04-27-12 LETTING ITEM 145

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	(108,109,110)RS-3	Cumberland	56 ~~57~~	1
	ILLINOIS	CONTRACT NO. 74252		

* 828 & 773

** 56+1 = 57

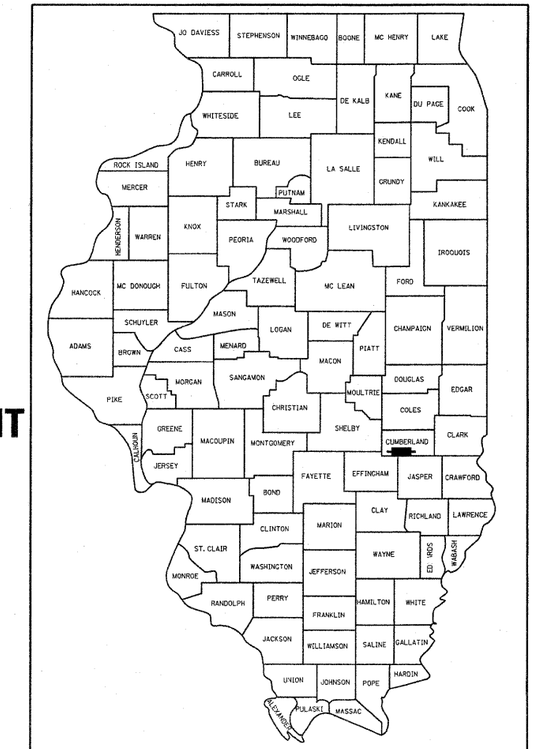
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PROPOSED
HIGHWAY PLANS

FAP ROUTE 828 & 773 (ILL 121)
SECTION (108, 109, 110)RS-3
PROJECT F-0005(859)
HMA RESURFACING /BOX CULVERT REPLACEMENT
CUMBERLAND COUNTY

C-97-080-07

D97-071-09



LOCATION OF SECTION INDICATED THUS: – ■

ADT = 2081(2009)

STATION EQUATION
STA 0+00 BK = STA 6+08 AH

BEGIN PROJECT
STA 7+94

RAILROAD OMISSION
STA 6+08 TO STA 6+20

BRIDGE OMISSION
STA 76+16 TO STA 76+32

BRIDGE OMISSION
STA 154+89 TO STA 155+95

BRIDGE OMISSION
STA 232+26 TO STA 233+14

STA 306+29
SN 018+8650
SINGLE 12' x10' x67'
PRECAST CONCRETE
BOX CULVERT

BRIDGE OMISSION
STA 378+63 TO STA 379+15

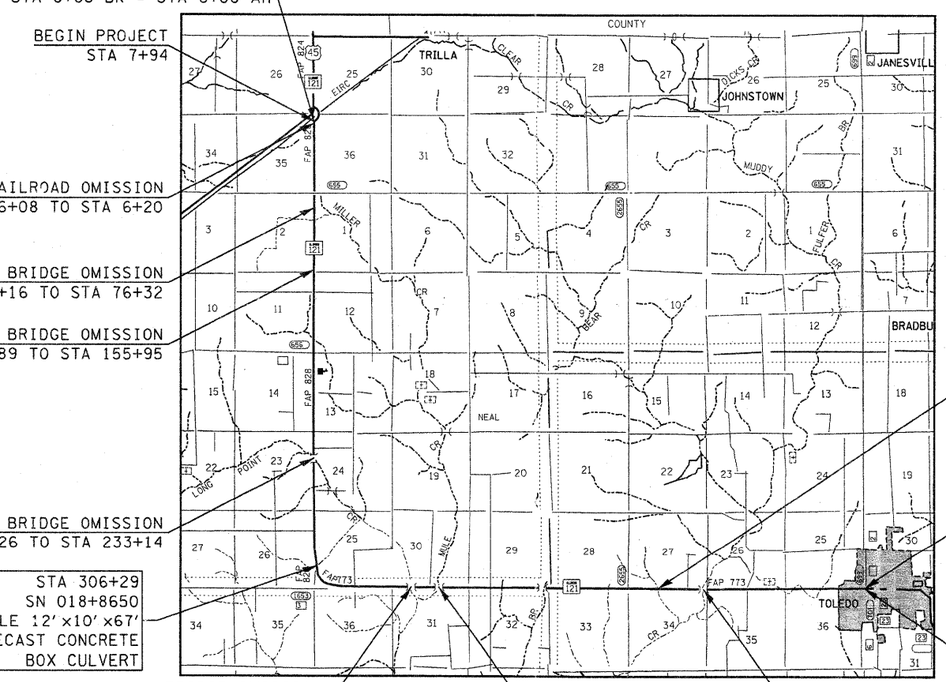
BRIDGE OMISSION
STA 394+00 TO STA 405+00

BRIDGE OMISSION
STA 569+00 TO STA 578+50

STA 545+03
SN 018+8311
DOUBLE 9' x7' x136'
PRECAST CONCRETE
BOX CULVERT

END PROJECT
STA 690+60

STATION EQUATION
STA 690+60 BK = STA 0+00 AH



100' 200' 300' — 1"= 100'
0 10' 20' 30' — 1"= 10'
0 50' 100' — 1"= 50'
0 50' 100' — 1"= 40'
0 50' 100' — 1"= 30'
0 50' 100' — 1"= 20'

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

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

PROJECT ENGINEER: MARK DAUGHERTY
PROJECT MANAGER: JOYCE HEMMEN

CONTRACT NO. 74252

GROSS LENGTH = 69,246 FT. = 13.11 MILE
NET LENGTH = 66,922 FT. = 12.67 MILE

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED May 12 20 11
Roger L. Driskell
DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

March 23 20 12
John D. Baranzelli, P.E. for
acting **ENGINEER OF DESIGN AND ENVIRONMENT**

March 23 20 12
William R. Fiegle for
acting **DIRECTOR OF HIGHWAYS, CHIEF ENGINEER**

PRINTED BY THE AUTHORITY OF THE STATE OF ILLINOIS

FOR INDEX OF SHEETS, SEE SHEET NO. 2

GENERAL NOTES

THIS PROJECT IS LOCATED ON ILLINOIS ROUTE 121 IN CUMBERLAND COUNTY, FROM THE INTERSECTION OF ROUTE 121 AND US 45 TO JUST WEST OF THE TOLEDO SQUARE IN TOLEDO. THE WORK INCLUDED IN SECTION (108, 109, 110)RS-3, CONSISTS OF PAVEMENT PATCHING, MILLING, HOT-MIX ASPHALT RESURFACING, AGGREGATE SHOULDERS, PAVEMENT MARKING, BOX CULVERT REMOVAL AND REPLACEMENT, AND OTHER WORK NECESSARY TO COMPLETE THE SECTION.

PAVEMENT MARKING SHALL BE APPLIED IN ACCORDANCE WITH SECTION 780 OF THE STANDARD SPECIFICATIONS. SHORT TERM PAVEMENT MARKING SHALL BE APPLIED TO THE MILLED SURFACE, BITUMINOUS MATERIALS (PRIME COAT), LEVEL BINDER, AND BITUMINOUS SURFACE COURSE AS SPECIFIED IN SECTION 703 OF THE STANDARD SPECIFICATIONS. TEMPORARY TAPE SHALL BE USED ON THE SURFACE COURSE AND PAINT SHALL BE USED ON MILLED SURFACES.

THE TOTAL QUANTITY OF PAINT PAVEMENT MARKING-LINE 4" CONSISTS OF 190,739 FEET OF YELLOW AND 49781 FEET OF WHITE.

PAINT PAVEMENT MARKING ON CENTERLINE ROAD SHALL BE COMPLETED BEFORE DETOUR BEGINS.

THE TOTAL QUANTITY OF RAISED REFLECTIVE PAVEMENT MARKERS IS 837 2-WAY AMBER AND 79 ONE WAY CRYSTAL.

THE MATERIAL USED FOR AGGREGATE SHOULDERS, TYPE B SHALL BE CRUSHED STONE, CRUSHED CONCRETE OR RAP.

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

EXISTING AGGREGATE SHOULDER WITHIN THE LIMITS OF HMA INLAY SECTIONS SHALL BE REMOVED AS NEEDED FOR PLACEMENT OF HMA RESURFACING AND REPLACED WITH AGGREGATE SHOULDERS, TYPE B. THE REMOVAL WILL NOT BE PAID FOR SEPARATELY BUT SHALL BE INCLUDED IN THE COST OF THE CONTRACT.

THE EXISTING PAVEMENT SHALL BE PATCHED IN ACCORDANCE WITH SECTION 442 OF THE STANDARD SPECIFICATIONS AND THE SPECIAL PROVISIONS. THE QUANTITY OF PATCHING SHOWN ON THE PLANS IS AN ESTIMATE ONLY AND THE FINAL LOCATIONS AND QUANTITY SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

BITUMINOUS MATERIALS (PRIME COAT) SHALL BE EITHER RC-70 OR AN EMULSIFIED POLYMER PRIME SS-1HP OR SS-1H.

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

THE RESIDENT ENGINEER SHALL BE THE SOLE JUDGE CONCERNING THE CURING TIME FOR THE VARIOUS BITUMINOUS LIFTS.

THE FOLLOWING MIXTURE REQUIREMENTS ARE APPLICABLE FOR THIS PROJECT:

MIXTURE USE:	LEVEL BINDER
APPLICATION:	LEVELING BINDER (MACHINE METHOD) N70
PG GRADE:	PG 64-22
DESIGN AIR VOIDS:	4.0% @ NDESIGN = 70
MIXTURE COMPOSITION:	IL-9.5
FRICTION AGGREGATE:	N/A

MIXTURE USE:	SURFACE COURSE
APPLICATION:	HMA SURFACE COURSE, MIX "C", N70
PG GRADE:	PG 64-22
DESIGN AIR VOIDS:	4% @ NDESIGN = 70
MIXTURE COMPOSITION:	IL - 9.5
FRICTION AGGREGATE:	MIXTURE C

MIXTURE USE:	PAVEMENT PATCHING
APPLICATION:	HMA BINDER COURSE, IL-19.0, N70
PG GRADE:	PG 64-22
DESIGN AIR VOIDS:	4.0% @ NDESIGN = 70
MIXTURE COMPOSITION:	IL-19.0
FRICTION AGGREGATE:	N/A

MIXTURE USE:	INCIDENTAL HOT MIX ASPHALT SURFACING
APPLICATION:	HMA SURFACE COURSE, MIX "C", N70
PG GRADE:	PG 64-22
DESIGN AIR VOIDS:	4% @ NDESIGN = 70
MIXTURE COMPOSITION:	IL-9.5
FRICTION AGGREGATE:	MIXTURE C

MIXTURE USE:	HOT-MIX ASPHALT SHOULDER
APPLICATION:	HMA SURFACE COURSE, N30 C, 9.5L
PG GRADE:	PG 64-22
DESIGN AIR VOIDS:	4% @ NDESIGN = 30
MIXTURE COMPOSITION:	IL-9.5L
FRICTION AGGREGATE:	MIXTURE C

MIXTURE USE:	HMA PAVEMENT (FULL-DEPTH), 13-1/2" (BINDER ONLY)
APPLICATION:	HMA APSPHALT BINDER COURSE, IL-19.0, N70
PG GRADE:	PG 64-22
DESIGN AIR VOIDS:	4% @ NDESIGN = 70
MIXTURE COMPOSITION:	IL-19.0
FRICTION AGGREGATE:	NA

THE FOLLOWING RATES OF APPLICATION HAVE BEEN USED IN CALCULATING PLAN QUANTITIES:

AGGREGATE SURFACE COURSE	2.05 TONS/CU YD
AGGREGATE SHOULDERS	2.05 TONS/CU YD
BITUMINOUS MATERIALS (PRIME COAT)	0.10 GAL/SQ YD
AGGREGATE (PRIME COAT)	4 LBS/SQ YD
HOT MIX ASPHALT	112 LBS/SQ YD/INCH

INDEX OF SHEETS

THE FOLLOWING STANDARDS AND DISTRICT DETAILS ARE A PART OF THESE PLANS AND ARE INCLUDED AFTER SHEET NO. 56:

STD. NO.	DESCRIPTION
000001-06	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
001001-02	AREAS OF REINFORCEMENT BARS
280001-06	TEMPORARY EROSION CONTROL SYSTEMS
406201-01	MAILBOX TURNOUT
442201-03	CLASS C AND D PATCHES
482001-02	HMA SHOULDER ADJACENT TO FLEXIBLE PAVEMENT
630001-09	STEEL PLATE BEAM GUARDRAIL
630101-09	GUARDRAIL MOUNTED ON EXISTING CULVERTS
635006-03	REFLECTOR AND TERMINAL MARKER PLACEMENT
635011-02	REFLECTOR MARKER AND MOUNTING DETAILS
666001-01	RIGHT OF WAY MARKERS
667101-02	PERMANENT SURVEY MARKERS
701001-02	OFF-RD MOVING OPERATIONS, 2L, 2W, DAY ONLY
701006-03	OFF-RD OPERATIONS, 2L, 2W, MORE THAN 15' AWAY
701011-02	OFF-RD OPERATIONS, 2L, 2W, 15' TO 24" FROM PAVEMENT EDGE
701201-04	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS >= 45 MPH
701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
701306-03	LANE CLOSURE, 2L, 2W, SLOW MOVING OPERATIONS DAY ONLY, FOR SPEEDS >=45 MPH
701311-03	LANE CLOSURE, 2L, 2W, MOVING OPERATIONS - DAY ONLY
701901-01	TRAFFIC CONTROL DEVICES
780001-02	TYPICAL PAVEMENT MARKINGS
781001-03	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS
B.L.R. 22-6	TYPICAL APPLICATIONS OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS (ROAD CLOSED TO THRU TRAFFIC)
DETAIL NO Z0070202	SURVEY MARKER VAULT

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL NOTES & INDEX OF SHEETS

SCALE: na | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	(108,109,110)RS-3	Cumberland	56	2
		CONTRACT NO. 74252		
	ILLINOIS FED. AID PROJECT			

• 828 & 773

80% FED
20% STATE

SUMMARY OF QUANTITIES

CODE NO	ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION TYPE CODE					
				0005	0040 SN 018-8650	0040 SN 018-8311	0021	0042	
20100500	TREE REMOVAL, ACRES	ACRE	1.1		0.8	0.3			
20200100	EARTH EXCAVATION	CU YD	10319		1477	8842			
20200600	EXCAVATING AND GRADING EXISTING SHOULDER	UNIT	1118	1118					
20201200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU YD	44		44				
20400800	FURNISHED EXCAVATION	CU YD	1071		102	969			
20700220	POROUS GRANULAR EMBANKMENT	CU YD	84		22	62			
28000305	TEMPORARY DITCH CHECKS	FOOT	360		63	297			
28000400	PERIMETER EROSION BARRIER	FOOT	833		167	666			
28100109	STONE RIPRAP, CLASS A5	SQ YD	801		464	337			
28200200	FILTER FABRIC	SQ YD	801		464	337			
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	288	288					
40600100	BITUMINOUS MATERIALS (PRIME COAT)	GALLON	19266	19266					
40600300	AGGREGATE (PRIME COAT)	TON	385	385					
40600635	LEVELING BINDER (MACHINE METHOD), N70	TON	8092	8092					
40600895	CONSTRUCTING TEST STRIP	EACH	1	1					
40600982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SQ YD	2150	2150					
40600990	TEMPORARY RAMP	SQ YD	597	597					
40603315	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N70	TON	17509	17509					
40701951	HOT-MIX ASPHALT PAVEMENT (FULL-DEPTH), 13 1/2"	SQ YD	535		159	376			
40800050	INCIDENTAL HOT-MIX ASPHALT SURFACING	TON	444	444					
44000151	HOT-MIX ASPHALT SURFACE REMOVAL, 1/2"	SQ YD	175377	175377					
44000158	HOT-MIX ASPHALT SURFACE REMOVAL, 2 1/4"	SQ YD	17284	17284					
44201803	CLASS D PATCHES, TYPE II, 13 INCH	SQ YD	2628	2628					
44201807	CLASS D PATCHES, TYPE III, 13 INCH	SQ YD	1024	1024					
44201809	CLASS D PATCHES, TYPE IV, 13 INCH	SQ YD	1988	1988					
48101200	AGGREGATE SHOULDERS, TYPE B	TON	2465	2465					
48203029	HOT-MIX ASPHALT SHOULDERS, 8"	SQ YD	362		362				
50100300	REMOVAL OF EXISTING STRUCTURES NO. 1	EACH	1		1				
50100400	REMOVAL OF EXISTING STRUCTURES NO. 2	EACH	1			1			
50200100	STRUCTURE EXCAVATION	CU YD	1968		586	1382			
50200400	ROCK EXCAVATION FOR STRUCTURES	CU YD	368			368			
51500100	NAME PLATES	EACH	2		1	1			
54001001	BOX CULVERT END SECTIONS, CULVERT NO. 1	EACH	2		2				

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	(108,109,110)RS-3	Cumberland	56	3
		CONTRACT NO. 74252		
	ILLINOIS FED. AID PROJECT			

• 828 & 773

80% FED
20% STATE

SUMMARY OF QUANTITIES

CODE NO	ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION TYPE CODE 0005	0040 SN 018-8650	0040 SN 018-8311	0021	0042	
54001002	BOX CULVERT END SECTIONS, CULVERT NO. 2	EACH	2			2			
54010907	PRECAST CONCRETE BOX CULVERT 9' X 7'	FOOT	270			270			
54011210	PRECAST CONCRETE BOX CULVERT 12' X 10'	FOOT	64		64				
* 63000001	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	FOOT	1250	350	900				
* 63000003	STEEL PLATE BEAM GUARDRAIL, TYPE A, 9 FOOT POSTS	FOOT	350	350					
* 63000025	STEEL PLATE BEAM GUARDRAIL, ATTACHED TO STRUCTURES	FOOT	38		38				
* 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	10	4	6				
63200310	GUARDRAIL REMOVAL	FOOT	2258	1025	1233				
66600105	FURNISHING AND ERECTING RIGHT-OF-WAY MARKERS	EACH	15		8	7			
~~66700205~~	~~PERMANENT SURVEY MARKERS, TYPE I~~	~~EACH~~	~~15~~	~~15~~					
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	6	6					
67100100	MOBILIZATION	L SUM	1	1					
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	1					
70100460	TRAFFIC CONTROL AND PROTECTION, STANDARD 701306	L SUM	1	1					
~~70100600~~	~~TRAFFIC CONTROL AND PROTECTION, STANDARD 701336~~	~~L SUM~~	~~1~~	~~1~~					
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	11	11					
70300100	SHORT-TERM PAVEMENT MARKING	FOOT	27422	27422					
70300210	TEMPORARY PAVEMENT MARKING - LETTERS AND SYMBOLS	SQ FT	122	122					
70300220	TEMPORARY PAVEMENT MARKING - LINE 4"	FOOT	240520	240520					
70300240	TEMPORARY PAVEMENT MARKING - LINE 6"	FOOT	659	659					
70300260	TEMPORARY PAVEMENT MARKING - LINE 12"	FOOT	150	150					
70300280	TEMPORARY PAVEMENT MARKING - LINE 24"	FOOT	95	95					
70301000	WORK ZONE PAVEMENT MARKING REMOVAL	SQ FT	2285	2285					
* 78000100	THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS	SQ FT	122	122					
* 78000400	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	FOOT	659	659					
* 78000600	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	FOOT	150	150					
* 78000650	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	FOOT	95	95					
* 78001110	PAINT PAVEMENT MARKING - LINE 4"	FOOT	240520	240520					
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	916	916					

* SPECIALTY ITEM

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	(108,109,110)RS-3	Cumberland	56	4
		CONTRACT NO. 74252		
	ILLINOIS FED. AID PROJECT			

80% FED
20% STATE

SUMMARY OF QUANTITIES

CODE NO	ITEM	UNIT	TOTAL QUANTITIES	CONSTRUCTION TYPE CODE 0005	0040 SN 018-8650	0040 SN 018-8311	0021	0042	
*78200410	GUARDRAIL MARKERS, TYPE A	EACH	25	10	15				
*78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	10	4	6				
*80400100	ELECTRIC SERVICE INSTALLATION	EACH	1				1		
~~*81021330~~	~~CONDUIT PUSHED, 2" DIA., PVC~~	~~FOOT~~	~~143~~				~~143~~		
*81603010	UNIT DUCT, 600V, 2-1C NO. 10, 1/C NO. 10 GROUND, (XLP-TYPE USE), 3/4" DIA. POLYETHYLENE	FOOT	1846				1846		
*81028350	UNDERGROUND CONDUIT, PVC 2" DIA.	FOOT	143				143		
~~81900200~~	~~TRENCH AND BACKFILL FOR ELECTRICAL WORK~~	~~FOOT~~	~~1477~~				~~1477~~		
*82102250	LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, 250 WATT	EACH	11				11		
*82500300	LIGHTING CONTROLLER, POLE MOUNTED, 240VOLT, 30AMP	EACH	1				1		
*83003600	LIGHT POLE, ALUMINUM, 45 FT. M.H., 15 FT. DAVIT ARM	EACH	11				11		
*83600355	LIGHT POLE FOUNDATION METAL, 15" BOLT CIRCLE, 8" X 6'	EACH	11				11		
*83800650	BREAKAWAY DEVICE, COUPLING, WITH STAINLESS STEEL SCREEN	EACH	44				44		
84200500	REMOVAL OF LIGHTING UNIT, SALVAGE	EACH	11				11		
84500110	REMOVAL OF LIGHTING CONTROLLER	EACH	1				1		
84500120	REMOVAL OF ELECTRIC SERVICE INSTALLATION	EACH	1				1		
*A2003816	TREE, FRAXINUS PENNSYLVANICA (GREEN ASH) 2" CALIPER, BALLED AND BURLAPPED	EACH	10		5	5			
*A2005116	TREE, JUGLANS NIGRA (BLACK WALNUT), 2" CALIPER, BALLED AND BURLAPPED	EACH	4		3	1			
*A2006916	TREE, QUERCUS PALUSTRIS (PIN OAK), 2" CALIPER, BALLED AND BURLAPPED	EACH	8		3	5			
X0321837	REMOVE SHEET PILING	L SUM	1		1				
*X2501000	SEEDING, CLASS 2 (SPECIAL)	ACRE	1.3		0.3	1			
*Z0016702	DETOUR SIGNING	L SUM	1	1					
~~Z0025500~~	~~FURNISHING AND INSTALLING PROPERTY MARKERS~~	~~EACH~~	~~11~~	~~11~~					
Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1	1					
Z0054505	ROCK FILL - REPLACEMENT	TON	79		79				
Z0049799	PROTECTING AND RESETTING SURVEY MARKERS	EACH	27	27					
Z0076600	TRAINEES	HOUR	500					500	
Z0070202	SURVEY MARKER VAULT	EACH	27	27					

*SPECIALTY ITEM

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	(108,109,110)RS-3	Cumberland	56	5
		CONTRACT NO. 74252		
	ILLINOIS FED. AID PROJECT			

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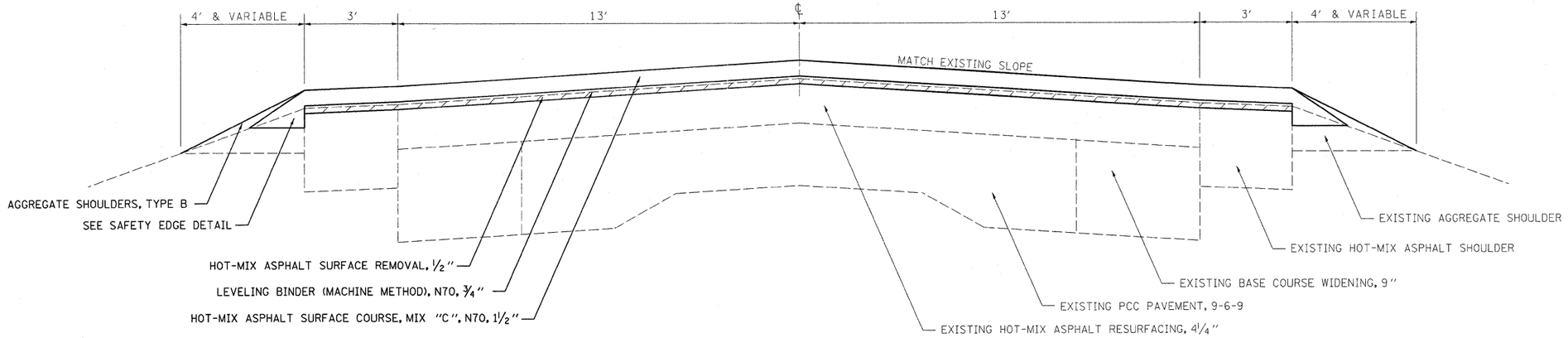
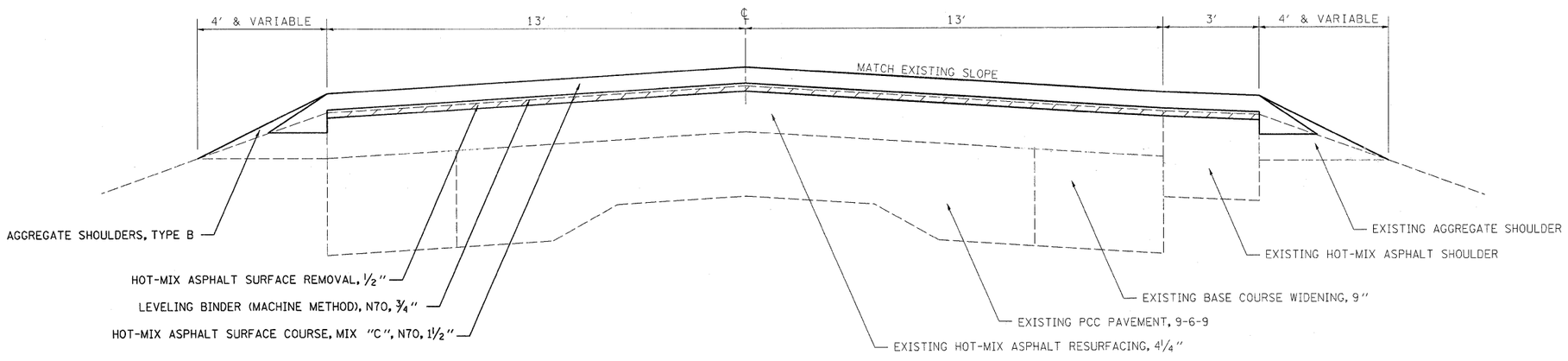


BEGIN PROJECT: STA 7+94 TO STA 6+06 ②
③ STA 151+83 TO STA 154+89
OMISSION STA 154+89 TO STA 155+95
STA 155+95 TO STA 158+34 ③

②



① STA 6+06 TO STA 5+31 ③

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

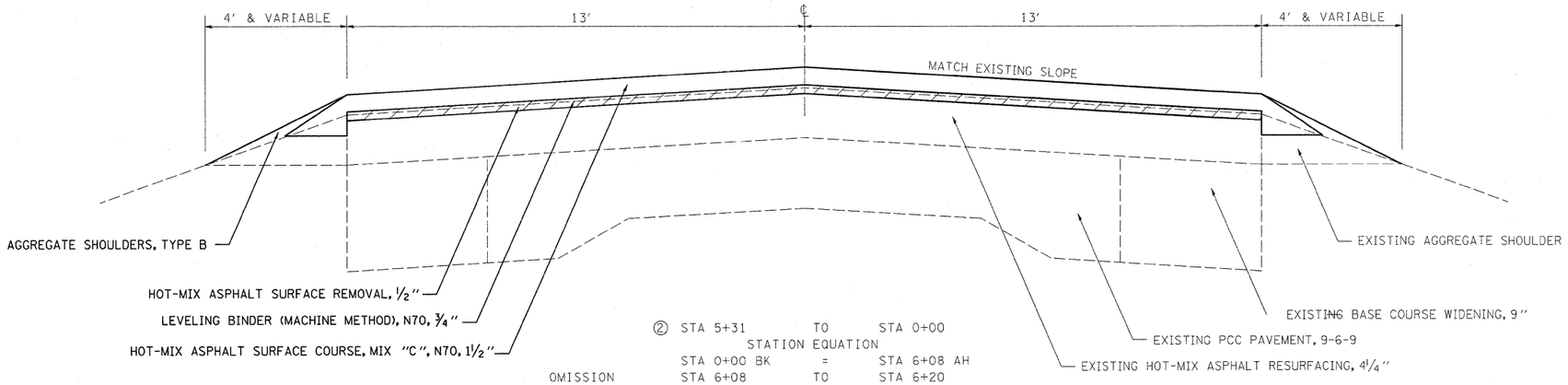
TYPICALS

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	(108,109,110)RS-3	Cumberland	56	6
		CONTRACT NO. 74252		
	ILLINOIS FED. AID PROJECT			

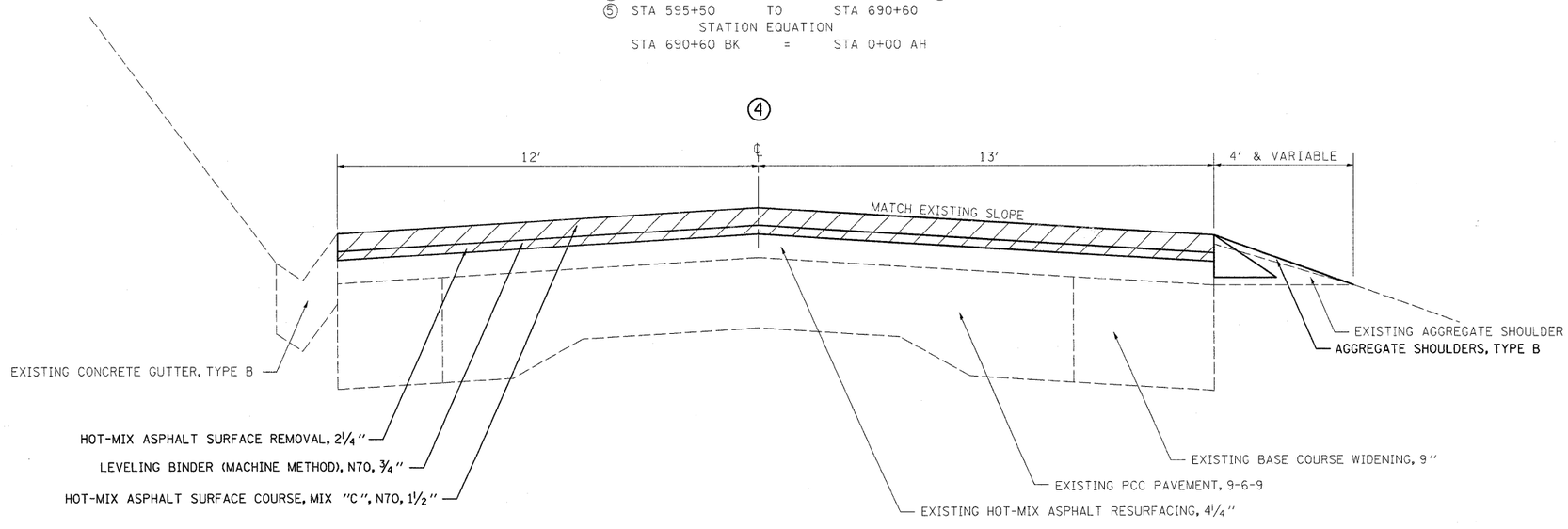
• 828 & 773

③



②	STA 5+31	TO	STA 0+00		
	STATION EQUATION				
	STA 0+00 BK	=	STA 6+08 AH		
OMISSION	STA 6+08	TO	STA 6+20		
	STA 6+20	TO	STA 76+16		
OMISSION	STA 76+16	TO	STA 76+32		
	STA 76+32	TO	STA 151+83	①	
①	STA 158+34	TO	STA 211+76	④	
④	STA 218+50	TO	STA 232+26		
OMISSION	STA 232+26	TO	STA 233+14		
	STA 233+14	TO	STA 243+50	⑤	
⑥	STA 250+10	TO	STA 254+55	④	
⑤	STA 262+33	TO	STA 297+81	⑤	
⑤	STA 305+10	TO	STA 308+41	⑦	
⑦	STA 333+29	TO	STA 368+65	⑤	
⑤	STA 377+75	TO	STA 378+63		
OMISSION	STA 378+63	TO	STA 379+15		
	STA 379+15	TO	STA 394+00	⑤	
⑤	STA 411+70	TO	STA 564+68	④	
⑤	STA 578+50	TO	STA 589+34	⑤	
⑤	STA 595+50	TO	STA 690+60		
	STATION EQUATION				
	STA 690+60 BK	=	STA 0+00 AH		

④



③	STA 211+76	TO	STA 212+12	⑤	
⑤	STA 217+15	TO	STA 218+50	③	
③	STA 254+55	TO	STA 257+25	⑤	
③	STA 564+68	TO	STA 564+85	⑤	

FILE NAME = c:\pw_work\pwidot\teasleyck\d0123840\D774252-sht-typicals.dgn	USER NAME = teasleyck	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 5/4/2011	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

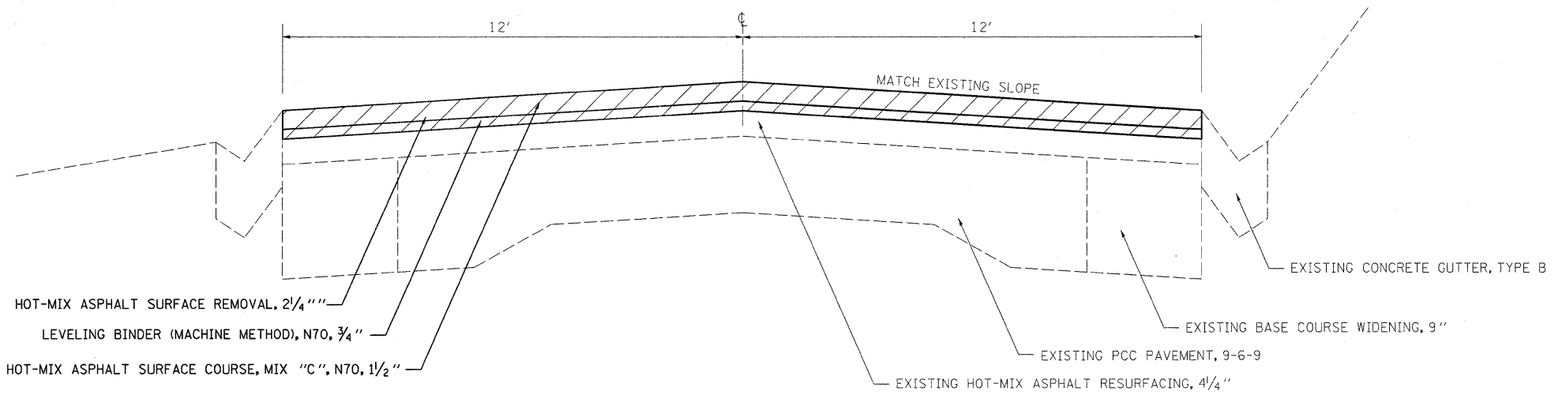
TYPICALS

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	(108,109,110)RS-3	Cumberland	56	7
		CONTRACT NO. 74252		
	ILLINOIS FED. AID PROJECT			

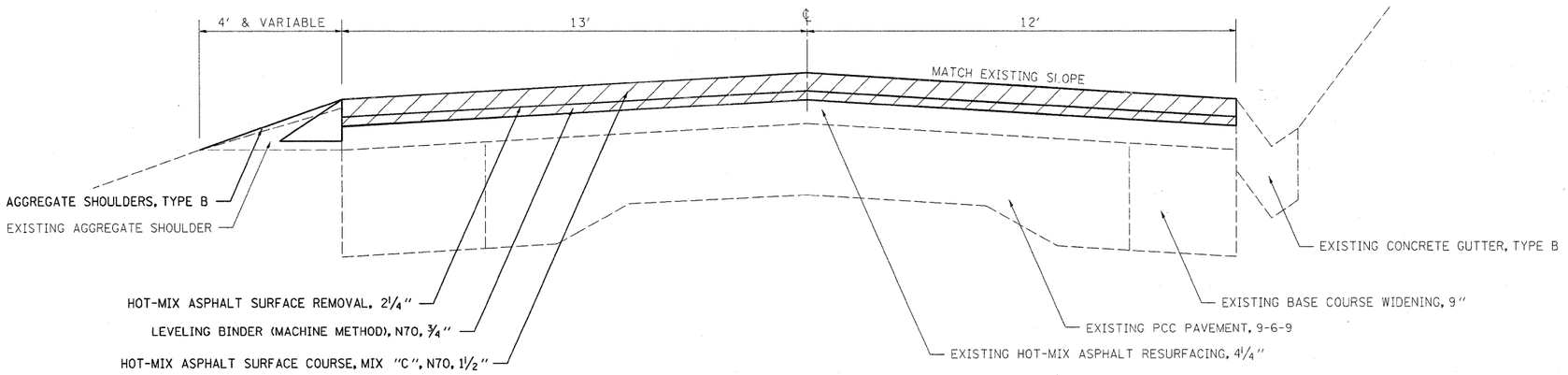
• 828 & 773

⑤



	④	STA 212+12	TO	STA 217+15	④
	③	STA 243+50	TO	STA 249+14	⑥
	④	STA 257+25	TO	STA 262+33	③
	③	STA 297+81	TO	STA 305+10	③
	③	STA 368+65	TO	STA 377+75	③
OMISSION	③	STA 394+00	TO	STA 405+00	
		STA 405+00	TO	STA 411+70	③
	④	STA 564+85	TO	STA 569+00	
OMISSION		STA 569+00	TO	STA 578+50	③
	③	STA 589+34	TO	STA 595+50	③

⑥



⑤ STA 249+14 TO STA 250+10 ③

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		DRAWN -	REVISED -
	PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 5/4/2011	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

