

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 1 (FAS 369)	02-00076 -00-BR	MARSHALL	14	1
ILLINOIS				

CONTRACT NO. 87278

STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION DIVISION OF HIGHWAYS PLANS FOR PROPOSED BRIDGE REPLACEMENT AND REHABILITATION PROGRAM

**SECTION 02-00076-00-BR
MARSHALL COUNTY
PROJECT NO. BRS-369 (105)
COUNTY HIGHWAY 1 (FAS ROUTE 369)
JOB NO. C-93-089-04**

INDEX OF SHEETS

SHEET NO.	TITLE
1.	COVER SHEET
2.	SUMMARY OF QUANTITIES, GENERAL NOTES & TYPICAL SECTIONS
3.	PLAN AND PROFILE SHEET
4.	SHOULDER WIDENING AND GUARDRAIL DETAILS
5.-8.	BRIDGE PLANS
9.-14.	STATION CROSS SECTIONS

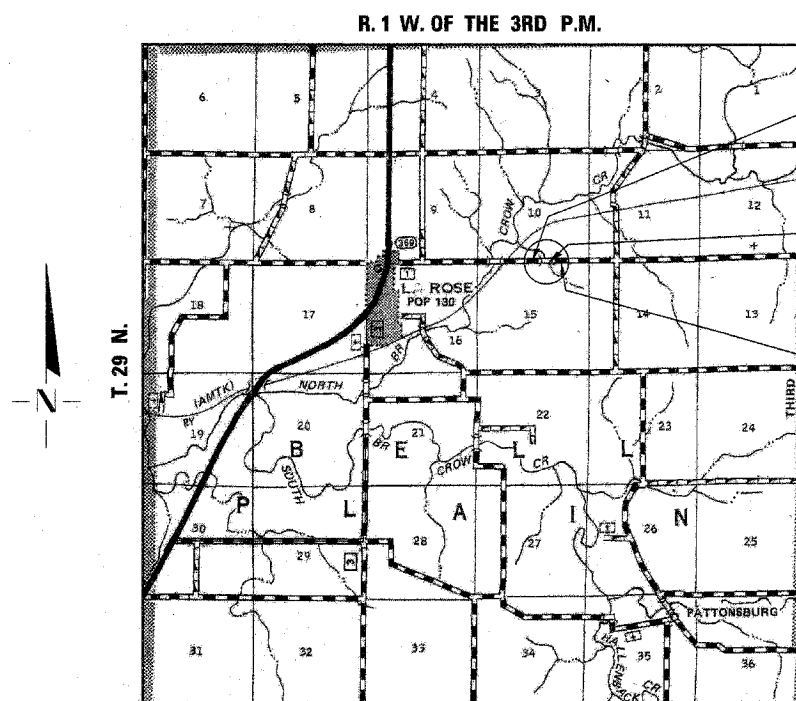
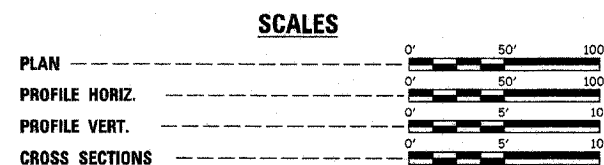
STANDARDS:

- 280001-02
- 515001-02
- 630001-05
- 630301-03
- 631026-02
- 635006-02
- 702001-05
- BLR 21-6

OVERHEAD POWER

AMERENCILCO
309-693-4762

BURIED CABLE
VERIZON NORTH, INC.
309-663-3422



IMPROVEMENT BEGINS
STA. 12+00

A.R. STA. 15+00 - SPECIAL DESIGN
18'-0" x 7'-8" R.C.B.C., 36'-7 1/2" LENGTH
WITH DROP BOX, 35° RT. AHEAD SKEW
28'-0" ROADWAY
EXISTING STRUCTURE S.N. 062-3601
PROPOSED STRUCTURE S.N. 062-3610

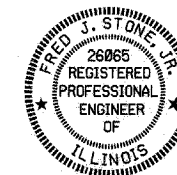
IMPROVEMENT ENDS
STA. 18+00

LOCATION PLAN

GROSS LENGTH OF SECTION = 600 FEET = 0.114 MILES
NET LENGTH OF SECTION = 600 FEET = 0.114 MILES



MAJOR COLLECTOR (NON-URBAN)
ADT 250-400
CURRENT ADT = 394 (2005)
3R DESIGN
40 MPH DESIGN SPEED



Fred S. Stone, Jr. (2-09-05)
ILLINOIS PROFESSIONAL NO. 26065
EXPIRES 11-30-05

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

APPROVED	<i>February 8</i>	2005
	<i>Angel P. Minster</i>	COUNTY ENGINEER
PASSED	<i>2/18</i>	2005
	<i>July 11</i>	DISTRICT THREE ENGINEER OF LOCAL ROADS & STREETS
APPROVED	<i>2/18</i>	2005
	<i>Greg Monte</i>	DEPUTY DIRECTOR OF HIGHWAYS, REGION TWO ENGINEER
STATE OF ILLINOIS DEPARTMENT OF TRANSPORTATION		

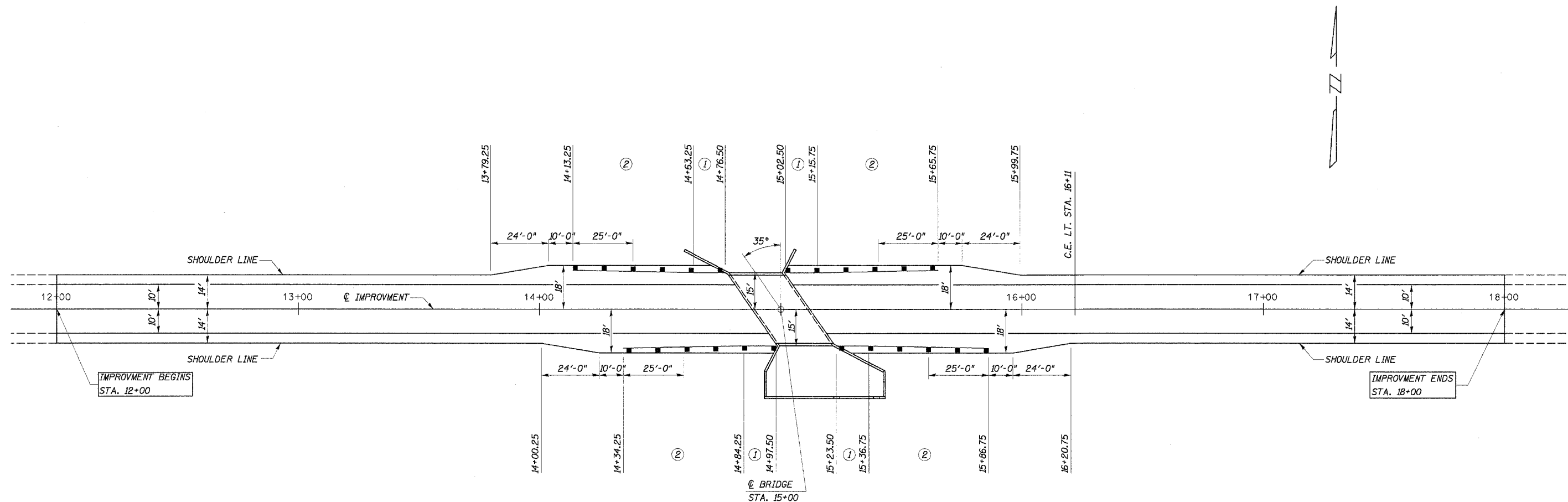
CONTRACT NO. 87278

4440 ASH GROVE
SPRINGFIELD, IL 62711
(217) 793-8600
oasino@famvid.com

OZYURT AND STONE, INC.
CONSULTING ENGINEERS

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 1 FAS 369	02-00076 -00-BR	MARSHALL	14	4
ILLINOIS				

