

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

**PROPOSED**  
**HIGHWAY PLANS**

**FAP ROUTE 320 (IL 121)**  
**D7 BRIDGE REPAIRS 2011-3**

**JOINT & BEARING REPLACEMENT**  
**MACON COUNTY**

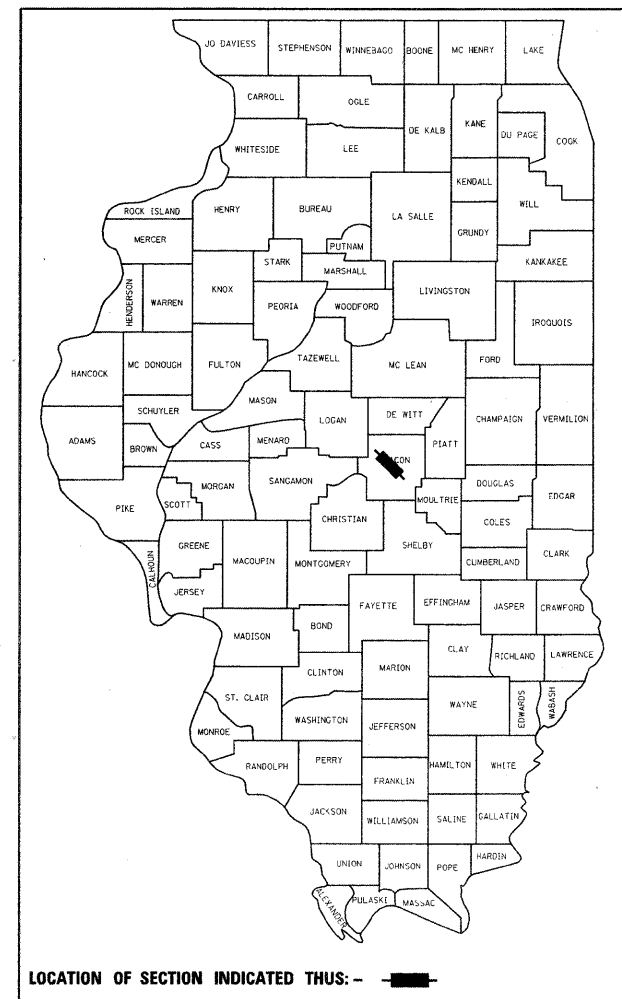
C-97-142-10

FOR INDEX OF SHEETS, SEE SHEET NO. 2

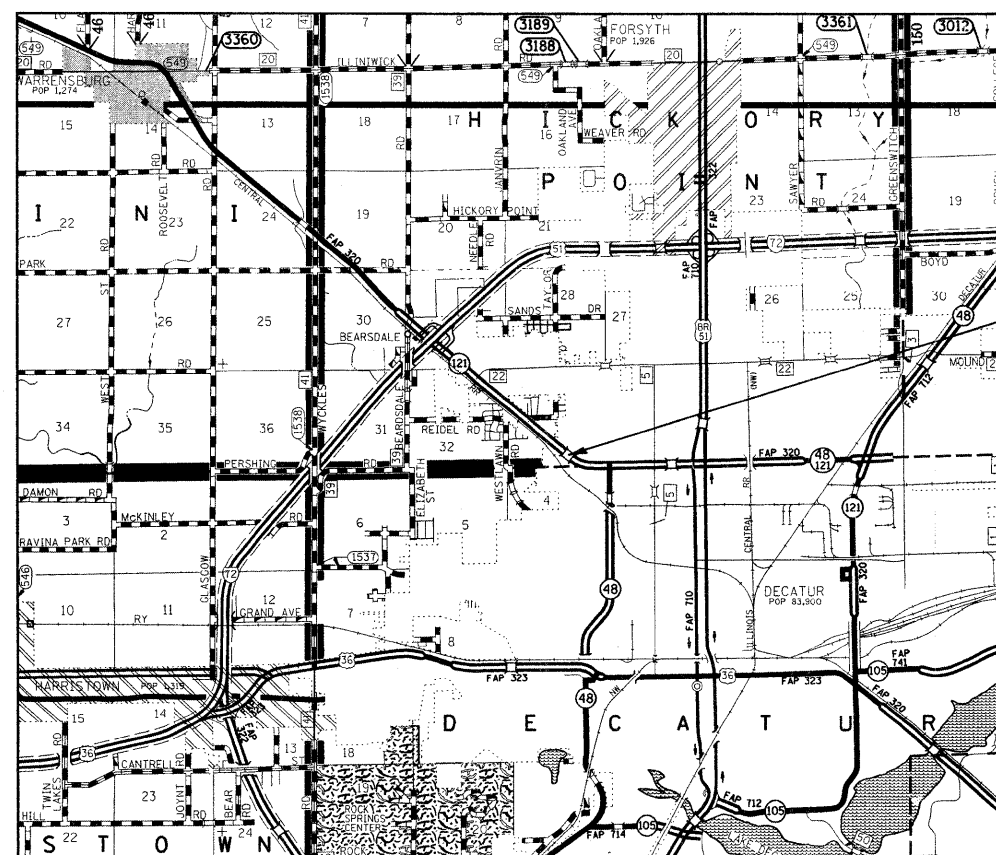
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
320	.	Macon	32	1
		ILLINOIS	CONTRACT NO. 74491	

\*D7 Bridge Repairs 2011-3

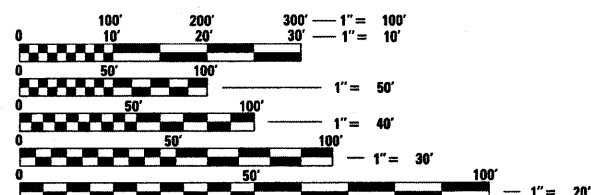
D-97-074-10



LOCATION OF SECTION INDICATED THUS: — ■ —



PROJECT LOCATION



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  
 OR 811

PROJECT ENGINEER: MARK DAUGHERTY  
 PROJECT MANAGER: BRIAN LEWIS

CONTRACT NO. 74491

GROSS LENGTH = 308 FT. = 0.06 MILE  
 NET LENGTH = 308 FT. = 0.06 MILE

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS

SUBMITTED 2-24 2011  
Brian Lewis  
 DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

March 25 2011  
Scott E. Stitt, P.E.  
 ENGINEER OF DESIGN AND ENVIRONMENT

March 25 2011  
Christine M. Reed  
 DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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**OF THE STATE OF ILLINOIS**

**GENERAL NOTES**

THIS SECTION SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PLANS, THE "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", ADOPTED JANUARY 1, 2007; THE "SUPPLEMENTAL SPECIFICATIONS AND RECURRING SPECIAL PROVISIONS" INDICATED ON THE CHECK SHEET, AND "THE SPECIAL PROVISIONS" INCLUDED IN THE PROPOSAL.

THE WORK INCLUDED IN THIS SECTION CONSISTS OF BEARING AND JOINT REPLACEMENT AND OTHER WORK NECESSARY TO COMPLETE THE PROJECT. MEDIAN REMOVAL AND REPLACEMENT IS SHOWN IN TWO STAGES. THE CONTRACTOR MAY ELECT TO PERFORM ALL MEDIAN REMOVAL AND REPLACEMENT BEFORE BEGINNING STAGE 1 CONSTRUCTION.

WET REFLECTIVE TEMPORARY TAPE SHALL BE USED DURING STAGE 1 & 2. PAINT PAVEMENT MARKINGS SHALL BE APPLIED TO THE WESTBOUND LANES BEFORE RESTORING TRAFFIC TO THE NORMAL PATTERN AFTER STAGE 2 IS COMPLETE. PAINT PAVEMENT MARKINGS SHALL BE APPLIED TO THE EASTBOUND LANES IMMEDIATELY THEREAFTER.

THE REFLECTIVE LENS OF ALL RAISED REFLECTIVE PAVEMENT MARKERS IN CONFLICT WITH THE STAGE TRAFFIC CONTROL SHALL BE REMOVED PRIOR TO STAGE 1 CONSTRUCTION. THIS WORK WILL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR RAISED REFLECTIVE PAVEMENT MARKERS, REFLECTOR REMOVAL.

REMOVAL OF THE 4" THICK MEDIAN SURFACE WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE FOOT FOR CONCRETE MEDIAN SURFACE REMOVAL. THIS ITEM SHALL BE CONSTRUCTED ACCORDING TO SECTION 440 OF THE STANDARD SPECIFICATIONS.

MATERIAL EXCAVATED FROM MEDIAN SHALL BE STOCKPILED AND REPLACED AT COMPLETION OF STAGE CONSTRUCTION WORK. COST OF EXCAVATION, STOCKPILING, AND REPLACEMENT OF EXCAVATED MATERIAL SHALL BE INCLUDED IN THE UNIT PRICE FOR PCC BASE COURSE.

THE UNIT PRICE FOR PCC BASE COURSE SHALL INCLUDE THE COST OF REMOVAL OF THAT ITEM AFTER THE COMPLETION OF STAGE 2.

THE UNIT PRICE FOR COMBINATION CONCRETE CURB & GUTTER TYPE B9.24 SHALL INCLUDE TWO 25 FOOT LONG TRANSITIONS TO TYPE B6.24 CURB & GUTTER.

FIELD MARKINGS OF UNDERGROUND UTILITIES IN CRITICAL AREAS MAY BE OBTAINED BY PROVIDING A MINIMUM OF 96 HOURS ADVANCE NOTICE THROUGH THE J.U.L.I.E. SYSTEM BY CALLING 800-892-0123.

**INDEX OF SHEETS**

SHEET NO	TITLE
1	COVER SHEET
2	GENERAL NOTES, INDEX OF SHEETS
3	SUMMARY OF QUANTITIES
4-7	TYPICAL SECTIONS
8	SCHEDULES
9-15	STAGE 1 STAGING DETAILS
16-22	STAGE 2 STAGING DETAILS
23-32	STRUCTURAL SHEETS

THE FOLLOWING STANDARDS ARE A PART OF THESE PLANS AND ARE INCLUDED FOLLOWING THE LAST NUMBERED SHEET OF THE PLANS.

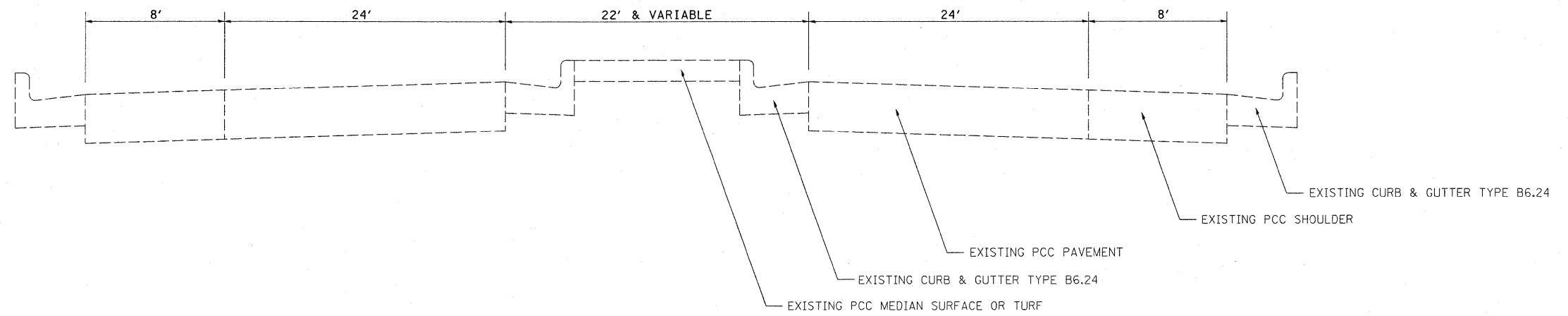
000001-06	STANDARD SYMBOLS, ABBREVIATIONS, AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
606001-04	CONCRETE CURB TYPE B AND COMBINATION CONCRETE CURB AND GUTTER
606301-04	PC CONCRETE ISLANDS AND MEDIANS
701101-02	OFF-ROAD OPERATIONS, MULTILANE, 15' TO 24" FROM PAVEMENT EDGE
701426-04	LANE CLOSURE, MULTILANE, INTERMITTENT OR MOVING OPERATION, FOR SPEEDS >= 45 MPH
701606-07	URBAN LANE CLOSURE, MULTILANE, 2W WITH MOUNTABLE MEDIAN
701801-04	LANE CLOSURE, MULTILANE, 1W OR 2W, CROSSWALK OR SIDEWALK CLOSURE
701901-01	TRAFFIC CONTROL DEVICES
780001-02	TYPICAL PAVEMENT MARKINGS

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	4491-shr-gennote.dgn	DRAWN -	REVISED -			Macon	32	2		
	PLOT SCALE = 50.0000 1/1 IN.	CHECKED -	REVISED -			CONTRACT NO. 74491				
	PLOT DATE = 2/24/2011	DATE -	REVISED -			ILLINOIS FED. AID PROJECT				
SCALE: SHEET NO. OF SHEETS STA. TO STA.						*D7 Bridge Repairs 2011-3				

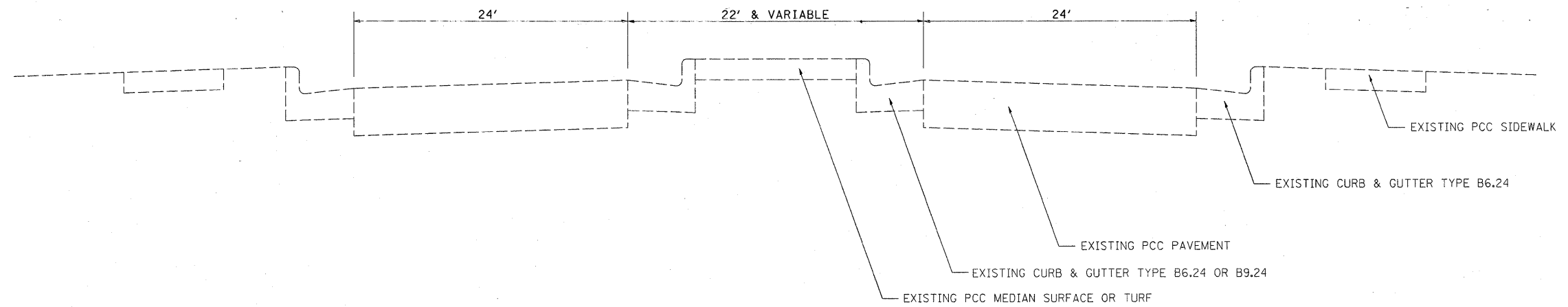
SUMMARY OF QUANTITIES			TOTAL QUANTITIES	CONSTRUCTION TYPE CODE		
CODE NO	ITEM	UNIT		100% STATE 0014		
25100630	EROSION CONTROL BLANKET	SQ YD	1207	1207		
35300400	PORTLAND CEMENT CONCRETE BASE COURSE 9"	SQ YD	1889	1889		
44000500	COMBINATION CURB AND GUTTER REMOVAL	FOOT	2267	2267		
50102400	CONCRETE REMOVAL	CU YD	88	88		
50300255	CONCRETE SUPERSTRUCTURE	CU YD	88	88		
50300300	PROTECTIVE COAT	SQ YD	152	152		
50500405	FURNISHING AND ERECTING STRUCTURAL STEEL	POUND	4150	4150		
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	7120	7120		
52000110	PREFORMED JOINT STRIP SEAL	FOOT	308	308		
52100010	ELASTOMERIC BEARING ASSEMBLY, TYPE I	EACH	10	10		
52100020	ELASTOMERIC BEARING ASSEMBLY, TYPE II	EACH	10	10		
52100520	ANCHOR BOLTS, 1"	EACH	40	40		
60605100	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-6.24 (ABUTTING EXISTING PAVEMENT)	FOOT	1862	1862		
60607500	COMBINATION CONCRETE CURB AND GUTTER, TYPE B-9.24 (ABUTTING EXISTING PAVEMENT)	FOOT	403	403		
60618300	CONCRETE MEDIAN SURFACE, 4 INCH	SQ FT	2418	2418		
67000500	ENGINEER'S FIELD OFFICE, TYPE B	CAL MO	3	3		
67100100	MOBILIZATION	L SUM	1	1		
70102625	TRAFFIC CONTROL AND PROTECTION, STANDARD 701606	L SUM	1	1		
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	10	10		
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	4711	4711		
*78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	4406	4406		
*78001130	PAINT PAVEMENT MARKING - LINE 6"	FOOT	504	504		
*78100300	REPLACEMENT REFLECTOR	EACH	95	95		
78300100	PAVEMENT MARKING REMOVAL	SQ FT	1849	1849		
X0325299	INLET MODIFICATION	EACH	2	2		
*X2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.25	0.25		
X4402020	CONCRETE MEDIAN SURFACE REMOVAL	SQ FT	2418	2418		
X7030030	WET REFLECTIVE TEMPORARY TAPE TYPE III, 4 INCH	FOOT	13316	13316		
X7030055	WET REFLECTIVE TEMPORARY TAPE TYPE III, 24 INCH	FOOT	35	35		
*X7830050	RAISED REFLECTIVE PAVEMENT MARKER, REFLECTOR REMOVAL	EACH	95	95		
Z0001899	JACK AND REMOVE EXISTING BEARINGS	EACH	20	20		

\*SPECIALTY ITEM

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	PLOT DATE = 2/24/2011	DATE -	REVISED -			SCALE:	SHEET NO.	OF	SHEETS	STA.	TO STA.



