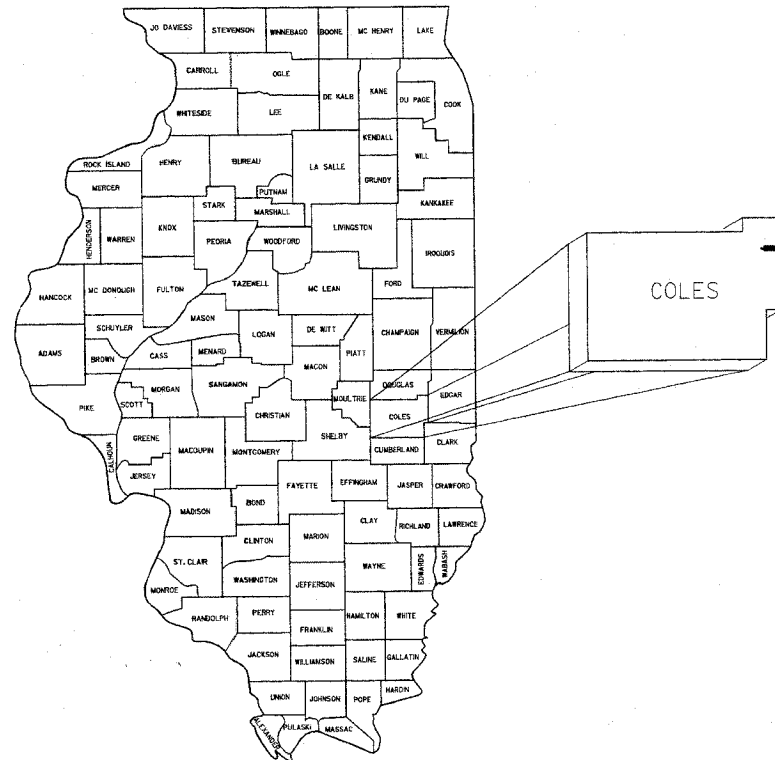


**INDEX OF SHEETS**

SHEET NO.	CONTENTS
1	COVER SHEET
2-3	PLAN AND PROFILE
4	GENERAL PLAN AND ELEVATION
5-6	SUPERSTRUCTURE DETAILS
7	ABUTMENT DETAILS
8	PIER DETAILS
9	RAILING DETAILS
10	SOIL BORINGS
11-15	ROADWAY CROSS SECTIONS

**STANDARDS**

STD. NO.	DESCRIPTION
280001-02	TEMPORARY EROSION CONTROL SYSTEMS
515001-02	NAME PLATE FOR BRIDGES
630301-03	SHOULDER WIDENING FOR TYPE I (SPECIAL) GUARDRAIL/TERMINALS
631026-02	TRAFFIC BARRIER TERMINAL, TYPE 5A
635006-02	TERMINAL MARKER, DIRECT APPLIED
702001-05	TYPICAL APPLICATION OF TRAFFIC CONTROL DEVICES
BLR 21-6	TRAFFIC CONTROL
BLR 22-4	TRAFFIC CONTROL
BLR 23-1	TRAFFIC BARRIER TERMINAL, TYPE I

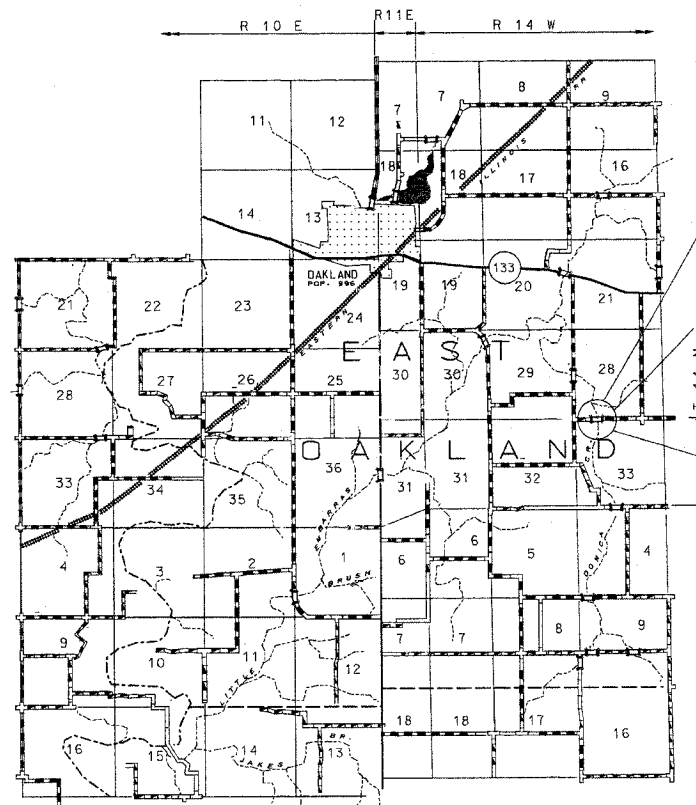


LOCATION OF SECTION INDICATED THIS: →

STATE OF ILLINOIS  
**PLANS FOR THE  
 PROPOSED BRIDGE REPLACEMENT  
 AND REHABILITATION PROGRAM**  
 PROJECT NO. BR-0S-029(276) JOB NO. C-95-125-02  
 BRIDGE OVER DONICA CREEK  
 SECTION 98-03121-00-BR  
 ROUTE: TR 35  
 EAST OAKLAND TOWNSHIP  
 COLES COUNTY

**SUMMARY OF QUANTITIES**

		X080-2A	
	ITEMS	UNIT	QUANTITY
2010010	TREE REMOVAL (6-15 UNITS DIAMETER)	UNITS	103
2010020	TREE REMOVAL (OVER 15 UNITS DIAMETER)	UNITS	52
2020010	EARTH EXCAVATION	CU.YD.	2438
2030010	CHANNEL EXCAVATION	CU.YD.	472
2040080	FURNISHED EXCAVATION	CU.YD.	5895
2500100	SEEDING CLASS 2 (SPECIAL)	ACRE	152
28000300	TEMPORARY DITCH CHECKS	EACH	32
28000400	PERIMETER EROSION BARRIER	FOOT	2224
28100108	STONE RIPRAP, CLASS A4 (SPECIAL)	SQ.YD.	460
28102500	STONE RIPRAP, DITCH	SQ.YD.	869
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	972
50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1
50300225	CONCRETE STRUCTURES	CU.YD.	315
50400305	PRECAST PRESTRESSED CONCRETE DECK BEAMS (17" DEPTH)	SQ.FT.	3215
50800105	REINFORCEMENT BARS	POUND	7470
50900205	STEEL RAILING, TYPE S1	FOOT	230
51201500	FURNISHING STEEL PILES HPI0X57	FOOT	673
51202700	DRIVING STEEL PILES	FOOT	673
51203500	TEST PILE STEEL HPI0X57	EACH	2
51204315	CONCRETE ENCASMENT	CU.YD.	492
51500100	NAME PLATES	EACH	1
54200220	PIPE CULVERTS CLASS D, TYPE I 15"	FOOT	88
60100965	PIPE DRAINS, 18"	FOOT	144
63100075	TRAFFIC BARRIER TERMINAL, TYPE 5A	EACH	4
63100167	TRAFFIC BARRIER TERMINAL, TYPE I (SPECIAL) TANGENT	EACH	4
67000500	ENGINEERS FIELD OFFICE, TYPE B	CAL.MO.	6
78201000	TERMINAL MARKER, DIRECT APPLIED	EACH	4



SECTION 98-03121-00-BR  
 BEGINS STATION 0+00

SECTION 98-03121-00-BR  
 ENDS STATION 10+00

PROPOSED STRUCTURE - TRIPLE SPAN 17' PPC  
 DECK BEAM BRIDGE ON  
 SPILL-THRU ABUTMENTS,  
 SKEWED 0° WITH ENCASED  
 PILE BENT PIERS  
 SPAN LENGTHS 35'-6", 42'-10", 35'-6".

**LOCATION MAP**

SCALE 1 INCH = 1 MILE  
 NET LENGTH OF SECTION = 1000 FEET (0.189 MILES)

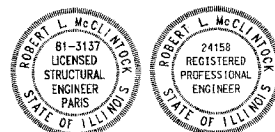
**UTILITY COMPANIES**

\*\*ILLINOIS CONSOLIDATED PHONE CO.  
 2116 S. 17TH STREET  
 MATTOON, ILLINOIS, 61938  
 BARB WILLIAMS  
 1-800-553-9981 (217) 235-3326

\*\*COLES MOULTRIE ELECTRIC  
 P.O. BOX 709  
 MATTOON, ILLINOIS, 61938  
 MR. STEVE UNDERWOOD  
 1-888-661-2632 (217) 235-0341

TOLL FREE JOINT UTILITY  
 LOCATING INFORMATION  
 FOR EXCAVATORS (J.U.L.I.E.)  
 TELEPHONE \* 1-800-892-0123

\*\*BELONGS TO J.U.L.I.E.



I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED  
 BY ME OR UNDER MY DIRECT SUPERVISION,  
 AND THAT I AM A DULY LICENSED STRUCTURAL AND  
 PROFESSIONAL ENGINEER UNDER THE LAWS OF THE  
 STATE OF ILLINOIS.

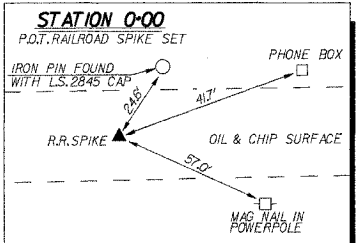
*Robert L. McClintock* DATE: 10-30-02  
 ROBERT L. McCLINTOCK  
 P.E. LICENSE EXP. 11-30-03 P.E. #24158  
 S.E. LICENSE EXP. 11-30-04 S.E. # 3137

CONTRACT NO: 91277

PASSED	1/31 2005
<i>David A. Gail</i> DISTRICT ENGINEER OF LOCAL ROADS AND STREETS	
APPROVED	1/26 2005
<i>John Silver</i> REGIONAL ENGINEER	
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	
<b>McCLINTOCK</b> CIVIL ENGINEERING SERVICE 404 SHAW AVENUE, PARIS, IL 61944 PHONE (217) 466-6100	
DRN R.T. DATE 7/09/02	SHEET 1 OF 15
C.K. SCALE	JOB NO. 3137-454-99
APPR.	

COLES COUNTY HIGHWAY DEPT.  
 APPROVED *Robert L. McClintock* 01/26/05  
 COUNTY ENGINEER  
*David A. Gail*  
 ROAD DISTRICT COMMISSIONER

