Notes: ** Contractor is responsible for determining the casing thickness and the actual tip elevation to be used (see Special Provisions).
Pay limits for the Permanent Casing are based on the minimum length shown.
Reinforcement Bars designated (E) shall be epoxy coated.
Cast steps monolithically with cap.
Space cap reinforcement to miss anchor bolts.
Minimum lap for spirals = $1\frac{1}{2}$ turns.
For Detail A, Sections B-B & C-C, see sheet 38 of 46.

Construction Sequence for encasement walls:

1. Excavate through water, between and outside of shafts, to base of lower encasement wall.
2. Set lower encasement wall forms into place through water and secure at top and bottom as required to maintain proper clearance from shaft.
3. Place the lower encasement wall reinforcement cage into forms using spacers to maintain proper clearances from shaft and forms.
4. If the forms can be sealed against the streambed to allow dewatering, the reinforcement and the concrete placement may be completed in the dry. Alternatively, the rebar cage can be lowered into position through water and the concrete discharged at the base of the excavation through a tremie pipe or pump hose, displacing water, sediment, and tainted concrete out the top of the forms.
5. Prepare construction joint at top of drilled shafts and lower encasement wall.
6. Lap splice upper encasement wall reinforcement and cage length to lower encasement and shaft reinforcement, form and pour upper encasement wall.

* If the prevailing water surface elevation during construction is consistently different than estimated on the plans, the contractor may propose an adjustment to the top of the drilled shaft elevation as part of their installation procedure. The top of all drilled shafts within a substructure unit shall be constructed to the same elevation and extend above the prevailing water surface. The quantities and reinforcement detailing are based on the top of shaft and the estimated elevations shown and may change based on the actual elevations encountered at each shaft and the final top of shaft elevation.

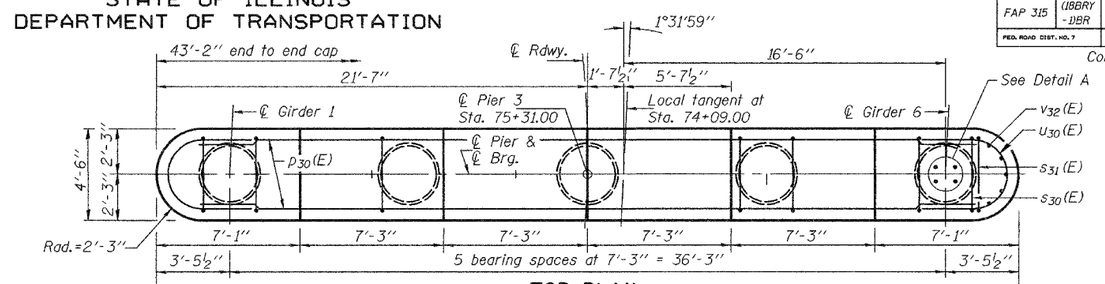
DESIGNED	DPN
CHECKED	FT
DRAWN	h.t. parsons
CHECKED	DPN/FT

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

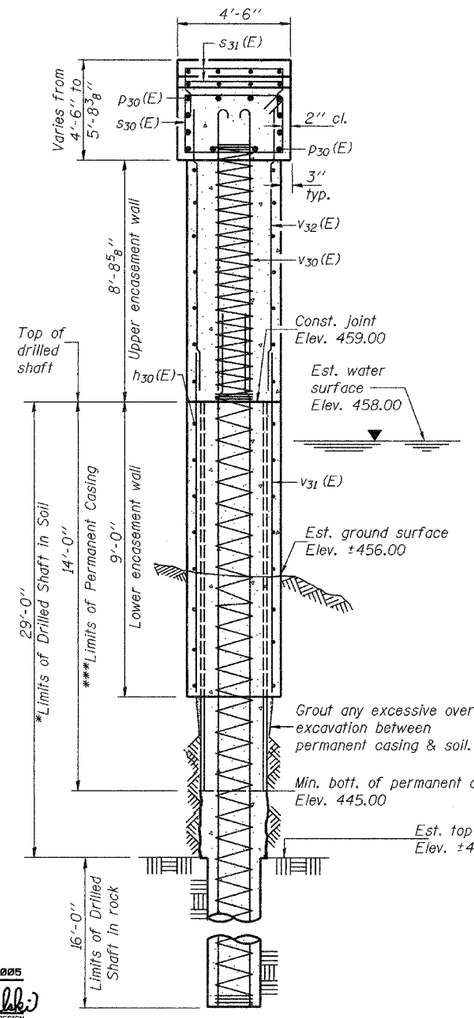
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 315	(18BRY -1)BR	FULTON		30
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

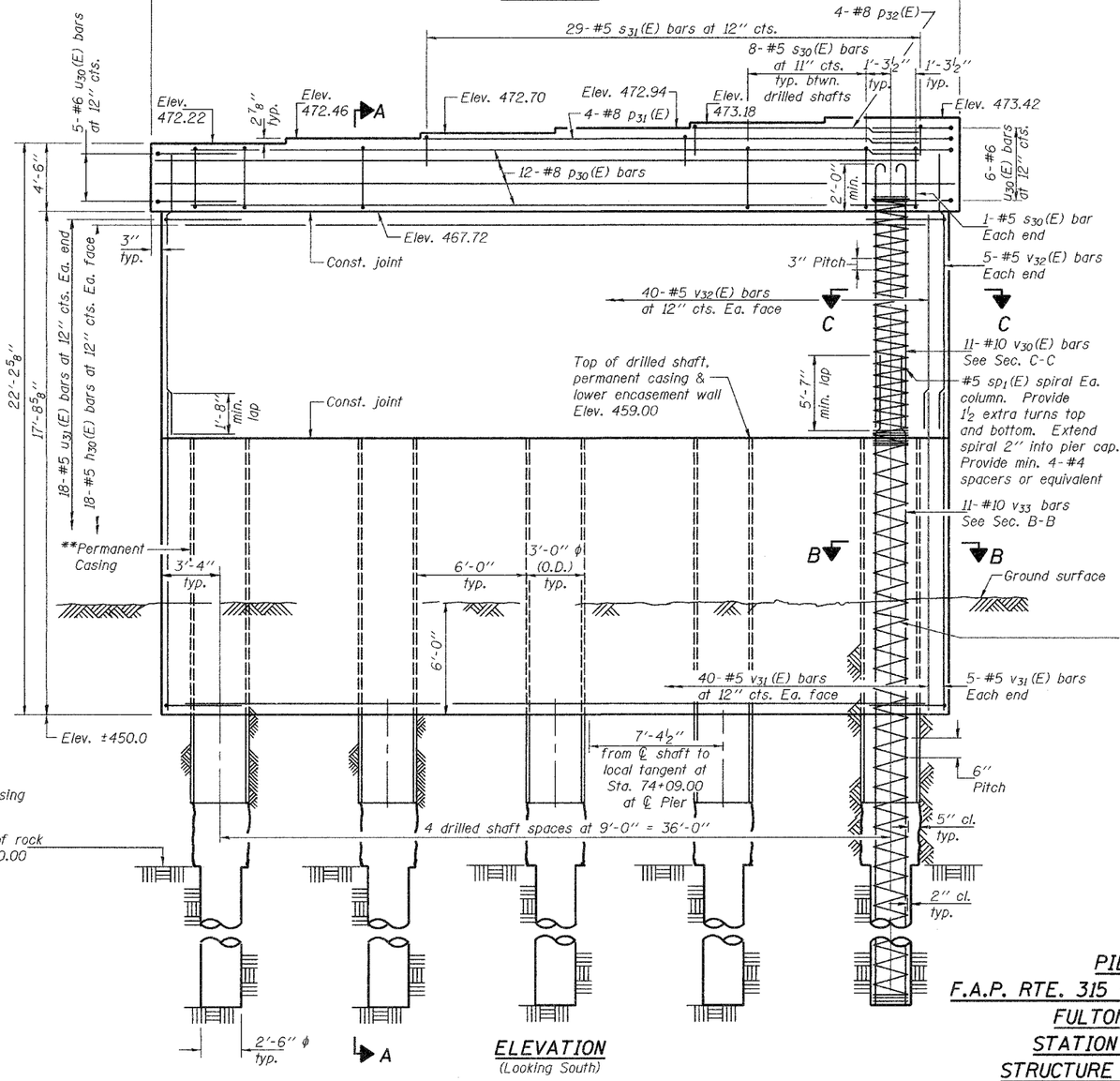
SHEET NO. 37
46 SHEETS
Contract #88753



TOP PLAN



SECTION A-A



ELEVATION
(Looking South)

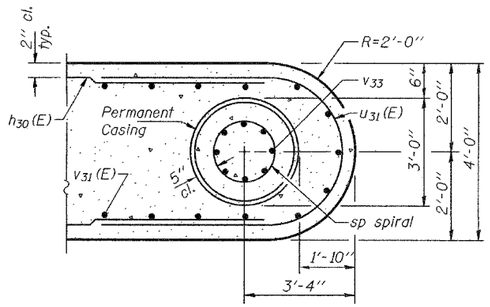
PIER 3
F.A.P. RTE. 315 - SEC. (18BRY-1)BR
FULTON COUNTY
STATION 74+09.000
STRUCTURE NO. 029-0068

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

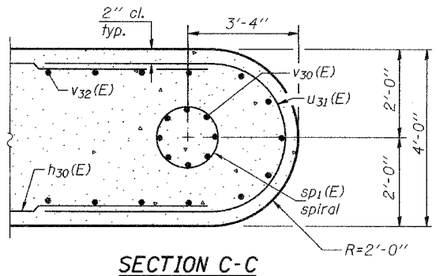
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 315	(18BRY -1)BR	FULTON		702
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 38
46 SHEETS

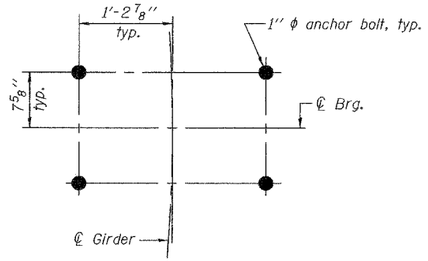
Contract #88753



SECTION B-B

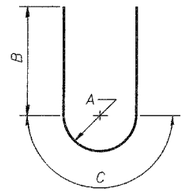


SECTION C-C



DETAIL A

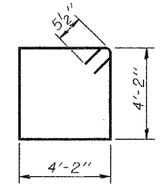
Notes: For anchor bolt installation details, see sheet 30 of 46.



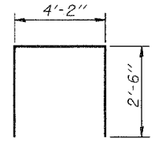
BARS u_{30}(E) or u_{31}(E)

A, B & C DIMENSIONS

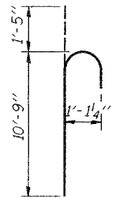
Bar	A	B	C
u_{30}(E)	2'-0 1/4"	6'-4"	6'-4"
u_{31}(E)	1'-10"	4'-10"	5'-9"



BAR s_{30}(E)



BAR s_{31}(E)



BAR v_{30}(E)

BILL OF MATERIAL

	Bar	No.	Size	Length	Shape
	h_{30}(E)	36	#5	38'-8"	
	p_{30}(E)	12	#8	38'-8"	
	p_{31}(E)	4	#8	26'-5"	
	p_{32}(E)	4	#8	11'-11"	
	s_{30}(E)	34	#5	17'-7"	
	s_{31}(E)	27	#5	9'-2"	
**	sp	5	#5	45'-0"	
**	sp_1(E)	5	#5	8'-11"	
	u_{30}(E)	11	#6	19'-0"	
	u_{31}(E)	18	#5	15'-5"	
	v_{33}	55	#10	50'-7"	
	v_{30}(E)	55	#10	12'-2"	
	v_{31}(E)	90	#5	10'-8"	
	v_{32}(E)	90	#5	11'-6"	

	Underwater Structure Excavation Protection, Location 1	Each	1
	Drilled Shaft in Soil 36"	Foot	145
	Drilled Shaft in Rock 30"	Foot	80
	Concrete Structures	Cu. Yd.	133.8
*	Reinforcement Bars, Epoxy Coated	Pound	10920
*	Reinforcement Bars	Pound	15270
	Structure Excavation	Cu. Yd.	80
	Permanent Casing	Foot	70

** Length is height of spiral.
* Weight includes spacers for spirals.

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

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

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

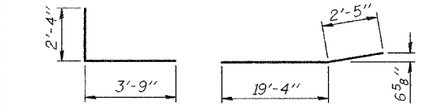
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 315	(18BRY -1)BR	FULTON		103
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 39
46 SHEETS

Contract #88753

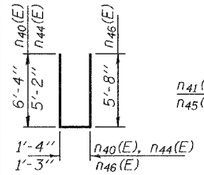
Notes: Pour steps monolithically with cap.
Reinforcement bars designated (E) shall be epoxy coated.
For bar splicers details see sht. 42 of 46.
For anchor bolt installation, see sheet 30 of 46.
For Section thru Abut. see sheet 41 of 46.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

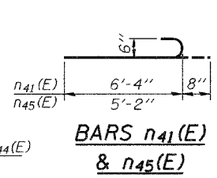


BAR h_{42}(E)

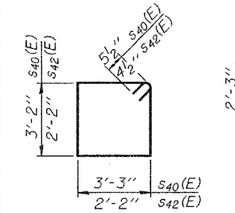
BAR h_{47}(E)



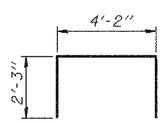
BARS n_{40}(E), n_{44}(E) & n_{46}(E)



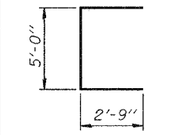
BARS n_{41}(E) & n_{45}(E)



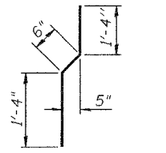
BARS s_{40}(E) & s_{42}(E)



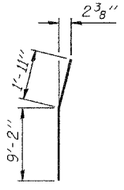
BAR s_{41}(E)



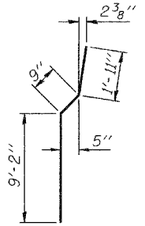
BAR u_{40}(E)



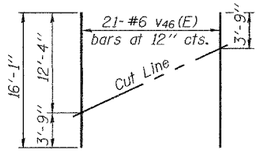
BAR v_{41}(E)



BAR v_{43}(E)

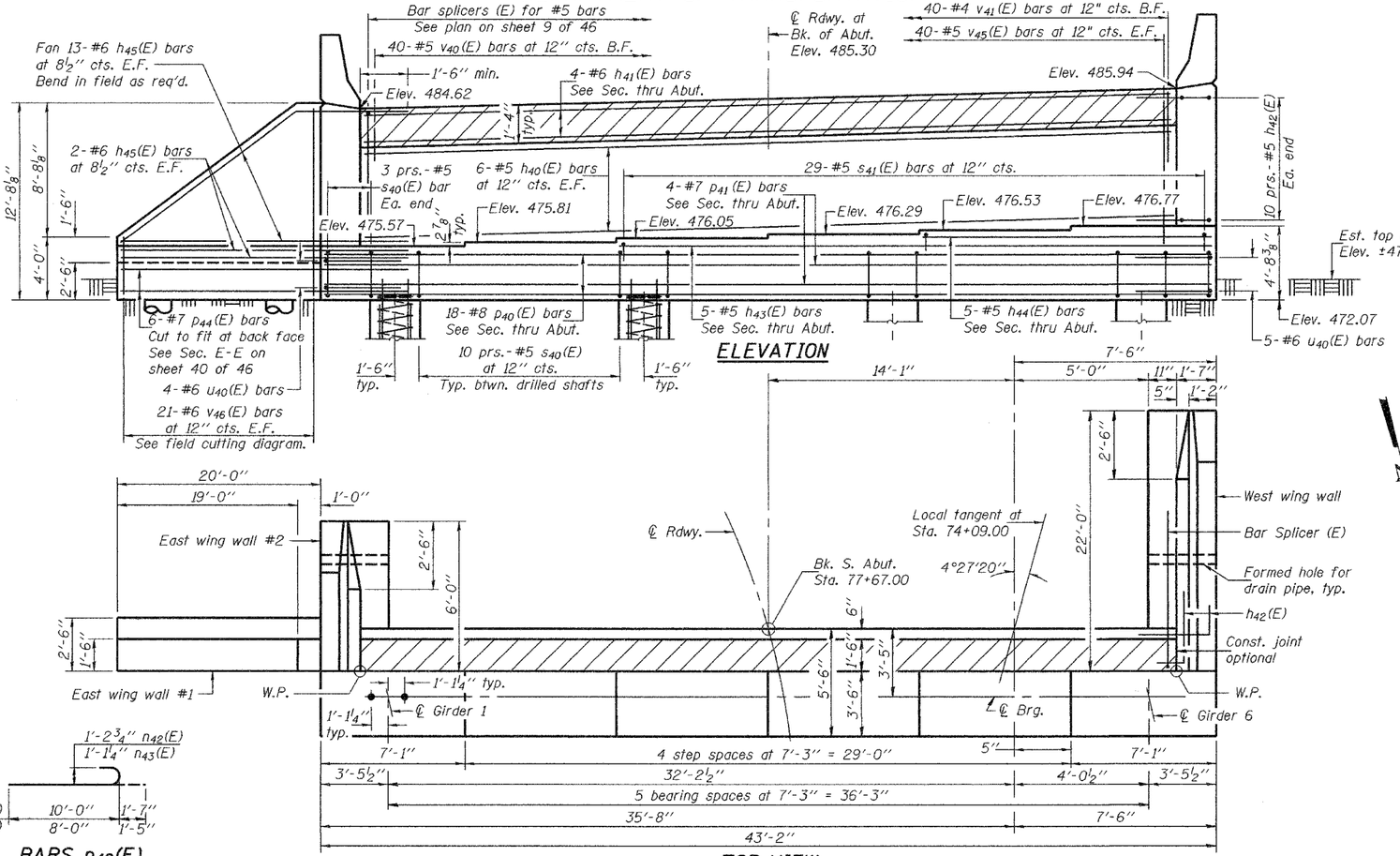


BAR v_{44}(E)



FIELD CUTTING DIAGRAM

Order v_{46}(E) full length. Cut as shown and use remainder of bars in opposite face.



SOUTH ABUTMENT
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h_{40}(E)	12	#5	39'-9"	
h_{41}(E)	4	#6	39'-9"	
h_{42}(E)	40	#5	6'-1"	
h_{43}(E)	5	#5	28'-6"	
h_{44}(E)	5	#5	14'-0"	
h_{45}(E)	30	#6	24'-11"	
h_{46}(E)	16	#4	21'-8"	
h_{47}(E)	12	#4	21'-9"	
h_{48}(E)	16	#4	5'-8"	
h_{49}(E)	12	#4	5'-9"	
n_{40}(E)	20	#6	14'-0"	
n_{41}(E)	6	#6	7'-0"	
n_{42}(E)	40	#11	11'-7"	
n_{43}(E)	28	#10	9'-5"	
n_{44}(E)	4	#6	11'-8"	
n_{45}(E)	6	#6	5'-10"	
p_{40}(E)	18	#8	42'-10"	
p_{41}(E)	4	#7	42'-10"	
p_{42}(E)	6	#7	22'-0"	
p_{43}(E)	6	#7	6'-0"	
p_{44}(E)	6	#7	23'-6"	
s_{40}(E)	72	#5	13'-9"	
s_{41}(E)	29	#4	8'-8"	
s_{42}(E)	47	#4	9'-5"	
** sp_{40}	4	#5	46'-4"	
** sp_{41}	4	#4	18'-4"	
u_{40}(E)	9	#6	10'-6"	
v_{40}(E)	40	#5	3'-0"	
v_{41}(E)	40	#4	3'-2"	
v_{42}(E)	30	#6	11'-9"	
v_{43}(E)	6	#6	11'-1"	
v_{44}(E)	24	#6	11'-10"	
v_{45}(E)	40	#5	10'-4"	
v_{46}(E)	21	#6	16'-1"	
v_{47}	40	#11	45'-10"	
v_{48}	28	#10	17'-10"	
Structure Excavation		Cu. Yd.	99.6	
Concrete Structures		Cu. Yd.	94.8	
Reinforcement Bars, Epoxy Coated		Pound	13930	
* Reinforcement Bars		Pound	15310	
Rock Excavation for Structures		Cu. Yd.	14.3	
Drilled Shaft in Rock, 36"		Foot	184	
Drilled Shaft in Rock, 24"		Foot	72	

* Weight includes spacers for spirals.
** Length is height of spiral.

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

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

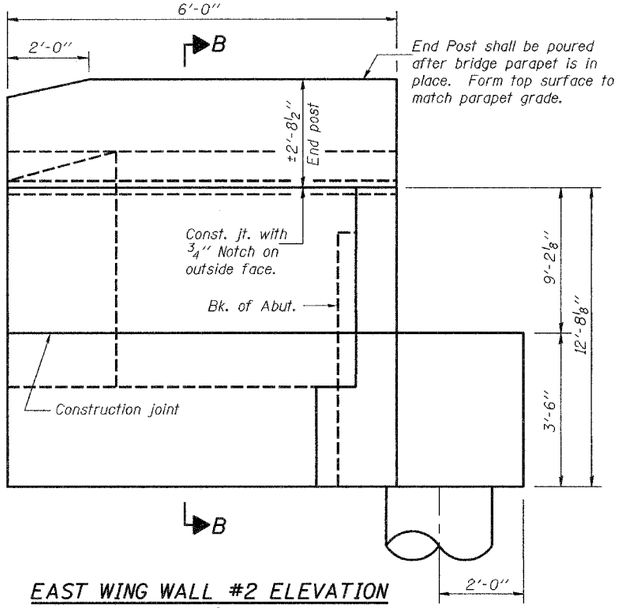
SOUTH ABUTMENT
F.A.P. RTE. 315 - SEC. (18BRY-1)BR
FULTON COUNTY
STATION 74+09.000
STRUCTURE NO. 029-0068

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

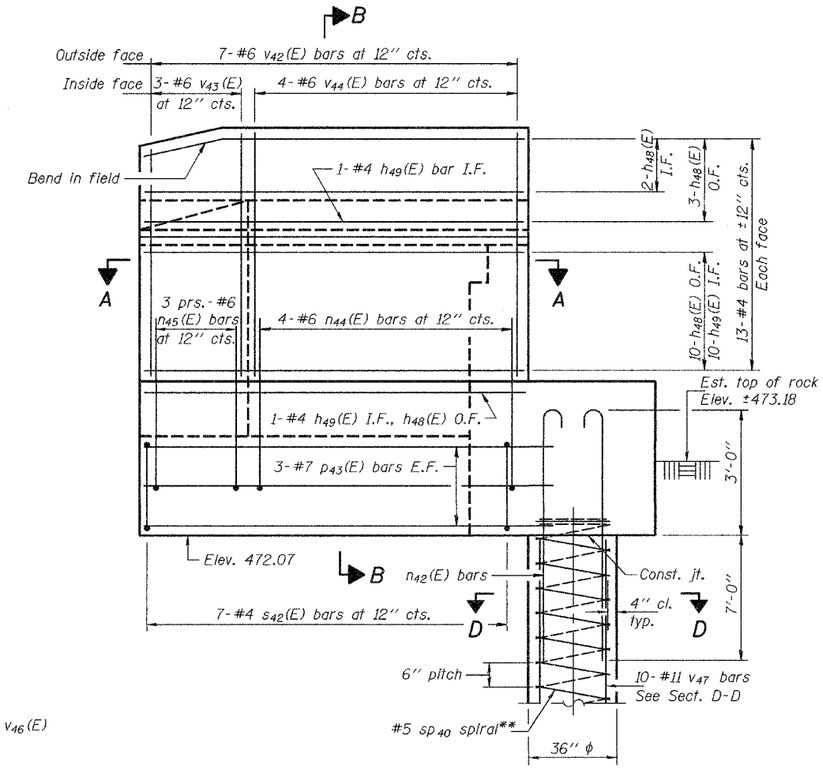
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 315	(18BRY -1)BR	FULTON		40
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 40
46 SHEETS

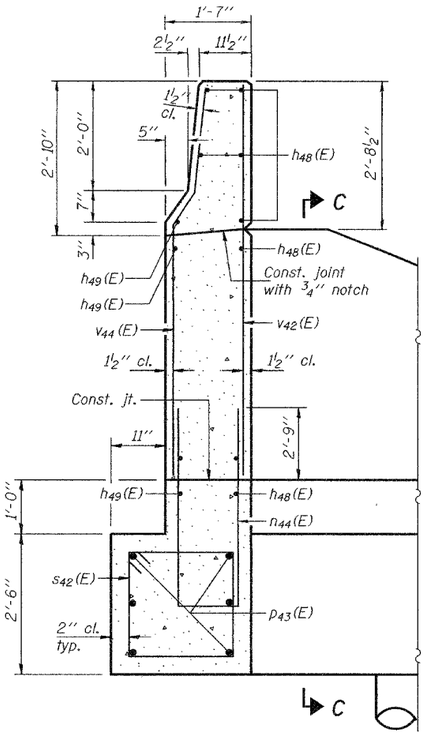
Contract #88753



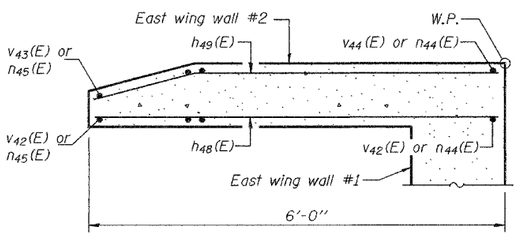
EAST WING WALL #2 ELEVATION
Parallel to ℄ Roadway
(Showing dimensions)



EAST WING WALL #2 &
DRILLED SHAFT ELEVATION
Showing Reinforcement
20'-0" East wingwall not shown for clarity.
For remainder of details for 36" ϕ shaft, see sheet 41 of 46.

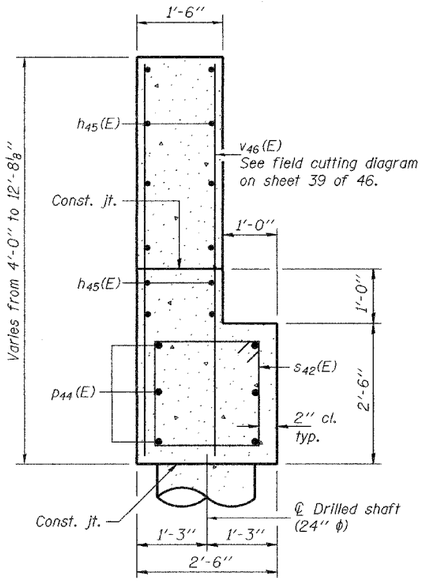


SECTION B-B

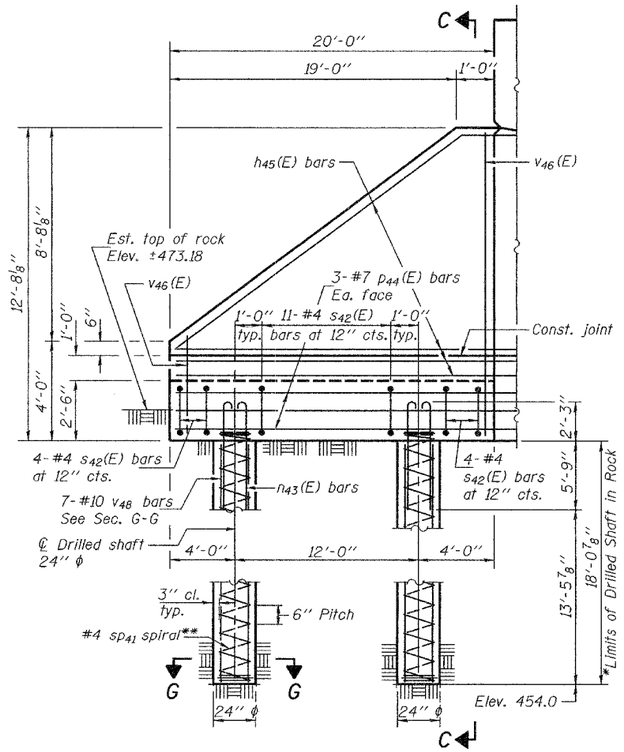


SECTION A-A

Notes: * The quantities and detailing are based on the estimated elevations shown on the plans. The actual elevations may differ at each shaft and corresponding adjustments shall be made to the drilled shaft and reinforcement quantities and payment limits.
Reinforcement bars designated (E) shall be epoxy coated.
Quantity of concrete in end post included with Concrete Superstructure on sheet 11 of 46.
** Provide 1½ extra turns top and bottom of each drilled shaft. Extend spiral 2" into abutment or wingwall cap. Provide min. 4-#4 spacers or equivalent.
Min. lap for spirals = 2'-6" (#5 spiral)
For Sections D-D & G-G, see sheet 41 of 46.



SECTION C-C



EAST WING WALL #1 &
DRILLED SHAFT ELEVATION
Looking south

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

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

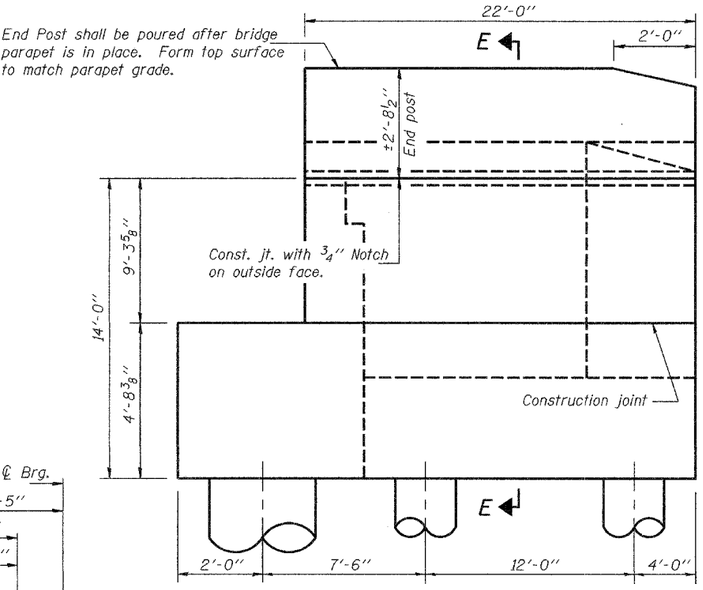
SOUTH ABUTMENT DETAILS
EAST WING WALLS
F.A.P. RTE. 315 - SEC. (18BRY-1)BR
FULTON COUNTY
STATION 74+09.000
STRUCTURE NO. 029-0068

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

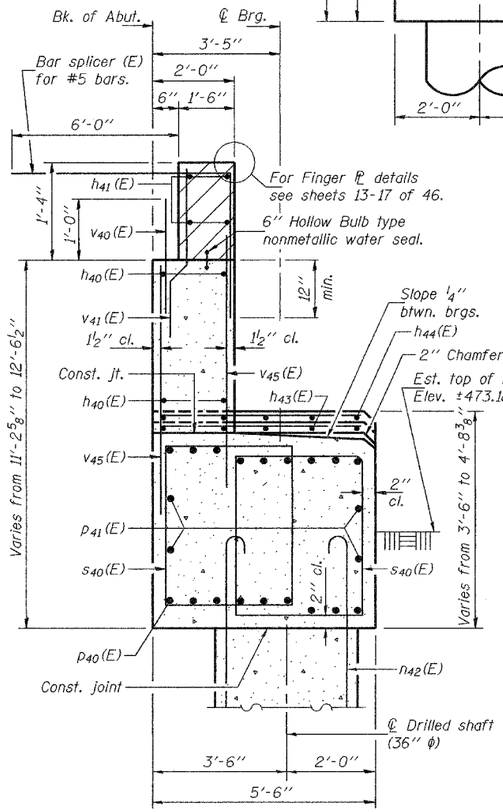
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 315	(18BRY -1)BR	FULTON		205
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 41
46 SHEETS

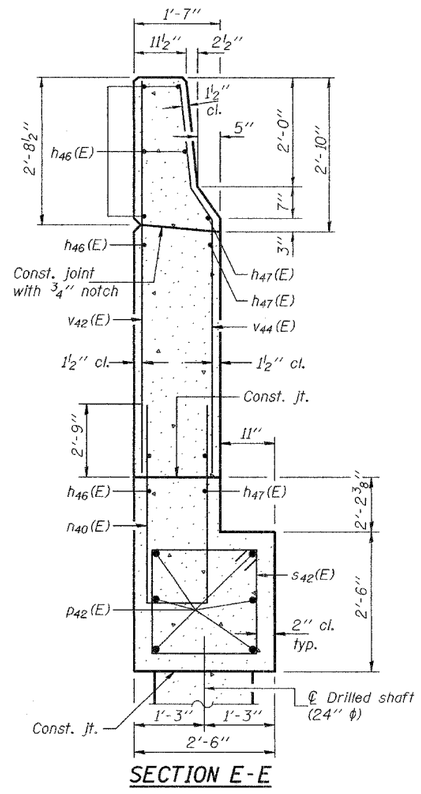
Contract #88753



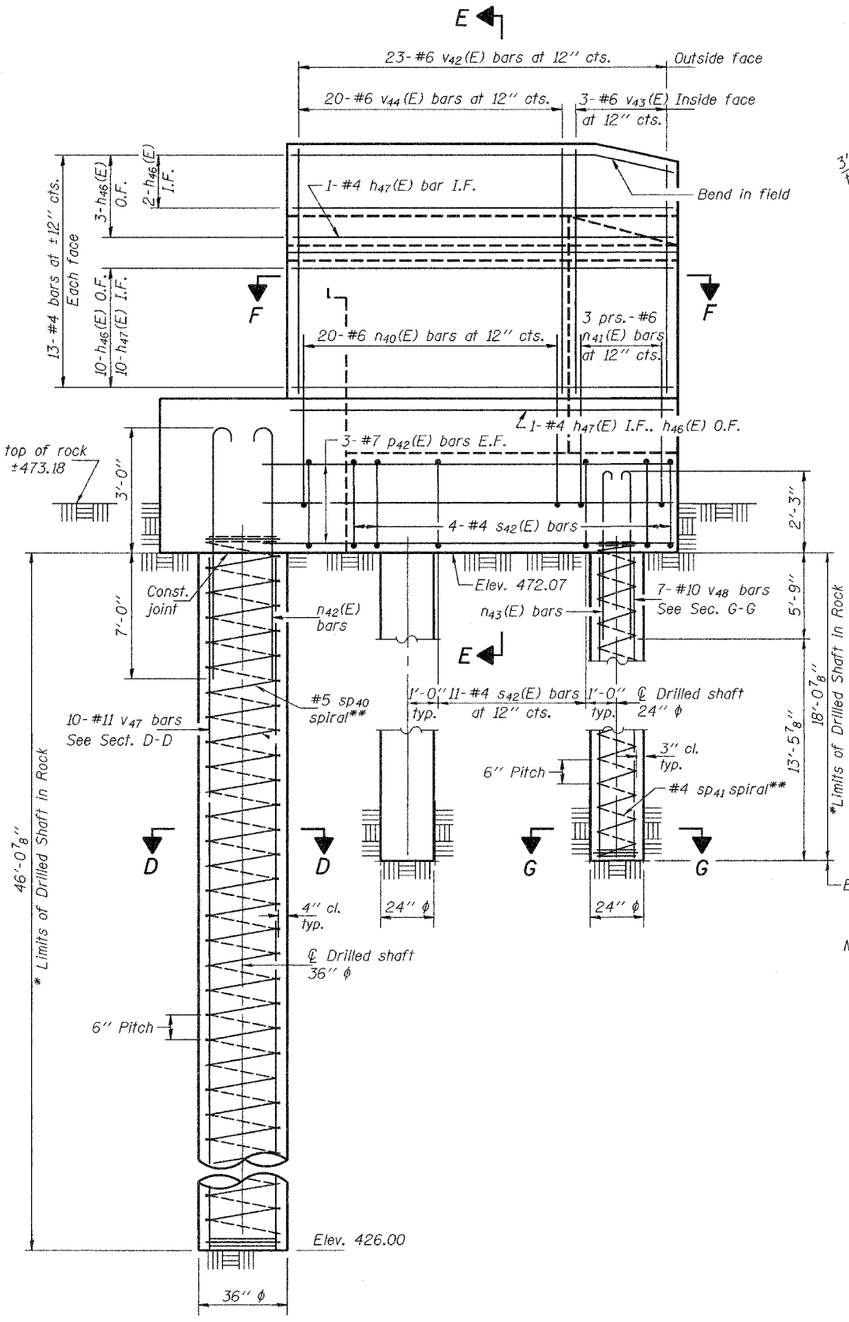
WEST WING WALL ELEVATION
Showing Dimensions



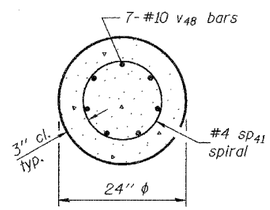
SECTION THRU ABUTMENT



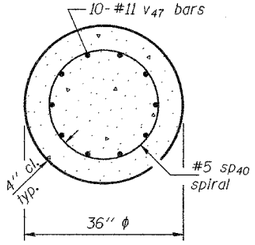
SECTION E-E



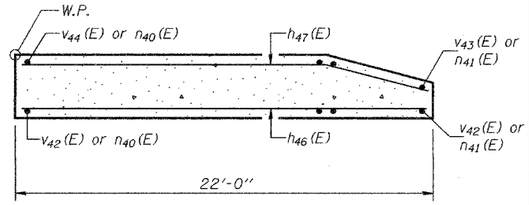
WEST WING WALL & DRILLED SHAFT ELEVATION
Showing Reinforcement



SECTION G-G



SECTION D-D



SECTION F-F

Notes: * The quantities and detailing are based on the estimated elevations shown on the plans. The actual elevations may differ at each shaft and corresponding adjustments shall be made to the drilled shaft and reinforcement quantities and payment limits.
Reinforcement bars designated (E) shall be epoxy coated.
Quantity of concrete in end post included with Concrete Superstructure on sheet 11 of 46.
** Provide 1½ extra turns top and bottom of each drilled shaft. Extend spiral 2" into abutment or wingwall cap. Provide min. 4-#4 spacers or equivalent.
Min. lap for spirals = 2'-0" (#4 spiral)
2'-6" (#5 spiral)

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

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

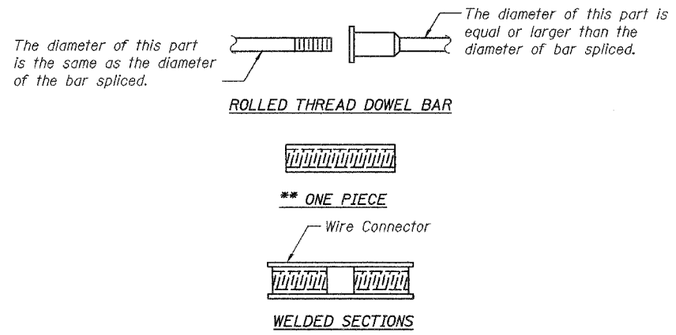
SOUTH ABUTMENT DETAILS
WEST WING WALL
F.A.P. RTE. 315 - SEC. (18BRY-1)BR
FULTON COUNTY
STATION 74+09.000
STRUCTURE NO. 029-0068

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 315	(18BRY -1)BR	FULTON		206
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

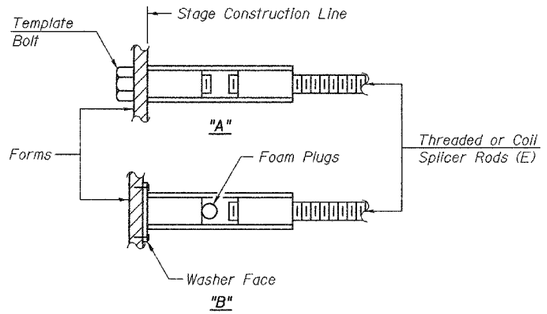
SHEET NO. 42
46 SHEETS

Contract #88753



BAR SPLICER ASSEMBLY ALTERNATIVES

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



INSTALLATION AND SETTING METHODS

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

NOTES

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.

Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.

All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.

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

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

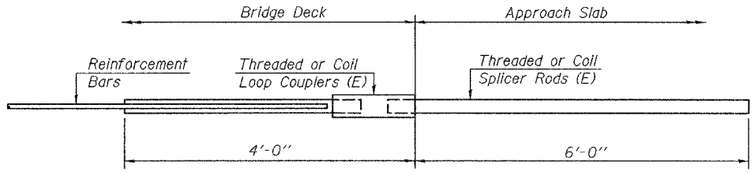
② Minimum *Pull-out Strength (Tension in kips) = $1.25 \times fs_{allow} \times A_t$

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

BAR SPLICER ASSEMBLIES

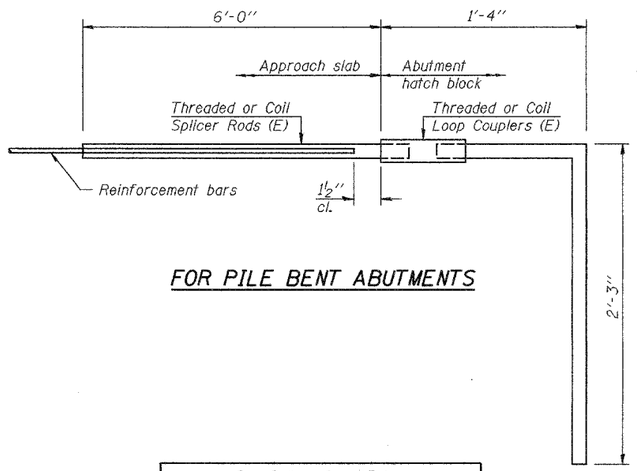
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	5.9
#5	2'-0"	23.0	9.2
#6	2'-7"	33.1	13.3
#7	3'-5"	45.1	18.0
#8	4'-6"	58.9	23.6
#9	5'-9"	75.0	30.0
#10	7'-3"	95.0	38.0
#11	9'-0"	117.4	46.8

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



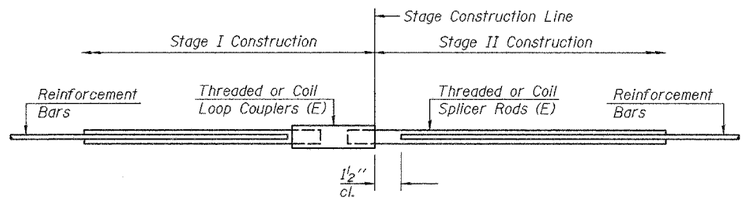
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

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



FOR PILE BENT ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 9.2 kips - tension
No. Required = 42 (N. Abut.) 42 (S. Abut.)



STANDARD

Bar Size	No. Assemblies Required	Location

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

EXAMINED May 16, 2005
Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN

PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

BSD-1 10-22-04

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

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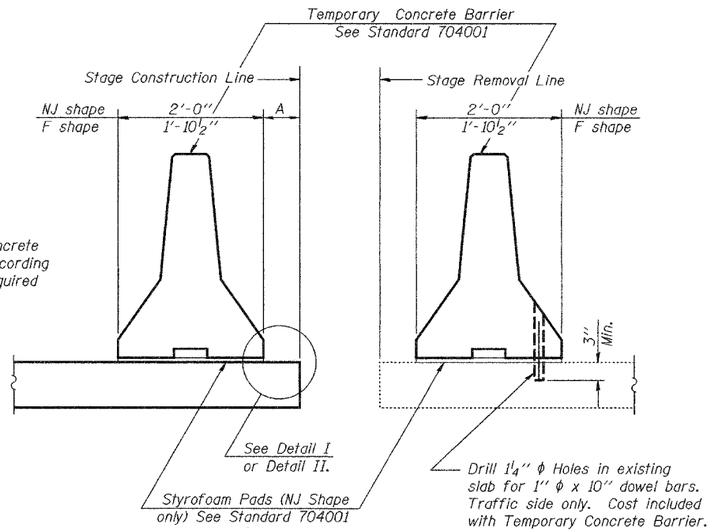
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

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

SHEET NO. 43
46 SHEETS

Contract #88753



NEW SLAB EXISTING SLAB

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

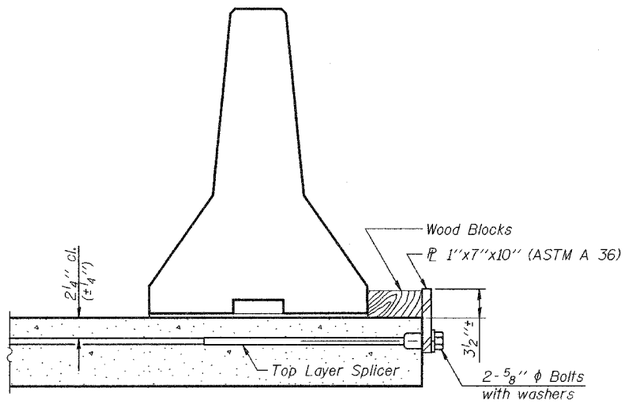
NOTES

Detail I - With Bar Splicer or Couplers:
Connect one (1) 1"x7"x10" steel ℙ to the top layer of couplers with 2-⅝" ϕ bolts screwed to coupler at approximate ℄ of each barrier panel.

Detail II - With Extended Reinforcement Bars:
Connect one (1) 1"x7"x10" steel ℙ to the concrete slab with 2-⅝" ϕ Expansion Anchors or cast in place inserts spaced between the top layer of reinforcement at approximate ℄ of each barrier panel.

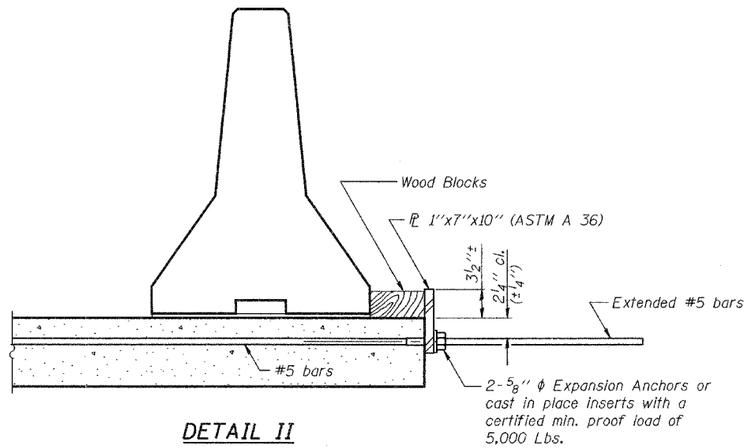
Cost of anchorage is included with Temporary Concrete Barrier.

SECTIONS THRU SLAB



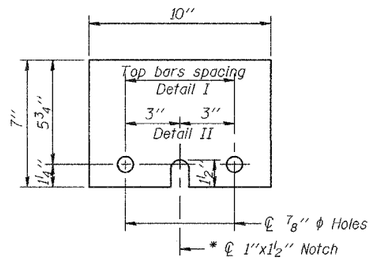
DETAIL I

The 1"x7"x10" Plate shall not be removed until Stage II Construction forms and reinforcement bars are in place.



DETAIL II

The 1"x7"x10" 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.



ℙ 1"x7"x10"

* Required only with Detail II

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

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

R-27 10-22-04

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

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 315	(18BRY - 1)BR	FULTON		28
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 44
46 SHEETS

Contract #88753

Illinois Department of Transportation — Division of Highways, District Four Materials — **SOIL BORING LOG** — Page 1 of 2 — Date 9/30/02

ROUTE FA 317 (US 24) DESCRIPTION US 24 & IL 100 over Spoon River LOGGED BY DBR
SECTION (18 BRY-1)BR LOCATION SW¼, NE¼, SEC. 8, TWP. 4N, RNG. 3E, 4 PM
COUNTY Fulton DRILLING METHOD HSA HAMMER TYPE AUTO
STRUCT. NO. 029-0004 (exist) 029-0068(prop)
Station 74+10 (prop)
BORING NO. 7063 (N. Abut)
Station 70+63
Offset 43.00ft Rt
Ground Surface Elev. 454.73 ft
Surface Water Elev. 439.08 ft
Stream Bed Elev. ft
Groundwater Elev.:
First Encounter ft
Upon Completion 444.4 ft
After 24 Hrs. 444.6 ft

DEPTH (ft)	BLOWS (6")	UCS Qu (tsf)	MOIST (%)	
				No Sample Taken 0'-1.5'
453.23				
	5			Dark Gray SILTY CLAY LOAM
	5	4.25	21.8	
	7	P		
	2			
-5	5	2.89	30.0	
	6	B		
448.23				
	2			Dark Brown/Brown SILTY CLAY
	2	1.73	34.5	
	2	B		
	1			
-10	1	1.44	29.2	
	2	B		
	H	.62	30.7	
442.23	1	B		
	1		24.9	Brown Fine SAND wtr of clay
	H			
-15	H		24.3	
	H			
	H			
	H		24.0	
	H			
	H			
-20	2		20.5	
				Brown Fine SAND
433.23				
	1			Light Brown/Light Gray fine SAND
	2		18.5	
	2			
430.73				
	1			Brown/Gray Fine SAND
-25	1		18.0	
	3			
428.23				
	2			Brown/Gray SANDY GRAVEL
	1		12.2	
	3			
425.73				
	1			Gray CLAY LOAM with some SANDY GRAVEL
-30	H	.82	26.8	
	H	B		
423.23				
	1			Gray FINE SAND
	9		13.9	
	10			
420.73				
	7			Gray SANDY GRAVEL with trace of CLAY
-35	9		11.3	
	18			
418.23				
	2			Gray Fine SAND with trace of GRAVEL
	5		15.1	
	7			
415.73				
	6			Gray/Brown CLAY TILL
-40	9	2.27	19.9	

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, from 137 (Rev. 8-99)

Illinois Department of Transportation — Division of Highways, District Four Materials — **SOIL BORING LOG** — Page 2 of 2 — Date 9/30/02

ROUTE FA 317 (US 24) DESCRIPTION US 24 & IL 100 over Spoon River LOGGED BY DBR
SECTION (18 BRY-1)BR LOCATION SW¼, NE¼, SEC. 8, TWP. 4N, RNG. 3E, 4 PM
COUNTY Fulton DRILLING METHOD HSA HAMMER TYPE AUTO
STRUCT. NO. 029-0004 (exist) 029-0068(prop)
Station 74+10 (prop)
BORING NO. 7063 (N. Abut)
Station 70+63
Offset 43.00ft Rt
Ground Surface Elev. 454.73 ft
Surface Water Elev. 439.08 ft
Stream Bed Elev. ft
Groundwater Elev.:
First Encounter ft
Upon Completion 444.4 ft
After 24 Hrs. 444.6 ft

DEPTH (ft)	BLOWS (6")	UCS Qu (tsf)	MOIST (%)	
	15	B		Gray/Brown CLAY TILL (continued)
	21			
	20	3.05	15.6	
	65	S		
410.73				
	49			Light Gray/Light Brown Weathered, weakly cemented, SANDSTONE
-45	80		15.9	
	20			
	100		14.8	
405.65				
-50	100		20.6	

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, from 137 (Rev. 8-99)

Illinois Department of Transportation — Division of Highways, District Four Materials — **SOIL BORING LOG** — Page 1 of 2 — Date 9/30/02

ROUTE FA 317 (US 24) DESCRIPTION US 24 & IL 100 over Spoon River LOGGED BY SCG
SECTION (18 BRY-1)BR LOCATION SW¼, NE¼, SEC. 8, TWP. 4N, RNG. 3E, 4 PM
COUNTY Fulton DRILLING METHOD HSA HAMMER TYPE AUTO
STRUCT. NO. 029-0004 (exist) 029-0068(prop)
Station 74+10 (prop)
BORING NO. 7284 (Pier)
Station 72+84
Offset 17.00ft Rt
Ground Surface Elev. 454.37 ft
Surface Water Elev. 439.08 ft
Stream Bed Elev. ft
Groundwater Elev.:
First Encounter 442.4 ft
Upon Completion 447.5 ft
After 24 Hrs. 443.2 ft

DEPTH (ft)	BLOWS (6")	UCS Qu (tsf)	MOIST (%)	
				No sample taken 0-2'
452.37				
	1			Dark Brown CLAY LOAM
	2	3.35	23.9	
	5	S		
449.87				
-5	1			Dark Brown/Brown SILTY CLAY LOAM
	2	2.89	20.0	
	4	S		
	H			
	H	.52	27.2	
	2	S		
444.87				
-10	H	.25	29.6	Brown SILTY LOAM
443.87	H	B		
	1	.08	28.9	Brown SANDY LOAM
		B		
	H			
	H		23.1	
	H			
-15	H			
	H		24.2	
	1			
437.37				
	H			Brown Fine SAND
	1		20.9	
435.87	1			
	3			Brown to Gray SANDY GRAVEL
-20				
	6		12.2	Brown to Gray SANDY GRAVEL (continued)
	5			
	1			
	1		13.6	
	3			
-25	1		18.6	
	3			
	3		20.7	
	H			
	H			
	H			
424.87				
-30	3			Gray SANDY LOAM
	4		13.2	
	10			
422.37				
	11			Gray GRAVEL
	14		7.5	
	9			
419.87				
-35	7			Gray SHALEY SILT
	19		12.7	
	40			
417.37				
	50			Gray/Dark Gray SHALE
	100		10.4	
-40	42			

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, from 137 (Rev. 8-99)

Illinois Department of Transportation — Division of Highways, District Four Materials — **SOIL BORING LOG** — Page 2 of 2 — Date 9/30/02

ROUTE FA 317 (US 24) DESCRIPTION US 24 & IL 100 over Spoon River LOGGED BY SCG
SECTION (18 BRY-1)BR LOCATION SW¼, NE¼, SEC. 8, TWP. 4N, RNG. 3E, 4 PM
COUNTY Fulton DRILLING METHOD HSA HAMMER TYPE AUTO
STRUCT. NO. 029-0004 (exist) 029-0068(prop)
Station 74+10 (prop)
BORING NO. 7284 (Pier)
Station 72+84
Offset 17.00ft Rt
Ground Surface Elev. 454.37 ft
Surface Water Elev. 439.08 ft
Stream Bed Elev. ft
Groundwater Elev.:
First Encounter 442.4 ft
Upon Completion 447.5 ft
After 24 Hrs. 443.2 ft

DEPTH (ft)	BLOWS (6")	UCS Qu (tsf)	MOIST (%)	
	100		8.5	Gray/Dark Gray SHALE (continued)
	10			
411.37	100		15.2	
-45				
-50				
-55				
-60				

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, from 137 (Rev. 8-99)

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

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 315	(18BRY -1)BR	FULTON		909
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 45
46 SHEETS

Contract #88753

Illinois Department of Transportation
Division of Highways
District Four Materials

SOIL BORING LOG

Page 1 of 1

Date 9/27/02

ROUTE FA 317 (US 24) DESCRIPTION US 24 & IL 100 over Spoon River LOGGED BY DPS

SECTION (18 BRY-1)BR LOCATION SW1/4, NE1/4, SEC. 8, TWP. 4N, RNG. 3E, 4 PM

COUNTY Fulton DRILLING METHOD HSA HAMMER TYPE AUTO

STRUCT. NO. 029-0004 (exist) 029-0068(prop)
Station 74+10 (prop)

BORING NO. 7494 (Pier)
Station 74+94
Offset 32.00ft Rt
Ground Surface Elev. 458.31 ft

Surface Water Elev. 439.08 ft
Stream Bed Elev. ft

Groundwater Elev.:
First Encounter 441.3 ft
Upon Completion *None ft
After 24 Hrs. **None ft

DEPTH (ft)	BLOWS (6")	UCS Qu (tsf)	MOIST (%)
No Sample Taken 0-2'			
456.31			
Brown SANDY LOAM	H		
	1	0.25	12.5
	1	P	
-5	H	0.33	26.4
452.81	1	B	
Brown CLAY LOAM	3	3.71	19.7
		S	
451.31			
Dark Gray SILTY CLAY	1		
	3	2.47	25.4
	3	B	
448.81			
Brown SILTY CLAY LOAM	H		
-10	1	0.79	24.2
	2	S	
	H		
	H	0.49	28.9
	1	B	
-15	H	0.41	30.2
	1	B	
442.51	2		21.2
Brown FINE SAND			
	H		
	2		21.1
	2		
-20	H		

DEPTH (ft)	BLOWS (6")	UCS Qu (tsf)	MOIST (%)
Brown FINE SAND (continued)	1		21.1
	2		
	1		
	2		16.8
	3		
-25	1		
	3		16.0
	4		
431.31			
Brown and Gray GRAVEL 430.81	2		5.1
Black COAL	60		
	40@3"		28.8
428.81			
Gray Light Gray SHALE	-30 36		
	100@5"		10.6
425.91	100@5"		10.2
* No H2O- hole collapsed @ 14.8' ** No H2O- hole collapse @ 15.2'			
-40			

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, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
District Four Materials

ROCK CORE LOG

Page 1 of 2

Date 7/17/03

ROUTE FAP 317 & 315 (US 24)L 100 & US 136) DESCRIPTION US 24 Lewistown to Duncan Mills LOGGED BY DPS

SECTION 18RS-2,19RS-3,(18BRY&18BRY-1) BR,18S-1 LOCATION , SEC. , TWP. , RNG.

COUNTY Fulton CORING METHOD Dual Barrel

STRUCT. NO.
Station

CORING BARREL TYPE & SIZE NWD4 5'

BORING NO. 7531 Pier
Station 75+31
Offset 0.00ft On CL
Ground Surface Elev. 468.20 ft

Core Diameter 2.1 in
Top of Rock Elev. 429.20 ft
Begin Core Elev. 429.20 ft

DEPTH (ft)	CORE (#)	RECOVERY (%)	RQD (%)	CORE TIME (min/ft)	STRENGTH (tsf)
Gray SHALE					
429.20	1	20	14		
-30					
424.20					
Lt. Gray SHALE	2	50	0		
423.20 -35					
	3	80	65		
Lt. Gray SANDSTONE			5.9% moisture		30.2
			5.5% moisture		40.4
419.76					
Lt. Gray SHALE					
418.20 -40			5.4% moisture		28.1
Gray SHALE	4	96	87		
			5.4% moisture		
			5.6% moisture		
			6% moisture		
413.35 -45					
Lt. Gray SANDSTONE 413.20	5	100	86		
Gray LIMESTONE			6% moisture		201.2
412.00					
Lt. Gray SHALE			7.6% moisture		
411.18					
Lt. Gray LIMESTONE					
			2.2% moisture		215.0
			4.3% moisture		335.2

Color pictures of the cores No
Cores will be stored for examination until
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)

BBS, form 138 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
District Four Materials

ROCK CORE LOG

Page 2 of 2

Date 7/17/03

ROUTE FAP 317 & 315 (US 24)L 100 & US 136) DESCRIPTION US 24 Lewistown to Duncan Mills LOGGED BY DPS

SECTION 18RS-2,19RS-3,(18BRY&18BRY-1) BR,18S-1 LOCATION , SEC. , TWP. , RNG.

COUNTY Fulton CORING METHOD Dual Barrel

STRUCT. NO.
Station

CORING BARREL TYPE & SIZE NWD4 5'

BORING NO. 7531 Pier
Station 75+31
Offset 0.00ft On CL
Ground Surface Elev. 468.20 ft

Core Diameter 2.1 in
Top of Rock Elev. 429.20 ft
Begin Core Elev. 429.20 ft

DEPTH (ft)	CORE (#)	RECOVERY (%)	RQD (%)	CORE TIME (min/ft)	STRENGTH (tsf)
Lt. Gray LIMESTONE (continued)					
408.20 -60			4.3% moisture		186.4
Lt. Gray LIMESTONE	6	100	98		
			4.9% moisture		290.6
			2.9% moisture		334.6
			6.2% moisture		292.8
			4.5% moisture		524.4
			4.4% moisture		452.5
403.20 -65					
End of Boring					
-80					
-85					

Color pictures of the cores No
Cores will be stored for examination until
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)

BBS, form 138 (Rev. 8-99)

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

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 315	(18BRY -1BR	FULTON		209A
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT -		

SHEET NO. 46
46 SHEETS

Contract #88753

Illinois Department of Transportation
Division of Highways
District Four Materials

SOIL BORING LOG

Page 1 of 4
Date 12/1901

ROUTE FA 317 (US 24) DESCRIPTION US 24 & IL 100 over Spoon River LOGGED BY KRW
SECTION (18 BRY-1BR LOCATION SW1/4, NE1/4, SEC. 8, TWP. 4N, RNG. 3E, 4 PM
COUNTY Fulton DRILLING METHOD HSA HAMMER TYPE AUTO

STRUCT. NO. 029-0004 (exist) 029-0068(prop)
Station 74+10 (prop)
BORING NO. 7757 (S. Abut.)
Station 77+57
Offset 3.00ft Rt
Ground Surface Elev. 477.68 ft

Surface Water Elev. 439.08 ft
Stream Bed Elev. ft
Groundwater Elev.:
First Encounter None ft
Upon Completion *None ft
After 24 Hrs. **None ft

DEPTH (ft)	BLOWS (6")	UCS Qu (tsf)	MOIST (%)
NO SAMPLE TAKEN 0-2'			
475.68			
Brown SILTY CLAY	H		
	7	1.25	20
	18	P	
473.18			
-5 Gray /Light Brown SHALE	60		
	100@4"		7
	100@5"		8
468.18			
-10 Brown SHALEY CLAY	10		
	14	4.25	9
	20	P	
	12		
	28	2.5	12
	47	P	
463.18			
-15 Gray SHALEY CLAY	16		
	31	1.25	8
	64	P	
	21		
	77		8
	23@4"		
458.18			
-20 Borehole continued with rock coring.			

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, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
District Four Materials

ROCK BORING LOG

Page 2 of 4
Date 12/1901

ROUTE FA 317 (US 24) DESCRIPTION US 24 & IL 100 over Spoon River LOGGED BY KRW
SECTION (18 BRY-1BR LOCATION SW1/4, NE1/4, SEC. 8, TWP. 4N, RNG. 3E, 4 PM
COUNTY Fulton CORING METHOD

STRUCT. NO. 029-0004 (exist) 029-0068(prop)
Station 74+10 (prop)
CORING BARREL TYPE & SIZE NWD4 5'
Core Diameter 2.06 in
Top of Rock Elev. 473.18 ft
Begin Core Elev. 468.18 ft
BORING NO. 7757 (S. Abut.)
Station 77+57
Offset 3.00ft Rt
Ground Surface Elev. 477.68 ft

DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
Gray SHALE	1	100	6		9.08
458.18					
-20					
	2	100	6		1.002
-25					
448.18					
Gray SHALE w/SANDSTONE seams					
-30	3	90	0		
443.18					
Gray SHALE					48.2
-35	4	86	29		9.93

Color pictures of the cores ____No____
Cores will be stored for examination until ____
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)
BBS, form 138 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
District Four Materials

ROCK BORING LOG

Page 3 of 4
Date 12/1901

ROUTE FA 317 (US 24) DESCRIPTION US 24 & IL 100 over Spoon River LOGGED BY KRW
SECTION (18 BRY-1BR LOCATION SW1/4, NE1/4, SEC. 8, TWP. 4N, RNG. 3E, 4 PM
COUNTY Fulton CORING METHOD

STRUCT. NO. 029-0004 (exist) 029-0068(prop)
Station 74+10 (prop)
CORING BARREL TYPE & SIZE NWD4 5'
Core Diameter 2.06 in
Top of Rock Elev. 473.18 ft
Begin Core Elev. 468.18 ft
BORING NO. 7757 (S. Abut.)
Station 77+57
Offset 3.00ft Rt
Ground Surface Elev. 477.68 ft

DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
Gray SHALE (continued)	5	100	8		13.28
-40					
433.18					
Brown & Gray SHALE 432.88	6	100	7		
-45 Gray SHALE					
431.08					
Black COAL					38.7
429.38					
Gray SHALE					
428.18					
-50 Gray SANDSTONE	7	97	68		107.28
					84.06
					48.03
					80.95
					41.53
					55.14
-55	8	97	63		
421.58					
Gray SAND & GRAVEL 421.28					67.98
Gray SANDSTONE					44.81
418.18					40.93

Color pictures of the cores ____No____
Cores will be stored for examination until ____
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)
BBS, form 138 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
District Four Materials

ROCK BORING LOG

Page 4 of 4
Date 12/1901

ROUTE FA 317 (US 24) DESCRIPTION US 24 & IL 100 over Spoon River LOGGED BY KRW
SECTION (18 BRY-1BR LOCATION SW1/4, NE1/4, SEC. 8, TWP. 4N, RNG. 3E, 4 PM
COUNTY Fulton CORING METHOD

STRUCT. NO. 029-0004 (exist) 029-0068(prop)
Station 74+10 (prop)
CORING BARREL TYPE & SIZE NWD4 5'
Core Diameter 2.06 in
Top of Rock Elev. 473.18 ft
Begin Core Elev. 468.18 ft
BORING NO. 7757 (S. Abut.)
Station 77+57
Offset 3.00ft Rt
Ground Surface Elev. 477.68 ft

DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
Gray SHALE	9	100	52		1.66
-60					
418.28					
Lt. Gray LIMESTONE					77.81
					115.38
					131.94
					157.42
					220.34
-65	10	100	36		
					242.64
					170.25
					215.82
408.18					
-70					
-75					

Color pictures of the cores ____No____
Cores will be stored for examination until ____
The "Strength" column represents the uniaxial compressive strength of the core sample (ASTM D-2938)
BBS, form 138 (Rev. 8-99)

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

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

Existing Structure: Double barrel CIP concrete box culvert. Built in 1925 under Section 18A, Route 31 at Sta. 84+78. Repair project 1992 with partial wall thickening. Existing traffic to be maintained using temporary runaround for Stage III & V construction. For details of Stage I, II and IV, see Roadway Plans.

