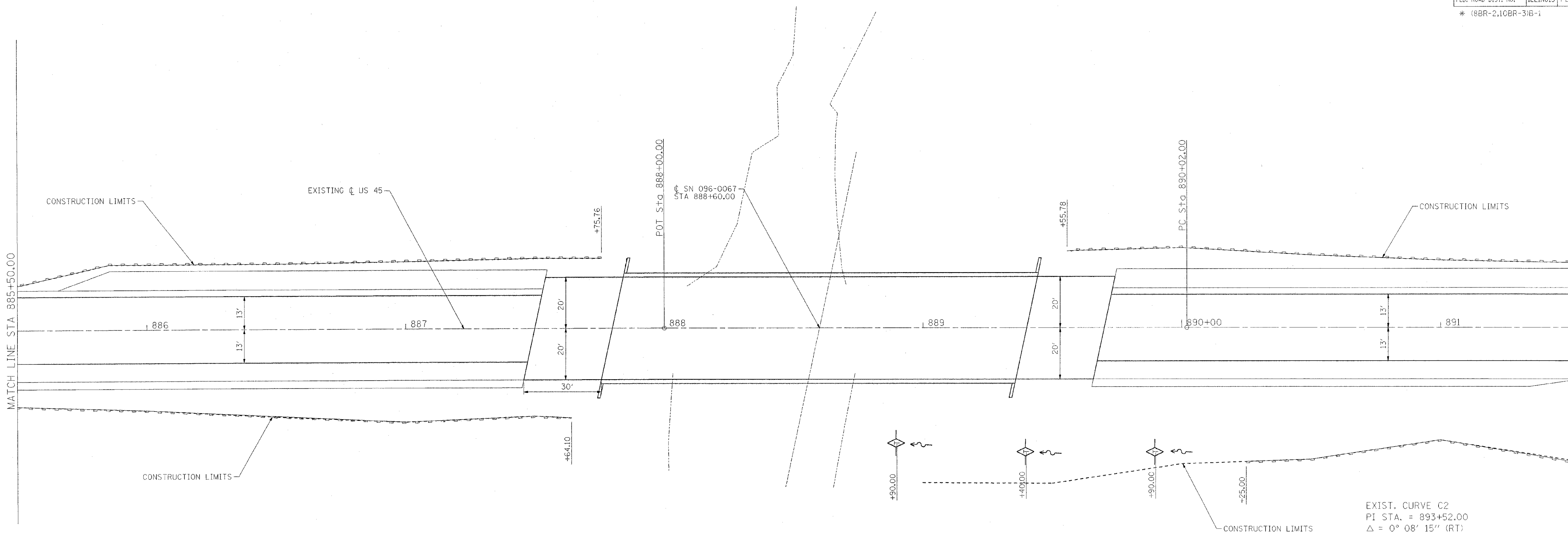
Plot Date: 9/17/2007
Plot Time: 10:07:16 AM
Plotted By: sdonahue
Plot Scale:
Filename: i:\06055\cadd\replacement\construction plans\13_096-0067_EC04.dgn

US 45 OVER RACCOON CREEK (SN 096–0067) EROSION CONTROL PLAN

CONTRACT NO. 74040

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	*	WAYNE	140	21
STA. 885+50.00	TO STA. 891+50.00			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (8BR-2,10BR-3)B-1



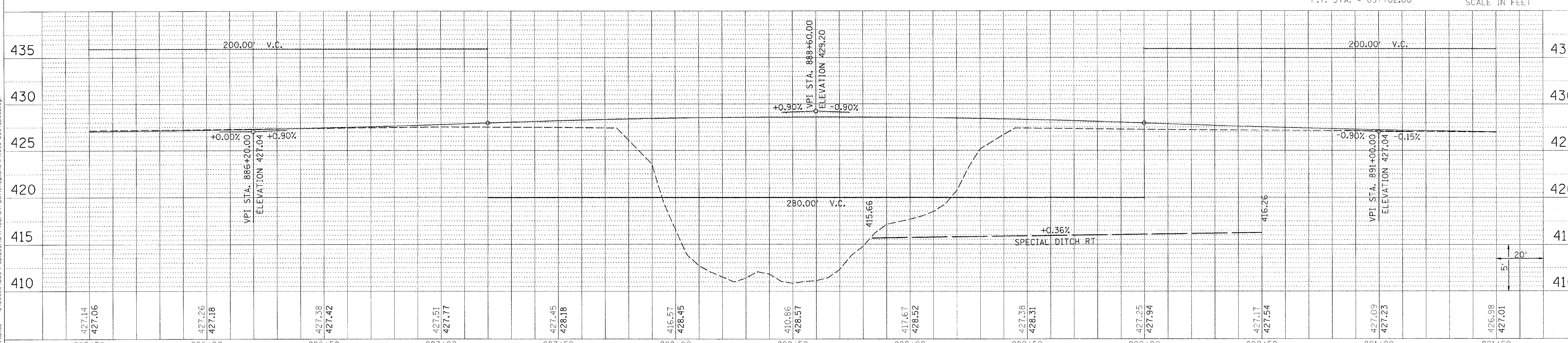
LEGEND

TEMPORARY DITCH CHECK

PERIMETER EROSION BARRIER

EXIST. CURVE C2
PI STA. = 893+52.00
Δ = 0° 08' 15" (RT)
D = 0° 01' 11"
R = 291,687.46'
T = 350.00'
L = 700.00'
E = 0.21'
e = -----
T.R. = -----
S.E. RUN = -----
P.C. STA. = 890+02.00
P.T. STA. = 897+02.00

SCALE IN FEET



US 45 OVER RACCOON CREEK (SN 096-0067) EROSION CONTROL PLAN

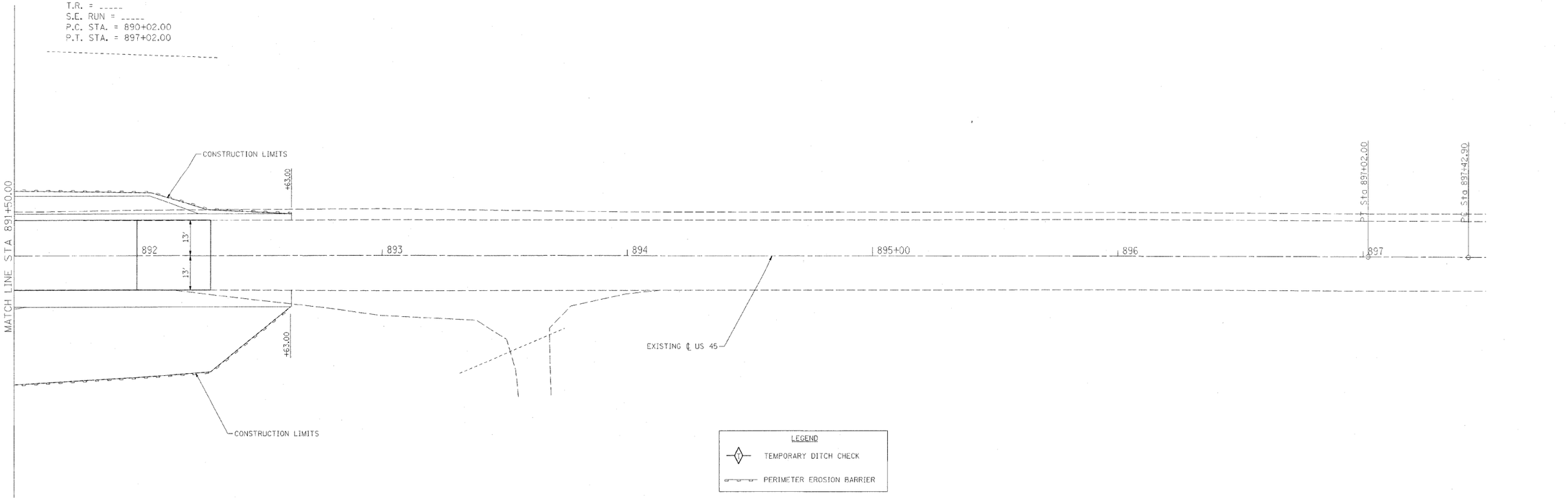
CONTRACT NO. 74040

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	*	WAYNE	140	22
STA. 891+50.00		TO STA. 897+50.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (8BR-2,10BR-3)B-1

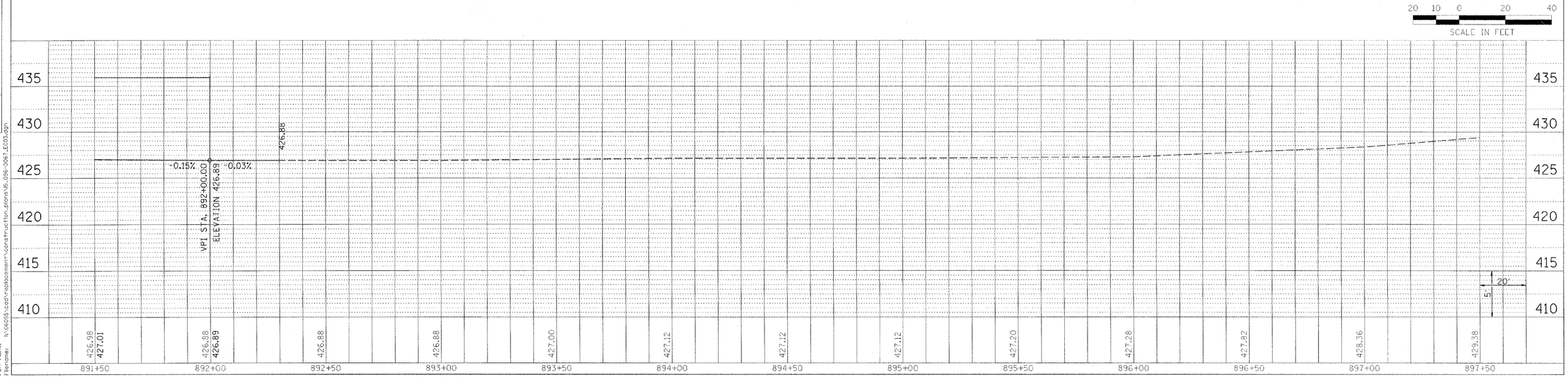
EXIST. CURVE C2
PI STA. = 893+52.00
Δ = 0° 08' 15" (RT)
D = 0° 01' 11"
R = 291,687.46'
T = 350.00'
L = 700.00'
E = 0.21'
e = _____
T.R. = _____
S.E. RUN = _____
P.C. STA. = 890+02.00
P.T. STA. = 897+02.00

PLAN
DRAWN BY: DATE:
PLOTTED
ALIGNMENT CHECKED
RT. OF WAY MONUMENTED
CADD FILE NAME
NOTE BOOK
NO.



LEGEND
TEMPORARY DITCH CHECK
PERIMETER EROSION BARRIER

PROFILE
DRAWN BY: DATE:
PLOTTED
GRADES CHECKED
R.P. & M. SET
NOTE BOOK
NO.
STRUCTURE NOTATIONS CHKD



Plot Date: 9/17/2007
Plot Time: 10:07:05 AM
Plotted By: sdonahue
Plot Scale: 1" = 20'
Filename: I:\06056\cadd\replacement\construction_plans\B_096-0067_E003.dgn

US 45 OVER RACCOON CREEK (SN 096-0067) EROSION CONTROL PLAN

Bench Mark: Railroad spike in power pole no. 280 on West side of US 45. Sta. 906+06, 29.7' o/s. Elev. 438.46

Existing Structure: SN 096-0019 was originally built in 1920. The superstructure was replaced and the substructure widened in 1973. The structure consists of 3 spans of PPC deck beams on closed abutments and solid shaft piers. The bridge is 129'-0" bk.-bk. abuts. and 33'-0" o.-o. deck. Existing structure is to be removed and replaced. One lane of traffic will be maintained utilizing stage construction.

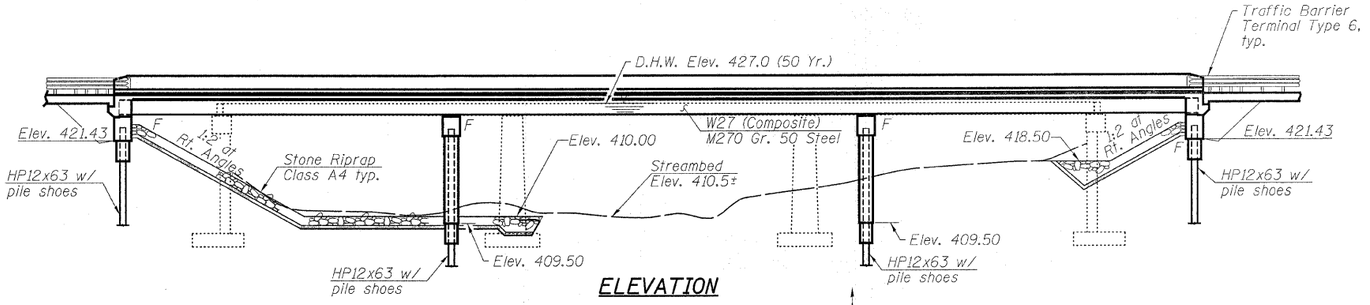
No salvage.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

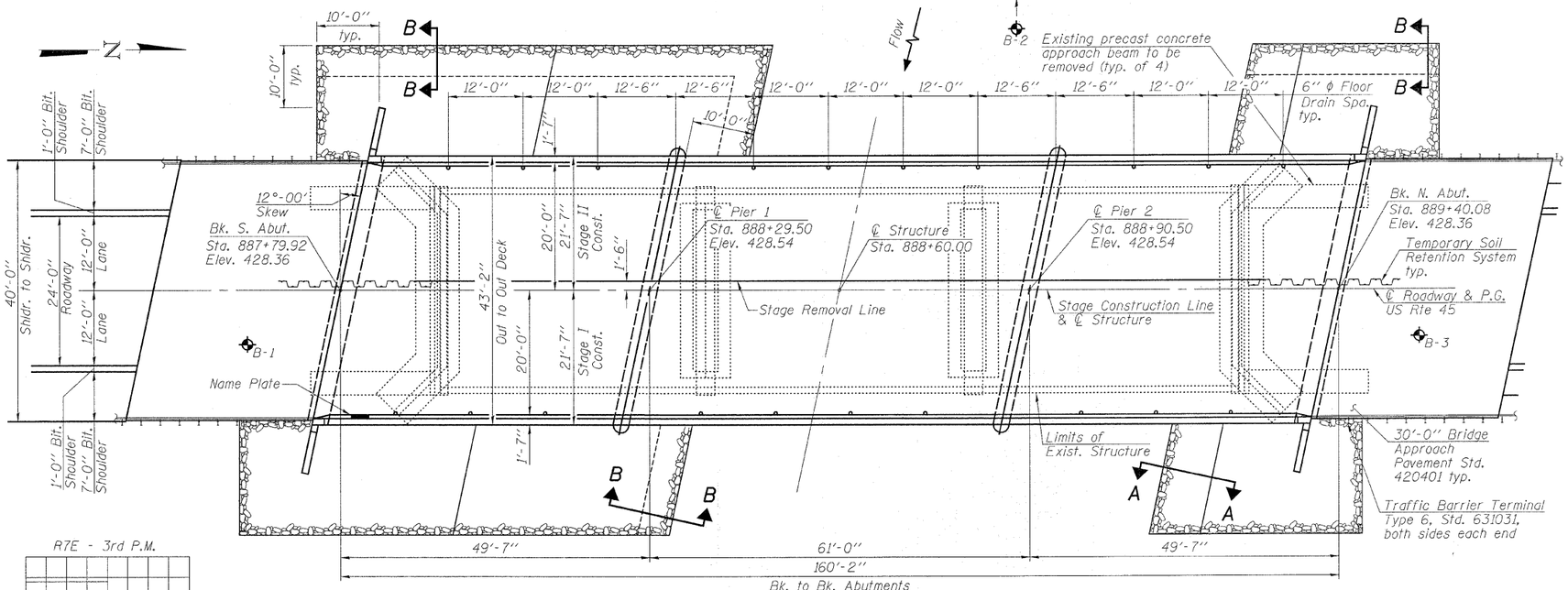
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 328	(8BR-2) B-1	WAYNE	140	23
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 1
25 SHEETS

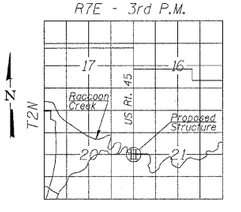
Contract #74040



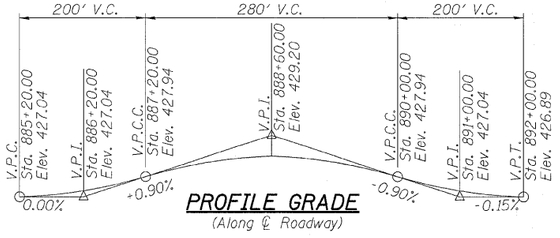
ELEVATION



PLAN



LOCATION SKETCH



PROFILE GRADE
(Along ℄ Roadway)

DESIGNED	SJB
CHECKED	EML
DRAWN	KLH
CHECKED	EML

WATERWAY INFORMATION

Drainage Area = 72.6 Sq. Mi.
Exist. Low Grade Elev. = 426.9 Ft. @ Sta. 893+00
Prop. Low Grade Elev. = 426.9 Ft. @ Sta. 893+00

Flood Frequency		Discharge (cfs) Exist.	Discharge (cfs) Prop.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head-Ft. Exist.	Head-Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
10 Yr	Main Channel	4431	4505	1158	1557	425.7	0.5	0.3	426.2	426.0
	Relief Structure	276	202	70	70					
	Total	4707	4707	1228	1627					
Design 50 Yr	Main Channel	6669	6774	1158	1557	427.0	0.8	0.6	427.8	427.6
	Relief Structure	322	217	70	70					
	Total	6991	6991	1228	1627					
100 Yr	Main Channel	7489	7600	1158	1557	427.4	0.7	0.5	428.1	427.9
	Relief Structure	452	341	70	70					
	Total	7941	7941	1228	1627					
Overtopping 25 Yr	Main Channel	5741	5835	1158	1557	426.4	0.9	0.7	427.3	427.1
	Relief Structure	290	196	70	70					
	Total	6031	6031	1228	1627					

INDEX OF SHEETS

DESIGN SPECIFICATIONS
2002 AASHTO

LOADING HS20-44
Allow 50 psf for future wearing surface.

DESIGN STRESSES

FIELD UNITS
f'c = 3,500 psi
fy = 60,000 psi (Reinf.)
fy = 50,000 psi (structural steel AASHTO M270, Gr. 50)
fy = 36,000 psi (structural steel AASHTO M270, Gr. 36)

SEISMIC DATA
Seismic Performance Category (SPC) = B
Bedrock Acceleration Coefficient (A) = 9.1%g
Site Coefficient (S) = 1.5

STATION 888+60.00
BUILT 200 BY
STATE OF ILLINOIS
FAP RT 328 - SEC (8BR-2)B-1
LOADING HS20
STR. NO. 096-0067

NAME PLATE
See Std. 515001

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	N. Abut.	Pier 1	Pier 2	S. Abut.
	421.42	410.50	415.00	421.42

ERIC M. LAGEMANN
LICENSE NO. 081-006124
STATE OF ILLINOIS LICENSED STRUCTURAL ENGINEER

APPROVED
FOR STRUCTURAL ADEQUACY ONLY

Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

Eric Lagemann 8/2/07
Expires 11/30/2008

HORNER & SHIFRIN, INC.
ENGINEERS

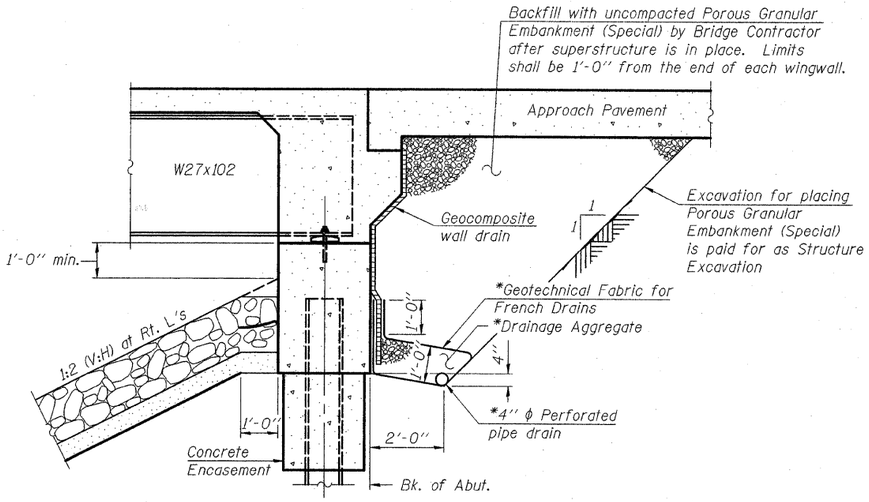
GENERAL PLAN
US ROUTE 45 OVER RACCOON CREEK
F.A.P. ROUTE 328 - SECTION (8BR-2)B-1
WAYNE COUNTY
STATION 888+60.00
STRUCTURE NO. 096-0067

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 328	(8BR-2) B-1	WAYNE	TOTAL SHEETS 140	SHEET NO. 24
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 2
25 SHEETS

Contract #74040



SECTION THRU INTEGRAL ABUTMENT

(Horiz. dim. at Rt. L's)

* Included in the cost of Pipe Underdrains for Structures.

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

GENERAL NOTES

Fasteners shall be AASHTO M164 Type 1, mechanically galvanized bolts. Bolts $\frac{7}{8}$ in. ϕ, holes $\frac{15}{16}$ in. ϕ, unless otherwise noted.

Calculated Weight of Structural Steel = 103,620 AASHTO M 270 Grade 50.

Calculated Weight of Structural Steel = 9,100 ASSHTO M 270 Grade 36.

No field welding is permitted except as specified in the contract documents.

Reinforcement bars shall conform to the requirements of ASTM A706 Gr 60 (IL Modified). See Special Provisions.

Reinforcement bars designated (E) shall be epoxy coated.

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of $\frac{1}{8}$ in. (0.01 ft). Adjustments shall be made either by grinding the surface or by shimming the bearings.

The Inorganic Zinc Rich Primer / Acrylic / Acrylic Paint System shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the final finish coat for all interior steel surfaces shall be grey, Munsell No. 5B 7/1. The color of the final finish coat for the exterior and bottom flange of the fascia beams shall be blue, Munsell No. 10B 3/6. See Special Provision for "Cleaning and Painting New Metal Structures."

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

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

All cross frames or diaphragms shall be installed as steel is erected and secured with erection pins and bolts except as otherwise noted. Individual cross frames or diaphragms at supports may be temporarily disconnected to install bearing anchor rods.

Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.

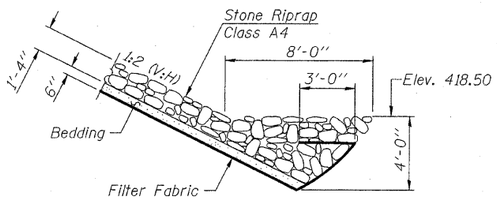
Two $\frac{1}{8}$ in. adjusting shims shall be provided for each bearing in addition to all other plates or shims and placed as shown on bearing details.

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.

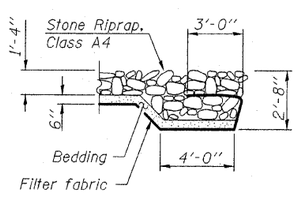
Slipforming of the parapets is not allowed.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment (Special)	Cu. Yd.		85	85
Stone Riprap, Class A4	Sq. Yd.		897	897
Filter Fabric	Sq. Yd.		1174	1174
Removal of Existing Structures	Each			1
Structure Excavation	Cu. Yd.		347	347
Floor Drains	Each	20		20
Concrete Structures	Cu. Yd.		133.8	133.8
Concrete Superstructure	Cu. Yd.	226.9		226.9
Bridge Deck Grooving	Sq. Yd.	676		676
Concrete Encasement	Cu. Yd.		12.6	12.6
Protective Coat	Sq. Yd.	846		846
Furnishing and Erecting Structural Steel	L Sum	0.58		0.58
Stud Shear Connectors	Each	3,294		3,294
Reinforcement Bars, Epoxy Coated	Pound	57,780	13,660	71,440
Bar Splicers	Each	656	76	732
Furnishing Steel Piles HP12x63	Foot		1088	1088
Driving Piles	Foot		1088	1088
Test Pile Steel HP12x63	Each		2	2
Pile Shoes	Each		36	36
Name Plates	Each	1		1
Anchor Bolts, 1"	Each	48		48
Geocomposite Wall Drain	Sq. Yd.		62	62
Pipe Underdrains for Structures (4")	Foot		121	121
Mechanical Splice	Each		48	48
Temporary Soil Retention System	Sq. Ft.		435	435
Underwater Structure Excavation Protection, Location 1	Each		1	1
Underwater Structure Excavation Protection, Location 2	Each		1	1
Asbestos Bearing Pad Removal	Each	22		22



SECTION A-A



SECTION B-B

DESIGNED	SJB
CHECKED	EML
DRAWN	KLH
CHECKED	EML

HORNER & SHIFRIN, INC.
ENGINEERS

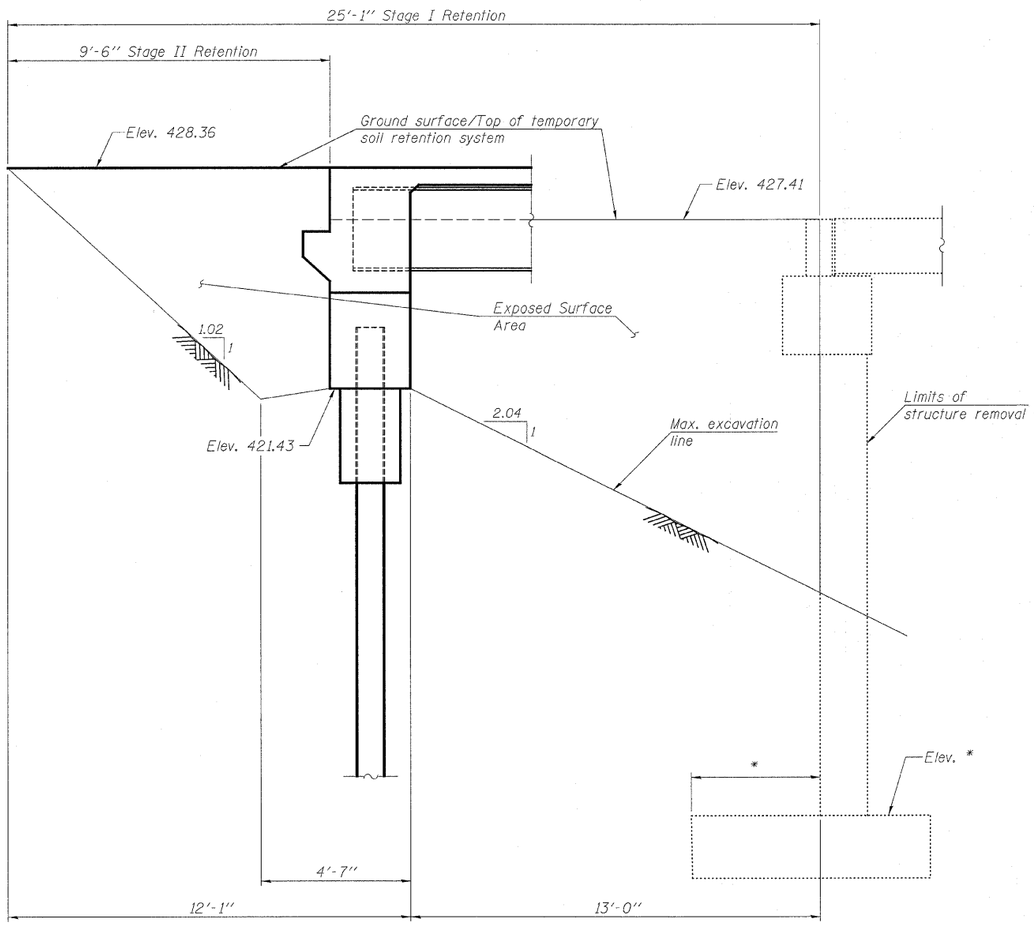
GENERAL NOTES AND DETAILS
F.A.P. ROUTE 328 - SECTION (8BR-2)B-1
WAYNE COUNTY
STATION 888+60.00
STRUCTURE NO. 096-0067

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

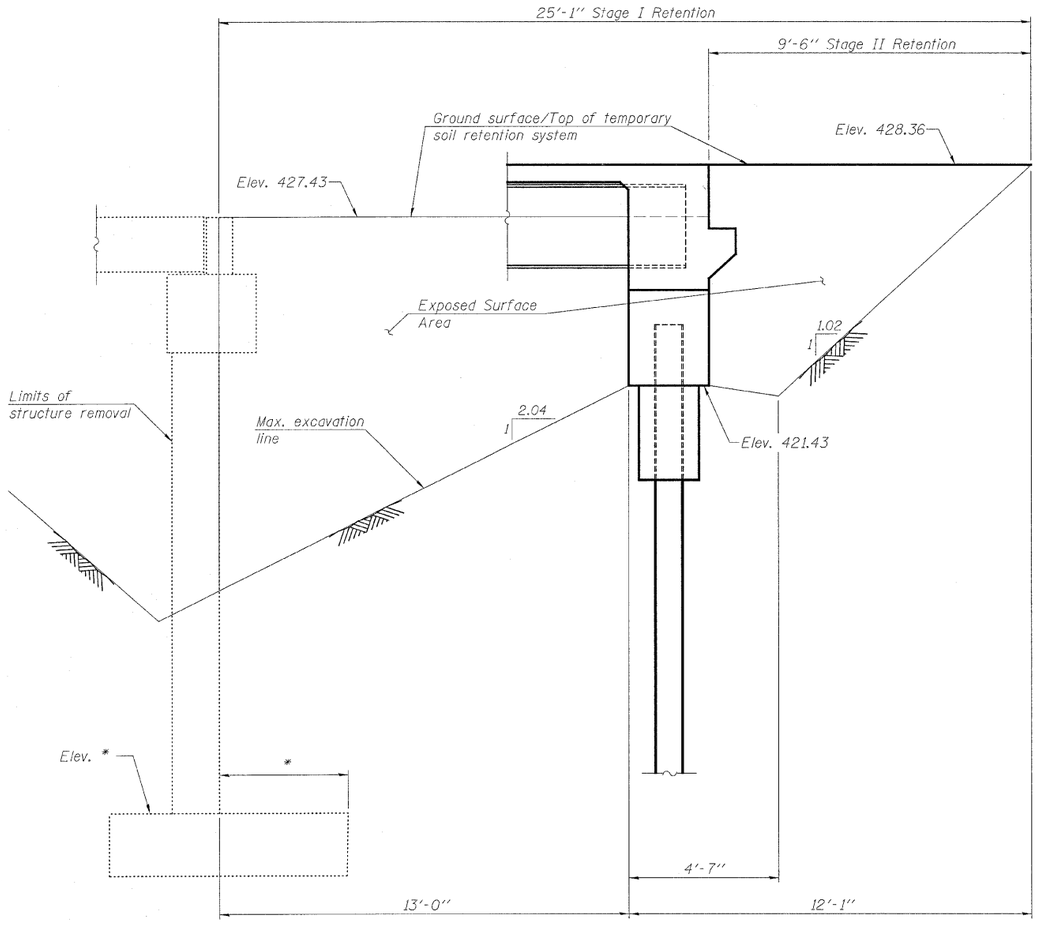
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 328	(8BR-2) B-1	WAYNE	140	25
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 3
25 SHEETS

Contract #74040



TEMPORARY SOIL RETENTION SYSTEM
AT SOUTH ABUTMENT



TEMPORARY SOIL RETENTION SYSTEM
AT NORTH ABUTMENT

Notes:
Excavation behind existing abutment walls shall be performed to balance front and back soil pressure before removing the existing superstructure. The contractor shall sawcut the upper portion of the existing abutment at the stage removal line before Stage 1 removal to ensure the remaining portion will not be prematurely damaged.

A cantilevered sheet piling design does not appear feasible and additional members or other retention system may be necessary. The Contractor shall submit a temporary soil retention system design including plan details and calculations for review and acceptance by the Engineer.

* Existing plans for substructure are not available. It is the Contractor's responsibility to determine existing footing dimensions and elevations.

DESIGNED	KLH
CHECKED	EML
DRAWN	KLH
CHECKED	EML

HORNER & SHIFRIN, INC.
ENGINEERS

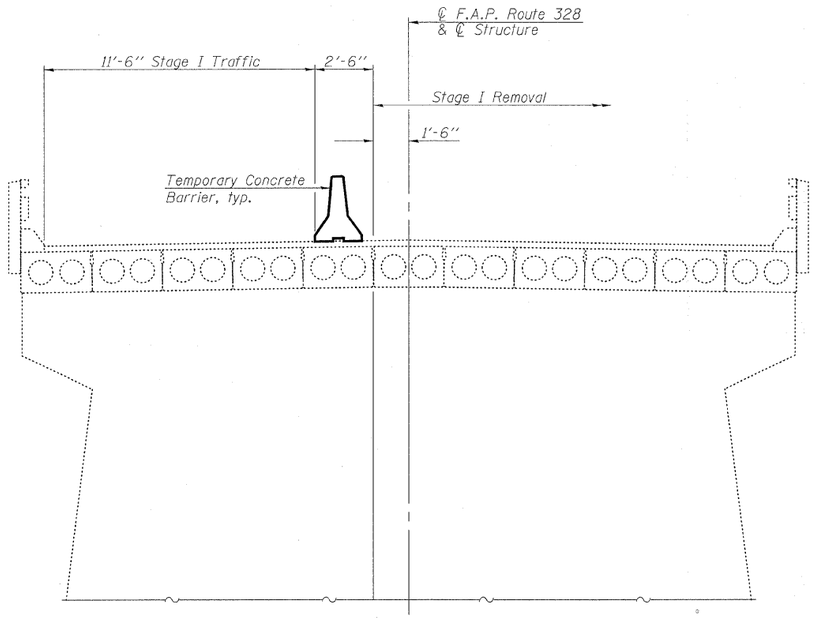
TEMPORARY SOIL RETENTION SYSTEM
F.A.P. ROUTE 328 - SECTION (8BR-2)B-1
WAYNE COUNTY
STATION 888+60.00
STRUCTURE NO. 096-0067

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

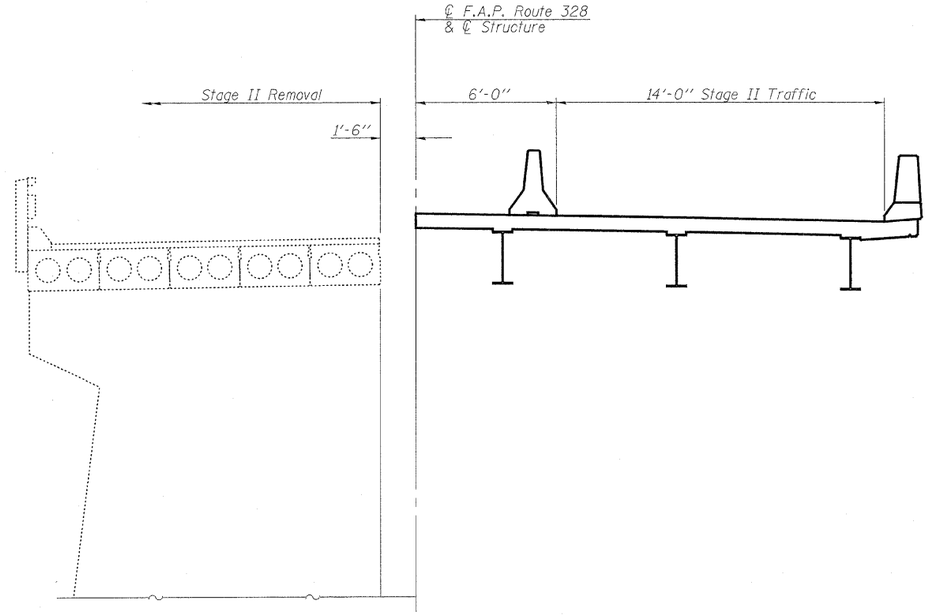
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 328	(8BR-2) B-1	WAYNE	140	26
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 4
25 SHEETS

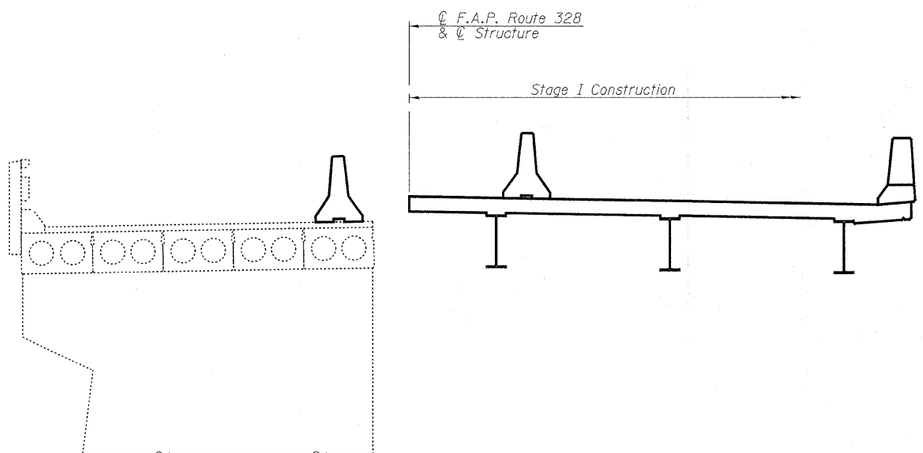
Contract #74040



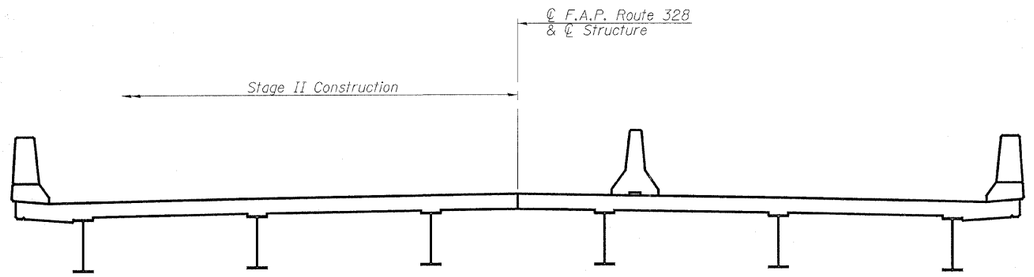
STAGE I REMOVAL
(Looking North)



STAGE II REMOVAL
(Looking North)



STAGE I CONSTRUCTION
(Looking North)



STAGE II CONSTRUCTION
(Looking North)

DESIGNED	SJB
CHECKED	EML
DRAWN	KLH
CHECKED	EML

HORNER & SHIFRIN, INC.
ENGINEERS

STAGE CONSTRUCTION DETAILS
F.A.P. ROUTE 328 - SECTION (8BR-2)B-1
WAYNE COUNTY
STATION 888+60.00
STRUCTURE NO. 096-0067

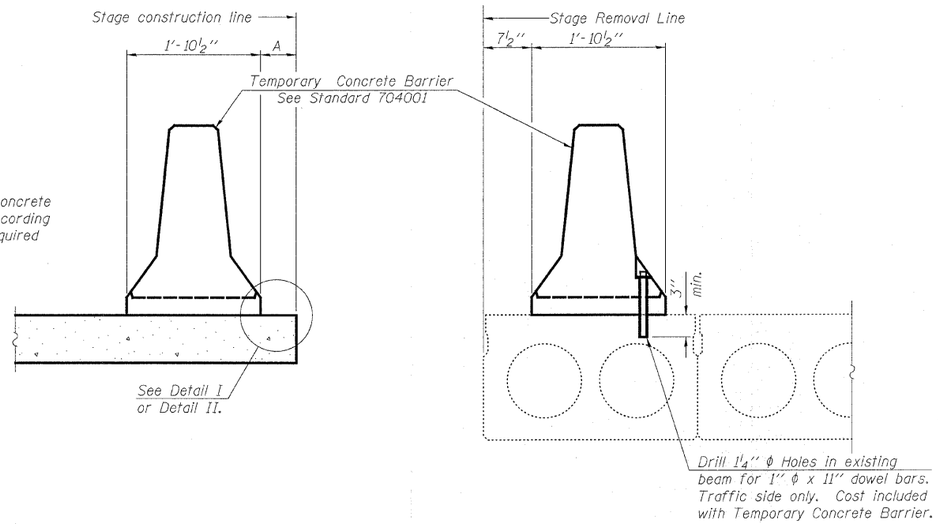
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 328	(8BR-2) B-1	WAYNE	140	27
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 5
25 SHEETS

Contract #74040

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 PPC DECK BEAMS

SECTIONS THRU SLAB

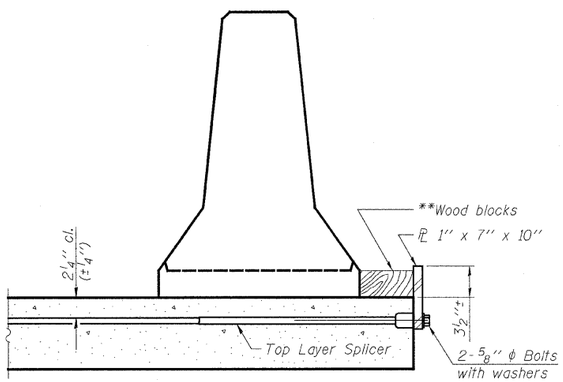
NOTES

Detail I - With Bar Splicer or Couplers:
Connect one (1) 1"x7"x10" steel ℄ to the top layer of couplers with 2-⅝" ϕ bolts screwed to coupler at approximate ℄ of each barrier panel.

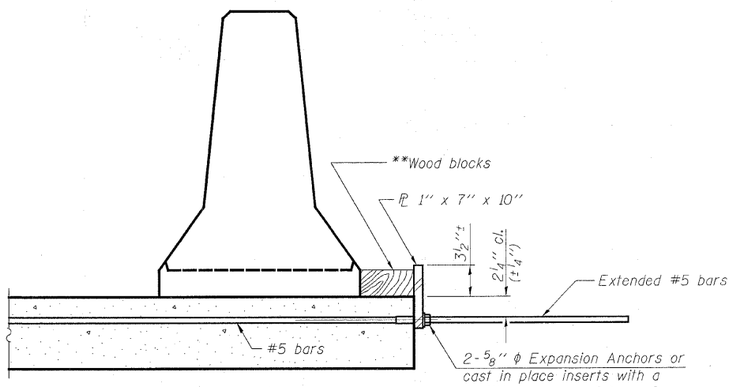
Detail II - With Extended Reinforcement Bars:
Connect one (1) 1"x7"x10" steel ℄ to the concrete slab with 2-⅝" ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate ℄ of each barrier panel.

Cost of anchorage is included with Temporary Concrete Barrier.

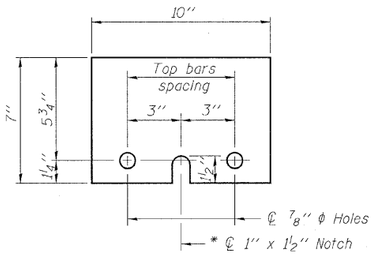
The 1" x 7" x 10" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.



DETAIL I



DETAIL II



STEEL RETAINER ℄ 1" x 7" x 10"

* Required only with 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.

DESIGNED	KLH
CHECKED	EML
DRAWN	KLH
CHECKED	EML

HORNER & SHIFRIN, INC.
ENGINEERS

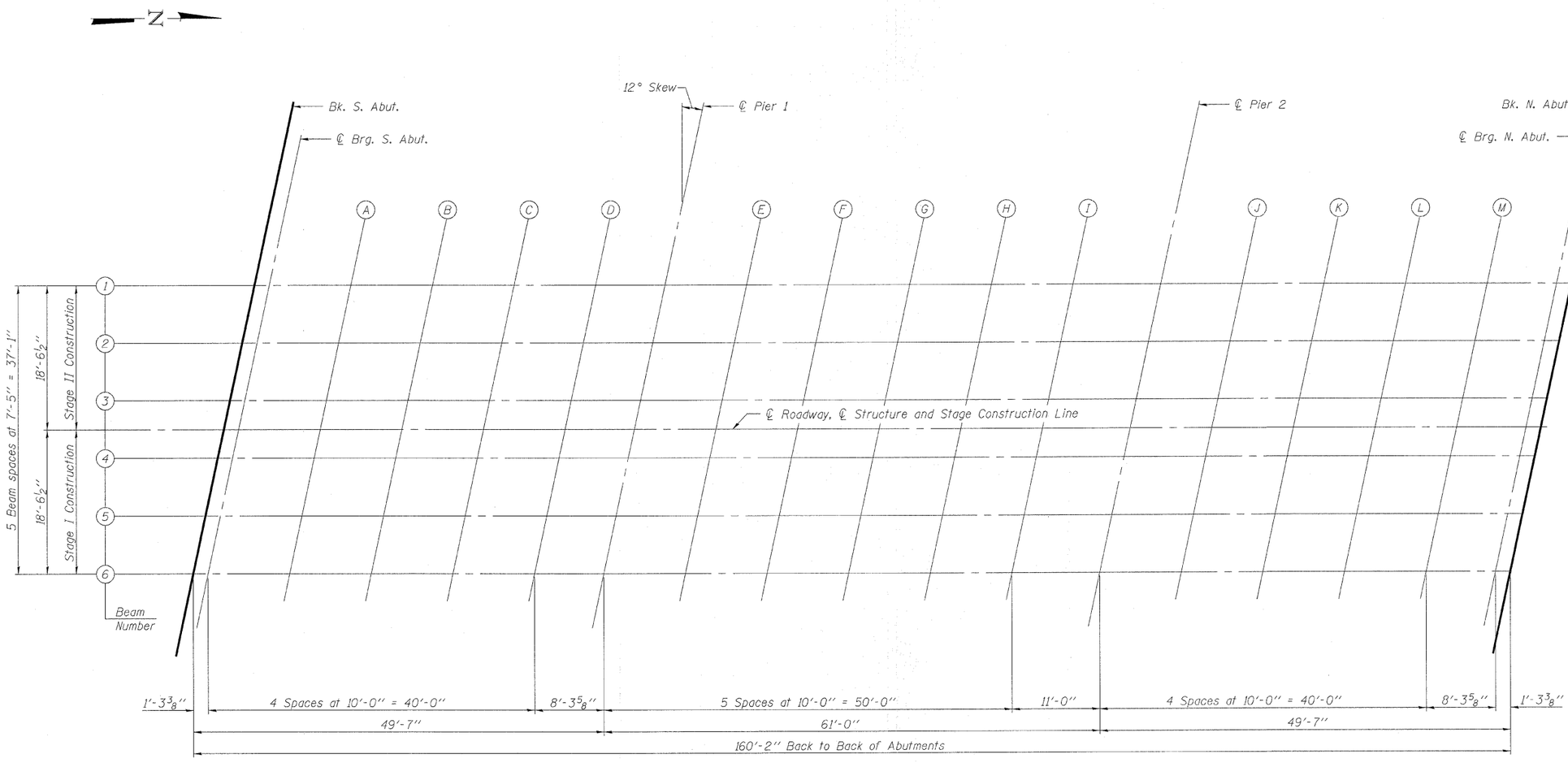
TEMPORARY CONCRETE BARRIER
FOR STAGE CONSTRUCTION
F.A.P. ROUTE 328 - SECTION (8BR-2)B-1
WAYNE COUNTY
STATION 888+60.00
STRUCTURE NO. 096-0067

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 328	(8BR-2) B-1	WAYNE	140	28
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 6
25 SHEETS

Contract #74040

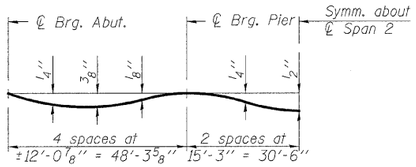


PLAN

DESIGNED	EML
CHECKED	KLH
DRAWN	KLH
CHECKED	EML

HORNER & SHIFRIN, INC.
ENGINEERS

TOP OF SLAB ELEVATIONS
F.A.P. ROUTE 328 - SECTION (8BR-2)B-1
WAYNE COUNTY
STATION 888+60.00
STRUCTURE NO. 096-0067

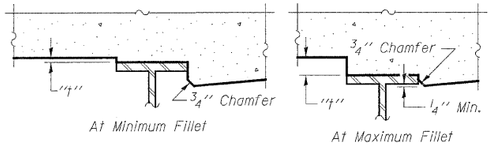


DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete only.)

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 328	(8BR-2) B-1	WAYNE	140	29
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 7
25 SHEETS

Contract #74040

To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown below. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown below, minus slab thickness, equals the fillet heights "t" above top flange of beams.

FILLET HEIGHTS

BEAM 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	887+83.86	-18.54	428.06	428.06
℄ Brg. S. Abut.	887+85.14	-18.54	428.07	428.07
A	887+95.14	-18.54	428.11	428.13
B	888+05.14	-18.54	428.15	428.18
C	888+15.14	-18.54	428.18	428.20
D	888+25.14	-18.54	428.21	428.21
℄ Pier 1	888+33.44	-18.54	428.22	428.22
E	888+43.44	-18.54	428.24	428.25
F	888+53.44	-18.54	428.24	428.28
G	888+63.44	-18.54	428.25	428.29
H	888+73.44	-18.54	428.24	428.28
I	888+83.44	-18.54	428.23	428.25
℄ Pier 2	888+94.44	-18.54	428.21	428.21
J	889+04.44	-18.54	428.18	428.19
K	889+14.44	-18.54	428.15	428.18
L	889+24.44	-18.54	428.11	428.14
M	889+34.44	-18.54	428.07	428.09
℄ Brg. N. Abut.	889+42.74	-18.54	428.03	428.03
Bk. N. Abut.	889+44.02	-18.54	428.02	428.02

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	887+82.28	-11.13	428.20	428.20
℄ Brg. S. Abut.	887+83.56	-11.13	428.21	428.21
A	887+93.56	-11.13	428.25	428.28
B	888+03.56	-11.13	428.29	428.32
C	888+13.56	-11.13	428.33	428.35
D	888+23.56	-11.13	428.35	428.36
℄ Pier 1	888+31.86	-11.13	428.37	428.37
E	888+41.86	-11.13	428.39	428.40
F	888+51.86	-11.13	428.39	428.43
G	888+61.86	-11.13	428.40	428.44
H	888+71.86	-11.13	428.39	428.43
I	888+81.86	-11.13	428.38	428.40
℄ Pier 2	888+92.86	-11.13	428.36	428.36
J	889+02.86	-11.13	428.34	428.35
K	889+12.86	-11.13	428.31	428.33
L	889+22.86	-11.13	428.27	428.30
M	889+32.86	-11.13	428.23	428.24
℄ Brg. N. Abut.	889+41.17	-11.13	428.18	428.18
Bk. N. Abut.	889+42.44	-11.13	428.18	428.18

BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	887+80.71	-3.71	428.31	428.31
℄ Brg. S. Abut.	887+81.99	-3.71	428.32	428.32
A	887+91.99	-3.71	428.36	428.39
B	888+01.99	-3.71	428.40	428.43
C	888+11.99	-3.71	428.44	428.46
D	888+21.99	-3.71	428.47	428.47
℄ Pier 1	888+30.29	-3.71	428.48	428.48
E	888+40.29	-3.71	428.50	428.51
F	888+50.29	-3.71	428.51	428.54
G	888+60.29	-3.71	428.51	428.56
H	888+70.29	-3.71	428.51	428.55
I	888+80.29	-3.71	428.50	428.52
℄ Pier 2	888+91.29	-3.71	428.48	428.48
J	889+01.29	-3.71	428.46	428.47
K	889+11.29	-3.71	428.43	428.45
L	889+21.29	-3.71	428.39	428.42
M	889+31.29	-3.71	428.35	428.37
℄ Brg. N. Abut.	889+39.59	-3.71	428.31	428.31
Bk. N. Abut.	889+40.87	-3.71	428.30	428.30

Note:
Offsets are based off of ℄ F.A.P. Route 328.

