

04-24-2015 LETTING ITEM 155

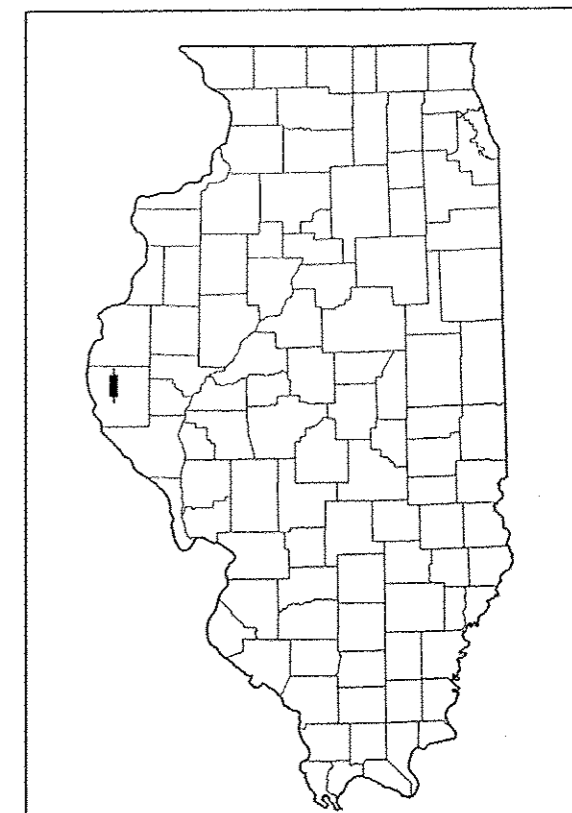
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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
**PLANS FOR PROPOSED
SURFACE TRANSPORTATION / BRIDGE PROGRAM**
HANCOCK COUNTY
WYTHE ROAD DISTRICT
T.R. 88
SECTION 12-25119-00-BR
JOB NO. C-96-204-14
PROJECT NO. BROS-0067(151)

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 88	12-25119-00-BR	HANCOCK	22	1
ROAD DISTRICT		ILLINOIS	WYTHE TOWNSHIP	

CONTRACT: 93633



LOCATION OF SECTION INDICATED THUS: [arrow pointing to Hancock County]

HIGHWAY STANDARDS

- 280001-07.....TEMPORARY EROSION CONTROL SYSTEMS
- 515001-03.....NAME PLATES FOR BRIDGES
- 630301-06.....SHOULDER WIDENING FOR TYPE 1 (SPECIAL) GUARDRAIL TERMINALS
- 635006-03.....REFLECTOR AND TERMINAL MARKER PLACEMENT
- 701901-04.....TRAFFIC CONTROL DEVICES
- BLR 21-9.....TRAFFIC CONTROL DEVICES RURAL LOCAL HWYS.
- BLR 26-3.....STEEL PLATE BEAM GUARD RAIL (29.0" HT.)
- BLR 27-1.....TRAFFIC BARRIER TERMINAL, TYPE 5A

JULIE
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123

NONE IDENTIFIED IN PROJECT LIMITS

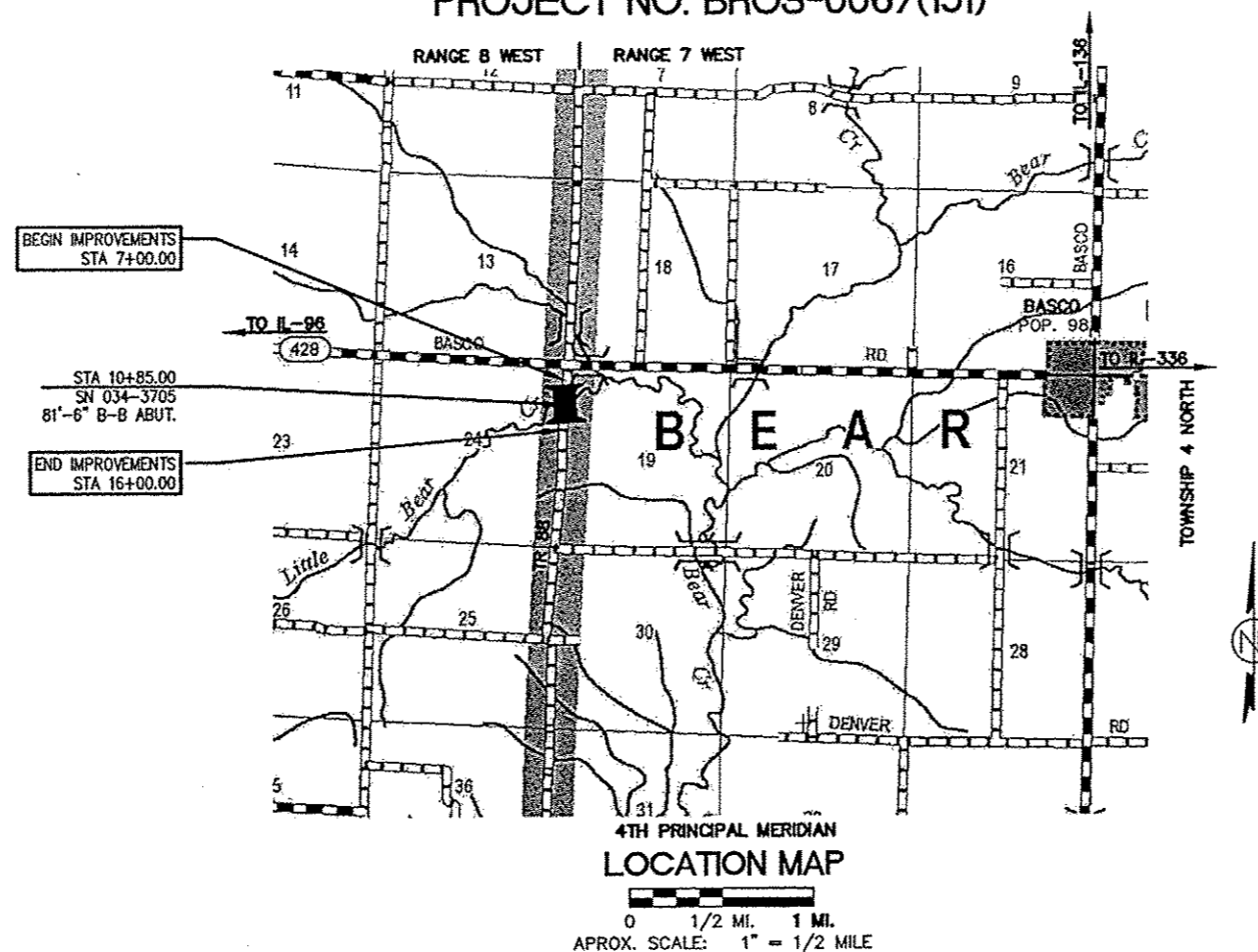
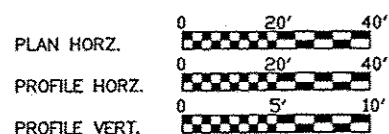
PROJECT DESCRIPTION

COMPLETE REPLACEMENT OF EXISTING STRUCTURE.

EXISTING STRUCTURE SN 034-3704 IS A CLOSED ABUTMENT 16'-0" WIDE SINGLE SPAN (30'-0" B-B ABUTMENT) WITH 10" I-BEAMS AND A CORRUGATED STEEL PLATE DECK WITH HOT-MIX ASPHALT SURFACE.

PROPOSED STRUCTURE SN 034-3705 WILL BE AN OPEN ABUTMENT, RIPRAP SLOPE WALL, 27'-0" WIDE SINGLE SPAN (81'-6" B-B ABUTMENT), 33" DEEP PRECAST PRE-STRESSED CONCRETE DECK BEAMS, NO WEARING SURFACE AND ASSOCIATED WORK.

SCALES



GROSS & NET LENGTH OF SECTION = 900.00 FT. = 0.17 MI.
HIGHWAY CLASS: LOCAL ROAD (NON-URBAN)
DESIGN GUIDELINES: RURAL TWO-LANE LOCAL ROAD
DESIGN SPEED: 30 MPH
CURRENT ADT: 10 (2012 ADT)

PREPARED BY:

PSBA POEPPING, STONE, BACH & ASSOCIATES, INC.
ARCHITECTS ENGINEERS PLANNERS SURVEYORS
400 S 54TH ST, P.O. BOX 709 - QUINCY, IL 62306 - PHONE 217/223-4605

APPROVED	<i>Elger Berry</i> 2/10	2015
	COUNTY ENGINEER	
APPROVED	<i>Michael P. Smith</i> 2/10	2015
	ROAD DISTRICT COMMISSIONER	
PASSED	<i>Justin Smith</i> 2/11	2015
	DISTRICT SIX ENGINEER LOCAL ROADS & STREETS	
PASSED	<i>Ken Chamberlain</i> 2-11	2015
	DISTRICT SIX ENGINEER CONSTRUCTION	
PASSED RELEASING FOR BID BASED ON LIMITED REVIEW	<i>Roger J. Dvorak</i> 2/11	2015
	DEPUTY DIRECTOR OF HIGHWAYS REGION FOUR ENGINEER	
	STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION	



Doug B. Seeber 2-5-15
DOUGLAS B. SEEBER
062-040210
EXP. DATE 11/30/15

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 88	12-25119-00-BR	HANCOCK	22	2
ROAD DISTRICT		ILLINOIS	WYTHE TOWNSHIP	

CONTRACT: 93633

GENERAL NOTES

- ALL EXISTING ROAD SIGNS THAT CONFLICT WITH THE PROPOSED WORK ZONE TRAFFIC CONTROL MEASURES SHALL BE REMOVED OR COVERED AS DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED AS PART OF THE CONTRACT AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- ALL EROSION PROTECTION TO BE PLACED AS DIRECTED BY THE ENGINEER.
- ALL WASTE OR UNDESIRABLE MATERIAL AS IDENTIFIED BY THE ENGINEER SHALL BE DISPOSED OF OUTSIDE THE LIMITS OF THE RIGHT OF WAY AT NO ADDITIONAL COST TO THE DEPARTMENT.
- THE REMOVAL OF EXISTING FENCE SHALL BE REMOVED AS EARTH EXCAVATION AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- THE REMOVAL OF EXISTING ROADWAY SHALL BE REMOVED AS EARTH EXCAVATION AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- REMOVAL OF EXISTING ENTRANCE CULVERTS SHALL BE CONSIDERED INCIDENTAL TO EARTH EXCAVATION AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- ALL EXISTING PRIVATELY OWNED UTILITIES REQUIRING ADJUSTMENT WILL BE MADE BY THE UTILITY COMPANY INVOLVED. WHERE NO PROVISIONS HAVE BEEN MADE FOR ADJUSTMENTS ON THE PLANS, NO ADDITIONAL COMPENSATION WILL BE ALLOWED DUE TO DELAYS OR INCONVENIENCES CAUSED BY THE SAID UTILITY ADJUSTMENTS.
- THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS REPRESENTS THE BEST KNOWLEDGE OF THE COUNTY. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY LOCATIONS OF UNDERGROUND INSTALLATIONS BEFORE STARTING CONSTRUCTION OPERATIONS. THE CONTRACTOR SHALL INDEMNIFY THE COUNTY, ITS OFFICERS AND EMPLOYEES AGAINST ALL CLAIMS DUE TO DAMAGE TO CORPORATE OR PRIVATE PROPERTY RESULTING FROM HIS CONSTRUCTION OPERATIONS AS DESCRIBED IN ARTICLES 107.2 AND 107.26 OF THE STANDARD SPECIFICATIONS.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO MAKE SURE THAT ANY UTILITY ADJUSTMENTS OR REMOVAL HAS BEEN COMPLETED PRIOR TO BEGINNING WORK.
- WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND PRESERVE PROPERTY MARKERS UNTIL THE OWNER, AN AUTHORIZED SURVEYOR, OR AGENT, HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION.
- ALL ELEVATIONS SHOWN REFER TO AN U.S.G.S. MEAN SEA LEVEL DATUM (NAVD 1988).
- PLAN DIMENSIONS AND DETAILS RELATIVE TO EXISTING PLANS ARE SUBJECT TO NOMINAL CONSTRUCTION VARIATIONS. THE CONTRACTOR SHALL FIELD VERIFY EXISTING DIMENSIONS AND DETAILS AFFECTING NEW CONSTRUCTION AND MAKE NECESSARY APPROVED ADJUSTMENTS PRIOR TO CONSTRUCTION OR ORDERING OF MATERIALS. SUCH VARIATIONS SHALL NOT BE CAUSE FOR ADDITIONAL COMPENSATION FOR A CHANGE IN SCOPE OF THE WORK, HOWEVER, THE CONTRACTOR WILL BE PAID FOR THE QUANTITY ACTUALLY FURNISHED AT THE UNIT PRICE BID FOR THE WORK.

SUMMARY OF QUANTITIES

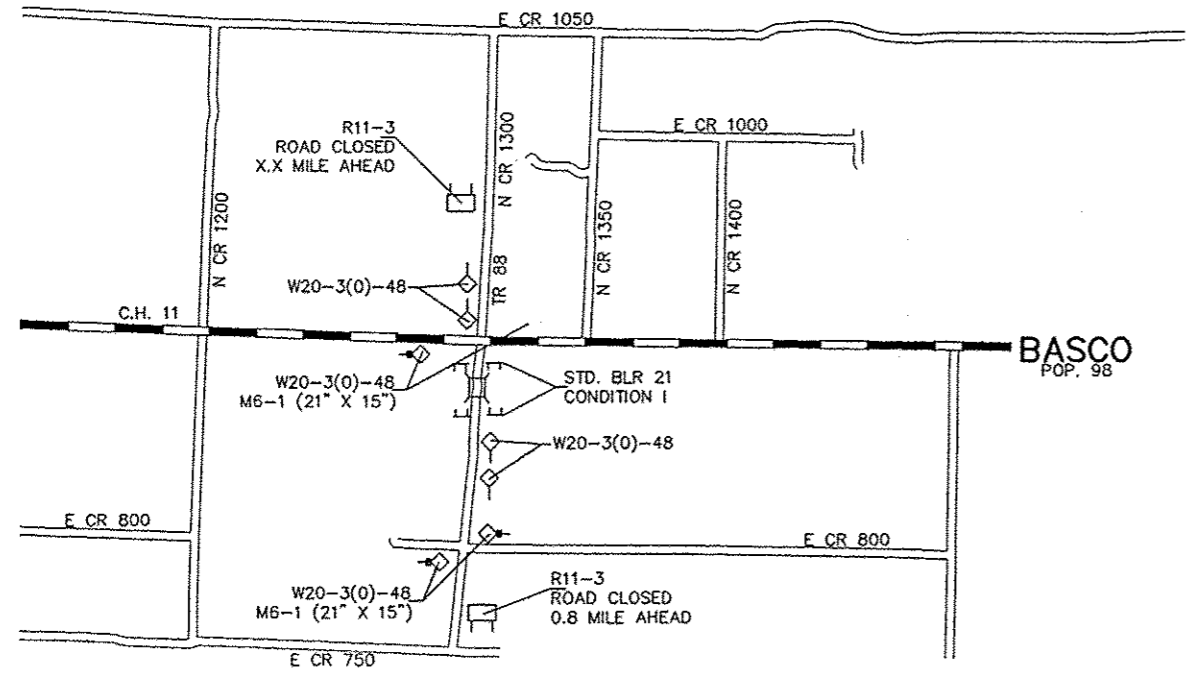
CODE NO.	CODE ITEM	UNIT	TOTAL QUANTITY	ROADWAY	BRIDGE S.N. 034-3705
20100500	TREE REMOVAL, ACRES	ACRE	0.15	0.15	
* 20200100	EARTH EXCAVATION	CU YD	2,861	2,861	
20300100	CHANNEL EXCAVATION	CU YD	265		265
20400800	FURNISHED EXCAVATION	CU YD	514	514	
25000200	SEEDING, CLASS 2	ACRE	1.7	1.7	
25000400	NITROGEN FERTILIZER NUTRIENT	POUND	153	153	
25000500	PHOSPHORUS FERTILIZER NUTRIENT	POUND	153	153	
25000600	POTASSIUM FERTILIZER NUTRIENT	POUND	153	153	
25000700	AGRICULTURAL GROUND LIMESTONE	TON	3.4	3.4	
25100115	MULCH, METHOD 2	ACRE	1.7	1.7	
28000250	TEMPORARY EROSION CONTROL SEEDING	POUND	170	170	
28000305	TEMPORARY DITCH CHECKS	FOOT	140	140	
28000315	AGGREGATE DITCH CHECKS	TON	360	360	
28000400	PERIMETER EROSION BARRIER	FOOT	1740	1740	
28000500	INLET AND PIPE PROTECTION	EACH	3	3	
40200800	AGGREGATE SURFACE COURSE, TYPE B	TON	915	915	
* 50100100	REMOVAL OF EXISTING STRUCTURES	EACH	1		1
50300225	CONCRETE STRUCTURES	CU YD	28.4		28.4
* 50400605	PRECAST PRESTRESSED CONCRETE DECK BEAMS (33" DEPTH)	SQ FT	2,151		2,151
50800205	REINFORCEMENT BARS, EPOXY COATED	POUND	3,100		3,100
Δ 50900205	STEEL RAILING, TYPE S1	FOOT	160		160
51201400	FURNISHING STEEL PILES HP10X42	FOOT	297		297
51202305	DRIVING PILES	FOOT	297		297
51203400	TEST PILE STEEL HP10X42	EACH	1		1
51500100	NAME PLATES	EACH	1		1
542D0220	PIPE CULVERTS, CLASS D, TYPE 1 15"	FOOT	40	40	
542D0223	PIPE CULVERTS, CLASS D, TYPE 1 18"	FOOT	84	84	
Δ 63100075	TRAFFIC BARRIER TERMINAL, TYPE 5A	EACH	4	4	
Δ 63100167	TRAFFIC BARRIER TERMINAL, TYPE 1 (SPECIAL) TANGENT	EACH	4	4	
Δ 63200310	GUARDRAIL REMOVAL	FOOT	92	92	
67100100	MOBILIZATION	L SUM	1	1	
* 70101830	TRAFFIC CONTROL AND PROTECTION, STANDARD BLR 21	L SUM	1	1	
Δ 78201000	TERMINAL MARKER - DIRECT APPLIED	EACH	4	4	
* X2810208	STONE RIPRAP, CLASS A4 (SPECIAL)	TON	259		259
* X2830495	AGGREGATE DITCH (SPECIAL)	TON	520	520	

* DENOTES SPECIAL PROVISION
 Δ SPECIALTY ITEMS

CONSTRUCTION TYPE CODE: 0011

APPLICATION RATES US IN QUANTITY CALCULATIONS

- STONE RIPRAP, CLASS A4 (SPECIAL) = 1.50 TON/CY
- AGGREGATE DITCH (SPECIAL) = 1.50 TON/CY
- AGGREGATE SURFACE COURSE = 2.05 TON/CY
- NITROGEN FERTILIZER = 90 LB/ACRE
- PHOSPHORUS FERTILIZER = 90 LB/ACRE
- POTASSIUM FERTILIZER = 90 LB/ACRE
- AGRICULTURAL GROUND LIMESTONE = 2 TON/ACRE

