

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

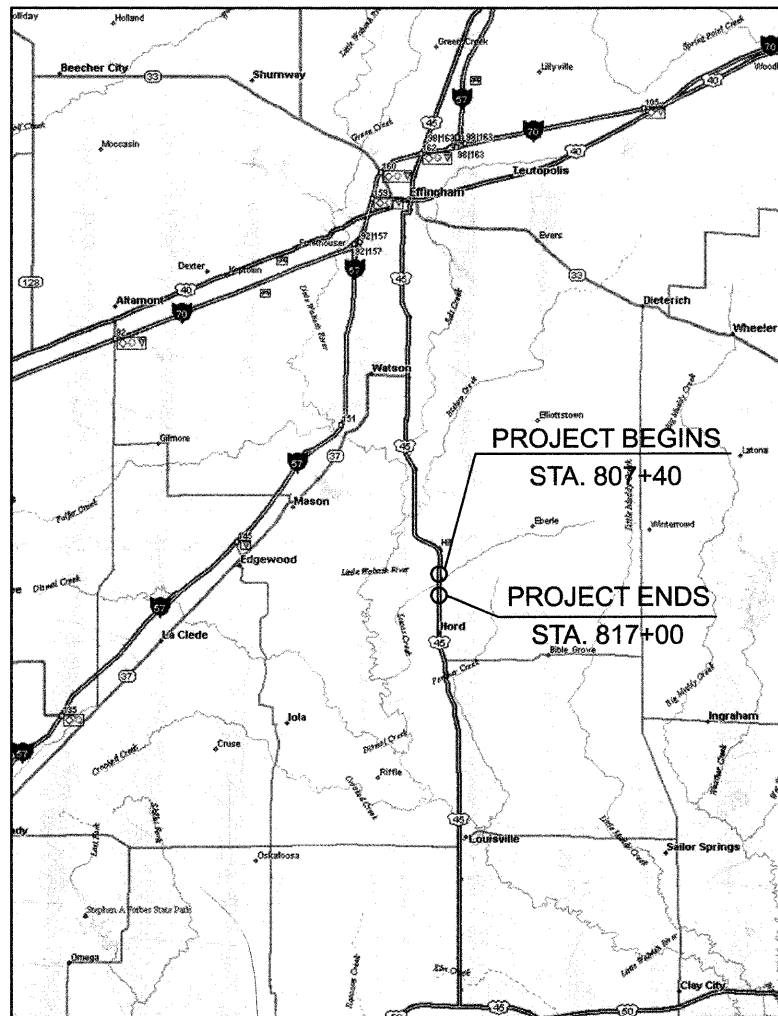
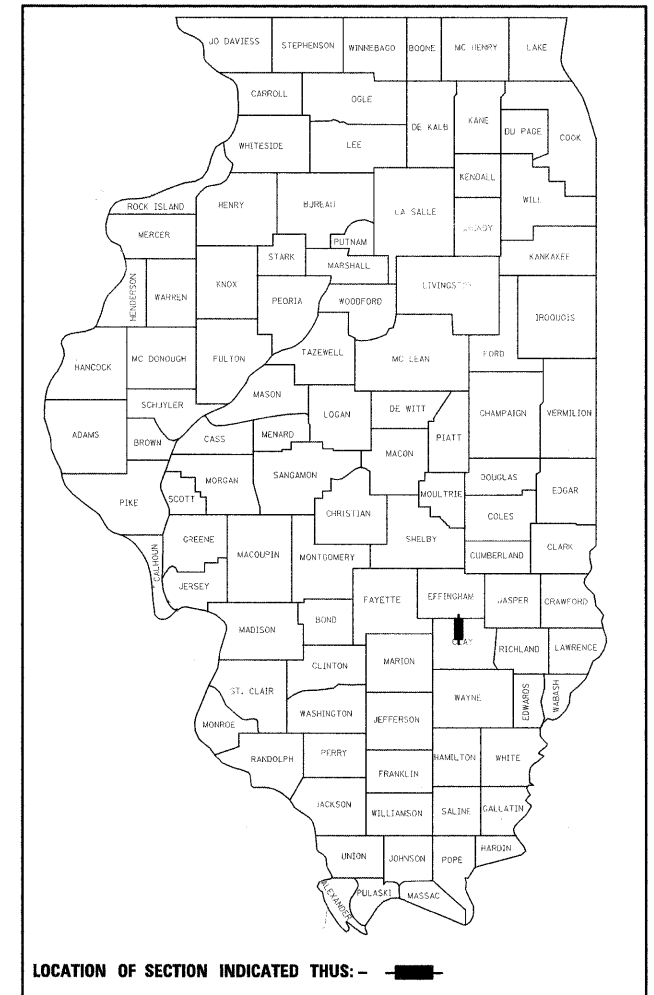
PROPOSED  
HIGHWAY PLANS

F.A.P. ROUTE 328 (U.S. ROUTE 45)  
SECTION (4BR-1)B PROJECT: ACF-0328(027)  
BRIDGE REPLACEMENT  
CLAY COUNTY  
C-97-063-08

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	(4BR-1)B	CLAY	42	1
FED. ROAD DIST. NO.		ILLINOIS	CONTRACT NO. 74310	

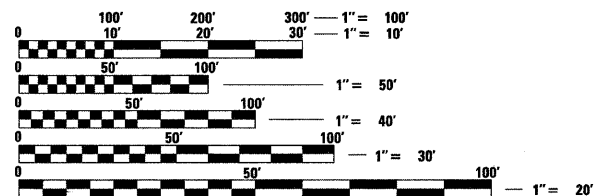
JOB NO. D-97-023-08

FOR INDEX OF SHEETS, SEE SHEET NO. 2



LOCATION MAP  
NO SCALE

ADT = 2,500 (2007)



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

J.U.L.I.E.  
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION  
1-800-892-0123  
OR 811

PROJECT ENGINEER: DOUGLAS RATERMANN – HMG ENGINEERS  
PROJECT MANAGER

CONTRACT NO. 74310



STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

SUBMITTED August 17, 2009

*Regis Z. Smith*  
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

December 4, 2009  
*Charles G. Ingersoll*  
ENGINEER OF DESIGN AND ENVIRONMENT

December 4, 2009  
*Christine M. Reed*  
DIRECTOR OF HIGHWAYS, CHIEF ENGINEER



*Douglas J. Ratermann*  
DOUGLAS J. RATERMANN, P.E.  
ILLINOIS REGISTERED ENGINEER NO 062-056320  
REGISTRATION EXPIRES NOV. 30, 2009

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**INDEX OF SHEETS**

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	INDEX OF SHEETS, GENERAL NOTES AND APPLICABLE HIGHWAY STANDARDS
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5	TYPICAL SECTIONS AND MISCELLANEOUS DETAILS
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7-10	SCHEDULE OF QUANTITIES
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13	TYPICAL SECTIONS STAGE CONSTRUCTION
14	STAGE I CONSTRUCTION AND TRAFFIC CONTROL
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16	WIDE LOAD SIGNING PLAN
17	EROSION CONTROL
18	REMOVALS
19-39	STRUCTURE PLANS
40-42	LUCAS CREEK CROSS-SECTIONS

**GENERAL NOTES**

- 10 FOOT TRANSITIONS SHALL BE USED TO MATCH PROPOSED ITEMS OF WORK TO EXISTING ITEMS IN THE FIELD, UNLESS OTHERWISE SHOWN. THE TRANSITIONS SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE FOR THE PROPOSED ITEM OF WORK SPECIFIED.
- THE ENGINEER SHALL BE THE SOLE JUDGE CONCERNING CURING TIME FOR THE VARIOUS BITUMINOUS LIFTS.
- EXCEPT AS NOTED IN THE PLANS, PAVEMENT GRADES SHOWN ARE AT THE TOP OF PAVEMENT SURFACES.
- ALL DIMENSIONS ARE IN FEET (FT) EXCEPT AS NOTED.
- ALL ELEVATIONS REFER TO MEAN SEA LEVEL DATUM.
- ABANDONED UNDERGROUND UTILITIES THAT CONFLICT WITH CONSTRUCTION SHALL BE DISPOSED OUTSIDE THE LIMITS OF THE RIGHT OF WAY ACCORDING TO ARTICLE 202.03 OF THE STANDARD SPECIFICATIONS AND AS DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE CONSIDERED INCLUDED IN THE COST OF EARTH EXCAVATION AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- SEEDING SHALL BE PLACED ON ALL AREAS THAT ARE DISTURBED BY CONSTRUCTION OPERATIONS. NUTRIENTS AND MULCH, IF REQUIRED, SHALL BE APPLIED TO ALL SEEDING AREAS. THE SEEDING SHALL BE DONE ACCORDING TO ARTICLE 250 AND 251 OF THE STANDARD SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO INSURE THAT ADJACENT PAVEMENT IS NOT DAMAGED DURING CONSTRUCTION. REPLACEMENT OF PAVEMENT DAMAGED BY THE CONTRACTOR SHALL BE AT THE EXPENSE OF THE CONTRACTOR.
- EROSION CONTROL SHALL BE PLACED AROUND INLETS, END SECTIONS AND HEADWALLS IN ACCORDANCE WITH THE DETAILS IN THE PLANS.
- ANY REFERENCE TO A STANDARD IN THESE PLANS SHALL BE INTERPRETED TO MEAN THE EDITION AS INDICATED BY THE SUBNUMBER LISTED IN THE INDEX OF SHEETS OR THE COPY OF THE STANDARD INCLUDED IN THESE PLANS.
- THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
- ALL SAW CUTTING OF EXISTING PAVEMENT NOT RELATED TO PAVEMENT PATCHING SHALL BE CONSIDERED INCLUDED IN THE COST OF THE VARIOUS ITEMS OF WORK INVOLVED. THE MINIMUM CUT DEPTH INTO THE PAVEMENT SHALL BE 1.5 INCHES UNLESS OTHERWISE SPECIFIED IN THE PLANS.
- ACCESS TO PRIVATE AND COMMERCIAL PROPERTIES SHALL BE MAINTAINED AT ALL TIMES THROUGHOUT THE CONSTRUCTION PERIOD. TEMPORARY DRIVEWAYS, IF NECESSARY, SHALL BE CONSTRUCTED BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER. THIS WORK WILL BE MEASURED AND PAID FOR AT THE CONTRACT UNIT PRICE PER EACH FOR TEMPORARY ACCESS (PRIVATE ENTRANCE). THE AGGREGATE USED SHALL BE OF THE SAME TYPE AS THE PERMANENT AGGREGATE SURFACE, AND THE MATERIAL FROM THE TEMPORARY ACCESS MAY BE UTILIZED IN THE PERMANENT ENTRANCE SURFACE AS DIRECTED BY THE ENGINEER.
- ALL TEMPORARY PAVEMENT MARKINGS SHALL BE PAINT ON MILLED SURFACES AND TAPE ON THE FINAL SURFACE COURSE.
- PIPE UNDERDRAINS FOR STRUCTURES 4" SHALL BE EXTENDED DOWN SLOPE TO THE DITCH. ALL WORK NECESSARY TO ATTACH A PIPE DRAIN TO THE ABUTMENT DRAIN PIPE, TRENCHING IN THE PIPE DRAIN AND ATTACHING THE PIPE DRAIN TO THE CONCRETE HEADWALLS IS INCLUDED IN THE CONTRACT UNIT PRICE FOR PIPE DRAINS OF THE DIAMETER SPECIFIED.
- PORTLAND CEMENT CONCRETE BASE COURSE WIDENING, 10" NEAR THE BRIDGE WILL NEED TO BE REMOVED PRIOR TO THE CONSTRUCTION OF THE APPROACH SLAB. THIS QUANTITY HAS BEEN INCLUDED IN PAVEMENT REMOVAL AND SHALL BE PAID FOR AS SUCH.
- THE FOLLOWING RATES WERE USED IN THE COMPUTATION OF QUANTITIES:
 

NITROGEN FERTILIZER NUTRIENT	90 LBS/ACRE
PHOSPHORUS FERTILIZER NUTRIENT	90 LBS/ACRE
POTASSIUM FERTILIZER NUTRIENT	90 LBS/ACRE
AGRICULTURAL GROUND LIMESTONE	4.0 TONS/ACRE
MULCH, METHOD 1	2.0 TONS/ACRE
TEMPORARY EROSION CONTROL SEEDING	100 LBS/ACRE
AGGREGATE SURFACE COURSE, TYPE B	2.05 TONS/CU YD
BITUMINOUS MATERIALS (PRIME COAT)	0.10 GAL/SQ YD
AGGREGATE (PRIME COAT)	4.0 LB/SQ YD
HOT-MIX ASPHALT BINDER COURSE, IL 19.0, N50	2.016 TONS/CU YD
HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	2.016 TONS/CU YD
HOT-MIX ASPHALT SHOULDERS	2.016 TONS/CU YD

**UTILITY INFORMATION**

UTILITY NAME	UTILITY TYPE AND UTILITY LOCATION	ANTICIPATED INVOLVEMENT
AMEREN CIPS 1800 FORD AVE EFFINGHAM, IL 62401 (217)347-3135	ELECTRIC PARALLEL TO WEST	RELOCATE POWER POLES DATE UNKNOWN
E-J WATER CORP P.O. BOX 8 DIETERICH, IL 62424 (217)245-5762	WATER PARALLEL TO EAST	NO ANTICIPATED INVOLVEMENT
WABASH TELEPHONE COOP P.O. BOX 299 LOUISVILLE, IL 62858 (618)665-3311	TELEPHONE PARALLEL TO WEST	NO ANTICIPATED INVOLVEMENT

**APPLICABLE HIGHWAY STANDARDS**

STD. NO.	TITLE
000001-05	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
001006	DECIMAL OF AN INCH AND OF A FOOT
280001-05	TEMPORARY EROSION CONTROL SYSTEMS
420401-08	BRIDGE APPROACH PAVEMENT CONNECTOR
482001-02	HMA SHOULDER ADJACENT TO FLEXIBLE PAVEMENTS
515001-03	NAME PLATE FOR BRIDGES
601101-01	CONCRETE HEADWALL FOR PIPE DRAIN
630001-08	STEEL PLATE BEAM GUARDRAIL
630201-06	PCC/HMA STABILIZATION AT STEEL PLATE BEAM GUARDRAIL
630301-05	SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
631031-08	TRAFFIC BARRIER TERMINAL, TYPE 6
635006-03	REFLECTOR AND TERMINAL MARKER PLACEMENT
635011-01	REFLECTOR MARKERS AND MOUNTING DETAILS
666001-01	RIGHT-OF-WAY MARKERS
701006-03	OFF-RD OPERATIONS, 2L, 2W, 15' TO 24" FROM PAVEMENT EDGE
701011-02	OFF-RD MOVING OPERATIONS, 2L, 2W, DAY ONLY
701306-02	LANE CLOSURE, 2L, 2W, SLOW MOVING OPERATIONS DAY ONLY, FOR SPEEDS > 45 MPH
701311-03	LANE CLOSURE, 2L, 2W, MOVING OPERATIONS, DAY ONLY
701321-10	LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
701326-03	LANE CLOSURE, 2L, 2W, PAVEMENT WIDENING, FOR SPEEDS > 45 MPH
701901-01	TRAFFIC CONTROL DEVICES
704001-06	TEMPORARY CONCRETE BARRIER
720001-01	SIGN PANEL MOUNTING DETAILS
720006-01	SIGN PANEL ERECTION DETAILS
780001-02	TYPICAL PAVEMENT MARKINGS
781001-03	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS
886001-01	DETECTOR LOOP INSTALLATIONS
886006-01	TYPICAL LAYOUTS FOR DETECTION LOOPS

MIXTURE COMPOSITION TABLE:	
MIXTURE USE:	SURFACE
APPLICATION:	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50
AIR VOIDS / Ndes:	4.0% @ Ndes 50
PG BINDER GRADE:	64-22
MIXTURE COMPOSITION:	IL 9.5
FRICITION AGGREGATE:	MIXTURE C
RAP % (MAX):	15%
MIXTURE USE:	BINDER
APPLICATION:	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N70
AIR VOIDS / Ndes:	4.0% @ Ndes 70
PG BINDER GRADE:	PG 64-22
MIXTURE COMPOSITION:	IL 19.0
RAP % (MAX):	25%
MIXTURE USE:	SHOULDERS
APPLICATION:	HOT-MIX ASPHALT SHOULDERS
AIR VOIDS / Ndes:	2.0% @ Ndes 30
PG BINDER GRADE:	PG 58-22
RAP % (MAX):	30%

FILE NAME =	USER NAME = #USER#	DESIGNED - DJR	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>INDEX OF SHEETS, GENERAL NOTES AND APPLICABLE HIGHWAY STANDARDS</b>	F.A.P. RTE. 328	SECTION 4(BR-1)B	COUNTY CLAY	TOTAL SHEETS 42	SHEET NO. 2
#FILE#	PLOT SCALE = #SCALE#	DRAWN - KOJ	REVISED -			CONTRACT NO. 74310				
	PLOT DATE = #DATE#	CHECKED -	REVISED -			ILLINOIS FED. AID PROJECT				
		DATE -	REVISED -			SCALE:	SHEET NO. 1 OF 1 SHEETS	STA. TO STA.		

**SUMMARY OF QUANTITIES**

80% FED.  
20% STATE

CODE NO.	ITEM	UNIT	QUANTITY
20100500	TREE REMOVAL, ACRES	ACRE	0.75
20200100	EARTH EXCAVATION	CU YD	4,930
20300100	CHANNEL EXCAVATION	CU YD	674
20700400	POROUS GRANULAR EMBANKMENT, SPECIAL	CU YD	150
25001000	SEEDING, CLASS 2 (SPECIAL)	ACRE	1.50
25100630	EROSION CONTROL BLANKET	SQ YD	230
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	139
28000305	TEMPORARY DITCH CHECKS	FOOT	150
28000500	INLET AND PIPE PROTECTION	EACH	1
28000400	PERIMETER EROSION BARRIER	FOOT	613
28100105	STONE RIPRAP, CLASS A3	SQ YD	74
28100109	STONE RIPRAP, CLASS A5	SQ YD	752
28200200	FILTER FABRIC	SQ YD	826
35400500	PORTLAND CEMENT CONCRETE BASE COURSE WIDENING 10"	SQ YD	365
35600724	HOT-MIX ASPHALT BASE COURSE WIDENING, 12"	SQ YD	464
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	58
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	802
40600300	AGGREGATE (PRIME COAT)	TON	17
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	160
40600990	TEMPORARY RAMP	SQ YD	85
40603085	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N70	TON	574
40603310	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50	TON	188
42001430	BRIDGE APPROACH PAVEMENT CONNECTOR (FLEXIBLE)	SQ YD	57
44000100	PAVEMENT REMOVAL	SQ YD	332
44004250	PAVED SHOULDER REMOVAL	SQ YD	143
48101500	AGGREGATE SHOULDERS, TYPE B 6"	SQ YD	195
48203100	HOT-MIX ASPHALT SHOULDERS	TON	841
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50105220	PIPE CULVERT REMOVAL	FOOT	30
50200100	STRUCTURE EXCAVATION	CU YD	229
50300100	FLOOR DRAINS	EACH	12
50300225	CONCRETE STRUCTURES	CU YD	72.5
50300255	CONCRETE SUPERSTRUCTURE	CU YD	270.3
50300260	BRIDGE DECK GROOVING	SQ YD	594
50300280	CONCRETE ENCASEMENT	CU YD	4.2
50300300	PROTECTIVE COAT	SQ YD	723
50500105	FURNISHING AND ERECTING STRUCTURAL STEEL	L SUM	1
50500505	STUD SHEAR CONNECTORS	EACH	2,256
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	68,750

/4915/4915.195A#3LucasCreekStandalone/smq45\_01.dgn

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PLOT DATE = #DATE#		DATE -	REVISED -		ILLINOIS FED. AID PROJECT								

SHEET NO. 4915

**SUMMARY OF QUANTITIES**

80% FED.  
20% STATE

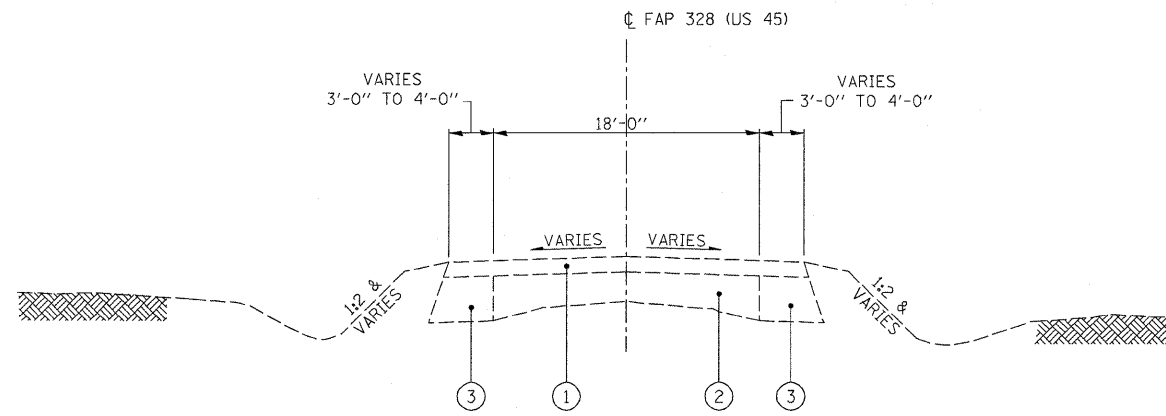
CODE NO.	ITEM	UNIT	X071-2A QUANTITY
50800515	BAR SPLICERS	EACH	575
51201700	FURNISHING STEEL PILES HP12X74	FOOT	216
51500100	NAME PLATES	EACH	1
52100520	ANCHOR BOLTS, 1"	EACH	32
59100100	GEOCOMPOSITE WALL DRAIN	SQ YD	74
60100060	CONCRETE HEADWALL FOR PIPE DRAINS	EACH	4
60100905	PIPE DRAINS 4"	FOOT	38
60109580	PIPE UNDERDRAINS FOR STRUCTURES 4"	FOOT	155
* 63000001	STEEL PLATE BEAM GUARD RAIL, TYPE A, 6" POSTS	FOOT	837.5
* 63100085	TRAFFIC BARRIER TERMINAL, TYPE 6	EACH	4
* 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	4
63200310	GUARDRAIL REMOVAL	FOOT	476
66600105	FURNISHING AND ERECTING RIGHT-OF-WAY MARKERS	EACH	12
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	8
67100100	MOBILIZATION	L SUM	1
70100460	TRAFFIC CONTROL AND PROTECTION, STANDARD 701306	L SUM	1
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1
70101205	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321 (SPECIAL)	EACH	1
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	20
<del>70100500</del>	<del>TEMPORARY BRIDGE TRAFFIC SIGNALS</del>	<del>EACH</del>	<del>1</del>
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	480
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	716
70400100	TEMPORARY CONCRETE BARRIER	FOOT	637.5
70400200	RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	612.5
* 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	2,160
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	12
* 78100105	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	EACH	1
* 78200410	GUARDRAIL MARKERS, TYPE A	EACH	19
* 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	13
X0323988	TEMPORARY SOIL RETENTION SYSTEM	SQ FT	368
X0326372	REMOVE RIGHT-OF-WAY MARKERS	EACH	2
<del>X000733</del>	<del>TOPSOIL EXCAVATION AND PLACEMENT, 4"</del>	<del>SQ YD</del>	<del>3,695</del>
Z0001900	ASBESTOS BEARING PAD REMOVAL	EACH	24
Z0030250	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2
Z0030350	IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2
* Z0065000	SETTING PILES IN ROCK	EACH	12

\*Specialty Items

FILE NAME = #FILE#	USER NAME = #USER#	DESIGNED - DJR	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>SUMMARY OF QUANTITIES</b>	F.A.P. RTE. 328	SECTION 4(BR-1)B	COUNTY CLAY	TOTAL SHEETS 42	SHEET NO. 4		
PLOT SCALE = #SCALE#	CHECKED -	REVISED -	REVISED -			SCALE:	SHEET NO. 2 OF 2 SHEETS	STA.	TO STA.	CONTRACT NO. 74310		
PLOT DATE = #DATE#	DATE -	REVISED -	REVISED -			ILLINOIS FED. AID PROJECT						
HENRY, MEISENHEIMER & GENDE, INC., 1075 LAKE ROAD, PO BOX 70, CARLYLE, IL 62231 PHONE (618) 594-3711 WWW.HMGENGINEERS.COM												

Rev.  
H.M.G. NO. 4915

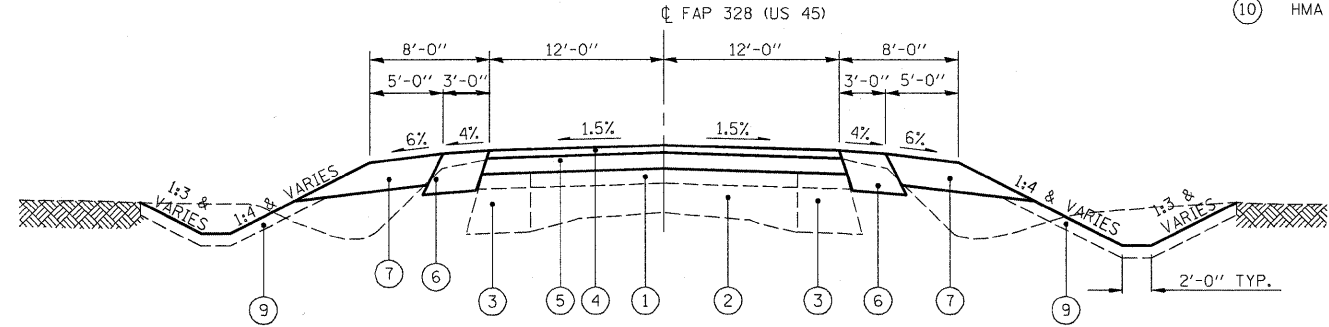




**EXISTING TYPICAL SECTION**

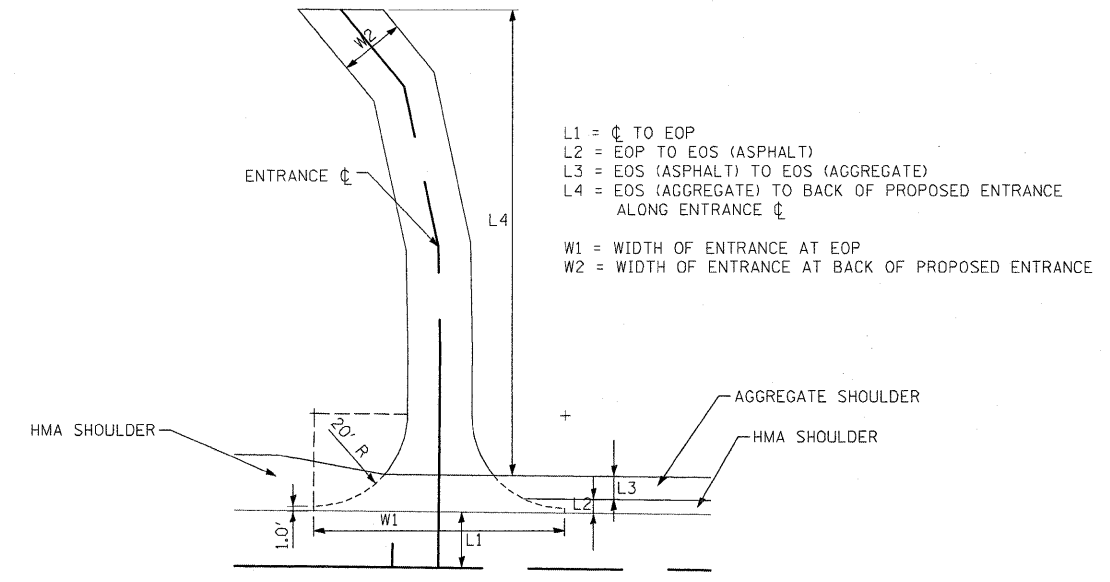
STA 807+40.00 TO STA 817+00.00

- LEGEND**
- ① EXISTING BITUMINOUS SURFACE, 3" MIN.
  - ② EXISTING PCC PAVEMENT (9"-6"-9")
  - ③ EXISTING BASE COURSE WIDENING, 9"
  - ④ HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50 (1.5")
  - ⑤ HOT-MIX ASPHALT BINDER COURSE, IL 19.0, N70 (VARIABLE DEPTH)
  - ⑥ HOT MIX ASPHALT SHOULDERS, 8" (MIN)
  - ⑦ AGGREGATE SHOULDERS, TYPE B, 6"
  - ⑧ PORTLAND CEMENT CONCRETE BASE COURSE WIDENING, 10"
  - ⑨ TOPSOIL FURNISH AND PLACE, 4" OR TOPSOIL EXCAVATION AND PLACEMENT, 4"
  - ⑩ HMA BASE COURSE WIDENING 12" MINIMUM



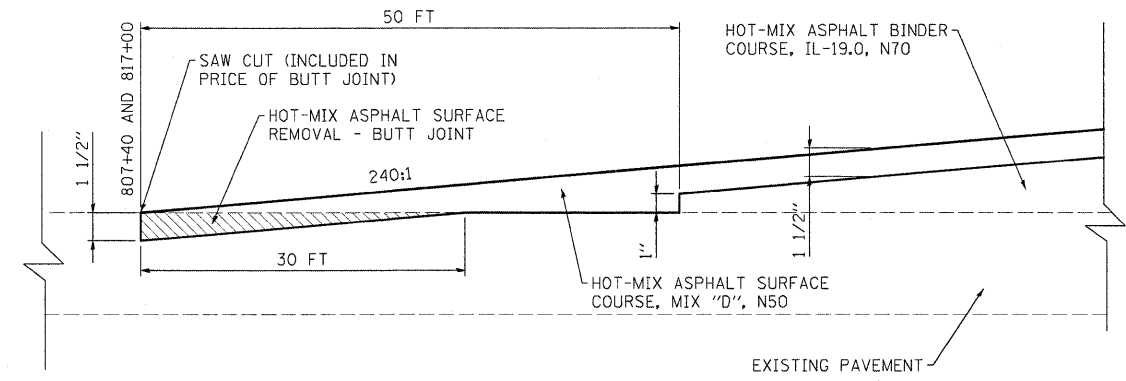
**PROPOSED TYPICAL SECTION**

STA 807+40.00 LT/RT TO STA 808+34.71 RT (STA 809+06.86 LT)  
 STA 815+65.29 LT (STA 816+05.64 RT) TO STA 817+00.00 LT/RT



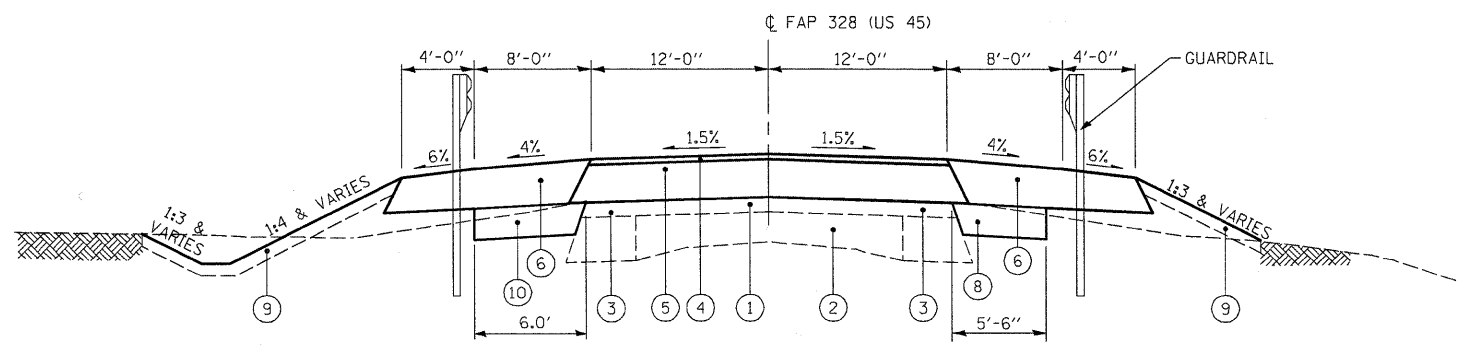
**ENTRANCE DETAIL**

STATION 816+10



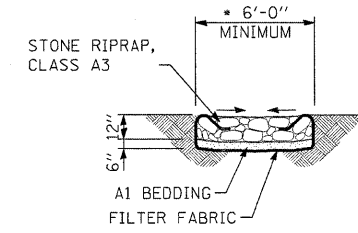
**BUTT JOINT DETAIL**

(NOT TO SCALE)



**PROPOSED TYPICAL SECTION**

STA 809+06.86 TO STA 815+65.29 LT  
 STA 808+34.71 TO STA 816+05.64 RT  
 STA 811+87.51 TO STA 812+97.14 LT (SEE BRIDGE STRUCTURE PLANS)  
 STA 812+02.85 TO STA 813+12.49 RT (SEE BRIDGE STRUCTURE PLANS)

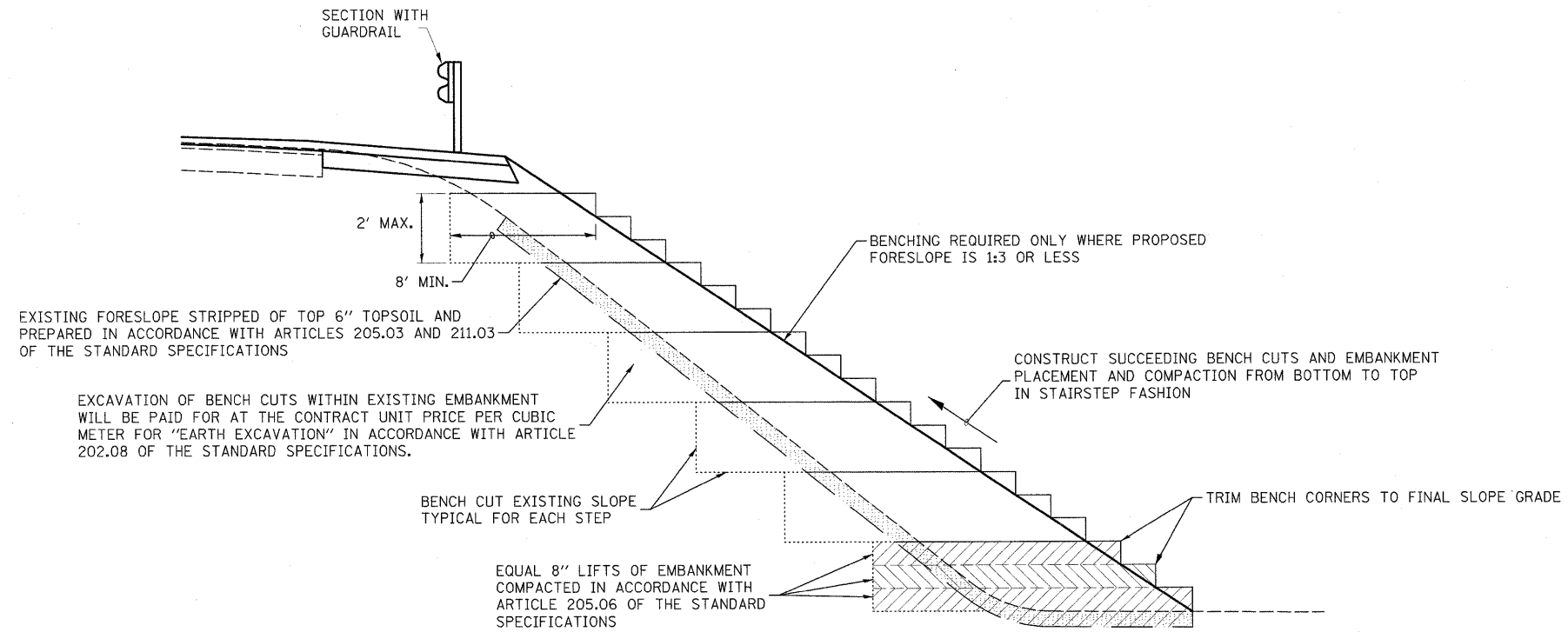


**BRIDGE APPROACH PAVEMENT DRAIN DETAIL**

• PROVIDES DRAINAGE DOWN EMBANKMENT FROM BRIDGE APPROACH PAVEMENT

/4915/4915.195A\*3LucasCreekStandalone/TS45\_01.DGN

FILE NAME =	USER NAME = #USER#	DESIGNED - DJR	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>TYPICAL SECTIONS AND MISCELLANEOUS DETAILS</b>		F.A.P. RTE. 328	SECTION 4(BR-1)B	COUNTY CLAY	TOTAL SHEETS 42	SHEET NO. 5
#FILE#	PLOT SCALE = #SCALE#	DRAWN - KOJ	REVISED -				SCALE: NONE	SHEET NO. 1 OF 2 SHEETS	STA. TO STA.	CONTRACT NO. 74310	
	PLOT DATE = #DATE#	CHECKED -	REVISED -								
		DATE -	REVISED -								



**TYPICAL BENCHING DETAIL FOR EMBANKMENTS**

FILE NAME =	USER NAME = #USER#	DESIGNED - DJR	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>EMBANKMENT BENCHING DETAIL</b>				F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
#FILE#		DRAWN - KOJ	REVISED -		328	4(BR-1)B	CLAY	42	6				
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PLOT DATE = #DATE#		DATE -	REVISED -		ILLINOIS FED. AID PROJECT								
				SCALE:	SHEET NO. 2 OF 2 SHEETS	STA.	TO STA.						