CONTRACT NO. 87278



SHOULDER TRANSITION PLAN

TRAFFIC BARRIER TERMINAL, TYPE 5A

LT. 14.67' STA. 14+63.25 TO LT. 14.67' STA. 14+76.50 = 1 EACH
 RT. 14.67' STA. 14+84.25 TO RT. 14.67' STA. 14+97.50 = "
 LT. 14.67' STA. 15+02.50 TO LT. 14.67' STA. 15+15.75 = "
 RT. 14.67' STA. 15+23.50 TO RT. 14.67' STA. 15+36.75 = "
 TOTAL = 4 EACH

TRAFFIC BARRIER TERMINAL, TYPE 1 SPECIAL (TANGENT)

LT. 15.67' STA. 14+13.25 TO LT. 14.67' STA. 14+63.25 = 1 EACH
 RT. 15.67' STA. 14+34.25 TO RT. 14.67' STA. 14+84.25 = "
 LT. 14.67' STA. 15+15.75 TO LT. 15.67' STA. 15+65.75 = "
 RT. 14.67' STA. 15+36.75 TO RT. 15.67' STA. 15+86.75 = "
 TOTAL = 4 EACH

LEGEND

NOTE: ALL DIMENSIONS REFER TO FRONT FACE OF PROPOSED RAILING.

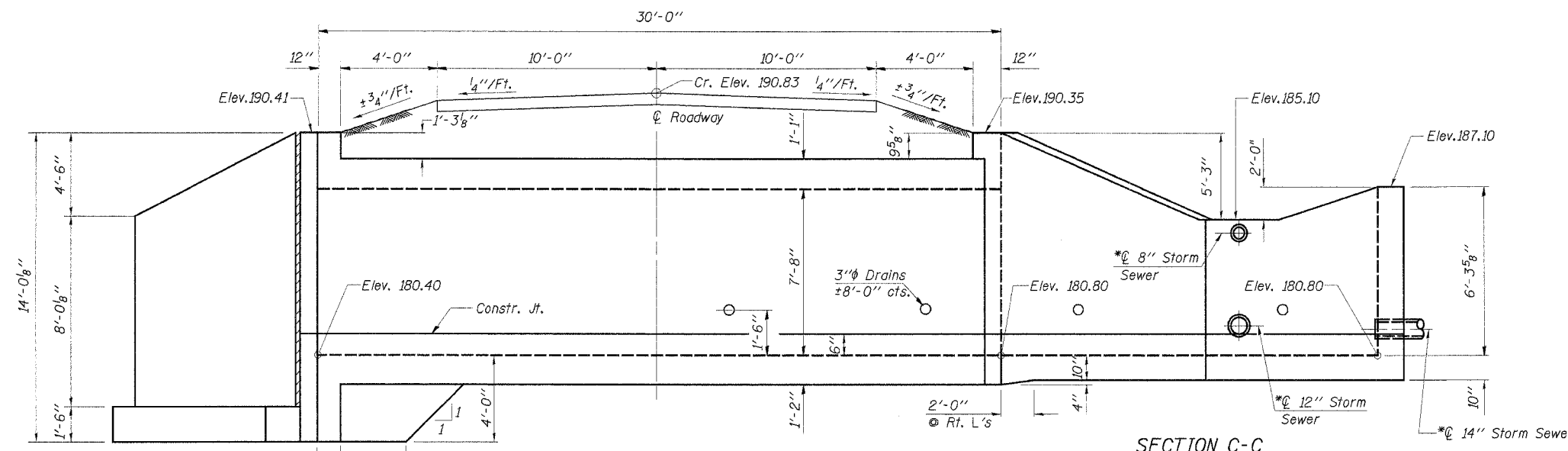
- ① TRAFFIC BARRIER TERMINAL, TYPE 5A
- ② TRAFFIC BARRIER TERMINAL, TYPE 1, SPECIAL (TANGENT)

DESIGNED	F.J.S.
CHECKED	S.F.M.
DRAWN	S.A.P.
CHECKED	S.F.M.

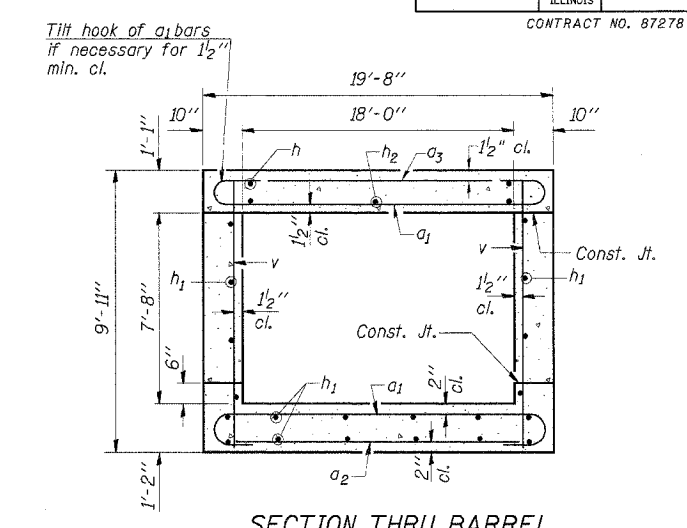
SHOULDER WIDENING & GUARDRAIL DETAILS COUNTY HIGHWAY 1 SECTION 02-00076-00-BR MARSHALL COUNTY STATION 15+00		
4440 ASH GROVE SPRINGFIELD, IL. 62711 (217) 793-8800 oasinc@tamvid.com	OZYURT AND STONE, INC. CONSULTING ENGINEERS	JOB NO.: 0412 FILE: 0412SHLDR.dgn DATE: 12-09-04

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 1	02-00076	MARSHALL	14	5
FAS 369	-00-BR			

ILLINOIS
CONTRACT NO. 87278



SECTION C-C



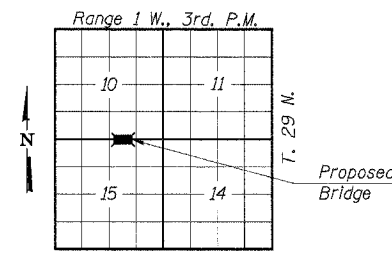
SECTION THRU BARREL

ELEVATION
Dimensions are at Rt. L's to C Rdwy.

