

DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS

**PROPOSED  
HIGHWAY PLANS**

FAP ROUTE 619 (IL 71)  
SECTION 120BR,CR  
PUTNAM COUNTY

C-94-110-07  
PROJECT F-0619(021)

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
619	120BR,CR	PUTNAM	77	1
		ILLINOIS	CONTRACT NO. 68740	

QC/QA CONCRETE

NPDES REQUIRED

FOR INDEX OF SHEETS, SEE SHEET NO. 2

ADT = 4800 (2011)

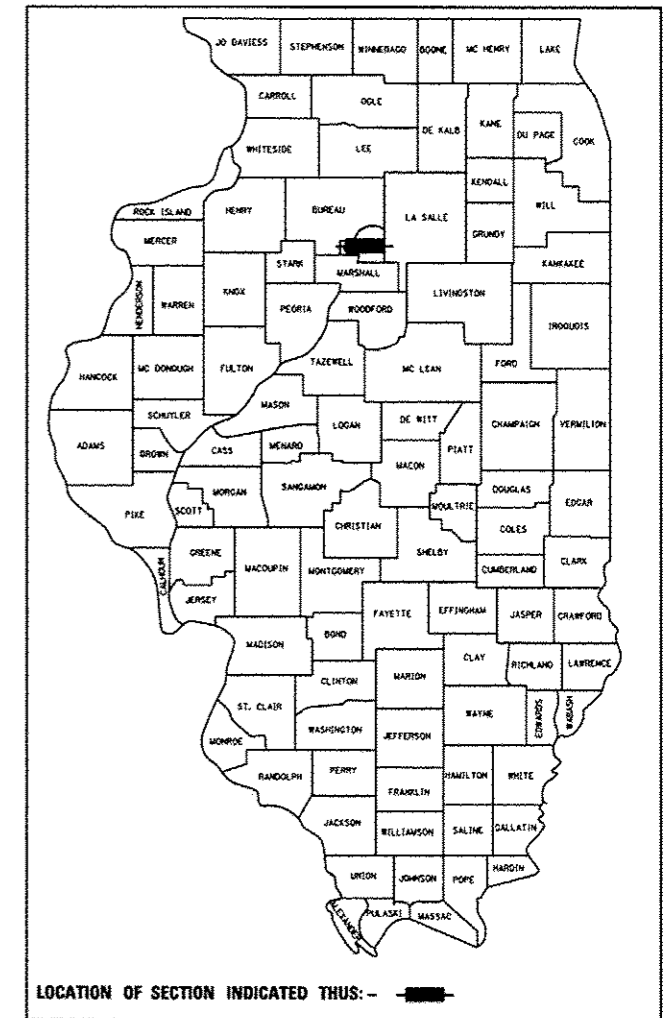
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%MU = 4.2%

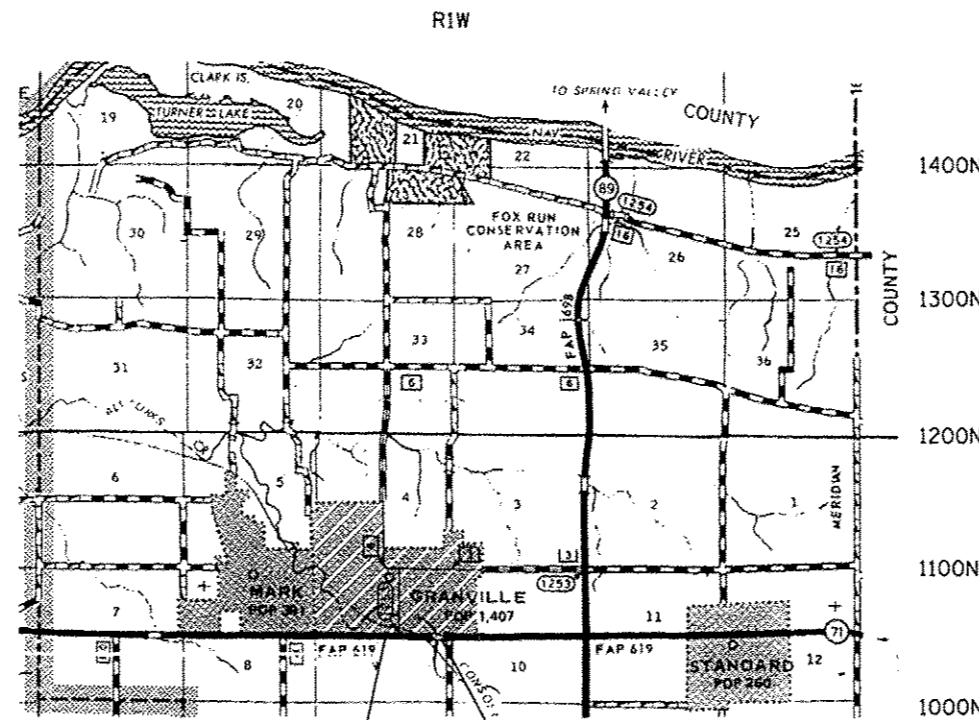
DESIGN DESIGNATION CLASS II TRUCK ROUTE

FUNCTIONAL CLASSIFICATION: MINOR ARTERIAL

D-94-072-07



DESCRIPTION OF WORK:  
 THE PROPOSED IMPROVEMENT CONSISTS OF REPLACING THE STRUCTURE CARRYING IL 71 OVER DITCH (EXIST. S.N. 078-0030), 1.1 MILES WEST OF IL 89, AND THE REPLACEMENT OF A BOX CULVERT (EXIST. S.N. 078-1001) AND EXTENSION OF AN ELLIPTICAL CULVERT, 0.5 MILE EAST OF LAUGHLIN DRIVE IN GRANVILLE.



PROJECT ENGINEER: RICH DOTSON (309) 671-3455  
 DESIGN ENGINEER: KEVIN HORST (309) 671-3472 /  
 JOSHUA JOCHUMS

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

EXIST. S.N. 078-1001/PROP. S.N. 078-2500  
 CONSTRUCTION BEGINS: STA. 11+949  
 IMPROVEMENT BEGINS: STA. 12+002.9  
 IMPROVEMENT ENDS: STA. 12+106

EXIST. S.N. 078-0030/PROP. S.N. 078-2007  
 IMPROVEMENT BEGINS: STA. 12+476  
 IMPROVEMENT ENDS: STA. 12+600  
 CONSTRUCTION ENDS: STA. 12+651

OMMISSION: STA. 12+106 TO STA. 12+476

SURVEY BOOK NO. 2906  
 CATALOG NO. 033197-03D  
 CONTRACT NO. 68740

GROSS LENGTH = 702 METERS = 0.702 KILOMETERS  
 NET LENGTH = 227.1 METERS = 0.227 KILOMETERS

STATE OF ILLINOIS  
 DEPARTMENT OF TRANSPORTATION  
 DIVISION OF HIGHWAYS

SUBMITTED MARCH 21, 2013

Joseph E. Hoover  
 DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

May 10, 2013  
John D. Baranzolo, PE  
 acting ENGINEER OF DESIGN AND ENVIRONMENT

May 10, 2013  
ONEC OSWALD, PE  
 DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

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# INDEX OF SHEETS

# HIGHWAY STANDARDS

CONTRACT #68740

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
619	120BR,CR	PUTNAM	77	2
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS		FED. AID PROJECT	

SHEET NO.	DESCRIPTION	STANDARD NO.	DESCRIPTION
1	COVER SHEET	000001-06	STANDARDS, SYMBOLS, ABBREVIATIONS, AND PATTERS
2	INDEX OF SHEETS	280001-07	TEMPORARY EROSION CONTROL SYSTEMS
3-4	GENERAL NOTES & COMMITMENTS	442201-03	CLASS C&D PATCHES
5	PROJECT SPECIFIC NOTES	515001-03	NAME PLATE FOR BRIDGES
6-8	STATUS OF UTILITIES	542401-01	METAL END SECTION FOR PIPE CULVERTS
9-14	SUMMARY OF QUANTITIES	630101-09	GUARDRAIL MOUNTED ON EXISTING CULVERTS
15-17	TYPICAL SECTIONS	635011-02	REFLECTOR MARKER AND MOUNTING DETAILS
18-21	SCHEDULE OF QUANTITIES	666001-01	R.O.W. MARKERS
22-23	ALIGNMENT SURVEY TIES, BENCHMARKS, CONTROL POINTS	701006-05	OFF-RD OPERATIONS, 2L, 2W, 15' TO 24' FROM EOP
24	EXISTING AND REMOVAL DETAILS	701201-04	LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS > OR = 45 MPH
25-26	IL 71 PLAN AND PROFILE SHEETS	701301-04	LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS
27	STREAM PLAN AND PROFILE AT CULVERT STA. 12+530	701311-03	LANE CLOSURE, 2L, 2W, MOVING OPERATIONS-DAY ONLY
28-30	CULVERT 12+058.5 STAGING SHEETS	701321-13	LANE CLOSURE, 2L, 2W, BRIDGE REPAIR WITH BARRIER
31-32	CULVERT 12+530 STAGING SHEETS	701326-04	LANE CLOSURE, 2L, 2W, PAVEMENT WIDENING, FOR SPEEDS > OR = 45 MPH
33-35	TEMPORARY BRIDGE TRAFFIC SIGNAL DETAILS	701901-03	TRAFFIC CONTROL DEVICES
36	EROSION AND SEDIMENT CONTROL DETAILS	704001-07	TEMPORARY CONCRETE BARRIER
37	RIGHT-OF-WAY SHEETS	780001-04	TYPICAL PAVEMENT MARKINGS
38-41	STRUCTURE REPAIR PLANS (S.N. 078-1001 AND S.N. 078-0030)	781001-03	TYPICAL APPLICATIONS RAISED REFLECTIVE PAVEMENT MARKERS
42-49	STRUCTURE PLANS (S.N. 078-2007)	857001-01	STANDARD PHASE DESIGNATION DIAGRAMS AND PHASE SEQUENCES
50-51	SOIL BORINGS (S.N. 078-1001)	857006-01	SUPERVISED RAILROAD INTERCONNECT CIRCUIT
52	MILL & OVERLAY DETAIL	886001-01	DETECTOR LOOP INSTALLATIONS
53-54	EXISTING BRIDGE DETAILS	886006-01	TYPICAL LAYOUTS FOR DETECTION LOOPS
55	HANDRAIL AT CULVERT 12+530 DETAIL	B.L.R. 22-7	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS
56-57	RURAL ENTRANCE DETAIL		
58-68	DISTRICT STANDARDS		
69-72	CROSS SECTIONS AT S.N. 078-2500		
73-74	CROSS SECTIONS AT S.N. 078-2007		
75-77	STREAM CROSS SECTIONS AT S.N. 078-2007		

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

INDEX

DATE \_\_\_\_\_ DRAWN BY \_\_\_\_\_  
 CHECKED BY \_\_\_\_\_

CONTRACT #68740

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
619	120BR.CR	PUTNAM	77	3
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

**AVAILABILITY OF ELECTRONIC FILES**

Micro Station and GEOPAK files of this project will be made available to the Contractor. If there is a conflict between the electronic files and the printed contract plans and documents, the printed contract plans and documents shall take precedence over the electronic files. The Contractor shall accept all risk associated with using the electronic files and shall hold the Department harmless for any errors or omissions in the electronic files and the data contained therein. Errors or delays resulting from the use of the electronic files by the Contractor shall not result in an extension of time for any interim or final completion date or shall not be considered cause for additional compensation. The Contractor shall not use, share, or distribute these electronic files except for the purpose of constructing this contract. Any claims by third parties due to use or errors shall be the responsibility of the Contractor. The Contractor shall include this disclaimer with the transfer of these electronic files to any other parties and shall include appropriate language binding them to similar responsibilities.

**UTILITIES -- LOCATIONS /INFORMATION ON PLANS**

The locations of existing water mains, gas mains, sewers, electric power lines, telephone lines and other utilities as shown on the plans are based on careful field investigation and the best information available, but they are not guaranteed. Unless elevations are shown — all utility locations shown on the cross sections are based on the approximate depth supplied by the utility company. It shall be the Contractor's responsibility to ascertain their exact location from the utility companies and by field inspection.

**TREE REMOVAL -- UTILITY RELOCATION**

Tree removal may be necessary prior to utility companies being able to relocate their facilities outside the construction limits. The Contractor should coordinate any contract tree removal activities with the utility companies to eliminate conflicts and potential delays caused by utility tree removal activities or incomplete utility relocations.

**PLAN ELEVATIONS -- U. S. G. S. MEAN SEA LEVEL DATUM**

1. All elevations shown on the plans are established from U. S. G. S. mean sea level datum.

**TREE REMOVAL**

The District Four Tree Committee should be contacted and prior approval obtained for any tree removal beyond the limits/locations included in the plans.

**ENVIRONMENTAL REVIEWS**

Prior to the use of any proposed borrow areas, use areas (temporary access roads, detours, run-arounds, etc.) and/or waste areas, the Contractor shall file the required environmental resource request surveys according to Section 107.22 of the Standard Specifications. These surveys are required in order for the Department to conduct cultural and biological resource surveys for the proposed site.

Prior to any waste materials being removed from the construction site the required environmental resource surveys will need to be obtained and filed by the Contractor. Excess waste products removed from the construction site shall be disposed of as required in Section 202.03 of the Standard Specifications.

Any protruding metal bars shall be removed prior to the disposal of broken concrete at approved disposal sites.

The required environmental resource documentation shall include the following:

- \* BDE Form 2289 (Environmental Survey Request)
- \* A location map showing the size limits and location of the use area
- \* Signed property owner agreement form-D4 PI0100
- \* Color photographs depicting the use area
- \* Borrow Area Entry Agreement form-D4 PI0101

Please note that a minimum of two weeks shall be allowed for the District to obtain the required environmental clearances.

**AGGREGATE FOR DRIVEWAY REPLACEMENT**

The material used for construction of permanent aggregate driveways shall be gravel or crushed stone as directed by the Engineer, to replace in kind the existing aggregate driveways.

No additional compensation shall be provided for this requirement but shall be considered as included in the cost of the pay item for the aggregate as specified on the plans.

**HMA MIXTURE REQUIREMENTS**

Mixture Use(s):	Surface Course	Leveling Binder (Variable Depth 1.5" to 2.0")	Base Cse & Widening (Lower Lifts)	Base Cse & Widening (Surface Lift)
AC/PG:	PG 64-22	PG 64-22	PG 64-22	PG 64-22
RAP% (Max): **	15%	15%	25%	15%
Design Air Voids:	4.0% @ N=50	4.0% @ N=50	4.0% @ N=50	3.0% @ N=50
Mixture Composition:	IL 9.5 or IL 12.5	IL 9.5 or IL 12.5	IL 19.0	IL 9.5 or 12.5
Friction Aggregate:	Mixture D	N.A.	N.A.	Mixture C

Notes: Individual lift thickness of each mix type will be no less than 3 times nominal maximum aggregate size and no more than 6 times nominal aggregate size.

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION  <b>GENERAL NOTES AND COMMITMENTS</b>  DRAWN BY CHECKED BY
NAME	DATE	
DATE		





CONTRACT #68740

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
619	120BR.CR	PUTNAM	77	5
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

1. THE FOLLOWING RATES OF APPLICATION HAVE BEEN ASSUMED IN CALCULATING PLAN

QUANTITIES:

COURSE AGGREGATE	2.43	METRIC TON/CU. M
FINE AGGREGATE	1.78	METRIC TON/CU. M
BITUMINOUS MATERIALS PRIME COAT	SEE GENRAL NOTES	
LEVEL BINDER (MACHINE METHOD)	2.39	KG/(SQ. M*MM)
HMA SURFACE COURSE	2.39	KG/(SQ. M*MM)
NITROGEN FERTILIZER NUTRIENTS (SEED/SOD)	100	KG/HA
PHOSPHOROUS FERTILIZER NUTIRENTS (SEED/SOD)	100	KG/HA
POTASSIUM FERTILIZER NUTRIENTS (SEED/SOD)	100	KG/HA
RIPRAP	1.78	METRIC TON/CU. M

2. THE THEORETICAL CENTERLINE (HORIZONTAL ALIGNMENT) PROVIDED IN THE PLANS FOR IL 71 DOES NOT NECESSARILY MATCH THE LOCATION OF THE PHYSICAL CENTERLINE JOINT (EXISTING CROWN) IN THE EXISTING PAVEMENT. IT IS NOT THE INTENTION OF THIS IMPROVEMENT TO RELOCATE THE CENTERLINE JOINT TO MATCH THE THEORETICAL CENTERLINE.

3. ALL TYPE 3 BARRICADES SHOWN IN THE STAGING DETAILS FOR THE CULVERT AT 12+530 SHALL BE INCLUDED IN TRAFFIC CONTROL STANDARD 701321.

4. THE STRUCTURE PLANS FOR S.N. 078-2007 DETAIL PROPOSED STROM SEWER ENTERING INTO THE EAST AND WEST SIDES OF THE PROPOSED STRUCUTRE. THE ROADWAY PLANS WERE REVISED AFTER THE STRUCTURE PLANS WERE COMPLETED. THERE NO LONGER WILL BE ANY PROPOSED STORM SEWER TO CONNECT TO PROPOSED S.N. 078-2007. LIKEWISE, THE STRUCTURE PLANS FOR S.N. 078-2007 SHOW PROPOSED CURB AND GUTTER ON IL ROUTE 71. THE ROADWAY PLANS WERE REVISED SINCE THE STRUCTURE PLANS WERE COMPLETED, AND THERE IS NO PROPOSED CURB AND GUTTER ON THIS PROJECT. SEE THE ROADWAY PLANS FOR INFORMATION ON THE PROPOSED ROADWAY OVER PROPOSED S.N. 078-2007.

5. CADD STANDARD 540000 APPLIES TO THE PROPOSED CULVERT AT IL 71 STA. 12+058.5 AND NOT AT THE PROPOSED CULVERT AT IL 71 STA. 12+530.

6. THERE IS AN EXISTING 280 MM THICK REINFORCED CONCRETE SLAB OVER EXISTING S.N. 078-0030. THE REMOVAL OF THIS SLAB SHALL BE INCLUDED IN THE COST OF THE PROPOSED CLASS D PATCH AT THIS LOCATION.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**PROJECT SPECIFIC NOTES**  
 DRAWN BY \_\_\_\_\_  
 CHECKED BY \_\_\_\_\_  
 DATE \_\_\_\_\_







80% FEDERAL  
20% STATE

CONSTRUCTION CODE

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE		
				PUTNAM COUNTY ROADWAY 0004	PUTNAM COUNTY S. N. 078-2500 0040	PUTNAM COUNTY S. N. 078-2007 0040
28000500	INLET AND PIPE PROTECTION	EACH	3	3		
40600895	CONSTRUCTING TEST STRIP	EACH	1	1		
50100300	REMOVAL OF EXISTING STRUCTURES NO. 1	EACH	1		1	
50100400	REMOVAL OF EXISTING STRUCTURES NO. 2	EACH	1			1
50800515	BAR SPLICERS	EACH	114			114
51500100	NAME PLATES	EACH	1			1
54001001	BOX CULVERT END SECTIONS, CULVERT NO. 1	EACH	2		2	
66600105	FURNISHING AND ERECTING RIGHT-OF-WAY MARKERS	EACH	17	17		
66700205	PERMANENT SURVEY MARKERS, TYPE I	EACH	4	4		
67000400	ENGINEER'S FIELD OFFICE, TYPE A	CAL MO	12	12		
67100100	MOBILIZATION	L SUM	1	1		
70100405	TRAFFIC CONTROL AND PROTECTION, STANDARD 701321	EACH	2	2		
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1	1		
70100500	TRAFFIC CONTROL AND PROTECTION, STANDARD 701326	L SUM	1	1		

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FILE NAME * plot.dgn	USER NAME * subr999	DESIGNED * DRAWN *	REVISED * REVISED *	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES	F.A.P. RTE. 619	SECTION 1206R.CR	COUNTY PUTNAM	TOTAL SHEETS 77	SHEET NO. 9
PLOT SCALE * 100:8000 H / V	CHECKED * DATE *	REVISED * REVISED *	CONTRACT NO. 68740							
PLOT DATE * 3/29/2013	DATE *	REVISED * REVISED *	ILLINOIS FED. AID PROJECT							

80% FEDERAL  
20% STATE

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE		
				PUTNAM	PUTNAM	PUTNAM
				COUNTY	COUNTY	COUNTY
				ROADWAY	S. N. 078-2500	S. N. 078-2007
				0004	0040	0040
70101835	TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 22	L SUM	1	1		
70103815	TRAFFIC CONTROL SURVEILLANCE	CAL DA	5	5		
70106500	TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1	1		
70106800	CHANGEABLE MESSAGE SIGN	CAL MO	2	2		
70600260	IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	EACH	2	2		
* 78100100	RAISED REFLECTIVE PAVEMENT MARKER	EACH	9	9		
78300200	RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	EACH	9	9		
M2010500	TREE REMOVAL, HECTARES	HA	0.1	0.1		
M2020010	EARTH EXCAVATION	CU M	574	574		
M2020050	EARTH EXCAVATION (WIDENING)	CU M	108	108		
M2021200	REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	CU M	145			145
M2030100	CHANNEL EXCAVATION	CU M	536	536		
M2070220	POROUS GRANULAR EMBANKMENT	CU M	317.8	172.8		145
M2101000	GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	SO M	302	302		

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\*SPECIALTY ITEM

FILE NAME * plot.dgn	USER NAME * aubreyg	DESIGNED -	REVISED -
		DRAWN -	REVISED -
		CHECKED -	REVISED -
		DATE -	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
619	120BR.CR	PUTNAM	77	10
			CONTRACT NO. 68740	
ILLINOIS FED. AID PROJECT				

80% FEDERAL  
20% STATE

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE		
				PUTNAM	PUTNAM	PUTNAM
				COUNTY	COUNTY	COUNTY
				ROADWAY	S. N. 078-2500	S. N. 078-2007
				0004	0040	0040
M2113100	TOPSOIL FURNISH AND PLACE, 100MM	SQ M	3057	3057		
M2500210	SEEDING, CLASS 2A	HA	0.31	0.31		
M2500400	NITROGEN FERTILIZER NUTRIENT	KG	31	31		
M2500500	PHOSPHORUS FERTILIZER NUTRIENT	KG	31	31		
M2500600	POTASSIUM FERTILIZER NUTRIENT	KG	31	31		
M2500750	MOWING	HA	0.31	0.31		
M2510115	MULCH, METHOD 2	HA	0.31	0.31		
M2510630	EROSION CONTROL BLANKET	SQ M	349	349		
M2800200	EARTH EXCAVATION FOR EROSION CONTROL	CU M	78	78		
M2800250	TEMPORARY EROSION CONTROL SEEDING	KG	67	67		
M2800305	TEMPORARY DITCH CHECKS	METER	100	100		
M2800400	PERIMETER EROSION BARRIER	METER	116	116		
M2801000	AGGREGATE ( EROSION CONTROL )	M TON	2	2		
M2810107	STONE RIPRAP, CLASS A4	SQ M	778	698		80

14 ■ 100% STATE

FILE NAME = plot.dgn	USER NAME = mbr-eggs	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES	F.A.P. RTE. 619	SECTION 1208R_CR	COUNTY PUTNAM	TOTAL SHEETS 77	SHEET NO. 11
PLOT SCALE = 100,0000 M / IN.	CHECKED -	REVISED -	CONTRACT NO. 68740							
PLOT DATE = 3/29/2013	DATE -	REVISED -	ILLINOIS FED. AID PROJECT							

80% FEDERAL  
20% STATE

CONSTRUCTION CODE

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE		
				PUTNAM	PUTNAM	PUTNAM
				COUNTY	COUNTY	COUNTY
				ROADWAY	S. N. 078-2500	S. N. 078-2007
				0004	0040	0040
M2810225	STONE RIPRAP, CLASS B3	M TON	176	176		
M2820200	FILTER FABRIC	SO M	1317	1192		125
M3111150	SUB-BASE GRANULAR MATERIAL, TYPE B 150 MM	SO M	321	321		
M3550450	HOT-MIX ASPHALT BASE COURSE, 150MM	SO M	101	101		
M3560500	HOT-MIX ASPHALT BASE COURSE WIDENING, 200MM	SO M	543	543		
M4060215	POLYMERIZED BITUMINOUS MATERIAL (PRIME COAT)	M TON	1	1		
M4060982	HOT-MIX ASPHALT SURFACE REMOVAL - BUTT JOINT	SO M	409	409		
M4060990	TEMPORARY RAMPS	SO M	48	48		
M4062125	LEVELING BINDER (MACHINE METHOD), N50	M TON	95	95		
M4063335	HOT-MIX ASPHALT SURFACE COURSE, MIX "D", N50	M TON	201	201		
M4080500	INCIDENTAL HOT-MIX ASPHALT SURFACING	M TON	12.1	12.1		
M4400740	HOT-MIX ASPHALT SURFACE REMOVAL, 40MM	SO M	814	814		
M4402010	DRIVEWAY PAVEMENT REMOVAL	SO M	104	104		
M4428440	CLASS D PATCHES, TYPE IV, 300MM	SO M	321	321		

FILE NAME * plot.dgn	USER NAME * aubr-eggs	DESIGNED - DRAWN -	REVISED - REVISED -
		CHECKED -	REVISED -
		DATE -	REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

P.A.P. RATE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
619	I20BR.CR	PUTNAM	77	12
			CONTRACT NO. 68740	
ILLINOIS FED. AID PROJECT				



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CONSTRUCTION CODE

CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE		
				PUTNAM	PUTNAM	PUTNAM
				COUNTY	COUNTY	COUNTY
				ROADWAY	S. N. 078-2500	S. N. 078-2007
				0004	0040	0040
M4812000	AGGREGATE SHOULDERS, TYPE B	M TON	43	43		
M5010522	PIPE CULVERT REMOVAL	METER	16	16		
M5030360	CONCRETE SUPERSTRUCTURE	CU M	7.1		3	4.1
M5080105	REINFORCEMENT BARS	KG	870			870
M5080205	REINFORCEMENT BARS, EPOXY COATED	KG	16,740		450	16,290
M5090540	PIPE HANDRAIL	METER	32.8	32.8		
M5401100	PRECAST CONCRETE BOX CULVERT 2.4M X 1.5M	METER	21.5		21.5	
M5403000	CONCRETE BOX CULVERTS	CU M	149.8			149.8
M5422345	PIPE CULVERTS, CLASS A, TYPE I EQUIVALENT ROUND-SIZE 1200MM	METER	8.5	8.5		
M542F020	METAL END SECTIONS 450MM	EACH	2	2		
M542H430	PIPE CULVERTS, CLASS D, TYPE I 450MM	METER	17.2	17.2		
M6320030	GUARDRAIL REMOVAL	METER	350	350		
M7030100	SHORT-TERM PAVEMENT MARKING	METER	78	78		
* M7030520	PAVEMENT MARKING TAPE, TYPE III 100MM	METER	1092	1092		
* M7030580	PAVEMENT MARKING TAPE, TYPE III 600MM	METER	16	16		

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\*SPECIALTY ITEM

FILE NAME * plandgn	USER NAME * aubraygn	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES	F.A.P. RATE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.	
		DRAWN -	REVISED -			619	120BR.CR	PUTNAM	77	13	
		CHECKED -	REVISED -			CONTRACT NO. 68740					
		DATE -	REVISED -			ILLINOIS FED. AID PROJECT					
		PLOT SCALE * 100.0000 M / in.									
		PLOT DATE * 3/29/2013									

80% FEDERAL  
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CODE NO.	ITEM	UNIT	TOTAL QUANTITY	CONSTRUCTION CODE		
				PUTNAM	PUTNAM	PUTNAM
				COUNTY	COUNTY	COUNTY
				ROADWAY	S. N. 078-2500	S. N. 078-2007
				0004	0040	0040
M7031000	WORK ZONE PAVEMENT MARKING REMOVAL	SO M	119	119		
M7040100	TEMPORARY CONCRETE BARRIER	METER	213	213		
M7040200	RELOCATE TEMPORARY CONCRETE BARRIER	METER	187	187		
M7830100	PAVEMENT MARKING REMOVAL	SO M	77	77		
MX033276	TEMPORARY SOIL RETENTION SYSTEM	SO M	12.4		12.4	
MX440950	HOT-MIX ASPHALT SURFACE REMOVAL, VARIABLE DEPTH	SO M	411	411		
MX440955	HOT-MIX ASPHALT SURFACE REMOVAL, SPECIAL	SO M	29.2		15.1	14.1
X5427600	REMOVE AND RELOCATE END SECTIONS	EACH	2	2		
X7016500	TEMPORARY BRIDGE TRAFFIC SIGNALS (SPECIAL)	EACH	1	1		
Z0013798	CONSTRUCTION LAYOUT	L SUM	1	1		
70600350	IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	EACH	4	4		
70600350	IMPACT ATTENUATORS, RELOCATE (NON- REDIRECTIVE), TEST LEVEL 3	EACH	4	4		
Z0048665	RAILROAD PROTECTIVE LIABILITY INSURANCE	L SUM	1	1		
MZ026407	TEMPORARY SHEET PILING	SO M	174			174
*M7809100	MODIFIED URETHANE PAVEMENT MARKING - LINE 100MM	METER	580	580		

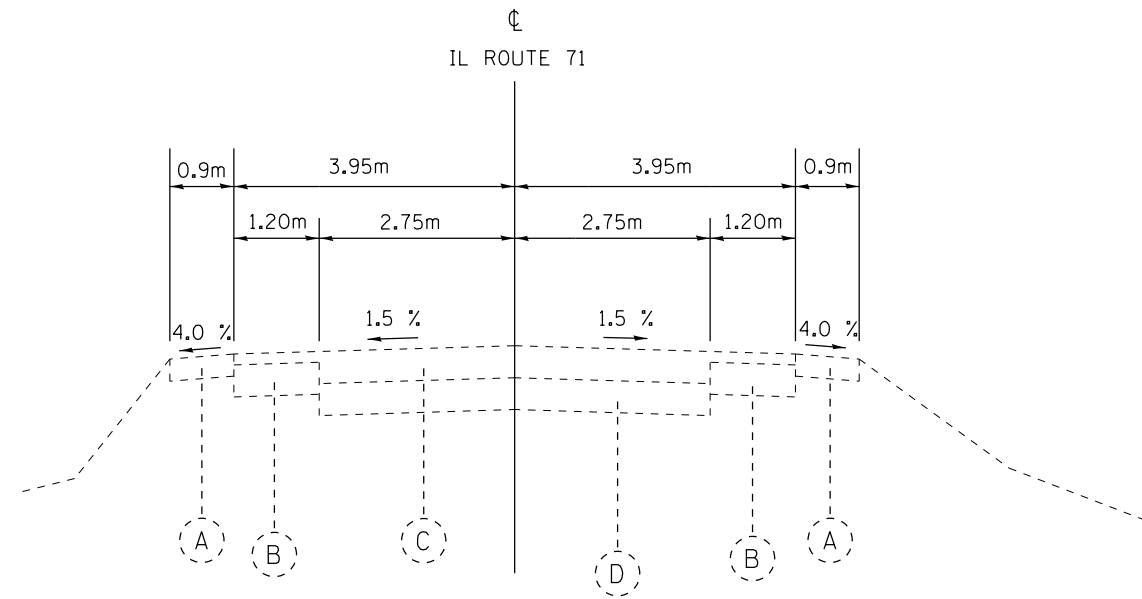
15

\*SPECIALTY ITEM

FILE NAME * plot.dgn	USER NAME * mub-eggs	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SUMMARY OF QUANTITIES	F.A.P RTE. 619	SECTION 120BR.CR	COUNTY PUTNAM	TOTAL SHEETS 77	SHEET NO. 14
PLOT SCALE * 100.0000 M / 1"	CHECKED -	REVISED -	CONTRACT NO. 68740							
PLOT DATE * 3/24/2013	DATE -	REVISED -	ILLINOIS FED. AID PROJECT							

CONTRACT #68740

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
619	120BR,CR	PUTNAM	77	15
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



EXISTING TYPICAL SECTION

STA. 12+000 TO STA. 12+625

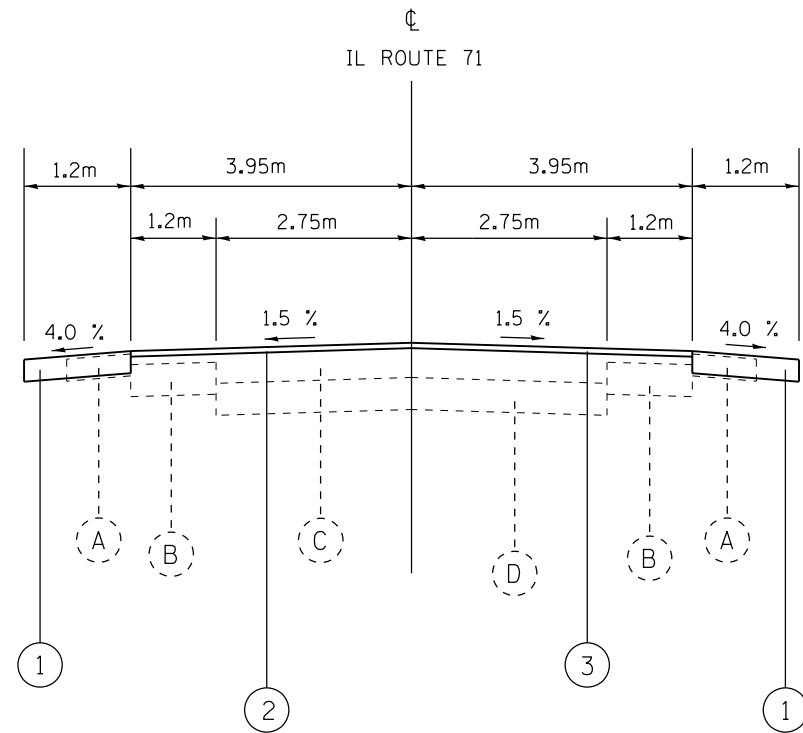
EXISTING

- (A) EXISTING AGGREGATE SHOULDER
- (B) EXISTING HMA WIDENING
- (C) EXISTING HMA OVERLAY, 225mm AND VARIES
- (D) EXISTING PCC PAVEMENT, 225mm-150mm-225mm

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION
NAME	DATE	
		<p><b>TYPICAL SECTIONS</b></p> <p>DRAWN BY _____</p> <p>CHECKED BY _____</p> <p>DATE _____</p>

CONTRACT #68740

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
619	120BR,CR	PUTNAM	77	16
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



PROPOSED TYPICAL SECTION NO. 1

STA. 12+002.9 TO STA. 12+106

EXISTING

- (A) EXISTING AGGREGATE SHOULDER
- (B) EXISTING HMA WIDENING, 225MM
- (C) EXISTING HMA OVERLAY, 225MM AND VARIES
- (D) EXISTING PCC PAVEMENT, 225MM-150MM-225MM

PROPOSED

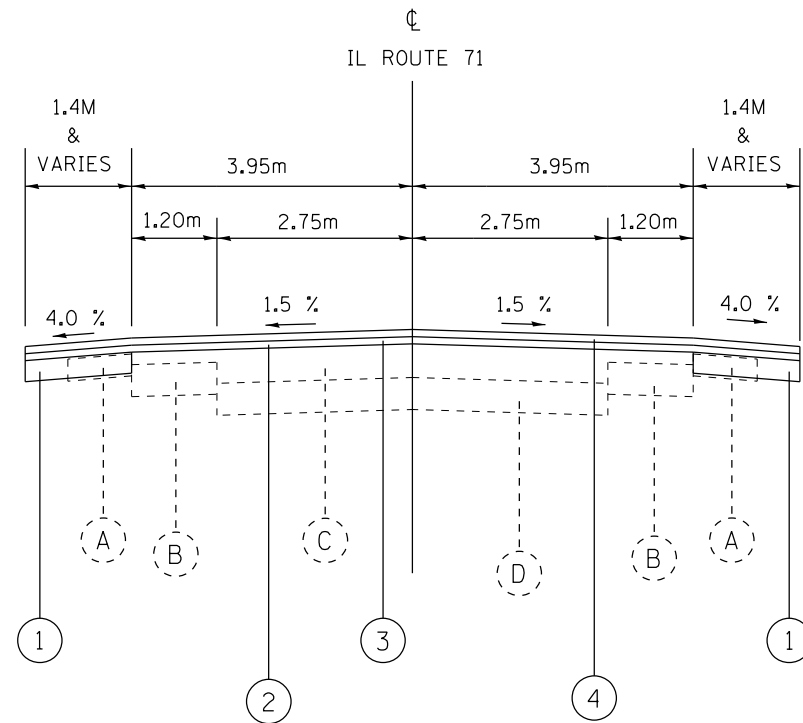
- (1) PROPOSED HMA BASE COURSE WIDENING, 200MM
- (2) PROPOSED HMA SURFACE REMOVAL, 40MM
- (3) PROPOSED HMA SURFACE COURSE, MIX "D", N50, 40MM

NOTE: SEE CROSS SECTIONS FOR INFORMATION ON PROPOSED DITCHES.

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION
NAME	DATE	
		<p><b>TYPICAL SECTIONS</b></p> <p>DRAWN BY _____</p> <p>CHECKED BY _____</p> <p>DATE _____</p>

CONTRACT #68740

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
619	120BR,CR	PUTNAM	77	17
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



PROPOSED TYPICAL SECTION NO. 2

STA. 12+476 TO STA. 12+600

EXISTING

- (A) EXISTING AGGREGATE SHOULDER
- (B) EXISTING HMA WIDENING, 225mm
- (C) EXISTING HMA OVERLAY, 225mm AND VARIES
- (D) EXISTING PCC PAVEMENT, 225mm-150mm-225mm

PROPOSED

- (1) PROPOSED HMA BASE COURSE WIDENING, 200MM
- (2) PROPOSED HMA SURFACE REMOVAL, VARIABLE
- (3) PROPOSED LEVELING BINDER (MACHINE METHOD), N50 (3/4" AND VARIES)
- (4) PROPOSED HMA SURFACE COURSE, MIX "D", N50

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION
NAME	DATE	
		<p><b>TYPICAL SECTIONS</b></p> <p>DRAWN BY _____</p> <p>CHECKED BY _____</p> <p>DATE _____</p>

CONTRACT #68740

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
619	120BR,CR	PUTNAM	77	18
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

RIPRAP SCHEDULE							
LOCATION	OFFSET	WIDTH (MEASURED ALONG SLOPES) (m)	LENGTH (m)	AREA (m <sup>2</sup> )	STONE RIPRAP, CLASS B3 (METRIC TON)	STONE RIPRAP CLASS A4 (SQ. M)	FILTER FABRIC (m <sup>2</sup> )
STA. 12+050 TO STA. 12+066.4	RT	5.0	16.4	82		82.0	82.0
STA. 12+066.4 TO STA. 12+075.0	RT	5.0	8.6	43	15.3		43.0
STA. 12+052.8 TO STA. 12+060.5	LT	8.0	7.7	61.6		61.6	61.6
STA. 12+060.5 TO STA. 12+075	LT	5.0	14.5	72.5	25.8		72.5
STA. 12+075 TO STA. 12+085	LT	3.7	10	37	13.2		37.0
STA. 12+475 TO STA. 12+525	RT	3.2	50	160	57.0		160.0
STA. 12+525 TO STA. 12+541	RT	18.0	16	288		288.0	288.0
STA. 12+541 TO STA. 12+550	RT	3.0	8	24	8.5		24.0
STA. 12+515 TO STA. 12+530	LT	14.0	19	266		266.0	266.0
STA. 12+533.5 TO STA. 12+581.5	LT	3.5	45	157.5	56.1		157.5
<b>TOTAL</b>					<b>176</b>	<b>698</b>	<b>1192</b>

TEMPORARY DITCH CHECKS						
STATION TO STATION			OFFSET	QUANTITY	INDIVIDUAL LENGTH (m)	LENGTH (m)
12+000	TO	12+100	RT	5	3.9	19.7
12+000	TO	12+100	LT	3	3.9	11.8
12+475	TO	12+600	RT	6	3.9	23.6
12+475	TO	12+600	LT	3	3.9	11.8
SUBTOTAL				17	3.9	66.9
REINSTALLATIONS - 50%				8.5	3.9	33.2
<b>TOTAL</b>						<b>100</b>

TREE REMOVAL		
LOCATION	OFFSET	HECTARES
STA. 12+501 TO STA. 12+532	LT	0.02
STA. 12+502 TO STA. 12+566	RT	0.06
<b>TOTAL</b>		<b>0.10</b>

INLET & PIPE PROTECTION		
STATION	OFFSET	EACH
12+056.7	RT	2
12+600	LT	1
<b>TOTAL</b>		<b>3</b>

SHORT TERM PAVEMENT MARKING	
LOCATION	METER
STA. 12+476 TO 12+600	
MILLED SURFACE	9
PRIMED SURFACE	9
LEVEL BINDER	9
PRIMED SURFACE	9
SURFACE	9
STA. 12+002.9 TO 12+106	
MILLED SURFACE	10
PRIMED SURFACE	10
SURFACE	10
<b>TOTAL</b>	<b>78</b>

FURNISHING AND ERECTING RIGHT OF WAY MARKERS	
LOCATION	EACH
12+005.08	1
12+024.91	1
12+029.9	1
12+044.55	1
12+064.55	1
12+084.94	1
12+086.8	1
12+089.94	1
12+443.83	1
12+493.44	1
12+500.00	1
12+520.00	1
12+530.00	1
12+530.00	1
12+545.00	1
12+600.00	1
12+615.00	1
<b>TOTAL</b>	<b>17</b>

NOTE: SEE R.O.W PLANS FOR EXACT STATIONS AND OFFSETS.

SEEDING AND FERTILIZER SUMMARY									
LOCATION	OFFSET	TEMP. EROSION CONTROL SEEDING	SEEDING, CLASS 2A	EROSION CONTROL BLANKET (FYI)	MULCH, METHOD 2	NITROGEN FERT. NUT.	PHOSPHORUS FERT. NUT.	POTASSIUM FERT. NUT.	TOPSOIL FURNISH & PLACE, 100 mm
STATION TO STATION	RT/LT	KILOGRAMS	HECTARE	SQ. M.	HECTARE	KILOGRAMS	KILOGRAMS	KILOGRAMS	SQ. M.
STA. 12+000 TO STA. 12+106	RT	16.214	0.07	185.5	0.07	7.37	7.37	7.37	737
STA. 12+000 TO STA. 12+085	LT	9.46	0.04	69.2	0.04	4.3	4.3	4.3	430
STA. 12+450 TO STA. 12+625	RT	21.604	0.10	97.8	0.10	9.82	9.82	9.82	982
STA. 12+476.3 TO STA. 12+625	LT	19.976	0.09	0.0	0.09	9.08	9.08	9.08	908
<b>TOTAL</b>		<b>67</b>	<b>0.31</b>		<b>0.31</b>	<b>31</b>	<b>31</b>	<b>31</b>	<b>3057</b>

EROSION CONTROL BLANKET						
LOCATION		OFFSET	WIDTH	LENGTH	AREA	
			m	m	SQ. m	
12+000	TO	12+050	RT	2.44	50.0	122.0
12+025	TO	12+053	LT	2.44	27.9	68.1
12+075	TO	12+100	RT	2.44	25.0	61.0
12+550	TO	12+590	RT	2.44	40.0	97.6
<b>TOTAL</b>					<b>349</b>	

SEDIMENT BASINS		
STATION	EARTH EXCAVATION FOR EROSION CONTROL	AGGREGATE (EROSION CONTROL)
	(CU m)	(MTON)
12+057	39	0.38
12+524	39	1.6
<b>TOTAL</b>	<b>78</b>	<b>2</b>

CHANNEL EXCAVATION	
LOCATION	CHANNEL EXCAVATION (CUT)
	CU. M.
STREAM STA. 1+000 TO 1+056.4	536.0
<b>TOTAL</b>	<b>536</b>

PERIMETER EROSION BARRIER			
STATION TO STATION		LENGTH (m)	
12+513	TO	12+539 LT	51
12+522	TO	12+542.7 RT	65
<b>TOTAL</b>			<b>116.0</b>

GEOTECHNICAL FABRIC FOR GROUND STABILIZATION	
LOCATION	SQ. M.
STA. 12+058.5	91.768
STA. 12+530	210.7
<b>TOTAL</b>	<b>302</b>

IMPACT ATTENUATORS, TEMPORARY (FULLY REDIRECTIVE, NARROW), TEST LEVEL 3	
LOCATION	EACH
STA. 12+521.24 RT (PRE-STAGE I/STAGE I)	1
STA. 12+532.64 RT (PRE-STAGE I/STAGE I)	1
<b>TOTAL</b>	<b>2</b>

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SCHEDULE OF QUANTITIES

DATE \_\_\_\_\_ DRAWN BY \_\_\_\_\_ CHECKED BY \_\_\_\_\_

CONTRACT #68740

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
619	120BR,CR	PUTNAM	77	19
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

EARTH EXCAVATION					
LOCATION	EARTH EXCAVATION (CUT)	EARTH EXCAVATION (WIDENING)	FOR INFORMATION ONLY		
			ADJUSTED EARTH EXCAVATION (ADJ. CUT)	EMBANKMENT (FILL)	WASTE
	CU. M.	CU. M.	CU. M.	CU. M.	CU. M.
EARTHWORK FROM STA. 12+000 TO 12+100	334.8	48.7	267.8	20.3	247.5
EARTHWORK FROM STA. 12+450 TO 12+625	239.3	59.6	191.4	382.2	-190.8
<b>TOTAL</b>	<b>574</b>	<b>108</b>	<b>459</b>	<b>403</b>	<b>57</b>

NOTE: ADJUSTED EARTH EXCAVATION CALCULATED ASSUMING A 20% SHRINKAGE FACTOR. THE QUANTITY CALCULATED FOR WASTE IS BASED ON THE ADJUSTED EARTH EXCAVATION QUANTITY.

RESURFACING SCHEDULE											
STA. TO STA.			WIDTH	LENGTH	AREA	POLYMERIZED BITUMINOUS MATERIALS (PRIME COAT)	LEVELING BINDER (MACHINE METHOD), N50	HMA SURFACE COURSE, MIX "D", N50	HMA SURFACE REMOVAL, 40MM	HMA SURFACE REMOVAL, VARIABLE DEPTH	HMA SURFACE REMOVAL - BUTT JOINT
			M	M	SQ. M.	M TON	M TON	M TON	SQ. M.	SQ. M.	SQ. M.
12+003	TO	12+106	7.9	103.1	814.5	0.28	-	77.9	814.5	-	144.4
12+476	TO	12+491	10.7	14.8	158.4	0.09	7.6	15.1	-	-	158.4
12+491	TO	12+496	10.7	4.9	52.4	0.03	2.5	5.0	-	52.4	-
12+496	TO	12+553	10.7	57.0	609.9	0.34	62.7	58.3	-	-	-
12+553	TO	12+587	10.7	33.5	358.5	0.20	17.1	34.3	-	358.5	-
12+587	TO	12+600	7.9	13.5	106.7	0.06	5.1	10.2	-	-	106.7
<b>TOTAL</b>						<b>1.0</b>	<b>95</b>	<b>201</b>	<b>814</b>	<b>411</b>	<b>409</b>
APPLICATION RATES											
POLY BIT. MATERIALS (PRIME COAT)			0.000428 M. TONS / SQ. M. ON MILLED SURFACE								
			0.000219 M. TONS / SQ. M. ON NEW BINDER								
HMA MIXES			2.39 KG / (SQ. M. * MM)								

TABULATION OF SHOULDER QUANTITIES						
STA.	TO	STA.	OFFSET	LENGTH	AGG. SHOULDER TYPE B	HMA BASE COURSE WIDENING, 200mm
				METER	M. TON	SQ. M
12+003	TO	12+057	RT	53.6		64.3
12+061	TO	12+106	RT	45.7		54.8
12+003	TO	12+106	LT	103.3		124.0
12+476	TO	12+583	RT	107.0		149.8
12+476	TO	12+583	LT	107.0		149.8
12+583	TO	12+625	RT	41.7	21.3	
12+583	TO	12+625	LT	41.7	21.3	
<b>TOTAL</b>					<b>43</b>	<b>543</b>

DRIVEWAY PAVEMENT REMOVAL		
LOCATION	OFFSET	AREA SQ. M
STA. 12+589.6	LT	104
<b>TOTAL</b>		<b>104</b>

MOWING	
LOCATION	HA
JOBSITE	0.31
<b>TOTAL</b>	<b>0.31</b>

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION
NAME	DATE	
DATE		SCHEDULE OF QUANTITIES
		DRAWN BY
		CHECKED BY





CONTRACT #68740

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
619	120BR,CR	PUTNAM	77	21
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

TEMPORARY CONCRETE BARRIER				
LOCATION		LENGTH (METERS)	NOTES	
12+008.3	TO 12+103.1	95	STAGE 2	
12+476.3	TO 12+582.8	107	STAGE I	
12+521.24	TO 12+532.84	11	PRE-STAGE I/STAGE I	
<b>TOTAL</b>		<b>213</b>		

RELOCATE TEMPORARY CONCRETE BARRIER				
LOCATION		LENGTH (METERS)	NOTES	
12+008.3	TO 12+103.1	95	STAGE 3	
12+484	TO 12+575.2	92	STAGE II	
<b>TOTAL</b>		<b>187</b>		

TRAFFIC CONTROL AND PROTECTION, STANDARD 701321		
LOCATION	EACH	
S.N. 078-2500	1	
S.N. 078-2007	1	
<b>TOTAL</b>	<b>2</b>	

TRAFFIC CONTROL AND PROTECTION, STANDARD 701326		
LOCATION	L SUM	
S.N. 078-2500	0.5	
S.N. 078-2007	0.5	
<b>TOTAL</b>	<b>1</b>	

TRAFFIC CONTROL SURVEILLANCE		
LOCATION	CAL DAY	
JOBSITE	5	
<b>TOTAL</b>	<b>5</b>	

PERMANENT SURVEY MARKERS, TYPE 1	
LOCATION	EACH
POT STA. 12+038.014	1
POT STA. 12+242.399	1
STA. 12+530, S.N. 078-2007	1
POT STA. 12+587.632	1
<b>TOTAL</b>	<b>4</b>

RAISED REFLECTIVE PAVEMENT MARKER	
LOCATION	EACH
STA. 12+002.9 TO STA. 12+106	4
STA. 12+476 TO STA. 12+600	5
<b>TOTAL</b>	<b>9</b>

RAISED REFLECTIVE PAVEMENT MARKER REMOVAL	
LOCATION	EACH
STA. 12+002.9 TO STA. 12+106	4
STA. 12+476 TO STA. 12+600	5
<b>TOTAL</b>	<b>9</b>

CHANGEABLE MESSAGE SIGN	
LOCATION	CAL MO
JOBSITE	2
<b>TOTAL</b>	<b>2</b>

IMPACT ATTENUATORS, TEMPORARY (NON-REDIRECTIVE), TEST LEVEL 3	
LOCATION	EACH
STA. 12+007	1
STA. 12+104	1
STA. 12+475	1
STA. 12+583	1
<b>TOTAL</b>	<b>4</b>

IMPACT ATTENUATOR, RELOCATE (NON-REDIRECTIVE), TEST LEVEL 3	
LOCATION	EACH
STA. 12+007	1
STA. 12+104	1
STA. 12+475	1
STA. 12+583	1
<b>TOTAL</b>	<b>4</b>

CONSTRUCTION LAYOUT	
LOCATION	L SUM
JOBSITE	1
<b>TOTAL</b>	<b>1</b>

PAVEMENT MARKING REMOVAL	
LOCATION	AREA
	SQ. M
CULVERT AT STA. 12+058.5	28
CULVERT AT STA. 12+530	49
<b>TOTAL</b>	<b>77.2</b>

TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	
LOCATION	L. SUM
S.N. 078-2500	0.5
S.N. 078-2007	0.5
<b>TOTAL</b>	<b>1</b>

TRAFFIC CONTROL AND PROTECTION, STANDARD BLR-22	
LOCATION	L. SUM
JOBSITE	1
<b>TOTAL</b>	<b>1</b>

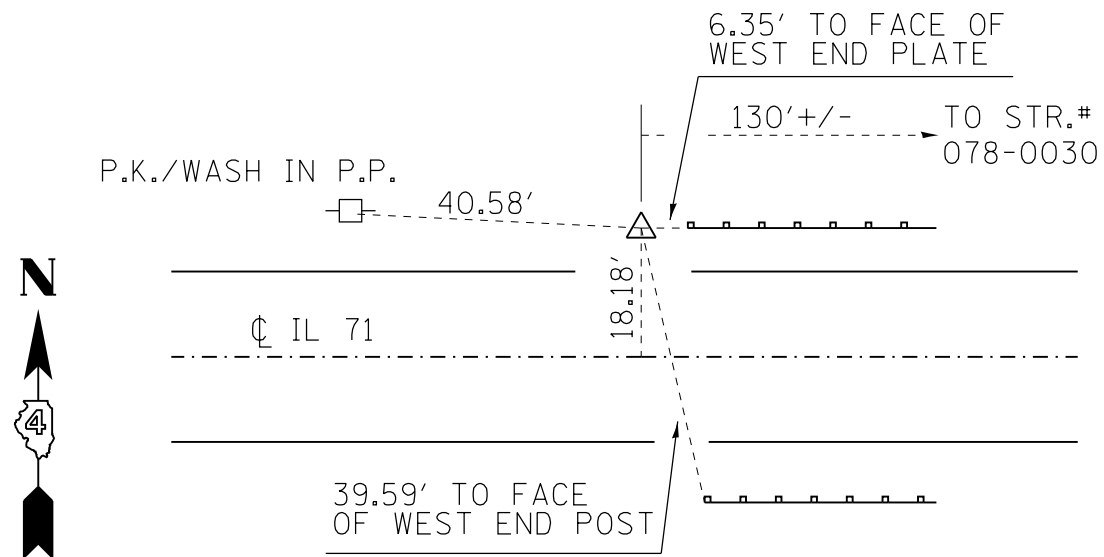
WORKZONE PAVEMENT MARKING REMOVAL	
LOCATION	AREA (SQ. M)
STA. 11+949 TO STA. 12+153	57
STA. 12+350 TO STA. 12+651	61
<b>TOTAL</b>	<b>119</b>

MODIFIED URETHANE PAVEMENT MARKING - LINE 100mm			
STATION TO STATION	YELLOW SKIP-DASH 4"	YELLOW SOLID 4"	WHITE SOLID 4"
	(METER)	(METER)	(METER)
12+003 TO 12+106	26	49	206
12+476 TO 12+600	31	20	248
<b>TOTAL</b>	<b>57</b>	<b>69</b>	<b>454</b>
<b>GRAND TOTAL</b>	<b>580</b>		

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION
NAME	DATE	
		<p style="text-align: center;">SCHEDULE OF QUANTITIES</p> <p style="text-align: right;">DRAWN BY CHECKED BY</p>

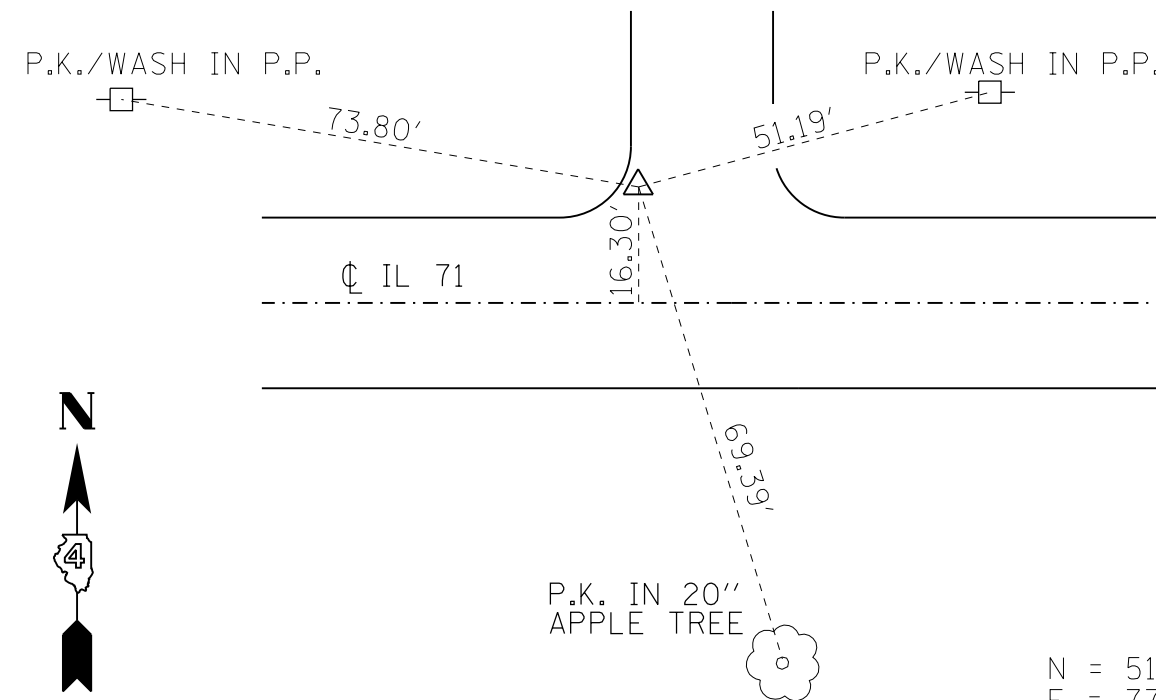
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
619	120BR,CR	PUTNAM	77	22
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

TIES FOR PT. #11-10" NAIL (APPROX. STA. 12+487)



