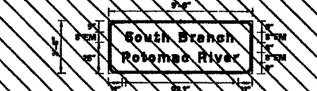
Public Roads Div.	State Dist. No.	State Project No.	Federal Project No.	Fiscal Year	County	Sheet No.	Total Sheets
WV	5	X316 - H - 100.40 06	APD 0484 (251)C	2003	HARDY	191	670

SIGN DETAIL 9 2
N.T.S.



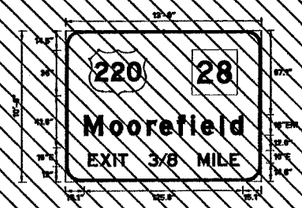
WIDTH x HGHT.	9'-0" x 3'-6"
BORDER WIDTH	1"
CORNER RADIUS	9"
BACKGROUND	TYPE: Hi-Intensity
	COLOR: Green
LEGEND/BORDER	TYPE: Hi-Intensity
	COLOR: White

SYMBOL	X	Y	WID	HT

DIMENSIONS ARE IN inches.tenths Letter spacings are to start of next letter

LETTER POSITIONS (X)	LENGTH	SERIES/SIZE
S o u t h B r a n c h	68.4	EM96
13.8 8.3 7.7 7.3 6.6 5.1 4.0 9.3 4.1 8.2 7.6 7.6 5.1 13.8		
P o t o m a c R i v e r	92.6	EM96
10.5 8.3 6.9 5.8 7.7 10.0 7.5 5.1 9 5.1 3.8 7.5 7.6 3.9 10.5		

SIGN DETAIL 9 1
N.T.S.



WIDTH x HGHT.	12'-0" x 10'-0"
BORDER WIDTH	3"
CORNER RADIUS	12"
BACKGROUND	TYPE: Hi-Intensity
	COLOR: Green
LEGEND/BORDER	TYPE: Demi Hi-Int
	COLOR: White

SYMBOL	X	Y	WID	HT
US SHIELD	16.5	66.5	45	36
WV2 SHIELD	100.5	66.5	36	36

DIMENSIONS ARE IN inches.tenths Letter spacings are to start of next letter

LETTER POSITIONS (X)	LENGTH	SERIES/SIZE
M o o r e f i e l d	108.4	EM142
10.1 10.2 7.7 5.4 10.2 13.6 11.8 7.9 10.1 7.9 10.1 15.1		
E X I T 3 / 8 M I L E	120.1	EM
11.0 9.4 10.7 3.6 7.3 10.5 9 7.1 9 16.5 11.8 4.3 9.4 7.3 11.0		

SIGN DETAIL 10 1
N.T.S.

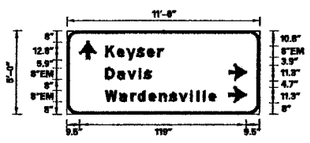
WIDTH x HGHT.	8'-0" x 5'-0"
BORDER WIDTH	1"
CORNER RADIUS	9"
BACKGROUND	TYPE: Hi-Intensity
	COLOR: Green
LEGEND/BORDER	TYPE: Demi Hi-Int
	COLOR: White

SYMBOL	X	Y	WID	HT

DIMENSIONS ARE IN inches.tenths Letter spacings are to start of next letter

LETTER POSITIONS (X)	LENGTH	SERIES/SIZE
B i s m a r k	72.7	EM96
11.8 9.2 3.5 7.5 10.8 9.2 5.5 10.0 8 6.1 6.1 11.8		
D a v i s	72.7	EM96
11.8 8.5 7.3 6.1 3.8 5.1 25.8 8 9.4 11.8		
E l k i n s	73.7	EM96
11.8 8.5 4.8 7.5 4.8 7.3 5.1 21.4 9 6.7 11.8		

SIGN DETAIL 11 40
N.T.S.



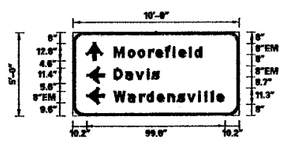
WIDTH x HGHT.	11'-6" x 5'-0"
BORDER WIDTH	2"
CORNER RADIUS	9"
BACKGROUND	TYPE: Hi-Intensity
	COLOR: Green
LEGEND/BORDER	TYPE: Demi Hi-Int
	COLOR: White

SYMBOL	X	Y	WID	HT
ARSHRT	9.5	39.2	11.4	12.8
ARSHRT	115.7	24.0	12.8	11.4
ARSHRT	115.7	8.0	12.8	11.4

DIMENSIONS ARE IN inches.tenths Letter spacings are to start of next letter

LETTER POSITIONS (X)	LENGTH	SERIES/SIZE
K e y s e r	41.0	EM96
28.9 8.1 6.8 7.9 8.8 7.6 3.9 68.1		
D a v i s	32.8	EM96
28.9 8.4 7.3 8.1 3.8 5.1 76.3		
W a r d e n s v i l l e	78.8	EM96
28.9 10.3 8.2 5.1 7.6 7.8 7.4 6.7 8.1 4.6 4.6 4 5.1 30.3		

SIGN DETAIL 12 46
N.T.S.



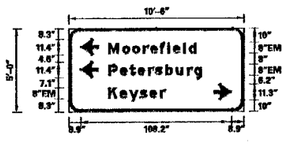
WIDTH x HGHT.	10'-0" x 5'-0"
BORDER WIDTH	2"
CORNER RADIUS	9"
BACKGROUND	TYPE: Hi-Intensity
	COLOR: Green
LEGEND/BORDER	TYPE: Demi Hi-Int
	COLOR: White

SYMBOL	X	Y	WID	HT
ARSHRT	10.2	8.0	12.8	11.4
ARSHRT	10.2	24.0	12.8	11.4
ARSHRT	11.6	39.2	11.4	12.8

DIMENSIONS ARE IN inches.tenths Letter spacings are to start of next letter

LETTER POSITIONS (X)	LENGTH	SERIES/SIZE
M o o r e f i e l d	62.9	EM96
31.0 10.1 7 7.7 5.1 6.8 5.7 4 7.6 4 5.0 26.1		
D a v i s	32.8	EM96
31.0 8.4 7.3 8.2 3.7 5.0 56.2		
W a r d e n s v i l l e	78.8	EM96
31.0 10.2 8.1 5.1 7.5 7.6 7.3 6.6 8.2 4.6 4.6 4 5.0 10.2		

SIGN DETAIL 12 53
N.T.S.



WIDTH x HGHT.	10'-6" x 5'-0"
BORDER WIDTH	2"
CORNER RADIUS	9"
BACKGROUND	TYPE: Hi-Intensity
	COLOR: Green
LEGEND/BORDER	TYPE: Demi Hi-Int
	COLOR: White

SYMBOL	X	Y	WID	HT
ARSHRT	8.9	40.3	12.8	11.4
ARSHRT	8.9	24.3	12.8	11.4
ARSHRT	104.3	8.3	12.8	11.4

DIMENSIONS ARE IN inches.tenths Letter spacings are to start of next letter

LETTER POSITIONS (X)	LENGTH	SERIES/SIZE
M o o r e f i e l d	62.9	EM96
29.7 10.1 7 7.7 5.1 6.9 5.7 4 7.6 4 5.1 33.4		
P e t e r s b u r g	66.6	EM96
29.7 8.3 6.8 5.6 7.6 4.9 7.5 7.6 8.2 5.1 5.1 29.7		
K e y s e r	41.0	EM96
29.7 8.1 6.7 7.9 6.8 7.6 3.9 55.3		

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Baker
Michael Baker Jr., Inc.

REVISION NUMBER	SHEET NUMBER	REVISION	DATE	BY

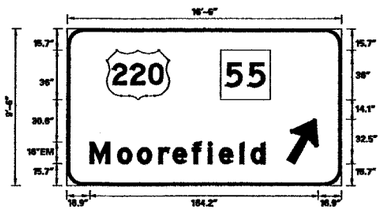
THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SIGN FABRICATION DETAIL

L:\proj\Corridorh\Sect6\Contract 06\FinalEes\Signing\dtsgnfab01.dgn
09:34:57 PM
09/15/2003

Public Roads Div.	State Dist. No.	State Project No.	Federal Project No.	Fiscal Year	County	Sheet No.	Total Sheets
WV	5	X316 - H - 100.40 06	APD 0484 (251)C	2003	HARDY	192	670

SIGN DETAIL 20 18
N.T.S.



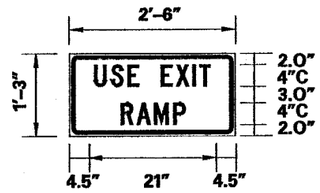
WIDTH x HGHT.	16'-6" x 9'-6"
BORDER WIDTH	3"
CORNER RADIUS	12"
BACKGROUND	TYPE: Hi-Intensity
	COLOR: Green
LEGEND/BORDER	TYPE: Demt Hi-Int
	COLOR: White

SYMBOL	X	Y	WID	HT
US SHIELD	40.5	62.3	45	36
WV2 SHIELD	121.5	62.3	36	36
ARMED	158.8	15.7	23.3	32.5

DIMENSIONS ARE IN inches.tenths Letter spacings are to start of next letter

LETTER POSITIONS (X)																			LENGTH	SERIES/SIZE
	M	o	o	r	e	f	i	e	l	d										EM16/12
16.9	20.2	14.1	15.5	10.2	13.7	11.3	8	15.3	7.9	10.3	55.2								125.9	

SIGN DETAIL D11-1b
N.T.S.



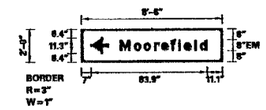
WIDTH x HGHT.	2'-6" x 1'-3"
BORDER WIDTH	.5"
CORNER RADIUS	1.5"
BACKGROUND	TYPE: Hi-Intensity
	COLOR: Green
LEGEND/BORDER	TYPE: D.A. Hi- Int
	COLOR: White

SYMBOL	X	Y	WID	HT

DIMENSIONS ARE IN inches.tenths Letter spacings are to start of next letter

LETTER POSITIONS (X)																			LENGTH	SERIES/SIZE
	U	S	E		E	X	I	T												C4
4.5	3	3	2	4	2.7	3	1.2	2	4.5										21	
	R	A	M	P																C4
9.2	2.9	3.2	3.5	2.2	9.2														11.7	

SIGN DETAIL 16 32
N.T.S.



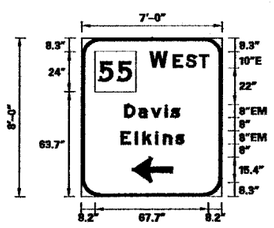
WIDTH x HGHT.	8'-6" x 2'-0"
BORDER WIDTH	1"
CORNER RADIUS	3"
BACKGROUND	TYPE: Reflective
	COLOR: Green
LEGEND/BORDER	TYPE: Reflective
	COLOR: White

SYMBOL	X	Y	WID	HT
ARSHRT	7	6.4	12.7	11.3

DIMENSIONS ARE IN inches.tenths Letter spacings are to start of next letter

LETTER POSITIONS (X)																			LENGTH	SERIES/SIZE
	M	o	o	r	e	f	i	e	l	d										EM8/6
27.8	10.1	7	7.7	5.1	6.9	5.7	4	7.6	4	5.1	11.1								63.2	

SIGN DETAIL 16 107
N.T.S.



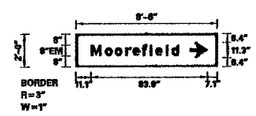
WIDTH x HGHT.	7'-0" x 8'-0"
BORDER WIDTH	2"
CORNER RADIUS	9"
BACKGROUND	TYPE: Hi-Intensity
	COLOR: Green
LEGEND/BORDER	TYPE: Demt Hi-Int
	COLOR: White

SYMBOL	X	Y	WID	HT
WV2 SHIELD	8.2	63.7	24.3	24.0
ARMED	29.8	8.3	24.0	16.4

DIMENSIONS ARE IN inches.tenths Letter spacings are to start of next letter

LETTER POSITIONS (X)																			LENGTH	SERIES/SIZE
	W	E	S	T																E10,E8
42.2	10.5	7.5	8.1	5.9	11.7														33.5	
	D	a	v	i	s															EM8/6
25.6	8.4	7.3	8.1	3.8	5.1	25.6													32.8	
	E	l	k	i	n	s														EM8/6
23.3	8.5	4.6	7.5	4.6	7.4	5.1	23.3												37.5	

SIGN DETAIL 16 24
N.T.S.



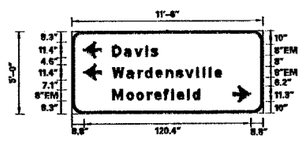
WIDTH x HGHT.	8'-6" x 2'-0"
BORDER WIDTH	1"
CORNER RADIUS	3"
BACKGROUND	TYPE: Reflective
	COLOR: Green
LEGEND/BORDER	TYPE: Reflective
	COLOR: White

SYMBOL	X	Y	WID	HT
ARSHRT	82.3	6.4	12.7	11.3

DIMENSIONS ARE IN inches.tenths Letter spacings are to start of next letter

LETTER POSITIONS (X)																			LENGTH	SERIES/SIZE
	M	o	o	r	e	f	i	e	l	d										EM8/6
11.1	10.1	7	7.7	5.1	6.9	5.7	4	7.6	4	5.1	27.8								63.2	

SIGN DETAIL 17 84
N.T.S.



WIDTH x HGHT.	11'-6" x 5'-0"
BORDER WIDTH	2"
CORNER RADIUS	9"
BACKGROUND	TYPE: Hi-Intensity
	COLOR: Green
LEGEND/BORDER	TYPE: Demt Hi-Int
	COLOR: White

SYMBOL	X	Y	WID	HT
ARSHRT	8.8	40.3	12.8	11.4
ARSHRT	8.8	24.3	12.8	11.4
ARSHRT	116.4	8.3	12.8	11.4

DIMENSIONS ARE IN inches.tenths Letter spacings are to start of next letter

LETTER POSITIONS (X)																			LENGTH	SERIES/SIZE
	D	a	v	i	s															EM8/6
29.4	8.4	7.3	8.1	3.8	5.1	75.8													32.8	
	W	a	r	d	e	n	s	v	i	l	l	e								EM8/6
29.3	10.3	8.2	5.1	7.6	7.6	7.4	6.7	8.1	4.6	4.6	4	5.1	29.6						79.1	
	M	o	o	r	e	f	i	e	l	d										EM8/6
29.4	10.1	7	7.7	5.1	6.9	5.7	4	7.6	4	5.1	45.4								63.2	

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Baker
Michael Baker Jr., Inc.

REVISION NUMBER	SHEET NUMBER	REVISION	DATE	BY

THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SIGN FABRICATION DETAIL

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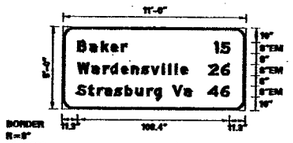
09:36:32 PM
09/15/2003

Public Roads Div.	State Dist. No.	State Project No.	Federal Project No.	Fiscal Year	County	Sheet No.	Total Sheets
WV	5	X316 - H - 100.4006	APD 0484 (252)C	2003	HARDY	193	670

SIGN DETAIL
N.T.S. (14) (51)



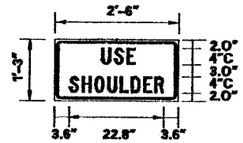
WIDTH x HGHT.	11'-0" x 5'-0"
BORDER WIDTH	2"
CORNER RADIUS	9"
BACKGROUND	TYPE: Hi-Intensity
	COLOR: Green
LEGEND/BORDER	TYPE: Demi Hi-Int
	COLOR: White

SYMBOL	X	Y	WID	HT

DIMENSIONS ARE IN Inches,tenths Letter spacings are to start of next letter

LETTER POSITIONS (X)																				LENGTH	SERIES/SIZE
	B	a	k	e	r		1	5													EM96
11.3	8.6	8.2	6.8	7.6	8.9	65.9	4.4	6.4	11.3											45.9	
	W	a	r	d	e	n	s	v	i	l	l	e		2	6						EM96
11.3	10.3	8.2	5.1	7.6	7.6	7.4	6.7	8.1	4.6	4.6	4	5.1	41.9	8.1	6.4	11.3				93.5	
	S	t	r	a	s	b	u	r	g		V	a		4	6						EM96
11.3	8.1	6.5	5.1	7.5	7.5	7.6	8.2	5.1	5.1	8	6.6	5.1	36.9	9	6.4	11.3				97.7	

SIGN DETAIL
N.T.S. D11-1a



WIDTH x HGHT.	2'-6" x 1'-3"
BORDER WIDTH	.5"
CORNER RADIUS	1.5"
BACKGROUND	TYPE: Hi-Intensity
	COLOR: Green
LEGEND/BORDER	TYPE: D.A. Hi- Int
	COLOR: White

SYMBOL	X	Y	WID	HT

DIMENSIONS ARE IN Inches,tenths Letter spacings are to start of next letter

LETTER POSITIONS (X)																				LENGTH	SERIES/SIZE
	U	S	E																		C4
11.0	3	3	2	11.0																8.1	
	S	H	O	U	L	D	E	R													C4
3.6	3.1	3	3.2	3	2.7	3	2.7	2.2	3.6											22.8	

SIGN DETAIL
N.T.S. (19) (12)

SEE NOTE BELOW

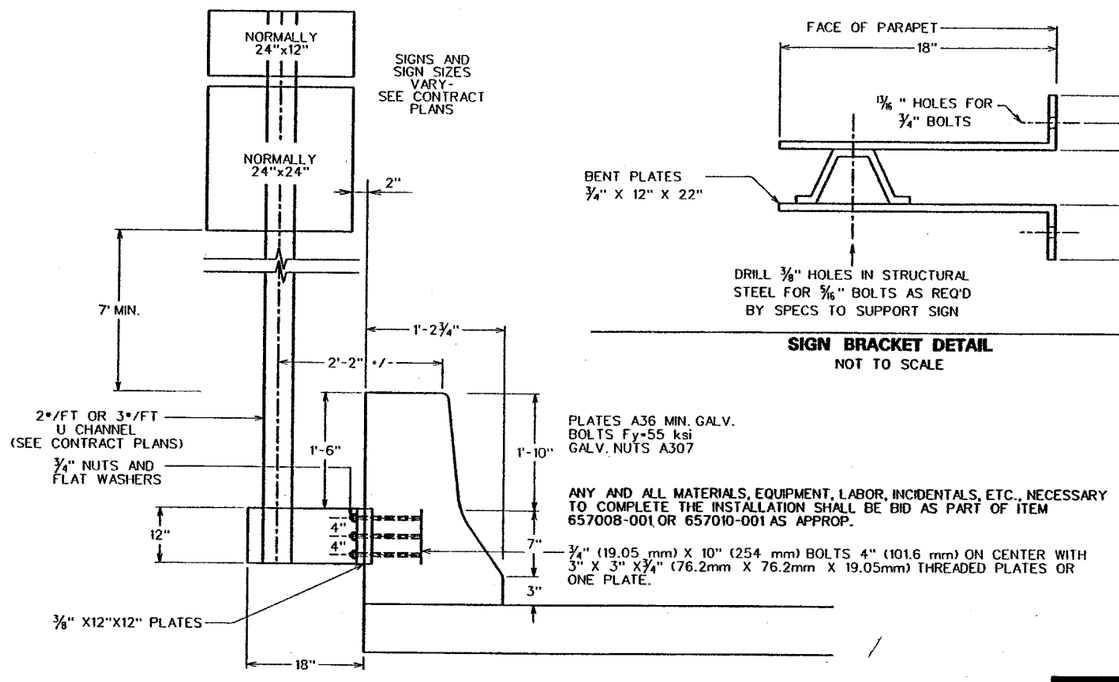
WIDTH x HGHT.	19'-9" x 10'-0"
BORDER WIDTH	3"
CORNER RADIUS	12"
BACKGROUND	TYPE: Hi-Intensity
	COLOR: Green
LEGEND/BORDER	TYPE: Demi Hi-Int
	COLOR: White

SYMBOL	X	Y	WID	HT
WVA2 SHIELD	61.8	69.5	36	36

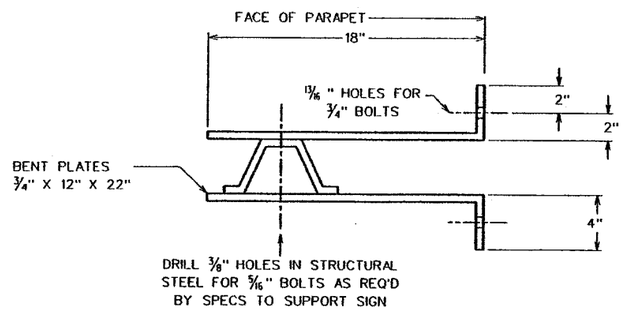
DIMENSIONS ARE IN Inches,tenths Letter spacings are to start of next letter

LETTER POSITIONS (X)																				LENGTH	SERIES/SIZE
	W		E	S	T																E15,E12
115.1	15.7	3.5	11.3	12.1	8.8	61.5														51.4	
	E	a	s	t		M	o	o	r	e	f	i	e	l	d						EM16/12
16.8	16	14.7	13.3	8	16	20.2	14.1	15.5	10.2	13.7	11.3	8	15.3	7.9	10.3	16.8				194.4	
	E	X	I	T		1		12		M	I	L	E	S							E10,E15
37.7	9.4	10.7	3.8	7.3	22.5	4.4	7.5	22	22.5	11.8	4.3	9.4	9.4	8	37.3					153	

NOTE: ALLOW SPACE ON SIGN FOR SHIELD AND CARDINAL TO BE PLACED (OVERLAY) AT A LATER DATE.