STA 986+00 TO STA 993+00



STA 998+75 TO STA 1005+60

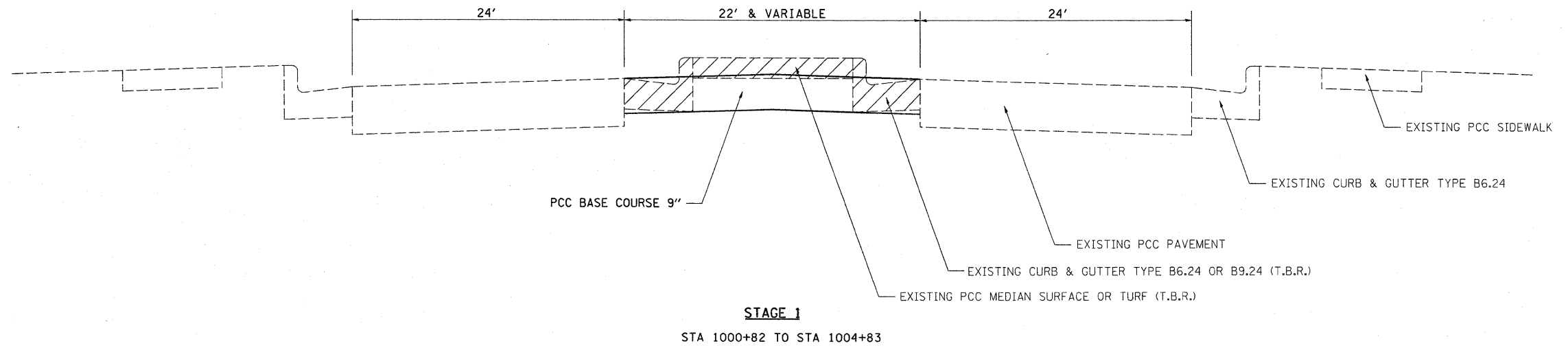
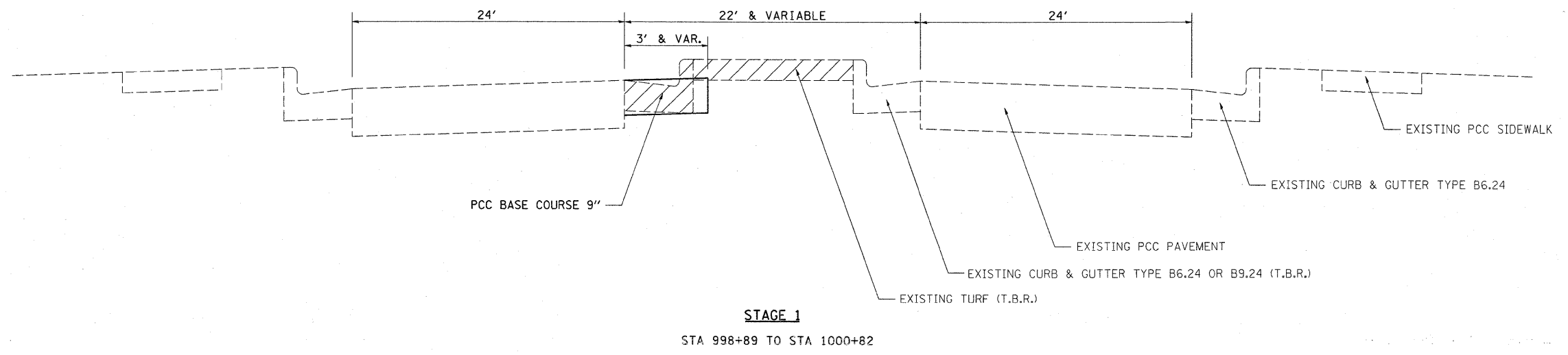
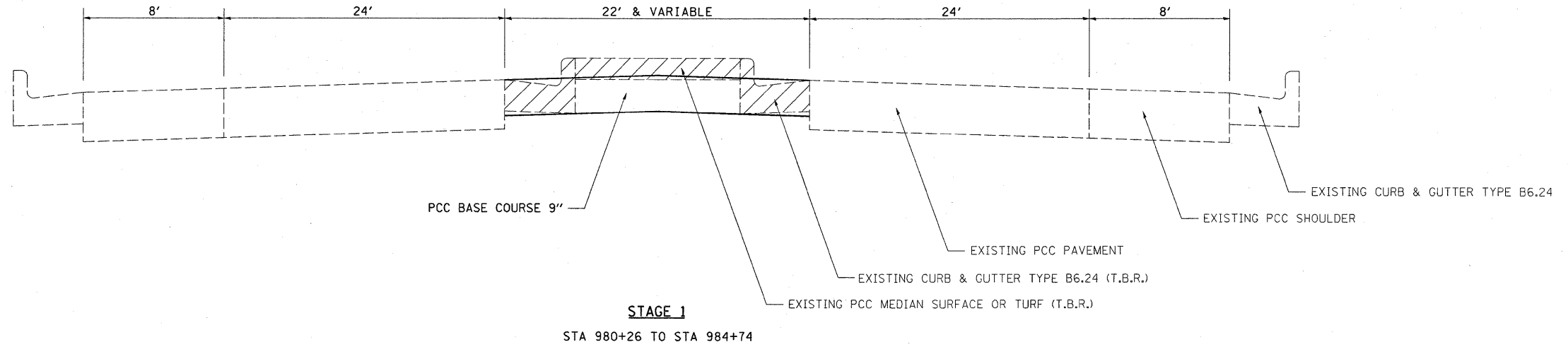
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PLOT DATE = 2/24/2011	DATE -	REVISED -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**EXISTING TYPICALS**

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
320	•	Macon	32	4
ILLINOIS FED. AID PROJECT			CONTRACT NO. 74491	



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DATE -

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REVISED -

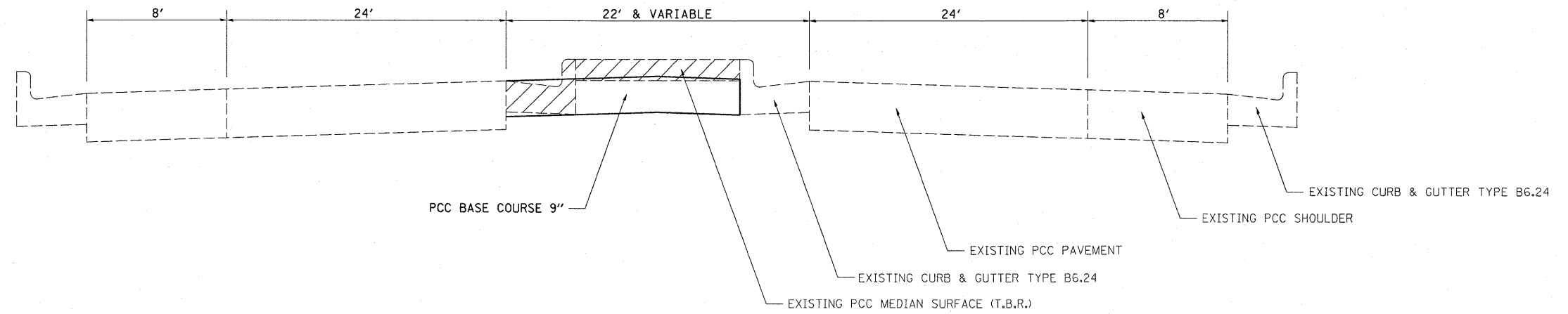
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**STAGE 1 TYPICALS**

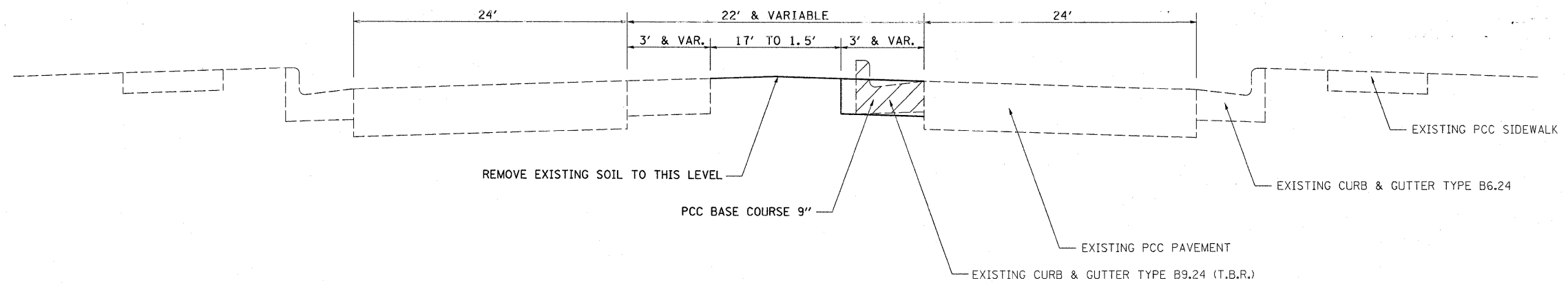
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F.A.P. RTE. 320	SECTION •	COUNTY Macon	TOTAL SHEETS 32	SHEET NO. 5
CONTRACT NO. 74491				

ILLINOIS FED. AID PROJECT



**STAGE 2**  
STA 978+40 TO STA 979+74



**STAGE 2**  
STA 998+60 TO STA 1000+82

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DRAWN -

REVISED -  
REVISED -

PLOT SCALE = 50.0000' / IN.

CHECKED -

REVISED -

PLOT DATE = 2/24/2011

DATE -

REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

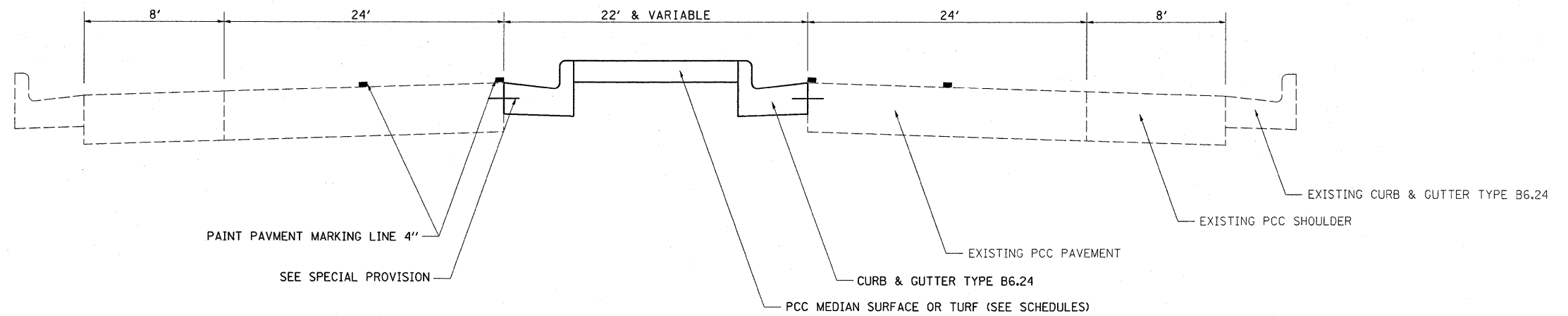
**STAGE 2 TYPICALS**

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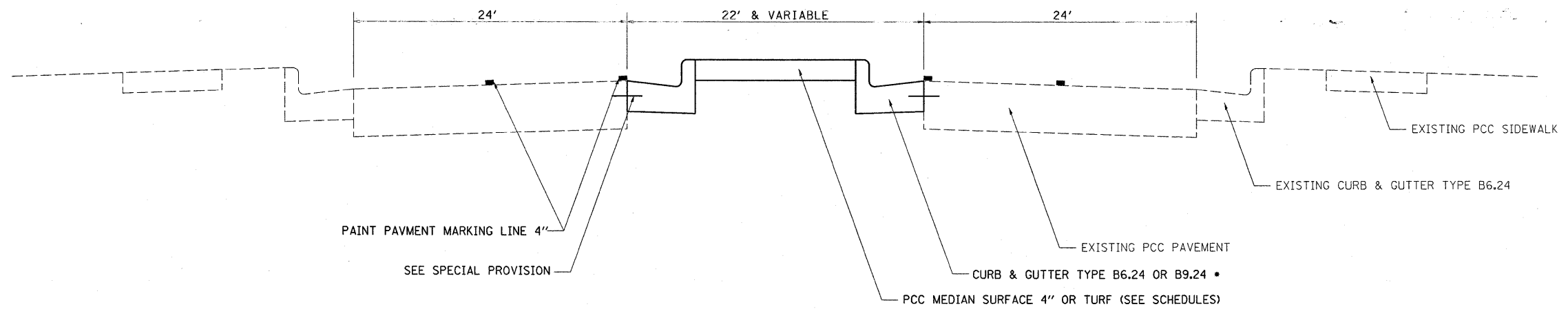
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
320		Macon	32	6

CONTRACT NO. 74491

ILLINOIS FED. AID PROJECT



STA 980+26 TO STA 984+74



STA 998+60 TO STA 1004+83

• TRANSITION B9.24 TO B6.24  
STA 1000+51 TO STA 1000+76

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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**FINAL PROPOSED TYPICALS**

SCALE:	SHEET NO.	OF	SHEETS	STA.	TO STA.
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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
320	•	Macon	32	7
ILLINOIS FED. AID PROJECT			CONTRACT NO. 74491	

**STAGE 1**

COMBINATION CURB & GUTTER REMOVAL	
STA 980+26 TO 984+74	900 FOOT
LT STA 998+89 TO LT 1002+48	595 FOOT
RT STA 1000+82 TO LT 1004+83	401 FOOT
TOTAL	1896 FOOT

CONCRETE MEDIAN SURFACE REMOVAL	
STA 980+29 TO 981+65	804 SQ FT
STA 983+61 TO 984+71	549 SQ FT
STA 1003+71 TO 1004+80	546 SQ FT
TOTAL	1899 SQ FT

INLET MODIFICATION	
STA 984+69	1 EACH
TOTAL	1 EACH

PCC BASE COURSE 9"	
STA 980+26 TO 984+74	703 S. Y.
STA 998+64 TO 1004+83	920 S. Y.
TOTAL	1623 S. Y.

**STAGE 2**

COMBINATION CURB & GUTTER REMOVAL	
LT STA 978+40 TO 979+74	146 FOOT
RT STA 998+60 TO 1000+82	222 FOOT
TOTAL	368 FOOT

CONCRETE MEDIAN SURFACE REMOVAL	
STA 978+64 TO 979+71	519 SQ FT
TOTAL	519 SQ FT

INLET MODIFICATION	
STA 979+69	1 EACH
TOTAL	1 EACH

PCC BASE COURSE 9"	
STA 978+33 TO 979+74	129 S. Y.
STA 998+60 TO 1000+82	137 S. Y.
TOTAL	266 S. Y.

**AFTER STAGE 2**

COMB. CONC. C&G TYPE B6.24 (ABUTTING EX. PAVT.)	
LT STA 978+40 TO 979+74	146 FOOT
STA 980+26 TO 984+74	900 FOOT
LT STA 1000+76 TO 1004+83	408 FOOT
RT STA 1000+76 TO 1004+83	408 FOOT
TOTAL	1862 FOOT

COMB. CONC. C&G TYPE B9.24 (ABUTTING EX. PAVT.)	
LT STA 998+89 TO 1000+76	187 FOOT
RT STA 998+60 TO 1000+76	216 FOOT
TOTAL	403 FOOT

NOTE: TRANSITION B9.24 TO B6.24 STA 1000+51 TO STA 1000+76  
SEE GENERAL NOTES

CONC. MEDIAN SURFACE 4"	
STA 978+64 TO 979+71	519 SQ FT
STA 980+29 TO 981+65	804 SQ FT
STA 983+61 TO 984+71	549 SQ FT
STA 1003+71 TO 1004+80	546 SQ FT
TOTAL	2418 SQ FT

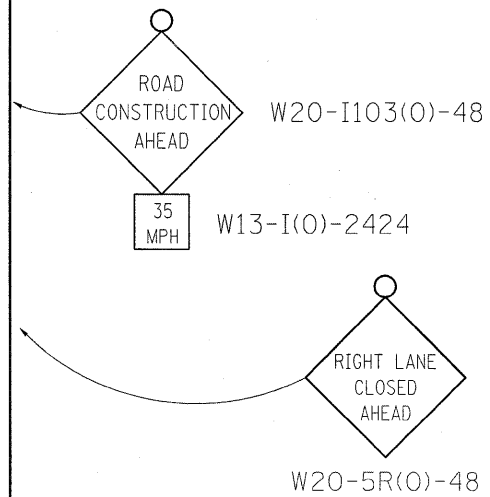
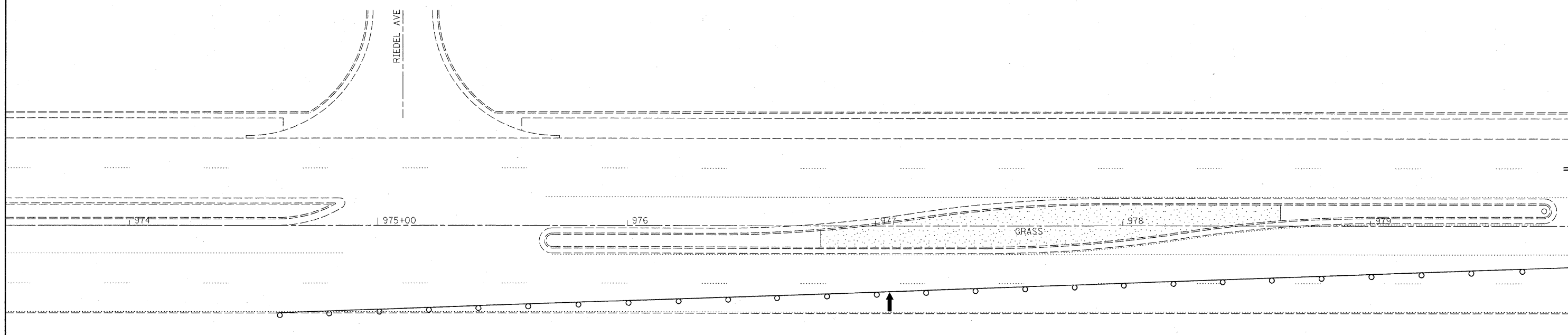
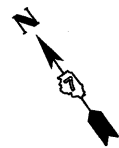
SEEDING, CLASS 2 (SPECIAL)	
STA 981+65 TO 983+61	0.06 ACRE
STA 998+63 TO 1003+71	0.19 ACRE
TOTAL	0.25 ACRE

EROSION CONTROL BLANKET	
STA 981+65 TO 983+61	299 SQ YD
STA 998+63 TO 1003+71	908 SQ YD
TOTAL	1207 SQ YD

PAVEMENT MARKING

SEQUENCE & LOCATION UNITS	PAVEMENT MARKING REMOVAL SQ FT	RAISED REFLECTIVE PAVEMENT MARKER, REFLECTOR REMOVAL EACH	WET REFLECTIVE TEMPORARY TAPE TYPE III, 4 INCH FOOT	WET REFLECTIVE TEMPORARY TAPE TYPE III, 24 INCH FOOT	PAINT PAVEMENT MARKING - LINE 4" FOOT	PAINT PAVEMENT MARKING - LINE 6" FOOT	REPLACEMENT REFLECTOR EACH	WORK ZONE PAVEMENT MARKING REMOVAL SQ FT
STAGE 1								
LINE BESIDE WB LTL STA 1005+93 TO 1008+35	121	7						
LINE BESIDE MEDIAN RT STA 977+75 TO 985+29	381							
LINE BESIDE MEDIAN RT STA 1002+67 TO 1004+82	72							
LINE BESIDE MEDIAN LT STA 982+37 TO 987+28	164							
LINE BESIDE MEDIAN LT STA 998+94 TO 1004+83	196							
SKIP DASHES BETWEEN EB LANES STA 974+60 TO 978+20	30	4						
SKIP DASHES BETWEEN WB LANES STA 979+75 TO 1011+30	263	41						
DOUBLE YELLOW BETWEEN LANES LT STA 979+77 TO 999+64				3974				
WHITE TAPER LINE STA 974+59 TO 987+26				1267				
YELLOW TAPER LINE STA 999+08 TO 1005+16				608				
YELLOW TAPER LINE STA 999+64 TO 1004+81				517				
AFTER STAGE 1								2325
WET REFLECTIVE TEMPORARY TAPE								
STAGE 2								
LINE BESIDE EB LTL STA 990+47 TO 993+09	131	8						
LINE BESIDE MEDIAN RT STA 998+75 TO 1002+67	130							
LINE BESIDE MEDIAN LT STA 978+32 TO 982+37	135							
SKIP DASHES BETWEEN EB LANES STA 978+20 TO 1005+30	226	35						
DOUBLE YELLOW BETWEEN LANES STA 985+27 TO 1005+29				4004				
YELLOW TAPER LINE STA 975+70 TO 985+27				957				
YELLOW TAPER LINE STA 978+32 TO 985+27				695				
WHITE TAPER LINE STA 998+75 TO 1011+29				1254				
STOP BAR STA 993+35 TO 993+70						35		
YELLOW "CAT TRACKS" STA 993+70 TO 993+90				40				
AFTER STAGE 2								2386
WET REFLECTIVE TEMPORARY TAPE								
FINAL								
YELLOW LINE BESIDE MEDIAN RT STA 977+75 TO 985+29					754			
YELLOW LINE BESIDE MEDIAN RT STA 998+75 TO 1004+82					607			
YELLOW LINE BESIDE MEDIAN LT STA 978+32 TO 987+32					900			
YELLOW LINE BESIDE MEDIAN LT STA 998+94 TO 1004+83					589			
SOLID WHITE BESIDE LTL STA 990+47 TO 993+09							262	8
SOLID WHITE BESIDE LTL STA 1005+93 TO 1008+35							242	7
WHITE SKIP DASHES BETWEEN EB LANES STA 974+60 TO 1005+30					767			39
WHITE SKIP DASHES BETWEEN WB LANES STA 979+75 TO 1011+30					789			41
TOTALS	1849	95	13316	35	4406	504	95	4711





"50 MPH"  
COVER SIGN  
DURING CONSTRUCTION

➔ ARROW BOARD

○ LIGHTED BARRELS AT  
20' C-C AND  
4" WET REFLECTIVE TAPE

SEE STD. 701606  
FOR DETAILS NOT SHOWN.  
WORKERS OR FLAGGER  
SIGN NOT REQUIRED.

