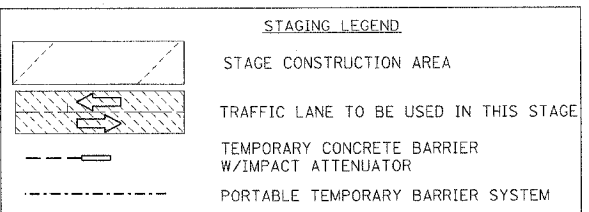
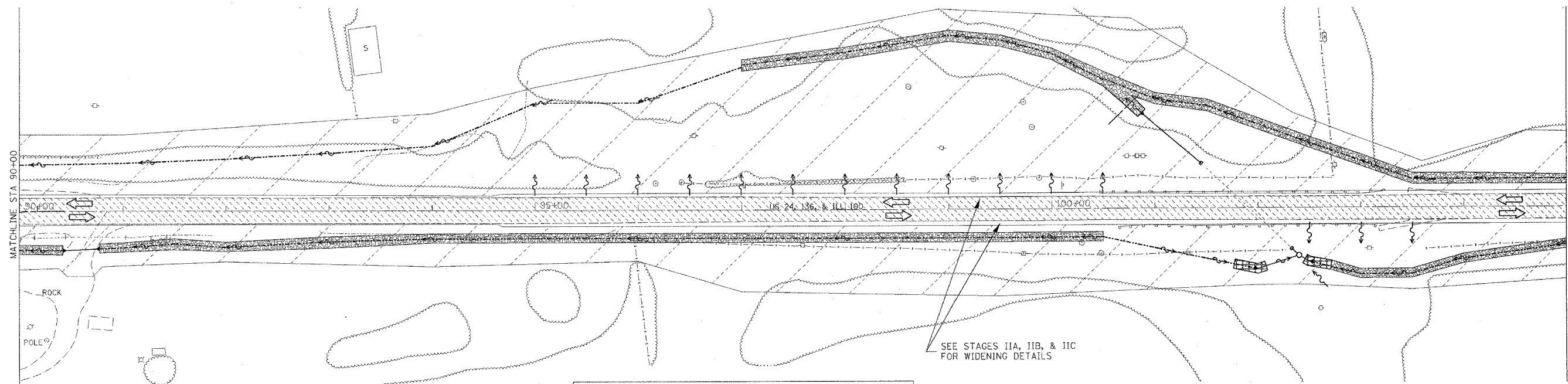
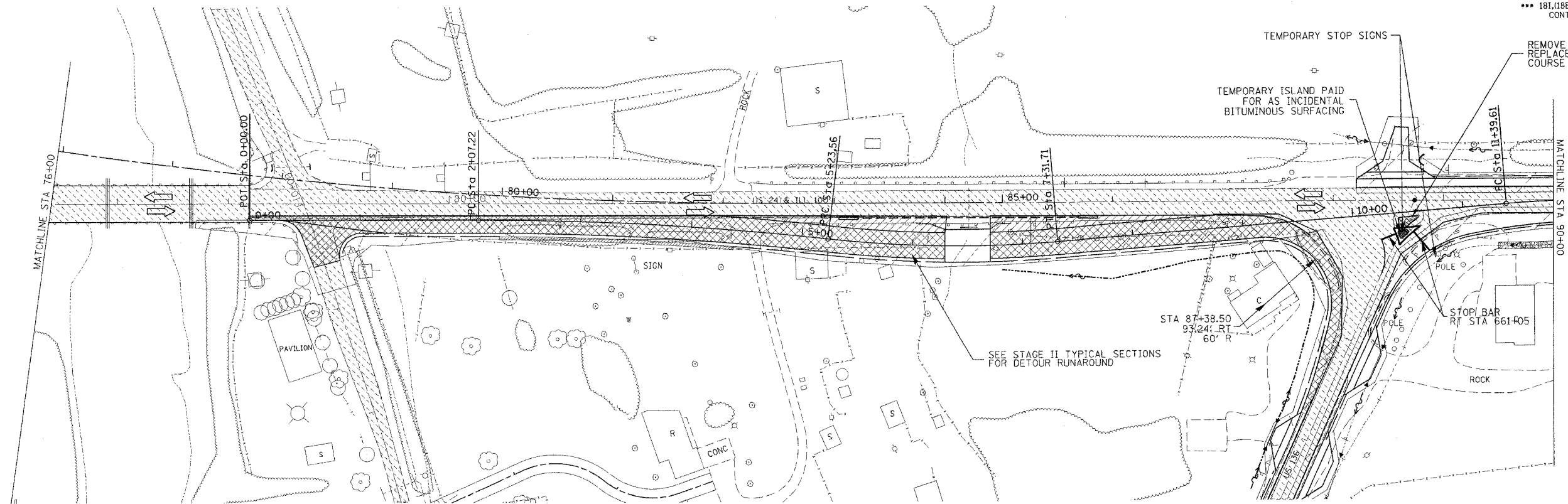


F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315/317	***	FULTON	684	101
STA. 76+00		TO STA. 105+00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
*** 181,188BRY&188BRY-1)BR,188-1 CONTRACT# 88753				



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

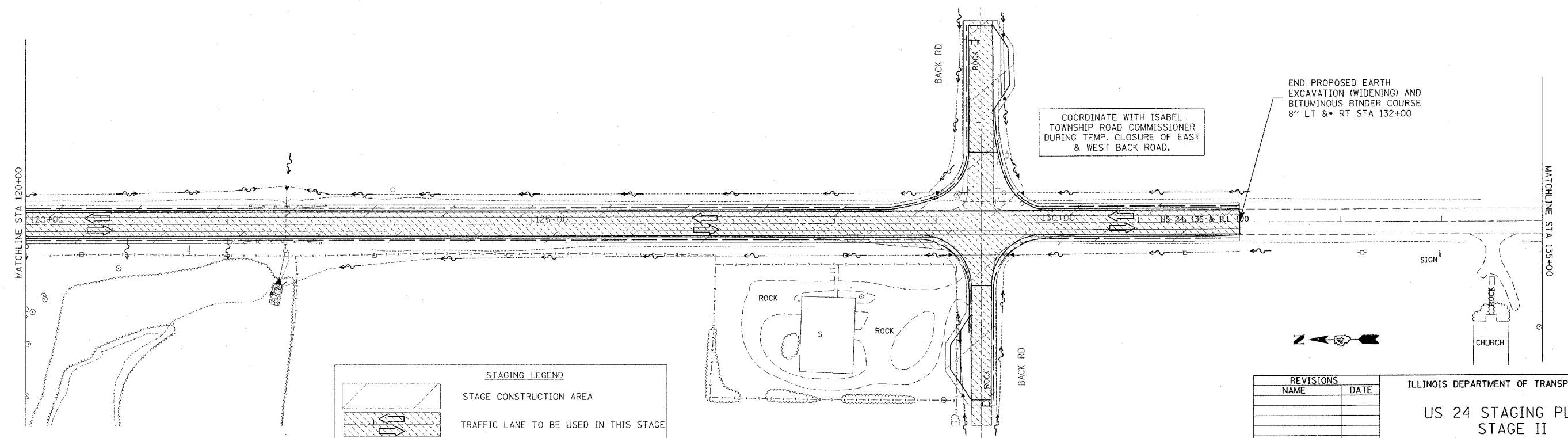
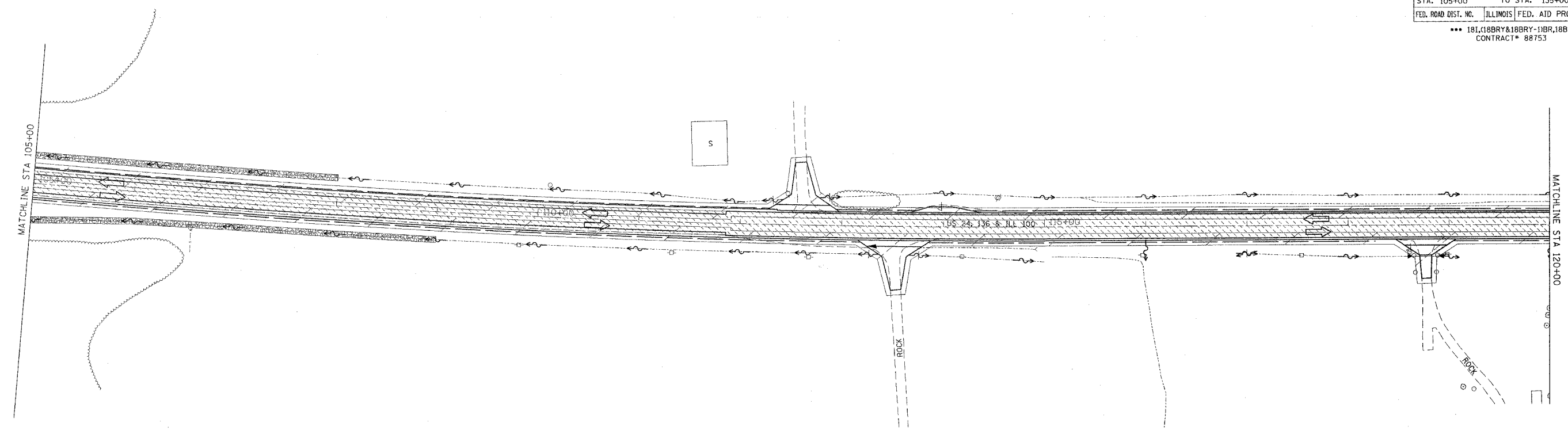
US 24 STAGING PLANS
STAGE II
STA 76+00 TO 105+00

SCALE: VERT. _____
 HORIZ. _____
 DATE **DATE**

DRAWN BY _____
 CHECKED BY _____

•DGN-ONLY*

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315/317	***	FULTON	684	102
STA. 105+00		TO STA. 135+00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
*** 181,18BRY&18BRY-1BR,18B-1 CONTRACT# 88753				



STAGING LEGEND

	STAGE CONSTRUCTION AREA
	TRAFFIC LANE TO BE USED IN THIS STAGE
	TEMPORARY CONCRETE BARRIER W/IMPACT ATTENUATOR
	PORTABLE TEMPORARY BARRIER SYSTEM

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

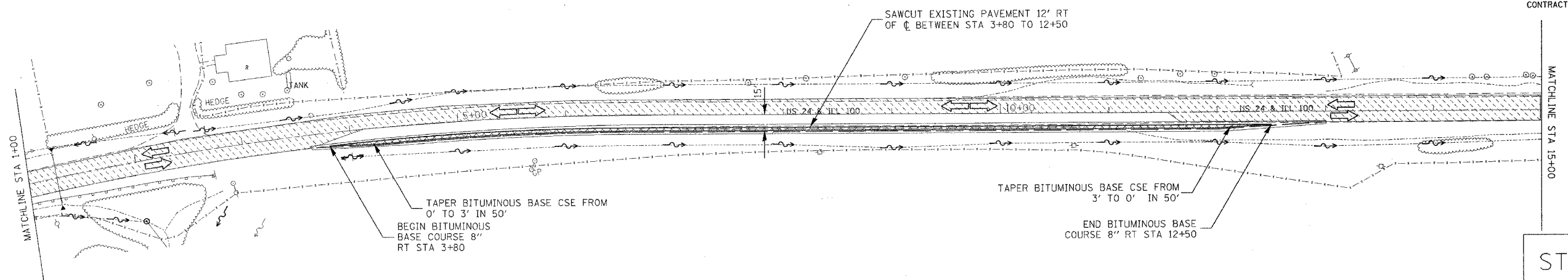
**US 24 STAGING PLANS
STAGE II
STA 105+00 TO 135+00**

SCALE: VERT. _____
HORIZ. _____
DATE ##DATE##

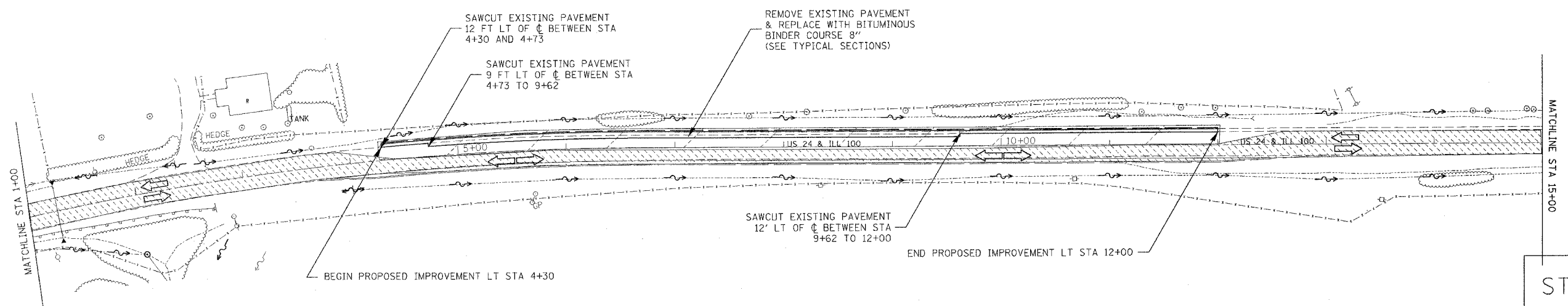
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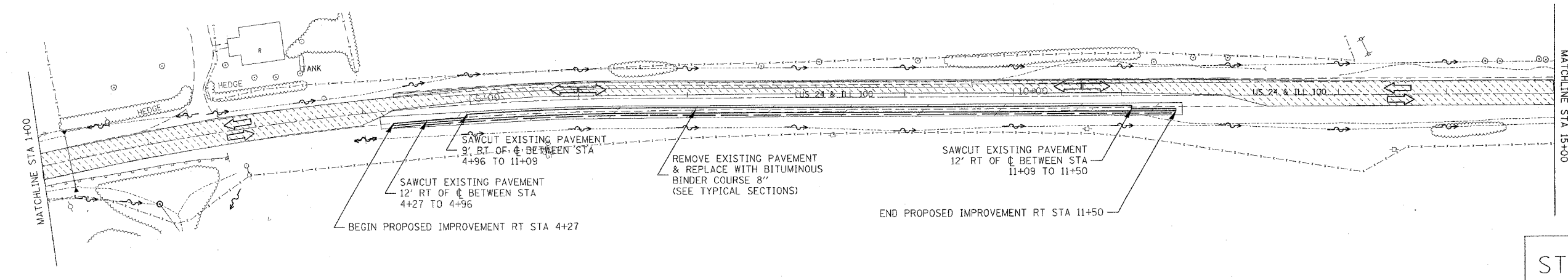
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	***	FULTON	684	103
STA. 1+00		TO STA. 15+00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
*** 181,188BRY&188BRY-1BR,188-1 CONTRACT# 88753				



STAGE IIA



STAGE IIB



STAGE IIC

STAGING LEGEND

	STAGE CONSTRUCTION AREA
	TRAFFIC LANE TO BE USED IN THIS STAGE
	TEMPORARY CONCRETE BARRIER W/IMPACT ATTENUATOR
	PORTABLE TEMPORARY BARRIER SYSTEM

REVISIONS	
NAME	DATE

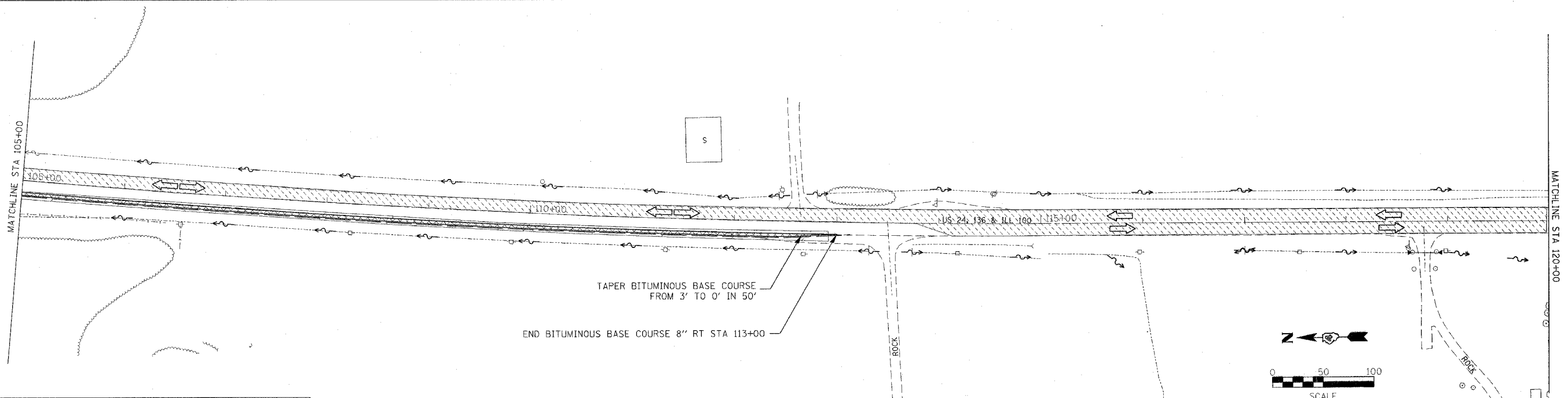
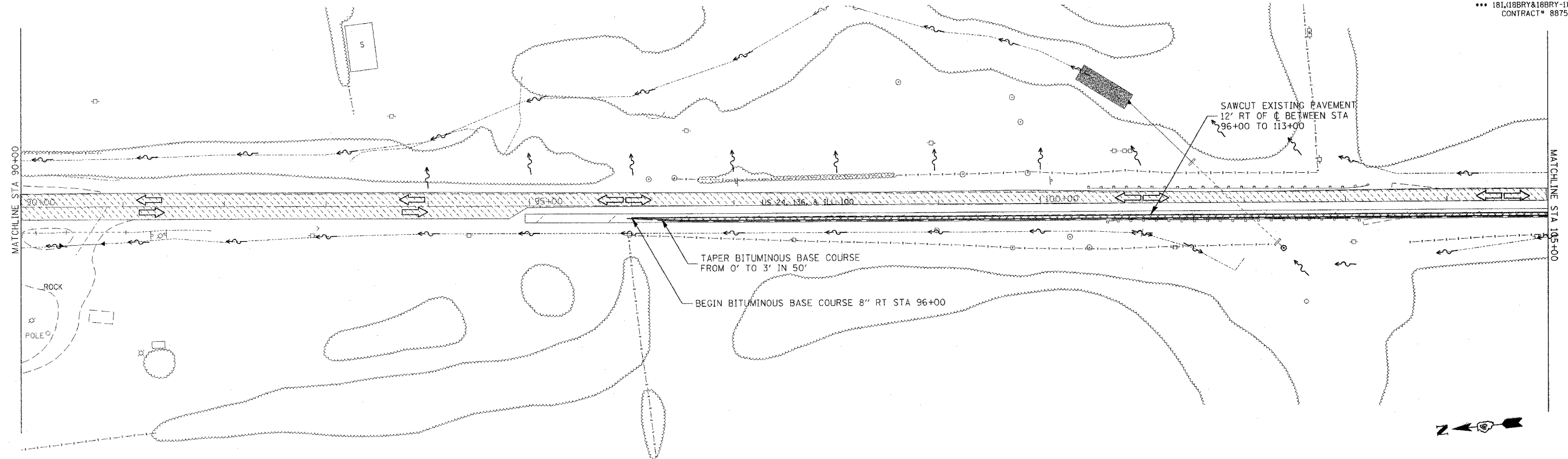
ILLINOIS DEPARTMENT OF TRANSPORTATION

US 24 STAGING PLANS
STAGE IIA, IIB, & IIC
STA 1+00 TO 15+00

VERT. SCALE: DATE: **DATE**
HORIZ. SCALE: DRAWN BY:
 CHECKED BY:

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 REFERENCE = SEE
 DON'T ONLY

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315/317	***	FULTON	684	104
STA. 90+00	TO STA. 120+00			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
*** 181.18BRY&18BRY-1BR,18B-1 CONTRACT# 88753				



STAGING LEGEND	
	STAGE CONSTRUCTION AREA
	TRAFFIC LANE TO BE USED IN THIS STAGE
	TEMPORARY CONCRETE BARRIER W/IMPACT ATTENUATOR
	PORTABLE TEMPORARY BARRIER SYSTEM

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

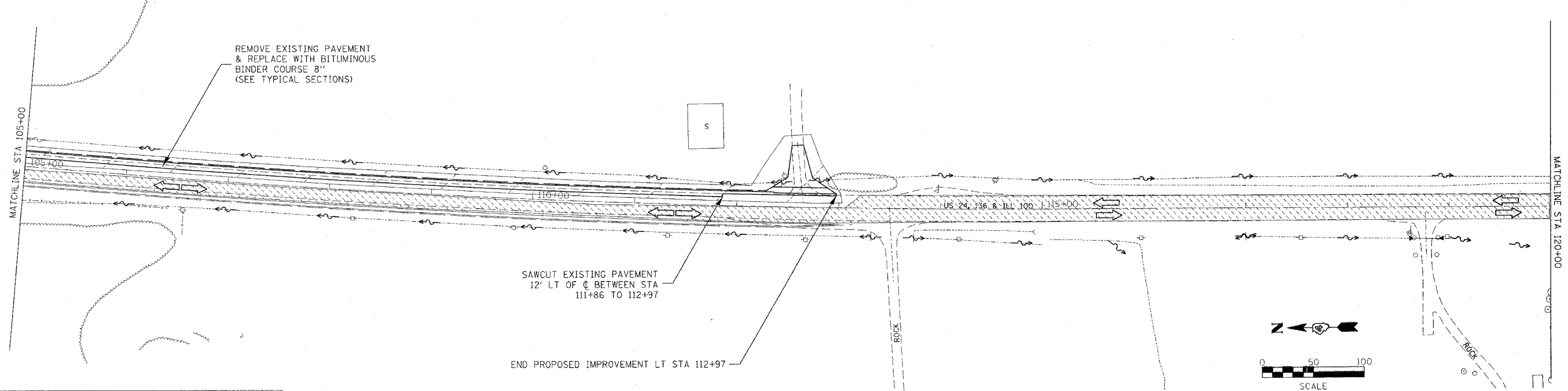
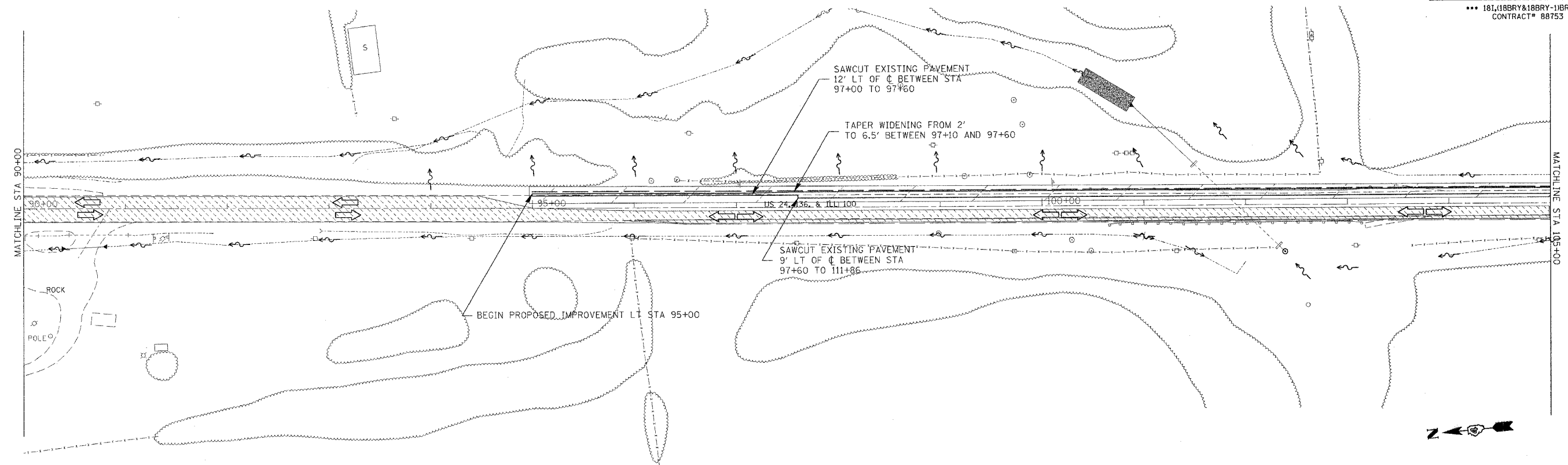
US 24 STAGING PLANS
STAGE IIA
STA 90+00 TO 120+00

SCALE: VERT. _____
 HORIZ. _____
 DATE **DATE**

DRAWN BY _____
 CHECKED BY _____

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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
SHS/317	***	FULTON	684	105
STA. 90+00	TO STA. 120+00			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
*** 181,188RY&188RY-1BR,188-1 CONTRACT# 88753				



STAGING LEGEND	
	STAGE CONSTRUCTION AREA
	TRAFFIC LANE TO BE USED IN THIS STAGE
	TEMPORARY CONCRETE BARRIER W/IMPACT ATTENUATOR
	PORTABLE TEMPORARY BARRIER SYSTEM

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

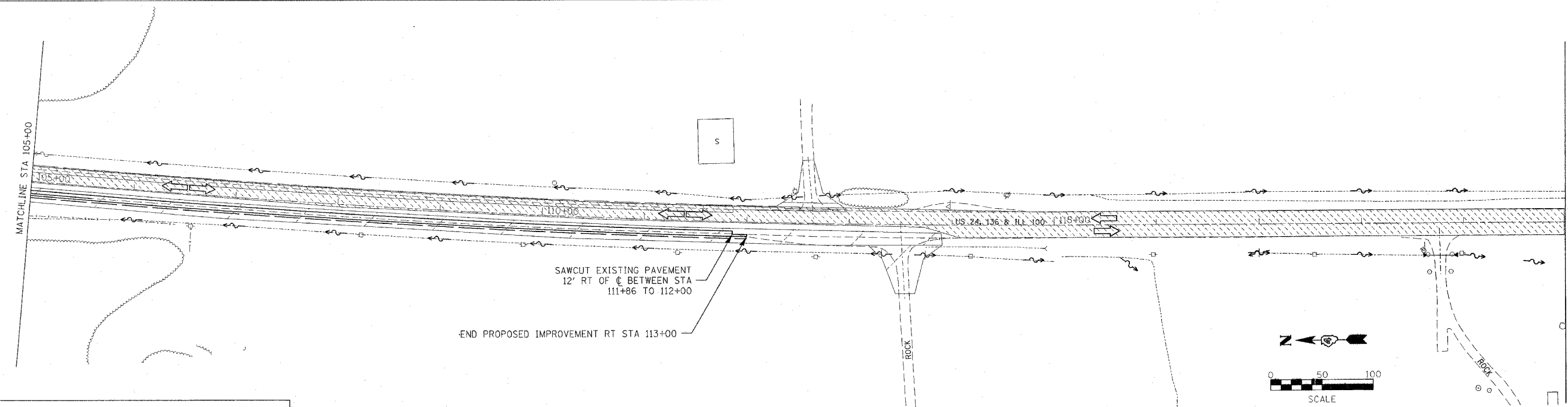
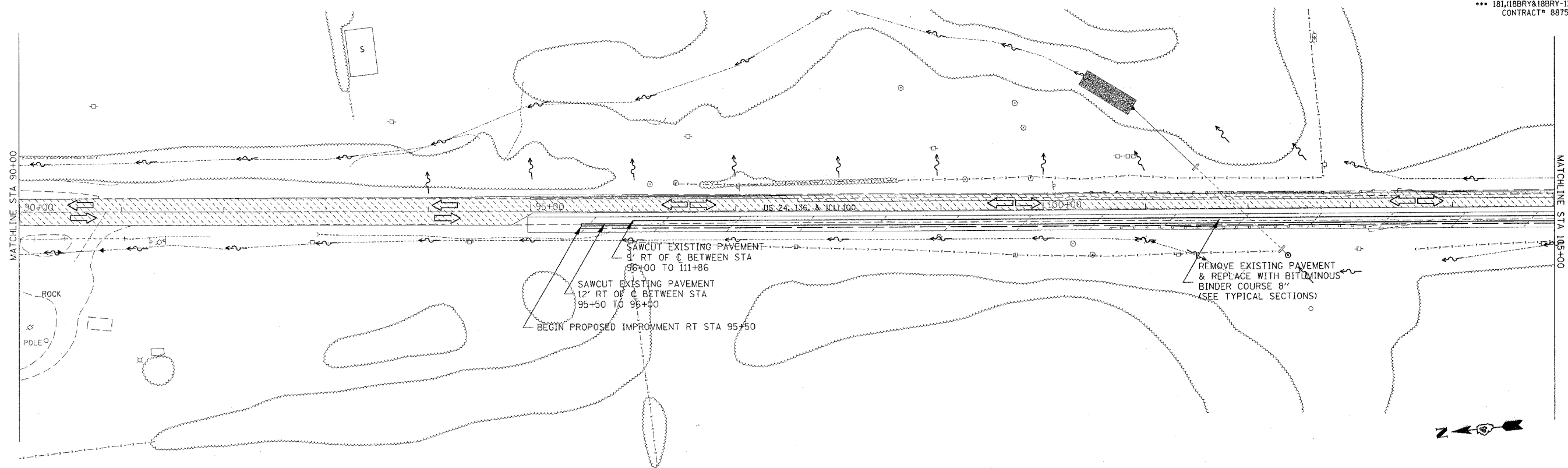
**US 24 STAGING PLANS
STAGE IIB
STA 90+00 TO 120+00**

SCALE: VERT. _____
HORIZ. _____
DATE ##DATE##

DRAWN BY _____
CHECKED BY _____

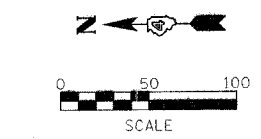
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PLOT ONLY

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315/317	***	FULTON	624	106
STA.	90+00	TO STA.	120+00	
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
*** 181,18BRY&18BRY-1BR,18B-1 CONTRACT# 88753				



STAGING LEGEND

	STAGE CONSTRUCTION AREA
	TRAFFIC LANE TO BE USED IN THIS STAGE
	TEMPORARY CONCRETE BARRIER W/IMPACT ATTENUATOR
	PORTABLE TEMPORARY BARRIER SYSTEM



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

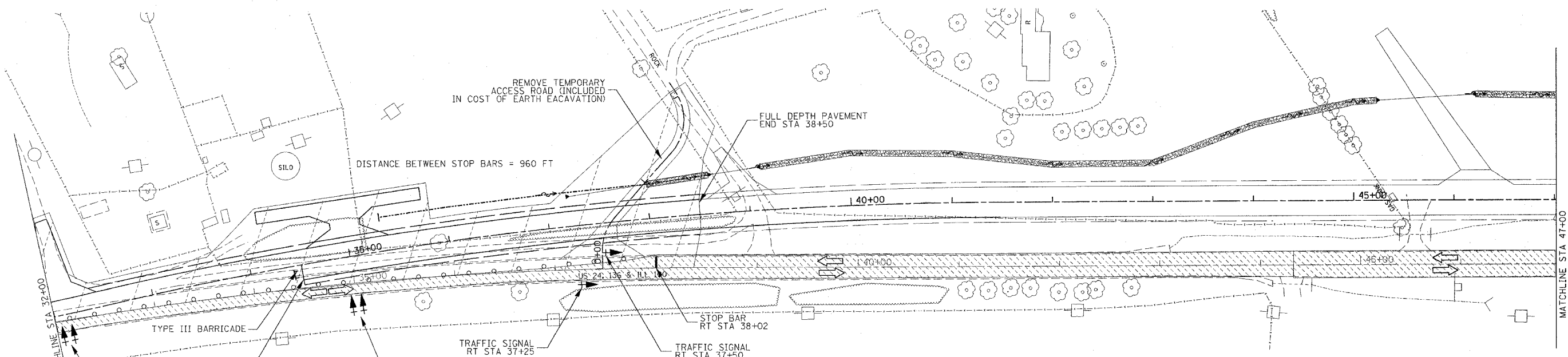
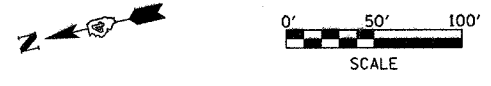
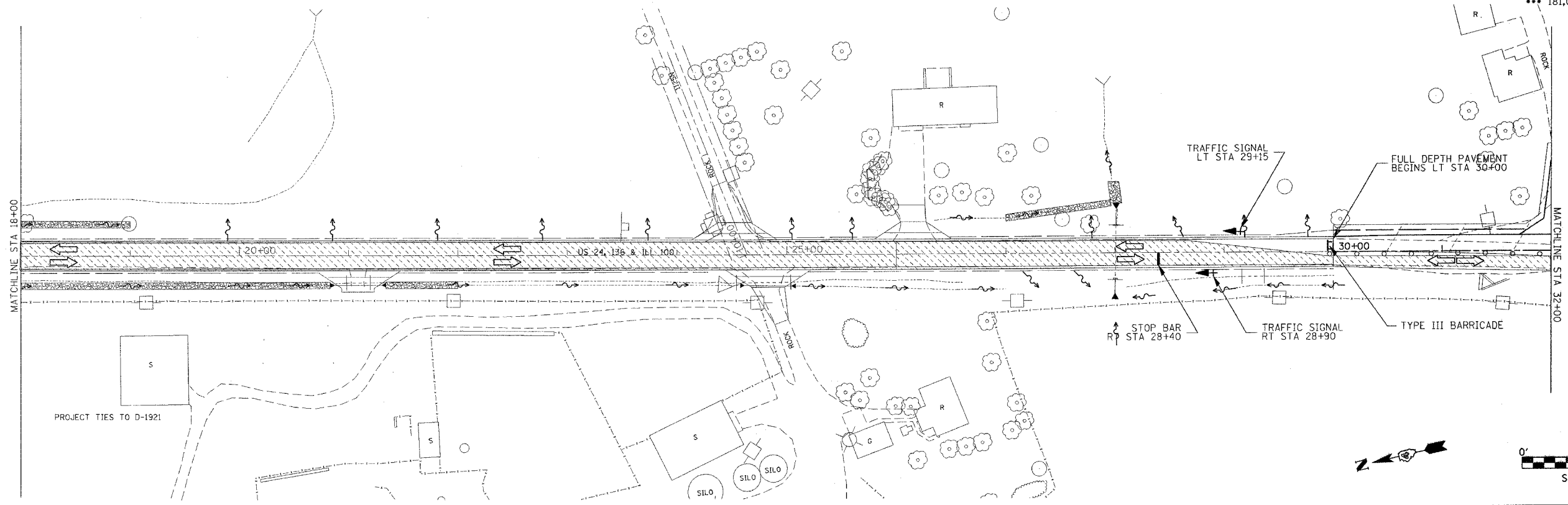
US 24 STAGING PLANS
STAGE IIC
STA 90+00 TO 120+00

SCALE: VERT. / HORIZ.
DATE ##DATE##

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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	...	FULTON	684	107
STA. 18+00		TO STA. 47+00		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
		... 181, (18BRY&18BRY-1)BR, 18B-1		



STAGING LEGEND

- STAGE CONSTRUCTION AREA
- TRAFFIC LANE TO BE USED IN THIS STAGE
- TEMPORARY CONCRETE BARRIER W/IMPACT ATTENUATOR
- PORTABLE TEMPORARY BARRIER SYSTEM

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

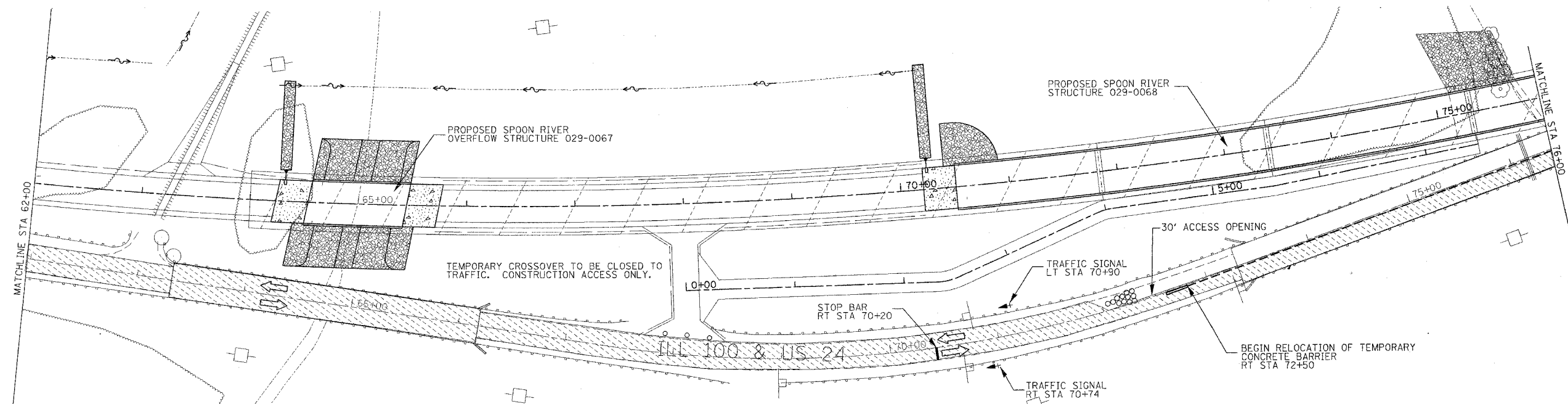
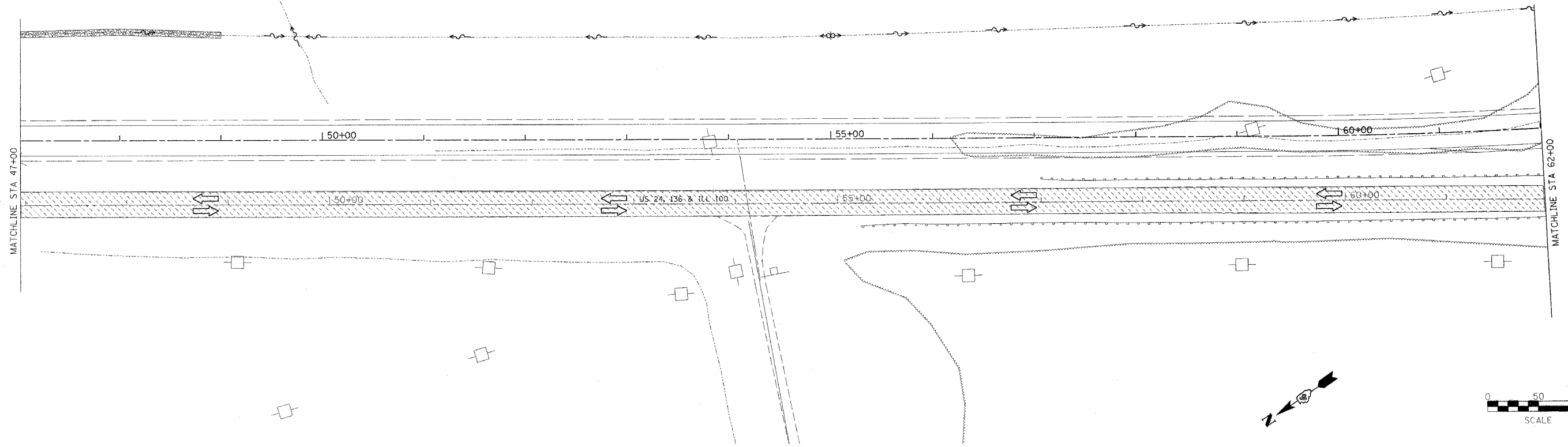
US 24 STAGING PLANS
STAGE III
STA 18+00 TO 47+00

SCALE: VERT. _____
 HORIZ. _____
 DATE _____

DRAWN BY _____
 CHECKED BY _____

PLOT DATE = 4/7/2005
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 USER NAME = hmgardner

CONTRACT NO. 88753			
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS
317	***	FULTON	684
NO.			108
STA.	TO STA.		
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT		
	*** 181,118BRY&18BRY-11BR,18B-1		



STAGING LEGEND	
	STAGE CONSTRUCTION AREA
	TRAFFIC LANE TO BE USED IN THIS STAGE
	TEMPORARY CONCRETE BARRIER W/IMPACT ATTENUATOR
	PORTABLE TEMPORARY BARRIER SYSTEM

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

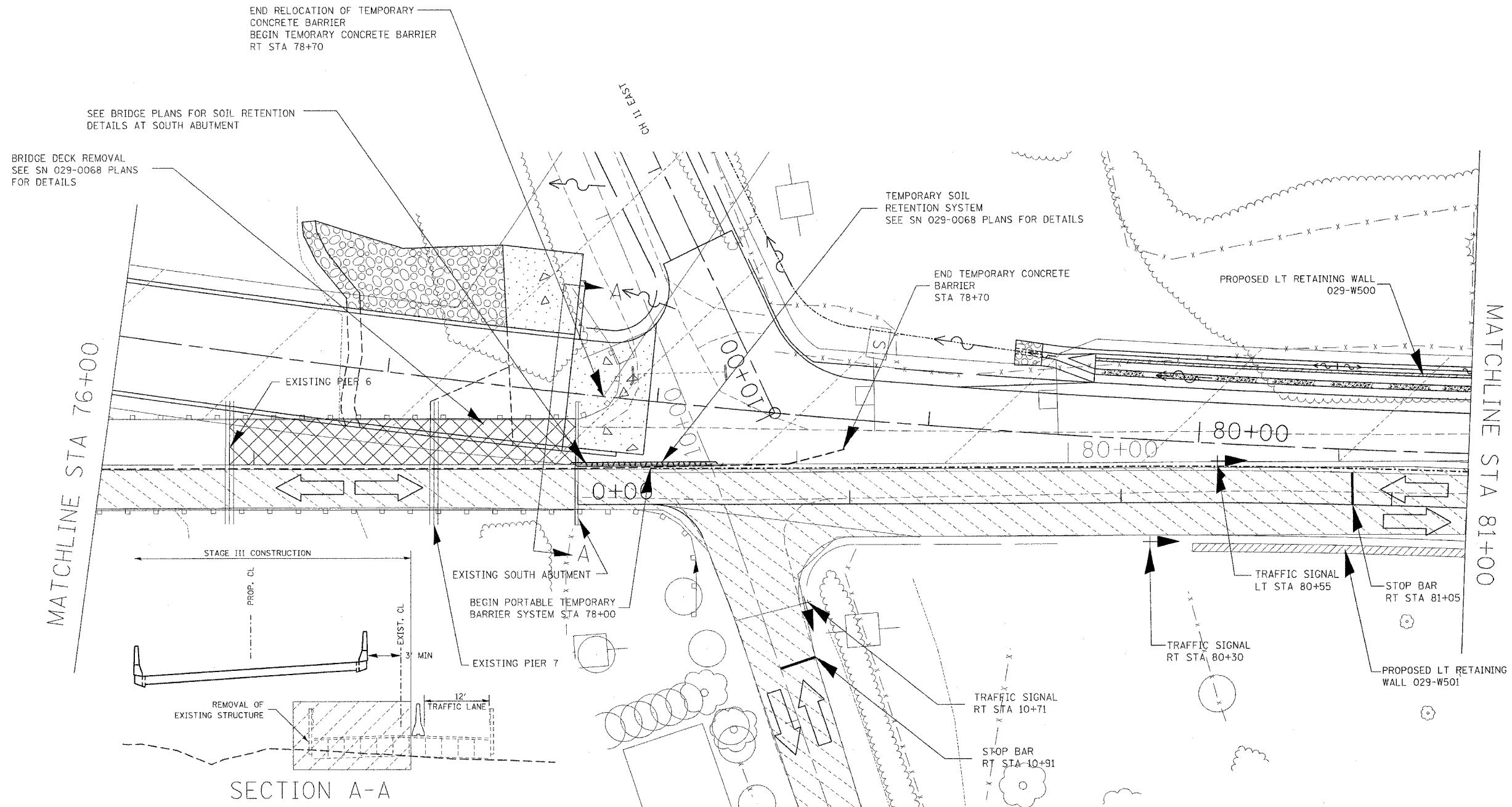
US 24 STAGING PLANS
STAGE III
STA 47+00 TO 76+00

SCALE: VERT. _____
 HORIZ. _____

DATE _____ DRAWN BY _____
 CHECKED BY _____

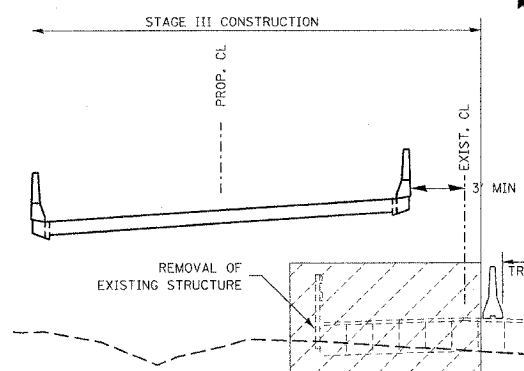
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 USER NAME = kuhfarsch

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
***			634	109
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
*** 181, (18BRY&18BRY-1)BR,18B-1				



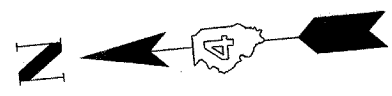
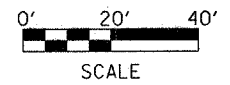
MATCHLINE STA 76+00

MATCHLINE STA 81+00



SECTION A-A

STAGING LEGEND	
	TEMP CONC BARRIER W/IMPACT ATTENUATOR
	PORTABLE TEMPORARY BARRIER SYSTEM
	STAGE CONSTRUCTION AREA
	TRAFFIC LANE



REVISIONS	
NAME	DATE

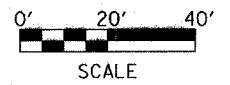
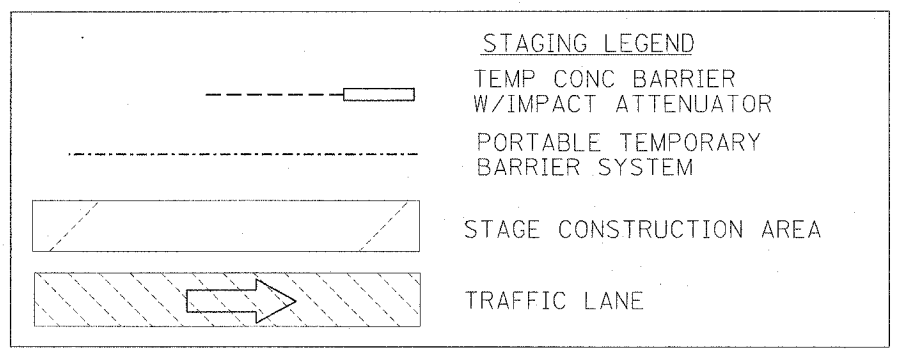
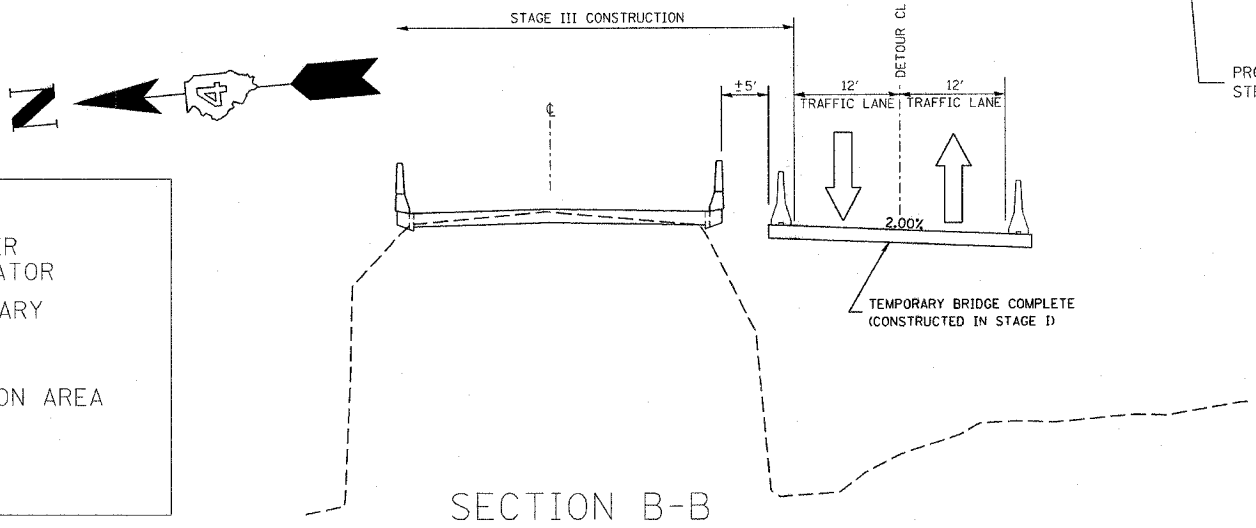
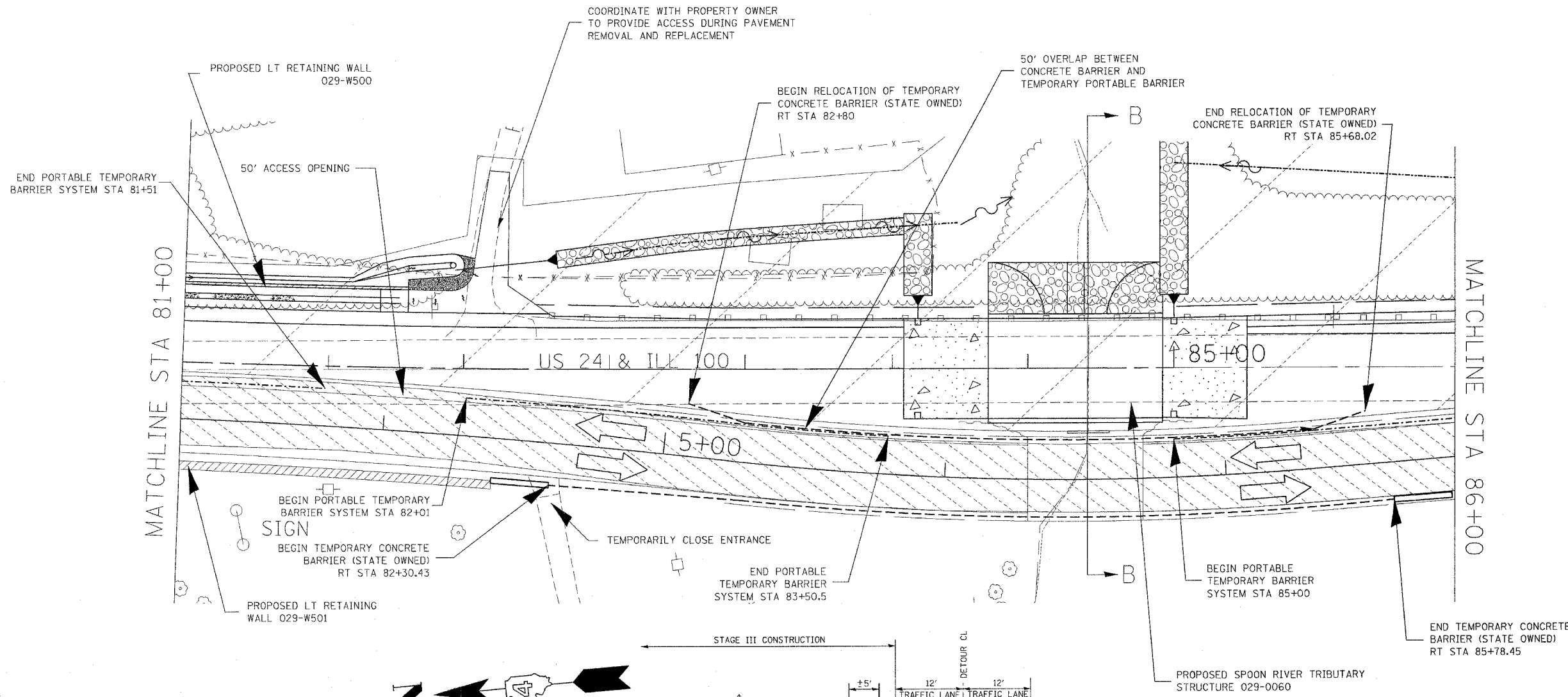
ILLINOIS DEPARTMENT OF TRANSPORTATION
 US 24 STAGING PLANS
 STAGE III
 STA 76+00 TO 81+00

SCALE: VERT. DATE
 HORIZ. DRAWN BY
 CHECKED BY

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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	***	FULTON	684	110
STA. 81+00	TO STA. 86+00			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

*** 181, (18BRY&18BRY-1)BR, 18B-1



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

US 24 STAGING PLANS
STAGE III
STA 81+00 TO 86+00

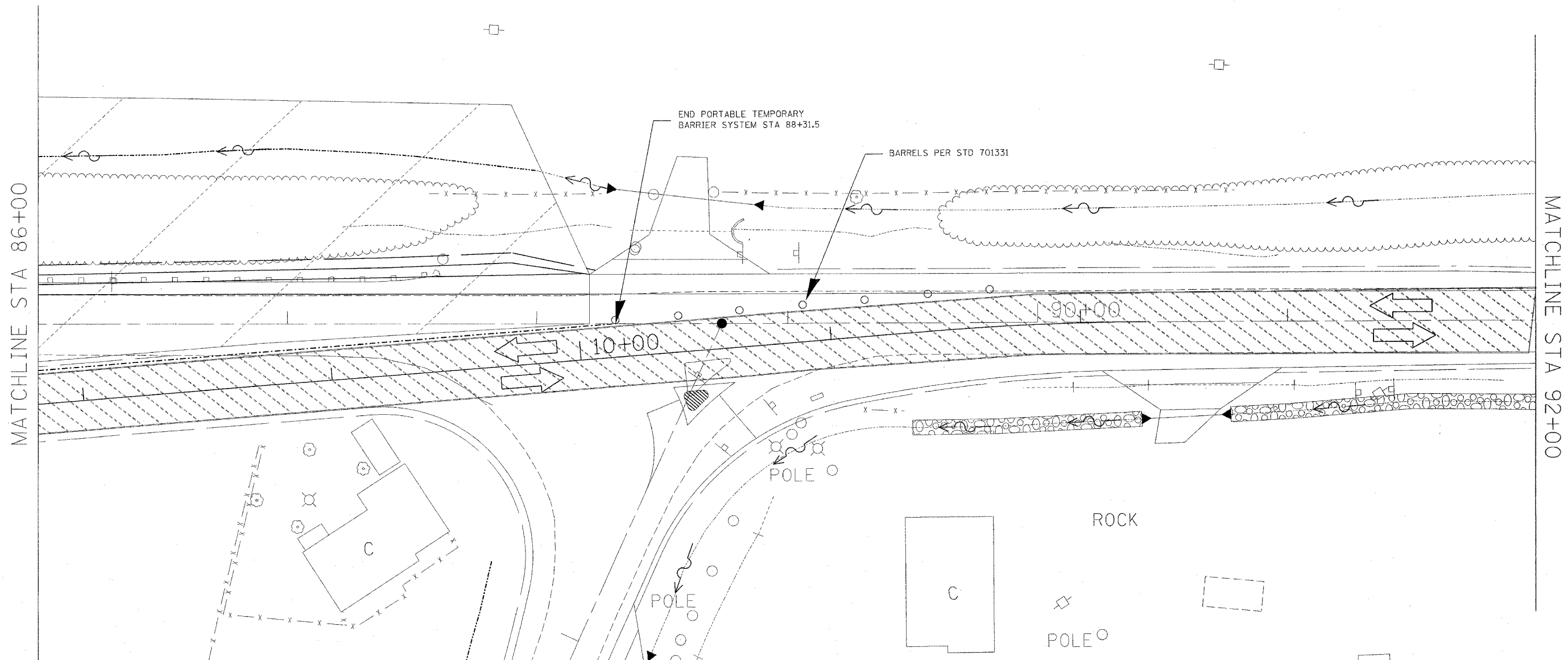
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DATE _____ DRAWN BY _____
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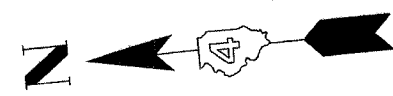
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F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
XXX	FULTON		684	111
STA. 86+00		TO STA. 92+00		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

••• 181,18BRY&18BRY-1BR,18B-1



STAGING LEGEND	
	TEMP CONC BARRIER W/IMPACT ATTENUATOR
	PORTABLE TEMPORARY BARRIER SYSTEM
	STAGE CONSTRUCTION AREA
	TRAFFIC LANE

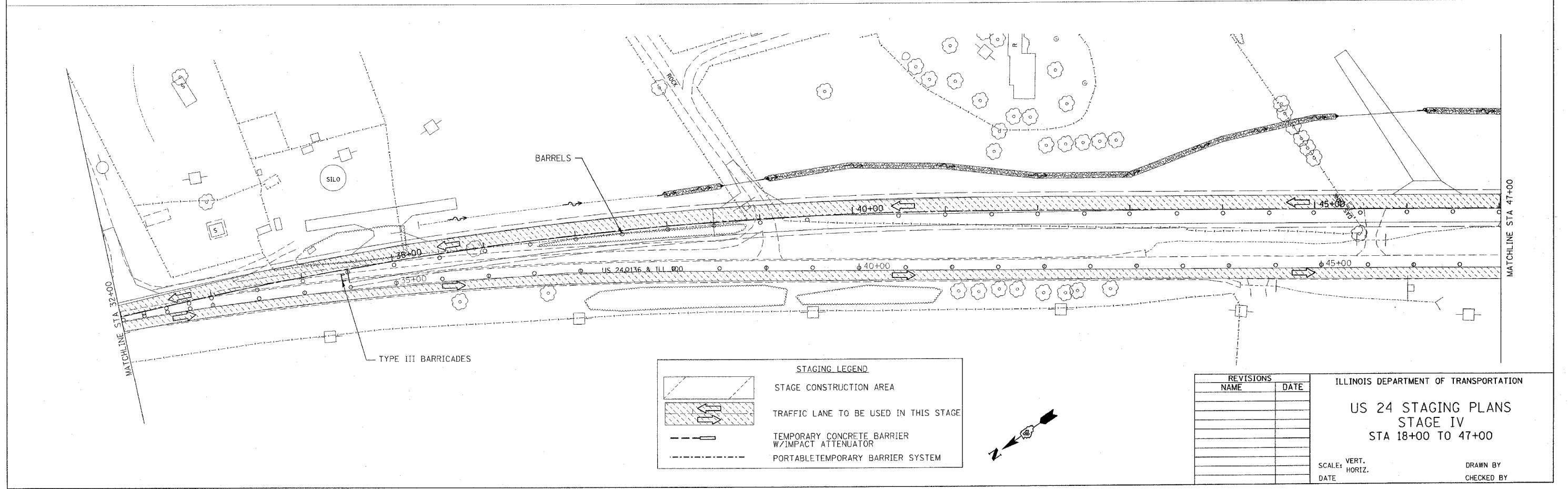
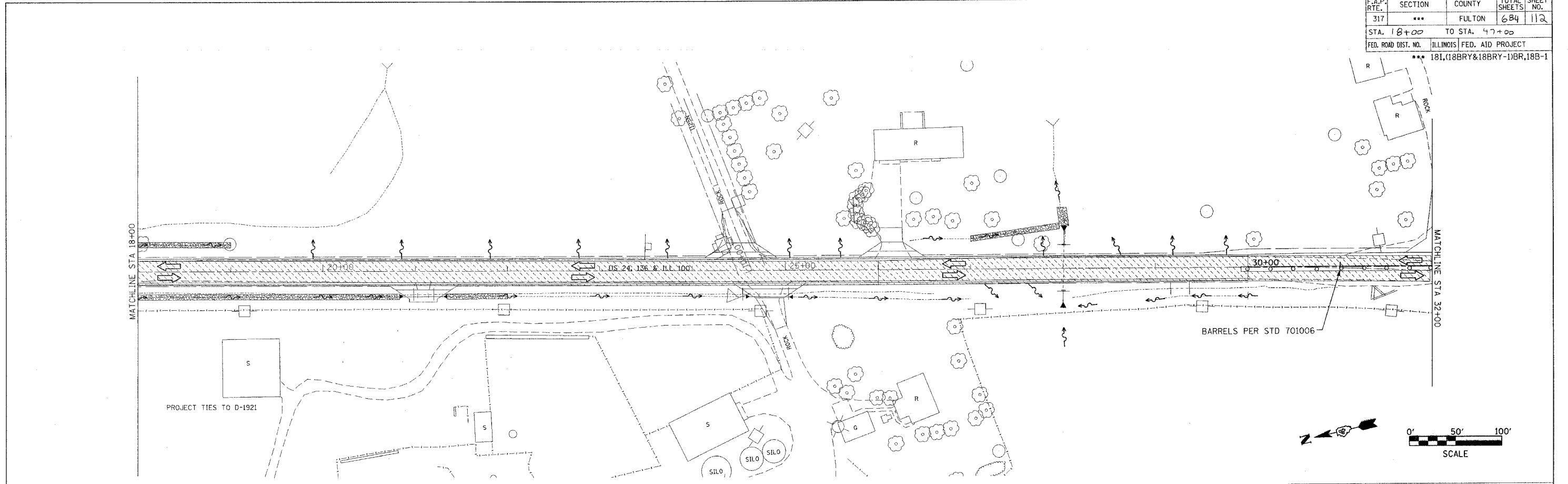


REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 US 24 STAGING PLANS
 STAGE III
 STA 86+00 TO 92+00
 SCALE: VERT. _____
 DATE: _____
 DRAWN BY _____
 CHECKED BY _____

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F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	***	FULTON	684	112
STA. 18+00		TO STA. 47+00		
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			
***	181, (18BRY&18BRY-1)BR, 18B-1			



STAGING LEGEND

	STAGE CONSTRUCTION AREA
	TRAFFIC LANE TO BE USED IN THIS STAGE
	TEMPORARY CONCRETE BARRIER W/IMPACT ATTENUATOR
	PORTABLE TEMPORARY BARRIER SYSTEM

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

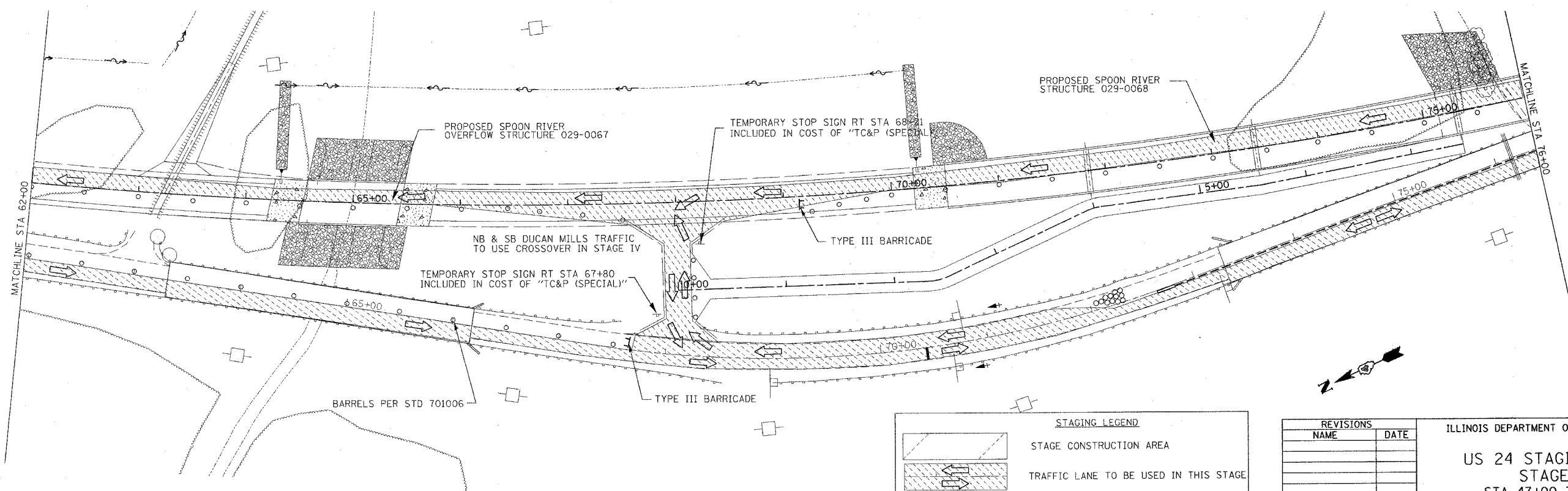
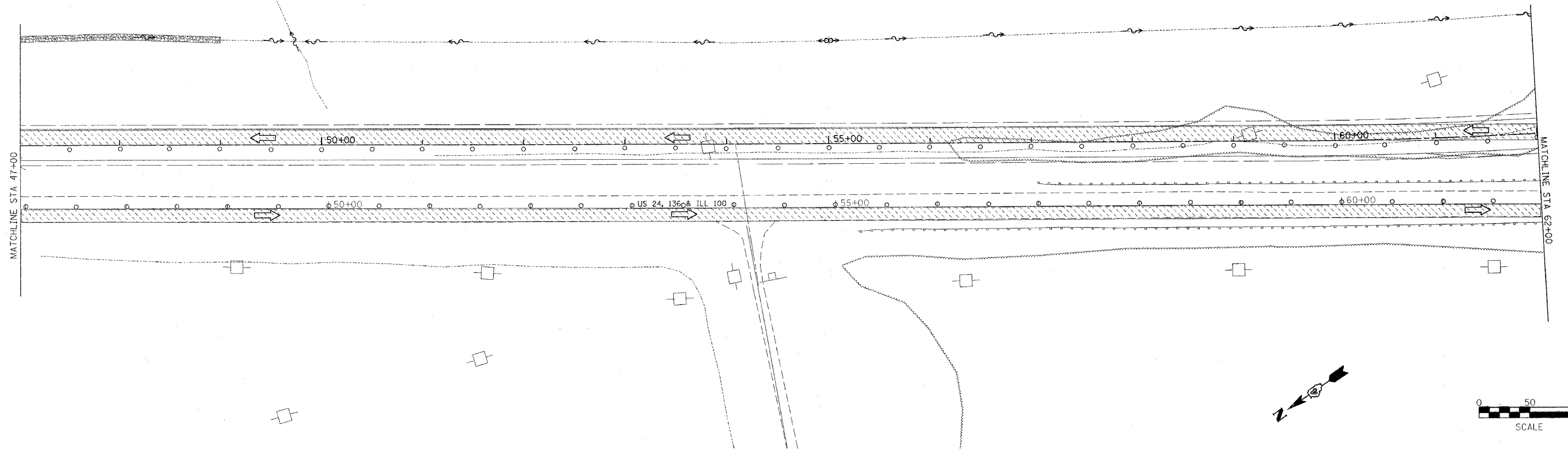
**US 24 STAGING PLANS
STAGE IV
STA 18+00 TO 47+00**

SCALE: VERT. _____
HORIZ. _____

DRAWN BY _____
CHECKED BY _____

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 USER NAME = heggardm

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	***	FULTON	684	113
STA. 47+00 TO STA. 76+00				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				
*** 181,188BRY&188BRY-1DBR,188-1				



STAGING LEGEND

	STAGE CONSTRUCTION AREA
	TRAFFIC LANE TO BE USED IN THIS STAGE
	TEMPORARY CONCRETE BARRIER W/IMPACT ATTENUATOR
	PORTABLE TEMPORARY BARRIER SYSTEM

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

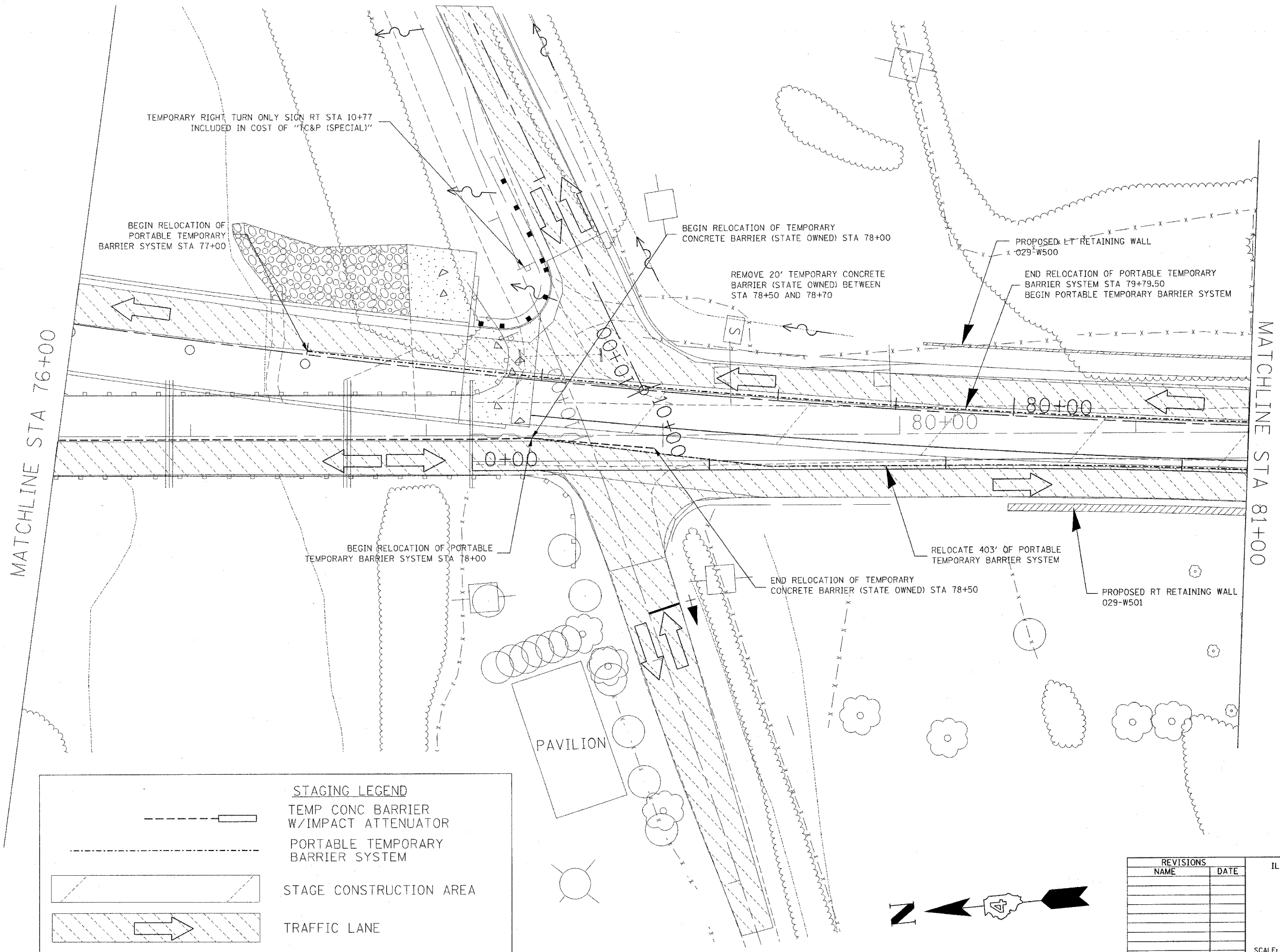
**US 24 STAGING PLANS
STAGE IV
STA 47+00 TO 76+00**

SCALE: VERT. _____
HORIZ. _____

DATE _____ DRAWN BY _____
CHECKED BY _____

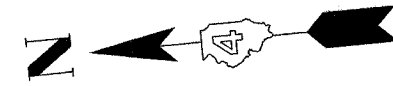
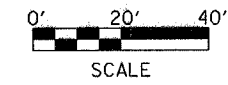
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USER NAME = hngland

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
44*	Fulton		684	114
STA. 76+00		TO STA. 81+00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
••• 181,(18BRY&18BRY-1)BR,18B-1				



STAGING LEGEND

- TEMP CONC BARRIER W/IMPACT ATTENUATOR
- PORTABLE TEMPORARY BARRIER SYSTEM
- STAGE CONSTRUCTION AREA
- TRAFFIC LANE



REVISIONS	
NAME	DATE

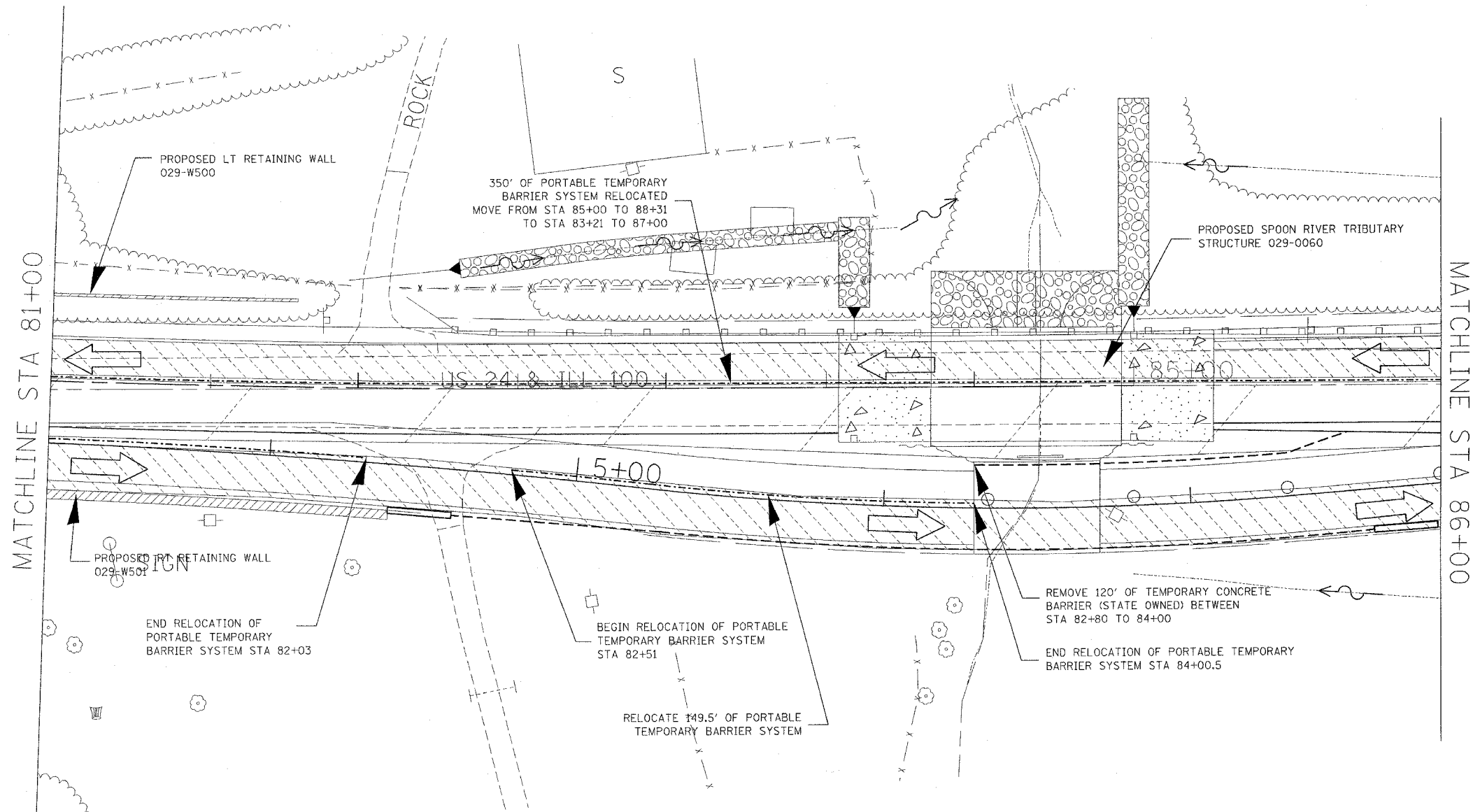
ILLINOIS DEPARTMENT OF TRANSPORTATION
**US 24 STAGING PLANS
 STAGE IV
 STA 76+00 TO 81+00**

SCALE: VERT. _____
 HORIZ. _____
 DATE _____

DRAWN BY _____
 CHECKED BY _____

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 USER NAME = hggjenn

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	***	FULTON	694	115
STA. 81+00		TO STA. 86+00		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
*** 181,18BRY&18BRY-1BR,18B-1				



STAGING LEGEND

- TEMP CONC BARRIER W/IMPACT ATTENUATOR
- PORTABLE TEMPORARY BARRIER SYSTEM
- STAGE CONSTRUCTION AREA
- TRAFFIC LANE



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

US 24 STAGING PLANS
STAGE IV
STA 81+00 TO 86+00

SCALE: VERT. _____
HORIZ. _____





DATE _____ DRAWN BY _____
CHECKED BY _____

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USER NAME = haagsand

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
YY	FULTON		684	116
STA. 86+00		TO STA. 92+00		
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			

••• 181,188RY&188RY-1BR,188-1

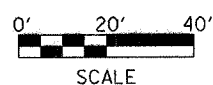
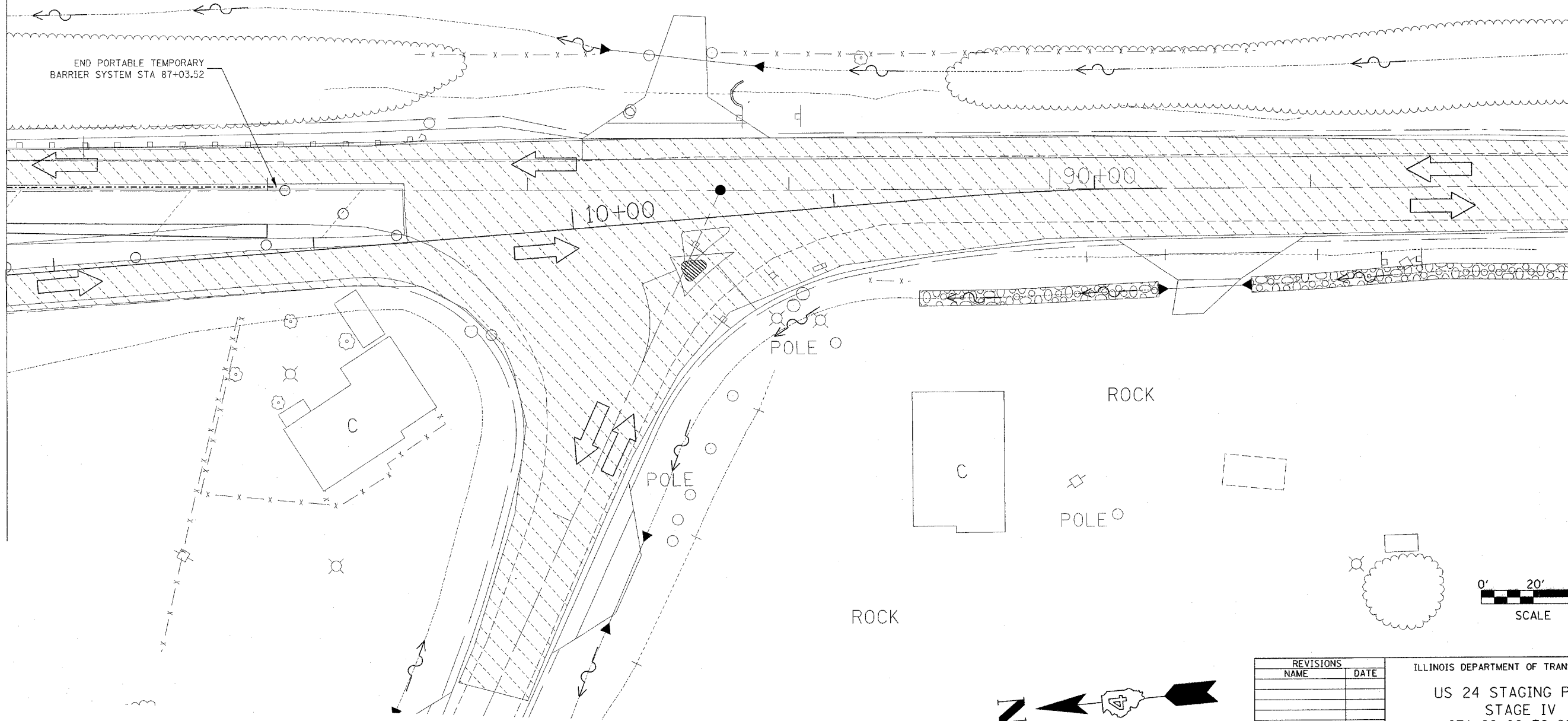
STAGING LEGEND

-  TEMP CONC BARRIER W/IMPACT ATTENUATOR
-  PORTABLE TEMPORARY BARRIER SYSTEM
-  STAGE CONSTRUCTION AREA
-  TRAFFIC LANE

MATCHLINE STA 86+00

MATCHLINE STA 92+00

END PORTABLE TEMPORARY BARRIER SYSTEM STA 87+03.52



REVISIONS	
NAME	DATE

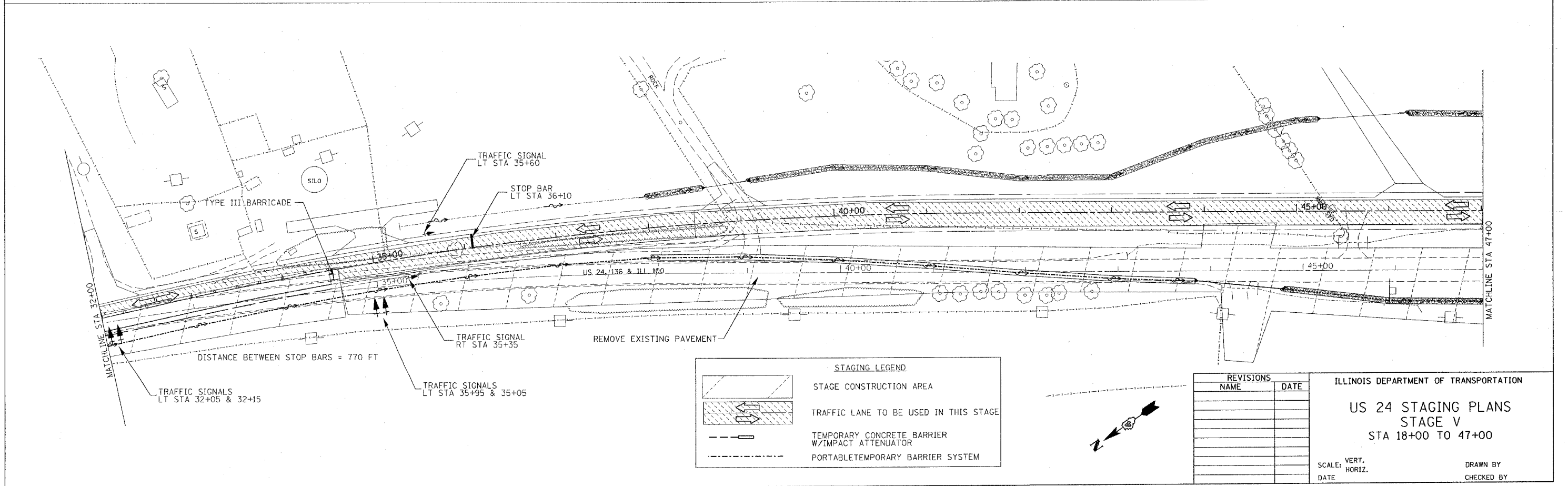
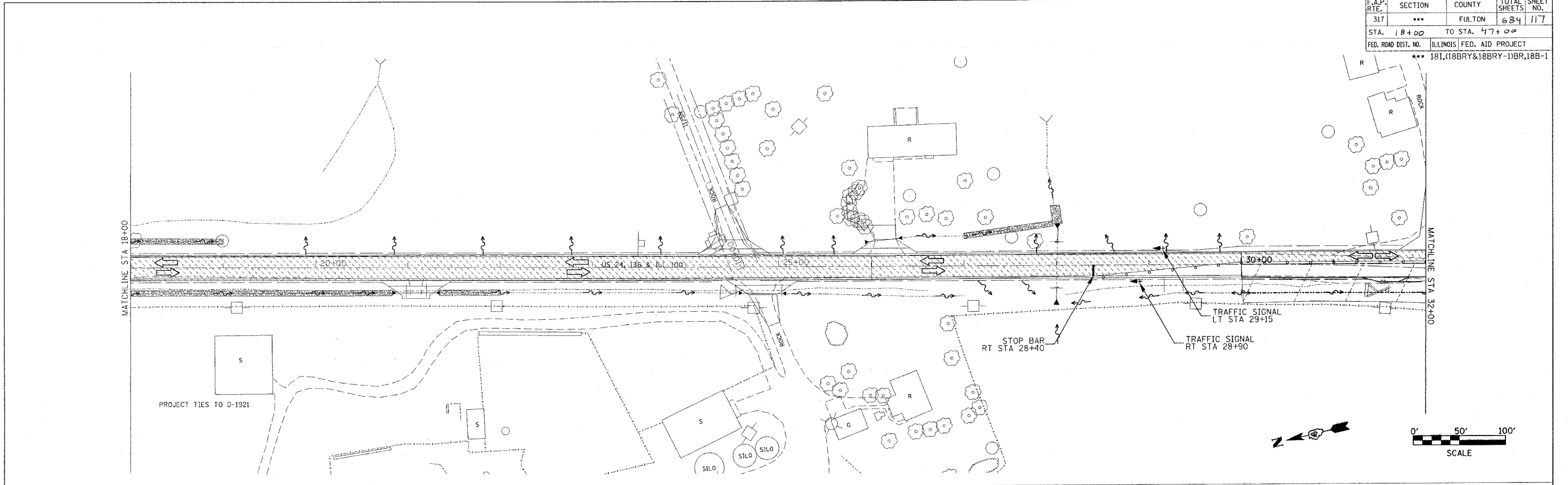
ILLINOIS DEPARTMENT OF TRANSPORTATION
US 24 STAGING PLANS
STAGE IV
STA 86+00 TO 92+00

SCALE: VERT. _____
 HORIZ. _____
 DATE _____

DRAWN BY _____
 CHECKED BY _____

PLOT DATE = 4/7/2005
 FILE NAME = c:\p10\188ry\us24\staging\plans\stg3185.dgn
 PLOT SCALE = 20.0000 / IN.
 USER NAME = hgggand

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	***	FULTON	684	117
STA. 18+00		TO STA. 47+00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
*** 181, (18BRY&18BRY-1)BR, 18B-1				



STAGING LEGEND

	STAGE CONSTRUCTION AREA
	TRAFFIC LANE TO BE USED IN THIS STAGE
	TEMPORARY CONCRETE BARRIER W/IMPACT ATTENUATOR
	PORTABLE TEMPORARY BARRIER SYSTEM

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

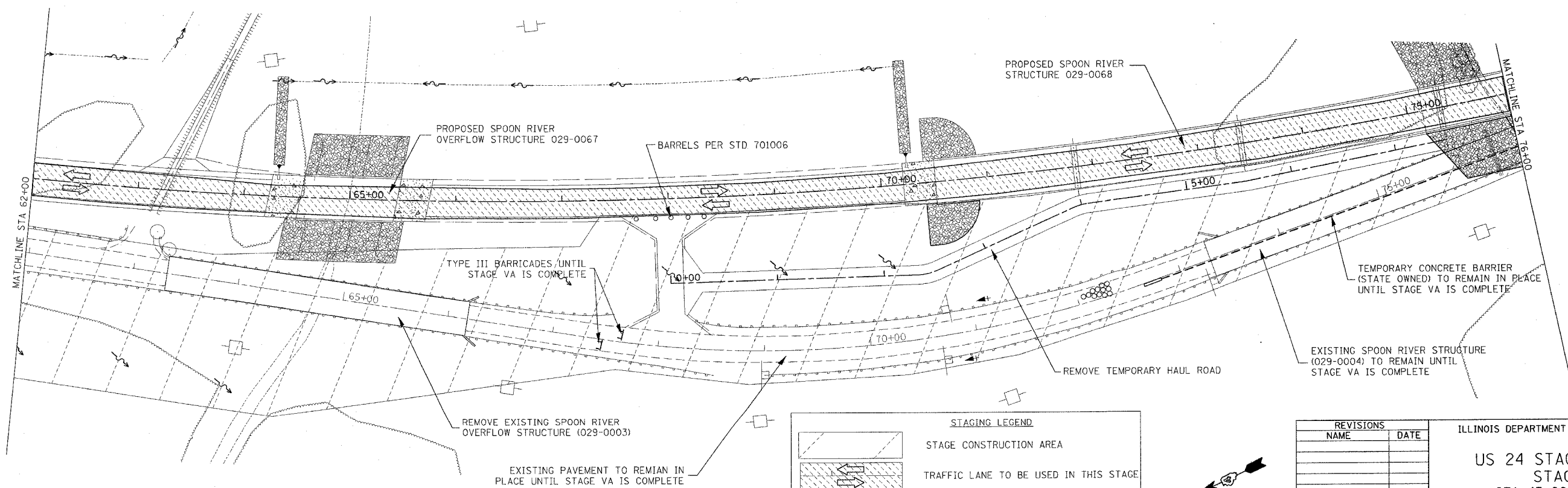
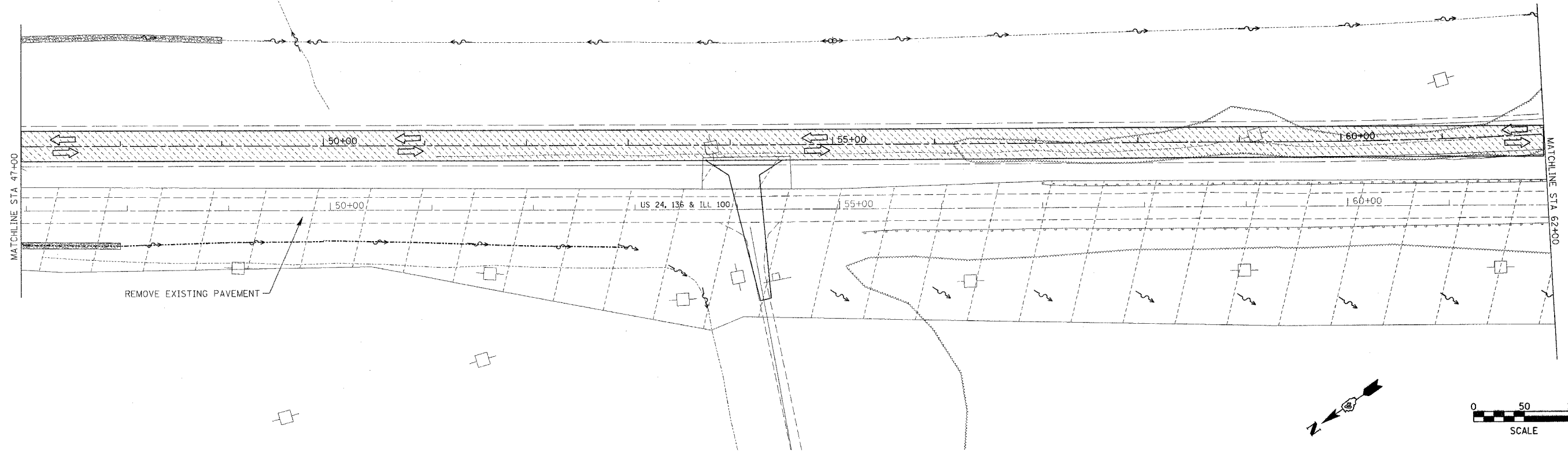
US 24 STAGING PLANS
STAGE V
STA 18+00 TO 47+00