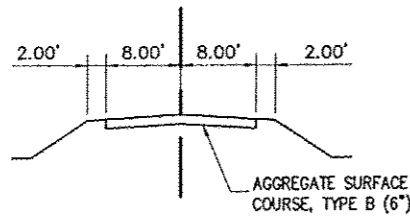


TRAFFIC CONTROL PLAN

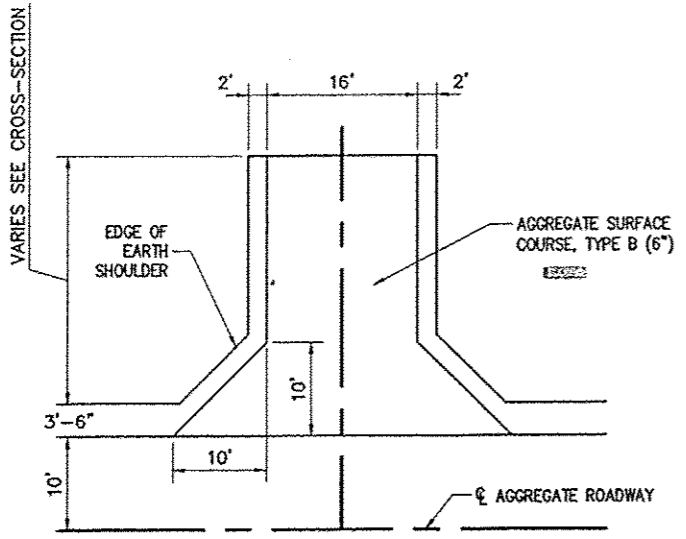
SUMMARY OF QUANTITIES
 S.N. 034-3705
 STA 7+00.00 TO STA 16+00.00
 TR 88 (1300 E) AT LITTLE BEAR CREEK
 WYTHE TOWNSHIP
 HANCOCK COUNTY, IL

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 88	12-25119-00-BR	HANCOCK	22	3
ROAD DISTRICT	ILLINOIS	WYTHE TOWNSHIP		

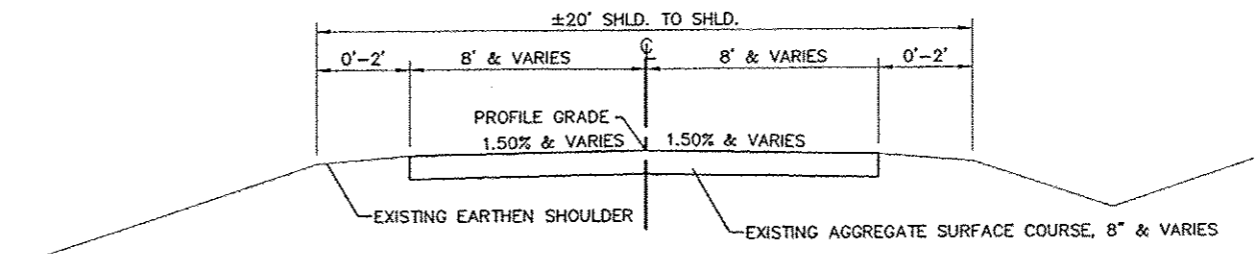
CONTRACT: 93633



ENTRANCE TYPICAL SECTION

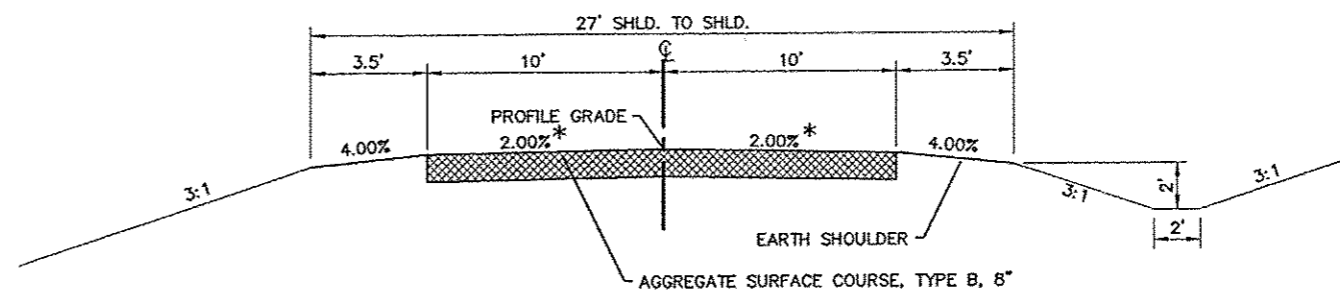


ENTRANCE DETAIL



EXISTING TYPICAL SECTION

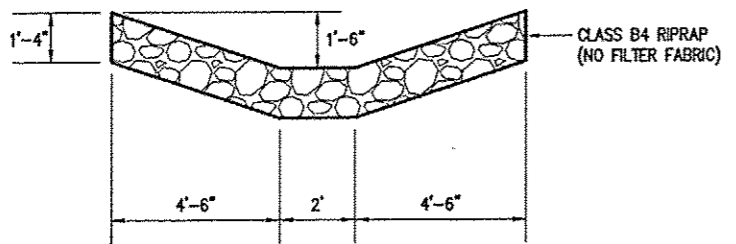
STA. 7+00.00 TO STA. 16+00.00
BRIDGE OMISSION: STA. 10+44.25 TO STA. 11+25.75



PROPOSED TYPICAL SECTION

STA. 7+00.00 TO STA. 16+00.00
BRIDGE OMISSION: STA. 10+44.25 TO STA. 11+25.75

*STA. 7+00.00 TO STA 7+50.00
STA 15+50.00 TO STA 16+00.00
TRANSITION CROSS SLOPE FROM EXISTING TO PROPOSED 2.00%



AGGREGATE DITCH (SPECIAL)

GUARDRAIL SCHEDULE		
STATION - STATION	TRAF. BARR. TERM. TY 1 (SPL) TANG	TRAF. BARR. TERM, TY 5A
LT 9+81.75 - 10+45.00	1	1
RT 9+81.75 - 10+45.00	1	1
LT 11+25.00 - 11+88.25	1	1
RT 11+25.00 - 11+88.25	1	1

ENTRANCE SCHEDULE		
STATION	AGGREGATE SURFACE COURSE, TYPE B (TON)	CMP CULVERT (DIA-LENGTH)
9+00, LT	32	18" - 40 FT
9+00, RT	33	18" - 44 FT
15+50, RT	19	15" - 40 FT

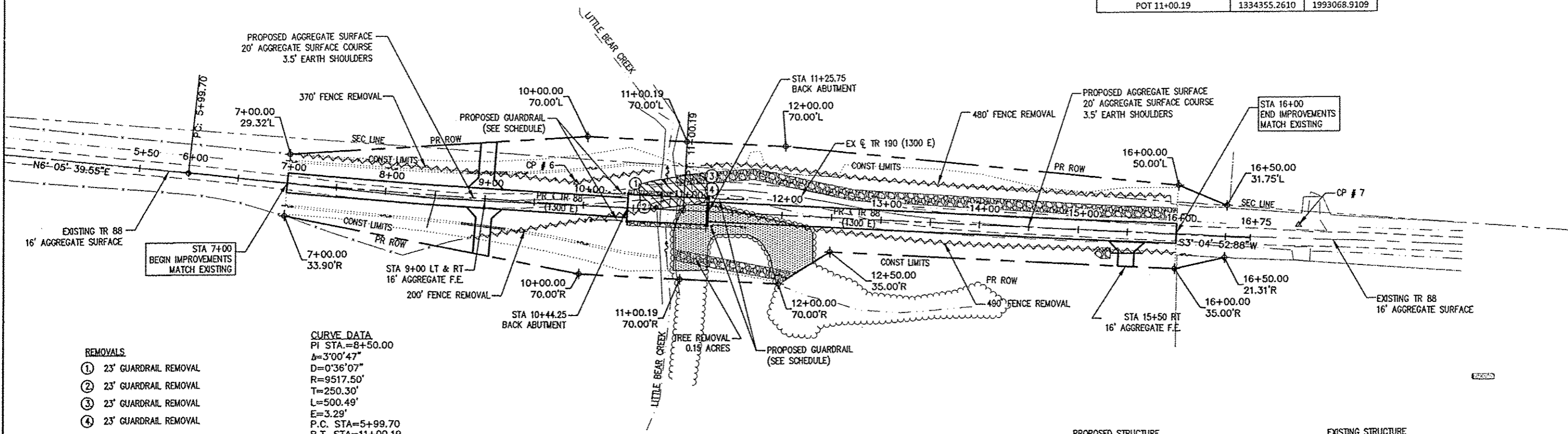
EARTHWORK SCHEDULE					
STATION TO STATION	EARTH EXCAVATION (CU. YD.)	SHRINKAGE (%)	EARTH EXCAVATION (CU. YD.)	EMBANKMENT (CU. YD.)	WASTE (+) SHORT (-)
6+50.00 TO 10+44.25	1,126	25	845	556	289
[BRIDGE OMISSION] STA 10+44.25 TO STA 11+25.75					
11+25.75 TO 16+50.00	1,735	25	1,301	1,918	-617
TOTAL	2,861			TOTAL	-328
CHANNEL EXCAVATION					
10+44.25 TO 11+25.75	265	50	133	318	-186
			FURNISHED EXCAVATION		-514

SCHEDULE QUANTITIES
S.N. 034-3705
STA 7+00.00 TO STA 16+00.00
TR 88 (1300 E) AT LITTLE BEAR CREEK
WYTHE TOWNSHIP
HANCOCK COUNTY, IL

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 88	12-25119-00-BR	HANCOCK	22	4
ROAD DISTRICT		ILLINOIS	WYTHE TOWNSHIP	
CONTRACT: 93633				

KENNETH W. WRIGHT
HELEN L. CHURCH
MICHAEL D. WRIGHT
NW 1/4 SECTION 19, T.4N., R7W., 4TH P.M.

ALIGNMENT POINTS		
DESCRIPTION	NORTHING	EASTING
POC 5+99.70	1334854.0879	1993108.9390
PI 8+50.00	1334605.2012	1993082.3657
POT 11+00.19	1334355.2610	1993068.9109



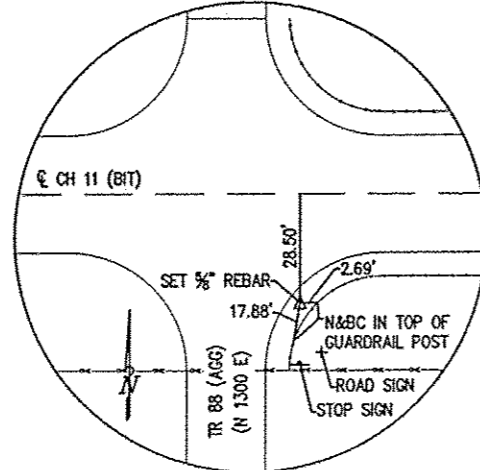
- REMOVALS**
- ① 23' GUARDRAIL REMOVAL
 - ② 23' GUARDRAIL REMOVAL
 - ③ 23' GUARDRAIL REMOVAL
 - ④ 23' GUARDRAIL REMOVAL

CURVE DATA
PI STA.=8+50.00
Δ=3°00'47"
D=0°36'07"
R=9517.50'
T=250.30'
L=500.49'
E=3.29'
P.C. STA=5+99.70
P.T. STA=11+00.19

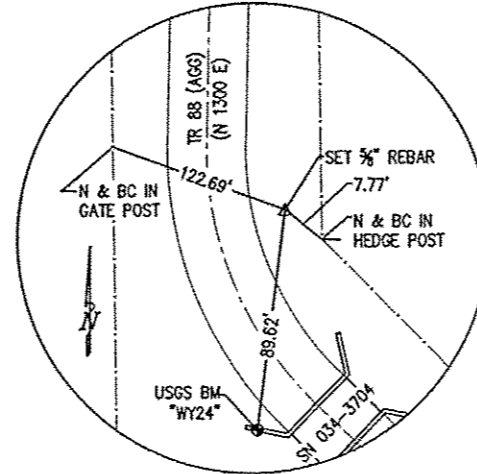
- NOTE:**
- 1.) FENCE REMOVAL IS INCIDENTAL TO EARTH EXCAVATION.
 - 2.) ENTRANCE CULVERT REMOVAL IS INCIDENTAL TO EARTH EXCAVATION.

KENNETH W. WRIGHT
NE 1/4 SECTION 24, T.4N., R8W., 4TH P.M.

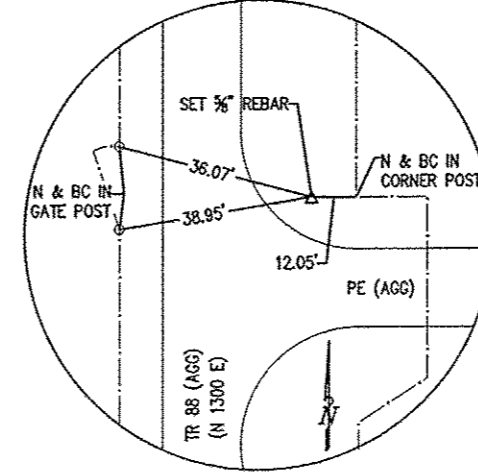
CONTROL POINT #5
STA 00+00.00
N: 1335473.3528'
E: 1993182.1883'



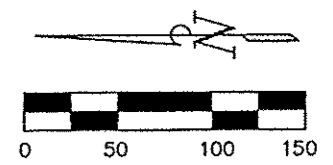
CONTROL POINT #6
STA 9+80.00
N: 1334462.4749'
E: 1993097.9701'



CONTROL POINT #7
STA 17+25.00
N: 1333732.7436'
E: 1993051.1906'



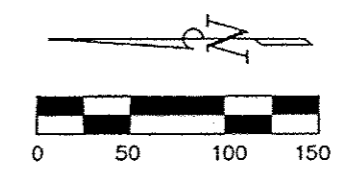
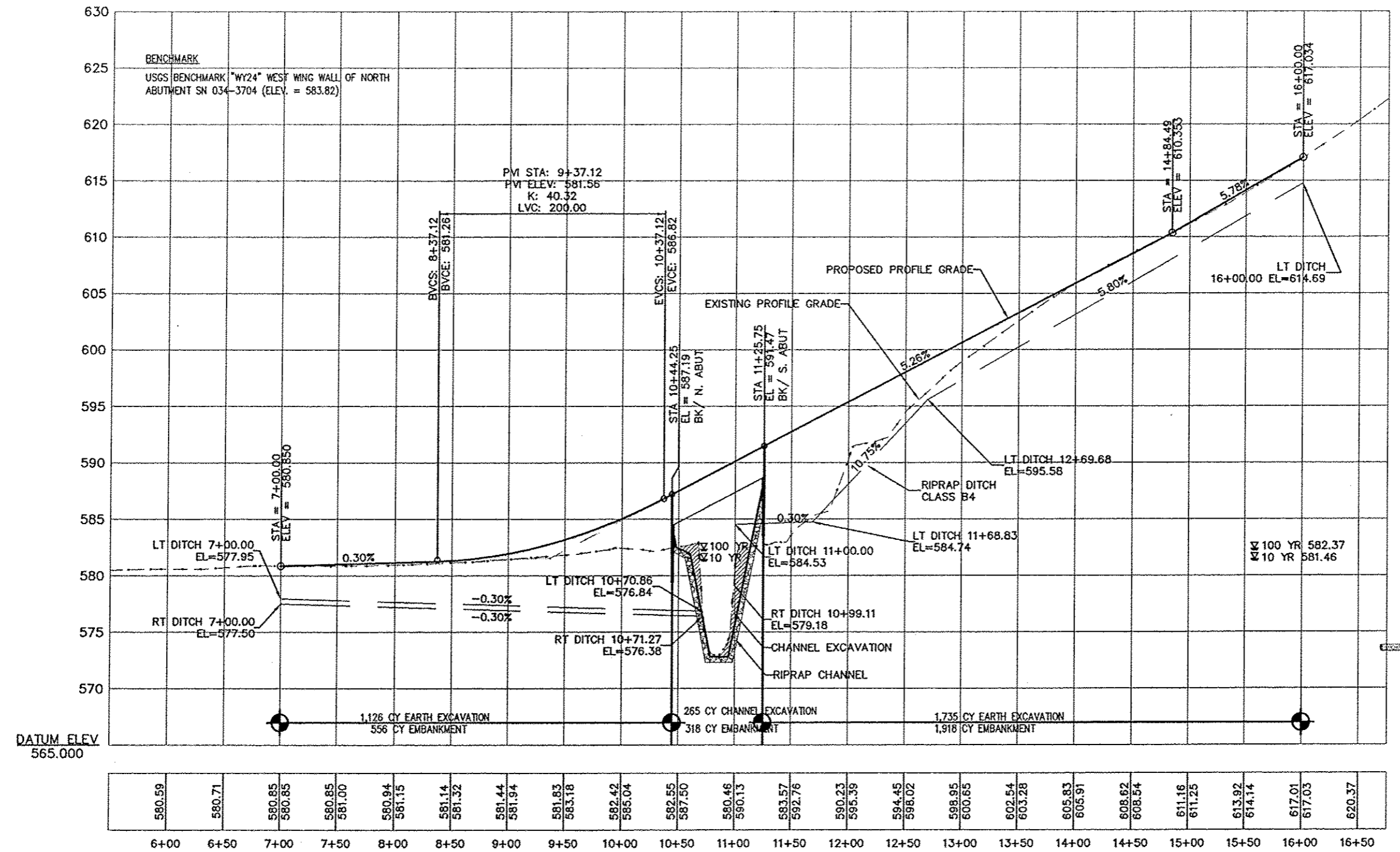
BENCHMARK
USGS BENCHMARK "WY24" WEST WING WALL OF NORTH
ABUTMENT SN 34-3704 (ELEV. = 583.82)



ROADWAY PLAN
S.N. 034-3705
STA 7+00.00 TO STA 16+00.00
TR 88 (1300 E) AT LITTLE BEAR CREEK
WYTHE TOWNSHIP
HANCOCK COUNTY, IL

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 88	12-25119-00-BR	HANCOCK	22	5
ROAD DISTRICT		ILLINOIS	WYTHE TOWNSHIP	

CONTRACT: 93633







ROADWAY PROFILE
S.N. 034-3705
STA 7+00.00 TO STA 16+00.00
TR 88 (1300 E) AT LITTLE BEAR CREEK
WYTHE TOWNSHIP
HANCOCK COUNTY, IL

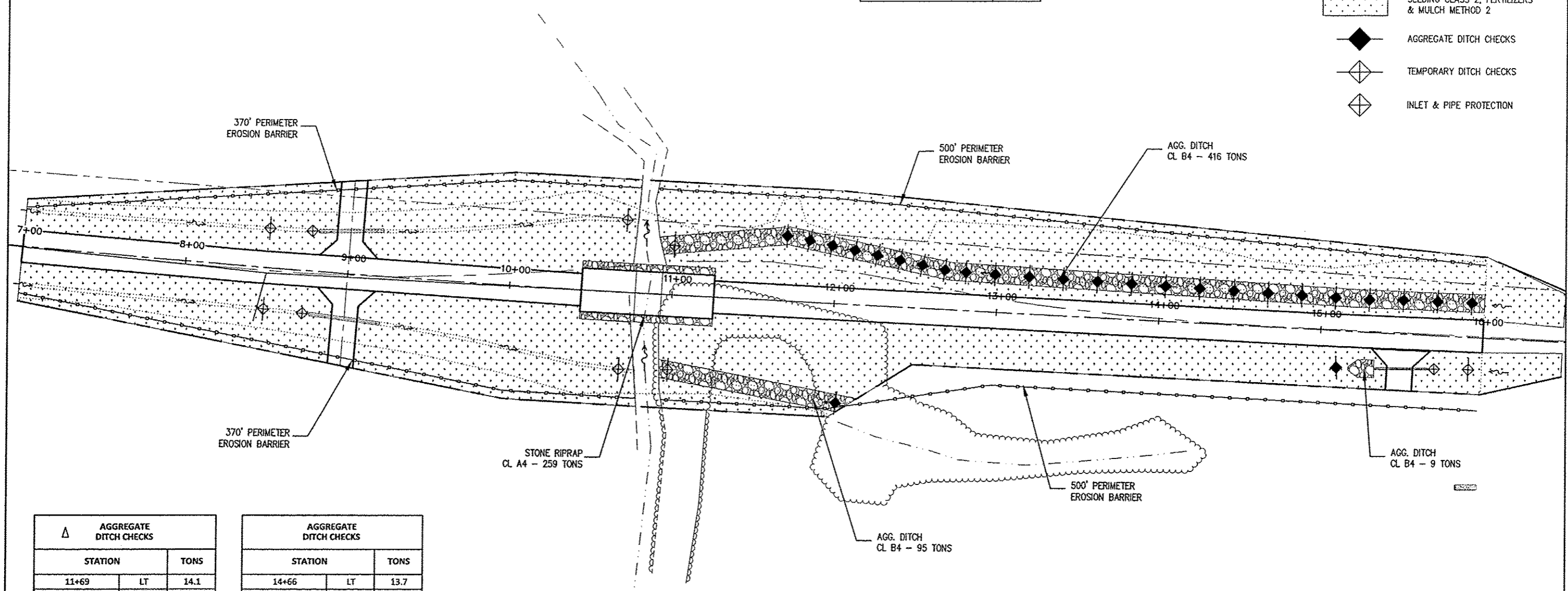
RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 88	12-25119-00-BR	HANCOCK	22	6
ROAD DISTRICT		ILLINOIS	WYTHE TOWNSHIP	