No salvage

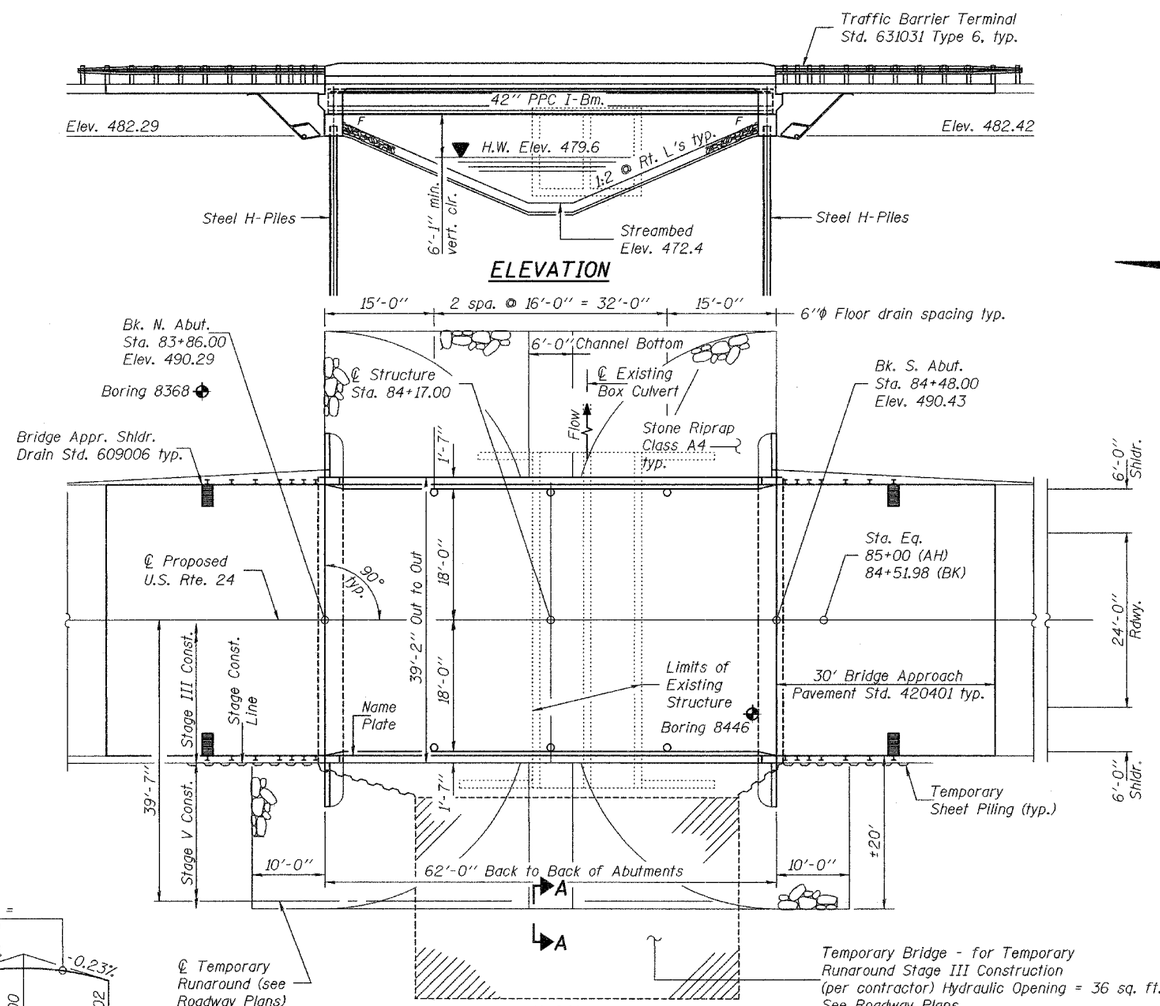
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 315	18B-1	FULTON		210
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 1
13 SHEETS

Contract #88753

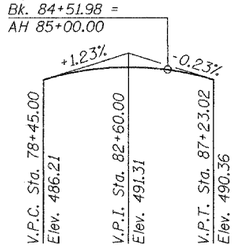
STATION 84+17.00
BUILT 20 BY
STATE OF ILLINOIS
F.A.P. RT. 315 SECTION 18B-1
LOADING HS20
STR. NO. 029-0060



For Section A-A thru riprap, see sheet 2 of 13.

Boring 8452

Equation:
Bk. 84+51.98 =
AH 85+00.00



LVC = 830'

PROFILE GRADE
(along ℄ roadway)

DESIGNED	Stephen M. Ryan
CHECKED	
DRAWN	R. Doty BMC
CHECKED	SMR

April 29, 2005
EXAMINED Thomas Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
RALPH E. ANDERSON
081-004625
SPRINGFIELD
LICENSED STRUCTURAL ENGINEER

EXPIRES 11-30-2006

NAME PLATE
See Std. 515001

CURVE DATA
(U.S. Rte. 24)
P.I. Sta. = 71+34.68
Δ = 28°-53'-55.60" (LT)
D = 1°-15'-23.35"
R = 4,560.00'
T = 1,175.00'
L = 2,299.97'
E = 148.95'
e = 3.3%
T.R. = 41.28' & 27.93'
S.E. Run = 196.85
P.C. Sta. = 59+59.68
P.T. Sta. = 82+59.64
S.E. Transition = 81+61.21
Normal Crown = 83+86.0

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

DESIGN SPECIFICATIONS
2002 AASHTO

DESIGN STRESSES
FIELD UNITS
f'_c = 3,500 psi
f_y = 60,000 psi (reinforcement)
PRECAST PRESTRESSED UNITS
f'_c = 6,000 psi
f'_{ci} = 5,000 psi
f'_s = 270,000 psi (½"ϕ low lax. strands)
f'_{si} = 201,960 psi (½"ϕ low lax. strands)

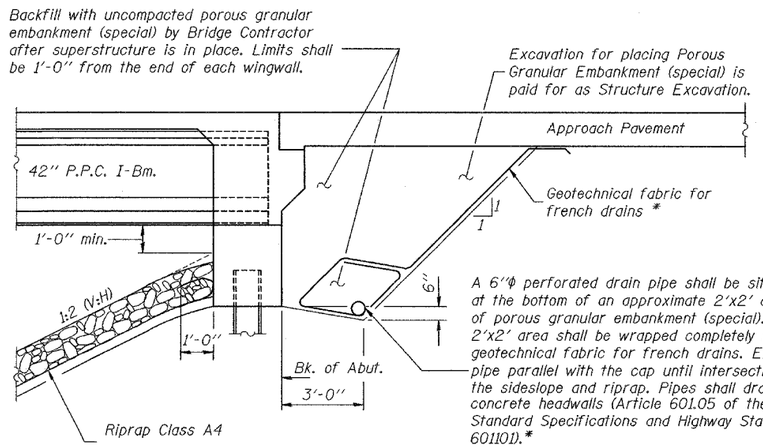
SEISMIC DATA
Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 4.3%g
Site Coefficient (S) = 1.2

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

The Contractor shall drive one (1) steel HP12x53 test pile in a permanent location at the South Abutment as directed by the Engineer before ordering the remainder of piles.

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

All construction joints shall be bonded.



SECTION THRU INTEGRAL ABUTMENT
* - Included in the cost of Porous Granular Embankment (special).

TOTAL BILL OF MATERIAL

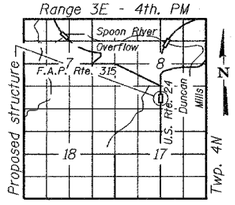
ITEM	UNIT	SUPER	SUB	TOTAL
Removal of Existing Structures No. 3	Each			1
Structure Excavation	Cu. Yd.		380	380
Porous Granular Embankment (Special)	Cu. Yd.		222	222
Protective Coat	Sq. Yd.	300		300
Concrete Structures	Cu. Yd.		33.8	33.8
Concrete Superstructure	Cu. Yd.	100.4		100.4
Furnishing and Erecting Precast Prestressed Concrete I-Beams, 42"	Foot	366		366
Bridge Deck Grooving	Sq. Yd.	233		233
Reinforcement Bars, Epoxy Coated	Pound	17,380	4320	21,700
Floor Drains	Each	6		6
Furnishing Steel Piles HP12x53	Foot		415	415
Driving Steel Piles	Foot		415	415
Test Pile Steel HP12x53	Each		1	1
Name Plates	Each	1		1
Stone Riprap, Class A4	Ton		437	437
Filter Fabric	Sq. Yd.		655	655
Bar Splicers	Each	72	44	116
Temporary Sheet Piling	Sq. Ft.		689	689

WATERWAY INFORMATION

Exist. Low Grade Elev. 490.4 @ Sta. 83+00
Drainage Area = 1.3 mi.² Prop. Low Grade Elev. 490.0 @ Sta. 83+00

Flood	Freq. Yr.	Q C.F.S.	Opening Sq. Ft. Exist.	Opening Sq. Ft. Prop.	Nat. H.W.E.	Head - Ft. Exist.	Head - Ft. Prop.	Headwater El. Exist.	Headwater El. Prop.
	10	601	57	109	478.4	2.5	0.6	480.9	479.0
Design	50	1001	71	144	479.6	3.8	0.9	483.4	480.5
Base	100	1181	75	156	479.9	4.6	1.0	484.5	480.9
Max. Calc.	500	1627	83	180	480.5	7.7	1.1	488.2	481.6

10 year velocity existing bridge = 10.5 ft./sec. 10 year velocity proposed bridge = 5.5 ft./sec.



LOCATION SKETCH

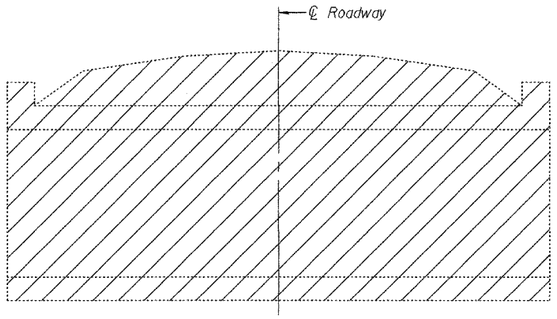
GENERAL PLAN
U.S. ROUTE 24 OVER
SPOON RIVER TRIBUTARY
F.A.P. ROUTE 315 - SECTION 18B-1
FULTON COUNTY
STATION 84+17.00
STRUCTURE NO. 029-0060

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 315	18B-1	FULTON		2 | 1
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

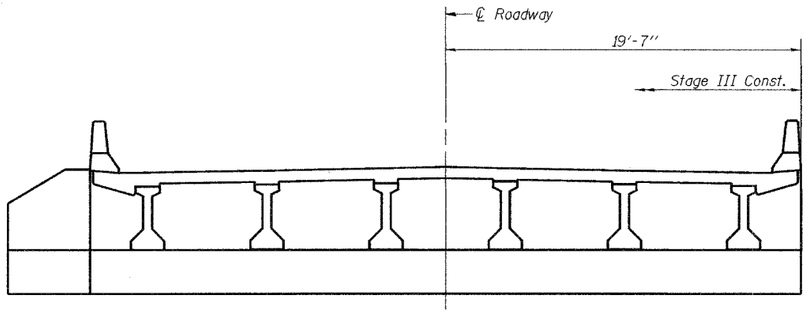
SHEET NO. 2
13 SHEETS

Contract #88753

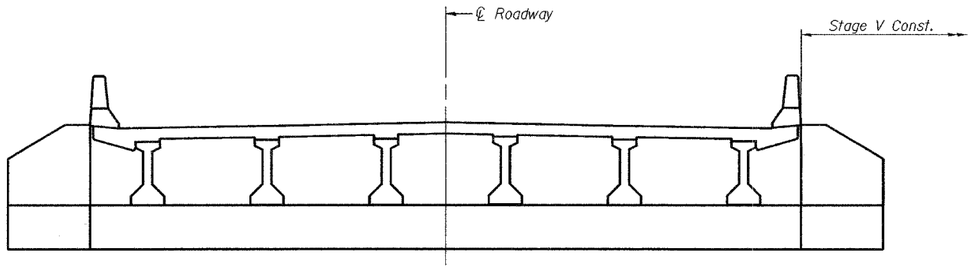
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



STAGE III REMOVAL

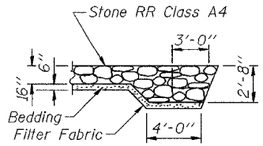


STAGE III CONSTRUCTION



STAGE V CONSTRUCTION

INDEX OF SHEETS



SECTION A-A

Note:
All sections are looking South.
Hatched areas indicate Removal of Existing Structures.
For details of Stages I, II, and IV, see Roadway Plans.

DESIGNED	Stephen M. Ryan
CHECKED	SEM & MDS
DRAWN	R. Doty DMC
CHECKED	SMR/MDS/SEM

April 11, 2005
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

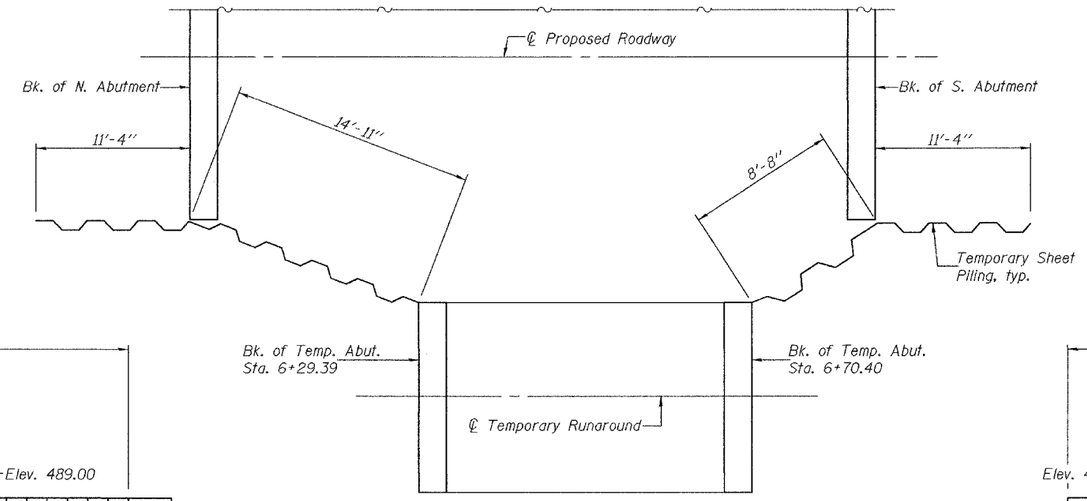
STAGE CONSTRUCTION DETAILS
F.A.P. RT. 315 SEC. 18B-1
FULTON COUNTY
STATION 84+17.00
STRUCTURE NO. 029-0060

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 315	18B-1	FULTON		2
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

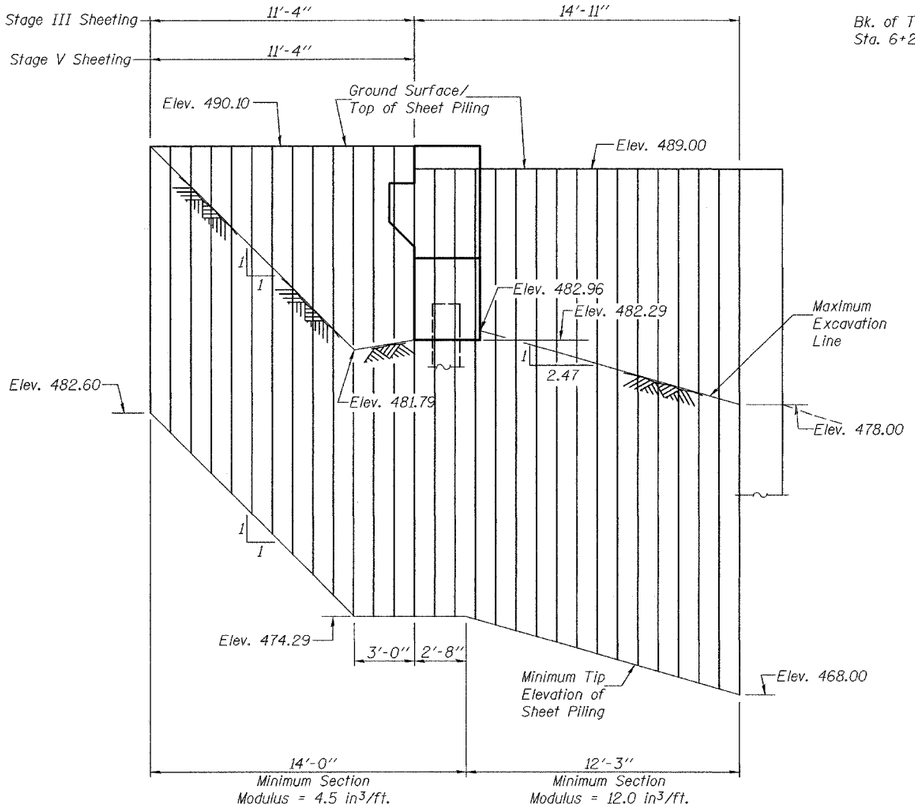
SHEET NO. 3
13 SHEETS

Contract #88753

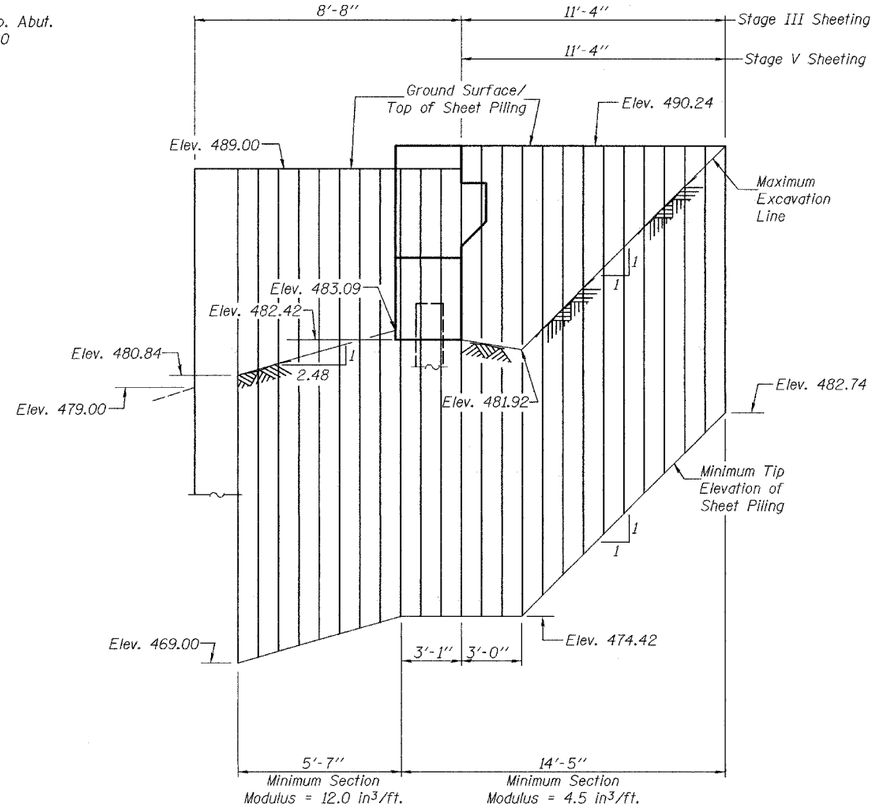


N

TEMPORARY SHEET PILING PLAN



ELEVATION AT NORTH ABUTMENT



ELEVATION AT SOUTH ABUTMENT

TEMPORARY SHEET PILING

If the Contractor chooses to alter the temporary cantilevered sheet piling design requirements shown on the plans, a design submittal including plan details and calculations will be required for review and acceptance by the Engineer.

DESIGNED	Stephen M. Ryan
CHECKED	SEM/MDS/RLM
DRAWN	R. Doty ØMC
CHECKED	SMR/MDS/SEM

April 11, 2005
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

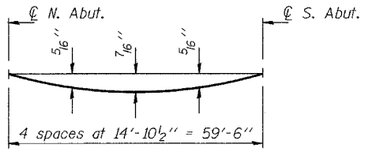
TEMPORARY SHEET PILING DETAILS
F.A.P. RT. 315 SEC. 18B-1
FULTON COUNTY
STATION 84+17.00
STRUCTURE NO. 029-0060

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 315	18B-1	FULTON		213
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 4
13 SHEETS

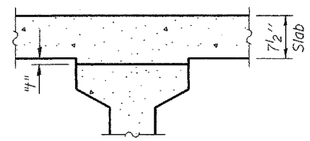
Contract #88753



DEAD LOAD DEFLECTION DIAGRAM

Includes weight of concrete, excluding beams

Note: The above deflections are not to be used in the field if the Engineer is working from the grade elevations adjusted for dead load deflections as shown below.



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

FILLET HEIGHTS

BEAM 1

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk N Abut	8386.000	-16.250	490.010	490.010
℄ N Abut	8387.250	-16.250	490.013	490.013
A	8397.250	-16.250	490.040	490.057
B	8407.250	-16.250	490.065	490.094
C	8417.250	-16.250	490.088	490.125
D	8427.250	-16.250	490.110	490.139
E	8437.250	-16.250	490.129	490.146
℄ S Abut	8446.750	-16.250	490.146	490.146
Bk S Abut	8448.000	-16.250	490.148	490.148

BEAM 2

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk N Abut	8386.000	-9.750	490.133	490.133
℄ N Abut	8387.250	-9.750	490.137	490.137
A	8397.250	-9.750	490.163	490.181
B	8407.250	-9.750	490.188	490.218
C	8417.250	-9.750	490.212	490.248
D	8427.250	-9.750	490.233	490.262
E	8437.250	-9.750	490.253	490.269
℄ S Abut	8446.750	-9.750	490.270	490.270
Bk S Abut	8448.000	-9.750	490.272	490.272

BEAM 3

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk N Abut	8386.000	-3.250	490.235	490.235
℄ N Abut	8387.250	-3.250	490.238	490.238
A	8397.250	-3.250	490.265	490.282
B	8407.250	-3.250	490.290	490.320
C	8417.250	-3.250	490.313	490.350
D	8427.250	-3.250	490.335	490.364
E	8437.250	-3.250	490.354	490.371
℄ S Abut	8446.750	-3.250	490.371	490.371
Bk S Abut	8448.000	-3.250	490.374	490.374

℄ ROADWAY AND PROFILE GRADE

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk N Abut	8386.000	0.000	490.286	490.286
℄ N Abut	8387.250	0.000	490.289	490.289
A	8397.250	0.000	490.316	490.333
B	8407.250	0.000	490.341	490.370
C	8417.250	0.000	490.364	490.401
D	8427.250	0.000	490.385	490.415
E	8437.250	0.000	490.405	490.422
℄ S Abut	8446.750	0.000	490.422	490.422
Bk S Abut	8448.000	0.000	490.424	490.424

BEAM 4

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk N Abut	8386.000	3.250	490.235	490.235
℄ N Abut	8387.250	3.250	490.238	490.238
A	8397.250	3.250	490.265	490.282
B	8407.250	3.250	490.290	490.320
C	8417.250	3.250	490.313	490.350
D	8427.250	3.250	490.335	490.364
E	8437.250	3.250	490.354	490.371
℄ S Abut	8446.750	3.250	490.371	490.371
Bk S Abut	8448.000	3.250	490.374	490.374

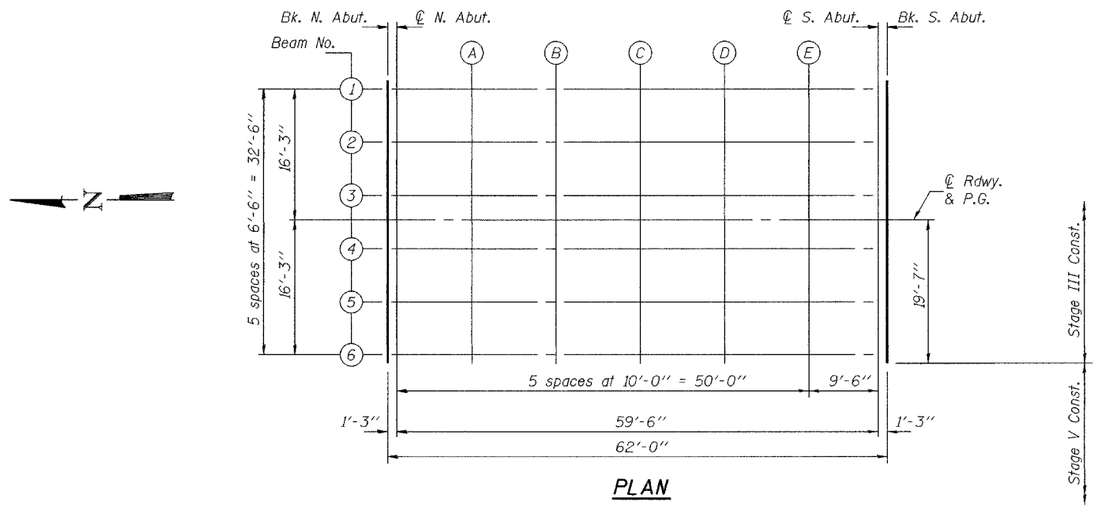
BEAM 5

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk N Abut	8386.000	9.750	490.133	490.133
℄ N Abut	8387.250	9.750	490.137	490.137
A	8397.250	9.750	490.163	490.181
B	8407.250	9.750	490.188	490.218
C	8417.250	9.750	490.212	490.248
D	8427.250	9.750	490.233	490.262
E	8437.250	9.750	490.253	490.269
℄ S Abut	8446.750	9.750	490.270	490.270
Bk S Abut	8448.000	9.750	490.272	490.272

BEAM 6

Location	Station	Offset	Theoretical Grade Elevations	Theoretical Grade Elevations Adjusted For Dead Load Deflection
Bk N Abut	8386.000	16.250	490.010	490.010
℄ N Abut	8387.250	16.250	490.013	490.013
A	8397.250	16.250	490.040	490.057
B	8407.250	16.250	490.065	490.094
C	8417.250	16.250	490.088	490.125
D	8427.250	16.250	490.110	490.139
E	8437.250	16.250	490.129	490.146
℄ S Abut	8446.750	16.250	490.146	490.146
Bk S Abut	8448.000	16.250	490.148	490.148

Note:
All stations are using Back stationing.
For station equation, see Plan on sheet 1 of 13.



PLAN

DESIGNED	Stephen M. Ryan
CHECKED	Sital J. Bhakta
DRAWN	R. Doty BMG
CHECKED	SMR/SJB

April 11, 2005
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

PI-E 9-1-03

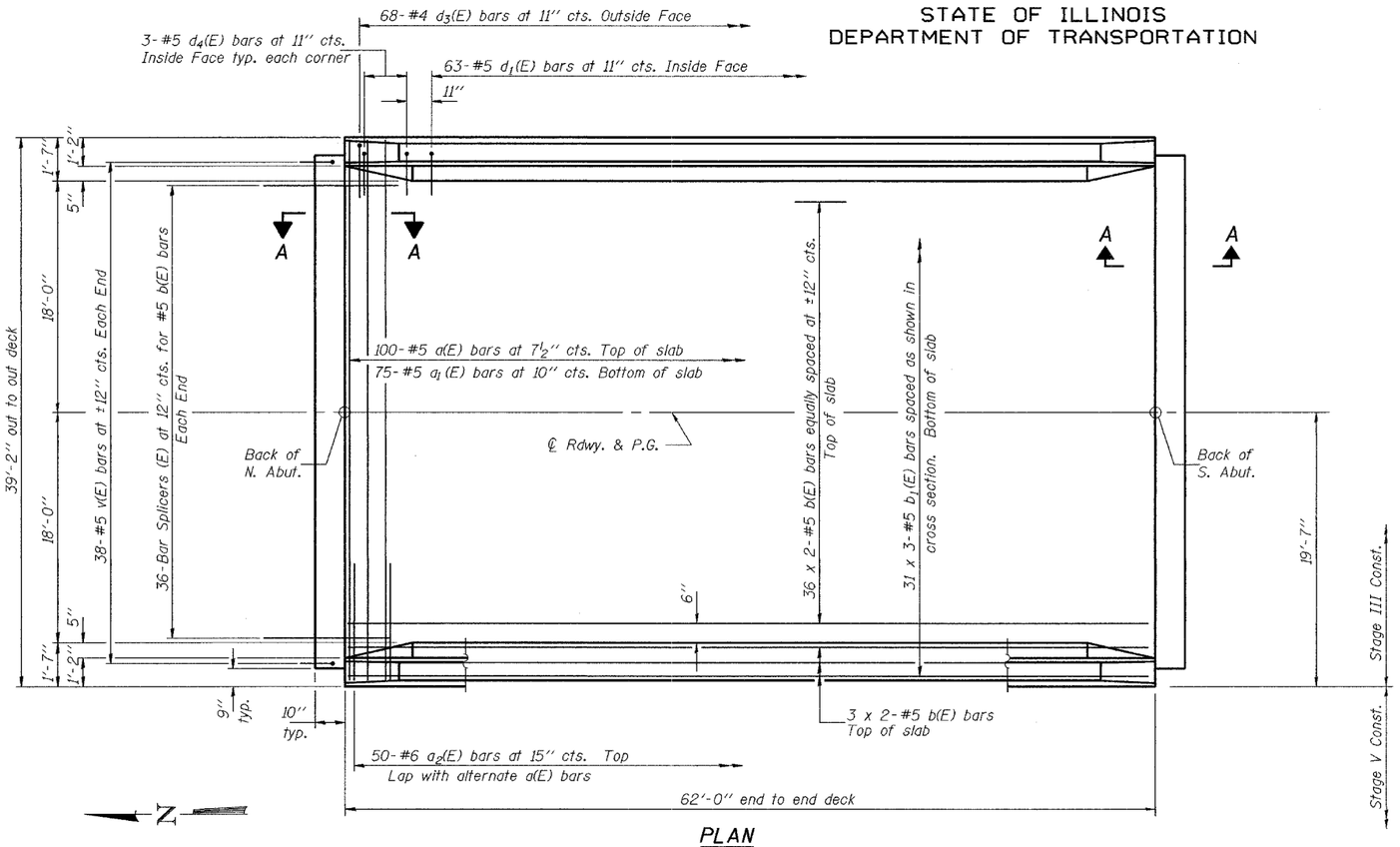
TOP OF SLAB ELEVATIONS
F.A.P. RT. 315 SEC. 18B-1
FULTON COUNTY
STATION 84+17.00
STRUCTURE NO. 029-0060

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

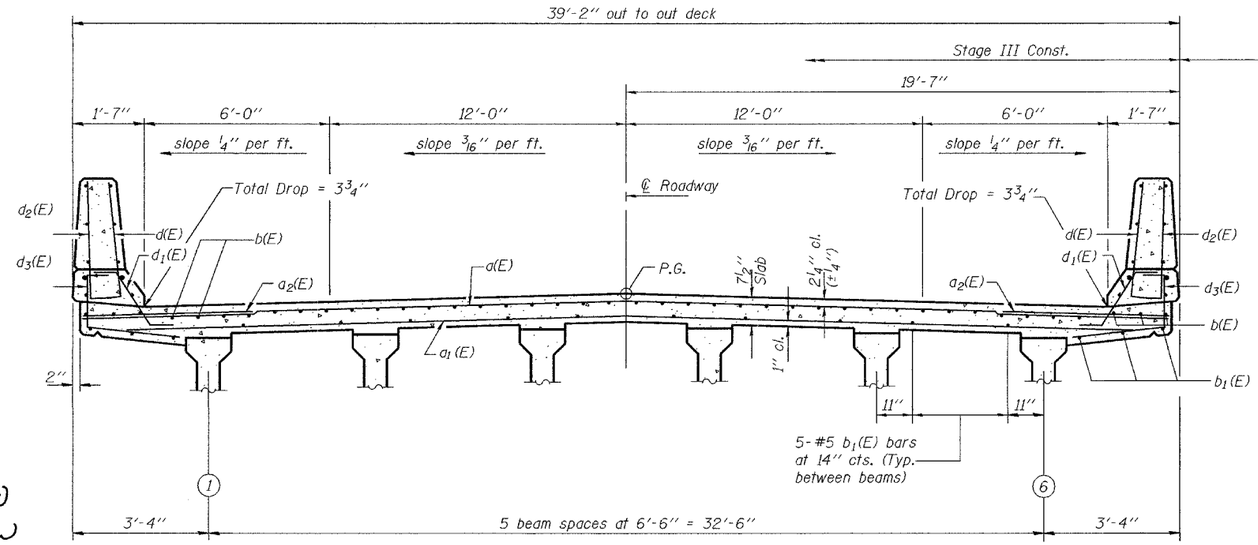
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 315	18B-1	FULTON		214
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 5
13 SHEETS

Contract #88753



PLAN



CROSS SECTION

MIN. BAR LAP

#5 bars = 1'-8"

Notes: See sheet 6 of 13 for superstructure details, parapet reinforcement and Bill of Material.
For Section A-A and diaphragm details see sheet 7 of 13.
Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 36 x 2-#5 etc. indicates 36 lines of bars with 2 lengths per line.
See sheet 12 of 13 for bar splicer details.
See sheet 1 of 13 for floor drain spacing.

DESIGNED	Stephen M. Ryan
CHECKED	Sital J. Bhakta
DRAWN	R. Doty BMG
CHECKED	SMR/SJB

April 11, 2005
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

PI-1-0 9-1-03

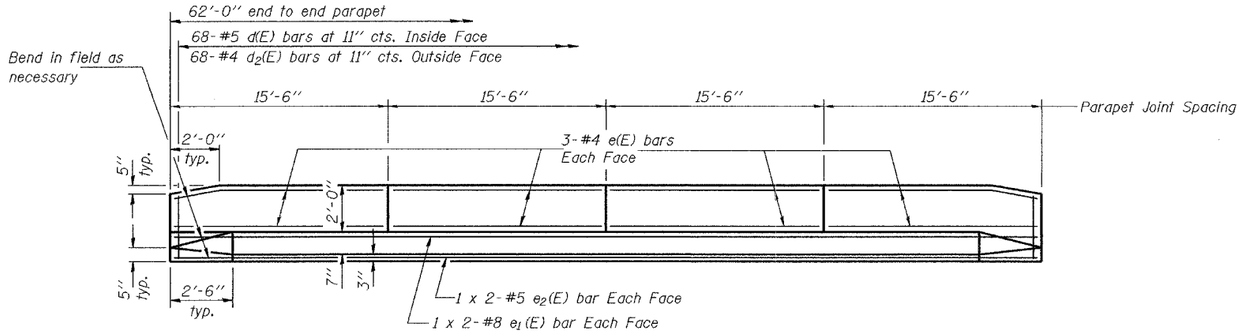
SUPERSTRUCTURE
F.A.P. RT. 315 SEC. 18B-1
FULTON COUNTY
STATION 84+17.00
STRUCTURE NO. 029-0060

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

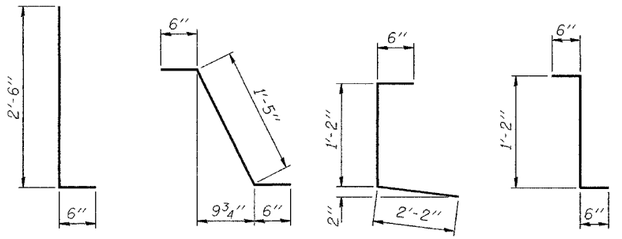
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 315	18B-1	FULTON		215
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 6
13 SHEETS

Contract #88753

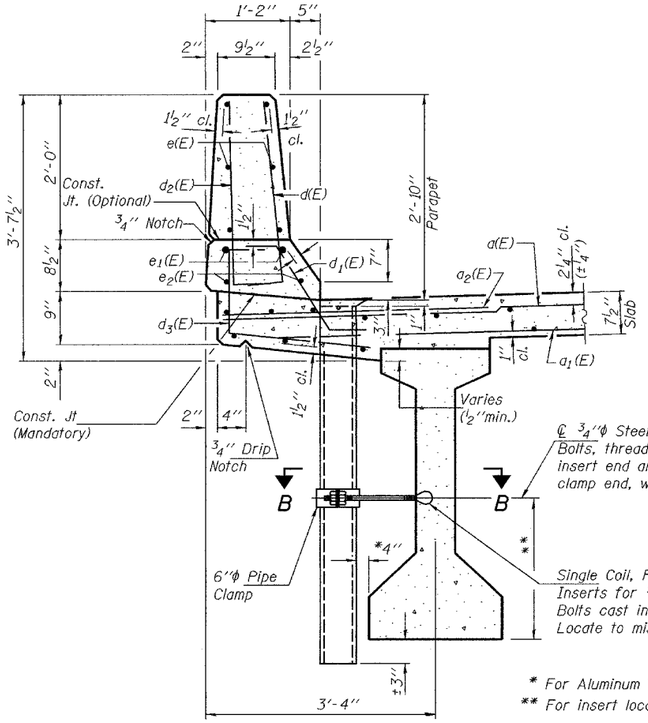


INSIDE ELEVATION OF PARAPET

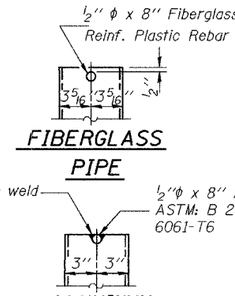


MIN. BAR LAPS

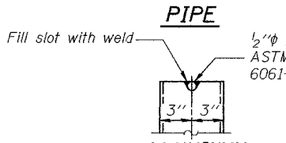
#5 bar = 1'-8"
#8 bar = 3'-5"



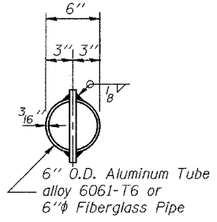
SECTION THRU PARAPET



FIBERGLASS PIPE

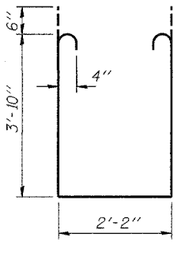


ALUMINUM TUBE

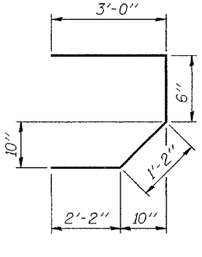


TOP PLAN

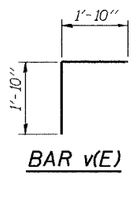
Showing Aluminum Tube



BAR s1(E)



BAR s(E)



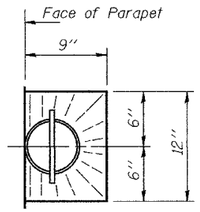
BAR v(E)

Notes:

Fiberglass pipe shall conform to ASTM D2996, with short-time rupture strength hoop tensile stress of 30,000 p.s.i. minimum.

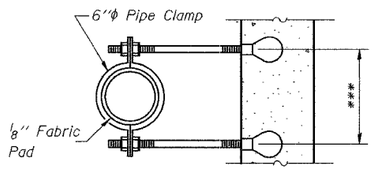
The exterior surfaces of the floor drains shall be coated or pigmented by the manufacturer with a color that matches the concrete.

The clamping device and inserts shall be galvanized according to AASHTO M 232.



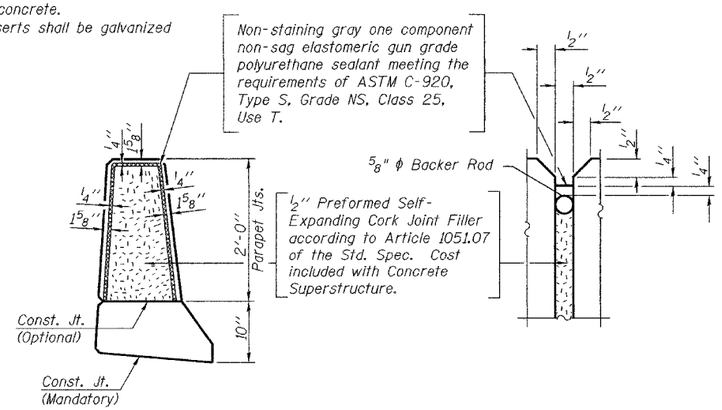
TOP PLAN

* For Aluminum Tube Option.
** For insert locations see sheet 9 of 13.



*** Dimension as required by Pipe Clamp

SECTION B-B



PARAPET JOINT DETAILS

SUPERSTRUCTURE BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a(E)	100	#5	38'-6"	—
a1(E)	75	#5	36'-10"	—
a2(E)	100	#5	4'-6"	—
b(E)	84	#5	31'-9"	—
b1(E)	93	#5	21'-8"	—
d(E)	136	#5	3'-0"	⎯
d1(E)	126	#5	2'-5"	⌐
d2(E)	136	#4	3'-0"	⎯
d3(E)	136	#4	3'-8"	⊏
d4(E)	12	#5	2'-2"	⌐
e(E)	48	#4	15'-2"	—
e1(E)	8	#8	32'-7"	—
e2(E)	8	#5	31'-8"	—
m(E)	4	#6	37'-4"	—
m1(E)	24	#6	9'-3"	—
m2(E)	6	#6	38'-11"	—
m3(E)	10	#6	4'-5"	—
m4(E)	4	#6	2'-1"	—
s(E)	72	#5	6'-10"	⌐
s1(E)	72	#4	10'-10"	⊐
v(E)	76	#5	3'-8"	⌐
Reinforcement Bars, Epoxy Coated			Pound	17,380
Concrete Superstructure			Cu. Yd.	100.4

Reinforcement bars designated (E) shall be epoxy coated.
Bars indicated thus 1 x 2-#5 etc. indicates 1 line of bars with 2 lengths per line.

DESIGNED	Stephen M. Ryan
CHECKED	Sital J. Bhakta
DRAWN	R. Doty BMG
CHECKED	SMR/SJB

April 11, 2005
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

PI-1-D 9-1-03

SUPERSTRUCTURE DETAILS
F.A.P. RT. 315 SEC. 18B-1
FULTON COUNTY
STATION 84+17.00
STRUCTURE NO. 029-0060

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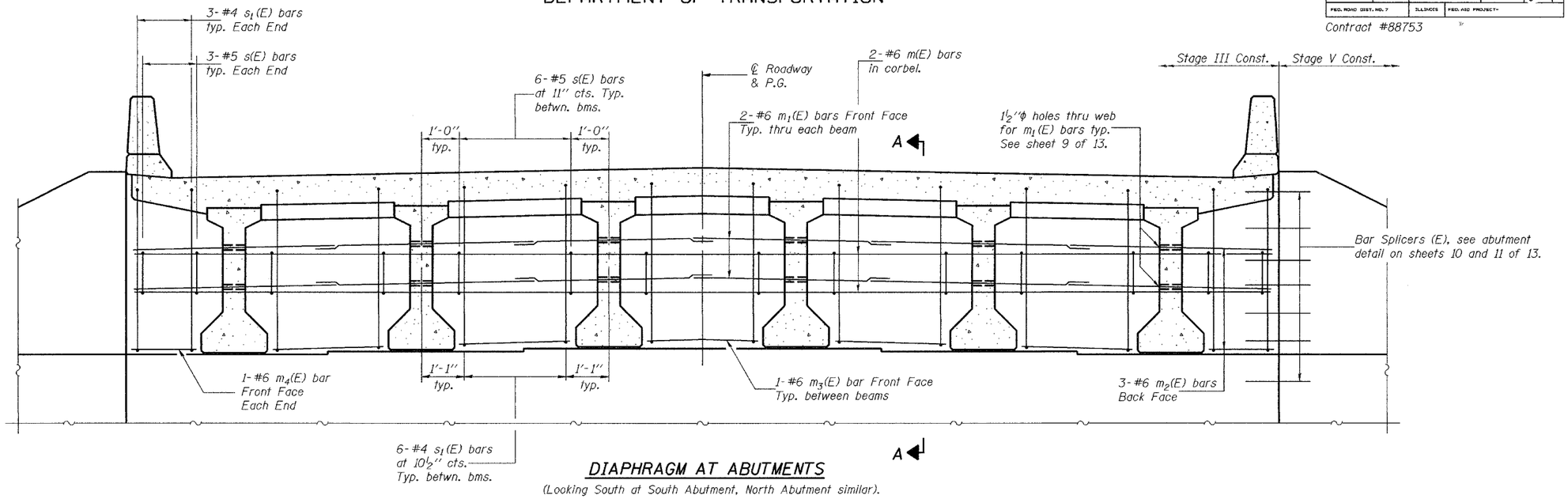
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 315	18B-1	FULTON		216
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

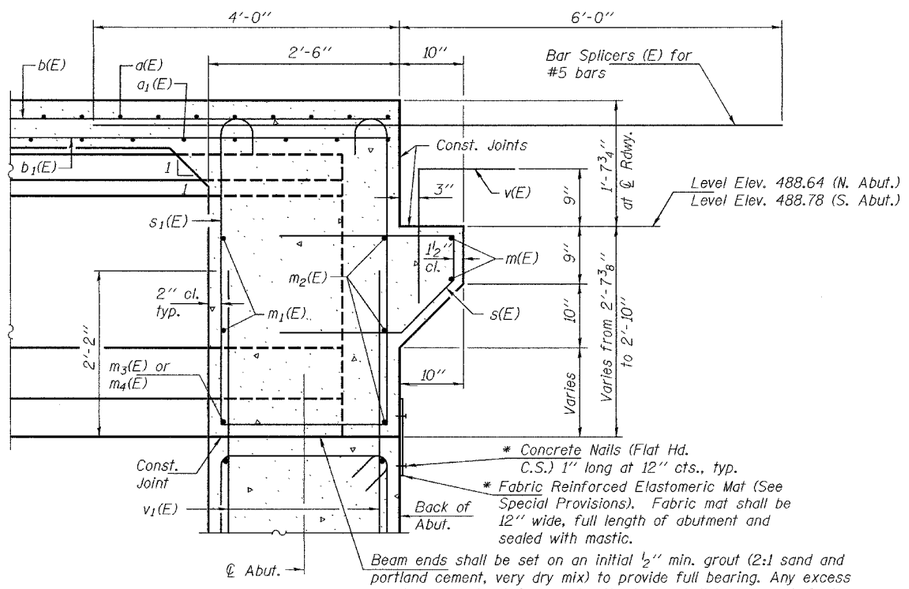
SHEET NO. 7
13 SHEETS

Contract #88753



DIAPHRAGM AT ABUTMENTS

(Looking South at South Abutment, North Abutment similar).



SECTION A-A

MIN. BAR LAP

#6 bar = 2'-9"

Notes:
- Reinforcement bars in diaphragm are billed with superstructure on sheet 6 of 13.
- Concrete in diaphragm is included with Concrete Superstructure on sheet 6 of 13.
- For details of bars v(E), s(E) and s_1(E) see sheet 6 of 13.
- Reinforcement bars designated (E) shall be epoxy coated.
- For details of Bar Splicers, see sheet 12 of 13.

* Cost included with Concrete Structures.

DESIGNED	Stephen M. Ryan
CHECKED	Sital J. Bhakta
DRAWN	R. Doty BMC
CHECKED	SMR/SJB

April 11, 2005
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

DIAPHRAGM DETAILS
F.A.P. RT. 315 SEC. 18B-1
FULTON COUNTY
STATION 84+17.00
STRUCTURE NO. 029-0060

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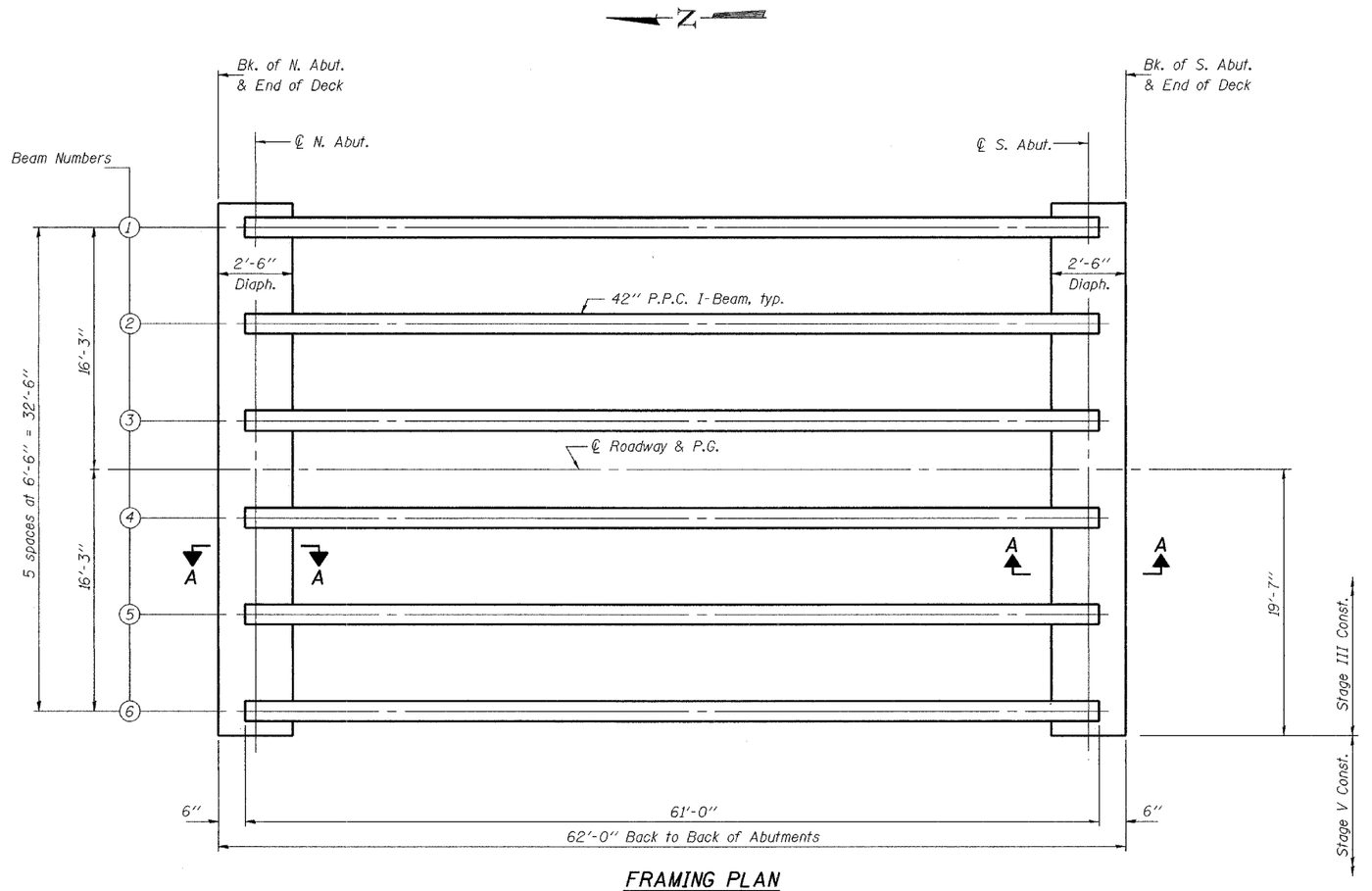
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 315	18B-1	FULTON		217
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 8
13 SHEETS

Contract #88753



FRAMING PLAN

Note: For Section A-A see sheet 7 of 13.

DESIGNED	Stephen M. Ryan
CHECKED	Sital J. Bhakta
DRAWN	R. Doty ØMC
CHECKED	SMR/SJB

April 11, 2005
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

FRAMING PLAN
F.A.P. RT. 315 SEC. 18B-1
FULTON COUNTY
STATION 84+17.00
STRUCTURE NO. 029-0060

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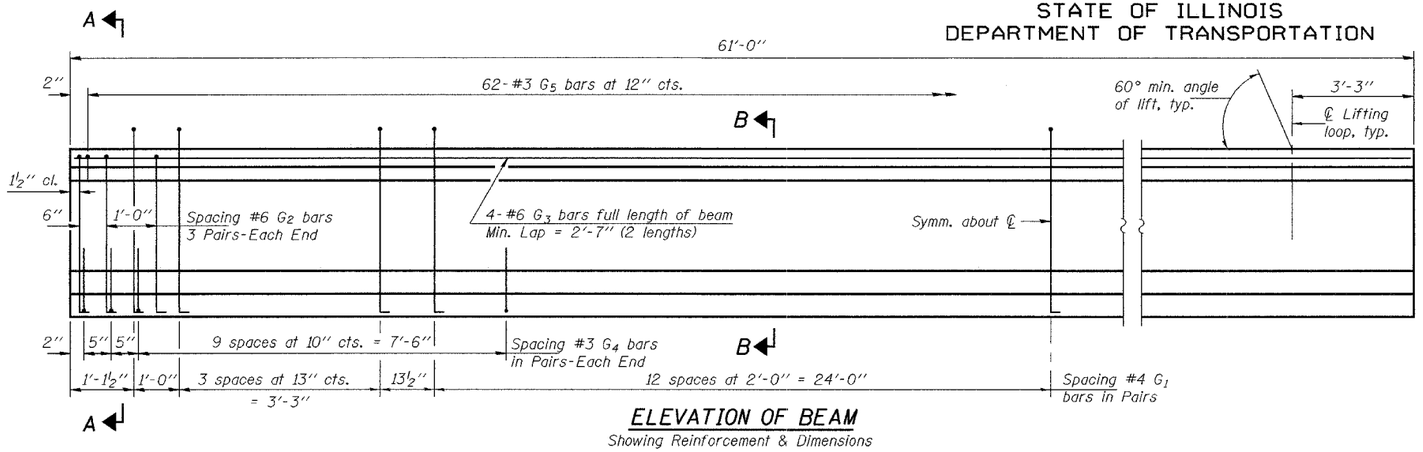
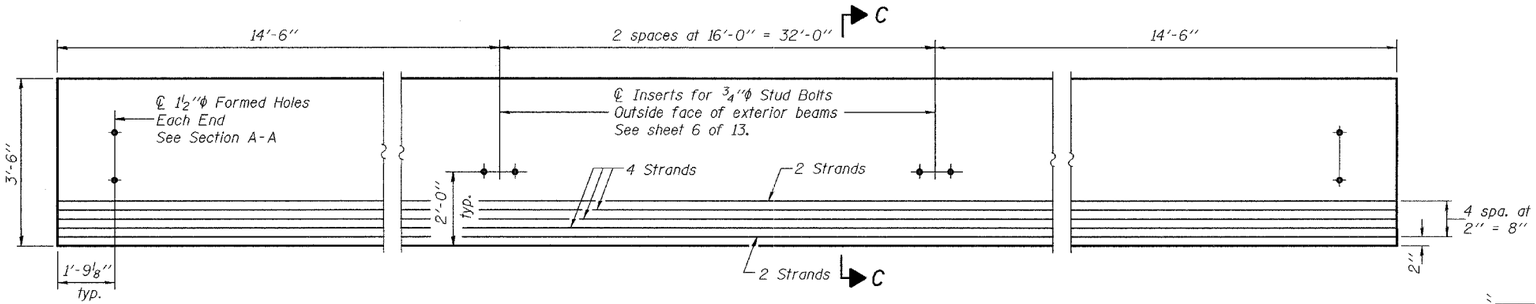
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 315	18B-1	FULTON	13	SHEET NO. 9
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		13 SHEETS

Contract #88753



ELEVATION OF BEAM
Showing Reinforcement & Dimensions



ELEVATION OF BEAM
Showing Prestressing Steel

INTERIOR BEAM MOMENT TABLE		0.5 Span
I	(in⁴)	90955.6
I'	(in⁴)	272413
S_b	(in³)	5152.7
S_b'	(in³)	8678
S_t	(in³)	3735.6
S_t'	(in³)	25675
D_L	(k/')	1.111
M_{D_L}	('k)	492
s_{D_L}	(k/')	0.475
$M_{S_{D_L}}$	('k)	210
M_L	('k)	471
M (Imp)	('k)	128

INTERIOR BEAM REACTION TABLE		Abut.
R_{D_L}	(k)	33.1
$R_{S_{D_L}}$	(k)	14.1
R_L	(k)	35.9
Imp.	(k)	9.7
R (Total)	(k)	92.8

I and I' are the moment of inertia and composite moment of inertia of the beam section.

Sb and Sb' are the non-composite and composite section modulus for the bottom fiber of the prestressed beam.

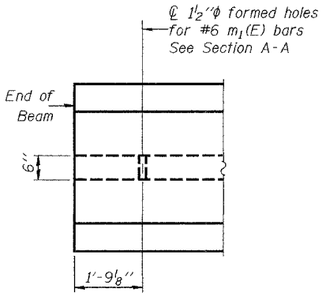
St and St' are the non-composite and composite section modulus for the top fiber of the prestressed beam.

M_{D_L} is the moment due to dead loads on the non-composite prestressed beam. It is conservatively calculated at 0.5 of the span.

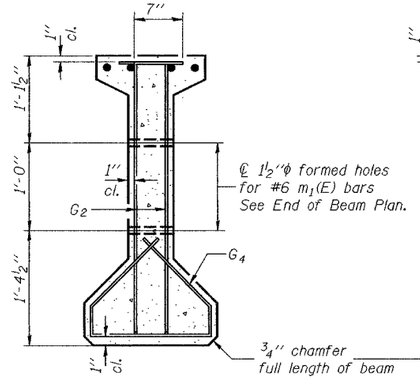
$M_{S_{D_L}}$ is the moment due to dead loads on the composite section.

M_L is the moment due to live load on the composite section.

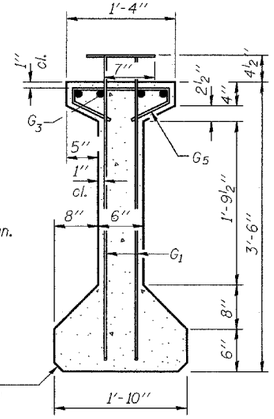
M (Imp) is the moment due to live load impact on the composite section.



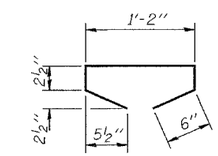
END OF BEAM PLAN



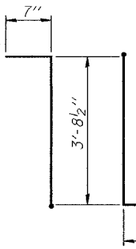
SECTION A-A



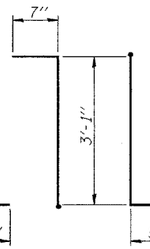
SECTION B-B



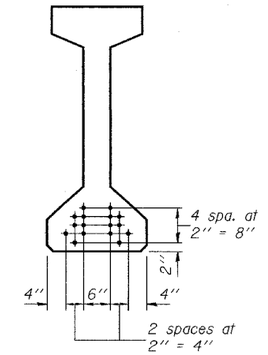
BAR G5



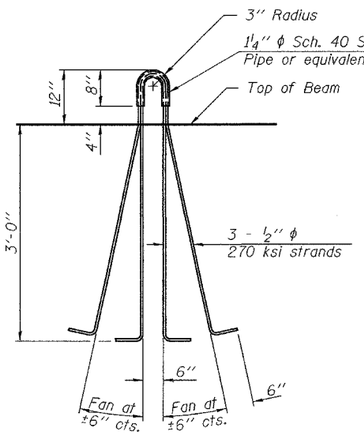
BAR G1



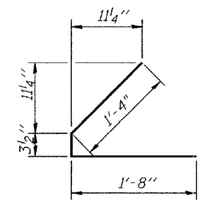
BAR G2



SECTION C-C



LIFTING LOOP DETAIL



BAR G4

*BAR LIST

Bar	No.	Size	Length	Shape
G_1	35	#4	4'-10½"	7L
G_2	12	#6	4'-1"	7L
G_3	8	#6	31'-8"	——
G_4	48	#3	3'-3½"	⌐
G_5	62	#3	2'-7"	⌓

*For one beam only.

BILL OF MATERIAL

Item	Unit	Total
Furnishing and Erecting Precast Prestressed Concrete I-Beams, 42"	Foot	366

NOTES

Inserts for ¾" ϕ threaded dowel rods are to be two strut, coil type for interior I-Beams and single coil, flared loop type for exterior I-Beams.

Prestressing steel shall be uncoated high strength, low relaxation 7-wire strand, Grade 270.

The nominal diameter shall be ½" and the nominal cross-sectional area shall be 0.153 sq. in.

Non-prestressing steel shall conform to AASHTO designation M-31 or M 322, Grade 60.

A minimum 2½" ϕ lifting pin shall be used to engage the lifting loops during handling.

Required release strength, f'ci, shall be 5,000 psi.

Reinforcement bars designated (E) shall be epoxy coated.