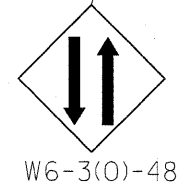
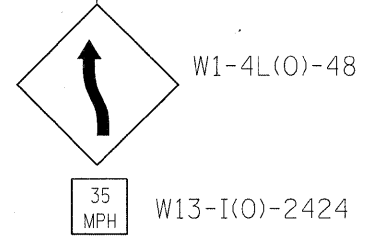
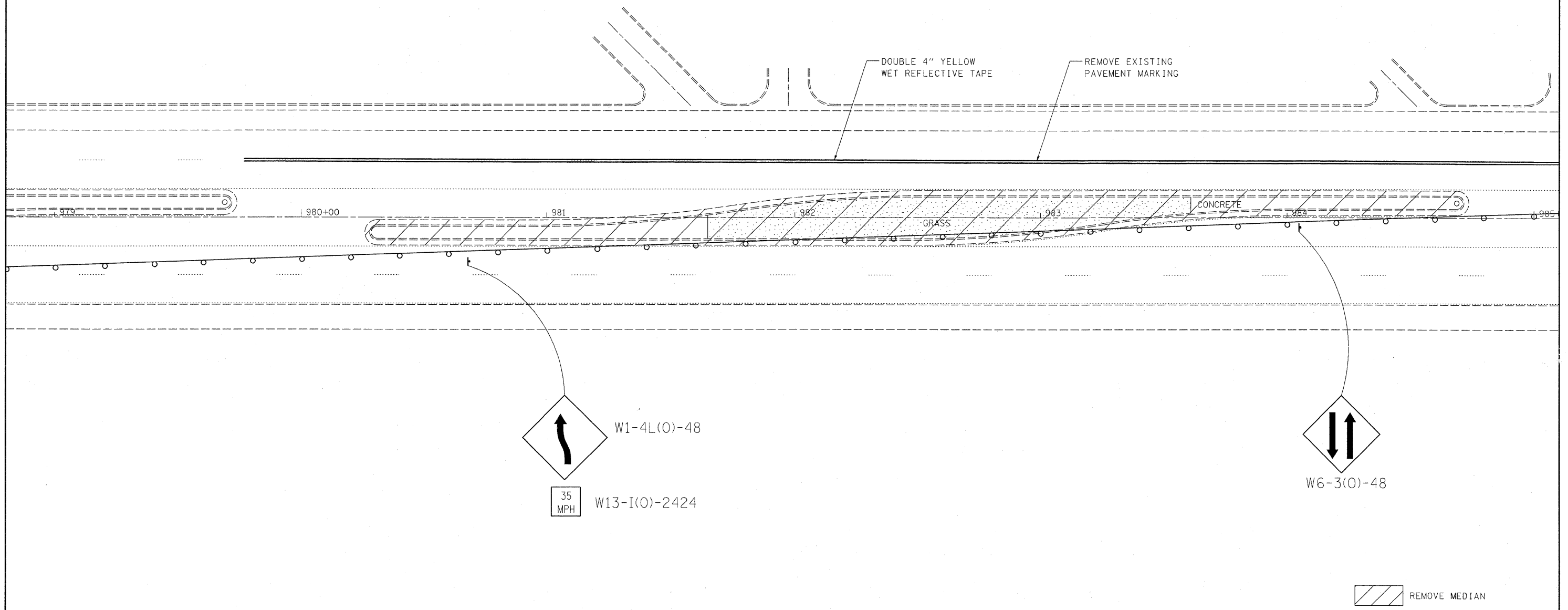
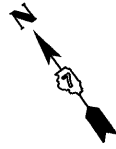
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	PLOT DATE = 2/24/2011	CHECKED -	REVISED -
		DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**STAGE 1 CONSTRUCTION**

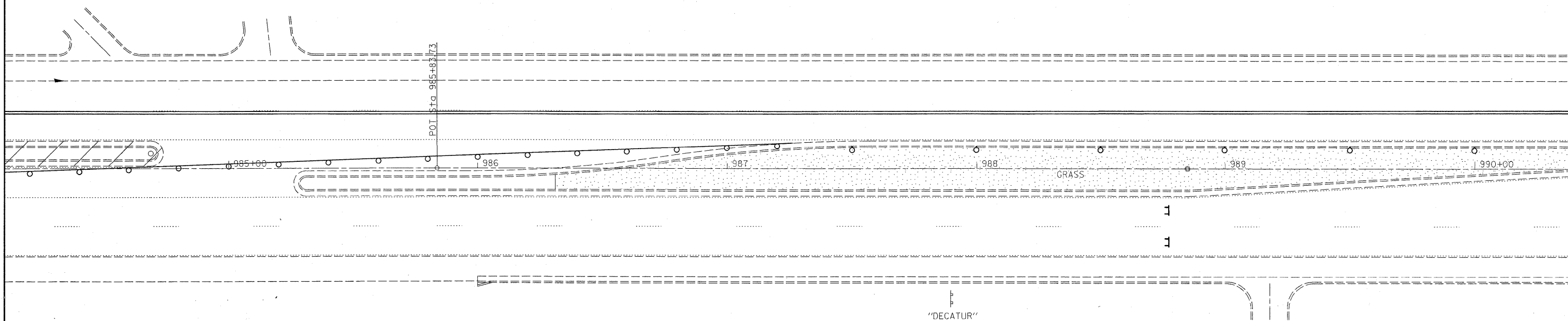
F.A.P. RTE. 320	SECTION •	COUNTY Macon	TOTAL SHEETS 32	SHEET NO. 9
CONTRACT NO. 74491				

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



REMOVE MEDIAN

FILE NAME = c:\pw\work\pwidot\teasleyok\d0209576\07	USER NAME = teasleyok	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>STAGE 1 CONSTRUCTION</b>				F.A.P. RTE. 320	SECTION •	COUNTY Macon	TOTAL SHEETS 32	SHEET NO. 10
	PLOT SCALE = 20.0000' / IN.	CHECKED -	REVISED -						ILLINOIS FEDERAL PROJECT				
	PLOT DATE = 2/24/2011	DATE -	REVISED -		SCALE:	SHEET NO.	OF SHEETS	STA.	TO STA.	CONTRACT NO. 74491			



- 1 TYPE III BARRICADE
- BARREL WITH LIGHT

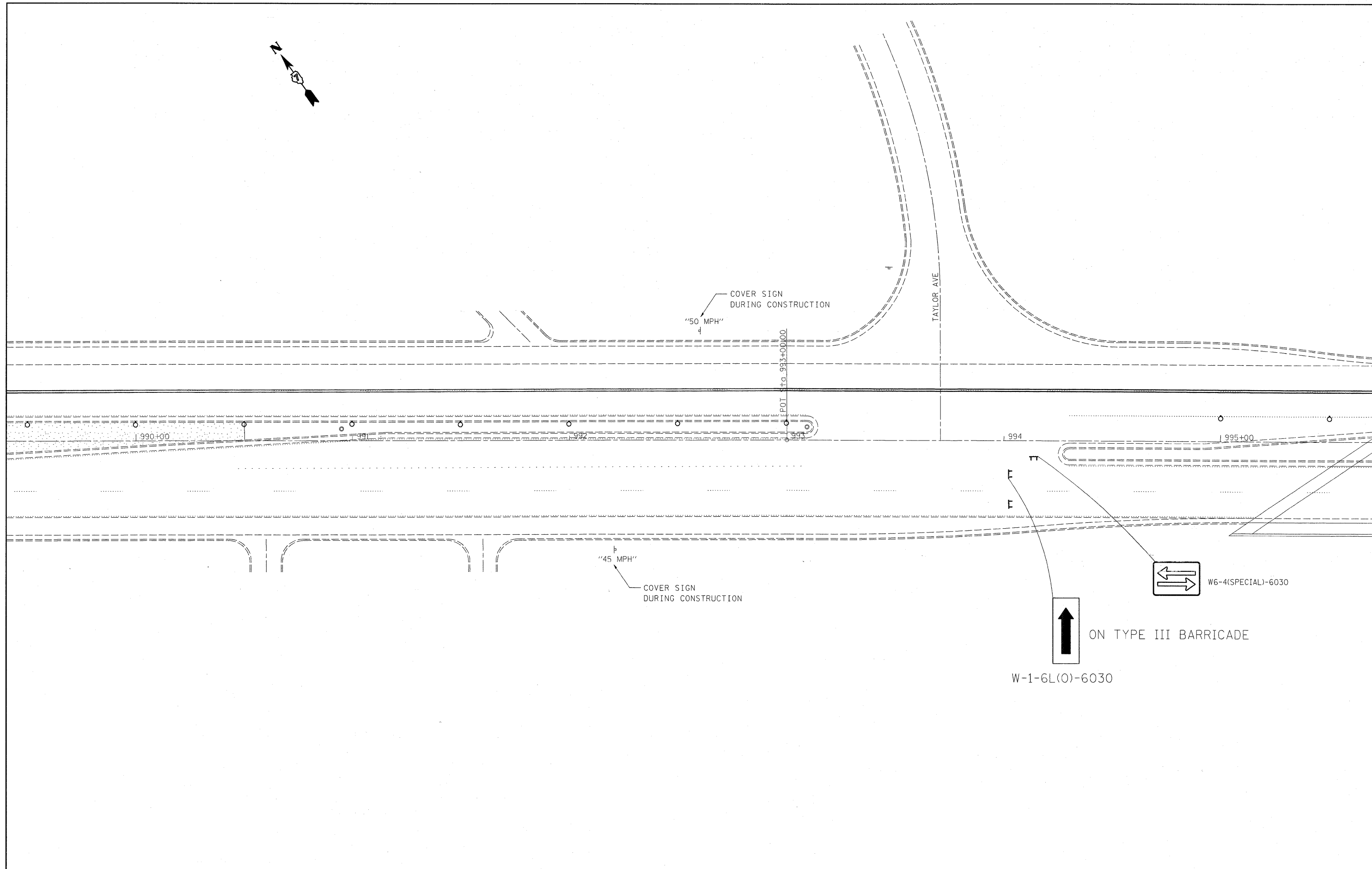
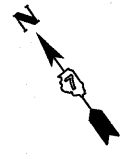
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**STAGE 1 CONSTRUCTION**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
320		Macon	32	11
CONTRACT NO. 74491				

SCALE: SHEET NO. OF SHEETS STA. TO STA. ILLINOIS FED. AID PROJECT

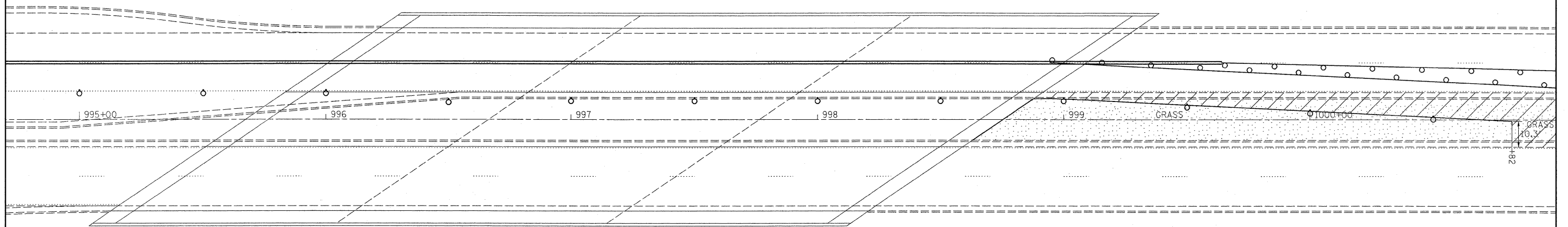
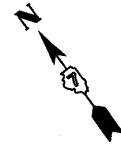


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		DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

STAGE 1 CONSTRUCTION				
SCALE:	SHEET NO.	OF SHEETS	STA.	TO STA.

F.A.P. RTE. 320	SECTION •	COUNTY Macon	TOTAL SHEETS 32	SHEET NO. 12
CONTRACT NO. 74491				



 REMOVE MEDIAN

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USER NAME = teasleyck  
4491-sht-staging.dgn

DESIGNED -  
DRAWN -

REVISED -  
REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**STAGE 1 CONSTRUCTION**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
320	*	Macon	32	13

PLOT SCALE = 20.0000' / IN.  
PLOT DATE = 2/24/2011

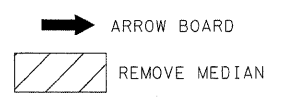
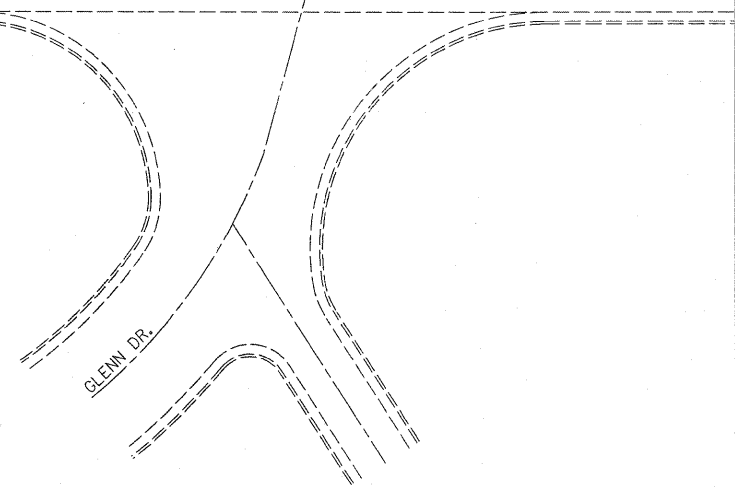
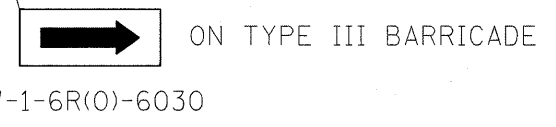
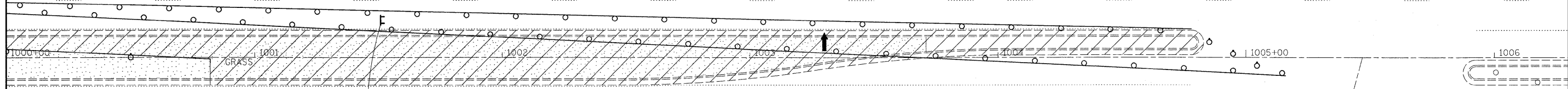
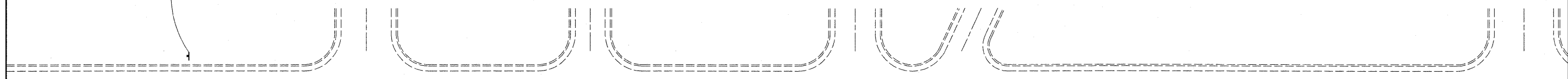
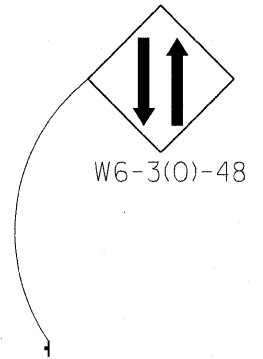
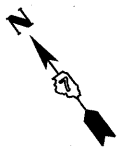
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DATE -

REVISED -  
REVISED -

**CONTRACT NO. 74491**

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

ILLINOIS FED. AID PROJECT



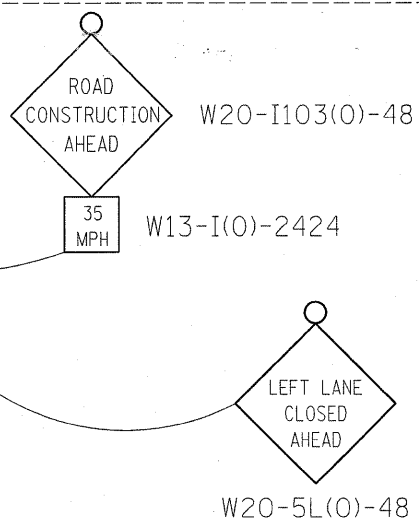
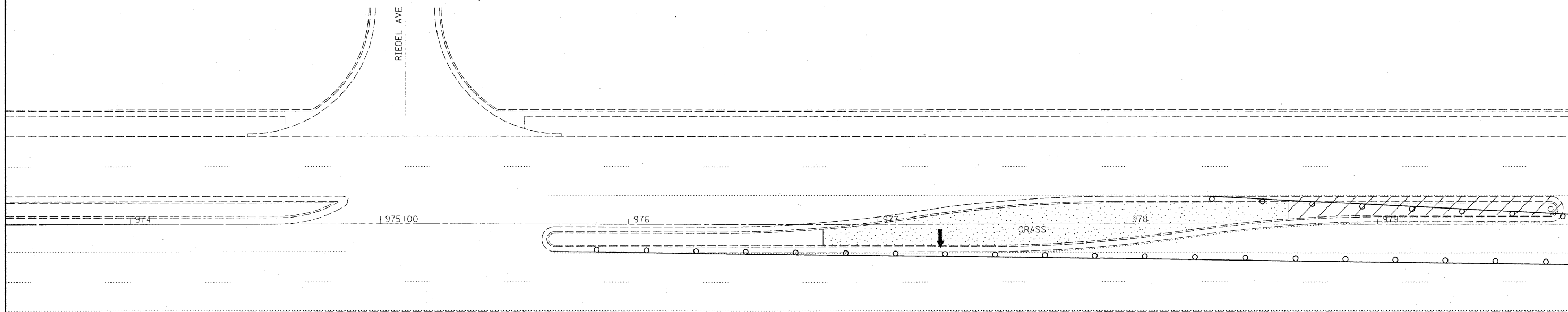
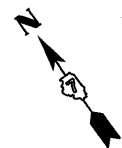
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	PLOT DATE = 2/24/2011	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

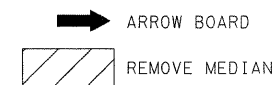
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SCALE:	SHEET NO.	OF SHEETS	STA.	TO STA.

F.A.P. RTE. 320	SECTION •	COUNTY Macon	TOTAL SHEETS 32	SHEET NO. 14
CONTRACT NO. 74491				





"50 MPH"  
COVER SIGN  
DURING CONSTRUCTION



SEE STD. 701606  
FOR DETAILS NOT SHOWN.  
WORKERS OR FLAGGER  
SIGN NOT REQUIRED.

