

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 179	85-09110-01-BR	CLAY	9	1
FED. ROAD DIST. NO. 7		ILLINOIS	FEDERAL AID PROJECT	
CONTRACT NO. 95450				

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED FEDERAL - AID BRIDGE REPLACEMENT AND REHABILITATION PROGRAM

TR 179 (QUARTZ LANE)
SECTION 85-09110-01-BR
PROJECT NO. BROS-025(51)
CLAY COUNTY
OVER WET WEATHER CREEK
C-97-004-05

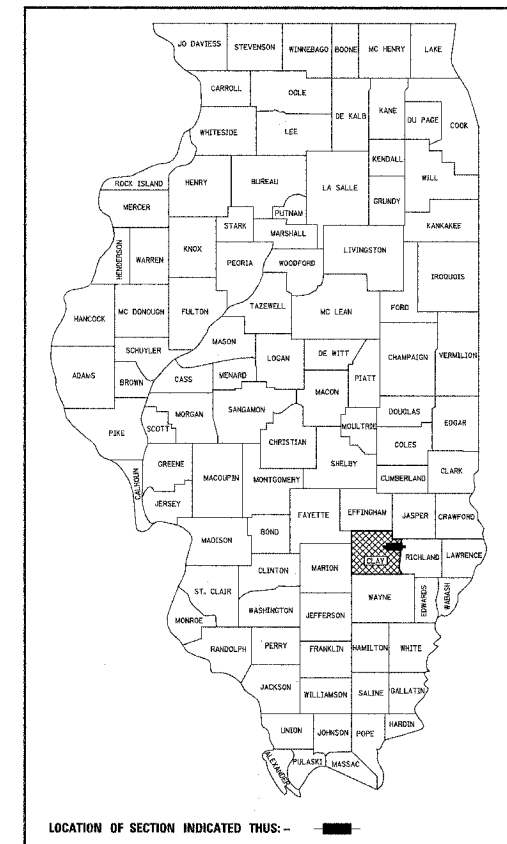
INDEX OF SHEETS

1. COVER SHEET
2. SUMMARY OF QUANTITIES AND TYPICAL SECTIONS
3. PLAN AND PROFILE OF ROADWAY
- 4.-5. CROSS SECTIONS OF ROADWAY
6. GENERAL PLAN AND ELEVATION
7. PRECAST PRESTRESSED CONCRETE DECK BEAM DETAILS
8. STEEL RAILING, TYPE S1 DETAILS
9. ABUTMENT DETAILS

STANDARDS ARE INCLUDED IN PLANS AFTER SHEET NO. 9

000001-04	STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS
280001-02	TEMPORARY EROSION CONTROL SYSTEMS
515001-02	NAME PLATE FOR BRIDGES
635006-02	REFLECTOR AND TERMINAL MARKER PLACEMENT
702001-05	TRAFFIC CONTROL DEVICES
BLR 21-6	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES FOR CONSTRUCTION ON RURAL LOCAL HIGHWAYS

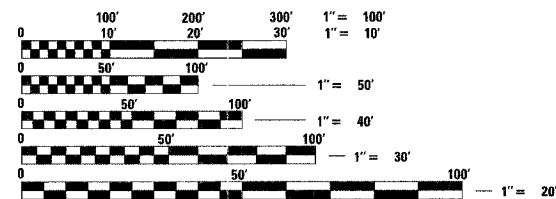
SOIL BORINGS (SEE SPECIFICATIONS)



LOCATION OF SECTION INDICATED THUS: —■—

DESIGN CLASSIFICATION: LOCAL ROAD (RURAL)

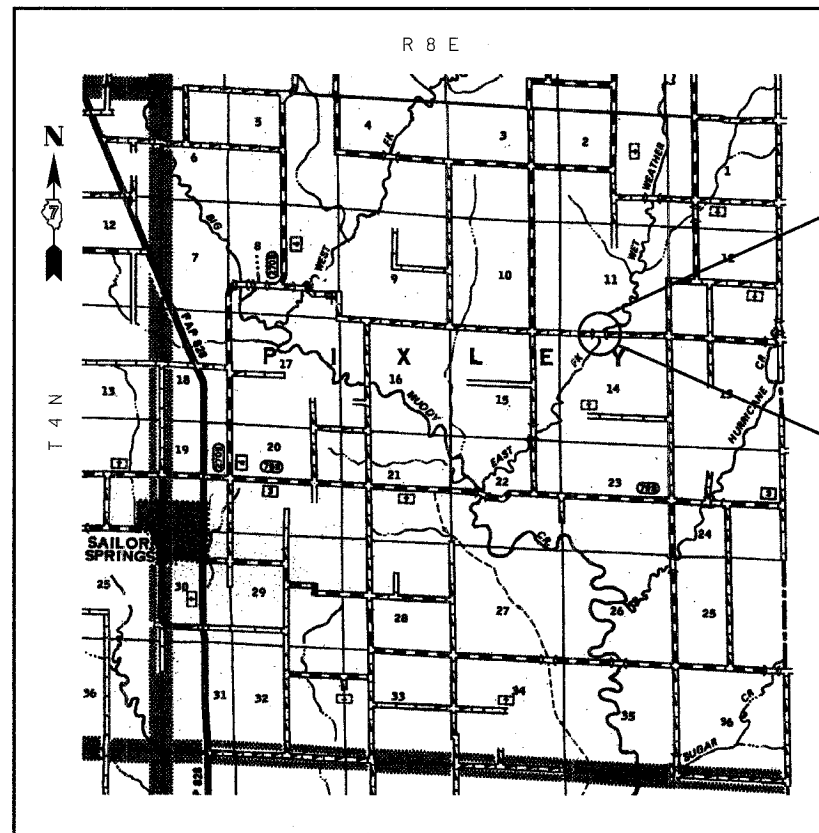
ADT₂₀₀₄ : 100
ADT₂₀₂₄ : 125
DESIGN SPEED - 30 MPH



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

J.U.L.I.E.
JOINT UTILITY LOCATING INFORMATION FOR EXCAVATORS
1-800-892-0123 Website: <http://www.illinois1call.com>

CONTRACT NUMBER: 95450



SECTION BEGINS
STA. 48+57.96

SECTION 85-09110-01-BR

INCLUDES THE CONSTRUCTION OF A SINGLE SPAN PRECAST PRESTRESSED CONCRETE DECK BEAM BRIDGE CARRYING TR 179 OVER WET WEATHER CREEK, 82'-6" BK. TO BK. ABUTMENTS. NO SKEW. EXISTING STRUCTURE NO. 013-3083 PROPOSED STRUCTURE NO. 013-3194

SECTION ENDS
STA. 52+16.92

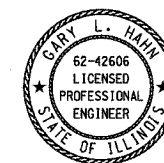
LOCATION: NEAR THE NE CORNER, NW 1/4, SECTION 14, T4N, R8E, 3RD P.M.
NET LENGTH OF PROJECT: 358.96 FT = 0.068 MI

APPROVED 10-20, 2005
E.T. Y.
COUNTY ENGINEER

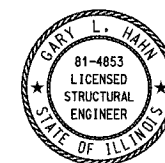
PASSED 11-7, 2005
Maureen Kasel
DISTRICT SEVEN ENGINEER OF LOCAL ROADS & STREETS

RELEASING FOR BID BASED ON LIMITED REVIEW 11/7, 2005
Christine M. Redmond
DEPUTY DIRECTOR OF HIGHWAYS, REGION FOUR ENGINEER

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION



Gary L. Hahn 10-18-05
GARY L. HAHN
CENTRALIA, ILLINOIS
ILLINOIS LICENSED PROFESSIONAL ENGINEER NO. 62-42606
EXPIRES NOV. 30, 2005



Gary L. Hahn 10-18-05
GARY L. HAHN
CENTRALIA, ILLINOIS
ILLINOIS LICENSED STRUCTURAL ENGINEER NO. 81-4853
EXPIRES NOV. 30, 2006

RHUTASEL and ASSOCIATES, INC.
CONSULTING ENGINEERS • LAND SURVEYORS
CENTRALIA, ILLINOIS FREEBURG, ILLINOIS
ILLINOIS DESIGN FIRM LICENSE NO. 184-000287

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Job No. 50304

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 179	85-09110-01-BR	CLAY	9	2
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 95450				

SUMMARY OF QUANTITIES

Code No.	Item	Unit	Quantity	Location	
				X081-2A	E000
20200100	EARTH EXCAVATION	CU YD	19	-	19
20300100	CHANNEL EXCAVATION	CU YD	201	201	-
20400800	FURNISHED EXCAVATION	CU YD	388	-	388
* 20700110	POROUS GRANULAR EMBANKMENT	TON	46	46	-
* 25001000	SEEDING, CLASS 2 (SPECIAL)	ACRE	0.2	-	0.2
* 28100807	STONE DUMPED RIPRAP, CLASS A4	TON	126	126	-
* 40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	360	-	360
* 50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1	1	-
50300225	CONCRETE STRUCTURES	CU YD	18.2	18.2	-
* 50400605	PRECAST PRESTRESSED CONCRETE DECK BEAMS (33" DEPTH)	SQ FT	1948	1948	-
50800105	REINFORCEMENT BARS	POUND	2980	2980	-
50900205	STEEL RAILING, TYPE S1	FOOT	165	165	-
** 51201800	FURNISHING STEEL PILES HP14X73	FOOT	150	150	-
** 51202700	DRIVING STEEL PILES	FOOT	150	150	-
** 51203800	TEST PILE STEEL HP14X73	EACH	2	2	-
51500100	NAME PLATES	EACH	1	1	-
54200643	PIPE CULVERTS, TYPE 1, CORRUGATED STEEL OR ALUMINUM CULVERT PIPE 18"	FOOT	26	-	26
67100100	MOBILIZATION	L SUM	1	-	-
78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4	4	-

* See Special Provisions

** The Contractor shall drive one (1) Steel HP14x73 Test Pile in a permanent location at both the East and West abutments as directed by the Engineer before ordering the remainder of the piles.