DESIGNED	Stephen M. Ryan
CHECKED	Sital J. Bhakta
DRAWN	R. Doty
CHECKED	SMR/SJB

April 11, 2005
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

BEAM DETAILS
F.A.P. RT. 315 SEC. 18B-1
FULTON COUNTY
STATION 84+17.00
STRUCTURE NO. 029-0060

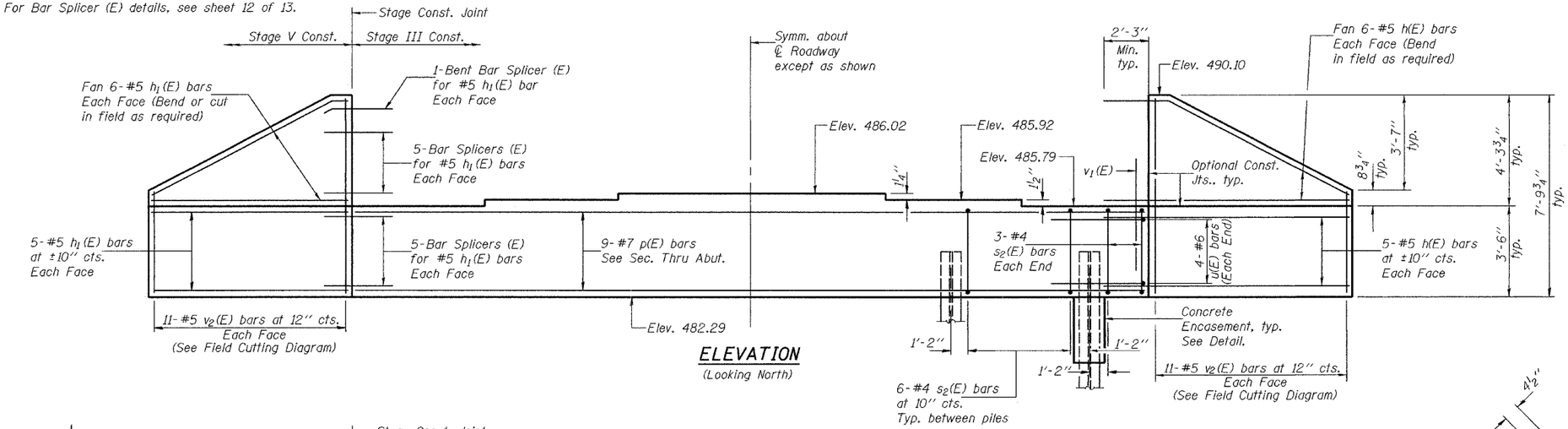
Notes: Pour steps monolithically with cap.
Reinforcement bars designated (E) shall be epoxy coated.
For Bar Splicer (E) details, see sheet 12 of 13.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

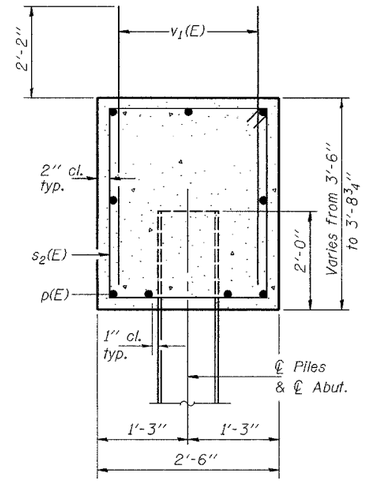
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 315	18B-1	FULTON		9
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 10
13 SHEETS

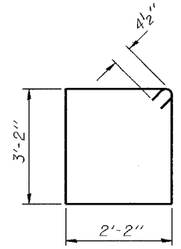
Contract #88753



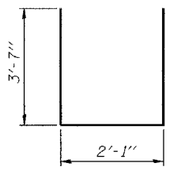
ELEVATION
(Looking North)



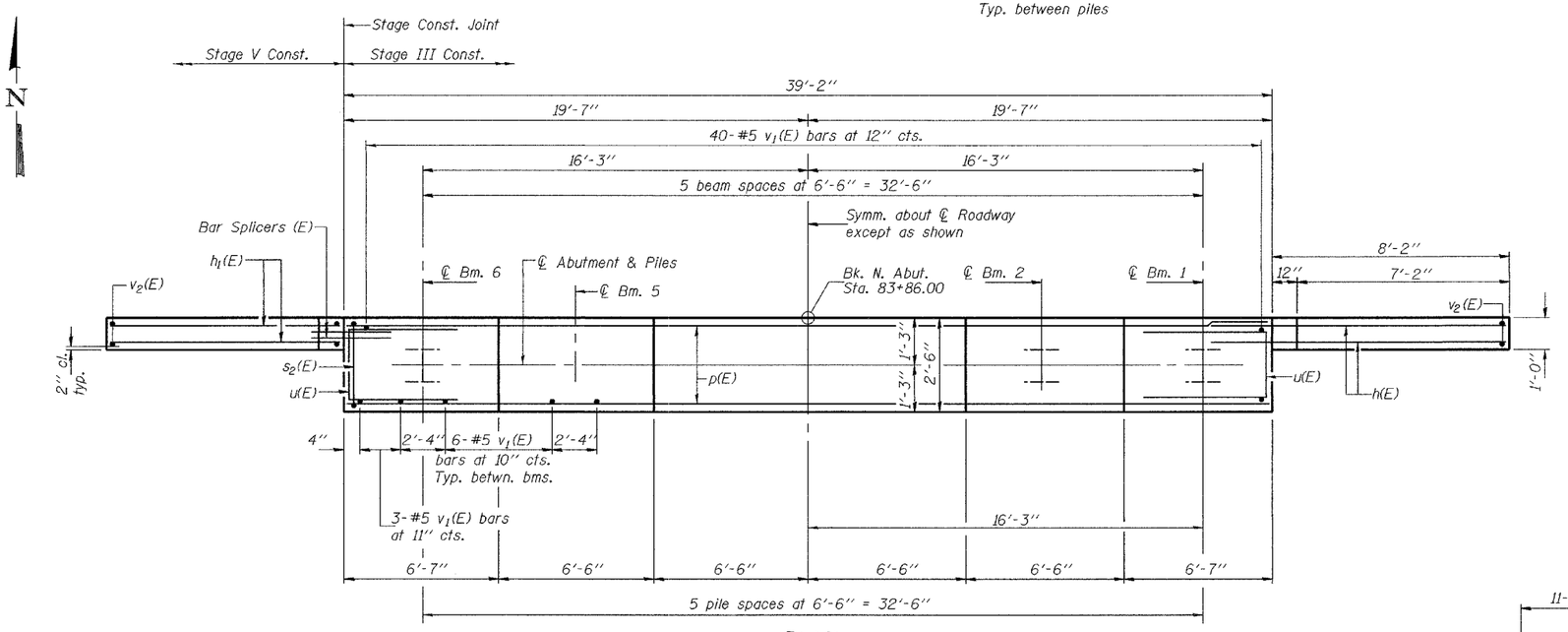
SEC. THRU ABUT.



BAR s_2(E)



BAR u(E)



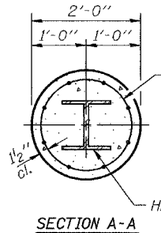
PLAN

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	22	#5	11'-1"	——
h_1(E)	22	#5	8'-8"	——
p(E)	9	#7	38'-10"	——
s_2(E)	36	#4	11'-5"	□
u(E)	8	#6	9'-3"	⊏
v_1(E)	76	#5	4'-4"	——
v_2(E)	22	#5	11'-5"	——
Structure Excavation			Cu. Yd.	190
Concrete Structures			Cu. Yd.	16.9
Reinforcement Bars, Epoxy Coated			Pound	2160
Furnishing Steel Piles HP12x53			Foot	240
Driving Steel Piles			Foot	240

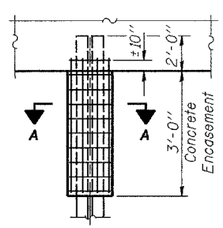
PILE DATA

Type: Steel HP12x53
Capacity: Driven to refusal
Est. Length: 40'
No. Required: 6

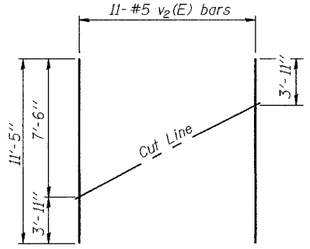


SECTION A-A

Welded wire fabric 6x6-W4.0xW4.0 weighing 58#/100 sq. ft. The cost of excavation, Concrete Encasement and reinforcement is included with furnishing piles. Forms for encasement may be omitted when soil conditions permit.



PILE ENCASEMENT DETAIL



FIELD CUTTING DIAGRAM

Order v_2(E) bars full length. Cut as shown and use remainder of bars in opposite face.

DESIGNED	Stephen M. Ryan
CHECKED	SJB & SEM
DRAWN	R. Doty BMG
CHECKED	SMR/SJB/SEM

April 11, 2005
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

NORTH ABUTMENT
F.A.P. RT. 315 SEC. 18B-1
FULTON COUNTY
STATION 84+17.00
STRUCTURE NO. 029-0060

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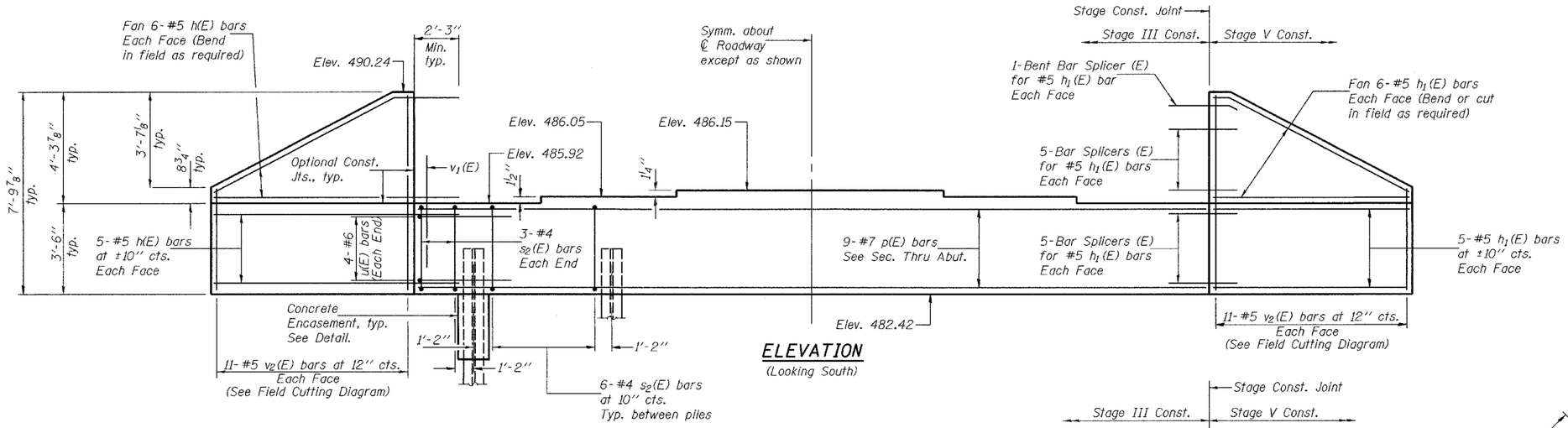
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 315	188-1	FULTON		220
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

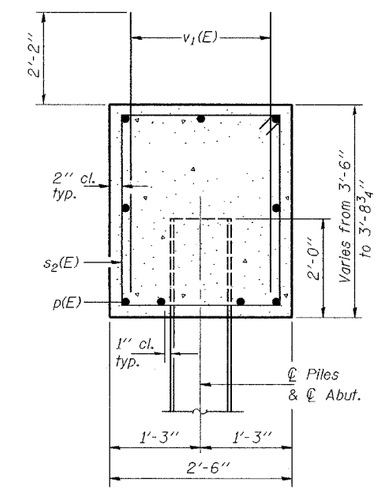
SHEET NO. 11
13 SHEETS

Contract #88753

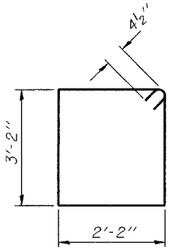
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



ELEVATION
(Looking South)

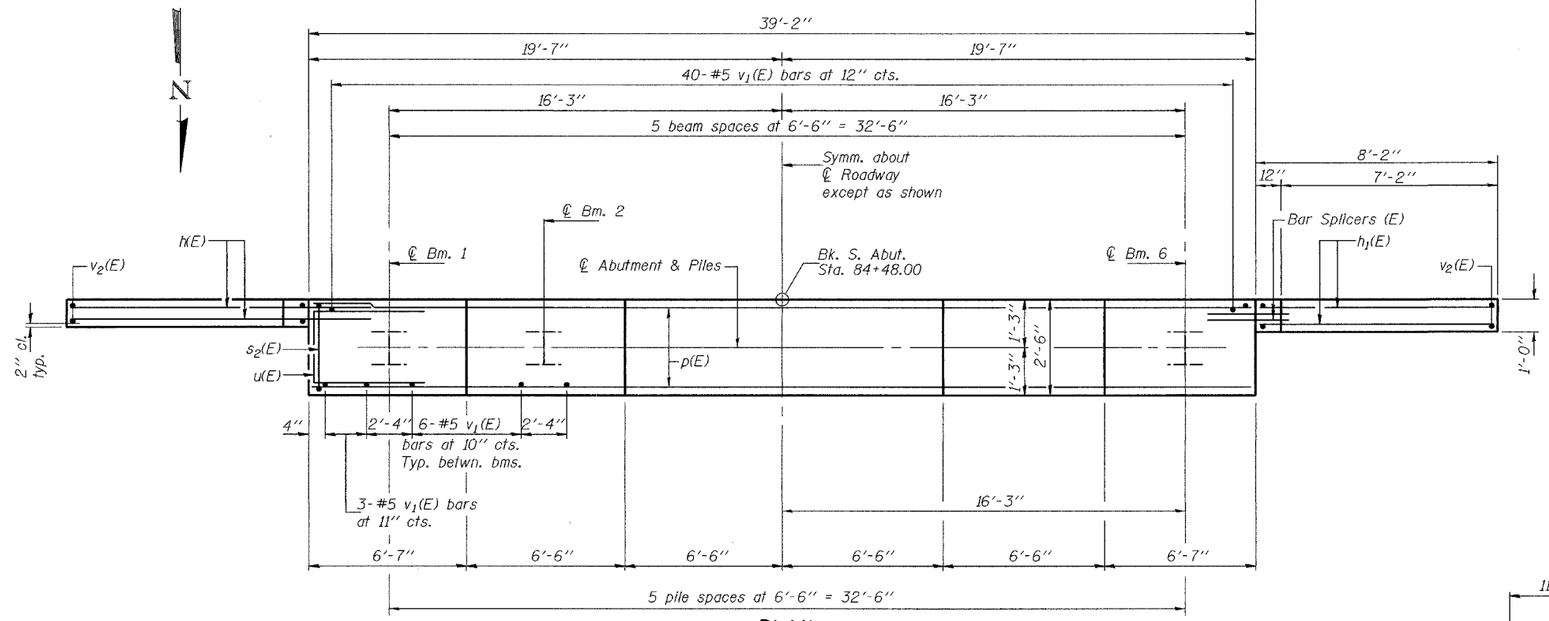


SEC. THRU ABUT.



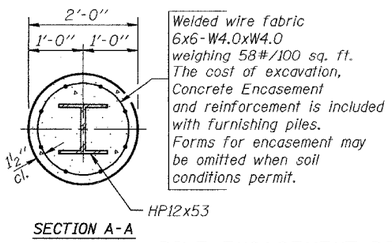
BAR $s_2(E)$

BAR u(E)



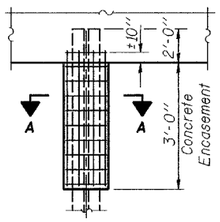
PLAN

Notes:
Pour steps monolithically with cap.
Reinforcement bars designated (E) shall be epoxy coated.
For bar splicer (E) details, see sheet 12 of 13.



SECTION A-A

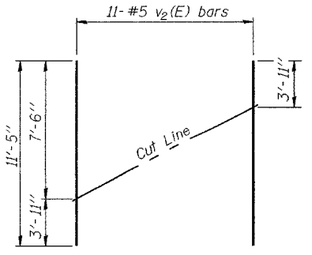
Welded wire fabric 6x6-W4.0xW4.0 weighing 58#/100 sq. ft. The cost of excavation, Concrete Encasement and reinforcement is included with furnishing piles. Forms for encasement may be omitted when soil conditions permit.



PILE ENCASEMENT DETAIL

PILE DATA

Type: Steel HP12x53
Capacity: Driven to refusal
Est. Length: 35'
No. Required: 5 + 1 test pile



FIELD CUTTING DIAGRAM

Order $v_2(E)$ bars full length. Cut as shown and use remainder of bars in opposite face.

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	22	#5	11'-1"	——
$h_1(E)$	22	#5	8'-8"	——
p(E)	9	#7	38'-10"	——
$s_2(E)$	36	#4	11'-5"	▭
u(E)	8	#6	9'-3"	⊏
$v_1(E)$	76	#5	4'-4"	——
$v_2(E)$	22	#5	11'-5"	——
Structure Excavation		Cu. Yd.		190
Concrete Structures		Cu. Yd.		16.9
Reinforcement Bars, Epoxy Coated		Pound		2160
Furnishing Steel Piles HP12x53		Foot		175
Driving Steel Piles		Foot		175
Test Pile Steel HP12x53		Each		1

DESIGNED	Stephen M. Ryan
CHECKED	SJB & SEM
DRAWN	R. Doty DMG
CHECKED	SMR/SJB/SEM

April 11, 2005
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

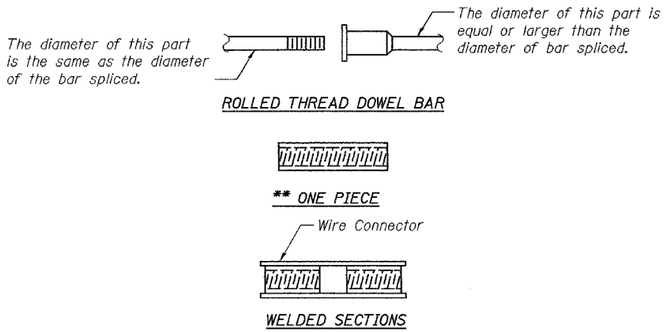
SOUTH ABUTMENT
F.A.P. RT. 315 SEC. 18B-1
FULTON COUNTY
STATION 84+17.00
STRUCTURE NO. 029-0060

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 315	18B-1	FULTON		22
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

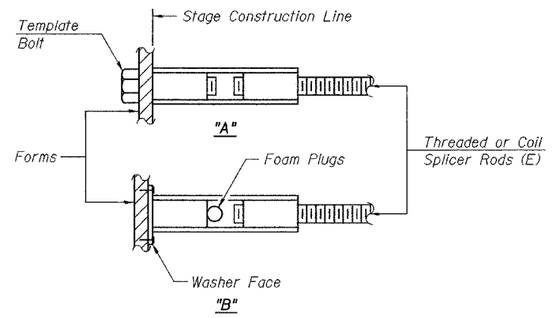
SHEET NO. 12
13 SHEETS

Contract #88753



BAR SPLICER ASSEMBLY ALTERNATIVES

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



INSTALLATION AND SETTING METHODS

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

NOTES

Bar splicer assemblies shall be of an approved type and shall develop in tension at least 125 percent of the yield strength of the lapped reinforcement bars.

Splicer rods shall be of minimum 60 ksi yield strength, threaded or coiled full length.

All reinforcement bars shall be lapped and tied to the splicer rods or dowel bars.

Bar splicer assemblies shall be epoxy coated according to the requirements for reinforcement bars.

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

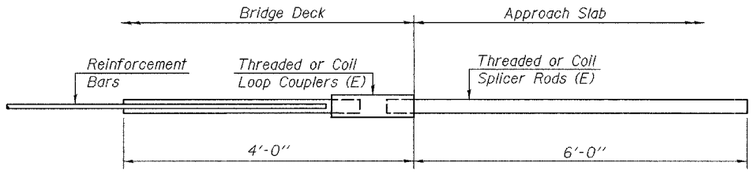
① Minimum Capacity (Tension in kips) = $1.25 \times f_y \times A_t$

② Minimum *Pull-out Strength (Tension in kips) = $1.25 \times fs_{allow} \times A_t$

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

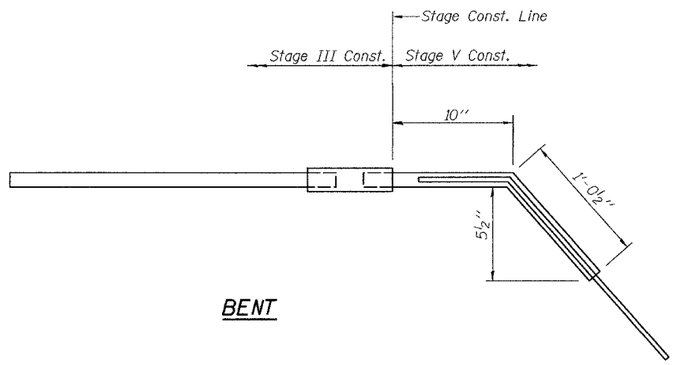
BAR SPLICER ASSEMBLIES			
Bar Size to be Spliced	Splicer Rod or Dowel Bar Length	Strength Requirements	
		Min. Capacity kips - tension	Min. Pull-Out Strength kips - tension
#4	1'-8"	14.7	5.9
#5	2'-0"	23.0	9.2
#6	2'-7"	33.1	13.3
#7	3'-5"	45.1	18.0
#8	4'-6"	58.9	23.6
#9	5'-9"	75.0	30.0
#10	7'-3"	95.0	38.0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

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



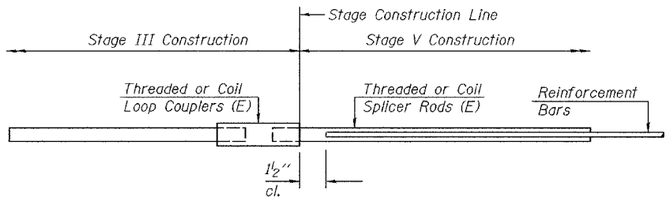
FOR INTEGRAL OR SEMI-INTEGRAL ABUTMENTS

Bar Splicer for #5 bar
Min. Capacity = 23.0 kips - tension
Min. Pull-out Strength = 9.2 kips - tension
No. Required = 72



BENT

Bar Size	No. Assemblies Required	Location
#5	4	Top of West Wingwalls



STANDARD

Bar Size	No. Assemblies Required	Location
#5	20	Abutments
#5	20	Diaphragms

DESIGNED	Stephen M. Ryan
CHECKED	SJB & SEM
DRAWN	R. Doty BMC
CHECKED	SMR/SJB/SEM

April 11, 2005
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

BAR SPLICER ASSEMBLY DETAILS
F.A.P. RT. 315 SEC. 18B-1
FULTON COUNTY
STATION 84+17.00
STRUCTURE NO. 029-0060

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 315	18B-1	FULTON	13	222
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 13
13 SHEETS

Contract #88753

Illinois Department of Transportation
Division of Highways
District Four Materials

SOIL BORING LOG

Page 1 of 1
Date 2/1/91

ROUTE FAP 317 & 315 (US 24/IL 100 & US 136) DESCRIPTION US 24 Lewistown to Duncan Mills LOGGED BY DLR
SECTION 18RS-2,19RS-3,(18BRY&18BRY-1) BR,18B-1 LOCATION , SEC. , TWP. , RNG.
COUNTY Fulton DRILLING METHOD HSA HAMMER TYPE AUTO

STRUCT. NO. _____
Station _____
BORING NO. 8368 (Culvert)
Station 83+68 (Bk. stationing)
Offset 33.00ft Lt. CL
Ground Surface Elev. 476.35 ft

Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft
Groundwater Elev.:
First Encounter 468.9 ft ▼
Upon Completion 6.0' ft
After 24 Hrs. 473.6 ft ▽

DEPTH (ft)	BLOWS (6")	UCS Qu (tsf)	MOIST (%)
NO SAMPLE TAKEN			
473.85			
Brown & Gray SILTY CLAY LOAM ▼	1		
	1	0.8	29.0
	2	B	
471.35 –5			
Brown & Gray LOAM	1		
	1	0.6	29.0
	1	B	
468.85 ▼			
Gray SILTY CLAY LOAM	1		
Free H20	1	0.6	39.0
	2	B	
466.35 –10			
Gray SILTY LOAM	1		
w/trace of organics	1	0.7	34.0
	1	B	
463.85			
Red CLAY	1		
	3	1.1	26.0
	4	S	
–15			
	2		
460.35	5		
Gray LOAM	4	3.1	26.0
		S	20.0
		0.5	
	2	P	
	6	0.6	17.0
	12	B	
458.35 –20			

DEPTH (ft)	BLOWS (6")	UCS Qu (tsf)	MOIST (%)
Gray COARSE SAND & GRAVEL	1		
	3		15.0
	11		
	2		
	3		18.0
	12		
451.35 –25			
Gray SHALEY CLAY	4		
450.35	7	4.3	13.0
Gray & Dk. Gray SANDY SHALE	15	S	
	16		
	100@6"		10.0
–30			
	100@3"		
			12.0
	50@4"		12.0
End of Boring 442.35			
–35			
–40			

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, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
District Four Materials

SOIL BORING LOG

Page 1 of 2
Date 10/16/02

ROUTE FAP 317 & 315 (US 24/IL 100 & US 136) DESCRIPTION US 24 Lewistown to Duncan Mills LOGGED BY DBR
SECTION 18RS-2,19RS-3,(18BRY&18BRY-1) BR,18B-1 LOCATION NW¼, SE¼, SEC. 8, TWP. 4N, RNG. 3E, 4th PM
COUNTY Fulton DRILLING METHOD HSA HAMMER TYPE AUTO

STRUCT. NO. 029-0060(prop)
Station _____
BORING NO. 8446 (Bridge Abut.)
Station 84+46 (Bk. stationing)
Offset 14.00ft Rt.
Ground Surface Elev. 489.8 ft

Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft
Groundwater Elev.:
First Encounter 488.3 ft ▼
Upon Completion 477.6 ft ▽
After 24 Hrs. Not Taken ft

DEPTH (ft)	BLOWS (6")	UCS Qu (tsf)	MOIST (%)
No Sample taken 0-1.5'			
488.30			
Lt. Brown	2		
SILTY LOAM	2	1.3	19.9
	3	P	
	1		
–5	2	0.8	20.3
	1	P	
	1		
	2	0.8	22.9
	1	P	
480.80			
Lt. Brown to Brown	1		
SILTY CLAY	–10 2	0.9	24.4
	2	B	
478.30			
Dk. Gray ▽	1		
SILTY CLAY	2	0.4	33.1
	1	S	
475.80			
Gray	1		
CLAY LOAM	–15 2	1.7	24.8
	1	B	
473.30			
GrayBrown	1		
SILTY CLAY	1	0.9	26.9
	2	B	
	1		
–20	1	0.8	28.1

DEPTH (ft)	BLOWS (6")	UCS Qu (tsf)	MOIST (%)
GrayBrown	2	B	
SILTY CLAY (continued)			
468.30 ▼	1		
Gray	2	1.2	34.1
CLAY LOAM	1	B	
	1		
–25	1	0.8	28.8
	1	B	
	1		
	3	1.5	24.6
	4	B	
460.80			
Lt. Gray	12		
Weathered SANDSTONE	–30 13		10.6
(possible cobble/boulder)	7		
458.30			
Gray	H		
CLAY LOAM	1	0.8	19.0
	5	B	
455.80			
Gray	8		
Medium SAND	–35 10		16.1
	18		
453.30			
Gray to Dk. Gray	9		
SANDY CLAY LOAM	15	2.5	11.3
	18	P	
450.80			
Dk. Gray	9		
SHALE –40	19		10.6

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, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
District Four Materials

SOIL BORING LOG

Page 2 of 2
Date 10/16/02

ROUTE FAP 317 & 315 (US 24/IL 100 & US 136) DESCRIPTION US 24 Lewistown to Duncan Mills LOGGED BY DBR
SECTION 18RS-2,19RS-3,(18BRY&18BRY-1) BR,18B-1 LOCATION NW¼, SE¼, SEC. 8, TWP. 4N, RNG. 3E, 4th PM
COUNTY Fulton DRILLING METHOD HSA HAMMER TYPE AUTO

STRUCT. NO. 029-0060(prop)
Station _____
BORING NO. 8446 (Bridge Abut.)
Station 84+46 (Bk. stationing)
Offset 14.00ft Rt.
Ground Surface Elev. 489.8 ft

Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft
Groundwater Elev.:
First Encounter 488.3 ft ▼
Upon Completion 477.6 ft ▽
After 24 Hrs. Not Taken ft

DEPTH (ft)	BLOWS (6")	UCS Qu (tsf)	MOIST (%)
Dk. Gray	81		
SHALE (continued)			
448.30			
Gray to Lt. Gray	100@6"		9.1
SHALE			
445.38	100@5"		9.4
End of Boring –45			
–50			
–55			
–60			

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, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
District Four Materials

SOIL BORING LOG

Page 1 of 1
Date 2/1/91

ROUTE FAP 317 & 315 (US 24/IL 100 & US 136) DESCRIPTION US 24 Lewistown to Duncan Mills LOGGED BY DLR
SECTION 18RS-2,19RS-3,(18BRY&18BRY-1) BR,18B-1 LOCATION , SEC. , TWP. , RNG.
COUNTY Fulton DRILLING METHOD HSA HAMMER TYPE AUTO

STRUCT. NO. _____
Station _____
BORING NO. 8452 (Culvert)
Station 84+52 (Bk. stationing)
Offset 61.00ft Rt. CL
Ground Surface Elev. 480.25 ft

Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft
Groundwater Elev.:
First Encounter none ft
Upon Completion none ft
After 24 Hrs. not taken ft

DEPTH (ft)	BLOWS (6")	UCS Qu (tsf)	MOIST (%)
Brown SILTY LOAM	2		
	2	0.5	27.0
	2	S	
	1		
	2	0.4	26.0
–5	3	S	
474.25			
Brown & Gray GRAVELY LOAM	1		
	3		22.0
	2		
471.75			
Brown & Gray SILTY LOAM	1		
	1	0.2	29.0
–10	1	B	
469.25			
Gray to Reddish Gray SILTY	1		
CLAY	1		34.0
	2		
	1		
	2	1.0	21.0
–15	2	P	
464.25			
Reddish Gray CLAY	2		
	5	1.9	23.0
	3	S	
	1		
	5	1.9	18.0
–20	4	S	

DEPTH (ft)	BLOWS (6")	UCS Qu (tsf)	MOIST (%)
Reddish Gray CLAY (continued)			
459.25			
Gray CLAY LOAM	2		
	5	1.7	20.0
	6	S	
	3	1.4	20.0
–25	3	S	
454.25			
Gray SHALEY CLAY	3		
	5	2.8	14.0
	12	S	
451.75			
Gray to Dk. Gray SHALE	37		
	100@3"		7.0
–30			
	100@4"		
			7.0
446.75			
Gray to Dk. Gray SANDY SHALE	100@5"		5.0
445.25 –35			
End of Boring			
–40			

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, from 137 (Rev. 8-99)

BORING DETAILS
F.A.P. RT. 315 SEC. 18B-1
FULTON COUNTY
STATION 84+17.00
STRUCTURE NO. 029-0060

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

Existing Structure: None.

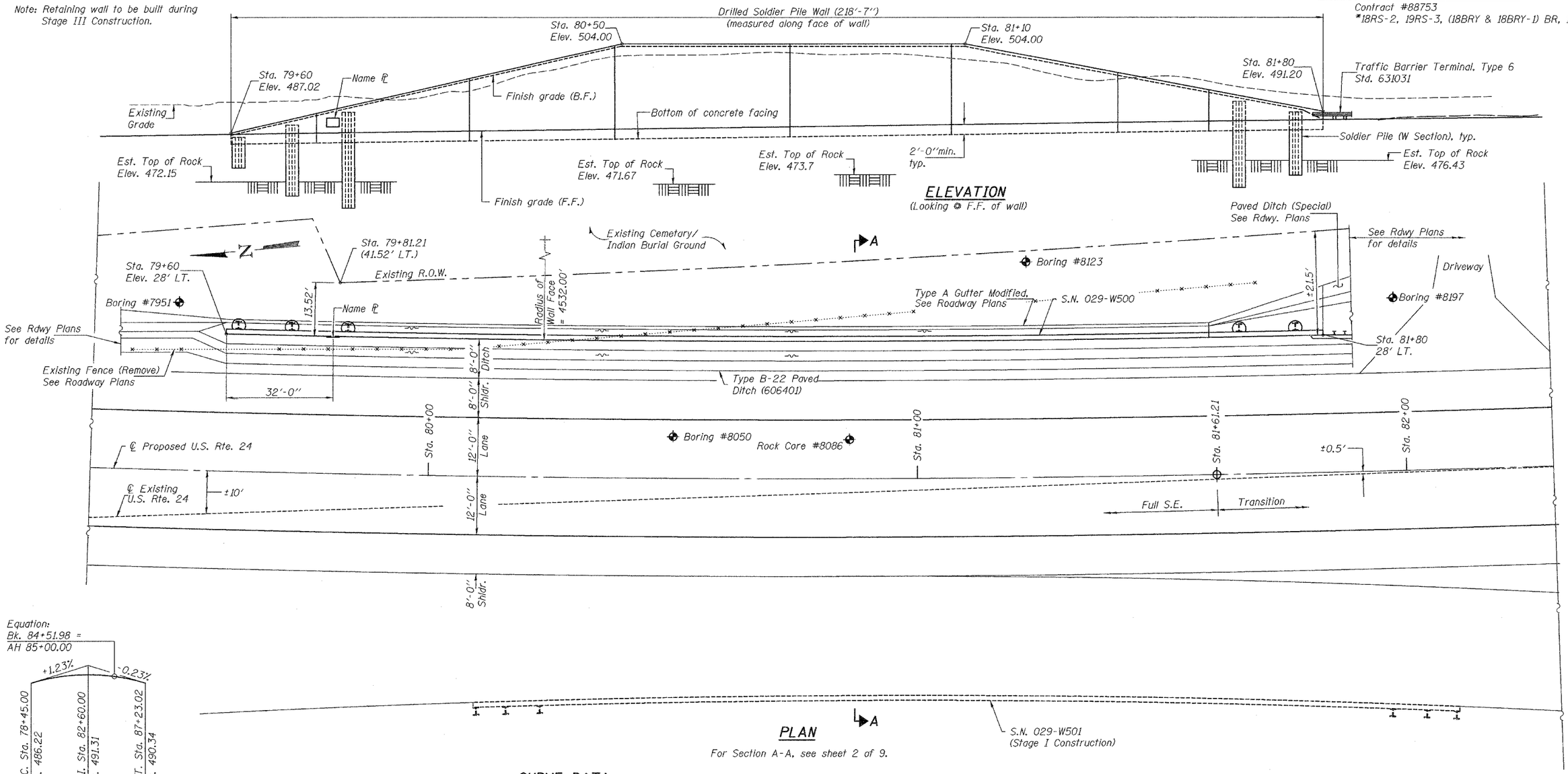
Note: Retaining wall to be built during Stage III Construction.

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 315	*	FULTON		223
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 1
9 SHEETS

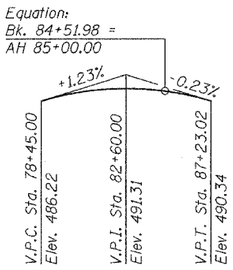
Contract #88753
*18RS-2, 19RS-3, (18BRY & 18BRY-1) BR, 18B-1



PLAN

For Section A-A, see sheet 2 of 9.

Equation:
Bk. 84+51.98 =
AH 85+00.00



LVC = 830'

PROFILE GRADE
(along ℄ roadway)

DESIGNED	Stephen M. Ryan / Aaron E. Garrison
CHECKED	Mark Shaffer SEM
DRAWN	WDG & BMG
CHECKED	SMR SEM

EXAMINED April 28, 2005
ENGINEER OF BRIDGE DESIGN

PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

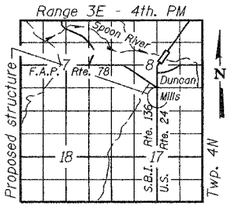
STATE OF ILLINOIS
RALPH E. ANDERSON
081-004625
SPRINGFIELD
LICENSED STRUCTURAL ENGINEER

EXPIRES 11-30-2006

CURVE DATA
(U.S. Rte. 24)
P.I. Sta. = 71+34.68
△ = 28°-53'-55.60" (LT)
D = 1°-15'-23.35"
R = 4,560.00'
T = 1,175.00'
L = 2,299.97'
E = 148.95'
e = 3.3%
T.R. = 41.28' & 27.93'
S.E. Run = 196.85
P.C. Sta. = 59+59.68
P.T. Sta. = 82+59.64
S.E. Transition = 81+61.21
Normal Crown = 83+86

DESIGN SPECIFICATIONS
2002 AASHTO

DESIGN STRESSES
FIELD UNITS
f'_c = 3,500 psi
f_y = 60,000 psi (reinforcement)
f_y = 50,000 psi (AASHTO M270 Gr. 50 for soldier piles)



LOCATION SKETCH

GENERAL PLAN
U.S. ROUTE 24
F.A.P. RTE. 315 - SEC. 18RS-2, 19RS-3, (18BRY & 18BRY-1) BR, 18B-1
FULTON COUNTY
LT. STATION 79+60 to 81+80
STRUCTURE NO. 029-W500

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 315	*	FULTON		224
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT -		

SHEET NO. 2
9 SHEETS

Contract #88753
*18RS-2, 19RS-3, (18BRY & 18BRY-1) BR, 18B-1

TOTAL BILL OF MATERIAL

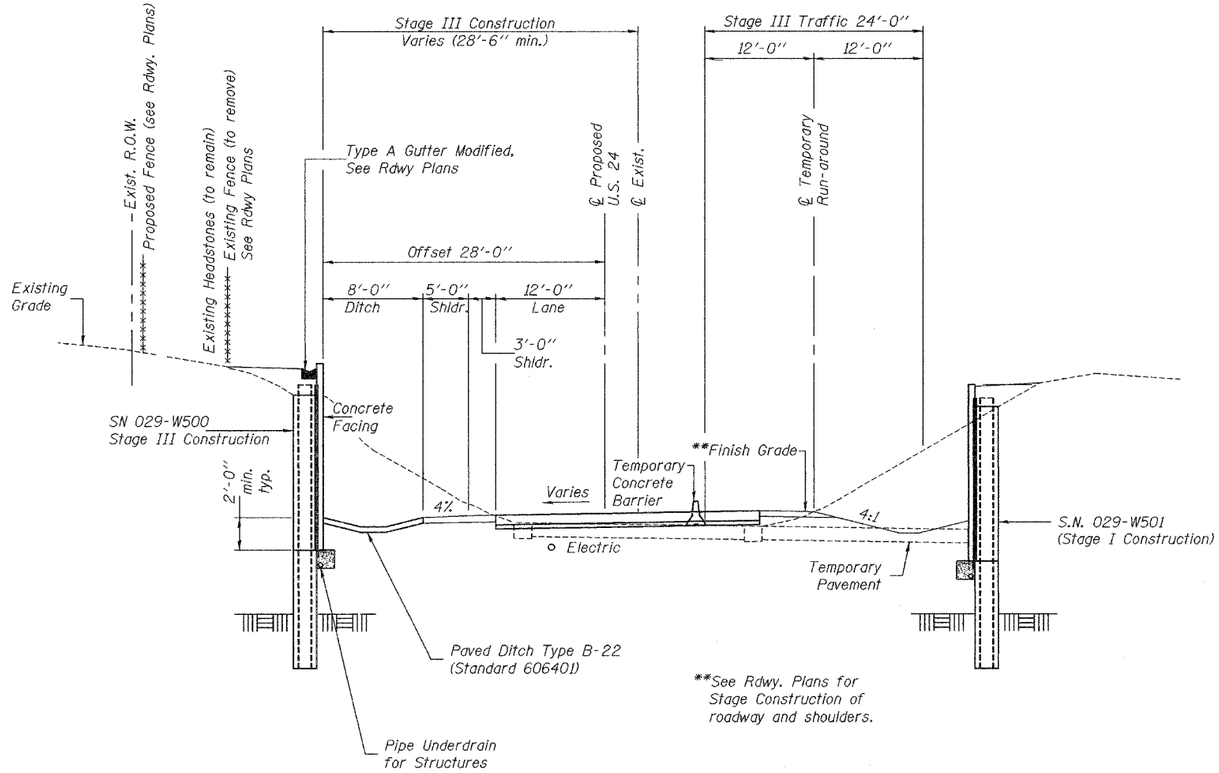
ITEM	UNIT	TOTAL
Structure Excavation	Cu. Yd.	227
Concrete Structures	Cu. Yd.	96.0
Furnishing Soldier Piles (W Section)	Foot	1029
Drilling and Setting Soldier Piles (in Soil)	Cu. Ft.	4620
Drilling and Setting Soldier Piles (in Rock)	Cu. Ft.	1386
Stud Shear Connectors	Each	462
Reinforcement Bars, Epoxy Coated	Pound	14,280
Geocomposite Wall Drain	Sq. Yd.	171.3
Untreated Timber Lagging	Sq. Ft.	2305
Name Plates	Each	1
Pipe Underdrains for Structures 4"	Foot	219

LEFT STATION 79+60 to 81+80
BUILT 20 BY
STATE OF ILLINOIS
FAP 315 - SEC 18RS-2, 19RS-3, (18BRY & 18 BRY-1) BR, 18B-1
STR. NO. 029-W500

NAME PLATE
See Std. 515001

GENERAL NOTES

Reinforcement bars shall conform to the requirements of AASHTO M31 or M322 Grade 60.
All exposed concrete edges shall be chamfered $\frac{3}{4}$" except as noted.
All construction joints shall be bonded.



**See Rdwy. Plans for Stage Construction of roadway and shoulders.

SECTION A-A - (DIMENSION RADIAL)
(Looking South)

INDEX OF SHEETS

DESIGNED	DFZ & SMR
CHECKED	MDS & SEM
DRAWN	BECKY M. CURRY
CHECKED	DFZ, SMR & SEM

April 28, 2005
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Rafael E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

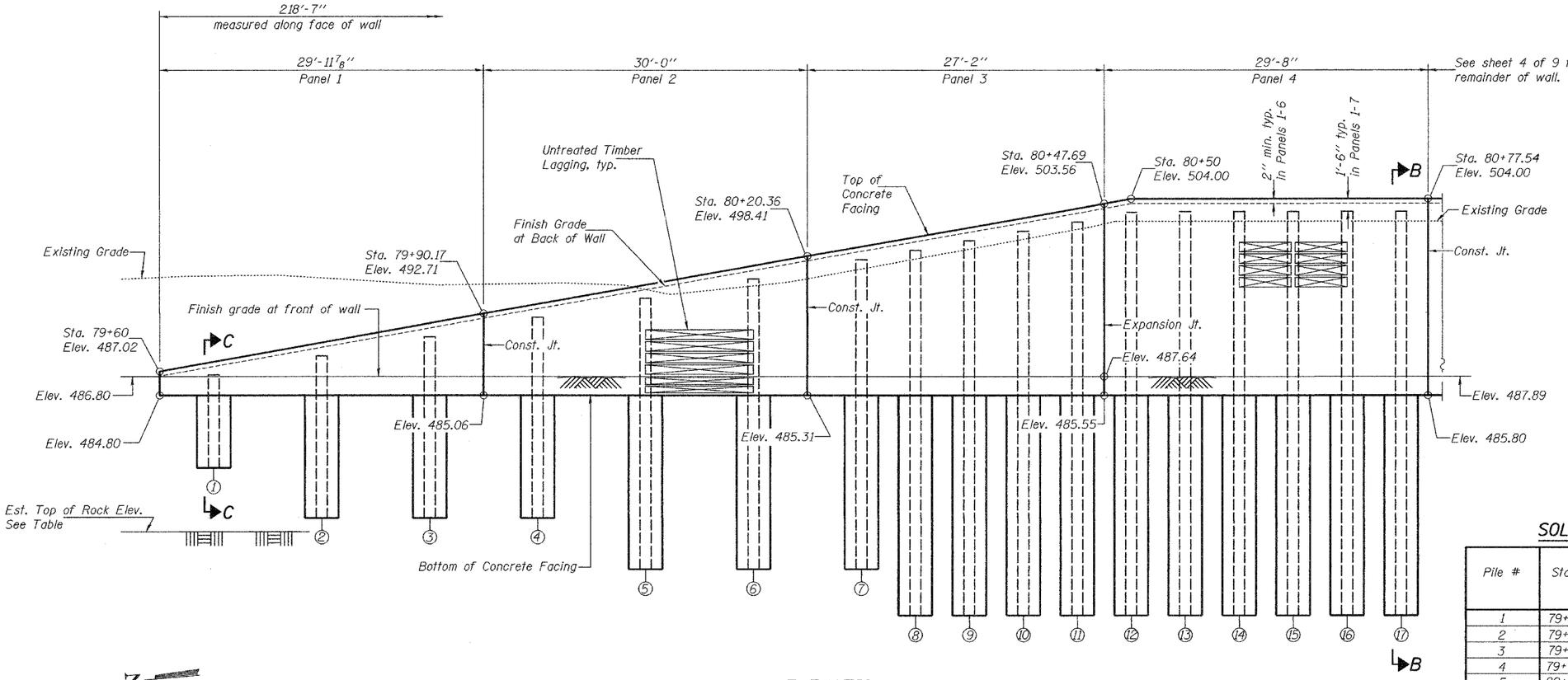
GENERAL DATA
F.A.P. RTE. 315 - SEC. 18RS-2, 19RS-3, (18BRY & 18BRY-1) BR, 18B-1
FULTON COUNTY
LT. STATION 79+60 to 81+80
STRUCTURE NO. 029-W500

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

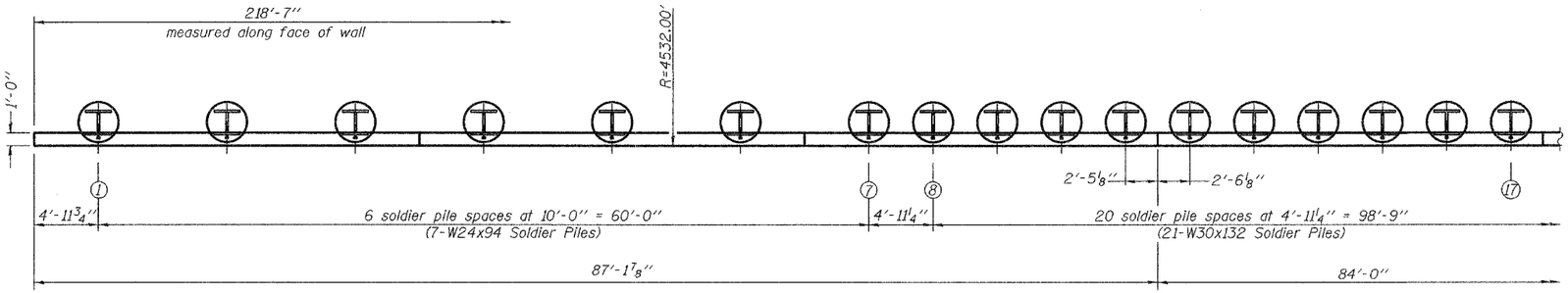
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 315	*	FULTON		225
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT -	

SHEET NO. 3
9 SHEETS

Contract #88753
*18RS-2, 19RS-3, (18BRY & 18BRY-1) BR, 18B-1



ELEVATION
(Looking at front face of wall)
(Looking East)



PLAN

Notes:
Where the existing ground line is higher than the finish grade line at back of wall, earth excavation behind the wall (to approximately the finish grade at back of wall) shall be done prior to drilling the shaft excavation.
Where the existing ground line is lower than the finish grade line at back of wall, the shaft excavation shall be drilled prior to placing embankment to the finish grade at back of wall. Embankment shall be placed against the rear face of lagging and compacted within 6 ft. behind the wall with lightweight mechanical tamper, roller or vibratory system to minimize deflection of the soldier piles.

SOLDIER PILE SUMMARY (PILES 1-17)

Pile #	Station	Offset Rt. (ft.)	Top of Pile Elevation (ft)	**Bottom of Pile Elevation (ft)	Length (ft)	Est. Top of Rock Elevation
1	79+65.01	28.0	486.46	477.85	8.61	472.08
2	79+75.07	28.0	488.36	473.20	15.16	472.03
3	79+85.13	28.0	490.25	473.20	17.05	471.98
4	79+95.20	28.0	492.16	473.20	18.96	471.94
5	80+05.26	28.0	494.06	468.45	25.61	471.89
6	80+15.32	28.0	495.96	468.45	27.51	471.84
7	80+25.38	28.0	497.86	468.45	29.41	471.79
8	80+30.35	28.0	498.79	464.80	33.99	471.76
9	80+35.32	28.0	499.73	464.80	34.93	471.74
10	80+40.28	28.0	500.66	464.80	35.86	471.72
11	80+45.25	28.0	501.56	464.80	36.76	471.69
12	80+50.22	28.0	502.50	464.80	37.70	471.67
13	80+55.19	28.0	502.50	464.80	37.70	471.95
14	80+60.16	28.0	502.50	464.80	37.70	472.23
15	80+65.12	28.0	502.50	464.80	37.70	472.51
16	80+70.09	28.0	502.50	464.80	37.70	472.79
17	80+75.06	28.0	502.50	464.80	37.70	473.08

Each shaft shall be excavated to the elevation specified in the table for "Bottom of Pile Elevation". This elevation may be above or below the encountered top of rock elevation. There is no minimum required embedment in rock.

**Bottom of shaft excavation.

DESIGNED	DFZ & SMR
CHECKED	MDS & SEM
DRAWN	BECKY M. CURRY
CHECKED	DFZ, SMR & SEM

April 28, 2005
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

Notes:
See sheet 5 of 9 for concrete facing details.
See sheet 6 of 9 for Sections B-B and C-C.
See sheets 6 & 7 of 9 for soldier pile wall details.

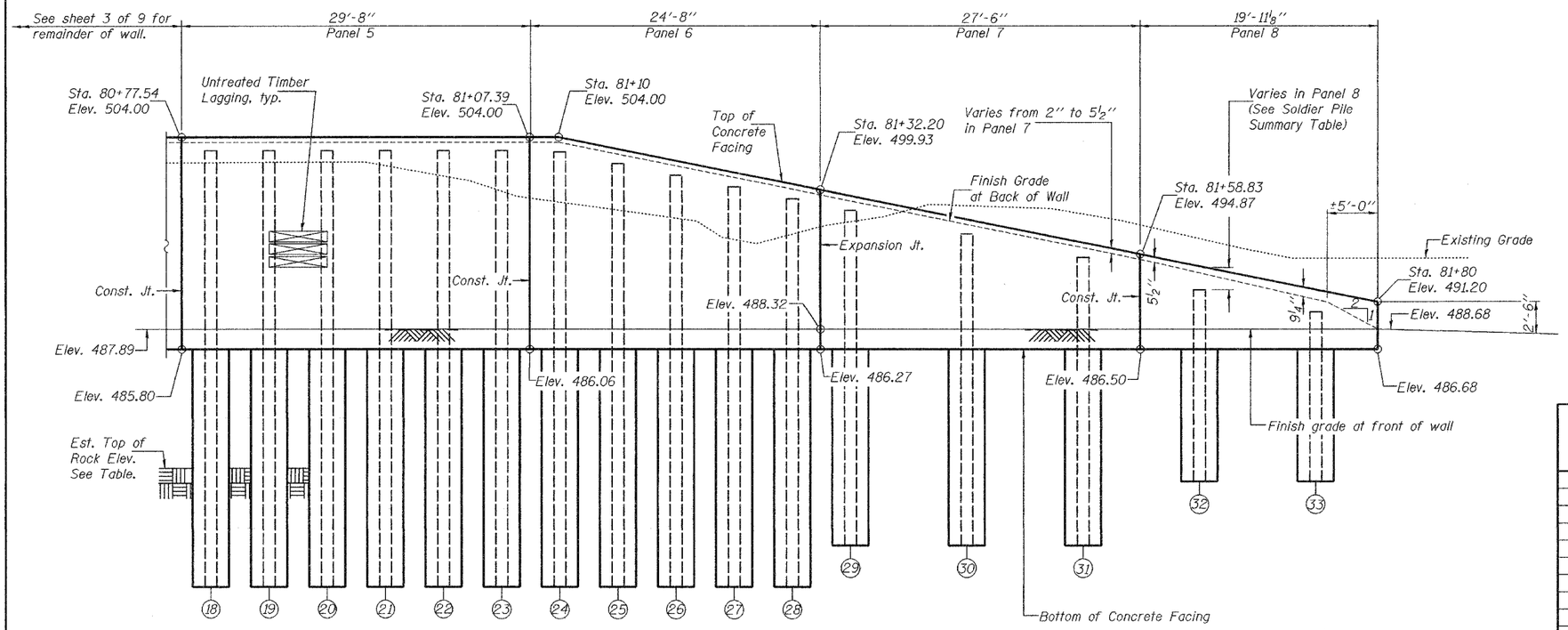
SOLDIER PILE WALL
F.A.P. RTE. 315 - SEC. 18RS-2, 19RS-3, (18BRY & 18BRY-1) BR, 18B-1
FULTON COUNTY
LT. STATION 79+60 to 81+80
STRUCTURE NO. 029-W500

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 315	*	FULTON		226
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 4
9 SHEETS

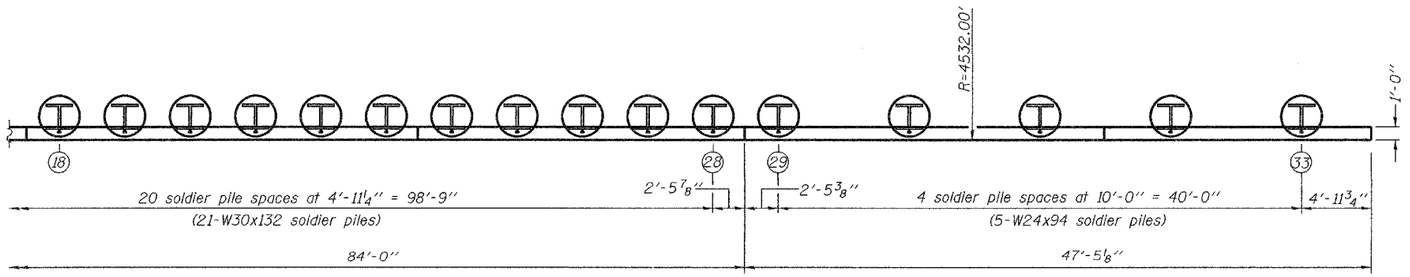
Contract #88753
*18RS-2, 19RS-3, (18BRY & 18BRY-1) BR, 18B-1

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



ELEVATION

(Looking at front face of wall)
(Looking East)



PLAN

SOLDIER PILE SUMMARY (PILES 18-33)

Pile #	Station	Offset Lt. (ft.)	Top of Pile Elevation (ft)	**Bottom of Pile Elevation (ft)	Length (ft)	Est. Top of Rock Elevation
18	80+80.03	28.00	502.50	464.80	37.70	473.36
19	80+85.00	28.00	502.50	464.80	37.70	473.64
20	80+89.96	28.00	502.50	464.80	37.70	473.80
21	80+94.96	28.00	502.50	464.80	37.70	473.92
22	80+99.90	28.00	502.50	464.80	37.70	474.04
23	81+04.87	28.00	502.50	464.80	37.70	474.17
24	81+09.84	28.00	502.50	464.80	37.70	474.29
25	81+14.80	28.00	501.62	464.80	36.82	474.41
26	81+19.77	28.00	500.71	464.80	35.91	474.54
27	81+24.74	28.00	499.80	464.80	35.00	474.66
28	81+29.71	28.00	498.89	464.80	34.09	474.78
29	81+34.68	28.00	497.98	470.35	27.63	474.91
30	81+44.74	28.00	496.13	470.35	25.78	475.15
31	81+54.80	28.00	494.29	470.35	23.94	475.40
32	81+64.86	28.00	492.37	473.56	18.81	475.64
33	81+74.92	28.00	490.19	473.56	16.63	475.89

Each shaft shall be excavated to the elevation specified in the table for "Bottom of Pile Elevation". This elevation may be above or below the encountered top of rock elevation. There is no minimum required embedment in rock.

**Bottom of shaft excavation.

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Furnishing Soldier Piles (W Section)	Foot	1029
Drilling and Setting Soldier Piles (in Rock)	Cu. Ft.	1386
Drilling and Setting Soldier Piles (in Soil)	Cu. Ft.	4620
Untreated Timber Lagging	Sq. Ft.	2305
Geocomposite Wall Drain	Sq. Yd.	171.3

DESIGNED	DFZ & SMR
CHECKED	MDS & SEM
DRAWN	BECKY M. CURRY
CHECKED	DFZ, SMR & SEM

April 28, 2005
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

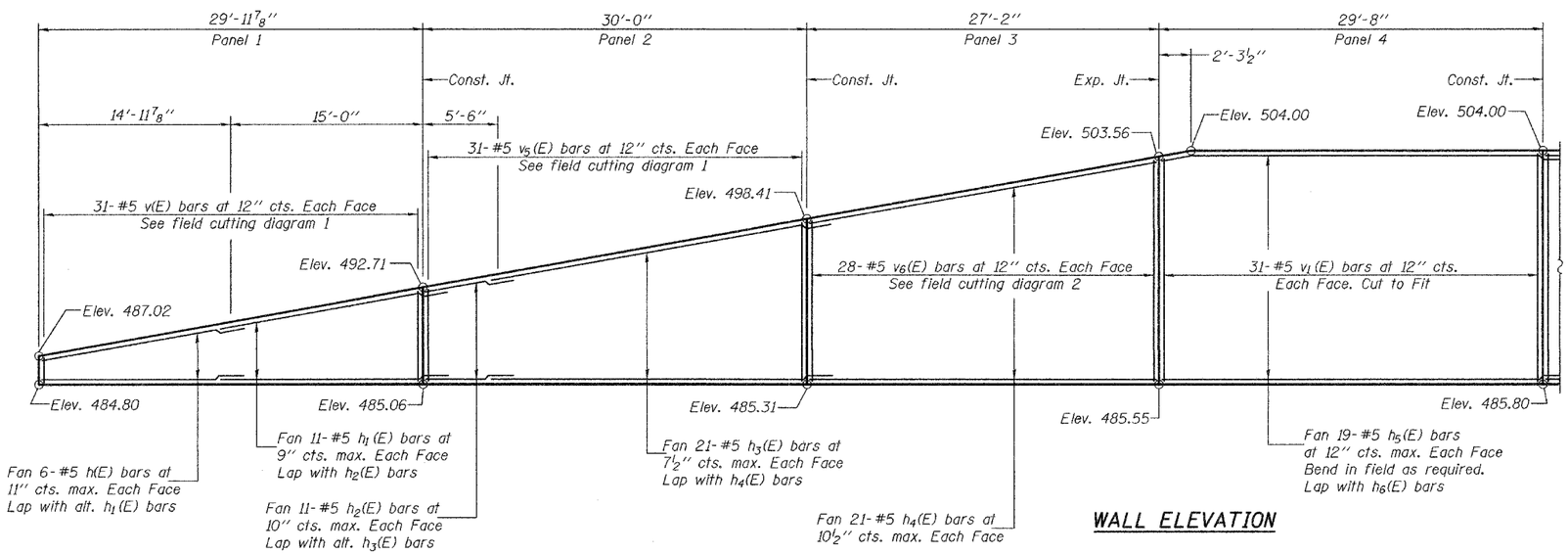
SOLDIER PILE WALL
F.A.P. RTE. 315 - SEC. 18RS-2, 19RS-3, (18BRY & 18BRY-1) BR, 18B-1
FULTON COUNTY
LT. STATION 79+60 to 81+80
STRUCTURE NO. 029-W500

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

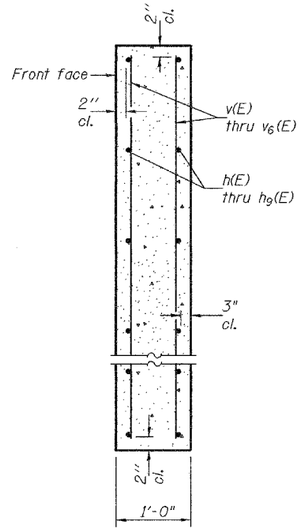
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 315	*	FULTON	9	227
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 5
9 SHEETS

Contract #88753
*18RS-2, 19RS-3, (18BRY & 18BRY-1) BR, 18B-1



WALL ELEVATION

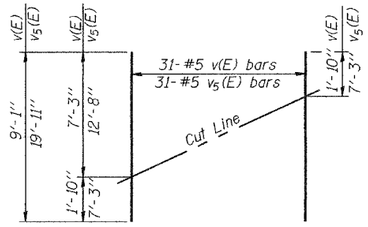


SECTION THRU CONCRETE FACING

BILL OF MATERIAL

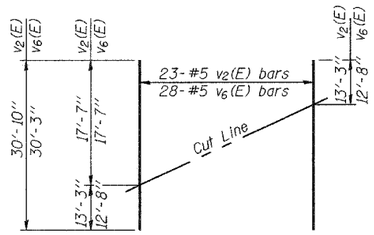
Bar	No.	Size	Length	Shape
h(E)	12	#5	18'-2"	———
h_1(E)	22	#5	18'-4"	———
h_2(E)	22	#5	8'-6"	———
h_3(E)	42	#5	27'-11"	———
h_4(E)	42	#5	27'-5"	———
h_5(E)	38	#5	32'-9"	———
h_6(E)	38	#5	32'-6"	———
h_7(E)	38	#5	24'-9"	———
h_8(E)	38	#5	30'-10"	———
h_9(E)	20	#5	20'-0"	———
v(E)	31	#5	9'-1"	———
v_1(E)	128	#5	17'-8"	———
v_2(E)	23	#5	30'-10"	———
v_3(E)	28	#5	21'-3"	———
v_4(E)	21	#5	12'-2"	———
v_5(E)	31	#5	19'-11"	———
v_6(E)	28	#5	30'-3"	———
Reinforcement Bars, Epoxy Coated			Pound	14,280
Concrete Structures			Cu. Yd.	96.0

Reinforcement bars designated (E) shall be epoxy coated.



FIELD CUTTING DIAGRAM 1

Order v(E) and v_5(E) full length. Cut as shown and use remainder of bars in opposite face.

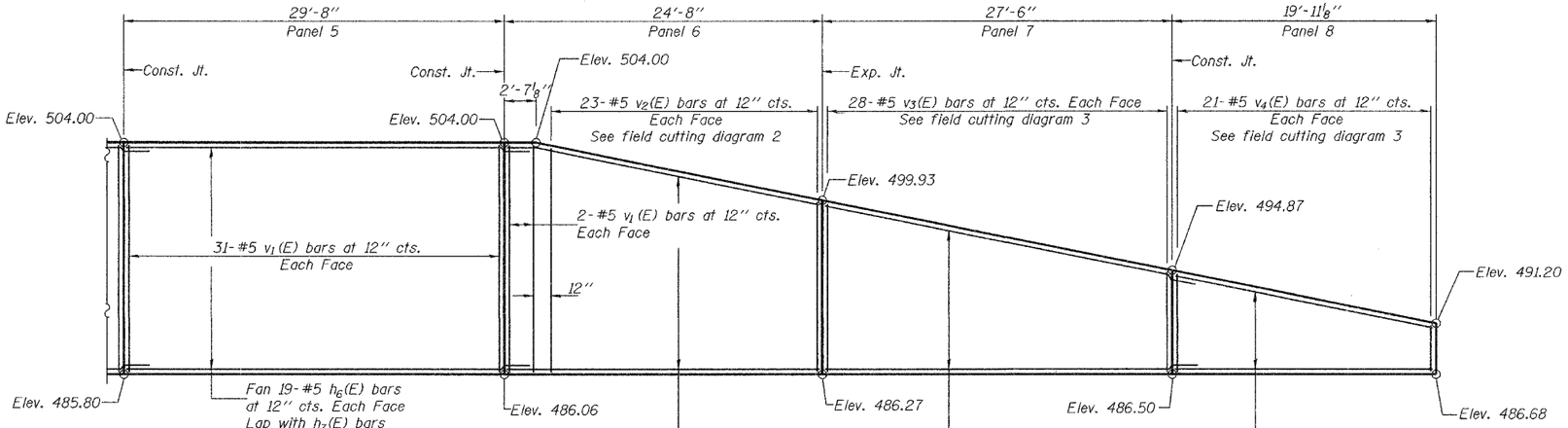


FIELD CUTTING DIAGRAM 2

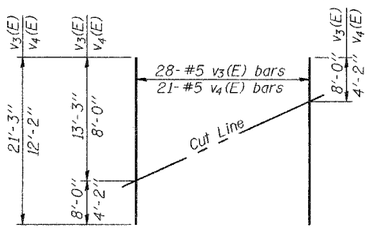
Order v_2(E) and v_6(E) full length. Cut as shown and use remainder of bars in opposite face.

DESIGNED	DFZ & SMR
CHECKED	MDS & SEM
DRAWN	BECKY M. GURRY
CHECKED	DFZ, SMR & SEM

April 28, 2005
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES



WALL ELEVATION



FIELD CUTTING DIAGRAM 3

Order v_3(E) and v_4(E) full length. Cut as shown and use remainder of bars in opposite face.