ROUTE #	SECTION	COUNTY	TOTAL	SHEET #
TR35	98-0312-00-BR	COLES	15	2
JOB # 3137-454-99				



**TREE REMOVAL**  
6" DIAMETER TO 15" DIAMETER

STATION	OFFSET	UNIT
3+92	35' LT.	12"
4+01	22' LT.	10"
4+05	31' LT.	10"
4+13	25' LT.	13"
45 UNITS		

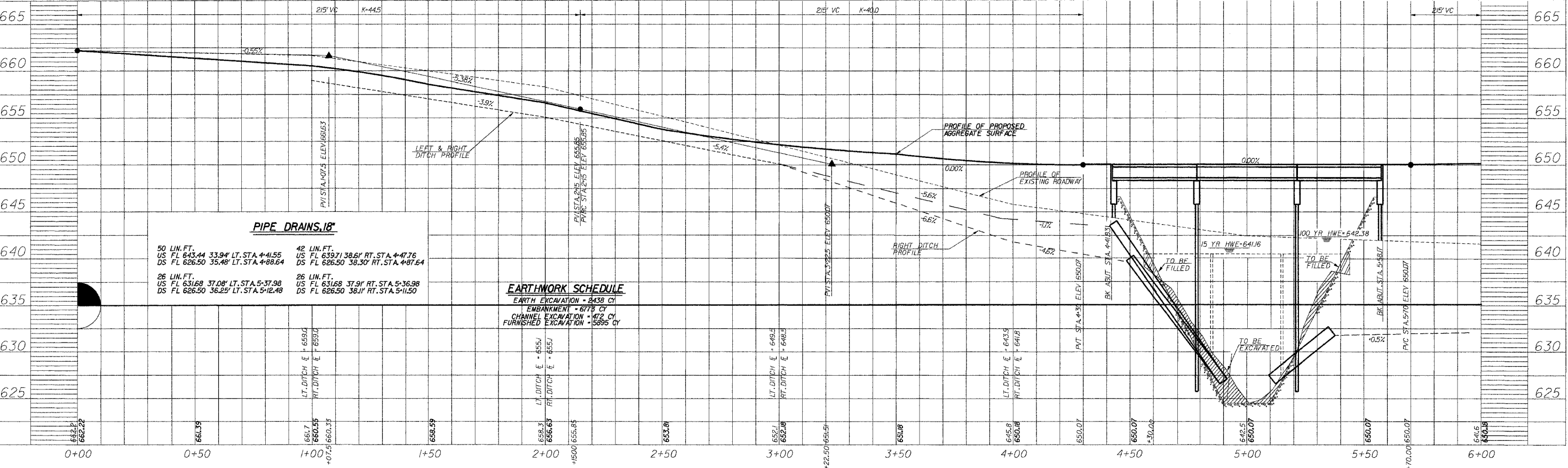
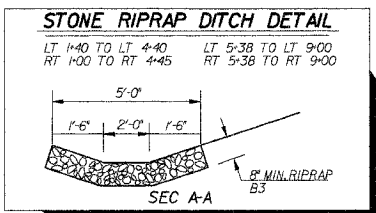
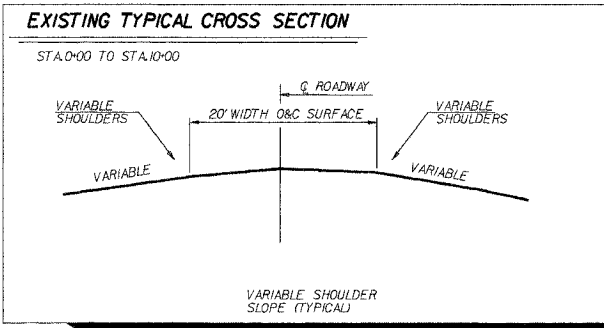
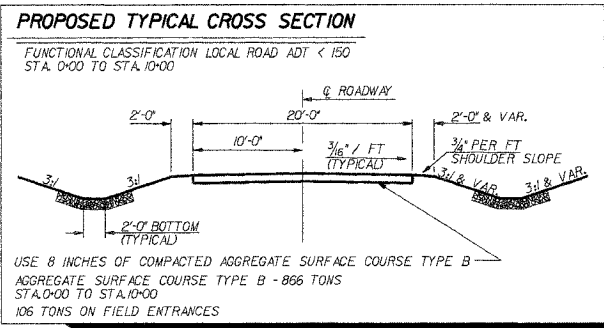
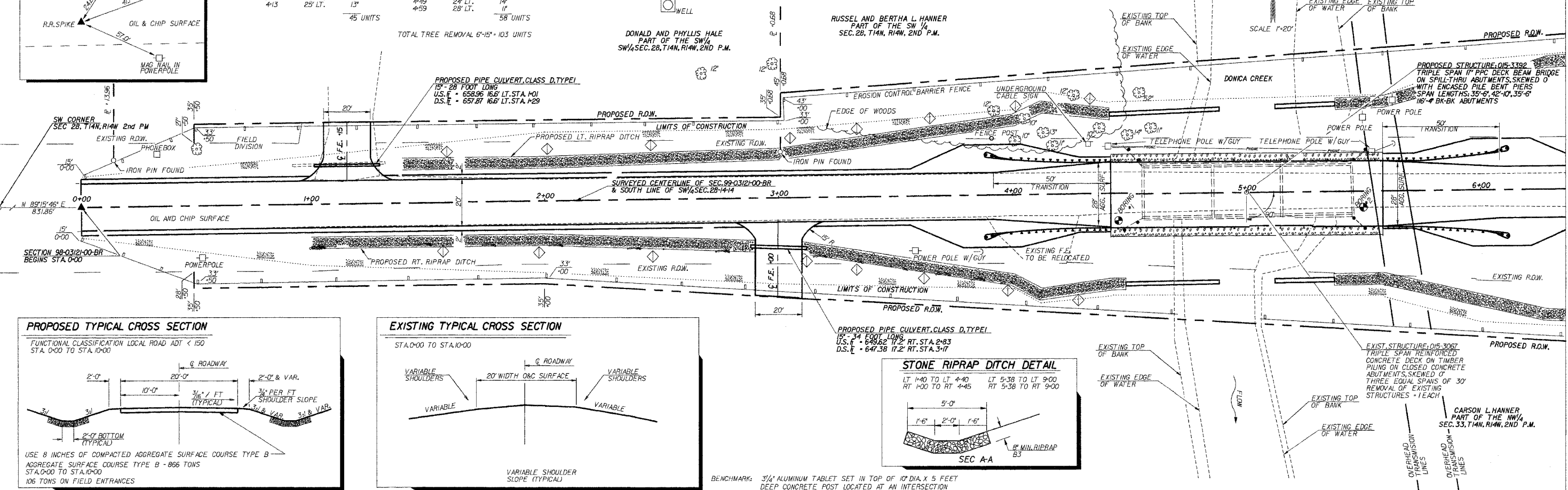
**TREE REMOVAL**  
6" DIAMETER TO 15" DIAMETER

STATION	OFFSET	UNIT
4+17	20' LT.	11"
4+26	4' LT.	12"
4+31	21' LT.	10"
4+49	24' LT.	14"
4+59	28' LT.	11"
58 UNITS		

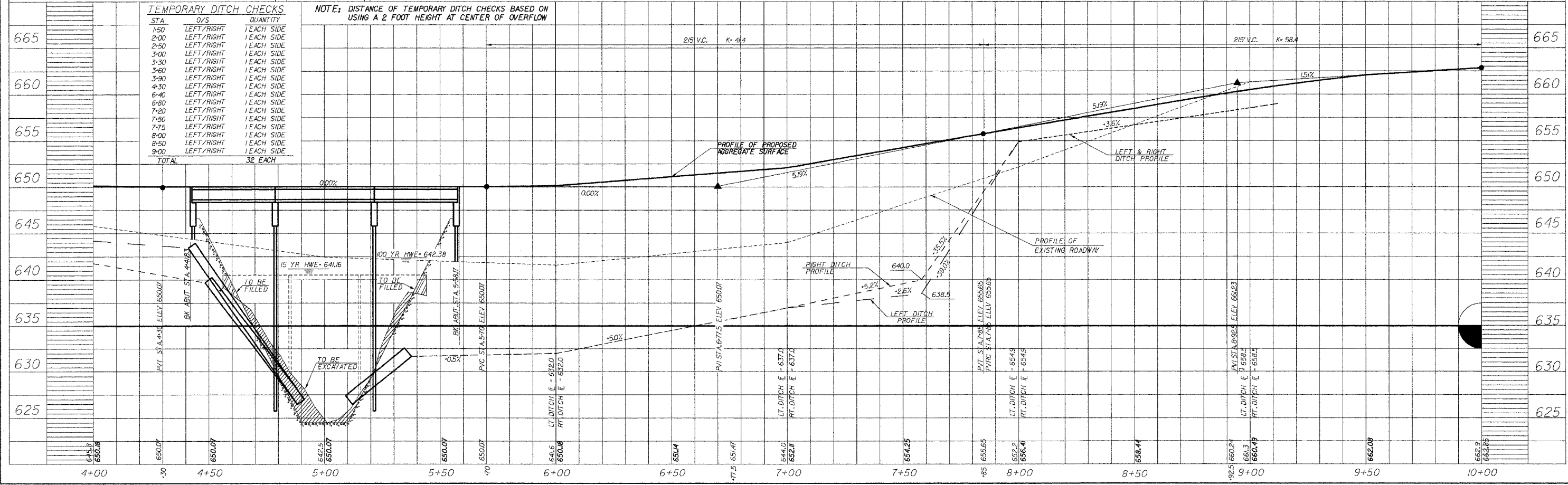
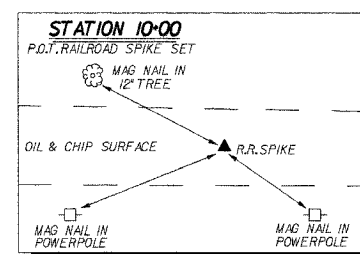
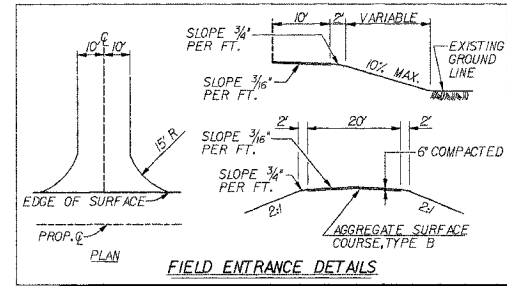
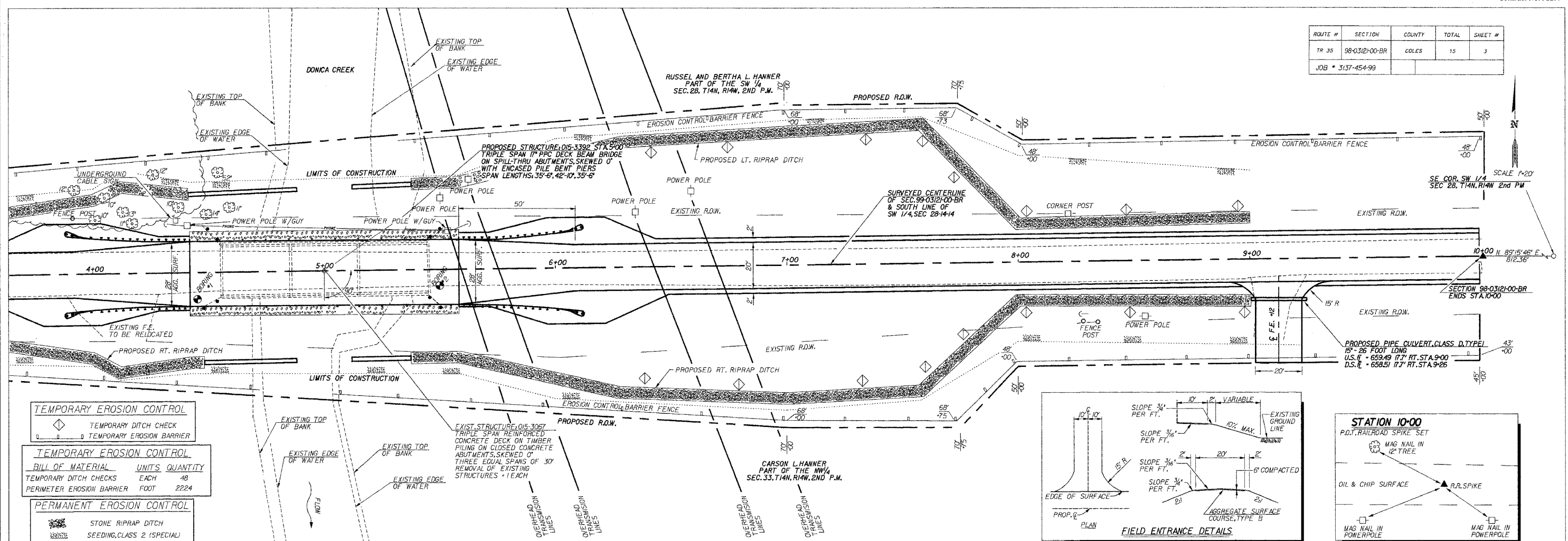
TOTAL TREE REMOVAL 6"-15" = 103 UNITS

**TREE REMOVAL**  
OVER 15" DIAMETER

STATION	OFFSET	UNIT
4+54	42' LT.	52'
52 UNITS		



ROUTE #	SECTION	COUNTY	TOTAL	SHEET #
TR 35	98-0312+00-BR	COLES	15	3
JOB # 3137-454-99				



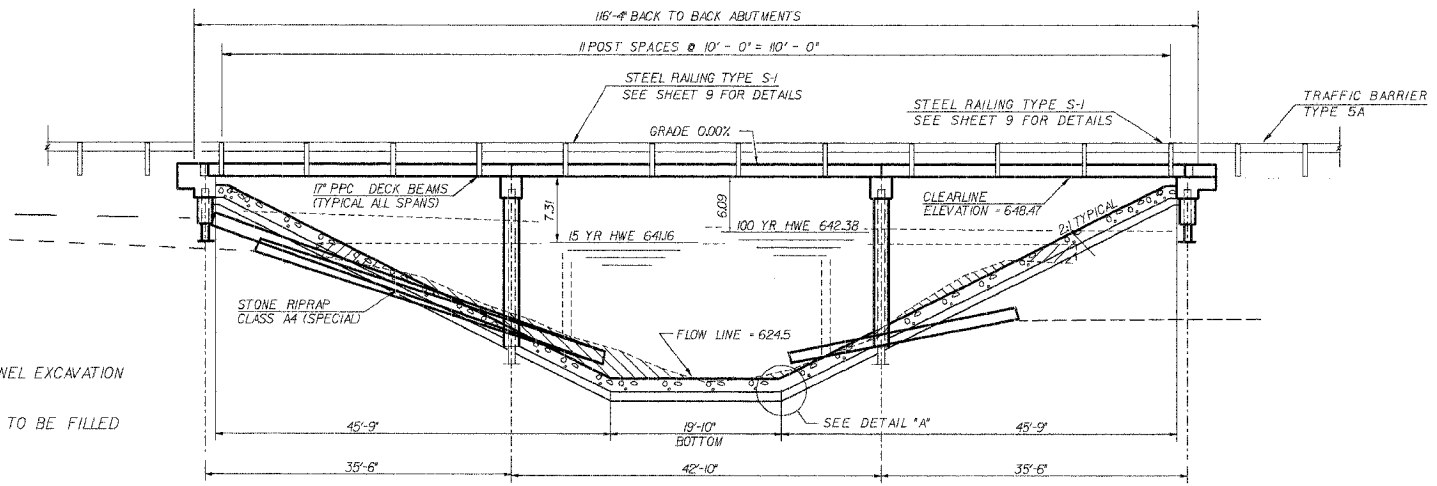
DESIGN STRESSES	
$f'_c = 5,000$	P.S.I. (PRESTRESSED BEAMS)
$f'_{cl} = 4,300$	P.S.I. (PRESTRESSED BEAM END SPANS)
$f'_{cl} = 4,700$	P.S.I. (PRESTRESSED BEAMS)
$f'_c = 3,500$	P.S.I. (CONCRETE STRUCTURES)
$f'_s = 270,000$	P.S.I. (PRESTRESSED STRANDS)
$f'_{sl} = 189,000$	P.S.I. (PRESTRESSED STRANDS)
$f'_y = 60,000$	P.S.I. (REINFORCEMENT BARS)

LOADING HS 20-44 DESIGN SPECS. 1996 AASHTO AND 1997 THROUGH 2002 INTERIMS

**WATERWAY INFORMATION**

DRAINAGE AREA = 27.19 MI.		LOW GRADE ELEV. 650.07 AT STATION 5+00							
FLOOD	FREQ. YR.	Q C.F.S.	OPENING EXISTING	SO. FT. PROP.	NAT. HW. E. EXISTING	HEAD - FOOT EXIST.	HEAD - FOOT PROP.	HEADWATER EL. EXIST.	HEADWATER EL. PROP.
DESIGN	15	2486	722	846	641.16	0.08	0.02	641.24	641.18
BASE	100	3859	792*	951	642.38	0.30	0.09	642.68	642.47