GENERAL NOTES

This section shall be constructed in accordance with the plans, the Special Provisions, and the "Standard Specifications for Road and Bridge Construction", adopted January 1, 2002.

Any required clearing, grubbing, and trimming shall be considered incidental to the cost of Earth Excavation.

If Section or Subsection monuments are encountered, the Engineer shall be notified before such monuments are removed. The Contractor shall protect and carefully preserve all property markers and monuments until owner, an authorized Surveyor or agent has witnessed or otherwise referenced their location.

Any reference to a Standard in these plans shall be interpreted to mean the edition as indicated by the sub-number listed in the Index of Sheets or the copy of the Standard included in these plans.

Centerline profiles refer to the finished surface.

Existing utilities shown are located from surface observations or information provided by the respective utilities and must be considered approximate. There may be others, the exact location of which are unknown and not shown. The Contractor will be responsible for notifying the respective utilities before work is begun. Field marking of underground utilities may be obtained by providing a minimum of 48 hours advance notice through the J.U.L.I.E. system by calling 1-800-892-0123, or by direct contact with non-members of J.U.L.I.E.

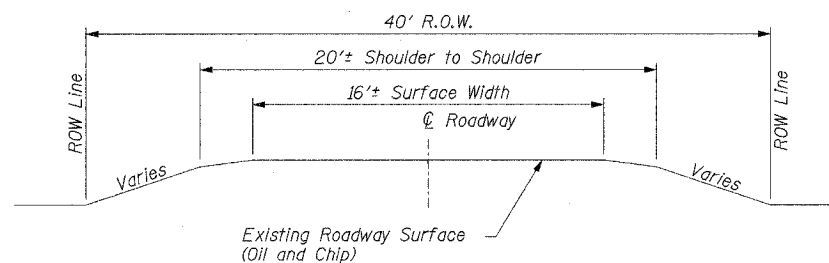
The nominal thickness for surface course is shown on the Typical Sections, Standards, Schedules, or Special Details. The constructed thickness of the above item shall not be less than 90 percent of the nominal thickness at any location.

Factors used for quantity calculations are as follows:

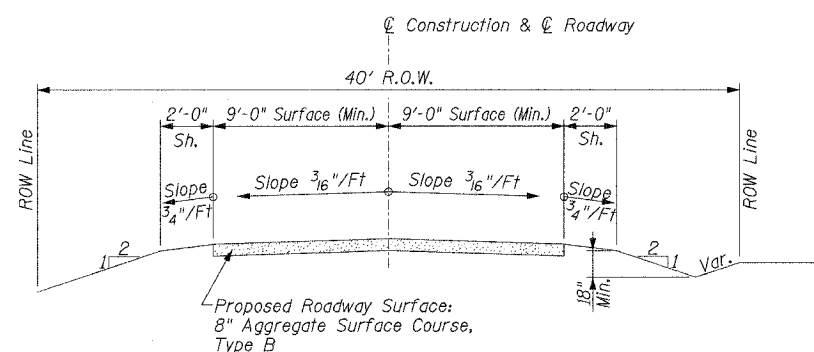
Porous Granular Embankment 2.1 tons/cu. yd.
Stone Dumped Riprap 130 pounds/cu. ft.
Aggregate Surface Course 2.1 tons/cu. yd.

**SUMMARY OF QUANTITIES
AND TYPICAL SECTIONS
PROPOSED BRIDGE OVER
WET WEATHER CREEK
TR 179
SECTION 85-09110-01-BR
CLAY COUNTY, ILLINOIS**

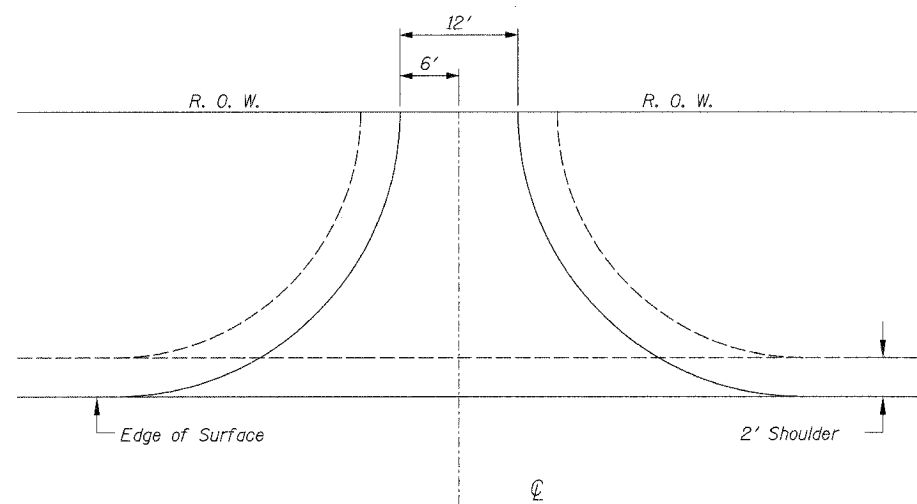
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TYPICAL SECTION
EXISTING APPROACH ROADWAY



TYPICAL SECTION
PROPOSED APPROACH ROADWAY



Aggregate Surface Course, Type B 6" Depth
Rt., Sta. 49+06 - 8 Tons (Included in Summary
of Quantities)

TYPICAL FIELD ENTRANCE

UTILITIES

Telephone: Wabash Telephone Co-op., Inc.
Phone: (618)665-3311

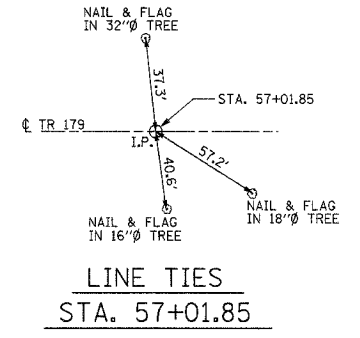
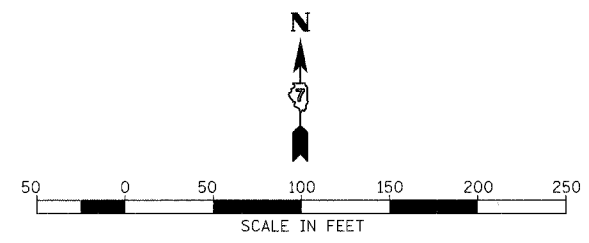
Water: E J Water Corporation
Phone: (217)925-5566

Electric: None Observed

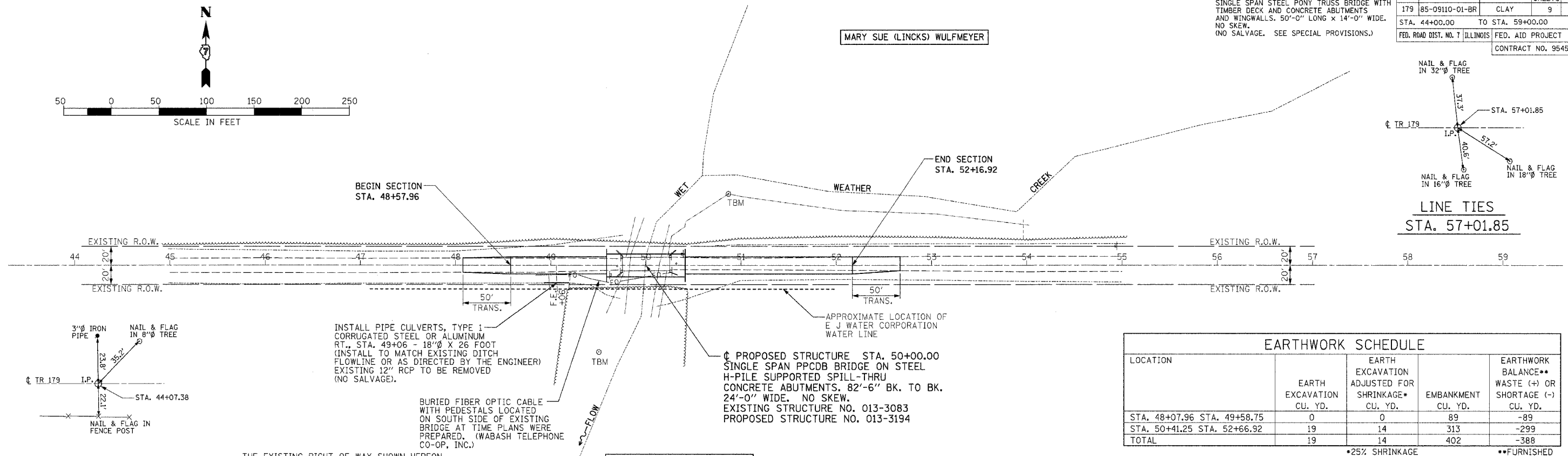
10/17/2005

EXISTING STRUCTURE NO. 013-3083;
SINGLE SPAN STEEL PONY TRUSS BRIDGE WITH
TIMBER DECK AND CONCRETE ABUTMENTS
AND WINGWALLS. 50'-0" LONG x 14'-0" WIDE.
NO SKEW.
(NO SALVAGE. SEE SPECIAL PROVISIONS.)

TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
179	85-09110-01-BR	CLAY	9	3
STA. 44+00.00		TO STA. 59+00.00		
FED. ROAD DIST. NO. 7		ILLINOIS		FED. AID PROJECT
CONTRACT NO. 95450				



PLAN	DATE
SUBMITTED	BY
PLOTTED	BY
CHECKED	BY
REVISIONS	BY
NO. OF WAYS CHECKED	
NO.	CARD FILE NAME



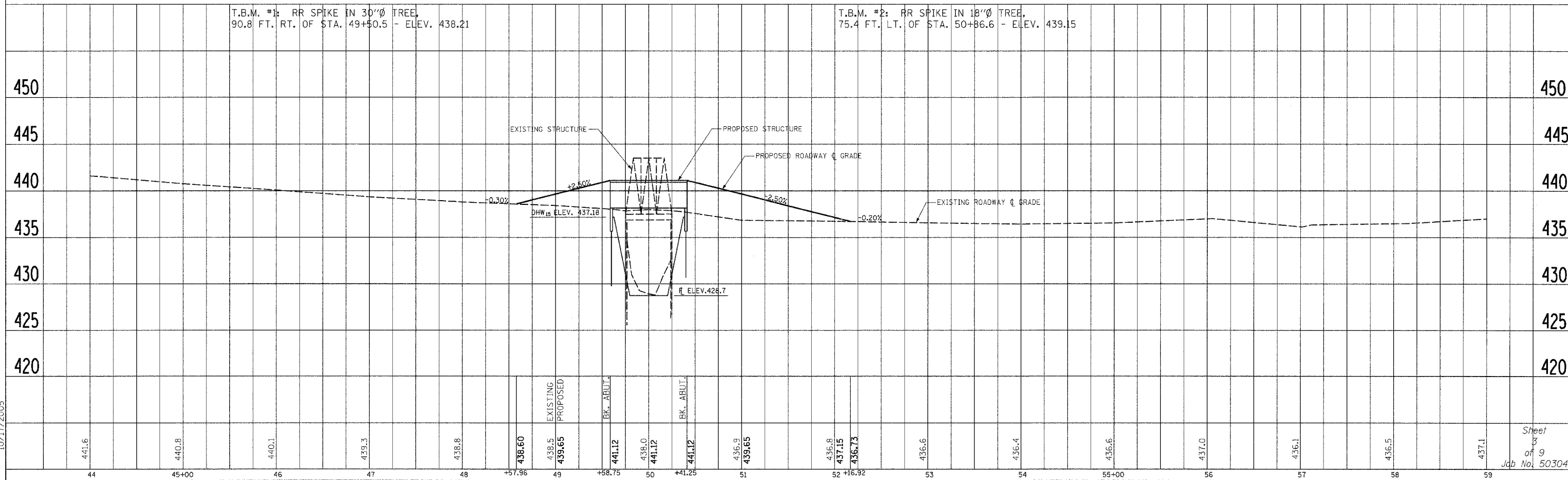
LOCATION	EARTH EXCAVATION CU. YD.	EARTH EXCAVATION ADJUSTED FOR SHRINKAGE* CU. YD.	EMBANKMENT CU. YD.	EARTHWORK BALANCE** WASTE (+) OR SHORTAGE (-) CU. YD.
STA. 48+07.96 STA. 49+58.75	0	0	89	-89
STA. 50+41.25 STA. 52+66.92	19	14	313	-299
TOTAL	19	14	402	-388

*25% SHRINKAGE **FURNISHED EXCAVATION

NOTE: ANY REQUIRED CLEARING, GRUBBING, AND TRIMMING SHALL BE CONSIDERED INCIDENTAL TO THE COST OF EARTH EXCAVATION.

THE EXISTING RIGHT OF WAY SHOWN HEREON HAS BEEN PROTRACTED FROM EXISTING RECORDS AND IS TO BE USED FOR REFERENCE PURPOSES ONLY. FURTHERMORE, NO COMPLETE SURVEY OF SAID R.O.W. IS IMPLIED BY THIS PLAT.

PROFILE	DATE
SUBMITTED	BY
PLOTTED	BY
CHECKED	BY
REVISIONS	BY
NO. OF WAYS CHECKED	
NO.	STRUCTURE NOTATION CIRCO

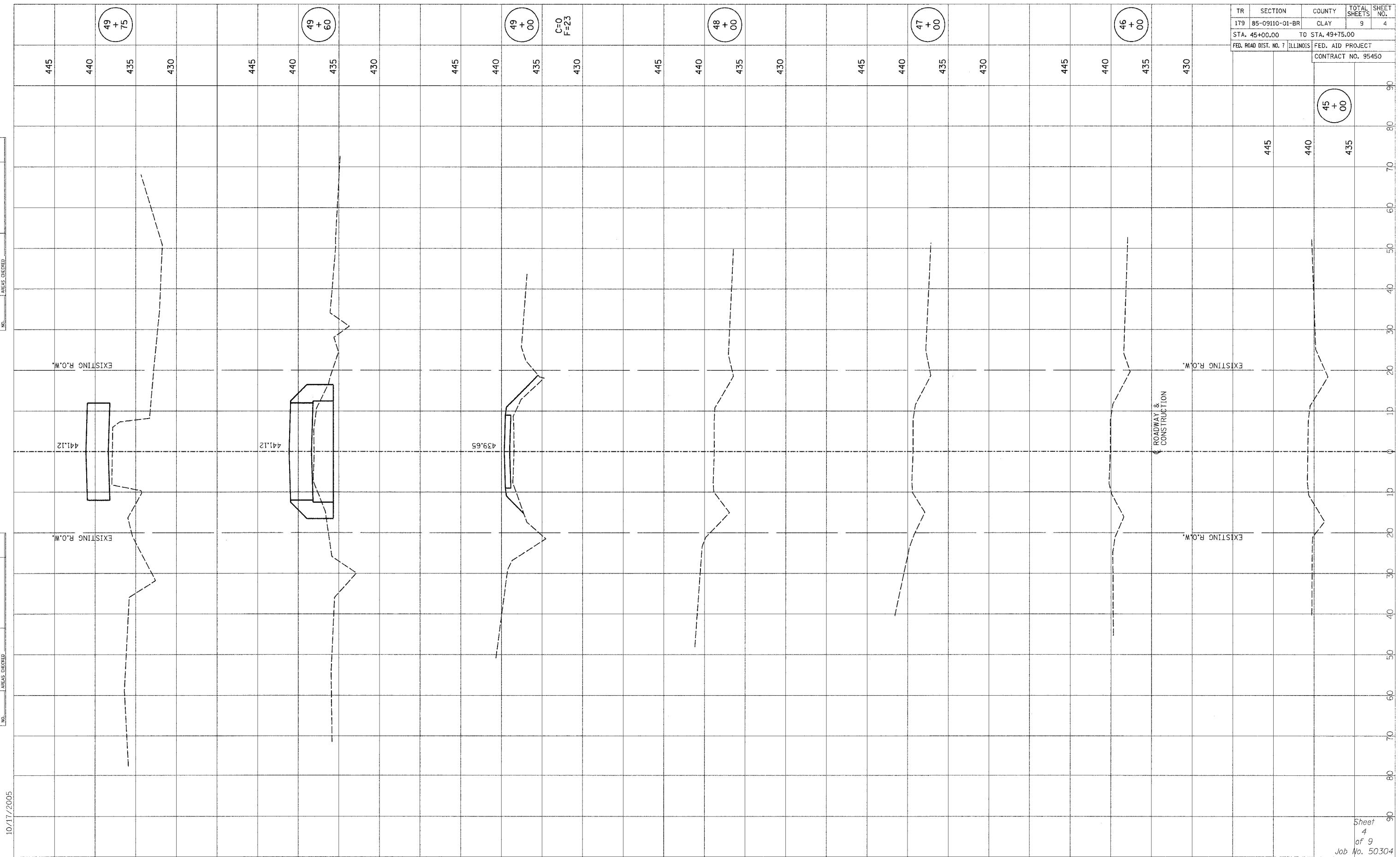


10/17/2005

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Job No. 50304

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

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



TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
179	85-09110-01-BR	CLAY	9	4
STA. 45+00.00		TO STA. 49+75.00		
FED. ROAD DIST. NO. 7		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 95450				