SCALE: VERT. _____
 HORIZ. _____
 DATE _____

DRAWN BY _____
 CHECKED BY _____

PLOT DATE = 4/17/2005
 FILE NAME = c:\p\proj\sta\us24staging\plan_v\staging\stagev\us24staging\stagev.dgn
 PLOT SCALE = 500/20000 = 1/40
 USER NAME = haggard

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	***	FULTON	684	118
STA. 47+00		TO STA. 76+00		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
*** 181, (18BRY&18BRY-1)BR, 18B-1				



STAGING LEGEND

	STAGE CONSTRUCTION AREA
	TRAFFIC LANE TO BE USED IN THIS STAGE
	TEMPORARY CONCRETE BARRIER W/IMPACT ATTENUATOR
	PORTABLE TEMPORARY BARRIER SYSTEM

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

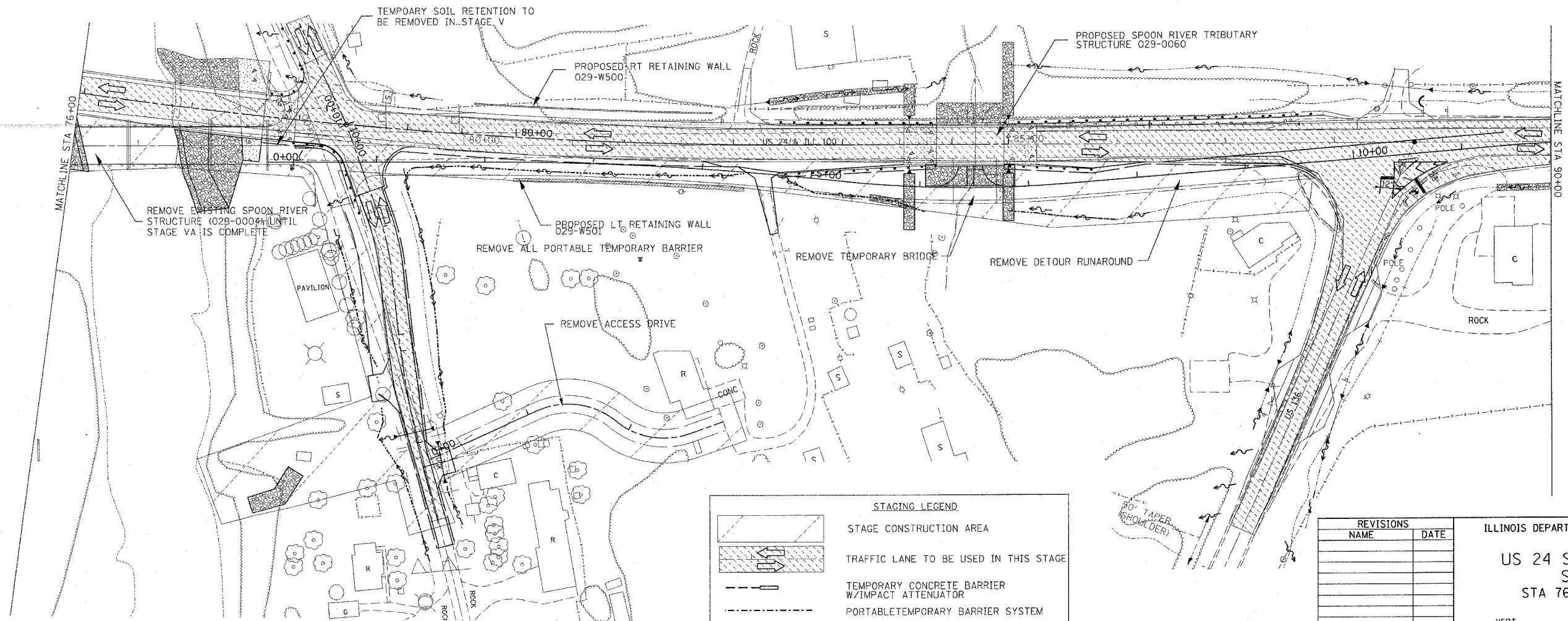
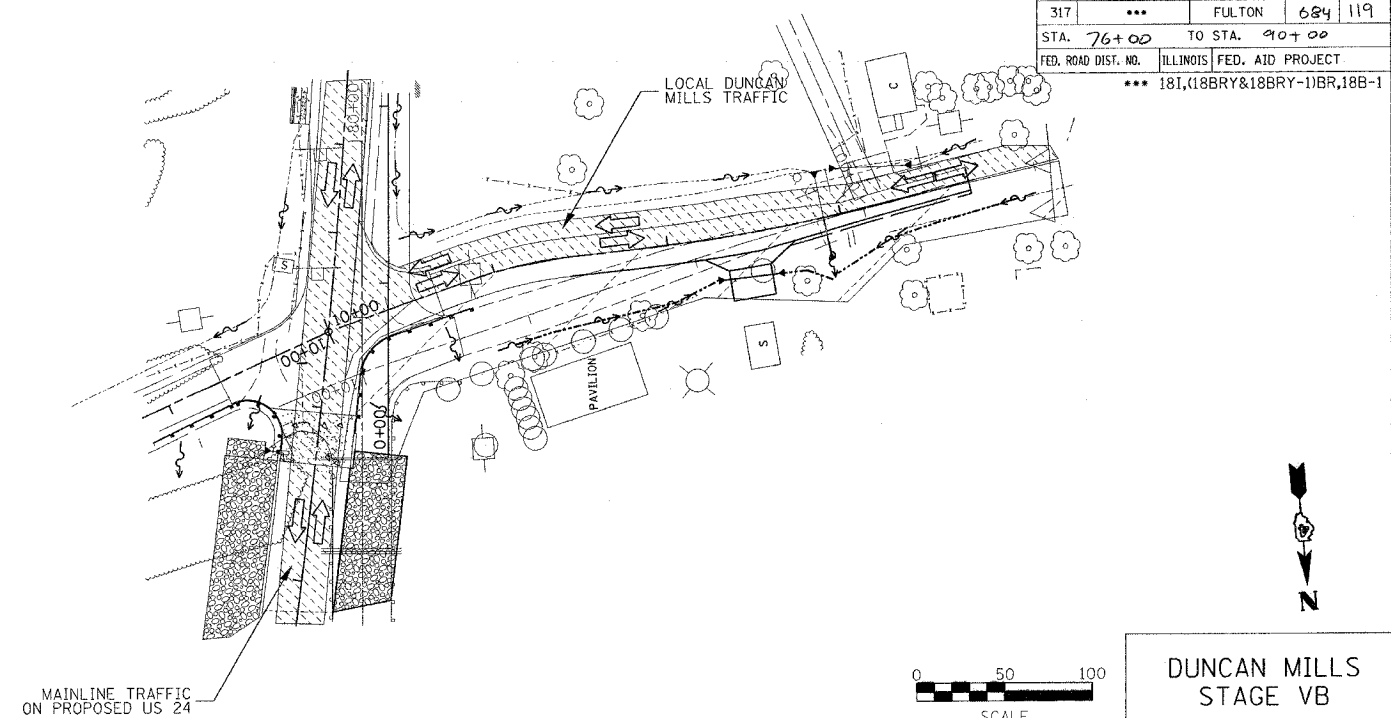
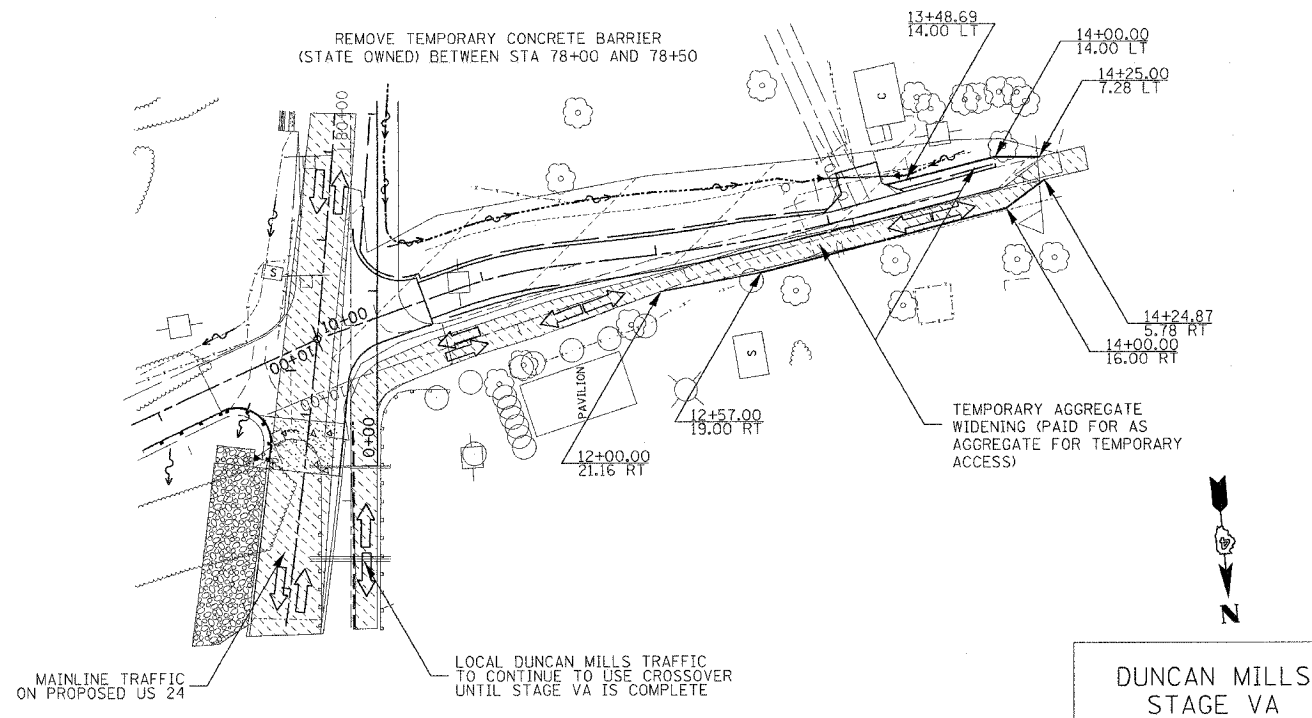
US 24 STAGING PLANS
STAGE V
STA 47+00 TO 76+00

SCALE: VERT. _____
 DATE: _____

DRAWN BY _____
 CHECKED BY _____

PLOT DATE = 4/7/2005
 FILE NAME = c:\p\proj\us24\spoon.ph_2\staging\stage_v\sa348.dgn
 PLOT SCALE = 50:1
 USER NAME = haggard

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	...	FULTON	684	119
STA. 76+00		TO STA. 90+00		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
... 181, (18BRY&18BRY-1)BR, 18B-1				



STAGING LEGEND

	STAGE CONSTRUCTION AREA
	TRAFFIC LANE TO BE USED IN THIS STAGE
	TEMPORARY CONCRETE BARRIER W/IMPACT ATTENUATOR
	PORTABLE TEMPORARY BARRIER SYSTEM

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

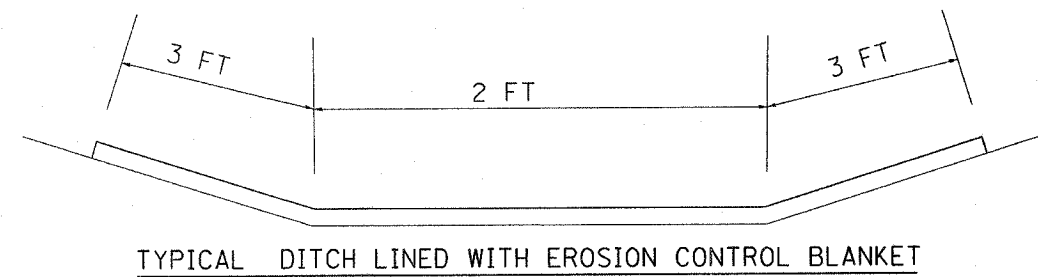
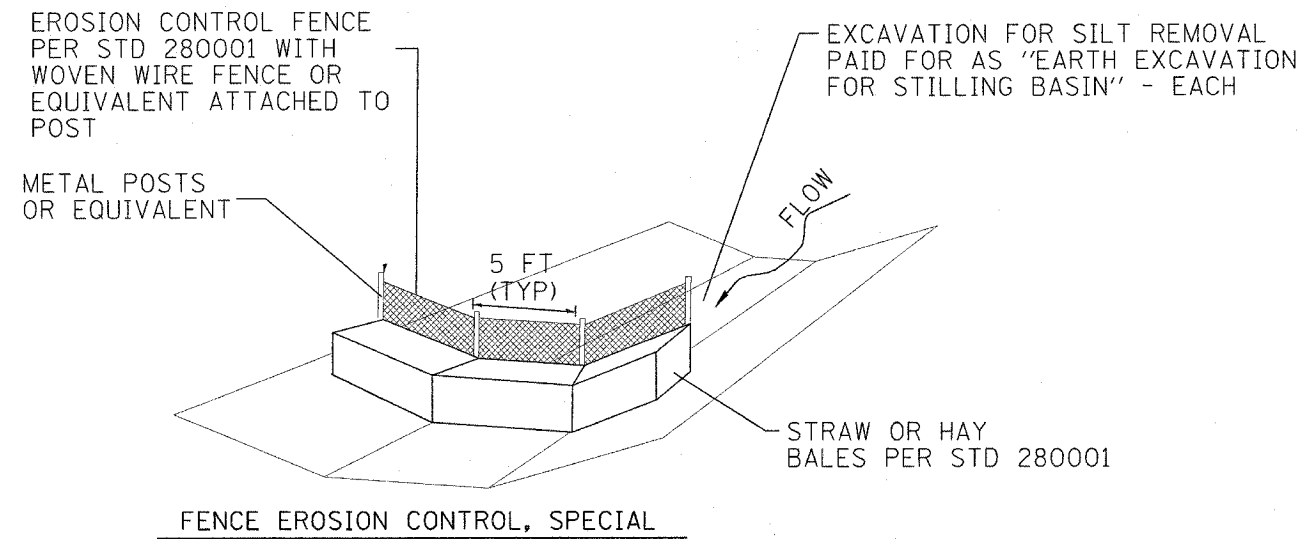
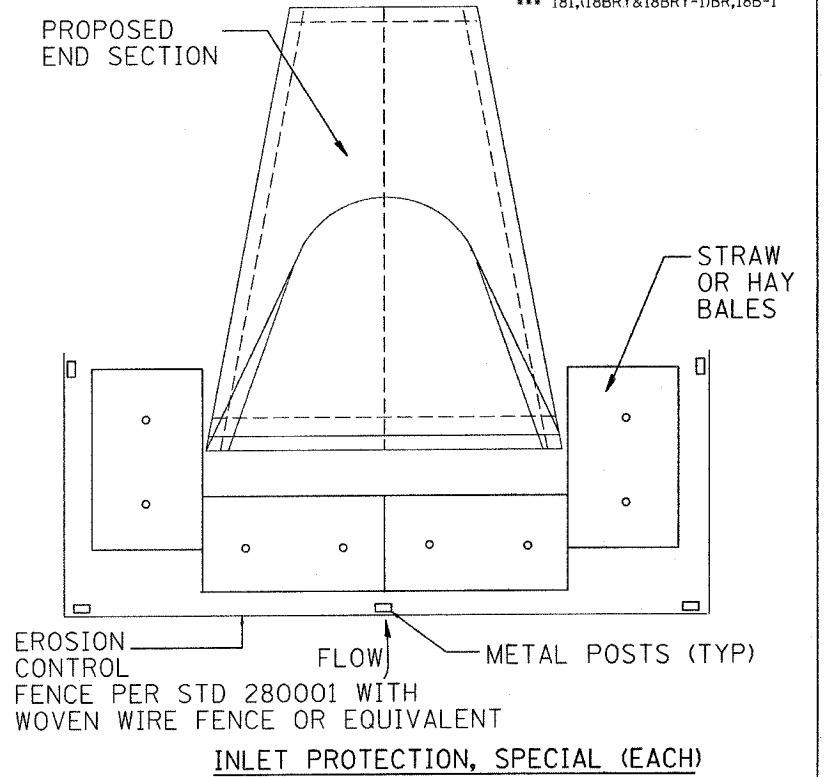
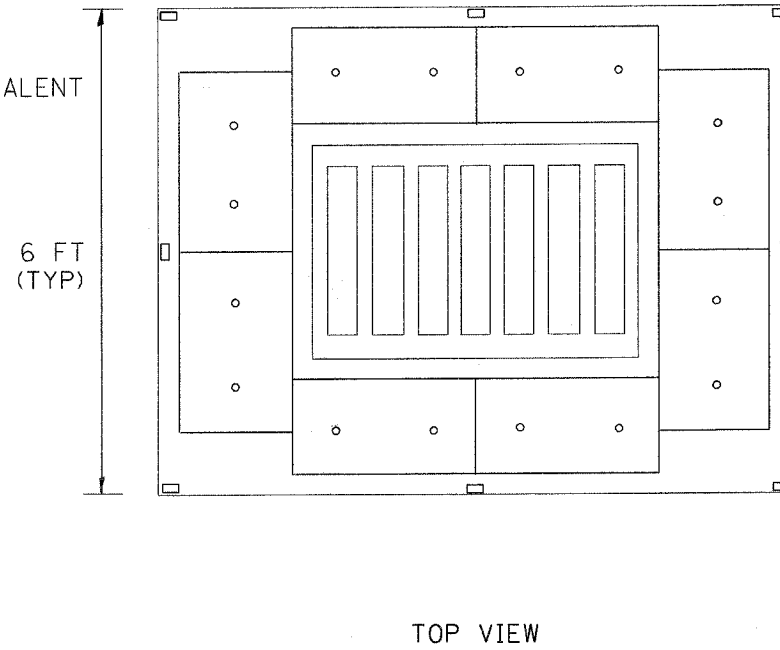
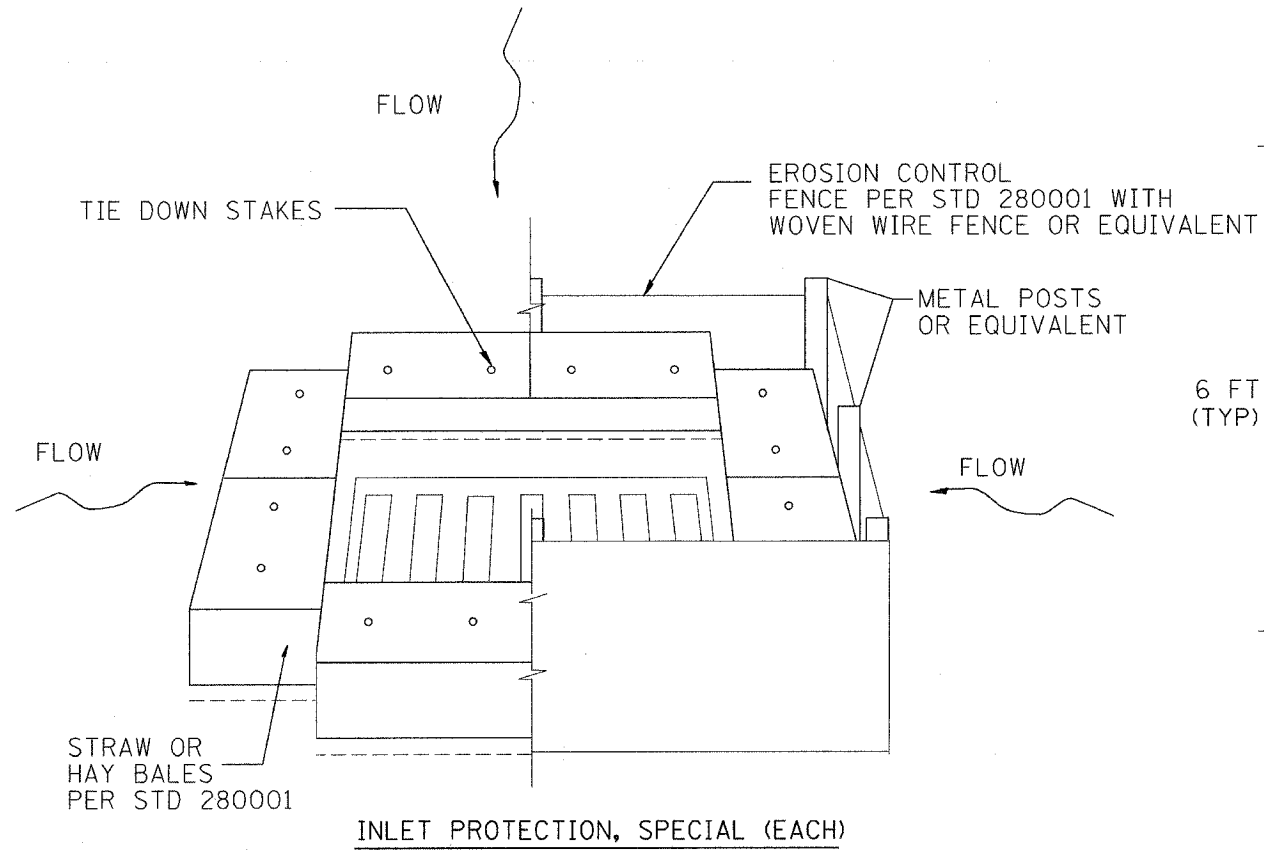
US 24 STAGING PLANS
STAGE V
STA 76+00 TO 90+00

SCALE: VERT. / HORIZ.
DATE

DRAWN BY
CHECKED BY

PLOT DATE = 4/7/2005
FILE NAME = c:\p\projects\us24\spoon.plt...2\staging\sheet3485.dgn
PLOT SCALE = 50.0000 / 1"
USER NAME = Regisrard

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	***	FULTON	604	120
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
*** 181, (18BRY&18BRY-1)BR, 18B-1				



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
EROSION CONTROL DETAILS
 SCALE: VERT. _____
 DATE _____
 DRAWN BY _____
 CHECKED BY _____

PLOT DATE = 4/7/2005
 FILE NAME = c:\projects\us24\scen.ph-2\erosecon\erosecon.dgn
 SCALE = 1/8" = 1'-0"
 USER = jraggs

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	***	FULTON	684	121
STA. 0+00		TO STA. 18+00		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
*** 181,(18BRY&18BRY-1)BR,18B-1				

HAMPTON, DONALD G. &
RITA K.

HILLIG, GLENN F.

POSTIN, RAY A. &
RONALD K.

POSTIN, RAY A. &
RONALD K.

EROSION CONTROL LEGEND			
	AGGREGATE DITCH CHECK PER STD 280001 (PAID FOR AS AGG. E.C., TONS)		FENCE EROSION CONTROL, SPECIAL (FT)
	INLET PROTECTION, SPECIAL (EACH)		TEMPORARY DITCH CHECKS (EACH)
	PROPOSED TREE WHIP PLACEMENT		PERIMETER EROSION BARRIER (FT)
NOTE: LEGEND ITEMS NOT TO SCALE			

PROPOSED IMPROVEMENT
BEGINS - STA. 0+00

GRISSOM, KENNETH LEE
HELEN LOUISE CO. TRUSTEE

SWICKARD, SAMUEL C.

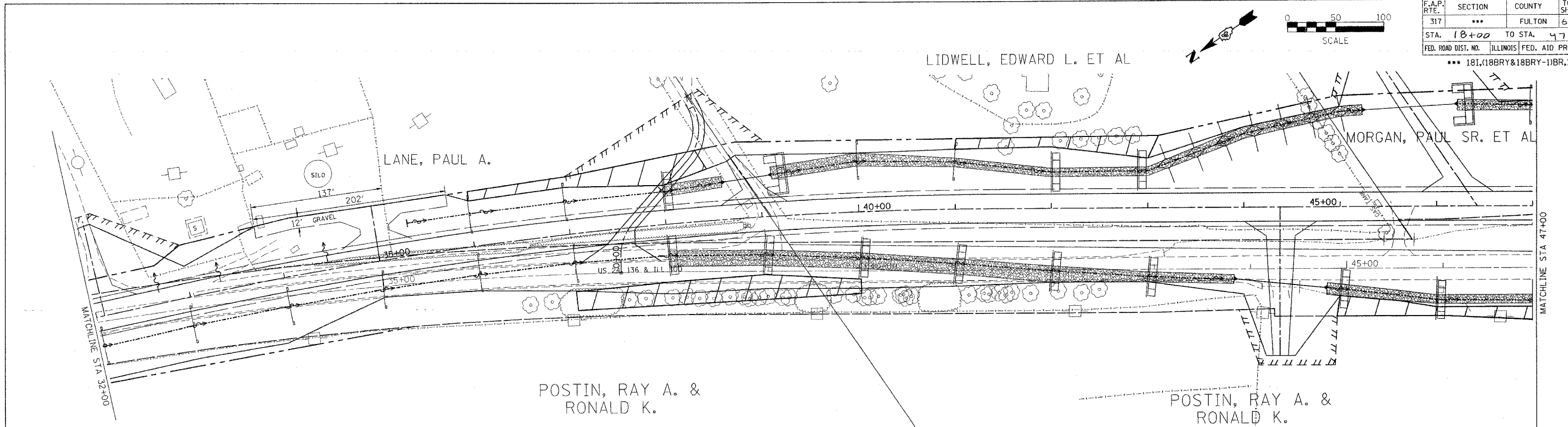
POSTIN, RAY A. &
RONALD K.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
EROSION CONTROL AND
TREE WHIP PLAN
STA 0+00 TO STA 18+00
SCALE: VERT. _____
HORIZ. _____
DATE _____ DRAWN BY _____
CHECKED BY _____

PLOT DATE = 4/7/2005
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USER NAME = hggstnd

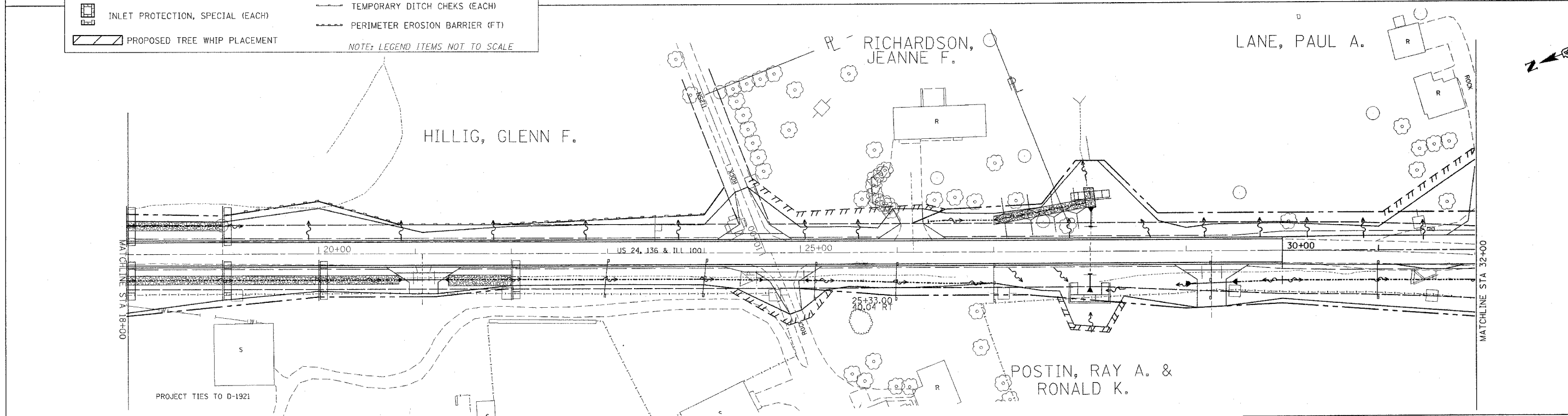
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	...	FULTON	684	122
STA. 18+00		TO STA. 47+00		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
... 181, (18BRY&18BRY-1)BR, 18B-1				



EROSION CONTROL LEGEND

	AGGREGATE DITCH CHECK PER STD 280001 (PAID FOR AS AGG. E.C., TONS)		FENCE EROSION CONTROL, SPECIAL (FT)
	INLET PROTECTION, SPECIAL (EACH)		TEMPORARY DITCH CHECKS (EACH)
	PROPOSED TREE WHIP PLACEMENT		PERIMETER EROSION BARRIER (FT)

NOTE: LEGEND ITEMS NOT TO SCALE



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

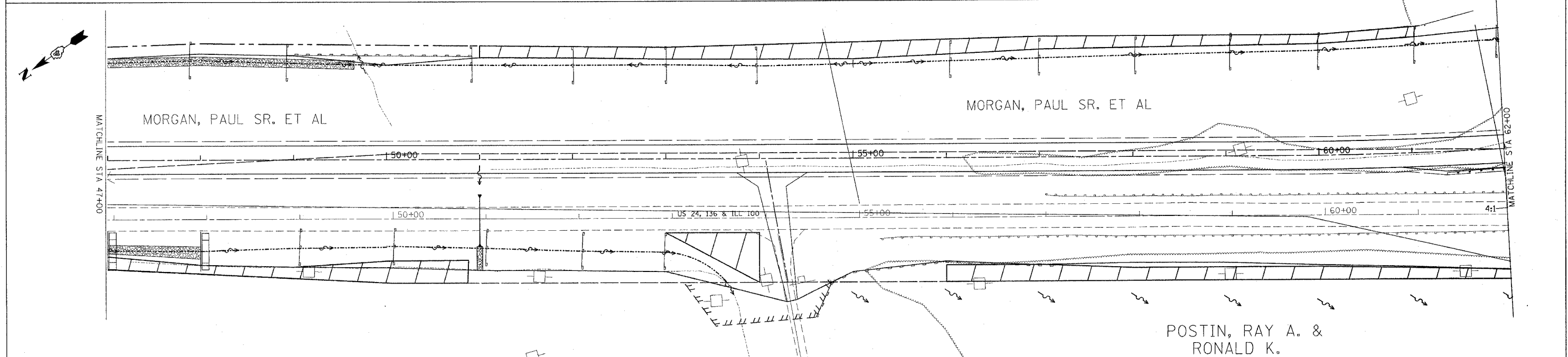
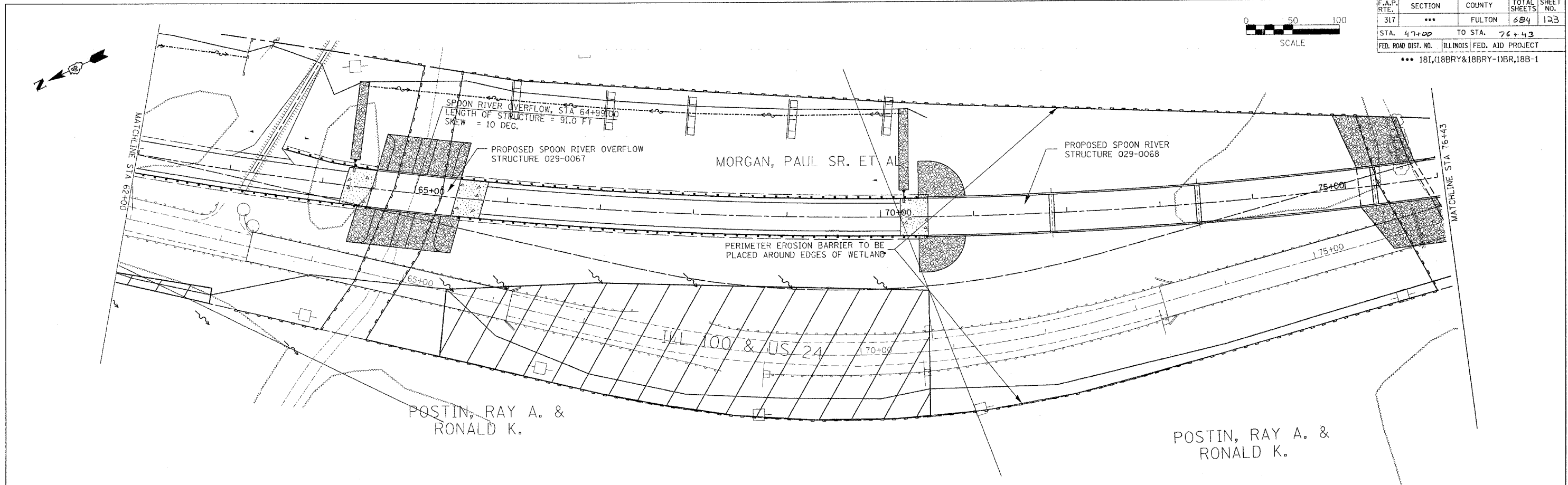
EROSION CONTROL AND TREE WHIP PLAN

STA 18+00 TO STA 47+00

SCALE: VERT. DATE
HORIZ. DRAWN BY
CHECKED BY

PLOT DATE = 4/7/2005
FILE NAME = c:\nrc\jesta\us24spec\ph_2\values.erosioncontrol.dgn
USER NAME = jesta
PROGRAM = Pegasus

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	***	FULTON	684	123
STA. 47+00		TO STA. 76+43		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
*** 181, (18BRY&18BRY-1)BR, 18B-1				



EROSION CONTROL LEGEND

- AGGREGATE DITCH CHECK PER STD 280001 (PAID FOR AS AGG. E.C., TONS)
- FENCE EROSION CONTROL, SPECIAL (FT)
- INLET PROTECTION, SPECIAL (EACH)
- TEMPORARY DITCH CHECKS (EACH)
- PERIMETER EROSION BARRIER (FT)
- PROPOSED TREE WHIP PLACEMENT

NOTE: LEGEND ITEMS NOT TO SCALE

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

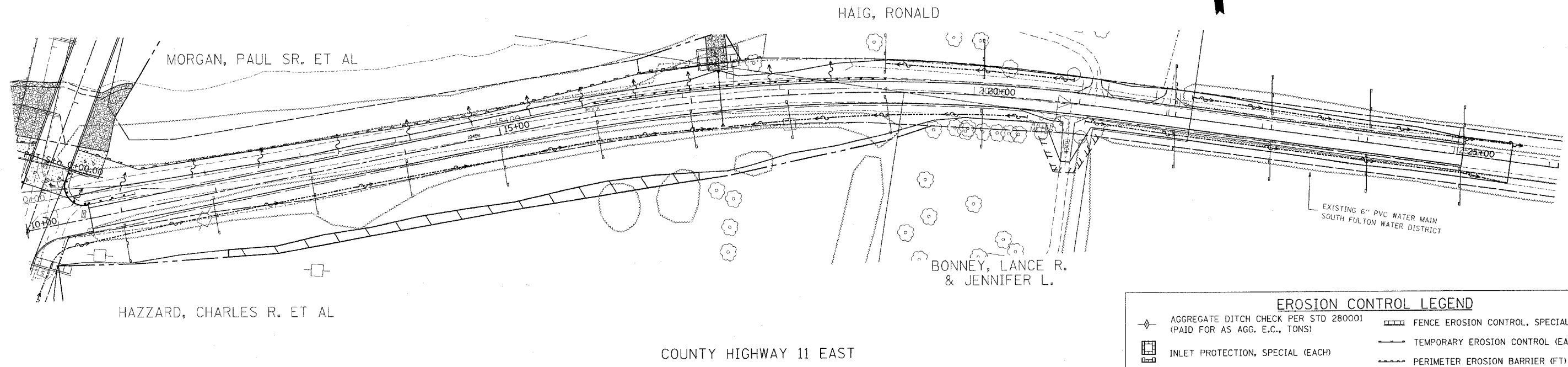
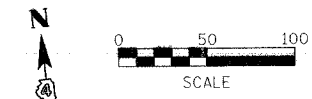
EROSION CONTROL AND TREE WHIP PLAN

STA 47+00 TO STA 76+43

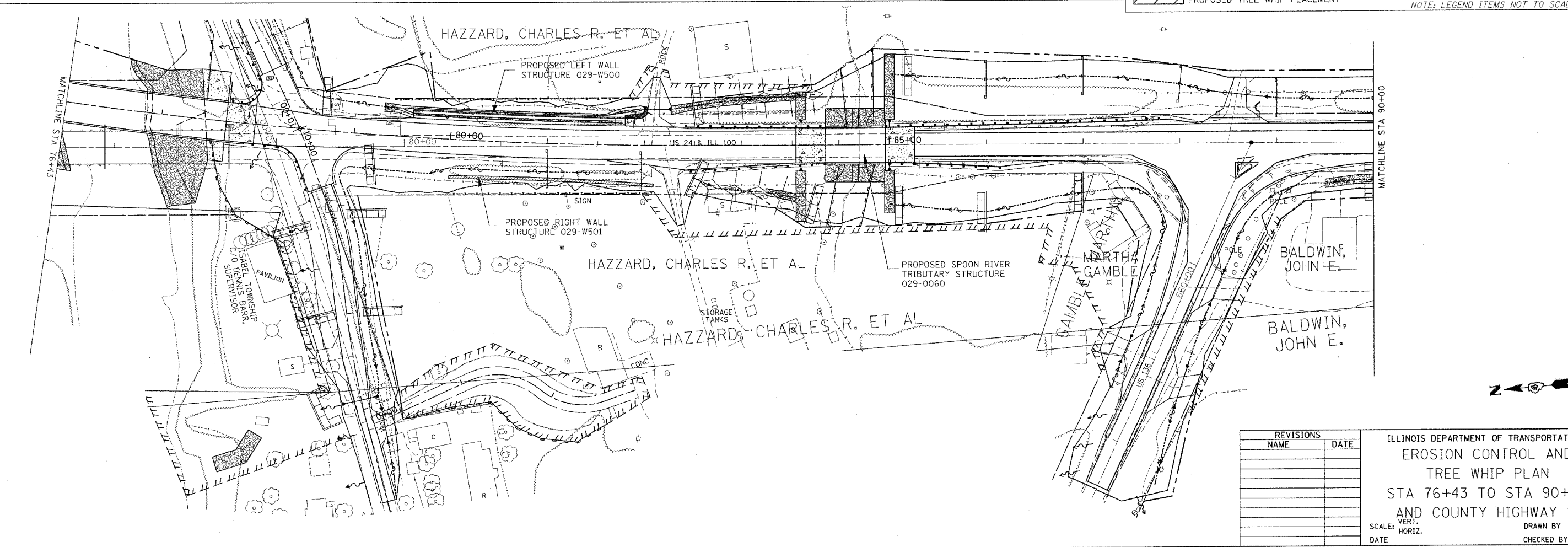
SCALE: VERT. DATE: HORIZ. DRAWN BY: CHECKED BY:

PLOT DATE = 4/7/2005
 FILE NAME = c:\projects\sta47-76\spoon-ph-2\sheet181.erosioncontrol.dgn
 PLOT SCALE = 50.0000 / IN.
 USER NAME = pgregano

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	***	FULTON	684	124
STA. 76+43		TO STA. 90+00		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
*** 181,18BRY&18BRY-1BR,18B-1				



	AGGREGATE DITCH CHECK PER STD 280001 (PAID FOR AS AGG. E.C., TONS)		FENCE EROSION CONTROL, SPECIAL (FT)
	INLET PROTECTION, SPECIAL (EACH)		TEMPORARY EROSION CONTROL (EACH)
	PROPOSED TREE WHIP PLACEMENT		PERIMETER EROSION BARRIER (FT)
NOTE: LEGEND ITEMS NOT TO SCALE			

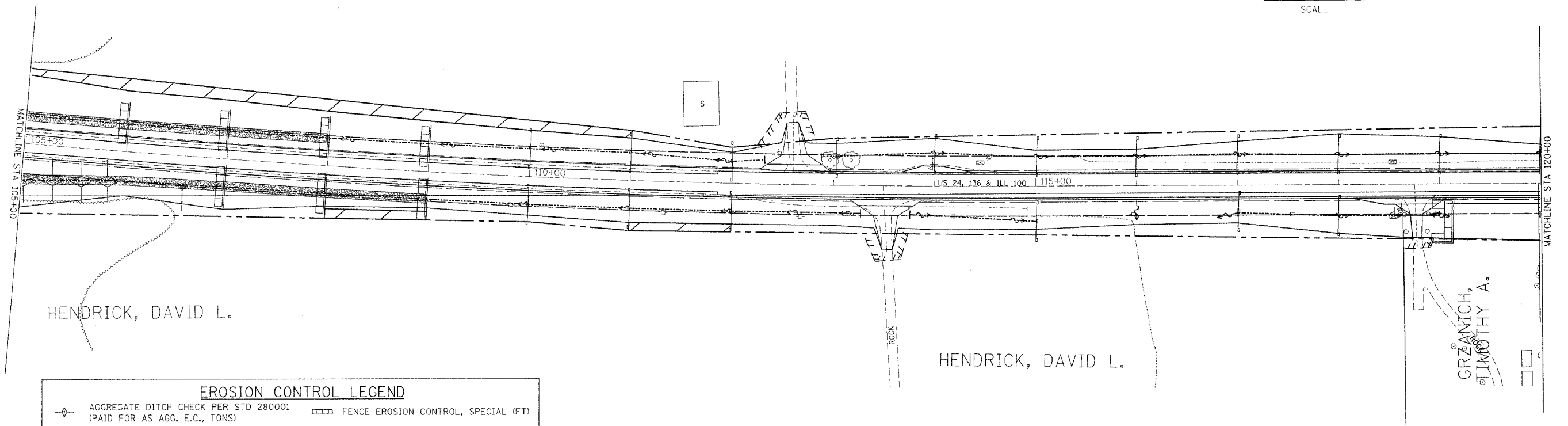
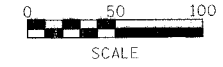


NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 EROSION CONTROL AND
 TREE WHIP PLAN
 STA 76+43 TO STA 90+00
 AND COUNTY HIGHWAY 11
 VERT. SCALE: HORIZ. SCALE: HORIZ.
 DRAWN BY: _____
 CHECKED BY: _____
 DATE: _____

PLOT DATE = 4/17/2005
 FILE NAME = c:\projects\11a24\p100n\11_2\hazards_erosioncontrol.dgn
 PLOT SCALE = 5/8"=1'-0"
 USER NAME = haggard

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	***	FULTON	684	125
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
		*** 181,(18BRY&18BRY-1)BR,18B-1		



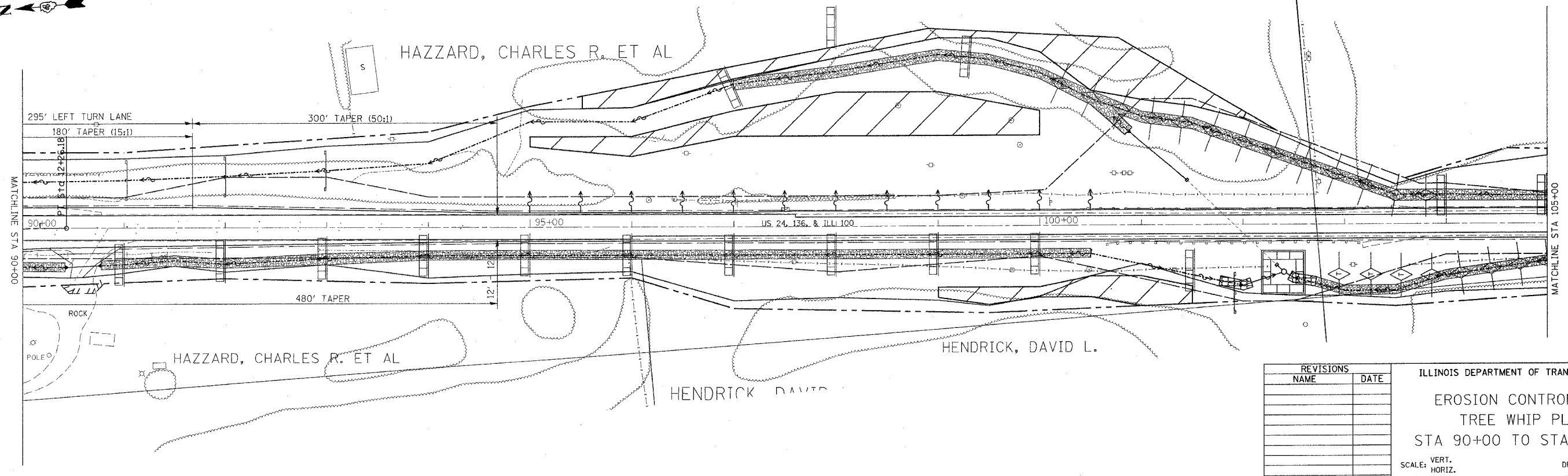
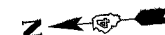
EROSION CONTROL LEGEND

	AGGREGATE DITCH CHECK PER STD 280001 (PAID FOR AS AGG. E.C., TONS)		FENCE EROSION CONTROL, SPECIAL (FT)
	INLET PROTECTION, SPECIAL (EACH)		TEMPORARY EROSION CONTROL (EACH)
	PROPOSED TREE WHIP PLACEMENT		PERIMETER EROSION BARRIER (FT)

NOTE: LEGEND ITEMS NOT TO SCALE

HAZZARD, CHARLES R. ET AL

EUGENE, COLEMAN

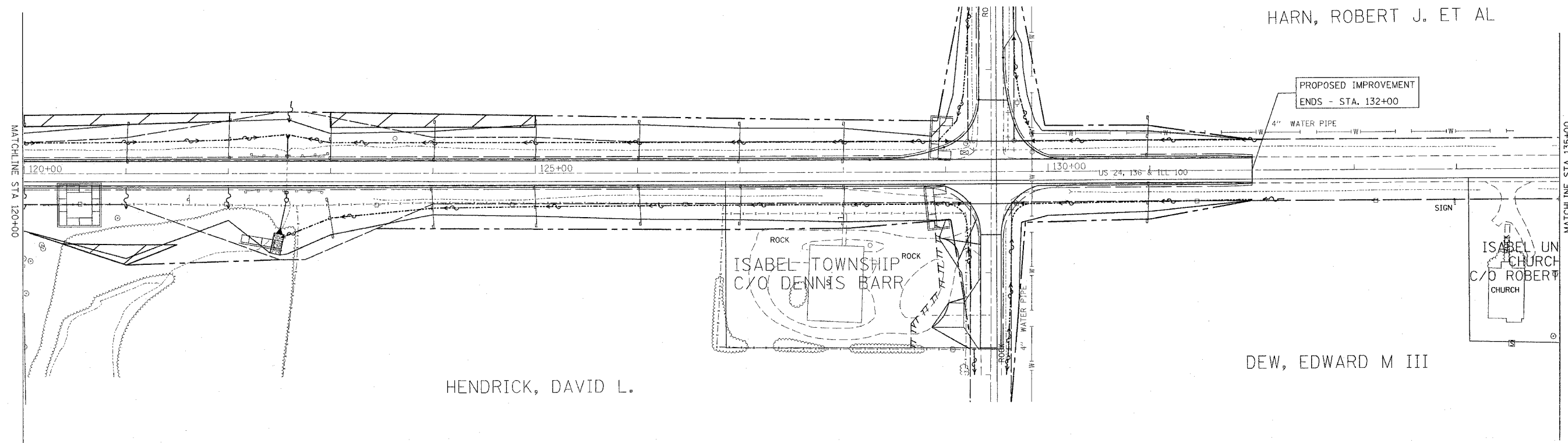


REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
EROSION CONTROL AND TREE WHIP PLAN
 STA 90+00 TO STA 120+00
 SCALE: VERT. _____
 HORIZ. _____
 DATE _____ DRAWN BY _____
 CHECKED BY _____

PLOT DATE = 4/7/2005
 PLOT SCALE = 5000000 / IN.
 USER NAME = heggland

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	***	FULTON	624	126
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
*** 181,18BRY&18BRY-18B,18B-1				



EROSION CONTROL LEGEND	
	AGGREGATE DITCH CHECK PER STD 280001 (PAID FOR AS AGG. E.C., TONS)
	FENCE EROSION CONTROL, SPECIAL (FT)
	INLET PROTECTION, SPECIAL (EACH)
	TEMPORARY DITCH CHECKS (EACH)
	PROPOSED TREE WHIP PLACEMENT
	PERIMETER EROSION BARRIER (FT)
NOTE: LEGEND ITEMS NOT TO SCALE	

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

EROSION CONTROL AND TREE WHIP PLAN

STA 120+00 TO STA 135+00

SCALE: VERT. _____
 HORIZ. _____

DATE _____

DRAWN BY _____
 CHECKED BY _____

PLOT DATE = 4/7/2005
 FILE NAME = c:\projects\11024\11024.dwg
 PLOT SCALE = 3/8" = 1'-0"
 USER NAME = hgg11111

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315/317	***	FULTON	684	127
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

*** 181,(18BRY&18BRY-1)BR,18B-1

TOWNSHIP 4 NORTH, RANGE 3 EAST

TOWNSHIP 4 NORTH, RANGE 3 EAST

WEST LINE OF THE SOUTHWEST QUARTER

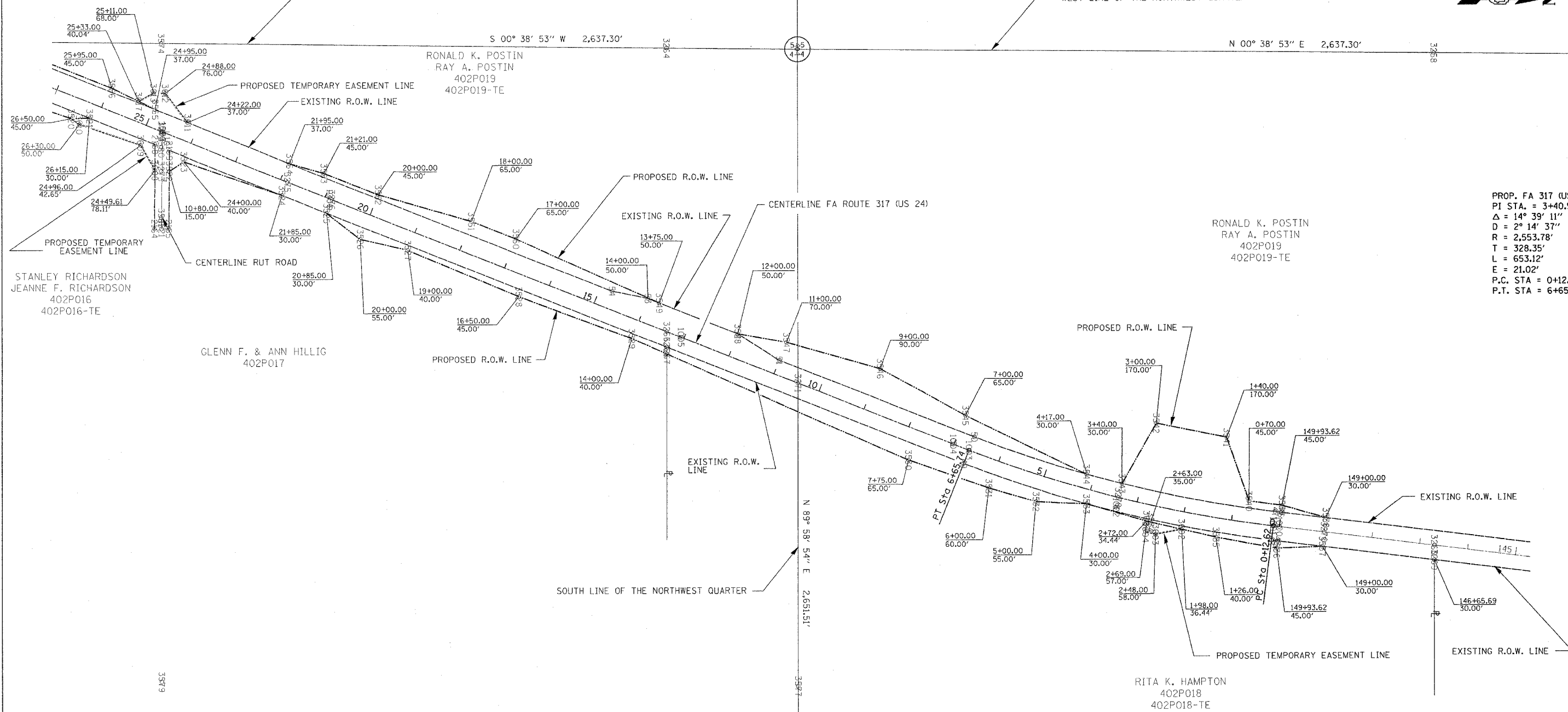
WEST LINE OF THE NORTHWEST QUARTER

S 00° 38' 53" W 2,637.30'

N 00° 38' 53" E 2,637.30'

RONALD K. POSTIN
RAY A. POSTIN
402P019
402P019-TE

RONALD K. POSTIN
RAY A. POSTIN
402P019
402P019-TE



PROP. FA 317 (US 24)
PI STA. = 3+40.97
Δ = 14° 39' 11" (RT)
D = 2° 14' 37"
R = 2,553.78'
T = 328.35'
L = 653.12'
E = 21.02'
P.C. STA = 0+12.62
P.T. STA = 6+65.74

STANLEY RICHARDSON
JEANNE F. RICHARDSON
402P016
402P016-TE

GLENN F. & ANN HILLIG
402P017

RITA K. HAMPTON
402P018
402P018-TE

LEGEND:

- PROPOSED R.O.W. LINE
- - - PROPOSED T.E. LINE
- EXISTING R.O.W. LINE

PLATFILE: 143

FOR OLD R.O.W.
PLAN FILE: 10
SHEET(S): 19, 20

RIGHT OF WAY PLANS
FA ROUTE 317 (US 24)

PROJECT _____ SECTION _____
STATION 149+00.00 TO
STATION 27+00.00
COUNTY FULTON
SCALE 1"=100' SHEET 1 OF 7

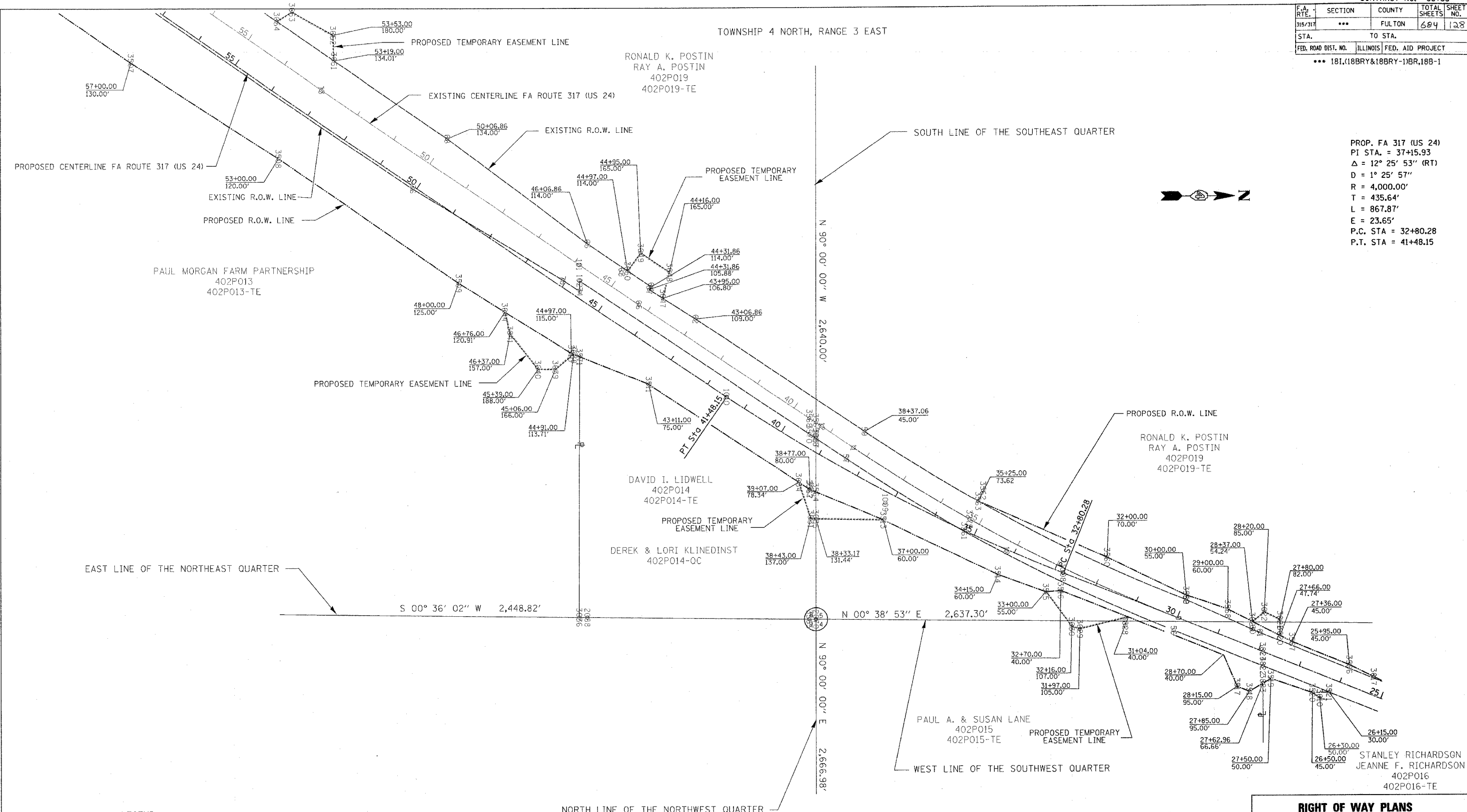
APPROVED BY _____
DISTRICT ENGINEER

DATE _____

DRAWN BY _____
WRITTEN BY _____
CHECKED BY _____
INSPECTED BY _____

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315/317	***	FULTON	604	128
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			
*** 181,18BRY&18BRY-1BR,188-1				

TOWNSHIP 4 NORTH, RANGE 3 EAST



PROP. FA 317 (US 24)
 PI STA. = 37+15.93
 $\Delta = 12^\circ 25' 53''$ (RT)
 $D = 1^\circ 25' 57''$
 $R = 4,000.00'$
 $T = 435.64'$
 $L = 867.87'$
 $E = 23.65'$
 P.C. STA = 32+80.28
 P.T. STA = 41+48.15



APPROVED BY _____ DISTRICT ENGINEER
 DATE _____

DRAWN BY _____
 WRITTEN BY _____
 CHECKED BY _____
 INSPECTED BY _____

LEGEND:

- PROPOSED R.O.W. LINE
- PROPOSED T.E. LINE
- EXISTING R.O.W. LINE

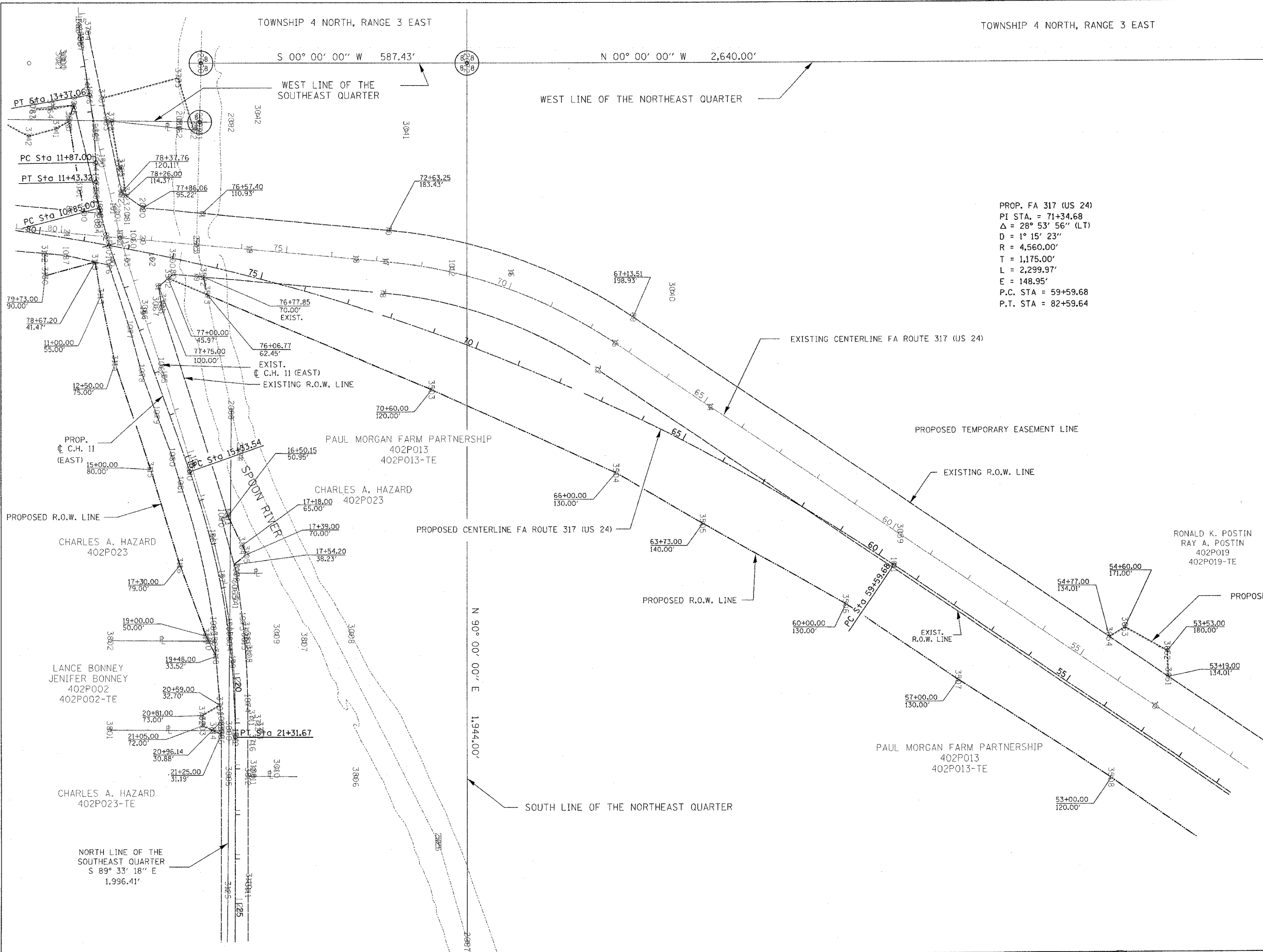
PLATFILE: 143
 FOR OLD R.O.W.
 PLAN FILE: 10
 SHEET(S): 19, 20

RIGHT OF WAY PLANS	
FA ROUTE 317 (US 24)	
PROJECT	SECTION *
STATION	27+00.00 TO
STATION	55+00.00
COUNTY	FULTON
SCALE	1"=100' SHEET 2 OF 7

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317/317	***	FULTON	684	129
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			
*** 181,18BRY&18BRY-1)BR,18B-1				

TOWNSHIP 4 NORTH, RANGE 3 EAST

TOWNSHIP 4 NORTH, RANGE 3 EAST



PROP. FA 317 (US 24)
 PI STA. = 71+34.68
 $\Delta = 28^\circ 53' 56''$ (LT)
 $D = 1^\circ 15' 23''$
 $R = 4,560.00'$
 $T = 1,175.00'$
 $L = 2,299.97'$
 $E = 148.95'$
 P.C. STA = 59+59.68
 P.T. STA = 82+59.64



LEGEND:

- PROPOSED R.O.W. LINE
- PROPOSED T.E. LINE
- EXISTING R.O.W. LINE

PLATFILE: 143

FOR OLD R.O.W.
 PLAN FILE: 10
 SHEET(S): 19, 20

RIGHT OF WAY PLANS
 FA ROUTE 317 (US 24)

PROJECT _____ SECTION _____
 STATION 55+00.00 _____ TO _____
 STATION 80+00.00 _____
 COUNTY FULTON
 SCALE 1"=100' SHEET 3 OF 7

APPROVED BY _____
 DISTRICT ENGINEER
 DATE _____

DRAWN BY _____
 WRITTEN BY _____
 CHECKED BY _____
 INSPECTED BY _____

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315/317	***	FULTON	684	130
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT			
*** 181,18BRY&18BRY-1)BR,18B-1				

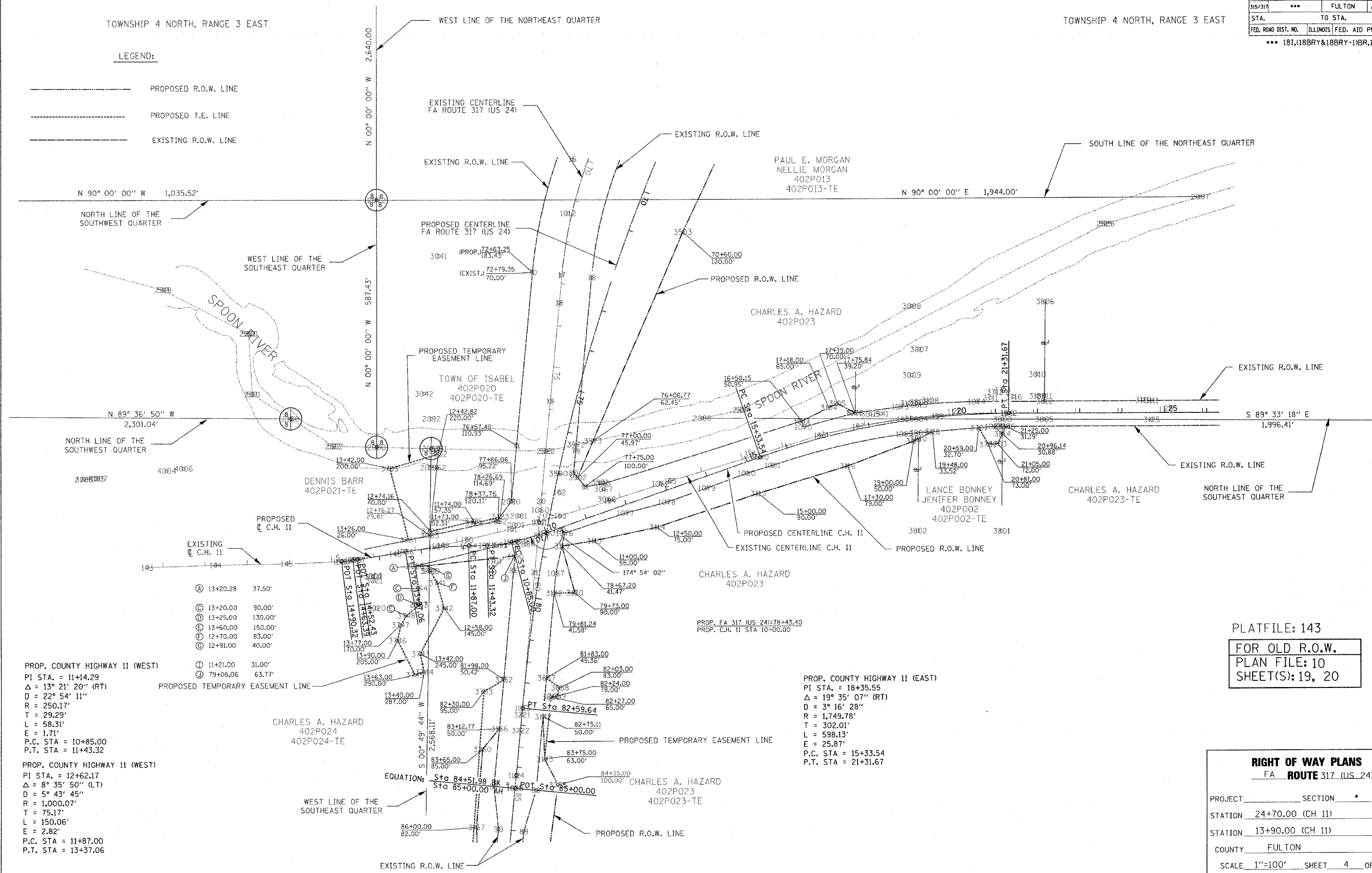
TOWNSHIP 4 NORTH, RANGE 3 EAST

TOWNSHIP 4 NORTH, RANGE 3 EAST

LEGEND:

- PROPOSED R.O.W. LINE
- PROPOSED T.E. LINE
- EXISTING R.O.W. LINE

APPROVED BY _____ DISTRICT ENGINEER
DATE _____



- Ⓐ 13+20.28 37.50'
- Ⓑ 13+20.00 90.00'
- Ⓒ 13+25.00 130.00'
- Ⓓ 13+60.00 150.00'
- Ⓔ 12+70.00 83.00'
- Ⓚ 12+91.00 40.00'
- Ⓛ 11+21.00 31.00'
- Ⓜ 79+08.06 63.77'

PROP. COUNTY HIGHWAY 11 (WEST)
 PI STA. = 11+14.29
 Δ = 13° 21' 20" (RT)
 D = 22° 54' 11"
 R = 250.17'
 T = 29.29'
 L = 58.31'
 E = 1.71'
 P.C. STA = 10+85.00
 P.T. STA = 11+43.32

PROP. COUNTY HIGHWAY 11 (EAST)
 PI STA. = 18+35.55
 Δ = 19° 35' 07" (RT)
 D = 3° 16' 28"
 R = 1,749.78'
 T = 302.01'
 L = 598.13'
 E = 25.87'
 P.C. STA = 15+33.54
 P.T. STA = 21+31.67

PLATFILE: 143
 FOR OLD R.O.W.
 PLAN FILE: 10
 SHEET(S): 19, 20

RIGHT OF WAY PLANS	
FA ROUTE 317 (US 24)	
PROJECT	SECTION *
STATION	24+70.00 (CH 11) TO
STATION	13+90.00 (CH 11)
COUNTY	FULTON
SCALE	1"=100' SHEET 4 OF 7

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315/317	***	FULTON	604	131
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
*** 181,18BRY&18BRY-1BR,18B-1				

TOWNSHIP 4 NORTH, RANGE 3 EAST

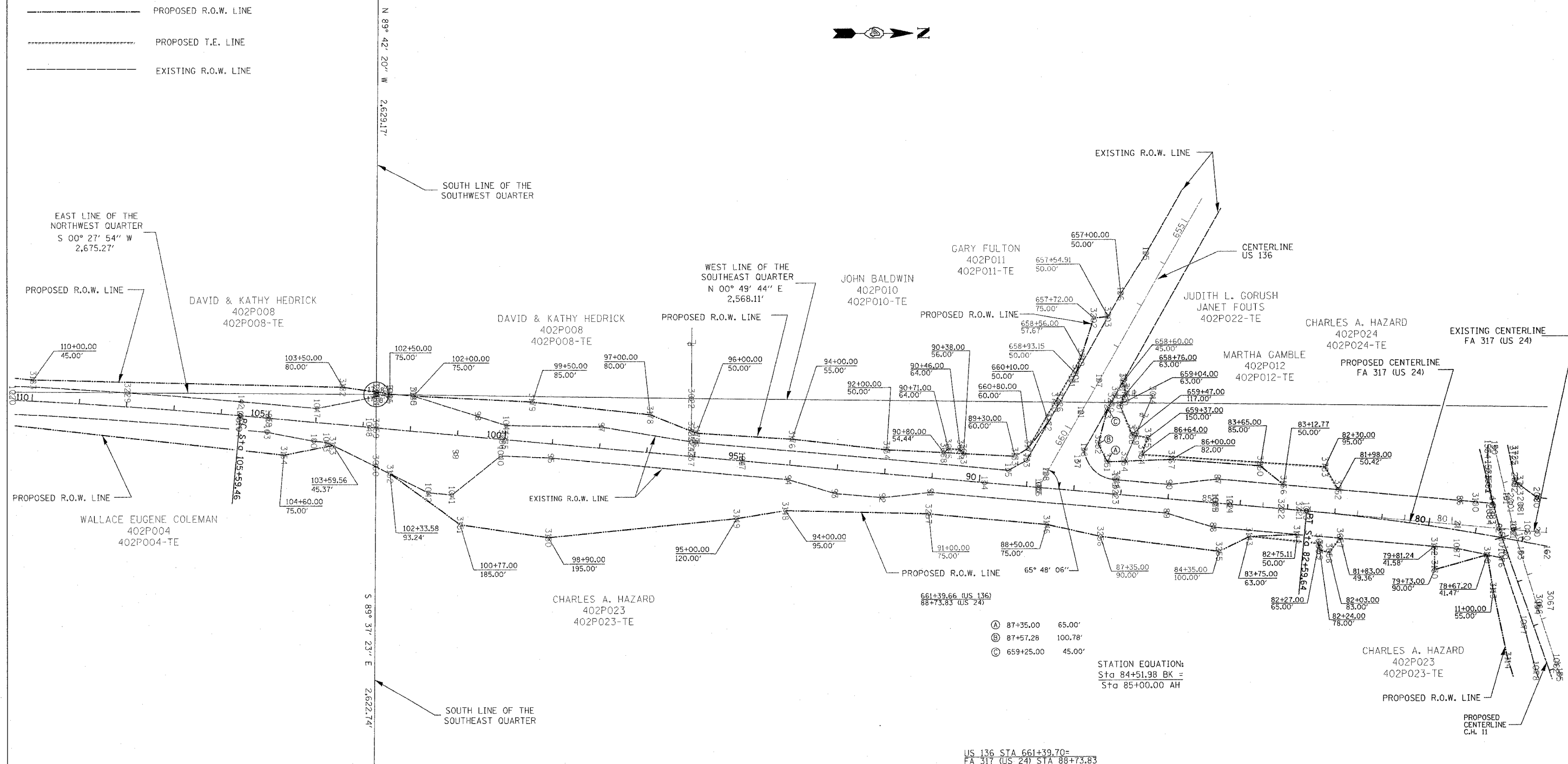
TOWNSHIP 4 NORTH, RANGE 3 EAST

LEGEND:

- PROPOSED R.O.W. LINE
- PROPOSED T.E. LINE
- EXISTING R.O.W. LINE



APPROVED BY _____ DISTRICT ENGINEER
DATE _____



- (A) 87+35.00 65.00'
- (B) 87+57.28 100.78'
- (C) 659+25.00 45.00'

STATION EQUATION:
Sta 84+51.98 BK =
Sta 85+00.00 AH

US 136 STA 661+39.70=
FA 317 (US 24) STA 88+73.83

FOR OLD R.O.W.
PLAN FILE: 10
SHEET(S): 19, 20

PLATFILE: 143

PROP. FA 317 (US 24)
PI STA. = 71+34.68
Δ = 28° 53' 56" (LT)
D = 1° 15' 23"
R = 4,560.00'
T = 1,175.00'
L = 2,299.97'
E = 148.95'
P.C. STA = 59+59.68
P.T. STA = 82+59.64

RIGHT OF WAY PLANS	
FA ROUTE 317 (US 24)	
PROJECT _____	SECTION _____
STATION _____	TO _____
STATION _____	
COUNTY _____	
SCALE 1"=100'	SHEET 5 OF 7

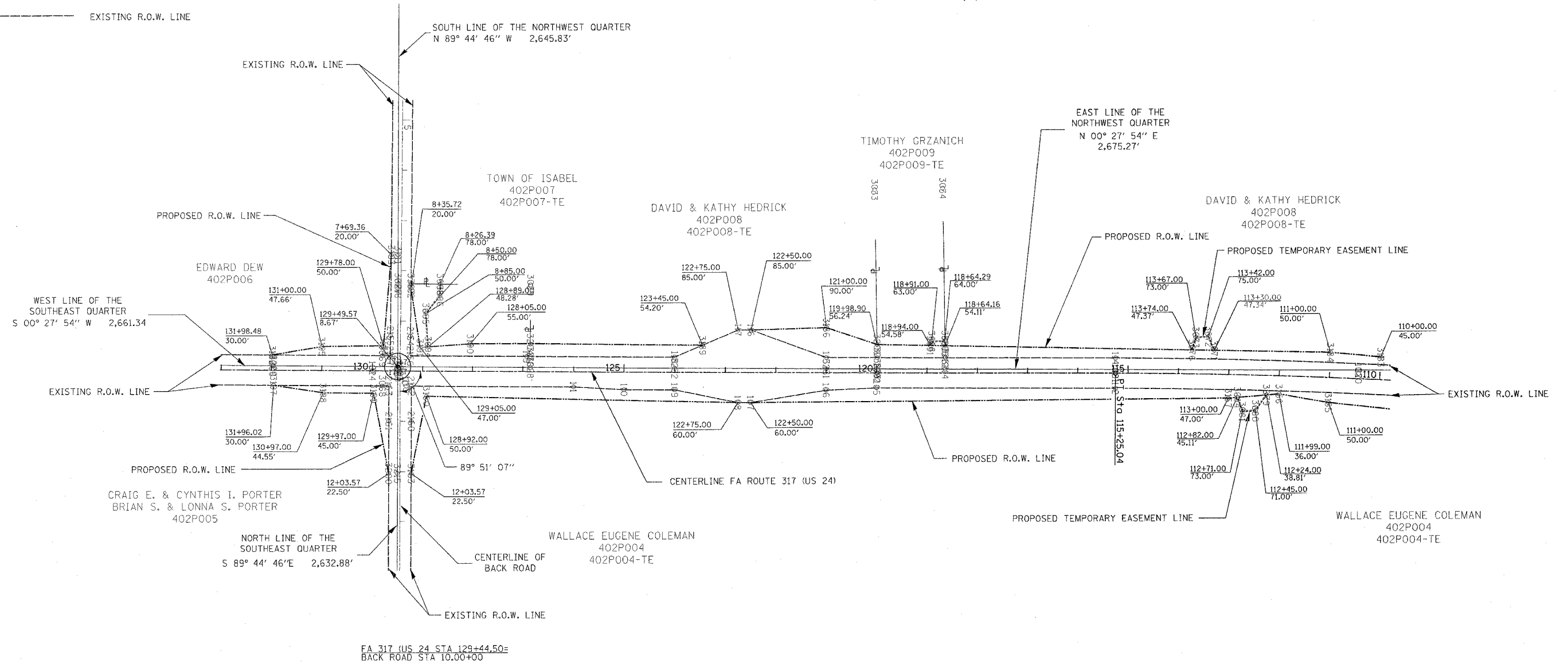
PROP. FA 317 (US 24)
PI STA. = 110+42.54
Δ = 4° 52' 16" (LT)
D = 0° 30' 16"
R = 11,357.60'
T = 483.08'
L = 965.57'
E = 10.27'
P.C. STA = 105+59.46
P.T. STA = 115+25.04

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315/317	***	FULTON	684	132
STA. TO STA.				
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		
*** 181,(18BRY&18BRY-1)BR,18B-1				

TOWNSHIP 4 NORTH, RANGE 3 EAST

LEGEND:

- PROPOSED R.O.W. LINE
- PROPOSED T.E. LINE
- EXISTING R.O.W. LINE



APPROVED BY _____ DISTRICT ENGINEER
DATE _____

DRAWN BY _____
WRITTEN BY _____
CHECKED BY _____
INSPECTED BY _____

PROP. FA 317 (US 24)
PI STA. = 110+42.54
Δ = 4° 52' 16" (LT)
D = 0° 30' 16"
R = 11,357.60'
T = 483.08'
L = 965.57'
E = 10.27'
P.C. STA = 105+59.46
P.T. STA = 115+25.04

PLATFILE: 143

FOR OLD R.O.W.
PLAN FILE: 10
SHEET(S): 19, 20

RIGHT OF WAY PLANS
FA ROUTE 317 (US 24)

PROJECT _____ SECTION * _____
STATION 110+00.00 _____ TO _____
STATION 131+98.48 _____
COUNTY FULTON _____
SCALE 1"=100' SHEET 6 OF 7

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315/317	***	FULTON	684	133
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

*** 181,18BRY&18BRY-DIBR,18B-1

CURVE B DATA
20 FT R

ARC 35.11'
 DELTA 122°46'8.4"
 PC STA 10+67.03
 OFF 14.10' LT
 CC STA 10+66.35
 OFF 34.09' LT
 PT STA 77+80.10
 OFF 19.96' LT

CURVE A DATA
28 FT R

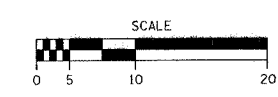
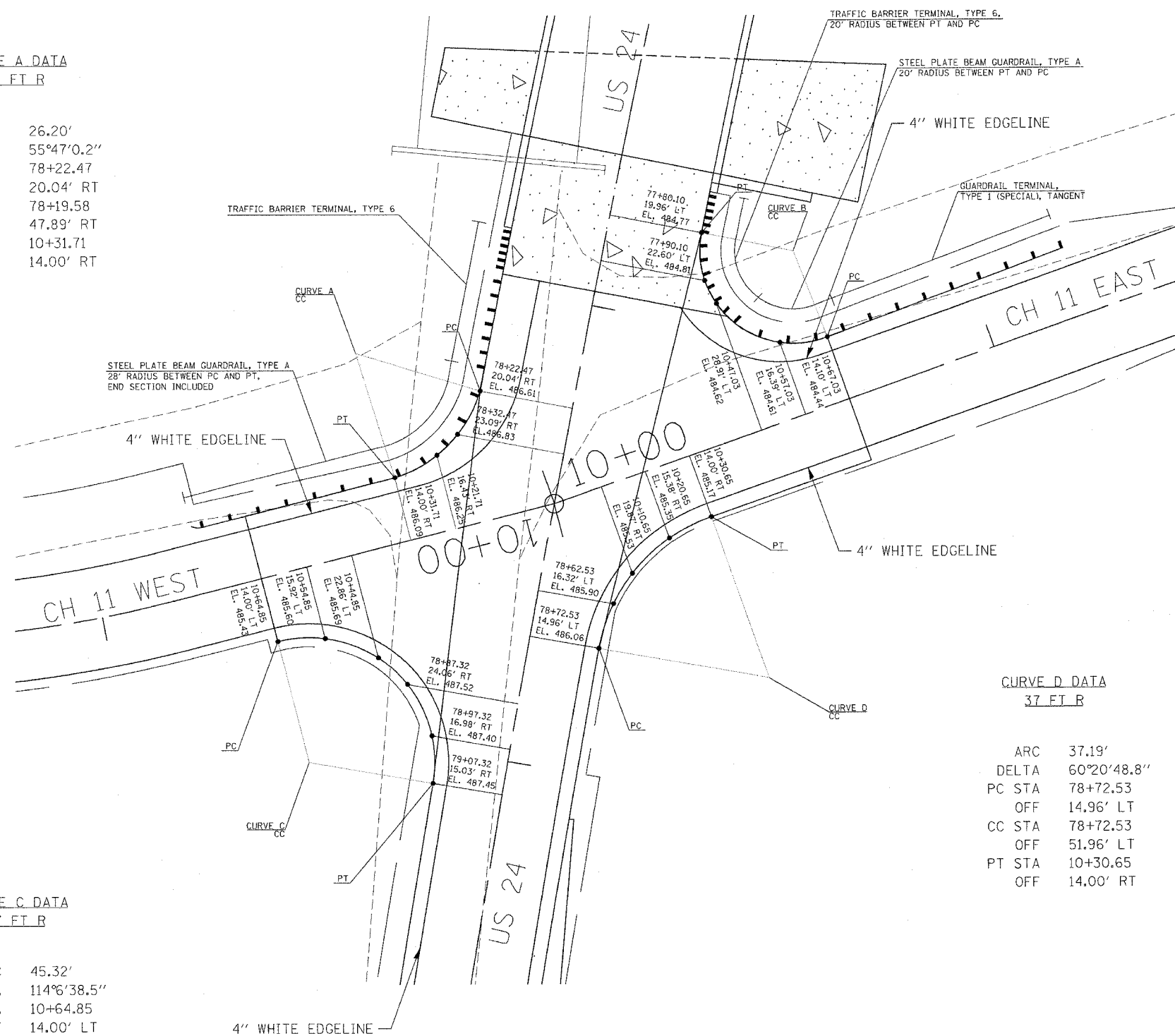
ARC 26.20'
 DELTA 55°47'0.2"
 PC STA 78+22.47
 OFF 20.04' RT
 CC STA 78+19.58
 OFF 47.89' RT
 PT STA 10+31.71
 OFF 14.00' RT

CURVE D DATA
37 FT R

ARC 37.19'
 DELTA 60°20'48.8"
 PC STA 78+72.53
 OFF 14.96' LT
 CC STA 78+72.53
 OFF 51.96' LT
 PT STA 10+30.65
 OFF 14.00' RT

CURVE C DATA
27 FT R

ARC 45.32'
 DELTA 114°6'38.5"
 PC STA 10+64.85
 OFF 14.00' LT
 CC STA 79+07.32
 OFF 42.03' RT
 PT STA 79+07.32
 OFF 15.03' RT



REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION
NAME	DATE	
		INTERSECTION DETAIL FAP 317 (US 24) & CH 11

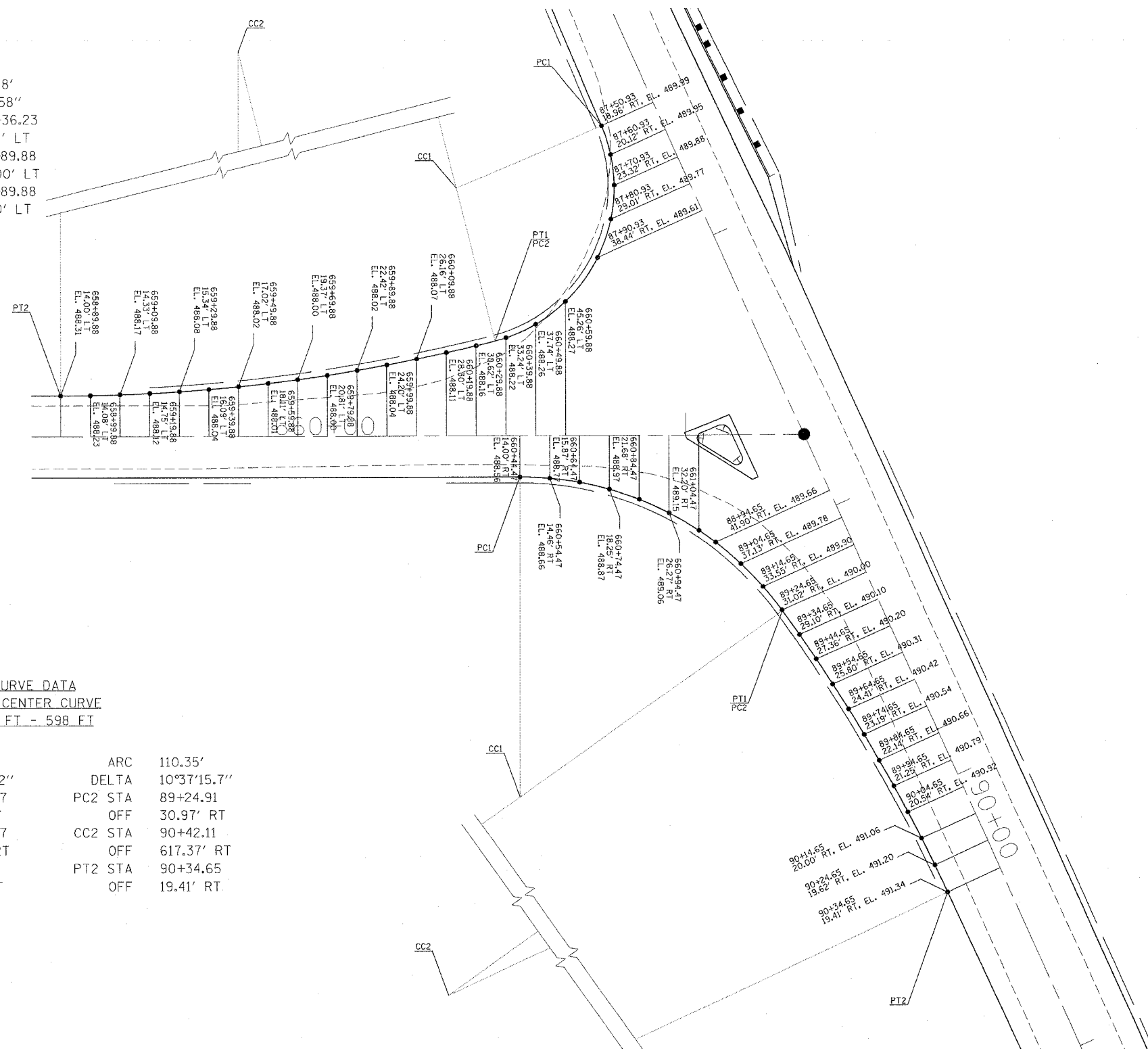
SCALE: VERT. HORIZ.
 DATE **DATE** DRAWN BY
 CHECKED BY