CONTRACT: 93633

LOCATION	SEEDING, CLASS 2 (ACRE)	NITROGEN NUTRIENT (LB)	PHOSPHORUS NUTRIENT (LB)	POTASSIUM NUTRIENT (LB)	AGRICULTURAL GROUND LIMESTONE (TON)	MULCH, METHOD 2 (ACRE)
NORTHEAST SECTION	0.4	36	36	36	0.8	0.4
NORTHWEST SECTION	0.4	36	36	36	0.8	0.4
SOUTHEAST SECTION	0.5	45	45	45	1.0	0.5
SOUTHWEST SECTION	0.4	36	36	36	0.8	0.4
TOTAL	1.7	153	153	153	3.4	1.7

INLET AND PIPE PROTECTION		
STATION		EACH
8+73	RT	1
8+76	LT	1
15+71	RT	1
TOTAL		3

-  SEEDING CLASS 2, FERTILIZERS & MULCH METHOD 2
-  AGGREGATE DITCH CHECKS
-  TEMPORARY DITCH CHECKS
-  INLET & PIPE PROTECTION



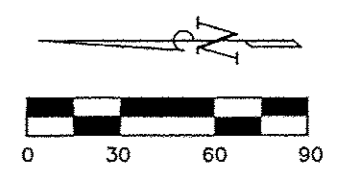
AGGREGATE DITCH CHECKS		
STATION		TONS
11+69	LT	14.1
11+83	LT	14.1
11+97	LT	14.1
12+00	RT	14.1
12+11	LT	14.1
12+25	LT	14.1
12+39	LT	14.1
12+53	LT	14.1
12+67	LT	14.1
12+80	LT	13.7
12+98	LT	13.7
13+19	LT	13.7
13+40	LT	13.7
13+61	LT	13.7
13+82	LT	13.7
14+03	LT	13.7
14+24	LT	13.7
14+45	LT	13.7

AGGREGATE DITCH CHECKS		
STATION		TONS
14+66	LT	13.7
14+87	LT	13.7
15+08	LT	13.7
15+15	RT	13.7
15+29	LT	13.7
15+50	LT	13.7
15+71	LT	13.7
15+92	LT	13.7
TOTAL		359.8
USE		360

TEMPORARY DITCH CHECKS		
STATION		FOOT
8+50	LT & RT	40
10+70	LT & RT	40
11+00	LT & RT	40
15+92	RT	20
TOTAL		140

DESCRIPTION OF INTENDED SEQUENCE OF MAJOR CONSTRUCTION ACTIVITIES WHICH WILL DISTURB EARTH AND LEAD TO POSSIBLE EROSION FOR MAJOR PORTIONS OF THE CONSTRUCTION SITE.

1. PLACEMENT OF PERIMETER EROSION CONTROL FENCE PRIOR TO THE COMMENCEMENT OF ANY ROAD OR BRIDGE WORK (SEE STD 280001).
2. REMOVAL OF EXISTING STRUCTURE.
3. CONSTRUCTION OF THE REPLACEMENT STRUCTURE.
4. PLACEMENT OF ROADWAY EMBANKMENT TO RAISE THE ROADWAY TO THE PROPOSED GRADE.
5. DRAINAGE STRUCTURE, INCLUDING DITCHES, WILL BE INSTALLED BEFORE AND OR DURING THE COMPLETION OF THE EMBANKMENT.
6. PLACEMENT AND MAINTENANCE OF THE TEMPORARY EROSION CONTROL.
7. REMOVAL AND PROPER CLEAN UP OF TEMPORARY EROSION CONTROL.
8. FINAL GRADING, PLACING AGGREGATE AND OTHER MISCELLANEOUS ITEMS.

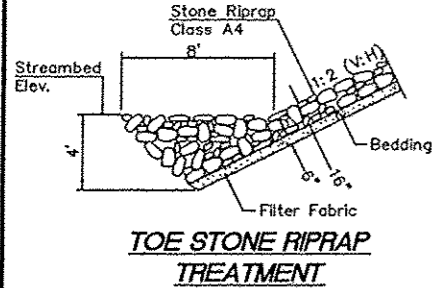


EROSION CONTROL PLAN
 S.N. 034-3705
 STA 7+00.00 TO STA 16+00.00
 TR 88 (1300 E) AT LITTLE BEAR CREEK
 WYTHE TOWNSHIP
 HANCOCK COUNTY, IL

BM #1 - USGS CHISLED "□" ON NORTH WINGWALL OF STRUCTURE NO 034-3704 OVER LITTLE CREEK, 0.4 MI SOUTH OF C.H. 11.

EXISTING STRUCTURE - SN. 034-3704
30' X 16' CONCRETE SLAB BRIDGE WITH CLOSED CONCRETE ABUTMENTS AND WINGWALLS

SALVAGE - NO SALVAGEABLE MATERIALS.

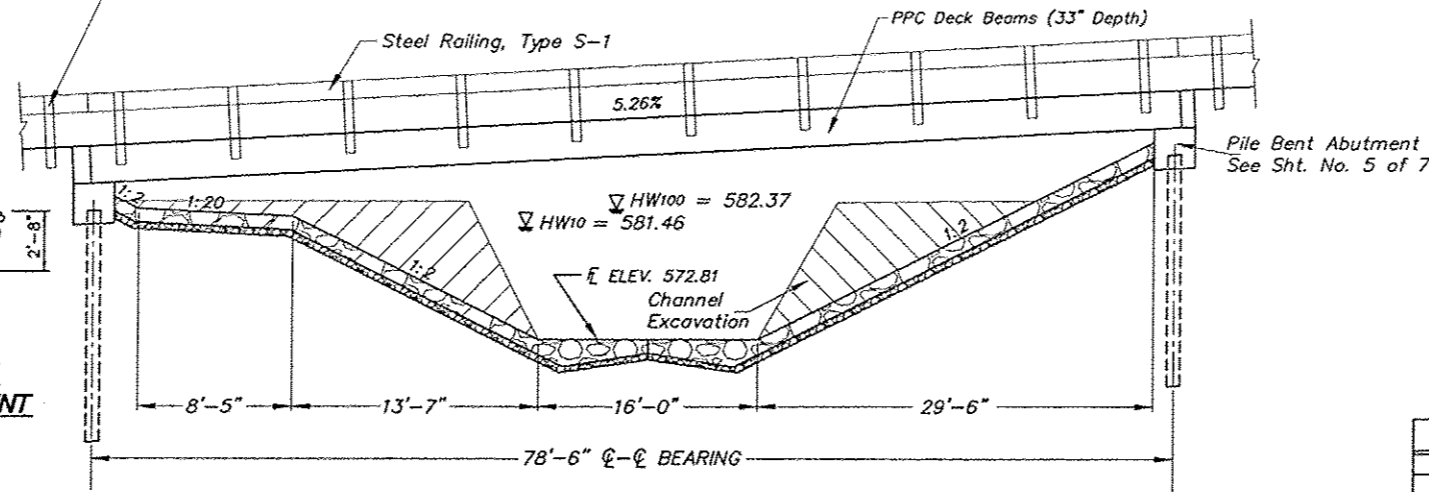


ITEM	UNIT	N. ABUT	S. ABUT	TOTAL
STONE RIPRAP, CLASS-A4	TON	192	197	333
FILTER FABRIC	SQ. YD.	214	202	416

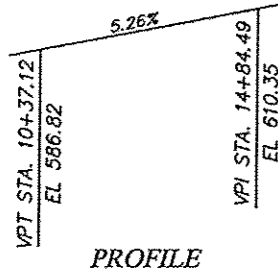
FILTER FABRIC AND BEDDING MATERIALS SHALL BE CONSIDERED INCIDENTAL TO THE UNIT PRICE PER TON FOR STONE RIPRAP, CLASS A4 (SPECIAL)

RIPRAP PLACEMENT DETAIL

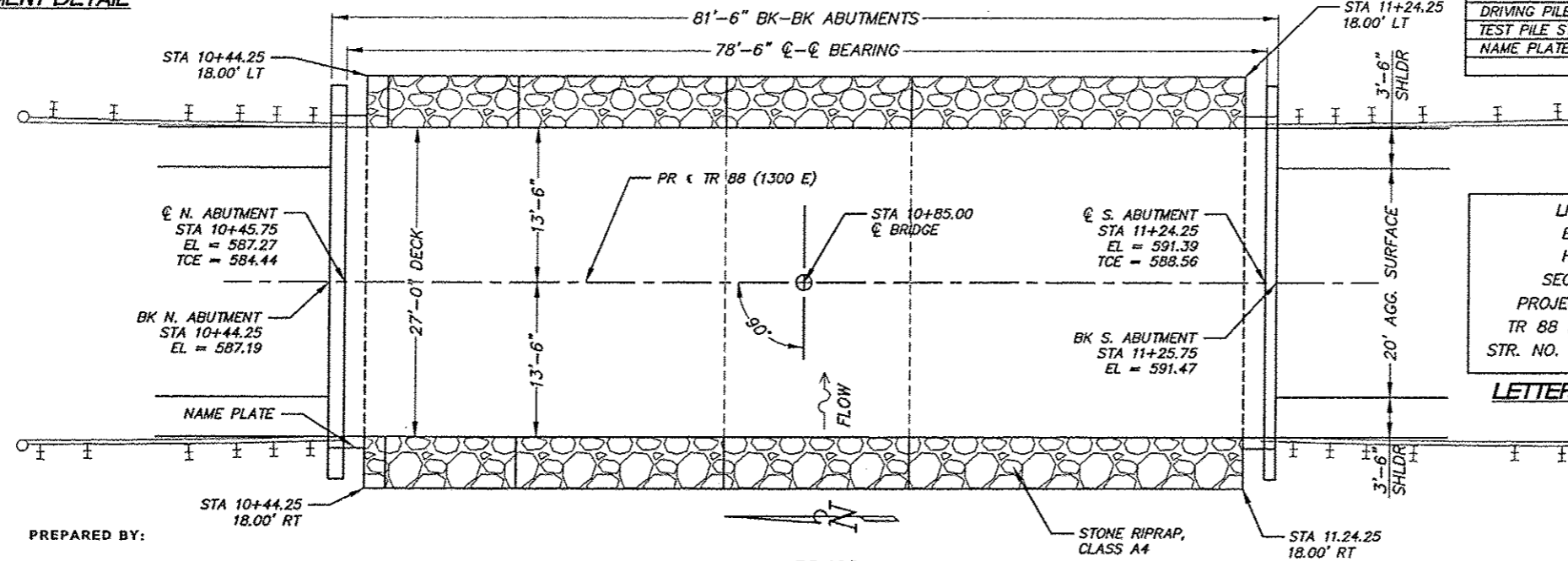
Traffic Barrier Terminal, Type 1 & 5A
All 4 Corners
See Std. No. BLR 27



ELEVATION
Shown Along ϕ Roadway

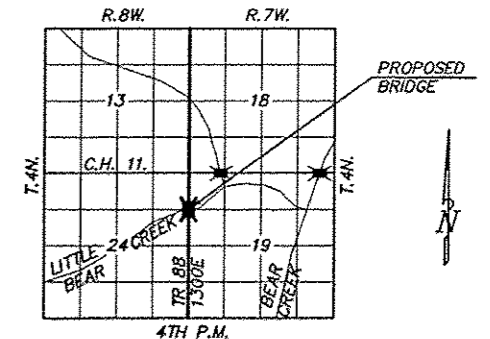


PROFILE



PLAN

LITTLE BEAR CREEK
BUILT 20 BY
HANCOCK COUNTY
SEC. 12-25119-00-BR
PROJECT NO. BROS-0067(151)
TR 88 (1300 E) STA. 10+85.00
STR. NO. 034-3705 LOADING HL-93
LETTERING FOR NAME PLATE
(See Std. 515001)



LOCATION PLAN

DESIGN SCOUR ELEVATIONS (FT.)

DESIGN DISCHARGE	S. EX. ABUT.	N. EX. ABUT.
Q100	581.07	585.35

INDEX OF SHEETS

- BRIDGE GENERAL PLAN AND ELEVATION
- P.P.C. DECK BEAM SUPERSTRUCTURE
- P.P.C. 33"x36" DECK BEAM
- P.P.C. 33"x36" DECK BEAM DETAILS
- P.P.C. DECK BEAM PILE BENT ABUTMENT DETAILS
- METAL SHELL PILE DETAILS
- STEEL RAILING, TYPE S-1

GENERAL PLAN & ELEVATION

S.N. 034-3705
STA 10+45.75 TO STA 11+24.75
TR 88 (1300 E) AT LITTLE BEAR CREEK
WYTHE TOWNSHIP
HANCOCK COUNTY, IL

GENERAL NOTES

- SEE SPECIAL PROVISIONS FOR BORING LOGS.
- ALL GROUT ON THIS PROJECT SHALL BE NON-SHRINK.
- CORROSION INHIBITOR, PER ARTICLE 1020.05(b)(10) AND 1021.07 OF THE STANDARD SPECIFICATIONS, SHALL BE USED IN THE CONCRETE FOR PRECAST PRESTRESSED CONCRETE DECK BEAMS.
- STONE RIPRAP SHALL BE PLACED TO THE DIMENSIONS SHOWN OVER A GEOTECHNICAL FABRIC IN ACCORDANCE WITH THE RIPRAP PLACEMENT DETAIL AND APPLICABLE SPECIAL PROVISIONS.
- LAYOUT OF THE SLOPE PROTECTION MAY BE VARIED TO SUIT GROUND CONDITIONS IN THE FIELD AS DIRECTED BY THE ENGINEER.
- REINFORCEMENT BARS SHALL CONFORM TO THE REQUIREMENTS OF ASTM A706, GRADE 60.
- REINFORCEMENT BARS DESIGNATED (E) SHALL BE EPOXY COATED.
- THE CONTRACTOR SHALL DRIVE TEST PILES TO 110% OF THE NOMINAL REQUIRED BEARING SPECIFIED IN PRODUCTION LOCATIONS AT SUBSTRUCTURES SPECIFIED OR APPROVED BY THE ENGINEER BEFORE ORDERING THE REMAINDER OF PILES.

TOTAL BILL OF MATERIAL

ITEM	UNIT	SUPER.	SUBSTRUCTURE		TOTAL
			PIER	ABUT.	
CHANNEL EXCAVATION	CU. YD.			265	265
STONE RIPRAP, CLASS A-4 (SPECIAL)	TON			259	259
REMOVAL OF EXISTING STRUCTURE	EACH			1	1
CONCRETE STRUCTURES	CU. YD.			28.4	28.4
P.P. CONCRETE DECK BEAMS 33" DEPTH	SQ. FT.	2,151			2,151
REINFORCEMENT BARS, EPOXY COATED	POUND			3,100	3,100
STEEL RAILING, TYPE S-1	FOOT	160			160
FURNISHING STEEL PILES HP10X42	FOOT			297	297
DRIVING PILES	FOOT			297	297
TEST PILE STEEL HP10X42	EACH			1	1
NAME PLATES	EACH			1	1



PREPARED BY:
PSBA POEPPING, STONE, BACH & ASSOCIATES, INC.
ARCHITECTS-ENGINEERS-PLANNERS-SURVEYORS
-100 S 54TH ST, P.O. BOX 709 - QUINCY, IL 62306 - PHONE 217/223-4505

SEISMIC DATA

SEISMIC PERFORMANCE ZONE (SPZ) = 1
DESIGN SPECTRAL ACCELERATION AT 1.0 SEC. = 0.045
DESIGN SPECTRAL ACCELERATION AT 0.2 SEC = 0.10
SOIL SITE CLASS = D

PILE DATA (2-ABUTMENTS)

PILE TYPE AND SIZE: STEEL PILES HP10X42
NOMINAL REQUIRED BEARING: 240 KIPS
FACTORED RESISTANCE AVAILABLE: 132 KIPS
ESTIMATED LENGTH: 27 FEET (N. ABUT) / 27 FEET (S. ABUT)
NUMBER OF PRODUCTION PILES: 6 (N. ABUT) / 5 (S. ABUT)
NUMBER OF TEST PILES: 1 (S. ABUT)