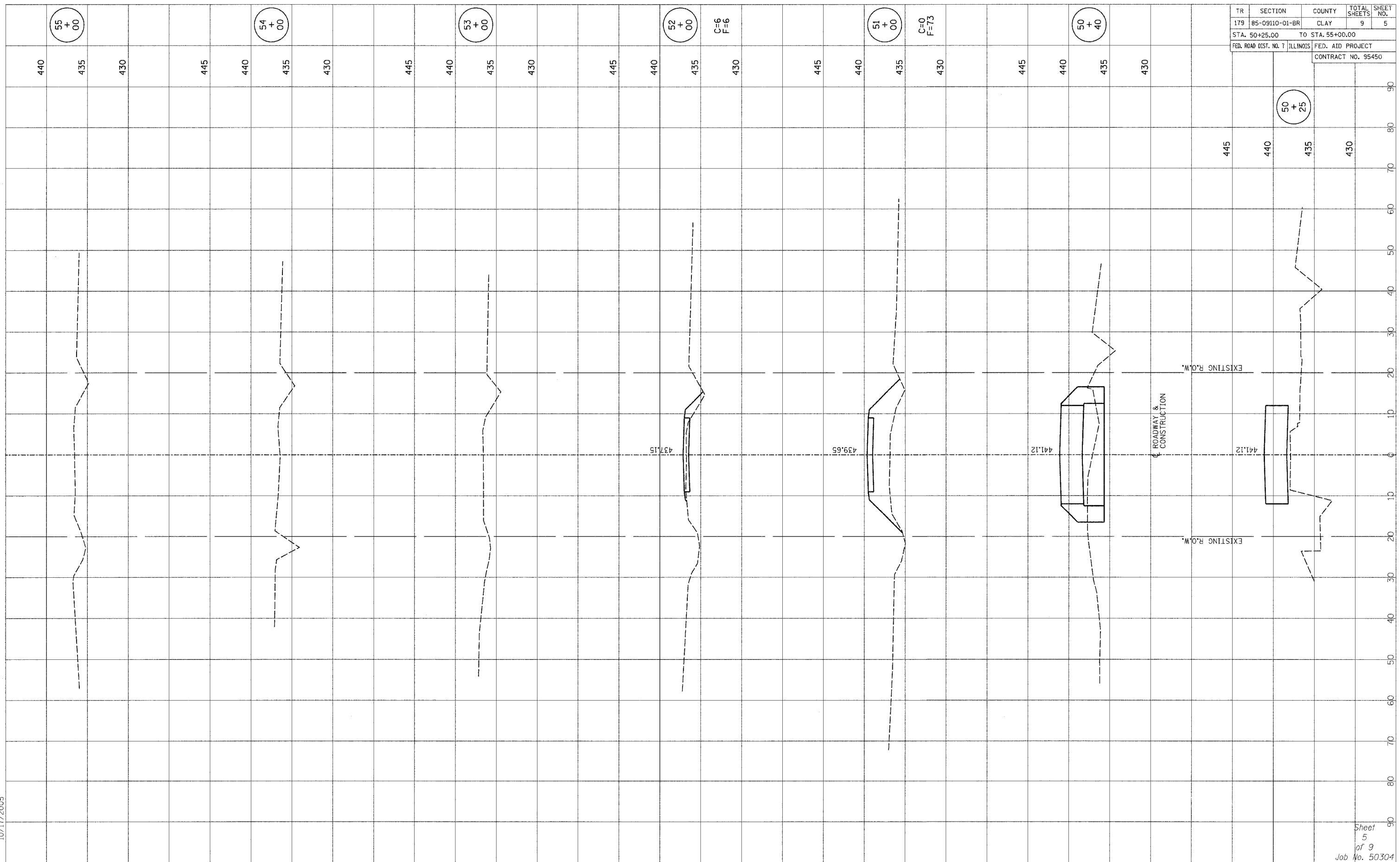
10/11/2005

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

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

10/17/2005



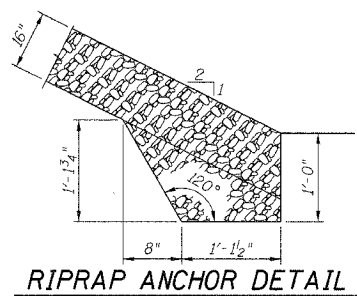
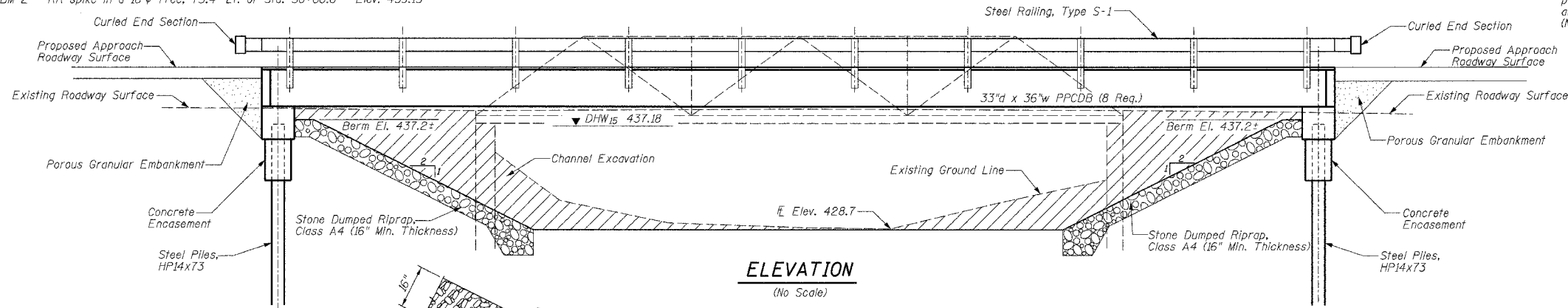
TR	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
179	85-09110-01-BR	CLAY	9	5
STA. 50+25.00		TO STA. 55+00.00		
FED. ROAD DIST. NO. 7		ILLINOIS FED. AID PROJECT		
CONTRACT NO. 95450				

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TBM 1 - RR spike in a 30" Tree, 90.8' Rt. of Sta. 49+50.5 - Elev. 438.21
 TBM 2 - RR spike in a 18" Tree, 75.4' Lt. of Sta. 50+86.6 - Elev. 439.15

Existing Structure, Str. No. 013-3083; Single span steel pony truss bridge with timber deck and concrete abutments and wingwalls, 50'-0" Long x 14'-0" wide, No Skew. (No salvage. See Special Provisions)

ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 179	85-09110-01-BR	CLAY	9	6
FED. ROAD DIST. NO. 7		ILLINOIS	FED. AID PROJECT	
CONTRACT NO. 95450				



WET WEATHER CREEK
 BUILT 200_ BY CLAY COUNTY
 TR 179
 SEC. 85-09110-01-BR
 STR. NO. 013-3194
 LOADING HS 20

BILL OF MATERIALS (BRIDGE ONLY)

ITEM	UNIT	SUPER	SUB	TOTAL
Channel Excavation	Cu Yd	-	201	201
Porous Granular Embankment	Ton	-	46	46
Stone Dumped Riprap, Class A4	Ton	-	126	126
Removal of Existing Structures	Each	-	1	1
Concrete Structures	Cu Yd	-	18.2	18.2
PPCDB (33" Depth)	Sq Ft	1948	-	1948
Reinforcement Bars	Pound	-	2980	2980
Steel Railing, Type S-1	Foot	165	-	165
Furnishing Steel Piles HP14x73	Foot	-	150	150
Driving Steel Piles	Foot	-	150	150
Test Pile Steel HP14x73	Each	-	2	2
Name Plates	Each	-	1	1
Terminal Marker - Direct Applied	Each	4	-	4

GENERAL NOTES

Reinforcement bars shall conform to the requirements of AASHTO M-31, M-42, or M-53 grade 60.

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

Channel excavation shall be excavated as shown within the limits of the proposed bridge, then tapered to the existing channel at the ROW line. If the Engineer deems the material satisfactory, it may be used to construct the roadway embankment.

See Specifications for Soil Borings.

Do not scale these drawings.

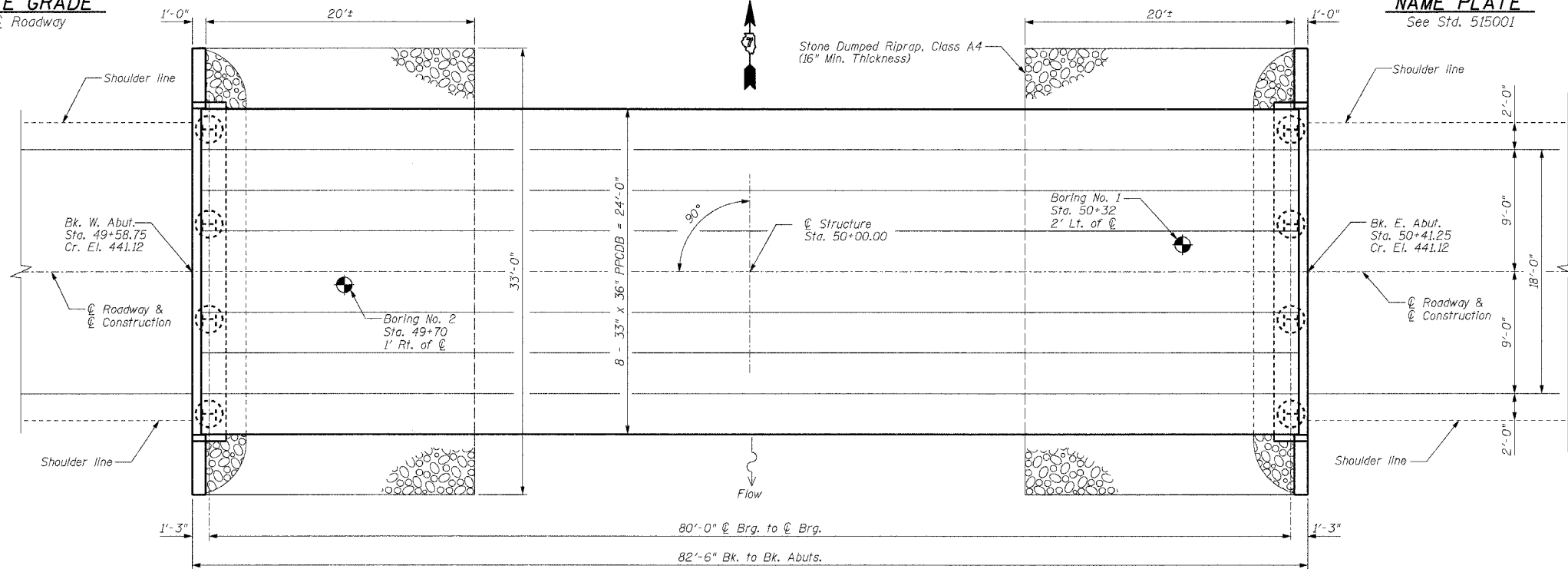
See Section 502 of the Standard Specifications for Structural Excavation.

The Contractor shall drive one (1) Steel HP14x73 Test Pile in a permanent location at both the East and West abutments as directed by the Engineer before ordering the remainder of the piles.

The Contractor is hereby advised that very stiff soils will be encountered prior to the location of anticipated refusal. See the Soil Borings for further information.

In addition to all other requirements of Section 512 of the Standard Specifications, splices for Steel H-piles shall develop the full capacity of the steel's cross sectional area for tension, shear and bending forces. One approved method of achieving this requirement is full penetration butt welding of the entire cross section. Other types of splices meeting the full capacity requirement may be allowed subject to the approval of the Engineer. Any proposal by the Contractor to use an alternate splice method must include adequate documentation demonstrating that the full tension, shear and bending capacities will be met. Appropriate welder qualifications will be required for the positions and processes used in splicing all piles. Nondestructive testing of completed welds will be limited to visual inspection.

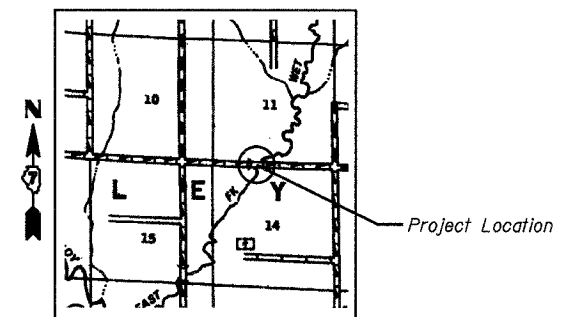
PROFILE GRADE
 Along \bar{C} Roadway



PLAN
 (No Scale)

Note: Buried Fiber Optic Cable located on South side of existing bridge at time plans were being prepared.

I certify that to the best of my information, knowledge, and belief, this bridge is structurally adequate for the design loading shown on plans. The design is an economical one for the structure and complies with requirements of the current AASHTO Standard Specifications for Highway Bridges.