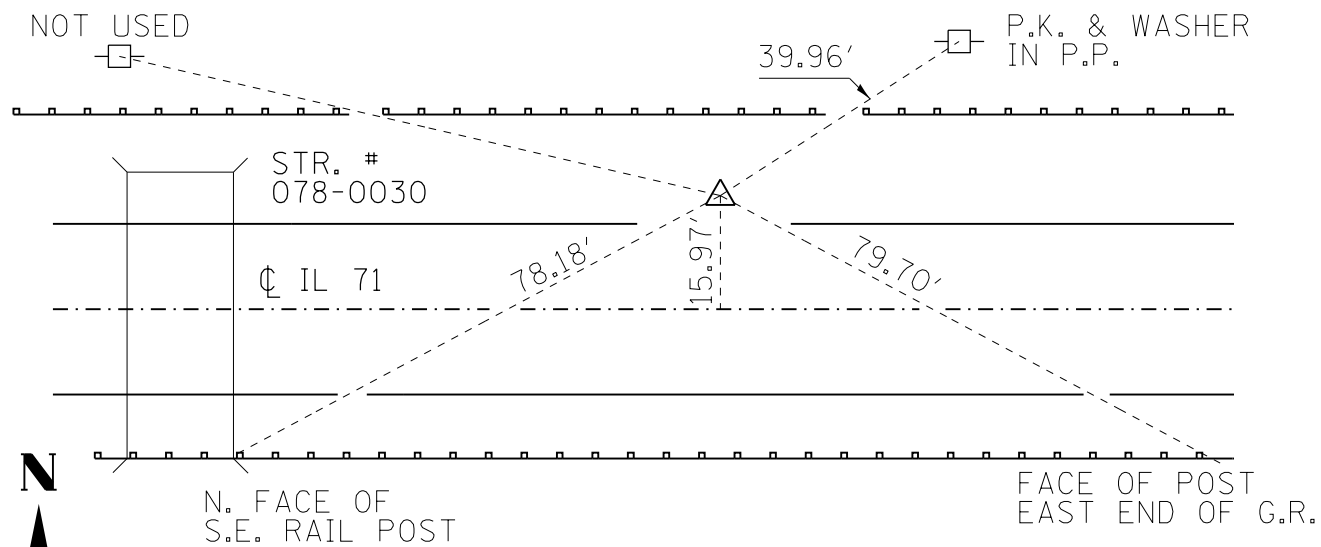
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E = 778,955.5705

TIES FOR PT. #23-P.K. & WASHER IN PAVEMENT (APPROX. STA. 12+583)



N = 510,058.2376  
E = 779,051.6861

TIES FOR PT. #10-10" NAIL (APPROX. STA. 12+551)



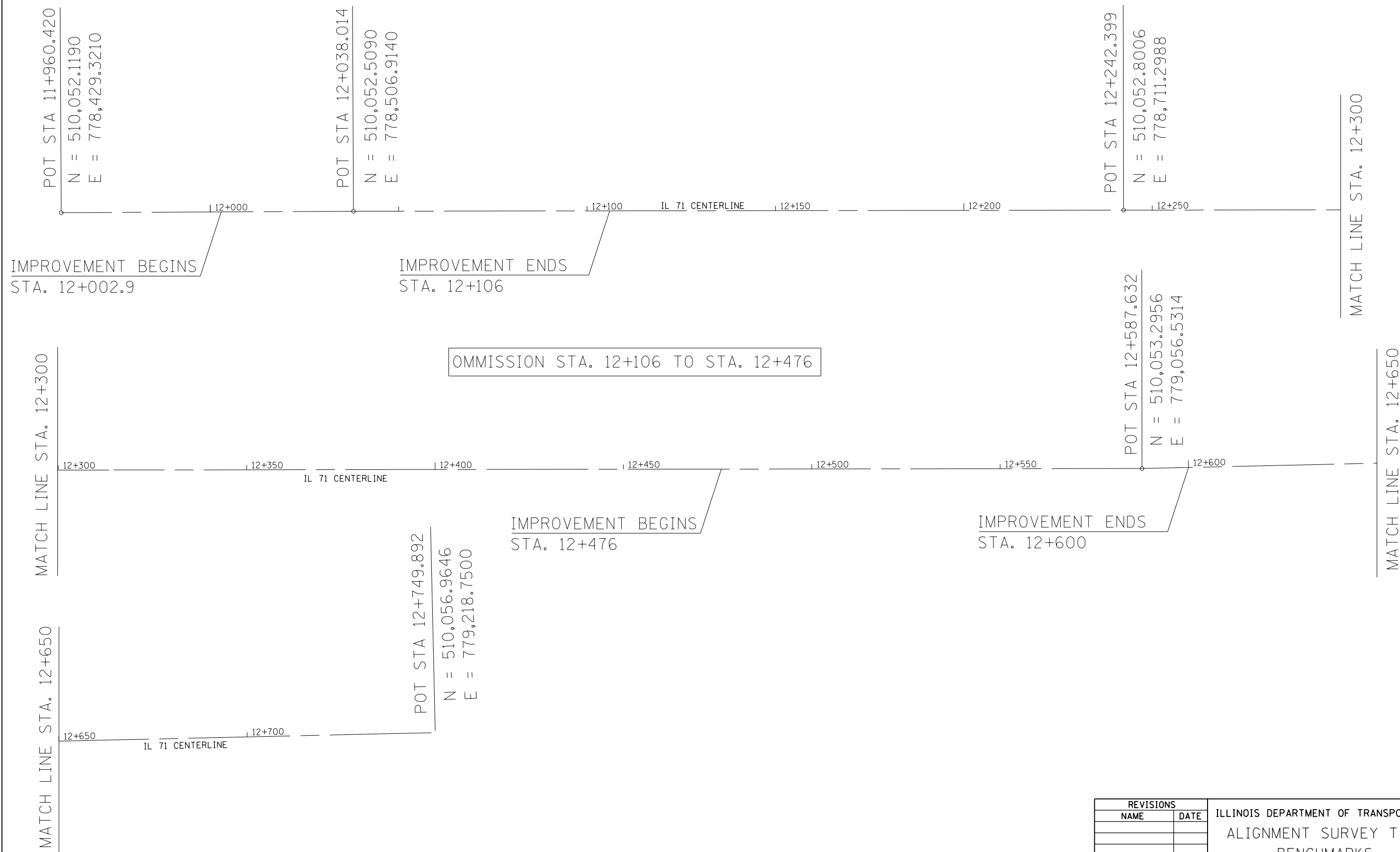
N = 510,057.8389  
E = 779,019.4244

TBM 12

RR SPIKE IN POWER POLE  
N. SIDE IL. ROUTE 71  
STA. 12+475 +/-  
ELEV. 206.684

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION ALIGNMENT SURVEY TIES, BENCHMARKS, AND CONTROL POINTS DRAWN BY CHECKED BY
NAME	DATE	
		DATE

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
619	120BR.CR	PUTNAM	77	23
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



REVISIONS	
NAME	DATE

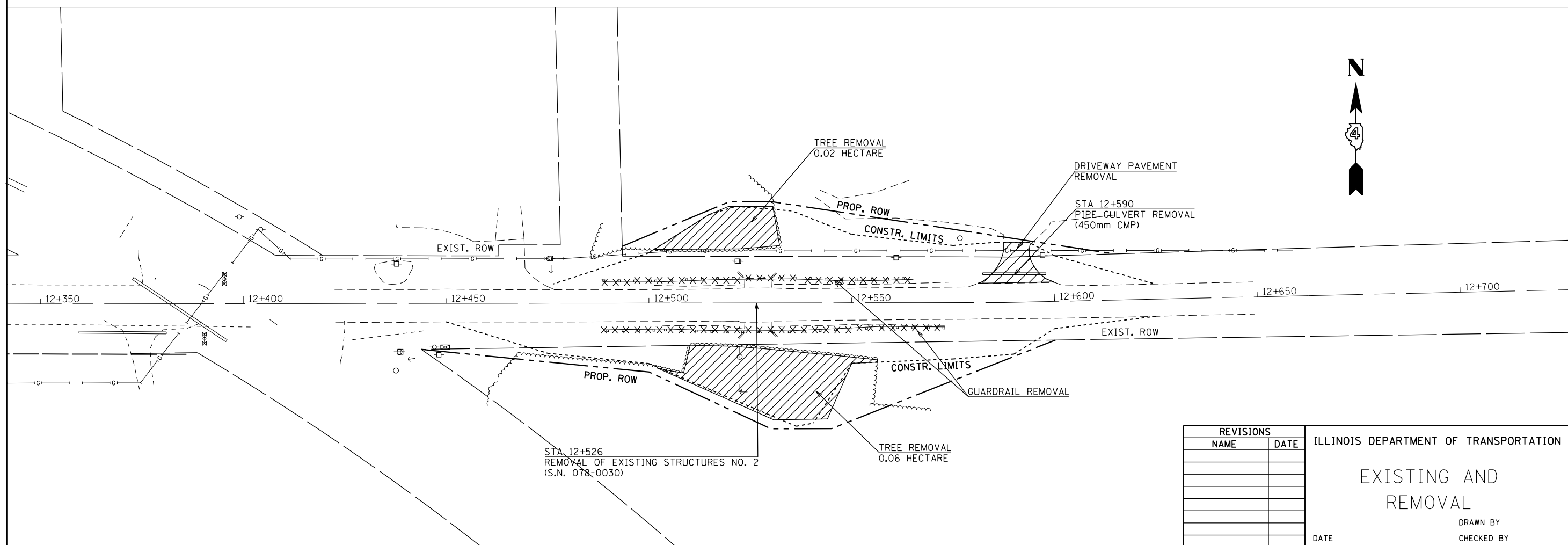
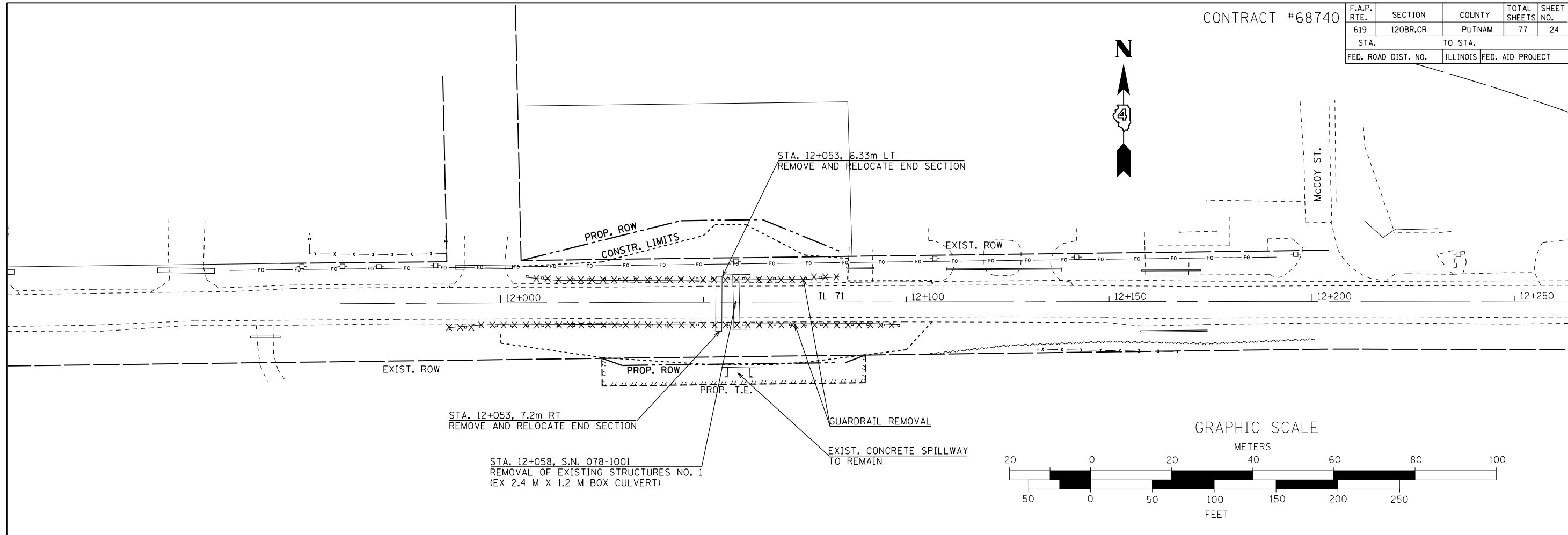
ILLINOIS DEPARTMENT OF TRANSPORTATION  
ALIGNMENT SURVEY TIES,  
BENCHMARKS,  
AND CONTROL POINTS

DRAWN BY \_\_\_\_\_  
CHECKED BY \_\_\_\_\_

DATE \_\_\_\_\_

CONTRACT #68740

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
619	120BR.CR	PUTNAM	77	24
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION


**EXISTING AND REMOVAL**


DATE \_\_\_\_\_ DRAWN BY \_\_\_\_\_ CHECKED BY \_\_\_\_\_

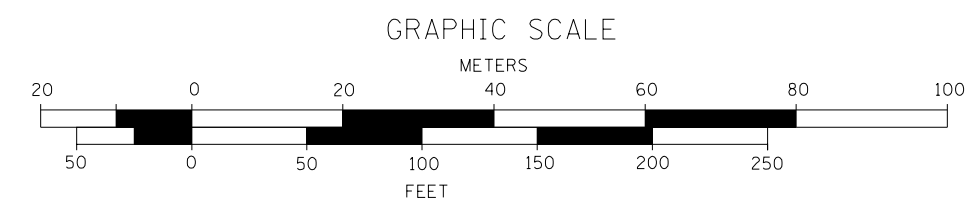
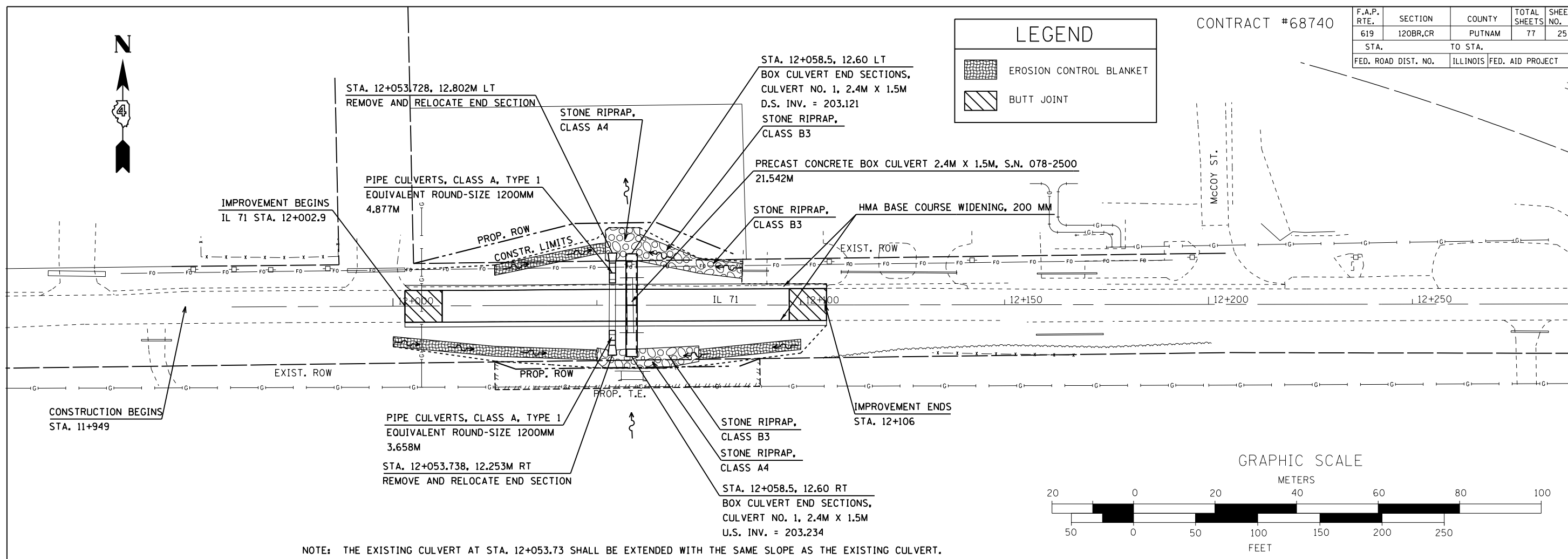
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
619	120BR.CR	PUTNAM	77	25
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

CONTRACT #68740

**LEGEND**

 EROSION CONTROL BLANKET

 BUTT JOINT



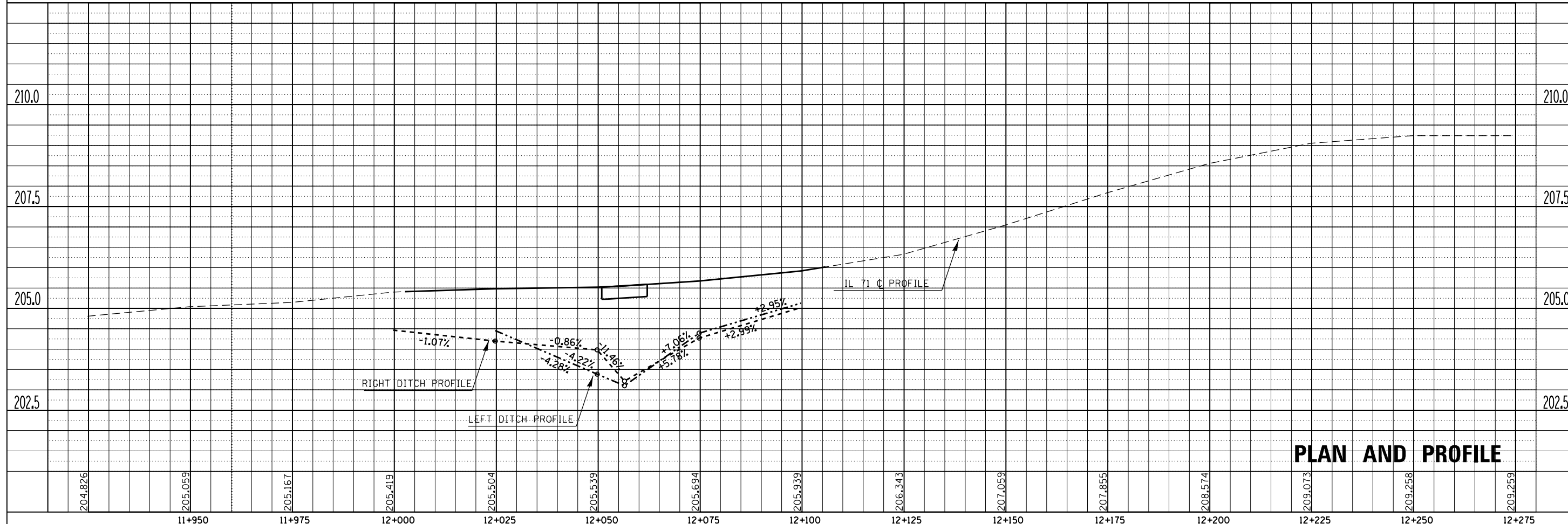
NOTE: THE EXISTING CULVERT AT STA. 12+053.73 SHALL BE EXTENDED WITH THE SAME SLOPE AS THE EXISTING CULVERT.

PLAN

DATE	BY
SURVEYED	PLOTTED
NOTE BOOK	ALIGNMENT CHECKED
NO.	RT. OF WAY CHECKED
	CADD FILE NAME

PROFILE

DATE	BY
SURVEYED	PLOTTED
NOTE BOOK	GRADES CHECKED
NO.	B.M. NOTED
	STRUCTURE NOTATIONS CHKD



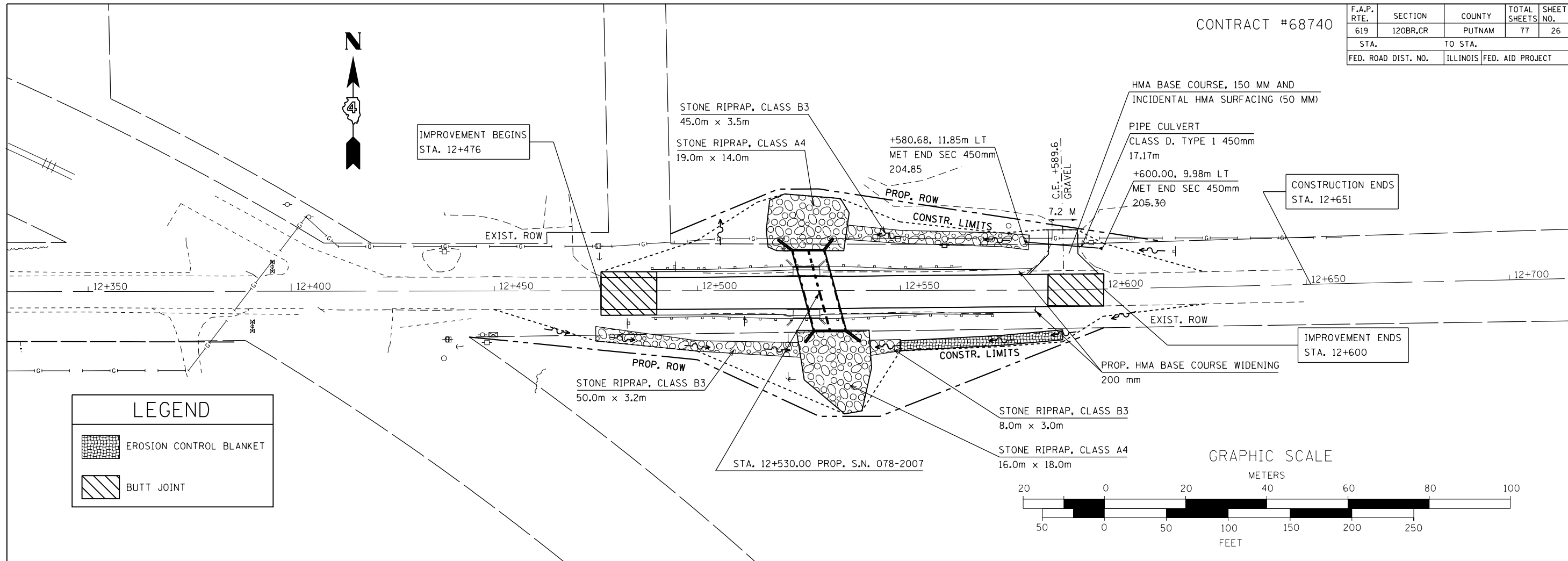
**PLAN AND PROFILE**

CONTRACT #68740

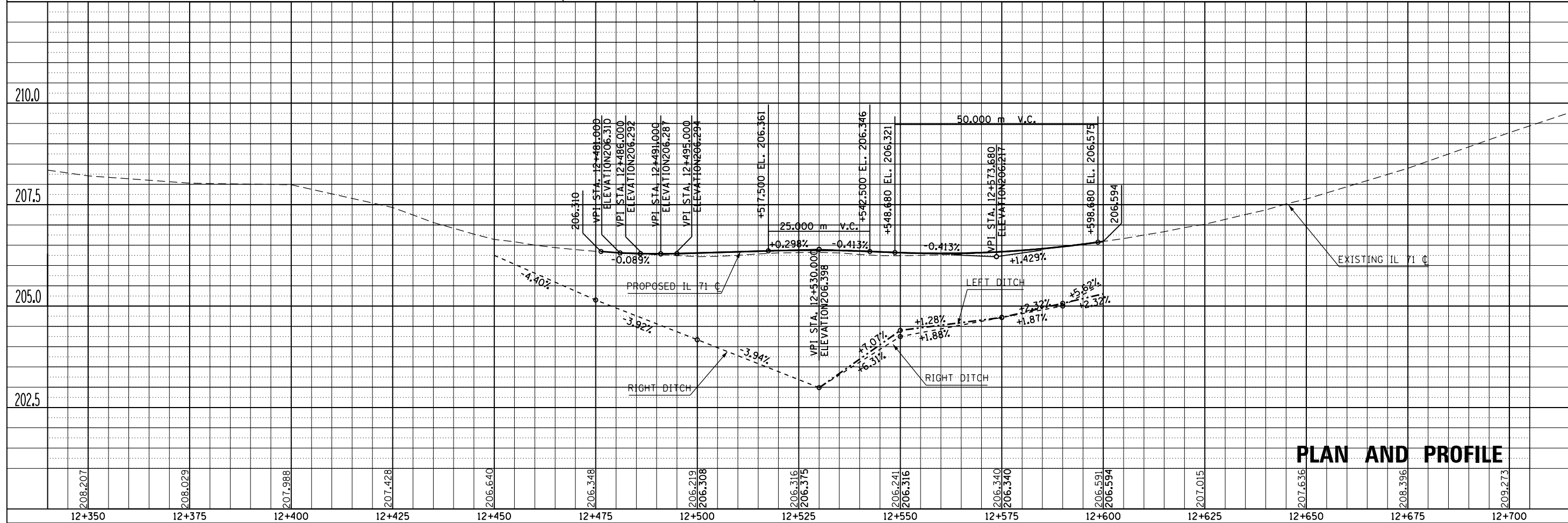
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
619	120BR.CR	PUTNAM	77	26
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

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

LEGEND	
	EROSION CONTROL BLANKET
	BUTT JOINT



PROFILE	SURVEYED	BY	DATE
	PLOTTED		
	GRADES CHECKED		
	B.M. NOTED		
	STRUCTURE NOTATIONS CHKD		
	NO.		

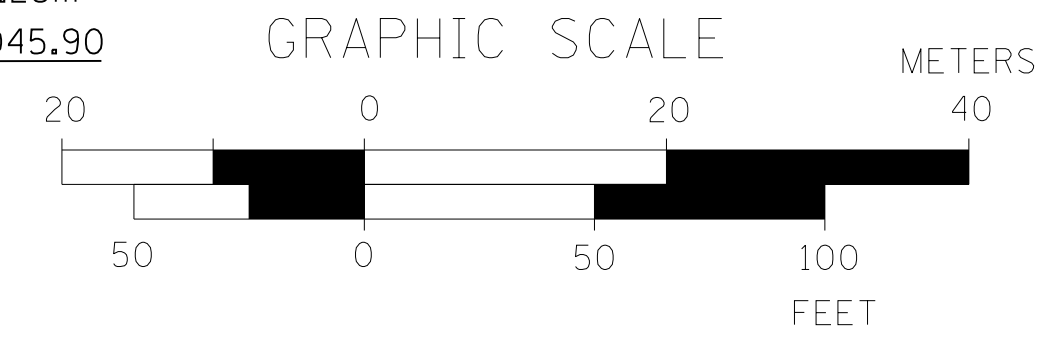
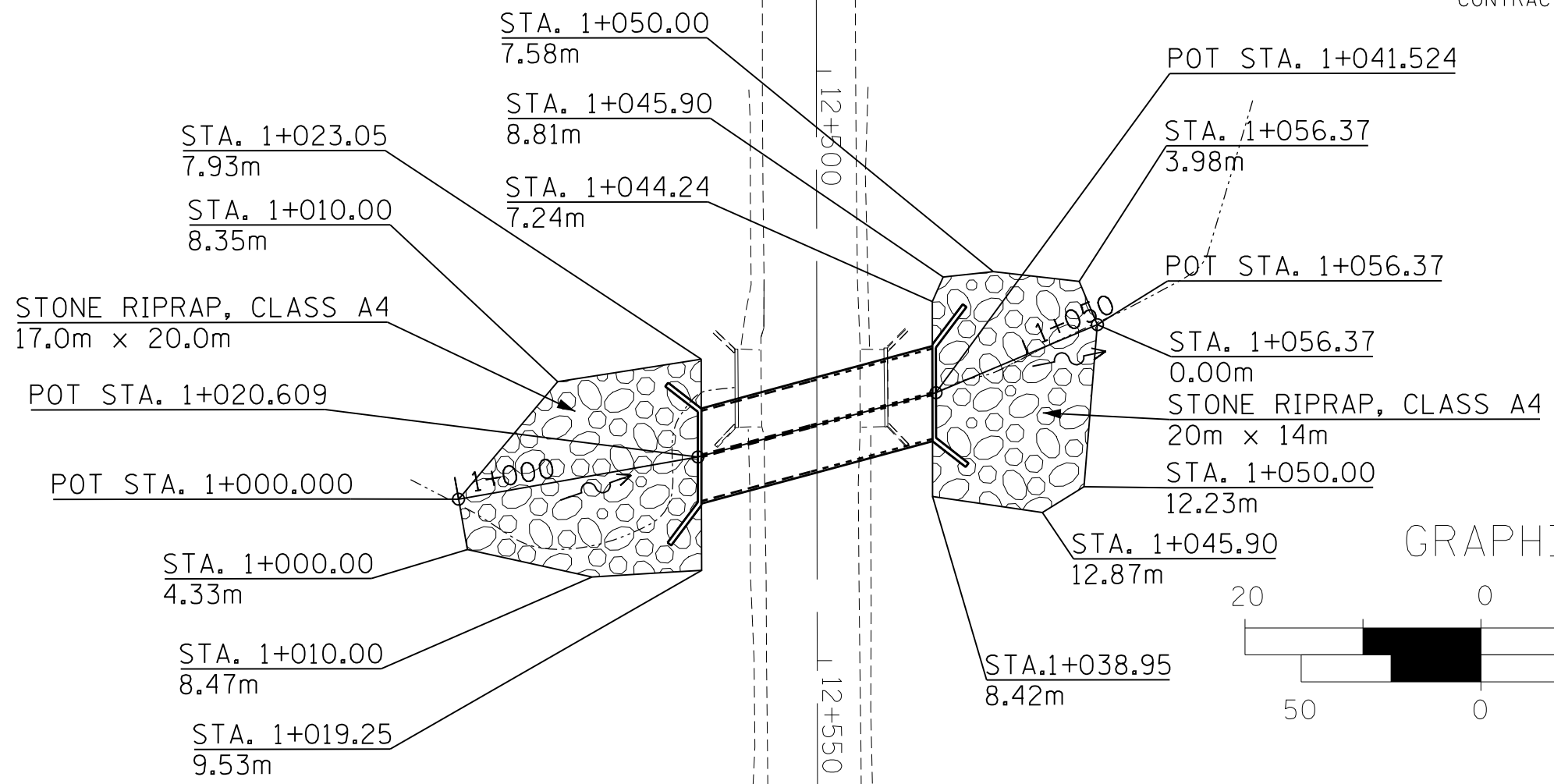


PLAN AND PROFILE

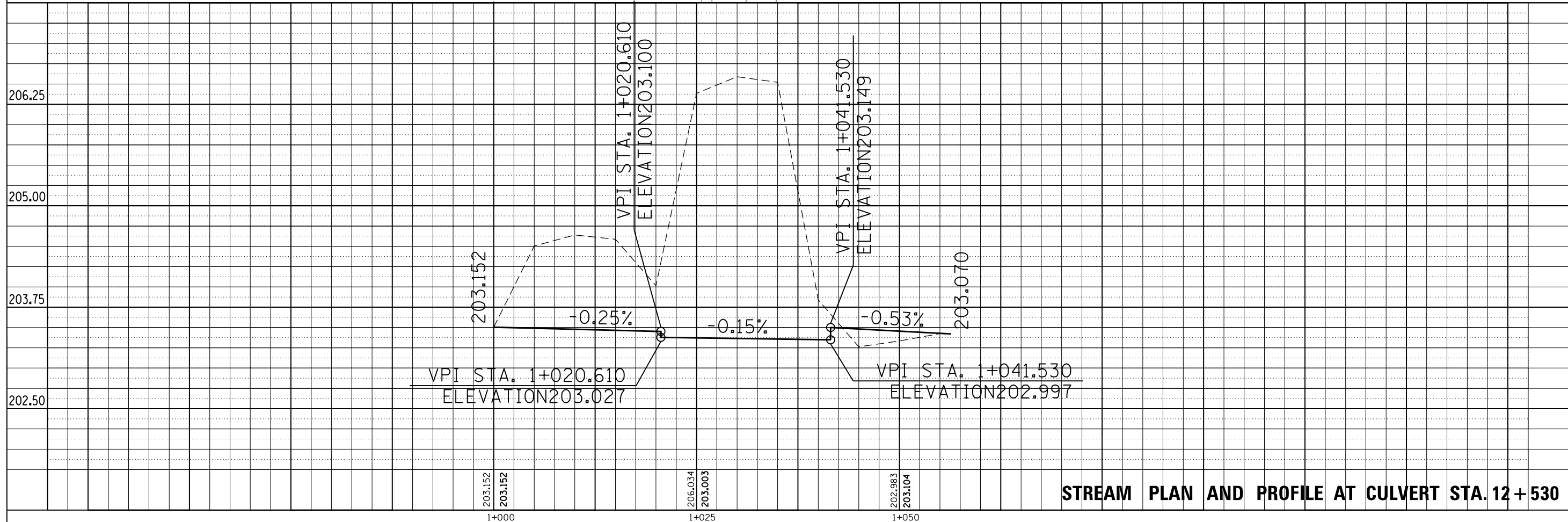
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619	120BR.CR	PUTNAM	77	27
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



PLAN	SURVEYED	BY	DATE
	PLOTTED		
	ALIGNED		
	CHECKED		
	RT. OF WAY		
	CHECKED		
	NO.		
	CADD FILE NAME		



PROFILE	SURVEYED	BY	DATE
	PLOTTED		
	GRADES		
	CHECKED		
	B.M. NOTED		
	STRUCTURE NOTATIONS		
	CHKD		
	NO.		

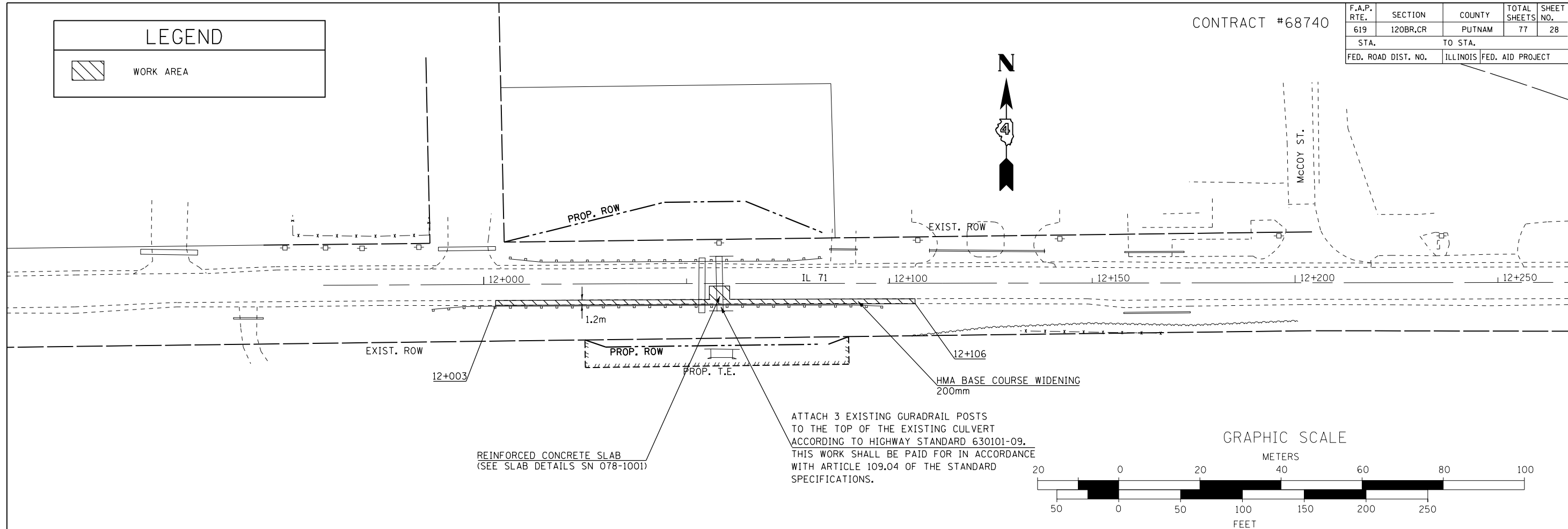


**STREAM PLAN AND PROFILE AT CULVERT STA. 12 + 530**

CONTRACT #68740

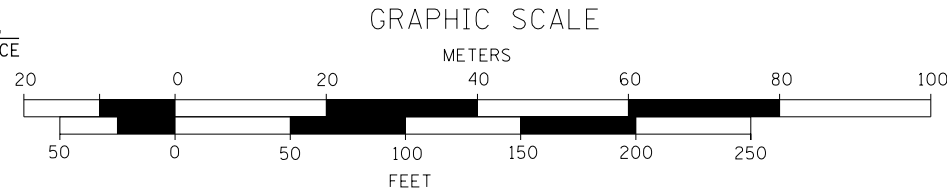
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
619	120BR.CR	PUTNAM	77	28
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

LEGEND	
	WORK AREA



REINFORCED CONCRETE SLAB  
(SEE SLAB DETAILS SN 078-1001)

ATTACH 3 EXISTING GURADRAIL POSTS  
TO THE TOP OF THE EXISTING CULVERT  
ACCORDING TO HIGHWAY STANDARD 630101-09.  
THIS WORK SHALL BE PAID FOR IN ACCORDANCE  
WITH ARTICLE 109.04 OF THE STANDARD  
SPECIFICATIONS.



NOTES:

1. CONSTRUCT REINFORCED CONCRETE SLAB.  
USE TRAFFIC CONTROL & PROTECTION STANDARD 701201.
2. CONSTRUCT WIDENING FROM STA. 12+003 TO 12+106 RT.  
USE TRAFFIC CONTROL & PROTECTION STANDARD 701326.

REVISIONS	
NAME	DATE

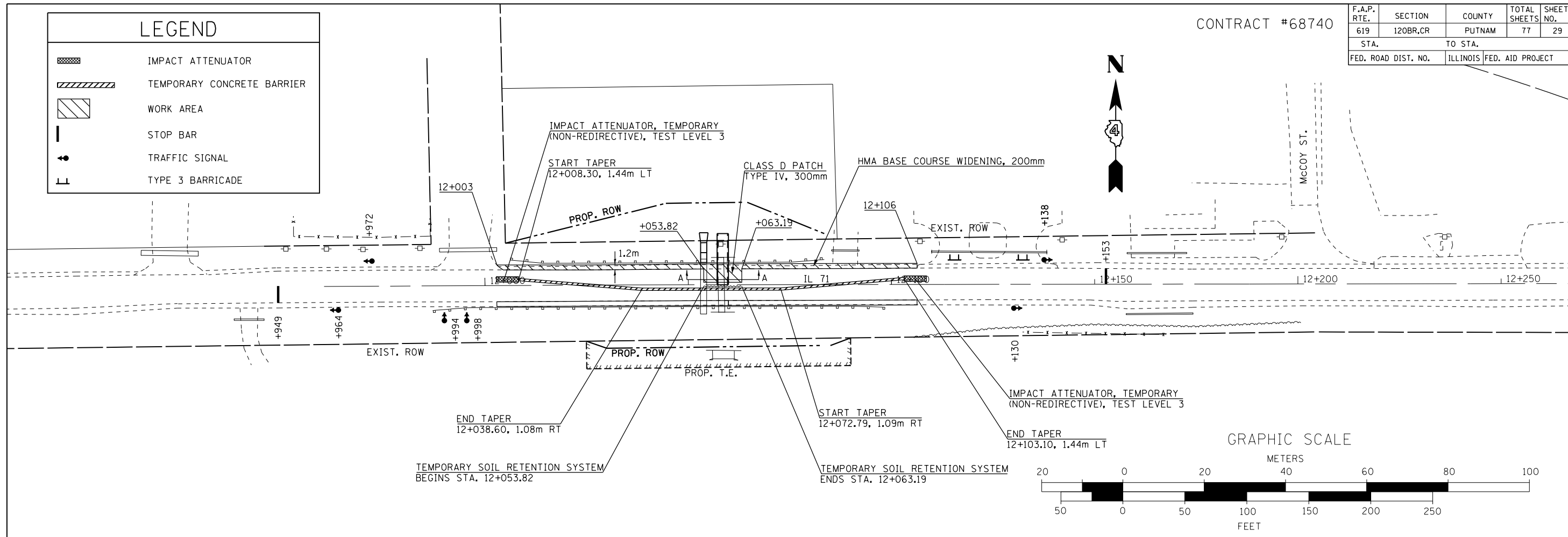
ILLINOIS DEPARTMENT OF TRANSPORTATION  
**CULVERT 12+058.5**  
**STAGING DETAIL -**  
**STAGE 1**  
 DRAWN BY JGJ 2/16/11  
 CHECKED BY KJH 2/16/11  
 DATE



CONTRACT #68740

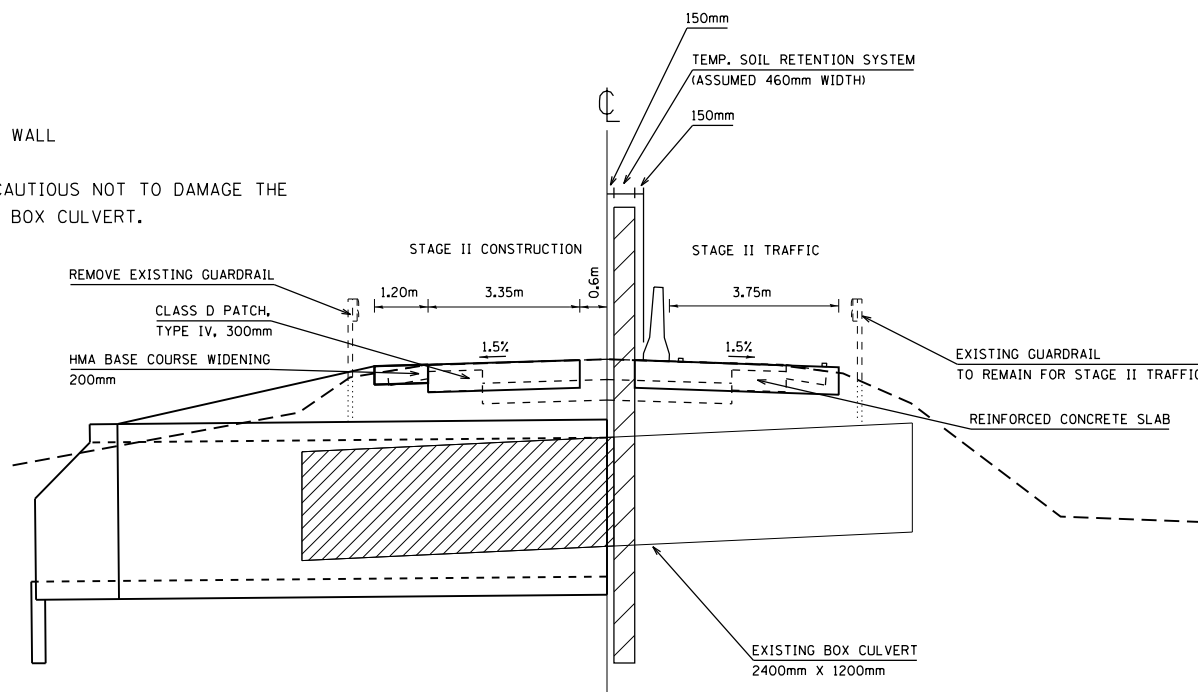
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
619	120BR.CR	PUTNAM	77	29
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

LEGEND	
	IMPACT ATTENUATOR
	TEMPORARY CONCRETE BARRIER
	WORK AREA
	STOP BAR
	TRAFFIC SIGNAL
	TYPE 3 BARRICADE

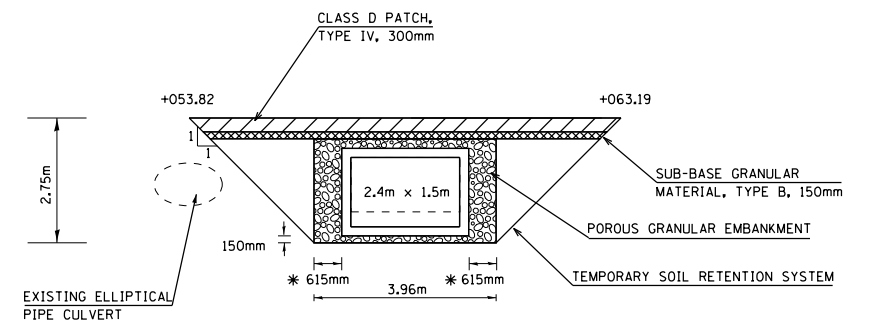


NOTES:

1. TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH TRAFFIC CONTROL & PROTECTION STANDARD 701321 AND THIS DETAIL.
2. OFFSETS TO BARRIER WALL ARE TO THE CENTER OF BARRIER WALL
3. WHEN INSTALLING TEMPORARY SOIL RETENTION SYSTEM, BE CAUTIOUS NOT TO DAMAGE THE EXISTING ELLIPTICAL PIPE CULVERT ADJACENT TO PROPOSED BOX CULVERT.



CROSS SECTION AT STA. 12+058.5  
(LOOKING EAST)



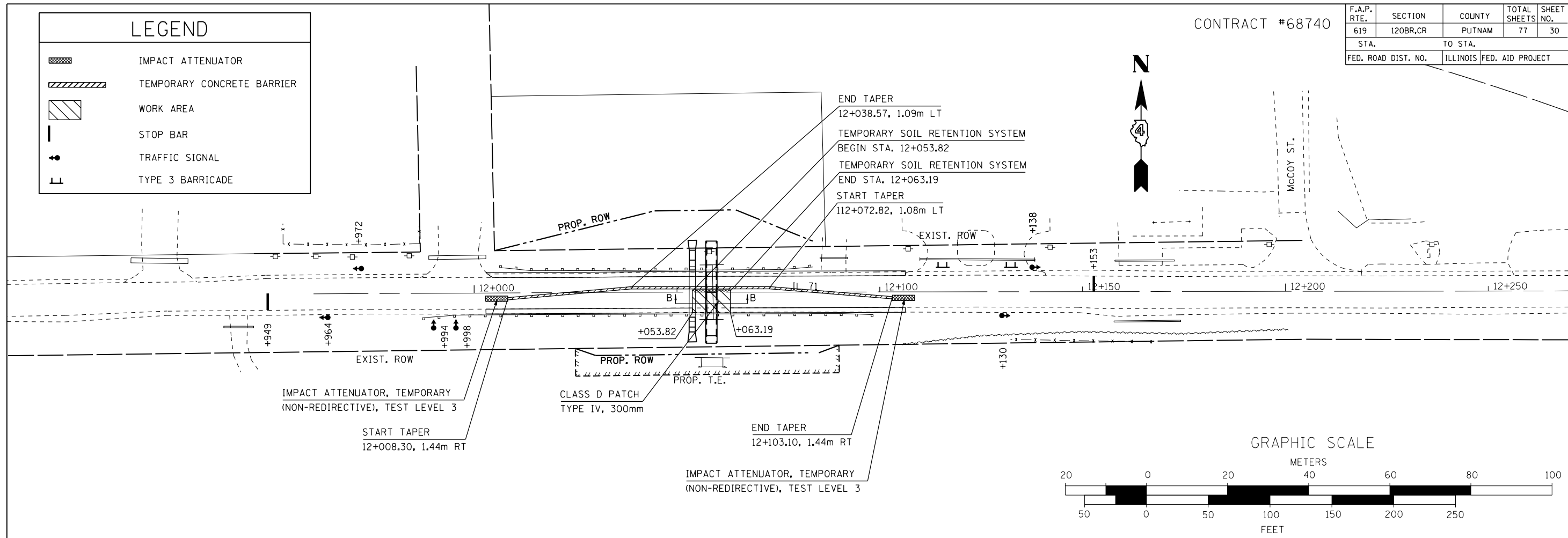
SECTION A-A  
(LOOKING NORTH) \* POROUS GRANULAR EMBANKMENT PAID TO 2 FT. OUTSIDE THE BOX CULVERT

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**CULVERT 12+058.5**  
**STAGING DETAIL -**  
**STAGE 2**  
 DRAWN BY JGJ 2/16/11  
 CHECKED BY KJH 2/17/11  
 DATE

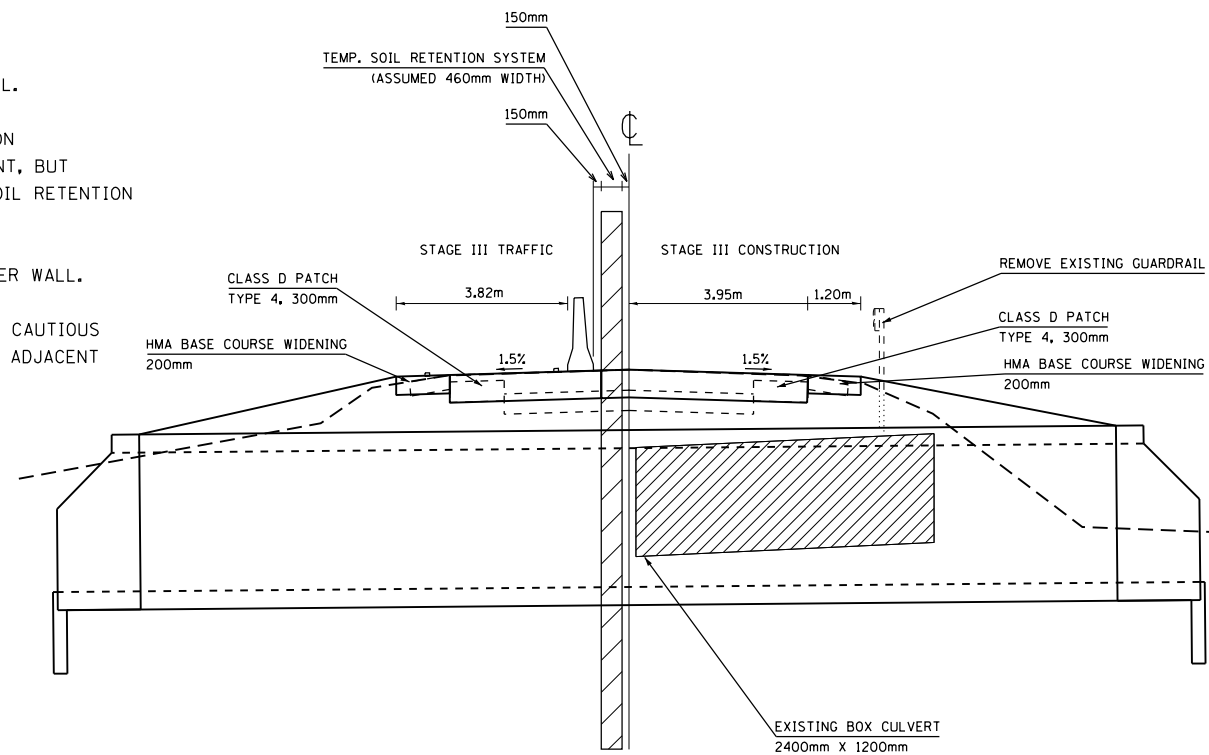
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
619	120BR.CR	PUTNAM	77	30
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

LEGEND	
	IMPACT ATTENUATOR
	TEMPORARY CONCRETE BARRIER
	WORK AREA
	STOP BAR
	TRAFFIC SIGNAL
	TYPE 3 BARRICADE

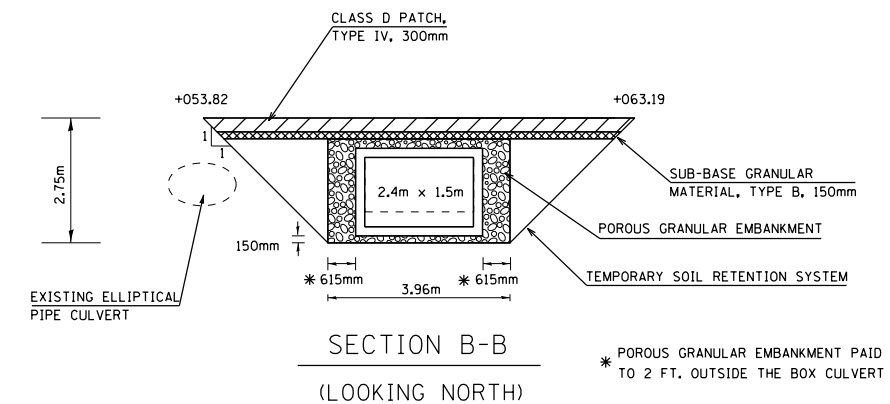
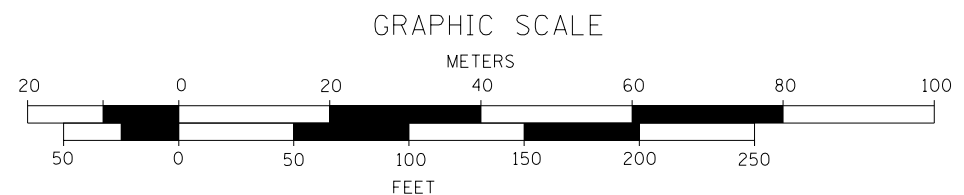


NOTES:

1. TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH TRAFFIC CONTROL & PROTECTION STANDARD 701321 AND THIS DETAIL.
2. ADJUSTING OR RELOCATING THE TEMPORARY SOIL RETENTION SYSTEM FOR STAGE 3 WILL NOT BE MEASURED FOR PAYMENT, BUT IT WILL BE INCLUDED IN THE COST OF THE TEMPORARY SOIL RETENTION SYSTEM USED IN STAGE 2.
3. OFFSETS TO BARRIER WALL ARE TO THE CENTER OF BARRIER WALL.
4. WHEN INSTALLING TEMPORARY SOIL RETENTION SYSTEM, BE CAUTIOUS NOT TO DAMAGE THE EXISTING ELLIPTICAL PIPE CULVERT ADJACENT TO PROPOSED BOX CULVERT.



CROSS SECTION AT STA. 12+056.7  
(LOOKING EAST)



\* POROUS GRANULAR EMBANKMENT PAID TO 2 FT. OUTSIDE THE BOX CULVERT

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**CULVERT 12+058.5  
 STAGING DETAIL-  
 STAGE 3**  
 DRAWN BY JGJ 2/16/11  
 CHECKED BY KJH 2/17/11  
 DATE

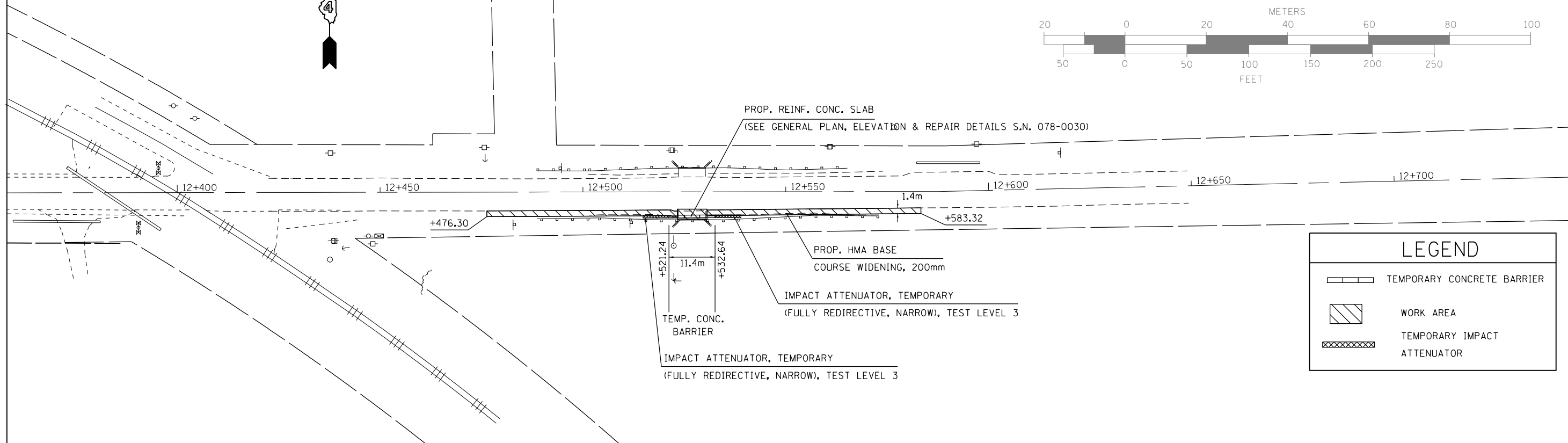
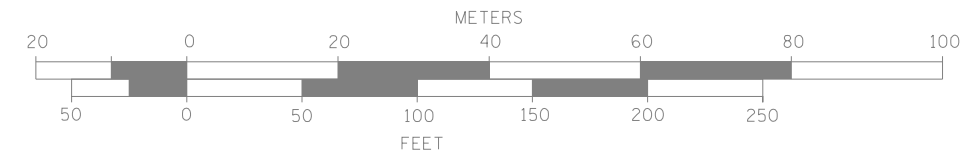
CONTRACT #68740

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
619	120BR.CR	PUTNAM	77	31
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

# PRE-STAGE I



GRAPHIC SCALE

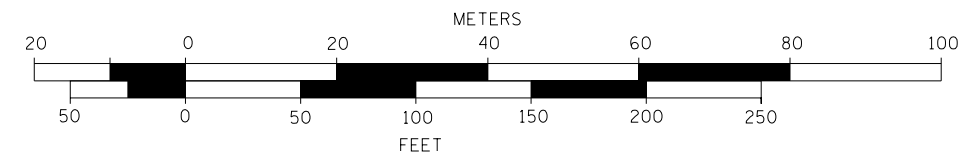


LEGEND	
	TEMPORARY CONCRETE BARRIER
	WORK AREA
	TEMPORARY IMPACT ATTENUATOR

PRE-STAGE I NOTES

1. USE TRAFFIC CONTROL & PROTECTION STANDARD 701326 TO CONSTRUCT REINFORCED CONCRETE SLAB, WIDENING, AND TO INSTALL TEMPORARY CONCRETE BARRIER AND TEMPORARY ATTENUATORS ALONG THE SOUTH SIDE OF IL 71.
2. EXTEND THE HMA BASE COURSE WIDENING BELOW THE PROPOSED TEMPORARY CONCRETE BARRIER WALL AND THE PROPOSED IMPACT ATTENUATORS.