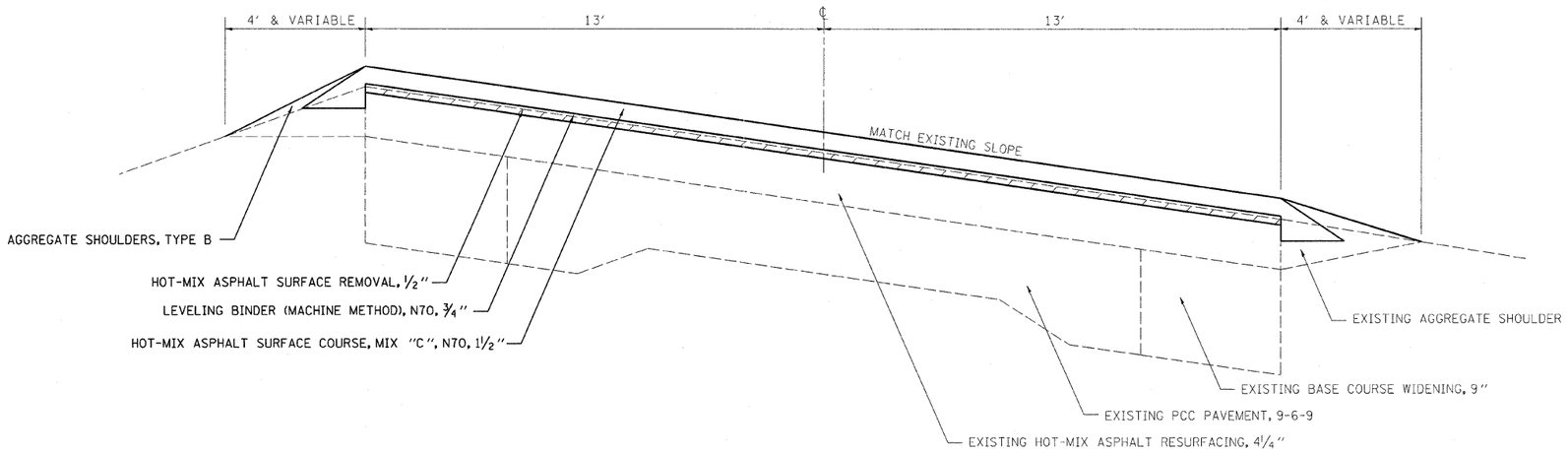
TYPICALS

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	(108,109,110)RS-3	Cumberland	56	8
		CONTRACT NO. 74252		
	ILLINOIS FED. AID PROJECT			

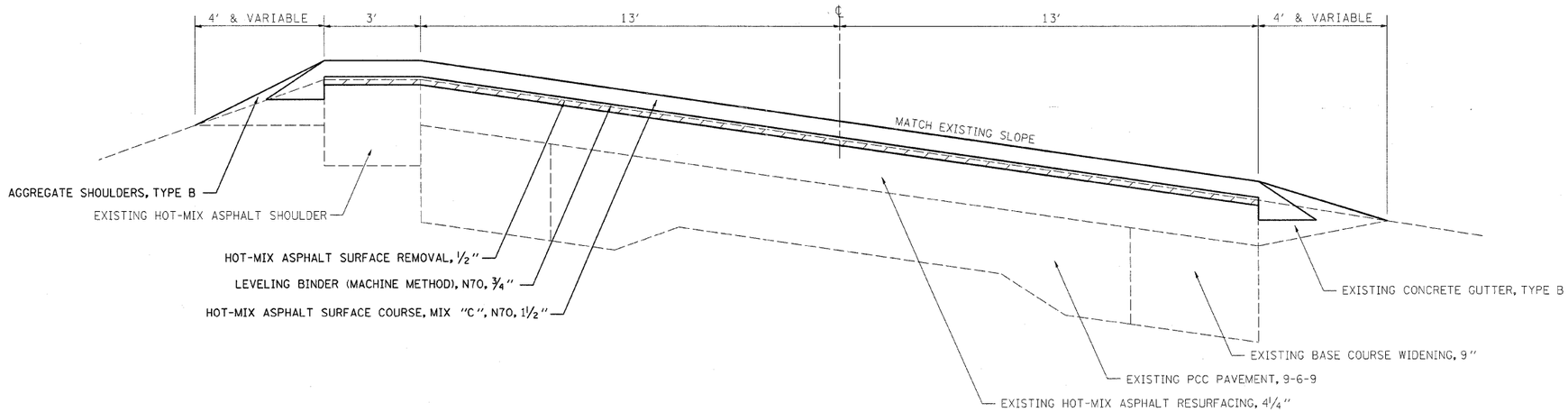
• 828 & 773

⑦



③ STA 308+41 TO STA 308+79 ⑧
⑧ STA 311+10 TO STA 313+00 ⑨
⑨ STA 322+50 TO STA 333+29 ③

⑧



⑦ STA 308+79 TO STA 311+10 ⑦

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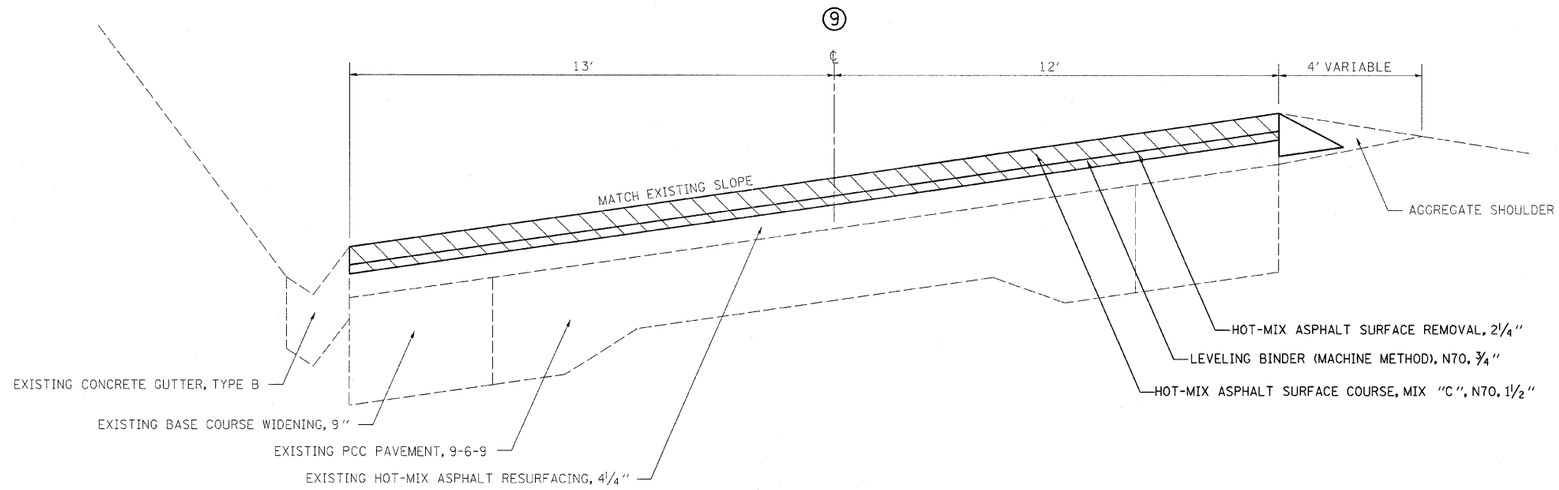
	PLOT SCALE = 50.0000 ' / in.	DRAWN -	REVISED -						•	(108,109,110)RS-3	Cumberland	56	9
	PLOT DATE = 5/4/2011	CHECKED -	REVISED -								CONTRACT NO. 74252		
		DATE -	REVISED -		SCALE:	SHEET NO. OF SHEETS	STA.	TO STA.		ILLINOIS	FED. AID PROJECT		

• 828 & 773



⑦ STA 313+00 TO STA 322+50 ⑦

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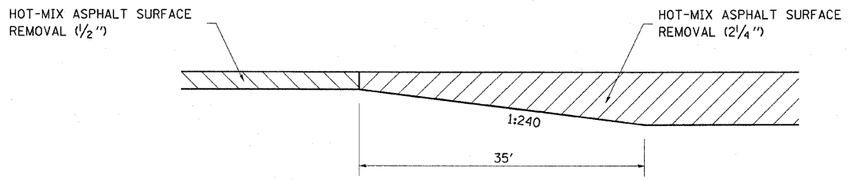
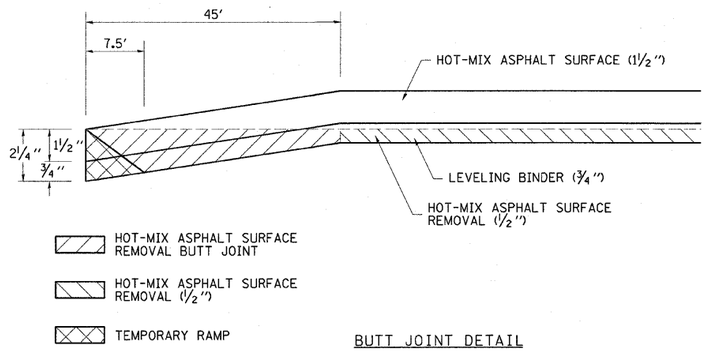
	PLOT SCALE = 50.0000 ' / in.	DRAWN -	REVISED -			•	(108,109,110)RS-3	Cumberland	56	10
	PLOT DATE = 5/4/2011	CHECKED -	REVISED -					CONTRACT NO. 74252		
		DATE -	REVISED -		SCALE: SHEET NO. OF SHEETS STA. TO STA.			ILLINOIS FED. AID PROJECT		

• 828 & 773



MILLING TRANSITION DETAIL

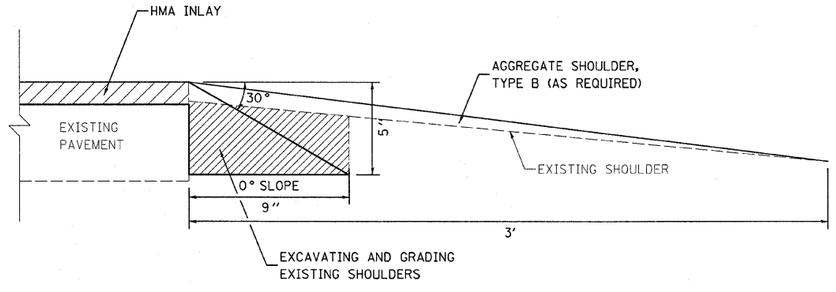
STA 211+41 TO STA 211+76
STA 218+50 TO STA 218+85
STA 243+15 TO STA 243+50
STA 250+10 TO STA 250+45
STA 254+00 TO STA 254+55
STA 262+33 TO STA 262+68
STA 297+46 TO STA 297+81
STA 305+10 TO STA 305+45
STA 312+65 TO STA 313+00
STA 322+50 TO STA 322+85
STA 368+30 TO STA 368+65
STA 377+75 TO STA 378+10
STA 411+70 TO STA 412+05
STA 564+33 TO STA 564+68
STA 588+99 TO STA 589+34
STA 595+50 TO STA 595+85



BUTT JOINT DETAIL

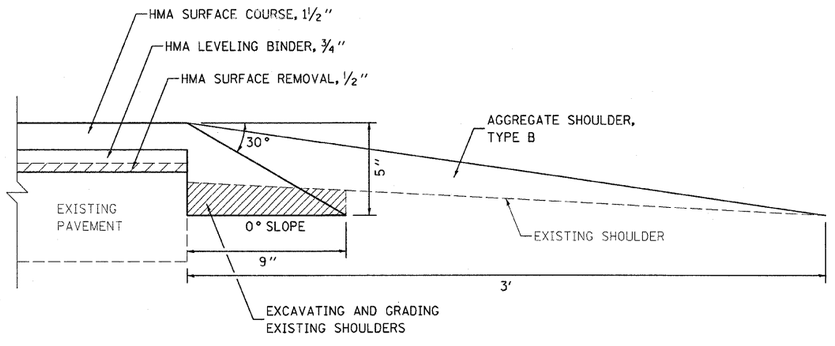
STA 0+45 TO STA 0+00
STA 6+20 TO STA 6+65
STA 75+71 TO STA 76+16
STA 76+32 TO STA 76+77
STA 154+44 TO STA 154+89
STA 155+95 TO STA 158+34
STA 231+81 TO STA 232+26
STA 233+14 TO STA 233+59
STA 378+18 TO STA 378+63
STA 379+15 TO STA 379+60
STA 393+55 TO STA 394+00
STA 578+50 TO STA 578+95
STA 690+15 TO STA 690+60

INLAY



SAFETY EDGE

3P



SAFETY EDGE

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		DRAWN -	REVISED -
	PLOT SCALE = 20.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 5/3/2011	DATE -	REVISED -

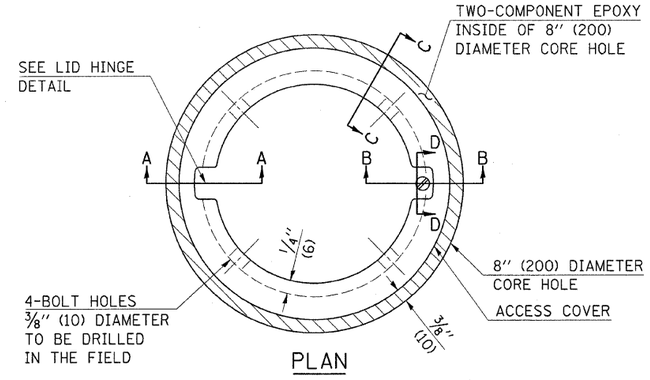
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETAILS

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	(108,109,110)RS-3	Cumberland	56	11
		CONTRACT NO. 74252		
	ILLINOIS FED. AID PROJECT			

• 828 & 773



PLAN

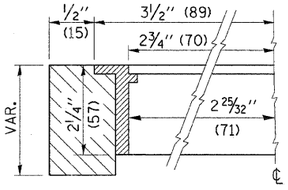
LEGEND

- ALUMINUM CASTING
- 5" (125) OR 6" (150) P.V.C. PIPE
- TWO-COMPONENT EPOXY

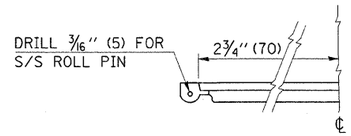
T = THICKNESS OF PAVEMENT STRUCTURE

H = THE THICKNESS OF THE SUB-BASE GRANULAR + 1" (25)

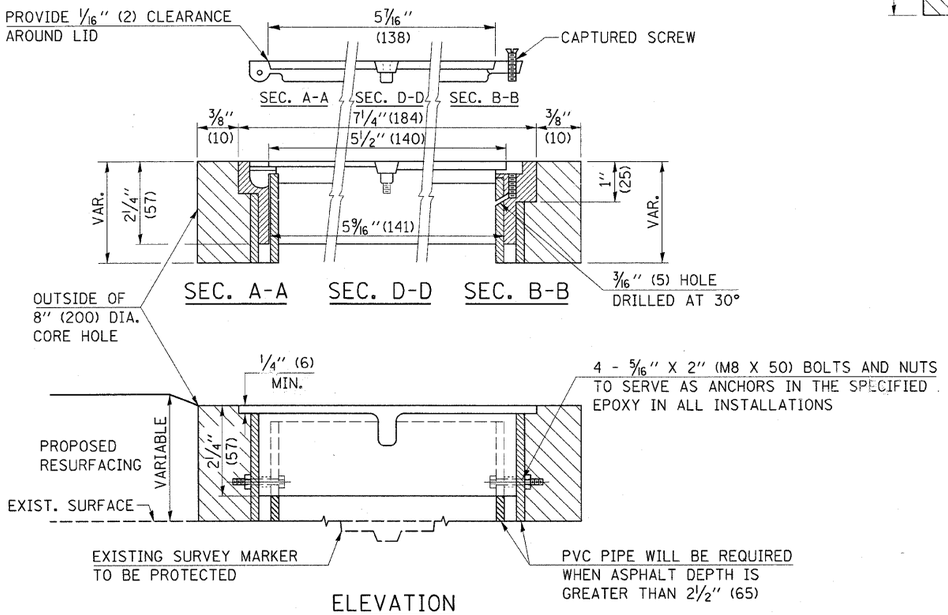
BILL OF MATERIAL
ALUMINUM CASTING OF THE DIMENSIONS AND SPECIFICATIONS SHOWN OR OTHER SUBJECT TO ENGINEER'S APPROVAL OF SHOP DRAWINGS, 4 EACH - 5/16" X 2" (M8 X 50) BOLTS WITH NUTS, EPOXY, 5" OR 6" (125 mm OR 150 mm) DIAMETER P.V.C. PIPE, SCHEDULE 40 (WHEN REQUIRED).



SECTION C-C

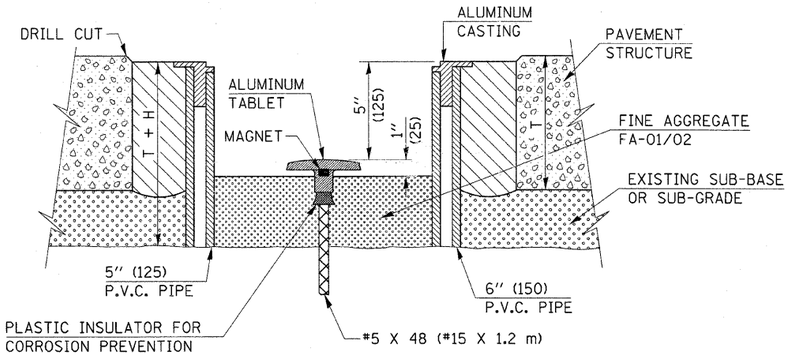


LID HINGE DETAIL



ELEVATION

EXISTING SURVEY MARKER



ELEVATION

PROPOSED SURVEY MARKER

NOT TO SCALE

Note: All dimensions are in INCHES (millimeters) unless otherwise shown.

DISTRICT 7 DETAIL NO. Z0070202

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		DRAWN -	REVISED -
	PLOT SCALE = 20.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 2/2/2012	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SURVEY MARKER VAULTS

SCALE: | SHEET 1 OF 1 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	(108,109,110)RS-3	Cumberland	56	11A
		CONTRACT NO. 74252		
	ILLINOIS FED. AID PROJECT			

• 828 & 773

11A

PAVING SCHEDULE

STATIONING		LENGTH	WIDTH	AREA	BITUMINOUS MATERIALS PRIME COAT	AGGREGATE (PRIME COAT)	LEVELING BINDER (MACHINE METHOD), N70	HOT-MIX ASHPALT SURFACE REMOVAL - BUTT JOINT	TEMPORARY RAMP	HOT-MIX ASPHALT SURFACE COURSE, MIX "C", N70	HOT-MIX ASPHALT PAVEMENT (FULL-DEPTH), 13 - 1/2"	HOT-MIX ASPHALT SURFACE REMOVAL, 1/2"	HOT-MIX ASPHALT SURFACE REMOVAL, 2-1/4"	AGGREGATE SHOULDERS, TYPE B
FROM	TO	(FEET)	(FEET)	(SQ YD)	GALLON	(TON)	(TON)	(SQ YD)	(SQ YD)	(TON)	(SQ YD)	(SQ YD)	(SQ YD)	(TON)
7+94	6+06	188	32	668.4	66.8	1.3	28.1	160.0	45.0	56.1		668.4		23
6+06	5+31	75	29	241.7	24.2	0.5	10.2	0.0	0.0	21.2		241.7		12
5+31	0+00	531	26	1534.0	153.4	3.1	64.4	130.0	38.0	141.2		1534.0		43
0+00	6+08		STATION EQUATION											
6+08	6+20	12	RAILROAD OMISSION											
6+20	76+16	6996	26	20210.7	2021.1	40.4	848.8	260.0	72.0	1857.6		20210.7		401
76+16	76+32	16												
76+32	151+83	7551	26	21814.0	2181.4	43.6	916.2	130.0	36.0	1983.8		21814.0		389
151+83	154+89	306	32	1088.0	108.8	2.2	45.7	160.0	45.0	91.4		1088.0		15
154+89	155+95	106	BRIDGE OMISSION											
155+95	158+34	239	32	849.8	85.0	1.7	35.7	160.0	43.0	71.4		849.8		15
158+34	211+76	5342	26	15432.4	1543.2	30.9	648.2	0.0	0.0	1406.3		15432.4		213
211+76	212+12	36	25	100.0	10.0	0.2	4.2	0.0	0.0	8.5			100.0	
212+12	217+15	503	24	1341.3	134.1	2.7	56.3	0.0	0.0	112.7			1341.3	
217+15	218+50	135	25	375.0	37.5	0.8	15.8	0.0	0.0	33.1			375.0	3
218+50	232+26	1376	26	3975.1	397.5	8.0	167.0	130.0	36.0	364.4		3975.1		50
232+26	233+14	88	BRIDGE OMISSION											
233+14	243+50	1036	26	2992.9	299.3	6.0	125.7	130.0	36.0	275.2		2992.9		39
243+50	249+14	564	24	1504.0	150.4	3.0	63.2	0.0	0.0	126.3			1504.0	
249+14	250+10	96	25	266.7	26.7	0.5	11.2	0.0	0.0	23.5			266.7	2
250+10	254+55	445	26	1285.6	128.6	2.6	54.0	0.0	0.0	118.4		1285.6		17
254+55	257+25	270	25	750.0	75.0	1.5	31.5	0.0	0.0	66.2			750.0	14
257+25	262+33	508	24	1354.7	135.5	2.7	56.9	0.0	0.0	113.8			1354.7	
262+33	297+81	3548	26	10249.8	1025.0	20.5	430.5	0.0	0.0	933.7		10249.8		141
297+81	305+10	729	24	1944.0	194.4	3.9	81.6	0.0	0.0	163.3			1944.0	1
305+10	308+41	331	26	956.2	95.6	1.9	40.2	0.0	0.0	87.9	158.9	956.2		13
308+41	308+79	38	26	109.8	11.0	0.2	4.6	0.0	0.0	10.1		109.8		1
308+79	311+10	231	29	744.3	74.4	1.5	31.3	0.0	0.0	64.7		744.3		9
311+10	313+00	190	26	548.9	54.9	1.1	23.1	0.0	0.0	50.5		548.9		8
313+00	322+50	950	25	2638.9	263.9	5.3	110.8	0.0	0.0	232.8			2638.9	18
322+50	333+29	1079	26	3117.1	311.7	6.2	130.9	0.0	0.0	287.0		3117.1		38
333+29	368+65	3536	26	10215.1	1021.5	20.4	429.0	0.0	0.0	933.7		10215.1		126
368+65	377+75	910	24	2426.7	242.7	4.9	101.9	0.0	0.0	225.1			2426.7	
377+75	378+63	88	26	254.2	25.4	0.5	10.7	130.0	36.0	23.4		254.2		3
378+63	379+15	52	BRIDGE OMISSION											
379+15	394+00	1485	26	4290.0	429.0	8.6	180.2	260.0	72.0	393.6		4290.0		54
394+00	405+00	1100	BRIDGE OMISSION											
405+00	411+70	670	24	1786.7	178.7	3.6	75.0	120.0	33.0	150.1			1786.7	
411+70	564+68	15298	26	44194.2	4419.4	88.4	1856.2	0.0		4057.6	375.6	44194.2		562
564+68	564+85	17	25	47.2	4.7	0.1	2.0	0.0		4.2			47.2	0
564+85	569+00	415	24	1106.7	110.7	2.2	46.5	120.0	33.0	93.0			1106.7	26
569+00	578+50	950	BRIDGE OMISSION											
578+50	589+34	1084	26	3131.6	313.2	6.3	131.5	130.0	36.0	288.0		3131.6		41
589+34	595+50	616	24	1642.7	164.3	3.3	69.0	0.0	0.0	138.0			1642.7	0
595+50	690+60	9510	26	27473.3	2747.3	54.9	1153.9	130.0	36.0	2501.7		27473.3		188
690+60	0+00		STATION EQUATION											
			TOTALS:	19266	385	8092	2150	597	17509	535	175377	17284	2465	

FILE NAME = c:\pw_work\pwidot\teasleyck\d0123840\D774252-sht-schedule.dgn	USER NAME = teasleyck	DESIGNED -	REVISED -
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PAVING SCHEDULE

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	(108,109,110)RS-3	Cumberland	56	12
		CONTRACT NO. 74252		
	ILLINOIS FED. AID PROJECT			

• 828 & 773

PAVEMENT MARKING SCHEDULE

LOCATION		SHORT-TERM PAVEMENT MARKING	WORK ZONE PAVEMENT MARKING REMOVAL	TEMPORARY PAVEMENT MARKING - LETTERS AND SYMBOLS	TEMPORARY PAVEMENT MARKING - LINE 4"	TEMPORARY PAVEMENT MARKING - LINE 6"	TEMPORARY PAVEMENT MARKING - LINE 12"	TEMPORARY PAVEMENT MARKING - LINE 24"	THERMOPLASTIC PAVEMENT MARKING - LETTERS AND SYMBOLS	THERMOPLASTIC PAVEMENT MARKING - LINE 6"	THERMOPLASTIC PAVEMENT MARKING - LINE 12"	THERMOPLASTIC PAVEMENT MARKING - LINE 24"	PAINT PAVEMENT MARKING - LINE 4"	RAISED REFLECTIVE PAVEMENT MARKERS
STA TO STA		(FOOT)	(SQ FT)	(SQ FT)	(FOOT)	(FOOT)	(FOOT)	(FOOT)	(SQ FT)	(FOOT)	(FOOT)	(FOOT)	(FOOT)	(EACH)
7+94	0+17	310.8	25.9	61.2	3108.0			36.0	61.2			36.0	3108.0	9.7
0+17	0+00	6.8	0.6		55.3			12.0				12.0	55.3	0.2
0+00	6+08	STATION EQUATION												
6+08	9+81	144.4	12.0		1212.3			36.0				36.0	1212.3	4.5
9+81	201+28	7610.0	634.2	61.2	42609.8				61.2				42609.8	237.8
201+28	213+70	496.8	41.4		4036.5								4036.5	15.5
213+70	223+80	404.0	33.7		3282.5								3282.5	12.6
223+80	235+81	445.2	37.1		2642.3								2642.3	13.9
235+81	246+65	433.6	36.1		3523.0								3523.0	13.6
246+65	262+35	628.0	52.3		6280.0								6280.0	19.6
262+35	272+90	422.0	35.2		3428.8								3428.8	13.2
272+90	288+56	626.4	52.2		3461.5								3461.5	19.6
288+56	299+88	452.8	37.7		3679.0								3679.0	14.2
299+88	320+18	1011.2	84.3		8212.0	289.0	87.0			289.0	87.0		7815.0	25.4
320+18	331+43	498.0	41.5		3414.8	185.0	32.0	11.0		185.0	32.0	11.0	3287.3	49.1
331+43	356+66	1415.2	117.9		8247.3	185.0	31.0			185.0	31.0		8119.8	59.5
356+66	367+41	430.0	35.8		3493.8								3493.8	29.4
367+41	380+03	484.0	40.3		4101.5								4101.5	15.1
380+03	405+00	558.8	46.6		5559.3								5559.3	17.5
405+00	409+45	178.0	14.8		1446.3								1446.3	5.6
409+45	420+45	440.0	36.7		3525.0								3525.0	13.8
420+45	554+07	5344.8	445.4		29840.5								29840.5	167.0
554+07	563+39	372.8	31.1		3029.0								3029.0	11.7
563+39	563+92	21.2	1.8		119.3								119.3	0.7
563+92	568+75	193.2	16.1		1502.8								1502.8	6.0
568+75	585+81	302.4	25.2		3838.5								3838.5	9.4
585+81	594+85	361.6	30.1		2938.0								2938.0	11.3
594+85	596+44	63.6	5.3		357.8								357.8	2.0
596+44	605+54	364.0	30.3		2826.5								2826.5	11.4
605+54	639+04	1340.0	111.7		7477.5								7477.5	41.9
639+04	646+61	302.8	25.2		2460.3								2460.3	9.5
646+61	651+35	189.6	15.8		1066.5								1066.5	5.9
651+35	656+36	200.4	16.7		1628.3								1628.3	6.3
656+36	690+60	1369.6	114.1		7528.0								7528.0	42.8
ILL 121/700 N													255.0	
IL 121/MONTROSE RD													397.0	
CENTERLINE ROAD													60588.0	
TOTAL:		27422	2285	122	179931	659	150	95	122	659	150	95	240520	916

PROTECTING OR RESETTING SURVEY MARKERS

LOCATION		UNIT
STATION	DESCRIPTION	(EACH)
0+37.84	PC	1
1+36.5	NORTHWEST CORNER SEC 36 T11N, R7E	1
2+34.17	PT	1
5+92.68	PC	1
7+29.07	PT	1
215+50.00	POT	1
215+88.00	SOUTHWEST CORNER SEC 13 T10N, R7E	1
243+68.08	POT	1
294+01.90	POT	1
295+25.00	NORTHEAST CORNER SE 1/4 SEC. 26 T10N, R7E	1
308+40.90	PC	1
317+66.04	PT	1
317+72.76	PC	1
333+25.00	PT	1
340+21.58	POT	1
341+42.00	SOUTHEAST CORNER SE 1/4 SEC. 25, T10N, R7E	1
365+49.14	POT	1
393+38.00	SOUTH QUARTER CORNER SEC. 30 T10N, R8E	1
419+86.06	SOUTHEAST CORNER SEC. 30	1
446+25.00	NORTH QUARTER CORNER SEC. 32 T10N, R8E TOTAL:	1
525+03.00	NORTHWEST CORNER SEC. 34 T10N, R8E	1
531+32.10	POT	1
551+69.00	NORTH QUARTER CORNER SEC. 34 T10N, R8E	1
562+32.89	POT	1
577+67.00	SOUTHEAST CORNER SEC. 27	1
593+76.44	POT	1
657+31.00	NORTH QUARTER CORNER, SEC. 36 T10N, R8E.	1
	TOTAL:	27

GUARDRAIL REMOVAL

(STA TO STA) LOCATION		SIDE	LENGTH (FEET)
7+94	6+80	RT	125
160+91	165+41	RT	450
161+33	165+83	LT	450
	TOTAL:		1025

GUARDRAIL SCHEDULE		STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS	STEEL PLATE BEAM GUARDRAIL, TYPE A, 9 FOOT POSTS	GUARDRAIL MARKERS, TYPE A	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	TERMINAL MARKER - DIRECT APPLIED
LOCATION	SIDE	QUANTITY (FOOT)	QUANTITY (FOOT)	QUANTITY (EACH)	QUANTITY (EACH)	QUANTITY (EACH)
*160+91 TO 165+41	RT	350.0		4	2	2
*161+33 TO 165+83	LT		350.0	4	2	2
	TOTAL:	350	350	9	4	4

* PLACE FACE OF GUARDRAIL AT THIS LOCATION 4' OFF OF THE EDGE OF PAVEMENT

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		DRAWN -	REVISED -
	PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 2/2/2012	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MISCELLANEOUS SCHEDULES

SCALE: NA | SHEET NO. 1 OF 1 SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	(108,109,110)RS-3	Cumberland	56	13
		CONTRACT NO. 74252		
	ILLINOIS FED. AID PROJECT			

* 828 & 773

SCHEDULES FOR SN 018-8311

NAME PLATES

LOCATION STATION	UNIT (EACH)
545+02.84	1
TOTAL:	1

POROUS GRANULAR EMBANKMENT

LOCATION STATION	QUANTITY (CU YD)
545+03	62.2
TOTAL:	62.2

FILTER FABRIC

LOCATION (STA TO STA)		SIDE	QUANTITY (SQ YD)
544+75	545+30	RT	163.2
544+72	545+34	LT	188.1
	TOTAL:		351.3

TEMPORARY DITCH CHECKS

LOCATION (STA TO STA)		SIDE	QUANTITY (FOOT)
544+00	544+80	RT	36
542+52	544+80	LT	108
545+22	546+21	RT	72
545+22	546+77	LT	81
	TOTAL:		297

EARTHWORK SCHEDULE

LOCATION (STA TO STA)		EARTH EXCAVATION (CU YD)	EMBANKMENT REQUIRED (CU YD)	EARTH EXCAVATION AVAILABLE (ADJUSTED FOR SHRINKAGE - 25%) (CU YD)	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-) (CU YD)
542+50	547+00	8842	7600	6632	-969
	TOTAL:	8842	7600	6632	-969

REMOVAL OF EXISTING STRUCTURES

LOCATION STATION	UNIT (EACH)
545+02.84	1
TOTAL:	1

PERIMETER EROSION BARRIER

LOCATION (STA TO STA)		SIDE	QUANTITY (FOOT)
544+00	544+80	RT	236
542+52	544+80	LT	88
545+22	546+21	RT	164
545+22	546+77	LT	11
		TOTAL:	499

TREE REMOVAL

LOCATION (STA TO STA)		QUANTITY (ACRES)
542+50	547+00	0.3
	TOTAL:	0.3

STONE RIPRAP, CLASS A5

LOCATION (STA. TO STA.)		LENGTH (SQ YD)
544+75	545+30	163
544+72	545+34	188
	TOTAL:	351

FURNISHING AND ERECTING RIGHT-OF-WAY MARKERS

LOCATION STATION	OFFSET	SIDE	UNIT (EACH)
541+00	50	RT	1
543+50	115	RT	1
545+50	115	RT	1
548+00	50	RT	1
543+50	50	LT	1
545+25	135	LT	1
547+00	50	LT	1
		TOTAL:	7

TREE SCHEDULE

DESCRIPTION	QUANTITY (EACH)
TREE, FRAXINUS PENNSYLVANICA (GREEN ASH) 2" CALIPER, BALLED AND BURLAPPED	5
TREE, JUGLANS NIGRA (BLACK WALNUT), 2" CALIPER, BALLED AND BURLAPPED	1
TREE, QUERCUS PALUSTRIS (PIN OAK), 2" CALIPER, BALLED AND BURLAPPED	5
TOTAL:	11

GUARDRAIL SCHEDULE

LOCATION	SIDE	STEEL PLATE BEAM GUARDRAIL, TYPE A, 6 FOOT POSTS QUANTITY (FOOT)	STEEL PLATE BEAM GUARD RAIL, ATTACHED TO STRUCTURES QUANTITY (FOOT)	GUARDRAIL MARKERS QUANTITY (EACH)	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT QUANTITY (EACH)	TERMINAL MARKER - DIRECT APPLIED QUANTITY (EACH)
303+56.5 TO 309+52.5	RT	375.0		5	4	4
304+44 TO 311+01	LT	525.0	38	7	2	2
	TOTAL:	900	38	11	6	6

SCHEDULES FOR SN 018-8650

PERIMETER EROSION BARRIER

LOCATION (STA TO STA)		SIDE	QUANTITY (FOOT)
305+37	306+07	RT	90
305+20	306+09	LT	77
	TOTAL:		167

FILTER FABRIC

LOCATION (STA TO STA)		SIDE	QUANTITY (SQ FT)
304+50	304+70	RT	8.9
305+96	306+61	RT	202.2
305+97	306+61	LT	248.9
	TOTAL:		451

GUARDRAIL REMOVAL

LOCATION (STA TO STA)		SIDE	LENGTH (FEET)
303+56	306+57	RT	301
306+83	309+53	RT	270
304+44	311+07	LT	663
	TOTAL:		1233

REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL

LOCATION (STA)	QUANTITY (CU YD)
306+29	44
TOTAL:	44

ROCK FILL - REPLACEMENT

LOCATION STATION	QUANTITY (TON)
306+29	79
TOTAL:	79

POROUS GRANULAR EMBANKMENT

LOCATION (STA)	QUANTITY (CU YD)
306+29	21.9
TOTAL:	22

EARTHWORK SCHEDULE

LOCATION (STA TO STA)		EARTH EXCAVATION (CU YD)	EMBANKMENT REQUIRED (CU YD)	EARTH EXCAVATION AVAILABLE (ADJUSTED FOR SHRINKAGE - 25%) (CU YD)	EARTHWORK BALANCE WASTE (+) OR SHORTAGE (-) (CU YD)
305+25	307+25	1477	1210	1108	-102
	TOTAL:	1477	1210	1108	-102

REMOVAL OF EXISTING STRUCTURES

LOCATION (STA)	QUANTITY (EACH)
306+25	1
TOTAL:	1

HOT-MIX ASPHALT SHOULDERS, 8"

LOCATION (STA TO STA)		SIDE	LENGTH (FEET)	WIDTH (FEET)	QUANTITY (SQ YD)
304+60	308+50	LT	390	4	173.3
304+68	308+92	RT	424	4	188.4
		TOTAL:			362

TEMPORARY DITCH CHECKS

LOCATION (STA TO STA)		SIDE	QUANTITY (FOOT)
305+37	306+07	RT	27
305+20	306+09	LT	36
	TOTAL:		63

STONE RIPRAP, CLASS A5

LOCATION (STA TO STA)		SIDE	LENGTH (FEET)	WIDTH (FEET)	QUANTITY (SQ YD)
304+50	304+70	RT	20	4	8.9
305+96	306+61	RT	65	28	202.2
305+97	306+61	LT	64	35	248.9
		TOTAL:			451

FURNISHING AND ERECTING RIGHT-OF-WAY MARKERS

LOCATION STATION	OFFSET	SIDE	UNIT (EACH)
303+25	40	RT	1
305+50	40	RT	1
305+75	100	RT	1
307+94	55	RT	1
304+75	40	LT	1
306+00	90	LT	1
306+75	90	LT	1
308+00	40	LT	1
		TOTAL:	8

NAME PLATES

LOCATION STATION	UNIT (EACH)
306+25	1
TOTAL:	1

TREE REMOVAL

LOCATION (STA TO STA)		QUANTITY (ACRES)
305+15	307+00	0.8
	TOTAL:	0.8

TREE SCHEDULE

DESCRIPTION	QUANTITY (EACH)
TREE, FRAXINUS PENNSYLVANICA (GREEN ASH) 2" CALIPER, BALLED AND BURLAPPED	5
TREE, JUGLANS NIGRA (BLACK WALNUT), 2" CALIPER, BALLED AND BURLAPPED	3
TREE, QUERCUS PALUSTRIS (PIN OAK), 2" CALIPER, BALLED AND BURLAPPED	3
TOTAL:	11

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		DRAWN -	REVISED -
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	PLOT DATE = 5/3/2011	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SCHEDULES FOR
SN 018-8311 & SN 018-8650

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	(108,109,110)RS-3	Cumberland	56	14
		CONTRACT NO. 74252		
	ILLINOIS FED. AID PROJECT			

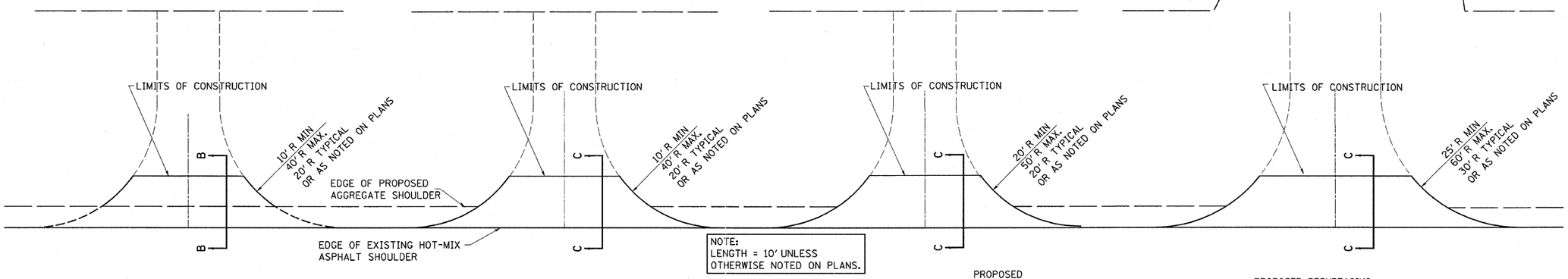
• 828 & 773

FIELD ENTRANCE

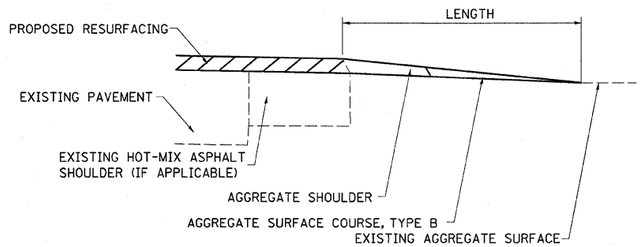
PRIVATE ENTRANCE

COMMERCIAL ENTRANCE

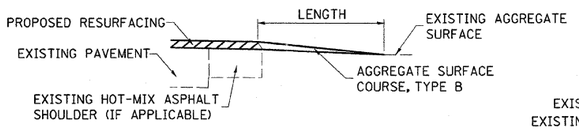
PUBLIC ROAD APPROACH

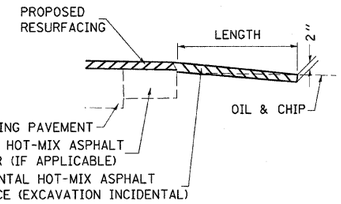


NOTE:
LENGTH = 10' UNLESS
OTHERWISE NOTED ON PLANS.