\* INCLUDES OVER THE ROAD FLOW

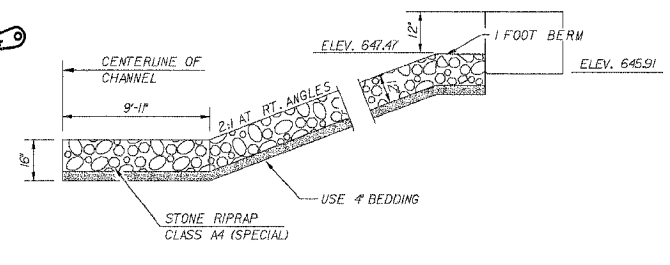
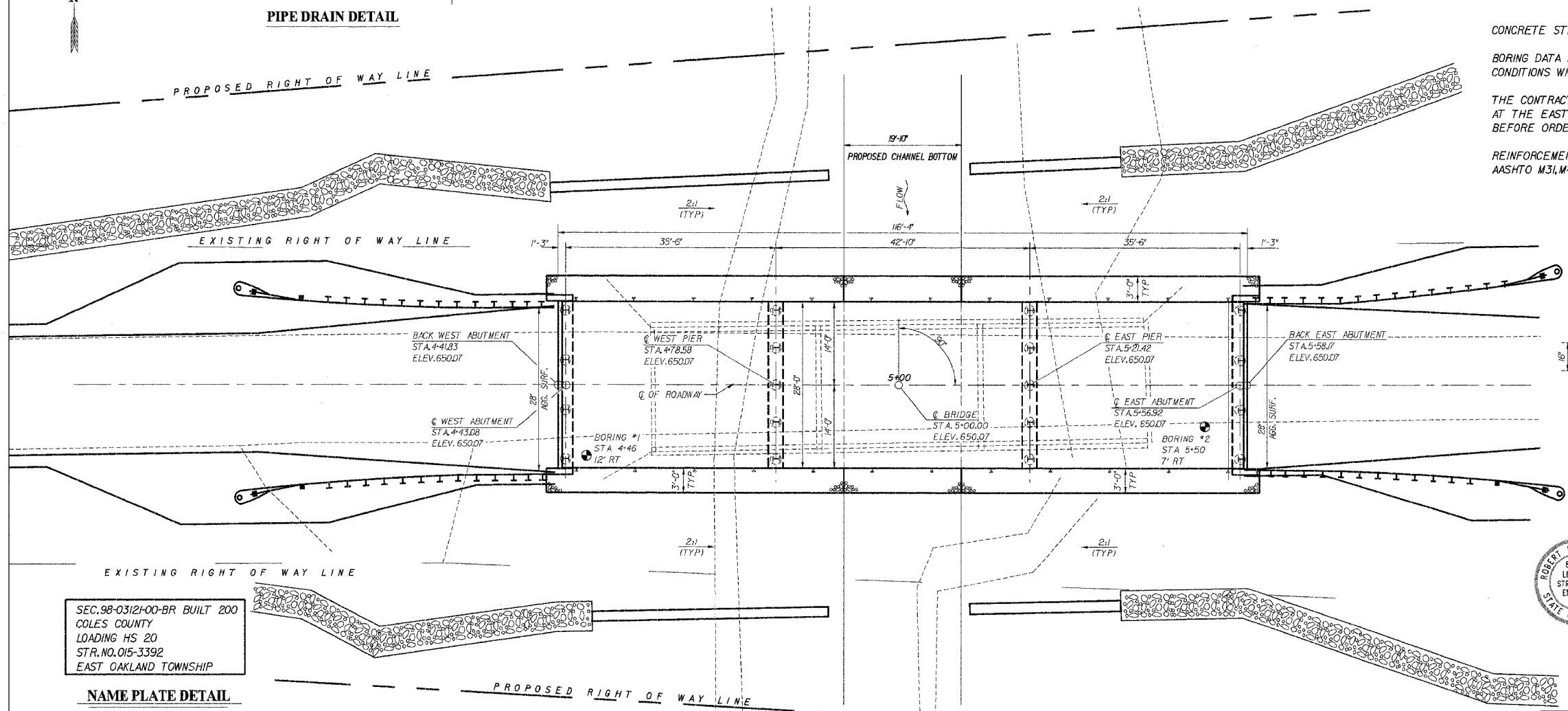
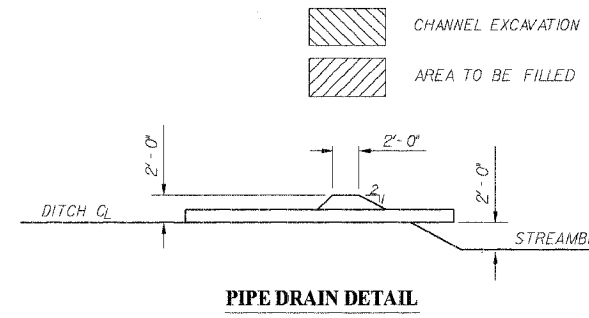


**TOTAL BILL OF MATERIAL**

ITEM	UNIT	SUPER	SUB	TOTAL
PRECAST PRESTRESSED CONCRETE DECK BEAMS (17" DEPTH)	SQ. FT.	3215		3215
CONCRETE STRUCTURES	CU. YD.		31.5	31.5
REINFORCEMENT BARS	POUND		7470	7470
STEEL RAILING, TYPE S-1	FOOT	230		230
NAME PLATES	EACH	1		1
FURNISHING STEEL PILES, HP 10x57	FOOT		673	673
TEST PILE STEEL, HP 10x57	EACH		2	2
DRIVING STEEL PILES	FOOT		673	673
STONE RIPRAP, CLASS A-4 (SPECIAL)	SQ. YD.		460	460
CHANNEL EXCAVATION	CU. YD.		472	472
CONCRETE ENCASEMENT	CU. YD.		492	492

**GENERAL NOTES**

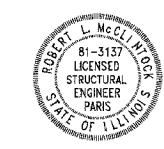
CONCRETE STRUCTURES SHALL BE USED IN THE ABUTMENTS AND PIERS.  
 BORING DATA IS SHOWN ONLY AS A GUIDE TO BIDDERS IN ESTIMATES SOIL CONDITIONS WHICH MAY BE ENCOUNTERED DURING CONSTRUCTION.  
 THE CONTRACTOR SHALL DRIVE ONE TEST PILE IN A PERMANENT LOCATION AT THE EAST ABUTMENT AND PIER AS DIRECTED BY THE ENGINEER BEFORE ORDERING THE REMAINDER OF THE PILES.  
 REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M31, M42 OR M53 GRADE 60.



SEC. 98-03121-00-BR BUILT 200  
 COLES COUNTY  
 LOADING HS 20  
 STR. NO. 015-3392  
 EAST OAKLAND TOWNSHIP

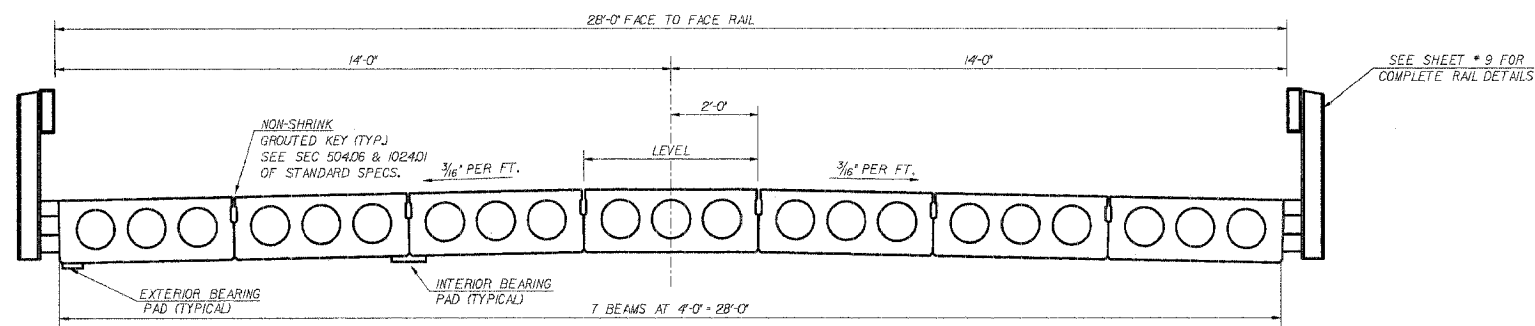
**NAME PLATE DETAIL**  
 SEE STANDARD 515001

THE LAYOUT OF RIPRAP MAY BE VARIED TO SUIT GROUND CONDITIONS IN THE FIELD, AS DIRECTED BY THE ENGINEER.

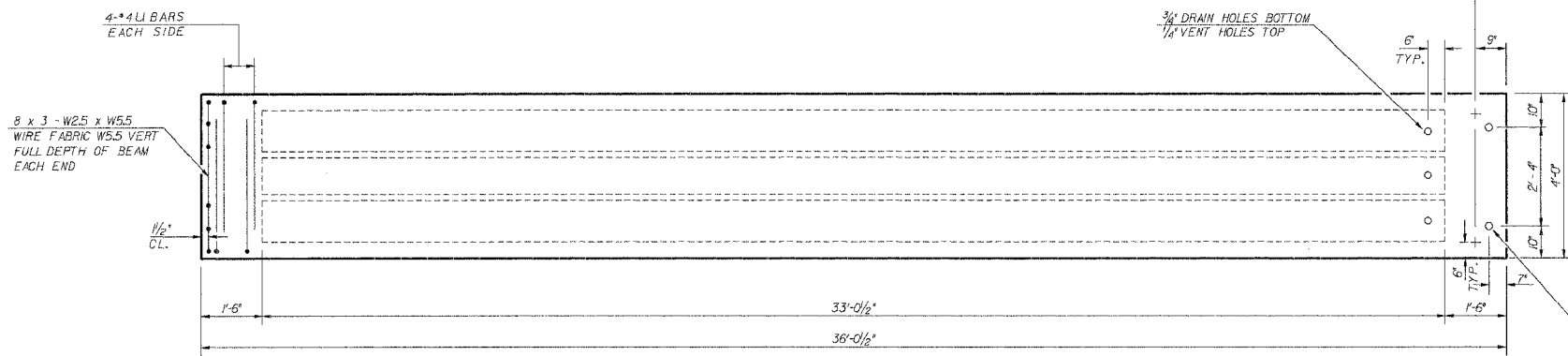


I certify that to the best of my knowledge, information, and belief, this bridge design is structurally adequate for the design loading shown on the plan. The design is an economical one for the style of structure and complies with requirements of the current A.A.S.H.T.O. Standard Specifications for Highway Bridges.  
 Robert L. McClintock Date: 10-30-02  
 Robert L. McClintock IL S.E. #3137  
 LICENSE EXPIRES 11-30-04

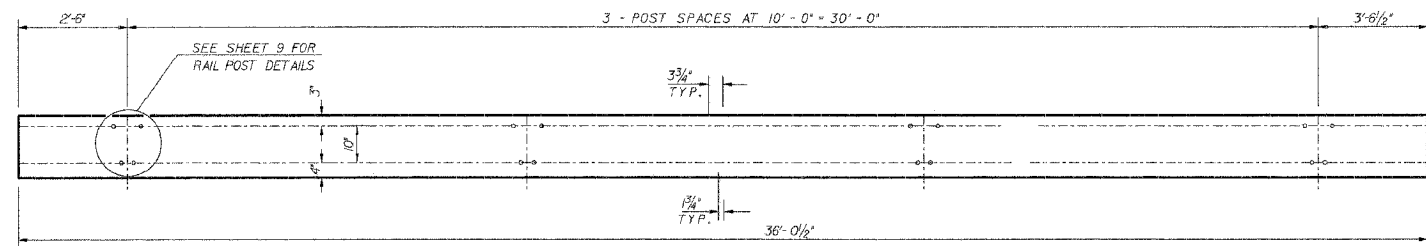
<b>GENERAL PLAN AND ELEVATION</b>	<b>McCLINTOCK</b> CIVIL ENGINEERING SERVICE 404 SHAW AVE. SUITE 101 PHONE 1217-465-6110
SEC. 98-03121-00-BR EAST OAKLAND TOWNSHIP COLES COUNTY	DRN. R.T. DATE 7/09/02 SHEET 4 OF 15 CK. SCALE 1:10 APPR. JOB NO. 3137-454-99



**CROSS SECTION**



**TYPICAL PLAN OF BEAMS**



**ELEVATION OF OUTSIDE BEAMS**

PRESTRESSING STEEL SHALL BE NON-GALVANIZED HIGH STRENGTH, STRESS-RELIEVED 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 1/2" DIAMETER, 6x25 CLASS WIRE ROPE WITH FIBER CORE AND SHALL HAVE A MINIMUM ULTIMATE TENSILE STRENGTH OF 21,000 LBS. OR 2-1/2"Ø-270 KSI STRANDS, AS SHOWN.

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.

REINFORCEMENT BARS SHALL CONFORM TO 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 1/2" FABRIC ADJUSTING SHIMS OF THE DIMENSIONS OF THE EXTERIOR BEARING PAD SHALL BE PROVIDED FOR EACH BEARING.

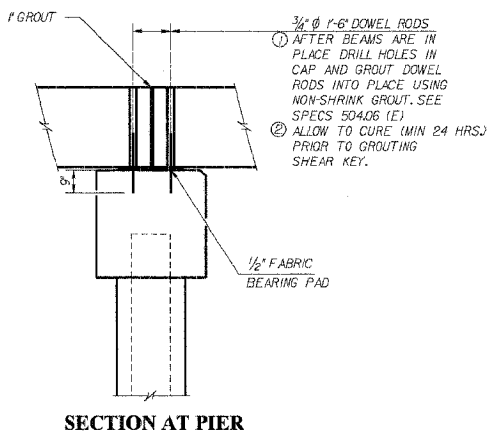
AN EQUAL SUBSTITUTION OF THE LOW-RELAXATION STRANDS FOR THE STRESS-RELIEVED STRANDS WILL BE PERMITTED.

A CALCIUM NITRITE CORROSION INHIBITOR, AS COVERED IN THE SPECIAL PROVISIONS SHALL BE USED IN THE CONCRETE FOR PRECAST PRESTRESSED CONCRETE DECK BEAMS.