GRAPHIC SCALE



REVISIONS	
NAME	DATE

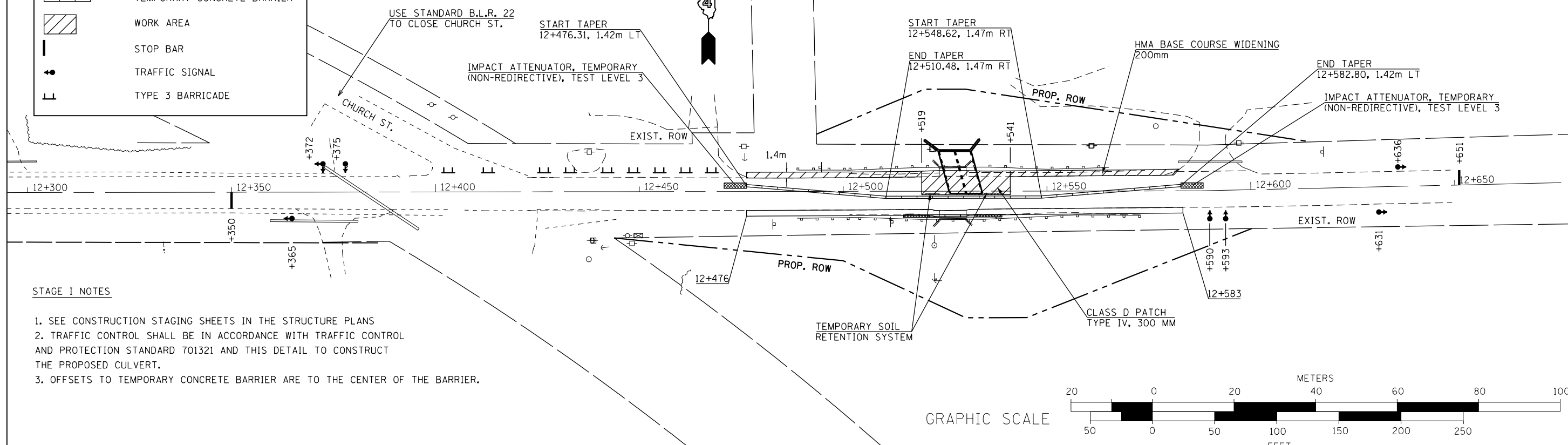
ILLINOIS DEPARTMENT OF TRANSPORTATION  
**CULVERT 12+530  
 STAGING DETAIL -  
 PRE-STAGE I**  
 DRAWN BY JGJ 2/16/11  
 CHECKED BY KJH 2/17/11  
 DATE

CONTRACT #68740

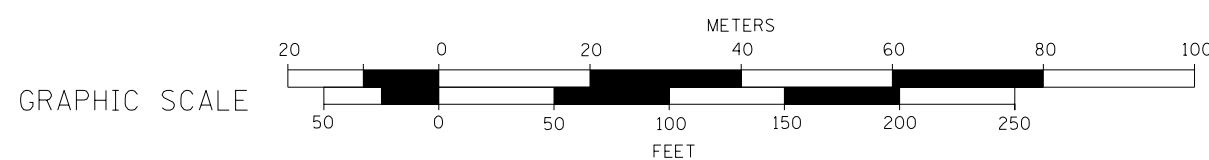
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
619	120BR.CR	PUTNAM	77	32
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

LEGEND	
	TEMPORARY IMPACT ATTENUATOR
	TEMPORARY CONCRETE BARRIER
	WORK AREA
	STOP BAR
	TRAFFIC SIGNAL
	TYPE 3 BARRICADE

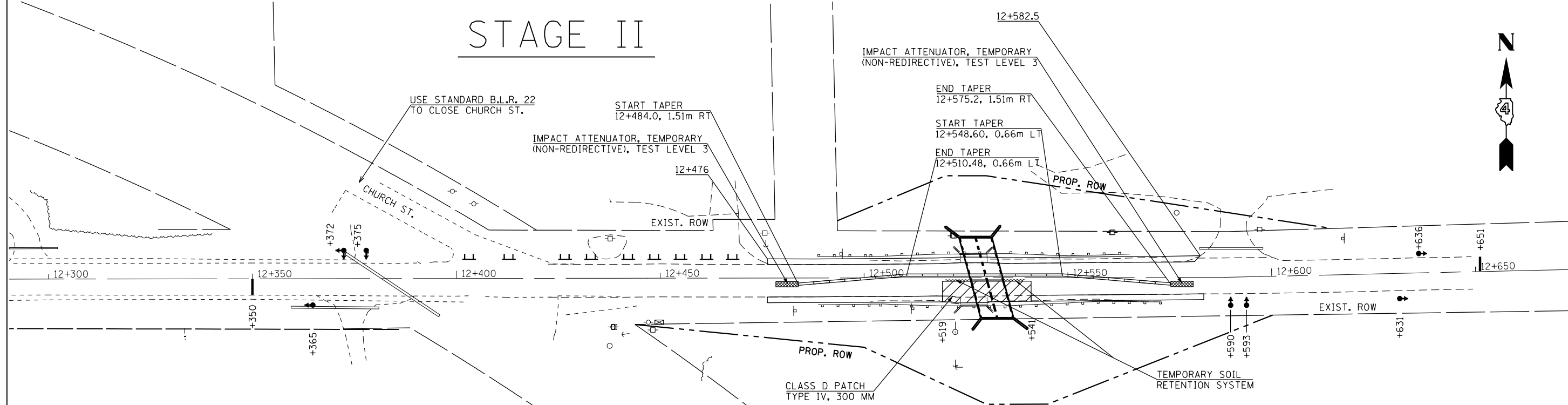
# STAGE I



- STAGE I NOTES**
1. SEE CONSTRUCTION STAGING SHEETS IN THE STRUCTURE PLANS
  2. TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH TRAFFIC CONTROL AND PROTECTION STANDARD 701321 AND THIS DETAIL TO CONSTRUCT THE PROPOSED CULVERT.
  3. OFFSETS TO TEMPORARY CONCRETE BARRIER ARE TO THE CENTER OF THE BARRIER.



# STAGE II



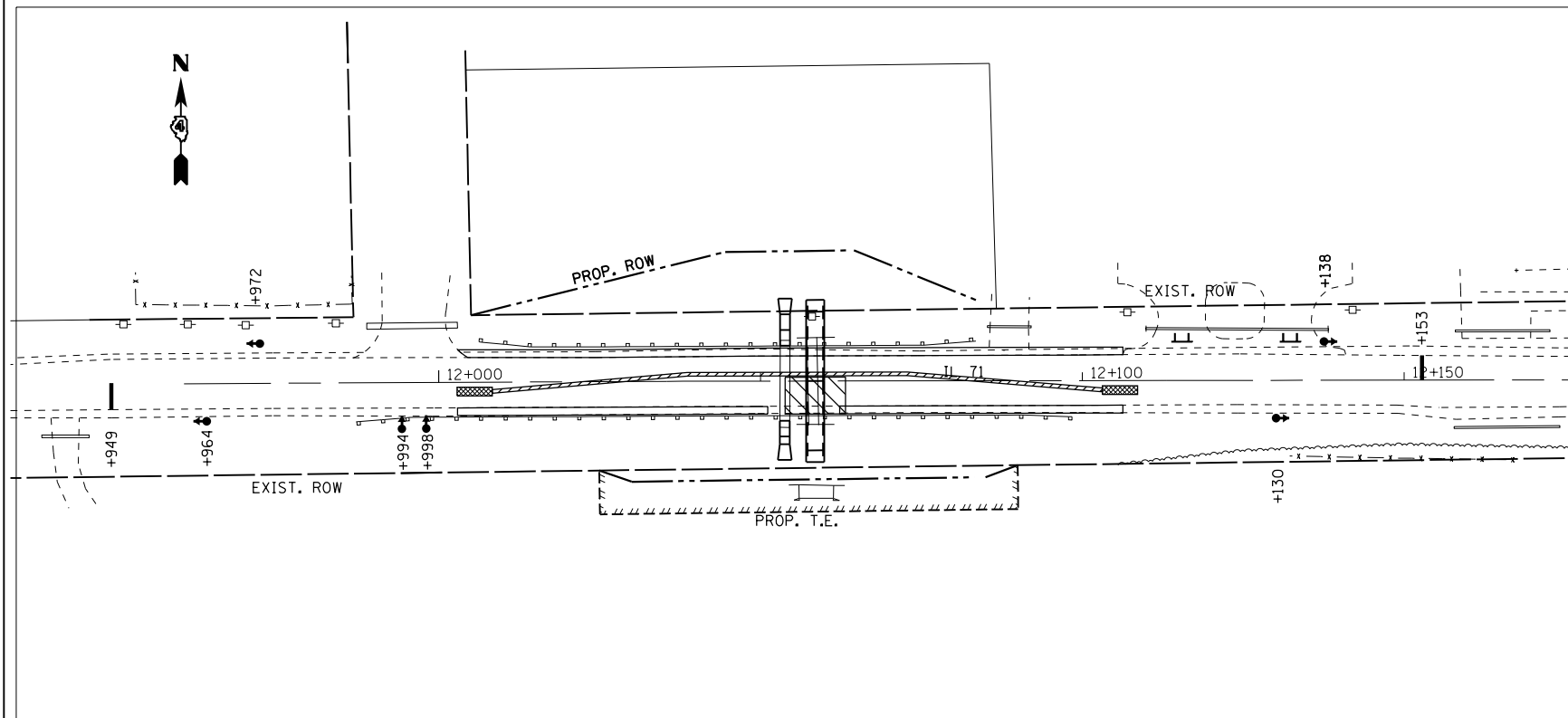
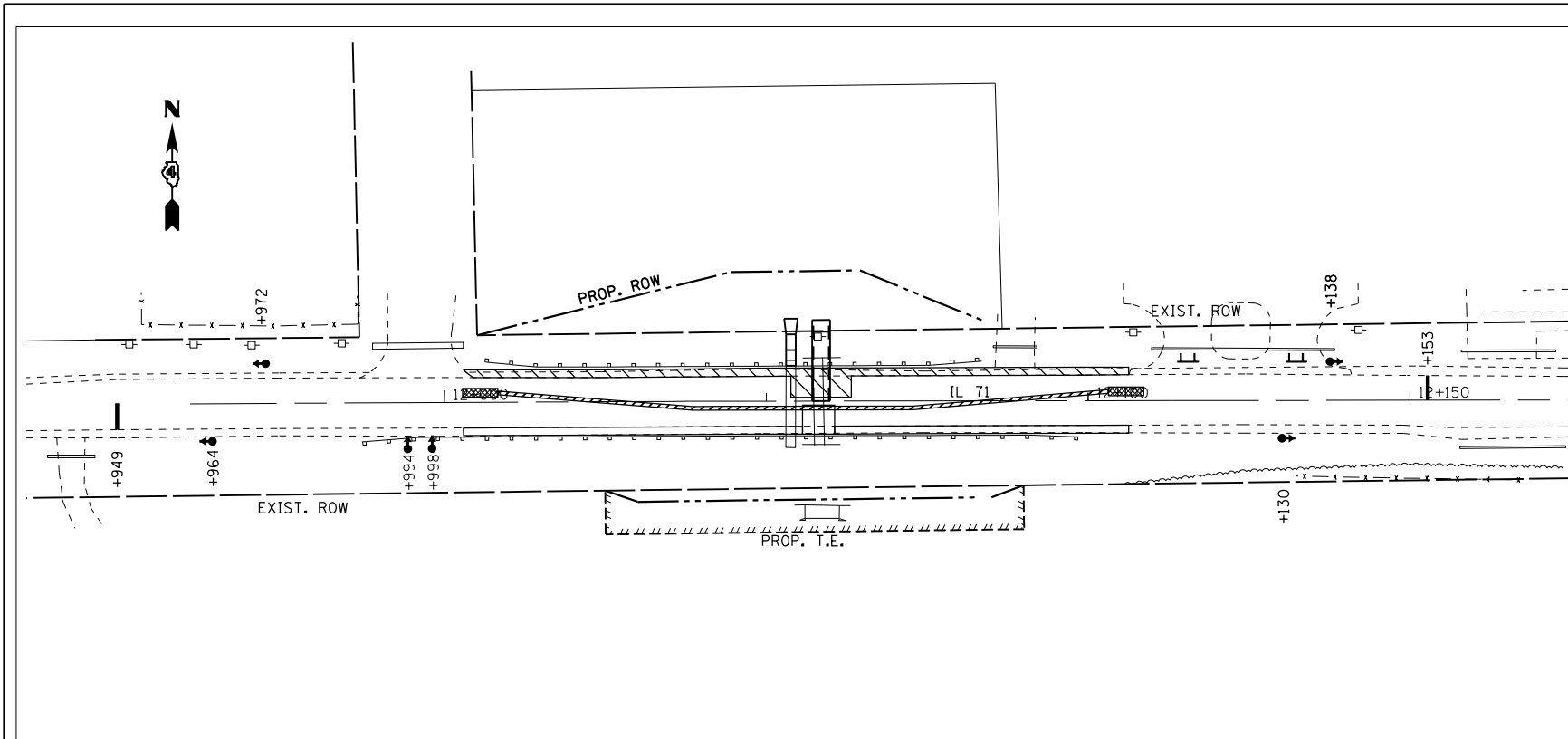
- STAGE II NOTES**
1. SEE CONSTRUCTION STAGING SHEETS IN THE STRUCTURE PLANS
  2. TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH TRAFFIC CONTROL AND PROTECTION STANDARD 701321 AND THIS DETAIL TO CONSTRUCT THE PROPOSED CULVERT.
  3. OFFSETS TO TEMPORARY CONCRETE BARRIER ARE TO THE CENTER OF THE BARRIER.

REVISIONS	
NAME	DATE

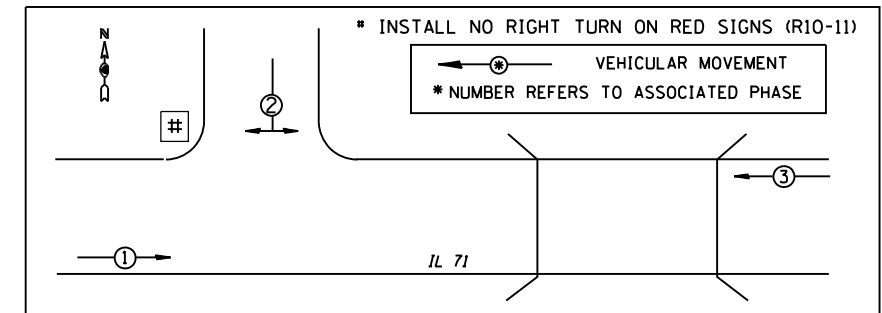
ILLINOIS DEPARTMENT OF TRANSPORTATION  
**CULVERT 12+530  
 STAGING DETAIL -  
 STAGE I & II**  
 DRAWN BY JGJ 2/16/11  
 CHECKED BY KJH 2/17/11  
 DATE

CONTRACT #68740

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
619	120BR,CR	PUTNAM	77	33
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		



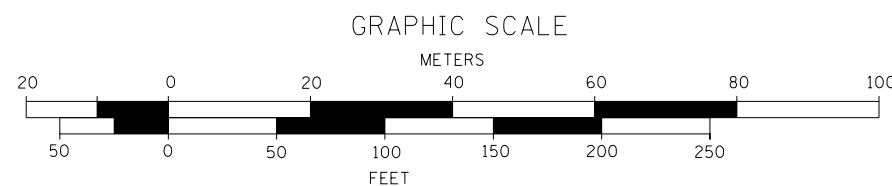
TEMPORARY PHASE DIAGRAM



1. TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH STANDARD 701321.
2. THREE PHASE SIGNAL OPERATION IS REQUIRED. THE ENGINEER OF TRAFFIC SHALL APPROVE ALL TIMING PARAMETERS. THE CONTRACTOR SHALL CONTACT PAUL GRANT, DISTRICT 4 TRAFFIC SIGNAL TECHNICIAN, AT (309) 671-4474, A MINIMUM OF FORTY-EIGHT HOURS PRIOR TO SIGNAL TURN ON.
3. THE CONTRACTOR MAY INSTALL A CONVENTIONAL TRAFFIC SIGNAL INSTALLATION OR UTILIZE SOLAR POWERED TRAILER MOUNTED TRAFFIC SIGNALS. DETECTION CAN BE EITHER MICROWAVE OR DETECTOR LOOPS.
4. ALL TRAFFIC SIGNAL SECTIONS SHALL HAVE 12" DIAMETER LED LENSES.
5. THE TEMPORARY TRAFFIC SIGNAL HEADS SHALL BE PLACED AT THE LOCATIONS INDICATED ON THE PLAN SHEETS OR DIRECTED BY THE ENGINEER.
6. THE CONTRACTOR SHALL FURNISH AND INSTALL A TEMPORARY ELECTRICAL SERVICE FOR THE TRAFFIC SIGNALS. THE CONTRACTOR SHALL PROVIDE ELECTRICAL CABLE, WOOD POLES, SERVICE DISCONNECT, AND ALL OTHER ITEMS REQUIRED FOR THE TEMPORARY SERVICE INSTALLATION. THE CONTRACTOR SHALL FIELD VERIFY THE DISTANCE FROM THE TEMPORARY TRAFFIC SIGNALS TO THE TEMPORARY ELECTRICAL SERVICE PRIOR TO BIDDING.
7. THE CONTRACTOR SHALL INSTALL "NO RIGHT TURN ON RED" AND "STOP HERE ON RED" SIGNS FOR ALL PRIVATE AND COMMERCIAL ENTRANCE
8. THE TEMPORARY TRAFFIC SIGNAL INSTALLATION SHALL CONFORM TO ALL MUTCD REQUIREMENTS.
9. ALL LABOR, MATERIALS, AND EQUIPMENT REQUIRED FOR THE TEMPORARY TRAFFIC SIGNAL INSTALLATION SHALL BE INCLUDED IN THE BID PRICE FOR THE PAY ITEM "TEMPORARY BRIDGE TRAFFIC SIGNALS". THERE WILL BE NO ADDITIONAL COMPENSATION.

ITEM DESCRIPTION	UNIT	QTY.
TEMPORARY BRIDGE TRAFFIC SIGNALS	EACH	1

LEGEND	
	IMPACT ATTENUATOR
	TEMPORARY CONCRETE BARRIER
	WORK AREA
	STOP BAR
	TRAFFIC SIGNAL
	TYPE 3 BARRICADE



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

**TEMPORARY BRIDGE TRAFFIC SIGNALS  
CULVERT 12+058.5**

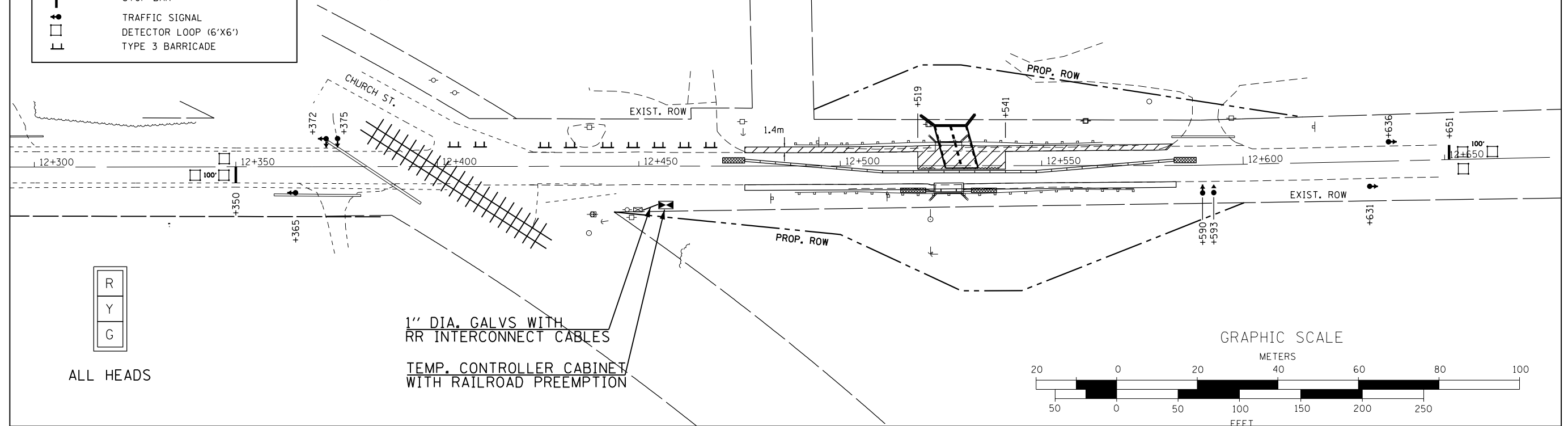
DATE \_\_\_\_\_ DRAWN BY ERH 3/27/13  
CHECKED BY \_\_\_\_\_

CONTRACT #68740

F.A.P. RTE. 619	SECTION 120BR,CR	COUNTY PUTNAM	TOTAL SHEETS 77	SHEET NO. 34
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

LEGEND	
	IMPACT ATTENUATOR
	TEMPORARY CONCRETE BARRIER
	WORK AREA
	STOP BAR
	TRAFFIC SIGNAL
	DETECTOR LOOP (6'X6')
	TYPE 3 BARRICADE

# STAGE I

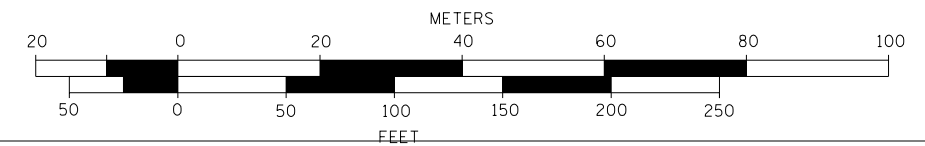


R  
Y  
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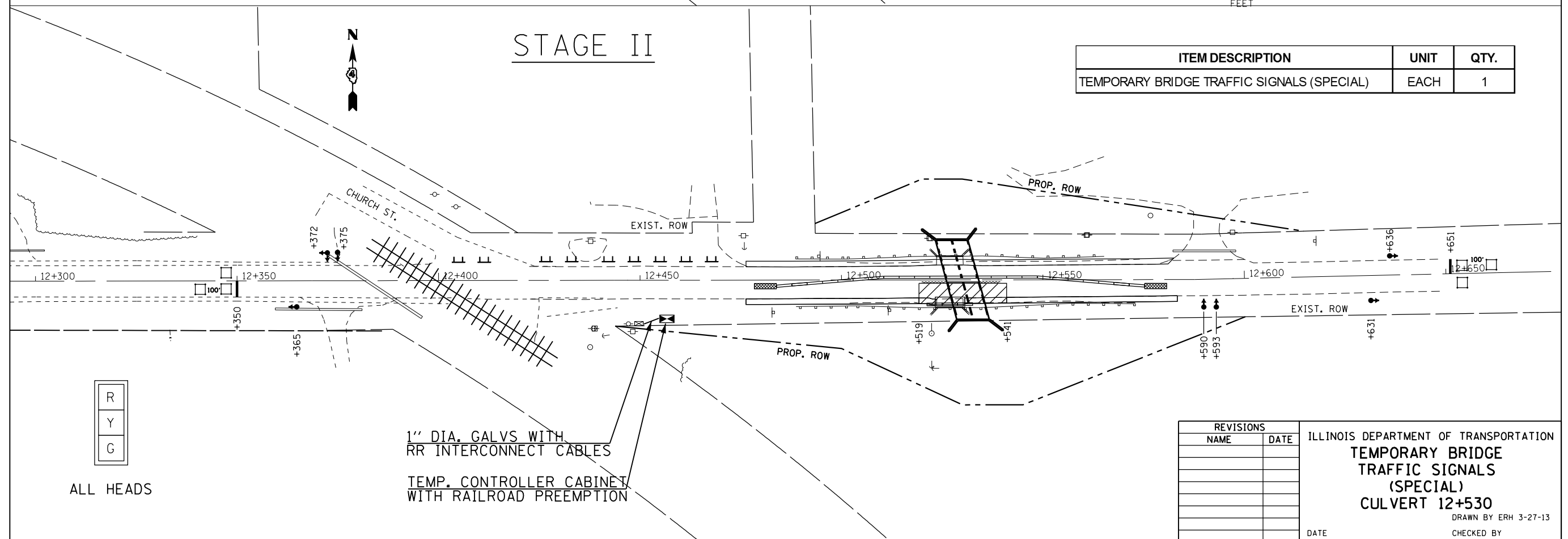
ALL HEADS

1" DIA. GALVS WITH  
RR INTERCONNECT CABLES  
TEMP. CONTROLLER CABINET  
WITH RAILROAD PREEMPTION

GRAPHIC SCALE



# STAGE II



R  
Y  
G

ALL HEADS

1" DIA. GALVS WITH  
RR INTERCONNECT CABLES  
TEMP. CONTROLLER CABINET  
WITH RAILROAD PREEMPTION

ITEM DESCRIPTION	UNIT	QTY.
TEMPORARY BRIDGE TRAFFIC SIGNALS (SPECIAL)	EACH	1

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**TEMPORARY BRIDGE  
 TRAFFIC SIGNALS  
 (SPECIAL)  
 CULVERT 12+530**  
 DRAWN BY ERH 3-27-13  
 CHECKED BY  
 DATE

CONTRACT #68740

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
619	120BR,CR	PUTNAM	77	35
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH STANDARD 701321. FOUR PHASE SIGNAL OPERATION WITH RAILROAD PREEMPTION IS REQUIRED. THE ENGINEER OF TRAFFIC AND THE ICC SHALL APPROVE ALL TIMING PARAMETERS. THE CONTRACTOR SHALL CONTACT PAUL GRANT, DISTRICT 4 TRAFFIC SIGNAL TECHNICIAN, AT (309) 671-4474, A MINIMUM OF FORTY-EIGHT HOURS PRIOR TO SIGNAL TURN ON.

THE CONTRACTOR SHALL INSTALL A CONVENTIONAL TRAFFIC SIGNAL INSTALLATION WITH IN-PAVEMENT DETECTOR LOOPS THAT HAS ALL OF THE REQUIRED FUNCTIONALITY DESCRIBED WITHIN THE CONTRACT PLANS AND SPECIAL PROVISIONS. THE USE OF SOLAR POWERED TRAILER MOUNTED TRAFFIC SIGNALS WILL NOT BE ALLOWED.

THE CONTRACTOR SHALL FURNISH AND INSTALL A NEW TYPE IV TRAFFIC SIGNAL CABINET COMPLETE WITH 16 POSITION TS-2 BACK PANEL, TS-2 TYPE 2 CONTROLLER, MMU, 8 CHANNELS OF DETECTION, RAILROAD PREEMPTION, AND ALL OTHER ACCESSORIES FOR INTERCONNECTION WITH THE RAILROAD CROSSING SIGNALS. THE CABINET AND INSTALLATION SHALL BE SUBJECT TO APPROVAL BY THE ICC. THE CONTRACTOR SHALL SUBMIT CATALOG CUT SHEETS FOR THE CONTROLLER CABINET AND ALL RELATED COMPONENTS TO THE DEPARTMENT FOR APPROVAL. AFTER REMOVAL OF THE TEMPORARY BRIDGE TRAFFIC SIGNALS, THE CABINET SHALL BECOME THE PROPERTY OF THE DEPARTMENT AND THE CONTRACTOR SHALL DELIVER IT TO THE IDOT TRAFFIC BUILDING LOCATED AT 1025 W. DETWEILLER DR., PEORIA, IL 61614.

THE CONTRACTOR SHALL INSTALL DETECTOR LOOPS FOR USE WITH THE TEMPORARY TRAFFIC SIGNALS IN ACCORDANCE WITH HIGHWAY STANDARD 701321 EXCEPT THAT THE ADVANCED DETECTOR LOOPS FOR BOTH MAINLINE APPROACHES SHALL BE LOCATED 100 FT. FROM THE STOP BAR.

THE CONTRACTOR SHALL INSTALL RAILROAD INTERCONNECT CABLE FROM THE CONTROLLER CABINET TO THE RAILROAD EQUIPMENT FACILITY. THE INTERCONNECT CABLE SHALL BE INSTALLED IN 1" DIAMETER GALVANIZED STEEL CONDUIT. THE INSTALLATION SHALL BE IN ACCORDANCE WITH HIGHWAY STANDARD 857006.

RAILROAD INTERCONNECT CABLE SHALL BE INDIVIDUALLY SHIELDED AND RATED FOR 300V.

ALL DETECTOR LOOPS SHALL HAVE SIX TURNS.

ALL TRAFFIC SIGNAL SECTIONS SHALL HAVE 12" DIAMETER LED LENSES.

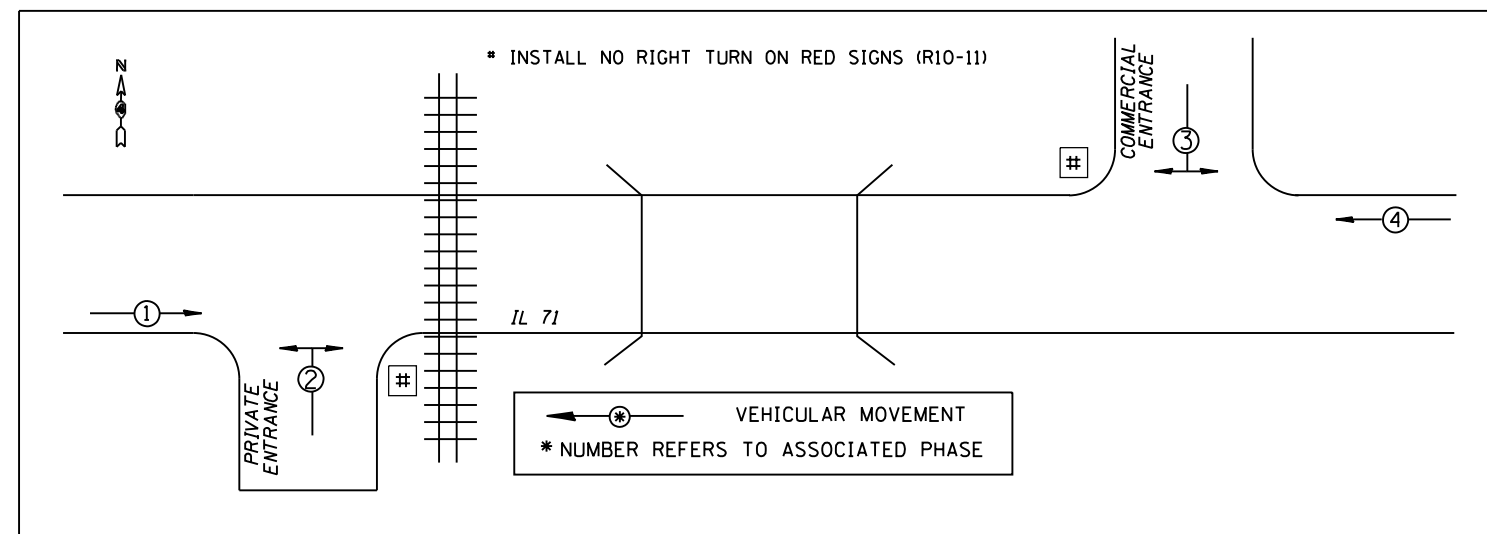
THE TEMPORARY TRAFFIC SIGNAL HEADS SHALL BE PLACED AT THE LOCATIONS INDICATED ON THE PLAN SHEETS OR DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL FURNISH AND INSTALL A TEMPORARY ELECTRICAL SERVICE FOR THE TRAFFIC SIGNALS. THE CONTRACTOR SHALL PROVIDE ELECTRICAL CABLE, WOOD POLES, SERVICE DISCONNECT, AND ALL OTHER ITEMS REQUIRED FOR THE TEMPORARY SERVICE INSTALLATION. THE CONTRACTOR SHALL FIELD VERIFY THE DISTANCE FROM THE TEMPORARY TRAFFIC SIGNALS TO THE TEMPORARY ELECTRICAL SERVICE PRIOR TO BIDDING.

THE CONTRACTOR SHALL INSTALL "NO RIGHT TURN ON RED" AND "STOP HERE ON RED" SIGNS FOR ALL PRIVATE AND COMMERCIAL ENTRANCE APPROACHES. THE TEMPORARY TRAFFIC SIGNAL INSTALLATION SHALL CONFORM TO ALL MUTCD REQUIREMENTS.

ALL LABOR, MATERIALS, AND EQUIPMENT REQUIRED FOR THE TEMPORARY TRAFFIC SIGNAL INSTALLATION SHALL BE INCLUDED IN THE BID PRICE FOR THE PAY ITEM "TEMPORARY BRIDGE TRAFFIC SIGNALS (SPECIAL)". THERE WILL BE NO ADDITIONAL COMPENSATION.

TEMPORARY PHASE DIAGRAM



EQUIPMENT NOTES

1. THE TRAFFIC SIGNAL CONTROLLER AND CABINET SHALL BE EQUIPPED WITH CRC SECURITY OR T&F SIGNATURE SECURITY TO PREVENT TIMING CHANGES THAT WOULD AFFECT THE PREEMPTION SEQUENCE.
2. THE SUPERVISORY INTERCONNECT CABLE SHALL HAVE INDIVIDUALLY SHIELDED CONDUCTORS WHERE THE BRAIDING OR SHIELDING FROM EACH CONDUCTOR IS TIED TOGETHER TO AC-IN THE TRAFFIC SIGNAL CONTROLLER TO ENSURE FUSE FAILURE IN THE EVENT OF A SHORT IN THE CABLE.
3. THE RAILROAD INTERCONNECT CABLE SHALL BE NO. 16, 3-PAIR, TWISTED/SHEILDED CABLE RATED FOR 300 VAC OR GREATER.

THE ALL-RED CLEARANCE TIME FOR PHASES 1 AND 4 HAS BEEN CALCULATED AT 30 SECONDS. THIS TIME MAY BE MODIFIED DEPENDING UPON FIELD CONDITIONS.

PHASE TIMING INFORMATION

PHASE	1	2	3	4
MINIMUM GREEN	10.0	6.0	6.0	10.0
YELLOW CLEARANCE	4.0	4.0	4.0	4.0
RED CLEARANCE	2.0	2.0	2.0	2.0

RECOMMENDED MINIMUM PREEMPTION TIMING

TIMING PARAMETERS	VALUE (SEC)
DELAY	1.0
MINIMUM GREEN	1.0
YELLOW INTERVAL	USE PHASE VALUE
ALL-RED INTERVAL	USE PHASE VALUE
MAX. TIME PRIOR TO TRACK CLEARANCE PHASE	8.0
TRACK CLEARANCE TIME	0
MINIMUM HOLD TIME	15.0
MINIMUM PREEMPTION TIME REQUIRED	20.0

RAILROAD PREEMPTION SEQUENCE

I.	II.	III.
TRACK CLEAR	HOLD PHASES (GREEN)	EXIT PHASES
N/A	NONE (ALL PHASES RED DURING PREEMPT)	I. ALL-RED PERIOD OF 30 SECONDS II. CALLS PLACED IN PHASES 1 & 4 FOR SERVICE

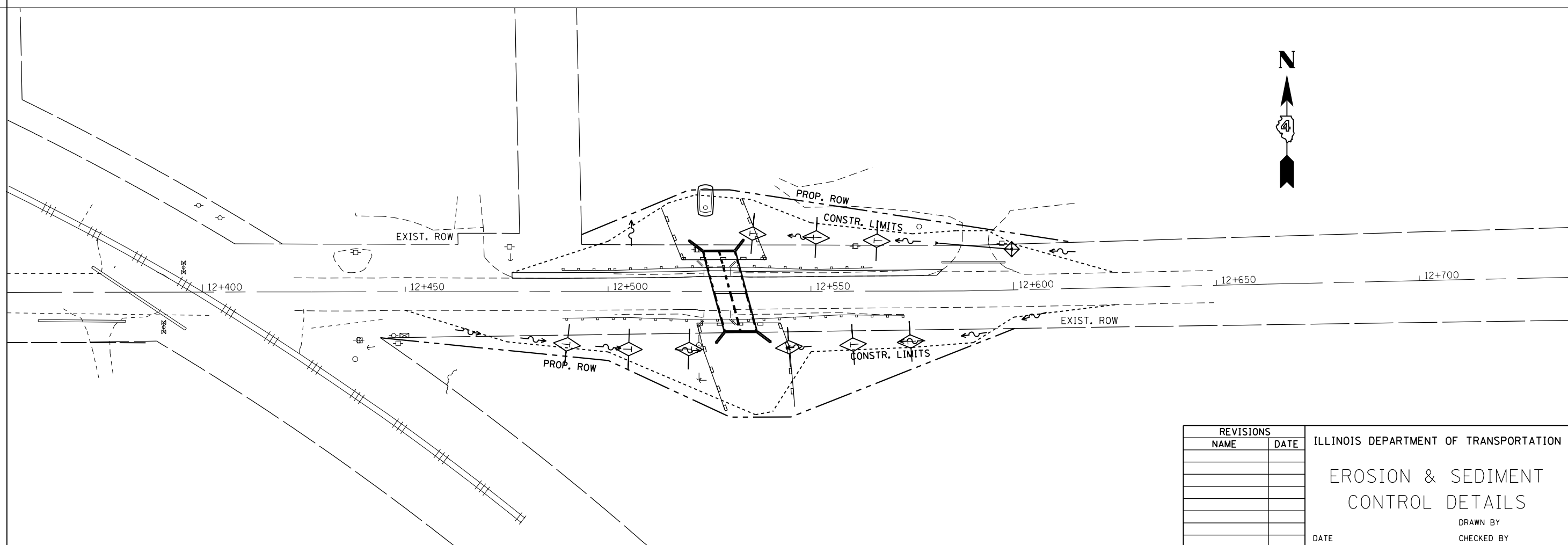
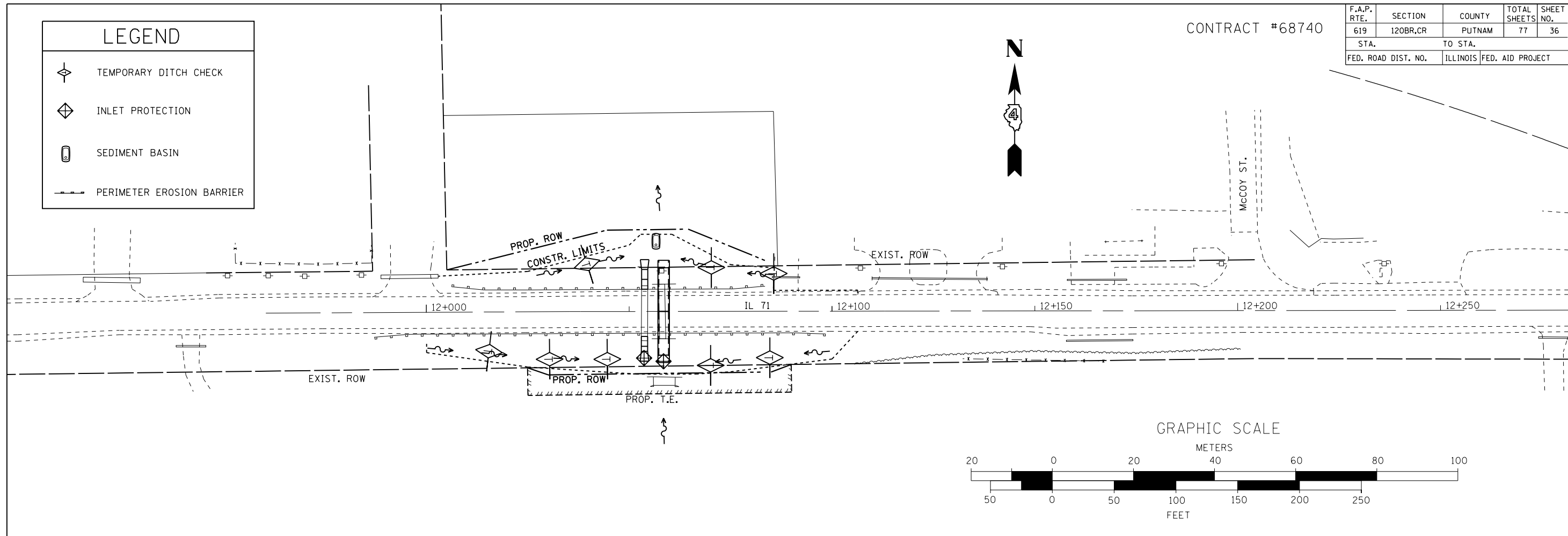
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**TEMPORARY BRIDGE TRAFFIC SIGNALS (SPECIAL) DETAILS CULVERT 12+530**  
 DRAWN BY ERH 3/27/13  
 CHECKED BY  
 DATE

CONTRACT #68740

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
619	120BR.CR	PUTNAM	77	36
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

LEGEND	
	TEMPORARY DITCH CHECK
	INLET PROTECTION
	SEDIMENT BASIN
	PERIMETER EROSION BARRIER



REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

**EROSION & SEDIMENT CONTROL DETAILS**

DRAWN BY \_\_\_\_\_

CHECKED BY \_\_\_\_\_

DATE \_\_\_\_\_



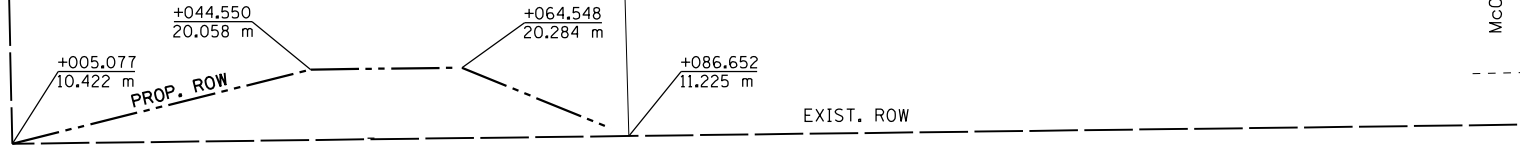
LEGEND	
	EXIST. ROW
	PROP. T.E.
	PROP. ROW



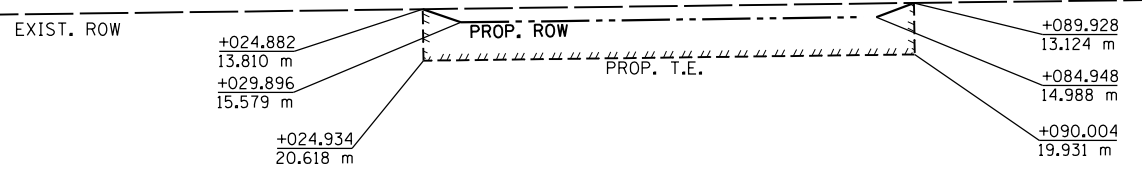
CONTRACT #68740

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
619	120BR.CR	PUTNAM	77	37
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

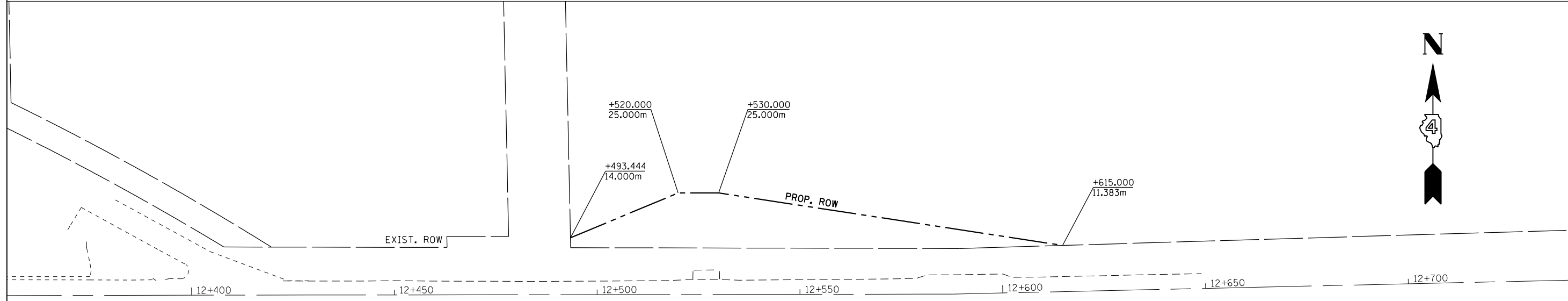
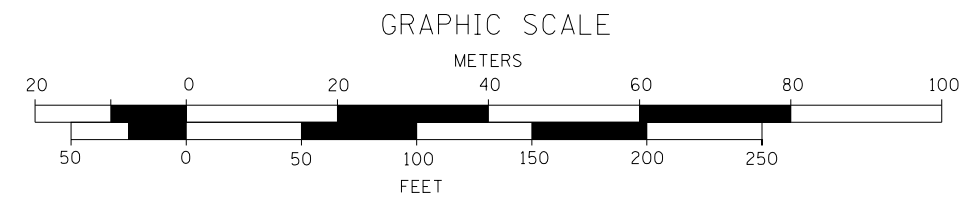
McCOY ST.



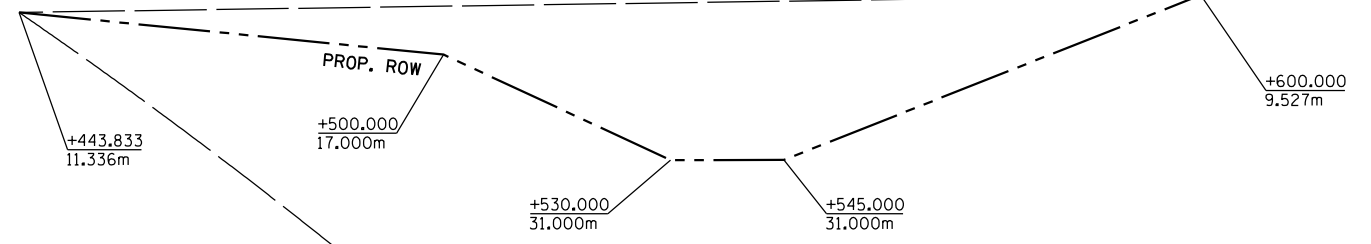
12+000 IL 71 12+100 12+150 12+200



NOTE:  
 THE STATIONS AND OFFSETS SHOWN IN THESE PLANS FOR THE PROPOSED RIGHT-OF-WAY AND TEMPORARY EASEMENTS BETWEEN IL 71 STA. 12+000 AND 12+100 ARE DIFFERENT THAN THOSE FOUND ON FINAL PLATS DUE TO A DIFFERENT IL ROUTE 71 CENTERLINE BEING USED IN THE PLANS THAN ON THE FINAL PLATS.

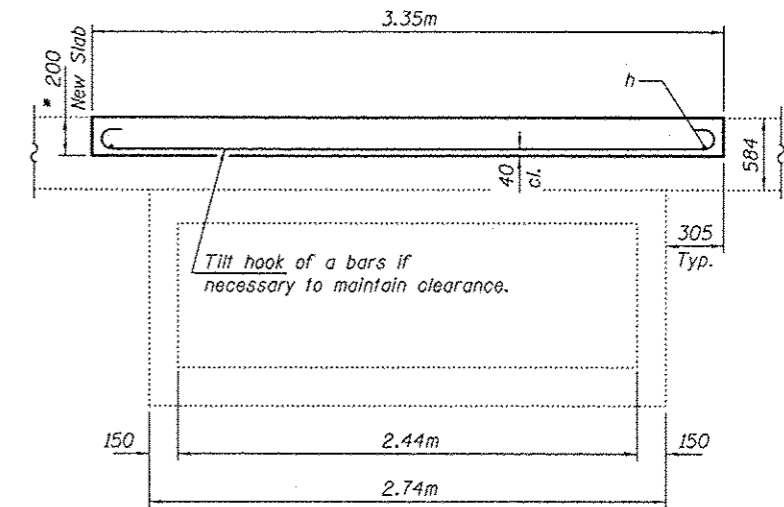
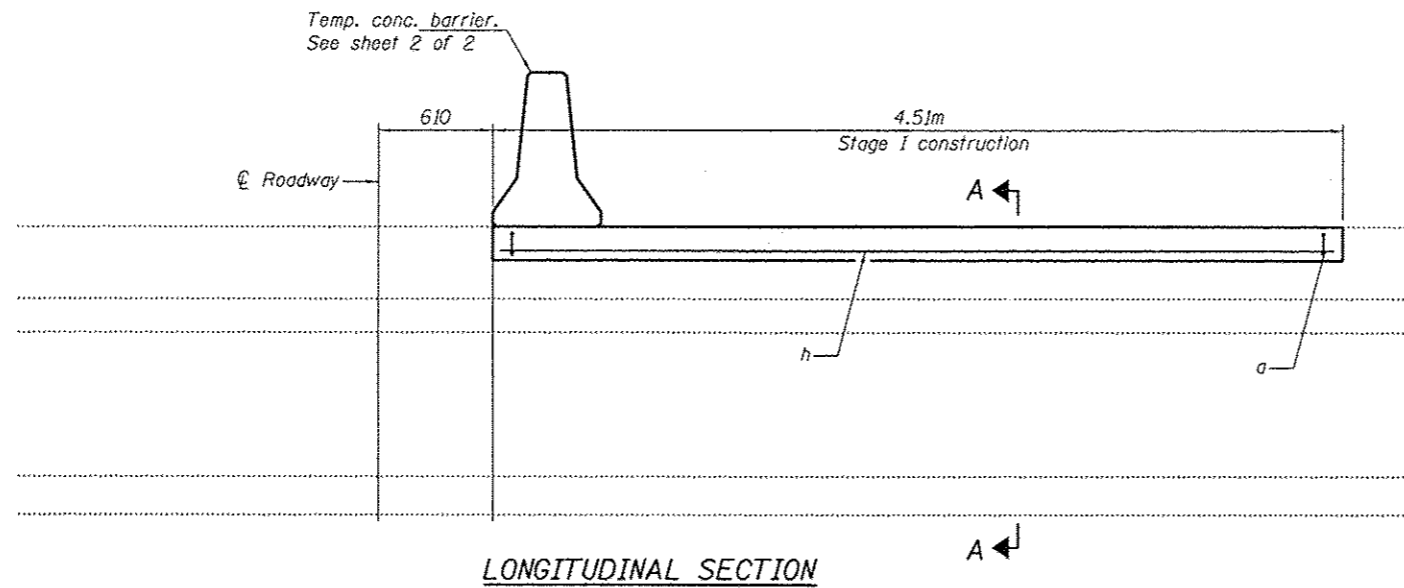


12+400 12+450 12+500 12+550 12+600 12+650 12+700

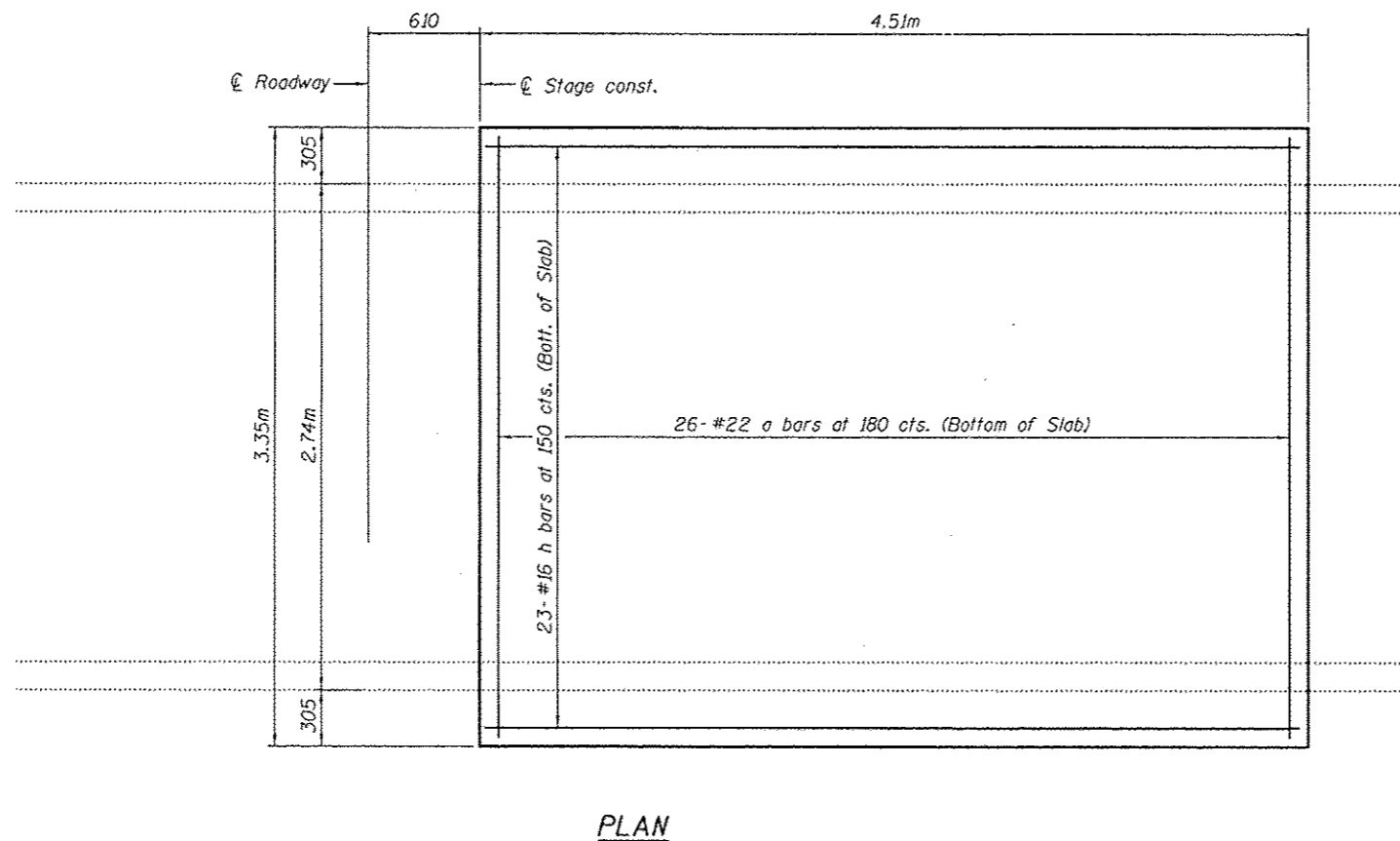


REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
 R.O.W. PLANS  
 DATE \_\_\_\_\_ DRAWN BY \_\_\_\_\_ CHECKED BY \_\_\_\_\_



\* Remove 200 of existing HMA overlay and replace with 200 concrete slab as shown. Removal to be limited to the 200 shown. Slope to match roadway. Cost of removal included with Hot-Mix Asphalt Surface Removal, Special.



**GENERAL NOTES**

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

The slab surface shall have its final finish tined according to Article 420.09(e)(1) of the Standard Specifications. Cost included with Concrete Superstructure.

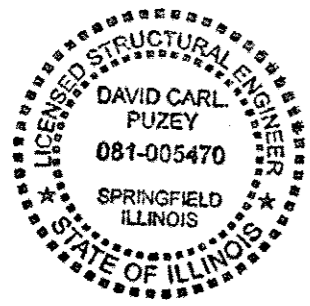
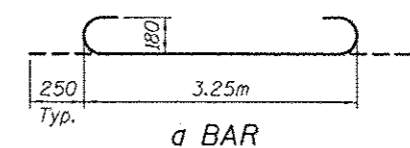
All dimensions are in millimeters (mm) except as noted.

**DESIGN STRESSES**

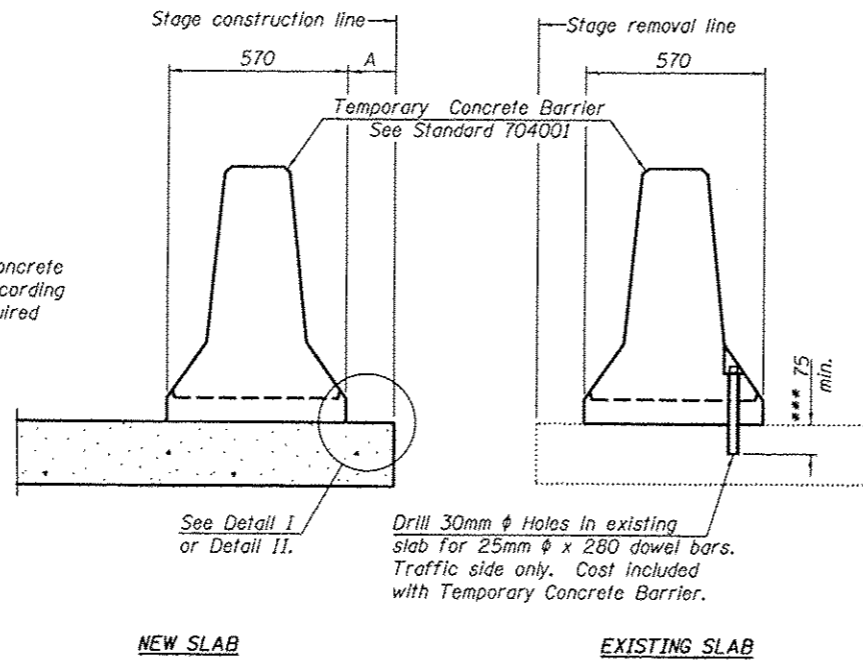
FIELD UNITS  
 $f'c = 24 \text{ MPa}$   
 $f_y = 420 \text{ MPa (Reinf.)}$

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
a	26	#22	3.75m	⌋
h	23	#16	4.42m	—
HMA Surface Removal, Special			m <sup>2</sup>	15.1
Reinforcement Bars			kg	450
Concrete Superstructure			m <sup>3</sup>	3.0



When "A" is 1.067m or less, the temporary concrete barrier shall be anchored to the new slab according to Detail I or Detail II. No anchorage is required when "A" is greater than 1.067m.