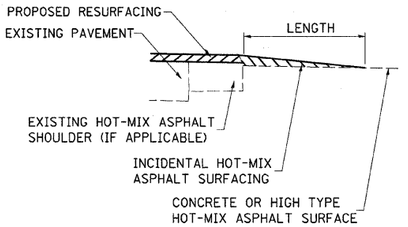


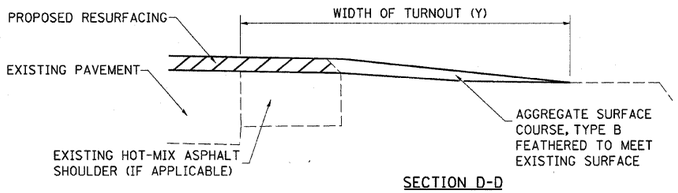
SECTION B-B





SECTION C-C





SECTION D-D

TYPICAL SECTION AT MAILBOX TURNOUT

NOTE: SEE STANDARD 406201 FOR MAILBOX TURNOUT DETAILS

NOTES

THE COST OF THE ASPHALT MATERIALS, AND AGGREGATE (PRIME COAT) FOR ENTRANCES AND PUBLIC ROADS AND APPROACHES SHALL BE INCLUDED IN THE PAY ITEM INCIDENTAL HOT-MIX ASPHALT SURFACING.

THE COST OF EXCAVATION IS INCLUDED IN THE PAY ITEM INCIDENTAL HOT-MIX ASPHALT SURFACING.

IF THERE IS NOT EXISTING HOT-MIX ASPHALT SHOULDER THEN THE ENTRANCE TAPER STARTS AT THE EDGE OF EXISTING PAVEMENT.

THE COST OF THE BITUMINOUS MATERIALS AND AGGREGATE (PRIME COAT) FOR ENTRANCES AND PUBLIC ROAD APPROACHES SHALL BE INCLUDED IN THE PAY ITEM INCIDENTAL HOT-MIX ASPHALT SURFACING.

SIDE	STATION	TYPE	INCIDENTAL HOT-MIX ASPHALT SURFACING	AGGREGATE SURFACE COURSE, TYPE B
			TON	TON
RT	17+36	FE		1.1
LT	24+96	PE	1.47	
LT	25+33	MBT		3.1
LT	30+84	FE		0.7
RT	30+94	FE		1.1
LT	36+54	MBT		2.1
LT	36+78	PE	1.68	
RT	43+71	FE		0.6
LT	52+40	PE	1.40	
LT	54+35	PE	1.58	
LT	54+50	MBT		3.3
LT	57+56	PRA	3.85	
RT	57+56	PRA	2.21	
LT	59+37	FE		0.5
LT	70+61	MBT		4.8
RT	70+61	PE	1.86	
LT	74+40	PE	1.96	
LT	74+76	MBT		2.0
LT	76+30	PE	2.42	
LT	76+75	MBT		3.6
RT	80+25	PE	1.79	

SIDE	STATION	TYPE	INCIDENTAL HOT-MIX ASPHALT SURFACING	AGGREGATE SURFACE COURSE, TYPE B
			TON	TON
LT	80+65	MBT		5.0
LT	83+52	FE		0.9
RT	83+72	FE		0.9
LT	84+80	MBT		6.3
LT	90+81	PE	3.26	
LT	91+19	MBT		4.3
LT	91+81	PE	2.17	
LT	96+90	FE		0.8
RT	97+20	FE		1.1
LT	97+20	PE	1.40	
LT	110+07	PE	2.10	
LT	110+90	MBT		7.0
LT	111+98	PE	2.38	
LT	112+25	MBT		2.5
RT	117+75	FE		0.6
LT	121+85	MBT		3.8
RT	121+85	PE	2.45	
LT	123+54	MBT		2.4
LT	123+74	PRA	2.73	
RT	123+74	PRA	4.24	
LT	127+40	MBT		5.3

SIDE	STATION	TYPE	INCIDENTAL HOT-MIX ASPHALT SURFACING	AGGREGATE SURFACE COURSE, TYPE B
			TON	TON
RT	127+40	PE	2.42	
RT	128+29	PE	1.47	
RT	129+99	PE	2.66	
RT	131+44	PE	4.27	
LT	134+13	PE	2.59	
LT	134+40	MBT		2.1
LT	137+25	MBT		4.2
RT	137+25	PE	1.86	
LT	139+39	MBT		1.5
RT	139+39	PE	2.59	
LT	140+78	MBT		1.4
RT	140+78	PE	1.47	
LT	142+08	MBT		3.1
RT	142+08	PE	2.03	
RT	142+97	PE	1.75	
LT	143+72	MBT		5.0
RT	143+72	PE	2.98	
RT	145+90	CE	5.25	
RT	146+99	CE	3.47	
LT	148+48	MBT		7.0
RT	148+48	PE	1.75	

SIDE	STATION	TYPE	INCIDENTAL HOT-MIX ASPHALT SURFACING	AGGREGATE SURFACE COURSE, TYPE B
			TON	TON
LT	150+33	FE		0.6
RT	152+31	FE		0.7
LT	160+65	PE	1.82	
LT	162+40	PE	5.08	
LT	163+20	PRA	3.99	
RT	163+20	PRA	5.04	
LT	164+09	PE	4.27	
RT	167+97	CE	3.08	
RT	168+25	MBT		4.1
LT	168+82	PE	1.96	
LT	169+04	MBT		3.1
LT	172+24	CE	2.66	
RT	173+52	FE		0.8
LT	174+00	CE	2.59	
RT	177+40	MBT		2.1
LT	177+68	PE	1.75	
RT	177+71	PE	2.59	
LT	178+00	MBT		3.8
LT	178+51	PE	1.65	
LT	179+96	PE	1.75	
LT	180+13	MBT		2.8

SIDE	STATION	TYPE	INCIDENTAL HOT-MIX ASPHALT SURFACING	AGGREGATE SURFACE COURSE, TYPE B
			TON	TON
LT	181+88	PE	1.68	
LT	182+00	MBT		4.0
LT	183+42	CE	2.03	
LT	185+22	CE	3.75	
LT	185+75	MBT		3.6
LT	186+45	CE	6.02	
RT	187+18	PE	2.38	
RT	187+42	MBT		4.2
LT	187+42	PE	1.65	
LT	187+58	MBT		3.1
LT	190+00	PRA	3.50	
LT	191+95	FE		0.7
RT	192+43	PE	1.51	
LT	196+66	FE		0.6
LT	202+90	MBT		1.9
LT	203+07	PE	1.16	
RT	203+07	PE	1.40	
RT	203+25	MBT		1.4
LT	205+35	PE	1.58	
LT	205+50	MBT		2.9
RT	208+15	PE	1.54	

FE=FIELD ENTRANCE
PE=PRIVATE ENTRANCE
CE=COMMERCIAL ENTRANCE
PRA - PUBLIC ROAD APPROACH
MBT - MAILBOX TURNOUT

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	PLOT DATE = 5/3/2011	CHECKED -	REVISED -
		DATE -	REVISED -

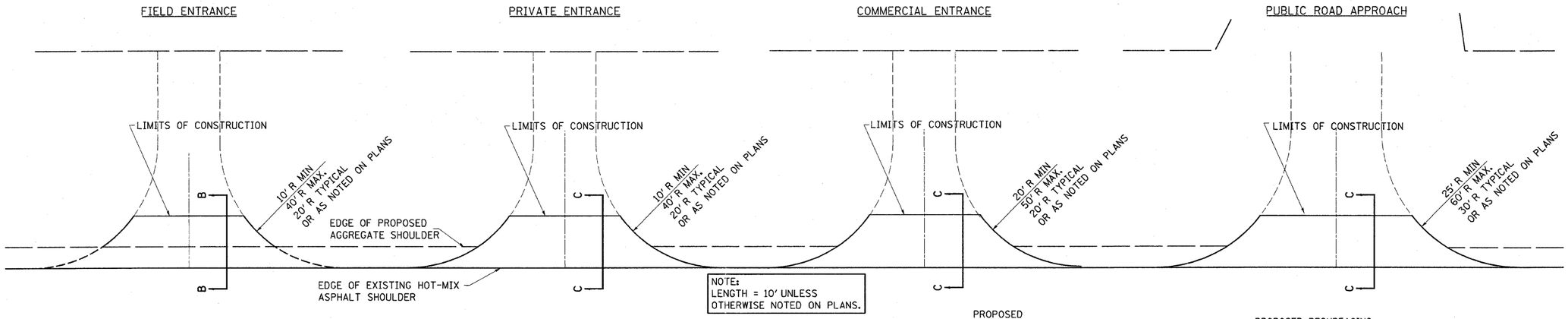
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

RURAL ENTRANCE SCHEDULE AND MAILBOX TURNOUT DETAILS WITH SHOULDERS

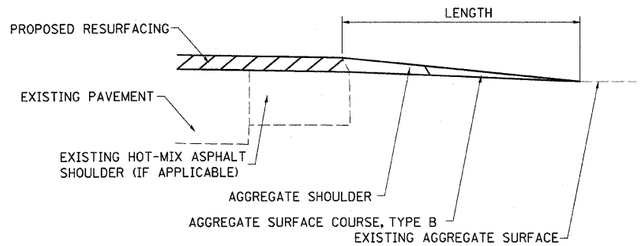
SCALE: | SHEET NO. OF SHEETS | STA. | TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	(108,109,110)RS-3	Cumberland	56	15
		CONTRACT NO. 74252		
		ILLINOIS	FED. AID PROJECT	

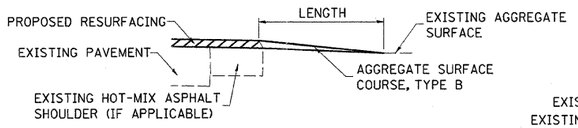
• 828 & 773

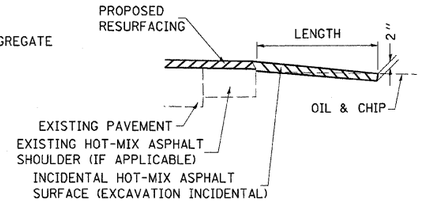


NOTE:
LENGTH = 10' UNLESS
OTHERWISE NOTED ON PLANS.

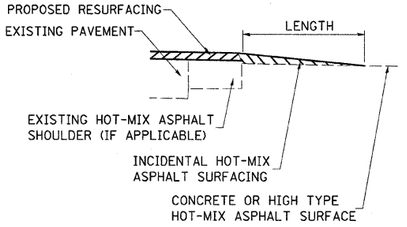


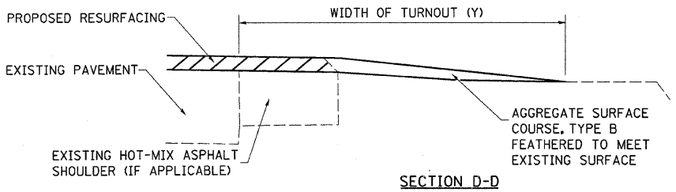
SECTION B-B





SECTION C-C





SECTION D-D

TYPICAL SECTION AT MAILBOX TURNOUT

NOTE: SEE STANDARD 406201 FOR MAILBOX TURNOUT DETAILS

NOTES

THE COST OF THE ASPHALT MATERIALS, AND AGGREGATE (PRIME COAT) FOR ENTRANCES AND PUBLIC ROADS AND APPROACHES SHALL BE INCLUDED IN THE PAY ITEM INCIDENTAL HOT-MIX ASPHALT SURFACING.

THE COST OF EXCAVATION IS INCLUDED IN THE PAY ITEM INCIDENTAL HOT-MIX ASPHALT SURFACING.

IF THERE IS NOT EXISTING HOT-MIX ASPHALT SHOULDER THEN THE ENTRANCE TAPER STARTS AT THE EDGE OF EXISTING PAVEMENT.

THE COST OF THE BITUMINOUS MATERIALS AND AGGREGATE (PRIME COAT) FOR ENTRANCES AND PUBLIC ROAD APPROACHES SHALL BE INCLUDED IN THE PAY ITEM INCIDENTAL HOT-MIX ASPHALT SURFACING.

SIDE	STATION	TYPE	INCIDENTAL HOT-MIX ASPHALT SURFACING TON	AGGREGATE SURFACE COURSE, TYPE B TON
LT	208+48	PE	2.28	
LT	208+70	MBT		2.3
RT	209+18	PE	1.61	
RT	209+30	MBT		2.2
RT	210+12	PE	1.65	
RT	210+30	MBT		2.1
LT	211+34	PE	1.26	
LT	211+54	MBT		4.5
RT	211+87	PE	1.54	
LT	222+07	PE	1.89	
RT	222+07	PE	2.38	
LT	222+23	MBT		3.6
RT	222+23	MBT		1.8
RT	225+08	FE		0.9
LT	229+40	MBT		4.6
LT	229+65	PRA	3.22	
RT	234+62	MBT		3.6
RT	234+98	PE	3.29	
LT	262+34	CE	1.54	
RT	262+34	CE	4.06	
LT	262+70	MBT		3.5

SIDE	STATION	TYPE	INCIDENTAL HOT-MIX ASPHALT SURFACING TON	AGGREGATE SURFACE COURSE, TYPE B TON
RT	263+74	PE	2.03	
RT	264+29	PE	1.96	
LT	264+44	MBT		2.6
LT	264+60	PE	1.89	
RT	265+75	PE	1.75	
RT	266+96	PE	1.72	
LT	268+47	PE	1.65	
RT	268+62	MBT		2.6
RT	269+08	PE	1.82	
LT	271+44	MBT		3.4
LT	271+61	PE	2.10	
LT	273+67	MBT		3.7
RT	273+93	PE	2.03	
LT	275+08	PE	2.21	
LT	277+64	MBT		2.6
LT	277+76	PE	1.47	
LT	281+46	MBT		4.8
LT	281+80	PE	4.34	
RT	281+94	PRA	3.57	
LT	287+09	PE	1.68	
RT	287+29	MBT		2.0

SIDE	STATION	TYPE	INCIDENTAL HOT-MIX ASPHALT SURFACING TON	AGGREGATE SURFACE COURSE, TYPE B TON
LT	287+62	PE	1.86	
LT	289+00	PE	1.58	
RT	289+67	MBT		6.4
LT	290+20	PE	2.00	
RT	293+71	PE	1.93	
LT	294+74	PE	1.93	
RT	294+74	PE	1.93	
RT	306+74	PE	0.95	
RT	309+86	PE	2.56	
LT	341+72	PRA	2.52	
RT	341+77	PRA	2.38	
RT	345+45	PE	2.49	
RT	345+78	MBT		6.3
LT	347+25	FE		0.7
LT	350+84	PE	2.17	
RT	351+02	MBT		2.9
RT	352+31	PE	1.75	
LT	354+67	PE	2.73	
RT	354+94	MBT		4.8
LT	356+86	PE	2.31	
RT	356+89	FE		0.5

SIDE	STATION	TYPE	INCIDENTAL HOT-MIX ASPHALT SURFACING TON	AGGREGATE SURFACE COURSE, TYPE B TON
RT	361+16	PE	1.93	
LT	361+48	PE	3.82	
RT	362+30	MBT		4.8
LT	363+06	PE	1.12	
LT	364+08	PE	1.75	
RT	364+08	PE	1.68	
LT	366+13	PE	1.75	
RT	367+25	MBT		2.6
RT	367+53	PE	2.10	
RT	368+40	MBT		2.9
LT	368+52	PE	1.86	
RT	384+63	MBT		3.6
LT	384+63	PE	3.36	
RT	385+37	FE		0.6
RT	393+60	FE		1.0
LT	393+67	PRA	3.29	
RT	414+03	PE	2.03	
RT	414+23	MBT		1.3
RT	415+57	MBT		2.2
LT	416+46	PE	1.79	
LT	419+33	PE	1.61	

SIDE	STATION	TYPE	INCIDENTAL HOT-MIX ASPHALT SURFACING TON	AGGREGATE SURFACE COURSE, TYPE B TON
RT	419+96	MBT		3.2
RT	420+37	PRA	2.91	
RT	423+34	FE		0.7
RT	425+05	MBT		1.3
LT	425+20	PE	1.65	
RT	425+27	FE		0.7
RT	433+59	PRA	2.45	
RT	433+59	PRA	2.63	
LT	434+45	MBT		0.7
LT	434+57	PE	1.23	
LT	440+19	MBT		0.8
LT	440+40	FE		0.7
RT	442+32	PE	2.21	
RT	444+02	FE		0.7
LT	444+02	FE		0.7
LT	447+07	FE		0.7
RT	451+64	FE		0.7
RT	454+68	FE		0.7
LT	460+07	PE	1.05	
RT	466+40	FE		0.6
LT	469+04	FE		1.0

FE=FIELD ENTRANCE
PE=PRIVATE ENTRANCE
CE=COMMERCIAL ENTRANCE
PRA - PUBLIC ROAD APPROACH
MBT - MAILBOX TURNOUT

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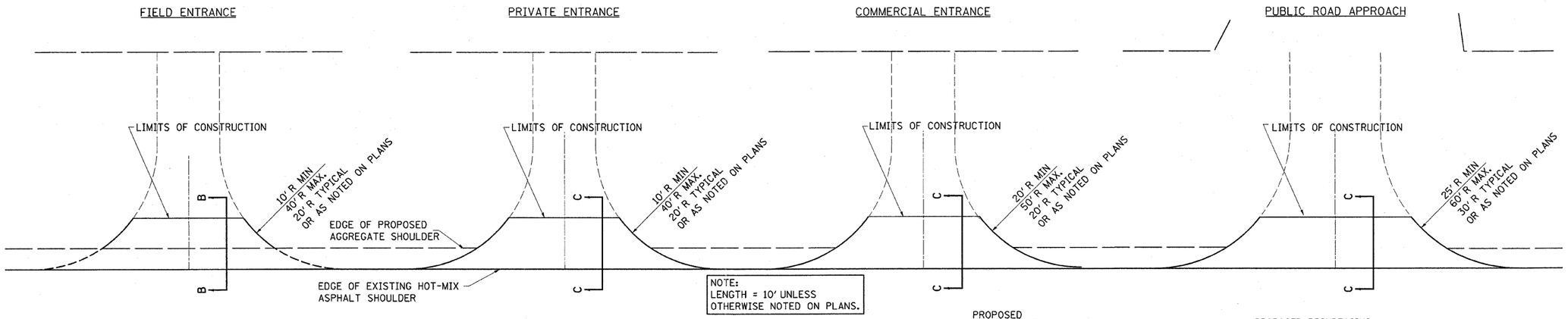
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

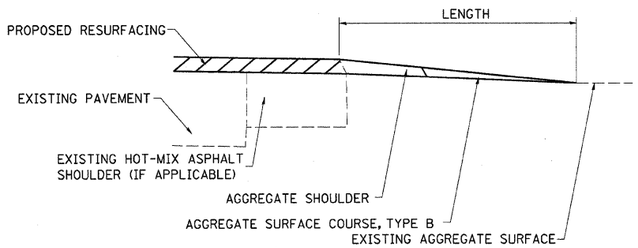
RURAL ENTRANCE SCHEDULE AND MAILBOX TURNOUT DETAILS WITH SHOULDERS

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

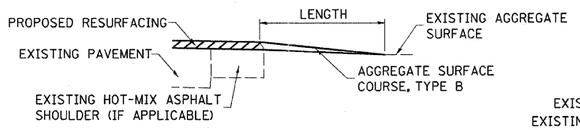
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	(108,109,110)RS-3	Cumberland	56	16
		CONTRACT NO. 74252		
	ILLINOIS	FED. AID PROJECT		

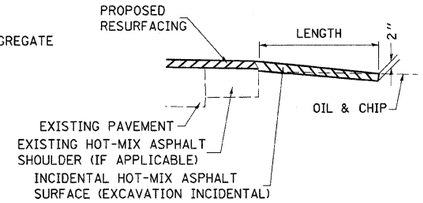
• 828 & 773





SECTION B-B





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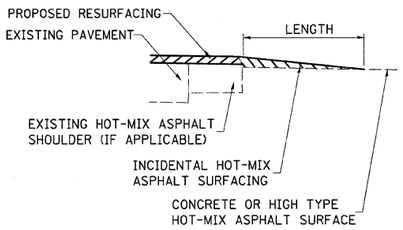

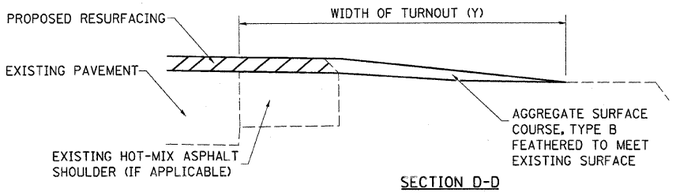

SECTION D-D

TYPICAL SECTION AT MAILBOX TURNOUT

NOTE: SEE STANDARD 406201 FOR MAILBOX TURNOUT DETAILS

NOTES

THE COST OF THE ASPHALT MATERIALS, AND AGGREGATE (PRIME COAT) FOR ENTRANCES AND PUBLIC ROADS AND APPROACHES SHALL BE INCLUDED IN THE PAY ITEM INCIDENTAL HOT-MIX ASPHALT SURFACING.

THE COST OF EXCAVATION IS INCLUDED IN THE PAY ITEM INCIDENTAL HOT-MIX ASPHALT SURFACING.

IF THERE IS NOT EXISTING HOT-MIX ASPHALT SHOULDER THEN THE ENTRANCE TAPER STARTS AT THE EDGE OF EXISTING PAVEMENT.

THE COST OF THE BITUMINOUS MATERIALS AND AGGREGATE (PRIME COAT) FOR ENTRANCES AND PUBLIC ROAD APPROACHES SHALL BE INCLUDED IN THE PAY ITEM INCIDENTAL HOT-MIX ASPHALT SURFACING.

SIDE	STATION	TYPE	INCIDENTAL HOT-MIX ASPHALT SURFACING	AGGREGATE SURFACE COURSE, TYPE B
			TON	TON
LT	469+36	MBT		0.8
RT	469+68	PE	1.58	
RT	473+20	PRA	2.59	
LT	475+96	MBT		0.5
LT	476+12	PE	1.75	
LT	478+43	FE		0.6
RT	478+43	PE	1.30	
LT	486+46	FE		0.7
RT	486+51	FE		0.7
LT	491+89	FE		0.7
LT	496+24	MBT		1.7
RT	496+50	PE	1.68	
LT	498+24	FE		0.7
LT	499+21	MBT		1.4
RT	499+63	PE	1.96	
LT	507+31	MBT		3.1
RT	507+70	PE	1.47	
LT	512+57	FE		0.7
RT	517+31	FE		0.7
LT	517+31	MBT		2.3
LT	517+60	FE		0.6

SIDE	STATION	TYPE	INCIDENTAL HOT-MIX ASPHALT SURFACING	AGGREGATE SURFACE COURSE, TYPE B
			TON	TON
RT	517+89	PE	1.96	
LT	525+00	PRA	2.56	
RT	525+00	PRA	2.35	
RT	526+49	PE	2.00	
RT	531+22	PE	1.40	
LT	531+42	MBT		4.8
RT	534+91	PE	1.96	
RT	538+27	FE		0.7
LT	539+14	MBT		1.7
LT	539+43	PE	1.58	
LT	541+38	MBT		0.6
LT	541+72	PE	2.45	
LT	546+53	MBT		1.8
LT	546+69	PE	1.54	
RT	546+69	PE	1.58	
LT	551+07	FE		0.6
RT	551+41	FE		0.7
LT	561+25	MBT		1.9
RT	561+25	PE	1.89	
LT	564+63	PRA	3.89	
LT	588+18	MBT		1.1

SIDE	STATION	TYPE	INCIDENTAL HOT-MIX ASPHALT SURFACING	AGGREGATE SURFACE COURSE, TYPE B
			TON	TON
RT	588+18	PE	1.47	
LT	596+00	MBT		2.1
LT	596+52	PE	2.94	
LT	604+14	PRA	3.50	
RT	604+14	PRA	3.92	
RT	610+92	MBT		0.6
RT	611+12	PE	2.31	
RT	614+82	MBT		1.7
RT	614+92	PE	1.54	
RT	616+11	PE	1.65	
LT	617+32	CE	1.93	
LT	626+71	PE	1.96	
RT	629+27	MBT		1.3
LT	629+27	PE	1.26	
RT	630+40	PE	1.40	
LT	630+52	PRA	3.15	
RT	632+85	MBT		4.6
LT	632+85	PE	1.26	
RT	634+49	MBT		3.7
LT	634+88	PE	1.61	
RT	639+81	PE	2.66	

SIDE	STATION	TYPE	INCIDENTAL HOT-MIX ASPHALT SURFACING	AGGREGATE SURFACE COURSE, TYPE B
			TON	TON
RT	640+19	MBT		1.8
LT	642+34	PE	1.61	
RT	642+83	MBT		2.7
RT	644+63	PE	1.54	
RT	644+90	MBT		0.8
RT	646+66	MBT		0.9
LT	646+83	PE	1.47	
RT	649+22	PE	1.89	
RT	649+41	MBT		0.5
RT	650+66	PE	1.82	
LT	651+01	PE	1.58	
LT	655+75	PE	1.72	
RT	656+97	PE	2.42	
RT	657+18	MBT		1.4
LT	658+29	PE	1.93	
RT	661+96	FE		0.7
LT	663+26	CE	4.76	
RT	664+02	PE	2.28	
RT	664+30	MBT		0.5
RT	664+53	PE	1.68	
LT	664+53	PE	2.17	

SIDE	STATION	TYPE	INCIDENTAL HOT-MIX ASPHALT SURFACING	AGGREGATE SURFACE COURSE, TYPE B
			TON	TON
RT	665+60	PE	1.47	
RT	665+75	MBT		0.4
LT	665+81	PE	2.03	
LT	667+00	PE	1.75	
RT	667+98	CE	2.77	
LT	668+14	PE	1.96	
RT	669+96	MBT		0.9
RT	670+08	PE	1.23	
LT	670+72	PE	1.54	
RT	670+90	PE	1.75	
RT	671+49	PE	1.79	
RT	672+75	PE	1.26	
LT	672+98	PE	1.61	
RT	673+13	PE	1.05	
LT	674+03	PE	1.44	
RT	674+39	PE	2.03	
LT	674+83	PE	1.44	
LT	675+11	PE	1.33	
RT	676+58	PE	1.05	
LT	677+20	PE	1.16	
RT	677+77	PE	1.05	

FE=FIELD ENTRANCE
PE=PRIVATE ENTRANCE
CE=COMMERCIAL ENTRANCE
PRA - PUBLIC ROAD APPROACH
MBT - MAILBOX TURNOUT

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	PLOT DATE = 5/3/2011	DATE -	REVISED -

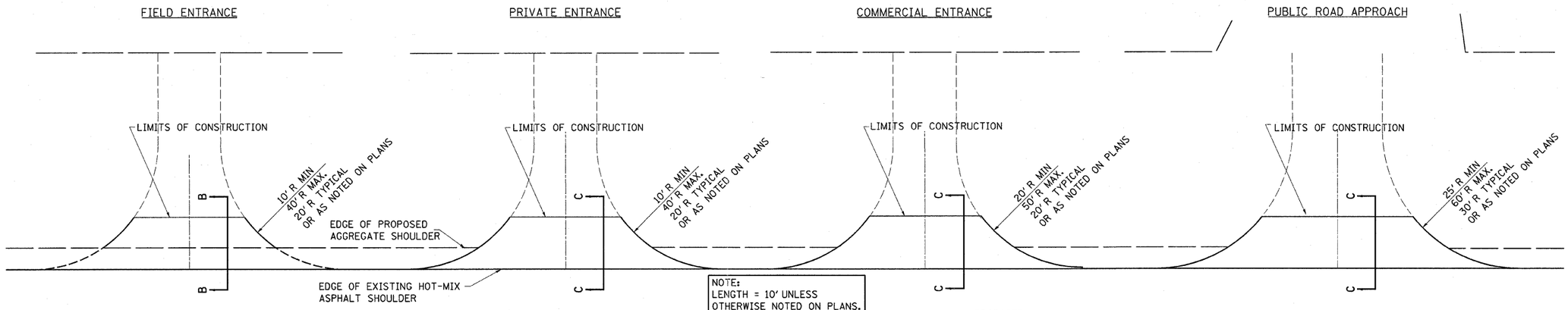
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

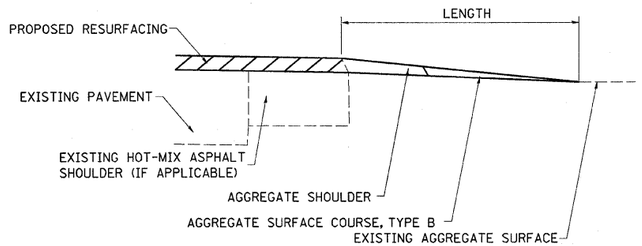
RURAL ENTRANCE SCHEDULE AND MAILBOX TURNOUT DETAILS WITH SHOULDERS

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

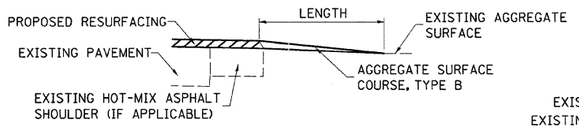
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	(108,109,110)RS-3	Cumberland	56	17
		CONTRACT NO. 74252		
	ILLINOIS	FED. AID PROJECT		

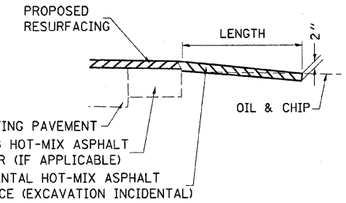
• 828 & 773



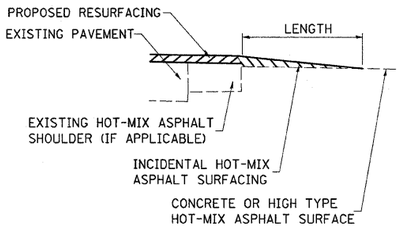


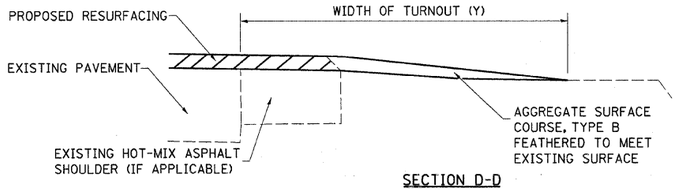
SECTION B-B





SECTION C-C





SECTION D-D

TYPICAL SECTION AT MAILBOX TURNOUT

NOTE: SEE STANDARD 406201 FOR MAILBOX TURNOUT DETAILS

NOTES

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SIDE	STATION	TYPE	INCIDENTAL HOT-MIX ASPHALT SURFACING TON	AGGREGATE SURFACE COURSE, TYPE B TON
LT	677+80	PE	1.12	
RT	678+75	PE	1.05	
LT	679+00	MBT		0.6
RT	679+15	PE	3.15	
RT	679+65	PE	1.05	
RT	680+17	PE	1.05	
LT	680+25	PE	0.98	
RT	681+00	PE	0.81	
RT	681+32	PE	0.98	
LT	681+41	PE	0.98	
RT	682+24	PE	0.91	
LT	682+28	PE	1.26	
LT	683+08	PRA	1.19	
RT	684+71	PE	3.57	
LT	684+71	PRA	4.90	
RT	685+61	PE	0.98	
LT	686+65	PE	0.98	
RT	686+65	PE	1.47	
LT	687+66	PRA	1.05	
RT	688+60	CE	2.94	
LT	688+60	PRA	2.73	
RT	690+00	CE	3.08	
LT	690+40	CE	8.96	
	TOTALS		443.7	287.7

FE=FIELD ENTRANCE
PE=PRIVATE ENTRANCE
CE=COMMERCIAL ENTRANCE
PRA - PUBLIC ROAD APPROACH
MBT - MAILBOX TURNOUT

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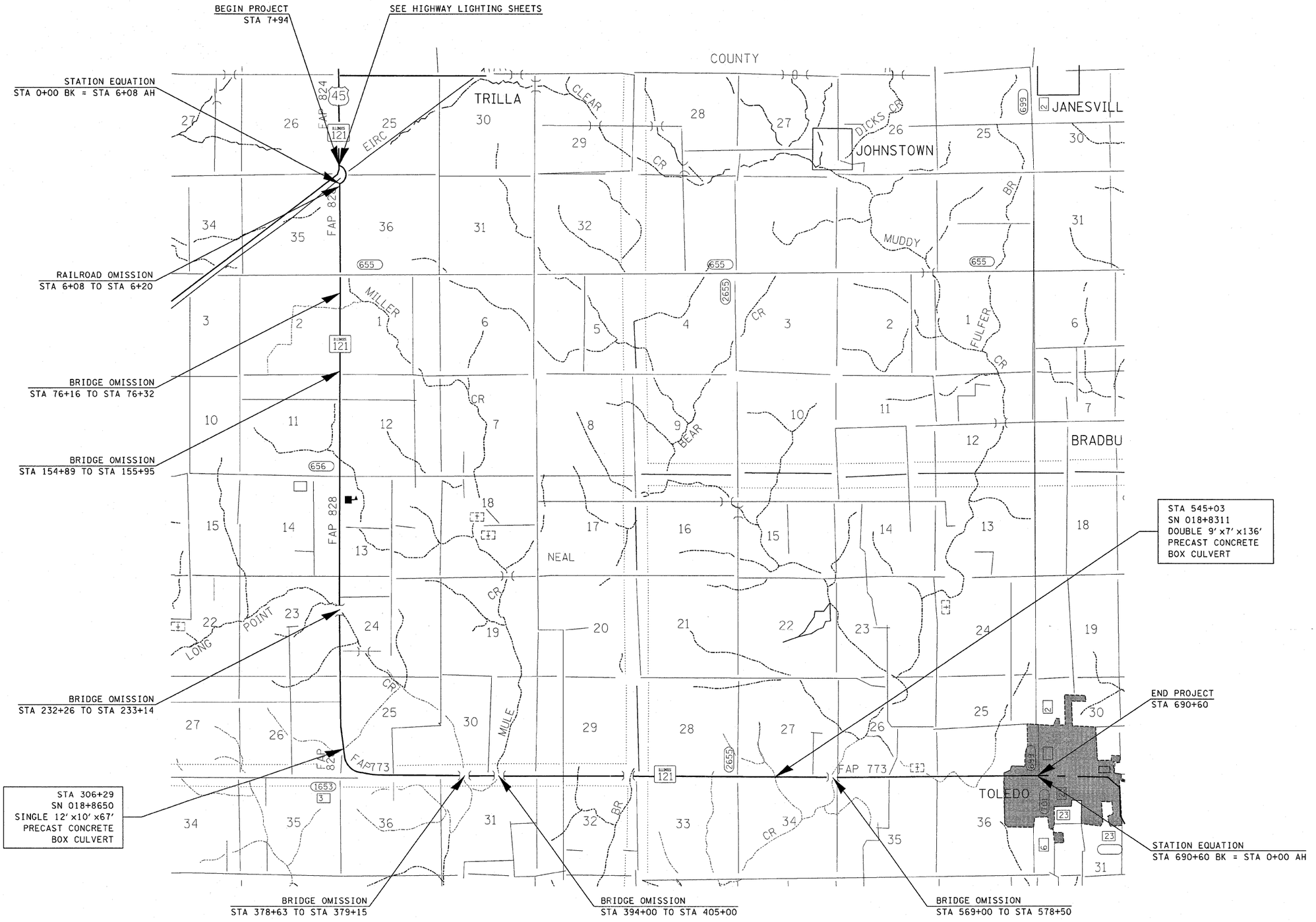
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

RURAL ENTRANCE SCHEDULE AND MAILBOX TURNOUT DETAILS WITH SHOULDERS

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	(108,109,110)RS-3	Cumberland	56	18
		CONTRACT NO. 74252		
		ILLINOIS	FED. AID PROJECT	

• 828 & 773



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	PLOT DATE = 5/3/2011	CHECKED -	REVISED -		
		DATE -	REVISED -		

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	(108,109,110)RS-3	Cumberland	56	19
		CONTRACT NO. 74252		
	ILLINOIS	FED. AID PROJECT		

? ELEV. 590.00

EXISTING ROW

PROPOSED ROW

306+61.5
70' LT

305+96.5
70' LT

PROPOSED
DITCH

BOX CULVERT END SECTION,
CULVERT NO. 1, 1 EACH

305+96.5
35' LT

306+61.5
35' LT

EXISTING ROW

PROPOSED S.N. 018-8650
PRECAST CONCRETE CULVERT
SINGLE BARREL 12'X10'X67'
℄ STATION 306+29
SKEW = 0°

TRAFFIC BARRIER TERMINAL,
TYPE 1 SPECIAL (TANGENT)

? ELEV. 601.32

STEELPLATE BEAM GUARDRAIL,
TYPE A, 6 FOOT POSTS, 900 FOOT

Sta 308+40.90

+60 +02 +57 +50

EXISTING S.N. 018-8605
REINFORCED CONCRETE CULVERT
SINGLE BARREL 6'X6'X60'
℄ STATION 306+25
SKEW = 0°

HOT-MIX ASPHALT PAVEMENT,
(FULL DEPTH), 13 1/2", 159 SQ YD

303 304 305+00 306 307 308 309

TRAFFIC BARRIER TERMINAL,
TYPE 1 SPECIAL (TANGENT)