WATERWAY INFORMATION

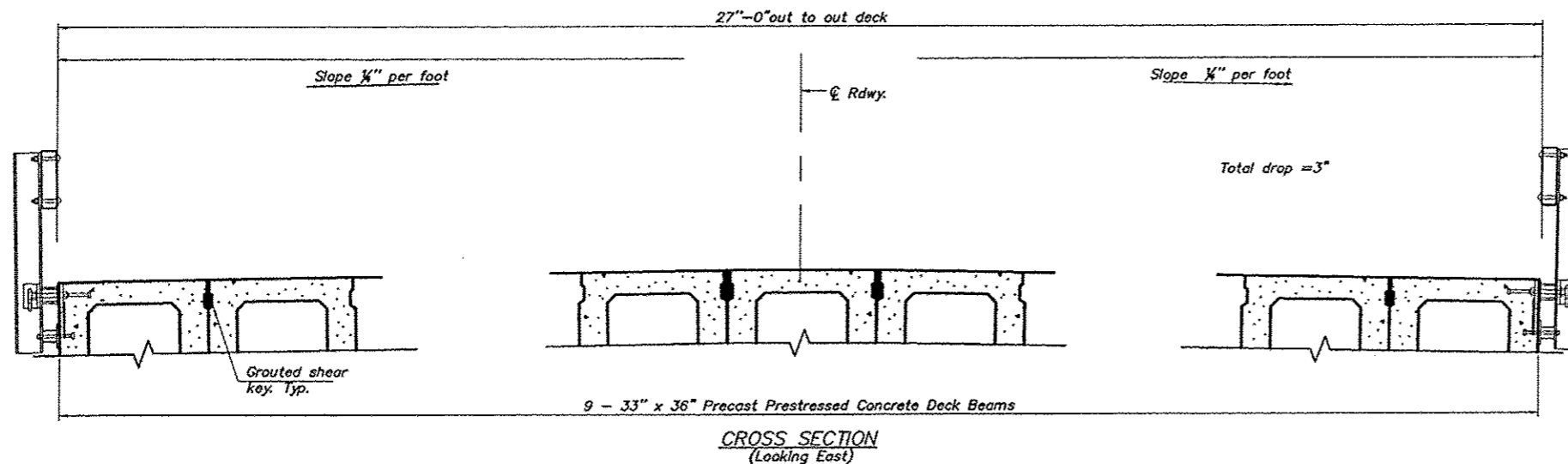
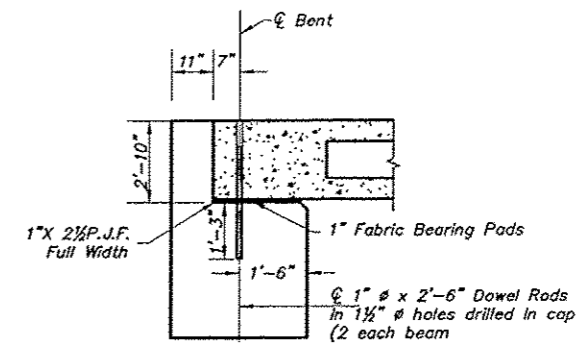
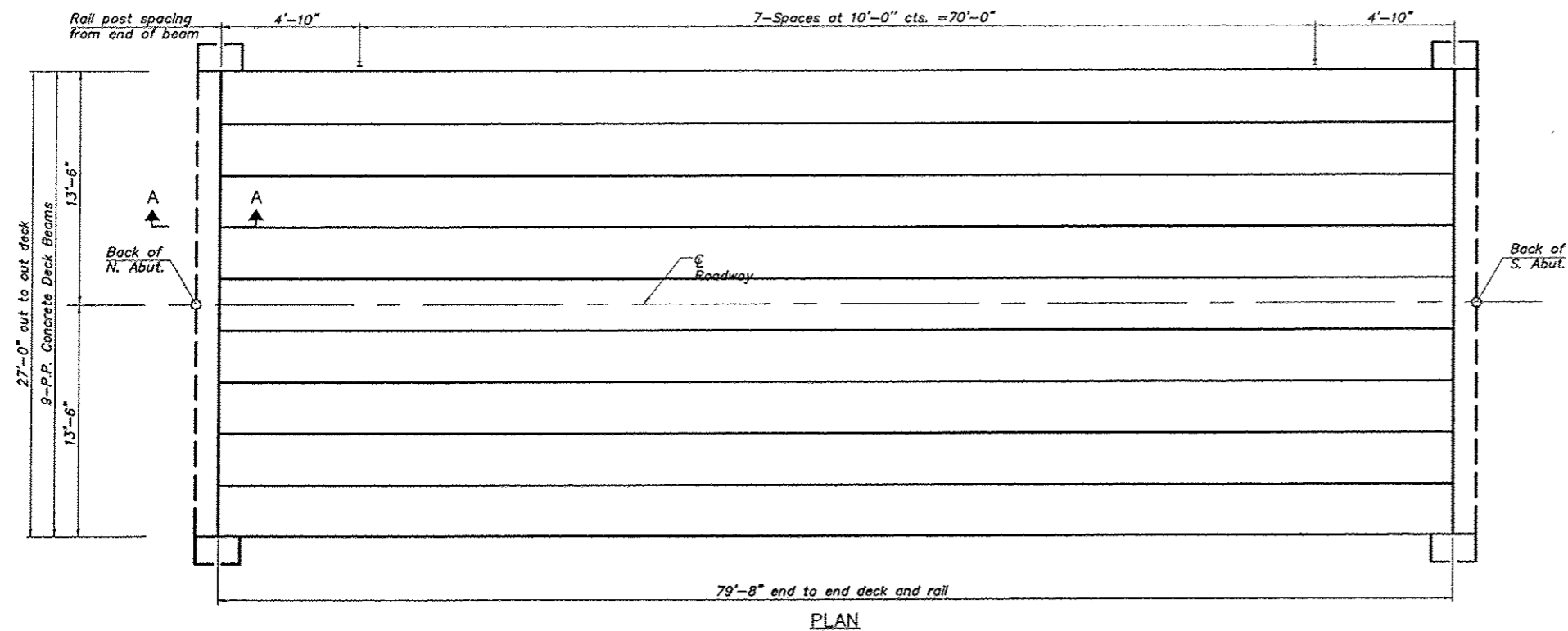
FLOOD	FLOOD FREQUENCY (YEAR)	FLOW VOLUME (CFS)	DRAINAGE AREA - 20.6 SQ. MI		LOW GRADE ELEVATION = 579.98 AT STA. 2+00					
			EXISTING	PROPOSED	NATURAL H.W.E.	HEAD - FT.		HEADWATER ELEV.		
						EXISTING	PROPOSED	EXISTING	PROPOSED	
DESIGN	10	2,376	174.9	177.0	581.5	0.2	0.2	581.7	581.7	
BASE	100	4,239	196.5	198.4	582.4	0.1	0.1	582.5	582.5	
OVERTOPPING	<2	1,069			580.6	0.8	0.8	581.4	581.4	
MAX. CALC	500	5,623	206.3	210.7	582.8	0.1	0.1	582.9	582.9	

THIS STRUCTURE HAS BEEN DESIGNED TO BE STABLE FOR SCOUR CONDITIONS IN ACCORDANCE WITH THE FHWA TECHNICAL ADVISORY T-5140.23 "EVALUATING SCOUR AT BRIDGES" AND HYDRAULIC ENGINEER CIRCULAR 18 - EVALUATING SCOUR AT BRIDGES.
THE REQUIREMENTS OF THE IDNR DIVISION OF WATER RESOURCES HAVE BEEN FULFILLED WITH STATEWIDE PERMIT NO. 2

I Certify That to the Best of my Knowledge, Information and Belief, the Revised Standard Detail Sheets and/or Special Component Sheets Included with the Standard Bridge Detail Sheets are Structurally Adequate for the Design Loading Shown on the Plans. The Design is an Economical One For The Style of Structure and Complies with the Requirements of the Current AASHTO Standard Specifications for Highway Bridges.
The Design Complies With the Requirements of the Current AASHTO Guide Specifications for Seismic Design of Highway Bridges.
David S. Poland
Licensed Structural Engineer
State of Illinois No. 81-005124
expires 11/30/2016
Date 2-5-15

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 88	12-25119-00-BR	HANCOCK	22	8
ROAD DISTRICT		ILLINOIS	WYTHE TOWNSHIP	

BRIDGE SHEET 2 OF 7
CONTRACT: 93633



Notes:

- See sheet 3 & 4 of 7 for Superstructure Details and Bill of Material.
- Bars indicated thus 20 x 2-#4 etc. indicates 20 lines of bars with 2 lengths per line.
- After beams have been erected, holes shall be drilled into substructure and anchor dowels placed. Dowel holes shall be filled with non-shrink grout to top of beam and allowed to cure min. 24 hrs. prior to grouting the shear keys.
- Longitudinal keys shall be grouted.
- the 1" rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. packets that receive transverse tie bar outside shall be filled with grout after the transverse tie assembly is in place.

MINIMUM BAR LAP
#4 bar = 2'-7"

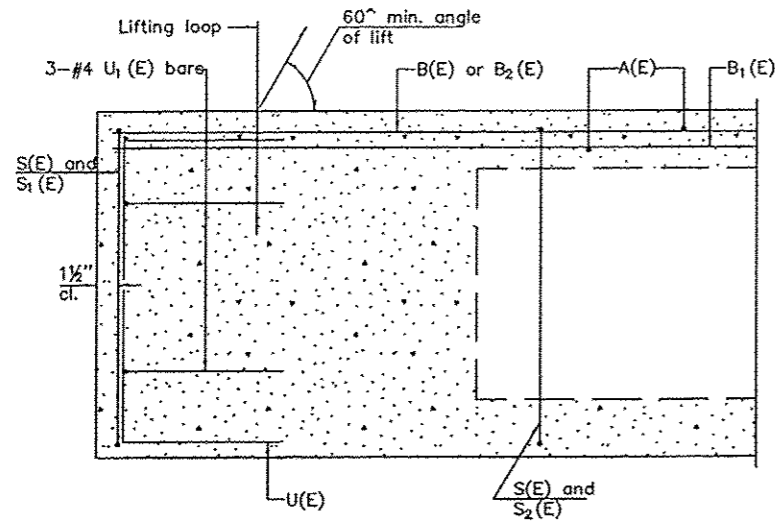
P.P.C DECK BEAM SUPERSTRUCTURE
S.N. 034-3705
STA 10+45.75 TO STA 11+24.75
TR 88 (1300 E) AT LITTLE BEAR CREEK
WYTHE TOWNSHIP
HANCOCK COUNTY, IL

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 88	12-25119-00-BR	HANCOCK	22	9
ROAD DISTRICT		ILLINOIS	WYTHE TOWNSHIP	

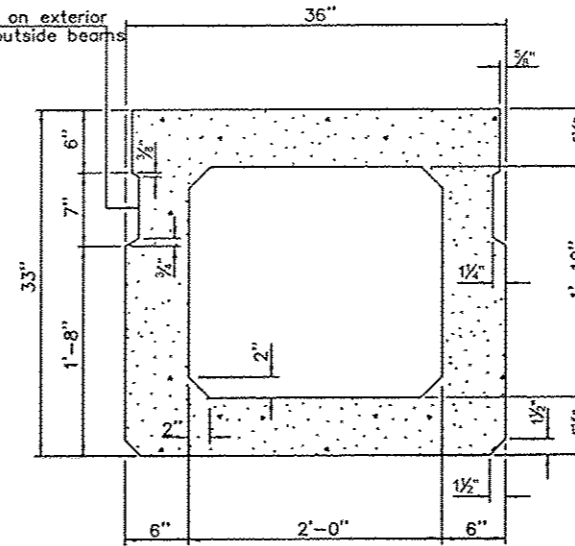
BRIDGE SHEET 3 OF 7
CONTRACT: 93633

* Rail post anchor devices (specified elsewhere)
To be cast into exterior face of outside beam.

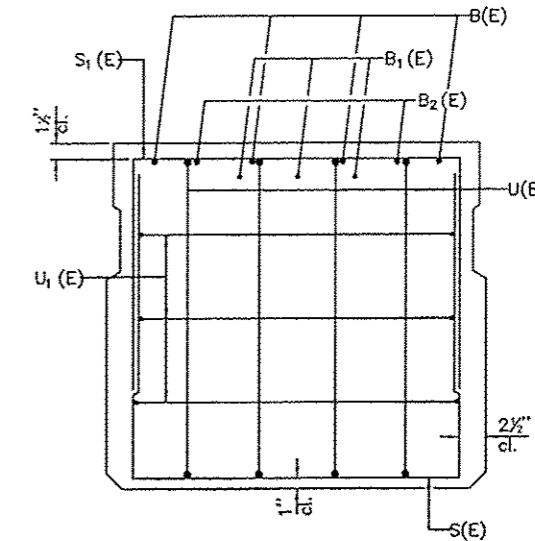
* Omit key on exterior face of outside beams



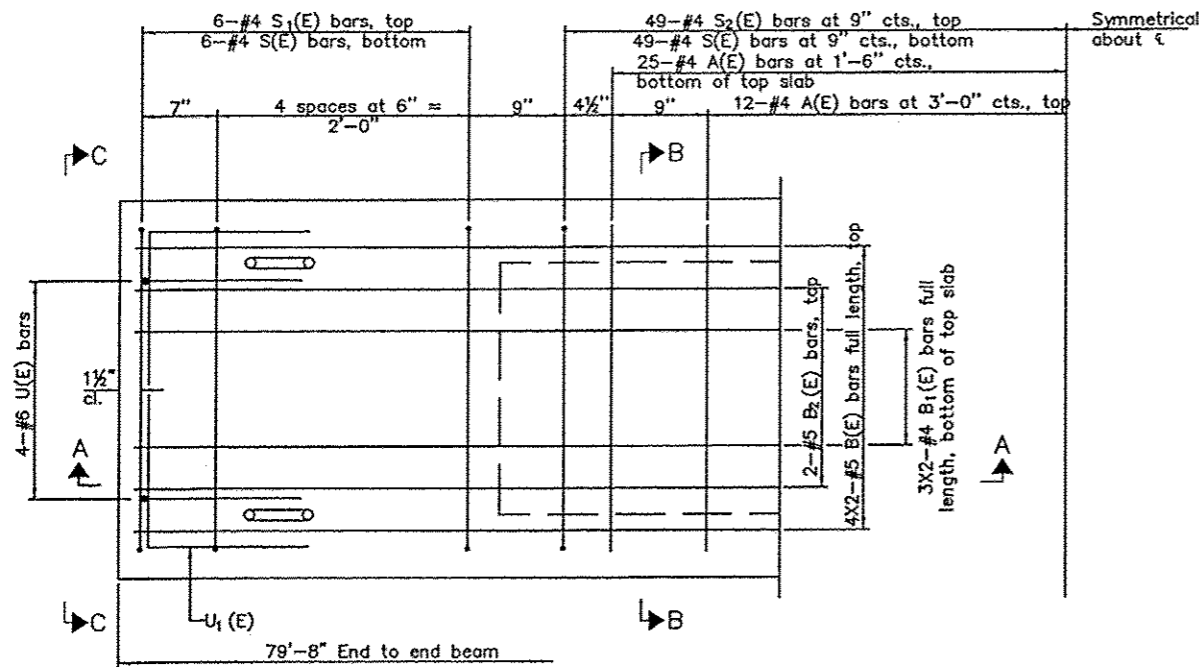
SECTION A-A



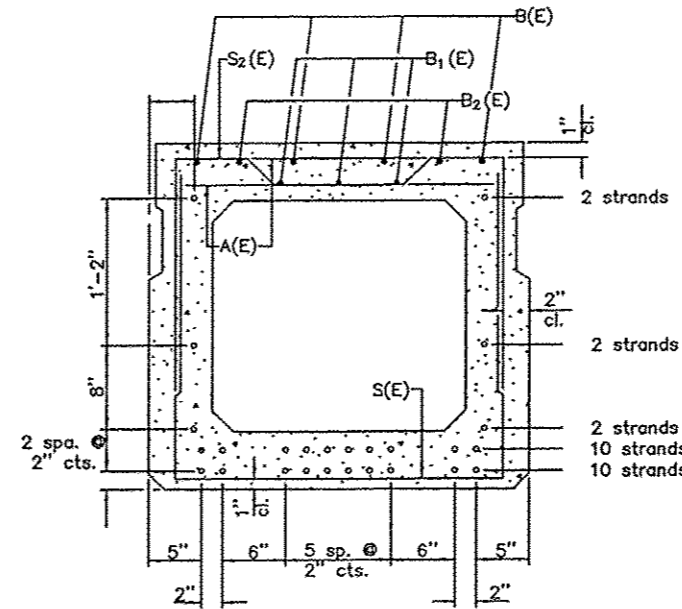
SECTION B-B
(Showing dimensions)



VIEW C-C



PLAN VIEW



SECTION B-B
(Showing reinforcement and permissible strand locations)

Note: Place the number of strands specified in each row symmetrically about the centerline of beam in the permissible strand locations shown.

BAR LIST
ONE BEAM ONLY
(For information only)

Bar	No.	Size	Length	Shape
A(E)	74	#4	2'-7"	—
B(E)	8	#5	41'-0"	—
B1(E)	6	#4	41'-0"	—
B2(E)	4	#5	10'-0"	—
S(E)	110	#4	7'-5"	□
S1(E)	12	#4	6'-3"	□
S2(E)	98	#4	6'-6"	□
U(E)	8	#6	5'-0"	□
U1(E)	6	#4	5'-0"	□

Note: See sheet 4 of 7 for additional details and Bill of Material.

MINIMUM BAR LAP

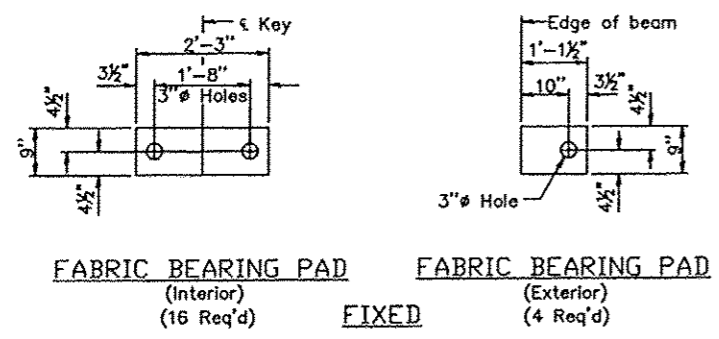
#4 bar = 2'-0"
#5 bar = 2'-6"

Note: Spacing of S(E) and S2(E) bars may be adjusted up to 4" in the immediate area of the transverse tie diaphragms to miss the block outs for the transverse ties.

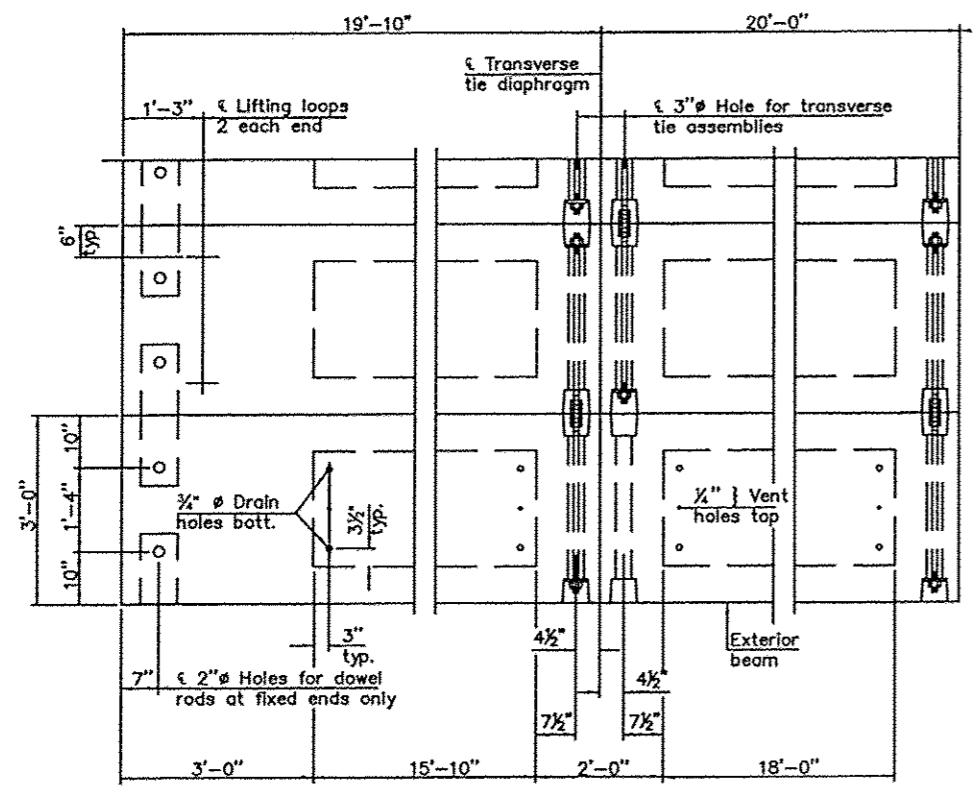
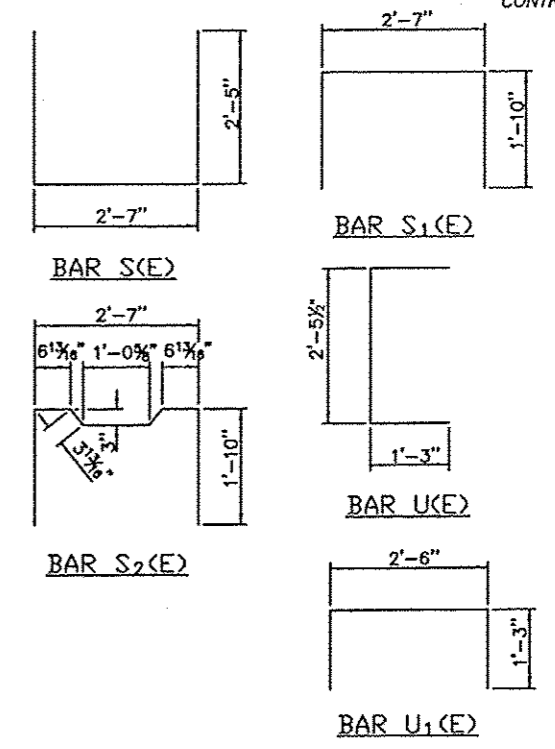
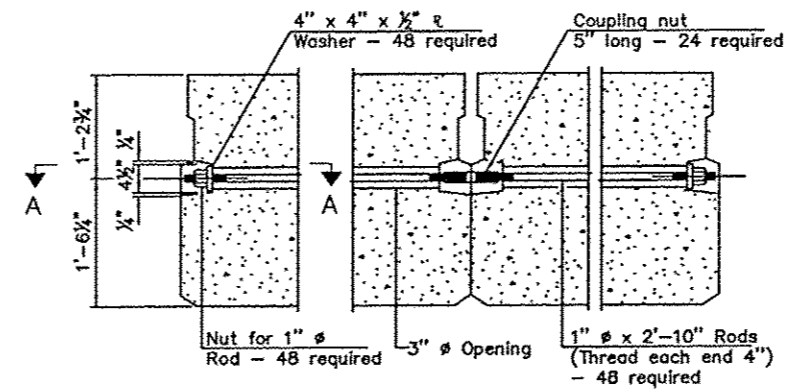
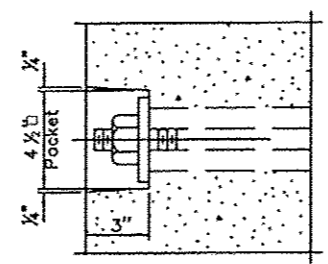
P.P.C 33" X 36" DECK BEAM
S.N. 034-3705
STA 10+45.75 TO STA 11+24.25
TR 88 (1300 E) AT LITTLE BEAR CREEK
WYTHE TOWNSHIP
HANCOCK COUNTY, IL

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 88	12-25119-00-BR	HANCOCK	22	10
ROAD DISTRICT	ILLINOIS	WYTHE TOWNSHIP		

BRIDGE SHEET 4 OF 7
CONTRACT: 93633



Notes:
All bearing pads shall be 1" thick.
Omit holes when using expansion bearings.
Expansion bearing pad shall be bonded to the substructure.