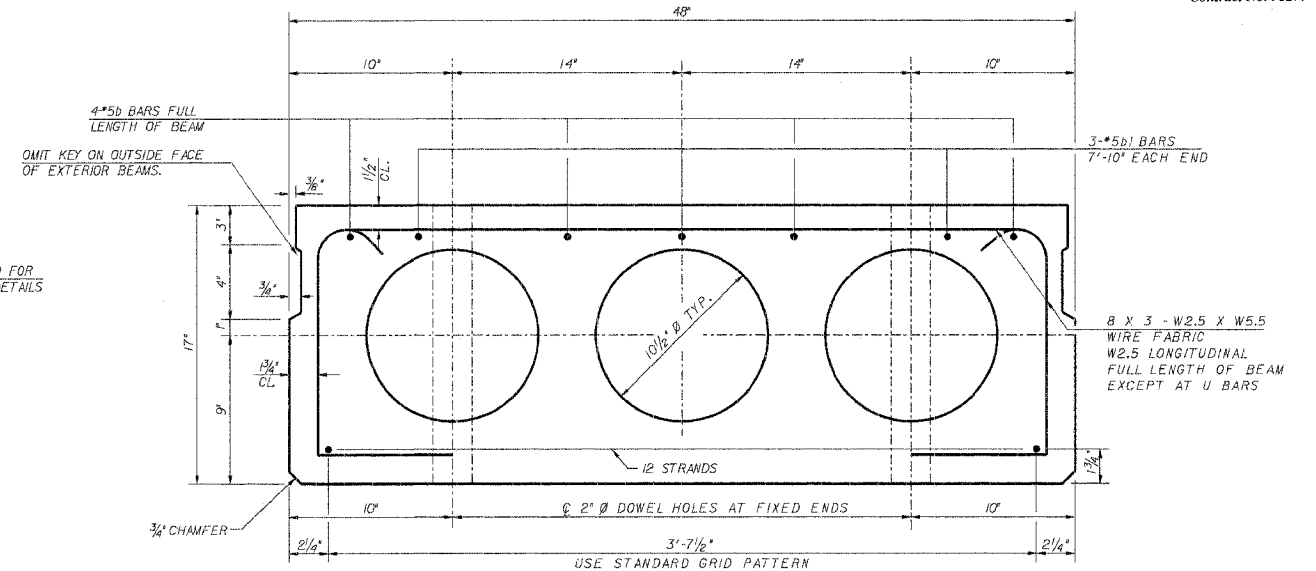
THE INITIAL PRESTRESSING FORCE APPLIED TO EACH STRAND SHALL BE THE SAME AS FOR THE STRESS RELIEVED STRANDS (28,900 LBS.)

RAIL POST ANCHOR DEVICES SHALL BE CAST INTO OUTSIDE BEAM AS ELSEWHERE SPECIFIED

REQUIRED RELEASE STRENGTH, 1% OF, SHALL BE 4,300 PSI

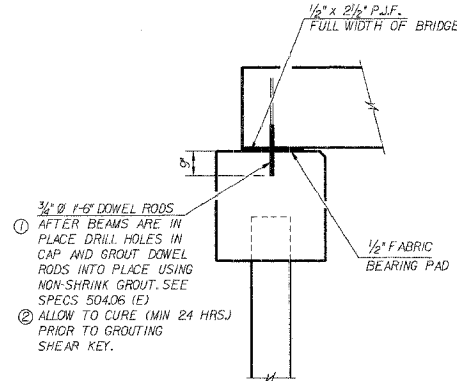


**SECTION AT PIER**

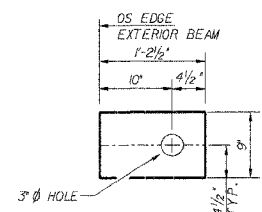


**TYPICAL SECTION**

12-NO 7 WIRE 1/2" Ø STRANDS STRESSED TO 28,900 POUNDS  
12 STRANDS 1 3/4" UP

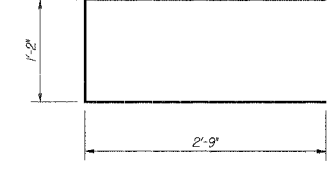


**SECTION AT ABUTMENT**

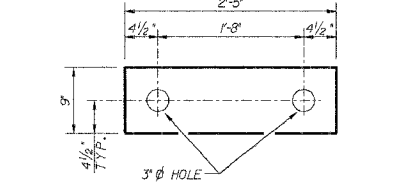


**1/2" FABRIC BEARING PAD**

EXTERIOR (4 REQ'D PER SPAN)



**U BAR**

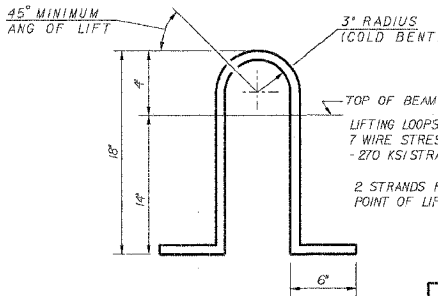


**1/2" FABRIC BEARING PAD**

INTERIOR (12 REQ'D PER SPAN)

**BILL OF MATERIAL**

BOTH SPANS			
ITEM	UNIT	QUANTITY	
PRECAST PRESTRESSED CONCRETE			
DECK BEAMS (17" DEPTH)	SO. FT.	2018	



**LIFTING LOOP DETAIL**

APPROVED ALTERNATE MAY BE SUBSTITUTED FOR ABOVE

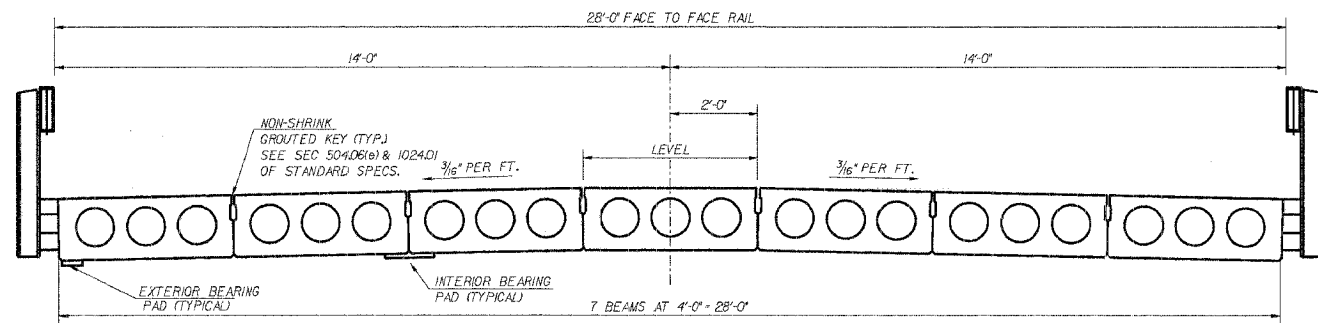
**SUPERSTRUCTURE DETAILS END SPANS**

SEC. 98-03/21-00-BR  
EAST OAKLAND TOWNSHIP  
COLES COUNTY

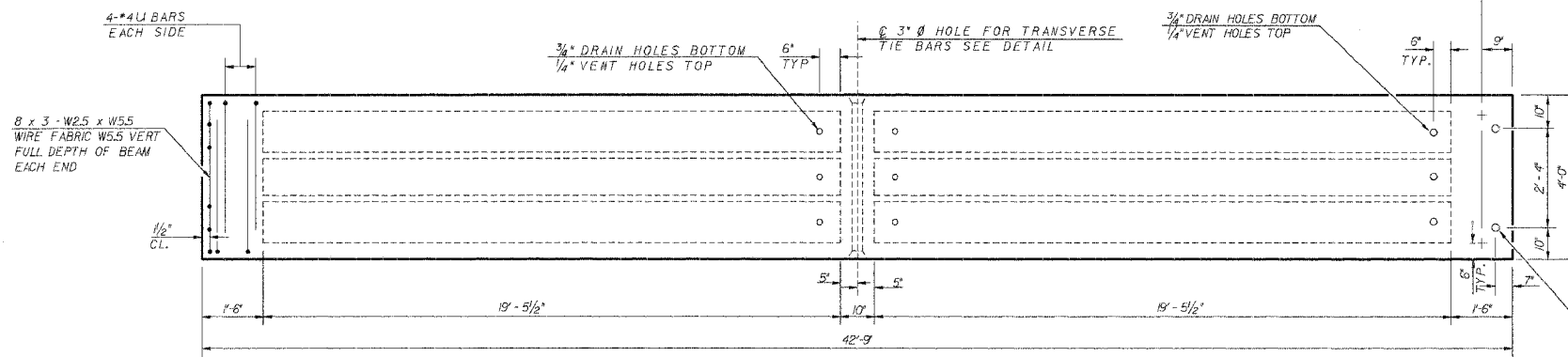
**McCLINTOCK**  
CIVIL ENGINEERING SERVICE  
404 SWAN AVENUE, PARSIPpany, NJ 07944  
PHONE (201) 466-6100