SECTIONS THRU SLAB OR DECK BEAM

**NOTES**

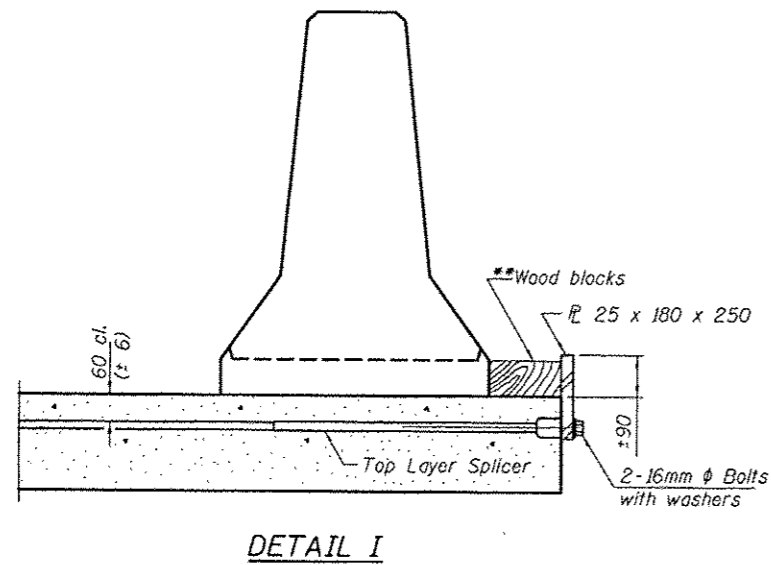
Detail I - With Bar Splicer or Couplers:  
Connect one (1) 25 x 180 x 250 steel  $\bar{L}$  to the top layer of couplers with 2-16mm  $\phi$  bolts screwed to coupler at approximate  $\bar{C}$  of each barrier panel.

Detail II - With Extended Reinforcement Bars:  
Connect one (1) 25 x 180 x 250 steel  $\bar{L}$  to the concrete slab or concrete wearing surface with 2-16mm  $\phi$  Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate  $\bar{C}$  of each barrier panel.

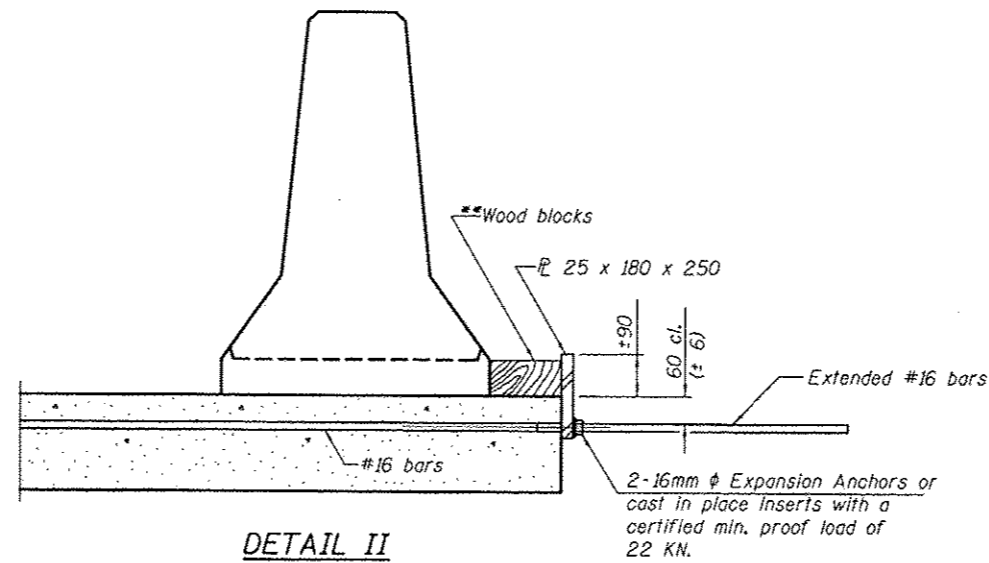
Cost of anchorage is included with Temporary Concrete Barrier. The 25 x 180 x 250 plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

All dimensions are in millimeters (mm) except as noted.

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



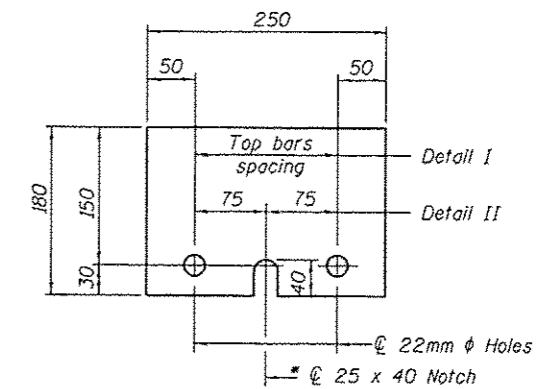
DETAIL I



DETAIL II

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

"W" = Top bars spacing + 4"



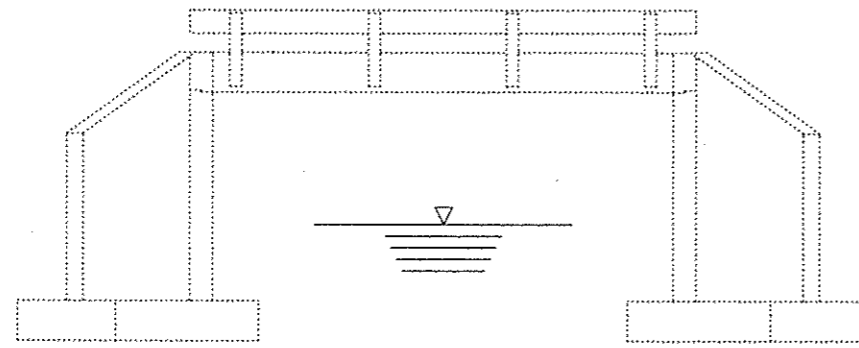
STEEL RETAINER  $\bar{L}$  25 x 180 x 250

\* Required only with Detail II

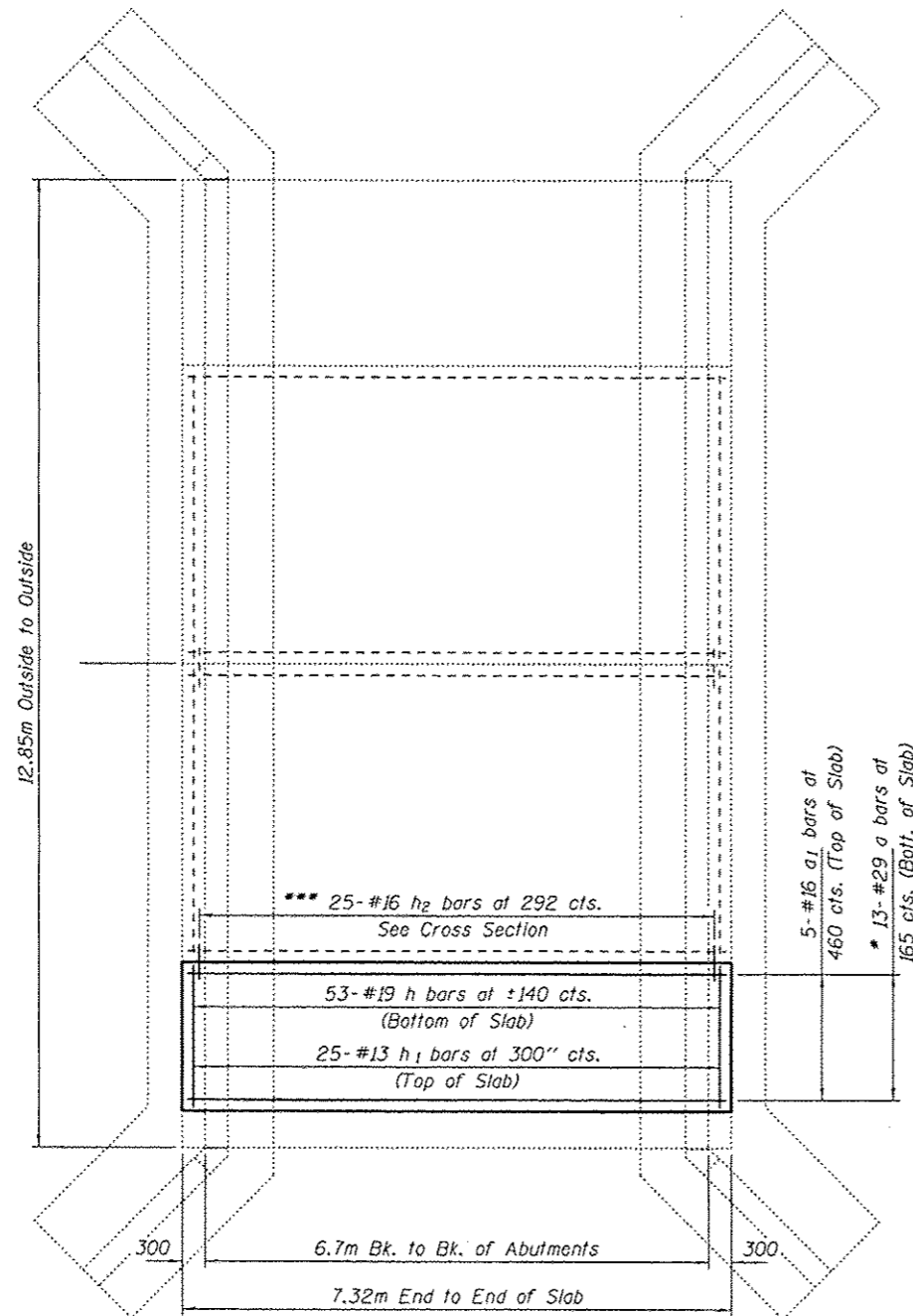
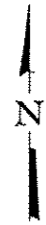
DESIGNED VHV	EXAMINED <i>Timothy A. ...</i>	DATE - APRIL 25, 2013	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION SN 078-1001	F.A.P. RTE. 619	SECTION 120 BR, CR	COUNTY PUTNAM	TOTAL SHEETS 77	SHEET NO. 39
CHECKED DAB	PASSED <i>Carl ...</i>				SHEET NO. 2 OF 2 SHEETS	CONTRACT NO. 68740		ILLINOIS FED. AID PROJECT		

**GENERAL NOTES**

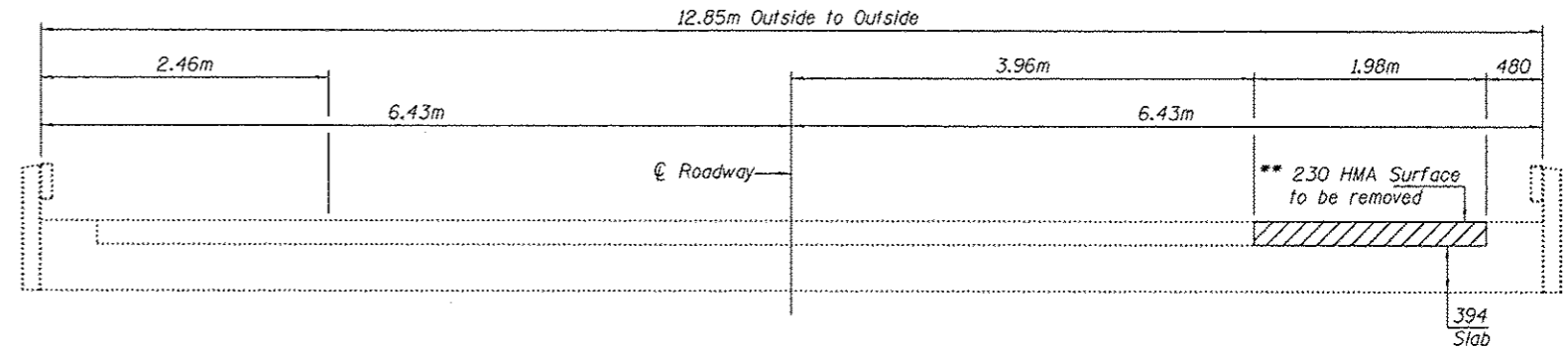
Plan dimensions and details relative to existing plans are subject to nominal construction variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished at the unit price bid for the work. The deck surface shall have its final finish tined according to Article 420.09(e)(1) of the Standard Specifications. Cost included with Concrete Superstructures. All dimensions are in millimeters (mm) except as noted.



**ELEVATION**

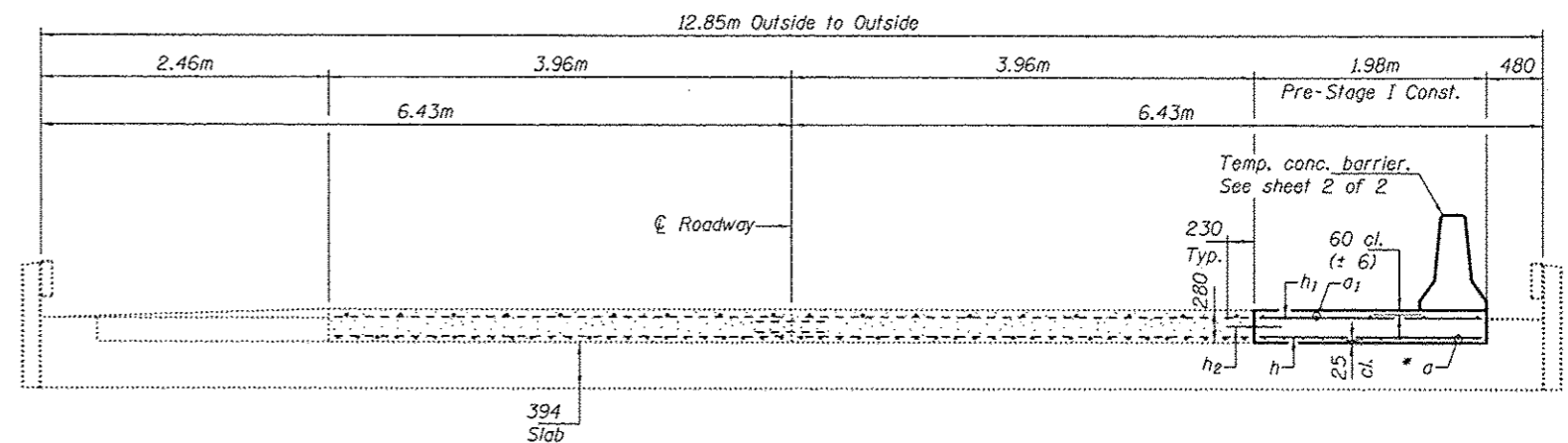


**PLAN**



**EXISTING CROSS-SECTION**

(Looking East)



**PROPOSED CROSS-SECTION**

(Looking East)

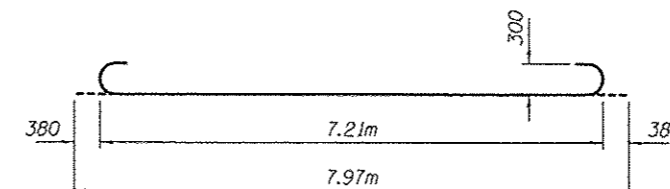
- \* Tilt #29  $a$  bars as required to maintain clearance.
- \*\* Contractor must not remove any material beyond this limit.
- \*\*\* Epoxy grout  $h_2$  bars in 230 min. holes according to Article 584 of the Standard Specifications.

**DESIGN STRESSES**

**FIELD UNITS**  
 $f'_c = 24 \text{ MPa}$   
 $f_y = 420 \text{ MPa (Reinf.)}$

**BILL OF MATERIAL**

Bar	No.	Size	Length	Shape
$a$	13	#29	7.97m	
$a_1$	5	#16	7.21m	
$h$	53	#19	1.88m	
$h_1$	25	#13	1.88m	
$h_2$	25	#16	460	
HMA Surface Removal, Special				m <sup>2</sup> 14.1
Concrete Superstructure				m <sup>3</sup> 4.1
Reinforcement Bars				kg 870



**BAR a**



Expires: November 30, 2014

DESIGNED - <i>Victor Puzey</i>	EXAMINED - <i>Timothy A. Dook</i>	DATE - APRIL 25, 2013
CHECKED - <i>John Puzey</i>	PASSED - <i>David Carl Puzey</i>	
DRAWN - <i>Baliga</i>		
CHECKED - <i>SK</i>		

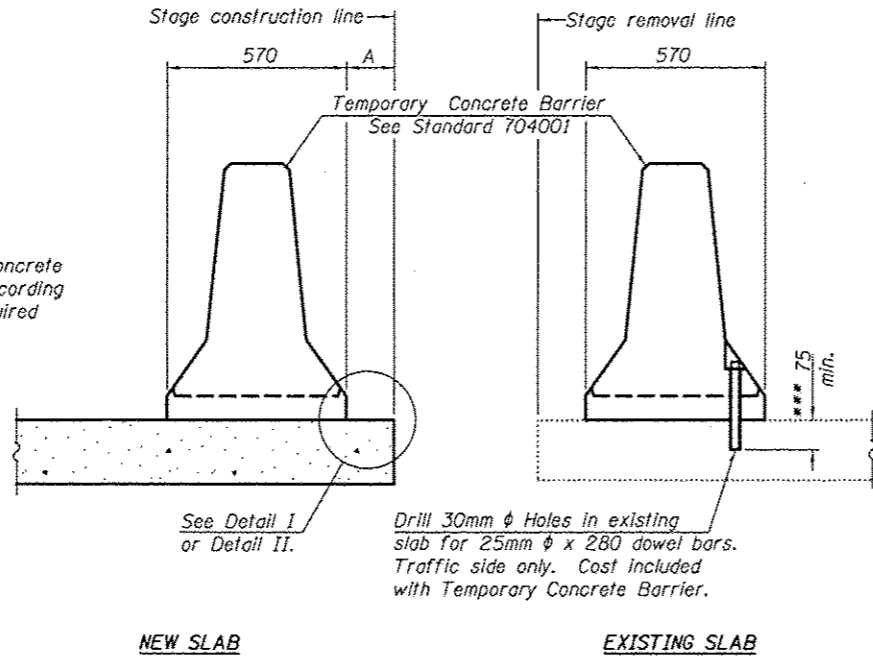
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION & REPAIR DETAILS  
SN 078-0030

SHEET NO. 1 OF 2 SHEETS

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
619	120 BR.CR	PUTNAM	77	40
				CONTRACT NO. 68740
ILLINOIS FED. AID PROJECT				

When "A" is 1.067m or less, the temporary concrete barrier shall be anchored to the new slab according to Detail I or Detail II. No anchorage is required when "A" is greater than 1.067m.



SECTIONS THRU SLAB OR DECK BEAM

**NOTES**

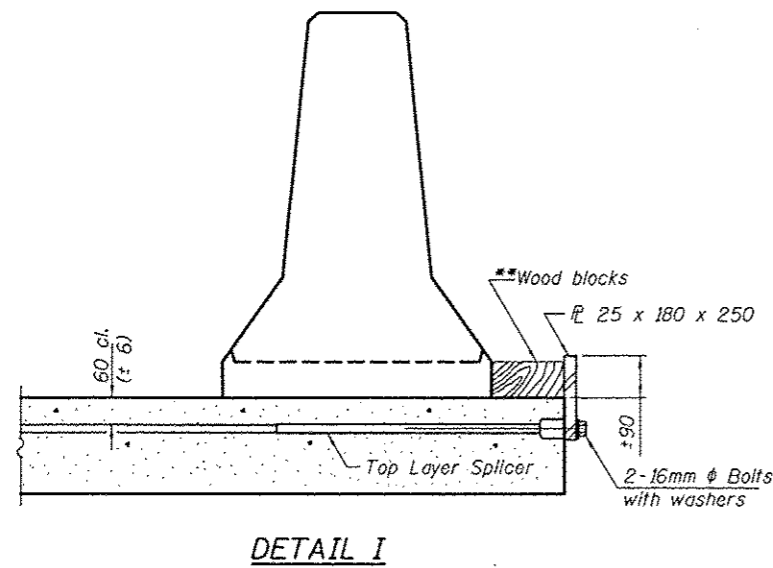
Detail I - With Bar Splicer or Couplers:  
Connect one (1) 25 x 180 x 250 steel  $\bar{L}$  to the top layer of couplers with 2-16mm  $\phi$  bolts screwed to coupler at approximate  $\bar{C}$  of each barrier panel.

Detail II - With Extended Reinforcement Bars:  
Connect one (1) 25 x 180 x 250 steel  $\bar{L}$  to the concrete slab or concrete wearing surface with 2-16mm  $\phi$  Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate  $\bar{C}$  of each barrier panel.

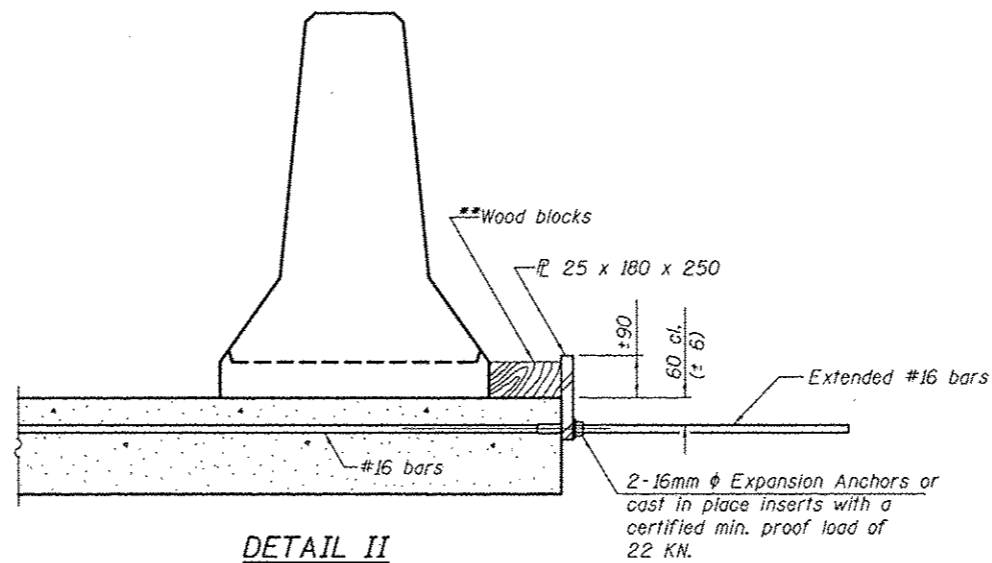
Cost of anchorage is included with Temporary Concrete Barrier. The 25 x 180 x 250 plate shall not be removed until stage II construction forms and all reinforcement bars are in place and the concrete is ready to be placed.

All dimensions are in millimeters (mm) except as noted.

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



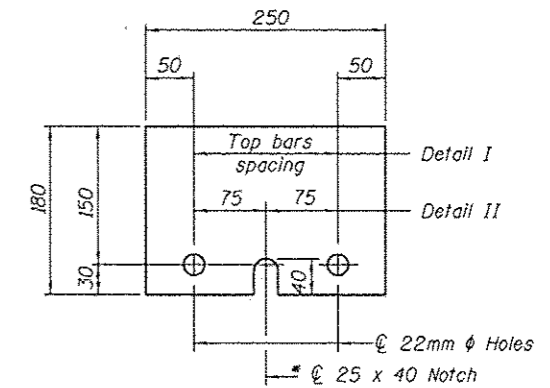
DETAIL I



DETAIL II

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

"W" = Top bars spacing + 4"



STEEL RETAINER  $\bar{L}$  25 x 180 x 250

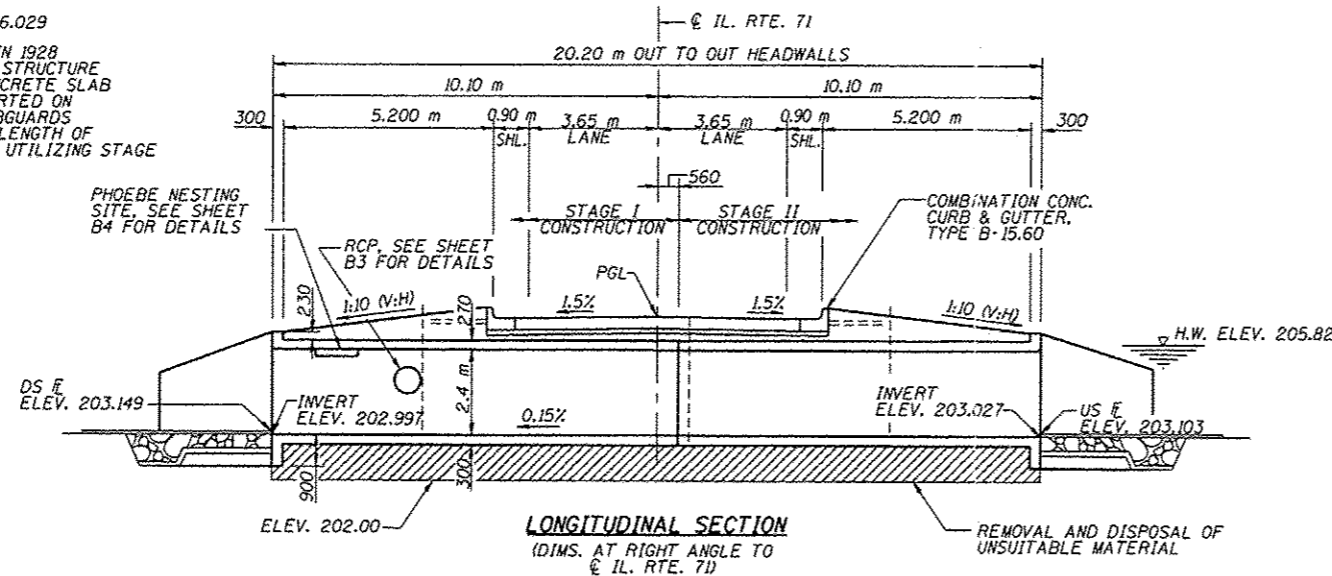
\* Required only with Detail II

DESIGNED - VHV	EXAMINED - <i>Timothy A. Ault</i>	DATE - APRIL 25, 2013	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION SN 078-0030	F.A.P. RTE. 619	SECTION 120 BR,CR	COUNTY PUTNAM	TOTAL SHEETS 77	SHEET NO. 41	
CHECKED - DAB	PASSED - <i>Carl Perry</i>				CONTRACT NO. 68740			ILLINOIS FED. AID PROJECT		
DRAWN - baliva					SHEET NO. 2 OF 2 SHEETS					
CHECKED - VHV DAB										

BENCHMARK:  
CHISELED "□" ON N.E. WING WALL ELEV. 206.029

EXISTING STRUCTURE: S.N. 078-0030 BUILT IN 1928 UNDER SECTION 120-B OF SBI RTE. 69. THE STRUCTURE IS A SINGLE SPAN, 393 mm REINFORCED CONCRETE SLAB STRUCTURE WITH CLOSED ABUTMENTS SUPPORTED ON TIMBER PILES. 12.1 m FACE TO FACE OF HUBGUARDS (12.8 m OUT TO OUT) WITH A BACK TO BACK LENGTH OF 6.7 m. ONE WAY TRAFFIC TO BE MAINTAINED UTILIZING STAGE CONSTRUCTION.

NO SALVAGE.



STATION 12+530.00  
BUILT BY  
STATE OF ILLINOIS  
F.A.P. ROUTE 619 - SEC. 120 BR  
LOADING MSIB  
STR. NO. 078-2007

**NAME PLATE**  
SEE STD. 515001

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
619	120 BR, CR	PUTNAM	77	42

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

SHEET B1 OF B6  
CONTRACT NO. 68740

**GENERAL NOTES**

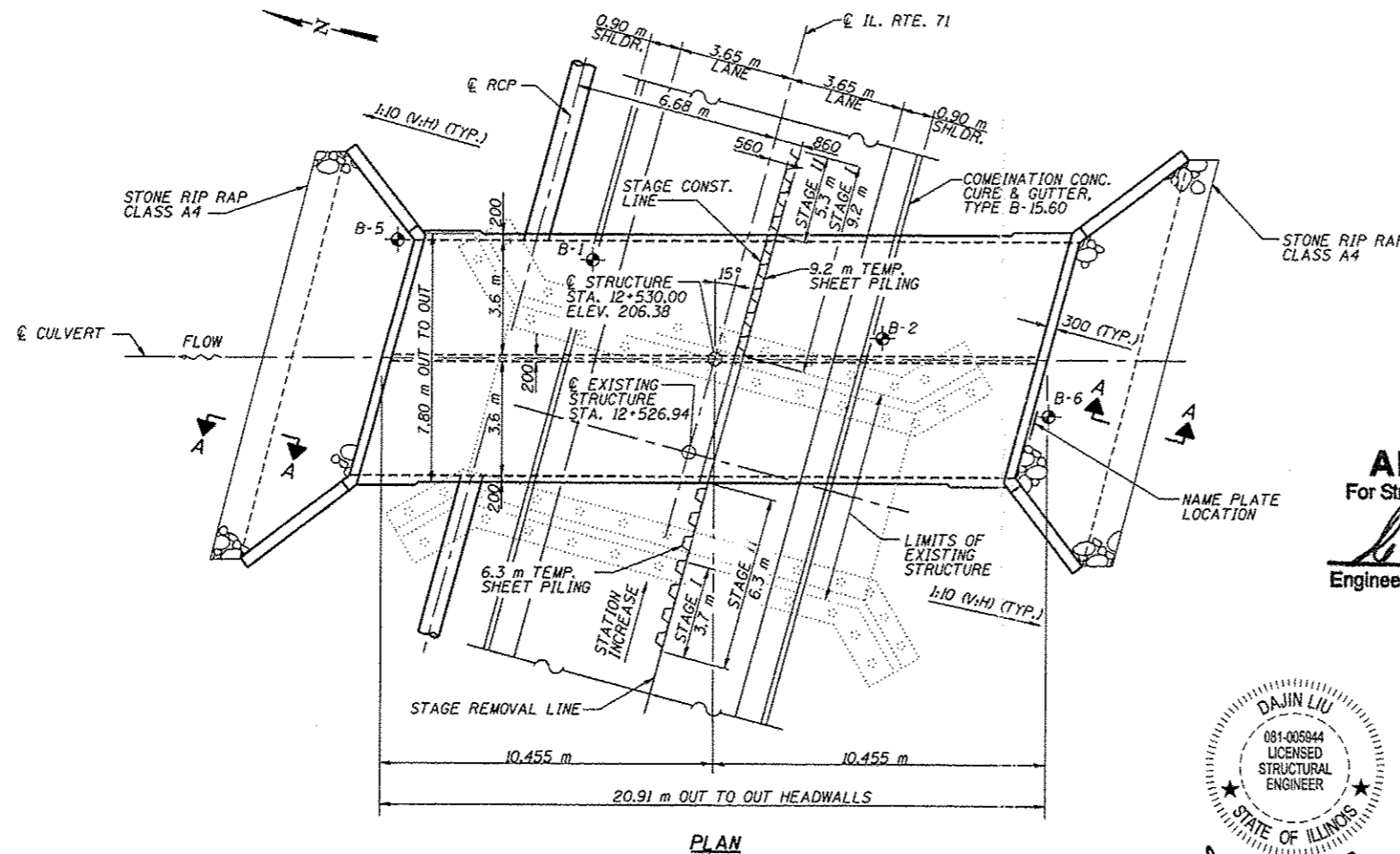
1. REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.
2. LAYOUT OF SLOPE PROTECTION SYSTEM MAY BE VARIED IN THE FIELD TO SUIT GROUND CONDITIONS AS DIRECTED BY THE ENGINEER.
3. ALL DIMENSIONS ARE IN MILLIMETERS (mm) EXCEPT AS NOTED.
4. A PRECAST BOX CULVERT ALTERNATE WILL NOT BE ALLOWED AT THIS SITE.
5. FOR BACKFILLING AND EMBANKMENT, SEE STANDARD SPECIFICATIONS.
6. EXPOSED EDGES SHALL HAVE STANDARD 20 mm CHAMFER, UNLESS OTHERWISE NOTED.
7. EXCAVATION BEHIND EXISTING ABUTMENT WALLS SHALL BE PERFORMED TO BALANCE FRONT AND BACK SOIL PRESSURE BEFORE REMOVING THE EXISTING SUPERSTRUCTURE. THE CONTRACTOR SHALL SAWCUT THE UPPER PORTION OF THE EXISTING ABUTMENT AT STAGE I REMOVAL TO ENSURE THE REMAINING PORTION WILL NOT BE PREMATURELY DAMAGED.

**INDEX OF SHEETS**

- B1 GENERAL PLAN AND ELEVATION
- B2 CONSTRUCTION STAGING
- B3 CULVERT PLAN
- B4 SECTIONS AND DETAILS
- B5 BAR SPLICER ASSEMBLY DETAILS
- B6 TEMPORARY CONCRETE BARRIER FOR STAGE CONSTRUCTION
- 48 SOIL BORINGS - 1 OF 2
- 49 SOIL BORINGS - 2 OF 2

**TOTAL BILL OF MATERIAL**

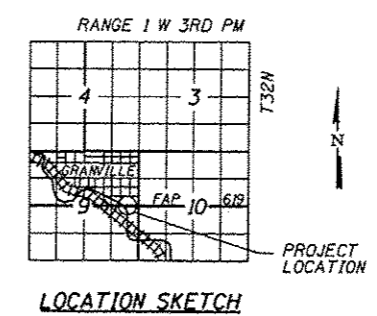
ITEM	UNIT	TOTAL
REMOVAL OF EXISTING STRUCTURES NO. 2	EACH	1
NAME PLATES	EACH	1
STONE RIPRAP, CLASS A4	m <sup>2</sup>	80
FILTER FABRIC	m <sup>2</sup>	125
REINFORCEMENT BARS, EPOXY COATED	kg	16,290
TEMPORARY SHEET PILING	m <sup>2</sup>	174
CONCRETE BOX CULVERTS	m <sup>3</sup>	149.8
BAR SPLICERS	EACH	114
REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL	m <sup>3</sup>	145
POROUS GRANULAR EMBANKMENT	m <sup>3</sup>	145



**APPROVED**  
For Structural Adequacy Only  
*D. Carl Kuyper*  
Engineer of Bridges & Structures

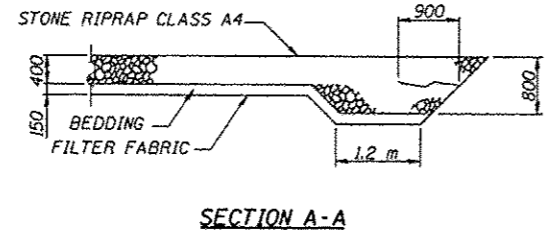
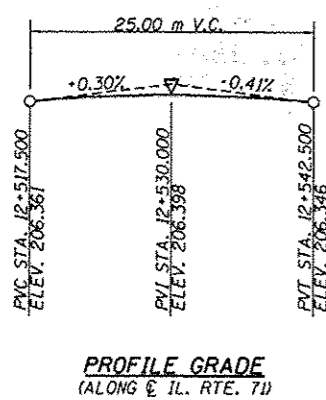
DAJIN LIU  
081-005944  
LICENSED  
STRUCTURAL  
ENGINEER  
STATE OF ILLINOIS

*Dajin Liu*  
DAJIN LIU, P.E., S.E.  
NO. 081-005944  
EXP. DATE 11/30/2014  
4/22/13



**LOADING MSIB**  
Allow 2.4 kN/m<sup>2</sup> for future wearing surface.  
**DESIGN SPECIFICATIONS**  
1996 AASHTO with 1997, 1998 & 1999 Interims

**DESIGN STRESSES**  
FIELD UNITS  
f<sub>c</sub> = 24 MPa  
f<sub>y</sub> = 420 MPa (Reinforcement)



Drainage Area = 8.26 km<sup>2</sup> Low Grade Elev. 206.337 Sta. 12+530.0

Flood	Freq. Yr.	Q m <sup>3</sup> /s	Opening m <sup>2</sup>		Nat. H.W.E.	Head - m		Headwater Elev.	
			Exist.	Prop.		Exist.	Prop.	Exist.	Prop.
Design	50	30.4	13.6	15.6	205.61	0.384	0.210	206.00	205.82
Base	100	34.8	13.6	15.6	205.68	0.518	0.311	206.20	206.00
Overtopping	100	34.4/42.4	13.6	15.6	205.68	0.518	0.567	206.20	206.25
Max. Calc.	500	45.3	13.6	15.6	205.82	0.527	0.482	206.35	206.31

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**GENERAL PLAN AND ELEVATION**  
ILLINOIS ROUTE 71 OVER DRAINAGE DITCH  
F.A.P. RT. 619 - SECTION 120 BR  
PUTNAM COUNTY  
STATION 12+530  
STRUCTURE No. 078-2007

DESIGNED BY: MV  
CHECKED BY: SG  
DATE: April 22, 2013

DRAWN BY: KDS  
CHECKED BY: MV

TranSystems

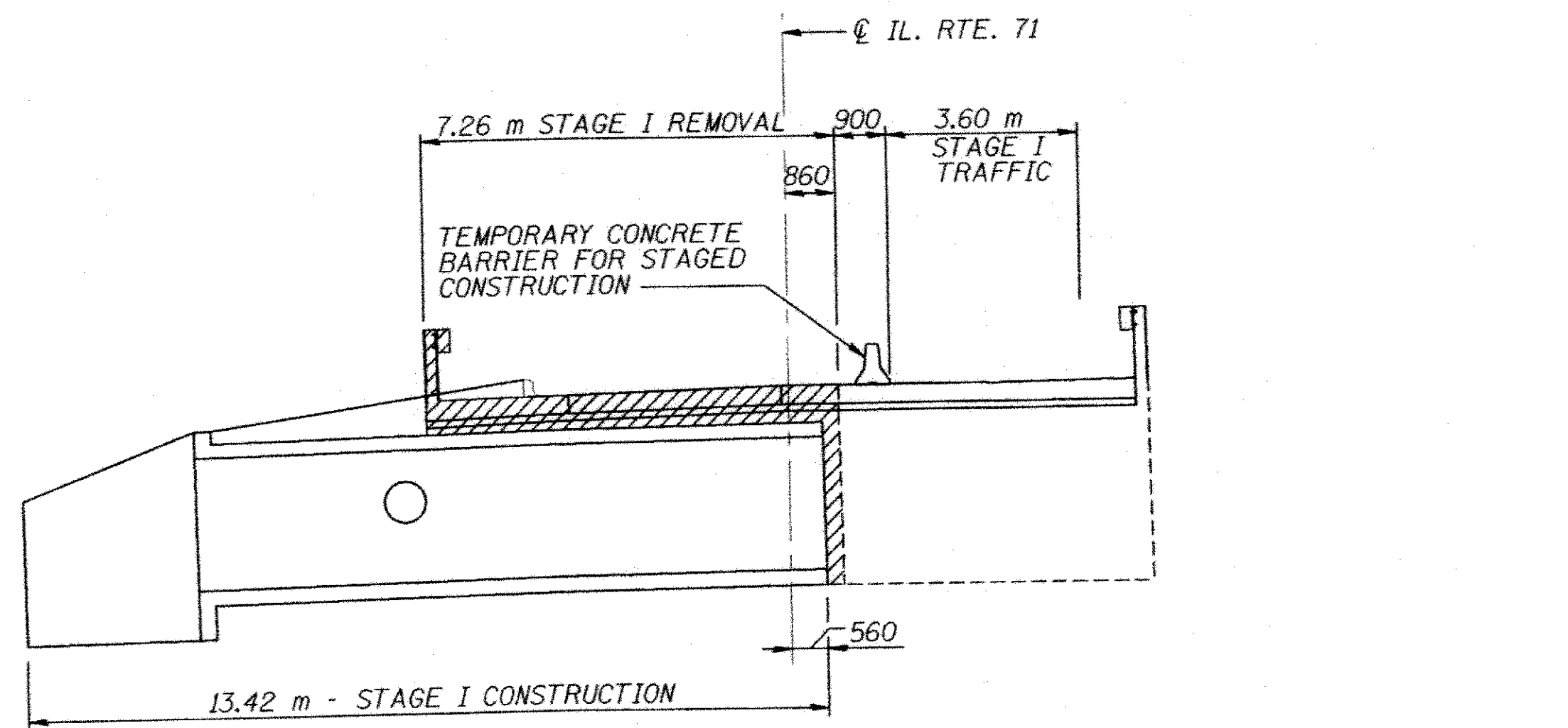


RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
619	*	PUTNAM	77	43

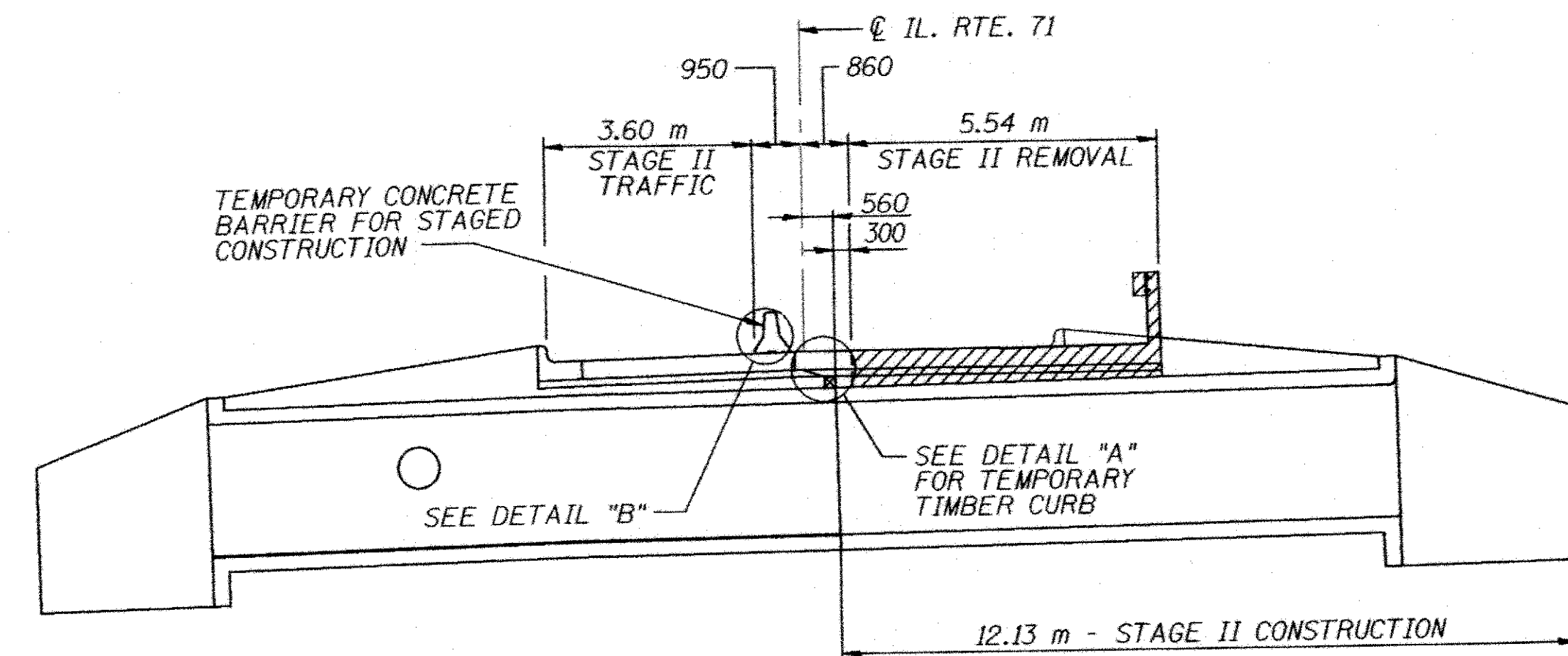
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT-  
 \* 120 BR, CR

CONTRACT NO. 68740

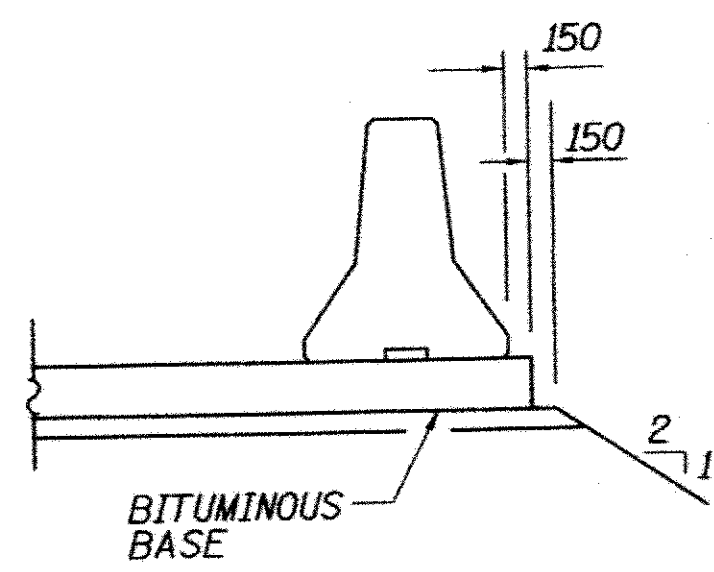
- NOTES:  
 1. THE CONTRACTOR SHALL ANCHOR THE SHEET PILING TO THE EXISTING ABUTMENT WALL. THE CONNECTION SHALL BE APPROVED BY THE ENGINEER.  
 2. SHEET PILING WITHIN THE LIMITS OF THE EXISTING FOOTING SHALL BE DRIVEN TO THE TOP OF THE FOOTING.



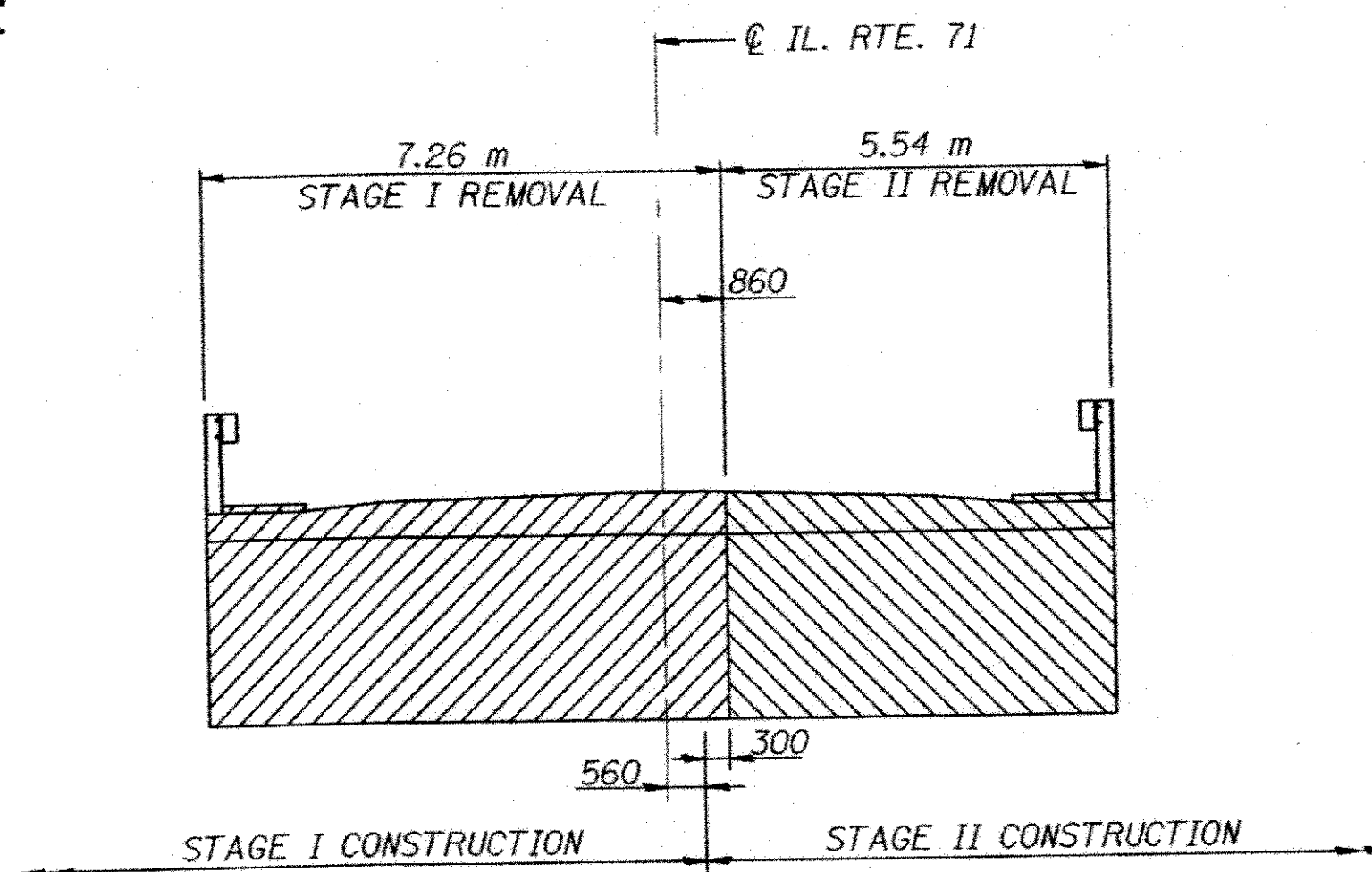
**STAGE I**  
 LOOKING EAST  
 DIMENSIONS ARE AT RIGHT  
 ANGLE TO CL. ROUTE 71



**STAGE II**  
 LOOKING EAST  
 DIMENSIONS ARE AT RIGHT  
 ANGLE TO CL. ROUTE 71

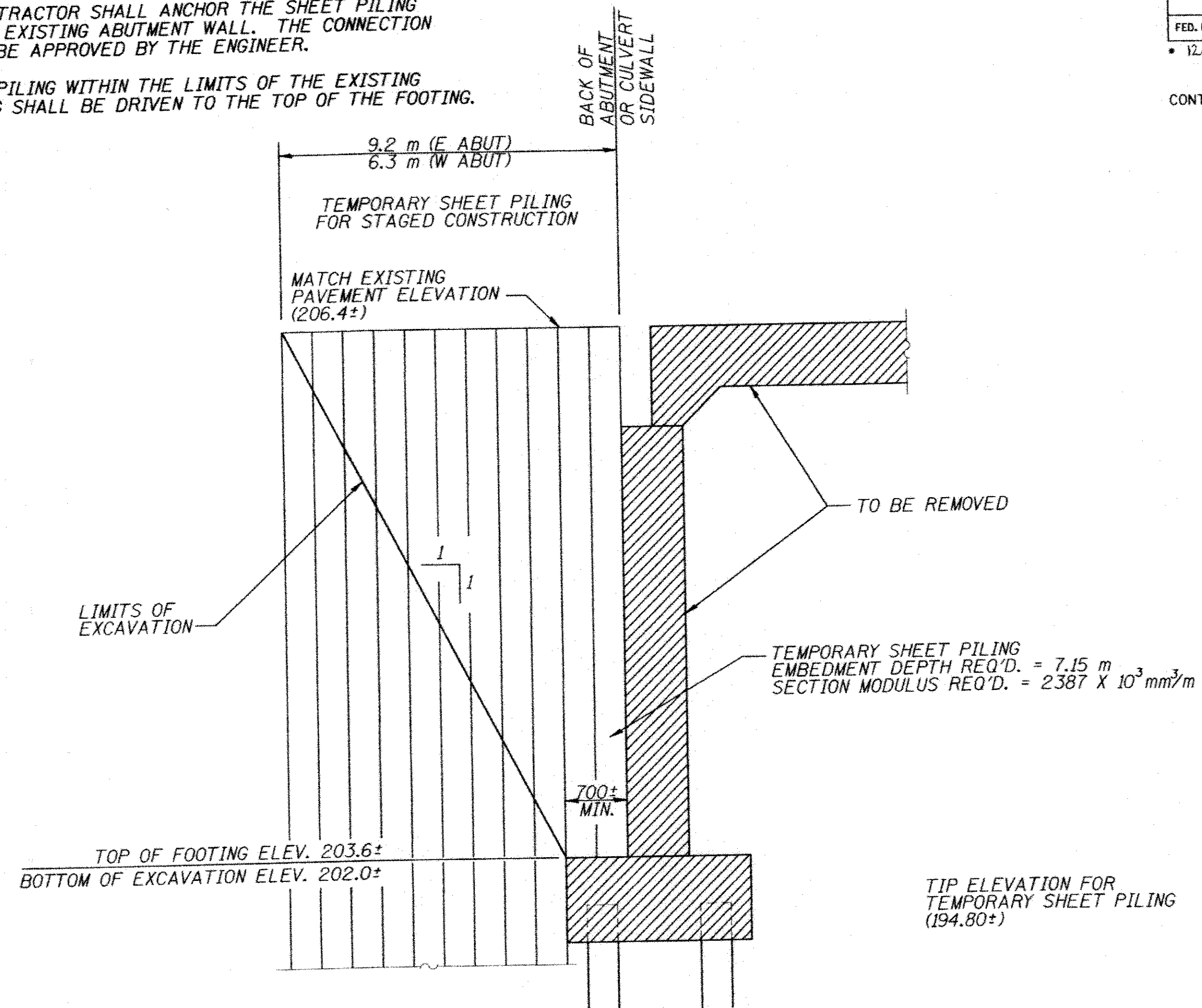


**DETAIL "B"**



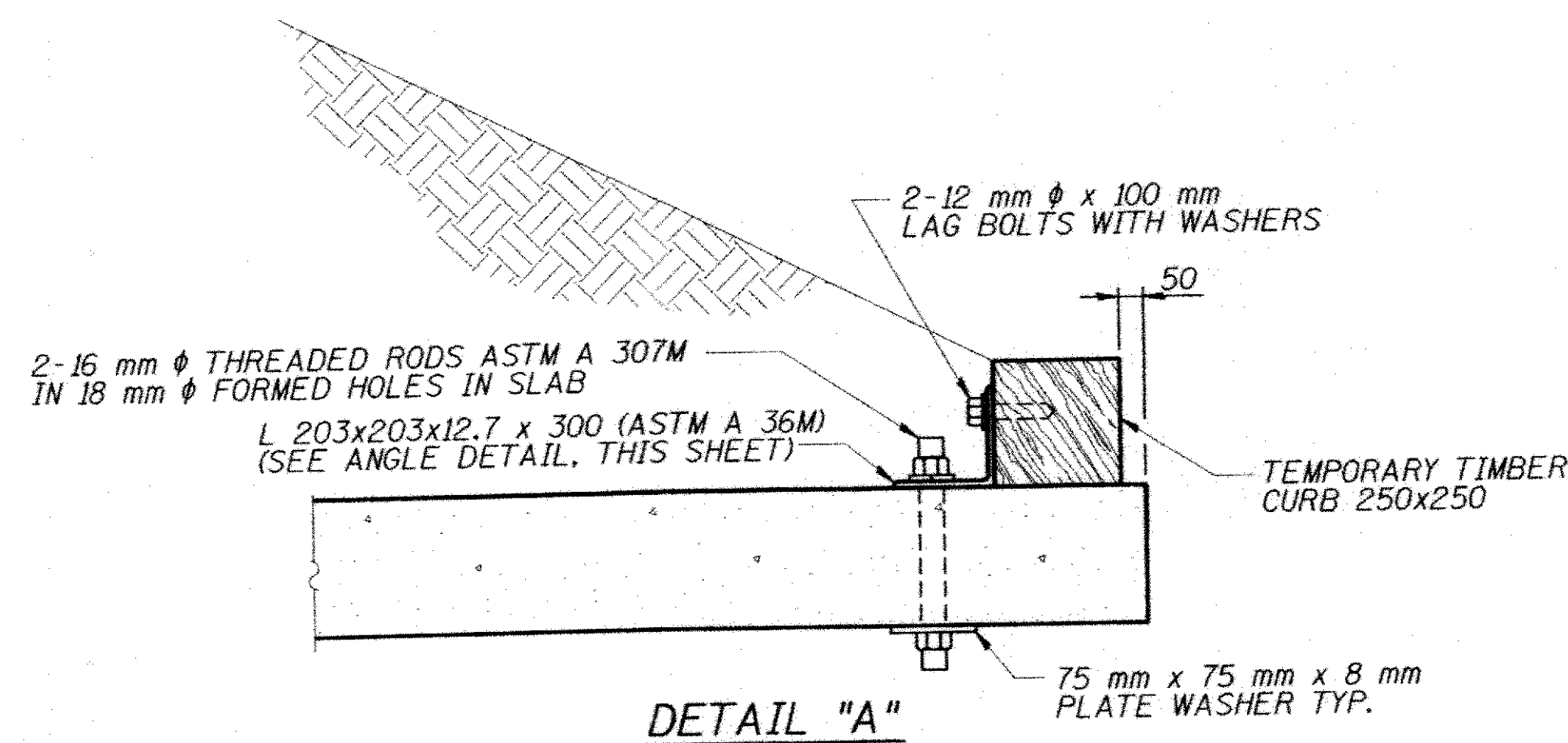
**REMOVAL DETAIL**  
 LOOKING EAST

- NOTES:  
 1. HATCHED AREAS INDICATE REMOVAL OF EXISTING STRUCTURES.  
 2. FOR TEMPORARY CONCRETE BARRIER DETAILS SEE SHEET B-6 OF B-8. FOR QUANTITY SEE ROADWAY PLANS.