DESIGNED	EML
CHECKED	KLH
DRAWN	KLH
CHECKED	EML

HORNER & SHIFRIN, INC.
ENGINEERS

TOP OF SLAB ELEVATIONS
F.A.P. ROUTE 328 - SECTION (8BR-2)B-1
WAYNE COUNTY
STATION 888+60.00
STRUCTURE NO. 096-0067

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 328	(8BR-2) B-1	WAYNE	140	30
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 8
25 SHEETS

Contract #74040

℄ ROADWAY, ℄ STRUCTURE AND STAGE CONSTRUCTION LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	887+79.92	0.00	428.36	428.36
℄ Brg. S. Abut.	887+81.20	0.00	428.37	428.37
A	887+91.20	0.00	428.42	428.44
B	888+01.20	0.00	428.46	428.49
C	888+11.20	0.00	428.49	428.52
D	888+21.20	0.00	428.52	428.53
℄ Pier 1	888+29.50	0.00	428.54	428.54
E	888+39.50	0.00	428.56	428.57
F	888+49.50	0.00	428.57	428.60
G	888+59.50	0.00	428.57	428.61
H	888+69.50	0.00	428.57	428.60
I	888+79.50	0.00	428.56	428.57
℄ Pier 2	888+90.50	0.00	428.54	428.54
J	889+00.50	0.00	428.52	428.53
K	889+10.50	0.00	428.49	428.51
L	889+20.50	0.00	428.45	428.48
M	889+30.50	0.00	428.41	428.43
℄ Brg. N. Abut.	889+38.80	0.00	428.37	428.37
Bk. N. Abut.	889+40.08	0.00	428.36	428.36

BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	887+79.13	3.71	428.30	428.30
℄ Brg. S. Abut.	887+80.41	3.71	428.31	428.31
A	887+90.41	3.71	428.36	428.38
B	888+00.41	3.71	428.40	428.43
C	888+10.41	3.71	428.43	428.46
D	888+20.41	3.71	428.46	428.47
℄ Pier 1	888+28.71	3.71	428.48	428.48
E	888+38.71	3.71	428.50	428.51
F	888+48.71	3.71	428.51	428.54
G	888+58.71	3.71	428.51	428.56
H	888+68.71	3.71	428.51	428.55
I	888+78.71	3.71	428.50	428.52
℄ Pier 2	888+89.71	3.71	428.48	428.48
J	888+99.71	3.71	428.46	428.47
K	889+09.71	3.71	428.43	428.46
L	889+19.71	3.71	428.40	428.43
M	889+29.71	3.71	428.36	428.37
℄ Brg. N. Abut.	889+38.01	3.71	428.32	428.32
Bk. N. Abut.	889+39.29	3.71	428.31	428.31

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	887+77.56	11.13	428.18	428.18
℄ Brg. S. Abut.	887+78.83	11.13	428.18	428.18
A	887+88.83	11.13	428.23	428.26
B	887+98.83	11.13	428.28	428.31
C	888+08.83	11.13	428.31	428.33
D	888+18.83	11.13	428.34	428.35
℄ Pier 1	888+27.14	11.13	428.36	428.36
E	888+37.14	11.13	428.38	428.39
F	888+47.14	11.13	428.39	428.43
G	888+57.14	11.13	428.40	428.44
H	888+67.14	11.13	428.39	428.43
I	888+77.14	11.13	428.39	428.40
℄ Pier 2	888+88.14	11.13	428.37	428.37
J	888+98.14	11.13	428.35	428.36
K	889+08.14	11.13	428.32	428.35
L	889+18.14	11.13	428.29	428.32
M	889+28.14	11.13	428.25	428.27
℄ Brg. N. Abut.	889+36.44	11.13	428.21	428.21
Bk. N. Abut.	889+37.72	11.13	428.20	428.20

BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. S. Abut.	887+75.98	18.54	428.02	428.02
℄ Brg. S. Abut.	887+77.26	18.54	428.03	428.03
A	887+87.26	18.54	428.08	428.10
B	887+97.26	18.54	428.12	428.15
C	888+07.26	18.54	428.16	428.18
D	888+17.26	18.54	428.19	428.19
℄ Pier 1	888+25.56	18.54	428.21	428.21
E	888+35.56	18.54	428.23	428.24
F	888+45.56	18.54	428.24	428.27
G	888+55.56	18.54	428.25	428.29
H	888+65.56	18.54	428.25	428.28
I	888+75.56	18.54	428.24	428.26
℄ Pier 2	888+86.56	18.54	428.22	428.22
J	888+96.56	18.54	428.20	428.21
K	889+06.56	18.54	428.18	428.20
L	889+16.56	18.54	428.14	428.17
M	889+26.56	18.54	428.10	428.12
℄ Brg. N. Abut.	889+34.86	18.54	428.07	428.07
Bk. N. Abut.	889+36.14	18.54	428.06	428.06

Note:
Offsets are based off of ℄ F.A.P. Route 328.

DESIGNED	EML
CHECKED	KLH
DRAWN	KLH
CHECKED	EML

HORNER & SHIFRIN, INC.
ENGINEERS

TOP OF SLAB ELEVATIONS
F.A.P. ROUTE 328 - SECTION (8BR-2)B-1
WAYNE COUNTY
STATION 888+60.00
STRUCTURE NO. 096-0067

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 328	(8BR-2) B-1	WAYNE	140	31
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 9
25 SHEETS

Contract #14040

WEST CURB LINE

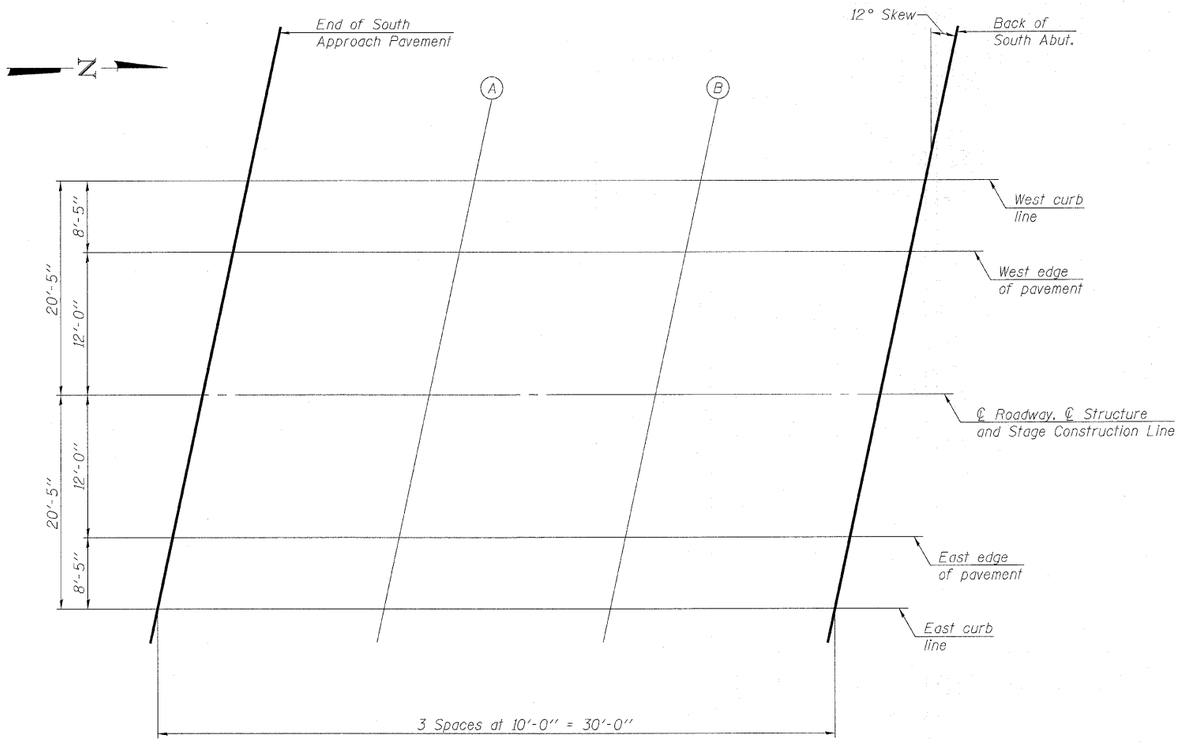
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
End S. Appr. Pav't.	887+54.26	-20.42	427.85	427.85
A	887+64.26	-20.42	427.91	427.91
B	887+74.26	-20.42	427.97	427.97
Bk. S. Abut.	887+84.26	-20.42	428.02	428.02

WEST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
End S. Appr. Pav't.	887+52.47	-12.00	428.01	428.01
A	887+62.47	-12.00	428.08	428.08
B	887+72.47	-12.00	428.14	428.14
Bk. S. Abut.	887+82.47	-12.00	428.19	428.19

℄ ROADWAY, ℄ STRUCTURE AND STAGE CONSTRUCTION LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
End S. Appr. Pav't.	887+49.92	0.00	428.18	428.18
A	887+59.92	0.00	428.25	428.25
B	887+69.92	0.00	428.31	428.31
Bk. S. Abut.	887+79.92	0.00	428.36	428.36



PLAN

EAST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
End S. Appr. Pav't.	887+47.37	12.00	427.97	427.97
A	887+57.37	12.00	428.04	428.04
B	887+67.37	12.00	428.11	428.11
Bk. S. Abut.	887+77.37	12.00	428.16	428.16

EAST CURB LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
End S. Appr. Pav't.	887+45.58	20.42	427.79	427.79
A	887+55.58	20.42	427.86	427.86
B	887+65.58	20.42	427.92	427.92
Bk. S. Abut.	887+75.58	20.42	427.98	427.98

DESIGNED	EML
CHECKED	KLH
DRAWN	KLH
CHECKED	EML

HORNER & SHIFRIN, INC.
ENGINEERS

TOP OF SOUTH APPROACH
SLAB ELEVATIONS
F.A.P. ROUTE 328 - SECTION (8BR-2)B-1
WAYNE COUNTY
STATION 888+60.00
STRUCTURE NO. 096-0067

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 328	(8BR-2) B-1	WAYNE	140	32
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 10
25 SHEETS

Contract #74040

WEST CURB LINE

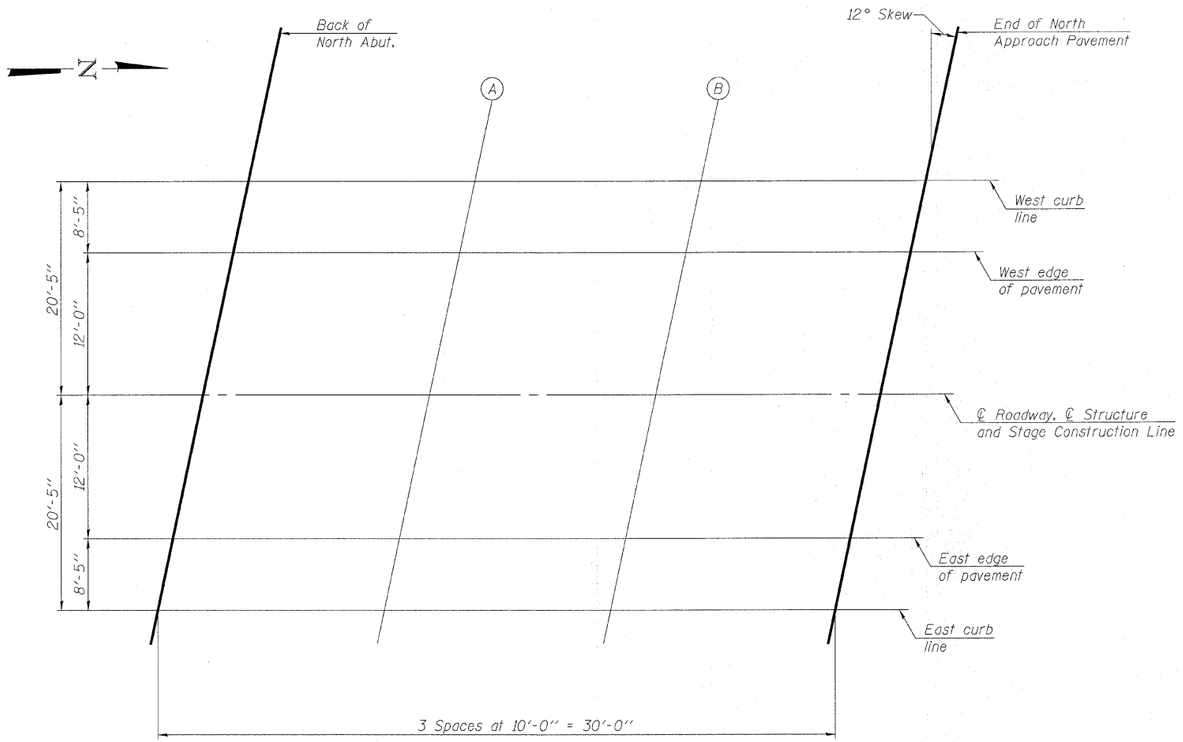
Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	889+44.42	-20.42	427.98	427.98
A	889+54.42	-20.42	427.92	427.92
B	889+64.42	-20.42	427.86	427.86
End N. Appr. Pav't.	889+74.42	-20.42	427.79	427.79

WEST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	889+42.63	-12.00	428.16	428.16
A	889+52.63	-12.00	428.11	428.11
B	889+62.63	-12.00	428.04	428.04
End N. Appr. Pav't.	889+72.63	-12.00	427.97	427.97

℄ ROADWAY, ℄ STRUCTURE AND STAGE CONSTRUCTION LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	889+40.08	0.00	428.36	428.36
A	889+50.08	0.00	428.31	428.31
B	889+60.08	0.00	428.25	428.25
End N. Appr. Pav't.	889+70.08	0.00	428.18	428.18



PLAN

EAST EDGE OF PAVEMENT

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	889+37.53	12.00	428.19	428.19
A	889+47.53	12.00	428.14	428.14
B	889+57.53	12.00	428.08	428.08
End N. Appr. Pav't.	889+67.53	12.00	428.01	428.01

EAST CURB LINE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	889+35.74	20.42	428.02	428.02
A	889+45.74	20.42	427.97	427.97
B	889+55.74	20.42	427.91	427.91
End N. Appr. Pav't.	889+65.74	20.42	427.85	427.85

DESIGNED	EML
CHECKED	KLH
DRAWN	KLH
CHECKED	EML

HORNER & SHIFRIN, INC.
ENGINEERS

TOP OF NORTH APPROACH
SLAB ELEVATIONS
F.A.P. ROUTE 328 - SECTION (8BR-2)B-1
WAYNE COUNTY
STATION 888+60.00
STRUCTURE NO. 096-0067

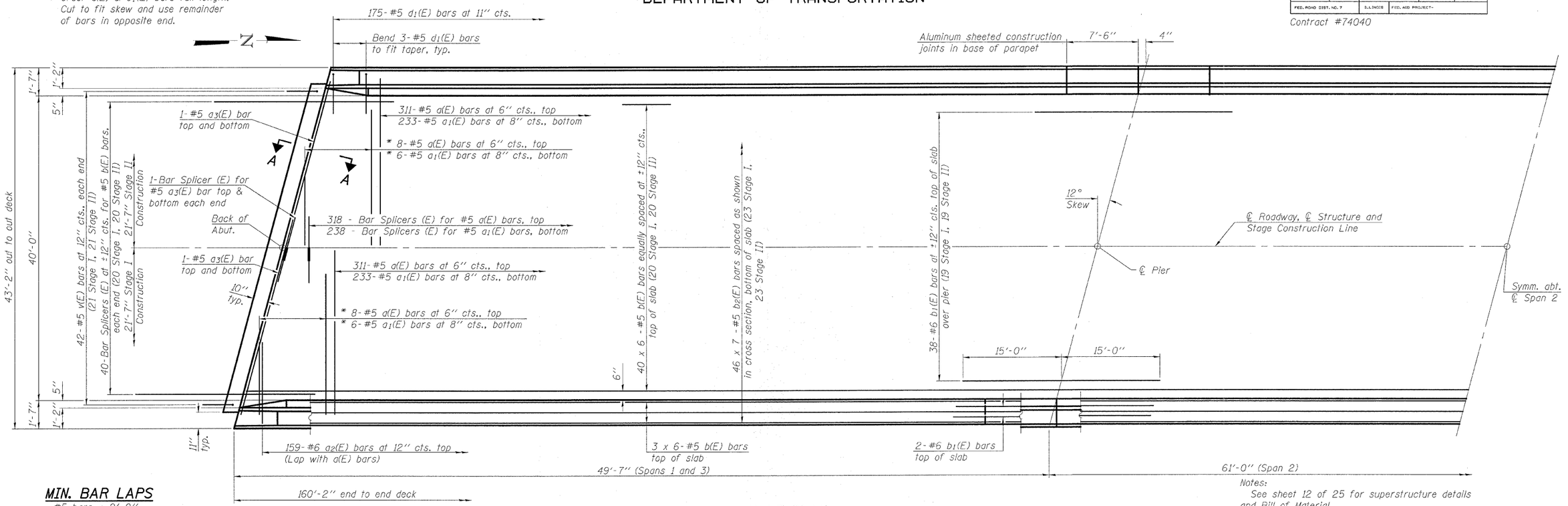
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 328	(8BR-2) B-1	WAYNE	140	33
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 11
25 SHEETS

Contract #74040

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

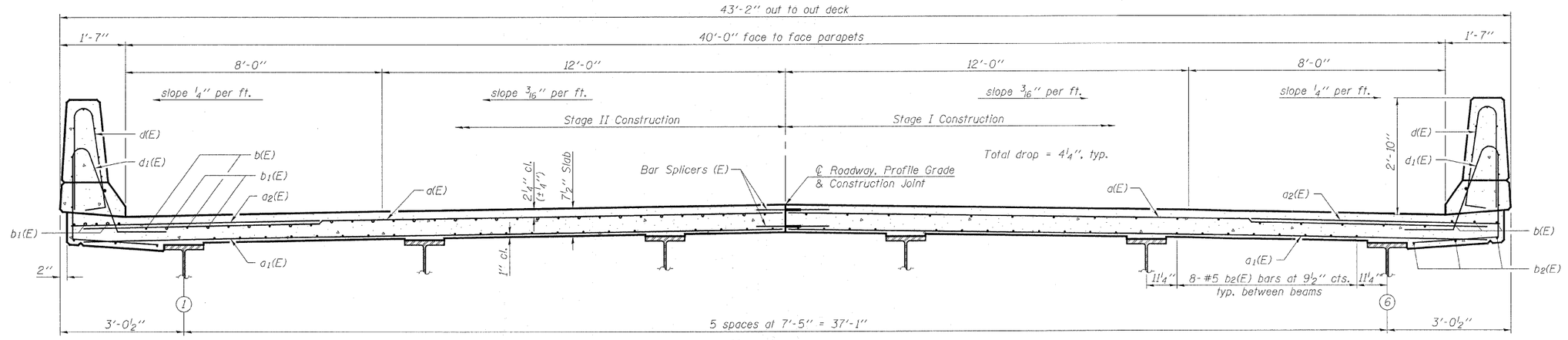


MIN. BAR LAPS

#5 bars = 2'-2"

HALF PLAN

Notes:
See sheet 12 of 25 for superstructure details and Bill of Material.
Bars indicated thus 20 x 3-#5 etc. indicates 20 lines of bars with 3 lengths per line.
See sheet 12 of 25 for parapet reinforcement.



NEAR PIER

NEAR MIDSPAN

CROSS SECTION

(Looking North)

DESIGNED	SJB
CHECKED	EML
DRAWN	KLH
CHECKED	EML

HORNER & SHIFRIN, INC.
ENGINEERS

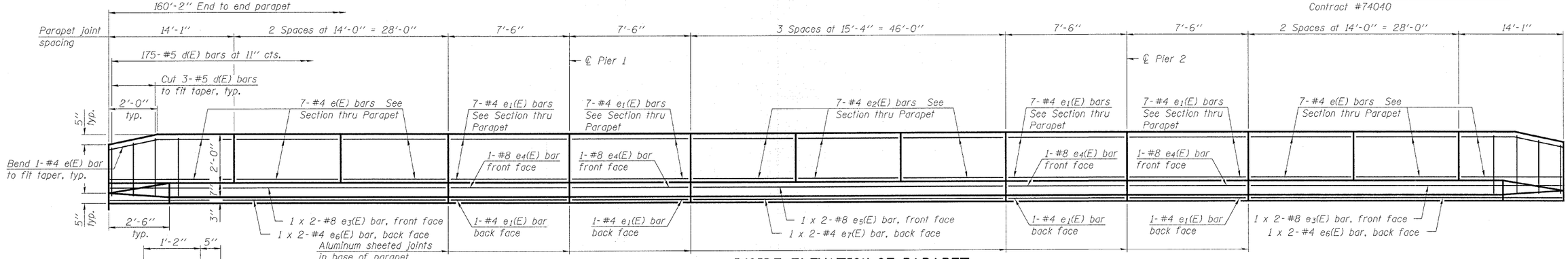
SUPERSTRUCTURE
F.A.P. ROUTE 328 - SECTION (8BR-2)B-1
WAYNE COUNTY
STATION 888+60.00
STRUCTURE NO. 096-0067

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 328	(8BR-2) B-1	WAYNE	140	34
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

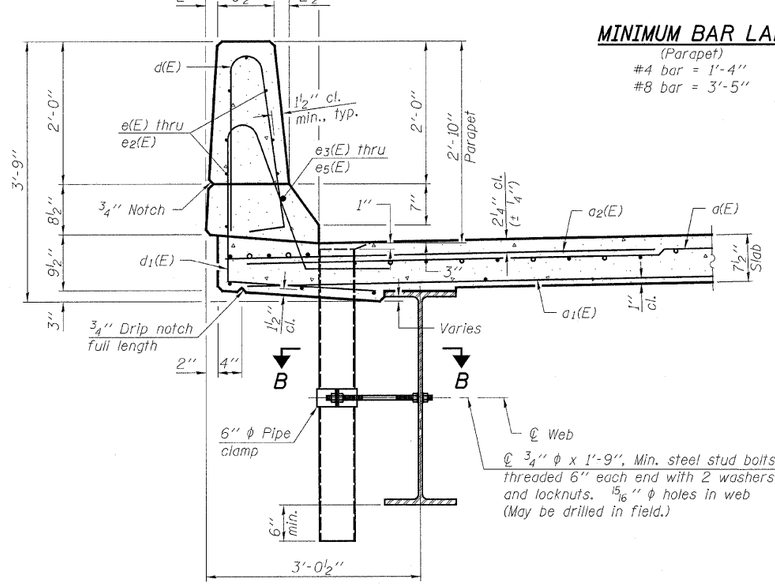
SHEET NO. 12
25 SHEETS

Contract #74040

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



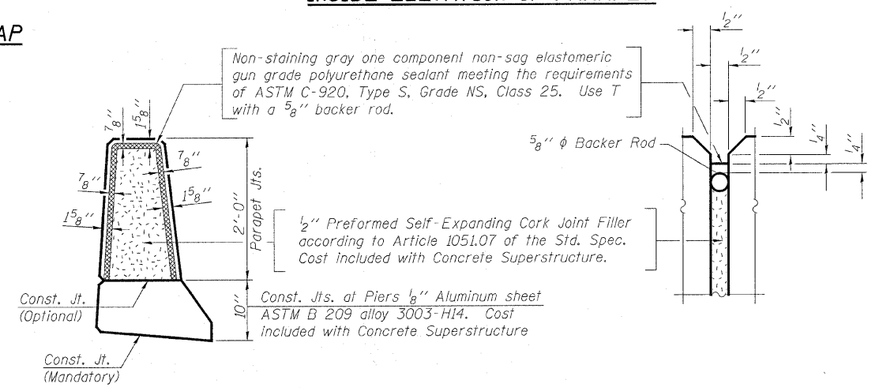
INSIDE ELEVATION OF PARAPET



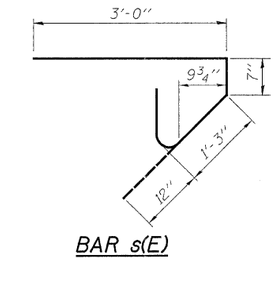
SECTION THRU PARAPET

MINIMUM BAR LAP

(Parapet)
#4 bar = 1'-4"
#8 bar = 3'-5"



PARAPET JOINT DETAILS

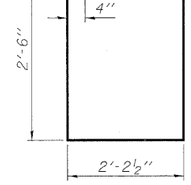


BAR s(E)

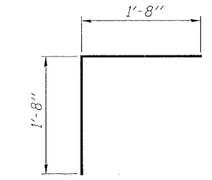
SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	638	#5	21'-2"	——
a1(E)	478	#5	21'-0"	——
a2(E)	318	#6	6'-0"	——
a3(E)	8	#5	21'-7"	——
b(E)	276	#5	28'-6"	——
b1(E)	84	#6	30'-0"	——
b2(E)	322	#5	24'-9"	——
d(E)	350	#5	5'-7"	
d1(E)	350	#5	7'-10"	
e(E)	84	#4	13'-8"	——
e1(E)	64	#4	7'-2"	——
e2(E)	42	#4	15'-0"	——
e3(E)	8	#8	22'-9"	——
e4(E)	8	#8	7'-2"	——
e5(E)	4	#8	24'-7"	——
e6(E)	8	#4	21'-8"	——
e7(E)	4	#4	23'-6"	——
m(E)	8	#6	20'-7"	——
m1(E)	12	#6	21'-9"	——
m2(E)	24	#6	9'-1"	——
m3(E)	8	#6	7'-3"	——
m4(E)	4	#6	2'-9"	——
m5(E)	4	#6	3'-6"	——
s(E)	92	#5	5'-10"	
s1(E)	84	#4	8'-3"	
v(E)	84	#5	3'-4"	
Reinforcement Bars, Epoxy Coated			Pound	57,780
Concrete Superstructure			Cu. Yds.	226.9

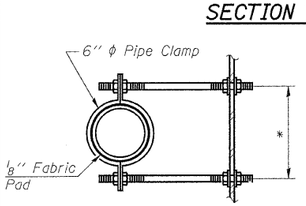
Bars indicated thus 1 x -#5 etc. indicates 1 line of bars with lengths per line.



BAR s1(E)

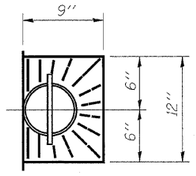


BAR v(E)

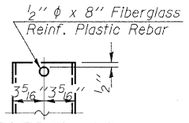


SECTION B-B

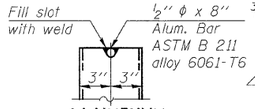
* Dimension as required by Pipe Clamp



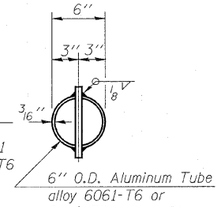
TOP PLAN



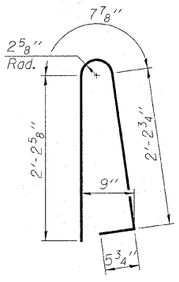
FIBERGLASS PIPE



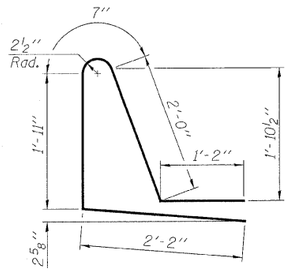
ALUMINUM TUBE



TOP PLAN
(Showing Aluminum Tube)



BAR d(E)



BAR d1(E)

Notes:
The exterior surfaces of the floor drains shall be painted with the finish coat as specified in the special provisions for Cleaning and Painting New Metal Structures. The exterior surfaces of the drains shall be cleaned according to Steel Structures Painting Council's Spec. SSPC-SP1 prior to painting.
Fiberglass pipe shall conform to ASTM D 2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.

DESIGNED	SJB
CHECKED	EML
DRAWN	KLH
CHECKED	EML

HORNER & SHIFRIN, INC.
ENGINEERS

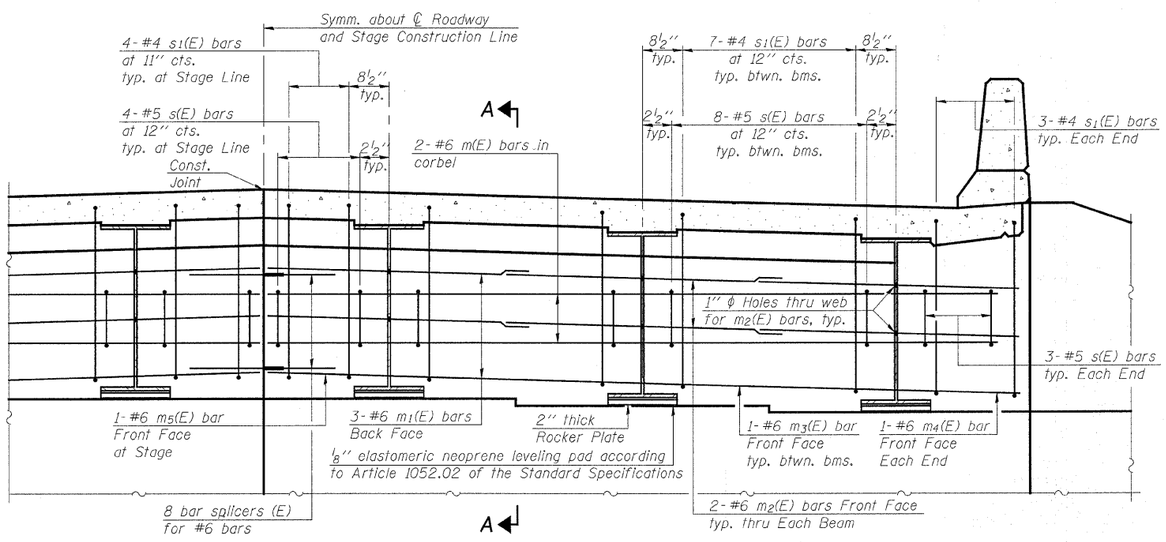
SUPERSTRUCTURE DETAILS
F.A.P. ROUTE 328 - SECTION (8BR-2)B-1
WAYNE COUNTY
STATION 888+60.00
STRUCTURE NO. 096-0067

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

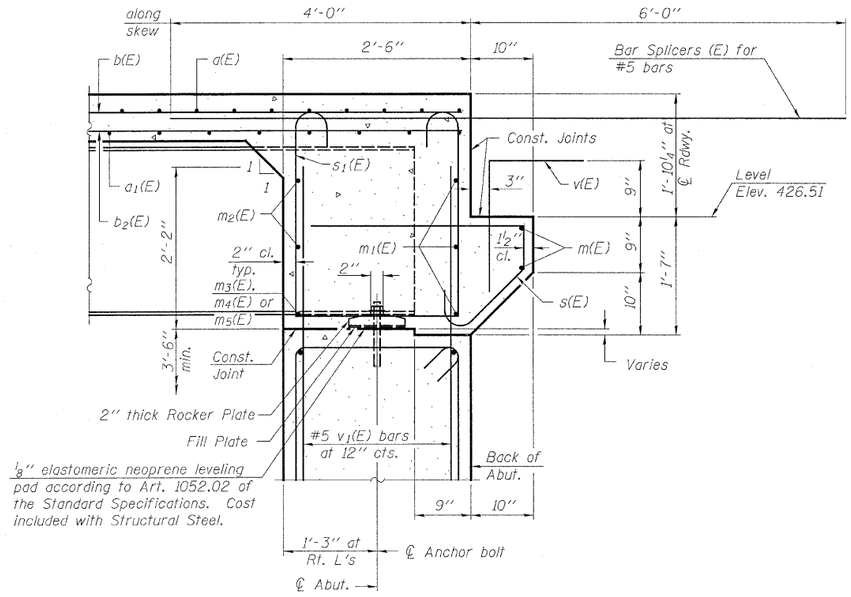
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 328	(8BR-2) B-1	WAYNE	140	35
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 13
25 SHEETS

Contract #74040



DIAPHRAGM ELEVATION AT ABUTMENT



SECTION A-A

Dimensions at right angles to abutment, except as shown.

Notes:
Reinforcement bars in diaphragm are billed with superstructure on sheet 12 of 25.
Concrete in diaphragm is included with Concrete Superstructure on sheet 12 of 25.
For details of bars s(E) & s_1(E) see sheet 12 of 25.
The s(E) and s_1(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.

MIN. BAR LAP

#6 bar = 2'-9"

DESIGNED	JJD
CHECKED	EML
DRAWN	KLH
CHECKED	EML

HORNER & SHIFRIN, INC.
ENGINEERS

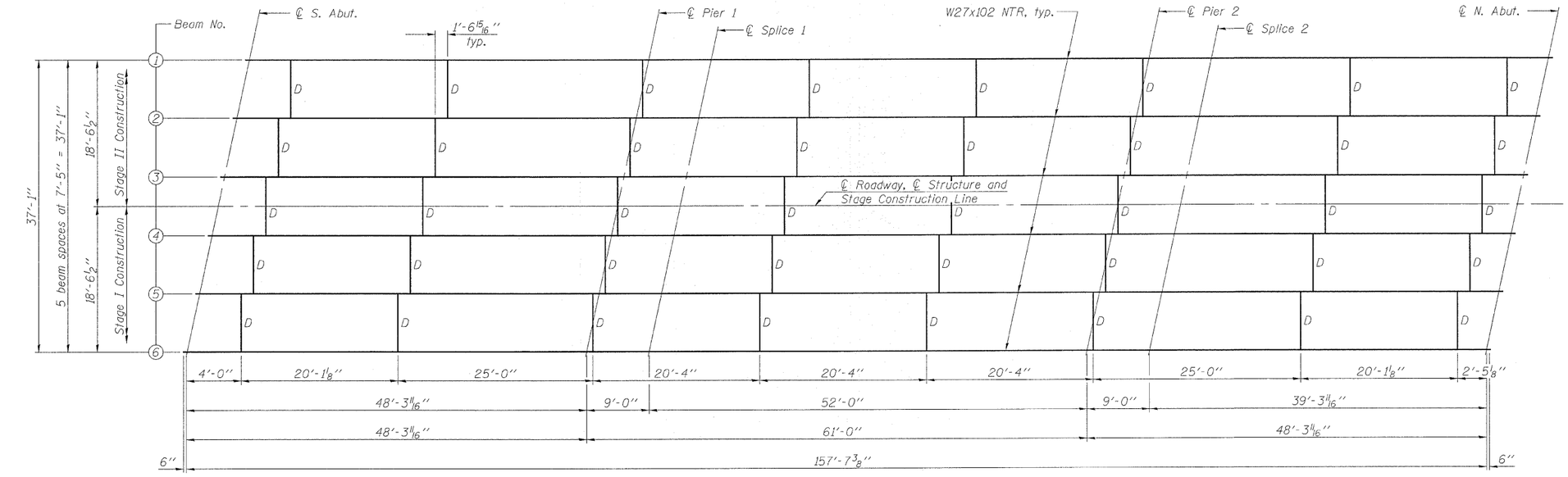
DIAPHRAGM DETAILS
F.A.P. ROUTE 328 - SECTION (8BR-2)B-1
WAYNE COUNTY
STATION 888+60.00
STRUCTURE NO. 096-0067

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 328	(8BR-2) B-1	WAYNE	140	36
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

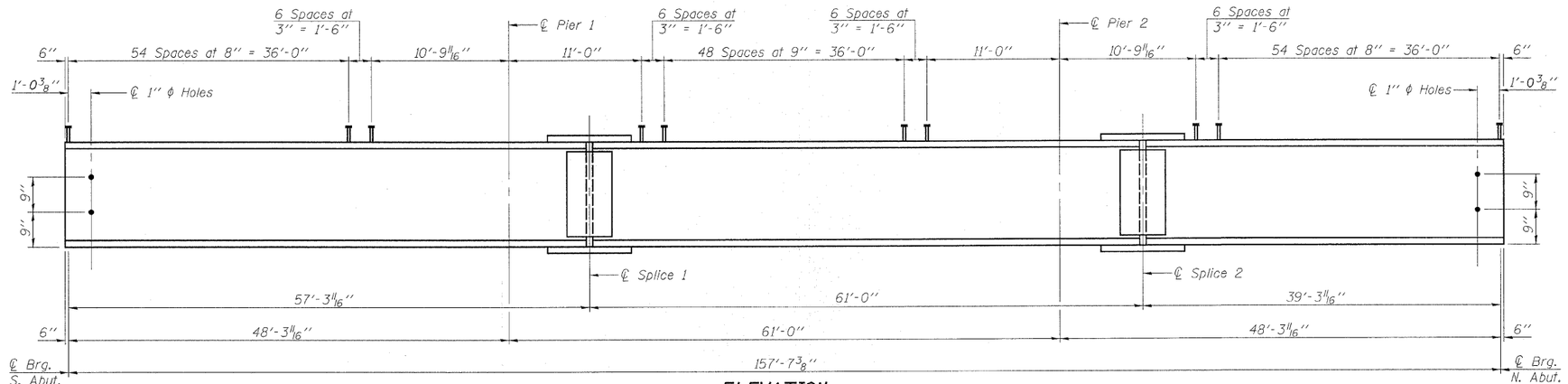
SHEET NO. 14
25 SHEETS

Contract #74040

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

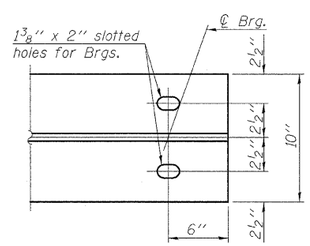


FRAMING PLAN

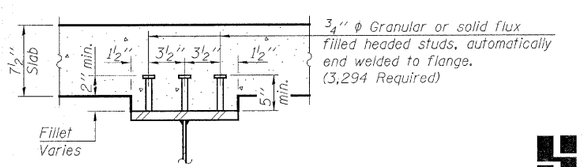


ELEVATION

All beams W27x102 and splice plates shall be AASHTO M 270, Grade 50 and shall meet Notch Toughness Requirements.



END OF BEAM DETAIL



SECTION A-A

DESIGNED	SJB
CHECKED	EML
DRAWN	KLH
CHECKED	EML

HORNER & SHIFRIN, INC.
ENGINEERS

STRUCTURAL STEEL
F.A.P. ROUTE 328 - SECTION (8BR-2)B-1
WAYNE COUNTY
STATION 888+60.00
STRUCTURE NO. 096-0067

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 328	(8BR-2) B-1	WAYNE	140	37
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 15
25 SHEETS

Contract #74040

INTERIOR GIRDER MOMENT TABLE				
		0.4 Sp. 1 or 0.6 Sp. 3	Pier 1 or Pier 2	0.5 Sp. 2
I_s	(in^4)	3620	3620	3620
$I_c(n)$	(in^4)	10361	-	10361
$I_c(3n)$	(in^4)	7792	-	7792
S_s	(in^3)	267	267	267
$S_c(n)$	(in^3)	400	-	400
$S_c(3n)$	(in^3)	365	-	365
Z	(in^3)	305	305	305
$\mathcal{Q}$	(k/')	0.807	0.807	0.807
$M\mathcal{Q}$	('k)	128.0	245.3	130.4
$s\mathcal{Q}$	(k/')	0.483	0.483	0.483
$M_s\mathcal{Q}$	('k)	86.3	122.6	102.2
M_L	('k)	343.9	196.4	393.6
M_{Imp}	('k)	99.7	55.0	106.3
$\frac{5}{3}[M_L + M_{Imp}]$	('k)	739.3	419.0	833.2
M_a	('k)	1239.7	1023.0	1385.5
* M_u	('k)	1609.7	-	1609.7
f_s $\mathcal{Q}$ non-comp	(ksi)	5.8	11.0	5.9
f_s $\mathcal{Q}$ (comp)	(ksi)	2.8	5.5	3.4
f_s $\frac{5}{3}[M_L + M_{Imp}]$	(ksi)	22.2	18.8	25.0
f_s (Overload)	(ksi)	30.8	35.3	34.3
** f_s (Total)	(ksi)	-	45.9	-
VR	(k)	38.5	-	41.9

INTERIOR GIRDER REACTION TABLE			
		Abut.	Pier
$R\mathcal{Q}$	(k)	23.6	78.2
R_L	(k)	42.7	48.7
Imp.	(k)	12.4	13.6
R_{Total}	(k)	78.7	140.5

* Compact section
** Braced non-compact and partially braced section

I_s, S_s: Non-composite moment of inertia and section modulus of the steel section used for computing f_s (Total and Overload) due to non-composite dead loads (in.^{4} and in.^{3}).

$I_c(n)$, $S_c(n)$: Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing f_s (Total and Overload) due to short-term composite live loads (in.^{4} and in.^{3}).

$I_c(3n)$, $S_c(3n)$: Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing f_s (Total and Overload) due to long-term composite (superimposed) dead loads (in.^{4} and in.^{3}).

Z: Plastic Section Modulus of the steel section in non-composite areas (in.^{3}).

$\mathcal{Q}$: Un-factored non-composite dead load (kips/ft.).

$M\mathcal{Q}$: Un-factored moment due to non-composite dead load (kip-ft.).

$s\mathcal{Q}$: Un-factored long-term composite (superimposed) dead load (kips/ft.)

$M_s\mathcal{Q}$: Un-factored moment due to long-term composite (superimposed) dead load (kip-ft.).

M_L: Un-factored live load moment (kip-ft.).

M_{Imp}: Un-factored moment due to impact (kip-ft.).

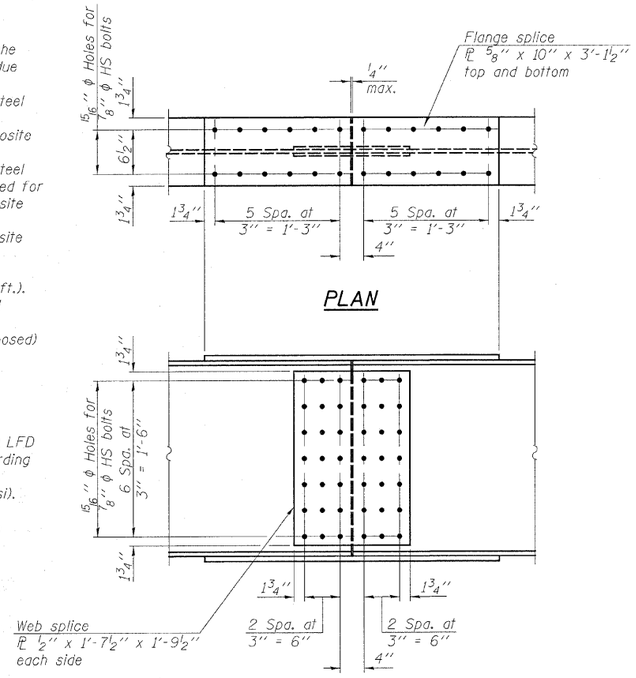
M_a: Factored design moment (kip-ft.).
$1.3\ [\ M\mathcal{Q} + M_s\mathcal{Q} + \frac{5}{3}\ (M_L + M_{Imp})]$

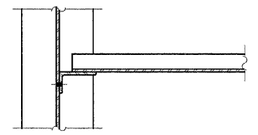
M_u: Compact composite moment capacity according to AASHTO LFD 10.50.1.1 or compact non-composite moment capacity according to AASHTO LFD 10.48.1 (kip-ft.).

f_s (Overload): Sum of stresses as computed from the moments below (ksi).
$M\mathcal{Q} + M_s\mathcal{Q} + \frac{5}{3}\ (M_L + M_{Imp})$

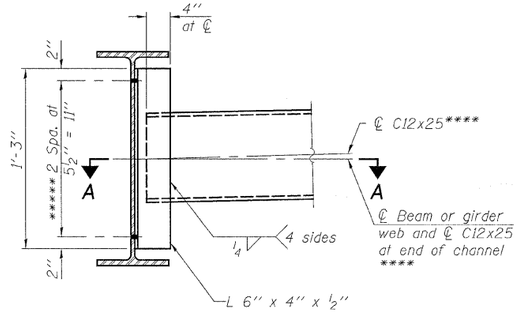
f_s (Total): Sum of stresses as computed from the moments below on non-compact section (ksi).
$1.3\ [M\mathcal{Q} + M_s\mathcal{Q} + \frac{5}{3}\ (M_L + M_{Imp})]$

VR: Maximum $_L$ + impact horizontal shear range within the composite portion of the span for stud shear connector design (kips).





SECTION A-A



INTERIOR DIAPHRAGM

Note:
Two hardened washers required for each set of oversized holes.

**** Alternate channels are permitted to facilitate material acquisition. Calculated weight of structural steel is based on the lighter section.
***** 7/8" ϕ HS bolts, 1 1/16" ϕ holes

The angle and channel of the interior diaphragm shall be AASHTO M 270 Grade 36.

SPLICE DETAIL
(12 Required)

Note:
All bolts shall have the threads excluded from the shear plane.

*** TOP OF BEAM ELEVATIONS

Location	℄ Brg. S. Abut.	℄ Brg. Pier 1	℄ Splice 1	℄ Brg. Pier 2	℄ Splice 2	℄ Brg. N. Abut.
Beam 1	427.40	427.48	427.50	427.45	427.44	427.36
Beam 2	427.54	427.63	427.65	427.61	427.60	427.51
Beam 3	427.65	427.74	427.76	427.73	427.72	427.64
Beam 4	427.64	427.74	427.76	427.73	427.72	427.65
Beam 5	427.51	427.62	427.64	427.61	427.61	427.54
Beam 6	427.36	427.47	427.49	427.46	427.46	427.40

*** For fabrication only

DESIGNED	SJB
CHECKED	EML
DRAWN	KLH
CHECKED	EML

HORNER & SHIFRIN, INC.
ENGINEERS

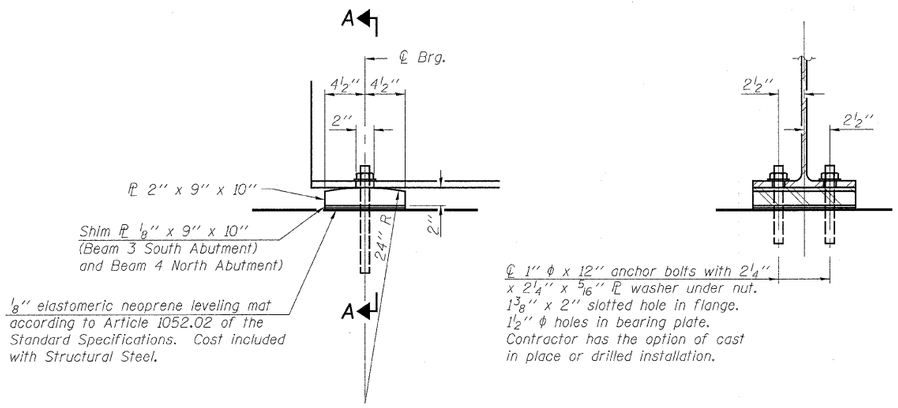
STRUCTURAL STEEL DETAILS
F.A.P. ROUTE 328 - SECTION (8BR-2)B-1
WAYNE COUNTY
STATION 888+60.00
STRUCTURE NO. 096-0067

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 328	(8BR-2) B-1	WAYNE	140	38
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 16
25 SHEETS

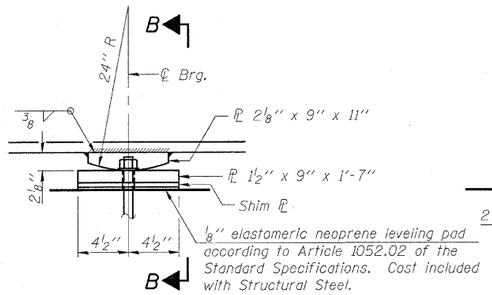
Contract #74040



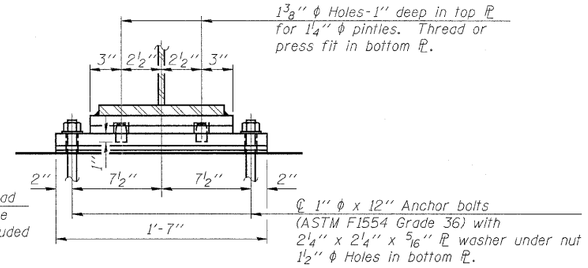
ELEVATION AT ABUTMENT

SECTION A-A

FIXED BEARING
12 required

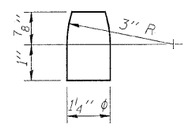


ELEVATION AT PIER



SECTION B-B

FIXED BEARING
12 required



PINTLE

Notes:

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

Anchor bolts at fixed bearings may be either cast in place or installed in holes drilled after the supported member is in place.

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

The plates of the fixed bearings shall be AASHTO M270 Grade 50.

The pintles of the fixed bearings shall be AASHTO M270 Grade 36.

DESIGNED	EML
CHECKED	KLH
DRAWN	KLH
CHECKED	EML

HORNER & SHIFRIN, INC.
ENGINEERS

BEARING DETAILS
F.A.P. ROUTE 328 - SECTION (8BR-2)B-1
WAYNE COUNTY
STATION 888+60.00
STRUCTURE NO. 096-0067

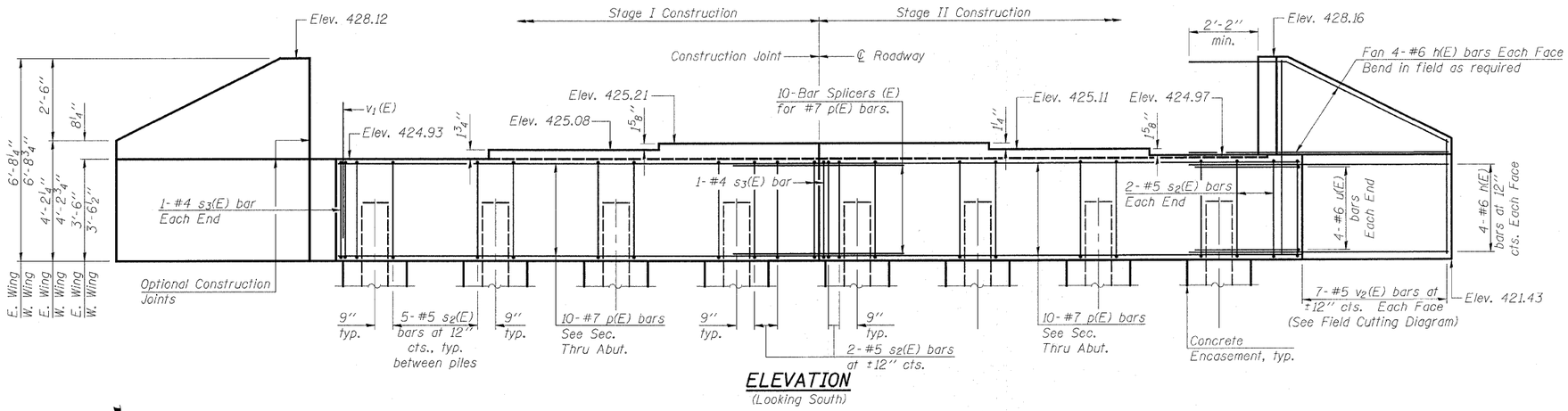
Notes: Pour steps monolithically with cap.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

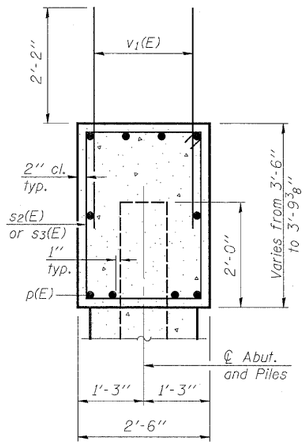
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 328	(8BR-2) B-1	WAYNE	140	39
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 17
25 SHEETS

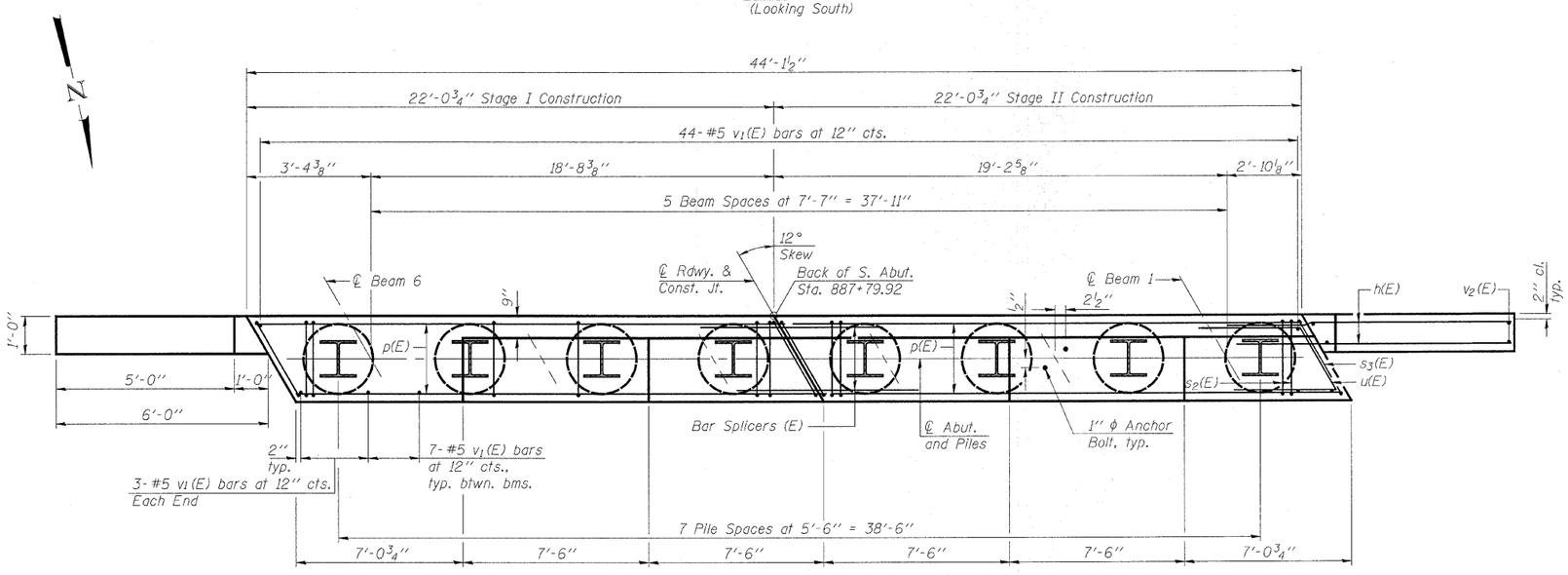
Contract #74040



ELEVATION
(Looking South)



SEC. THRU ABUT.