DRN. R.T.	DATE 9/23/02	SHEET 5 OF 15
C.K.	SCALE	
APPR.		
		JOB NO. 3137-454-99

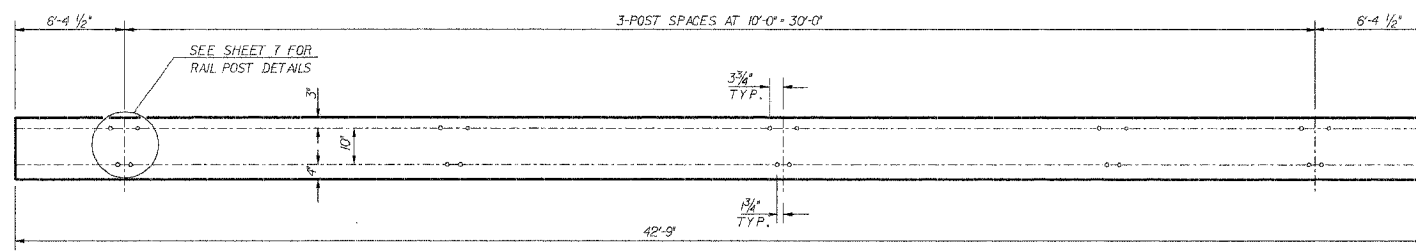




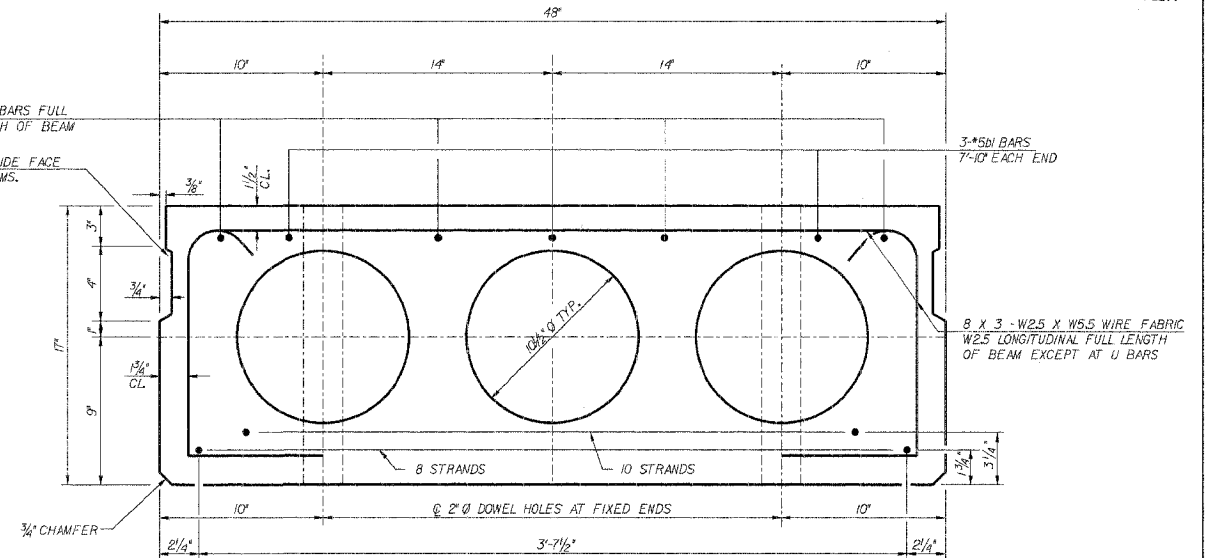
**CROSS SECTION**



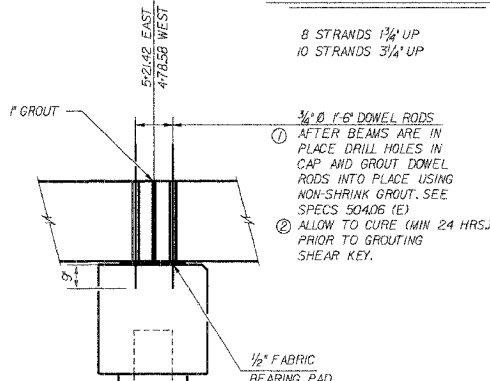
**TYPICAL PLAN OF BEAMS**



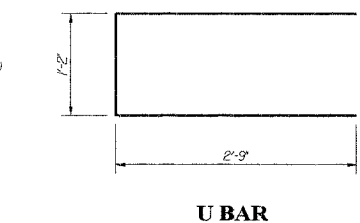
**ELEVATION OF OUTSIDE BEAMS**



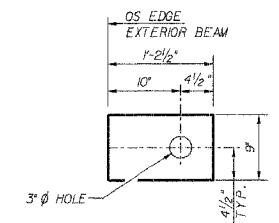
**TYPICAL SECTION**



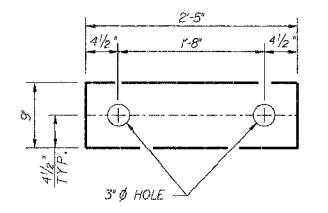
**SECTION AT PIER**



**U BAR**



**1/2" FABRIC BEARING PAD**



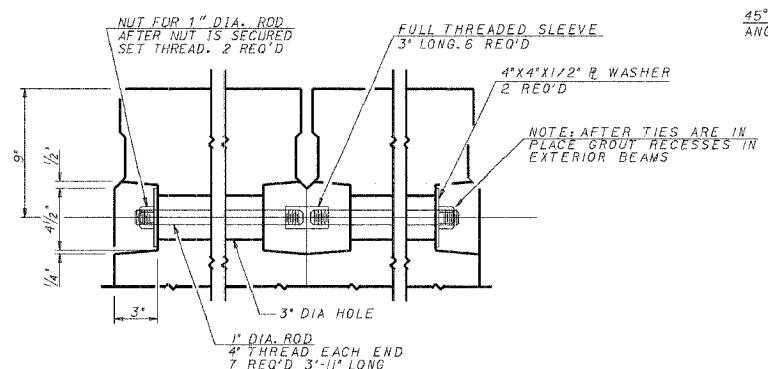
**1/2" FABRIC BEARING PAD**

INTERIOR (1/2 REQ'D) PER SPAN

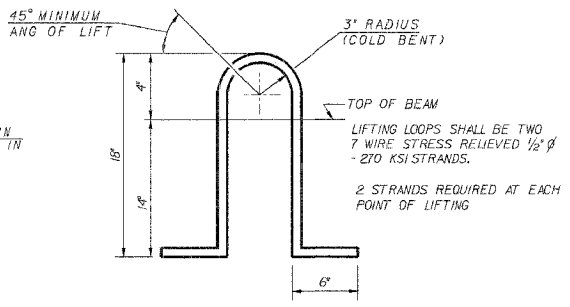
EXTERIOR (4 REQ'D) PER SPAN

**BILL OF MATERIAL**

ITEM	UNIT	QUANTITY
PRECAST PRESTRESSED CONCRETE		
IDECK BEAMS (17" DEPTH)	SQ.FT.	197



**TRANSVERSE TIE BAR DETAIL**



**LIFTING LOOP DETAIL**

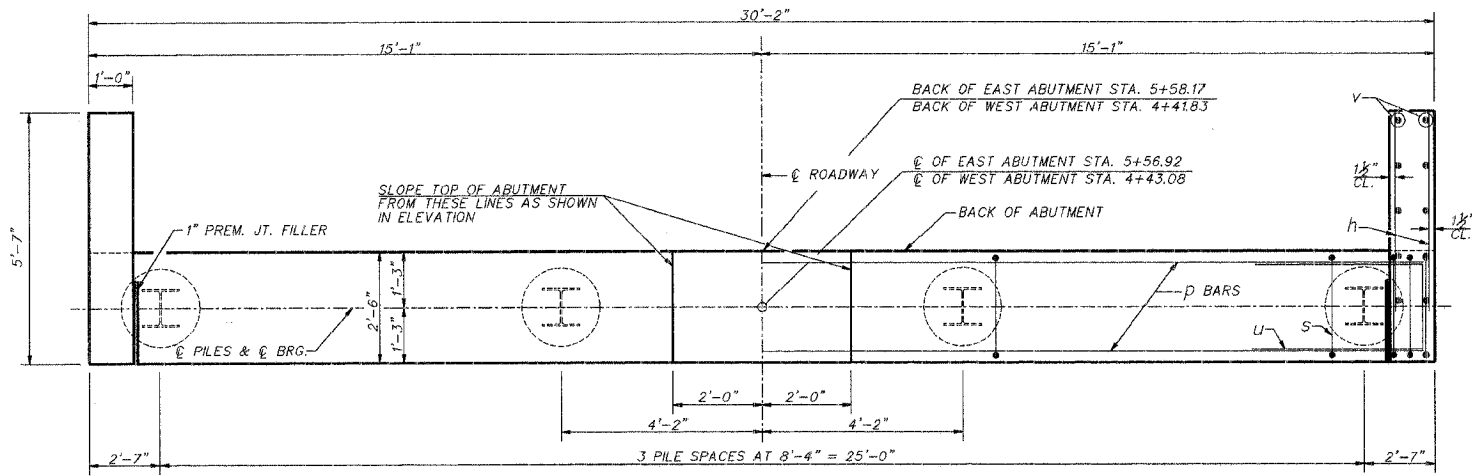
APPROVED ALTERNATIVE MAY BE SUBSTITUTED FOR ABOVE

PRESTRESSING STEEL SHALL BE NON-GALVANIZED HIGH STRENGTH, STRESS-RELIEVED 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 1/2" DIAMETER, 6x25 CLASS WIRE ROPE WITH FIBER CORE AND SHALL HAVE A MINIMUM ULTIMATE TENSILE STRENGTH OF 21,000 LBS. OR 2-1/2" - 270 KSI STRANDS, AS SHOWN.  
 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.  
 REINFORCEMENT BARS SHALL CONFORM TO 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 1/2" FABRIC ADJUSTING SHIMS OF THE DIMENSIONS OF THE EXTERIOR BEARING PAD SHALL BE PROVIDED FOR EACH BEARING.  
 AN EQUAL SUBSTITUTION OF THE LOW-RELAXATION STRANDS FOR THE STRESS-RELIEVED STRANDS WILL BE PERMITTED.  
 A CALCIUM NITRITE CORROSION INHIBITOR, AS COVERED IN THE SPECIAL PROVISIONS SHALL BE USED IN THE CONCRETE FOR PRECAST PRESTRESSED CONCRETE DECK BEAMS.  
 THE INITIAL PRESTRESSING FORCE APPLIED TO EACH STRAND SHALL BE THE SAME AS FOR THE STRESS RELIEVED STRANDS (28,900 LBS.).  
 RAIL POST ANCHOR DEVICES SHALL BE CAST INTO OUTSIDE BEAM AS ELSEWHERE SPECIFIED  
 REQUIRED RELEASE STRENGTH, F'ci, SHALL BE 4,700

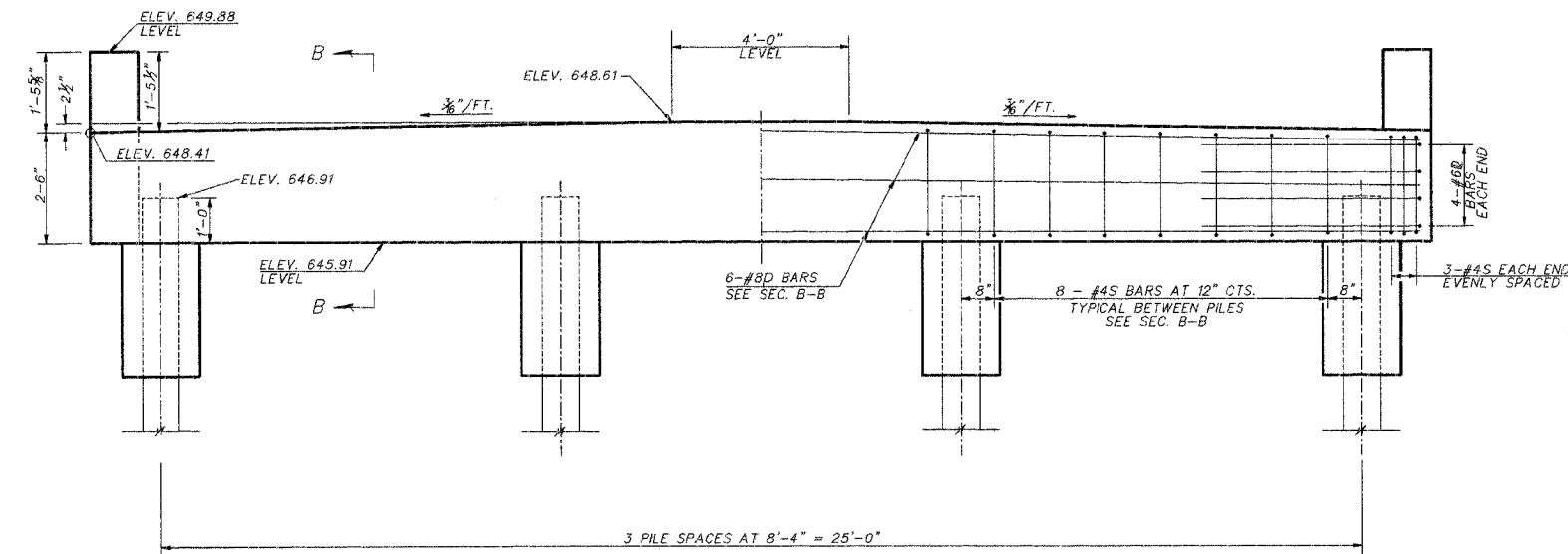
**SUPERSTRUCTURE DETAILS MIDDLE SPAN**  
 SEC. 98-03121-00-BR  
 EAST OAKLAND TOWNSHIP  
 COLES COUNTY

**McCLINTOCK**  
 CIVIL ENGINEERING SERVICE  
 404 SWAN AVENUE, PARSIPpany, NJ 07944  
 PHONE (201) 466-6100

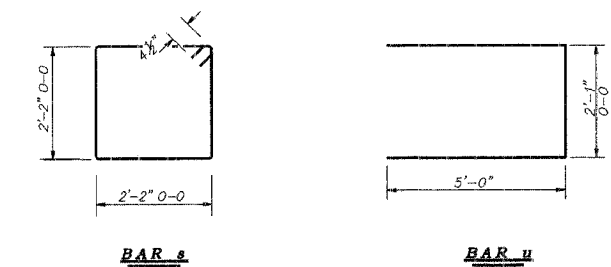
DRN. R.T. DATE 9/24/02 SHEET 6 OF 15  
 C.K. SCALE JOB NO. 3137-454-99  
 APPR.



**PLAN**



**ELEVATION**



**BAR s**

**BAR u**

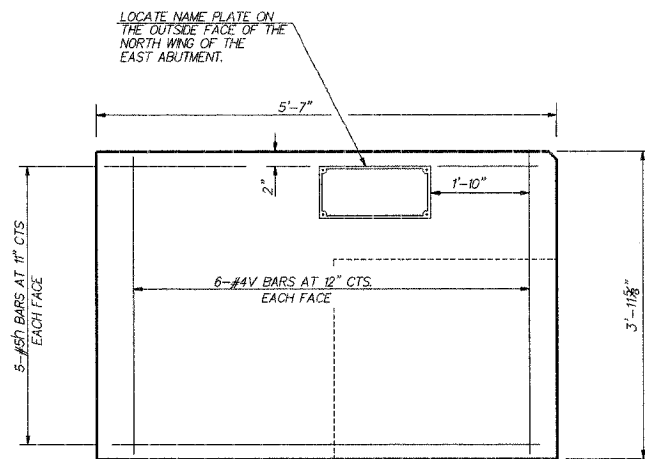
**PILE DATA**

**BOTH ABUTMENTS**

TYPE	HP10 x 57
NO. REQUIRED	8 *
DESIGN CAPACITY	30 TON/PILE**
EST. LENGTH	34 FT. FOR WEST ABUTMENT
EST. LENGTH	44 FT. FOR EAST ABUTMENT

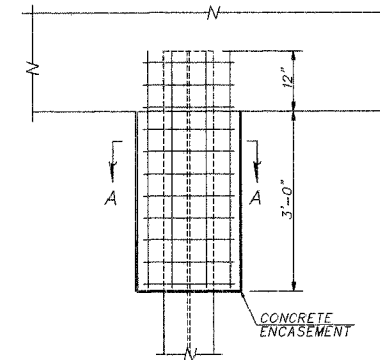
\*INCLUDES ONE TEST PILE TO BE DRIVEN AT A PERMANENT LOCATION IN THE EAST ABUTMENT

\*\*DRIVE TO 45 (TON/PILE)

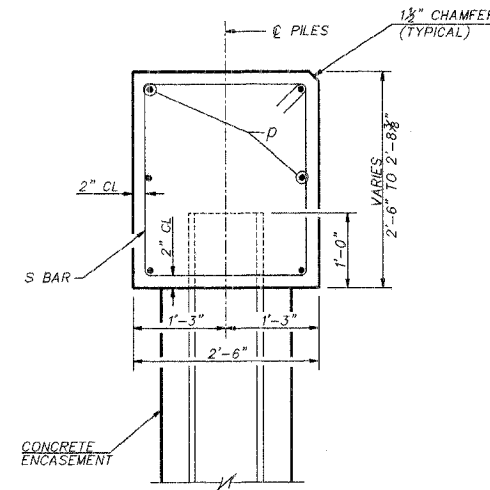


**WINGWALL ELEVATION**

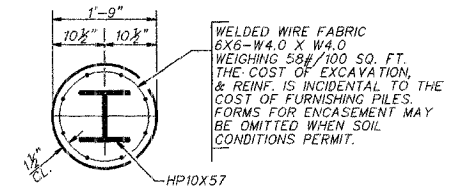
TIE 3-#5h BARS & 2-#4V EACH FACE IN ABUTMENT BARREL FOR WINGWALL TO TIE IN WITH.