**TEMPORARY SHEET PILING DETAIL**

IF THE CONTRACTOR CHOOSES TO ALTER THE TEMPORARY CANTILEVERED SHEET PILING DESIGN REQUIREMENTS SHOWN ON THE PLANS FOR LESSER DESIGN REQUIREMENTS, THEN FULL DESIGN SUBMITTALS WITH THE REQUIRED SEALS WILL BE EXPECTED BY THE DEPARTMENT, FOR REVIEW AND APPROVAL.

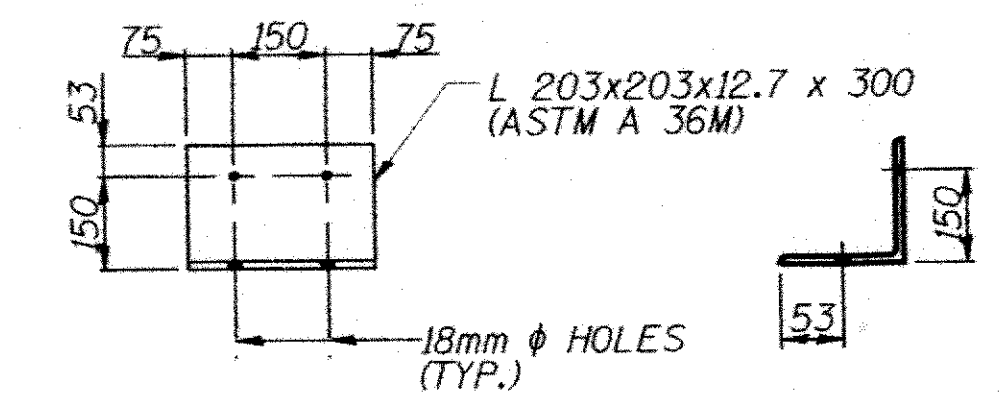


**DETAIL "A"**

THE L 203x203x12.7 x 300 AND TEMPORARY TIMBER SHALL NOT BE REMOVED UNTIL STAGE II CONSTRUCTION HAS BEEN COMPLETED.

**DETAIL "A" NOTES**

CONNECT ONE (1) L 203x203x12.7 x 300 TO THE TOP OF STAGE I CULVERT WITH TWO (2) THREADED RODS WITH NUTS AND WASHERS PLACED IN FORMED HOLES. ANGLES TO BE POSITIONED NEAR EACH END OF ALL TIMBER CURBS, BUT THE OUTSIDE LAG BOLT SHALL BE AT LEAST 150mm FROM END OF TIMBER. COST INCLUDED WITH CONCRETE BOX CULVERTS.



**ANGLE DETAIL**

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**CONSTRUCTION STAGING**  
 ILLINOIS ROUTE 71 OVER DRAINAGE DITCH  
 F.A.P. RT. 619 - SECTION 120 BR  
 PUTNAM COUNTY  
 STATION 12+530  
 STRUCTURE No. 078-2007

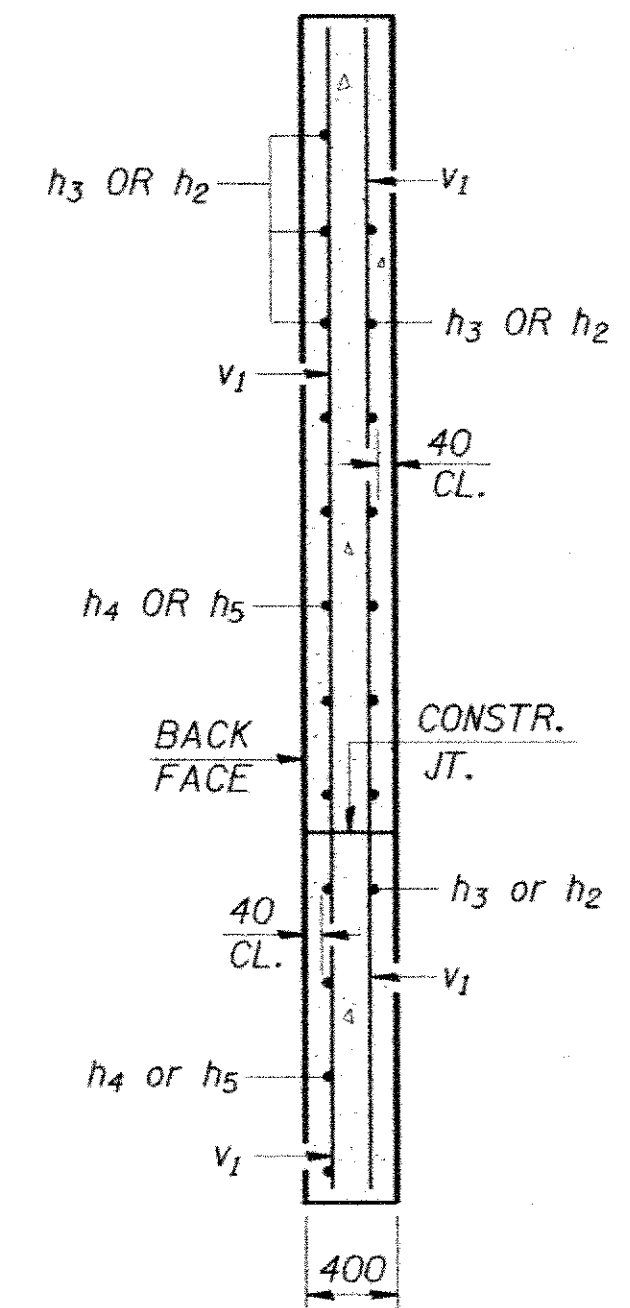
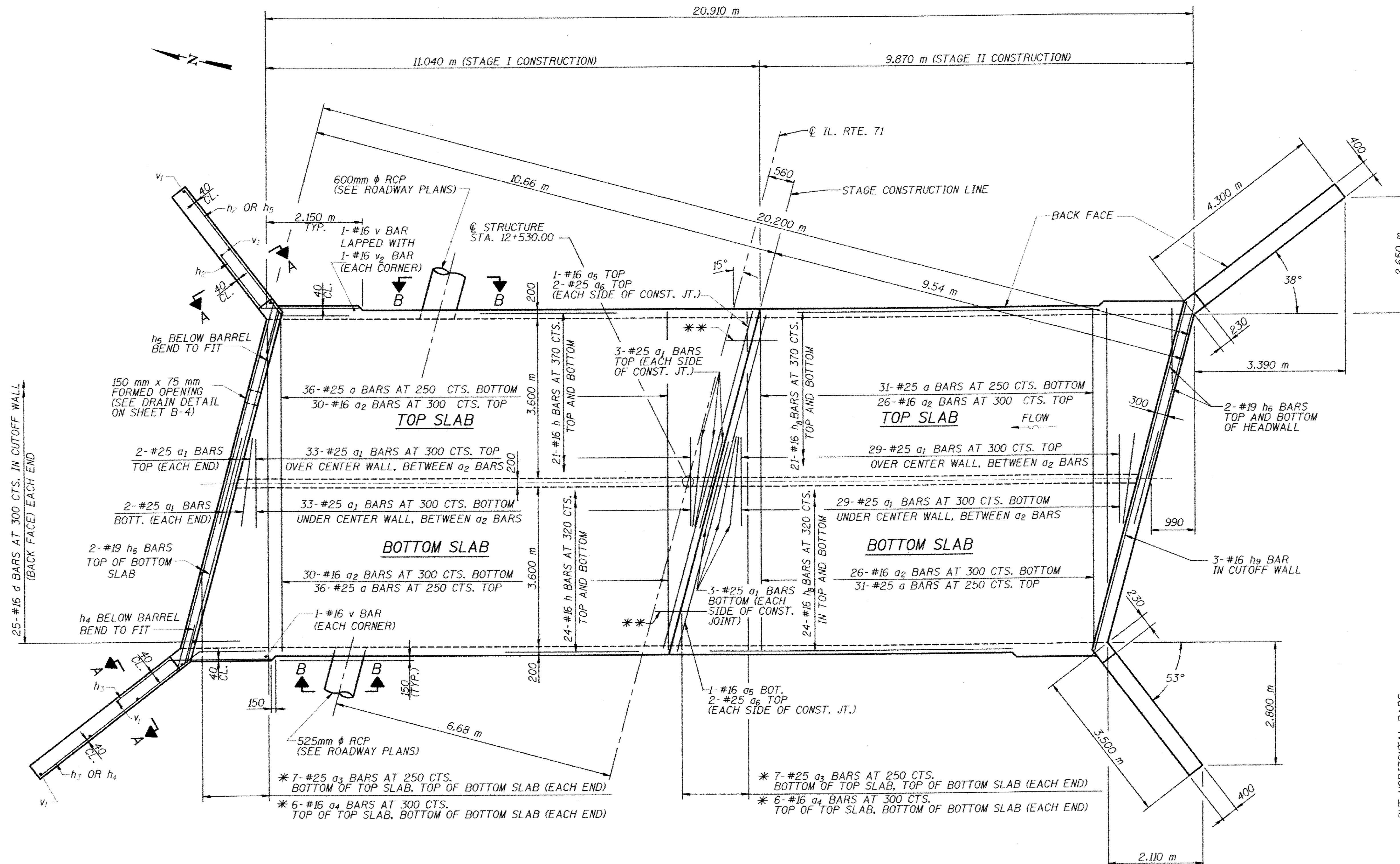
DESIGNED BY: MV DRAWN BY: KDS  
 DATE: 09/21/09 CHECKED BY: SG  
 TRAN SYSTEMS



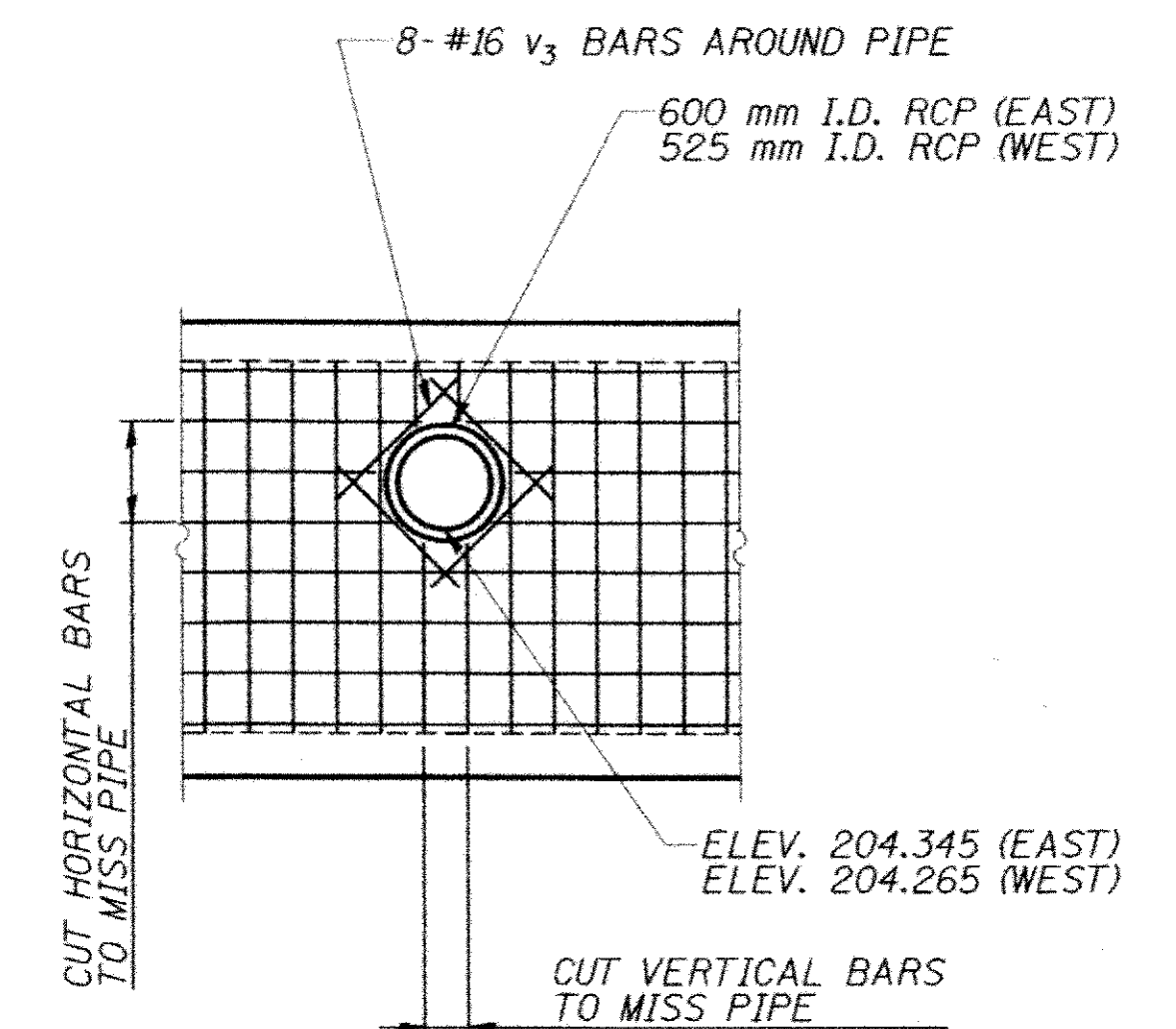
RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO
619	.	PUTNAM	77	44

FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT-  
 \* 120 BR, CR

CONTRACT NO. 08740



SECTION A-A



SECTION B-B

\* CUT  $a_3$  AND  $a_4$  BARS TO FIT SKEW AT BOTTOM SLAB.  
 USE BALANCE OF BAR IN TOP SLAB, PLACE HOOKED  
 END ALONG OUTSIDE SLAB EDGE, CUT END NEAR HEADWALL.

\*\* 42-BAR SPLICERS FOR #16 h AND  $h_8$  BARS TOP AND BOTTOM OF TOP SLAB (STAGE I)  
 48-BAR SPLICERS FOR #16 h AND  $h_8$  BARS TOP AND BOTTOM OF BOTTOM SLAB (STAGE I)

PLAN

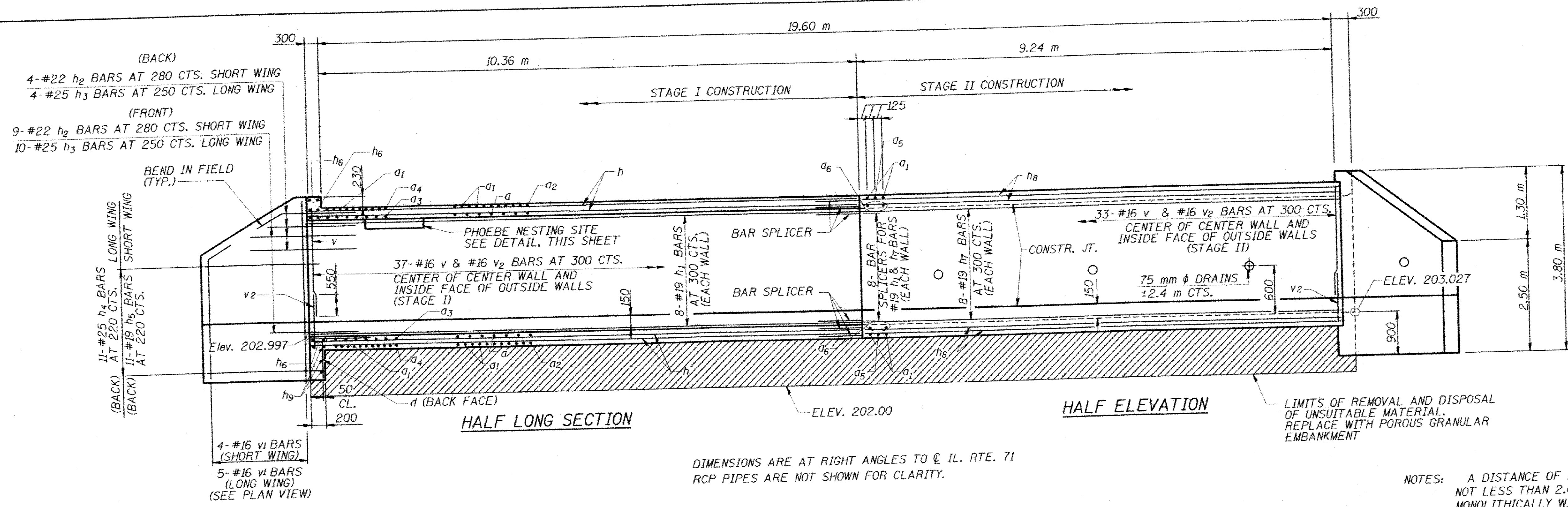
REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**CULVERT PLAN**  
 ILLINOIS ROUTE 71 OVER DRAINAGE DITCH  
 F.A.P. RT. 619 - SECTION 120 BR  
 PUTNAM COUNTY  
 STATION 12+530  
 STRUCTURE No. 078-2007

DATE: 09/21/09 DESIGNED BY: MV DRAWN BY: KDS  
 CHECKED BY: SG CHECKED BY: MV

TranSystems

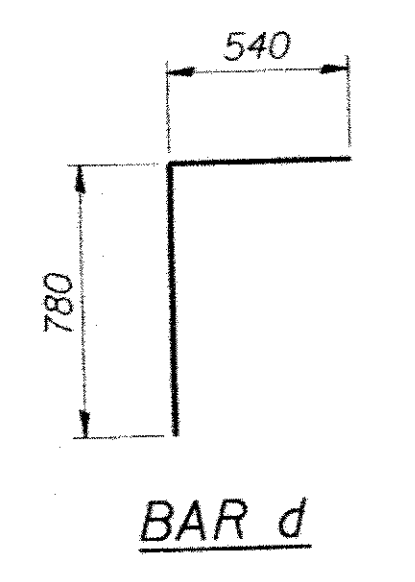
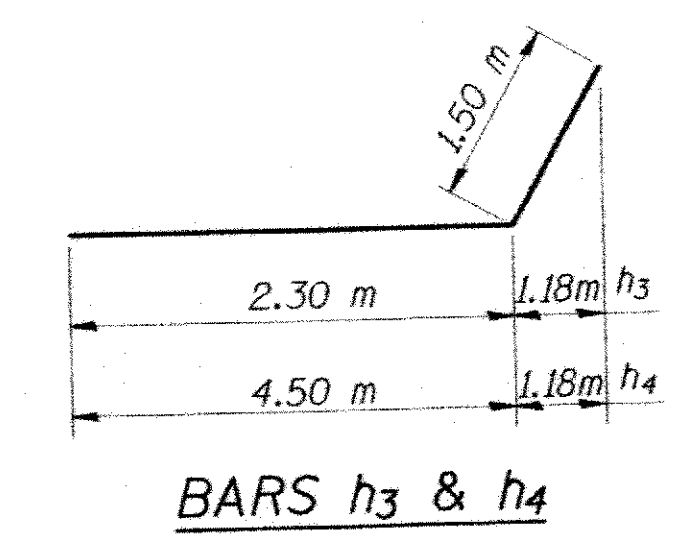
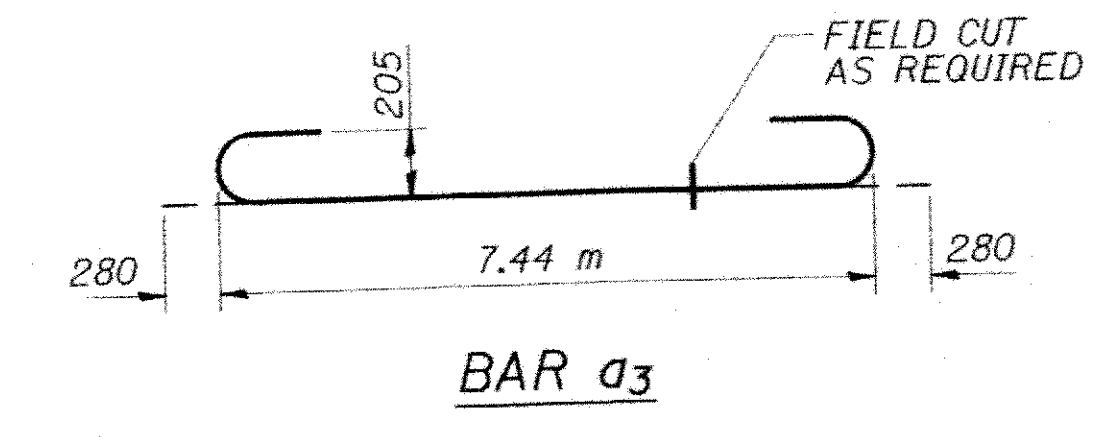
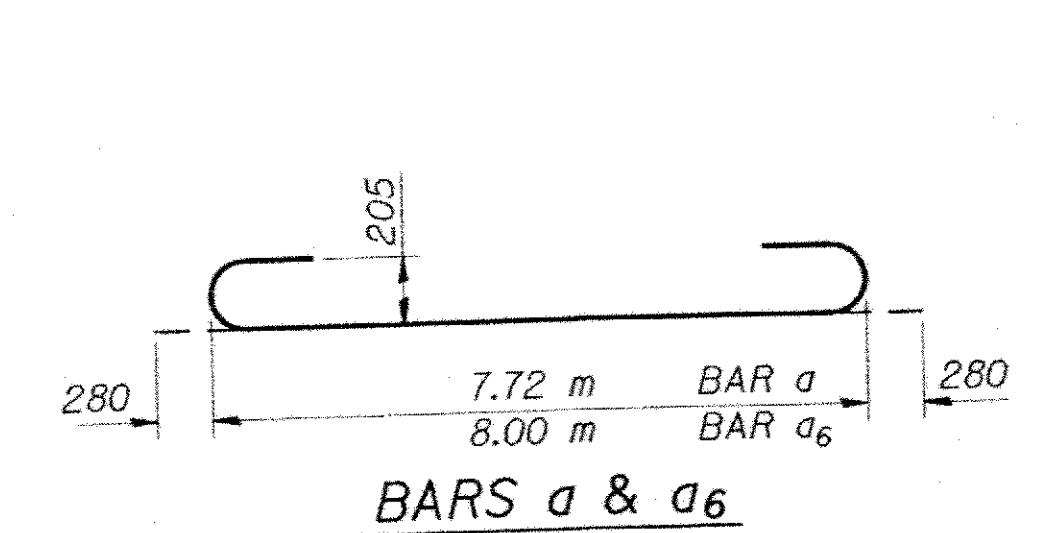
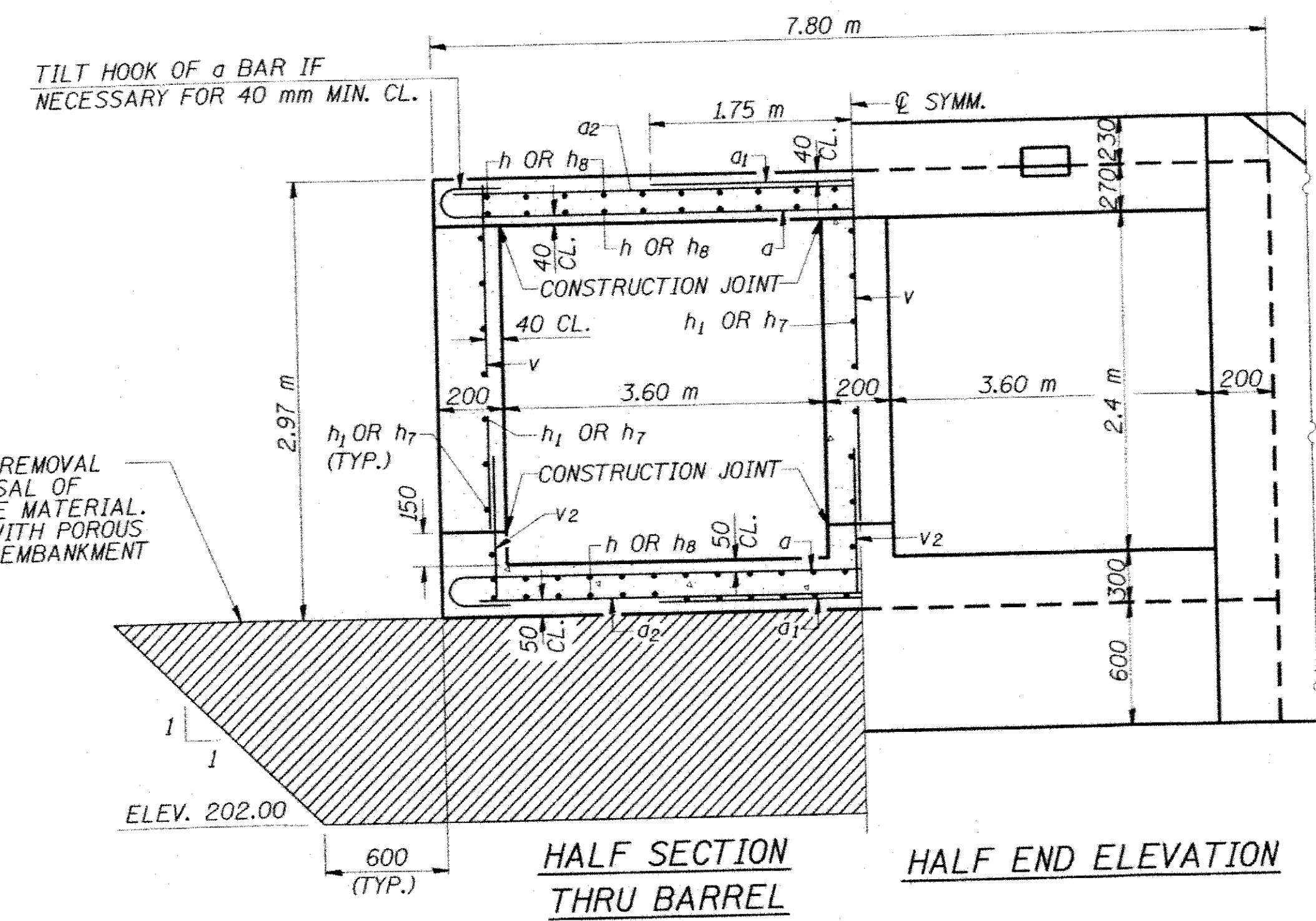




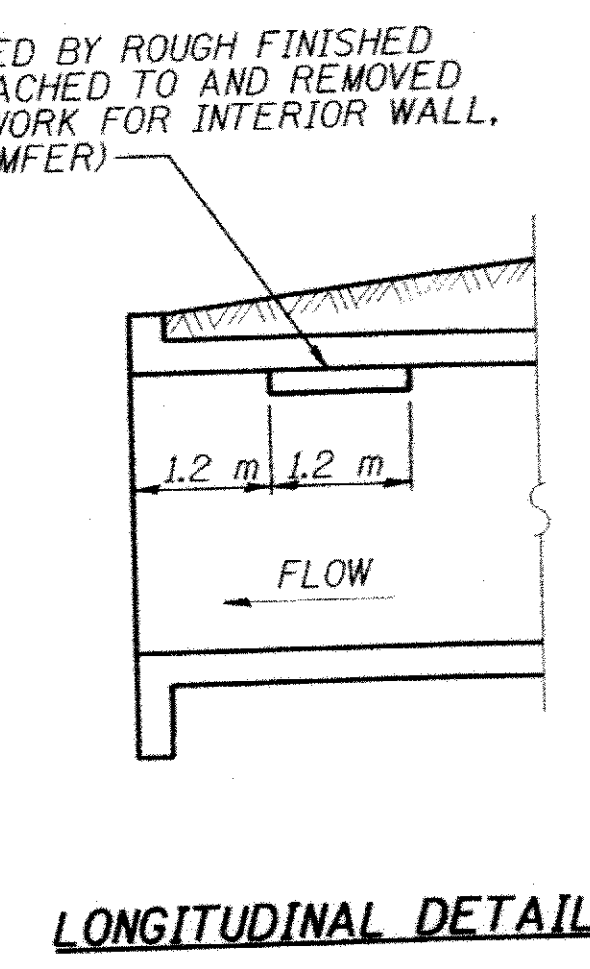
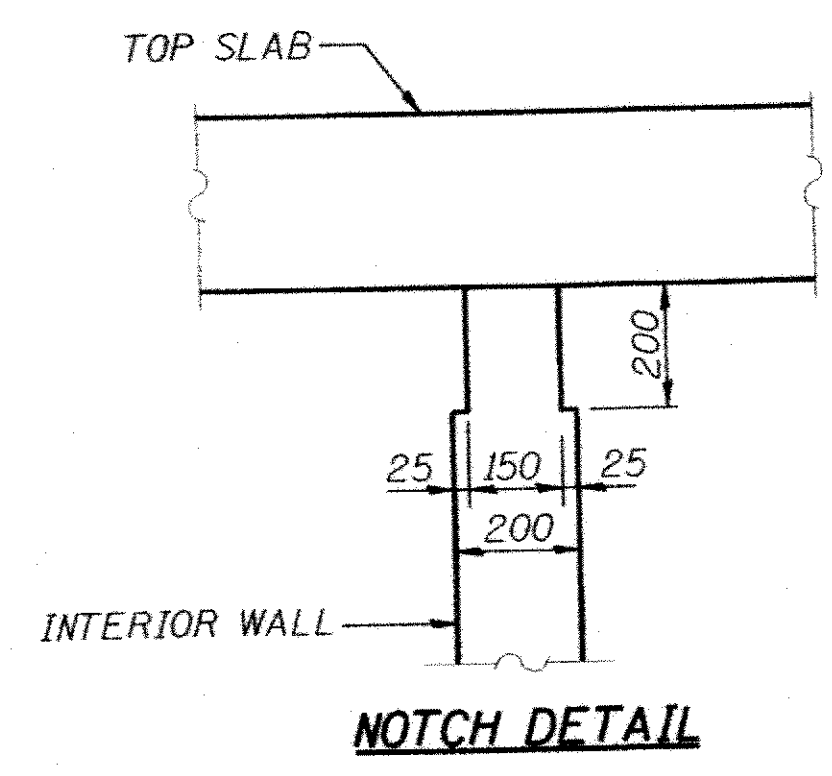
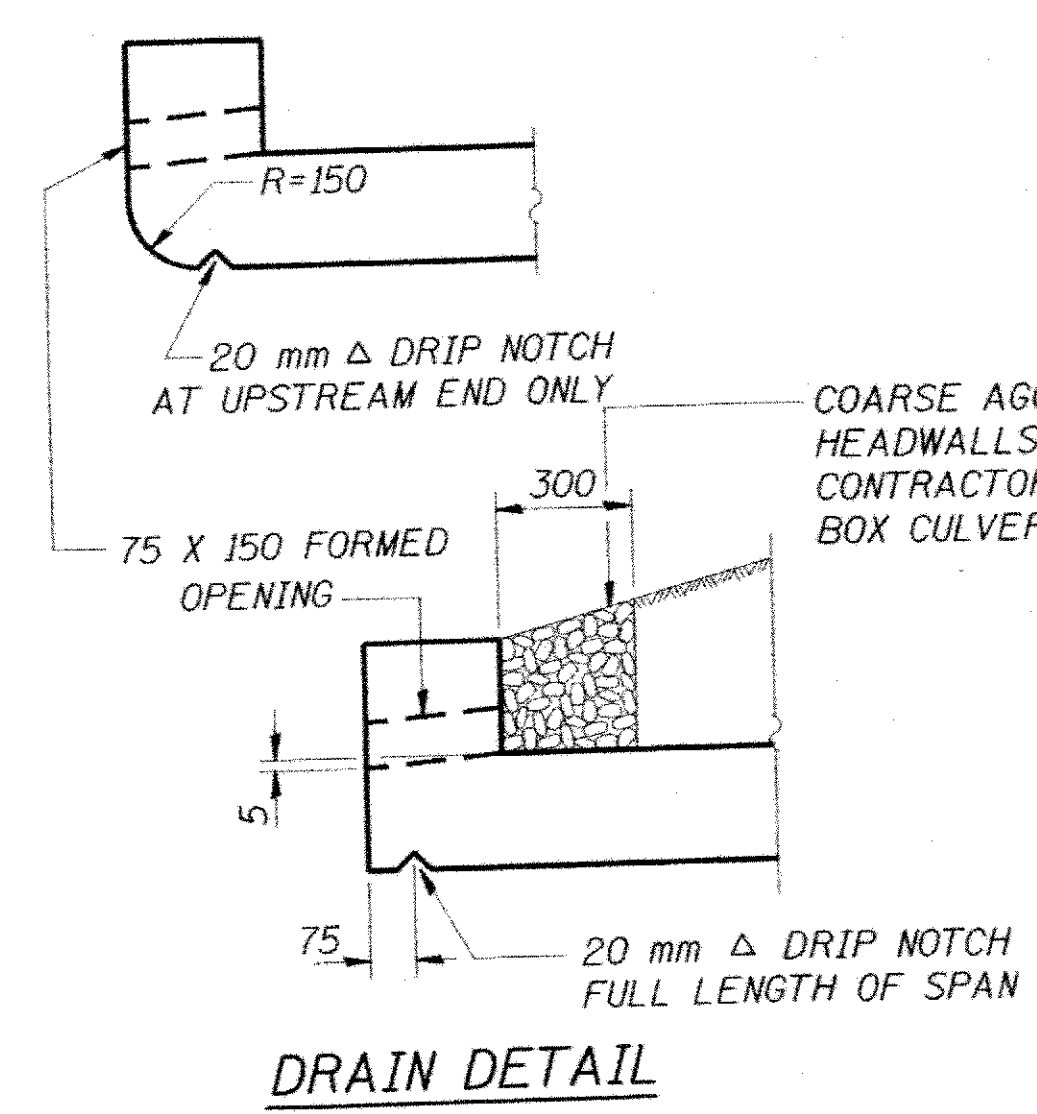
DIMENSIONS ARE AT RIGHT ANGLES TO C. IL. RTE. 71  
RCP PIPES ARE NOT SHOWN FOR CLARITY.

LIMITS OF REMOVAL AND DISPOSAL OF UNSUITABLE MATERIAL. REPLACE WITH POROUS GRANULAR EMBANKMENT

NOTES: A DISTANCE OF HALF THE LENGTH OF THE WINGWALL BUT NOT LESS THAN 2.0 m OF THE BARREL SHALL BE POURED MONOLITHICALLY WITH THE WINGWALLS.  
ALL DIMENSIONS ARE IN MILLIMETERS (mm) EXCEPT AS NOTED.



Bar	No.	Size	Length (m)	Shape
a	134	#25	8.28	C
a1	144	#25	3.50	—
a2	112	#16	7.72	—
a3	28	#25	8.00	C
a4	24	#16	7.44	—
a5	4	#16	8.00	—
a6	8	#25	8.56	C
d	50	#16	1.32	L
h	90	#16	10.80	—
h1	24	#19	10.80	—
h2	26	#22	3.67	—
h3	28	#25	3.80	—
h4	22	#25	6.00	—
h5	22	#19	5.10	—
h6	12	#19	7.95	—
h7	24	#19	9.77	—
h8	90	#16	9.77	—
h9	6	#16	7.95	—
v	214	#16	2.42	—
v1	18	#16	3.68	—
v2	214	#16	0.80	—
v3	16	#16	0.90	—
Concrete Box Culverts		m <sup>3</sup>	149.8	
Reinforcement Bars		kg	16,290	



PHOEBE NESTING SITE DETAILS (DOWNSTREAM END ONLY)

NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**SECTIONS AND DETAILS**  
 ILLINOIS ROUTE 71 OVER DRAINAGE DITCH  
 F.A.P. RT. 619 - SECTION 120 BR  
 PUTNAM COUNTY  
 STATION 12+530  
 STRUCTURE No. 078-2007

DESIGNED BY: MV    DRAWN BY: KDS  
 CHECKED BY: SG    CHECKED BY: MV

DATE: 09/21/09

TranSystems

FILE: g:\401\2000\0003902\cond\culv\_078-2007\0782007.dwg



**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 400 MPa YIELD STRENGTH, THREADED OR COILED FULL LENGTH. ALL REINFORCEMENT BARS SHALL BE LAPPED AND TIED TO THE SPLICER RODS OR DOWEL BARS. BAR SPLICER ASSEMBLIES SHALL BE EPOXY COATED ACCORDING TO THE REQUIREMENTS FOR REINFORCEMENT BARS.

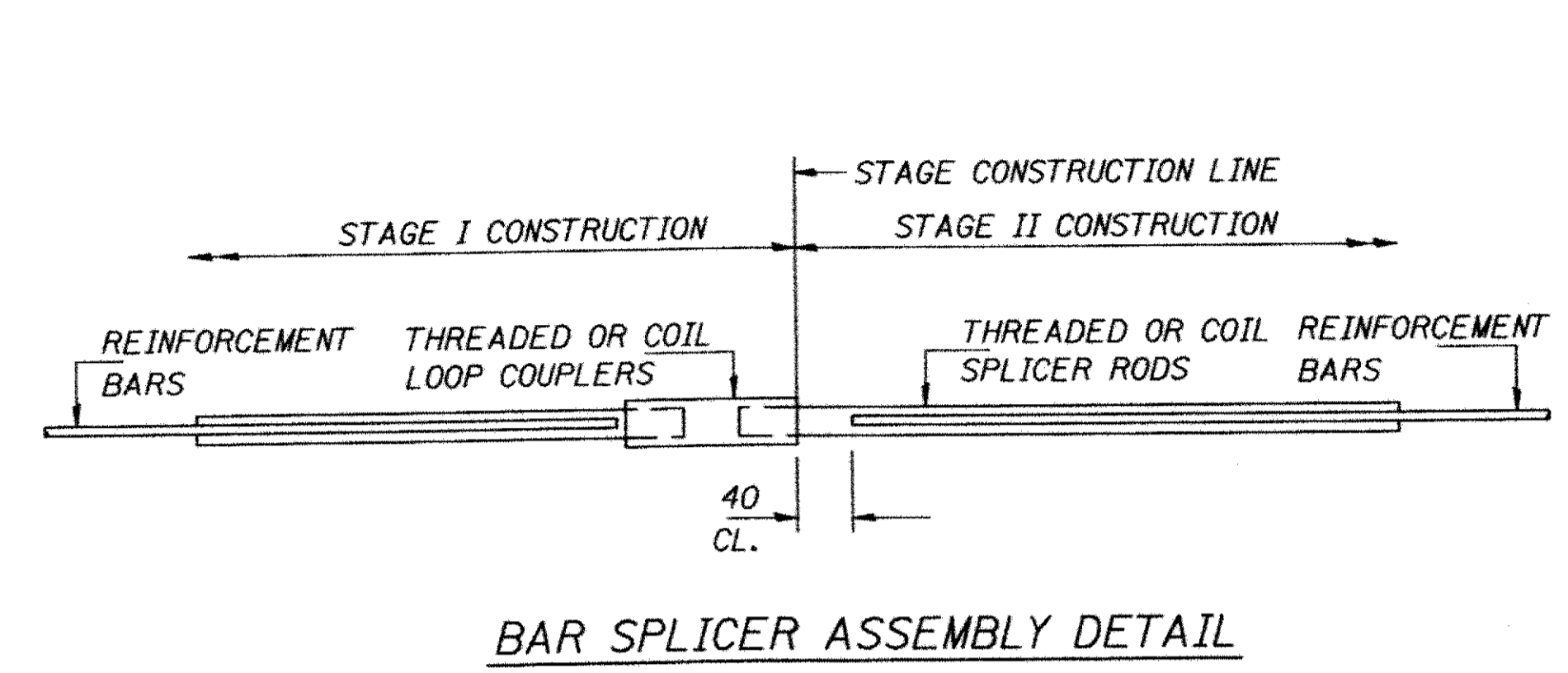
OTHER SYSTEMS OF SIMILAR DESIGN MAY BE SUBMITTED TO THE ENGINEER FOR APPROVAL. APPROVAL SHALL BE BASED ON CERTIFIED TEST RESULTS FROM AN APPROVED TESTING LABORATORY THAT THE PROPOSED BAR SPLICER ASSEMBLY SATISFIES THE FOLLOWING REQUIREMENTS:

- ① MINIMUM CAPACITY (TENSION IN KN) =  $1.25 \times 10^{-3} \times F_y \times A_t$
- ② MINIMUM \*PULL-OUT STRENGTH (TENSION IN KN) =  $0.66 \times 10^{-3} \times F_y \times A_t$

WHERE  $F_y$  = YIELD STRENGTH OF LAPPED REINFORCEMENT BARS IN MPa.  
 $A_t$  = TENSILE STRESS AREA OF LAPPED REINFORCEMENT BARS (mm<sup>2</sup>).  
 \* = 28 DAY CONCRETE

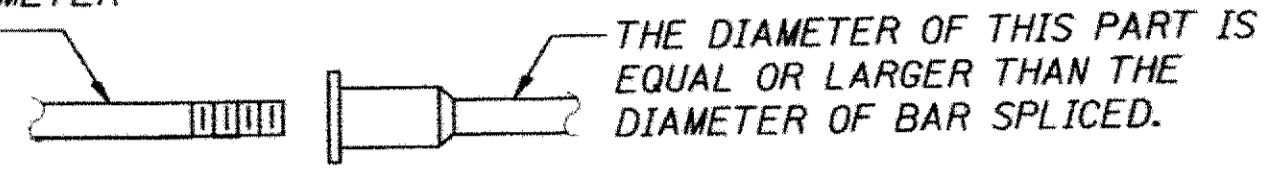
BAR SPLICER ASSEMBLIES			
BAR SIZE TO BE SPLICED	SPLICER ROD OR DOWEL BAR LENGTH	STRENGTH REQUIREMENTS	
		MIN. CAPACITY KN - TENSION	MIN. PULL-OUT STRENGTH KN - TENSION
#16	660 mm	100	55
#19	790 mm	150	80

ALL DIMENSIONS ARE IN MILLIMETERS (mm) EXCEPT AS NOTED.



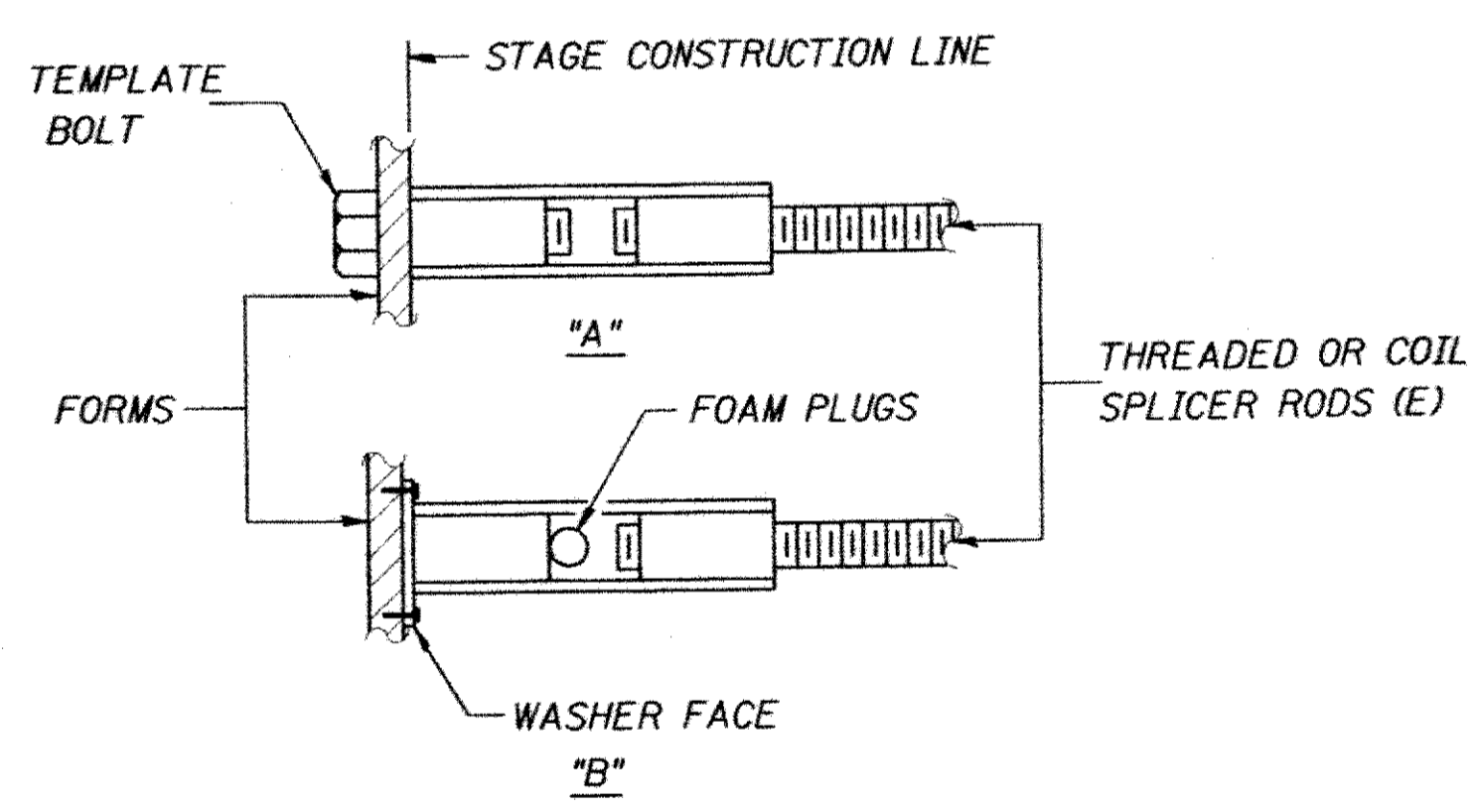
BAR SIZE	NO. ASSEMBLIES REQUIRED	LOCATION
#16	90	CULVERT TOP & BOTTOM SLAB
#19	24	CULVERT WALLS

THE DIAMETER OF THIS PART IS THE SAME AS THE DIAMETER OF THE BAR SPLICED.



**BAR SPLICER ASSEMBLY ALTERNATIVES**

\*\* HEAVY HEX NUTS CONFORMING TO ASTM A 563M, GRADE C, D OR DH MAY BE USED.



**INSTALLATION AND SETTING METHODS**

"A" : SET BAR SPLICER ASSEMBLY BY MEANS OF A TEMPLATE BOLT.  
 "B" : SET BAR SPLICER ASSEMBLY BY NAILING TO WOOD FORMS OR CEMENTING TO STEEL FORMS.  
 (E): INDICATES EPOXY COATING

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**BAR SPLICER ASSEMBLY DETAILS**  
 ILLINOIS ROUTE 71 OVER DRAINAGE DITCH  
 F.A.P. RT. 619 - SECTION 120 BR  
 PUTNAM COUNTY  
 STATION 12+530  
 STRUCTURE No. 078-2007

DATE: 09/21/09    DESIGNED BY: MV    DRAWN BY: KDS  
 CHECKED BY: SG    CHECKED BY: MV

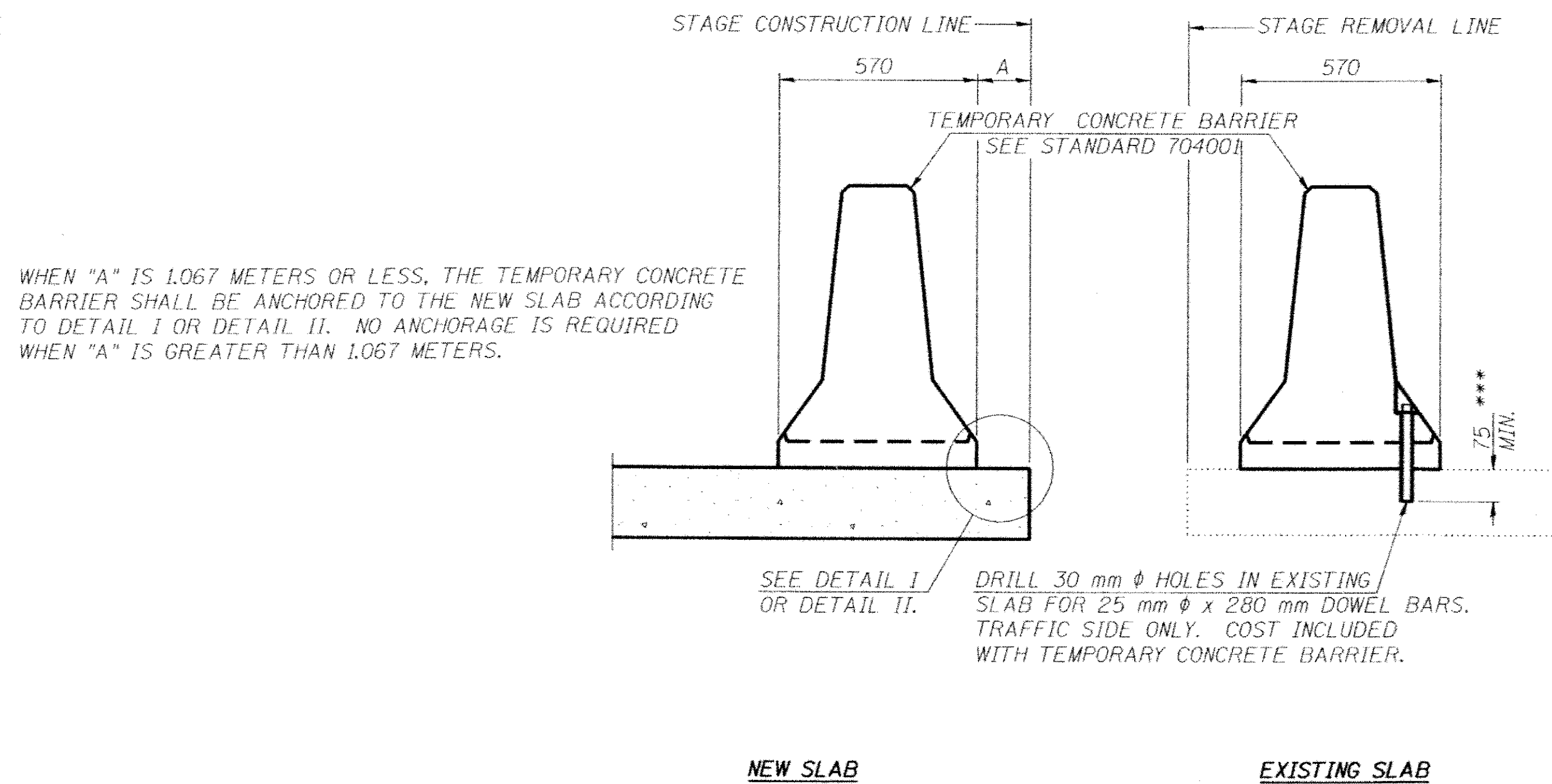
**TranSystems**

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
619	*	PUTNAM	77	47

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

\* 120 BR, CR

CONTRACT NO. 68740



**SECTIONS THRU SLAB**

**NOTES**

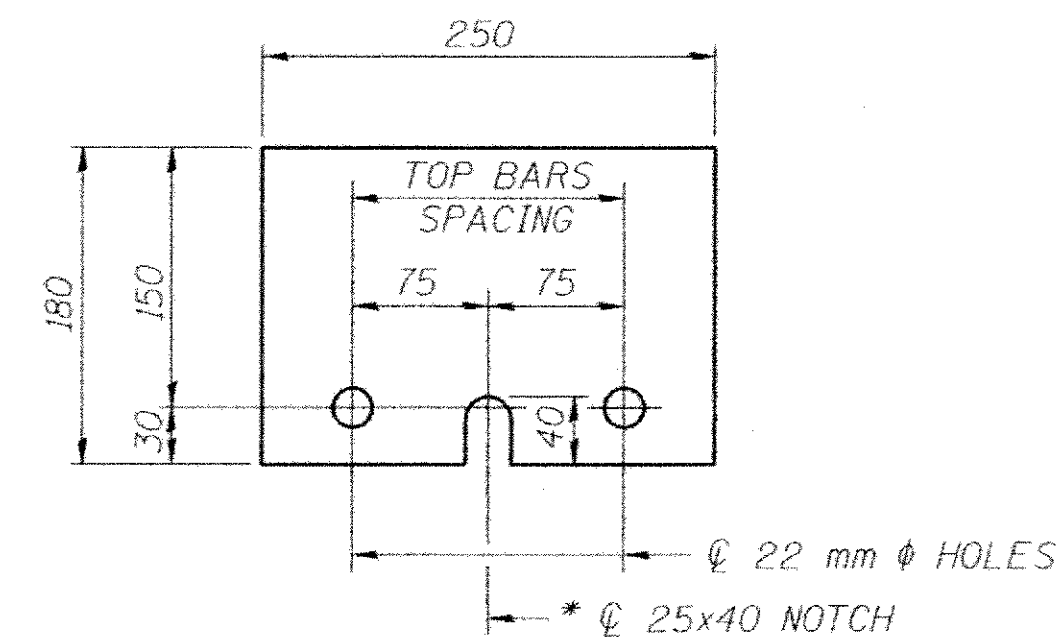
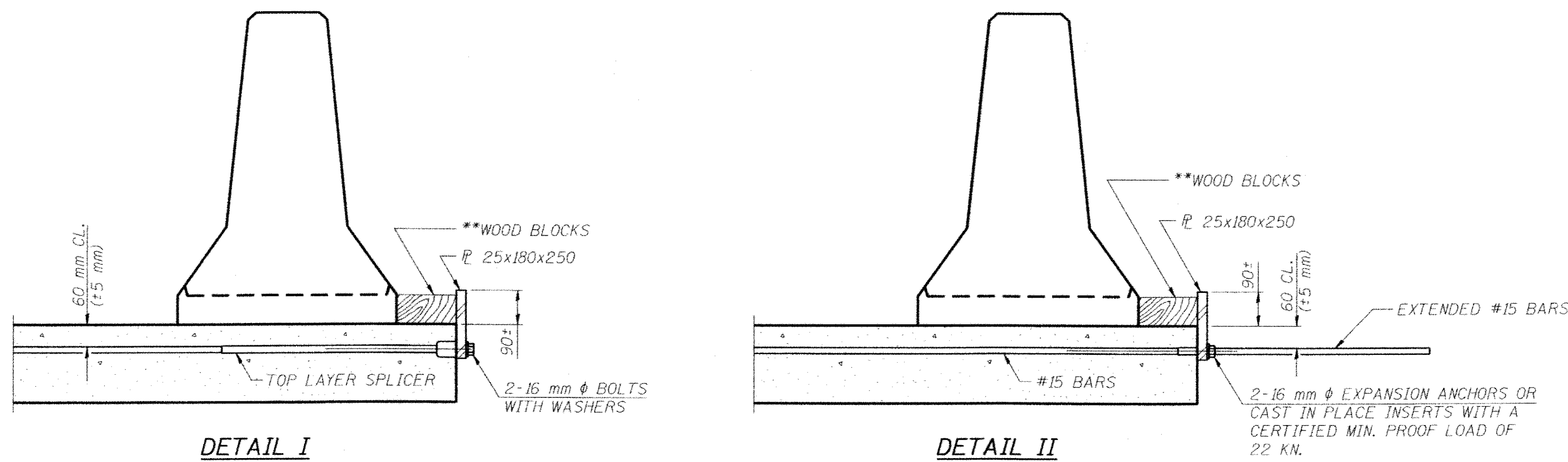
DETAIL I - WITH BAR SPLICER OR COUPLERS:  
CONNECT ONE (1) 25x180x250 STEEL  $\bar{P}$  TO THE TOP LAYER OF COUPLERS WITH 2-16 mm  $\phi$  BOLTS SCREWED TO COUPLER AT APPROXIMATE  $\bar{C}$  OF EACH BARRIER PANEL.

DETAIL II - WITH EXTENDED REINFORCEMENT BARS:  
CONNECT ONE (1) 25x180x250 STEEL  $\bar{P}$  TO THE CONCRETE SLAB WITH 2-16 mm  $\phi$  EXPANSION ANCHORS OR CAST IN PLACE INSERTS SPACED BETWEEN THE TOP LAYER OF REINFORCEMENT AT APPROXIMATE  $\bar{C}$  OF EACH BARRIER PANEL.

COST OF ANCHORAGE IS INCLUDED WITH TEMPORARY CONCRETE BARRIER. THE 25x180x250 PLATE SHALL NOT BE REMOVED UNTIL STAGE II CONSTRUCTION FORMS AND ALL REINFORCEMENT BARS ARE IN PLACE AND THE CONCRETE IS READY TO BE PLACED.

ALL DIMENSIONS ARE IN MILLIMETERS (mm) EXCEPT AS NOTED.

\*\*\* DIMENSION SHOWN IS MINIMUM REQUIRED EMBEDMENT INTO CONCRETE. IF HOT-MIX ASPHALT WEARING SURFACE IS PRESENT, MINIMUM EMBEDMENT SHALL BE IN ADDITION TO WEARING SURFACE DEPTH.



**STEEL RETAINER  $\bar{P}$  25x180x250**

\* REQUIRED ONLY WITH DETAIL II

\*\* WOOD BLOCKS MAY BE OMITTED WHEN REQUIRED TO PROVIDE MINIMUM STAGE TRAFFIC LANE WIDTH. WHEN THE WOOD BLOCKS ARE OMITTED, THE CONCRETE BARRIER SHALL BE IN DIRECT CONTACT WITH THE STEEL RETAINER PLATE.