PAVEMENT REMOVAL AND SHOULDER REMOVAL SCHEDULE

LOCATION	PAVEMENT REMOVAL	PAVED SHOULDER REMOVAL
STATION	SQ YD	SQ YD
FAP RTE 328 (US RTE 45)		
ALONG LEFT SHOULDER		
STA 810+00.00 TO STA 810+50.00		4.02
STA 810+50.00 TO STA 811+00.00		6.89
STA 811+00.00 TO STA 811+50.00		6.27
STA 811+50.00 TO STA 812+00.00		7.10
B R I D G E		
STA 813+10.00 TO STA 814+00.00		5.70
STA 814+00.00 TO STA 814+50.00		1.61
STA 814+50.00 TO STA 815+00.00		0.77
ALONG RIGHT SHOULDER		
STA 810+00.00 TO STA 810+50.00		6.66
STA 810+50.00 TO STA 811+00.00		13.22
STA 811+00.00 TO STA 811+50.00		15.63
STA 811+50.00 TO STA 812+00.00		12.43
B R I D G E		
STA 813+10.00 TO STA 814+00.00		29.81
STA 814+00.00 TO STA 814+50.00		21.14
STA 814+50.00 TO STA 815+00.00		11.60
(BETWEEN EXISTING BRIDGE AND PROPOSED EXTENTS OF APPROACH PAVEMENT ALONG PROPOSED CENTERLINE)		
STA 811+70.00 TO STA 811+80.00	8.54	
STA 811+80.00 TO STA 811+90.00	33.19	
STA 811+90.00 TO STA 812+00.00	35.10	
STA 812+00.00 TO STA 812+10.00	35.22	
STA 812+10.00 TO STA 812+20.00	33.92	
STA 812+20.00 TO STA 812+30.00	22.18	
B R I D G E		
STA 812+70.00 TO STA 812+80.00	15.59	
STA 812+80.00 TO STA 812+90.00	33.80	
STA 812+90.00 TO STA 813+00.00	33.75	
STA 813+00.00 TO STA 813+10.00	33.71	
STA 813+10.00 TO STA 813+20.00	33.19	
STA 813+20.00 TO STA 813+30.00	13.00	
TOTAL	331.2	142.9
USE	332	143

TREE REMOVAL SCHEDULE

LOCATION	TREE REMOVAL ACRES
STATION	ACRE
FAP RTE 328 (US RTE 45)	
LT STA 807+35.00 TO STA 808+00.00	0.005
RT STA 807+35.00 TO STA 808+00.00	0.011
LT STA 808+00.00 TO STA 809+00.00	0.019
RT STA 808+00.00 TO STA 809+00.00	0.039
LT STA 809+00.00 TO STA 810+00.00	0.001
RT STA 809+00.00 TO STA 810+00.00	0.025
LT STA 810+00.00 TO STA 811+00.00	0.000
RT STA 810+00.00 TO STA 811+00.00	0.002
LT STA 811+00.00 TO STA 812+00.00	0.001
RT STA 811+00.00 TO STA 812+00.00	0.003
LT STA 812+00.00 TO STA 813+00.00	0.008
RT STA 812+00.00 TO STA 813+00.00	0.031
LT STA 813+00.00 TO STA 814+00.00	0.047
RT STA 813+00.00 TO STA 814+00.00	0.074
LT STA 814+00.00 TO STA 815+00.00	0.125
RT STA 814+00.00 TO STA 815+00.00	0.062
LT STA 815+00.00 TO STA 816+00.00	0.109
RT STA 815+00.00 TO STA 816+00.00	0.018
LT STA 816+00.00 TO STA 817+00.00	0.117
RT STA 816+00.00 TO STA 817+00.00	0.000
LT STA 817+00.00 TO STA 817+20.00	0.010
RT STA 817+00.00 TO STA 817+20.00	0.000
TOTAL	0.707
USE	0.75

EARTHWORK SCHEDULE

LOCATION	A	B	C	D
	EARTH EXCAVATION	EARTH EXCAVATION WITH SHRINKAGE FACTOR (0.85)	REQUIRED FILL	BALANCE: WASTE (+) OR SHORTAGE (-)
STATION	CU YD	CU YD	CU YD	CU YD
FAP RTE 328 (US RTE 45)				
ENTRANCE				
STA 816+10.00 LT	67.00	56.95	0.00	56.95
BETWEEN EXIST & PROP ABUTMENTS				
NORTH ABUTMENTS	124.34	105.69	0.00	105.69
SOUTH ABUTMENTS	187.68	159.53	0.00	159.53
CROSS-SECTIONS				
STA 807+40.00 TO STA 808+00.00	41.81	35.54	44.66	-9.12
STA 808+00.00 TO STA 809+00.00	78.78	66.96	146.98	-80.02
STA 809+00.00 TO STA 810+00.00	29.78	25.31	147.98	-122.67
STA 810+00.00 TO STA 811+00.00	30.94	26.30	171.87	-145.57
STA 811+00.00 TO STA 812+00.00	48.59	41.30	199.35	-158.05
STA 812+00.00 TO STA 812+10.00	7.67	6.52	20.58	-14.06
STA 812+90.00 TO STA 813+00.00	0.00	0.00	6.17	-6.17
STA 813+00.00 TO STA 814+00.00	598.09	508.38	46.59	461.79
STA 814+00.00 TO STA 815+00.00	1680.04	1428.03	15.72	1412.31
STA 815+00.00 TO STA 816+00.00	1362.24	1157.90	0.00	1157.90
STA 816+00.00 TO STA 817+00.00	606.48	515.51	0.00	515.51
STA 817+00.00 TO STA 817+20.00	65.24	55.45	0.00	55.45
TOTAL	4,928.68	4,189.37	799.90	3,389.47
USE	4,930	4,190	800	3,390

NOTES:

- 1 COLUMN "A" - ESTIMATED FROM CROSS-SECTION END AREAS.
- 2 COLUMN "B" - REMAINING MATERIAL THAT COULD BE USED FOR FILL. (NOT A PAY ITEM).
- 3 COLUMN "C" - ESTIMATED FILL FOR THE PROJECT FROM CROSS-SECTION END AREAS. (NOT A PAY ITEM).
- 4 COLUMN "D" - ESTIMATED EXCESS MATERIAL. (NOT A PAY ITEM).

RIGHT OF WAY MARKERS SCHEDULE

LOCATION	FURNISHING AND ERECTING RIGHT OF WAY MARKERS	REMOVE RIGHT OF WAY MARKERS
STATION	EACH	EACH
FAP RTE 328 (US RTE 45)		
STA 805+30.24 60.00 RT	1.0	
STA 805+30.24 60.00 LT	1.0	
STA 806+50.00 70.00 RT	1.0	
STA 807+00.00 60.00 LT	1.0	
STA 809+11.24 60.00 LT	1.0	
STA 809+68.38 100.00 LT	1.0	
STA 812+68.38 120.00 LT	1.0	
STA 814+47.67 120.00 LT	1.0	
STA 814+48.70 70.00 RT	1.0	
STA 816+00.00 60.00 RT	1.0	
STA 817+12.06 60.00 RT	1.0	
STA 817+15.37 120.00 LT	1.0	
STA 817+20.89 119.73 LT		1.0
STA 817+21.74 29.84 LT		1.0
TOTAL	12.0	2.0
USE	12	2

CULVERT SCHEDULE

LOCATION	SIZE	TYPE	PIPE CULVERT REMOVAL
STATION	INCH		FOOT
FAP RTE 328 (US RTE 45)			
LT STA 816+10	12.0	CMP	30.0
LT STA 817+50	12.0	PIPE CULVERT	
TOTAL			30.0
USE			30

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PLANS NO. 4915

BINDER COURSE THICKNESS SCHEDULE

LOCATION	BINDER COURSE THICKNESS	BINDER COURSE THICKNESS (AVERAGE BETWEEN STATIONS)	BINDER COURSE THICKNESS (AVERAGE BETWEEN STATIONS)
STATION	FT	FT	IN
FAP RTE 328 (US RTE 45)			
STA 807+40.00	0.00		
STA 807+50.00	0.00	0.00	0.00
STA 807+60.00	0.00	0.00	0.00
STA 807+70.00	0.00	0.00	0.00
STA 807+80.00	0.00	0.00	0.00
STA 807+90.00	0.00	0.00	0.00
STA 808+00.00	0.00	0.00	0.00
STA 808+10.00	0.04	0.02	0.24
STA 808+20.00	0.07	0.06	0.72
STA 808+30.00	0.13	0.10	1.20
STA 808+40.00	0.18	0.16	1.92
STA 808+50.00	0.23	0.21	2.52
STA 808+60.00	0.21	0.22	2.64
STA 808+70.00	0.20	0.21	2.52
STA 808+80.00	0.22	0.21	2.52
STA 808+90.00	0.24	0.23	2.76
STA 809+00.00	0.25	0.25	3.00
STA 809+10.00	0.28	0.27	3.24
STA 809+20.00	0.31	0.30	3.60
STA 809+30.00	0.34	0.33	3.96
STA 809+40.00	0.31	0.33	3.96
STA 809+50.00	0.33	0.32	3.84
STA 809+60.00	0.33	0.33	3.96
STA 809+70.00	0.35	0.34	4.08
STA 809+80.00	0.35	0.35	4.20
STA 809+90.00	0.38	0.37	4.44
STA 810+00.00	0.42	0.40	4.80
STA 810+10.00	0.44	0.43	5.16
STA 810+20.00	0.49	0.47	5.64
STA 810+30.00	0.54	0.52	6.24
STA 810+40.00	0.59	0.57	6.84
STA 810+50.00	0.66	0.63	7.56
STA 810+60.00	0.72	0.69	8.28
STA 810+70.00	0.79	0.76	9.12
STA 810+80.00	0.88	0.84	10.08
STA 810+90.00	0.96	0.92	11.04
STA 811+00.00	1.05	1.01	12.12
STA 811+10.00	1.12	1.09	13.08
STA 811+20.00	1.18	1.15	13.80
STA 811+30.00	1.25	1.22	14.64
STA 811+40.00	1.30	1.28	15.36
STA 811+50.00	1.35	1.33	15.96
STA 811+60.00	1.39	1.37	16.44
STA 811+70.00	1.43	1.41	16.92
STA 811+80.00	1.44	1.44	17.28
STA 811+80 TO STA 813+20	BRIDGE AND BRIDGE APPROACH PAVEMENT		
STA 813+20.00	1.01		
STA 813+30.00	0.95	0.98	11.76
STA 813+40.00	0.91	0.93	11.16
STA 813+50.00	0.86	0.89	10.68
STA 813+60.00	0.81	0.84	10.08
STA 813+70.00	0.75	0.78	9.36
STA 813+80.00	0.71	0.73	8.76
STA 813+90.00	0.68	0.70	8.40
STA 814+00.00	0.63	0.66	7.92
STA 814+10.00	0.57	0.60	7.20
STA 814+20.00	0.54	0.56	6.72
STA 814+30.00	0.50	0.52	6.24
STA 814+40.00	0.45	0.48	5.76
STA 814+50.00	0.41	0.43	5.16
STA 814+60.00	0.38	0.40	4.80

BINDER COURSE THICKNESS SCHEDULE

LOCATION	BINDER COURSE THICKNESS	BINDER COURSE THICKNESS (AVERAGE BETWEEN STATIONS)	BINDER COURSE THICKNESS (AVERAGE BETWEEN STATIONS)
STATION	FT	FT	IN
STA 814+70.00	0.34	0.36	4.32
STA 814+80.00	0.28	0.31	3.72
STA 814+90.00	0.24	0.26	3.12
STA 815+00.00	0.21	0.23	2.76
STA 815+10.00	0.17	0.19	2.28
STA 815+20.00	0.15	0.16	1.92
STA 815+30.00	0.12	0.14	1.68
STA 815+40.00	0.10	0.11	1.32
STA 815+50.00	0.06	0.08	0.96
STA 815+60.00	0.06	0.06	0.72
STA 815+70.00	0.02	0.04	0.48
STA 815+80.00	0.02	0.02	0.24
STA 815+90.00	0.00	0.01	0.12
STA 816+00.00	0.00	0.00	0.00
STA 816+10.00	0.00	0.00	0.00
STA 816+20.00	0.00	0.00	0.00
STA 816+30.00	0.00	0.00	0.00
STA 816+40.00	0.00	0.00	0.00
STA 816+50.00	0.00	0.00	0.00
STA 816+60.00	0.00	0.00	0.00
STA 816+70.00	0.00	0.00	0.00
STA 816+80.00	0.00	0.00	0.00
STA 816+90.00	0.00	0.00	0.00
STA 817+00.00	0.00	0.00	0.00

SHOULDER AND WIDENING SCHEDULE

LOCATION	HOT-MIX ASPHALT SHOULDERS	AGGREGATE SHOULDERS, TYPE A, 6"	PORTLAND CEMENT CONCRETE BASE COURSE WIDENING, 10"	HOT-MIX ASPHALT BASE COURSE WIDENING, 12"
STATION	TON	SQ YD	SQ YD	SQ YD
FAP RTE 328 (US RTE 45)				
RT STA 806+90.00 TO 808+00.00	0.00	26.46		
LT STA 806+90.00 TO 808+00.00		54.67		
RT STA 808+00.00 TO 809+00.00	64.18			
LT STA 808+00.00 TO 809+00.00		32.14		
RT STA 809+00.00 TO 810+00.00	119.07		58.08	
LT STA 809+00.00 TO 810+00.00				85.22
RT STA 810+00.00 TO 811+00.00	164.64		61.11	
LT STA 810+00.00 TO 811+00.00				88.88
RT STA 811+00.00 TO 812+50.00	119.99		77.23	
LT STA 811+00.00 TO 812+50.00				66.56
RT STA 812+50.00 TO 814+00.00	82.10		76.86	
LT STA 812+50.00 TO 814+00.00				78.83
RT STA 814+00.00 TO 815+00.00	107.74		60.97	
LT STA 814+00.00 TO 815+00.00				89.37
RT STA 815+00.00 TO 816+00.00	104.59		30.34	
LT STA 815+00.00 TO 816+00.00				54.65
RT STA 816+00.00 TO 817+50.00	78.42	23.33		
LT STA 816+00.00 TO 817+50.00		58.28		
TOTAL	840.7	194.9	364.6	463.5
USE	841	195	365	464

ENTRANCE SCHEDULE

LOCATION	TYPE	EXISTING DRIVEWAY MATERIAL	L1	L2	L3	L4	L1%	L2 %	W1	W2	R	AGGREGATE SURFACE COURSE, TYPE B
STATION			FOOT	FOOT	FOOT	FOOT			FOOT	FOOT	FOOT	TON
FAP RTE 328 (US RTE 45)												
LT STA 816+10	FE	EARTH	12.0	3.0	5.0	106.0	1.5	4.0	54.0	14.0	20.0	58.0
TOTAL												58.0
USE												58

(SEE ALSO ENTRANCE DETAIL & CROSS SECTIONS)

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FILE NAME =	USER NAME = #USER#	DESIGNED - DJR	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>SCHEDULE OF QUANTITIES</b>				F.A.P. RTE. 328	SECTION 4(BR-1)B	COUNTY CLAY	TOTAL SHEETS 42	SHEET NO. 8
#FILE#	PLOT SCALE = #SCALE#	CHECKED - KOJ	REVISED -		SCALE:	SHEET NO. 2 OF 4 SHEETS	STA.	TO STA.	<b>CONTRACT NO. 74310</b>				
	PLOT DATE = #DATE#	DATE -	REVISED -		ILLINOIS FED. AID PROJECT								

H.M.G. INC. 4915

GUARDRAIL SCHEDULE

LOCATION	GUARDRAIL REMOVAL	STEEL PLATE BEAM GUARDRAIL, TYPE A 6 FT POSTS	TERMINAL MARKER - DIRECT APPLIED	GUARDRAIL MARKERS, TYPE A	TRAFFIC BARRIER TERMINAL TYPE 1, (SPECIAL) TANGENT	TRAFFIC BARRIER TERMINAL, TYPE 6
STATION	FOOT	FOOT	EACH	EACH	EACH	EACH
FAP RTE 328 (US RTE 45)						
RT STA 808+34.71 TO 808+84.71			1.0		1.0	
RT STA 808+84.71 TO 811+59.71		275.0		6 EACH @ 61.0' CTRS. BEGIN @ 808+84.71		1.0
RT STA 811+59.71 TO 812+02.76						
LT STA 809+06.86 TO 809+56.86			1.0		1.0	
LT STA 809+56.86 TO 811+44.36		187.5		4 EACH @ 62.0' CTRS. BEGIN @ 809+56.86		1.0
LT STA 811+44.36 TO 811+87.51						
RT STA 813+12.49 TO 813+55.64						1.0
RT STA 813+55.64 TO 815+55.64		200.0		5 EACH @ 61.0' CTRS. BEGIN @ 813+55.64	1.0	
RT STA 815+55.64 TO 816+05.64			1.0			
LT STA 812+97.14 TO 813+40.29						1.0
LT STA 813+40.29 TO 815+15.29		175.0		4 EACH @ 62.0' CTRS. BEGIN @ 813+40.29	1.0	
LT STA 815+15.29 TO 815+65.29			1.0			
RT STA 811+09.32 TO 812+26.49	117.21					
LT STA 811+10.87 TO 812+26.70	115.96					
RT STA 812+74.61 TO 813+95.32	120.74					
LT STA 812+75.76 TO 813+96.88	121.19					
RT STA 812+51.00						
LT STA 812+05.00						
LT STA 812+67.00						
TOTAL	475.10	837.5	4.0	19.0	4.0	4.0
USE	476	837.5	4	19	4	4

EROSION CONTROL SCHEDULE

LOCATION	INLET AND PIPE PROTECTION	TEMPORARY DITCH CHECK	EROSION CONTROL BLANKET	PERIMETER EROSION BARRIER	PIPE DRAINS, 4"	CONCRETE HEADWALLS FOR PIPE DRAINS
STATION	EACH	EACH	SQ YD	FOOT	FOOT	EACH
FAP RTE 328 (US RTE 45)						
LT STA 817+16	1					
RT STA 807+93		1				
RT STA 808+22		1				
RT STA 808+51		1				
RT STA 808+82		1				
RT STA 809+12		1				
RT STA 809+77		1				
RT STA 810+42		1				
RT STA 811+07		1				
RT STA 812+08		1				
RT STA 812+59		1				
LT STA 813+07		1				
RT STA 813+31		1				
LT STA 814+02		1				
RT STA 815+88		1				
LT STA 816+84		1				
RT STA 806+96.44 TO 811+60.64				485.9		
LT STA 815+92.65 TO 817+02.67				126.3		
RT STA 807+47.58 TO 812+62.51			230.0			
LT STA 811+96.97					11	1
RT STA 812+23.71					13	1
LT STA 812+82.03					9	1
RT STA 813+09.72					5	1
TOTAL	1.0	15.0	230.0	612.2	38.0	4.0
USE	1	15	230	613	38	4

PAVING SCHEDULE

LOCATION	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	TEMPORARY RAMPS	*BITUMINOUS MATERIALS (PRIME COAT)	*AGGREGATE (PRIME COAT)	HOT-MIX ASPHALT BINDER COURSE, IL-19.0, N70 (VAR)	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N50
STATION	SQ YD	SQ YD	GALLON	TON	TON	TON
FAP RTE 328 (US RTE 45)						
STAGE 1 CONSTRUCTION						
LT STA 811+75.00 TO 811+80.00		11.10				
LT STA 813+20.00 TO 813+25.00		11.10				
TRANSITION WEST LANE UP TO EAST LANE **		22.20				
HMA BUTT JOINT						
STA 807+40.00 TO 807+45.00		13.30				
STA 816+95.00 TO 817+00.00		13.30				
STAGE 2 CONSTRUCTION						
STA 811+75.00 TO 811+80.00		6.70				
STA 813+20.00 TO 813+25.00		6.70				
STA 807+40.00 TO 807+70.00	80.00					
STA 816+70.00 TO 817+00.00	80.00					
PAVING OPERATIONS						
STA 807+40.00 TO 808+00.00			0.83	0.32	0.00	16.43
STA 808+00.00 TO 809+00.00			1.83	0.53	29.16	22.40
STA 809+00.00 TO 810+00.00			2.13	0.53	59.40	22.40
STA 810+00.00 TO 811+00.00			2.13	0.53	121.95	22.40
STA 811+00.00 TO 811+80.00			1.66	0.40	168.73	16.65
STA 811+80.00 TO 813+20.00			BRIDGE APPROACH PAVEMENT AND BRIDGE SUPERSTRUCTURE			
STA 813+20.00 TO 814+00.00			1.65	0.40	106.15	16.65
STA 814+00.00 TO 815+00.00			2.13	0.53	73.92	22.40
STA 815+00.00 TO 816+00.00			2.11	0.53	14.56	22.40
STA 816+00.00 TO 817+00.00			1.54	0.53	0.00	25.39
TOTAL	160.0	84.4	16.01	4.3	573.9	187.1
USE	160	85.0	17	5.0	574	188

\* - BITUMINOUS MATERIALS (PRIME COAT) AND AGGREGATE (PRIME COAT) TO BE APPLIED TO EXISTING PAVEMENT BEFORE PAVING AND BEFORE APPLICATION OF THE PROPOSED SURFACE.

\*\* - THIS IS LOCATED SHORTLY AFTER THE STOP BAR ON THE SOUTH BOUND LANE.

RIPRAP SCHEDULE

LOCATION	STONE RIPRAP, CLASS A3	FILTER FABRIC
STATION	SQ YD	SQ YD
FAP RTE 328 (US RTE 45)		
BRIDGE APPROACH PAVEMENT DRAIN		
LT STA 811+73.00	22.37	22.37
RT STA 811+88.00	17.74	17.74
LT STA 813+12.00	13.15	13.15
RT STA 813+37.00	20.04	20.04
TOTAL	73.3	73.3
USE	74.0	74.0

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FILE NAME = #FILE#	USER NAME = #USER#	DESIGNED - DJR	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>SCHEDULE OF QUANTITIES</b>		F.A.P. RTE. 328	SECTION 4(BR-1)B	COUNTY CLAY	TOTAL SHEETS 42	SHEET NO. 9	
	PLOT SCALE = #SCALE#	DRAWN - KOJ	REVISED -		SCALE:	SHEET NO. 3 OF 4 SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT			
	PLOT DATE = #DATE#	CHECKED -	REVISED -		<b>CONTRACT NO. 74310</b>							
		DATE -	REVISED -									

PLAC. NO. 4915

PAVEMENT MARKING SCHEDULE

LOCATION	TYPE	TEMPORARY PAVEMENT MARKING - LINE 4"	WORKZONE PAVEMENT MARKING REMOVAL	RAISED REFLECTIVE PAVEMENT MARKER	RAISED REFLECTIVE PAVEMENT MARKER (BRIDGE)	PAINT PAVEMENT MARKING - LINE 4"	
						WHITE (SOLID)	YELLOW (SKIP-DASH)
STATION		FOOT	SQ FT	EACH	EACH	FOOT	FOOT
FAP RTE 328 (US RTE 45)							
LT STA 807+40 TO 817+00				12.0	1.0	960.0	240.0
CTR STA 807+40 TO 817+00						960.0	
RT STA 807+40 TO 817+00							
STAGE 1							
STA 808+21 TO 816+62	SOLID		98.8				
STA 808+61 (FOR STAGE 1 & 2)	SOLID		24.0				
STA 816+50 (FOR STAGE 1 & 2)	SOLID		24.0				
STAGE 2							
STA 807+85 TO 816+40	SOLID		285.6				
STA 809+36 TO 815+44	SOLID		202.8				
BEFORE APPLICATION OF HMA SURFACE							
** CTR STA 807+40 TO 817+00	SKIP - DASH	240.0					
*** CTR STA 807+40 TO 817+00	SKIP - DASH	240.0	80.0				
TOTAL		480.0	715.2	12.0	1.0	1920.0	240.0
USE		480	716	12	1	1920	240

\*\* - TEMPORARY PAVEMENT MARKING, 4" SHOULD BE PAINT. IT WILL NOT BE APPLIED TO THE FINAL SURFACE, BUT IMMEDIATELY AFTER THE LAST LIFT OF BINDER COURSE.  
 \*\*\* - TEMPORARY PAVEMENT MARKING, 4" SHOULD BE TAPE. IT WILL BE APPLIED TO THE FINAL SURFACE, AND THEN REMOVED IMMEDIATELY PRIOR TO THE FINAL PAVEMENT MARKINGS.

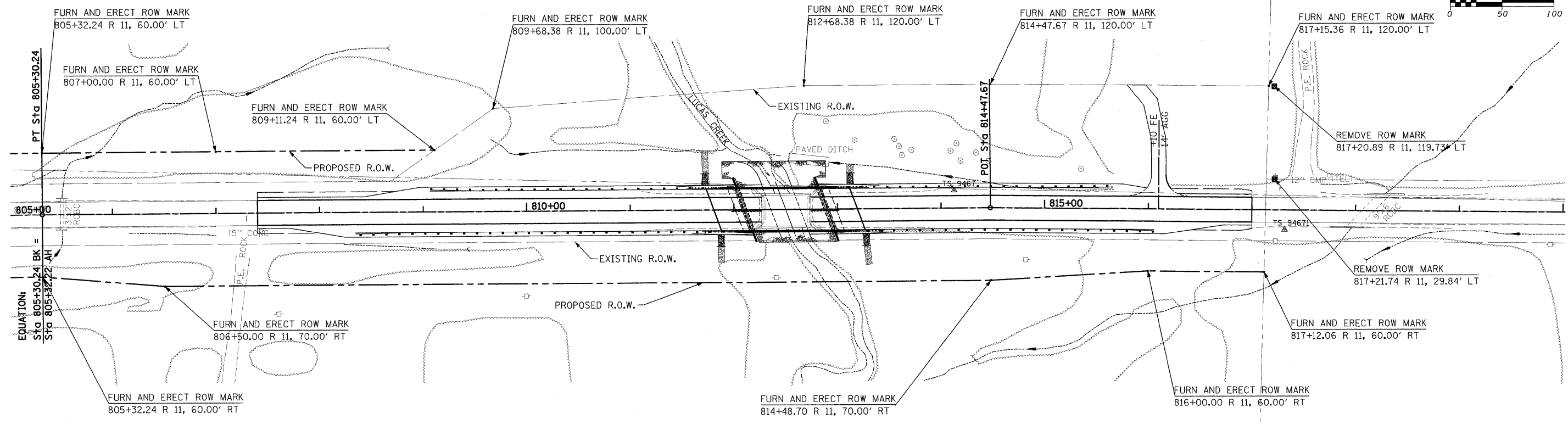
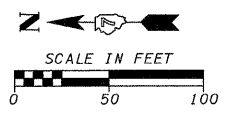
SEEDING SCHEDULE

LOCATION	TEMPORARY EROSION CONTROL SEEDING	SEEDING, CLASS 2 (SPECIAL)
STATION	POUND	ACRE
FAP RTE 328 (US RTE 45)		
LT STA 806+98 TO 808+00	5.16	0.05
RT STA 806+98 TO 808+00	3.64	0.04
LT STA 808+00 TO 809+00	5.04	0.05
RT STA 808+00 TO 809+00	6.41	0.06
LT STA 809+00 TO 810+00	2.61	0.03
RT STA 809+00 TO 810+00	6.11	0.06
LT STA 810+00 TO 811+00	2.36	0.02
RT STA 810+00 TO 811+00	6.93	0.07
LT STA 811+00 TO 812+70	4.57	0.05
RT STA 811+00 TO 812+70	11.15	0.11
LT STA 812+70 TO 814+00	10.33	0.10
RT STA 812+70 TO 814+00	7.28	0.07
LT STA 814+00 TO 815+00	15.91	0.16
RT STA 814+00 TO 815+00	7.57	0.08
LT STA 815+00 TO 816+00	18.30	0.18
RT STA 815+00 TO 816+00	5.13	0.05
LT STA 816+00 TO 817+50	16.82	0.17
RT STA 816+00 TO 817+50	3.19	0.03
TOTAL	138.51	1.38
USE	139	1.50

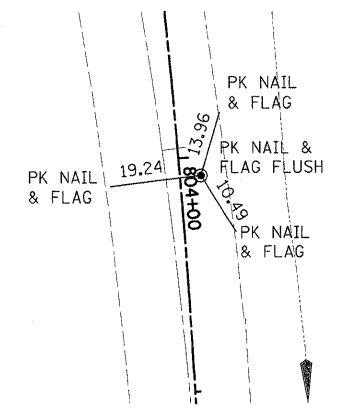
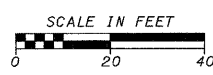
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#FILE#		DRAWN - KOJ	REVISED -			328	4(BR-1)B	CLAY	42	10	
	PLOT SCALE = #SCALE#	CHECKED -	REVISED -			<b>CONTRACT NO. 74310</b>					
	PLOT DATE = #DATE#	DATE -	REVISED -			ILLINOIS FED. AID PROJECT					
				SCALE:	SHEET NO. 4 OF 4 SHEETS	STA.	TO STA.				