PLAN

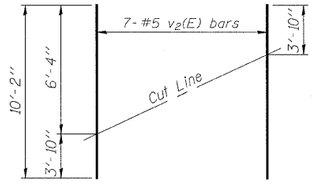
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	32	#6	8'-0"	
p(E)	20	#7	21'-9"	
s2(E)	38	#5	11'-7"	
s3(E)	4	#5	11'-8"	
u(E)	8	#6	9'-3"	
v1(E)	85	#5	4'-4"	
v2(E)	14	#5	10'-2"	
Structure Excavation		Cu. Yd.	134	
Concrete Structures		Cu. Yd.	16.5	
Reinforcement Bars, Epoxy Coated		Pound	2,430	
Furnishing Steel Piles HP12x63		Foot	224	
Driving Piles		Foot	224	
Test Pile Steel HP12x63		Each	1	
Concrete Encasement		Cu. Yd.	2.8	
Piles Shoes		Each	8	
Anchor Bolts, 1"		Each	12	

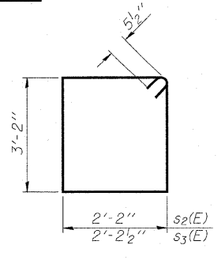
For details of Bar Splicers, see sheet 22 of 25.
For details of piles and Concrete Encasement, see sheet 21 of 25.

PILE DATA

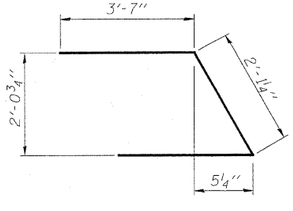
Type: HP12x63
Nominal Required Bearing: 300 kips
Allowable Resistance Available: 100 kips
Est. Length: 32'
No. Production Piles: 7
No. Test Piles: 1



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



BARS s2(E) & s3(E)



BAR u(E)

DESIGNED	JJD
CHECKED	EML
DRAWN	KLH
CHECKED	EML

HORNER & SHIFRIN, INC.
ENGINEERS

SOUTH ABUTMENT
F.A.P. ROUTE 328 - SECTION (8BR-2)B-1
WAYNE COUNTY
STATION 888+60.00
STRUCTURE NO. 096-0067

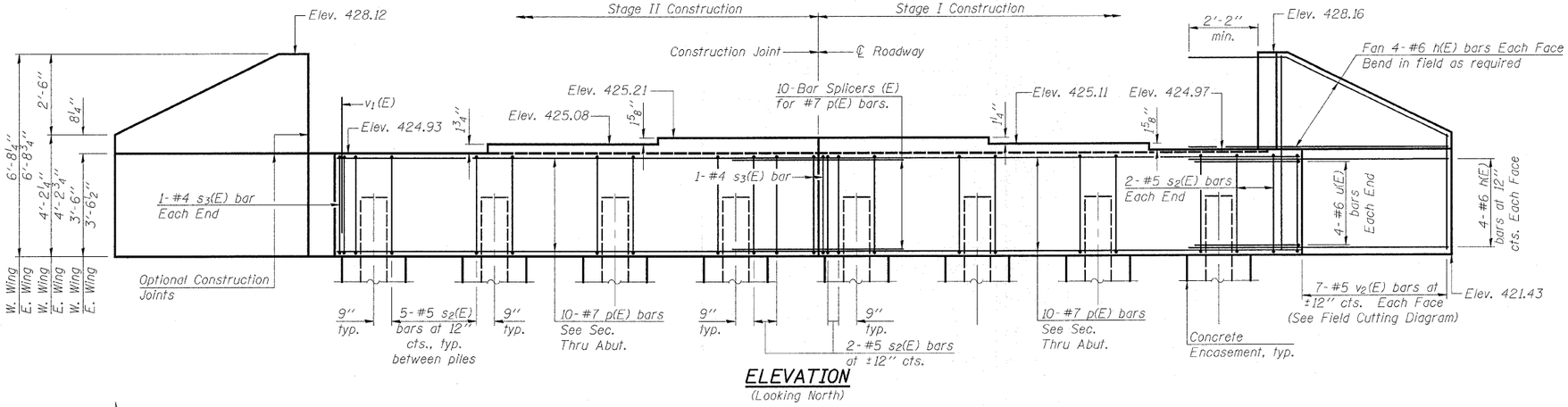
Notes: Pour steps monolithically with cap.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

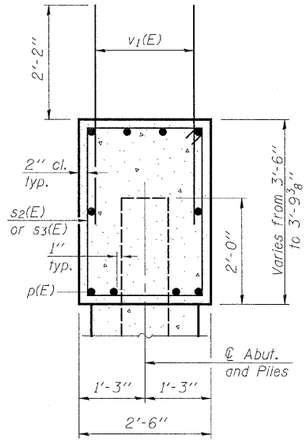
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 328	(8BR-2) B-1	WAYNE	140	40
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 18
25 SHEETS

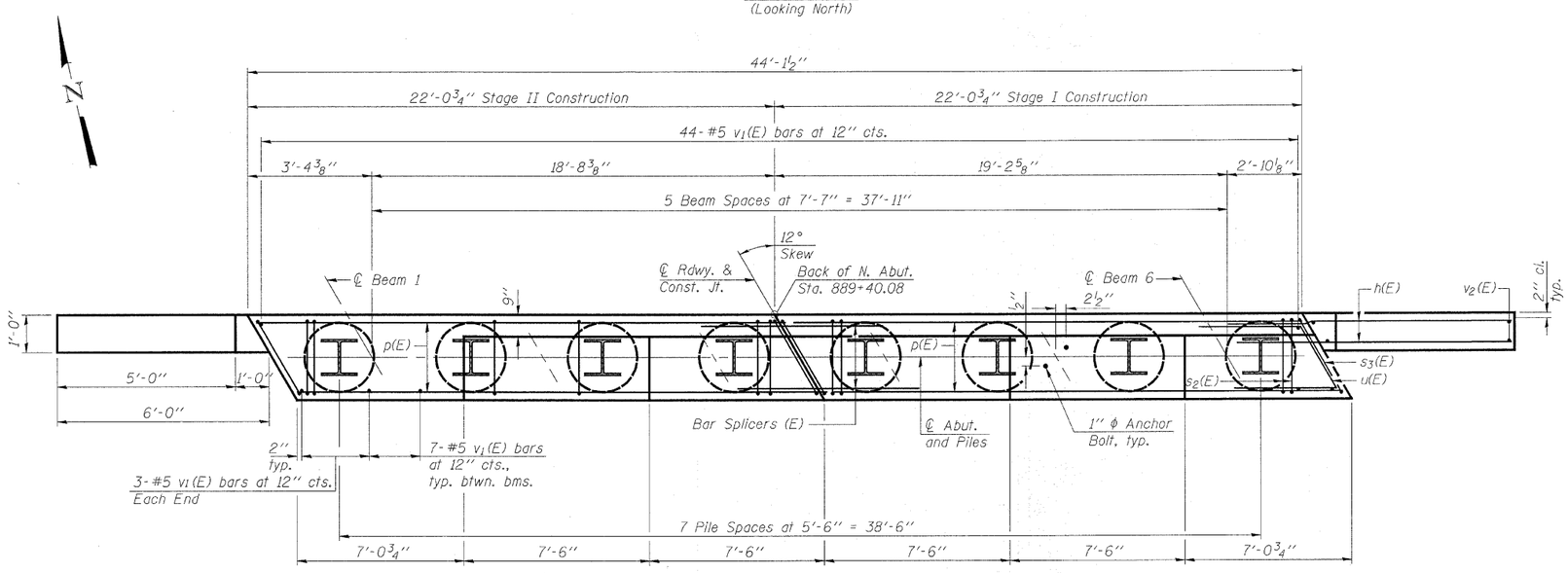
Contract #74040



ELEVATION
(Looking North)



SEC. THRU ABUT.



PLAN

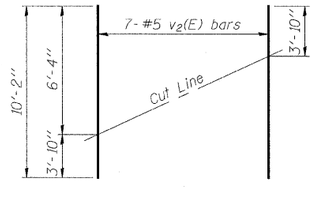
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	32	#6	8'-0"	—
p(E)	20	#7	21'-9"	—
s2(E)	38	#5	11'-7"	□
s3(E)	4	#5	11'-8"	□
u(E)	8	#6	9'-3"	⌐
v1(E)	85	#5	4'-4"	—
v2(E)	14	#5	10'-2"	—
Structure Excavation			Cu. Yd.	134
Concrete Structures			Cu. Yd.	16.5
Reinforcement Bars, Epoxy Coated			Pound	2,430
Furnishing Steel Piles HP12x63			Foot	256
Driving Piles			Foot	256
Concrete Encasement			Cu. Yd.	2.8
Piles Shoes			Each	8
Anchor Bolts, 1"			Each	12

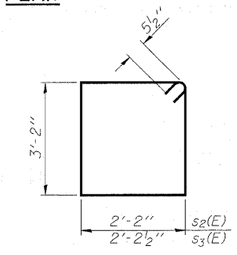
For details of Bar Splicers, see sheet 22 of 25.
For details of piles and Concrete Encasement, see sheet 21 of 25.

PILE DATA

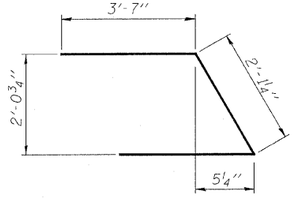
Type: HP12x63
Nominal Required Bearing: 300 kips
Allowable Resistance Available: 100 kips
Est. Length: 32'
No. Production Piles: 8
No. Test Piles: 0



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



BARS s2(E) & s3(E)



BAR u(E)

DESIGNED	JJD
CHECKED	EML
DRAWN	KLH
CHECKED	EML

HORNER & SHIFRIN, INC.
ENGINEERS

NORTH ABUTMENT
F.A.P. ROUTE 328 - SECTION (8BR-2)B-1
WAYNE COUNTY
STATION 888+60.00
STRUCTURE NO. 096-0067

Notes:
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
For details of piles, see sheet 21 of 25.
For details of bar splicers, see sheet 22 of 25.
For concrete encasement, see sheet 21 of 25.

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 328	(8BR-2) B-1	WAYNE	140	41
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

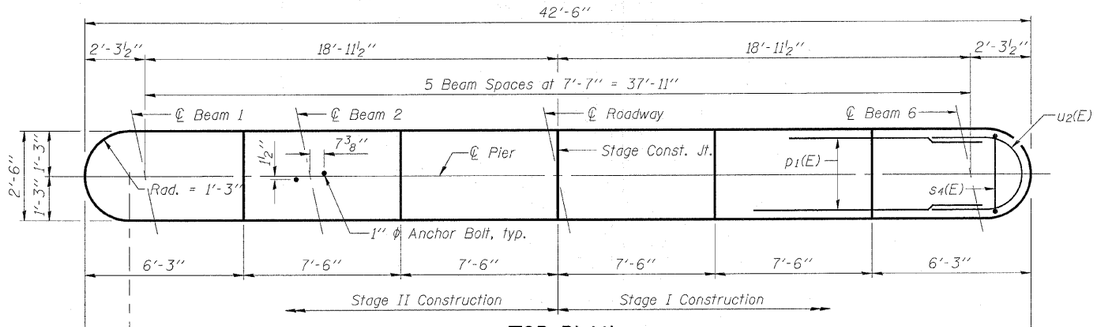
SHEET NO. 19
25 SHEETS

Contract #74040

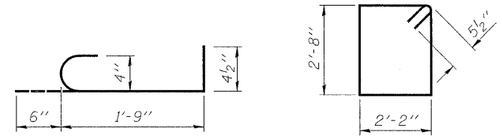
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PILE DATA

Type: HP12x63
Nominal Required Bearing: 400 kips
Allowable Resistance Available: 133 kips
Est. Length: 32'
No. Production Piles: 10
No. Test Piles: 0

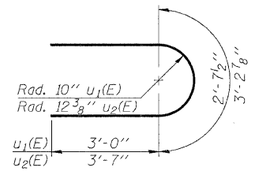


TOP PLAN



BAR s5(E)

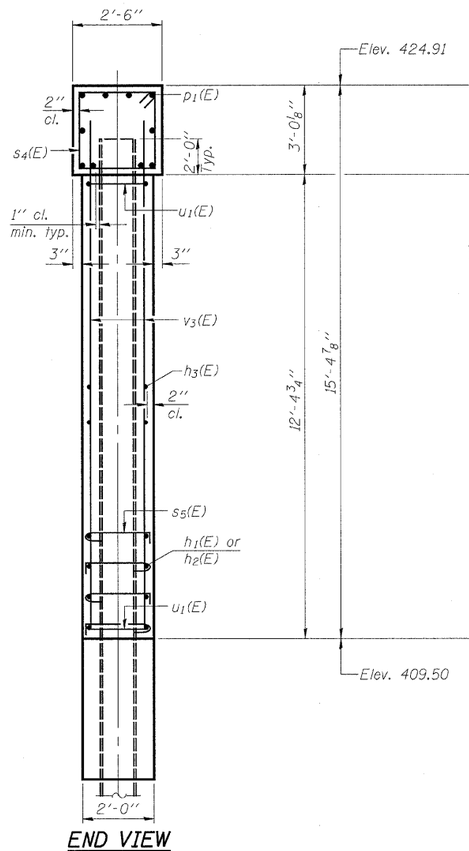
BAR s4(E)



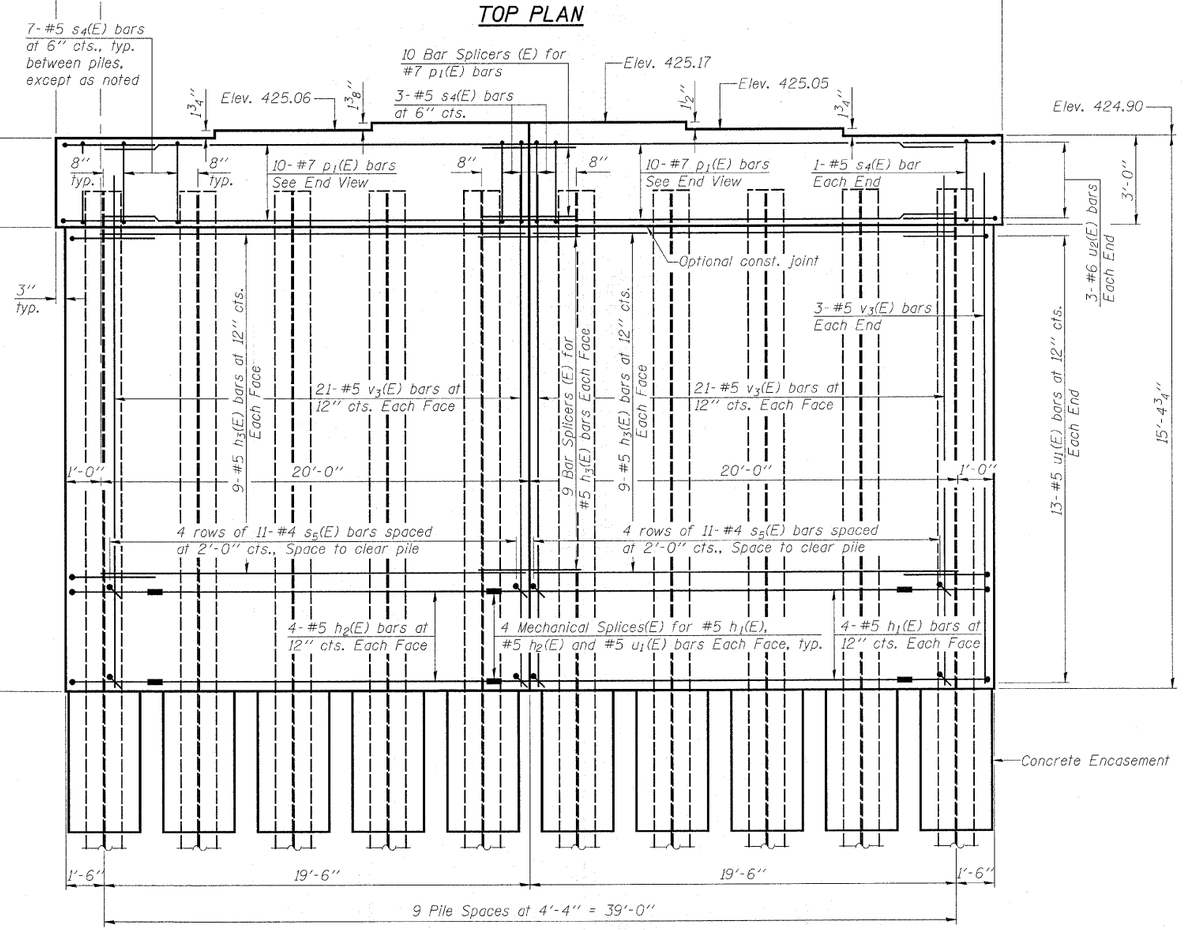
BARS u1(E) & u2(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h1(E)	8	#5	18'-0"	——
h2(E)	8	#5	16'-0"	——
h3(E)	36	#5	20'-0"	——
p1(E)	20	#7	20'-0"	——
s4(E)	64	#5	10'-7"	□
s5(E)	88	#4	2'-8"	⊏⊐
u1(E)	26	#5	8'-8"	⊔
u2(E)	6	#6	10'-5"	⊔
v3(E)	90	#5	14'-5"	——
Structure Excavation		Cu. Yd.	21	
Concrete Structures		Cu. Yd.	50.4	
Reinforcement Bars, Epoxy Coated		Pound	4,400	
Furnishing Steel Piles HP12x63		Foot	320	
Driving Piles		Foot	320	
Concrete Encasement		Cu. Yd.	3.5	
Pile Shoes		Each	10	
Anchor Bolts, 1"		Each	12	
Underwater Structure Excavation Protection Location 1		Each	1	
Mechanical Splice		Each	24	



END VIEW



ELEVATION
(Looking North)

DESIGNED	JJD
CHECKED	EML
DRAWN	KLH
CHECKED	EML

HORNER & SHIFRIN, INC.
ENGINEERS

PIER 1
F.A.P. ROUTE 328 - SECTION (8BR-2)B-1
WAYNE COUNTY
STATION 888+60.00
STRUCTURE NO. 096-0067

Notes:
Space reinforcement in cap to miss anchor bolts.
Pour steps monolithically with cap.
For details of piles, see sheet 21 of 25.
For details of bar splicers, see sheet 22 of 25.
For concrete encasement, see sheet 21 of 25.

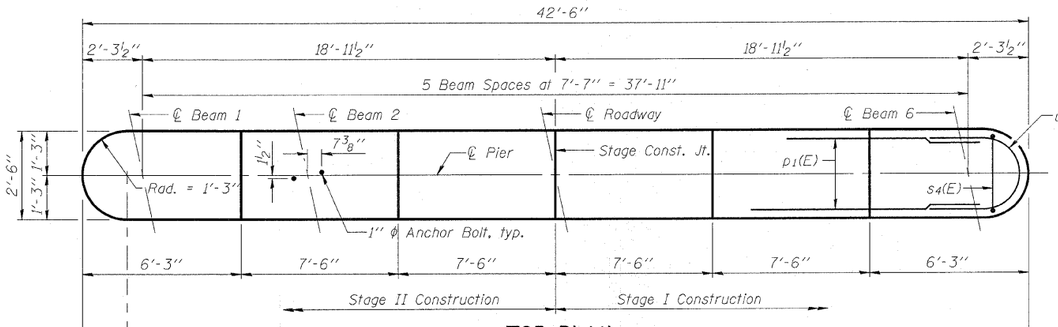
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 328	(8BR-2) B-1	WAYNE	140	42
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 20
25 SHEETS
Contract #74040

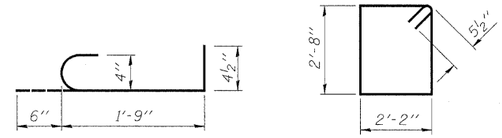
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PILE DATA

Type: HP12x63
Nominal Required Bearing: 400 kips
Allowable Resistance Available: 133 kips
Est. Length: 32'
No. Production Piles: 9
No. Test Piles: 1

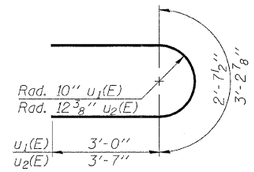


TOP PLAN



BAR s5(E)

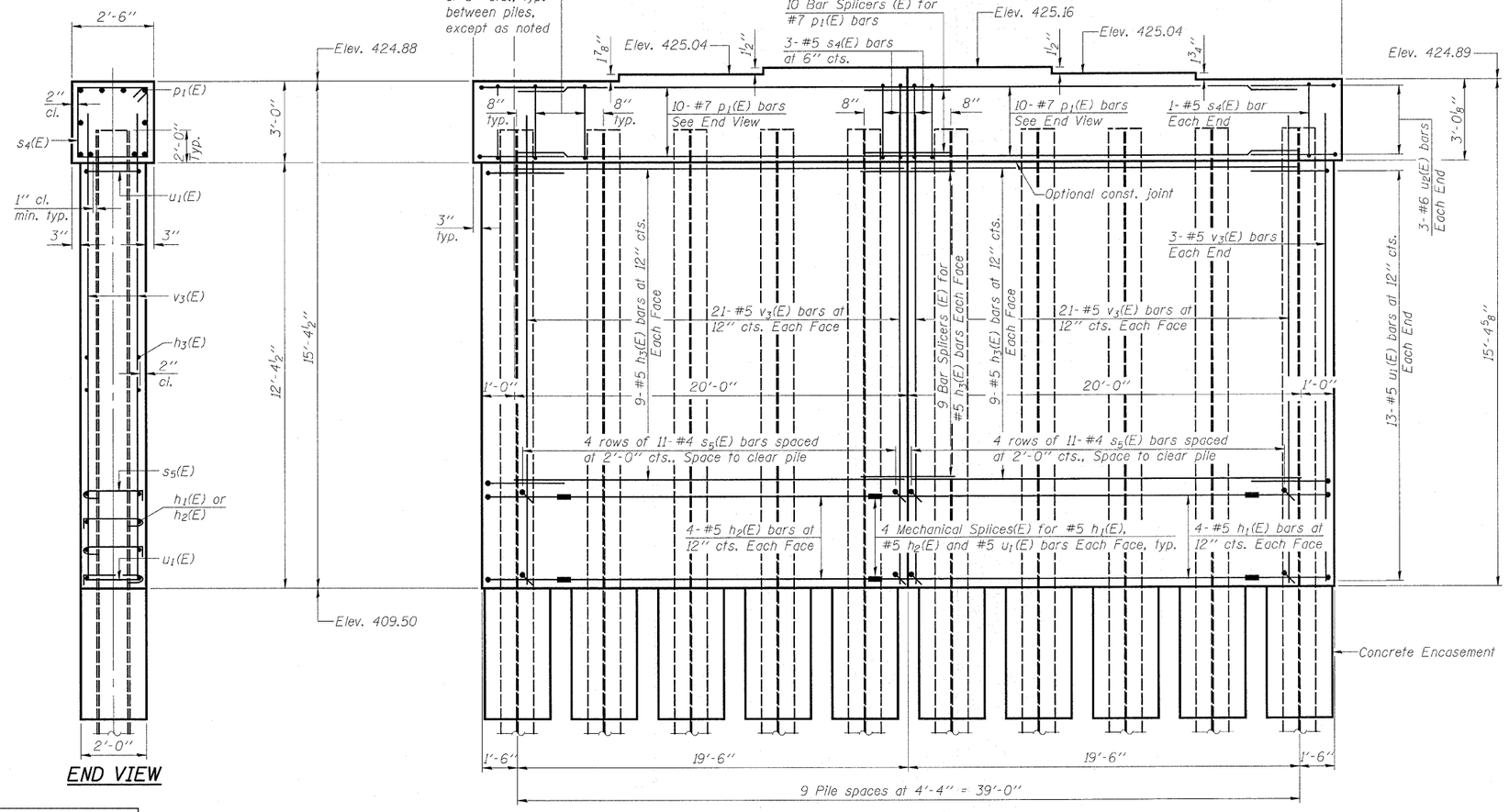
BAR s4(E)



BARS u1(E) & u2(E)

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
$h_1(E)$	8	#5	18'-0"	——
$h_2(E)$	8	#5	16'-0"	——
$h_3(E)$	36	#5	20'-0"	——
$p_1(E)$	20	#7	20'-0"	——
$s_4(E)$	64	#5	10'-7"	□
$s_5(E)$	88	#4	2'-8"	⊔
$u_1(E)$	26	#5	8'-8"	⊃⊂
$u_2(E)$	6	#6	10'-5"	⊃⊂
$v_3(E)$	90	#5	14'-5"	——
Structure Excavation		Cu. Yd.	58	
Concrete Structures		Cu. Yd.	50.4	
Reinforcement Bars, Epoxy Coated		Pound	4,400	
Furnishing Steel Piles HP12x63		Foot	288	
Driving Piles		Foot	288	
Test Pile Steel HP12x63		Each	1	
Concrete Encasement		Cu. Yd.	3.5	
Pile Shoes		Each	10	
Anchor Bolts, 1"		Each	12	
Underwater Structure Excavation Protection Location 2		Each	1	
Mechanical Splice		Each	24	



END VIEW

ELEVATION
(Looking North)

DESIGNED	JJD
CHECKED	EML
DRAWN	KLH
CHECKED	EML

HORNER & SHIFRIN, INC.
ENGINEERS

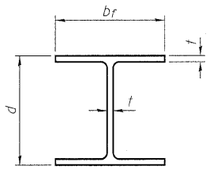
PIER 2
F.A.P. ROUTE 328 - SECTION (8BR-2)B-1
WAYNE COUNTY
STATION 888+60.00
STRUCTURE NO. 096-0067

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 328	(8BR-2) B-1	WAYNE	140	43
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

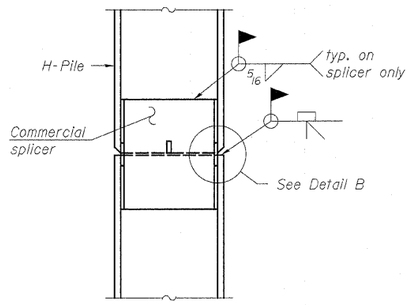
SHEET NO. 21
25 SHEETS

Contract #74040

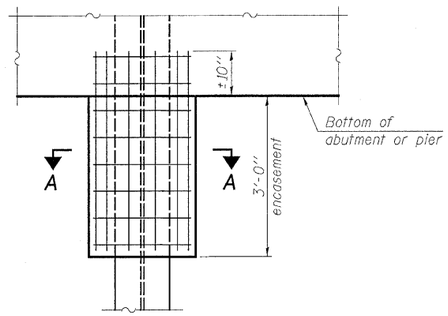


STEEL PILE TABLE

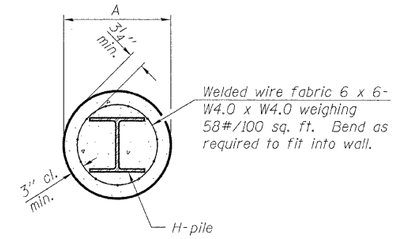
Designation	Depth d	Flange width b_f	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	13/16"	30"
x102	14"	14 3/4"	11/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	11/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53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



ELEVATION



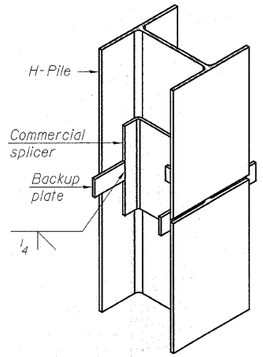
ELEVATION



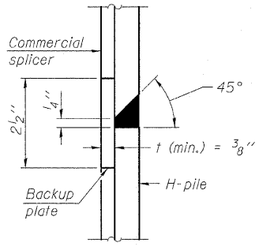
Note:
Forms for encasement may be omitted when soil conditions permit.

SECTION A-A

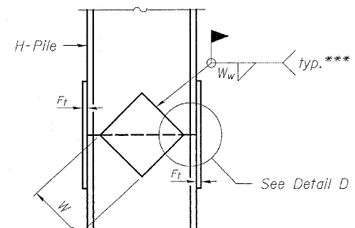
PILE ENCASEMENT



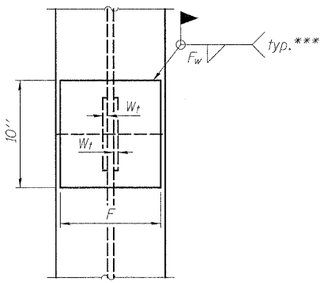
ISOMETRIC VIEW



DETAIL B

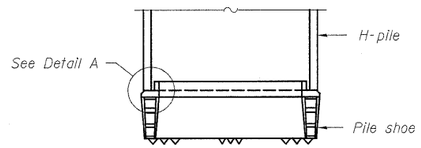


ELEVATION



END VIEW

WELDED COMMERCIAL SPLICE



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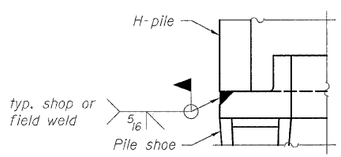
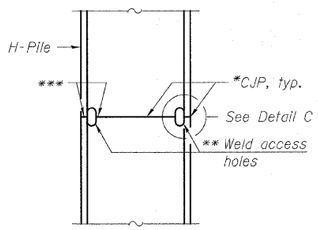
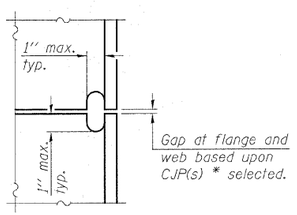


DETAIL A

H-PILE SHOE ATTACHMENT

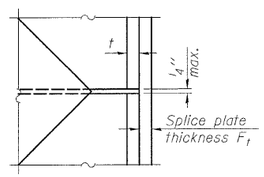


ELEVATION



DETAIL C

COMPLETE PENETRATION WELD SPLICE



DETAIL D

WELDED PLATE FIELD SPLICE

Designation	F	F_t	F_w	W	W_t	W_w
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5/8"	1/2"
x89	12 1/2"	3/4"	11/16"	7 3/4"	5/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5/8"	1/2"
HP 12x84	10"	7/8"	11/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	11/16"	6 1/2"	5/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"

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

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

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

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

DESIGNED	JJD
CHECKED	EML
DRAWN	KLH
CHECKED	EML

F-HP 11-1-06

HORNER & SHIFRIN, INC.
ENGINEERS

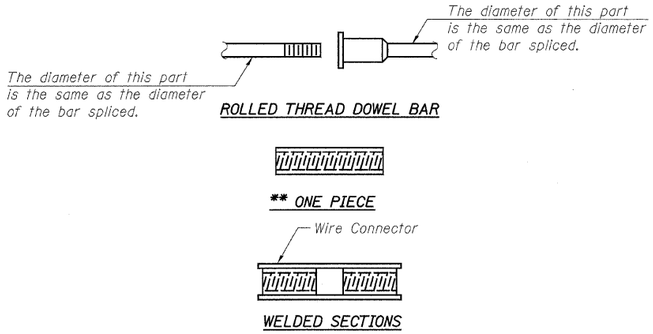
STEEL H-PILE DETAILS
F.A.P. ROUTE 328 - SECTION (8BR-2)B-1
WAYNE COUNTY
STATION 888+60.00
STRUCTURE NO. 096-0067

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 328	(8BR-2) B-1	WAYNE	140	44
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

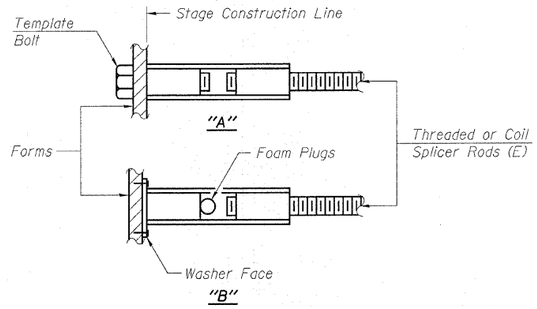
SHEET NO. 22
25 SHEETS

Contract #74040



BAR SPLICER ASSEMBLY ALTERNATIVES

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



INSTALLATION AND SETTING METHODS

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

NOTES

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

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

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

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

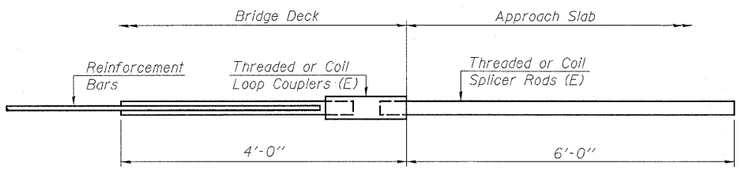
Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

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

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

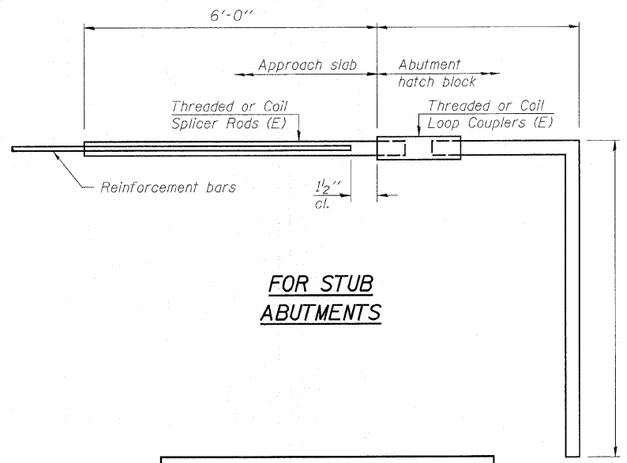
Where fy = Yield strength of lapped reinforcement bars in ksi.
A_t = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	7.9
#5	2'-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



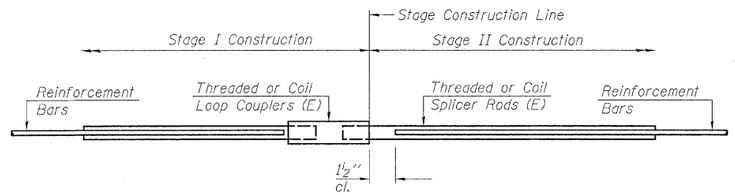
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 12.3 kips - tension
No. Required = 80



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	560	Slab
#6	16	Diaphragms
#7	20	Abutments
#5	36	Piers
#7	20	Piers

DESIGNED	
CHECKED	
DRAWN	KLH
CHECKED	EML

BSD-1 11-1-06

HORNER & SHIFRIN, INC.
ENGINEERS

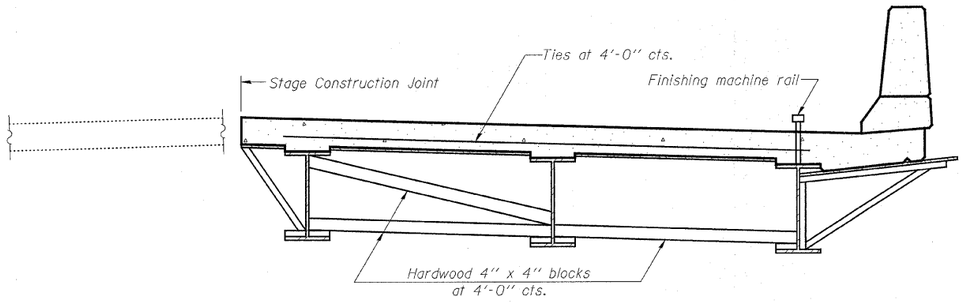
BAR SPLICER ASSEMBLY DETAILS
F.A.P. ROUTE 328 - SECTION (8BR-2)B-1
WAYNE COUNTY
STATION 888+60.00
STRUCTURE NO. 096-0067

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

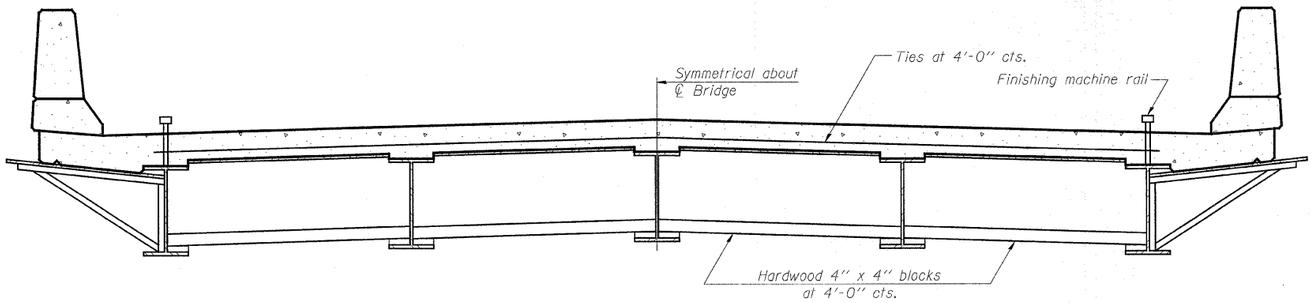
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 328	(8BR-2) B-1	WAYNE	140	45
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 23
25 SHEETS

Contract #74040



FORM BRACES FOR
STAGE CONSTRUCTION



FORM BRACES FOR
STANDARD CONSTRUCTION

When cantilever forming brackets are used, the work shall be done according to Article 503.06(b) of the Standard Specifications, except as modified below and in the details shown on this sheet.

The finishing machine rails shall be placed on the top flange of the exterior beams.

The beams or girders, supporting cantilever forming brackets, shall be tied together at 4 foot intervals.

For Standard construction, or Stage Construction the Hardwood bracing materials shall be placed as shown between webs of beams in each bay.

DESIGNED	
CHECKED	
DRAWN	KLH
CHECKED	EML

SB-1 11-1-06

HORNER & SHIFRIN, INC.
ENGINEERS

CANTILEVER FORMING BRACKETS
F.A.P. ROUTE 328 - SECTION (8BR-2)B-1
WAYNE COUNTY
STATION 888+60.00
STRUCTURE NO. 096-0067

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 328	(8BR-2) B-1	WAYNE	140	46
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 24
25 SHEETS

Contract #74040

Illinois Department of Transportation
Division of Highways
Ill. Dept. of Trans. D-7

SOIL BORING LOG

Page 1 of 2

Date 8/17/05

ROUTE FAP 328 (US 45) DESCRIPTION Raccoon Creek LOGGED BY E. Sandschafer

SECTION (8BR-2)B-1 LOCATION Sec 20 - E 1/2, Sec 21 - W 1/2, SEC. , TWP. 2 N, RNG. 7 E, 3 PM

COUNTY Wayne DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 096-0019
Station 888+60

BORING NO. 1
Station 887+65
Offset 8.70ft Rt
Ground Surface Elev. 427.25 ft

Surface Water Elev. 412.45 ft
Stream Bed Elev. 409.98 ft

Groundwater Elev.:
First Encounter 407.3 ft
Upon Completion Washed ft
After ____ Hrs. samples ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
426.85			
5" Asphalt.			
426.05			
9" Concrete pavement.			
Stiff to soft, damp, brown to gray, SILTY LOAM.	2		
	3 3	1.2 B	22
	2		
-5	3 3	0.8 B	20
	0		
	0 0	0.3 B	25
	2		
-10	1		
	2 3	0.6 B	23
	2		
414.75			
Soft to medium, damp, brown mottled tan, SILTY CLAY.	3 3	0.5 B	25
412.55			
-15 Very soft, very damp, tan/gray/red, SILTY LOAM.	0 1 2	0.2 B	21
	0		
	0 0 2	0.2 B	23
407.45 -20	2		
Very soft, wet, red, SANDY LOAM. *(continued)*			
405.25			
Stiff to medium, damp, gray mottled red, CLAY.	2		
	3 4	1.1 B	23
-25	0		
	0 3	0.6 B	22
400.25			
Very soft, damp, gray, SILTY LOAM w/ white Silt specks.	0 1 2	0.2 B	22
397.75			
-30 Medium, wet, gray, fine grained, SAND. *16% passing #200 sieve.*	1 6 10		22
392.75			
-35 Very dense, very moist, gray, SANDY CLAY SHALE.	36 50/2" 50/0"	3.6 S	8
392.15 Borehole continued with rock coring.			
-40			

Latitude N 38 deg 35.756 min. Longitude W 89 deg 28.516 min. Map Datum WGS 84

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Ill. Dept. of Trans. D-7

ROCK CORE LOG

Page 2 of 2

Date 8/17/05

ROUTE FAP 328 (US 45) DESCRIPTION Raccoon Creek LOGGED BY E. Sandschafer

SECTION (8BR-2)B-1 LOCATION Sec 20 - E 1/2, Sec 21 - W 1/2, SEC. , TWP. 2 N, RNG. 7 E, 3 PM

COUNTY Wayne CORING METHOD Rotary, surf set diamond bit

STRUCT. NO. 096-0019
Station 888+60

CORING BARREL TYPE & SIZE NW, conv dbl bbl, split inner
Core Diameter 2.06 in
Top of Rock Elev. 392.75 ft
Begin Core Elev. 392.15 ft

BORING NO. 1
Station 887+65
Offset 8.70ft Rt
Ground Surface Elev. 427.25 ft

DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
392.15					
Gray, SANDY CLAY SHALE.					
391.75					
Hard, gray, SANDSTONE, not easily scratched.		100	37	0.5	
389.25					
Gray, SANDY CLAY SHALE.					
387.75					
-40 Hard, gray, SANDSTONE, scratched easier than above, broken into many 2" layers.		100	0	0.4	
382.15 -45					
Extent of exploration.					
Benchmark: RR spike in PP #299 in SW quadrant = 427.29' Provided by Bureau of Program Development.					
-50					
-55					

Color pictures of the cores _____
Cores will be stored for examination until_____
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)
BBS, form 138 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Ill. Dept. of Trans. D-7

SOIL BORING LOG

Page 1 of 1

Date 8/18/05

ROUTE FAP 328 (US 45) DESCRIPTION Raccoon Creek LOGGED BY E. Sandschafer

SECTION (8BR-2)B-1 LOCATION Sec 20 - E 1/2, Sec 21 - W 1/2, SEC. , TWP. 2 N, RNG. 7 E, 3 PM

COUNTY Wayne DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 096-0019
Station 888+60

BORING NO. 2
Station 888+80
Offset 55.40ft Lt
Ground Surface Elev. 416.86 ft

Surface Water Elev. 412.45 ft
Stream Bed Elev. 409.98 ft

Groundwater Elev.:
First Encounter 399.9 ft
Upon Completion 405.9 ft
After 96 Hrs. 408.9 ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)
Brown to gray, SILTY CLAY.			
415.36			
Hard, very moist, brown mottled red, CLAY.	5		
	5 4	+4.5 PP	12
	3		
-5 411.86			
Soft to medium, very damp, gray, SILTY LOAM.	3 3	0.3 PP	21
	3		
	3 3	0.8 B	23
407.36			
-10 Very soft, wet, gray, SANDY LOAM.	0 0 1	0.1 B	21
	1		
404.36			
Stiff, damp, gray mottled red, CLAY w/ trace Silt.	3 3	1.0 B	22
402.36			
-15 Stiff, damp, gray, SANDY CLAY.	2		
401.36	4 5	1.4 B	13
Gray, SANDY LOAM.			
399.86			
Loose, wet, gray, fine grained, SAND. *6% passing #200 sieve.*	0		
	3 6		27
-20	0		
4% passing #200 sieve.	2 5		21
2% passing #200 sieve. 394.36	13		
Very dense, moist, gray, CLAY SHALE w/ Sand. 393.86	50/4" 50/2"		6
Extent of exploration.			
-25 Benchmark: RR spike in PP #299 in SW quadrant = 427.29' Provided by Bureau of Program Development.			
-30			
-35			
-40			

Latitude N 38 deg 35.752 min. Longitude W 89 deg 28.325 min. Map Datum WGS 84

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
BBS, from 137 (Rev. 8-99)

DESIGNED	
CHECKED	
DRAWN	KLH
CHECKED	EML

HORNER & SHIFRIN, INC.
ENGINEERS

BORING LOGS
F.A.P. ROUTE 328 - SECTION (8BR-2)B-1
WAYNE COUNTY
STATION 888+60.00
STRUCTURE NO. 096-0067

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 328	(8BR-2) B-1	WAYNE	140	47
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 25
25 SHEETS

Contract #74040

Illinois Department of Transportation
Division of Highways
Ill. Dept. of Trans. D-7

SOIL BORING LOG

Page 1 of 1

Date 8/17/05

ROUTE FAP 328 (US 45) DESCRIPTION Raccoon Creek LOGGED BY E. Sandschafer

SECTION (8BR-2)B-1 LOCATION Sec 20 - E 1/2, Sec 21 - W 1/2, SEC., TWP. 2 N, RNG. 7 E, 3 PM

COUNTY Wayne DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 096-0019
Station 888+60

BORING NO. 3
Station 889+53
Offset 7.50ft Rt
Ground Surface Elev. 427.17 ft

Surface Water Elev. 412.45 ft
Stream Bed Elev. 409.98 ft

Groundwater Elev.:
First Encounter 397.2 ft
Upon Completion Caved ft
After ____ Hrs. ____ ft

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
				8 1/2" Asphalt.
426.47				
				9" Concrete pavement.
425.67				
	1			Medium, damp, brown mottled red, SILTY CLAY.
	3	0.7	23	
	3	B		
-5	0			
422.17				
	0	0.4	27	Soft to very soft, very damp, gray, SILTY LOAM.
	2	B		
	0			
	0	0.3	26	
	0	B		
-10	0			
	0	0.1	24	
	0	B		
	0			
	1	0.1	27	
	0	B		
-15	0			
	0	0.4	34	*Many wood fragments.*
	0	B		
410.17				
	0			Brown, SANDY LOAM w/ many wood fragments.
408.97				
	1	1.5	25	Stiff, damp, gray/red, CLAY.
	2	B		
-20	2			

DEPTH (ft)	BLOWS (/6")	UCS Qu (tsf)	MOIST (%)	Description
	3	1.5	26	Stiff, damp, gray/red, CLAY. *(continued)*
	4	B		
	2			
	3	1.0	29	
	4	B		
402.67				
-25	0			Medium, damp, dark brown, CLAY to SILTY CLAY w/ few wood fragments.
	2	0.6	28	
	2	B		
	1			
399.17				
	6	1.9	14	Stiff, damp, gray, CLAY TILL.
	7	B		
397.67				
-30	0			Loose, wet, gray, fine grained, SAND w/ few Sandstone fragments. *2% passing #200 sieve.*
	3		20	
	4			
392.67				
-35	30			Very dense, moist, gray, SANDY CLAY SHALE.
391.87	50/3"		7	Extent of exploration.
	50/1"			
				Benchmark: RR spike in PP #299 in SW quadrant = 427.29' Provided by Bureau of Program Development.
-40				

Latitude N 38° deg 53.786' min, Longitude W 88 deg 29.513 min, Map Datum WGS 84

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

BBS, from 137 (Rev. 8-99)

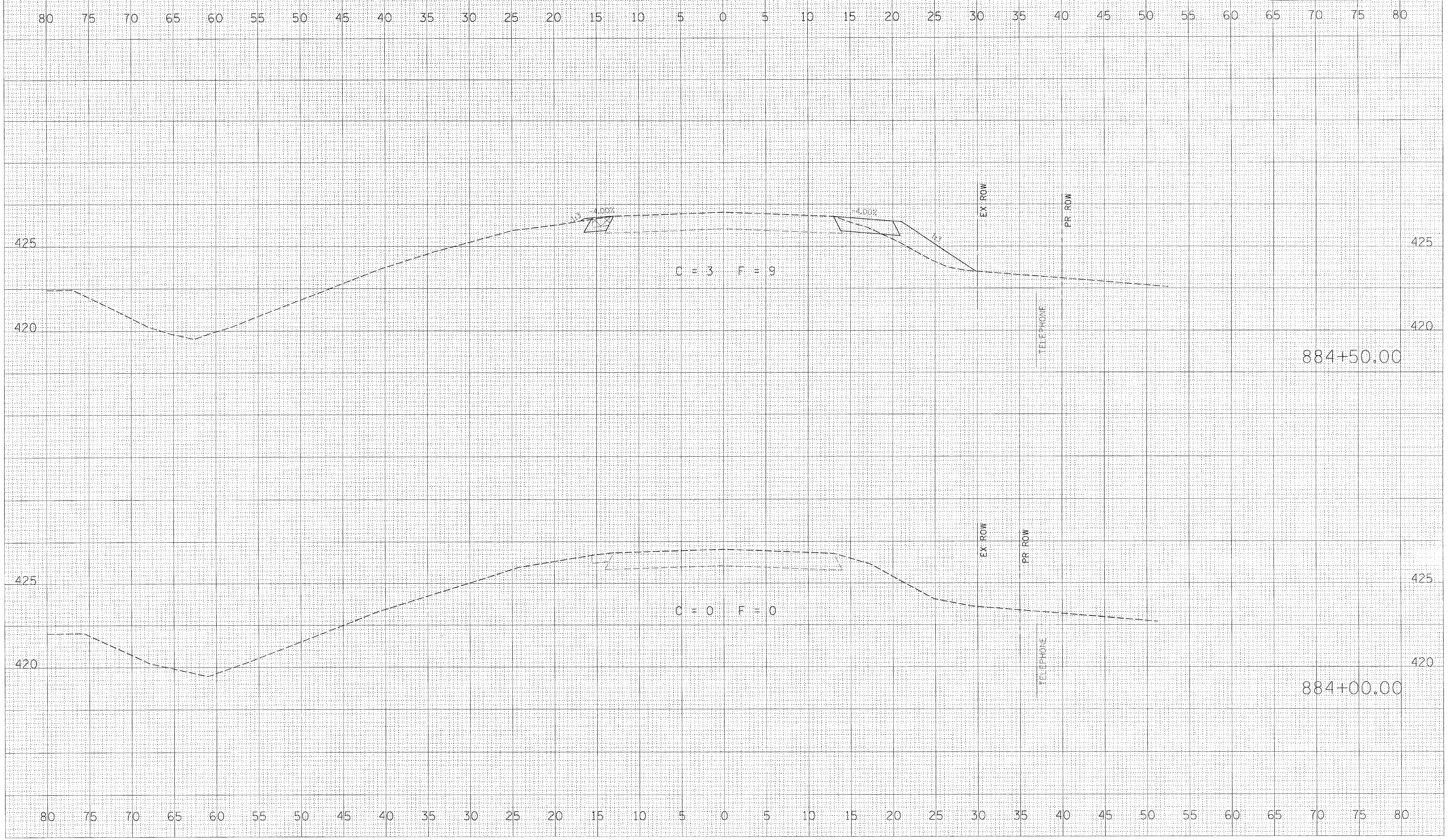
DESIGNED	
CHECKED	
DRAWN	KLH
CHECKED	EML

HORNER & SHIFRIN, INC.
ENGINEERS

BORING LOGS
F.A.P. ROUTE 328 - SECTION (8BR-2)B-1
WAYNE COUNTY
STATION 888+60.00
STRUCTURE NO. 096-0067

CONTRACT NO. 74040

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	(8BR-2)B-1	WAYNE	140	48
STA. 884+00.00 TO STA. 884+50.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