+58 +65

306+61.5
32' RT

305+96.5
32' RT

EXISTING ROW

EXISTING ROW

HOT-MIX ASPHALT SHOULDERS, 362 SQ YD

PROPOSED DITCH

BOX CULVERT END SECTION,
CULVERT NO. 1, 1 EACH

PROPOSED ROW

? ELEV. 599.94

305+96.5
60' RT

CONSTRUCTION LIMITS

306+61.5
60' RT

PROPOSED ROW

REMOVE BROKEN UP CONCRETE GUTTER
OUTLET AND REPLACE WITH AGGREGATE
SHOULDER AND RIPRAP AS DETERMINED
BY THE ENGINEER

? ELEV. 591.99

TEMPORARY DITCH CHECKS

STONE RIPRAP, CLASS A5

PLAN
SURVEYED
ADOPTED
ALIGNMENT CHECKED
PT. OF INT. CHECKED
ROAD FILE NAME
NOTE BOOK
NO.
BY
DATE

PROFILE
SURVEYED
ADOPTED
GRADES CHECKED
R.M. NOTED
PROJECTION NOTATIONS CHKD
NOTE BOOK
NO.
BY
DATE

625
620
615
610
605
600
595
590
585

306+02
607.98

306+57
607.05

US INVERT ELEV. = 591.50
DS INVERT ELEV. = 590.49
POROUS GRANULAR EMBANKMENT, 6"
ROCKFILL REPLACEMENT, 1'

615.42 615.15 614.88 614.60 614.33 614.05 613.78 613.49 613.19 612.90 612.61 612.31 612.01 611.72 611.42 611.12 610.83 610.55 610.28 610.01 609.74 609.46 609.21 608.96 608.72 608.47 608.22 608.02 607.83 607.64 607.45 607.26 607.12 606.98 606.84 606.70 606.56 606.44 606.33 606.22 606.11 606.00 605.91 605.82 605.74 605.65 605.57 605.52 605.47 605.43 605.38 605.34 605.31 605.29 605.27 605.24 605.22 605.23

303+50 304+00 304+50 305+00 305+50 306+00 306+50 307+00 307+50 308+00 308+50 309+00

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		DRAWN -	REVISED -
	PLOT SCALE = 20.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 5/3/2011	DATE -	REVISED -

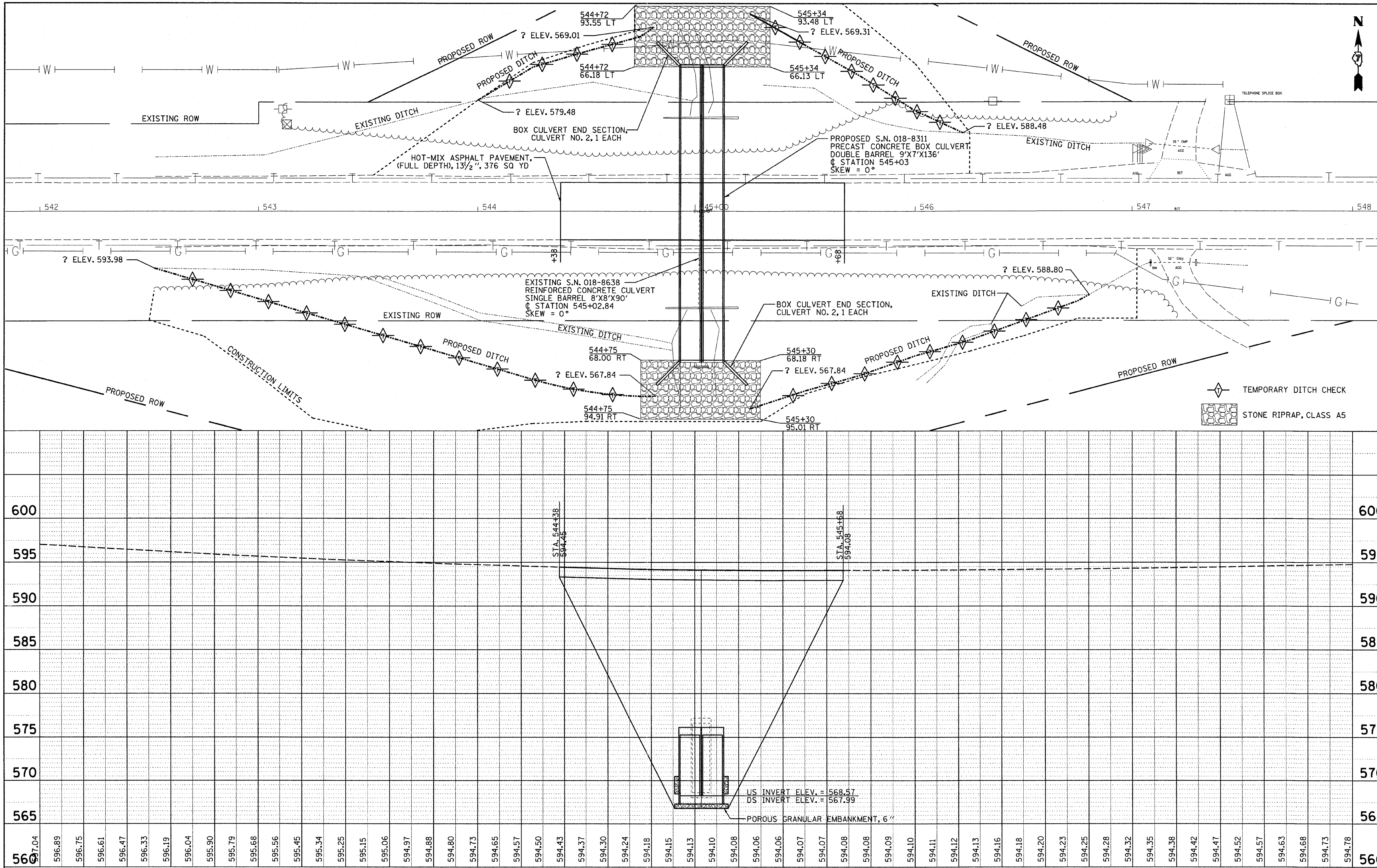
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLAN AND PROFILE
SN 018-8650

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	(108,109,110)RS-3	Cumberland	56	20
		CONTRACT NO. 74252		
	ILLINOIS FED. AID PROJECT			

• 828 & 773



544+72
93.55 LT
? ELEV. 569.01
545+34
93.48 LT
? ELEV. 569.31
PROPOSED ROW
PROPOSED DITCH
544+72
66.18 LT
545+34
66.13 LT
EXISTING ROW
EXISTING DITCH
? ELEV. 579.48
BOX CULVERT END SECTION, CULVERT NO. 2, 1 EACH
HOT-MIX ASPHALT PAVEMENT, (FULL DEPTH), 13½", 376 SQ YD
PROPOSED S.N. 018-8311
PRECAST CONCRETE BOX CULVERT
DOUBLE BARREL 9'X7'X136'
℄ STATION 545+03
SKEW = 0°
? ELEV. 588.48
TELEPHONE SPLICE BOX
542
543
544
545+00
546
547
548
+38
+68
? ELEV. 593.98
EXISTING S.N. 018-8638
REINFORCED CONCRETE CULVERT
SINGLE BARREL 8'X8'X90'
℄ STATION 545+02.84
SKEW = 0°
? ELEV. 588.80
EXISTING DITCH
BOX CULVERT END SECTION, CULVERT NO. 2, 1 EACH
CONSTRUCTION LIMITS
544+75
68.00 RT
545+30
68.18 RT
? ELEV. 567.84
? ELEV. 567.84
544+75
94.91 RT
545+30
95.01 RT
TEMPORARY DITCH CHECK
STONE RIPRAP, CLASS A5
600
595
590
585
580
575
570
565
560
STA. 544+38
594.45
STA. 545+68
594.08
US INVERT ELEV. = 568.57
DS INVERT ELEV. = 567.99
POROUS GRANULAR EMBANKMENT, 6"
597.04 596.89 596.75 596.61 596.47 596.33 596.19 596.04 595.90 595.79 595.68 595.56 595.45 595.34 595.25 595.15 595.06 594.97 594.88 594.80 594.73 594.65 594.57 594.50 594.43 594.37 594.30 594.24 594.18 594.15 594.13 594.10 594.08 594.06 594.06 594.07 594.07 594.08 594.08 594.09 594.10 594.11 594.12 594.13 594.16 594.18 594.20 594.23 594.25 594.28 594.32 594.35 594.38 594.42 594.47 594.52 594.57 594.63 594.68 594.73 594.78
542+00 542+40 542+80 543+20 543+60 544+00 544+40 544+80 545+20 545+60 546+00 546+40 546+80 547+20 547+60 548+00

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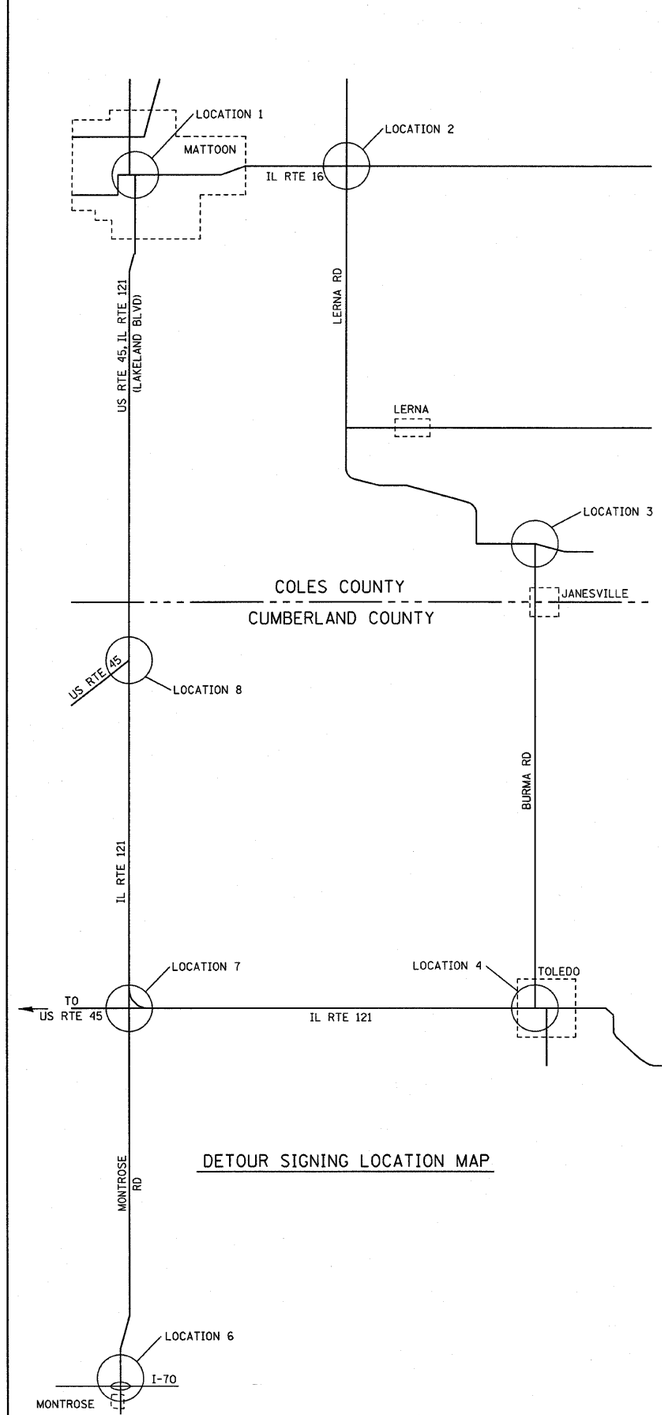
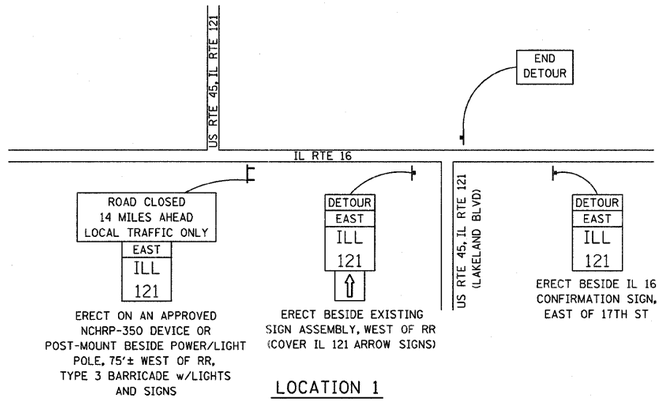
		DATE -	REVISED -			

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	(108,109,110)RS-3	Cumberland	56	21
		CONTRACT NO. 74252		
		ILLINOIS FED. AID PROJECT		

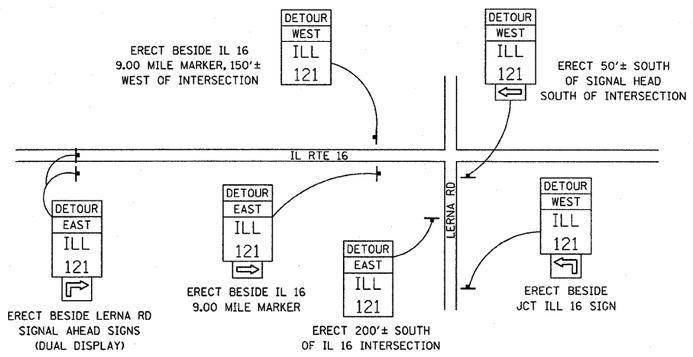
* 828 & 773



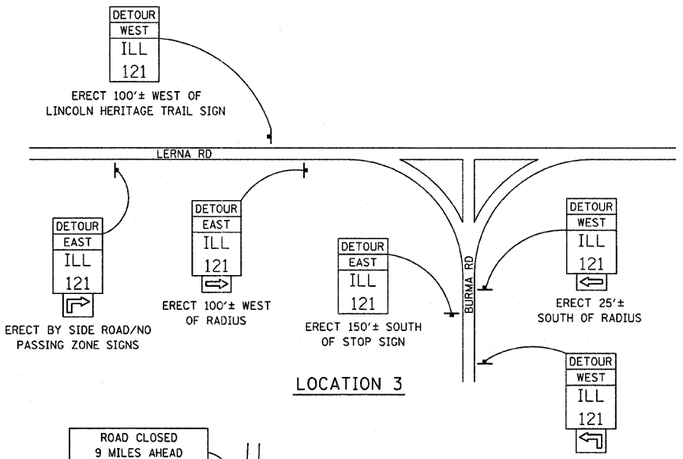
DETOUR SIGNING LOCATION MAP



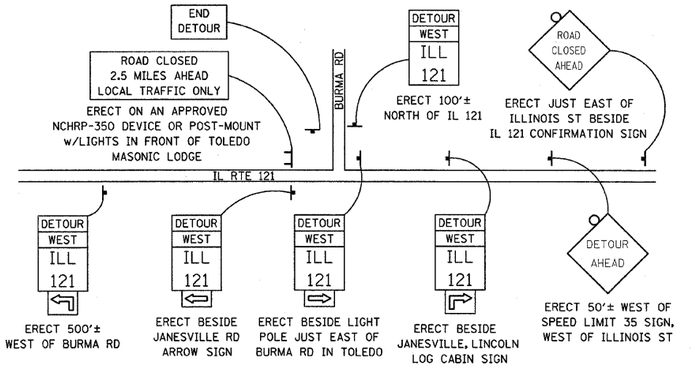
LOCATION 1



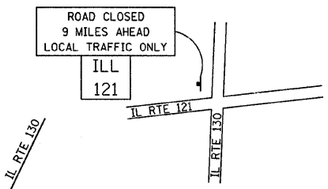
LOCATION 2



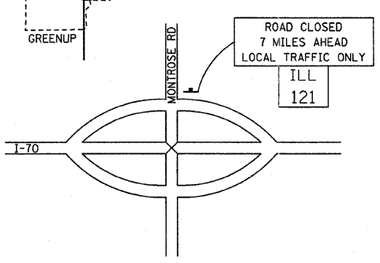
LOCATION 3



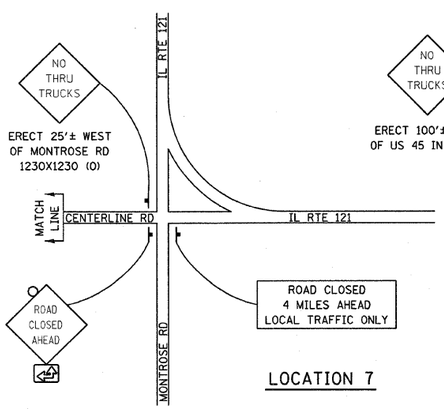
LOCATION 4



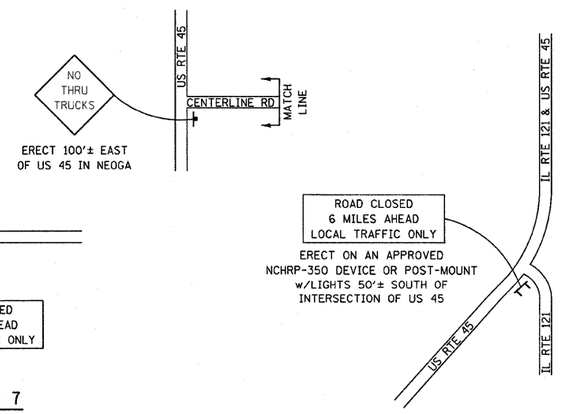
LOCATION 5



LOCATION 6



LOCATION 7



LOCATION 8

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	PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 5/3/2011	DATE -	REVISED -

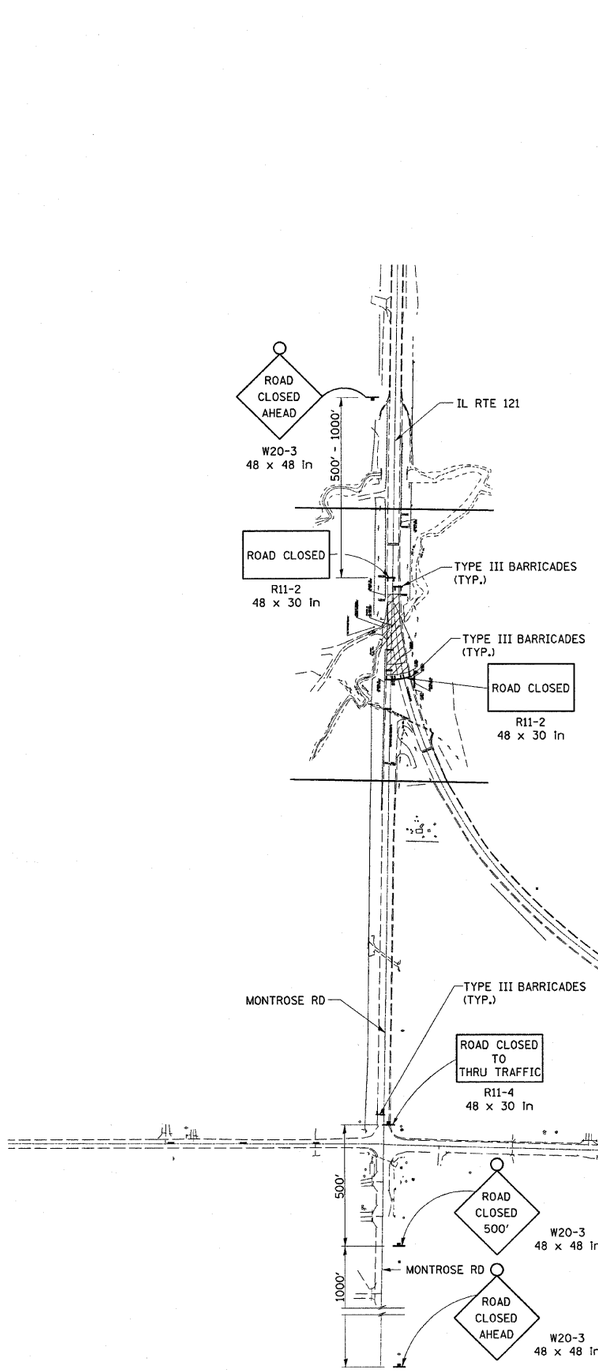
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

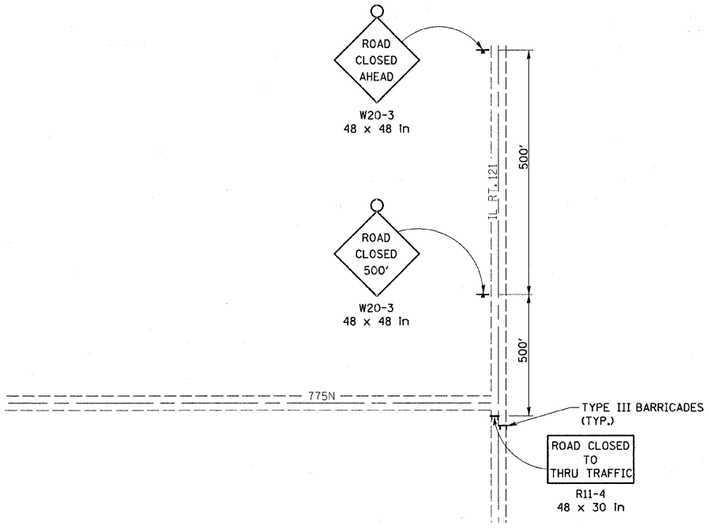
SPECIAL DETAIL FOR TRAFFIC CONTROL AND PROTECTION FOR TEMPORARY DETOUR

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

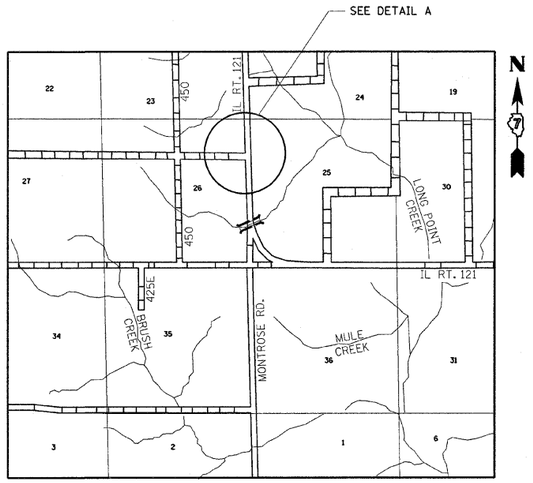
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	(108,109,110)RS-3	Cumberland	56	22
		CONTRACT NO. 74252		
		ILLINOIS FED. AID PROJECT		

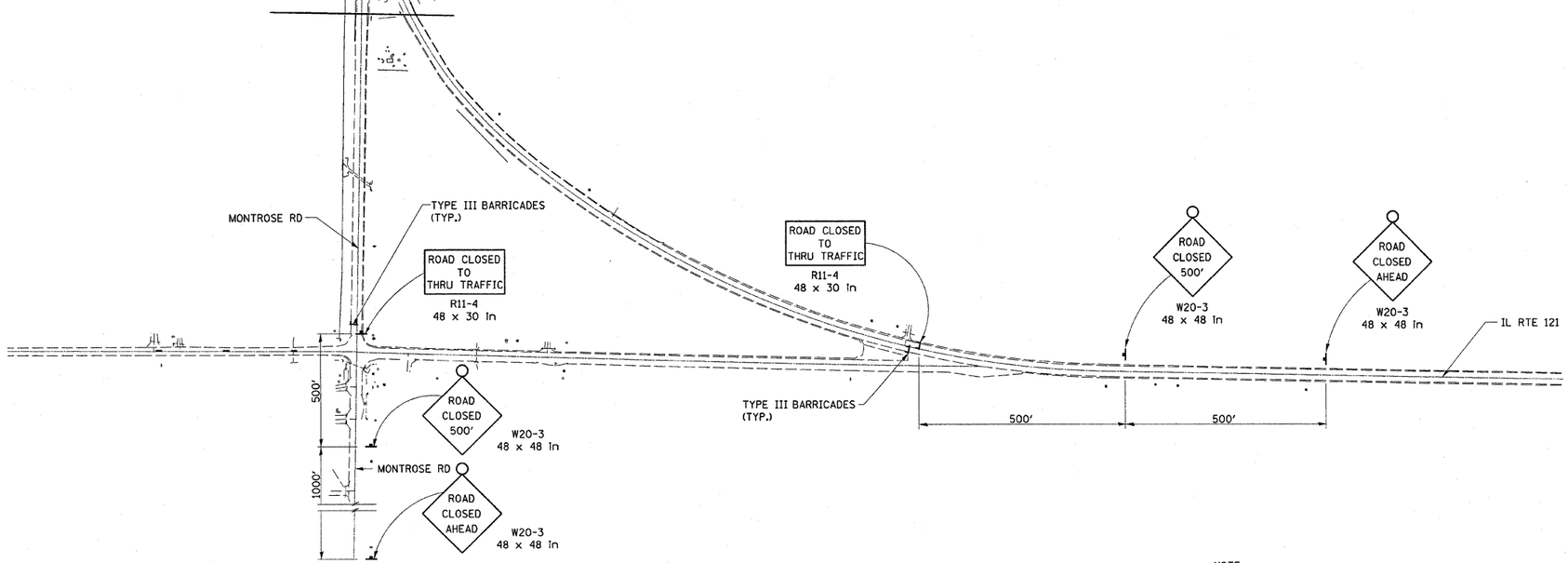
• 828 & 773





DETAIL A





LEGEND

- WORK AREA
- SIGN
- TYPE III BARRICADES WITH FLASHING LIGHTS
- TYPE A FLASHING LIGHT

NOTE:
BARRICADE PLACEMENT AND REQUIRED CLOSURE SIGNING SHALL BE ADJUSTED TO ALLOW LOCAL TRAFFIC ONLY ACCESS DURING CONSTRUCTION OPERATIONS.

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	PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED -
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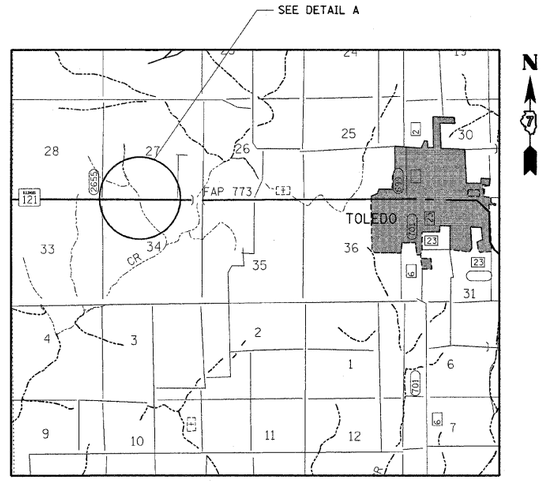
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

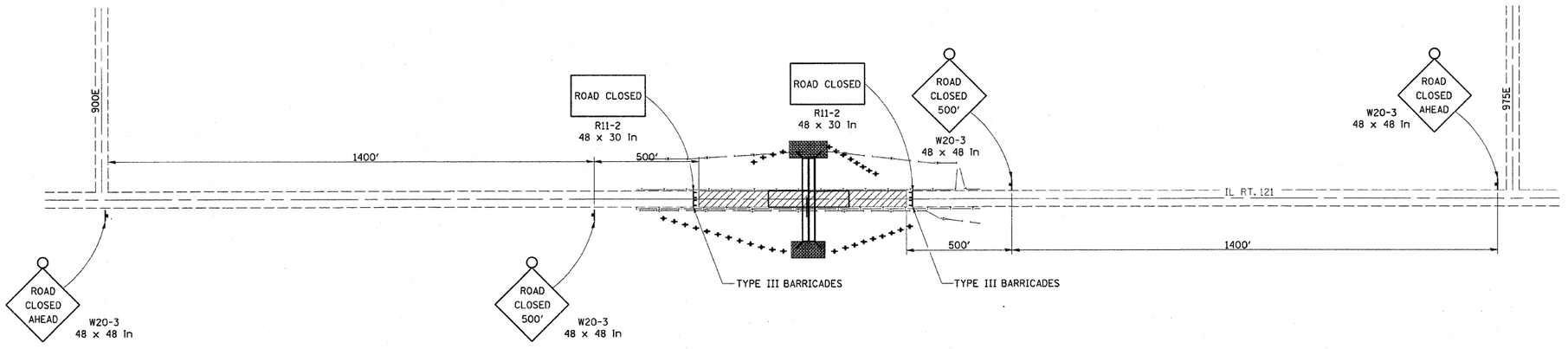
ROAD CLOSURE DETAIL

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	(108,109,110)RS-3	Cumberland	56	23
		CONTRACT NO. 74252		
	ILLINOIS	FED. AID PROJECT		

• 828 & 773





DETAIL A

LEGEND

- WORK AREA
- SIGN
- TYPE III BARRICADES WITH FLASHING LIGHTS
- TYPE A FLASHING LIGHT

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROAD CLOSURE DETAIL

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

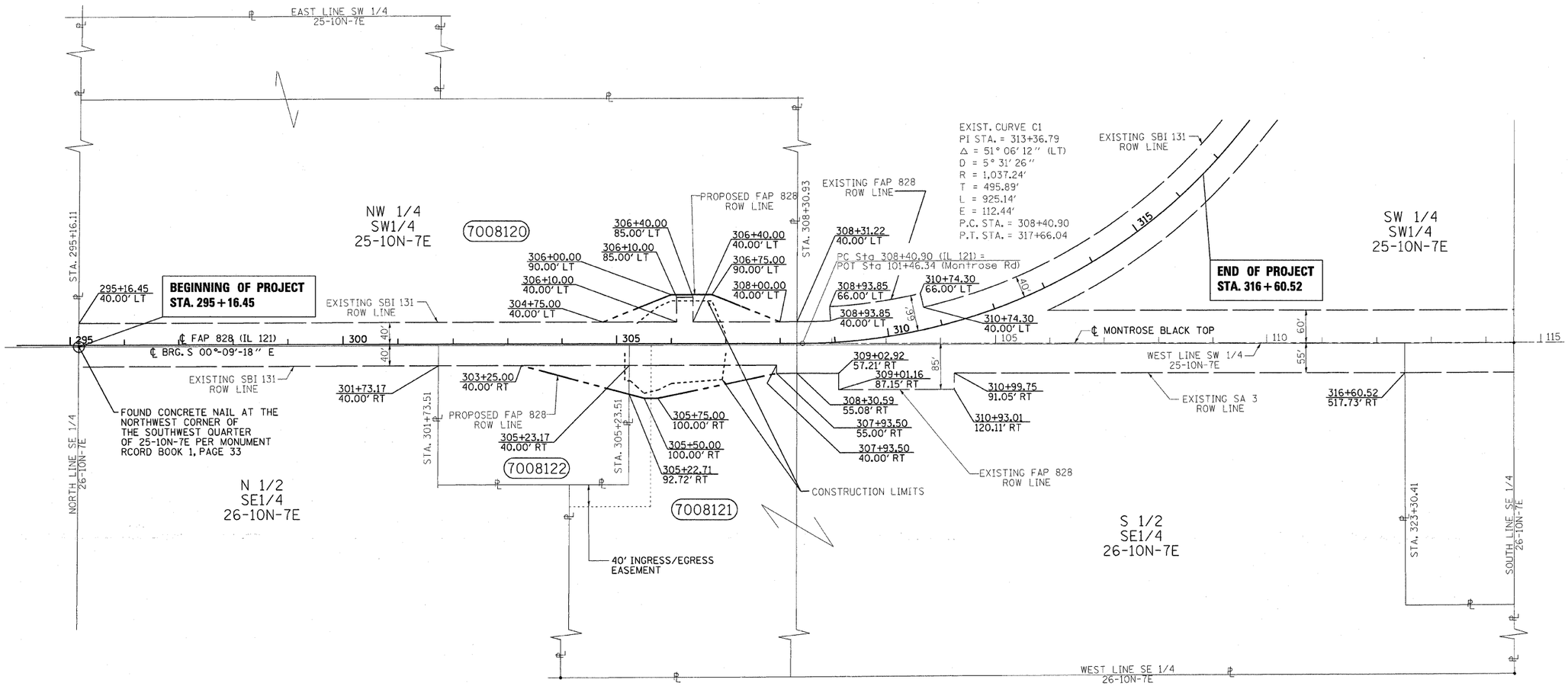
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	(108,109,110)RS-3	Cumberland	56	24
		CONTRACT NO. 74252		
	ILLINOIS FED. AID PROJECT			

• 828 & 773

SEC. 25 & 26 T.10N.–R.7E., 3RD P.M.

N

100′ 0 100′ 200′



PARCEL	OWNER	AREA TAKEN		TEMPORARY EASEMENT	REM. AREA	INST	RECORDED				EXCESS	
		ADD	EXIST.				MICRO FILM NO		DATE	BOOK	PAGE	AREA	SOLD
7008120	THOMAS EARL MCKLEROY	0.199 AC	1.325 AC	-	58.260 AC								
7008121	CHARLES I. HOENE AND MARY LOU HOENE	0.258 AC	0.365 AC	-	101.412 AC								
7008122	ADA M. REED	0.120 AC	0.298 AC	-	1.631 AC								

NOTE: BEARINGS ARE REFERENCED TO THE ILLINOIS STATE PLANE COORDINATE SYSTEM EAST ZONE DATUM OF 1983.

⊕ FOUND IRON PIN

FILE NAME: c:\pw_work\pwidot\teasleyck\d0123840\D774252-sht-rowplans.dgn	USER NAME = teasleyck	DESIGNED -	REVISED -
		DRAWN - RJC	REVISED -
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	PLOT DATE = 5/3/2011	DATE - 10/8/10	REVISED -

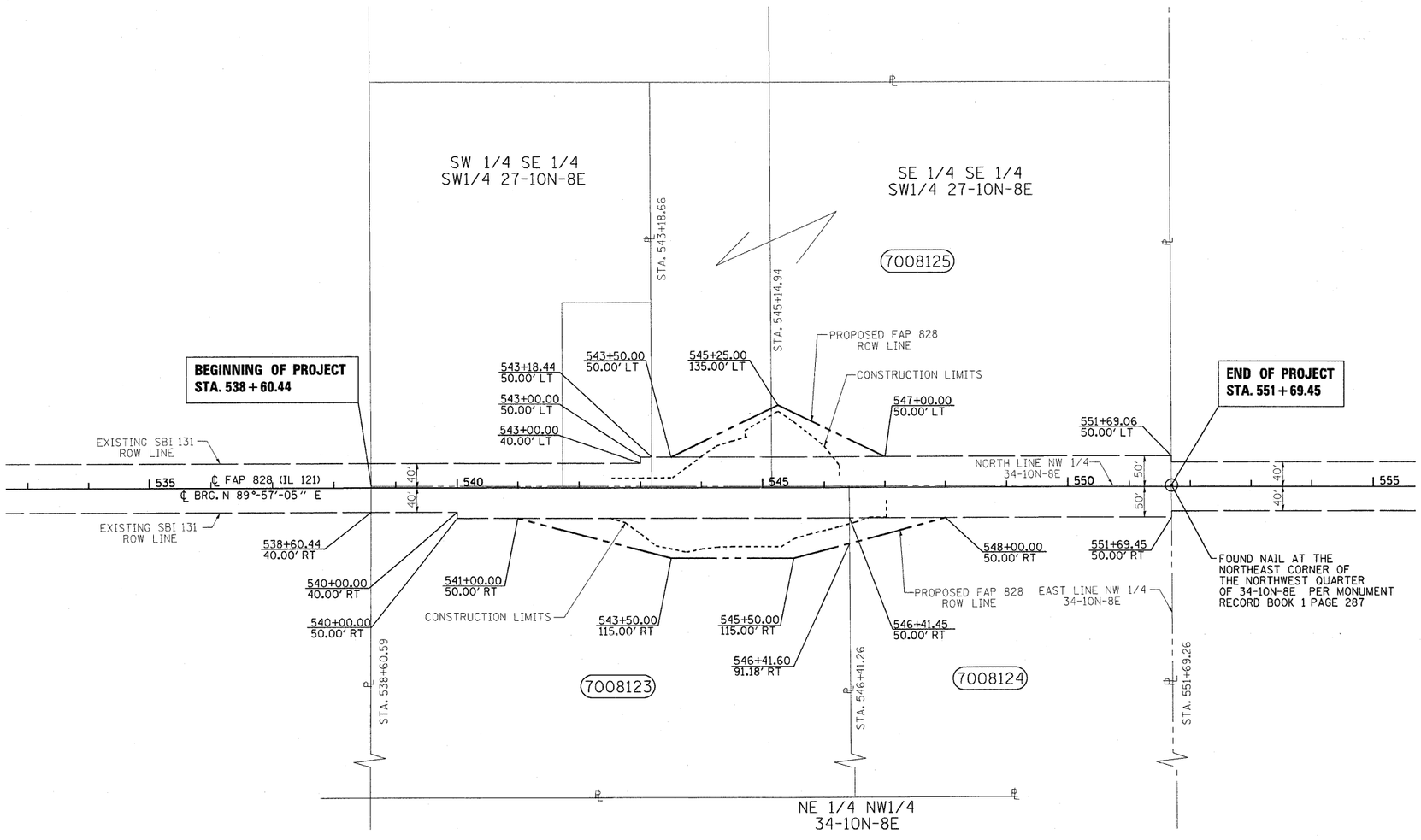
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

RIGHT OF WAY PLANS

	PROJECT	JOB NO. R-97-008-10
SCALE: 1″ = 100′	SHEET NO. 2 OF 3 SHEETS	STA. 295+00.00 TO STA. 317+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
828	(108, 109, 110)RS-3	CUMBERLAND	56	25
		CONTRACT NO. 74252		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

SEC. 27 & 34 T.10N.–R.8E., 3RD P.M.



PARCEL	OWNER	AREA TAKEN		TEMPORARY EASEMENT	REM. AREA	INST	RECORDED					EXCESS	
		ADD	EXIST.				MICRO FILM NO		DATE	BOOK	PAGE	AREA	SOLD
7008123	RONALD E. COLLINS AND LOIS J. COLLINS	0.597 AC	0.912 AC	-	22.314 AC								
7008124	LUCILLE BURTON	0.075 AC	0.636 AC	-	15.293 AC								
7008125	HARLOW J. GRIFFITHS AND SANDRA G. GRIFFITHS	0.342 AC	0.927 AC	-	11.601 AC								

NOTE: BEARINGS ARE REFERENCED TO THE ILLINOIS STATE PLANE COORDINATE SYSTEM EAST ZONE DATUM OF 1983.