LOCATION SKETCH

WATERWAY DATA

Drainage Area = 26.94 Sq. Mi. Low Grade Elev. 436.10 @ Sta. 57+00

Flood Yr.	Freq.	Q	Opening Sq. Ft.		Natural Head - Ft.		Headwater El.		
			Exist.	Prop.	Exist.	Prop.	Exist.	Prop.	
Design	15	3165	313	448	4.37.18	0.77	0.42	437.95	437.60
Base	100	4995	322	532	4.38.03	0.39	0.42	438.42	438.45
Max. Calc.	500	6469	340	548	4.38.61	0.21	0.25	438.82	438.86

DESIGN STRESSES

FIELD UNITS
 $f'_c = 3,500$ psi
 $f_y = 60,000$ psi

PRECAST PRESTRESSED UNITS
 $f'_c = 6,000$ psi
 $f_{ci} = 5,000$ psi
 $f'_s = 270,000$ psi ($\frac{1}{2}$ " ϕ strands)(Low Relaxation)
 $f'_{si} = 202,500$ psi ($\frac{1}{2}$ " ϕ strands)(Low Relaxation)

DESIGN SPECIFICATIONS

AASHTO - 2002, 17th Edition

LOADING HS20-44

Allow 25#/sq. ft. for future wearing surface.



Gary L. Hahn 10.18.05

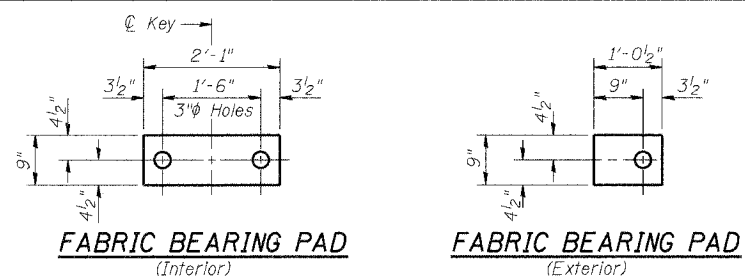
Gary L. Hahn
 Centralia, Illinois
 Illinois Licensed Structural
 Engineer No. 81-4853
 Expires Nov. 30, 2006

**GENERAL PLAN AND ELEVATION
 PROPOSED BRIDGE OVER
 WET WEATHER CREEK
 TR 179
 SECTION 85-09110-01-BR
 CLAY COUNTY, ILLINOIS**

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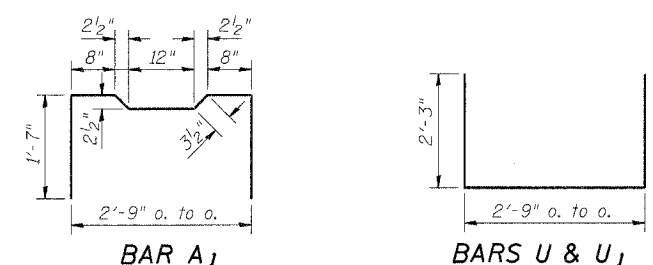
10/17/2005

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CONTRACT NO. 95450				



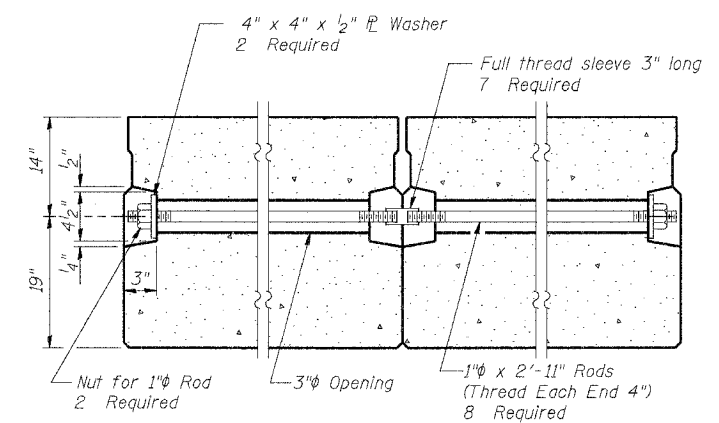
FABRIC BEARING PAD
(Interior)

FABRIC BEARING PAD
(Exterior)

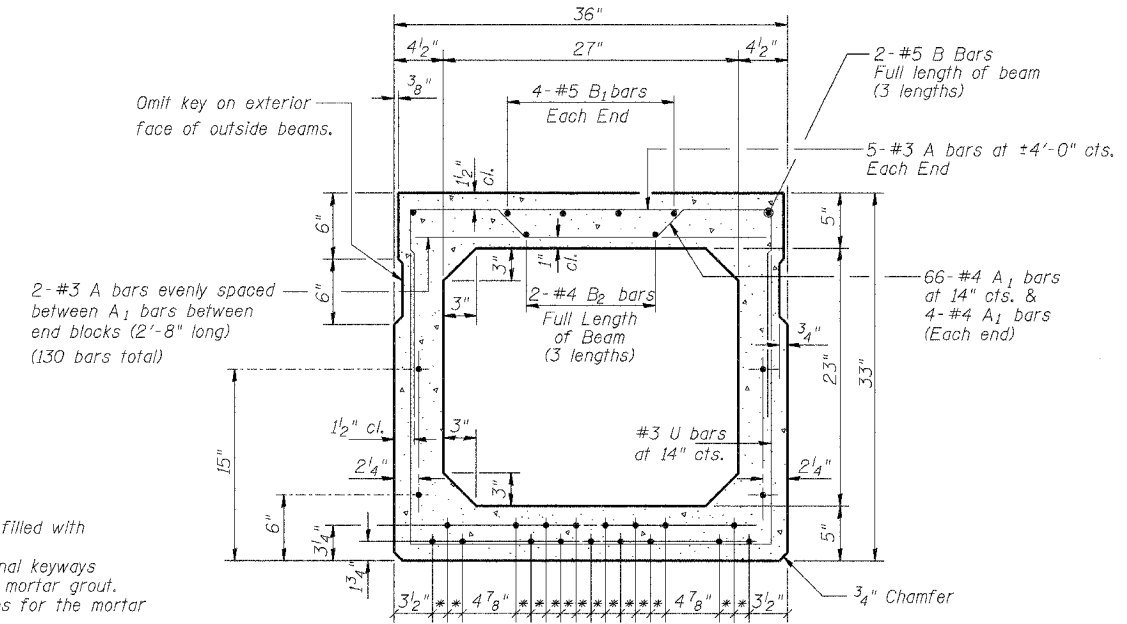


BAR A₁

BARS U & U₁



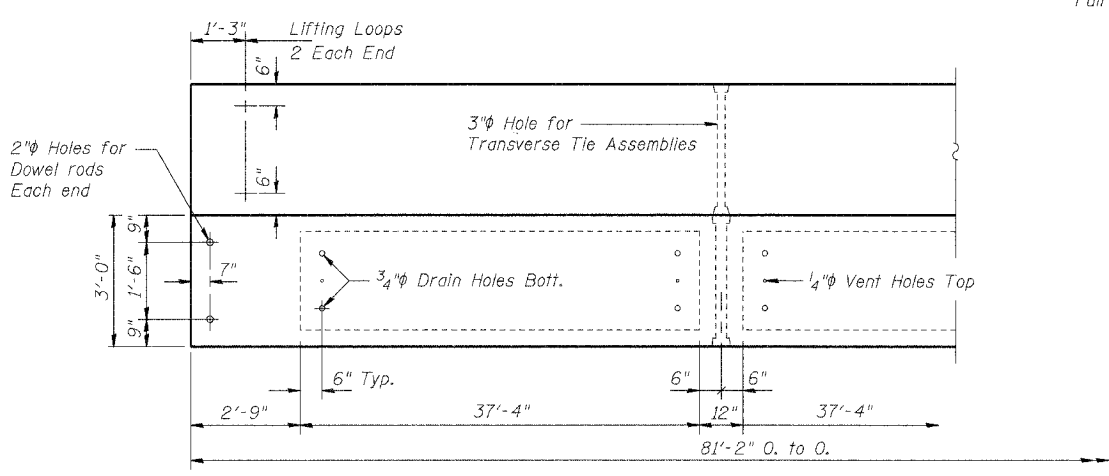
TYPICAL TRANSVERSE TIE ASSEMBLY



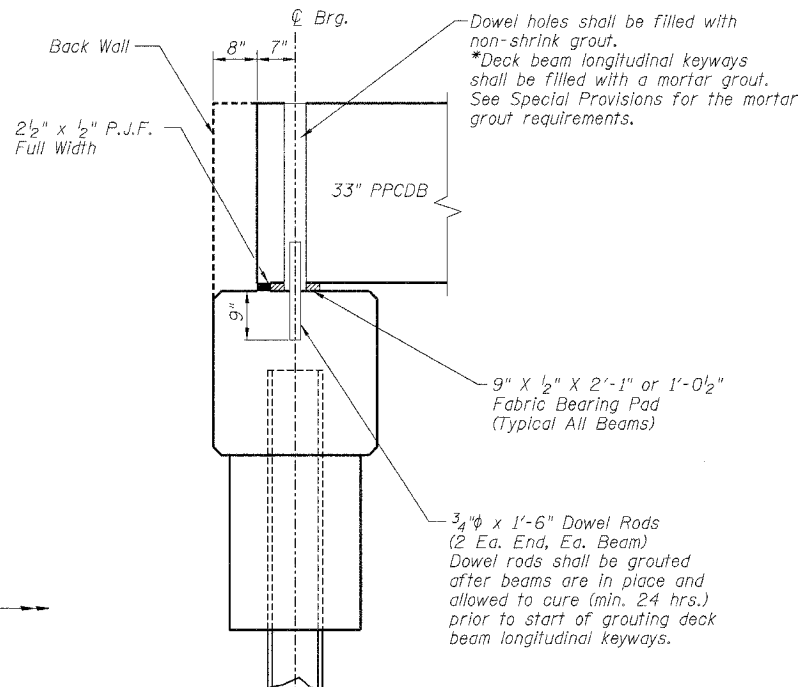
TYPICAL SECTION

21 - 1/2" Strands Each Strand Stressed to 31,000 Lbs.
9-Strands 1 3/4" up, 8-Strands 3/4" up
2-Strands 6" up, 2-Strands 15" up

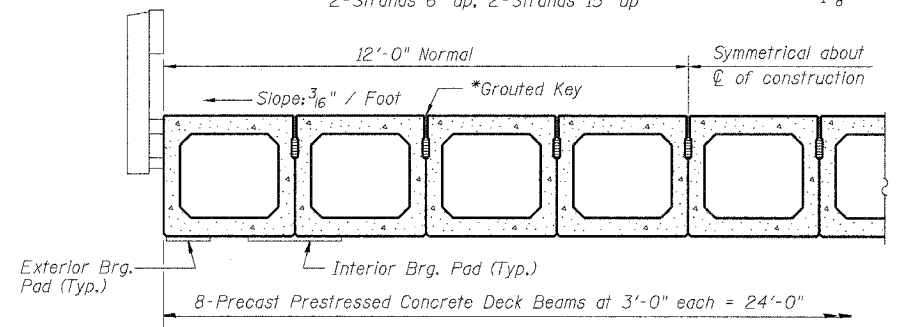
Note: Place strands symmetrically about center of beam.
* = 1 3/8"



PLAN



RESTRAINED BEARING ABUTMENT



HALF CROSS SECTION

See Sheet 8 for the details showing the spacing and mounting of posts and rails to the PPCDB.