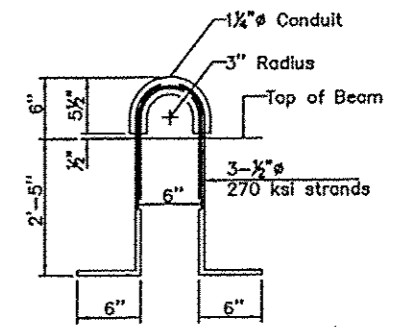
Note: Connect beams in pairs with the transverse tie configuration shown.

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.
The 1" rods in the transverse tie assembly shall be tightened to a snug fit and the threads set. Pockets on exterior faces of bridge shall be filled with grout after transverse tie assembly is in place.
Reinforcement bars shall conform to ASTM A 706, Grade 60.
Two 1/2" fabric adjusting shims of the dimensions of the exterior bearing pad shall be provided for each bearing pad location.
A minimum 2" lifting pin shall be used to engage the lifting loops during handling.
Corrosion Inhibitor, per Article 1020.05(b)(10) and 1021.07 of the Standard Specifications, shall be used in the concrete for precast prestressed concrete deck beams.
Compressive strength of prestressed concrete, f'c, shall be 6000 psi.
Compressive strength of prestressed concrete at release, f'cl, shall be 5000 psi.

BILL OF MATERIAL

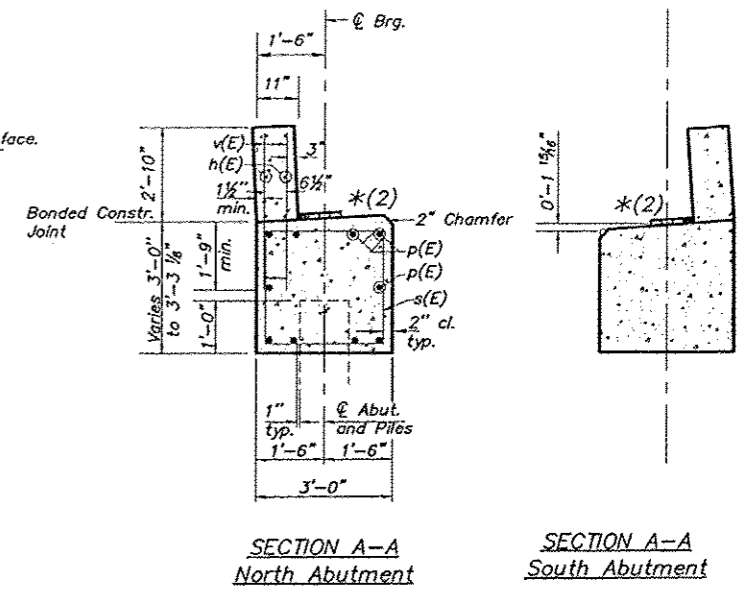
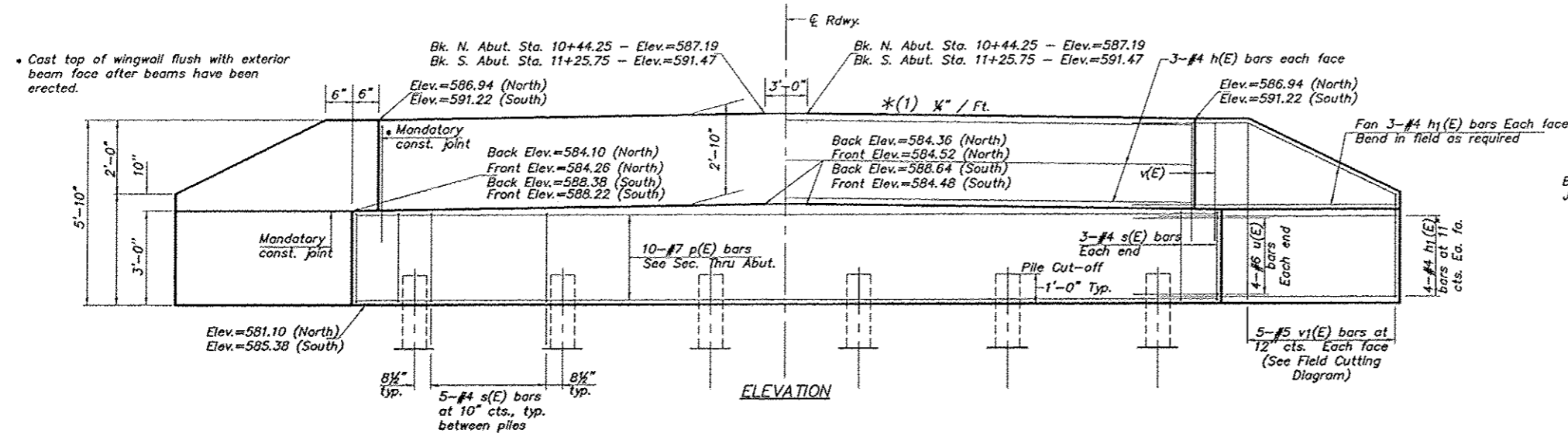
Precast Prestressed Concrete Deck Beams (33" depth)	Sq. Ft.	2,151
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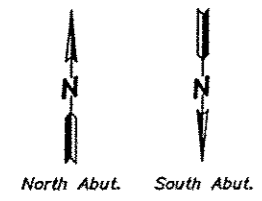
P.P.C 33" X 36" DECK BEAM DETAILS
S.N. 034-3705
STA 7+00.00 TO STA 16+00.00
TR 88 (1300 E) AT LITTLE BEAR CREEK
WYTHE TOWNSHIP
HANCOCK COUNTY, IL

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 88	12-25119-00-BR	HANCOCK	22	11
ROAD DISTRICT		ILLINOIS	WYTHE TOWNSHIP	

BRIDGE SHEET 5 OF 7
CONTRACT: 93633



- Note:
- 1.) Abutment shall be poured to maintain 2% cross slope as indicated in elevation view.
 - 2.) Abutment shall be poured to maintain 5.26% roadway slope as shown above.



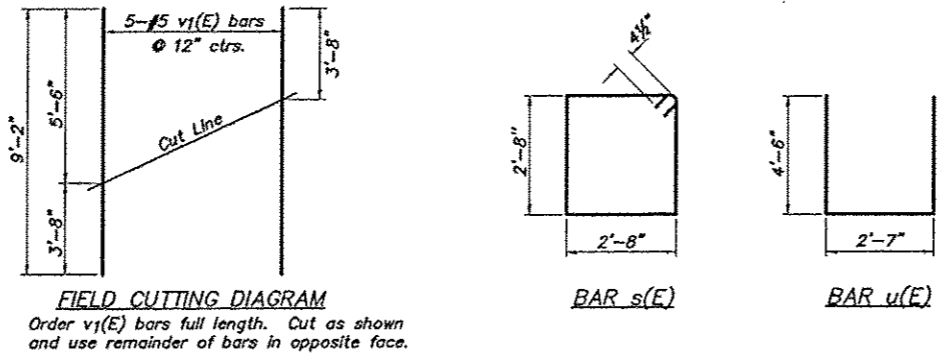
BILL OF MATERIAL ONE ABUTMENT

Bar	No.	Size	Length	Shape
h(E)	6	#4	26'-9"	
h1(E)	28	#4	6'-6"	
p(E)	10	#7	27'-8"	
s(E)	31	#4	11'-5"	□
u(E)	8	#6	11'-7"	□
v(E)	60	#5	4'-6"	
v1(E)	10	#5	9'-2"	
Concrete Structures		Cu. Yd.	14.2	
Reinforcement Bars, Epoxy Coated		Pound	1,550	
Furnishing Steel Piles HP10x42		Foot	162 (North) 135 (South)	
Driving Piles		Foot	162 (North) 135 (South)	
Test Pile Steel HP10x42		Each	1	

For details of piles see sheet 6 of 7.

PILE DATA
Type: Steel HP 10x42
Nominal Required Bearing: 240 kips
Factored Resistance Available: 132 kips
Est. Length: West Abut. - 27 Ft.
East Abut. - 27 Ft.
No. Production Piles: 12 (Includes Test Pile)
No. Test Piles: 1 (South Abut.)*

* Driven to 110% NRB

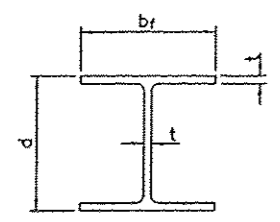


Note:
Cast back wall after beams have been erected

P.P.C DECK BEAM PILE BENT
ABUTMENT DETAILS
S.N. 034-3705
STA 10+45.25 TO STA 11+24.75
TR 88 (1300 E) AT LITTLE BEAR CREEK
WYTHE TOWNSHIP
HANCOCK COUNTY, IL

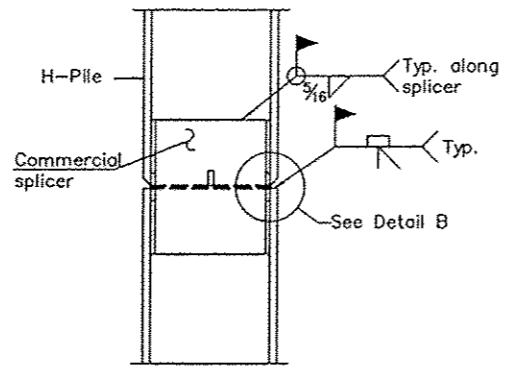
RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 88	12-25119-00-BR	HANCOCK	22	12
ROAD DISTRICT	ILLINOIS	WYTHE TOWNSHIP		

BRIDGE SHEET 6 OF 7
CONTRACT: 93633

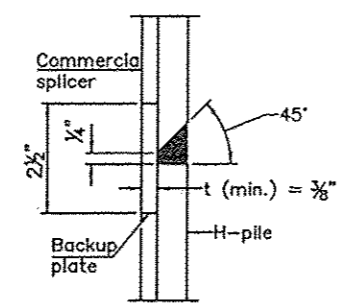


STEEL PILE TABLE

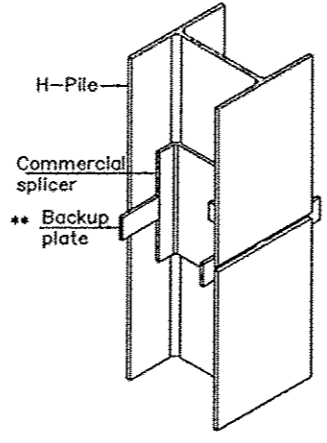
Designation	Depth d	Flange width bf	Web and Flange thickness t	Encasement diameter A
HP 14x117	14 1/4"	14 7/8"	1 3/16"	30"
x102	14"	14 3/4"	1 1/16"	30"
x89	13 7/8"	14 3/4"	5/8"	30"
x73	13 5/8"	14 5/8"	1/2"	30"
HP 12x84	12 1/4"	12 1/4"	1 1/16"	24"
x74	12 1/8"	12 1/4"	5/8"	24"
x63	12"	12 1/8"	1/2"	24"
x53	11 3/4"	12"	7/16"	24"
HP 10x57	10"	10 1/4"	9/16"	24"
x42	9 3/4"	10 1/8"	7/16"	24"
HP 8x36	8"	8 3/8"	7/16"	18"



ELEVATION

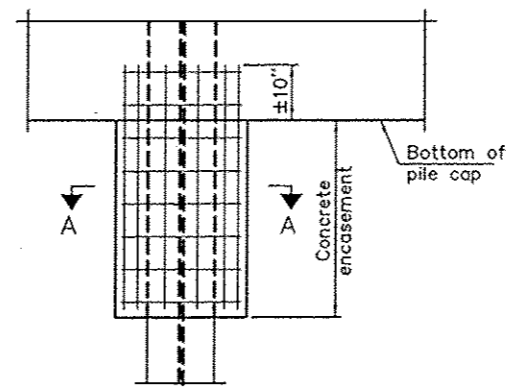


DETAIL "B"



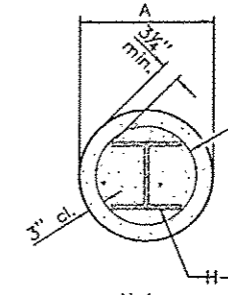
ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE



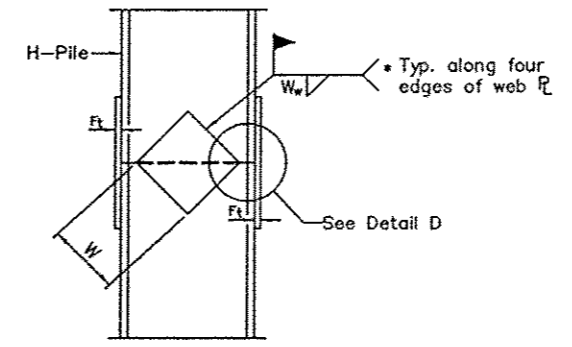
ELEVATION

PILE ENCASEMENT

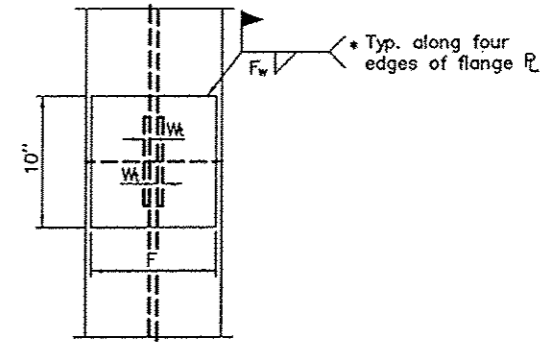


SECTION A-A

Note: Forms for encasement may be omitted when soil conditions permit.

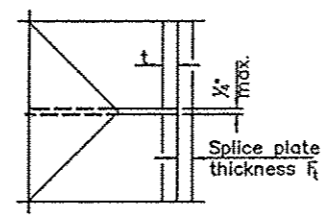


ELEVATION



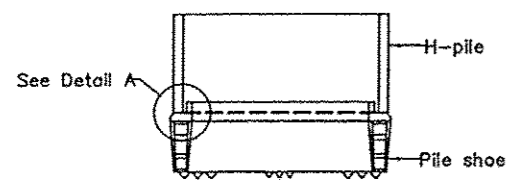
END VIEW

Designation	F	Ft	Fw	W	Wt	Ww
HP 14x117	12 1/2"	1"	7/8"	7 3/4"	5/8"	1/2"
x102	12 1/2"	7/8"	3/4"	7 3/4"	5/8"	1/2"
x89	12 1/2"	3/4"	1 1/16"	7 3/4"	5/8"	1/2"
x73	12 1/2"	5/8"	9/16"	7 3/4"	5/8"	1/2"
HP 12x84	10"	7/8"	1 1/16"	6 1/2"	5/8"	1/2"
x74	10"	7/8"	1 1/16"	6 1/2"	5/8"	1/2"
x63	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
x53	10"	5/8"	1/2"	6 1/2"	1/2"	3/8"
HP 10x57	8"	3/4"	9/16"	5 1/4"	1/2"	3/8"
x42	8"	5/8"	9/16"	5 1/4"	1/2"	3/8"
HP 8x36	7"	5/8"	7/16"	4 1/4"	1/2"	3/8"