MIN. BAR LAPS

#5 bar = 3'-0"

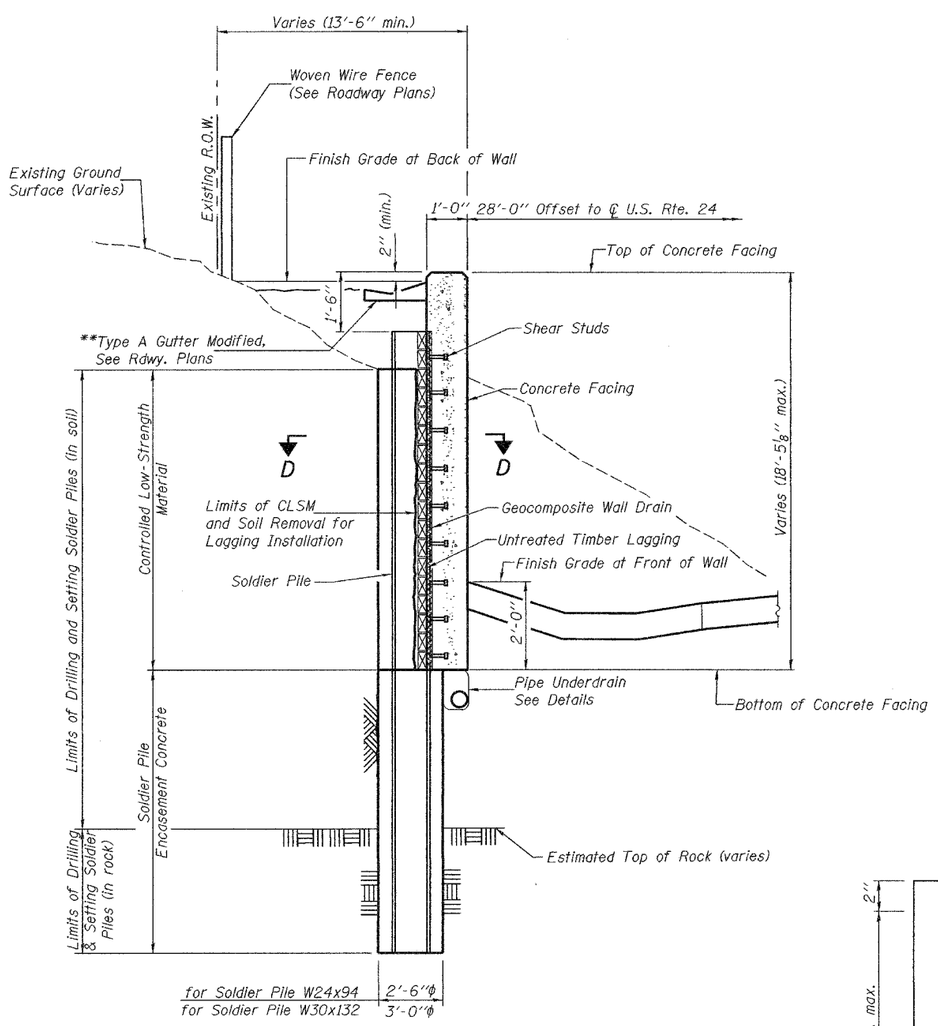
CONCRETE FACING FOR SOLDIER PILE WALL
F.A.P. RTE. 315 - SEC. 18RS-2, 19RS-3, (18BRY & 18BRY-1) BR, 18B-1
FULTON COUNTY
LT. STATION 79+60 to 81+80
STRUCTURE NO. 029-W500

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 315	*	FULTON		228
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

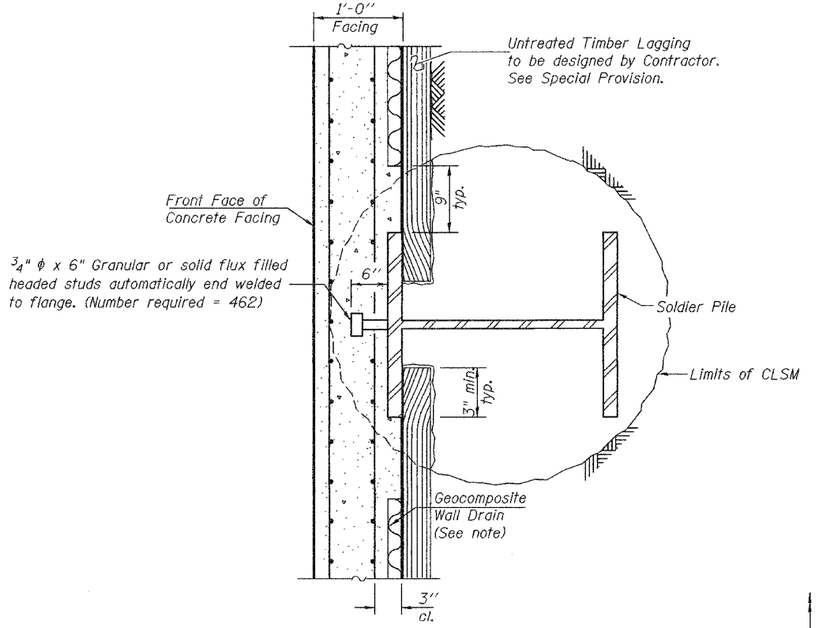
SHEET NO. 6
9 SHEETS

Contract #88753
*18RS-2, 19RS-3, (18BRY & 18BRY-1) BR, 18B-1



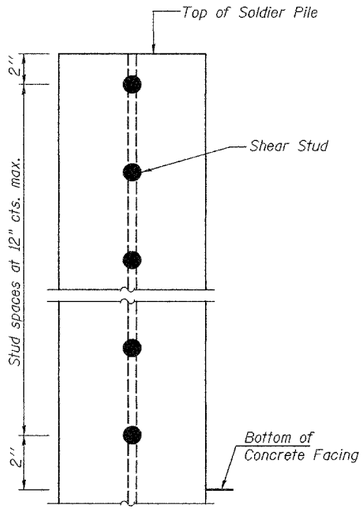
SECTION B-B

** For details of Paved Ditch (special) at South end of wall, See Rdwy. Plans.

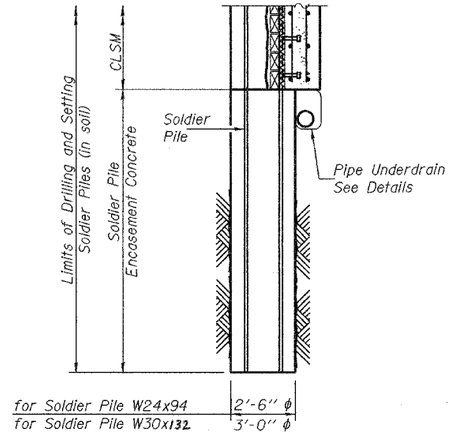

1'-0" Facing
Untreated Timber Lagging to be designed by Contractor. See Special Provision.
Front Face of Concrete Facing
¾" ϕ x 6" Granular or solid flux filled headed studs automatically end welded to flange. (Number required = 462)
9" typ.
6"
Soldier Pile
Limits of CLSM
3" min. typ.
Geocomposite Wall Drain (See note)
3" cl.

SECTION D-D

Note:
Geocomposite Wall Drain shall not have a thickness greater than 1".


Top of Soldier Pile
2"
Shear Stud
Stud spaces at 12" cts. max.
2"
Bottom of Concrete Facing

SHEAR STUD DETAIL
(Elevation of pile shown)


Limits of Drilling and Setting Soldier Piles (in soil)
CLSM
Soldier Pile
Soldier Pile Encasement Concrete
Pipe Underdrain See Details
for Soldier Pile W24x94 2'-6" ϕ
for Soldier Pile W30x132 3'-0" ϕ

SECTION C-C
For remainder of details, see Section B-B.

DESIGNED	DFZ & SMR
CHECKED	MDS & SEM
DRAWN	BECKY M. CURRY
CHECKED	DFZ, SMR & SEM

April 28, 2005
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

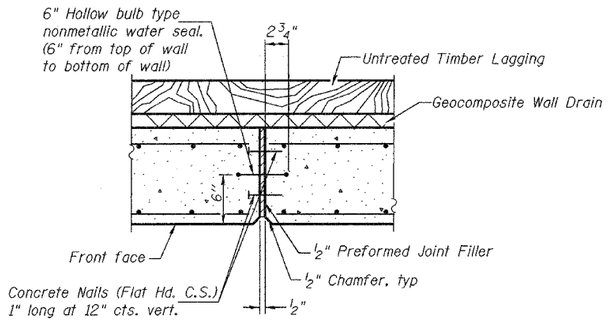
SOLDIER PILE WALL DETAILS
F.A.P. RTE. 315 - SEC. 18RS-2, 19RS-3,
(18BRY & 18BRY-1) BR, 18B-1
FULTON COUNTY
LT. STATION 79+60 to 81+80
STRUCTURE NO. 029-W500

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

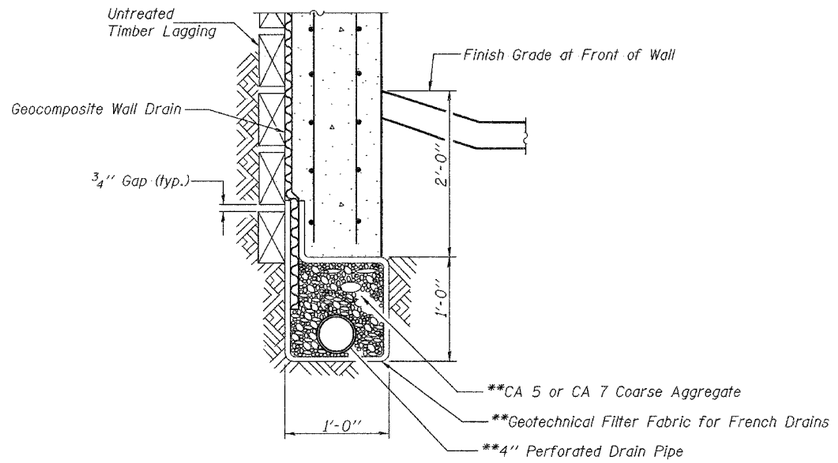
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 315	*	FULTON		229
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 7
9 SHEETS

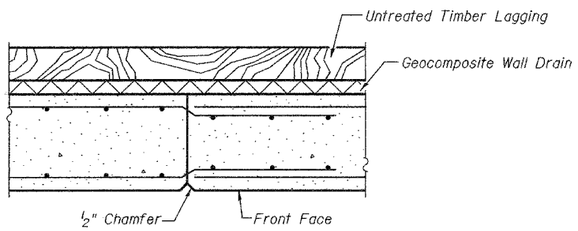
Contract #88753
*18RS-2, 19RS-3 (18BRY & 18BRY-1) BR, 18B-1



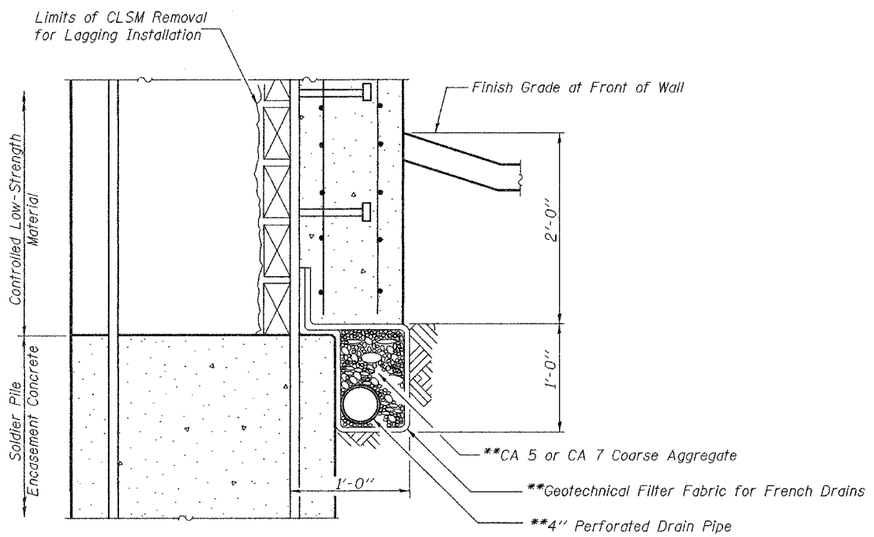
EXPANSION JOINT DETAIL



PIPE UNDERDRAIN BETWEEN SOLDIER PILES



CONSTRUCTION JOINT DETAIL



PIPE UNDERDRAIN AT SOLDIER PILES

**Cost included with Pipe Underdrains for Structures 4".

DESIGNED	DFZ & SMR
CHECKED	SMR & SEM
DRAWN	BECKY M. CURRY
CHECKED	DFZ, SMR & SEM

April 28, 2005
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

SOLDIER PILE WALL DETAILS
F.A.P. RTE. 315 - SEC. 18RS-2, 19RS-3,
(18BRY & 18BRY-1) BR, 18B-1
FULTON COUNTY
LT. STATION 79+60 to 81+80
STRUCTURE NO. 029-W500

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 315	*	FULTON		230
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 8 9 SHEETS

Contract #88753
*18RS-2, 19RS-3, (18BRY & 18BRY-1) BR, 18B-1

Illinois Department of Transportation
Division of Highways
District Four Materials

SOIL BORING LOG

Page 1 of 1

Date 92702

ROUTE FAP 317 & 315 (US 24/L 100 & US 136) DESCRIPTION US 24 Lewistown to Duncan Mills LOGGED BY DBR
SECTION 18RS-2,19RS-3,(18BRY&18BRY-1) BR,18B-1 LOCATION SW1/4, NE1/4, SEC. 8, TWP. 4N, RNG. 3E, 4th PM
COUNTY Fulton DRILLING METHOD HSA HAMMER TYPE AUTO

STRUCT. NO. ____
Station ____
BORING NO. 7951 (Retaining Wall)
Station 79+51
Offset 39.00ft Lt.
Ground Surface Elev. 490.90 ft

Surface Water Elev. ____ ft
Stream Bed Elev. ____ ft
Groundwater Elev.:
First Encounter None ft
Upon Completion *None ft
After 24 Hrs. **None ft

DEPTH (ft)	BLOWS (6")	UCS Qu (tsf)	MOIST (%)
No Sample Taken 0-1'			
489.90			
Brown SILTY CLAY	1		
	3	2.3	20.7
	3	B	
487.40			
Brown CLAY LOAM	1		
	2	0.8	28.9
-5	1	B	
	2		
	2	2.1	17.6
	5	B	
482.40			
Brown/Gray CLAY LOAM	4		
	5	3.1	15.6
-10	6	S	
479.90			
Brown/Gray SHALEY CLAY	4		
	10	5.7	20.4
	13	S	
477.40			
Gray SHALE	12		
	37		10.4
-15	83/3"		
474.90			
Light Gray SHALE	8		
	100/4"		9.4
472.40			
Light Gray Sandy SHALE 472.16	100/3"		8.9
* No H2O- hole collapsed @ 16.8'			
** No H2O- hole collapsed @ 16.3			
-20			

End of Boring
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, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
District Four Materials

SOIL BORING LOG

Page 1 of 1

Date 102102

ROUTE FAP 317 & 315 (US 24/L 100 & US 136) DESCRIPTION US 24 Lewistown to Duncan Mills LOGGED BY DBR
SECTION 18RS-2,19RS-3,(18BRY&18BRY-1) BR,18B-1 LOCATION SW1/4, NE1/4, SEC. 8, TWP. 4N, RNG. 3E, 4th PM
COUNTY Fulton DRILLING METHOD HSA HAMMER TYPE AUTO

STRUCT. NO. ____
Station ____
BORING NO. 8050 (Retaining Wall)
Station 80+50
Offset 8.50ft Lt.
Ground Surface Elev. 488.50 ft

Surface Water Elev. ____ ft
Stream Bed Elev. ____ ft
Groundwater Elev.:
First Encounter None ft
Upon Completion *None ft
After 24 Hrs. **None ft

DEPTH (ft)	BLOWS (6")	UCS Qu (tsf)	MOIST (%)
No Sample Taken 0-1.5'			
487.00			
Brown/Gray SILTY CLAY LOAM	2		
	3	2.9	16.4
	4	S	
484.50			
Gray & Brown SILTY CLAY	3		
-5	6	2.2	16.4
	8	S	
	2		
	3	1.7	20.5
	5	B	
479.50			
Reddish Brown SILTY CLAY	1		
-10	3	1.2	18.5
	5	S	
477.00			
Brown/Gray SANDY CLAY LOAM	9		
	12	3.8	15.4
	17	P	
474.50			
Gray SILTY SHALE	9		
-15	18		8.9
	34		
472.00			
Lt. Gray SANDSTONE 471.67	100@4"		3.7
* No H2O- hole collapsed @ 14.2'			
** No H2O- hole collapsed @ 14.2'			
End of Boring			
-20			

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, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
District Four Materials

ROCK CORE LOG

Page 1 of 1

Date 71403

ROUTE FAP 317 & 315 (US 24/L 100 & US 136) DESCRIPTION US 24 Lewistown to Duncan Mills LOGGED BY DPS
SECTION 18RS-2,19RS-3,(18BRY&18BRY-1) BR,18B-1 LOCATION SW1/4, NE1/4, SEC. 8, TWP. 4N, RNG. 3E, 4th PM
COUNTY Fulton CORING METHOD Dual Barrel

STRUCT. NO. ____
Station ____
CORING BARREL TYPE & SIZE NWD4 5'
Core Diameter 2.1 in
BORING NO. 8086 Ret.Wall
Station 80+86
Offset 9.00ft Lt.CL
Top of Rock Elev. 473.70 ft
Begin Core Elev. 473.70 ft
Ground Surface Elev. 489.20 ft

DEPTH (ft)	CORE (#)	RECOVERY (%)	R.Q.D. (%)	CORE TIME (min/ft)	STRENGTH (tsf)
Lt. Gray SANDSTONE shaley clay seams16.13'-16.7' 15.5'-16.13' sample washed away during coring	1	84	56		
					4.7%moisture 206.0
					6.6%moisture 354.9
					5.9%moisture 383.3
-20					
	2	100	47		
					7.4%moisture 319.8
					6.2%moisture 335.2
					3.9%moisture 430.7
					5.5%moisture 911.1
					7.8%moisture 343.5
					9.1%moisture 322.0
					8.5%moisture 514.8
-25					7.8%moisture 390.0
	3	80	68		
462.65					
Gray SHALEY CLAY/SHALE 462.50					
Lt. Gray SANDSTONE					8.2%moisture 239.1
					7.9%moisture 217.7
					8.6%moisture 160.3
					8.6%moisture 355.2
					8.3%moisture 277.3
-30					
w/Dk. Gray laminations from 29.5'-30.5' 458.90					
Dk. Gray Shaley Clay/Shale (organics) 458.50					
Gray SILTY SHALE 458.10	4	100	33		
Lt. Gray SILTSTONE 457.40					
Lt. Gray SILTY SHALE irregular bedding & poor quality 2" shaley clay seams @ 31.8' & 33.2'					
455.10					
Gray to Dk. Gray SHALE laminated & fissile					
-35					
453.70					

End of Boring
Color pictures of the cores ____No____
Cores will be stored for examination until ____
The "Strength" column represents the unixial compressive strength of the core sample (ASTM D-2938)
BBS, form 138 (Rev. 8-99)

BORING DATA
F.A.P. RTE. 315 - SEC. 18RS-2, 19RS-3,
(18BRY & 18BRY-1) BR, 18B-1
FULTON COUNTY
LT. STATION 79+60 to 81+80
STRUCTURE NO. 029-W500

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 315	*	FULTON		231
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 9
9 SHEETS

Contract #88753
*18RS-2, 19RS-3, (18BRY & 18BRY-1) BR, 18B-1

Illinois Department of Transportation
Division of Highways
District Four Materials

SOIL BORING LOG

Page 1 of 1

Date 10/30/02

ROUTE FAP 317 & 315 (US 24/L 100 & US 136) DESCRIPTION US 24 Lewistown to Duncan Mills LOGGED BY DBR
18RS-2,19RS-3,(18BRY&18BRY-1)
SECTION BR,18B-1 LOCATION SW1/4, NE1/4, SEC. 8, TWP. 4N, RNG. 3E, 4th PM

COUNTY Fulton DRILLING METHOD HSA HAMMER TYPE AUTO

STRUCT. NO. ____
Station ____
BORING NO. B123 (Retaining Wall)
Station 81+23
Offset 53.00ft Lt.
Ground Surface Elev. 503.10 ft

Surface Water Elev. ____ ft
Stream Bed Elev. ____ ft
Groundwater Elev.:
First Encounter None ft
Upon Completion *None ft
After 24 Hrs. **None ft

DEPTH (ft)	BLOWS (6")	UCS Qu (tsf)	MOIST (%)
NO SAMPLE TAKEN 0-1.5'			
501.60			
Light Brown SILTY LOAM	2		
	2	3.0	14.1
	3	P	
	2		
-5	4	1.5	17.8
	6	P	
	2		
	2	0.4	15.3
	3	S	
494.10			
Lt. Brown/Lt. Gray SILTY LOAM w/tr of fine sand	2		
-10	7	0.5	13.9
	8	P	
	3		
	5	0.7	22.7
	5	S	
	2		
-15	5	0.7	26.5
	5	S	
	1		
	1	0.6	24.2
485.95	2	S	
Brown CLAY LOAM TILL	4	2.1	19.5
		B	
	1		
-20	3	1.7	20.4

DEPTH (ft)	BLOWS (6")	UCS Qu (tsf)	MOIST (%)
Brown CLAY LOAM TILL (continued)			
481.60	5	B	
Gray SHALE	5		
	11	3.9	18.1
	21	S	
478.80	00@4"		6.9
**Not Avail.- hole collapsed @ 19.2'			
-25 End of Boring			
-30			
-35			
-40			

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, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
District Four Materials

SOIL BORING LOG

Page 1 of 1

Date 10/21/02

ROUTE FAP 317 & 315 (US 24/L 100 & US 136) DESCRIPTION US 24 Lewistown to Duncan Mills LOGGED BY DBR
18RS-2,19RS-3,(18BRY&18BRY-1)
SECTION BR,18B-1 LOCATION SW1/4, NE1/4, SEC. 8, TWP. 4N, RNG. 3E, 4th PM

COUNTY Fulton DRILLING METHOD HSA HAMMER TYPE AUTO

STRUCT. NO. ____
Station ____
BORING NO. B197 (Retaining Wall)
Station 81+97
Offset 32.00ft Lt.
Ground Surface Elev. 490.85 ft

Surface Water Elev. ____ ft
Stream Bed Elev. ____ ft
Groundwater Elev.:
First Encounter None ft
Upon Completion *None ft
After 24 Hrs. Not Taken ft

DEPTH (ft)	BLOWS (6")	UCS Qu (tsf)	MOIST (%)
NO SAMPLE TAKEN 0-1.5'			
489.35			
Light Brown & Light Gray SILTY LOAM	3		
	2	2.8	15.2
	2	S	
	2		
-5	3	1.8	23.5
	5	S	
	2		
	4	1.6	23.6
	4	S	
481.85			
Brown SILTY CLAY	2		
-10	2	1.2	26.1
	3	B	
	1		
	1	0.5	26.1
478.60	2	P	2.2
Light Grey SANDSTONE poorly cemented	52		
476.43	13		6.4
* No H2O- hole collapsed @ 12.3'	100@5"		
-15 End of Boring			
-20			

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, from 137 (Rev. 8-99)

BORING DATA
F.A.P. RTE. 315 - SEC. 18RS-2, 19RS-3,
(18BRY & 18BRY-1) BR, 18B-1
FULTON COUNTY
LT. STATION 79+60 to 81+80
STRUCTURE NO. 029-W500

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

Existing Structure: None.

Note: Retaining wall to be built during Stage I Construction.

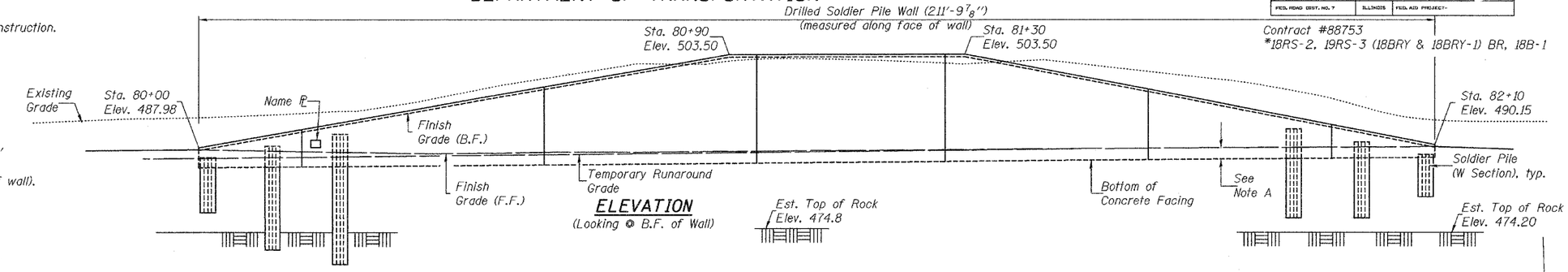
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 315	*	FULTON	9	232
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

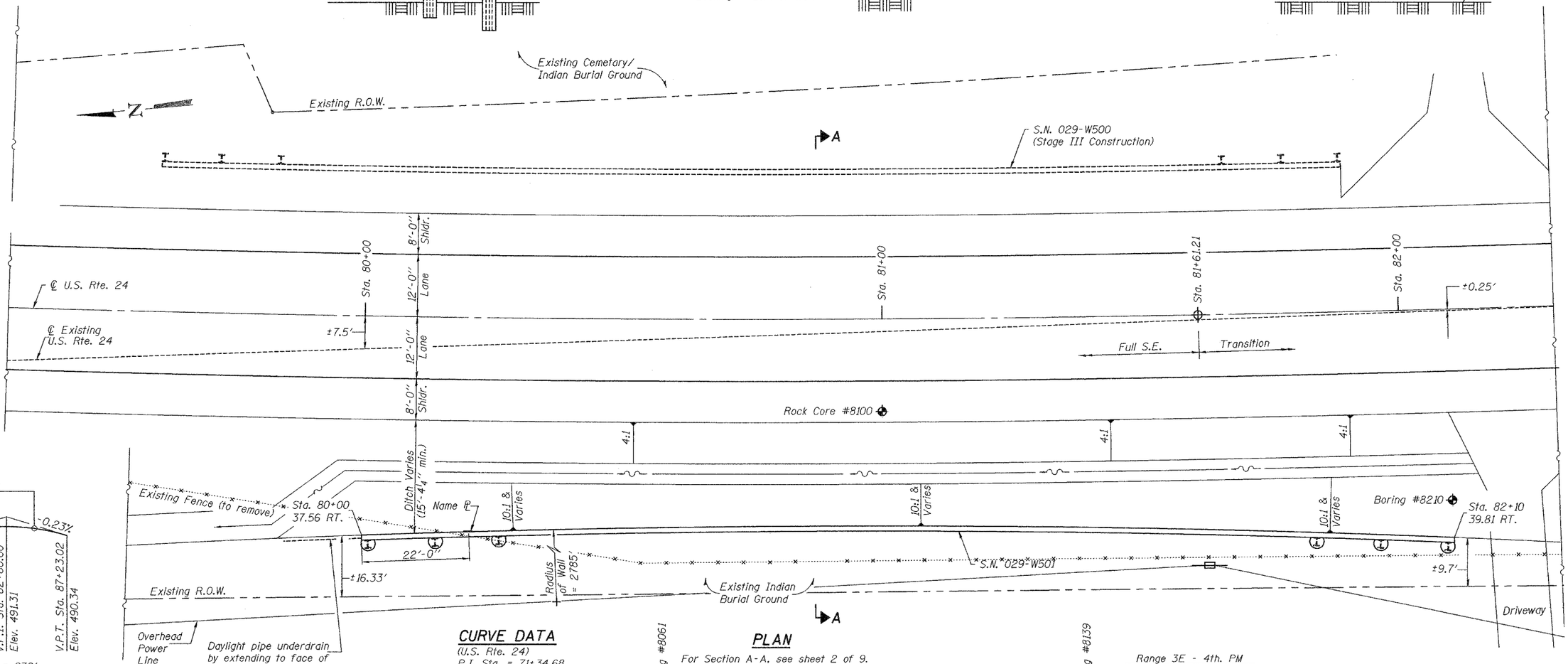
SHEET NO. 1
9 SHEETS

Contract #88753
*18RS-2, 19RS-3 (18BRY & 18BRY-1) BR, 18B-1

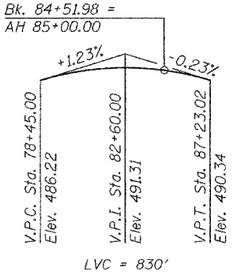
Note A:
Bottom of concrete facing will be at least 2'-0" below finish grade at front of wall and at least 1'-0" below top of temporary shoulder (at front of wall).



ELEVATION
(Looking @ B.F. of Wall)



Equation:
Bk. 84+51.98 = AH 85+00.00



LVC = 830'

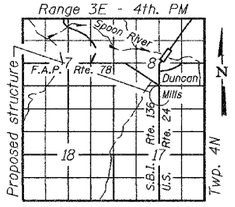
PROFILE GRADE
(along ℄ roadway)

CURVE DATA
(U.S. Rte. 24)
P.I. Sta. = 71+34.68
Δ = 28°-53'-55.60" (LT)
D = 1°-15'-23.35"
R = 4,560.00'
T = 1,175.00'
L = 2,299.97'
E = 148.95'
e = 3.3%
T.R. = 41.28' & 27.93'
S.E. Run = 196.85
P.C. Sta. = 59+59.68
P.T. Sta. = 82+59.64
S.E. Transition = 81+61.21
Normal Crown = 83+86

PLAN
For Section A-A. see sheet 2 of 9.

DESIGN SPECIFICATIONS
2002 AASHTO

DESIGN STRESSES
FIELD UNITS
f'_c = 3,500 psi
f_y = 60,000 psi (reinforcement)
f_y = 50,000 psi (AASHTO M270 Gr. 50) (for soldier piles)



LOCATION SKETCH

DESIGNED	Paul F. Germann
CHECKED	Stephen M. Ryan
DRAWN	WDC & BMC
CHECKED	SMR SEM

EXAMINED April 28, 200 5
Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN

PASSED
Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

STATE OF ILLINOIS
RALPH E. ANDERSON
081-004625
SPRINGFIELD
REGISTERED STRUCTURAL ENGINEER

EXPIRES 11-30-2006

GENERAL PLAN
U.S. ROUTE 24
F.A.P. RTE. 315 - SEC. 18RS-2, 19RS-3, (18BRY & 18BRY-1) BR, 18B-1
FULTON COUNTY
RT. STATION 80+00 to 82+10
STRUCTURE NO. 029-W501

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 315	*	FULTON		233
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 2
9 SHEETS

Contract #88753
*18RS-2, 19RS-3 (18BRY & 18BRY-1) BR, 18B-1

TOTAL BILL OF MATERIAL

ITEM	UNIT	TOTAL
Structure Excavation	Cu. Yd.	255
Concrete Structures	Cu. Yd.	87.3
Furnishing Soldier Piles (W Section)	Foot	813
Drilling and Setting Soldier Piles (in Soil)	Cu. Ft.	3175
Drilling and Setting Soldier Piles (in Rock)	Cu. Ft.	990
Stud Shear Connectors	Each	339
Reinforcement Bars, Epoxy Coated	Pound	13,840
Geocomposite Wall Drain	Sq. Yd.	170
Untreated Timber Lagging	Sq. Ft.	2060
Name Plates	Each	1
Pipe Underdrains for Structures 4"	Foot	212

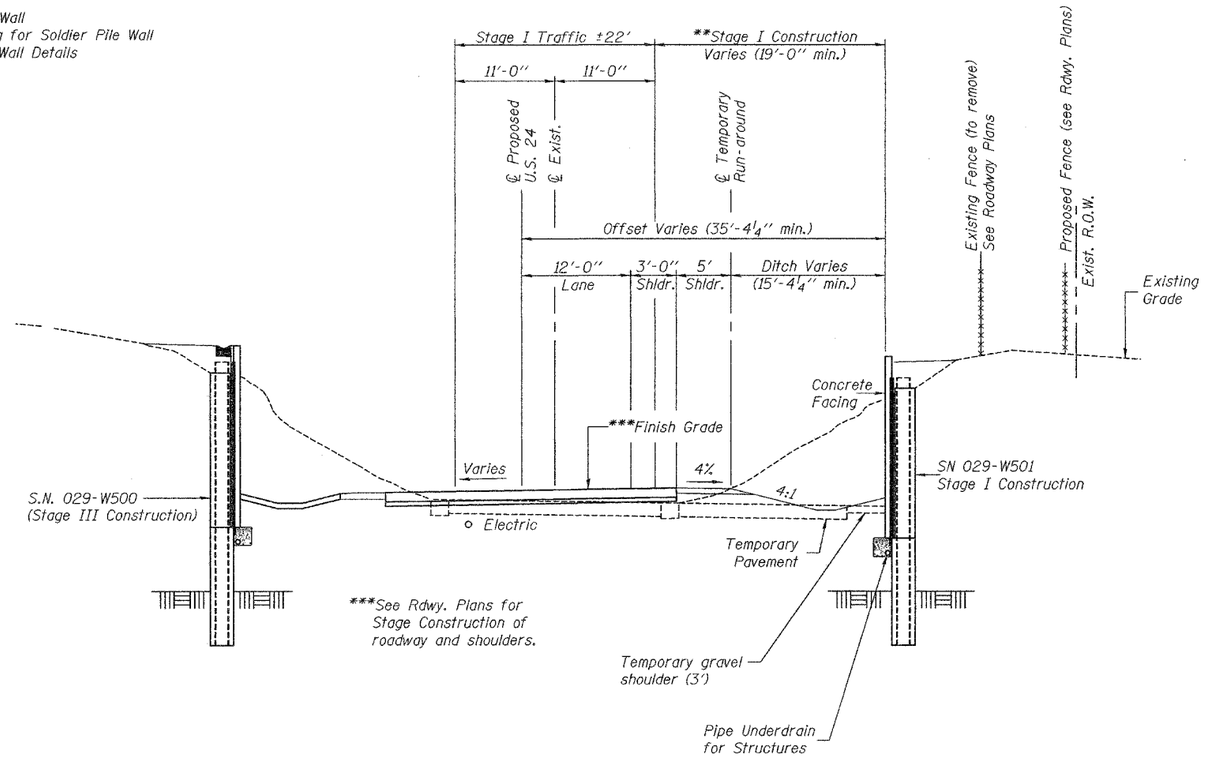
RIGHT STATION 80+00 to 82+10
BUILT 20 BY
STATE OF ILLINOIS
FAP 315 - SEC 18RS-2, 19RS-3, (18BRY & 18 BRY-1) BR, 18B-1
STR. NO. 029-W501

NAME PLATE
See Std. 515001

GENERAL NOTES

Reinforcement bars shall conform to the requirements of AASHTO M31 or M322 Grade 60.
All exposed concrete edges shall be chamfered $\frac{3}{4}$" except as noted.
All construction joints shall be bonded.

INDEX OF SHEETS



SECTION A-A - (DIMENSION RADIAL)
(Looking South)
**Southbound lane of Stage I Traffic may have temporary daytime lane closures for portions of wall construction only

DESIGNED	DFZ
CHECKED	SMR
DRAWN	BECKY M. CURRY
CHECKED	DFZ, SMR & SEM

April 28, 2005
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

GENERAL DATA
F.A.P. RTE. 315 - SEC. 18RS-2, 19RS-3, (18BRY & 18BRY-1) BR, 18B-1
FULTON COUNTY
RT. STATION 80+00 to 82+10
STRUCTURE NO. 029-W501

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 315	*	FULTON		234
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

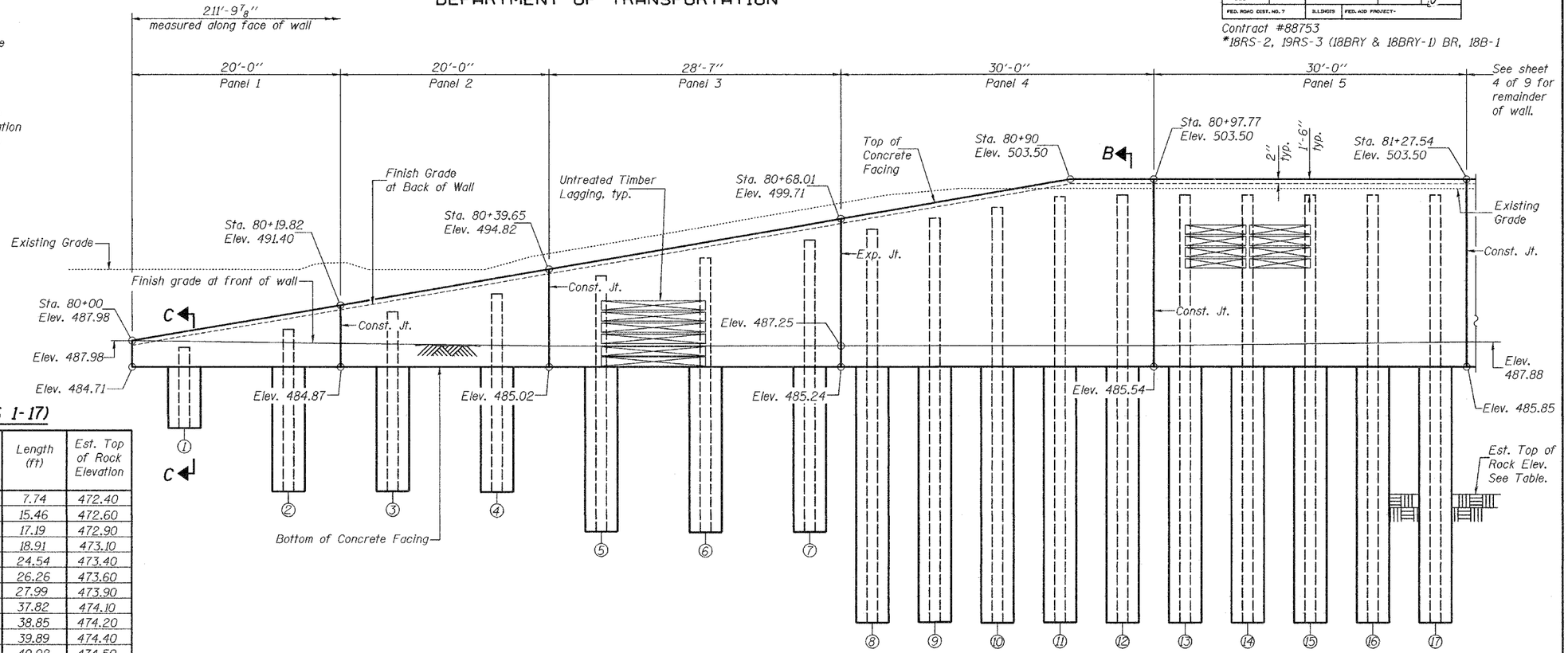
SHEET NO. 3
9 SHEETS

Contract #88753
*18RS-2, 19RS-3 (18BRY & 18BRY-1) BR, 18B-1

Notes:

Where the existing ground line is higher than the finish grade line at back of wall, earth excavation behind the wall (to approximately the finish grade at back of wall) shall be done prior to drilling the shaft excavation.

Where the existing ground line is lower than the finish grade line at back of wall, the shaft excavation shall be drilled prior to placing embankment to the finish grade at back of wall. Embankment shall be placed against the rear face of lagging and compacted within 6 ft. behind the wall with lightweight mechanical tamper, roller or vibratory system to minimize deflection of the soldier piles.



ELEVATION

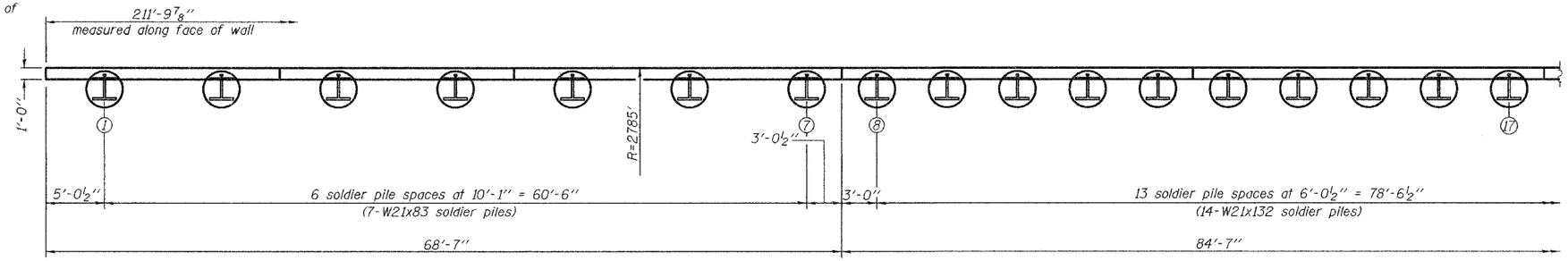
(Looking at back face of wall)
(Looking East)

SOLDIER PILE SUMMARY (PILES 1-17)

Pile #	Station	Offset Rt. (ft.)	Top of Pile Elevation (ft)	**Bottom of Pile Elevation (ft)	Length (ft)	Est. Top of Rock Elevation
1	80+04.99	37.313	487.34	479.60	7.74	472.40
2	80+14.99	36.863	489.06	473.60	15.46	472.60
3	80+24.98	36.472	490.79	473.60	17.19	472.90
4	80+34.98	36.139	492.51	473.60	18.91	473.10
5	80+44.98	35.865	494.24	469.70	24.54	473.40
6	80+54.99	35.650	495.96	469.70	26.26	473.60
7	80+64.99	35.493	497.69	469.70	27.99	473.90
8	80+70.99	35.427	498.72	460.90	37.82	474.10
9	80+76.98	35.382	499.75	460.90	38.85	474.20
10	80+82.98	35.359	500.79	460.90	39.89	474.40
11	80+88.97	35.356	501.82	460.90	40.92	474.50
12	80+94.97	35.374	502.00	460.90	41.10	474.70
13	81+00.96	35.414	502.00	460.90	41.10	473.60
14	81+06.96	35.474	502.00	460.90	41.10	473.60
15	81+12.95	35.555	502.00	460.90	41.10	473.60
16	81+18.94	35.658	502.00	460.90	41.10	473.70
17	81+24.94	35.781	502.00	460.90	41.10	473.70

Each shaft shall be excavated to the elevation specified in the table for "Bottom of Pile Elevation". This elevation may be above or below the encountered top of rock elevation. There is no minimum required embedment in rock.

***Bottom of shaft excavation.*



PLAN

Notes:

See sheet 5 of 9 for concrete facing details.
See sheet 6 of 9 for Section B-B and C-C.
See sheet 6 & 7 of 9 for soldier pile wall details.

DESIGNED	DFZ
CHECKED	SMR
DRAWN	BECKY M. CURRY
CHECKED	DFZ, SMR & SEM

April 28, 2005
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

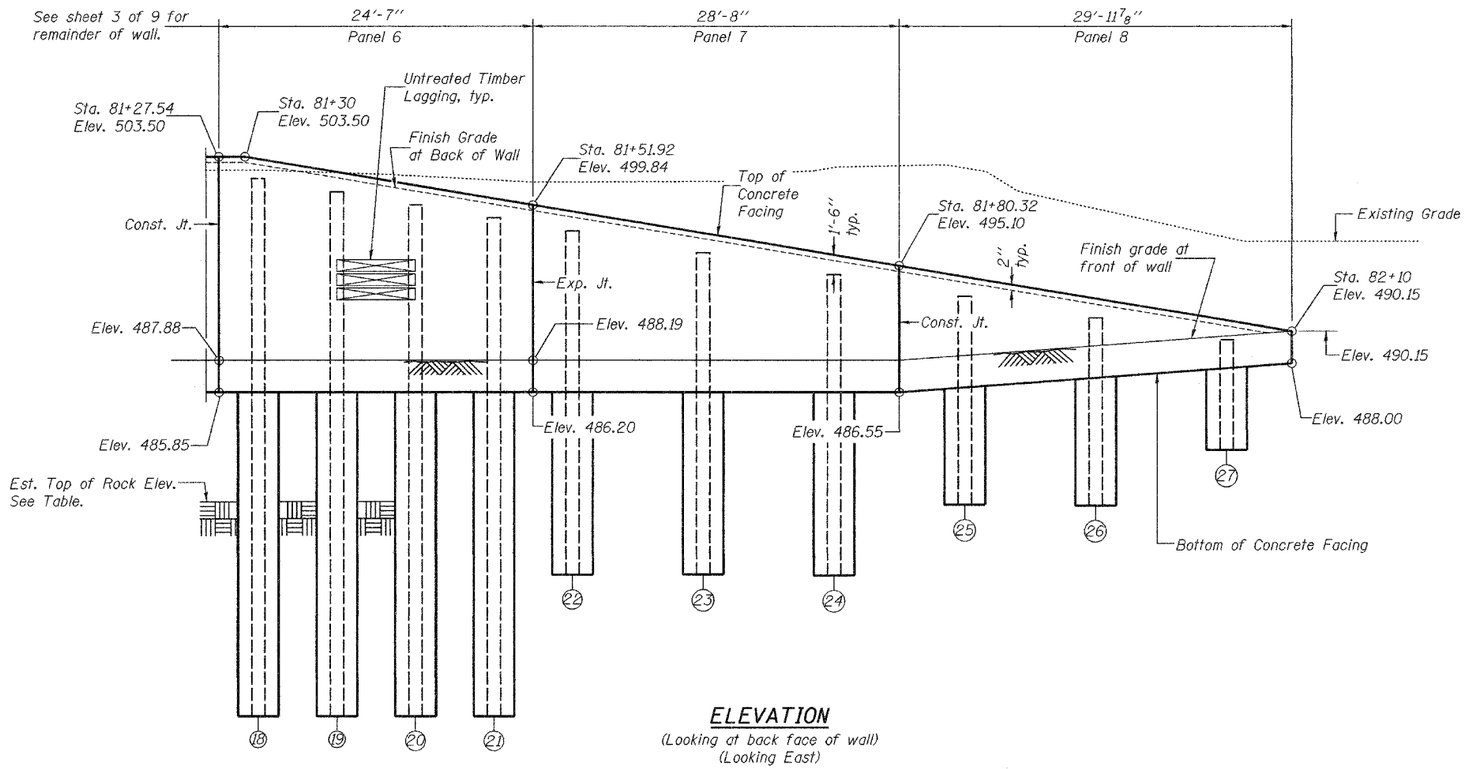
SOLDIER PILE WALL
F.A.P. RTE. 315 - SEC. 18RS-2, 19RS-3, (18BRY & 18BRY-1) BR, 18B-1
FULTON COUNTY
RT. STATION 80+00 to 82+10
STRUCTURE NO. 029-W501

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

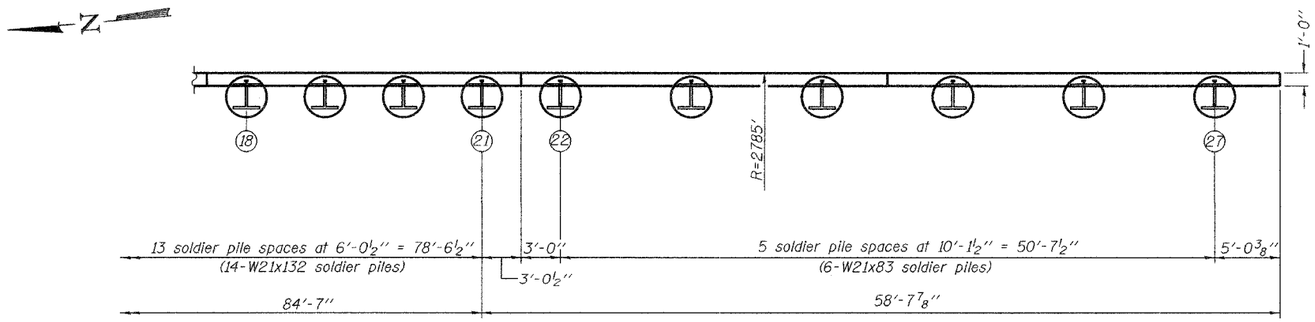
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 315	*	FULTON		235
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 4
9 SHEETS

Contract #88753
*18RS-2, 19RS-3 (18BRY & 18BRY-1) BR, 18B-1



ELEVATION
(Looking at back face of wall)
(Looking East)



PLAN

SOLDIER PILE SUMMARY (PILES 18-27)

Pile #	Station	Offset Rt. (ft.)	Top of Pile Elevation (ft)	**Bottom of Pile Elevation (ft)	Length (ft)	Est. Top of Rock Elevation
18	81+30.93	35.926	501.84	460.90	40.94	473.70
19	81+36.92	35.092	500.85	460.90	39.95	473.80
20	81+42.91	36.278	499.85	460.90	38.95	473.80
21	81+48.90	36.486	498.85	460.90	37.95	473.80
22	81+54.89	36.715	497.85	471.50	26.35	473.90
23	81+64.93	37.145	496.17	471.50	24.67	473.90
24	81+74.96	37.635	494.50	471.50	23.00	474.00
25	81+84.99	38.183	492.82	476.86	15.96	474.00
26	81+95.01	38.791	491.15	476.86	14.29	474.10
27	82+05.02	39.457	489.48	481.10	8.38	474.20

Each shaft shall be excavated to the elevation specified in the table for "Bottom of Pile Elevation". This elevation may be above or below the encountered top of rock elevation. There is no minimum required embedment in rock.

**Bottom of shaft excavation.

BILL OF MATERIAL

ITEM	UNIT	TOTAL
Furnishing Soldier Piles (W Section)	Ft.	813
Drilling and Setting Soldier Piles (in Rock)	Cu. Ft.	990
Drilling and Setting Soldier Piles (in Soil)	Cu. Ft.	3175
Untreated Timber Lagging	Sq. Ft.	2060
Geocomposite Wall Drain	Sq. Yd.	170

DESIGNED	DFZ
CHECKED	SMR
DRAWN	BECKY M. CURRY
CHECKED	DFZ, SMR & SEM

April 28, 2005
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

SOLDIER PILE WALL
F.A.P. RTE. 315 - SEC. 18RS-2, 19RS-3, (18BRY & 18BRY-1) BR, 18B-1
FULTON COUNTY
RT. STATION 80+00 to 82+10
STRUCTURE NO. 029-W501

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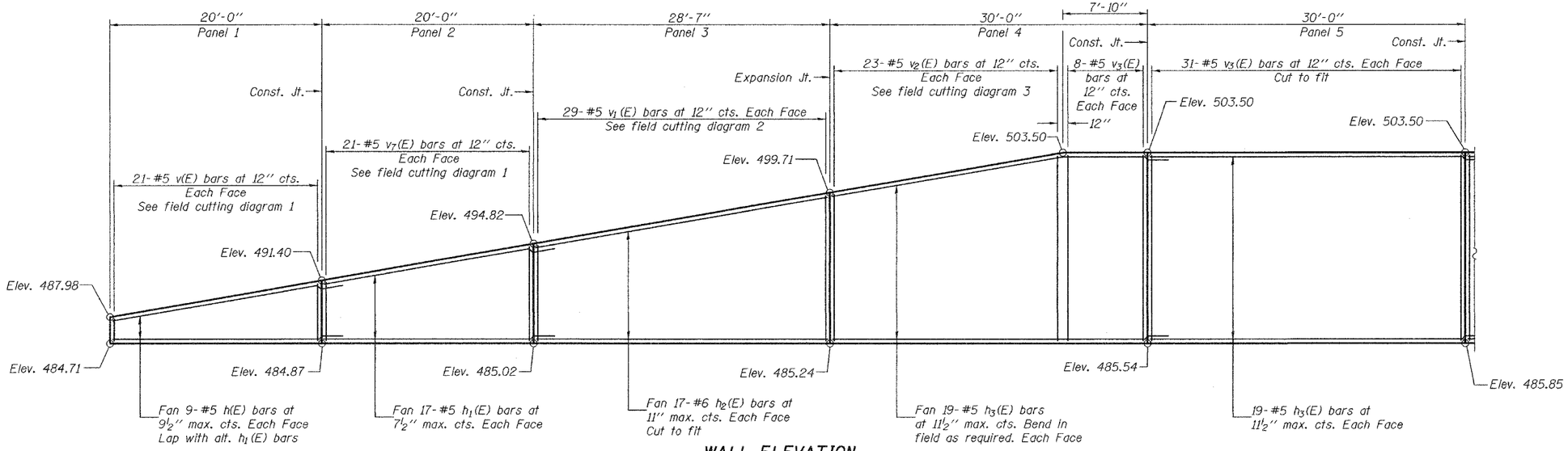
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

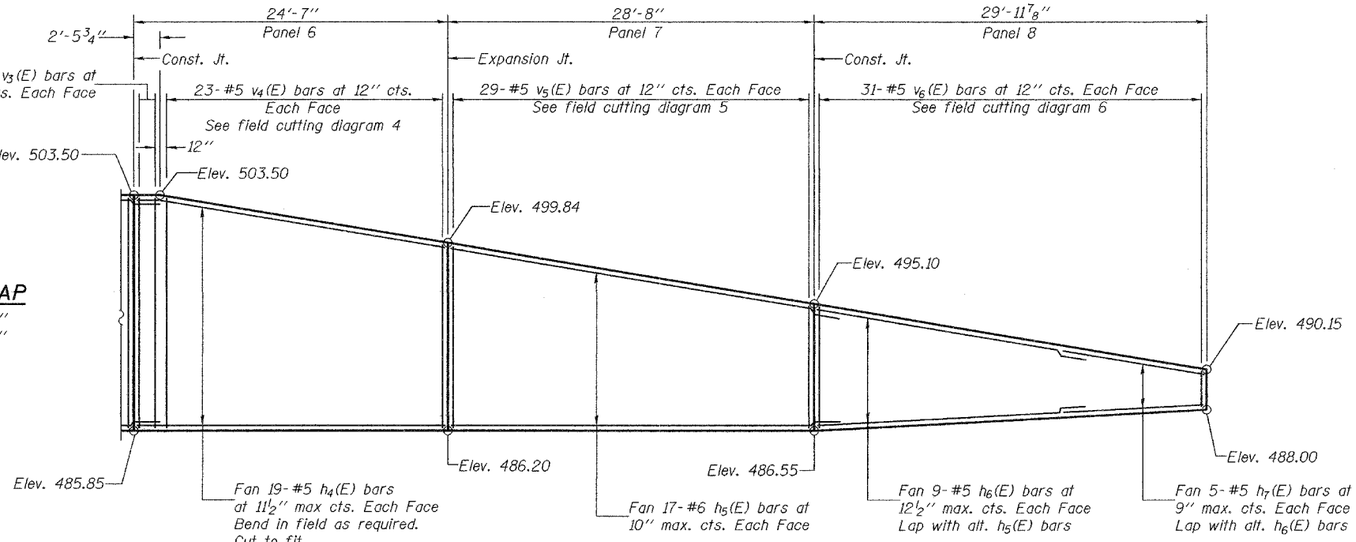
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 315	*	FULTON		236
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 5
9 SHEETS

Contract #88753
*18RS-2, 19RS-3 (18BRY & 18BRY-1) BR, 18B-1



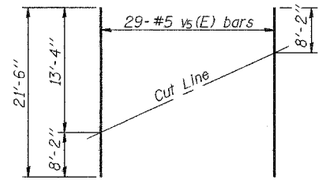
WALL ELEVATION



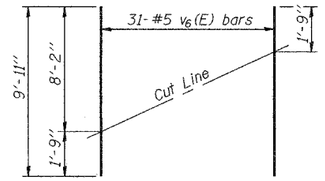
WALL ELEVATION

MIN. BAR LAP
#5 bar = 3'-0"
#6 bar = 3'-7"

SECTION THRU CONCRETE FACING



FIELD CUTTING DIAGRAM 5
Order v5(E) full length. Cut as shown and use remainder of bars in opposite face.

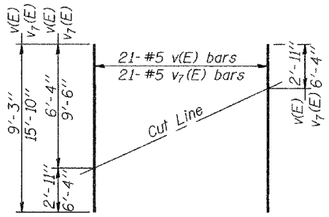


FIELD CUTTING DIAGRAM 6
Order v6(E) full length. Cut as shown and use remainder of bars in opposite face.

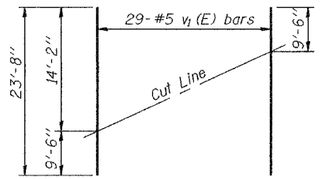
BILL OF MATERIAL

Bar	No.	Size	Length	Shape
h(E)	18	#5	23'-2"	——
h1(E)	34	#5	23'-9"	——
h2(E)	34	#6	28'-9"	——
h3(E)	76	#5	33'-4"	——
h4(E)	38	#5	24'-8"	——
h5(E)	34	#6	32'-8"	——
h6(E)	18	#5	24'-10"	——
h7(E)	10	#5	8'-8"	——
v(E)	21	#5	9'-3"	——
v1(E)	29	#5	23'-8"	——
v2(E)	23	#5	31'-10"	——
v3(E)	82	#5	17'-9"	——
v4(E)	23	#5	30'-8"	——
v5(E)	29	#5	21'-6"	——
v6(E)	31	#5	9'-11"	——
v7(E)	21	#5	15'-10"	——
Reinforcement Bars, Epoxy Coated			Pound	13,840
Concrete Structures			Cu. Yd.	87.3

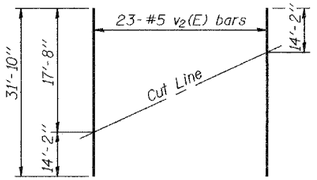
Reinforcement bars designated (E) shall be epoxy coated.



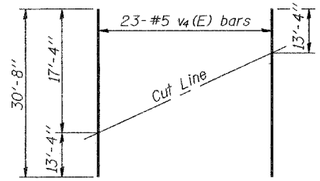
FIELD CUTTING DIAGRAM 1
Order v(E) and v7(E) full length. Cut as shown and use remainder of bars in opposite face.



FIELD CUTTING DIAGRAM 2
Order v1(E) full length. Cut as shown and use remainder of bars in opposite face.



FIELD CUTTING DIAGRAM 3
Order v2(E) full length. Cut as shown and use remainder of bars in opposite face.



FIELD CUTTING DIAGRAM 4
Order v4(E) full length. Cut as shown and use remainder of bars in opposite face.

DESIGNED	DFZ
CHECKED	SMR
DRAWN	BECKY M. CURRY
CHECKED	DFZ, SMR & SEM

April 28, 2005
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Rafat E. Andersen
ENGINEER OF BRIDGES AND STRUCTURES

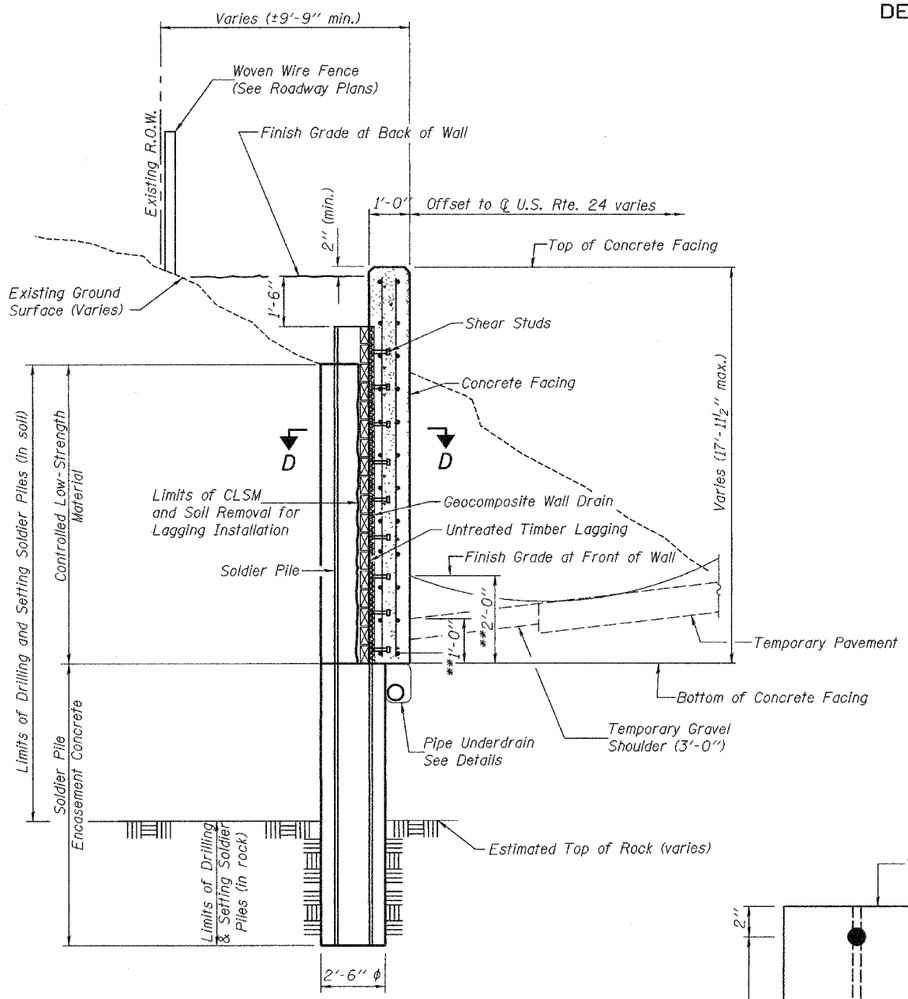
CONCRETE FACING FOR SOLDIER PILE WALL
F.A.P. RTE. 315 - SEC. 18RS-2, 19RS-3, (18BRY & 18BRY-1) BR, 18B-1
FULTON COUNTY
RT. STATION 80+00 to 82+10
STRUCTURE NO. 029-W501

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 315	*	FULTON		239
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

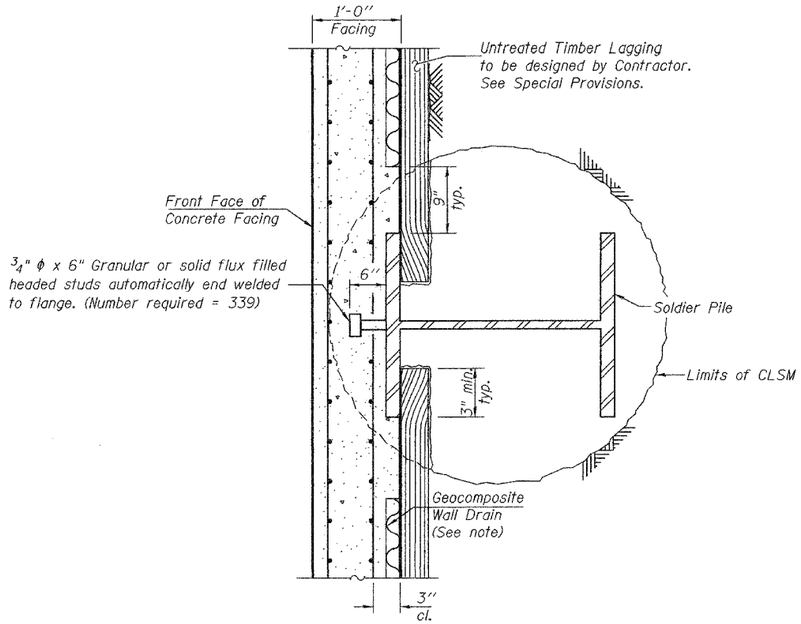
SHEET NO. 6
9 SHEETS

Contract #88753
*18RS-2, 19RS-3 (18BRY & 18BRY-1) BR. 18B-1



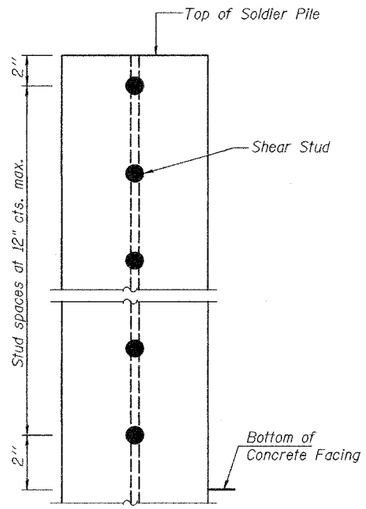
SECTION B-B

** Top of underdrain will be at least 2'-0" below finish grade at front of wall and at least 1'-0" below top of temporary shoulder (at front of wall).

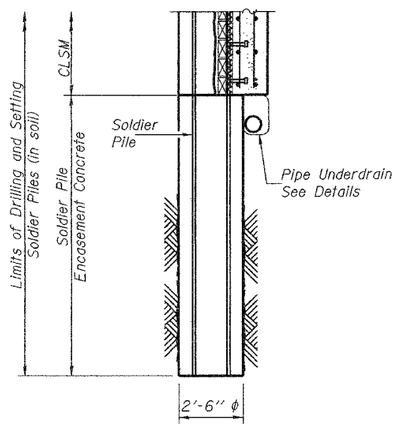


SECTION D-D

Note:
Geocomposite Wall Drain shall not have a thickness greater than 1".



SHEAR STUD DETAIL
(Elevation of pile shown)



SECTION C-C
For remainder of details, see Section B-B.