*All pipes to be relocated in the field and extend thru the drop box and connect to existing tile use Class A, Type 1 material and a minimum length of 20'-0"

BUILT 200_ BY
MARSHALL COUNTY
SEC. 02-00076-00-BR
F.A.S. ROUTE 369
PROJ. BRS-369(105)
STR. NO. 062-3610
LOADING HS20

LETTERING FOR NAME PLATE
See Std. 515001



LOCATION PLAN

DESIGN STRESSES

fy = 60,000 psi
f'c = 3,500 psi
Max. Soil Pressure under footing = 2715 psf

LOADING HS 20-44

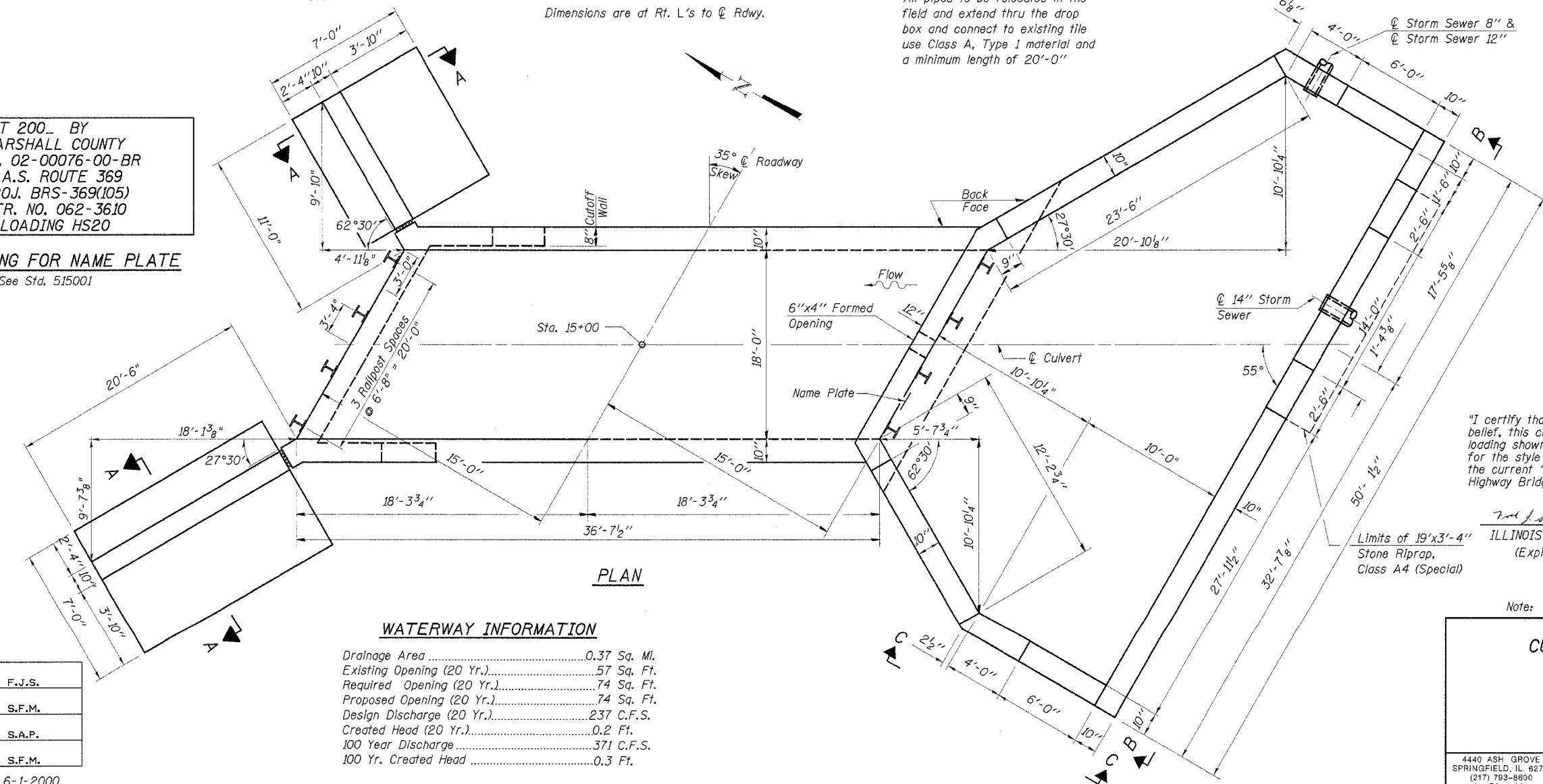
"I certify that to the best of my knowledge, information and belief, this culvert design is structurally adequate for the design loading shown on the plans. The design is an economical one for the style of structure and complies with requirements of the current 'AASHTO Standard Specifications for Highway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

Fred J. Stone, Jr. (2-2-05)
ILLINOIS STRUCTURAL NO. 2934
(Expires 11/30/06)



Limits of 19'x3'-4"
Stone Riprap,
Class A4 (Special)

Note: See Sheet 7 for Sections A-A & B-B



PLAN

WATERWAY INFORMATION

Drainage Area	0.37 Sq. Mi.
Existing Opening (20 Yr.)	57 Sq. Ft.
Required Opening (20 Yr.)	74 Sq. Ft.
Proposed Opening (20 Yr.)	74 Sq. Ft.
Design Discharge (20 Yr.)	237 C.F.S.
Created Head (20 Yr.)	0.2 Ft.
100 Year Discharge	371 C.F.S.
100 Yr. Created Head	0.3 Ft.

DESIGNED	F.J.S.
CHECKED	S.F.M.
DRAWN	S.A.P.
CHECKED	S.F.M.

SSB-T1-R 6-1-2000

CULVERT PLAN & ELEVATION

COUNTY HIGHWAY 1
SECTION 02-00076-00-BR
MARSHALL COUNTY
STATION 15+00

4440 ASH GROVE
SPRINGFIELD, IL 62711
(217) 793-8600
casinc@famvid.com

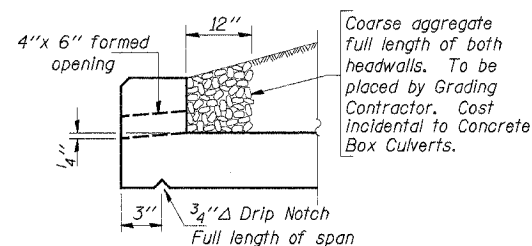
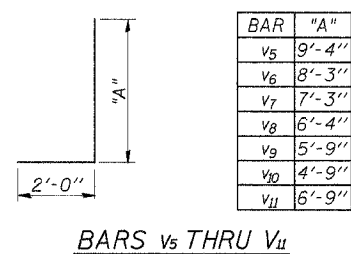
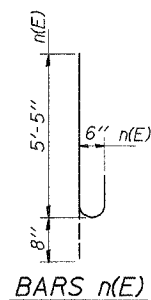
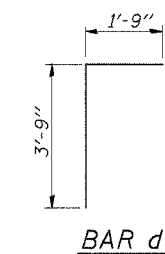
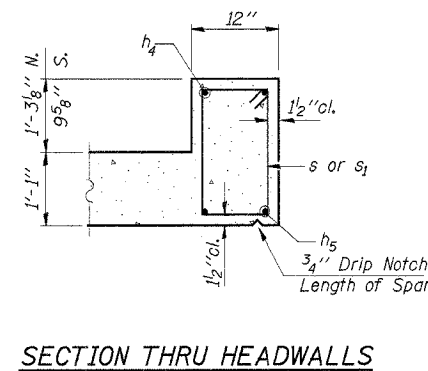
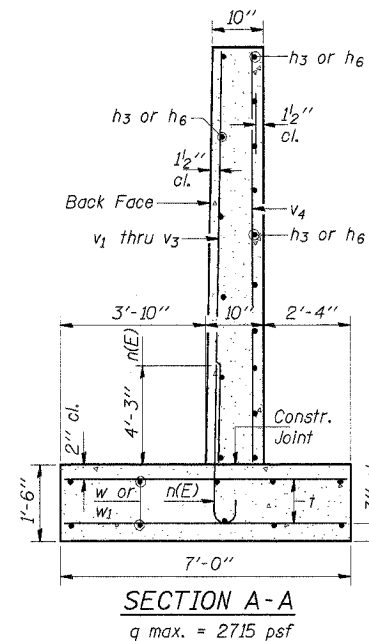
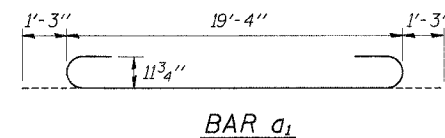
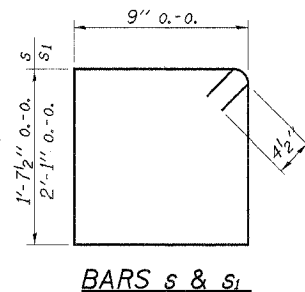
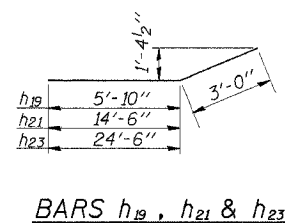
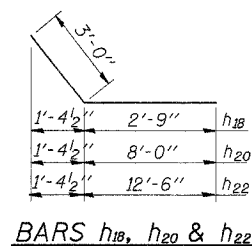
OZYURT AND STONE, INC.
CONSULTING ENGINEERS