◯ FOUND NAIL

FILE NAME: c:\pw_work\pwidot\teasleyck\d0123840\D774252-sht-rowplans.dgn	USER NAME = teasleyck	DESIGNED -	REVISED -
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	PLOT DATE = 5/3/2011	DATE - 10/08/10	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

RIGHT OF WAY PLANS

	PROJECT	JOB NO. R-97-008-10
SCALE: 1" = 100'	SHEET NO. 3 OF 3 SHEETS	STA. 535+00.00 TO STA. 555+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
828	(108, 109, 110)RS-3	CUMBERLAND	56	26
		CONTRACT NO. 74252		
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		

GIVEN CONDITIONS

ROADWAY DATA:	Pavement Width	36 FT
	Number of Lanes	3
	Median Width	0 FT
	IES Surface Classification	R3
	Q-Zero Value	.07
LIGHT POLE DATA:	Mounting Height	45 FT
	Mast Arm Length	15 FT
	Pole Set-Back from Edge of Pavement	20 FT
LUMINAIRE DATA:	Lamp Type	HPS
	Lamp Lumens	28000
	IES Vertical Distribution	M
	IES Control of Distribution	FC
	IES Lateral Distribution	3
	Total Light Loss Factor	0.684
LAYOUT DATA:	Spacing	145 FT
	Configuration	Single Side
———	Luminaire Overhang Over Edge of Pavement Lane	-5 FT

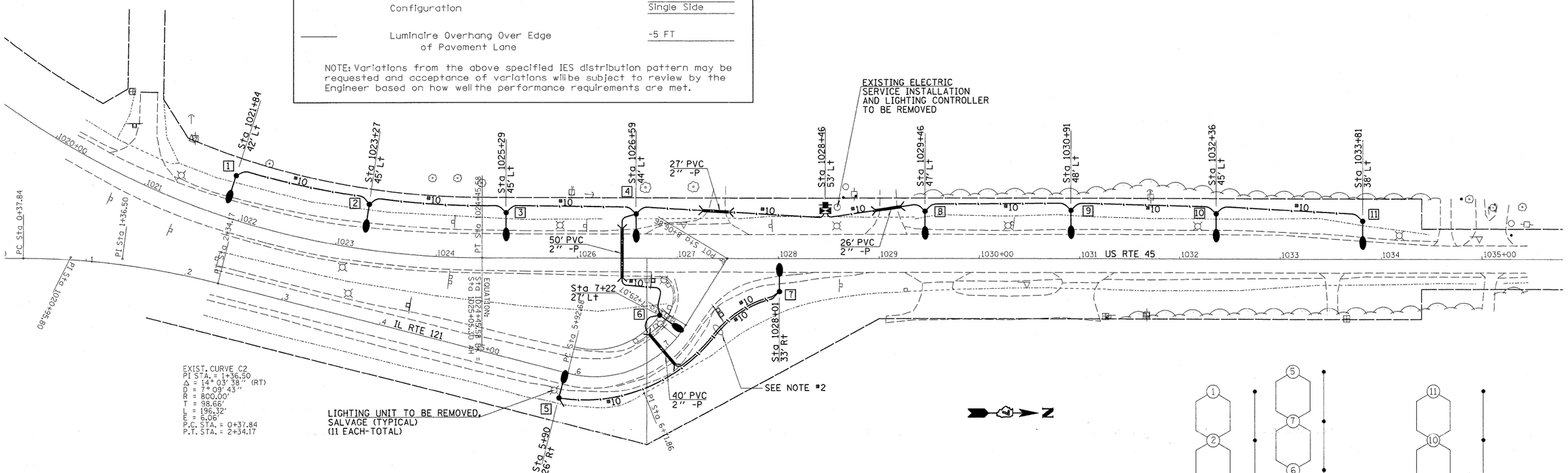
NOTE: Variations from the above specified IES distribution pattern may be requested and acceptance of variations will be subject to review by the Engineer based on how well the performance requirements are met.

PERFORMANCE REQUIREMENTS

NOTE: These performance requirements shall be the minimum acceptable standards of photometric performance for the luminaires.

ILLUMINANCE:	Average Horizontal Illuminance, (Eave)	9.0 Lux
	Uniformity Ratio, (Eave/Emin)	3.0
LUMINANCE:	Average Luminance, (Lave)	0.6 Cd/sq m
	Uniformity Ratios, (Lave/Lmin)	3.5
	(Lmax/Lmin)	6.0
	Maximum Veiling Luminance Ratio: (Lv/Lave)	0.3

EXIST. CURVE C1
PI STA. = 1020+95.80
Δ = 53° 08' 41" (LT)
D = 7° 00' 04"
R = 818.39'
T = 409.33'
L = 759.10'
E = 96.66'
P.C. STA. = 1016+86.48
P.T. STA. = 1024+45.58



EXIST. CURVE C2
PI STA. = 1+36.50
Δ = 14° 03' 38" (RT)
D = 7° 09' 43"
R = 800.00'
T = 98.66'
L = 196.32'
E = 6.06'
P.C. STA. = 0+37.84
P.T. STA. = 2+34.17

EXIST. CURVE C3
PI STA. = 5+71.86
Δ = 72° 54' 57" (LT)
D = 53° 27' 28"
R = 107.18'
T = 79.19'
L = 136.40'
E = 26.08'
P.C. STA. = 5+92.68
P.T. STA. = 7+29.07

LEGEND

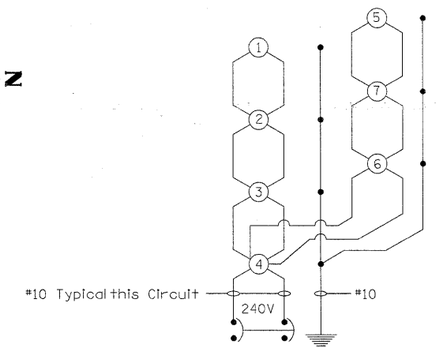
- Electric Service Installation, 120/240v, One Phase, Four Wire
- Lighting Controller, Pole Mounted, 30 Amp., 240 volt
- Light Pole, Aluminum, 45 ft M.H., 15 ft Davit Arm with 250W HPS Luminaire
- *10 — L — Unit Duct, 600 v, 2-1C No. 10, 1/C No. 10 Ground, (XLP-Type Use), 3/4" Polyethylene
- Conduit Pushed — LENGTH — XX' PVC — TYPE OF MATERIAL; DIAMETER — X"-P — PUSHED
- Existing Lighting Unit to be Removed, Salvage
- Existing Electric Service Installation and Lighting Controller to be Removed

NOTE:

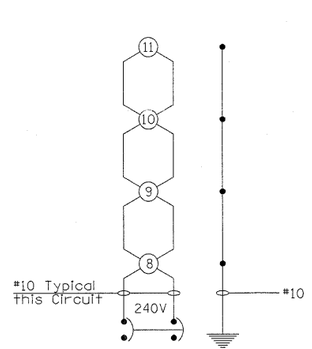
1.) POLES TO BE OFFSET, AS SHOWN, FROM EDGE OF PAVEMENT, FURTHER IF IN FLOWLINE OF DITCH. IN THAT CASE, MOVE FURTHER BACK AND OUT OF THE FLOWLINE OR AS DIRECTED BY THE ENGINEER. IF OBSTACLES ARE ENCOUNTERED, THE POLE WILL BE RELOCATED TO AN APPROPRIATE LOCATION AS DIRECTED BY THE ENGINEER.

2.) UNIT DUCT TO BE INSTALLED IN COMMON TRENCH.

3.) PUSHED CONDUIT SHALL BE PVC SCHEDULE 80.



20 AMP. 2 POLE CIRCUIT BREAKER
CIRCUIT NO. 1



20 AMP. 2 POLE CIRCUIT BREAKER
CIRCUIT NO. 2

(X) 250W ROADWAY LUMINAIRE

NOTE: ALL NECESSARY REVISIONS TO THE WIRING SHOWN ON THIS SHEET SHALL BE MADE AT NO ADDITIONAL COST TO THE DEPARTMENT AND TO THE SATISFACTION OF THE ENGINEER.

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	PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 5/3/2011	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HIGHWAY LIGHTING
INTERSECTION US RTE 45 & IL RTE 121

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	(108,109,110)RS-3	Cumberland	56	27
		CONTRACT NO. 74252		
	ILLINOIS FED. AID PROJECT			

GENERAL NOTES

1.) THIS PORTION OF THE PROJECT IS LOCATED AT THE INTERSECTION OF US ROUTE 45 AND ILL ROUTE 121 IN CUMBERLAND COUNTY. THE WORK INCLUDED IN THIS SECTION CONSISTS OF THE INSTALLATION OF HIGHWAY LIGHTING AND ALL OTHER WORK NECESSARY TO COMPLETE THIS SECTION.

2.) ALL PROPOSED LIGHTING UNITS SHALL BE LABELED ACCORDING TO THE STANDARD SPECIFICATIONS, WITH POLE NUMBERS ATTACHED WITH STAINLESS STEEL BANDING. LIGHTING UNIT NUMBERING SHALL BE AS DIRECTED BY THE ENGINEER.

3.) CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE ELECTRICAL WORK WITH OTHER TRADES.

4.) CONTRACTOR SHALL INSTALL LIGHT POLES AT THE LOCATIONS INDICATED ON THE PLANS, MAINTAINING ADEQUATE CLEARANCE FROM OVERHEAD UTILITY LINES. CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY CLEARANCES PER THE NATIONAL ELECTRICAL SAFETY CODE AND/OR THE REQUIREMENTS OF THE UTILITY COMPANIES. THE LOCATION OF BURIED AND ABOVE GROUND UTILITIES SHOWN ARE APPROXIMATE AND ARE SHOWN FOR INFORMATION ONLY. REROUTING, DISCONNECTION, RELOCATION, PROTECTION, ETC., OF ANY UTILITIES MUST BE COORDINATED BETWEEN THE CONTRACTOR, UTILITY COMPANY AND OWNER. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO CONTRUCTION.

5.) THE CONTRACTOR IS RESPONSIBLE FOR UNCOVERING OR HAND DIGGING AROUND UTILITIES AS NECESSARY. THE COST OF THIS WORK IS TO BE INCLUDED WITH THE "TRENCH AND BACKFILL FOR ELECTRIC WORK" PAY ITEM.

6.) LIGHT POLE FOUNDATIONS SHALL BE PLUMB AND FLUSH WITH THE PROPOSED GRADE AND SHALL MEET HEIGHT REQUIREMENTS OF ARTICLE 836.03 OF THE STANDARD SPECIFICATIONS.

LIGHTING SCHEDULE

	PAYITEM	LOCATION INTERSECTION US 45 & IL 121
80400100	ELECTRIC SERVICE INSTALLATION	1
81021330	CONDUIT PUSHED, 2" DIA., PVC	143
81603010	UNIT DUCT, 600V, 2-1C #10, 1/C #10 GROUND, (XLP-TYPE USE) 3/4" POLYETHYLENE	1846
81900200	TRENCH AND BACKFILL FOR ELECTRICAL WORK	1477
82102250	LUMINAIRE, SODIUM VAPOR, HORIZONTAL MOUNT, 250 WATT	11
82500300	LIGHTING CONTROLLER, POLE MOUNTED, 240 VOLT, 30 AMP	1
83003600	LIGHT POLE, ALUMINUM, 45 FT. M.H., 15 FT. DAVIT ARM	11
83600355	LIGHT POLE FOUNDATION, METAL, 15" BOLT CIRCLE, 8" X 6'	11
83800650	BREAKAWAY DEVICE, COUPLING, WITH STAINLESS STEEL SCREEN	44
84200500	REMOVAL OF LIGHTING UNIT, SALVAGE	11
84500110	REMOVAL OF LIGHTING CONTROLLER	1
84500120	REMOVAL OF ELECTRIC SERVICE INSTALLATION	1

FILE NAME = c:\pw_work\pwidot\teasleyck\d0123840\D774252-hwy lighting-sht.dgn	USER NAME = teasleyck	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 5/3/2011	DATE -	REVISED -

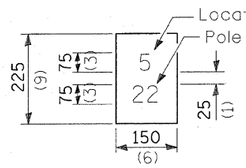
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

HIGHWAY LIGHTING
GENERAL NOTES & BILL OF MATERIALS

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

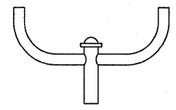
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
*	(108,109,110)RS-3	Cumberland	56	28
		CONTRACT NO. 74252		
	ILLINOIS FED. AID PROJECT			

* 828 & 773

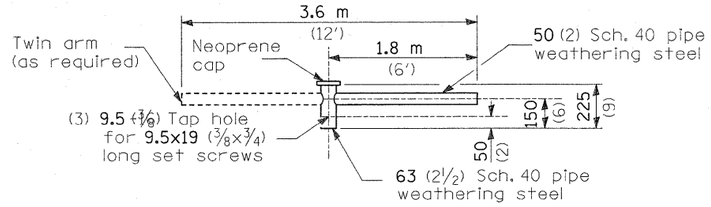


The contractor shall furnish and install a light pole identification of each new light pole, as shown above, incidental to the respective light pole pay item. The numerals shall be 75 (3) series "D", black, screened on silver-white type B pressure sensitive reflective sheeting conforming to the requirements of section T602.01 of the Standard Specifications for Traffic Control Items. The numerals shall conform to the FHWA "Standard Alphabets for Highway Signs".

The light pole identification shall be applied to sign base material as specified in section 1069.06 of the Standard Specifications, approximatey 180 (7) above the adjacent pavement grade visible to approaching traffic in accordance with Highway Standard 720001.

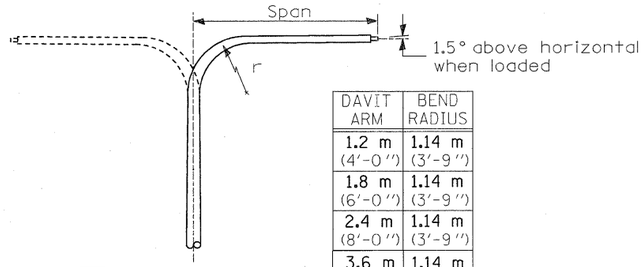


☐ TWIN TENON



☐ TENON MOUNT BRACKET ARM

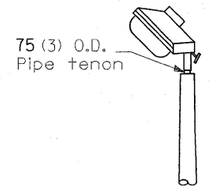
NOTE: Single or twin arm assembly shall be tilted 3° above horizontal.



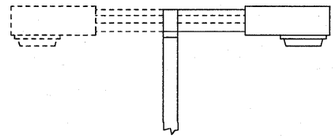
DAVIT ARM	BEND RADIUS
1.2 m (4'-0")	1.14 m (3'-9")
1.8 m (6'-0")	1.14 m (3'-9")
2.4 m (8'-0")	1.14 m (3'-9")
3.6 m (12'-0")	1.14 m (3'-9")

☒ DAVIT ARM

☐ DAVIT ARM-TWIN

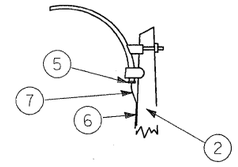


☐ TENON

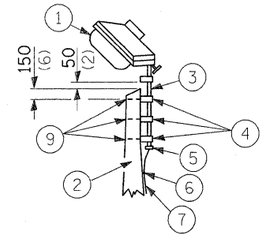


☐ SHORT BRACKET

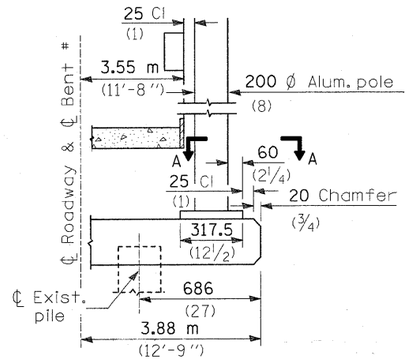
☐ SHORT BRACKET - TWIN



☐ MAST ARM

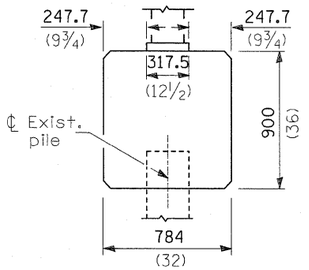


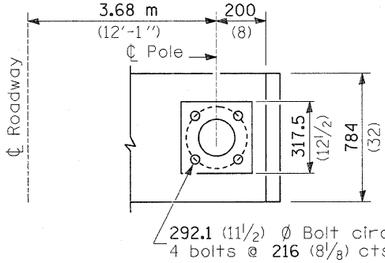
☐ TENON



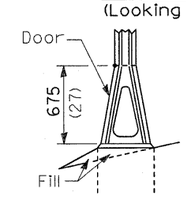
BENT #
(Looking)

☐ BRIDGE PIER MOUNT

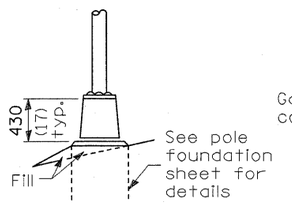




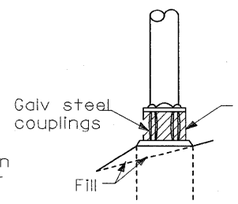
SECTION A-A



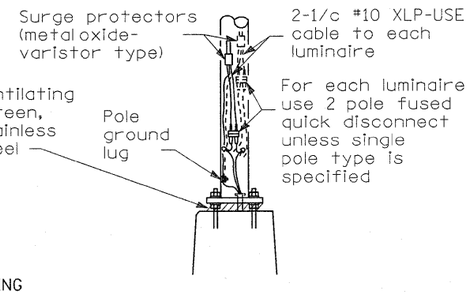
☐ STAINLESS STEEL FLAIR BASE



☐ TRANSFORMER BASE



☒ BREAKAWAY COUPLING

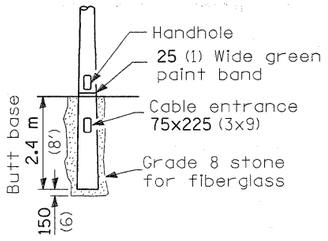


☐ ANCHOR

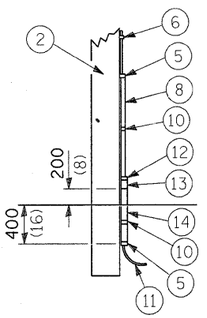
☒ FRANGIBLE

☒ METAL OR ☐ CONCRETE

Details for underground distribution if required



☐ BUTT BASE



☐ POLE, WOOD

POLE LENGTH	DEPTH IN GROUND
19.8 m (65')	3.6 m (12')
18.0 m (60')	3.0 m (10')
16.8 m (55')	2.7 m (9')
16.0 m (50')	2.4 m (8')
13.7 m (45')	2.1 m (7')
12.0 m (40')	2.0 m (6.5')
10.7 m (35')	1.8 m (6')
9.0 m (30')	1.7 m (5.5')

1. Luminaire
2. Wood pole, class 3 or better
3. 63 (2 1/2) Galv. steel conduit
4. Single offset pole band
5. Conduit bushing
6. Cable clamps on 600 (24) centers
7. 2/c #12 Type use cable
8. 25 (1) Galv. steel conduit 3.0 m (10') in length
9. 16 (5/8) Ø hot dipped galvanized bolt with flat washer & locknut (3 req'd)
10. Conduit clamps on 900 (36) centers
11. Unit duct
12. Threaded reducer
13. "C" Condulet, threaded
14. 40 (1 1/2) Galv. steel conduit for 1 unit duct or 75 (3) galv. steel conduit for 2 or 3 unit ducts.

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

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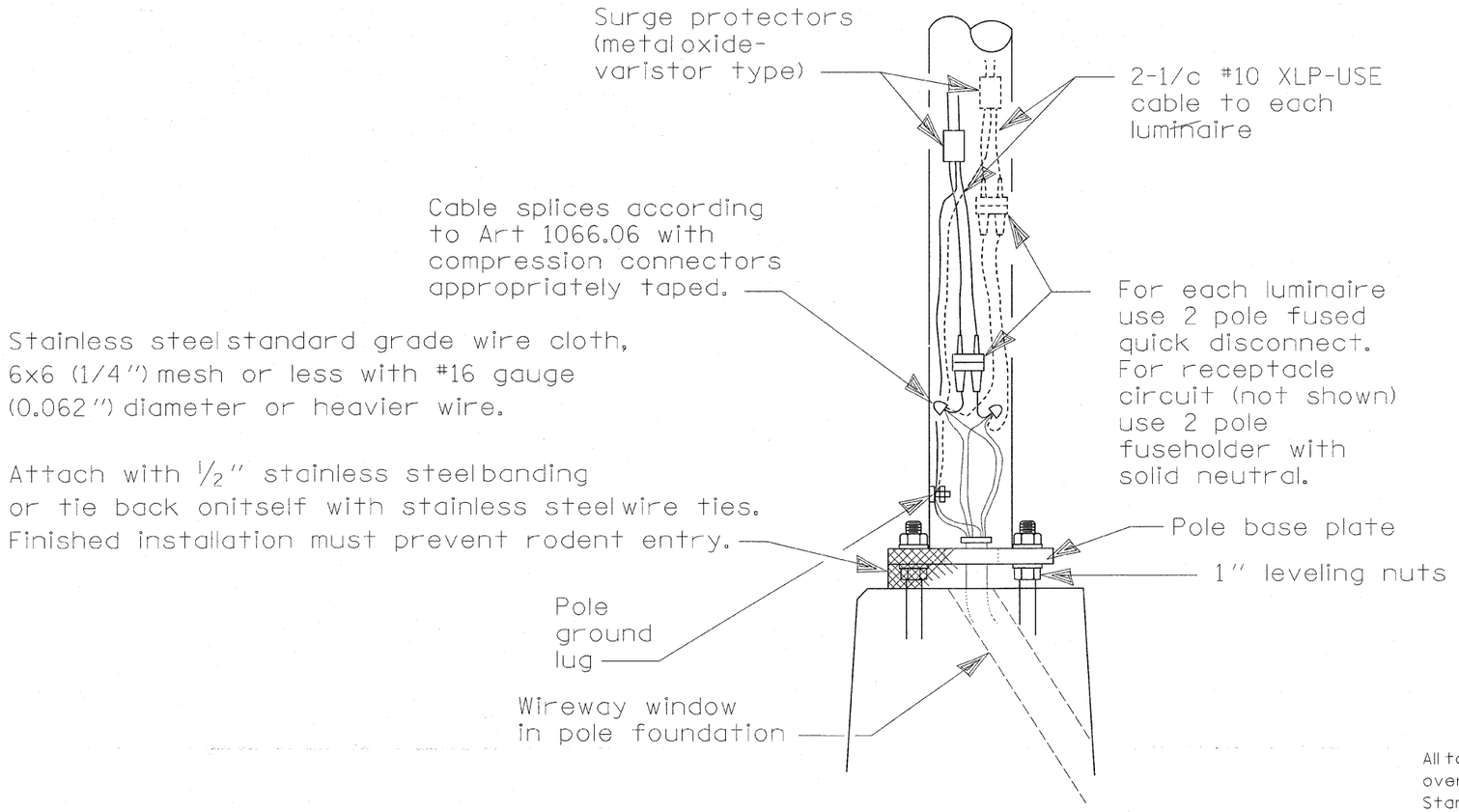
	PLOT DATE = 5/3/2011	CHECKED -	REVISED -		SCALE: SHEET NO. OF SHEETS STA. TO STA.
		DATE -	REVISED -		

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	(108,109,110)RS-3	Cumberland	56	29
		CONTRACT NO. 74252		
	ILLINOIS FED. AID PROJECT			

• 828 & 773



WIRING DETAIL

NO SCALE

GENERAL NOTES

All taped splices shall use 2 layers of electrical tape over 3 layers of rubber tape as required by the Standard Specifications. Coat the finished taped splice with bonding compound.

All cable splices shall be taped unless another method has been specifically approved by the Engineer.

For example purposes the pole is shown on an anchor base. If the pole is required to be set on a breakaway base, consult the Standard Specifications.

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

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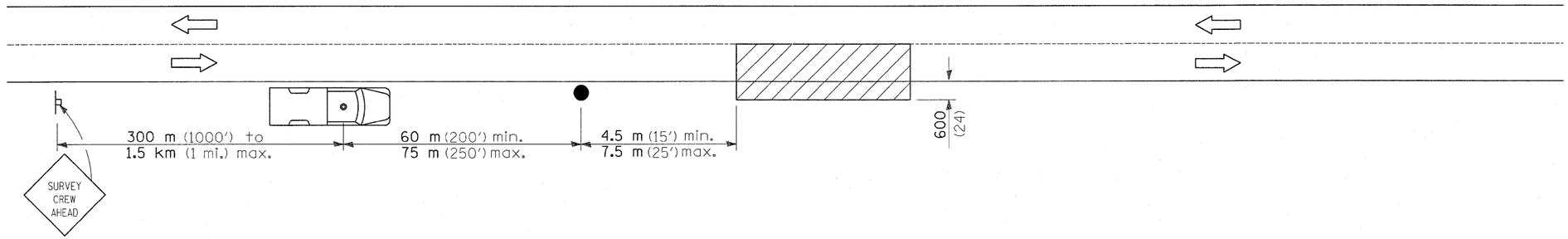
		DRAWN -	REVISED -			•	(108,109,110)RS-3	Cumberland	56	30
	PLOT SCALE = 50.0000 '/ in.	CHECKED -	REVISED -					CONTRACT NO. 74252		
	PLOT DATE = 5/3/2011	DATE -	REVISED -		SCALE: SHEET NO. OF SHEETS STA. TO STA.		ILLINOIS	FED. AID PROJECT		

• 828 & 773

ILCT008A.DGN



SYMBOLS

Work area

Sign on portable or permanent support

Truck with flashing amber light and dual emergency flashers

Flagger with traffic control sign

TYPICAL APPLICATIONS

Utility operations

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

FILE NAME = c:\pw_work\pwidot\teasleyck\d0123840\D774252-hwy lighting-sht.dgn	USER NAME = teasleyck	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 50.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 5/3/2011	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

DETAIL FOR
NIGHTTIME LIGHTING INSPECTION

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	(108,109,110)RS-3	Cumberland	56	31
		CONTRACT NO. 74252		
	ILLINOIS FED. AID PROJECT			

= 929 & 773

LGT017 M32

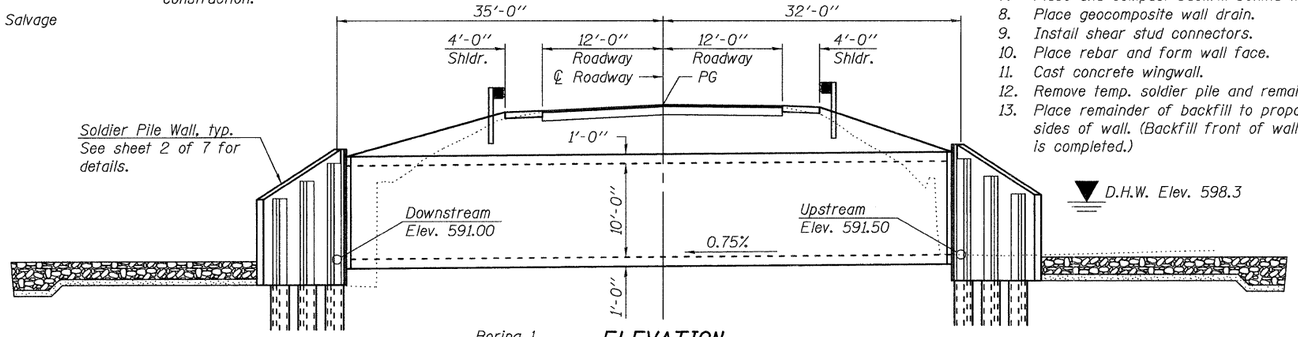
Benchmark (B.M. 350): Chiseled square on NE corner of a 8′ x 12′ box culvert North of IL 121 and Montrose Blacktop. (Structure No. 018-8604): Elev. 602.9705.

Benchmark (B.M. 350A): Railroad spike in a power pole 70′ South of 6′ x 6′ box culvert and 41′ East of centerline of IL 121: Elev. 597.3058.

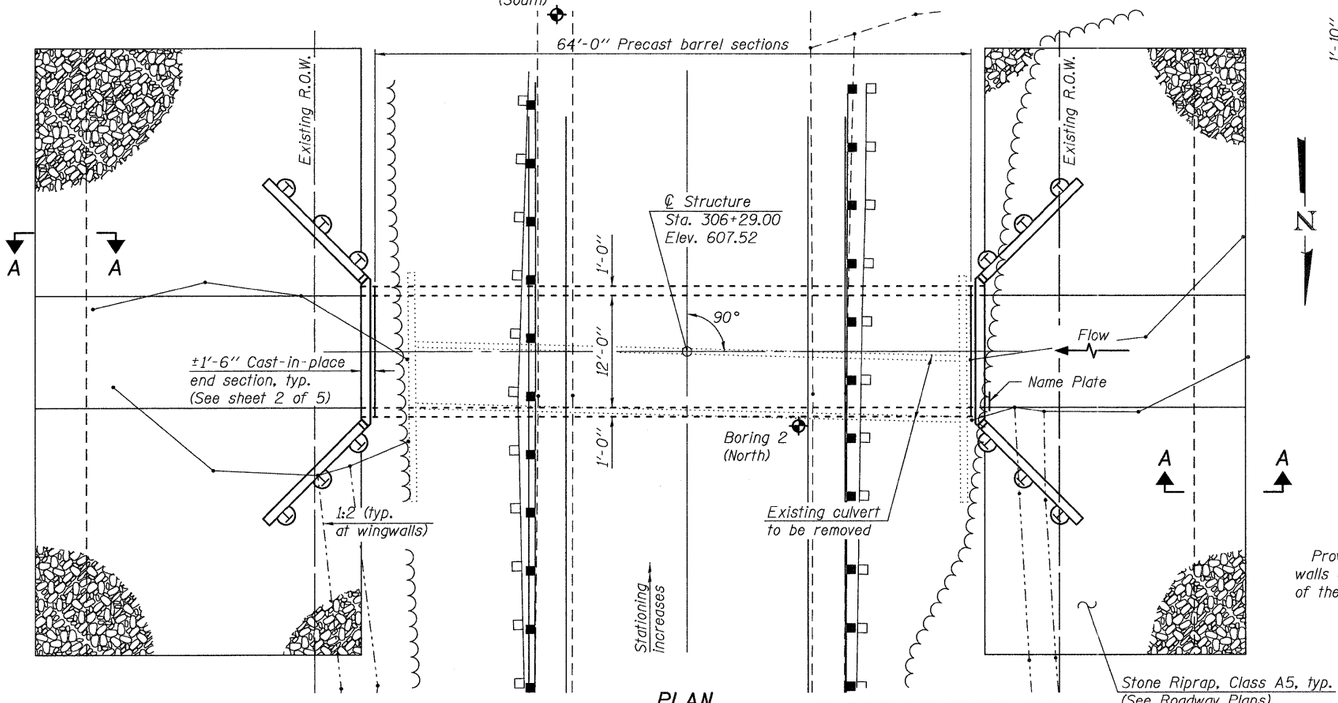
Benchmark (B.M. 324): Chiseled square on the Southwest corner of a box culvert 16′ South of the centerline of CR700N, 300′ East of the Montrose Blacktop: Elev. 622.528.

Existing Structure: S.N. 018-8605 is a 6′ x 6′ x 60′ single barrel reinforced concrete box culvert. The culvert headwall is parallel to the roadway without wingwalls. The culvert has a 0 degree skew. The structure will be completely removed and replaced. The road will be temporarily closed during construction.

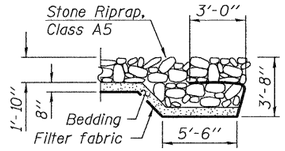
No Salvage



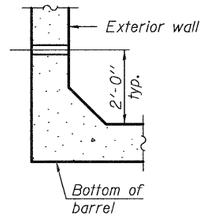
ELEVATION



PLAN



SECTION A-A



DRAIN DETAIL

Provide 3″ ϕ drain holes in exterior walls at ±8′ cts. See Article 503.11 of the Standard Specifications.

CULVERT CONSTRUCTION SEQUENCE

1. Remove existing structure.
2. Build cutoff wall.
3. Place precast box culvert sections.
4. Form and place concrete for portion of end sections to be cast onto precast box sections.
5. Drill soldier piles (May be completed prior to box placement).
6. Install timber lagging.
7. Place and compact backfill behind wall to top of timber lagging.
8. Place geocomposite wall drain.
9. Install shear stud connectors.
10. Place rebar and form wall face.
11. Cast concrete wingwall.
12. Remove temp. soldier pile and remaining timber outside wall limits.
13. Place remainder of backfill to proposed ground surface elevations on both sides of wall. (Backfill front of wall as much as possible before backfilling is completed.)

GENERAL NOTES

Reinforcement bars shall conform to the requirements of ASTM A 706, Gr. 60..

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

The design fill height for this structure is 6 feet. The precast concrete box culvert sections shall conform to the requirements of AASHTO M259.

Areas of the precast box culvert in contact with cast-in-place concrete shall be sand blasted, cleaned, and wetted prior to placing concrete in the field according to Article 503.09(b) of the Standard Specifications.

In order to minimize excessive deflection and/or stresses in the soldier piles, compaction equipment used within 4 feet of the back face of the timber lagging shall be limited to lightweight mechanical tampers, rollers, or vibratory systems.

Build top of headwalls parallel to the grade lines.

All construction joints shall be bonded according to Article 503.09 of the Standard Specifications.

End Sections will be paid for at the contract unit price each for BOX CULVERT END SECTIONS as outlined in Section 540 of the Standard Specifications.

Class SI concrete shall be used for the concrete cast in the field for the cutoff walls, portions of the end sections being cast onto the end of the precast box sections, and the concrete facing for the walls.

Concrete, rebar, and welded wire fabric quantities and lengths calculated for the end sections may vary based upon the precast box culverts supplied.

Portions of the box culvert end sections may be built in the field or furnished as precast pieces as detailed in the plans. Portions of the end sections that will be precast shall be detailed in the shop drawings and submitted to the Engineer for review and approval.

The ends of the precast box sections adjacent to the end sections shall be formed without the tongue and groove shapes specified in Article 8.1 of AASHTO M259 when the Contractor elects to cast the barrel portion of the end sections in the field.

The longitudinal reinforcement of the welded wire fabric extending from the precast boxes into the end sections shall have a minimum area of 0.20 in²/ft. Substitution of reinforcement bars for welded wire fabric is not allowed.

The joints between precast box sections shall be sealed and all voids filled with a mastic joint sealer. In addition, the joints shall be externally sealed on all four sides with a 13 inch wide external sealing band. The seal shall be centered over the joint, secured in place, and protected during the backfilling process.

INDEX OF SHEETS

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Stone Riprap, Class A5	Sq. yd.	455
Filter Fabric	Sq. yd.	455
Removal of Existing Structures No. 1	Each	1
Structure Excavation	Cu. yd.	586
Name Plates	Each	1
Box Culvert End Sections, Culvert No. 1	Each	2
Precast Concrete Box Culvert 12′ x 10′	Foot	64.0

DESIGN STRESSES

FIELD UNITS

f′c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 36,000 psi (AASHTO M270, Grade 36) (Soldier Piles)

PRECAST UNITS

f′c = 5,000 psi
fy = 65,000 psi (welded wire fabric)

LOADING HS 20-44

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

DESIGN SPECIFICATIONS

2002 AASHTO - Standard Specifications

STATION 306+29.00
BUILT 201 BY
STATE OF ILLINOIS
F.A.P. RTE. 773 SEC. (108,109,110)RS-3
LOADING HS 20-44
STRUCTURE NO. 018-8650

NAME PLATE

See Std. 515001

DESIGN SCOUR ELEVATION TABLE

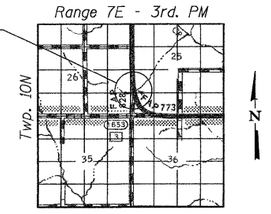
Design Scour Elevation (ft.)	Downstream	Upstream
	588.0	588.5

WATERWAY INFORMATION

Drainage Area = 0.47 mi.²
Proposed Low Grade Elev. 605.22 @ Sta. 309+00
Existing Low Grade Elev. 605.55 @ Sta. 309+00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	344	27	64	596.8	3.8	0.3	600.6	597.1
Design	50	581	35	82	598.3	9.0	0	607.3	598.3
Base	100	690	36	86	598.7	13.4	0.1	612.1	598.8
Max. Calc.	500	964	36	95	599.4	26.1	1.3	625.6	600.7

10 year velocity through existing bridge = 14.3 ft./sec.
10 year velocity through proposed culvert = 9.7 ft./sec.