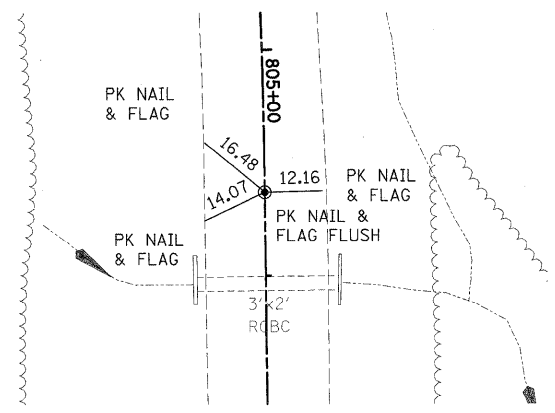
PLG. NO. 4915



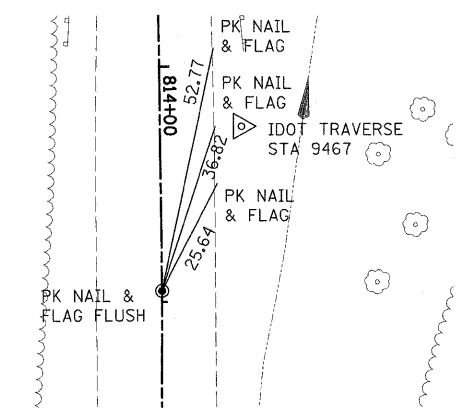
HORIZONTAL TIES



U.S. 45 PI STA 804+04.23



U.S. 45 PT STA 805+30.24 BK=  
PT STA 805+32.22 AH



U.S. 45 PI STA 814+47.67

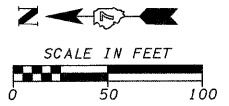
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		DRAWN - KOJ	REVISED -
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	PLOT DATE = #DATE#	DATE -	REVISED -

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

RIGHT OF WAY & TIES	
PROJECT	JOB NO. D-97-023-08
SHEET NO. 1 OF 1 SHEETS	STA. 807+40.00 TO STA. 816+90.00

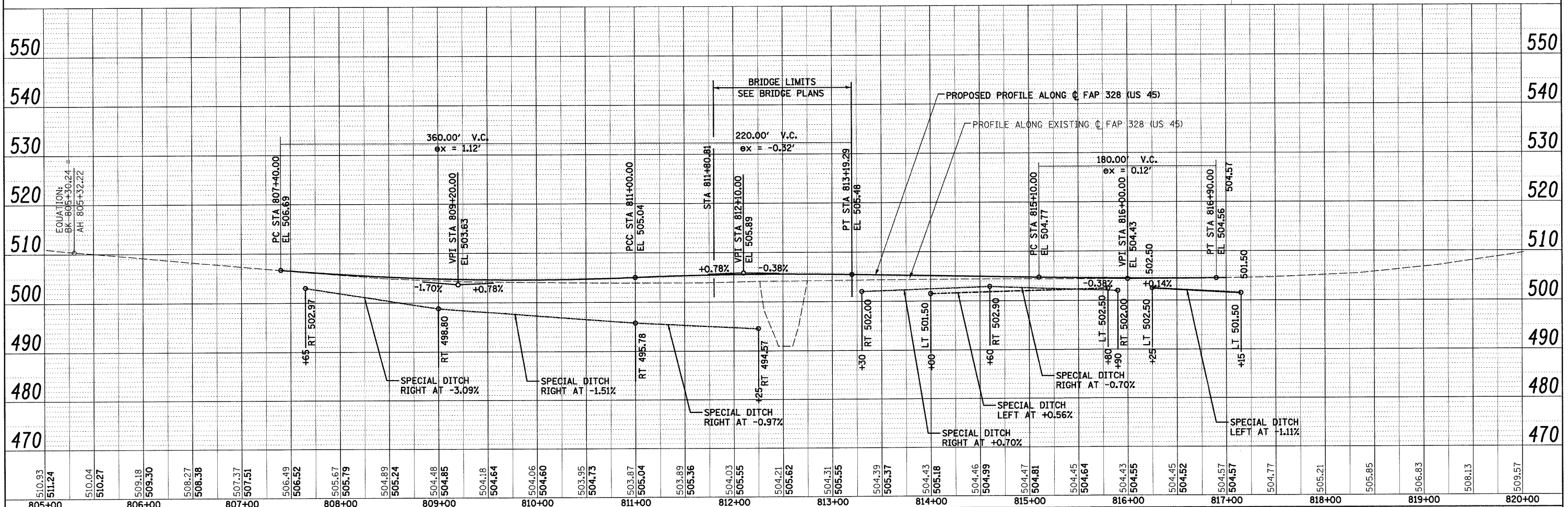
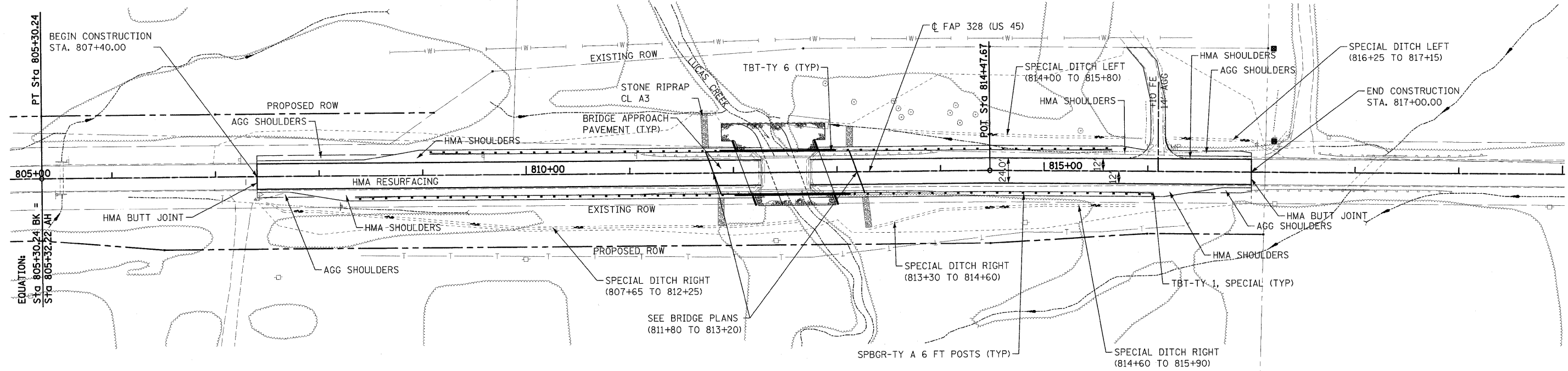
F.A.P. RTE. 328	SECTION (4BR-1)B	COUNTY CLAY	TOTAL SHEETS 42	SHEET NO. 11
SCALE:		CONTRACT NO. 74310		
		FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT		





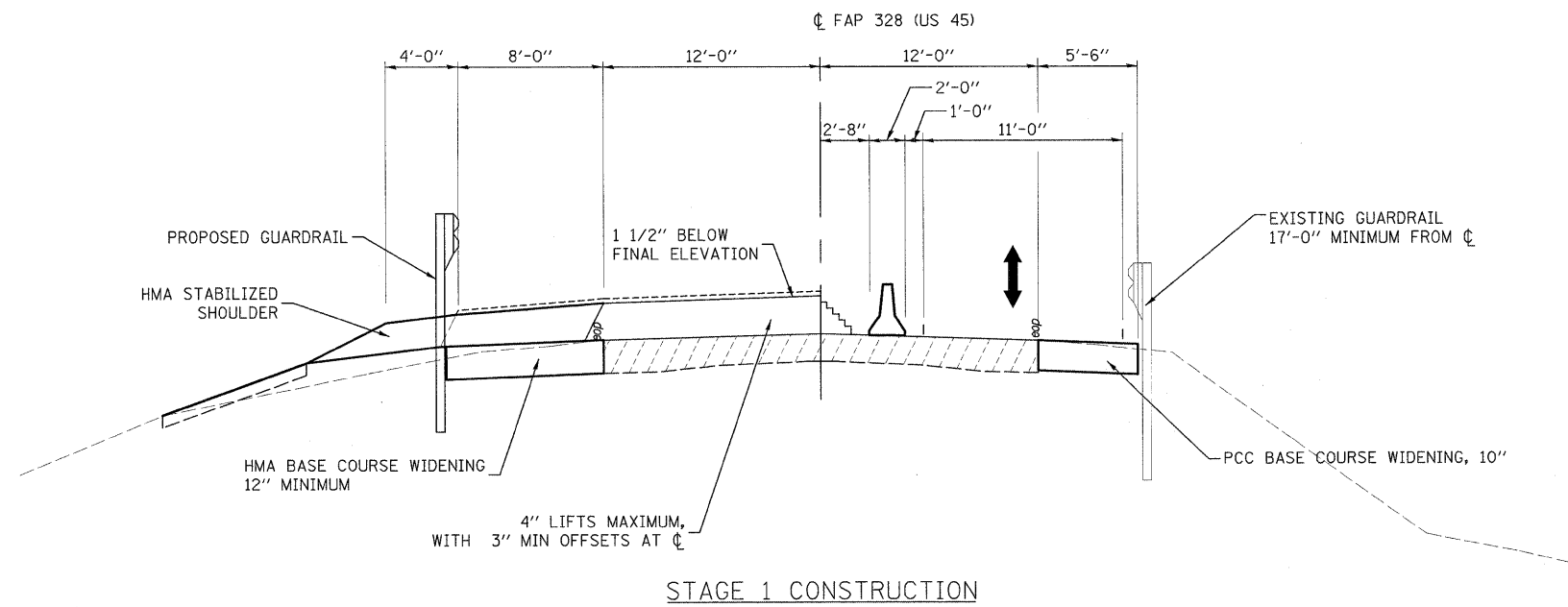
PLAN	DATE
BY	
REVISIONS	
NO.	
DESCRIPTION	
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PROFILE	DATE
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REVISIONS	
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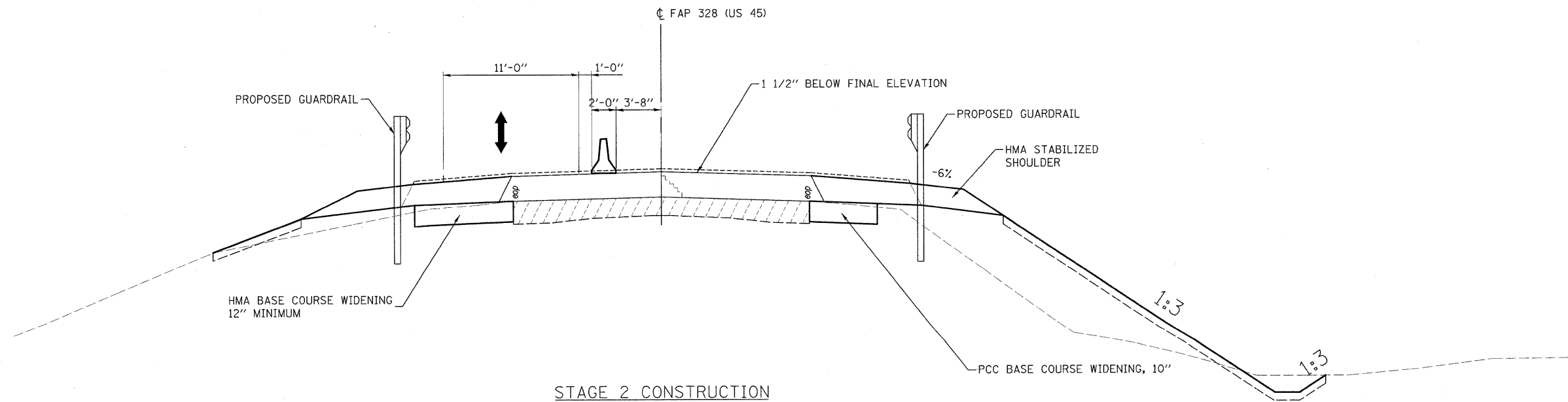


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805+00	806+00	807+00	808+00	809+00	810+00	811+00	812+00	813+00	814+00	815+00	816+00	817+00	818+00	819+00	820+00																																								



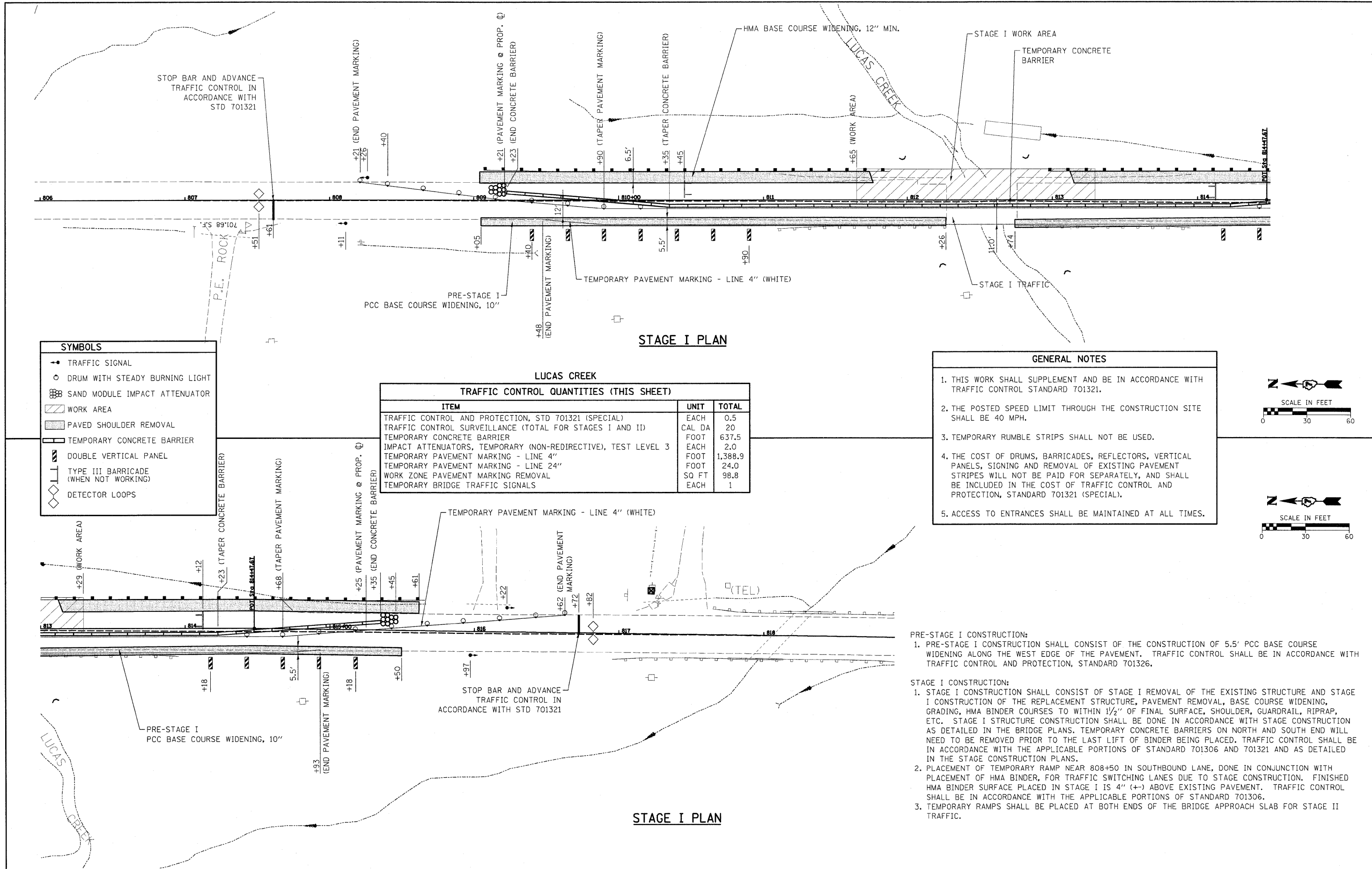


STAGE 1 CONSTRUCTION



STAGE 2 CONSTRUCTION

FILE NAME =	USER NAME = \$USER\$	DESIGNED - DJR	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>TYPICAL SECTIONS STAGE CONSTRUCTION</b>		F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
\$FILE\$		DRAWN - KOJ	REVISED -		328	4(BR-1)B	CLAY	42	13		
		CHECKED -	REVISED -		CONTRACT NO. 74310			ILLINOIS FED. AID PROJECT			
		DATE -	REVISED -		SCALE:	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.			



**SYMBOLS**

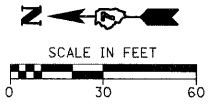
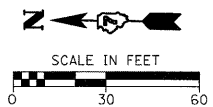
- ⬮ TRAFFIC SIGNAL
- DRUM WITH STEADY BURNING LIGHT
- ⊞ SAND MODULE IMPACT ATTENUATOR
- ▨ WORK AREA
- ▩ PAVED SHOULDER REMOVAL
- ▭ TEMPORARY CONCRETE BARRIER
- ▧ DOUBLE VERTICAL PANEL
- ⊥ TYPE III BARRICADE (WHEN NOT WORKING)
- ◇ DETECTOR LOOPS

**LUCAS CREEK**

**TRAFFIC CONTROL QUANTITIES (THIS SHEET)**

ITEM	UNIT	TOTAL
TRAFFIC CONTROL AND PROTECTION, STD 701321 (SPECIAL)	EACH	0.5
TRAFFIC CONTROL SURVEILLANCE (TOTAL FOR STAGES I AND II)	CAL DA	20
TEMPORARY CONCRETE BARRIER	FOOT	637.5
IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2.0
TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	1,388.9
TEMPORARY PAVEMENT MARKING - LINE 24"	FOOT	24.0
WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	98.8
TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1

- GENERAL NOTES**
- THIS WORK SHALL SUPPLEMENT AND BE IN ACCORDANCE WITH TRAFFIC CONTROL STANDARD 701321.
  - THE POSTED SPEED LIMIT THROUGH THE CONSTRUCTION SITE SHALL BE 40 MPH.
  - TEMPORARY RUMBLE STRIPS SHALL NOT BE USED.
  - THE COST OF DRUMS, BARRICADES, REFLECTORS, VERTICAL PANELS, SIGNING AND REMOVAL OF EXISTING PAVEMENT STRIPES WILL NOT BE PAID FOR SEPARATELY, AND SHALL BE INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION, STANDARD 701321 (SPECIAL).
  - ACCESS TO ENTRANCES SHALL BE MAINTAINED AT ALL TIMES.

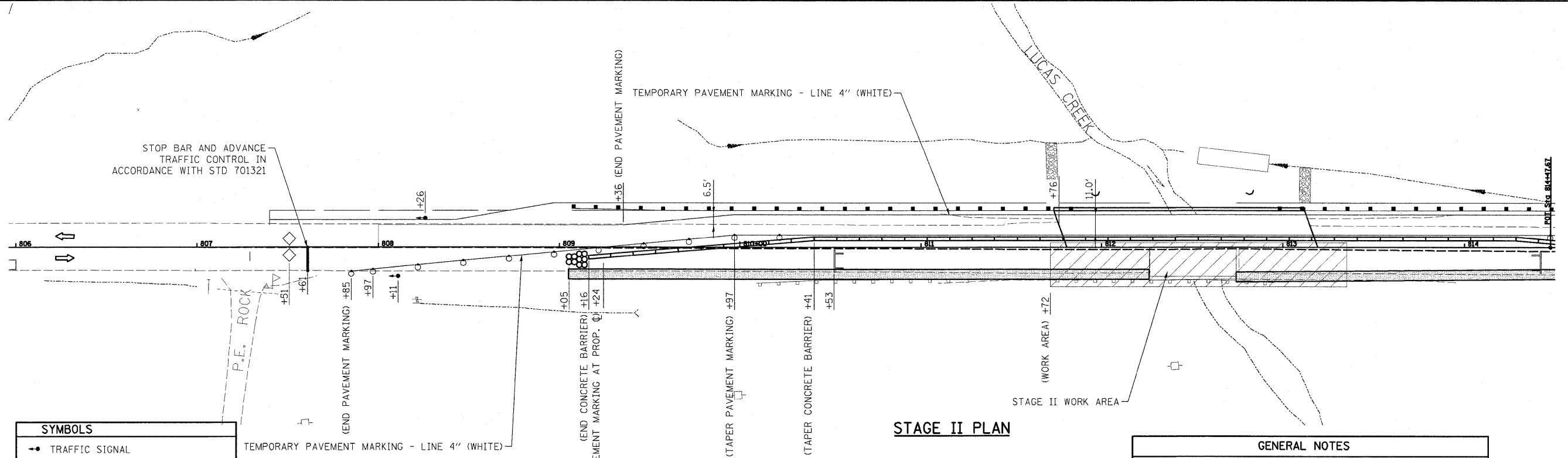


- PRE-STAGE I CONSTRUCTION:**
- PRE-STAGE I CONSTRUCTION SHALL CONSIST OF THE CONSTRUCTION OF 5.5' PCC BASE COURSE WIDENING ALONG THE WEST EDGE OF THE PAVEMENT. TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH TRAFFIC CONTROL AND PROTECTION, STANDARD 701326.
- STAGE I CONSTRUCTION:**
- STAGE I CONSTRUCTION SHALL CONSIST OF STAGE I REMOVAL OF THE EXISTING STRUCTURE AND STAGE I CONSTRUCTION OF THE REPLACEMENT STRUCTURE, PAVEMENT REMOVAL, BASE COURSE WIDENING, GRADING, HMA BINDER COURSES TO WITHIN 1/2" OF FINAL SURFACE, SHOULDER, GUARDRAIL, RIPRAP, ETC. STAGE I STRUCTURE CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH STAGE CONSTRUCTION AS DETAILED IN THE BRIDGE PLANS. TEMPORARY CONCRETE BARRIERS ON NORTH AND SOUTH END WILL NEED TO BE REMOVED PRIOR TO THE LAST LIFT OF BINDER BEING PLACED. TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF STANDARD 701306 AND 701321 AND AS DETAILED IN THE STAGE CONSTRUCTION PLANS.
  - PLACEMENT OF TEMPORARY RAMP NEAR 808+50 IN SOUTHBOUND LANE, DONE IN CONJUNCTION WITH PLACEMENT OF HMA BINDER, FOR TRAFFIC SWITCHING LANES DUE TO STAGE CONSTRUCTION. FINISHED HMA BINDER SURFACE PLACED IN STAGE I IS 4" (+) ABOVE EXISTING PAVEMENT. TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF STANDARD 701306.
  - TEMPORARY RAMPS SHALL BE PLACED AT BOTH ENDS OF THE BRIDGE APPROACH SLAB FOR STAGE II TRAFFIC.

4915.195A#3LucasCreekStandalone/SC04\_45.DGN

FILE NAME = #FILE#	USER NAME = #USER#	DESIGNED - DJR	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>STAGE I CONSTRUCTION AND TRAFFIC CONTROL</b>	F.A.P. RTE. 328	SECTION 4(BR-1)B	COUNTY CLAY	TOTAL SHEETS 42	SHEET NO. 14		
PLOT SCALE = #SCALE#		CHECKED - KOJ	REVISED -			CONTRACT NO. 74310		ILLINOIS FED. AID PROJECT				
PLOT DATE = #DATE#		DATE -	REVISED -			SCALE: SHEET NO. 1 OF 2 SHEETS   STA. TO STA.						
HENRY, MEISENHEIMER & GENDE, INC., 1075 LAKE ROAD, PO BOX 70, CARLYLE, IL 62231 PHONE (618) 594-3711 WWW.HMGENGINEERS.COM												

PLANS - NO. 0919



STAGE II PLAN

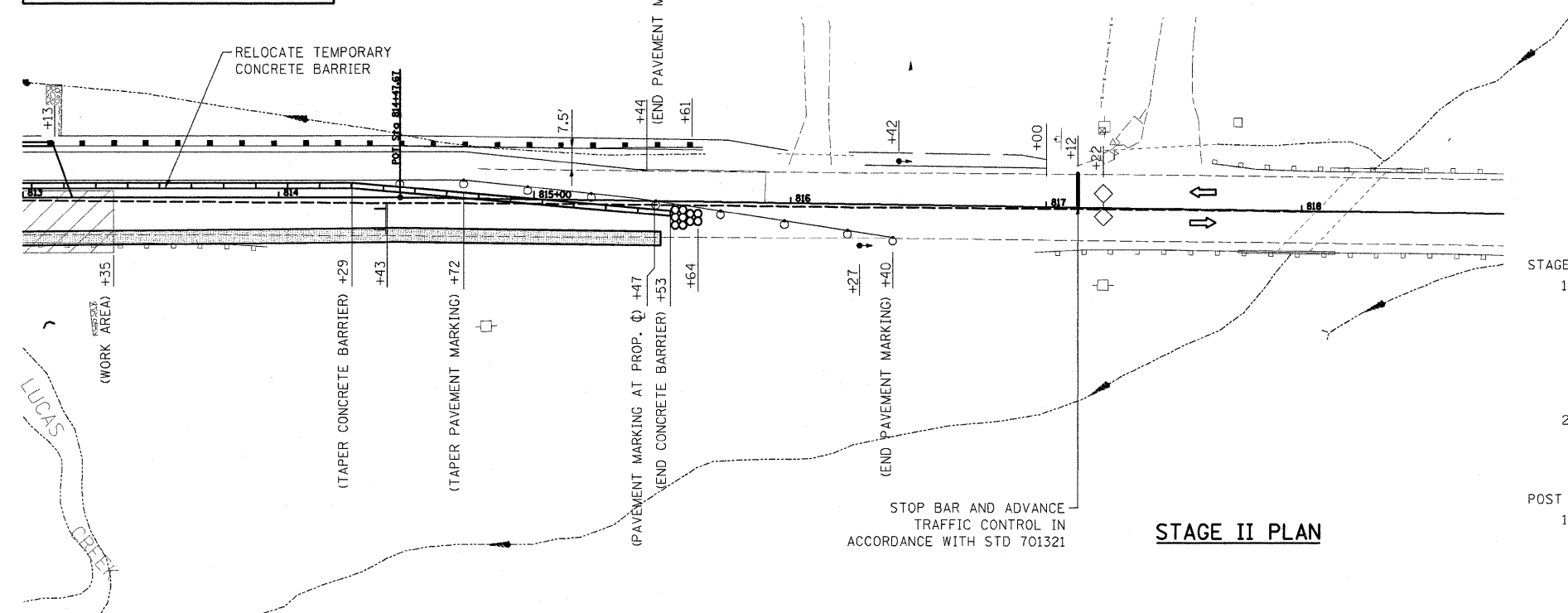
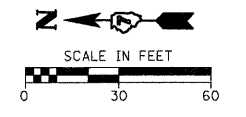
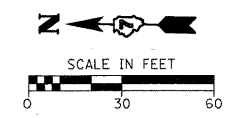
**SYMBOLS**

- ▲ TRAFFIC SIGNAL
- DRUM WITH STEADY BURNING LIGHT
- ▣ SAND MODULE IMPACT ATTENUATOR
- ▨ WORK AREA
- ▩ PAVED SHOULDER REMOVAL
- ▭ TEMPORARY CONCRETE BARRIER
- ▧ DOUBLE VERTICAL PANEL
- ▬ TYPE III BARRICADE (WHEN NOT WORKING)
- ◇ DETECTOR LOOPS

**TRAFFIC CONTROL QUANTITIES (THIS SHEET)**

ITEM	UNIT	TOTAL
TRAFFIC CONTROL AND PROTECTION, STD 701321 (SPECIAL)	EACH	0.5
IMPACT ATTENUATORS, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	EACH	2.0
RELOCATE TEMPORARY CONCRETE BARRIER	FOOT	612.5
TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	1,466.7
WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	488.4

- GENERAL NOTES**
- THIS WORK SHALL SUPPLEMENT AND BE IN ACCORDANCE WITH TRAFFIC CONTROL STANDARD 701321.
  - THE POSTED SPEED LIMIT THROUGH THE CONSTRUCTION SITE SHALL BE 40 MPH.
  - TEMPORARY RUMBLE STRIPS SHALL NOT BE USED.
  - THE COST OF DRUMS, BARRICADES, REFLECTORS, VERTICAL PANELS, SIGNING AND REMOVAL OF EXISTING PAVEMENT STRIPES WILL NOT BE PAID FOR SEPARATELY, AND SHALL BE INCLUDED IN THE COST OF TRAFFIC CONTROL AND PROTECTION, STANDARD 701321 (SPECIAL).
  - ACCESS TO ENTRANCES SHALL BE MAINTAINED AT ALL TIMES.



STAGE II PLAN


- STAGE II CONSTRUCTION:**
- STAGE II CONSTRUCTION SHALL CONSIST OF STAGE II REMOVAL OF THE EXISTING STRUCTURE, STAGE II CONSTRUCTION OF THE REPLACEMENT STRUCTURE, REMOVAL OF PRE-STAGE I BASE COURSE WIDENING, PAVEMENT REMOVAL, GRADING, HMA BINDER COURSES TO WITHIN 1 1/2" OF FINAL SURFACE, SHOULDER, GUARDRAIL, RIPRAP, ETC. STAGE II STRUCTURE CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH STAGE CONSTRUCTION AS DETAILED IN THE BRIDGE PLANS. TEMPORARY CONCRETE BARRIERS ON NORTH AND SOUTH END WILL NEED TO BE REMOVED PRIOR TO THE LAST LIFT OF BINDER BEING PLACED. TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF STANDARD 701321 AND AS DETAILED IN THE STAGE CONSTRUCTION PLANS.
  - TEMPORARY RAMP SHALL BE PLACED AT BOTH ENDS OF THE BRIDGE APPROACH SLAB FOR POST-STAGE II TRAFFIC.
- POST STAGE CONSTRUCTION:**
- POST-STAGE CONSTRUCTION SHALL CONSIST OF CONSTRUCTING BUTT JOINTS AT NORTH AND SOUTH LIMITS OF PROJECT, REMOVAL OF TEMPORARY CONCRETE BARRIERS, PLACING 1 1/2" HMA SURFACE. TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF STANDARD 701306.