JOB NO.: 0412
FILE: 0412CULV.dgn
DATE: 12-09-04

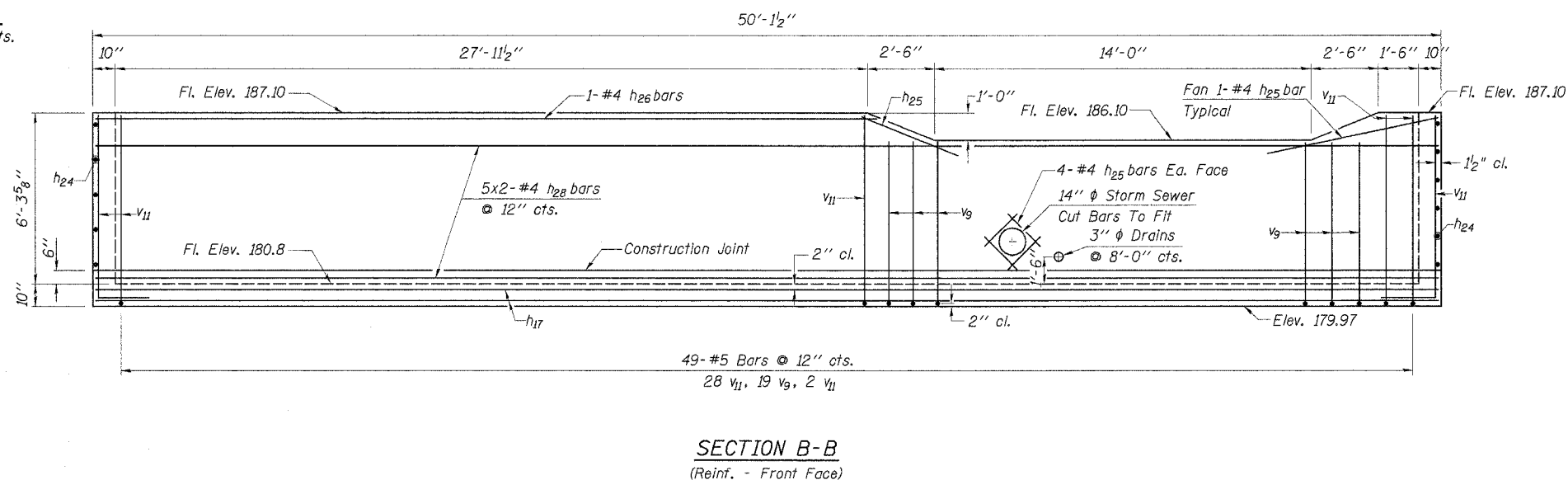
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 1	02-00076	MARSHALL	14	7
FAS 369	-00-BR			
ILLINOIS		CONTRACT NO. 87278		

BILL OF MATERIAL

Bar	No.	Size	Length	Shape
a ₁	92	#9	21'-10"	U
a ₂	18	#4	19'-4"	—
a ₃	23	#5	19'-4"	—
a ₄	1	#4	23'-0"	—
d	28	#4	5'-6"	—
h	38	#4	18'-10"	—
h ₁	116	#6	19'-2"	—
h ₂	44	#7	19'-7"	—
h ₃	16	#4	9'-11"	—
h ₄	4	#6	22'-6"	—
h ₅	8	#11	23'-6"	—
h ₆	16	#4	19'-5"	—
h ₇	16	#5	10'-8"	—
h ₈	14	#5	14'-0"	—
h ₉	12	#5	16'-10"	—
h ₁₀	12	#5	19'-1"	—
h ₁₁	48	#5	21'-4"	—
h ₁₂	4	#5	25'-0"	—
h ₁₃	8	#5	16'-0"	—
h ₁₄	8	#5	18'-6"	—
h ₁₅	8	#5	21'-0"	—
h ₁₆	8	#5	23'-6"	—
h ₁₇	48	#5	25'-9"	—
h ₁₈	2	#6	5'-9"	—
h ₁₉	2	#6	8'-10"	—
h ₂₀	2	#6	11'-0"	—
h ₂₁	2	#6	17'-6"	—
h ₂₂	5	#6	15'-6"	—
h ₂₃	5	#6	27'-6"	—
h ₂₄	12	#4	10'-11"	—
h ₂₅	18	#4	4'-6"	—
h ₂₆	1	#4	28'-7"	—
h ₂₇	40	#6	5'-0"	—
h ₂₈	10	#4	25'-7"	—
n(E)	41	#6	6'-1"	U
s	24	#4	5'-6"	□
s ₁	24	#4	6'-5"	□
t	83	#4	6'-8"	—
v	88	#4	9'-7"	—
v ₁	14	#4	9'-8"	—
v ₂	13	#4	8'-2"	—
v ₃	14	#4	6'-7"	—
v ₄	10	#4	12'-0"	—
v ₅	5	#5	11'-4"	—
v ₆	6	#5	10'-3"	—
v ₇	6	#5	9'-3"	—
v ₈	6	#5	8'-4"	—
v ₉	29	#5	7'-9"	—
v ₁₀	20	#5	6'-9"	—
v ₁₁	32	#5	8'-9"	—
v ₁₂	4	#4	13'-8"	—
w	10	#5	19'-5"	—
w ₁	10	#5	9'-11"	—
Concrete Box Culverts	Cu. Yd.		152.7	
Reinforcement Bars, Epoxy Coated	Pound		375	
Reinforcement Bars	Pound		22,380	



DRAIN DETAIL
Space to miss rail posts.