LOCATION SKETCH

GENERAL PLAN & ELEVATION
IL ROUTE 121 OVER TRIBUTARY
TO LONG POINT CREEK
F.A.P. RTE. 773 - SEC. (108,109,110)RS-3
CUMBERLAND COUNTY
STATION 306+29.00
STRUCTURE NO. 018-8650

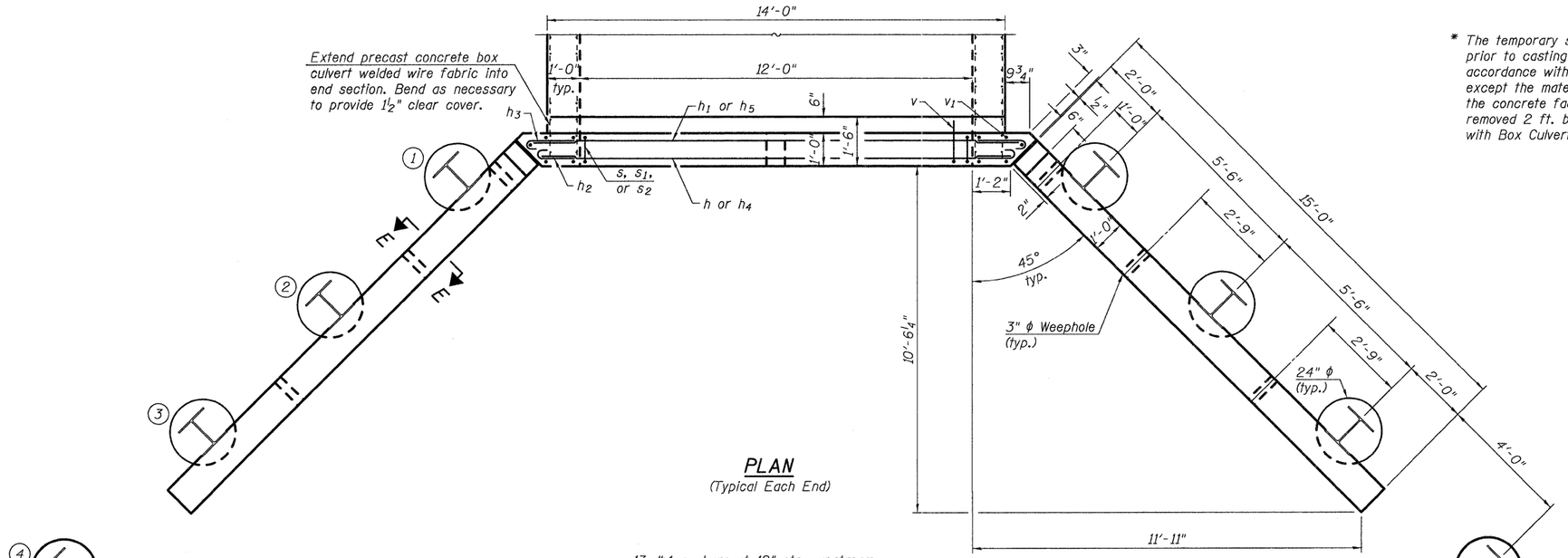
DESIGNED	-		
CHECKED	-	Michael D. Ridgell	
DRAWN	-	MICHAEL B. MOSSMAN	
CHECKED	-	MDR / DLG	

EXAMINED
ENGINEER OF BRIDGE DESIGN
PASSED
ENGINEER OF BRIDGES AND STRUCTURES
DATE - August 1, 2011

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION
STRUCTURE NO. 018-8650
SHEET NO. 1 OF 7 SHEETS

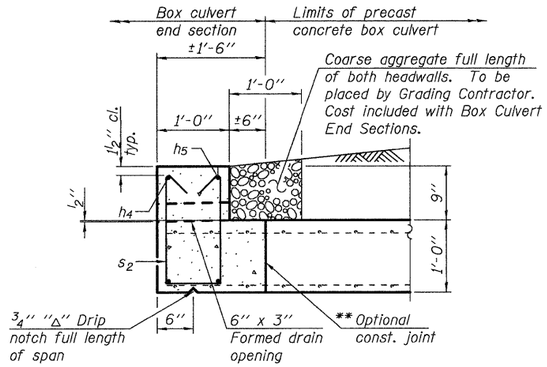
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
773	(108,109,110)RS-3	CUMBERLAND	56	32
		CONTRACT NO. 74252		
	ILLINOIS FED. AID PROJECT			



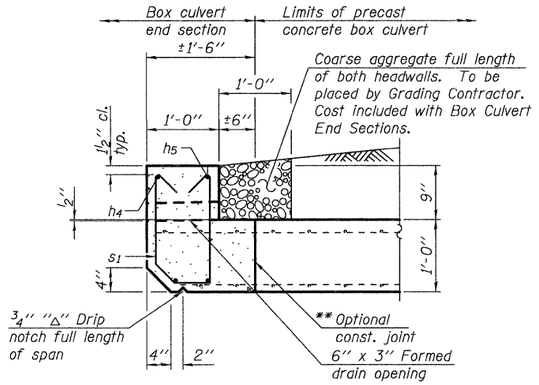
* *The temporary soldier pile is required to facilitate backfilling of the wall prior to casting the concrete face. The temporary soldier pile shall be in accordance with the Special Provisions for Drilled Soldier Pile Retaining Wall except the material for the temporary soldier pile may be new or used. After the concrete face has been allowed to cure, the temporary soldier pile shall be removed 2 ft. below streambed along with adjacent timber lagging. Cost included with Box Culvert End Section.*

*** *Mandatory if barrel portion of box culvert end section is cast in the field.*

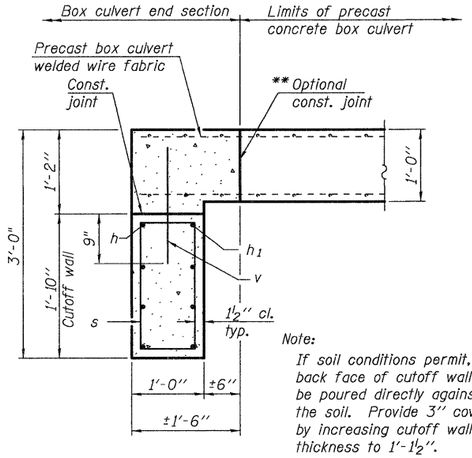
DESIGNED - DAVID L. GREIFZU	EXAMINED	Thomas J. Domagalski	DATE - August 1, 2011	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**BOX CULVERT END SECTION DETAILS STRUCTURE NO. 018-8650**	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - MICHAEL D. ROLAPE		ENGINEER OF BRIDGE DESIGN				773	(108,109,110)RS-3	CUMBERLAND	56	33
DRAWN - MICHAEL B. MOSSMAN	PASSED	A. Carl Lang			SHEET NO. 2 OF 7 SHEETS				CONTRACT NO. 74252	
CHECKED - D.L.G. / M.D.R.		ENGINEER OF BRIDGES AND STRUCTURES						ILLINOIS	FED. AID PROJECT	



SECTION B-B
(Downstream Section)

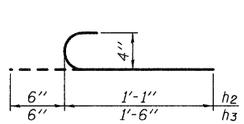


SECTION B-B
(Upstream Section)

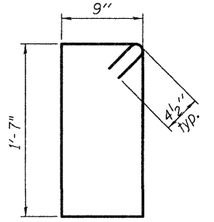


SECTION C-C
(Typical both ends)

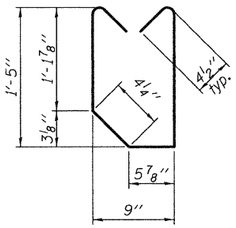
Note:
If soil conditions permit, the back face of cutoff wall may be poured directly against the soil. Provide 3" cover by increasing cutoff wall thickness to 1'-1½".



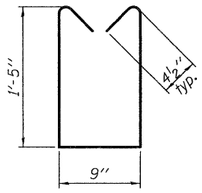
BARS h2 and h3



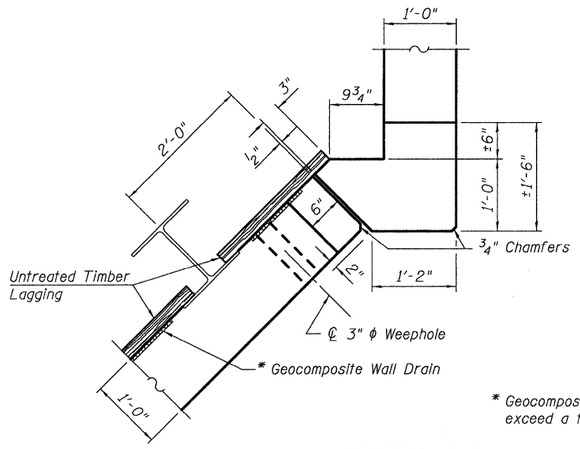
BAR s



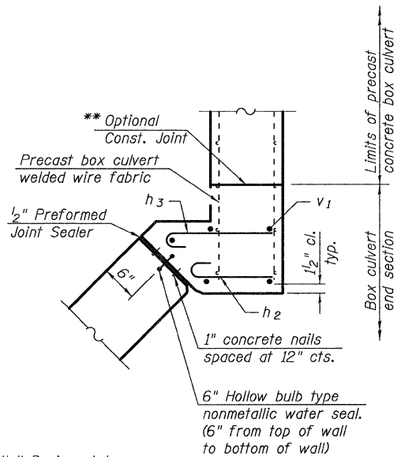
BAR s1



BAR s2



SECTION D-D
(Showing dimensions, wall drain, and weephole.)



SECTION D-D
(Showing reinforcement and seal)

* Geocomposite Wall Drain not to exceed a thickness of ¾".

ALTERNATE SECTION C-C
(Typical both ends)

Note:
The Contractor may construct a precast cutoff wall in accordance with Alternate Section C-C. See Precast Cutoff Wall Construction Sequence.

ONE END SECTION BILL OF MATERIAL
(For information only)

	Bar	No.	Size	Length	Shape
	h	4	#5	14'-2"	
	h1	4	#5	15'-6"	
	h2	34	#4	1'-7"	
	h3	34	#4	2'-0"	
	h4	2	#6	14'-2"	
	h5	2	#6	15'-6"	
	h6	64	#5	14'-9"	
	s	13	#4	5'-5"	
***	s1	13	#4	4'-2"	
***	s2	13	#4	4'-4"	
	v	9	#4	1'-8"	
	v1	10	#5	11'-5"	
	v2	32	#5	23'-6"	
	Concrete Structures		Cu. Yd.	13.4	
	Stud Shear Connectors		Each	66	
	Reinforcement Bars		Pound	2,280	
	Bar Splicers		Each	10	
	Furnishing Soldier Piles (HP Section)		Foot	182	
	Drilling and Setting Soldier Piles (in soil)		Cu. Ft.	327	
	Untreated Timber Lagging		Sq. Ft.	308	
	Concrete Box Culverts		Cu. Yd.	4.8	
	Geocomposite Wall Drain		Sq. Ft.	93	

*** *Only s1 or s2 bars are required for each end section.*

The above pay items will not be measured for payment but shall be included in the contract unit price for Box Culvert End Sections of the culvert number specified.

PRECAST CUTOFF WALL CONSTRUCTION SEQUENCE

1. *Perform excavation and set precast end cutoff wall in place.*
2. *Backfill accordingly and place bedding for precast box culvert sections.*
3. *Set precast box culvert section in place.*
4. *Drill and epoxy grout reinforcement in end cutoff wall in accordance with Section 584 of the Standard Specifications.*
5. *Pressure grout voids using non-shrink grout conforming to Section 1024 of the Standard Specifications.*

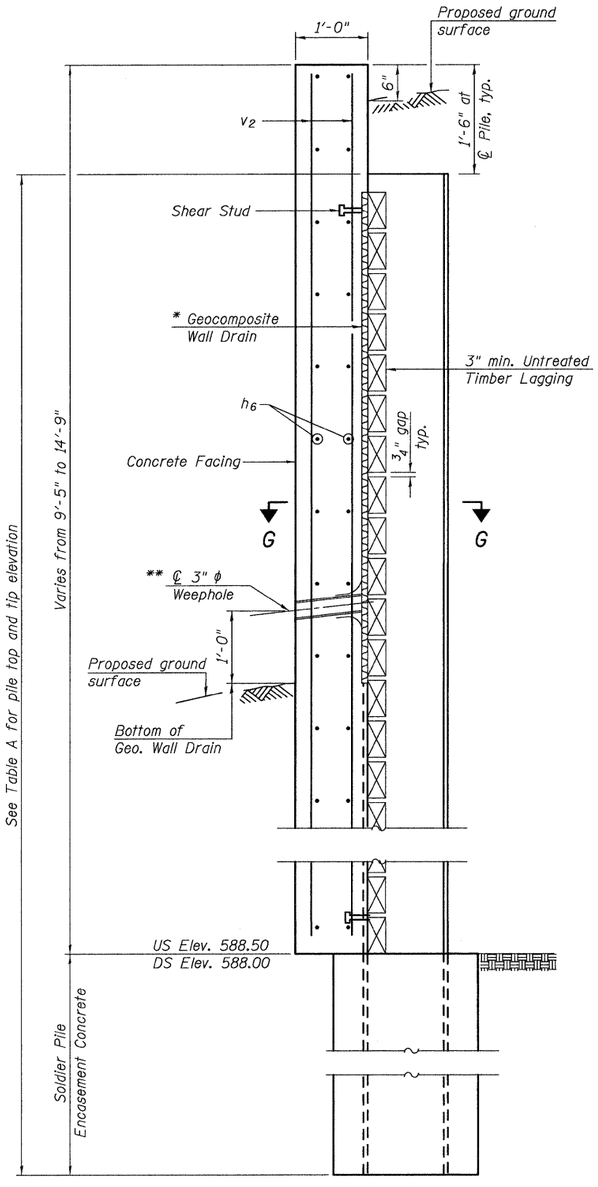
If the Contractor chooses to provide a precast cutoff wall, details of the water seal installation shall be provided to the Engineer for review and approval. The water seal is required to be continuous for the full height.

** *The Contractor may construct the 1'-6" barrel portion of the box culvert end section using any of the following methods:*

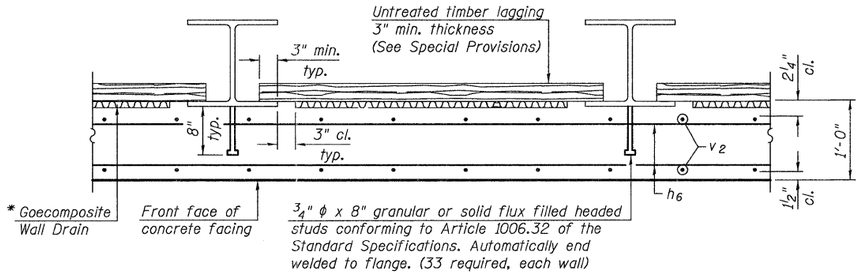
1. *Cast monolithic with the precast concrete box culvert sections.*
2. *Completed by the precaster using the optional construction joint shown prior to the pieces being shipped to the field.*
3. *Cast in the field after the adjacent precast concrete box culvert section has been constructed. If the Contractor chooses this option and chooses to provide a precast cutoff wall as shown in Alternate Section C-C, the #4 v bars may be cast with the precast cutoff wall and the barrel portion of the end section may be cast directly onto the cutoff wall omitting the PE pipe and non-shrink grout shown in Alternation Section C-C.*

If the Contractor chooses options #1 or #2, details of the water seal installation shall be provided to the Engineer for review and approval. The water seal is required to be continuous for the full height. Also with options #1 or #2, the #5 bar splicers detailed in the cutoff wall shall be omitted and the v1 bars shall be lengthened to extend into the bottom slab of the end section. The minimum lay length of the combined box culvert end segment shall be 4'-0" for options #1 and #2.

DESIGNED - DAVID L. GREIFZU	EXAMINED	Thomas J. Domagalski	DATE - August 1, 2011	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**BOX CULVERT END SECTION DETAILS STRUCTURE NO. 018-8650**	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - MICHAEL D. ROLAPE		ENGINEER OF BRIDGE DESIGN				773	(108,109,110)RS-3	CUMBERLAND	56	34
DRAWN - MICHAEL B. MOSSMAN	PASSED	D. Carl Tracy			SHEET NO. 3 OF 7 SHEETS			CONTRACT NO. 74252		
CHECKED - D.L.G. / M.D.R.		ENGINEER OF BRIDGES AND STRUCTURES						ILLINOIS FED. AID PROJECT		

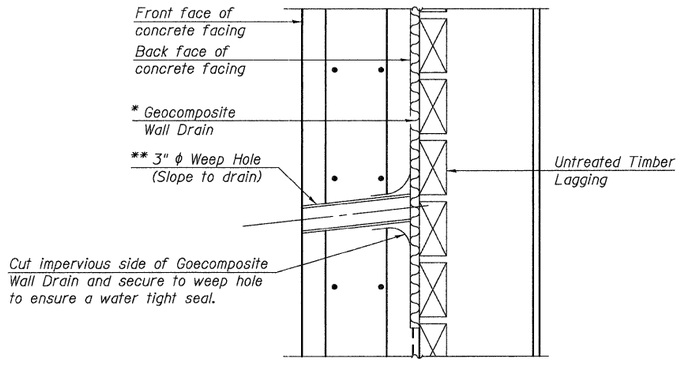


SECTION E-E



* Geocomposite Wall Drain not to exceed thickness of 3/4".

SECTION G-G

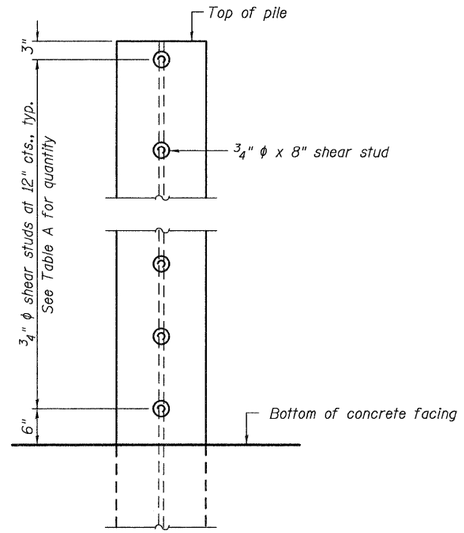


WEEP HOLE DRAIN DETAIL

** Cost of the weep hole drain and the connection to the geocomposite wall drain are included with Box Culvert End Sections.

Note:

The Contractor is responsible for the design and performance of the lagging using no less than a 3 in. nominal rough-sawn thickness and timber with a minimum allowable bending stress of 1000 psi.



SHEAR STUD DETAIL

(Elevation of Pile Shown)

TABLE A

(Upstream)

Soldier Pile	Pile Size	Top Elevation (ft.)	Bottom Elevation (ft.)	Total Height (ft.)	Number of Shear Studs
1	HP 14 x 102	601.2	574.0	27.2	13
2	HP 14 x 102	599.18	574.0	25.18	11
3	HP 14 x 102	597.15	574.0	23.15	9
4	HP 14 x 102	595.13	580.0	15.13	
			Total	91	33

TABLE A

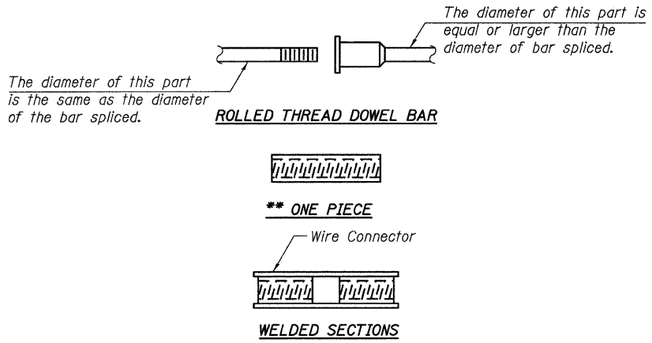
(Downstream)

Soldier Pile	Pile Size	Top Elevation (ft.)	Bottom Elevation (ft.)	Total Height (ft.)	Number of Shear Studs
1	HP 14 x 102	600.7	574.0	26.7	13
2	HP 14 x 102	598.68	574.0	24.68	11
3	HP 14 x 102	596.65	574.0	22.65	9
4	HP 14 x 102	594.63	580.0	14.63	
			Total	89	33

DESIGNED - DAVID L. GREIFZU	EXAMINED	DATE - August 1, 2011	**STATE OF ILLINOIS**
CHECKED - MICHAEL D. ROLAPE		ENGINEER OF BRIDGE DESIGN	**DEPARTMENT OF TRANSPORTATION**
DRAWN - MICHAEL B. MOSSMAN	PASSED		
CHECKED - D.L.G. / M.D.R.		ENGINEER OF BRIDGES AND STRUCTURES	

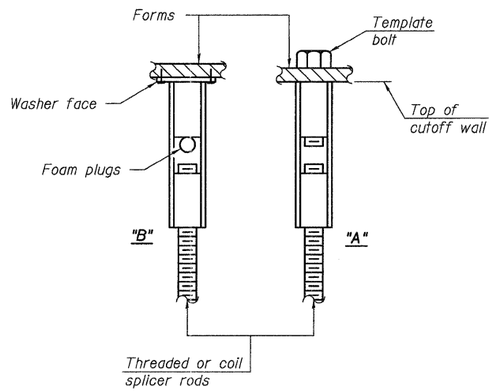
BOX CULVERT END SECTION DETAILS
STRUCTURE NO. 018-8650
SHEET NO. 4 OF 7 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
773	(108,109,110)RS-3	CUMBERLAND	56	35
		CONTRACT NO. 74252		
		ILLINOIS FED. AID PROJECT		



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.

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.

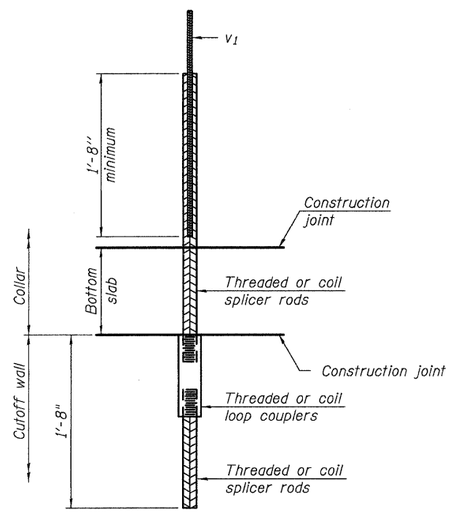
Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

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 for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 12.3 kips - tension
No. Required = 20



FOR BOX CULVERT END SECTIONS

DESIGNED - DAVID L. GREIFZU	EXAMINED	Thomas J. Domagalski ENGINEER OF BRIDGE DESIGN	DATE - August 1, 2011	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BAR SPLICER ASSEMBLY DETAILS STRUCTURE NO. 018-8650	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - MICHAEL D. ROLAPE						773	(108,109,110)RS-3	CUMBERLAND	56	36
DRAWN - MICHAEL B. MOSSMAN	PASSED	D. Carl Puzey ENGINEER OF BRIDGES AND STRUCTURES			SHEET NO. 5 OF 7 SHEETS			CONTRACT NO. 74252		
CHECKED - D.L.G. / M.D.R.								ILLINOIS FED. AID PROJECT		

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Date 2606

ROUTE FAP 828 (IL 121) DESCRIPTION Box Culvert LOGGED BY E. Sandschafer

SECTION (108,109,110)RS-3 LOCATION Sec 25 - SW 14, Sec 26 - SE 14, SEC., TWP. 10 N, RNG. 7 E, 3 PM

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

STRUCT. NO. 018-8605
Station

BORING NO. 1 (South)
Station 306+84
Offset 14.00ft Lt
Ground Surface Elev. 606.46 ft

Surface Water Elev. Dry ft
Stream Bed Elev. 589.70 ft

Groundwater Elev.:
First Encounter 589.5 ft
Upon Completion N/A ft
After 72 Hrs. 592.0 ft

DEPTH (ft)	BLOWS (6")	UCS Qu (tsf)	MOIST (%)	Soil Description
				Crushed stone shoulder. 605.96
				Medium to very stiff, damp, tan, CLAY w/trace fine gravel.
	1			
	5	2.3	22	
	9	PP		
-5	3			
	6	1.0	22	
	8	PP		
				599.46
	0			Stiff, damp, tan, SILTY CLAY.
	4	1.1	20	
	5	PP		
				596.46
-10	0			Medium, damp, gray, CLAY w/ trace sand & fine gravel.
	5	0.8	19	
	9	B		
				594.46
	1			Medium, damp, gray, SILTY CLAY w/trace organics & some sand.
	5	0.6	18	
	6	B		
				591.96
-15	1			Soft, damp, dark gray, SANDY LOAM w/trace organics.
	2	0.4	19	
	2	PP		
				589.46
	3			Medium, damp, red mottled gray, CLAY w/trace fine gravel.
	4	0.7	18	
	5	B		
				586.46
-20	11			

DEPTH (ft)	BLOWS (6")	UCS Qu (tsf)	MOIST (%)	Soil Description
	24	5.7	13	Very stiff, very moist, brown, SANDY CLAY TILL.
	22	B		
				584.46
	9			Very stiff, very moist, gray, CLAY TILL.
	13	3.8	14	
	17	B		
-25	6			
	9	2.8	14	
	12	B		
	4			
	8	3.0	13	
	13	B		
-30	5			
	9	3.5	13	
	14	B		
-35	5			
	9	3.0	14	
	13	B		
-40	5			566.46

Latitude N 39 deg 16.606 min, Longitude W 88 deg 22.693 min, Map Datum WGS 84

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

BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Date 2606

ROUTE FAP 828 (IL 121) DESCRIPTION Box Culvert LOGGED BY E. Sandschafer

SECTION (108,109,110)RS-3 LOCATION Sec 25 - SW 14, Sec 26 - SE 14, SEC., TWP. 10 N, RNG. 7 E, 3 PM

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

STRUCT. NO. 018-8605
Station

BORING NO. 1 (South)
Station 306+84
Offset 14.00ft Lt
Ground Surface Elev. 606.46 ft

Surface Water Elev. Dry ft
Stream Bed Elev. 589.70 ft

Groundwater Elev.:
First Encounter 589.5 ft
Upon Completion N/A ft
After 72 Hrs. 592.0 ft

DEPTH (ft)	BLOWS (6")	UCS Qu (tsf)	MOIST (%)	Soil Description
	22	0.5	14	Soft to medium, damp, gray, SANDY LOAM.
	26	S		
				561.96
-45	3			Stiff, damp, gray, CLAY w/Silt and gravel.
	7	1.9	21	
	9	B		
				556.96
-50	3			Very stiff, damp, gray, CLAY TILL.
	6	1.7	19	
	8	B		
-55				
-60	6			546.46

DEPTH (ft)	BLOWS (6")	UCS Qu (tsf)	MOIST (%)	Soil Description
	26	1.9	13	Black, COAL. 545.66
	50/4"	B		
				Extent of exploration.
				Benchmark: BM 350A RR spike in PP, 70' South of existing box culvert, 41' East of centerline of IL 121 = 597.31' elevation.
-65				
-70				
-75				
-80				

Latitude N 39 deg 16.606 min, Longitude W 88 deg 22.693 min, Map Datum WGS 84

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

BBS, form 137 (Rev. 8-99)

DESIGNED - DAVID L. GREIFZU	EXAMINED	Thomas J. Domagalski	DATE - August 1, 2011	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**SOIL BORING LOGS STRUCTURE NO. 018-8650**
CHECKED - MICHAEL D. ROLAPE		ENGINEER OF BRIDGE DESIGN			SHEET NO. 6 OF 7 SHEETS
DRAWN - MICHAEL B. MOSSMAN	PASSED				
CHECKED - D.L.G. / M.D.R.		ENGINEER OF BRIDGES AND STRUCTURES			

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
773	(108,109,110)RS-3	CUMBERLAND	56	37
		CONTRACT NO. 74252		
		ILLINOIS FED. AID PROJECT		

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Date 2606

ROUTE FAP 828 (IL 121) DESCRIPTION Box Culvert LOGGED BY E. Sandschafer

SECTION (108,109,110)RS-3 LOCATION Sec 25 – SW 14, Sec 26 – SE 14, SEC. , TWP. 10 N, RNG. 7 E, 3 PM

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

STRUCT. NO. 018-8605
Station

BORING NO. 2 (North)
Station 306+21
Offset 12.00ft Rt
Ground Surface Elev. 608.21 ft

Surface Water Elev. Dry ft
Stream Bed Elev. 589.70 ft

Groundwater Elev.:
First Encounter Dry ft
Upon Completion N/A ft
After 72 Hrs. 565.7 ft

	DEPTH (ft)	BLOWS (6")	UCS Qu (tsf)	MOIST (%)
13.5" Asphalt pavement.				
607.11				
6" aggregate base.				
606.61				
Soft, very damp, red mottled gray, SILTY CLAY w/some fine gravel.				
	-5	1		
		2	0.4	16
		3	PP	
		1		
		3	0.4	20
		4	PP	
	-10	1		
		2	0.4	23
		3	B	
596.21				
Medium, damp, dark gray, SANDY LOAM w/many wood chunks, highly organic.		1		
		2	0.6	28
		3	B	
	-15	2		
592.71		3	0.6	13
Very soft, gray, wet, SILTY LOAM.		7	B	
591.21				
Hard, very moist, brown marbled gray, CLAY TILL.		3		
		5	2.8	16
		7	B	
588.21	-20	5		
Hard to very stiff, very moist, gray, CLAY TILL.				
		12	5.1	13
		14	B	
		10		
		15	6.2	13
		22	B	
	-25	1		
		16	7.9	11
		22	S	
		7		
		11	5.0	10
		18	B	
	-30	8		
		15	3.7	10
		25	B	
	-35	4		
		6	2.1	18
		9	B	
568.21	-40	4		

Latitude N 39 deg 16.616 min, Longitude W 88 deg 22.700 min, Map Datum WGS 84

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

BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Date 2606

ROUTE FAP 828 (IL 121) DESCRIPTION Box Culvert LOGGED BY E. Sandschafer

SECTION (108,109,110)RS-3 LOCATION Sec 25 – SW 14, Sec 26 – SE 14, SEC. , TWP. 10 N, RNG. 7 E, 3 PM

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

STRUCT. NO. 018-8605
Station

BORING NO. 2 (North)
Station 306+21
Offset 12.00ft Rt
Ground Surface Elev. 608.21 ft

Surface Water Elev. Dry ft
Stream Bed Elev. 589.70 ft

Groundwater Elev.:
First Encounter Dry ft
Upon Completion N/A ft
After 72 Hrs. 565.7 ft

	DEPTH (ft)	BLOWS (6")	UCS Qu (tsf)	MOIST (%)
Very stiff, damp, gray, CLAY TILL.		9	2.8	14
		13	B	
	-45	3		
		6	1.7	17
		8	B	
	-50	3		
		7	2.3	15
		9	B	
548.21	-60	3		
		7	2.9	15
		11	B	
* Blow Counts: 50 /1⁴" 50 /1⁸" 50 /1¹⁶"	-65			
540.71				
Very dense, moist, gray, highly cemented, SANDSTONE.				
538.70				
Extent of exploration.	-70	*		
Benchmark: BM 350A RR spike in PP, 70' South of existing box culvert, 41' East of centerline of IL 121 = 597.31' elevation.	-75			
	-80			

Latitude N 39 deg 16.616 min, Longitude W 88 deg 22.700 min, Map Datum WGS 84

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

BBS, form 137 (Rev. 8-99)

DESIGNED - DAVID L. GREIFZU	EXAMINED Thomas J. Domagalski	DATE - August 1, 2011	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**SOIL BORING LOGS STRUCTURE NO. 018-8650**	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - MICHAEL D. ROLAPE	ENGINEER OF BRIDGE DESIGN				773	(108,109,110)RS-3	CUMBERLAND	56	38
DRAWN - MICHAEL B. MOSSMAN	PASSED						CONTRACT NO. 74252		
CHECKED - D.L.G. / M.D.R.	ENGINEER OF BRIDGES AND STRUCTURES			SHEET NO. 7 OF 7 SHEETS			ILLINOIS FED. AID PROJECT		

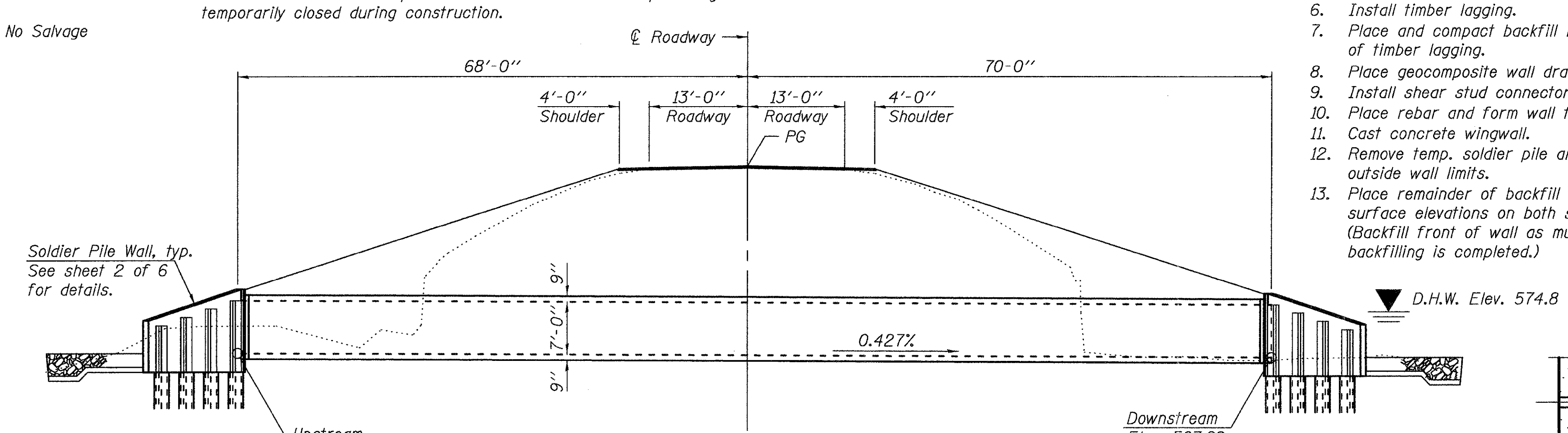
Benchmark (B.M. 308): Station 554+90 25' LT Cut square on the northwest corner of a box culvert 1000' west of CR 975E Elev. 594.058

Benchmark (B.M. 309): Station 539+95 23' LT Cut square on the southeast corner of a box culvert on a private entrance 1500' east of CR 975E Elev. 599.339

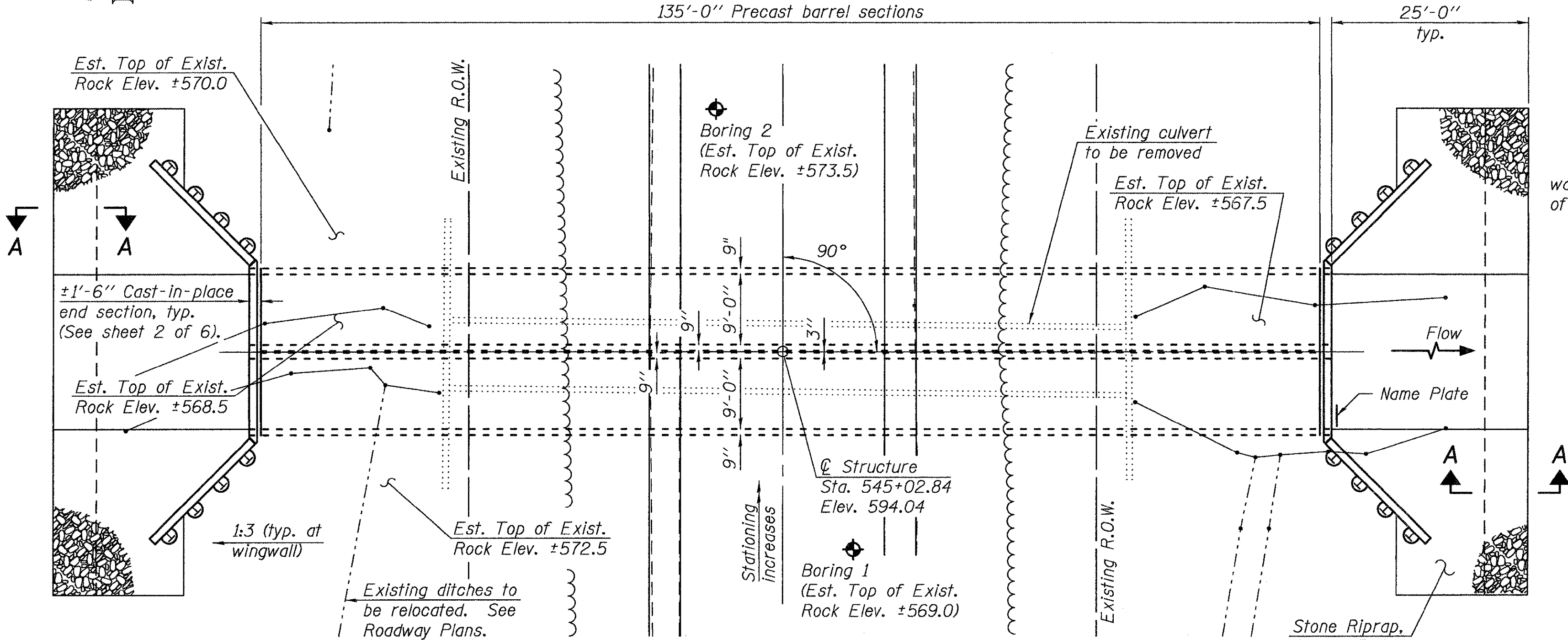
Benchmark (B.M. 324): Station 547+00 23' RT Chisled square on the top center of a concrete headwall for a private entrance to the south Elev. 594.261

Existing Structure: S.N. 018-8638 is a 8' x 8' single barrel concrete box culvert. The culvert headwall and wingwalls are parallel to the roadway. Existing structure is to be removed and replaced with a precast double box culvert with cast-in-place end sections and soldier pile wingwalls. The road is to be temporarily closed during construction.

No Salvage



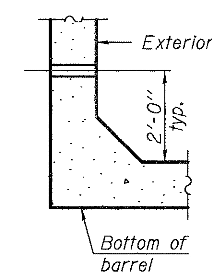
ELEVATION



PLAN

CULVERT CONSTRUCTION SEQUENCE

1. Remove existing structure.
2. Place precast box culvert sections.
3. Build cutoff wall.
4. Form and place concrete for portion of end sections to be cast onto precast box sections.
5. Drill soldier piles (May be completed prior to box placement).
6. Install timber lagging.
7. Place and compact backfill behind wall to top of timber lagging.
8. Place geocomposite wall drain.
9. Install shear stud connectors.
10. Place rebar and form wall face.
11. Cast concrete wingwall.
12. Remove temp. soldier pile and remaining timber outside wall limits.
13. Place remainder of backfill to proposed ground surface elevations on both sides of wall. (Backfill front of wall as much as possible before backfilling is completed.)



DRAIN DETAIL

Provide 3" ϕ drain holes in exterior walls at ±8' cts. See Article 503.11 of the Standard Specifications.

INDEX OF SHEETS

STATION 545+02.84
BUILT 201 BY
STATE OF ILLINOIS
F.A.P. RTE. 828 SEC. (108,109,110)RS-3
LOADING HS 20-44
STRUCTURE NO. 018-8311

NAME PLATE

See Std. 515001

GENERAL NOTES

Reinforcement bars shall conform to the requirements of ASTM A 706, Gr. 60.

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

The design fill height for this structure is 18 feet. The precast concrete box culvert sections shall conform to the requirements of ASTM C1433.

Areas of the precast box culvert in contact with cast-in-place concrete shall be sand blasted, cleaned, and wetted prior to placing concrete in the field according to Article 503.09(b) of the Standard Specifications.

In order to minimize excessive deflection and/or stresses in the soldier piles, compaction equipment used within 4 feet of the back face of the timber lagging shall be limited to lightweight mechanical tampers, rollers, or vibratory systems.

Build top of headwalls parallel to the grade lines.

All construction joints shall be bonded according to Article 503.09 of the Standard Specifications.

End Sections will be paid for at the contract unit price each for BOX CULVERT END SECTIONS as outlined in Section 540 of the Standard Specifications.

The box culvert end section shall be built in the field and a precast option is not allowed. Class SI concrete shall be used for the concrete cast in the field for the cutoff walls, portions of the end sections being cast onto the end of the precast box sections, and the concrete facing for the walls.

Concrete, rebar, and welded wire fabric quantities and lengths calculated for the end sections may vary based upon the precast box culverts supplied.

The ends of the precast box sections adjacent to the end sections shall be formed without the tongue and groove shapes specified in Article 8.1 of ASTM C1433.

The longitudinal reinforcement of the welded wire fabric extending from the precast boxes into the end sections shall have a minimum area of 0.20 in²/ft. Substitution of reinforcement bars for welded wire fabric is not allowed.

The joints between precast box sections shall be sealed and all voids filled with a mastic joint sealer. In addition, the joints shall be externally sealed on all four sides with a 13 inch wide external sealing band. The seal shall be centered over the joint, secured in place, and protected during the backfilling process.