PLOT DATE = 4/27/2005
 PLOT SCALE = 1/4" = 20'-0"
 REFERENCE = BREF#

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	***	FULTON	684	134
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	
*** 181,(18BRY&18BRY-1)BR,18B-1				

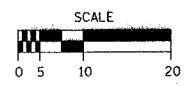
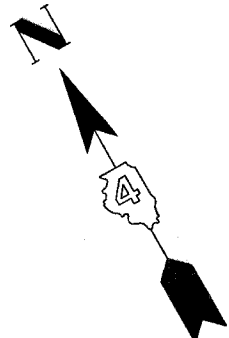
CURVE DATA
TWO CENTER CURVE
53 FT - 598 FT

ARC	80.54'	ARC	147.48'
DELTA	98°53'13.2"	DELTA	14°9'58"
PC1 STA	87+50.93	PC2 STA	660+36.23
OFF	18.96' RT	OFF	32.18' LT
CC1 STA	87+49.87	CC2 STA	658+89.88
OFF	71.95' RT	OFF	612.00' LT
PT1 STA	660+36.23	PT2 STA	659+89.88
OFF	32.18' LT	OFF	14.00' LT



CURVE DATA
TWO CENTER CURVE
108 FT - 598 FT

ARC	98.90'	ARC	110.35'
DELTA	54°29'54.2"	DELTA	10°37'15.7"
PC1 STA	660+44.47	PC2 STA	89+24.91
OFF	14.00' RT	OFF	30.97' RT
CC1 STA	660+44.47	CC2 STA	90+42.11
OFF	122.00' RT	OFF	617.37' RT
PT1 STA	89+24.91	PT2 STA	90+34.65
OFF	30.97' RT	OFF	19.41' RT



PLOT DATE = 4/7/2005
 FILE NAME = c:\projects\un24spoon.plt\24intersection.dgn
 PLOT SCALE = 30.0000' / IN.
 USER NAME = haggard

REVISIONS		DATE
NAME		

ILLINOIS DEPARTMENT OF TRANSPORTATION	
INTERSECTION DETAIL	
US 24 & US 136 N	
SCALE: VERT.	DRAWN BY
DATE	CHECKED BY

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	***	FULTON	684	135
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

*** 181,(18BRY&18BRY-1)BR,18B-1

CURVE DATA
50 FT R

ARC 70.71'
DELTA 90°0'0.0"
PC STA 128+84.28
OFF 12.00' RT
CC STA 128+84.28
OFF 62.00' RT
PT STA 9+37.96
OFF 10.00' LT

CURVE DATA
TWO CENTER CURVE
50 FT - 225 FT

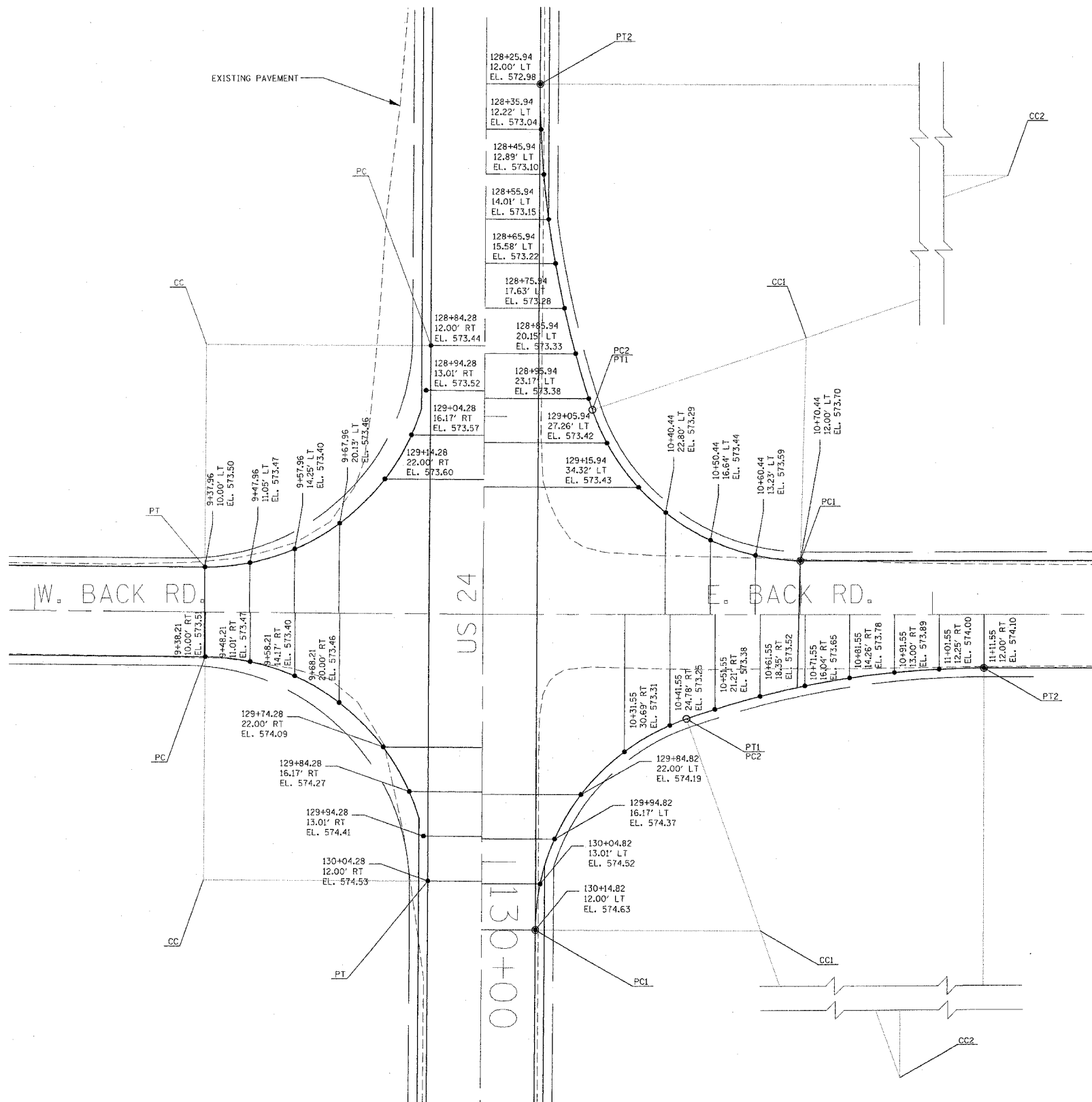
ARC 57.46'	ARC 73.48'
DELTA 70°8'34.4"	DELTA 18°47'42.4"
PC1 STA 10+70.44	PC2 STA 128+98.43
OFF 12.00' LT	OFF 24.00' LT
CC1 STA 128+82.32	CC2 STA 128+25.94
OFF 71.33' LT	OFF 237.00' LT
PT1 STA 128+98.43	PT2 STA 128+25.94
OFF 24.00' LT	OFF 12.00' LT

CURVE DATA
50 FT R

ARC 70.59'
DELTA 89°48'1.1"
PC STA 9+38.21
OFF 10.00' RT
CC STA 130+04.28
OFF 62.00' RT
PT STA 130+04.28
OFF 12.00' RT

CURVE DATA
TWO CENTER CURVE
50 FT - 200 FT

ARC 57.46'	ARC 67.27'
DELTA 70°8'34.4"	DELTA 19°21'45.4"
PC1 STA 130+14.82	PC2 STA 10+45.24
OFF 12.00' LT	OFF 23.31' RT
CC1 STA 130+14.82	CC2 STA 11+11.55
OFF 62.00' LT	OFF 212.00' RT
PT1 STA 10+45.24	PT2 STA 11+11.55
OFF 23.31' RT	OFF 12.00' RT



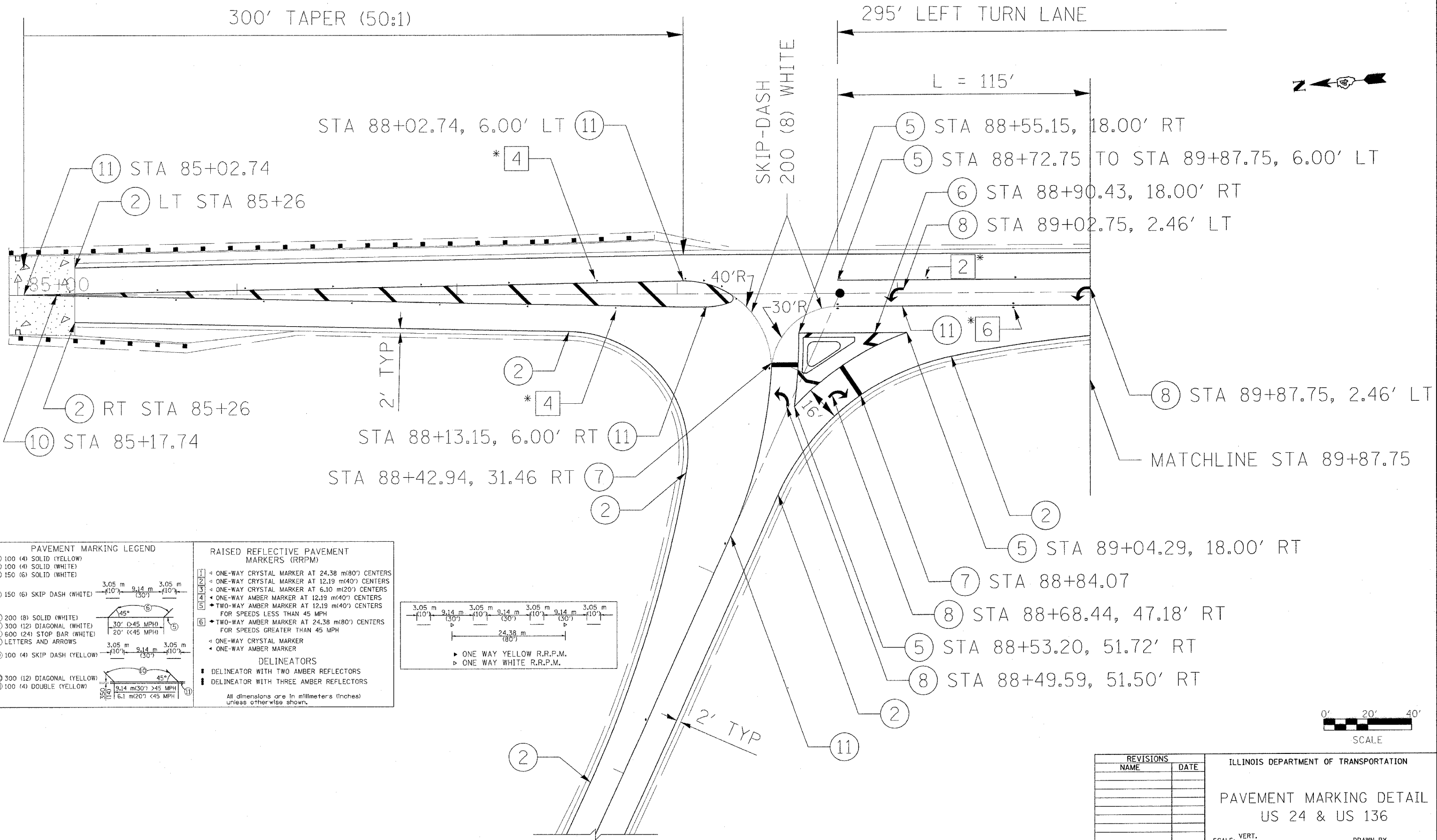
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
INTERSECTION DETAIL
FAP 317 (US 24) &
BACK ROAD

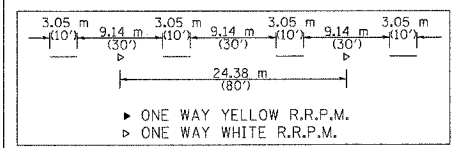
SCALE: VERT. HORIZ.
DATE **DATE** DRAWN BY
CHECKED BY

PLOT DATE = 4/7/2005
FILE NAME = c:\projects\us24\spoon_jh_2\detail\intersection.dgn
PLOT SCALE = 20.00000' / IN.
REFERENCE = #REFS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	***	FULTON	684	136
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
*** 181,188BRY&188BRY-1BR,188-1				



PAVEMENT MARKING LEGEND		RAISED REFLECTIVE PAVEMENT MARKERS (RRPM)	
① 100 (4) SOLID (YELLOW)		① ONE-WAY CRYSTAL MARKER AT 24.38 m(80') CENTERS	
② 100 (4) SOLID (WHITE)		② ONE-WAY CRYSTAL MARKER AT 12.19 m(40') CENTERS	
③ 150 (6) SOLID (WHITE)		③ ONE-WAY CRYSTAL MARKER AT 6.10 m(20') CENTERS	
④ 150 (6) SKIP DASH (WHITE)		④ ONE-WAY AMBER MARKER AT 12.19 m(40') CENTERS	
⑤ 200 (8) SOLID (WHITE)		⑤ TWO-WAY AMBER MARKER AT 12.19 m(40') CENTERS FOR SPEEDS LESS THAN 45 MPH	
⑥ 300 (12) DIAGONAL (WHITE)		⑥ TWO-WAY AMBER MARKER AT 24.38 m(80') CENTERS FOR SPEEDS GREATER THAN 45 MPH	
⑦ 600 (24) STOP BAR (WHITE)		⑦ ONE-WAY CRYSTAL MARKER	
⑧ LETTERS AND ARROWS		⑧ ONE-WAY AMBER MARKER	
⑨ 100 (4) SKIP DASH (YELLOW)		DELINEATORS	
⑩ 300 (12) DIAGONAL (YELLOW)		■ DELINEATOR WITH TWO AMBER REFLECTORS	
⑪ 100 (4) DOUBLE (YELLOW)		■ DELINEATOR WITH THREE AMBER REFLECTORS	
All dimensions are in millimeters (inches) unless otherwise shown.			



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

PAVEMENT MARKING DETAIL
US 24 & US 136

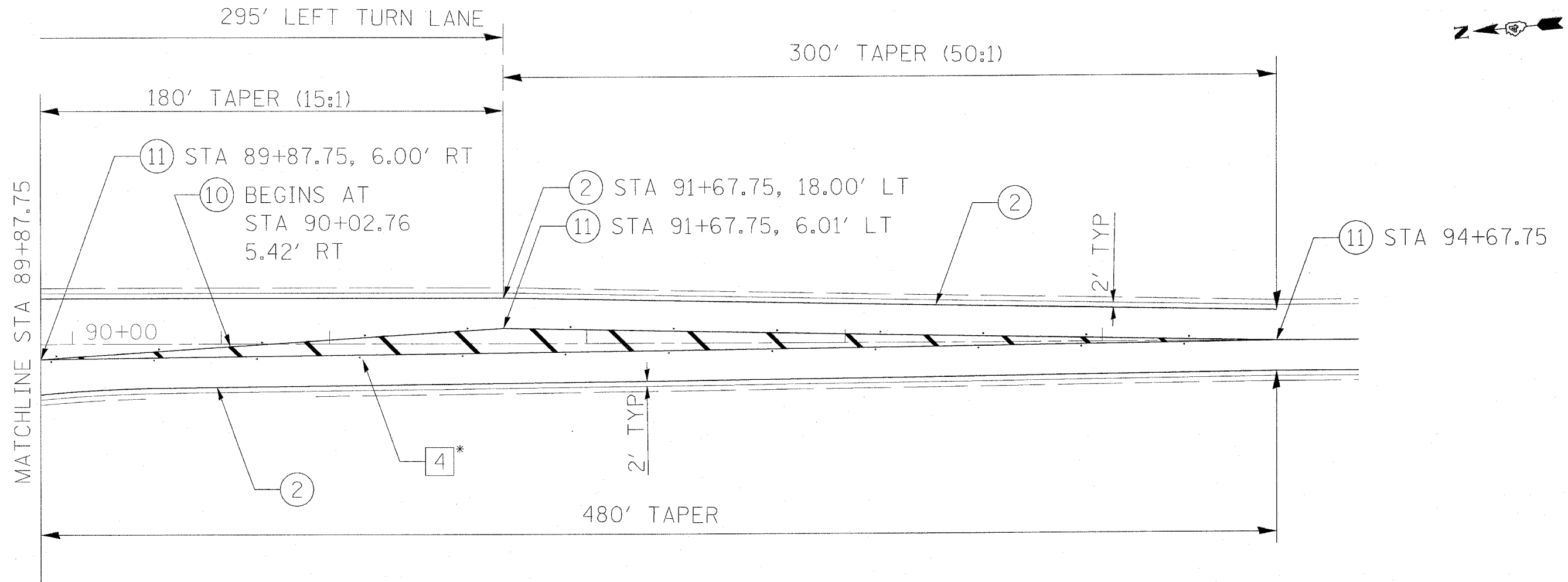
SCALE: VERT. _____
HORIZ. _____

DATE _____ DRAWN BY _____
CHECKED BY _____

PLOT DATE = 4/7/2005
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 USER = jh
 SCALE = 20.0000' / 1"

* SEE STANDARD 781001 FOR RAISED REFLECTIVE PAVEMENT MARKING DETAILS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	...	FULTON	684	137
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		
... 181, (18BRY&18BRY-1)BR, 18B-1				



PAVEMENT MARKING LEGEND

① 100 (4) SOLID (YELLOW)	
② 100 (4) SOLID (WHITE)	
③ 150 (6) SOLID (WHITE)	
④ 150 (6) SKIP DASH (WHITE)	
⑤ 200 (8) SOLID (WHITE)	
⑥ 300 (12) DIAGONAL (WHITE)	
⑦ 600 (24) STOP BAR (WHITE)	
⑧ LETTERS AND ARROWS	
⑨ 100 (4) SKIP DASH (YELLOW)	
⑩ 300 (12) DIAGONAL (YELLOW)	
⑪ 100 (4) DOUBLE (YELLOW)	

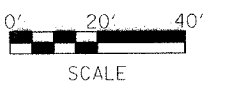
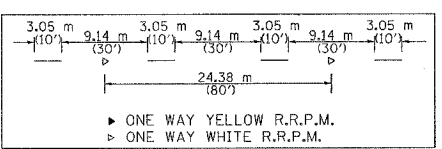
RAISED REFLECTIVE PAVEMENT MARKERS (RRPM)

①	ONE-WAY CRYSTAL MARKER AT 24.38 m (80') CENTERS
②	ONE-WAY CRYSTAL MARKER AT 12.19 m (40') CENTERS
③	ONE-WAY CRYSTAL MARKER AT 6.10 m (20') CENTERS
④	ONE-WAY AMBER MARKER AT 12.19 m (40') CENTERS
⑤	TWO-WAY AMBER MARKER AT 12.19 m (40') CENTERS FOR SPEEDS LESS THAN 45 MPH
⑥	TWO-WAY AMBER MARKER AT 24.38 m (80') CENTERS FOR SPEEDS GREATER THAN 45 MPH
⑦	ONE-WAY CRYSTAL MARKER
⑧	ONE-WAY AMBER MARKER

DELINEATORS

⑨	DELINEATOR WITH TWO AMBER REFLECTORS
⑩	DELINEATOR WITH THREE AMBER REFLECTORS

All dimensions are in millimeters (inches) unless otherwise shown.



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

**PAVEMENT MARKING
DETAIL US 24/US 136**

SCALE: VERT. _____
HORIZ. _____

DATE _____

DRAWN BY _____
CHECKED BY _____

PLOT DATE = 4/7/2005
 FILE NAME = c:\pwork\pav24\pav24.dwg
 PLOT SCALE = 20.0000' / 1"

* SEE STANDARD 781001 FOR RAISED REFLECTIVE PAVEMENT MARKING DETAILS

S:\GENDRAFT\STD&PLNS\SQUAD9\88753\Phase II PowerDraft Files\US 24-US 136 Flasher and Overhead 3-27-05.dgn

VAR RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	**	FULTON	684	138
STA. TO STA.				
FED. ROAD DIST. NO. 4	ILLINOIS	FED. AID PROJECT		
**181, 188BRY & 188BRY-188-1 CONTRACT # 88753				

SUMMARY OF QUANTITIES	UNIT	TOTAL QUANTITIES
SERVICE INSTALLATION, TYPE A	EACH	1.0
CONDUIT IN TRENCH, 2" DIA., PVC	FOOT	31.0
CONDUIT PUSHED, 2" DIA., PVC	FOOT	19.0
CONDUIT ATTACHED TO STRUCTURE, 1-1/2" DIA., GALVS	FOOT	49.0
TRENCH AND BACKFILL FOR ELECTRICAL WORK	FOOT	31.0
FLASHER CONTROLLER	EACH	1.0
GULFBOX JUNCTION	EACH	2.0
ELECTRIC CABLE IN CONDUIT, SIGNAL, NO. 14 3C	FOOT	74.0
SIGNAL HEAD, I-FACE, 1-SECTION, POST MOUNTED	EACH	1.0
LUMINAIRE, SODIUM VAPOR, MULTI-MOUNT, PHOTO-CELL CONTROL, 250 WATT	EACH	2.0

CONSTRUCTION NOTES

THE GULFBOX JUNCTION SHALL BE CONSTRUCTED SO THAT THE TOP OF THE FRAME WILL BE FLUSH WITH THE SURFACE OF THE MEDIAN.

THE LOCATION OF ALL UTILITIES SHALL BE FIELD VERIFIED BY THE CONTRACTOR BEFORE THE INSTALLATION OF ANY ELECTRICAL COMPONENTS.

COILABLE POLYETHYLENE DUCT MAY BE SUBSTITUTED FOR PVC CONDUIT PUSHED OR TRENCHED.

GALVANIZED STEEL CONDUIT SHALL BE USED FOR THE TYPE A SERVICE INSTALLATION AND ALL EXPOSED CONDUIT ABOVE GRADE.

ALL JUNCTION BOXES SHALL BE INSTALLED ONE INCH BELOW GRADE AND ENCASED IN A MINIMUM OF 6 INCHES OF CONCRETE ON ALL SIDES.

THE SERVICE DISCONNECT AND FLASHER CABINET SHALL BE MOUNTED AT A MINIMUM HEIGHT OF 3.5 FT ON THE PROPOSED SERVICE POLE.

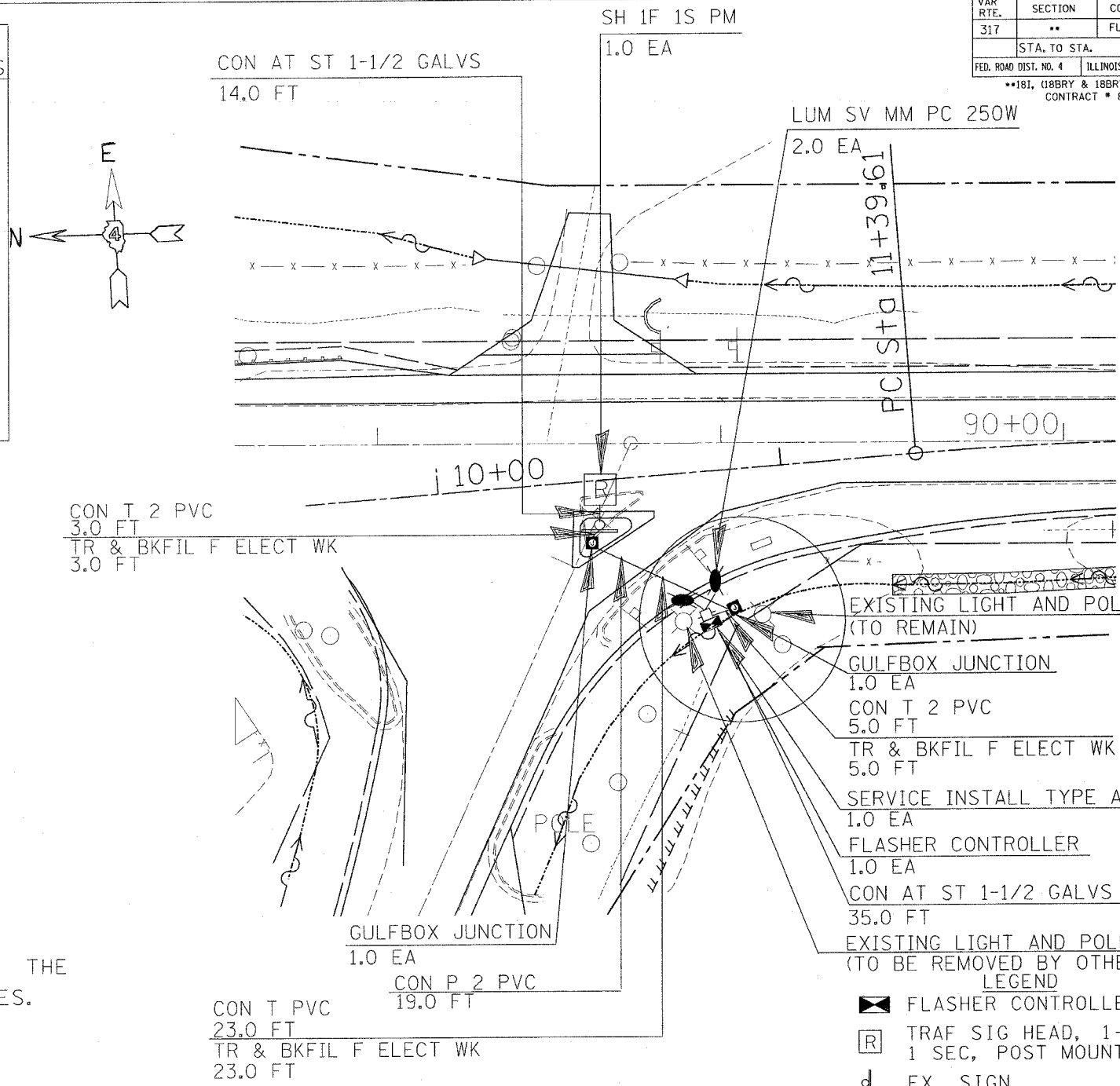
THE TRAFFIC SIGNAL HEAD SHALL BE EQUIPPED WITH A 12" RED LED.

THE FLASHER INSTALLATION SHALL CONFORM TO STANDARD 880001.

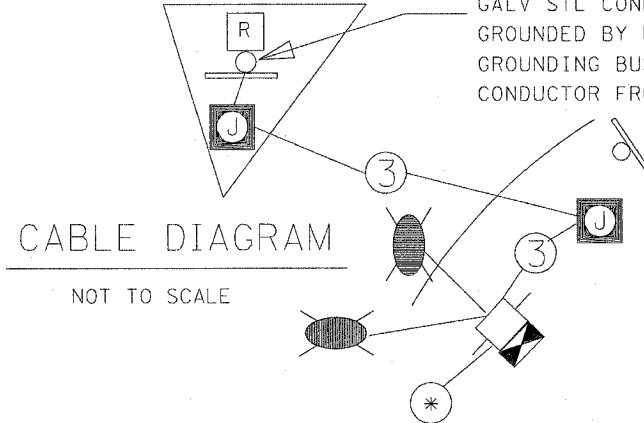
A TWIN-TENON LUMINAIRE MOUNTING BRACKET, ALL MOUNTING HARDWARE, AND #6 WIRE SHALL BE PROVIDED AND INSTALLED ON THE PROPOSED SERVICE POLE. THE COST OF THIS WORK SHALL BE INCLUDED IN THE BID PRICE FOR THE LUMINAIRES.

LUMINAIRES SHALL BE EQUIPPED WITH INTEGRAL FUSING.

LUMINAIRES SHALL HAVE A MINIMUM 35 FT. MOUNTING HEIGHT.



GALV STL CONDUIT SHALL BE GROUNDED BY UTILIZING A GROUNDING BUSHING AND SPARE CONDUCTOR FROM #14 CABLE.



- TRAFFIC SIGNAL LEGEND**
- ⊙ OVERHEAD SERVICE CABLE FROM UTILITY
 - ⊠ PROP. FLASHER CONTROLLER
 - ③ 3/C NO. 14
 - ⊠ PROP. TRAFFIC SIGNAL HEAD, 1 FACE, 1 SECTION, POST MOUNTED
 - ⊙ PROP. GULFBOX JUNCTION
 - ⊠ PROP. TYPE A SERVICE AND POLE
 - ⊙ PROP. LUMINAIRE
 - ⊠ EX. SIGN

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
**FLASHING BEACON
 OVERHEAD LIGHTING**
 U.S. 24 & U.S. 136
 SCALE: VERT. DATE
 HORIZ. DATE
 DRAWN BY
 CHECKED BY

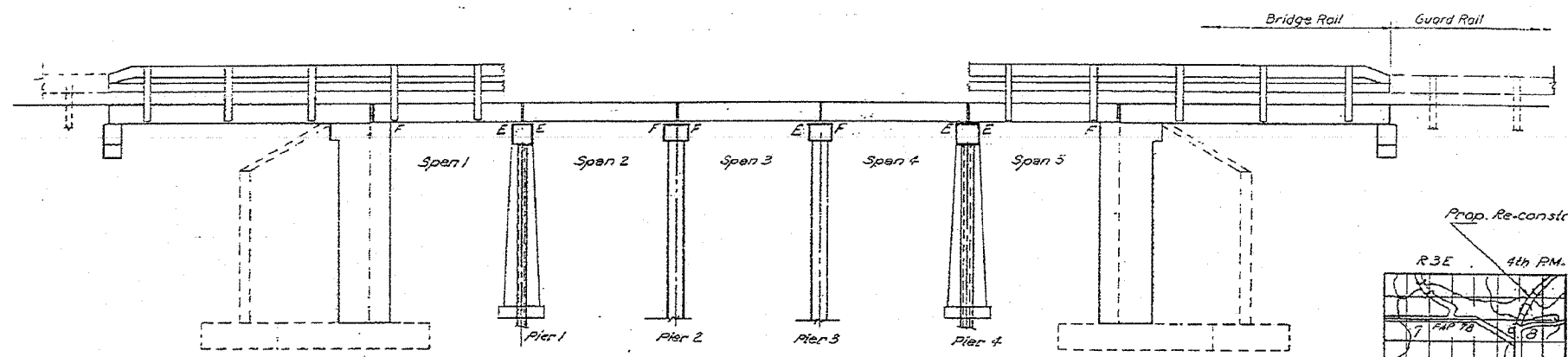
4/7/2005

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	...	FULTON	684	139
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

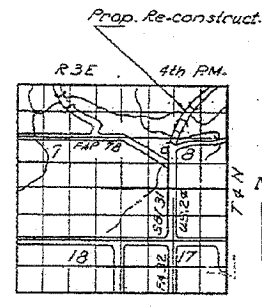
18L188RY&188RY-1BR,188-1

Built as S.B. 1. P. 31, Section 18-120, Sta. 64+75, Year 1726 Sec. 10.51-1 in 1965
 Existing Structure: R.C. Abutments, R.C. Piers, 2 spans PPC Slabs to remain in place.
 1 span Steel Truss 150' long (22' Roadway). Salvage Steel Truss by contractor.

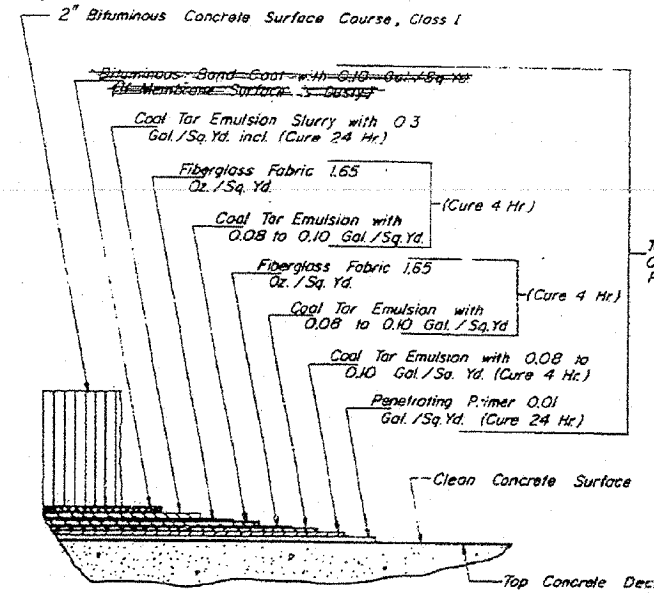
STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS & BUILDINGS
 DIVISION OF HIGHWAYS



ELEVATION



LOCATION SKETCH



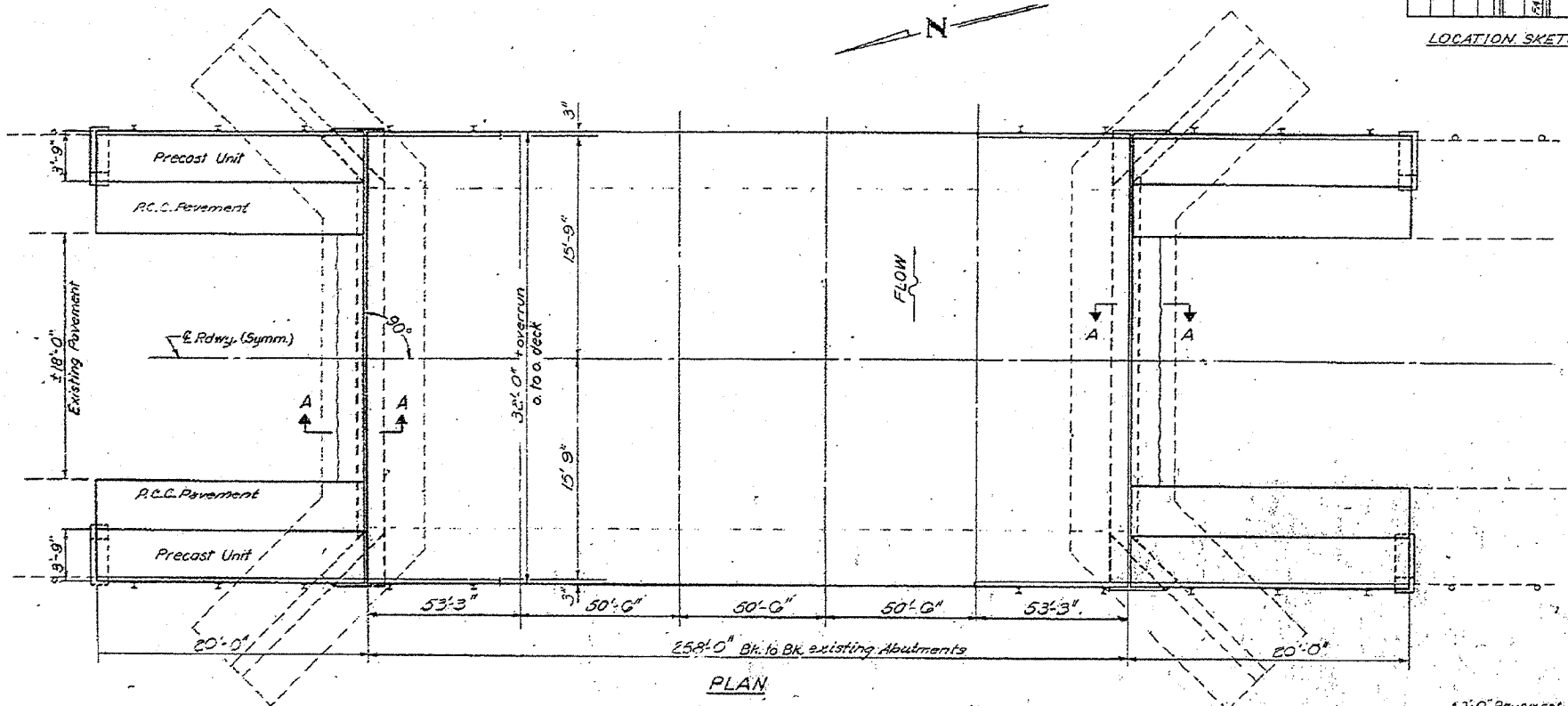
DETAIL OF DECK SURFACING

GENERAL NOTES

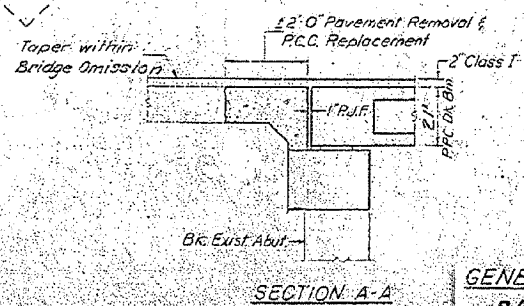
All reinforcement bars shall be lapped 24 diameters unless otherwise shown.
 It shall be the responsibility of the Contractor to verify all dimensions and conditions existing in the field prior to construction and ordering of materials.
 An alternate strand pattern using Extra High Strength Prestressing strand (270 ksi.) is permitted.
 Expansion bolts shall consist of self drilling expansion anchors and 3/4" hooked bolts. Hooked bolts shall extend a minimum of 12" into new concrete.
 Shoulder transition to wingwall shall be shaped with broken concrete.
 Cost Incidental.
 Limits of Coal Tar Interlayer Protective Coat shall be back to back of abutments.
 The Contractor shall drive one Metal Shell test pile in a permanent location at Pier 2 as directed by the Engineer before ordering the remainder of Piles

TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub.	Total
Class A Excavation	Cu. Yds.		104	104
Portland Cement Concrete Pavement (10")	Sq. Yds.	29		29
Pavement Fabric	Sq. Yds.	29		29
Concrete Removal	Cu. Yds.	8	10	18
Expansion Bolts (3/4")	Each	52	150	202
Class X Concrete	Cu. Yds.	1.6	91.3	92.9
Precast Concrete Bridge Slab	Sq. Ft.	299		299
Precast Prestressed Concrete Deck Beams (21)	Sq. Ft.	3701		3701
Steel Railing, Type N	Lin. Ft.	596		596
Reinforcement Bars	Lbs.		7860	7860
Pavement Removal & P.C.C. Replacement, Type 2 (10")	Sq. Yds.	8		8
Coal Tar Interlayer Protective Coat	Sq. Yds.	917		917
Bituminous Concrete Surface Removal	Sq. Yds.	247		247
Removal of Existing Superstructure	Each	1		1
Metal Shell Piles (12" dia)	Lin. Ft.		874	874
Test Piles (Metal Shell Piles)	Each		1	1
Bridge Handrail Removal	Lin. Ft.	212		212



PLAN



SECTION A-A

DESIGN STRESSES

FIELD UNITS PRECAST PRESTR. UNITS
 $f_c = 1400$ psi. (super) $f_c = 5000$ psi.
 $f_c = 1000$ psi. (sub) $f_{cr} = 4000$ psi.
 $f_s = 20,000$ psi. (reinf.) $f_s = 248,000$ psi.
 $v_c = 75$ psi. (footing) $f_{si} = 173,600$ psi.
 $n = 10$

LOADING HS 20-44

DESIGNED: *John Schuller*
 CHECKED: *James Hamilton*
 DRAWN: *J.L. Armstrong, JR.*
 CHECKED: *J.H. JP*
 EXAMINED: *Richard H. Holtzman*
 PASSED: *W.E. Beaman*
 1970

GENERAL PLAN & ELEVATION
 S.B. 1. RT. 31 - SEC. 18 BRY
 FULTON COUNTY
 STATION 64+75

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 EXISTING OVERFLOW STRUCTURE
 FOR INFORMATION ONLY

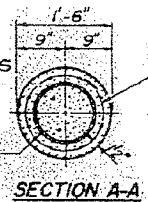
SCALE: VERT.
 HORIZ.
 DATE

DRAWN BY
 CHECKED BY

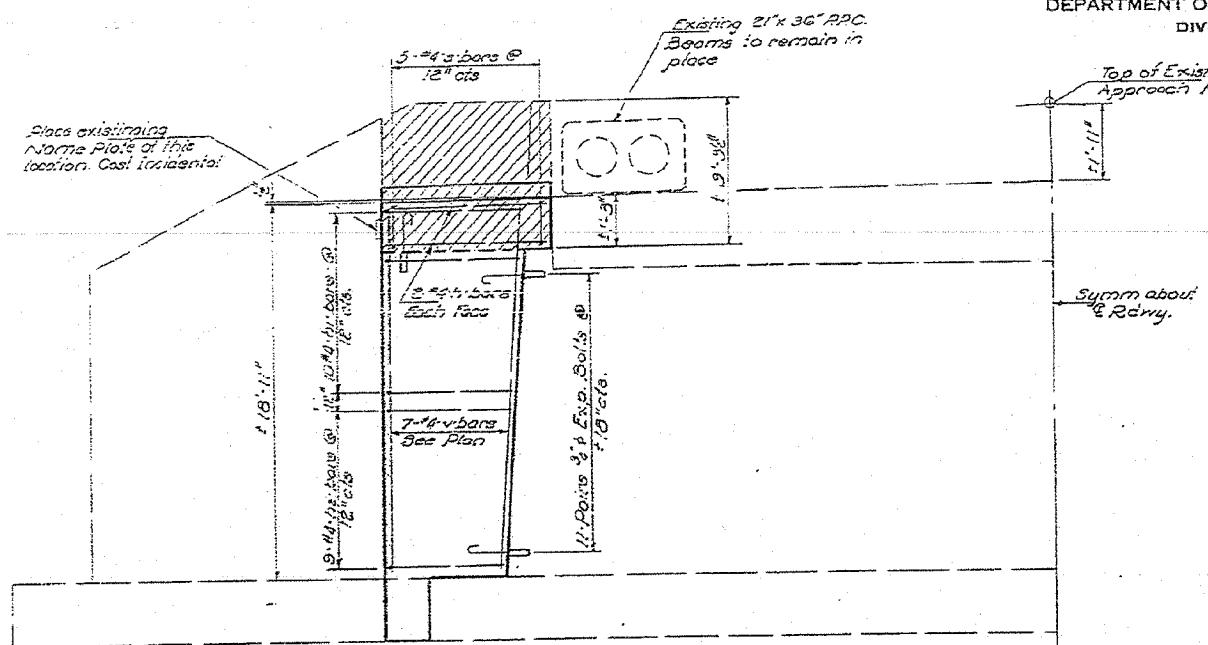
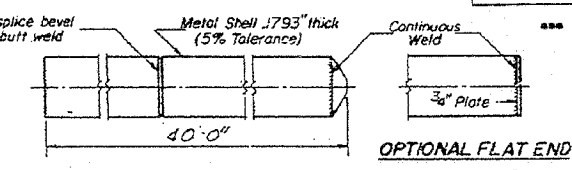
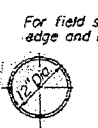
PLOT DATE: 2/23/2006
 FILE NAME: c:\valcom\188ry\188ry.dgn
 PLOT SCALE: 1/8" = 1'-0"
 USER NAME: jh
 PLOT DEVICE: HPGL

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315	***	FULTON	694	140
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS FED. AID PROJECT		*** 18L188RY&188RY-1NR.188-1	

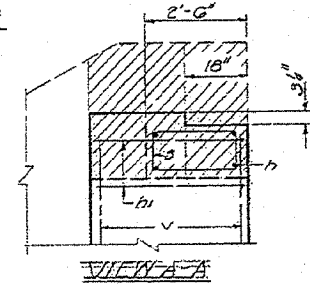
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS



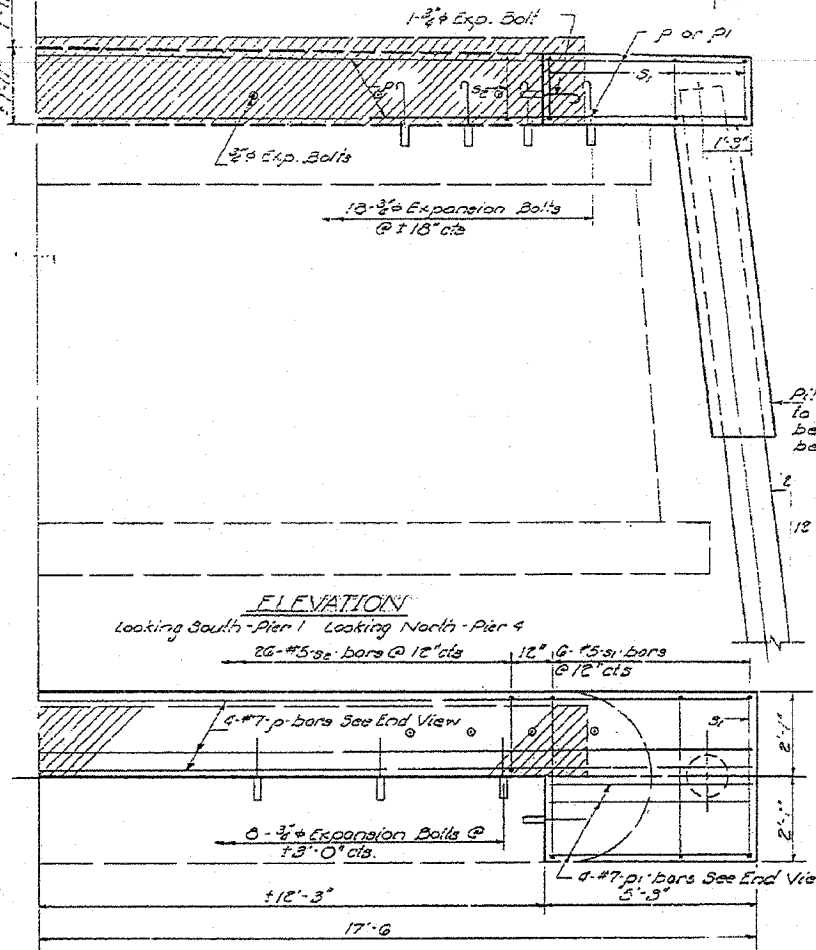
Welded wire fabric 6"x6" mesh
#4 wire - Wt. 53#/100 sq. ft.
The cast of Class X Concrete Encasement and Reinforcement is incidental to the cost of furnishing piles.
Forms for encasement may be omitted when soil conditions will permit.



ELEVATION



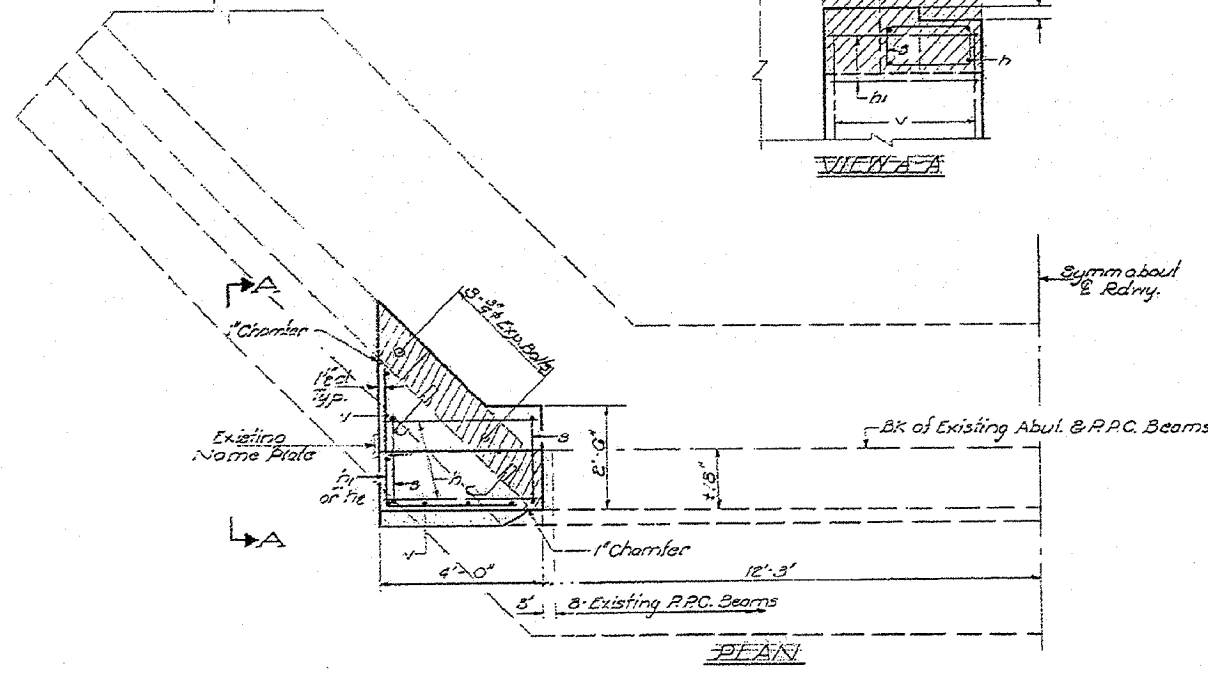
VIEW A-A



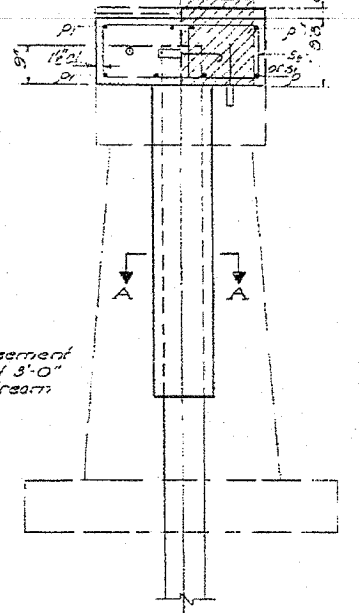
ELEVATION

Looking South - Pier 1 Looking North - Pier 4

PLAN



PLAN



END VIEW

PILE DATA

Type: Metal Shell Piles 12" dia
Capacity: 30 Tons
Est Length: 40 Ft.
No. Required: 2

TWO ABUTMENTS
BILL OF MATERIAL

Bar	No	Size	Length	Shape
h	16	#4	3'-9"	—
h1	40	#4	6'-2"	L
h2	36	#4	5'-4"	L
s	20	#4	7'-3"	□
v	28	#4	10'-8"	—

Class X Concrete Cu.Yds 17.8
Reinforcement Bars Lbs 780
Expansion bolts 1/2" dia 100
Concrete Removal Cu.Yds 3

TWO PIERS
BILL OF MATERIAL

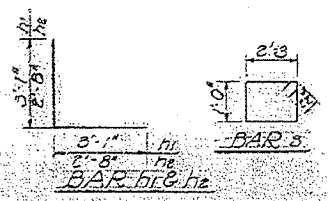
Bar	No	Size	Length	Shape
p	8	#7	34'-0"	—
pi	16	#7	5'-0"	—
si	24	#5	11'-9"	□
se	52	#5	7'-7"	□

Class X Concrete Cu.Yds 12.5
Reinforcement Bars Lbs 1440
Expansion Bolts 1/2" dia 56
Concrete Removal Cu.Yds 7
Metal Shell Piles 12" dia Lin.Ft. 160

ABUTMENT NO. 6 PIERS 1&4
S.E. PI. 3 SEC. 18 BRY
FULTON COUNTY
STA. 6-4-75

NOTES:
Matched area indicates concrete removal. Reinforcement extending into removed area shall be cleaned and incorporated into the new construction.
Expansion bolts shall be anchored in sound concrete.
All edges shall have standard 1/4" chamfers except as noted.

DESIGNED	John S. Schineller	EXAMINED	[Signature]
CHECKED	James P. [Signature]	PASSED	[Signature]
DRAWN	J. SCHINELLER	DATE	5/22/70
CHECKED	JD		



BAR SCHEDULE

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION
NAME	DATE	
		EXISTING OVERFLOW STRUCTURE FOR INFORMATION ONLY

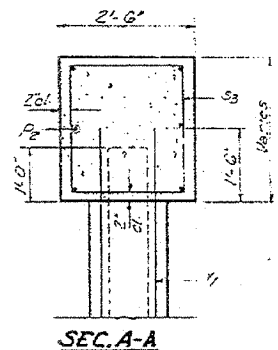
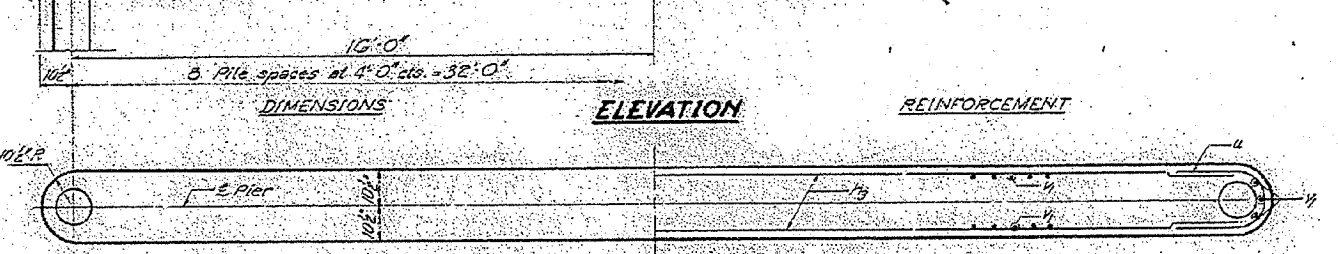
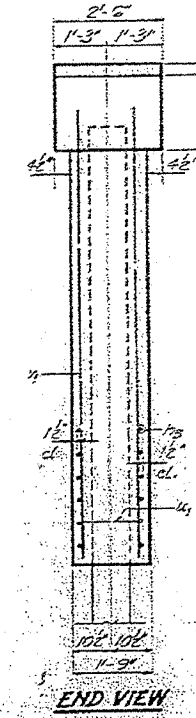
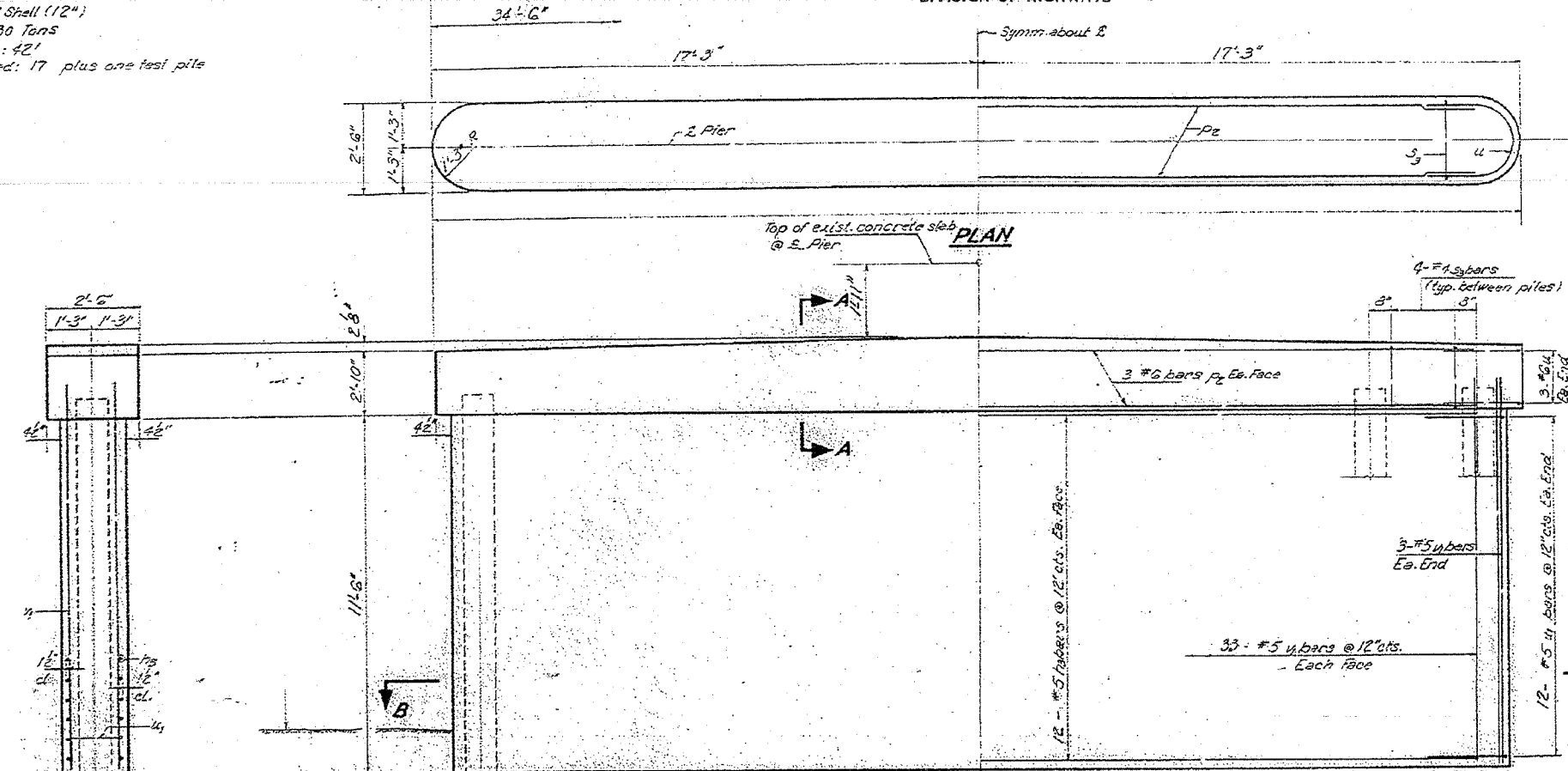
SCALE: VERT. DATE
HORIZ. DATE

DRAWN BY
CHECKED BY

PILE DATA -

Type: Metal Shell (12")
 Capacity: 30 Tons
 Est. length: 42'
 No. Required: 17 plus one test pile

STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS & BUILDINGS
 DIVISION OF HIGHWAYS



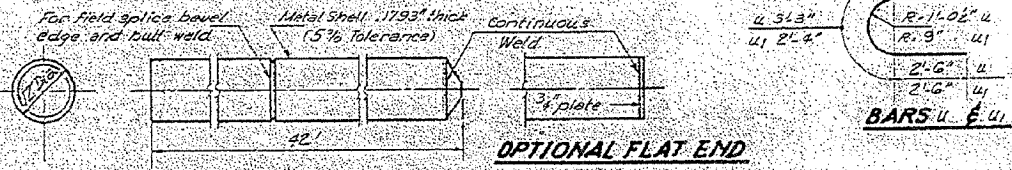
Note:
 All edges shall have Std. 2" chamfers

TWO PIERS

BILL OF MATERIAL

Bar No.	Size	Length	Shape
1a	#8	32'-0"	—
1b	#6	32'-0"	—
2	#4	10'-1"	□
3	#6	8'-3"	□
4	#5	7'-8"	□
5	#5	12'-9"	—
Class X Concrete Cu. Yds.			61.5
Reinforcement Bars Lbs.			5040
Metal Shell Piles (12") Lin. Ft.			114
Test Piles (Metal Shell) Each			1

Note:
 Driving and bearing ends of pile shall be cut square



METAL SHELL PILE DETAILS

DESIGNED: *James Hamilton*
 CHECKED: *James Hamilton*
 DRAWN: *usank*
 CHECKED: *JP*

EXAMINED: *Richard H. Guller*
 PASSED: *Richard H. Guller*
 APPROVED: *Richard H. Guller*

FEB 6 1970

PIERS 2 & 3
 S.B. 1 RT. 31 SEC. 18 BRY
 FULTON COUNTY
 STA. 64+75

REVISIONS	DATE
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

EXISTING OVERFLOW STRUCTURE FOR INFORMATION ONLY

SCALE: VERT. DATE
 HORIZ. DATE

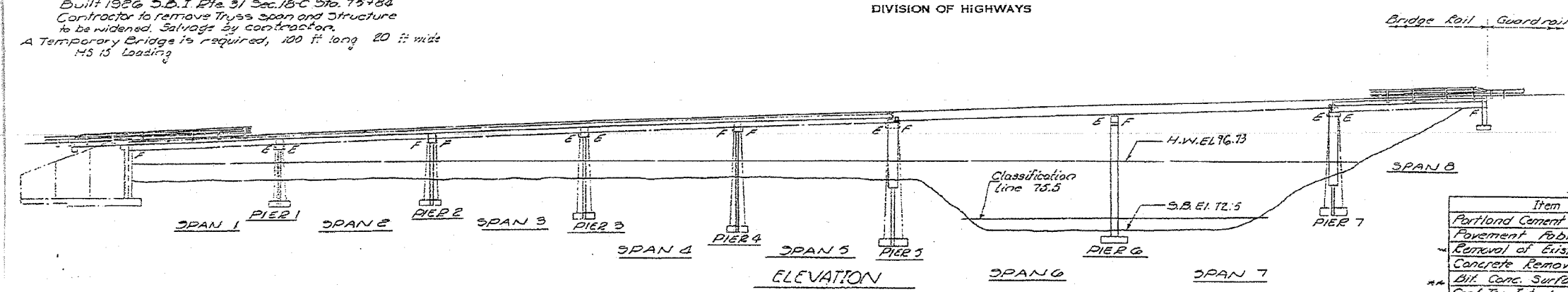
DRAWN BY
 CHECKED BY

PLOT DATE: 3/23/2000
 PLOT SCALE: 1/8" = 1'-0"
 USER NAME: jh1414

CONTRACT NO. 88753			
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS
315	***	FULTON	684
STA.		TO STA.	
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT	
*** 181.188RY&188RY-18R.188-1			

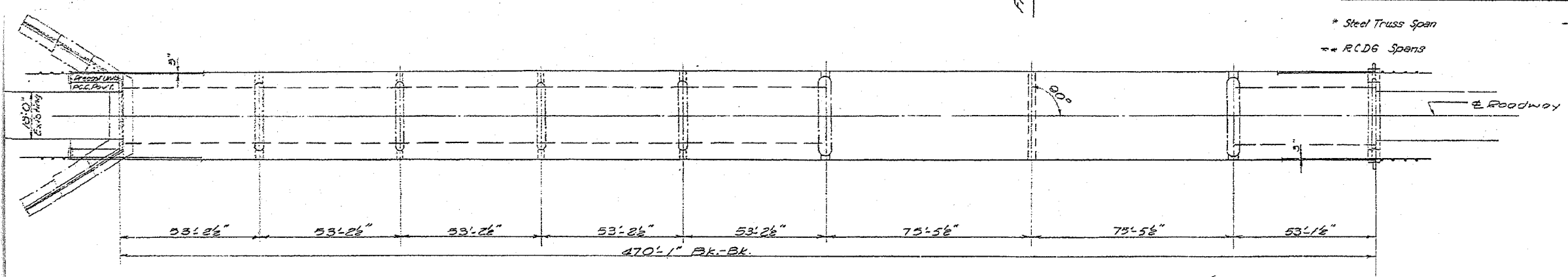
B.M: Chiseled square on Southeast wingwall of the Spoon River Overflow Structure El. 100.00
 Existing Structure: 6 Span R.C. Deck Girder, 1 Span thru Truss R.C. Abutments, R.C. Piers
 Built 1926 S.D.I. Rte. 31 Sec. 18-C Sta. 75+84
 Contractor to remove Truss span and structure to be widened. Salvage by contractor.
 A Temporary Bridge is required, 100 ft long 20 ft wide HS 15 Loading

STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS & BUILDINGS
 DIVISION OF HIGHWAYS



TOTAL BILL OF MATERIAL

Item	Unit	Super	Sub	Total
Portland Cement Conc. Pav't (10")	Sq. Yds.	17		17
Pavement Fabric	Sq. Yds.	17		17
Removal of Exst. Superstructure	Each	1		1
Concrete Removal	Cu. Yds.	10.3	10	11.3
Bit. Conc. Surface Removal	Sq. Yds.	621		621
Coat for Interlayer Protec. Coat	Sq. Yds.	1724		1724
Expansion Bolts 3/4" x 8"	Each	76	356	382
Class X Concrete	Cu. Yds.		170.1	170.1
Precast Conc. Bridge Slab	Sq. Ft.	149		149
Prec. Prest. Conc. Deck Bms. (21")	Sq. Ft.	3624		3624
Prec. Prest. Conc. Deck Bms. (35")	Sq. Ft.	4975		4975
Steel Railing Type N	Lin. Ft.	950		950
Reinforcement Bars	Lbs.		11,910	11,910
Steel Piles (10BP42)	Lin. Ft.		503	503
Test Piles (10BP42)	Each		1	1
Class X Conc. Encasement	Cu. Yds.		13.6	13.6
Temporary Bridge Complete	Each		1	1
Class A Excavation	Cu. Yds.		71	71
Class B Excavation	Cu. Yds.		75	75



GENERAL NOTES

All reinforcement bars shall be lapped 24 dia. unless otherwise shown.

The Contractor shall drive (1) one Steel (10BP42) test pile in a permanent location at Pier 2 as directed by the Engineer before ordering the remainder of piles.

It shall be the responsibility of the Contractor to verify all dimensions and conditions existing in the field prior to construction and ordering of materials.

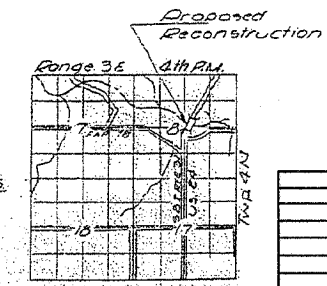
An alternate strand pattern using Extra High Strength Prestressing strand (EHS) is permitted. Expansion bolts shall consist of self-drilling expansion anchors and 3/4" x 12" hooked bolts unless otherwise shown.

Limits of Coat for Interlayer Protective Coat shall be bk. to bk. of abutments and out to out of deck.

DESIGN STRESSES

FIELD UNITS	PRECAST PRESTR. UNITS
f _c = 1400 psi Super	f _c = 5000 psi
f _c = 1000 psi Sub	f _s = 4000 psi
f _s = 20,000 psi Prest	f _s = 248,000 psi
v _e = 75 psi Figs	f _s = 173,600 psi
n = 10	

LOADING HS 20-44



OVER SPOON RIVER
 S.B.I. ROUTE 31
 SECTION 188RY-1
 FULTON COUNTY
 STATION 75+84

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION	
NAME	DATE	EXISTING SPOON RIVER STRUCTURE FOR INFORMATION ONLY	

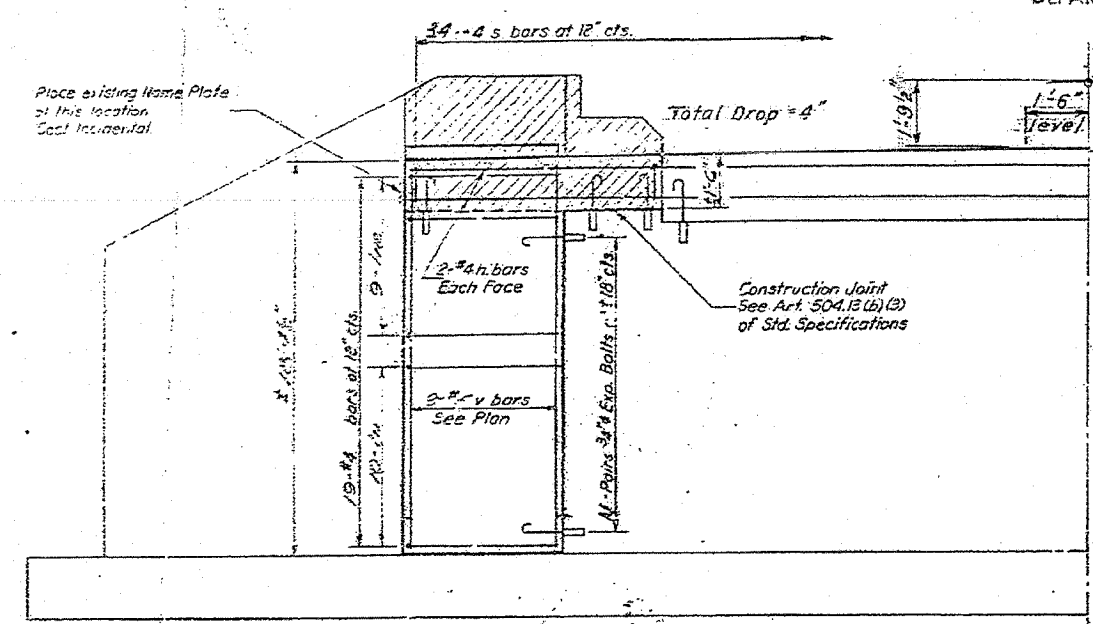
DESIGNED: James Hamilton
 CHECKED: James Pevle
 DRAWN: D. Deringer
 CHECKED: JP

EXAMINED: James Hamilton
 PASSED: W. G. ...
 APPROVED: ...

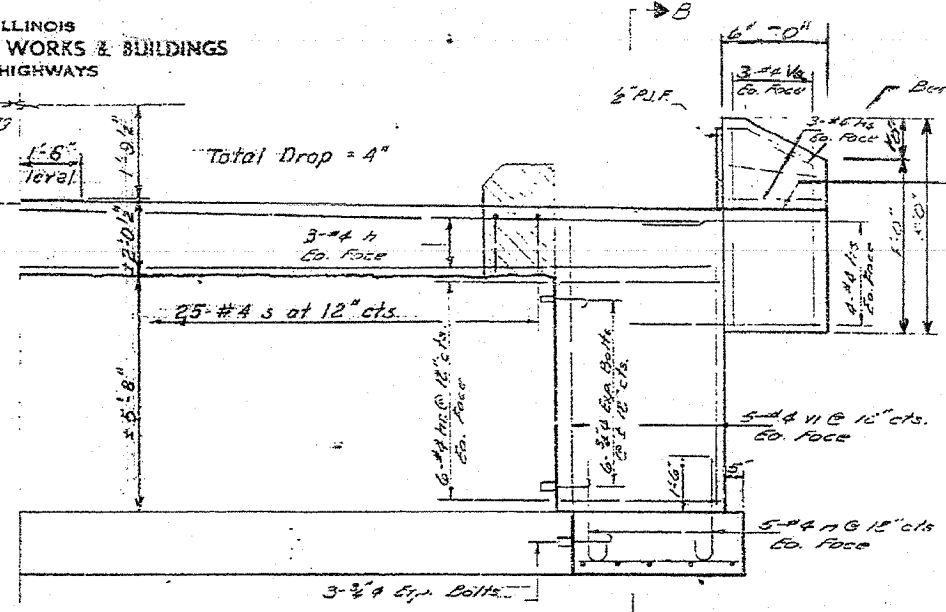
PLOT DATE: 3/23/2000
 PLOT SCALE: 1/8" = 1'-0"
 USER NAME: huffman

16L188RY-188RY-188-1

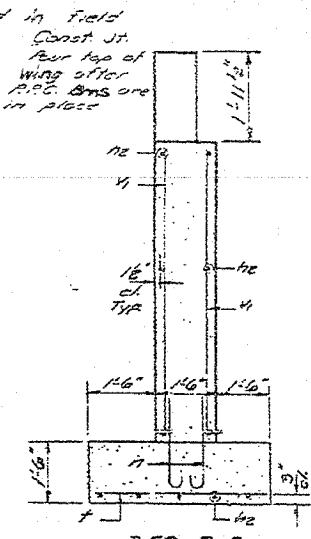
STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS & BUILDINGS
 DIVISION OF HIGHWAYS



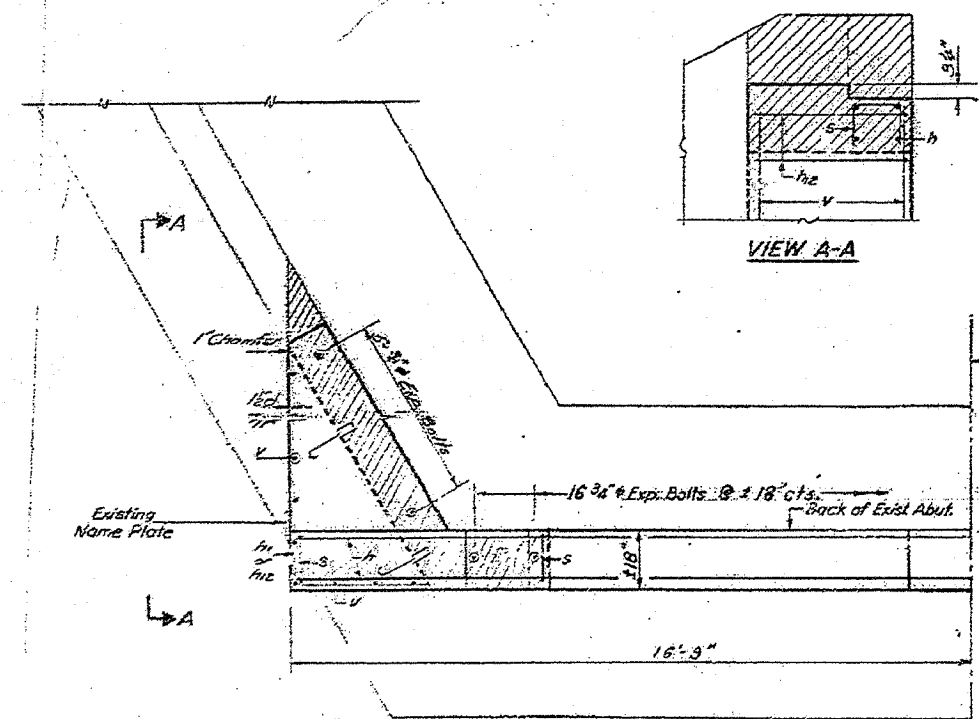
ELEVATION NORTH ABUTMENT



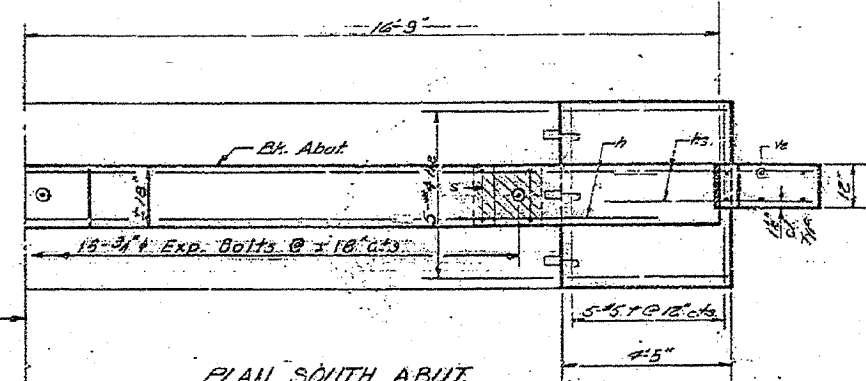
ELEV. SOUTH ABUTMENT



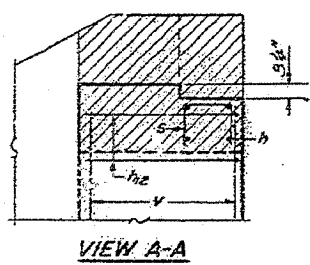
SEC. B-B



PLAN NORTH ABUT.



PLAN SOUTH ABUT.



VIEW A-A

SOUTH ABUTMENT
 BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h2	24	#4	4'-0"	—
h3	16	#4	3'-3"	—
h4	12	#4	2'-9"	—
h	6	#4	33'-3"	—
s	20	#4	3'-3"	—
s	25	#4	3'-9"	□
v	10	#5	4'-3"	—
v	20	#4	7'-0"	—
v	12	#4	4'-9"	—
Class X Concrete Cu.Yds. 9.2				
Reinforcement Bars Lbs. 560				
Expansion Bolts #4 Each 34				
Concrete Removal Cu.Yds. 0.5				

NORTH ABUTMENT
 BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h	4	#4	33'-3"	—
h	20	#4	7'-0"	L
h	18	#4	8'-9"	—
s	34	#4	3'-9"	□
v	10	#5	10'-0"	—
Class X Concrete Cu.Yds. 23.0				
Reinforcement Bars Lbs. 710				
Expansion Bolts #4 Each 70				
Concrete Removal Cu.Yds. 2.5				

NOTES:
 Hatched area indicates Concrete Removal. Reinforcement extending into removed area shall be cleaned and incorporated into the new construction.
 Expansion bolts shall be anchored in sound concrete.
 All edges shall have standard 3/4" chamfers except as noted.

AS REVISED
 ABUTMENTS
 S.B.T. RT. 31. SEC. 188RY-1
 FULTON COUNTY
 STATION: 75+84

REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
 EXISTING SPOON RIVER STRUCTURE
 FOR INFORMATION ONLY
 SCALE: VERT. DATE
 HORIZ. DATE
 DRAWN BY
 CHECKED BY

DESIGNED	W. S. 510	EXAMINED	W. S. 510
CHECKED	J. L. Armstrong	DESIGNED	W. S. 510
DRAWN	J. L. Armstrong	CHECKED	Richard A. Hoffmann
CHECKED	J. P.		

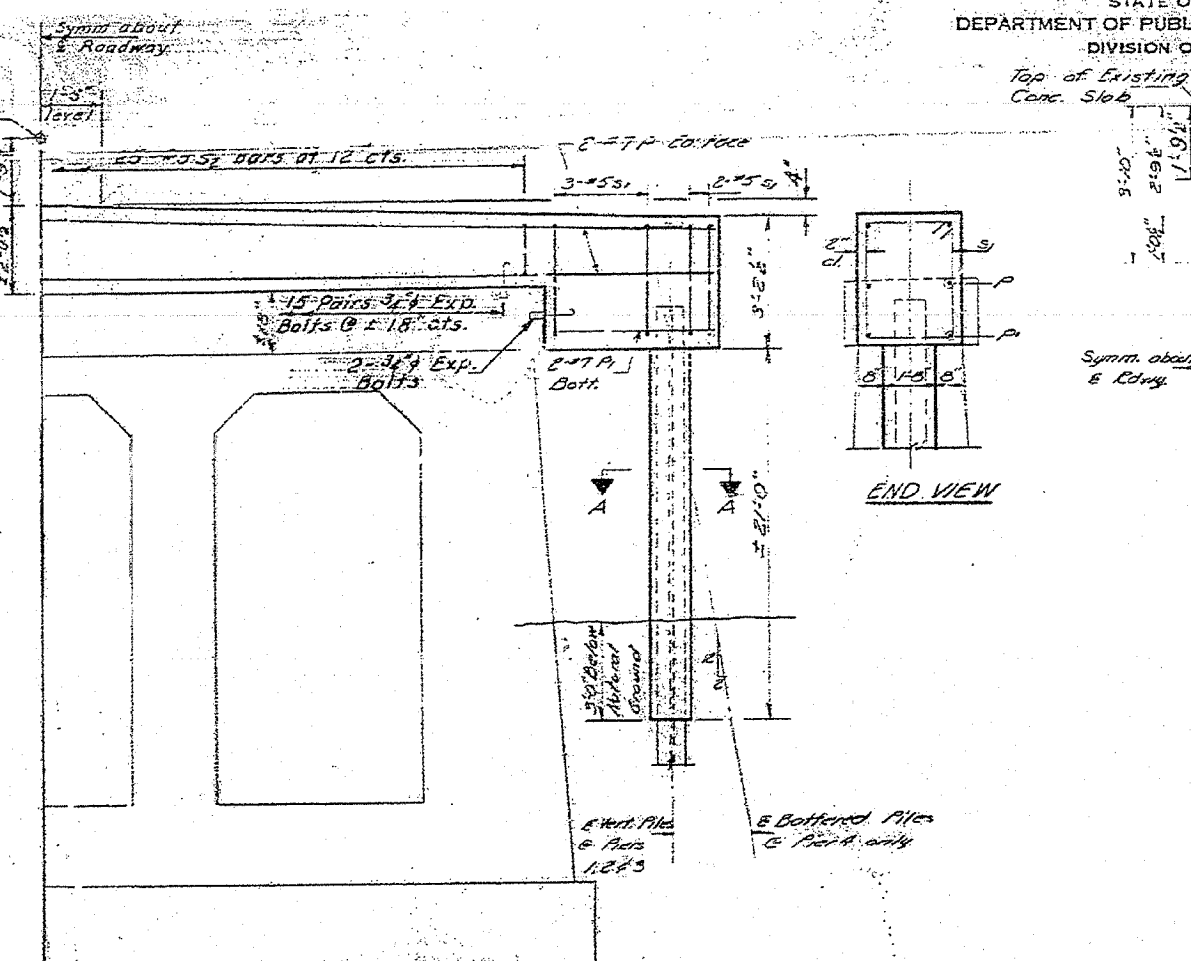
J. M. P. May 24, 1971



PLOT DATE: 5/23/71
 FILE NAME: 188RY-188RY-188-1.dwg
 PLOT SCALE: 1/8" = 1'-0"
 USER NAME: J. Armstrong

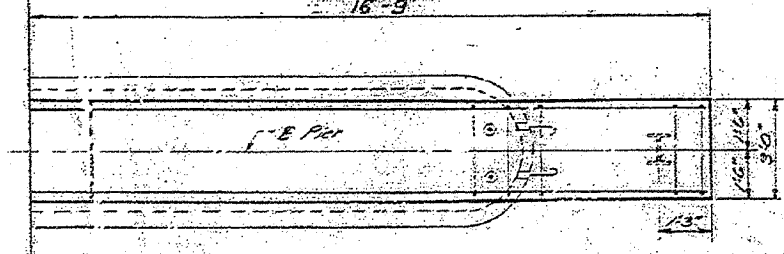
STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

CONTRACT NO. 88753			
F.A. RTE.	SECTION	COUNTY	TOTAL SHEET NO.
315	***	FULTON	684 144
STA.		TO STA.	
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT	
*** 181.188RY&188RY-188-1			

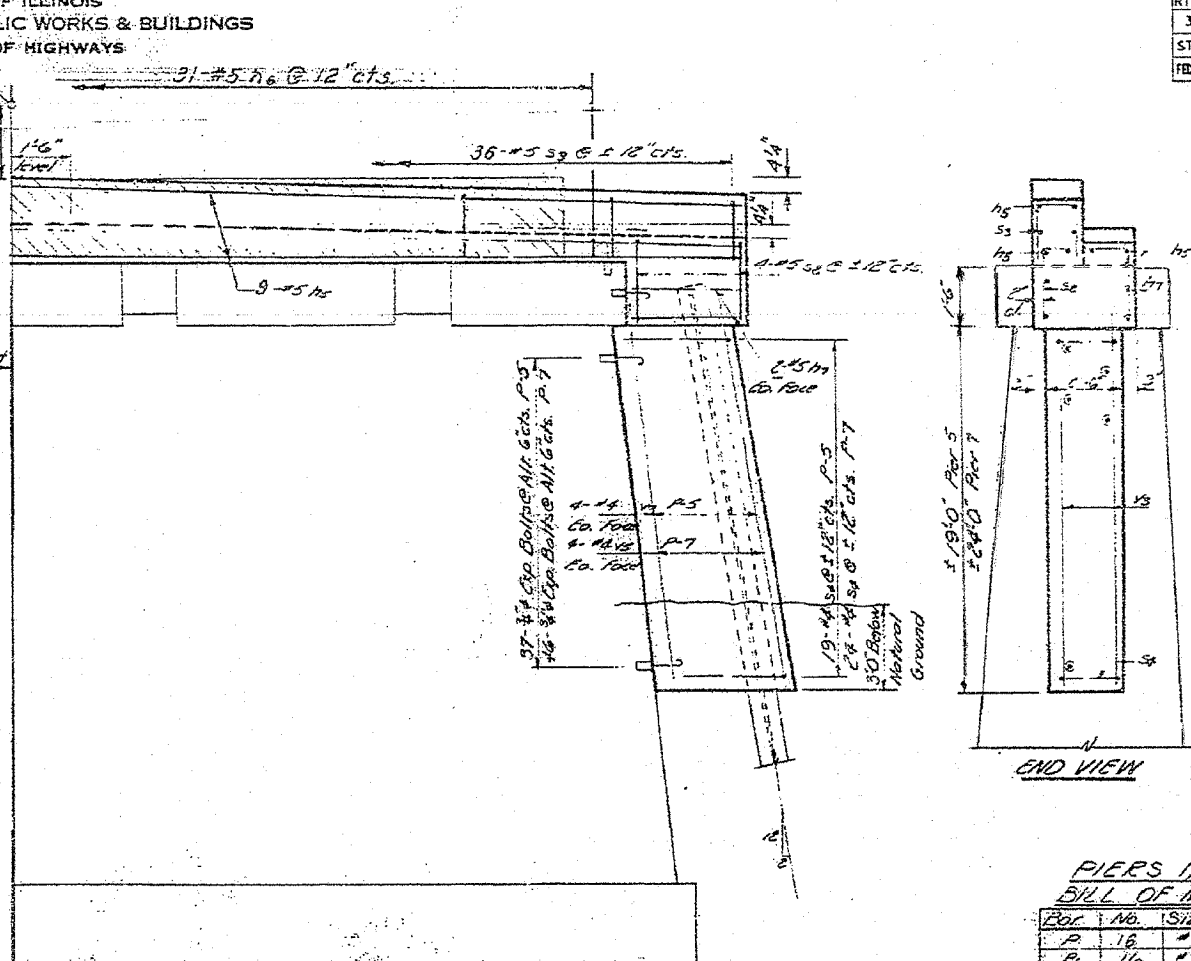


END VIEW

ELEVATION PIERS 1,2,3 & 4

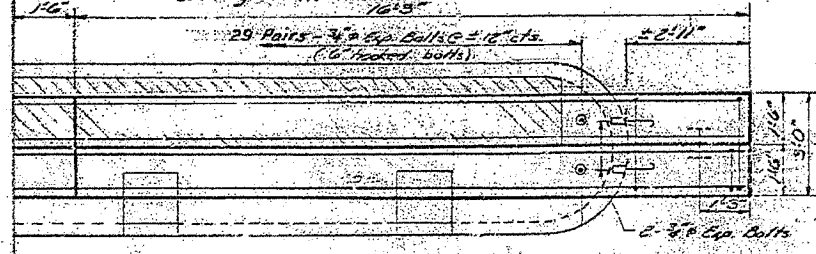


PLAN PIERS 1,2,3 & 4



END VIEW

ELEVATION PIERS 5 & 7



PLAN PIERS 5 & 7

PIERS 1,2,3 & 4
BILL OF MATERIAL

Bar No.	Size	Length	Shape
P 16	#7	33'-3"	—
P 16	#7	4'-3"	—
S 40	#5	14'-11"	□
S 100	#5	5'-8"	□
Class X Concrete Encasement Cu. Yds. 13.6			
Class X Concrete Cu. Yds. 38.2			
Reinf. Bars Lbs. 2310			
Elo. Bolts 3/4" Dia. Each 136			
Steel Piles (108P42) Lin. Ft. 330			
Test Piles (108P42) Each 1			

PIERS 5 & 7
BILL OF MATERIAL

Bar No.	Size	Length	Shape
H 18	#5	35'-3"	—
H 62	#5	3'-8"	—
H 14	#5	21'-9"	—
S 14	#5	5'-8"	□
S 72	#5	6'-8"	□
S 86	#5	7'-10"	□
V 16	#4	20'-0"	—
V 16	#4	25'-0"	—
Class X Concrete Cu. Yds. 47.6			
Reinf. Bars Lbs. 2280			
Elo. Bolts 3/4" Dia. Each 290			
Conc. Removal Cu. Yds. 7			
Steel Piles (108P42) Lin. Ft. 178			

AS REVISED

PIERS 1,2,3 & 5 & 7
S.B.T. RT. 31 SEC. 18 DPT-1
FULTON COUNTY
STATION: 75+24

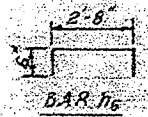
PILE DATA
Type - Steel (108P42)
Capacity - Driven to refusal
Est. Length - Pier 1 - 62'
Pier 3 - 50'
Pier 4 - 52'
Pier 5 - 54'
Pier 7 - 35'
No. Read - 11 plus 1 test pile at Pier 6



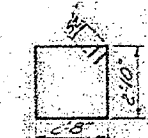
SECTION A-A

DESIGNED	Checked
EXAMINED	Checked
DRAWN	Checked
CHECKED	Checked

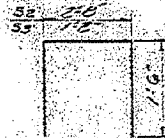
J.H.P. May 24, 1971



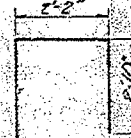
BAR 76



BAR S1



BAR S2 & S3



BAR S4

FILE DATE 5/25/70
FILE NAME 188.188-1
PLOT SCALE 1/8" = 1'-0"
USER NAME

REVISIONS	DATE

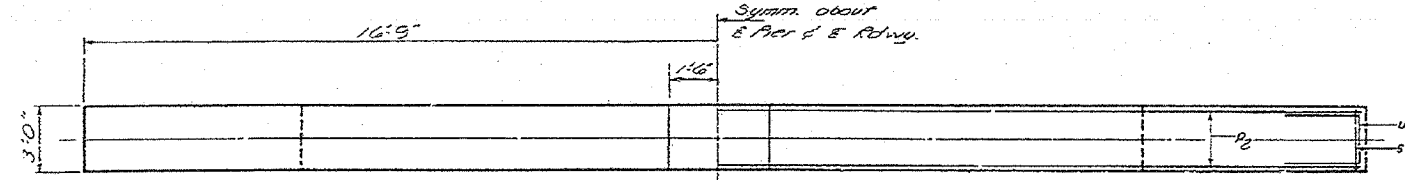
ILLINOIS DEPARTMENT OF TRANSPORTATION
EXISTING SPOON RIVER STRUCTURE
FOR INFORMATION ONLY
SCALE: VERT. DRAWN BY
 HORIZ. CHECKED BY
DATE

STATE OF ILLINOIS
DEPARTMENT OF PUBLIC WORKS & BUILDINGS
DIVISION OF HIGHWAYS

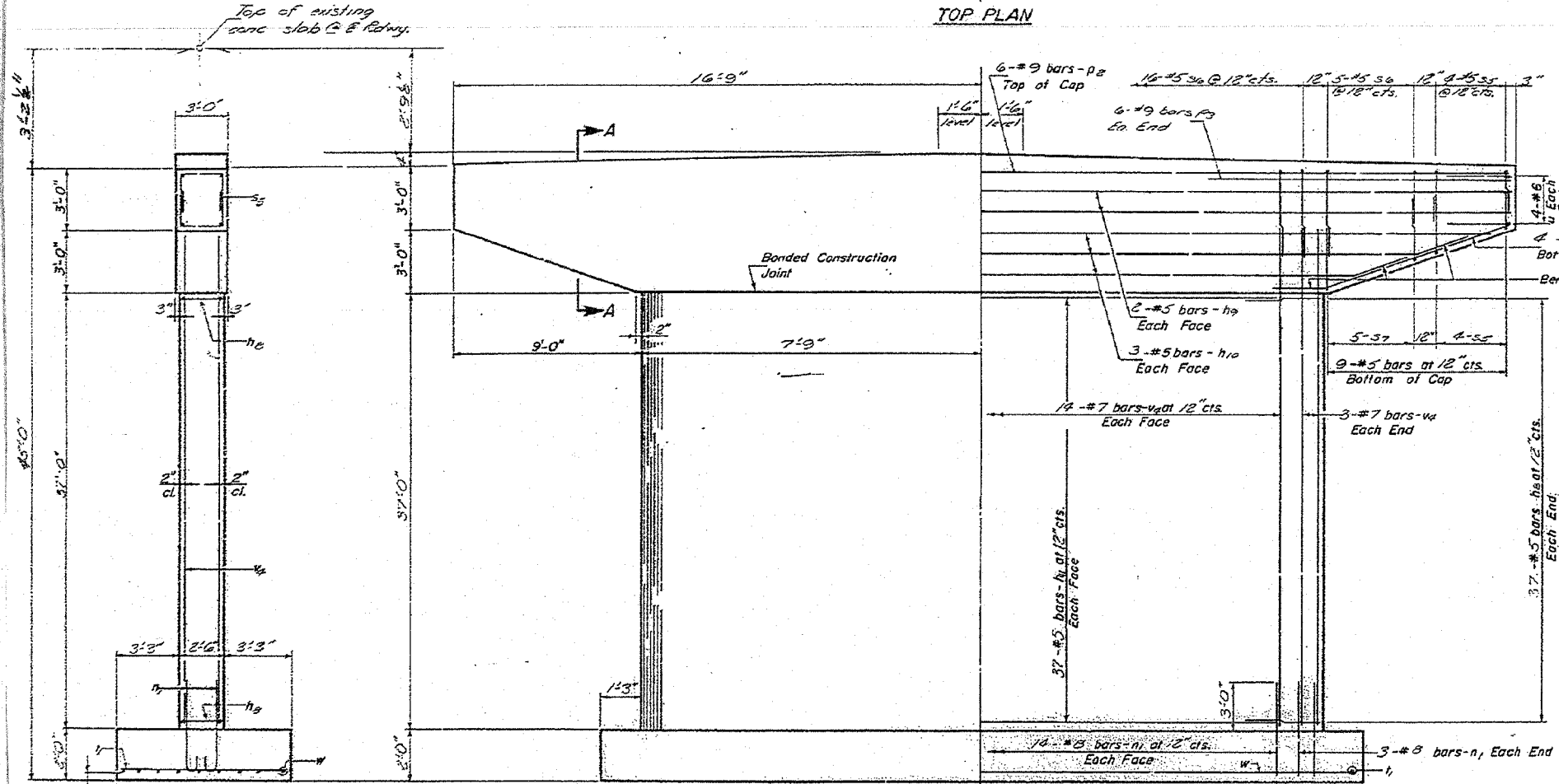
CONTRACT NO. 88753			
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS
315	***	FULTON	684
STA.	TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT	

Note:
Space reinforcement in cap to miss anchor bolts.
Minimum bar lags = 24 dia. unless otherwise noted.
All edges shall have standard 3/4 chamfers except as noted.
Four steps monolithically with cap.