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

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

PLOT DATE = 9/17/2007
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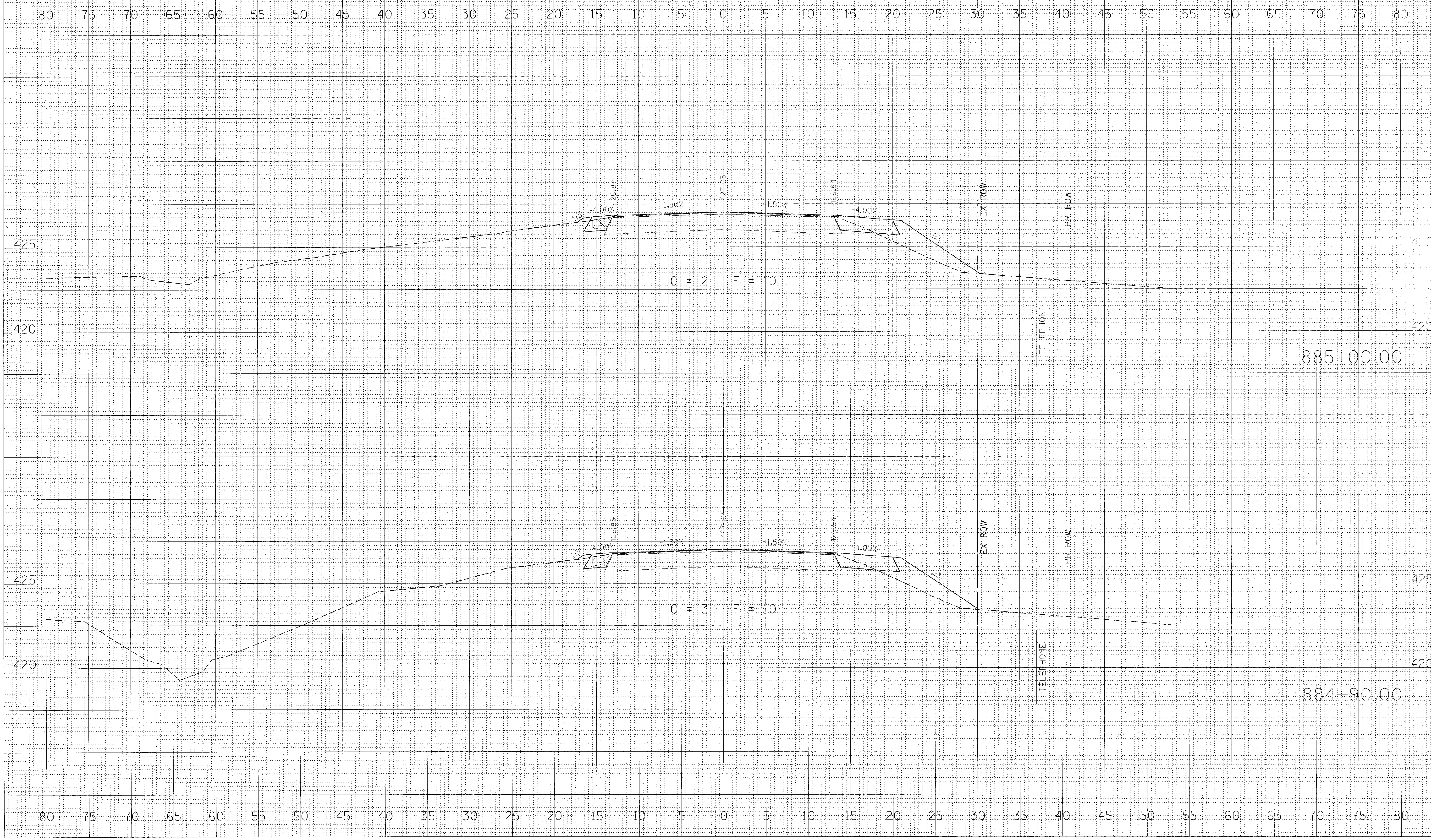
PLOT SCALE = 5.000 ' / IN.
USER NAME = sdonahue

US 45 OVER RACCOON CREEK (SN 096-0067) CROSS SECTION SHEET

CONTRACT NO. 74040

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	(8BR-2)B-1	WAYNE	140	49
STA. 884+90.00 TO STA. 885+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



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

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

PLOT DATE = 9/17/2007
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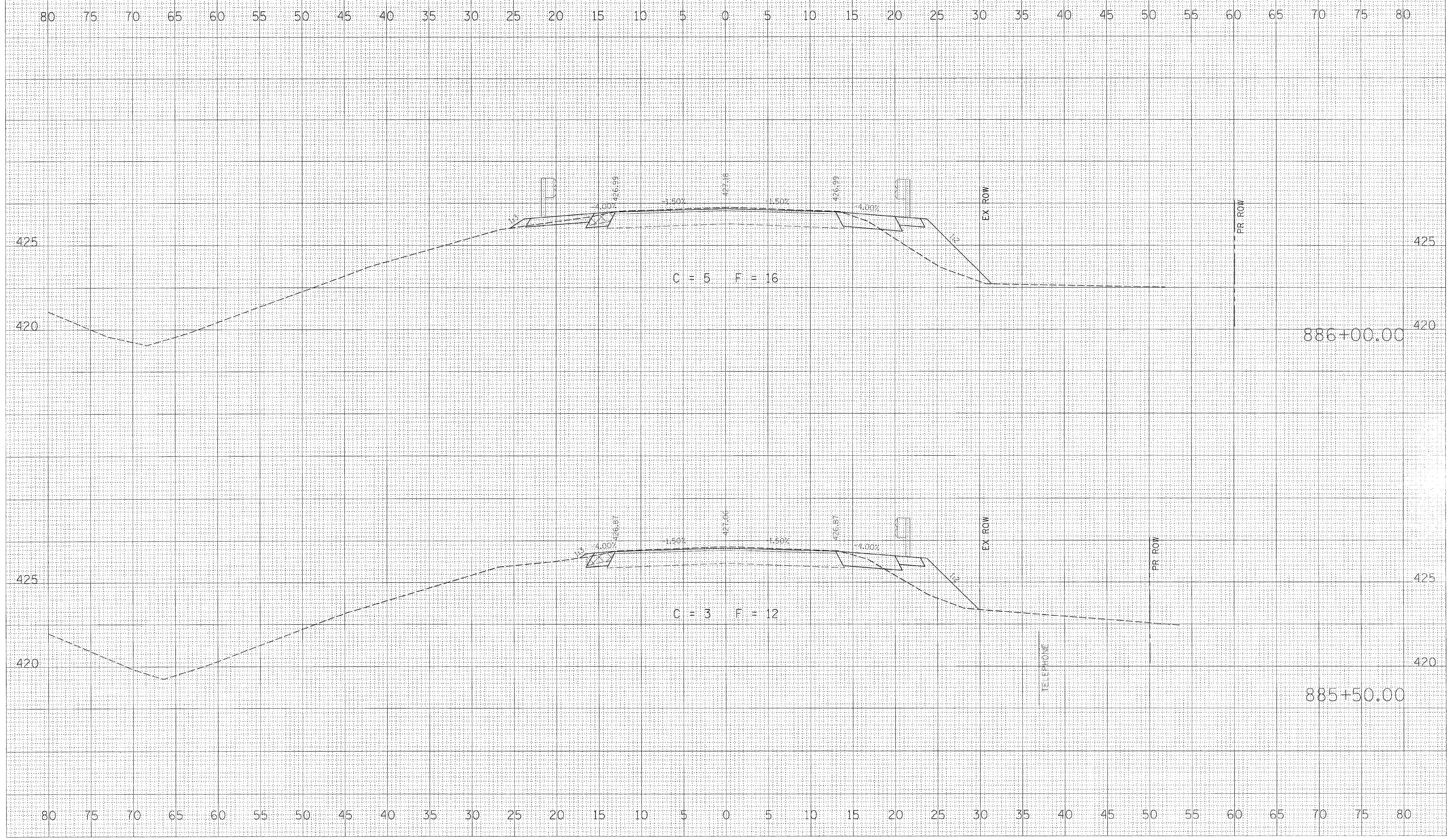
US 45 OVER RACCOON CREEK (SN 096-0067) CROSS SECTION SHEET

CONTRACT NO. 74040

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	(8BR-2)B-1	WAYNE	140	50
STA. 885+50.00 TO STA. 886+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



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

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

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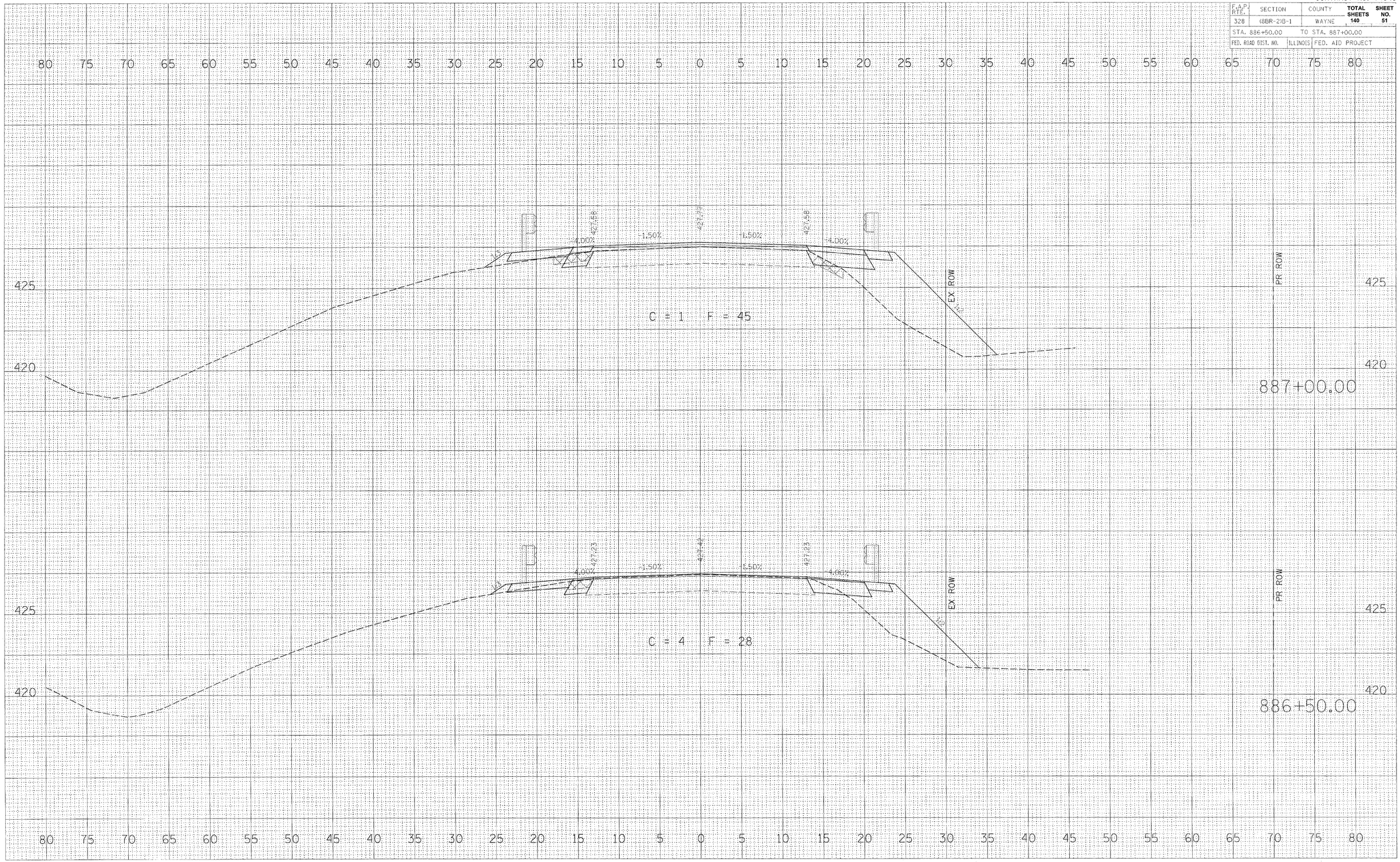
US 45 OVER RACCOON CREEK (SN 096–0067) CROSS SECTION SHEET

CONTRACT NO. 74040

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	(6BR-2)B-1	WAYNE	140	51
STA. 886+50.00		TO STA. 887+00.00		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	



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SURVEYED — BY — DATE
DRAWN — BY — DATE
TEMPLATE — BY — DATE
AREAS — CHECKED — DATE

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SURVEYED — BY — DATE
DRAWN — BY — DATE
AREAS — SKETCHED — DATE

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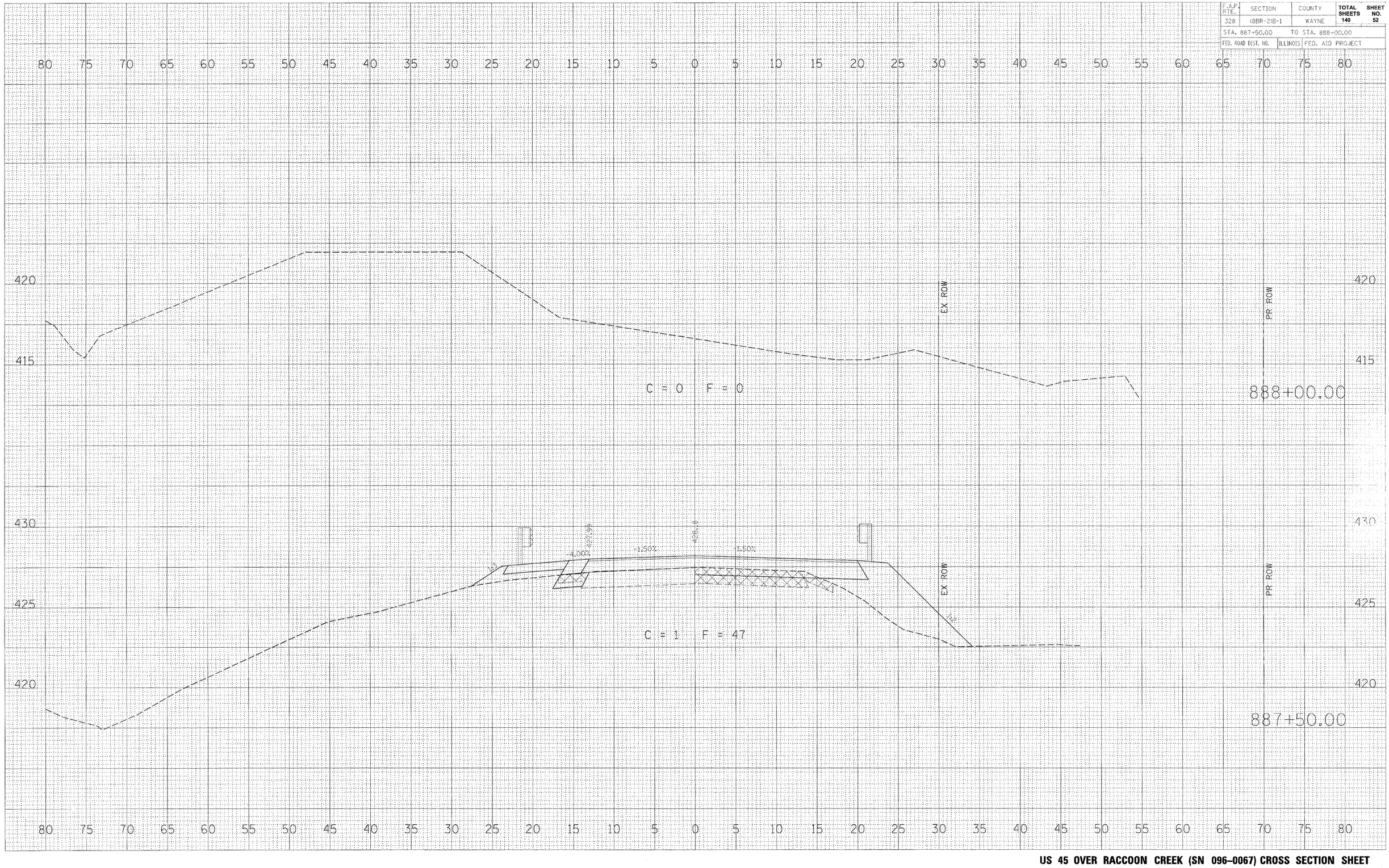
US 45 OVER RACCOON CREEK (SN 096-0067) CROSS SECTION SHEET

CONTRACT NO. 74040

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	(BBR-21B-1	WAYNE	140	52
STA. 887+50.00		TO STA. 888+00.00		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	



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PLOT DATE = 9/17/2007
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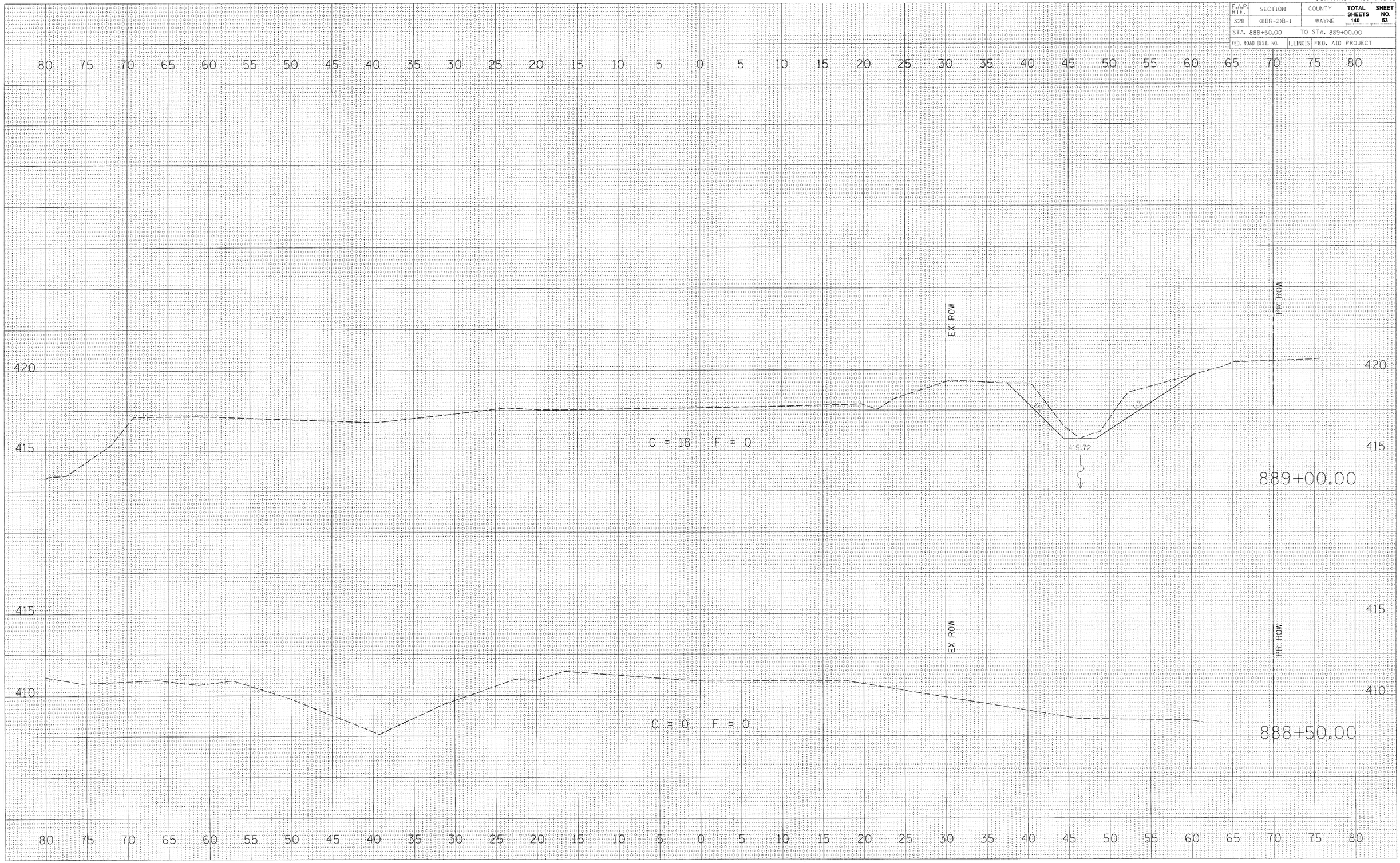
USER NAME = sdonahue

US 45 OVER RACCOON CREEK (SN 096–0067) CROSS SECTION SHEET

CONTRACT NO. 74040

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	(8BR-2)B-1	WAYNE	140	53
STA. 888+50.00		TO STA. 889+00.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



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

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USER NAME = sdonahue

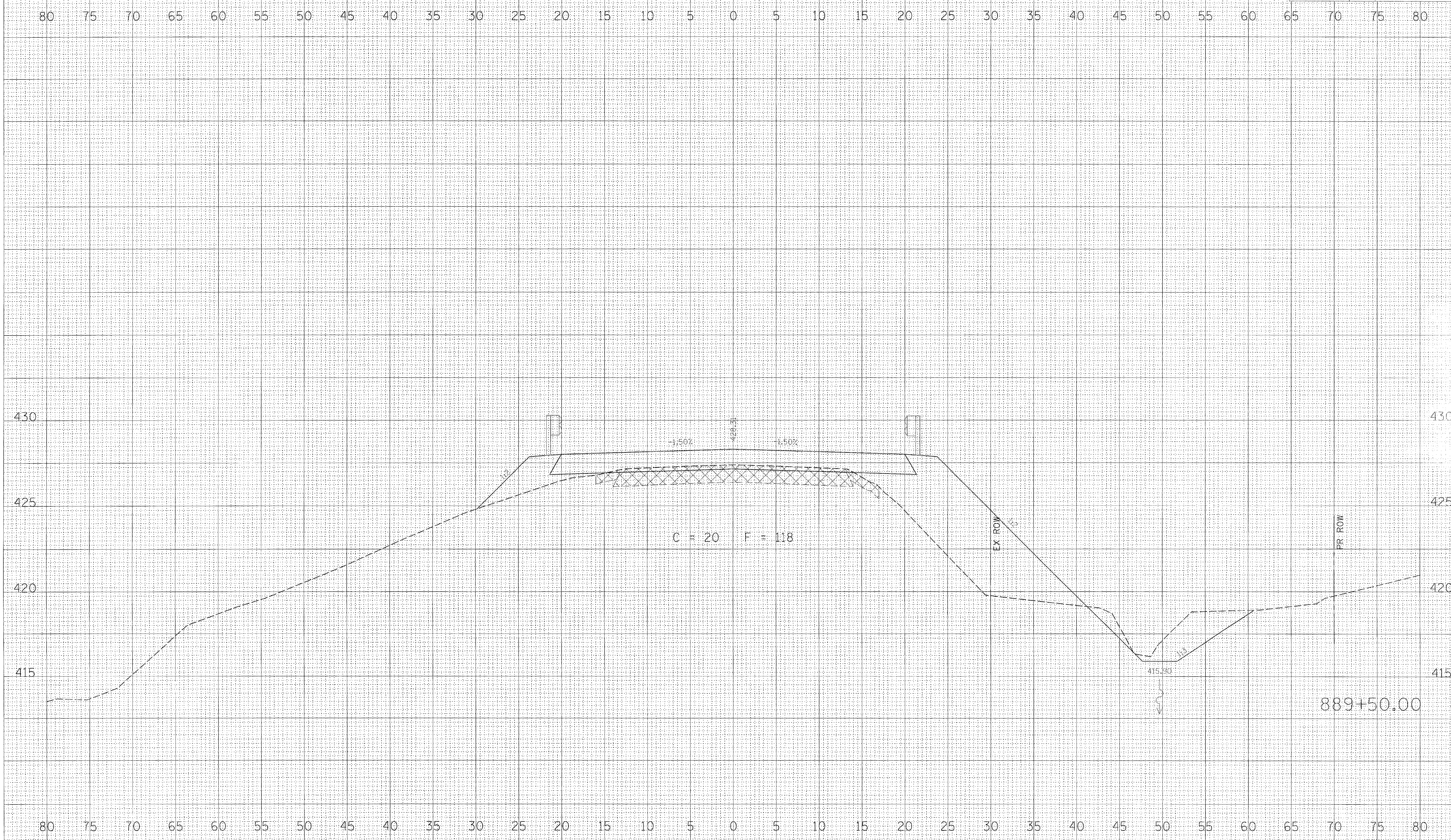
US 45 OVER RACCOON CREEK (SN 096–0067) CROSS SECTION SHEET

CONTRACT NO. 74040

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	(88R-2)B-1	WAYNE	140	54

STA. 889+50.00 TO STA. 889+50.00

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



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

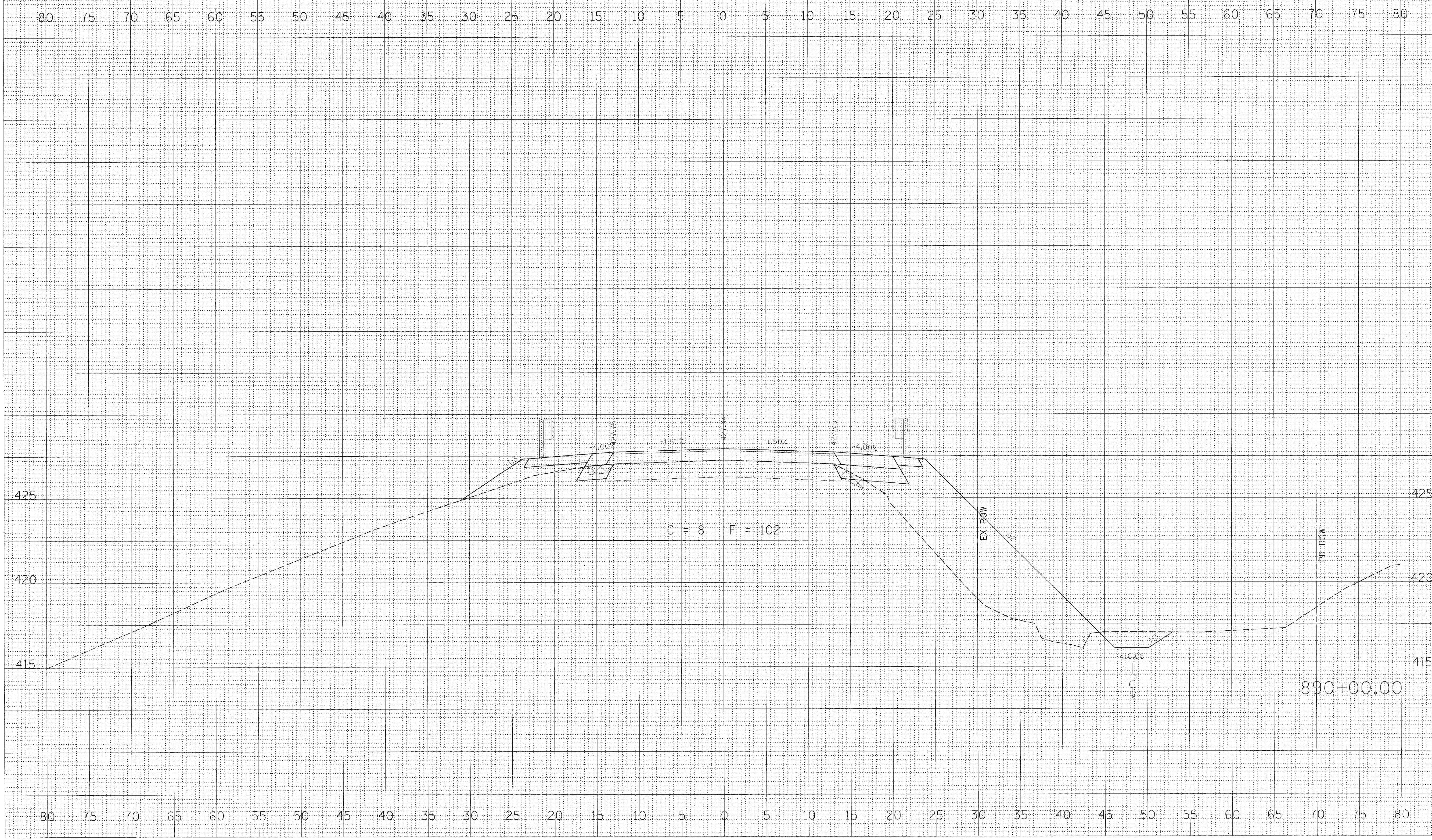
ORIGINAL SURVEY | SURVEYED | PLOTTED | TEMPLATE | AREAS | AREAS CHECKED | NOTE BOOK | NO. | BY | DATE

PLOT DATE = 9/17/2007
USER NAME = sdonahue

US 45 OVER RACCOON CREEK (SN 096-0067) CROSS SECTION SHEET

CONTRACT NO. 74040

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	(8BR-2)B-1	WAYNE	140	55
STA. 890+00.00	TO STA. 890+00.00			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



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

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

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USER NAME = sdonahue

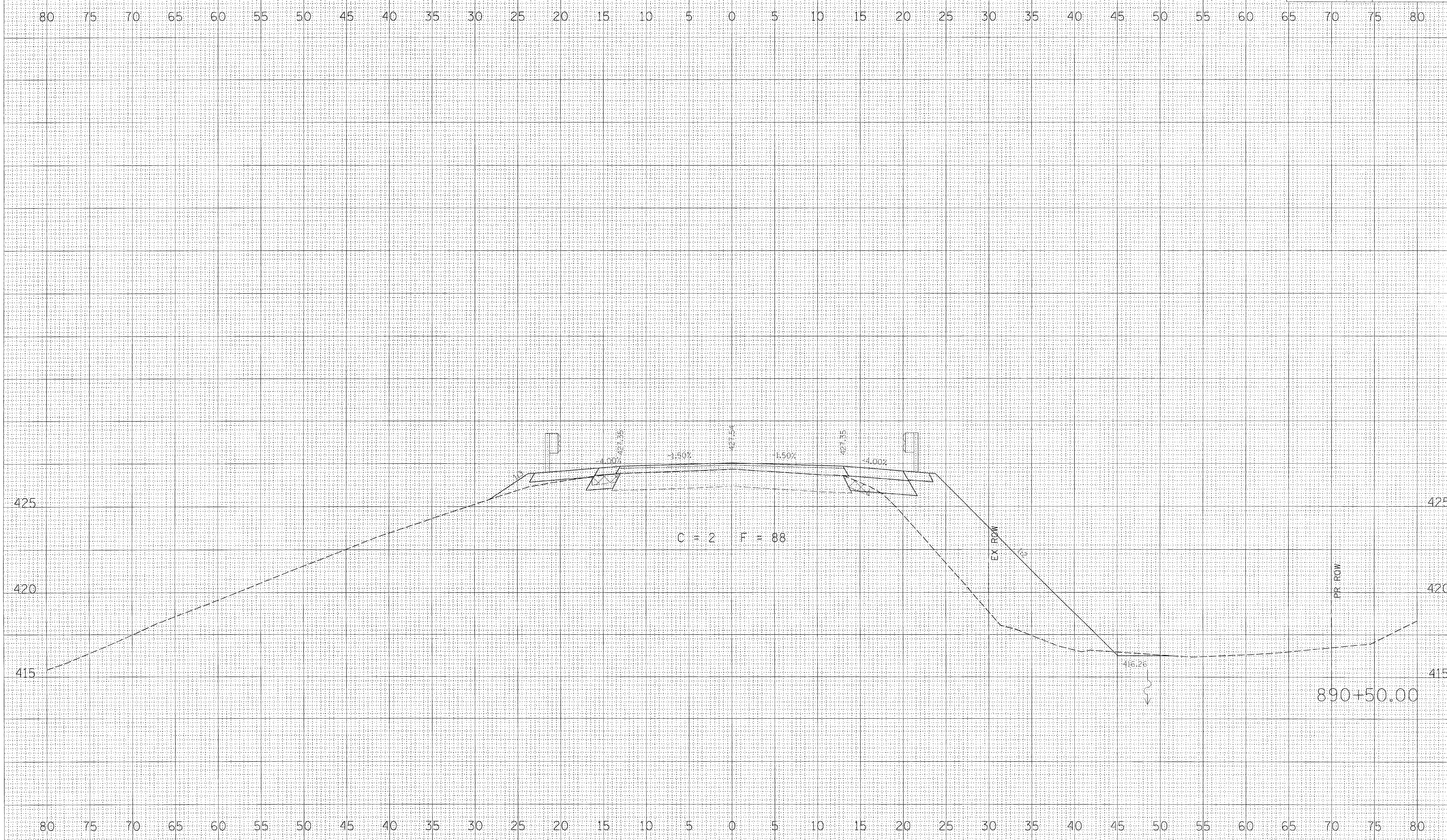
US 45 OVER RACCOON CREEK (SN 096-0067) CROSS SECTION SHEET

CONTRACT NO. 74040

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	(8BR-2)B-1	WAYNE	140	56

STA. 890+50.00 TO STA. 890+50.00

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



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

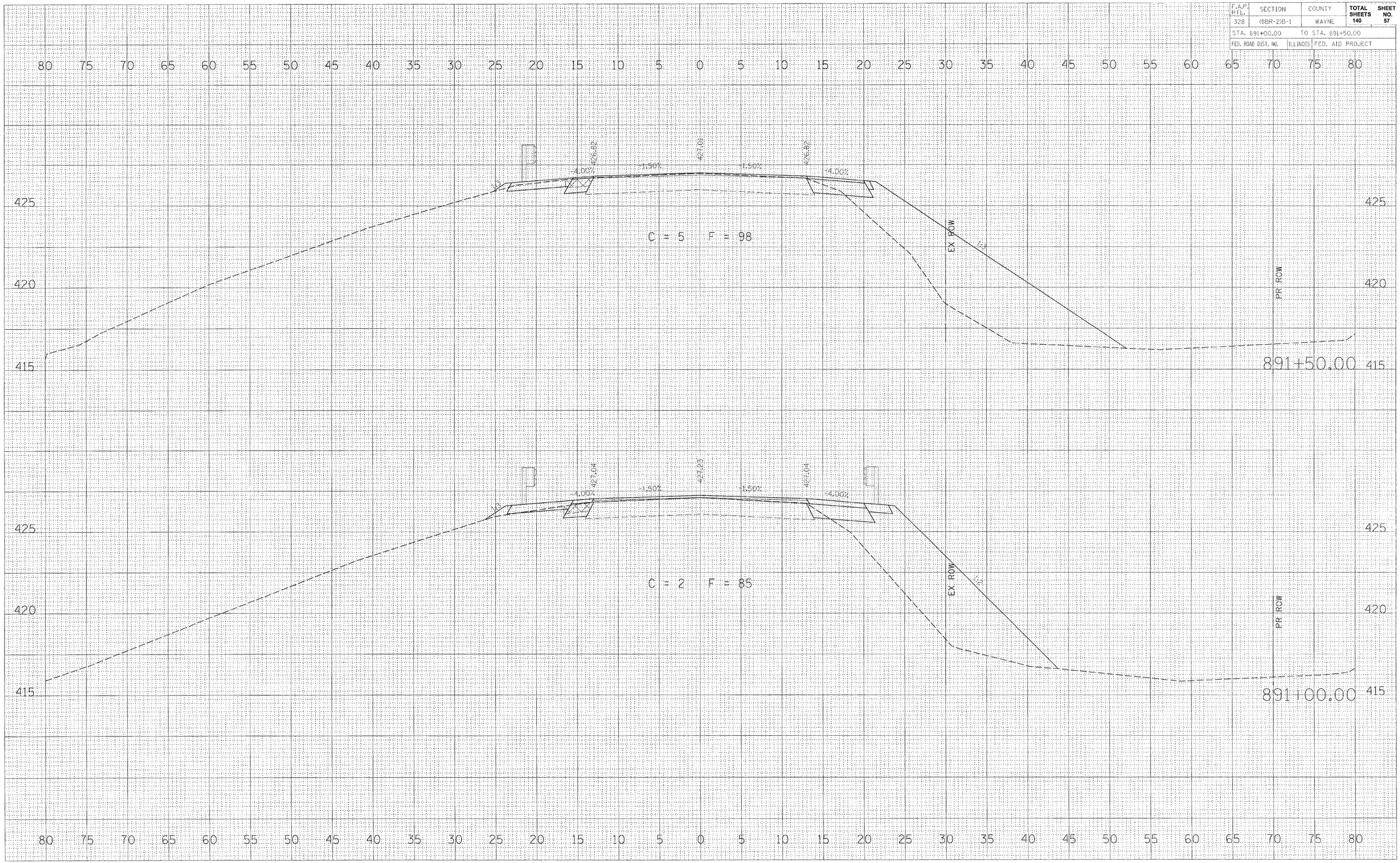
ORIGINAL SURVEY | NO. | SURVEYED | PLOTTED | AREAS | AREAS CHECKED | BY | DATE

PLOT DATE = 4/17/2007
PLOT SCALE = 5.000 '/ IN.
USER NAME = sdonohue

US 45 OVER RACCOON CREEK (SN 096-0067) CROSS SECTION SHEET

CONTRACT NO. 74040

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	(BBR-2)B-1	WAYNE	140	57
STA. 891+00.00	TO STA. 891+50.00			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



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

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

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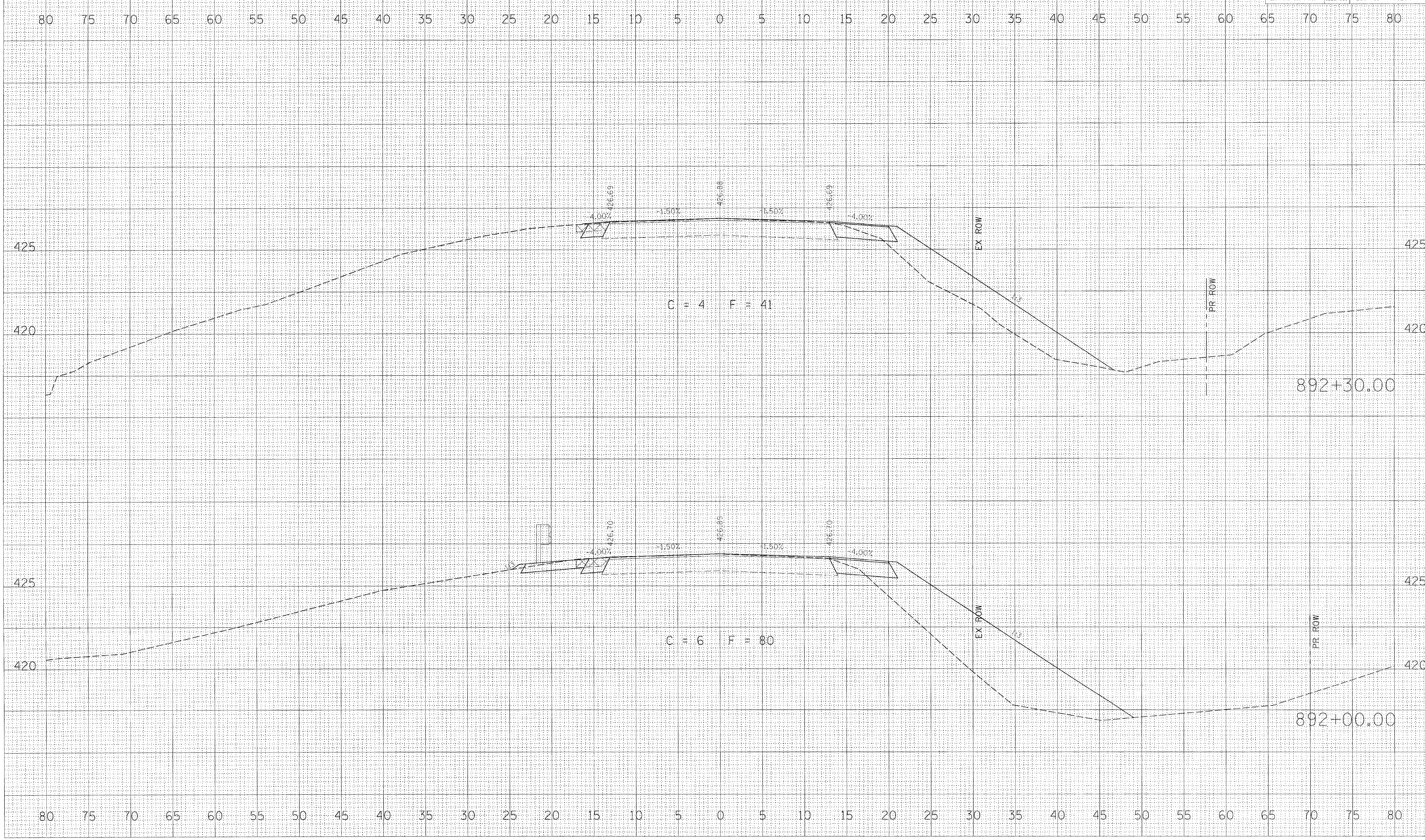
USER NAME = adorshue

US 45 OVER RACCOON CREEK (SN 096-0067) CROSS SECTION SHEET

CONTRACT NO. 74040

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	(8BR-2)B-1	WAYNE	140	58
STA. 892+00.00	TO STA. 892+30.00			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



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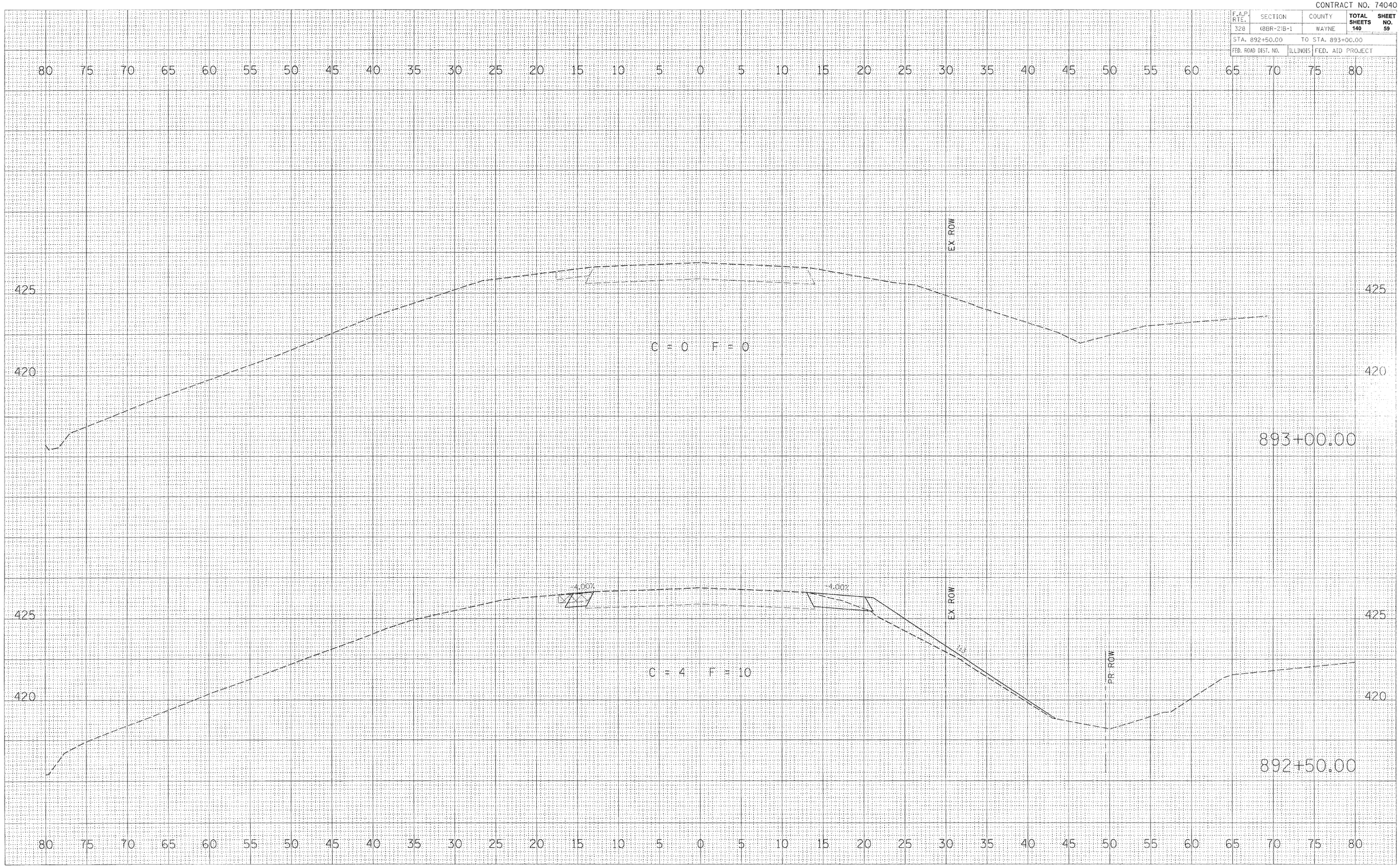
ORIGINAL SURVEY: NOTE BOOK NO. / SURVEYED / PLOTTED / TEMPLATE / AREAS / AREAS CHECKED / BY / DATE

PLOT DATE = 9/17/2007
PLOT SCALE = 5.0000 ' / IN.
USER NAME = sdonohue

US 45 OVER RACCOON CREEK (SN 096–0067) CROSS SECTION SHEET

CONTRACT NO. 74040

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	(BBR-2)B-1	WAYNE	140	59
STA. 892+50.00		TO STA. 893+00.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



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

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USER NAME = stonehue

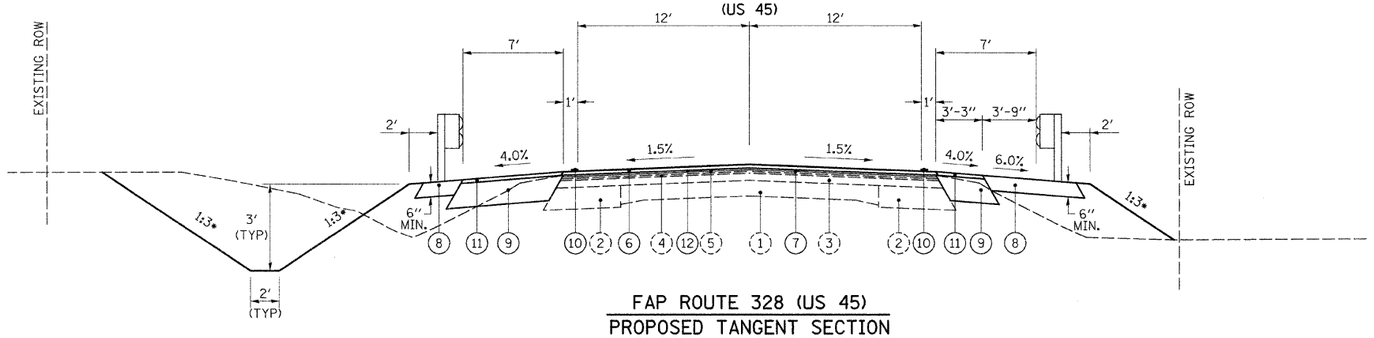
US 45 OVER RACCOON CREEK (SN 096–0067) CROSS SECTION SHEET

CONTRACT NO. 74040

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	*	WAYNE	140	60
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (8BR-2,10BR-3)B-1

℄
FAP ROUTE 328
(US 45)

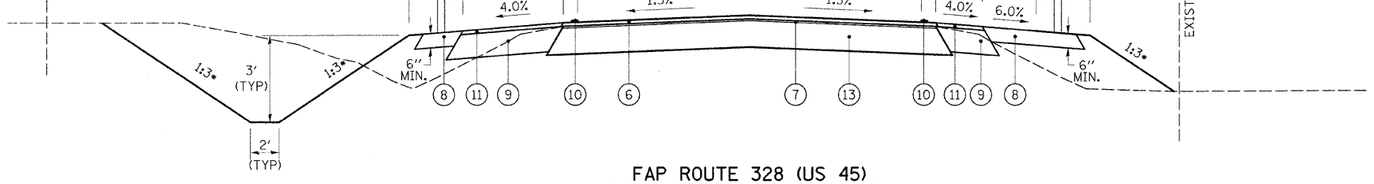


FAP ROUTE 328 (US 45)
PROPOSED TANGENT SECTION

- TO APPLY -
STA 409+00.00 TO STA 409+77.70
CULVERT OMISSION
STA 410+50.43 TO STA 411+00.00

* OR AS SHOWN ON CROSS SECTIONS

℄
FAP ROUTE 328
(US 45)

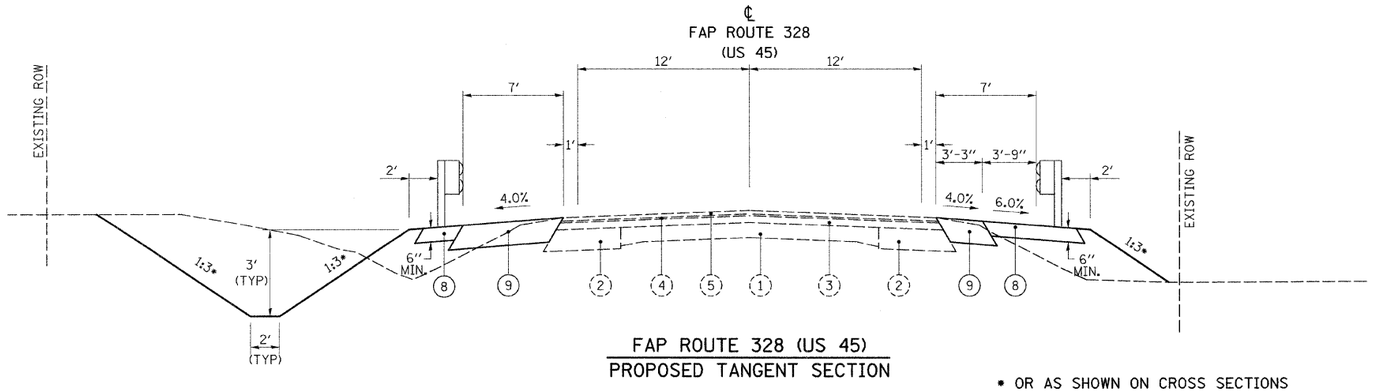


FAP ROUTE 328 (US 45)
PROPOSED TANGENT SECTION

- TO APPLY -
STA 409+77.70 TO STA 410+50.43

* OR AS SHOWN ON CROSS SECTIONS

℄
FAP ROUTE 328
(US 45)



FAP ROUTE 328 (US 45)
PROPOSED TANGENT SECTION

- TO APPLY -
STA 407+35.35 TO STA 409+00.00 &
STA 411+00.00 TO STA 413+06.64

* OR AS SHOWN ON CROSS SECTIONS

MATERIALS LEGEND

(1) EXISTING PCC PAVEMENT, 9"-6"-9"
(2) EXISTING WIDENING
(3) EXISTING HOT-MIX ASPHALT BINDER (VARIABLE DEPTH)
(4) EXISTING HOT-MIX ASPHALT LEVELING BINDER (MACHINE METHOD) TYPE 2, ¾"
(5) EXISTING HOT-MIX ASPHALT SURFACE COURSE, MIXTURE D, CLASS I, TYPE 2, 1½"
(6) PROPOSED HOT-MIX ASPHALT SURFACE COURSE, MIXTURE "C", N70, (1½")
(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) PROPOSED PAVEMENT MARKING
(11) PROPOSED HOT-MIX ASPHALT SHOULDERS, 1½"
(12) PROPOSED HOT-MIX ASPHALT REMOVAL, ¾"
(13) PROPOSED HOT-MIX ASPHALT BASE COURSE, 6"

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS
US ROUTE 45
OVER BRANCH OF DEER CREEK

SCALE: VERT. N/A
HORIZ. N/A
DATE 06/12/07

DRAWN BY KMO
CHECKED BY SSM

CONTRACT NO. 74040

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	*	WAYNE	140	61
STA. 407+00.00		TO STA. 413+00.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (8BR-2,10BR-3)B-1

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

PROFILE
SURVEYED
PLOTTED
LEVELS CHECKED
NOTE BOOK
NO.
STRUCTURE NOTATIONS CHKD
BY
DATE

PROPOSED ROW INTERSECTS EXISTING ROW AT STA 406+50.00, 30' LT

2' x 2' BOX CULVERT EXTENSION W/ PRECAST CONCRETE BOX CULVERT END SECTION (SPECIAL) STA 407+70.96 DESIGN FILL HEIGHT 3.6 FEET US ℄ = 423.38

EX HEADWALL TBR

7'-0" BASE COURSE WIDENING

+50.00 55' LT

CLASS SI CONCRETE GUTTER OUTLET

PROPOSED ROW

+20.00 55' LT

+00.00 80' LT

STONE RIPRAP, CLASS A4

CONSTRUCTION LIMITS

+50.00 80' LT

℄ S.N. 096-2010 STA 410+21.00, 20° LT FWD DOUBLE 10' X 8' BOX CULVERT (SEE STRUCTURE PLANS)

PROPOSED ROW INTERSECTS EXISTING ROW AT STA 414+00.00, 30' LT

7'-0" BASE COURSE WIDENING

+00.00 45' LT

FENCE REMOVAL

END GUARDRAIL STA 413+06.65

+50.00 45' LT

PROPOSED ROW

EX GUARDRAIL TBR

EXISTING ROW

BEGIN CONSTRUCTION STA 408+70.00

BEGIN GUARDRAIL STA 409+19.15

END CONSTRUCTION STA 411+30.00

+83.11 | +10.07 | +34.23 | +50.00

407 | 408 | 409 | 410+00 | 411 | 412 | 413

13' | 13' | 13' | 13'

EX GUTTER OUTLET TBR

EXISTING ℄ US 45

BEGIN GUARDRAIL STA 407+35.35

HOT-MIX ASPHALT SHOULDERS, 6"

3'-3" BASE COURSE WIDENING

CONSTRUCTION LIMITS

30' BUTT JOINT

30' BUTT JOINT

EX GUARDRAIL TBR

EX 3" HIGH PRESSURE GASLINE TO BE RELOCATED BY OTHERS

STONE RIPRAP, CLASS A4

FENCE REMOVAL

CONSTRUCTION LIMITS

+22.85

END GUARDRAIL STA 412+22.85

HOT-MIX ASPHALT SHOULDERS, 6"

3'-3" BASE COURSE WIDENING

+84.91 | +06.65

EXISTING ℄ US 45

EXISTING ROW

EXISTING ROW

TO BE REMOVED

20 10 0 20 40
SCALE IN FEET

200.00' V.C.