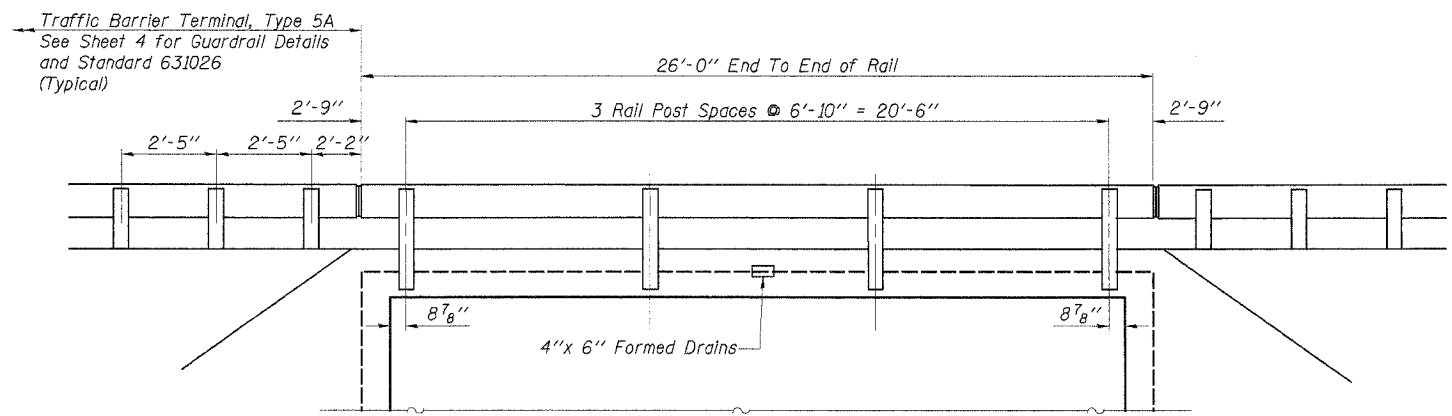
DESIGNED	F.J.S.
CHECKED	S.F.M.
DRAWN	S.A.P.
CHECKED	S.F.M.

CULVERT DETAILS

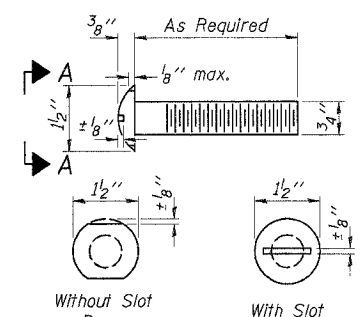
COUNTY HIGHWAY 1
SECTION 02-00076-00-BR
MARSHALL COUNTY
STATION 15+00

4440 ASH GROVE SPRINGFIELD, IL 62711 (217) 983-8600 oasinc@famvid.com	OZYURT AND STONE, INC. CONSULTING ENGINEERS	JOB NO.: 0412 FILE:0412DETAIL.dgn DATE: 12-09-04
--	---	--

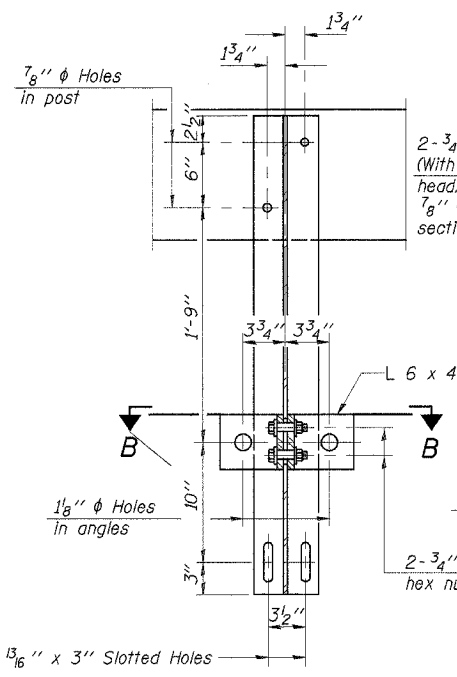
ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H. 1	02-00076	MARSHALL	14	8
FAS 369	-00-BR			
ILLINOIS				
CONTRACT NO. 87278				



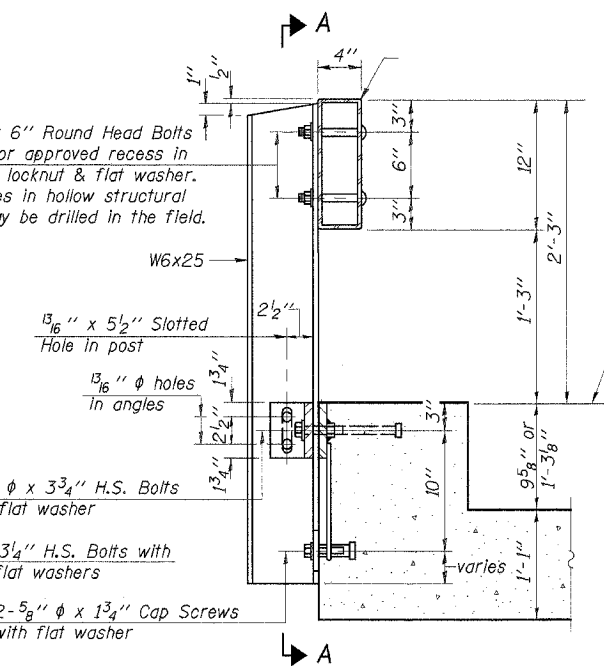
ELEVATION
Facing Culvert



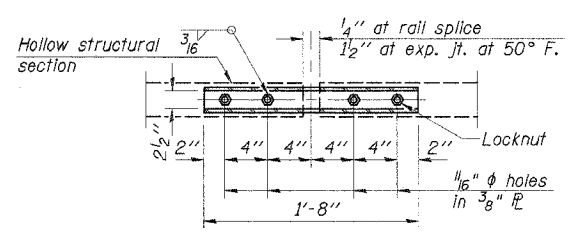
VIEW A-A
ROUND HEAD BOLT



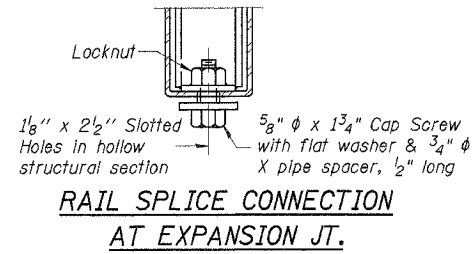
SECTION A-A



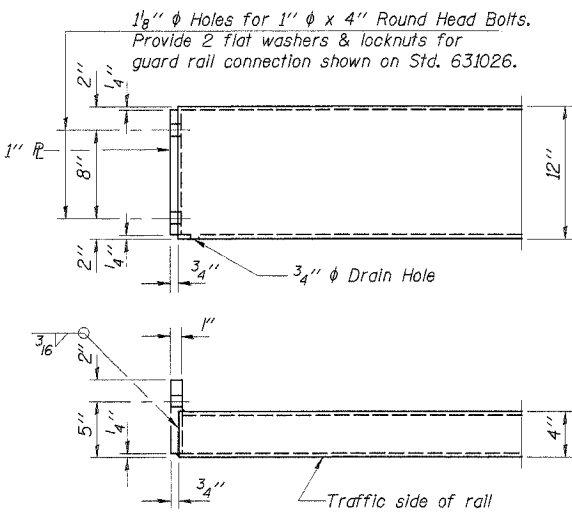
SECTION AT RAIL POST



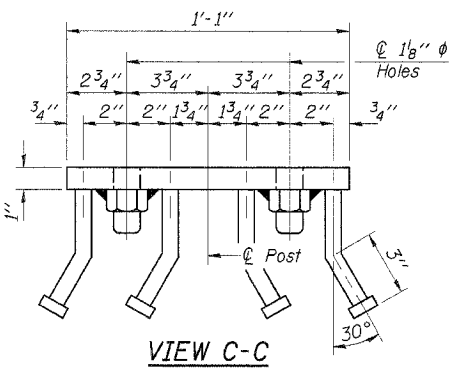
PLAN-BOTT. SPLICE R
TYPICAL



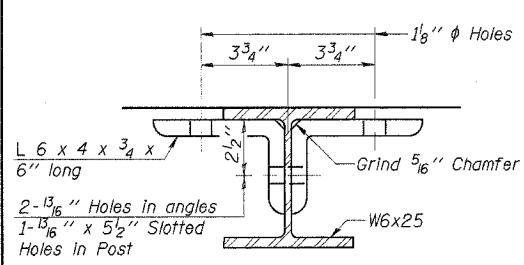
RAIL SPLICE CONNECTION
AT EXPANSION JT.