BENT PLATE MOUNTING DETAIL
NOT TO SCALE



SIGN BRACKET DETAIL
NOT TO SCALE

Baker
Michael Baker Jr., Inc.

REVISION NUMBER	SHEET NUMBER	REVISION	DATE	BY

THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SIGN FABRICATION DETAIL

S-24

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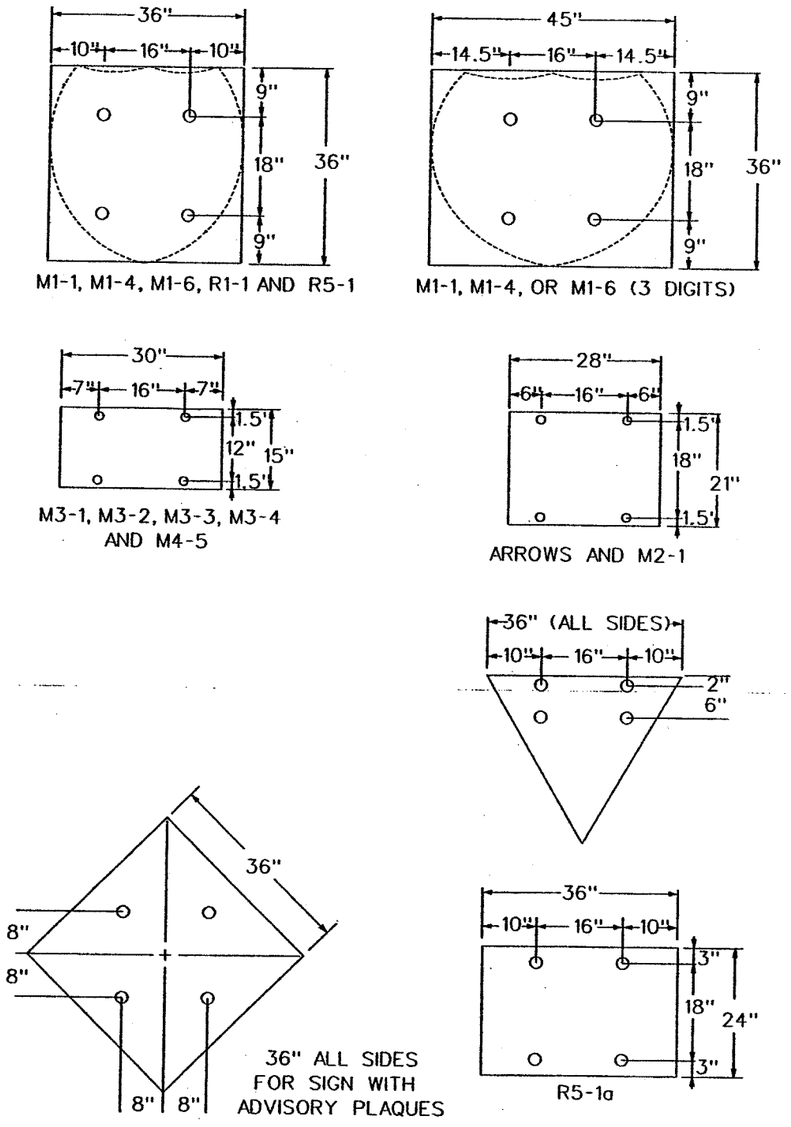
08/01/2003

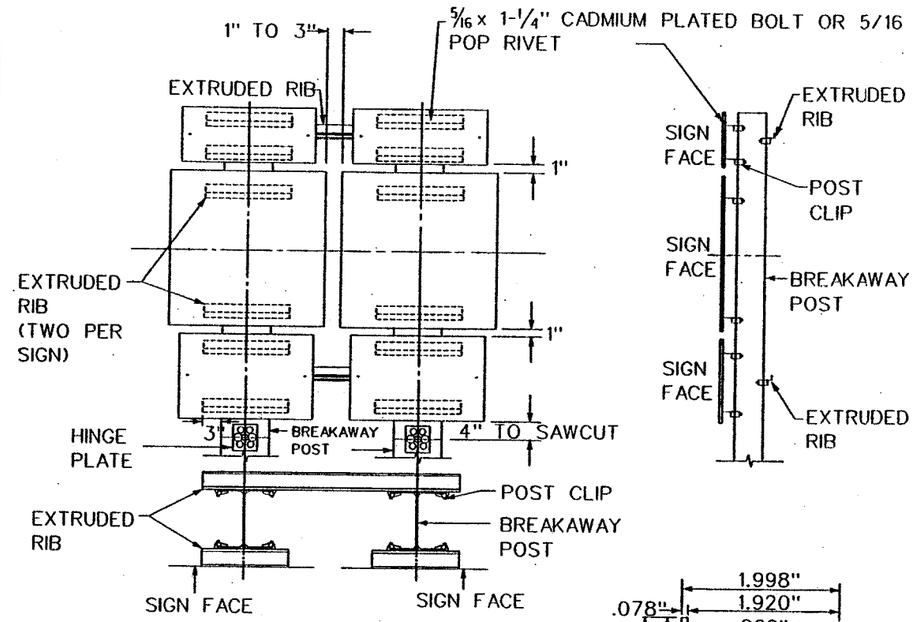
Public Roads Div.	State Dist. No.	State Project No.	Federal Project No.	Fiscal Year	County	Sheet No.	Total Sheets
WV	5	X316 - H - 100.4006	APD 0484 (252)C	2003	HARDY	194	670



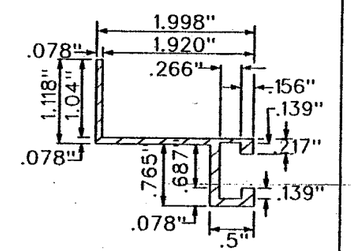
ALL SIGNS SHALL HAVE TWO EXTRUDED RIBS. FOR MOUNTING DETAILS SEE STANDARD DETAIL TP-A, TP1-1 AND TP1-2. ALL HOLES SHALL BE 3/8".

SPECIAL PUNCHING DETAILS

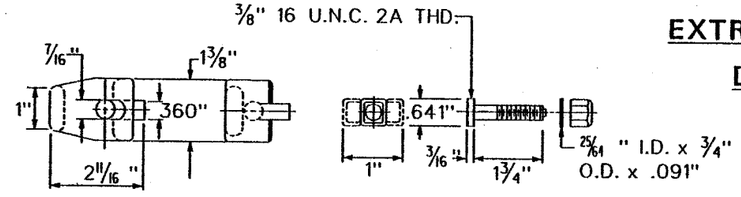
NOT TO SCALE



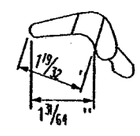
TYPICAL ROUTE MARKER ARRANGEMENT



EXTRUDED RIB DETAIL



POST CLIP BOLT, NUT AND WASHER



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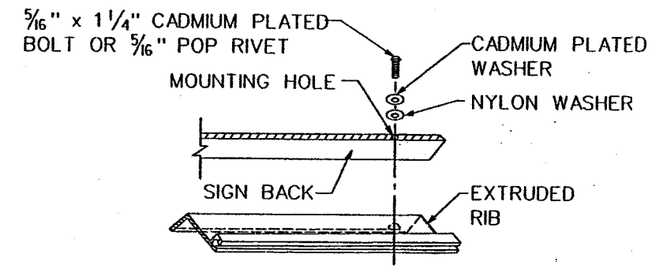
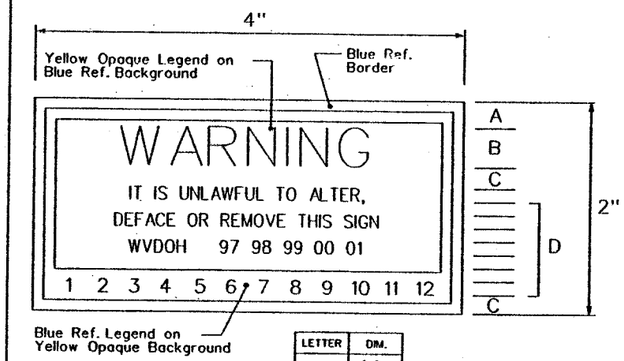


ROUTE MARKER ASSEMBLIES

NOT TO SCALE

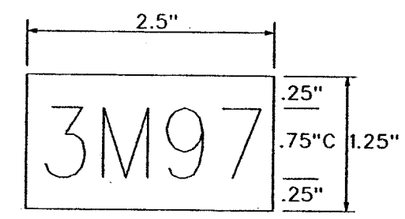
SIGN IDENTIFICATION DECAL

NOT TO SCALE



LETTER	DIM.
A	1/4"
B	3/8"
C	3/16"
D	1/8"

DECALS FOR FLAT SHEET AND EXTRUDED PANEL SIGNS WILL BE PROVIDED BY THE SIGN FABRICATOR. THE YEAR AND MONTH OF INSTALLATION ARE TO BE PUNCHED OUT BY THE CONTRACTOR. SEE SIGNING GENERAL NOTES.



BLACK NON. REF. LEGEND, NO BORDER
WHITE REF. SHEETING BACKGROUND

Baker
Michael Baker Jr., Inc.

REVISION NUMBER	SHEET NUMBER	REVISION	DATE	BY

THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SPECIAL DETAILS

S-25

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Public Roads Div.	State Dist. No.	State Project No.	Federal Project No.	Fiscal Year	County	Sheet No.	Total Sheets
WV	5	X316 - H - 100.40 06	APD 0484 (251)C	2003	HARDY	195	670

SUMMARY OF QUANTITIES

ITEM NO.	ALTERNATE	DESCRIPTION	QUANTITY UNIT	QUANTITY TOTAL
662002-001		GALVANIZED STEEL CONDUIT, 01	L.S.	1
*662006-001		JUNCTION BOX, TYPE A MODIFIED	EACH	5
662006-001		JUNCTION BOX, TYPE H,18" X 18"	EACH	16
662007-001		LUMINAIRE, 250W	EACH	26
662008-001		CABLE, 01	L.S.	1
662010-001		LIGHTING SUPPORT, TYPE I (40-10)	EACH	2
662010-001		LIGHTING SUPPORT, TYPE I (40-15)	EACH	9
662010-001		LIGHTING SUPPORT, TYPE I (40-20)	EACH	13
662013-001		SERVICE AND CONTROL STATION, 01	L.S.	1
662014-001		INCIDENTAL ELECTRICAL WORK	L.S.	1
662015-001		ELECTRICAL TEST, 01	L.S.	1

* INCLUDES 4 FUTURE TYPE A JUNCTION BOXES, MOUNTED IN BRIDGE STRUCTURE FOR FUTURE LIGHTING.

CIRCUIT AND LUMINAIRE NUMBER

POLE NO.	STATION	OFFSET (FEET)	POLE TYPE	POLE ITEM NO.	LUMINAIRE TYPE	CIRCUIT I.D.	BASE TYPE
	U.S. 220						
-	718+32 LT	-	(A)	-	MS III	-	-
-	719+77 RT	-	(A)	-	MS III	-	-
	U.S. 220 RAMP CONNECTOR						
1	801+64 LT	17'-0"	I	662010-001 (40-20)	MS III	(B)	BREAKAWAY
2	828+20 LT		I		MS III	J1	
3	829+90 RT		I		MS III	I2	
4	831+60 LT		I		MS III	I1	
5	833+30 RT		I		MS III	J3	
6	835+00 LT		I		MS III	J2	
	RAMP 1						
7	108+41 RT	12'-0"	I	662010-001 (40-10)	MS II	B2	BREAKAWAY
8	110+76 RT		I		MS II	A3	
9	119+63 RT	17'-0"	I	662010-001 (40-15)	MS II	B3	
	RAMP 2						
10	201+04 RT	17'-0"	I	662010-001 (40-15)	MS II	H1	BREAKAWAY
	RAMP 3						
11	301+00 LT	17'-0"	I	662010-001 (40-15)	MS II	C1	BREAKAWAY
12	316+83 LT		I		MS II	F2	
13	319+28 LT		I		MS II	E2	
14	321+73 LT		I		MS II	F1	
15	324+18 LT		I		MS II	E1	
	RAMP 4						
16	422+62 LT	17'-0"	I	662010-001 (40-15)	MS II	D1	BREAKAWAY
	U.S. 220 RAMP CONNECTOR NORTH						
17	2284+80 LT	17'-0"	I	662010-001 (40-20)	MS II	I3	BREAKAWAY
18	2285+88 RT		I		MS II	G2	
19	2287+45 LT		I		MS III	C3	BREAKAWAY
20	2289+05 RT		I		MS III	H2	
21	2290+75 LT		I		MS III	D3	
22	2292+50 RT		I		MS III	G1	
23	2294+84 LT		I		MS III	C2	
24	2296+84 LT	13'-0"±	I	662010-001 (40-15)	MS III	D2	ANCHOR

(A) LUMINAIRE MOUNTED ON TRAFFIC SIGNAL POLE. PROVIDE INTEGRAL PHOTOCELL AND 240 VOLT BALLAST. COORDINATE LUMINAIRE INSTALLATION WITH TRAFFIC SIGNAL PLANS.

(B) POWER SERVICE TO LIGHTING UNIT NO.1 SUPPLIED BY TRAFFIC SIGNAL POWER SERVICE CONTROLLER. SEE TRAFFIC SIGNAL PLANS FOR DETAILS.

GOVERNING SPECIFICATIONS

1. THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION, DIVISION OF HIGHWAYS, STANDARD SPECIFICATIONS ROADS AND BRIDGES, ADOPTED 2000, AS AMMENDED BY THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION, DIVISION OF HIGHWAYS, SUPPLEMENTAL SPECIFICATIONS, DATED JANUARY 1, 2003. THE CONTRACT DOCUMENTS AND THE CONTRACT PLANS ARE THE GOVERNING PROVISIONS APPLICABLE TO THIS PROJECT.
2. NATIONAL ELECTRICAL CODE STANDARDS OF THE NATIONAL BOARD OF FIRE UNDERWRITERS AND ELECTRIC WIRING AND APPARATUS.
3. ALL APPLICABLE STANDARD DRAWINGS FOR THIS PROJECT ARE INCLUDED IN WEST VIRGINIA DEPARTMENT OF HIGHWAYS STANDARD DETAILS BOOK VOLUME II, SIGNING, SIGNALS, LIGHTING AND MARKINGS, ISSUE DATE: JANUARY 1, 1994

GENERAL NOTES

1. LIGHT POLE POSITIONS SHOWN ON THE PLANS MAY BE RELOCATED, LATERALLY +/- 2 FEET, BY THE DISTRICT ENGINEER. ANY RELOCATION BEYOND 2 FEET SHALL BE ONLY BY THE AUTHORIZATION OF THE TRAFFIC ENGINEERING DIVISION, CHARLESTON, W. VA.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SIZING ALL WIRE IN ACCORDANCE WITH THE LOAD REQUIREMENTS (MINIMUM NO. 8 AWG EXCEPT FOR NO. 10 AWG POLE AND BRACKET CABLES).
3. THE LUMINAIRE BALLAST SHALL BE RATED AT 240 VOLTS; LUMINAIRE LAMPS SHALL BE RATED AT 250 WATT- 30,000 LUMENS, EQUIVALENT TO AMERICAN ELECTRIC CURVE AE38491 AND AE38421 RESPECTIVELY, OR APPROVED EQUAL.
4. WHERE CONDUITS ARE INSTALLED IN SHOULDERS OR PAVEMENTS, THE AREA DISTURBED SHALL BE REPLACED TO THE ORIGINAL DESIGN CONDITIONS AS REQUIRED IN SECTION 652.6 OF THE SPECIFICATIONS.
5. UNDERGROUND CONDUIT PLACEMENT SHALL BE IN ACCORDANCE WITH APPLICABLE CODE REQUIREMENTS. ALL UNDERGROUND UTILITY LINES, GAS, WATER, ETC. IN THE CONSTRUCTION AREA SHALL BE LOCATED AND MARKED BY THE APPROPRIATE UTILITY UPON NOTIFICATION BY THE CONTRACTOR PRIOR TO PLACING ANY CONDUIT.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION WITH ALLEGHENY POWER COMPANY FOR CONNECTION OF NEW ELECTRICAL SERVICE AND INTERIM USE AND DISCONNECTION OF EXISTING ELECTRICAL SERVICE.
7. COLOR CODING OF ELECTRICAL CONDUCTORS BY USE OF PHASE TAPE OR FIELD PAINT IS NOT ACCEPTABLE ON THIS PROJECT. CONDUCTORS MUST BE MANUFACTURER COLORED, STRIPED OR RIGID MARKED AS SPECIFIED.
8. THE POWER SERVICE WILL BE 120/240 VOLT, 2 WIRE, SINGLE PHASE, WITH GROUND FOR ROADWAY LIGHTING, UNLESS OTHERWISE NOTED ON PLANS. ALLEGHENY POWER CO. WILL PROVIDE SERVICE DROPS AS AGREED IN THE FIELD AND SHOWN ON THE PLANS. THE CONTRACTOR SHALL BE REQUIRED TO INSTALL A COMPLETE SERVICE CONTROL CENTER. AS SHOWN ON TEL-22.
9. ALL OFFSET DISTANCES FOR LIGHT POLE PLACEMENTS ARE TAKEN FROM EDGE OF PAVEMENT.
10. LUMINAIRE SUPPORT POLE BASES SHALL BE BREAKAWAY TRANSFORMER TYPE FOR ROADSIDE INSTALLATION.
11. ALL JB 18" x 18" USED ON THIS PROJECT SHALL INCLUDE GROUND RODS AS SHOWN ON TEL-43.
12. ALL WORK, MATERIALS AND FEES REQUIRED BY THE POWER COMPANY FOR CONSTRUCTION OF THE ELECTRICAL SERVICES SHALL BE BID AS PART OF ITEM 662013-001.
13. CONDUIT EXPANSION FITTINGS SHALL BE INSTALLED AT ALL LOCATIONS AS RECOMMENDED BY THE BRIDGE DESIGNS. REFER TO STANDARD DRAWING TEL-31.
14. LUMINAIRE POLE SUPPORTS SHALL BE TRUSS TYPE UNLESS OTHERWISE DESIGNATED, AND SHALL BE GALVANIZED AND PAINTED BROWN IN ACCORDANCE WITH THE SPECIAL PROVISION.
15. THE POWER SERVICE AND CONTROL STATION MUST PROVIDE FOR A MINIMUM OF TWO SEPARATE CIRCUITS WITH SEPARATE OVERCURRENT BREAKERS. EACH CIRCUIT RUN MUST BE DESIGNED SO THAT ALTERNATE LIGHTS ARE ON DIFFERENT CIRCUITS AND THE ELECTRICAL LOAD IS EVENLY DISTRIBUTED AS MUCH AS POSSIBLE. EACH BRANCH CIRCUIT SHALL CONSIST OF TWO PHASE CONDUCTORS. AN INSULATED GROUNDED BONDING WIRE (COLOR CODED GREEN) MUST BE RUN IN ALL WIREWAYS TO INSURE GROUND CONTINUITY.