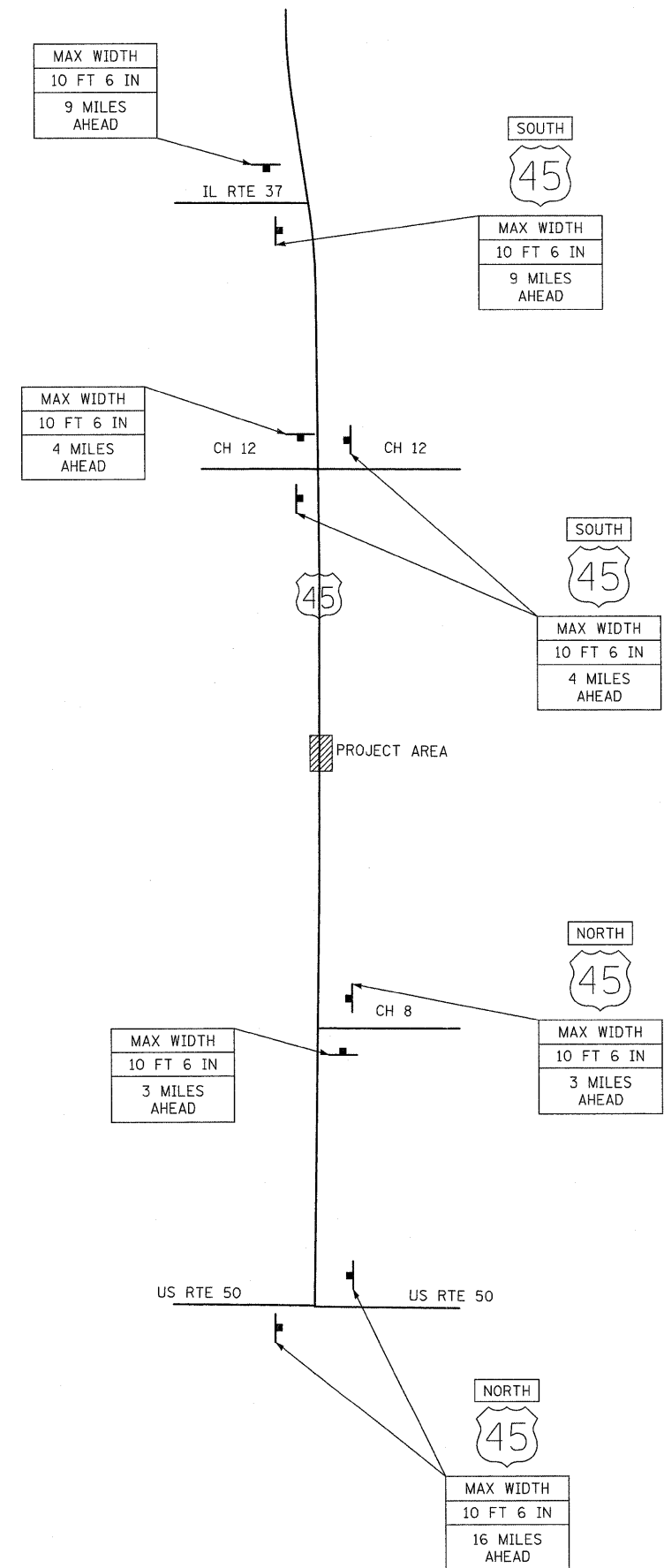
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PLOT SCALE = #SCALE#		CHECKED - KOJ	REVISED -			SCALE: SHEET NO. 2 OF 2 SHEETS   STA. TO STA.		CONTRACT NO. 74310				
PLOT DATE = #DATE#		DATE -	REVISED -			ILLINOIS FED. AID PROJECT						
HENRY, MEISENHEIMER & GENDE, INC., 1075 LAKE ROAD, PO BOX 70, CARLYLE, IL 62231 PHONE (618) 594-3711 WWW.HMGENGINEERS.COM												

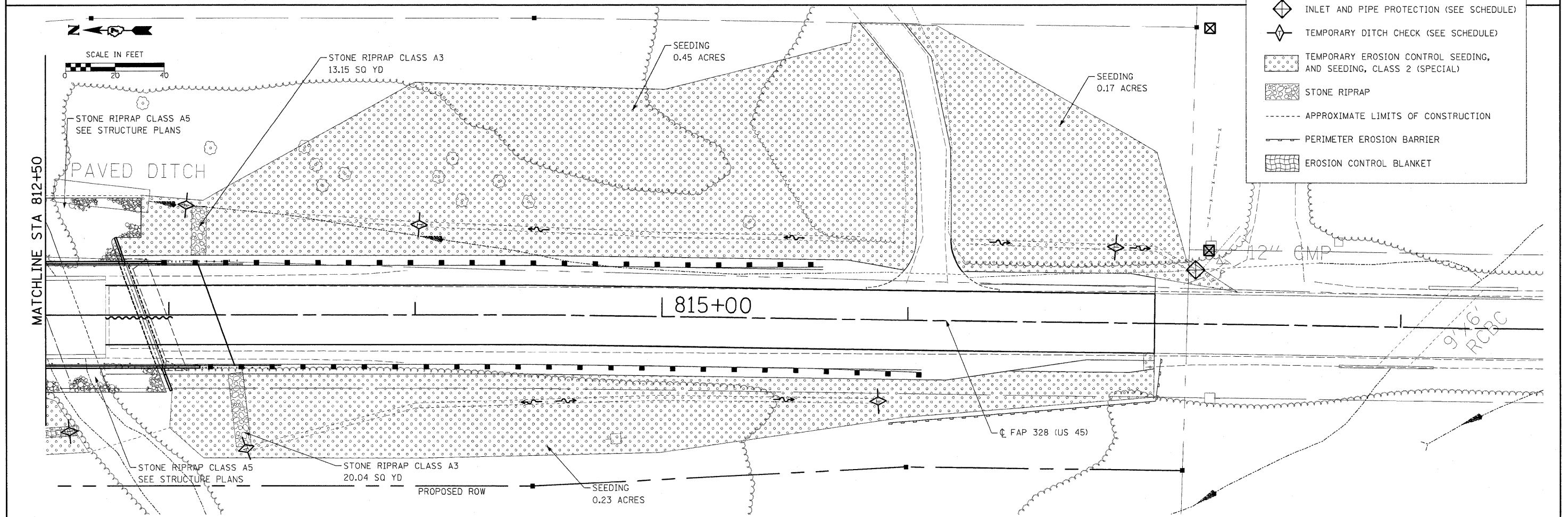
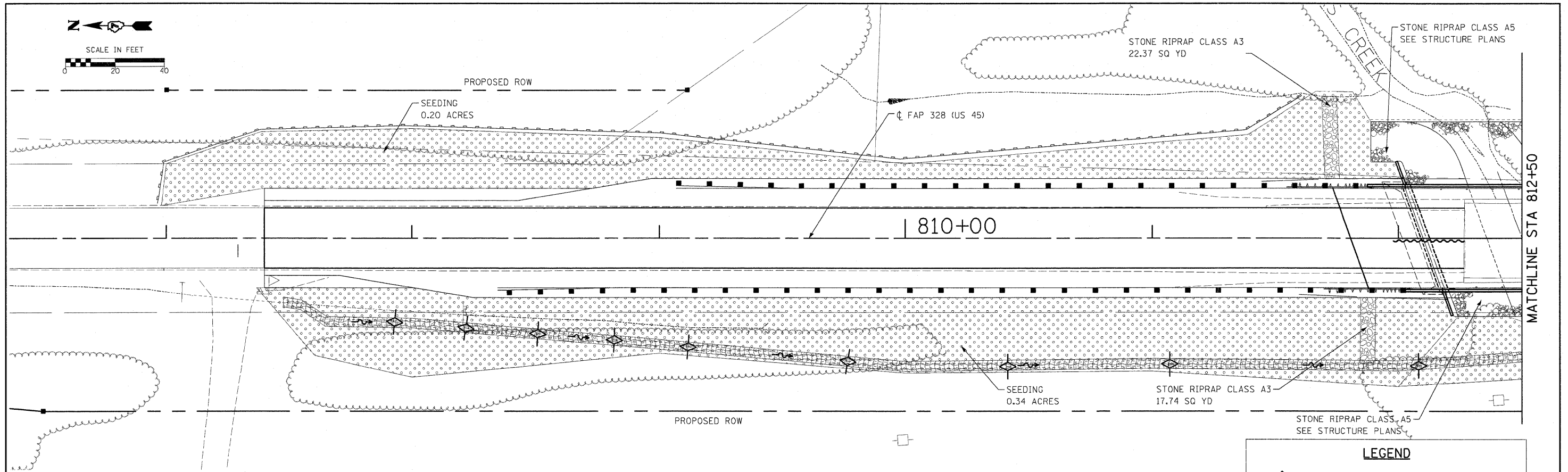
**NOTES**

1. ALL SIGNS REQUIRED WILL BE SUPPLIED TO THE CONTRACTOR BY ILLINOIS DEPARTMENT OF TRANSPORTATION.
2. THE CONTRACTOR SHALL FURNISH THE POSTS AND ERECT SIGNS AT THE LOCATIONS SHOWN ON THIS SHEET AND AS DIRECTED BY THE RESIDENT ENGINEER. THE POSTS SHALL REMAIN THE PROPERTY OF THE CONTRACTOR.
3. THE CONTRACTOR SHALL GIVE THE ILLINOIS DEPARTMENT OF TRANSPORTATION, BUREAU OF OPERATIONS, TWO WEEKS NOTICE FOR SIGNS. THE CONTRACTOR SHALL PICK UP THE SIGNS AT THE DISTRICT 7 SIGN SHOP LOCATED WEST OF EFFINGHAM ON US ROUTE 40, AND RETURN THEM UPON COMPLETION OF THE CONTRACT.
4. THE ABOVE NOTED WORK SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE, LUMP SUM, FOR TRAFFIC CONTROL AND PROTECTION, STANDARD 701321 (SPECIAL) AND NO OTHER COMPENSATION WILL BE ALLOWED.
5. THE HEIGHT TO THE BOTTOM OF THE LOWEST SIGN SHALL BE NOT LESS THAN 6'.

SIGNS REQUIRED																
 (6)	NORTH (3)	SOUTH (3)														
<table border="1"> <tr><td>MAX WIDTH</td></tr> <tr><td>10 FT 6 IN</td></tr> <tr><td>9 MILES AHEAD</td></tr> </table> (2)	MAX WIDTH	10 FT 6 IN	9 MILES AHEAD	<table border="1"> <tr><td>MAX WIDTH</td></tr> <tr><td>10 FT 6 IN</td></tr> <tr><td>4 MILES AHEAD</td></tr> </table> (3)	MAX WIDTH	10 FT 6 IN	4 MILES AHEAD	<table border="1"> <tr><td>MAX WIDTH</td></tr> <tr><td>10 FT 6 IN</td></tr> <tr><td>3 MILES AHEAD</td></tr> </table> (2)	MAX WIDTH	10 FT 6 IN	3 MILES AHEAD	<table border="1"> <tr><td>MAX WIDTH</td></tr> <tr><td>10 FT 6 IN</td></tr> <tr><td>16 MILES AHEAD</td></tr> </table> (2)	MAX WIDTH	10 FT 6 IN	16 MILES AHEAD	
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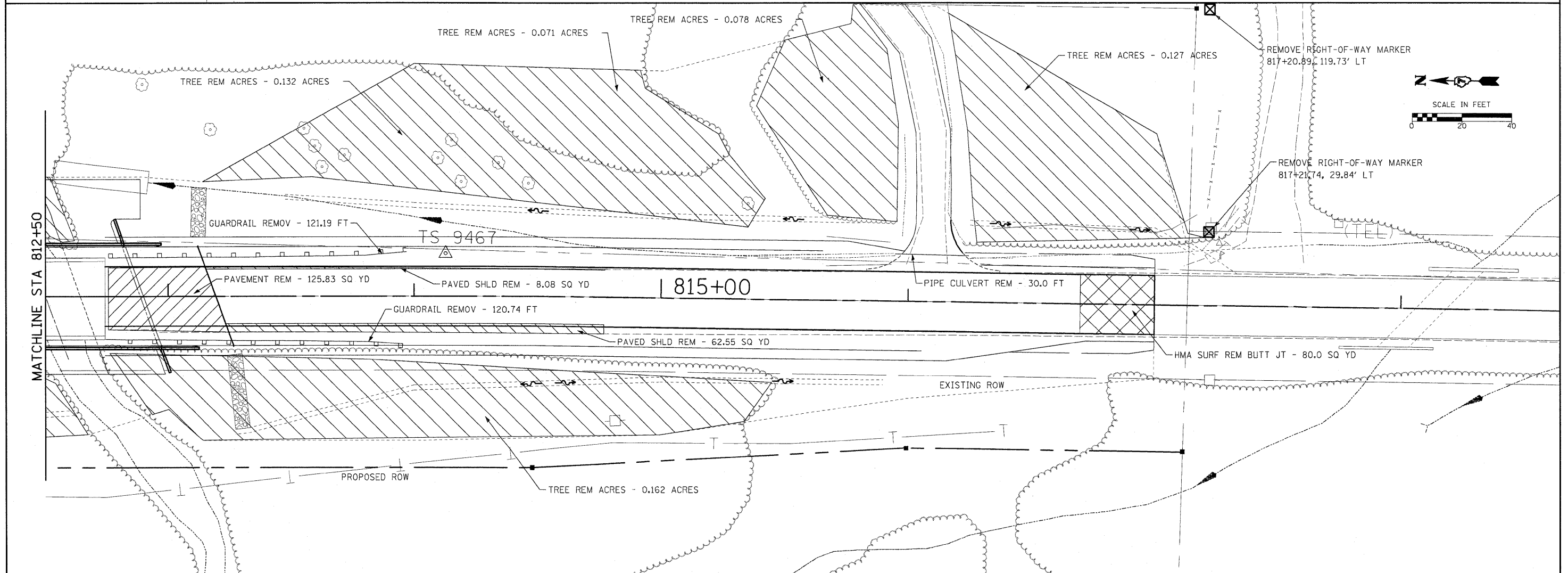
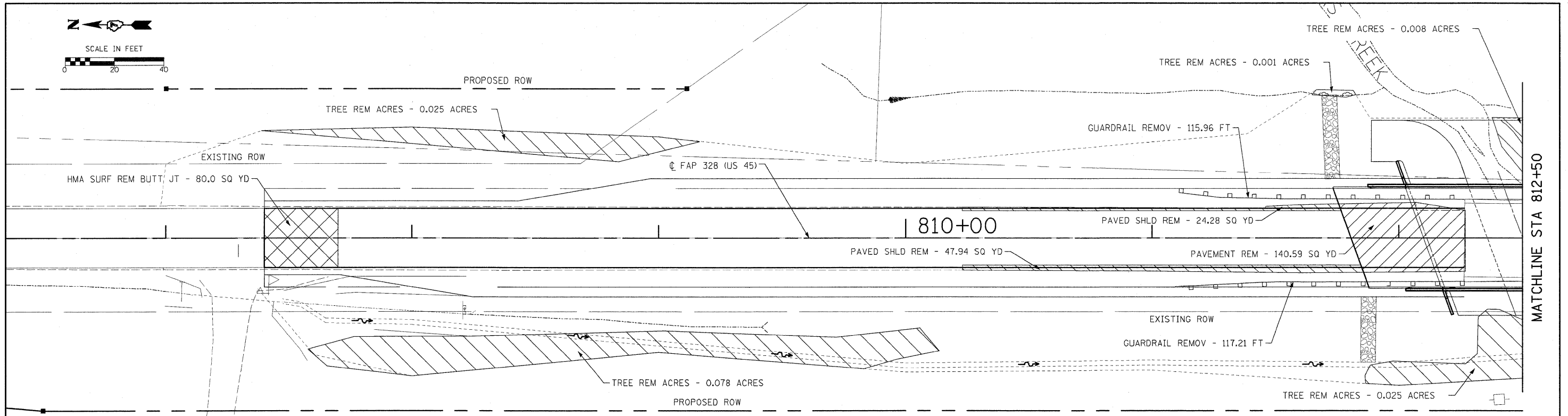
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\$FILE\$		DRAWN - KOJ	REVISED -			SCALE:	SHEET NO. 1 OF 1 SHEETS	STA.	TO STA.	ILLINOIS FED. AID PROJECT	
		PLOT SCALE = \$SCALE\$	REVISED -								
		PLOT DATE = \$DATE\$	REVISED -								



**LEGEND**

- INLET AND PIPE PROTECTION (SEE SCHEDULE)
- TEMPORARY DITCH CHECK (SEE SCHEDULE)
- TEMPORARY EROSION CONTROL SEEDING, AND SEEDING, CLASS 2 (SPECIAL)
- STONE RIPRAP
- APPROXIMATE LIMITS OF CONSTRUCTION
- PERIMETER EROSION BARRIER
- EROSION CONTROL BLANKET

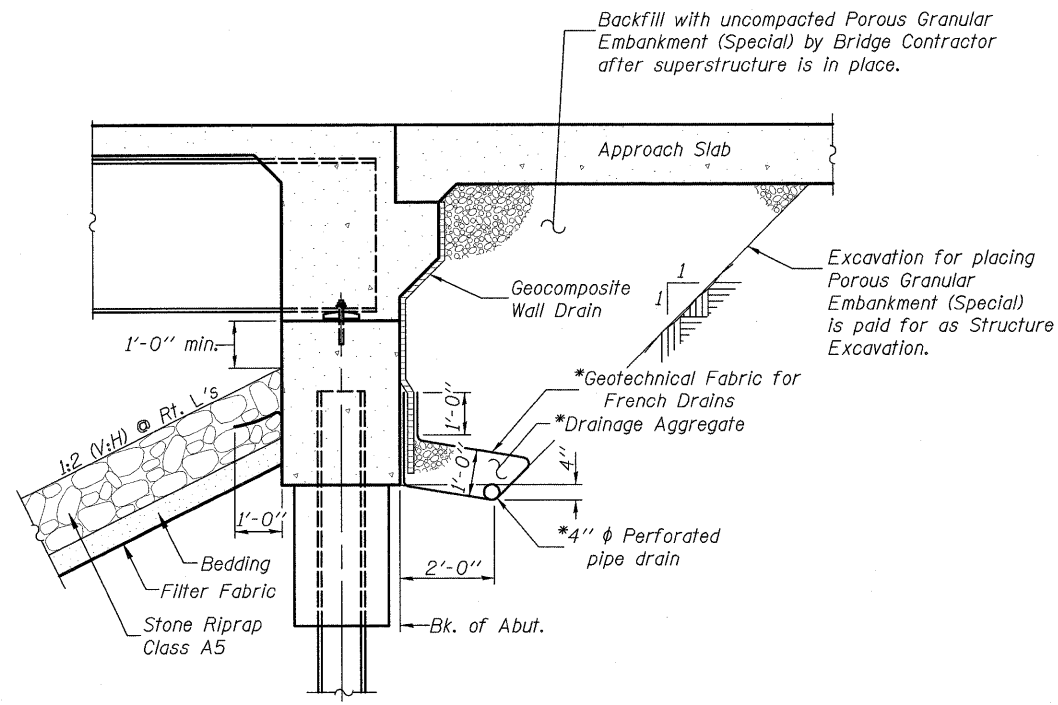
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PLOT SCALE = #SCALE#	CHECKED - KQJ	REVISED -	SCALE: SHEET NO. 1 OF 1 SHEETS STA. TO STA.			<b>CONTRACT NO. 74310</b>				
PLOT DATE = #DATE#	DATE -	REVISED -	ILLINOIS FED. AID PROJECT							



FILE NAME =	USER NAME = #USER#	DESIGNED - DJR	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>REMOVALS</b>		F.A.P. RTE. 328	SECTION 4(BR-1)B	COUNTY CLAY	TOTAL SHEETS 42	SHEET NO. 18	
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		DATE -	REVISED -		ILLINOIS FED. AID PROJECT							





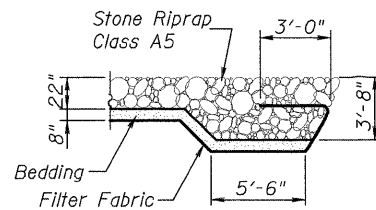


**SECTION THRU INTEGRAL ABUTMENT**  
(Horiz. dim. @ Rt. L's)

\*Included in the cost of Pipe Underdrains for Structures.

**Note:**

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



**STONE RIPRAP FLANK DETAIL**

**TOTAL BILL OF MATERIAL**

ITEM	UNIT	SUPER	SUB	TOTAL
Porous Granular Embankment (Special)	Cu. Yd.	150		150
Stone Riprap, Class A5	Sq. Yd.	752		752
Filter Fabric	Sq. Yd.	752		752
Removal of Existing Structures	Each			1
Structure Excavation	Cu. Yd.	229		229
Floor Drains	Each	12		12
Concrete Structures	Cu. Yd.		72.5	72.5
Concrete Superstructure	Cu. Yd.	270.3		270.3
Bridge Deck Grooving	Sq. Yd.	594		594
Concrete Encasement	Cu. Yd.		4.2	4.2
** Protective Coat	Sq. Yd.	723		723
Furnishing and Erecting Structural Steel	L. Sum	1		1
Stud Shear Connectors	Each	2,256		2,256
*** Reinforcement Bars, Epoxy Coated	Pound	61,410	7,340	68,750
*** Bar Splicers	Each	575		575
Furnishing Steel Piles HP 12x74	Foot		216	216
Name Plates	Each	1		1
Anchor Bolts, 1"	Each		32	32
Geocomposite Wall Drain	Sq. Yd.		74	74
Pipe Underdrains for Structures 4"	Foot		155	155
Asbestos Bearing Pad Removal	Each	24		24
Setting Piles in Rock	Each		12	12
Temporary Soil Retention System	Sq. Ft.		368	368

\*\* Quantity includes top of concrete surface of bridge deck and approach slab end to end and the top and inside vertical faces of the parapets and curbs.

\*\*\* Reinforcement and Bar Splicer quantities for Bridge Approach Slabs and Footings are included in Superstructure quantities.

**GENERAL NOTES**

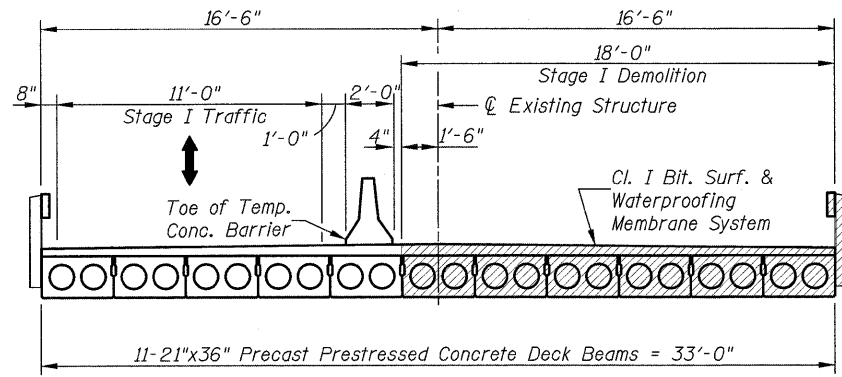
- The Contractor is advised that the existing PPC deck beams are in a deteriorated condition with reduced load carrying capacity. It is the Contractor's responsibility to account for the condition of the beams when developing construction procedures for removal and replacement of the superstructure. If the Contractor's procedures for existing beam removal involves placement of heavy equipment on the existing deck beams, a detailed procedure shall be submitted to the Engineer for approval. The procedure shall include calculations, sealed by an Illinois Licensed Structural Engineer, verifying the structural adequacy of the beams for the proposed loads. Cost included with Removal of Existing Structures.
- Drill through existing footings, as necessary, where in conflict with piles. Cost included in Setting Piles in Rock.
- Fasteners shall be AASHTO M164 Type 1, mechanically galvanized bolts. Bolts 3/4 in.  $\phi$ , holes 15/16 in.  $\phi$ , unless otherwise noted.
- Calculated weight of Structural Steel = 114,030 lbs.
- No field welding is permitted except as specified in the contract documents.
- Reinforcement bars shall conform to the requirements of ASTM A 706 Gr 60. See Special Provisions.
- Reinforcement bars designated (E) shall be epoxy coated.
- If the Contractor elects to use cantilever forming brackets on the exterior beams or girders, the brackets shall be placed at the same locations as required for the hardwood blocks in Article 503.06(b) of the Standard Specifications. If additional cantilever forming brackets are required, hardwood blocking shall be wedged between the exterior and first interior beam at each of these additional bracket locations.
- 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 Gray, Munsell No. 5B 7/1. See Special Provision for "Cleaning and Painting New Metal Structures".
- Layout of slope protection system may be varied in the field to suit ground conditions as directed by the Engineer.
- Slipforming of the parapets is not allowed.
- Excavation behind existing abutment walls shall be performed to balance front and back soil pressure before removing the existing superstructure. The Contractor shall sawcut the upper portion of the existing abutment at the stage removal line before Stage I removal to ensure the remaining portion will not be prematurely damaged.

DESIGNED	B.G.H.
CHECKED	L.D.G.
DRAWN	K.H.L.
CHECKED	B.G.H.

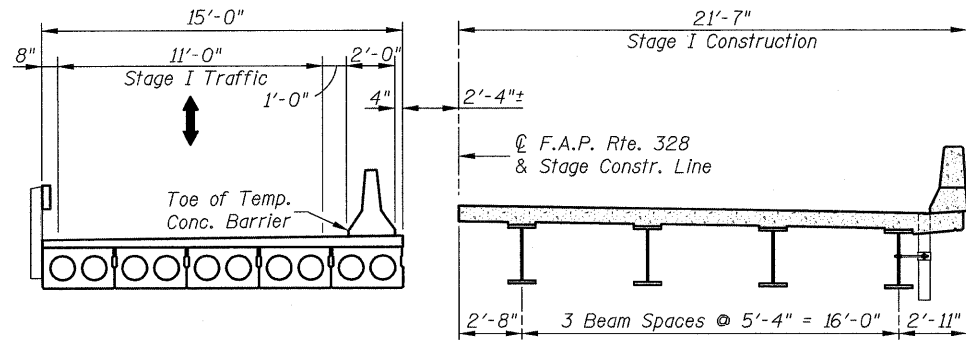
**GENERAL DATA**

SHEET NO. 2	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	328	(4BR-1)B	CLAY	42	20
21 SHEETS	S.N. 013-0039		CONTRACT NO. 74310		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

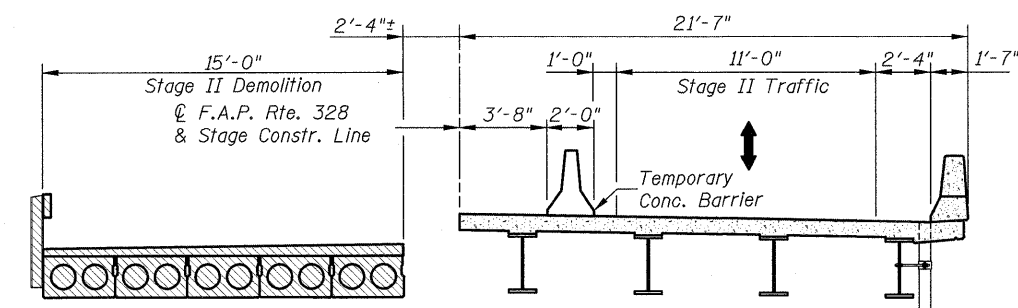




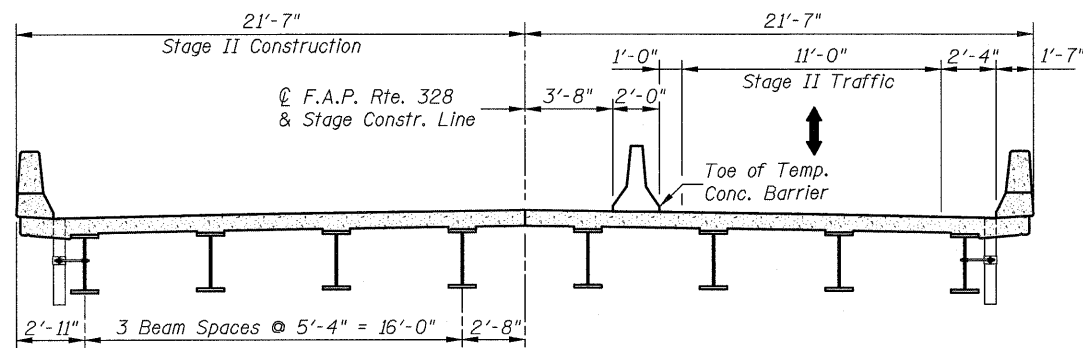
**STAGE I DEMOLITION**  
(Looking North)



**STAGE I CONSTRUCTION**  
(Looking North)



**STAGE II DEMOLITION**  
(Looking North)

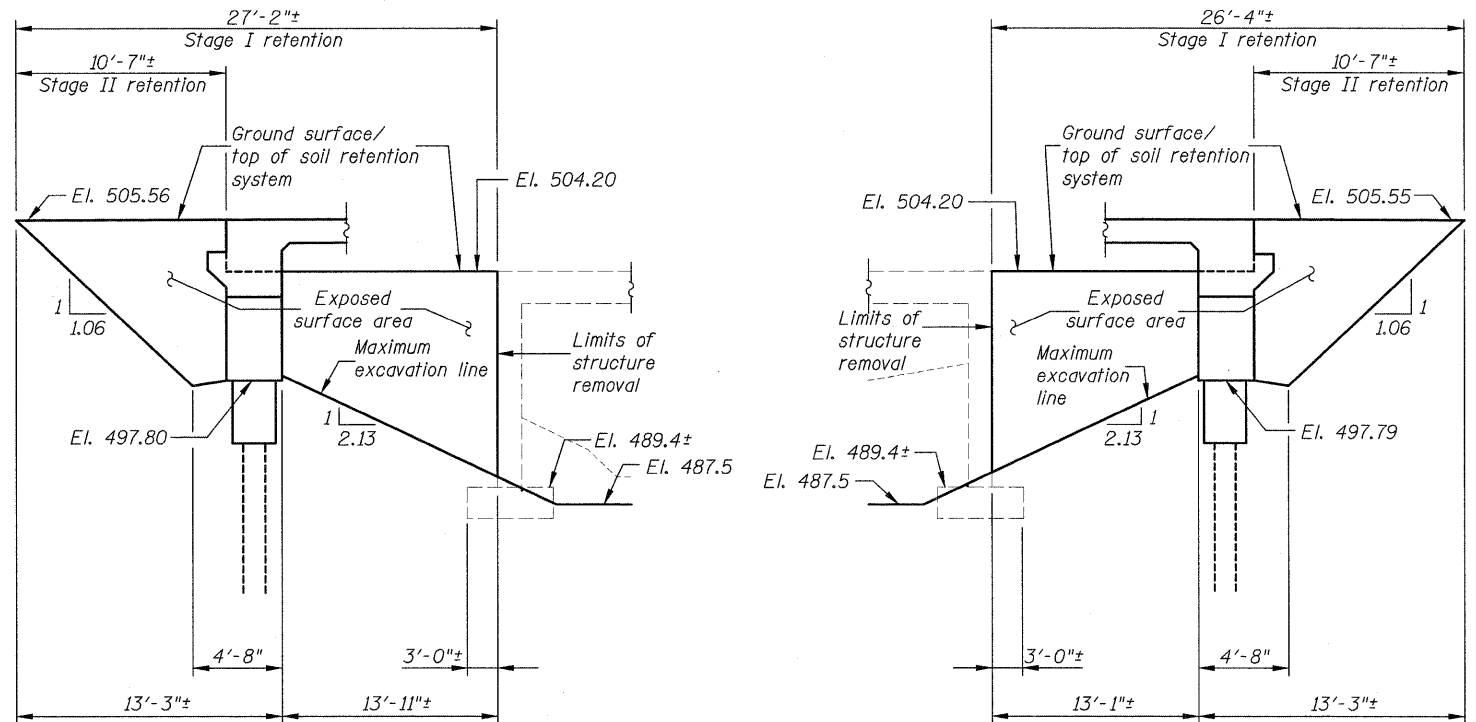


**STAGE II CONSTRUCTION**  
(Looking North)

DESIGNED	B.G.H.
CHECKED	L.D.G.
DRAWN	K.H.L.
CHECKED	B.G.H.

**Note:**

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.



**NORTH ABUTMENT ELEVATION**

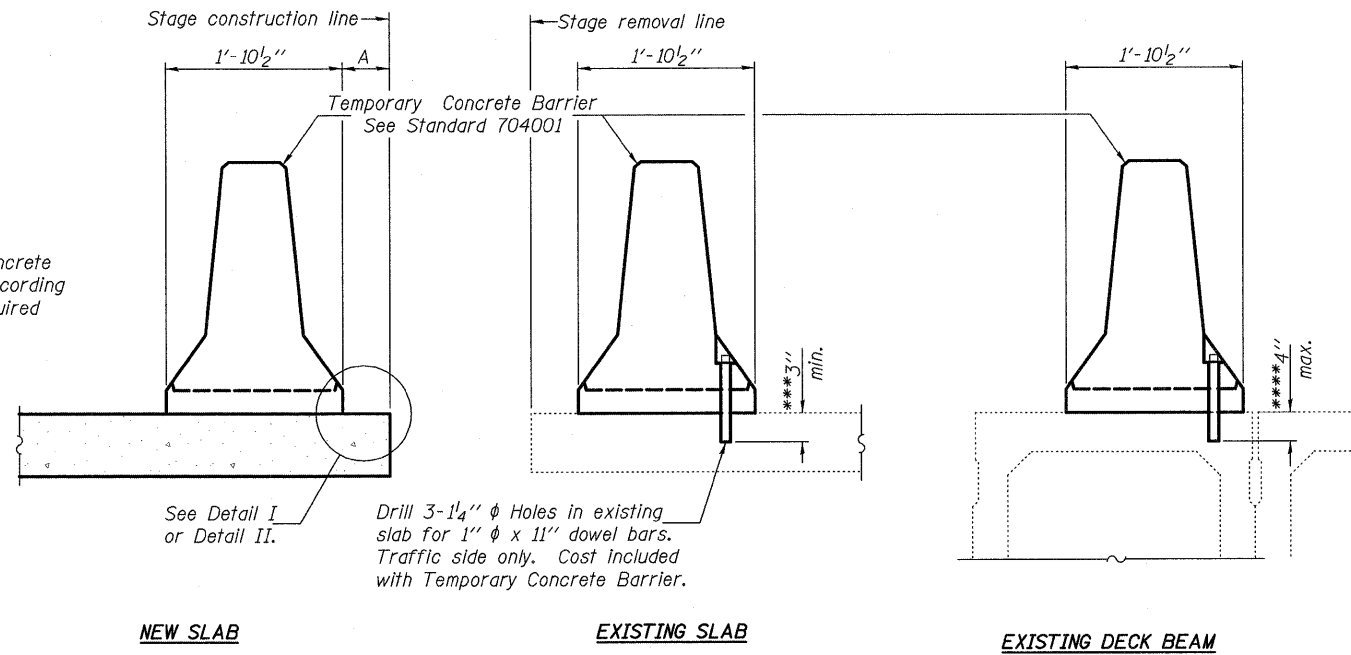
**SOUTH ABUTMENT ELEVATION**

**TEMPORARY SOIL RETENTION SYSTEM ELEVATION**

**STAGE CONSTRUCTION DETAILS**

SHEET NO. 3	F.A.P. RTE. 328	SECTION (4BR-1)B	COUNTY CLAY	TOTAL SHEETS 42	SHEET NO. 21
	S.N. 013-0039		CONTRACT NO. 74310		
21 SHEETS	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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



**SECTIONS THRU SLAB OR DECK BEAM**

**NOTES**

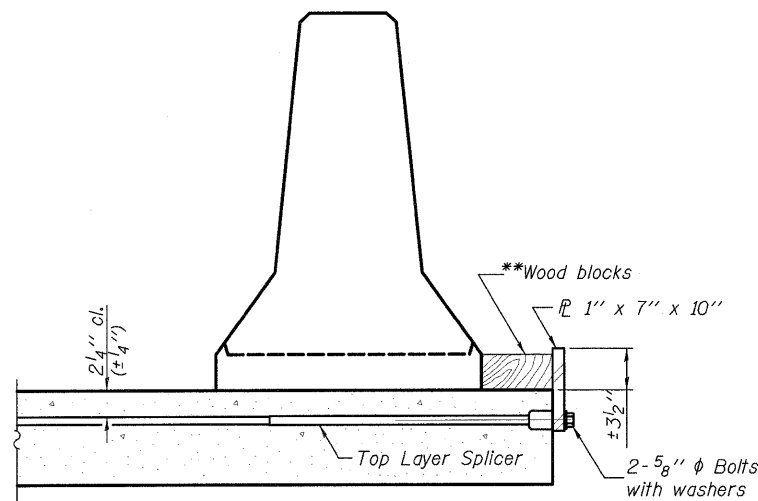
Detail I - With Bar Splicer or Couplers:  
Connect one (1) 1"x7"x10" steel PL to the top layer of couplers with 2-5/8" φ bolts screwed to coupler at approximate C of each barrier panel.