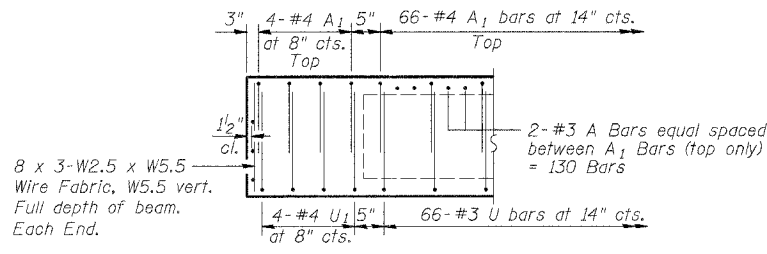
BILL OF MATERIAL ONE BEAM

Bar	No.	Size	Length	Shape
A	140	#3	2'-8"	—
A ₁	74	#4	6'-1"	—
B	6	#5	29'-0"	—
B ₁	8	#5	16'-3"	—
B ₂	6	#4	28'-6"	—
U	66	#3	7'-3"	—
U ₁	8	#4	7'-3"	—
Precast Prestressed Concrete Deck Beams			Sq. Ft.	243.50
** Reinforcement Bars			Pound	1100
Total Weight Each Beam			Pound	53560

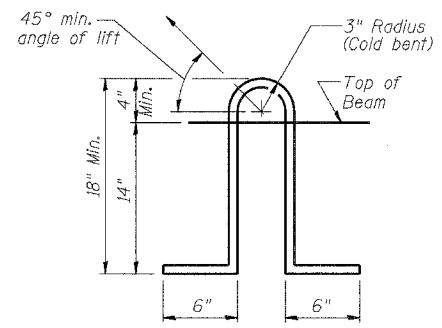
**Weight does not include W.W.F.

NOTES

- Prestressing steel shall be uncoated high strength, Low-relaxation 7-wire strand, Grade 270.
- The nominal diameter shall be 1/2" and the nominal cross-sectional area shall be 0.153 sq. in.
- Lifting loops shall be 4 - 1/2" - 270 ksi strands, as shown.
- The 1" rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets that receive transverse tie bar on outside shall be filled with grout after transverse tie assembly is in place.
- Reinforcement bars shall conform to the requirements of AASHTO M-31, M-42 or M-53 Grade 60.
- The bearing seat surfaces shall be adjusted by shimming to assure firm and even bearing. Two 1/8" fabric adjusting shims of the dimensions of the Exterior Bearing Pad shall be provided for each bearing.
- Keyway surfaces shall be cleaned to remove form oil or other bond breaking material prior to shipment of the beams. Cleaning shall be done by sandblasting the keyway areas between top of the beam and the bottom edge of the key.
- Required Release Strength, f'ci, shall be 5000 p.s.i. (minimum).
- Low-relaxation strands are required.



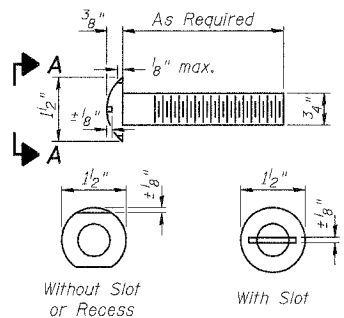
END ELEVATION



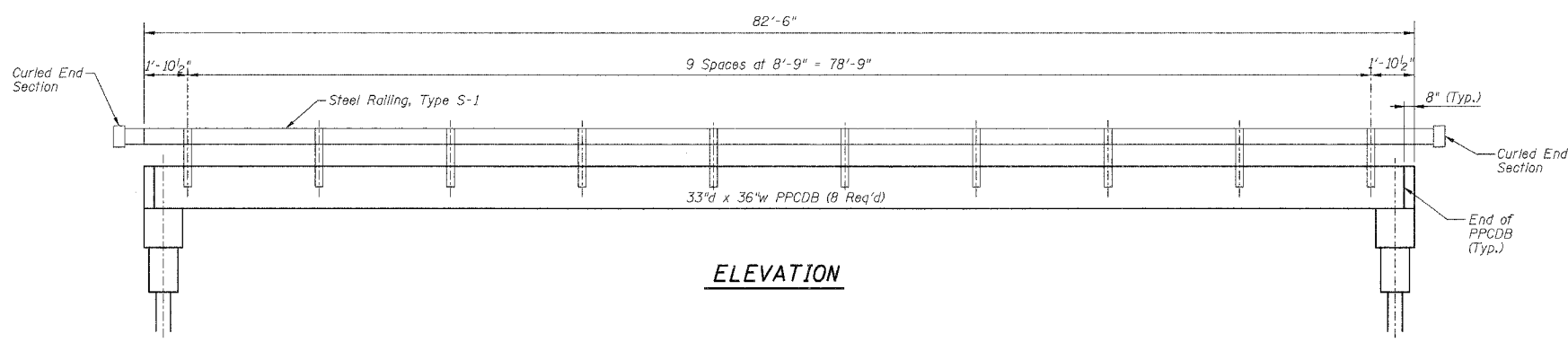
LIFTING LOOP DETAIL

PRECAST PRESTRESSED CONCRETE DECK BEAM DETAILS
PROPOSED BRIDGE OVER WET WEATHER CREEK
TR 179
SECTION 85-09110-01-BR
CLAY COUNTY, ILLINOIS

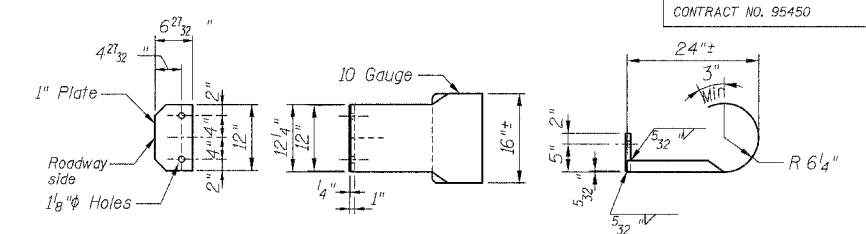
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 179	85-09110-01-BR	CLAY	9	8
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 95450				



**VIEW A-A
ROUND HEAD BOLT**



ELEVATION

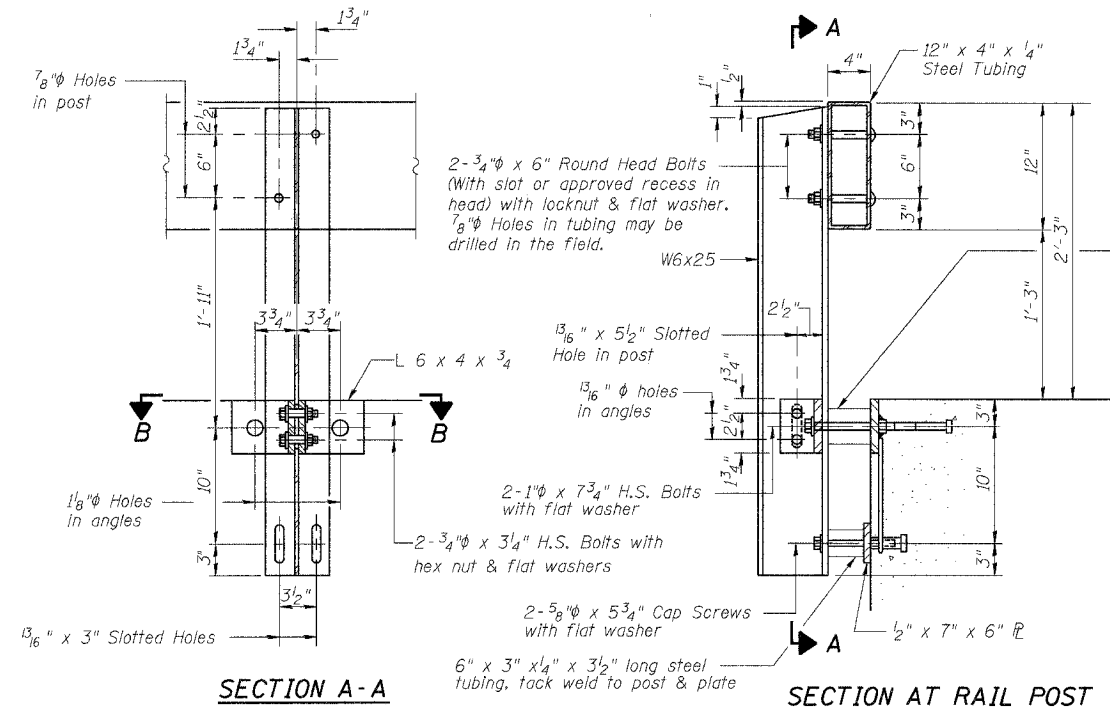


CURLED END SECTION DETAILS

The Curled End Section shall be considered incidental to the cost of the "STEEL RAILING, TYPE S1", and no additional compensation will be allowed.