L-1

Baker
Michael Baker Jr., Inc.

REVISION NUMBER	SHEET NUMBER	REVISION	DATE	BY

THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

HIGHWAY LIGHTING SUMMARY OF QUANTITIES

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Public Roads Div.	State Dist. No.	State Project No.	Federal Project No.	Fiscal Year	County	Sheet No.	Total Sheets
WV	5	X316 - H - 100.40 06	APD 0484 (251)C	2003	HARDY	196	670

LEGEND

- LIGHTING SUPPORT WITH IES TYPE II 250 WATT HPS LUMINAIRE (40'-0" MTG. HT.)
- LIGHTING SUPPORT WITH IES TYPE III 250 WATT HPS LUMINAIRE (40'-0" MTG. HT.)
- IES TYPE III 250 WATT HPS LUMINAIRE (40'-0" MTG. HT.) MOUNTED ON TRAFFIC SIGNAL POLE
- 2" GALVANIZED STEEL CONDUIT WITH LIGHTING CIRCUIT FEEDERS (UNLESS OTHERWISE NOTED)
- 2" GALVANIZED STEEL CONDUIT.STUB-UP FOR FUTURE USE
- CONDUIT IN BRIDGE STRUCTURE WITH LIGHTING CIRCUIT FEEDERS
- JUNCTION BOX TYPE H, 18" X 18"
- SERVICE AND CONTROL STATION (C/S)
- JUNCTION BOX TYPE A, MODIFIED, INSTALLED IN BRIDGE PARAPET (SEE SHEET L9 FOR DETAILS)

LIGHT POLE IDENTIFICATION

UNIT LOCATION

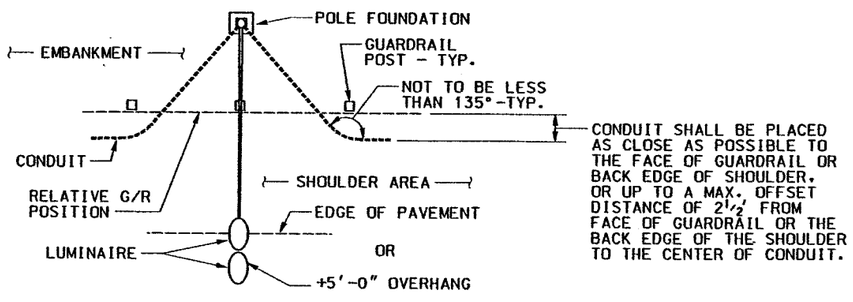
000 + 00

1 - A1 - 1

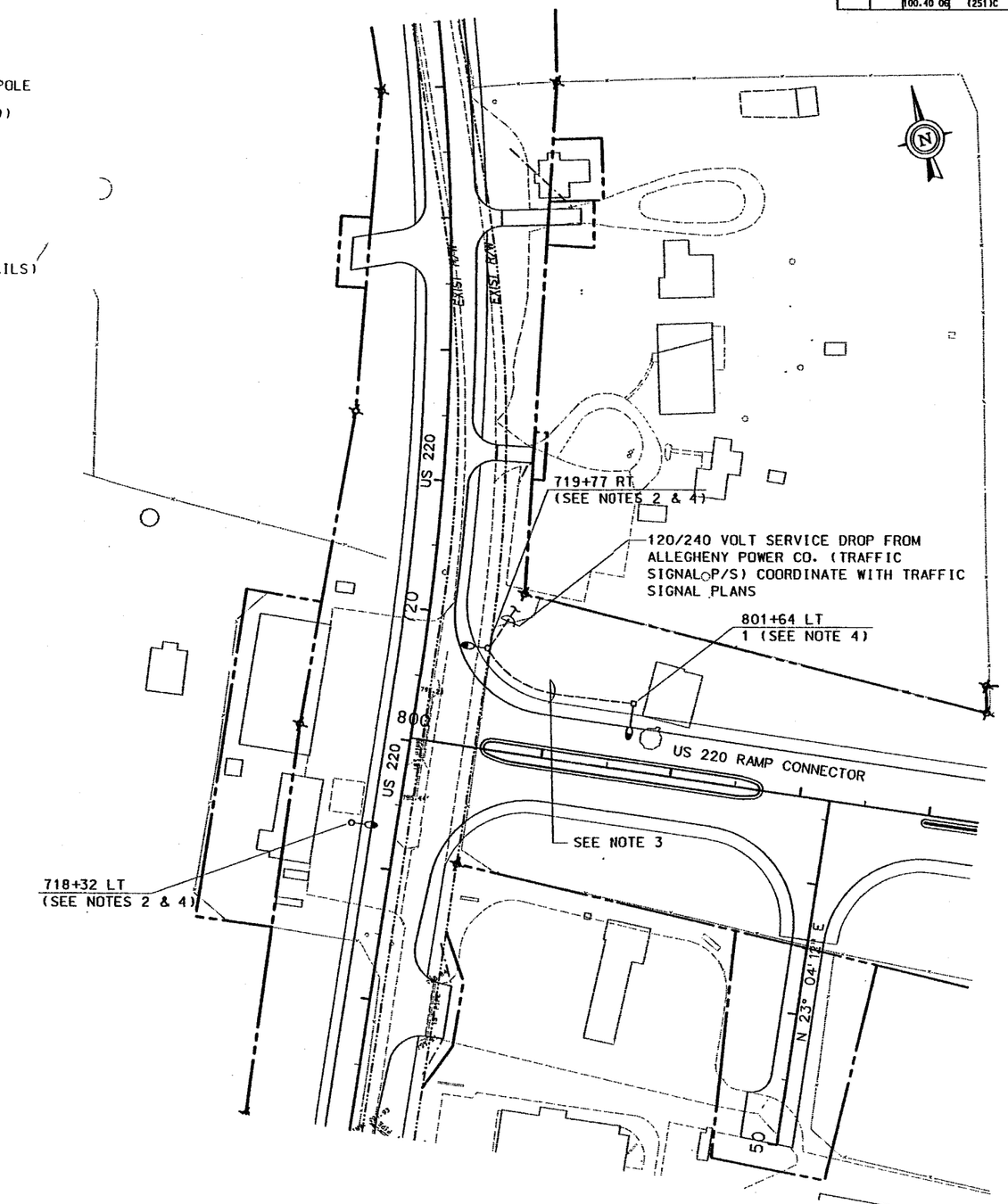
- POLE NUMBER
- CIRCUIT DESIGNATION
- SERVICE/CONTROL CABINET DESIGNATION

NOTES:

1. CIRCUIT CONDUCTOR ROUTING HAS BEEN SHOWN BEHIND GUARDRAIL FOR CLARITY. ALL CONDUIT ROUTING, EXCEPT AS NOTED, SHALL BE INSTALLED WITHIN AN AREA 2'-0" WIDE BETWEEN EDGE OF PAVED SHOULDER AND FACE OF GUARD RAIL. FOR CONDUIT ROUTING AT LIGHT POLE LOCATIONS, SEE"CONDUIT DETAIL" THIS SHEET.
2. LUMINAIRE MOUNTED ON TRAFFIC SIGNAL POLE AT 40'-0" MTG. HT. SEE TRAFFIC SIGNAL PLANS FOR LUMINAIRE INSTALLATION AND CIRCUITRY ROUTING.
3. 2" RIGID GALVANIZED STEEL CONDUIT AND CIRCUITRY ROUTING TO LIGHTING UNIT. 240V POWER SERVICE TO LIGHTING UNIT SUPPLIED THROUGH TRAFFIC SIGNAL CONTROLLER. SEE TRAFFIC SIGNAL PLANS FOR CONTROLLER DETAILS.
4. PROVIDE INTEGRAL PHOTO CELL CONTROL AT LIGHTING UNIT.



CONDUIT DETAIL
SCALE: NO SCALE



SCALE : 0 50 ft.

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REVISION NUMBER	SHEET NUMBER	REVISION	DATE	BY

THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLAN SHEET

L-2

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Public Route Div.	State Dist. No.	State Project No.	Federal Project No.	Fiscal Year	County	Sheet No.	Total Sheets
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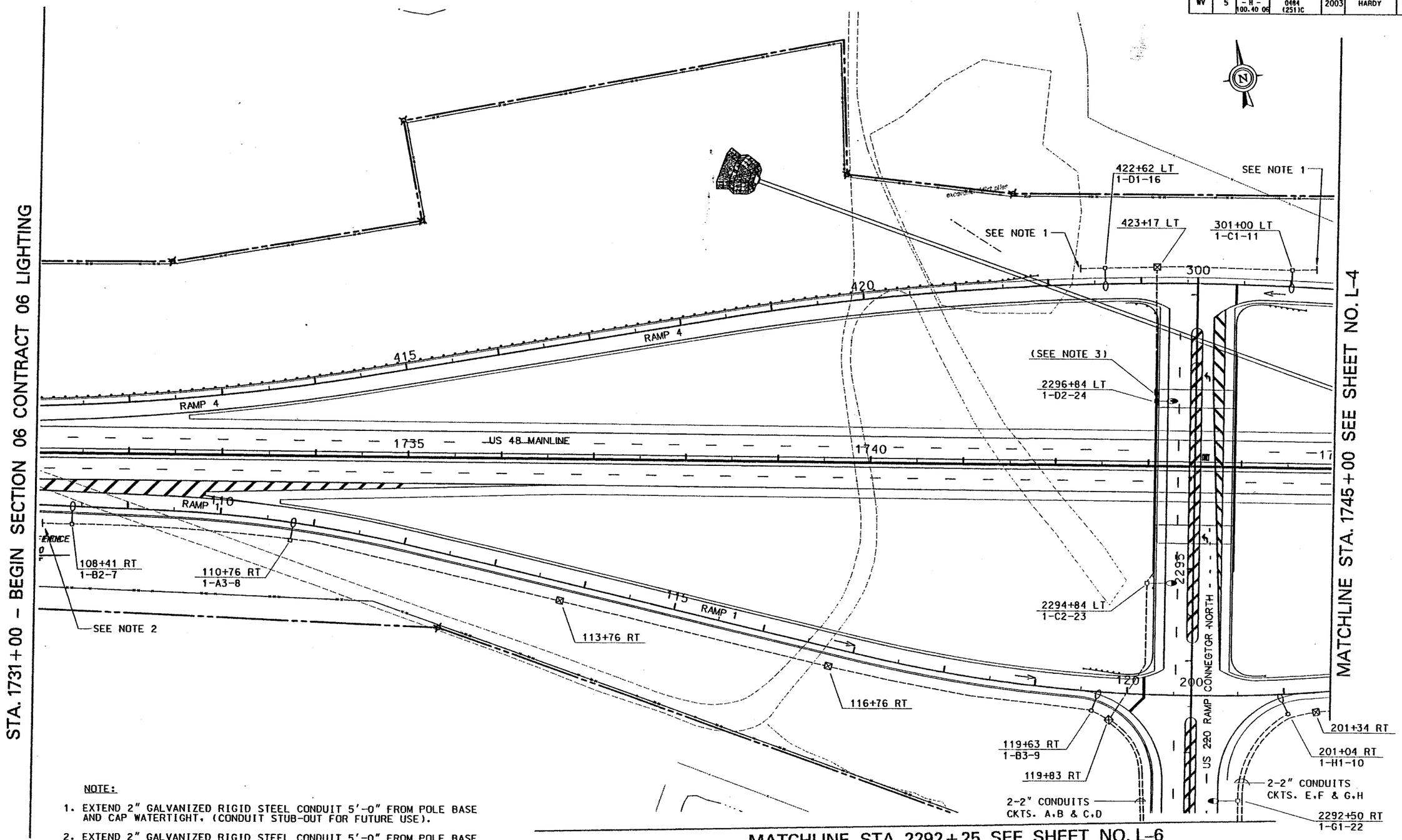

NOTE:

1. EXTEND 2" GALVANIZED RIGID STEEL CONDUIT 5'-0" FROM POLE BASE AND CAP WATERTIGHT. (CONDUIT STUB-OUT FOR FUTURE USE).
2. EXTEND 2" GALVANIZED RIGID STEEL CONDUIT 5'-0" FROM POLE BASE AND CAP WATERTIGHT. CONDUIT STUB-OUT FOR FUTURE HIGHWAY LIGHTING.
3. JUNCTION BOX, TYPE A, MODIFIED INSTALLED IN BRIDGE BARRIER WALL FOR FUTURE LIGHTING. SEE BRIDGE STRUCTURE DRAWINGS FOR LOCATION.

SCALE : 0 50 ft.

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REVISION NUMBER	SHEET NUMBER	REVISION	DATE	BY

THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLAN SHEET

L-3

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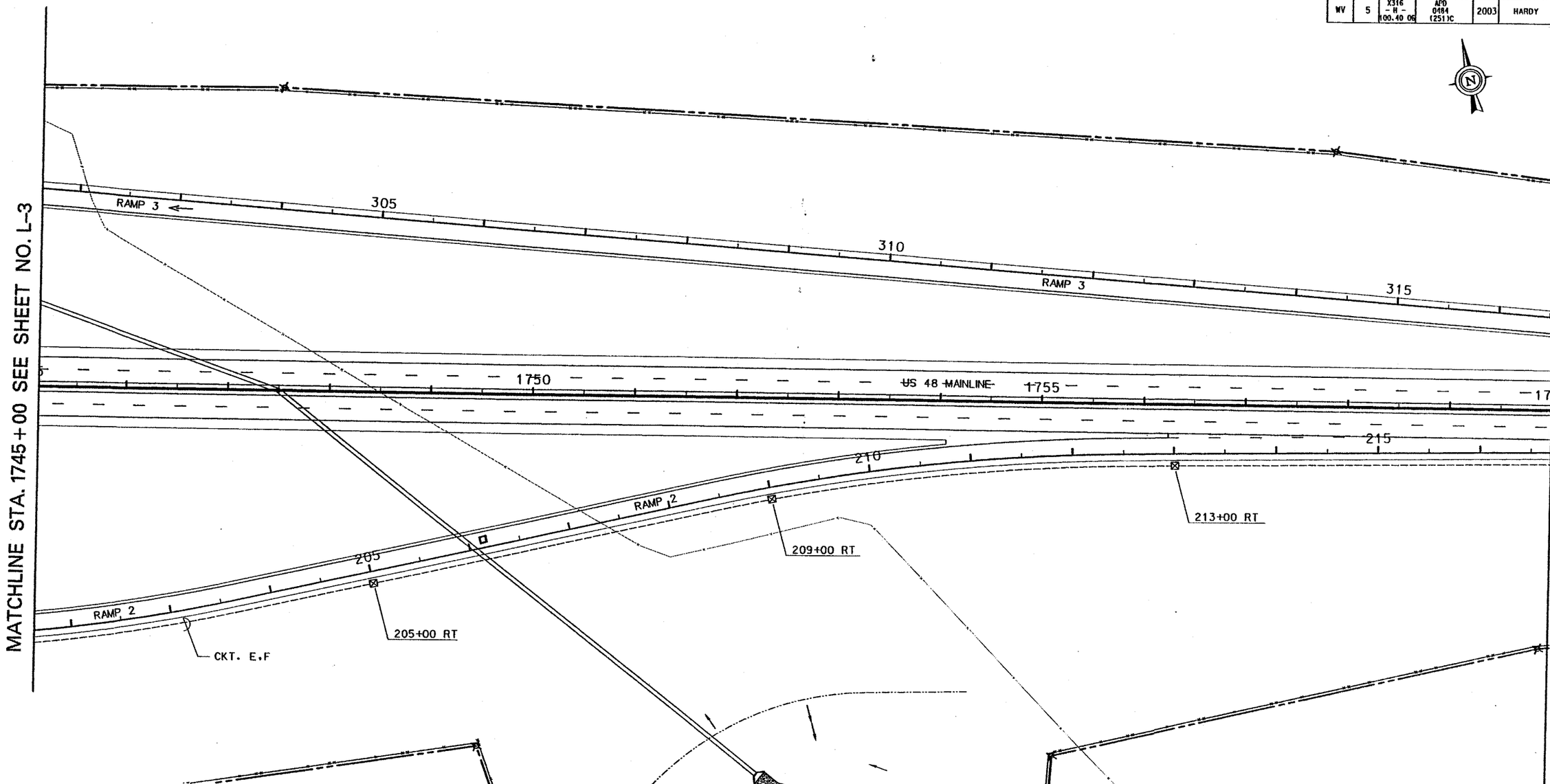
Public Roads Div.	State Dist. No.	State Project No.	Federal Project No.	Fiscal Year	County	Sheet No.	Total Sheets
WV	5	X316 - H - 100.40 06	APD 0484 (251)C	2003	HARDY	198	670



SCALE : 0 50 ft.