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

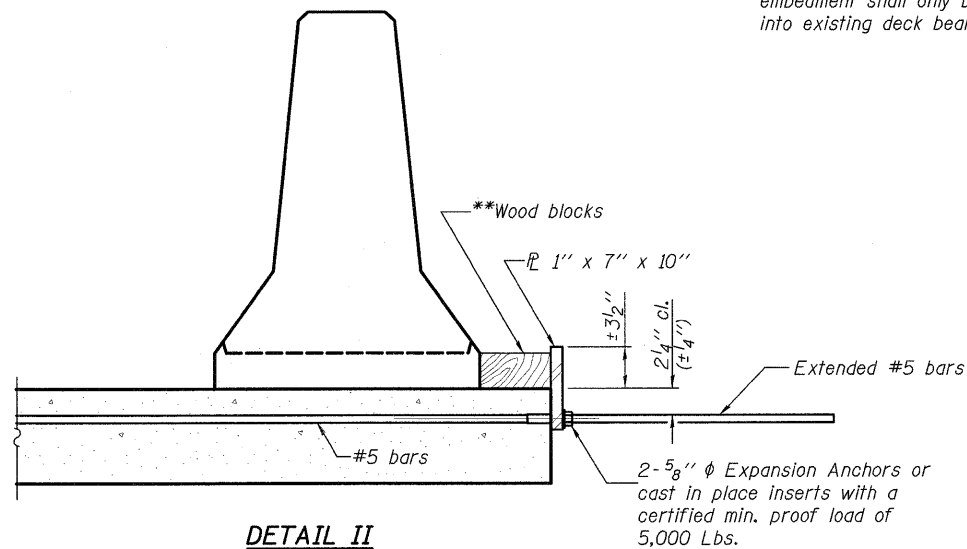
Cost of anchorage is included with Temporary Concrete Barrier.  
The 1" x 7" x 10" plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

\*\*\* Dimension shown is minimum required embedment into concrete.  
If hot-mix asphalt wearing surface is present, minimum embedment shall be in addition to wearing surface depth.

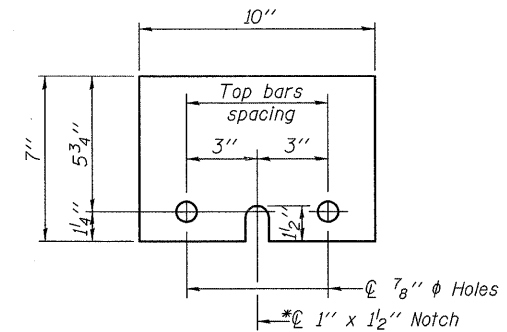
\*\*\*\* If existing deck beam is to remain in place after stage construction, embedment shall only be into wearing surface and not into existing deck beam concrete.



**DETAIL I**



**DETAIL II**



**STEEL RETAINER PLATE 1" x 7" x 10"**

\* Required only with Detail II

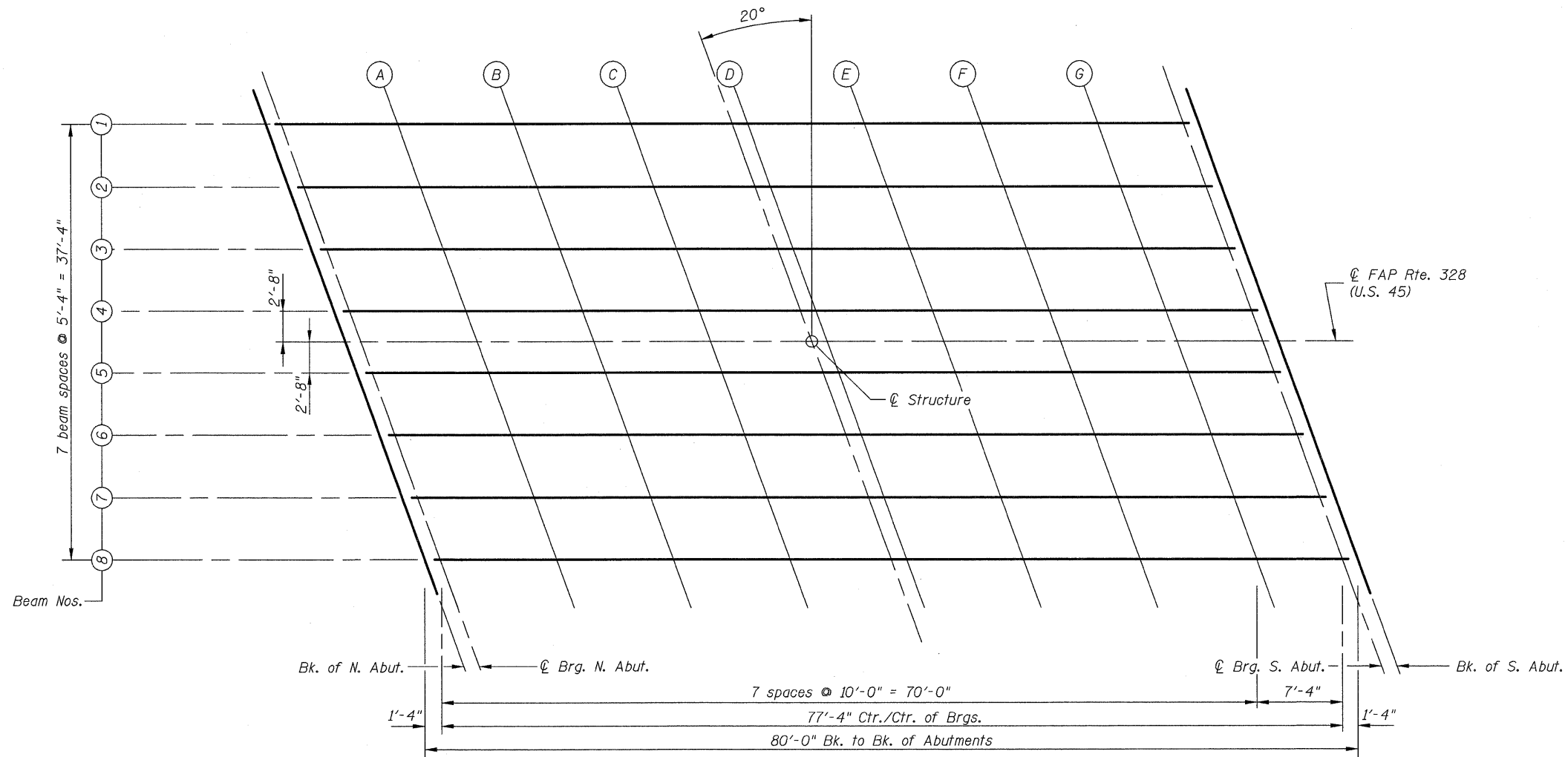
\*\*Wood blocks may be omitted when required to provide minimum stage traffic lane width. When the wood blocks are omitted, the concrete barrier shall be in direct contact with the steel retainer plate.

DESIGNED	B.G.H.
CHECKED	L.D.G.
DRAWN	K.H.L.
CHECKED	B.G.H.

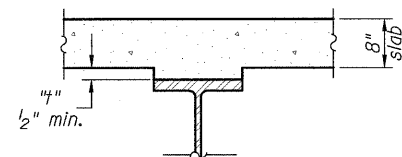
R-27 10-1-08

**TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION**

SHEET NO. 4	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	328	(4BR-1)B	CLAY	42	22
21 SHEETS	S.N. 013-0039		CONTRACT NO. 74310		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

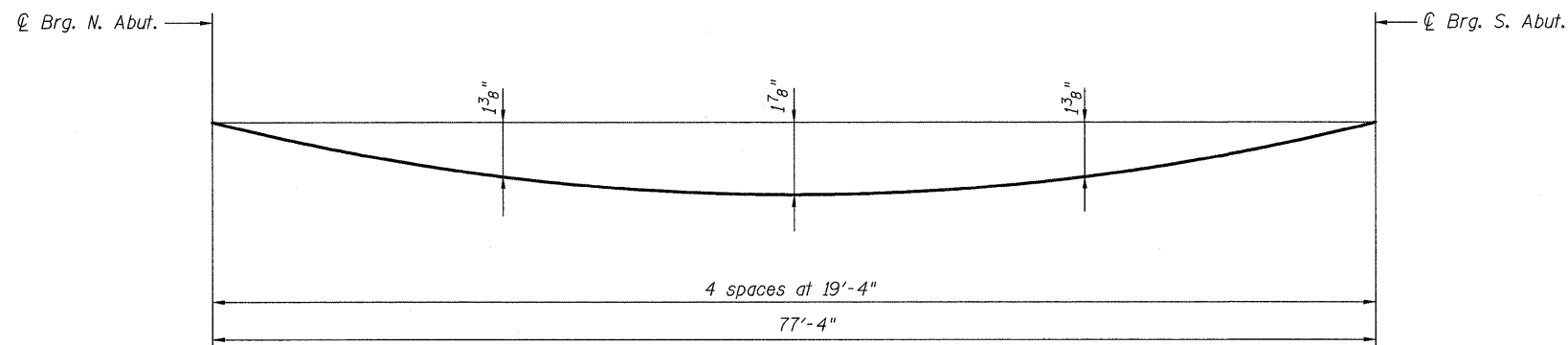


**PLAN**  N



To determine "t": After all structural steel has been erected, elevations of the top flanges of the beams shall be taken at intervals shown on this sheet. These elevations subtracted from the "Theoretical Grade Elevations Adjusted for Dead Load Deflections" shown on sheets 6 and 7, minus slab thickness, equals the fillet heights "t" above top flanges of beams.

**FILLET HEIGHTS**



**DEAD LOAD DEFLECTION DIAGRAM**

(Includes weight of concrete slab only, exclusive of beam weight.)

**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 shown on sheets 6 and 7.

DESIGNED	B.G.H.
CHECKED	L.D.G.
DRAWN	K.H.L.
CHECKED	B.G.H.

**TOP OF SLAB ELEVATIONS**

SHEET NO. 5	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	328	(4BR-1)B	CLAY	42	23
21 SHEETS	S.N. 013-0039		CONTRACT NO. 74310		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		

**BEAM #1**

Location	Station	Offset from Ctrline	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
Bk. N. Abut.	812+03.21	-18.67	505.23	505.23
⊕ Brg. N. Abut.	812+04.54	-18.67	505.24	505.24
A	812+14.54	-18.67	505.26	505.32
B	812+24.54	-18.67	505.27	505.39
C	812+34.54	-18.67	505.28	505.43
D	812+44.54	-18.67	505.29	505.45
E	812+54.54	-18.67	505.29	505.43
F	812+64.54	-18.67	505.28	505.39
G	812+74.54	-18.67	505.27	505.32
⊕ Brg. S. Abut.	812+81.88	-18.67	505.26	505.26
Bk. S. Abut.	812+83.21	-18.67	505.26	505.26

**BEAM #2**

Location	Station	Offset from Ctrline	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
Bk. N. Abut.	812+05.15	-13.33	505.35	505.35
⊕ Brg. N. Abut.	812+06.48	-13.33	505.35	505.35
A	812+16.48	-13.33	505.37	505.44
B	812+26.48	-13.33	505.39	505.50
C	812+36.48	-13.33	505.40	505.55
D	812+46.48	-13.33	505.40	505.56
E	812+56.48	-13.33	505.40	505.54
F	812+66.48	-13.33	505.39	505.50
G	812+76.48	-13.33	505.38	505.43
⊕ Brg. S. Abut.	812+83.82	-13.33	505.37	505.37
Bk. S. Abut.	812+85.15	-13.33	505.36	505.36

**BEAM #3**

Location	Station	Offset from Ctrline	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
Bk. N. Abut.	812+07.09	-8.00	505.44	505.44
⊕ Brg. N. Abut.	812+08.42	-8.00	505.45	505.45
A	812+18.42	-8.00	505.47	505.53
B	812+28.42	-8.00	505.48	505.60
C	812+38.42	-8.00	505.49	505.64
D	812+48.42	-8.00	505.49	505.65
E	812+58.42	-8.00	505.49	505.63
F	812+68.42	-8.00	505.48	505.58
G	812+78.42	-8.00	505.47	505.51
⊕ Brg. S. Abut.	812+85.76	-8.00	505.45	505.45
Bk. S. Abut.	812+87.09	-8.00	505.45	505.45

**BEAM #4**

Location	Station	Offset from Ctrline	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
Bk. N. Abut.	812+09.03	-2.67	505.53	505.53
⊕ Brg. N. Abut.	812+10.36	-2.67	505.53	505.53
A	812+20.36	-2.67	505.55	505.62
B	812+30.36	-2.67	505.56	505.68
C	812+40.36	-2.67	505.57	505.72
D	812+50.36	-2.67	505.57	505.73
E	812+60.36	-2.67	505.57	505.71
F	812+70.36	-2.67	505.56	505.67
G	812+80.36	-2.67	505.55	505.59
⊕ Brg. S. Abut.	812+87.70	-2.67	505.53	505.53
Bk. S. Abut.	812+89.03	-2.67	505.53	505.53

**⊕ ROADWAY, P.G. AND STAGE CONSTRUCTION LINE**

Location	Station	Offset from Ctrline	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
Bk. N. Abut.	812+10.00	0.00	505.58	505.58
⊕ Brg. N. Abut.	812+11.33	0.00	505.58	505.58
A	812+21.33	0.00	505.60	505.66
B	812+31.33	0.00	505.61	505.73
C	812+41.33	0.00	505.61	505.76
D	812+51.33	0.00	505.61	505.77
E	812+61.33	0.00	505.61	505.75
F	812+71.33	0.00	505.60	505.71
G	812+81.33	0.00	505.59	505.63
⊕ Brg. S. Abut.	812+88.67	0.00	505.57	505.57
Bk. S. Abut.	812+90.00	0.00	505.57	505.57

DESIGNED	B.G.H.
CHECKED	L.D.G.
DRAWN	K.H.L.
CHECKED	B.G.H.

**Notes:**  
 1. Elevations are at Top of Concrete.  
 2. See Sheet 5 for elevation locations.

**TOP OF SLAB ELEVATIONS**

SHEET NO. 6	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	328	(4BR-1)B	CLAY	42	24
21 SHEETS	S.N. 013-0039		CONTRACT NO. 74310		
	FED. ROAD DIST. NO. _		ILLINOIS FED. AID PROJECT		

**BEAM #5**

Location	Station	Offset from Ctrline	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
Bk. N. Abut.	812+10.97	2.67	505.54	505.54
Ⓞ Brg. N. Abut.	812+12.30	2.67	505.54	505.54
A	812+22.30	2.67	505.56	505.62
B	812+32.30	2.67	505.57	505.68
C	812+42.30	2.67	505.57	505.72
D	812+52.30	2.67	505.57	505.73
E	812+62.30	2.67	505.57	505.71
F	812+72.30	2.67	505.56	505.66
G	812+82.30	2.67	505.54	505.59
Ⓞ Brg. S. Abut.	812+89.64	2.67	505.53	505.53
Bk. S. Abut.	812+90.97	2.67	505.53	505.53

**BEAM #6**

Location	Station	Offset from Ctrline	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
Bk. N. Abut.	812+12.91	8.00	505.46	505.46
Ⓞ Brg. N. Abut.	812+14.24	8.00	505.46	505.46
A	812+24.24	8.00	505.47	505.54
B	812+34.24	8.00	505.48	505.60
C	812+44.24	8.00	505.49	505.64
D	812+54.24	8.00	505.49	505.65
E	812+64.24	8.00	505.48	505.63
F	812+74.24	8.00	505.47	505.58
G	812+84.24	8.00	505.46	505.50
Ⓞ Brg. S. Abut.	812+91.58	8.00	505.44	505.44
Bk. S. Abut.	812+92.91	8.00	505.44	505.44

**BEAM #7**

Location	Station	Offset from Ctrline	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
Bk. N. Abut.	812+14.85	13.33	505.37	505.37
Ⓞ Brg. N. Abut.	812+16.18	13.33	505.37	505.37
A	812+26.18	13.33	505.39	505.45
B	812+36.18	13.33	505.40	505.51
C	812+46.18	13.33	505.40	505.55
D	812+56.18	13.33	505.40	505.56
E	812+66.18	13.33	505.39	505.54
F	812+76.18	13.33	505.38	505.48
G	812+86.18	13.33	505.36	505.41
Ⓞ Brg. S. Abut.	812+93.52	13.33	505.35	505.35
Bk. S. Abut.	812+94.85	13.33	505.34	505.34

**BEAM #8**

Location	Station	Offset from Ctrline	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted for Dead Load Deflection
Bk. N. Abut.	812+16.79	18.67	505.26	505.26
Ⓞ Brg. N. Abut.	812+18.12	18.67	505.26	505.26
A	812+28.12	18.67	505.28	505.34
B	812+38.12	18.67	505.29	505.40
C	812+48.12	18.67	505.29	505.44
D	812+58.12	18.67	505.29	505.45
E	812+68.12	18.67	505.28	505.42
F	812+78.12	18.67	505.27	505.37
G	812+88.12	18.67	505.25	505.30
Ⓞ Brg. S. Abut.	812+95.46	18.67	505.23	505.23
Bk. S. Abut.	812+96.79	18.67	505.23	505.23

DESIGNED	B.G.H.
CHECKED	L.D.G.
DRAWN	K.H.L.
CHECKED	B.G.H.

**Notes:**  
 1. Elevations are at Top of Concrete.  
 2. See Sheet 5 for elevation locations.

**TOP OF SLAB ELEVATIONS**

SHEET NO. 7	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	328	(4BR-1)B	CLAY	42	25
21 SHEETS	S.N. 013-0039		CONTRACT NO. 74310		
FED. ROAD DIST. NO. _		ILLINOIS	FED. AID PROJECT		

**EAST CURB LINE**

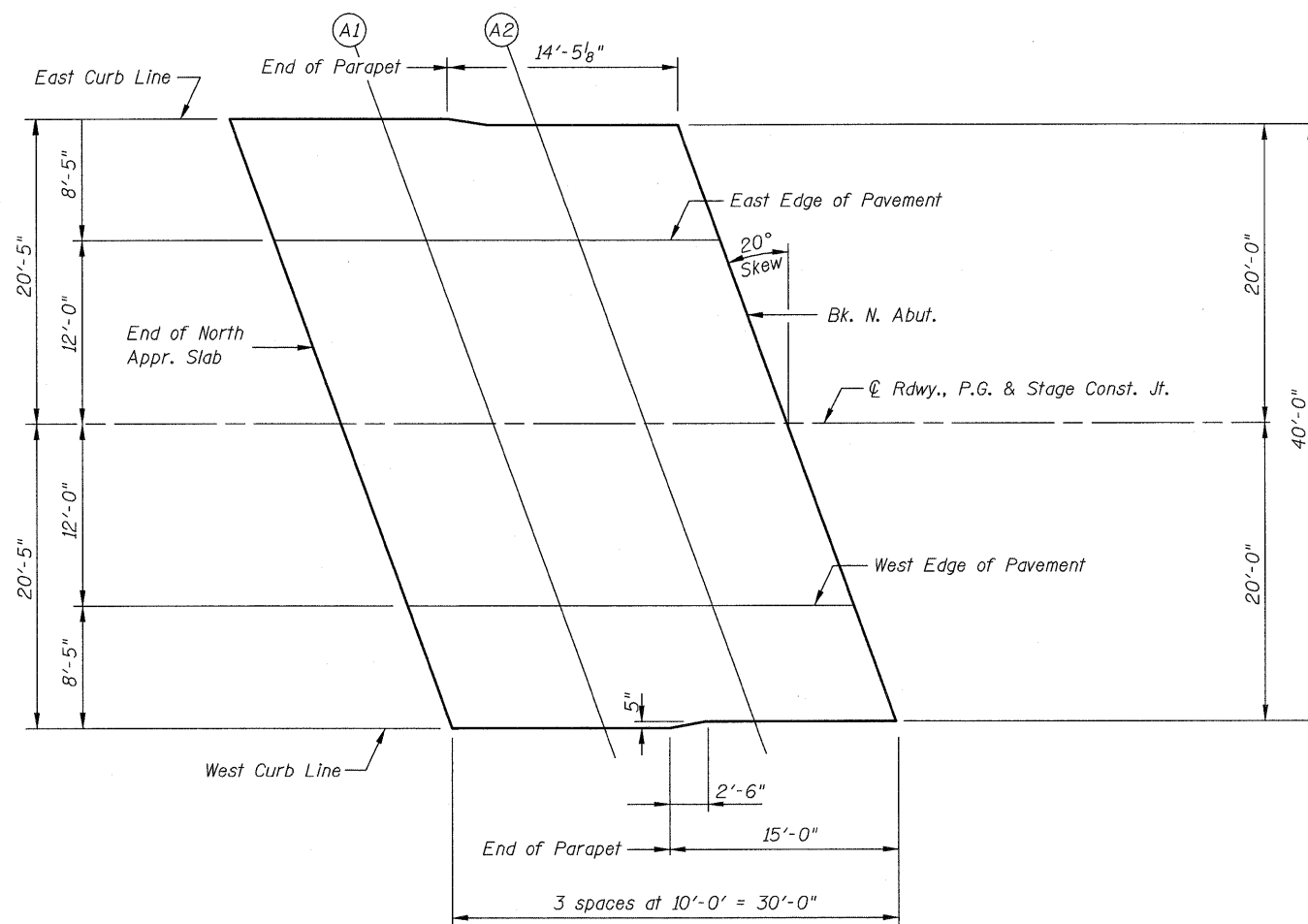
Location	Station	Offset	Theoretical Grade Elevations
End N. Appr. Slab	811+72.57	-20.42	505.10
A1	811+82.57	-20.42	505.14
A2	811+92.72	-20.00	505.18
Bk. N. Abut.	812+02.72	-20.00	505.21

**EAST EDGE OF PAVEMENT**

Location	Station	Offset	Theoretical Grade Elevations
End N. Appr. Slab	811+75.63	-12.00	505.29
A1	811+85.63	-12.00	505.32
A2	811+95.63	-12.00	505.35
Bk. N. Abut.	812+05.63	-12.00	505.38

**☉ ROADWAY, P.G. & STAGE CONSTRUCTION LINE**

Location	Station	Offset	Theoretical Grade Elevations
End N. Appr. Slab	811+80.00	0.00	505.49
A1	811+90.00	0.00	505.52
A2	812+00.00	0.00	505.55
Bk. N. Abut.	812+10.00	0.00	505.58



**NORTH APPROACH PLAN** ← N

**WEST EDGE OF PAVEMENT**

Location	Station	Offset	Theoretical Grade Elevations
End N. Appr. Slab	811+84.37	12.00	505.32
A1	811+94.37	12.00	505.35
A2	812+04.37	12.00	505.38
Bk. N. Abut.	812+14.37	12.00	505.40

**WEST CURB LINE**

Location	Station	Offset	Theoretical Grade Elevations
End N. Appr. Slab	811+87.43	20.42	505.15
A1	811+97.43	20.42	505.18
A2	812+07.28	20.00	505.22
Bk. N. Abut.	812+17.28	20.00	505.24

**TOP OF NORTH APPROACH SLAB ELEVATIONS**

DESIGNED	B.G.H.
CHECKED	L.D.G.
DRAWN	K.H.L.
CHECKED	B.G.H.

SHEET NO. 8	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	328	(4BR-1)B	CLAY	42	26
21 SHEETS	S.N. 013-0039		CONTRACT NO. 74310		
	FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT				

**EAST CURB LINE**

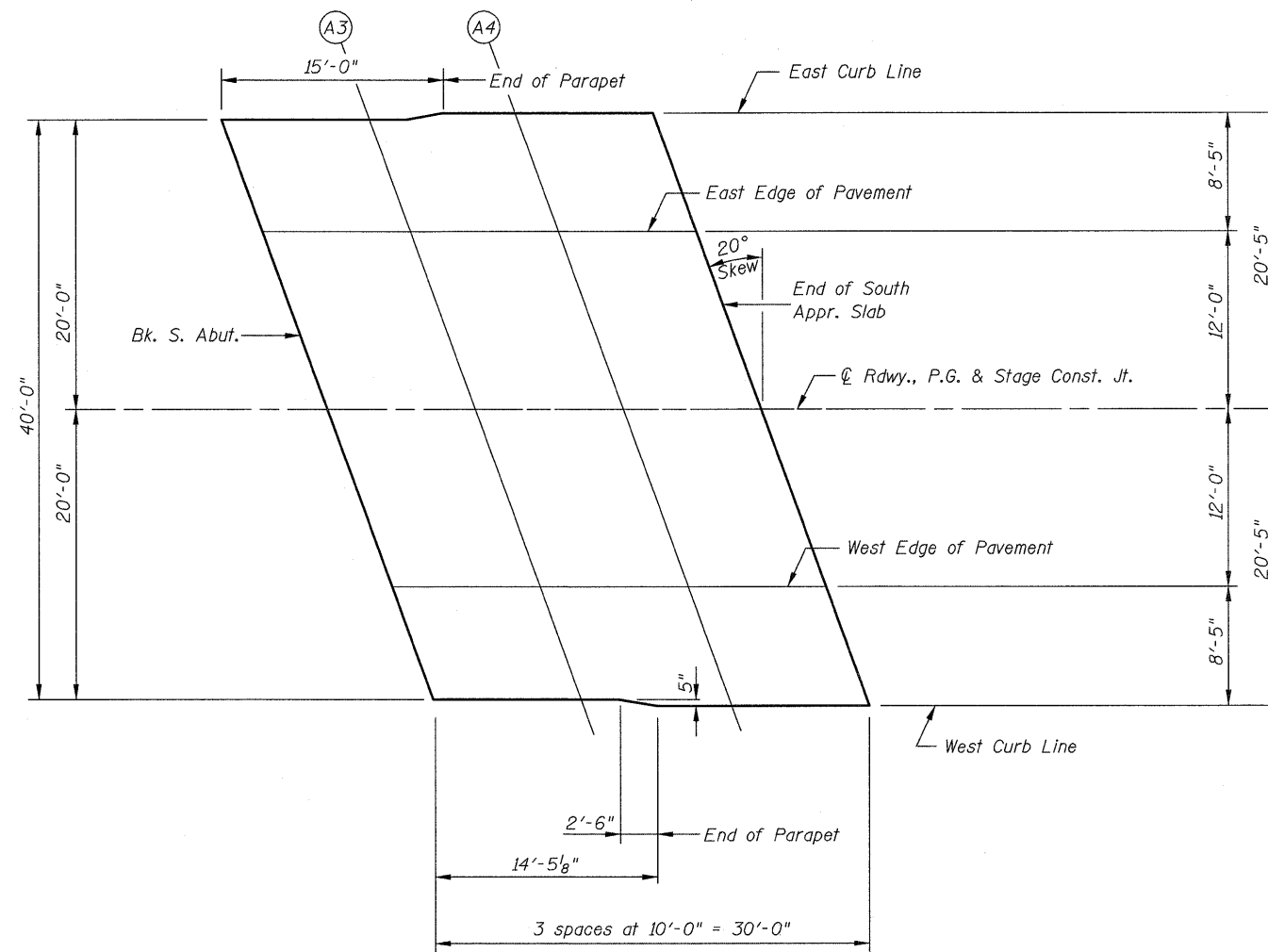
Location	Station	Offset	Theoretical Grade Elevations
Bk. S. Abut.	812+82.72	-20.00	505.23
A3	812+92.72	-20.00	505.21
A4	813+02.57	-20.42	505.18
End S. Appr. Slab	813+12.57	-20.42	505.14

**EAST EDGE OF PAVEMENT**

Location	Station	Offset	Theoretical Grade Elevations
Bk. S. Abut.	812+85.63	-12.00	505.39
A3	812+95.63	-12.00	505.37
A4	813+05.63	-12.00	505.34
End S. Appr. Slab	813+15.63	-12.00	505.31

**☉ ROADWAY, P.G. & STAGE CONSTRUCTION LINE**

Location	Station	Offset	Theoretical Grade Elevations
Bk. S. Abut.	812+90.00	0.00	505.57
A3	813+00.00	0.00	505.55
A4	813+10.00	0.00	505.52
End S. Appr. Slab	813+20.00	0.00	505.48



**SOUTH APPROACH PLAN** ◀ N

**WEST EDGE OF PAVEMENT**

Location	Station	Offset	Theoretical Grade Elevations
Bk. S. Abut.	812+94.37	12.00	505.37
A3	813+04.37	12.00	505.35
A4	813+14.37	12.00	505.31
End S. Appr. Slab	814+24.37	12.00	505.28

**WEST CURB LINE**

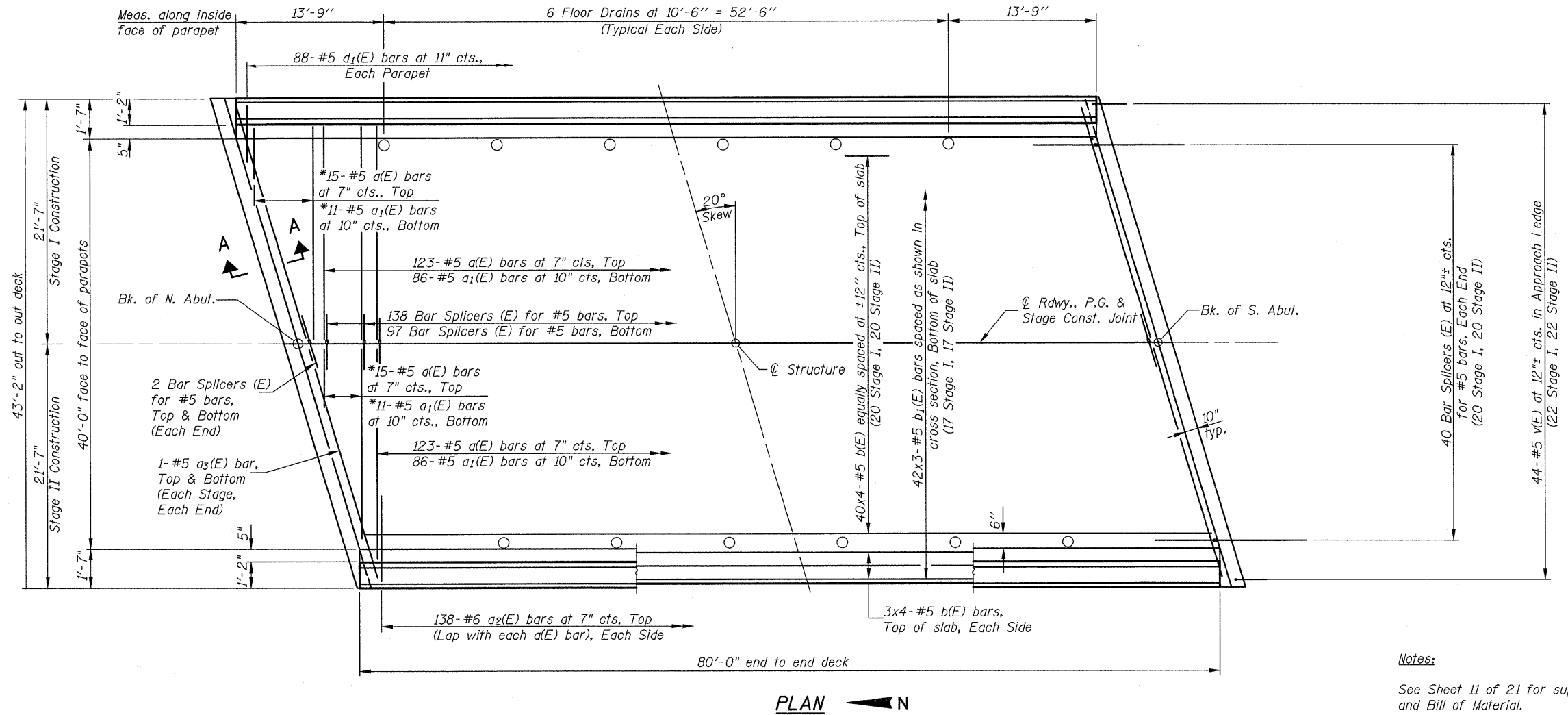
Location	Station	Offset	Theoretical Grade Elevations
Bk. S. Abut.	812+97.28	20.00	505.20
A3	813+07.28	20.00	505.17
A4	813+17.43	20.42	505.13
End S. Appr. Slab	813+27.43	20.42	505.09

**TOP OF SOUTH APPROACH SLAB ELEVATIONS**

DESIGNED	B.G.H.
CHECKED	L.D.G.
DRAWN	K.H.L.
CHECKED	B.G.H.