VPI STA. 409+00.00
ELEVATION 425.82

VPI STA. 411+00.00
ELEVATION 424.85

VPI STA. 410+00.00
ELEVATION 424.97

426.06

424.69

-0.80%

-0.85%

-0.85%

-0.12%

-0.12%

-0.53%

-2.73%

+1.44%

SPECIAL DITCH LT

+0.43%

-6.58%

-8.00%

SPECIAL DITCH LT

-19.95%

+1.86%

+5.70%

SPECIAL DITCH LT

+1.41%

423.93

423.79

424.53

+90.00
424.70

+12.00
424.00

421.50

417.50

4.69

417.54

418.25

418.95

2'X2' BOX CULVERT EXTENSION STA 407+70.18 U.S. ℄ = 423.38

S.N. 096-2010 10' X 8' BOX CULVERT STA 410+21.00 U.S. ℄ = 414.15

20'
5'

435 | 430 | 425 | 420 | 415 | 410

430.49 | 428.58 | 427.29 | 426.32 | 425.69 / 425.82 | 425.28 / 425.44 | 425.00 / 425.15 | 424.81 / 424.96 | 424.72 / 424.85 | 424.66 | 424.62 | 424.61 | 424.58

407+00 | 407+50 | 408+00 | 408+50 | 409+00 | 409+50 | 410+00 | 410+50 | 411+00 | 411+50 | 412+00 | 412+50 | 413+00

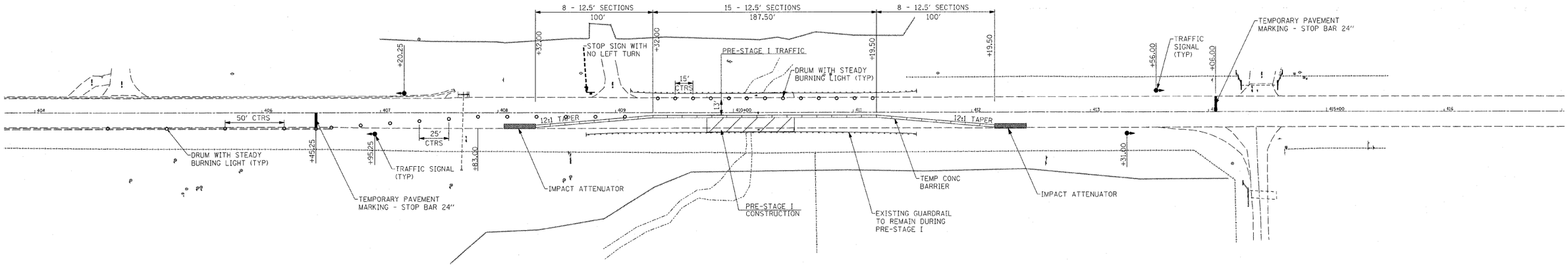
US 45 OVER BRANCH OF DEER CREEK (SN 096-2010) PLAN & PROFILE

REVISED 11/09/07

CONTRACT NO. 74040

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	•	WAYNE	140	62
STA. 406+45.25		TO STA. 414+06.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

• (8BR-2,10BR-3)B-1



SEQUENCE OF CONSTRUCTION

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

PRE-STAGE I

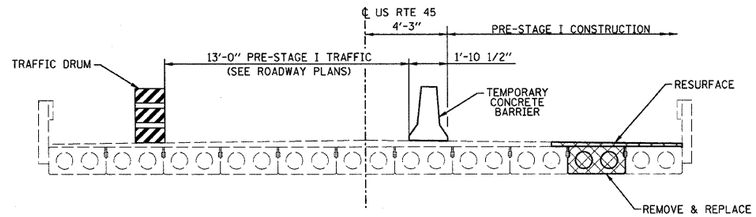
N

SCALE IN FEET
0 40 80

NOTES

ADVANCED WARNING SIGNS, 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.



PRE-STAGE I TYPICAL

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

STAGING DETAILS
US ROUTE 45
OVER BRANCH OF DEER CREEK

SCALE: VERT. N/A
HORIZ. 1" = 40'
DATE 07/18/07
DRAWN BY KMO
CHECKED BY SSM

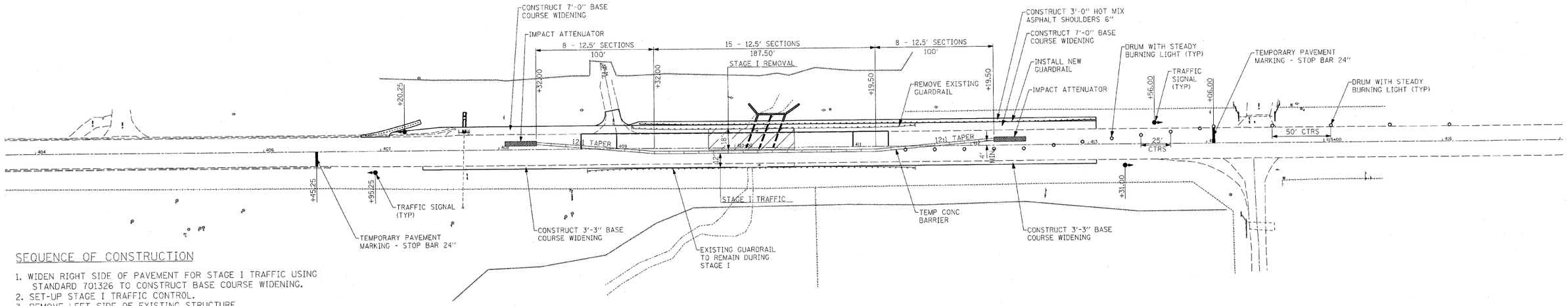
PLOT DATE = 4/24/07
FILE NAME = STAGE1.DGN

US 45 OVER BRANCH OF DEER CREEK (SN 096-2010) STAGING PLAN

CONTRACT NO. 74040

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	•	WAYNE	140	63
STA. 406+45.25		TO STA. 414+06.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

• (8BR-2,10BR-3)B-1



SEQUENCE OF CONSTRUCTION

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

STAGE I

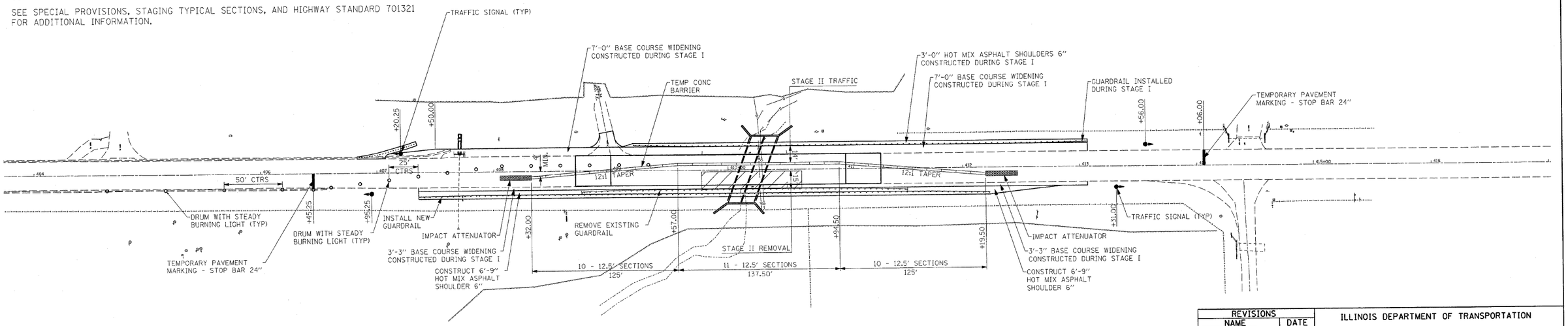
N

SCALE IN FEET
0 40 80

NOTES

ADVANCED WARNING SIGNS, 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.



STAGE II

N

SCALE IN FEET
0 40 80

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

STAGING DETAILS

US ROUTE 45
OVER BRANCH OF DEER CREEK

SCALE: VERT. N/A
HORIZ. 1" = 40'
DATE 06/12/07

DRAWN BY TJQ
CHECKED BY RPJ

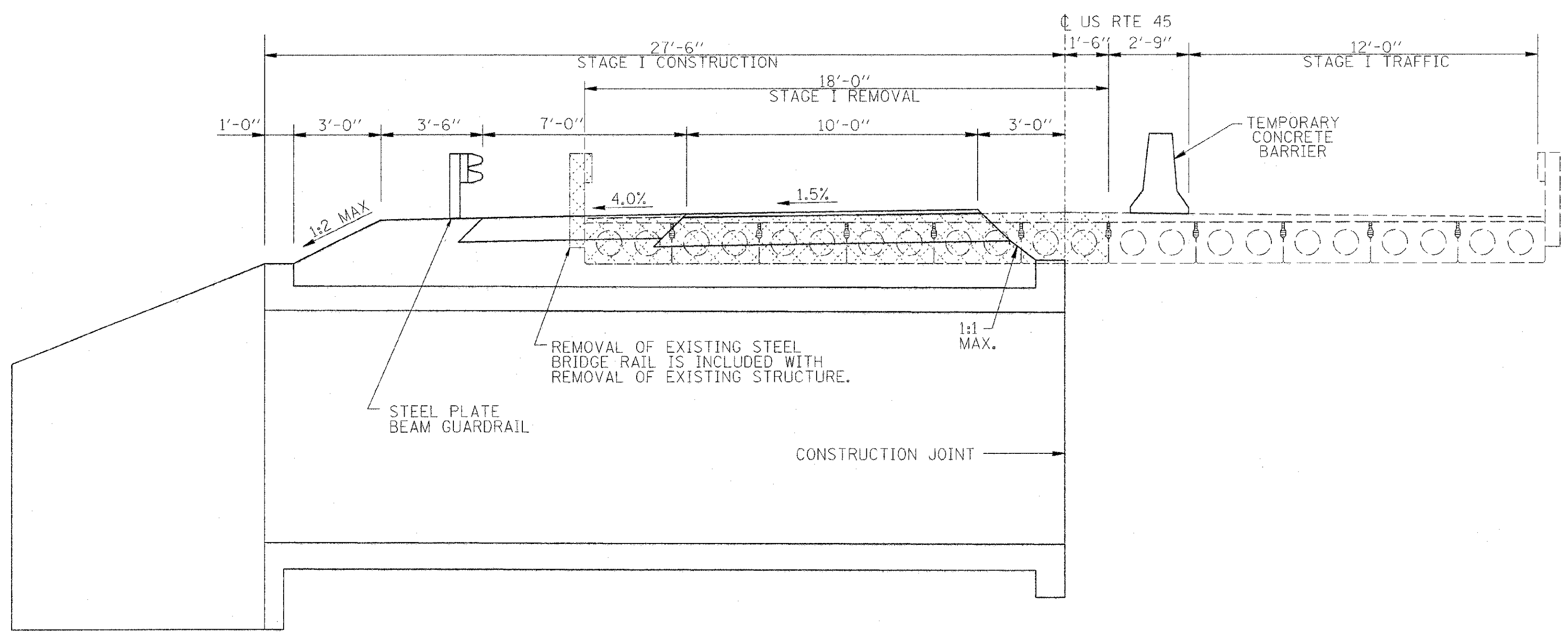
PLOT DATE = 4/24/07
FILE NAME = STAGE1.B10L0N

US 45 OVER BRANCH OF DEER CREEK (SN 096-2010) STAGING PLAN

CONTRACT NO. 74040

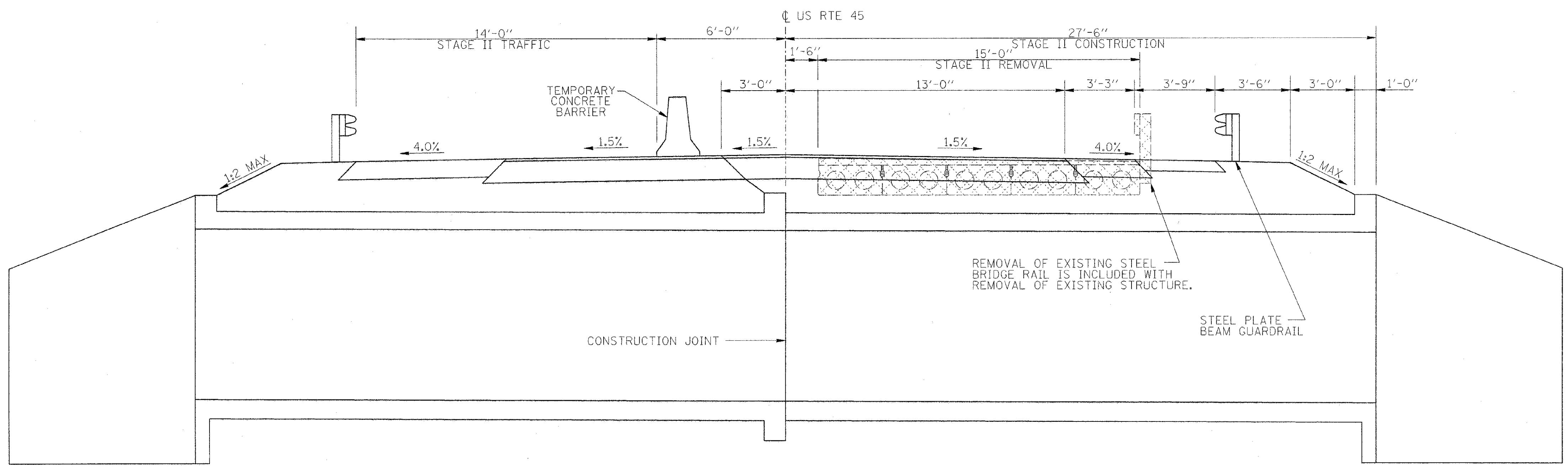
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	*	WAYNE	140	64
STA. 406+45.25	TO STA. 414+06.00			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (BBR-2,10BR-3)B-1



STAGE I

NOTE:
CROSS HATCHED AREAS INDICATE REMOVAL OF EXISTING STRUCTURE.



STAGE II

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

STAGING CROSS SECTIONS
US ROUTE 45
OVER BRANCH DEER CREEK

SCALE: VERT. NONE HORIZ. NONE
DATE 06/12/07
DRAWN BY TJQ
CHECKED BY RPJ

US 45 OVER BRANCH OF DEER CREEK (SN 096-2010) STAGING CROSS SECTIONS

Plot Date: 9/17/2007
Plot Time: 10:07:44 AM

CONTRACT NO. 74040

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	*	WAYNE	140	65
STA. 407+00.00		TO STA. 413+00.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (8BR-2,10BR-3)B-1

N

PLAN — SCANNED / PLOTTED / ALIGNMENT CHECKED / PROFILE CHECKED / CADD FILE NAME / NOTE BOOK / NO. / BY / DATE

PROFILE — SCANNED / PLOTTED / GRADES CHECKED / CADD FILE NAME / NOTE BOOK / NO. / BY / DATE / STRUCTURE NOTATING CHKD

STONE RIPRAP, CLASS A4

CONSTRUCTION LIMITS

STONE RIPRAP, CLASS A4

STONE RIPRAP, CLASS A4

+50.00 +25.00 +75.00 +75.00 +25.00 +75.00 +19.00 +07.14

+83.10

407 408 409 410+00 411 412 413

13' 13' 13' 13'

+35.31

CONSTRUCTION LIMITS

EXISTING ℄ US 45

+61.75

CONSTRUCTION LIMITS

+76.64 +28.60

℄ S.N. 096-2010
STA 410+21.00, 20° LT FWD
DOUBLE 10' X 8' BOX CULVERT
(SEE STRUCTURE PLANS)

STONE RIPRAP, CLASS A4

LEGEND

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

20 10 0 20 40

SCALE IN FEET

435 430 425 420 415 410

200.00' V.C.

VPI STA. 409+00.00
ELEVATION 425.82

VPI STA. 411+00.00
ELEVATION 424.85

VPI STA. 410+00.00
ELEVATION 424.97

426.06 423.93 423.79 424.53 424.70 424.00 421.50 417.50 424.69 417.54 418.25 418.95

-2.73% +1.44% +0.43% -0.80% -0.85% -6.58% -8.00% -15.95% -0.85% -0.12% -0.12% -0.53% +1.41% +5.70% +1.86%

SPECIAL DITCH LT

SPECIAL DITCH LT

SPECIAL DITCH LT

+90.00 +12.00

2'X2' BOX CULVERT EXTENSION
STA 407+70.18
U.S. FL = 423.38

S.N. 096-2010
10' X 8' BOX CULVERT
STA 410+21.00
U.S. FL = 414.15

4.69

20'

5'

430.49 428.58 427.29 426.32 425.69 425.82 425.28 425.44 425.00 425.15 424.81 424.96 424.72 424.85 424.66 424.62 424.61 424.58

407+00 407+50 408+00 408+50 409+00 409+50 410+00 410+50 411+00 411+50 412+00 412+50 413+00

Plot Date: 9/17/2007
Plot Time: 10:07:46 AM
Plotted By: sdondhue
Plot Scale: 1"=50'
Filename: i:\06055\roadreplacement\construction_plans\28_096-2010_E01.dgn

US 45 OVER BRANCH OF DEER CREEK (SN 096-2010) EROSION CONTROL PLAN

CONTRACT NO. 74040

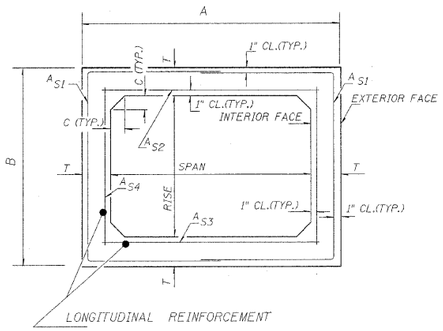
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	*	WAYNE	140	66
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (8BR-2,10BR-3)B-1

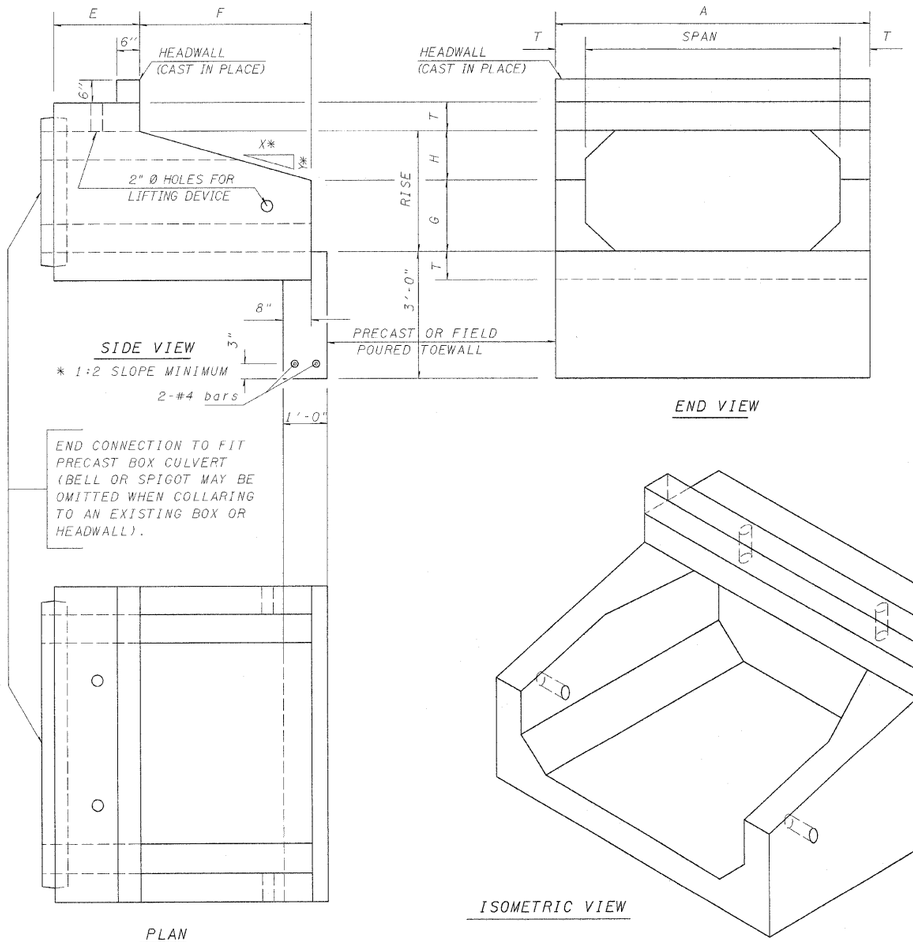
DETAIL OF PRECAST CONCRETE BOX CULVERT END SECTION

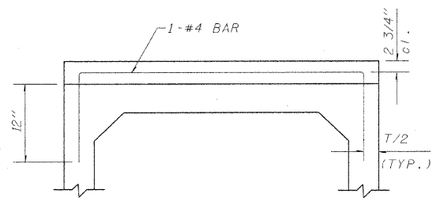
AASHTO DESIGNATION M259M
(ASTM DESIGNATION C-789M)
DESIGN LOADING = MS18

** NOTE: THE DIMENSIONS INDICATED ARE FOR END SECTIONS THAT ARE TO BE USED WITH PRECAST BOX CULVERT SECTIONS DESIGNED FOR 2" OR MORE OF FILL. THE DIMENSIONS MUST BE MODIFIED FOR THE END SECTION TO BE COMPATIBLE WITH PRECAST CULVERT SECTIONS DESIGNED FOR LESS THAN 2" OF FILL.



CROSS SECTION





PART SECTION THRU HEADWALL

PLAN

ISOMETRIC VIEW

CULVERT SIZE	DIMENSIONS **								
SPANxRISE (FOOT)	T	A	B	C	E	F	G	H	SLOPE
	INCH	FT-IN	FT-IN	INCH	FT-IN	FT-IN	FT-IN	FT-IN	Y:X
2x2	4	2-8	2-8	4	3-0	3-0	1-0	1-0	1:3
3x2	4	3-8	2-8	4	3-0	3-0	1-0	1-0	1:3
3x3	4	3-8	3-8	4	2-0	4-0	1-8	1-4	1:3
4x2	5	4-10	2-10	5	3-0	3-0	1-0	1-0	1:3
4x3	5	4-10	3-10	5	2-0	4-0	1-8	1-4	1:3
4x4	5	4-10	4-10	5	2-0	4-0	2-0	2-0	1:2
4x6	7	5-2	7-2	7	2-0	6-0	3-0	3-0	1:2
5x2	5	5-10	2-10	6	3-0	3-0	1-0	1-0	1:3
5x3	6	6-0	4-0	6	2-0	4-0	1-8	1-4	1:3
5x4	6	6-0	5-0	6	2-0	4-0	2-0	2-0	1:2
5x5	6	6-0	6-0	6	2-0	4-0	3-0	2-0	1:2
6x2	7	7-2	3-2	7	3-0	3-0	1-0	1-0	1:3
6x3	7	7-2	4-2	7	2-0	4-0	1-8	1-4	1:3
6x4	7	7-2	5-2	7	2-0	4-0	2-0	2-0	1:2
6x5	7	7-2	6-2	7					
6x6	7	7-2	7-2	7	2-0	6-0	3-0	3-0	1:2
7x4	8	8-4	5-4	8	2-0	4-0	2-0	2-0	1:2
7x5	8	8-4	6-4	8					
7x6	8	8-4	7-4	8					
7x7	8	8-4	8-4	8					
8x4	8	9-4	5-4	8	2-0	4-0	2-0	2-0	1:2
8x5	8	9-4	6-4	8					
8x6	8	9-4	7-4	8					
8x7	8	9-4	8-4	8					
8x8	8	9-4	9-4	8					
9x5	9	10-6	6-6	9					
9x6	9	10-6	7-6	9					
9x7	9	10-6	8-6	9					
9x8	9	10-6	9-6	9					
9x9	9	10-6	10-6	9					
10x5	10	11-8	6-8	10					
10x6	10	11-8	7-8	10					
10x7	10	11-8	8-8	10					
10x8	10	11-8	9-8	10					
10x9	10	11-8	10-8	10					
10x10	10	11-8	11-8	10					
11x4	11	12-10	5-10	11					
11x6	11	12-10	7-10	11					
11x8	11	12-10	9-10	11					
11x10	11	12-10	11-10	11					
11x11	11	12-10	12-10	11					
12x4	12	14-0	6-0	12					
12x6	12	14-0	8-0	12					
12x8	12	14-0	10-0	12					
12x10	12	14-0	12-0	12					
12x12	12	14-0	14-0	12					
CULVERTS WITH RISE > 6' REQUIRE CAST-IN-PLACE END SECTIONS									

GENERAL NOTES

SHOP PLANS FOR THE REINFORCEMENT SHALL BE SUBMITTED IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 504.04(a) OF THE STANDARD SPECIFICATIONS.

MINIMUM CONCRETE STRENGTH SHALL BE 5000 PSI AFTER 28 DAYS.

THE JOINTS OF THE PRECAST BOX SECTIONS SHALL BE SEALED WITH ACCORDANCE WITH ARTICLE 542.04(d) OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

THE TERMS A_{S1}, A_{S2}, A_{S3}, AND A_{S4} DENOTE THE REQUIRED STEEL AREAS FOR REINFORCEMENT AS SPECIFIED IN AASHTO M259M. REINFORCEMENT SHALL BE WELDED WIRE FABRIC CONFORMING TO AASHTO SPECIFICATIONS M55M.

LIFTING HOLES SHALL BE FILLED WITH CONCRETE PLUGS AND MASTIC AFTER THE END SECTIONS ARE IN PLACE.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

DETAIL SHEET

PRECAST CONCRETE BOX
CULVERT END SECTION (SPECIAL)

SCALE: VERT. N/A
HORIZ. N/A
DATE 06/12/07

DRAWN BY KLH
CHECKED BY EML

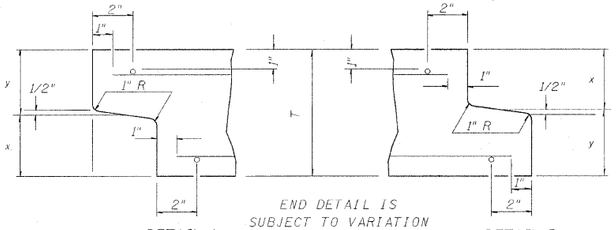
CONTRACT NO. 74040

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	*	WAYNE	140	67
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (8BR-2,10BR-3)B-1

DETAIL OF PRECAST CONCRETE BOX CULVERT M259M

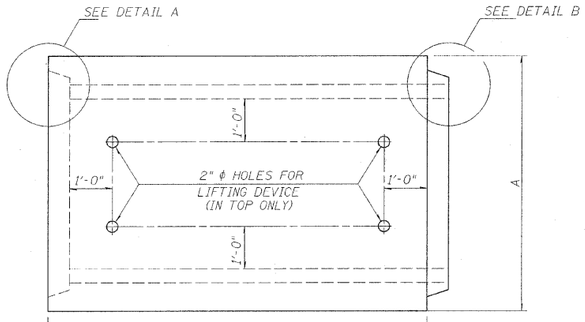
AASHTO DESIGNATION M259M
(ASTM DESIGNATION C-789M)
DESIGN LOADING = MS18



DETAIL A (TYP. INLET END)

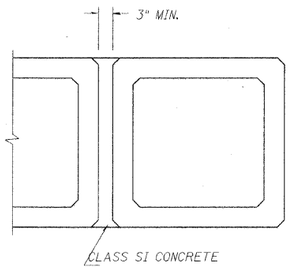
DETAIL B (TYP. OUTLET END)

NOTE: INLET AND OUTLET ENDS SHALL BE COMPATIBLE.



PLAN

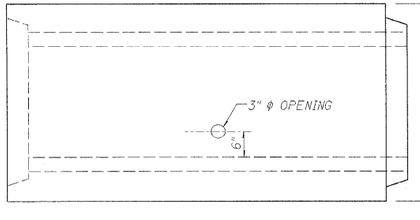
LOCATION OF LIFTING HOLES MAY BE VARIED AS NEEDED TO CLEAR REINFORCEMENT.



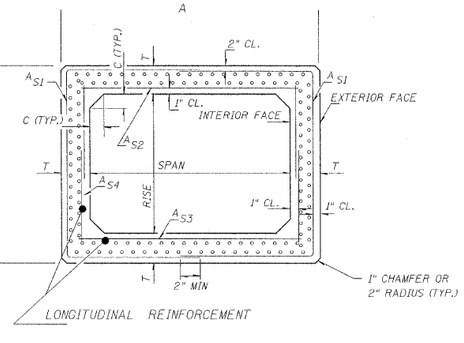
MULTIPLE UNIT PLACEMENT

SECTION LENGTH

WHEN EXTENDING AN EXISTING BOX, PLACE THIS END AGAINST THE EXISTING HEADWALL.



ELEVATION



CROSS SECTION

GENERAL NOTES

SHOP PLANS FOR THE REINFORCEMENT SHALL BE SUBMITTED IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 504.04(a) OF THE STANDARD SPECIFICATIONS.

MINIMUM CONCRETE STRENGTH SHALL BE 5000 PSI AFTER 28 DAYS.

THE JOINTS OF THE PRECAST BOX SECTIONS SHALL BE SEALED IN ACCORDANCE WITH ARTICLE 542.04(d) OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

THE TERMS A_{S1}, A_{S3}, AND A_{S4} DENOTE THE REQUIRED STEEL AREAS FOR REINFORCEMENT AS SPECIFIED IN ASSHTO M259M. REINFORCEMENT SHALL BE WELDED WIRE FABRIC CONFORMING TO ASSHTO M55M.

LIFTING HOLES SHALL BE FILLED WITH CONCRETE PLUGS AND MASTIC AFTER THE BOX SECTIONS ARE IN PLACE.

DRAINAGE OPENINGS SHALL BE PROVIDED IN ACCORDANCE WITH ARTICLE 503.12 OF THE STANDARD SPECIFICATIONS. LOCATION AND SPACING OF THE OPENINGS SHALL BE SHOWN ON THE SHOP DRAWINGS.

CULVERT SIZE	DIMENSIONS			
SPANxRISE (FOOT)	T (INCHES)	A FT-IN	B FT-IN	C (INCHES)
2x2	4	2-8	2-8	4
3x2	4	3-8	2-8	4
3x3	4	3-8	3-8	4
4x2	5	4-10	2-10	5
4x3	5	4-10	3-10	5
4x4	5	4-10	4-10	5
5x2	6	6-0	3-0	6
5x3	6	6-0	4-0	6
5x4	6	6-0	5-0	6
5x5	6	6-0	6-0	6
6x2	7	7-2	3-2	7
6x3	7	7-2	4-2	7
6x4	7	7-2	5-2	7
6x5	7	7-2	6-2	7
6x6	7	7-2	7-2	7
7x4	8	8-4	5-4	8
7x5	8	8-4	6-4	8
7x6	8	8-4	7-4	8
7x7	8	8-4	8-4	8
8x4	8	9-4	5-4	8
8x5	8	9-4	6-4	8
8x6	8	9-4	7-4	8
8x7	8	9-4	8-4	8
8x8	8	9-4	9-4	8
9x5	9	10-6	6-6	9
9x6	9	10-6	7-6	9
9x7	9	10-6	8-6	9
9x8	9	10-6	9-6	9
9x9	9	10-6	10-6	9
10x5	10	11-8	6-8	10
10x6	10	11-8	7-8	10
10x7	10	11-8	8-8	10
10x8	10	11-8	9-8	10
10x9	10	11-8	10-8	10
10x10	10	11-8	11-8	10
11x4	11	12-10	5-10	11
11x6	11	12-10	7-10	11
11x8	11	12-10	9-10	11
11x10	11	12-10	11-10	11
11x11	11	12-10	12-10	11
12x4	12	14-0	6-0	12
12x6	12	14-0	8-0	12
12x8	12	14-0	10-0	12
12x10	12	14-0	12-0	12
12x12	12	14-0	14-0	12

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

DETAIL SHEET

PRECAST CONCRETE BOX CULVERT SECTION

SCALE: VERT. N/A
HORIZ. N/A
DATE 06/12/07

DRAWN BY KLH
CHECKED BY EML

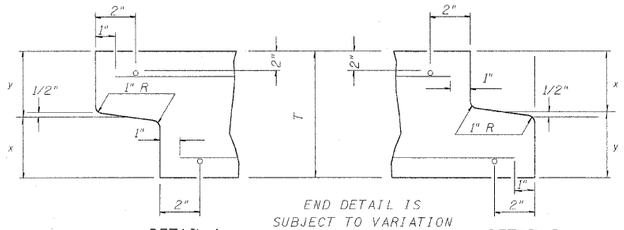
CONTRACT NO. 74040

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	*	WAYNE	140	68
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

* (8BR-2,10BR-3)B-1

DETAIL OF PRECAST CONCRETE BOX CULVERT M273M

(WITH LESS THAN 2' OF COVER)
AASHTO DESIGNATION M273M
(ASTM DESIGNATION C-850M)
DESIGN LOADING = MS18

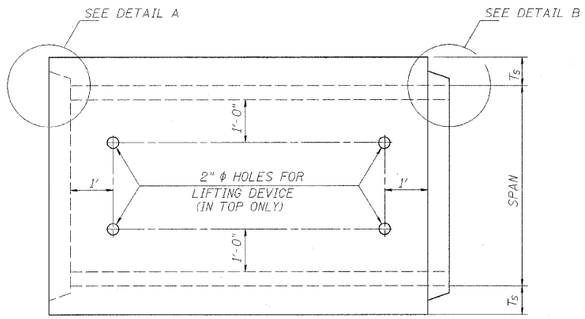


DETAIL A (TYP. INLET END)

END DETAIL IS SUBJECT TO VARIATION BY FABRICATOR

DETAIL B (TYP. OUTLET END)

NOTE: INLET AND OUTLET ENDS SHALL BE COMPATIBLE.

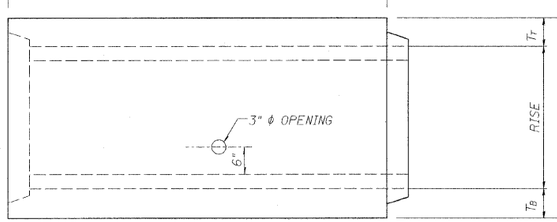


PLAN

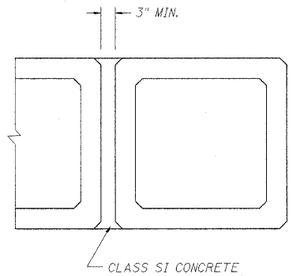
LOCATION OF LIFTING HOLES MAY BE VARIED AS NEEDED TO CLEAR REINFORCEMENT.

SECTION LENGTH

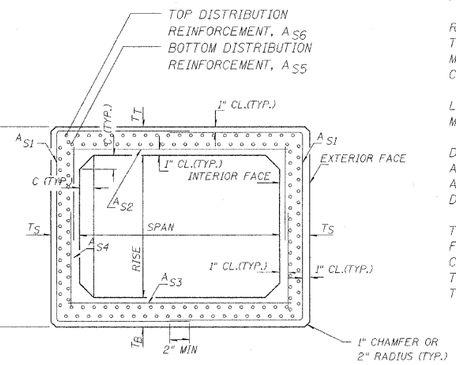
WHEN EXTENDING AN EXISTING BOX, PLACE THIS END AGAINST THE EXISTING HEADWALL.



ELEVATION



MULTIPLE UNIT PLACEMENT



LONGITUDINAL REINFORCEMENT

CROSS SECTION

GENERAL NOTES

SHOP PLANS FOR THE REINFORCEMENT SHALL BE SUBMITTED IN ACCORDANCE WITH THE REQUIREMENTS OF ARTICLE 504.04(a) OF THE STANDARD SPECIFICATIONS.

MINIMUM CONCRETE STRENGTH SHALL BE 5000 PSI AFTER 28 DAYS.

THE JOINTS OF THE PRECAST BOX SECTIONS SHALL BE SEALED IN ACCORDANCE WITH ARTICLE 542.04(d) OF THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION.

THE TERMS A_{S1}, A_{S2}, ETc. DENOTE THE REQUIRED STEEL AREAS FOR REINFORCEMENT AS SPECIFIED IN ASSHTO M273M.

REINFORCEMENT SHALL BE WELDED WIRE FABRIC CONFORMING TO ASSHTO M55M. LONGITUDINAL DISTRIBUTION REINFORCEMENT MAY CONSIST OF WELDED WIRE FABRIC OR DEFORMED BARS CONFORMING TO ASSHTO M31M. M42M, OR M53M, GRADE 400.

LIFTING HOLES SHALL BE FILLED WITH CONCRETE PLUGS AND MASTIC AFTER THE BOX SECTIONS ARE IN PLACE.

DRAINAGE OPENINGS SHALL BE PROVIDED IN ACCORDANCE WITH ARTICLE 503.12 OF THE STANDARD SPECIFICATIONS. LOCATION AND SPACING OF THE OPENINGS SHALL BE SHOWN ON THE SHOP DRAWINGS.

THE P.C.C. PAVEMENT PATCH REINFORCED WITH PAVEMENT FABRIC (STANDARD 420701) WILL BE CONSTRUCTED OVER THE CULVERT. THE PATCH SHALL BE FULL PAVEMENT WIDTH, AND THE LENGTH SHALL EXTEND 2" BEYOND EACH SIDE OF THE CULVERT.

CULVERT SIZE (FEET)		DIMENSIONS (INCHES)		
SPAN	RISE	T_T	T_B	T_S
3	2	7	6	4
3	3	7	6	4
4	2	7 1/2	6	5
4	3	7 1/2	6	5
4	4	7 1/2	6	5
5	3	8	7	6
5	4	8	7	6
5	5	8	7	6
6	3	8	7	7
6	4	8	7	7
6	5	8	7	7
6	6	8	7	7
7	4	8	8	8
7	5	8	8	8
7	6	8	8	8
7	7	8	8	8
8	4	8	8	8
8	5	8	8	8
8	6	8	8	8
8	7	8	8	8
8	8	8	8	8
9	5	9	9	9
9	6	9	9	9
9	7	9	9	9
9	8	9	9	9
9	9	9	9	9
10	5	10	10	10
10	6	10	10	10
10	7	10	10	10
10	8	10	10	10
10	9	10	10	10
10	10	10	10	10
11	4	11	11	11
11	6	11	11	11
11	8	11	11	11
11	10	11	11	11
11	11	11	11	11
12	4	12	12	12
12	6	12	12	12
12	8	12	12	12
12	10	12	12	12
12	12	12	12	12

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

DETAIL SHEET

PRECAST CONCRETE BOX CULVERT SECTION

SCALE: VERT. N/A
HORIZ. N/A
DATE 06/12/07

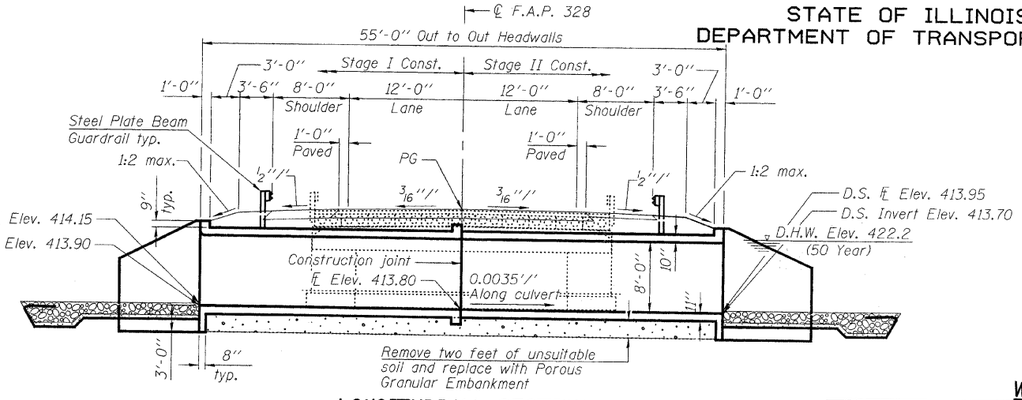
DRAWN BY KLH
CHECKED BY EML

Bench Mark: Chiseled square on NW corner of SN 096-0022. Elev. 424.24

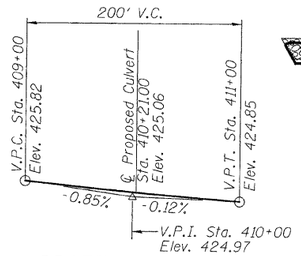
Existing Structure:
SN 096-0022 was built in 1923 with reconstruction in 1974. It is a single span structure consisting of 17" PPC deck beams on closed abutments and wingwalls on spread footings. The deck width is 33'-0" and the length is 32'-0" back to back of abutments. Traffic shall be maintained utilizing stage construction.

No salvage.

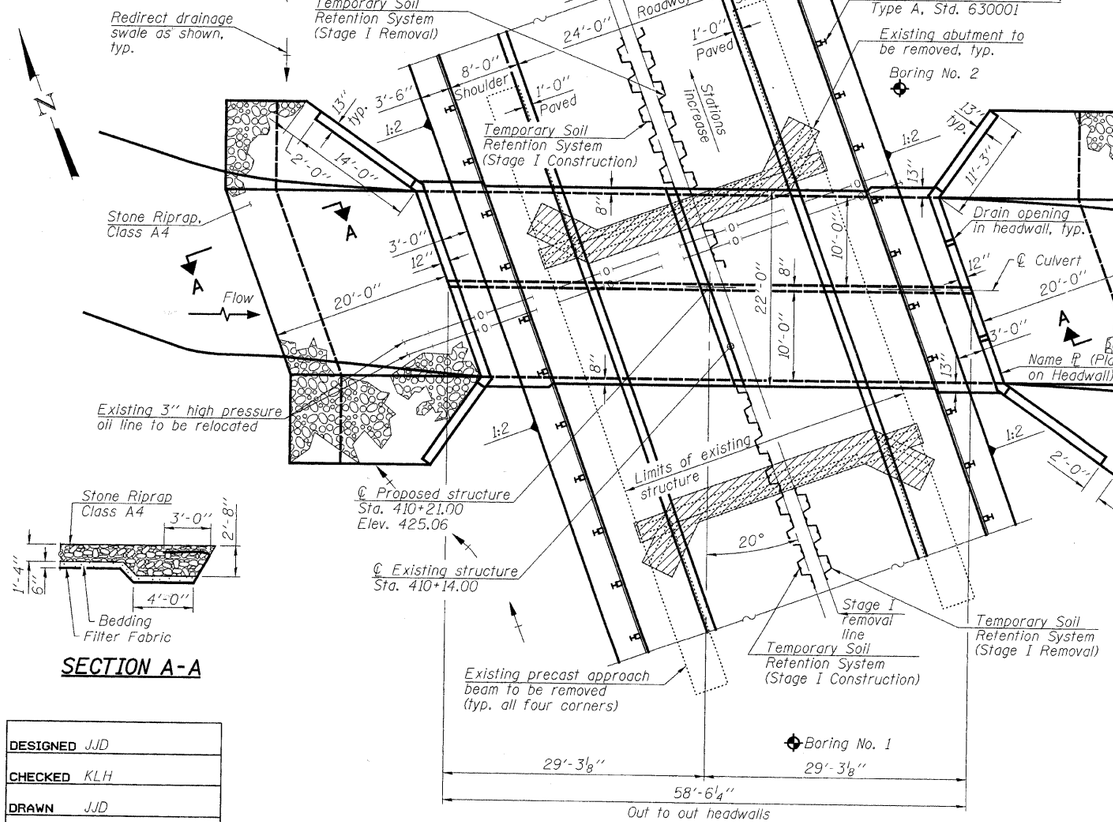
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



LONGITUDINAL SECTION
(Looking North)
(Horizontal dimensions at right angle to ℄ F.A.P. 328)



PROFILE GRADE
Along ℄ Roadway



PLAN

Note: Modify existing channel to match culvert at culvert ends as directed by the Engineer in the field.

SECTION A-A

DESIGNED	JJD
CHECKED	KLH
DRAWN	JJD
CHECKED	NJM

INDEX OF SHEETS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 328	(10BR-3)B-1	WAYNE	TOTAL SHEETS 140	SHEET NO. 69
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 1
10 SHEETS

Contract #74040

GENERAL NOTES

Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60 (IL Modified). See Special Provisions.
For backfilling and embankment see the Standard Specifications.
All Construction joints shall be bonded.
Exposed edges shall be beveled 3/4 inch.
A precast culvert alternate is not allowed.
Layout of the slope protection system may be varied to suit ground conditions in the field as directed by the Engineer.
Remove two feet of soil beneath the footprint of the box culvert and extend two feet beyond the perimeter of the culvert. Replace with Porous Granular Embankment.

WATERWAY INFORMATION

Drainage Area = 1.9 Sq. Mi.
Exist. Low Grade Elev. = 424.50 Ft. @ Sta. 414+00
Prop. Low Grade Elev. = 424.50 Ft. @ Sta. 414+00

Flood	Freq. Yr.	Q C.F.S.	Opening-Sq. Ft. Exist.	Opening-Sq. Ft. Prop.	Nat. H.W.E.	Head-Ft. Exist.	Head-Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	518	113	153	421.5	0.6	0.3	422.1	421.8
Design	50	799	134	160	422.2	1.2	0.8	423.4	423.0
Base	100	917	140	160	422.4	1.2	1.0	423.6	423.4
Overtopping	500	1199	153	-	422.9	1.7	-	424.6	-
Max. Calc.	500	1199	-	160	422.9	-	1.5	-	424.4

Design Scour	Upstream	Downstream
Elevation	410.9	410.7

STATION 410+21.00
BUILT 200 BY
STATE OF ILLINOIS
FAP RT 328 - SEC (10BR-3)B-1
LOADING HS20
STR. NO. 096-2010

NAME PLATE
See Std. 515001

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Removal and Disposal of Unsuitable Material	Cu. Yd.	110
Porous Granular Embankment	Cu. Yd.	110
Stone Riprap, Class A4	Sq. Yd.	167
Filter Fabric	Sq. Yd.	217
Hot Mix Asphalt Surface Course, Mix "C", N70	Ton	7
Removal of Existing Structures	Each	1
Concrete Superstructure	Cu. Yd.	0.1
Reinforcement Bars	Pound	32,680
Bar Splicers	Each	106
Name Plates	Each	1
Concrete Box Culverts	Cu. Yd.	148.6
Removal of Existing P.P.C. Deck Beams	Sq. Ft.	99
Temporary Soil Retention System	Sq. Ft.	649
P.P.C. Deck Beam (17" Depth) Special	Sq. Ft.	97

LOADING HS20-44
Allow 50 psf for future wearing surface.

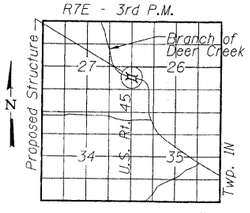
DESIGN SPECIFICATIONS
2002 AASHTO

DESIGN STRESSES
FIELD UNITS
f'_c = 3,500 psi (Concrete)
f_y = 60,000 psi (reinforcement)

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

STATE OF ILLINOIS
ERIC M. LAGEMANN
LICENSE NO. 081-006124
REGISTERED STRUCTURAL ENGINEER

Eric Lagemann 9/12/07
Expires 11/30/2008



LOCATION SKETCH

HORNER & SHIFRIN, INC.
ENGINEERS

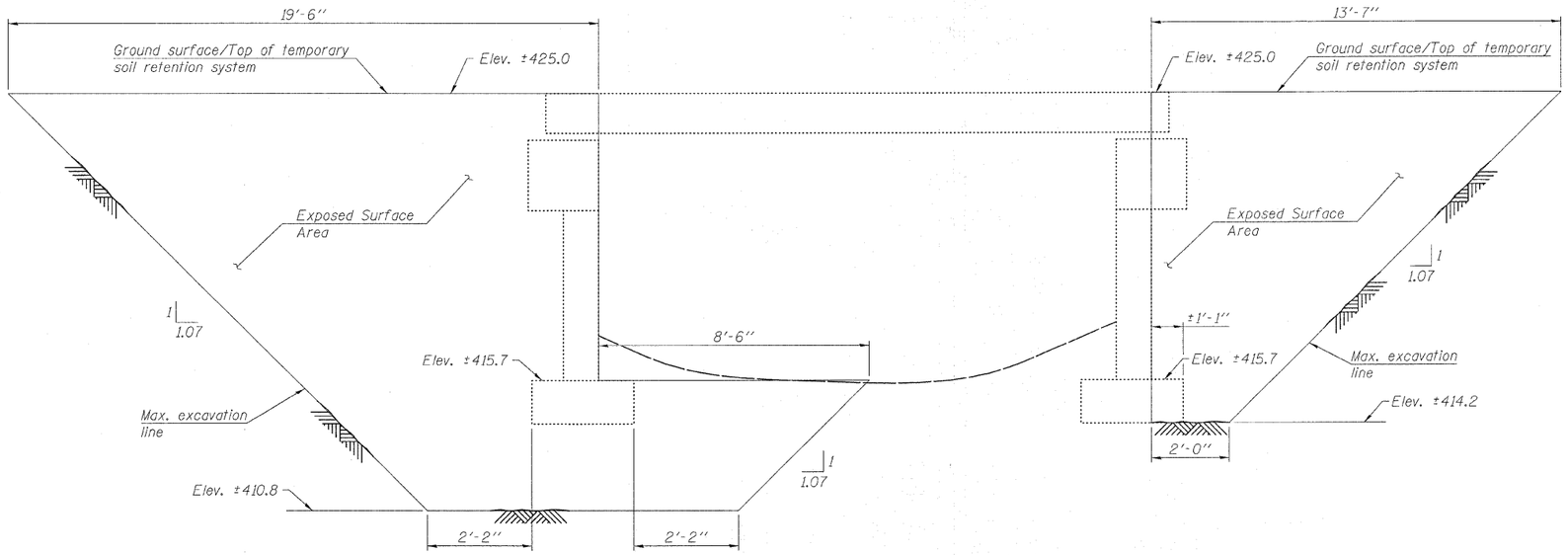
GENERAL PLAN
US ROUTE 45 OVER
BRANCH OF DEER CREEK
F.A.P. ROUTE 328 - SECTION (10BR-3)B-1
WAYNE COUNTY
STATION 410+21.00
STRUCTURE NO. 096-2010

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

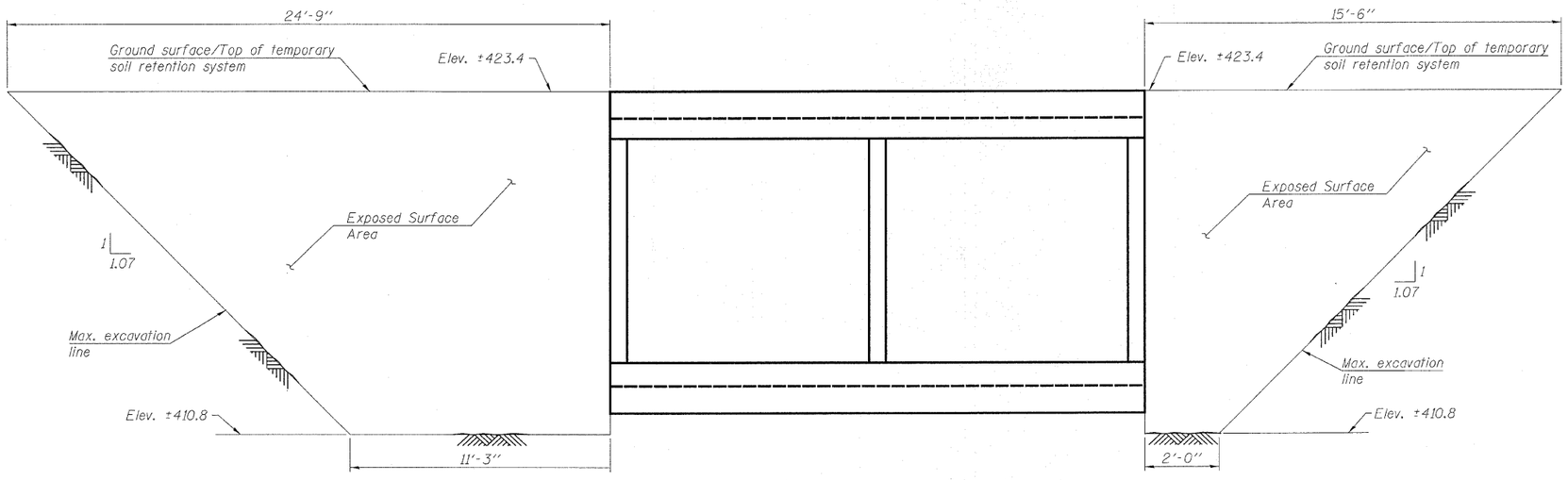
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 328	(10BR-3) B-1	WAYNE	140	70
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 2
10 SHEETS

Contract #74040



STAGE I REMOVAL
(Looking East)



STAGE I CONSTRUCTION
(Looking West)

Notes:

Excavation behind existing abutment walls shall be performed to balance front and back soil pressure before removing the existing superstructure. The Contractor shall sawcut the upper portion of the existing abutment at the stage removal line before Stage I removal to ensure the remaining portion will not be prematurely damaged.

A Cantilevered sheet piling design does not appear feasible and additional members or other retention systems may be necessary. The Contractor shall submit a temporary soil retention system design including plan details and calculations for review and acceptance by the Engineer.