**PILE ENCASEMENT DETAIL**



**SECTION B - B**  
SECTION THROUGH ABUTMENT



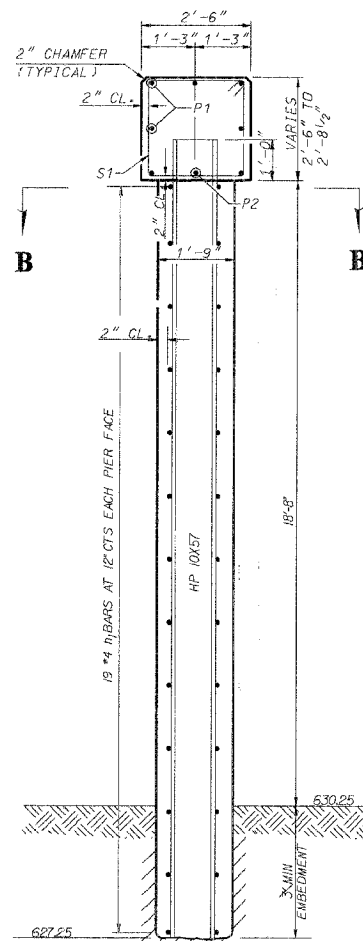
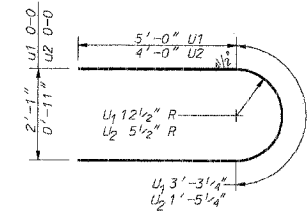
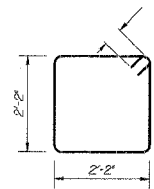
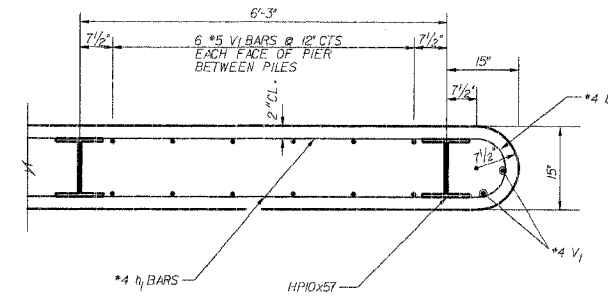
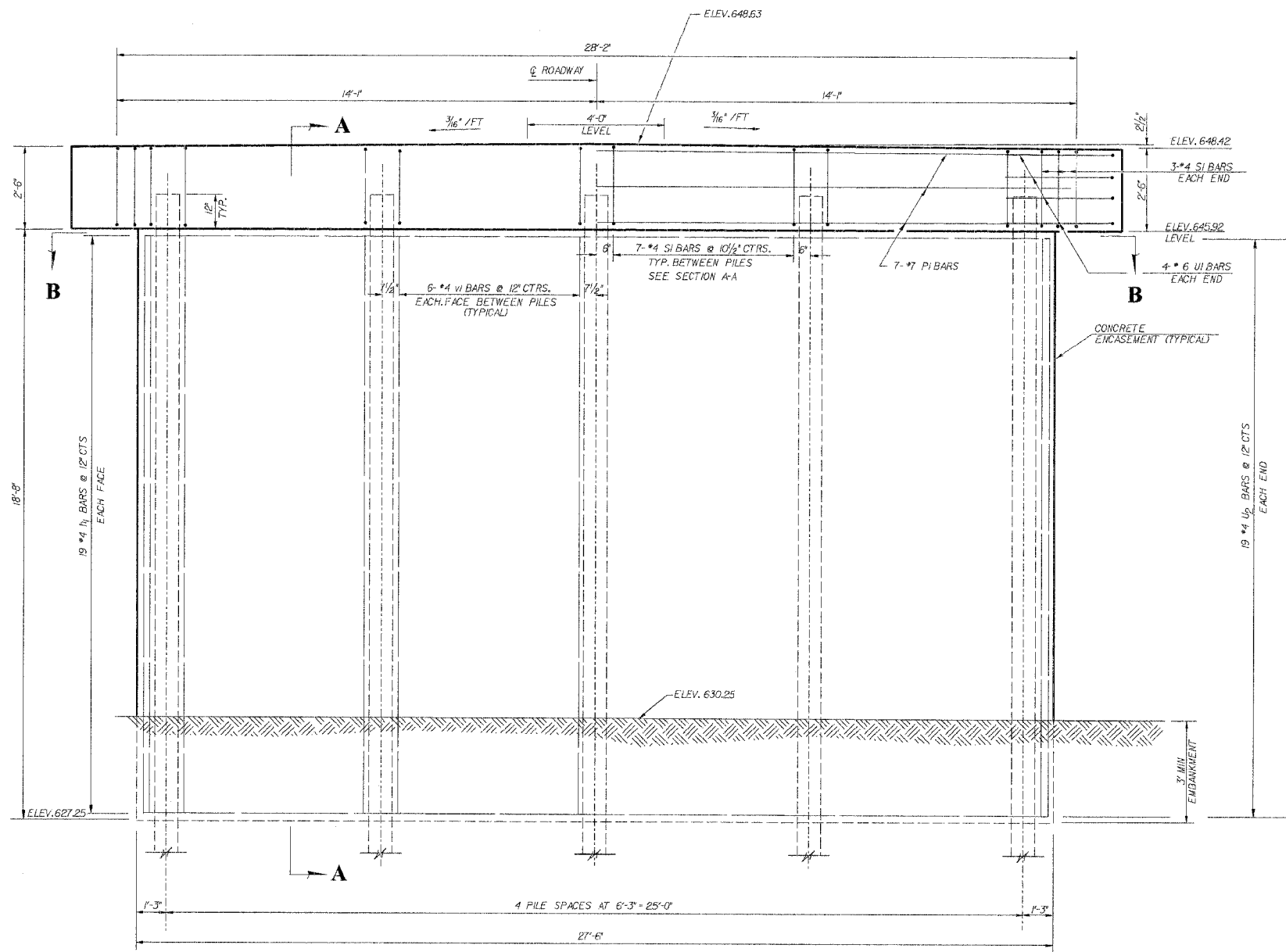
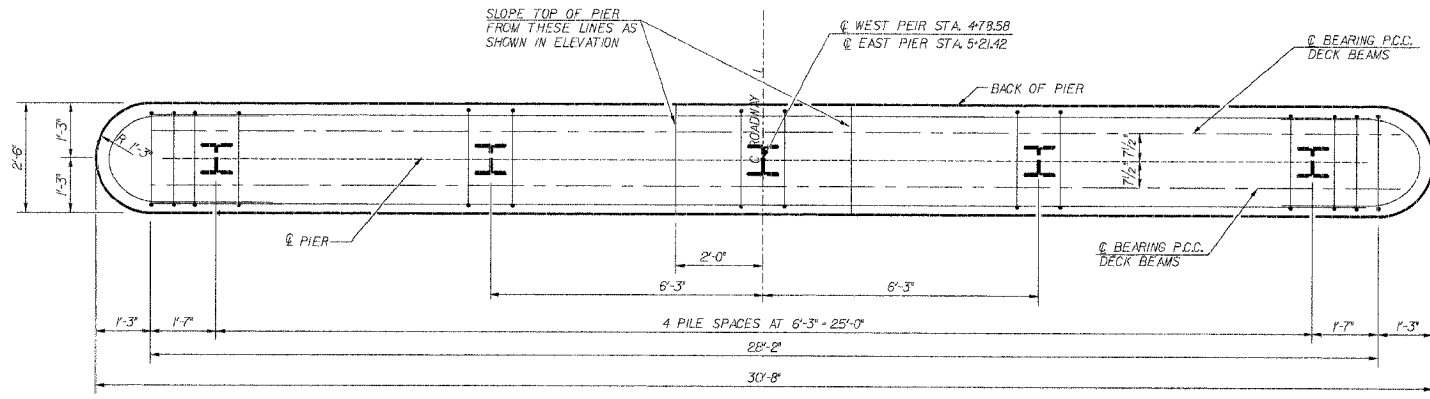
**SECTION A - A**

**BILL OF MATERIAL**  
TWO ABUTMENTS

BAR	NO.	SIZE	LENGTH	SHAPE
h	40	#5	5'-3"	—
p	12	#8	29'-10"	—
s	60	#4	9'-5"	□
u	16	#6	12'-1"	□
v	48	#4	3'-8"	—
CONCRETE STRUCTURES			CU. YD.	17.0
REINFORCEMENT BARS			POUND	1960
FUR. STEEL PILES HP10x57			FOOT	268
TEST PILE STEEL HP10x57			EACH	1
DRIVING STEEL PILES			FOOT	268
CONCRETE ENCASEMENT			CU. YD.	2.1

NOTES: THE WINGS SHALL BE POURED AFTER THE DECK BEAMS ARE IN PLACE. ALL EXPOSED EDGES SHALL BE CHAMFERED 3/8" UNLESS OTHERWISE NOTED.

<b>ABUTMENT DETAILS</b> SECTION 98-03121-00-BR EAST OAKLAND TOWNSHIP COLES COUNTY		 <b>McCLINTOCK</b> CIVIL ENGINEERING SERVICE 404 SHAW AVE. PARSIPpany, NJ 07654 PHONE (201) 466-0110
DRN: R.T. CK: APPR:	DATE: 8/13/02 SCALE: SHEET 7 OF 15 JOB NO. 3137-454-99	



**PILE DATA**

TYPE	STEEL HP10x57
NO. REQUIRED	10 *
WEST PIER CAPACITY	44.3 TON/PILE DRIVEN TO 66.5 TON BEARING
EAST PIER CAPACITY	44.3 TON/PILE DRIVEN TO 66.5 TON BEARING
EST. LENGTH FOR WEST PIER	50'
EST. LENGTH FOR EAST PIER	45'

\* INCLUDES ONE TEST PILE TO BE DRIVEN AT A PERMANENT LOCATION IN WEST PIER

**BILL OF MATERIALS**

TWO PIERS				
BAR	NO.	SIZE	LENGTH	SHAPE
h1	76	#4	26'-0"	—
p1	14	#7	28'-2"	—
p2	8	#7	5'-8"	—
s1	68	#4	9'-5"	□
u1	16	#6	13'-3"	U
u2	76	#4	9'-5"	U
v1	108	#5	18'-4"	—
CONCRETE STRUCTURES			CU. YD.	14.5
REINFORCEMENT BARS			POUND	5510
TEST PILE - ST. HP10x57			EACH	1
FUR STEEL PILES HP10x57			FOOT	405
DRIVE STEEL PILES			FOOT	405
CONCRETE ENCASEMENT			CU. YD.	47.1

NOTE: ALL EXPOSED EDGES SHALL HAVE STANDARD 3/4" CHAMFER

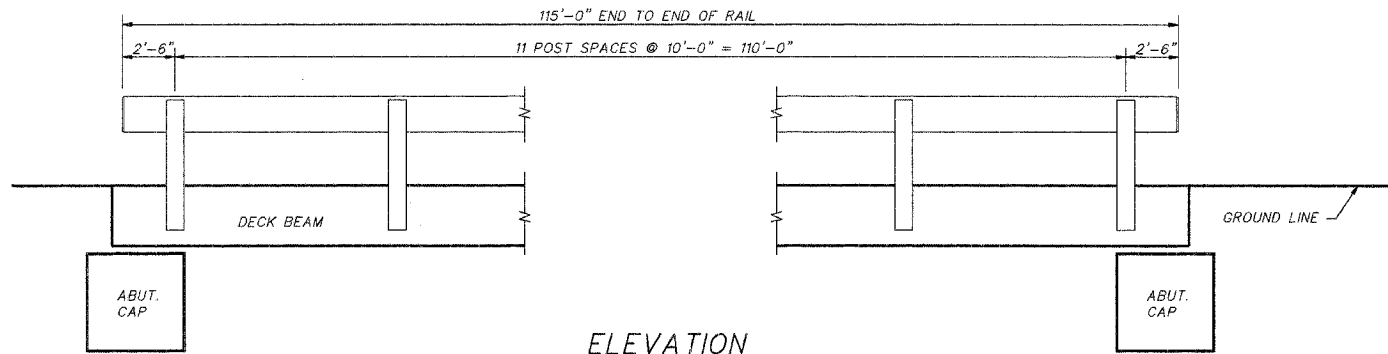
**PIER DETAILS**

SEC. 98-03121-00-BR  
EAST OAKLAND TOWNSHIP  
COLES COUNTY

**McCLINTOCK**  
CIVIL ENGINEERING SERVICE  
404 SHAW AVENUE, PARIS, ILL. 61944  
PHONE (217) 466-6110

DRW. R.T. DATE 10/27/02 SHEET 8 OF 15  
CK. SCALE  
APPR. JOB NO. 3137-454-99





**MATERIAL REQUIREMENTS**

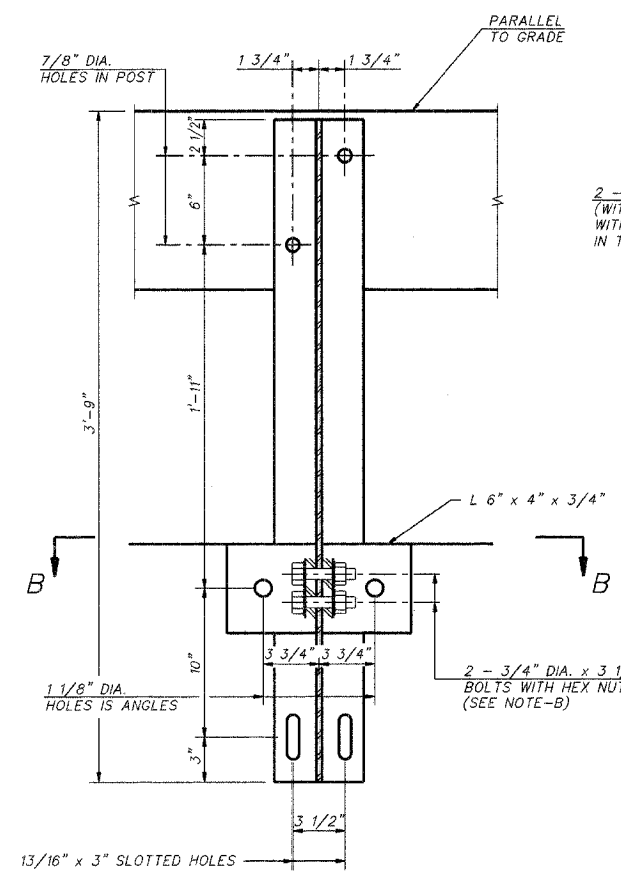
HOLLOW STRUCTURAL STEEL TUBING SHALL CONFORM TO THE REQUIREMENTS OF A.S.T.M. DESIGNATION A-500 GRADE B STRUCTURAL STEEL TUBING.  
 ALL OTHER STEEL SHAPES AND PLATES SHALL CONFORM TO THE REQUIREMENTS OF A.A.S.H.T.O. M-183 EXCEPT POSTS AND ANGLES SHALL CONFORM TO A.A.S.H.T.O. M-223, GRADE 50.  
 BOLTS, CAP SCREWS AND NUTS SHALL CONFORM TO THE REQUIREMENTS OF A.S.T.M. DESIGNATION A-307 EXCEPT FOR HIGH STRENGTH BOLTS, NUTS AND WASHERS NOTED WHICH SHALL CONFORM TO A.A.S.H.T.O. M-164.  
 ALL BOLTS, NUTS, CAP SCREWS, WASHERS AND LOCK WASHERS SHALL BE GALVANIZED IN ACCORDANCE WITH A.A.S.H.T.O. M-232.  
 ALL POST, RAILING, RAIL SPLICES, ANCHOR DEVICES AND ANGLES SHALL BE GALVANIZED AFTER SHOP FABRICATION IN ACCORDANCE WITH A.A.S.H.T.O. M-111 AND A.S.T.M. A-385. GALVANIZED RAIL SHALL NOT BE PAINTED.