*** 18L108RY&188RY-1BR,188-1

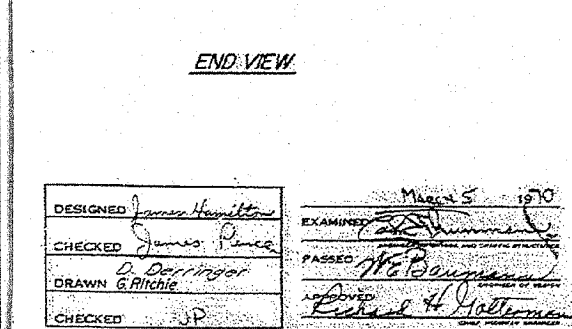


TOP PLAN

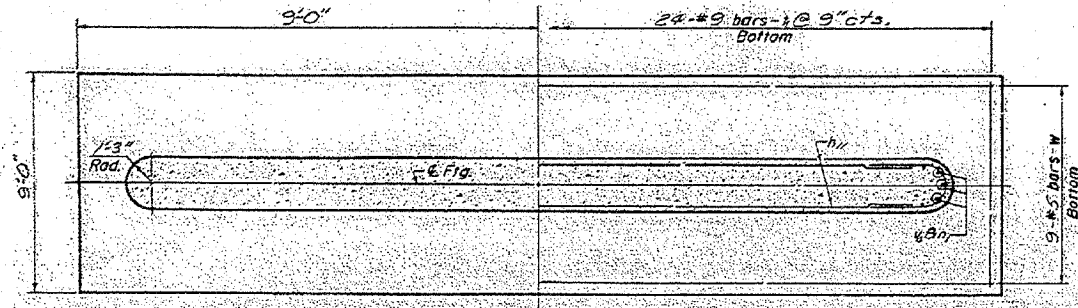


DIMENSIONS REINFORCEMENT

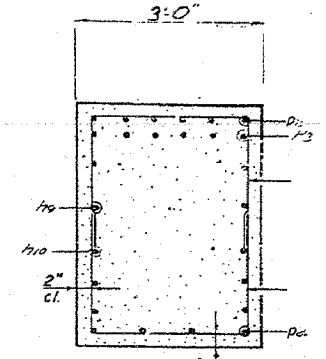
ELEVATION



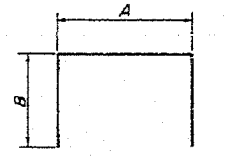
END VIEW



FOOTING PLAN



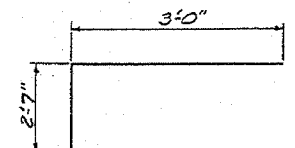
SECTION A-A



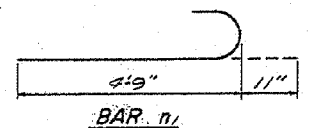
A & B DIMENSIONS

Bar	A	B
s5	2'-8"	2'-8"
s6	2'-5"	3'-9"
s7	2'-8"	3'-2"

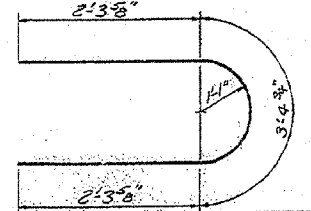
BARS s



BAR u



BAR n1



BAR n2

PIER 6 BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h8	74	#5	8'-0"	□
h9	4	#5	33'-3"	—
h10	6	#5	30'-3"	—
h11	74	#5	13'-0"	—
n1	34	#8	5'-8"	□
p2	6	#9	33'-3"	—
p3	12	#9	13'-0"	—
p4	8	#6	11'-6"	—
s5	16	#5	8'-0"	□
s6	26	#5	10'-2"	□
s7	10	#5	9'-0"	□
u	24	#9	8'-9"	—
v	8	#6	8'-7"	□
w	34	#7	41'-0"	—
w	9	#5	17'-9"	—
Class X Cc crete		Cu. Yds.	83.2	
Reinforceme. 1 Bars		Lbs.	8150	

PIER 6
S.L.I. PT 31 SEC. 18 BEY-1
FULTON COUNTY
STATION 75+84

REVISIONS	NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION
EXISTING SPOON RIVER STRUCTURE
FOR INFORMATION ONLY

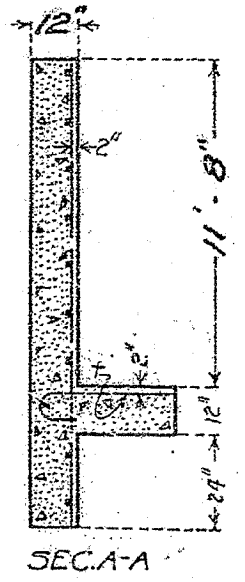
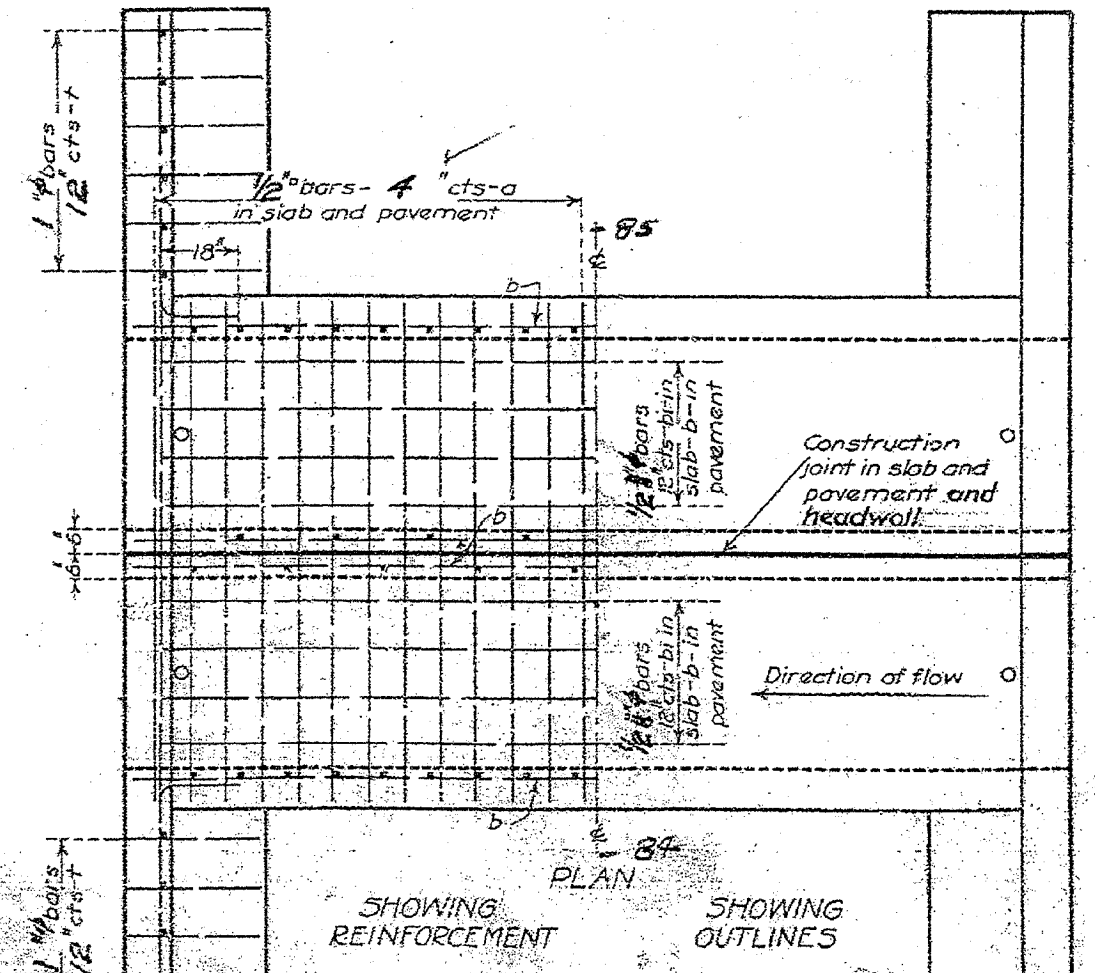
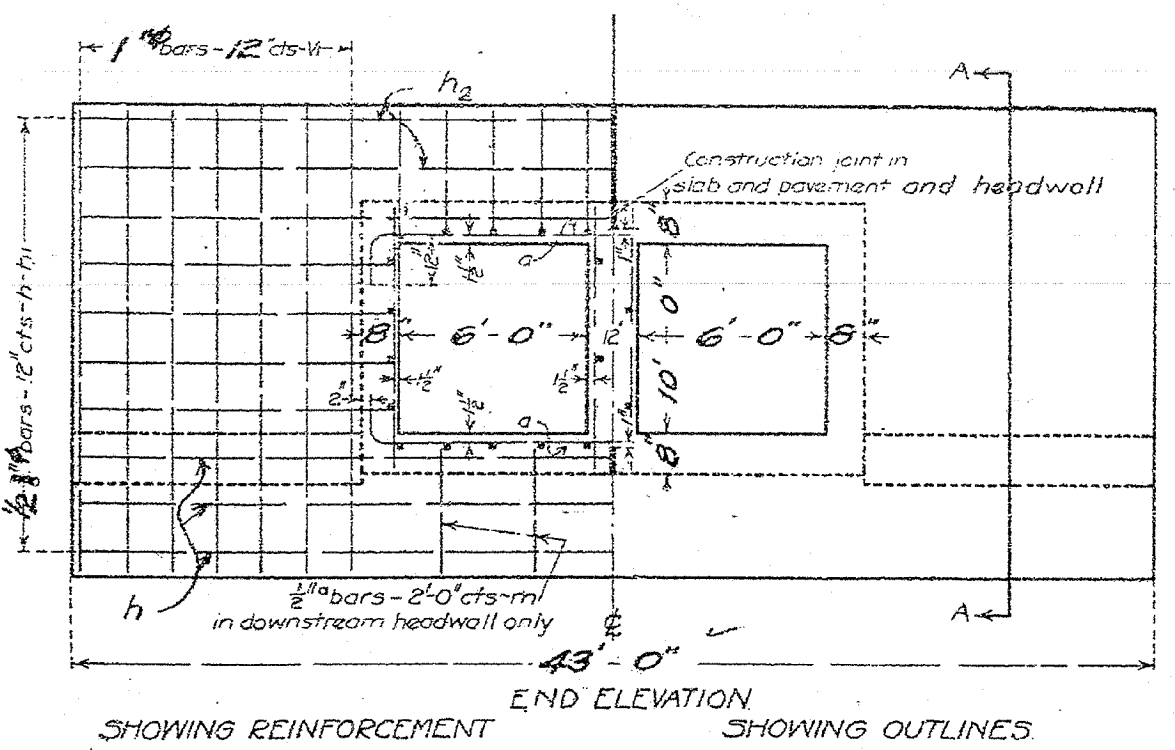
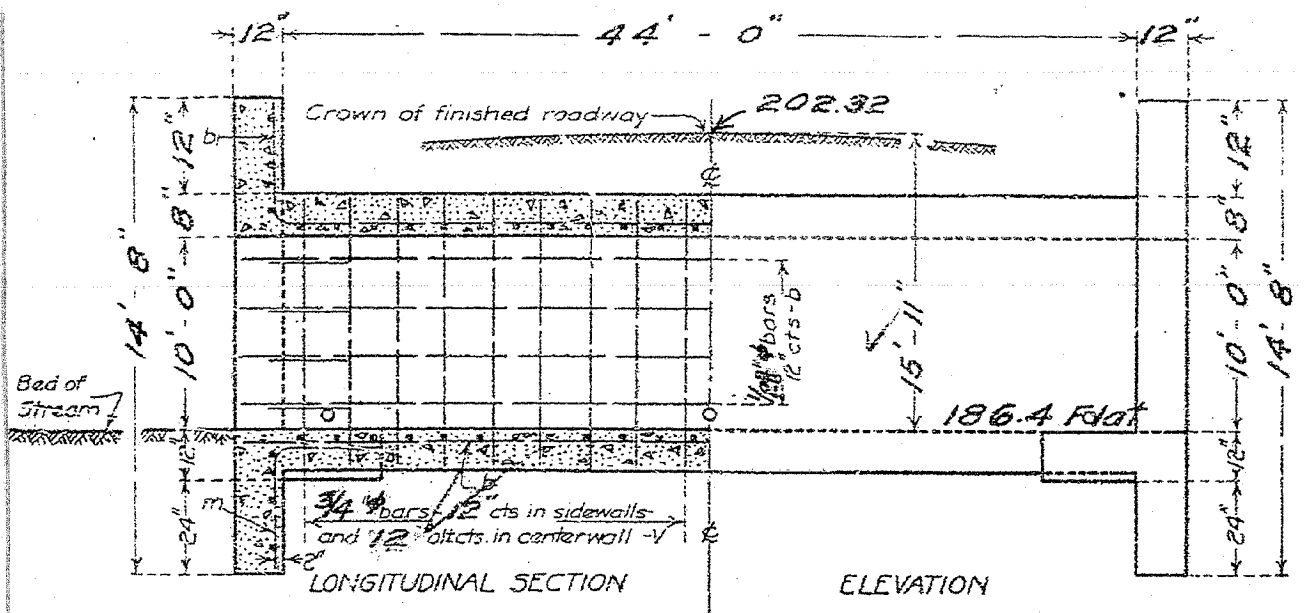
SCALE: VERT. DATE
HORIZ. DATE
DRAWN BY
CHECKED BY

PLOT DATE: 3/22/2008
FILE NAME: c:\p100\p100\p100\p100.dwg
PLOT SCALE: 1/8"=1'-0"
USER NAME: jhutchins

P-10, 1/4"=2'-0" 5-20-88

DESIGNED: James Hamilton
CHECKED: James Pence
DRAWN: G. Ritchie
EXAMINED: [Signature]
PASSED: [Signature]
APPROVED: [Signature]

Max. Soil Pressure = 4.5 tons/sq. ft.



BILL OF MATERIAL

BARS	NO	SIZE	LENGTH
V	132	3/4"	11'-0"
Vi	64	1"	14'-0"
h	12	1/2"	22'-6"
hi	40	1/2"	16'-0"
h2	8	1/2"	21'-0"
a	276	1/2"	16'-0"
b	84	1/2"	24'-0"
bi	28	1/2"	24'-6"
t	64	1"	5'-9"
m	8	1/2"	5'-0"
Reinforcing Steel-Lbs			11880
Concrete-Cu.Yds.			116.0

Class A Concrete to be used throughout Proportions 1-2 1/2-4

STATE OF ILLINOIS
 DEPARTMENT OF PUBLIC WORKS & BUILDINGS
 DIVISION OF HIGHWAYS
R.C. DOUBLE BOX CULVERT
 Sta. 84+78
 State Bond Issue
 Route 31
 Section 18A
 Fulton County

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION
NAME	DATE	
		EXISTING TRIBUTARY STRUCTURE FOR INFORMATION ONLY

SCALE: VERT. HORIZ. DATE DRAWN BY CHECKED BY

PLOT DATE: 9/23/2005
 FILE NAME: c:\v\p\proj\m180\180\180.dwg
 PLOT SCALE: 1/8"=1'-0"
 USER NAME: huf@fwd.com

COMPUTED - M.A. Malvern
 CHECKED - M.A. Malvern
 DRAWN - M.A. Malvern
 CHECKED - M.A. Malvern
 APPROVED - M.A. Malvern
 CHECKED - M.A. Malvern

EXAMINED - M.A. Malvern
 M.A. Malvern
 M.A. Malvern
 M.A. Malvern

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		FULTON	147	1
5 SHEETS				
Contract Number: 88753				

NOTES

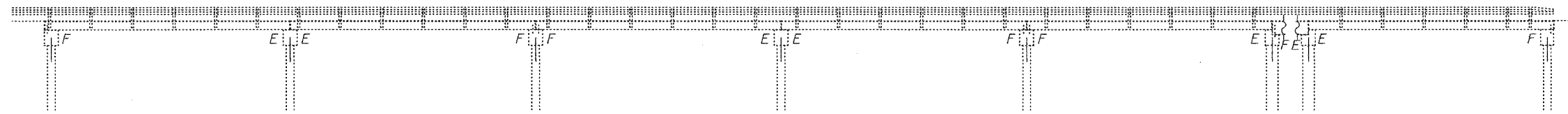
Plan dimensions and details relative to existing structure have been taken from existing plans and are subject to nominal construction variations. It shall be the Contractor's responsibility to verify such dimensions and details in the field and make necessary approved adjustments prior to construction 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 bid for the work.

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".

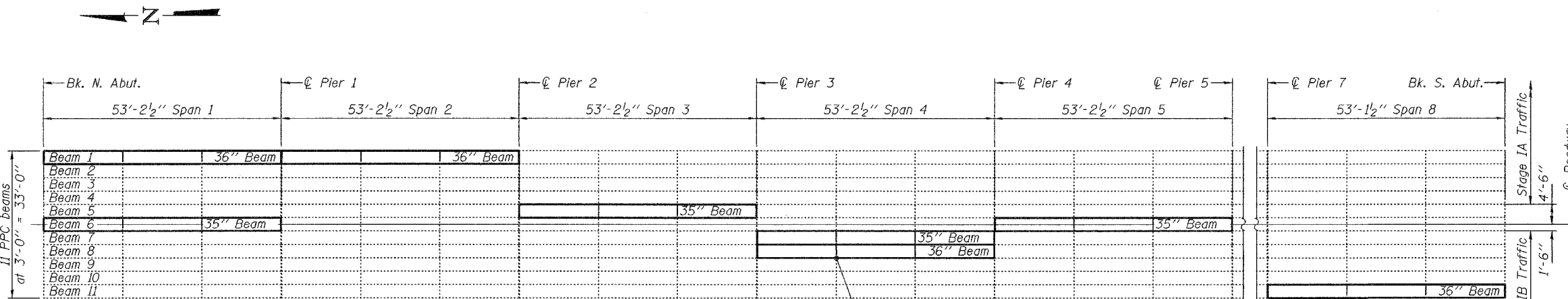
Reinforcement bars shall conform to the requirements of AASHTO M-31 or M322 Grade 60.

The top surface of the beams shall be finished in accordance with Article 504.06 of the Standard Specifications except that the surface shall not be roughened by brooming. The finished surface shall be free of depressions or high spots with sharp corners, and the top edge of keys shall be rounded or chamfered a minimum of 1/4".

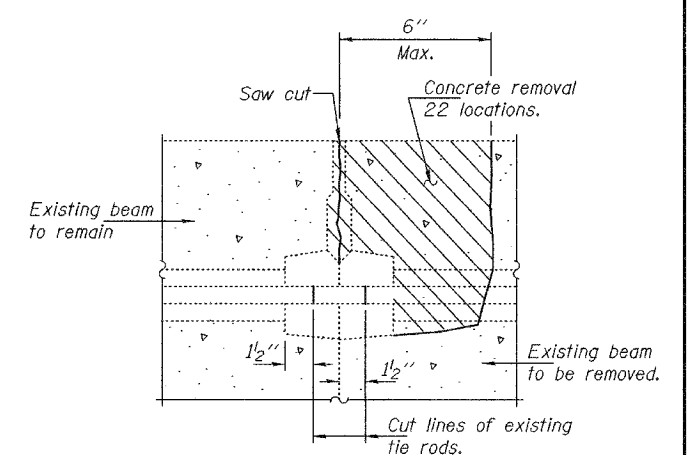
Temporary concrete barrier shall only be anchored into the overlay and not the PPC Deck Beams.



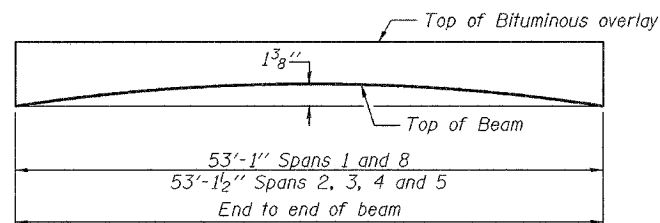
PARTIAL ELEVATION



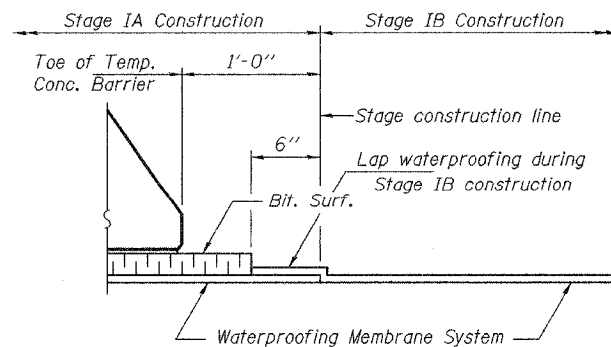
PARTIAL PLAN



BEAM REMOVAL DETAIL AT TRANSVERSE TIES



ANTICIPATED INITIAL CAMBER DIAGRAM



WATERPROOFING TREATMENT AT STAGE CONSTRUCTION

DESIGN STRESSES PRESTRESS UNITS

f'c = 5,000 psi
f'ci = 4,000 psi
f's = 270,000 psi (1/2"φ Low Relaxation Strands)
f'si = 201,960 psi (1/2"φ Low Relaxation Strands)

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Precast Prestressed Concrete Deck Beams (21" Depth)	Sq. Ft.	1239
Bituminous Concrete Surface Removal	Sq. Yd.	32.8
Removal of Existing PPC Deck Beams	Sq. Ft.	1275
Bituminous Surface Course Superpave Mixture D, N70	Ton	19.6
PC Mortar Fairing Course	Foot	640
Waterproofing Membrane System	Sq. Yd.	174.4
Removing & Re-erecting Existing Railing	Foot	160

**PLAN AND ELEVATION
FAP RT. 315
FULTON COUNTY
SN 029-0004**

DESIGNED	<i>M. J. T.</i>
CHECKED	<i>John A. Morris</i>
DRAWN	<i>ballva</i>
CHECKED	MJT/STB

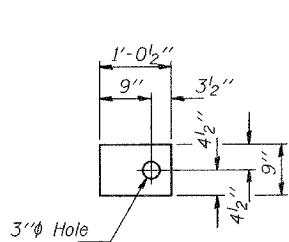
May 17, 2005
EXAMINED *John A. Morris*
ENGINEER OF STRUCTURAL SERVICES
PASSED *Robert C. Adams*
ENGINEER OF BRIDGES AND STRUCTURES



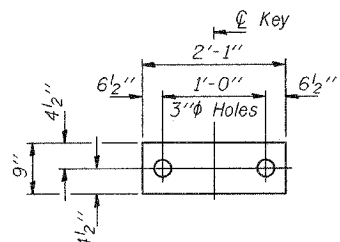
EXPIRES 11-30-2006

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

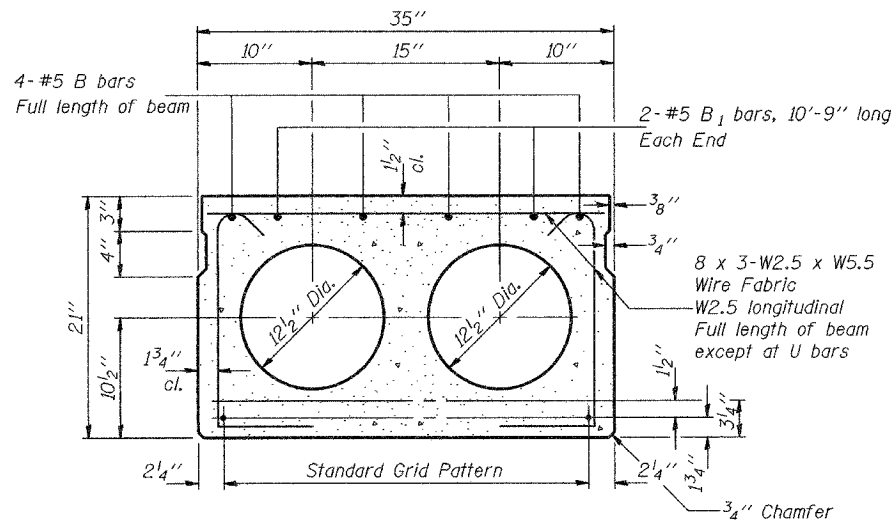
ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET
		FULTON	148	5
SHEET NO. 2 5 SHEETS				
Contract Number: 88753				



FABRIC ADJUSTING SHIM



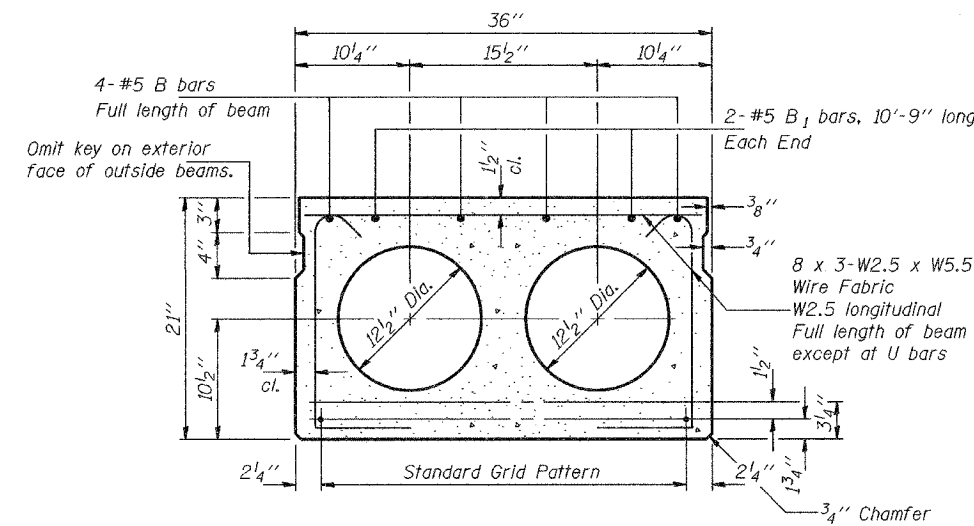
FABRIC BEARING PAD



TYPICAL 35" SECTION

16-1/2" ϕ Strands, Each Strand Stressed to 30,900 Lbs.
6-Strands 1 3/4" up
8-Strands 3 1/4" up
2-Strands 9" up

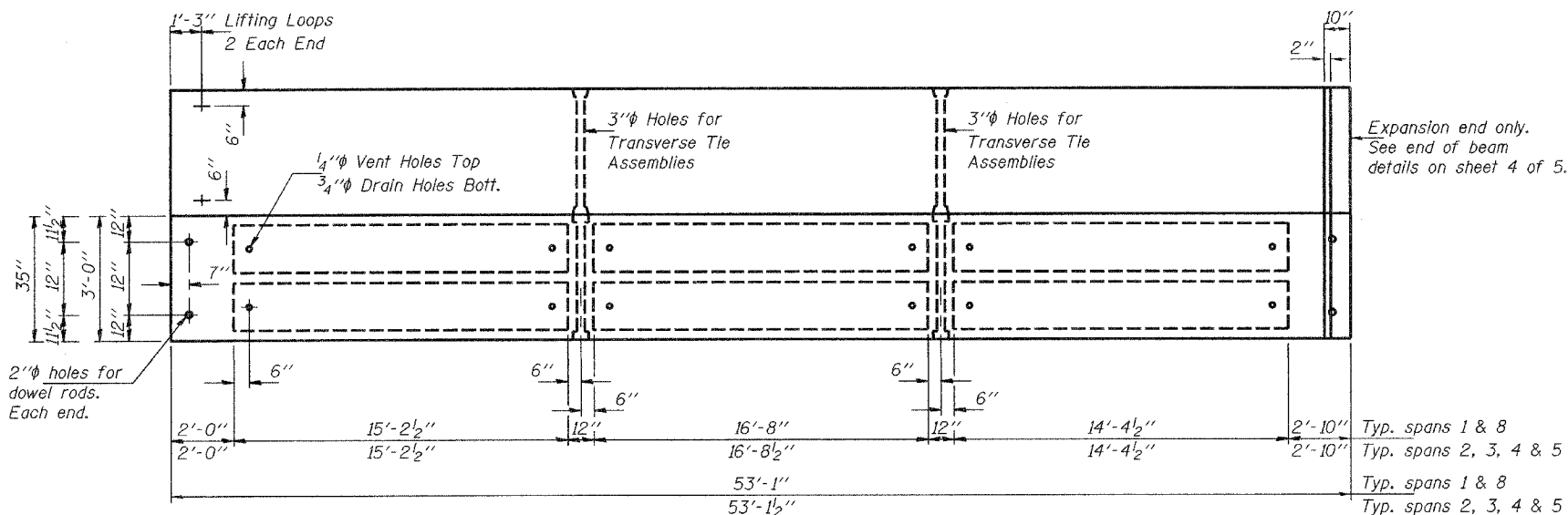
Note: Place strands symmetrically about ϕ of beam.



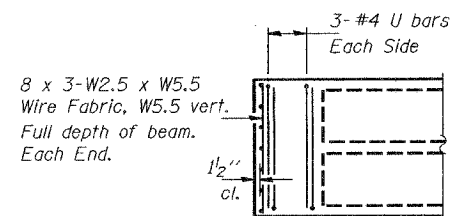
TYPICAL 36" SECTION

16-1/2" ϕ Strands, Each Strand Stressed to 30,900 Lbs.
6-Strands 1 3/4" up
8-Strands 3 1/4" up
2-Strands 9" up

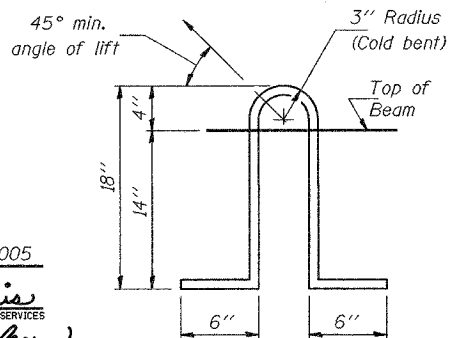
Note: Place strands symmetrically about ϕ of beam.



PLAN



END PLAN



LIFTING LOOP DETAIL

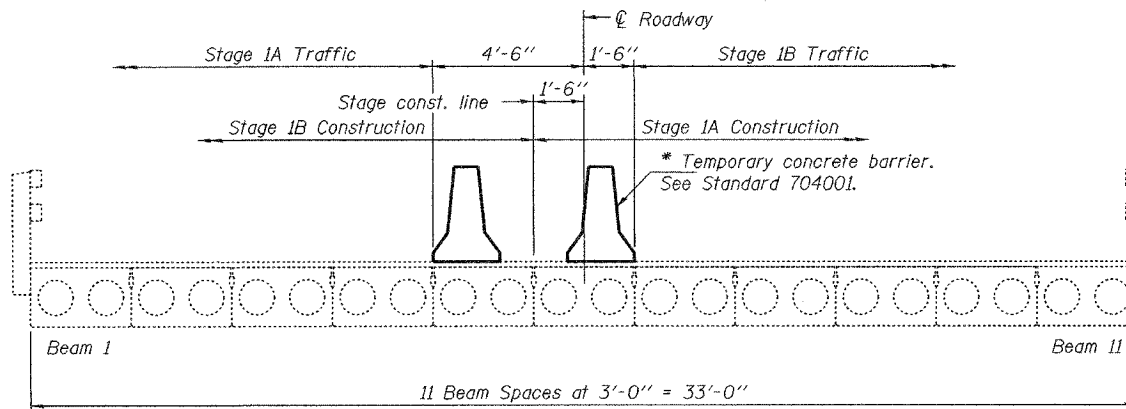
DESIGNED	MJT
CHECKED	SJB
DRAWN	baliva
CHECKED	MJT SJB

EXAMINED *John A. Morris*
ENGINEER OF STRUCTURAL SERVICES
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

MAY 17, 2005

NOTES

Prestressing steel shall be uncoated high strength, stress-relieved 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. Pockets that receive transverse tie bar on outside shall be filled with grout after transverse tie assembly is in place. Reinforcement bars shall conform to the requirements of AASHTO M-31 or M-322 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 shown 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. A Corrosion Inhibitor, as covered in the Special Provisions, shall be used in the concrete for precast prestressed concrete deck beams. Required Release Strength, f'cl, shall be 4000 p.s.i.

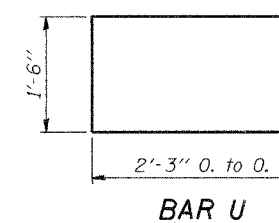


STAGING

(Looking South)
See sheet 1 of 5 for locations of new beams.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
Precast Prestressed Conc. Deck Bms. (21')			Sq. Ft.	1239



BAR U

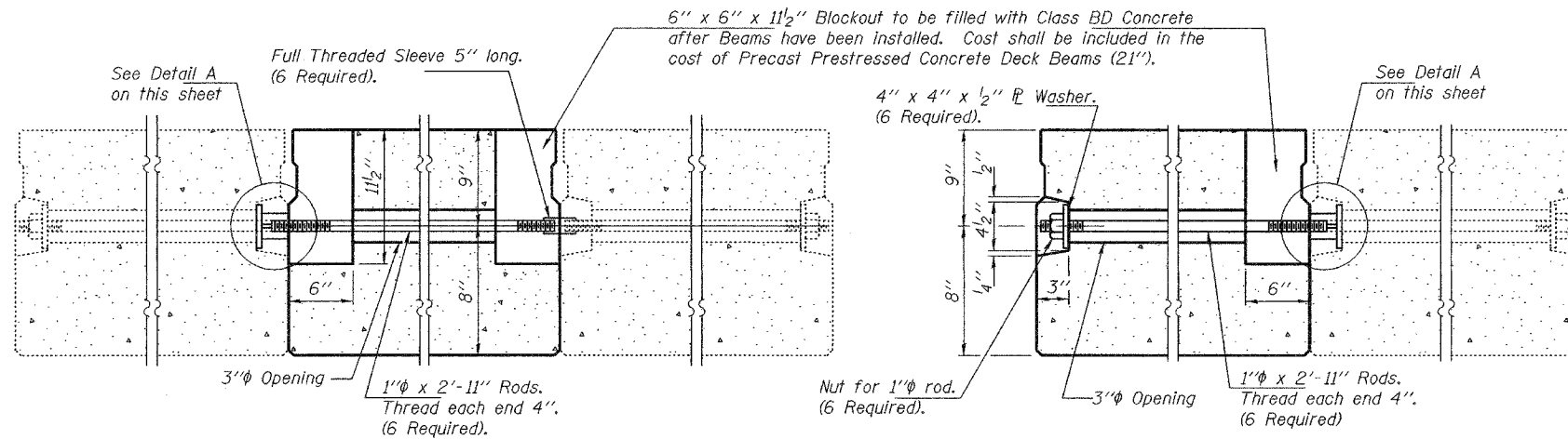
REPAIR DETAILS
FAP RT. 315
FULTON COUNTY
SN 029-004

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		FULTON		119
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 3
5 SHEETS

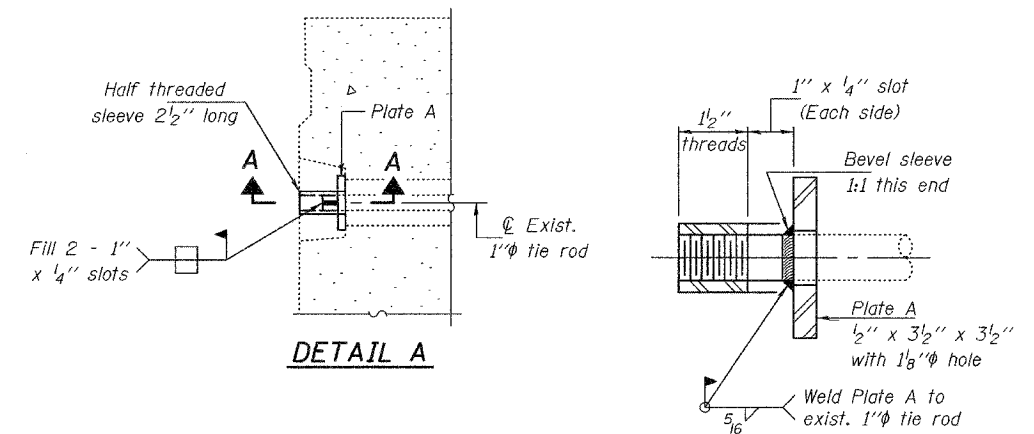
Contract Number: 88753



TRANSVERSE TIE ASSEMBLY
(Typ. for single interior beam replacement)

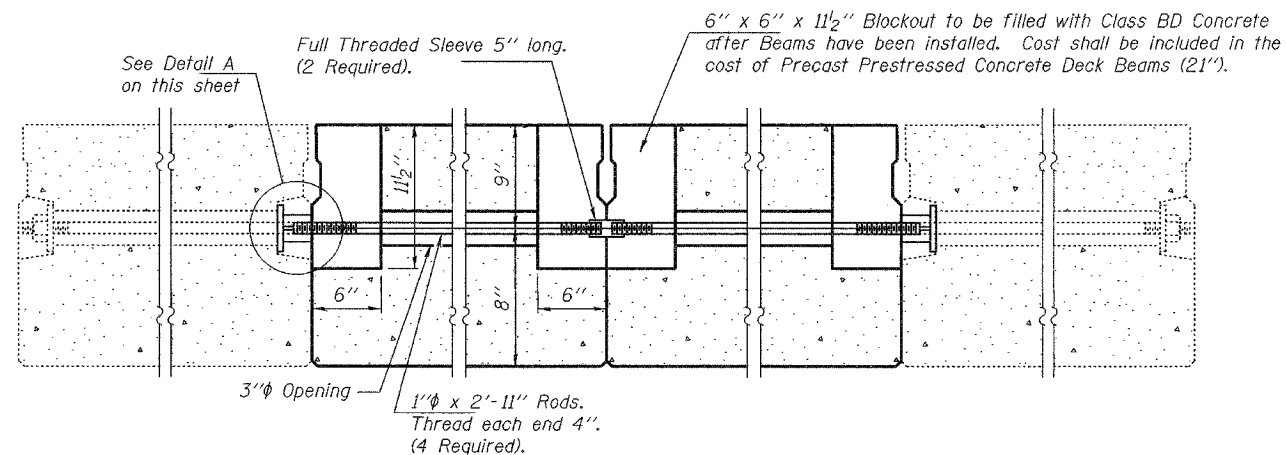
TRANSVERSE TIE ASSEMBLY
(Typ. for exterior beam replacement)

Note:
Existing grout covering existing nuts for transverse tie assemblies shall be removed. Existing rods shall be cut as detailed on sheet 1 of 5. Existing rods shall then be removed through the holes in exterior beam. Cost included with Removal of Existing PPC Deck Beams.



DETAIL A

SECTION A-A
(16 Required)



TRANSVERSE TIE ASSEMBLY
(Typ. for dual beam replacement)

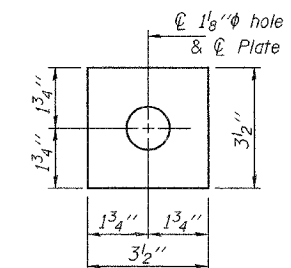


PLATE A
(22 Required)

DESIGNED	MJT
CHECKED	SJB
DRAWN	baliva
CHECKED	MJT SJB

MAY 17, 2005

EXAMINED *John A. Morris*
ENGINEER OF STRUCTURAL SERVICES

PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

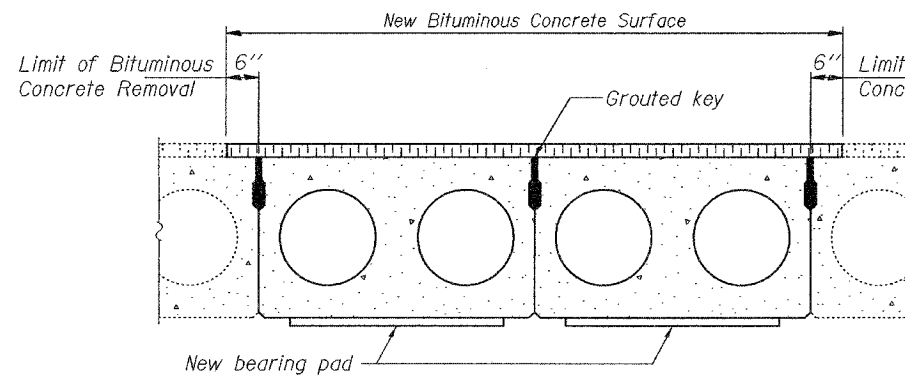
REPAIR DETAILS
FAP RT. 315
FULTON COUNTY
SN 029-0004

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

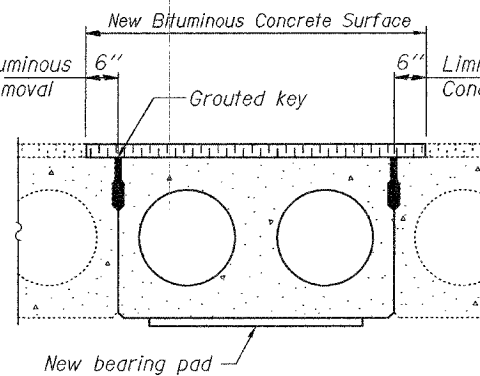
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
		FULTON		150
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 4
5 SHEETS

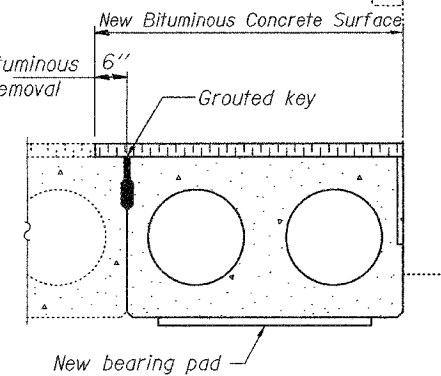
Contract Number: 88753



PARTIAL CROSS SECTION
(Span 4)

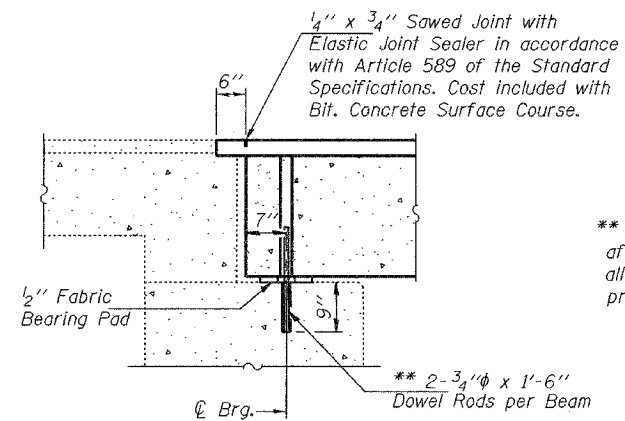


PARTIAL CROSS SECTION
(Spans 1, 3 & 5)



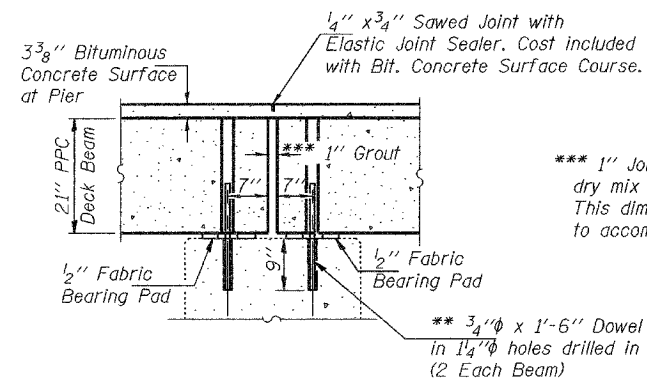
PARTIAL CROSS SECTION
(Spans 1, 2 & 8)

Existing handrail & posts to be removed, stored & reused.



TYPICAL SECTION AT ABUTMENTS

** Dowel Rods to be grouted after beams are in place and allowed to cure (Min. 24 hrs.) prior to grouting the shear keys.



TYPICAL SECTION AT PIERS

Existing Dowel Rods shall be cut off & ground flush with the top of the existing concrete. Cost included with Removal of Existing PPC Deck Beams. Proposed Dowel Rods shall be grouted after beams are in place and allowed to cure (Min. 24 hrs.) prior to grouting shear keys.

At expansion Piers 1, 3, and 7 grout rods into Pier cap and fill holes in beam with PAF-4.

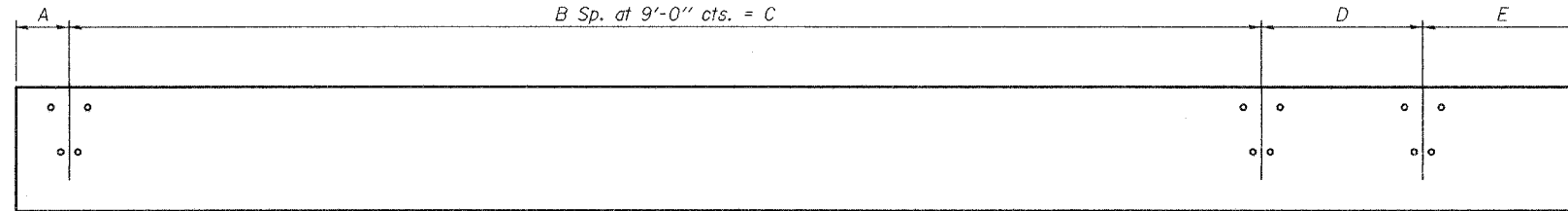
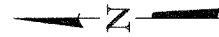
*** 1" Joint shall be packed with a very dry mix of 2:1 sand and PC mortar. This dimension may vary plus or minus to accommodate tolerance in beam lengths.

DESIGNED	MJT
CHECKED	SJB
DRAWN	baliva
CHECKED	MJT SJB

MAY 17, 2005
EXAMINED *John A. Morris*
ENGINEER OF STRUCTURAL SERVICES
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

REPAIR DETAILS
FAP RT. 315
FULTON COUNTY
SN 029-0004

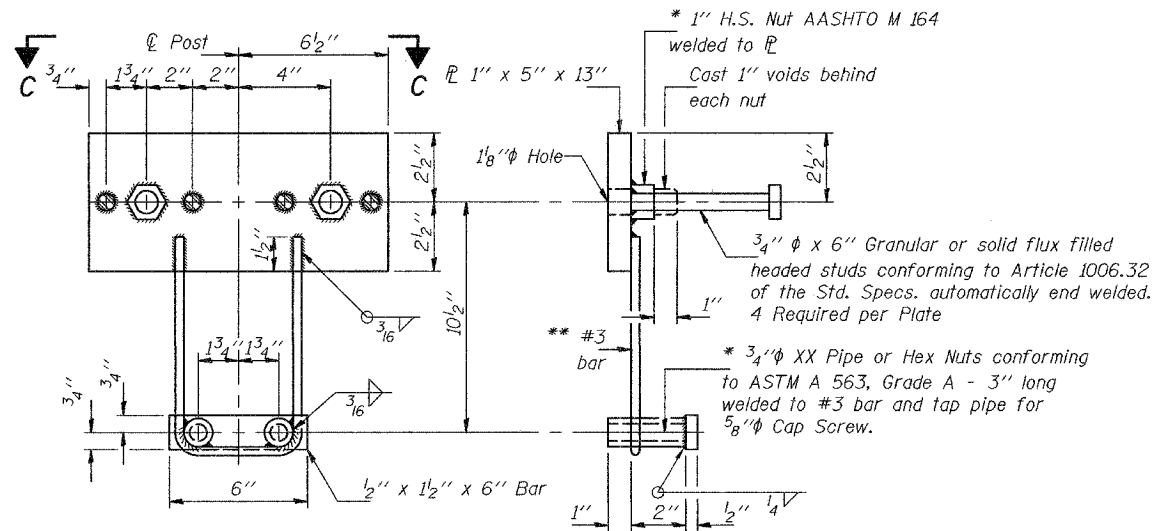
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



For Bill of Material, see sheet 2 of 5.

RAIL POST SPACING
(Outside face of beams only)

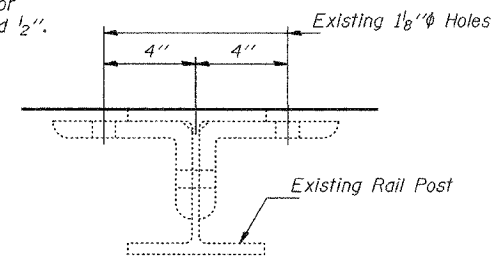
BEAM	A	B	C	E	D
1	1'-0"	4	36	7'-1"	9'-0"
2	1'-10"	4	36	6'-3 1/2"	9'-0"
8	7'-1"	4	36	5'-0"	5'-0"



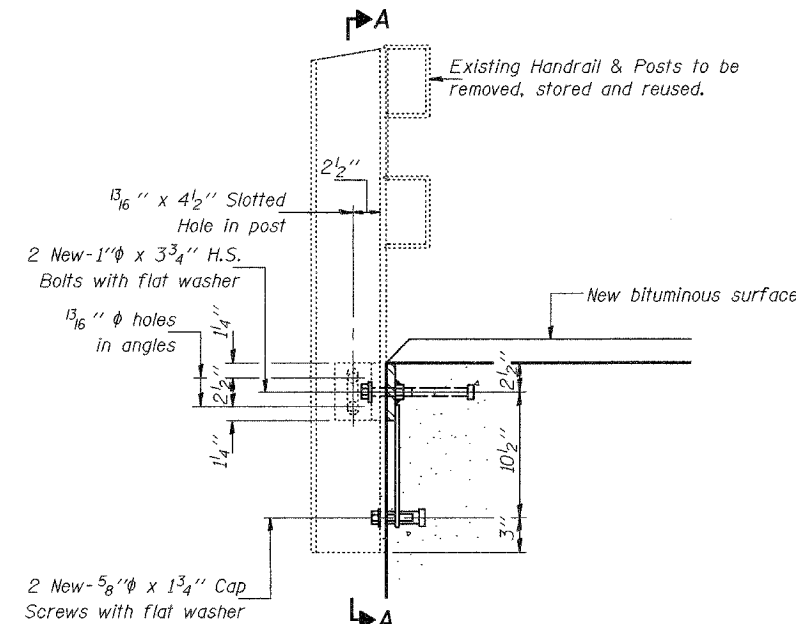
ANCHOR DEVICE

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

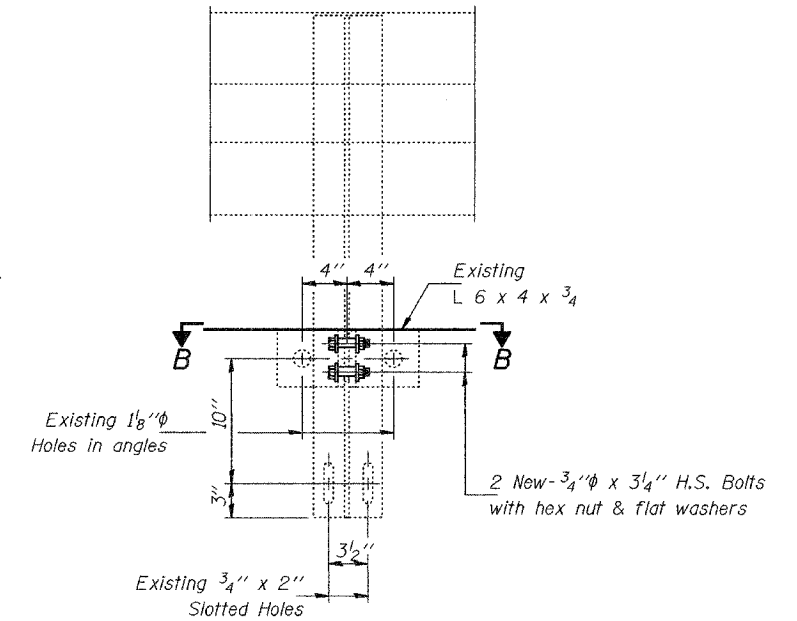
** Whenever the lower insert assemblies interfere with g₁ bars the #3 bars shall be cut and adjusted in order to allow raising or lowering of the lower inserts. Maximum adjustment not to exceed 1/2".



SECTION B-B



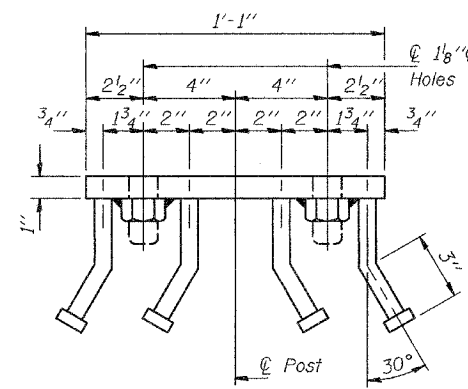
SECTION AT RAIL POST



SECTION A-A

NOTES

- Bolts, cap screws, and nuts shall conform to the requirements of ASTM designation A 307 except for high strength bolts nuts and washers noted which shall conform to AASHTO M 164.
- All bolts, nuts, cap screws, washers and lock washers shall be galvanized according to AASHTO M 232.
- Anchor devices shall be galvanized after shop fabrication according to AASHTO M 111 and ASTM A 385. Cost of anchorage devices is included with the cost of Precast Concrete Deck Beams (21" Depth).
- For multi-span bridges, sufficient 1/4" galvanized steel shims of the dimensions shown shall be provided to align rail between adjacent spans.
- The lower portion of the post flange in contact with concrete shall receive two coats of asphalt paint conforming to Section 1060.07 Type II or place new 1/8" fabric bearing pad between the post and concrete. Fabric bearing pads shall meet the requirements of Article 1082.01 of the Standard Specifications.
- The 3/4" high strength bolts used to connect the 6 x 4 x 3/4 angles to the post shall be tightened according to Article 505.04(f)(2) of the Standard Specifications. The 1" high strength bolts connecting the angles to the concrete shall be tightened to a snug fit and given an additional 1/8 turn. The 5/8" cap screws in bottom of posts shall be tightened to a snug fit only.
- Removal and re-erection of the existing railing shall be accomplished in a manner that will avoid scratching, denting or other damage that may affect the durability or appearance of the railing.
- The length paid for will be the overall length along the rail at the location of re-erection.
- This work will be paid for at the contract unit price per foot for Removing and Re-erecting Existing Railing, which price shall include removal, temporary storage, re-erection, asphalt paint or new bearing pads, shims and all new hardware required to satisfactorily complete the work.



VIEW C-C

DESIGNED	MJT
CHECKED	SJB
DRAWN	baliva
CHECKED	MJT SJB

MAY 17, 2005
 EXAMINED *John A. Morris*
 ENGINEER OF STRUCTURAL SERVICES
 PASSED *Ralph E. Anderson*
 ENGINEER OF BRIDGES AND STRUCTURES

REPAIR DETAILS
 FAP RT. 315
 FULTON COUNTY
 SN 029-0004

Bench Mark: Chiseled "□" on top of W. side of S. abut. of S.N. 029-0004 (Existing Spoon River Bridge) Elev. 480.75 (146.533)

Existing Structure: S.N. 029-0003: 5 span PPC-deck beam supported on timber pile footings. Built 1925 under Section 18BRY, S.B.I. Route 31 at Sta. 64+75. Widened and added Pier 2 & 3 with metal shell piles with new superstructure 1970. Existing structure to be removed and replaced along new alignment. Two-way traffic maintained on existing structure during Stage I, II & III construction.

No salvage

Note: For channel debris removal see Roadway Plans.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	DATE	SHEET
F.A.P. 315	(18BRY-1)BR	FULTON		152
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 1

13 SHEETS

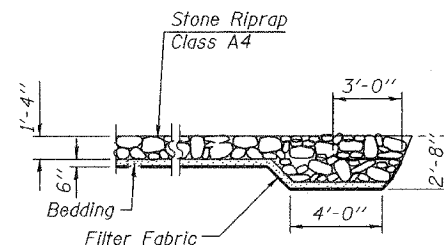
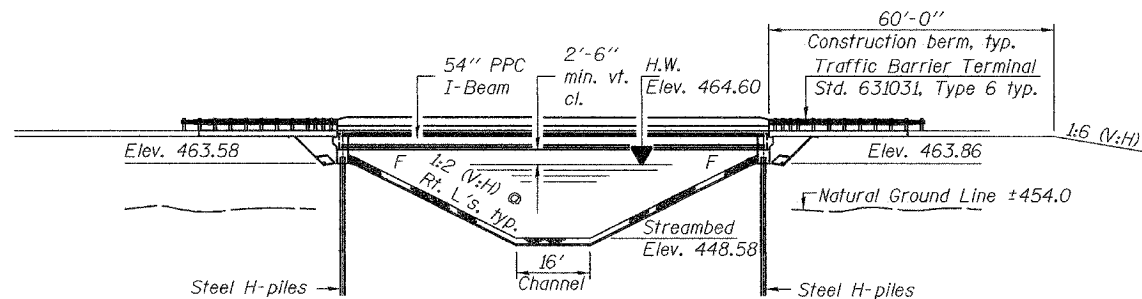
Contract #88753

GENERAL NOTES

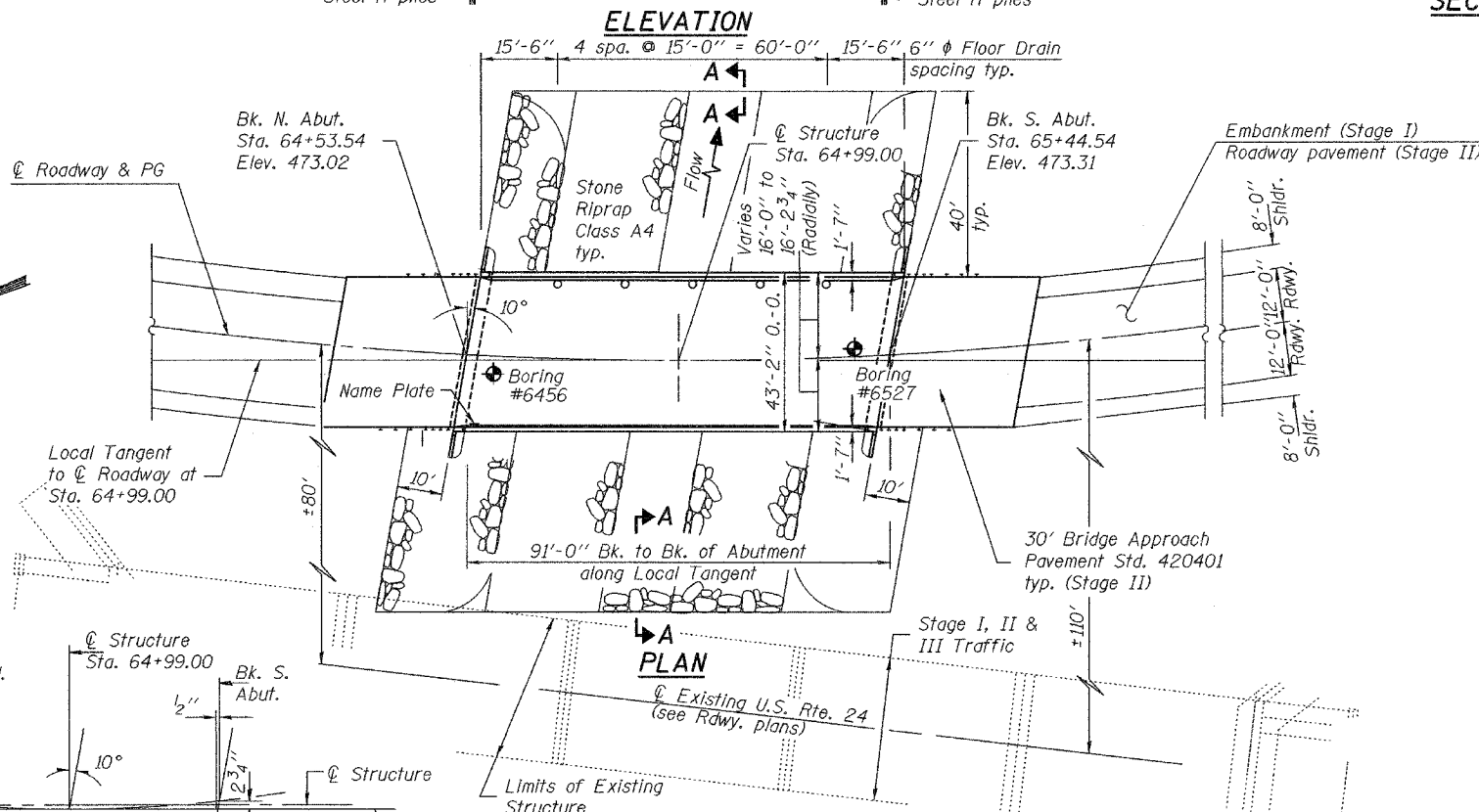
Reinforcement bars shall conform to the requirements of AASHTO M 31 or M322 Grade 60.
Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.
The embankment configuration shown shall be the minimum embankment that must be constructed prior to construction of the abutments.
All Construction joints shall be bonded.
The Contractor shall drive 1 test pile in a permanent location at the North abutment as directed by the Engineer before ordering the remainder of piles.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment (Special)	Cu. Yd.		293	293
Stone Riprap, Class A4	Ton		938	938
Filter Fabric	Sq. Yd.		1407	1407
Removal of Existing Structures No. 1	Each		1	1
Structure Excavation	Cu. Yd.		89	89
Floor Drains	Each	5		5
Concrete Structures	Cu. Yd.		44.4	44.4
Concrete Superstructure	Cu. Yd.	151.6		151.6
Bridge Deck Grooving	Sq. Yd.	384		384
Protective Coat	Sq. Yd.	481		481
Furnishing and Erecting Precast Prestressed Concrete I-Beams 54"	Foot	537		537
Reinforcement Bars, Epoxy Coated	Pound	27720	6380	34100
Furnishing Steel Piles HP 12x74	Foot		825	825
Driving Steel Piles	Foot		825	825
Test Pile Steel HP 12x74	Each		1	1
Name Plates	Each	1		1
Bar Splicers	Each	80		80



SECTION A-A



PROFILE GRADE
(along roadway)

CURVE DATA
U.S. RTE. 24

P.I. Sta. = 71+34.68
Δ = 28°-53'-55.60" (LT)
D = 1°-15'-23.35"
R = 4,560.00'
T = 1,175.00'
L = 2,299.97'
E = 148.95'
e = 3.3%
P.C. Sta. = 59+59.68
P.T. Sta. = 82+59.64

INDEX OF SHEETS

- 1- General Plan and Elevation
- 2- General Details
- 3-4- Top of Slab Elevations
- 5- Superstructure
- 6- Superstructure Details
- 7- Diaphragm Details
- 8- Framing Plan
- 9- Beam Details
- 10- North Abutment
- 11- South Abutment
- 12- Bar Splicer Assembly Details
- 13- Soil Boring Logs

LOADING HS20-44
Allow 50#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS
2002 AASHTO

DESIGN STRESSES

FIELD UNITS
f_c = 3,500 psi (conc.)
f_y = 60,000 psi (reinf.)

PRECAST PRESTRESSED UNITS

f_c = 6,000 psi
f'_{ci} = 5,000 psi
f'_s = 270,000 psi (1/2"φ low lax. strands)
f_s = 201,960 psi (1/2"φ low lax. strands)

SEISMIC DATA

Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 4.3%
Site Coefficient (S) = 1.0

WATERWAY INFORMATION

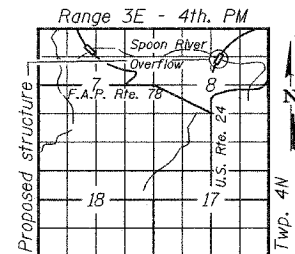
Drainage Area = 1837 ml.² Low Grade Elev. 463.3' (exist.), 468.80' (prop.)

Flood Yr.	Structure Number	Q C.F.S.		Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater El.	
		Exist.	Prop.	Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
10	029-0004	21305	24123	4720	6555	463.2	1.3	0.7	464.5	463.9
	029-0003	4474	1692	1689	619					
	overtopping	35	-	-	-					
	Total	25815	25815	6409	7174					
Design	029-0004	23318	35650	5293	7488	464.6	1.4	1.2	466.0	465.8
	029-0003	5248	2702	1689	722					
	overtopping	9786	-	-	-					
	Total	38352	38352	6982	8210					
Base	029-0004	26161	40432	5489	7837	465.1	1.2	1.2	466.3	466.3
	029-0003	3948	3182	1689	762					
	overtopping	13505	-	-	-					
	Total	43614	43614	7178	8599					
Overtopping	029-0004	20009	-	4439	-	462.5	0.8	-	463.3	-
	029-0003	4005	-	1689	-					
Max. Calc.	029-0004	26627	51941	5945	8756	466.5	0.9	0.9	467.4	467.4
	029-0003	5156	4210	1689	873					
	overtopping	24368	-	-	-					
	Total	56151	56151	7634	9629					

Exist. 10-yr. velocity: 4.5 ft./sec. (029-0004); 2.6 ft./sec. (029-0003)
Prop. 10-yr. velocity: 3.7 ft./sec. (029-0004); 2.7 ft./sec. (029-0003)
Max. H.W.E. 463.75' (date varies)

STATION 64+99.00
BUILT 20 BY
STATE OF ILLINOIS
F.A.P. RT. 315 SEC. (18BRY-1)BR
LOADING HS20
STR. NO. 029-0067

NAME PLATE
See Std. 515001



LOCATION SKETCH

GENERAL PLAN
F.A.P. ROUTE 315 OVER
SPOON RIVER OVERFLOW
U.S. ROUTE 24 - SECTION (18BRY-1)BR
FULTON COUNTY
STATION 64+99.00
STRUCTURE NO. 029-0067

DESIGNED *Al M. J.*
CHECKED *Robert E. Campbell*
DRAWN Michael B. Mossman
CHECKED AMJ PEC

EXAMINED *Thomas J. Anderson*
PASSED *Robert E. Campbell*
ENGINEER OF BRIDGES AND STRUCTURES

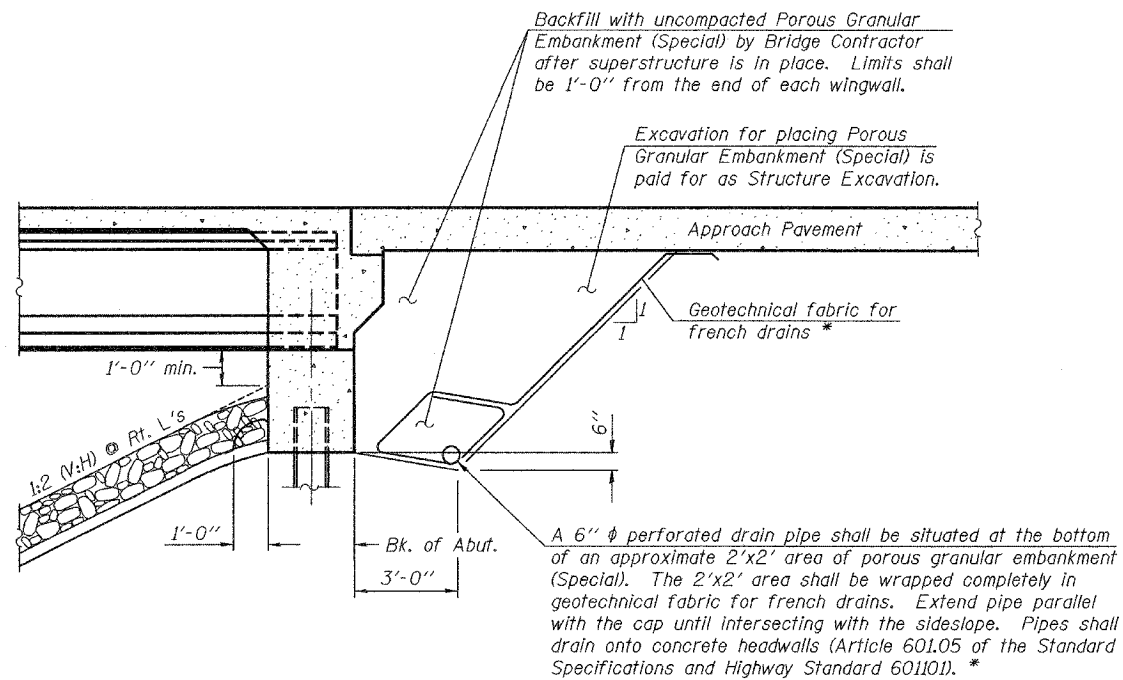


EXPIRES 11-30-2006

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 315	(18BRY-1)BR	FULTON	13	2
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

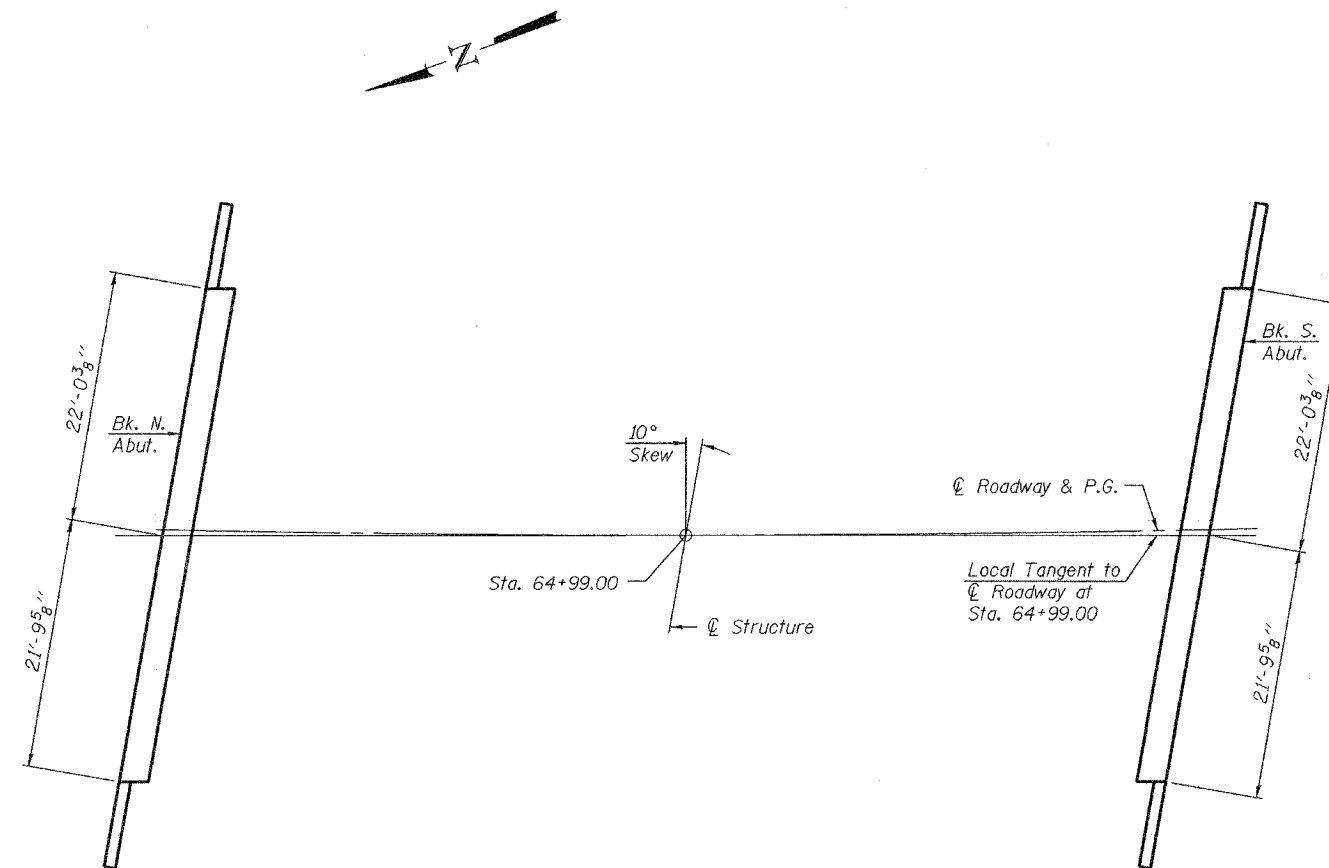
Contract #88753



* Included in the cost of Porous Granular Embankment (Special).

SECTION THRU INTEGRAL ABUTMENT

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



FOOTING LAYOUT

DESIGNED	Alan M. Johnson
CHECKED	Philip E. Coppernoll
DRAWN	Michael B. Mossman
CHECKED	AMJ PEC

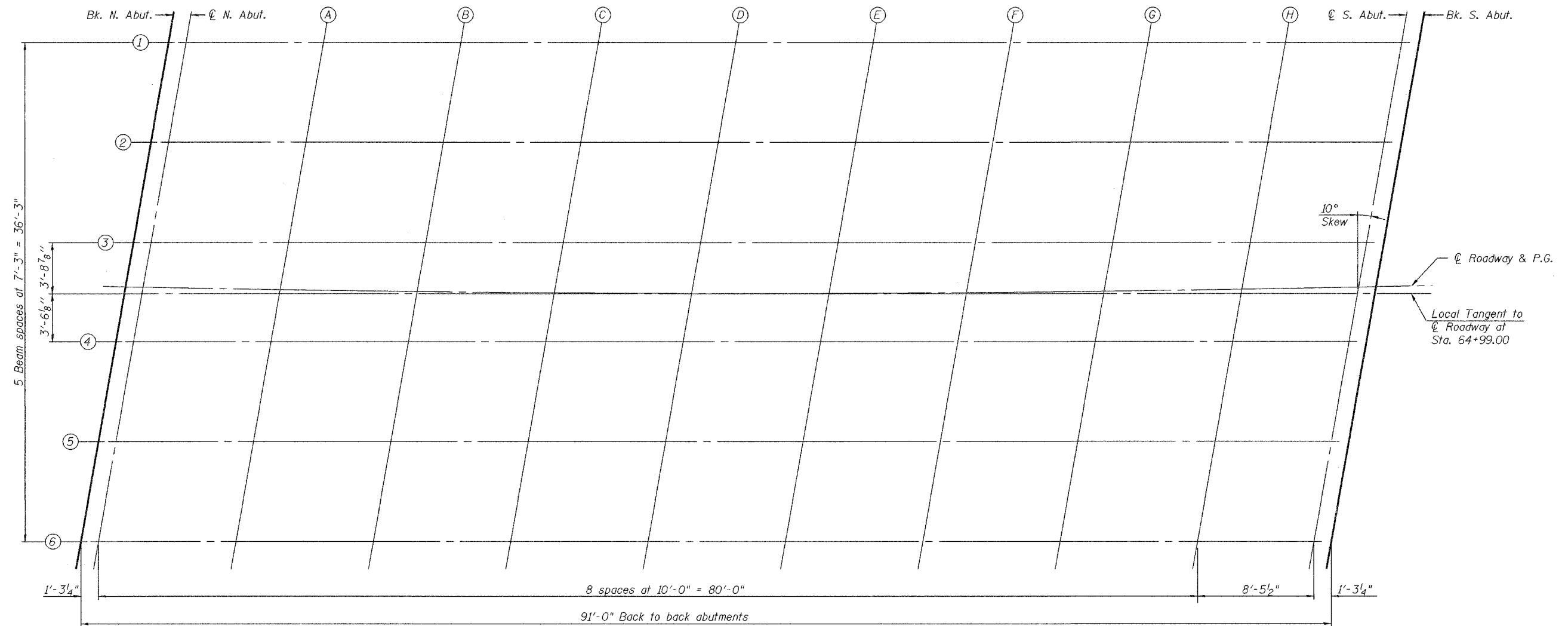
EXAMINED	Thomas J. Donagabadi	April 25, 2005
PASSED	Ralph E. Anderson	

GENERAL DETAILS
F.A.P. ROUTE 315 - SECTION (18BRY-1)BR
FULTON COUNTY
STATION 64+99.00
STRUCTURE NO. 029-0067

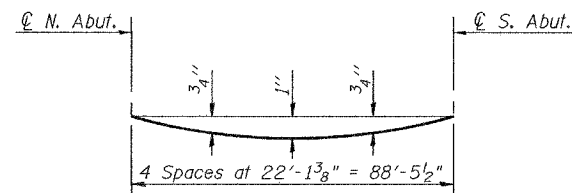
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 315	(18BRY-1)BR	FULTON	13	3
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

Contract #88753



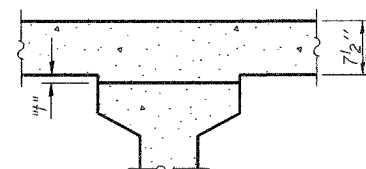
PLAN



DEAD LOAD DEFLECTION DIAGRAM

(Includes weight of concrete, excluding beams).

Note:
The above deflections are not to be used in the field if the engineer is working from the grade elevations adjusted for dead load deflections as shown on sheet 4 of 13.



To determine "t": After all precast prestressed beams have been erected, elevations of the top flanges of the beams shall be taken at intervals shown above. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflections" shown on sheet 4 of 13, minus slab thickness, equals the fillet heights "t" above top flanges of beams.

FILLET HEIGHTS

DESIGNED	Alan M. Johnson
CHECKED	Philip E. Copperrall
DRAWN	Michael B. Massman
CHECKED	AMJ PEC

EXAMINED	Thomas J. Donagabadi	April 25, 2005
PASSED	Ralph E. Anderson	

TOP OF SLAB ELEVATIONS
F.A.P. ROUTE 315 - SECTION (18BRY-1)BR
FULTON COUNTY
STATION 64+99.00
STRUCTURE NO. 029-0067

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET NO.
F.A.P. 315	(18BRY- 1)BR	FULTON	155	13 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

Contract #88753

BEAM 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. North Abut.	6456.548	-18.043	472.430	472.430
C.L. North Brg.	6457.823	-18.054	472.433	472.433
A	6467.862	-18.134	472.463	472.491
B	6477.902	-18.191	472.493	472.550
C	6487.942	-18.226	472.524	472.594
D	6497.982	-18.239	472.556	472.635
E	6508.022	-18.231	472.588	472.666
F	6518.062	-18.200	472.621	472.690
G	6528.102	-18.147	472.655	472.707
H	6538.142	-18.072	472.690	472.714
C.L. South Brg.	6546.635	-17.992	472.720	472.720
BK. South Abut.	6547.910	-17.978	472.724	472.724

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. North Abut.	6455.334	-10.781	472.665	472.665
C.L. North Brg.	6456.607	-10.793	472.669	472.669
A	6466.630	-10.875	472.698	472.727
B	6476.654	-10.935	472.728	472.785
C	6486.678	-10.973	472.759	472.829
D	6496.702	-10.989	472.791	472.870
E	6506.726	-10.983	472.823	472.901
F	6516.750	-10.955	472.856	472.925
G	6526.774	-10.905	472.890	472.942
H	6536.798	-10.833	472.924	472.948
C.L. South Brg.	6545.278	-10.755	472.954	472.954
BK. South Abut.	6546.551	-10.742	472.958	472.958

BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. North Abut.	6454.124	-3.519	472.901	472.901
C.L. North Brg.	6455.395	-3.531	472.905	472.905
A	6465.402	-3.616	472.934	472.962
B	6475.410	-3.679	472.964	473.020
C	6485.418	-3.719	472.995	473.065
D	6495.426	-3.738	473.026	473.105
E	6505.435	-3.735	473.058	473.136
F	6515.443	-3.710	473.091	473.159
G	6525.451	-3.663	473.125	473.177
H	6535.459	-3.594	473.159	473.183
C.L. South Brg.	6543.925	-3.518	473.188	473.188
BK. South Abut.	6545.196	-3.506	473.193	473.193

ROADWAY & PG

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk. N. Abut.	6453.539	0.000	473.015	473.015
Q N. Abut.	6454.807	0.000	473.019	473.019
A	6464.807	0.000	473.051	473.080
B	6474.807	0.000	473.083	473.140
C	6484.807	0.000	473.115	473.185
D	6494.807	0.000	473.147	473.227
E	6504.807	0.000	473.179	473.257
F	6514.807	0.000	473.211	473.280
G	6524.807	0.000	473.243	473.296
H	6534.807	0.000	473.275	473.299
Q S. Abut.	6543.269	0.000	473.303	473.303
Bk. S. Abut.	6544.541	0.000	473.307	473.307

BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. North Abut.	6452.918	3.743	473.137	473.137
C.L. North Brg.	6454.187	3.731	473.141	473.141
A	6464.179	3.643	473.170	473.198
B	6474.170	3.578	473.199	473.256
C	6484.162	3.535	473.230	473.300
D	6494.155	3.513	473.261	473.341
E	6504.147	3.513	473.293	473.371
F	6514.139	3.536	473.326	473.394
G	6524.131	3.580	473.359	473.412
H	6534.123	3.646	473.394	473.417
C.L. South Brg.	6542.576	3.719	473.423	473.423
BK. South Abut.	6543.845	3.731	473.427	473.427

BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. North Abut.	6451.716	11.006	473.373	473.373
C.L. North Brg.	6452.983	10.993	473.376	473.376
A	6462.958	10.903	473.405	473.434
B	6472.934	10.835	473.435	473.491
C	6482.911	10.789	473.465	473.535
D	6492.887	10.765	473.496	473.576
E	6502.864	10.762	473.528	473.606
F	6512.840	10.781	473.561	473.629
G	6522.816	10.823	473.594	473.646
H	6532.792	10.886	473.628	473.652
C.L. South Brg.	6541.232	10.956	473.658	473.658
BK. South Abut.	6542.499	10.968	473.662	473.662

BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
BK. North Abut.	6450.518	18.269	473.609	473.609
C.L. North Brg.	6451.782	18.256	473.612	473.612
A	6461.742	18.163	473.641	473.669
B	6471.702	18.092	473.670	473.727
C	6481.663	18.043	473.701	473.771
D	6491.623	18.016	473.732	473.811
E	6501.584	18.011	473.763	473.841
F	6511.545	18.028	473.796	473.864
G	6521.505	18.066	473.829	473.881
H	6531.466	18.126	473.863	473.887
C.L. South Brg.	6539.892	18.194	473.892	473.892
BK. South Abut.	6541.157	18.206	473.897	473.897

DESIGNED	Alan M. Johnson
CHECKED	Philip E. Copperrnoll
DRAWN	Michael B. Mossman
CHECKED	AMJ PEC

April 25, 2005
 EXAMINED *Thomas J. Domagala*
 ENGINEER OF BRIDGE DESIGN
 PASSED *Ralph E. Anderson*
 ENGINEER OF BRIDGES AND STRUCTURES

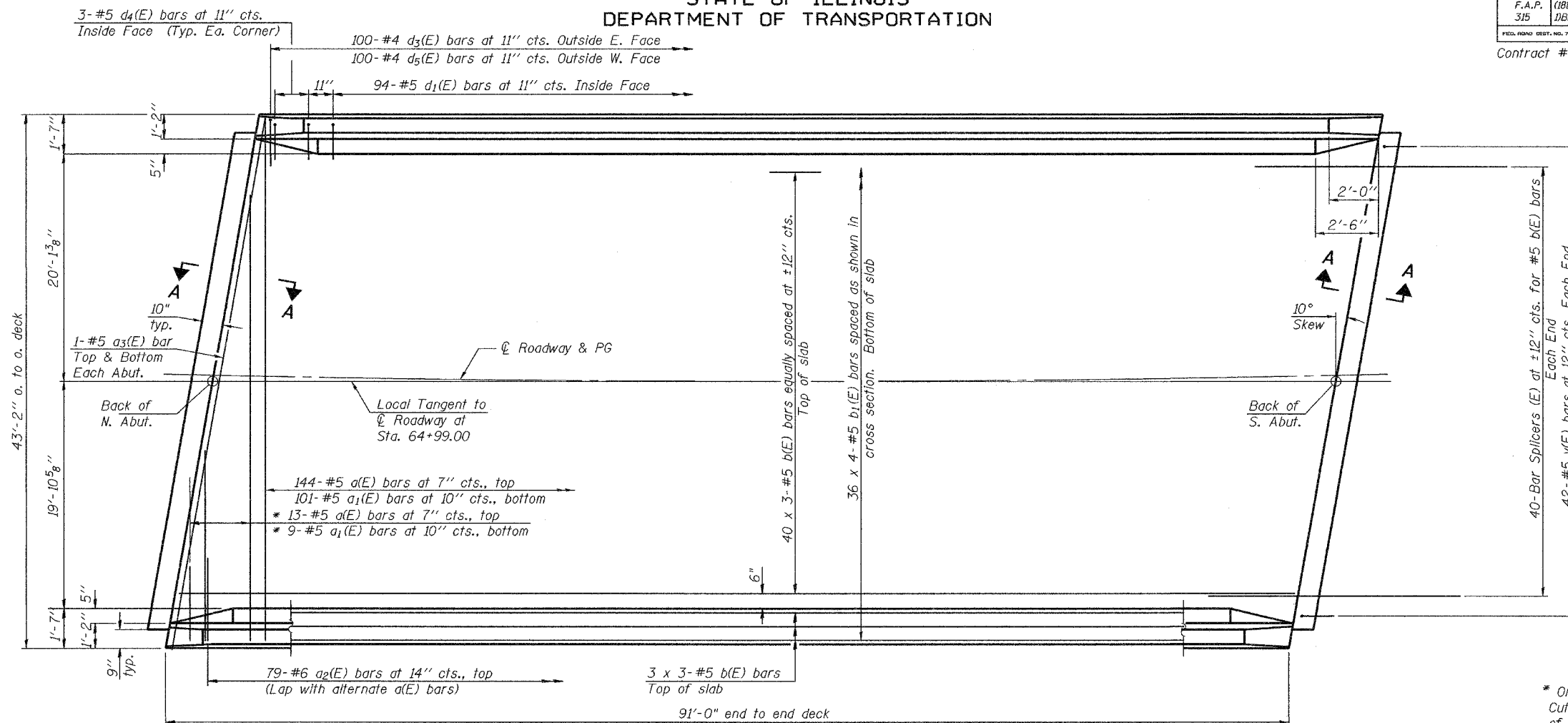
TOP OF SLAB ELEVATIONS
 F.A.P. ROUTE 315 - SECTION (18BRY-1)BR
 FULTON COUNTY
 STATION 64+99.00
 STRUCTURE NO. 029-0067

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO. F.A.P. 315	SECTION (18BRY-1)BR	COUNTY FULTON	TOTAL SHEETS 15	SHEET NO. 5
ILLINOIS FED. AID PROJECT-				

SHEET NO. 5
13 SHEETS

Contract #88753

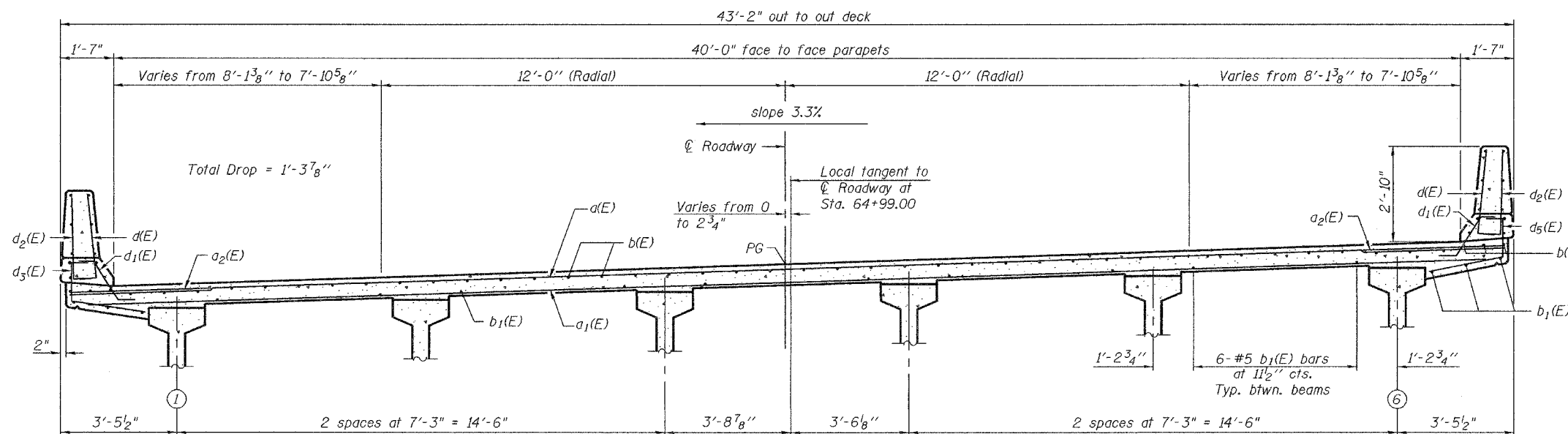


* Order a(E) and a₁(E) bars full length. Cut to fit skew and use remainder of bars in opposite end.