DESIGNED	JJD
CHECKED	KLH
DRAWN	JJD
CHECKED	NJM

HORNER & SHIFRIN, INC.
ENGINEERS

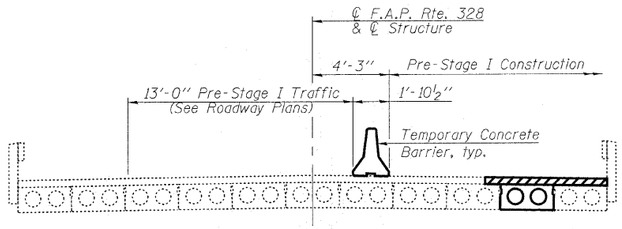
TEMPORARY SOIL RETENTION
F.A.P ROUTE 328 - SECTION (10BR-3)B-1
WAYNE COUNTY
STATION 410+21.00
STRUCTURE NO. 096-2010

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 328	(10BR-3) B-1	WAYNE	140	71
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

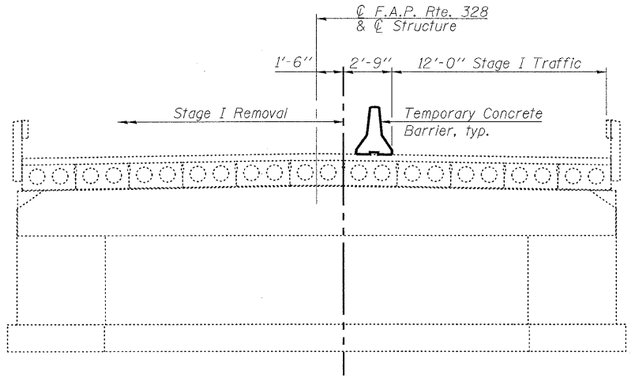
SHEET NO. 3
10 SHEETS

Contract #74040

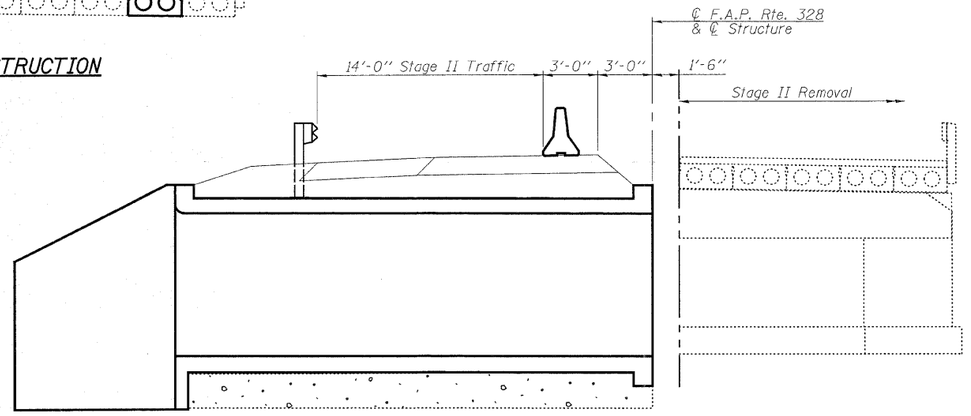
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



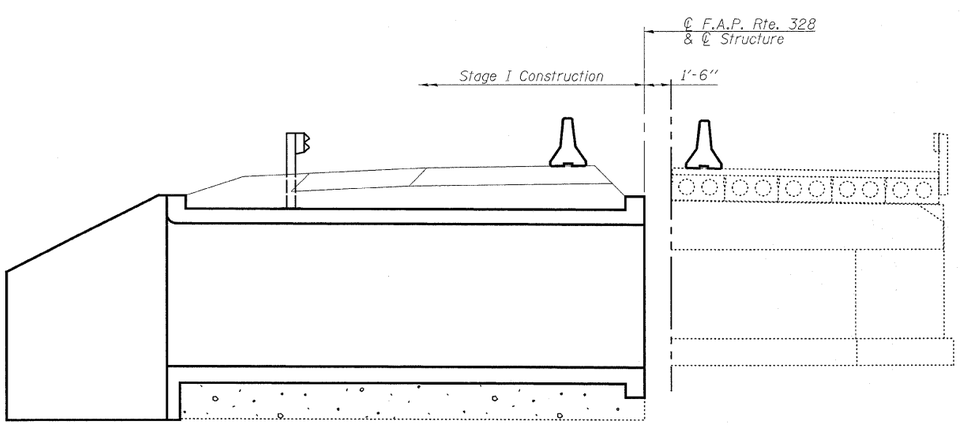
PRE-STAGE I CONSTRUCTION



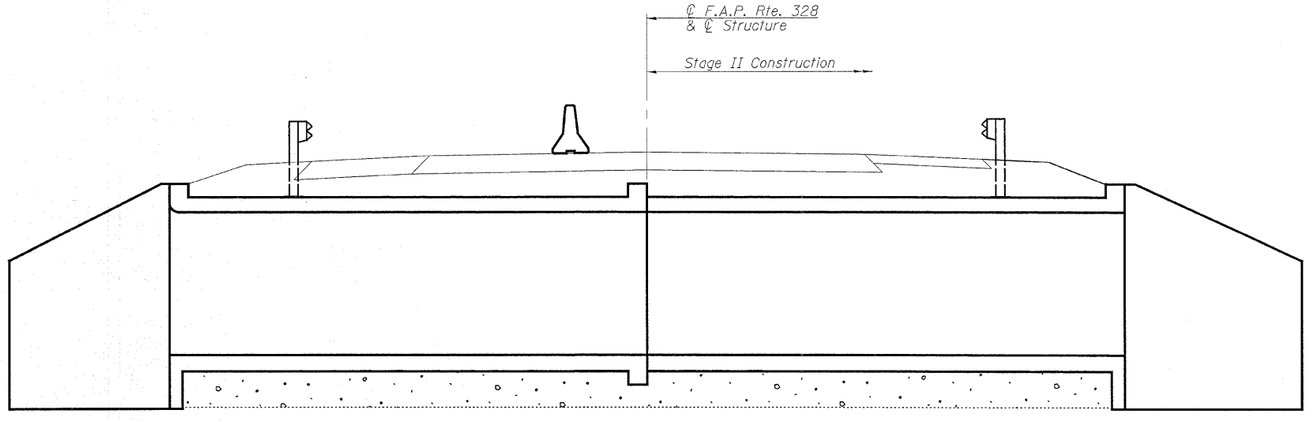
STAGE I REMOVAL



STAGE II REMOVAL



STAGE I CONSTRUCTION



STAGE II CONSTRUCTION

DESIGNED	JJD
CHECKED	KLH
DRAWN	JJD
CHECKED	NJM

Notes:
All sections are looking North.
All dimensions are at right angles to ℄ US Route 45
For quantity of Temporary Concrete Barrier, see roadway plans.
For details of Temporary Concrete Barrier, see sheet 4 of 10.
Contractor shall completely remove the North and South Abutments in their respective stage.

HORNER & SHIFRIN, INC.
ENGINEERS

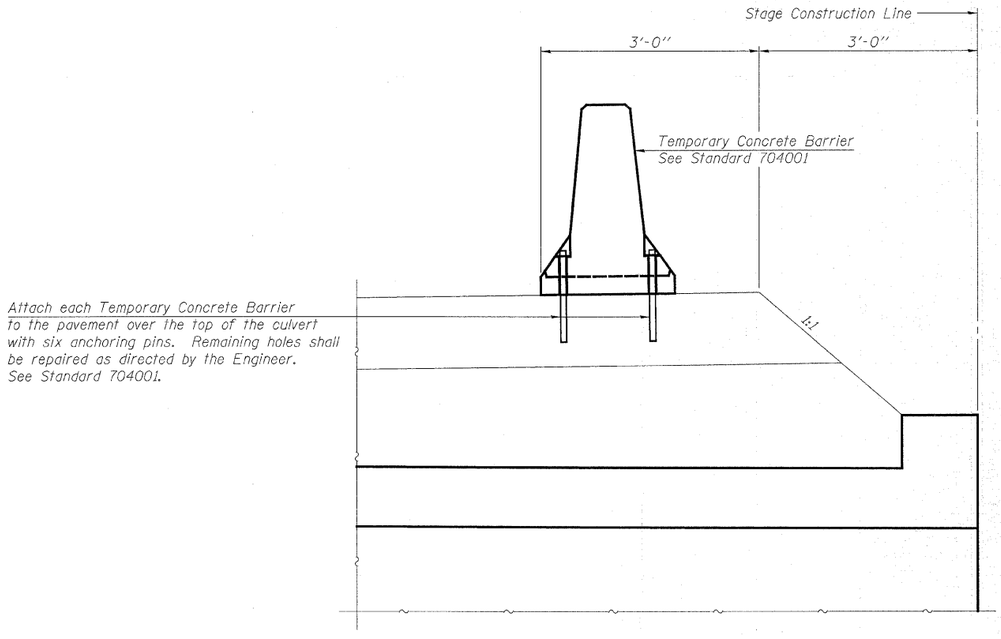
STAGE CONSTRUCTION DETAILS
F.A.P ROUTE 328 - SECTION (10BR-3)B-1
WAYNE COUNTY
STATION 410+21.00
STRUCTURE NO. 096-2010

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

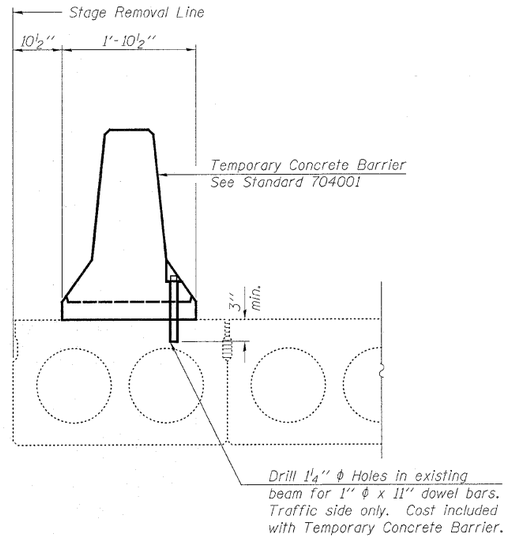
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 328	(10BR-3) B-1	WAYNE	140	72
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 4
10 SHEETS

Contract #74040



SECTION THRU NEW CULVERT



SECTION THRU EXISTING PPC DECK BEAMS

DESIGNED	JJD
CHECKED	KLH
DRAWN	JJD
CHECKED	NJM

HORNER & SHIFRIN, INC.
ENGINEERS

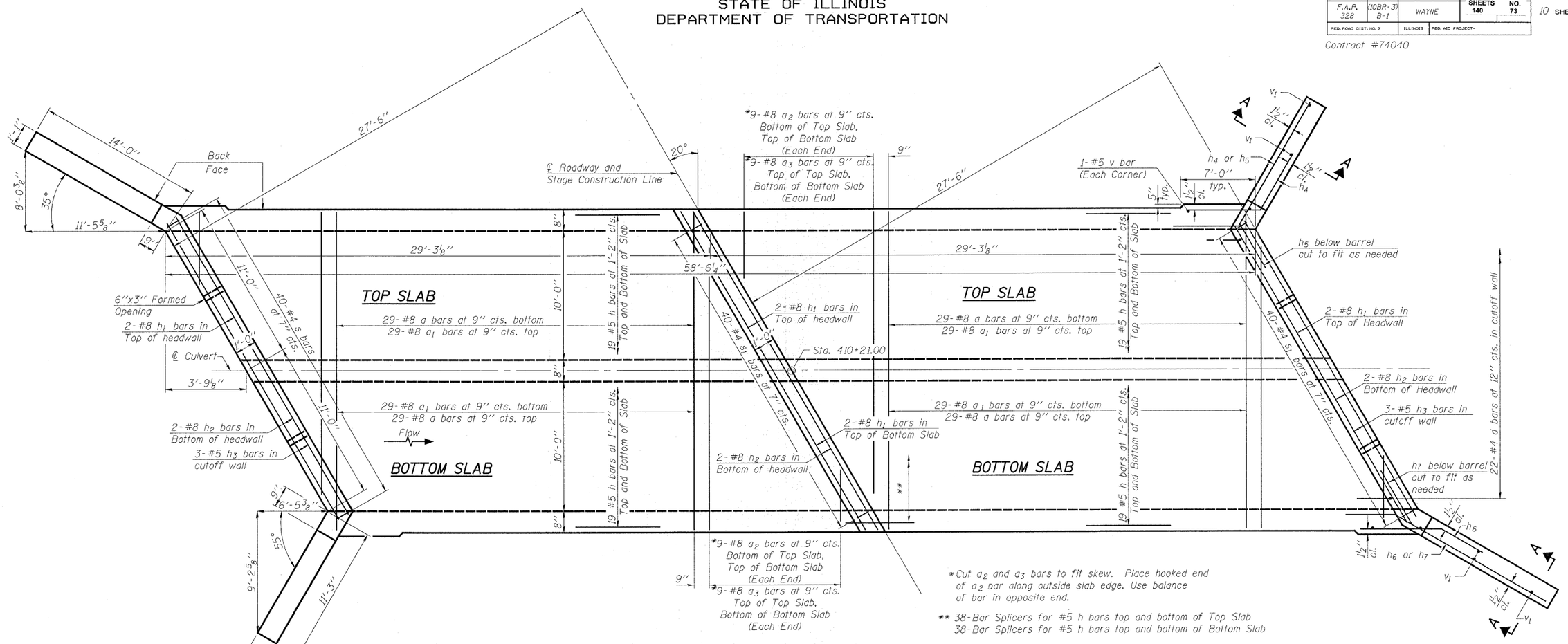
TEMPORARY CONCRETE BARRIER
F.A.P ROUTE 328 - SECTION (10BR-3)B-1
WAYNE COUNTY
STATION 410+21.00
STRUCTURE NO. 096-2010

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 328	(10BR-3) B-1	WAYNE	140	73
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 5
10 SHEETS

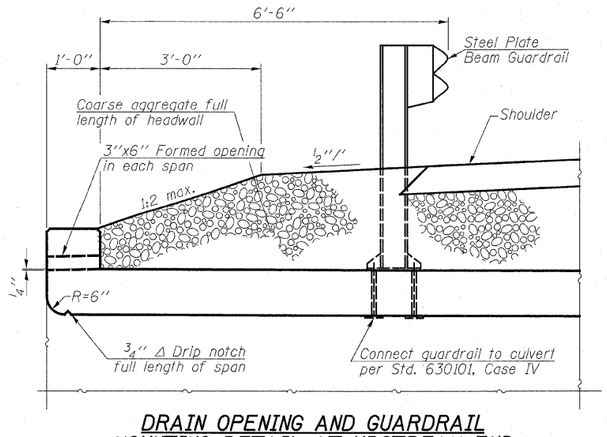
Contract #74040



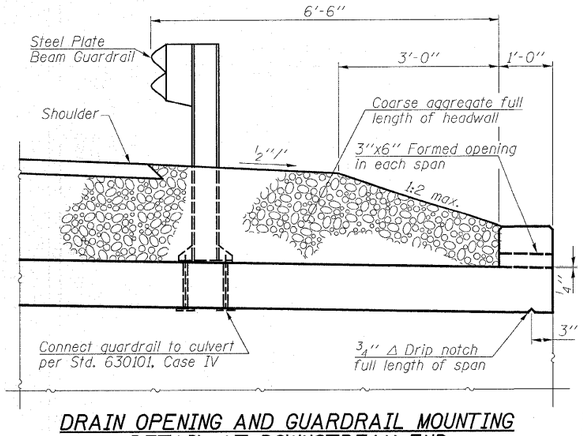
* Cut a_2 and a_3 bars to fit skew. Place hooked end of a_2 bar along outside slab edge. Use balance of bar in opposite end.

** 38-Bar Splicers for #5 h bars top and bottom of Top Slab
38-Bar Splicers for #5 h bars top and bottom of Bottom Slab

PLAN



DRAIN OPENING AND GUARDRAIL MOUNTING DETAIL AT UPSTREAM END



DRAIN OPENING AND GUARDRAIL MOUNTING DETAIL AT DOWNSTREAM END

Notes:
A distance of half the length of the wingwall but not less than six feet of the barrel shall be poured monolithically with the wingwalls.
See sheet 6 of 10 for Elevation, Details, and Section A-A.
Coarse aggregate is to be placed by Grading Contractor. Cost included with Concrete Box Culverts.

DESIGNED	JJD
CHECKED	KLH
DRAWN	JJD
CHECKED	NJM

HORNER & SHIFRIN, INC.
ENGINEERS

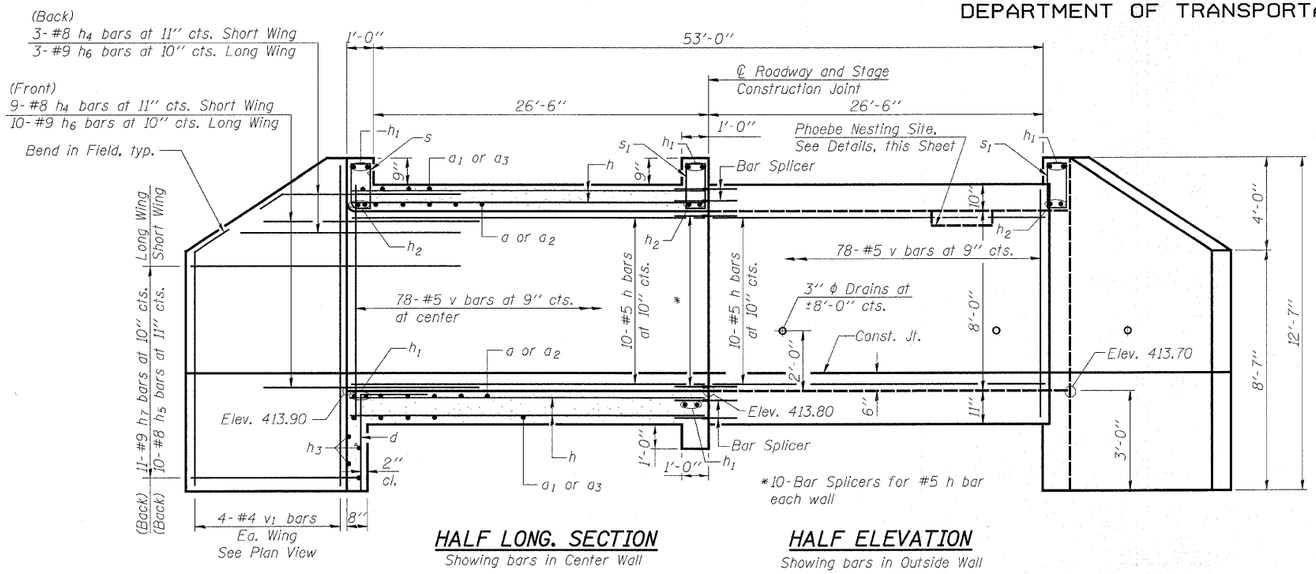
CULVERT PLAN
F.A.P ROUTE 328 - SECTION (10BR-3)B-1
WAYNE COUNTY
STATION 410+21.00
STRUCTURE NO. 096-2010

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 328	(10BR-3) B-1	WAYNE	140	74
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 6
10 SHEETS

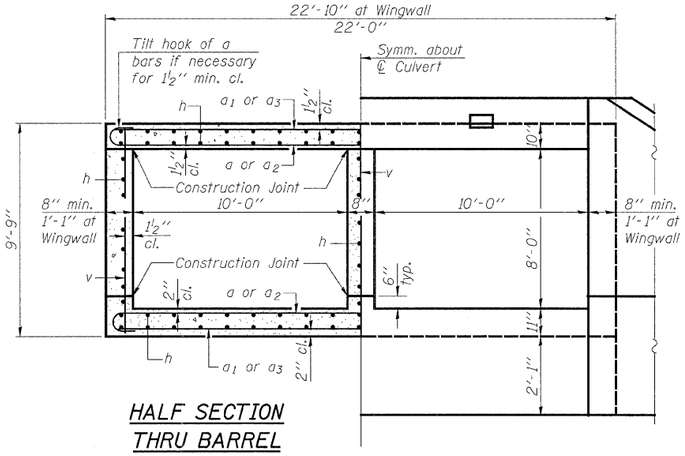
Contract #74040



HALF LONG. SECTION
Showing bars in Center Wall

HALF ELEVATION
Showing bars in Outside Wall

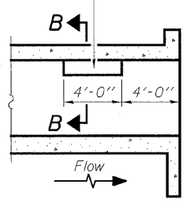
Dimensions are at right angles to ℄ Roadway



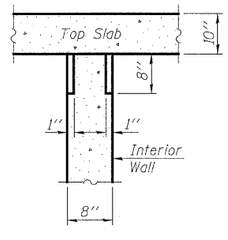
HALF SECTION THRU BARREL

HALF END ELEVATION

Notch formed by rough finished board attached to and removed with formwork, each interior wall. (Do not chamfer).

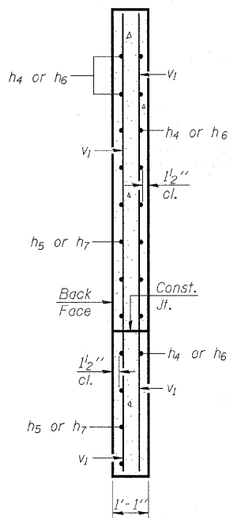


LONGITUDINAL SECTION

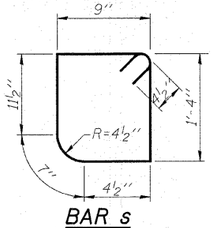


SECTION B-B

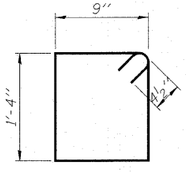
PHOEBE NESTING SITE DETAILS
(Downstream End Only)



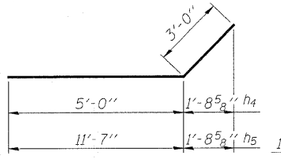
SECTION A-A



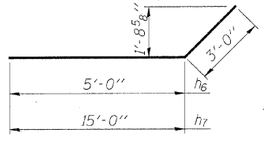
BAR s



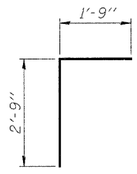
BAR s1



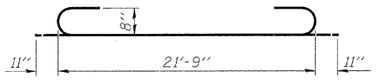
BARS h4 & h5



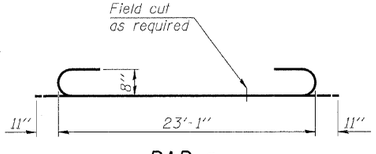
BARS h6 & h7



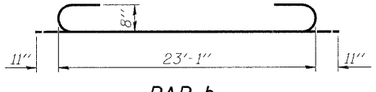
BAR d



BAR a



BAR a2



BAR h2

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a	116	#8	23'-7"	
a1	116	#8	21'-9"	
a2	36	#8	24'-11"	
a3	36	#8	23'-1"	
d	44	#4	4'-6"	
h	212	#5	29'-0"	
h1	12	#8	23'-1"	
h2	6	#8	24'-11"	
h3	6	#5	23'-1"	
h4	24	#8	8'-0"	
h5	20	#8	14'-7"	
h6	26	#9	8'-0"	
h7	22	#9	18'-0"	
s	40	#4	4'-9"	
s1	80	#4	4'-11"	
v	238	#5	9'-5"	
v1	16	#4	12'-2"	
Concrete Box Culverts			Cu. Yd.	148.6
Reinforcement Bars			Pound	32,680

DESIGNED	JJD
CHECKED	KLH
DRAWN	JJD
CHECKED	NJM

HORNER & SHIFRIN, INC.
ENGINEERS

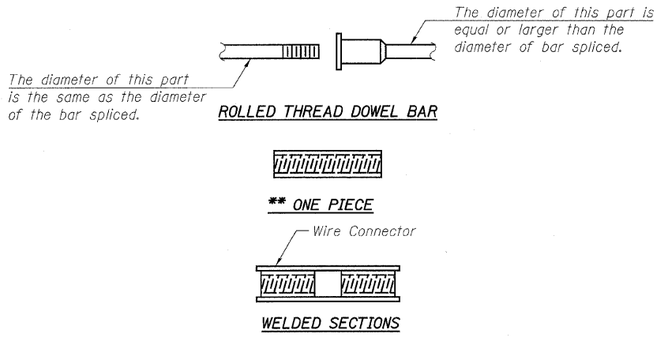
CULVERT ELEVATION AND DETAILS
F.A.P ROUTE 328 - SECTION (10BR-3)B-1
WAYNE COUNTY
STATION 410+21.00
STRUCTURE NO. 096-2010

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 328	(10BR-3) B-1	WAYNE	140	75
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

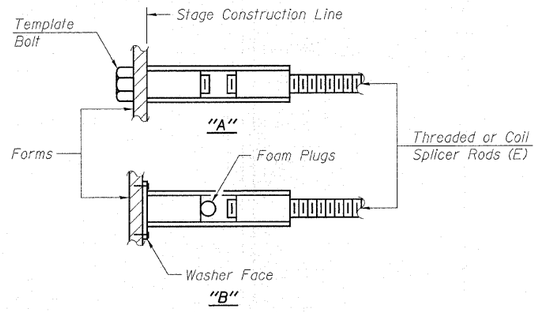
SHEET NO. 7
10 SHEETS

Contract #74040



BAR SPLICER ASSEMBLY ALTERNATIVES

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



INSTALLATION AND SETTING METHODS

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

NOTES

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

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

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

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

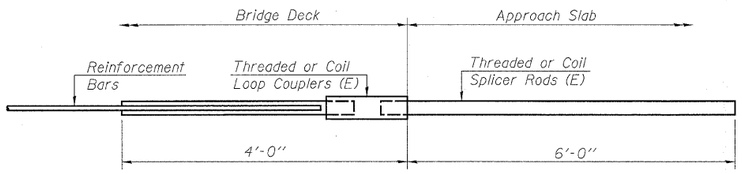
Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

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

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

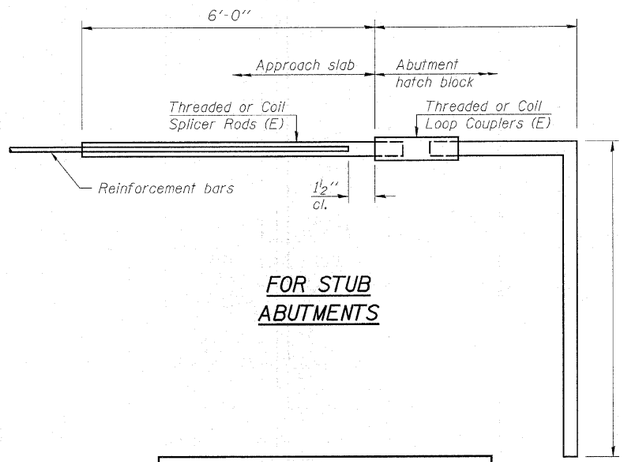
Where f_y = Yield strength of lapped reinforcement bars in ksi.
A_t = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	7.9
#5	2'-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



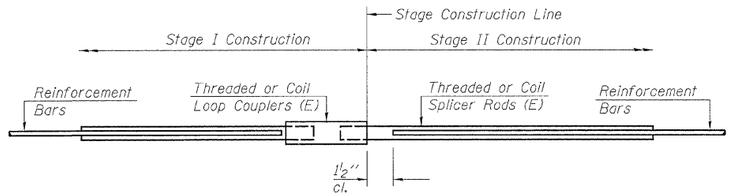
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

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	38	Top Slab
#5	30	Walls
#5	38	Bottom Slab

DESIGNED	JJD
CHECKED	KLH
DRAWN	JJD
CHECKED	NJM

BSD-1 11-1-06

HORNER & SHIFRIN, INC. ENGINEERS

BAR SPLICER ASSEMBLY DETAILS
F.A.P ROUTE 328 - SECTION (10BR-3)B-1
WAYNE COUNTY
STATION 410+21.00
STRUCTURE NO. 096-2010

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 328	(10BR-3) B-1	WAYNE	140	76
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 8
10 SHEETS

Contract #74040

Illinois Department of Transportation
Division of Highways
Ill. Dept. of Trans. D-7

SOIL BORING LOG

Page 1 of 2

Date 8/18/05

ROUTE FAP 328 (US 45) DESCRIPTION Un-named Stream LOGGED BY E. Sandschafer

SECTION (10BR-3)B-1 LOCATION Sec 26 - SW 1/4, Sec 27 - SE 1/4, SEC., TWP. 1 N, RNG. 7 E, 3 PM

COUNTY Wayne DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 096-0022
Station 410+14

BORING NO. 1
Station 409+70
Offset 8.00ft Lt
Ground Surface Elev. 425.00 ft

Surface Water Elev. Dry ft
Stream Bed Elev. 415.82 ft

Groundwater Elev.:
First Encounter Dry ft
Upon Completion Washed ft
After ____ Hrs. samples ft

	DEPTH		BLOWS	UCS Qu	MOIST
		(ft)	(/6")	(tsf)	(%)
8 1/2" Asphalt.	424.30				
8 3/4" Concrete.	423.60				
Medium to soft, damp, brown, CLAY w/ trace sand & gravel.			2		
			2	1.0	16
			3	PP	
	420.00	-5	5		
Very dense, very moist, brown, SANDSTONE.			50/4"	0.3	19
			50/2"	B	
			50/4"		10
			50/1"		
			50/1"		
	415.00	-10	50/4"		10
Borehole continued with rock coring.			50/1"		
			50/1"		
		-15			
		-20			

Latitude N 39 deg 29.523 min., Longitude W 88 deg 24.166 deg. Map Datum WGS 84

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
BBS, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Ill. Dept. of Trans. D-7

ROCK CORE LOG

Page 2 of 2

Date 8/18/05

ROUTE FAP 328 (US 45) DESCRIPTION Un-named Stream LOGGED BY E. Sandschafer

SECTION (10BR-3)B-1 LOCATION Sec 26 - SW 1/4, Sec 27 - SE 1/4, SEC., TWP. 1 N, RNG. 7 E, 3 PM

COUNTY Wayne CORING METHOD Rotary, surf set diamond bit

STRUCT. NO. 096-0022
Station 410+14

CORING BARREL TYPE & SIZE NW, conv dbl bbl, split inner

BORING NO. 1
Station 409+70
Offset 8.00ft Lt
Ground Surface Elev. 425.00 ft

Core Diameter 2.06 in
Top of Rock Elev. 420.00 ft
Begin Core Elev. 415.00 ft

	DEPTH		CORE	RECOVERY	R.Q.D.	CORE TIME	STRENGTH
		(ft)	(#)	(%)	(%)	(min/ft)	(tsf)
Brown, soft, SANDSTONE. Very easy to scratch, broke into 1/2" to 3" layers.	415.00			100	0	0.1	
		-15		100	0	0.2	
		-20		60	0	0.2	
	400.00	-25					
Extent of exploration.							
Benchmark: TBM RR spike in PP in SW quadrant (Point 1176) = 426.03'		-30					

Color pictures of the cores _____
Cores will be stored for examination until _____
The "Strength" column represents the unlaxial compressive strength of the core sample (ASTM D-2938)
BBS, form 138 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Ill. Dept. of Trans. D-7

SOIL BORING LOG

Page 1 of 1

Date 8/18/05

ROUTE FAP 328 (US 45) DESCRIPTION Un-named Stream LOGGED BY E. Sandschafer

SECTION (10BR-3)B-1 LOCATION Sec 26 - SW 1/4, Sec 27 - SE 1/4, SEC., TWP. 1 N, RNG. 7 E, 3 PM

COUNTY Wayne DRILLING METHOD Hollow stem auger & split spoon HAMMER TYPE Auto 140#

STRUCT. NO. 096-0022
Station 410+14

BORING NO. 2
Station 410+35
Offset 27.40ft Rt
Ground Surface Elev. 423.17 ft

Surface Water Elev. Dry ft
Stream Bed Elev. 415.82 ft

Groundwater Elev.:
First Encounter 403.7 ft
Upon Completion 413.5 ft
After 96 Hrs. 413.5 ft

	DEPTH		BLOWS	UCS Qu	MOIST
		(ft)	(/6")	(tsf)	(%)
Gray, TOPSOIL.	422.67				
Stiff, damp, brown, CLAY w/ trace Sand and many hair roots.			3		
			22	1.1	14
			14	B	
	418.17	-5	4		
Stiff, damp, gray, SILTY CLAY LOAM.			5	1.9	18
			3	B	
	416.17		0		
Soft, very damp, gray, SILTY LOAM.			1	0.3	30
			1	B	
		-10	2		
			2	0.3	21
			2	B	
			1		
	410.17		2	1.0	22
Medium to stiff, damp, gray mottled red, CLAY w/ trace Silt.			2	B	
	408.17	-15	0		
Very soft, wet, gray, SANDY LOAM.	407.77		2	0.6	19
			3	B	
Medium, damp, gray, SANDY CLAY.			1		
			2	0.7	22
			3	B	
	403.67				
Medium, damp, dark brown, SILTY		-20	0		

	DEPTH		BLOWS	UCS Qu	MOIST
		(ft)	(/6")	(tsf)	(%)
CLAY w/ gray, Sand speck, high organics.	402.67		0	0.8	33
			2	PP	
Very loose, very wet, gray, fine grained, SAND. *10% passing #200 steve.*			0		
	400.67				
Soft, damp, dark brown, SILTY LOAM.			1	0.3	33
			2	B	
	398.67				
Gray, fine grained, SAND. *11% passing #200 sieve.*		-25	2		
	397.67		3	0.9	15
Medium, damp, gray, SANDY CLAY.			4	B	
	396.17				
Medium to dense, wet, brown, fine grained, SAND w/ fine gravel. *7% passing #200 sieve.*			3		
	395.17		8		16
Gray to brown, fine grained, SAND w/ trace fine gravel. *6% passing #200 sieve.*			22		
		-30	7		
	392.67		15	1.4	16
Very dense, moist, gray, CLAY SHALE.			24	B	
		-35	24		
	387.37		50/5"		8
Extent of exploration.			50/4"		
Benchmark: TBM RR spike in PP in SW quadrant (Point 1176) = 426.03'		-40			

Latitude N 39 deg 29.535 min., Longitude W 88 deg 24.132 deg. Map Datum WGS 84

The Unconfined Compressive Strength (UCS) Failure Mode is indicated by (B-Bulge, S-Shear, P-Penetrometer)
The SPT (N value) is the sum of the last two blow values in each sampling zone (AASHTO T206)
BBS, from 137 (Rev. 8-99)

DESIGNED	JJD
CHECKED	KLH
DRAWN	JJD
CHECKED	NJM

HORNER & SHIFRIN, INC.
ENGINEERS

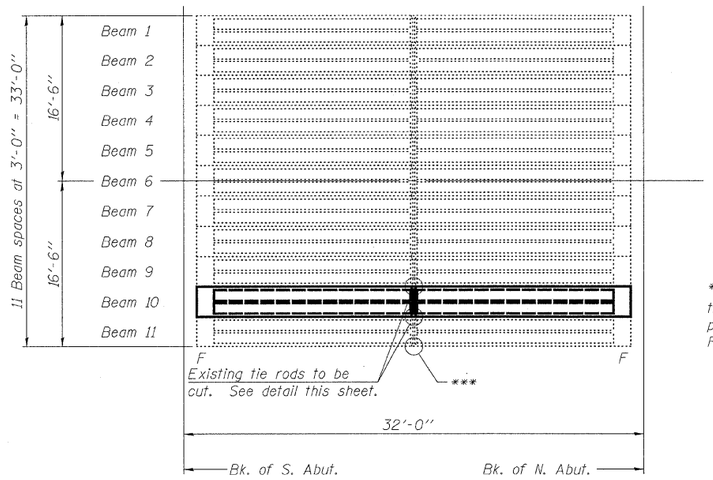
BORING LOGS
F.A.P ROUTE 328 - SECTION (10BR-3)B-1
WAYNE COUNTY
STATION 410+21.00
STRUCTURE NO. 096-2010

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 328	(10BR-3) B-1	WAYNE	140	77
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 9
10 SHEETS

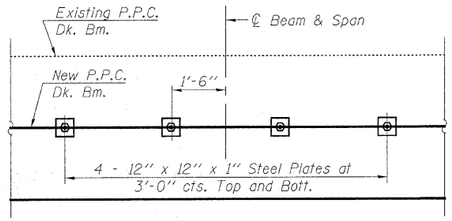
Contract #74040

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

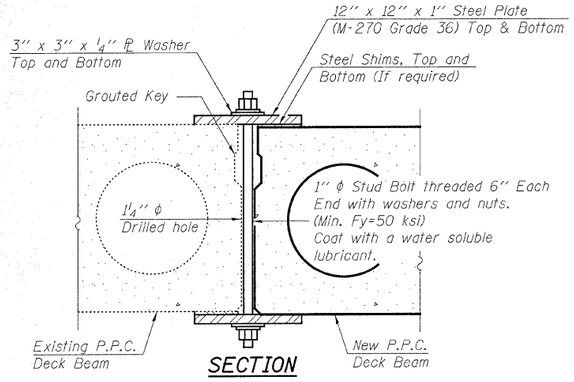


PLAN

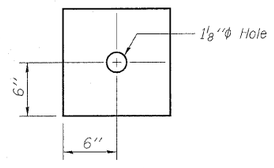
*** Contractor shall remove existing grout plug and transverse rod in the existing exterior beam prior to the placement of the replacement beam. Cost included with Removal of Existing P.P.C. Deck Beam.



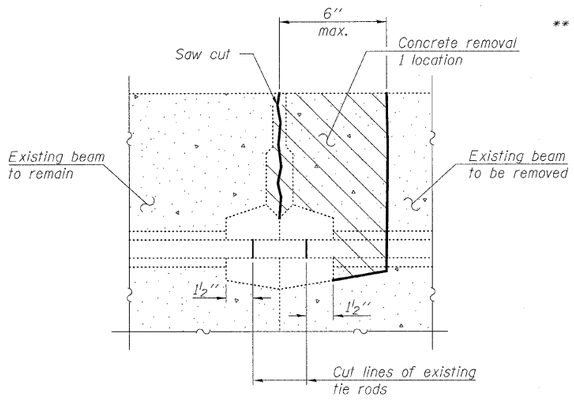
PLAN



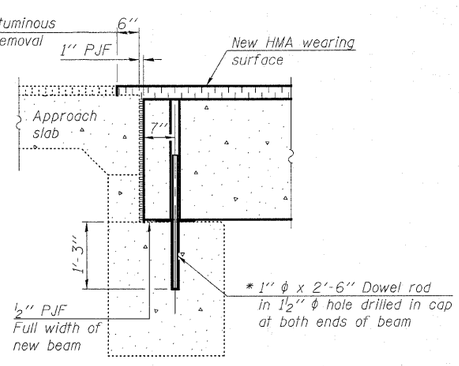
SECTION



CLAMPING PLATE



BEAM REMOVAL DETAIL AT TRANSVERSE TIES



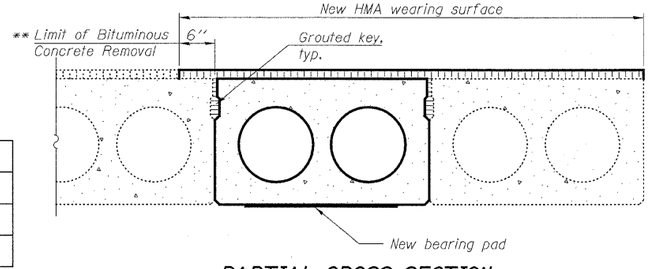
SECTION THRU ABUTMENTS

SHEAR KEY CLAMPING DETAILS AT REPLACEMENT BEAM. JTS.

Cost included with Precast Prestressed Concrete Deck Beams (17" Depth) Special.
See Stage Construction Details for traffic lanes.

* 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.



PARTIAL CROSS SECTION

DESIGNED	JJD
CHECKED	EML
DRAWN	JJD
CHECKED	EML

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 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".

BILL OF MATERIALS

Item	Unit	Total
Removal of Existing P.P.C. Deck Beams	Sq. Ft.	99
Hot Mix Asphalt Surface Course, Mix "C", N70	Ton	7

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

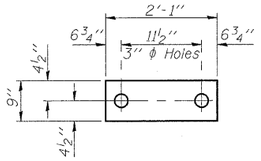
PRE-STAGE I DETAILS I
F.A.P ROUTE 328 - SECTION (10BR-3)B-1
WAYNE COUNTY
STATION 410+21.00
STRUCTURE NO. 096-2010

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

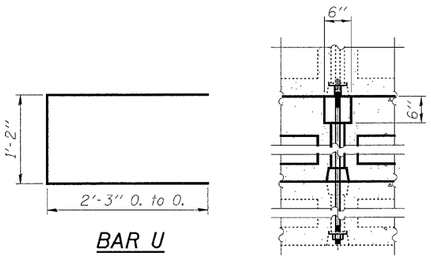
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 328	(10BR-3) B-1	WAYNE	140	78
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 10
10 SHEETS

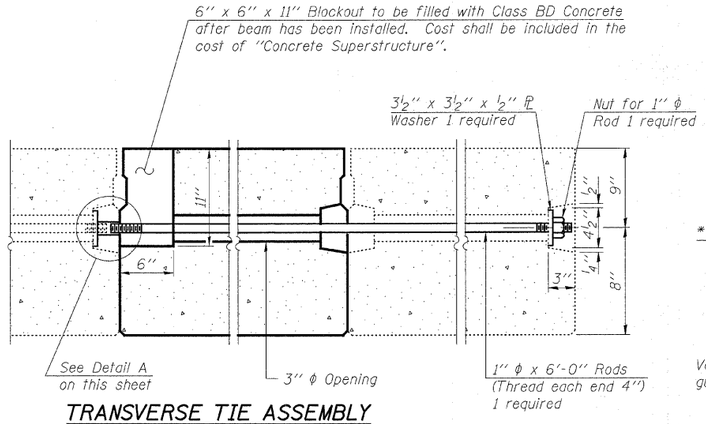
Contract #74040



FIXED FABRIC BEARING PAD

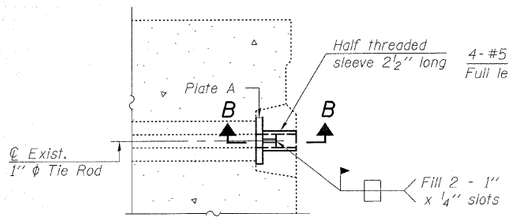


BAR U



TRANSVERSE TIE ASSEMBLY

Note: Dimensions shown are for new construction only.

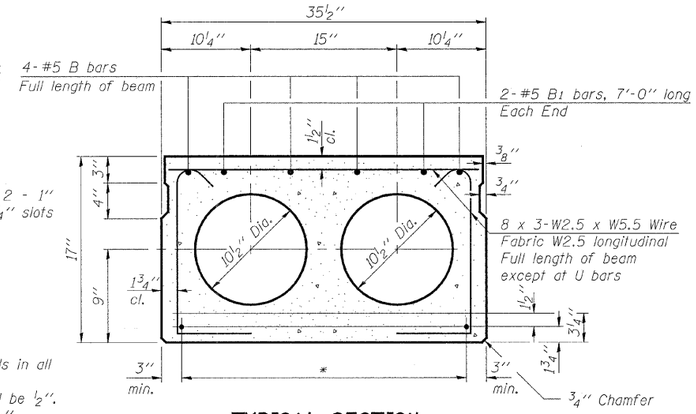


DETAIL A

*Transverse Strand Placement Guidelines

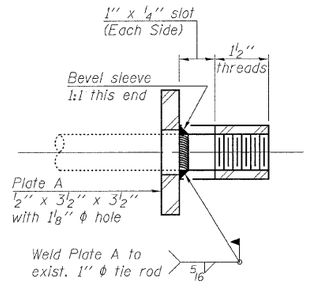
1. Place strands symmetrically about centerline of beam.
2. The minimum distance from center to center of strands in all directions shall be 2".
3. The minimum clearance from strand to dowel hole shall be 1/2".
4. The minimum clearance from strand to void shall be 1 1/2".

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



TYPICAL SECTION

1/2" ϕ Strands, Each Strand Stressed to 30,900 Lbs.
6 - Strands 1 3/4" up, 2 - Strands 3 1/4" up.



SECTION B-B

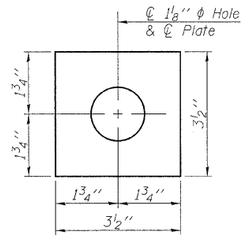
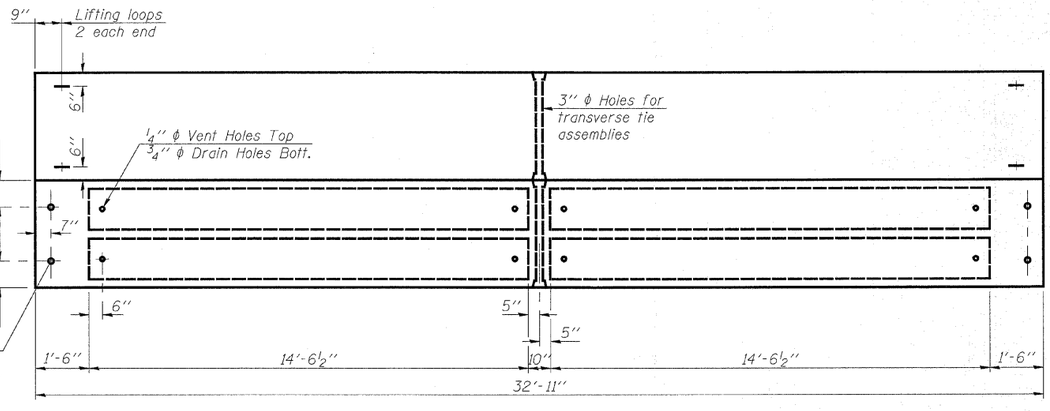
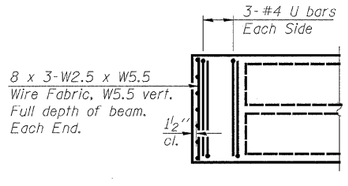


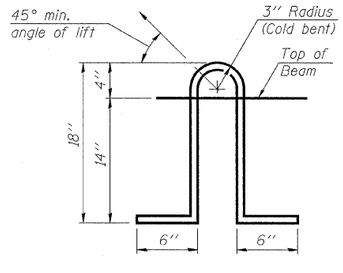
PLATE A



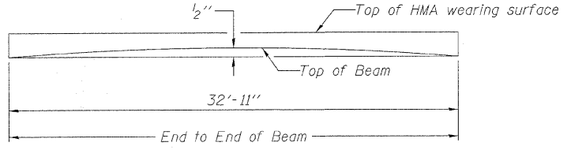
PLAN



END PLAN



LIFTING LOOP DETAIL



ANTICIPATED INITIAL CAMBER DIAGRAM

BILL OF MATERIAL

Item	Unit	Total
Concrete Superstructure	Cu. Yd.	0.1
Precast Prestressed Concrete Deck Beams (17" Depth) Special	Sq. Ft.	97

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" 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.
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 Fixed Fabric 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 9 of 10 for Shear Key Clamping Details at Replacement Beam Jts.

DESIGNED	JJD
CHECKED	EML
DRAWN	JJD
CHECKED	EML

HORNER & SHIFRIN, INC.
ENGINEERS

PRE-STAGE I DETAILS II
F.A.P ROUTE 328 - SECTION (10BR-3)B-1
WAYNE COUNTY
STATION 410+21.00
STRUCTURE NO. 096-2010

CONTRACT NO. 74040

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	(10BR-3)B-1	WAYNE	140	79
STA. 406+50.00		TO STA. 407+50.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY NOTE BOOK — NO.

SURVEYED — BY — DATE
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED

80 75 70 65 60 55 50 45 40 35 30 25 20 15 10 5 0 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80

430
425

PR ROW
EX ROW
TELEPHONE
423.93
428.28
428.51
4.00%
4.00%
C = 24 F = 8
407+50.00

ORIGINAL SURVEY — NOTE BOOK — NO.