**INSTALLATION NOTES**

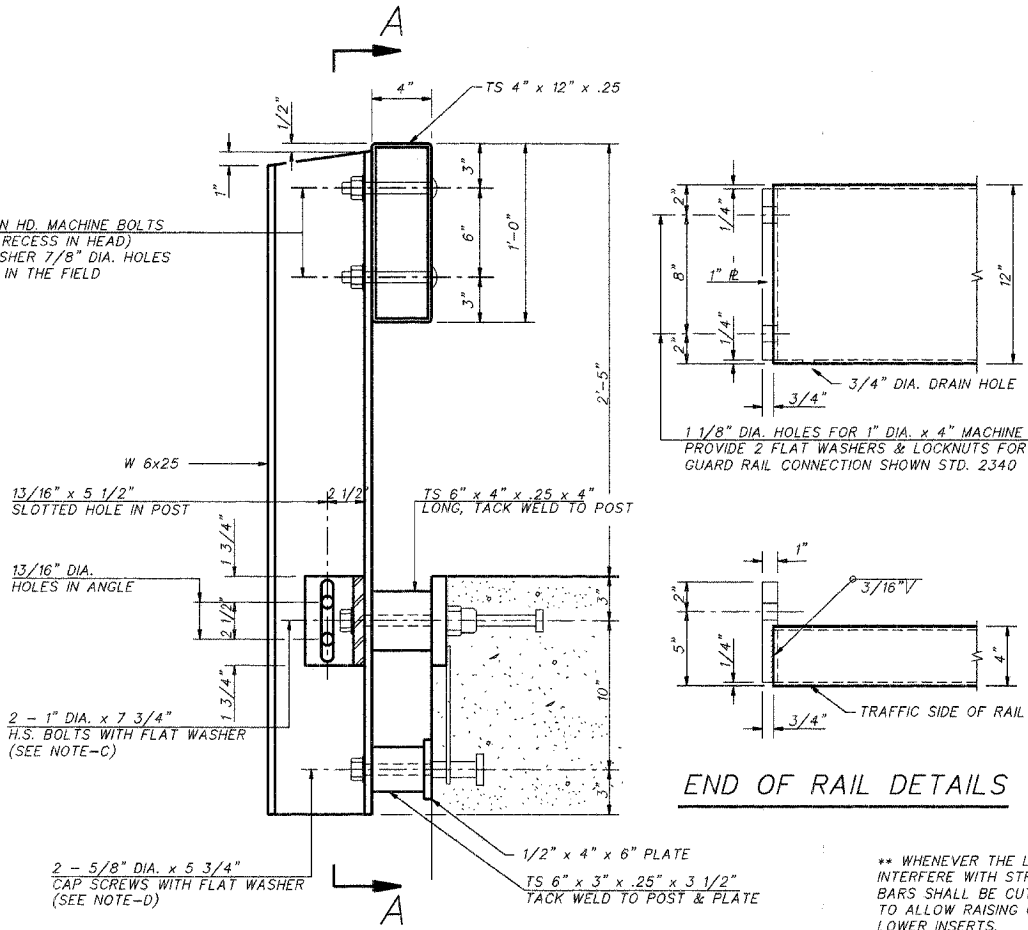
- (A) FOR MULTI-SPAN BRIDGES, SUFFICIENT 1/4" x 6" x 1'-2" GALVANIZED STEEL SHIMS SHALL BE PROVIDED TO ALIGN RAIL BETWEEN ADJACENT SPANS. COST INCIDENTAL TO STEEL RAILING. ALL FIELD DRILLED HOLES SHALL BE COATED WITH AN APPROVED ZINC RICH PAINT BEFORE ERECTION. THE 1/2" x 4" x 6" PLATES THAT COME IN CONTACT WITH CONCRETE SHALL RECEIVE TWO COATS OF ASPHALT PAINT CONFORMING TO SECTION 760.07 TYPE II OR PLACE 1/8" FABRIC BEARING PADS BETWEEN THE PLATES AND CONCRETE.
- (B) THE 3/4" DIA. HIGH STRENGTH BOLTS USED TO CONNECT THE 6"x4"x3/4" ANGLES TO THE POST SHALL BE TIGHTENED IN ACCORDANCE WITH ARTICLE 505.04 (f)(3) OF THE STANDARD SPECIFICATIONS.
- (C) THE 1" DIA. HIGH STRENGTH BOLTS CONNECTING THE ANGLES TO THE CONCRETE SHALL BE TIGHTENED TO A SNUG FIT AND GIVEN AN ADDITIONAL 1/8 TURN. THE 5/8" DIA. CAP SCREWS IN BOTTOM OF POSTS SHALL BE TO A SNUG FIT ONLY.
- (D) THE MAXIMUM ALLOWABLE RAIL POST SPACING SHALL BE 10'-9".

**BILL OF MATERIAL**

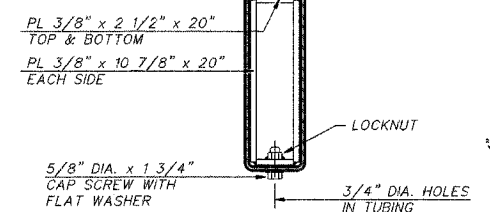
ITEM	UNIT	QUANTITY
STEEL RAILING, TYPE S-1	FOOT	230



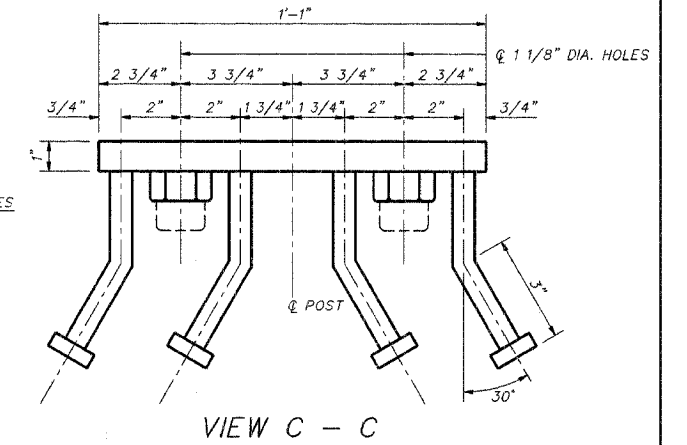
2 - 3/4" DIA. x 6" BUTTON HD. MACHINE BOLTS (WITH SLOT OR APPROVED RECESS IN HEAD) WITH LOCKNUT & FLAT WASHER 7/8" DIA. HOLES IN TUBING MAY BE DRILLED IN THE FIELD



1 1/8" DIA. HOLES FOR 1" DIA. x 4" MACHINE BOLTS PROVIDE 2 FLAT WASHERS & LOCKNUTS FOR GUARD RAIL CONNECTION SHOWN STD. 2340

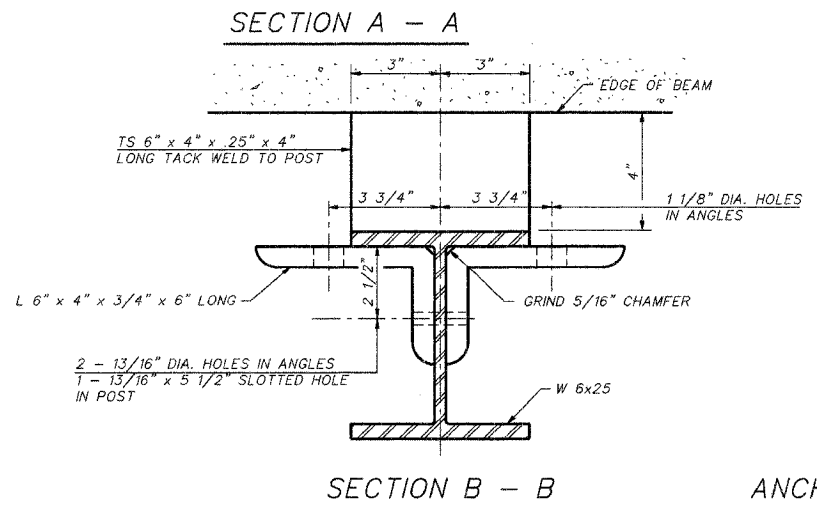


**SECTION AT RAIL SPLICE**

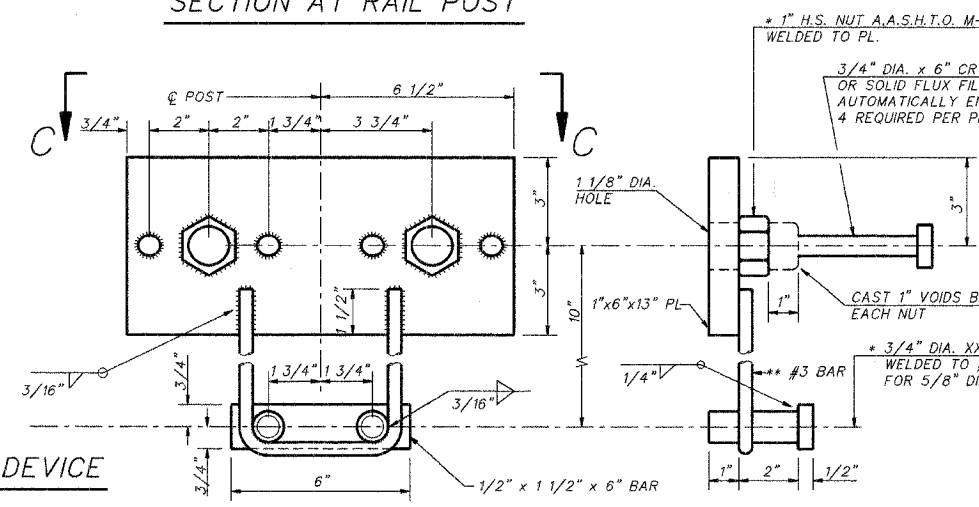


**END OF RAIL DETAILS**

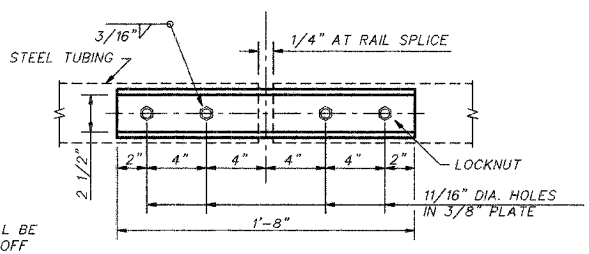
\*\* WHENEVER THE LOWER INSERT ASSEMBLIES INTERFERE WITH STRAND LOCATIONS, THE #3 BARS SHALL BE CUT AND ADJUSTED IN ORDER TO ALLOW RAISING OR LOWERING OF THE LOWER INSERTS. MAXIMUM ADJUSTMENT NOT TO EXCEED 1/2"



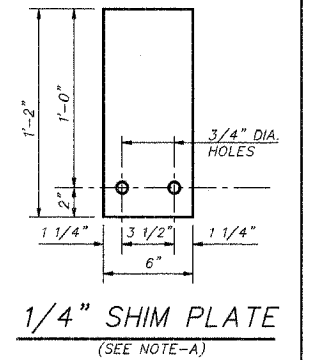
**ANCHOR DEVICE**



\* 1" H.S. NUT A.A.S.H.T.O. M-164 WELDED TO PL.  
 3/4" DIA. x 6" OR 1020 STEEL GRANULAR OR SOLID FLUX FILLED HEADED STUDS AUTOMATICALLY END WELDED. 4 REQUIRED PER PL.  
 \* 3/4" DIA. XX PIPE - 3" LONG WELDED TO #3 BAR AND TAP FOR 5/8" DIA. CAP SCREW