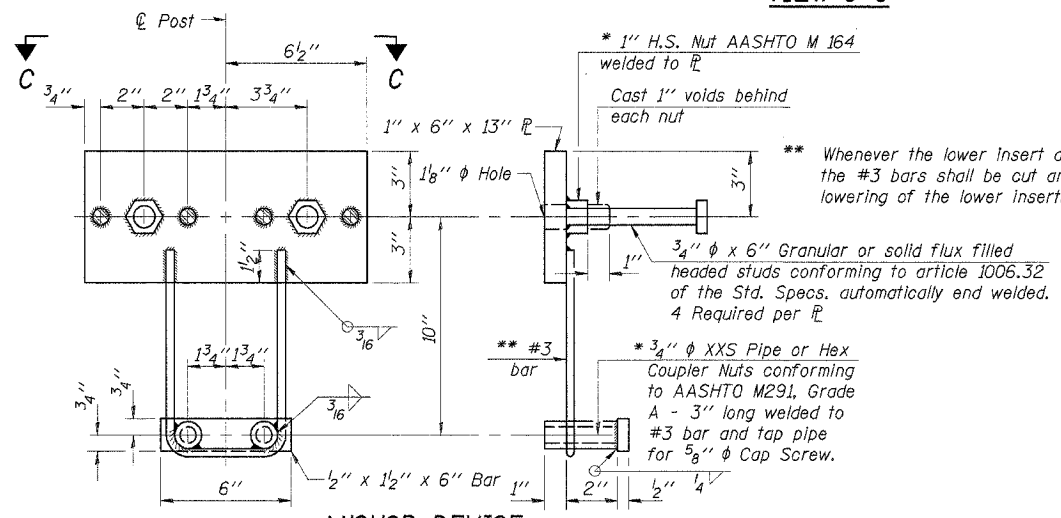
END OF RAIL DETAILS



VIEW C-C

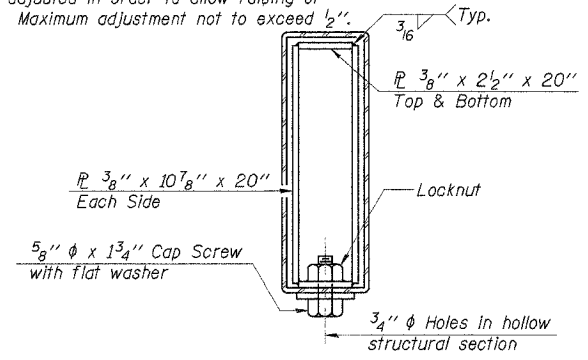


SECTION B-B



ANCHOR DEVICE

* Threaded areas shall be plugged or blocked off during casting of beam.



SECTIONS AT RAIL SPLICE

NOTES

Hollow structural sections 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 according to AASHTO M 232.
 All posts, railing, rail splices, anchor devices and angles shall be galvanized after shop fabrication according to AASHTO M 111 and ASTM A 385. Galvanized rail shall not be painted.
 Railing shall be according to 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 1060.07 Type II or place 1/8" fabric bearing pad between the post and concrete.
 The 3/4" diameter high strength bolts used to connect the 6 x 4 x 3/4 angles to the post shall be tightened according to Article 505.04(f)(2) of the Standard Specifications. The 1" diameter 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" diameter cap screws in bottom of posts shall be tightened to a snug fit only.
 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 included with STEEL RAILING, TYPE S-1.

BILL OF MATERIAL

Item	Unit	Quantity
Steel Railing, Type S1	Foot	52

STEEL RAILING, TYPE S1

COUNTY HIGHWAY 1
SECTION 02-00076-00-BR
MARSHALL COUNTY
STATION 15+00

DESIGNED	F.J.S.
CHECKED	S.F.M.
DRAWN	S.A.P.
CHECKED	S.F.M.
R-23A	9-01-03 (10'-9" Maximum Post Spacing)

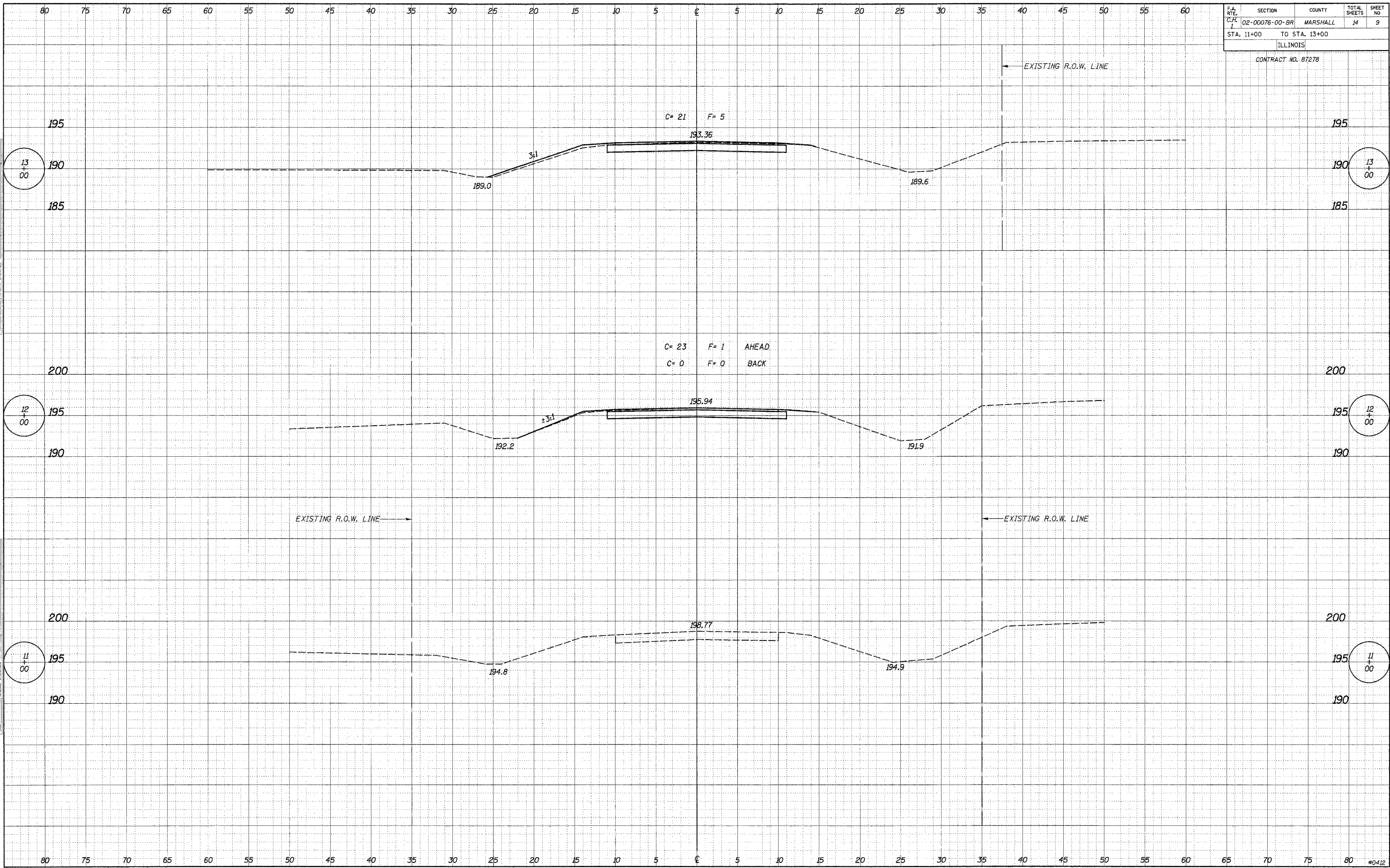
4440 ASH GROVE SPRINGFIELD, IL 62711 (217) 993-8600 casinc@famvia.com	OZYURT AND STONE, INC. CONSULTING ENGINEERS	JOB NO.: 0412 FILE: RAIL_SI-C.DGN DATE: 12-09-04
--	---	--