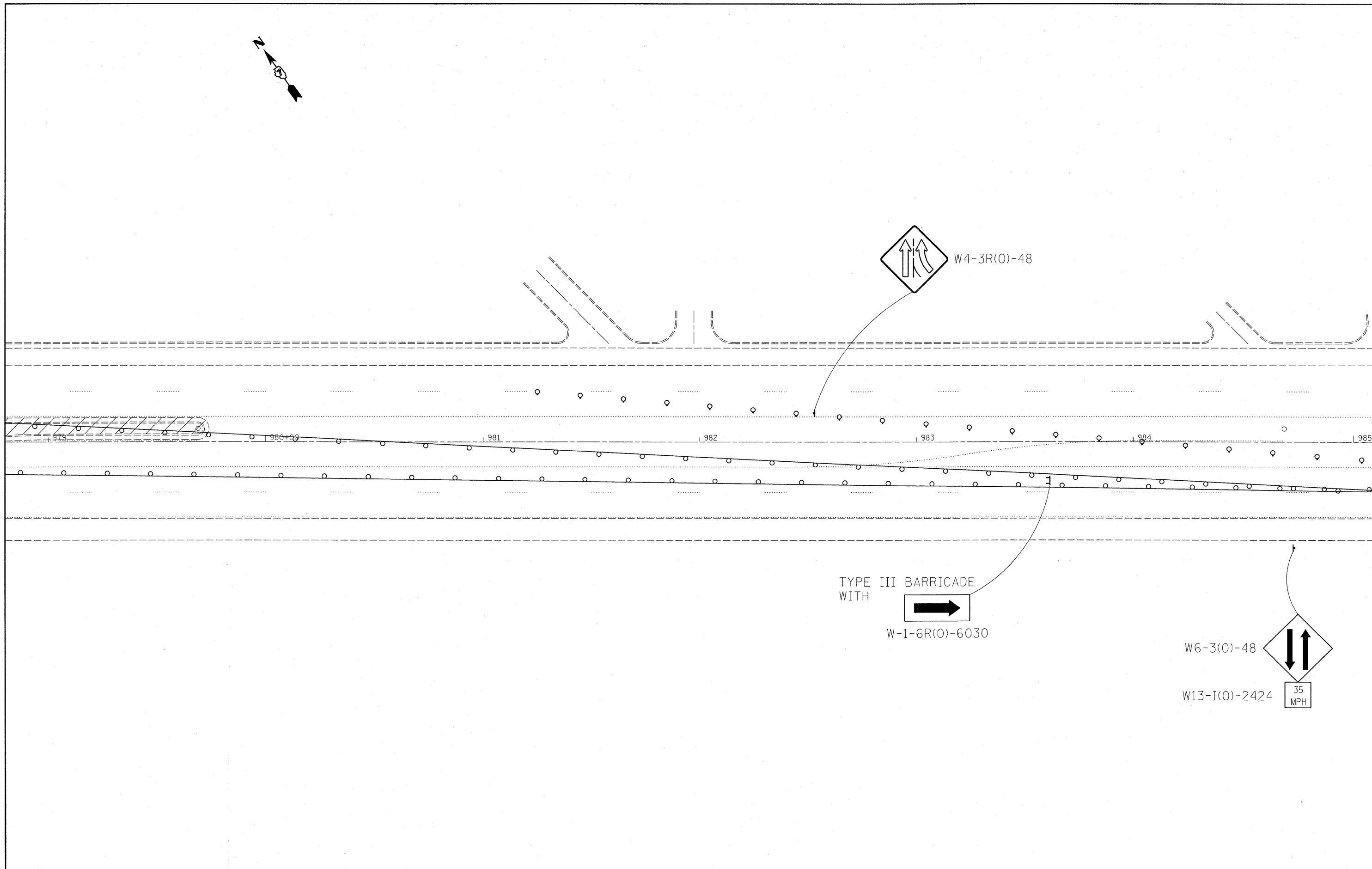
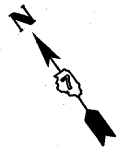
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PLOT DATE = 2/24/2011	DATE -	REVISED -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

STAGE 2 CONSTRUCTION				
SCALE:	SHEET NO.	OF SHEETS	STA.	TO STA.

F.A.P. RTE. 320	SECTION •	COUNTY Macon	TOTAL SHEETS 32	SHEET NO. 16
CONTRACT NO. 74491				
ILLINOIS FED. AID PROJECT				



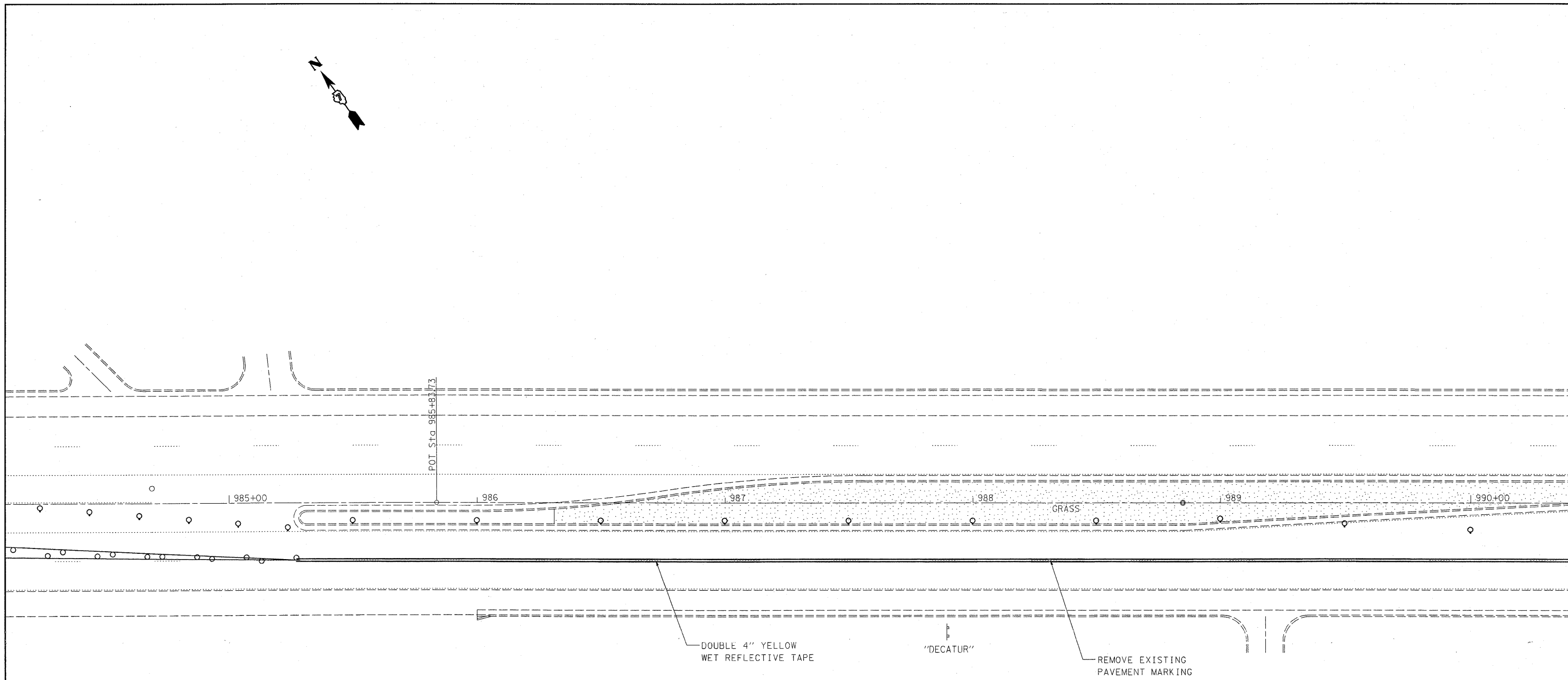
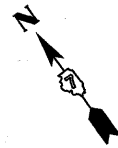


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	PLOT DATE = 2/24/2011	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

STAGE 2 CONSTRUCTION				
SCALE:	SHEET NO.	OF SHEETS	STA.	TO STA.

F.A.P. RTE. 320	SECTION •	COUNTY Macon	TOTAL SHEETS 32	SHEET NO. 17
CONTRACT NO. 74491				

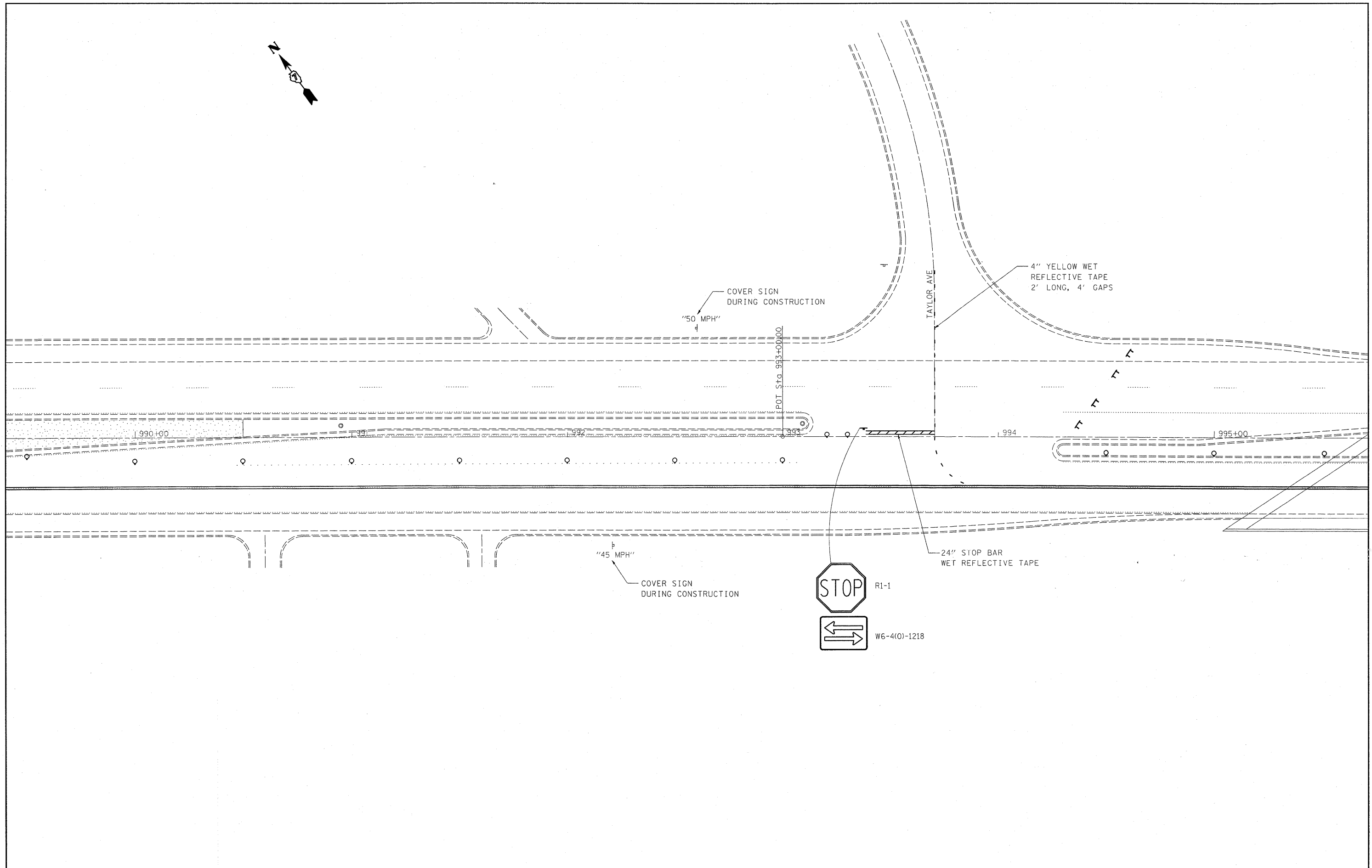
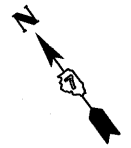


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		DATE -	REVISED -

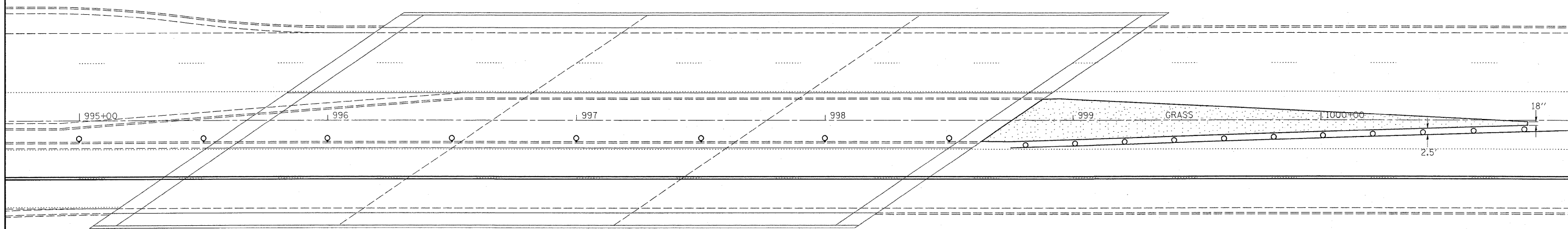
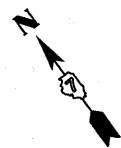
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

STAGE 2 CONSTRUCTION				
SCALE:	SHEET NO.	OF SHEETS	STA.	TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
320	•	Macon	32	18
ILLINOIS FED. AID PROJECT				
CONTRACT NO. 74491				



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DESIGNED -  
DRAWN -

REVISED -  
REVISED -

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PLOT DATE = 2/24/2011

CHECKED -  
DATE -

REVISED -  
REVISED -

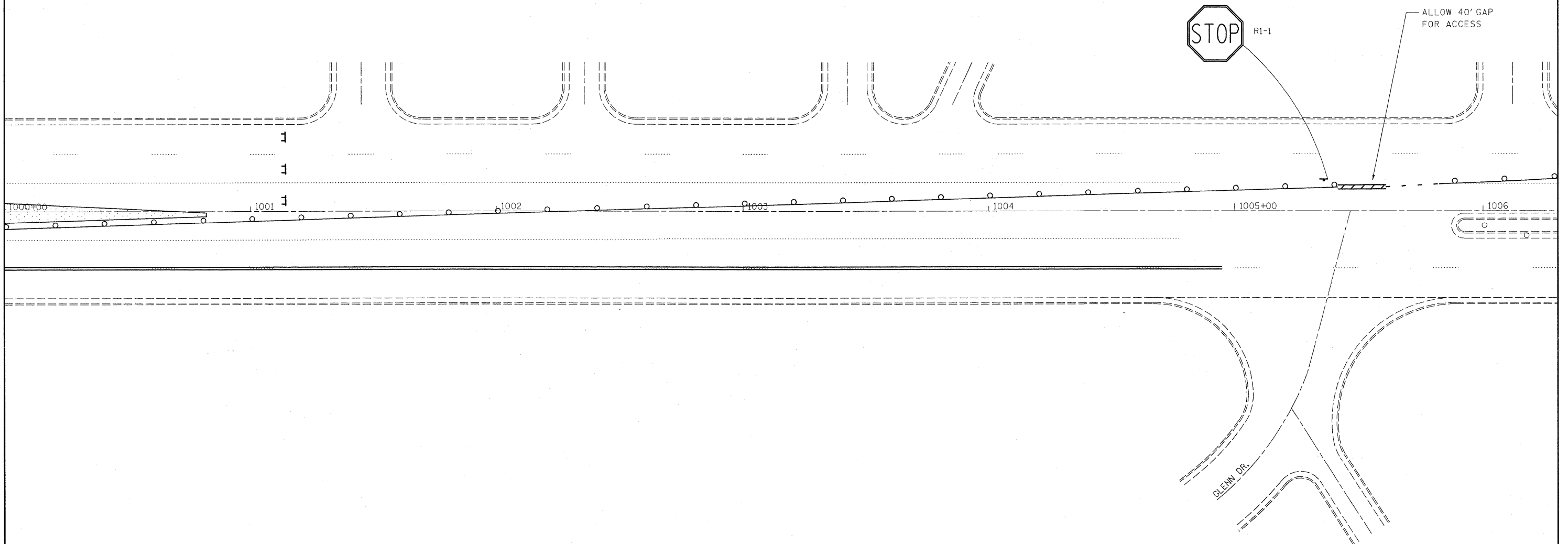
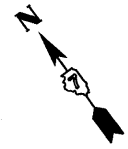
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**STAGE 2 CONSTRUCTION**

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

F.A.P. RTE. 320	SECTION •	COUNTY Macon	TOTAL SHEETS 32	SHEET NO. 20
CONTRACT NO. 74491				

ILLINOIS DEPT. OF TRANSPORTATION

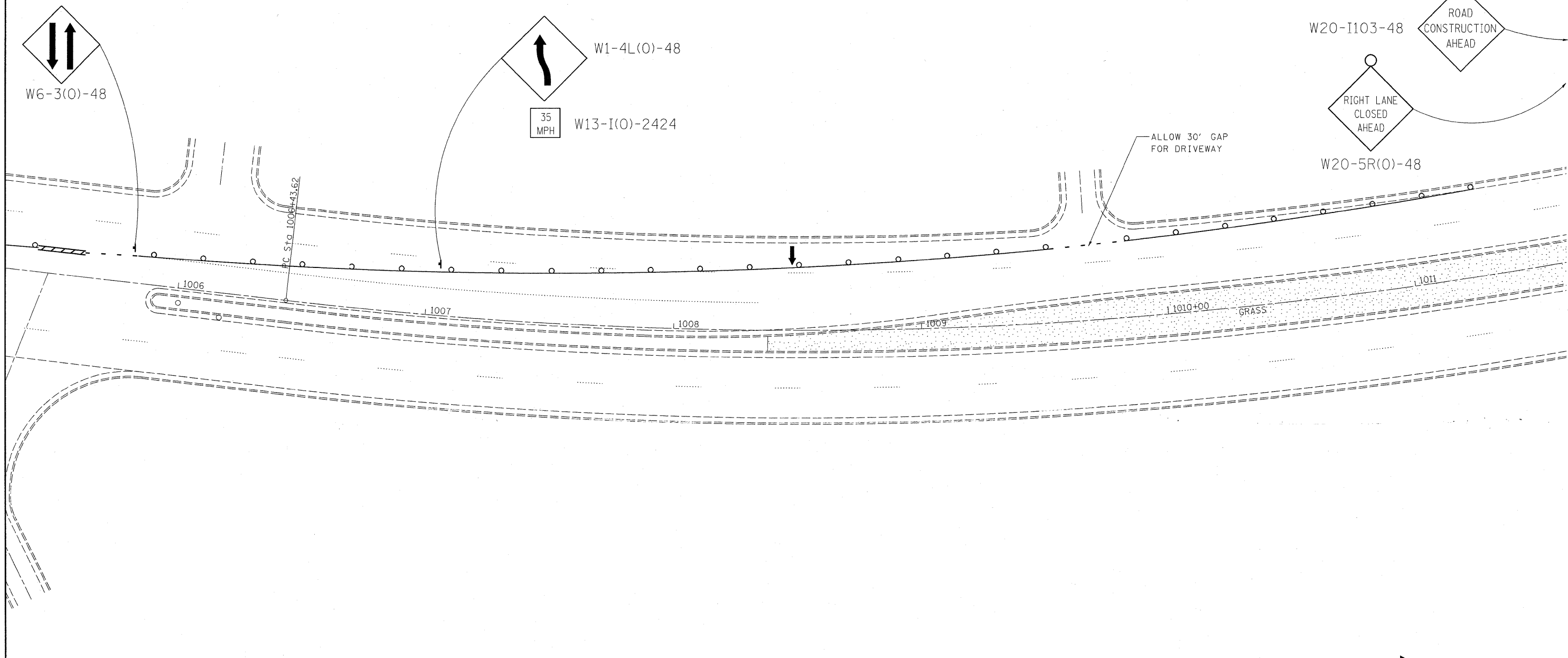


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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

STAGE 2 CONSTRUCTION				
SCALE:	SHEET NO.	OF	SHEETS	STA. TO STA.

F.A.P. RTE. 320	SECTION •	COUNTY Macon	TOTAL SHEETS 32	SHEET NO. 21
ILLINOIS FED. AID PROJECT CONTRACT NO. 74491				



➔ ARROW BOARD

SEE STD. 701606  
FOR DETAILS NOT SHOWN.  
WORKERS OR FLAGGER  
SIGN NOT REQUIRED.