PLAN

Notes:

See sheet 6 of 13 for superstructure details and Bill of Material.
For Section A-A and diaphragm details see sheet 7 of 13.
Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 40 x 3-#5 etc. indicates 40 lines of bars with 3 lengths per line.
See sheet 6 of 13 for parapet reinforcement.
See sheet 12 of 13 for bar splicer details.



MINIMUM BAR LAP
#5 bar - 2'-2"

CROSS SECTION
(Looking South)

DESIGNED	Alan M. Johnson
CHECKED	Philip E. Coppernoll
DRAWN	Michael B. Mossman
CHECKED	AMJ PEC

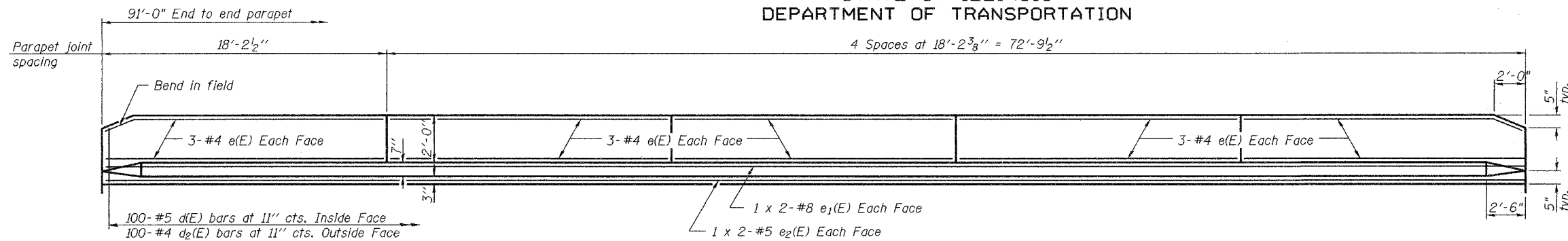
APPROVED	April 25, 2005
EXAMINED	Thomas J. Demagala ENGINEER OF BRIDGE DESIGN
PASSED	Ralph E. Anderson ENGINEER OF BRIDGES AND STRUCTURES

SUPERSTRUCTURE
F.A.P. ROUTE 315 - SECTION (18BRY-1)BR
FULTON COUNTY
STATION 64+99.00
STRUCTURE NO. 029-0067

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 315	(18BRY-1)BR	FULTON	151	13
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

Contract #88753



INSIDE ELEVATION OF PARAPET

MINIMUM BAR LAP

- #4 bar - 1'-4"
- #5 bar - 1'-8"
- #8 bar - 3'-5"

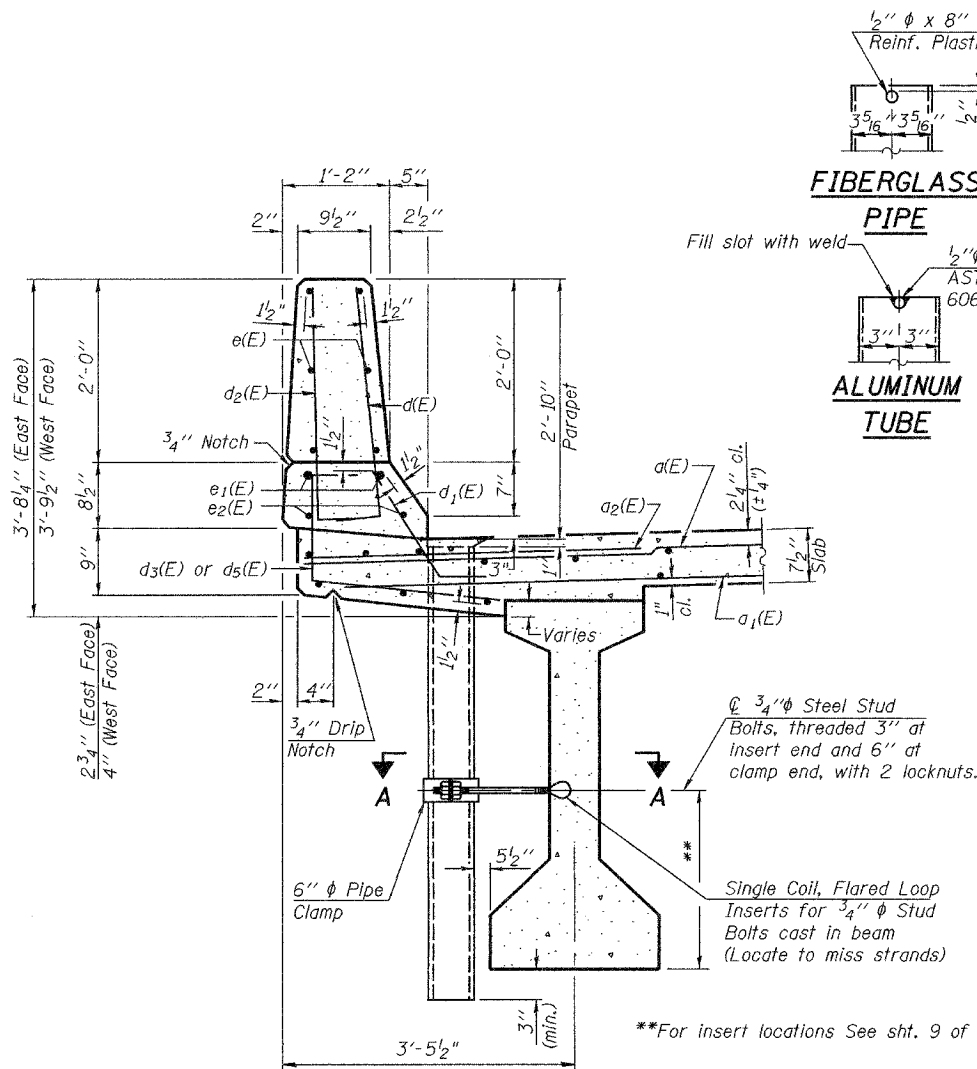
Notes:

Fiberglass pipe shall conform to ASTM D2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum. The exterior surfaces of the floor drains shall be coated or pigmented by the manufacturer with a color that matches the concrete. The clamping device and inserts shall be galvanized according to AASHTO M 232.

SUPERSTRUCTURE
BILL OF MATERIAL

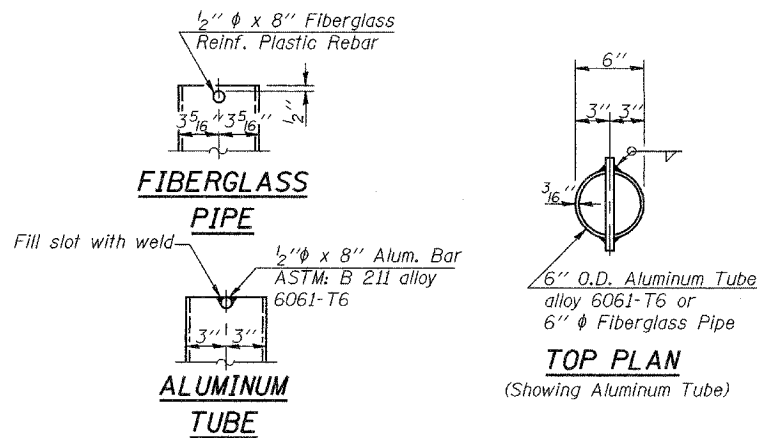
Bar	No.	Size	Length	Shape
a(E)	157	#5	42'-6"	—
a1(E)	110	#5	40'-8"	—
a2(E)	158	#6	4'-6"	—
a3(E)	4	#5	41'-6"	—
b(E)	138	#5	31'-8"	—
b1(E)	144	#5	24'-3"	—
d(E)	200	#5	3'-0"	—
d1(E)	188	#5	2'-5"	—
d2(E)	200	#4	3'-0"	—
d3(E)	100	#4	3'-10"	—
d4(E)	12	#5	2'-2"	—
d5(E)	100	#4	4'-1"	—
e(E)	60	#4	17'-10"	—
e1(E)	8	#8	47'-1"	—
e2(E)	8	#5	46'-3"	—
m(E)	4	#6	42'-0"	—
m1(E)	6	#6	43'-6"	—
m2(E)	24	#6	10'-0"	—
m3(E)	10	#6	5'-2"	—
m4(E)	4	#6	2'-2"	—
s(E)	82	#5	5'-10"	—
s1(E)	72	#4	12'-8"	—
v(E)	84	#5	3'-4"	—
Reinforcement Bars, Epoxy Coated		Lbs.	27720	
Concrete Superstructure		Cu. Yds.	151.6	

Reinforcement bars designated (E) shall be epoxy coated.

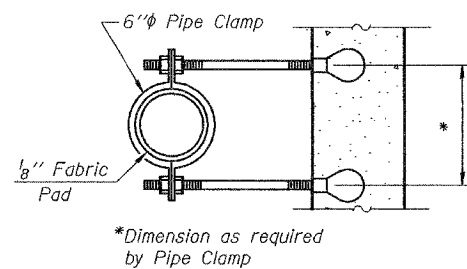
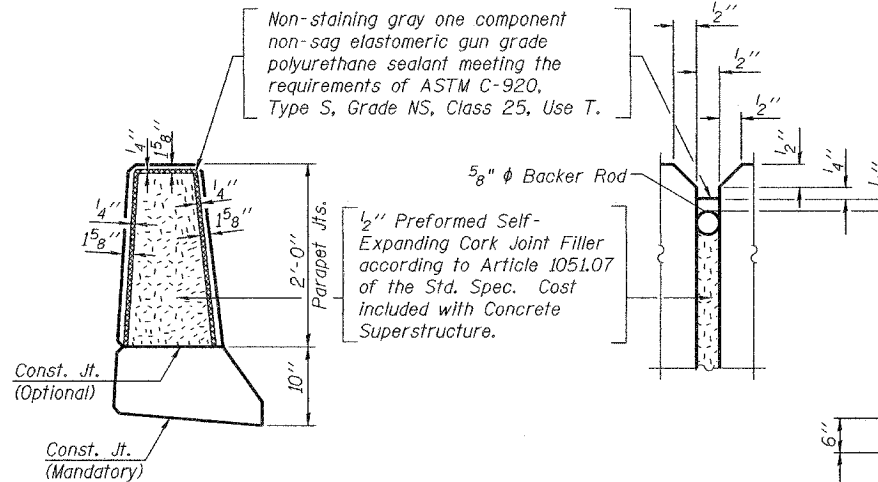


SECTION THRU PARAPET

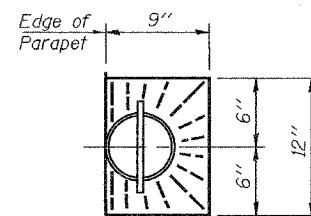
**For insert locations See sht. 9 of 13.



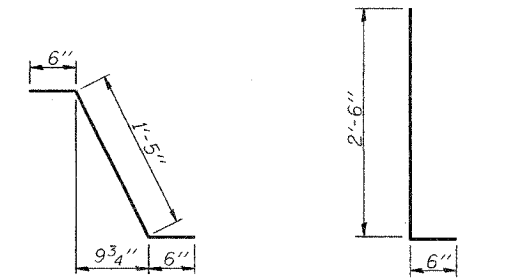
PARAPET JOINT DETAILS



SECTION A-A

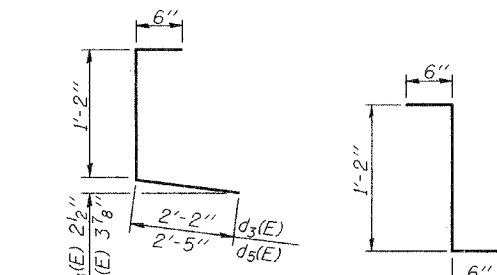


TOP PLAN



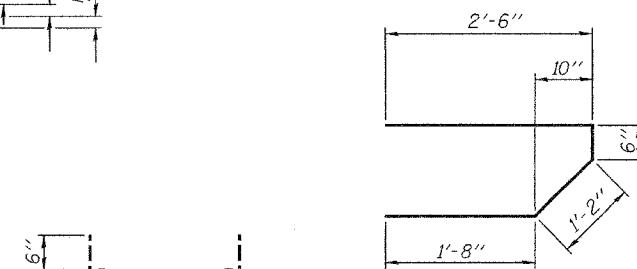
BAR d1(E)

BARS d(E) & d2(E)

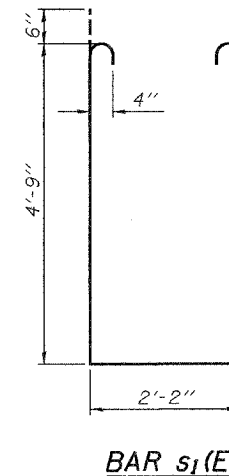


BARS d3(E) & d5(E)

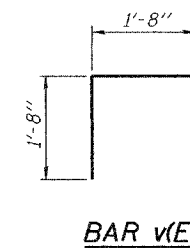
BAR d4(E)



BAR s(E)



BAR s1(E)



BAR v(E)

DESIGNED	Alan M. Johnson
CHECKED	Philip E. Copperrnoll
DRAWN	Michael B. Mossman
CHECKED	AMJ PEC

APPROVED	April 25, 2005
EXAMINED	Thomas J. Damagalki
PASSED	Ralph E. Anderson

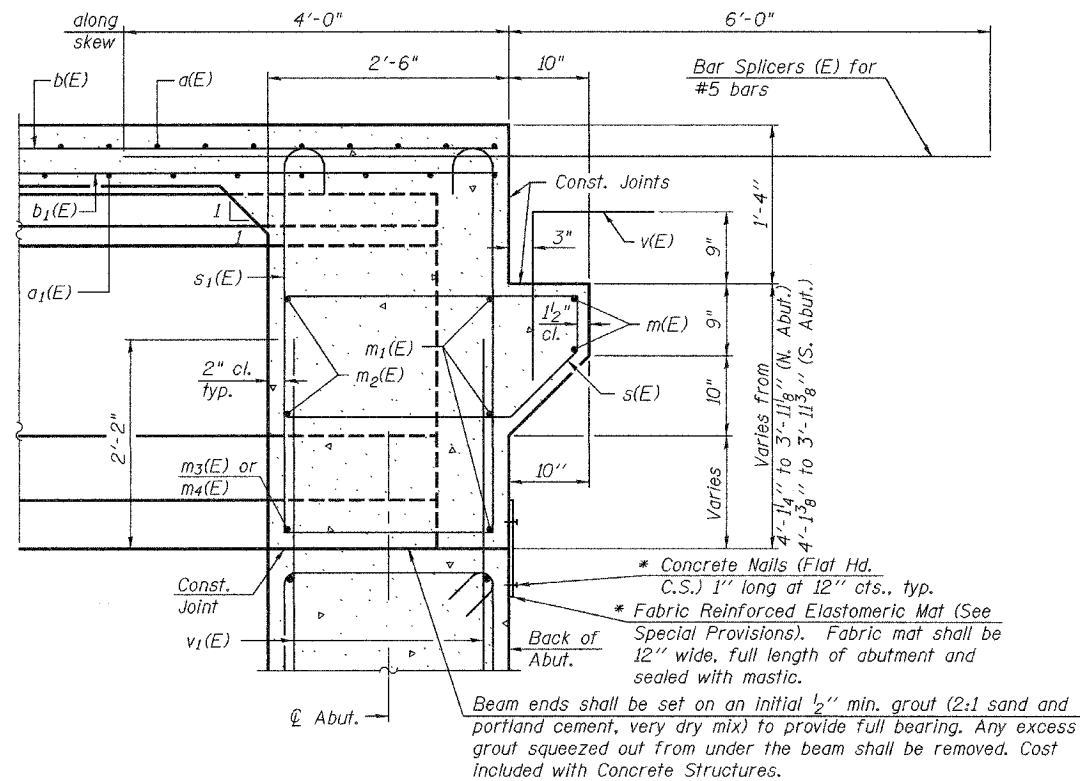
PI-1-D 9-1-03

SUPERSTRUCTURE DETAILS
F.A.P. ROUTE 315 - SECTION (18BRY-1)BR
FULTON COUNTY
STATION 64+99.00
STRUCTURE NO. 029-0067

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

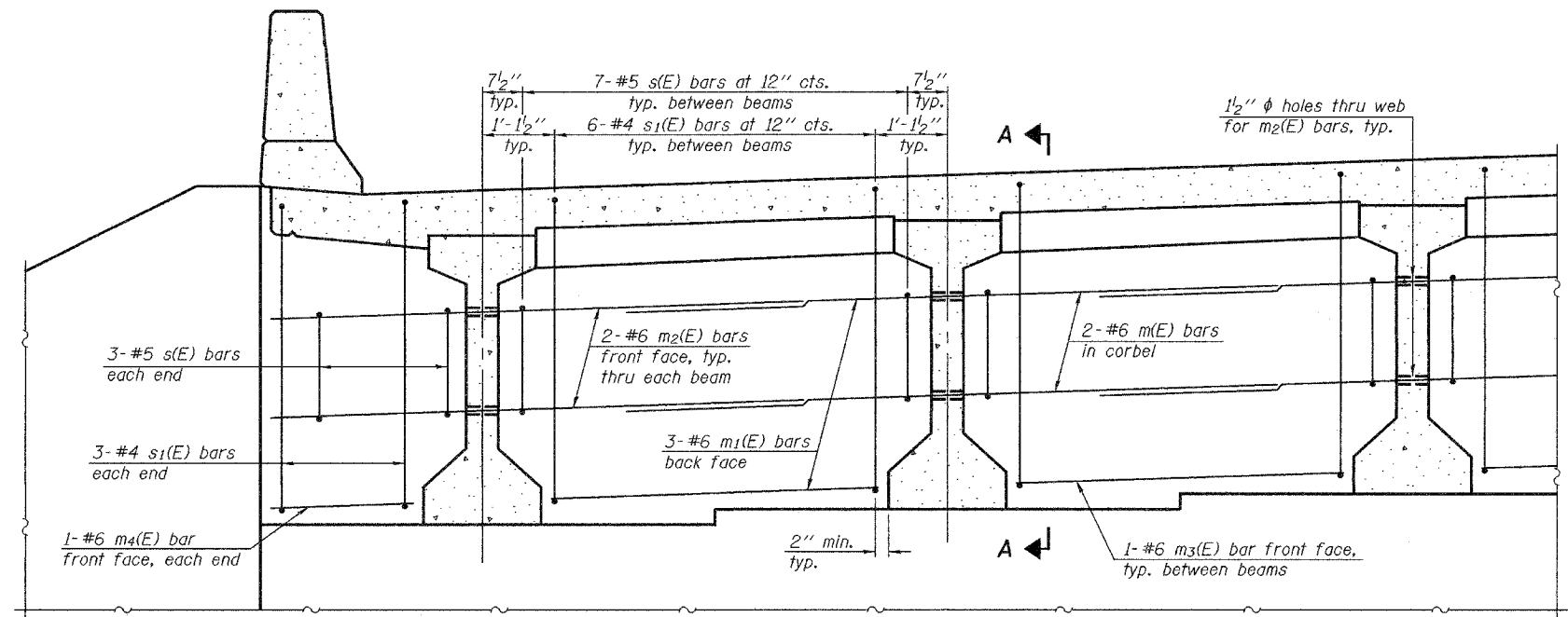
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	SHEET NO. 7
F.A.P. 315	18BRY-11BR	FULTON		158	13 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

Contract #88753



SECTION A-A

* Cost included with Concrete Structures.



DIAPHRAGM ELEVATION AT ABUTMENT

MIN. BAR LAP

#6 bar = 2'-7"

Notes:
Reinforcement bars in diaphragm are billed with superstructure on sheet 6 of 13.
Concrete in diaphragm is included with Concrete Superstructure on sheet 6 of 13.
For details of bars s(E) & s1(E) see sheet 6 of 13.
The s(E) and s1(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.

DESIGNED	Alan M. Johnson
CHECKED	Philip E. Coppernoll
DRAWN	Michael B. Mossman
CHECKED	AMJ PEC

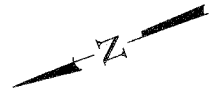
APPROVED	April 25, 2005
EXAMINED	Thomas J. Damagalki ENGINEER OF BRIDGE DESIGN
PASSED	Ralph E. Anderson ENGINEER OF BRIDGES AND STRUCTURES

DIAPHRAGM DETAILS
F.A.P. ROUTE 315 - SECTION (18BRY-11BR)
FULTON COUNTY
STATION 64+99.00
STRUCTURE NO. 029-0067

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	DISTRICT	SHEET NO.	SHEET NO. 8 13 SHEETS
F.A.P. 315	(IBRY-DBR)	FULTON		139	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract #88753



PLAN

DESIGNED	Alan M. Johnson
CHECKED	Phillip E. Coppernoll
DRAWN	Michael B. Mossman
CHECKED	AMJ PEC

April 25, 2005
 EXAMINED *Thomas J. Domagalicki*
 ENGINEER OF BRIDGE DESIGN
 PASSED *Ralph E. Anderson*
 ENGINEER OF BRIDGES AND STRUCTURES

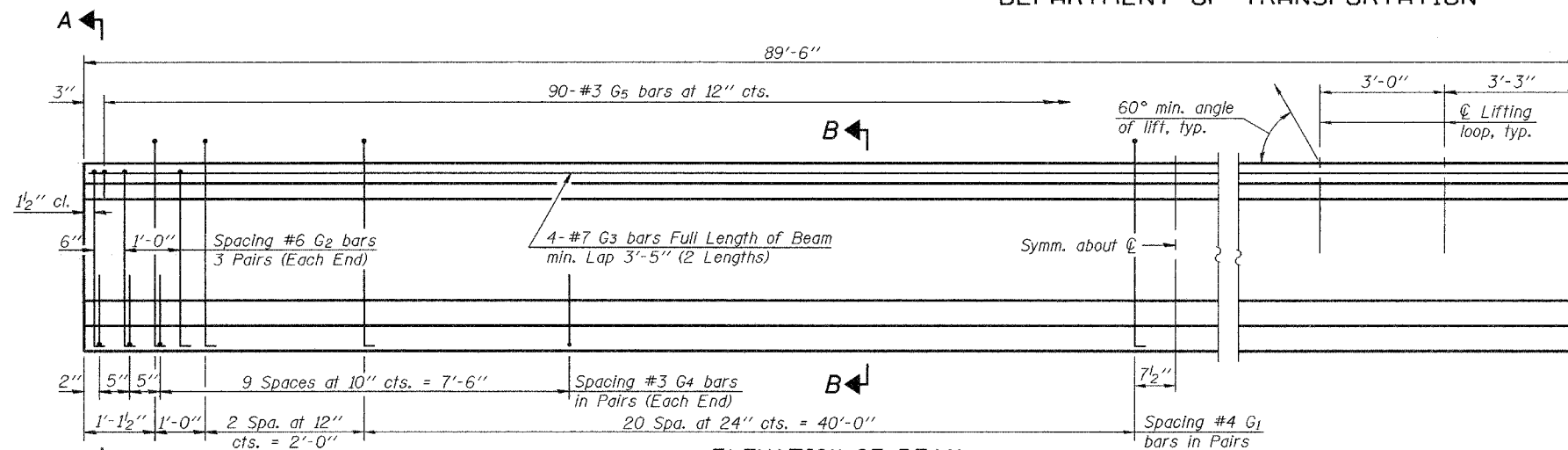
FRAMING PLAN
F.A.P. ROUTE 315 - SECTION (IBRY-DBR)
FULTON COUNTY
STATION 64+99.00
STRUCTURE NO. 029-0067

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

* 1/2" ϕ formed holes for $m_2(E)$ bars See Elevation

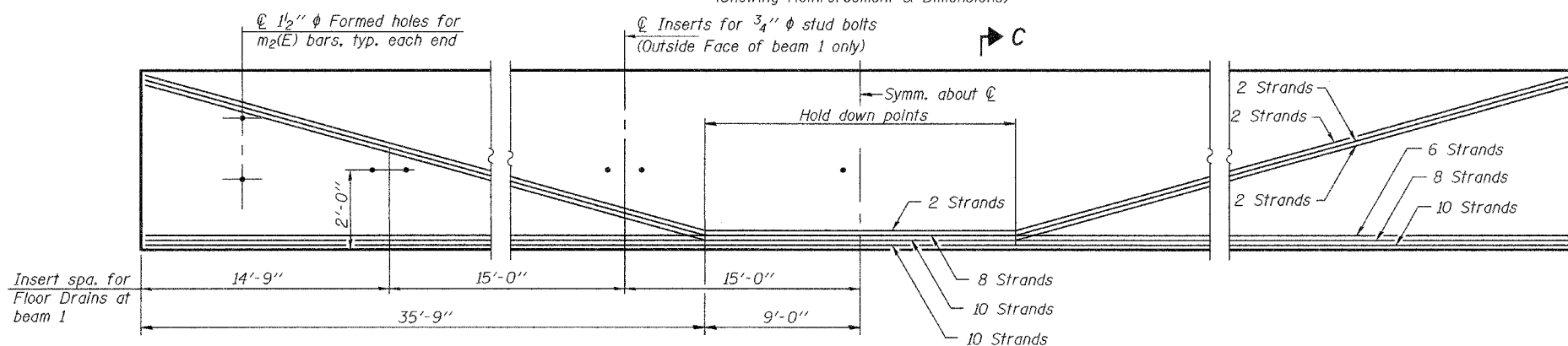
ROUTE NO.	SECTION	COUNTY	FEET	SHEET NO.
F.A.P. 315	(IBRY-1)BR	FULTON	160	13 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

Contract #88753



ELEVATION OF BEAM

(Showing Reinforcement & Dimensions)



ELEVATION OF BEAM

(Showing Prestressing Steel)

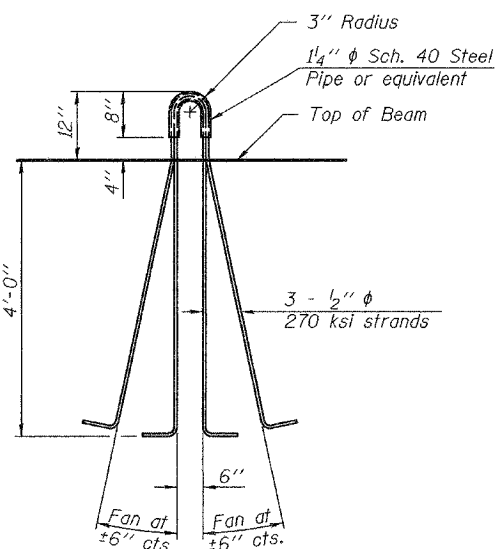
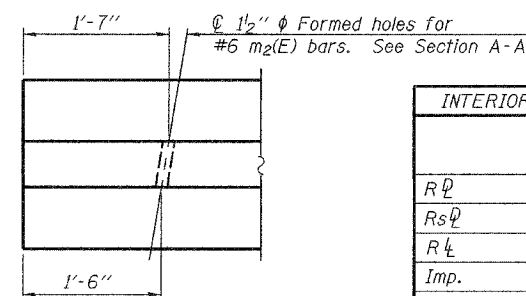
INTERIOR BEAM MOMENT TABLE

		0.5 Span
I	(in ⁴)	213715
I'	(in ⁴)	507557
S _b	(in ³)	8559
S _b '	(in ³)	12746
S _t	(in ³)	7362
S _t '	(in ³)	35794
D	(k/')	1.314
M _D	(k)	1286
s _D	(k/')	0.513
M _{sD}	(k)	502
M _L	(k)	899
M (Imp)	(k)	2.10

INTERIOR BEAM REACTION TABLE

		Abutment
R _D	(k)	58.1
R _{sD}	(k)	22.7
R _L	(k)	44.1
Imp.	(k)	10.3
R (Total)	(k)	135.2

END OF BEAM PLAN
(At abutments)



LIFTING LOOP DETAIL

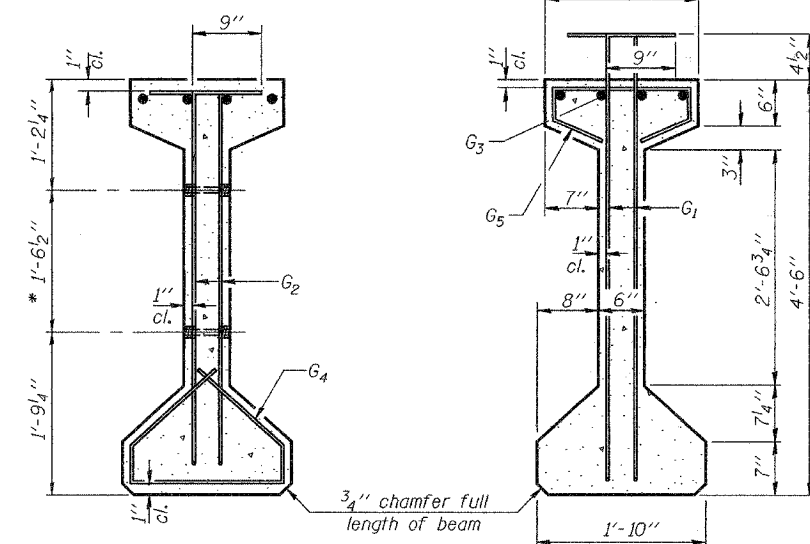
DESIGNED	Alan M. Johnson
CHECKED	Philip E. Copperrill
DRAWN	Michael B. Mossman
CHECKED	AMJ PEC

EXAMINED	Thomas J. Demagalki	April 25, 2005
PASSED	Ralph E. Anderson	

I and I' are the moment of inertia and composite moment of inertia of the beam section.
S_b and S_b' are the non-composite and composite section modulus for the bottom fiber of the prestressed beam.
S_t and S_t' are the non-composite and composite section modulus for the top fiber of the prestressed beam.
M_D is the moment due to dead loads on the non-composite prestressed beam.
M_{sD} is the moment due to dead loads on the composite section.
M_L is the moment due to live load on the composite section.
M (Imp) is the moment due to live load impact on the composite section.

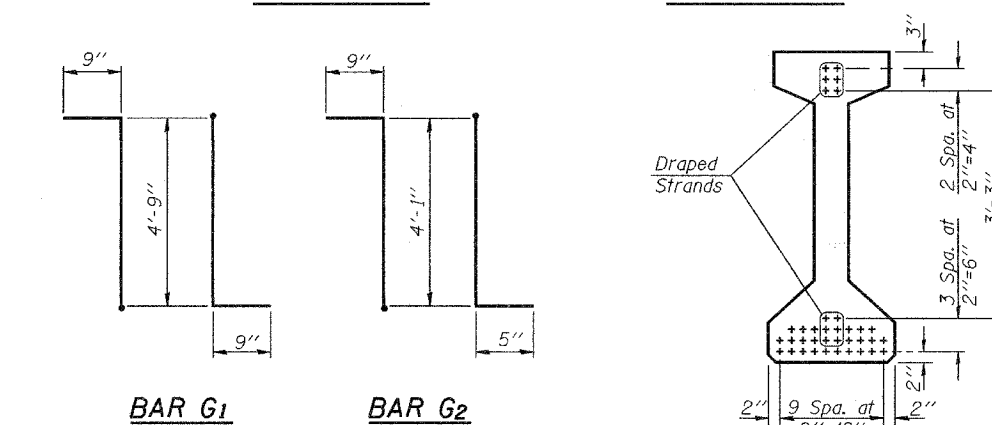
NOTES

Inserts for 3/4" ϕ threaded dowel rods are to be two strut, coil type for interior I-Beams and single coil, flared loop type for exterior I-Beams. 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. Non-prestressing steel shall conform to AASHTO designation M-31 or M 322, Grade 60. A minimum 2 1/2" ϕ lifting pin shall be used to engage the lifting loops during handling. Required release strength, f'ci, shall be 5,000 psi. Reinforcement bars designated (E) shall be epoxy coated.



SECTION A-A

SECTION B-B



BAR G1

BAR G2

SECTION C-C

***BAR LIST**

Bar	No.	Size	Length	Shape
G1	96	#4	6'-3"	TL
G2	12	#6	5'-3"	TL
G3	8	#7	46'-4"	
G4	48	#3	3'-4 1/2"	
G5	90	#3	3'-5"	

*For one beam only.

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete I-Beams, 54"	Ft.	537

BEAM DETAILS

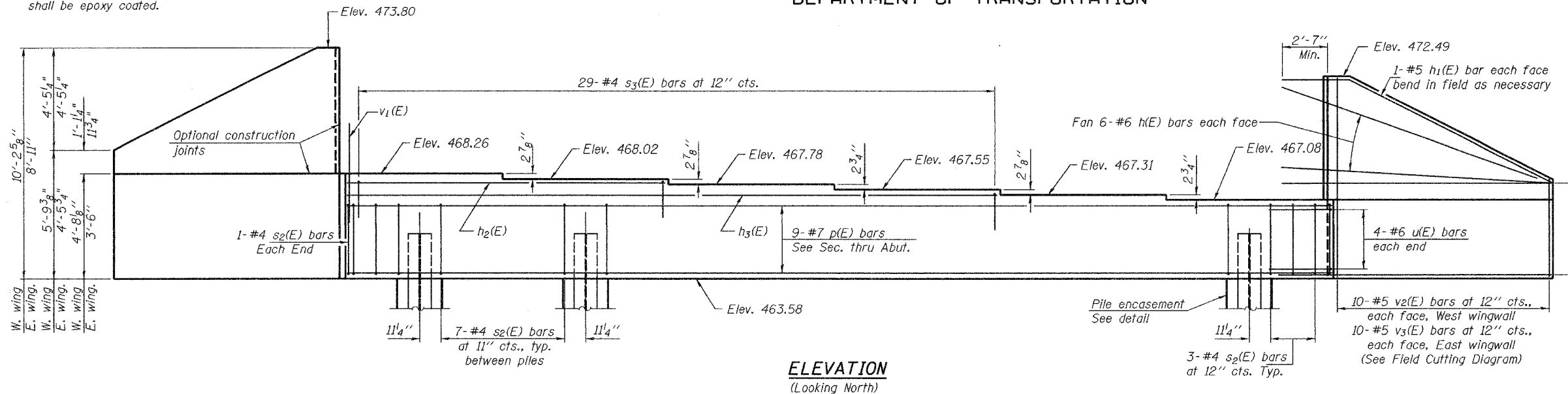
F.A.P. ROUTE 315 - SECTION (IBRY-1)BR
FULTON COUNTY
STATION 64+99.00
STRUCTURE NO. 029-0067

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET NO.
F.A.P. 315	18BRY-1)BR	FULTON	161	13
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

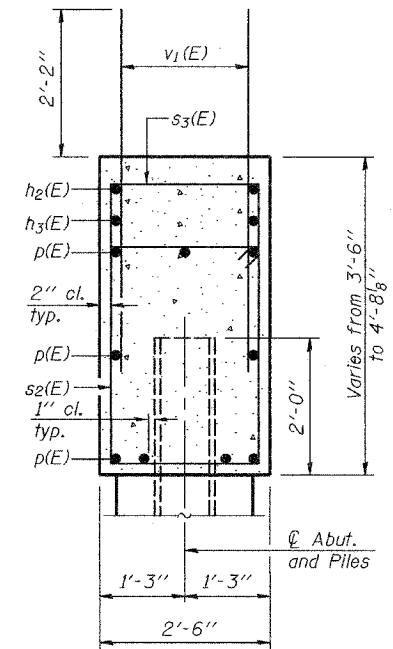
Contract #88753

Notes: Four steps monolithically with cap.
Reinforcement bars designated (E)
shall be epoxy coated.



ELEVATION
(Looking North)

8-#6 h(E) bars at 8" cts.
each face (West Wingwall)
7-#6 h(E) bars at 8" cts.
each face (East Wingwall)

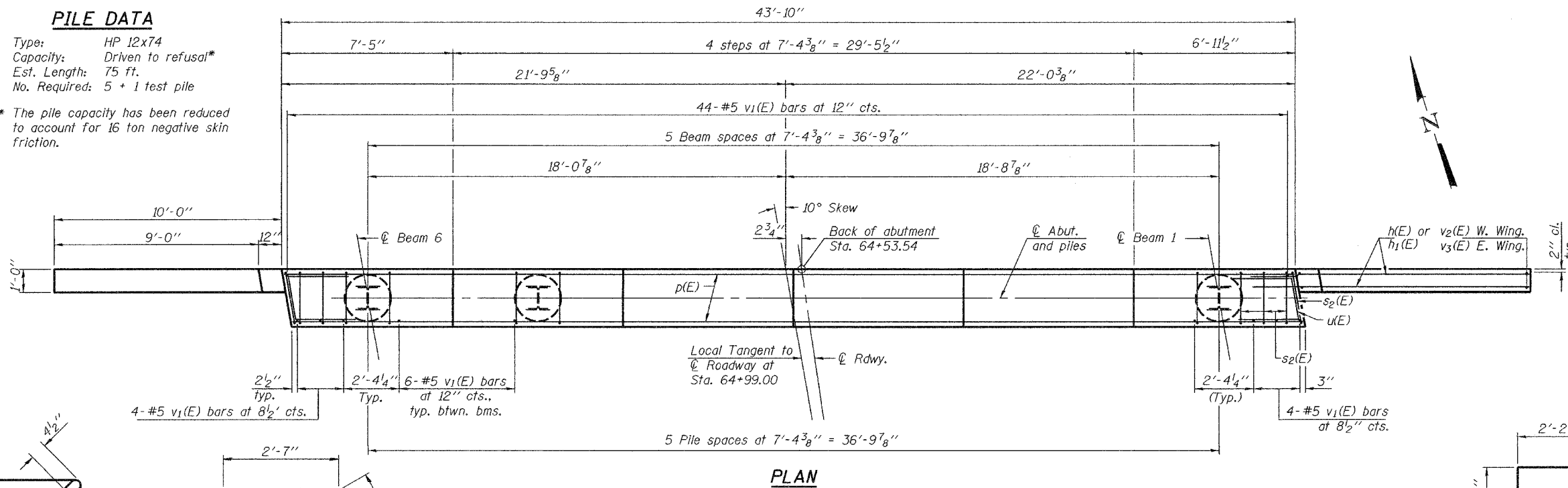


SEC. THRU ABUT.

PILE DATA

Type: HP 12x74
Capacity: Driven to refusal*
Est. Length: 75 ft.
No. Required: 5 + 1 test pile

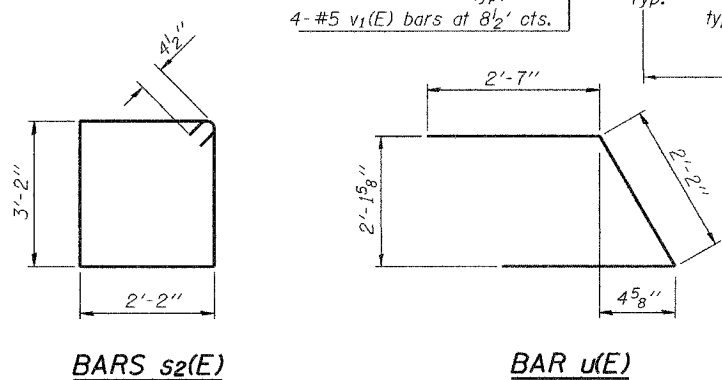
* The pile capacity has been reduced to account for 16 ton negative skin friction.



PLAN

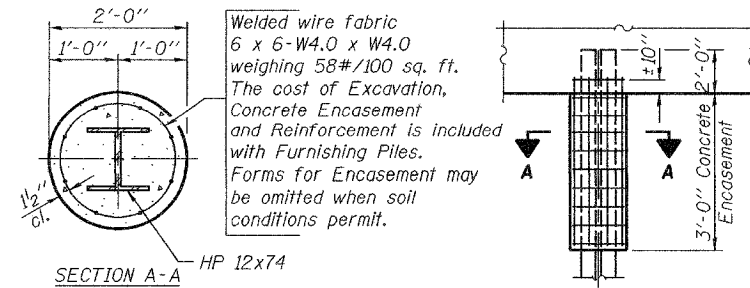
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	54	#6	13'-2"	
h1(E)	4	#5	13'-8"	
h2(E)	2	#4	14'-0"	
h3(E)	2	#4	28'-8"	
p(E)	9	#7	43'-6"	
s2(E)	43	#4	11'-5"	□
s3(E)	29	#4	6'-8"	□
u(E)	8	#6	7'-4"	∟
v1(E)	82	#5	4'-4"	
v2(E)	10	#5	15'-3"	
v3(E)	10	#5	12'-8"	
Concrete Structures		Cu. Yd.	22.2	
Reinforcement Bars, Epoxy Coated		Pound	3190	
Furnishing Steel Piles HP 12x74		Foot	375	
Driving Steel Piles HP 12x74		Foot	375	
Test Pile Steel HP 12x74		Each	1	
Structure Excavation		Cu. Yd.	44.5	

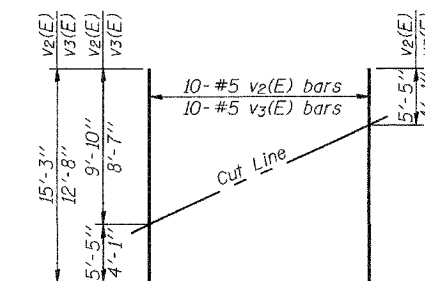


BARS s2(E)

BAR u(E)



PILE ENCASEMENT DETAIL



FIELD CUTTING DIAGRAM

Order v2(E) and v3(E) bars full length. Cut as shown and use remainder of bars in opposite face.

BAR s3(E)

DESIGNED	Alan M. Johnson
CHECKED	Philip E. Copperrnoll
DRAWN	Michael B. Mossman
CHECKED	AMJ PEC

EXAMINED	April 25, 2005	Thomas J. Donagabadi
PASSED		Ralph E. Anderson

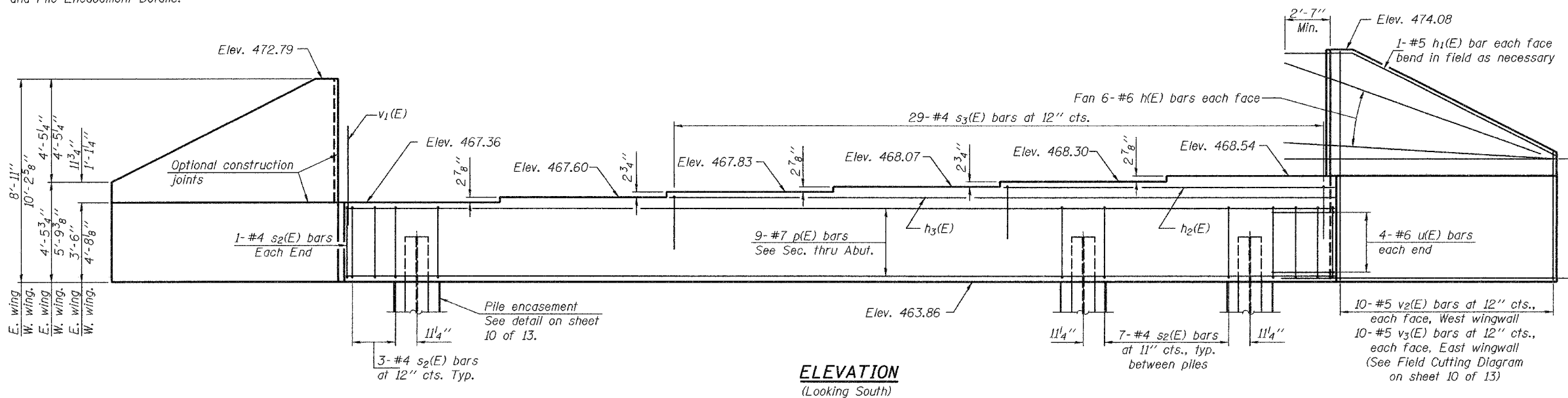
NORTH ABUTMENT
F.A.P. ROUTE 315 - SECTION (18BRY-1)BR
FULTON COUNTY
STATION 64+99.00
STRUCTURE NO. 029-0067

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET
F.A.P. 315	(18BRY-1)BR	FULTON	162	13 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

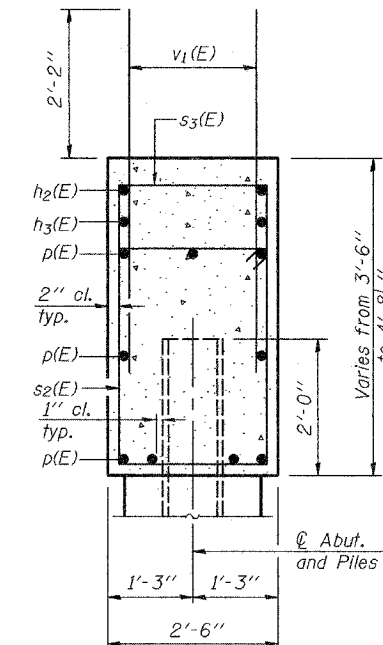
Contract #88753

Notes:
Pour steps monolithically with cap.
Reinforcement bars designated (E)
shall be epoxy coated.
See sheet 10 of 13 for Field Cutting
Diagram, s₂(E) bar, s₃(E) bar, u(E) bar
and Pile Encasement Details.

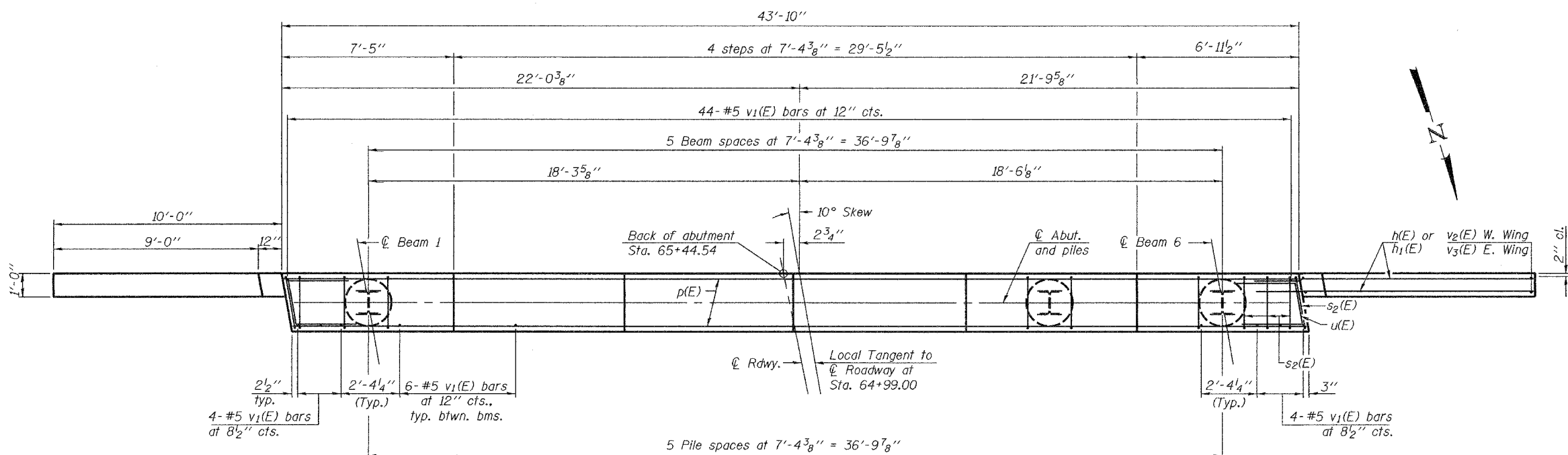


ELEVATION
(Looking South)

8-#6 h(E) bars at 8" cts.
each face West Wingwall
7-#6 h(E) bars at 8" cts.
each face East Wingwall



SEC. THRU ABUT.



PLAN

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	54	#6	13'-2"	—
h ₁ (E)	4	#5	13'-8"	—
h ₂ (E)	2	#4	14'-0"	—
h ₃ (E)	2	#4	28'-8"	—
p(E)	9	#7	43'-6"	—
s ₂ (E)	43	#4	11'-5"	□
s ₃ (E)	29	#4	6'-8"	□
u(E)	8	#6	7'-4"	∩
v ₁ (E)	82	#5	4'-4"	—
v ₂ (E)	10	#5	15'-3"	—
v ₃ (E)	10	#5	12'-8"	—
Concrete Structures		Cu. Yd.	22.2	
Reinforcement Bars, Epoxy Coated		Pound	3190	
Furnishing Steel Piles HP 12x74		Foot	450	
Driving Steel Piles		Foot	450	
Structure Excavation		Cu. Yd.	44.5	

PILE DATA

Type: HP 12x74
Capacity: Driven to refusal*
Est. Length: 75 ft.
No. Required: 6
* The pile capacity has been reduced
to account for 16 ton negative skin
friction.

DESIGNED	Alan M. Johnson
CHECKED	Philip E. Copperrill
DRAWN	Michael B. Mossman
CHECKED	AMJ PEC

April 25, 2005
EXAMINED *Thomas J. Domagalicki*
ENGINEER OF BRIDGE DESIGN
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

SOUTH ABUTMENT
F.A.P. ROUTE 315 - SECTION (18BRY-1)BR
FULTON COUNTY
STATION 64+99.00
STRUCTURE NO. 029-0067

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET
F.A.P. 315	(IBRY-DBR	FULTON	163	13
ILLINOIS FED. AID PROJECT -				

Contract #88753

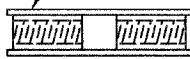
The diameter of this part is equal or larger than the diameter of bar spliced.

ROLLED THREAD DOWEL BAR



** ONE PIECE

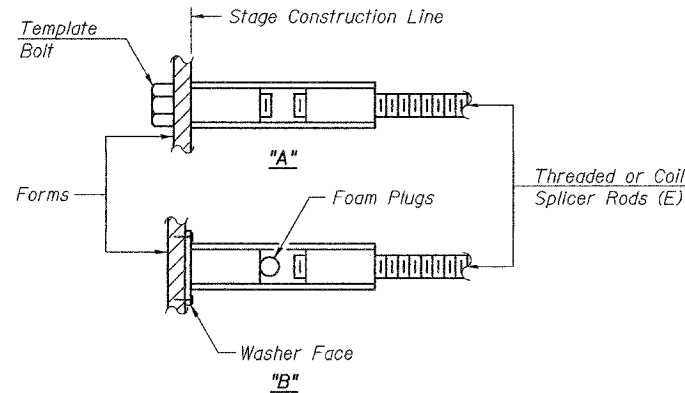
Wire Connector



WELDED SECTIONS

BAR SPLICER ASSEMBLY ALTERNATIVES

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



INSTALLATION AND SETTING METHODS

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

NOTES

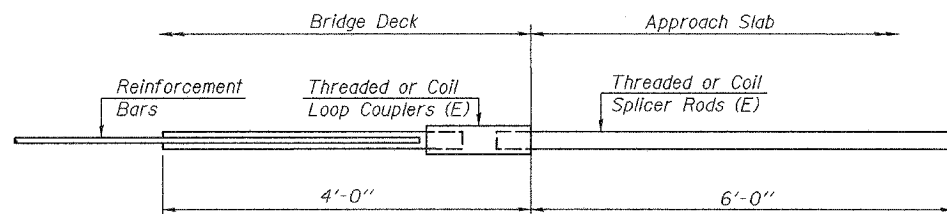
Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.
Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.
All reinforcement bars shall be lapped and tied to the 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:

- Minimum Capacity (Tension in kips) = $1.25 \times f_y \times A_t$
- Minimum *Pull-out Strength (Tension in kips) = $1.25 \times f_{s_{allow}} \times A_t$

Where f_y = Yield strength of lapped reinforcement bars in ksi.
 $f_{s_{allow}}$ = Allowable tensile stress in lapped reinforcement bars in ksi (Service Load)
 A_t = Tensile stress area of lapped reinforcement bars.
* = 28 day concrete

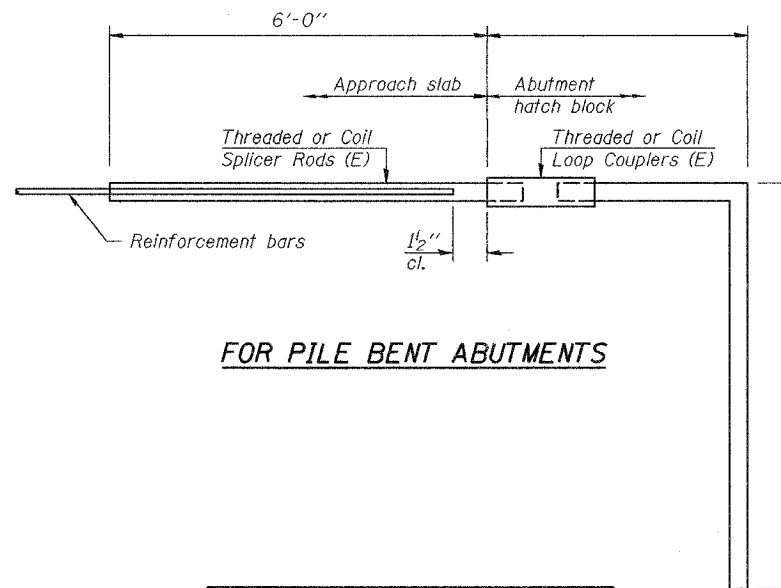
BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	5.9
#5	2'-0"	23.0	9.2
#6	2'-7"	33.1	13.3
#7	3'-5"	45.1	18.0
#8	4'-6"	58.9	23.6
#9	5'-9"	75.0	30.0
#10	7'-3"	95.0	38.0
#11	9'-0"	117.4	46.8

Bar splicer assemblies shall be according to Section 508 of the Standard Specifications, except as noted. The furnishing and installation of bar splicer assemblies will be measured and paid for at the contract unit price each for "BAR SPLICERS."



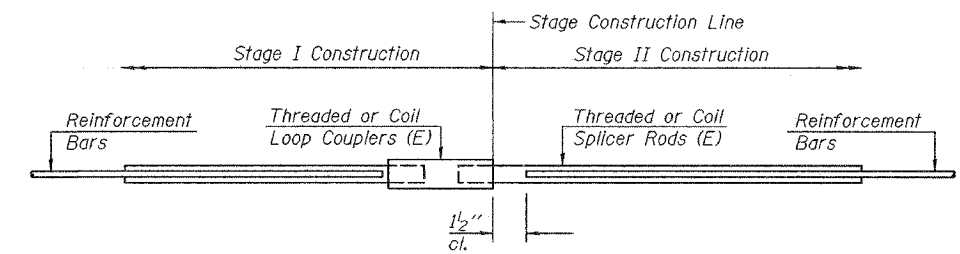
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 9.2 kips - tension
No. Required = 80



FOR PILE BENT ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 9.2 kips - tension
No. Required =



STANDARD

Bar Size	No. Assemblies Required	Location

BAR SPLICER ASSEMBLY DETAILS
F.A.P. ROUTE 315 - SECTION (IBRY-DBR
FULTON COUNTY
STATION 64+99.00
STRUCTURE NO. 029-0067

DESIGNED	Alan M. Johnson
CHECKED	Phillip E. Coppernoll
DRAWN	Michael B. Mossman
CHECKED	AMJ PEC

APPROVED	April 25, 2005
EXAMINED	Thomas J. Demagala
PASSED	Ralph E. Anderson

BSD-1 10-22-04

Bench Mark: Chiseled "□" on top of W. side of S. abut. of S.N. 029-0004 (Spoon River Bridge) Elev. 480.75 (146.533)

Existing Structure: S.N. 029-0004 Eight span 470' Bk.-Bk. abutments, 33' Out-to-Out of deck PPC deck beams supported on timber pile pier footings. Built in 1926 under Section 18C, S.B.I. Rt. 31 at Sta. 75+84. Bridge widening with new superstructure 1970. Existing bridge to have PPC deck beam replacement/repair during Stage I Construction. (See details elsewhere in contract plans). Existing structure to be removed and replaced, on new alignment. Two-way traffic maintained on existing structure during Stage II Construction (N. Abut. & Piers). One lane of traffic with stop bars during Stage III Construction (S. Abut.; Bridge superstructure; and Bridge Appr. Pav'ts.). See roadway plans for additional staging details.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

STATION 74+09.000
BUILT 20 BY
STATE OF ILLINOIS
F.A.P. RT. 315 SEC. (18BRY-1)BR
LOADING HS20
STRUCTURE NO. 029-0068

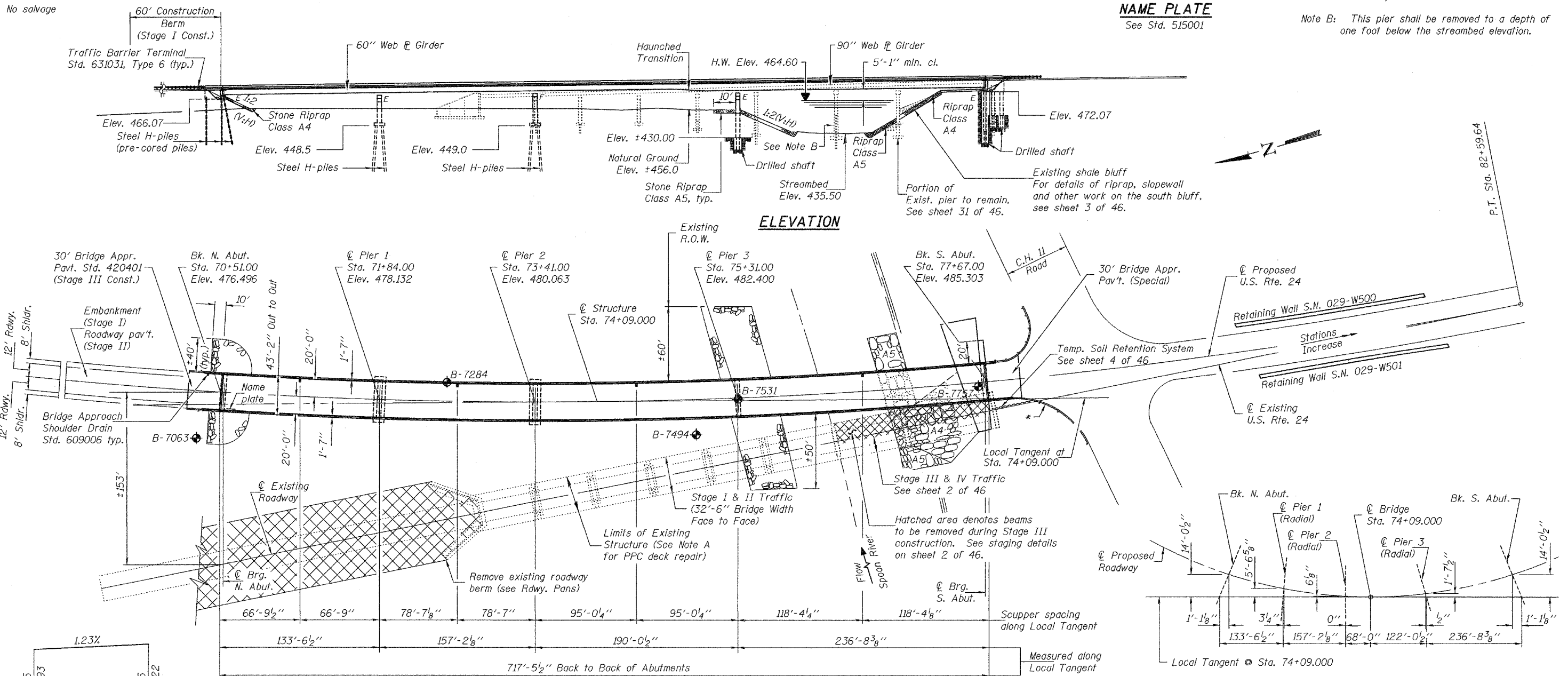
NAME PLATE
See Std. 515001

ROUTE NO.	SECTION	COUNTY	TOWNSHIP	SHEET NO.	SHEET NO. 1
FAP 315	(18BRY-1)BR	FULTON		166	46 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

Contract #88753

Note A: Remove and replace 8 PPC deck beams during Stage I Construction. See details elsewhere in contract plans.

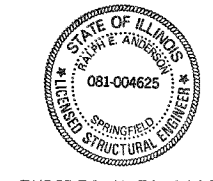
Note B: This pier shall be removed to a depth of one foot below the streambed elevation.



PROFILE GRADE
(along centerline roadway)

DESIGNED	<i>Thomas J. Parsons</i>
CHECKED	<i>Thomas J. Parsons</i>
DRAWN	<i>h.t. parsons</i>
CHECKED	<i>FT/DPN/SBR/MJT</i>

EXAMINED	<i>Thomas J. Parsons</i>	May 16, 2005
PASSED	<i>Ralph E. Anderson</i>	ENGINEER OF BRIDGES AND STRUCTURES



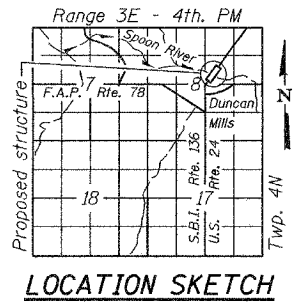
LOADING HS20-44
Allow 50#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS
2002 AASHTO
AASHTO Guide Specifications
for Horizontally Curved Steel Girder
Highway Bridges 2003.

DESIGN STRESSES
FIELD UNITS
f_c = 3,500 psi
f_y = 60,000 psi (reinforcement)
f_y = 50,000 psi (structural steel)
f_y = 36,000 psi (structural steel)

SEISMIC DATA
Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 4.3%
Site Coefficient (S) = 1.0

CURVE DATA
U.S. RTE. 24
P.I. Sta. = 71+34.68
Δ = 28°-53'-55.6" (LT)
D = 1°-15'-23.35"
R = 4,560.00'
T = 1,175.00'
L = 2,299.97'
E = 148.95'
e = 3.3%
P.C. Sta. = 59+59.68
P.T. Sta. = 82+59.64



LOCATION SKETCH

OFFSET SKETCH
(Brgs. at abutments and piers are radial to centerline of Proposed Rdwy.)

GENERAL PLAN
U.S. ROUTE 24 OVER
SPOON RIVER
PUBLIC WATERS
F.A.P. RTE. 315 - SEC. (18BRY-1)BR
FULTON COUNTY
STATION 74+09.000
STRUCTURE NO. 029-0068

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET NO. 2
FAP 315	(18BRY-1)BR	FULTON	166	46 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

Contract #88753

WATERWAY INFORMATION

Flood	Freq. Yr.	Structure Number	Q C.F.S.		Opening Sq. Ft.		Nat. H.W.E.	Head - Ft.		Headwater El.	
			Exist.	Prop.	Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Flood	10	029-0068	21305	24123	4720	6555	463.2	1.3	0.7	464.5	463.9
		029-0067	4474	1692	1689	619					
		overtopping	35	-	-	-					
		Total	25815	25815	6409	7174					
Design	50	029-0068	23318	35650	5293	7488	464.6	1.4	1.2	466.0	465.8
		029-0067	5248	2702	1689	722					
		overtopping	9786	-	-	-					
		Total	38352	38352	6982	8210					
Base	100	029-0068	26161	40432	5489	7837	465.1	1.2	1.2	466.3	466.3
		029-0067	3948	3182	1689	762					
		overtopping	13505	-	-	-					
		Total	43614	43614	7178	8599					
Overtopping	10	029-0068	20009	-	4439	-	462.5	0.8	-	463.3	-
		029-0067	4005	-	1689	-					
		Total	24014	-	6128	-					
Max. Calc.	500	029-0068	26627	51941	5945	8756	466.5	0.9	0.9	467.4	467.4
		029-0067	5156	4210	1689	873					
		overtopping	24368	-	-	-					
		Total	56151	56151	7634	9629					

Exist. 10-yr. velocity: 4.5 ft./sec. (029-0004); 2.6 ft./sec. (029-0003)
Prop. 10-yr. velocity: 3.7 ft./sec. (029-0004); 2.7 ft./sec. (029-0003)
Max. H.W.E. 463.75' (date varies)

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment	Cu. Yd.		279	279
Stone Riprap, Class A4	Ton		446	446
Stone Riprap, Class A5	Ton		2208	2208
Filter Fabric	Sq. Yd.		3010	3010
Slopedwall 4 Inch	Sq. Yd.		133.0	133.0
Structure Excavation	Cu. Yd.		820	820
Rock Excavation for Structures	Cu. Yd.		14.3	14.3
Concrete Structures	Cu. Yd.		552	552
Concrete Superstructure	Cu. Yd.	930.4		930.4
Bridge Deck Grooving	Sq. Yd.	2990		2990
Protective Coat	Sq. Yd.	3776		3776
Furnishing and Erecting Structural Steel	L. Sum	1		1
Stud Shear Connectors	Each	6066		6066
Reinforcement Bars, Epoxy Coated	Pound	239570	55590	295160
Reinforcement Bars	Pound		30580	30580
Furnishing Steel Piles HP10x57	Foot		560	560
Furnishing Steel Piles HP12x74	Foot		1299	1299
Driving Steel Piles	Foot		1859	1859
Test Pile Steel HP 10x57	Each	1		1
Test Pile Steel HP 12x74	Each	2		2
Name Plates	Each	1		1
Bridge Seat Sealer	Sq. Ft.		270	270
Floating Bearings, Guided Expansion, 150 K	Each		6	6
Floating Bearings, Guided Expansion, 250 K	Each		6	6
Floating Bearings, Guided Expansion, 400 K	Each		6	6
Floating Bearings, Guided Expansion, 650 K	Each		6	6
Floating Bearings, Fixed, 350 K	Each		6	6
Drainage Scuppers, DS-11	Each		4	4
Bar Splicers	Each		84	84
Drilled Shaft in Soil 36"	Foot		145	145
Drilled Shaft in Rock 30"	Foot		80	80
Drilled Shaft in Rock 36"	Foot		184	184
Drilled Shaft in Rock 24"	Foot		72	72
Fabric Reinforced Elastomeric Trough	Foot	87		87
Temporary Soil Retention System	Sq. Ft.		261	261
Underwater Structure Excavation Protection - Location 1	Each		1	1
Removal of Existing Structures No. 2	Each		1	1
Permanent Casing	Foot		70	70

GENERAL NOTES

Calculated weight of Structural Steel = 1,574,400 lbs. (AASHTO M270 Grade 50) = 9,240 lbs. (AASHTO M270 Grade 36)

Roadway expansion guards shall be assembled in the proper position with the ends in place and shall be left assembled for shop inspection.

The roadway expansion plates shall be flame cut as provided in Article 505.04(k) of the Standard Specifications.

Field welding of construction accessories will not be permitted to girders.

Anchor bolts shall be set before bolting cross frames over supports.

The main load carrying member components subject to tensile stress shall conform to the Supplemental Requirements for Notch Toughness Zone 2. These components are the tension flanges, webs and all splice plate material except fill plates.

Reinforcement bars shall conform to the requirements of AASHTO M 31 or M 322 Grade 60.

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

Bearing seat surfaces shall be constructed or adjusted to the designated elevations within a tolerance of 1/8 inch. Adjustment shall be made either by grinding the surface or by shimming the bearing. Two 1/8" adjusting shims, of the dimensions of the bottom bearing plate, shall be provided for each bearing in addition to all other plates or shims.

The contractor shall drive one steel HP 10x57 test pile in a permanent location at the North abutment as directed by the Engineer before ordering the remainder of piles.

The contractor shall drive two steel HP 12x74 test piles, one each at Pier 1 and Pier 2, as directed by the Engineer before ordering the remainder of piles.

Bridge Seat Sealer shall be applied to the seat area of the North and South Abutments.

When the deck pour is stopped for the day at one or more of the transverse Bonded Construction Joints in the deck Pouring Sequence as shown on sheet 9 of 45, the next pour shall not be made until both of the following requirements are met:

- At least 72 hours shall have elapsed from the end of the previous pour.
- The concrete strength shall have attained a minimum flexural strength of 650 psi or a minimum compressive strength of 3500 psi.

All construction joints shall be bonded.

If the Contractor elects to use cantilever forming brackets on the exterior girders, the brackets shall be placed at the same locations as required for the hardwood blocks in Article 503.06 of the Standard Specifications. If additional cantilever forming brackets are required, hardwood blocking shall be wedged between the exterior and first interior girder at each of these additional bracket locations.

Fasteners shall be high strength bolts. Bolts 7/8" φ, open holes 15/16" φ, unless otherwise noted.

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

The Contractor shall obtain a construction permit from the Illinois Department of Natural Resources (IDNR), Office of Water Resources for any temporary construction activity placed in the water except cofferdams. This shall include the placement of material for run-arounds, causeways, etc. Any permit application by the Contractor shall refer to the IDNR permit number DS2004132, which was issued for the permanent construction.

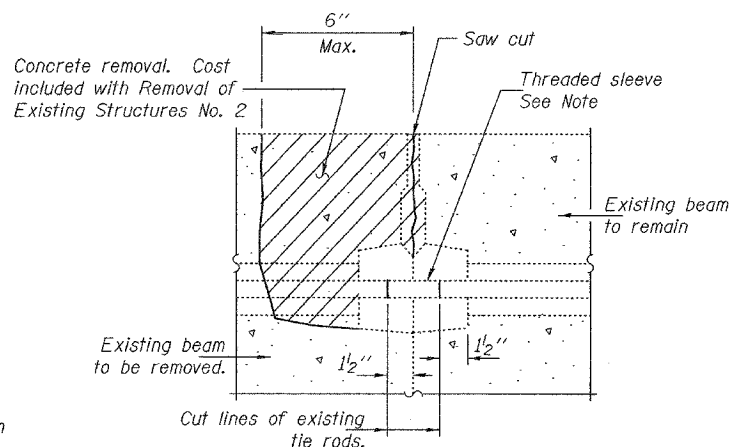
Before starting work, the Contractor shall submit the proposed method of structural steel erection for approval by the Engineer as provided in Article 505.08 (e) of the Standard Specifications.

The Contractor shall submit for approval by the Engineer the procedure for blocking the floating bearings prior to erecting structural steel.

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 gray, 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 provisions for "Cleaning and Painting New Metal Structures".

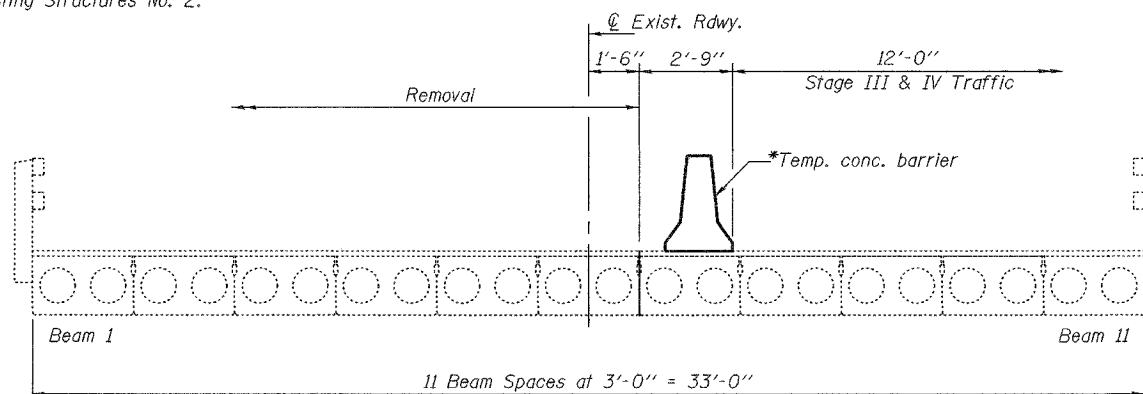
INDEX OF SHEETS

- 1 General Plan
- 2 General Data & Staging Details
- 3 General Details
- 4 Temporary Soil Retention System
- 5 Footing Layout
- 6-8 Top of Slab Elevations
- 9-12 Superstructure Details
- 13-17 Finger Plate Details
- 18 Drainage Scuppers
- 19-24 Structural Steel
- 25-29 Bearings
- 30 Anchor Bolt Details
- 31 Existing Pier Details
- 32-34 North Abutment
- 35 Pier 1
- 36 Pier 2
- 37-38 Pier 3
- 39-41 South Abutment
- 42 Bar Splicer Assembly Details
- 43 Temporary Concrete Barrier
- 44-46 Soil Boring Logs



BEAM REMOVAL DETAIL AT TRANSVERSE TIES

Note: Remove existing 3" threaded sleeve. Replace with 3 1/2" x 3 1/2" x 1/2" plate washer (with 1 1/2" φ hole) and nut. Cost included with Removal of Existing Structures No. 2.



STAGING

Looking south
Remove PPC deck beams (1 thru 6) in spans 7 & 8 during Stage III Construction.

* For details of Temporary Concrete Barrier, see sheet 43 of 46.
* For quantity of Temporary Concrete Barrier, see roadway plans.

DESIGNED	MJT/FT
CHECKED	FT/SEM
DRAWN	h.t. parsons
CHECKED	FT/SEM

May 16, 2005
EXAMINED *Thomas J. Damagala*
SUPERVISOR OF BRIDGE DESIGN
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

GENERAL DATA & STAGING DETAILS
F.A.P. RTE. 315 - SEC. (18BRY-1)BR
FULTON COUNTY
STATION 74+09.00
STRUCTURE NO. 029-0068

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

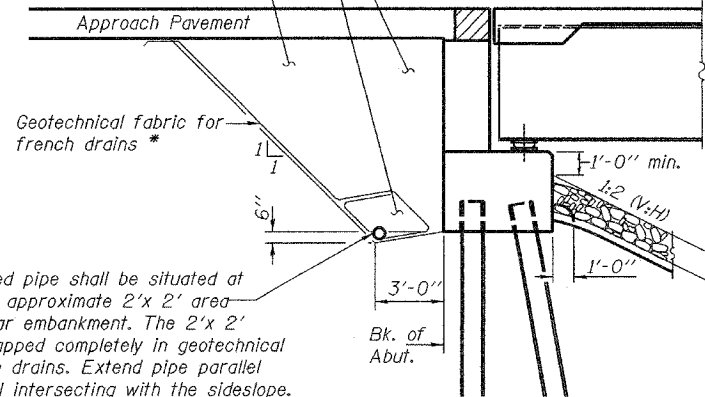
ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET
FAP 315	(18BRY-1)BR	FULTON	167	46 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

Contract #88753

Backfill with uncompacted porous granular embankment with a gradation of CA-5 or CA-7 by Bridge Contractor after superstructure is in place from inside face to inside face of wingwalls

Excavation for placing Porous Granular Embankment is paid for as Structure Excavation.

Geotechnical fabric for french drains *



A 6" ϕ perforated pipe shall be situated at the bottom of an approximate 2'x2' area of porous granular embankment. The 2'x2' area shall be wrapped completely in geotechnical fabric for french drains. Extend pipe parallel with the cap until intersecting with the sideslope. Place pipe to miss wingwall pile caps. Pipes shall drain onto concrete headwalls. (Art. 601.05 of the Std. Spec's. and Highway Std. 601101).*

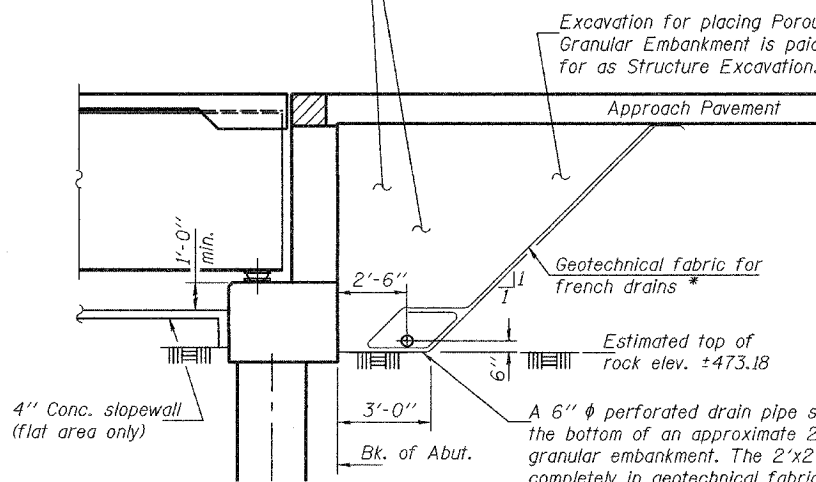
* Included in the cost of Porous Granular Embankment.

SECTION THRU NORTH ABUTMENT
(Dimensions are @ Rt. L's)

Backfill with uncompacted porous granular embankment with a gradation of CA-5 or CA-7 by Bridge Contractor after superstructure is in place from inside face of west wing wall to 1' from the end of east wing wall #1.

Excavation for placing Porous Granular Embankment is paid for as Structure Excavation.

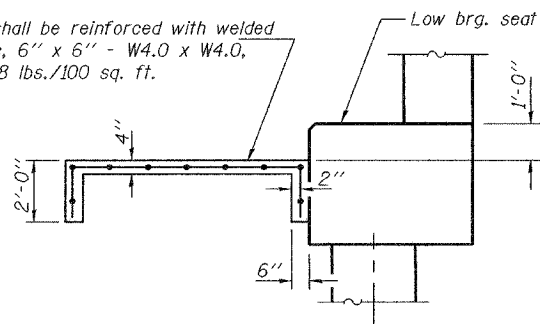
Geotechnical fabric for french drains *



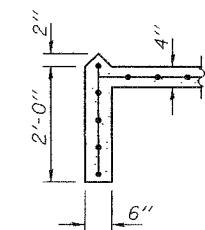
A 6" ϕ perforated drain pipe shall be situated at the bottom of an approximate 2'x2' area of porous granular embankment. The 2'x2' area shall be wrapped completely in geotechnical fabric for french drains. Form hole thru west wing wall cap and east wing wall #2 cap for drain pipe. Extend pipe parallel with the abutment cap until intersecting with the sideslope. Pipes shall drain onto concrete headwalls (Article 601.05 of the Std. Spec's and Highway Standard 601101).*

SECTION THRU SOUTH ABUTMENT
(Dimensions are @ Rt. L's)

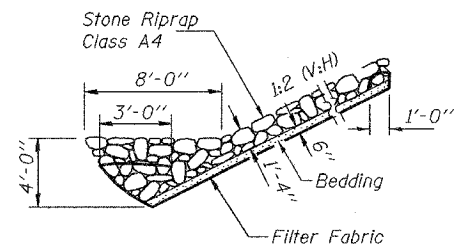
Slopewall shall be reinforced with welded wire fabric, 6" x 6" - W4.0 x W4.0, weighing 58 lbs./100 sq. ft.



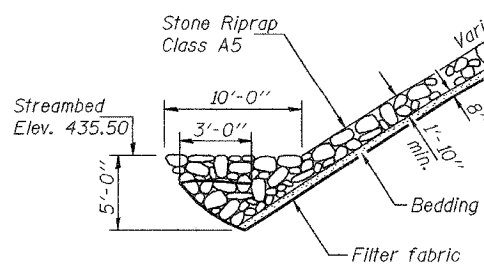
SECTION THRU SLOPEWALL
(South Abut.)



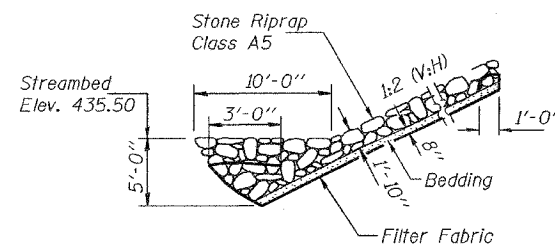
SECTION B-B SLOPEWALL EDGE



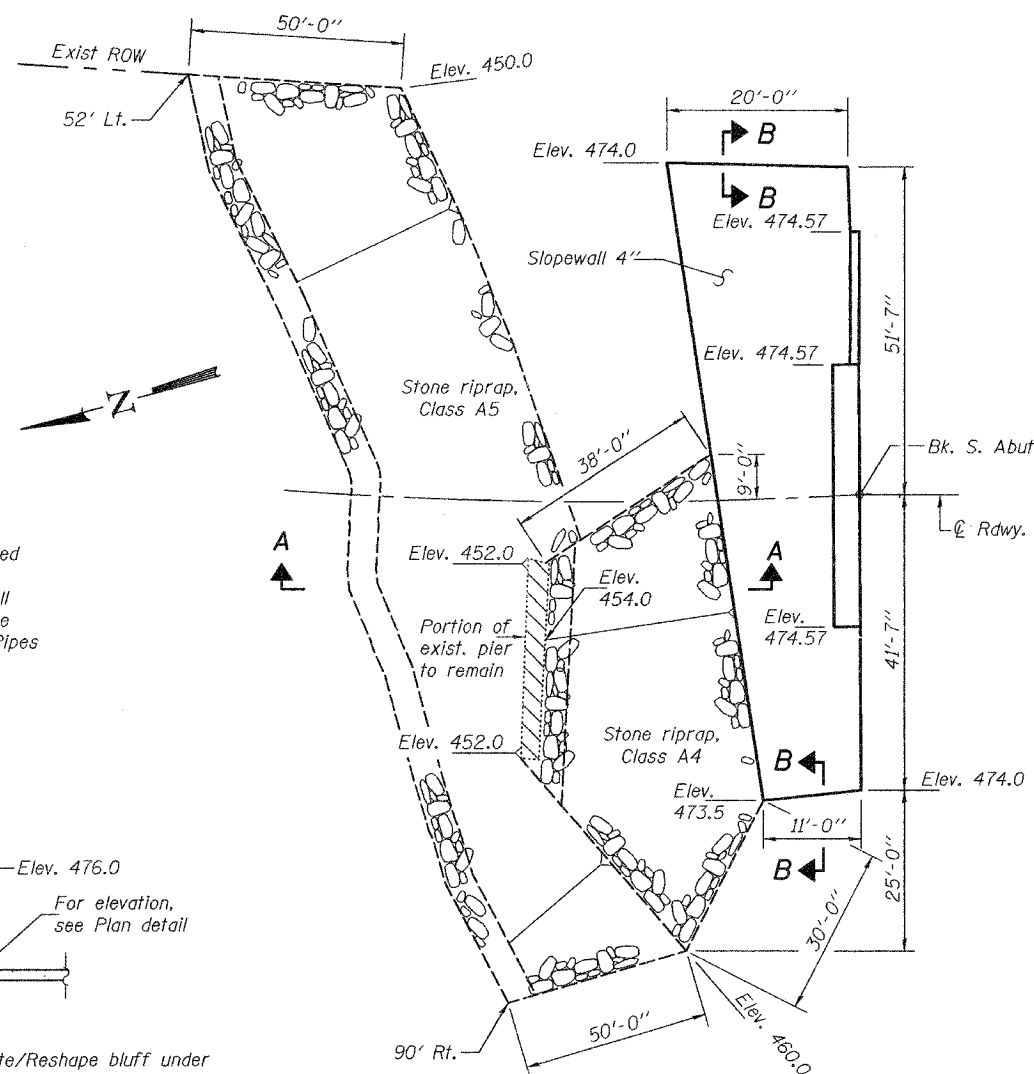
STONE RIPRAP ANCHOR DETAIL
(North Abut.)



SECTION A-A
(South Abut.)



STONE RIPRAP ANCHOR DETAIL
(Pier 3)



PLAN
(South Abut.)