SHEET NO. 9	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	328	(4BR-1)B	CLAY	42	27
21 SHEETS	S.N. 013-0039		CONTRACT NO. 74310		
	FED. ROAD DIST. NO. _	ILLINOIS	FED. AID PROJECT		

\* Order a(E) & a<sub>1</sub>(E) bars full length.  
Cut to fit skew and use remainder  
of bars in opposite end.



**MIN. BAR LAP**  
#5 bar = 2'-2"

**Notes:**

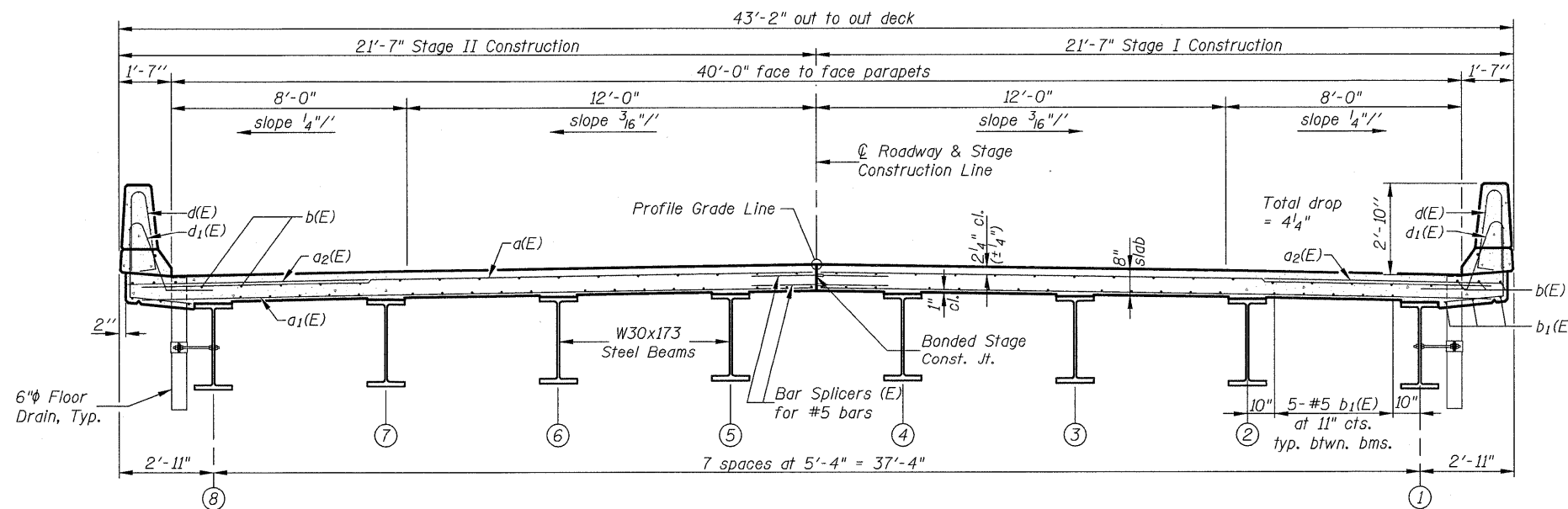
See Sheet 11 of 21 for superstructure details and Bill of Material.

Bars indicated thus 40 x 4-#5 etc. indicates 40 lines of bars with 4 lengths per line.

See Sheet 11 of 21 for parapet reinforcement.

Section A-A shown on sheet 12 of 21.

For Bar Splicer Details see sheet 19 of 21.



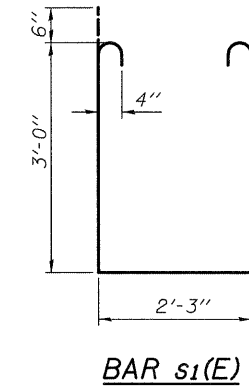
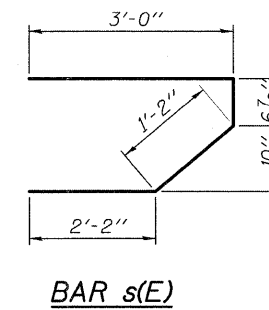
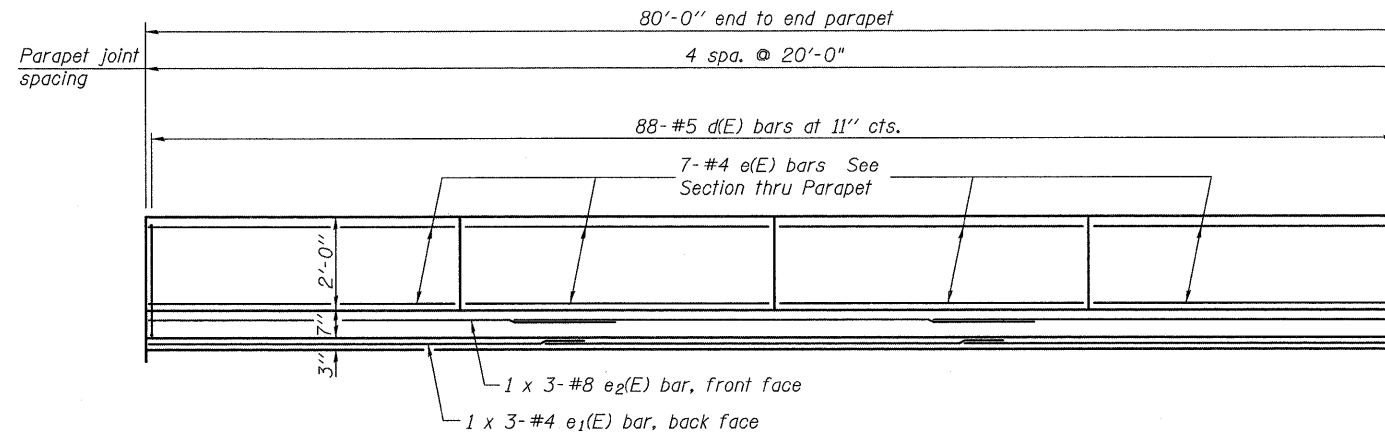
**CROSS SECTION**  
(Looking North)

**SUPERSTRUCTURE**

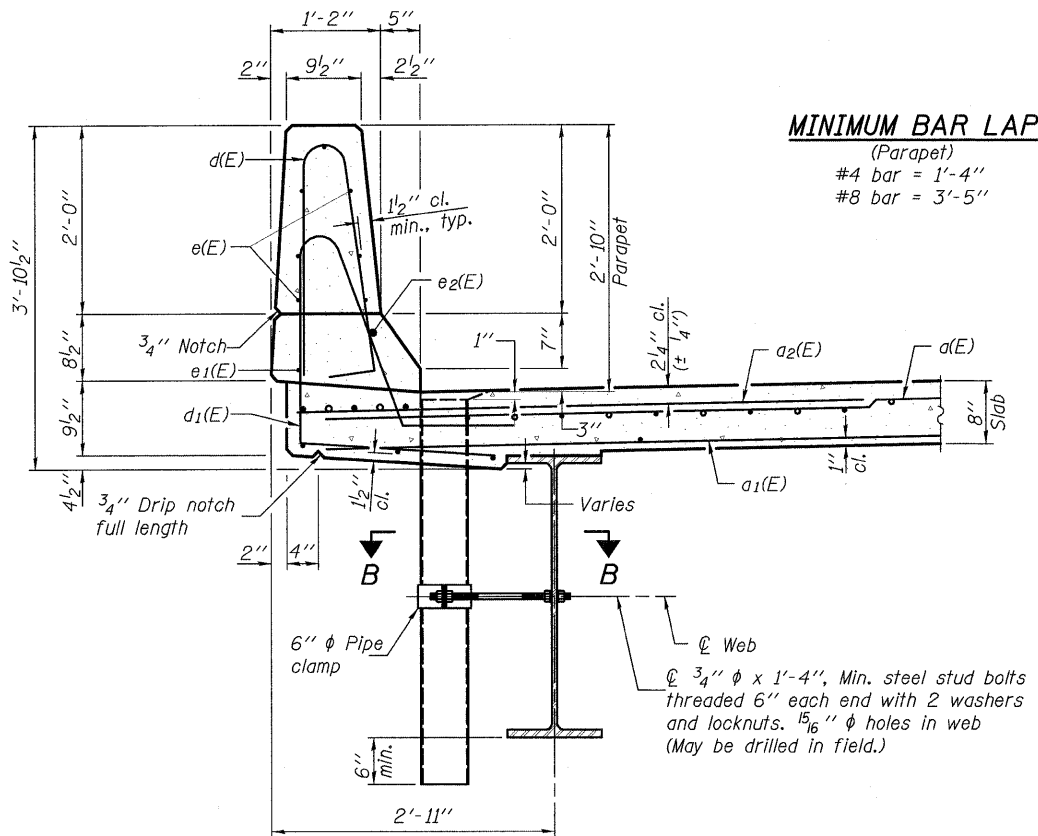
DESIGNED	B.G.H.
CHECKED	L.D.G.
DRAWN	K.H.L.
CHECKED	B.G.H.

SHEET NO. 10	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	328	(4BR-1B)	CLAY	42	28
21 SHEETS	S.N. 013-0039		CONTRACT NO. 74310		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

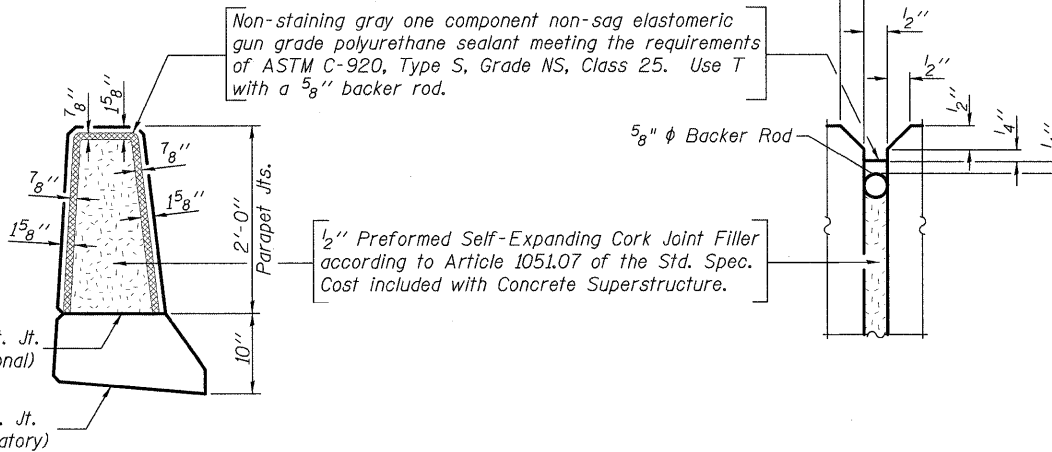




**INSIDE ELEVATION OF PARAPET**



**MINIMUM BAR LAP**  
(Parapet)  
#4 bar = 1'-4"  
#8 bar = 3'-5"



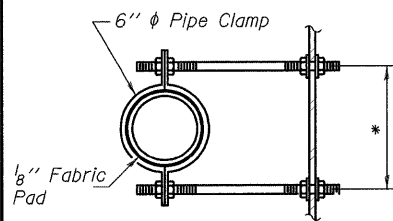
**PARAPET JOINT DETAILS**

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

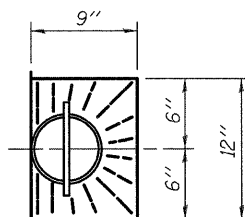
**SUPERSTRUCTURE BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a(E)	276	#5	21'-1"	—
a1(E)	194	#5	20'-8"	—
a2(E)	276	#6	6'-0"	—
a3(E)	8	#5	22'-5"	—
b(E)	184	#5	21'-7"	—
b1(E)	126	#5	28'-0"	—
d(E)	176	#5	5'-7"	—
d1(E)	176	#5	7'-6"	—
e(E)	56	#4	19'-9"	—
e1(E)	6	#4	27'-6"	—
e2(E)	6	#8	28'-10"	—
m(E)	8	#6	22'-5"	—
m1(E)	12	#6	22'-5"	—
m2(E)	32	#6	7'-8"	—
m3(E)	12	#6	5'-0"	—
m4(E)	8	#6	2'-4"	—
s(E)	96	#5	6'-11"	—
s1(E)	84	#4	9'-3"	—
v(E)	88	#5	3'-4"	—
Reinforcement Bars, Epoxy Coated		Pound	27,140	
Concrete Superstructure		Cu. Yds.	138.2	

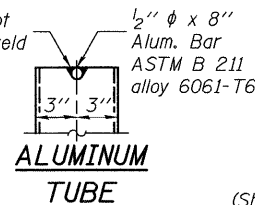
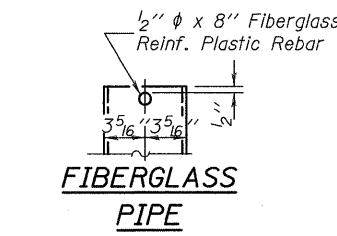
Bars indicated thus 1 x 3-#5 etc. indicates 1 line of bars with 3 lengths per line.



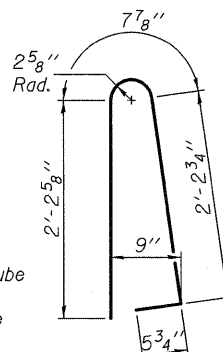
**SECTION B-B**  
\*Dimension as required by Pipe Clamp



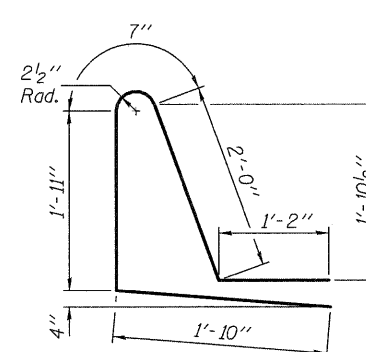
**TOP PLAN**



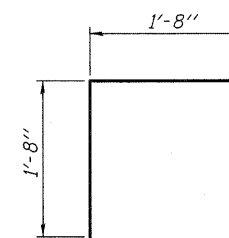
**TOP PLAN**  
(Showing Aluminum Tube)



**BAR d(E)**



**BAR d1(E)**



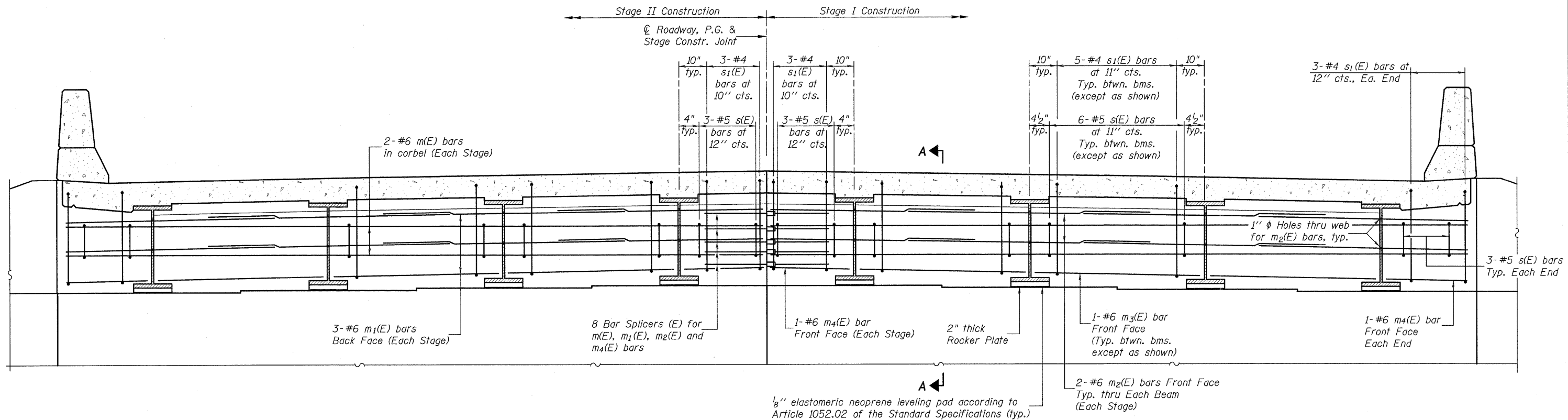
**BAR v(E)**

**SUPERSTRUCTURE DETAILS**

DESIGNED	B.G.H.
CHECKED	L.D.G.
DRAWN	K.H.L.
CHECKED	B.G.H.

S-I-D 10-1-08

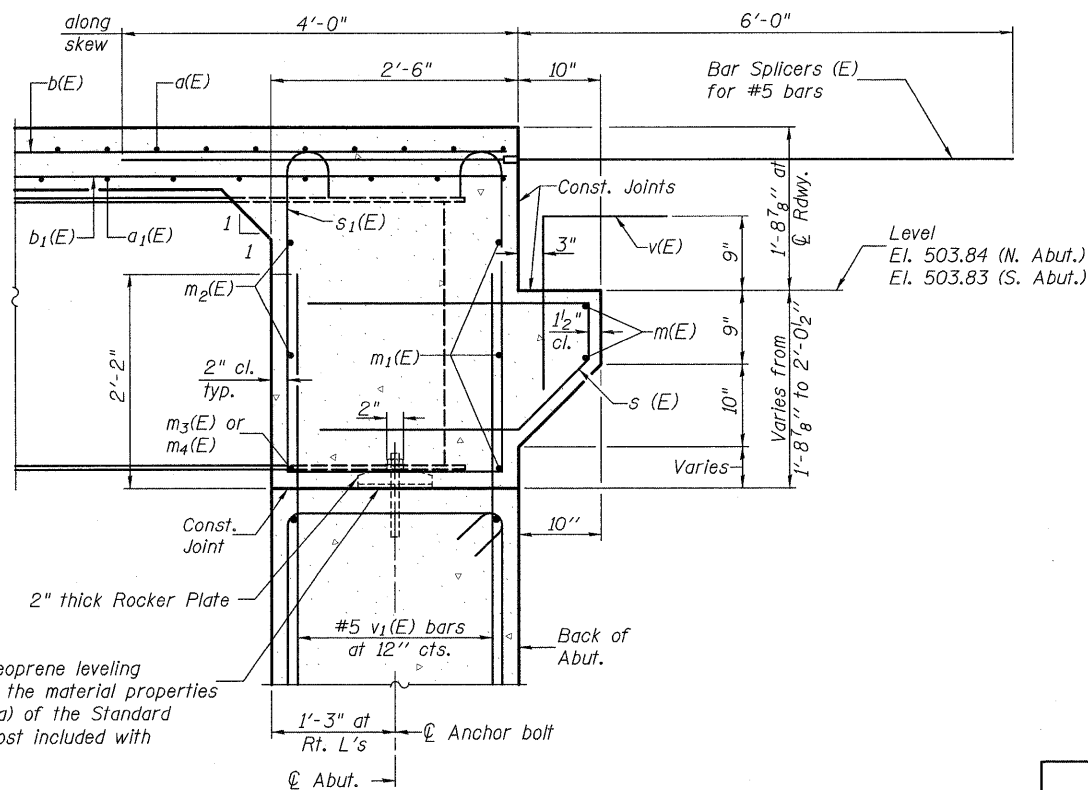
SHEET NO. 11	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	328	(4BR-1)B	CLAY	42	29
21 SHEETS	S.N. 013-0039		CONTRACT NO. 74310		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



**DIAPHRAGM ELEVATION AT NORTH ABUTMENT**  
(Looking North)

**Notes:**  
 Reinforcement bars in diaphragm are billed with superstructure on sheet 11 of 21.  
 Concrete in diaphragm is included with Concrete Superstructure on sheet 11 of 21.  
 For details of bars s(E) & s<sub>1</sub>(E) see sheet 11 of 21.  
 The s(E) and s<sub>1</sub>(E) bars shall be placed parallel to the beams. Spacing for these bars shall be at right angles to the beams.

**MIN. BAR LAP**  
 #6 bar = 2'-7"



**SECTION A-A**

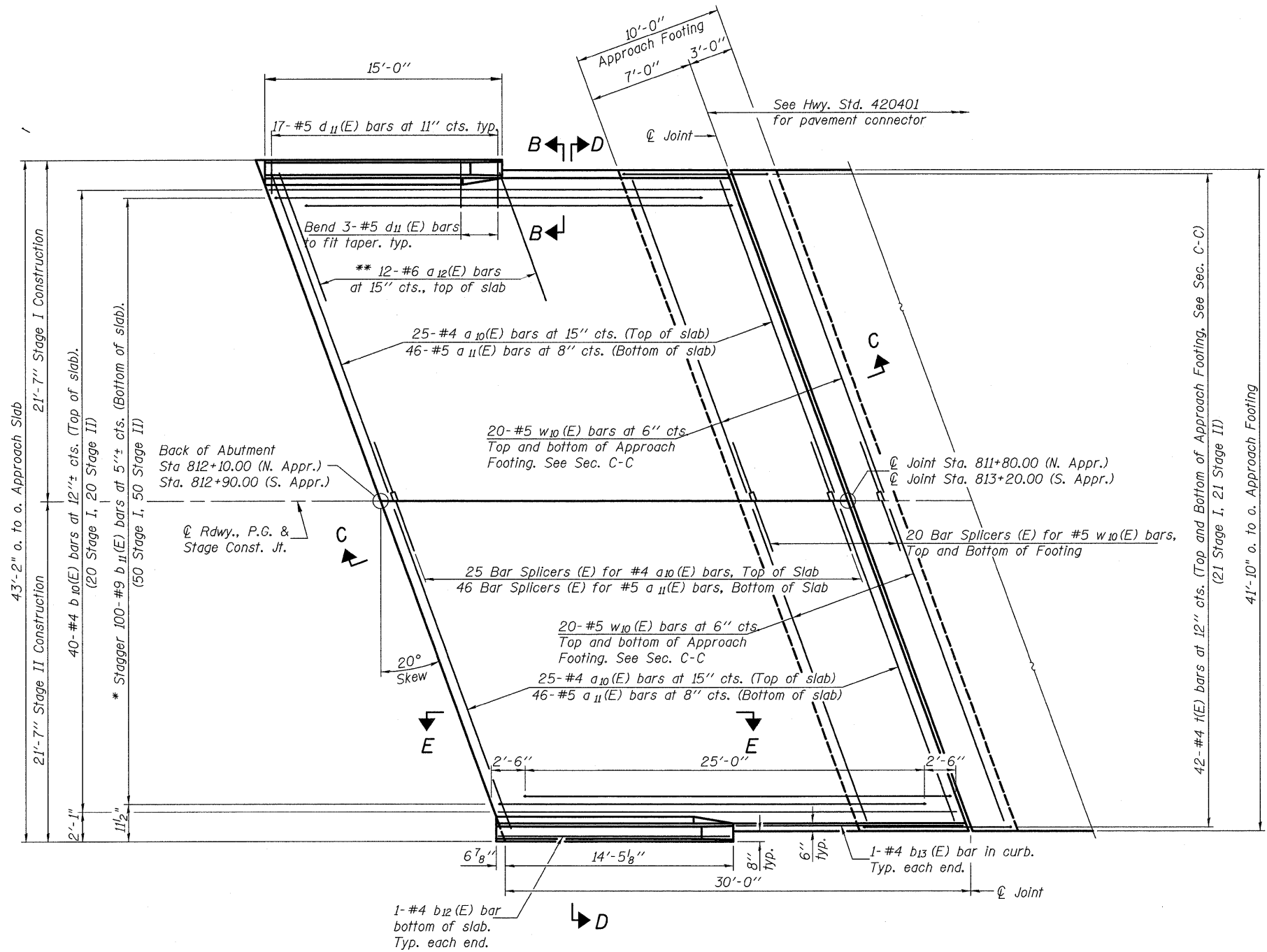
Dimensions at right angles to abutment, except as shown.

DESIGNED	B.G.H.
CHECKED	L.D.G.
DRAWN	K.H.L.
CHECKED	B.G.H.

**INTEGRAL ABUTMENT DIAPHRAGM DETAILS**

SHEET NO. 12	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	328	(4BR-1)B	CLAY	42	30
21 SHEETS	S.N. 013-0039		CONTRACT NO. 74310		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		

Notes:  
 See sheet 14 of 21 for Sections C-C & D-D and View E-E.  
 $a_{10}(E)$ ,  $a_{11}(E)$ , and  $w_{10}(E)$  bar spacings measured perpendicular to  $\text{C} \text{ Rdwy.}$



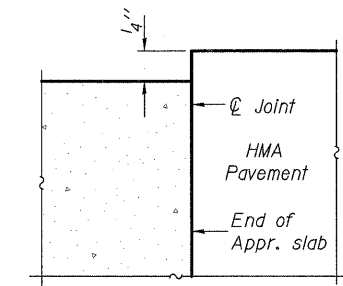
**PLAN**

(South Approach shown, North Approach similar)

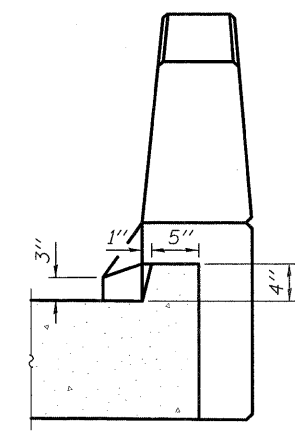
\* Tilt #9 b<sub>11</sub>(E) bars as required to maintain clearance.  
 \*\* Alternate with a<sub>10</sub>(E) bars, typ. each parapet.

DESIGNED	B.G.H.
CHECKED	L.D.G.
DRAWN	K.H.L.
CHECKED	B.G.H.

BA-R 10-31-08



**FLEXIBLE PAVEMENT**  
**DETAIL A**

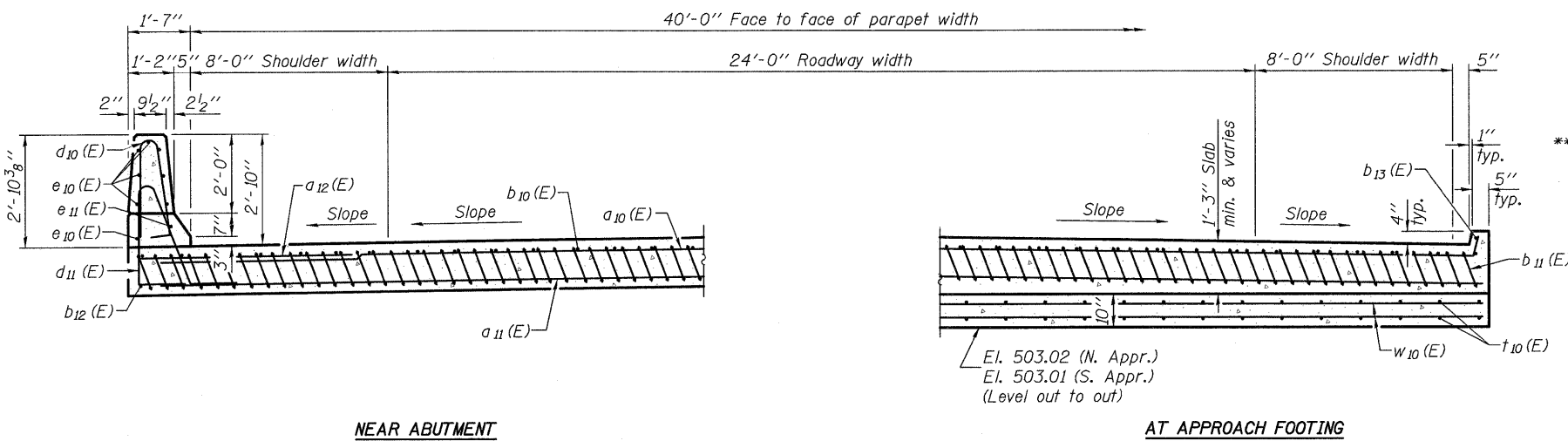
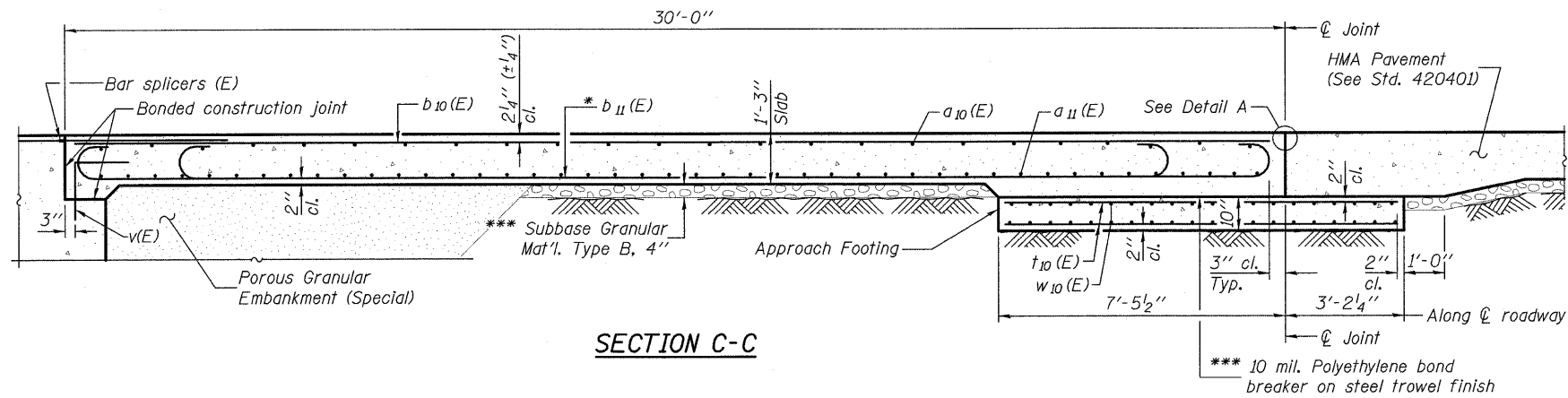


**VIEW B-B**

(Sheet 1 of 2)

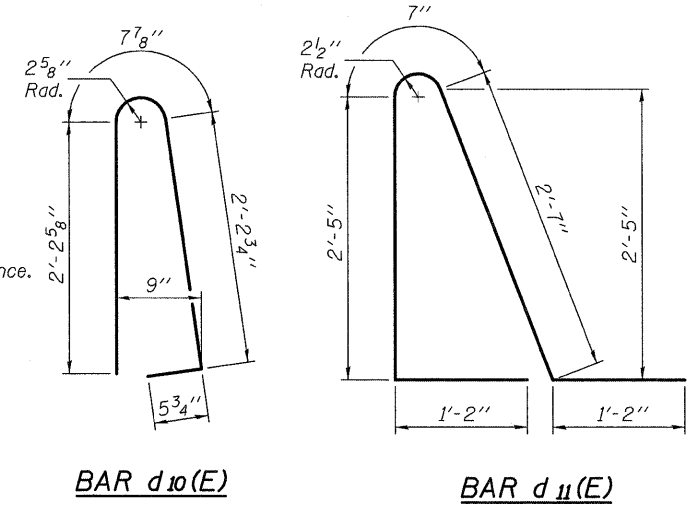
**BRIDGE APPROACH SLAB DETAILS**

SHEET NO. 13	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	328	(4BR-1)B	CLAY	42	31
21 SHEETS	S.N. 013-0039		CONTRACT NO. 74310		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		



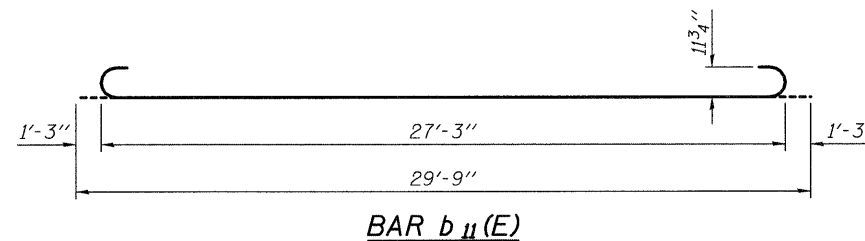
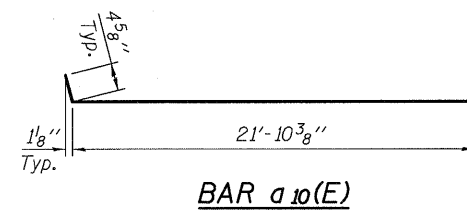
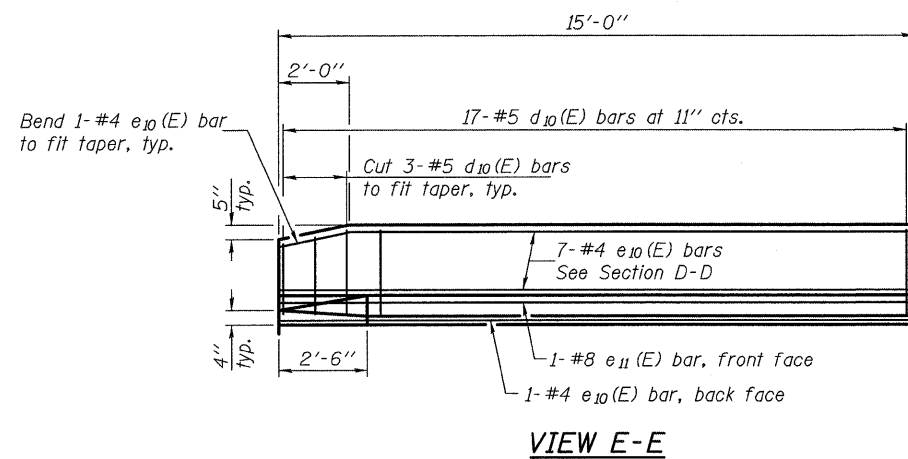
**Notes:**

- See sheet 13 of 21 for Detail A and View B-B.
- Approach slab and parapet concrete shall be paid for as Concrete Superstructure.
- Approach footing concrete shall be paid for as Concrete Structures.
- Reinforcement shall be paid for as Reinforcement Bars, Epoxy Coated.
- For v(E) bar details, see sheet 11 of 21.
- The approach footing maximum applied service bearing pressure (Q<sub>max</sub>) = 2.0 ksf.
- For bar splicer details, see sheet 19 of 21.
- Cost of excavation for approach footing included with Concrete Structures.
- For Porous Granular Embankment (Special) and drainage treatment details, see sheet 2 of 21.