Baker
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REVISION NUMBER	SHEET NUMBER	REVISION	DATE	BY

THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLAN SHEET

L-4

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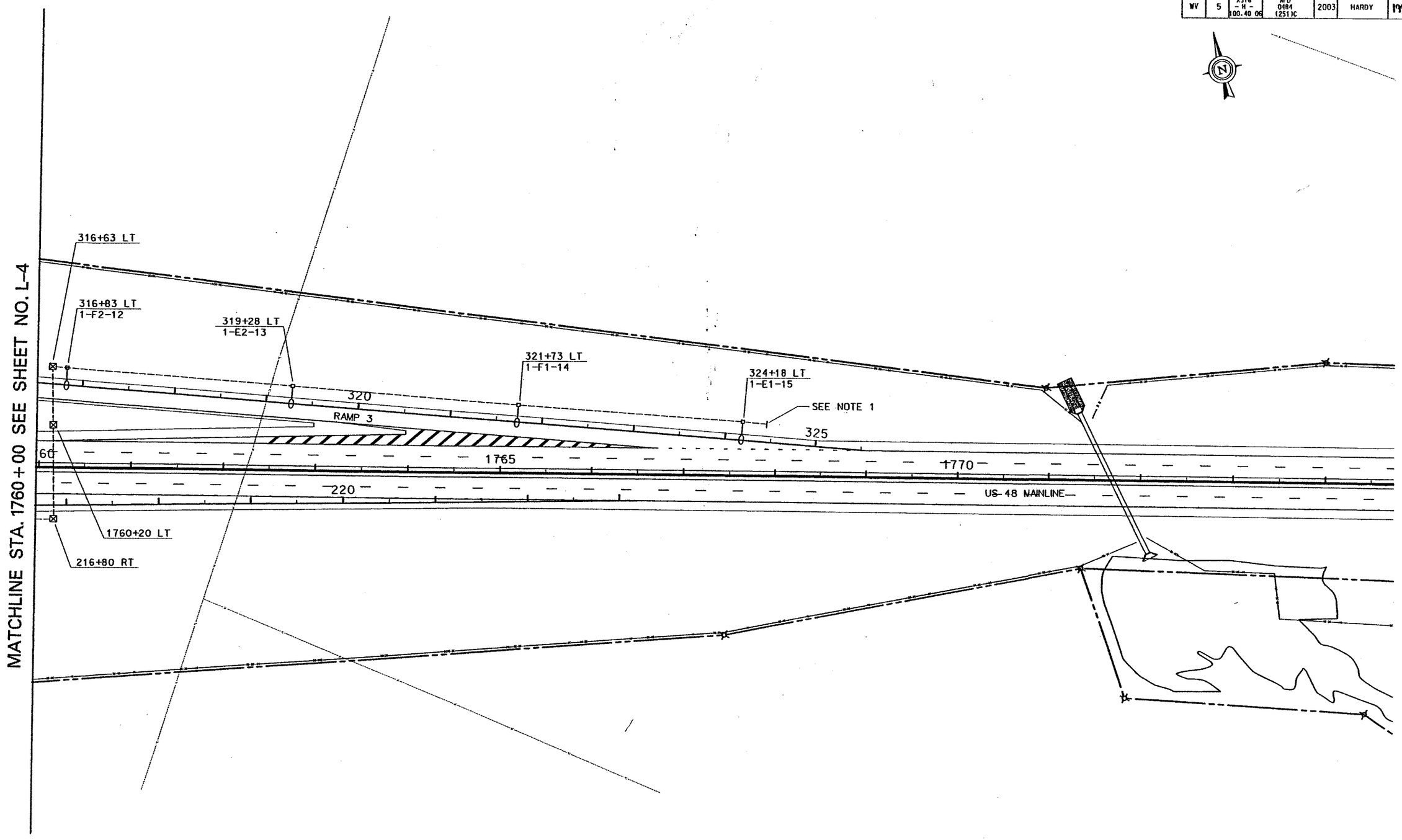
Public Roads Div.	State Dist. No.	State Project No.	Federal Project No.	Fiscal Year	County	Sheet No.	Total Sheets
WV	5	X316 - H - 100.40 06	APD 0484 (251)C	2003	HARDY	199	670



NOTE:

1. EXTEND 2" GALVANIZED RIGID STEEL CONDUIT 5'-0" FROM POLE BASE AND CAP WATERTIGHT. (CONDUIT STUB-OUT FOR FUTURE USE).

SCALE : 0 50 ft.

Baker
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REVISION NUMBER	SHEET NUMBER	REVISION	DATE	BY

THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLAN SHEET

L-5

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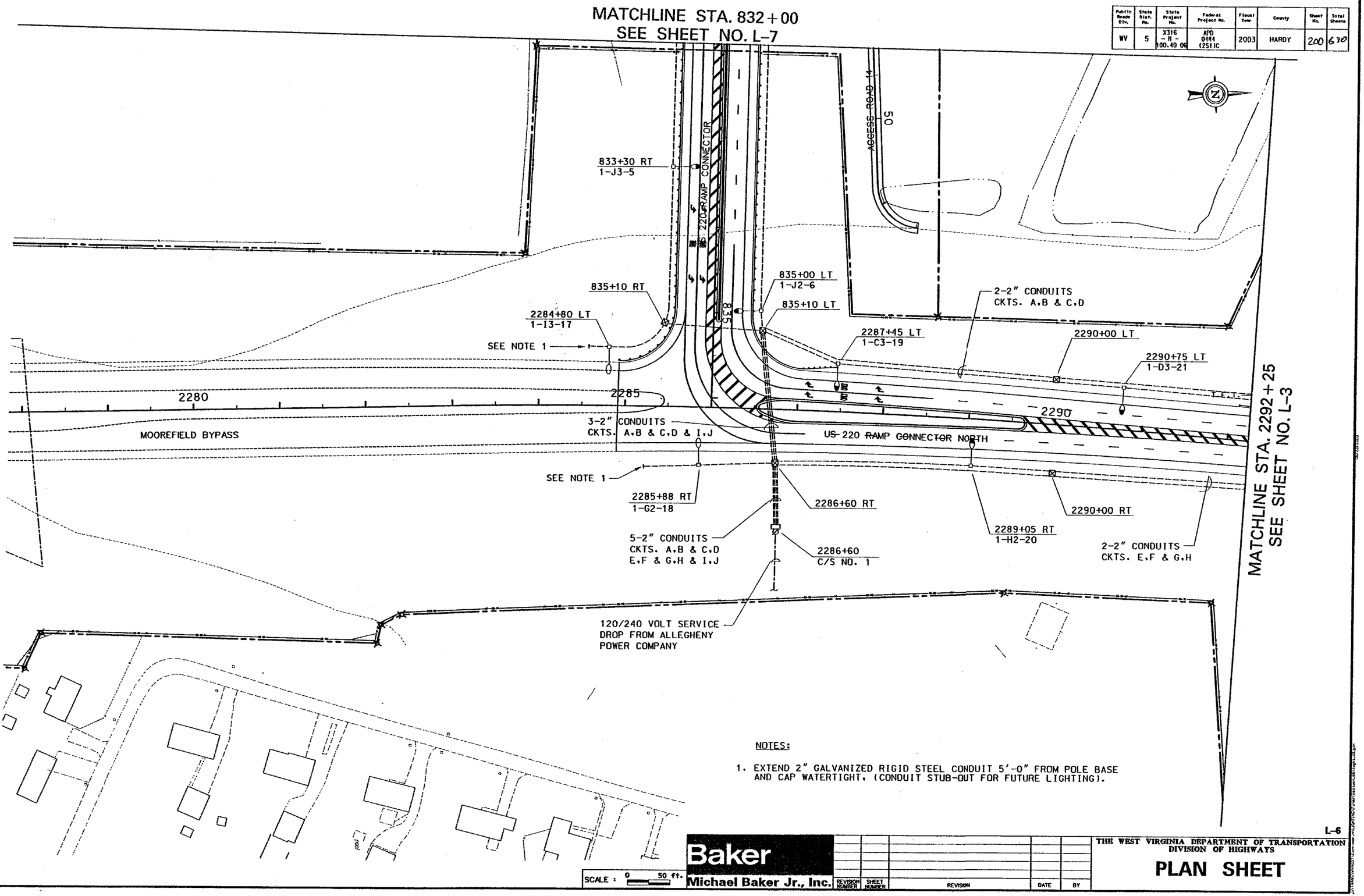
Public Roads Div.	State Dist. No.	State Project No.	Federal Project No.	Fiscal Year	County	Sheet No.	Total Sheets
WV	5	X316 - H - 100.40 06	APD 0484 (251)C	2003	HARDY	200	670



NOTES:

1. EXTEND 2" GALVANIZED RIGID STEEL CONDUIT 5'-0" FROM POLE BASE AND CAP WATERTIGHT. (CONDUIT STUB-OUT FOR FUTURE LIGHTING).

L-6

Baker
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REVISION NUMBER	SHEET NUMBER	REVISION	DATE	BY

THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLAN SHEET

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Public Roads Div.	State Dist. No.	State Project No.	Federal Project No.	Fiscal Year	County	Sheet No.	Total Sheets
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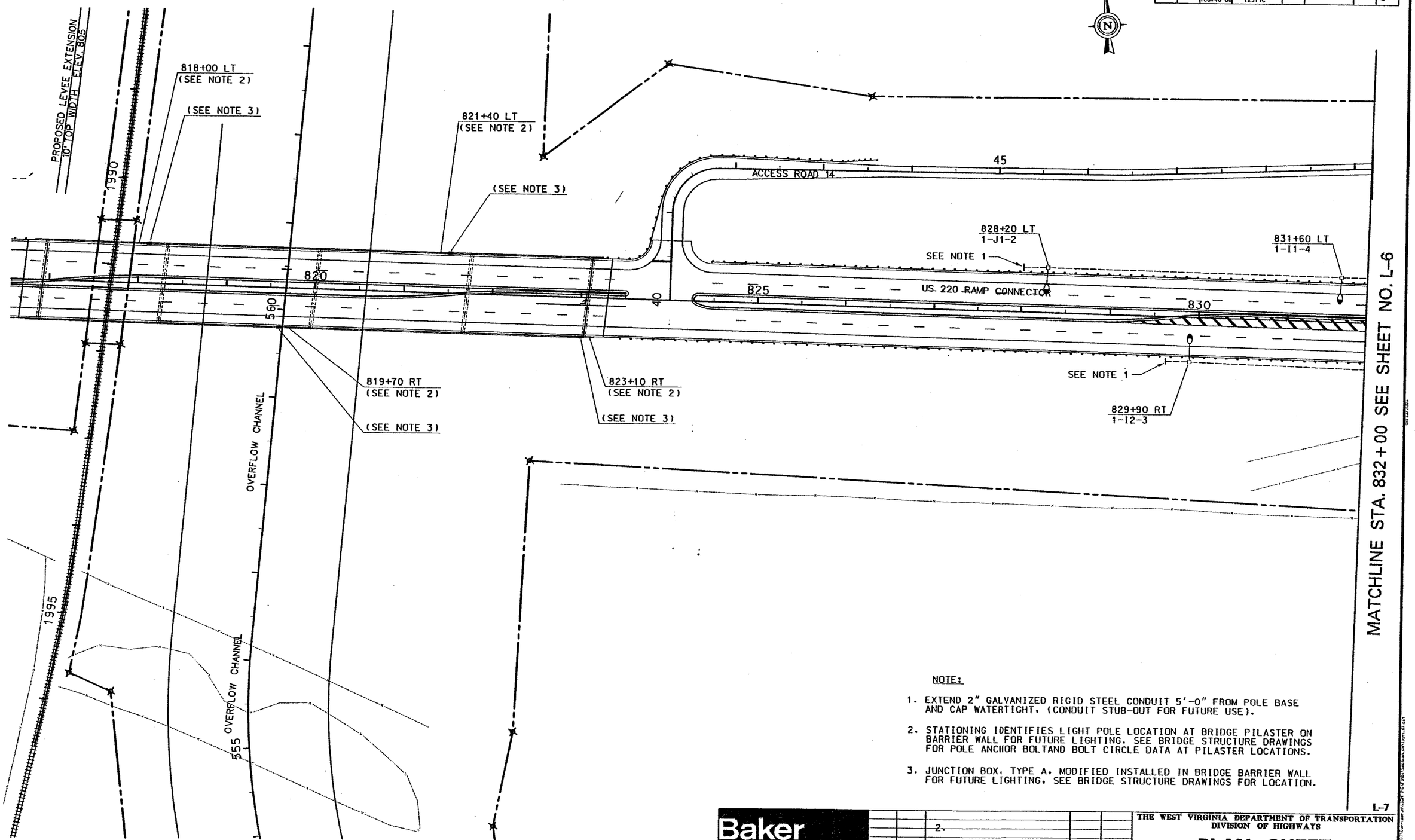

NOTE:

1. EXTEND 2" GALVANIZED RIGID STEEL CONDUIT 5'-0" FROM POLE BASE AND CAP WATERTIGHT. (CONDUIT STUB-OUT FOR FUTURE USE).
2. STATIONING IDENTIFIES LIGHT POLE LOCATION AT BRIDGE PILASTER ON BARRIER WALL FOR FUTURE LIGHTING. SEE BRIDGE STRUCTURE DRAWINGS FOR POLE ANCHOR BOLTAND BOLT CIRCLE DATA AT PILASTER LOCATIONS.
3. JUNCTION BOX, TYPE A, MODIFIED INSTALLED IN BRIDGE BARRIER WALL FOR FUTURE LIGHTING. SEE BRIDGE STRUCTURE DRAWINGS FOR LOCATION.

SCALE : 0 50 ft.

Baker
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REVISION NUMBER	SHEET NUMBER	REVISION	DATE	BY
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THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

PLAN SHEET

L-7

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Public Roads Div.	State Dist. No.	State Project No.	Federal Project No.	Fiscal Year	County	Sheet No.	Total Sheets
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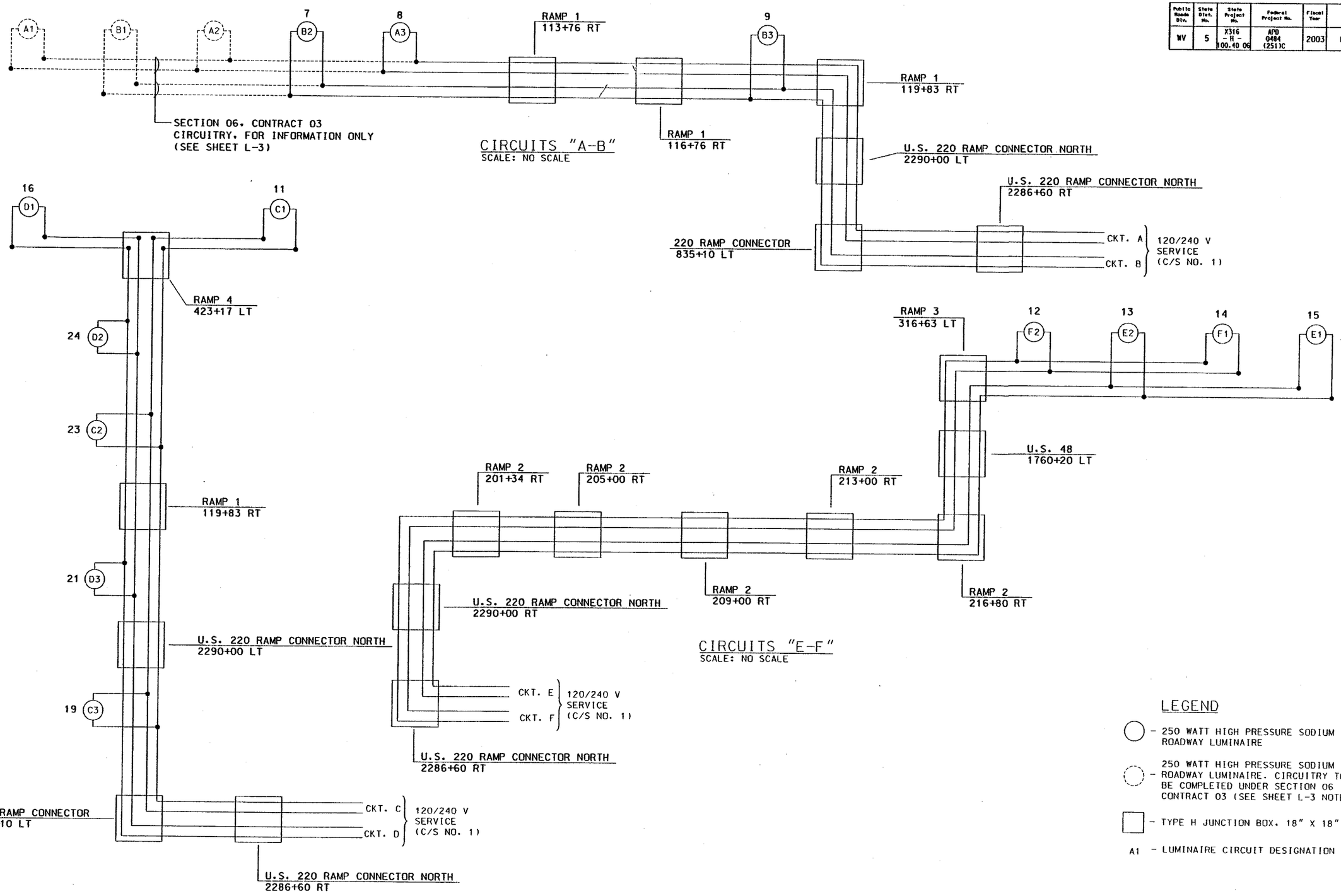

CIRCUITS "A-B"
SCALE: NO SCALE

CIRCUITS "E-F"
SCALE: NO SCALE

CIRCUITS "C-D"
SCALE: NO SCALE

LEGEND

- ○ – 250 WATT HIGH PRESSURE SODIUM ROADWAY LUMINAIRE
- ◌ – 250 WATT HIGH PRESSURE SODIUM ROADWAY LUMINAIRE. CIRCUITRY TO BE COMPLETED UNDER SECTION 06 CONTRACT 03 (SEE SHEET L-3 NOTE 2)
- □ – TYPE H JUNCTION BOX, 18" X 18"
- A1 – LUMINAIRE CIRCUIT DESIGNATION

L-8

Baker
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REVISION NUMBER	SHEET NUMBER	REVISION	DATE	BY

THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

HIGHWAY LIGHTING SCHEMATIC WIRING DIAGRAMS

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Public Roads Div.	State Dist. No.	State Project No.	Federal Project No.	Fiscal Year	County	Sheet No.	Total Sheets
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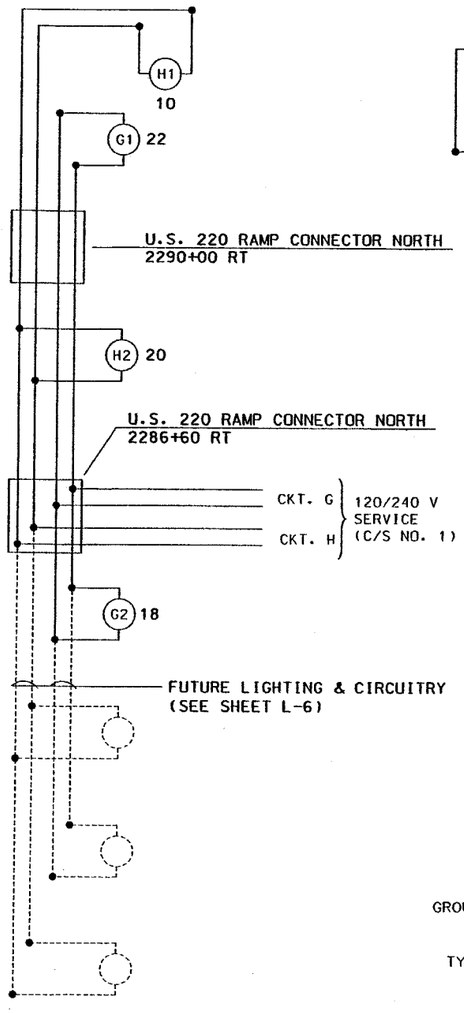
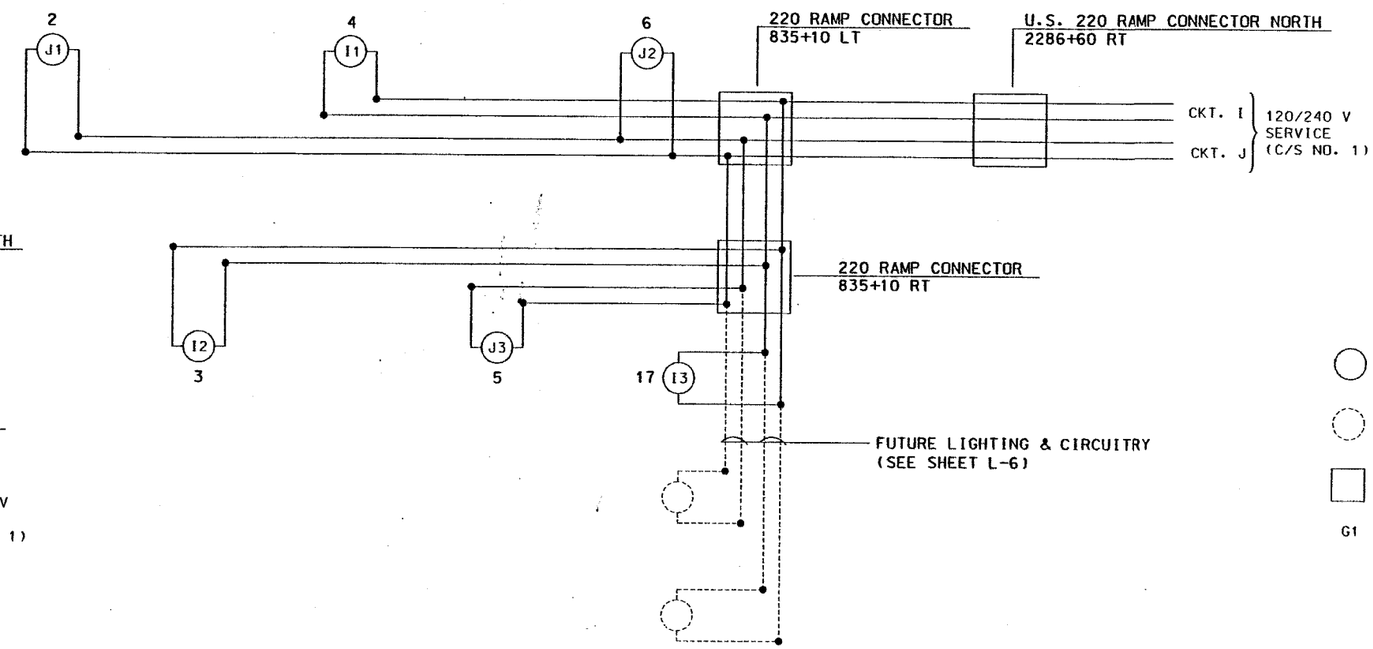


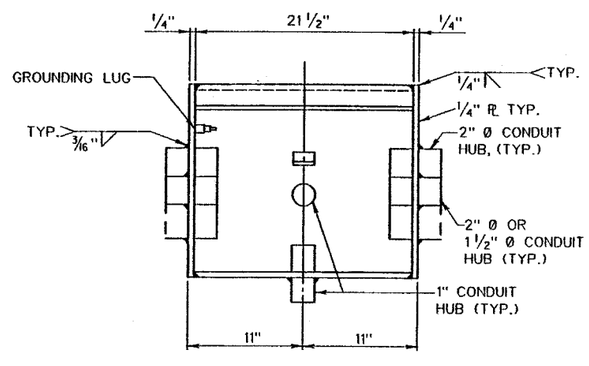
CIRCUITS "G-H"
SCALE: NO SCALE



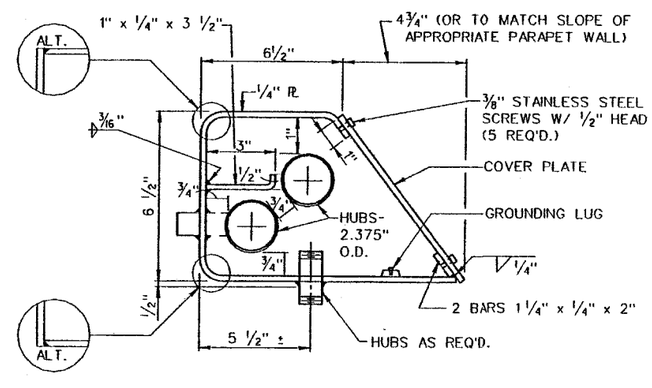
CIRCUITS "I-J"
SCALE: NO SCALE

LEGEND

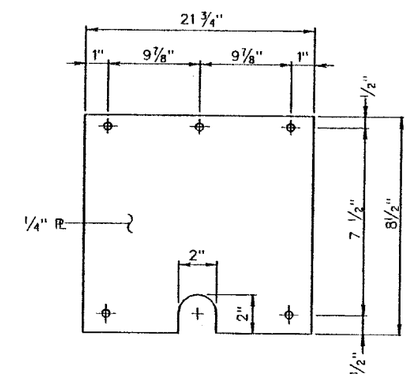
- ○ – 250 WATT HIGH PRESSURE SODIUM ROADWAY LUMINAIRE
- ◌ – FUTURE 250 WATT HIGH PRESSURE SODIUM ROADWAY LUMINAIRE. (SEE SHEET L-6)
- □ – TYPE H JUNCTION BOX. 18" X 18"
- G1 – LUMINAIRE CIRCUIT DESIGNATION



FRONT VIEW WITH COVER REMOVED



SIDE VIEW



COVER PLATE

TYPE A (MODIFIED) JUNCTION BOX
SCALE: NO SCALE

NOTES:

1. TYPE A BOXES ARE TO BE FABRICATED FROM STEEL CONFORMING TO ASTM A-36 AND HOT-DIPPED GALVANIZED AFTER ASSEMBLY.
2. REINFORCING STEEL THAT CONFLICTS WITH TYPE A BOXES SHALL BE APPROPRIATELY MODIFIED AS SHOWN ON THE BRIDGE PLANS OR AS DIRECTED BY THE ENGINEER.
3. CONDUIT NOT USED TO BE FIELD CAPPED.

L-9

Baker
Michael Baker Jr., Inc.

REVISION NUMBER	SHEET NUMBER	REVISION	DATE	BY

THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

HIGHWAY LIGHTING
SCHEMATIC WIRING DIAGRAMS

I:\TRANS\WVADOT\Corridor_H\LIGHTING\Final\Section_06\light_09.pln
11:36:21 AM
06/23/2003

PUBLIC ROADS DIV.	STATE DISTRICT NUMBER	STATE PROJECT NUMBER	FEDERAL PROJECT NUMBER	FISCAL YEAR	COUNTY	SHEET NUMBER	TOTAL SHEETS
WV	5	X316-H-100.40 06	APD-0484 (251)	2003	HARDY	204	670

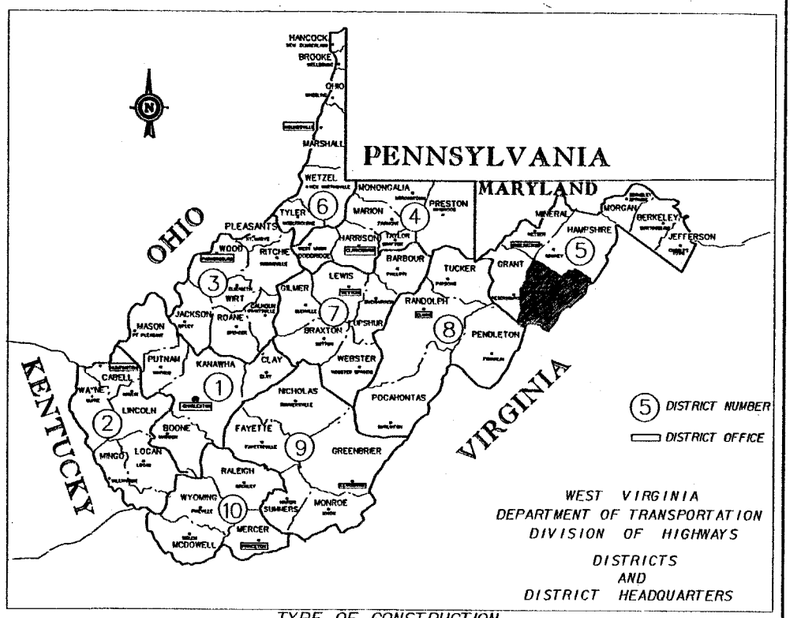
WEST VIRGINIA
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PLANS FOR CONSTRUCTION

OF

STATE HIGHWAY

FEDERAL PROJECT NO. APD-0484(251)
STATE PROJECT NO. X316-H-100.40 06
ROUTE NO. U.S. 220
MOOREFIELD DISTRICT
HARDY COUNTY

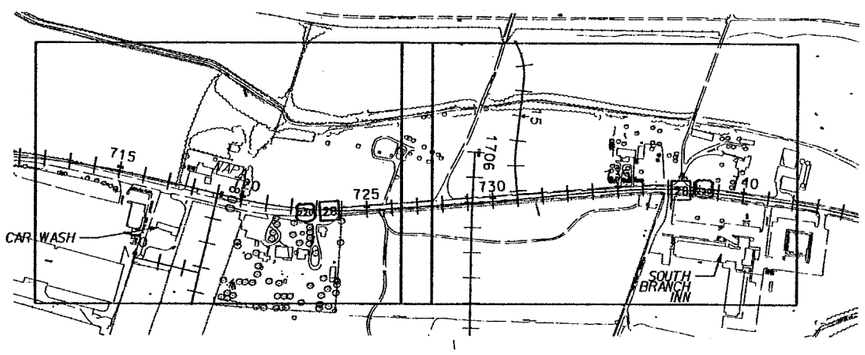
US 220 - FORT RUN



TYPE OF CONSTRUCTION
UTILITY RELOCATION

UTILITIES

ALLEGHENY POWER SYSTEMS (GAS)
ALLEGHRNY POWER SYSTEM (ELECTRIC)
FRONTIER COMMUNICATIONS OF WV
HARDY TELECOMMUNICATIONS INC.
SHENANDOAH VALLEY ELECTRIC COOPERATIVE INC.
WV STATE RAIL AUTHORITY
TOWN OF MOOREFIELD WASTEWATER DEPARTMENT
TOWN OF MOOREFIELD WATER DEPARTMENT
HARDY COUNTY RURAL DEVELOPMENT AUTHORITY



CLAY P. RILEY
REGISTERED
15634
STATE OF
WEST VIRGINIA
PROFESSIONAL ENGINEER
7/31/03

CONVENTIONAL SIGNS

STATE LINE
COUNTY LINE
CORPORATION LINE
PROPOSED R/W LINE
PROPERTY LINE
EXISTING FENCE
PROPOSED FENCE
EDGE OF STREAM
PROPOSED GUARD RAIL
EXISTING GUARD RAIL
RAILROAD
GAS LINE
WATER LINE
TELEPHONE LINE
ELECTRIC LINE
TELEPHONE AND TELEVISION LINES
ELECTRIC AND TELEPHONE LINES
ELECTRIC AND TELEVISION LINES
ELECTRIC, TELEPHONE, AND TELEVISION LINES
UNDERGROUND TELEPHONE LINE
TELEPHONE POLE
POWER POLE
COMBINED POWER AND TELEPHONE POLE
TREE
SHRUB
RIGHT OF WAY MARKER
BORING LOCATIONS

LAYOUT SCALE

0 300 ft.

INDEX TO SHEETS

NO.	DESCRIPTION
1	TITLE SHEET
2-3	PLAN SHEETS
4-6	DETAILS

DESIGN DESIGNATION

A.D.T. ____ " ____
A.D.T. ____ " ____
K ____ " ____
D ____ " ____
T ____ " ____
V ____ " ____

REVISION NUMBER	SHEET NUMBER	REVISIONS	DATE	BY

.....20....
I HEREBY CERTIFY THAT THIS IS A CORRECT COPY OF THE PLANS OF PROJECT X316-H-100.40 06, APD-0484(251).....
.....
EXECUTIVE SECRETARY

PHONE (304) 624-4108 THRASHER ENGINEERING (FAX) (304) 624-7831
CIVIL, ENVIRONMENTAL, AND CONSULTING
30 COLUMBIA BOULEVARD - CLARKSBURG, WV 26301

RECOMMENDED ..... DESIGNER
RECOMMENDED FOR APPROVAL ..... STATE HIGHWAY ENGINEER
APPROVED ..... COMMISSIONER OF HIGHWAYS

FEDERAL PROJECT NO. APD-0484(251)
STATE PROJECT NO. X316-H-100.40 06

UTILITY RELOCATION 7/28/03

PUBLIC ROADS DIV.	STATE DISTRICT NUMBER	STATE PROJECT NUMBER	FEDERAL PROJECT NUMBER	FISCAL YEAR	COUNTY	SHEET NUMBER	TOTAL SHEETS
WV	5	X316-H-100.40 06	APD-0484 (251)	2003	HARDY	205	670

QUANTITIES FOR WATER LINE RELOCATION

STATION TO STATION		ITEM 670004-222 8 INCH DUCTILE IRON PIPE TYPE 1, CLASS 52 LF	ITEM 670007-004 ¾ INCH PLASTIC PIPE CLASS 200 LF	ITEM 670007-022 8 INCH PLASTIC PIPE CLASS 200 LF	ITEM 670010-300 16 INCH STL CASING PIPE THICKNESS 0.1875" LF	ITEM 670015-040 ¾ INCH METER EA	ITEM 670019-221 8 INCH SPECIAL VALVE, TAP AND SLEEVE W/BOX EA
712+00	727+00			910	134		1
727+00	740+00	100	70	910	100	1	1
TOTALS		100	70	1820	234	1	2

GENERAL NOTES FOR WATER LINE RELOCATION

1. CONTRACTOR MUST FIELD VERIFY ALL EXISTING INVERT ELEVATIONS AND PIPE SIZES IN ORDER TO MAKE ANY NECESSARY ADJUSTMENTS BEFORE INSTALLING ANY PIPE.

2. THE COST OF ALL ELBOWS, CAPS, AND FITTINGS ARE TO BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 670007-004 AND ITEM 670007-022 PLASTIC PIPE AND ITEM 670004-222 DUCTILE IRON PIPE

3. THE LOCATIONS OF THE PROPOSED PIPE, VALVES, AND FITTINGS ARE APPROXIMATE AND MAY BE FIELD ADJUSTED TO MATCH EXISTING CONDITIONS.

4. INSTALL A NUMBER 12 COATED LOCATOR WIRE WITH THE PIPE. THE NEW LOCATOR WIRE TO BE CONNECTED TO THE EXISTING LOCATOR WIRE AN TO ALL METER SETTINGS, VALVE BOXES, FIRE HYDRANTS ETC. THE COST OF THE LOCATOR WIRE IS TO BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 670007-004 AND ITEM 670007-022 PLASTIC PIPE .

5. INSTALL A MAGNETICALLY DETECTABLE LOCATOR TAPE ABOVE THE PIPE AND 1 FOOT BELOW THE GROUND SURFACE. COST OF THE TAPE IS TO BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 670007-004 AND ITEM 670007-022 PLASTIC PIPE.

6. ALL PVC PIPE SHALL BE BURIED A MINIMUM OF 42". ALL DUCTILE IRON SHALL BE BURIED A MINIMUM OF 48" FROM THE FINISHED GRADE TO THE TOP OF THE GROUND.

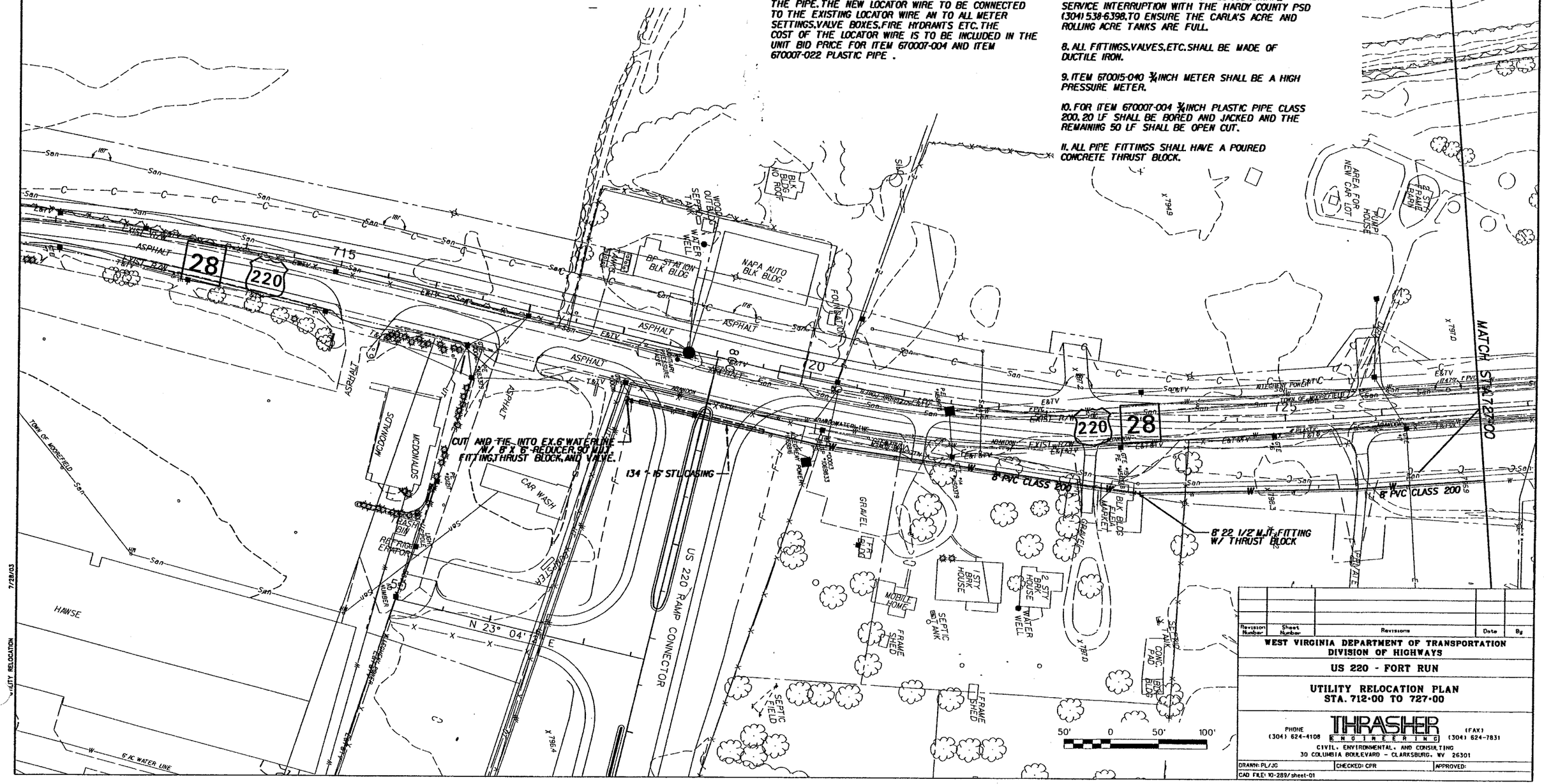
7. WATER LINE RELOCATION SHALL BE PERFORMED WITH MINIMAL SERVICE INTERRUPTION AS POSSIBLE. TIE IN'S TO EXISTING WATER LINE SHALL BE PERFORMED SIMULTANEOUSLY. CONTRACTOR SHALL COORDINATE SERVICE INTERRUPTION WITH THE HARDY COUNTY PSD (304) 538-6398, TO ENSURE THE CARLA'S ACRE AND ROLLING ACRE TANKS ARE FULL.