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**TEMPORARY CONCRETE BARRIER**  
**FOR STAGE CONSTRUCTION**  
 ILLINOIS ROUTE 71 OVER DRAINAGE DITCH  
 F.A.P. RT. 619 - SECTION 120 BR  
 PUTNAM COUNTY  
 STATION 12+530  
 STRUCTURE No. 078-2007

DESIGNED BY: MV      DRAWN BY: KDS  
 CHECKED BY: SG      CHECKED BY: MV

DATE: 09/21/09

**TranSystems** ISO REGISTERED QUALITY SYSTEM  
 STANDARD: ISO 9001:2008  
 FULL 9001 REG. NO. 1511



RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
619	*	PUTNAM	77	48

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

\* 120 BR CR

CONTRACT NO. 68740

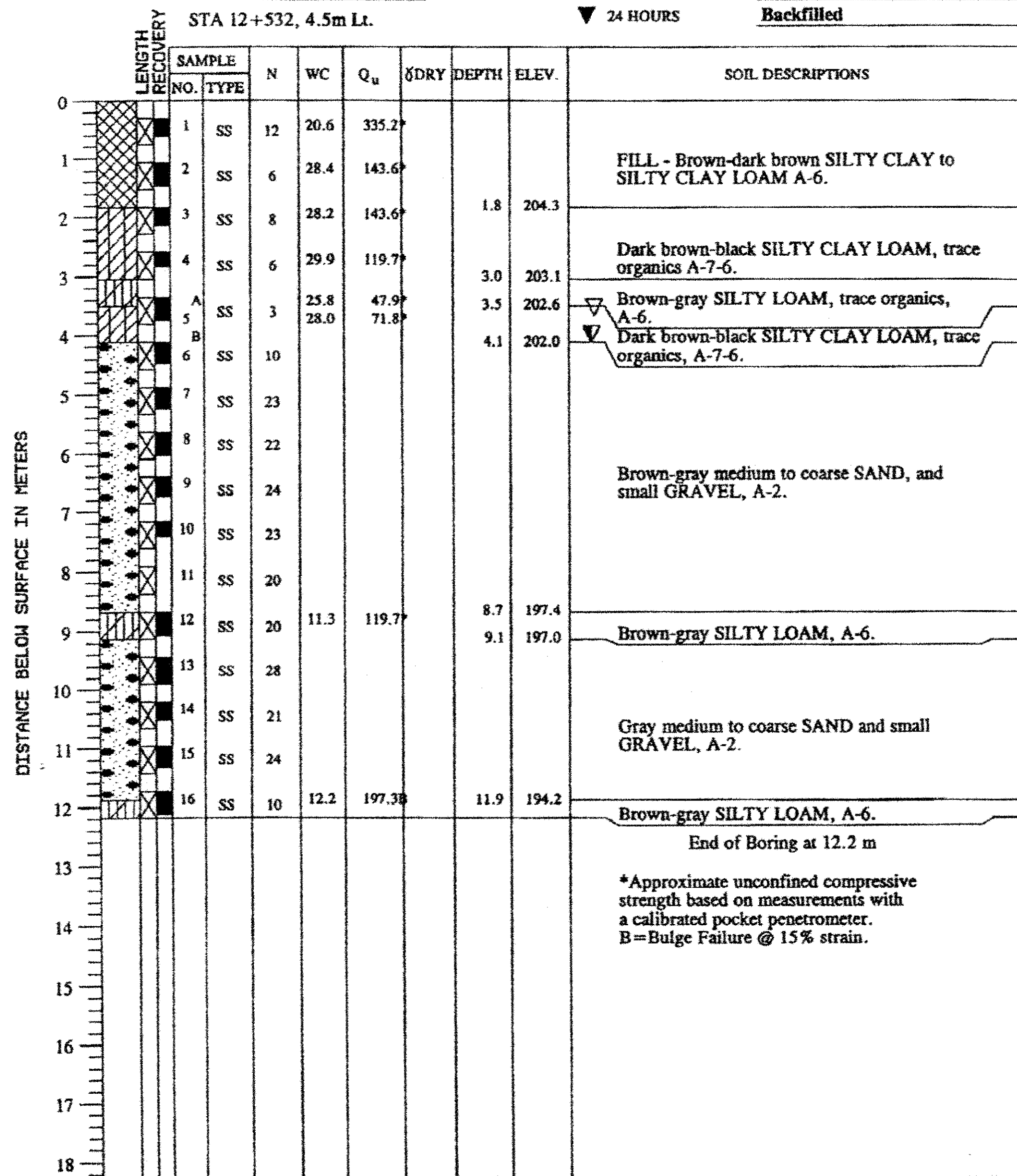
PROJECT **Structure 078-0030, Illinois Route 71, Putnam County, IL**

CLIENT **TransSystems Corp., Schaumburg, IL**

BORING **B-1** DATE STARTED **1-19-98** DATE COMPLETED **1-19-98** JOB **43,757**



ELEVATIONS WATER TABLE  
 GROUND SURFACE **206.1** WHILE DRILLING **4.1m**  
 END OF BORING **193.9** AT END OF BORING **3.7m**  
 24 HOURS **Backfilled**



DRILL RIG NO. **117**

Division lines between deposits represent approximate boundaries between soil types in-situ, the transition may be gradual.

A-26

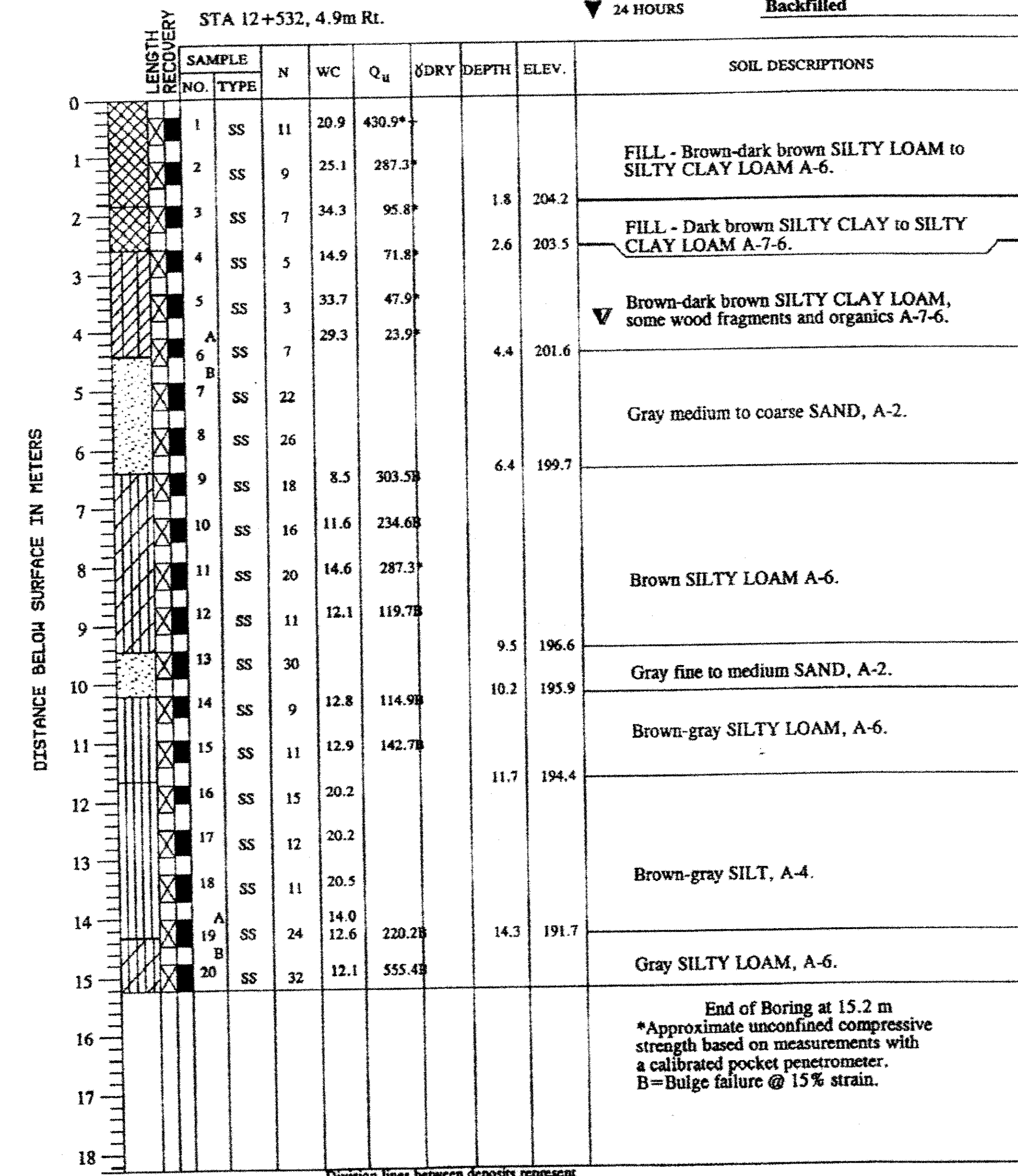
PROJECT **Structure 078-0030, Illinois Route 71, Putnam County, IL**

CLIENT **TransSystems Corp., Schaumburg, IL**

BORING **B-2** DATE STARTED **1-20-98** DATE COMPLETED **1-20-98** JOB **43,757**



ELEVATIONS WATER TABLE  
 GROUND SURFACE **206.0** WHILE DRILLING **4.0m**  
 END OF BORING **190.8** AT END OF BORING **4.0m**  
 24 HOURS **Backfilled**



DRILL RIG NO. **117**

Division lines between deposits represent approximate boundaries between soil types in-situ, the transition may be gradual.

A-27

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**SOIL BORINGS - 1 OF 2**  
 ILLINOIS ROUTE 71 OVER DRAINAGE DITCH  
 F.A.P. RT. 619 - SECTION 120 BR  
 PUTNAM COUNTY  
 STATION 12+530  
 STRUCTURE No. 078-2007

DESIGNED BY: **MV** DRAWN BY: **KDS**  
 CHECKED BY: **SG** CHECKED BY: **MV**

DATE: 09/21/09

**TransSystems**

800 WEATHER DR. SUITE 200  
 SCHWABING, IL 60177-5000  
 TEL 847 506-9600  
 FAX 847 506-9601

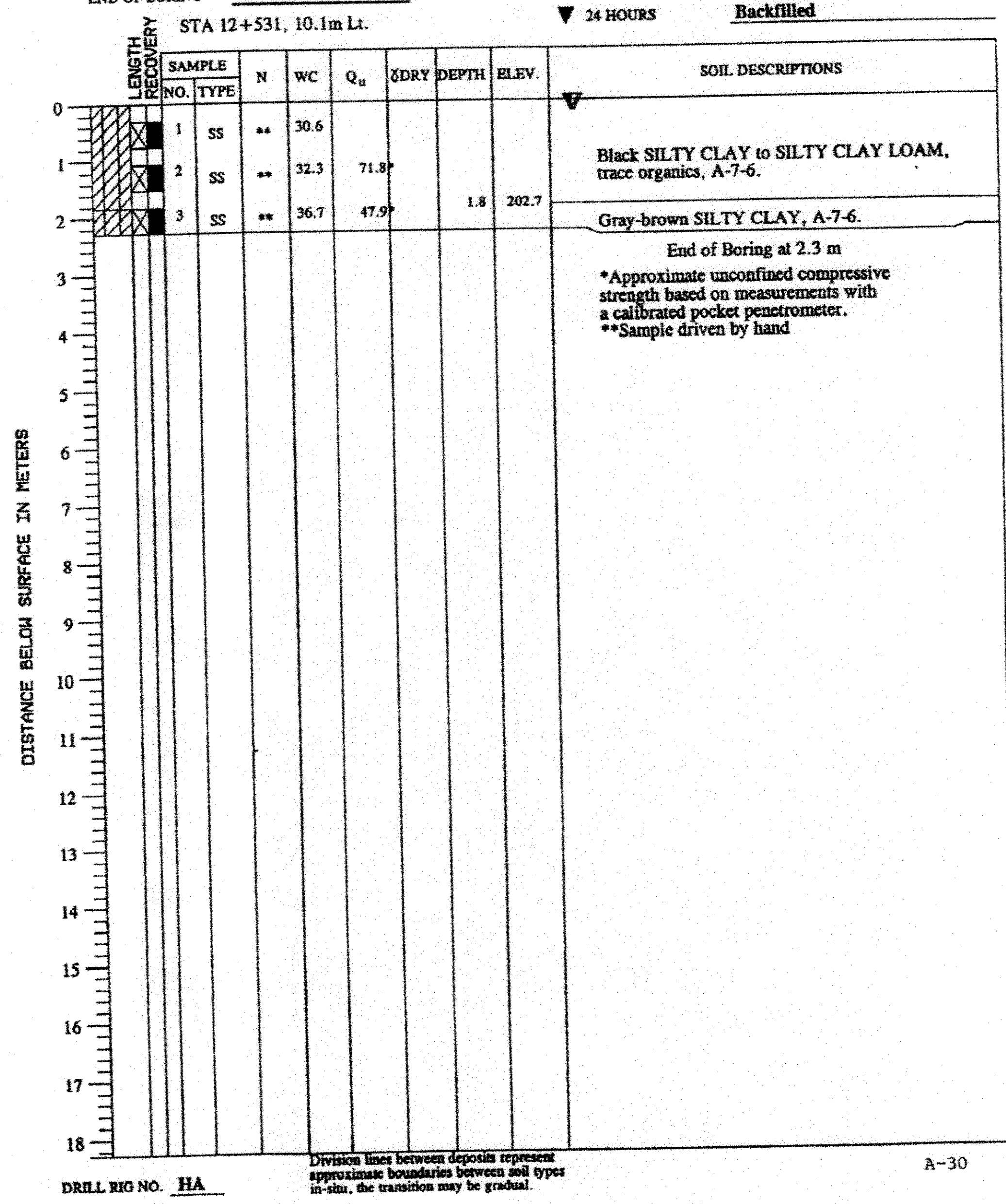
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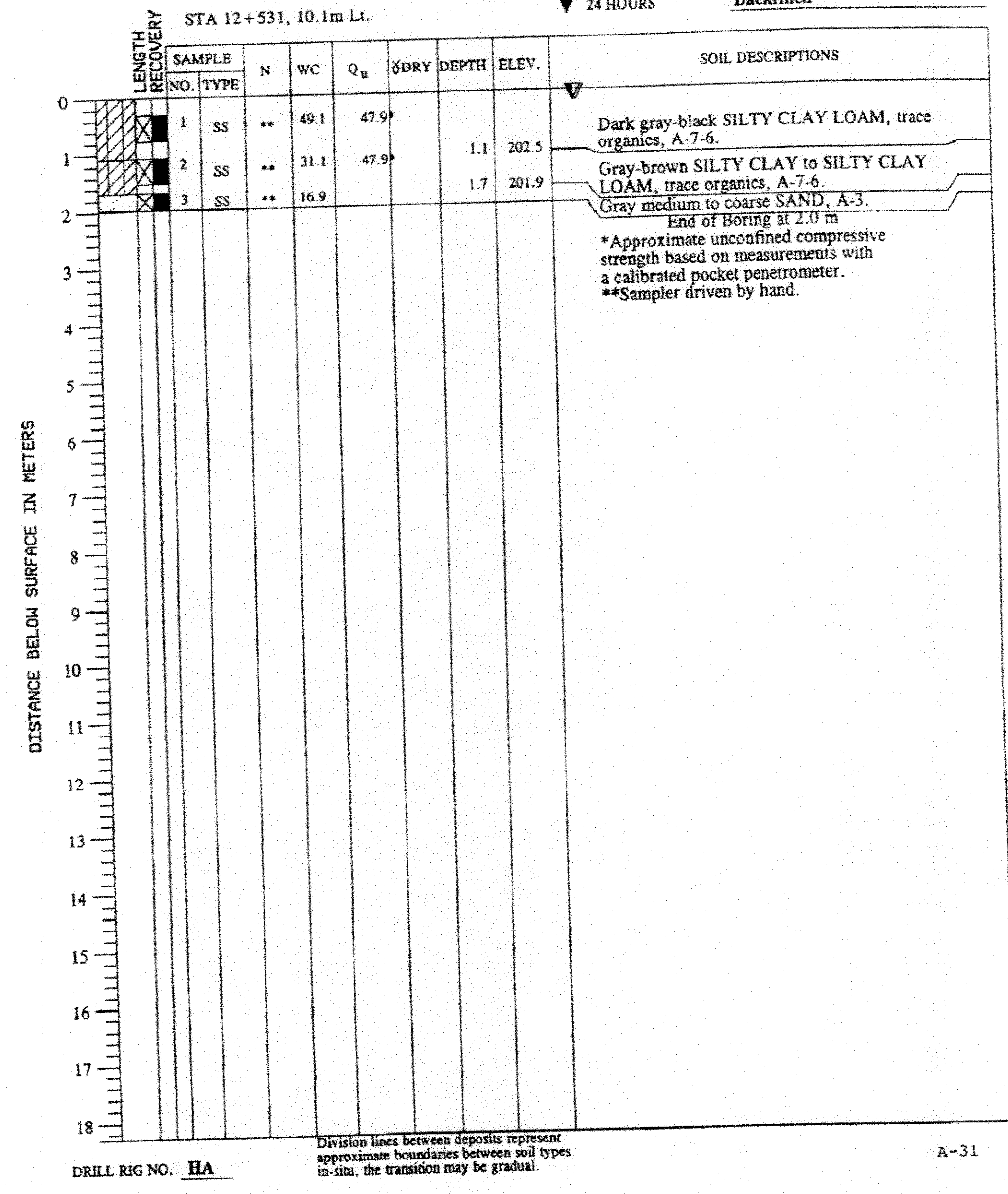
RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
619	*	PUTNAM	77	49
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT-	
* 120 BR, CR				

CONTRACT NO. 68740

PROJECT Structure 078-0030, Illinois Route 71, Putnam County, IL  
 CLIENT TransSystems Corp., Schaumburg, IL  
 BORING B-5 DATE STARTED 1-26-98 DATE COMPLETED 1-26-98 JOB 43,757  
 ELEVATIONS WATER TABLE  
 GROUND SURFACE 204.5 WHILE DRILLING 0.2m  
 END OF BORING 202.2 AT END OF BORING 0.2m  
 24 HOURS Backfilled



PROJECT Structure 078-0030, Illinois Route 71, Putnam County, IL  
 CLIENT TransSystems Corp., Schaumburg, IL  
 BORING B-6 DATE STARTED 1-26-98 DATE COMPLETED 1-26-98 JOB 43,757  
 ELEVATIONS WATER TABLE  
 GROUND SURFACE 203.5 WHILE DRILLING 0.2m  
 END OF BORING 201.5 AT END OF BORING 0.2m  
 24 HOURS Backfilled



FILE: g:\401\2000\0003902\cod\cdiv\_078\_2007\0782007.dwg

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION  
**SOIL BORINGS - 2 OF 2**  
 ILLINOIS ROUTE 71 OVER DRAINAGE DITCH  
 F.A.P. RT. 619 - SECTION 120 BR  
 PUTNAM COUNTY  
 STATION 12+530  
 STRUCTURE No. 078-2007

DATE: 09/21/09 DESIGNED BY: MV DRAWN BY: KDS  
 CHECKED BY: SG CHECKED BY: MV

**TranSystems**  
 SOIL PENETROMETER DRIVING GUIDE  
 SCHAMBURG, IL 60197-3000  
 TEL: (815) 600-3000  
 FAX: (815) 600-3000



Illinois Department  
of Transportation  
Division of Highways  
GSG CONSULTANTS, INC.

### SOIL BORING LOG

Page 1 of 1

Date 7/1/10

ROUTE FAP 619 (IL 71) DESCRIPTION Boring located south of roadway. LOGGED BY NSP  
SECTION 120 BR, CR LOCATION Granville Road District, SEC. 9, TWP. 32N, RNG. 1W, 3rd PM,  
Latitude 41° 15' 26.64" N, Longitude 89° 13' 47.75" W  
COUNTY Putnam DRILLING METHOD HSA HAMMER TYPE AUTO

STRUCT. NO.	DEPT	BLOWS	UCS	M	Surface Water Elev.	DEPT	BLOWS	UCS	M
Station	H	(/150 mm)	(kPa)	(%)	Stream Bed Elev.	H	(/150 mm)	(kPa)	(%)
078-1001					203.87 m				
12+058.1					203.40 m				
BORING NO. <u>B-1</u>					Groundwater Elev.:				
Station <u>12+052.1</u>					First Encounter <u>203.4 m</u> ▼				
Offset <u>12.19 m RT</u>					Upon Completion <u>196.4 m</u> ▼				
Ground Surface Elev. <u>204.66 m</u>					After - Hrs. <u>-</u>				
Gray and Black, Moist SILTY CLAY (fill), trace organics					Very Stiff to Stiff Brownish Gray, Wet CLAY LOAM, trace gravel (continued)		7	B	
		5					2		
		10		31			4	153	13
		2					8	B	
Note: Brick fragments observed at -1.2m		2					2		
203.13 -1.5		2		31			5	115	12
Medium Stiff Black, Moist SILTY CLAY LOAM, trace organics							7	B	
		1							
		1	57	29			3		
		1	B				5	172	12
202.37							8	B	
Medium Stiff to Stiff Mottled Brown and Gray, Moist SILTY CLAY LOAM									
		2							
202.07							2		
Stiff Brown, Wet CLAY LOAM							4	115	13
		3					5	B	
-3.0					End of Boring				
		2							
		3	115	14					
		5	B						
200.54									
Stiff to Very Stiff Brownish Gray, Wet CLAY LOAM, trace gravel									
		3							
		5	153	13					
		7	B						
-4.5									
199.78									
Very Stiff to Stiff Brownish Gray, Wet CLAY LOAM, trace gravel									
		2							
		5	268	11					
		6	B						
		3							
		5	77	14					
-6.0									

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  
GSG CONSULTANTS, INC.

### SOIL BORING LOG

Page 1 of 1

Date 6/30/10

ROUTE FAP 619 (IL 71) DESCRIPTION Boring located on shoulder on north side of roadway. LOGGED BY NSP  
SECTION 120 BR, CR LOCATION Granville Road District, SEC. 9, TWP. 32N, RNG. 1W, 3rd PM,  
Latitude 41° 15' 27.18" N, Longitude 89° 13' 46.96" W  
COUNTY Putnam DRILLING METHOD HSA HAMMER TYPE AUTO

STRUCT. NO.	DEPT	BLOWS	UCS	M	Surface Water Elev.	DEPT	BLOWS	UCS	M
Station	H	(/150 mm)	(kPa)	(%)	Stream Bed Elev.	H	(/150 mm)	(kPa)	(%)
078-1001					203.88 m				
12+058.1					200.90 m				
BORING NO. <u>B-2</u>					Groundwater Elev.:				
Station <u>12+059.7</u>					First Encounter <u>NONE m</u>				
Offset <u>4.27 m LT</u>					Upon Completion <u>NONE m</u>				
Ground Surface Elev. <u>205.57 m</u>					After - Hrs. <u>-</u>				
Gray to Black SANDY LOAM (fill), trace gravel					Stiff to Very Stiff Brownish Gray, Moist CLAY LOAM (continued)		5	B	
205.26									
Brown CLAY LOAM (fill), trace gravel							2		
		2					4	172	12
		3		15			5	B	
		5							
204.50									
Medium Stiff to Stiff Black, Wet CLAY									
		1							
		2	192	33					
		1	P						
-1.5									
		2							
		2	96	33					
		3	B						
		6	575	11					
		6	P						
202.98									
Medium Stiff to Very Stiff Gray, trace Brown, Wet CLAY									
		2							
		2	144	31					
		2	P						
-3.0									
		6							
		9	671	10					
		9	P						
196.43					End of Boring				
		3							
202.06									
Very Stiff to Stiff Brown, Moist CLAY LOAM									
		4	259	14					
		5	B						
201.45									
Stiff to Very Stiff Brownish Gray, Moist CLAY LOAM									
		2							
		4	172	13					
		6	B						
-4.5									
		3							
		4	172	11					
		4	B						
		3							
		4	192	12					
-6.0									

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)

### SOIL BORING LOGS

FILE NAME = sheets.dgn	USER NAME = keathbr	DESIGNED -	REVISED -	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	SOIL BORING LOGS (EXISTING S.N. 078-1001)	F.A.P. RTE. 619	SECTION 120BR,CR	COUNTY PUTNAM	TOTAL SHEETS 77	SHEET NO. 50	
PLOT SCALE = 3.6000 M / in.	CHECKED -	REVISED -	SCALE:			SHEET NO. 1 OF 2 SHEETS	STA. TO STA.	CONTRACT NO. 68740		ILLINOIS FED. AID PROJECT	
PLOT DATE = 3/29/2013	DATE -	REVISED -									



Illinois Department  
of Transportation  
Division of Highways  
GSG CONSULTANTS, INC.

# SOIL BORING LOG

Page 1 of 1

Date 7/1/10

ROUTE FAP 619 (IL 71) DESCRIPTION Boring located north of roadway. LOGGED BY NSP  
SECTION 120 BR, CR LOCATION Granville Road District, SEC. 9, TWP. 32N, RNG. 1W, 3rd PM,  
Latitude 41° 22' 3.86" N, Longitude 89° 7' 46.92" W  
COUNTY Putnam DRILLING METHOD HSA HAMMER TYPE AUTO

STRUCT. NO. 078-1001  
Station 12+058.1  
BORING NO. B-3  
Station 12+057.9  
Offset 17.68 m LT  
Ground Surface Elev. 204.74 m

DEPTH (m)	BLOWS (/150 mm)	UCS (kPa)	MOIST (%)	DESCRIPTION	DEPTH (m)	BLOWS (/150 mm)	UCS (kPa)	MOIST (%)	DESCRIPTION
				Surface Water Elev. <u>203.88</u> m					
				Stream Bed Elev. <u>200.90</u> m					
				Groundwater Elev.:					
				First Encounter <u>195.9</u> m					
				Upon Completion <u>200.5</u> m					
				After <u>0.5</u> Hrs. <u>202.3</u> m					
				Brown to Black, Fine to Medium grain, Moist SANDY LOAM (fill), trace gravel					
				204.13					
				Brown to Black, Moist CLAY LOAM (fill)					
				203.68					
				Stiff Black, Moist CLAY LOAM					
				-1.5					
				2					
				1					
				1					
				202.15					
				Soft Mottled Brown and Gray, Moist SILTY CLAY LOAM					
				-3.0					
				201.39					
				Stiff Brown, Moist CLAY LOAM					
				2					
				5					
				Note: 6" seam of Black Clay Loam with trace organics at -11.5'					
				200.63					
				Stiff to Very Stiff Brownish Gray, Moist CLAY LOAM, trace gravel					
				-4.5					
				2					
				4					
				5					
				2					
				4					
				-6.0					
				Stiff to Very Stiff Brownish Gray, Moist CLAY LOAM, trace gravel					
				204.13					
				1					
				2					
				5					
				6					
				203.68					
				1					
				1					
				2					
				196.06					
				Soft Mottled Brown and Gray, Moist SILTY CLAY LOAM					
				-3.0					
				201.39					
				Stiff Brown, Moist CLAY LOAM					
				2					
				5					
				Note: 6" seam of Black Clay Loam with trace organics at -11.5'					
				200.63					
				Stiff to Very Stiff Brownish Gray, Moist CLAY LOAM, trace gravel					
				-4.5					
				2					
				4					
				5					
				2					
				4					
				-6.0					
				Stiff to Very Stiff Brownish Gray, Moist CLAY LOAM, trace gravel					
				204.13					
				1					
				2					
				5					
				6					
				203.68					
				1					
				1					
				2					
				196.06					
				Soft Mottled Brown and Gray, Moist SILTY CLAY LOAM					
				-3.0					
				201.39					
				Stiff Brown, Moist CLAY LOAM					
				2					
				5					
				Note: 6" seam of Black Clay Loam with trace organics at -11.5'					
				200.63					
				Stiff to Very Stiff Brownish Gray, Moist CLAY LOAM, trace gravel					
				-4.5					
				2					
				4					
				5					
				2					
				4					
				-6.0					

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)

## SOIL BORING LOGS

FILE NAME = sheets.dgn	USER NAME = keathbr	DESIGNED -	REVISED -	<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>	<b>SOIL BORING LOGS (EXISTING S.N. 078-1001)</b>			F.A.P. RTE. = 619	SECTION = 120BR,CR	COUNTY = PUTNAM	TOTAL SHEETS = 77	SHEET NO. = 51
	PLOT SCALE = 3.6000 M / in.	DRAWN - H2S - IDOT	REVISED -		SCALE:	SHEET NO. 2 OF 2 SHEETS	STA. TO STA.	CONTRACT NO. 68740				
	PLOT DATE = 3/29/2013	CHECKED -	REVISED -		ILLINOIS FED. AID PROJECT							
		DATE -	REVISED -									

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
619	120BR.CR	PUTNAM	77	52
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

# GRAPHIC SCALE

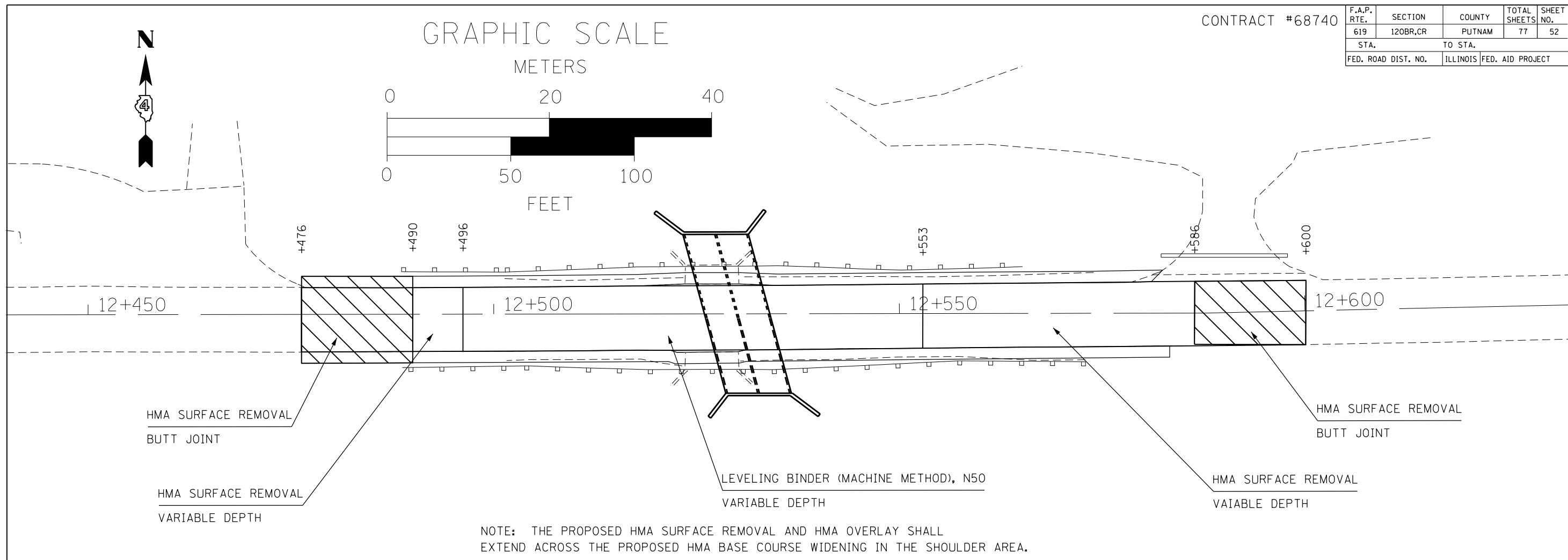
METERS



FEET

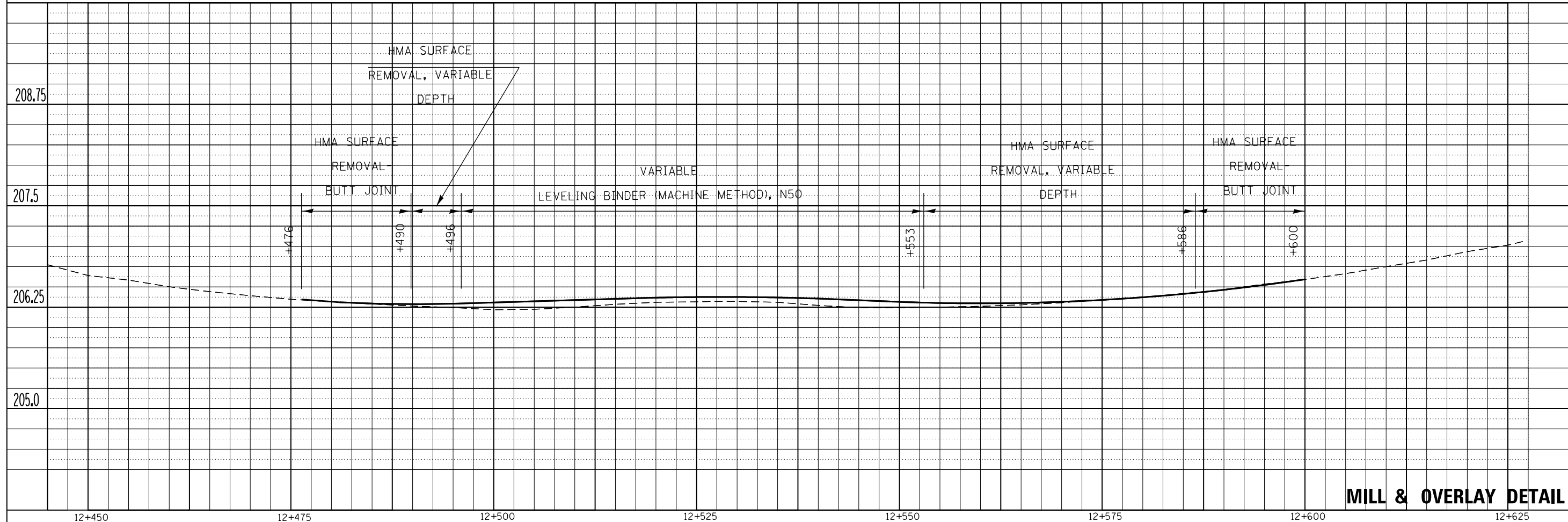


PLAN	SURVEYED	BY	DATE
	PLOTTED		
	NOTE BOOK		
	ALIGNMENT CHECKED		
	RT. OF WAY CHECKED		
	NO.		
	CADD FILE NAME		



NOTE: THE PROPOSED HMA SURFACE REMOVAL AND HMA OVERLAY SHALL EXTEND ACROSS THE PROPOSED HMA BASE COURSE WIDENING IN THE SHOULDER AREA.

PROFILE	SURVEYED	BY	DATE
	PLOTTED		
	GRADES CHECKED		
	B.M. NOTED		
	STRUCTURE NOTATIONS CHKD		





F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
619	120BR,CR	PUTNAM	77	53
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

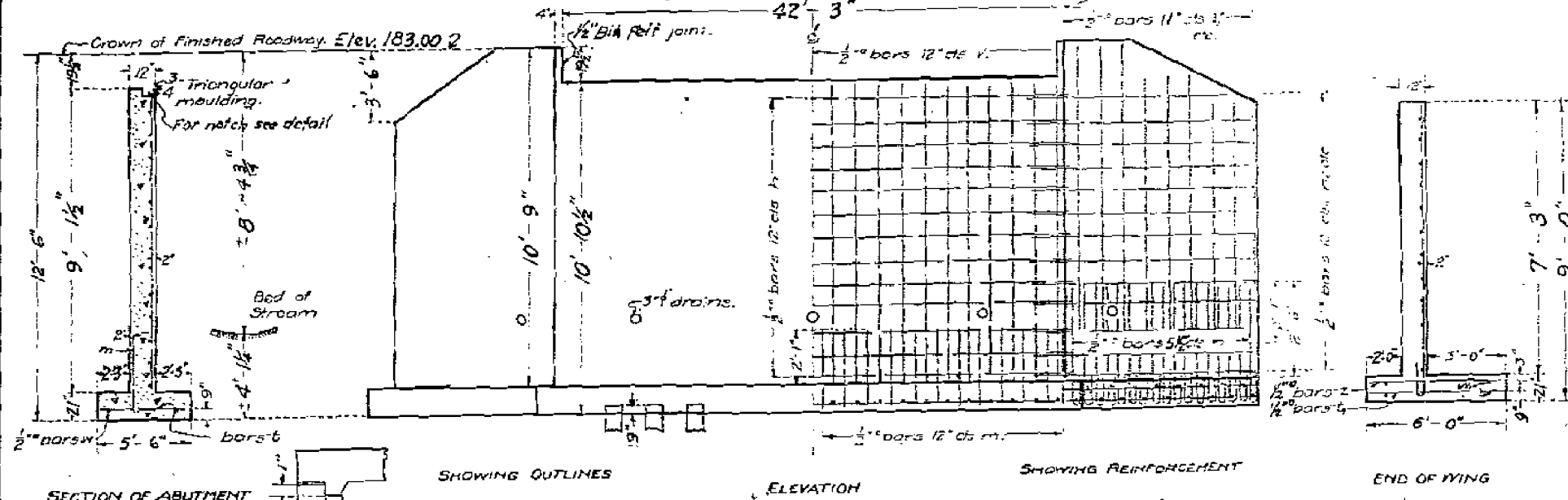
Sheet No. 3  
3 Sheets.

BOND ISSUE ROUTE NO.	COUNTY	SEC.	TOTAL SHEETS	SHEET NO.
89	PUTNAM	120B	48	41

B.M. #2 S. & W. in R.R. Rt. Sta. 6+70.  
Elevation 182.87  
Existing Structure - I beam, Span 14'  
Roadway 12 1/2 ft. To be removed by Contractor.

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

R.C. ABUTMENTS FOR SLAB BRIDGE  
HEIGHT OVER ALL 12 1/2 FEET



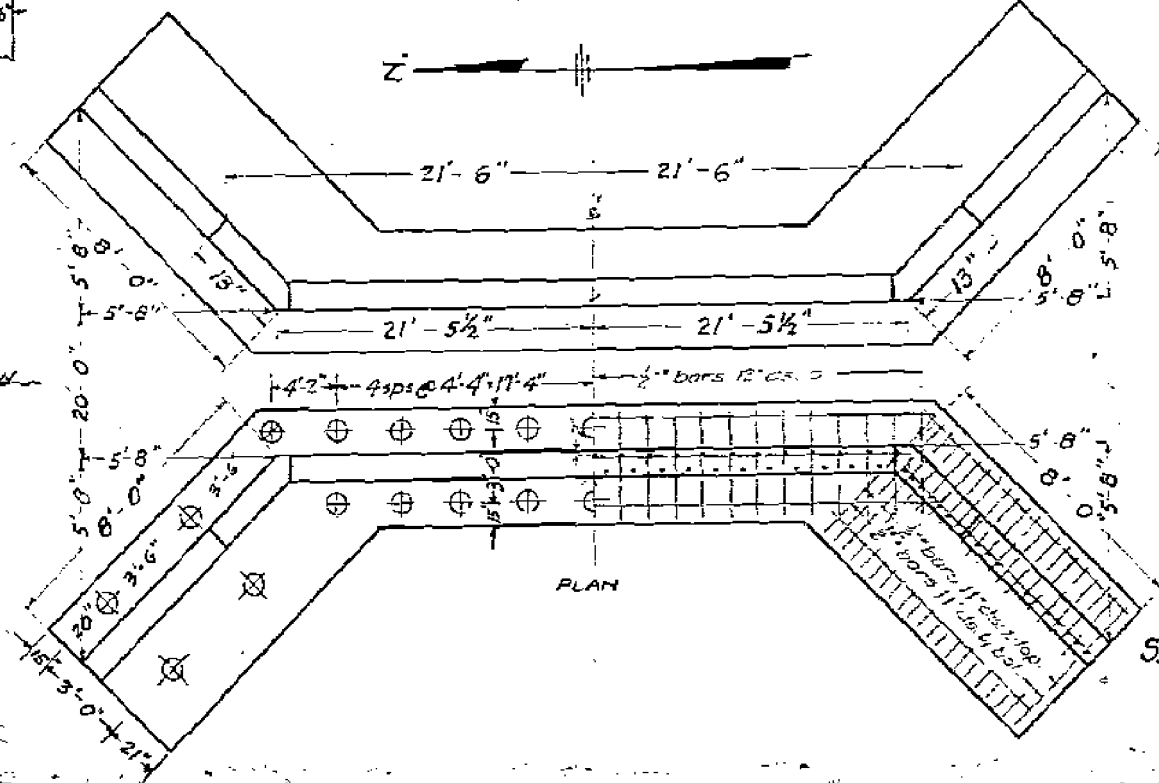
SECTION OF ABUTMENT  
DETAIL OF NOTCH  
SHOWING OUTLINES  
ELEVATION  
SHOWING REINFORCEMENT  
END OF WING

Class A concrete shall be used throughout.  
Proportion: 1:2 1/2:4.  
All reinforcing steel shall be securely wired in place before concrete is poured.

entr.  
10 Ten Pile = 10 in. butt  
8 in. tip. 5% required,  
840 lined feet.

COMPUTED - M. D. Quinn
CHECKED - E. D. Leary
DRAWN - J. R. Fisher
CHECKED - H. P. D.
ASSEMBLED - P. Michener
CHECKED - E. L. Styles

DRAWN Oct 17 1927  
PASSED  
APPROVED



PLAN

BILL OF MATERIAL

Bars	No	Size	Length
v	86	1/2"	8'-6"
v	8	2"	10'-0"
v	16	1/2"	8'-6"
v	12	2"	7'-0"
h	36	1/2"	22'-6"
h	28	2"	9'-6"
m	8	1/2"	7'-0"
n	72	1/2"	5'-0"
t	80	1/2"	5'-3"
t	40	1/2"	5'-9"
z	40	1/2"	5'-9"
w	8	1/2"	23'-6"
w	16	1/2"	9'-6"
m	86	1/2"	3'-0"

Reinforcing Steel Lbs. 2890  
Concrete Cu Yds. 81.7

S.B.I. ROUTE 89-SEC. 120B  
PUTNAM COUNTY  
STA. 1+42.

978

**FOR INFORMATION ONLY**

REVISIONS	
NAME	DATE

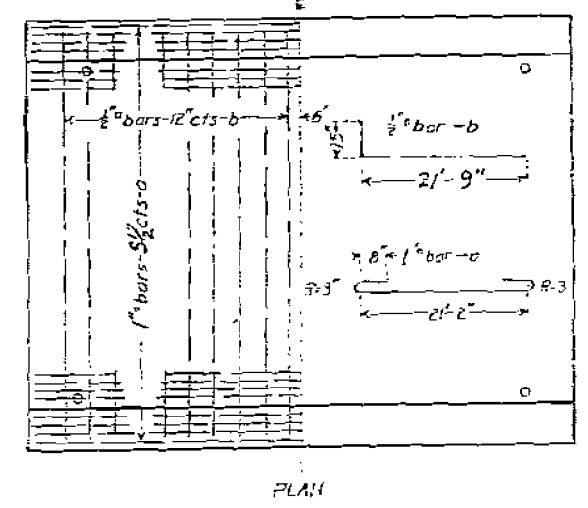
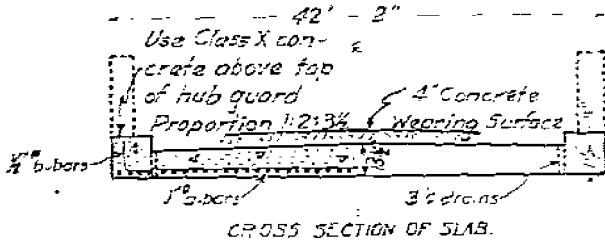
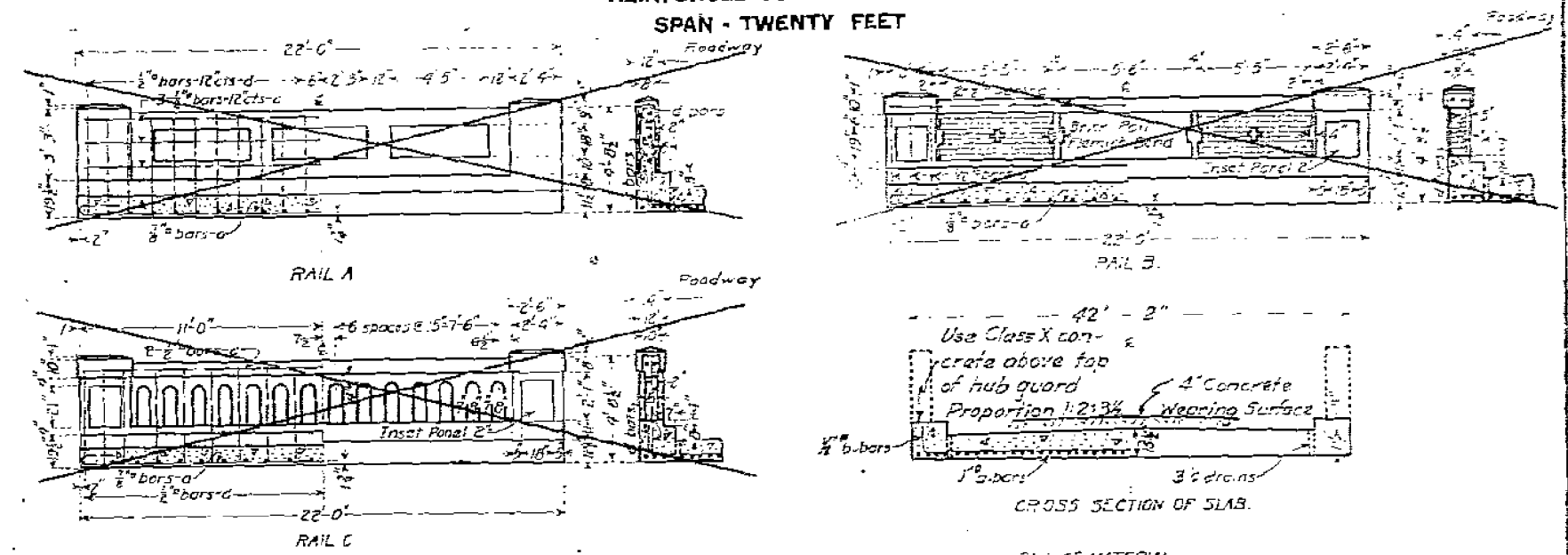
ILLINOIS DEPARTMENT OF TRANSPORTATION  
EXISTING STRUCTURE  
NUMBER 078-0030  
DRAWN BY  
CHECKED BY  
DATE

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
619	120BR,CR	PUTNAM	77	54
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

STATE OF ILLINOIS  
DEPARTMENT OF PUBLIC WORKS & BUILDINGS  
DIVISION OF HIGHWAYS  
**REINFORCED CONCRETE SLAB**  
**SPAN - TWENTY FEET**

BOND ISSUE ROUTE NO.	COUNTY	SEC.	TOTAL SHEETS	SHEET NO.
89	PUTNAM	120	48	41

Sheet No. 3 Sheets



BILL OF MATERIAL

	16 FT. ROADWAY	18 FT. ROADWAY	20 FT. ROADWAY	24 FT. ROADWAY	40 FT. ROADWAY
RAIL A	Bars No Size Length a 50 1/2" 24'-0" b 120 1/2" 19'-6" c 4 1/2" 21'-6" d 144 1/2" 4'-5" Steel-Lbs 3730 Concrete-Cu Yds 207	Bars No Size Length a 56 1/2" 24'-0" b 120 1/2" 19'-6" c 4 1/2" 21'-6" d 144 1/2" 4'-5" Steel-Lbs 4130 Concrete-Cu Yds 225	Bars No Size Length a 62 1/2" 24'-0" b 120 1/2" 19'-6" c 4 1/2" 21'-6" d 144 1/2" 4'-5" Steel-Lbs 4240 Concrete-Cu Yds 228	Bars No Size Length a 73 1/2" 24'-0" b 120 1/2" 19'-6" c 4 1/2" 21'-6" d 144 1/2" 4'-5" Steel-Lbs 5345 Concrete-Cu Yds 237	Bars No Size Length a 80 1/2" 24'-0" b 120 1/2" 19'-6" c 4 1/2" 21'-6" d 144 1/2" 4'-5" Steel-Lbs 5520 Concrete-Cu Yds 240
RAIL B	Bars No Size Length a 50 1/2" 24'-0" b 120 1/2" 19'-6" c 4 1/2" 21'-6" d 144 1/2" 4'-5" Steel-Lbs 3570 Concrete-Cu Yds 195	Bars No Size Length a 56 1/2" 24'-0" b 120 1/2" 19'-6" c 4 1/2" 21'-6" d 144 1/2" 4'-5" Steel-Lbs 3980 Concrete-Cu Yds 213	Bars No Size Length a 62 1/2" 24'-0" b 120 1/2" 19'-6" c 4 1/2" 21'-6" d 144 1/2" 4'-5" Steel-Lbs 4090 Concrete-Cu Yds 216	Bars No Size Length a 73 1/2" 24'-0" b 120 1/2" 19'-6" c 4 1/2" 21'-6" d 144 1/2" 4'-5" Steel-Lbs 4800 Concrete-Cu Yds 225	Bars No Size Length a 80 1/2" 24'-0" b 120 1/2" 19'-6" c 4 1/2" 21'-6" d 144 1/2" 4'-5" Steel-Lbs 4980 Concrete-Cu Yds 228
RAIL S	Bars No Size Length a 50 1/2" 24'-0" b 120 1/2" 19'-6" c 4 1/2" 21'-6" d 144 1/2" 4'-5" Steel-Lbs 3670 Concrete-Cu Yds 201	Bars No Size Length a 56 1/2" 24'-0" b 120 1/2" 19'-6" c 4 1/2" 21'-6" d 144 1/2" 4'-5" Steel-Lbs 4080 Concrete-Cu Yds 219	Bars No Size Length a 62 1/2" 24'-0" b 120 1/2" 19'-6" c 4 1/2" 21'-6" d 144 1/2" 4'-5" Steel-Lbs 4190 Concrete-Cu Yds 222	Bars No Size Length a 73 1/2" 24'-0" b 120 1/2" 19'-6" c 4 1/2" 21'-6" d 144 1/2" 4'-5" Steel-Lbs 4900 Concrete-Cu Yds 231	Bars No Size Length a 80 1/2" 24'-0" b 120 1/2" 19'-6" c 4 1/2" 21'-6" d 144 1/2" 4'-5" Steel-Lbs 5080 Concrete-Cu Yds 234

Class X concrete to be used below top of hub guard. Proportions-1:2:3 1/2

USE RAIL S, 40 FT. ROADWAY

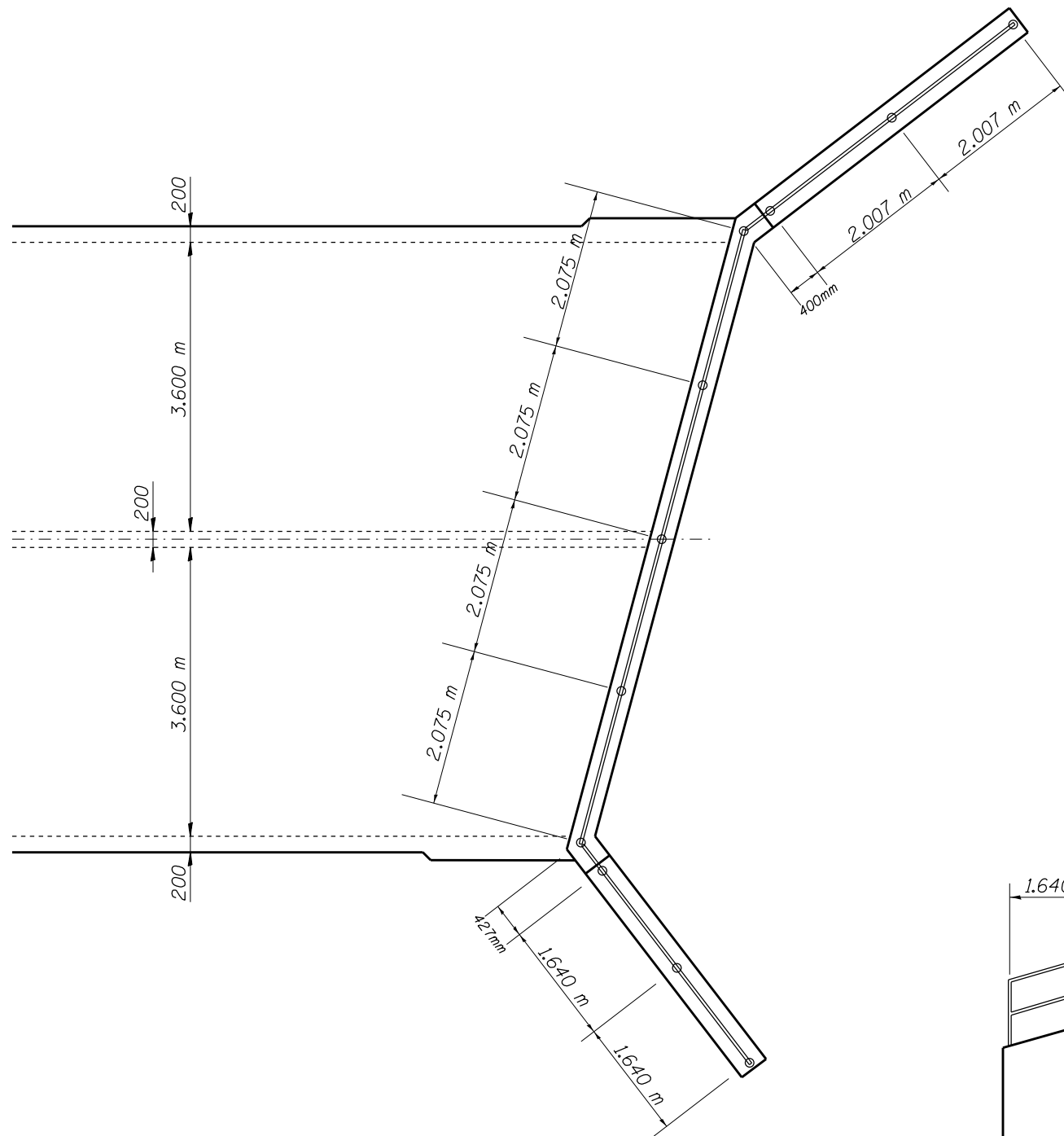
COMPUTED	Walter J. Judd
CHECKED	W. J. Judd
DRAWN	H. H. Halverson
CHECKED	W. J. Judd
APPROVED	P. Michener
CHECKED	E. J. Styles

S.B.I. ROUTE 89, - SEC. 120, E. 1/2  
PUTNAM COUNTY  
STA. 7+42.