**TWO APPROACHES  
BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a <sub>10</sub> (E)	100	#4	22'-4"	—
a <sub>11</sub> (E)	184	#5	21'-11"	—
a <sub>12</sub> (E)	48	#6	6'-0"	—
b <sub>10</sub> (E)	80	#4	29'-8"	—
b <sub>11</sub> (E)	200	#9	29'-9"	—
b <sub>12</sub> (E)	4	#4	14'-8"	—
b <sub>13</sub> (E)	4	#4	14'-8"	—
d <sub>10</sub> (E)	68	#5	5'-7"	⤴
d <sub>11</sub> (E)	68	#5	7'-11"	⤴
e <sub>10</sub> (E)	32	#4	14'-8"	—
e <sub>11</sub> (E)	4	#8	14'-8"	—
t <sub>10</sub> (E)	168	#4	10'-4"	—
w <sub>10</sub> (E)	160	#5	21'-11"	—
Concrete Superstructure			Cu. Yd.	132.1
Concrete Structures			Cu. Yd.	27.5
Reinforcement Bars, Epoxy Coated			Pound	34,270

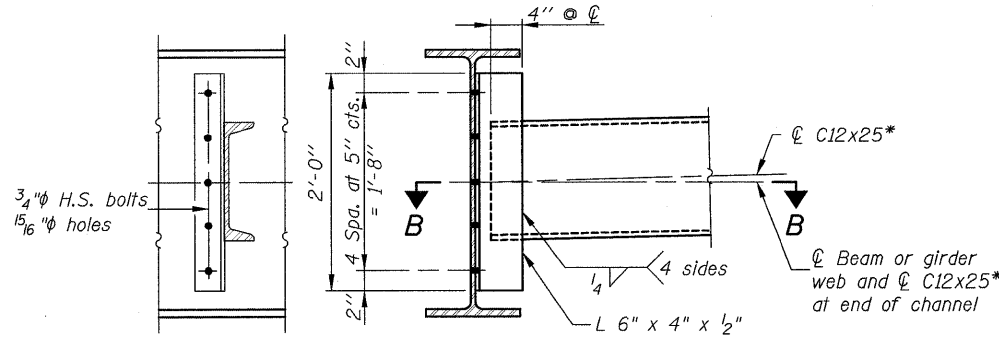


DESIGNED	B.G.H.
CHECKED	L.D.G.
DRAWN	K.H.L.
CHECKED	B.G.H.

BA-R 10-31-08

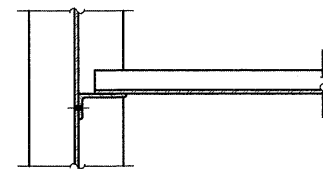
(Sheet 2 of 2)  
**BRIDGE APPROACH SLAB DETAILS**

SHEET NO. 14	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	328	(4BR-1)B	CLAY	42	32
21 SHEETS	S.N. 013-0039		CONTRACT NO. 74310		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

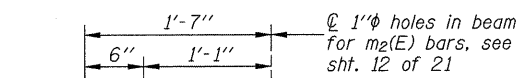


**DIAPHRAGM D**  
(18 Required)

\* Alternate channel C12x30 is permitted to facilitate material acquisition. Calculated weight of structural steel is based on the lighter section.

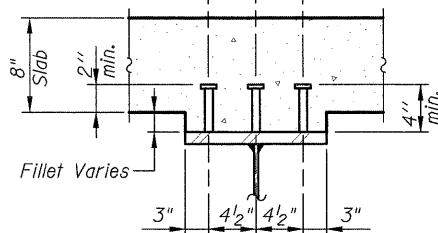


**SECTION B-B**

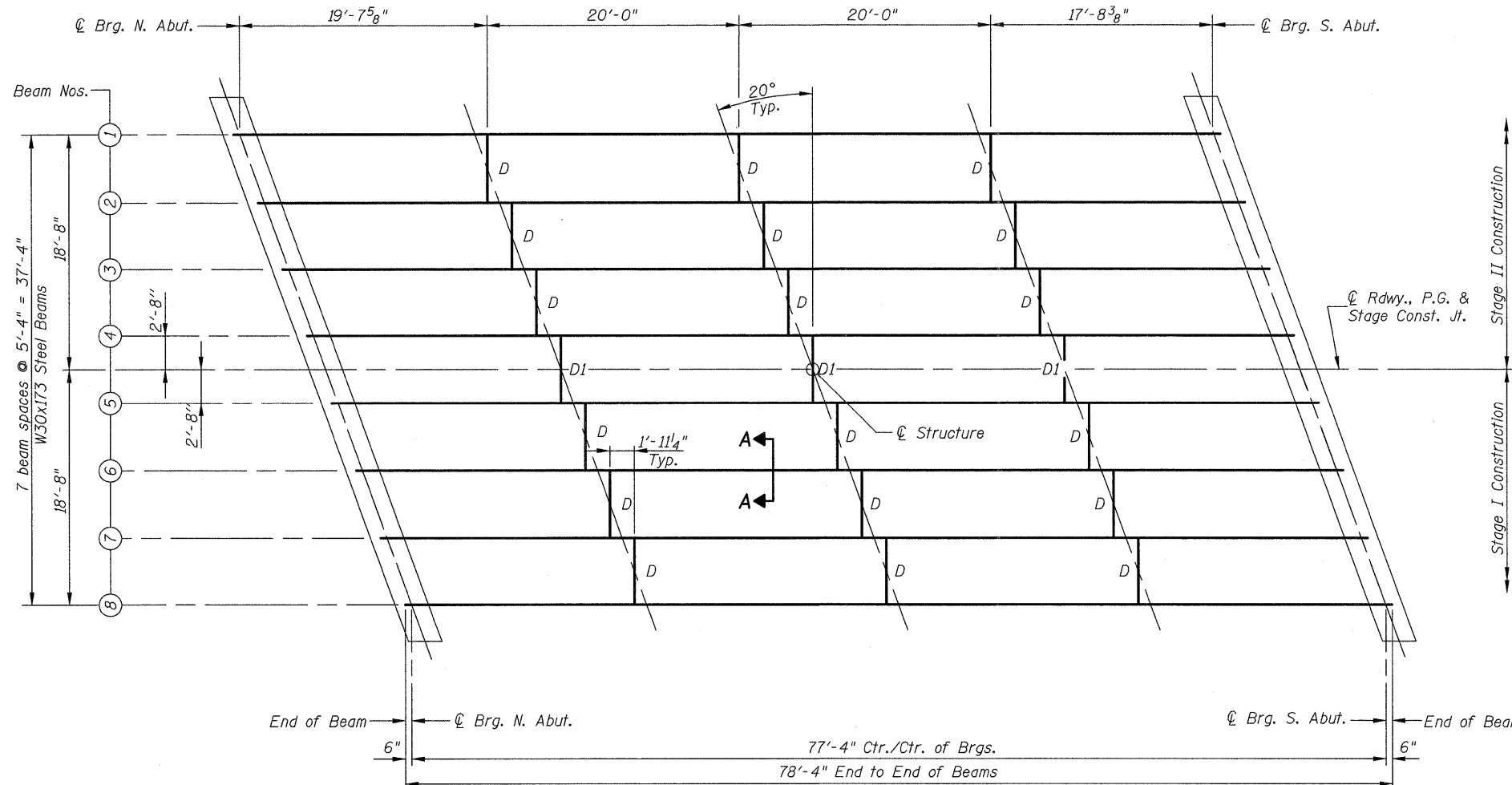


**TYP. END OF BEAM ELEVATION**

3/4" Granular or solid flux filled headed studs automatically end welded to flange. (No. Req'd. = 2,256)

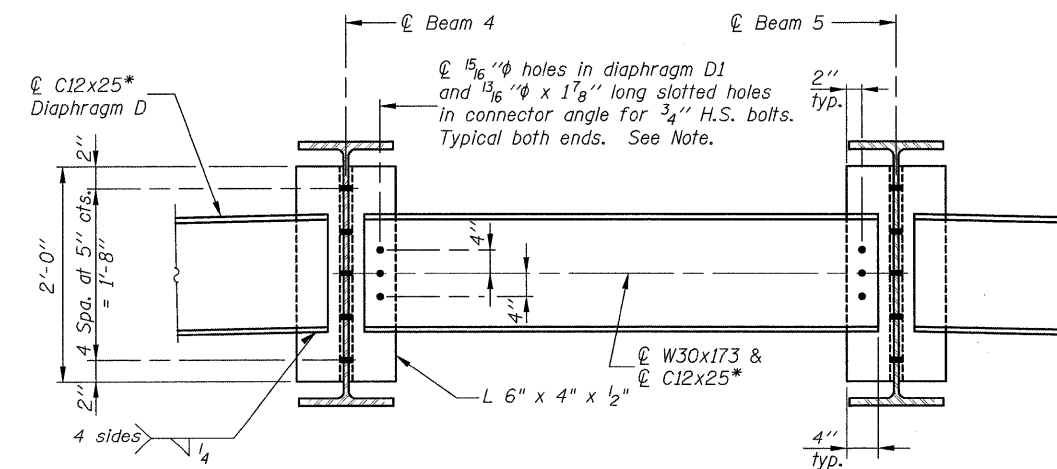


**SECTION A-A**

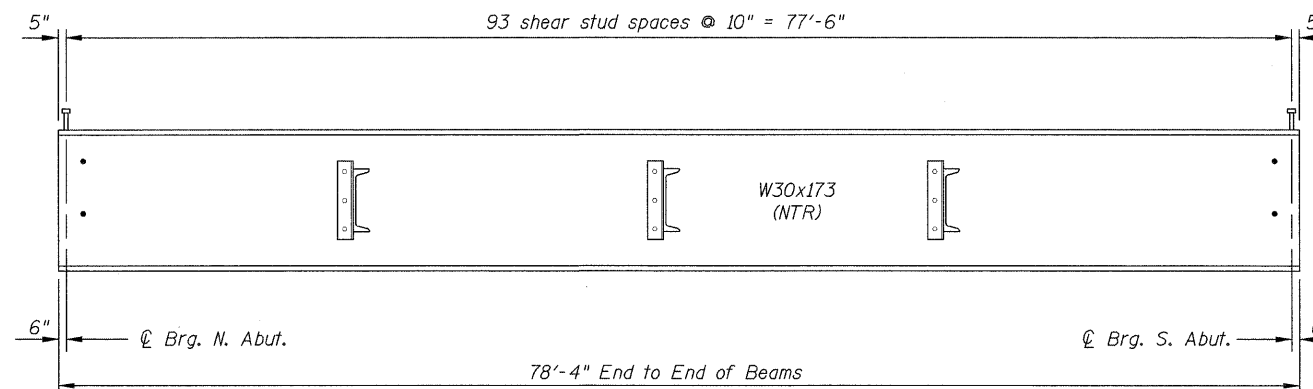


**FRAMING PLAN**

All Beams are W30x173 (NTR) and AASHTO M270, Gr. 50.



**DIAPHRAGM D1**  
(3 Required)



**BEAM ELEVATION**

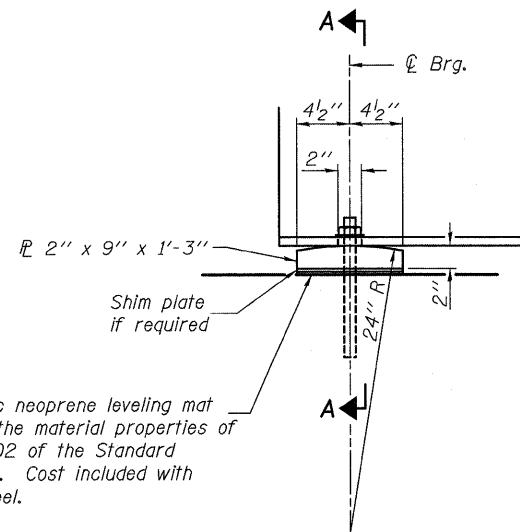
**Notes:**

- Two hardened washers required for each set of oversized holes.
- All cross frames or diaphragms between beams or girders shall be installed with erection pins and bolts in accordance with the erection plan approved by the Engineer. Individual cross frames or diaphragms at supports may be temporarily disconnected to install bearing anchor rods.
- Load carrying components designated "NTR" shall conform to the Supplemental Requirements for Notch Toughness, Zone 2.
- All diaphragms and connecting angles shall conform to the requirements of AASHTO M270, Gr. 50.
- Bolts in slots shall be finger tight until the second stage pour is complete. Position slots so bolts start at one end with no concrete load and finish near the opposite end under deck load allowing maximum displacement without laterally stressing main members. All holes shall have appropriate hardened or plate washers.

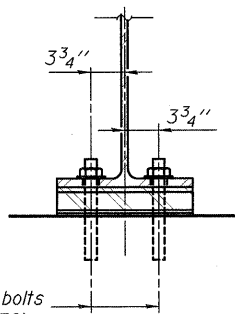
DESIGNED	B.G.H.
CHECKED	L.D.G.
DRAWN	K.H.L.
CHECKED	B.G.H.

**STRUCTURAL STEEL**

SHEET NO. 15	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	328	(4BR-1)B	CLAY	42	33
21 SHEETS	S.N. 013-0039		CONTRACT NO. 74310		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



**ELEVATION AT ABUTMENT**



**SECTION A-A**

**FIXED BEARING**

1/8" elastomeric neoprene leveling mat according to the material properties of Article 1052.02 of the Standard Specifications. Cost included with Structural Steel.

1" diameter x 12" anchor bolts (ASTM F1554 Grade 36) with 2 1/4" x 2 1/4" x 5/16" plate washer under nut. 1 3/8" x 2" slotted hole in flange. 1 1/2" diameter holes in bearing plate.

**TOP OF BEAM ELEVATIONS**

(For Fabrication Only)

Beam No.	℄ Brg. N. Abut.	℄ Brg. S. Abut.
1	504.516	504.538
2	504.632	504.646
3	504.726	504.732
4	504.814	504.811
5	504.817	504.807
6	504.738	504.720
7	504.651	504.625
8	504.543	504.509

**Notes:**

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

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

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

All bearing plates shall conform to the requirements of AASHTO M 270, Grade 50.

**Notes:**

Anchor bolts at fixed bearings may be built into the masonry.

INTERIOR GIRDER MOMENT TABLE		
0.5 Span		
$I_s$	(in <sup>4</sup> )	8,230
$I_c(n)$	(in <sup>4</sup> )	18,447
$I_c(3n)$	(in <sup>4</sup> )	13,427
$S_s$	(in <sup>3</sup> )	541
$S_c(n)$	(in <sup>3</sup> )	728
$S_c(3n)$	(in <sup>3</sup> )	658
DC1	(k/')	0.76
M <sub>DC1</sub>	(k)	568
DC2	(k/')	0.11
M <sub>DC2</sub>	(k)	82
DW	(k/')	0.25
M <sub>DW</sub>	(k)	187
M <sub>L + IM</sub>	(k)	974
M <sub>u</sub> (Strength I)	(k)	2,798
$\phi_r M_n$	(k)	3,360
$f_s$ DC1	(ksi)	12.6
$f_s$ DC2	(ksi)	1.5
$f_s$ DW	(ksi)	3.4
$f_s$ 1.3(L+IM)	(ksi)	20.9
$f_s$ (Service II)	(ksi)	38.4
V <sub>r</sub>	(k)	22.6

$I_s, S_s$ : Non-composite moment of inertia and section modulus of the steel section used for computing  $f_s$  (Total-Strength I, and Service II) due to non-composite dead loads (in<sup>4</sup> and in<sup>3</sup>).

$I_c(n), S_c(n)$ : Composite moment of inertia and section modulus of the steel and deck based upon the modular ratio, "n", used for computing  $f_s$  (Total-Strength I, and Service II) due to short-term composite live loads (in<sup>4</sup> and in<sup>3</sup>).

$I_c(3n), S_c(3n)$ : Composite moment of inertia and section modulus of the steel and deck based upon 3 times the modular ratio, "3n", used for computing  $f_s$  (Total-Strength I, and Service II) due to long-term composite (superimposed) dead loads (in<sup>4</sup> and in<sup>3</sup>).

DC1: Un-factored non-composite dead load (kips/ft.).

M<sub>DC1</sub>: Un-factored moment due to non-composite dead load (kip-ft.).

DC2: Un-factored long-term composite (superimposed excluding future wearing surface) dead load (kips/ft.).

M<sub>DC2</sub>: Un-factored moment due to long-term composite (superimposed excluding future wearing surface) dead load (kip-ft.).

DW: Un-factored long-term composite (superimposed future wearing surface only) dead load (kips/ft.).

M<sub>DW</sub>: Un-factored moment due to long-term composite (superimposed future wearing surface only) dead load (kip-ft.).

M<sub>L + IM</sub>: Un-factored live load moment plus dynamic load allowance (impact) (kip-ft.).

M<sub>u</sub> (Strength I): Factored design moment (kip-ft.).  
1.25 (M<sub>DC1</sub> + M<sub>DC2</sub>) + 1.5 M<sub>DW</sub> + 1.75 M<sub>L + IM</sub>

$\phi_r M_n$ : Compact composite positive moment capacity computed according to Article 6.10.7.1 (kip-ft.).

$f_s$  (Service II): Sum of stresses as computed from the moments below (ksi).  
M<sub>DC1</sub> + M<sub>DC2</sub> + M<sub>DW</sub> + 1.3 M<sub>L + IM</sub>

V<sub>r</sub>: Maximum factored shear range in composite portion of span computed according to Article 6.10.10.

**BILL OF MATERIAL**

Item	Unit	Total
Anchor Bolts, 1"	Each	32

INTERIOR GIRDER REACTION TABLE		
HL93 Loading		
Abutment		
R <sub>DC1</sub>	(k)	29.4
R <sub>DC2</sub>	(k)	4.4
R <sub>DW</sub>	(k)	9.7
R <sub>L + IM</sub>	(k)	67.8
R <sub>Total</sub>	(k)	111.3

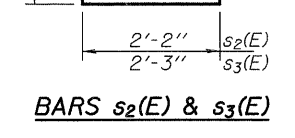
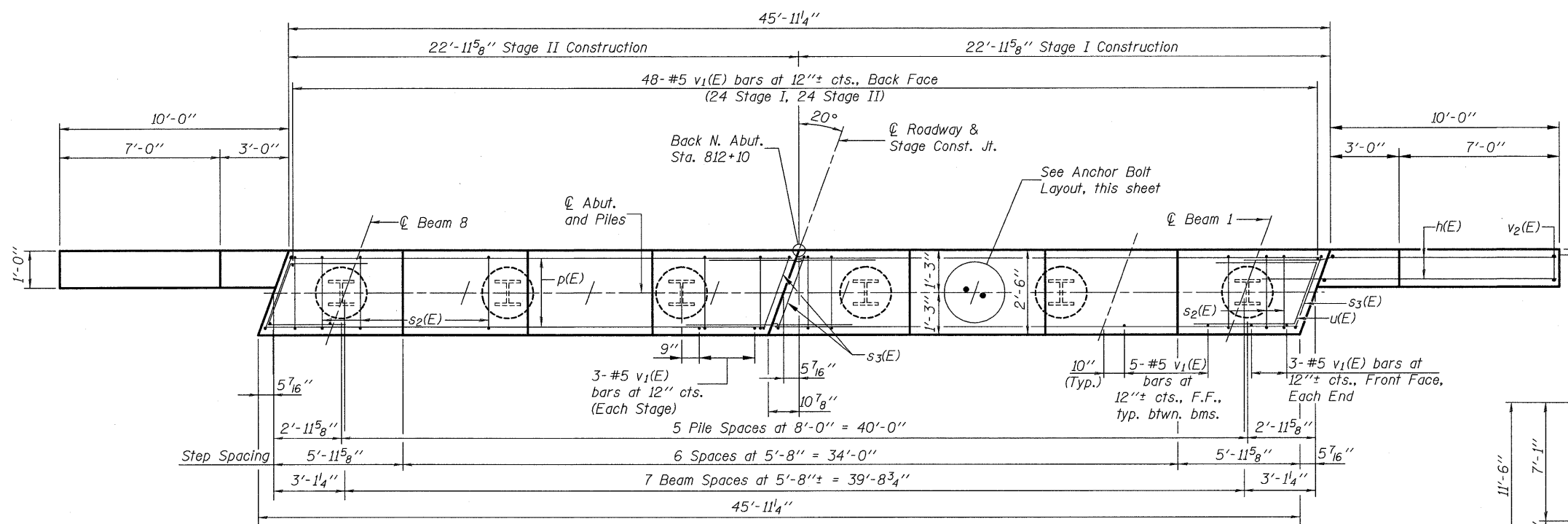
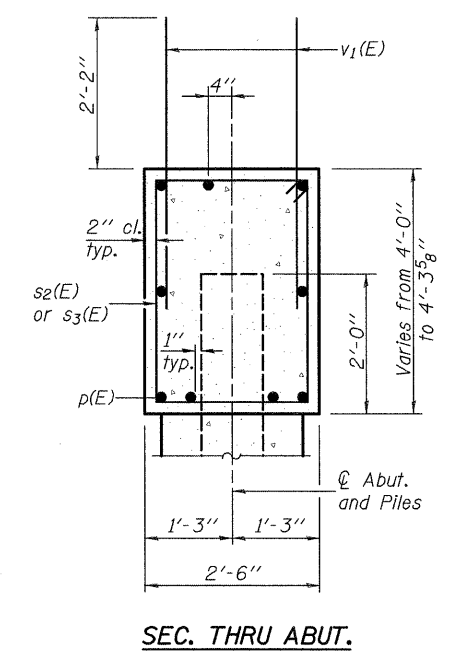
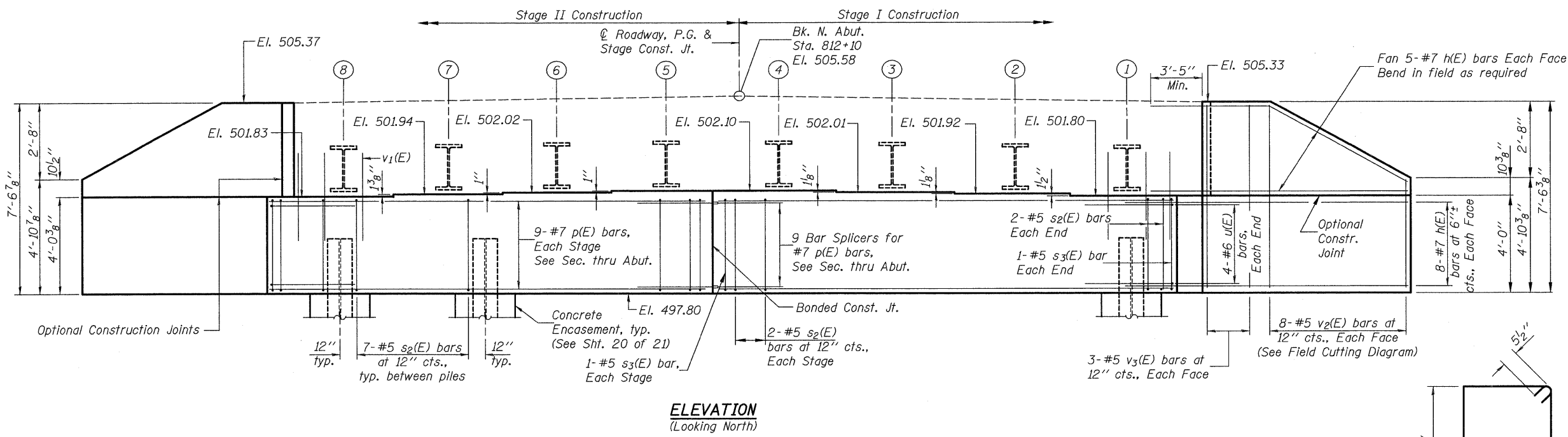
DESIGNED	B.G.H.
CHECKED	L.D.G.
DRAWN	K.H.L.
CHECKED	B.G.H.

**STEEL DETAILS**

SHEET NO. 16	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	328	(4BR-1)B	CLAY	42	34
21 SHEETS	S.N. 013-0039		CONTRACT NO. 74310		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

0130039-74310-JT-WABT.DGN MAY 26, 2009

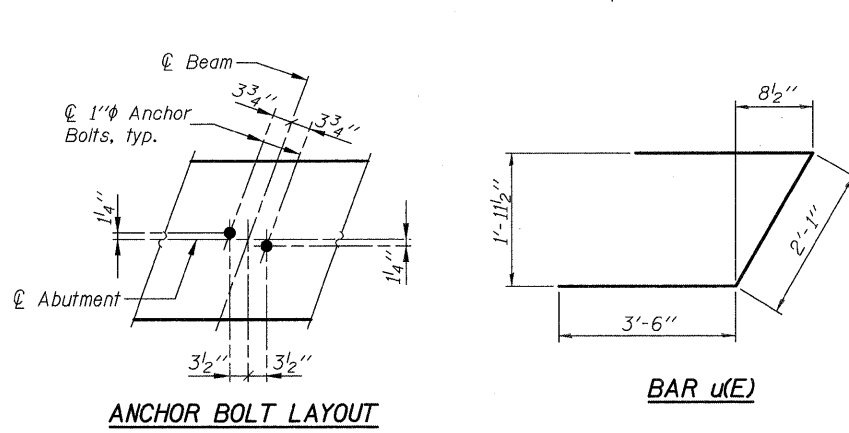
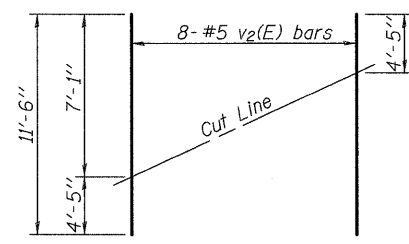
Note: Four steps monolithically with cap.



**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h(E)	52	#7	14'-3"	
p(E)	18	#7	22'-7"	
s <sub>2</sub> (E)	36	#5	12'-7"	□
s <sub>3</sub> (E)	4	#5	12'-9"	□
u(E)	8	#6	9'-1"	∟
v <sub>1</sub> (E)	90	#5	4'-4"	
v <sub>2</sub> (E)	16	#5	11'-6"	
v <sub>3</sub> (E)	12	#5	7'-1"	
Structure Excavation		Cu. Yd.	114	
Concrete Structures		Cu. Yd.	22.5	
Reinforcement Bars, Epoxy Coated		Pound	3,670	
Furnishing Steel Piles HP 12x74		Foot	126	
Concrete Encasement		Cu. Yd.	2.1	
Setting Piles in Rock		Each	6	

For details of Bar Splicers see sheet 19 of 21.  
For details of piles and Concrete Encasement see sheet 20 of 21.



**PILE DATA**

Type: HP 12x74  
Nominal Required Bearing: 589 kips  
Factored Resistance Available: 294 kips  
Est. Length: 21 feet  
No. Production Piles: 6  
No. Test Piles: 0

DESIGNED	B.G.H.
CHECKED	L.D.G.
DRAWN	K.H.L.
CHECKED	B.G.H.