F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1	02-00076-00-BR	MARSHALL	14	9
STA. 11+00 TO STA. 13+00				
ILLINOIS				

CONTRACT NO. 87278

FINAL SURVEY
SURVEYED
NOTE BOOK
DATE

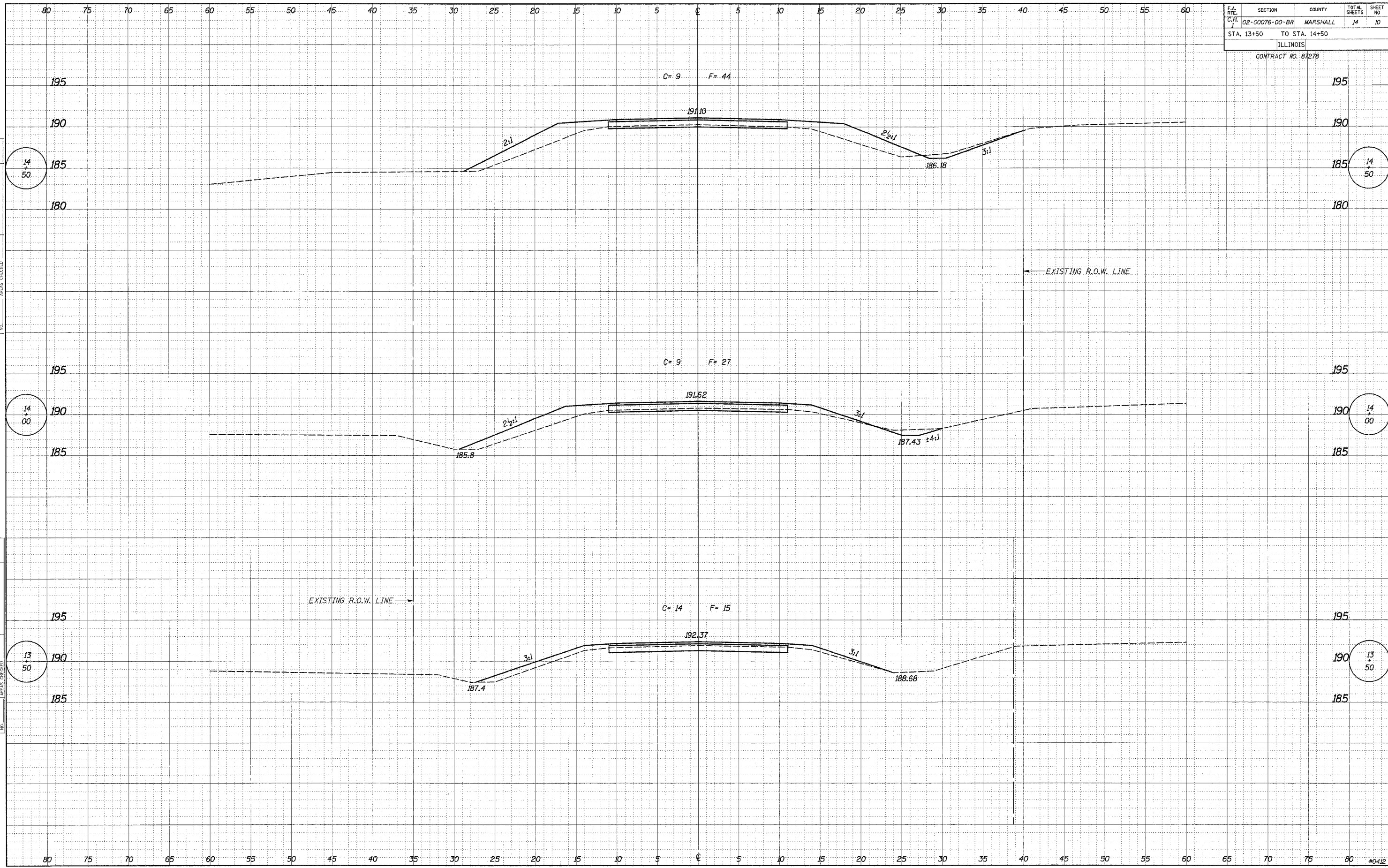
ORIGINAL SURVEY
SURVEYED
NOTE BOOK
DATE



F.A. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H.	02-00076-00-BR	MARSHALL	14	10
STA. 13+50 TO STA. 14+50				
ILLINOIS				
CONTRACT NO. 87278				