DESIGNED	DFZ
CHECKED	SMR
DRAWN	BECKY M. CURRY
CHECKED	DFZ, SMR & SEM

April 28, 2005
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

SOLDIER PILE WALL DETAILS
F.A.P. RTE. 315 - SEC. 18RS-2, 19RS-3, (18BRY & 18BRY-1) BR, 18B-1
FULTON COUNTY
RT. STATION 80+00 to 82+10
STRUCTURE NO. 029-W501

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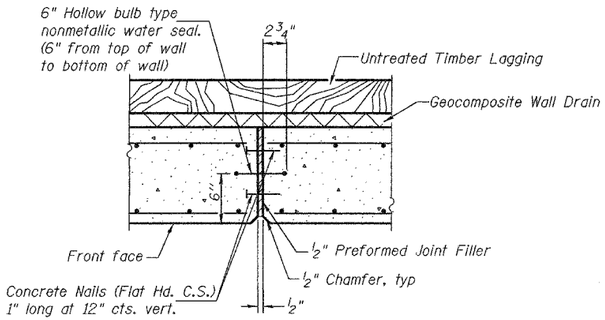
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

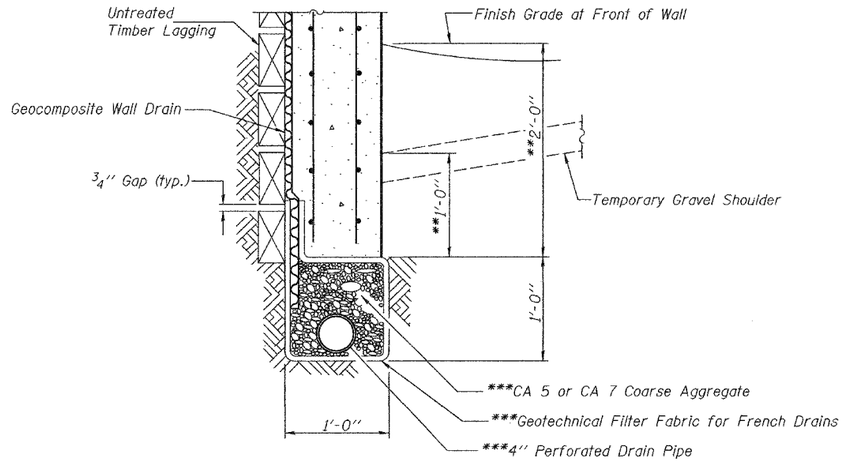
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 315	*	FULTON		238
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 7
9 SHEETS

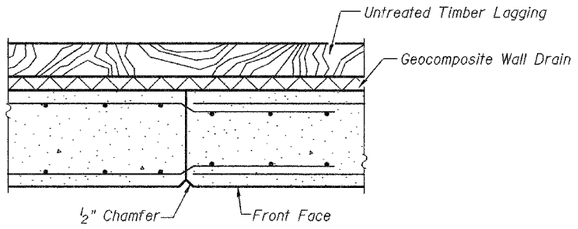
Contract #88753
*18RS-2, 19RS-3 (18BRY & 18BRY-1) BR, 18B-1



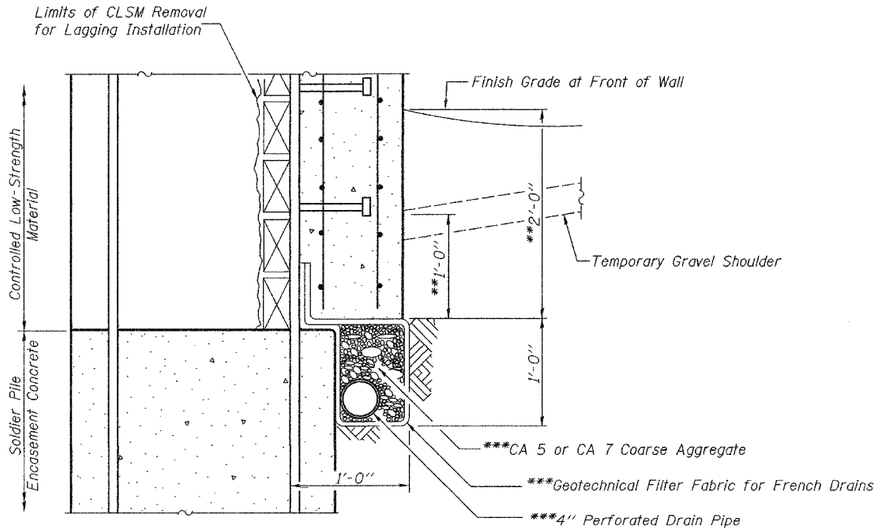
EXPANSION JOINT DETAIL



PIPE UNDERDRAIN BETWEEN SOLDIER PILES



CONSTRUCTION JOINT DETAIL



PIPE UNDERDRAIN AT SOLDIER PILES

DESIGNED	DFZ
CHECKED	SMR
DRAWN	BECKY M. GURRY
CHECKED	DFZ, SMR & SEM

April 28, 2005
EXAMINED Thomas J. Domagalski
ENGINEER OF BRIDGE DESIGN
PASSED Ralph E. Anderson
ENGINEER OF BRIDGES AND STRUCTURES

**Top of underdrain will be at least 2'-0" below finish grade at front wall and at least 1'-0" below top of temporary shoulder (at front of wall).

***Cost included with Pipe Underdrains for Structures 4".

SOLDIER PILE WALL DETAILS
F.A.P. RTE. 315 - SEC. 18RS-2, 19RS-3, (18BRY & 18BRY-1) BR, 18B-1
FULTON COUNTY
RT. STATION 80+00 to 82+10
STRUCTURE NO. 029-W501

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 315	*	FULTON		239
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT-	

SHEET NO. 8
9 SHEETS

Contract #88753
*18RS-2, 19RS-3 (18BRY & 18BRY-1) BR, 18B-1

Illinois Department of Transportation
Division of Highways
District Four Materials

SOIL BORING LOG

Page 1 of 1

Date 9/27/02

ROUTE FAP 317 & 315 (US 24/IL 100 & US 136) DESCRIPTION US 24 Lewistown to Duncan Mills LOGGED BY DBR
18RS-2,19RS-3,(18BRY&18BRY-1)
SECTION BR,18B-1 LOCATION SW1/4, NE1/4, SEC. 8, TWP. 4N, RNG. 3E, 4th PM

COUNTY Fulton DRILLING METHOD HSA HAMMER TYPE AUTO

STRUCT. NO. _____
Station _____

BORING NO. 7979 (Retaining Wall)
Station 79+79
Offset 79.00ft Rt.
Ground Surface Elev. 489.20 ft

Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft

Groundwater Elev.:
First Encounter None ft
Upon Completion *None ft
After 24 Hrs. **None ft

DEPTH (ft)	BLOWS (6")	UCS Qu (tsf)	MOIST (%)	DEPTH (ft)	BLOWS (6")	UCS Qu (tsf)	MOIST (%)
No Sample Taken 0-1.5'				** No H2O- hole collapsed @ 14.1'			
487.70	2			End of Boring			
Brown SILTY CLAY LOAM	3	4.3	18.9				
	5	P					
485.20							
Brown CLAY LOAM	3						
w/tr. of silt	5	3.3	20.6				
	6	S					
482.70							
Brown SANDY CLAY LOAM	2						
	1	1.0	22.9				
	2	B					
480.20							
Brown/Gray CLAY LOAM	1						
	2	2.7	17.7				
	3	B					
	2						
	7	2.3	16.5				
	8	B					
475.20							
Brown/Gray SHALEY CLAY	2						
	7	3.7	17.0				
	17	S					
472.70							
Gray SHALE	10						
	44		11.8				
	06/27						
470.20							
Light Grey SANDY SHALE 469.78	00/25"		6.9				
* No H2O- hole collapsed @ 14.1'							

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, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
District Four Materials

SOIL BORING LOG

Page 1 of 1

Date 10/18/02

ROUTE FAP 317 & 315 (US 24/IL 100 & US 136) DESCRIPTION US 24 Lewistown to Duncan Mills LOGGED BY DBR
18RS-2,19RS-3,(18BRY&18BRY-1)
SECTION BR,18B-1 LOCATION SW1/4, NE1/4, SEC. 8, TWP. 4N, RNG. 3E, 4th PM

COUNTY Fulton DRILLING METHOD HSA HAMMER TYPE AUTO

STRUCT. NO. _____
Station _____

BORING NO. 8061 (Retaining Wall)
Station 80+61
Offset 67.00ft Rt.
Ground Surface Elev. 498.20 ft

Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft

Groundwater Elev.:
First Encounter None ft
Upon Completion *None ft
After 24 Hrs. **None ft

DEPTH (ft)	BLOWS (6")	UCS Qu (tsf)	MOIST (%)	DEPTH (ft)	BLOWS (6")	UCS Qu (tsf)	MOIST (%)
NO SAMPLE TAKEN 0-1.5'				Light Grey & Light Brown CLAY LOAM (continued)			
496.70				476.70	17	B	
Light Brown SILTY CLAY LOAM	2			Light Gray SILTY SHALE	9		
	8	2.5	24.3		22		10.0
	13	B			41		
494.20				474.20			
Brown & Gray CLAY LOAM	2			Gray SHALE	45		
	8	2.9	19.4	473.50	00/22"		10.7
	9	B		* No H2O- hole collapsed @ 22.9'			
	2			** No H2O- hole collapsed @ 22.7'			
	5	3.5	18.1	Note: Boring offset to 67' due to overhead power lines			
	9	B		End of Boring			
	2						
	5	3.1	18.5				
	6	B					
486.70							
Gray SILTY CLAY	2						
	3	4.6	21.6				
	5	S					
484.20							
Gray CLAY LOAM	2						
	3	1.4	17.8				
	4	B					
	2						
	3	1.8	18.2				
	5	B					
479.20							
Light Gray & Light Brown CLAY LOAM TILL	4						
	9	5.6	14.9				

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, from 137 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
District Four Materials

SOIL BORING LOG

Page 1 of 1

Date 10/18/02

ROUTE FAP 317 & 315 (US 24/IL 100 & US 136) DESCRIPTION US 24 Lewistown to Duncan Mills LOGGED BY DBR
18RS-2,19RS-3,(18BRY&18BRY-1)
SECTION BR,18B-1 LOCATION SW1/4, NE1/4, SEC. 8, TWP. 4N, RNG. 3E, 4th PM

COUNTY Fulton DRILLING METHOD HSA HAMMER TYPE AUTO

STRUCT. NO. _____
Station _____

BORING NO. 8139 (Retaining Wall)
Station 81+29
Offset 66.00ft Rt.
Ground Surface Elev. 503.50 ft

Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft

Groundwater Elev.:
First Encounter None ft
Upon Completion 480.0 ft ▽
After 24 Hrs. **None ft

DEPTH (ft)	BLOWS (6")	UCS Qu (tsf)	MOIST (%)	DEPTH (ft)	BLOWS (6")	UCS Qu (tsf)	MOIST (%)
NO SAMPLE TAKEN 0-1.5'				Dark Gray, Gray & Brown CLAY LOAM (continued)			
502.00					7	B	
Light Brown & Brown SILT	1						
	1	0.8	9.4		5	2.3	16.8
	1	P			8	B	
				▽			
	2				6		
	3	0.3	12.3		15	6.1	14.1
	3	P			28	S	
477.00							
Light Gray & Gray SHALE	2				43		
	4	0.5	18.6		67		8.4
	4	P		475.50	33		
	2			**H2O Not Available			
	3	1.2	24.1	Hole collapsed @ 19.2'			
	3	S		NOTE: Boring offset to 66' Rt. due to powerlines			
492.00				End of Boring			
Brown & Gray CLAY LOAM	2						
	4	3.5	20.8				
	5	S					
	1						
	3	2.5	34.3				
	4	B					
487.00							
Reddish Brown & Gray SILTY CLAY	1	3.3	34.7				
	3	B	22.8				
	3	2.1					
		B					
484.50							
Dark Gray, Gray & Brown CLAY LOAM TILL	4						
	4	4.3	19.2				

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, from 137 (Rev. 8-99)

BORING DATA
F.A.P. RTE. 315 - SEC. 18RS-2, 19RS-3,
(18BRY & 18BRY-1) BR, 18B-1
FULTON COUNTY
RT. STATION 80+00 to 82+10
STRUCTURE NO. 029-W501

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
F.A.P. 315	*	FULTON		240
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT-		

SHEET NO. 9
9 SHEETS

Contract #88753
*18RS-2, 19RS-3 (18BRY & 18BRY-1) BR, 18B-1

Illinois Department of Transportation
Division of Highways
District Four Materials

ROCK CORE LOG

Page 1 of 1

Date 7/03

ROUTE FAP 317 & 315 (US 24)L 100 & US 136 DESCRIPTION US 24 Lewistown to Duncan Mills LOGGED BY DPS,JES
SECTION 18RS-2,19RS-3,(18BRY&18BRY-1) 8R,18B-1 LOCATION SW¼, NE¼, SEC. 8, TWP. 4N, RNG. 3E, 4th PM
COUNTY Fulton CORING METHOD Dual Barrel

STRUCT. NO. _____ CORING BARREL TYPE & SIZE NWD4 5'
Station _____
Core Diameter 2.1 in
BORING NO. 8100 Ret.Wall Top of Rock Elev. 474.80 ft
Station 81+00 Begin Core Elev. 474.80 ft
Offset 15.00ft Rt CL
Ground Surface Elev. 489.30 ft

DEPTH (ft)	CORE (#)	RECOVERY (%)	RQD (%)	CORE TIME (min/ft)	STRENGTH (tsf)
Gray to Dk. Gray SHALE thin bedded, "soft" , clayshale 474.80	-15	1	100	75	
473.15					
Lt. Gray SILTSTONE/Fine SANDSTONE Med. Bedding Thin organic sheley seam @ 16.3'				3.8% moisture	79.3
				5.6% moisture	140.8
				3.6% moisture	72.1
				3.9% moisture	223.0
469.80				5.3% moisture	114.1
Lt. Gray/Lt Brown SANDSTONE thick bedded, fine grained some v. thin clayshale seams throughout	-20	2	100	98 5.9% moisture	440.5
				5.8% moisture	71.0
				5.8% moisture	402.7
				7.0% moisture	346.0
				8.5% moisture	220.1
				8.6% moisture	313.7
				7.6% moisture	419.3
				8.0% moisture	66.8
464.80					
Lt. Gray Brown SANDSTONE 8.9% moisture thick bedded, fine grained	-25	3	100	84 8.3% moisture	558.9
				6.0% moisture	543.3
				8.6% moisture	531.4
				9.2% moisture	306.9
				8.6% moisture	393.3
462.10					380.5
Gray SHALE w/sandy seams & trace organics 461.53					
Lt. Gray SANDSTONE				8.0% moisture	216.0
				8.5% moisture	81.8
thick bedded, fine grained	-30	4	100	85	
457.95					
Black COAL 457.75					
Gray SHALE 456.60					
Gray SILTSTONE					
454.80				5.3% moisture	37.4

End of Boring
Color pictures of the cores No
Cores will be stored for examination until _____
The "Strength" column represents the unlaxial compressive strength of the core sample (ASTM D-2938)

BBS, form 138 (Rev. 8-99)

Illinois Department of Transportation
Division of Highways
District Four Materials

SOIL BORING LOG

Page 1 of 1

Date 12/02

ROUTE FAP 317 & 315 (US 24)L 100 & US 136 DESCRIPTION US 24 Lewistown to Duncan Mills LOGGED BY DBR
SECTION 18RS-2,19RS-3,(18BRY&18BRY-1) 8R,18B-1 LOCATION SW¼, NE¼, SEC. 8, TWP. 4N, RNG. 3E, 4th PM
COUNTY Fulton DRILLING METHOD HSA HAMMER TYPE AUTO

STRUCT. NO. _____
Station _____
BORING NO. 8210 (Retaining Wall)
Station 82+10
Offset 28.00ft Rt.
Ground Surface Elev. 491.60 ft

Surface Water Elev. _____ ft
Stream Bed Elev. _____ ft
Groundwater Elev.:
First Encounter None ft
Upon Completion *None ft
After 24 Hrs. **None ft

DEPTH (ft)	BLOWS (6")	UCS Qu (tsf)	MOIST (%)
NO SAMPLE TAKEN 0-1.5'			
490.10			
Brown SILTY LOAM	2		
	4	3.5	16.4
	3	P	
487.60			
Brown & Gray SILT	3		
-5	6	1.3	23.1
	6	P	
	3		
	5	1.4	23.8
	5	S	
	2		
-10	3	2.0	25.9
	2	S	
480.10			
Brown SILTY CLAY	1		
	1	1.1	19.5
	4	B	
477.60			
Light Gray to Gray SILTY SHALE	3		
-15	6	4.3	16.5
	12	P	
475.10			
Light Brown & Light Gray SANDSTONE 474.18	22 100/.05"		7.5
* No H2O- hole collapsed @ 14.9' ** No H2O- hole collapsed @ 14.8' End of Boring			
-20			

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)

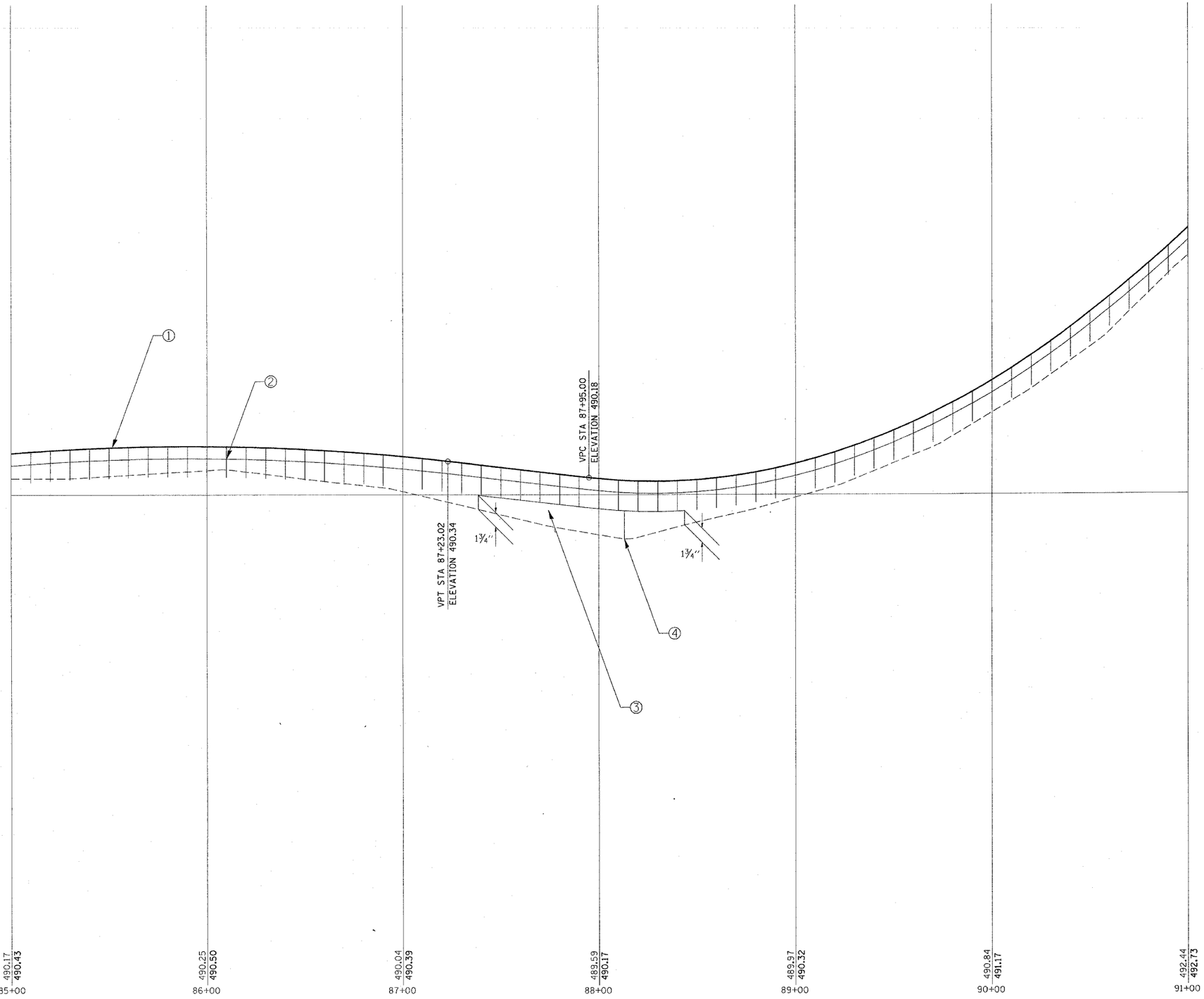
BBS, from 137 (Rev. 8-99)

BORING DATA
F.A.P. RTE. 315 - SEC. 18RS-2, 19RS-3,
(18BRY & 18BRY-1) BR, 18B-1
FULTON COUNTY
RT. STATION 80+00 to 82+10
STRUCTURE NO. 029-W501

CONTRACT NO. 88753

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	***	FULTON	684	341
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

*** 18I,18BRY&18BRY-1)BR,18B-1



LEGEND

① STA 79+60 (LT) & 80+00 (RT) TO STA 132+00
POLYMERIZED BIT. CONC. SURFACE COURSE 1½"
SUPERPAVE, MIX "D", N50

② STA 0+00 TO STA 132+00
POLYMERIZED BIT. CONC. BINDER COURSE 2¼"

③ STA 87+38.51 TO STA 88+43.73
POLYMERIZED BIT. CONC. BINDER COURSE 2¼"
1ST LIFT
TAPER TO 1¾" AT EACH END

④ STA 88+13.02
POLYMERIZED BIT. CONC. BINDER COURSE 2¼"
MAX 3.45"

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED VARIABLE
PAVING DETAIL
US 24
STA 85+00 TO 91+00

SCALE: VERT.
HORIZ.
DATE

DRAWN BY
CHECKED BY

PLOT DATE = 4/7/2005
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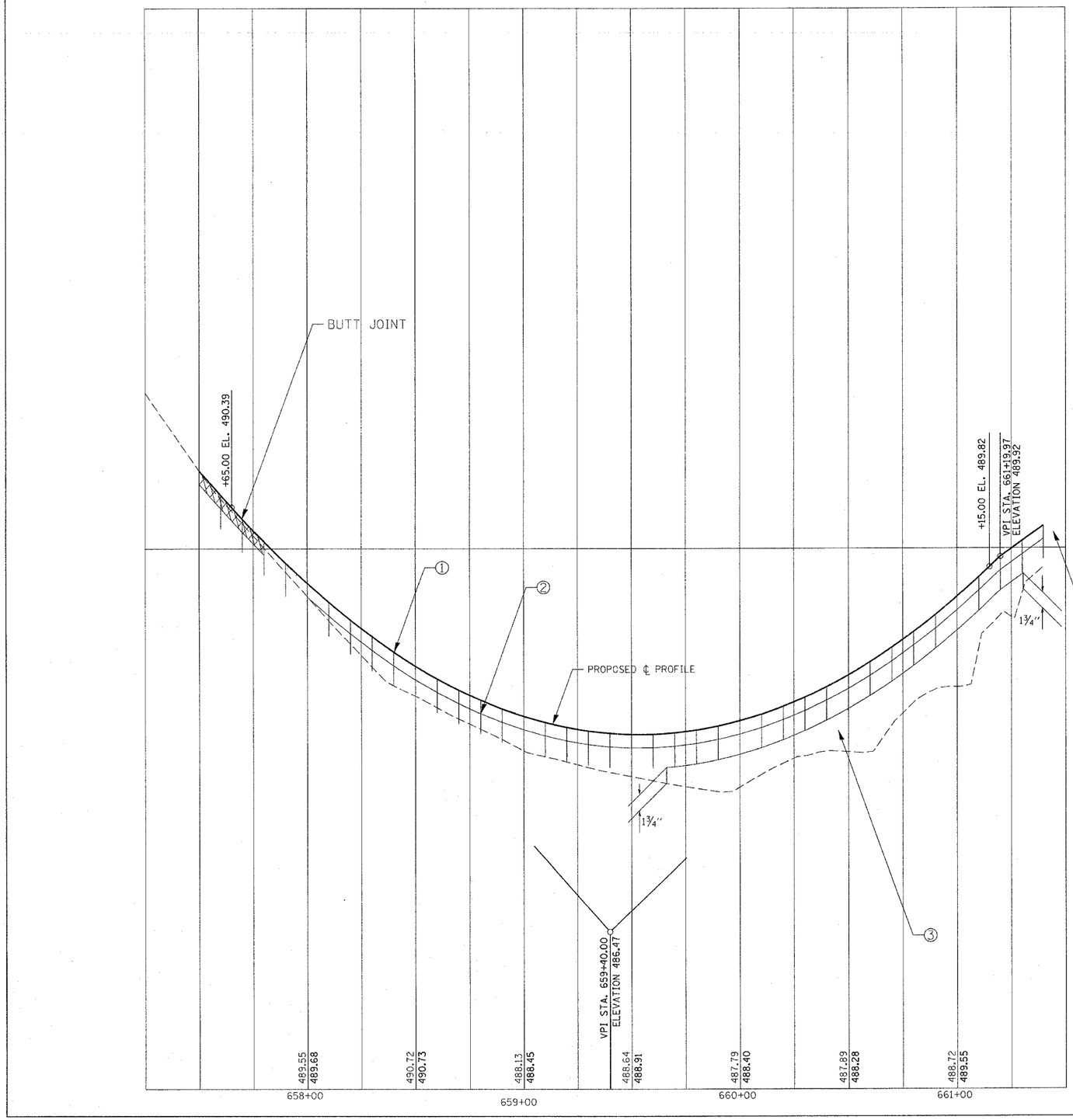
PLOT SCALE = 50.0000 '/ IN.
USER NAME = heggsend

CONTRACT NO. 88753

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	•••	FULTON	604	242
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

••• 181,(18BRY&18BRY-1)BR,18B-1



LEGEND

① STA 657+50.00 TO STA 661+39.69
POLYMERIZED BIT. CONC. SURFACE COURSE 1½"
SUPERPAVE, MIX "D", N50

② STA 658+00.51 TO STA 661+39.69
POLYMERIZED BIT. CONC. BINDER COURSE 2¼"

③ STA 659+66.16 TO STA 661+30.46
POLYMERIZED BIT. CONC. BINDER COURSE 2¼"
1ST LIFT
TAPER TO 1¾" AT EACH END

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

PROPOSED VARIABLE
PAVING DETAIL
US 136
STA 657+50 TO STA 661+39.69

SCALE: VERT.
HORIZ.
DATE

DRAWN BY
CHECKED BY

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CONTRACT NO. 88753

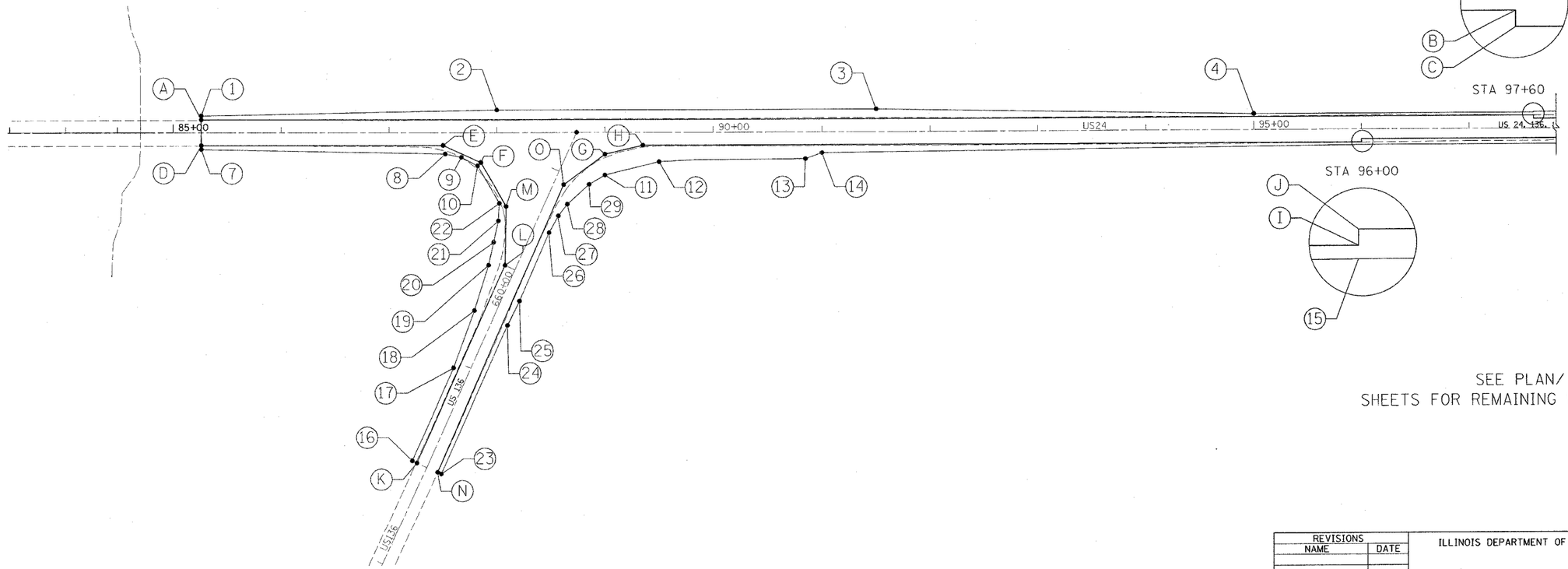
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	•••	FULTON	684	243
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

••• 181,(18BRY&18BRY-1)BR,18B-1

US 24		
BASE COURSE WIDENING		
POINT	STA	OFFSET
1	85+26	15.61 LT
2	88+00	21.00 LT
3	91+50	21.00 LT
4	95+00	14.75 LT
5	97+60	14.75 LT
6	97+60	15.50 LT
7	85+26	15.66 RT
8	87+52.06	20.00 RT
9	87+67	23.09 RT
10	87+82	31.07 RT
11	89+00	40.00 RT
12	89+50	27.50 RT
13	90+84.65	25.11 RT
14	91+00	19.50 RT
15	96+00	14.50 RT

US 136		
BASE COURSE WIDENING		
POINT	STA	OFFSET
16	658+00	14.75 LT
17	658+93.69	14.75 LT
18	659+50	18.62 LT
19	659+93.86	23.99 LT
20	660+15	28.35 LT
21	660+35	32.47 LT
22	660+50	38.27 LT
23	658+00	14.75 RT
24	659+50	14.75 RT
25	659+75.05	15.85 RT
26	660+44	14.75 RT
27	660+61.80	16.19 RT
28	660+75	19.50 RT
29	661+00	30.41 RT

SAWCUT DATA		
POINT	STA	OFFSET
A	85+26	12.00 LT
B	97+60	12.00 LT
C	97+60	9.00 LT
D	85+26	12.00 RT
E	87+50	12.00 RT
F	87+85	28.06 RT
G	89+00	20.39 RT
H	89+35	12.00 RT
I	96+00	12.00 RT
J	96+00	9.00 RT
K	658+00	10.00 LT
L	660+00	10.00 LT
M	660+50	31.43 LT
N	658+00	11.00 RT
O	660+90	9.02 RT



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USER NAME = haggsmd

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

BASE COURSE WIDENING DETAIL

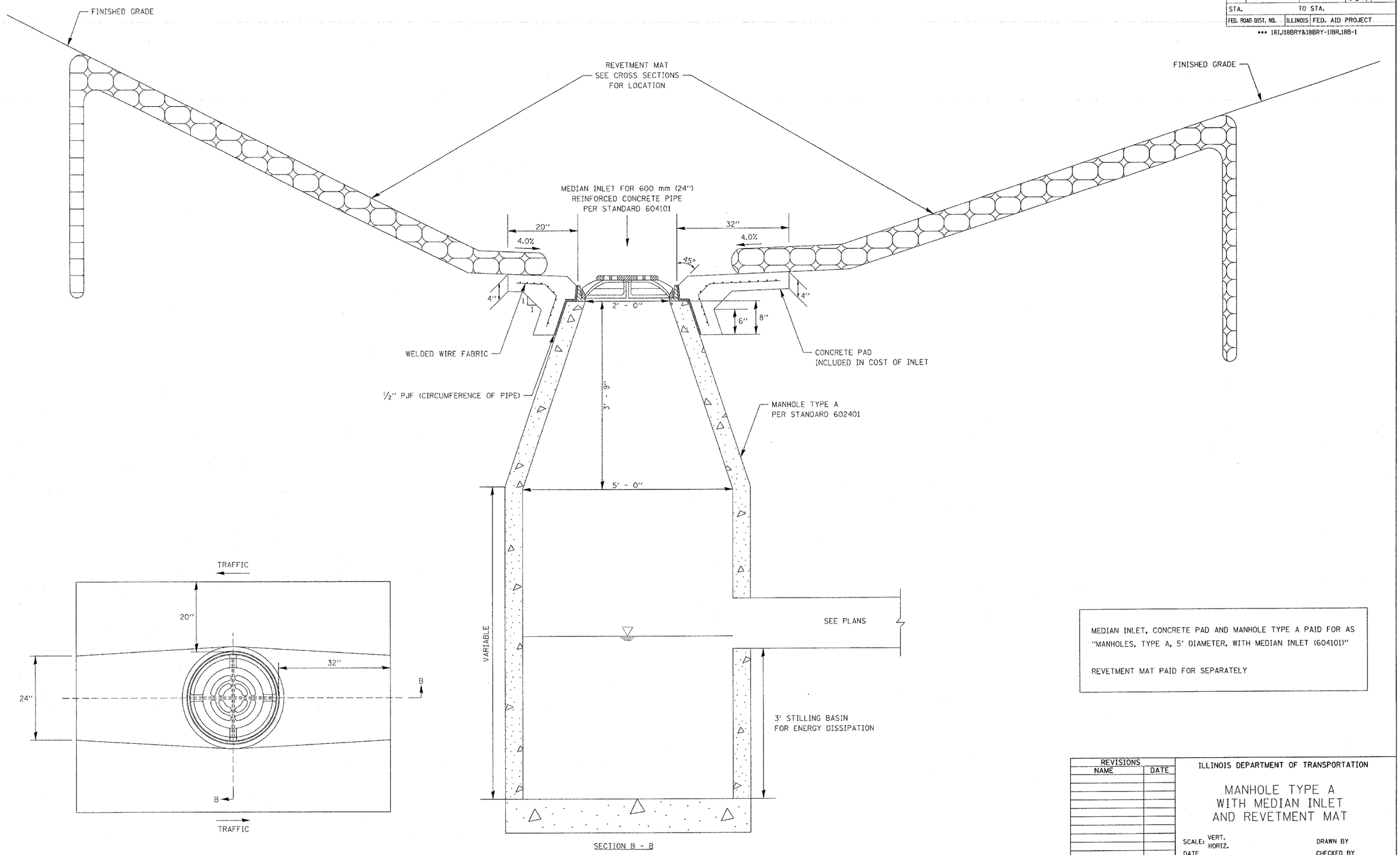
SCALE: VERT.
HORIZ.
DATE

DRAWN BY
CHECKED BY

CONTRACT NO. 88753

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	•••	FULTON	684	244
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

••• 181,(18BRY&18BRY-1)BR,18B-1



MEDIAN INLET, CONCRETE PAD AND MANHOLE TYPE A PAID FOR AS "MANHOLES, TYPE A, 5' DIAMETER, WITH MEDIAN INLET (604101)"

REVETMENT MAT PAID FOR SEPARATELY

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

MANHOLE TYPE A WITH MEDIAN INLET AND REVETMENT MAT

SCALE: VERT. HORIZ.

DATE

DRAWN BY

CHECKED BY

PLOT DATE = 4/7/2005
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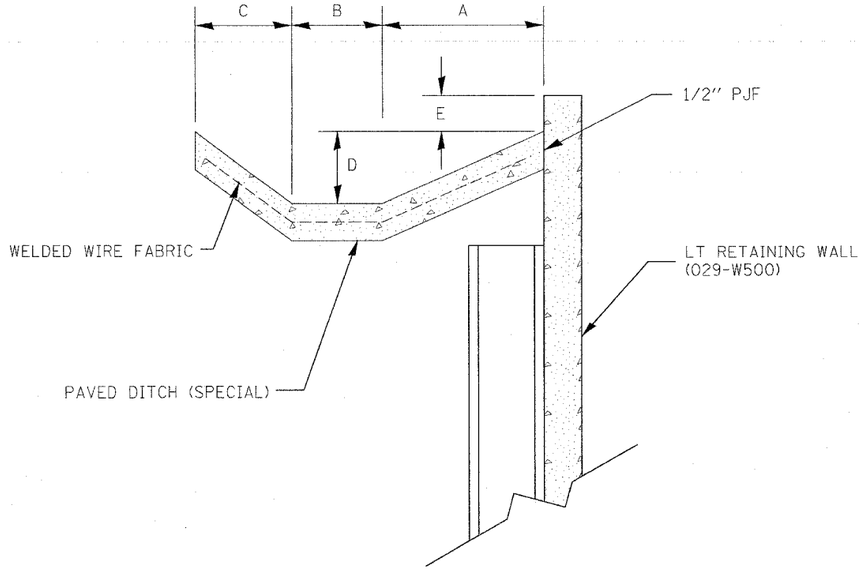
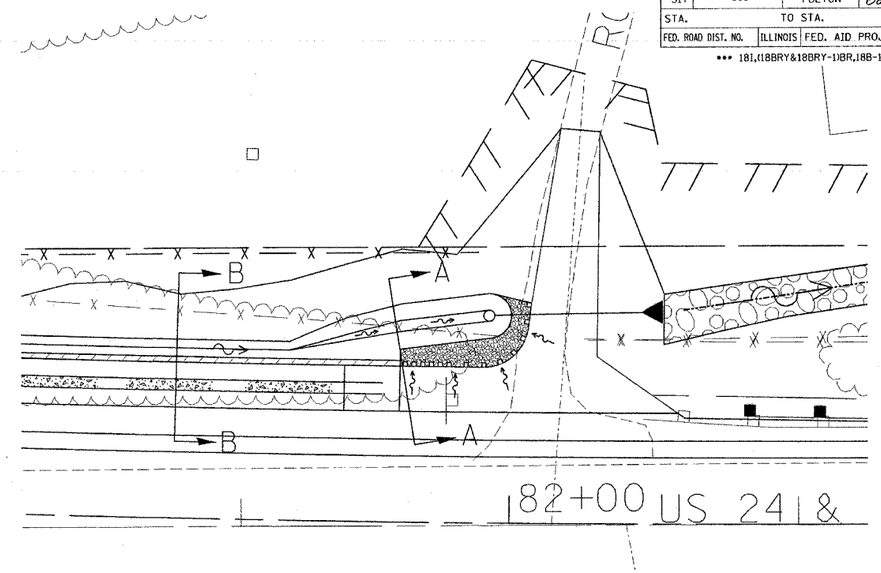
CONTRACT NO. 88753

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	***	FULTON	684	245
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

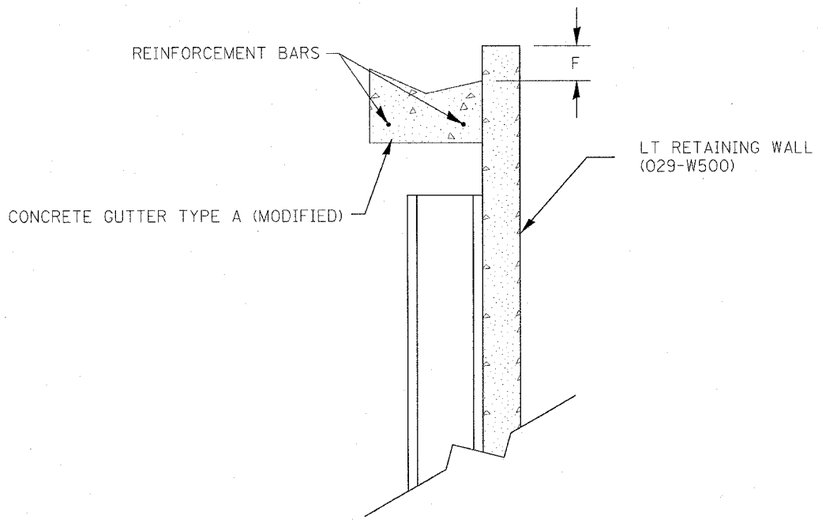


SECTION A-A
STA 81+60 TO 81+90



STATION	A	B	C	D	E
81+60	18	0	18	3	5.5
81+70	39	12	36	6	8
81+80	60	24	36	6	30
81+90	36	24	36	6	0

STATION	F
79+60 TO 80+50	2
80+60	2 3/8
80+70	2 3/4
80+80	3 1/8
80+90	3 1/2
81+00	3 7/8
81+10	4 3/16
81+20 TO 81+60	2



SECTION B-B
STA 79+60 TO 81+60

NOTES

1. ALL DIMINSIONS ARE IN INCES UNLESS OTHERWISE SPECIFIED
2. CONCRETE GUTTER TYPE A (MODIFIED) AND PAVED DITCH (SPECIAL) SHALL BE POURED MONOLITHICALLY INCLUDING THE APRON AROUND THE MEDIAN INLET (SPECIAL)
3. FINISH SHALL BE A RAKED FINISH ALONG THE LENGTH OF THE TYPE A GUTTER AND PAVED DITCH (SPECIAL)
4. CONSTRUCTION SHALL BE ACCORDING TO SECTION 606 UNLESS OTHERWISE NOTED IN THE PLANS

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

PAVED DITCH SPECIAL DETAIL

SCALE: VERT. HORIZ.
DATE
DRAWN BY
CHECKED BY

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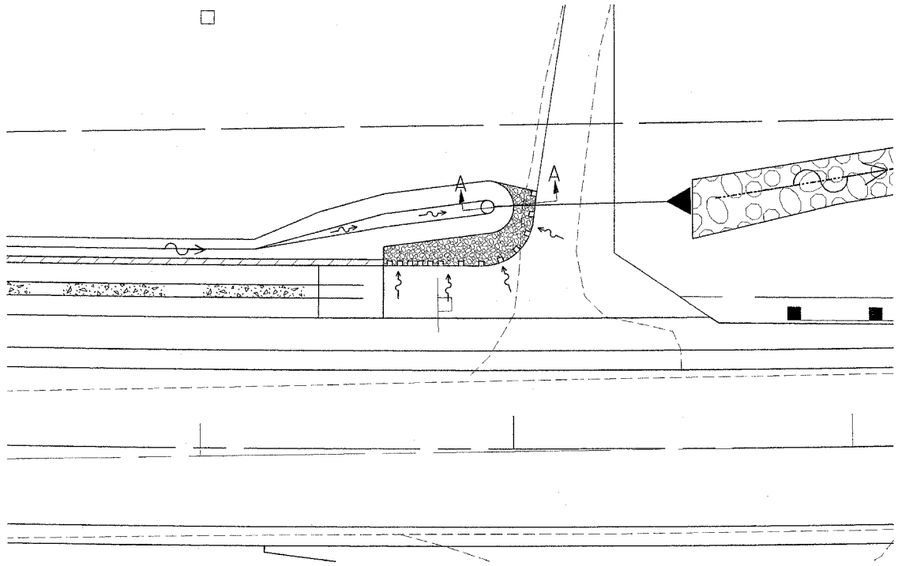
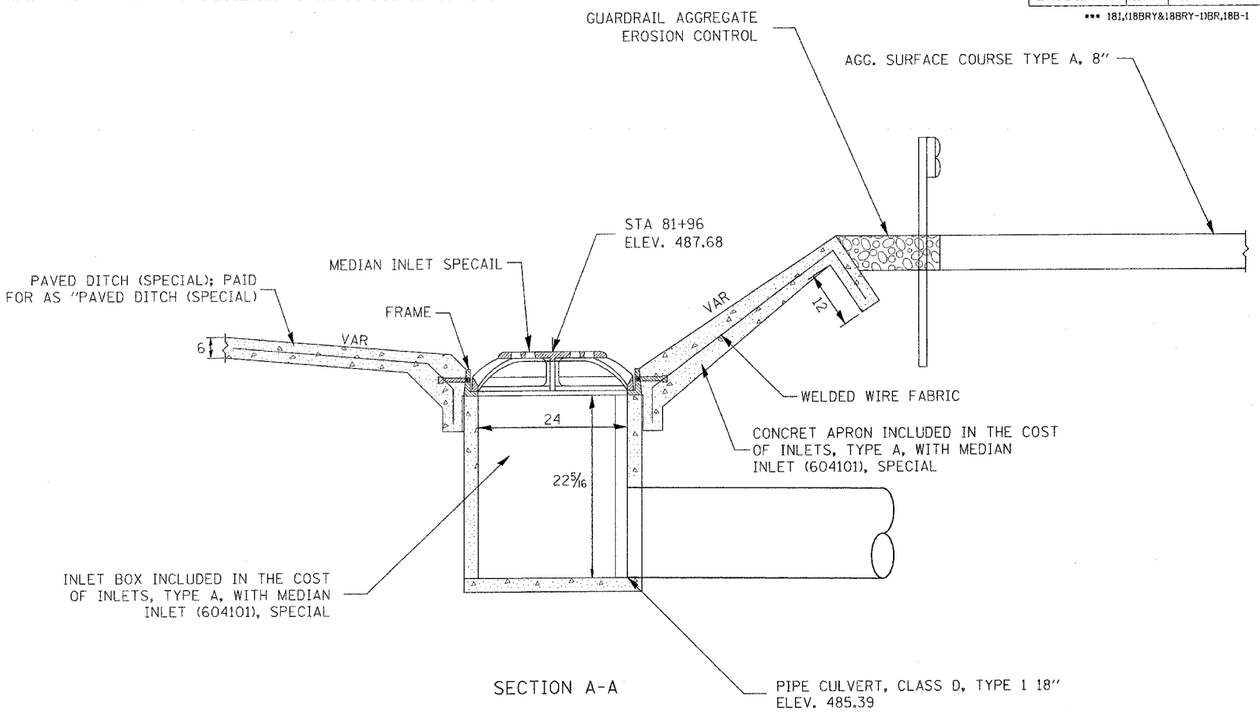
USER NAME = heggtend

CONTRACT NO. 88753

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	•••	FULTON	684	246
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

••• 181,(18BRY&18BRY-1)BR,18B-1





SECTION A-A

GENERAL NOTES

1. The applicable portions of Highway Standards 604101 and/or 604106 shall apply, except as noted herin.

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

INLETS, TYPE A, WITH MEDIAN INLET (604101), SPECIAL DETAIL

SCALE: VERT. HORIZ.
DATE
DRAWN BY
CHECKED BY

PLOT DATE = 4/7/2005
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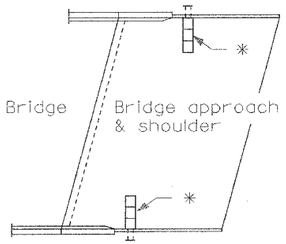
CONTRACT NO. 88753

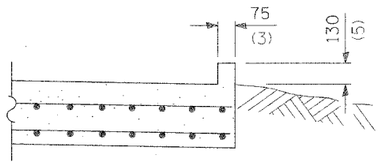
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	•••	FULTON	684	247
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

••• 181,(18BRY&18BRY-1)BR,18B-1

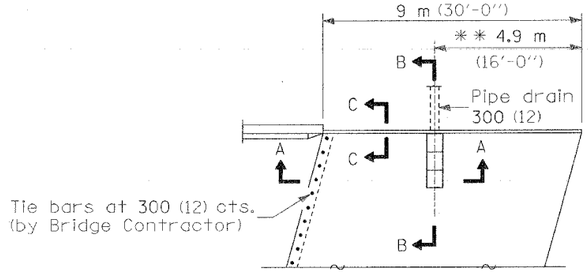
* Type B, C, or D inlet box as required.



GENERAL PLAN



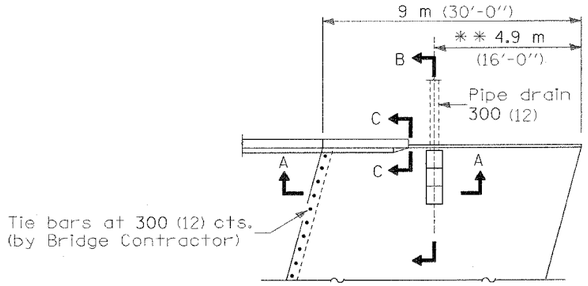
SECTION C-C



TYPICAL DETAIL PLAN

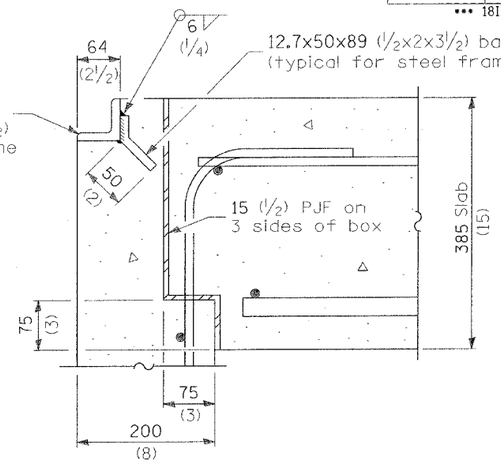
(W/O Wingwall)

** Vary this dimension as needed to position the Inlet Box and Pipe Drain between the proposed approach guardrail posts.

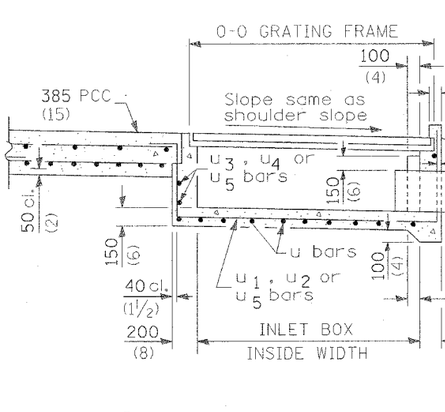


TYPICAL DETAIL PLAN

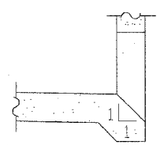
(With Wingwall)



DETAIL A

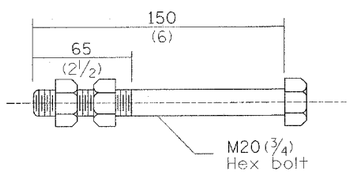


SEC. B-B



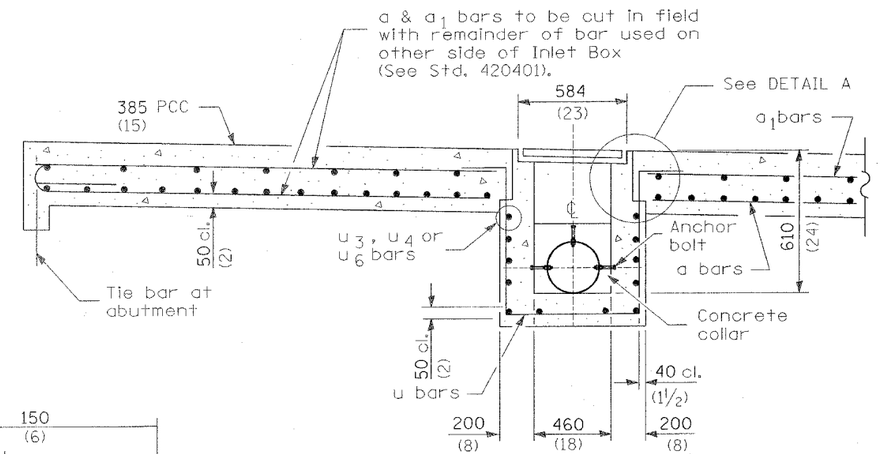
BOX OUTLET WHEN PRECAST

INLET TYPE	SHOULDER WIDTH	O-O GRATING FRAME	INLET BOX INSIDE WIDTH	INLET BOX INSIDE LENGTH
Type B	Less than 1.5 m (5')	0.690 m (2'-3")	0.560 m (1'-10")	460 (18)
Type C	1.5 - 1.8 m (5') (6')	1.325 m (4'-4")	1.195 m (3'-11")	460 (18)
Type D	Greater than 1.8 m (6')	1.960 m (6'-5")	1.830 m (6'-0")	460 (18)



ANCHOR BOLT

(Used to tie pipe to concrete collar)



SECTION A-A

GENERAL NOTES

All exposed edges of the inlet, except the upper perimeter, shall be beveled 20 mm (¾ inch).

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

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

BRIDGE APPROACH PAVEMENT DRAIN DETAIL

(Sheet 1 of 2)

SCALE: VERT. HORIZ.

DATE

DRAWN BY

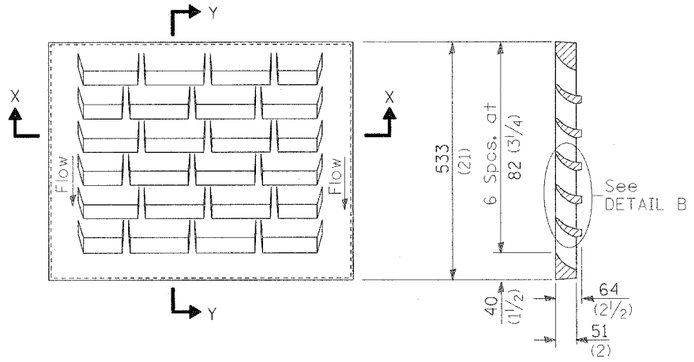
CHECKED BY

PLOT DATE = 4/7/2005
FILE NAME = d:\projects\us24spoon\ph_2\details\shoulderinlet.dgn
PLOT SCALE = 20.0000 ' / IN.
USER NAME = heggland

CONTRACT NO. 88753

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	•••	FULTON	684	248
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

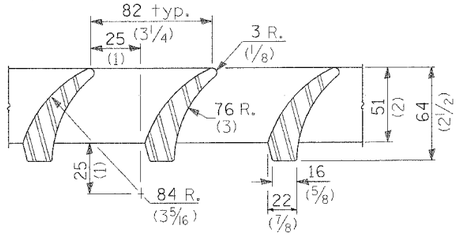
••• 181,(18BRY&18BRY-1)BR,18B-1



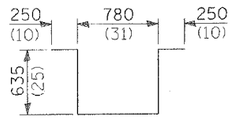
DETAIL OF CAST GRATE

Type B requires 1 grate
Type C requires 2 grates
Type D requires 3 grates

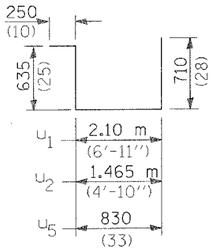
SECTION Y-Y



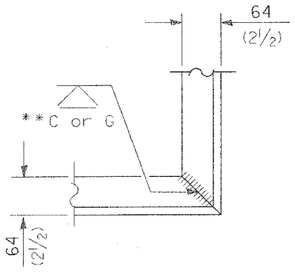
DETAIL B



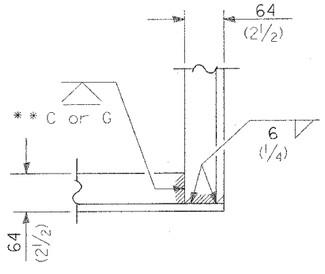
BAR u



BARS u_1, u_2 & u_5



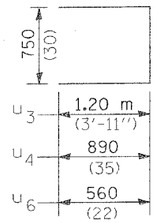
ALT. 1



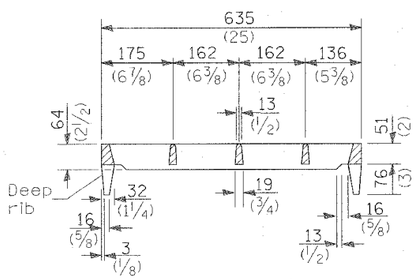
ALT. 2

TYPICAL CORNER of STEEL GRATING FRAME

**Cut or Grind flush

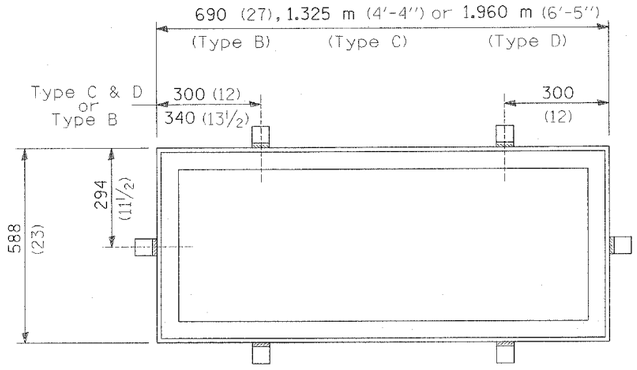


Bars u_3, u_4 & u_6



SECTION X-X

(Deep rib shall be omitted for end(s) resting on frame perimeter)



DETAIL OF STEEL FRAME

Cast frame to have same basic dimensions.

INLET BOX

REQUIRED MATERIAL

TYPE B

Bar	Qty.	Size	Length
u	4	No. 15 (No.4)	2.550 m (8'-5")
u_5	3	No. 15 (No.4)	2.425 m (8'-0")
u_6	4	No. 15 (No.4)	1.870 m (6'-2")
Concrete		m3 (cu. yds.)	0.4 (0.5)
Reinf. bars		kg (lbs.)	39.2 (55.0)
Grating		m2 (sq. ft.)	0.34 (3.6)

TYPE C

Bar	Qty.	Size	Length
u	6	No. 15 (No.4)	2.550 m (8'-5")
u_2	3	No. 15 (No.4)	3.060 m (10'-1")
u_4	4	No. 15 (No.4)	2.530 m (8'-4")
Concrete		m3 (cu. yds.)	0.6 (0.8)
Reinf. bars		kg (lbs.)	54.3 (76)
Grating		m2 (sq. ft.)	0.68 (7.3)

TYPE D

Bar	Qty.	Size	Length
u	8	No. 15 (No.4)	2.550 m (8'-5")
u_1	3	No. 15 (No.4)	3.695 m (12'-2")
u_3	4	No. 15 (No.4)	3.150 m (10'-4")
Concrete		m3 (cu. yds.)	0.8 (1.1)
Reinf. bars		kg (lbs.)	69.2 (97.0)
Grating		m2 (sq. ft.)	1.02 (10.9)

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

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

BRIDGE APPROACH PAVEMENT DRAIN DETAIL

(Sheet 2 of 2)

SCALE: VERT. HORIZ.
DATE
DRAWN BY
CHECKED BY

PLOT DATE = 4/7/2005
FILE NAME = c:\projects\us24tipton_ph_2\cesstailshoulderstriker.dgn
PLOT SCALE = 20.2020 '/ IN.
USER NAME = heggamd

CONTRACT NO. 88753

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	***	FULTON	684	249
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

88+57.14, 20.00' RT
EL. 489.87

660+99.67, 0.78' LT
EL. 489.53

CL US 136

661+00.37, 1.09' RT
EL. 489.54

3'R

2' TYP
RAMP ISLAND NOSE (TYP)

PAY LIMITS OF SMALL
ISLAND, TYPE SM - 4.24

A

B

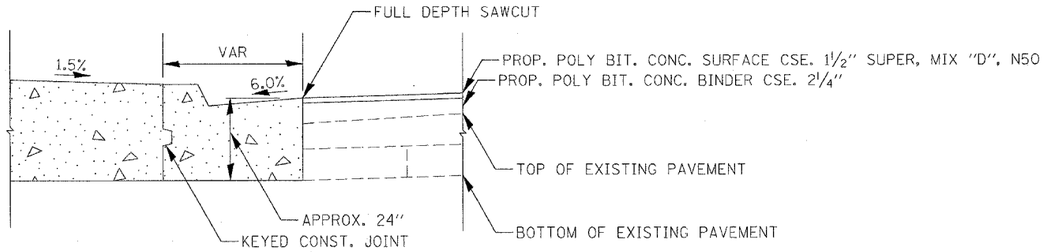
CL US 24

N

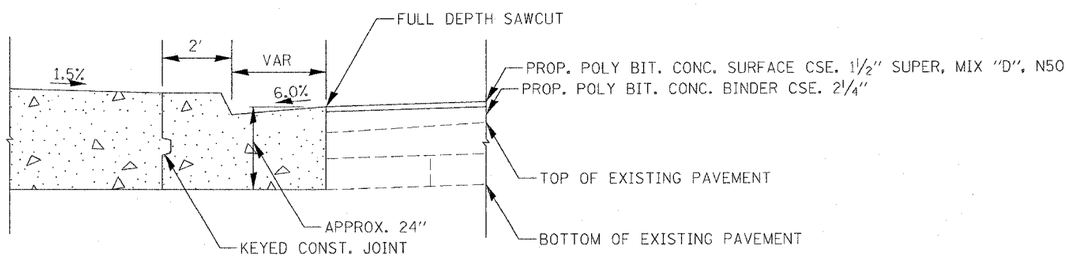
88+80.53, 20.00' RT
EL. 489.93

88+80.53, 22.00' RT
EL. 489.90

B



SECTION A - A



SECTION B - B

SCALES

PLAN VIEW 0 1 2

X-SECTION VIEW 0 5 10 20

REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

SMALL ISLAND
TYPE SM - 4.24
PER STANDARD 606301
US 24 & US 136 N

SCALE: VERT. HORIZ.
DATE
DRAWN BY
CHECKED BY

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

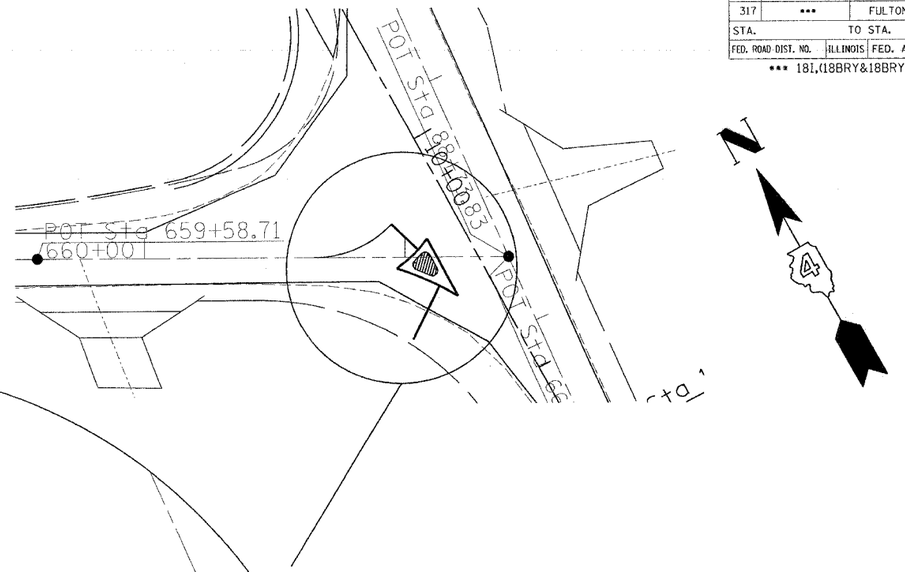
CONTRACT NO. 88753

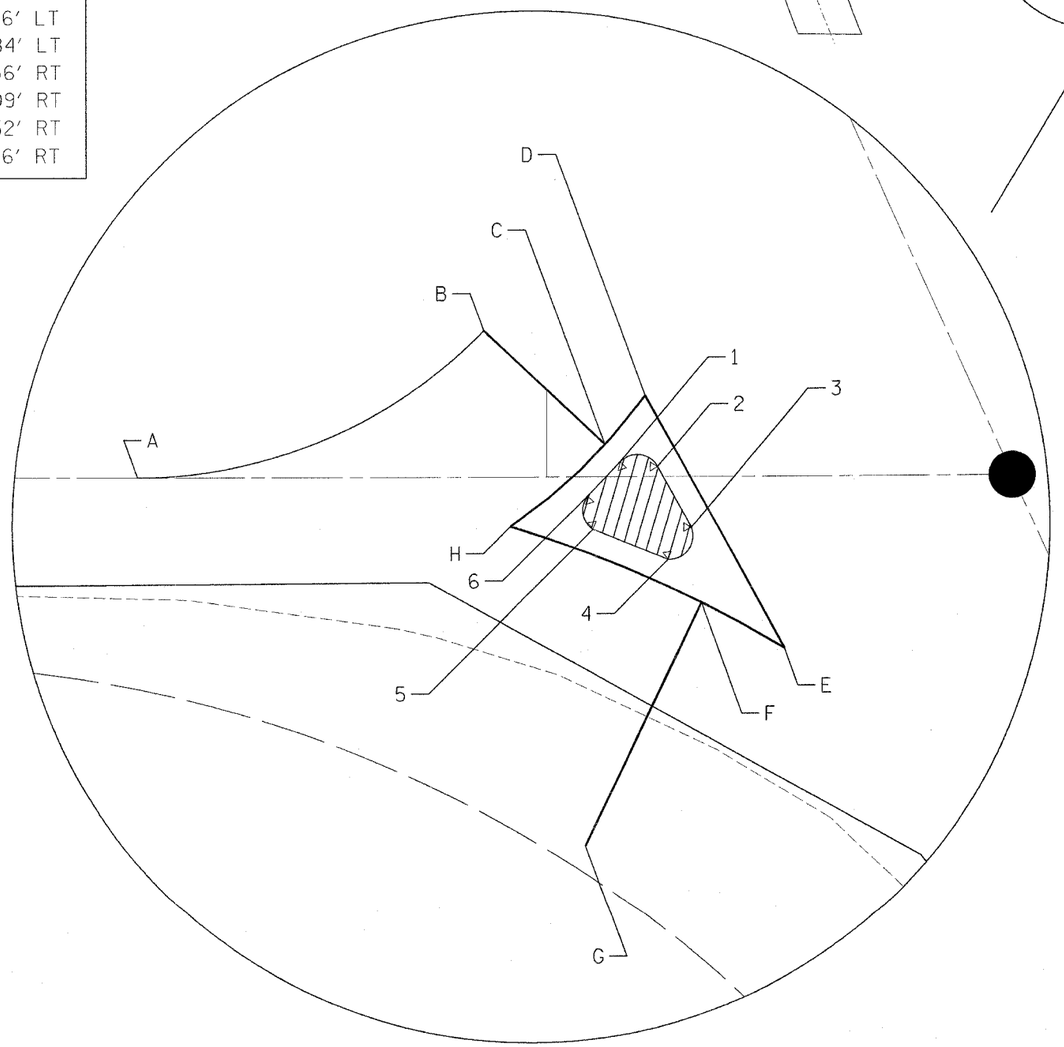
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317	•••	FULTON	684	250
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

••• 181,(18BRY&18BRY-1)BR,18B-1

ITEM	POINT	STA	OFFSET
TEMPORARY PAVEMENT MARKING	A	660+65.18	0.00'
	B	660+94.69	12.54' LT
	C	661+04.94	2.79' LT
	D	661+08.38	6.94' LT
	E	661+20.23	14.62' RT
	F	661+13.18	10.76' RT
	G	661+03.25	31.40' RT
	H	660+96.92	4.27' RT
TEMPORARY MEDIAN	1	661+06.24	1.26' LT
	2	661+09.45	0.84' LT
	3	661+12.31	4.36' RT
	4	661+10.32	7.09' RT
	5	661+03.91	4.52' RT
	6	661+03.47	1.66' RT

NOTE: 2' RADIUS AT EACH CORNER OF THE TEMP MEDIAN





REVISIONS NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

TEMPORARY MEDIAN DETAIL US 24 & US 136 N

SCALE: VERT. HORIZ.