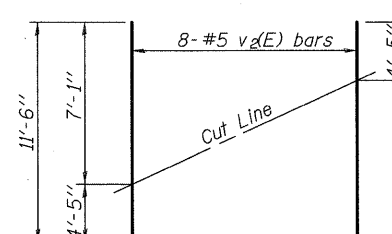
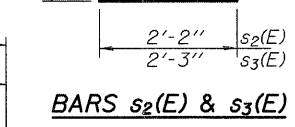
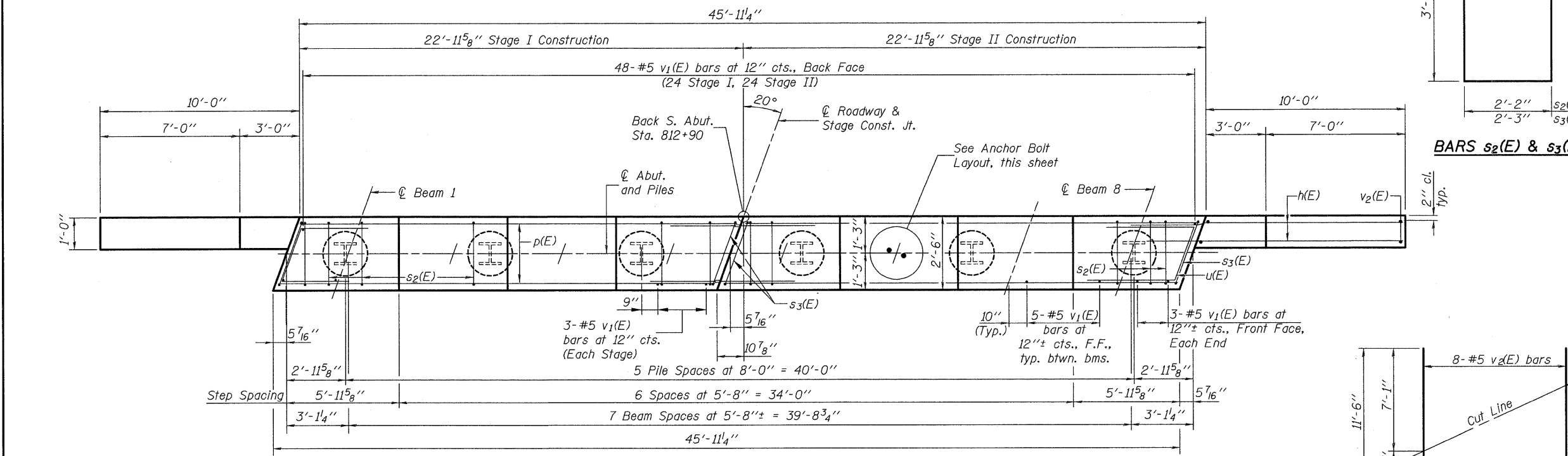
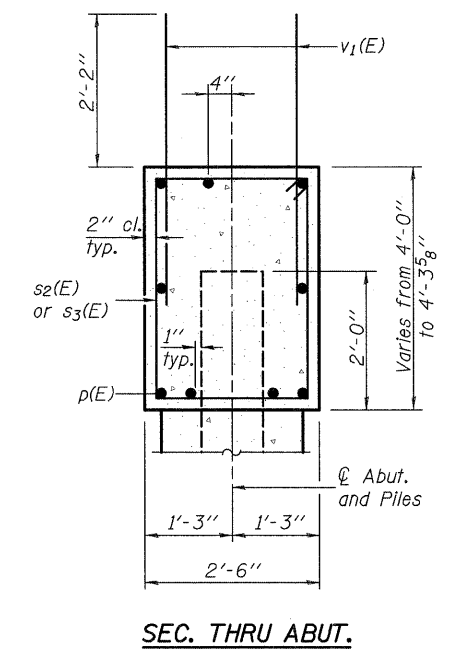
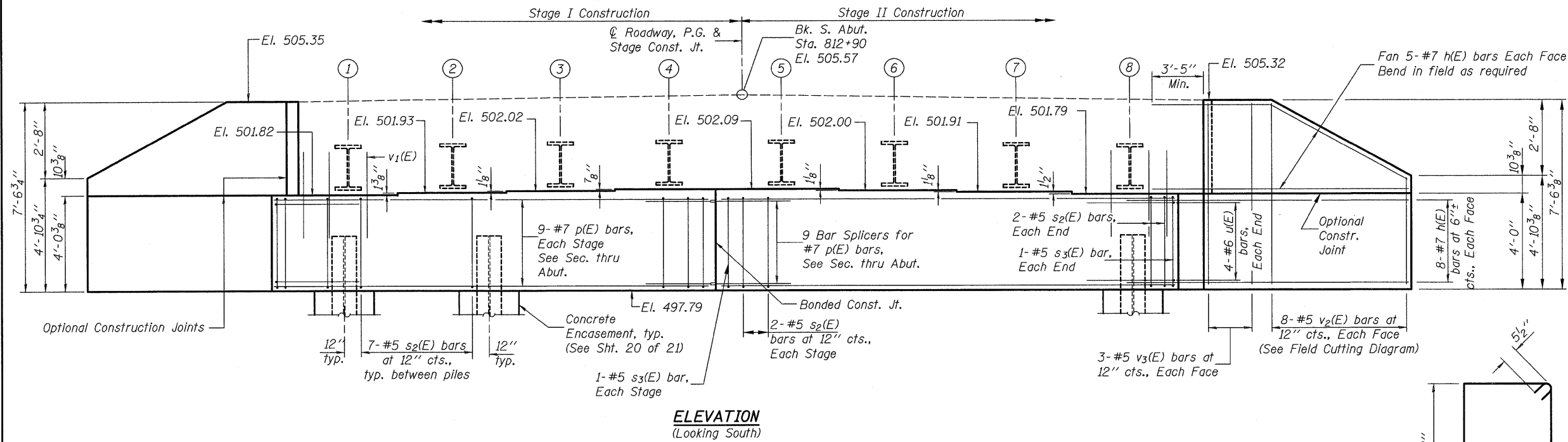
**NORTH ABUTMENT**

SHEET NO. 17	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	328	(4BR-1)B	CLAY	42	35
21 SHEETS	S.N. 013-0039		CONTRACT NO. 74310		
FED. ROAD DIST. NO. _		ILLINOIS	FED. AID PROJECT		

H.M.G. NO. 4915.19



Note: Pour steps monolithically with cap.



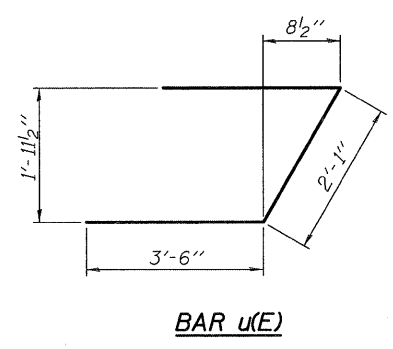
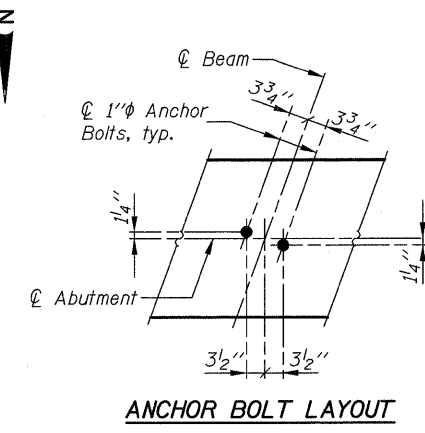
**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
h(E)	52	#7	14'-3"	
p(E)	18	#7	22'-7"	
s2(E)	36	#5	12'-7"	
s3(E)	4	#5	12'-9"	
u(E)	8	#6	9'-1"	
v1(E)	90	#5	4'-4"	
v2(E)	16	#5	11'-6"	
v3(E)	12	#5	7'-1"	
Structure Excavation		Cu. Yd.	115	
Concrete Structures		Cu. Yd.	22.5	
Reinforcement Bars, Epoxy Coated		Pound	3,670	
Furnishing Steel Piles HP 12x74		Foot	90	
Concrete Encasement		Cu. Yd.	2.1	
Setting Piles in Rock		Each	6	

For details of Bar Splicers see sheet 19 of 21. For details of piles and Concrete Encasement see sheet 20 of 21.

**PILE DATA**

DESIGNED	B.G.H.	Type:	HP 12x74
CHECKED	L.D.G.	Nominal Required Bearing:	589 kips
DRAWN	K.H.L.	Factored Resistance Available:	294 kips
CHECKED	B.G.H.	Est. Length:	15 feet
		No. Production Piles:	6
		No. Test Piles:	0

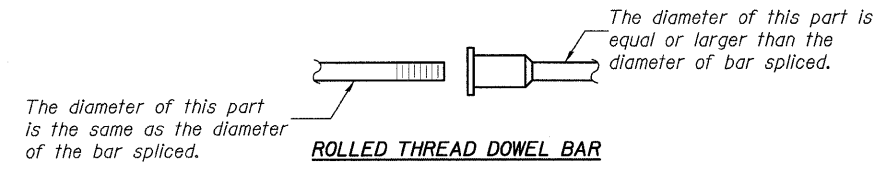


**FIELD CUTTING DIAGRAM**  
Order v2(E) full length. Cut as shown and use remainder of bars in opposite face.

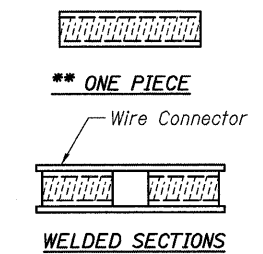
**SOUTH ABUTMENT**

SHEET NO. 18	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	328	(4BR-1B)	CLAY	42	36
21 SHEETS	S.N. 013-0039		CONTRACT NO. 74310		
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					



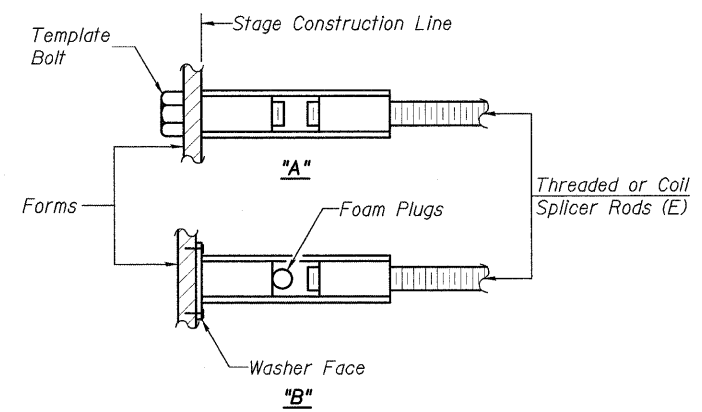


**ROLLED THREAD DOWEL BAR**



**BAR SPLICER ASSEMBLY ALTERNATIVES**

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



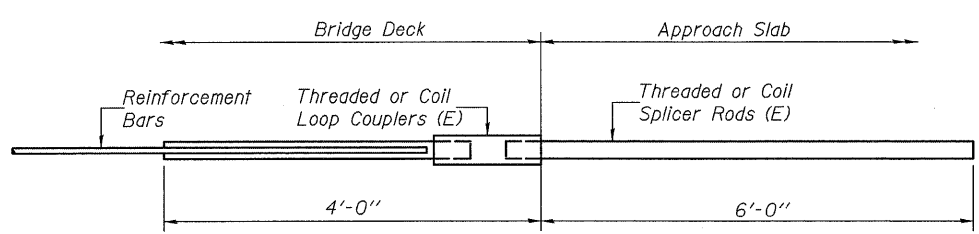
**INSTALLATION AND SETTING METHODS**

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

**NOTES**  
 Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.  
 Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.  
 All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.  
 Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.  
 Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

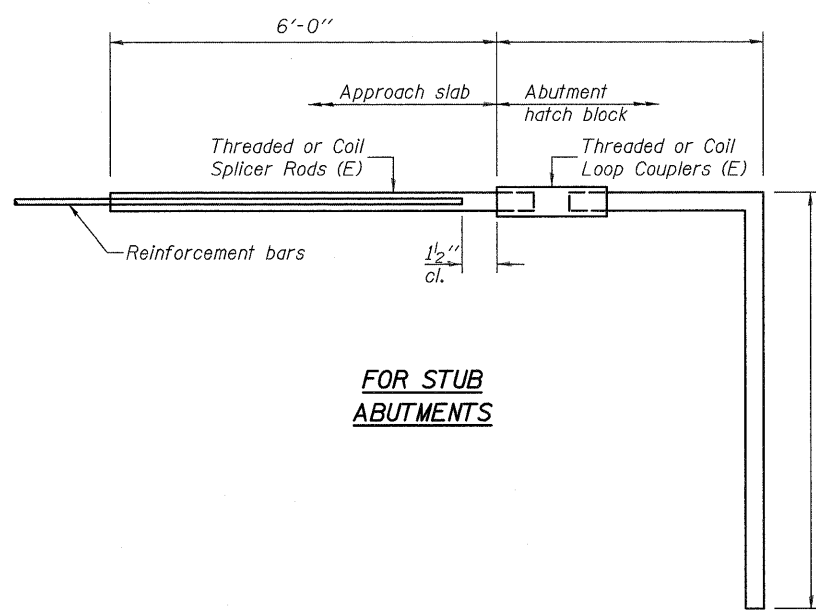
- ① Minimum Capacity (Tension in kips) =  $1.25 \times f_y \times A_t$
  - ② Minimum \*Pull-out Strength (Tension in kips) =  $0.66 \times f_y \times A_t$
- Where  $f_y$  = Yield strength of lapped reinforcement bars in ksi.  
 $A_t$  = Tensile stress area of lapped reinforcement bars.  
 \* = 28 day concrete

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



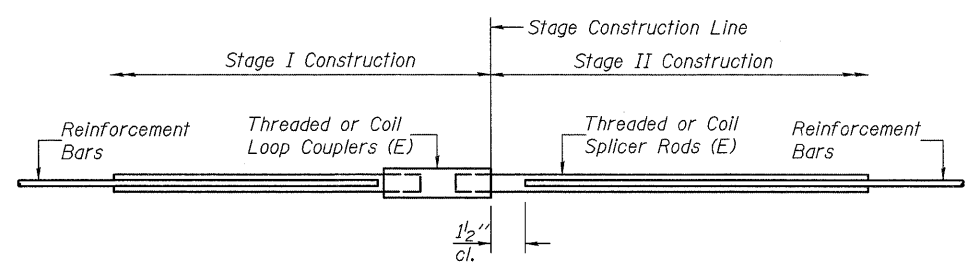
**FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS**

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



**FOR STUB ABUTMENTS**

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



**STANDARD**

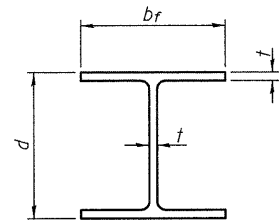
Bar Size	No. Assemblies Required	Location
#6	16	Diaphragm
#5	239	Deck
#7	18	Abutment
#4	50	Approach
#5	172	Approach

**BAR SPLICER ASSEMBLY DETAILS**

SHEET NO. 19	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	21 SHEETS	328	(4BR-1)B	CLAY	42
S.N. 013-0039			CONTRACT NO. 74310		
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT					

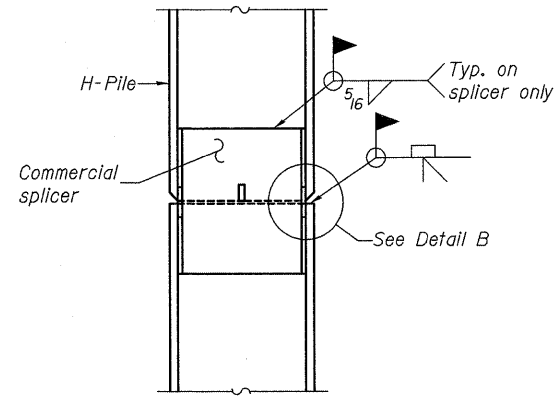
DESIGNED	B.G.H.
CHECKED	L.D.G.
DRAWN	K.H.L.
CHECKED	B.G.H.

BSD-1 10-1-08

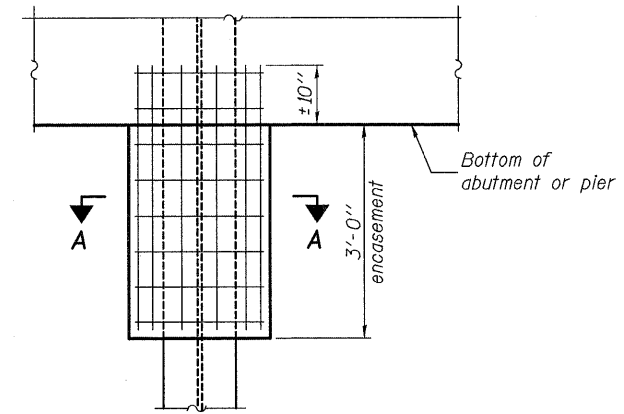


**STEEL PILE TABLE**

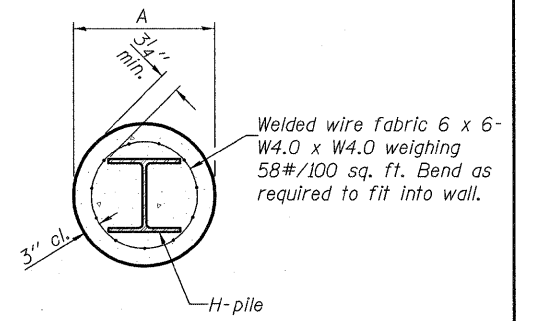
Designation	Depth d	Flange width br	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	13/16"	30"
x102	14"	14 3/4"	1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	11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



**ELEVATION**



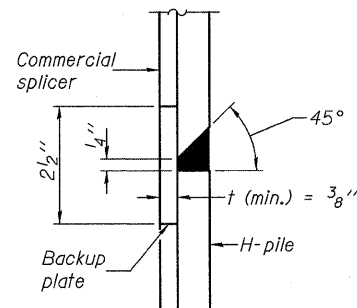
**ELEVATION**



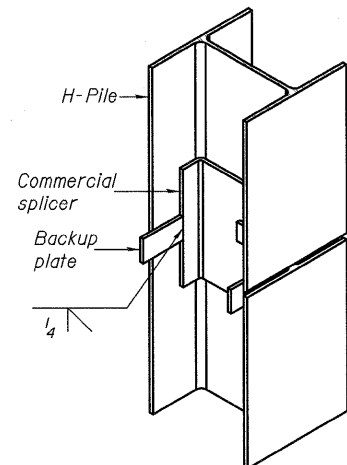
**SECTION A-A**

**PILE ENCASEMENT**

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

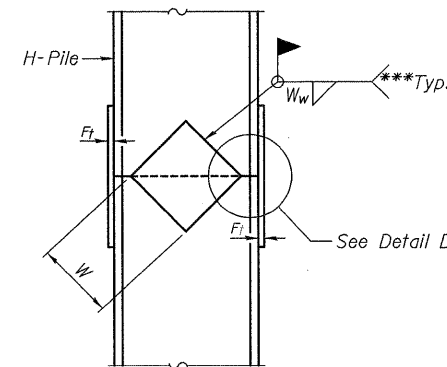


**DETAIL "B"**

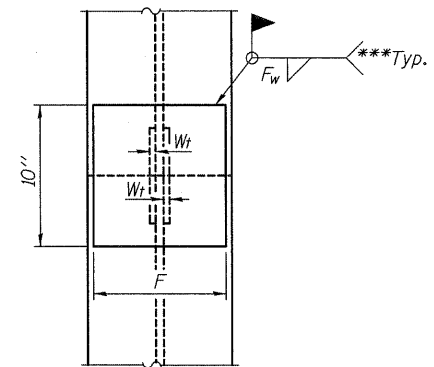


**ISOMETRIC VIEW**

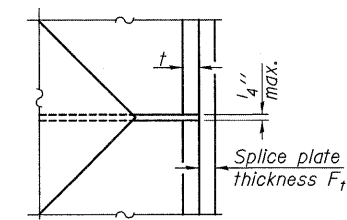
**WELDED COMMERCIAL SPLICE**



**ELEVATION**



**END VIEW**

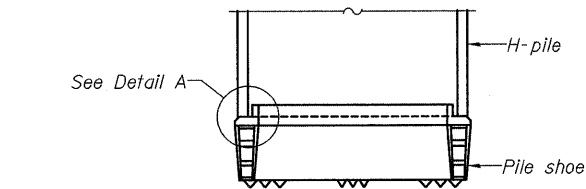


**DETAIL D**

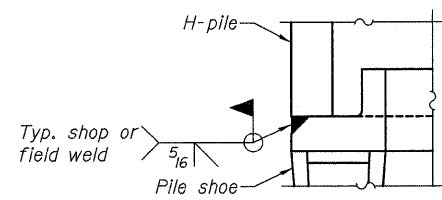
Designation	F	F <sub>t</sub>	F <sub>w</sub>	W	W <sub>t</sub>	W <sub>w</sub>
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5/8"	1/2"
x89	12 1/2"	3/4"	1/16"	7 3/4"	5/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5/8"	1/2"
HP 12x84	10"	7/8"	1/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	1/16"	6 1/2"	5/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"

**WELDED PLATE FIELD SPLICE**

**HP PILE DETAILS**

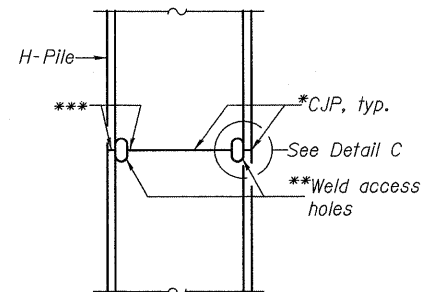


**ELEVATION**

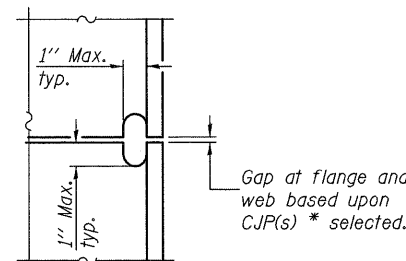


**DETAIL A**

**H-PILE SHOE ATTACHMENT**



**ELEVATION**



**DETAIL C**

**COMPLETE PENETRATION WELD SPLICE**

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

- \* Use joint conforming to Figure 3.4 in AWS D1.1, Structure Welding Code - Steel.
- \*\* Preparation per Fig. 5.2 in AWS D1.1, Structure Welding Code - Steel.
- \*\*\* Interrupt welds 1/4" from end of each pile.

DESIGNED	B.G.H.
CHECKED	L.D.G.
DRAWN	K.H.L.
CHECKED	B.G.H.
F-HP	10-1-08

SHEET NO. 20	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	328	(4BR-1)B	CLAY	42	38
21 SHEETS	S.N. 013-0039		CONTRACT NO. 74310		
	FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

ILLINOIS DEPARTMENT OF TRANSPORTATION				Struct Foundation Boring Log			
District Seven Materials METRIC VERSION				Sh. 1 of 1			
T5N, R6E, NORTHWEST QUARTER OF SECTION 3, 3rd P.M.;				Date 07/03/96			
PROJECT LUCAS CREEK BRIDGE LUCAS CREEK				Bored By D. LUX			
ROUTE FAP 328 (U.S.45) STRUCTURE NO. 013-0009				Checked By M. ROBERTSON			
SEC. (2,3,4)RS-1 STA.							
COUNTY CLAY							
Boring No. 1							
Sta 14.1m N EX CEN							
O/S 2.5m W EX CL							
El.	N	Qu 100 kN/m2	W	Surf Wat El. Grndwater El. at Compl CAVED	At	Hrs	El.
99.9	0						
PAVEMENT							
99.4							
ESTIMATED SOFT, DAMP TO VERY DAMP, BROWN CLAY							
98.5		3	0.3	17			
-1.5	(15)						
VERY SOFT, WET, BROWN CLAY							
		1	0.2	27			
97.3							
SOFT, VERY DAMP TO WET, BROWN MARBLED GRAY CLAY							
96.5		5		19			
96.2							
VERY SOFT, WET, DARK GRAY CLAY WITH SAND LOAM LENSES AND HAIR ROOTS							
		1	0.2	27			
-4.5	(15)						
95.0							
VERY LOOSE, WATER-BEARING MIXTURE OF CLAY, SANDY LOAM TO SAND, AND GRAVEL							
94.3							
94.1		20		14			
CLAY SHALE VERY DENSE, MOIST, BADLY WEATHERED, -6.0(20) CLAY SHALE							
93.7							
VERY DENSE, MOIST, BROWN WEATHERED SANDSTONE							
		*		13			
N-Std Pentr Test: 50mm (2") OD Sampler 63.5kg (140#) Hammer Falling 0.76m (30") (Type of Failure: B-Bulge S-Shear E-Estimated P-Penetrometer)							

ILLINOIS DEPARTMENT OF TRANSPORTATION				Struct Foundation Boring Log			
District Seven Materials METRIC VERSION				Sh. 1 of 1			
PROJECT LUCAS CREEK BRIDGE LUCAS CREEK				Date 07/03/96			
ROUTE FAP 328 (US 45) STRUCTURE NO. 013-0009				Bored By D. LUX			
SEC. (2,3,4)RS-1 STA.				Checked By M. ROBERTSON			
COUNTY CLAY							
Boring No. 2							
Sta 14.1m S EX CEN							
O/S 8.0m E EX CL							
El.	N	Qu 100 kN/m2	W	Surf Wat El. Grndwater El. at Compl	At	Hrs	El.
99.8	0						
GROUND SURFACE							
LOOSE, MOIST, BROWN, FINE GRAIN, SANDY LOAM TO SAND WITH GRAVEL							
		9		8			
98.7							
ESTIMATED VERY STIFF, DAMP, BROWN MARBLED GRAY, CLAY TILL							
		22	2.9	11			
-1.5	(5)						
98.9							
HARD, DAMP, BROWN MARBLED GRAY, CLAY TILL							
		24	6.4	10			
		23	4.9	12			
-3.0	(10)						
		22	7.1	13			
95.9							
ESTIMATED HARD, DAMP, VERY BADLY WEATHERED, CLAY SHALE WITH SAND PARTINGS							
		35	5.0	11			
-4.5	(15)						
95.2							
VERY DENSE, MOIST, BROWN, BADLY WEATHERED, SANDSTONE							
		*		8			
94.3							
VERY DENSE, MOIST, BROWN MARBLED GRAY, BADLY WEATHERED, -6.0(20) CLAY SHALE AND SANDSTONE							
		**		16			
93.1							
EXTENT OF EXPLORATION							
		**		15			
N-Std Pentr Test: 50mm (2") OD Sampler 63.5kg (140#) Hammer Falling 0.76m (30") (Type of Failure: B-Bulge S-Shear E-Estimated P-Penetrometer)							

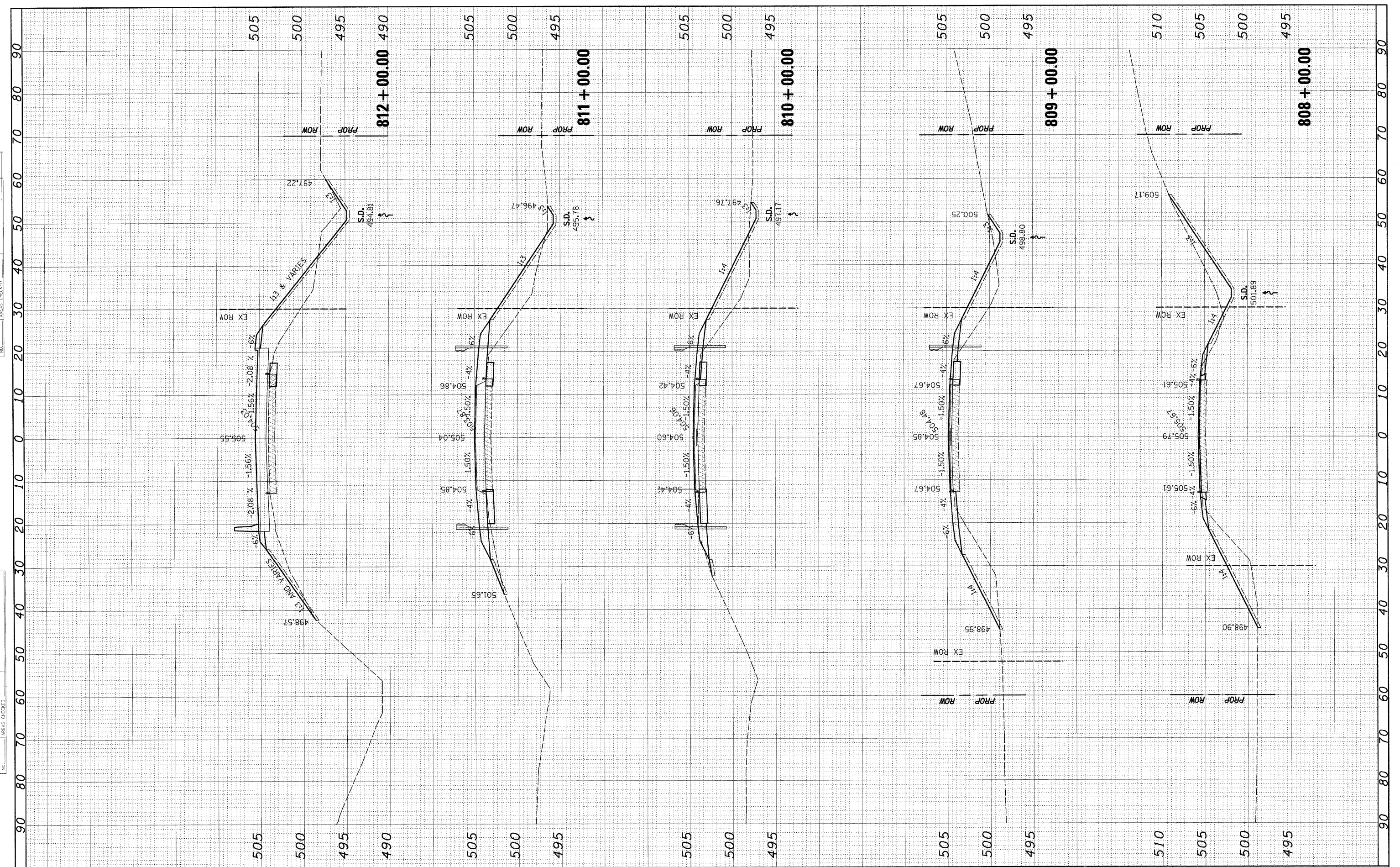
DESIGNED	B.G.H.
CHECKED	L.D.G.
DRAWN	K.H.L.
CHECKED	B.G.H.

SOIL BORING LOGS

SHEET NO. 21	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	328	(4BR-1)B	CLAY	42	39
21 SHEETS	S.N. 013-0039		CONTRACT NO. 74310		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT		

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

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



FILE NAME = #FILEL#  
 USER NAME = #USER#  
 PLOT SCALE = #SCALE#  
 PLOT DATE = #DATE#

DESIGNED - DJR  
 DRAWN - KOJ  
 CHECKED -  
 DATE -

REVISED -  
 REVISED -  
 REVISED -  
 REVISED -

**STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION**

**LUCAS CREEK CROSS SECTIONS**  
 SCALE: SHEET NO. 1 OF 3 SHEETS STA. 806+00.00 TO STA. 809+00.00

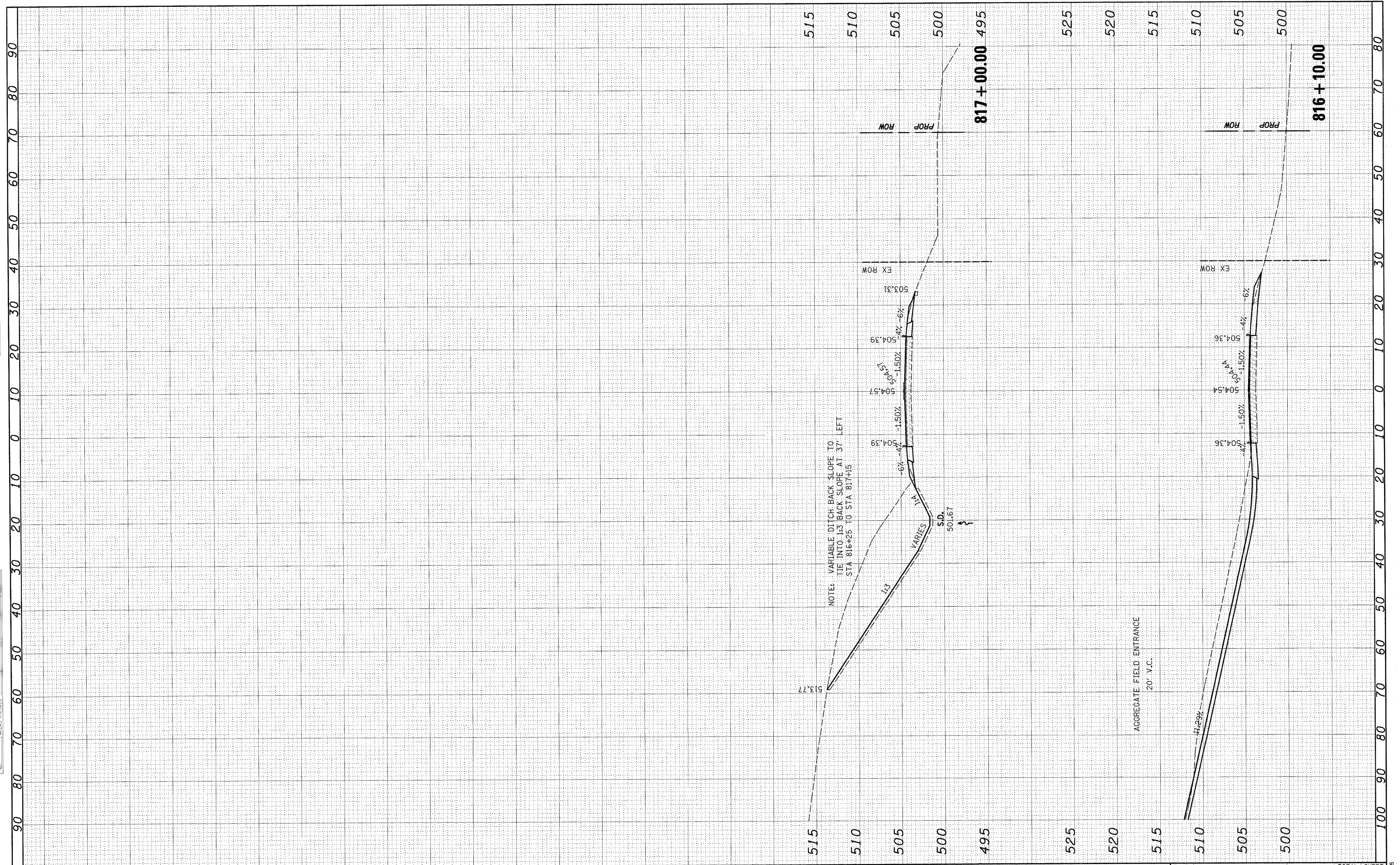
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
328	(4BR-1)B	CLAY	42	40
ILLINOIS FED. AID PROJECT			CONTRACT NO. 74310	





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

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



FILE NAME =	USER NAME = #USER#	DESIGNED - DJR	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>LUCAS CREEK CROSS SECTIONS</b>			F.A.P. RTE. 328	SECTION (4BR-1)B	COUNTY CLAY	TOTAL SHEETS 42	SHEET NO. 42
#FILE#	PLOT SCALE = \$SCALE#	DRAWN - KOJ	REVISED -		SCALE:	SHEET NO. 3 OF 3 SHEETS	STA. 815+00.00 TO STA. 817+52.00	CONTRACT NO. 74310				
	PLOT DATE = \$DATE#	CHECKED -	REVISED -		ILLINOIS FED. AID PROJECT							
		DATE -	REVISED -		H.M.G. NO. 4915							