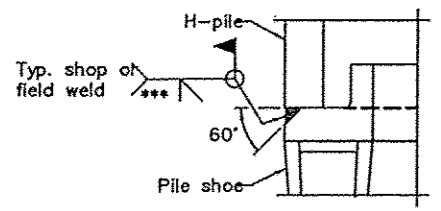


DETAIL D

WELDED PLATE FIELD SPLICE

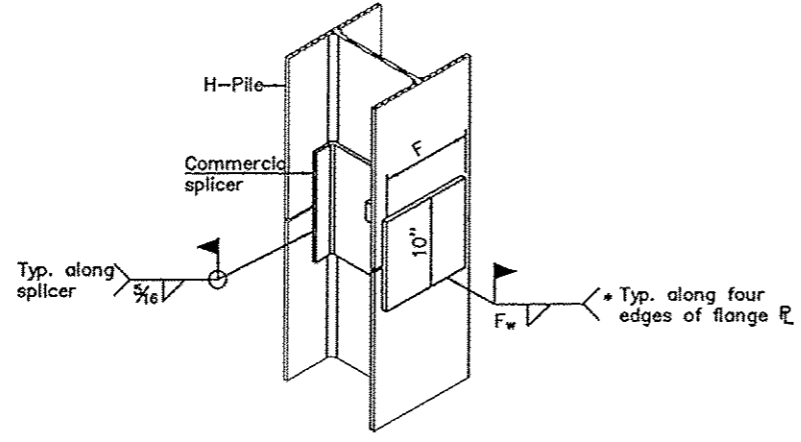


ELEVATION



DETAIL A

H-PILE SHOE ATTACHMENT



ISOMETRIC VIEW

WELDED COMMERCIAL SPLICE ALTERNATE

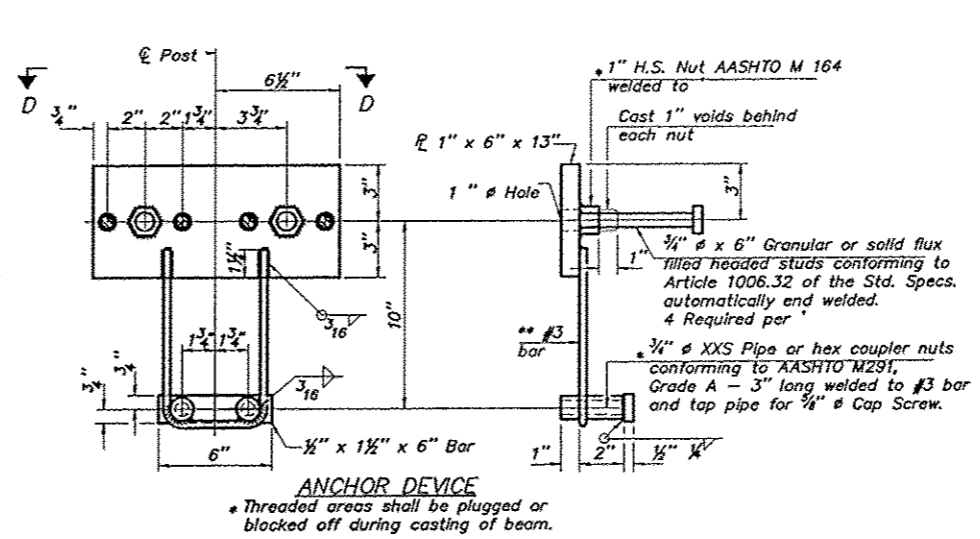
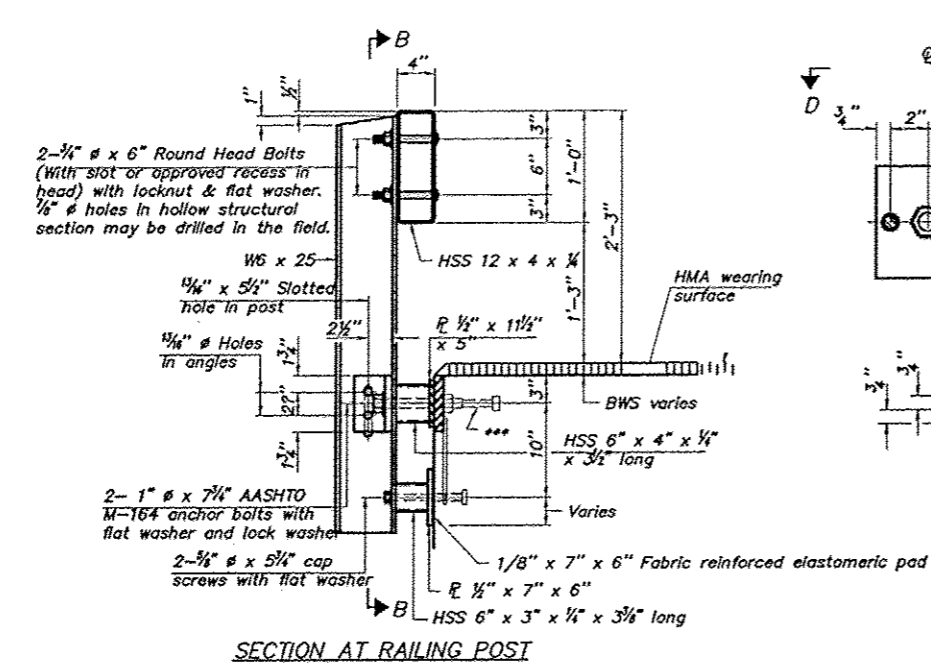
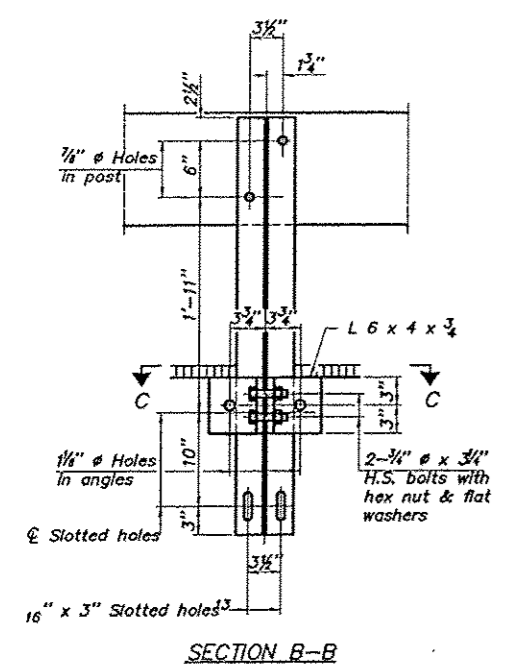
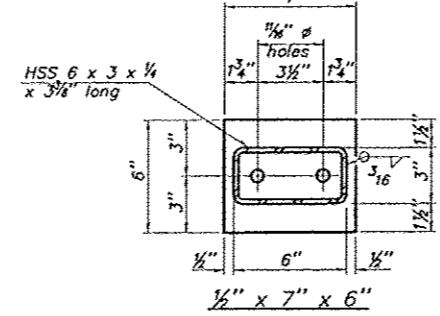
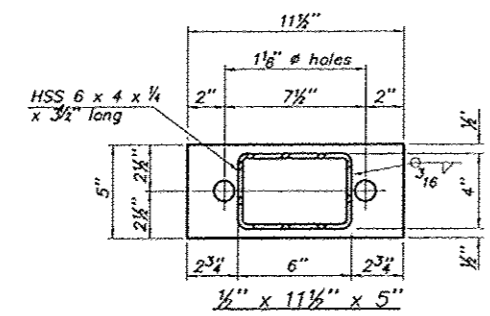
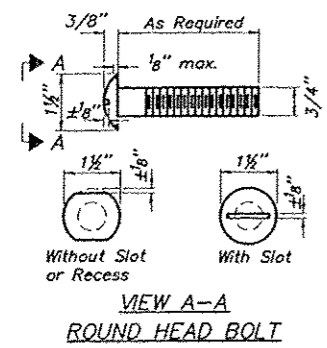
- * Interrupt welds 1/4" from end of web and/or each flange.
- ** Remove portions of backup plates that extend outside the flanges.
- *** Weld size per pile shoe manufacturer (5/16" min.).

Note: The steel H-piles shall be according to AASHTO M270 Grade 50.

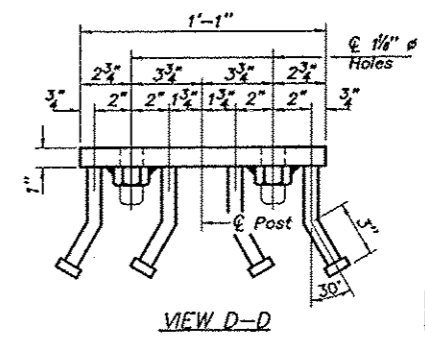
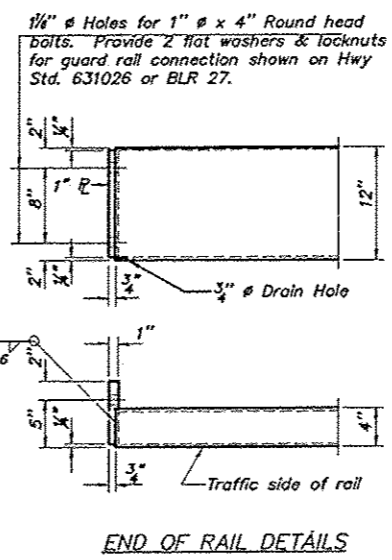
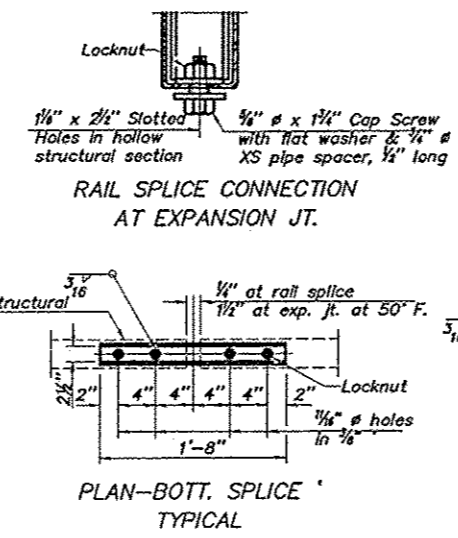
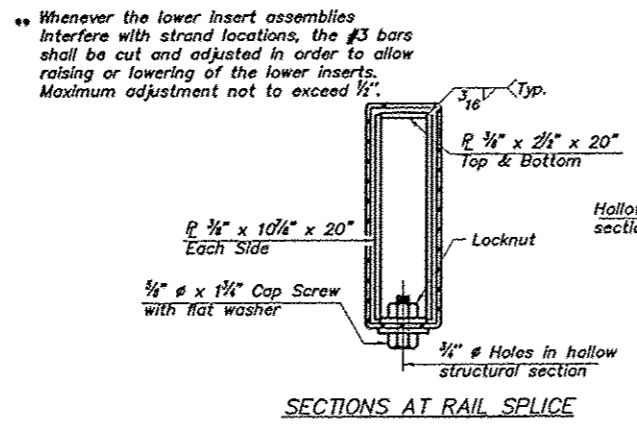
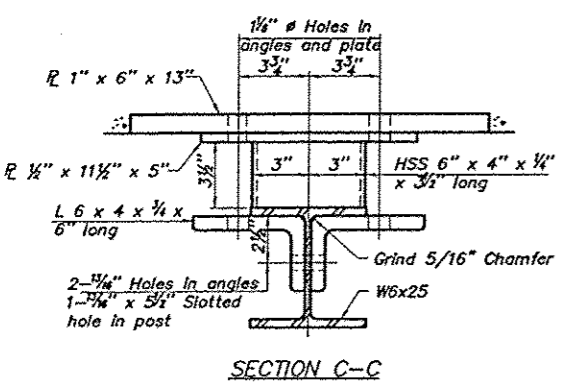
HP 10X42 PILE DETAILS
S.N. 034-3705
STA 10+45.75 TO STA 11+24.25
TR 88 (1300 E) AT LITTLE BEAR CREEK
WYTHE TOWNSHIP
HANCOCK COUNTY, IL

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 88	12-25119-00-BR	HANCOCK	22	13
ROAD DISTRICT	ILLINOIS	WYTHE TOWNSHIP		

BRIDGE SHEET 7 OF 7
CONTRACT: 93633



Notes:
All field drilled holes shall be coated with an approved zinc rich paint before erection.
For multi-span bridges, sufficient 1/4\"/>



BILL OF MATERIAL

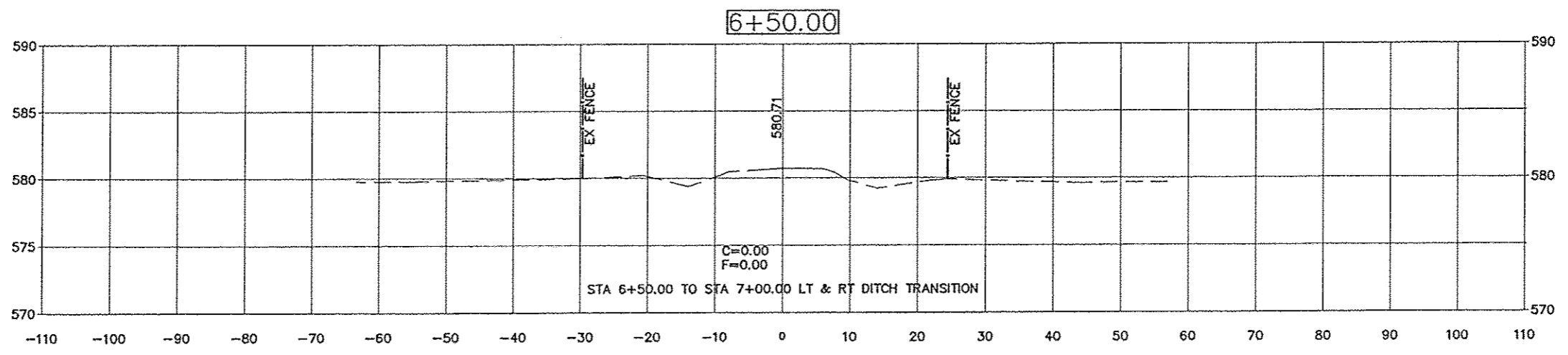
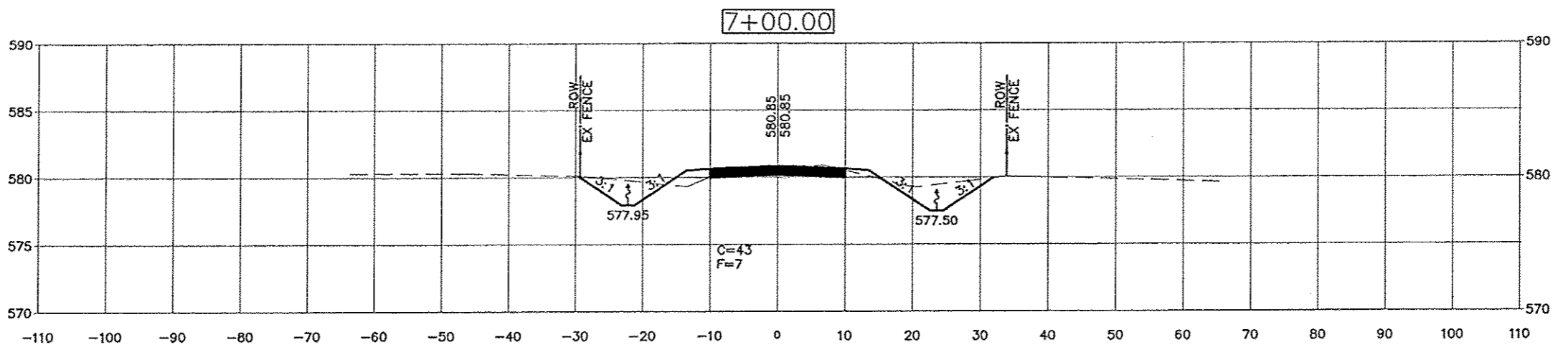
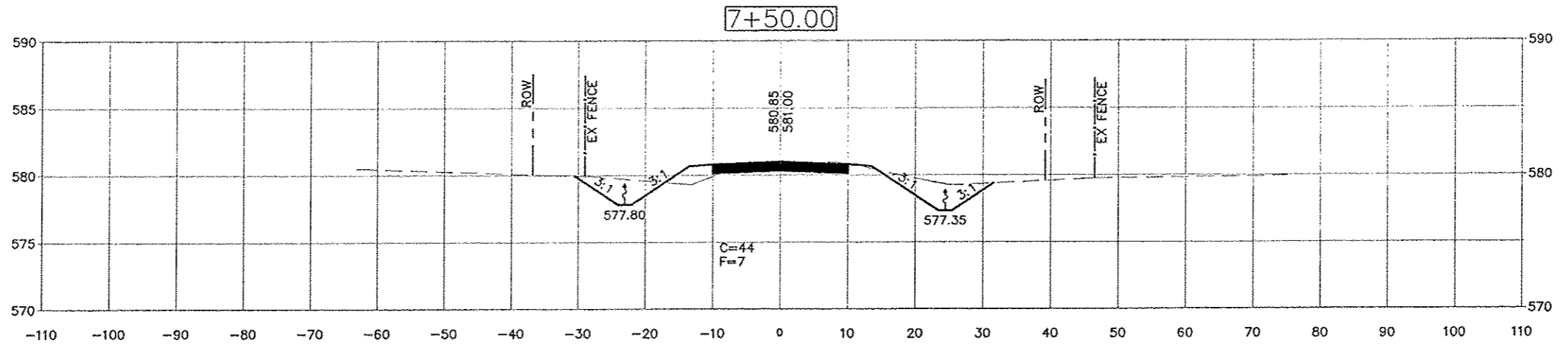
Item	Unit	Quantity
Steel Railing, Type S-1	Foot	160

(10'-9" Maximum Post Spacing)

STEEL RAILING, TYPE S-1
S.N. 034-3705
STA 10+45.75 TO STA 11+24.25
TR 88 (1300 E) AT LITTLE BEAR CREEK
WYTHE TOWNSHIP
HANCOCK COUNTY, IL

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 88	12-25119-00-BR	HANCOCK	22	14
ROAD DISTRICT	ILLINOIS	WYTHE TOWNSHIP		

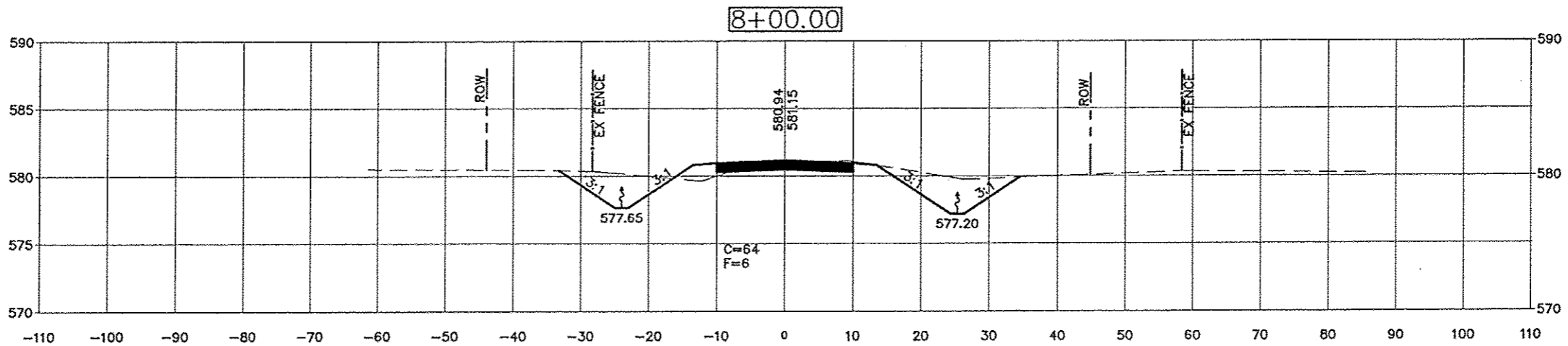
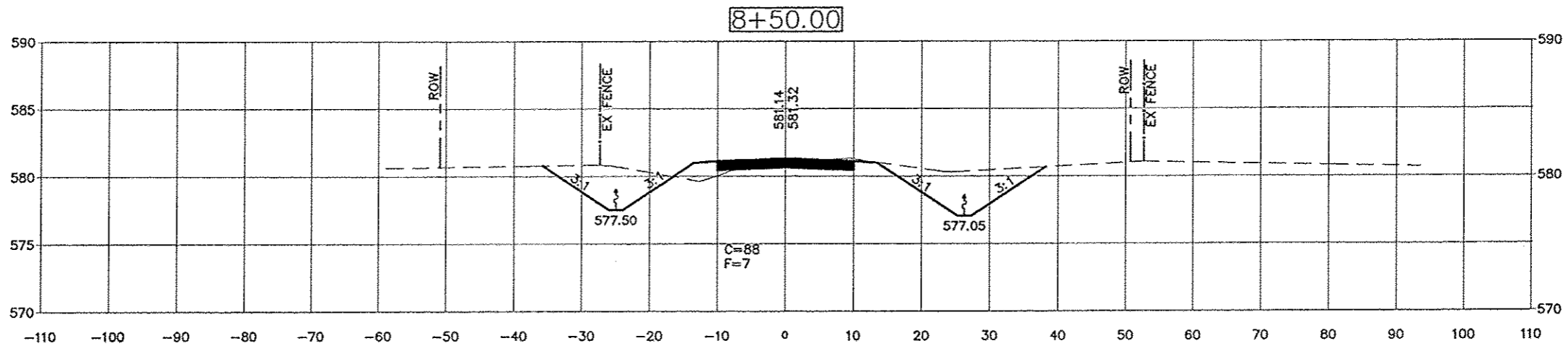
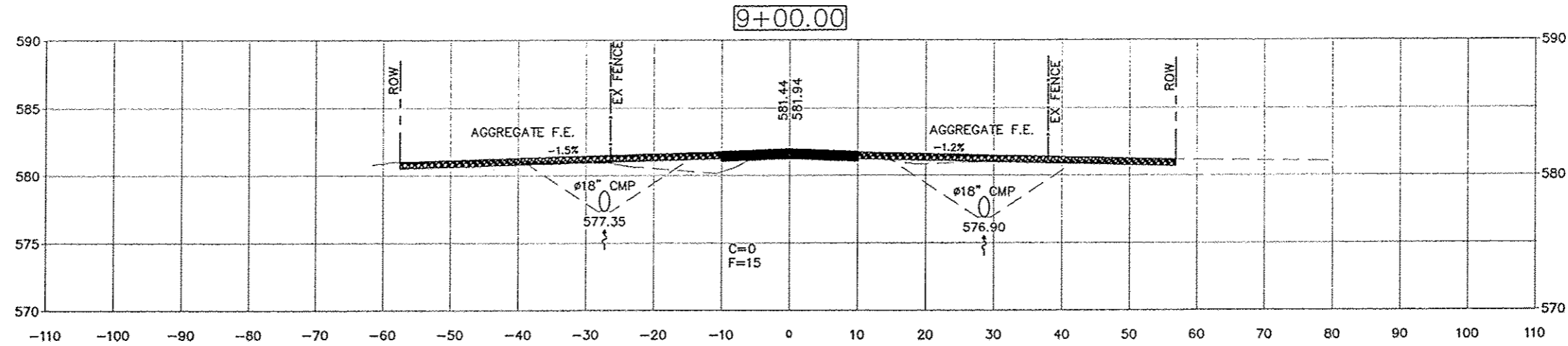
CONTRACT: 93633