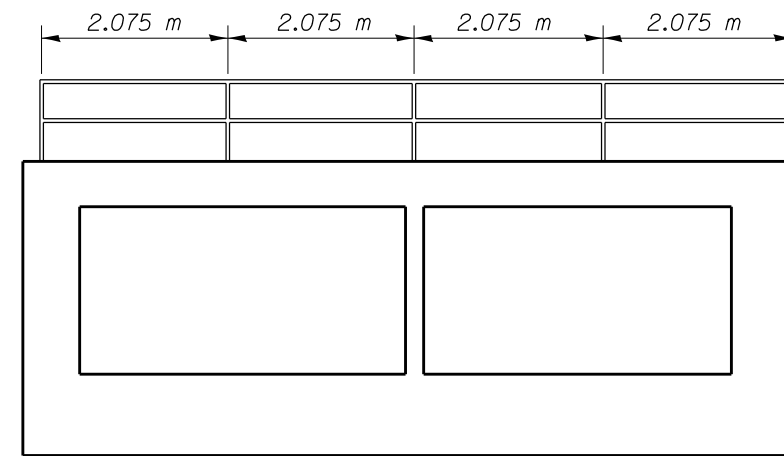
**FOR INFORMATION ONLY**

REVISIONS		ILLINOIS DEPARTMENT OF TRANSPORTATION
NAME	DATE	
		EXISTING STRUCTURE NUMBER 078-0030
DATE	CHECKED BY	DRAWN BY

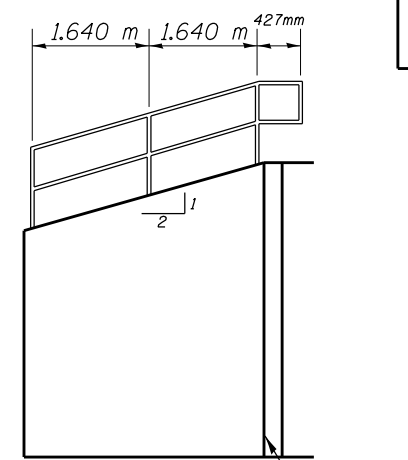
PIPE HANDRAIL SCHEDULE		
STA. to STA.	OFF.	LENGTH (METER)
12+520 to 12+535	LT	16.421
12+526 to 12+541	RT	16.421
<b>TOTAL</b>		<b>32.842</b>



PLAN VIEW



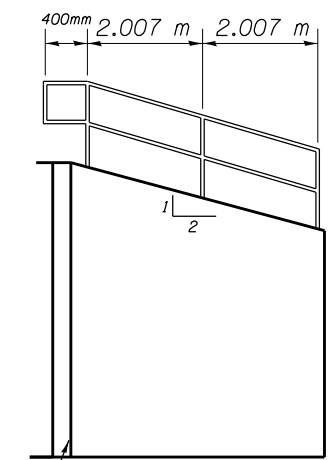
HEADWALL



SHORT WING

P.E.J.F

ELEVATION VIEWS  
(PERPENDICULAR TO EACH WALL)



P.E.J.F

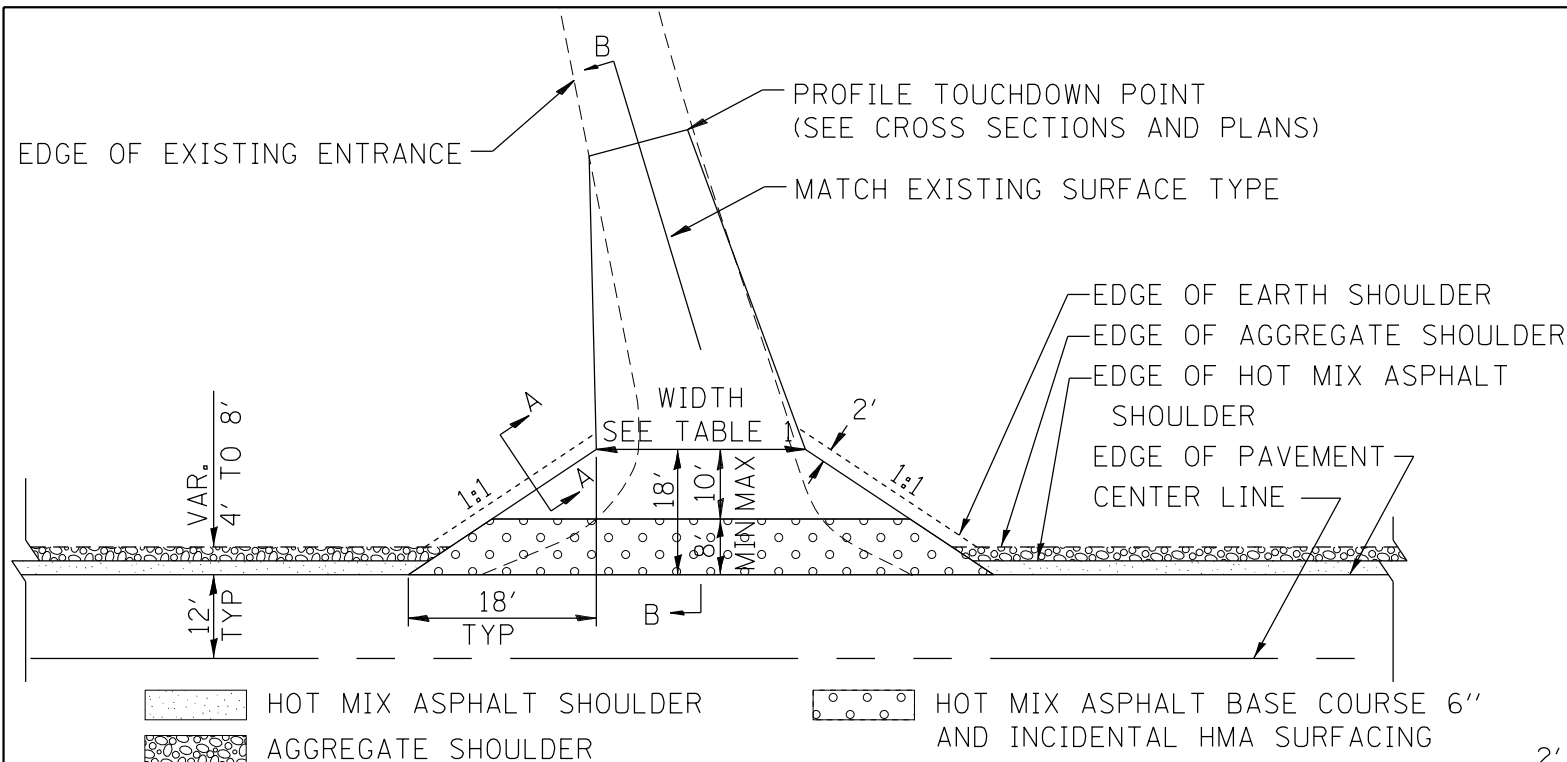
LONG WING

FILE NAME = 1L71.bridge.design change 02052013.dgn	USER NAME = aubreys	DESIGNED -	REVISED -
		DRAWN -	REVISED -
	PLOT SCALE = 25.0000 M / in.	CHECKED -	REVISED -
	PLOT DATE = 3/29/2013	DATE -	REVISED -

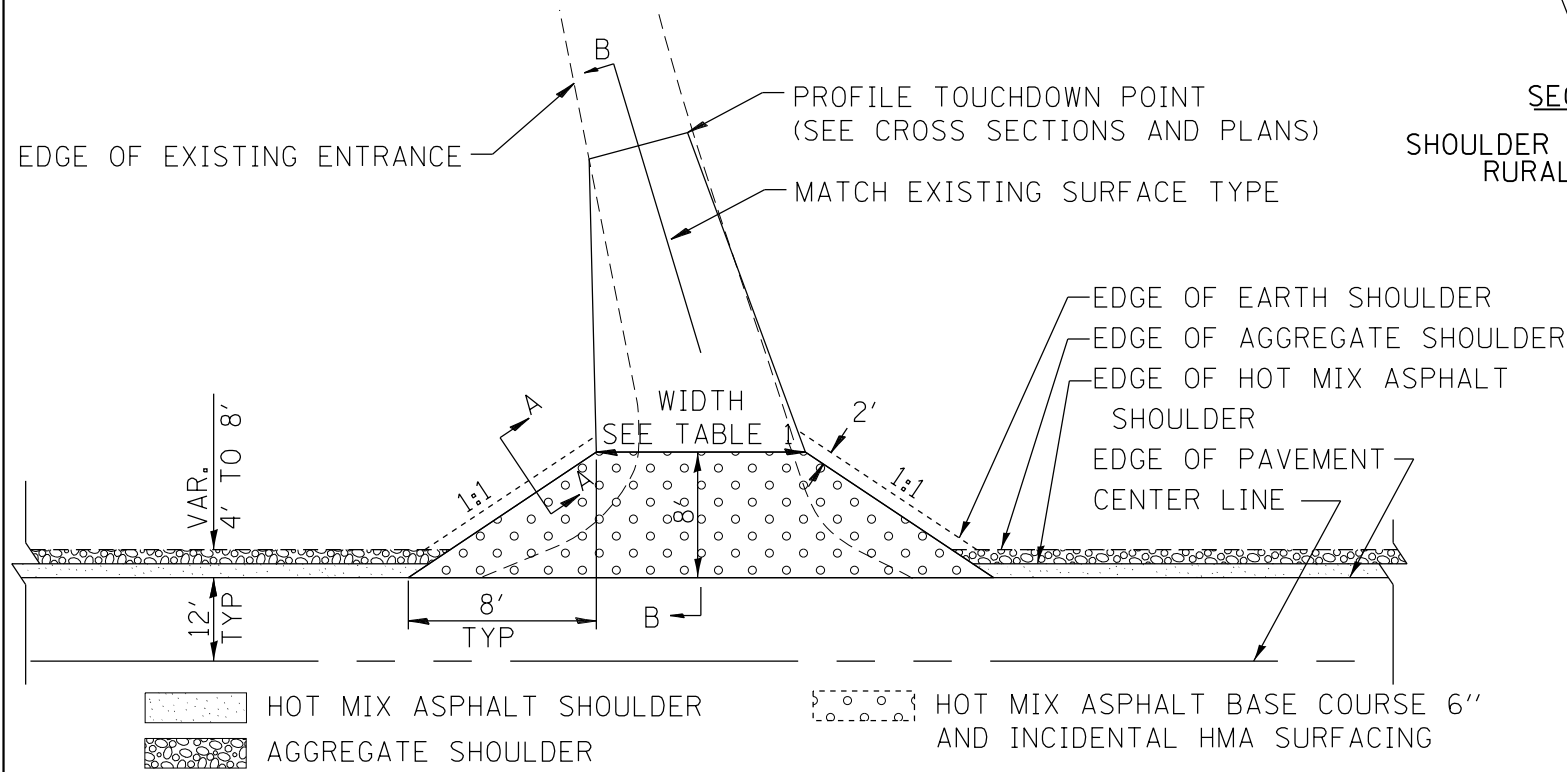
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

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

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
619	120BR,CR	PUTNAM	77	55
CONTRACT NO.			68740	
ILLINOIS FED. AID PROJECT				



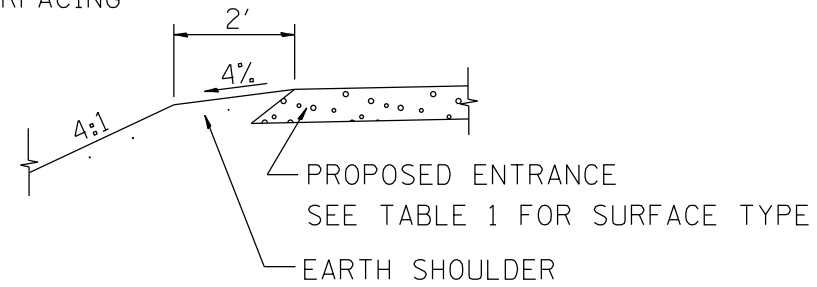
PLAN  
COMMERCIAL / FARM-RELATED ENTRANCE



PLAN  
PRIVATE ENTRANCE

TABLE 1						
RURAL ENTRANCE DESIGN						
ELEMENT	NON-COMMERCIAL		NON-COMMERCIAL W/ LARGE FARM EQUIPMENT		COMMERCIAL	
					1-WAY OPERATION	2-WAY OPERATION
WIDTH (W)	12'(3.6m) Min.	24'(7.2m) Max.	20' (6.1m)Max.	30' (9.0m)Max.	14'(4.3m) Min.	24'(7.2m) Max.
FLARE						1:1
MAX. GRADE (G)	12%		12%		10%	

SURFACE TYPE			
HMA BASE COURSE 6'' AND INCIDENTAL HOT MIX ASPHALT SURFACING	8''	—	8''
AGGREGATE SURFACE COURSE, TYPE B	6''	8''	8''
PCC DRIVEWAY PAVEMENT	6''	—	7''

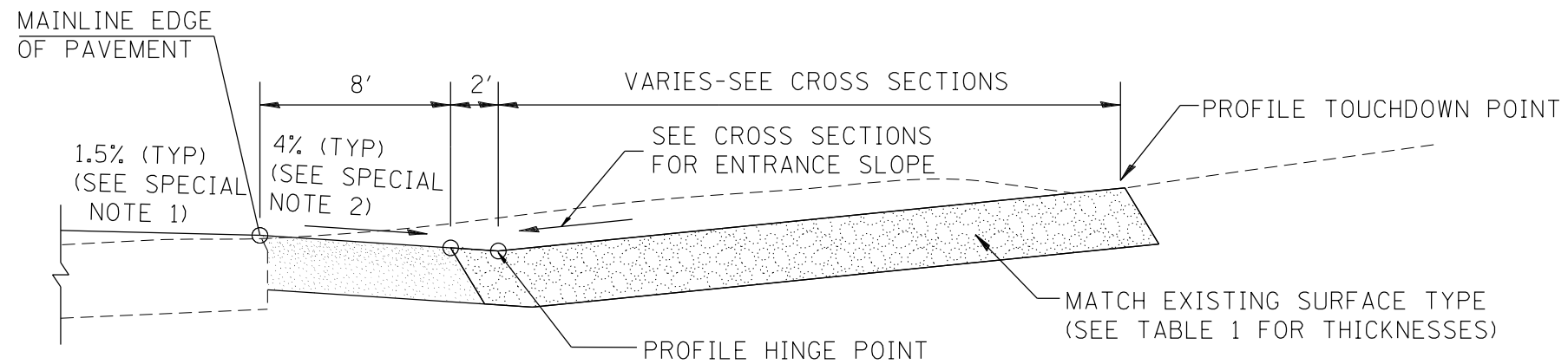


SECTION A-A  
SHOULDER TREATMENT FOR RURAL ENTRANCES

GENERAL NOTES

- ENTRANCES SHALL SLOPE AWAY FROM THE PAVEMENT AT A RATE EQUAL TO THE SHOULDER SLOPE FOR A MINIMUM DISTANCE OF 8'.
- A MINIMUM 8' PAVED SHOULDER SHALL BE CONSTRUCTED BETWEEN LOCATIONS WHERE THE RURAL ENTRANCE IS LESS THAN 50' FROM AN ADJACENT SIDEROAD, ENTRANCE OR MAILBOX TURNOUT.
- A TAPER RATE OF 5:1 IS DESIRABLE WHEN TRANSITING FROM THE RURAL ENTRANCE WIDTH SHOWN IN TABLE 1, TO THE EXISTING ENTRANCE WIDTH.

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

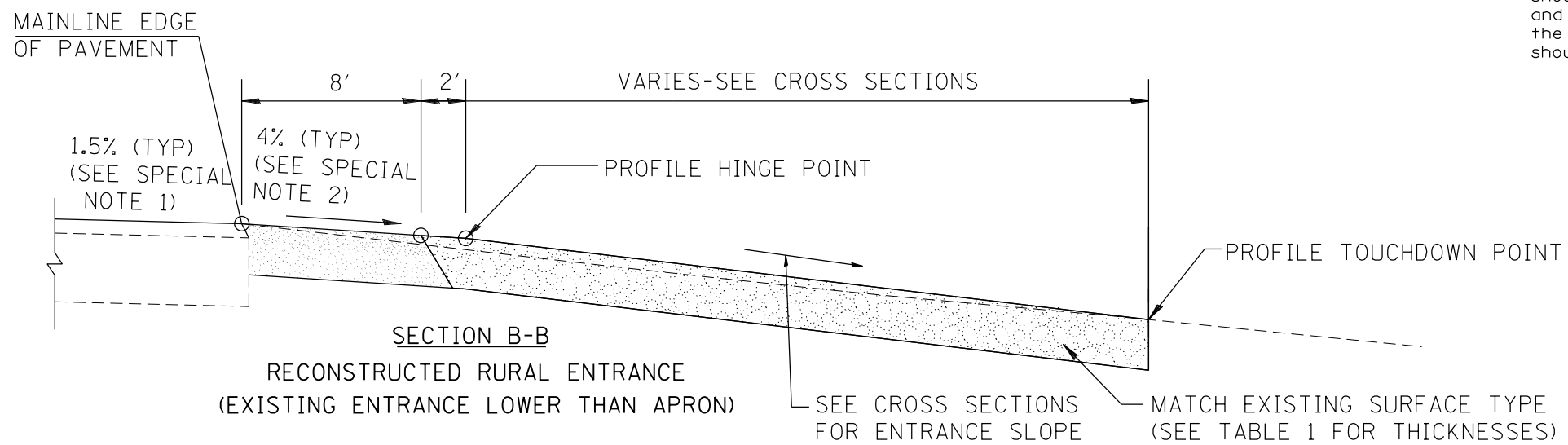


SECTION B-B

RECONSTRUCTED RURAL ENTRANCE  
(EXISTING ENTRANCE HIGHER THAN APRON)

**SPECIAL NOTES**

- ① The mainline pavement cross-slope is 1.5% for tangent alignment. See PLANS for cross-slope on superelevated horizontal curves.
- ② The shoulder slope shall control the entrance profile for a distance of 10' (3.0m) minimum from the pavement edge. The shoulder cross-slope is 4% for tangent alignment. Through superelevated curves, the maximum pavement-shoulder breakover should not be greater than 10% for shoulders 6' (1.8m) and wider and 12% for shoulders 4' (1.2m) and less. Where 12' paved shoulders are provided, the breakover should be at the edge of the paved shoulder rather than at the pavement edge.



SECTION B-B

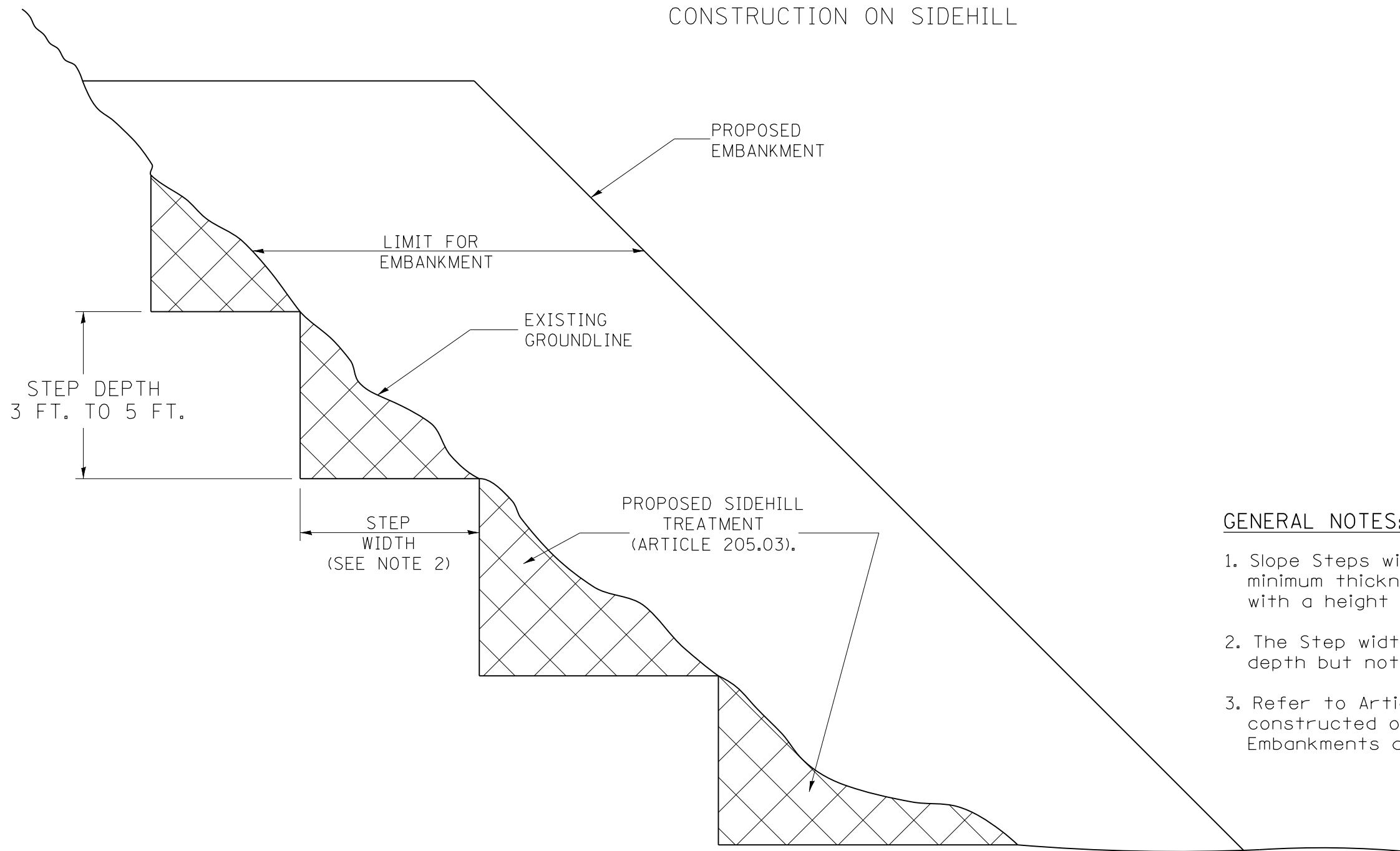
RECONSTRUCTED RURAL ENTRANCE  
(EXISTING ENTRANCE LOWER THAN APRON)

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

<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>				<b>RURAL ENTRANCE DETAIL</b>		SHT. 2 OF 2	
NOT TO SCALE							
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.			
619	120BR,CR	PUTNAM	77	57			
		CONTRACT NO. 68740					
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT					

# SLOPE STEPS DETAIL

## TYPICAL CROSS-SECTION EMBANKMENT CONSTRUCTION ON SIDEHILL



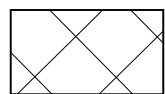
**GENERAL NOTES:**

1. Slope Steps will be required for all 12(300) minimum thickness "silver fills" and on a fills with a height of 10'(3.0m).
2. The Step width shall be twice the Step depth but not less than 6 feet.
3. Refer to Article 205.03 for Embankment to be constructed on Hillside or Slopes, or if existing Embankments are to be widened.

**DESIGNER NOTE:**

1. EACH PROJECT SHOULD BE REVIEWED INDEPENDENTLY FOR TREATMENT REQUIRED.
2. REFER TO THIS DETAIL WITH NOTE ON APPLICABLE TYPICAL SECTIONS.

**REPLACEMENT MATERIAL:**



STANDARD EMBANKMENT  
(IN ACCORDANCE WITH  
205 OF THE STANDARD SPECIFICATION).

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

1-1-97	RENUM. L-5.03, NEW REVISION BOX, REVISED TITLE	T.P.
	BOX, REVISED GENERAL NOTES.	
10-16-06	REVISED TO 2007 SPEC.	M.A.

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

**SLOPE STEPS DETAIL**

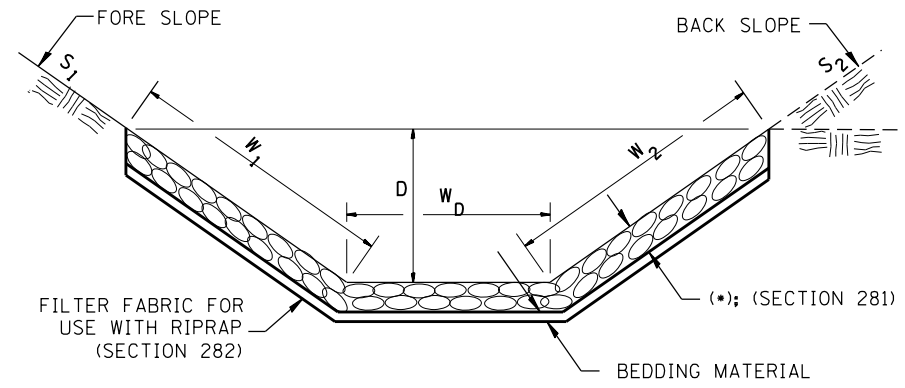
NOT TO SCALE

CADD STD. 205001-D4

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
619	120BR,CR	PUTNAM	77	58
CONTRACT NO. 68740				
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

Designer NOTES:  
 1. Designer to modify this Special Detail Sheet, as needed for inclusion in plans.  
 2. (\*) Designer to specify pay item including material, quality, and gradation.  
 3. Include District Special Provision if needed.

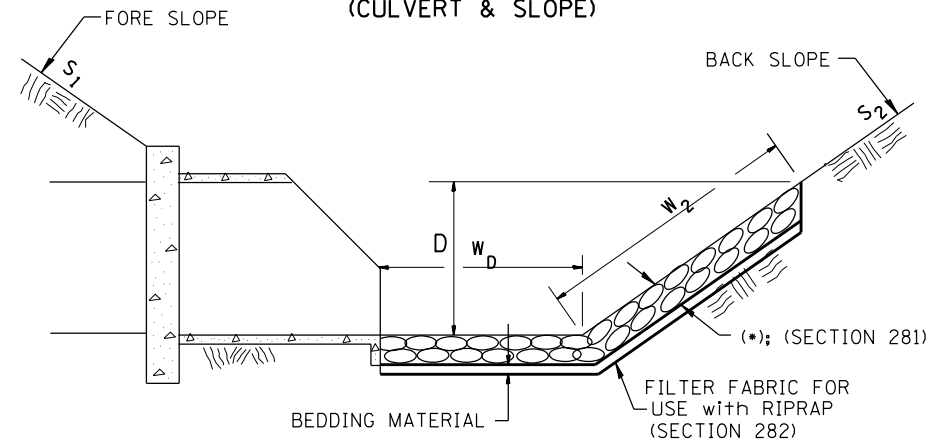
**CASE 1  
(DITCH)**



(*)				
LOCATION	WIDTH (1)	LENGTH	RIPRAP	FABRIC
STA TO STA	lin ft (m)	lin ft (m)	tons (m tons)	sq yds (m <sup>2</sup> )
TOTAL				

(1) WIDTH =  $W_1 + W_2 + W_D$

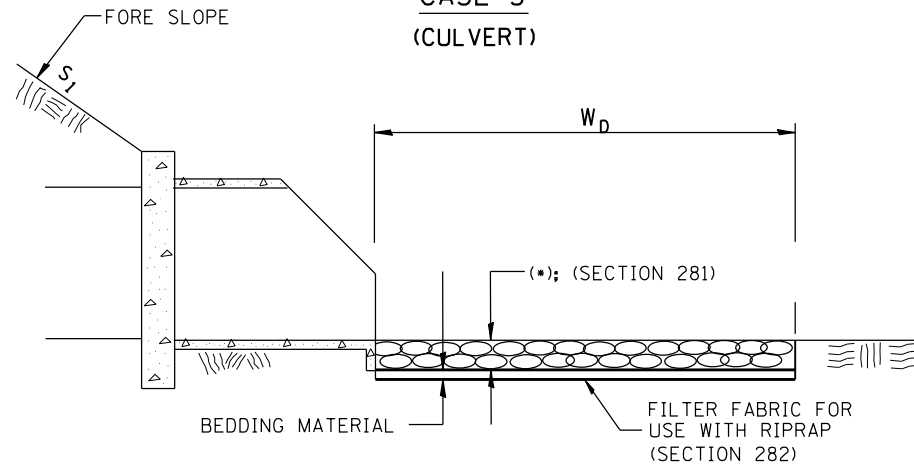
**CASE 2  
(CULVERT & SLOPE)**



(*)				
LOCATION	WIDTH (1)	LENGTH	RIPRAP	FABRIC
STA TO STA	lin ft (m)	lin ft (m)	tons (m tons)	sq yds (m <sup>2</sup> )
TOTAL				

(1) WIDTH =  $W_2 + W_D$

**CASE 3  
(CULVERT)**



(*)				
LOCATION	WIDTH (1)	LENGTH	RIPRAP	FABRIC
STA TO STA	lin ft (m)	lin ft (m)	tons (m tons)	sq yds (m <sup>2</sup> )
TOTAL				

(1) WIDTH =  $W_D$

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).

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

1-1-97	RENUM. A-12.02, NEW REVISION BOX	T.P.
12-1-97	CORRECT FILTER FABRIC LEADER ARROW	J.A.
10-16-06	REVISED TO 2007 SPEC.	M.A.
9-6-12	REMOVED A DESIGNER NOTE AND MADE MINOR CHANGES	R.D.

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

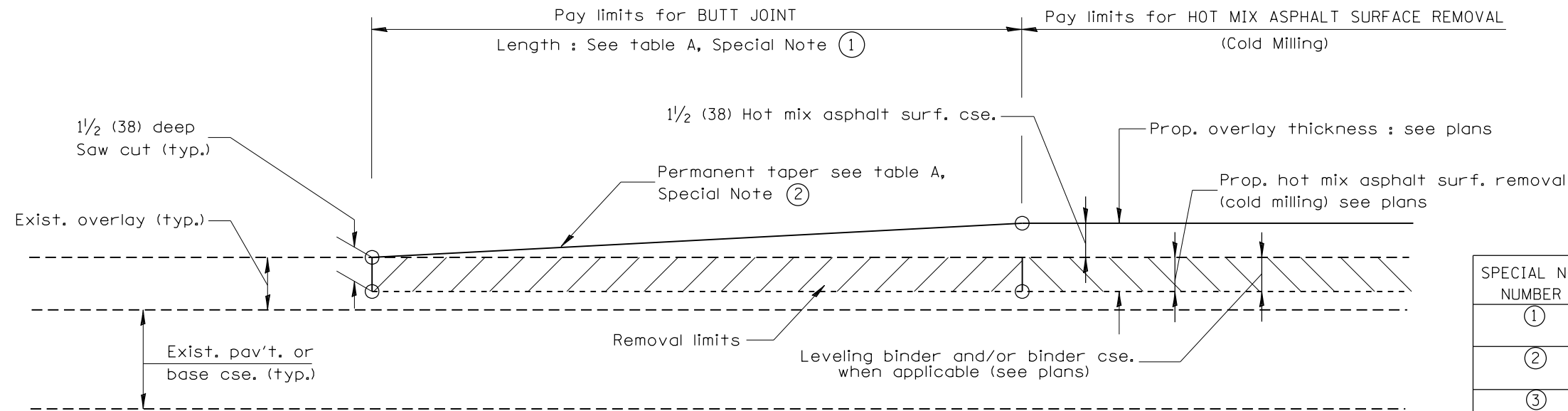
RIPRAP DITCH FOR EROSION PROTECTION

NOT TO SCALE

CADD STD. 281001-D4

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
619	120BR,CR	PUTNAM	77	59
CONTRACT NO. 68740				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

DESIGNER NOTES:  
 1. Include District Special Provision for Butt Joints & for Hot Mix Asphalt Removal (Cold Milling).  
 2. The butt joints pay item includes the saw cut & temporary ramp. Payment for the Butt Joint applies whether or not the project features Hot Mix Asphalt Removal (Cold Milling).



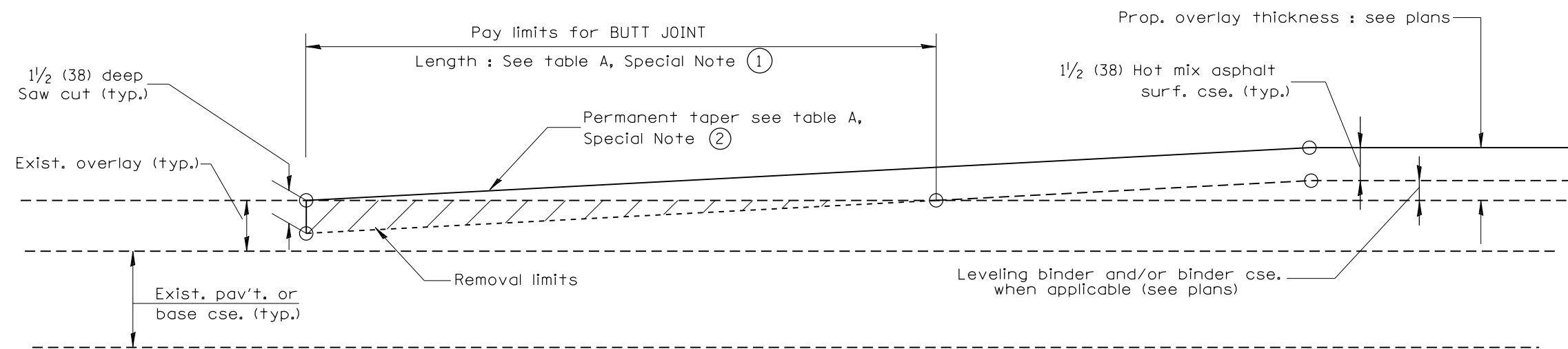
**CASE 1 : WITH HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)**

**TABLE A**  
(LENGTHS AND TAPER RATES)

SPECIAL NOTE NUMBER	ELEMENT	MAINLINE INTERSTATES & 4-LANE EXPRESSWAYS	ALL OTHERS
①	LENGTH OF BUTT JOINT	60'(18.0 m)	30'(9.0 m)
②	PERMANENT TAPER RATE	1:480	1:240
③	TEMPORARY RAMP TAPER RATE	1:80	1:40
④	TEMPORARY RAMP LENGTH	10'(3.0 m)	5'(1.5 m)
⑤	LENGTH OF BUTT JOINT	10'(3.0 m)	10'(3.0 m)

**GENERAL NOTES**

- The work shall be done in accordance with Article 406.08 and the Special Provision for Butt Joints.
- The pavement surface to be removed may be either bituminous or P.C. concrete. The work shall be performed in accordance with Article 440.04 and the Special Provisions for Butt Joints.
- The saw cut joints shall be primed just prior to the placing of bituminous material. The work will be in accordance with the applicable portions of Article 406.05.



**CASE 2 : NO HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)**

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

01-01-97	RENUM. C-23.01, NEW REVISION BOX	T.P.
04-01-97	CORRECTION TO DEPTH	J.A.
09-15-05	REVISED DESIGNER NOTE	M.M.A.
10-16-06	REVISED TO 2007 SPEC.	M.A.

**STATE OF ILLINOIS**  
**DEPARTMENT OF TRANSPORTATION**

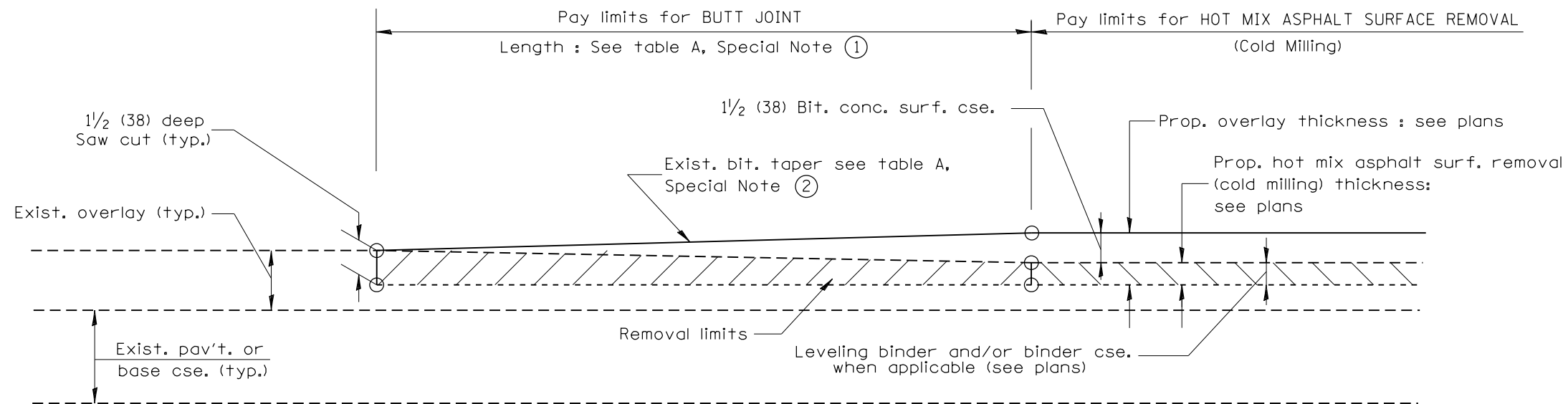
**BUTT JOINTS**

NOT TO SCALE

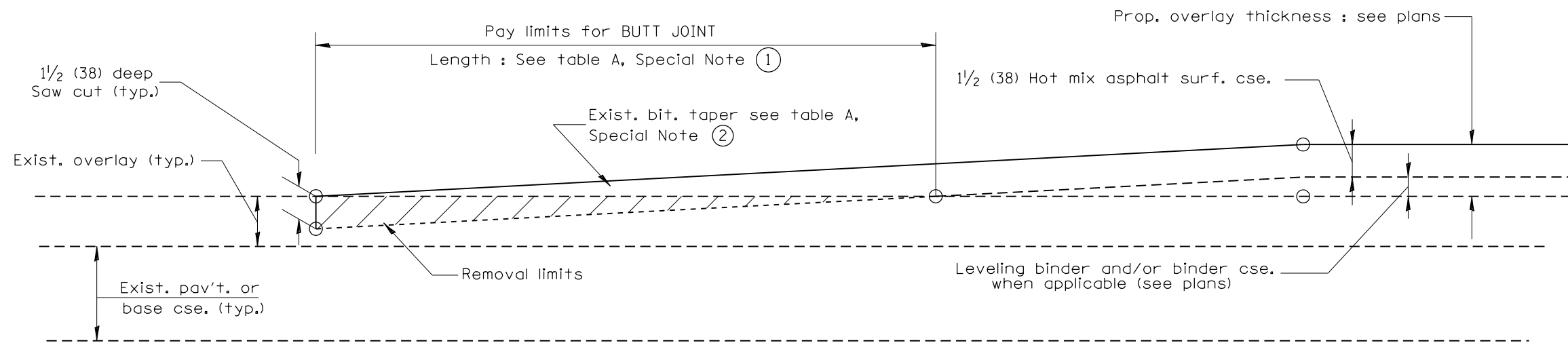
SHT. 1 OF 3  
CADD STD. 406101-D4

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
619	120BR,CR	PUTNAM	77	60
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 68740	

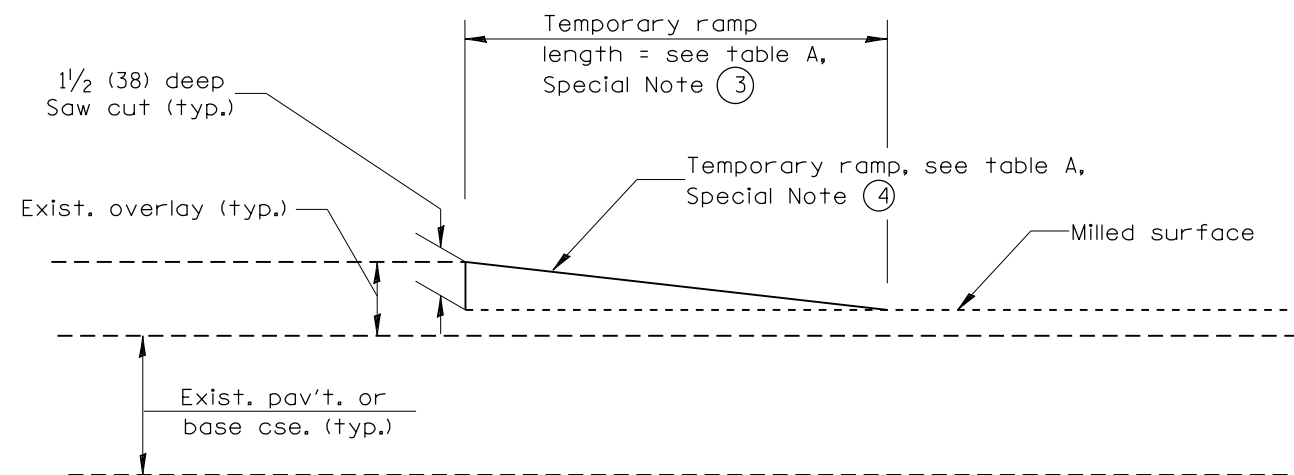




**CASE 3 : WITH HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)  
TIE-IN TO EXISTING BITUMINOUS TAPER**



**CASE 4 : NO HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)  
TIE-IN TO EXISTING BITUMINOUS TAPER**



**DETAIL TEMPORARY RAMP**

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

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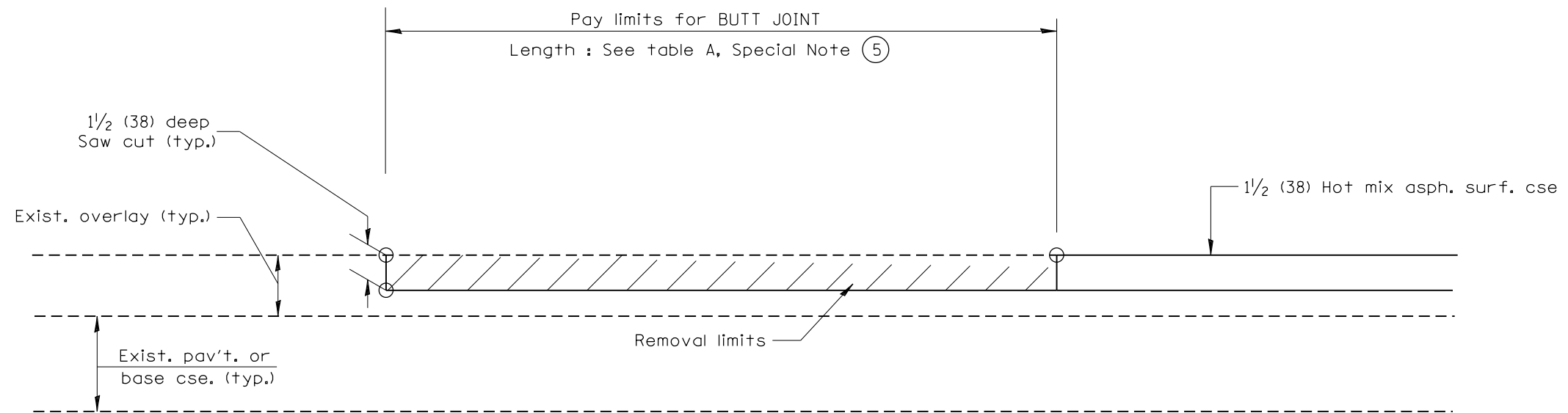
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

BUTT JOINTS

NOT TO SCALE

SHT. 2 OF 3  
CADD STD. 406101-D4

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
619	120BR,CR	PUTNAM	77	61
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 68740	



CASE 5 : WITH HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)  
TIE-IN TO EXISTING BITUMINOUS TAPER

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

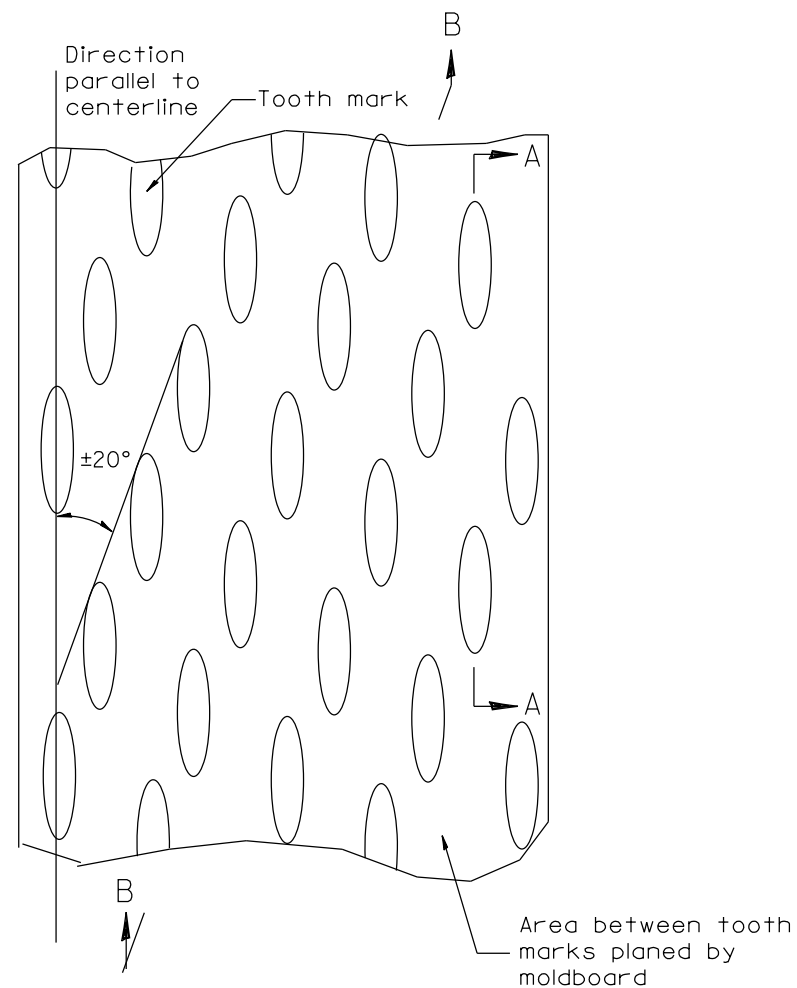

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

BUTT JOINTS

NOT TO SCALE

SHT. 3 OF 3  
CADD STD. 406101-D4

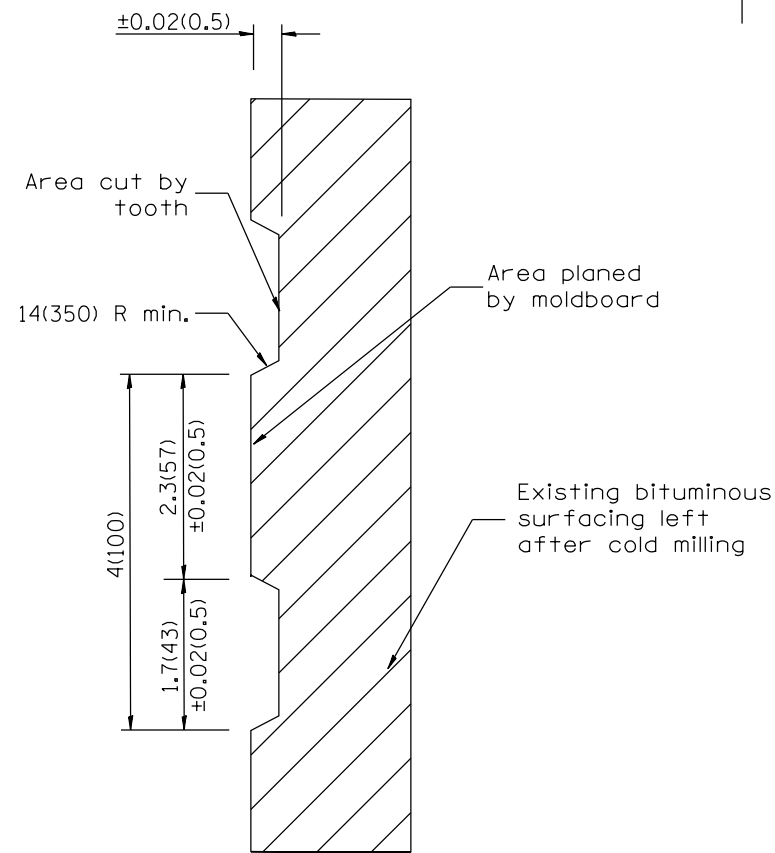
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
619	120BR,CR	PUTNAM	77	62
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 68740	



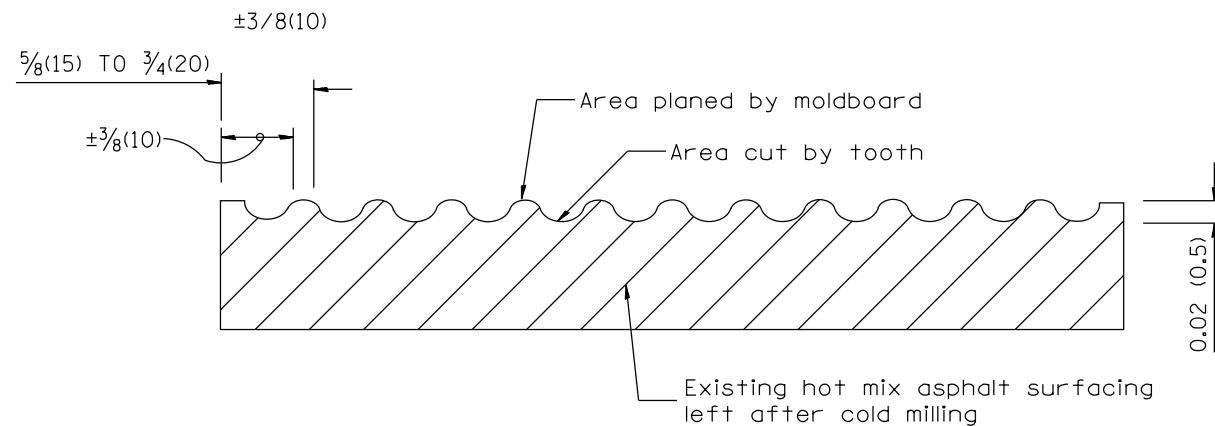
PLAN

General notes:

1. Coldmilling shall consist of two processes: Cutting with carbide teeth mounted on a rotating drum, and planing with a moldboard mounted immediately behind the cutting drum.
2. Other similar patterns will be acceptable if they consist of a smooth, flat, planed surface interspersed with a pattern of discontinuous longitudinal striations.



SECTION A-A



SECTION B-B PROJECTED PERPENDICULAR TO CENTERLINE

DESIGNER NOTES:  
1. INCLUDE DISTRICT SPECIAL PROVISION, IF APPLICABLE.

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

01-01-97	RENUM. C-104.01, NEW REVISION BOX	T.P.
04-20-98	REMOVED MILLING DETAIL FROM STANDARD	J.A.
09-08-98	CORRECT NOTE LEADER PLACEMENT	R.W.
10-16-06	REVISED TO 2007 SPEC.	M.A.

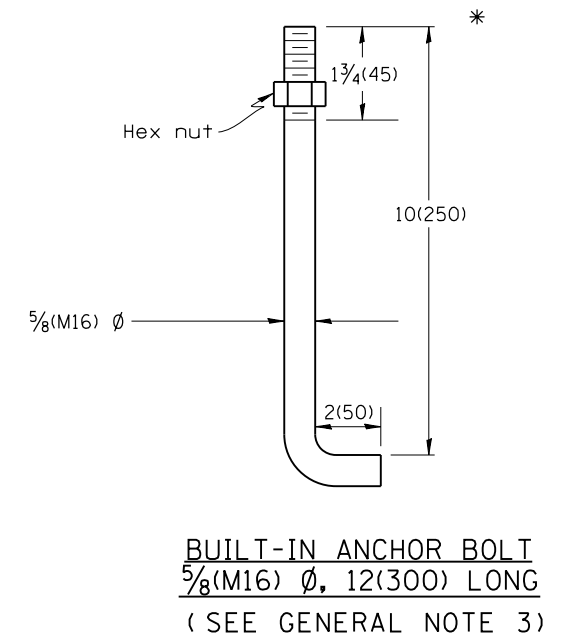
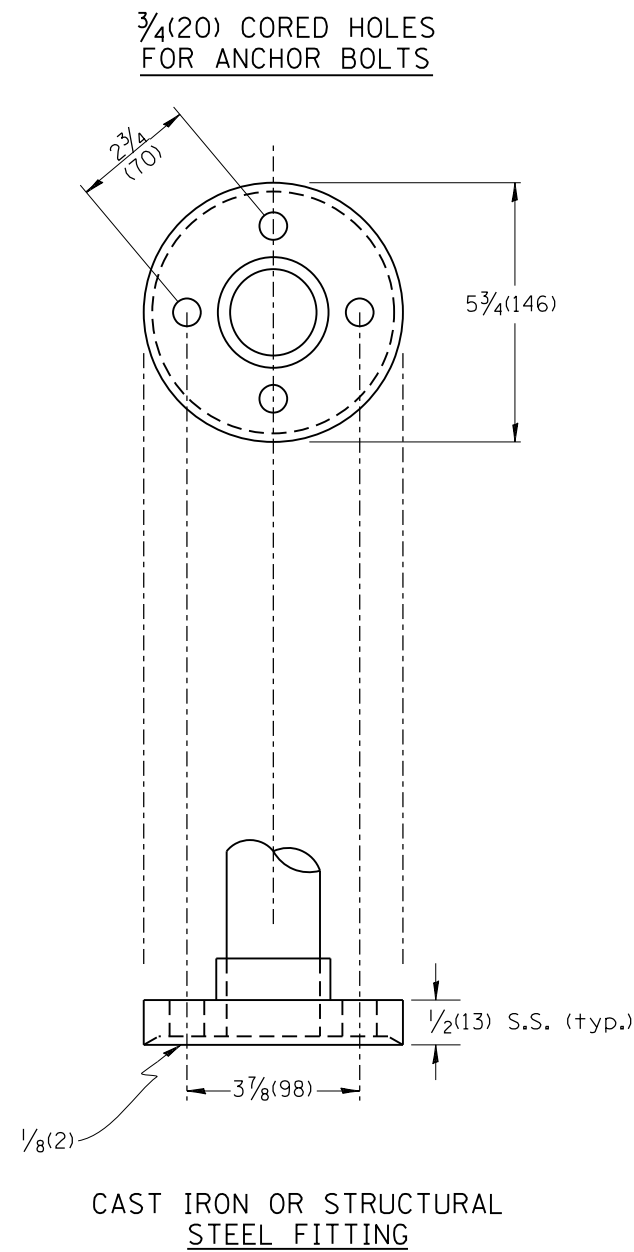
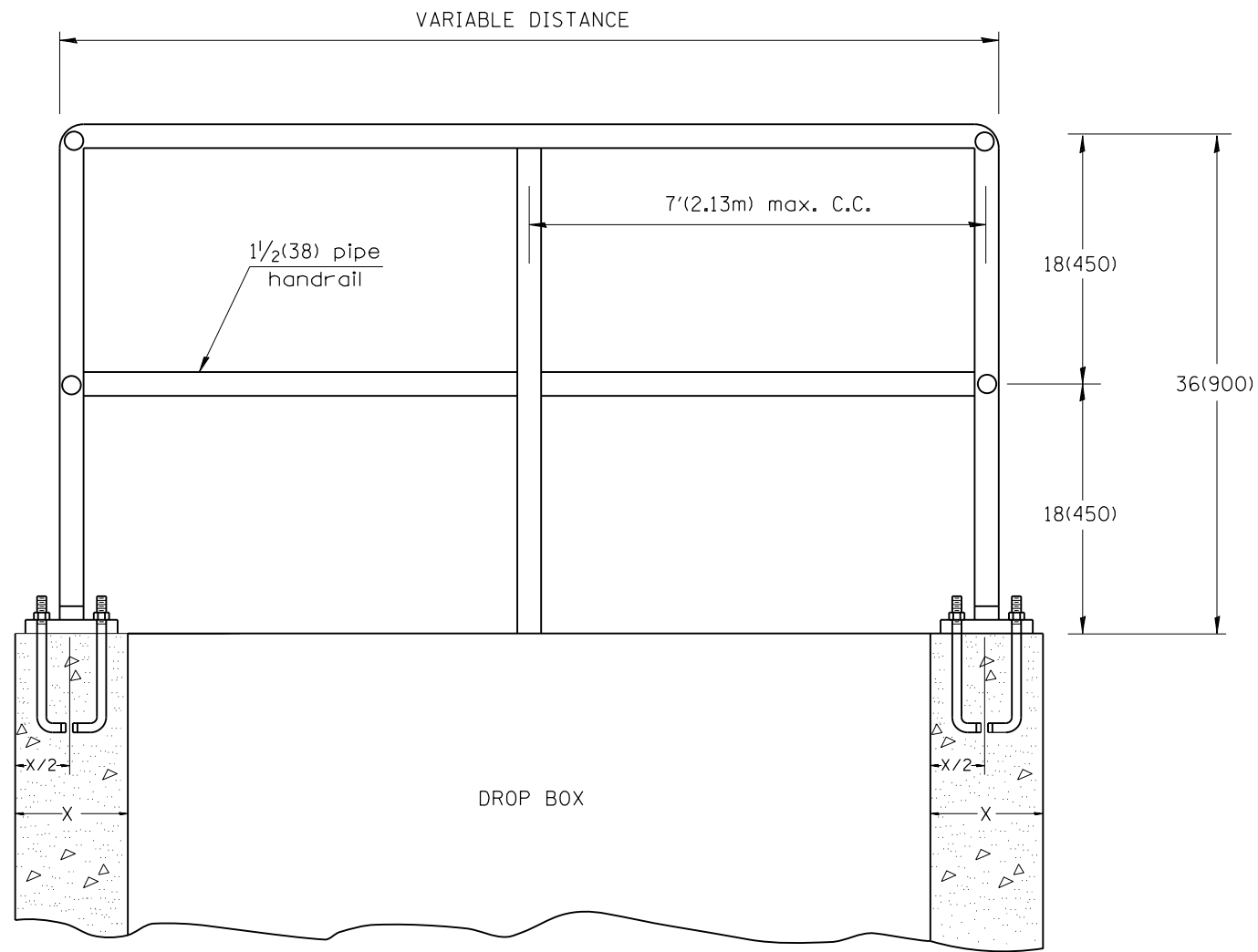
STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

HOT MIX ASPHALT SURFACE REMOVAL (COLD MILLING)

NOT TO SCALE

CADD STD. 440001-D4

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
619	120BR,CR	PUTNAM	77	63
CONTRACT NO. 68740				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				



**GENERAL NOTES:**

- Article 509.04 of the Standard Specifications shall apply.
- Connection of railing to posts shall be made by continuous welding or with using standard pipe fitting.
- An equivalent epoxy anchor stud can be used in place of anchor shown. Anchor bolt holes shall be 3/4(20) in diameter and 5(125) deep. They shall be predrilled with an electric hammer drill to a depth of 4(100) prior to use of a pneumatic drill for the remaining 4(100). A two component encapsulated epoxy such as "Parabond" or an equivalent shall be used. Installation shall be according to Manufacturer's recommendations.
- The pipe handrail shall be galvanized by the hot dip process.

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

01-01-97	RENUM. B-11.01, METRICS, NEW REVISION BOX, REVISED TITLE BOX, REVISED NOTES	T.P.
10-16-06	REVISED TO 2007 SPEC.	M.A.