SURVEYED — BY — DATE
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED

PR ROW
EX ROW
TELEPHONE
430.28
C = 2 F = 5
407+00.00

C = 0 F = 0
406+50.00

PLOT DATE = 9/17/2007
FILE NAME = s:\05045\road\replacement\contract\sheets\10_XSection1.dgn
PLOT SCALE = 5.0000 ' / IN.
USER NAME = sdonahue

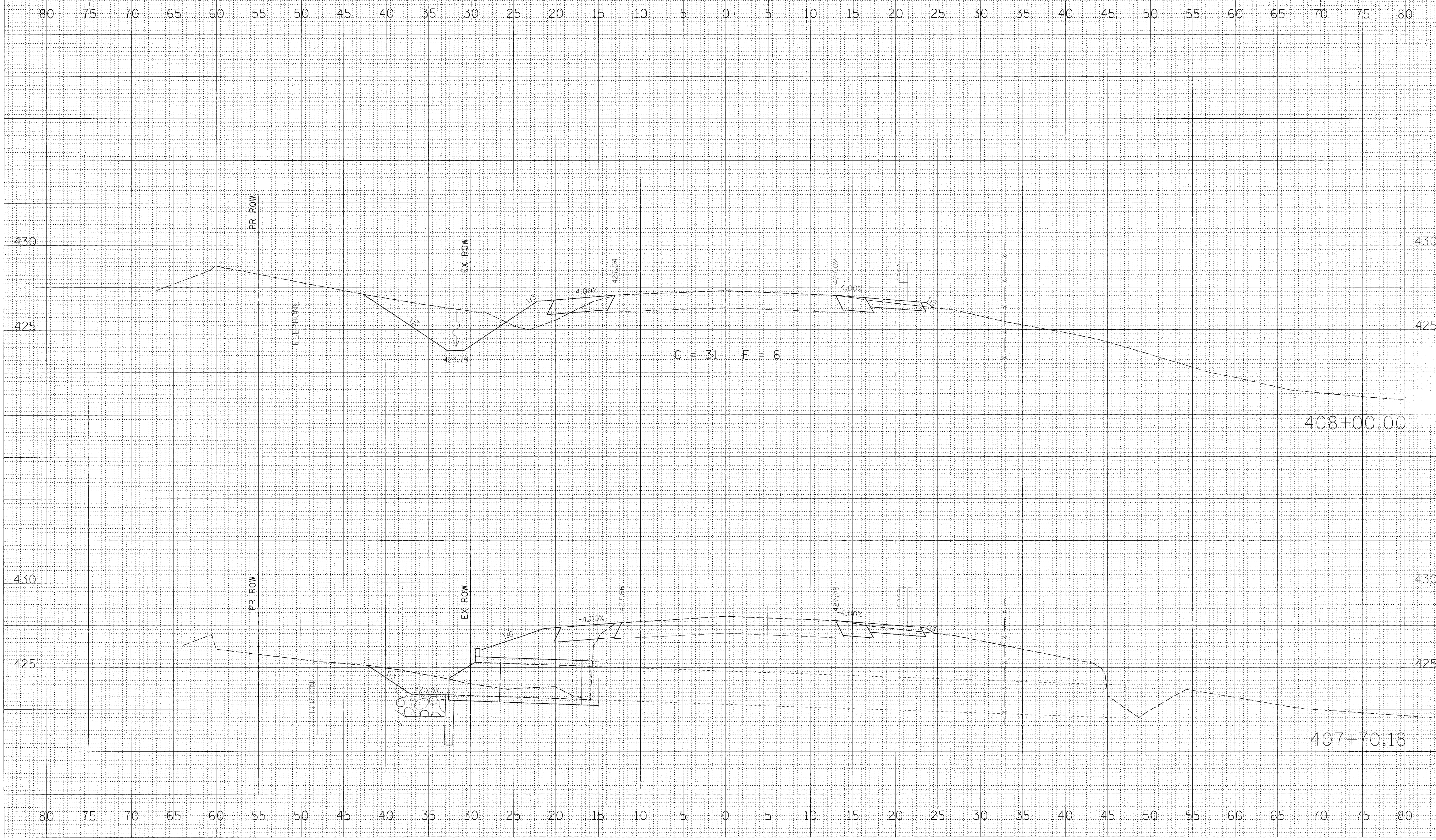
US 45 OVER BRANCH OF DEER CREEK (SN 096–2010) CROSS SECTION SHEET

CONTRACT NO. 74040

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	(10BR-3)B-1	WAYNE	140	80

STA. 407+70.18 TO STA. 408+00.00

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



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

ORIGINAL SURVEY | SURVEYED | PLOTTED | TEMPLATE | AREAS | AREAS CHECKED | NO. | BY | DATE

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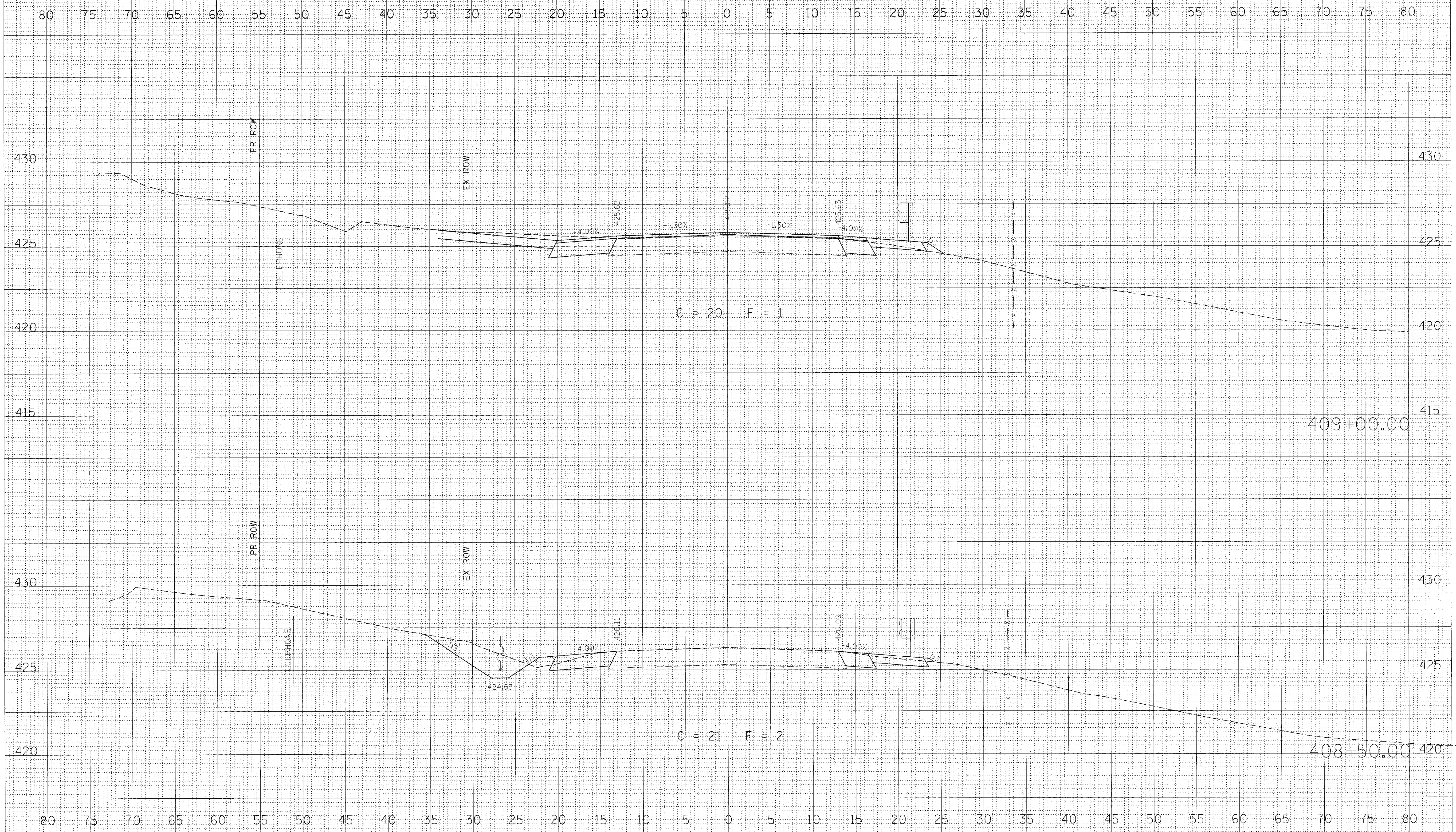
PLOT SCALE = 5.000 '/ IN.
USER NAME = sdonohuo

US 45 OVER BRANCH OF DEER CREEK (SN 096–2010) CROSS SECTION SHEET

CONTRACT NO. 74040

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	(10BR-3)B-1	WAYNE	140	81
STA. 408+50.00 TO STA. 409+00.00				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



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PLOT SCALE = 5.0000 ' / IN.
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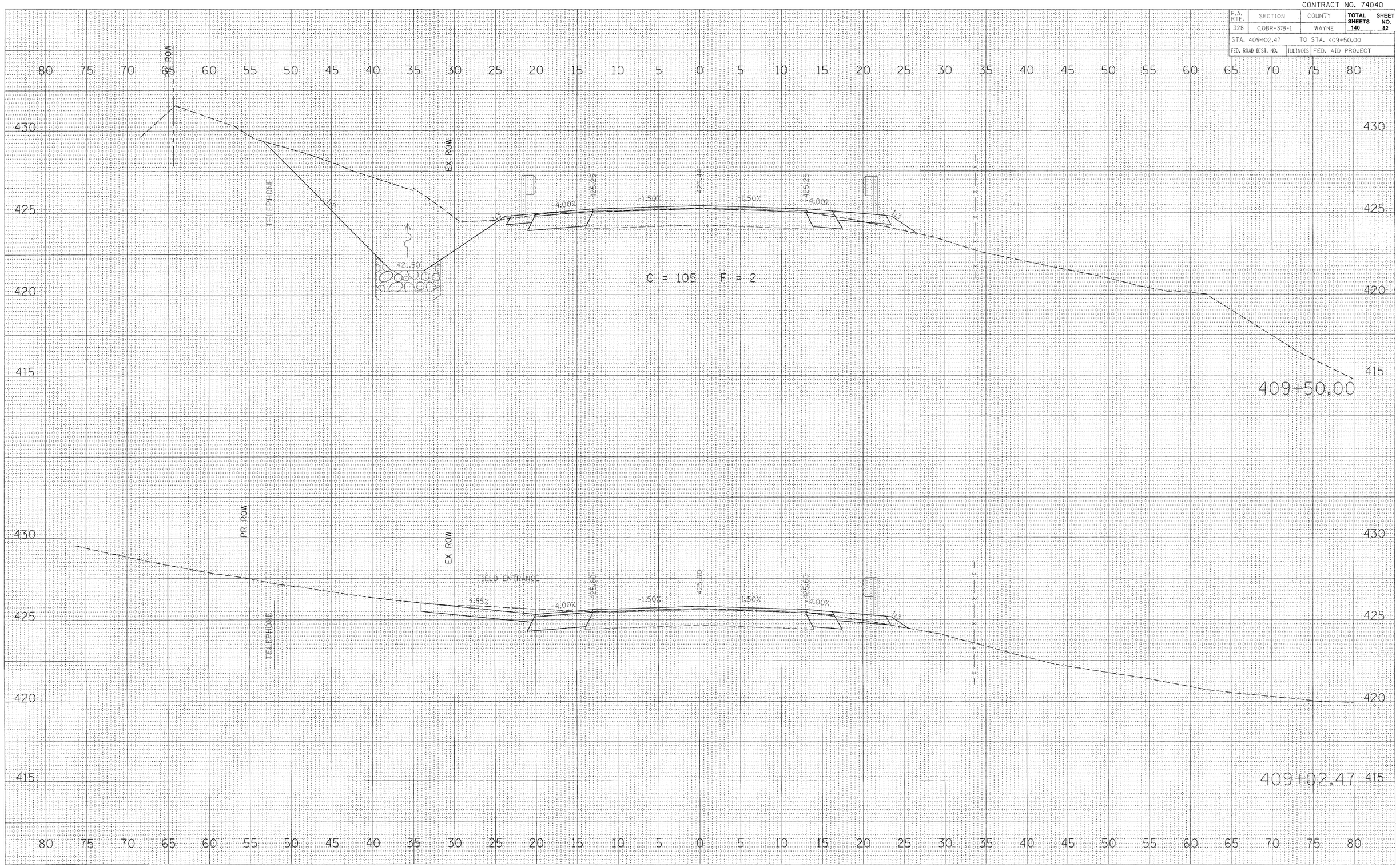
US 45 OVER BRANCH OF DEER CREEK (SN 096–2010) CROSS SECTION SHEET

CONTRACT NO. 74040

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	(10BR-3)B-1	WAYNE	140	82
STA. 409+02.47		TO STA. 409+50.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



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NOTE BOOK	PLOTTED		
NO.	TEMPLATE		
	AREAS		
	AREAS CHECKED		

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

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US 45 OVER BRANCH OF DEER CREEK (SN 096–2010) CROSS SECTION SHEET

CONTRACT NO. 74040

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	(10BR-3)B-1	WAYNE	140	83
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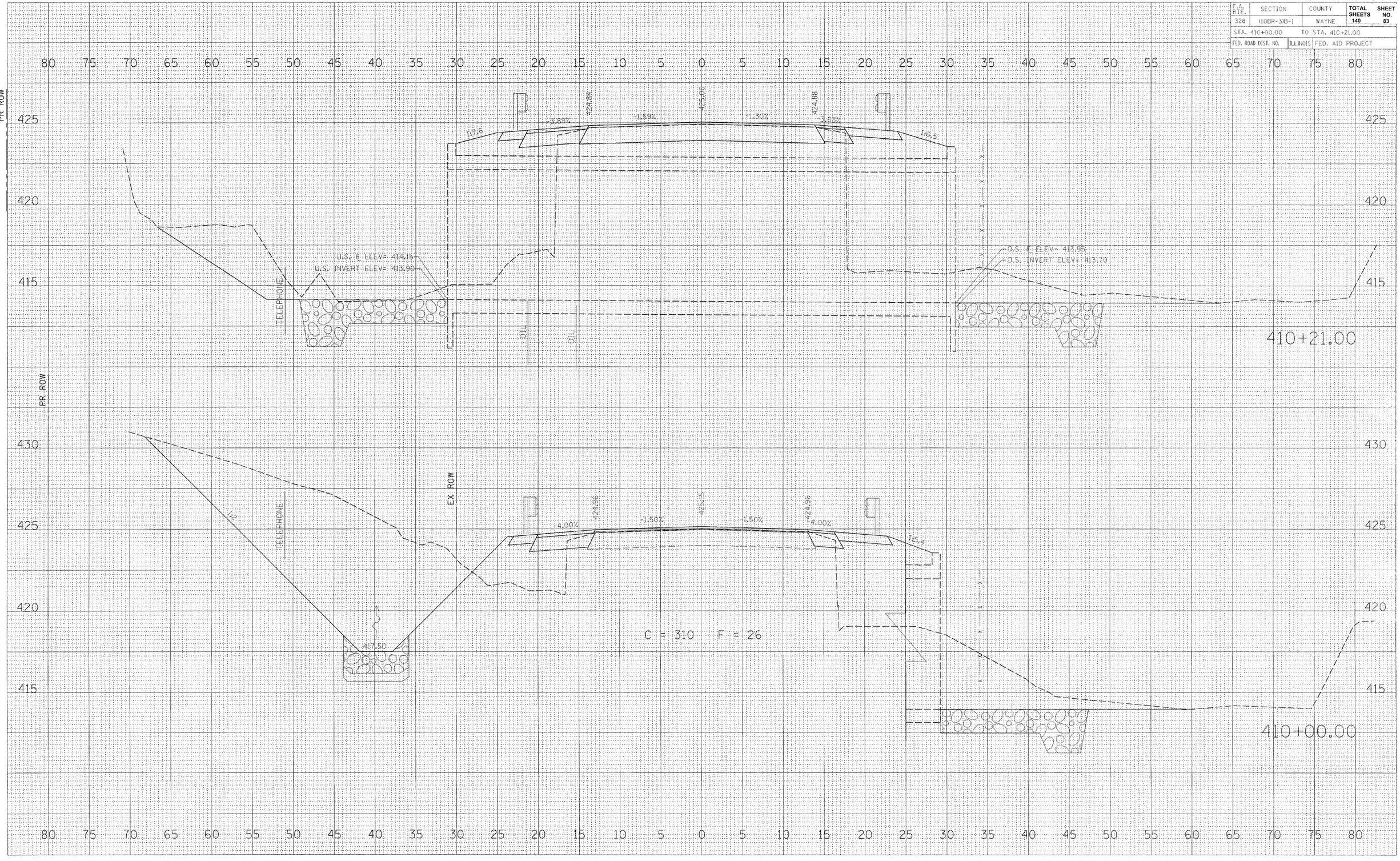

US 45 OVER BRANCH OF DEER CREEK (SN 096–2010) CROSS SECTION SHEET

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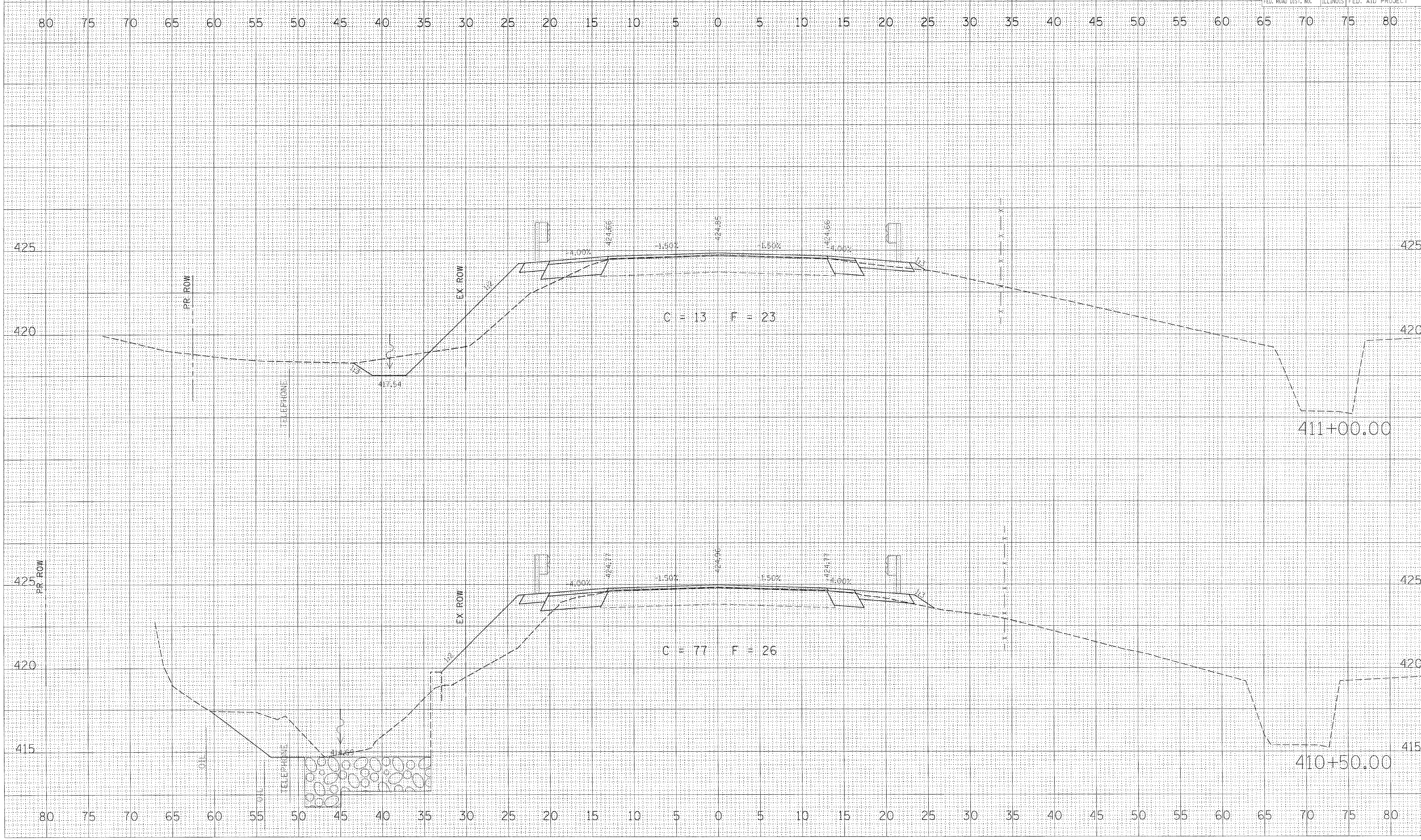
CONTRACT NO. 74040

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	(10BR-3)B-1	WAYNE	140	84

STA. 410+50.00 TO STA. 411+00.00

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



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PLOT DATE = 9/17/2007
PLOT SCALE = 5.000 ' / in.
USER NAME = sdonahue

US 45 OVER BRANCH OF DEER CREEK (SN 096–2010) CROSS SECTION SHEET

CONTRACT NO. 74040

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	(10BR-3)B-1	WAYNE	140	85
STA. 411+50.00	TO STA. 412+00.00			
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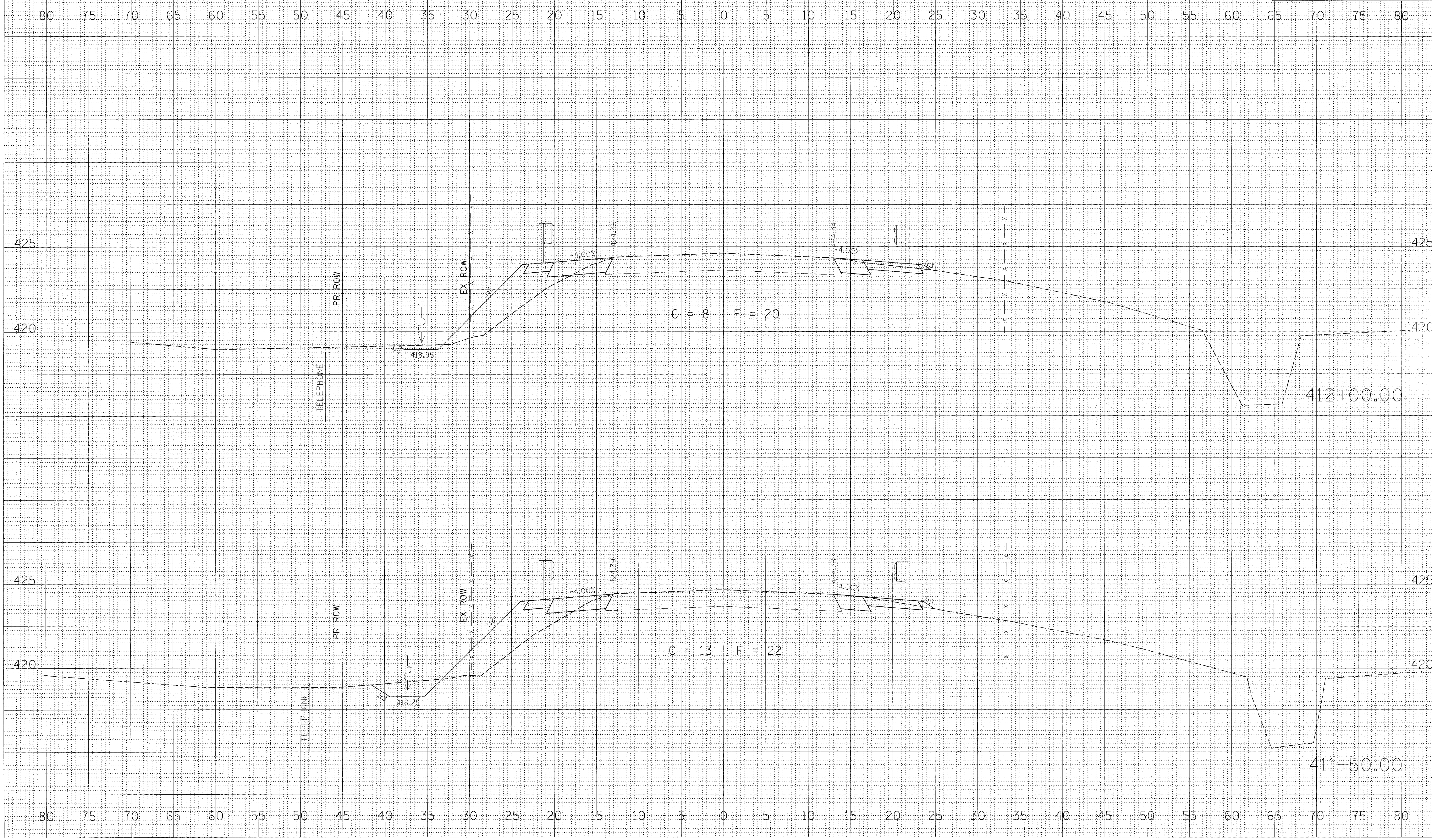

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NOTE BOOK	SURVEYED		
	PLOTTED		
	TEMPLATE		
	AREAS		
NO.	AREAS CHECKED		

ORIGINAL SURVEY		BY	DATE
	SURVEYED		
	PLOTTED		
	AREAS		
NO.	AREAS CHECKED		

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US 45 OVER BRANCH OF DEER CREEK (SN 096–2010) CROSS SECTION SHEET

CONTRACT NO. 74040

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	(10BR-3)B-1	WAYNE	140	86
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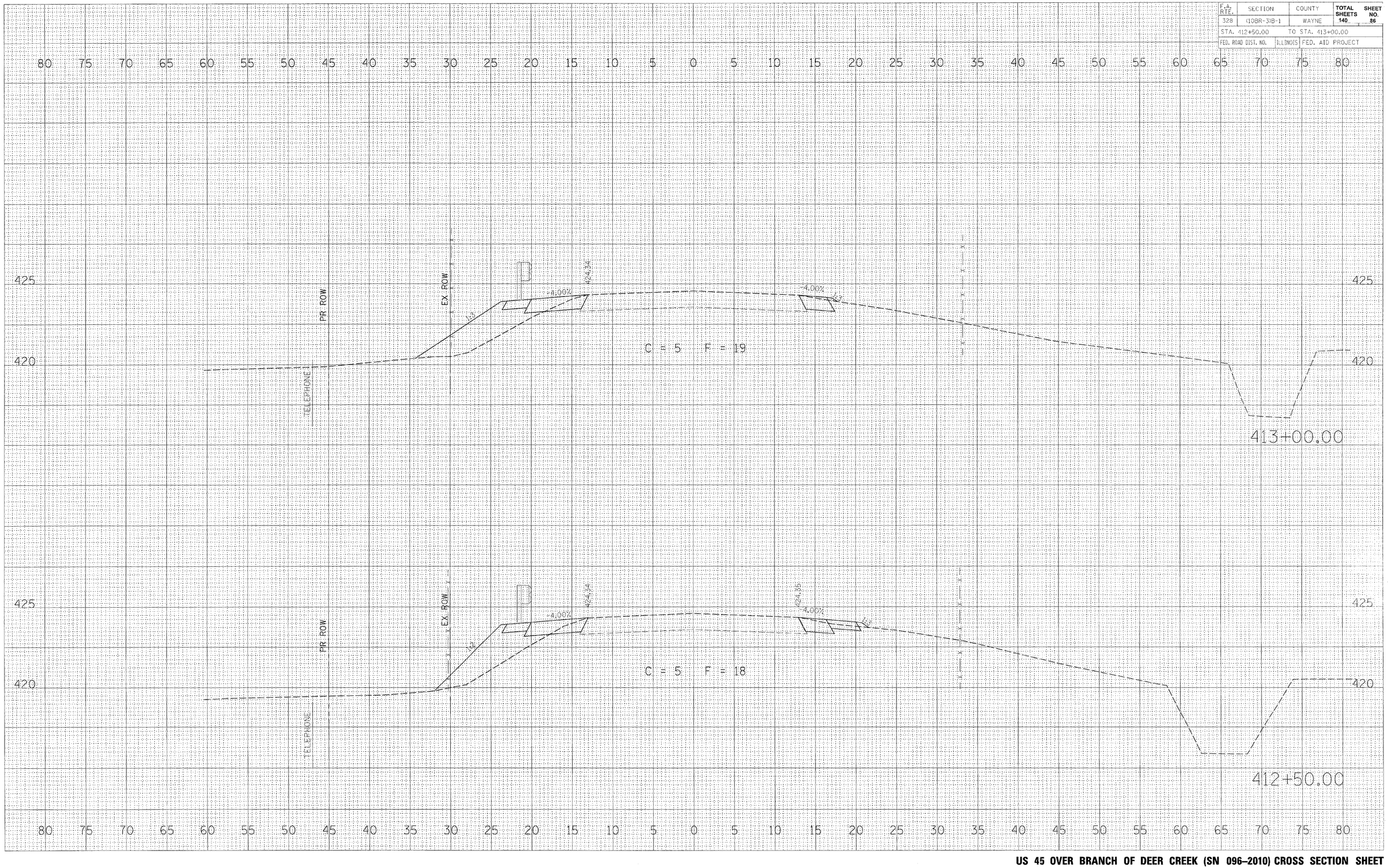

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NOTE BOOK	ADDED		
VOL.	TEMPLATE		
	AREAS		
	AREAS CHECKED		

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US 45 OVER BRANCH OF DEER CREEK (SN 096–2010) CROSS SECTION SHEET

CONTRACT NO. 74040

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	(10BR-3)B-1	WAYNE	140	87
STA. 413+50.00		TO STA. 413+50.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

ORIGINAL SURVEY	BY	DATE
SURVEYED		
PLOTTED		
NOTE BOOK		
AREAS		
AREAS CHECKED		
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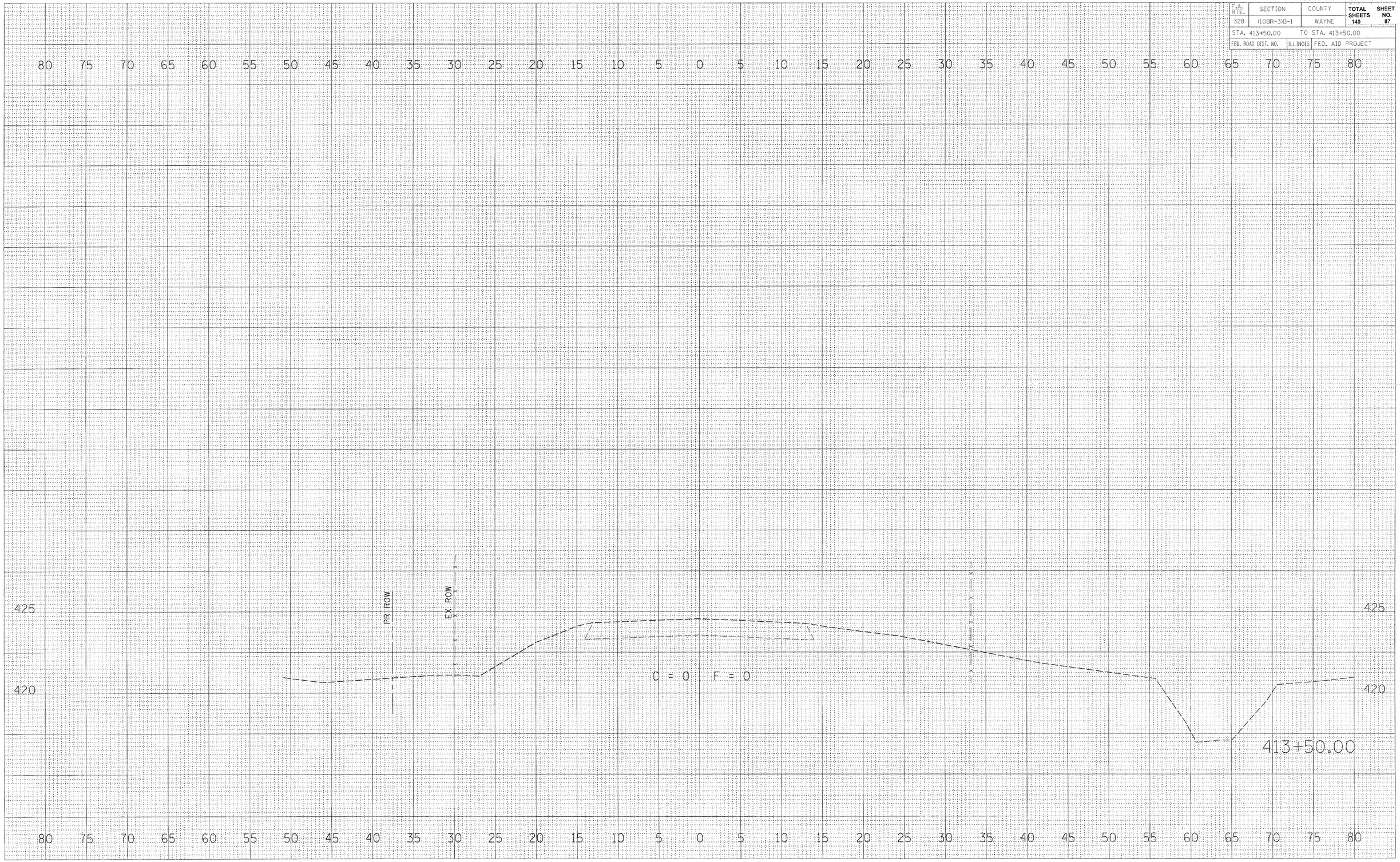
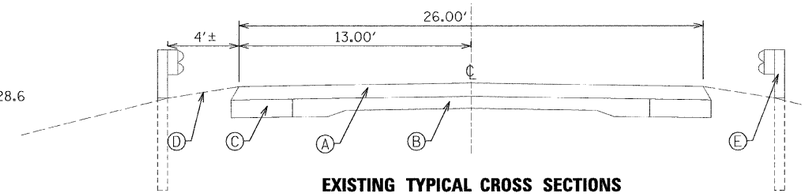


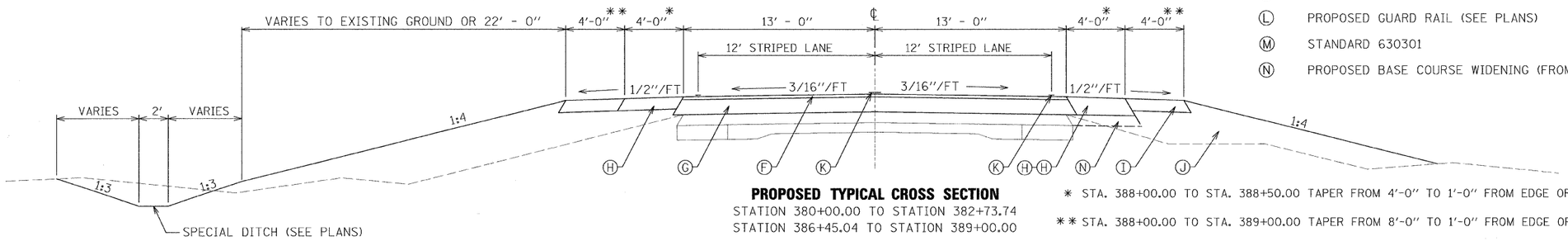
US 45 OVER BRANCH OF DEER CREEK (SN 096–2010) CROSS SECTION SHEET

EXISTING BRIDGE OMISSION
STATION 383+89.9 TO STATION 385+28.6



EXISTING TYPICAL CROSS SECTIONS
STATION 380+00 TO STATION 389+00

Ⓐ EXISTING HMA RESURFACING, 6''
Ⓑ EXISTING PCC PAVEMENT, 9-6-9
Ⓒ EXISTING PCC WIDENING, 9''
Ⓓ EXISTING EARTH SHOULDER
Ⓔ EXISTING SPBGR (TO BE REMOVED)
Ⓕ PROPOSED HMA SURFACE COURSE, MIX "C", N70, 2'' DEPTH
Ⓖ PROPOSED HMA BINDER COURSE, IL-19.0, N70, VARIABLE DEPTH
Ⓗ PROPOSED HMA SHOULDER, 8'' DEPTH
Ⓗ–Ⓗ PROPOSED HMA SHOULDER, 8'' DEPTH (VARIABLE DEPTH STA 381+92 TO 387+76)
Ⓘ PROPOSED AGGREGATE SHOULDER, TYPE B, 8''
Ⓙ PROPOSED EARTH EMBANKMENT
Ⓚ PROPOSED PAINT PAVEMENT MARKING LINE - 4''
Ⓛ PROPOSED GUARD RAIL (SEE PLANS)
Ⓜ STANDARD 630301
Ⓝ PROPOSED BASE COURSE WIDENING (FROM STAGE CONSTRUCTION)

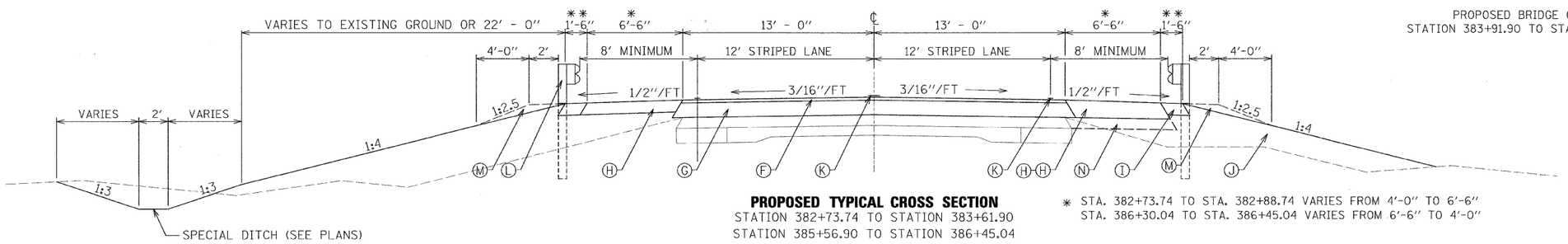


PROPOSED TYPICAL CROSS SECTION
STATION 380+00.00 TO STATION 382+73.74
STATION 386+45.04 TO STATION 389+00.00

* STA. 388+00.00 TO STA. 388+50.00 TAPER FROM 4'-0'' TO 1'-0'' FROM EDGE OF PAVEMENT

** STA. 388+00.00 TO STA. 389+00.00 TAPER FROM 8'-0'' TO 1'-0'' FROM EDGE OF PAVEMENT

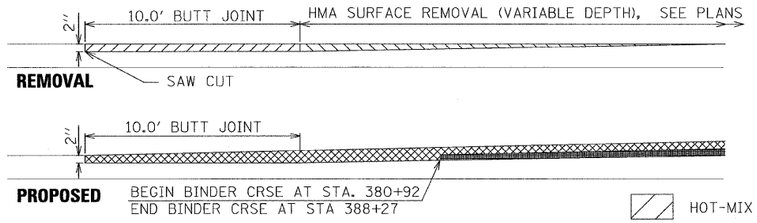
PROPOSED BRIDGE OMISSION
STATION 383+91.90 TO STATION 385+26.90



PROPOSED TYPICAL CROSS SECTION
STATION 382+73.74 TO STATION 383+61.90
STATION 385+56.90 TO STATION 386+45.04

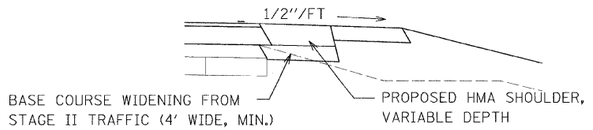
* STA. 382+73.74 TO STA. 382+88.74 VARIES FROM 4'-0'' TO 6'-6''
STA. 386+30.04 TO STA. 386+45.04 VARIES FROM 6'-6'' TO 4'-0''

** STA. 382+73.74 TO STA. 382+88.74 VARIES FROM 4'-0'' TO 1'-6''
STA. 386+30.04 TO STA. 386+45.04 VARIES FROM 1'-6'' TO 4'-0''



BUTT JOINT DETAIL
STATION 380+00 TO STATION 380+10
STATION 388+90 TO STATION 389+00

HOT-MIX SURFACE REMOVAL - BUTT JOINT
HOT-MIX SURFACE REMOVAL (VARIABLE DEPTH)
PROPOSED HMA SURFACE COURSE, 2'' DEPTH
PROPOSED HMA BINDER COURSE, VARIABLE DEPTH



HMA SHOULDER DETAIL
STATION 381+92.00 TO STATION 383+61.90
STATION 385+56.90 TO STATION 387+19.00

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		DRAWN -	REVISED -
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
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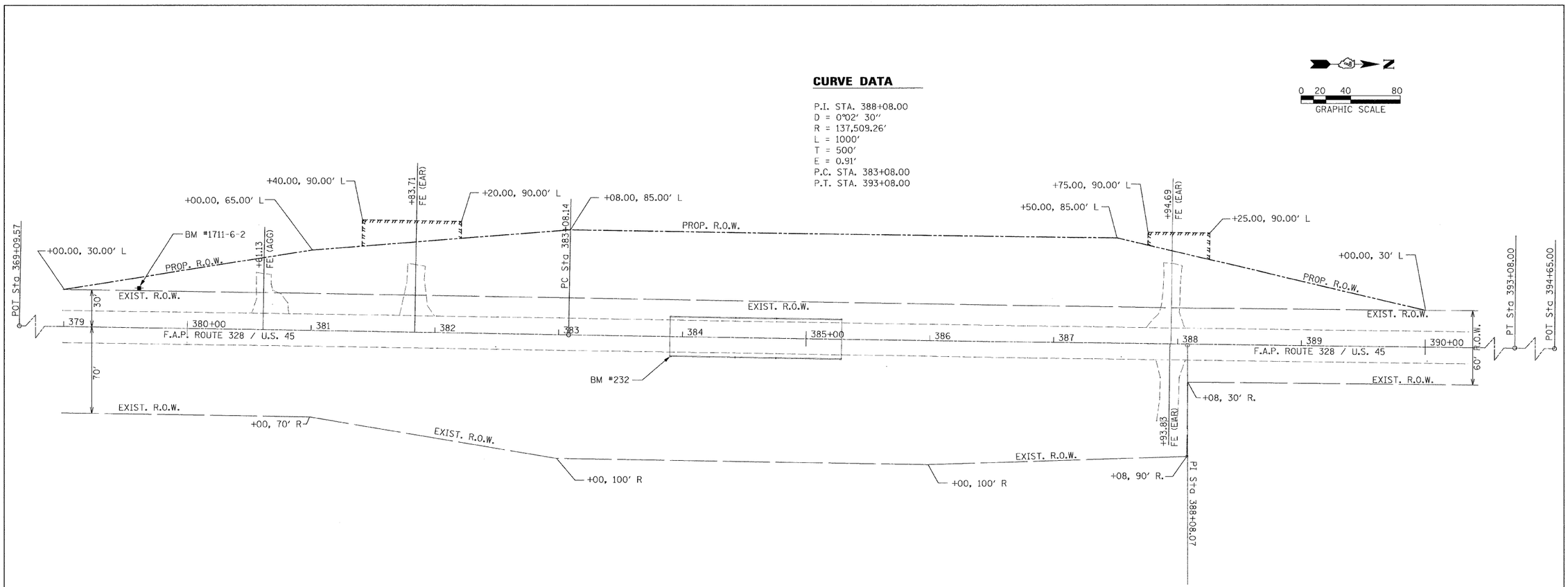
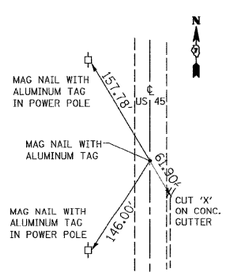
		CONTRACT NO. 74040		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		





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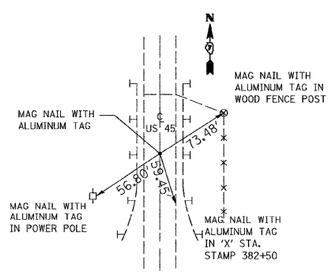
E964308.520



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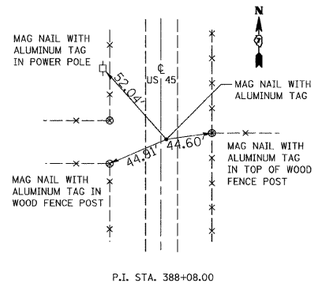
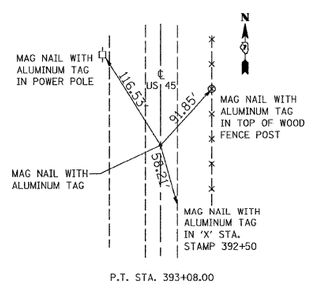


P.I. STA. 388+08.00



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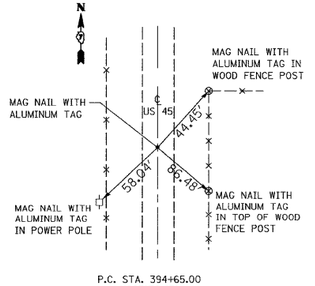

P.C. STA. 394+65.00
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E964346.993

BENCHMARKS

BM #232 ELEV. 423.23
CHISELED SQUARE ON THE SOUTHEAST CORNER OF BRIDGE #96-0023.

BM #230 ELEV. 424.24
CHISELED SQUARE ON THE NORTHWEST CORNER OF BRIDGE #96-0022.

BM #1711-6-2 ELEV. 422.61
YELLOW BENCH MARK SPIKE ON POWER POLE WEST SIDE OF U.S. ROUTE 45 SOUTH OF BRIDGE #96-0023 AT STAT 379+60, 38'± LEFT.

FILE NAME = $FILEL$	USER NAME = $USER$	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	ALIGNMENT, TIES AND BENCHMARKS			F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS / SHEET NO.
		DRAWN -	REVISED -					328	(10BR-2)B-1	WAYNE	140 / 89
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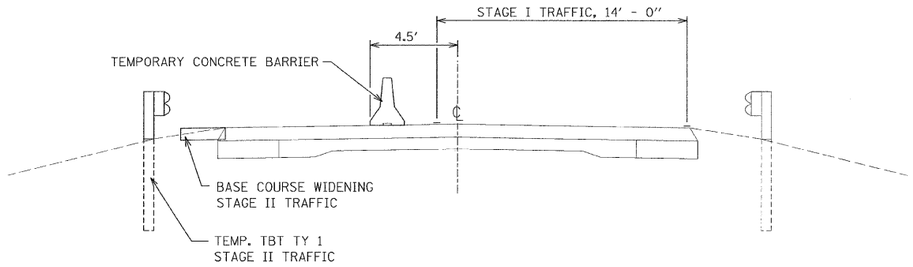
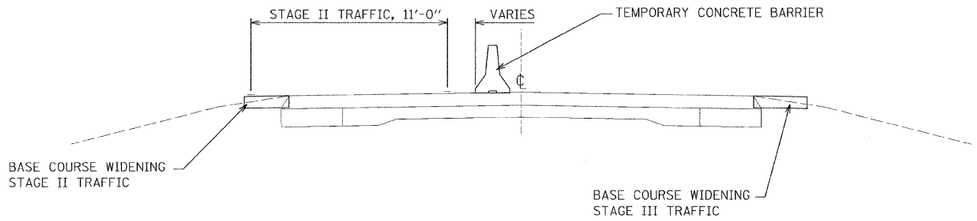
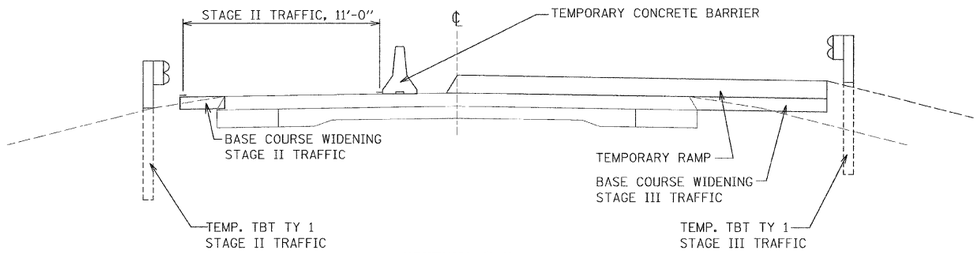


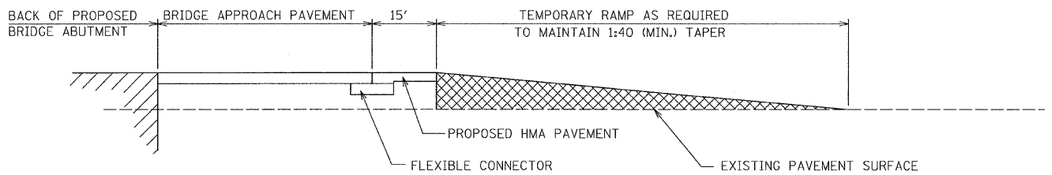
SECTION A–A



SECTION B–B

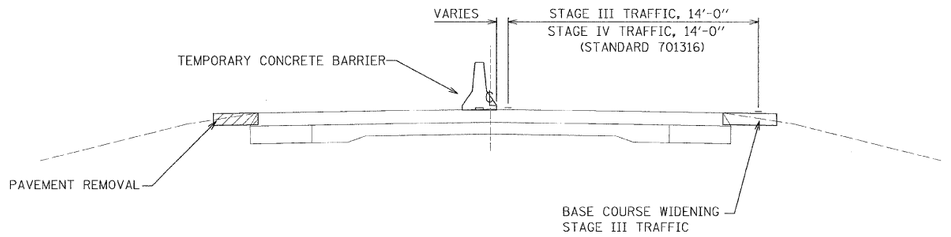


SECTION C–C

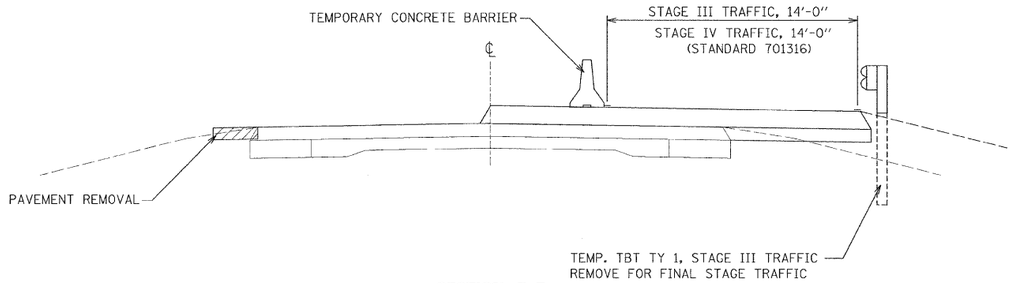


TEMPORARY RAMP DETAIL

N.T.S.



SECTION D–D



SECTION E–E

SUGGESTED SEQUENCE OF CONSTRUCTION

STAGE I CONSTRUCTION - BRIDGE REPAIR

1. INSTALL TEMPORARY TRAFFIC CONTROL SIGNALS, TEMPORARY CONCRETE BARRIERS AND TEMPORARY IMPACT ATTENUATORS.
2. MOVE ALL TRAFFIC TO NORTHBOUND LANE.
3. REPAIR EXISTING BRIDGE STRUCTURE AS SHOWN ON THE PLANS.
4. INSTALL BASE COURSE WIDENING FOR STAGE II TRAFFIC.
5. REMOVE OUTERMOST 50' OF SPBGR FROM EACH END OF SOUTHBOUND LANE AND INSTALL TEMPORARY TRAFFIC BARRIER TERMINAL TYPE 1.

STAGE II CONSTRUCTION

1. RELOCATE TEMPORARY CONCRETE BARRIERS (AS REQUIRED AND ADD ADDITIONAL AS REQUIRED) AND IMPACT ATTENUATORS.
2. MOVE ALL TRAFFIC TO SOUTHBOUND LANE.
3. REMOVE PAVEMENT AND INSTALL TEMORARY SHEETPILE.
4. REMOVE EXISTING BRIDGE STRUCTURE AND CONSTRUCT NEW BRIDGE STRUCTURE.
5. CONSTRUCT BRIDGE APPROACH PAVEMENT, FLEXIBLE CONNECTOR AND 9' OF PAVEMENT.
6. CONSTRUCT BASE COURSE WIDENING AND TEMPORARY RAMP FOR STAGE III TRAFFIC.
7. INSTALL TRAFFIC BARRIER TERMINAL TYPE 6 AND TEMPORARY TRAFFIC BARRIER TERMINAL TYPE 1 ON NORTHBOUND LANE.

STAGE III CONSTRUCTION

1. RELOCATE TEMPORARY CONCRETE BARRIERS (AS REQUIRED AND ADD ADDITIONAL AS REQUIRED) AND IMPACT ATTENUATORS.
2. MOVE ALL TRAFFIC TO NORTHBOUND LANE.
3. REMOVE PAVEMENT.
4. REMOVE EXISTING BRIDGE STRUCTURE AND CONSTRUCT NEW BRIDGE STRUCTURE.

STAGE IV CONSTRUCTION

1. REINSTALL TEMPORARY TRAFFIC CONTROL SIGNALS (TRAFFIC TO REMAIN ON NORTHBOUND LANE)
2. REMOVE TEMPORARY CONCRETE BARRIERS AND IMPACT ATTENUATORS.
2. INSTALL TRAFFIC BARRIERS ACCORDING TO STANDARD 701316.
3. CONSTRUCT PAVEMENT, SHOULDERS, GUARD RAIL, ETC TO COMPLETE SOUTHBOUND LANE.

STAGE V CONSTRUCTION - FINAL STAGE

1. MOVE ALL TRAFFIC TO SOUTHBOUND LANES
2. INSTALL TRAFFIC BARRIERS ACCORDING TO STANDARD 701316.
3. CONSTRUCT PAVEMENT, SHOULDERS, GUARD RAIL, PAVEMENT MARKINGS, ETC TO COMPLETE NORTHBOUND LANE.
4. COMPLETE FINAL PAVEMENT MARKINGS AND OTHER IMPROVEMENTS TO COMPLETE THE WORK.
5. OPEN ROADWAY TO TWO-WAY TRAFFIC.

FILE NAME = $FILEL$	USER NAME = $USER$	DESIGNED - WJS	REVISED -	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**STAGE CONSTRUCTION – TYPICALS & DETAILS**				F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN - WJS	REVISED -						328	(10BR-2)B-1	WAYNE	140	90
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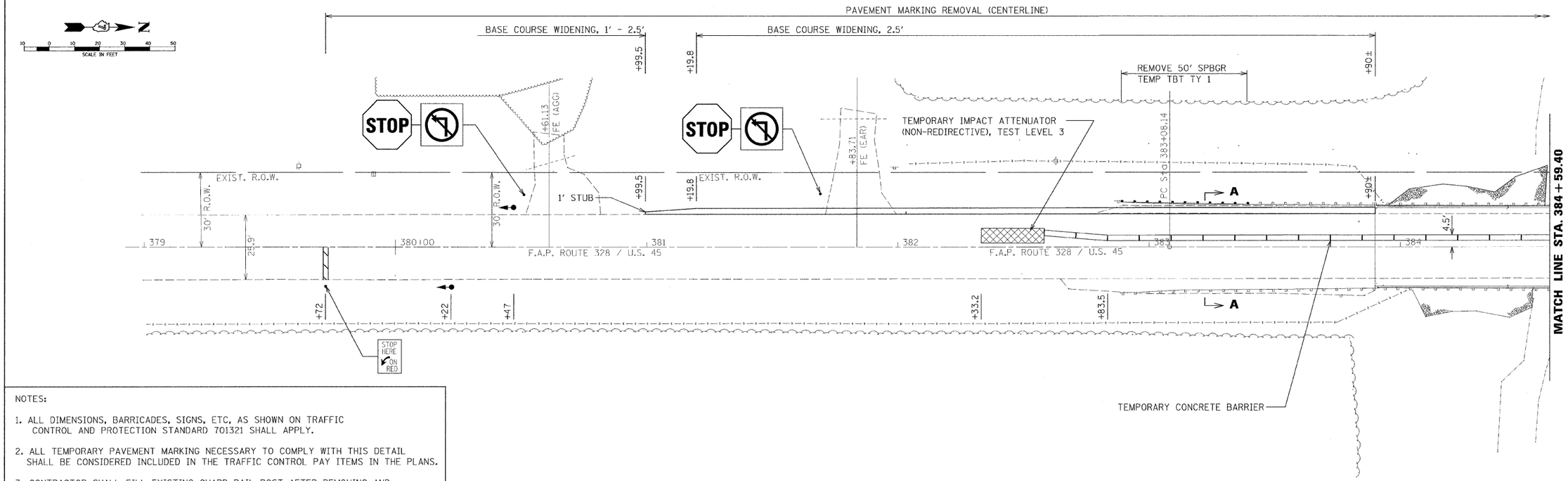
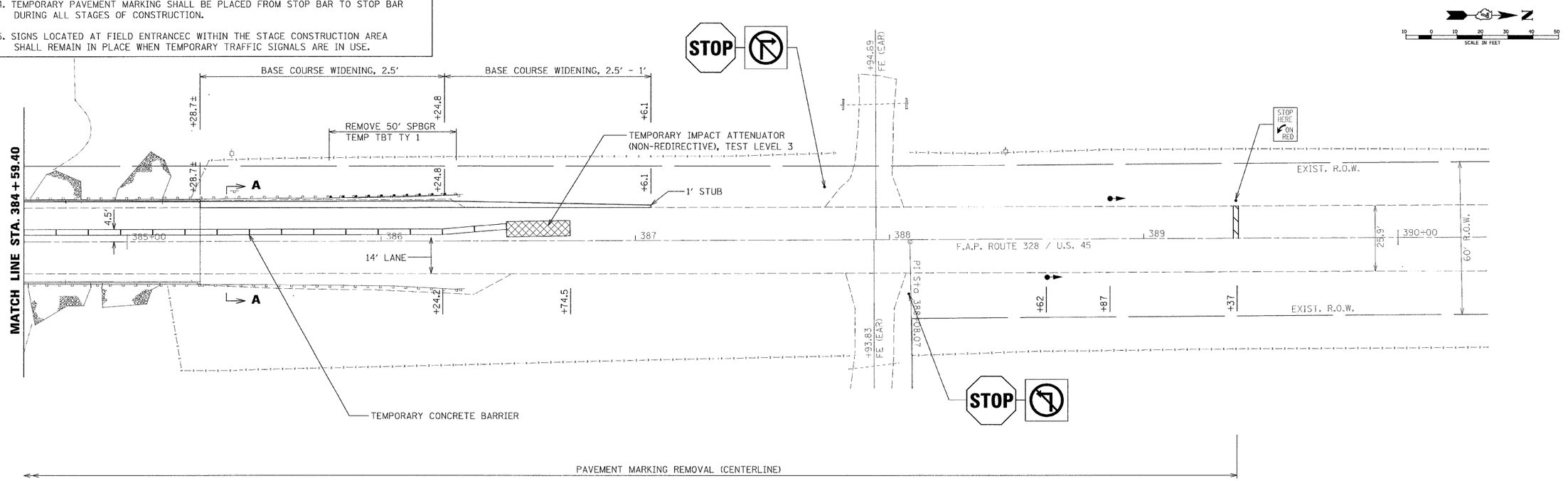


NOTES:

1. ALL DIMENSIONS, BARRICADES, SIGNS, ETC, AS SHOWN ON TRAFFIC CONTROL AND PROTECTION STANDARD 701321 SHALL APPLY.
2. ALL TEMPORARY PAVEMENT MARKING NECESSARY TO COMPLY WITH THIS DETAIL SHALL BE CONSIDERED INCLUDED IN THE TRAFFIC CONTROL PAY ITEMS IN THE PLANS.
3. CONTRACTOR SHALL FILL EXISTING GUARD RAIL POST AFTER REMOVING AND SHALL BE CONSIDERED INCIDENTAL TO STEEL PLATE BEAM GUARD RAIL REMOVAL.
4. TEMPORARY PAVEMENT MARKING SHALL BE PLACED FROM STOP BAR TO STOP BAR DURING ALL STAGES OF CONSTRUCTION.
5. SIGNS LOCATED AT FIELD ENTRANCEC WITHIN THE STAGE CONSTRUCTION AREA SHALL REMAIN IN PLACE WHEN TEMPORARY TRAFFIC SIGNALS ARE IN USE.