CROSS SECTIONS
 S.N. 034-3705
 STA 6+50.00 TO STA 7+50.00
 TR 88 (1300 E) AT LITTLE BEAR CREEK
 WYTHE TOWNSHIP
 HANCOCK COUNTY, IL

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 88	12-25119-00-BR	HANCOCK	22	15
ROAD DISTRICT		ILLINOIS	WYTHE TOWNSHIP	

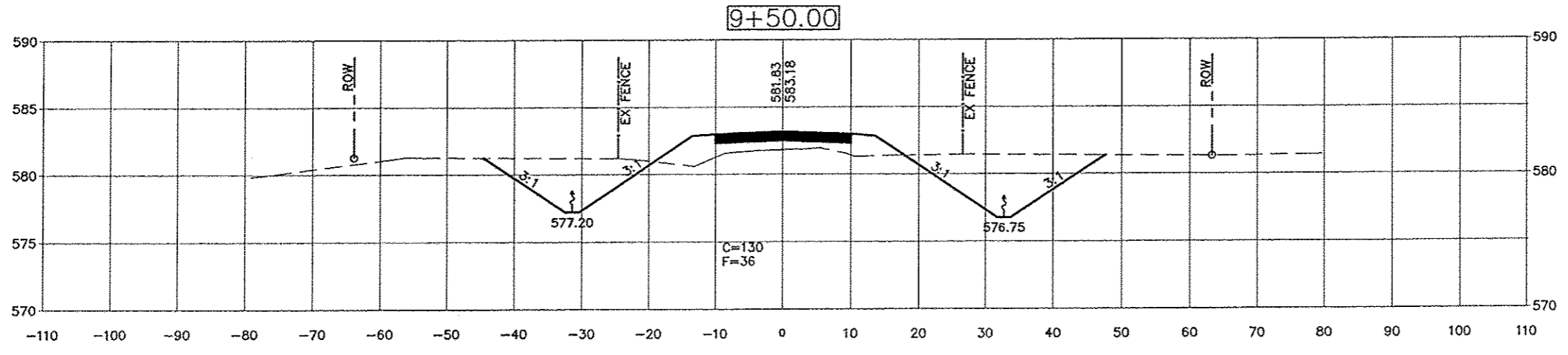
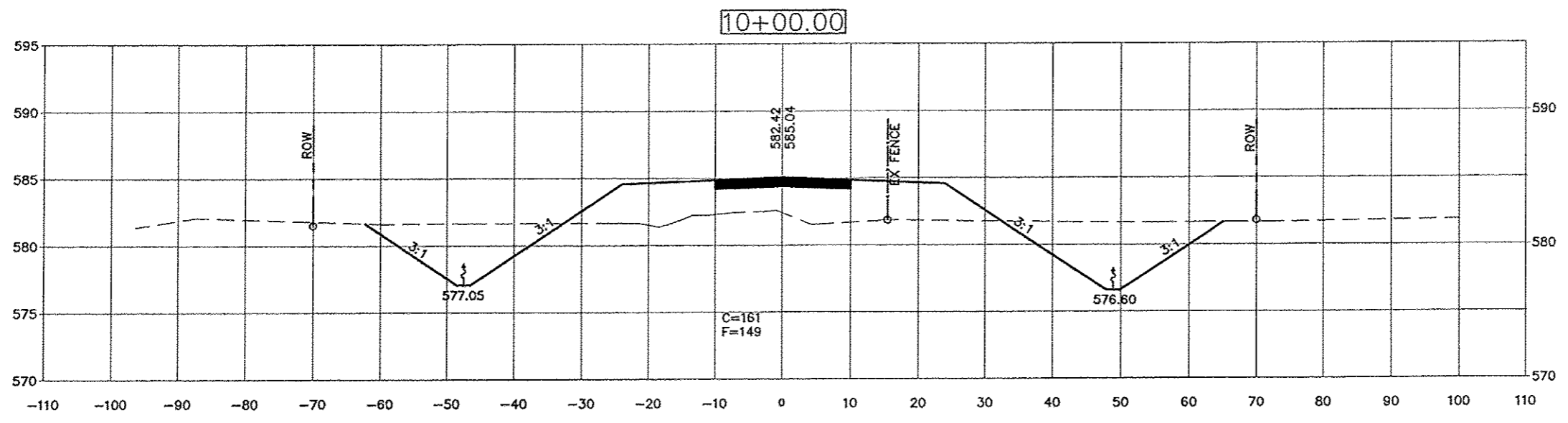
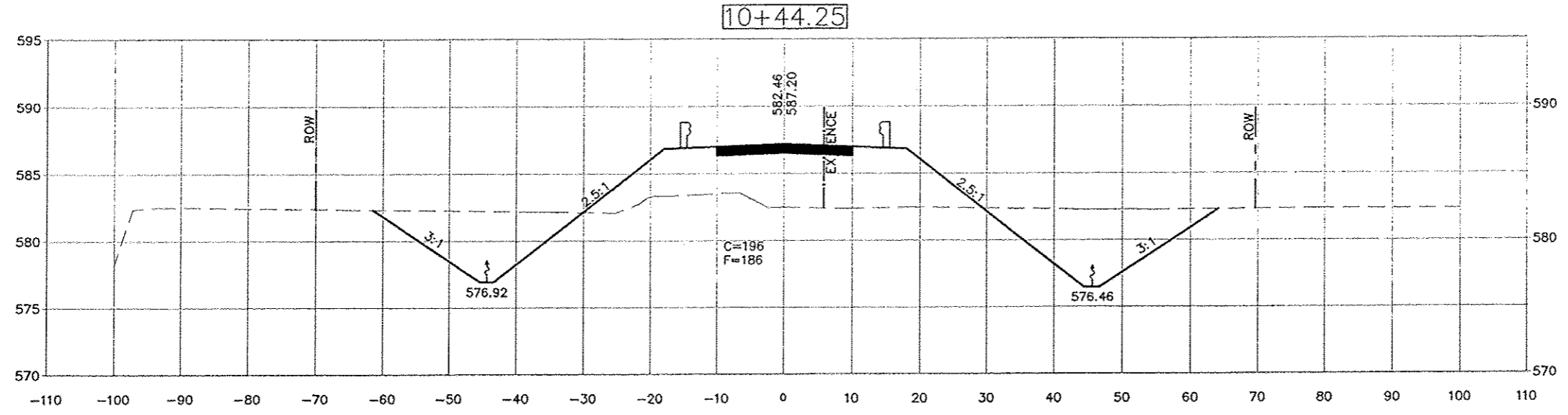
CONTRACT: 93633



CROSS SECTIONS
 S.N. 034-3705
 STA 8+00.00 TO STA 9+00.00
 TR 88 (1300 E) AT LITTLE BEAR CREEK
 WYTHE TOWNSHIP
 HANCOCK COUNTY, IL

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 88	12-25119-00-BR	HANCOCK	22	16
ROAD DISTRICT		ILLINOIS	WYTHE TOWNSHIP	

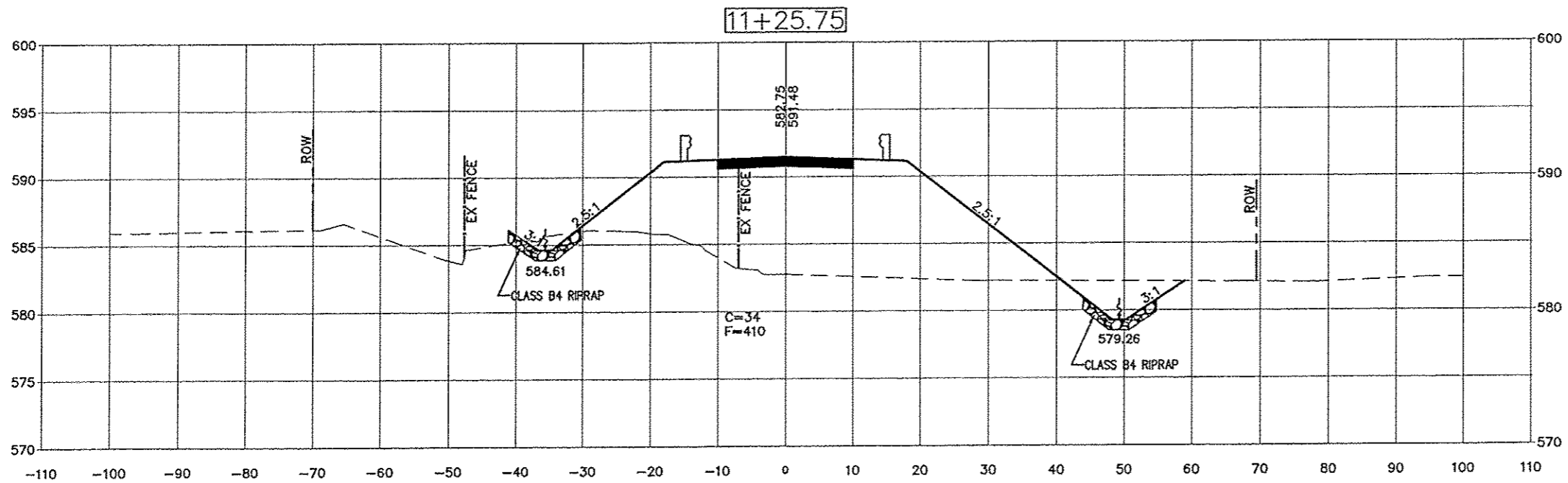
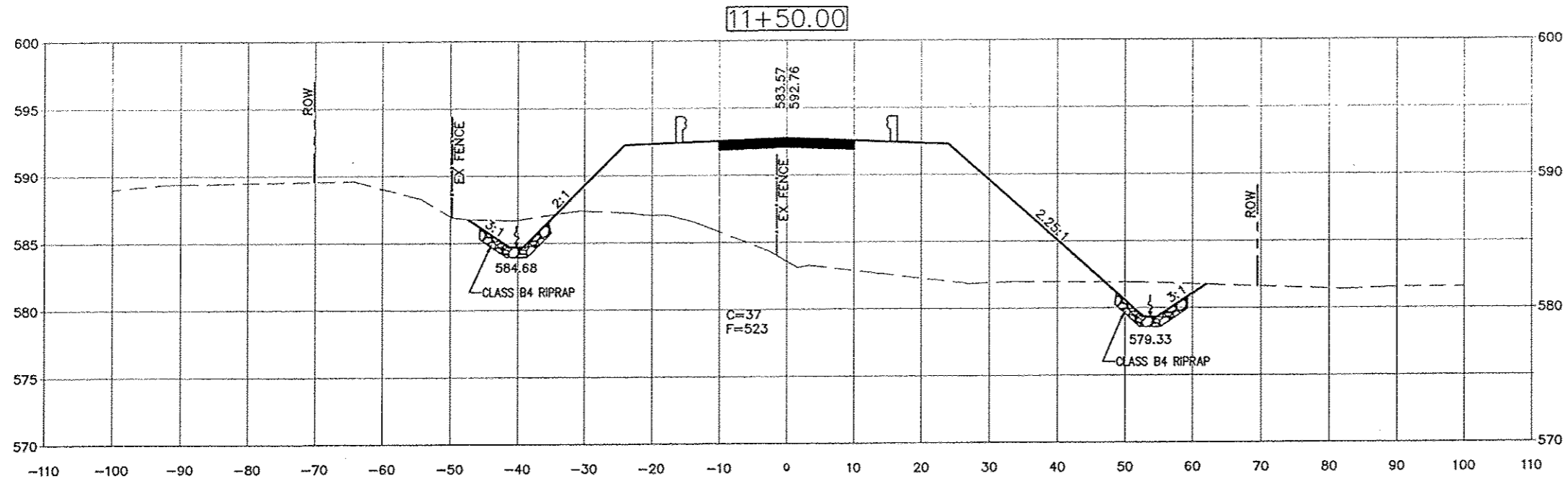
CONTRACT: 93633



CROSS SECTIONS
 S.N. 034-3705
 STA 9+50.00 TO STA 10+44.25
 TR 88 (1300 E) AT LITTLE BEAR CREEK
 WYTHE TOWNSHIP
 HANCOCK COUNTY, IL

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 88	12-25119-00-BR	HANCOCK	22	17
ROAD DISTRICT	ILLINOIS	WYTHE TOWNSHIP		

CONTRACT: 93633

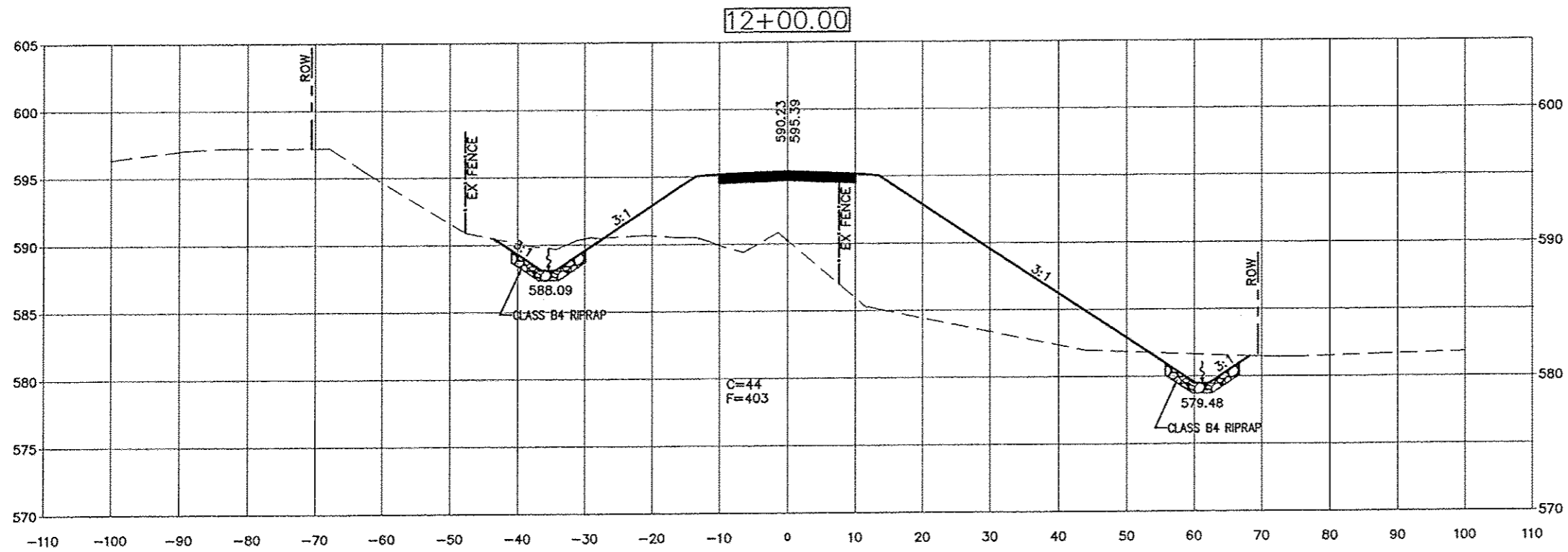
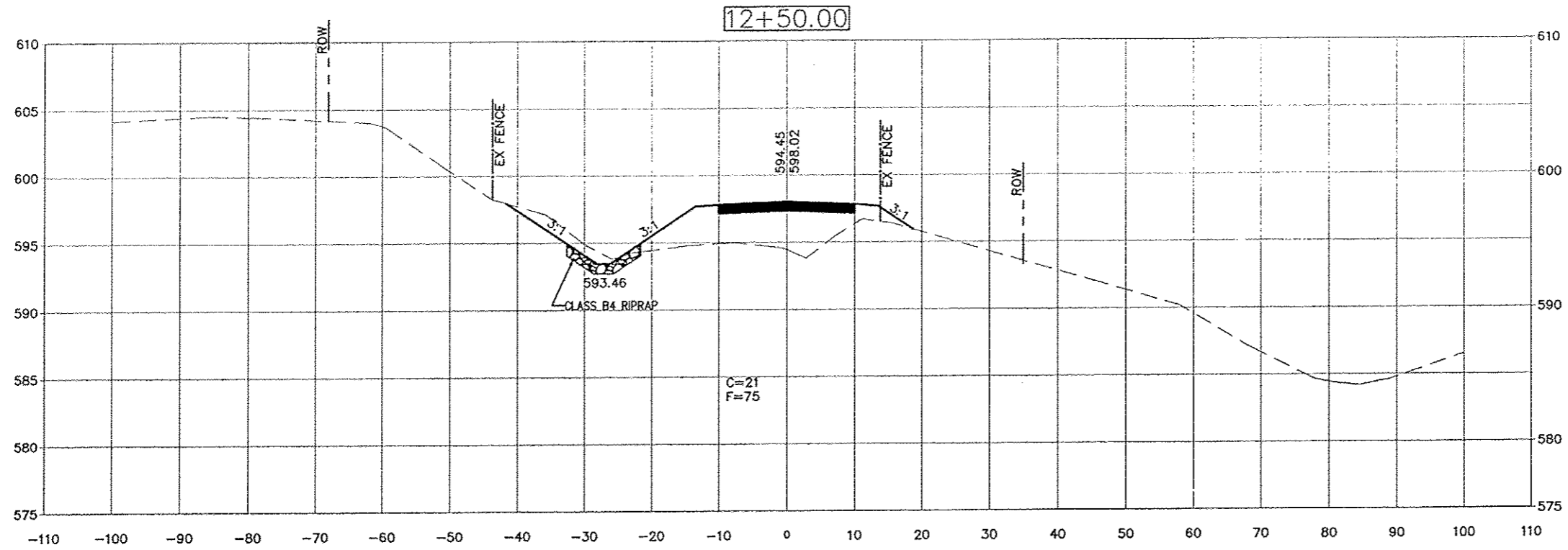


BRIDGE OMISSION STA 10+44.25-11+25.75

CROSS SECTIONS
 S.N. 034-3705
 STA 11+25.75 TO STA 11+50.00
 TR 88 (1300 E) AT LITTLE BEAR CREEK
 WYTHE TOWNSHIP
 HANCOCK COUNTY, IL

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 88	12-25119-00-BR	HANCOCK	22	18
ROAD DISTRICT		ILLINOIS	WYTHE TOWNSHIP	