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Slopewall 4 inch.	Sq. Yd.	133.3

GENERAL DETAILS
F.A.P. RTE. 315 - SEC. (18BRY-1)BR
FULTON COUNTY
STATION 74+09.00
STRUCTURE NO. 029-0068

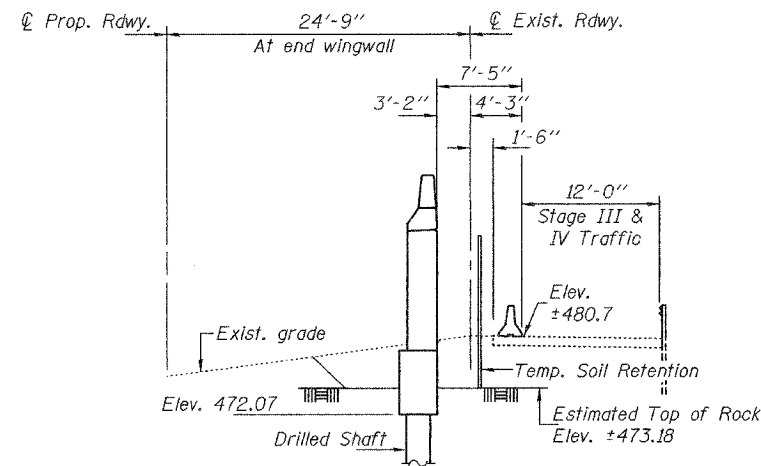
DESIGNED	RJC/FT
CHECKED	FT/SEM
DRAWN	h.f. parsons
CHECKED	FT/SEM

May 16, 2005
EXAMINED *Thomas J. Demagala*
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGE DESIGN
ENGINEER OF BRIDGES AND STRUCTURES

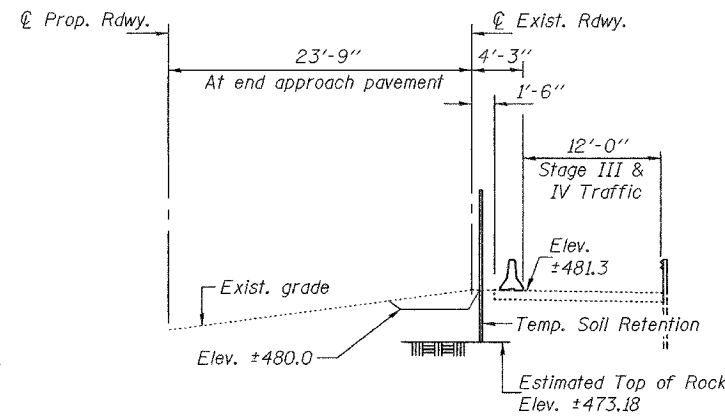
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 315	(18BRY-1)BR	FULTON	46	4
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

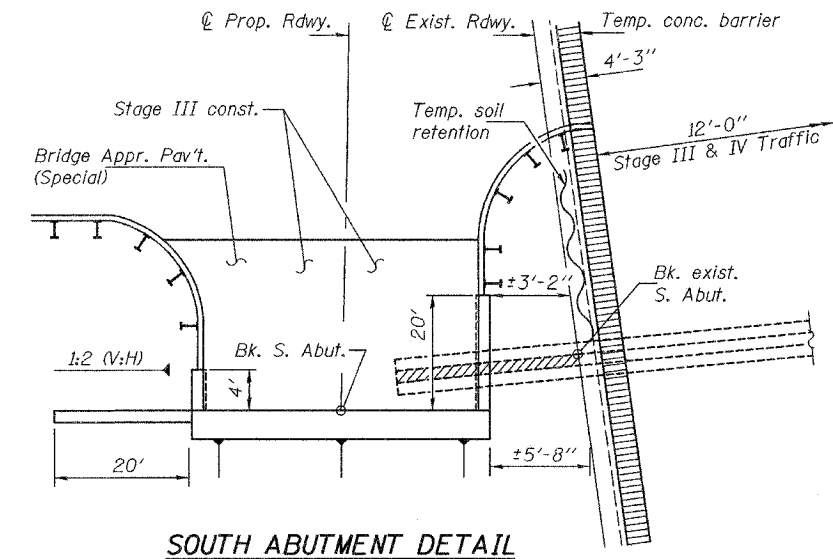
Contract #88753



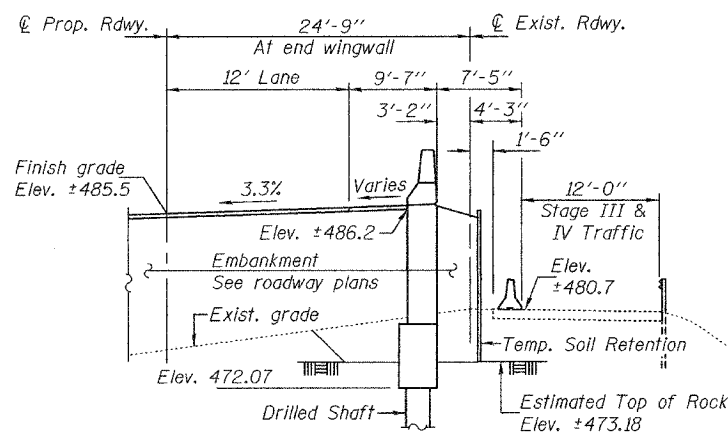
SECTION B-B
(Phase I Retention)
Dimensions at rt. L's to \O Rdwy.



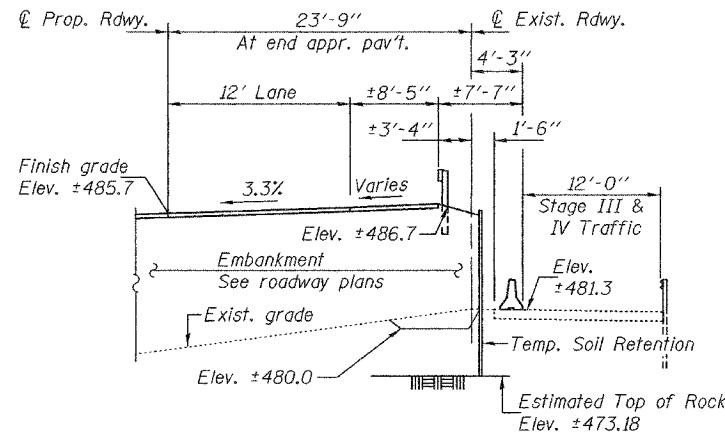
SECTION C-C
(Phase I Retention)
Dimensions at rt. L's to \O Rdwy.



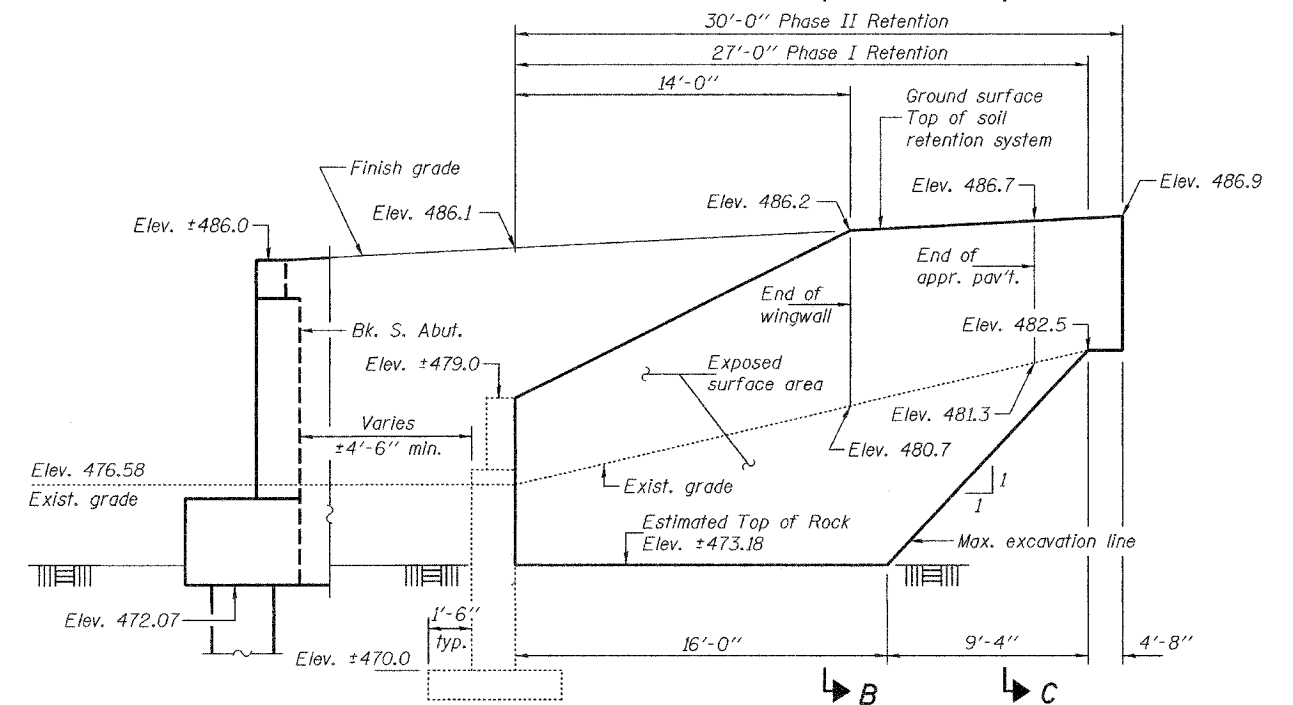
SOUTH ABUTMENT DETAIL



SECTION B-B
(Phase II Retention)
Dimensions at rt. L's to \O Rdwy.



SECTION C-C
(Phase II Retention)
Dimensions at rt. L's to \O Rdwy.



TEMPORARY SOIL RETENTION SYSTEM
At South Abutment

BILL OF MATERIAL

Item	Unit	Total
Temporary Soil Retention System	Sq. Ft.	261.0

TEMPORARY SOIL RETENTION SYSTEM
F.A.P. RTE. 315 - SEC. (18BRY-1)BR
FULTON COUNTY
STATION 74+09.00
STRUCTURE NO. 029-0068

Notes: 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.
Phase I Retention is to support face of excavation during construction of south abutment cap and west wing wall.
Phase II Retention is to support embankment during backfilling behind abutment and construction of Bridge Approach Pavement (Special).

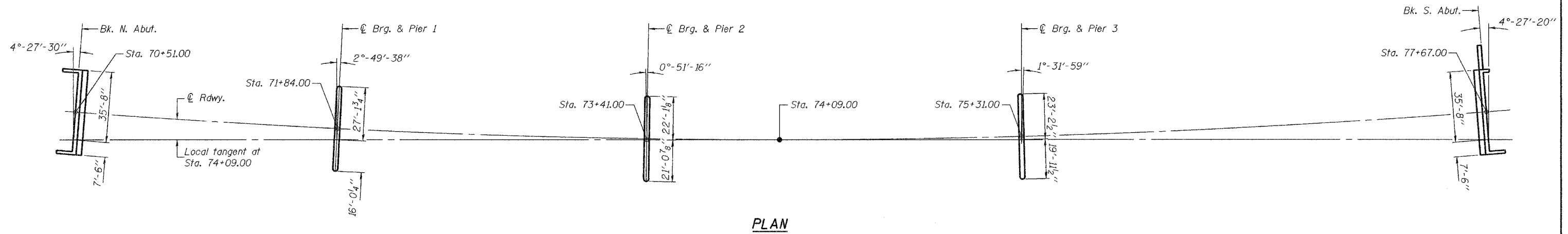
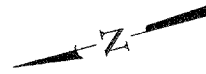
DESIGNED	RJC
CHECKED	SMR
DRAWN	h.t. parsons
CHECKED	RJC/SMR

May 16, 2005
EXAMINED *Thomas J. Donagale*
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	NO.	SHEET NO. 5
FAP 315	(18BRY - 1)BR	FULTON		169	46 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract #88753



DESIGNED	SEM/DPN
CHECKED	SMR/FT
DRAWN	h.t. parsons
CHECKED	SEM/SMR/DPN/FT

May 16, 2005
 EXAMINED *Thomas J. Domagala*
 ENGINEER OF BRIDGE DESIGN
 PASSED *Ralph E. Anderson*
 ENGINEER OF BRIDGES AND STRUCTURES

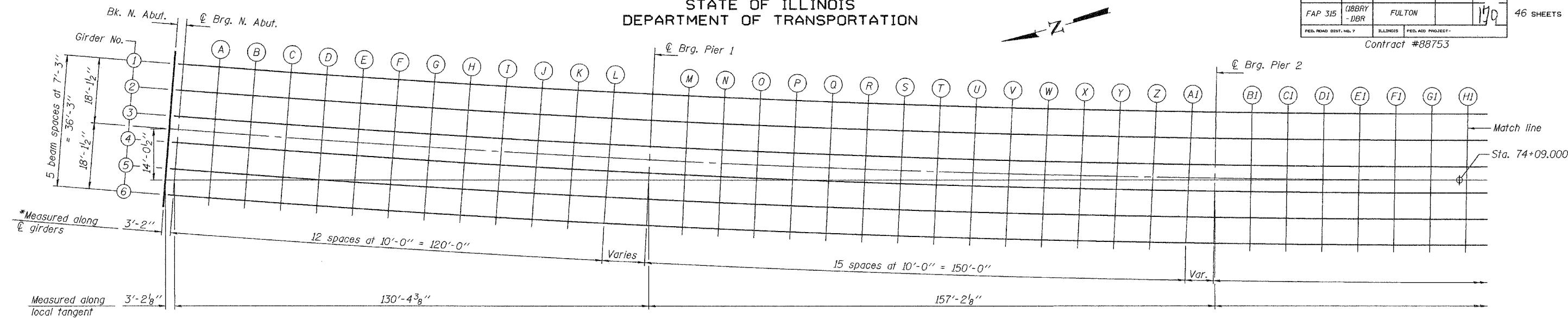
FOOTING LAYOUT
 F.A.P. RTE. 315 - SEC. (18BRY-1)BR
 FULTON COUNTY
 STATION 74+09.000
 STRUCTURE NO. 029-0068

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

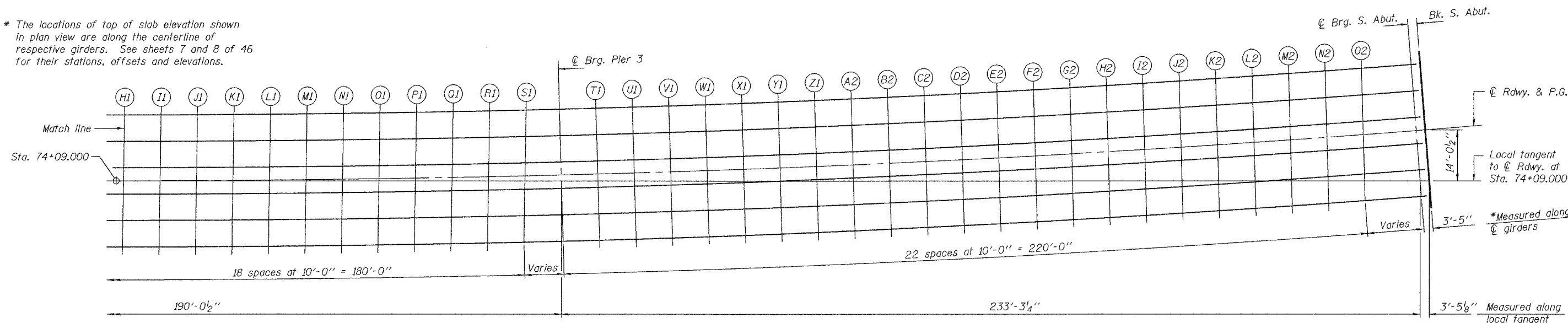
ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET
FAP 315	(18BRY-1)BR	FULTON	46	170
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

Contract #88753

SHEET NO. 6
46 SHEETS



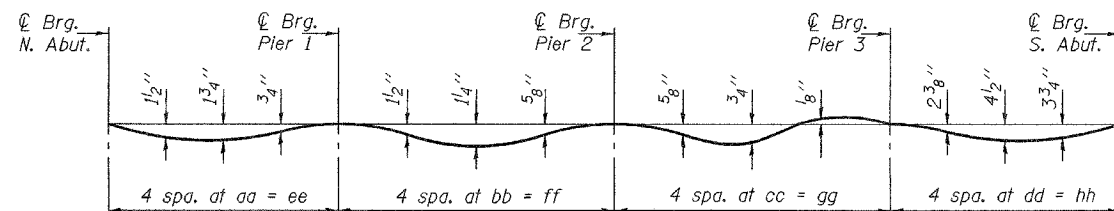
* The locations of top of slab elevation shown in plan view are along the centerline of respective girders. See sheets 7 and 8 of 46 for their stations, offsets and elevations.



PLAN

DIMENSIONS "aa" TO "hh"

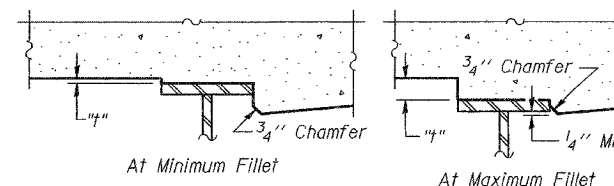
Girder #	aa	bb	cc	dd	ee	ff	gg	hh
1	32'-3 ¹⁵ / ₁₆ "	39'-1 ¹ / ₁₆ "	47'-3 ³ / ₄ "	57'-11"	129'-3 ¹³ / ₁₆ "	156'-4 ¹ / ₄ "	189'-2 ¹⁵ / ₁₆ "	231'-7 ⁷ / ₈ "
2	32'-4 ⁹ / ₁₆ "	39'-1 ⁷ / ₈ "	47'-4 ¹¹ / ₁₆ "	58'-0 ¹ / ₁₆ "	129'-6 ¹ / ₄ "	156'-7 ¹ / ₂ "	189'-6 ⁵ / ₈ "	232'-0 ⁵ / ₁₆ "
3	32'-5 ³ / ₁₆ "	39'-2 ⁵ / ₈ "	47'-5 ⁹ / ₁₆ "	58'-1 ³ / ₁₆ "	129'-8 ³ / ₄ "	156'-10 ¹ / ₂ "	189'-10 ⁴ / ₄ "	232'-4 ³ / ₄ "
4	32'-5 ¹³ / ₁₆ "	39'-3 ³ / ₈ "	47'-6 ¹ / ₁₆ "	58'-2 ⁵ / ₁₆ "	129'-11 ¹ / ₄ "	157'-1 ¹ / ₂ "	190'-1 ¹³ / ₁₆ "	232'-9 ³ / ₁₆ "
5	32'-6 ⁷ / ₁₆ "	39'-4 ¹ / ₈ "	47'-7 ³ / ₈ "	58'-3 ⁷ / ₁₆ "	129'-1 ¹ / ₁₆ "	157'-4 ¹ / ₂ "	190'-5 ⁷ / ₁₆ "	233'-1 ⁵ / ₈ "
6	32'-7 ¹ / ₁₆ "	39'-4 ⁷ / ₈ "	47'-8 ¹ / ₄ "	58'-4 ¹ / ₂ "	129'-4 ³ / ₁₆ "	157'-7 ¹ / ₂ "	190'-9 ¹ / ₁₆ "	233'-6 ¹ / ₁₆ "



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 on sheets 7 and 8 of 46.



FILLET HEIGHTS

To determine "t": After all structural steel has been erected, elevations of the top flanges of the girders shall be taken at intervals shown above. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflection" shown on sheets 7 and 8 of 46, minus slab thickness, equals the fillet heights "t" above top flange of girders.

DESIGNED	MJT
CHECKED	DPN/FT
DRAWN	h.t. parsons
CHECKED	MJT/DPN/FT

May 16, 2005
EXAMINED *Thomas J. Demagala*
ENGINEER OF BRIDGE DESIGN
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

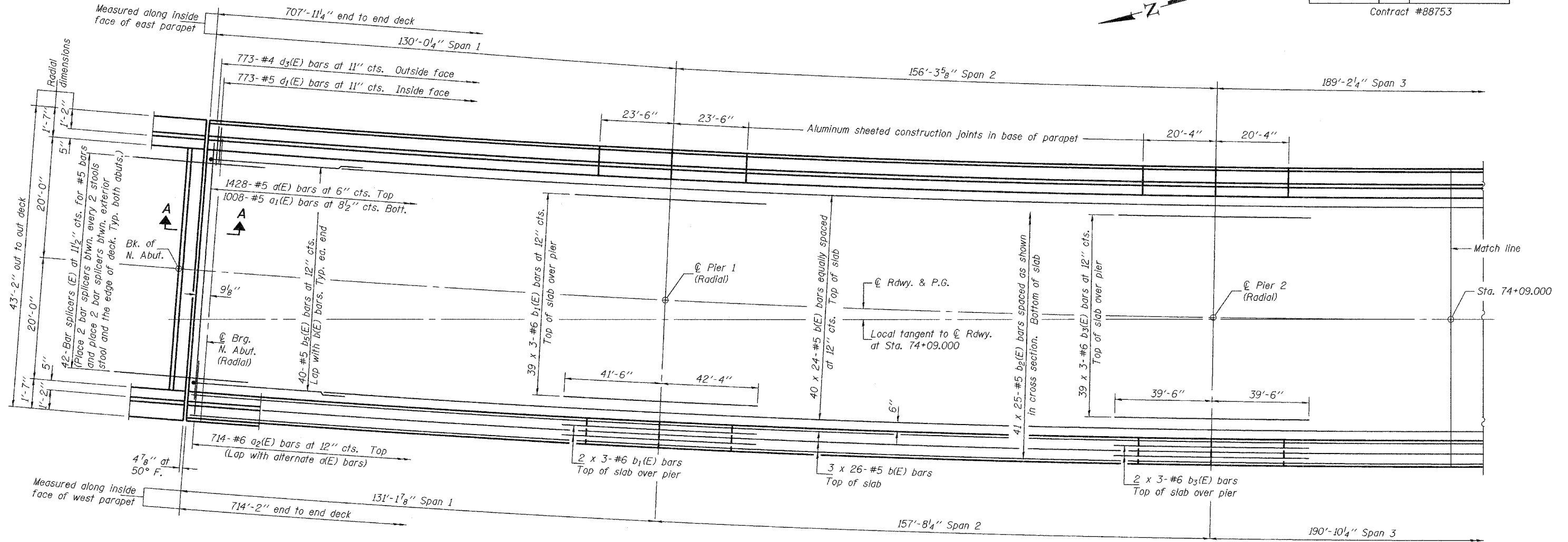
TOP OF SLAB ELEVATIONS
F.A.P. RTE. 315 - SEC. (18BRY-1)BR
FULTON COUNTY
STATION 74+09.000
STRUCTURE NO. 029-0068

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET
FAP 315	(18BRY-1)BR	FULTON		113
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

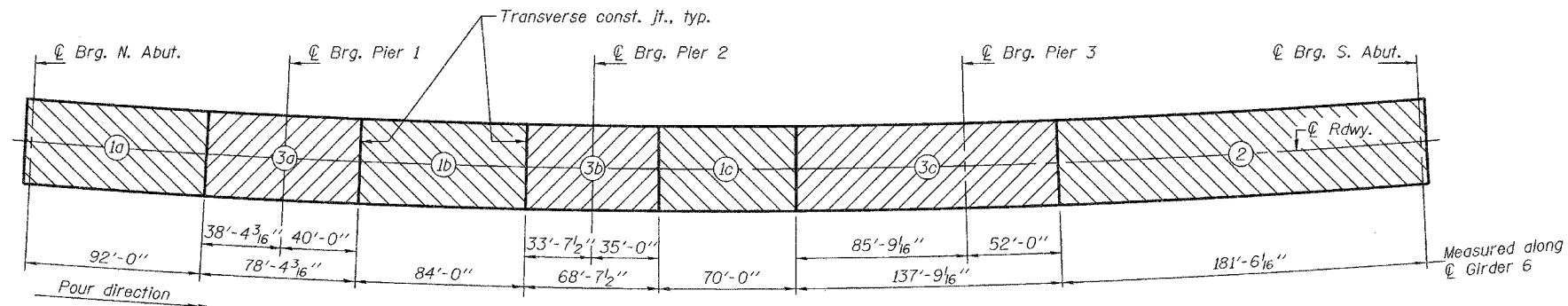
SHEET NO. 9
46 SHEETS

Contract #88753



PLAN

Notes: See sheet 1 of 46 for scupper locations.
See sheet 11 of 46 for superstructure details, Bill of Material and Section A-A.
Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 40 x 24-#5 etc. indicates 40 lines of bars with 24 lengths per line.
See sheet 12 of 46 for parapet reinforcement.
Work this sheet with sheets 9 thru 12 of 46.



DECK POURING SEQUENCE

The concrete deck slab segments shall be poured in numerical order as shown.
See general notes on sheet 2 of 46.

MIN. BAR LAPS

#5 bar = 2'-2"
#6 bar = 2'-7"

SUPERSTRUCTURE

SPANS 1 & 2

F.A.P. RTE. 315 - SEC. (18BRY-1)BR

FULTON COUNTY

STATION 74+09.000

STRUCTURE NO. 029-0068

DESIGNED	MJT
CHECKED	FT
DRAWN	h.t. parsons
CHECKED	MJT/FT/SMR

May 16, 2005

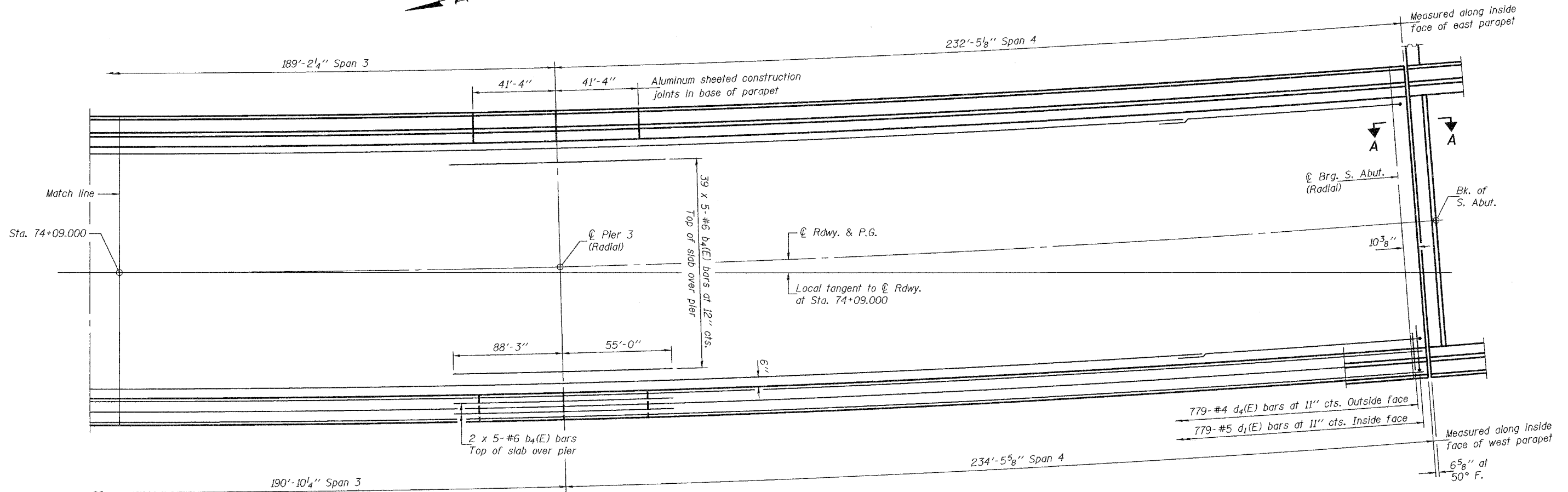
EXAMINED *Thomas J. Demagala*
ENGINEER OF BRIDGE DESIGN

PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 315	(18BRY-1)BR	FULTON	46	10
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

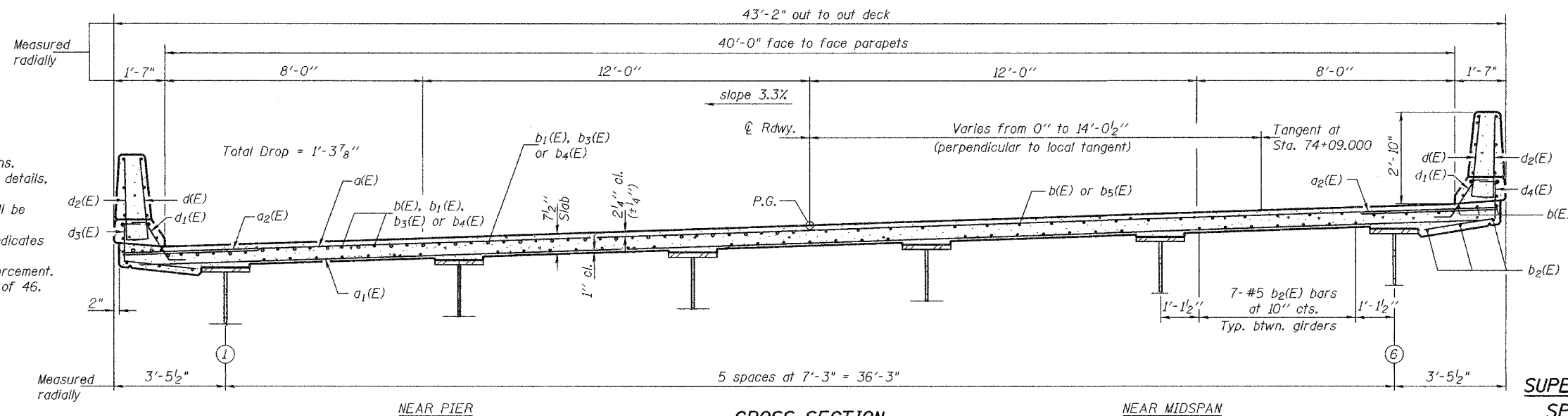
Contract #88753



PLAN

MIN. BAR LAPS
#5 bar = 2'-2"
#6 bar = 2'-7"

Notes:
See sheet 1 of 46 for scupper locations.
See sheet 11 of 46 for superstructure details.
Bill of Material and Section A-A.
Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 39 x 5-#6 etc. indicates 39 lines of bars with 5 lengths per line.
See sheet 12 of 46 for parapet reinforcement.
Work this sheet with sheets 9 thru 12 of 46.



CROSS SECTION
(Looking South)

**SUPERSTRUCTURE
SPANS 3 & 4**

F.A.P. RTE. 315 - SEC. (18BRY-1)BR
FULTON COUNTY
STATION 74+09.000
STRUCTURE NO. 029-0068

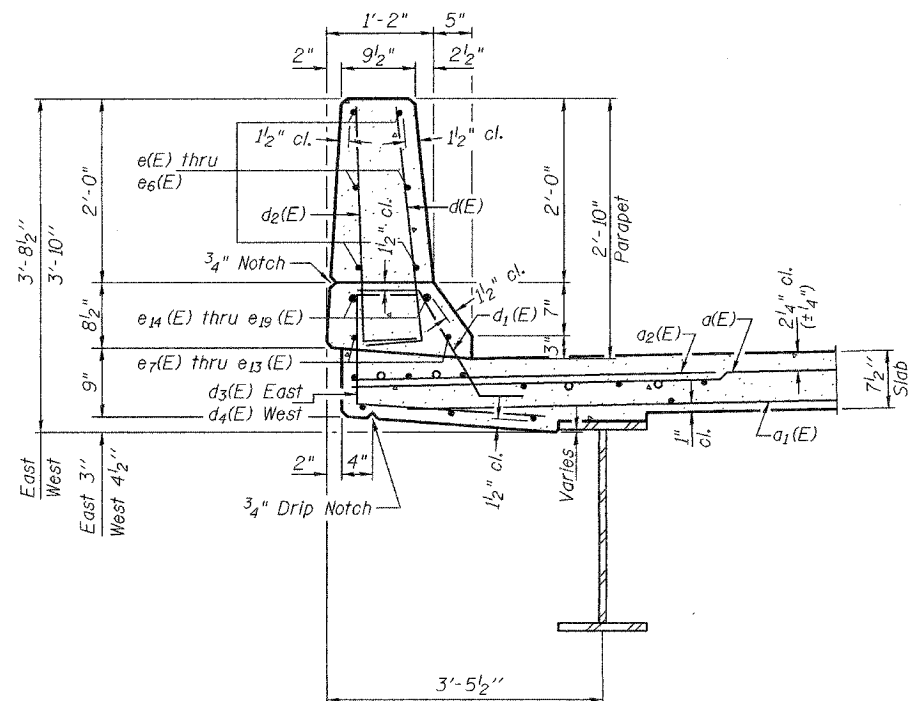
DESIGNED	MJT
CHECKED	FT
DRAWN	h.t. parsons
CHECKED	MJT/FT/SMR

May 16, 2005
EXAMINED *Thomas J. Damagala*
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

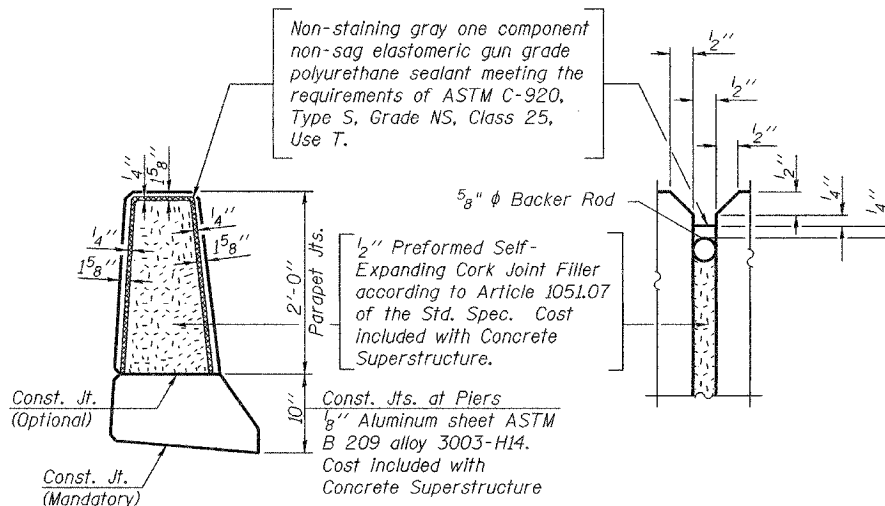
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	POST MILES	SHEET	SHEET NO. 11 46 SHEETS
FAP 315	(18BRY-1)BR	FULTON		116	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

Contract #88753



SECTION THRU PARAPET



PARAPET JOINT DETAILS

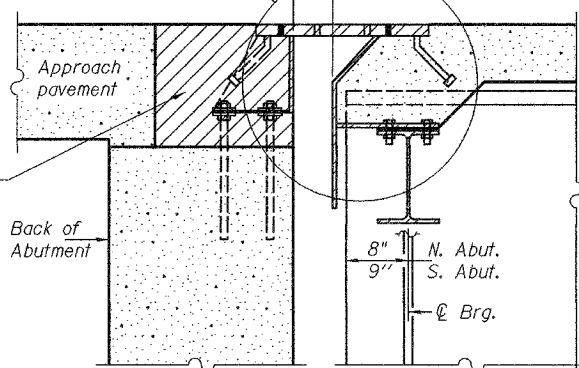
SUPERSTRUCTURE
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	1428	#5	42'-3"	—
a1(E)	1008	#5	41'-6"	—
a2(E)	1428	#6	4'-6"	—
a3(E)	32	#5	1'-6"	—
b(E)	1116	#5	29'-7"	—
b1(E)	129	#6	29'-8"	—
b2(E)	1025	#5	30'-8"	—
b3(E)	129	#6	28'-1"	—
b4(E)	215	#6	30'-9"	—
b5(E)	80	#5	30'-2"	—
d(E)	1552	#5	3'-0"	—
d1(E)	1552	#5	2'-5"	—
d2(E)	1552	#4	3'-0"	—
d3(E)	773	#4	3'-8"	—
d4(E)	779	#4	3'-8"	—
e(E)	72	#4	17'-6"	—
e1(E)	72	#4	18'-6"	—
e2(E)	120	#4	18'-11"	—
e3(E)	84	#4	18'-0"	—
e4(E)	24	#4	23'-3"	—
e5(E)	24	#4	20'-1"	—
e6(E)	24	#4	41'-1"	—
e7(E)	8	#5	23'-3"	—
e8(E)	8	#5	20'-1"	—
e9(E)	8	#5	41'-1"	—
e10(E)	28	#5	29'-0"	—
e11(E)	20	#5	27'-2"	—
e12(E)	16	#5	29'-8"	—
e13(E)	16	#5	28'-2"	—
e14(E)	8	#8	23'-3"	—
e15(E)	8	#8	20'-1"	—
e16(E)	8	#8	41'-1"	—
e17(E)	40	#8	35'-0"	—
e18(E)	16	#8	31'-0"	—
e19(E)	12	#8	37'-9"	—
Reinforcement Bars, Epoxy Coated	Pound	239570		
Concrete Superstructure	Cu. Yds.	930.4		

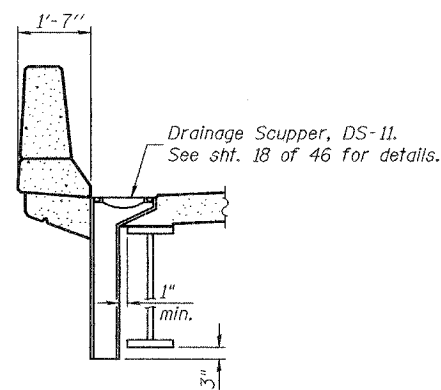
Reinforcement bars designated (E) shall be epoxy coated.

For details of expansion jts. see sheets 13 thru 17 of 46.
4 7/8" at 50° F. (N. Abut.)
6 5/8" at 50° F. (S. Abut.)

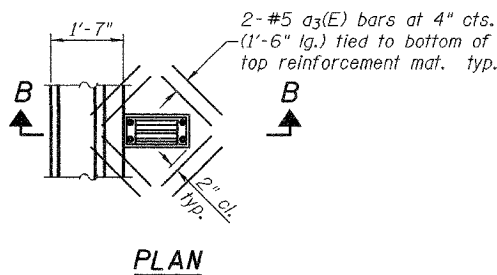
Hatched area is to be poured after superstructure forms have been removed. Quantity of concrete is included with Concrete Superstructure.



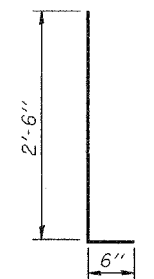
SECTION A-A



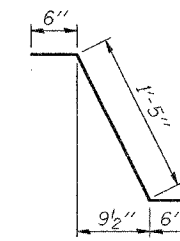
SECTION B-B



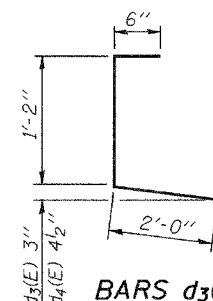
PLAN



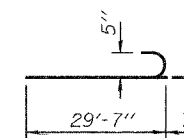
BARS d(E)
& d2(E)



BAR d1(E)



BARS d3(E)
& d4(E)



BAR b5(E)

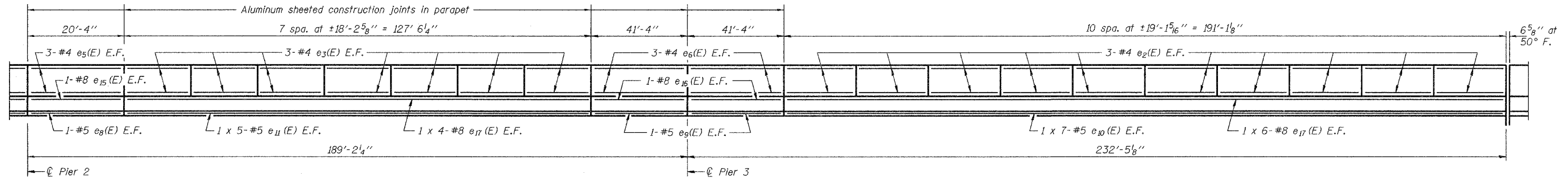
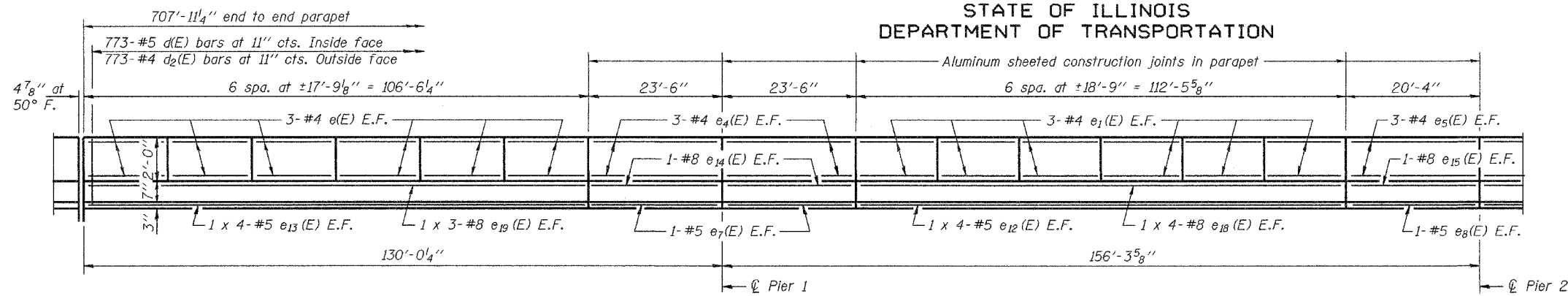
DESIGNED	FT
CHECKED	SMR
DRAWN	h.t. parsons
CHECKED	FT/SMR

May 16, 2005
EXAMINED *Thomas J. Demagala*
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

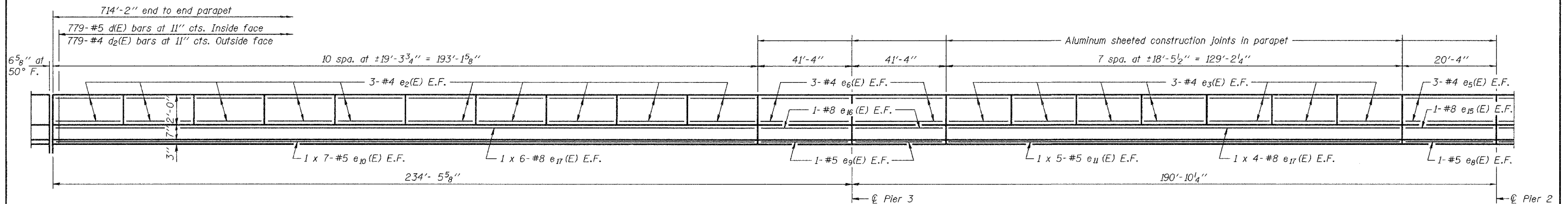
SUPERSTRUCTURE DETAILS
F.A.P. RTE. 315 - SEC. (18BRY-1)BR
FULTON COUNTY
STATION 74+09.000
STRUCTURE NO. 029-0068

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEETS	SHEET NO. 12
FAP 315	(18BRY-1)BR	FULTON	176	46 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-	Contract #88753	



INSIDE ELEVATION OF EAST PARAPET
(Looking east)



INSIDE ELEVATION OF WEST PARAPET
(Looking west)

Notes: Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 1 x 4-#5 etc. indicates 1 line of bars with 4 lengths per line.
For bar details and Bill of Material, see sheet 11 of 46.

DESIGNED	FT
CHECKED	SMR
DRAWN	h.t. parsons
CHECKED	FT/SMR

May 16, 2005
EXAMINED *Thomas J. Demagala*
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

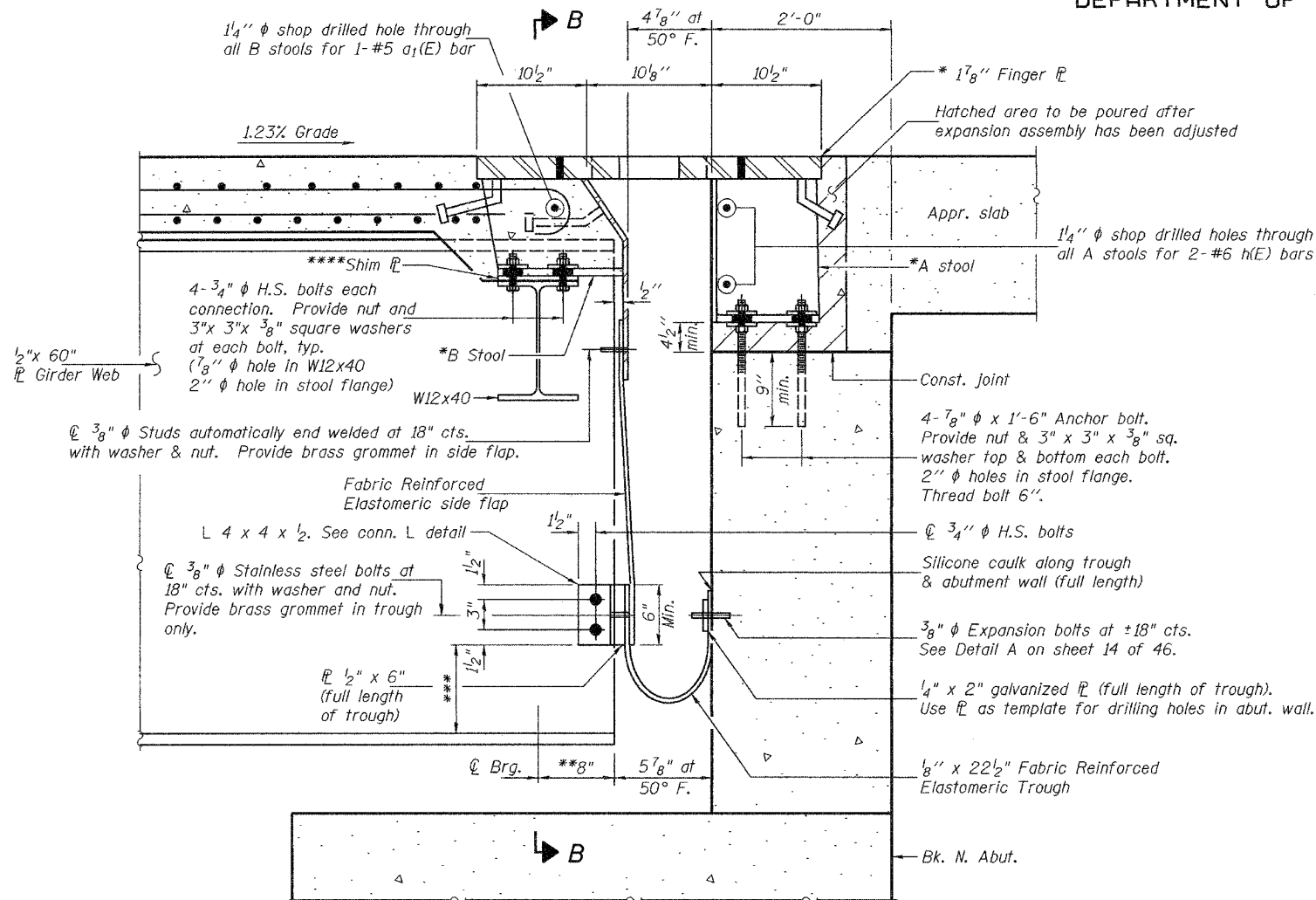
**MIN. PARAPET
BAR LAPS**
#4 bar = 1'-4"
#5 bar = 1'-8"
#8 bar = 3'-5"

SUPERSTRUCTURE DETAILS
F.A.P. RTE. 315 - SEC. (18BRY-1)BR
FULTON COUNTY
STATION 74+09.000
STRUCTURE NO. 029-0068

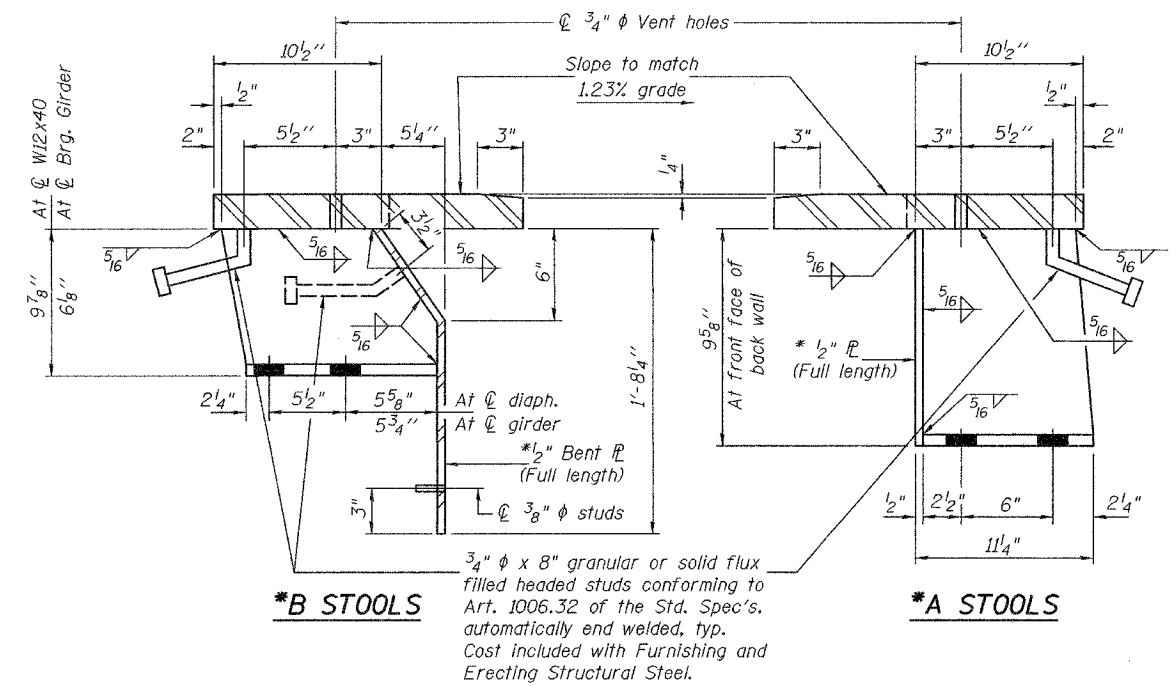
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 315	(18BRY - 1)BR	FULTON	46	13
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

Contract #88753

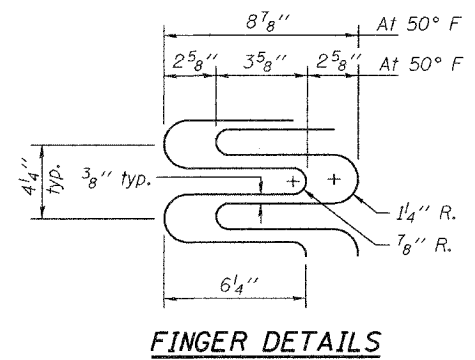


SECTION A-A

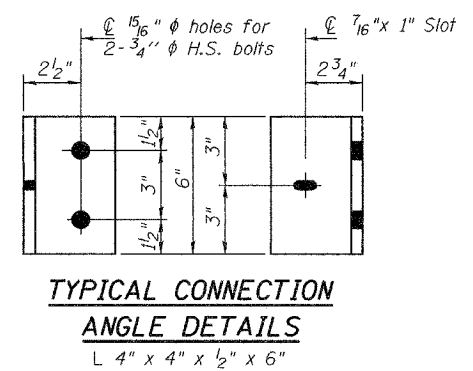


*B STOOLS

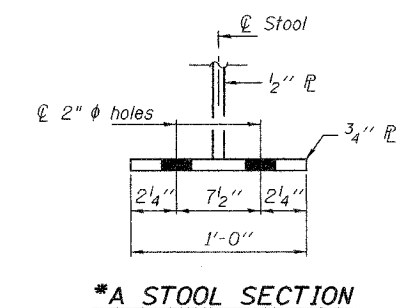
*A STOOLS



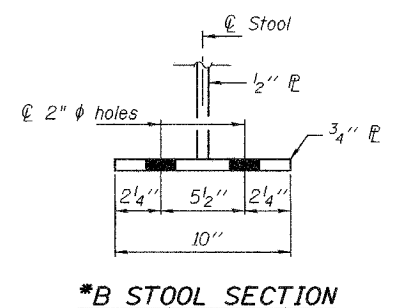
FINGER DETAILS



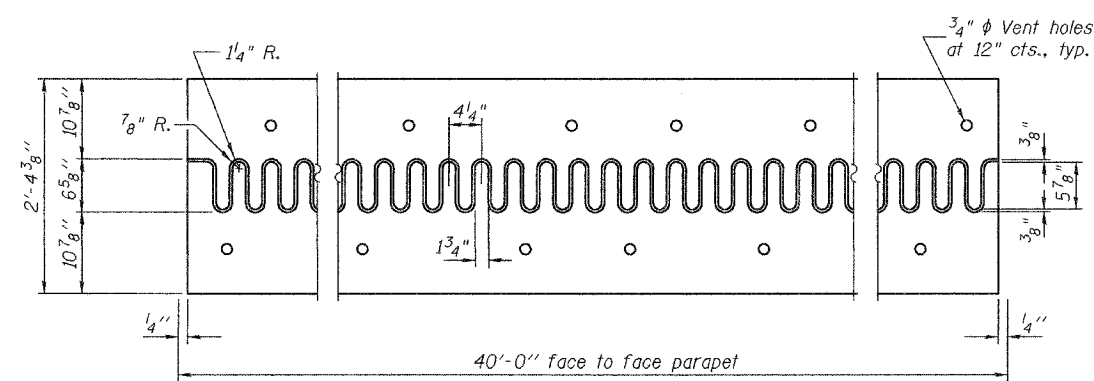
TYPICAL CONNECTION ANGLE DETAILS
L 4" x 4" x 1/2" x 6"



*A STOOL SECTION



*B STOOL SECTION



FLAME CUTTING DIAGRAM

Cut from *P 1 7/8" x 2'-4 3/8" x 39'-11 1/2" (AASHTO M270, Gr. 50)

- * Plates shall be AASHTO M 270, Grade 50.
- ** Measured along centerline of girder.
- *** Varies from 4" at Girder 1 to 2'-1 3/4" at Girder 6. See Section B-B on sheet 14 of 46.
- **** Provide 1/4" normal shim, plus one 1/8" shim and one 1/16" shim for height adjustment. Tapered shims shall be added under the stools as required by the Engineer to make a smooth finger joint. Cost shall be included with Furnishing and Erecting Structural Steel.

Note: See sheet 14 of 46 for Section B-B.

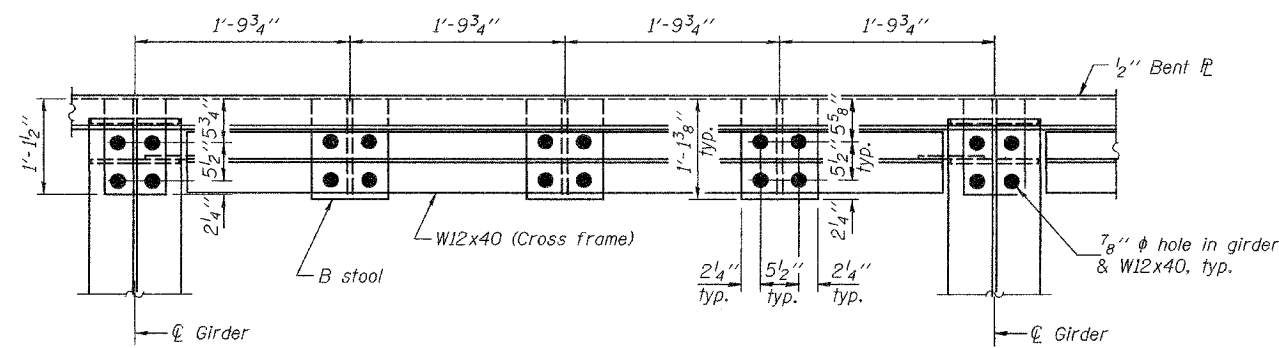
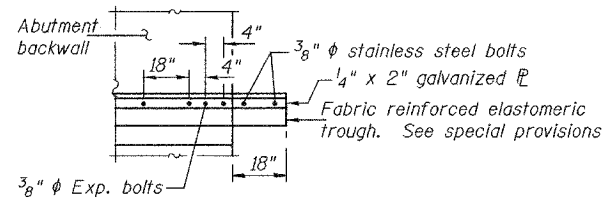
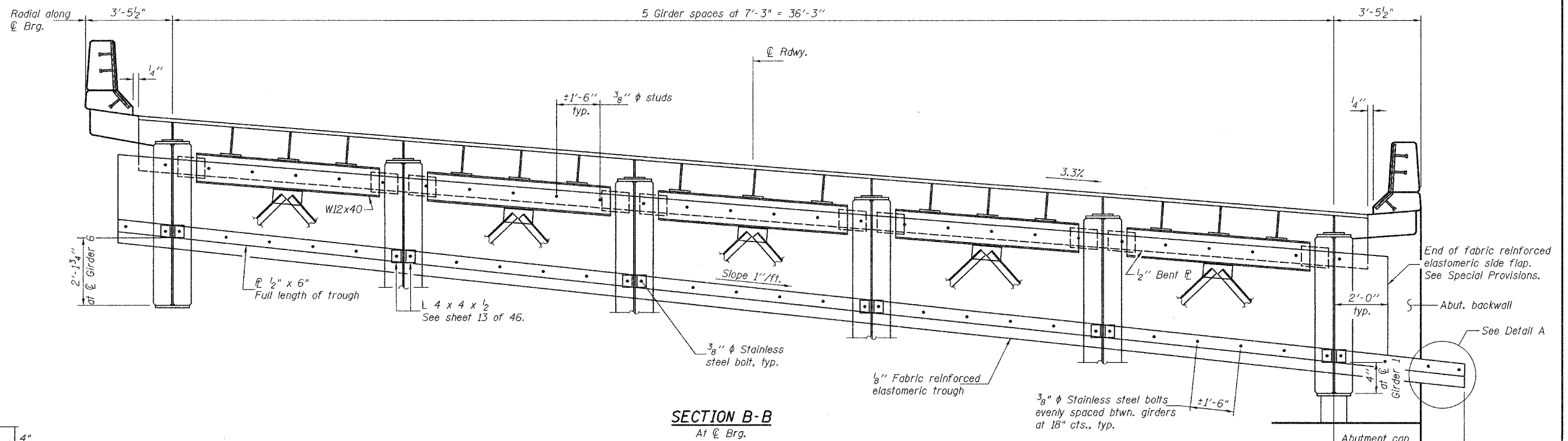
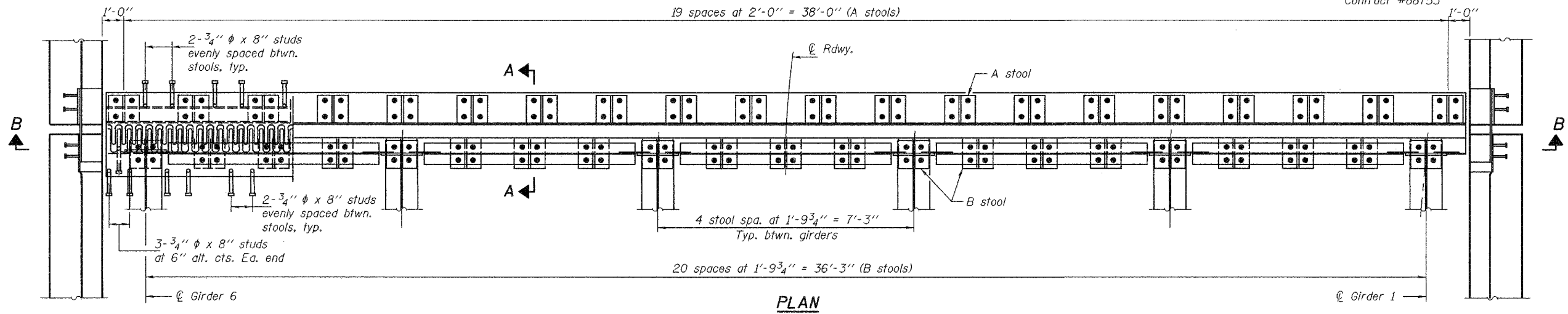
DESIGNED	RJC/DPN
CHECKED	FT
DRAWN	h.i. parsons
CHECKED	RJC/FT

May 16, 2005
EXAMINED *Thomas J. Damagalki*
ENGINEER OF BRIDGE DESIGN
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

NORTH ABUTMENT JOINT DETAILS
F.A.P. RTE. 315 - SEC. (18BRY-1)BR
FULTON COUNTY
STATION 74+09.00
STRUCTURE NO. 029-0068

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET NO. 14 46 SHEETS
FAP 315	(18BRY-DBR)	FULTON	178	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT	Contract #88753	



Notes: For Section A-A, see sheet 13 of 46.

DESIGNED	RJC/DPN
CHECKED	FT
DRAWN	h.t. parsons
CHECKED	RJC/FT

May 16, 2005

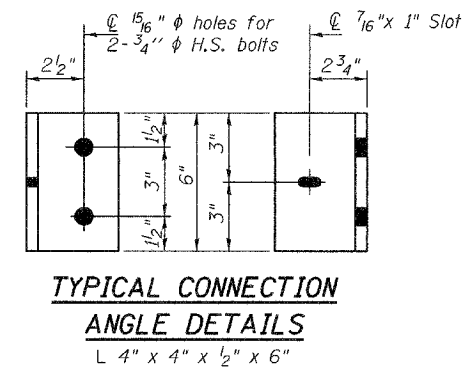
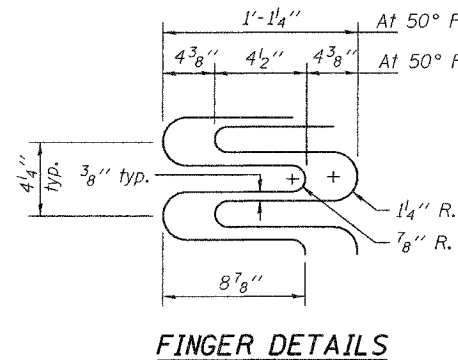
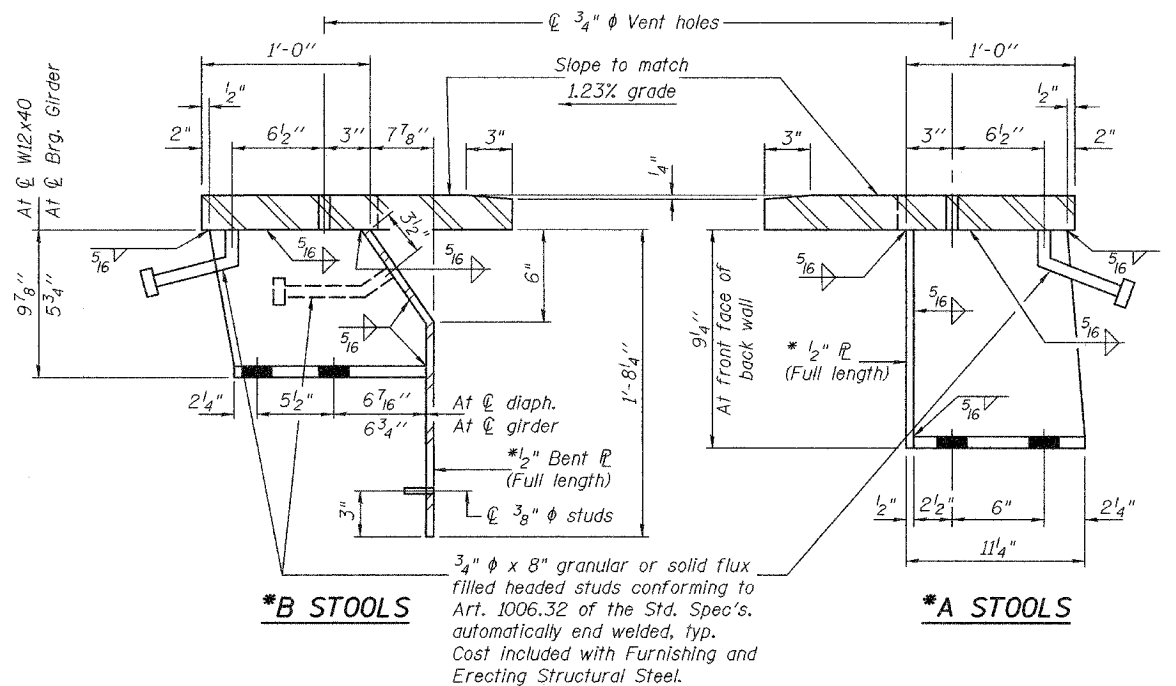
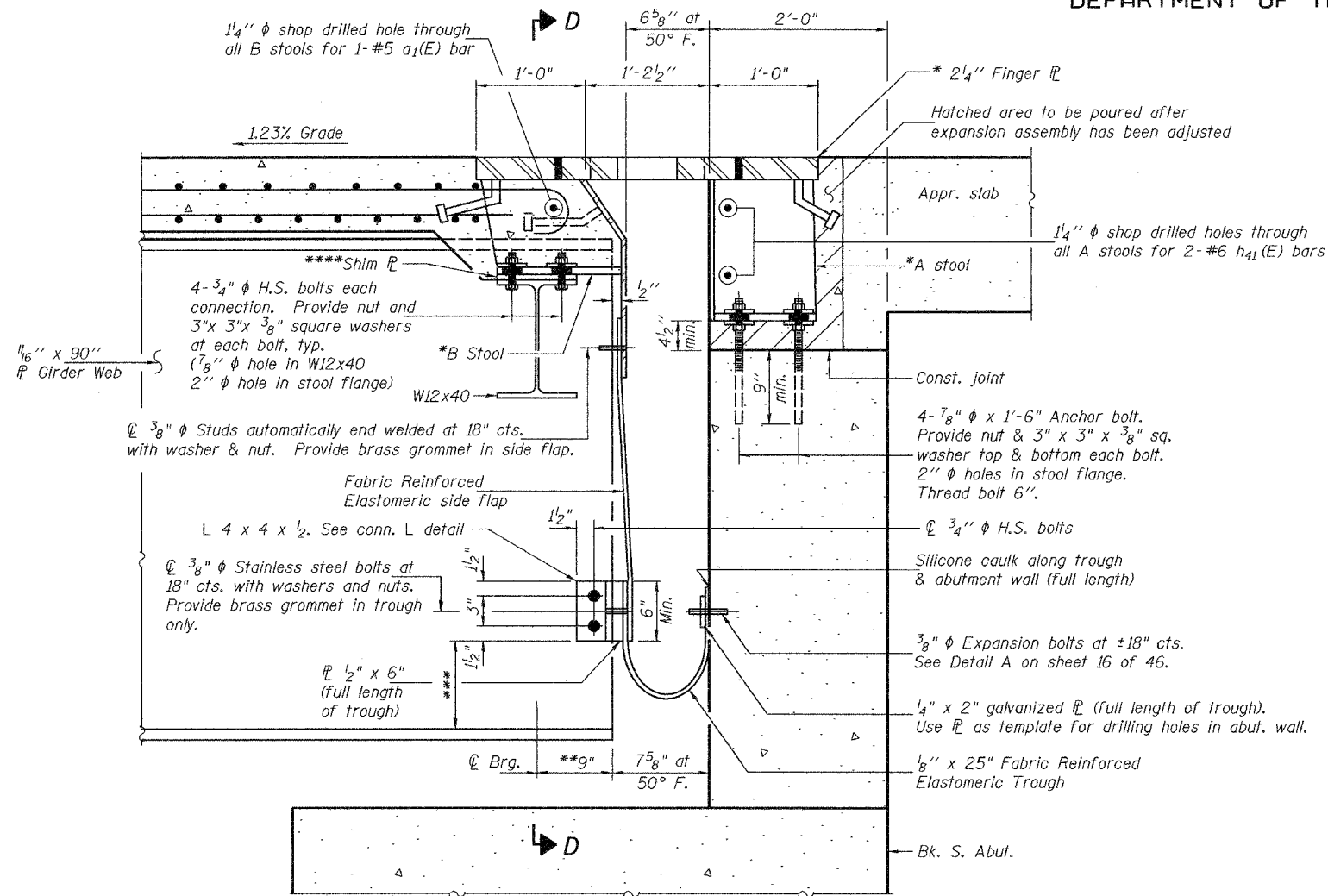
EXAMINED *Thomas J. Domagala*
ENGINEER OF BRIDGE DESIGN

PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

NORTH ABUTMENT JOINT DETAILS
F.A.P. RTE. 315 - SEC. (18BRY-DBR)
FULTON COUNTY
STATION 74+09.000
STRUCTURE NO. 029-0068

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 315	(18BRY - 1)BR	FULTON	46	15
Contract #88753				



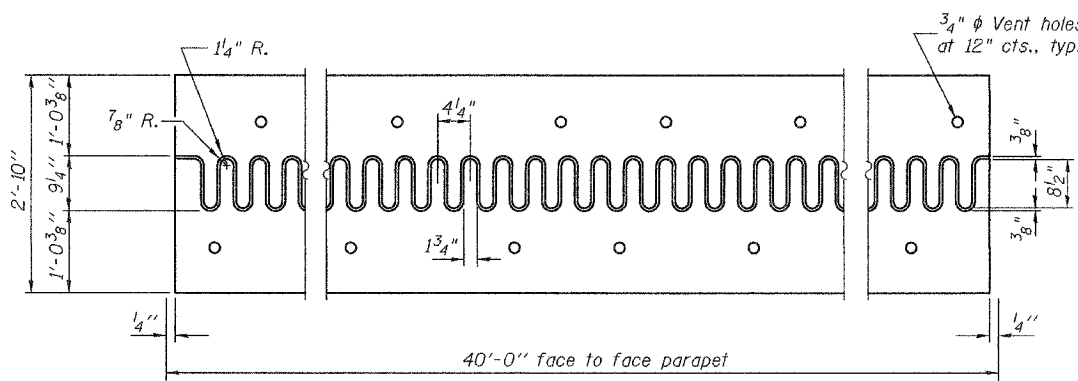
* Plates shall be AASHTO M 270, Grade 50.
** Measured along \bar{c} girder.
*** Varies from 4" at Girder 1 to 2'-1 3/4" at Girder 6. See Section B-B on sheet 14 of 46.
**** Provide 1/4" normal shim, plus one 1/8" shim and one 1/16" shim for height adjustment. Tapered shims shall be added under the stools as required by the Engineer to make a smooth finger joint. Cost shall be included with Furnishing and Erecting Structural Steel.

SECTION C-C

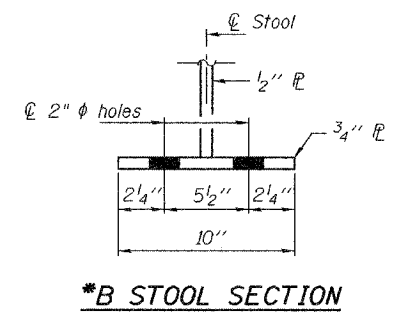
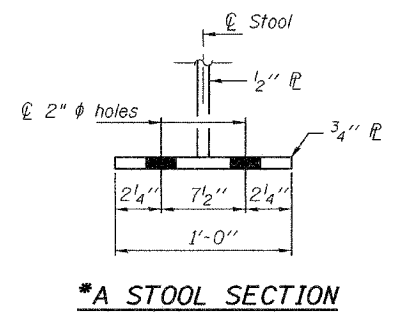
FINGER DETAILS

TYPICAL CONNECTION ANGLE DETAILS

Note: See sheet 16 of 46 for Section D-D.



FLAME CUTTING DIAGRAM



DESIGNED	RJC/DPN
CHECKED	FT
DRAWN	h.t. parsons
CHECKED	RJC/FT

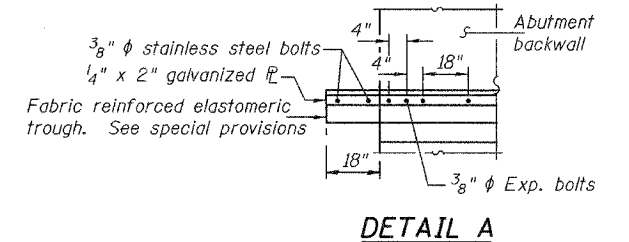
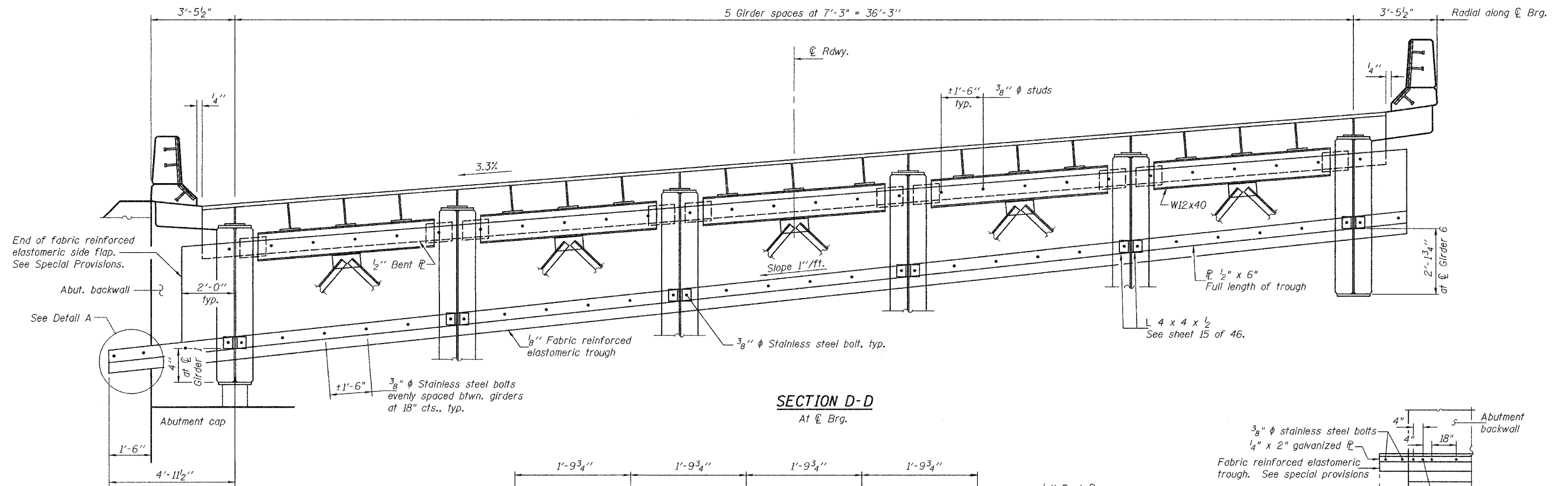
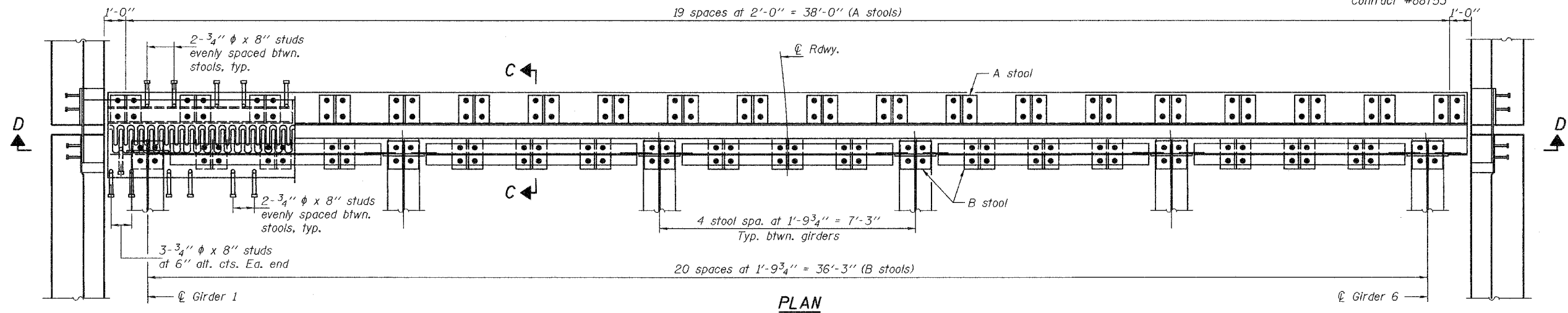
May 16, 2005
EXAMINED *Thomas J. Demagalibi*
PASSED *Ralph E. Anderson*

SOUTH ABUTMENT JOINT DETAILS
F.A.P. RTE. 315 - SEC. (18BRY - 1)BR
FULTON COUNTY
STATION 74+09.000
STRUCTURE NO. 029-0068

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	DATE	SHEET	SHEET NO. 16
FAP 315	18BRY-1BR	FULTON		180	46 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

Contract #88753



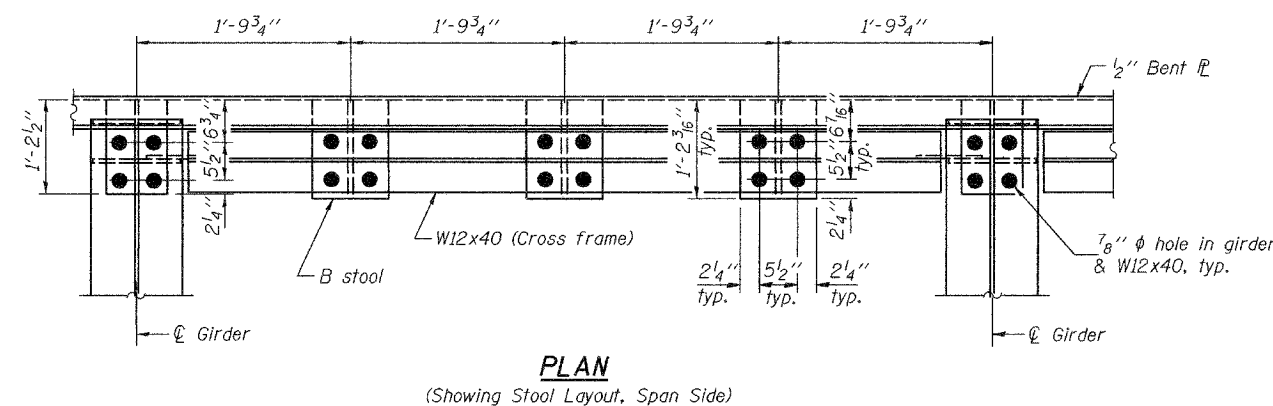
Note: For Section C-C, see sheet 15 of 46.

DESIGNED	RJC/DPN
CHECKED	FT
DRAWN	h.f. parsons
CHECKED	RJC/FT

May 16, 2005

EXAMINED *Thomas J. Romagallo*
ENGINEER OF BRIDGE DESIGN

PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

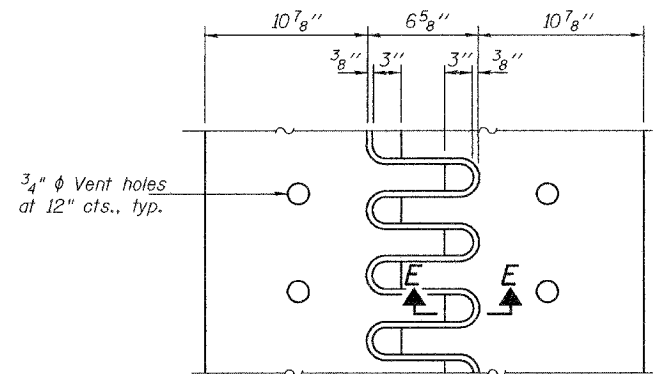


SOUTH ABUTMENT JOINT DETAILS
F.A.P. RTE. 315 - SEC. (18BRY-1)BR
FULTON COUNTY
STATION 74+09.000
STRUCTURE NO. 029-0068

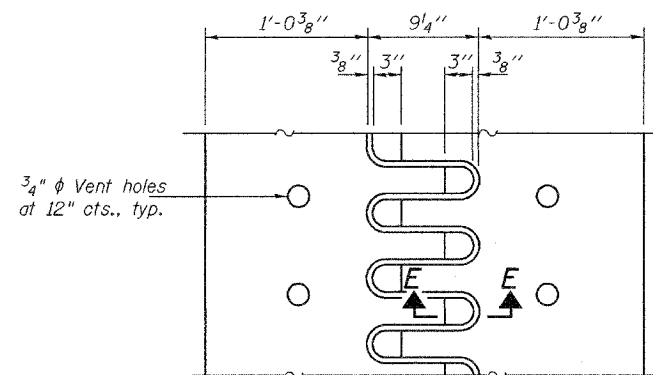
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 315	(18BRY-1)BR	FULTON	18	17
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		46 SHEETS

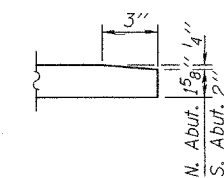
Contract #88753



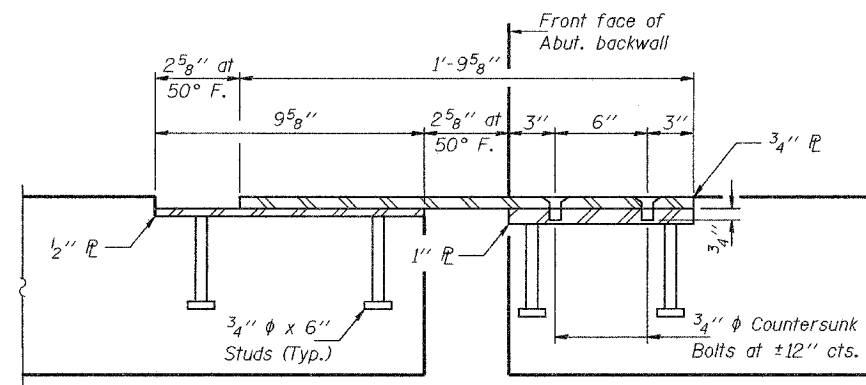
FINGER DETAILS
AT NORTH ABUTMENT



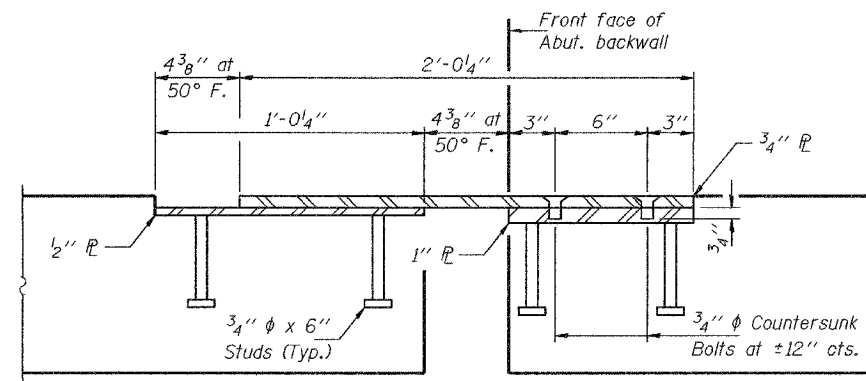
FINGER DETAILS
AT SOUTH ABUTMENT



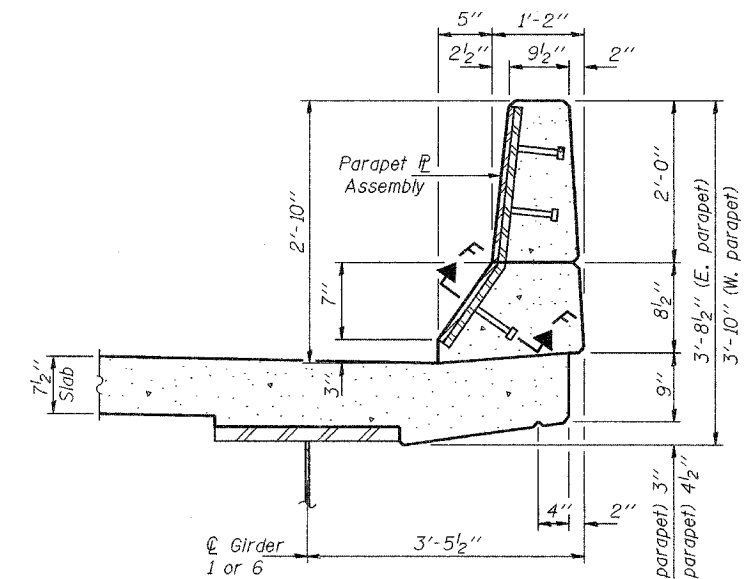
SECTION E-E



SECTION F-F
PARAPET PLATE ASSEMBLY DETAIL
AT NORTH ABUTMENT



SECTION F-F
PARAPET PLATE ASSEMBLY DETAIL
AT SOUTH ABUTMENT



SECTION THRU PARAPET

DESIGNED	RJC/DPN
CHECKED	FT
DRAWN	h.t. parsons
CHECKED	RJC/FT

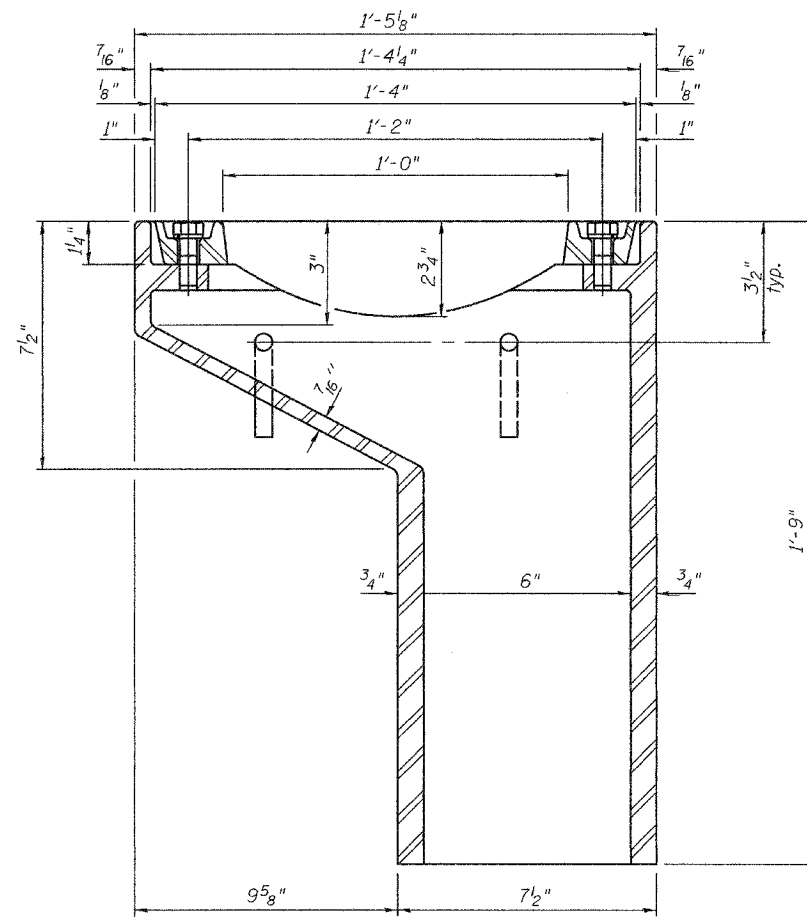
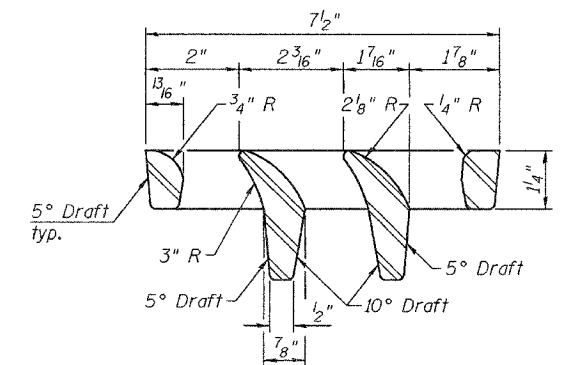
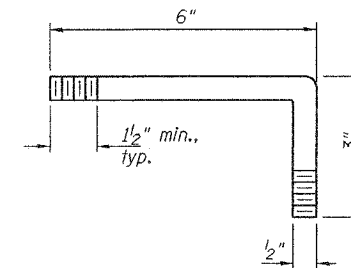
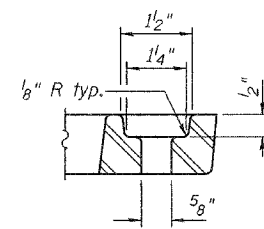
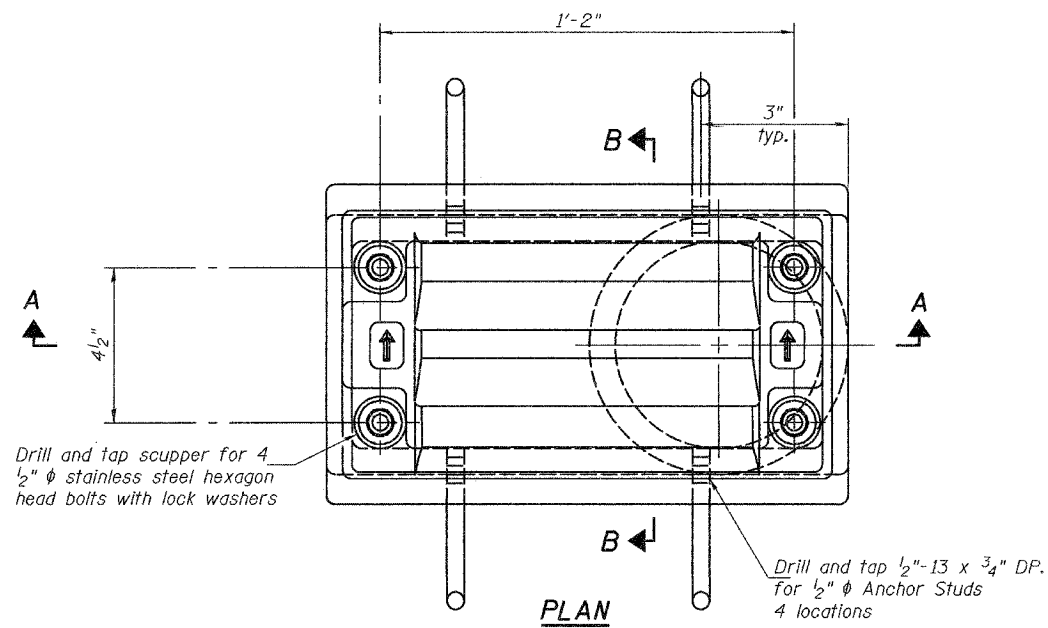
May 16, 2005
EXAMINED *Thomas J. Domagala*
ENGINEER OF BRIDGE DESIGN
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

EXPANSION JOINT DETAILS
F.A.P. RTE. 315 - SEC. (18BRY-1)BR
FULTON COUNTY
STATION 74+09.000
STRUCTURE NO. 029-0068

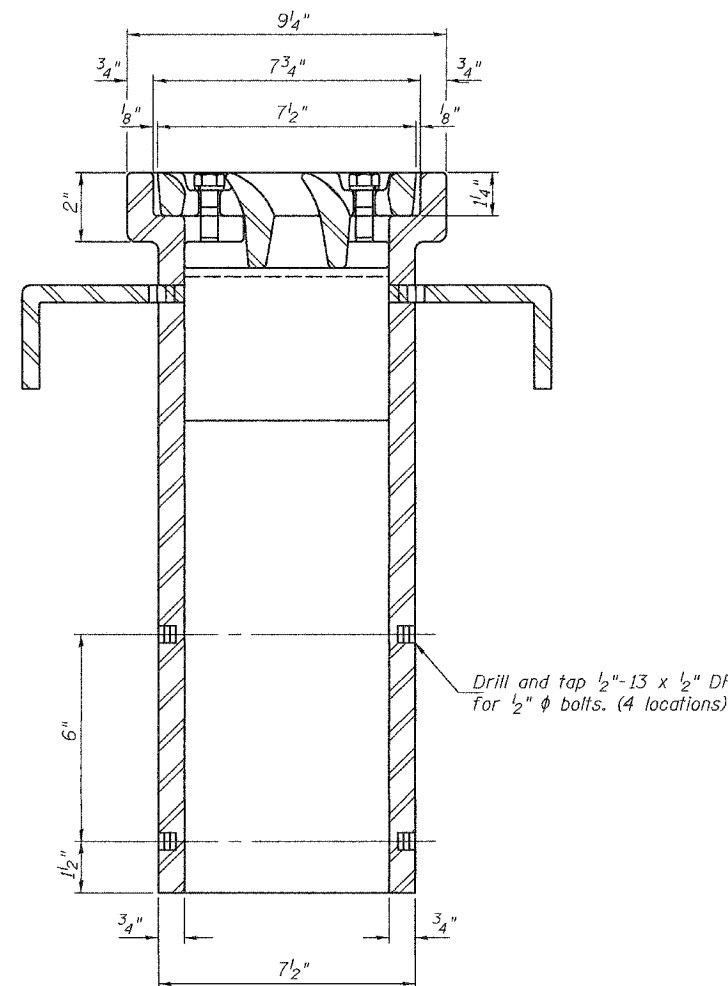
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	DATE	SHEET	SHEET NO. 18 46 SHEETS
FAP 315	(18BRY-1)BR	FULTON		18	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			

Contract #88753



See sheet 11 of 46 for scupper location relative to parapet.