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

DETAIL OF PIPE HANDRAIL FASTENING

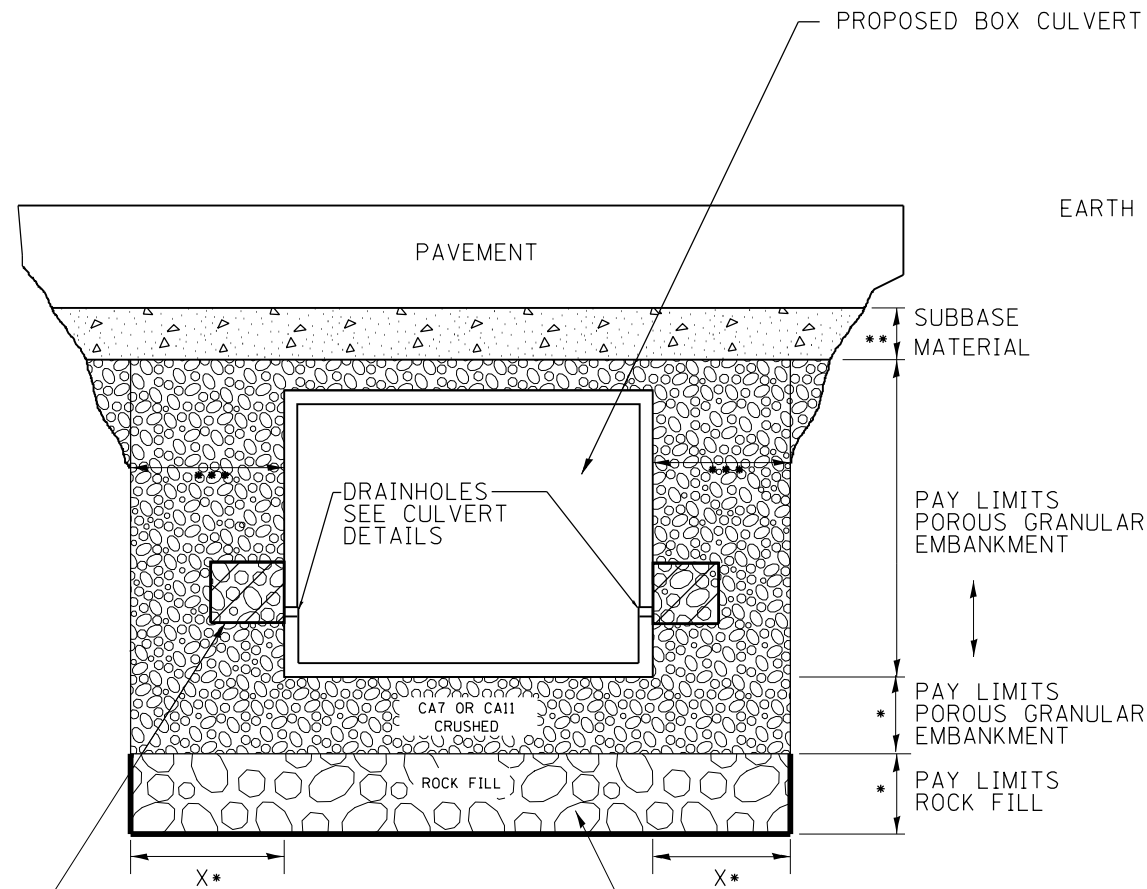
NOT TO SCALE

CADD STD. 510001-D4

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
619	120BR,CR	PUTNAM	77	64
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 68740	

1. IF DESIGN FILL IS < 2 FEET, CONTINUE PGE UP TO THE SUBBASE.  
 2. IF DESIGN FILL IS ≥ 2 FEET AND ≤ 8 FEET OR DEPTH OF FILL ≤ SPAN OF LARGEST BOX IN CONFIGURATION, CONTINUE BACKFILLING WITH PGE.

## ROADWAY PROFILE VIEW

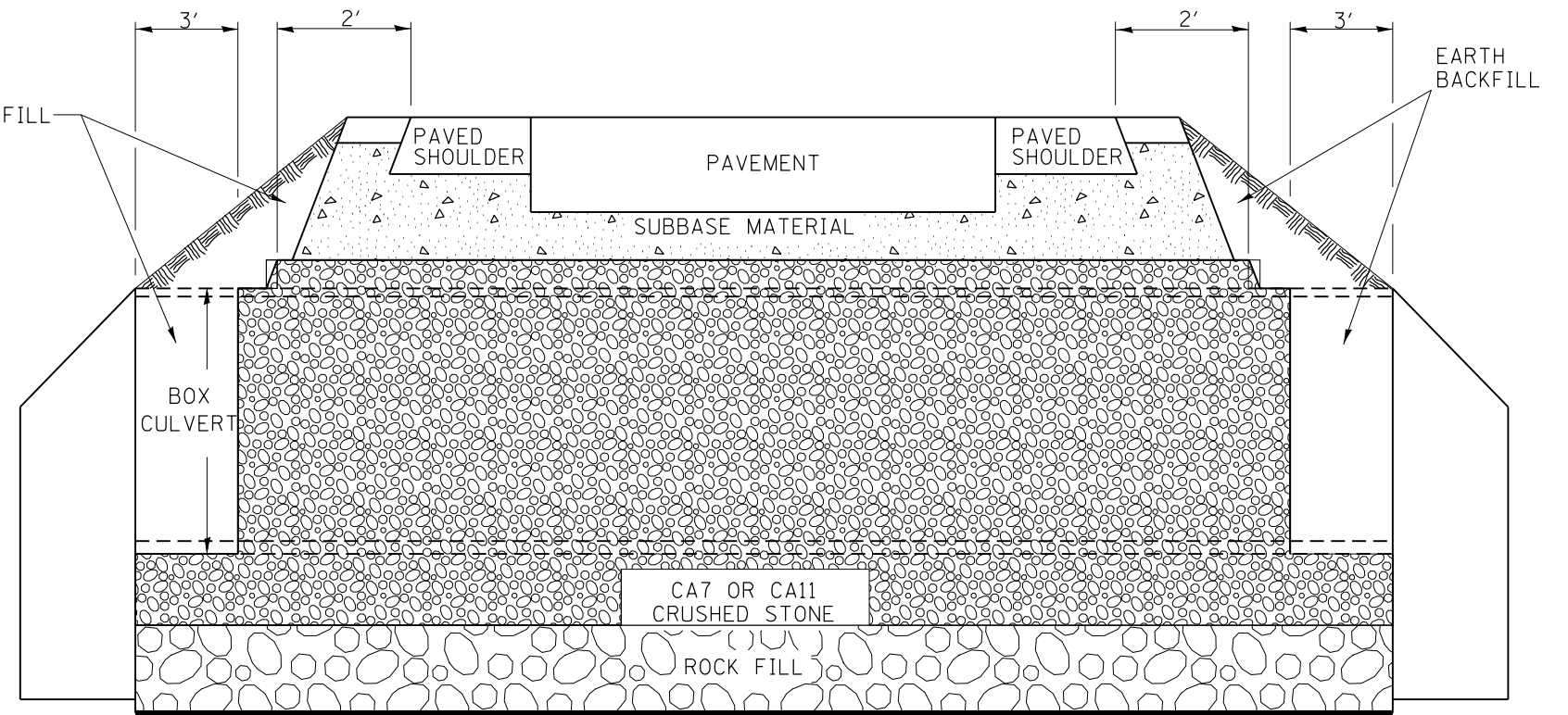


2' x 2' x 2' DEPOSIT OF CA 5, 7, OR 11 IN FABRIC ENVELOPE IN ACCORDANCE WITH ARTICLE 502.10 OF THE STANDARD SPECIFICATIONS (TYPICAL)

(IF UNDERCUT IS REQUIRED) PROPOSED REMOVAL & DISPOSAL OF UNSUITABLE, AND REPLACE WITH ROCK FILL WITH GEOTECHNICAL FABRIC FOR GROUND STABILIZATION. PAID FOR BY RESPECTIVE PAY ITEMS.

- \* IF APPLICABLE, SEE UNDERCUT DETAIL FOR DEPTHS AND WIDTHS. IF THERE IS NO UNDERCUT, X = 2 FEET AND SEE NOTE 3 THIS SHEET.
- \*\* SUBBASE SHALL BE 6" MINIMUM LAYER OF CA6 CRUSHED STONE OR OTHER MATERIAL AS SPECIFIED IN THE PLANS.
- \*\*\* PAY LIMITS OF POROUS GRANULAR EMBARKMENT SHALL BE 2 FEET UNLESS OTHERWISE SHOWN IN THE PLANS.

## ROADWAY CROSS SECTION VIEW



### NOTES:

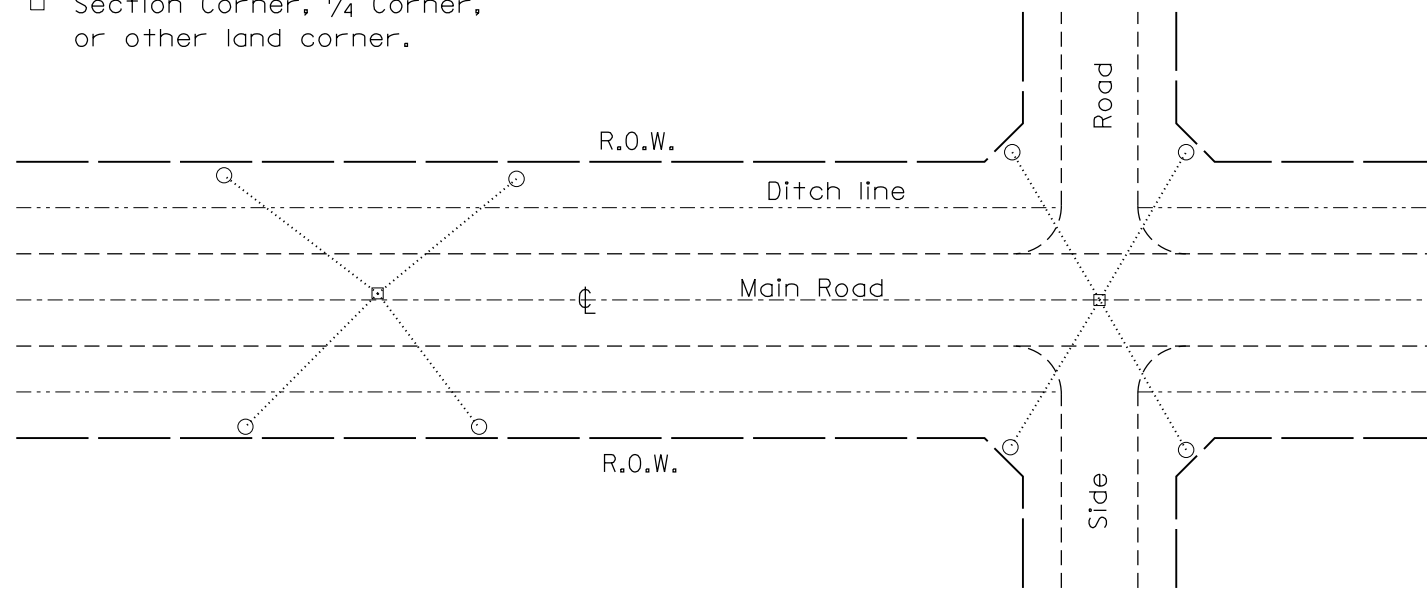
1. EXCEPT AS SPECIFIED IN THIS DETAIL, THE PLACEMENT AND COMPACTION OF BACKFILL SHALL BE IN ACCORDANCE WITH ARTICLE 502.10 OF THE STANDARD SPECIFICATIONS.
2. POROUS GRANULAR EMBARKMENT SHALL BE PLACED IN ACCORDANCE WITH SECTION 207 OF THE STANDARD SPECIFICATIONS.
3. IF NO UNDERCUT IS REQUIRED, A 6" MINIMUM LAYER OF POROUS GRANULAR EMBARKMENT SHALL BE PLACED BELOW THE ELEVATION OF THE BOTTOM OF BOX CULVERT.

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

6-12-12	CREATED NEW STD.	R.D.							
<b>STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION</b>					<b>DETAIL OF EXCAVATION AND BACKFILL FOR BOX CULVERTS</b>				
					NOT TO SCALE				
					CADD STD. 540000				
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.					
619	120BR,CR	PUTNAM	77	65					
					CONTRACT NO. 68740				
					FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

**PERMANENT SURVEY TIES**

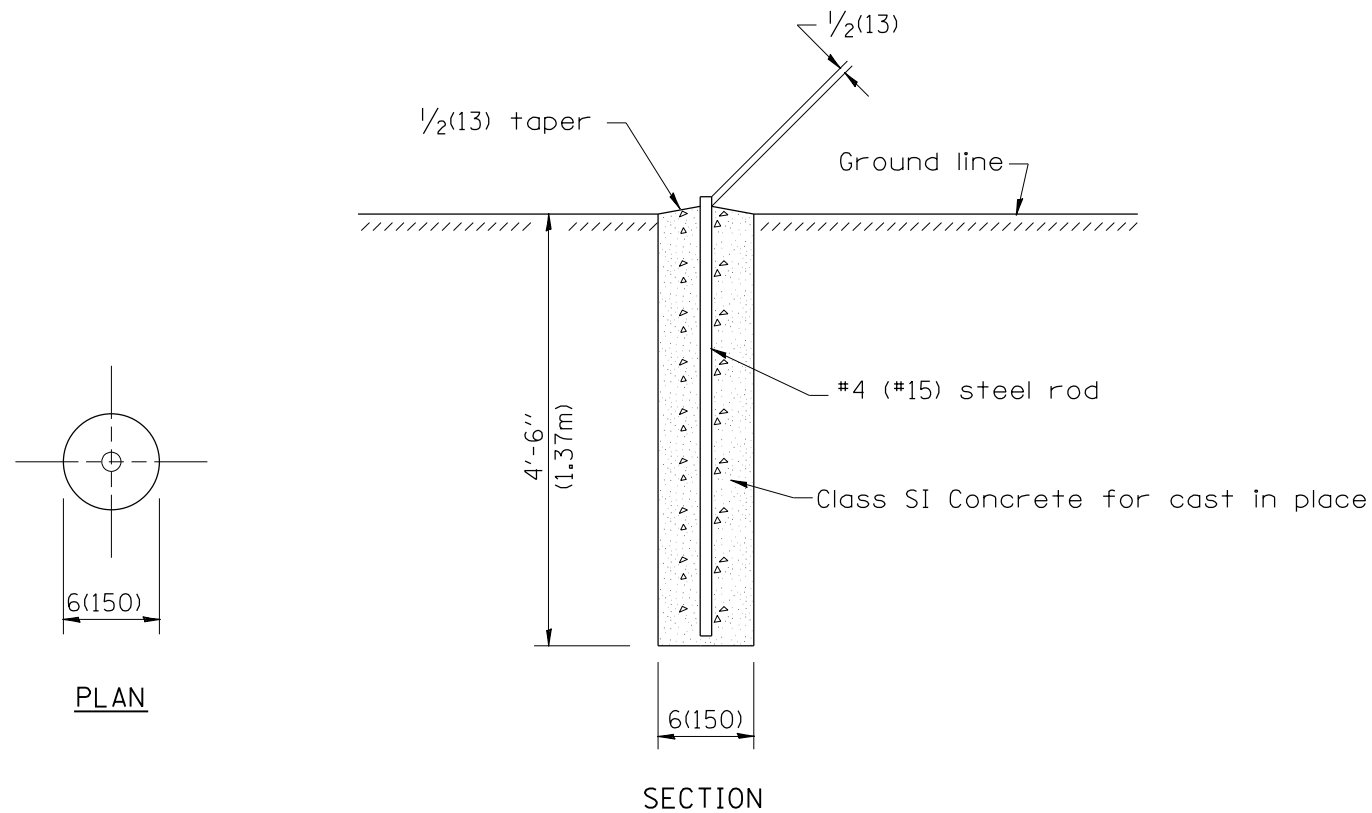
- Permanent Survey Tie
- Section Corner, 1/4 Corner, or other land corner.



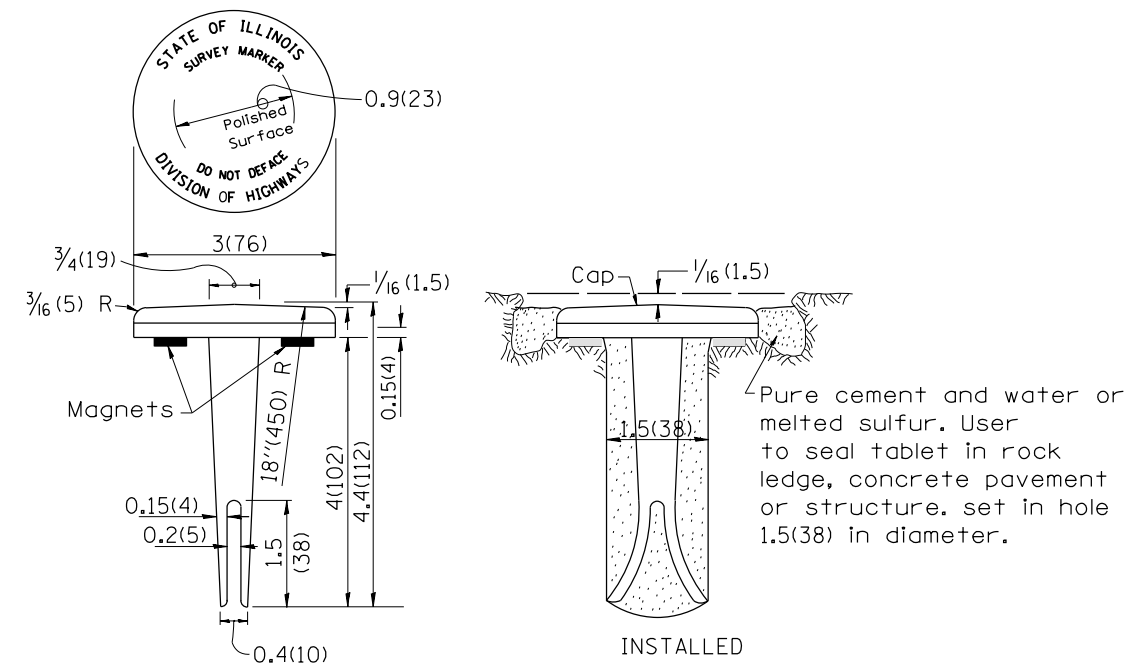
**TYPICAL APPLICATION**

**GENERAL NOTES**

1. The marker shall be cast in place of Class SI Concrete.
2. Tie marker shall be installed after the final seeding has been completed unless otherwise specified by the Engineer.
3. The tie distances to the section corner shall be measured and recorded by the surveyor setting the PSM. All ties shall be turned over to the IDOT Chief of Surveys or Chief of Plats for recordation.
4. All documentation shall be performed by a PLS



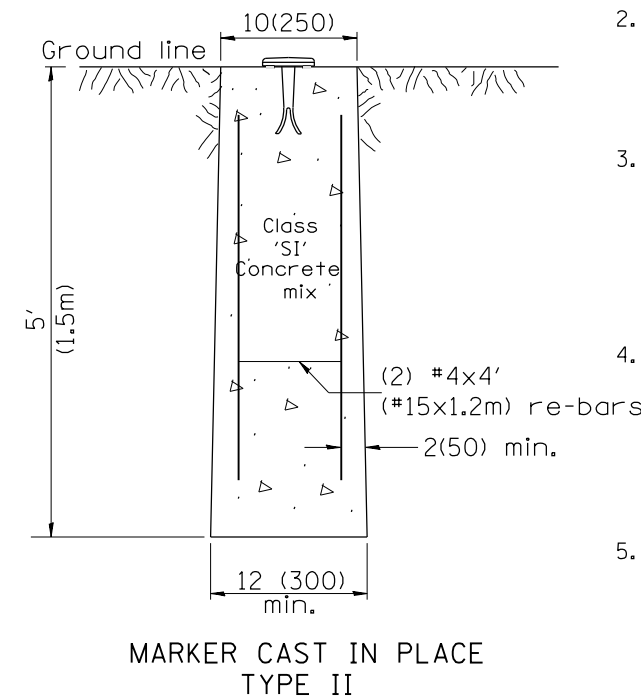
**PERMANENT SURVEY MARKERS**



**TYPE I**

**GENERAL NOTES**

1. All type II markers shall be cast in place, and precast markers will not be allowed.
2. Two permanent magnets, each having a diameter of 3/4 (19) and a thickness of 1/4 (6), or equivalent, shall be attached to the underside of the tablet with an approved epoxy bonding agent.
3. The location of the markers shall be in accordance with the plans in general, the markers will be placed at the P.T.'s, P.C.'s, and P.I.'s located within the R.O.W. of horizontal curves and spaces along the tangents in a way that a minimum of two markers are always inter-visible, and not to exceed 1000' (300m).
4. The markers shall be placed under the direction of the Engineer and shall be installed in a workmanlike manner in order that there will be no further settlement or horizontal shifting. The monuments shall be placed in a way that the survey point will fall within the portion of the plaque provided for that purpose.
5. The project designation, the centerline station, the survey point, and the elevation shall be permanently marked by the use of metal dies after marker has been installed.



**MARKER CAST IN PLACE TYPE II**

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

DESIGNER NOTES:  
 1. ADD DISTRICT SPECIAL PROVISION IF PLACING A TYPE I MARKER ON A STRUCTURE.  
 2. MODIFIES STATE STD 667101. DON'T USE STATE STD IF USING CADD STANDARD  
 3. PERMANENT SURVEY MARKERS SHALL BE PLACED TO PERPETUATE THE SURVEY LINES OF DIVIDED HIGHWAYS AND THE CENTERLINE OF ALL OTHERS WHERE THESE LINES HAVE BEEN ESTABLISHED BY SURVEY.  
 4. PERMANENT SURVEY MARKERS SHALL BE PLACED AT ALL LAND SECTION CORNERS WITHIN THE STATE R.O.W. WHERE THE MONUMENTS HAVE BEEN FOUND OR RELOCATED BY SURVEY.

01-01-97	RENUM. D-3.01, NEW REVISION BOX, REVISED	T.P.	10-16-06	REVISED TO 2007 SPEC.	M.A.
	TITLE BOX, ADD DESIGNER NOTE		01-04-11	REVISED FOR CORRECTIONS	R.D.
07-07-98	ADD DESIGNER NOTE	J.A.			
05-24-06	REMOVED GEN. NOTE UNDER TIES	M.A.			

**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

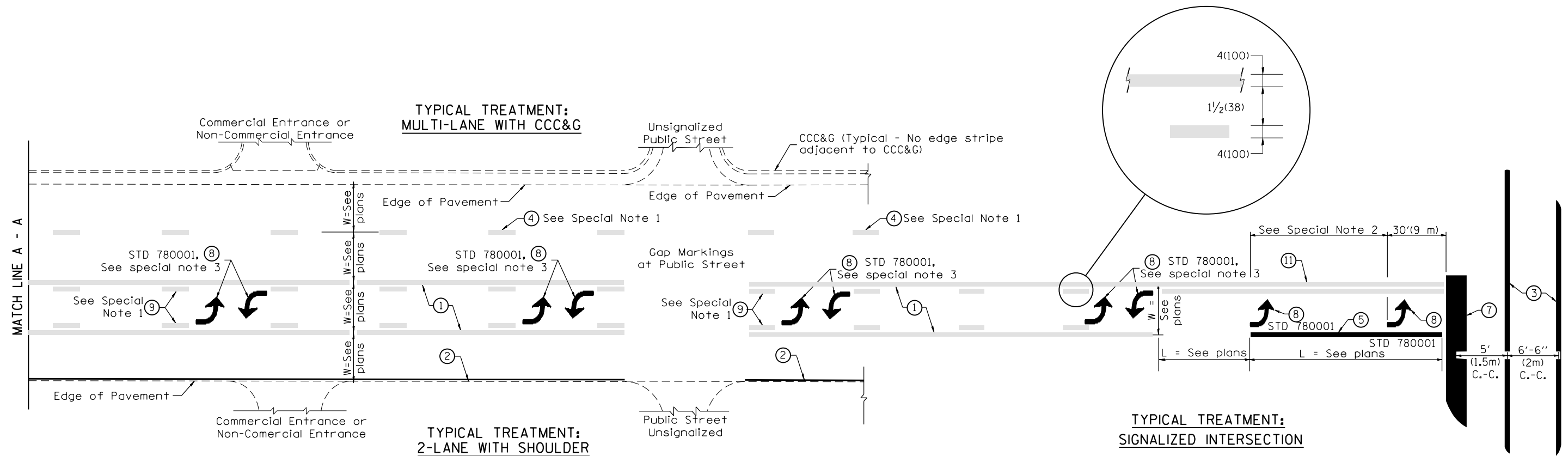
NOT TO SCALE

**PERMANENT SURVEY TIE &  
PERMANENT SURVEY MARKERS TY.I - TY.II**

CADD STD. 667101-D4

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
619	120BR,CR	PUTNAM	77	66
CONTRACT NO. 68740				
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT				

DESIGNER NOTES:  
1. Include State Standard 780001 (Typical Pavement Markings)



**FLUSH PAVED MEDIAN: TWO-WAY LEFT TURN LANE WITH ONE-WAY LEFT TURN LANE AT SIGNALIZED INTERSECTION**

**TYPICAL PAVEMENT MARKING LEGEND**

(Note: This is a District Standard Legend. Some elements may not apply to specific project.)

- ① 4(100) Solid (Yellow)
- ② 4(100) Solid (White)
- ③ 2-6(150) Crosswalk @ 6'-6" (2m)min C.-C. (White)  
2-8(200) Crosswalk @ 6'-6" (2m)min C.-C. (White) (When traffic signals are present.)
- ④ 6(150) Skip-Dash (White) (See Special Note 1)
- ⑤ 8(200) Solid (White)
- ⑥ 12(300) Diagonal (White) (Item ⑥ is shown on Std. 780001)
- ⑦ 24(600) Stop Bar (White)
- ⑧ Letters & Arrows (See Std. 780001 and Special Notes 2 & 3)
- ⑨ 4(100) Skip-Dash (Yellow) (See Special Note 1)
- ⑩ 12(300) Diagonal (Yellow) (See Table A)
- ⑪ 4(100) Double Solid (Yellow) (See Table A)

**SPECIAL NOTES**

1. Skip-Dash markings will be centered between both ends of city blocks and shall be placed in alignment transversely across the pavement.
2. The following shall apply to arrows located in one-way left turn lanes:
  - A. A minimum of two (2) arrows is required.
  - B. The maximum spacing between arrows is 80' (24 m).
  - C. Arrows shall be evenly spaced if three (3) or more are required.
3. The following shall apply to arrow pairs located in two-way left turn lanes:
  - A. A minimum of two (2) arrow pairs is required.
  - B. The maximum spacing between arrow pairs is 200' (61 m).
  - C. Arrow pairs shall be evenly spaced if three (3) or more are required.
  - D. The spacing between Bi Directional Left Turn Arrows is 33' (10 m).

**GENERAL NOTES**

1. Refer to State Standard 780001 for additional Pavement Markings including letters & arrows.
2. See Plans for Pavement Markings adjacent to curbed islands and medians, and through lane reductions.

01-01-97	RENUM. F-8.03, NEW REVISION BOX	T.P.	10-16-06	REVISED TO 2007 SPEC.
02-07-97	ADD BI DIRECTIONAL DIMENSION	J.A.		
10-97	CORRECT BI DIRECTIONAL DIMENSION	J.A.		
08-02	ADD CROSSWALK DMNS. WITH T.S.	M.A.		

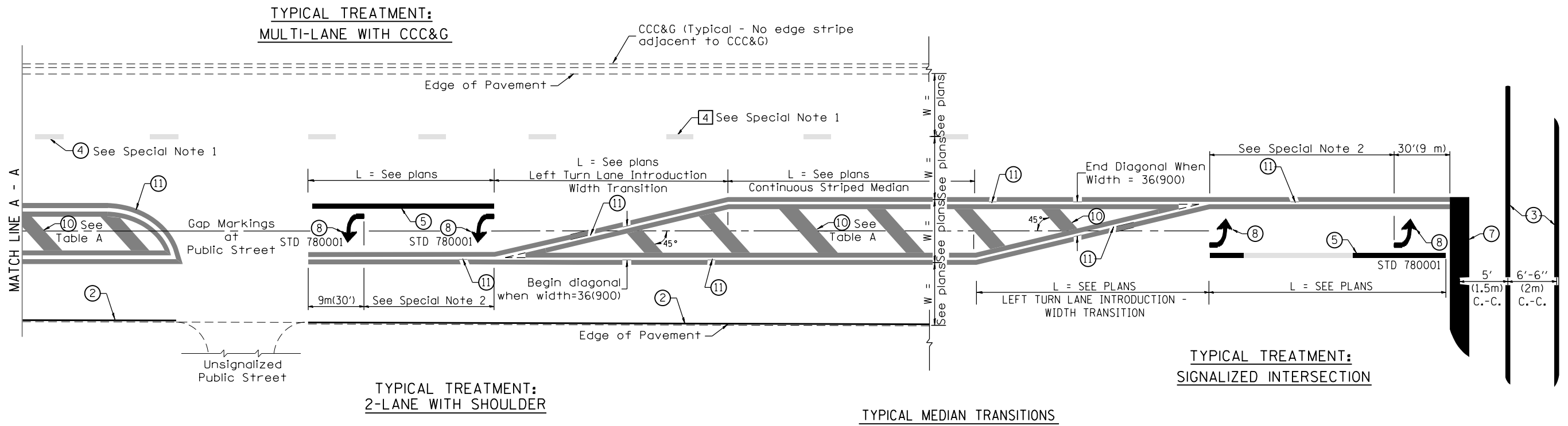
**STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION**

NOT TO SCALE

**TYPICAL PAVEMENT MARKINGS**

SHT. 1 OF 2  
CADD STD. 780001-D4

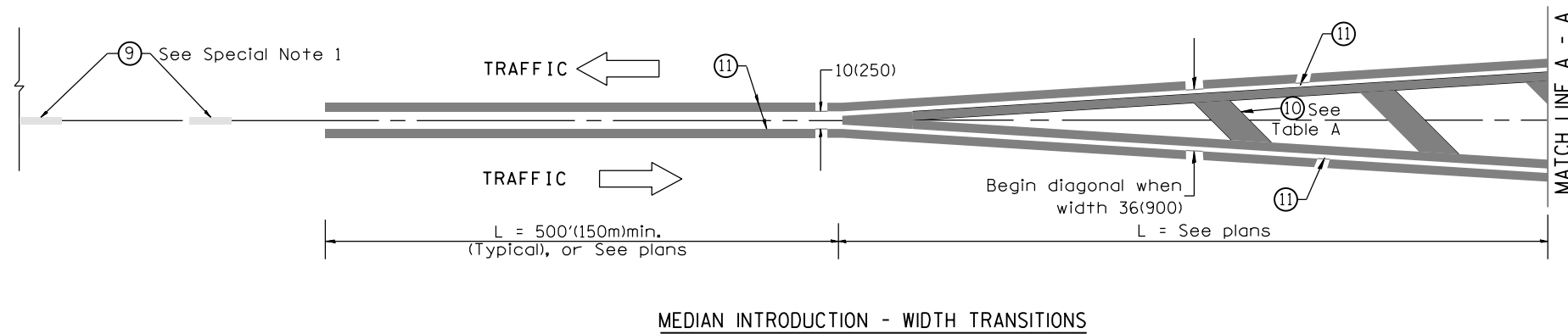
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
619	120BR,CR	PUTNAM	77	67
FED. ROAD DIST. NO. ILLINOIS FED. AID PROJECT			CONTRACT NO. 68740	



FLUSH PAVED MEDIAN: RESTRICTED LEFT TURN LANE

TABLE A  
RECOMMENDED SPACING BETWEEN DIAGONAL LINES

SPEED LIMIT RANGE	CONTINUOUS	INTERSECTION CHANNELIZATION (Includes Width Transitions for Median and Left Turn Lane Introductions)
Less Than 30 mph (50 km/h)	50' (15m)	15' (5m)
30 - 45 mph (50 - 70 km/h)	75' (23m)	20' (6m)
Over 45 mph (70 km/h)	150' (46m)	30' (9m)

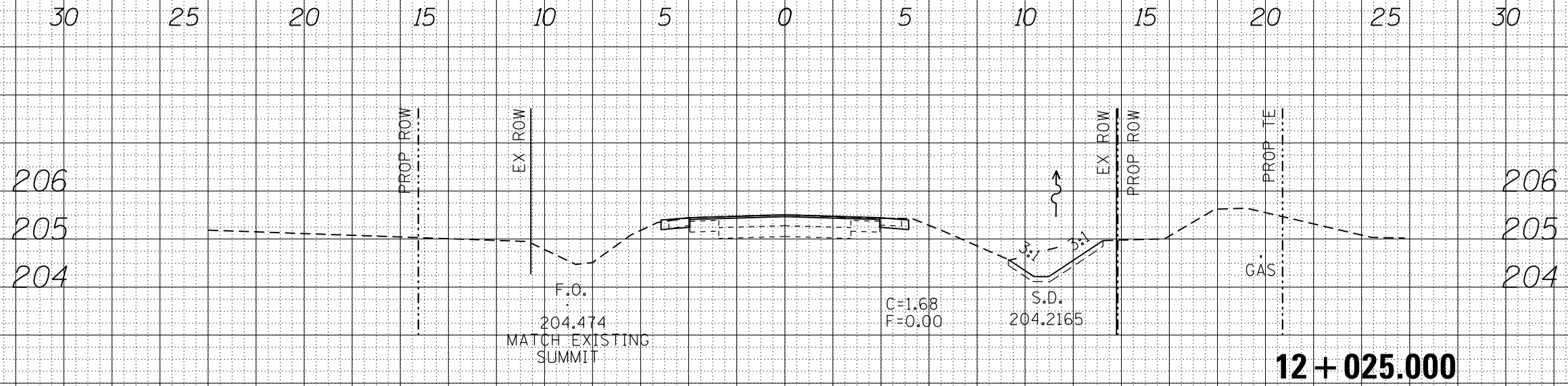


All dimensions are in inches (millimeters) unless otherwise noted.

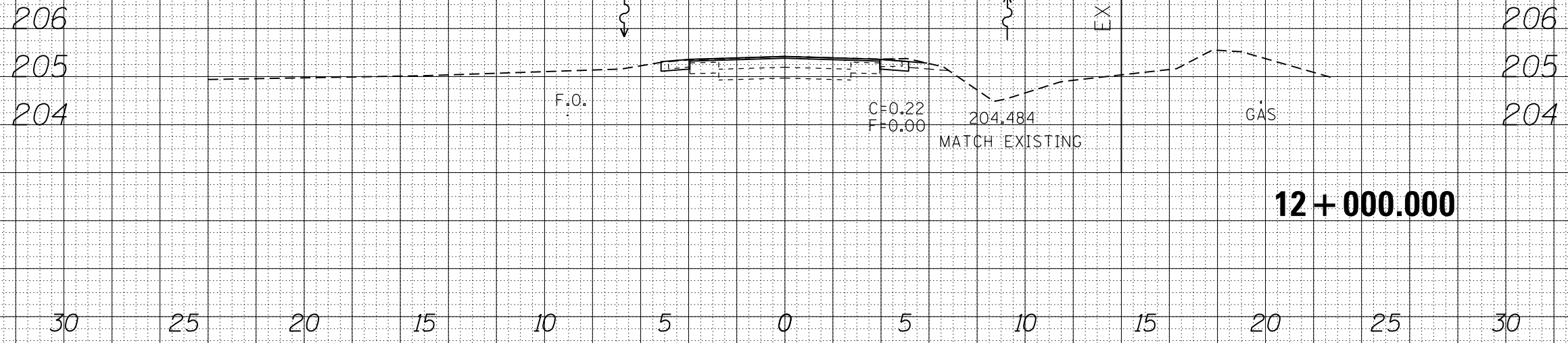


F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
619	120BR,CR	PUTNAM	77	69
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

BY	DATE
FINL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	AREAS CHECKED



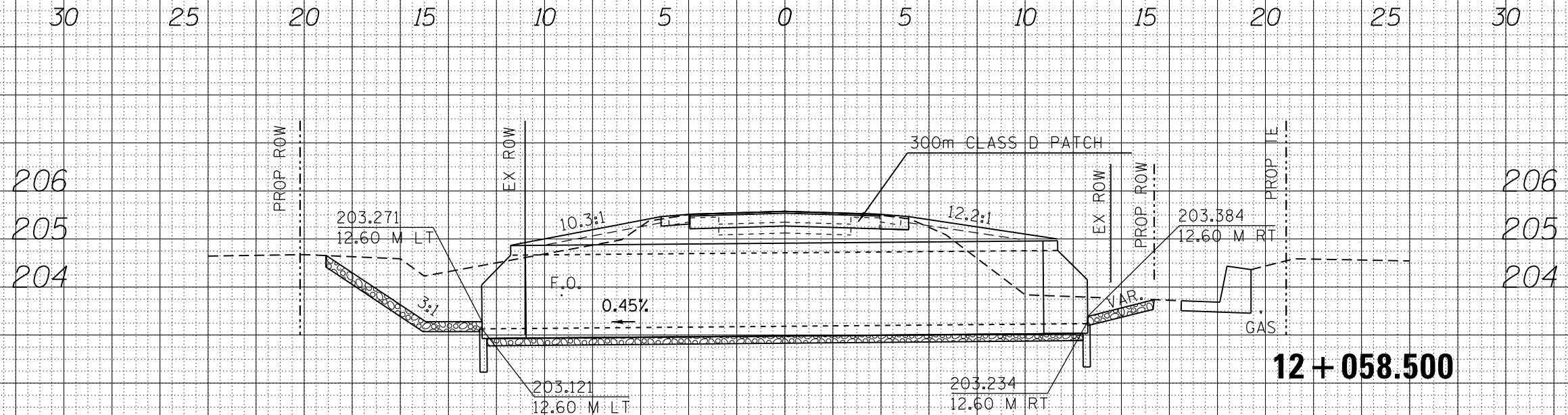
BY	DATE
ORIGINAL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	AREAS CHECKED



**CROSS SECTIONS AT S.N. 078-2500**

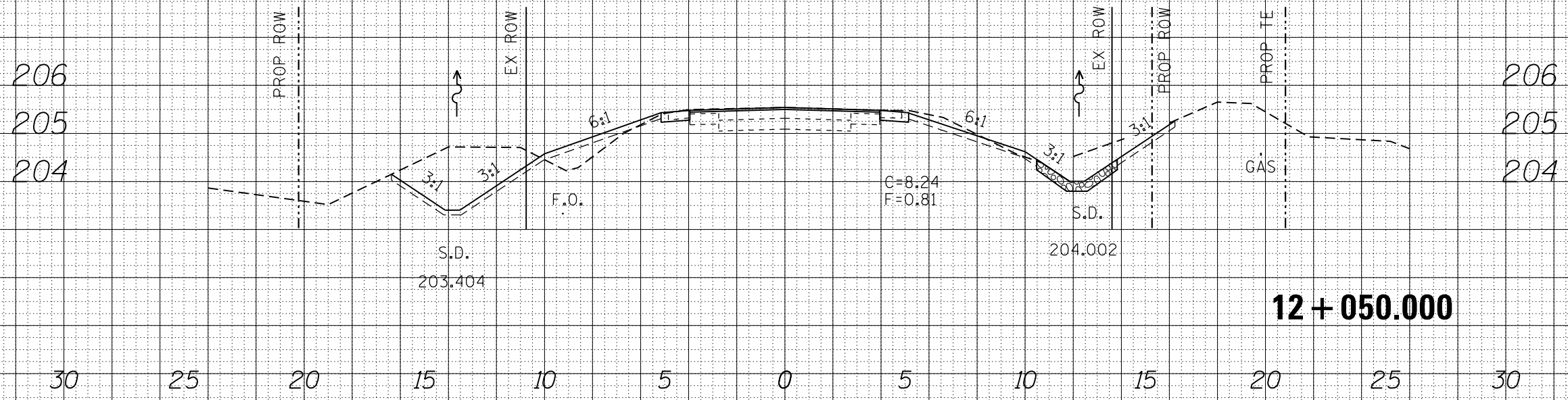
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
619	120BR,CR	PUTNAM	77	70
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

BY	DATE
FINL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	AREAS CHECKED



**12 + 058.500**

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



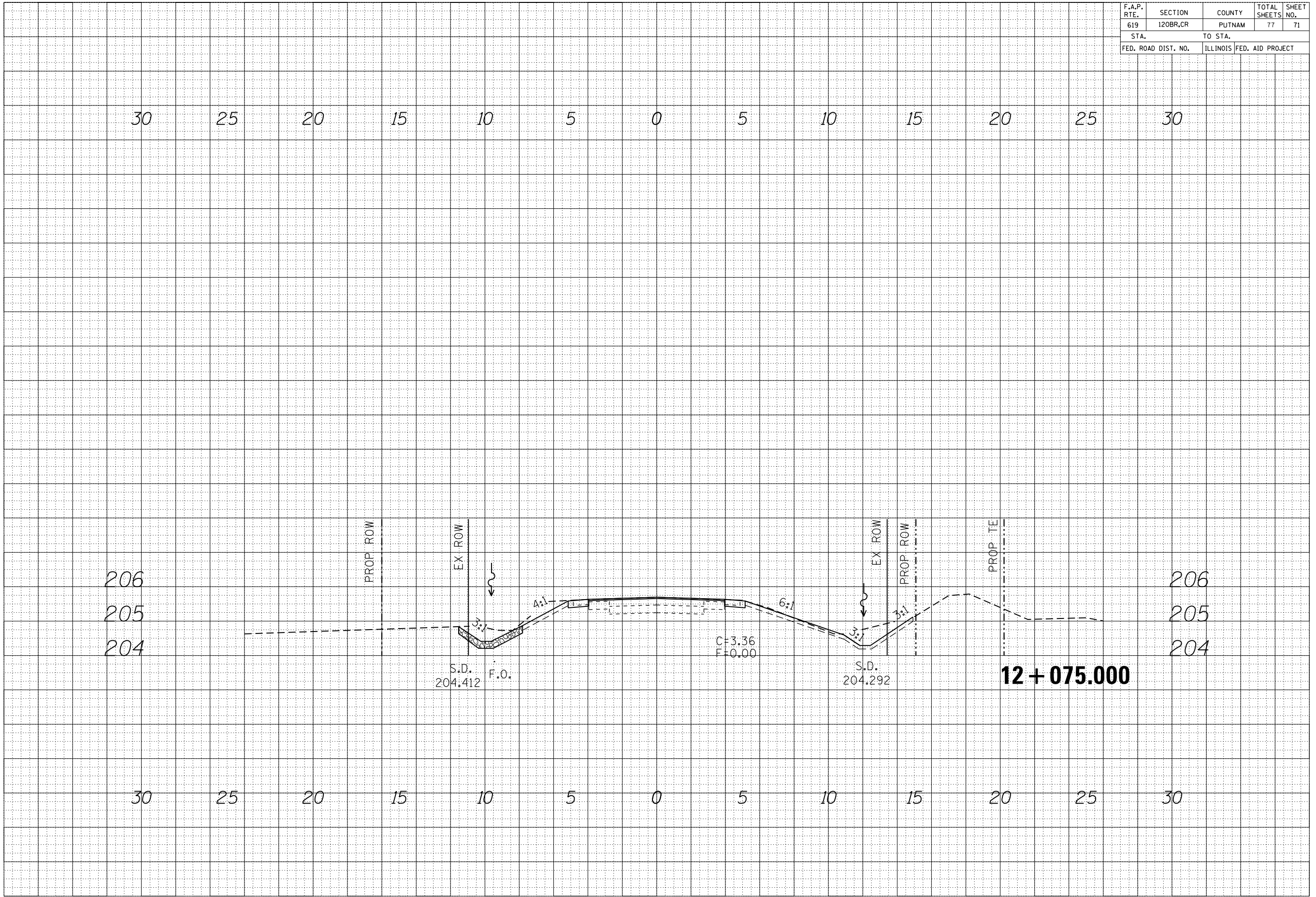
**12 + 050.000**

**CROSS SECTIONS AT S.N. 078-2500**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
619	120BR,CR	PUTNAM	77	71
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

BY	DATE
FINL SURVEY	SURVEYED
NOTE BOOK	PLOTTED
NO.	AREAS
	CHECKED

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

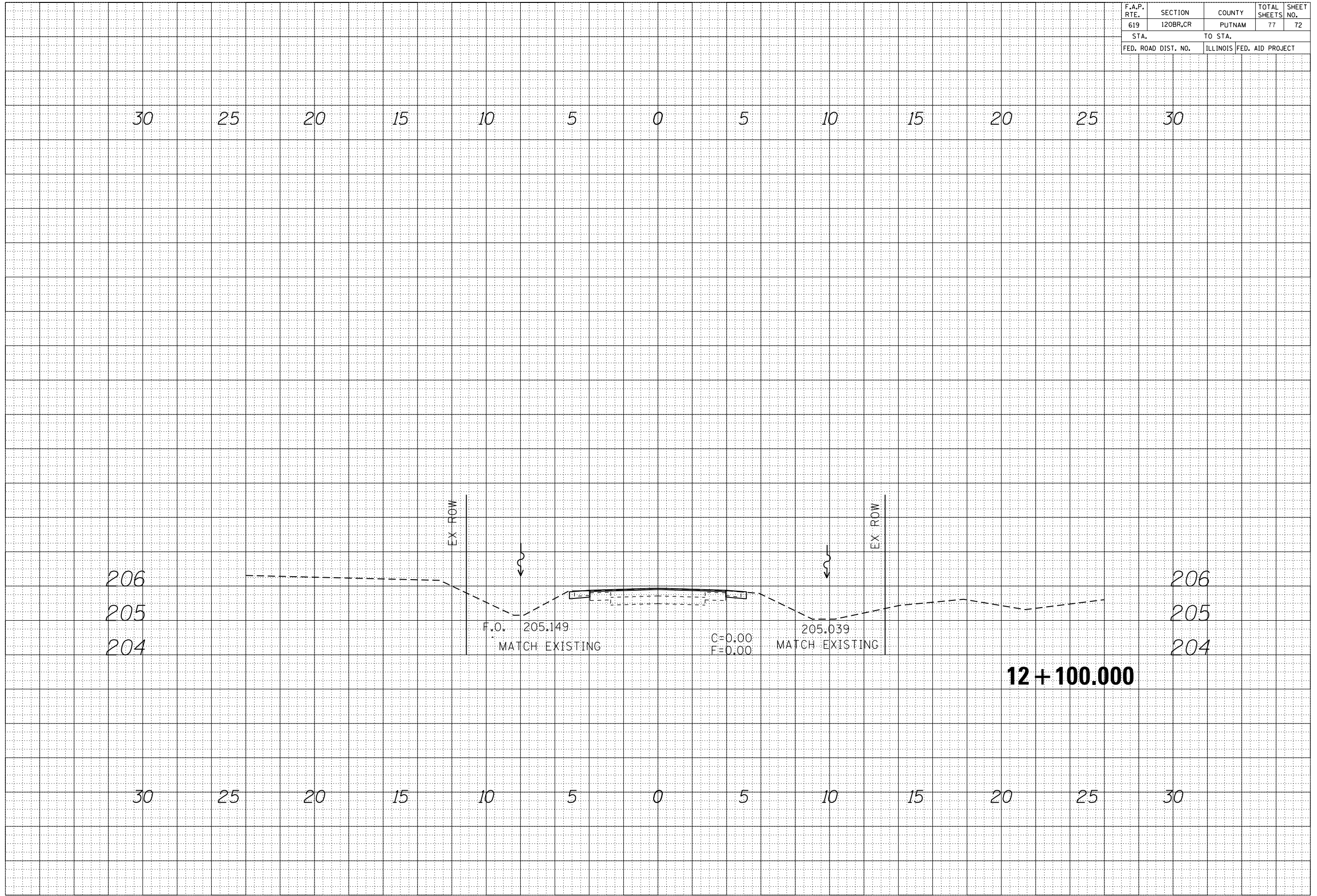


**CROSS SECTIONS AT S.N. 078-2500**

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
619	120BR,CR	PUTNAM	77	72
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

BY	DATE
FINISH SURVEY	SURVEYED
NOTE BOOK NO.	PLOTTED
	AREAS
	CHECKED

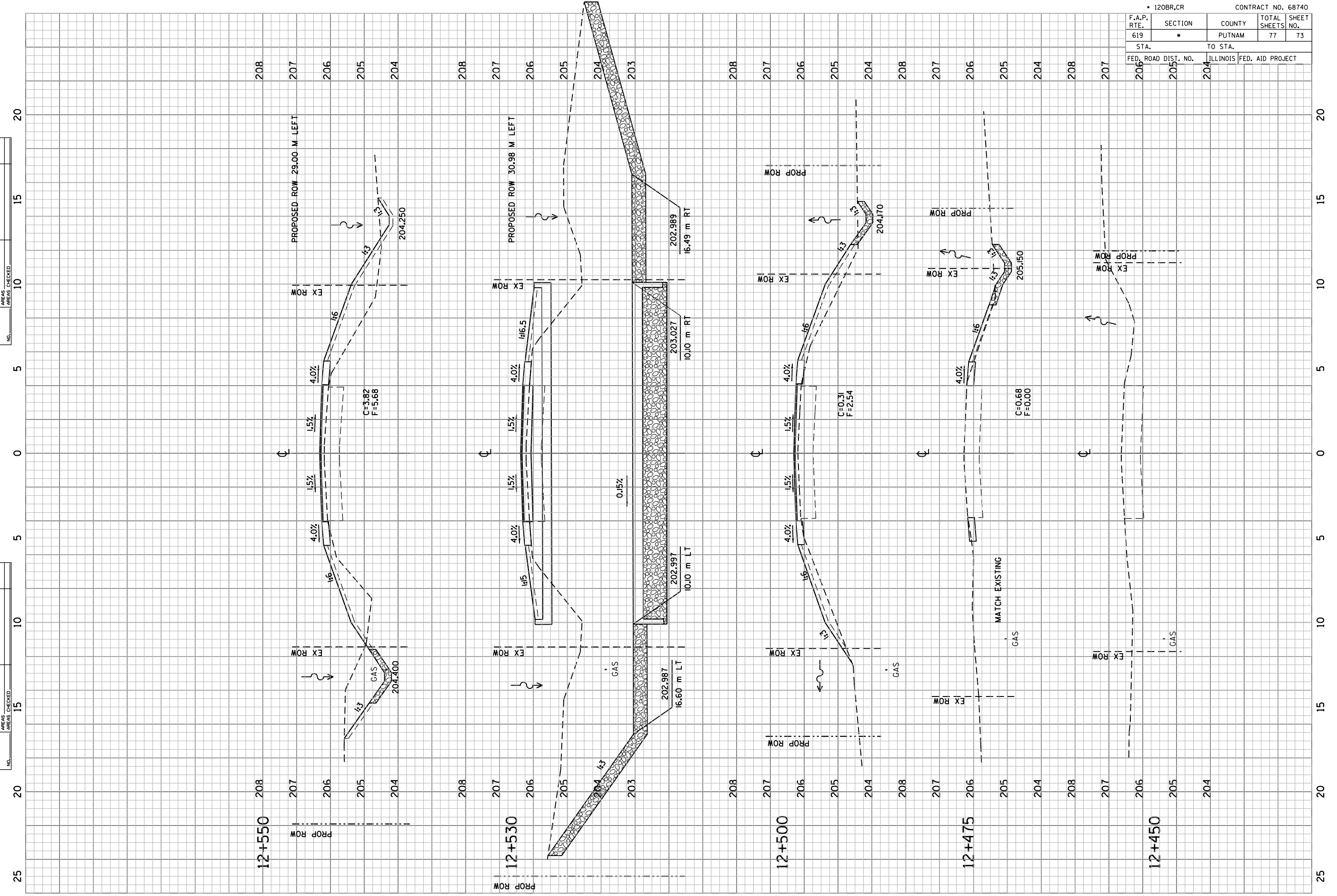
BY	DATE
ORIGINAL SURVEY	SURVEYED
NOTE BOOK NO.	PLOTTED
	AREAS
	CHECKED



F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
619	*	PUTNAM	77	73
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

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

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

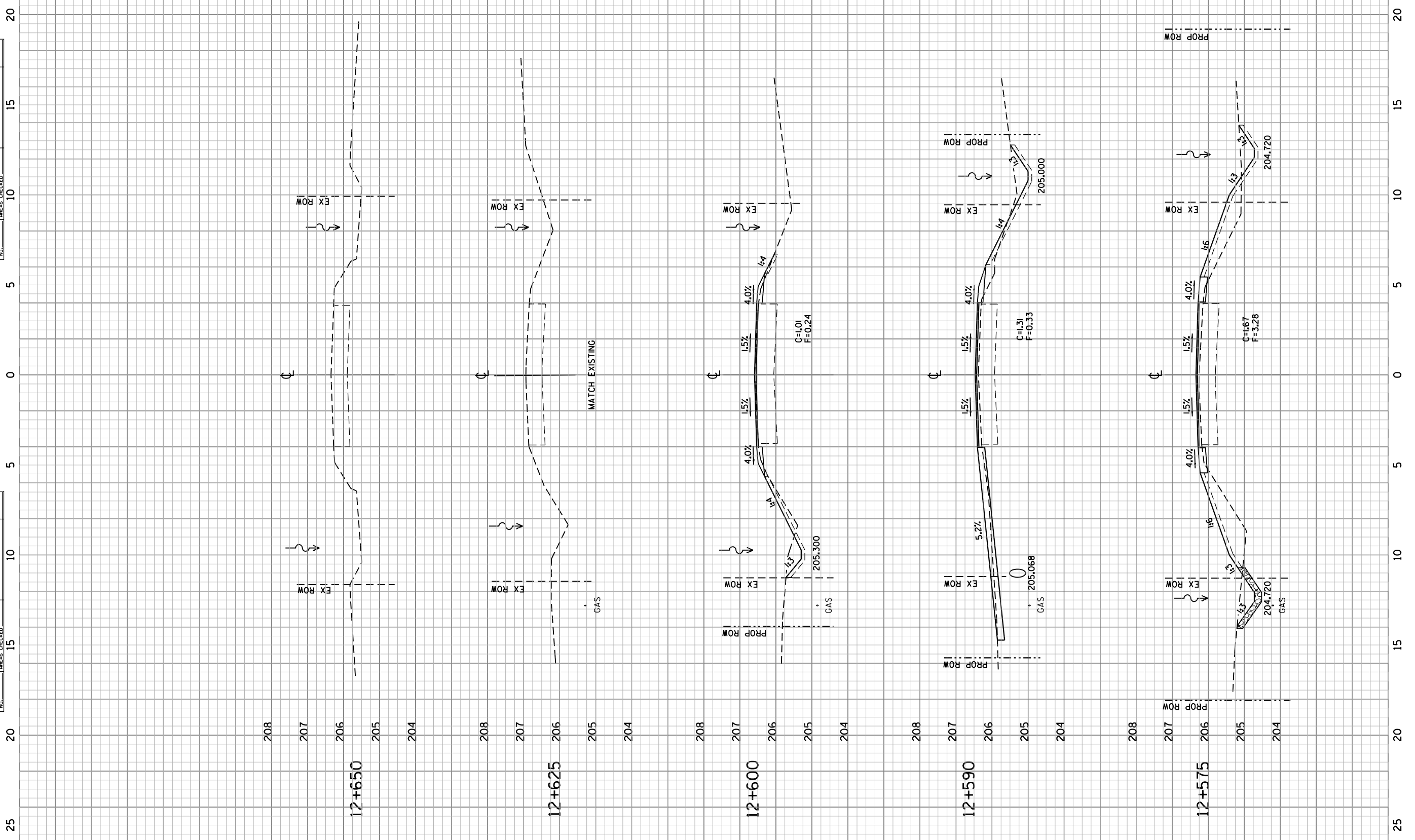


CROSS SECTIONS AT S.N. 078-2007

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
619	*	PUTNAM	77	74
STA.		TO STA.		
FED. ROAD DIST. NO.		ILLINOIS FED. AID PROJECT		

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

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



CROSS SECTIONS AT S.N. 078-2007



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

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

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207  
204.5  
202

C=11.10  
F=0

1+010

20 15 10 5 0 5 10 15 20

207  
204.5  
202

1+000

FILE NAME = IL71.bridge\_design\_change 02052013.dgn

USER NAME = aubreys

DESIGNED - KJH

REVISED -

DRAWN - JGJ

REVISED -

PLOT SCALE = 10.0000 M / in.

CHECKED - KJH

REVISED -

PLOT DATE = 3/28/2013

DATE -

REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

STREAM CROSS SECTIONS  
AT S.N. 078-2007

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
619	120BR,CR	PUTNAM	77	75
			CONTRACT NO. 68740	
ILLINOIS FED. AID PROJECT				

SCALE: SHEET OF SHEETS STA. TO STA.

CROSS SECTIONS OF STREAM

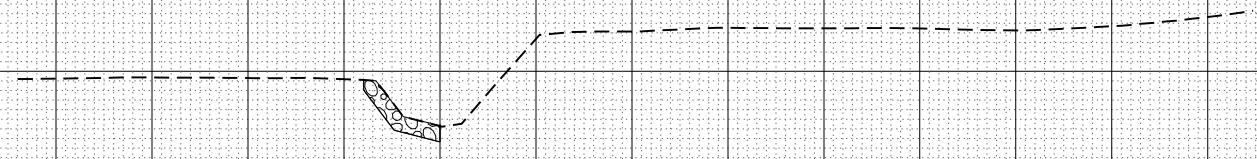




DATE	
BY	
SURVEYED	
PLOTTED	
TEMPLATE	
AREAS	
CHECKED	
FINAL SURVEY	
NOTE BOOK	
NO.	

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

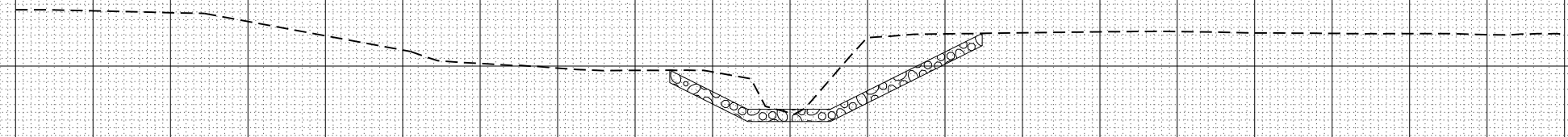
20 15 10 5 0 5 10 15 20



1+056.37

207  
204.5  
202

20 15 10 5 0 5 10 15 20



C=14.2  
F=0

1+050

207  
204.5  
202

FILE NAME = IL71.bridge\_design\_change\_02052013.dgn

USER NAME = aubreys

DESIGNED -  
DRAWN -

REVISED -  
REVISED -

PLOT SCALE = 10.0000 M / in.

CHECKED -  
DATE -

REVISED -  
REVISED -

STATE OF ILLINOIS  
DEPARTMENT OF TRANSPORTATION

STREAM CROSS SECTIONS  
AT S.N. 078-2007

SCALE: SHEET OF SHEETS STA. TO STA.

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
619	120BR,CR	PUTNAM	77	77
CONTRACT NO. 68740				

ILLINOIS FED. AID PROJECT

CROSS SECTIONS OF STREAM