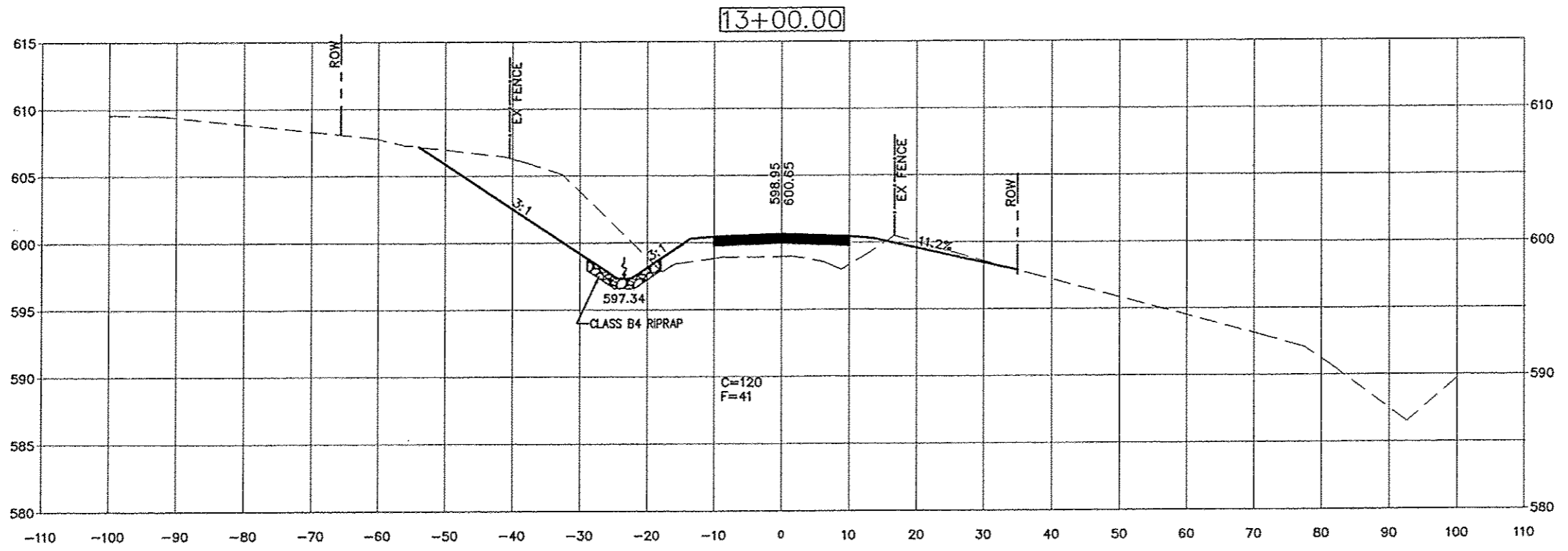
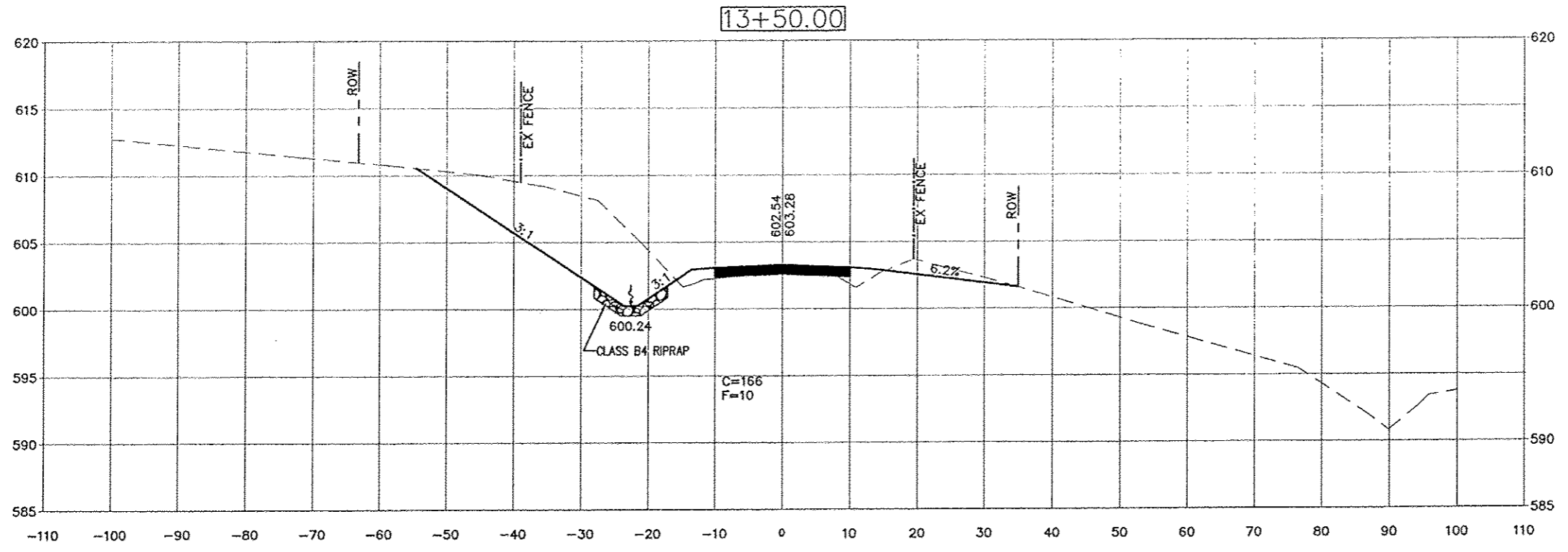
CONTRACT: 93633



CROSS SECTIONS
 S.N. 034-3705
 STA 12+00.00 TO STA 12+50.00
 TR 88 (1300 E) AT LITTLE BEAR CREEK
 WYTHE TOWNSHIP
 HANCOCK COUNTY, IL

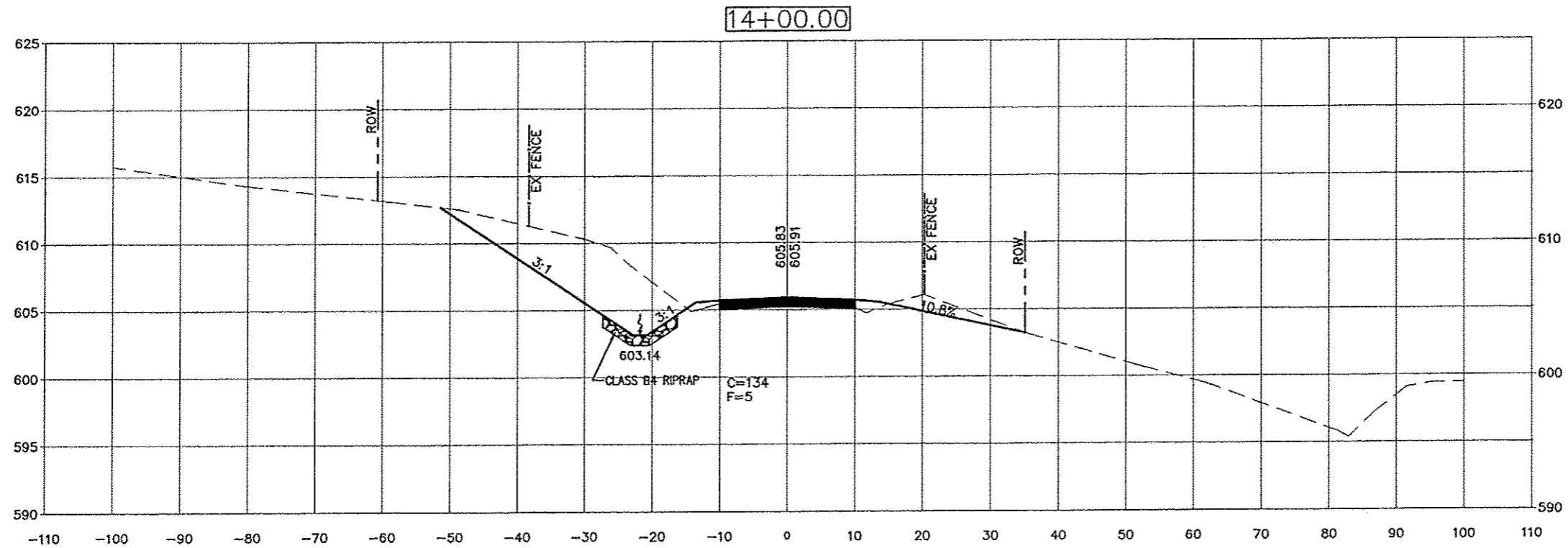
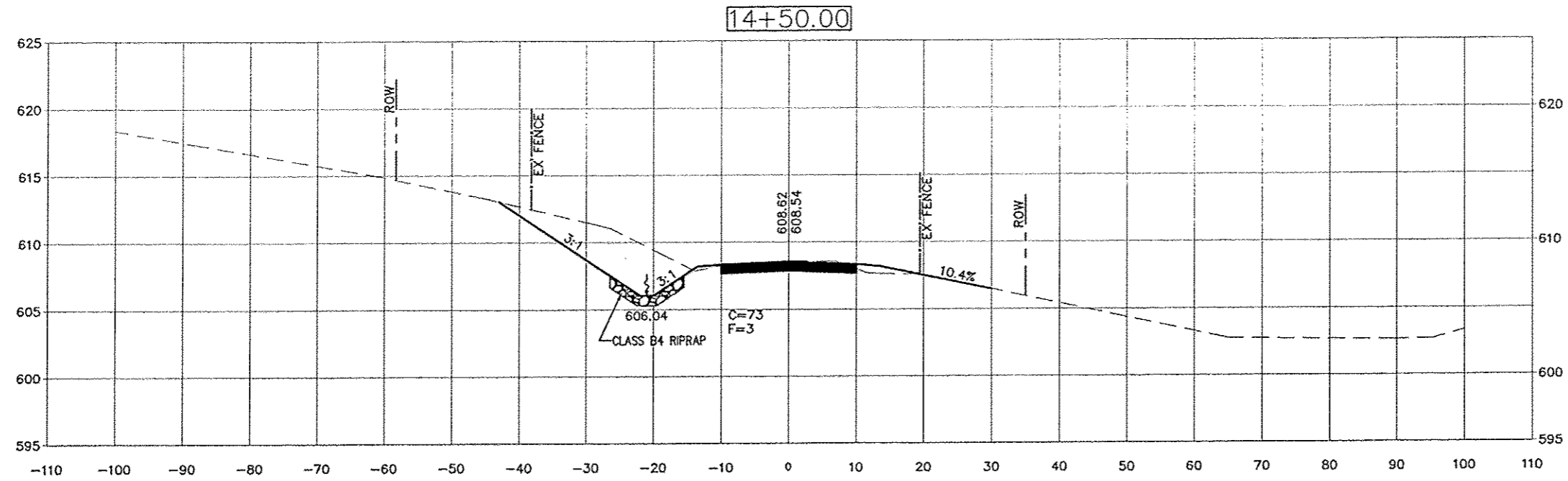
RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 88	12-25119-00-BR	HANCOCK	22	19
ROAD DISTRICT		ILLINOIS	WYTHE TOWNSHIP	

CONTRACT: 93633



CROSS SECTIONS
 S.N. 034-3705
 STA 13+00.00 TO STA 13+50.00
 TR 88 (1300 E) AT LITTLE BEAR CREEK
 WYTHE TOWNSHIP
 HANCOCK COUNTY, IL

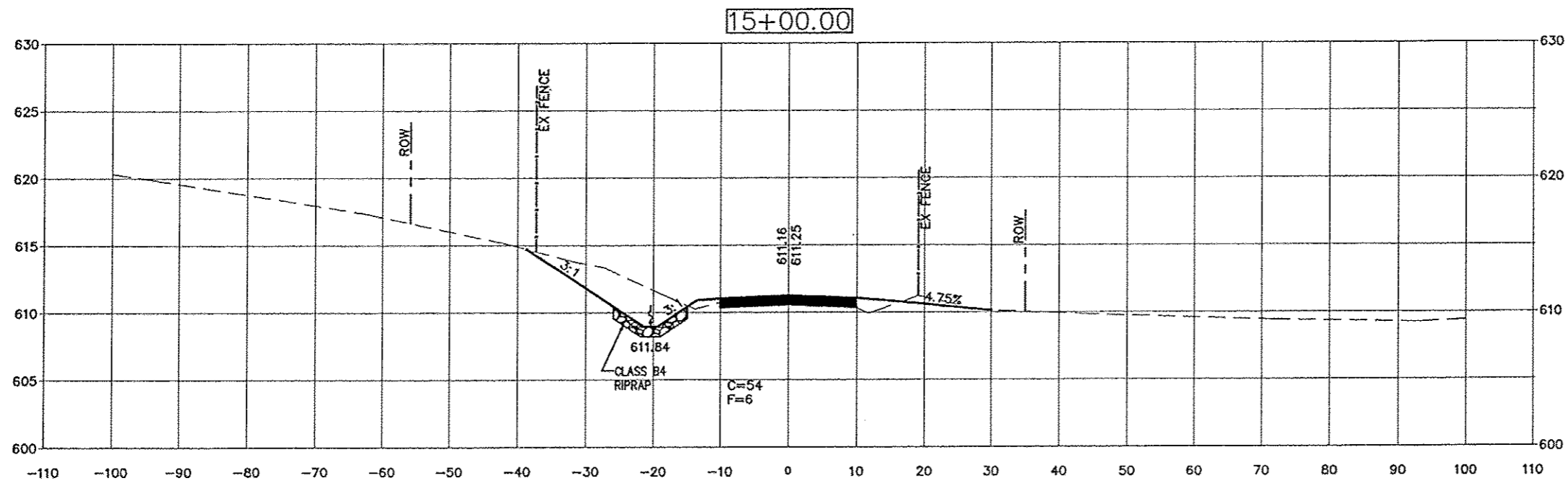
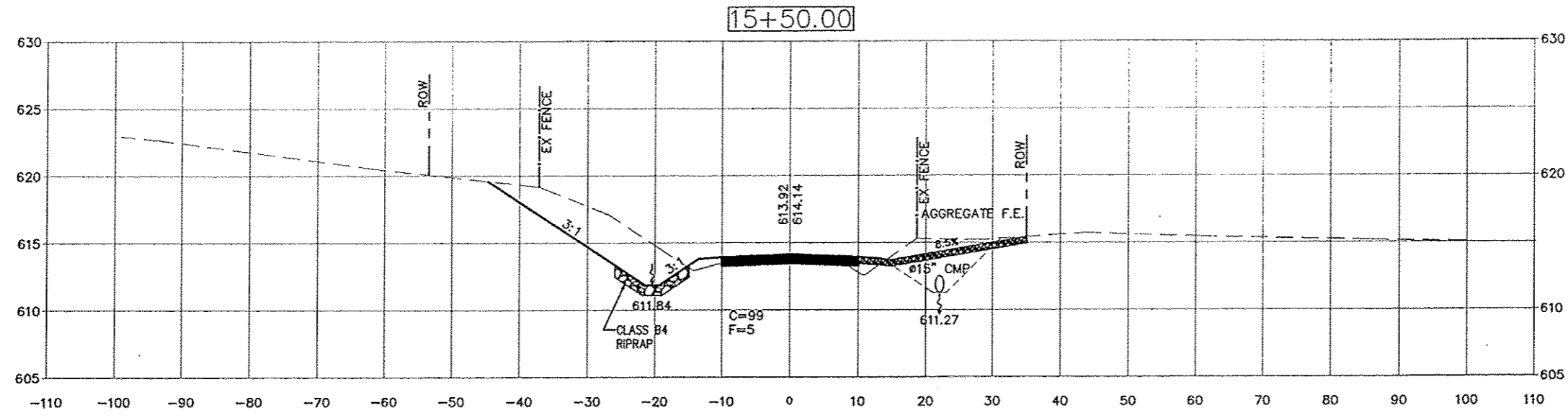
RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 88	12-25119-00-BR	HANCOCK	22	20
ROAD DISTRICT	ILLINOIS	WYTHE TOWNSHIP		
CONTRACT: 93633				



CROSS SECTIONS
 S.N. 034-3705
 STA 14+00.00 TO STA 14+50.00
 TR 88 (1300 E) AT LITTLE BEAR CREEK
 WYTHE TOWNSHIP
 HANCOCK COUNTY, IL

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 88	12-25119-00-BR	HANCOCK	22	21
ROAD DISTRICT		ILLINOIS	WYTHE TOWNSHIP	

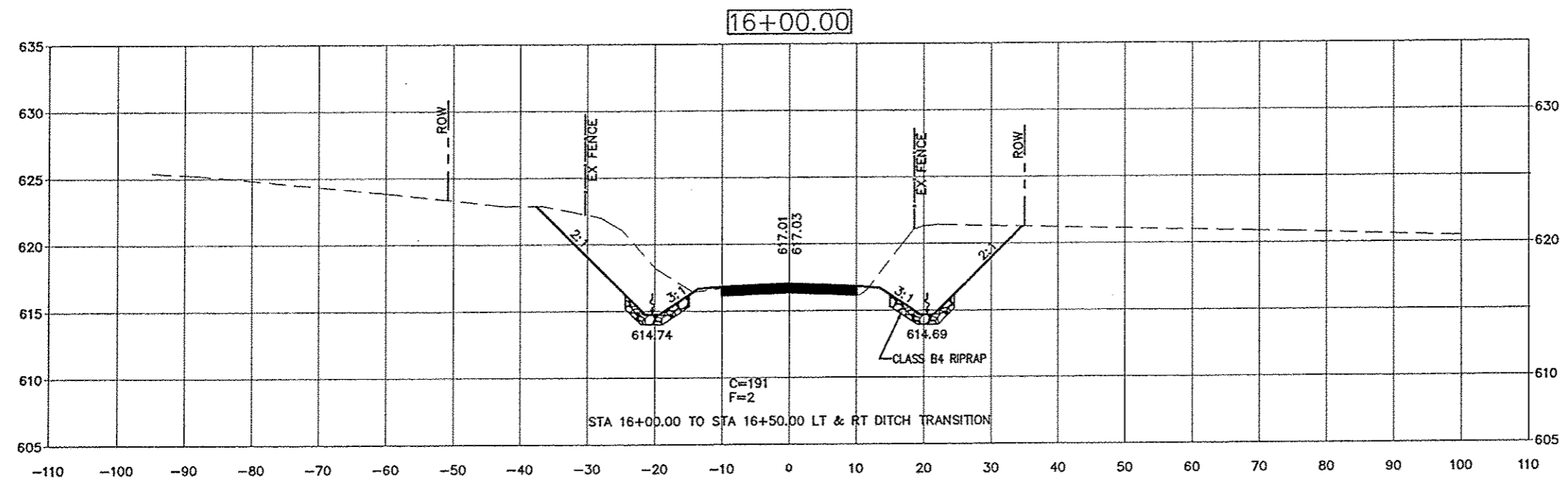
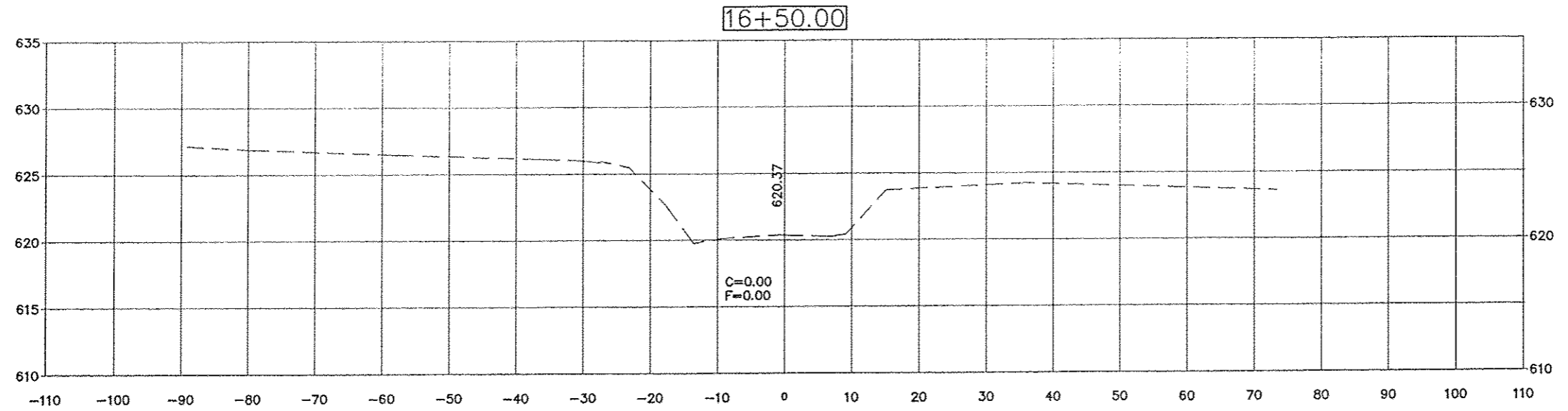
CONTRACT: 93633



CROSS SECTIONS
 S.N. 034-3705
 STA 15+00.00 TO STA 15+50.00
 TR 88 (1300 E) AT LITTLE BEAR CREEK
 WYTHE TOWNSHIP
 HANCOCK COUNTY, IL

RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
TR 88	12-25119-00-BR	HANCOCK	22	22
ROAD DISTRICT	ILLINOIS	WYTHE TOWNSHIP		

CONTRACT: 93633



CROSS SECTIONS
S.N. 034-3705
STA 16+00.00
TR 88 (1300 E) AT LITTLE BEAR CREEK
WYTHE TOWNSHIP
HANCOCK COUNTY, IL