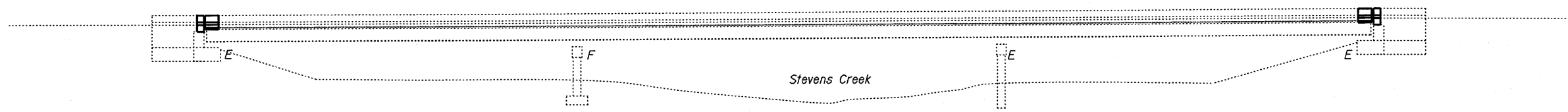
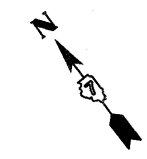
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**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

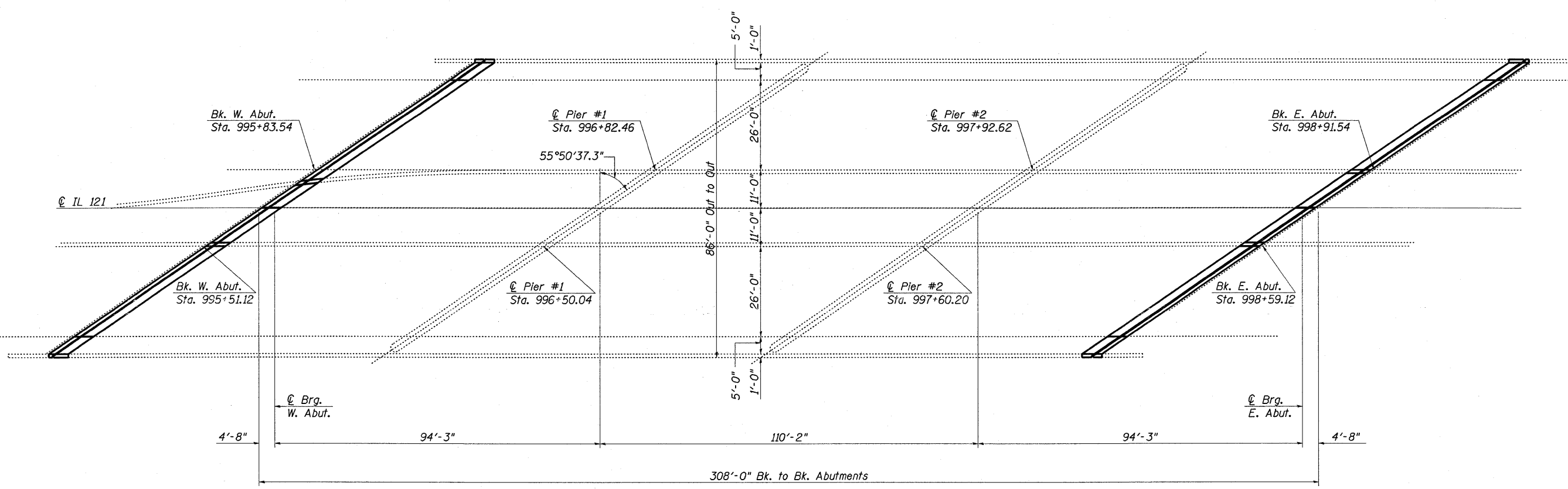
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SCALE:	SHEET NO.	OF SHEETS	STA. TO STA.

F.A.P. RTE. 320	SECTION •	COUNTY Macon	TOTAL SHEETS 32	SHEET NO. 22
CONTRACT NO. 74491				

The existing three span reinforced continuous steel multi-beam structure was constructed in 1984 as FAP 706 section 135BR-2 at Sta. 997+25.00. SN. 058-0111 carries IL 121 (FAP 320) over Stevens Creek. The proposed project consists of new expansion joints and new elastomeric bearings.



**ELEVATION**



**PLAN**



*David Carl Fuzey* 3/7/11  
Expires 11-30-2012

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	PLOT DATE = 2/24/2011	DATE - 12/22/10	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

<b>GENERAL PLAN &amp; ELEVATION SN. 058-0111</b>			
SCALE:	SHEET NO. 1 OF 10 SHEETS	STA. _____	TO STA. _____

F.A.P. RTE. 320	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		Mason	22	23
CONTRACT NO. 7449J				

**GENERAL NOTES**

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

Reinforcement bars shall conform to the requirements of ASTM A 706 GRADE 60. See Special Provisions.

Reinforcement Bars designated (E) shall be epoxy coated.

Existing reinforcement bars extending into the removal area shall be cleaned, straightened and incorporated into the new construction. Any reinforcement bars that are damaged during concrete removal operations shall be replaced using an approved bar splicer or anchorage system. Cost included in CONCRETE REMOVAL.

Joint openings shall be adjusted according to Article 520.04 of the Standard Specifications when the deck is poured at an ambient temperature other than 50°F.

Removal and re-installation of handrail sections and support posts at both abutment locations will be necessary for construction of the expansion joints. The existing handrail sections and support posts shall be reused. New bolts and shim plates as detailed in the plans, are to be provided and installed for the re-installation of the handrail and supports. This work and all materials shall be included in the contract unit price for CONCRETE SUPERSTRUCTURE.

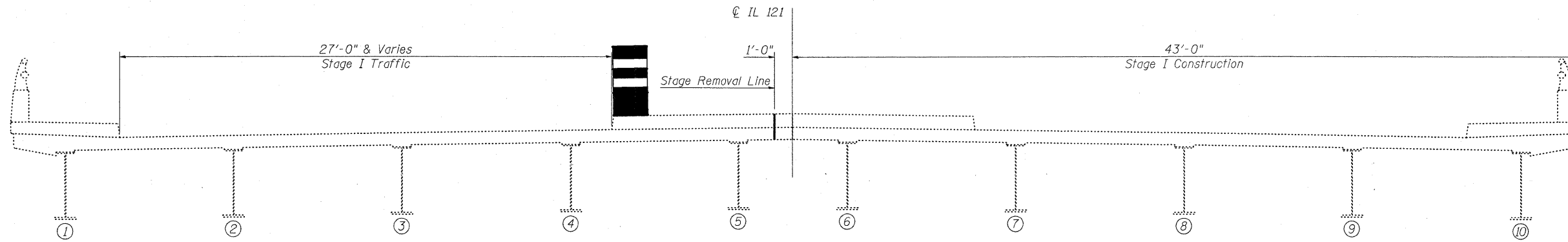
Prior to pouring the new concrete deck, all heavy and loose rust, loose mill scale, and other loose or potentially detrimental foreign material shall be removed from the surfaces in contact with concrete. Tightly adhered paint may remain, unless otherwise noted. Removal shall be accomplished by methods that will not damage the steel, and the cost will be included in the pay item covering removal of the existing concrete.

All new structural steel shall conform to AASHTO Classification M-270 Gr. 36 unless otherwise noted.

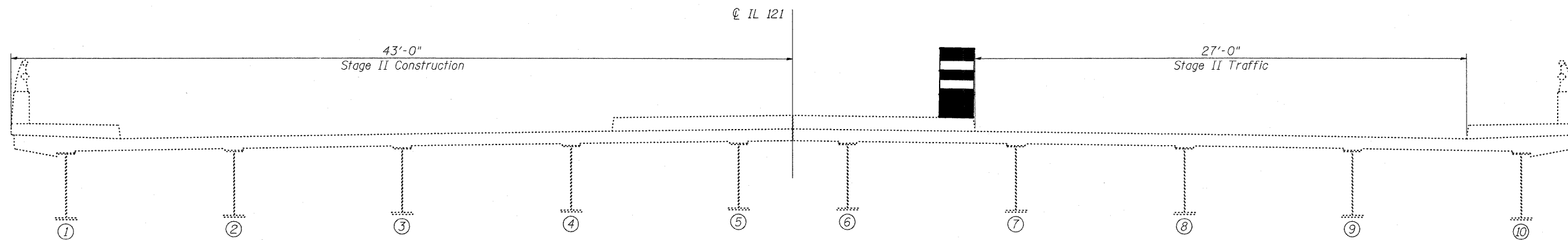
All structural steel shall be shop painted with inorganic zinc rich primer per AASHTO M300, Type 1. Cost included with Furnishing and Erecting Structural Steel.

**TOTAL BILL OF MATERIALS**

ITEM	UNIT	QUANTITY
Concrete Removal	Cu. Yd.	88.0
Concrete Superstructure	Cu. Yd.	88.0
Reinforcement Bars, Epoxy Coated	Pound	7120
Preformed Joint Strip Seal	Foot	308.0
Protective Coat	Sq Yd	152
Elastomeric Bearing Assembly, Type I	Each	10
Elastomeric Bearing Assembly, Type II	Each	10
Jack and Remove Existing Bearings	Each	20
Furnishing and Erecting Structural Steel	Pound	4150
Anchor Bolts 1"φ	Each	40



**STAGE I LOOKING EAST**



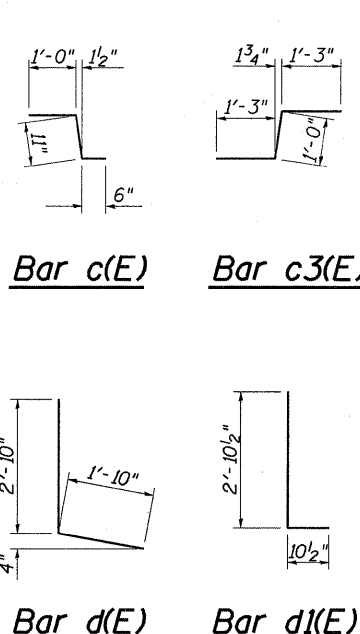
**STAGE II LOOKING EAST**



**BILL OF MATERIAL**

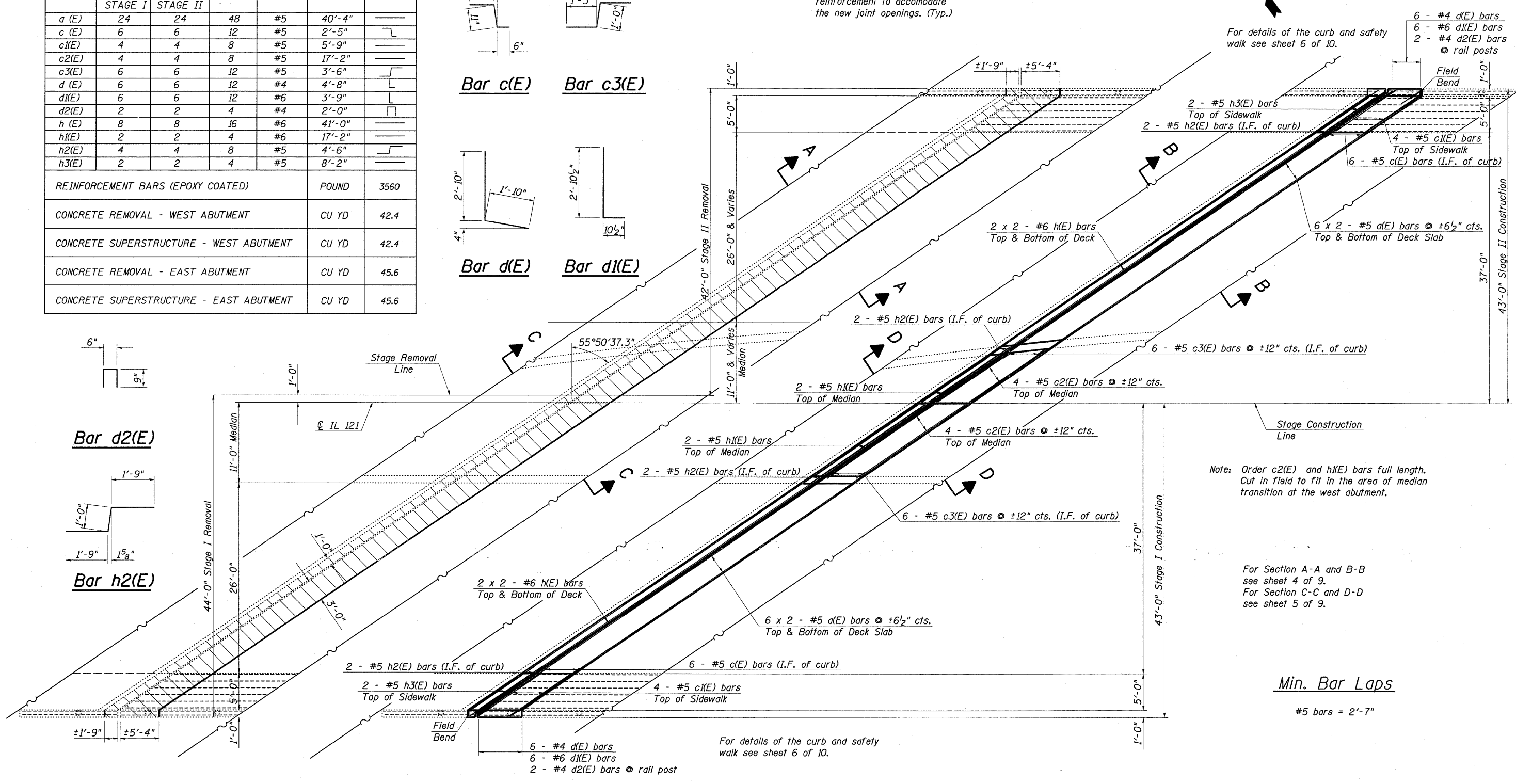
PER ABUTMENT

BAR	NUMBER OF BARS		TOTAL	SIZE	LENGTH	SHAPE
	STAGE I	STAGE II				
a (E)	24	24	48	#5	40'-4"	
c (E)	6	6	12	#5	2'-5"	
c1(E)	4	4	8	#5	5'-9"	
c2(E)	4	4	8	#5	17'-2"	
c3(E)	6	6	12	#5	3'-6"	
d (E)	6	6	12	#4	4'-8"	
d1(E)	6	6	12	#6	3'-9"	
d2(E)	2	2	4	#4	2'-0"	
h (E)	8	8	16	#6	41'-0"	
h1(E)	2	2	4	#6	17'-2"	
h2(E)	4	4	8	#5	4'-6"	
h3(E)	2	2	4	#5	8'-2"	
REINFORCEMENT BARS (EPOXY COATED)				POUND	3560	
CONCRETE REMOVAL - WEST ABUTMENT				CU YD	42.4	
CONCRETE SUPERSTRUCTURE - WEST ABUTMENT				CU YD	42.4	
CONCRETE REMOVAL - EAST ABUTMENT				CU YD	45.6	
CONCRETE SUPERSTRUCTURE - EAST ABUTMENT				CU YD	45.6	



Hatched area indicates removal.

Note: Trim existing longitudinal reinforcement to accommodate the new joint openings. (Typ.)



Note: Order c2(E) and h(E) bars full length. Cut in field to fit in the area of median transition at the west abutment.

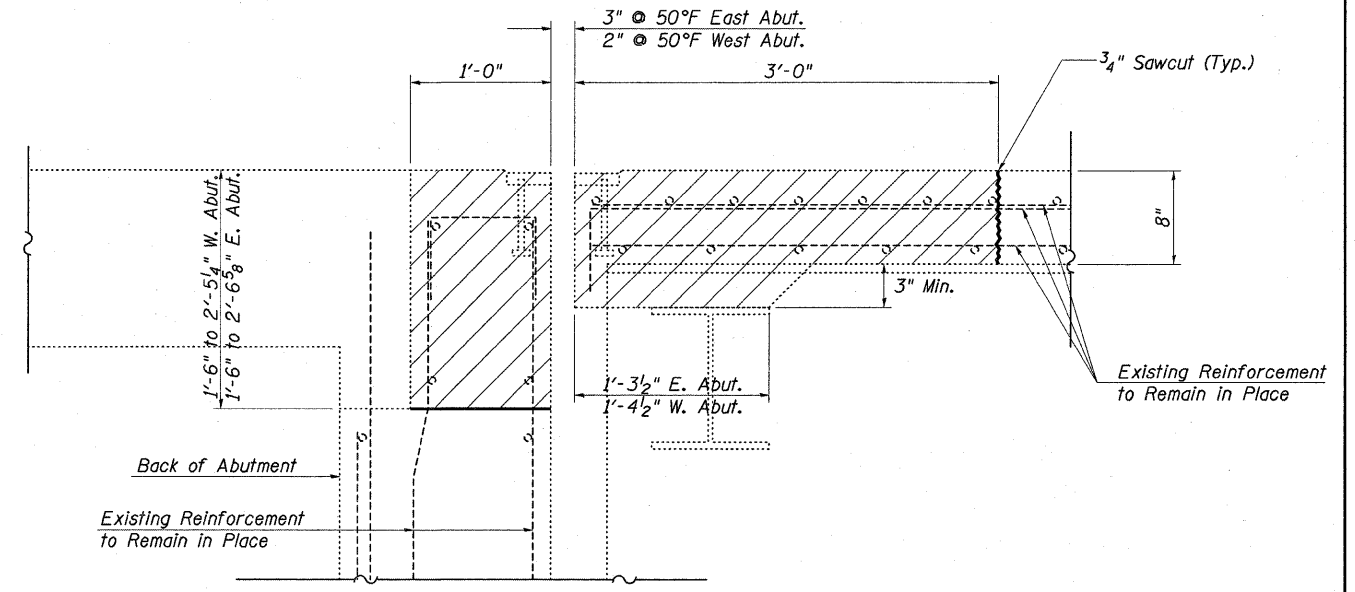
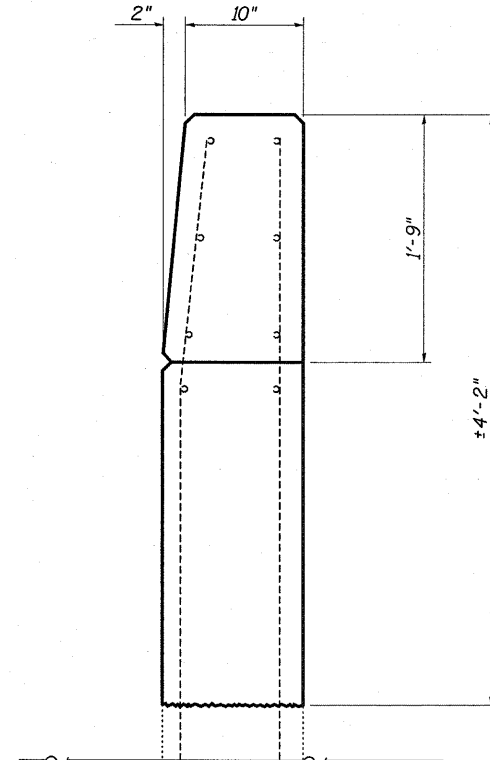
For Section A-A and B-B see sheet 4 of 9.  
For Section C-C and D-D see sheet 5 of 9.