DRAWN BY

DATE

CHECKED BY

PLOT DATE = 4/7/2005
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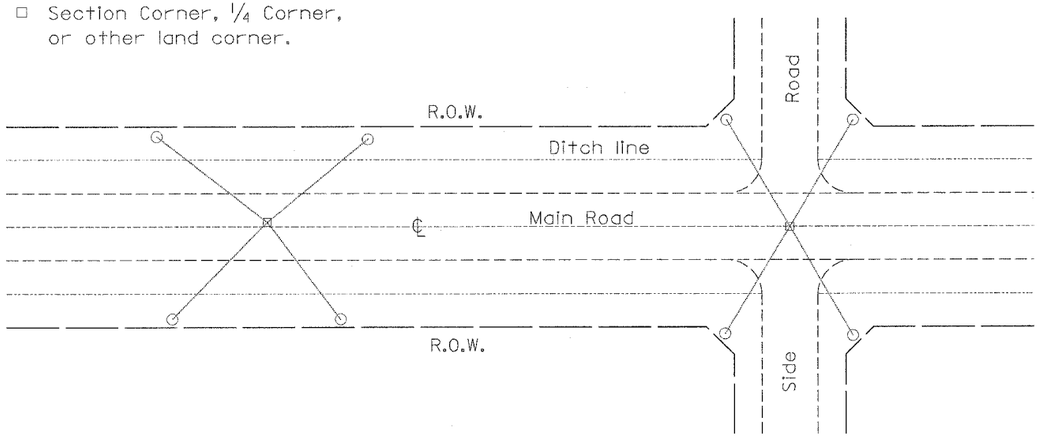
PLOT SCALE = 20.828208 ' / IN.
USER NAME = haggamd

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315/317	•••	FULTON	684	251
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

••• 181,(18BRY&18BRY-1)BR,18B-1
CONTRACT# 88753

PERMANENT SURVEY TIES

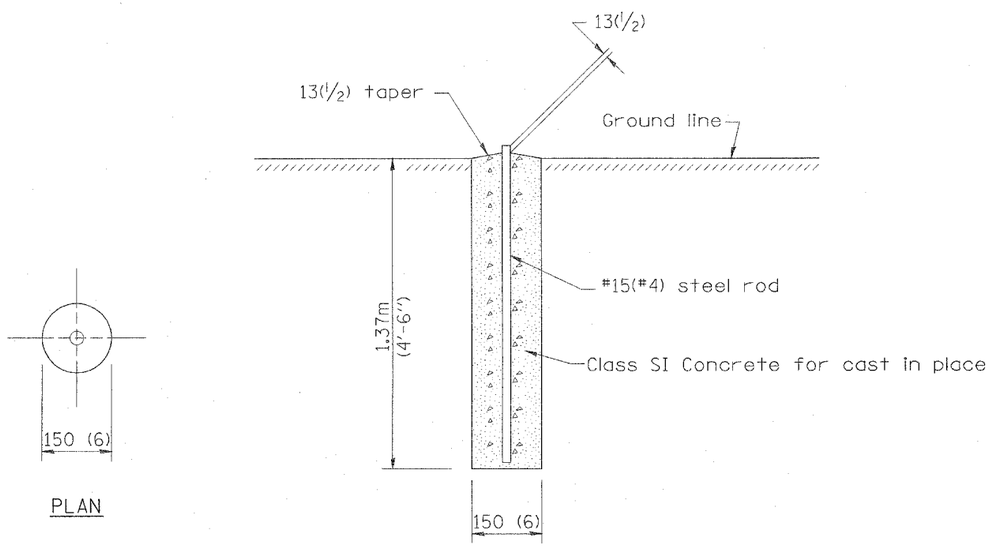
○ Permanent Survey Tie
□ Section Corner, 1/4 Corner, or other land corner.



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 IDOT Chief of Surveys.

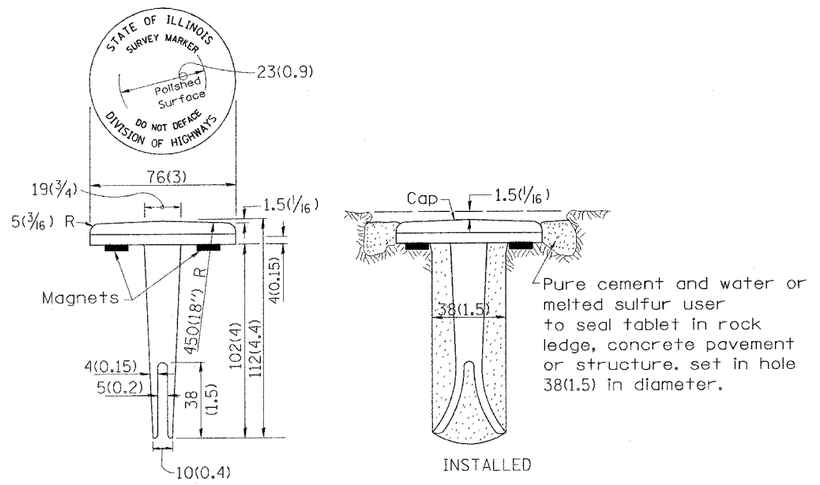


PLAN

SECTION

DESIGNER NOTE:
1. ADD DISTRICT SPECIAL PROVISION.
2. MODIFIES STATE STD 667101 TO CALL FOR "BRONZE" TABLET.

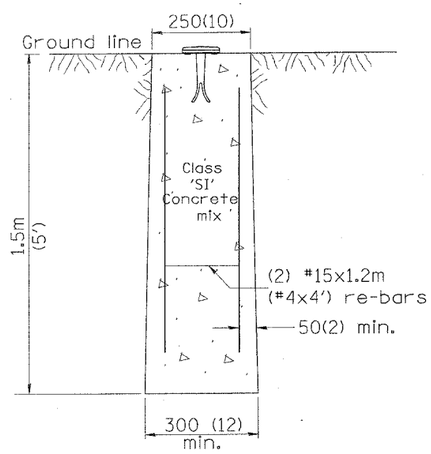
PERMANENT SURVEY MARKERS



BRONZE TABLET - No Scale
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 19 (3/4) and a thickness of 6 (1/4), or equivalent, shall beattached 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 and P.C.'s of horizontal curves and spaces along the tangents in a way that a minimum of two markers are alway inter-visible, and not to exceed 300m(1000').
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 millimeters (inches) unless otherwise noted.

DATE	REVISIONS	BY
1-1-97	RENUM. D-3.01, NEW REVISION BOX	T.P.
	ADD DESIGNER NOTE, REVISED TITLE BOX	
7-7-98	ADD DESIGNER NOTE	J.A.

ILLINOIS DEPARTMENT OF TRANSPORTATION

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

SCALE: NOT DRAWN TO SCALE — DRAWN BY CADD
DATE $$DATE$$ — CHECKED BY

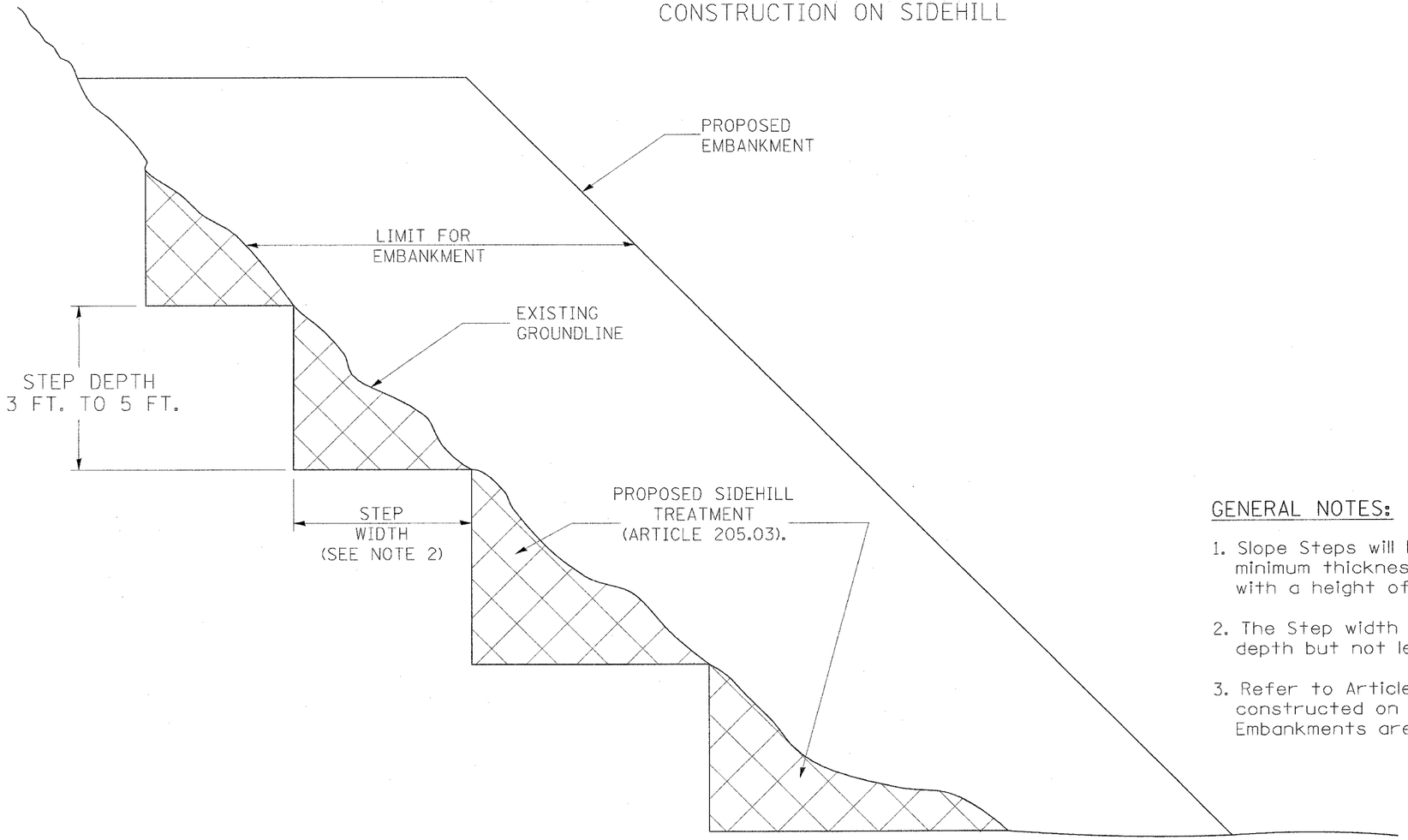
DGN-ONLY

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315/317	***	FULTON	684	252
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

*** 181,(18BRY&18BRY-1)BR,18B-1
CONTRACT* 88753

SLOPE STEPS DETAIL

TYPICAL CROSS-SECTION EMBANKMENT CONSTRUCTION ON SIDEHILL



GENERAL NOTES:

1. Slope Steps will be required for all 300(12) minimum thickness "silver fills" and on a fills with a height of 3.0m(10').
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.

REPLACEMENT MATERIAL:

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

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

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

DATE	REVISIONS	BY
1-1-97	RENUM. L-5.03, NEW REVISION BOX, REVISED TITLE BOX, REVISED GENERAL NOTES.	T.P.

ILLINOIS DEPARTMENT OF TRANSPORTATION
DISTRICT CADD STANDARD

SLOPE STEPS DETAIL

CADD STD. NO. 205001-D4
SCALE: NOT DRAWN TO SCALE
DATE $$DATE$$
DRAWN BY CADD
CHECKED BY

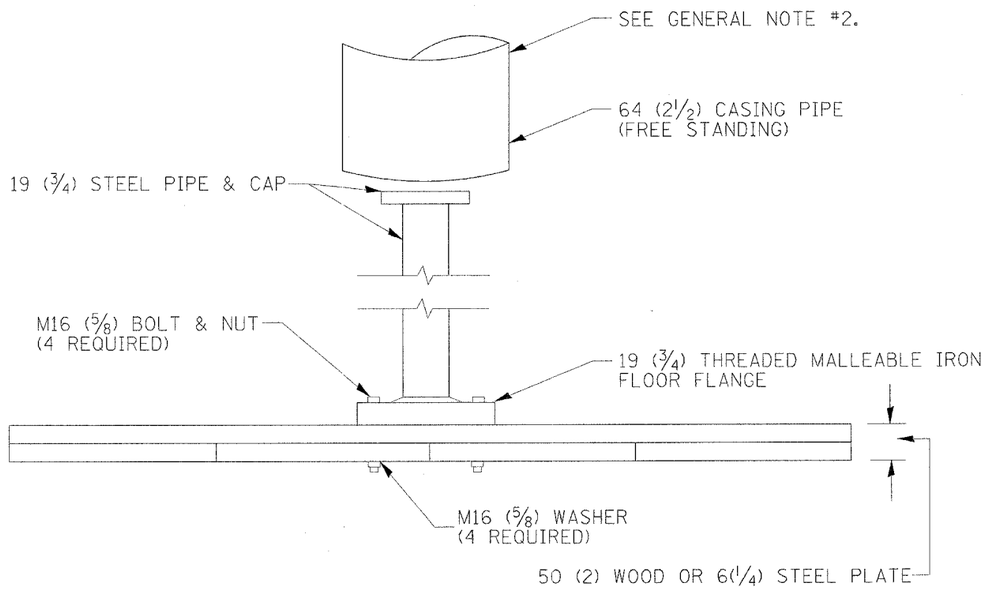
205001-D4

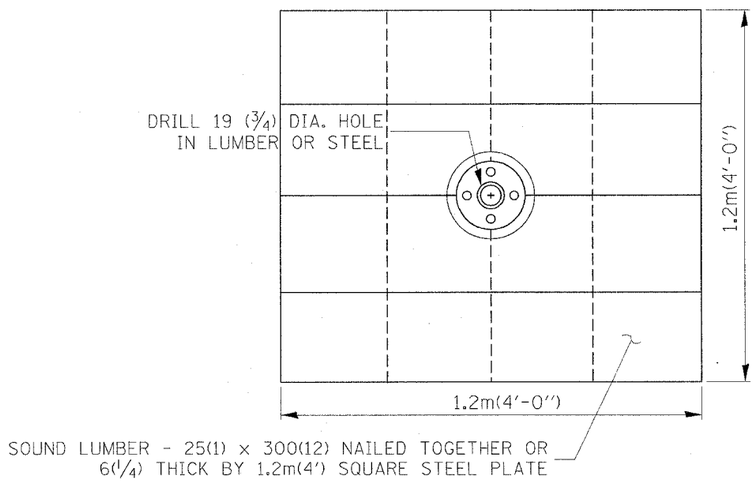
DGN-ONLY

CONTRACT NO. 88753

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
	•••	FULTON	684	253
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

••• 18I,(18BRY&18BRY-1)BR,18B-1





GENERAL NOTES:

1. Settlement Platform shall be in accordance with the appicable portions of Article 204.06 of the Standard Specifications.

2. Do Not install casing pipe until after one section of 19 mm(3/4") has been covered with earth. The casing pipe should not rest on platform.

DESIGNER NOTES:
1. SEE SOILS REPORT AND BUREAU OF MATERIALS FOR USAGE, LOCATIONS, AND SETTLEMENT RATES.
2. CONSIDER USE ON BRIDGE EMBANKMENT AND OTHER SETTLEMENT SENSITIVE FILLS.
3. THIS DRAWING ALLOWS FOR WOODBASE PLATE OPTION.

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

DATE	REVISIONS	BY
1-1-97	RENUM. L-5.04, NEW REVISION BOX,	T.P.
	REVISED NOTES, REVISED TITLE BOX	
4-14-99	ADDED "CASING PIPE" REQUIREMENT	J.A.
5-19-99	CORRECTIONS TO CASING PIPE	J.A.
8-23-01	UPDATE FOR NEW SPEC	M.A.

ILLINOIS DEPARTMENT OF TRANSPORTATION
DISTRICT CADD STANDARD

SETTLEMENT PLATFORM

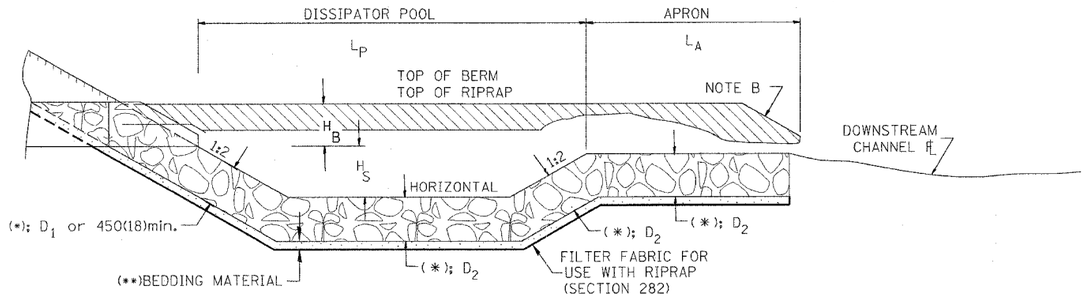
CADD STD. 205101-D4
SCALE: NOT DRAWN TO SCALE — DRAWN BY CADD
DATE **DATE** — CHECKED BY

205101-D4

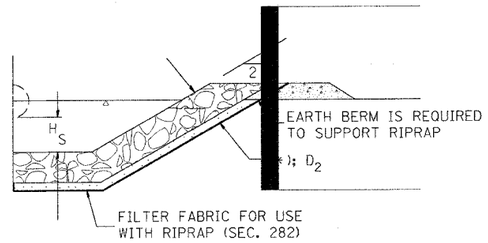
DGN-ONLY

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315/317	•••	FULTON	684	254
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

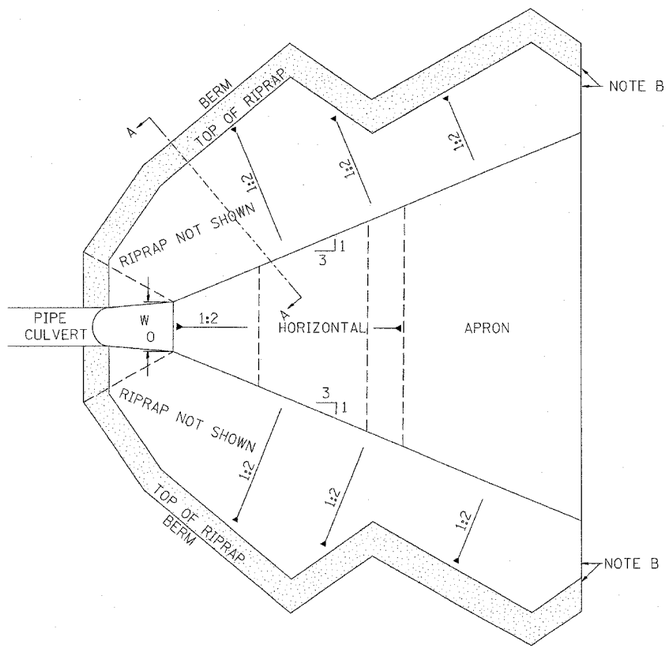
••• 181,(18BRRY&18BRY-1)BR,18B-1
CONTRACT 88753



℄ SECTION



SECTION A-A



TOP VIEW

STATION	W_O	L_P	L_A	H_S	H_B	(*) D_1	(*) D_2	(**) D_3

NOTE B: WARP BASIN TO CONFORM TO NATURAL STREAM CHANNEL

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. (**) Designer to specify thickness of bedding material.
4. Include District Special Provision if needed.

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

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

DATE	REVISIONS	BY
1-1-97	RENUM. A-12.03, NEW REVISION BOX	T.P.

ILLINOIS DEPARTMENT OF TRANSPORTATION

SPECIAL DETAIL SHEET

RIPRAP ENERGY DISSIPATOR

CADD DETAIL 281101-D4
SCALE: NOT DRAWN TO SCALE
DATE **DATE**

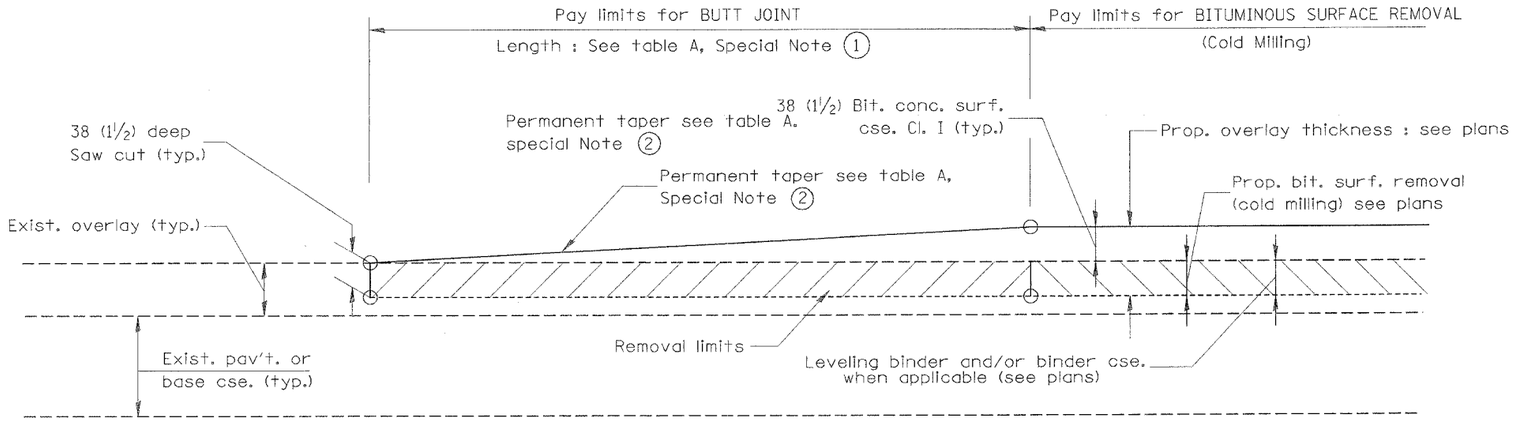
DRAWN BY CADD
CHECKED BY

281101-D4

DGN-ONLY

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315/317	***	FULTON	684	255
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

*** 18I,(18BRY&18BRY-1)BR,18B-1
CONTRACT# 88753



CASE 1 : WITH BITUMINOUS SURFACE REMOVAL (COLD MILLING)

TABLE A

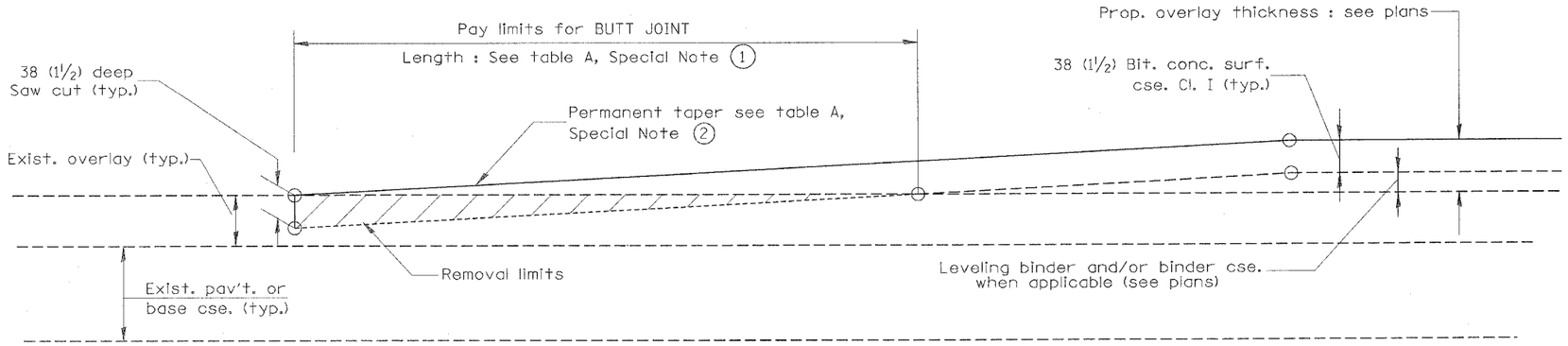
(LENGTHS AND TAPER RATES)

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

GENERAL NOTES

1. The work shall be done in accordance with Article 406.18 and the Special Provision for Butt Joints.
2. The pavement surface to be removed may be either bituminous or P.C. concrete. The work shall be performed in accordance with Article 440.03 and the Special Provisions for Butt Joints.
3. 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 406.06.

DESIGNER NOTES:
1. Include District Special Provision for Butt Joints & for Bituminous Surface 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 Bituminous Surface Removal (Cold Milling).



CASE 2 : NO BITUMINOUS SURFACE REMOVAL (COLD MILLING)

DATE	REVISIONS	BY
1-1-97	RENUM. C-23.01, NEW REVISION BOX	T.P.
4-1-97	CORRECTION TO DEPTH	J.A.

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

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT CADD STANDARD

BUTT JOINTS

CADD STD NO. 406101-D4 SHEET 1 OF 2

SCALE: NOT DRAWN TO SCALE DRAWN BY CADD

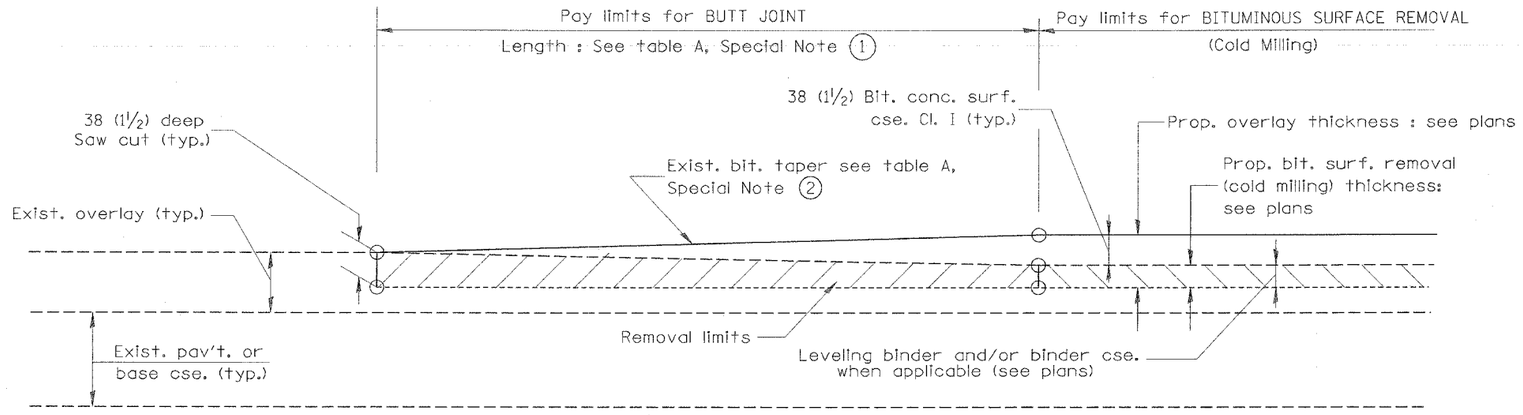
DATE $$DATE$$ CHECKED BY

406101-D4 (1)

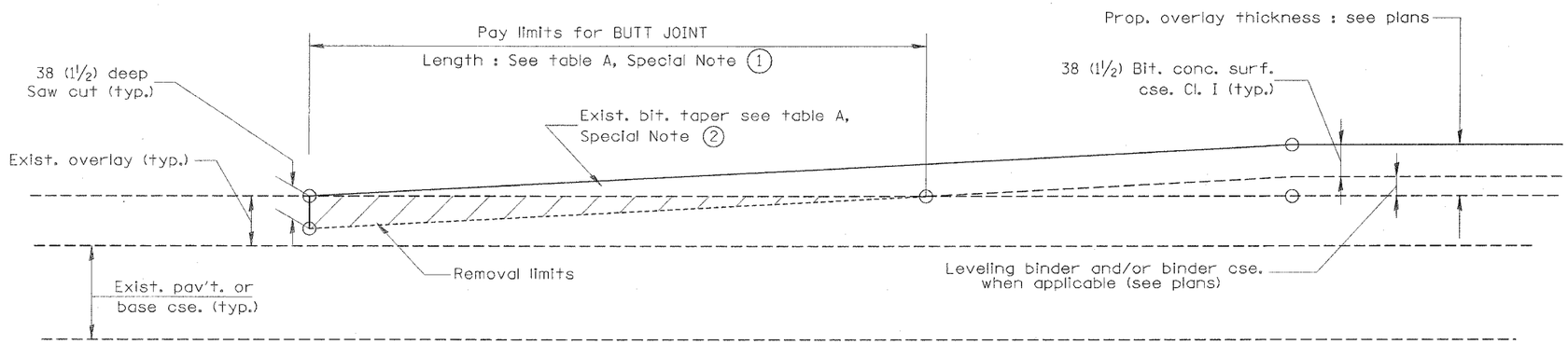
DGN-ONLY

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315/317	***	FULTON	684	256
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

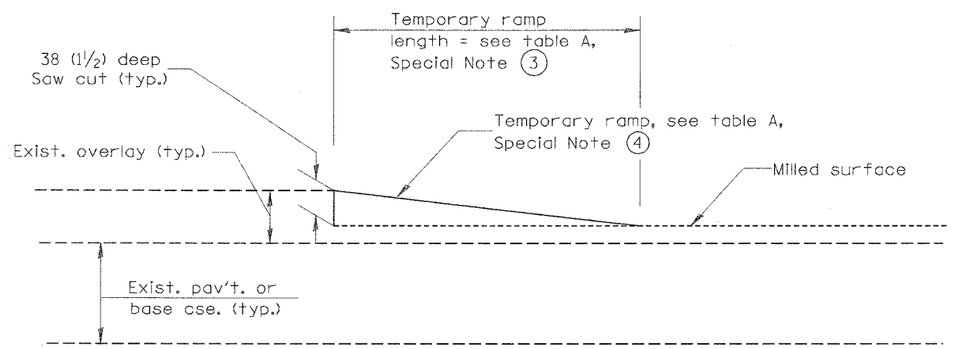
*** 181,(18BRY&18BRY-1)BR,18B-1
CONTRACT# 88753



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



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



DETAIL TEMPORARY RAMP

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

ILLINOIS DEPARTMENT OF TRANSPORTATION
DISTRICT CADD STANDARD

BUTT JOINTS

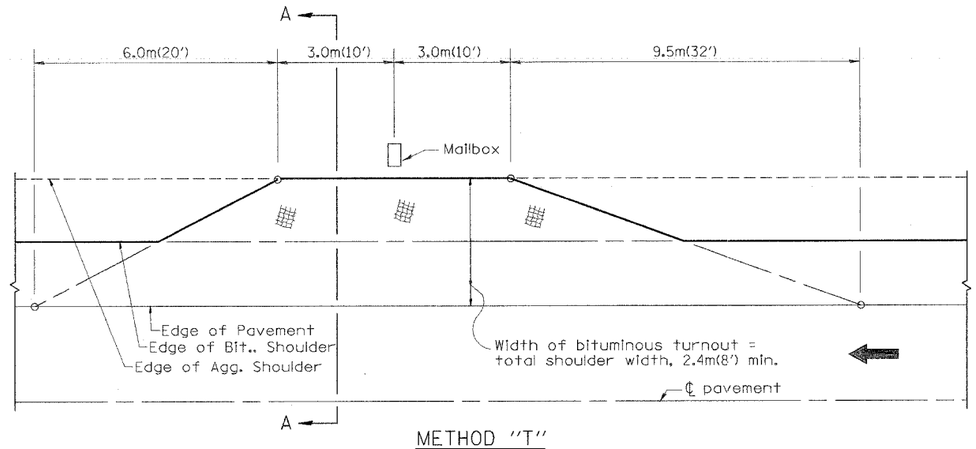
CADD STD NO. 406101-D4 SHEET 2 OF 2
SCALE: NOT DRAWN TO SCALE DRAWN BY CADD
DATE $$DATE$$ CHECKED BY

DGN-ONLY

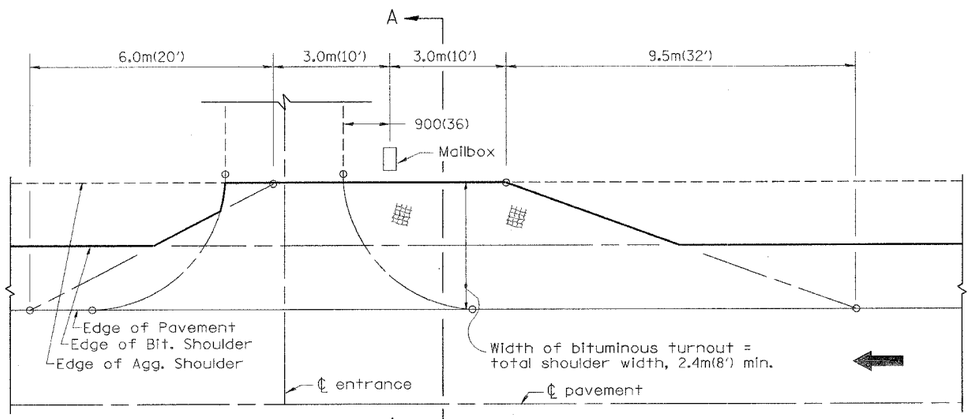
406101-D4 (2)

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315/317	***	FULTON	684	257
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

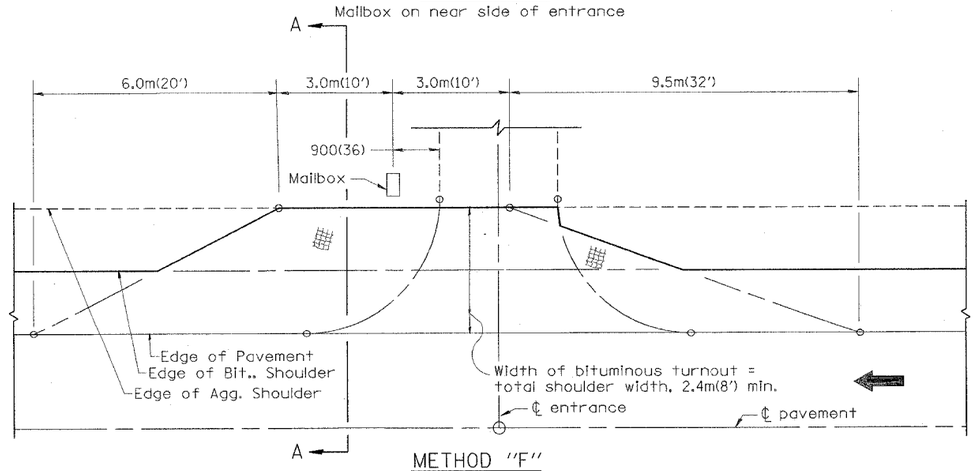
*** 181,(18BRY&18BRY-1)BR,18B-1
CONTRACT# 88753



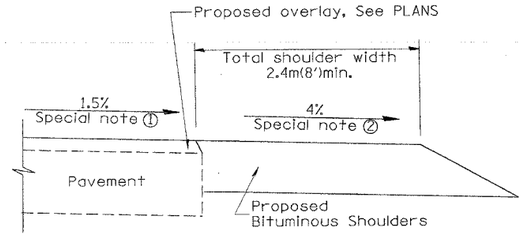
METHOD "T"
Typical Application



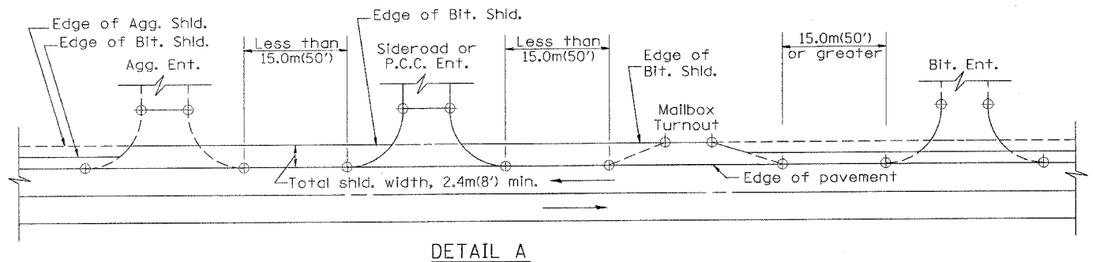
METHOD "N"
Mailbox on near side of entrance



METHOD "F"
Mailbox on far side of entrance



SECTION A-A



DETAIL A

SHOULDER TREATMENT FOR CLOSELY SPACED SIDEROADS,
ENTRANCES, AND/OR MAILBOX TURNOUTS

GENERAL NOTES

1. Mailbox turnouts shall slope away from the pavement edge at a rate equal to the shoulder slope. See SECTION A-A.

2. The total shoulder width, 2.4m(8') minimum, shall be paved between sideroads entrances and/or mailbox turnouts at locations where the distance between radius or taper control points is less than 15.0m(50'). See DETAIL A.

3. Mailboxes shall be mounted such that the face of the mailbox is 150(6) to 300(12) and the post a minimum of 600(24) from the edge of the turnout surfacing.

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 turnout slope. The standard cross-slope is 4% for tangent alignment. Through superelevated curves, the maximum pavement-shoulder breakover should not be greater than 10% for shoulders 1.8m(6') and wider and 12% for shoulders 1.2m(4') and less. Where 300(12) paved shoulders are provided, the breakover should be at the edge of the paved shoulder rather than at the pavement edge.

DESIGNER NOTE
1. THIS DRAWING REPLACES STATE STANDARD 406201
2. DESIGNER SHOULD CONSULT BLE PROCEDURE MEMORANDUM 95-20, EFFECTIVE 7-1-91 ENTITLED "3R DESIGN POLICIES FOR REHABILITATING HIGHWAYS, STREETS AND BRIDGES FOR OTHER THAN FREEWAYS AND EXPRESSWAYS" Revised July 1995.

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

DATE	REVISIONS	BY
1-1-97	RENUM. C-90.01, NEW REVISION BOX	T.P.
7-1-97	REVISE DESIGNER NOTES	J.A.

ILLINOIS DEPARTMENT OF TRANSPORTATION
DISTRICT CADD STANDARD

MAILBOX TURNOUTS FOR "3R" PROJECTS

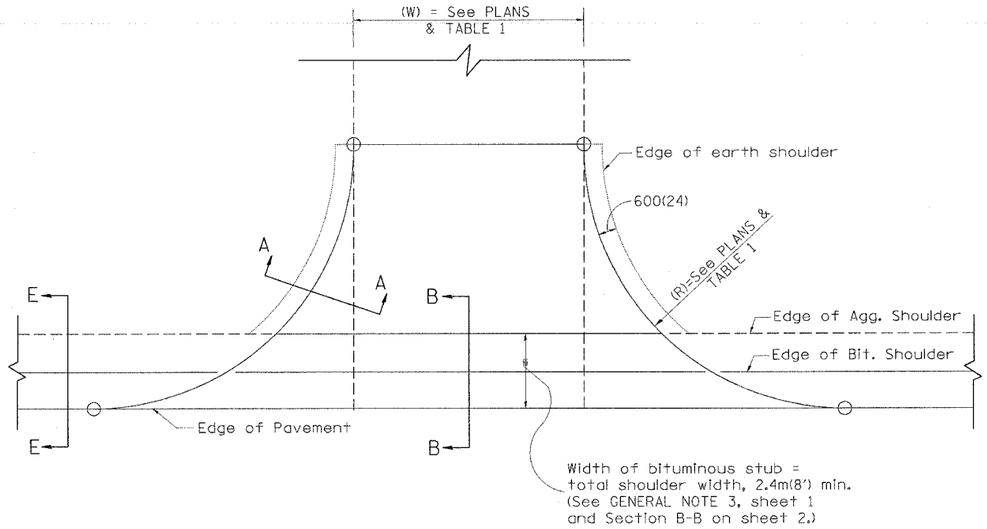
CADD STD NO. 406201-D4
SCALE: NOT DRAWN TO SCALE
DATE: $$DATE$$
DRAWN BY: CADD
CHECKED BY: T. PICKERING

406201-D4

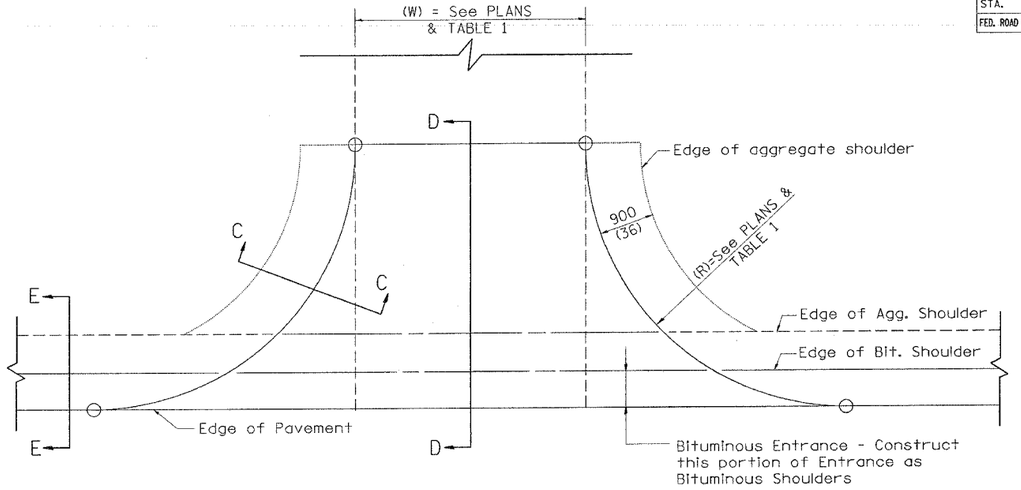
DGN-ONLY

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315/317	***	FULTON	684	258
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

*** 181.(18BRY&18BRY-1)BR,18B-1
CONTRACT* 88753



PLAN
AGGREGATE ENTRANCE

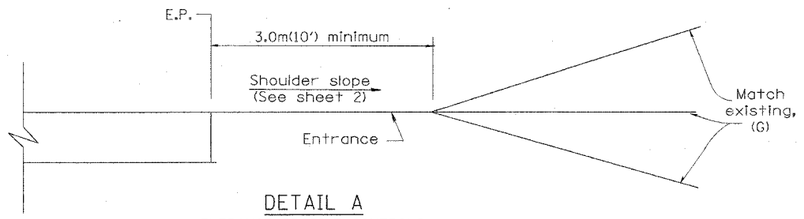


PLAN
PCC OR BITUMINOUS ENTRANCE

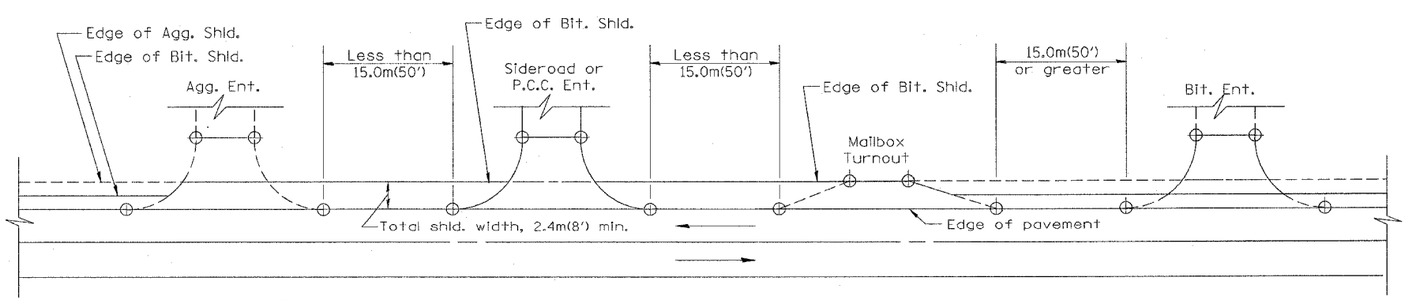
TABLE 1

RURAL ENTRANCE DESIGN

ELEMENT	NON-COMMERCIAL		NON-COMMERCIAL W/ LARGE FARM EQUIPMENT		COMMERCIAL			
					1-WAY OPERATION		2-WAY OPERATION	
WIDTH (W)	3.6m(12') MIN.	7.2m(24') MAX.	6.1m(20') MIN.	9.0m(30') MAX.	4.3m(14') MIN.	7.2m(24') MAX.	7.2m(24') MIN.	10.7m(35') MAX.
RADIUS (R)	3.0m(10') MIN.	12.0m(40') MAX.	3.0m(10') MIN.	12.0m(40') MAX.	6.1m(20') MIN.	15.0m(50') MAX.	6.1m(20') MIN.	15.0m(50') MAX.
MAX. GRADE (G)	12%		12%		10%			



DETAIL A
ENTRANCE PROFILE CONTROLS



DETAIL B
SHOULDER TREATMENT FOR CLOSELY SPACED SIDEROADS, ENTRANCES, AND/OR MAILBOX TURNOUTS
(SEE GENERAL NOTE 2, SHEET 1)

GENERAL NOTES

1. Entrances shall slope away from the pavement edge at a rate equal to the shoulder slope for a minimum distance of 3.0m(10'). See DETAIL 'A'.
2. The total shoulder width, 2.4m(8') minimum, shall be paved between sideroads, entrances and/or mailbox turnouts, at locations where the distance between radius or taper control points is less than 15.0m(50'). See DETAIL 'B'.
3. The width of bituminous stub for field entrances shall be equal to the bituminous shoulder width unless otherwise shown.

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

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

DESIGNER NOTE
1. DESIGNER SHOULD REVIEW "HANDBOOK FOR THE POLICY ON PERMITS FOR ACCESS DRIVEWAYS TO STATE HIGHWAYS"
2. DESIGNER SHOULD REVIEW BLE PROCEDURE MEMORANDUM 95-20, EFFECTIVE 7-1-91 ENTITLED "3R DESIGN POLICIES FOR REHABILITATING HIGHWAYS, STREETS AND BRIDGES FOR OTHER THAN FREEWAYS AND EXPRESSWAYS" Revised July 1995.

DATE	REVISIONS	BY
1-1-97	RENUM. C-103.06, NEW REVISION BOX	T.P.
7-1-97	REVISE DESIGNER NOTES	J.A.

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT CADD STANDARD

RURAL ENTRANCES FOR "3R" PROJECTS

SHEET 1 OF 2

CADD STD NO. 406301-D4

SCALE: NOT DRAWN TO SCALE DRAWN BY CADD

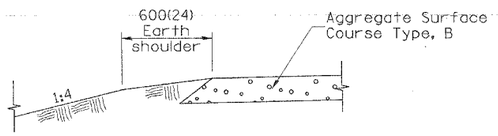
DATE $$DATE$$ CHECKED BY: T. PICKERING

DGN-ONLY

406301-D4(1)

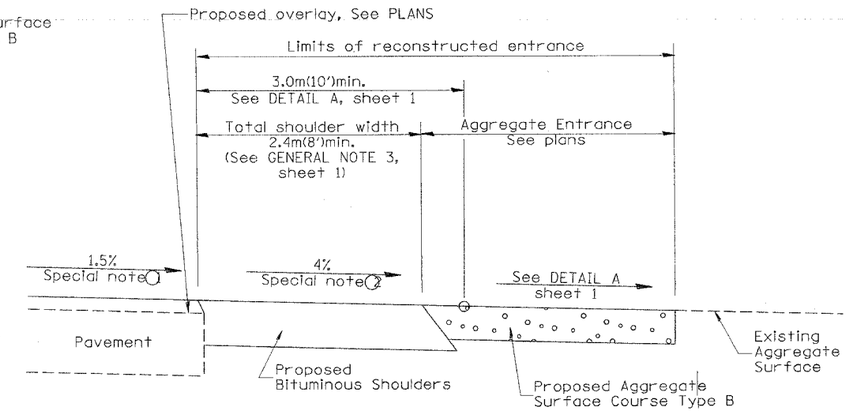
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315/317	•••	FULTON	684	259
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

••• 18I,(18BRY&18BRY-1)BR,18B-1
CONTRACT# 88753



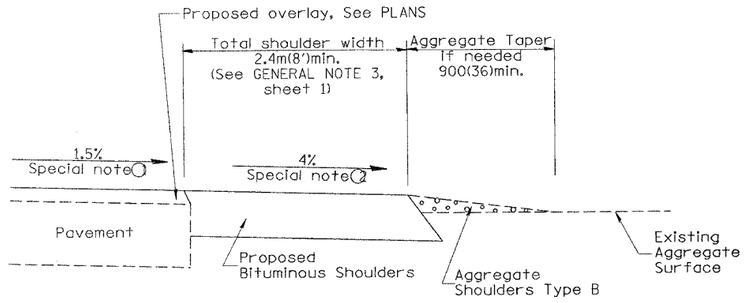
SECTION A-A

SHOULDER TREATMENT FOR AGGREGATE ENTRANCES



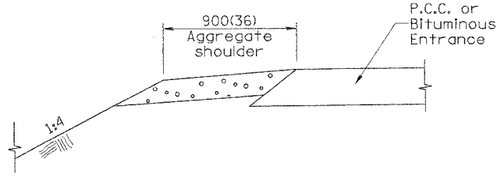
SECTION B-B

RECONSTRUCTED AGGREGATE ENTRANCE



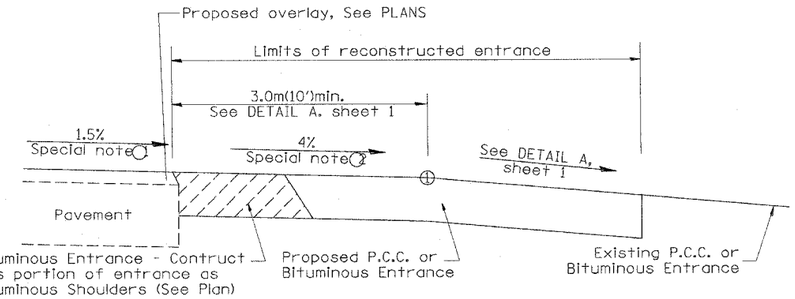
SECTION B-B

EXISTING AGGREGATE ENTRANCE



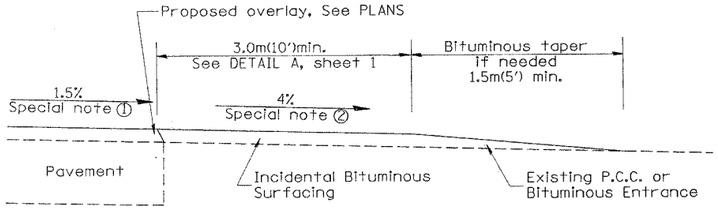
SECTION C-C

SHOULDER TREATMENT FOR P.C.C. OR BITUMINOUS ENTRANCES



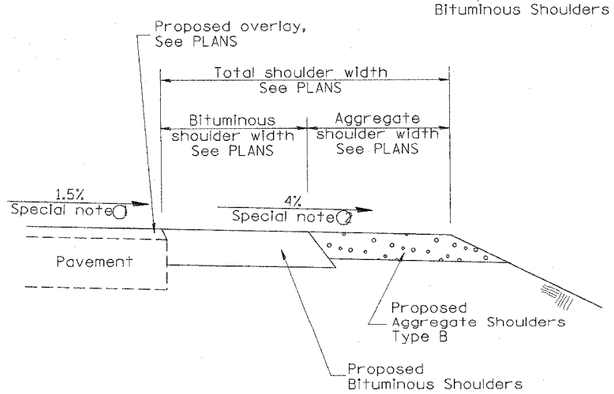
SECTION D-D

RECONSTRUCTED P.C.C. OR BITUMINOUS ENTRANCE



SECTION D-D

EXISTING P.C.C. OR BITUMINOUS ENTRANCE



SECTION E-E

MAINLINE SHOULDER TREATMENT

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 3.0m(10') 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 1.8(6) and wider and 12% for shoulders 1.2m(4') and less. Where 300(12) paved shoulders are provided, the breakover should be at the edge of the paved shoulder rather than at the pavement edge.

All slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V:H).
All dimensions are in millimeters (inches) unless otherwise noted.

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT CADD STANDARD

RURAL ENTRANCES FOR "3R" PROJECTS

SHEET 2 OF 2

CADD STD NO. 406301-D4

SCALE: NOT DRAWN TO SCALE — DRAWN BY CADD

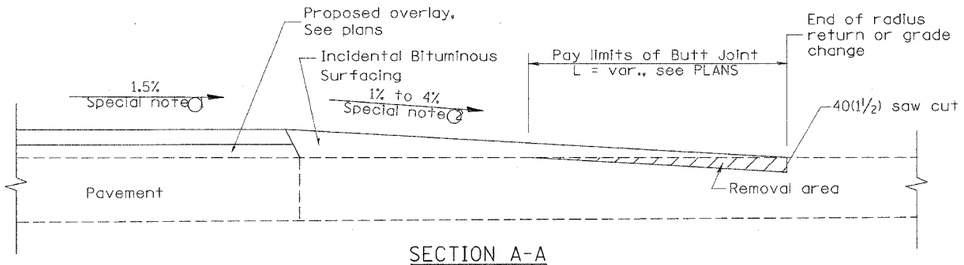
DATE $$DATE$$ — CHECKED BY: T. PICKERING

406301-D4(2)

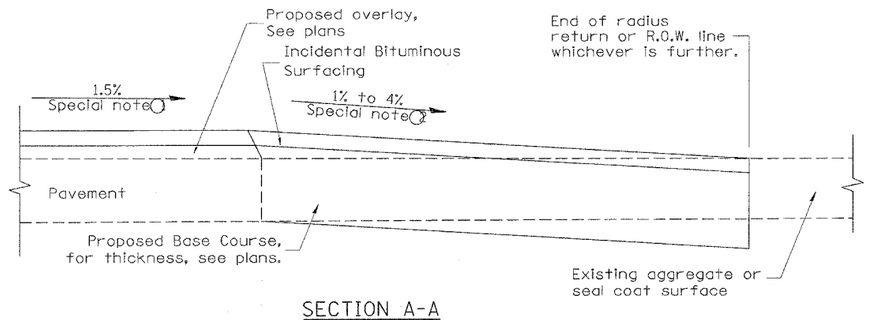
•DGN-ONLY•

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315/317	***	FULTON	684	260
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

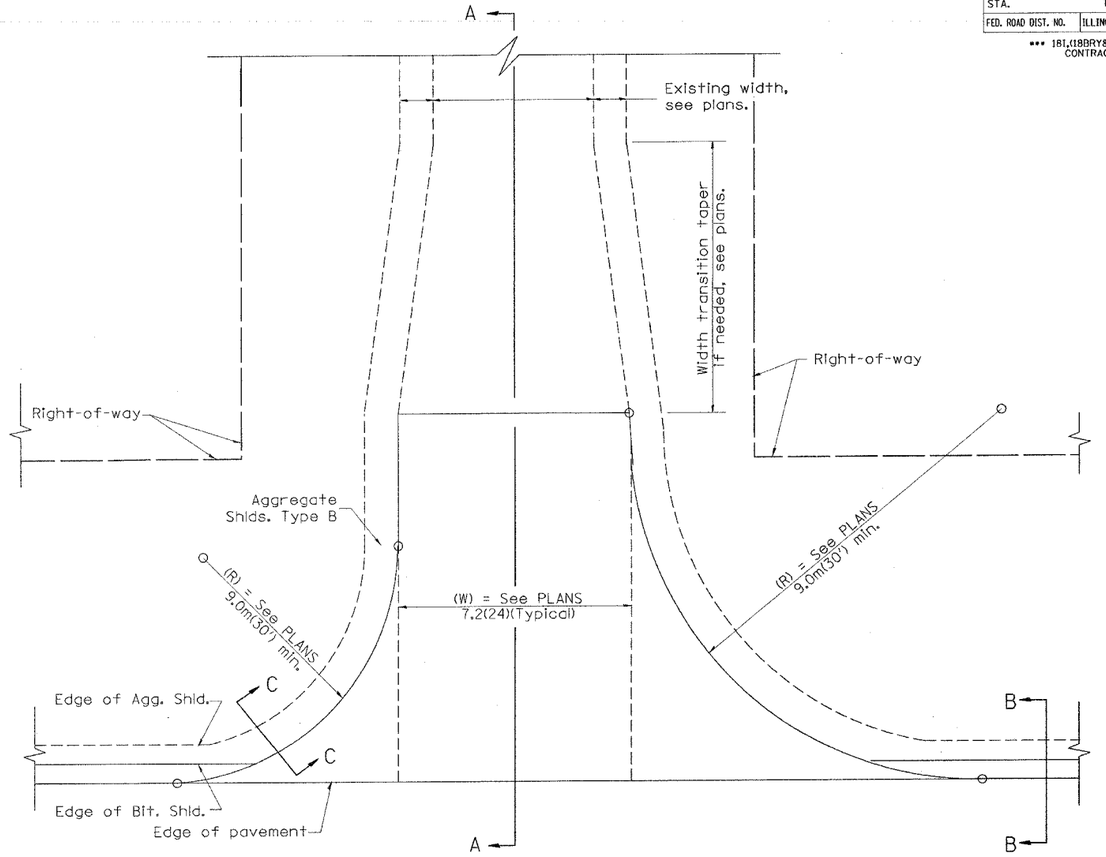
*** 1BI,(1BBRY&1BBRY-1)BR,1BB-1
CONTRACT# 88753



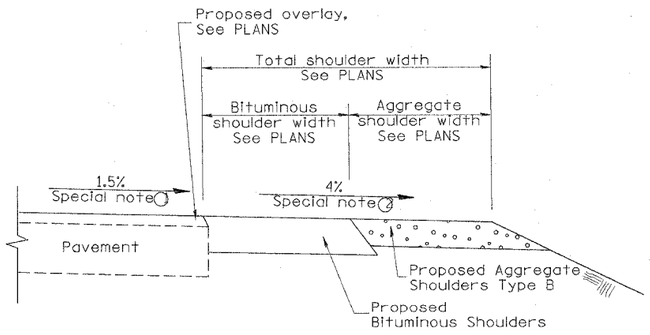
SECTION A-A
EXISTING PCC OR BITUMINOUS SIDEROAD



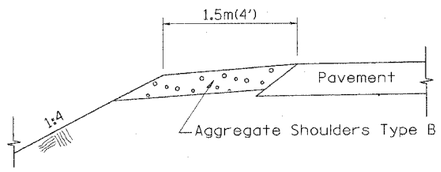
SECTION A-A
EXISTING AGGREGATE OR SEAL COAT SIDEROAD



PLAN



SECTION B-B
MAINLINE SHOULDER TREATMENT



SECTION C-C
SIDEROAD SHOULDER TREATMENT

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 sideroad profile should drain away from the mainline at 1% to 4% for 15.0m(50') to 30.0m(100'), or as a minimum to the end of the radius return. When the sideroad is on the high side of a mainline superelevated curve, - 2% maximum should be provided in order to minimize breakover at the pavement edge. See plans for sideroad profiles.

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

DESIGNER NOTE
1. DESIGNER SHOULD CONSULT THE BLE PROCEDURE MEMORANDUM 95-20 EFFECTIVE 07/01/91 ENTITLED "3R DESIGN POLICIES FOR REHABILITATING HIGHWAYS, STREETS AND BRIDGES FOR OTHER THAN FREEWAYS AND EXPRESSWAYS" Revised July 1995.

DATE	REVISIONS	BY
1-1-97	RENUM. C-105.02, NEW REVISION BOX	T.P.
7-1-97	REVISE DESIGNER NOTES	J.A.

ILLINOIS DEPARTMENT OF TRANSPORTATION
DISTRICT CADD STANDARD

RURAL SIDEROADS FOR "3R" PROJECTS

CADD STD NO. 406401-D4

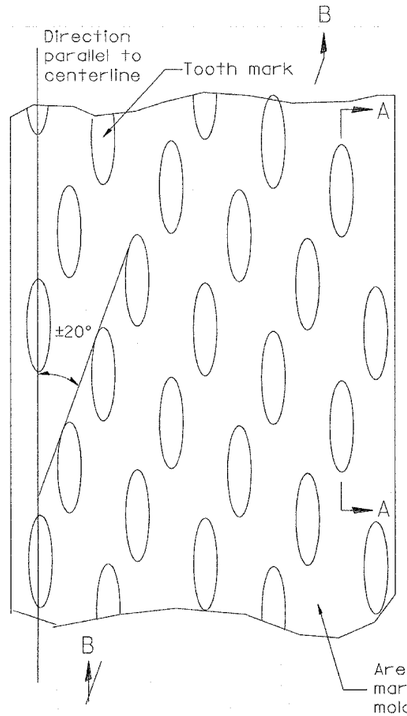
SCALE: NOT DRAWN TO SCALE — DRAWN BY CADD
DATE $$DATE$$ — CHECKED BY: T. PICKERING

406401-D4

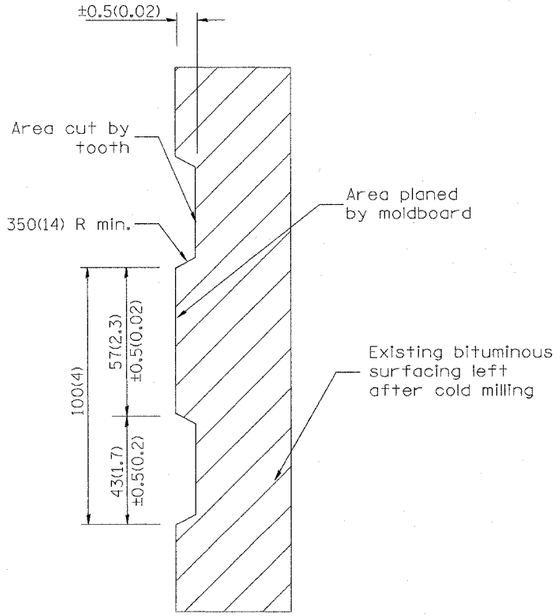
DGN-ONLY

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315/317	•••	FULTON	684	261
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

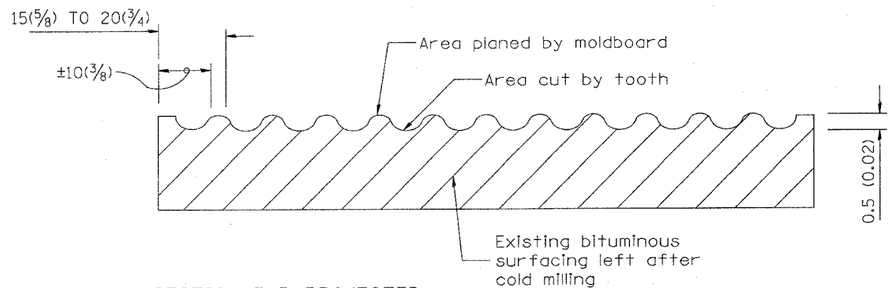
••• 18I,(18BRY&18BRY-1)BR,18B-1
CONTRACT# 88753



PLAN



SECTION A-A



SECTION B-B PROJECTED
PERPENDICULAR TO CENTERLINE

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.