8. ALL FITTINGS, VALVES, ETC. SHALL BE MADE OF DUCTILE IRON.

9. ITEM 670015-040 ¾ INCH METER SHALL BE A HIGH PRESSURE METER.

10. FOR ITEM 670007-004 ¾ INCH PLASTIC PIPE CLASS 200, 20 LF SHALL BE BORED AND JACKED AND THE REMAINING 50 LF SHALL BE OPEN CUT.

11. ALL PIPE FITTINGS SHALL HAVE A POURED CONCRETE THRUST BLOCK.



Revision Number	Sheet Number	Revisions	Date	By

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

US 220 - FORT RUN

UTILITY RELOCATION PLAN
STA. 712+00 TO 727+00

THRASHER ENGINEERING
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30 COLUMBIA BOULEVARD - CLARKSBURG, WV 26301

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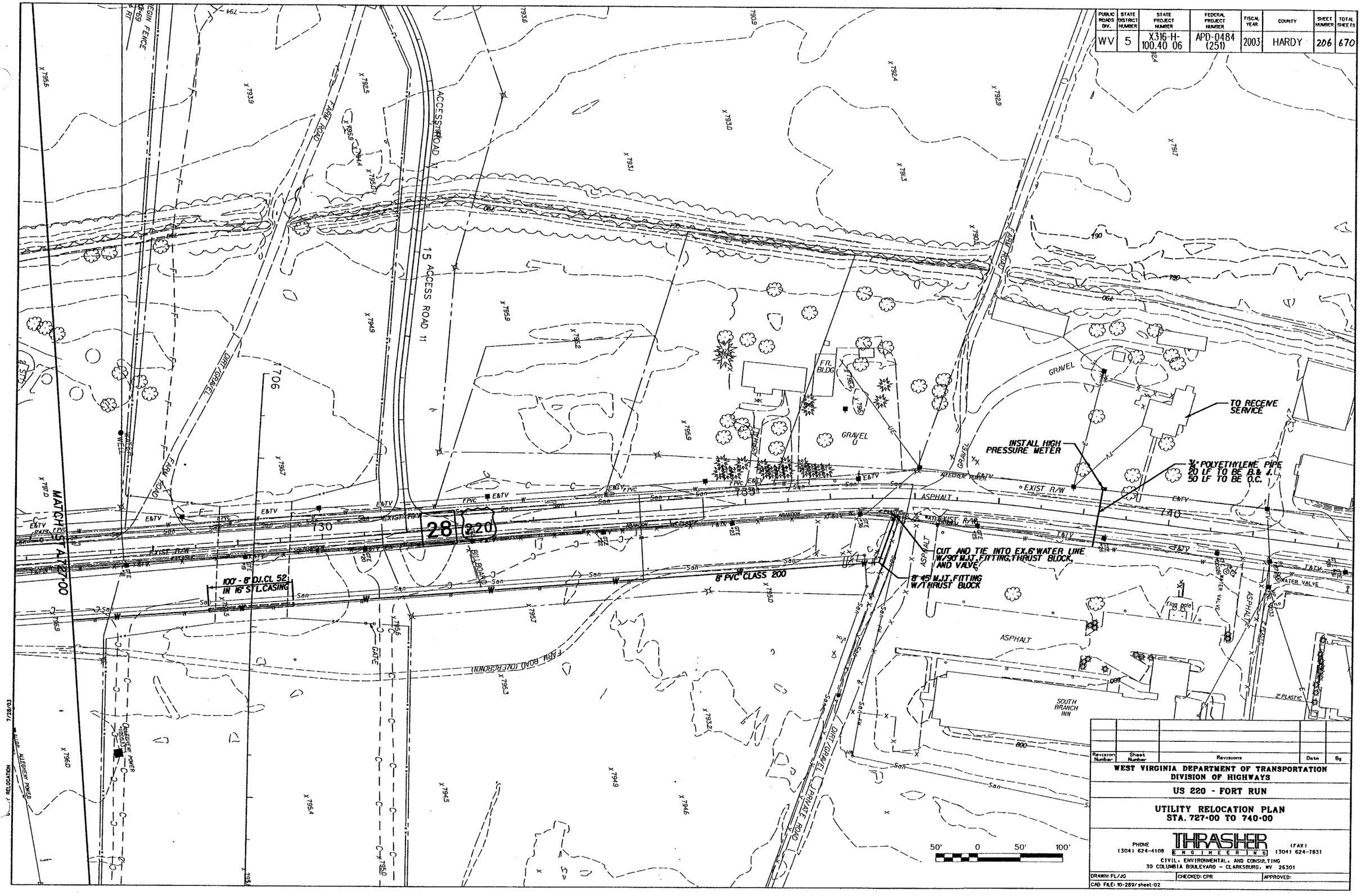
CAD FILE: 10-289/sheet-01

7/28/03

UTILITY RELOCATION

PUBLIC ROADS DIV.	STATE DISTRICT NUMBER	STATE PROJECT NUMBER	FEDERAL PROJECT NUMBER	FISCAL YEAR	COUNTY	SHEET NUMBER	TOTAL SHEETS
WV	5	X316-H-100.40 06	APD-0484 (251)	2003	HARDY	206	670



Revision Number	Sheet Number	Revisions	Date	By

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

US 220 - FORT RUN

UTILITY RELOCATION PLAN
STA. 727+00 TO 740+00

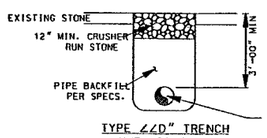
THRASHER ENGINEERING
PHONE (304) 624-4108 (FAX) (304) 624-7831
CIVIL, ENVIRONMENTAL, AND CONSULTING
30 COLUMBIA BOULEVARD - CLARKSBURG, WV 26301

DRAWN: PL/JG | CHECKED: CPR | APPROVED:

CAD FILE: 10-289/sheet-02

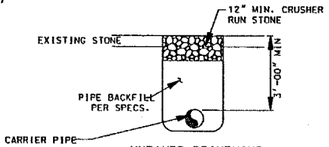
PUBLIC ROADS DIV.	STATE DISTRICT NUMBER	STATE PROJECT NUMBER	FEDERAL PROJECT NUMBER	FISCAL YEAR	COUNTY	SHEET NUMBER	TOTAL SHEETS
WV	5	X316-H-100.40 06	APD-0484 (251)	2003	HARDY	207	670

W.V. STATE ROADS, DELTA ROADS AND PRIVATE DRIVEWAYS (WITHIN WV.D.O.H. R.O.W.'S)

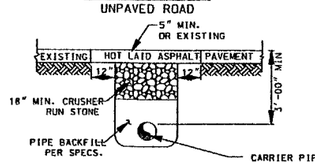


TYPE "D" TRENCH
UNPAVED ROAD

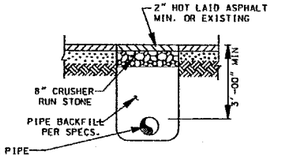
PRIVATE DRIVEWAYS (NOT WITHIN WV.D.O.H. R.O.W.'S)



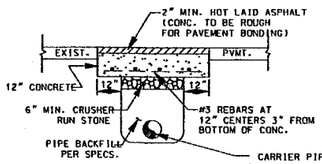
UNPAVED DRIVEWAYS



TYPE "C" TRENCH
ASPHALT PAVEMENT
PRESENT A.D.T. UNDER 2000

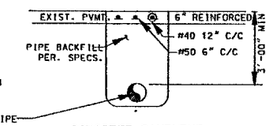


HLBC CITY STREET & DRIVEWAY REPAIR

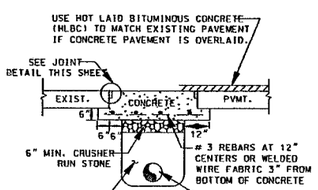


TYPE "B" TRENCH
HLBC PAVEMENT
PRESENT AVERAGE DAILY TRAFFIC OVER 2000 OR LOWER VOLUME ROADS WITH HEAVY TRUCK TRAFFIC (20 PER DAY)

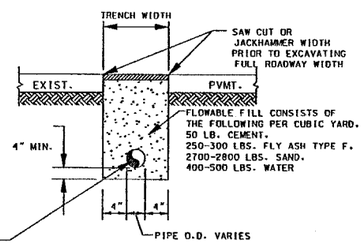
ALL CONCRETE TO BE MINIMUM 3000 PSI. 6 BAG MIX. AIR-ENTRAINED



CONCRETE PAVEMENT
NOTE: ALL CONCRETE TO BE MINIMUM 3000 P.S.I. 6 BAG MIX. AIR-ENTRAINED

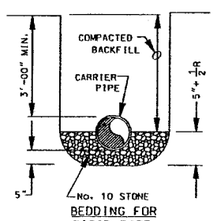


TYPE "A" TRENCH
CONCRETE PAVEMENT

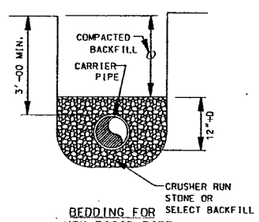


FLOWABLE FILL TRENCH REPAIR

TYPICAL ROAD REPAIR DETAILS
NOT TO SCALE



BEDDING FOR RIGID PIPE

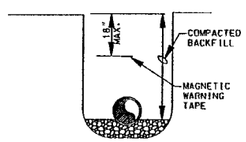


BEDDING FOR NON RIGID PIPE

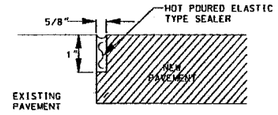
TYPICAL CROSS SECTION OF TRENCHES IN ROCK
NOT TO SCALE

RED	ELECTRIC
YELLOW	GAS - OIL
ORANGE	TELEPHONE
BLUE	WATER
GREEN	SEWER

COLOR CODES FOR UTILITY LOCATING MAGNETIC WARNING TAPE
NOT TO SCALE

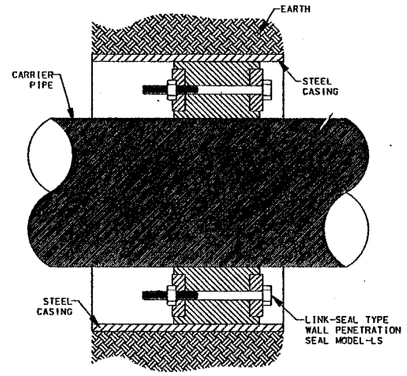


MAGNETIC WARNING TAPE
NOT TO SCALE

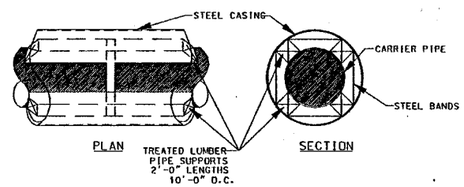


NOTE: EXISTING PAVEMENT TO BE SAWED
LOAD TRANSFER PROVISIONS MAY BE REQUIRED
NOTE: ALL CONCRETE TO BE MINIMUM 3.000 PSI. 6 BAG MIX. AIR - ENTRAINED

JOINT DETAIL
NOT TO SCALE



LINK-SEAL for CASING DETAIL
NOT TO SCALE



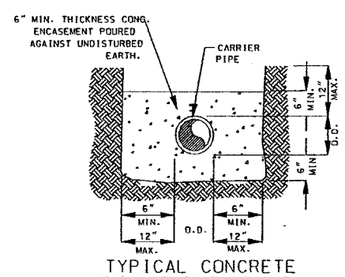
NOTE: SUPPORTS VARY, DUE TO VARIATION OF I.D. OF SUPPORT CASING

CASING BLOCKING DETAIL
NOT TO SCALE

MINIMUM WALL THICKNESS FOR STEEL CASING PIPE (COOPER E-80 LOADING)

NOMINAL DIAMETER IN INCHES	WITH PROTECTIVE COATING IN INCHES	WITHOUT PROTECTIVE COATING IN INCHES
Under 14	0.188	0.251
14 & 16	0.219	0.282
18	0.250	0.313
20	0.281	0.344
30	0.312	0.375

STEEL CASING PIPE SHALL HAVE A MINIMUM YIED STRENGTH OF 35.000 P.S.I.



TYPICAL CONCRETE ENCASEMENT DETAIL
NOT TO SCALE

THRUST BLOCKING

The thrust blocking must be formed against a solid trench wall and these fitting areas must be excavated by hand because mechanical equipment will damage the bearing surface of the trench wall.

The size and type of thrust block depends on the pipe size, line pressure, type of fitting, degree of bend and type of soil. In most cases, the size and type of thrust block will be determined by the engineer. Thrust block size may be calculated by the procedures shown at right.

THRUSTS IN SOFT UNSTABLE SOILS

In soft, unstable soils such as muck or peat, thrusts are resisted by running corrosion-resistant tie-rods to solid foundations or by removing the soft material and replacing it with ballast of sufficient size and weight to resist thrusts developed.

UPWARD THRUSTS AT FITTINGS

Where a fitting is used to make a vertical bend, anchor the fitting to a thrust block braced against the undisturbed earth. The thrust block should have enough resistance to withstand upward and outward thrusts at the fitting.

SIDE THRUST ON CURVES

An outward pressure exists on all deflections from a straight line. Good soil, properly tamped, is sufficient to hold side thrust-unless soil conditions are unstable. In that case, to anchor against this side thrust, the blocking should be placed against the pipe on each side of the coupling. Do not thrust block the coupling itself.

SIDE THRUST

Pipe Size Inches	Side Thrust Pounds per Degree
1 1/2"	5.1
2"	7.9
2 1/2"	11.6
3"	17.1
3 1/2"	22.4
4"	28.3
5"	43.1
6"	60.8
8"	103.0
10"	160.0
12"	225.0

Based on side thrust per 100'lb./in pressure per degree of deflection.

NOTE: Multiply side thrust pounds by degree of deflection times pounds of pressure divided by 100 to obtain total side thrust in pounds.

STEP 1. Multiply the pressure level desired for testing by the appropriate value shown in the following table:

Pipe Size	Dead End or Tee	90° Elbow	45° Elbow	22 1/2° Elbow
1.5"	2.94	4.16	2.25	1.15
2"	4.56	6.45	3.50	1.78
2.5"	6.65	9.40	5.10	2.60
3"	9.80	13.9	7.51	3.82
3.5"	12.8	18.1	9.81	4.99
4"	16.2	23.0	12.4	6.31
5"	24.7	35.0	18.9	9.63
6"	34.8	49.2	26.7	13.6
8"	59.0	83.5	45.2	23.0
10"	91.5	130.0	70.0	35.8
12"	129.0	180.0	98.5	50.3

Based on pounds thrust per psi working pressure.

STEP 2. Determine the bearing strength of the soil from the table below:

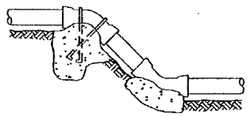
Soils and Safe Bearing Loads	Lbs. Sq. Ft.
Sound Shale	10.000
Cemented Gravel and Sand-Difficult to pick	4.000
Coarse & Fine Compact Sand	3.000
Medium Clay-Can be spaded	2.000
Soft Clay	1.000
Muck	0

STEP 3. Divide the total thrust obtained in Step 1 by the bearing strength of the soil: this gives the square feet of area needed.

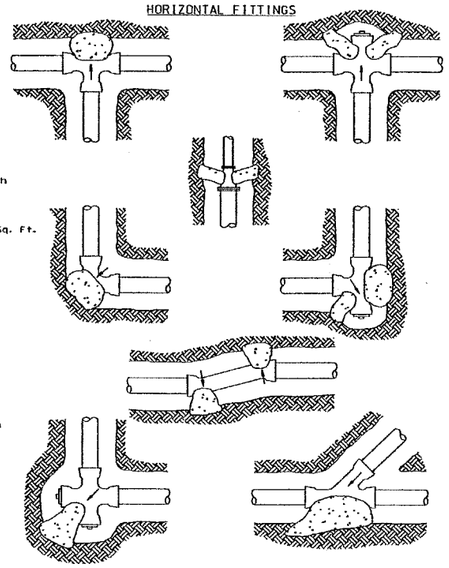
NOTE: ALL CONCRETE THRUST BLOCKING TO MEET 3000 PSI CRUSH TEST.

NOTE: ALL FITTING TO BE WRAPPED WITH 4 MIL PLASTIC WRAP PRIOR TO PLACING CONCRETE THRUST BLOCKING.

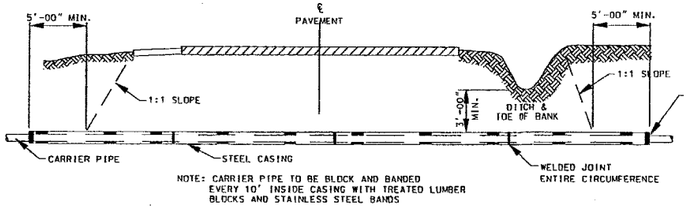
VERTICAL FITTINGS



HORIZONTAL FITTINGS



THRUST BLOCKING DETAILS
NOT TO SCALE



NOTE: CARRIER PIPE TO BE BLOCK AND BANDED EVERY 10' INSIDE CASING WITH TREATED LUMBER BLOCKS AND STAINLESS STEEL BANDS

TYPICAL CASING DETAIL FOR ROAD CROSSING
(OPEN CUT OR BORED & JACKED)
NOT TO SCALE

LINK-SEAL OF RUBBER MATERIAL OVER PIPE AND CASING INTERSECTION WITH STAINLESS STEEL BANDS EACH END.