Notes: All cast iron parts shall be gray iron conforming to the requirements of AASHTO M 105, Class 35B.
Bolts, anchor studs, washers and nuts shall conform to the requirements of ASTM A 307 and shall be galvanized according to AASHTO M 232.
The grate, frame and downspout shall be galvanized according to AASHTO M 111 and ASTM A 385. Downspouts located on the exterior side of a painted steel fascia beam shall be painted with the finish coat specified for the exterior side of the fascia beam.
As an alternate, bolts, anchor studs, washers and nuts may be stainless steel according to Article 1006.29(d) of the Standard Specifications.
Structural steel weldments of equal sections and of the same configuration may be substituted for cast iron. Fillet or full penetration welds shall be used for the weldments. Details shall be submitted to the Engineer for approval.
The Contractor shall take appropriate measures to assure that Protective Coat is not applied to the scupper.
Cost of the Grate, Frame, Downspout, Anchor Studs, Bolts, Washers and Nuts including complete installation of the scupper shall be paid for at the contract unit price each for Drainage Scupper, DS-11.

BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Drainage Scupper, DS-11	Each	4

DESIGNED	FT
CHECKED	SEM
DRAWN	h.t. parsons
CHECKED	FT/SEM

May 16, 2005
EXAMINED *Thomas J. Domagala*
ENGINEER OF BRIDGE DESIGN
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

8-11-02

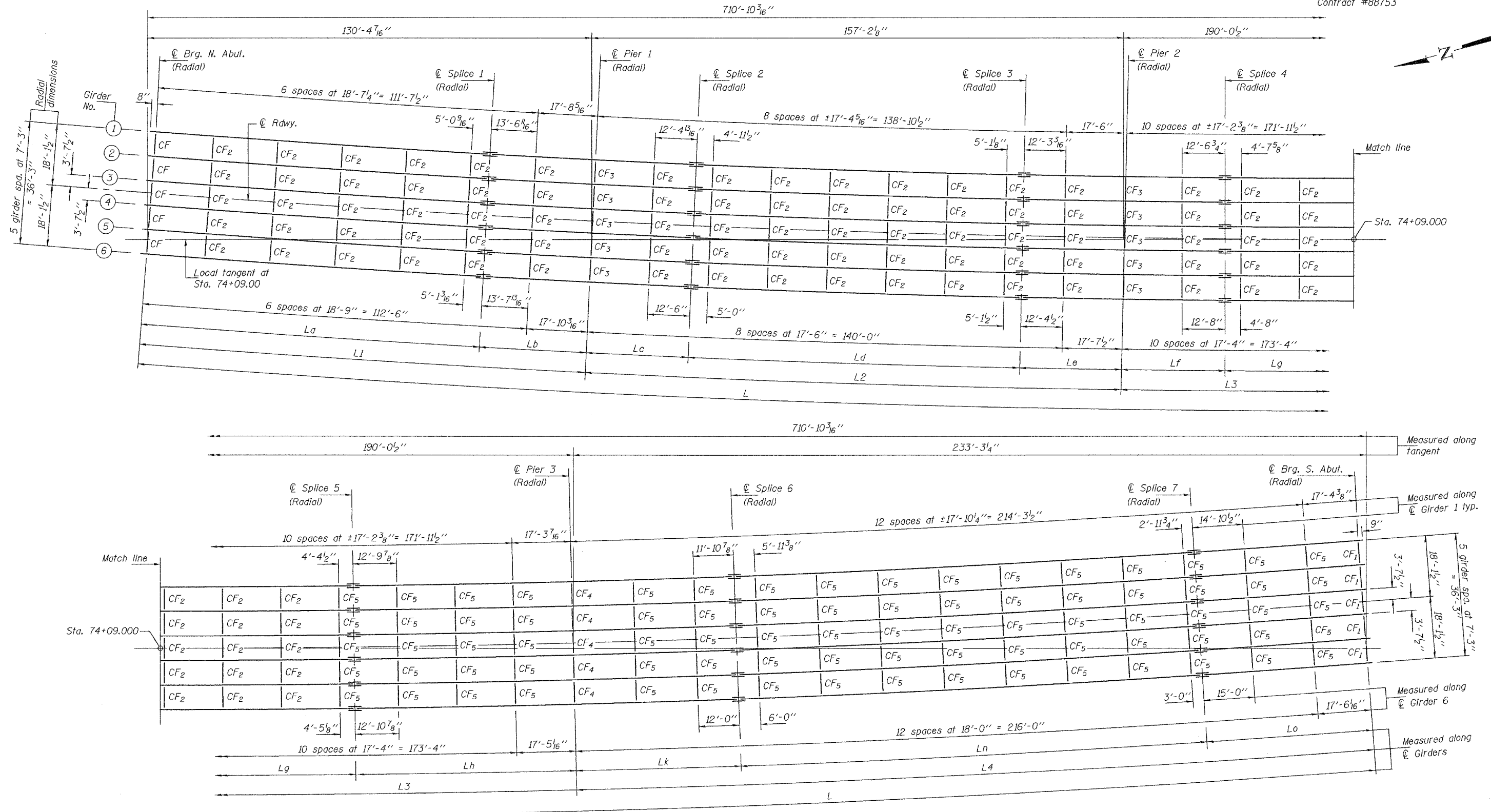
DRAINAGE SCUPPERS, DS-11
F.A.P. RTE. 315 - SEC. (18BRY-1)BR
FULTON COUNTY
STATION 74+09.000
STRUCTURE NO. 029-0068

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 315	(18BRY - 1)BR	FULTON		183
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 19
46 SHEETS

Contract #88753



DESIGNED	MJT
CHECKED	FT
DRAWN	h.t. parsons
CHECKED	MJT/FT

May 16, 2005
EXAMINED *Thomas J. Damagala*
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGE DESIGN
ENGINEER OF BRIDGES AND STRUCTURES

FRAMING PLAN

Notes: All \ominus 's of piers, splices and connection plates are radial to the \ominus Roadway.
For "L" dimensions, see table on sheet 20 of 46.

STRUCTURAL STEEL
F.A.P. RTE. 315 - SEC. (18BRY-1)BR
FULTON COUNTY
STATION 74+09.00
STRUCTURE NO. 029-0068

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	DATE	SHEET	SHEET NO. 20 46 SHEETS
FAP 315	(18BRY-1)BR	FULTON		18	
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-		Contract #88753

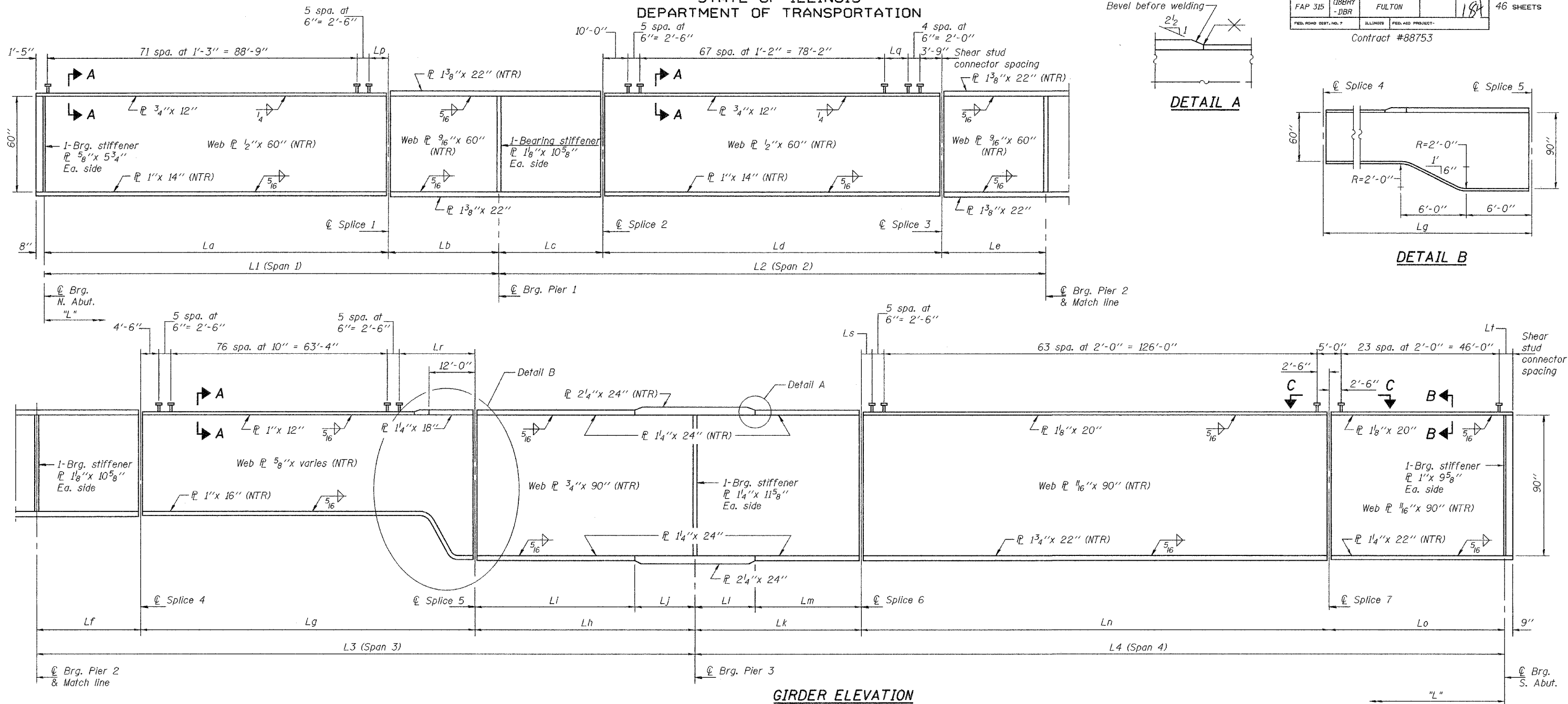


TABLE OF L THRU L4 & La THRU Lt DIMENSIONS

Girder No.	Radius	L	L1	L2	L3	L4	La	Lb	Lc	Ld	Le	Lf	Lg	Lh	Li	Lj	Lk	Ll	Lm	Ln	Lo	Lp	Lq	Lr	Ls	Lt
1	4541.875	706'-7 ¹ / ₈ "	129'-3 ¹³ / ₁₆ "	156'-4 ¹ / ₂ "	189'-2 ¹⁵ / ₁₆ "	231'-7 ⁷ / ₈ "	98'-0 ¹³ / ₁₆ "	31'-3"	29'-9 ⁹ / ₁₆ "	96'-10 ³ / ₁₆ "	29'-9 ³ / ₁₆ "	29'-9 ⁹ / ₁₆ "	95'-0"	64'-5 ¹³ / ₁₆ "	29'-9 ⁵ / ₁₆ "	34'-8 ¹ / ₂ "	47'-7 ⁷ / ₁₆ "	27'-9 ⁵ / ₁₆ "	19'-10 ¹ / ₈ "	133'-11 ³ / ₁₆ "	50'-1 ¹ / ₄ "	6'-0 ¹³ / ₁₆ "	5 ³ / ₁₆ "	22'-2"	2'-11 ³ / ₁₆ "	2'-4 ¹ / ₄ "
2	4549.125	707'-8 ¹ / ₄ "	129'-6 ¹ / ₄ "	156'-7 ¹ / ₂ "	189'-6 ⁵ / ₈ "	232'-0 ⁵ / ₁₆ "	98'-2 ⁵ / ₈ "	31'-3 ⁵ / ₈ "	29'-9 ³ / ₄ "	97'-0"	29'-9 ³ / ₄ "	29'-9 ³ / ₄ "	95'-1 ¹³ / ₁₆ "	64'-7 ¹ / ₁₆ "	29'-9 ³ / ₄ "	34'-9 ⁵ / ₁₆ "	47'-8 ³ / ₈ "	27'-9 ³ / ₄ "	19'-10 ⁵ / ₈ "	134'-1 ³ / ₄ "	50'-2 ³ / ₁₆ "	6'-2 ⁵ / ₈ "	7"	22'-3 ¹³ / ₁₆ "	3'-1 ³ / ₄ "	2'-5 ³ / ₁₆ "
3	4556.375	708'-10 ¹ / ₄ "	129'-8 ³ / ₄ "	156'-10 ¹ / ₂ "	189'-10 ¹ / ₄ "	232'-4 ³ / ₄ "	98'-4 ⁹ / ₁₆ "	31'-4 ³ / ₁₆ "	29'-10 ⁵ / ₁₆ "	97'-1 ⁷ / ₈ "	29'-10 ⁵ / ₁₆ "	29'-10 ⁵ / ₁₆ "	95'-3 ⁵ / ₈ "	64'-8 ⁵ / ₁₆ "	29'-10 ⁵ / ₁₆ "	34'-10"	47'-9 ¹ / ₄ "	27'-10 ³ / ₈ "	19'-10 ⁷ / ₈ "	134'-4 ⁵ / ₁₆ "	50'-3 ³ / ₁₆ "	6'-4 ⁹ / ₁₆ "	8 ⁷ / ₁₆ "	22'-5 ⁵ / ₈ "	3'-4 ⁵ / ₁₆ "	2'-6 ³ / ₁₆ "
4	4563.625	709'-11 ³ / ₄ "	129'-11 ¹ / ₄ "	157'-1 ¹ / ₂ "	190'-1 ¹³ / ₁₆ "	232'-9 ³ / ₁₆ "	98'-6 ⁷ / ₁₆ "	31'-4 ³ / ₁₆ "	29'-10 ⁷ / ₈ "	97'-3 ³ / ₄ "	29'-10 ⁷ / ₈ "	29'-10 ⁷ / ₈ "	95'-5 ⁷ / ₁₆ "	64'-9 ¹ / ₂ "	29'-10 ¹³ / ₁₆ "	34'-10 ¹ / ₁₆ "	47'-10 ³ / ₁₆ "	27'-10 ¹⁵ / ₁₆ "	19'-11 ¹ / ₄ "	134'-6 ⁷ / ₈ "	50'-4 ¹ / ₈ "	6'-6 ⁷ / ₁₆ "	10 ³ / ₄ "	22'-7 ⁷ / ₁₆ "	3'-6 ⁷ / ₈ "	2'-7 ¹ / ₈ "
5	4570.875	711'-1 ¹ / ₄ "	130'-1 ¹ / ₄ "	157'-4 ¹ / ₂ "	190'-5 ⁷ / ₁₆ "	233'-1 ⁵ / ₈ "	98'-8 ⁵ / ₁₆ "	31'-5 ³ / ₈ "	29'-11 ⁷ / ₁₆ "	97'-5 ⁹ / ₁₆ "	29'-11 ² / ₁₆ "	29'-11 ⁷ / ₁₆ "	95'-7 ¹ / ₄ "	64'-10 ³ / ₄ "	29'-11 ³ / ₈ "	34'-11 ³ / ₈ "	47'-11 ¹ / ₂ "	27'-11 ² / ₁₆ "	19'-11 ⁹ / ₁₆ "	134'-9 ⁷ / ₁₆ "	50'-5 ¹ / ₈ "	6'-8 ⁵ / ₁₆ "	1'-0 ⁹ / ₁₆ "	22'-9 ¹ / ₄ "	3'-9 ⁷ / ₁₆ "	2'-8 ¹ / ₈ "
6	4578.125	712'-2 ¹³ / ₁₆ "	130'-4 ³ / ₁₆ "	157'-7 ¹ / ₂ "	190'-9 ¹ / ₁₆ "	233'-6 ¹ / ₁₆ "	98'-10 ³ / ₁₆ "	31'-6"	30'-0"	97'-7 ¹ / ₂ "	30'-0"	30'-0"	95'-9 ¹ / ₁₆ "	65'-0"	30'-0"	35'-0"	48'-0"	28'-0"	20'-0"	135'-0"	50'-6 ¹ / ₁₆ "	6'-10 ³ / ₁₆ "	1'-2 ¹ / ₂ "	22'-11 ¹ / ₁₆ "	4'-0"	2'-9 ¹ / ₁₆ "

DESIGNED	MJT
CHECKED	FT
DRAWN	h.t. parsons
CHECKED	MJT/FT

May 16, 2005
 EXAMINED *Thomas J. Domagala*
 ENGINEER OF BRIDGE DESIGN
 PASSED *Ralph E. Anderson*
 ENGINEER OF BRIDGES AND STRUCTURES

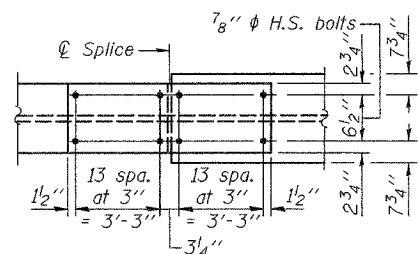
Notes:
 "NTR" denotes plates to which notch toughness requirements are applicable.
 All plates of the girders, including the bearing stiffeners, shall be AASHTO M 270, Grade 50.
 For Sections A-A & B-B, see sheet 22 of 46.
 For View C-C, see sheet 23 of 46.

STRUCTURAL STEEL DETAILS
 F.A.P. RTE. 315 - SEC. (18BRY-1)BR
 FULTON COUNTY
 STATION 74+09.000
 STRUCTURE NO. 029-0068

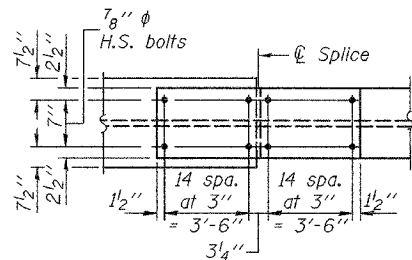
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 315	(18BRY-1)BR	FULTON	46	21
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

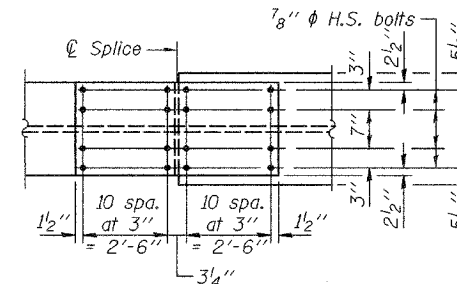
Contract #88753



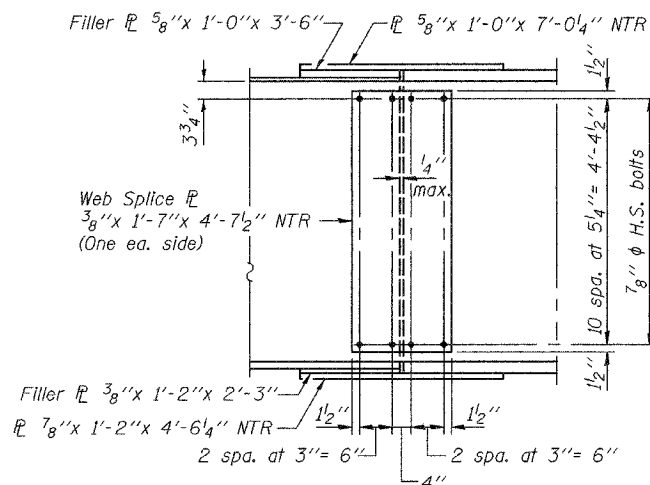
PLAN - SPLICES 1, 2 & 3
(Top flange)



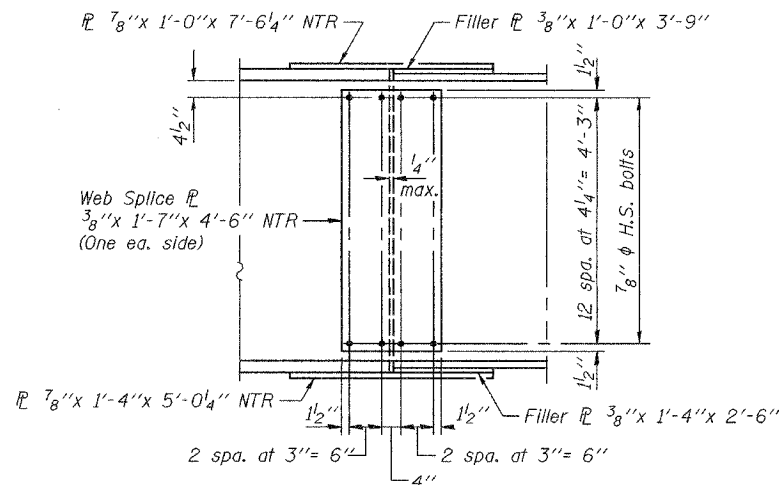
PLAN - SPLICE 4
(Top flange)



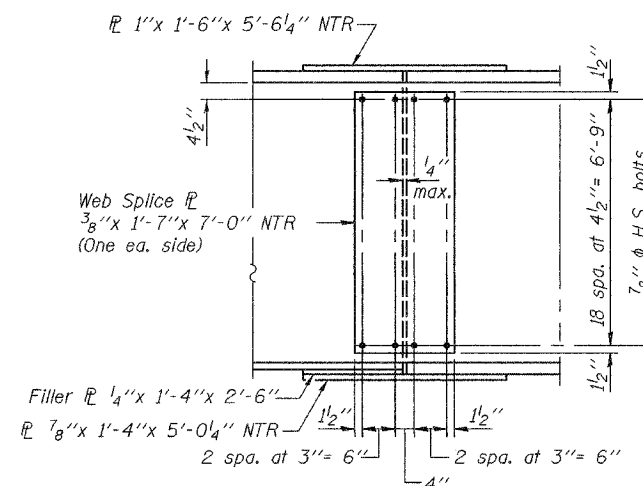
PLAN - SPLICE 5
(Top flange)



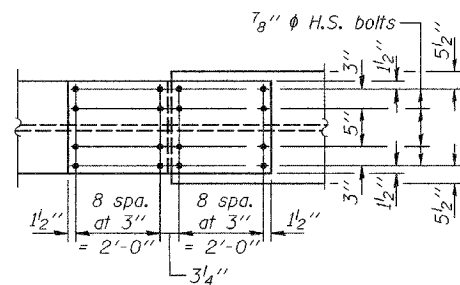
ELEVATION - SPLICES 1, 2 & 3



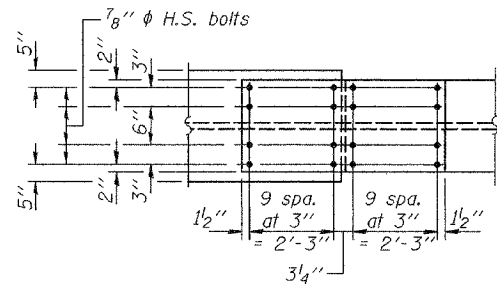
ELEVATION - SPLICE 4



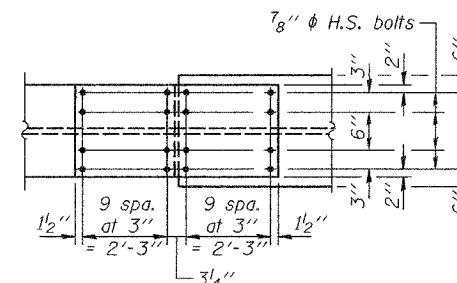
ELEVATION - SPLICE 5



PLAN - SPLICES 1, 2 & 3
(Bottom flange)



PLAN - SPLICE 4
(Bottom flange)



PLAN - SPLICE 5
(Bottom flange)

Notes: "NTR" denotes plates to which notch toughness requirements are applicable.
All splice plates shall be AASHTO M 270, Grade 50.

DESIGNED	MJT
CHECKED	FT
DRAWN	h.t. parsons
CHECKED	MJT/FT

May 16, 2005
 EXAMINED *Thomas J. Domagala*
 ENGINEER OF BRIDGE DESIGN
 PASSED *Ralph E. Anderson*
 ENGINEER OF BRIDGES AND STRUCTURES

*TOP OF WEB ELEVATIONS

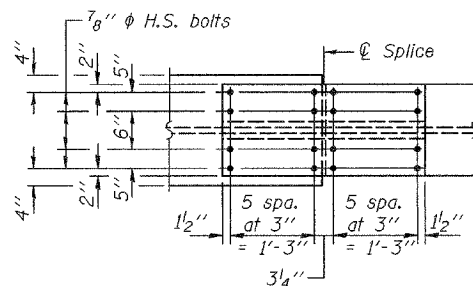
Location	¢ Brg. N. Abut.	¢ Splice 1	¢ Brg. Pier 1	¢ Splice 2	¢ Splice 3	¢ Brg. Pier 2	¢ Splice 4	¢ Splice 5	¢ Brg. Pier 3	¢ Splice 6	¢ Splice 7	¢ Brg. S. Abut.
Girder 1	475.187	476.358	476.728	477.080	478.303	478.637	478.971	480.090	480.901	481.825	483.683	483.882
Girder 2	475.426	476.599	476.969	477.321	478.544	478.878	479.212	480.330	481.145	482.073	483.938	484.121
Girder 3	475.665	476.840	477.209	477.561	478.784	479.118	479.451	480.568	481.385	482.315	484.181	484.360
Girder 4	475.904	477.079	477.448	477.800	479.023	479.356	479.689	480.806	481.625	482.556	484.424	484.599
Girder 5	476.144	477.320	477.689	478.040	479.262	479.596	479.930	481.045	481.865	482.797	484.666	484.839
Girder 6	476.383	477.555	477.926	478.278	479.501	479.834	480.167	481.283	482.101	483.032	484.895	485.078

*For fabrication only

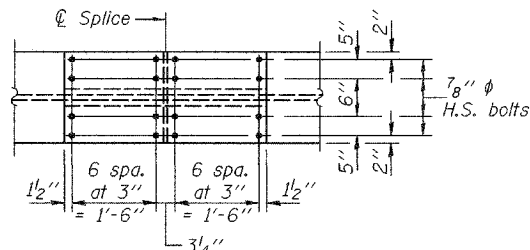
STRUCTURAL STEEL DETAILS
 F.A.P. RTE. 315 - SEC. (18BRY-1)BR
 FULTON COUNTY
 STATION 74+09.00
 STRUCTURE NO. 029-0068

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

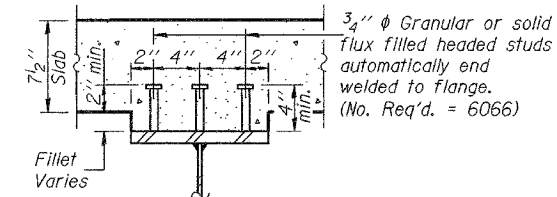
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 315	(18BRY-1)BR	FULTON	186	46 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-	Contract #88753	



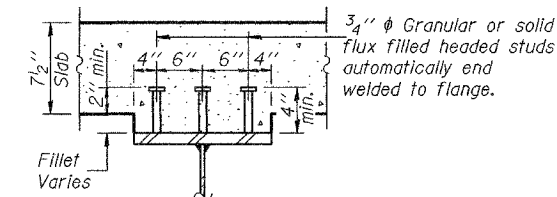
PLAN - SPLICE 6
(Top flange)



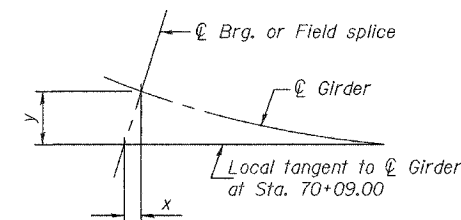
PLAN - SPLICE 7
(Top flange)



SECTION A-A

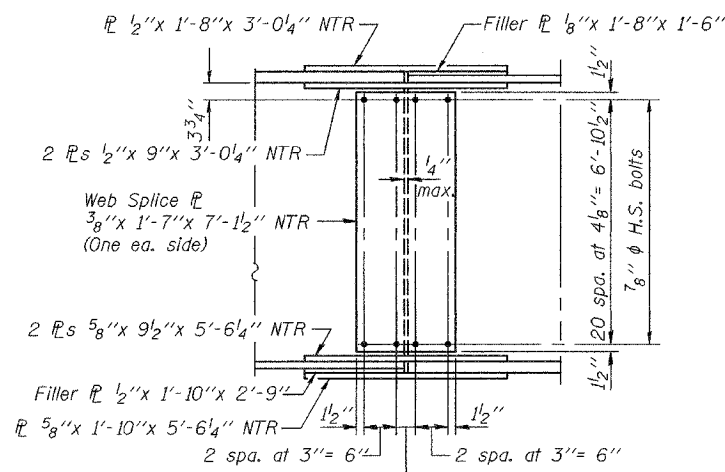


SECTION B-B

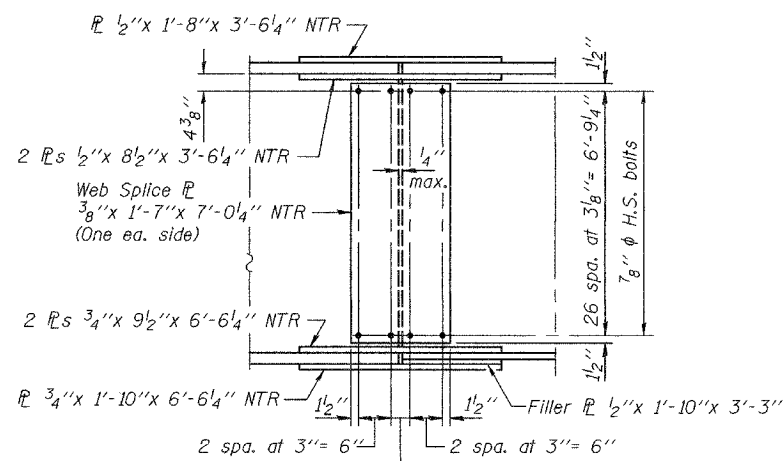


OFFSET SKETCH

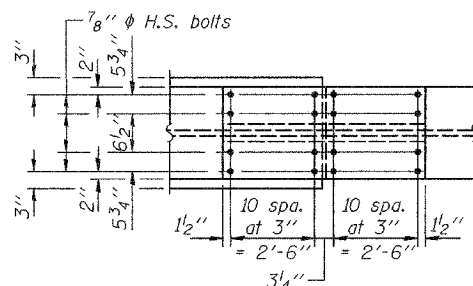
See table for x and y dimensions.
All y dimensions are given perpendicular to the local tangent.
All x dimensions are given parallel to the local tangent



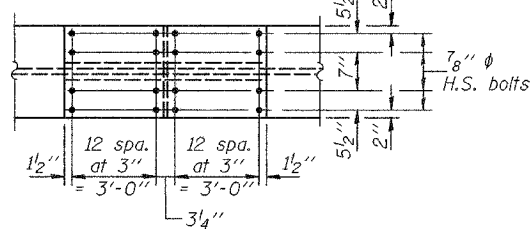
ELEVATION - SPLICE 6



ELEVATION - SPLICE 7



PLAN - SPLICE 6
(Bottom flange)



PLAN - SPLICE 7
(Bottom flange)

OFFSET DIMENSIONS

Location	C Brg. N. Abut.		C Splice 1		C Brg. Pier 1		C Splice 2		C Splice 3		C Brg. Pier 2		C Splice 4		C Splice 5		C Brg. Pier 3		C Splice 6		C Splice 7		C Brg. S. Abut.	
	x	y	x	y	x	y	x	y	x	y	x	y	x	y	x	y	x	y	x	y	x	y	x	y
Girder 1	1'-0 7/8"	13'-8 7/8"	4 7/8"	7'-2 7/8"	3 1/8"	5'-6 3/8"	2 1/8"	4'-1 7/8"	1/4"	1'-0 1/2"	0	6"	0	1 7/8"	0	4 1/4"	1/2"	1'-7 1/2"	1 3/8"	3'-1 3/4"	8 1/8"	10'-1 1/4"	1'-0 7/8"	13'-8 3/4"
Girder 2	1'-0 7/8"	13'-9 1/8"	4 7/8"	7'-2 1/4"	3 1/8"	5'-6 1/2"	2 1/8"	4'-2"	1/4"	1'-0 5/8"	0	6 1/8"	0	1 7/8"	0	4 1/8"	1/2"	1'-7 1/2"	1 3/8"	3'-1 7/8"	8 1/8"	10'-1 1/2"	1'-0 7/8"	13'-9"
Girder 3	1'-0 7/8"	13'-9 1/2"	4 7/8"	7'-2 3/8"	3 1/8"	5'-6 1/2"	2 1/8"	4'-2"	1/4"	1'-0 5/8"	0	6 1/8"	0	1 7/8"	0	4 1/4"	1/2"	1'-7 5/8"	1 3/8"	3'-1 7/8"	8 1/8"	10'-1 3/4"	1'-0 7/8"	13'-9 1/4"
Girder 4	1'-0 7/8"	13'-9 3/4"	4 7/8"	7'-2 1/2"	3 1/8"	5'-6 1/2"	2 1/8"	4'-2 1/8"	1/4"	1'-0 5/8"	0	6 1/8"	0	1 7/8"	0	4 3/8"	1/2"	1'-7 5/8"	1 3/8"	3'-2"	8 1/8"	10'-1 7/8"	1'-0 7/8"	13'-9 1/2"
Girder 5	1'-1"	13'-10"	4 7/8"	7'-2 5/8"	3 1/4"	5'-6 3/4"	2 1/8"	4'-2 1/4"	1/4"	1'-0 5/8"	0	6 1/8"	0	1 7/8"	0	4 3/8"	1/2"	1'-7 5/8"	1 3/8"	3'-2"	8 1/8"	10'-2 1/8"	1'-0 7/8"	13'-9 3/4"
Girder 6	1'-1"	13'-10 1/4"	4 7/8"	7'-2 3/4"	3 1/4"	5'-6 1/8"	2 1/8"	4'-2 1/4"	1/4"	1'-0 5/8"	0	6 1/8"	0	1 7/8"	0	4 3/8"	1/2"	1'-7 5/8"	1 3/8"	3'-2 1/8"	8 1/8"	10'-2 1/4"	1'-0 7/8"	13'-10"

DESIGNED	MJT
CHECKED	FT
DRAWN	h.t. parsons
CHECKED	MJT/FT

May 16, 2005
 EXAMINED *Thomas J. Damagala*
 ENGINEER OF BRIDGE DESIGN
 PASSED *Ralph E. Anderson*
 ENGINEER OF BRIDGES AND STRUCTURES

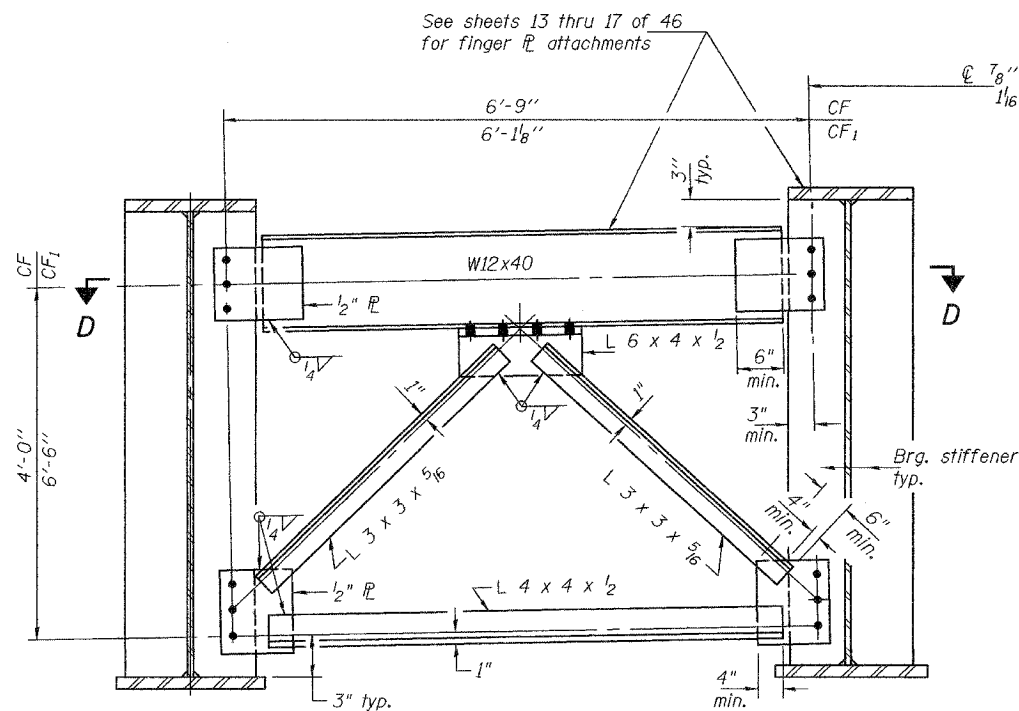
Notes: "NTR" denotes plates to which notch toughness requirements are applicable.
All splice plates shall be AASHTO M 270, Grade 50.

STRUCTURAL STEEL DETAILS
 F.A.P. RTE. 315 - SEC. (18BRY-1)BR
 FULTON COUNTY
 STATION 74+09.000
 STRUCTURE NO. 029-0068

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

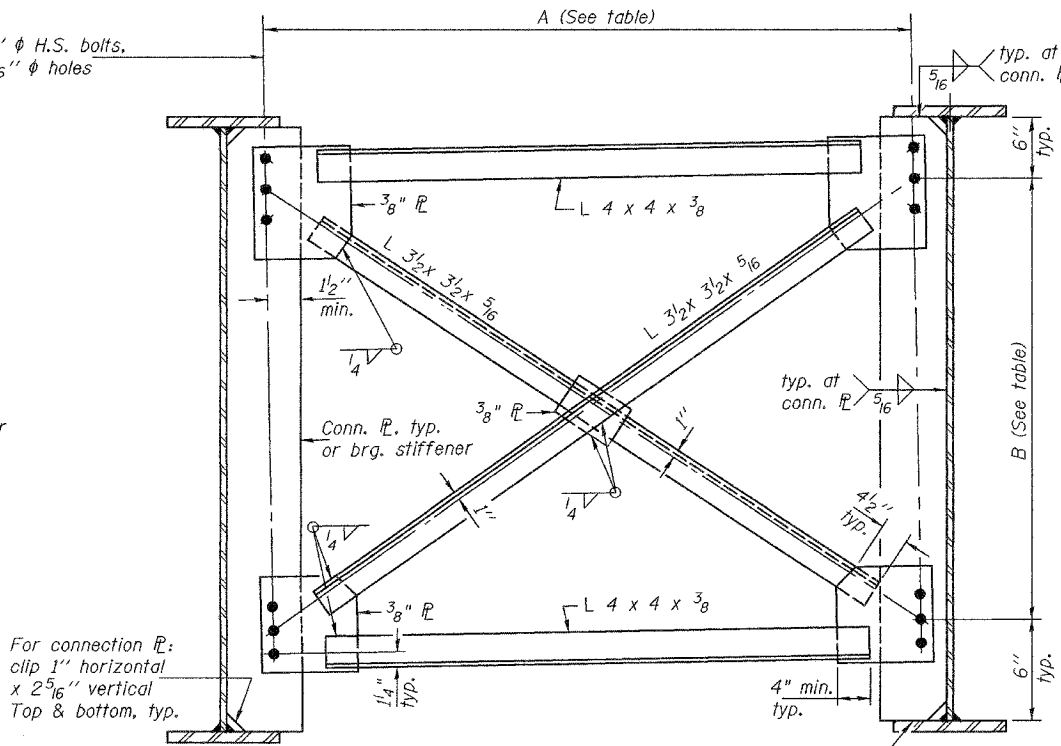
ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET
FAP 315	(18BRY-1)BR	FULTON	187	46 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

Contract #88753



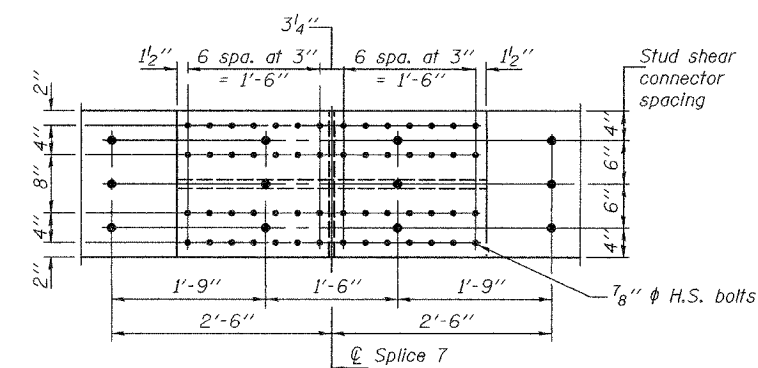
CROSS FRAMES CF & CF₁

CF (5 required)
CF₁ (5 required)

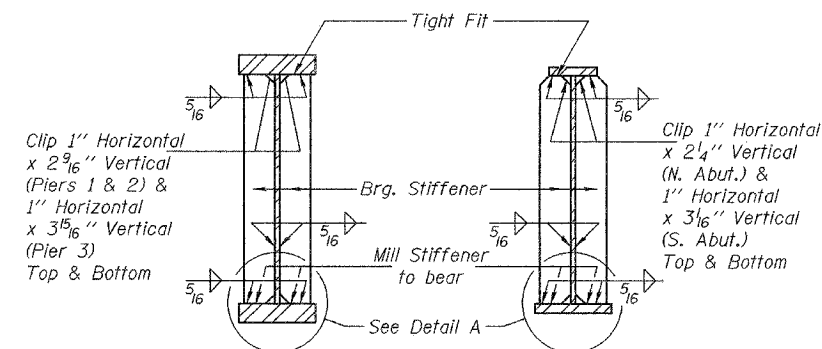


CROSS FRAMES CF₂, CF₃, CF₄ & CF₅

CF₂ (100 required)
CF₃ (10 required)
CF₄ (5 required)
CF₅ (80 required)

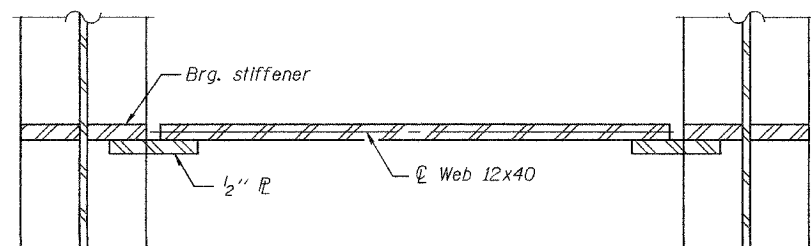


VIEW C-C
Shear studs over Splice 7



SECTION AT PIER **SECTION AT ABUTMENT**

BEARING STIFFENER DETAILS



SECTION D-D

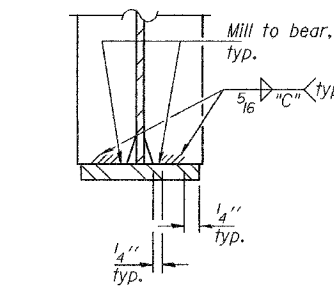
TABLE OF "A" & "B" DIMENSIONS

	A	B
CF ₂	6'-9 1/2"	4'-0"
CF ₃	6'-2 1/4"	4'-0"
CF ₄	6'-0"	6'-6"
CF ₅	6'-9 3/8"	6'-6"

TABLE OF "C" DIMENSION

	"C"
N. Abut.	4 1/4"
Pier 1	9 1/8"
Pier 2	9 1/8"
Pier 3	10 1/8"
S. Abut.	8 1/8"

Notes: "NTR" denotes elements to which notch toughness requirements are applicable.
All bearing stiffeners, connection plates, R's, angles, and W12x40 members shall be AASHTO M 270, Grade 50.
Two hardened washers shall be required over all oversized holes.



DETAIL A
See table for "C" dimension

DESIGNED	MJT
CHECKED	FT
DRAWN	h.t. parsons
CHECKED	MJT/FT

May 16, 2005
EXAMINED *Thomas J. Demagala*
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

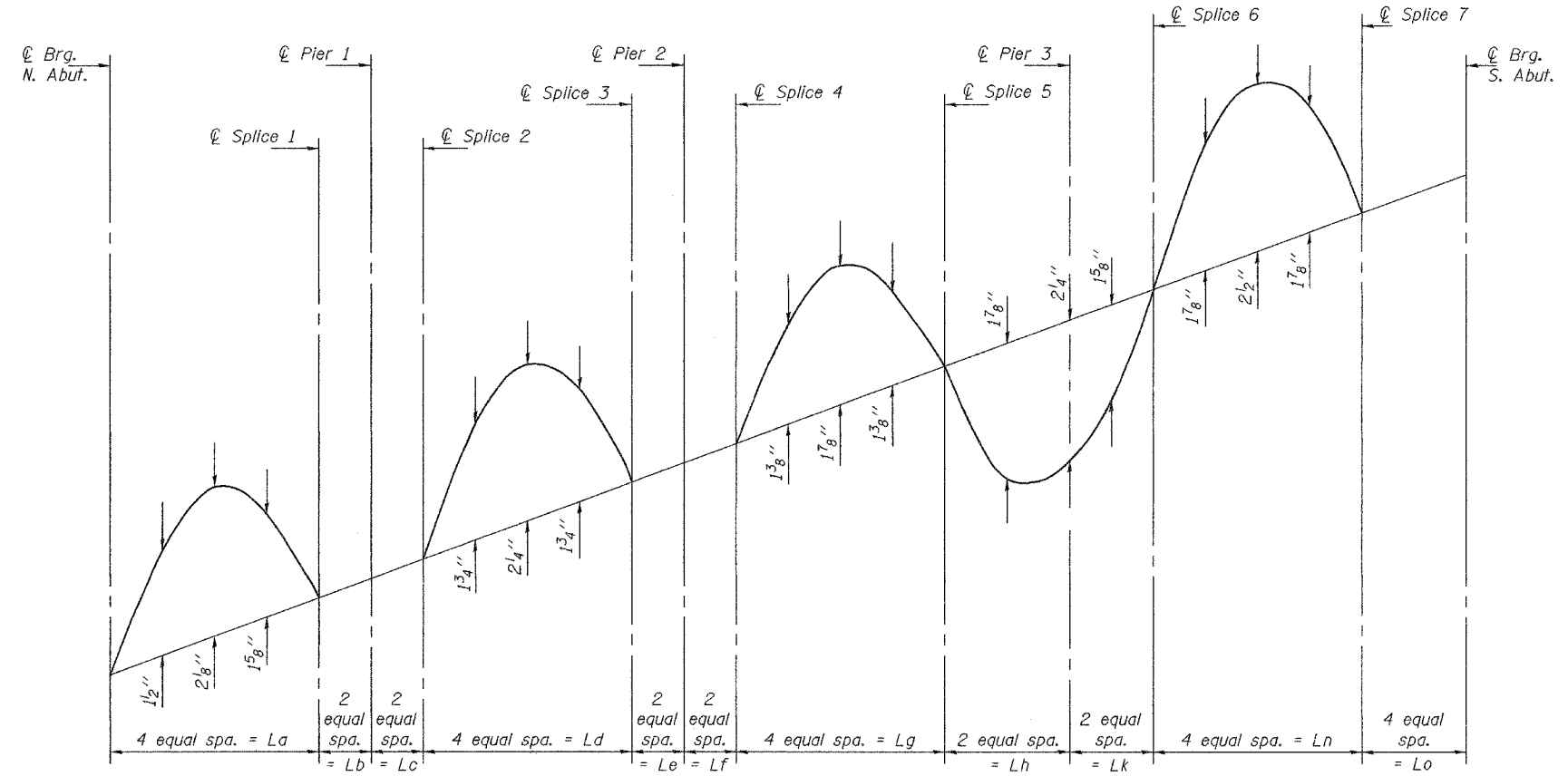
STRUCTURAL STEEL DETAILS
F.A.P. RTE. 315 - SEC. (18BRY-1)BR
FULTON COUNTY
STATION 74+09.000
STRUCTURE NO. 029-0068

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 315	(18BRY-DBR)	FULTON		188
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 24
46 SHEETS

Contract #88753



CAMBER DIAGRAM

For "L" dimensions, see table on sheet 20 of 45.

INTERIOR GIRDER MOMENT TABLE								
		0.4 Sp. 1	Pier 1	0.5 Sp. 2	Pier 2	0.4 Sp. 3	Pier 3	0.6 Sp. 4
I_s	(in ⁴)	29884	67109	29884	67109	37072	275380	165041
I_c (n)	(in ⁴)	73877	---	73877	---	84359	---	307420
I_c (3n)	(in ⁴)	53373	---	53373	---	60986	---	227463
S_s	(in ³)	1063	2139	1063	2139	1272	5828	4053
S_c (n)	(in ³)	1486	---	1486	---	1746	---	5029
S_c (3n)	(in ³)	1346	---	1346	---	1569	---	4579
S_{ϕ}	(in ³)	32.7	111	32.7	111	42.7	216	141
ϕ	(k/ft.)	0.874	1.57	0.874	1.57	0.925	1.91	1.17
M_{ϕ}	(k)	876	3435	743	2775	394	10190	4702
s_{ϕ}	(k/ft.)	0.523	---	0.523	---	0.523	---	0.523
$M_{s\phi}$	(k)	631	---	567	---	526	---	2280
M_{ϕ}	(k)	1140	1376	1206	1557	1312	3132	2997
M (Imp)	(k)	281	272	238	308	259	619	592
$5_3[M_{\phi} + M(\text{Imp})]$	(k)	2368	2747	2407	3108	2618	6252	5982
M_a	(k)	5038	8036	4832	7648	4600	21374	16853
$M_{b\phi}$	(k)	8	11	7	10	6	20	16
$f_{s\phi}$ non-comp (k.s.i.)		9.9	19.3	8.4	15.6	3.7	21.0	13.9
$f_{s\phi}$ (comp) (k.s.i.)		5.6	---	5.1	---	4.0	---	6.0
$f_{s5_3}(\phi + \text{Imp})$ (k.s.i.)		19.1	15.4	19.4	17.4	18.0	12.9	14.3
f_{ϕ} (k.s.i.)		2.9	1.2	2.6	1.1	1.7	1.1	1.4
f_s (Overload) (k.s.i.)		34.6	34.7	32.9	33.0	25.7	33.9	34.2
f_s (Total) (k.s.i.)		45.0	45.1	42.7	42.9	33.5	44.0	44.4
F_{cr} (Overload) (k.s.i.)		47.5	40	47.5	40	47.5	40	47.5
VR	(k)	68	---	77	---	91	---	96
F_{cr}	(k.s.i.)	49.0	47.5	49.0	47.5	49.4	47.9	49.6

INTERIOR GIRDER REACTION TABLE						
	N. Abut.	Pier 1	Pier 2	Pier 3	S. Abut.	
R_{ϕ}	(k)	66	242	218	446	152
R_{ϕ}	(k)	43	93	98	131	63
Imp.	(k)	11	23	24	32	16
R (Total)	(k)	120	358	340	609	231

I_s and S_s are the moment of inertia and section modulus of the steel section used in computing f_s (Total and Overload).
 I_c (n) & S_c (n) are the moment of inertia and section modulus of the composite section used in computing stresses due to live load.
 I_c (3n) and S_c (3n) are the moment of inertia and section modulus of the composite section used in computing stresses due to superimposed dead loads (See AASHTO 10.38).
 S_{ϕ} is the section modulus for one flange plate for lateral flange bending.
 M_{ϕ} - Moment due to dead loads on non-composite section.
 $M_{s\phi}$ - Moment due to dead loads on composite section.
 M_{ϕ} - Moment due to live load on non-composite or composite section.
 $M(\text{Imp})$ - Moment due to live load impact on non-composite or composite section.
 M_a (Applied Moment) = $1.3 [M_{\phi} + M_{s\phi} + \frac{5}{8} (M_{\phi} + M(\text{Imp}))]$.
 $M_{b\phi}$ is the lateral bending moment for one flange plate (factored).
 $f_{s\phi}$ (non-comp) is the stress due to M_{ϕ} .
 $f_{s\phi}$ (comp) is the stress due to $M_{s\phi}$.
 f_s (Overload) is the sum of the stresses due to $M_{\phi} + M_{s\phi} + \frac{5}{8} (M_{\phi} + M(\text{Imp}))$.
 $f_{s5_3} (M_{\phi} + M(\text{Imp}))$ is 5_3 times the stresses due to $M_{\phi} + M(\text{Imp})$.
 f_{ϕ} is the calculated normal stress at the edge of the flange due to lateral bending (factored).
 f_s (Total) is the sum of the stresses due to $1.3 [M_{\phi} + M_{s\phi} + \frac{5}{8} (M_{\phi} + M(\text{Imp}))]$.
 F_{cr} (Overload) is the critical average flange stress at overload computed according to the 2003 AASHTO Guide Specifications for Horizontally Curved Steel Girder Highway Bridges Section 9.5.
 VR is the maximum ϕ + impact shear range in span.
 F_{cr} is the critical average flange stress computed according to the 2003 AASHTO Guide Specifications for Horizontally Curved Steel Girder Highway Bridges Sections 5.2, 5.3 and 5.4.
 M_{ϕ} and R_{ϕ} includes the effects of centrifugal force and superelevation.

DESIGNED	MJT
CHECKED	FT
DRAWN	h.t. parsons
CHECKED	MJT/FT

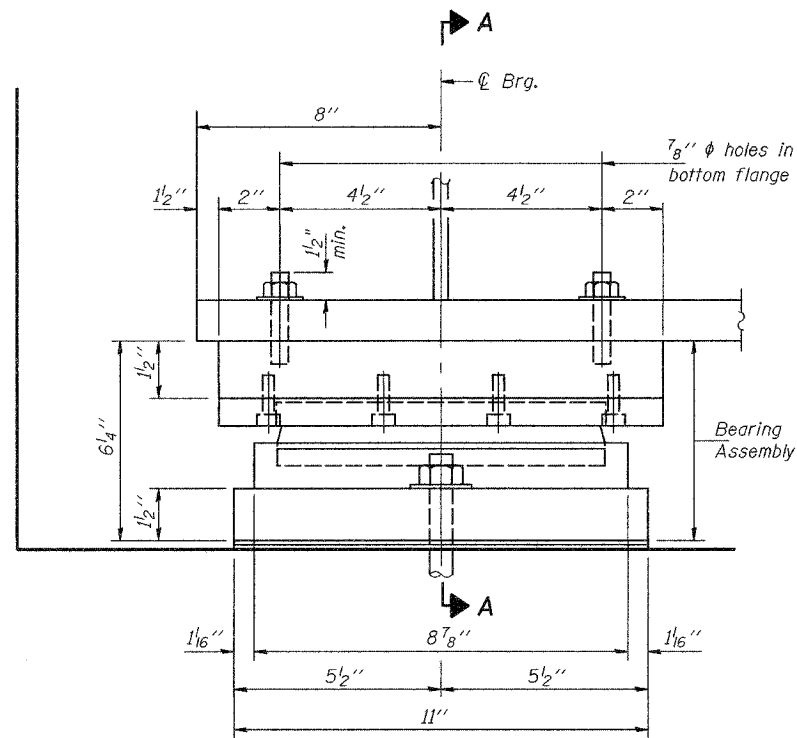
May 16, 2005
 EXAMINED *Thomas J. Donagale*
 ENGINEER OF BRIDGE DESIGN
 PASSED *Ralph E. Anderson*
 ENGINEER OF BRIDGES AND STRUCTURES

STRUCTURAL STEEL DETAILS
F.A.P. RTE. 315 - SEC. (18BRY-1)BR
FULTON COUNTY
STATION 74+09.000
STRUCTURE NO. 029-0068

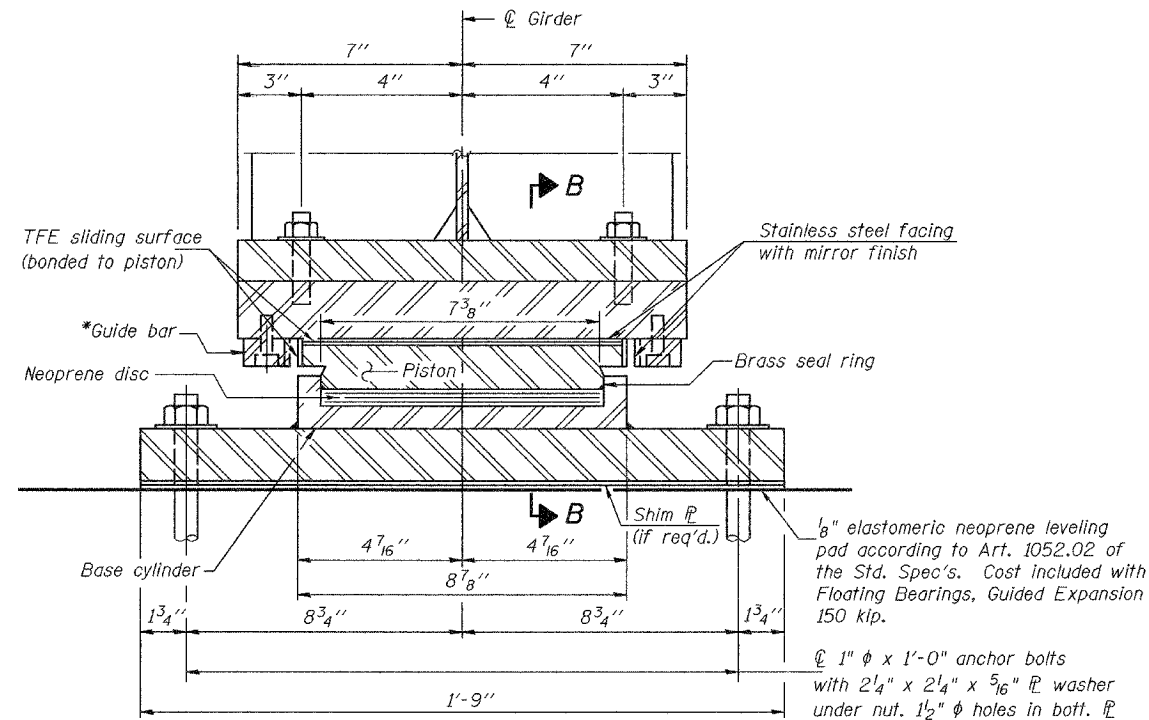
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 315	(18BRY-1)BR	FULTON	46	25
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

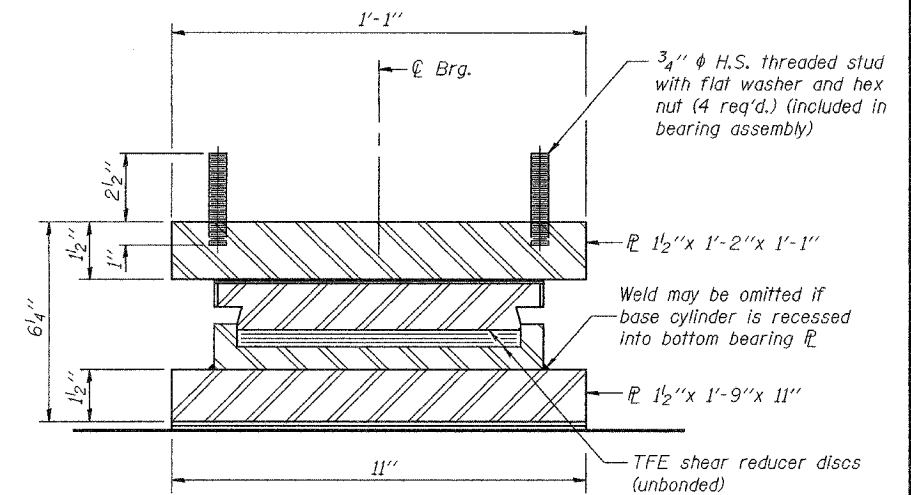
Contract #88753



ELEVATION AT N. ABUT.



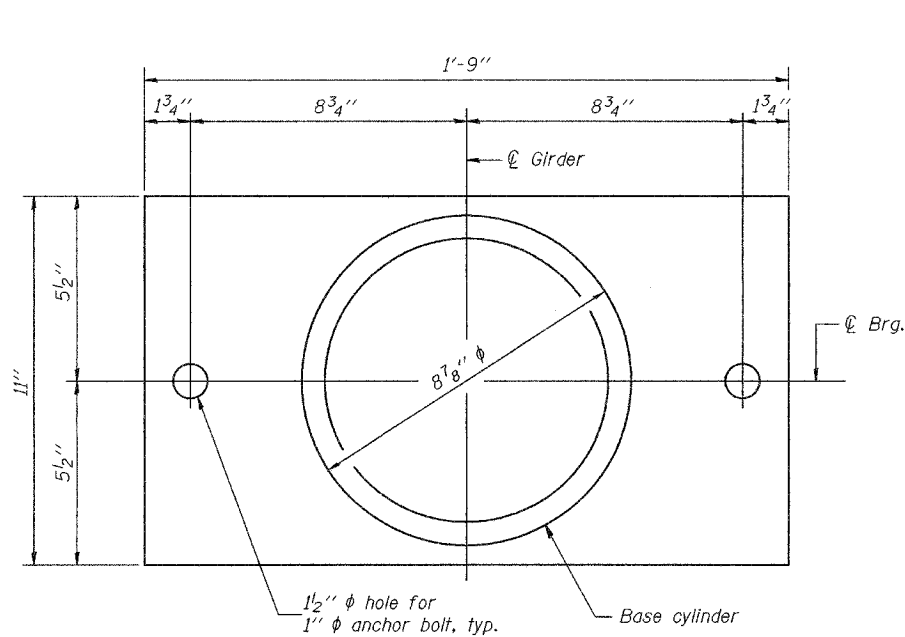
SECTION A-A



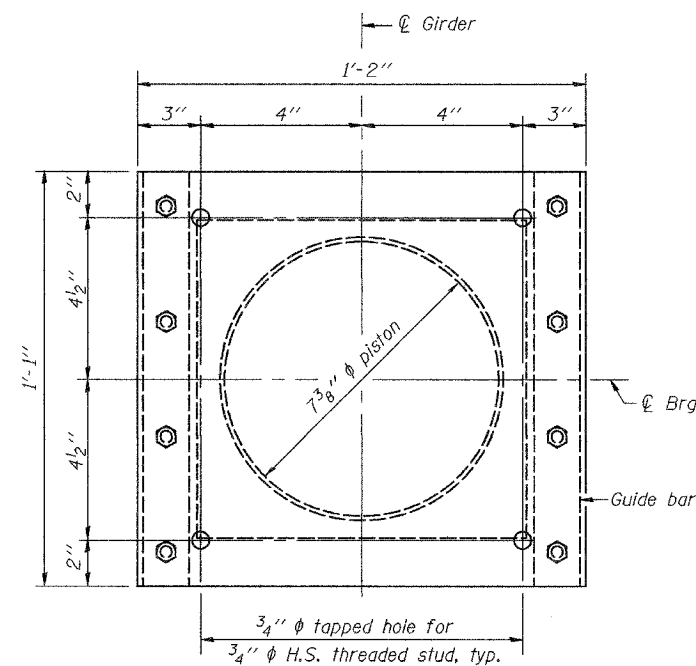
SECTION B-B
(Guide bar omitted for clarity.)

*As alternates to the bolted connection shown, the guide bars may be connected to the top bearing plate by groove welds or the guide bars and top bearing plate may be fabricated as a single piece.

GUIDED EXPANSION FLOATING BEARING



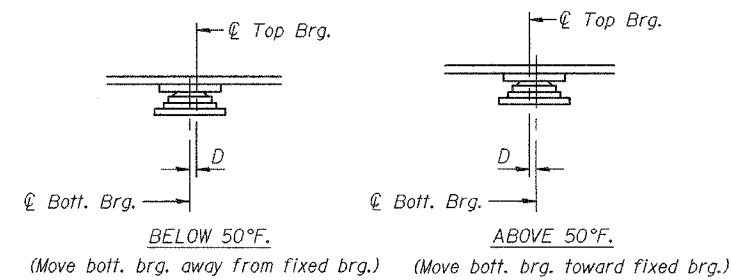
BOTTOM BEARING \varnothing AND
BASE CYLINDER PLAN



TOP BEARING \varnothing AND
PISTON PLAN

BEARING DATA	
Vertical design load	123 kip
Total required movement	3 5/8"

Notes: The plates of the Bearing Assembly shall be AASHTO M270, Grade 50.
For anchor bolt installation details, see sheet 30 of 46.



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
Floating Bearings, Guided Expansion 150 kip	Each	6

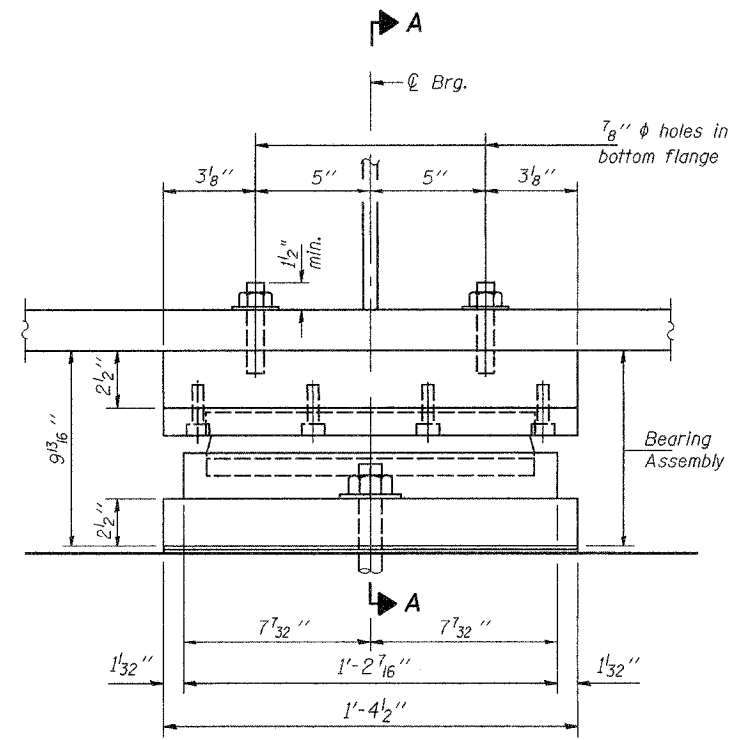
BEARING DETAILS - N. ABUT.
F.A.P. RTE. 315 - SEC. (18BRY-1)BR
FULTON COUNTY
STATION 74+09.000
STRUCTURE NO. 029-0068

DESIGNED	MJT
CHECKED	DPN
DRAWN	h.t. parsons
CHECKED	MJT/DPN

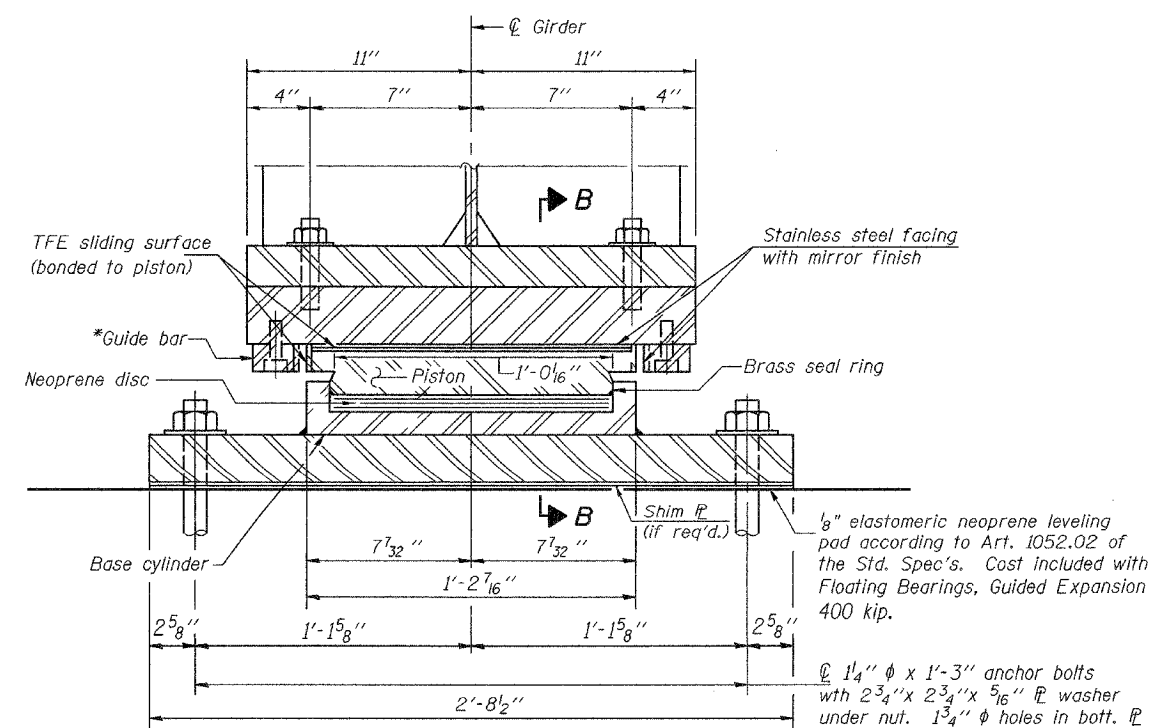
May 16, 2005
EXAMINED *Thomas J. Damagala*
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

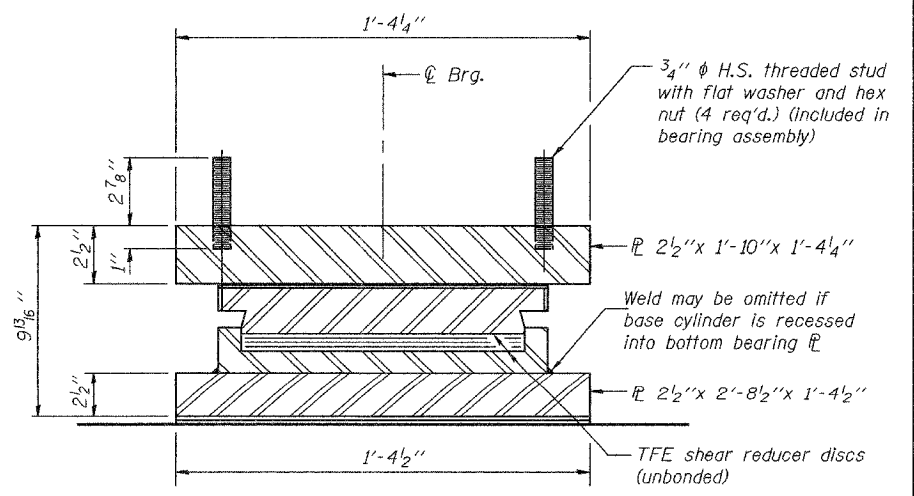
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FAP 315	(18BRY-1)BR	FULTON		190	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-			
Contract #88753					



ELEVATION AT PIER 1



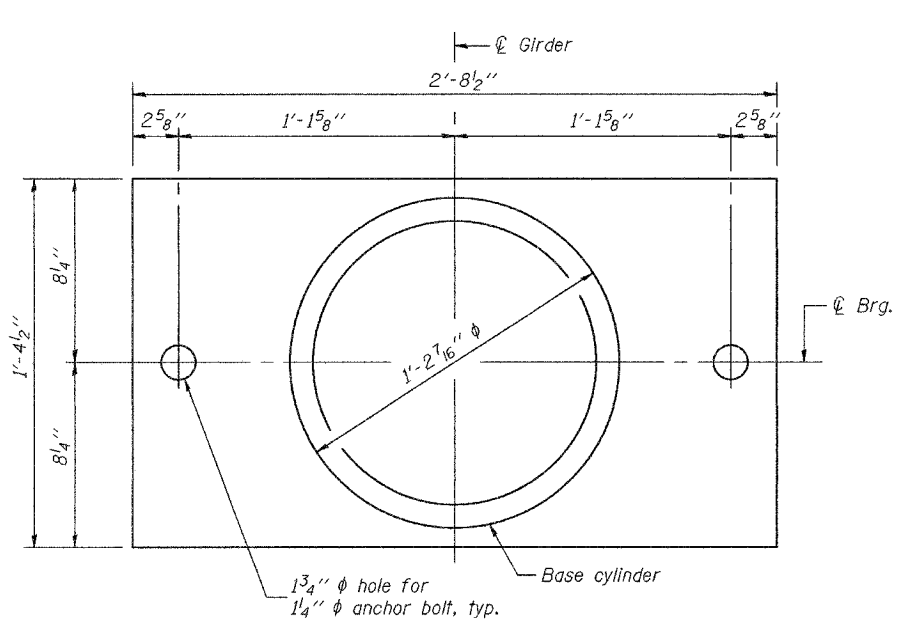
SECTION A-A



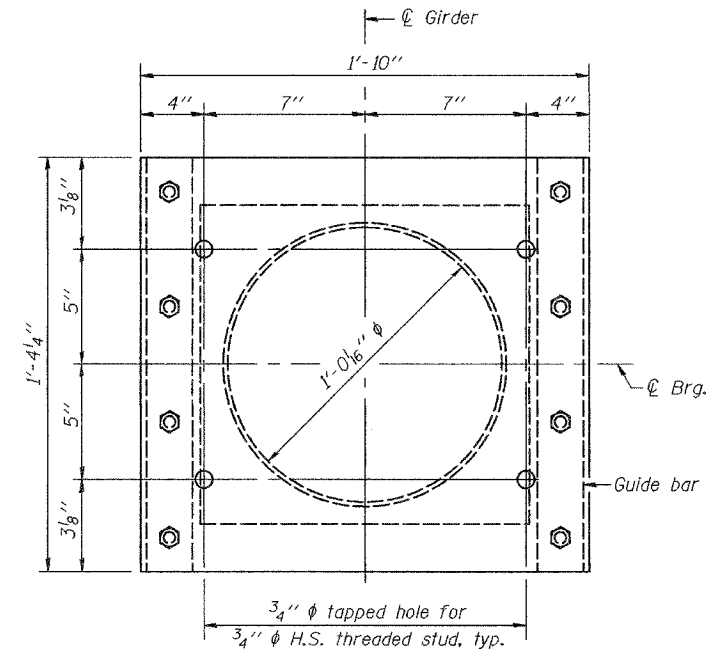
SECTION B-B
(Guide bar omitted for clarity)

GUIDED EXPANSION FLOATING BEARING

*As alternates to the bolted connection shown, the guide bars may be connected to the top bearing plate by groove welds or the guide bars and top bearing plate may be fabricated as a single piece.



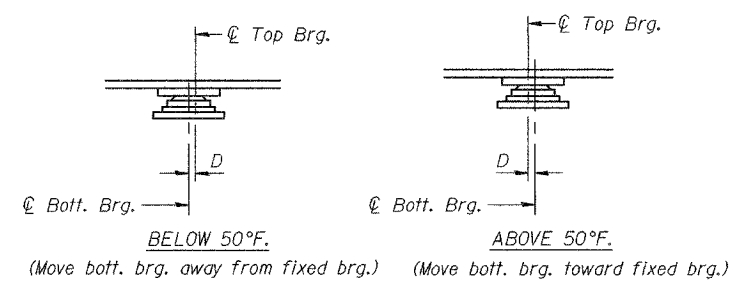
BOTTOM BEARING \varnothing AND BASE CYLINDER PLAN



TOP BEARING \varnothing AND PISTON PLAN

BEARING DATA	
Vertical design load	358 kip
Total required movement	2''

Notes: The plates of the Bearing Assembly shall be AASHTO M270, Grade 50. For anchor bolt installation details, see sheet 30 of 46.



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
Floating Bearings, Guided Expansion 400 kip	Each	6

BEARING DETAILS - PIER 1
F.A.P. RTE. 315 - SEC. (18BRY-1)BR
FULTON COUNTY
STATION 74+09.000
STRUCTURE NO. 029-0068

DESIGNED	MJT
CHECKED	DPN
DRAWN	h.t. parsons
CHECKED	MJT/DPN

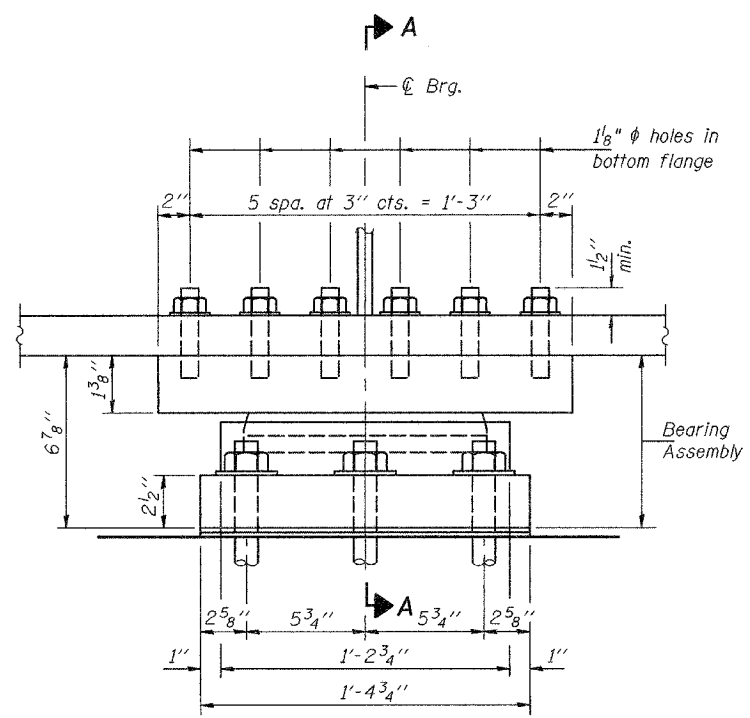
May 16, 2005
EXAMINED *Thomas J. Damagala*
ENGINEER OF BRIDGE DESIGN
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

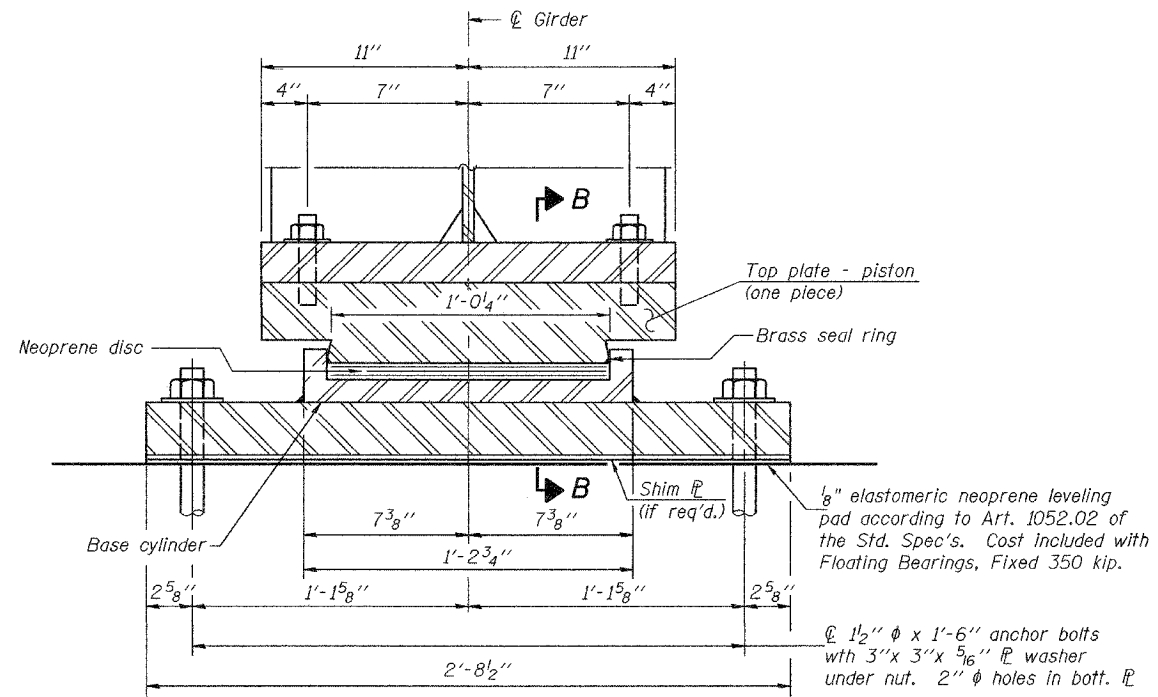
ROUTE NO.	SECTION	COUNTY	DATE	SHEET NO.
FAP 315	(18BRY-1)BR	FULTON		19/1
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SHEET NO. 27
46 SHEETS

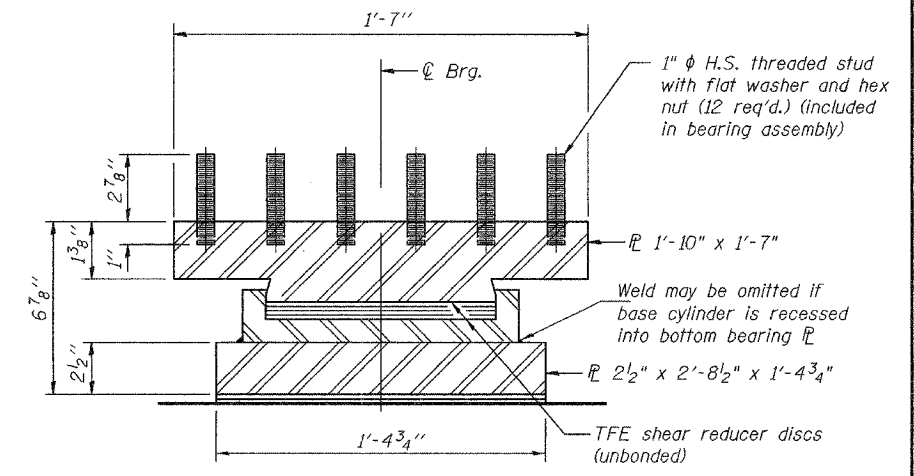
Contract #88753



ELEVATION AT PIER 2

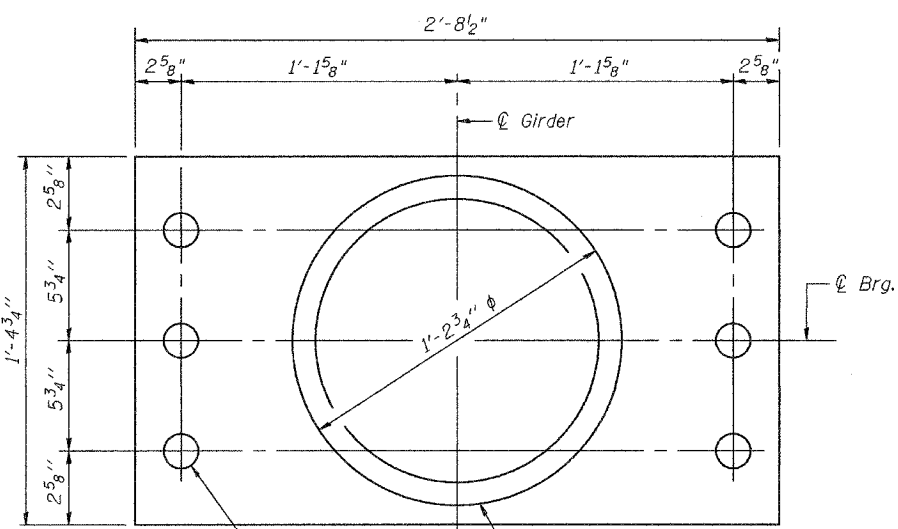


SECTION A-A

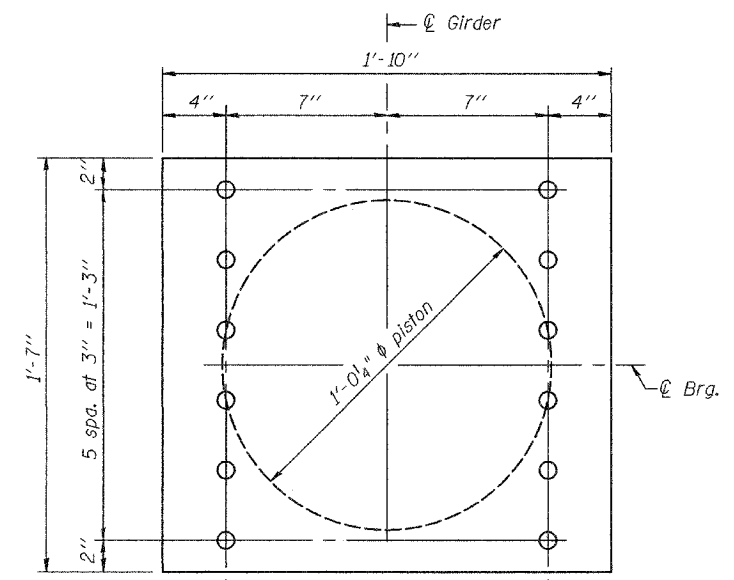


SECTION B-B

FIXED FLOATING BEARING



BOTTOM BEARING AND
BASE CYLINDER PLAN



TOP BEARING AND
PISTON PLAN

Notes: The plates of the Bearing Assembly shall be AASHTO M270, Grade 50.
For anchor bolt installation details, see sheet 30 of 46.