DESIGNER NOTE
1. INCLUDE DISTRICT SPECIAL PROVISION, IF APPLICABLE.

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

DATE	REVISIONS	BY
1- 1-97	RENUM. C-104.01, NEW REVISION BOX	T. P. A.
4-20-98	REMOVED MILLING DETAIL FROM STD.	J.
9-08-98	CORRECT NOTE LEADER PLACEMENT	R. W.

ILLINOIS DEPARTMENT OF TRANSPORTATION
DISTRICT CADD STANDARD

BITUMINOUS SURFACE REMOVAL (COLD MILLING)

CADD STD NO. 440001-D4
SCALE: NOT DRAWN TO SCALE DRAWN BY CADD
DATE $$DATE$$ CHECKED BY

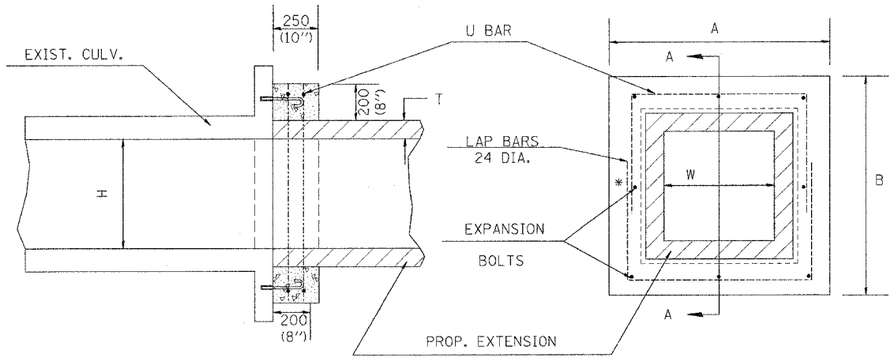
440001-D4

•DGN-ONLY•

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315/317	•••	FULTON	684	262
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

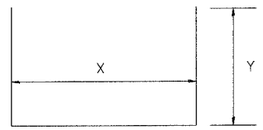
••• 181,(18BRY&18BRY-1)BR,18B-1
CONTRACT* 88753

* MINIMUM 1' LAP ON U BARS



SECTION A - A

END VIEW



#4 U BAR
FOUR REQUIRED
PER COLLAR

GENERAL NOTES

1. The collar shall be constructed entirely of CLASS SI CONCRETE and in accordance with the applicable portions of section 503 of the Standard Specifications. REINFORCEMENT BARS shall conform to section 508.
2. Expansion bolts shall consist of approved expansions anchors, and M20 ($\frac{3}{4}$") hook bolts which conform to Section 1006.09. These bolts shall extend at least 200(8") into the new concrete.

* Dimensions for ASTM C789.

DIMENSIONS

EXISTING BOX W mm (ft)	EXISTING BOX H mm (ft)	A	B	T *	EACH COLLAR CL SI m^3 (CU YD)	REINFORCEMENT BARS X	REINFORCEMENT BARS Y	REINFORCEMENT BARS kg (POUNDS)	EXPANSION BOLTS NO.
600(2)	600(2)	1.22m (4'-0")	1.22m (4'-0")	100(4")	0.21(0.27)	1.02m (3'-4")	660(26")	16(21)	8
900(3)	600(2)	1.52m (5'-0")	1.22m (4'-0")	100(4")	0.24(0.32)	1.32m (4'-4")	660(26")	18(23)	8
900(3)	750(2.5)	1.52m (5'-0")	1.37m (4'-6")	100(4")	0.26(0.34)	1.32m (4'-4")	737(29")	19(25)	8
900(3)	900(3)	1.52m (5'-0")	1.52m (5'-0")	100(4")	0.28(0.36)	1.32m (4'-4")	813(32")	20(26)	8
900(3)	1200(4)	1.57m (5'-2")	1.88m (6'-2")	125(5")	0.31(0.41)	1.37m (4'-6")	991(39")	22(29)	10
1200(4)	900(3)	1.88m (6'-2")	1.57m (5'-2")	125(5")	0.31(0.41)	1.68m (5'-6")	838(33")	22(29)	10
1200(4)	1200(4)	1.88m (6'-2")	1.88m (6'-2")	125(5")	0.34(0.45)	1.68m (5'-6")	991(39")	25(32)	12
1200(4)	1500(5)	1.93m (6'-4")	2.24m (7'-4")	150(6")	0.39(0.51)	1.73m (5'-8")	1.17m (3'-10")	28(36)	14
1500(5)	1200(4)	2.24m (7'-4")	1.93m (6'-4")	150(6")	0.39(0.51)	2.03m (6'-8")	1.02m (3'-4")	28(36)	14
1500(5)	1500(5)	2.24m (7'-4")	2.24m (7'-4")	150(6")	0.42(0.55)	2.03m (6'-8")	1.17m (3'-10")	29(38)	16
1500(5)	1800(6)	2.29m (7'-6")	2.59m (8'-6")	175(7")	0.46(0.60)	2.08m (6'-10")	1.35m (4'-5")	32(42)	16
1800(6)	1200(4)	2.59m (8'-6")	1.98m (6'-6")	175(7")	0.43(0.56)	2.39m (7'-10")	1.04m (3'-5")	30(39)	14
1800(6)	1500(5)	2.59m (8'-6")	2.29m (7'-6")	175(7")	0.46(0.60)	2.39m (7'-10")	1.19m (3'-11")	32(42)	16
1800(6)	1800(6)	2.59m (8'-6")	2.59m (8'-6")	175(7")	0.49(0.64)	2.39m (7'-10")	1.35m (4'-5")	35(45)	16
1800(6)	2400(8)	2.64m (8'-8")	3.25m (10'-8")	200(8")	0.57(0.74)	2.44m (8'-0")	1.68m (5'-6")	39(51)	18
2400(8)	2400(8)	3.25m (10'-8")	3.25m (10'-8")	200(8")	0.63(0.82)	3.05m (10'-0")	1.68m (5'-6")	43(56)	20

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

QUANTITIES

CALC. BY: _____ DATE: _____

CHECKED BY: _____ DATE: _____

QUANTITY CALCULATIONS ARE ON FILE AT THE DISTRICT 4 OFFICE; BUREAU OF PROJECT IMPLEMENTATION; DOCUMENTATION SECTION

DATE	REVISIONS	BY
1-1-97	RENUM. J-12.01, METRICS, NEW REVISION BOX, REVISED TITLE BOX, ADDED QUANTITY CALCULATION BOX.	T.P.

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT CADD STANDARD

COLLAR FOR BOX CULVERT EXTENSIONS

CADD STANDARD 540001-D4

SCALE: NOT DRAWN TO SCALE

DATE $$DATE$$

DRAWN BY CADD

CHECKED BY

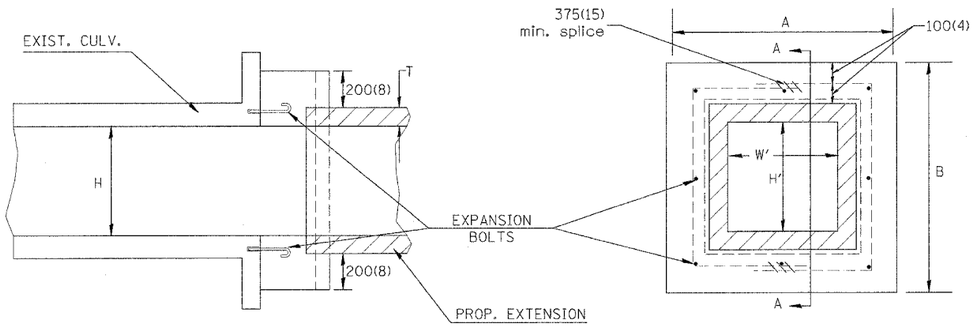
540001-D4

DGN-ONLY

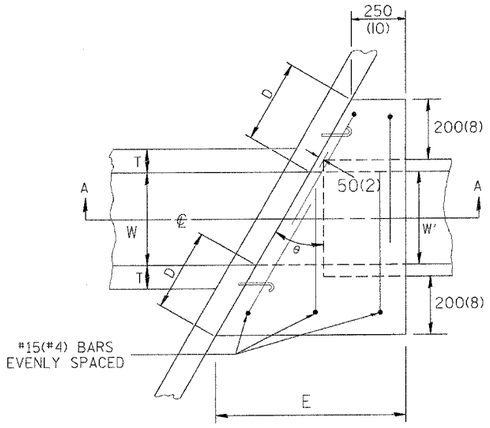
DGN-ONLY

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315/317	•••	FULTON	684	263
STA.	TO STA.			
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

••• 181,(18BRY&18BRY-1)BR,18B-1
CONTRACT# 88753

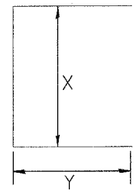


SECTION A - A



END VIEW

PLAN VIEW



#15(#4)□BAR
FIVE REQUIRED
PER COLLAR

$D = \frac{200(8)+T}{\cos\theta}$

$E = [W+410(16)+2T]\tan\theta+250(10)$

$X = B-200(8)$

$Y = \frac{W/2+T+100(4)}{\cos\theta}+190(7\frac{1}{2})$

LOCATION	EXIST. BOX		PROP. BOX			EACH COLLAR: CLASS SI CONCRETE m^3 (CU. YD.)	A	B	E	X	Y	REBARS KG(LBS.)	M20(¾) EXPANSION BOLTS EACH	EXT. LENGTH		END SEC.	SKEW ANGLE θ
	W	H	W'	H'	T									LT.	RT.		

DESIGNER NOTES:
1. ADD DISTRICT SPECIAL PROVISION.

QUANTITIES

CALC. BY: _____ DATE:

CHECKED BY: _____ DATE:

QUANTITY CALCULATIONS ARE ON FILE AT THE DISTRICT 4 OFFICE; BUREAU OF PROJECT IMPLEMENTATION; DOCUMENTATION SECTION

DGN-ONLY

GENERAL NOTES

1. The collar shall be constructed entirely of CLASS SI CONCRETE and in accordance with the applicable portions of section 503 of the Standard Specifications. Reinforcement bars shall conform to section 508.

2. Expansion bolts shall consist of approved expansion anchors, and M20(¾) hook bolts which conform to section 1006.08. These bolts shall extend at least 200(8) into the new concrete.

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

DATE	REVISIONS	BY
1-1-97	RENUM. J-12.06, NEW REVISION BOX,	T.P.
	REVISED TITLE BOX, ADDED QUANTITY	
	CALCULATION BOX.	

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT CADD STANDARD

PRECAST SKEWED BOX CULVERT EXTENSION COLLAR

CADD STD. NO. 540106-D4

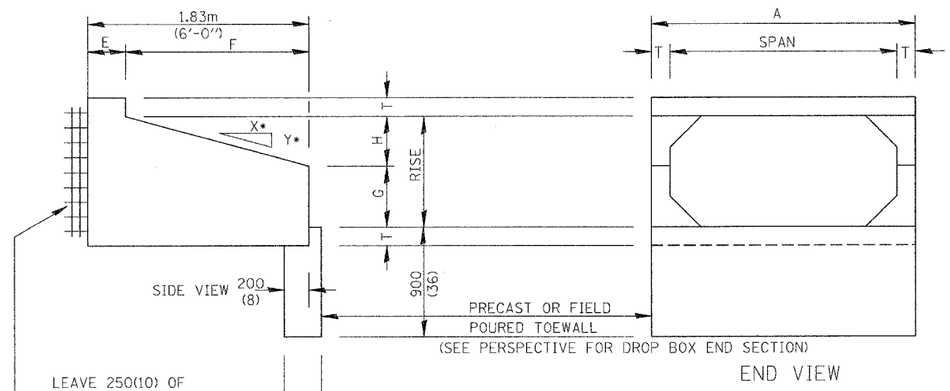
SCALE: NOT DRAWN TO SCALE DRAWN BY CADD

DATE $$DATE$$ CHECKED BY

540106-D4

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315/317	***	FULTON	684	264
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

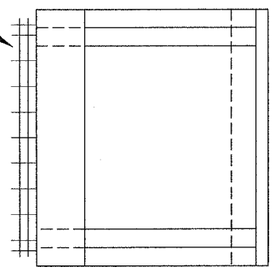
*** 1BI,(1BBRY&1BBRY-1)BR,1BB-1
CONTRACT* 88753



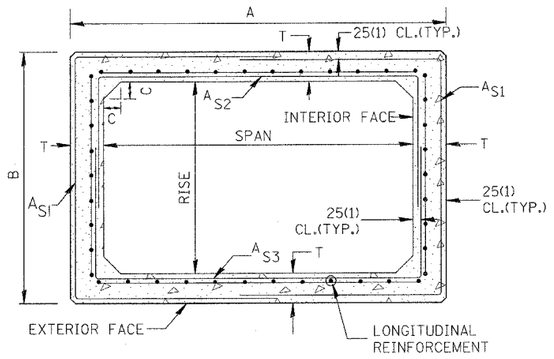
END VIEW

LEAVE 250(10) OF REINFORCEMENT EXPOSED AND PLACE THIS END INTO CONCRETE COLLAR

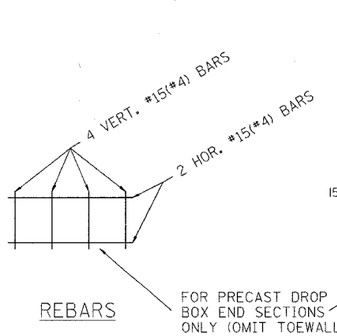
300 (12)



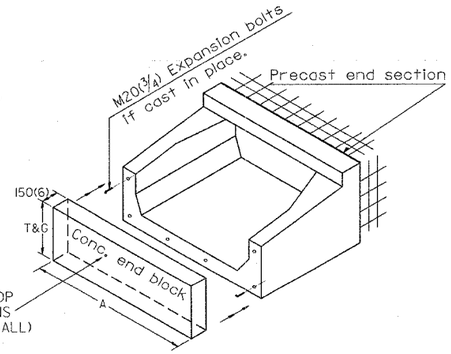
PLAN



CROSS-SECTION



REBARS



FOR PRECAST DROP BOX END SECTIONS ONLY (OMIT TOEWALL)

PERSPECTIVE

GENERAL NOTES:

1. The Box Culvert Sections shall conform to ASTM C789 for 0.6 m(2') cover or more. If less than 0.6 m(2') of cover exists, then ASTM C-850 applies and modify Table 'B' and drawing.

2. The Aggregate shall conform to the requirements of Articles 1003.02 and 1004.02 of the Standard Specifications. The gradation requirements do not apply.

3. The External Sealing Band shall conform to ASTM C 877. The appropriate portions of Articles 550.02(1) and 1057.01 of the Standard Specifications shall apply.

4. Shop plans for the Precast Reinforced Box Culvert Sections, End Sections and Drop Box End Sections shall be submitted in accordance with Article 504.04(a) of the Standard Specifications.

5. All dimensions shall be verified with the Supplier.

DESIGNER NOTES:
1. INSERT DISTRICT SPECIAL PROVISION.
2. TO BE USED IN CONJUNCTION WITH CONCRETE COLLAR.

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

DATE	REVISIONS	BY
1-1-97	RENUM. J-12.08 AND J-12.09, NEW FORMAT, METRICS, NEW REVISION BOX, NOTES.	T.P.
5-1-97	CORRECT TITLE & GEN. NOTES	J.A.
6-17-99	CORRECT DIMENSIONS	J.A.

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT CADD STANDARD

PRECAST CONCRETE BOX CULVERTS (SPECIAL), END SECTION (SPECIAL), & DROP BOX END SECTIONS (SPECIAL)

CADD STANDARD 540401-D4(1)
SCALE: NOT DRAWN TO SCALE
DATE **DATE**

DRAWN BY CADD
CHECKED BY
SHEET 1 OF 2

540401-D4(1)

DGN-ONLY

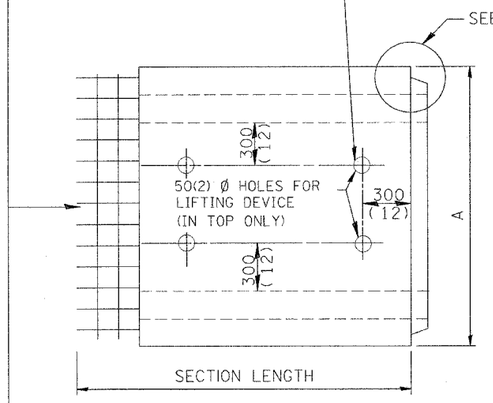
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315/317	***	FULTON	684	265
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

*** 18I,(18BRY&18BRY-1)BR,18B-1
CONTRACT* 88753

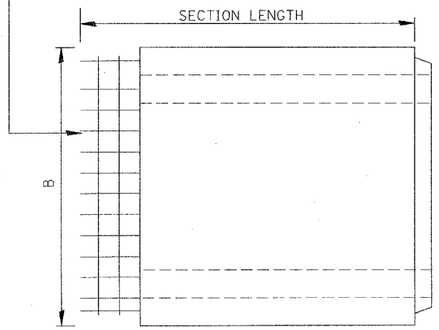
Leave 250(10) of reinforcement exposed and place this end into concrete collar

Location of lifting holes may vary as needed to clear reinforcement

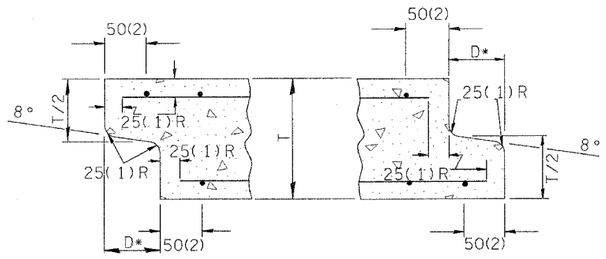
SEE DETAIL A



PLAN



ELEVATION

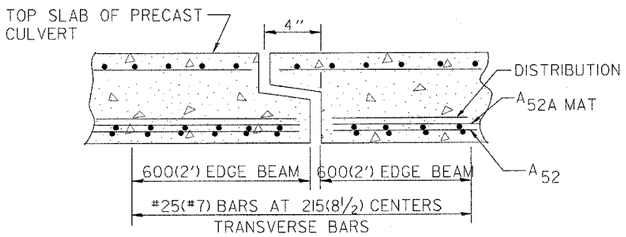


(TYP. INLET END)

DETAIL A
(TYP. OUTLET END)

NOTE: Inlet and outlet ends shall be compatible.

*The D dimension shall conform to the manufacturer's standards.



TYP. JOINT SHOWING EDGE BEAM REINFORCEMENT

NOTE: The additional Reinforcing Steel required for edge beams shall have the same length as As2A. The required area, As10, may be combined with As2 in a single mat or placed in a separate layer as shown above.
The additional Steel may be Welded Wire Fabric or grade 60 Deformed Bars.

(See GENERAL NOTES on sheet 1 of 2)

(DIMENSIONS APPLY TO END SECTION AND BOX SECTION DETAILS)

SPAN X RISE mm (ft)	T mm (in)	A	B	C mm (in)	E mm (in)	F	G	H mm (in)	SLOPE (Y : X)
600x600 (2x2)	100(4)	815(32)	815(32)	100(4)	915(36)	915(36)	305(12)	305(12)	1 : 3
600x900 (2x3)	100(4)	815(32)	1.12m (3'-8")	100(4)	610 (24)	1.22m (4'-0")	510(20)	410(16)	1 : 3
900x600 (3x2)	100(4)	1.12m (3'-8")	815(32)	100(4)	915(36)	915(36)	305(12)	305(12)	1 : 3
900x750 (3x2.5)	100(4)	1.12m (3'-8")	965(38)	100(4)	760(30)	1.07m (3'-6")	410(16)	355(14)	1 : 3
900x900 (3x3)	100(4)	1.12m (3'-8")	1.12m (3'-8")	100(4)	610(24)	1.22m (4'-0")	510(20)	410(16)	1 : 3
1200x600 (4x2)	125(5)	1.48m (4'-10")	865(34)	125(5)	915(36)	915(36)	305(12)	305(12)	1 : 3
1200x900 (4x3)	125(5)	1.48m (4'-10")	1.17m (3'-10")	125(5)	610(24)	1.22m (4'-0")	510(20)	410(16)	1 : 3
1200x1200 (4x4)	125(5)	1.48m (4'-10")	1.48m (4'-10")	125(5)	610(24)	1.22m (4'-0")	610(24)	610(24)	1 : 2
1200x1500 (4x5)	125(5)	1.48m (4'-10")	1.78m (5'-10")	125(5)	610(24)	1.22m (4'-0")	915(36)	610(24)	1 : 2
1200x1800 (4x6)	125(5)	1.48m (4'-10")	2.09m (6'-10")	125(5)	610(24)	1.22m (4'-0")	1.22m (4'-0")	610(24)	1 : 2
1500x600 (5x2)	150(6)	1.83m (6'-0")	915(36)	150(6)	915(36)	915(36)	305(12)	305(12)	1 : 3
1500x900 (5x3)	150(6)	1.83m (6'-0")	1.22m (4'-0")	150(6)	610(24)	1.22m (4'-0")	510(20)	410(16)	1 : 3
1500x1200 (5x4)	150(6)	1.83m (6'-0")	1.52m (5'-0")	150(6)	610(24)	1.22m (4'-0")	610(24)	610(24)	1 : 2
1500x1500 (5x5)	150(6)	1.83m (6'-0")	1.83m (6'-0")	150(6)	610(24)	1.22m (4'-0")	915(36)	610(24)	1 : 2
1800x600 (6x2)	175(7)	2.17m (7'-2")	965(38)	175(7)	915(36)	915(36)	305(12)	305(12)	1 : 3
1800x900 (6x3)	175(7)	2.17m (7'-2")	1.27m (4'-2")	175(7)	610(24)	1.22m (4'-0")	510(20)	410(16)	1 : 3
1800x1200 (6x4)	175(7)	2.17m (7'-2")	1.57 (5'-2")	175(7)	610(24)	1.22m (4'-0")	610(24)	610(24)	1 : 2
1800x1500 (6x5)	175(7)	2.17m (7'-2")	1.88m (6'-2")	175(7)	610(24)	1.22m (4'-0")	915(36)	610(24)	1 : 2
1800x1800 (6x6)	175(7)	2.17m (7'-2")	2.17m (7'-2")	175(7)	610(24)	1.22m (4'-0")	1.22m (4'-0")	610(24)	1 : 2
2100x1200 (7x4)	200(8)	2.54m (8'-4")	1.63m (5'-4")	200(8)	610(24)	1.22m (4'-0")	610(24)	610(24)	1 : 2
2100x1500 (7x5)	200(8)	2.54m (8'-4")	1.93m (6'-4")	200(8)	610(24)	1.22m (4'-0")	915(36)	610(24)	1 : 2
2100x1800 (7x6)	200(8)	2.54m (8'-4")	2.24m (7'-4")	200(8)	610(24)	1.22m (4'-0")	1.22m (4'-0")	610(24)	1 : 2
2100x2100 (7x7)	200(8)	2.54m (8'-4")	2.54m (8'-4")	200(8)	610(24)	1.22m (4'-0")	1.52m (5'-0")	610(24)	1 : 2
2400x1200 (8x4)	200(8)	2.84m (9'-4")	1.63m (5'-4")	200(8)	610(24)	1.22m (4'-0")	610(24)	610(24)	1 : 2
2400x1500 (8x5)	200(8)	2.84m (9'-4")	1.93m (6'-4")	200(8)	610(24)	1.22m (4'-0")	915(36)	610(24)	1 : 2
2400x1800 (8x6)	200(8)	2.84m (9'-4")	2.24m (7'-4")	200(8)	610(24)	1.22m (4'-0")	1.22m (4'-0")	610(24)	1 : 2
2700x1500 (9x5)	225(9)	3.2m (10'-6")	1.98m (6'-6")	225(9)	610(24)	1.22m (4'-0")	915(36)	610(24)	1 : 2
2700x1800 (9x6)	225(9)	3.2m (10'-6")	2.29m (7'-6")	225(9)	610(24)	1.22m (4'-0")	1.22m (4'-0")	610(24)	1 : 2

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

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT CADD STANDARD

PRECAST CONCRETE BOX CULVERTS (SPECIAL), END SECTION (SPECIAL), & DROP BOX END SECTIONS (SPECIAL)

CADD STANDARD 540401-D4(2)
SCALE: NOT TO SCALE
DATE: $$DATE$$

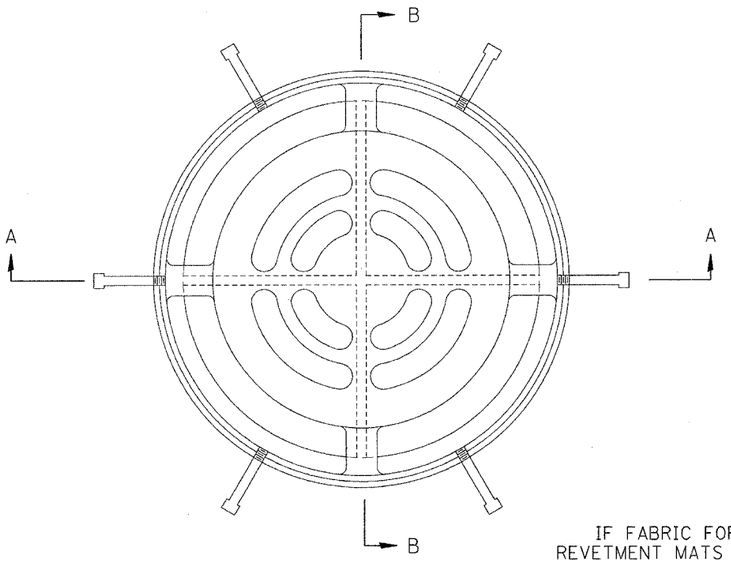
DRAWN BY CADD
CHECKED BY
SHEET 2 OF 2

DGN-ONLY

540401-D4(2)

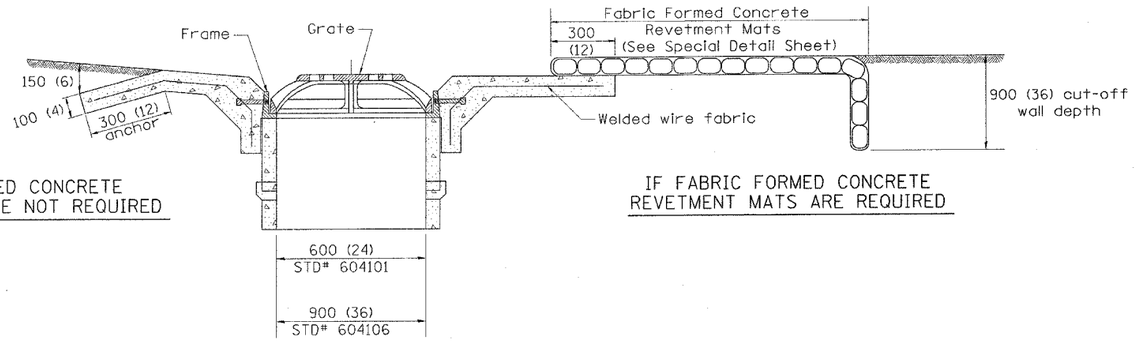
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315/317	***	FULTON	684	266
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

*** 18I,(18BRY&18BRY-1)BR,18B-1
CONTRACT* 88753



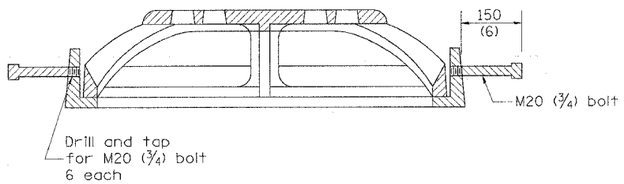
PLAN
(STD# 604101 & 604106)

IF FABRIC FORMED CONCRETE REVETMENT MATS ARE NOT REQUIRED



IF FABRIC FORMED CONCRETE REVETMENT MATS ARE REQUIRED

SECTION B-B
(STD# 604101 & 604106)



SECTION A-A
(STD# 604101 & 604106)

GENERAL NOTES

1. The applicable portions of Highway Standards 604101 and/or 604106 shall apply, except as noted herin.

Designer Notes:
1. This is to be used to supplement Standard 604101 and/or 604106
2. If fabric formed concrete revetment mats are used, include District CADD drawing.
3. Include District Special Provision.

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

DATE	REVISIONS	BY
1-1-97	RENUM. B-4.09, NEW REVISION BOX.	T.P.
	REVISED DESIGNER NOTES.	

ILLINOIS DEPARTMENT OF TRANSPORTATION

DISTRICT CADD STANDARD

MEDIAN INLET (604101), SPECIAL
AND
MEDIAN INLET (604106), SPECIAL

CADD STANDARD 604101-D4

SCALE NOT TO SCALE — DRAWN BY CADD

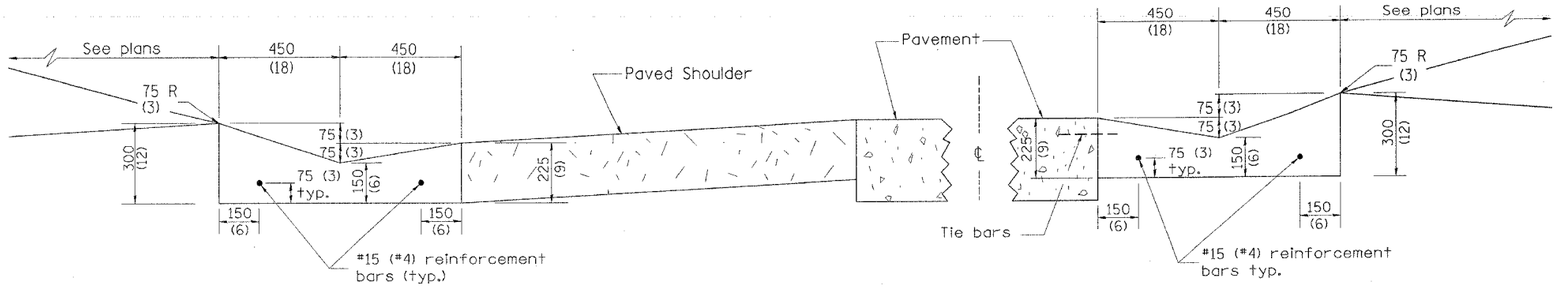
DATE $$DATE$$ — CHECKED BY

DGN-ONLY

604101-D4

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315/317	***	FULTON	684	267
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

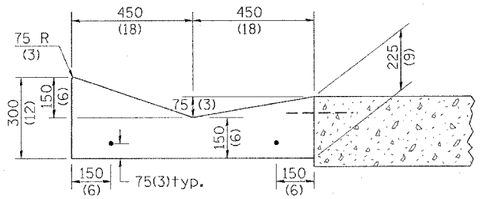
*** 18I,(18BRY&18BRY-1)BR,18B-1
CONTRACT* 88753



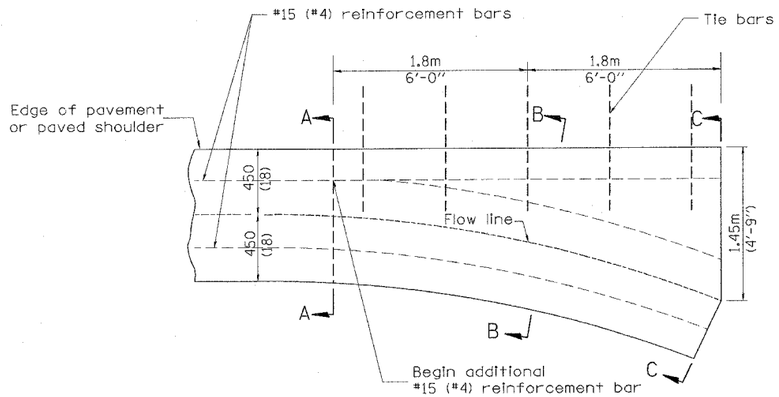
SHOULDER EDGE GUTTER

PAVEMENT EDGE GUTTER

TYPE A GUTTER (MODIFIED)



SECTION A-A

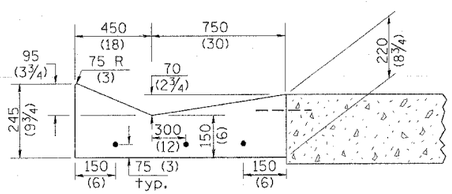


PLAN

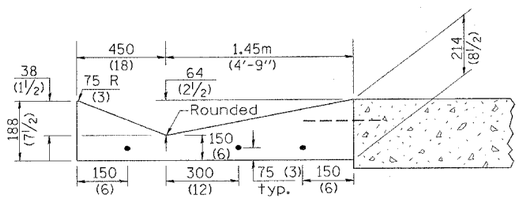
QUANTITY
Section C-C to A-A
m^3 (cu. yd.) concrete.

GENERAL NOTES:

1. TYPE A GUTTER (MODIFIED) shall conform to the the applicable portions of Section 606.
2. Tie bars shall be No. 20 (No. 6) at 600mm (24") centers unless otherwise shown.
3. Gutter, gutter inlets, gutter outlets, and gutter entrances shall be tied to rigid pavement in accordance with details shown on Standard 420001.
4. Joints shall be constructed in accordance with Article 606.06.
5. Welded wire fabric shall conform to Article 1006.10(c)(1), and shall not be less than 2.83 kg/m^2 (58 lbs/100 sq.ft.).



SECTION B-B



SECTION C-C

INLET

DESIGNER NOTE:
1. INCLUDE STATE STANDARD 420001.
2. INCLUDE DISTRICT SPECIAL PROVISION.

QUANTITIES
CALC. BY: _____ DATE:
CHECKED BY: _____ DATE:
QUANTITY CALCULATIONS ARE ON FILE AT THE DISTRICT 4 OFFICE; BUREAU OF PROJECT IMPLEMENTATION; DOCUMENTATION SECTION

DGN-ONLY

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

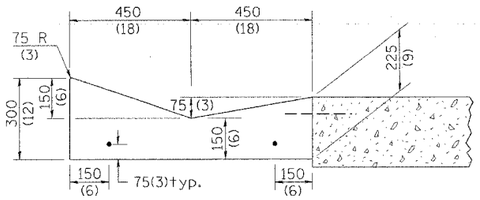
DATE	REVISIONS	BY
1-1-97	RENUM. A-1.02, NEW REVISION	T.P.
	BOX, ELIMINATED EXPANSION ANCHOR TIES.	
2-28-02	ENTRANCE TYPICALS REVISED	M.A.

ILLINOIS DEPARTMENT OF TRANSPORTATION
DISTRICT CADD STANDARD
TYPE A GUTTER, (MODIFIED) (INLET, OUTLET & ENTRANCE)
CADD STANDARD 606101-D4 SHEET 1 OF 3
SCALE: NOT DRAWN TO SCALE DRAWN BY CADD
DATE $$DATE$$ CHECKED BY

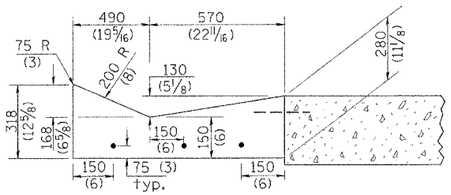
606101-D4 (1)

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315/317	•••	FULTON	684	268
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

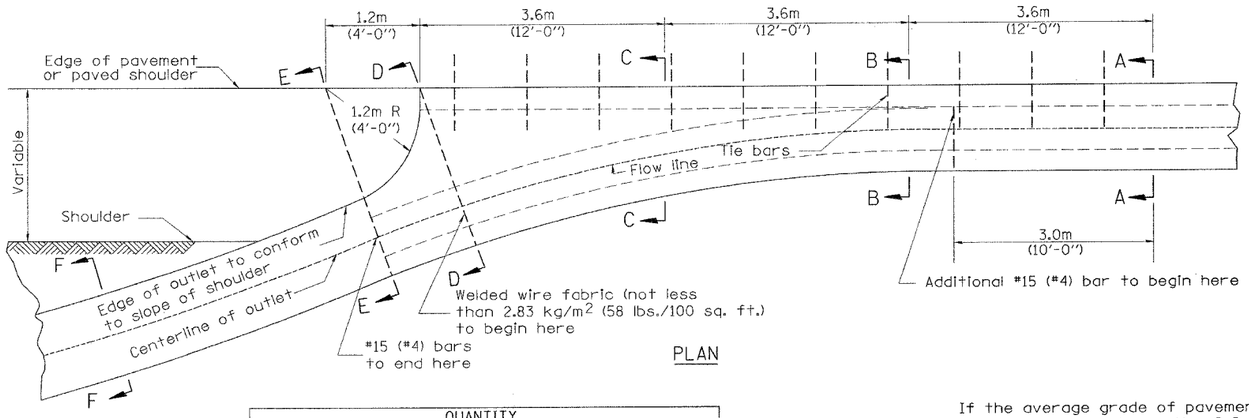
••• 181,(18BRY&18BRY-1)BR,18B-1
CONTRACT* 88753



SECTION A-A



SECTION B-B

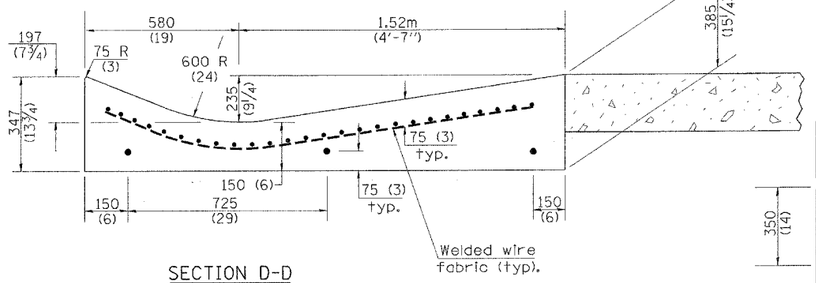


PLAN

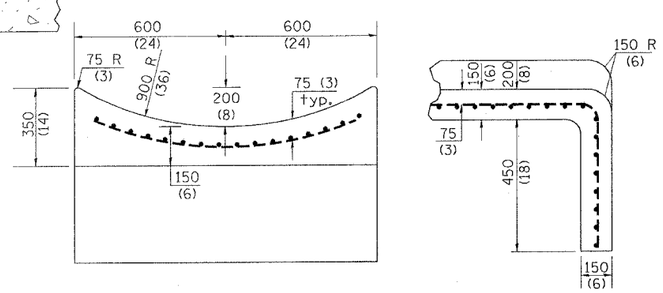
QUANTITY

Section A-A to E-E= m³ (cu. yd.) concrete.
Section F-F= m³/m (cu. yd./ft.) concrete.

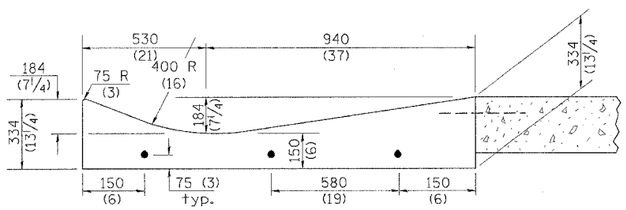
If the average grade of pavement for the distance from section A-A to section D-D exceeds 2%, this distance shall be increased 1.8 m (6 ft.) for each 1% increase in grade. A quantity adjustment is required.



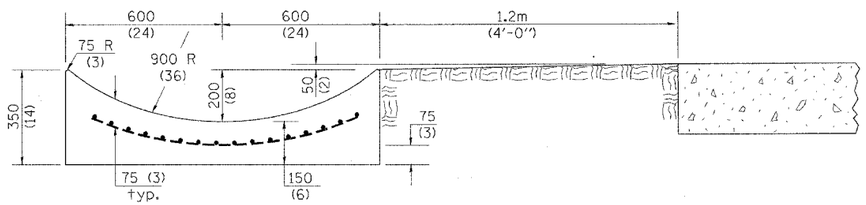
SECTION D-D



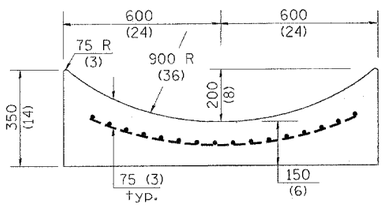
SECTIONS AT END OF OUTLET
(CURTAIN WALL)



SECTION C-C



SECTION E-E



SECTION F-F

QUANTITY

Curtain Wall
m³ (cu. yd.) concrete.

OUTLET

QUANTITIES

CALC. BY: _____ DATE:
CHECKED BY: _____ DATE:

QUANTITY CALCULATIONS ARE ON FILE AT THE DISTRICT 4 OFFICE; BUREAU OF PROJECT IMPLEMENTATION; DOCUMENTATION SECTION

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

ILLINOIS DEPARTMENT OF TRANSPORTATION
DISTRICT CADD STANDARD

TYPE A GUTTER, (MODIFIED)
(INLET, OUTLET & ENTRANCE)

CADD STANDARD 606101-D4 SHEET 2 OF 3

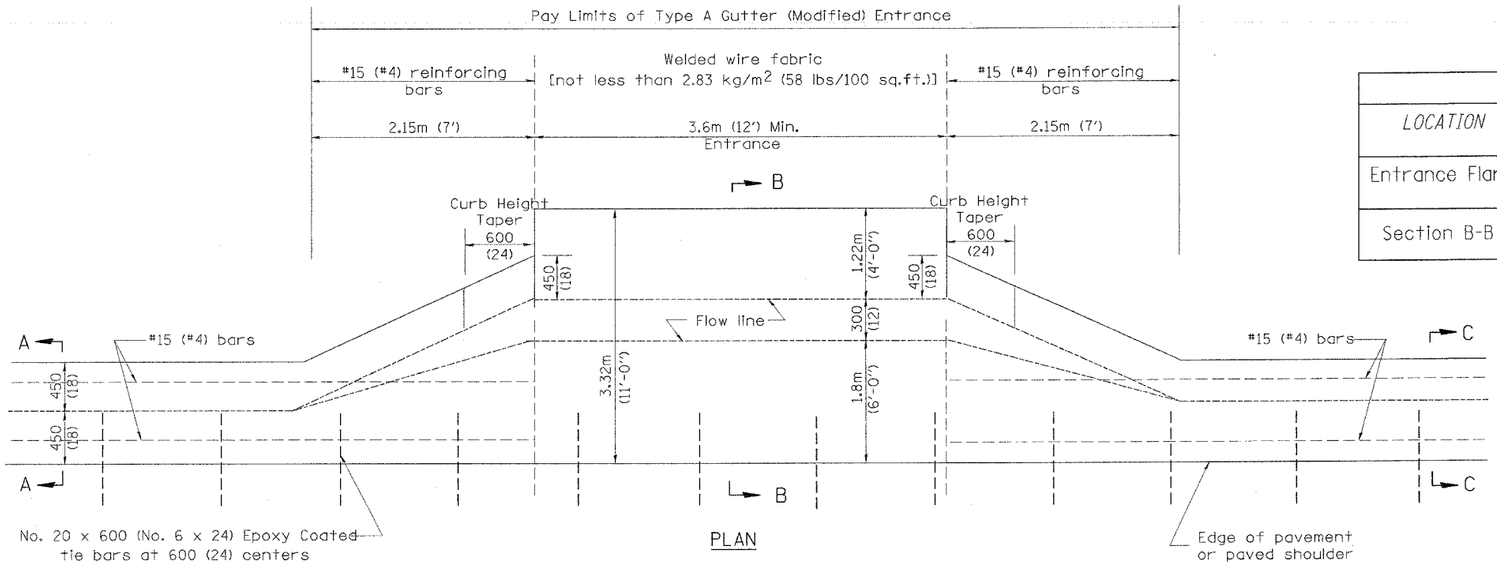
SCALE: NOT DRAWN TO SCALE DRAWN BY CADD
DATE $$DATE$$ CHECKED BY

DGN-ONLY

606101-D4 (2)

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315/317	•••	FULTON	684	269
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

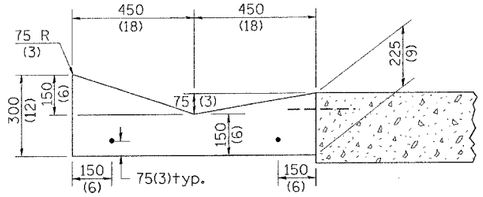
••• 181,(18BRY&18BRY-1)BR,18B-1
CONTRACT# 88753



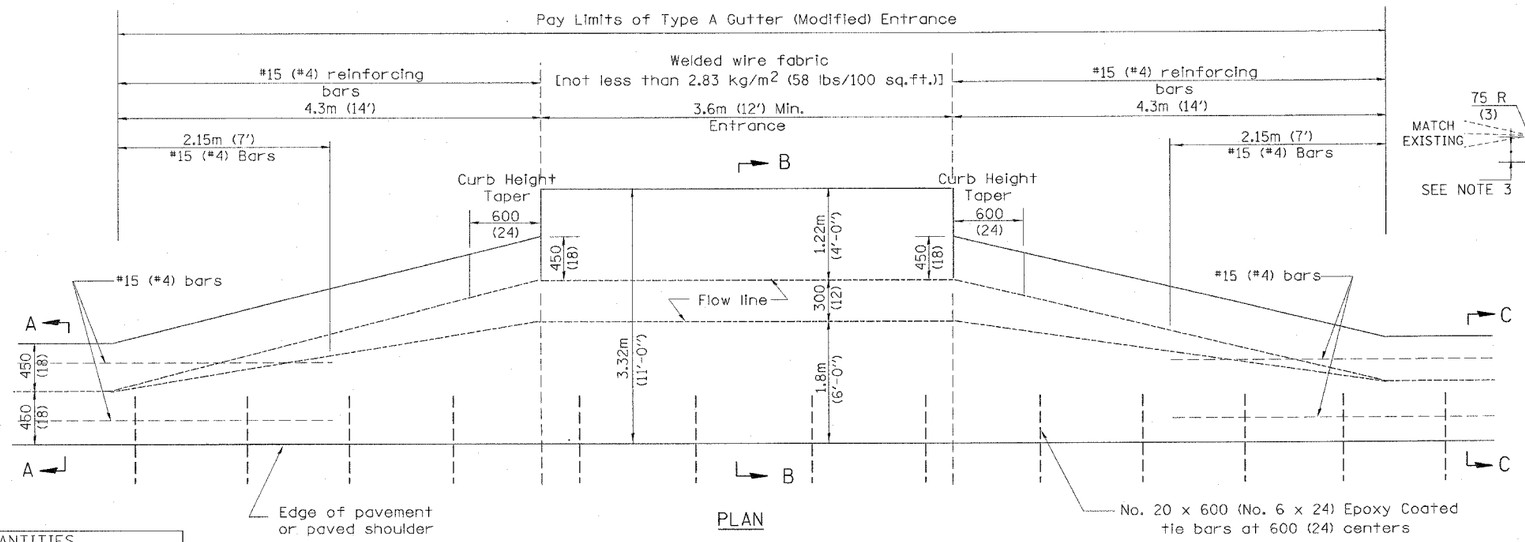
PLAN

TYPICAL URBAN ENTRANCE

QUANTITY CALCULATION			
LOCATION	*LENGTH*	*NON-COMMERCIAL 150 (6)*	*COMMERCIAL ENTRANCE 200 (8)*
Entrance Flare	2.15 m (7 Ft) Urban 4.30 m (14 Ft) Rural	0.37 Cu M / M (0.15 Cu Yd / Ft)	0.45 Cu M / M (0.18 Cu Yd / Ft)
Section B-B	See Plans	0.57 Cu M / M (0.23 Cu Yd / Ft)	0.70 Cu M / M (0.28 Cu Yd / Ft)

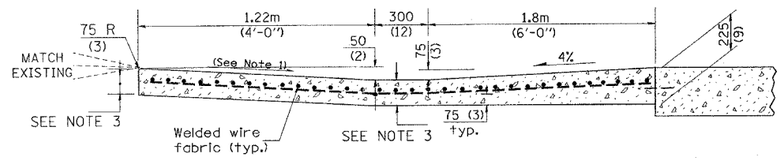


SECTION A-A & C-C



PLAN

TYPICAL RURAL ENTRANCE



SECTION B-B

GENERAL NOTES
1.) Slope may be increased from 4% (min.) to 6% (max.) In order to match the existing.

2.) The cross-slope is to be constructed as given in the plans from back turnout to where driveway matches existing.

3.) For Non-Commercial Entrances the driveway thickness shall be 150 (6). For Commercial Entrances the driveway thickness shall be 200 (8).

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

ENTRANCE

QUANTITIES
CALC. BY: _____ DATE:
CHECKED BY: _____ DATE:
QUANTITY CALCULATIONS ARE ON FILE AT THE DISTRICT 4 OFFICE; BUREAU OF PROJECT IMPLEMENTATION; DOCUMENTATION SECTION

ILLINOIS DEPARTMENT OF TRANSPORTATION
DISTRICT CADD STANDARD

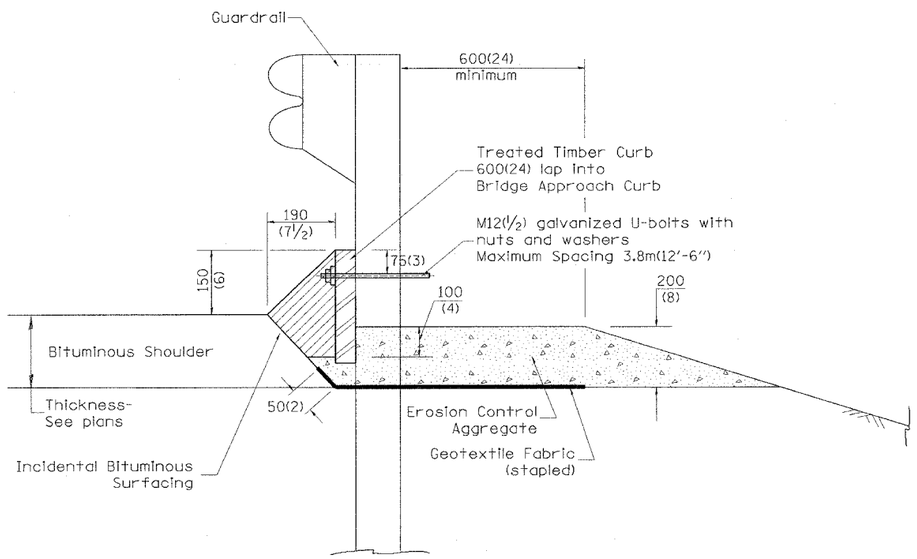
TYPE A GUTTER, (MODIFIED)
(INLET, OUTLET & ENTRANCE)

CADD STANDARD 606101-D4 SHEET 3 OF 3
SCALE: NOT DRAWN TO SCALE DRAWN BY CADD
DATE $$DATE$$ CHECKED BY

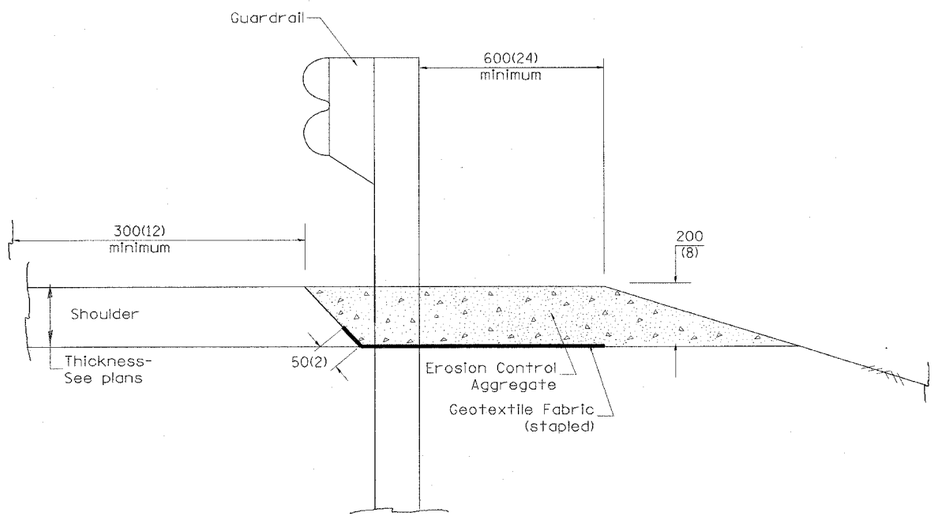
DGN-ONLY

606101-D4 (3)

DESIGNER NOTE:
1. Use EROSION CONTROL CURB at guardrail installations where grades are equal to or greater than 1% and at inlets. (Include District Special Provision)
2. Use GUARDRAIL AGGREGATE EROSION CONTROL at guardrail installations where grades are less than 1% (Include District Special Provision)
3. Include State Standards 609001, 609006 or 610001 if applicable.
4. Include the following District Cadd Standards as needed: Slope Drains for Exposed Pipes; Slope Drains for Buried Pipes; Seepage Collars for Buried Pipes; Seepage Collars for Exposed Pipes; Concrete Thrust Blocks and Pipe Elbow.
5. Include District Special Provision -"Aggregate Quality" for projects located in the Western Area of the District - approx. dividing line is IL 97.



TYPICAL SECTION WITH EROSION CONTROL CURB



TYPICAL SECTION WITHOUT EROSION CONTROL CURB

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315/317	***	FULTON	684	270
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

*** 181,(18BRY&18BRY-1)BR,18B-1
CONTRACT* 88753

GENERAL NOTES: EROSION CONTROL CURB

1. This work shall consist of grading as needed, installing hardware and treated timber boards, furnishing and placing mastic material and incidental bituminous surfacing in front of Steel Plate Beam Guardrail in accordance with Plan Details.

2. Timber shall be treated in accordance with Article 1007.12. All preservatives specified in the article will be allowed. Waterborne preservatives "asa" and "cca" shall have a minimum retention of 6.4 kg/m^3 (0.40 lbs./cu. ft.)

GENERAL NOTES: GUARDRAIL AGGREGATE EROSION CONTROL

1. This work shall consist of grading as needed, furnishing and installing geotextile fabric and staples, and furnishing, placing and shaping crushed aggregate around and behind Steel Plate Beam Guardrail posts in accordance with Plan Details.

2. Before placing the aggregate and the Geotextile Fabric, weeds and grass shall be removed from the area to be covered.

3. After the area has been prepared, and in a dry condition, the Geotextile fabric shall be placed with a 300(12) minimum overlap. A knife cut for guardrail post installation is necessary.

4. The aggregate shall be deposited, compacted and shaped by either mechanical or hand methods, in a manner reasonably true to line and grade.

5. The Contractor shall have the option of placing the guardrail before or after the Geotextile Fabric and Aggregate are in place. If the guardrail is placed after the Geotextile Fabric and Aggregate, then any voids must be filled and the aggregate returned to line and grade.

6. Materials shall meet the following requirements:

   A. The crushed aggregate shall be CA1 gradation in accordance with Article 1004.01(c) of the Standard Specifications.

   B. The Geotextile Fabric shall be nonwoven fabric in accordance with Article 1080.02 of the Standard Specifications.

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

DATE	REVISIONS	BY
1-1-97	RENUM. C-22.01, NEW REVISION BOX	T.P.
3-1-97	CORRECT STD. NUMBERS IN NOTES PG. 2	J.A.
11-3-00	CORRECTION TO NOTES	M.A.

ILLINOIS DEPARTMENT OF TRANSPORTATION
DISTRICT CADD STANDARD

GUARDRAIL EROSION CONTROL TREATMENTS

CADD STD NO. 630101-D4(1)
SCALE: NOT DRAWN TO SCALE
DATE **DATE**

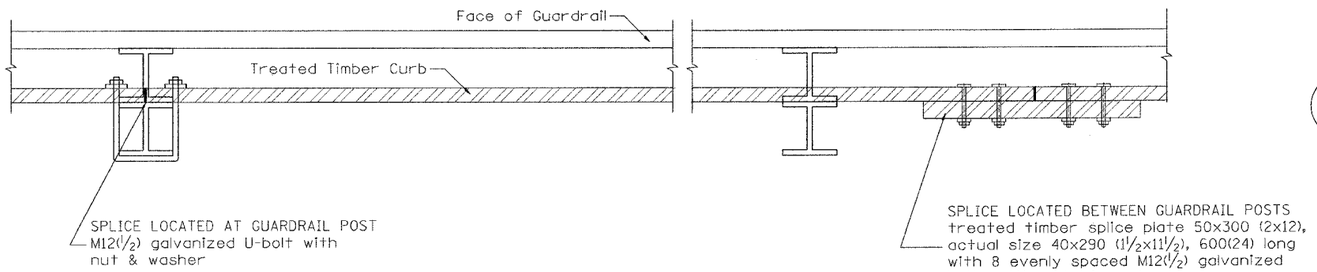
SHEET 1 OF 2
DRAWN BY CADD
CHECKED BY

630101-D4(1)

DGN-ONLY

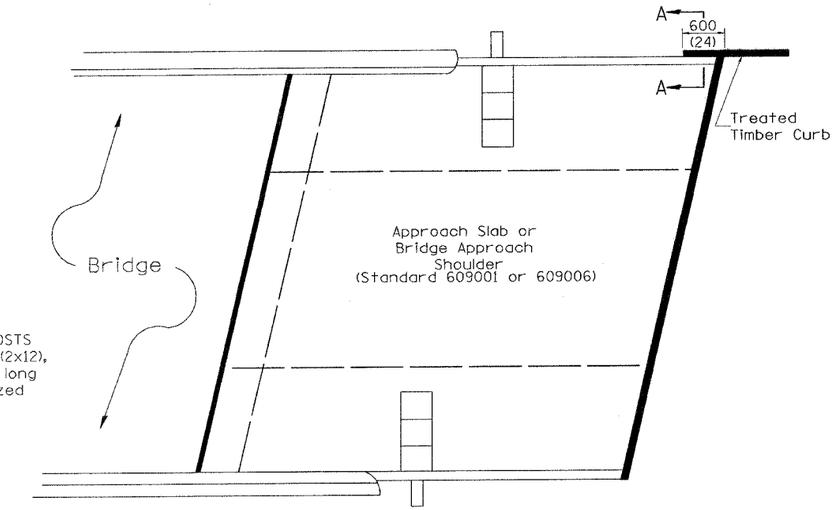
F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315/317	•••	FULTON	684	271
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

••• 181,(18BRY&18BRY-1)BR,18B-1
CONTRACT# 88753



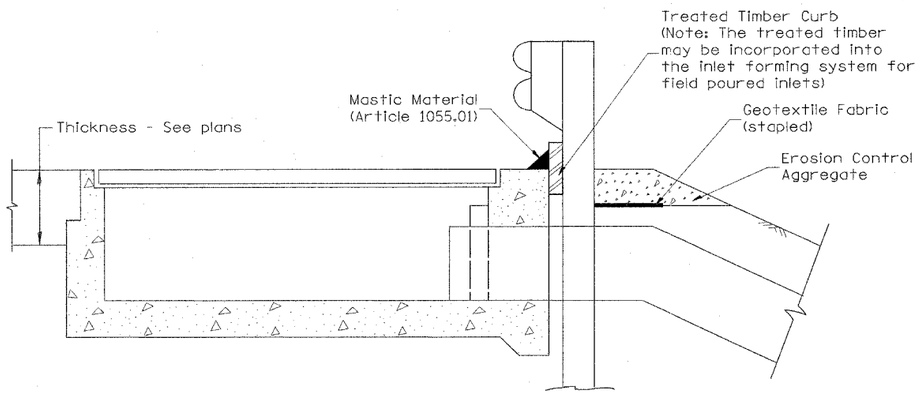
DETAIL A

(Typical Treated Timber Splices)

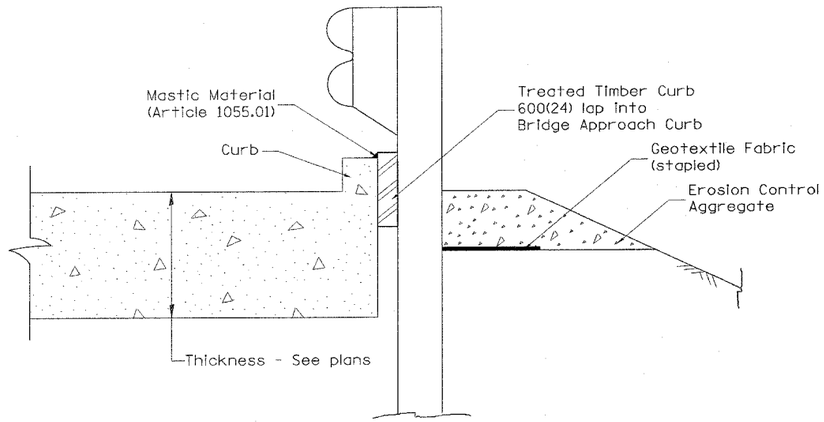


PLAN VIEW

APPROACH SLAB OR BRIDGE APPROACH SHOULDER
(STANDARD 609001 or 609006)



TYPICAL SECTION WITH EROSION CONTROL CURB
AT INLETS TYPE E & F (STANDARD 610001)



SECTION A-A

TYPICAL SECTION WITH EROSION CONTROL CURB
AT BRIDGE APPROACH CURB
(STANDARD 609001 OR 609006)

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

ILLINOIS DEPARTMENT OF TRANSPORTATION
DISTRICT CADD STANDARD

GUARDRAIL EROSION
CONTROL TREATMENTS

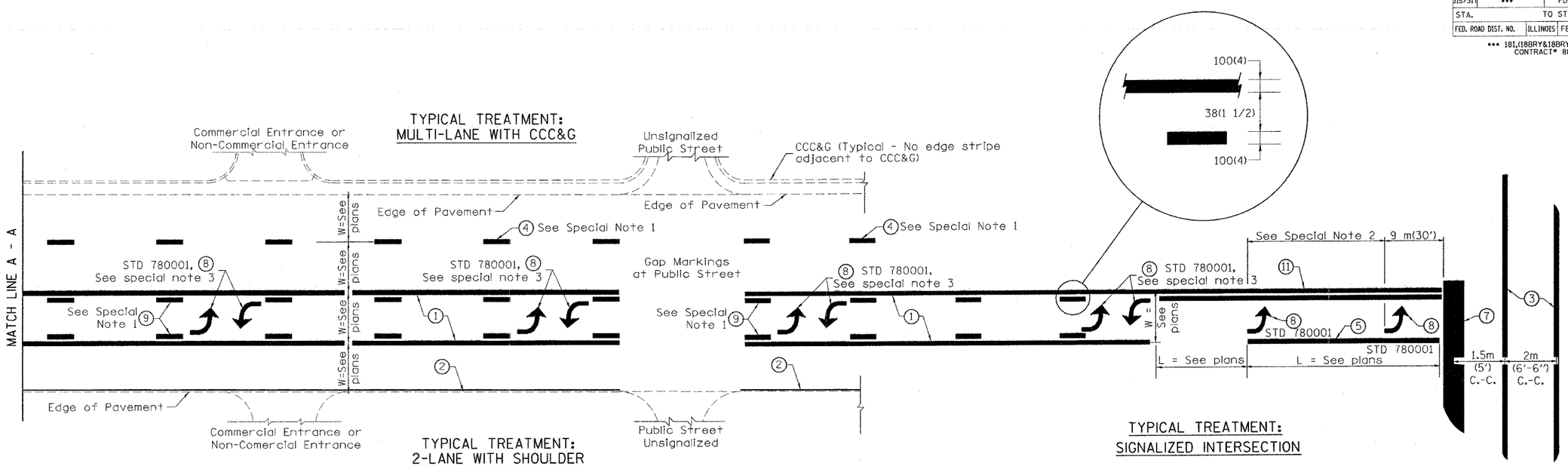
CADD STD NO. 630101-D4(2)	SHEET 2 OF 2
SCALE: NOT DRAWN TO SCALE	DRAWN BY CADD
DATE $$DATE$$	CHECKED BY

DGN-ONLY

630101-D4(2)

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315/317	***	FULTON	684	272
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

*** 181,(18BRY&18BRY-1)BR,18B-1
CONTRACT# 88753



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

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

TYPICAL PAVEMENT MARKING LEGEND

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

1. 100(4) Solid (Yellow)
2. 100(4) Solid (White)
3. 2-150(6) Crosswalk @ 2m (6'-6")min C.-C. (White)
   2-200(8) Crosswalk @ 2m (6'-6")min C.-C. (White) (When traffic signals are present.)
4. 150(6) Skip-Dash (White) — 3.05m (10') / 9.14m (30') / 3.05m (10') (See Special Note 1)
5. 200(8) Solid (White)
6. 300(12) Diagonal (White) (Item 6 is shown on Std. 780001)
7. 600(24) Stop Bar (White)
8. Letters & Arrows — 10m (33') (See Std. 780001 and Special Notes 2 & 3)
9. 100(4) Skip-Dash (Yellow) — 3.05m (10') / 9.14m (30') / 3.05m (10') (See Special Note 1)
10. 300(12) Diagonal (Yellow) (See Table A) — 45°
11. 100(4) Double Solid (Yellow) — 280(11) C.-C. / See Table A

SPECIAL NOTES

1. Skip-Dash markings will be centered between both ends of city blocks and shall be placed in alignment transversly 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 24 m (80').
   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 61 m (200').
   C. Arrow pairs shall be evenly spaced if three (3) or more are required.
   D. The spacing between Bi Directional Left Turn Arrows is 10 m (33').