Revision Number	Sheet Number	Revisions	Date	By

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

US 220 - FORT RUN

UTILITY RELOCATION DETAILS

THRASHER ENGINEERING
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CIVIL, ENVIRONMENTAL, AND CONSULTING
30 COLUMBIA BOULEVARD - CLARKSBURG, WV 26301

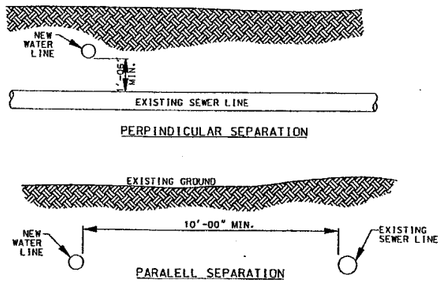
DRAWN: PL/JG | CHECKED: CPR | APPROVED:

CAD FILE: 10-289/WATERDETAILS

7/28/03

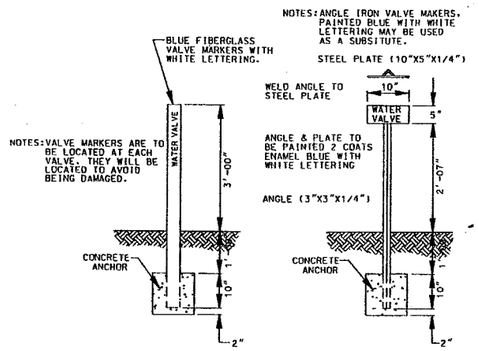
UTILITY RELOCATION

PUBLIC ROADS DIV.	STATE DISTRICT NUMBER	STATE PROJECT NUMBER	FEDERAL PROJECT NUMBER	FISCAL YEAR	COUNTY	SHEET NUMBER	TOTAL SHEETS
WV	5	X316-H-100.40 06	APD-0484 (251)	2003	HARDY	208	670



DETAIL SHOWING SEPARATION OF SEWER AND WATER LINES

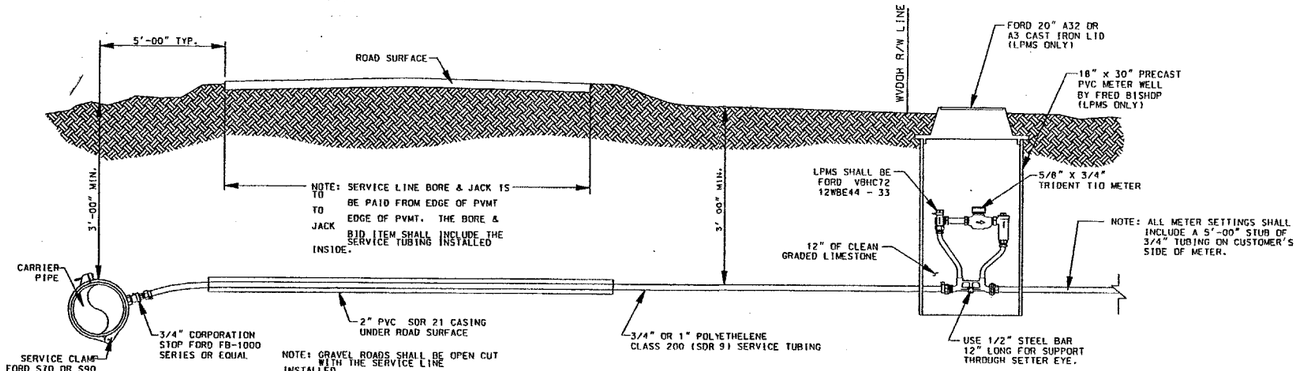
NOT TO SCALE



NOTES: (1) VALVE MARKERS WILL BE USED ON ALL VALVES.
(2) VALVE MARKERS ARE TO BE PLACED OUT OF WVDOH MAINTENANCE AREA

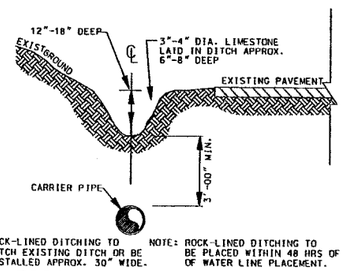
VALVE MARKER DETAIL

NOT TO SCALE



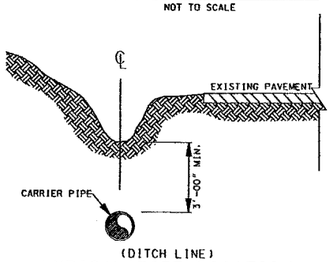
METER SETTING (OPPOSITE SIDE OF PAVED ROAD)

NOT TO SCALE



ROCK-LINED DITCH DETAIL

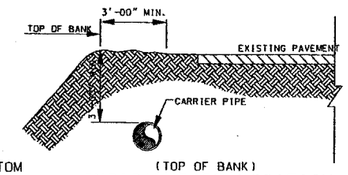
NOT TO SCALE



(DITCH LINE)

TYPICAL PIPE LOCATION

NOT TO SCALE



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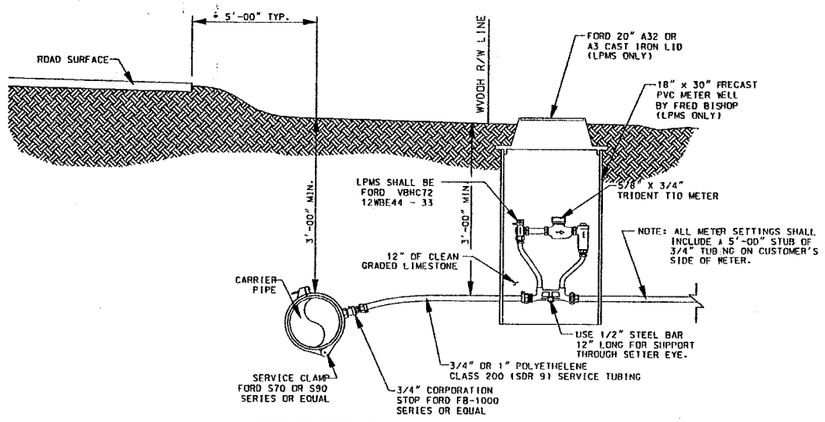
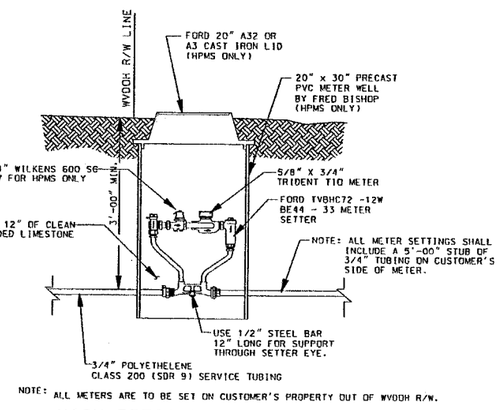
TYPICAL PIPE LOCATION

NOT TO SCALE



METER SETTING (SAME SIDE OF PAVED ROAD)

NOT TO SCALE



HIGH PRESSURE METER SETTING

NOT TO SCALE

WEST VIRGINIA D.O.H. NOTES

THE NEW WATERLINE IS TO BE PLACED UNDER OR AROUND ALL DRAINAGE PIPES OR STRUCTURES UNLESS OTHERWISE NOTED.

ALL PIPE TO BE PLACED 5' FROM EDGE OF PAVEMENT, OR BOTTOM OF THE DITCHLINE, UNLESS OTHERWISE NOTED.

BLUE MAGNETIC WARNING TAPE MUST BE PLACED 12"-18" BELOW FINISHED GROUND AND DIRECTLY OVER PIPE.

ALL UNSUITABLE MATERIAL WILL BE HANDLED ACCORDING TO SECTION 207.6.2 IN THE WVDOH SUPPLEMENTAL SPECIFICATIONS, AT THE DISCRETION OF THE DISTRICT ENGINEER.

MINIMUM NUMBER OF COMPACTION TESTS WILL BE ONE (1) PER 500 FEET OR ONE (1) PER DAY, WHICHEVER IS GREATER.

ALL DISTURBED AREAS INSIDE DOH RIGHT-OF-WAYS TO BE SEEDED AND MULCHED BY THE NEXT DAY AND ROCK RIP RAP TO BE DONE AS SOON AS POSSIBLE

WVDOH ROCK-LINED DITCH SHOULD BE PLACED OVER THE WATERLINE IN ALL AREAS WITHIN WVDOH RIGHTS-OF-WAYS THAT HAS A 5% OR GREATER SLOPE.

VALVES ARE TO BE PLACED OUT OF THE DITCH LINE IF POSSIBLE.

SUPPLEMENTAL SPECIFICATIONS - LATEST EDITION
"ACCOMMODATIONS OF UTILITIES ON HIGHWAY RIGHT OF WAYS" LATEST EDITION

W.VA. DEPT. OF HIGHWAYS "STANDARD SPECIFICATIONS-ROADS & BRIDGES" ADOPTED 1986 AS AMENDED BY SUPPLEMENTAL SPECIFICATIONS. LATEST EDITION

W.VA. DEPT. OF HIGHWAYS "TRAFFIC CONTROL FOR STREET & HIGHWAY CONSTRUCTION AND MAINTENANCE OPERATIONS", LATEST EDITION

ALL FIRE HYDRANTS AND FLUSHING HYDRANTS TO BE LOCATED OFF DOH RIGHT-OF-WAYS

GENERAL NOTE:

ALL LINES AND/OR CASINGS MUST BE INSTALLED UNDER OR AROUND DRAINAGE STRUCTURES IN A MANNER THAT WILL NOT OBSTRUCT THE MAINTENANCE, REPLACEMENT, OR FREE FLOW OF WATER.

UPON COMPLETION OF THE INSTALLATION OF THE WATER DISTRIBUTION LINES, WATER SAMPLES MUST BE COLLECTED FROM POINTS, DESIGNATED BY THE ENGINEER, THROUGHOUT THE NEW SYSTEM. THE CONTRACTOR MUST HAVE AN AUTHORIZED COLLECTOR (WVBPH CERTIFIED PUBLIC WATER SYSTEM OPERATOR) AND BE ANALYZED FOR BACTERIOLOGICAL WATER QUALITY. SATISFACTORY RESULTS MUST BE OBTAINED PRIOR TO LINES GOING INTO SERVICE.

7/28/03

UTILITY RELOCATION

Revision Number	Sheet Number	Revisions	Date	By

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

US 220 - FORT RUN

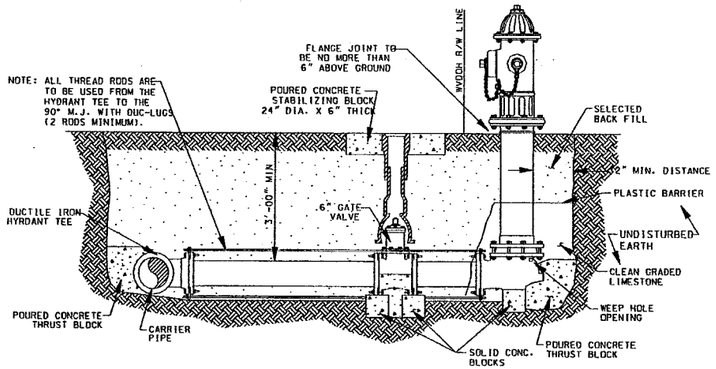
UTILITY RELOCATION DETAILS

THRASHER ENGINEERING
PHONE (304) 624-4108
(FAX) (304) 624-7831
CIVIL, ENVIRONMENTAL, AND CONSULTING
30 COLUMBIA BOULEVARD - CLARKSBURG, WV 26301

DRAWN: PL/JG | CHECKED: CPR | APPROVED:

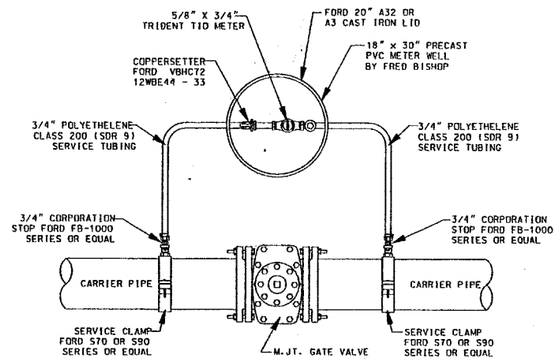
CAD FILE: 10-289/WATERDETAILS

PUBLIC ROADS DIV.	STATE DISTRICT NUMBER	STATE PROJECT NUMBER	FEDERAL PROJECT NUMBER	FISCAL YEAR	COUNTY	SHEET NUMBER	TOTAL SHEETS
WV	5	X316-H-100.40 06	APD-0484 (251)	2003	HARDY	209	670



FIRE HYDRANT ASSEMBLY DETAIL

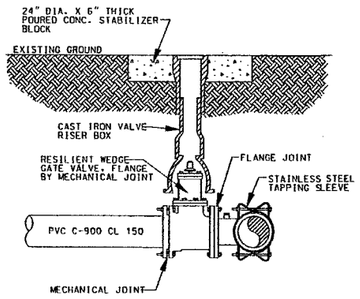
NOT TO SCALE



NOTE: ALL METERS ARE TO BE SET OUT OF WVDOH R/W.

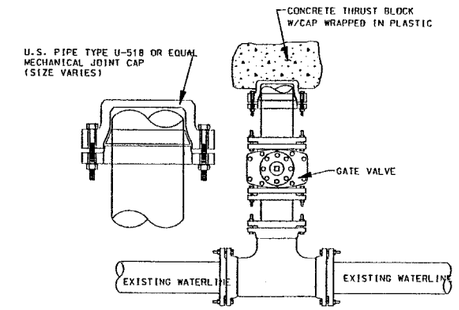
BYPASS METER ASSEMBLY DETAIL

NOT TO SCALE



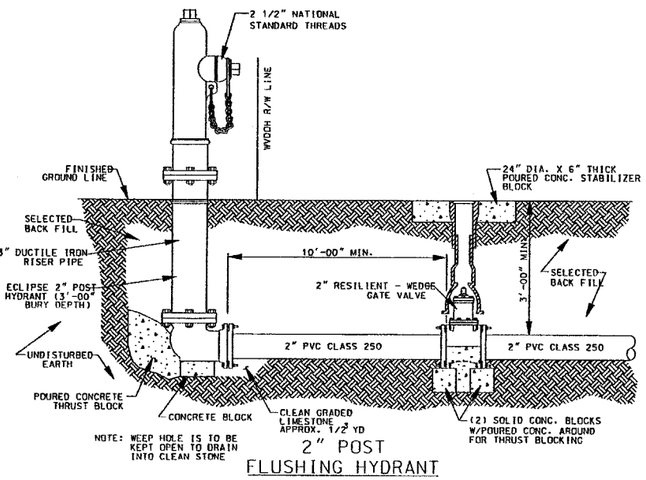
HOT TAP DETAIL

NOT TO SCALE



TYPICAL CUT AND PLUG DETAIL

NOT TO SCALE

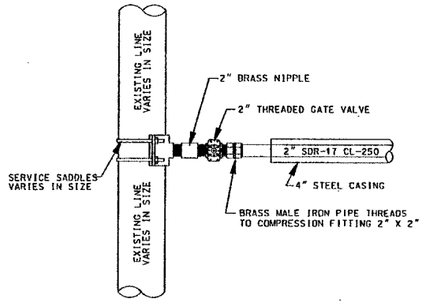


NOTE: WEEP HOLE IS TO BE KEPT OPEN TO DRAIN INTO CLEAN STONE

2" POST FLUSHING HYDRANT

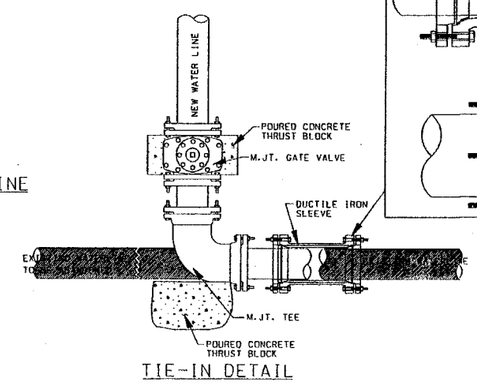
NOT TO SCALE

NOTE: A 2" GATE VALVE IS TO BE SET WITH ALL FLUSHING HYDRANTS ON THE END OF 2" WATERLINES AND INCLUDED IN THE BID PRICE OF THE HYDRANT. FLUSHING HYDRANTS SET AT THE END OF LINES LARGER THAN 2" ARE TO INCLUDE THE COST OF THE REDUCER TO 2" IN THE BID PRICE OF THE HYDRANT. THE MAINLINE GATE VALVE LARGER THAN A 2" WILL BE PAID FOR SEPARATELY.



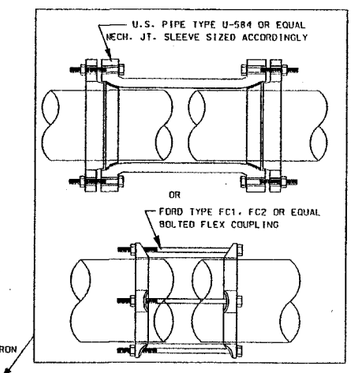
TYPICAL 2" CONNECTION TO EXISTING MAIN LINE

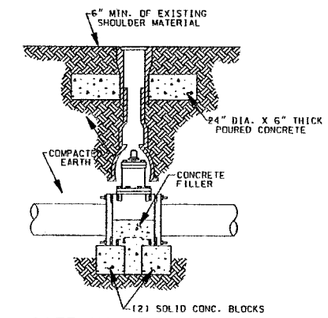
NOT TO SCALE



TIE-IN DETAIL

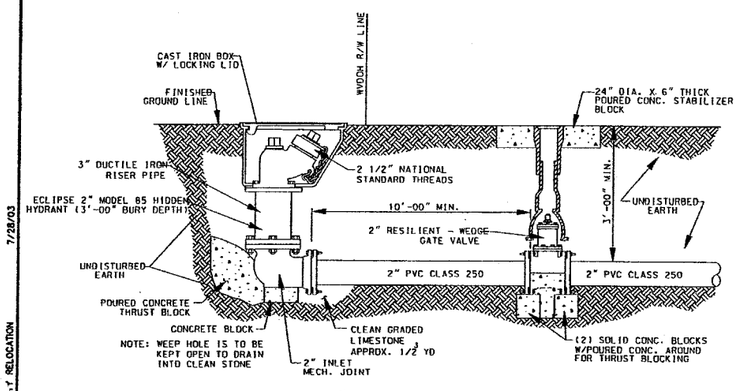
NOT TO SCALE





GATE VALVE SUPPORT IN WVDOH R.O.W.

NOT TO SCALE

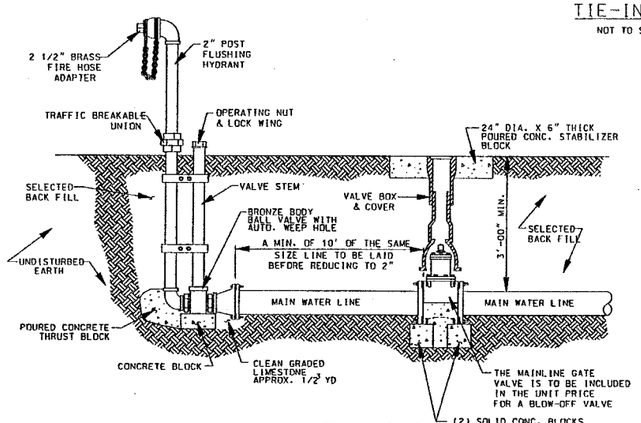


NOTE: WEEP HOLE IS TO BE KEPT OPEN TO DRAIN INTO CLEAN STONE

2" HIDDEN FLUSHING HYDRANT

NOT TO SCALE

NOTE: A 2" GATE VALVE IS TO BE SET WITH ALL FLUSHING HYDRANTS ON THE END OF 2" WATERLINES AND INCLUDED IN THE BID PRICE OF THE HYDRANT. FLUSHING HYDRANTS SET AT THE END OF LINES LARGER THAN 2" ARE TO INCLUDE THE COST OF THE REDUCER TO 2" IN THE BID PRICE OF THE HYDRANT. THE MAINLINE GATE VALVE LARGER THAN A 2" WILL BE PAID FOR SEPARATELY.