DATE	BY
FINAL SURVEY	
PLOTTED	
NOTE BOOK	
AREAS CHECKED	

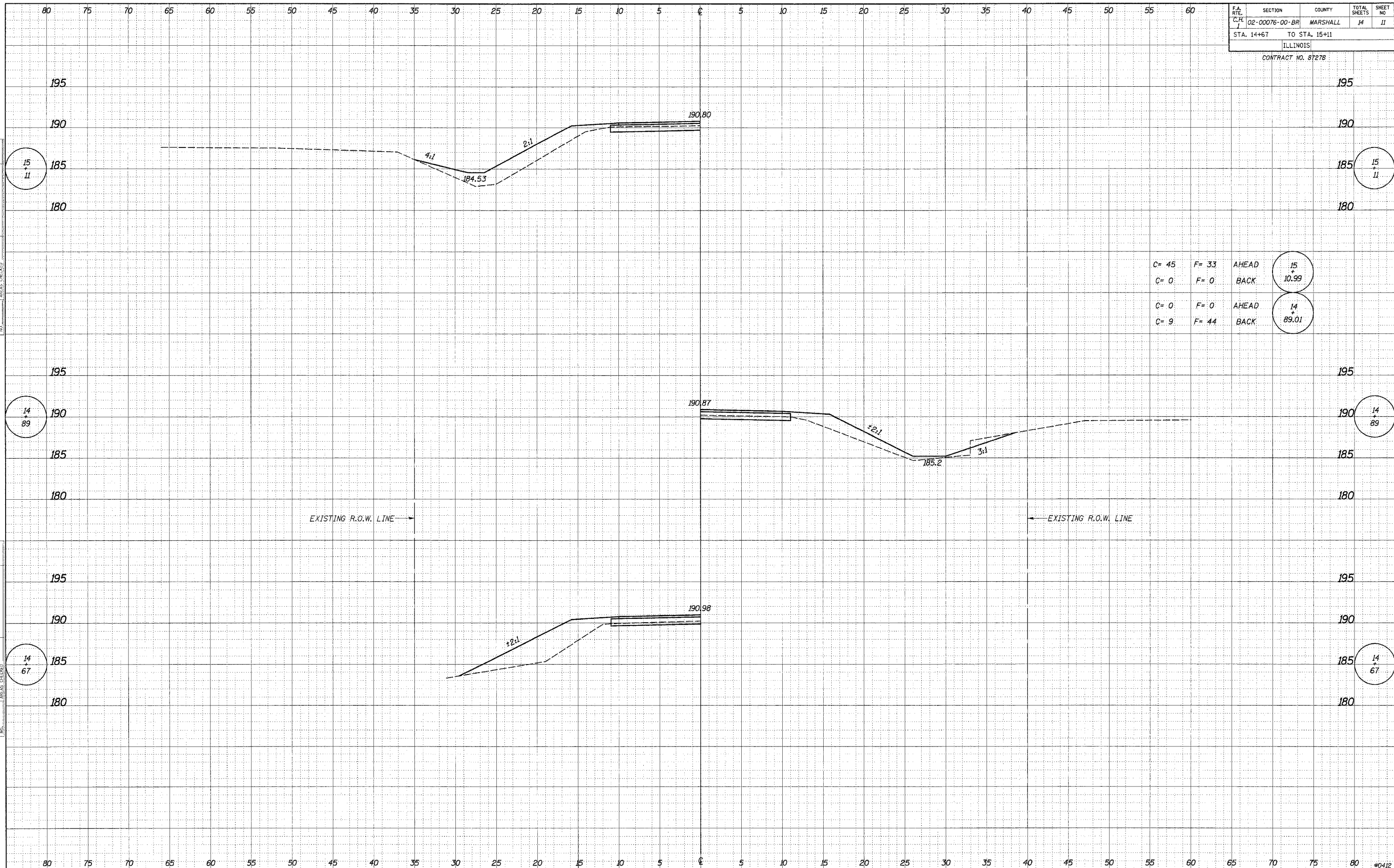
DATE	BY
ORIGINAL SURVEY	
PLOTTED	
NOTE BOOK	
AREAS CHECKED	



F.A. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H.	02-00076-00-BR	MARSHALL	14	11
STA. 14+67 TO STA. 15+11				
ILLINOIS				
CONTRACT NO. 87278				

DATE _____
 BY _____
 SURVEYED _____
 PLOTTED _____
 NOTE BOOK _____
 AREAS CHECKED _____

DATE 12/16/04
 BY S.A.P.
 SURVEYED _____
 PLOTTED _____
 NOTE BOOK _____
 AREAS CHECKED _____

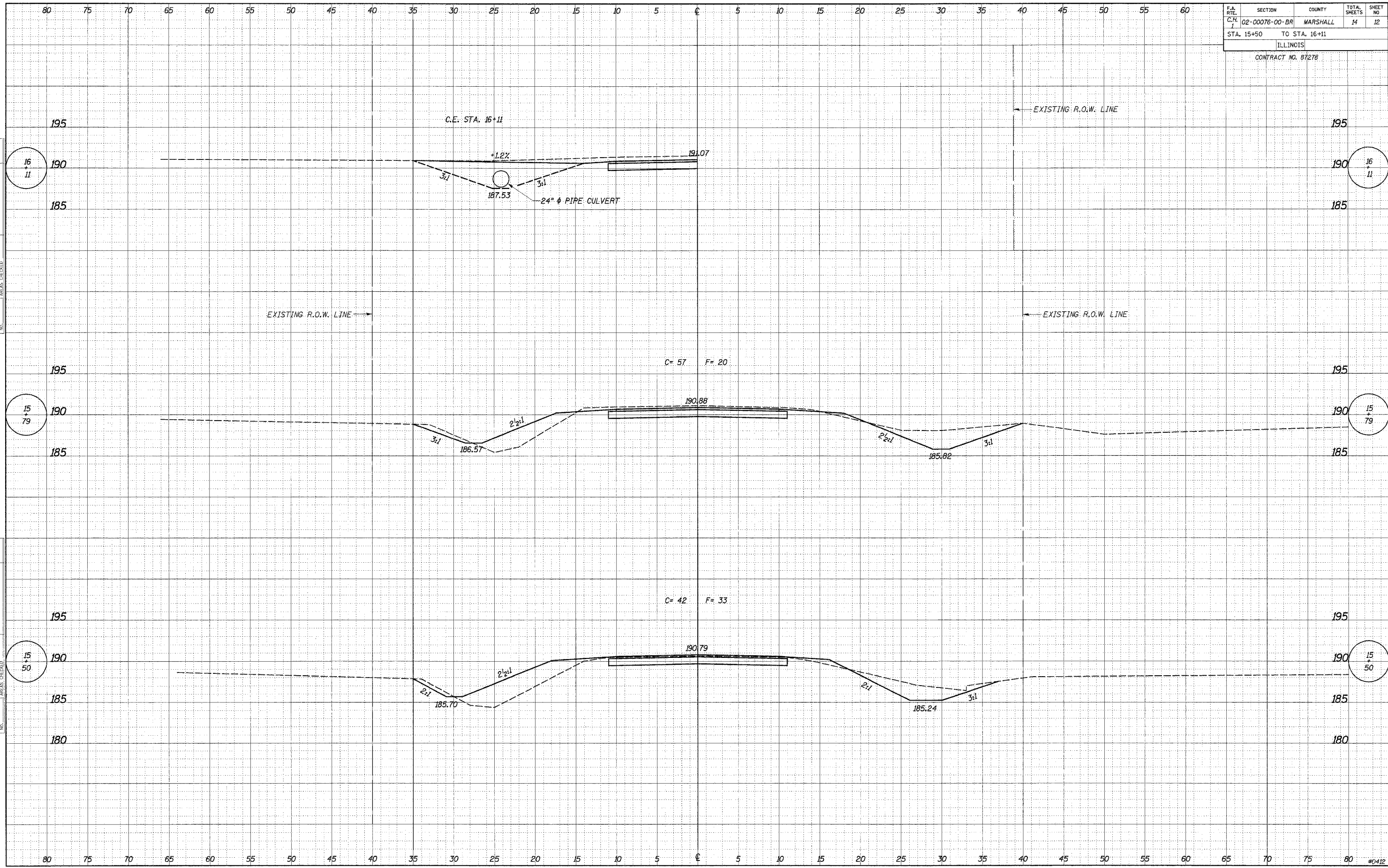


C= 45	F= 33	AHEAD	15
C= 0	F= 0	BACK	10.99
C= 0	F= 0	AHEAD	14
C= 9	F= 44	BACK	89.01

F.A. R.T.E.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
C.H.	02-00076-00-BR	MARSHALL	14	12
STA. 15+50		TO STA. 16+11		
ILLINOIS				
CONTRACT NO. 87278				

DATE	BY
SURVEYED	PLOTTED
NOTE BOOK	AREAS CHECKED
NO.	

DATE	BY
SURVEYED	PLOTTED
NOTE BOOK	AREAS CHECKED
NO.	



F.A. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
1	02-00076-00-BR	MARSHALL	14	13
STA. 16+50 TO STA. 18+00				
ILLINOIS				
CONTRACT NO. 87278				

DATE: _____
 BY: _____
 SURVEYED: _____
 SURVEY: _____
 NOTE BOOK: _____
 NO. _____
 AREAS CHECKED: _____

DATE: _____
 BY: _____
 SURVEYED: _____
 SURVEY: _____
 NOTE BOOK: _____
 NO. _____
 AREAS CHECKED: _____