**Min. Bar Laps**  
#5 bars = 2'-7"

**EXISTING PARTIAL PLAN**  
(West Abutment shown; East Abutment similar)

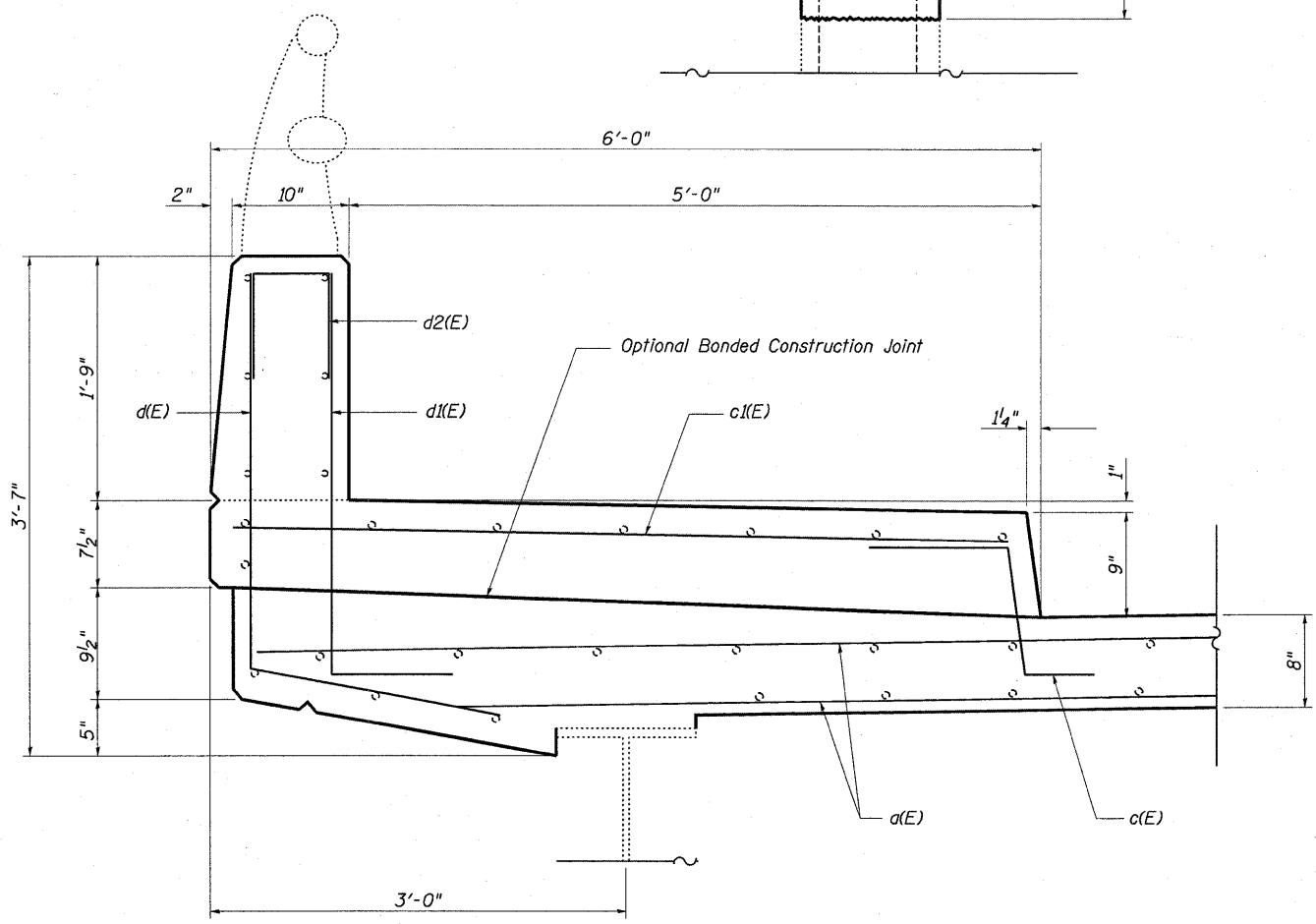
**PROPOSED PARTIAL PLAN**  
(West Abutment shown; East Abutment similar)

**TYPICAL WINGWALL  
REMOVAL AND REPLACEMENT**

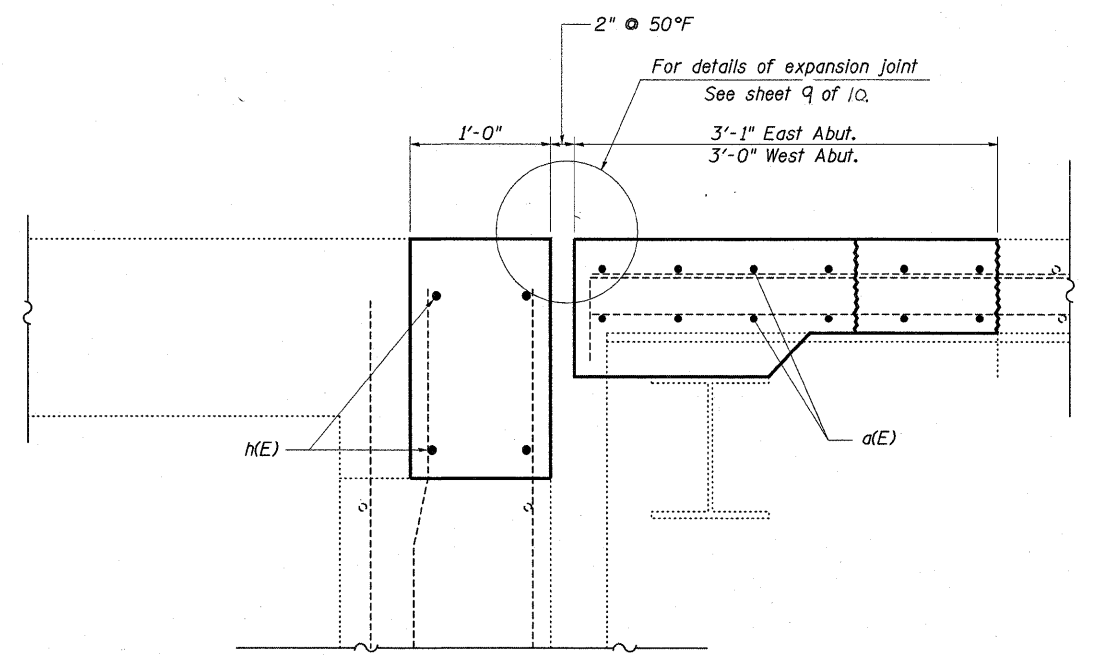


**SECTION A-A**  
(Dimensions at Rt. L's to end of deck)

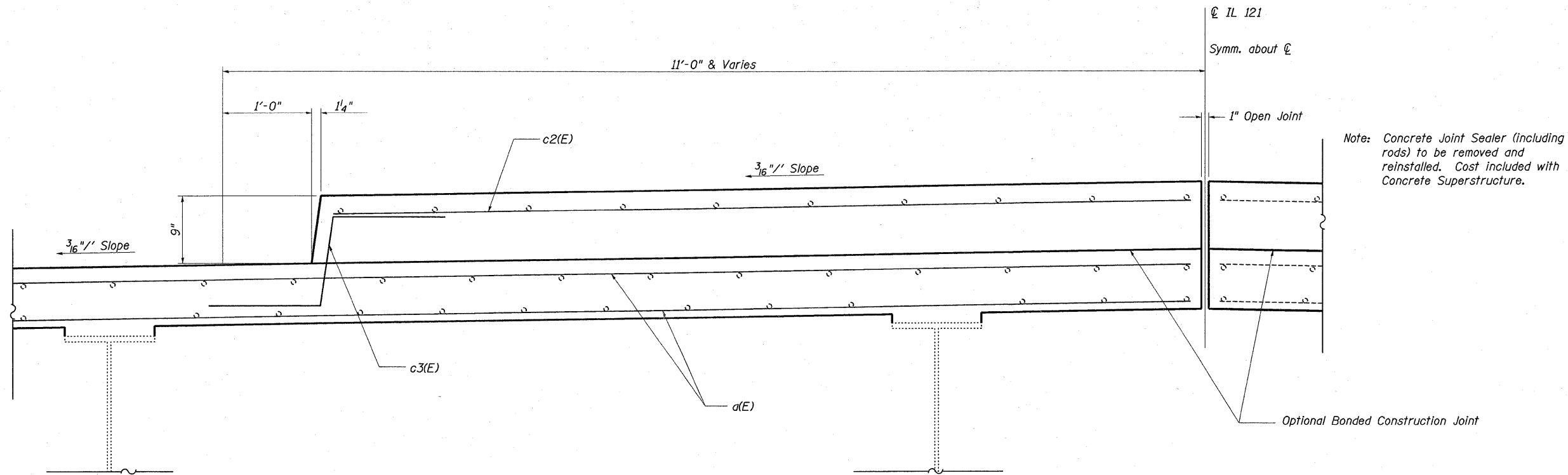
- Existing Reinforcement
- Proposed Reinforcement



**SECTION THRU PARAPET**

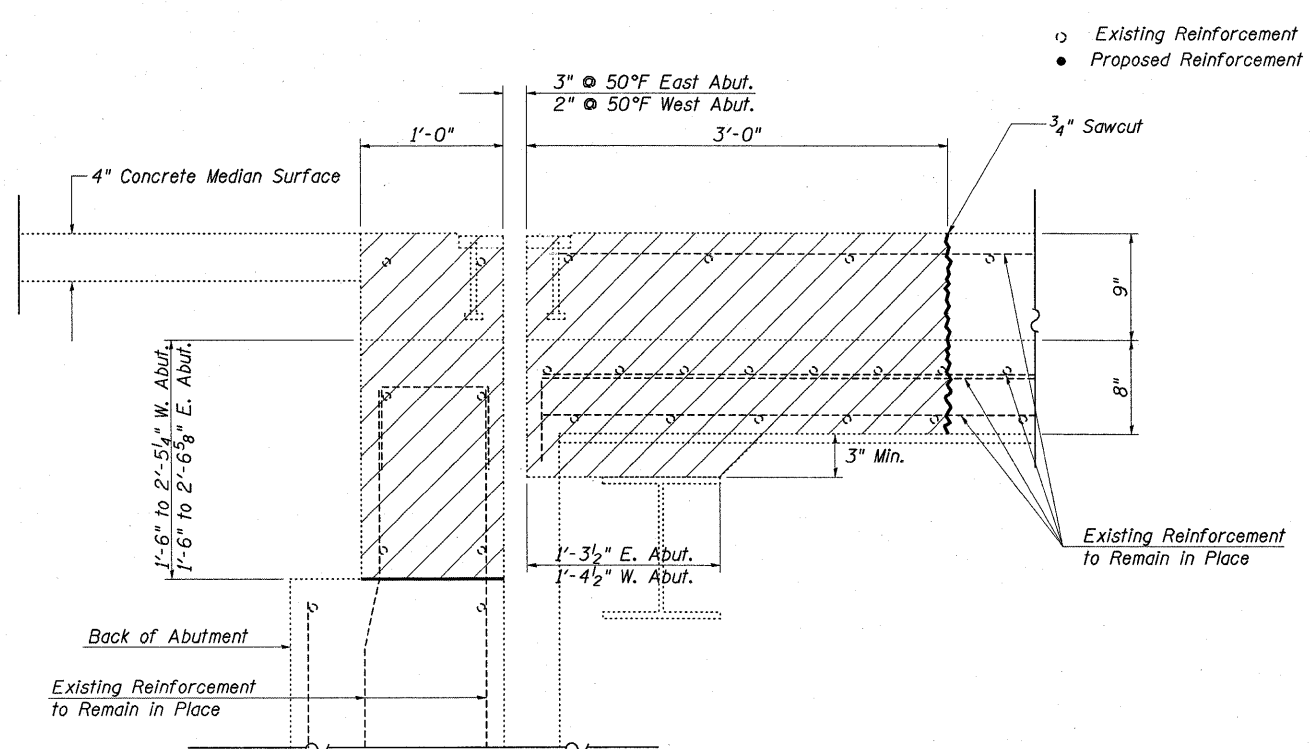


**SECTION B-B**  
(Dimensions at Rt. L's to end of deck)



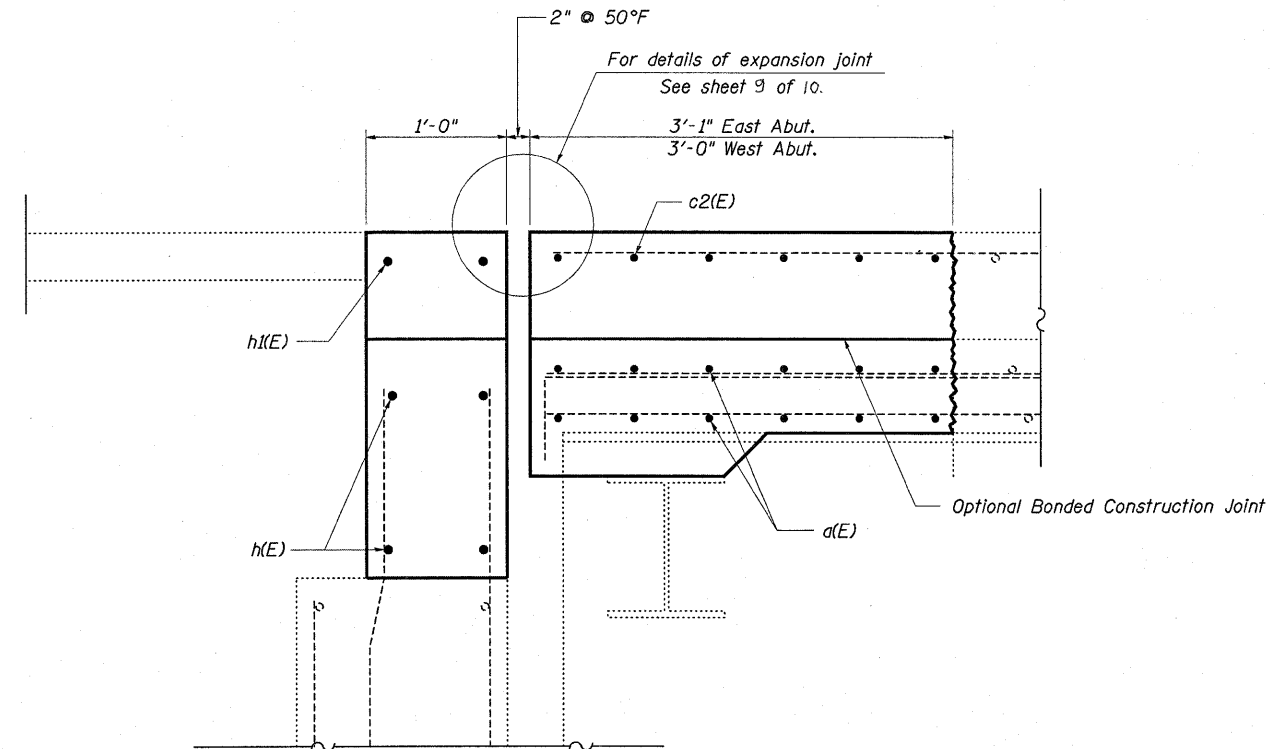
**SECTION THRU MEDIAN**

(Dimensions at Rt. L's to end of deck)



**SECTION C-C**

(Dimensions at Rt. L's to end of deck)



**SECTION D-D**

(Dimensions at Rt. L's to end of deck)

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c:\pwwork\pwwidot\teasleyck\d8289576\07

USER NAME = teasleyck  
4491-sht-brdetails-0580111.dgn

DESIGNED - KLB  
DRAWN - KLB

REVISED -  
REVISED -  
CHECKED - MEA  
DATE - 12/22/10

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**EXPANSION JOINT REPLACEMENT DETAILS  
SN. 058-0111**

F.A.P.  
RTE.  
320

SECTION  
.

COUNTY  
Macon

TOTAL SHEETS  
32

SHEET NO.  
27

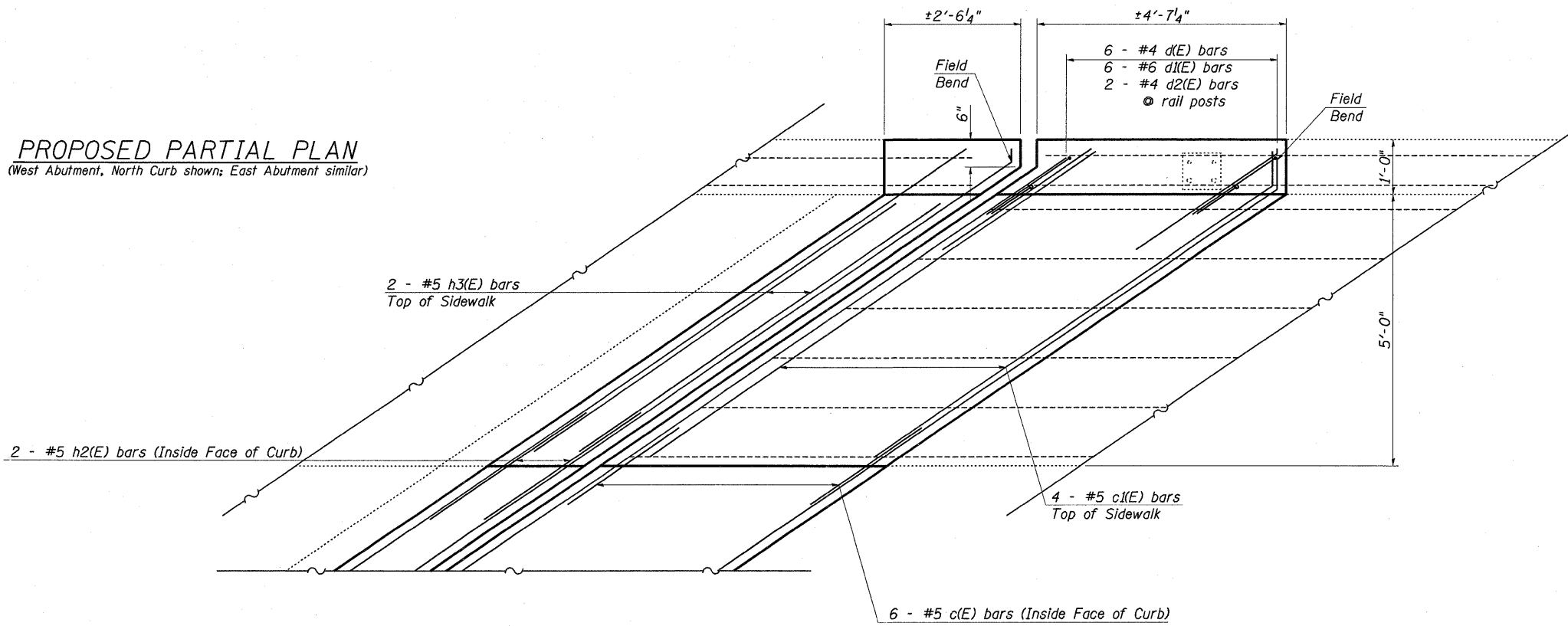
CONTRACT NO. 74491

SCALE: SHEET NO. 5 OF 10 SHEETS STA. TO STA.

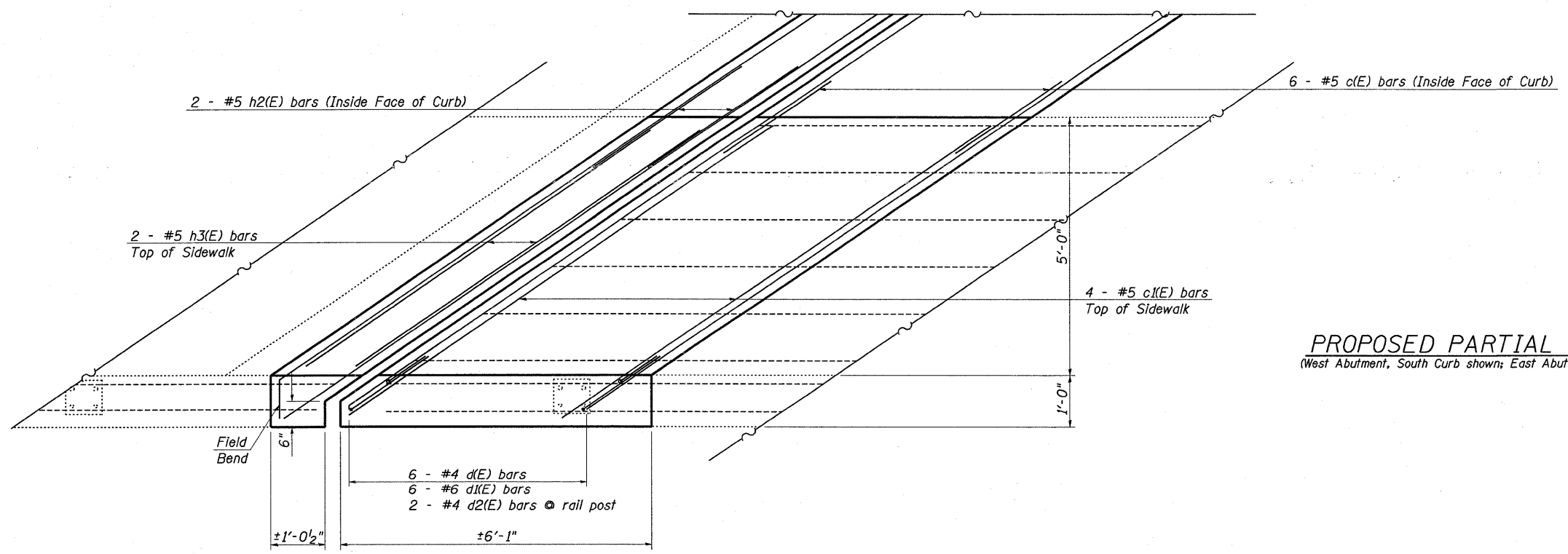
ILLINOIS FEDERAL PROJECT



**PROPOSED PARTIAL PLAN**  
(West Abutment, North Curb shown; East Abutment similar)



**PROPOSED PARTIAL PLAN**  
(West Abutment, South Curb shown; East Abutment similar)



FILE NAME =  
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44491-sht-brdetails-0580111.dgn  
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PLOT DATE = 2/24/2011

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DRAWN - ---  
CHECKED - ---  
DATE - ---

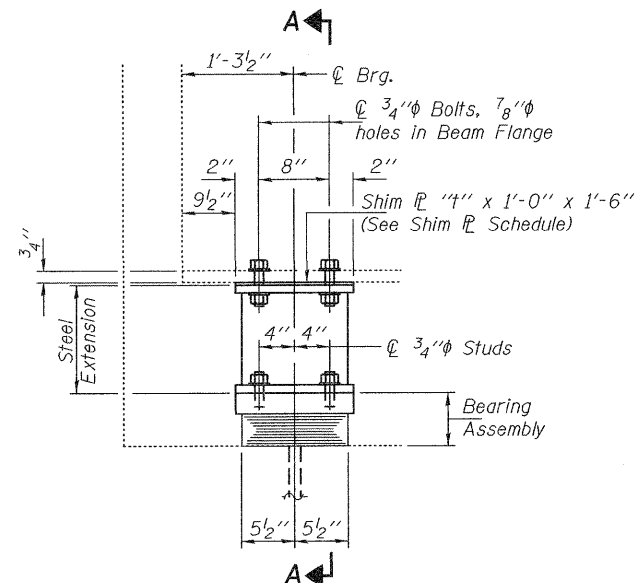
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REVISED - ---  
REVISED - ---  
REVISED - ---

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**EXPANSION JOINT REPLACEMENT DETAILS  
SN. 058-0111**

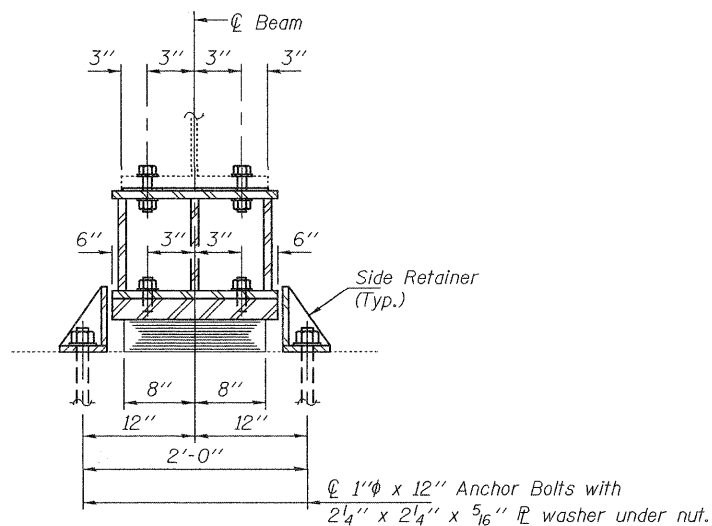
SCALE: SHEET NO. 6 OF 10 SHEETS STA. TO STA.