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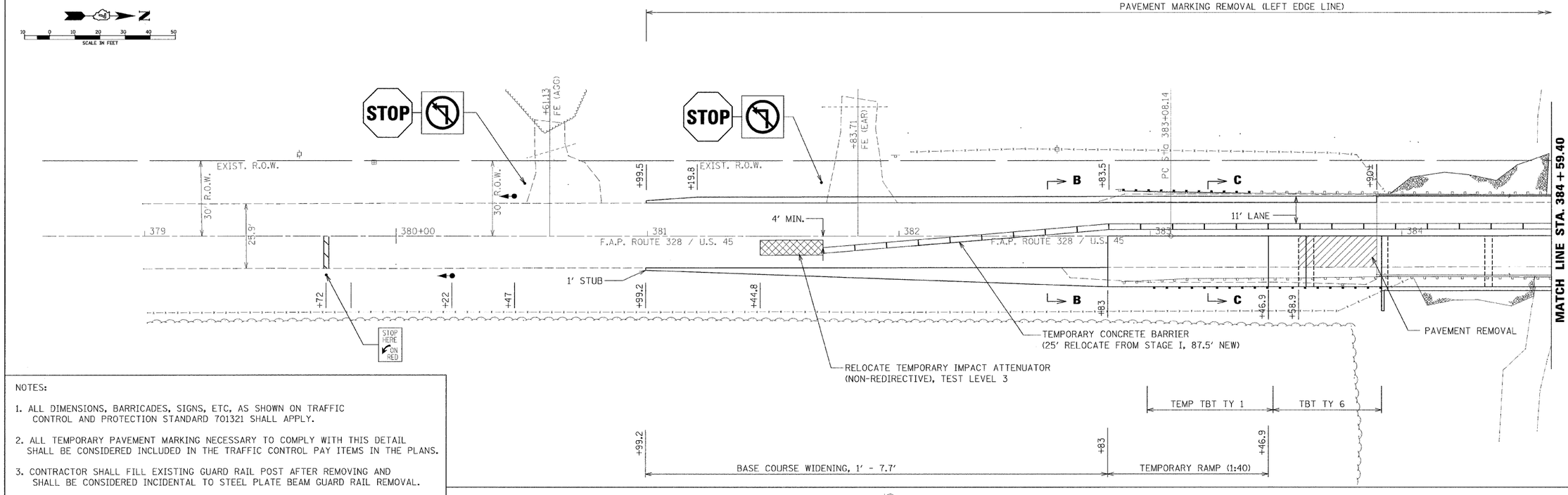
		DRAWN - WJS	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - AJD	REVISED -
	PLOT DATE = $DATE$	DATE - 10/24/07	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE I CONSTRUCTION – BRIDGE REPAIR

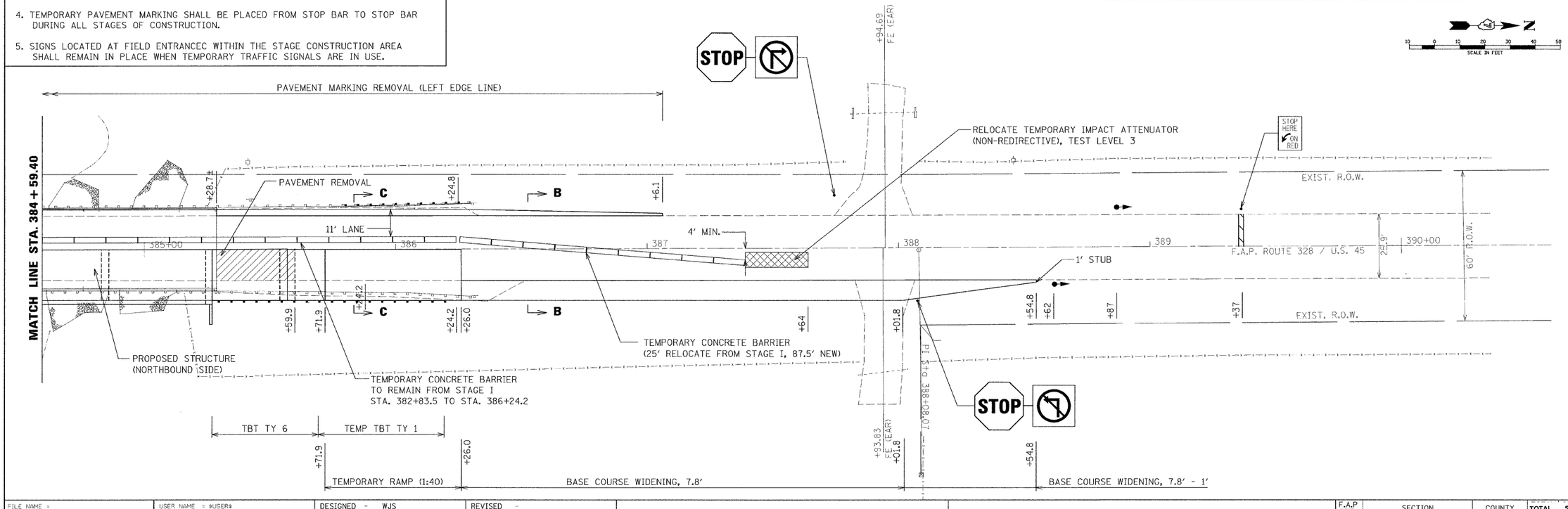
SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	(10BR-2)B-1	WAYNE	140	91
		CONTRACT NO. 74040		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



NOTES:

1. ALL DIMENSIONS, BARRICADES, SIGNS, ETC, AS SHOWN ON TRAFFIC CONTROL AND PROTECTION STANDARD 701321 SHALL APPLY.
2. ALL TEMPORARY PAVEMENT MARKING NECESSARY TO COMPLY WITH THIS DETAIL SHALL BE CONSIDERED INCLUDED IN THE TRAFFIC CONTROL PAY ITEMS IN THE PLANS.
3. CONTRACTOR SHALL FILL EXISTING GUARD RAIL POST AFTER REMOVING AND SHALL BE CONSIDERED INCIDENTAL TO STEEL PLATE BEAM GUARD RAIL REMOVAL.
4. TEMPORARY PAVEMENT MARKING SHALL BE PLACED FROM STOP BAR TO STOP BAR DURING ALL STAGES OF CONSTRUCTION.
5. SIGNS LOCATED AT FIELD ENTRANCEC WITHIN THE STAGE CONSTRUCTION AREA SHALL REMAIN IN PLACE WHEN TEMPORARY TRAFFIC SIGNALS ARE IN USE.



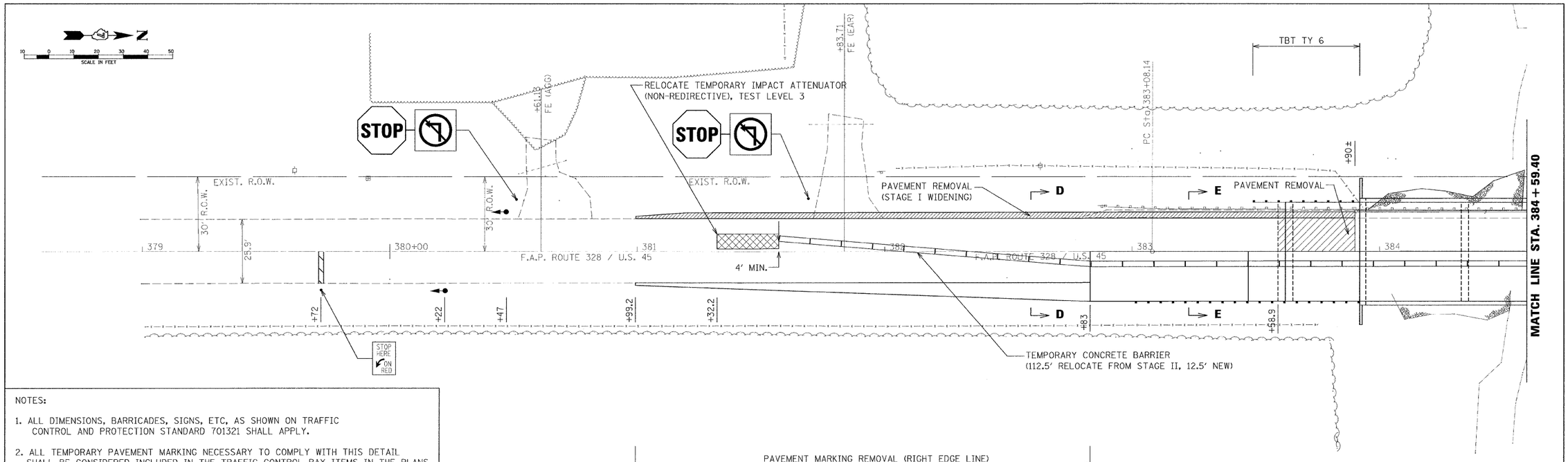
FILE NAME = $FILEL$	USER NAME = $USER$	DESIGNED - WJS	REVISED -
		DRAWN - WJS	REVISED -
	PLOT SCALE = $SCALE$	CHECKED - AJD	REVISED -
	PLOT DATE = $DATE$	DATE - 10/24/07	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STAGE II CONSTRUCTION

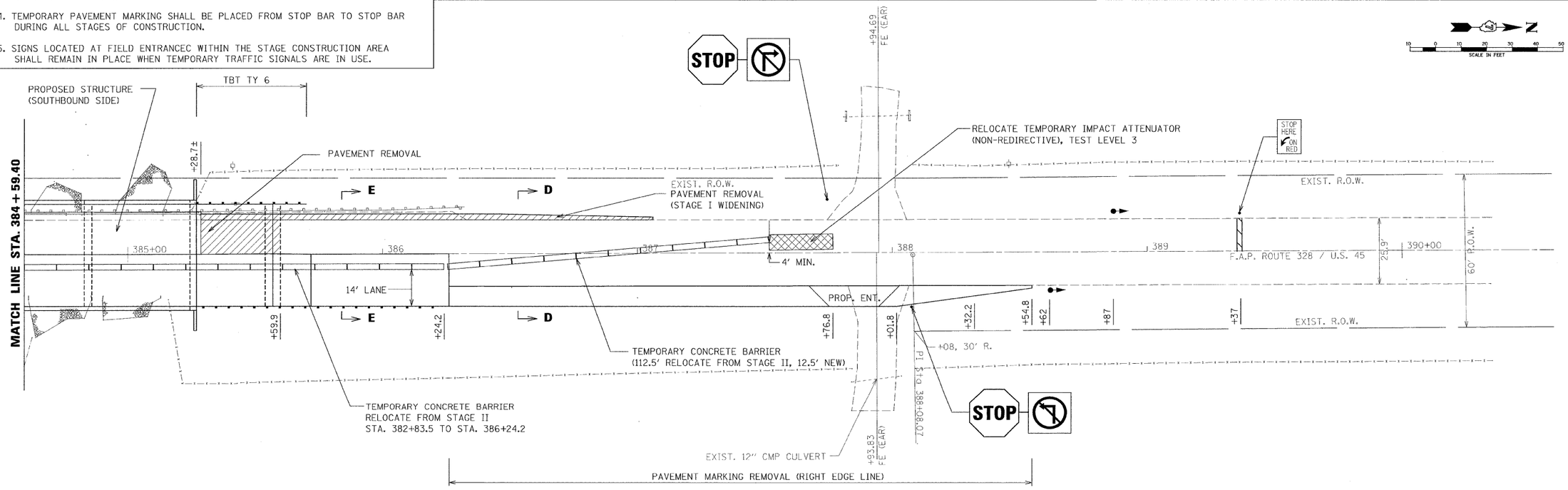
SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	(10BR-2)B-1	WAYNE	140	92
		CONTRACT NO. 74040		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



NOTES:

1. ALL DIMENSIONS, BARRICADES, SIGNS, ETC, AS SHOWN ON TRAFFIC CONTROL AND PROTECTION STANDARD 701321 SHALL APPLY.
2. ALL TEMPORARY PAVEMENT MARKING NECESSARY TO COMPLY WITH THIS DETAIL SHALL BE CONSIDERED INCLUDED IN THE TRAFFIC CONTROL PAY ITEMS IN THE PLANS.
3. CONTRACTOR SHALL FILL EXISTING GUARD RAIL POST AFTER REMOVING AND SHALL BE CONSIDERED INCIDENTAL TO STEEL PLATE BEAM GUARD RAIL REMOVAL.
4. TEMPORARY PAVEMENT MARKING SHALL BE PLACED FROM STOP BAR TO STOP BAR DURING ALL STAGES OF CONSTRUCTION.
5. SIGNS LOCATED AT FIELD ENTRANCEC WITHIN THE STAGE CONSTRUCTION AREA SHALL REMAIN IN PLACE WHEN TEMPORARY TRAFFIC SIGNALS ARE IN USE.



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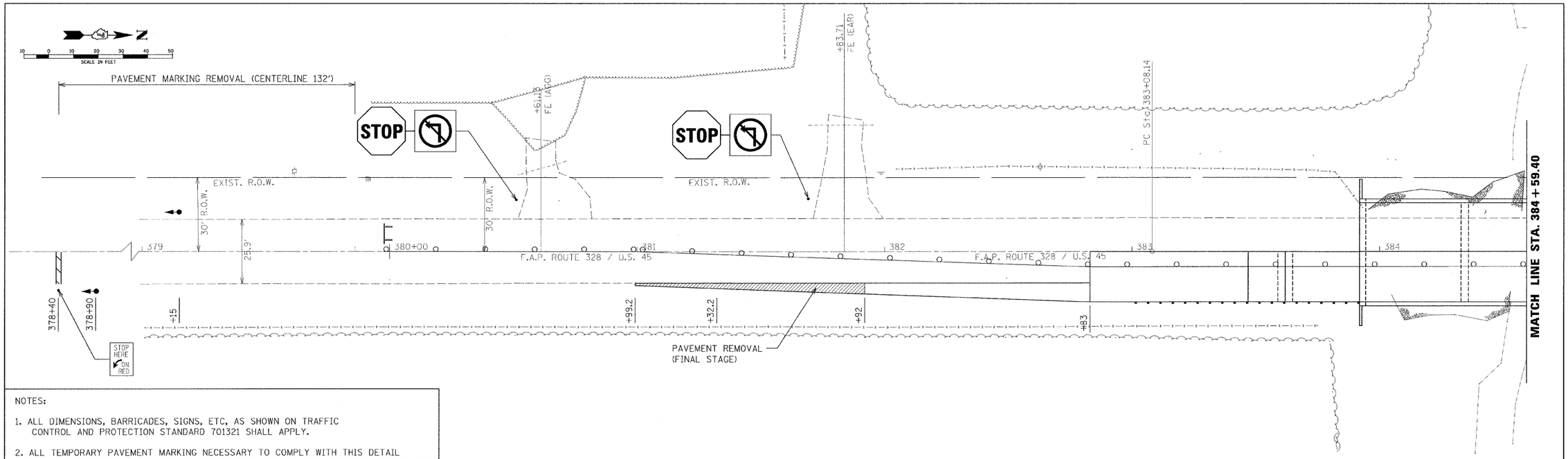
		DRAWN - WJS	REVISED -		
	PLOT SCALE = $SCALE$	CHECKED - AJD	REVISED -		SCALE: / SHEET NO. OF SHEETS / STA. / TO STA.
	PLOT DATE = $DATE$	DATE - 10/24/07	REVISED -		

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	(10BR-2)B-1	WAYNE	140	93
		CONTRACT NO. 74040		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



NOTES:

1. ALL DIMENSIONS, BARRICADES, SIGNS, ETC, AS SHOWN ON TRAFFIC CONTROL AND PROTECTION STANDARD 701321 SHALL APPLY.
2. ALL TEMPORARY PAVEMENT MARKING NECESSARY TO COMPLY WITH THIS DETAIL SHALL BE CONSIDERED INCLUDED IN THE TRAFFIC CONTROL PAY ITEMS IN THE PLANS.
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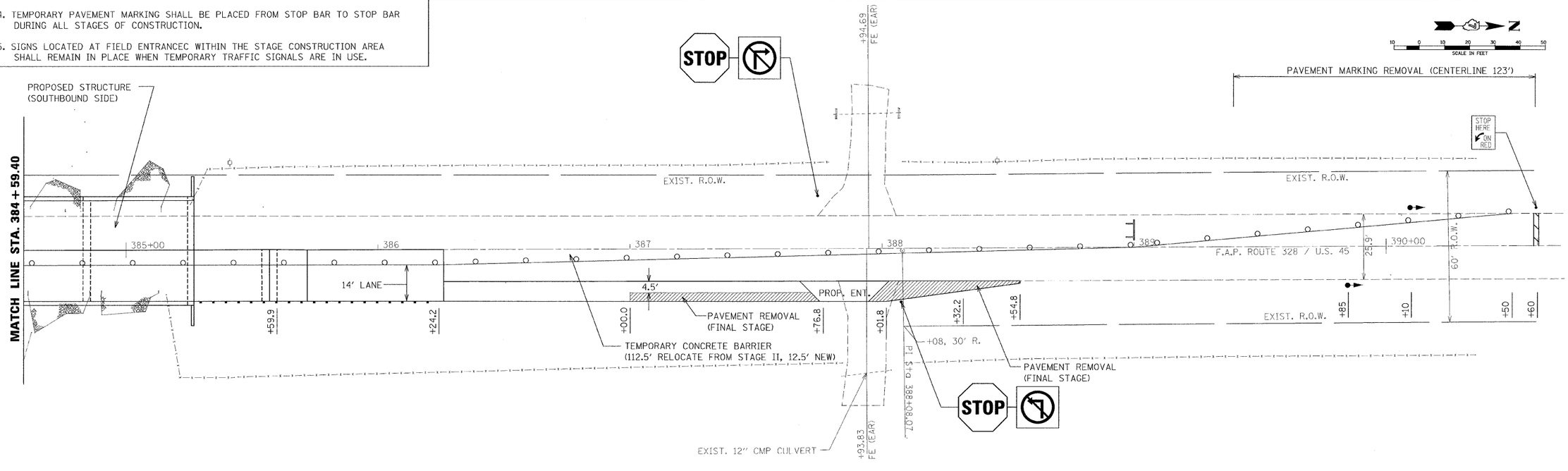
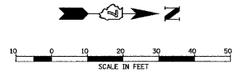
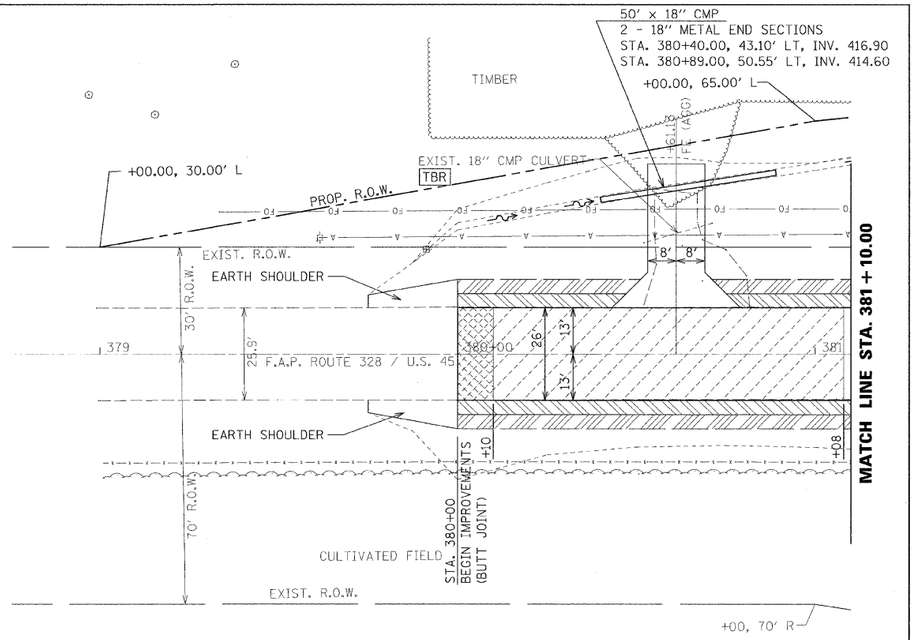
4. TEMPORARY PAVEMENT MARKING SHALL BE PLACED FROM STOP BAR TO STOP BAR DURING ALL STAGES OF CONSTRUCTION.
5. SIGNS LOCATED AT FIELD ENTRANCEC WITHIN THE STAGE CONSTRUCTION AREA SHALL REMAIN IN PLACE WHEN TEMPORARY TRAFFIC SIGNALS ARE IN USE.



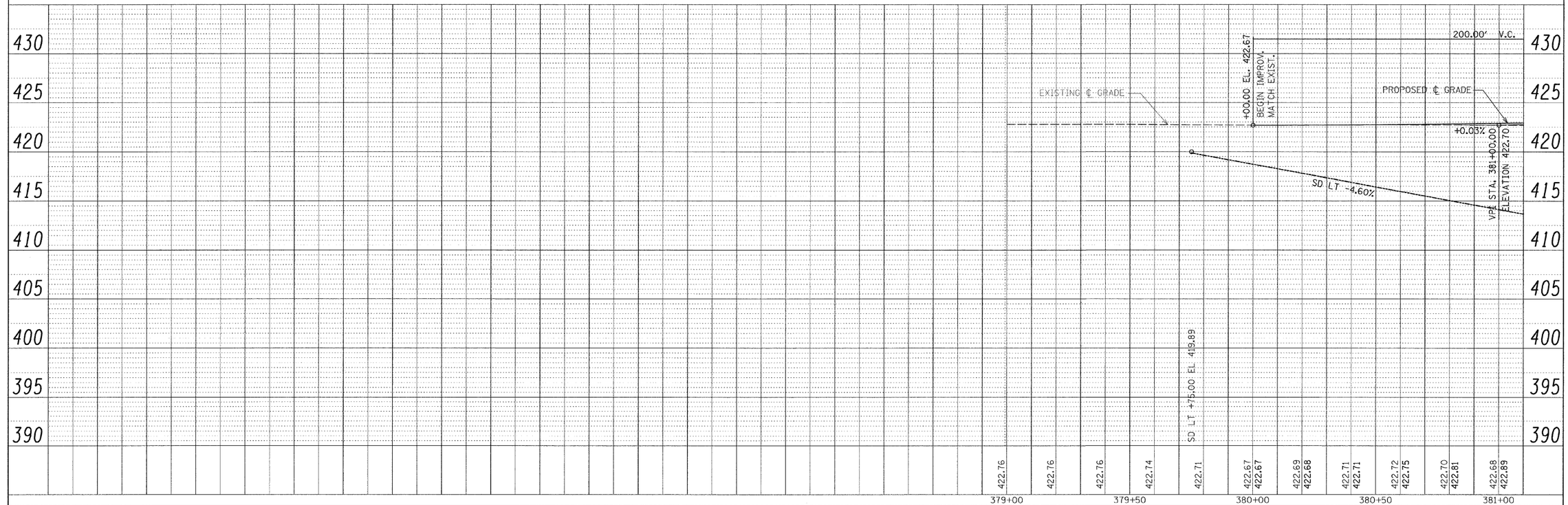
FILE NAME = $FILEL$	USER NAME = $USER$	DESIGNED - WJS	REVISED -	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**STAGE IV CONSTRUCTION**	F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		DRAWN - WJS	REVISED -			328	(10BR-2)B-1	WAYNE	140	93A
	PLOT SCALE = $SCALE$	CHECKED - AJD	REVISED -						CONTRACT NO. 74040	
	PLOT DATE = $DATE$	DATE - 10/24/07	REVISED -		SCALE: SHEET NO. OF SHEETS STA. TO STA.	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		





LEGEND

- HMA SURFACE REMOVAL - BUTT JOINT
- HMA SURFACE REMOVAL (VARIABLE DEPTH)
- PAVEMENT REMOVAL
- HMA SHOULDERS
- AGG. SHOULDER, TYPE B



PLAN — SURVEYED — PLOTTED — PLOT CHECKED — R/T OF WAY CHECKED — NOTE BOOK — XSD FILE NAME — NO. — BY — DATE

PROFILE — SURVEYED — PLOTTED — PLOT CHECKED — B.M. NOTED — STRUCTURE NOTATIONS SHOWN — NOTE BOOK — NO. — BY — DATE

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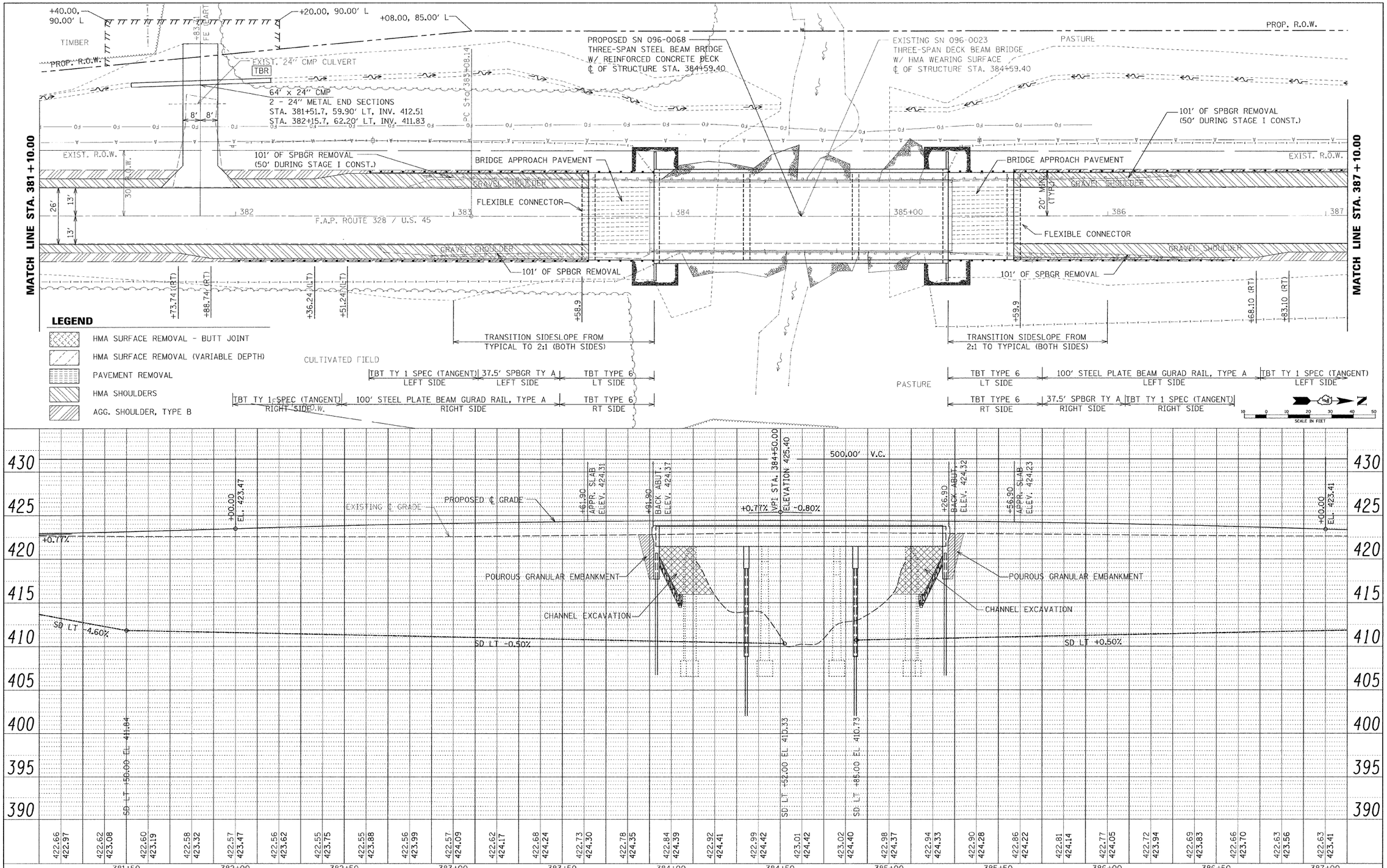
		DRAWN -	REVISED -
	PLOT SCALE = $SCALE$	CHECKED -	REVISED -
	PLOT DATE = $DATE$	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN & PROFILE FAP RT 328 (US 45)

SCALE: | SHEET NO. OF SHEETS | STA. 380+00 | TO STA. 381+10

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	(10BR-2)B-1	WAYNE	140	94
			CONTRACT NO. 74040	
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



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PROFILE — SURVEYED / PLOTTED / CHECKED / S.M. NOTED / NOTE BOOK / NO. / STRUCTURE ROTATING CURVED / BY / DATE

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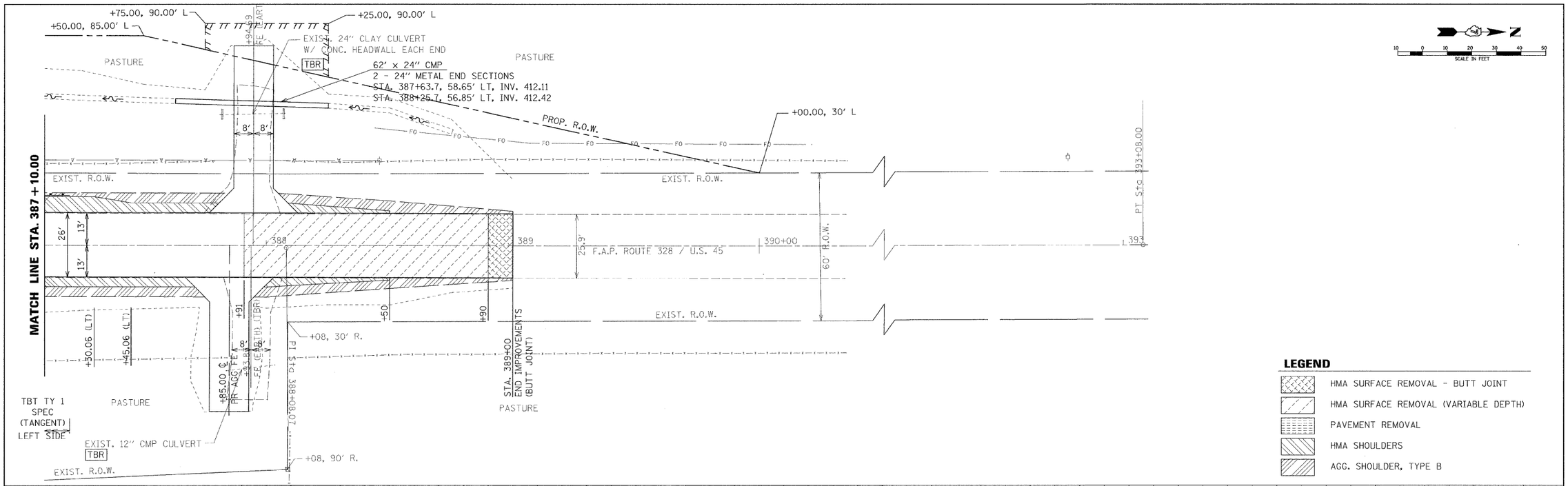
		DRAWN -	REVISED -
	PLOT SCALE = $SCALE$	CHECKED -	REVISED -
	PLOT DATE = $DATE$	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN & PROFILE FAP RT 328 (US 45)

SCALE: | SHEET NO. OF SHEETS | STA. 381+10 TO STA. 387.10

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	(10BR-2)B-1	WAYNE	140	95
			CONTRACT NO. 74040	
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



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PROFILE — SURVEYED — DRAWN — CHECKED — BEAM NOTED — STRUCTURE LAYOUTS SHOWN — NOTE BOOK — NO. — BY — DATE

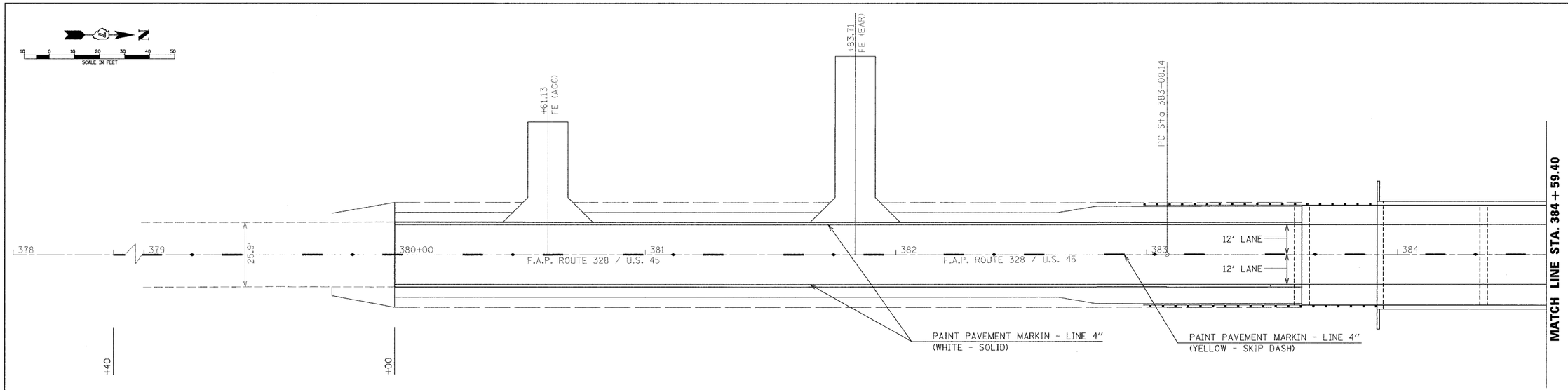
FILE NAME = $FILEL$	USER NAME = $USER$	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = $SCALE$	CHECKED -	REVISED -
	PLOT DATE = $DATE$	DATE -	REVISED -

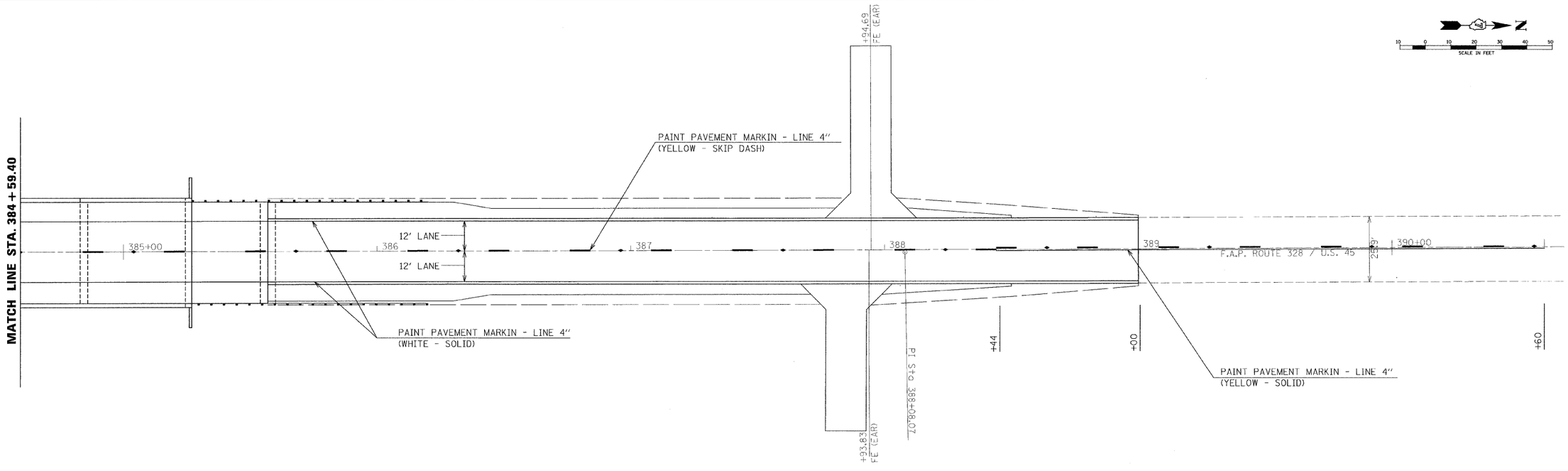
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN & PROFILE **FAP RT 328 (US 45)**

SCALE: | SHEET NO. OF SHEETS | STA. 387+10 | TO STA. 389+00

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	(10BR-2)B-1	WAYNE	140	96
		CONTRACT NO. 74040		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		





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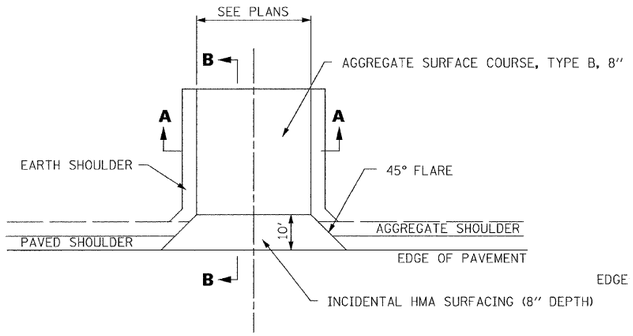
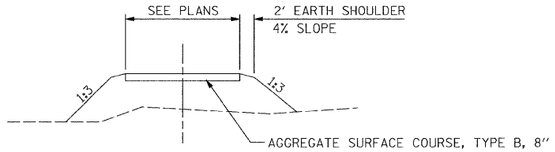
	PLOT SCALE = $SCALE$	CHECKED - AJD	REVISED -		SCALE:
	PLOT DATE = $DATE$	DATE - 10/24/07	REVISED -		SHEET NO. OF SHEETS

STA. 379+72.00 TO STA. 389+37.00

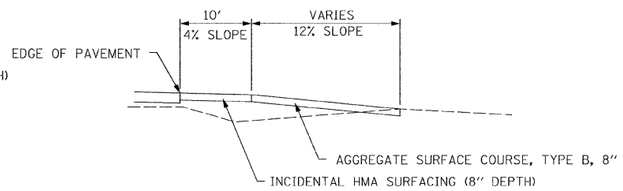
F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	(10BR-2)B-1	WAYNE	140	97
			CONTRACT NO. 74040	
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



PLAN



SECTION A–A

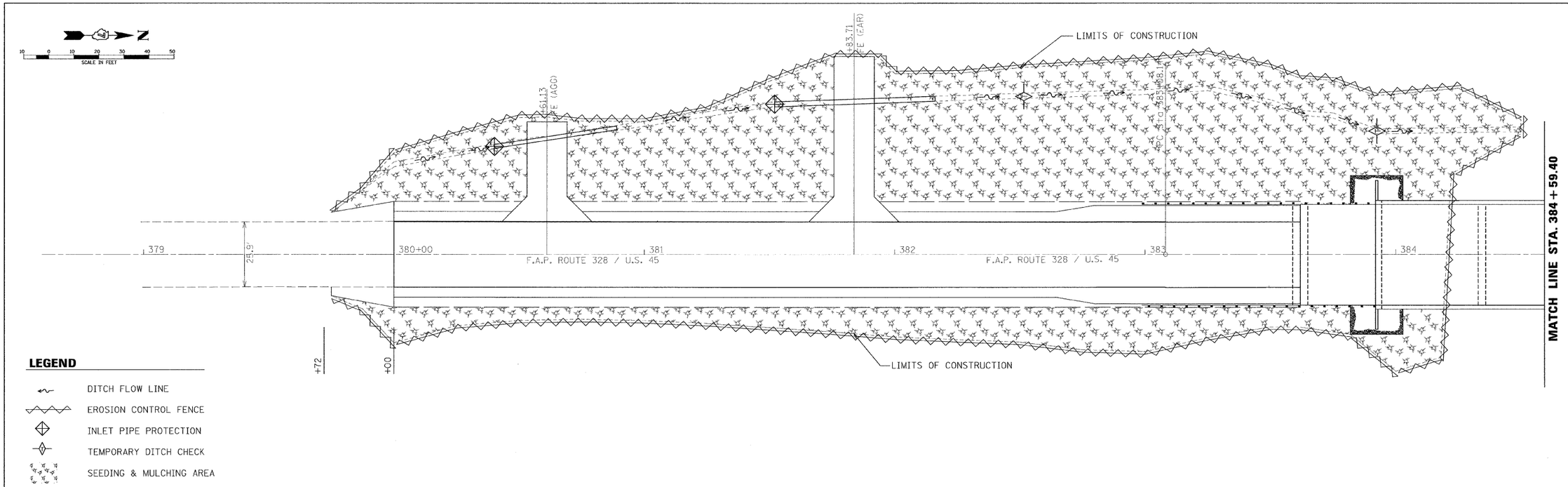


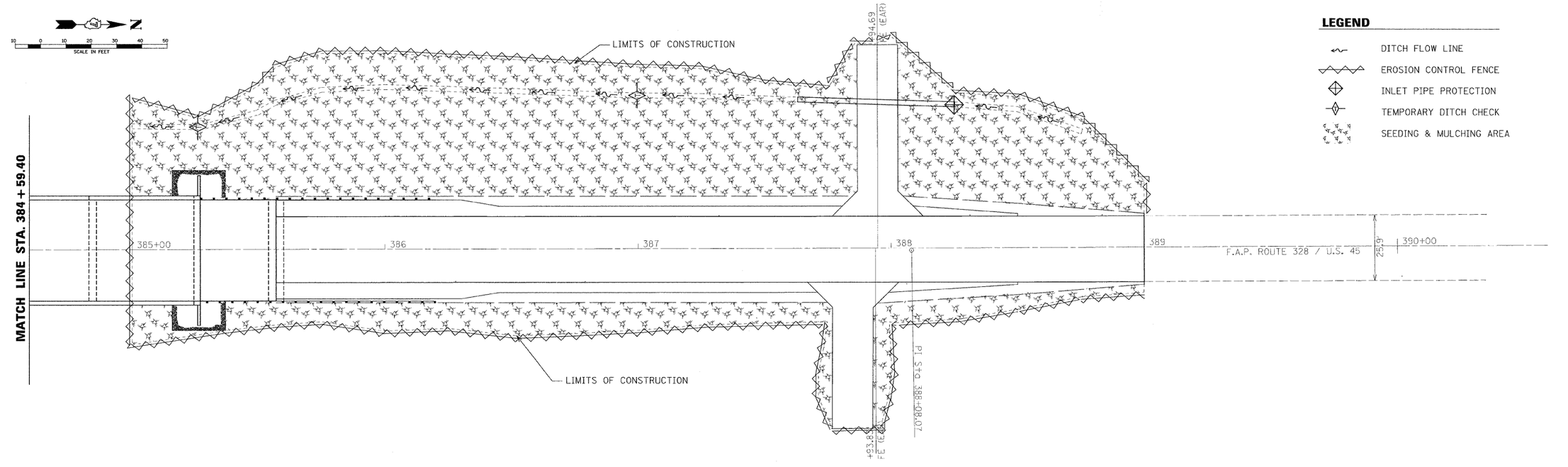
SECTION B–B

ENTRANCE DETAILS

N.T.S.

FILE NAME = *FILEL*	USER NAME = *USER*	DESIGNED -	REVISED -	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**ROADWAY DETAILS**	F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS 140 / SHEET NO. 98
		DRAWN -	REVISED -			328	(10BR-2)B-1	WAYNE	
	PLOT SCALE = *SCALE*	CHECKED -	REVISED -						CONTRACT NO. 74040
	PLOT DATE = *DATE*	DATE -	REVISED -		SCALE: / SHEET NO. OF SHEETS / STA. / TO STA.	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	





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	PLOT DATE = $DATE$	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

EROSION CONTROL PLAN

SCALE: | SHEET NO. OF SHEETS | STA. 379+72.00 TO STA. 389+37.00

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	(10BR-2)B-1	WAYNE	140	99
		CONTRACT NO. 74040		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

B.M.: #232; Chiseled Square on the Southeast Corner of SN 096-0023 Elevation 423.23

Existing Structure: Three-span PPC deck beam bridge built in 1923 on Rt. 25, Section 10-BR-2. Reconstructed in 1974 for widening to current 34'-0" out to out and 99'-0 back to back abutment length. The abutments and piers are spread footings on hard pan at elevation 406.3'. Existing structure to be removed and replaced. Traffic to be maintained with staged contruction.

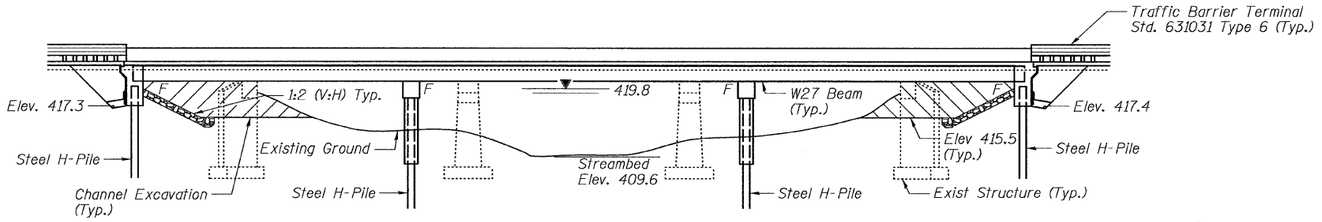
Salvage: None.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

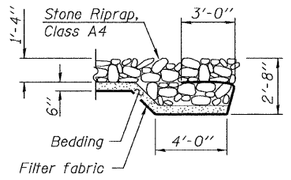
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 328	(10BR-2)B-1	WAYNE		1
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 1
21 SHEETS

Contract # 74040

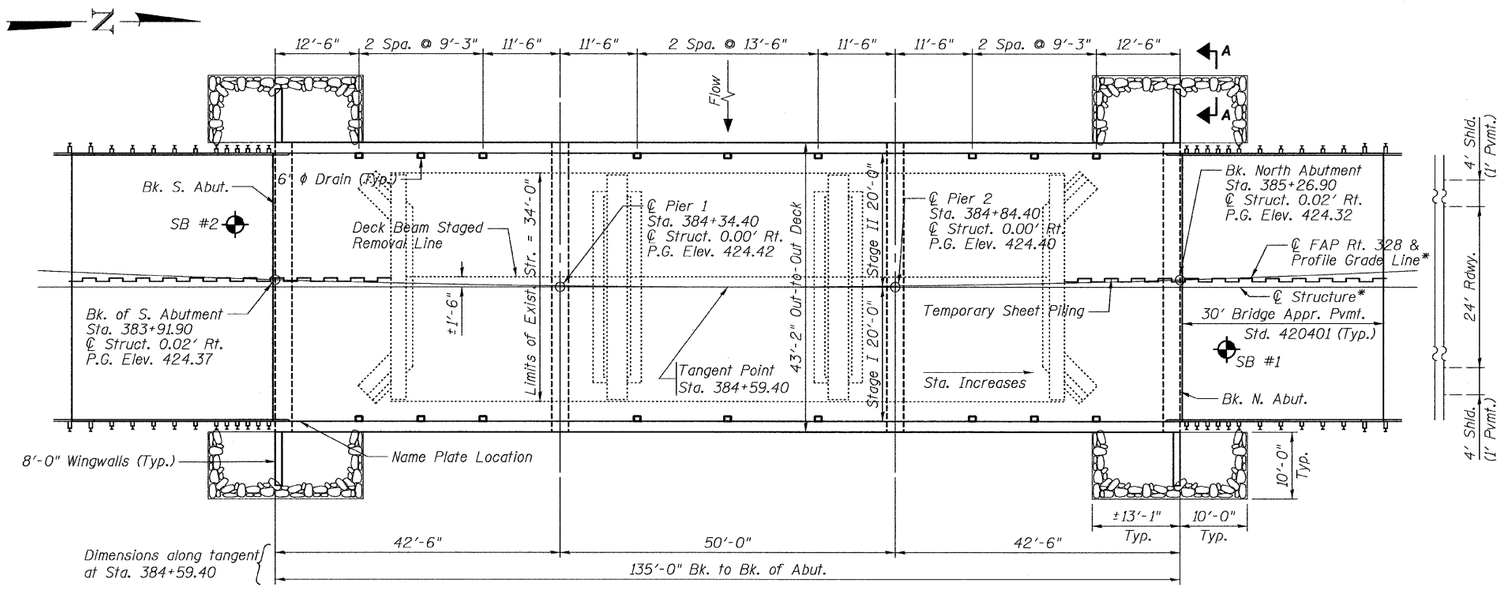


ELEVATION
(Along Tangent to Sta. 384+59.40)

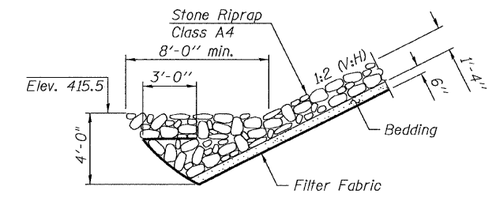


SECTION A-A

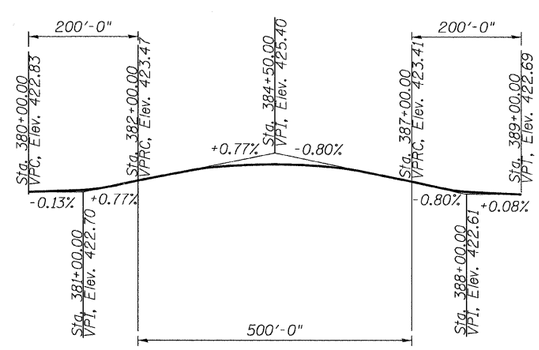
SHEET INDEX



PLAN



STONE RIPRAP ANCHOR DETAIL



PROFILE GRADE

* Bridge to be constructed on ℄ Structure, tangent to ℄ Roadway at Sta. 384+59.40

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	S. Abutment	Pier 1	Pier 2	N. Abutment
	417.3	396.0	395.8	417.4

WATERWAY INFORMATION

Drainage Area = 15.85 sq. mi. Proposed Low Grade Elev. = 422.69 @ Sta. 389+00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
Design	50	3809	513	631	418.9	1.6	1.1	420.5	420.0
Base	100	4449	531	655	419.1	2.7	1.3	421.8	420.4
Overtopping (Existing)	500	6016	584		419.7	3.0		422.7	
Max. Calc.	500	6016	584	729	419.7	3.0	2.3	422.7	422.0

BENTON & ASSOCIATES, INC.

DESIGNED	MBH
CHECKED	NRF
DRAWN	MBH
CHECKED	NRF

CURVE DATA

P.I. STA. 388+08.00
D = 0° 02' 30"
R = 137,509.26'
L = 1,000'
T = 500'
E = 0.91'
P.C. STA. 383+08.00
P.T. STA. 393+08.00

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = .09
Site Coefficient (S) = 1.0

LOADING HS20-44

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

DESIGN SPECIFICATIONS

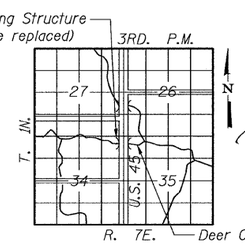
2002 AASHTO Standard Specifications - 17th ed.

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (reinf.)
fy = 50,000 psi (M270 Grade 50)

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



LOCATION SKETCH

REGINALD H. BENTON
081-004623
LICENSED STRUCTURAL ENGINEER
OF
JACKSONVILLE
ILLINOIS
11/28/07
Exp 11/30/08

BENTON & ASSOCIATES INC

BENTON & ASSOCIATES, INC.
Consulting Engineers / Land Surveyors
1970 West Lafayette Ave. Jacksonville, IL 62650
Phone: 217-245-4146 Fax: 217-245-4149
IL Design Firm Registration No. 184-000852

PLAN AND ELEVATION
US 45 / DEER CREEK
F.A.P. RT. 328
SEC. (10BR-2)B-1
WAYNE COUNTY
STA. 384+59.40
SN. 096-0068