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Stone Riprap, Class A5	Sq. yd.	337
Filter Fabric	Sq. yd.	337
Removal of Existing Structures No. 2	Each	1
Structure Excavation	Cu. yd.	1,382
Rock Excavation for Structures	Cu. yd.	368
Name Plates	Each	1
Box Culvert End Sections, Culvert No. 2	Each	2
Precast Concrete Box Culvert 9' x 7'	Foot	270

DESIGN STRESSES

FIELD UNITS

f'c = 3,500 psi
fy = 60,000 psi (Reinforcement)
fy = 36,000 psi (AASHTO M270, Gr. 36) (Soldier Piles)

PRECAST UNITS

f'c = 5,000 psi
fy = 65,000 psi (welded wire fabric)

LOADING HS 20-44

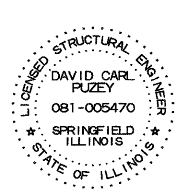
Allow 50#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS

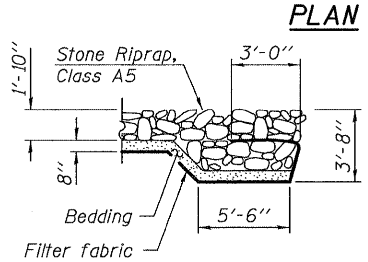
2002 AASHTO - Standard Specifications

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	Upstream	Downstream
	566.57	565.99



EXPIRES 11-30-2012



SECTION A-A

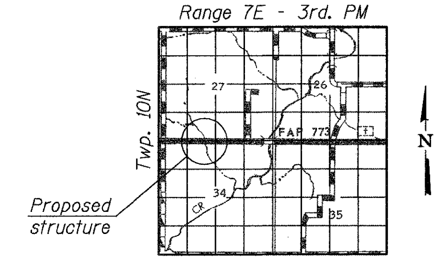
WATERWAY INFORMATION

Drainage Area = 0.53 mi²
Proposed Low Grade Elev. 594.06 @ Sta. 545+32
Existing Low Grade Elev. 594.06 @ Sta. 545+32

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	371	39	92	573.7	2.1	0	575.8	573.7
Design	50	625	48	112	574.8	4.0	0	578.8	574.8
Base	100	744	51	119	575.2	5.4	0	580.6	575.2
Max. Calc.	500	1040	57	126	575.9	9.6	0.3	585.5	576.2

10 year velocity through existing bridge = 11.7 ft./sec.
10 year velocity through proposed culvert = 6.6 ft./sec.

Range 7E - 3rd. PM



LOCATION SKETCH

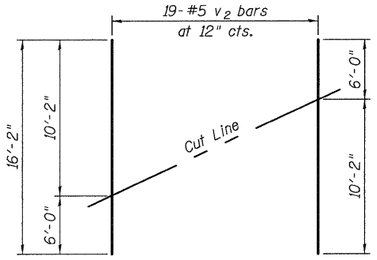
GENERAL PLAN & ELEVATION
ILL. ROUTE 121 OVER STREAM
F.A.P. RTE. 828 - SEC. (108,109,110)RS-3
CUMBERLAND COUNTY
STATION 545+02.84
STRUCTURE NO. 018-8311

DESIGNED - [signature]	EXAMINED [signature] ENGINEER OF BRIDGE DESIGN	DATE - August 1, 2011	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION
CHECKED - Michael D. Koland			
DRAWN - MICHAEL B. MOSSMAN	PASSED [signature] ENGINEER OF BRIDGES AND STRUCTURES		
CHECKED - MDR /DLG			

GENERAL PLAN AND ELEVATION
STRUCTURE NO. 018-8311
SHEET NO. 1 OF 6 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
828	(108,109,110)RS-3	CUMBERLAND	56	39
		CONTRACT NO. 74252		

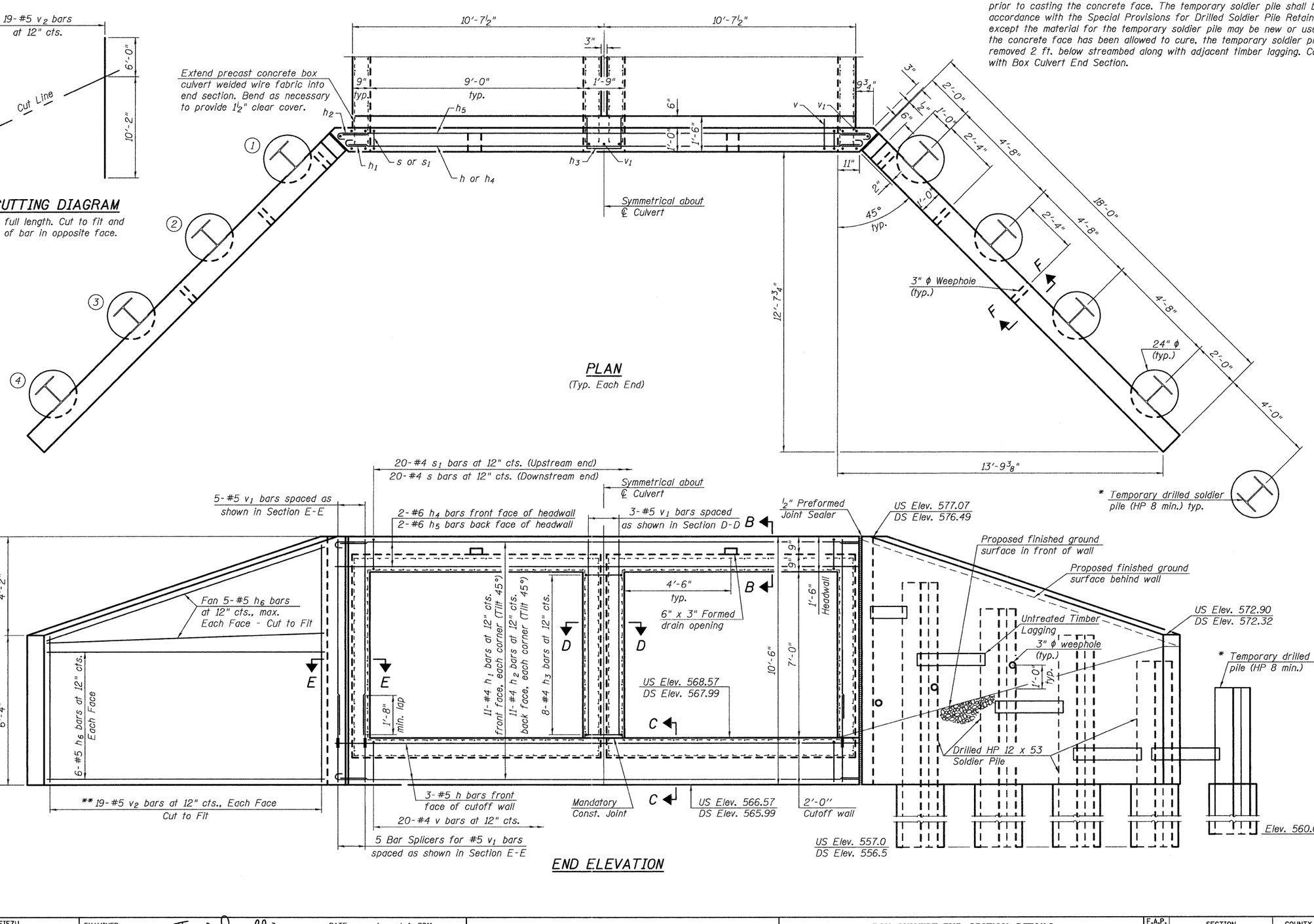
ILLINOIS FED. AID PROJECT



**** FIELD CUTTING DIAGRAM**

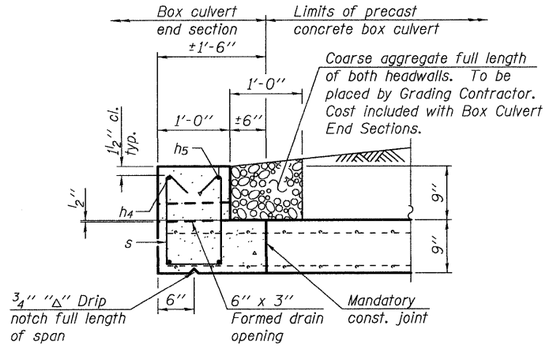
Order v_2 bars full length. Cut to fit and use remainder of bar in opposite face.

* The temporary soldier pile is require to facilitate backfilling of the wall prior to casting the concrete face. The temporary soldier pile shall be in accordance with the Special Provisions for Drilled Soldier Pile Retaining Wall except the material for the temporary soldier pile may be new or used. after the concrete face has been allowed to cure. the temporary soldier pile shall be removed 2 ft. below streambed along with adjacent timber lagging. Cost included with Box Culvert End Section.

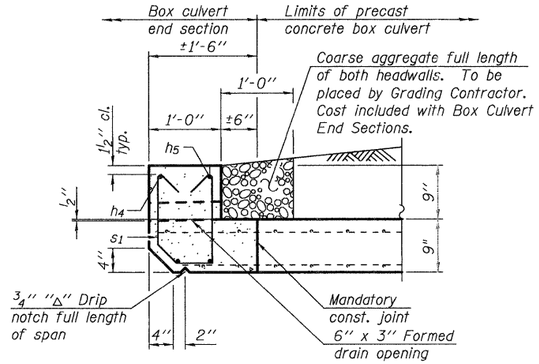


END ELEVATION

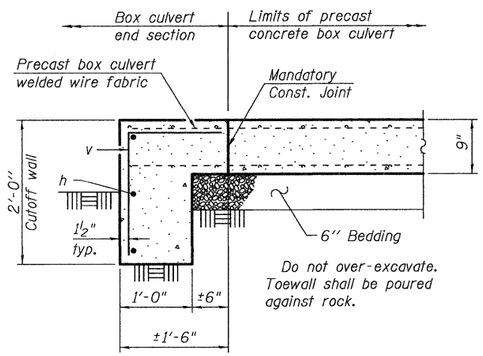
DESIGNED - DAVID L. GREIFZU	EXAMINED		DATE - August 1, 2011	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BOX CULVERT END SECTION DETAILS STRUCTURE NO. 018-8311	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - MICHAEL D. ROLAPE						828	(108,109,110)RS-3	CUMBERLAND	56	40
DRAWN - MICHAEL B. MOSSMAN	PASSED	ENGINEER OF BRIDGES AND STRUCTURES						CONTRACT NO. 74252		
CHECKED - D.L.G. / M.D.R.					SHEET NO. 2 OF 6 SHEETS			ILLINOIS FED. AID PROJECT		



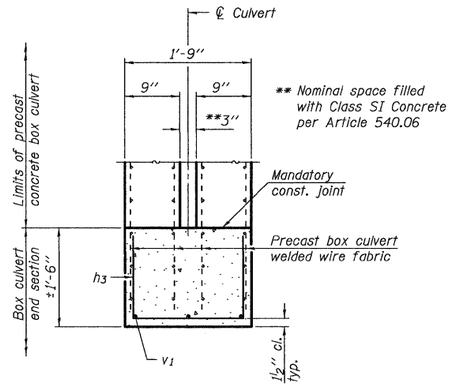
SECTION B-B
(Downstream Section)



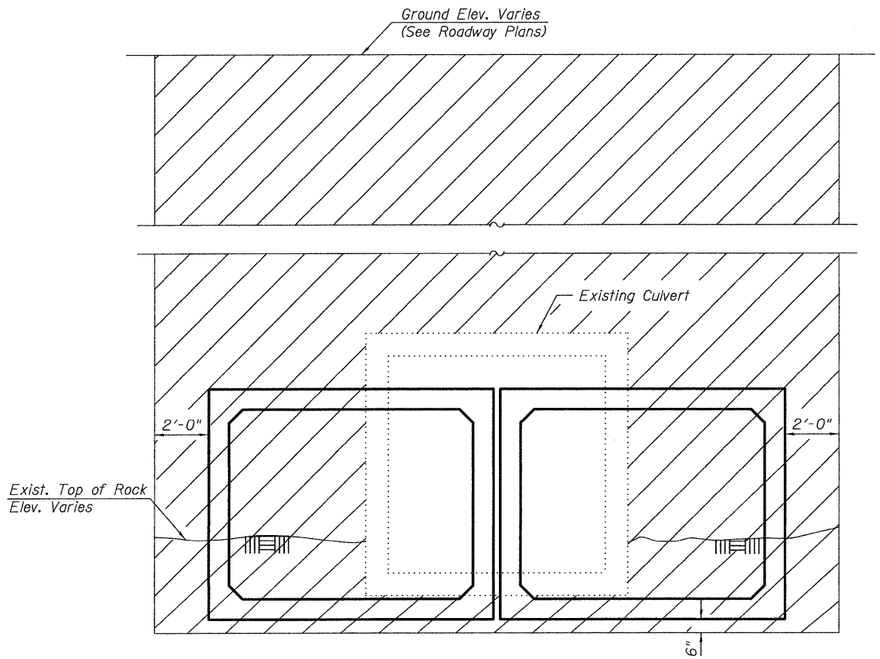
SECTION B-B
(Upstream Section)



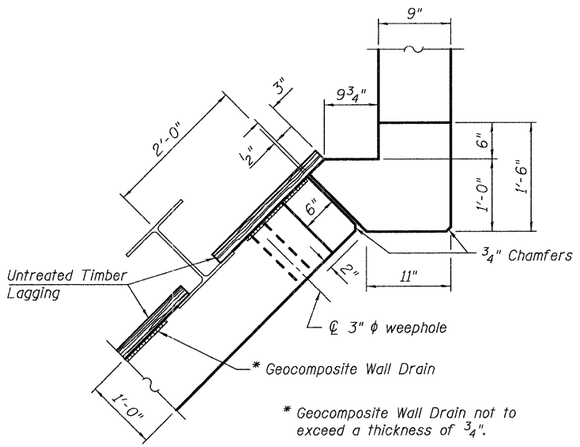
SECTION C-C
(Typ. Both Ends)



SECTION D-D
(Typ. Both Ends)

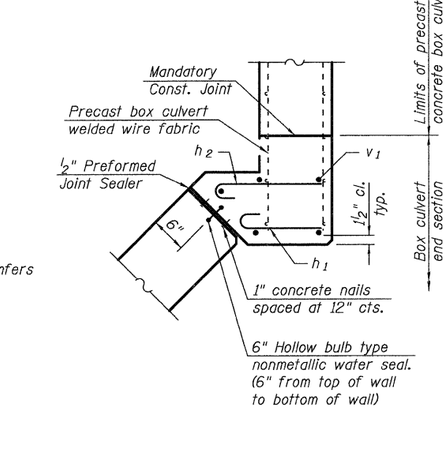


SECTION THRU CULVERT
(Showing excavation pay limits)

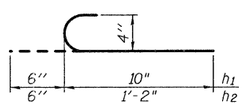


* Geocomposite Wall Drain not to exceed a thickness of ¾".

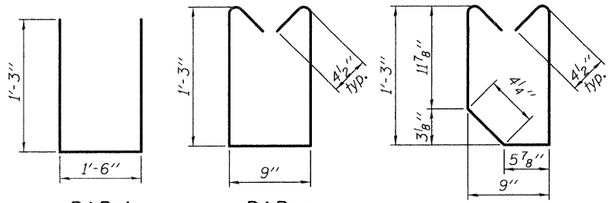
SECTION E-E
(Showing dimensions, wall drain, and weephole)



SECTION E-E
(Showing reinforcement and seal)



BARS h1 and h2



ONE END SECTION BILL OF MATERIAL
(For information only)

Bar	No.	Size	Length	Shape
h	3	#5	21'-4"	
h1	22	#4	1'-4"	
h2	22	#4	1'-8"	
h3	8	#4	4'-0"	
h4	2	#6	21'-4"	
h5	2	#6	22'-6"	
h6	44	#5	17'-9"	
** s	20	#4	4'-0"	
** s1	20	#4	3'-10"	
v	20	#4	2'-11"	
v1	13	#5	8'-3"	
v2	38	#5	16'-2"	
Concrete Structures		Cu. Yd.	11.3	
Stud Shear Connectors		Each	60	
Reinforcement Bars		Pound	1,930	
Bar Splicers		Each	10	
Furnishing Soldier Piles (HP Section)		Foot	154	
Drilling and Setting Soldier Piles (in rock)		Cu. Ft.	282	
Untreated Timber Lagging		Sq. Ft.	240	
Concrete Box Culverts		Cu. Yd.	5.1	
Geocomposite Wall Drain		Sq. Ft.	58	

** Only s or s1 bars are required for each end section.

The above pay items will not be measured for payment but shall be included in the contract unit price each for Box Culvert End Sections of the culvert number specified.

Notes:

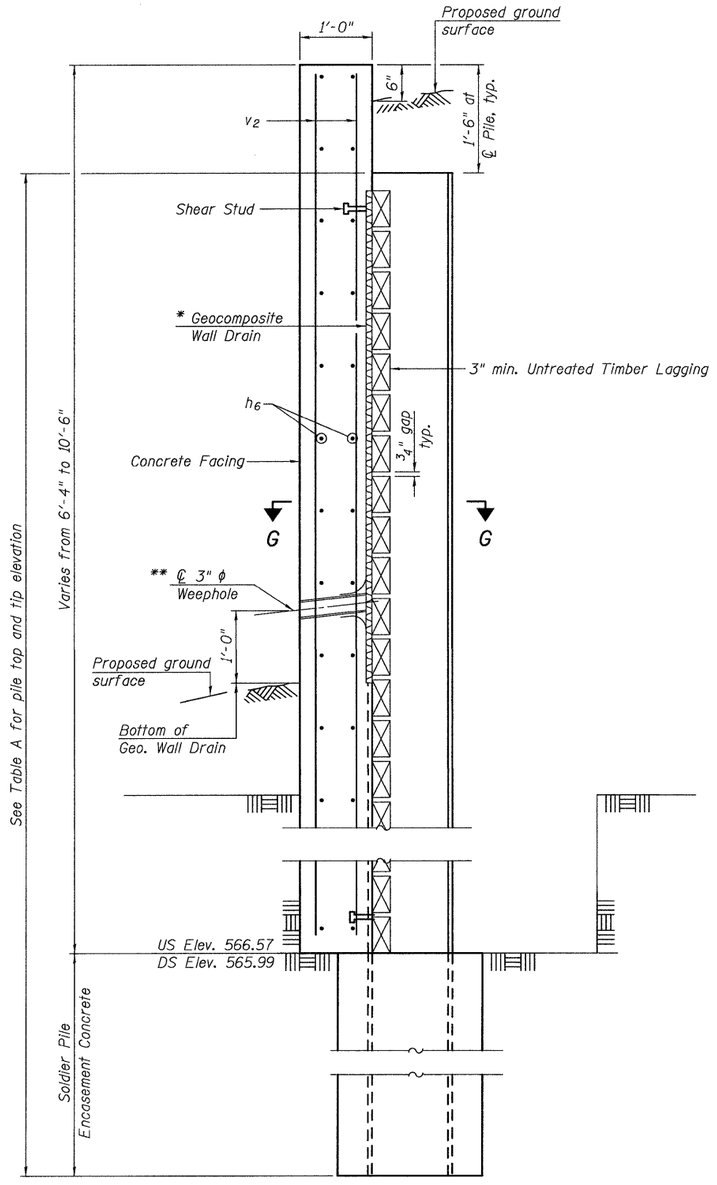
Hatched area indicates pay limits for Structure Excavation and Rock Excavation for Structures. Excavation performed outside these limits and the limits described below will not be measured for payment but shall be included in the cost of the unit price item of the work for which it is required.

Structure Excavation shall include all excavation, except rock excavation, necessary for construction of the proposed structure including excavation necessary for removal of the existing structure. Limits of measurement shall be relative to the proposed structure and in accordance with that described herein and Article 502.12(b) of the Standard Specifications.

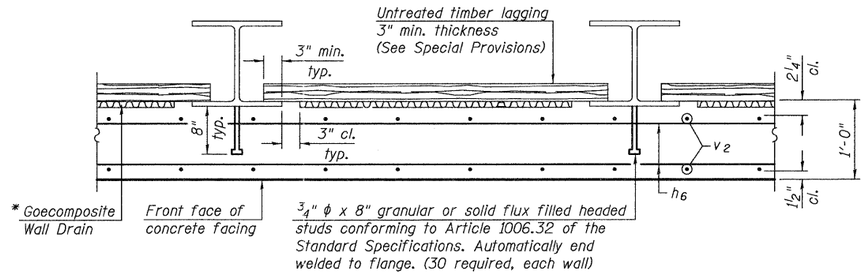
Rock Excavation for Structures and limits of measurement shall extend 2 ft. beyond each side of the culvert, 6 inches below the bottom of the culvert, and 2 ft. behind the concrete facing for the wingwalls.

DESIGNED - DAVID L. GREIFZU	EXAMINED	DATE - August 1, 2011	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**
CHECKED - MICHAEL D. ROLAPE	PASSED		**BOX CULVERT END SECTION DETAILS STRUCTURE NO. 018-8311**
DRAWN - MICHAEL B. MOSSMAN	Thomas J. Domagalski ENGINEER OF BRIDGE DESIGN		SHEET NO. 3 OF 6 SHEETS
CHECKED - D.L.G. / M.D.R.	D. Carl Tracy ENGINEER OF BRIDGES AND STRUCTURES		

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
828	(108,109,110)RS-3	CUMBERLAND	56	41
		CONTRACT NO. 74252		
		ILLINOIS FED. AID PROJECT		

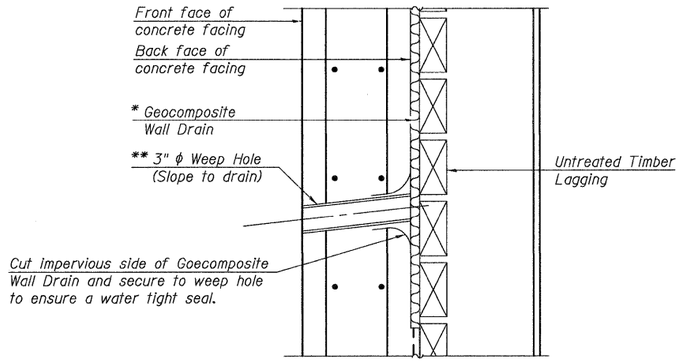


SECTION F-F



* Geocomposite Wall Drain not to exceed thickness of ¾".

SECTION G-G

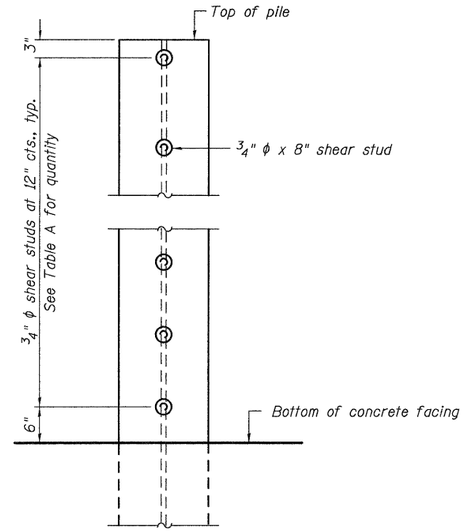


WEEP HOLE DRAIN DETAIL

** Cost of the weep hole drain and the connection to the geocomposite wall drain are included with Box Culvert End Sections.

Note:

The Contractor is responsible for the design and performance of the lagging using no less than a 3 in. nominal rough-sawn thickness and timber with a minimum allowable bending stress of 1000 psi.



SHEAR STUD DETAIL

(Elevation of Pile Shown)

TABLE A

(Upstream)

Soldier Pile	Pile Size	Top Elevation (ft.)	Bottom Elevation (ft.)	Total Height (ft.)	Number of Shear Studs
1	HP 14 x 102	575.21	557.0	18.21	9
2	HP 14 x 102	574.07	557.0	17.07	8
3	HP 14 x 102	572.97	557.0	15.97	7
4	HP 14 x 102	571.87	557.0	14.87	6
5	HP 14 x 102	570.45	560.0	10.45	

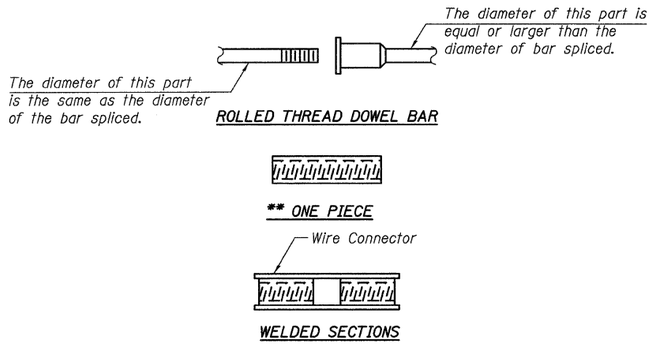
TABLE A

(Downstream)

Soldier Pile	Pile Size	Top Elevation (ft.)	Bottom Elevation (ft.)	Total Height (ft.)	Number of Shear Studs
1	HP 14 x 102	574.63	556.5	18.13	9
2	HP 14 x 102	573.49	556.5	16.99	8
3	HP 14 x 102	572.39	556.5	15.89	7
4	HP 14 x 102	571.29	556.5	14.79	6
5	HP 14 x 102	569.87	560.0	9.87	

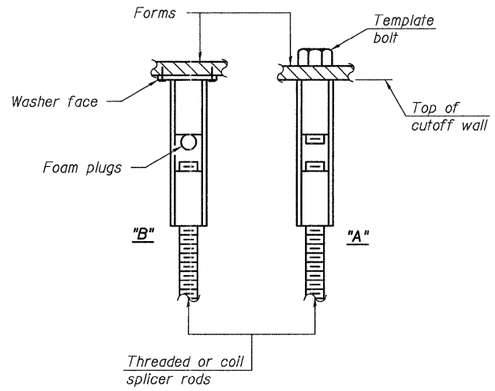
DESIGNED - DAVID L. GREIFZU	EXAMINED	Thomas J. Domagalski	DATE - August 1, 2011	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BOX CULVERT END SECTION DETAILS STRUCTURE NO. 018-8311
CHECKED - MICHAEL D. ROLAPE		ENGINEER OF BRIDGE DESIGN			SHEET NO. 4 OF 6 SHEETS
DRAWN - MICHAEL B. MOSSMAN	PASSED	A Carl Tapp			
CHECKED - D.L.G. / M.D.R.		ENGINEER OF BRIDGES AND STRUCTURES			

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
828	(108,109,110)RS-3	CUMBERLAND	56	42
		CONTRACT NO. 74252		
		ILLINOIS FED. AID PROJECT		



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.

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.

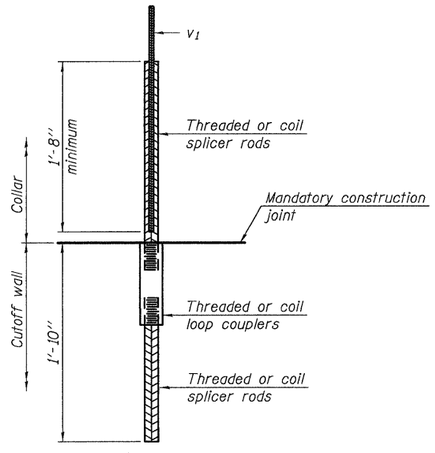
Other systems of similar design may be submitted to the Engineer for approval. Approval shall be based on certified test results from an approved testing laboratory that the proposed bar splicer assembly satisfies the following requirements:

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

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

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

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 12.3 kips - tension
No. Required = 20



FOR BOX CULVERT END SECTIONS

DESIGNED - DAVID L. GREIFZU	EXAMINED	Thomas J. Domagalski ENGINEER OF BRIDGE DESIGN	DATE - August 1, 2011	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	BAR SPLICER ASSEMBLY DETAILS STRUCTURE NO. 018-8311	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - MICHAEL D. ROLAPE						828	(108,109,110)RS-3	CUMBERLAND	56	43
DRAWN - MICHAEL B. MOSSMAN	PASSED							CONTRACT NO. 74252		
CHECKED - D.L.G. / M.D.R.		ENGINEER OF BRIDGES AND STRUCTURES			SHEET NO. 5 OF 6 SHEETS			ILLINOIS FED. AID PROJECT		

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Date 5/27/09

ROUTE FAP 828 (IL 121) DESCRIPTION Box Culvert over Un-named Stream LOGGED BY E. Sandschafer

SECTION (108,109,110)RS-3 LOCATION Sec 27 - SW 1/4, Sec 34 - NW 1/4, SEC., TWP. 10 N, RNG. 8 E, 3 PM

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

STRUCT. NO. 018-8638
Station 545+02.84

BORING NO. 1 West Side
Station 544+72
Offset 8.50ft Rt
Ground Surface Elev. 594.06 ft

Surface Water Elev. 573.59 ft
Stream Bed Elev. 571.84 ft

Groundwater Elev.:
First Encounter Dry ft
Upon Completion 574.9 ft
After 24 Hrs. 576.1 ft

DEPTH (ft)	BLOWS (6")	UCS Qu (tsf)	MOIST (%)
593.16			
5 1/8" asphalt on 6" concrete pavement.			
Medium, damp, gray, CLAY.	1		
	2	0.9	21
	3	B	
-5	1		
	1	0.8	23
	1	B	
587.06			
Soft, damp, red mottled gray, SILTY CLAY.	1		
	1	0.4	23
	1	B	
584.56			
Stiff, damp, gray, CLAY. -10	0		
	1	1.8	25
	2	B	
582.06			
Medium, damp, gray, CLAY w/ Silt.	0		
	1	0.8	36
	1	B	
-15	1		
	1	0.7	23
	1	B	
577.06			
Stiff, damp, gray, SILTY CLAY.	0		
	1	1.5	17
	3	B	
574.56			
Soft, damp, gray, SANDY LOAM. -20	0		

DEPTH (ft)	BLOWS (6")	UCS Qu (tsf)	MOIST (%)
Soft, damp, gray, SANDY LOAM. (continued)	1	0.3	22
	2	B	
572.06			
Very soft, very damp, gray, SILT. 571.56	0		
Very loose, damp, gray, SILTY CLAY w/Sandstone fragments.	2		11
	2		
569.06 -25	26		
Very dense, moist, gray, SANDY CLAY SHALE.	50/3"		9
	50/1"		
566.56	50/4"		8
Extent of exploration.	50/2"		
	50/1"		
Benchmark: BM 308A Chiseled square on top center of concrete headwall at private entrance South of culvert, Sta 547+00, 23' Rt = 594.26' elevation. Provided by Program Development. -30			
-35			
-40			

Latitude W 88 deg 17.832 min, Longitude N 39 deg 16.362 min, Map Datum WGS 84

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

BBS, form 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
Illinois Department of Transportation

SOIL BORING LOG

Date 5/27/09

ROUTE FAP 828 (IL 121) DESCRIPTION Box Culvert over Un-named Stream LOGGED BY E. Sandschafer

SECTION (108,109,110)RS-3 LOCATION Sec 27 - SW 1/4, Sec 34 - NW 1/4, SEC., TWP. 10 N, RNG. 8 E, 3 PM

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

STRUCT. NO. 018-8638
Station 545+02.84

BORING NO. 2 East Side
Station 545+28
Offset 9.00ft Lt
Ground Surface Elev. 593.88 ft

Surface Water Elev. 573.59 ft
Stream Bed Elev. 571.84 ft

Groundwater Elev.:
First Encounter Dry ft
Upon Completion Dry ft
After 24 Hrs. Dry ft

DEPTH (ft)	BLOWS (6")	UCS Qu (tsf)	MOIST (%)
4 7/8" asphalt on 8 3/4" concrete pavement. 592.78			
Stiff to medium, damp, red mottled gray, SILTY CLAY.	1		
	1	1.2	19
	1	B	
-5	1		
	1	1.0	20
	1	B	
586.88			
Medium to soft, damp, gray, CLAY w/Silt and wood.	0		
	1	0.7	27
	1	B	
-10	0		
	1	0.5	24
	2	B	
581.88			
Medium to stiff, damp, gray mottled brown, CLAY.	0		
	1	1.0	25
	2	B	
-15	0		
	1	1.2	28
	2	B	
576.88			
Stiff, damp, gray, SANDY CLAY LOAM.	1		
	3	1.2	13
	4	S	
574.38			
-20	2		

DEPTH (ft)	BLOWS (6")	UCS Qu (tsf)	MOIST (%)
Stiff, damp, gray marbled red. 573.38	6	1.3	16
SANDY CLAY TILL. (continued)	50/2"	S	
Gray, SANDSTONE. 571.88			
Very dense, moist, brown, SANDY CLAY SHALE. 571.38	50/5"		8
	50/2"		
Extent of exploration.	50/0"		
-25			
Benchmark: BM 308A Chiseled square on top center of concrete headwall at private entrance South of culvert, Sta 547+00, 23' Rt = 594.26' elevation. Provided by Program Development.			
-30			
-35			
-40			

Latitude W 88 deg 17.821 min, Longitude N 39 deg 16.364 min, Map Datum WGS 84

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

BBS, form 137 (Rev. 8-99)

DESIGNED - DAVID L. GREIFZU	EXAMINED	Thomas J. Domagalski	DATE - August 1, 2011	**STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION**	**SOIL BORING LOGS STRUCTURE NO. 018-8311**	F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
CHECKED - MICHAEL D. ROLAPE		ENGINEER OF BRIDGE DESIGN			SHEET NO. 6 OF 6 SHEETS	828	(108,109,110)RS-3	CUMBERLAND	56	44
DRAWN - MICHAEL B. MOSSMAN	PASSED	A. Carl Preuss						CONTRACT NO. 74252		
CHECKED - D.L.G. / M.D.R.		ENGINEER OF BRIDGES AND STRUCTURES						ILLINOIS FED. AID PROJECT		

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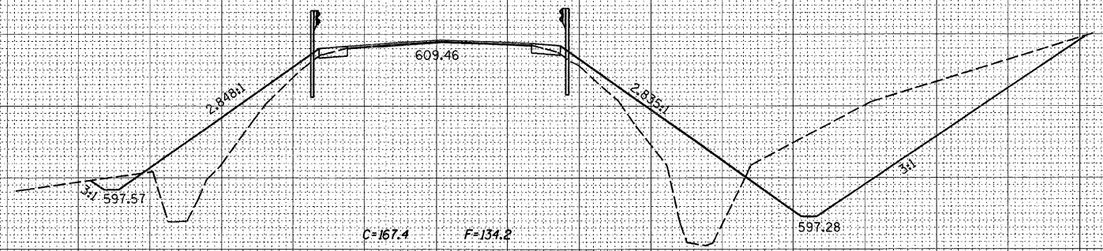
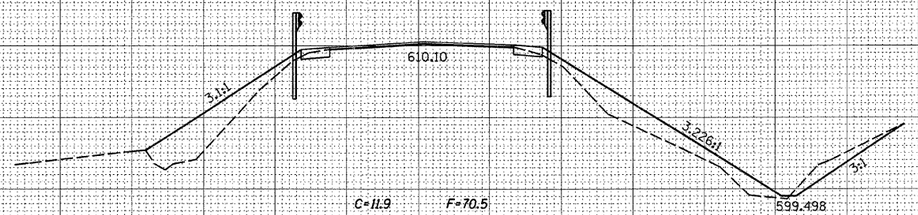
610
605
600



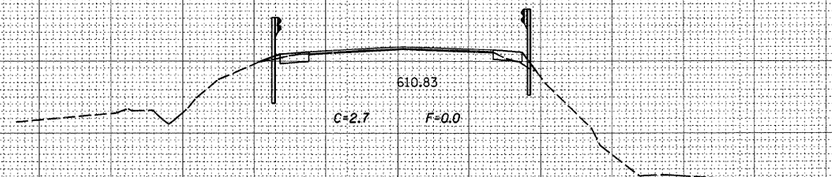
305 + 50.00

610
605
600



305 + 25.00

610
605



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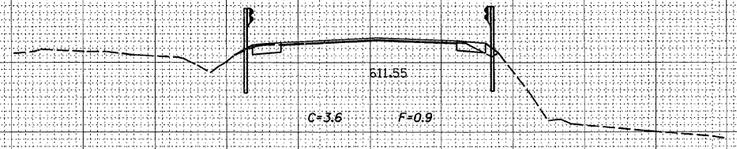
610
605



304 + 75.00

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

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

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		DRAWN -	REVISED -
	PLOT SCALE = 10.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 5/4/2011	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
SN 018-8650

SCALE: | SHEET NO. OF SHEETS | STA. 304+75.00 STA. 305+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	(108, 109, 110)RS-3	CUMBERLAND	56	45
		CONTRACT NO. 74252		
	ILLINOIS FED. AID PROJECT			

• 828, 773

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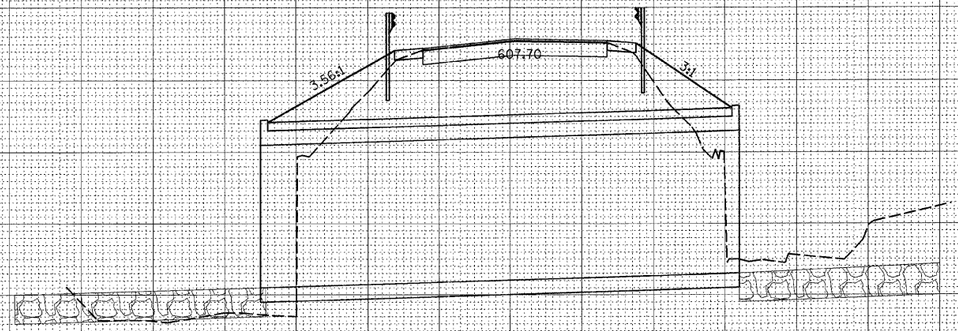
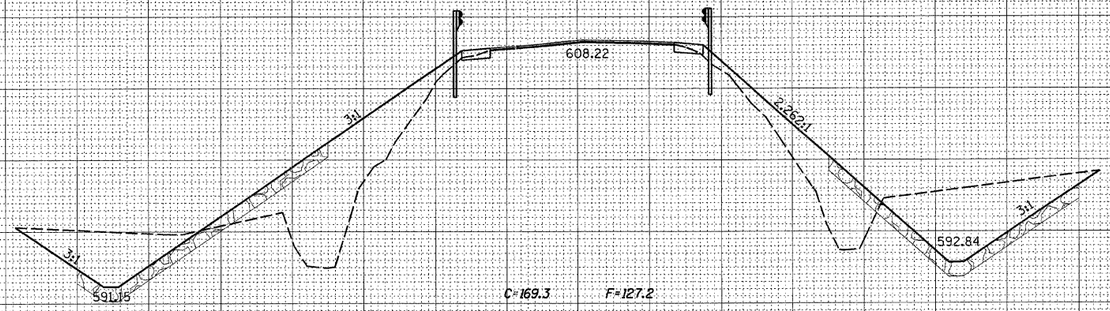
605 600 595 590

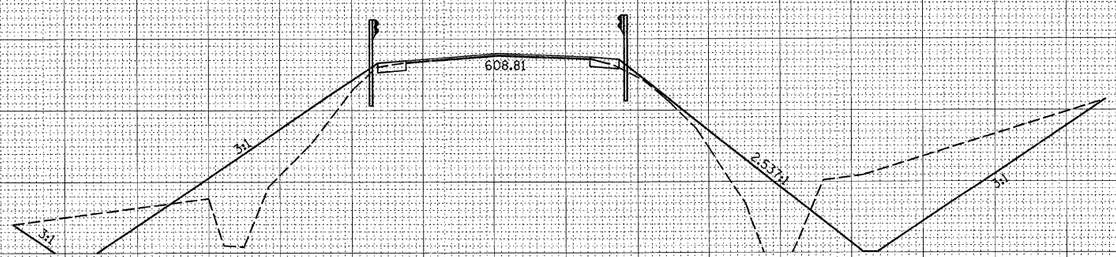


306 + 22.00



C=169.3 F=127.2

306 + 00.00



C=169.3 F=127.2

305 + 75.00

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

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	PLOT DATE = 5/4/2011	DATE -	REVISED -