F.A.P. RTE. 320	SECTION	COUNTY Macon	TOTAL SHEETS 22	SHEET NO. 28
CONTRACT NO. 7449J			ILLINOIS FED. AID PROJECT	



**ELEVATION AT W. ABUTMENT**

**TYPE I ELASTOMERIC EXP. BRG.**



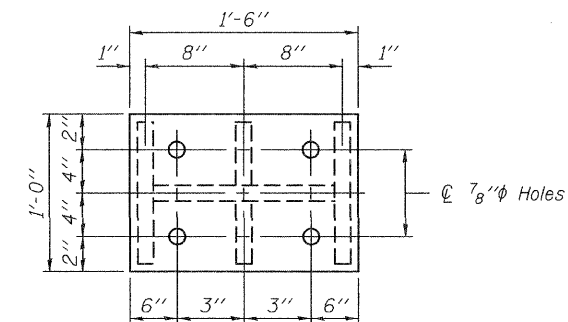
**SECTION A-A**

**BEAM REACTIONS**

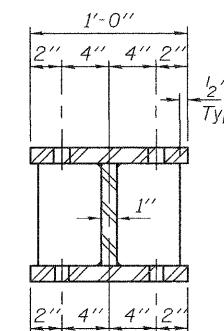
RP	(K)	63.5
R <sub>1</sub>	(K)	53.4
Imp.	(K)	12.2
R (Total)	(K)	129.1

**Notes:**

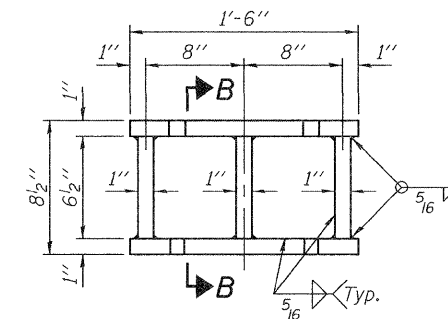
Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.  
 New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel.  
 Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Min. jack capacity = 75 Tons.  
 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 of 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.  
 Side retainers shall be included in the cost of Elastomeric Bearing Assembly, Type I.



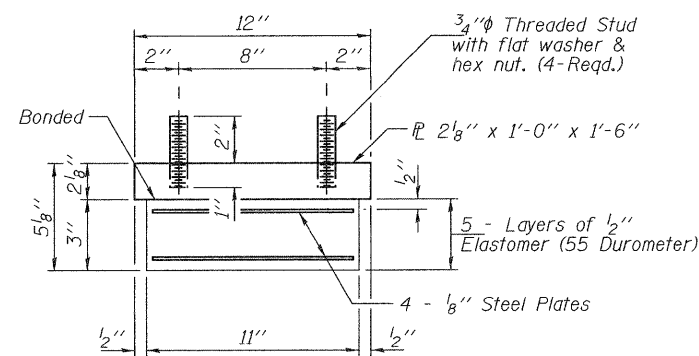
**PLAN TOP AND BOTTOM PLATE**



**SECTION B-B**



**STEEL EXTENSION DETAIL**

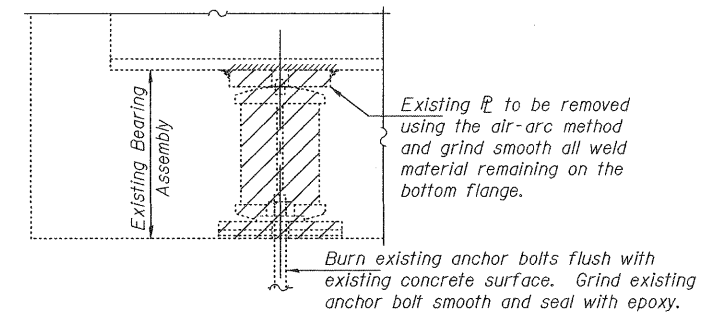


**BEARING ASSEMBLY**

Note: Shim plates shall not be placed under Bearing Assembly.

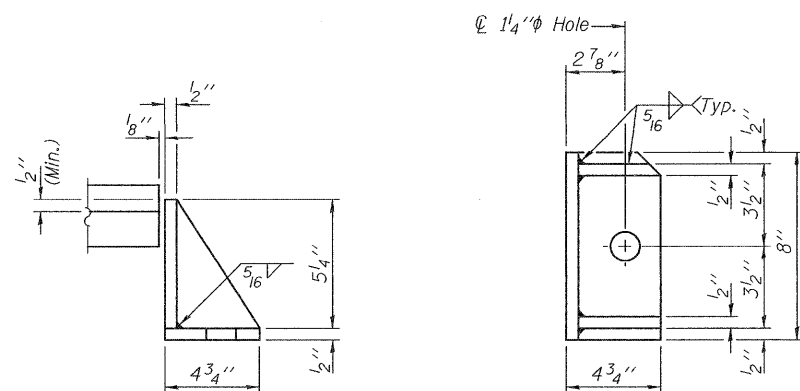
**SHIM PLATE SCHEDULE**

Girder	"#"
2	1/16"
4	1/16"
7	1/4"



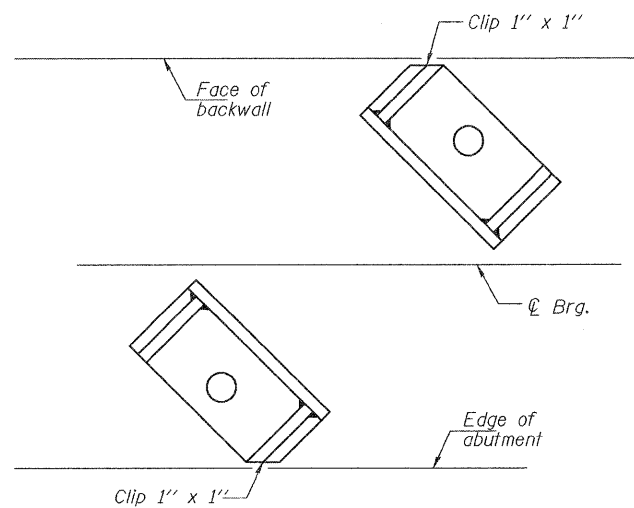
**EXISTING BEARING REMOVAL DETAIL**

Cost included with Jack and Remove Existing Bearings.



**SIDE RETAINER**

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



**RETAINER LAYOUT**

**BILL OF MATERIAL**

Item	Unit	Total
Elastomeric Bearing Assembly, Type I	Each	10
Jack and Remove Existing Bearings	Each	10
Furnishing and Erecting Structural Steel	Pound	2210
Anchor Bolts 1"φ	Each	20

**TYI/REPS**

DESIGNED	IJL
CHECKED	DAB
DRAWN	baliva
CHECKED	IJL DAB

EXAMINED	<i>Joanne F. Joffe</i>	DATE	MARCH 4, 2011
PASSED	<i>Carl King</i>		

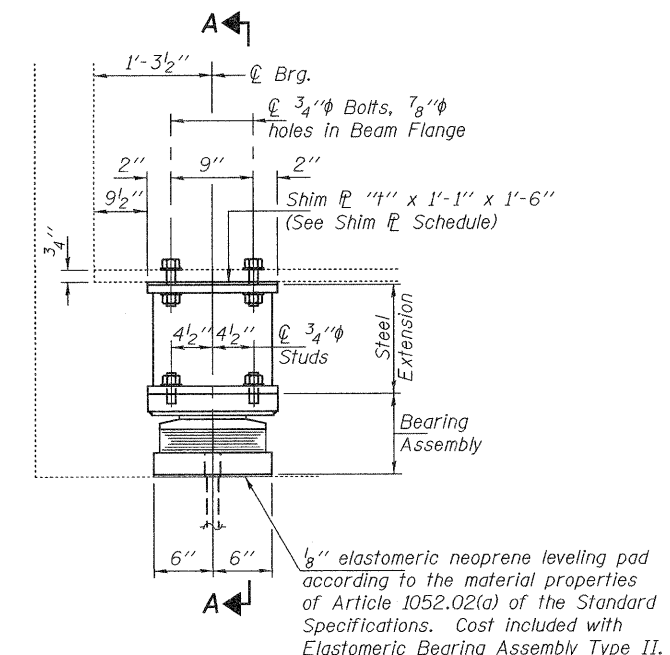
ACTING ENGINEER OF STRUCTURAL SERVICES  
 ACTING ENGINEER OF BRIDGES AND STRUCTURES

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**W. ABUTMENT BEARING REPLACEMENT DETAILS  
 SN 058-0111**

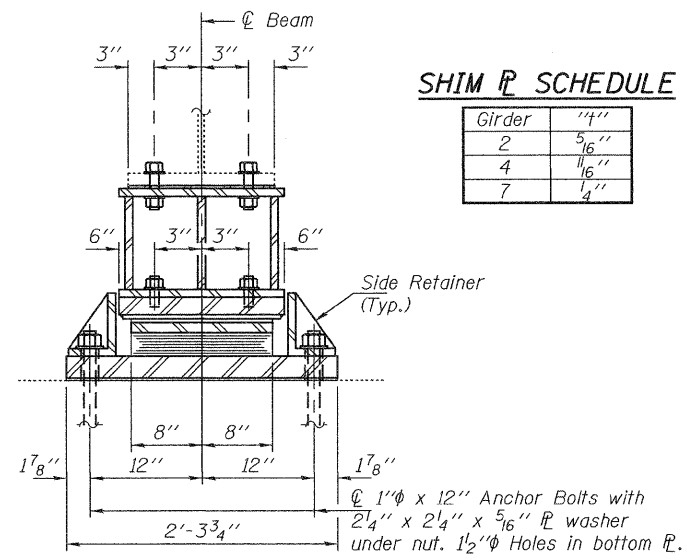
SHEET NO. 7 OF 10 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
706	D 7 BRIDGE REPAIRS 2011-3	MACON	32	29
			CONTRACT NO. 74491	
ILLINOIS FED. AID PROJECT				



**ELEVATION AT E. ABUTMENT**

**TYPE II TFE ELASTOMERIC EXP. BRG.**



**SECTION A-A**

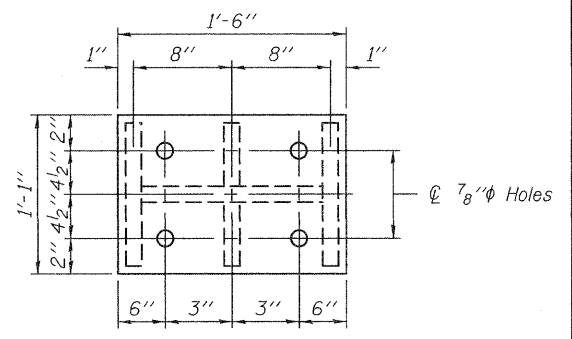
**SHIM  $\varnothing$  SCHEDULE**

Girder	"4"
2	5/16"
4	1/16"
7	1/4"

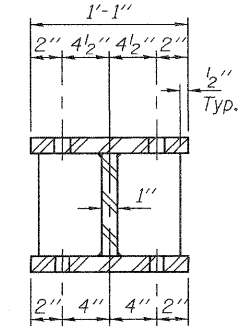
**BEAM REACTIONS**

R $\varnothing$	(K)	63.5
R $\ddagger$	(K)	53.4
Imp.	(K)	12.2
R (Total)	(K)	129.1

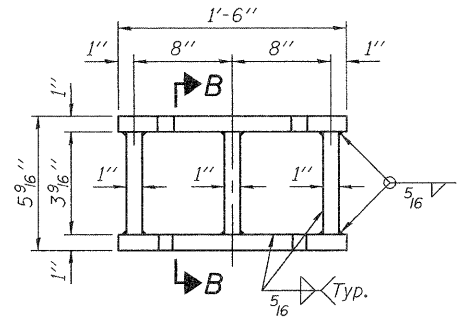
Notes:  
 Diaphragm removal and reinstallation may be required to facilitate drilling holes. Cost included with Furnishing and Erecting Structural Steel.  
 New steel extensions, shim plates and connection bolts are included with Furnishing and Erecting Structural Steel. Prior to ordering any material, the Contractor shall verify in the field all bearing height and shim thickness dimensions. Min. jack capacity = 75 Tons.  
 Anchor bolts shall be ASTM F1554 all-thread (or an Engineer-approved alternate material) of the grade(s) and diameter(s) specified. ASTM A307 Grade C anchor bolts may be used in lieu of ASTM F1554 Grade 36 (Fy=36ksi). The corresponding specified grade of AASHTO M314 anchor bolts may be used in lieu of ASTM F1554.  
 Anchor bolts for Type II bearings shall be placed in holes drilled through the bottom bearing plate after members are in place. Side retainers shall be placed after bolts are installed.  
 Drilled and set anchor bolts shall be installed according to Article 521.06 of the Standard Specifications.  
 Side retainers shall be included in the cost of Elastomeric Bearing Assembly, Type II.  
 The 1/8" PTFE sheet shall be bonded directly to the top steel plate with a two-component, medium viscosity epoxy resin, conforming to the requirements of the Federal Specification MMM-A-134, Type I. The bond agent shall be applied on the full area of the contact surfaces.  
 Bonding of 1/8" PTFE sheet during vulcanizing process will be permitted provided the process and method of adjusting assembly height is approved by the Engineer.



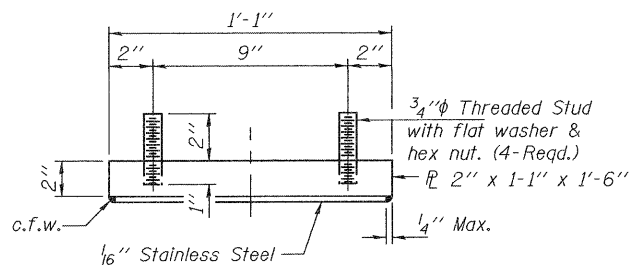
**PLAN TOP AND BOTTOM PLATE**



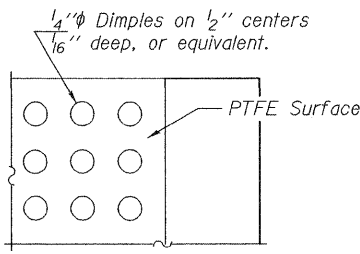
**SECTION B-B**



**STEEL EXTENSION DETAIL**

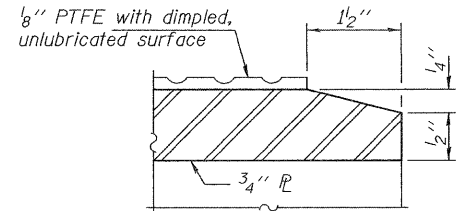


**TOP BEARING ASSEMBLY**

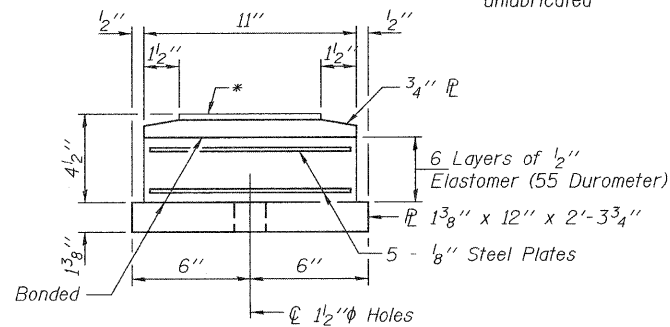


**PLAN-PTFE SURFACE**

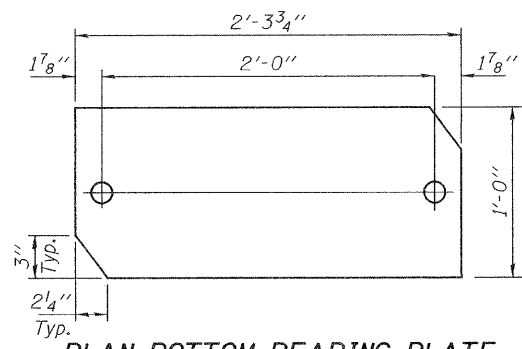
\* 1/8" PTFE dimpled, unlubricated



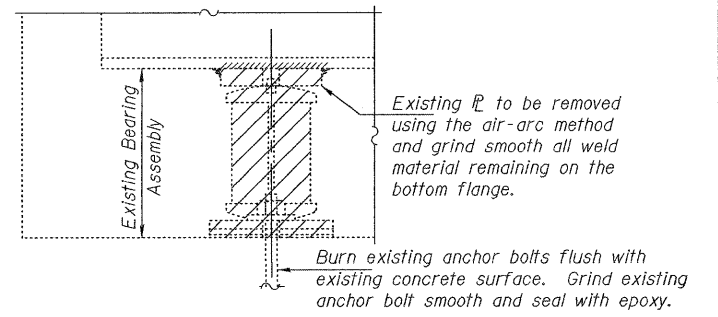
**SECTION THRU PTFE**



**BOTTOM BEARING ASSEMBLY**

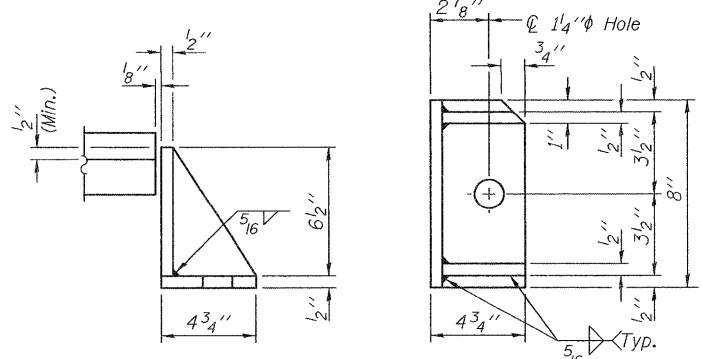


**PLAN BOTTOM BEARING PLATE**



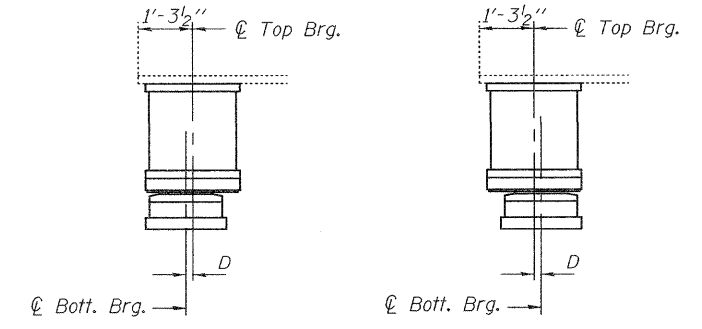
**EXISTING BEARING REMOVAL DETAIL**

Cost included with Jack and Remove Existing Bearings.