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.

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

DATE	REVISIONS	BY
1-1-97	RENUM. F-8.03, NEW REVISION BOX	T.P.
2-7-97	ADD BI DIRECTIONAL DIMENSION	J.A.
10-97	CORRECT BI DIRECTIONAL DIMENSION	J.A.
8-02	ADD CROSSWALK DMNS. WITH T.S.	M.A.

ILLINOIS DEPARTMENT OF TRANSPORTATION
DISTRICT CADD STANDARD

TYPICAL PAVEMENT MARKINGS

CADD STANDARD 780001-D4
SCALE: NOT DRAWN TO SCALE
SHEET 1 OF 2
DRAWN BY CADD
CHECKED BY

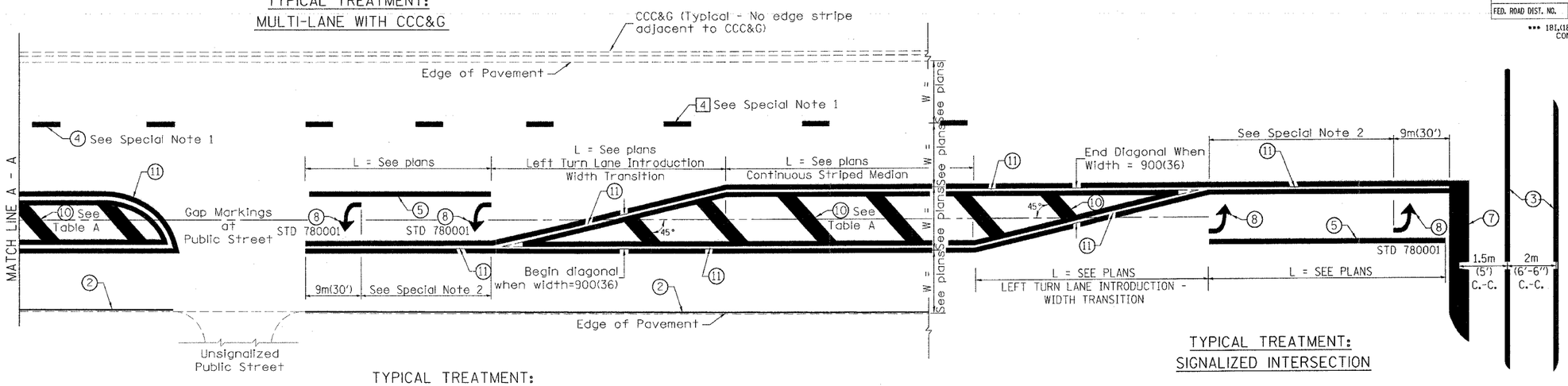
780001-D4 (1)

DGN-ONLY

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
315/317	***	FULTON	684	273
STA.		TO STA.		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

*** 18I,(18BRY&18BRY-1)BR,18B-1
CONTRACT# 88753

TYPICAL TREATMENT:
MULTI-LANE WITH CCC&G



TYPICAL TREATMENT:
2-LANE WITH SHOULDER

TYPICAL TREATMENT:
SIGNALIZED INTERSECTION

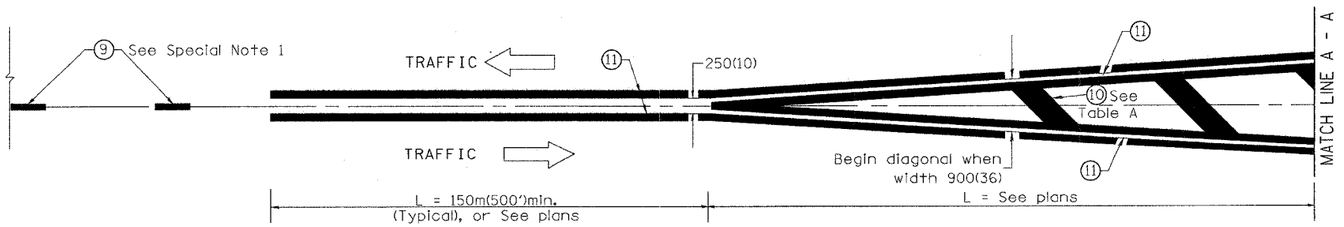
TYPICAL MEDIAN TRANSITIONS

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 50 km/h (30 mph)	15m (50')	5m (15')
50 - 70 km/h (30 - 45 mph)	23m (75')	6m (20')
Over 70 km/h (45 mph)	46m (150')	9m (30')



MEDIAN INTRODUCTION - WIDTH TRANSITIONS

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

ILLINOIS DEPARTMENT OF TRANSPORTATION
DISTRICT CADD STANDARD

TYPICAL PAVEMENT MARKINGS

CADD STANDARD 780001-D4
SCALE: NOT DRAWN TO SCALE

SHEET 2 OF 2
DRAWN BY CADD
CHECKED BY

DGN-ONLY

780001-D4 (2)

CONTRACT NO. 88753

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317		FULTON	684	274
STA. 147+00.00		TO STA. 148+00.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

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

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585 580 575 570 565

EXIST. R.O.W.

ELECTRIC

ELECTRIC

EXIST. R.O.W.

148+00.00

585 580 575 570 565

EXIST. R.O.W.

ELECTRIC

ELECTRIC

EXIST. R.O.W.

147+00.00

585 580 575 570 565

160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160

US 24

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317		FULTON	684	275
STA. 149+00.00		TO STA. 149+00.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

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SURVEYED
PLOTTED
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EXIST. R.O.W.
149+00.00
US 24

CONTRACT NO88753

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317		FULTON	684	276
STA. +00.00		TO STA. 1+00.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

ORIGINAL SURVEY		BY	DATE
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585 580 575 570 565

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572.69
572.99
1:3
1:4
TEL
ELECTRIC
569.58
ELECTRIC
EXIST. R.O.W.
1:4
1:3
PROP. R.O.W.
567.57
FABRIC FORMED CONCRETE REVETMENT MAT. STA. 0+80

1+00.00

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0+00.00

US 24

CONTRACT NO88753

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317		FULTON	684	277
STA. 1+25.00		TO STA. 1+25.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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PROP. R.O.W.

PROPOSED PRECAST REINFORCED CONC. FLARED END SECTION 24"

4:1

4:1

568.96

1.53 %

2.00 %

2.11 %

571.88

MANHOLE TYPE A, 5' DIAMETER WITH PRECAST REINFORCED CONCRETE FLAT SLAB TOP (602401 & 602601)

6.46 %

PROP. R.O.W.

8.82 %

567.72

PROPOSED PIPE CULVERT
CLASS A TYPE 1 24"
@ 1.53% (81.00')
USFL= 568.96
DSFL= 567.72

PROPOSED PIPE CULVERT
CLASS A TYPE 1 24"
@ 8.82% (26.63')
USFL= 567.57
DSFL= 565.22

565.22

3.00 %

558.78

555.62

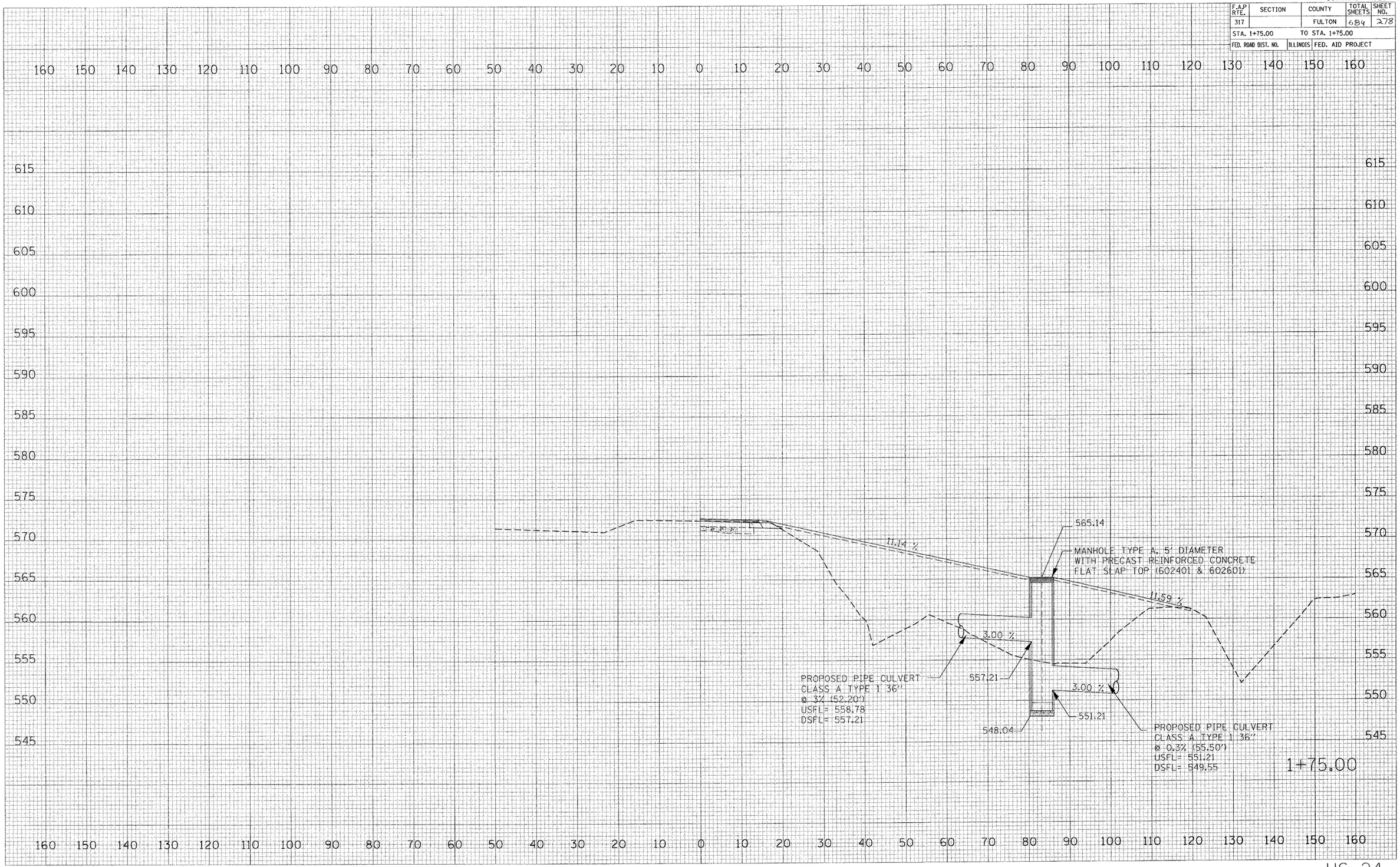
PROPOSED PIPE CULVERT
CLASS A TYPE 1 36"
@ 3% (52.20')
USFL= 558.78
DSFL= 557.21

1+25.00

US 24

CONTRACT NO88753

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317		FULTON	684	278
STA. 1+75.00		TO STA. 1+75.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



US 24

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

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CONTRACT NO88753

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317		FULTON	684	279
STA. 2+25.00		TO STA. 2+25.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

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610 605 600 595 590 585 580 575 570 565 560 555 550 545 540 535

562.30

MANHOLE TYPE A,
5' DIAMETER WITH
PRECAST REINFORCED
CONCRETE FLAT SLAB
TOP (602401 & 602601)

PROP. R.O.W.

9.63 %

9.12 %

PROPOSED PIPE CULVERT
CLASS A TYPE 1 36"
@ 3% (55.50')
USFL= 551.21
DSFL= 549.55

3.00 %

549.55

PROPOSED PIPE CULVERT
CLASS A TYPE 1 36"
@ 0.3% (54.00')
USFL= 538.41
DSFL= 538.25

0.30 %

538.41

535.24

2+25.00

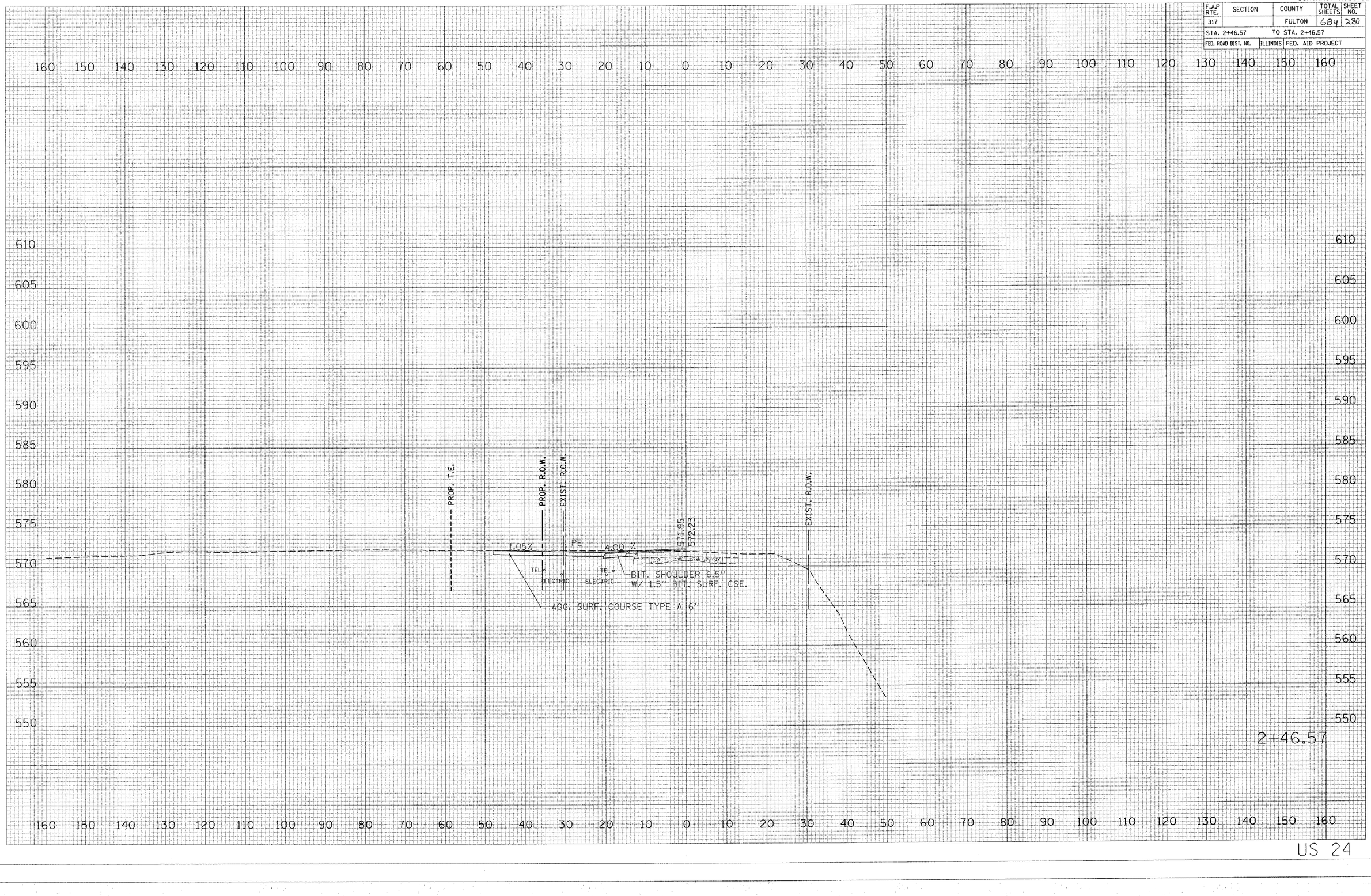
US 24

CONTRACT NO88753

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317		FULTON	684	280

STA. 2+46.57 TO STA. 2+46.57

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



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

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

PLOT DATE = 4/6/2005
FILE NAME = c:\projects\us24spoon_ph_2\sheets\ks0800d01.dgn
PLOT SCALE = 10.0000 ' / IN.
USED NAME = haggard

CONTRACT NO88753

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317		FULTON	684	281
STA. 2+75.00		TO STA. 2+75.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

2' UNDERCUT OF UNSUITABLE SOIL TO BE FILLED WITH SUB-BASE GRAN. MAT. TY B, 24" STA 2+50 TO 3+50

PROPOSED PIPE CULVERT
CLASS A TYPE 1 24"
@ 0.3% (54.00')
USFL= 538.41
DSFL= 538.25

0.30 %

538.25

PROP. R.O.W.

PROPOSED PRECAST REINFORCED CONC. FLARED END SECTION 24"

PROPOSED CLASS B3 RIPRAP

2+75.00

US 24

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

ORIGINAL SURVEY — SURVEYED — PLOTTED — TEMPLATE — AREAS — AREAS CHECKED — BY — DATE

PLOT DATE = 4/7/2025
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PLOT SCALE = 10.0000 ' / IN.
USER NAME = hoggland

CONTRACT N088753

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317		FULTON	684	282
STA. 3+00.00		TO STA. 3+00.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

BEGIN TYPE A GUTTER MODIFIED STA 2+84.35 (LT)

C(1,11)=8
F(1,11)=4 UNSUIT EX=13

PROP. R.O.W.
EXIST. R.O.W.
EXIST. R.O.W.

571.49
571.70
571.98

1%
1%

TEL.
ELECTRIC
TEL.
ELECTRIC

TYPE A GUTTER (MOD)

2' UNDERCUT OF UNSUITABLE SOIL TO BE FILLED WITH SUB-BASE GRAN. MAT. TY B, 24" STA 2+50 TO 3+50

3+00.00

US 24

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

ORIGINAL SURVEY | NO. | SURVEYED | PLOTTED | TEMPLATE | AREAS | AREAS CHECKED | BY | DATE

PLOT DATE = 4/6/2005
FILE NAME = c:\projects\us24spoon_ph_2\sheets\sht24spoon02.dgn
PLOT SCALE = 10.0000 ' / IN.
USER NAME = heggland

CONTRACT NO88753

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317		FULTON	684	283
STA. 4+00.00		TO STA. 4+00.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

BEGIN EROSION CONTROL BLANKET
LT STA 4+50 TO 10+00

C(1,11)=12
F(1,11)=0

PROP. R.O.W.
EXIST. R.O.W.

570.06
570.24
570.54
5%
5%
TEL
ELECTRIC
TEL
ELECTRIC
EXIST. R.O.W.
LT

4+00.00

US 24

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

ORIGINAL SURVEY | SURVEYED | PLOTTED | TEMPLATE | AREAS | AREAS CHECKED | BY | DATE

PLOT DATE = 4/6/2005
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PLOT STYLE = PSCHEME.CTB
USER NAME = hegsamd

CONTRACT N088753

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317		FULTON	684	284
STA. 5+00.00		TO STA. 5+00.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

BEGIN PAVEMENT WIDENING
LT STA. 4+73.00 TO 9+62. 6.50'

BEGIN EROSION CONTROL BLANKET
RT STA. 5+00 TO 10+00

BEGIN PAVEMENT WIDENING
RT STA. 4+95.98 TO 11+09.00. 5.75'

G(I,II)=147 TS(EXC)=7
F(I,II)=0

PROP. R.O.W.
EXIST. R.O.W.
EXIST. R.O.W.
PROP. R.O.W.

568.34
568.64

TEL.
ELECTRIC
TEL.
ELECTRIC

1:3
1:4
1:4
1:3

566.72
565.64

EXCAVATE TOPSOIL 4"
BEGIN 5+00 LT
(PAID FOR AS TS EXC.
& PLACEMENT 4")

5+00.00

US 24

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

ORIGINAL SURVEY | SURVEYED | PLOTTED | TOPSOIL AREAS | AREAS CHECKED | NO. | BY | DATE

PLOT DATE = 4/6/2005
FILE NAME = e:\projects\us24spoon_ph_2\sheets\sht0406dgn
PLOT SCALE = 10.0000 ' / IN.
USER NAME = heggsend

CONTRACT N088753

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317		FULTON	604	285
STA. 6+00.00		TO STA. 6+00.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

ORIGINAL SURVEY? — SURVEYED — PLOTTED — TEMPLATE — AREAS CHECKED — BY — DATE

PLOT DATE = 4/6/2005
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DGN SCALE = 40.000000
USER NAME = hoggarwd

160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160

610 605 600 595 590 585 580 575 570 565 560 555 550 545

BEGIN BLENDED SOIL
STA 6+00 TO 11+00
EL 563.3 TO 551.8
SEE SPECIAL PROVISION
EMBANKMENT (BLENDED SOIL)

C(1,1D)=327 TS(EXC)=16
F(1,1D)=0 UNSUIT EX=24

PROP. R.O.W.

EXIST. R.O.W.

EXCAVATE TOPSOIL 4"
BEGIN 6+00 RT
(PAID FOR AS TS EXC.
& PLACEMENT 4")

TEL & ELECTRIC

566.19
566.48

1:3
1:4

563.48

EXCAVATE TOPSOIL 4"
BEGIN 6+00 RT
(PAID FOR AS TS EXC.
& PLACEMENT 4")

2' UNDERCUT OF
UNSUITABLE SOIL
TO BE FILLED WITH
SUB-BASE GRAN.
MAT. TY B, 24"
STA 5+50 TO 6+50

EXIST. R.O.W.

PROP. R.O.W.

563.48

6+00.00

US 24

CONTRACT NO88753

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317		FULTON	684	286
STA. 7+00.00		TO STA. 7+00.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

ORIGINAL SURVEY	BY	DATE
	SURVEYED	
	SURVEY CHECKED	
	EARTHWORK TEMPLATE	
	AREAS	
	AREAS CHECKED	

PLOT DATE = 4/6/2005
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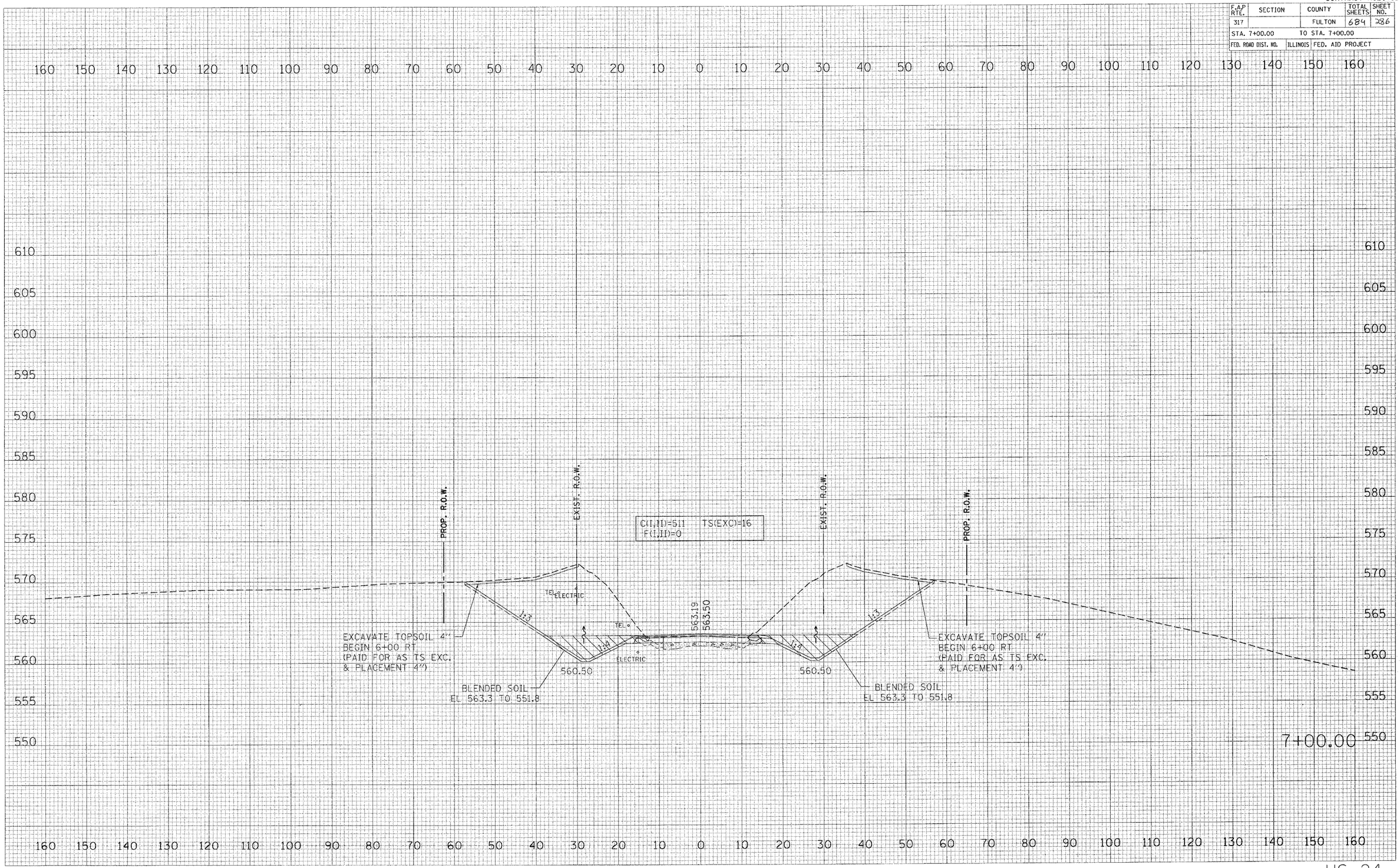
USER NAME = heggsmd



US 24

CONTRACT N088753

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317		FULTON	684	287
STA. 8+00.00		TO STA. 8+00.00		
FED. ROAD DIST. NO.		ILLINOIS	FED. AID PROJECT	

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

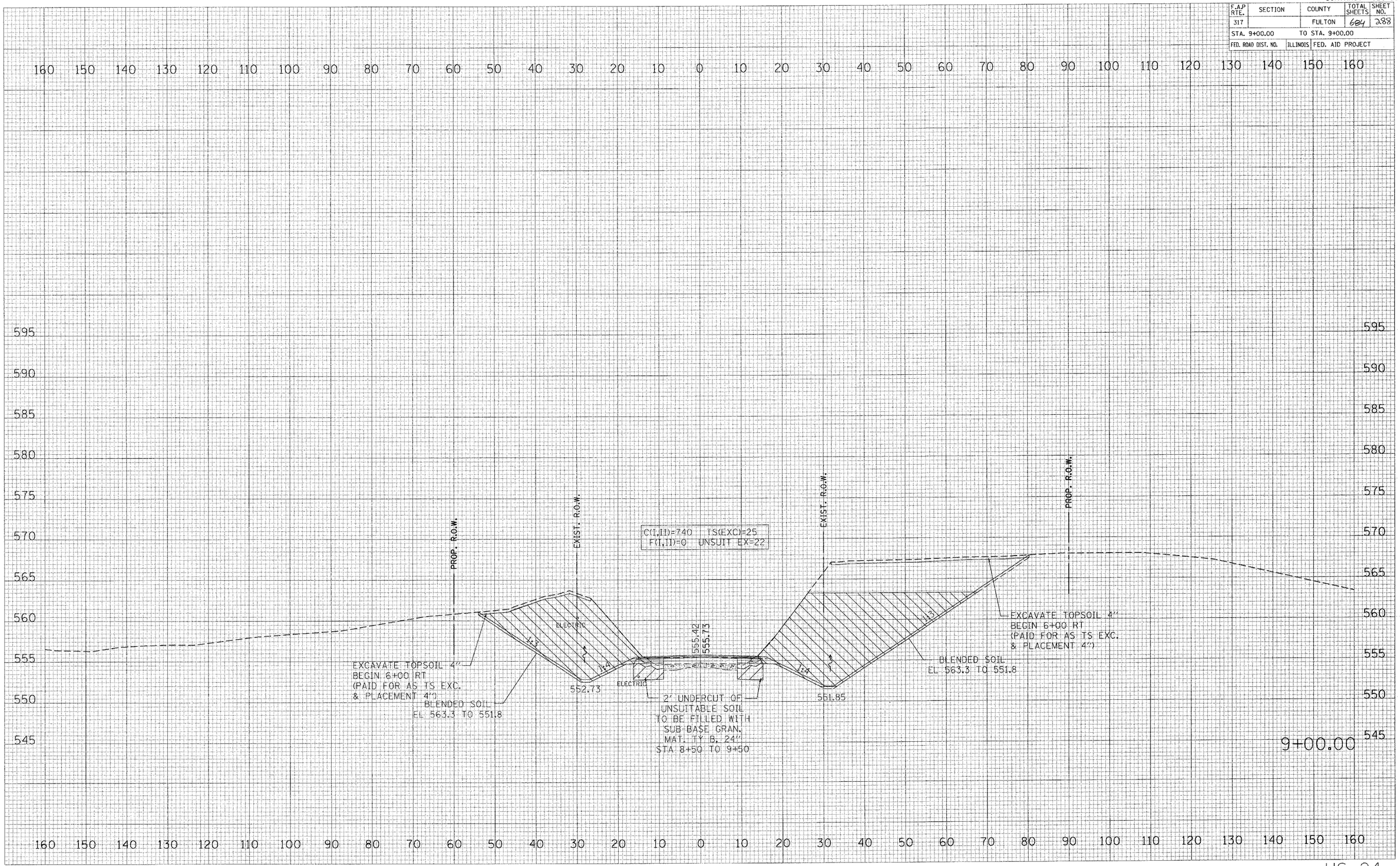
ORIGINAL SURVEY
SURVEYED
LOCATED
NOTE BOOK
TEMPLATE
AREAS
AREAS CHECKED
NO.
BY
DATE

PLOT DATE = 4/6/2005
FILE NAME = c:\proj\cs\us24spon_ph_2\sheets\ussheet8+00.dgn
PLOT SCALE = 10.0000 ' / IN.
PLOT BY = haggland
USER NAME = haggland

PROP. R.O.W.
EXIST. R.O.W.
C(I,II)=666 TS(EXC)=22
F(I,II)=0
EXIST. R.O.W.
PROP. R.O.W.
TEL.& ELECTRIC
TEL.& ELECTRIC
559.74
560.04
557.04
557.04
1:3
1:4
1:4
1:3
EXCAVATE TOPSOIL 4" BEGIN 6+00 RT (PAID FOR AS TS EXC. & PLACEMENT 4")
BLENDED SOIL EL 563.3 TO 551.8
BLENDED SOIL EL 563.3 TO 551.8
EXCAVATE TOPSOIL 4" BEGIN 6+00 RT (PAID FOR AS TS EXC. & PLACEMENT 4")
8+00.00
US 24

CONTRACT NO.88753

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317		FULTON	684	288
STA. 9+00.00		TO STA. 9+00.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



US 24

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

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

PLOT DATE = 4/6/2005
FILE NAME = c:\projects\us24spoon_ph_2\sheets\sht0000.dgn
PLOT SCALE = 10.0000 ' / IN.
USER NAME = heggland

CONTRACT NO88753

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317		FULTON	684	289
STA. 10+00.00		TO STA. 10+00.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

ORIGINAL SURVEY — SURVEYED — PLOTTED — TEMPLATE — AREAS CHECKED — BY — DATE

PLOT DATE = 4/6/2005
FILE NAME = c:\projects\us24spoon_ph_2\sheets\us24spoonphdsgn1.dgn
PLOT SCALE = 1.000000 '/ IN.
PLOT STYLE = PLOT_STYLE
USER NAME = hoggsmd

END PAVEMENT WIDENING
LT STA. 9+62, 6.50'

C(I,II)=464 TS(EXC)=17
F(I,II)=0

PROP. R.O.W.

EXIST. R.O.W.

BLENDED SOIL
EL 563.3 TO 551.8

EXCAVATE TOPSOIL 4"
BEGIN 5+00 LT
(PAID FOR AS TS EXC.
& PLACEMENT 4")

TEL ⌀
ELECTRIC

1:4

548.05

550.74
551.05

1:3

END EROSION CONTROL BLANKET
BEGIN CLASS B3 RIPRAP
LT STA. 10+00 TO 19+00

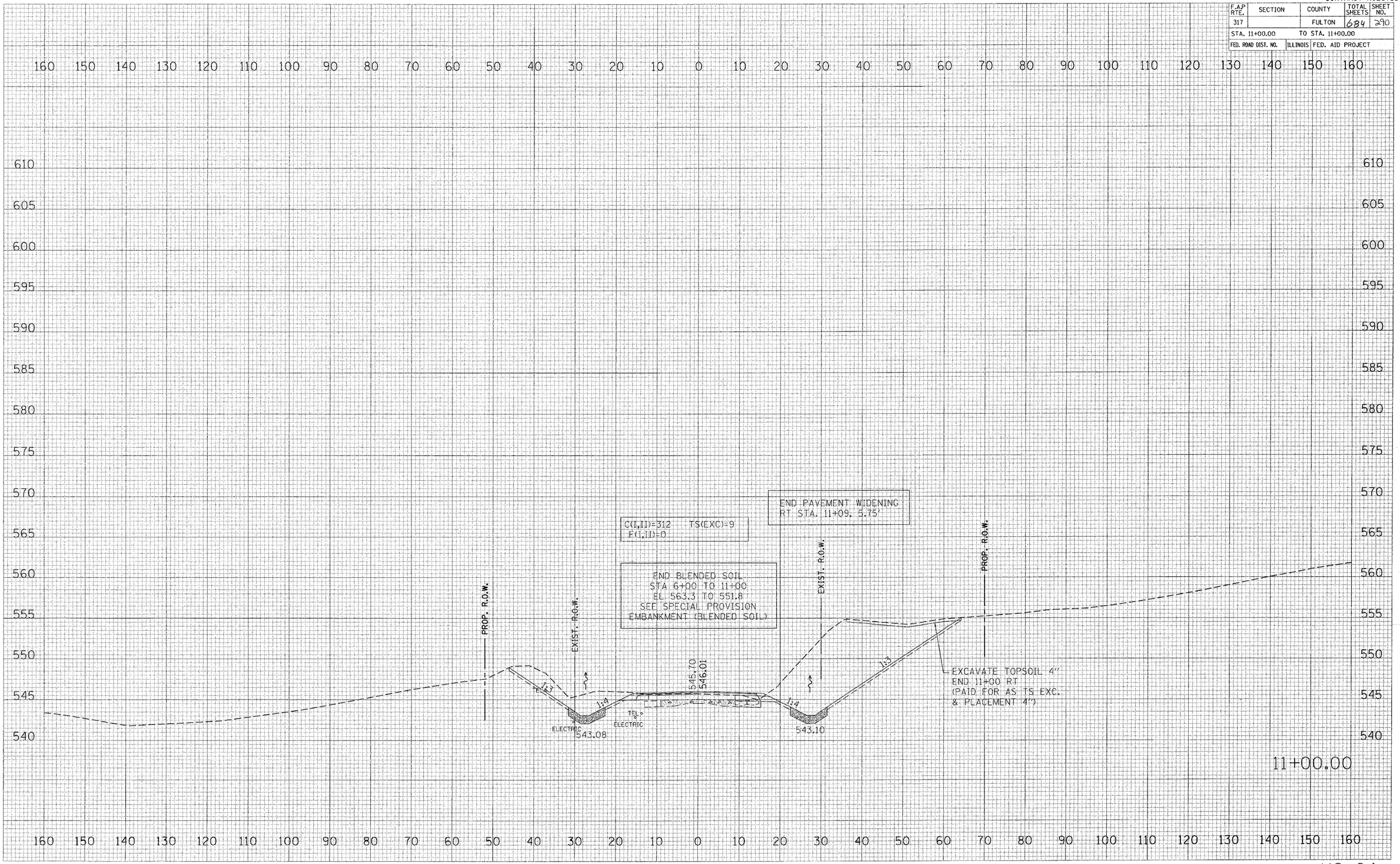
END EROSION CONTROL BLANKET
BEGIN CLASS B3 RIPRAP
RT STA. 10+00 TO 22+00

10+00.00

US 24

CONTRACT NO88753

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317		FULTON	684	290
STA. 11+00.00		TO STA. 11+00.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



US 24

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

ORIGINAL SURVEY
SURVEYED
PLOTTED
TEMPLATE
AREAS
AREAS CHECKED
NO. Incorporated
BY
DATE

PLOT DATE = 4/6/2005
FILE NAME = c:\projects\us24spoon.ph.2\sheets\us24spoon1.dgn
COLOR TBL = c:\projects\color.tbl
USER NAME = keggsend

CONTRACT NO88753

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317		FULTON	684	291
STA. 12+00.00		TO STA. 12+00.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

ORIGINAL SURVEY — SURVEYED — PLOTTED — TRACED — AREAS — DATE — BY — AREAS CHECKED

PLOT DATE = 4/6/2005
FILE NAME = c:\projects\us24spoon_pt_2\sheets\us24spoon_pt_2sht001.dgn
PLOT SCALE = 10.0000 ' / IN.
USER NAME = haggland

C(I,II)=69
F(I,II)=1

PROP. R.O.W.
EXIST. R.O.W.
EXIST. R.O.W.
PROP. R.O.W.
TEL
ELECTRIC
TEL
ELECTRIC
1:3
1:4
1:4
3:1
540.92
541.21
538.12
538.14
12+00.00
US 24

CONTRACT NO.88753

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317		FULTON	684	292
STA. 13+00.00		TO STA. 13+00.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160

600 595 590 585 580 575 570 565 560 555 550 545 540 535 530

C(I,II)=50
F(I,II)=12

PROP. R.O.W.
EXIST. R.O.W.
EXIST. R.O.W.
1:4
1:4
1:4
3.5:1
536.15
536.46
TEL.
ELECTRIC
533.15
TEL.
ELECTRIC
532.29

13+00.00

US 24

FINAL SURVEY
NOTE BOOK
MO.
SURVEYED
PLOTTED
TEMPLATE
CROSS SECTIONS
AREAS CHECKED
BY
DATE

ORIGINAL SURVEY
SURVEYED
PLOTTED
TEMPLATE
CROSS SECTIONS
AREAS CHECKED
NO.
BY
DATE

PLOT DATE = 4/6/2005
FILE NAME = c:\projects\us24spoon_ph2\sheets\sht292dsgn.dgn
PLOT SCALE = 100.0000 '/ IN.
USER NAME = haggamd

CONTRACT NO88753

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317		FULTON	684	293
STA. 14+00.00		TO STA. 14+00.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

FINAL SURVEY	DATE
SURVEYED	
PLOTTED	
NOTE BOOK	
NO.	

	BY	DATE
TEMPLATE		
AREAS		
AREAS CHECKED		

ORIGINAL SURVEY	DATE
SURVEYED	
PLOTTED	
NOTE BOOK	
NO.	

	BY	DATE
TEMPLATE		
AREAS		
AREAS CHECKED		

PLOT DATE = 4/6/2005
FILE NAME = c:\projects\us24spoon_ph_2\sheets\us24spoon_ph_2_sht_xsec.dgn
PLOT SCALE = 10.0000 '/ IN.
USER NAME = heggland

160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160

595 590 585 580 575 570 565 560 555 550 545 540 535 530 525

C(1,11)=12
F(1,11)=13

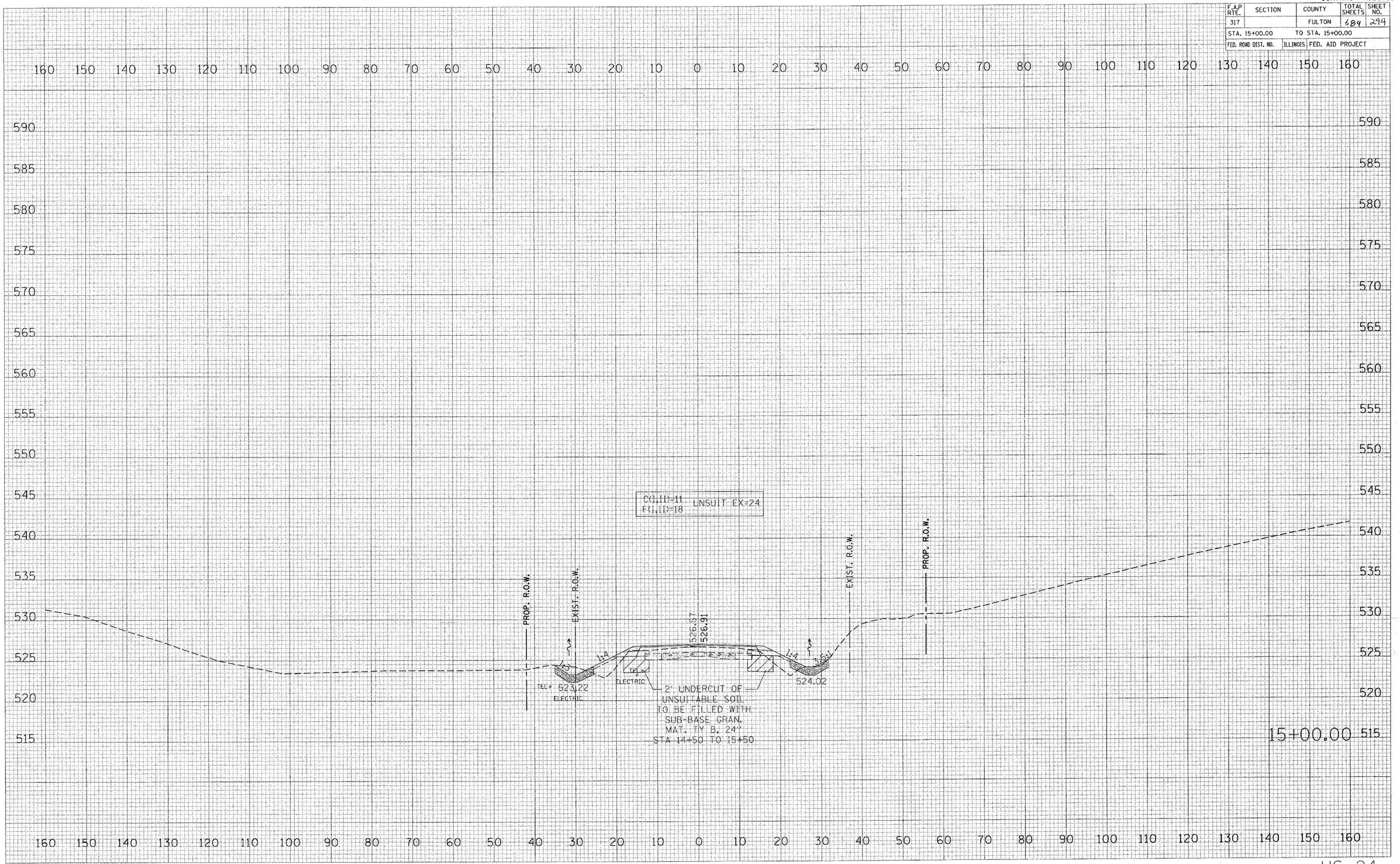
PROP. R.O.W.
EXIST. R.O.W.
TEL
528.19
ELECTRIC
1:4
531.41
531.72
TEL
ELECTRIC
1:4
3.5:1
527.99
EXIST. R.O.W.
PROP. R.O.W.

14+00.00

US 24

CONTRACT NO88753

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317		FULTON	684	294
STA. 15+00.00		TO STA. 15+00.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



US 24

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

PLOT DATE = 4/6/2025
FILE NAME = c:\projects\us24spoon_ph2\sheets\us24spoon_ph2_sht_pf0000.dgn
PLOT SCALE = 10.000 ' / IN.
USER NAME = heggsmd

CONTRACT NO88753

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317		FULTON	684	295
STA. 16+00.00		TO STA. 16+00.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

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

PLOT DATE = 4/8/2025
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USER NAME = tarajn

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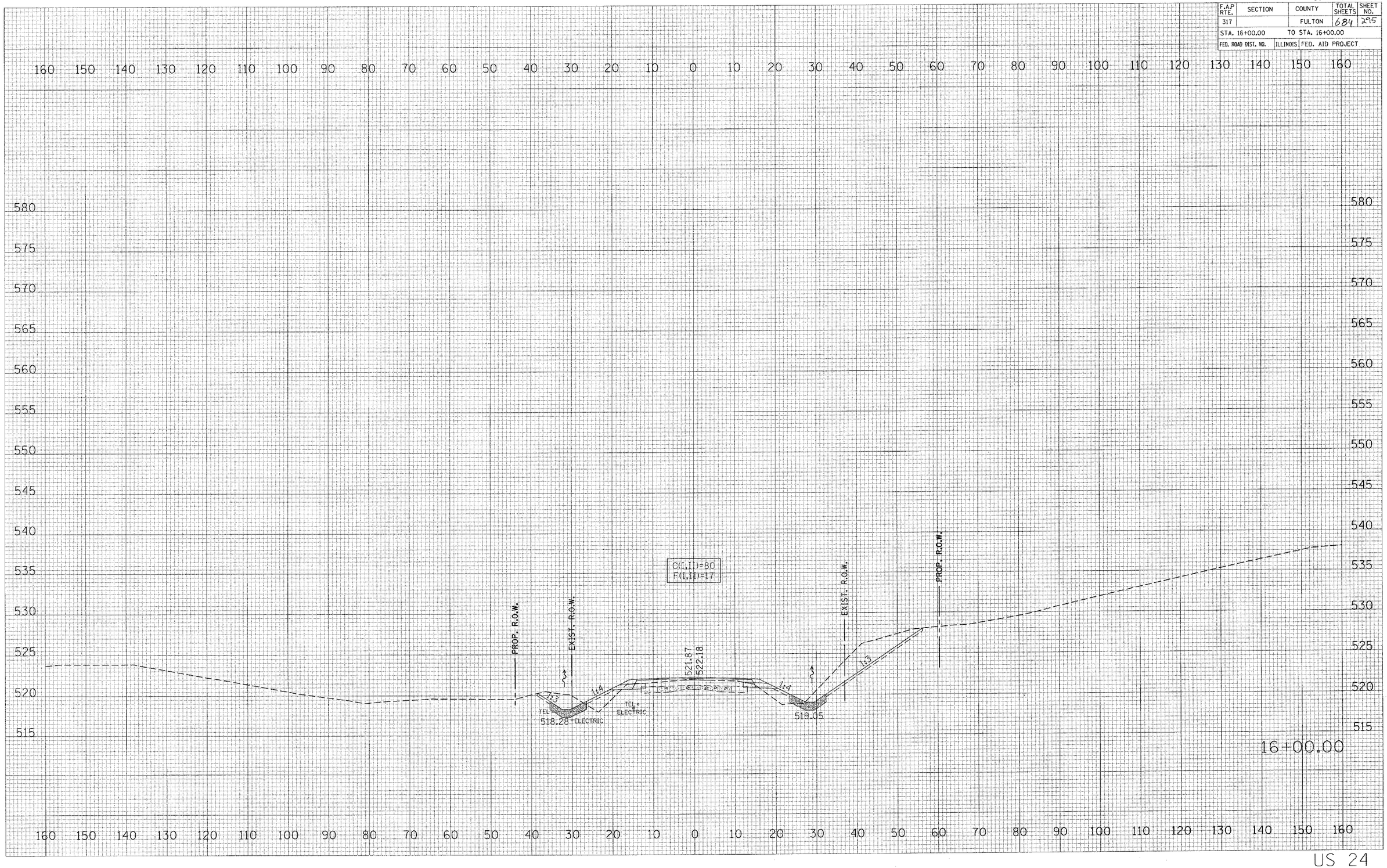
580 575 570 565 560 555 550 545 540 535 530 525 520 515



US 24

CONTRACT NO.88753

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317		FULTON		296
STA. 17+00.00		TO STA. 17+00.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

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

PLOT DATE = 4/6/2005
FILE NAME = c:\projects\us24spoon_ph2\sheets\us24spoon_ph2_sheet296.dgn
PLOT SCALE = 1.0000 '/ IN.
USER NAME = haggsand

160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160

580 575 570 565 560 555 550 545 540 535 530 525 520 515 510

C(I,II)=116
F(I,II)=2

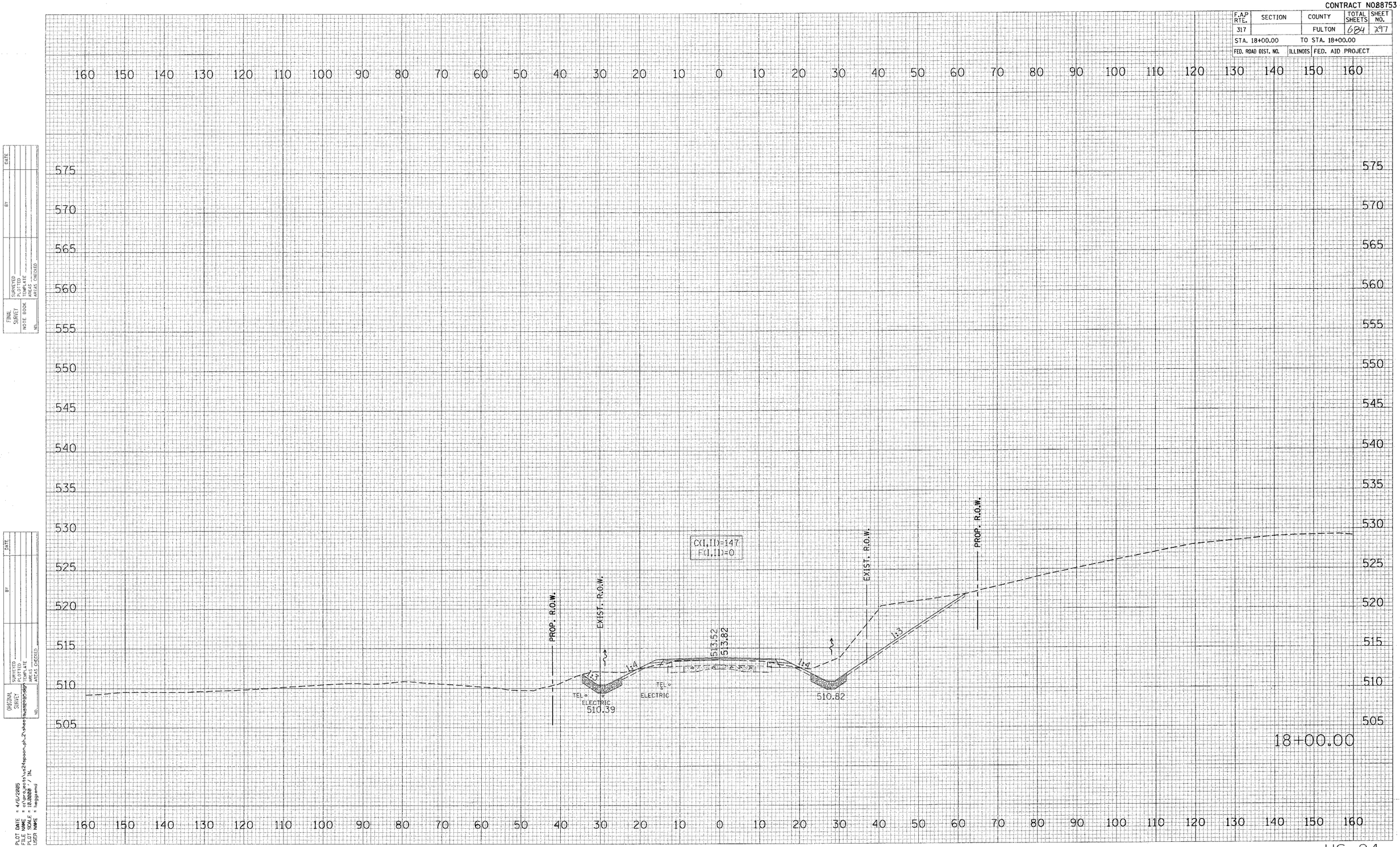
PROP. R.O.W.
EXIST. R.O.W.
1:3
1:4
TEL & ELECTRIC
513.29
517.19
517.50
514.56
EXIST. R.O.W.
PROP. R.O.W.
1:3

17+00.00

US 24

CONTRACT NO88753

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317		FULTON	684	297
STA. 18+00.00		TO STA. 18+00.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



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

ORIGINAL SURVEY — SURVEYED — PLOTTED — QUANTITIES — AREAS CHECKED — BY — DATE

PLOT DATE = 4/15/2005
FILE NAME = e:\projects\us24epoon_ph-2\sheet\epsheet.dgn
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USER NAME = haggsamd

CONTRACT NO88753

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317		FULTON	684	298
STA. 19+00.00		TO STA. 19+00.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		

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

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

PLOT DATE = 4/6/2005
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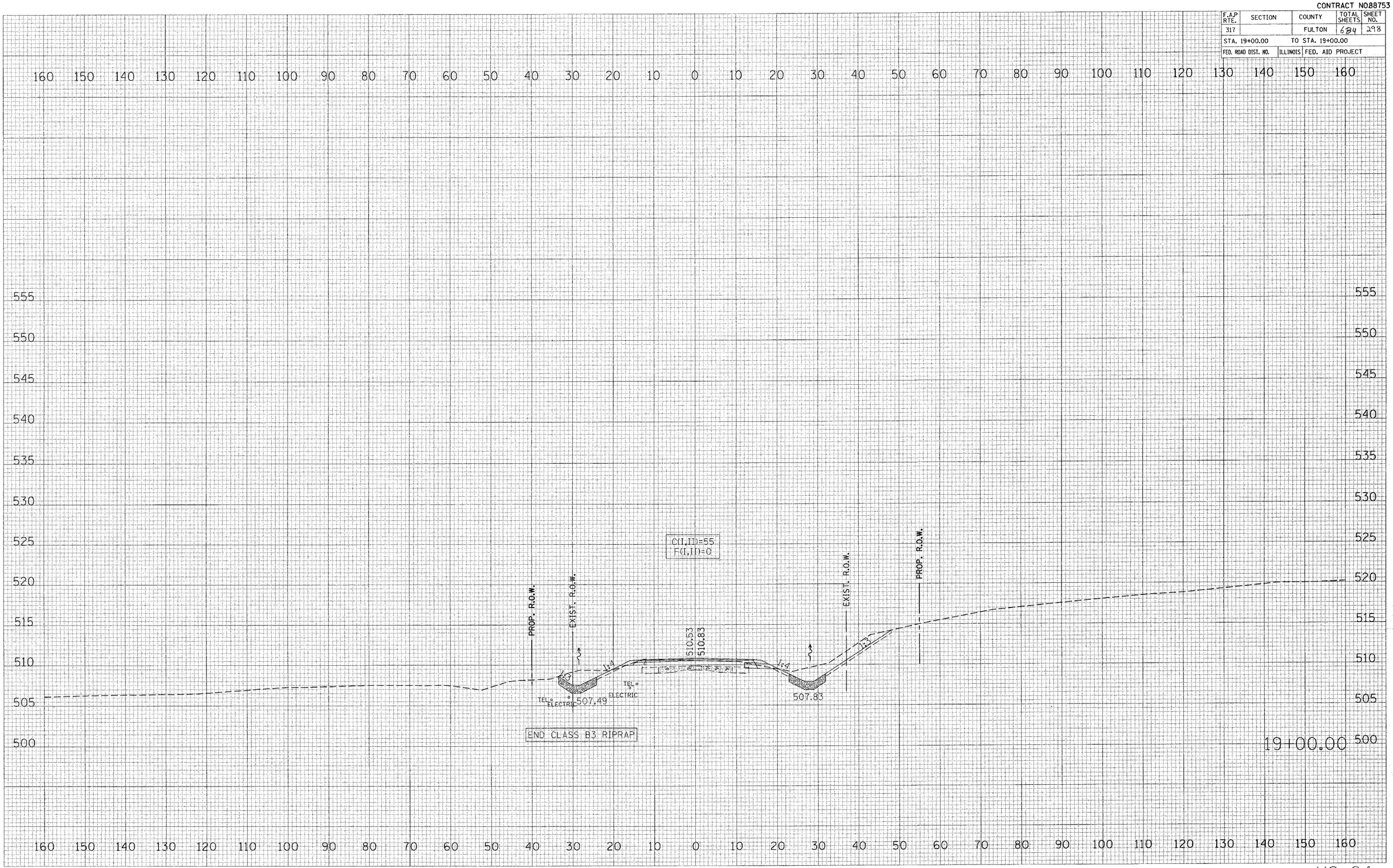
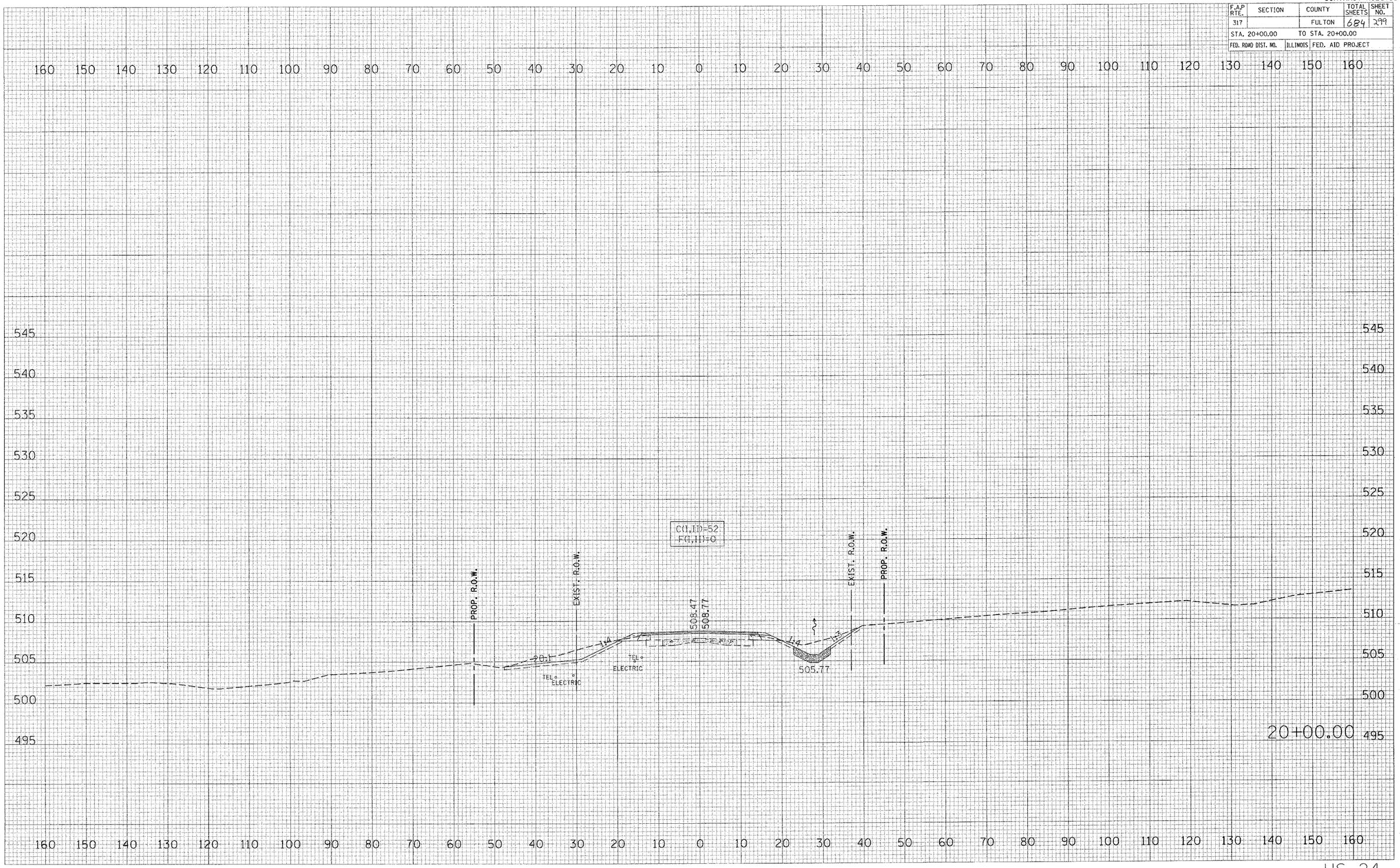
PLOT SCALE = 10.0000 ' / IN.
USER NAME = haggland



US 24

CONTRACT NO88753

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317		FULTON	684	299
STA. 20+00.00		TO STA. 20+00.00		
FED. ROAD DIST. NO.	ILLINOIS	FED. AID PROJECT		



US 24

FINAL SURVEY NOTE BOOK
SURVEYED / DRAWN
LOCATED
TEMPLATE
AREAS
AREAS CHECKED
NO. BY DATE

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

PLOT DATE = 4/6/2005
FILE NAME = c:\projects\us24spoon_ph_2\shee
PLOT SCALE = 10.0000 ' / IN.
USER NAME = haggard

CONTRACT NO88753

F.A.P RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
317		FULTON	684	300

STA. 21+07.53 TO STA. 22+00.00

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

160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160

520 515 510 505 500 495

C(1,11)=17
F(1,11)=5

PROP. R.O.W.
EXIST. R.O.W.

506.79
507.08

1:4 1:4 1:3

TEL & ELECTRIC

TEL & ELECTRIC

CLASS A1 RIPRAP

504.17

EXIST. R.O.W.

END CLASS B3 RIPRAP

22+00.00

525 520 515 510 505 500 495

EXIST. R.O.W.

AGG. SURF. COURSE TYPE A 8"

BIT. SHOULDER 6.5"
W/ 1.5" BIT. SURF. CSE.

507.13
507.42

1:4

4.00 %

FE

3.78 %

0

PROP. R.O.W.

TEL & ELECTRIC

TEL & ELECTRIC

EL. 504.91
PIPE CULVERT CLASS D TYPE 1 15"
USFL= 505.08
DSFL= 504.74

21+07.53

160 150 140 130 120 110 100 90 80 70 60 50 40 30 20 10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160

US 24

SURVEYED
DRAWN
TEMPLATE
AREAS
AREAS CHECKED

FINAL
SURVEY
NOTE BOOK
NO.

PLOT DATE = 4/6/2005
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