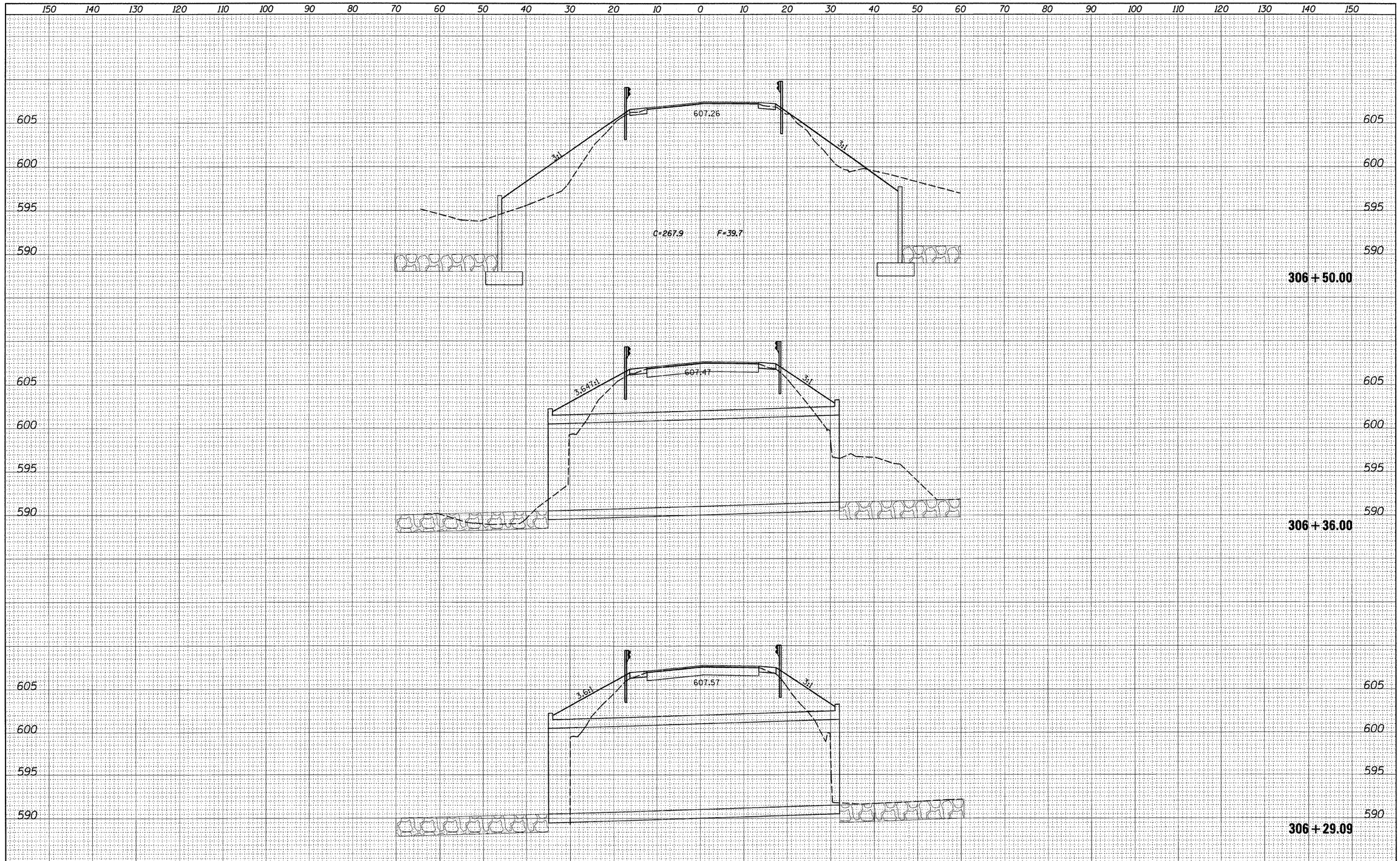
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
SN 018-8650

SCALE: | SHEET NO. OF SHEETS | STA. 305+75.00 STA. 306+22.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	(108, 109, 110)RS-3	CUMBERLAND	56	46
		CONTRACT NO. 74252		
	ILLINOIS FED. AID PROJECT			

• 828, 773



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		DRAWN -	REVISED -		
	PLOT SCALE = 10.0000 ' / in.	CHECKED -	REVISED -		
	PLOT DATE = 5/4/2011	DATE -	REVISED -		SCALE: SHEET NO. OF SHEETS STA. 306+29.09 STA. 306+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	(108, 109, 110)RS-3	CUMBERLAND	56	47
		CONTRACT NO. 74252		
	ILLINOIS FED. AID PROJECT			

• 828, 773

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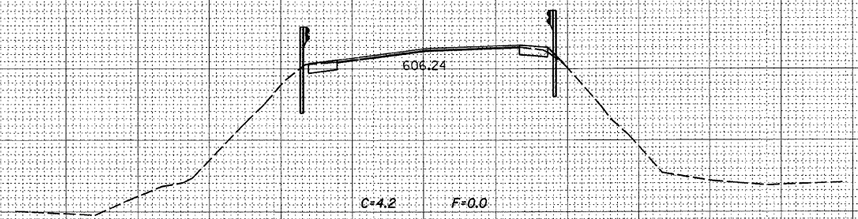
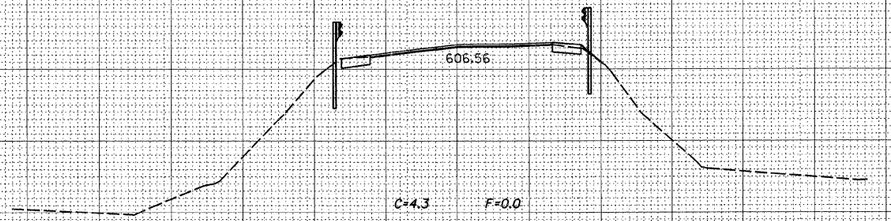
605
600
595

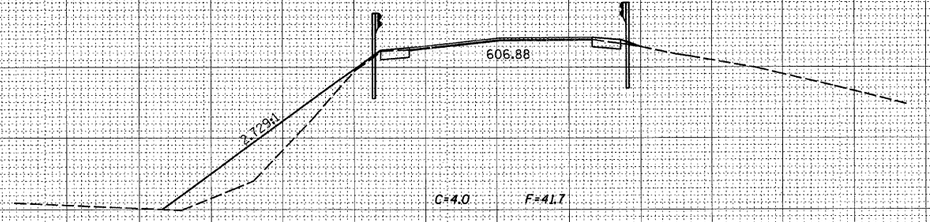
307+50.00



307+25.00



307+00.00



306+75.00

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

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

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

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	PLOT DATE = 5/4/2011	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

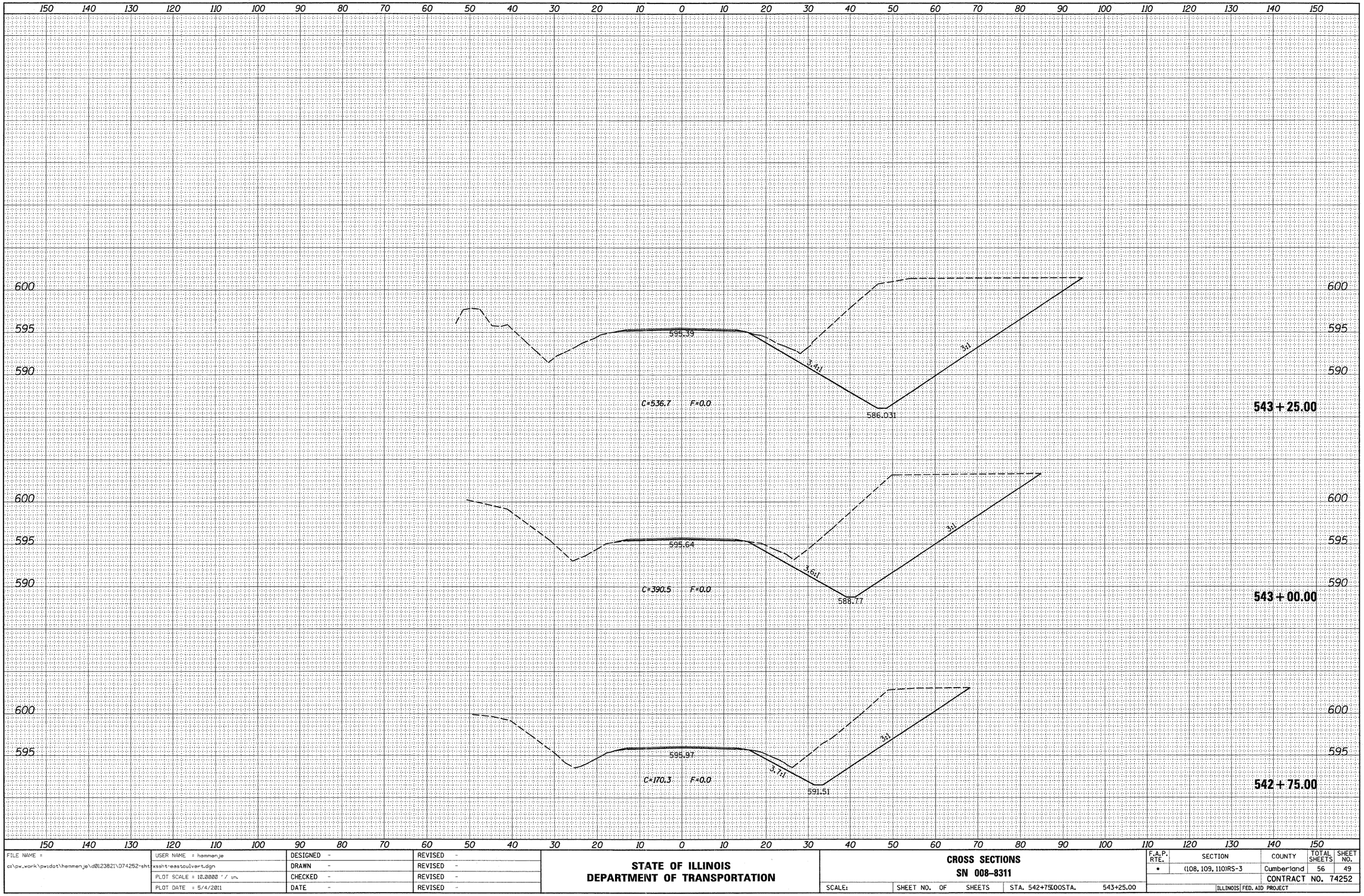
CROSS SECTIONS
SN 018-8650

SCALE: | SHEET NO. OF SHEETS | STA. 306+75.00 STA. 307+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	(108, 109, 110)RS-3	CUMBERLAND	56	48
		CONTRACT NO. 74252		
	ILLINOIS FED. AID PROJECT			

• 828, 773

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



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

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	PLOT DATE = 5/4/2011	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
SN 008-8311

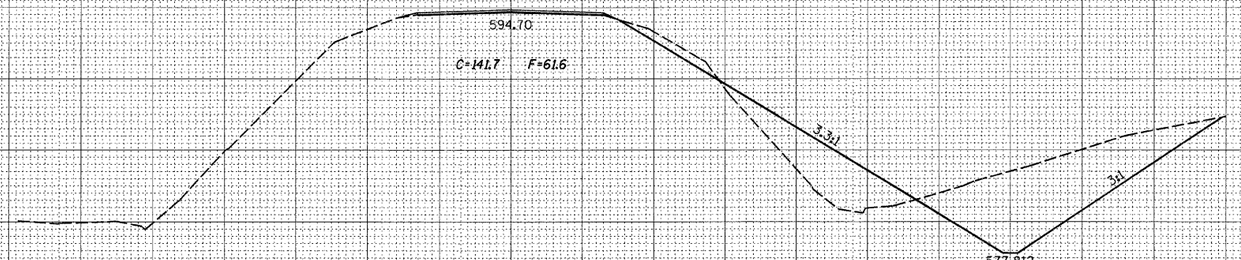
SCALE: | SHEET NO. OF SHEETS | STA. 542+75.00 STA. 543+25.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	(108, 109, 110)RS-3	Cumberland	56	49
		CONTRACT NO. 74252		
	ILLINOIS FED. AID PROJECT			

• 828, 773

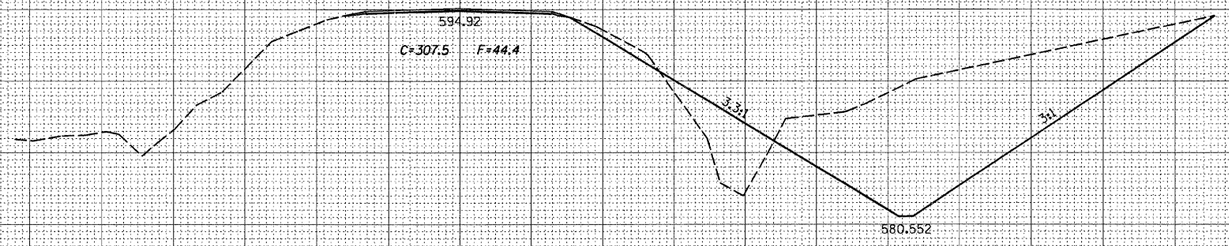
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

590 585 580



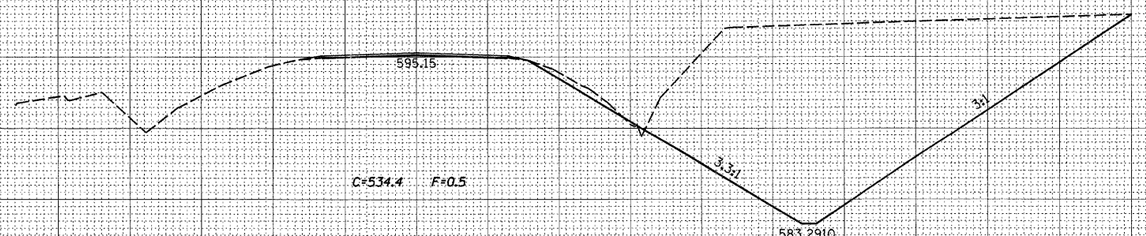
544 + 00.00

595 590 585 580



543 + 75.00

605 600 595 590 585



543 + 50.00

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

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

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	PLOT DATE = 5/4/2011	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
SN 008-8311

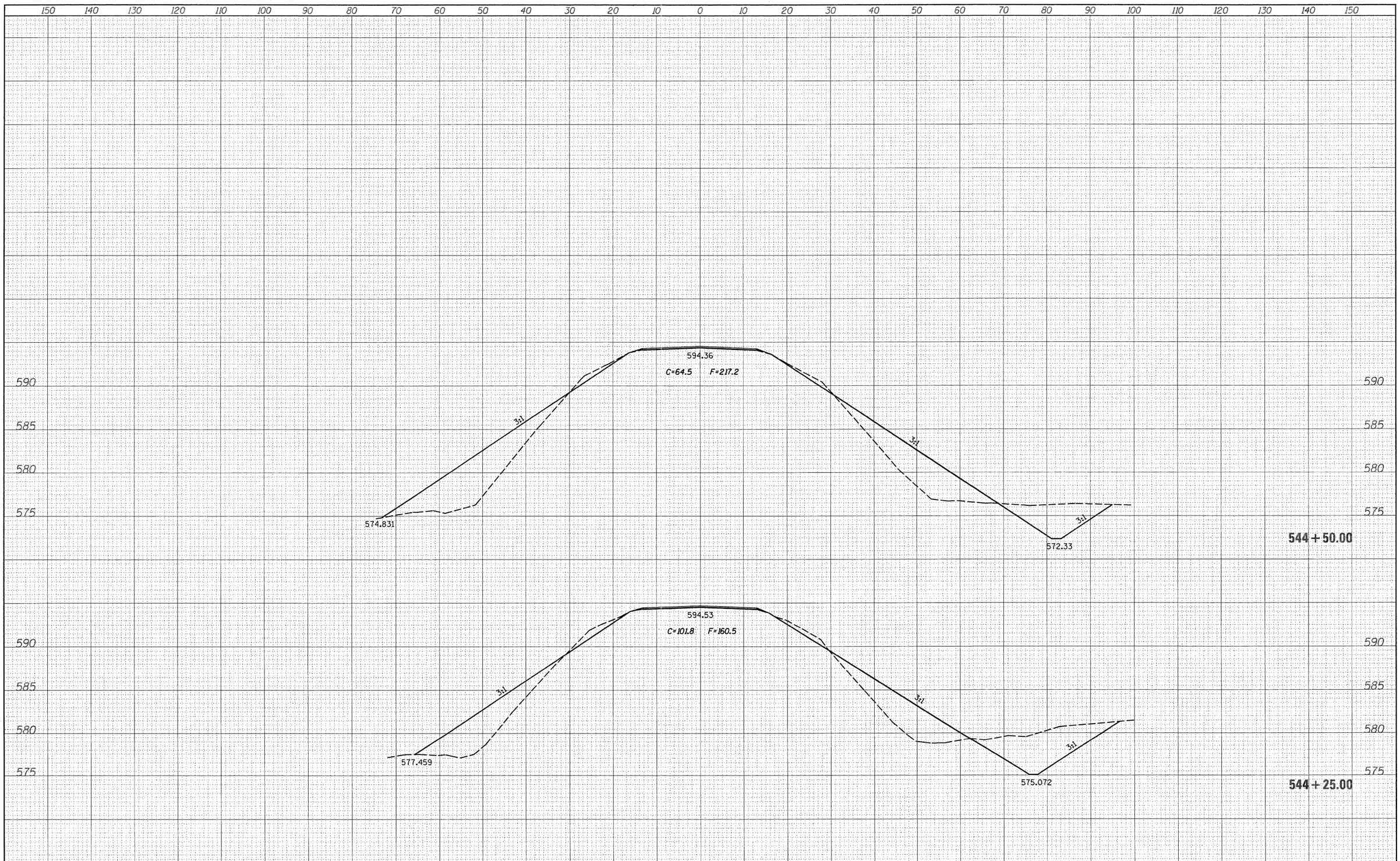
SCALE: | SHEET NO. OF SHEETS | STA. 543+50.00 STA. 544+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	(108, 109, 110)RS-3	Cumberland	56	50
		CONTRACT NO. 74252		
	ILLINOIS FED. AID PROJECT			

• 828, 773

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

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



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	PLOT DATE = 5/4/2011	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
SN 008-8311

SCALE: | SHEET NO. OF SHEETS | STA. 544+25.00 STA. 544+50.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	(108, 109, 110)RS-3	Cumberland	56	51
		CONTRACT NO. 74252		
	ILLINOIS FED. AID PROJECT			

• 828, 773

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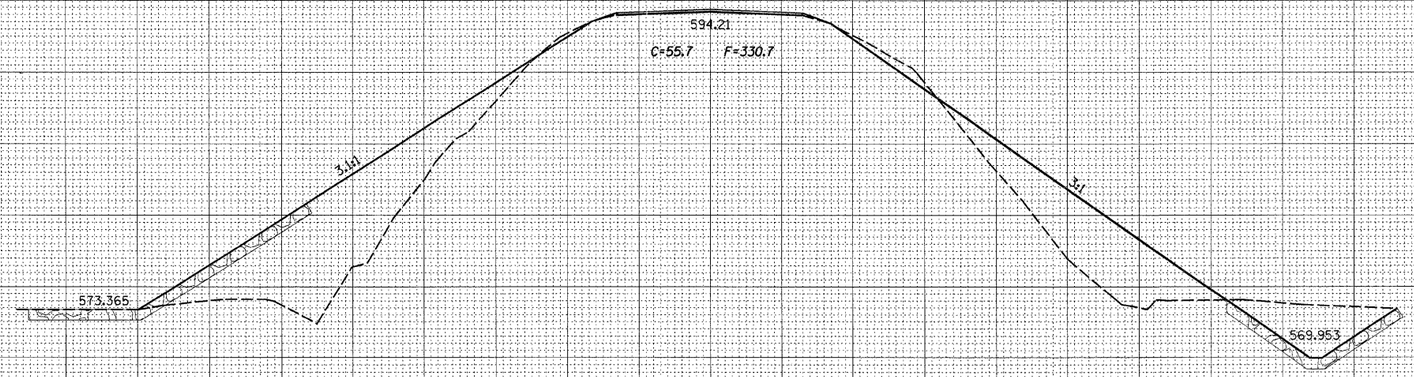
590 585 580 575 570

544 + 92.66



544 + 75.00

590 585 580 575 570

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

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

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

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		DRAWN -	REVISED -
	PLOT SCALE = 10.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 5/4/2011	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
SN 008-8311

SCALE: | SHEET NO. OF SHEETS | STA. 544+75.00 STA. 544+92.66

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	(108, 109, 110)RS-3	Cumberland	56	52
		CONTRACT NO. 74252		
	ILLINOIS FED. AID PROJECT			

• 828, 773

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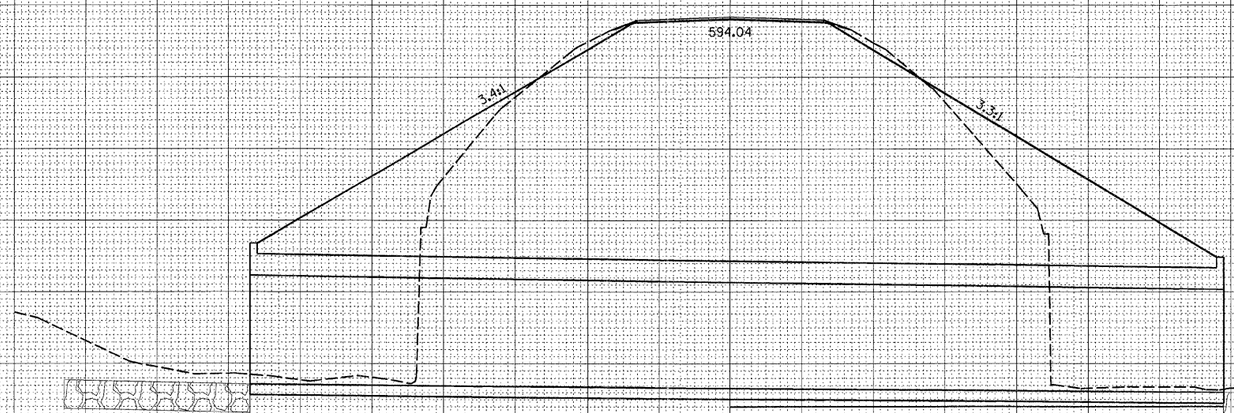
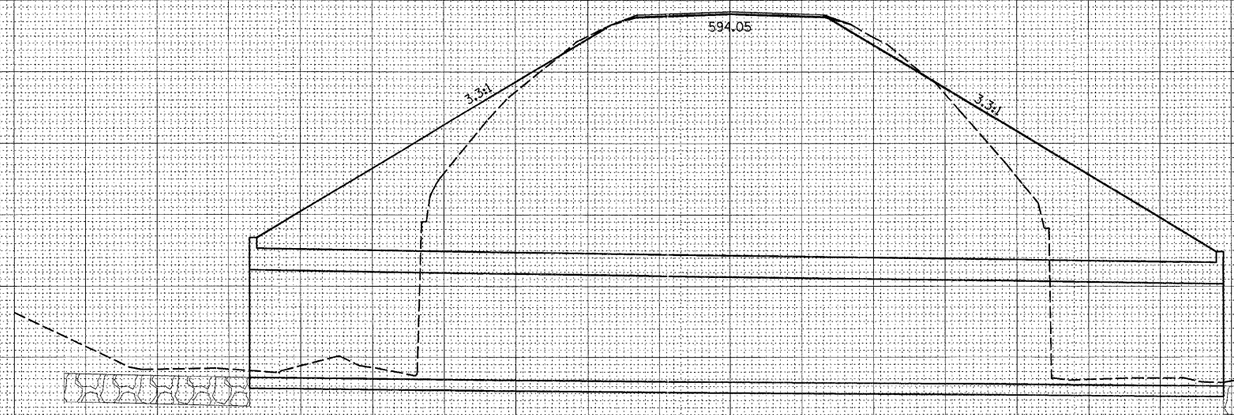
590
585
580
575
570



545 + 03.00



545 + 00.00

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

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

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

FILE NAME = c:\pw_work\pwidot\hammenje\d0123821\D74252-sht-xssht-eastculvert.dgn	USER NAME = hammenje	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 10.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 5/4/2011	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
SN 008-8311

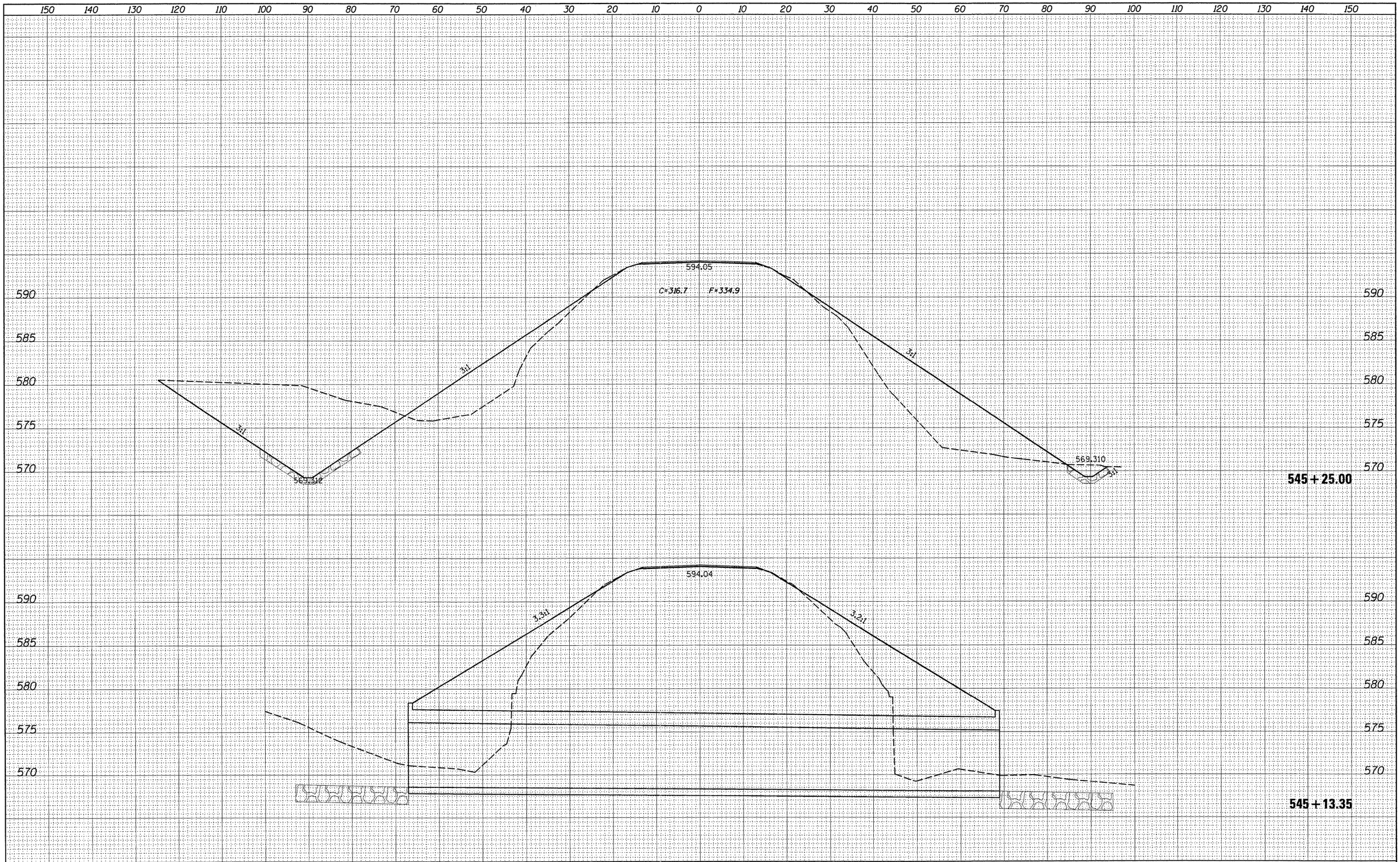
SCALE: | SHEET NO. OF SHEETS | STA. 545+00.00 STA. 545+03.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	(108, 109, 110)RS-3	Cumberland	56	53
		CONTRACT NO. 74252		
	ILLINOIS FED. AID PROJECT			

• 828, 773

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

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



FILE NAME = c:\pw_work\pwidot\hemmenje\d0123821\D74252-sht-xssht-eastculvert.dgn	USER NAME = hemmenje	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 10.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 5/4/2011	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
SN 008-8311

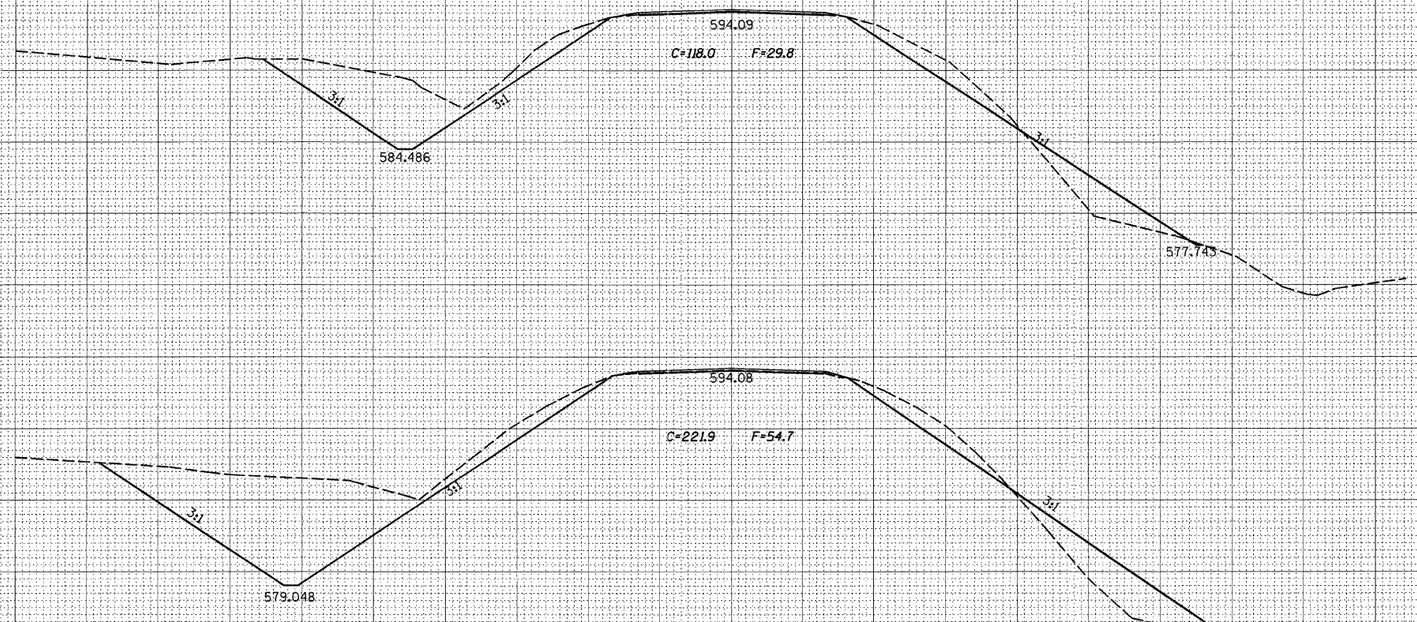
SCALE: | SHEET NO. OF SHEETS | STA. 545+13.35 STA. 545+25.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	(108, 109, 110)RS-3	Cumberland	56	54
		CONTRACT NO. 74252		
	ILLINOIS FED. AID PROJECT			

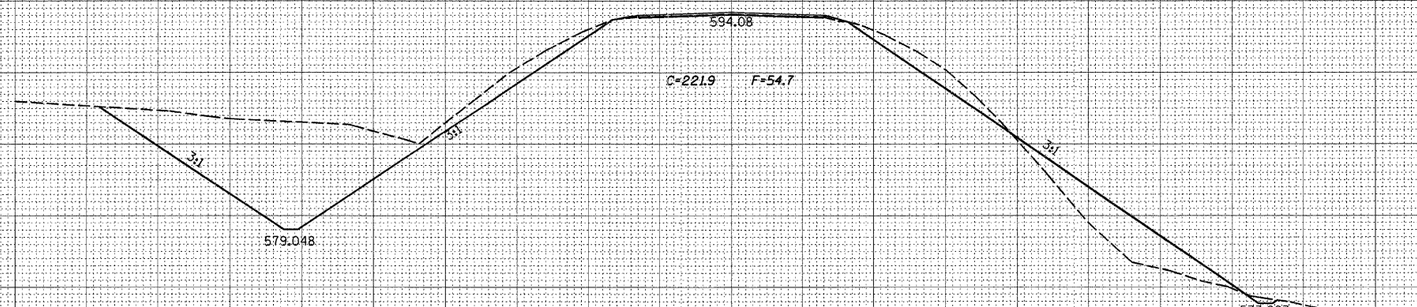
• 828, 773

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

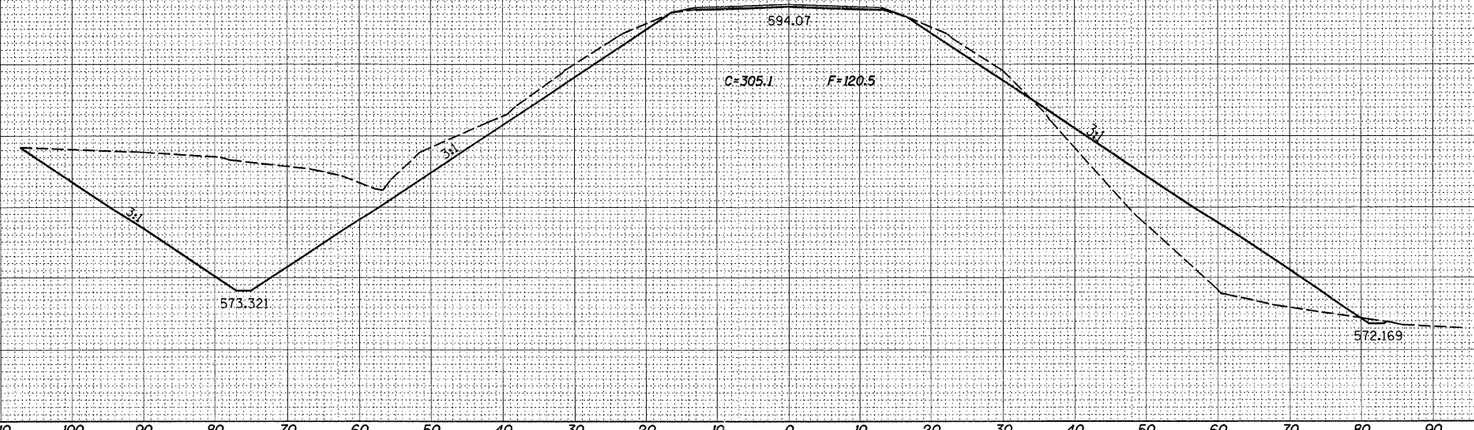
590
585
580
575



546 + 00.00



545 + 75.00



545 + 50.00

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

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

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

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		DRAWN -	REVISED -
	PLOT SCALE = 10.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 5/4/2011	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
SN 008-8311

CROSS SECTIONS
SN 008-8311

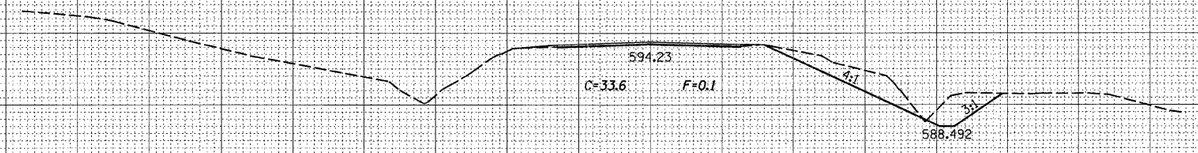
SCALE:	SHEET NO. OF SHEETS	STA. 545+50.00 STA. 546+00.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	(108, 109, 110)RS-3	Cumberland	56	55
		CONTRACT NO. 74252		
	ILLINOIS FED. AID PROJECT			

• 828, 773

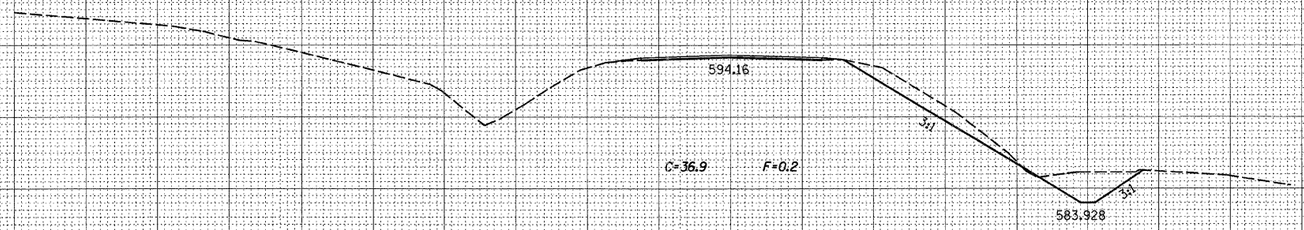
150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

595
590



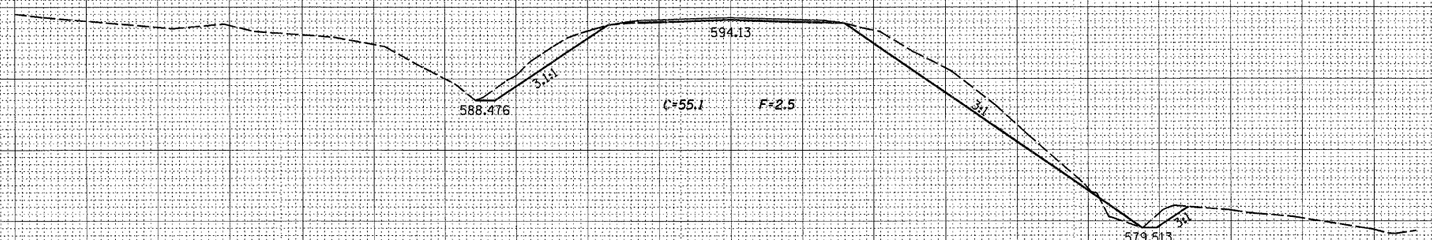
546 + 75.00

595
590
585



546 + 50.00

590
585
580



546 + 25.00

150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150

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

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

FILE NAME = c:\pw_work\pwidot\hammenje\d0123821\D74252-sht-xssht-eastculvert.dgn	USER NAME = hammenje	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 10.0000 ' / in.	CHECKED -	REVISED -
	PLOT DATE = 5/4/2011	DATE -	REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

CROSS SECTIONS
SN 008-8311

SCALE: | SHEET NO. OF SHEETS | STA. 546+25.00 STA. 546+75.00

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
•	(108, 109, 110)RS-3	Cumberland	56	56
		CONTRACT NO. 74252		
	ILLINOIS FED. AID PROJECT			

• 828, 773