**SIDE RETAINER**

Equivalent rolled angle with stiffeners will be allowed in lieu of welded plates.



**SETTING ANCHOR BOLTS AT EXP. BRG.**

D = 1/8" per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.

**BILL OF MATERIAL**

Item	Unit	Total
Elastomeric Bearing Assembly, Type II	Each	10
Jack and Remove Existing Bearings	Each	10
Furnishing and Erecting Structural Steel	Pound	1940
Anchor Bolts 1" $\phi$	Each	20

TYII/REPS

DESIGNED IJL  
 CHECKED DAB  
 DRAWN baliva  
 CHECKED IJL DAB

EXAMINED  
 PASSED  
 ACTING ENGINEER OF STRUCTURAL SERVICES  
 ACTING ENGINEER OF BRIDGES AND STRUCTURES

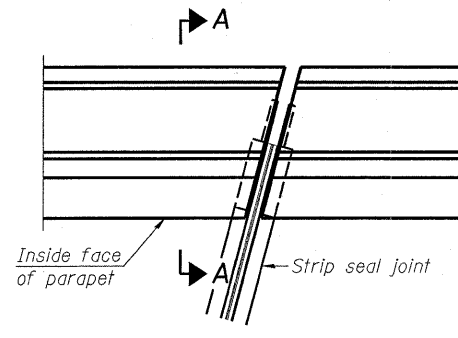
DATE - MARCH 4, 2011

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION

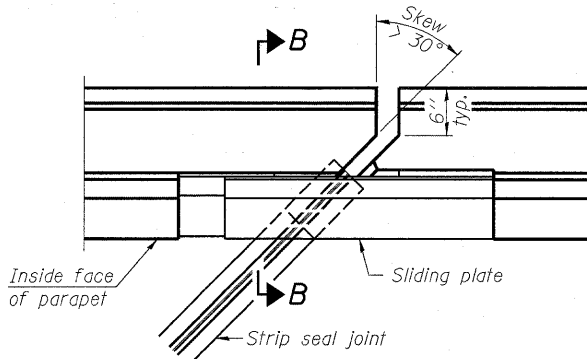
E. ABUTMENT BEARING REPLACEMENT DETAILS  
 SN 058-0111

SHEET NO. 8 OF 10 SHEETS

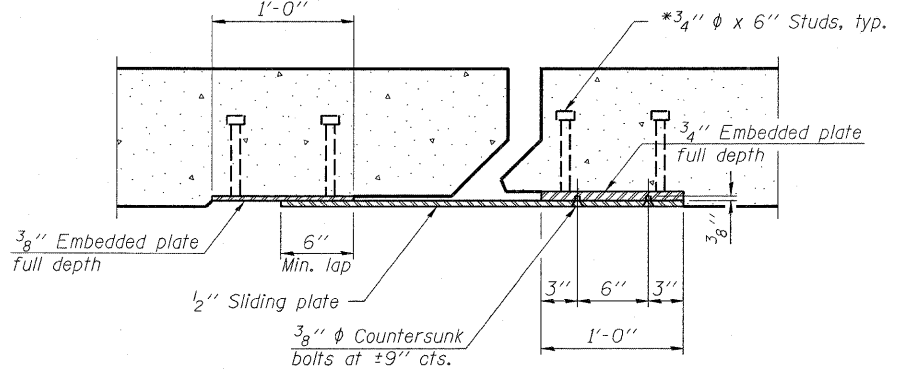
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
706	D7 BRIDGE REPAIRS 2011-3	MACON	32	30
CONTRACT NO. 74491			ILLINOIS FED. AID PROJECT	



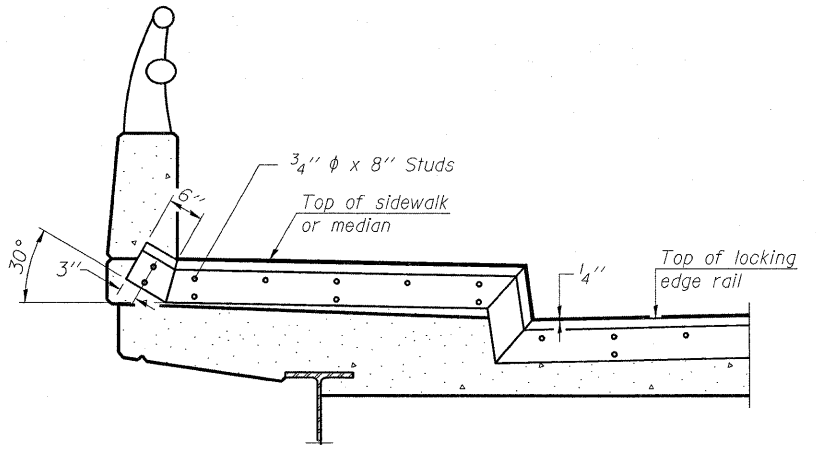
**PLAN**  
(For skews  $\leq 30^\circ$ )



**PLAN**  
(For skews  $> 30^\circ$ )  
Showing point block

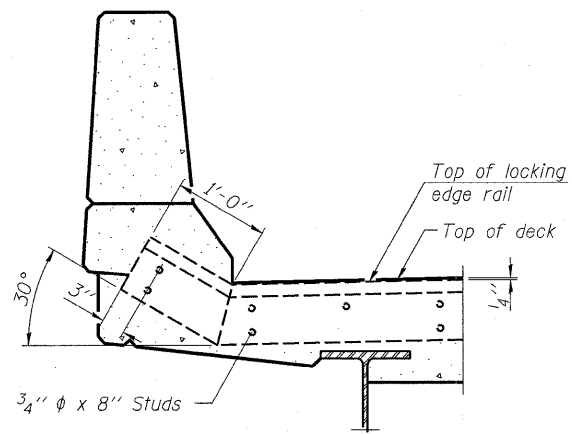


**SECTION C-C**

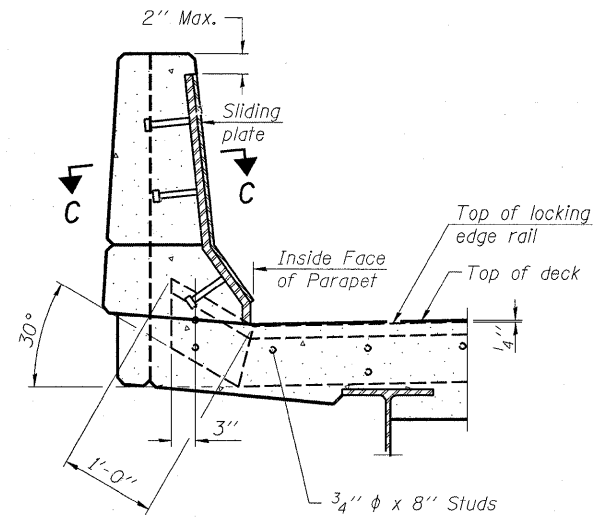


**TYPICAL END TREATMENT AT SIDEWALK OR MEDIAN**

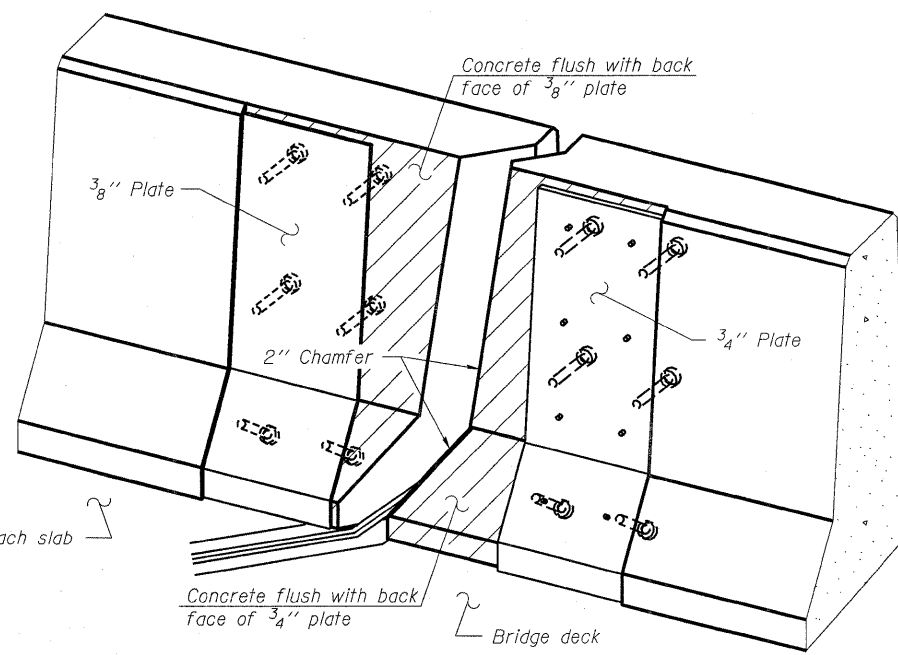
Shorter plates with a single row of studs at 12" cts. may be necessary on medians which are shallower than 9". See manufacturer's recommendation.



**SECTION A-A**



**SECTION B-B**



**TRIMETRIC VIEW**  
(Showing back plates only)

**Notes:**

The strip seal shall be made continuous and shall have a minimum thickness of 1/4". The configuration of the strip seal shall match the configuration of the Locking Edge Rails. Open or "webbed" strip seal gland configurations are not permitted. The gland shall be sized for a maximum rated movement of 4 inches.

The Locking Edge Rails depicted are conceptual only, except for the minimum dimensions shown. The actual configuration of the Locking Edge Rails and matching strip seal may vary from manufacturer to manufacturer. Flanged edge rails will not be allowed. Locking Edge Rails may be spliced at slope discontinuities.

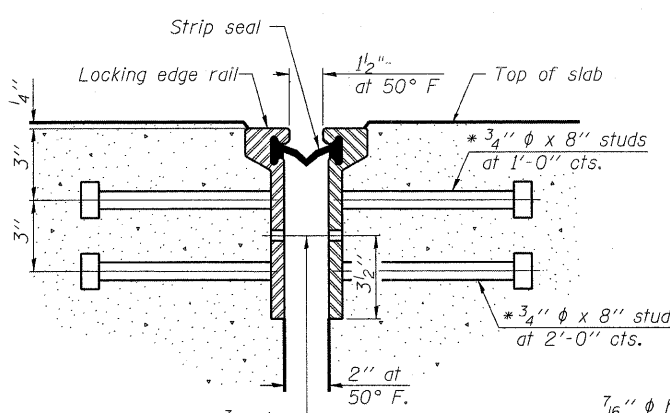
The manufacturer's recommended installation methods shall be followed.

The joint opening and deck dimensions detailed on the superstructure are based on a rolled rail expansion joint. If the Contractor elects to use the welded rail expansion joint, the opening and deck dimensions shall be modified according to the dimensions detailed on this sheet. Required modifications shall be made at no additional cost to the State.

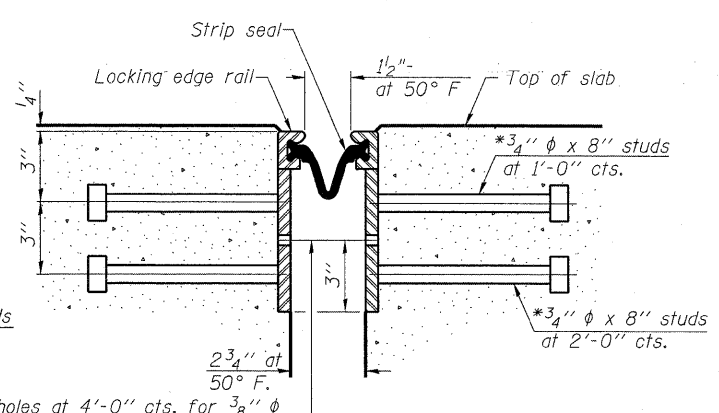
All steel components shall be galvanized after fabrication according to Article 520.03 of the Standard Specifications.

Maximum space between rail segments at stage lines shall be 3/16", sealed with a suitable sealant.

Parapet plates and anchorage studs for skews > 30° included in the cost of Preformed Joint Strip Seal.



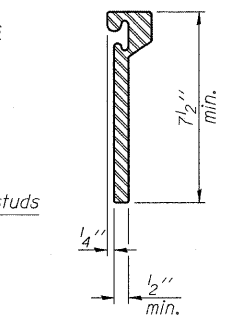
**SECTION THRU ROLLED RAIL JOINT**



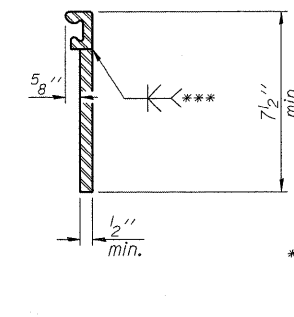
**SECTION THRU WELDED RAIL JOINT**

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

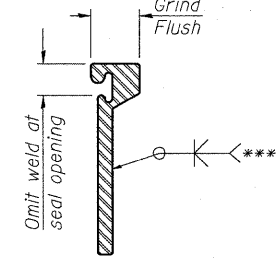
7/16" φ holes at 4'-0" cts. for 3/8" φ bolts. All bolts shall be burned, sawed, or chipped off flush with the plates after forms are removed, typ.



**ROLLED EXTRUDED RAIL**



**WELDED RAIL**



**LOCKING EDGE RAIL SPLICE**

\*\*\* Back gauge not required if complete joint penetration is verified by mock-up.

The inside of the locking edge rail groove shall be free of weld residue.  
Rolled rail shown, welded rail similar.

**LOCKING EDGE RAILS**

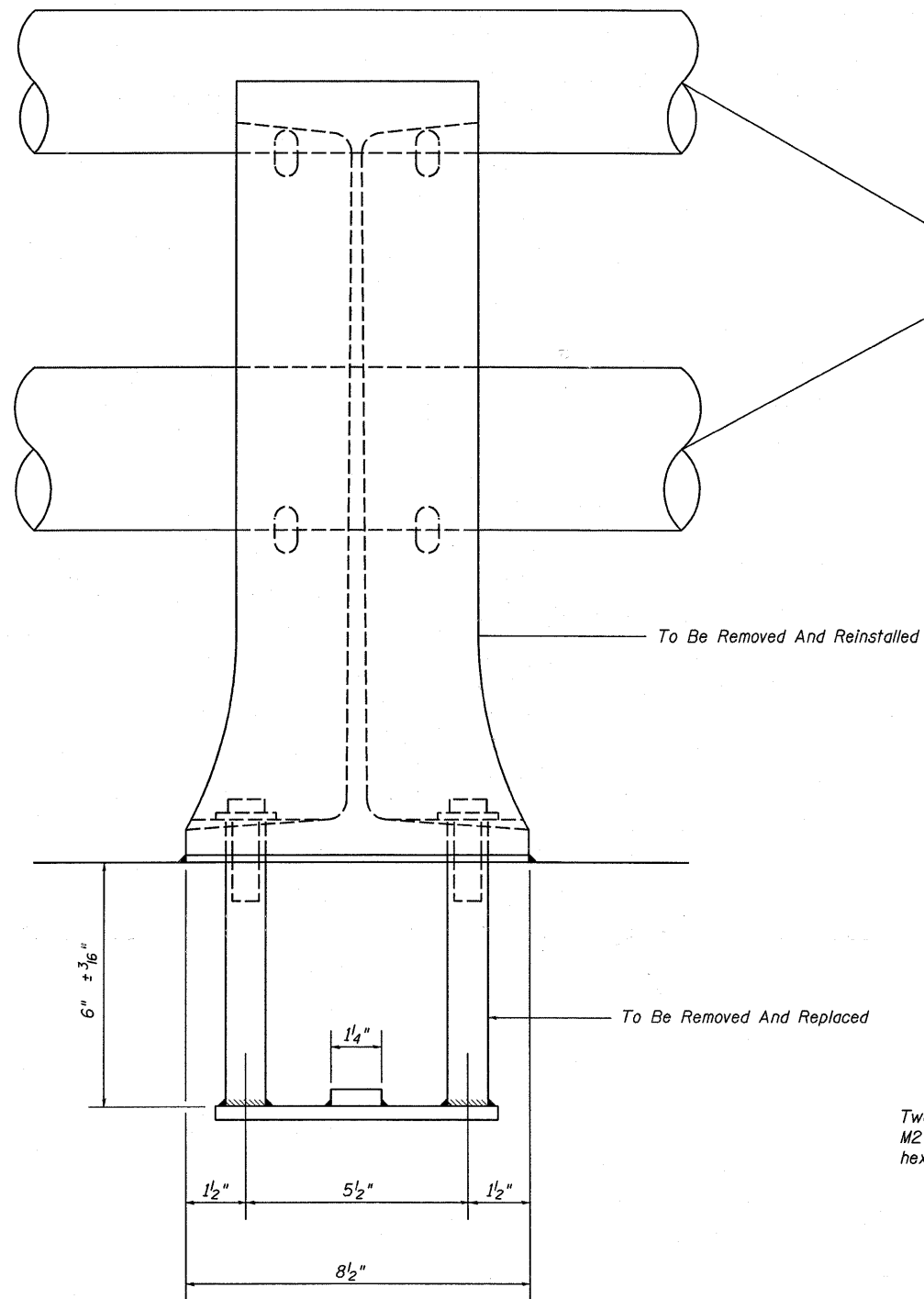
**BILL OF MATERIAL**

Item	Unit	Total
Preformed Joint Strip Seal	Foot	308.0

\* Granular or solid flux filled headed studs conforming to Article 1006.32 of the Std. Specs., automatically end welded.

EJ-SSJ

7-1-10



2 - 1/2"  $\phi$  x 1 3/4" hex. hd. cap screws  
Std. flat washers. (stnl. stl.)

2 - 3/4"  $\phi$  x 2" hex. hd. cap screws  
Std. flat washers. (stnl. stl.)

Base of post shall be sealed with two component non-staining gray sealing compound with polysulfide liquid polymers-gun grade with primer.

1/8" Fabric Bearing Pad

Front face of parapet

Two 3/4" Round bar stock, AASHTO M270 G50 - tapped for 1/2"  $\phi$  x 1 3/4" hex hd. cap screws.

Two 1" Round bar stock AASHTO M270 G50 Tapped for 3/4"  $\phi$  x 2" hex hd. cap screws.

3/8" x 1 1/4" x 7"

1/2" x 1 1/2" x 5 1/4" Bar

Note: New Rail Post anchorage devices will be required at each location where posts are connected to new construction. Cost shall be included with Concrete Superstructure.

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c:\pwwork\pwwork\teasleyck\d02209576\07

USER NAME = teasleyck  
4491-sht-brdtdetails-0580111.dgn

DESIGNED - ---  
DRAWN - ---

REVISED - ---  
REVISED - ---

PLOT SCALE = 20.0000' / IN.  
PLOT DATE = 2/24/2011

CHECKED - ---  
DATE - ---

REVISED - ---  
REVISED - ---

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

RAIL SUPPORT ANCHOR DETAILS  
SN. 058-0111

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
320		Mason	32	32
CONTRACT NO. 14491				

SCALE: SHEET NO. 10 OF 10 SHEETS STA. TO STA. (THIS SHEET IS A PART OF THE PROJECT)