**PLAN - BOTTOM SPLICE PL. TYPICAL**

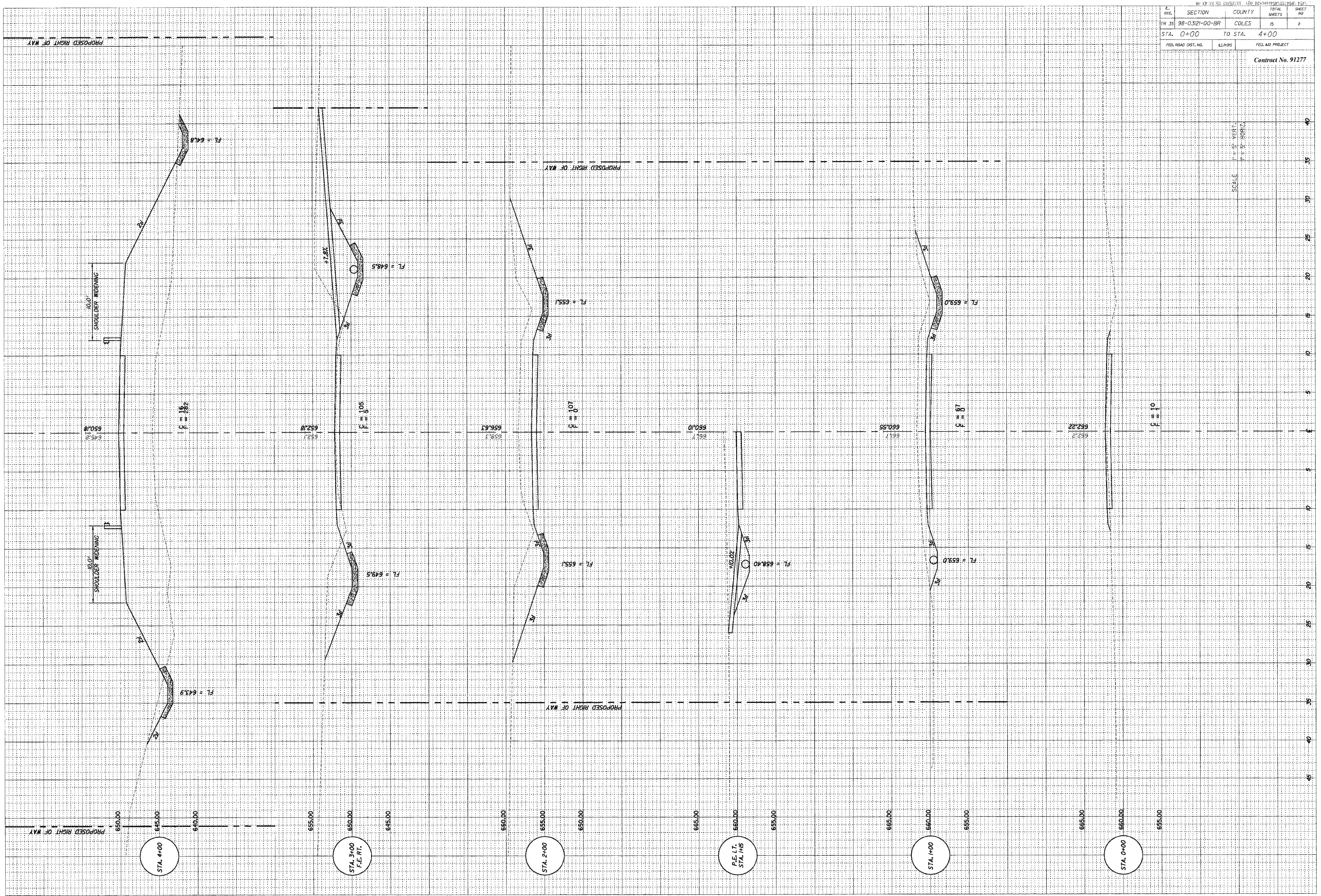


**1/4" SHIM PLATE (SEE NOTE-A)**

STEEL RAILING, TYPE S-1	<b>McCLINTOCK</b> CIVIL ENGINEERING SERVICE 404 SHAW AVENUE, PARSIPpany, NJ 07654 PHONE (201) 466-8100
SEC. 98-03121-00-BR EAST OAKLAND TOWNSHIP COLES COUNTY	DRN. R.T. DATE 9/23/02 SHEET 9 OF 15 CK SCALE APPR. JOB NO. 3137-454-99



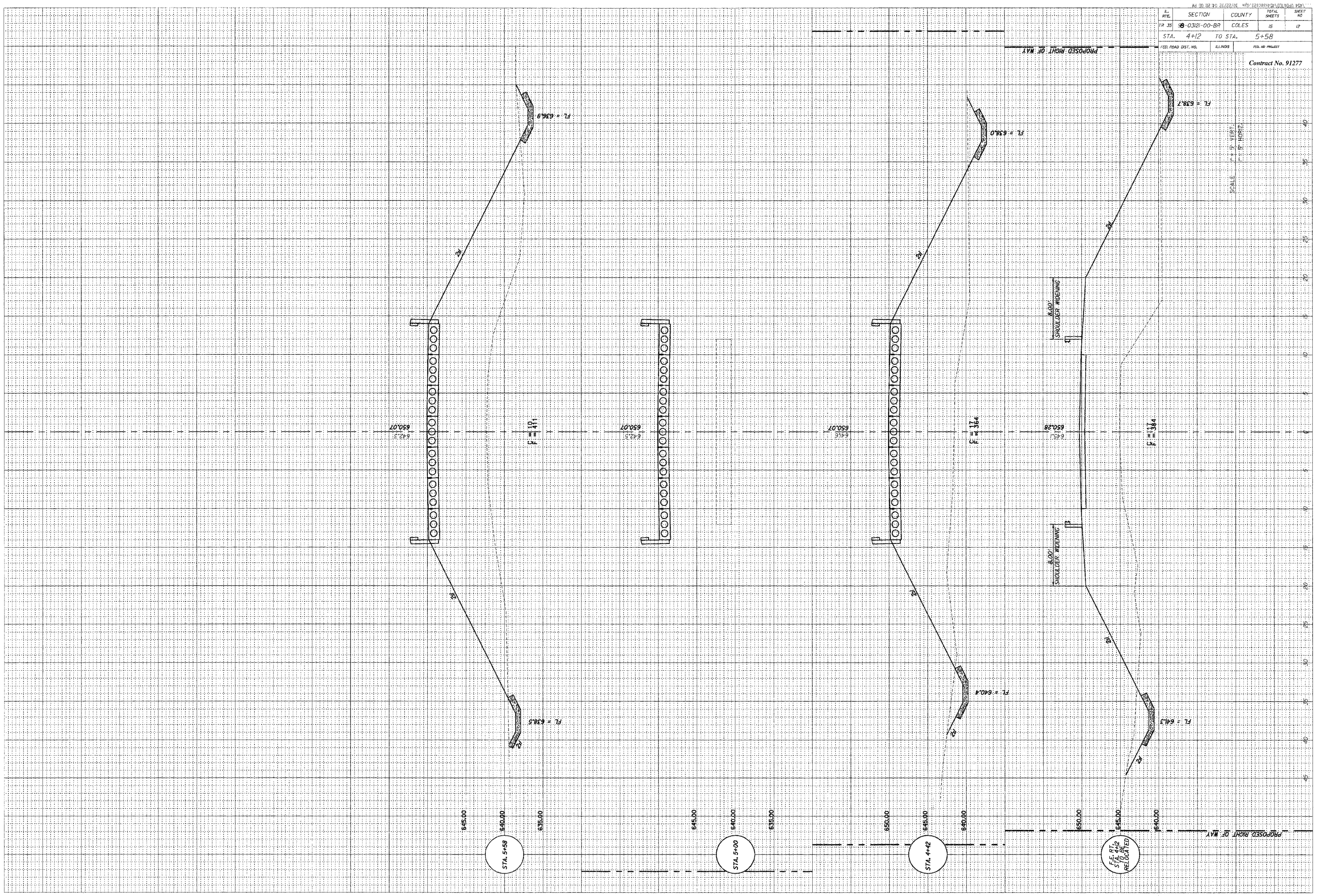
SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
38-0321-00-BR	COLES	15	7
STA. 0+00 TO STA. 4+00		FED. ROAD DIST. NO.	
FED. ROAD DIST. NO.		FED. ROAD PROJECT	
Contract No. 91277			





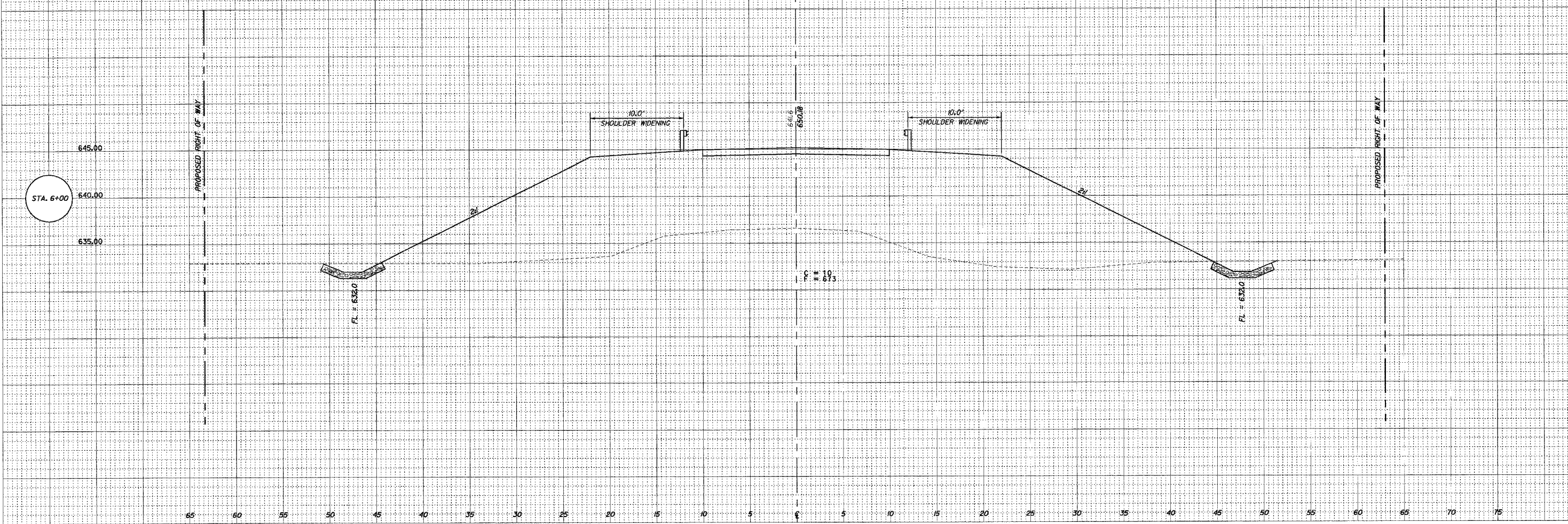
DATE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
10/22/13	03/21-00-BR	COLES	15	12
STA. 4+12	TO STA. 5+58			
FED. ROAD DIST. NO.		ILLINOIS		FED. AID PROJECT

Contract No. 91277



SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
98-03(2)-00-BR	COLES	05	03
STA. 6+00 TO STA.			
FED. ROAD DIST. NO.	R.L. NOS.	FED. AID PROJECT	
		Contract No. 91277	

SCALE: 1" = 20' VERT.  
1" = 50' HORIZ.



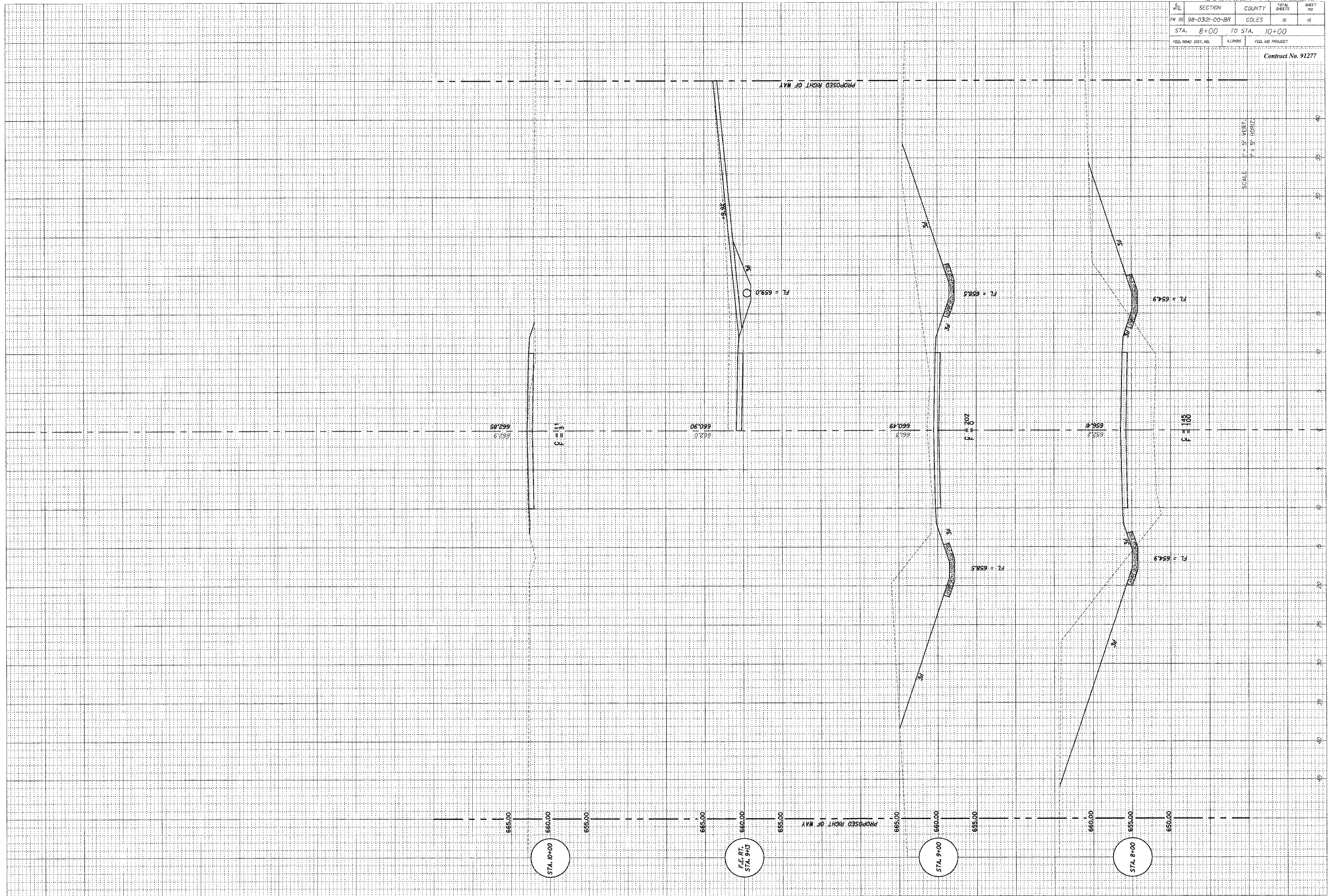






DATE	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 35	98-03(2)-00-BR	COLES	15	15
STA. 8+00		TO STA. 10+00		
FED. ROAD DIST. NO.	ELLINGS	FED. AID PROJECT		

Contract No. 91277



SCALE  
1" = 20' VERT.  
1" = 50' HORIZ.

STA. 10+00

F.E. RT.  
STA. 9+13

STA. 9+00

STA. 8+00

PROPOSED RIGHT OF WAY

PROPOSED RIGHT OF WAY