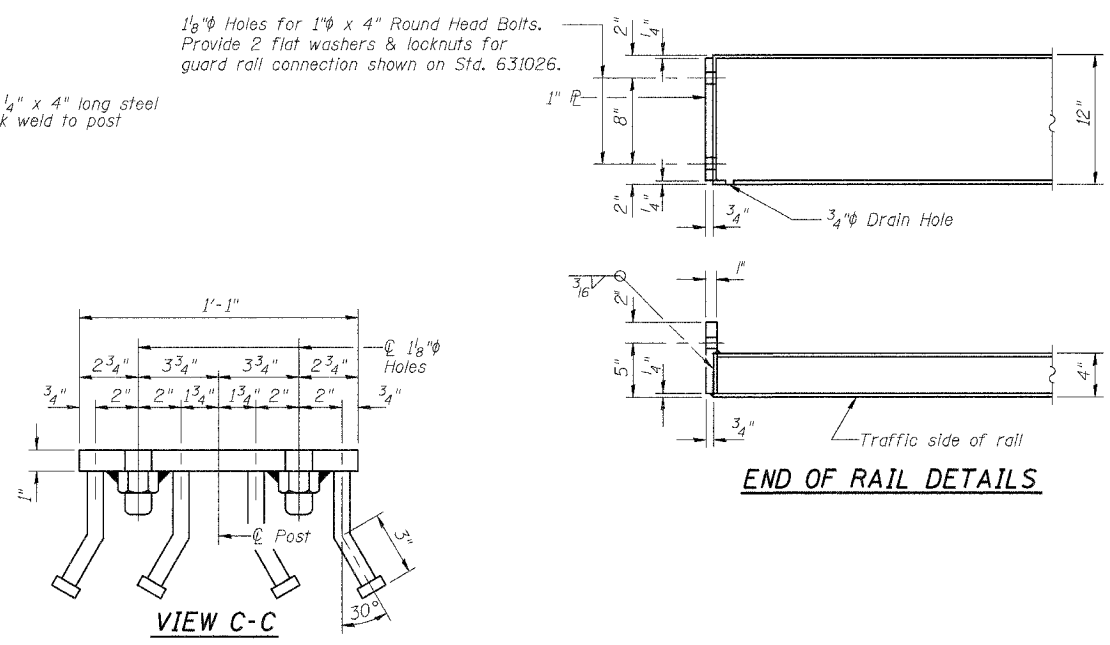
NOTES

- Hollow structural steel tubing shall conform to the requirements of ASTM designation A-500 Grade B Structural Steel Tubing and shall meet the longitudinal CVN requirements of 15 ft-lbs at 0° F.
- All other steel shapes and plates shall conform to the requirements of AASHTO M-270 Grade 36 except posts and angles shall conform to AASHTO M-270, Grade 50.
- Bolts, cap screws, and nuts shall conform to the requirements of ASTM designation A-307 except for high strength bolts, nuts and washers noted which shall conform to AASHTO M-164.
- All bolts, nuts, cap screws, washers and lock washers shall be galvanized in accordance with AASHTO M-232.
- All posts, railing, rail splices, anchor devices and angles shall be galvanized after shop fabrication in accordance with AASHTO M-111 and ASTM A-385. Galvanized rail shall not be painted.
- Railing shall be in accordance with Section 509 of the Standard Specifications, except as noted, and will be paid for at the contract unit price per foot for STEEL RAILING, TYPE S-1.
- All field drilled holes shall be coated with an approved zinc rich paint before erection.
- The lower portion of the post flange in contact with concrete shall receive two coats of asphalt paint conforming to Section 760.07 Type II or place 1/8" fabric bearing pad between the post and concrete.
- The 3/4" high strength bolts used to connect the 6 x 4 x 3/4 angles to the post shall be tightened in accordance with Article 505.04(F)(2) of the Standard Specifications. The 1" high strength bolts connecting the angles to the concrete shall be tightened to a snug fit and given an additional 1/2 turn. The 5/8" cap screws in bottom of posts shall be tightened to a snug fit only.



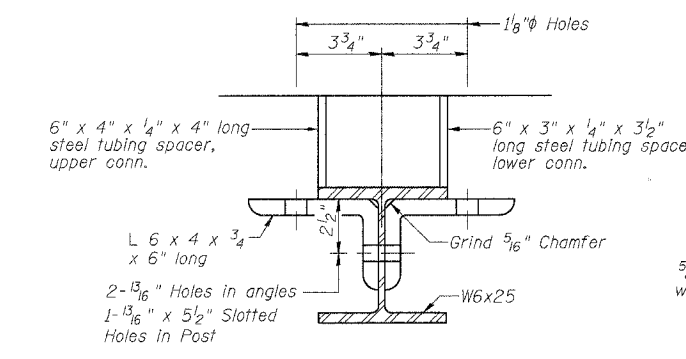
SECTION A-A

SECTION AT RAIL POST

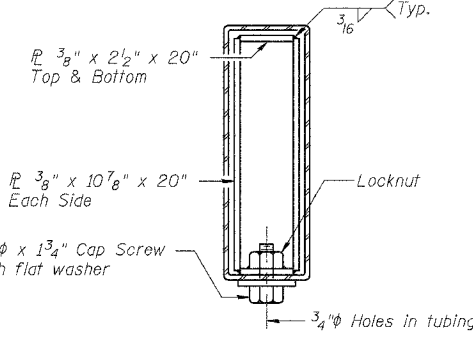


END OF RAIL DETAILS

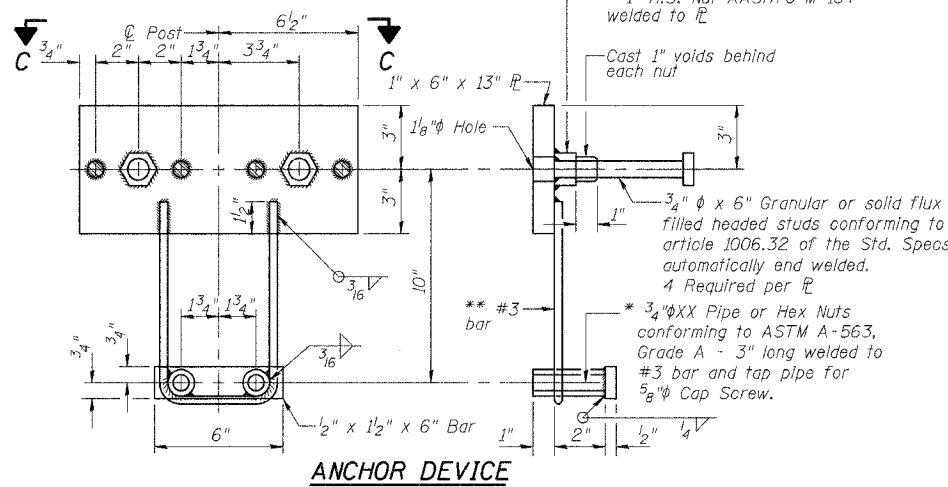
VIEW C-C



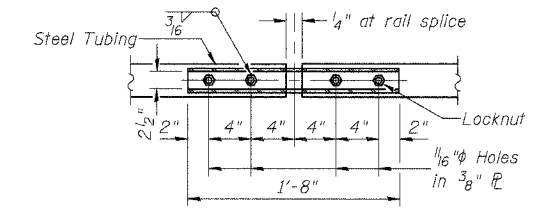
SECTION B-B



SECTIONS AT RAIL SPLICE



ANCHOR DEVICE



**PLAN-BOTT. SPLICE R
TYPICAL**

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type S-1	Foot	165

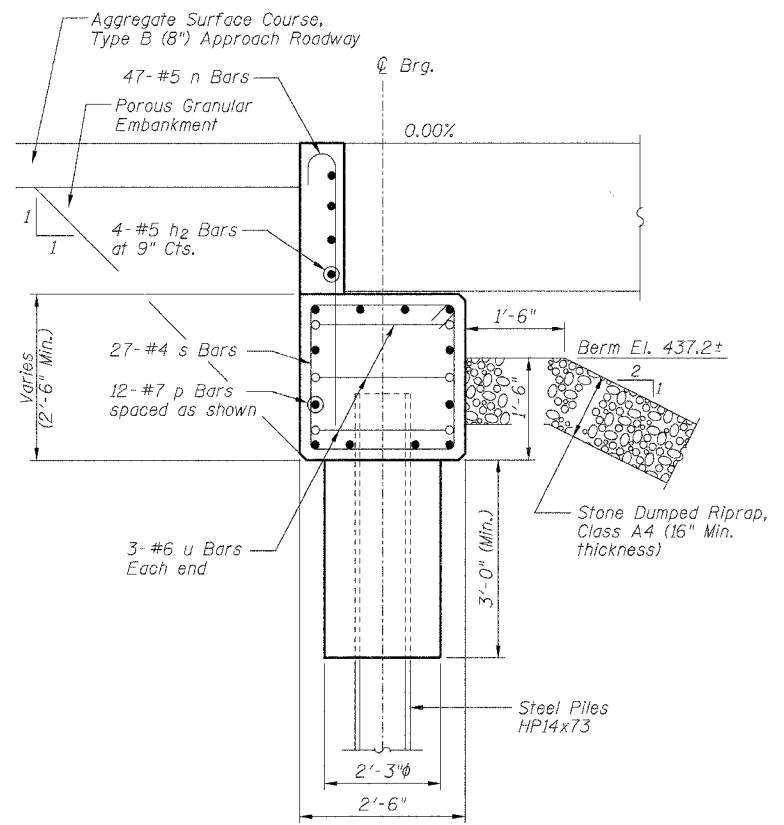
**STEEL RAILING, TYPE S-1 DETAILS
PROPOSED BRIDGE OVER
WET WEATHER CREEK
TR 179
SECTION 85-09110-01-BR
CLAY COUNTY, ILLINOIS**

Sheet
8
of 9
Job No. 50304

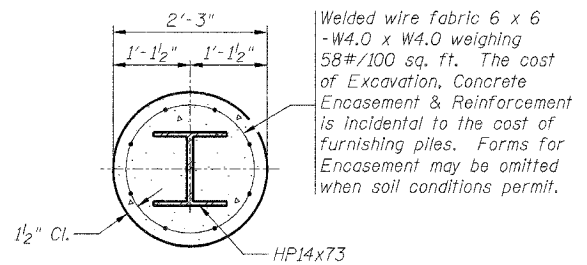
10/17/2005

* Threaded areas shall be plugged or blocked off during casting of beam.
** Whenever the lower insert assemblies interfere with strand locations, the #3 bars shall be cut and adjusted in order to allow raising or lowering of the lower inserts. Maximum adjustment not to exceed 1/2".