BEARING DATA	
Vertical design load	340 kip
Lateral design load	238 kip

BILL OF MATERIAL

Item	Unit	Total
Floating Bearings, Fixed - 350 kip	Each	6

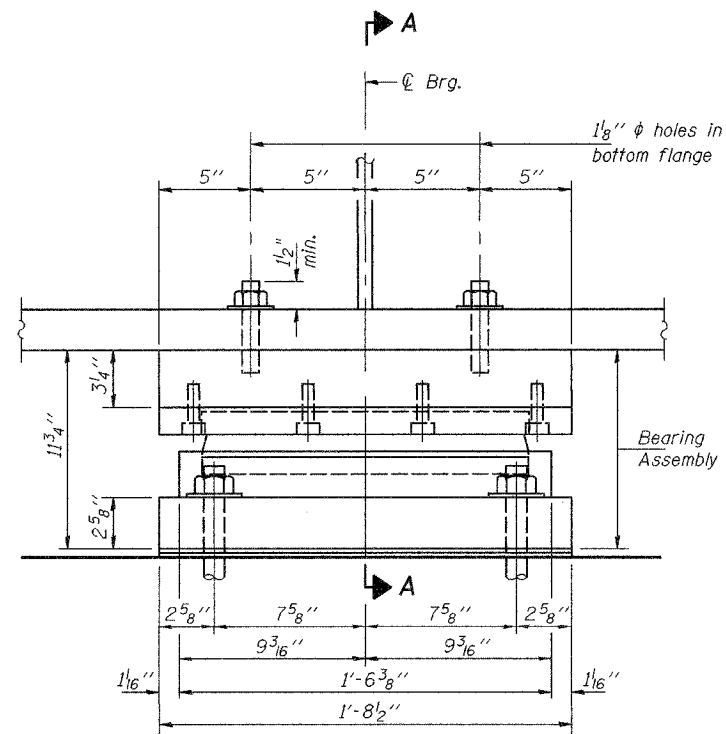
DESIGNED	MJT
CHECKED	DPN
DRAWN	h.t. parsons
CHECKED	MJT/DPN

May 16, 2005
EXAMINED *Thomas J. Domagala*
ENGINEER OF BRIDGE DESIGN
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

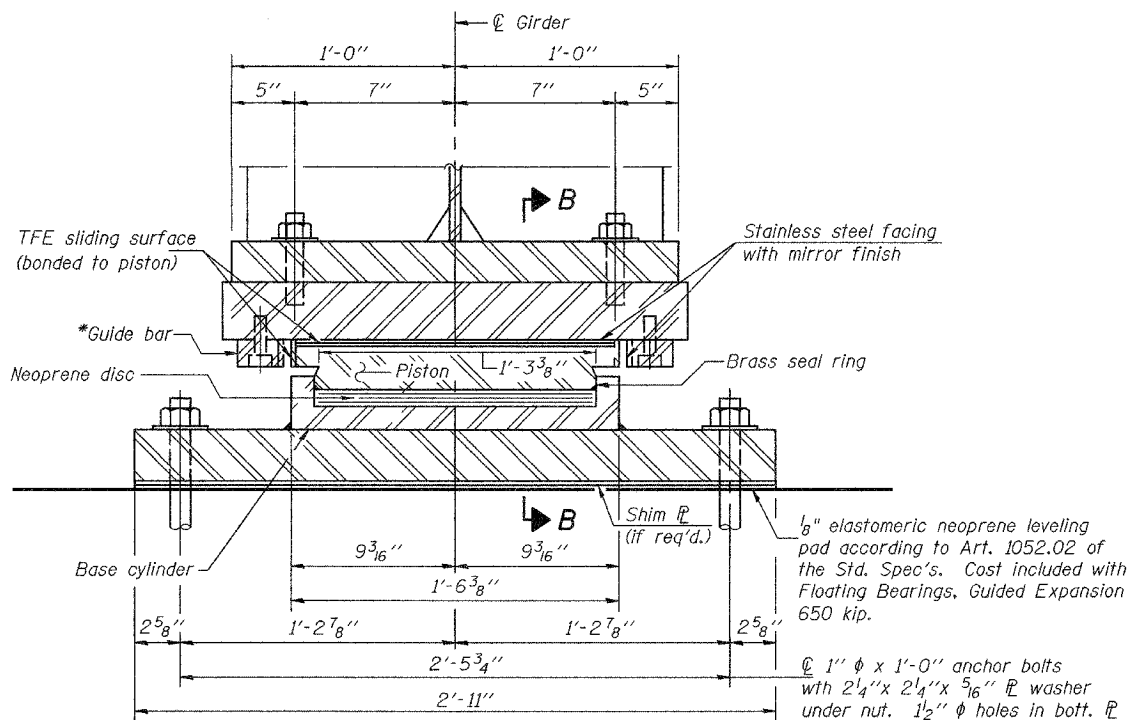
BEARING DETAILS - PIER 2
F.A.P. RTE. 315 - SEC. (18BRY-1)BR
FULTON COUNTY
STATION 74+09.000
STRUCTURE NO. 029-0068

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

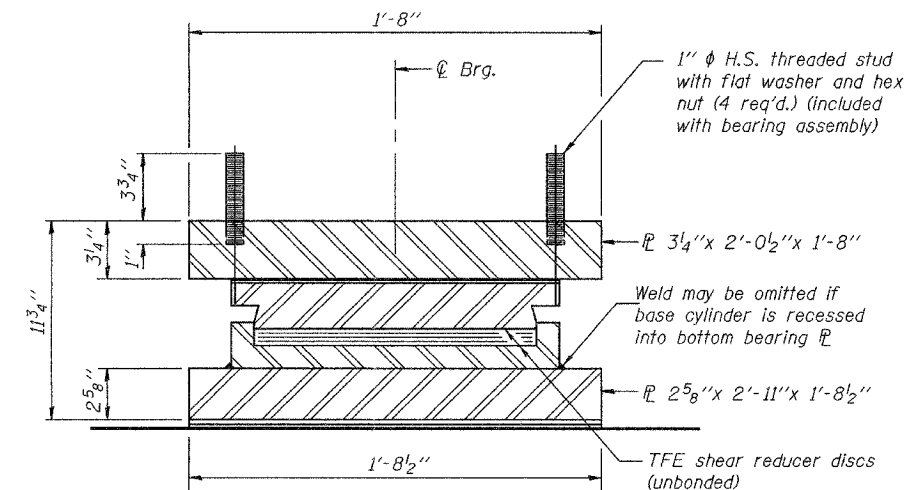
ROUTE NO.	SECTION	COUNTY	BRIDGE	SHEET	SHEET NO. 28 46 SHEETS
FAP 315	(18BRY-1)BR	FULTON		192	
FED. ROAD DIST. NO. 7	BLINDS	FED. AID PROJECT-			Contract #88753



ELEVATION AT PIER 3



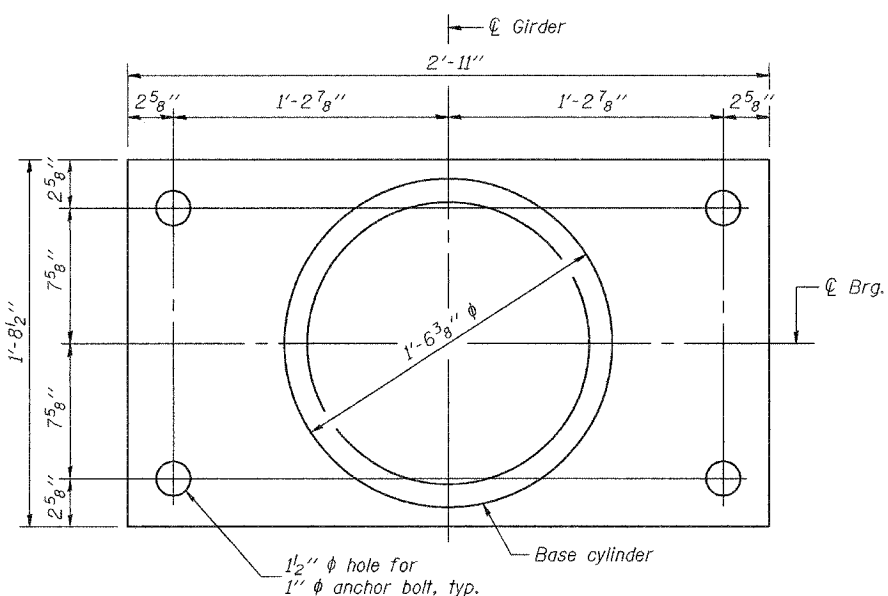
SECTION A-A



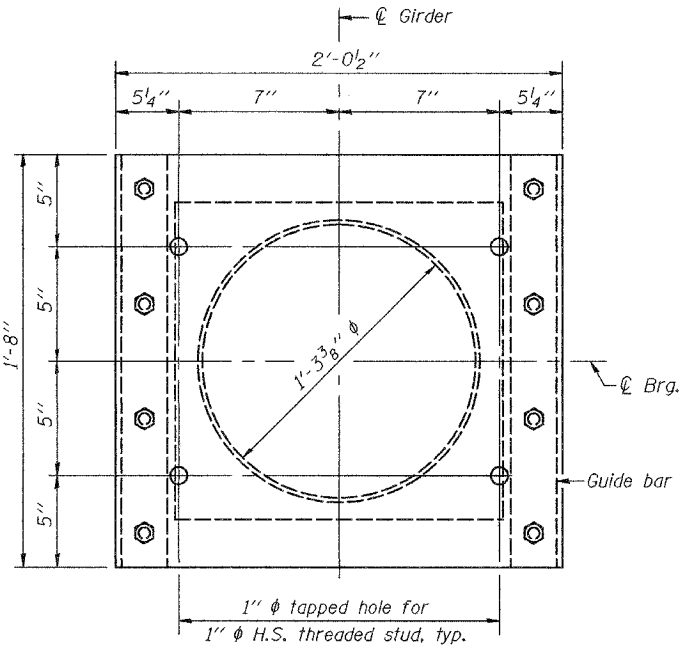
SECTION B-B
(Guide bar omitted for clarity.)

GUIDED EXPANSION FLOATING BEARING

*As alternates to the bolted connection shown, the guide bars may be connected to the top bearing plate by groove welds or the guide bars and top bearing plate may be fabricated as a single piece.



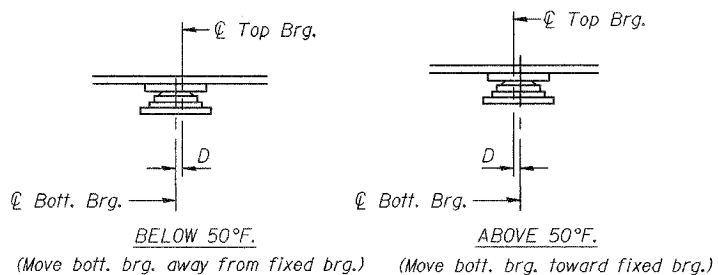
BOTTOM BEARING \varnothing AND BASE CYLINDER PLAN



TOP BEARING \varnothing AND PISTON PLAN

BEARING DATA	
Vertical design load	609 kip
Total required movement	2 $\frac{1}{2}"$

Notes: The plates of the Bearing Assembly shall be AASHTO M270, Grade 50. For anchor bolt installation details, see sheet 30 of 46.



SETTING ANCHOR BOLTS AT EXP. BRG.
D = $\frac{1}{8}"$ per each 100' of expansion for every 15° temp. change from the normal temp. of 50°F.

BILL OF MATERIAL

Item	Unit	Total
Floating Bearings, Guided Expansion 650 kip	Each	6

BEARING DETAILS - PIER 3
F.A.P. RTE. 315 - SEC. (18BRY-1)BR
FULTON COUNTY
STATION 74+09.000
STRUCTURE NO. 029-0068

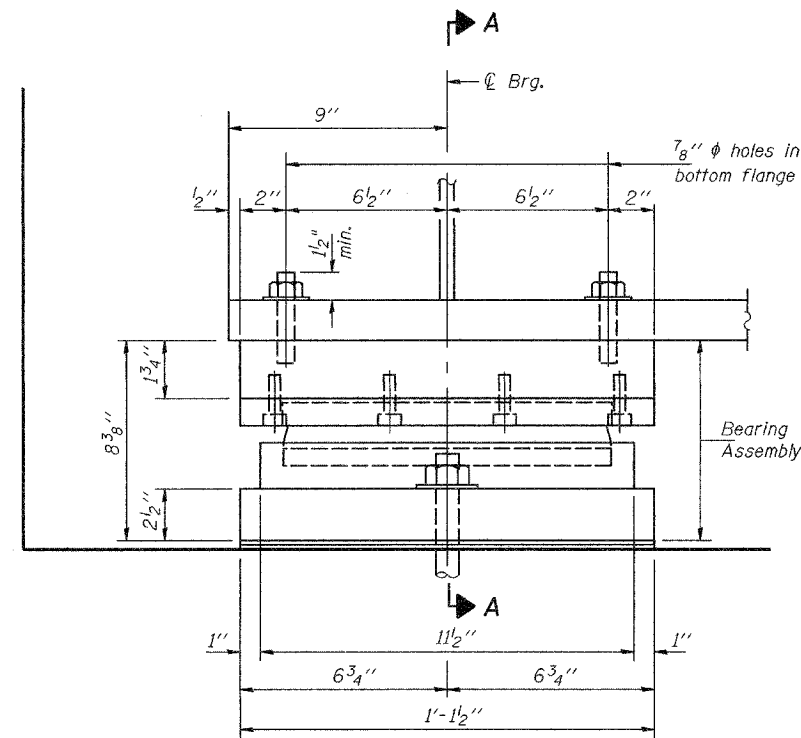
DESIGNED	MJT
CHECKED	DPN
DRAWN	h.t. parsons
CHECKED	MJT/DPN

May 16, 2005
EXAMINED *Thomas J. Domagala*
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGE DESIGN
ENGINEER OF BRIDGES AND STRUCTURES

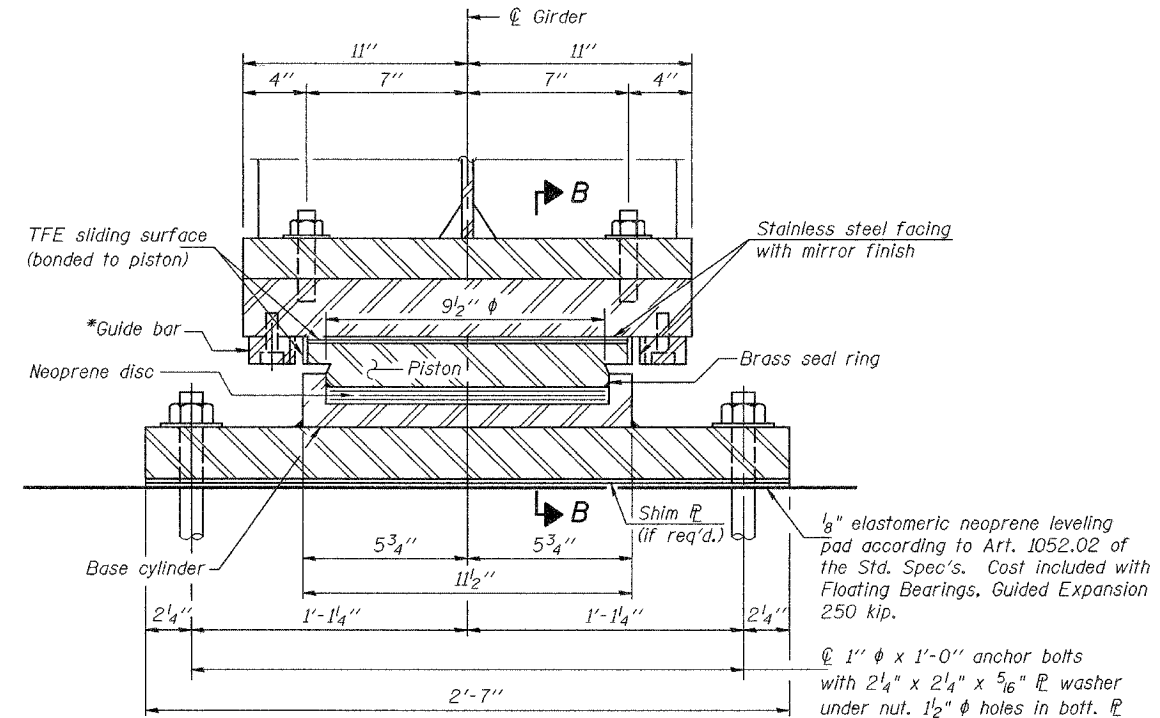
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 315	(18BRY-1)BR	FULTON		46
FED. ROAD DIST. NO. 7	BILLINGS	FED. AID PROJECT-		

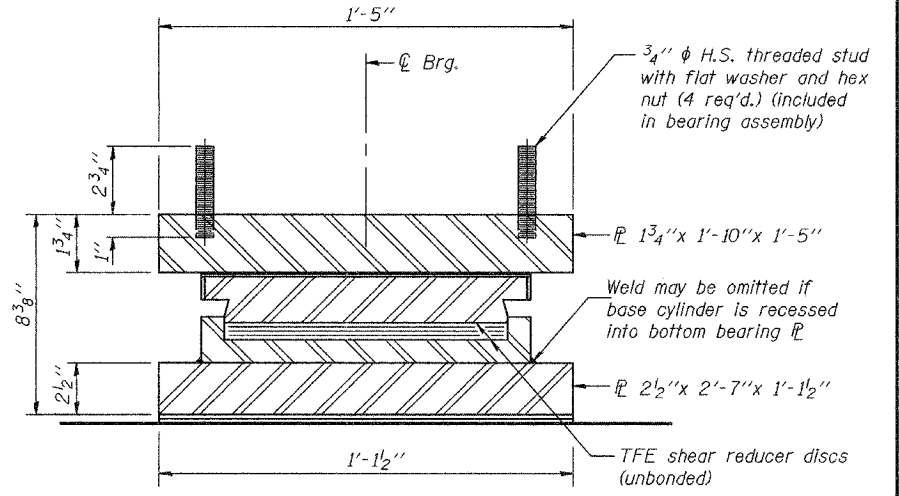
Contract #88753



ELEVATION AT S. ABUT.



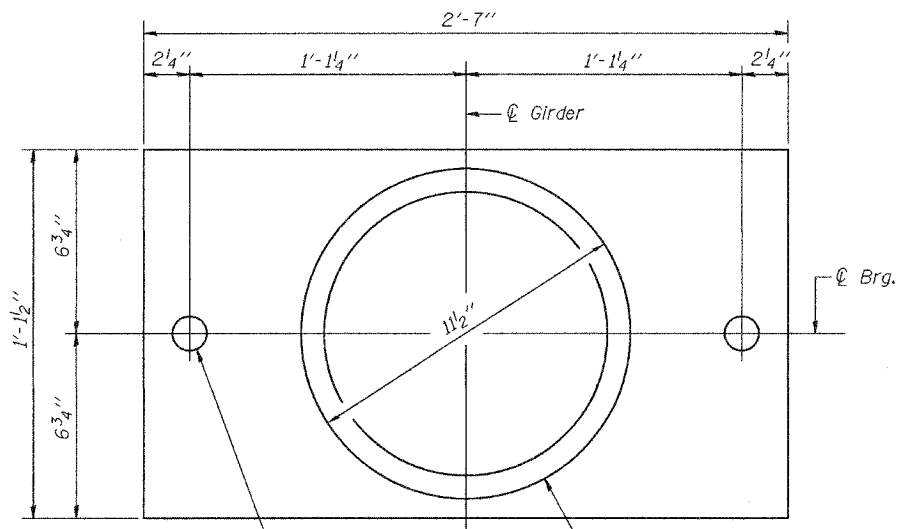
SECTION A-A



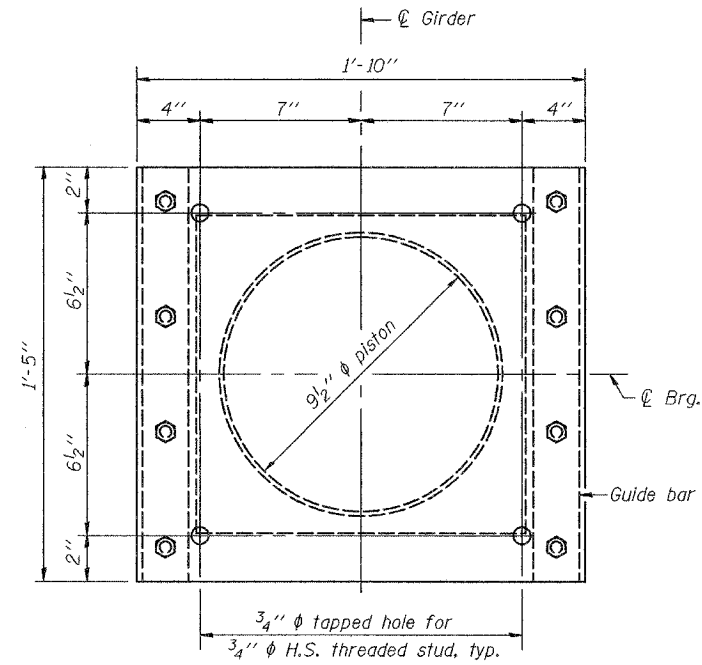
SECTION B-B
(Guide bar omitted for clarity.)

GUIDED EXPANSION FLOATING BEARING

*As alternates to the bolted connection shown, the guide bars may be connected to the top bearing plate by groove welds or the guide bars and top bearing plate may be fabricated as a single piece.



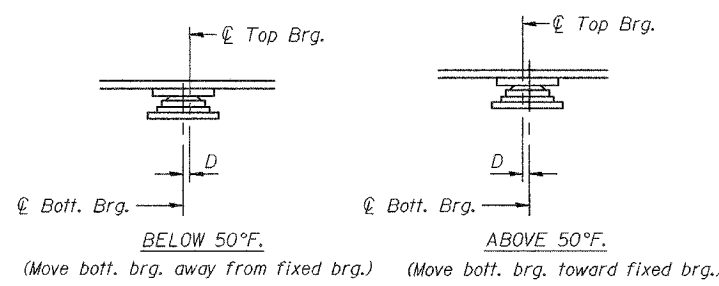
BOTTOM BEARING AND BASE CYLINDER PLAN



TOP BEARING AND PISTON PLAN

BEARING DATA	
Vertical design load	231 kip
Total required movement	5 7/8"

Notes: The plates of the Bearing Assembly shall be AASHTO M270, Grade 50.
For anchor bolt installation details, see sheet 30 of 46.



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
Floating Bearings, Guided Expansion 250 kip	Each	6

BEARING DETAILS - S. ABUT.
F.A.P. RTE. 315 - SEC. (18BRY-1)BR
FULTON COUNTY
STATION 74+09.000
STRUCTURE NO. 029-0068

DESIGNED	MJT	EXAMINED	Thomas J. Demagala
CHECKED	DPN	PASSED	Ralph E. Anderson
DRAWN	h.t. parsons		
CHECKED	MJT/DPN		

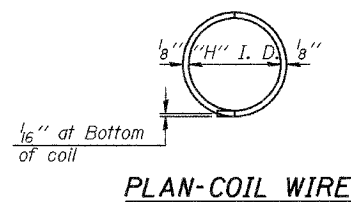
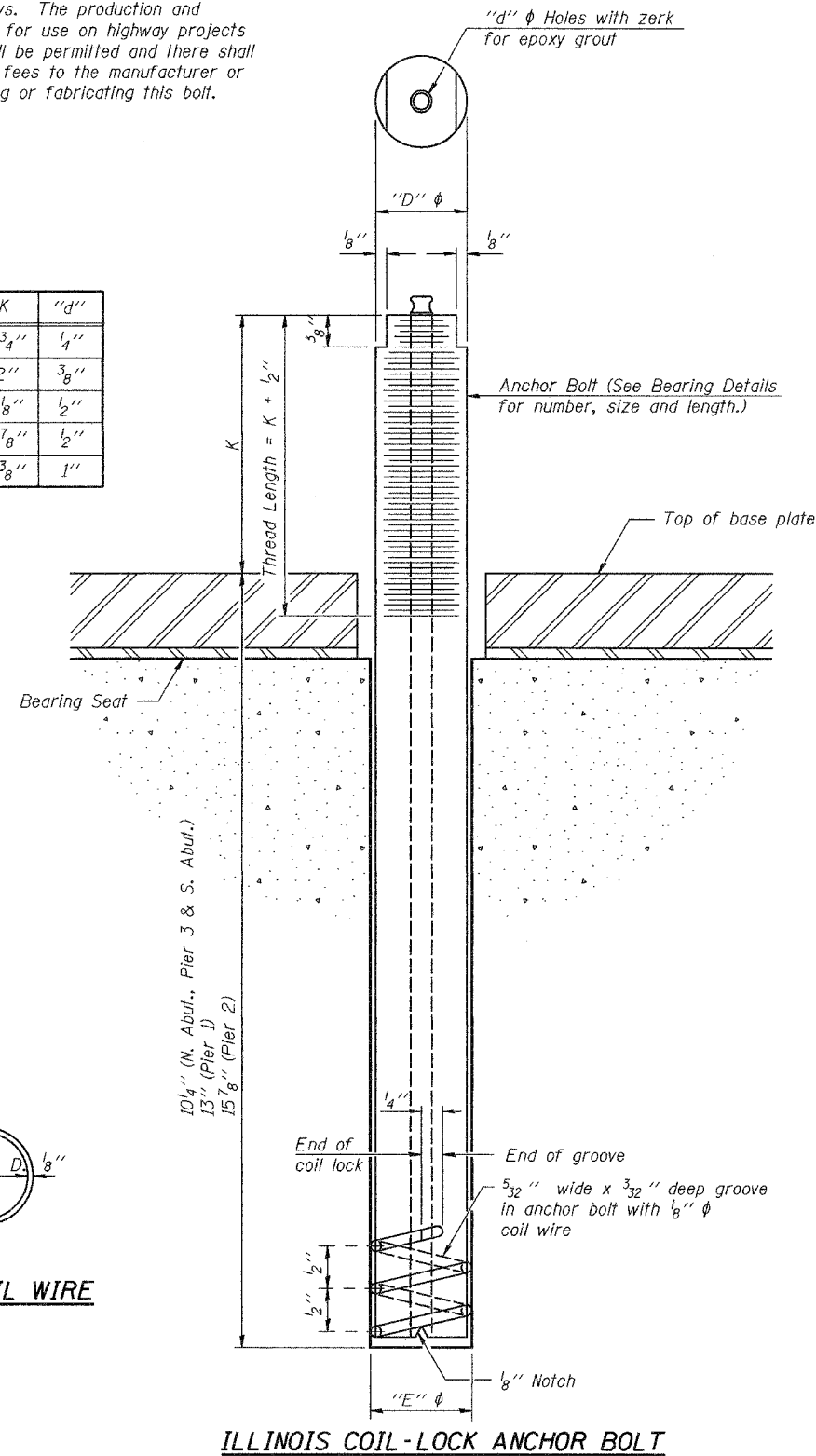
May 16, 2005

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	DISTRICT	COUNTY	SECTION	SHEET NO.	SHEET NO. 30 46 SHEETS
FAP 315	18BRY-1BR	FULTON		30	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			
Contract #88753					

The Illinois Coil-Lock Anchor Bolt is a proprietary item which is the property of the Illinois Department of Transportation. Use, reproduction or disclosure without express written permission is prohibited and protected under Federal copyright laws. The production and the fabrication of this bolt for use on highway projects in the State of Illinois shall be permitted and there shall be no incurred charges or fees to the manufacturer or the fabricator for producing or fabricating this bolt.

D	E	H	K	"d"
1"	1 1/8"	1 3/16"	1 3/4"	1/4"
1 1/4"	1 3/8"	1 1/16"	2"	3/8"
1 1/2"	1 5/8"	1 5/16"	2 1/8"	1/2"
2"	2 1/8"	1 13/16"	2 7/8"	1/2"
2 1/2"	2 5/8"	2 5/16"	3 3/8"	1"



MATERIALS FOR ILLINOIS COIL-LOCK ANCHOR BOLT

The anchor bolt shall be fabricated from cold drawn or hot finished seamless carbon steel mechanical tubing conforming to ASTM A 519, Grade 1026, CW and supplied with hexagonal nuts and cut washers.
The coil wire shall be made of any suitable soft steel wire.
The finished anchor bolt shall be cleaned of rust and other foreign materials and wrapped or packaged to prevent contamination until they are installed.
The epoxy grout shall be a two-component, epoxy resin bonding system conforming to ASTM C 881, Type I, Grade 1 and of a Class suitable for the temperature at installation.

INSTALLATION PROCEDURE for the ILLINOIS COIL-LOCK ANCHOR BOLT

1. With the coil wire in place, the bolt shall be inserted into the hole and turned clockwise to a snug fit in the hole. Nut and washer shall be placed on the bolt. The nut shall be tensioned until the steel base plates are held securely to the concrete bearing seat.
2. Epoxy grout shall be pumped through the zerk fitting with a pressure gun. Pumping shall continue until the epoxy overflows the hole around the bolt shank. After pumping is discontinued, excess epoxy shall be immediately wiped off.

ALTERNATE ANCHOR BOLTS

The Contractor may use, at his option, the capsule or the adhesive cartridge type anchor rods that have been previously tested and given a prior approval by the Department. The Contractor shall install these anchor rods in pre-drilled holes according to the manufacturer's recommendations and procedures.
The capsule or the adhesive cartridge type anchor rods shall be a two part system composed of:
1. A threaded rod stud with nut and washer of the type specified.
2. A sealed glass capsule or a sealed glass adhesive cartridge containing premeasured amounts of the adhesive chemical.

Location	Type
N. Abut.	A 325
Pier 1	A 325
Pier 2	A 325
Pier 3	A 325
S. Abut.	A 325

ASTM F 1554 Grade 105, ASTM A 449 and AASHTO M 314 Grade 105 anchor bolts may be substituted for the anchor bolts shown above.

GENERAL NOTES

Holes in the masonry for anchor bolts shall be drilled through the base plates to the diameter and depth shown or according to the manufacturer's recommendation after beams or girders have been erected and adjusted.
Prior to setting the bolts, the holes shall be dry and all dust and loose particles shall be removed by the use of compressed air or vacuuming.
The anchor bolts, furnished and installed including the epoxy grout or capsules shall not be paid for separately but shall be included in the unit bid price for Furnishing and Erecting Structural Steel.

**ANCHOR BOLT DETAILS
FOR BEARINGS
F.A.P. RTE. 315 - SEC. (18BRY-1)BR
FULTON COUNTY
STATION 74+09.00
STRUCTURE NO. 029-0068**

DESIGNED	DPN
CHECKED	FT
DRAWN	h.t. parsons
CHECKED	DPN/FT

May 16, 2005
EXAMINED *Thomas J. Romagosa*
ENGINEER OF BRIDGE DESIGN
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

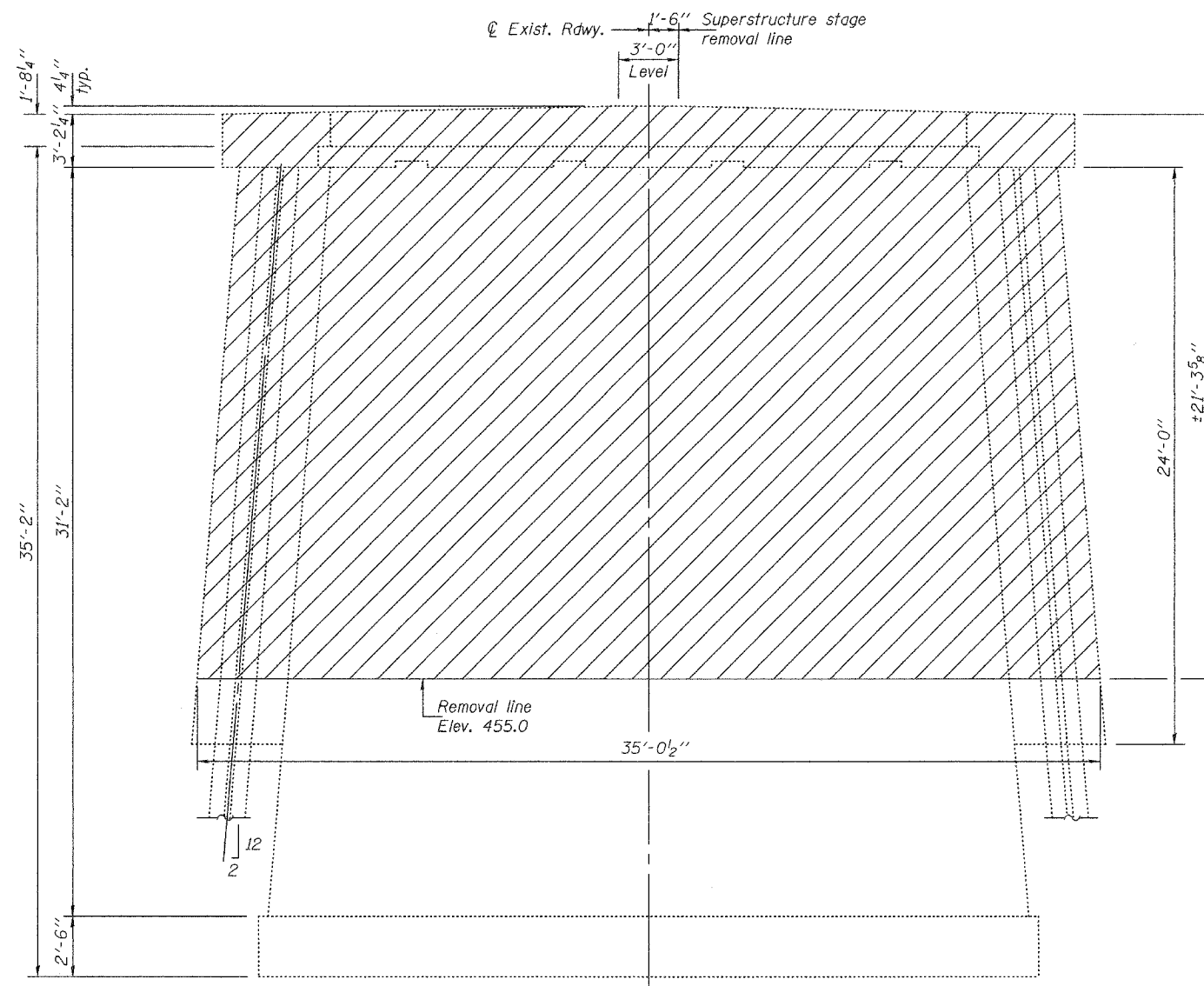
ABB-1 10-22-04

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

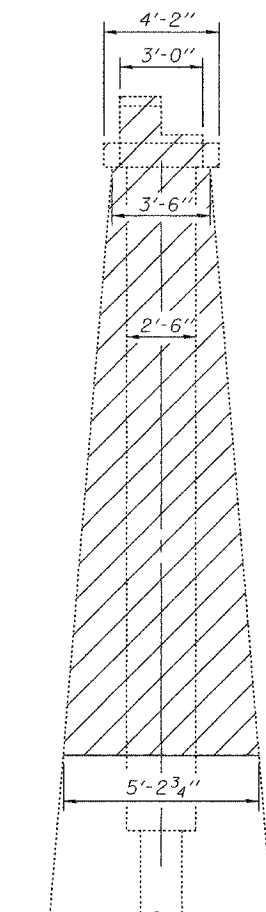
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 315	(18BRY-1)BR	FULTON		195
FED. ROAD DIST. NO. 7	BILLINGS	FED. AID PROJECT		

SHEET NO. 31
46 SHEETS

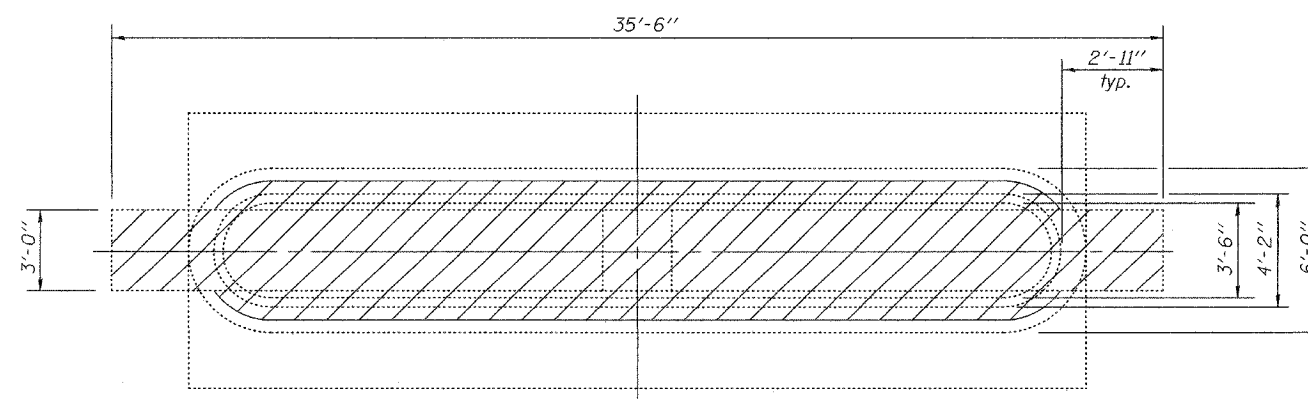
Contract #88753



ELEVATION



END VIEW



PLAN



Notes: Portions of the existing pier to the east of the Stage Removal Line may interfere with the proposed superstructure. The Contractor may need to remove these portions while leaving in place, and undamaged, the portions that are required to support the Stage III & IV Traffic. It is the Contractor's responsibility to remove the interfering portions of the pier, so that it won't interfere with the erection of steel girders. Cost included with Removal of Existing Structures No. 2. Existing reinforcement at the removal line (Elev. 455.0) shall be cut off flush and covered with 2" layer of cement grout. Cost included with Removal of Existing Structures No. 2.

DESIGNED	FT
CHECKED	SMR
DRAWN	h.t. parsons
CHECKED	FT/SMR

May 16, 2005
EXAMINED *Thomas J. Demagallibi*
ENGINEER OF BRIDGE DESIGN
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

Portion of existing pier to be removed. Cost included with Removal of Existing Structures No. 2.

EXISTING PIER DETAILS
F.A.P. RTE. 315 - SEC. (18BRY-1)BR
FULTON COUNTY
STATION 74+09.000
STRUCTURE NO. 029-0068

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET	SHEET NO. 32
FAP 315	(18BRY-1)BR	FULTON	196	46 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

Contract #88753

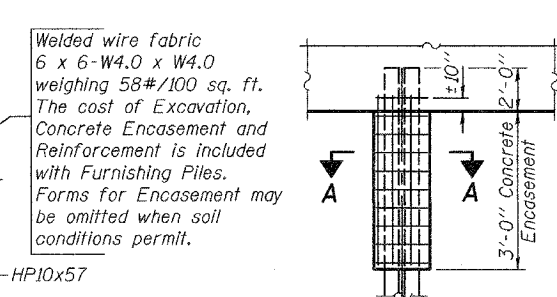
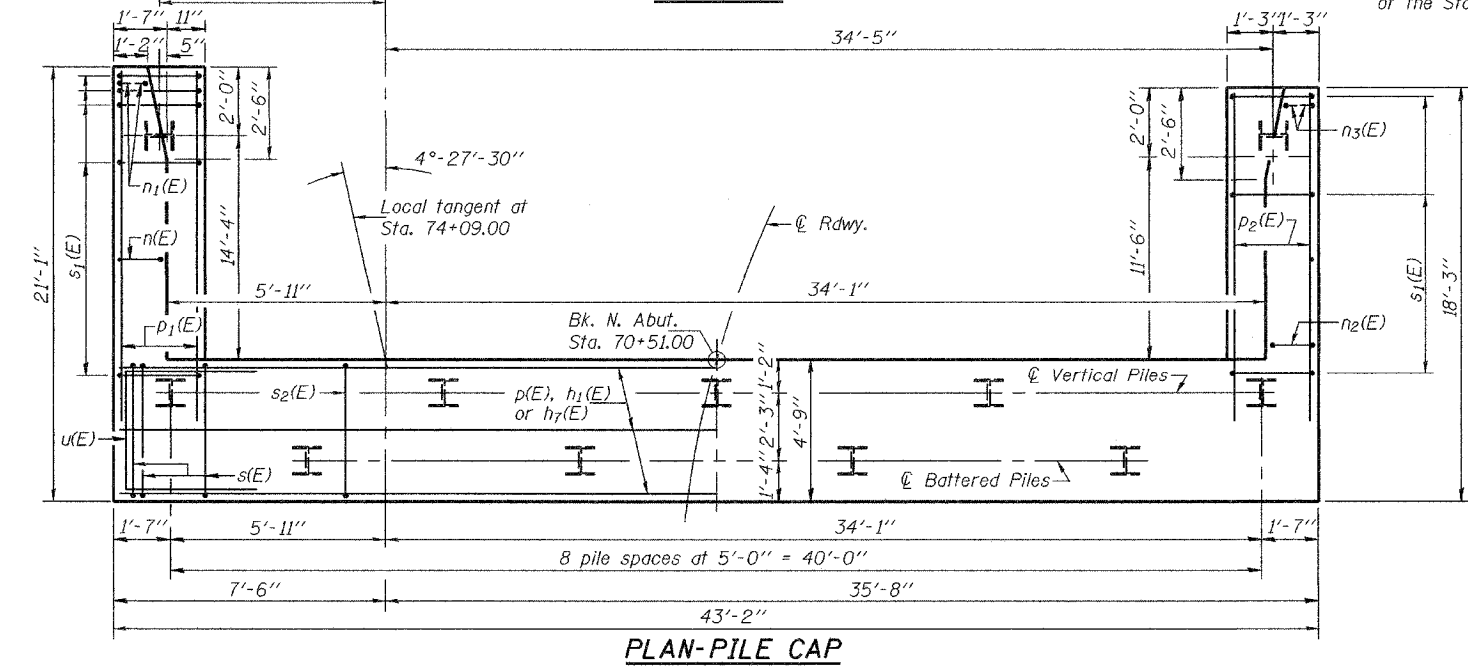
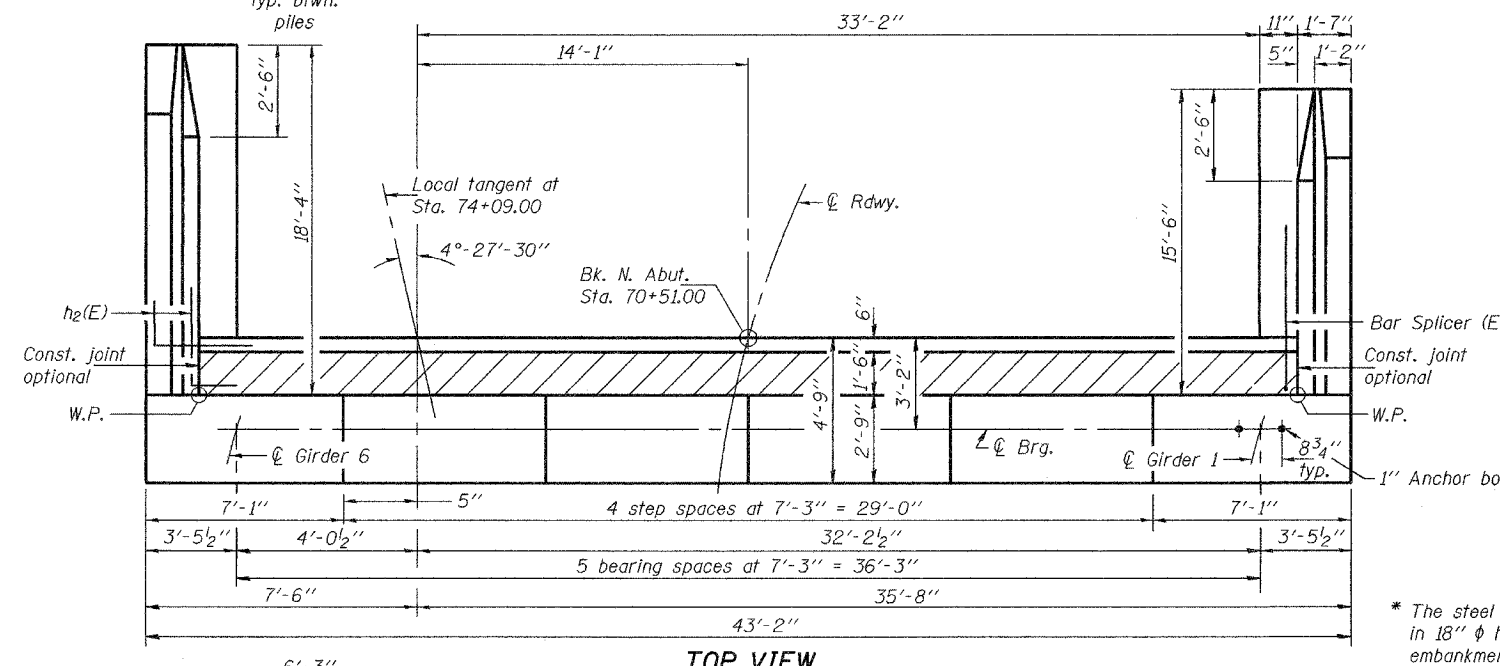
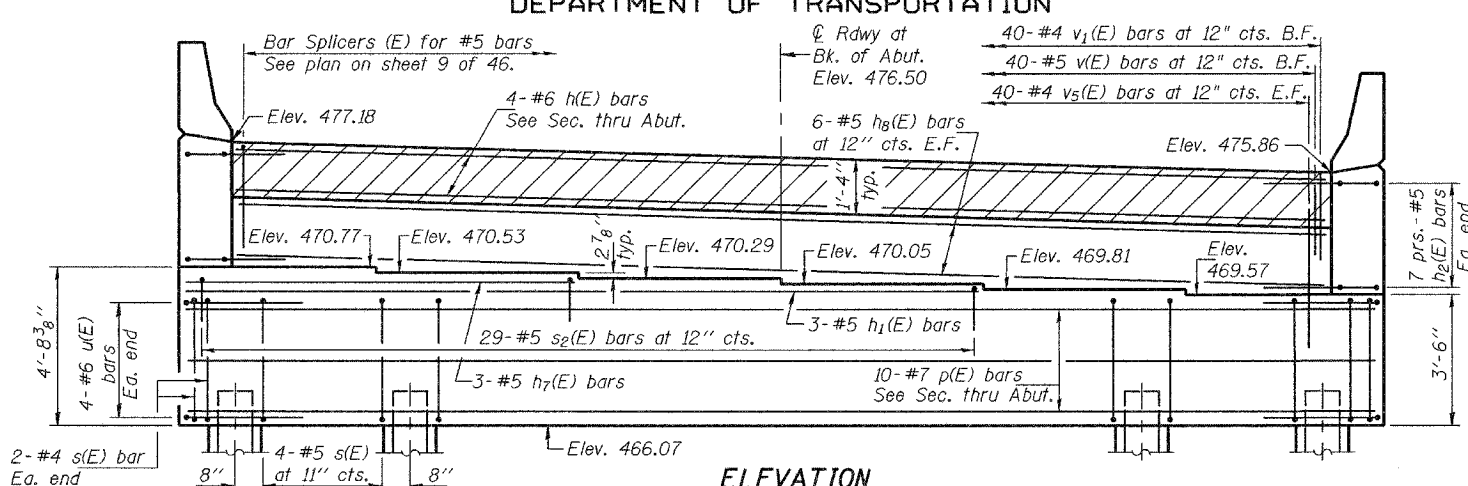
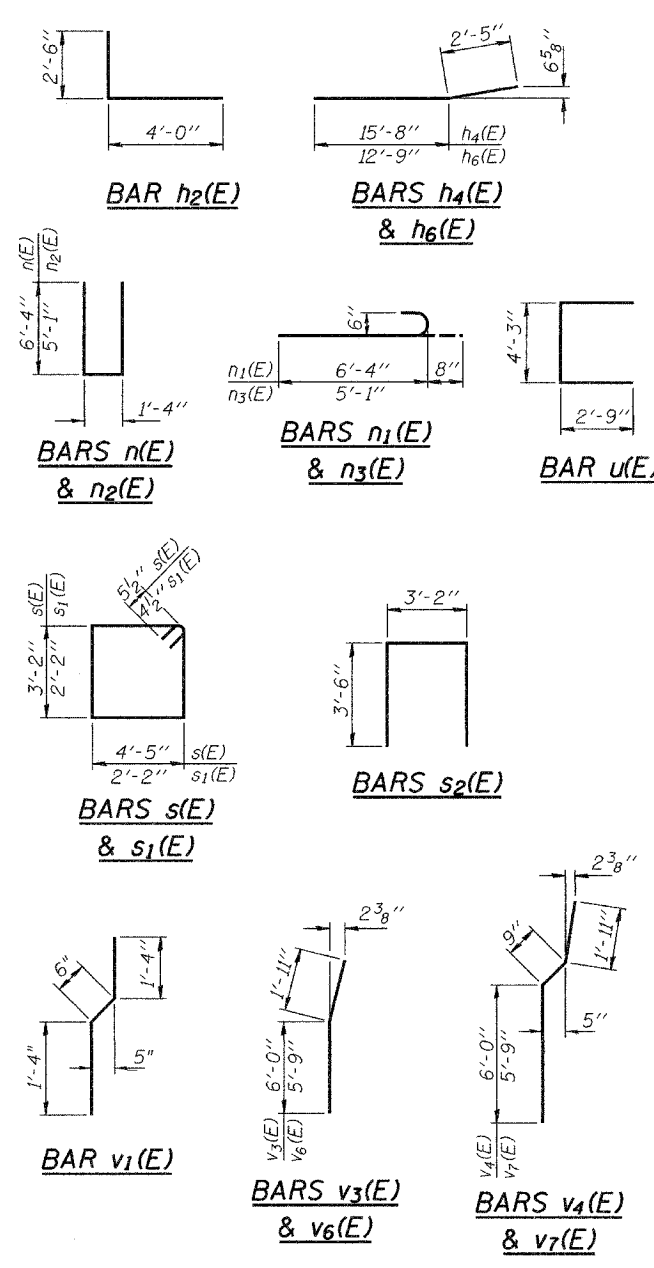
Notes: Reinforcement bars designated (E) shall be epoxy coated.
For details of bar splicers, see sheet 42 of 46.
For anchor bolt installation, see sheet 30 of 46.
Space reinforcement in cap to miss anchor bolts.

*PILE DATA

Type: HP10x57
Capacity: Driven to refusal
Est. Length: 56'
No. Required: 10 + 1 Test pile

NORTH ABUTMENT
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	4	#6	39'-9"	
h ₁ (E)	3	#5	28'-6"	
h ₂ (E)	28	#5	6'-6"	
h ₃ (E)	13	#4	18'-1"	
h ₄ (E)	9	#4	18'-1"	
h ₅ (E)	13	#4	15'-2"	
h ₆ (E)	9	#4	15'-2"	
h ₇ (E)	3	#5	14'-0"	
h ₈ (E)	12	#5	39'-8"	
n(E)	15	#6	14'-0"	
n ₁ (E)	6	#6	7'-0"	
n ₂ (E)	12	#6	11'-6"	
n ₃ (E)	6	#6	5'-9"	
p(E)	10	#7	42'-10"	
p ₁ (E)	6	#7	19'-10"	
p ₂ (E)	6	#7	17'-0"	
s(E)	36	#5	16'-1"	
s ₁ (E)	38	#4	9'-5"	
s ₂ (E)	29	#5	10'-2"	
u(E)	8	#6	9'-9"	
v(E)	40	#5	3'-5"	
v ₁ (E)	40	#4	3'-2"	
v ₂ (E)	19	#6	8'-11"	
v ₃ (E)	3	#6	7'-11"	
v ₄ (E)	16	#6	8'-8"	
v ₅ (E)	80	#4	8'-6"	
v ₆ (E)	13	#6	7'-8"	
v ₇ (E)	3	#6	8'-5"	
v ₈ (E)	16	#6	8'-8"	
Structure Excavation	Cu. Yd.		322.9	
Concrete Structures	Cu. Yd.		69.3	
Reinforcement Bars, Epoxy Coated	Pound		6350	
Furnishing Steel Piles HP10x57	Foot		560	
Test Pile Steel HP10x57	Each		1	
Driving Steel Piles	Foot		560	



DESIGNED	SMR
CHECKED	FT
DRAWN	h.t. parsons
CHECKED	SMR/FT

May 16, 2005
EXAMINED *Thomas J. Damagala*
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGE DESIGN
ENGINEER OF BRIDGES AND STRUCTURES

NORTH ABUTMENT
F.A.P. RTE. 315 - SEC. (18BRY-1)BR
FULTON COUNTY
STATION 74+09.00
STRUCTURE NO. 029-0068

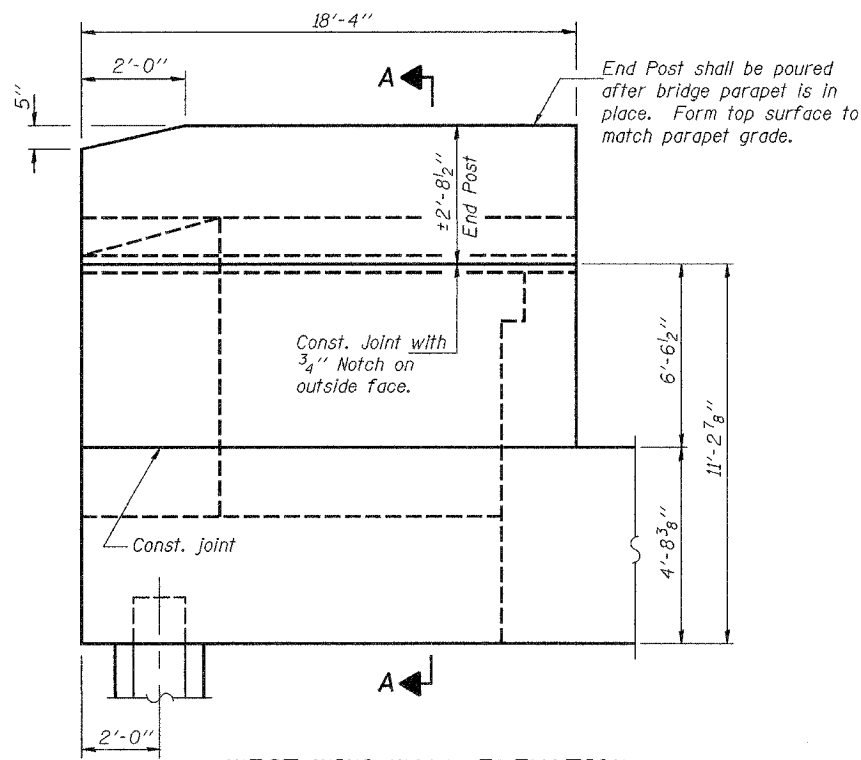
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	STATE SHEETS	SHEET NO.
FAP 315	(18BRY - DBR)	FULTON		199
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

Contract #88753

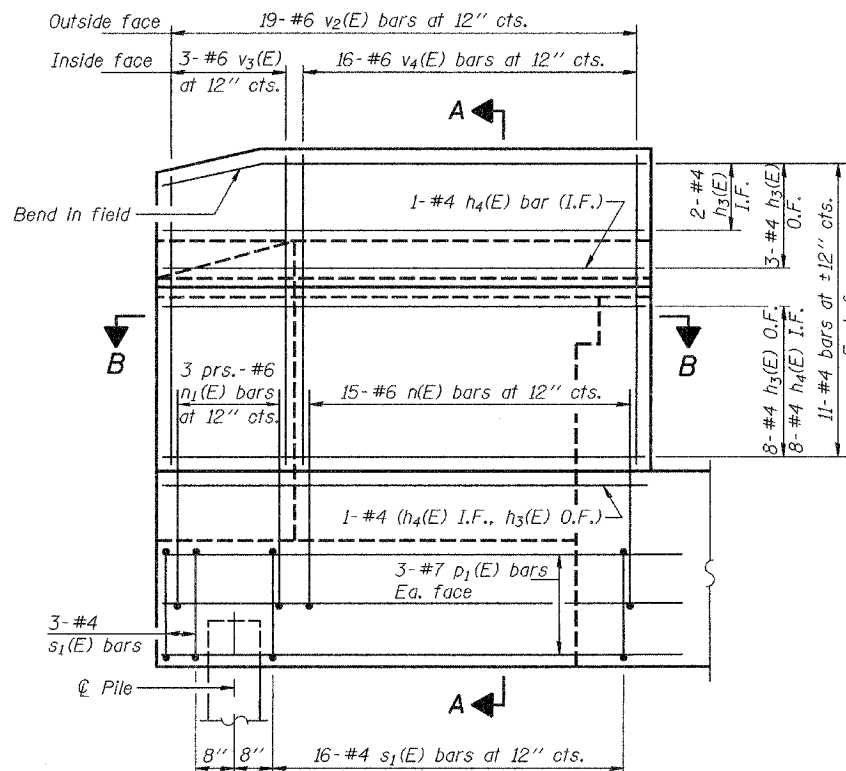
SHEET NO. 33

46 SHEETS



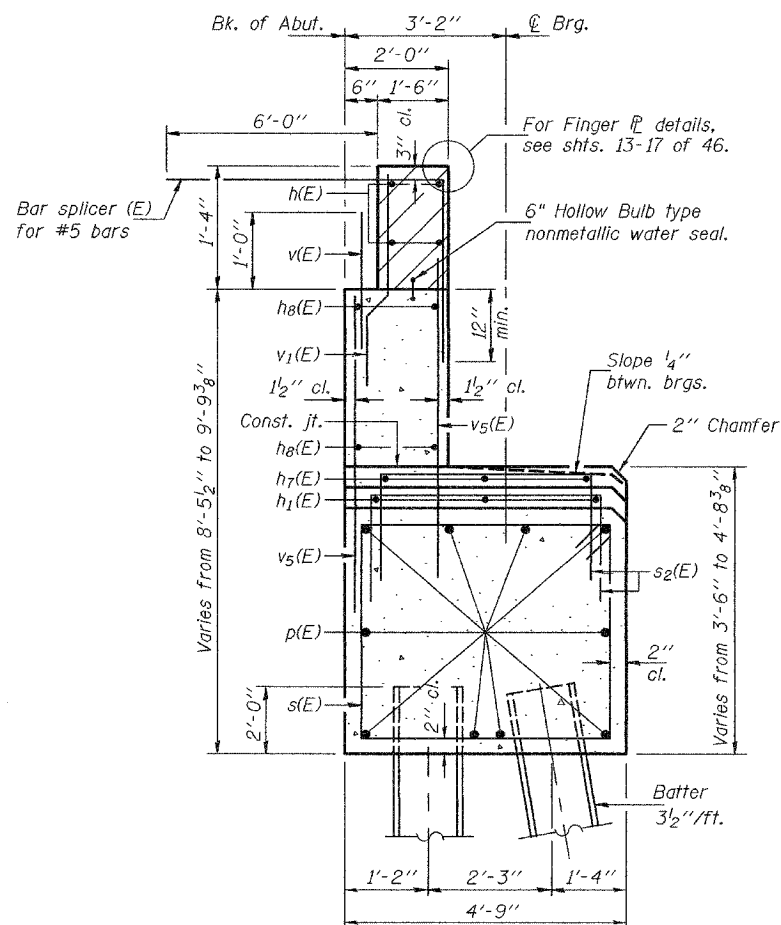
WEST WING WALL ELEVATION

Showing dimensions

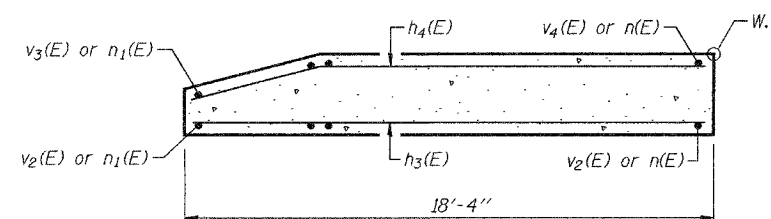


WEST WING WALL ELEVATION

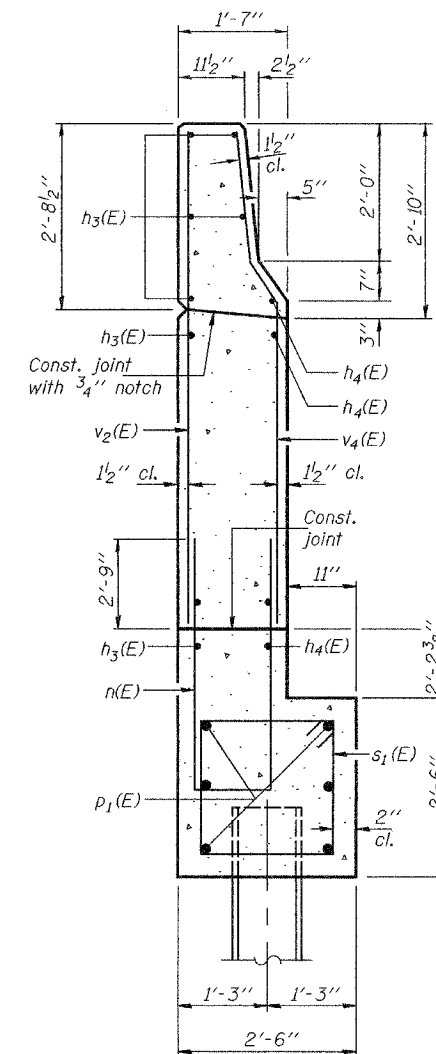
Showing reinforcement



SECTION THRU ABUT.



SECTION B-B



SECTION A-A

Notes: Hatched area to be poured after superstructure forms have been removed. Quantity of concrete included with Concrete Superstructure. Space reinforcement in cap to miss anchor bolts. Pour steps monolithically with cap. Reinforcement bars designated (E) shall be epoxy coated. Quantity of concrete in end post included with Concrete Superstructure on sheet 11 of 46.

DESIGNED	SMR
CHECKED	FT
DRAWN	h.t. parsons
CHECKED	SMR/FT

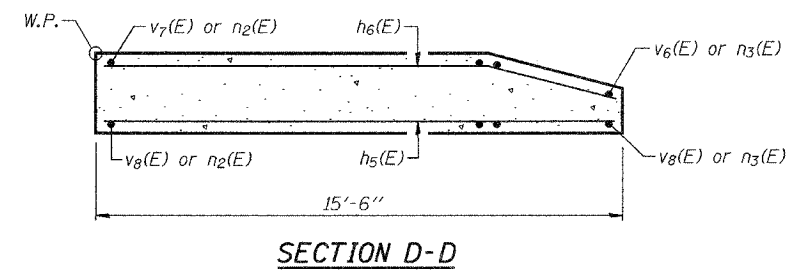
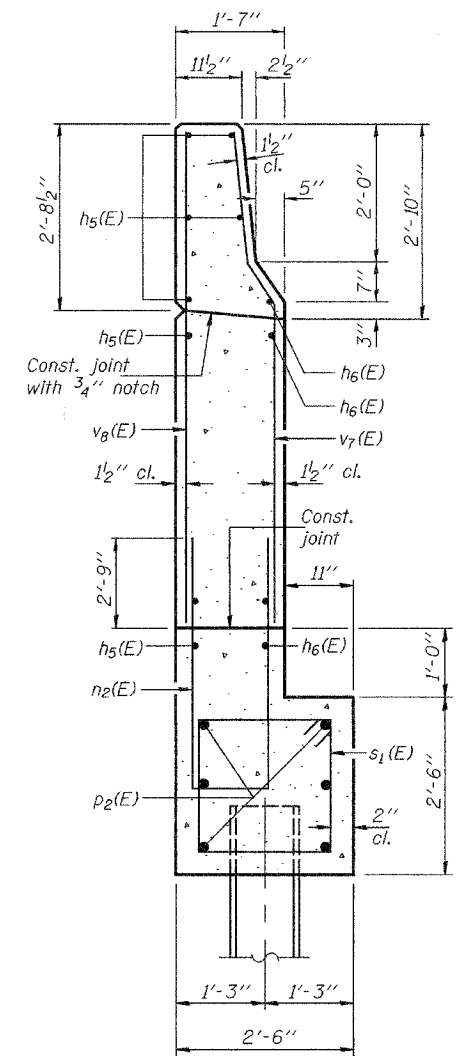
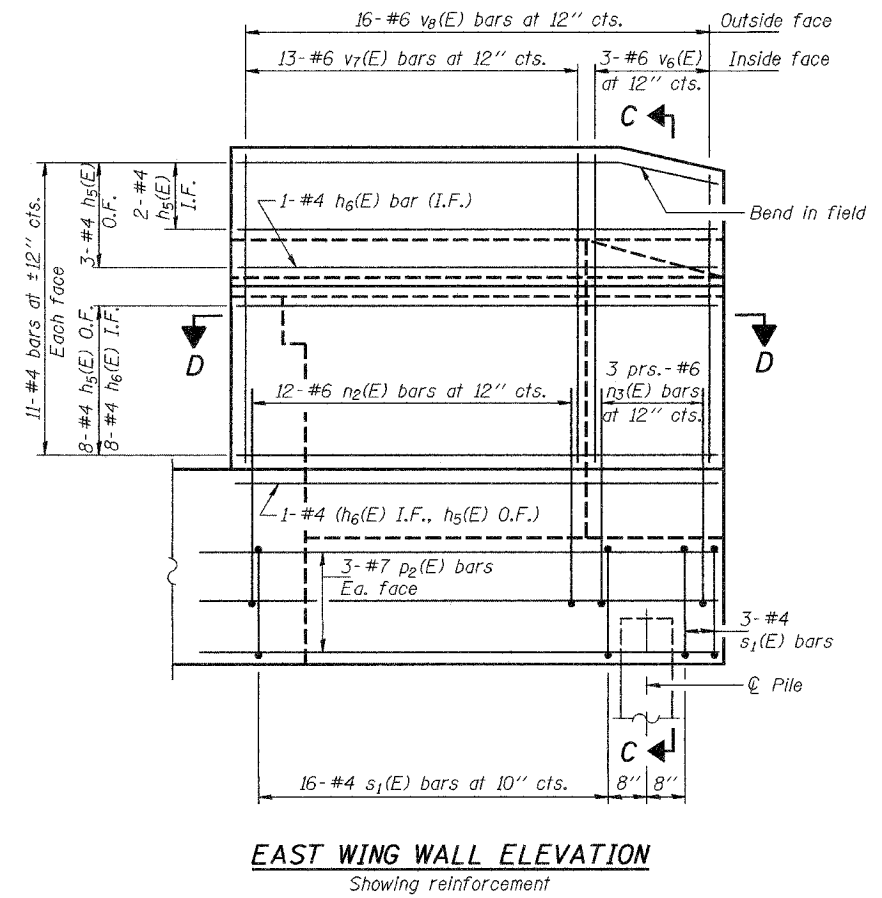
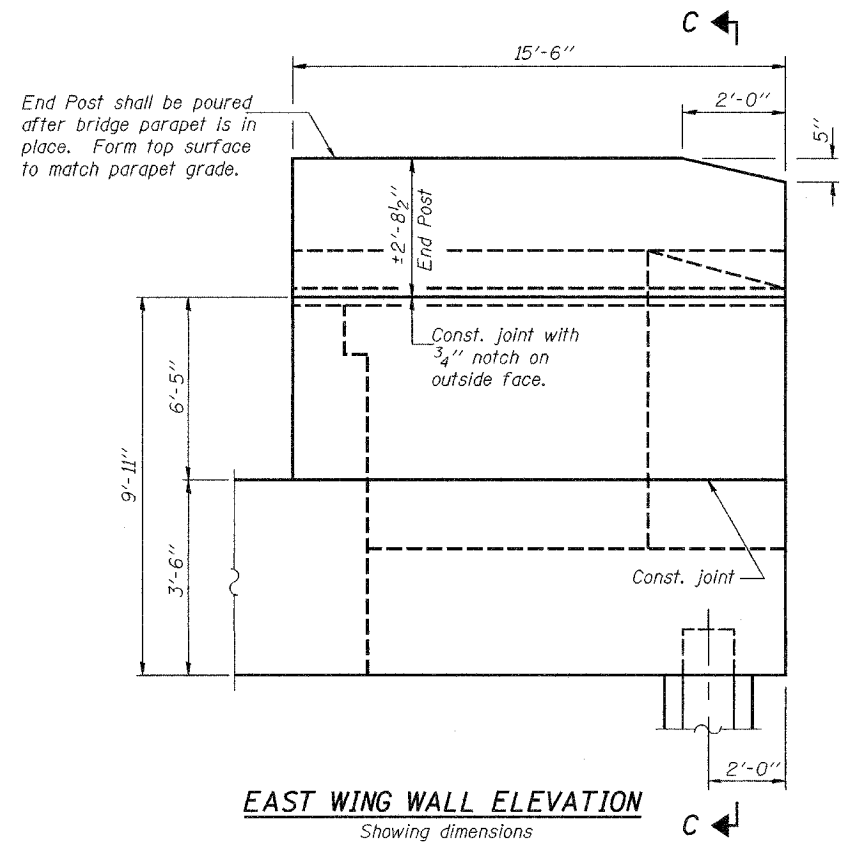
May 16, 2005
EXAMINED *Thomas J. Damagala*
ENGINEER OF BRIDGE DESIGN
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

NORTH ABUTMENT DETAILS
WEST WING WALL
F.A.P. RTE. 315 - SEC. (18BRY - DBR)
FULTON COUNTY
STATION 74+09.00
STRUCTURE NO. 029-0068

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	SHEET NO.	SHEET
FAP 315	(18BRY-1)BR	FULTON	198	46 SHEETS
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJ. NO.		

Contract #88753



Notes: Reinforcement bars designated (E) shall be epoxy coated.
Quantity of concrete in end post included with Concrete Superstructure on sheet 11 of 46.
See sheet 33 of 46 for Section thru Abutment.

DESIGNED	SMR
CHECKED	FT
DRAWN	h.t. parsons
CHECKED	SMR/FT

May 16, 2005
EXAMINED *Thomas J. Damagala*
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

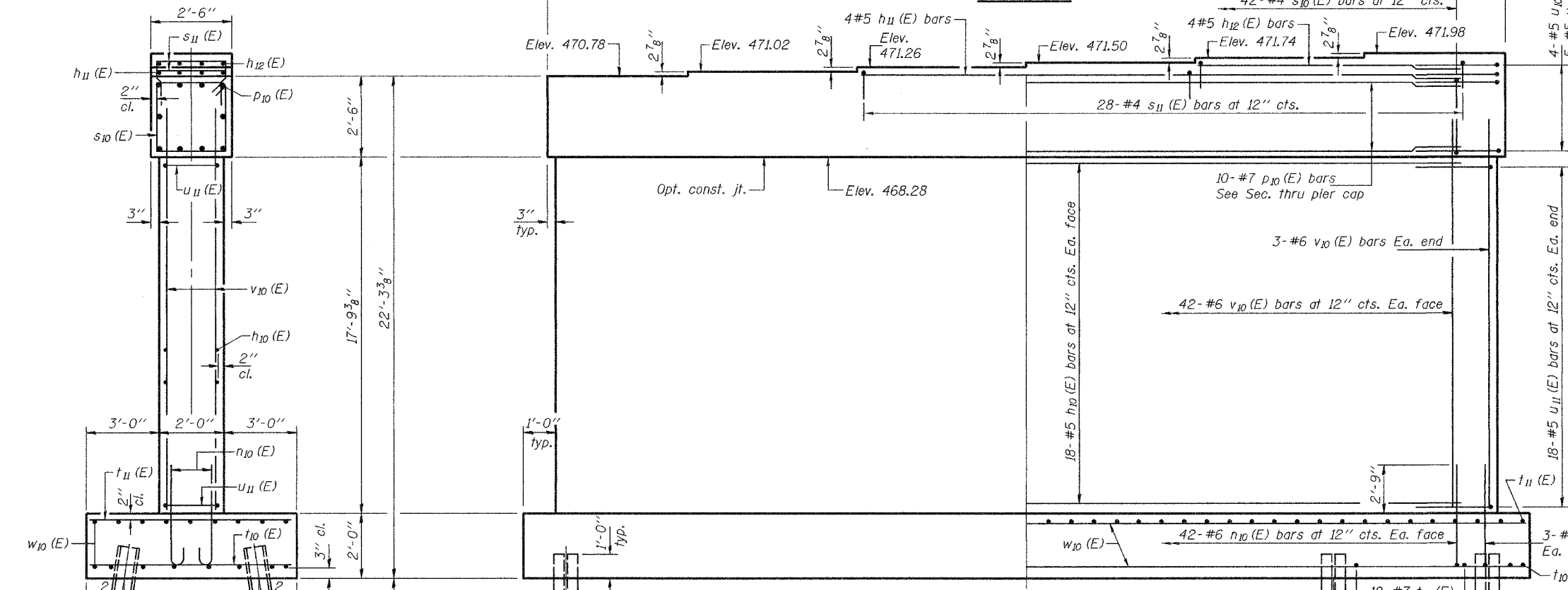
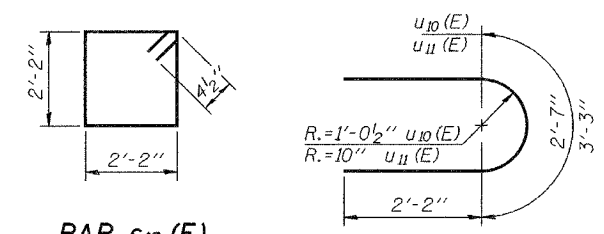
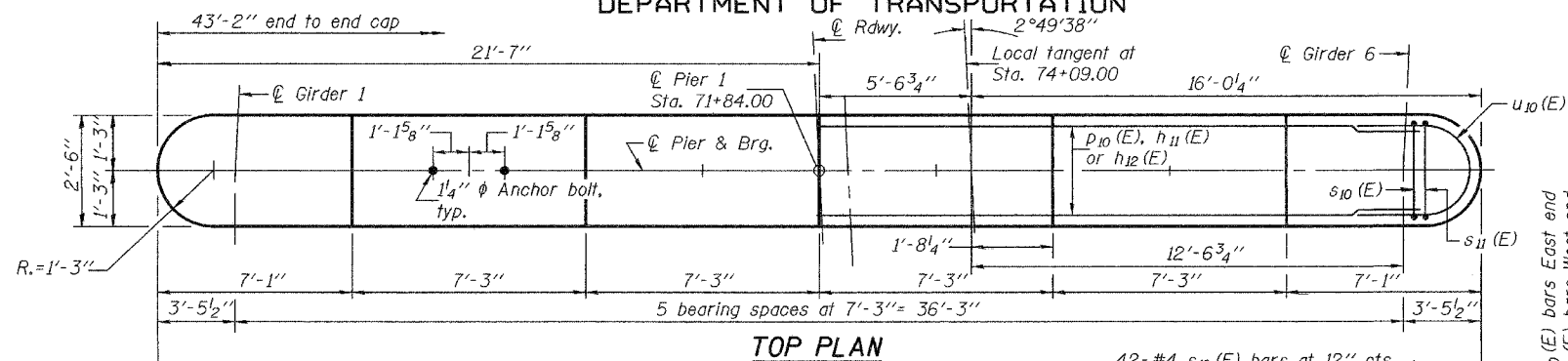
NORTH ABUTMENT DETAILS
EAST WING WALL
F.A.P. RTE. 315 - SEC. (18BRY-1)BR
FULTON COUNTY
STATION 74+09.000
STRUCTURE NO. 029-0068

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

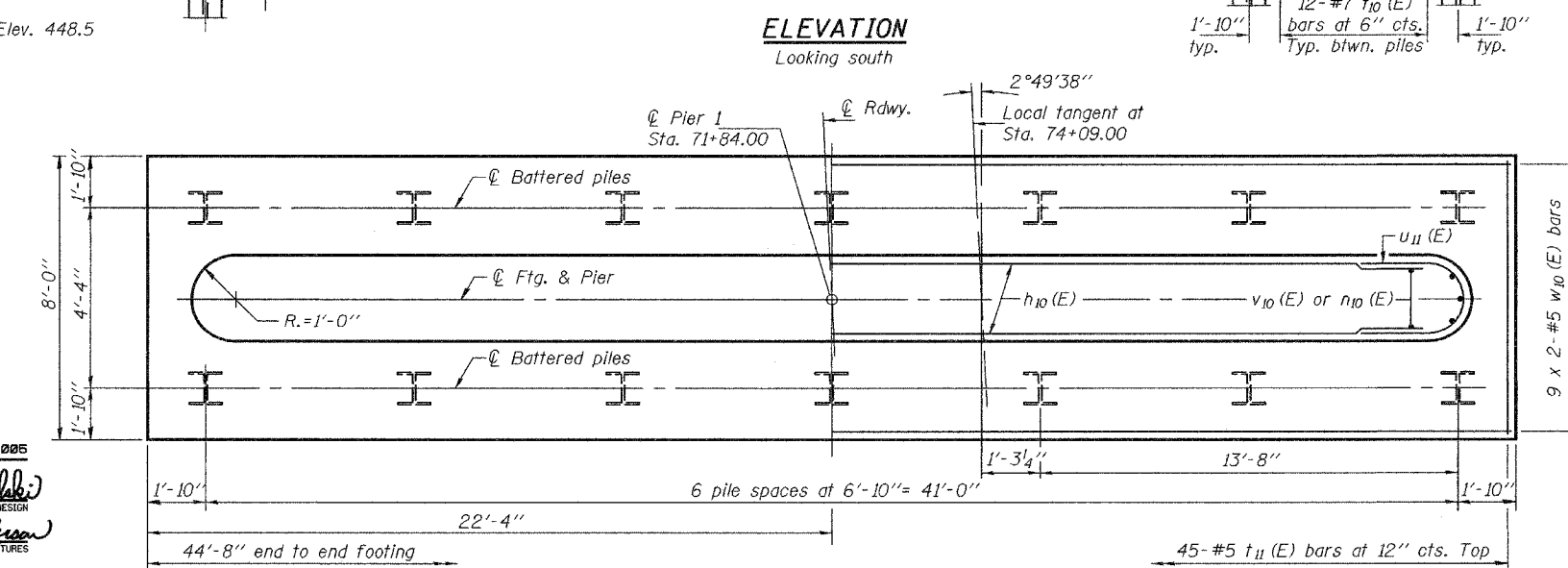
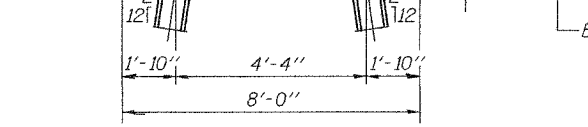
ROUTE NO.	SECTION	COUNTY	SHEET	SHEET NO. 35
FAP 315	(18BRY-1)BR	FULTON	190	46 SHEETS
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJ. NO. 1	

Contract #88753

Notes: Space reinforcement in cap to miss anchor bolts.
Four steps monolithically with cap.
Bars indicated thus 8 x 2- #5 etc. indicates 8 lines of bars with 2 lengths per line.
For anchor bolt installation details, see sheet 30 of 46.



MIN. BAR LAP
#5 bar = 3'-0"



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h10 (E)	36	#5	40'-8"	—
h11 (E)	4	#5	27'-5"	—
h12 (E)	4	#5	14'-1"	—
n10 (E)	90	#6	5'-0"	U
p10 (E)	10	#7	40'-8"	—
s10 (E)	42	#4	9'-5"	□
s11 (E)	28	#4	6'-4"	□
t10 (E)	76	#7	7'-8"	—
t11 (E)	45	#5	7'-8"	—
u10 (E)	9	#5	7'-7"	U
u11 (E)	36	#5	6'-11"	U
v10 (E)	90	#6	19'-10"	—
w10 (E)	34	#5	23'-8"	—

Concrete Structures	Cu. Yd.	94.3
Reinforcement Bars, Epoxy Coated	Pound	8990
Structure Excavation	Cu. Yd.	129.8
Furnishing Steel Piles HP12x74	Foot	494
Driving Steel Piles	Foot	494
Test Pile Steel HP12x74	Each	1

Reinforcement bars designated (E) shall be epoxy coated.

PILE DATA

Type: HP12x74
Capacity: Driven to refusal
Est. length: 38'
No. Required: 13 + 1 test pile

DESIGNED	CCC
CHECKED	DPN
DRAWN	h.t. parsons
CHECKED	FT/DPN

May 16, 2005
EXAMINED *Thomas J. Demgalecki*
ENGINEER OF BRIDGE DESIGN
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES

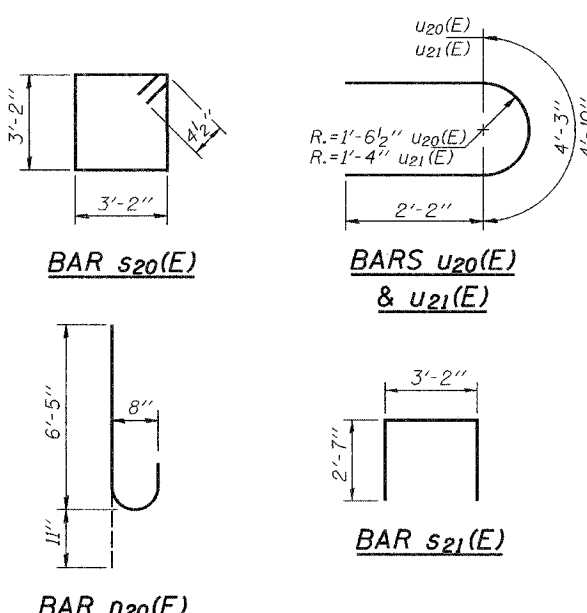
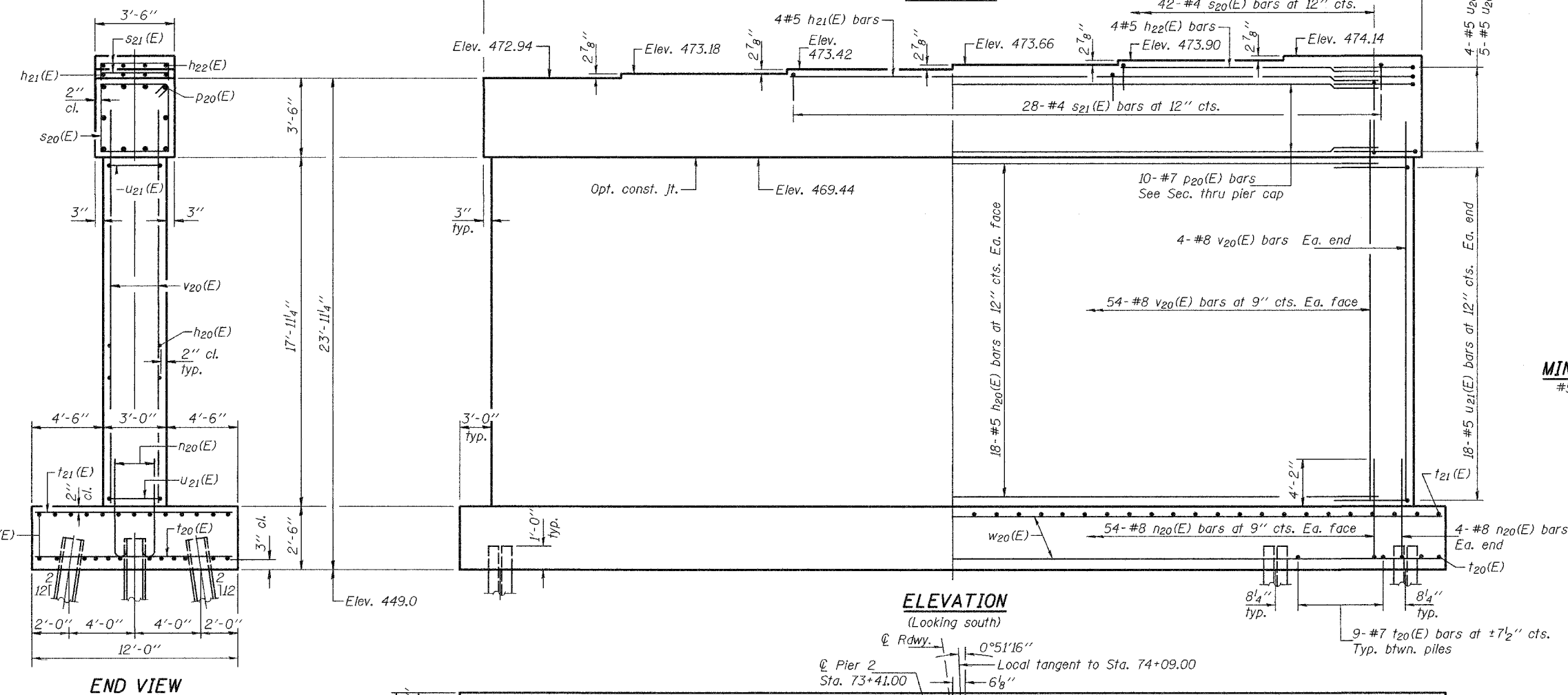
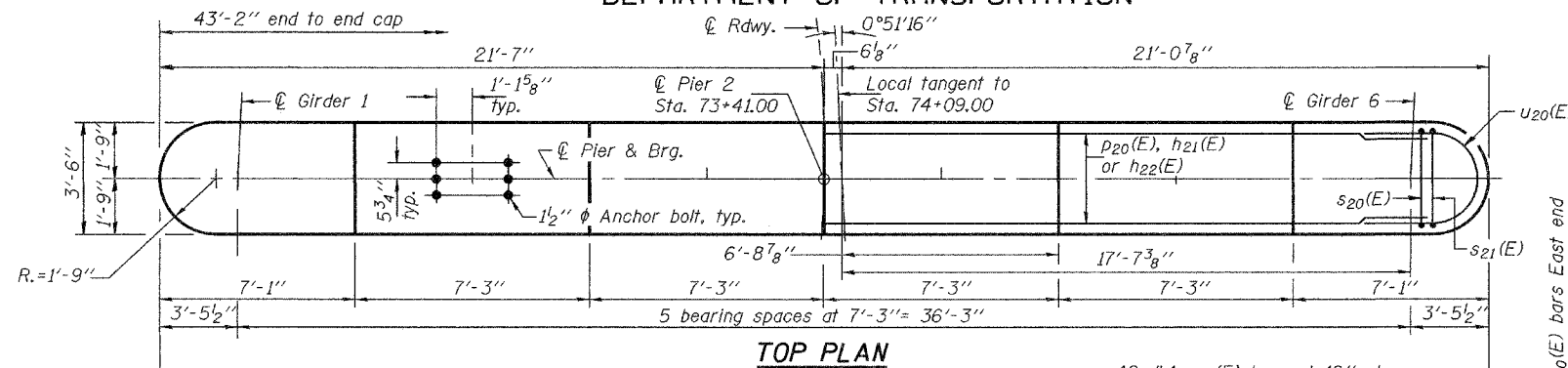
PIER 1
F.A.P. RTE. 315 - SEC. (18BRY-1)BR
FULTON COUNTY
STATION 74+09.00
STRUCTURE NO. 029-0068

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	POST MILE	SHEET	SHEET NO. 36 46 SHEETS
FAP 315	(18BRY-1)BR	FULTON		36	
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT			

Contract #88753

Notes: Space reinforcement in cap to miss anchor bolts.
Four steps monolithically with cap.
Bars indicated thus 12 x 2- #5 etc. indicates 12 lines of bars with 2 lengths per line.
For anchor bolt installation details, see sheet 30 of 46.



BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h20(E)	36	#5	39'-8"	—
h21(E)	4	#5	26'-11"	—
h22(E)	4	#5	12'-5"	—
n20(E)	116	#8	7'-4"	U
p20(E)	10	#7	39'-8"	—
s20(E)	42	#4	13'-5"	□
s21(E)	28	#4	8'-4"	□
t20(E)	67	#7	11'-8"	—
t21(E)	49	#5	11'-8"	—
u20(E)	9	#5	9'-2"	U
u21(E)	36	#5	8'-7"	U
v20(E)	116	#8	20'-0"	—
w20(E)	50	#5	25'-8"	—
Concrete Structures		Cu. Yd.	159.8	
Reinforcement Bars, Epoxy Coated		Pound	15400	
Structure Excavation		Cu. Yd.	187.3	
Furnishing Steel Piles HP12x74		Foot	805	
Driving Steel Piles		Foot	805	
Test Pile HP12x74		Each	1	

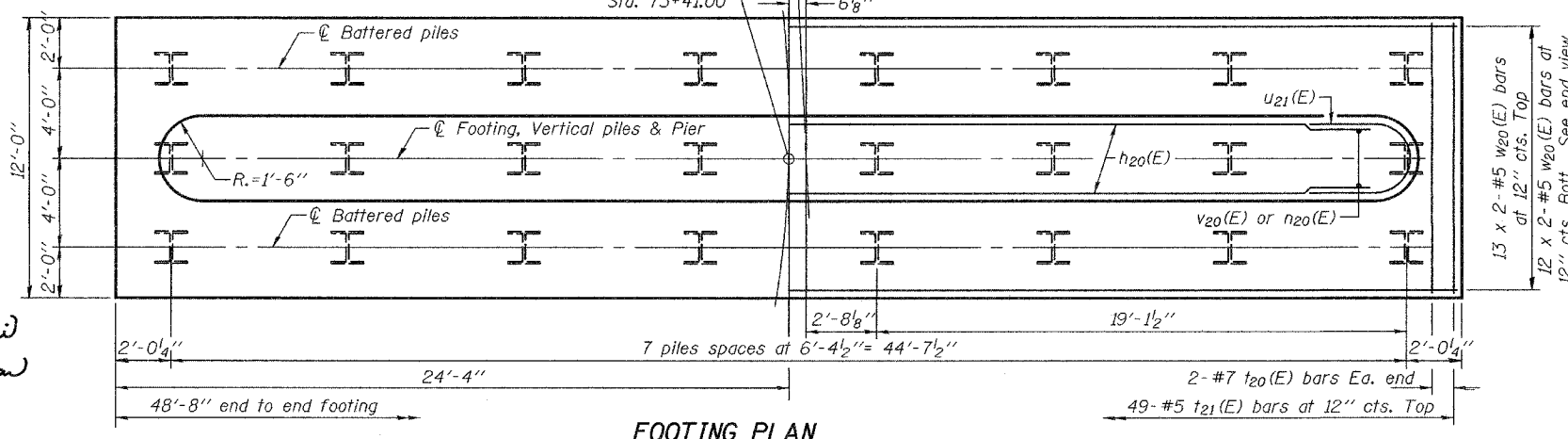
MIN. BAR LAP
#5 bar = 3'-0"

PILE DATA

Type: HP12x74
Capacity: Driven to refusal
Est. length: 35'
No. Required: 23 + 1 test pile

DESIGNED	DPN
CHECKED	FT
DRAWN	h.t. parsons
CHECKED	DPN/FT

May 16, 2005
EXAMINED *Thomas J. Duggan*
ENGINEER OF BRIDGE DESIGN
PASSED *Ralph E. Anderson*
ENGINEER OF BRIDGES AND STRUCTURES



PIER 2
F.A.P. RTE. 315 - SEC. (18BRY-1)BR
FULTON COUNTY
STATION 74+09.000
STRUCTURE NO. 029-0068