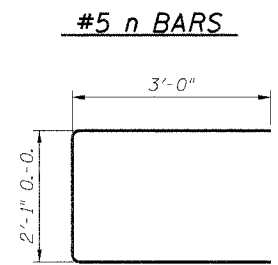
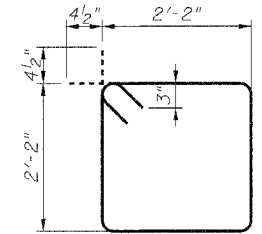
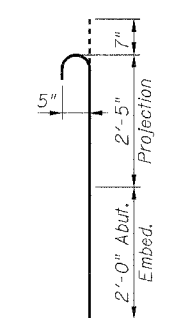
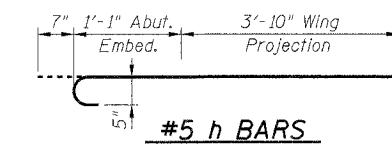
ROUTE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 179	85-09110-01-BR	CLAY	9	9
FED. ROAD DIST. NO. 7	ILLINOIS	FED. AID PROJECT		
CONTRACT NO. 95450				



SECTION THRU ABUTMENT
Normal to Abutment



SECTION A-A
PILE ENCASEMENT DETAIL



PILE DATA

Type:
West Abutment HP14x73
East Abutment HP14x73

Required Capacity: (Includes 150% of maximum calculated pile load for H-pile in friction)
West Abutment 101 tons
East Abutment 101 tons

Estimated Length:
West Abutment 22 foot
East Abutment 28 foot

Number Required:
West Abutment 3+1 Test pile
East Abutment 3+1 Test pile

Total Estimated Length: (Does not include Test Piles)
HP14x73 150 foot

BILL OF MATERIALS
ONE ABUTMENT w/ WINGWALLS

Bar	No.	Size	Length	Shape
h	20	#5	5'-6"	
h1	12	#5	4'-6"	
h2	4	#5	23'-8"	
n	47	#5	5'-0"	
p	12	#7	24'-8"	
s	27	#4	9'-5"	
u	6	#6	8'-1"	
v	24	#5	5'-0"	CUT IN FIELD
Concrete Structures			Cu. Yd.	9.1
Reinforcement Bars			Pound	1490

GENERAL NOTES

All exposed edges shall have standard 3/4" chamfer, unless otherwise noted.

All clearances between reinforcement bars and form surface shall be 2", unless otherwise noted.

Space reinforcement in abutment cap to miss PPCDB dowel bars.

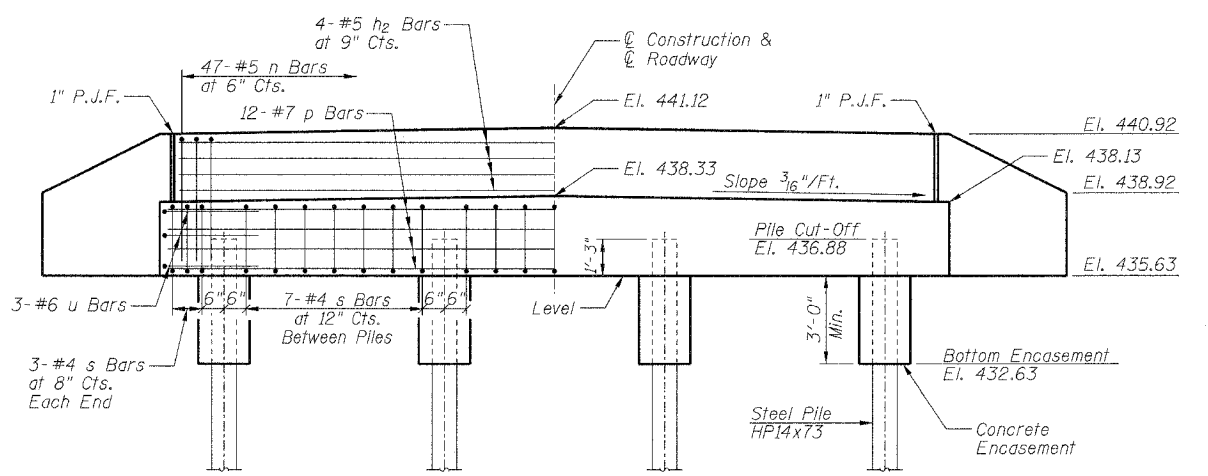
The Contractor shall drive one (1) Steel HP14x73 Test Pile in a permanent location at both the East and West abutments as directed by the Engineer before ordering the remainder of the piles.

The Contractor is hereby advised that very stiff soils will be encountered prior to the location of anticipated refusal. See the Soil Borings for further information.

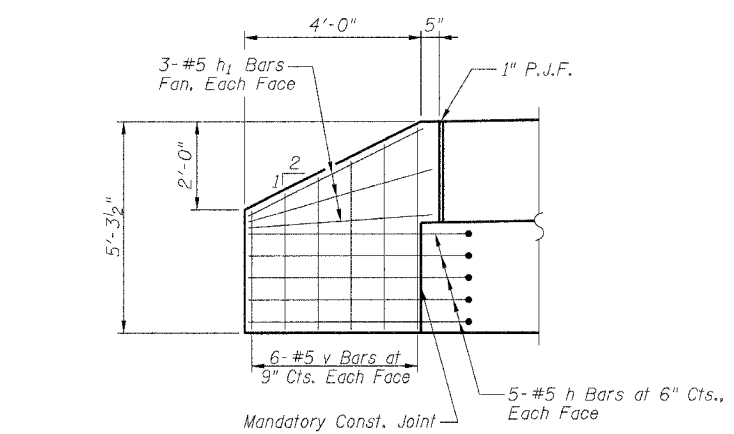
In addition to all other requirements of Section 512 of the Standard Specifications, splices for Steel H-piles shall develop the full capacity of the steel's cross sectional area of the pile for tension, shear and bending forces. One approved method of achieving this requirement is full penetration butt welding of the entire cross section. Other types of splices meeting the full capacity requirement may be allowed subject to the approval of the Engineer. Any proposal by the Contractor to use an alternate splice method must include adequate documentation demonstrating that the full tension, shear and bending capacities will be met. Appropriate welder qualifications will be required for the positions and processes used in splicing all piles. Nondestructive testing of completed welds will be limited to visual inspection.

ABUTMENT DETAILS
PROPOSED BRIDGE OVER
WET WEATHER CREEK
TR 179
SECTION 85-09110-01-BR
CLAY COUNTY, ILLINOIS

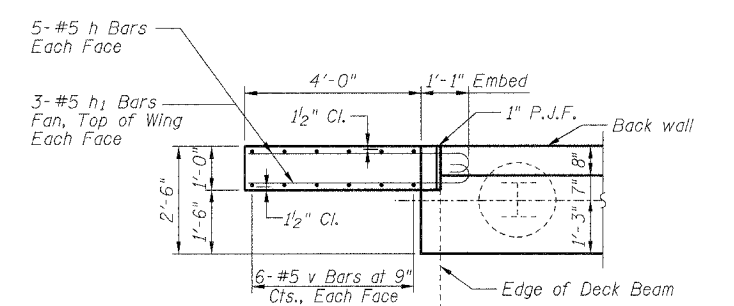
Sheet
of 9
Job No. 50304



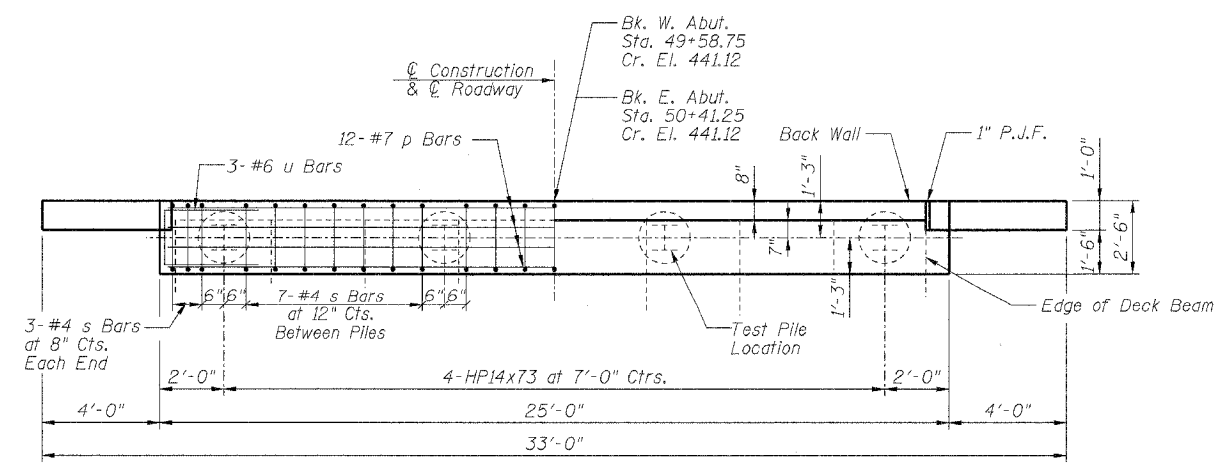
ELEVATION



ELEVATION OF WINGWALL



WINGWALL
CONNECTION DETAIL



PLAN

10/17/2005