BLOW-OFF VALVE

NOT TO SCALE

Revision Number	Sheet Number	Revisions	Date	By

WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

US 220 - FORT RUN

UTILITY RELOCATION DETAILS

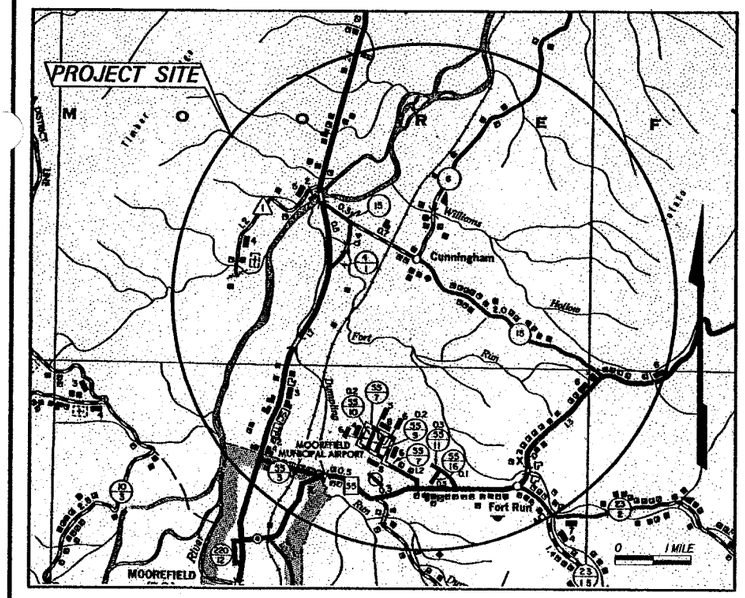
THRASHER ENGINEERING
PHONE (304) 624-4108 FAX (304) 624-7831
CIVIL, ENVIRONMENTAL, AND CONSULTING
30 COLUMBIA BOULEVARD - CLARKSBURG, WV 26301

DRAWN: PL/JG | CHECKED: CPR | APPROVED:

CAD FILE: 10-289/WATERDETAILS

7/28/03

Utility RELOCATION



WEST VIRGINIA
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
BORING LAYOUT
OF
STATE HIGHWAY

STATE PROJECT NO. *X316-H-100.40 06*

FEDERAL PROJECT NO. *APD-0484(251)C*

ROUTE NO. *U.S. 48*

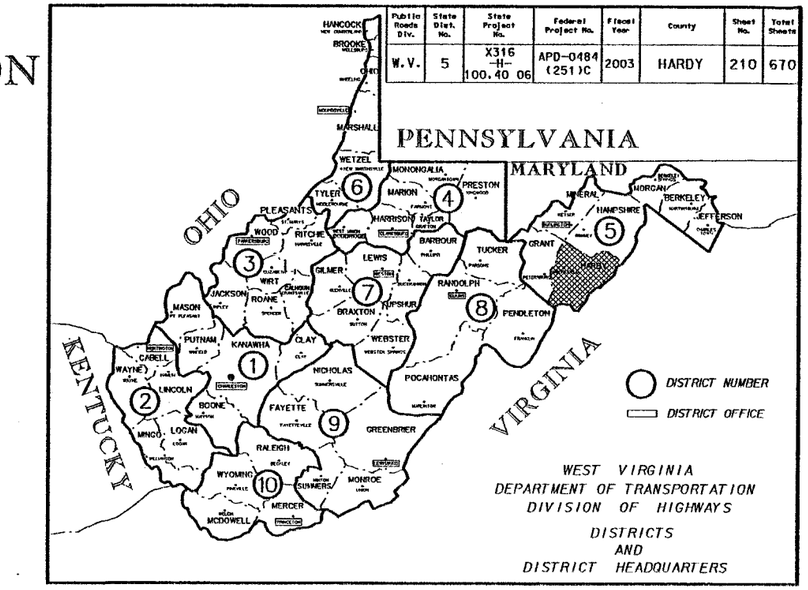
MOOREFIELD DISTRICT

COUNTY HARDY

US 220 – FORT RUN

PROJECT | STATION TO STATION | LENGTH (FT.) | LENGTH (MI.)

Public Roads Div.	State Dist. No.	State Project No.	Federal Project No.	Fiscal Year	County	Sheet No.	Total Sheets
W.V.	5	X316 -H- 100.40 06	APD-0484 (251)C	2003	HARDY	210	670



LEGEND OF SYMBOLS USED ON SOIL AND GEOLOGIC DATA

MINERALOGICAL DESCRIPTION OF ROCK AND SHALE

A -ARENACEOUS (SANDY)
L -CALCAREOUS (LIMEY)
C -ARGILLACEOUS (CLAYEY)

ROCK FIELD HARDNESS

VS -VERY SOFT
S -SOFT
M -MEDIUM
MH -MODERATELY HARD
H -HARD
VH -VERY HARD

SOIL DENSITY/CONSISTENCY

GRANULAR	SPOON BLOWS	COHESIVE	SPOON BLOWS
VL -VERY LOOSE	0-4	VS -VERY SOFT	0-1
L -LOOSE	5-10	S -SOFT	2-4
MD -MEDIUM DENSE	11-24	MST -MEDIUM STIFF	5-8
D -DENSE	25-50	ST -STIFF	9-15
VD -VERY DENSE	51+	VST -VERY STIFF	16-30
		H -HARD	31-60
		VH -VERY HARD	61+

BATTER BORING (63°)

AUGER BORING

GROUND WATER LEVEL (W)

CORE BORING

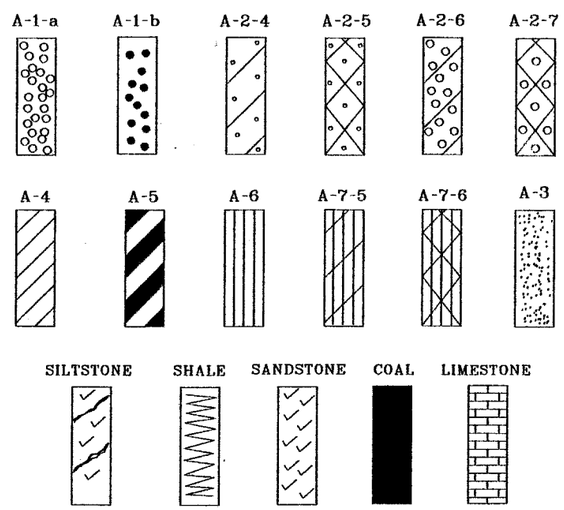
TEST PIT

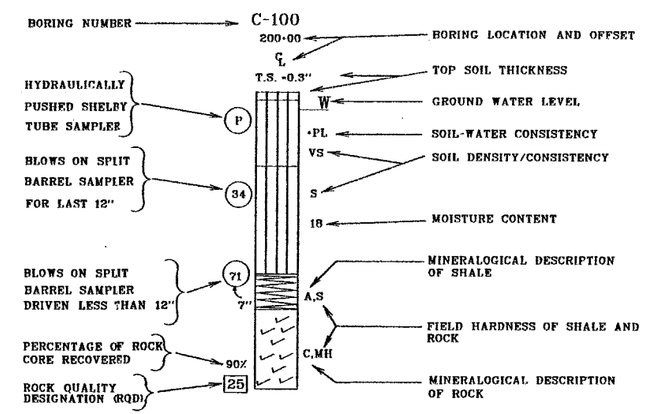
MOISTURE CONTENT BELOW PLASTIC LIMIT -PL

MOISTURE CONTENT ABOVE PLASTIC LIMIT +PL

MOISTURE CONTENT ABOVE LIQUID LIMIT +LL

SOIL-WATER CONSISTENCY





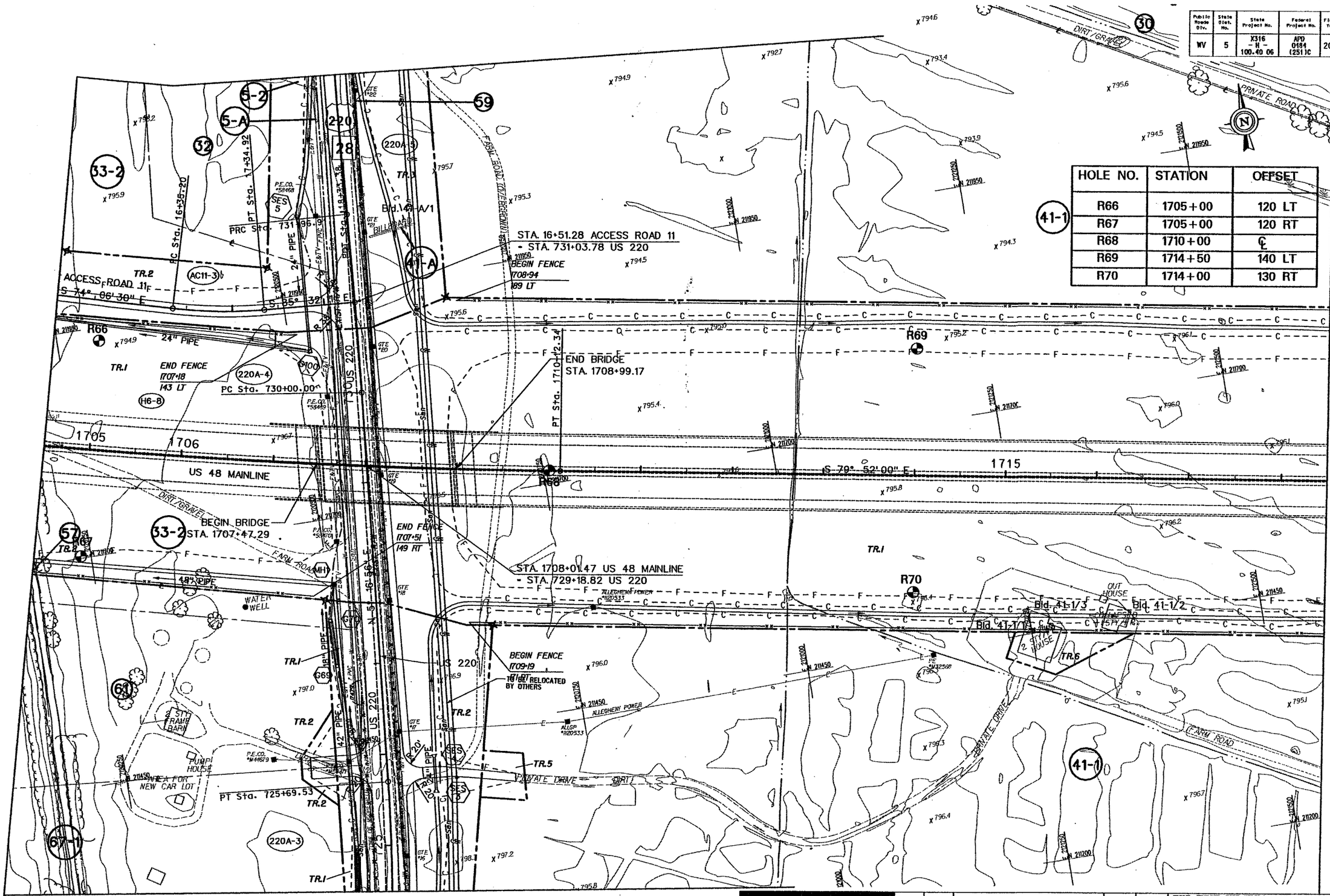
INDEX TO SHEETS

NO.	DESCRIPTION
	SOILS TITLE SHEET
	SOILS PLAN AND PROFILE SHEETS

SPRING OR NOTABLE SEEPAGE

15° STRIKE AND MEASURED DIP IN DEGREES

Public Roads Div.	State Dist. No.	State Project No.	Federal Project No.	Fiscal Year	County	Sheet No.	Total Sheets
WV	5	X316 - H - 100.40 06	APD 0184 (251)C	2003	HARDY	211	670



HOLE NO.	STATION	OFFSET
R66	1705+00	120 LT
R67	1705+00	120 RT
R68	1710+00	℄
R69	1714+50	140 LT
R70	1714+00	130 RT

SCALE : 0 50 ft.

Baker
Michael Baker Jr., Inc.

REVISION NUMBER	SHEET NUMBER	REVISION	DATE	BY

THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

BORING PLAN SHEET

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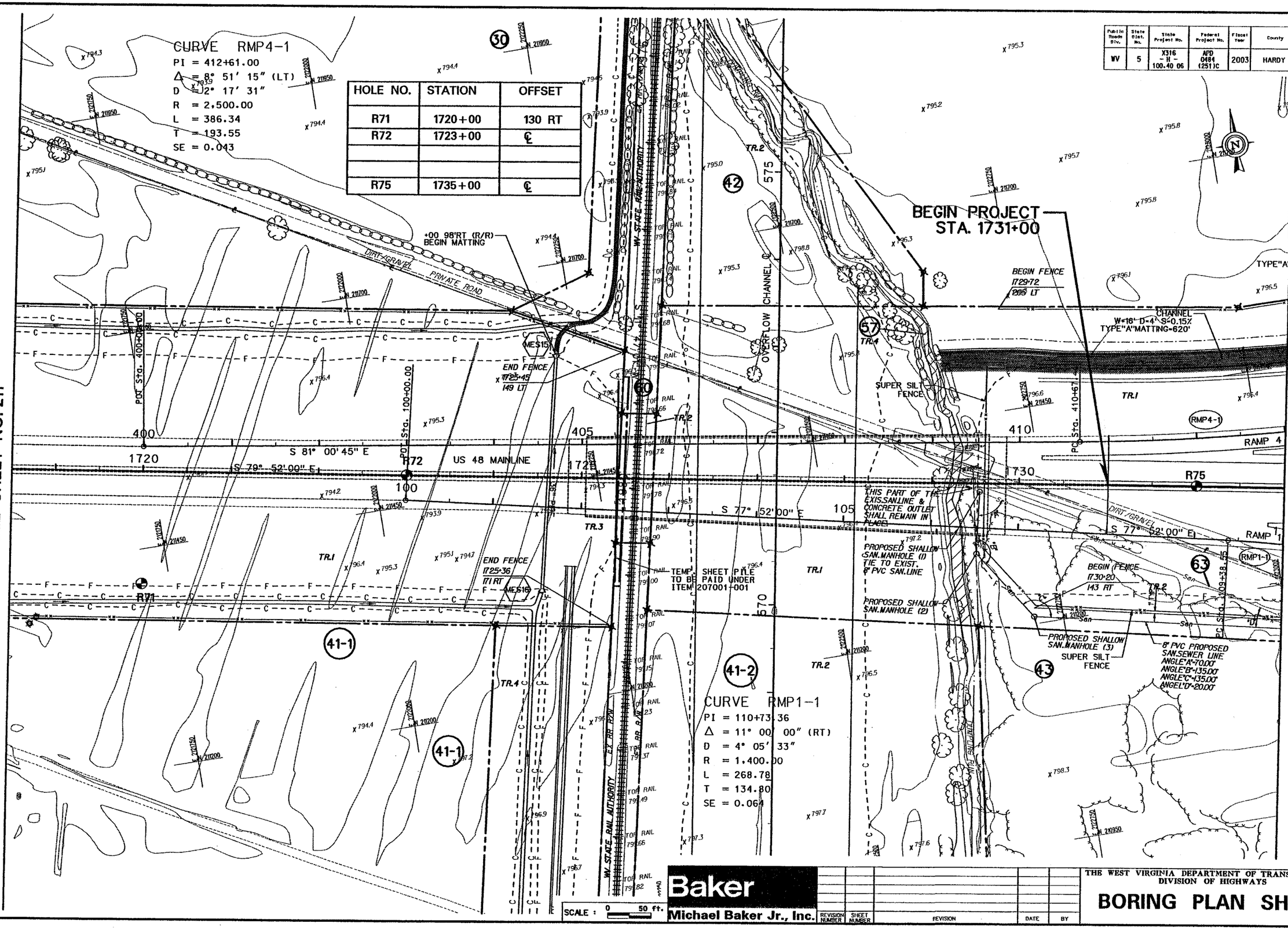
08/12/2003

Public Roads Div.	State Dist. No.	State Project No.	Federal Project No.	Fiscal Year	County	Sheet No.	Total Sheets
WV	5	X316 - H - 100.40 06	APD 0481 (251)C	2003	HARDY	212	670



Baker
Michael Baker Jr., Inc.

REVISION NUMBER	SHEET NUMBER	REVISION	DATE	BY

THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

BORING PLAN SHEET

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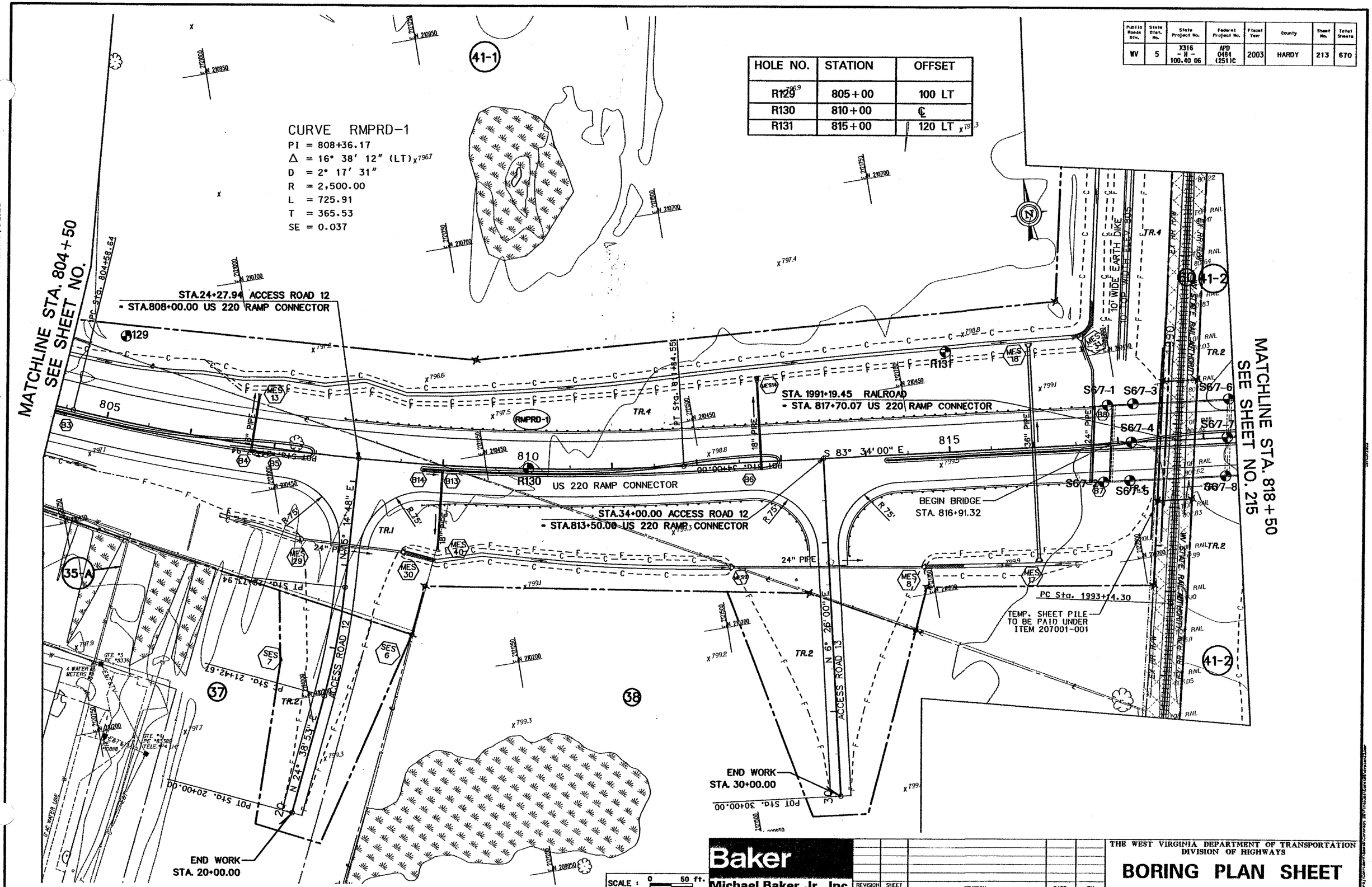
09/03/2003

Public Roads Div.	State Dist. No.	State Project No.	Federal Project No.	Fiscal Year	County	Sheet No.	Total Sheets
WV	5	X316 - H - 100.40 06	APD 0484 (251)C	2003	HARDY	213	670

HOLE NO.	STATION	OFFSET
R129	805+00	100 LT
R130	810+00	℄
R131	815+00	120 LT



Baker
Michael Baker Jr., Inc.

REVISION NUMBER	SHEET NUMBER	REVISION	DATE	BY

THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

BORING PLAN SHEET

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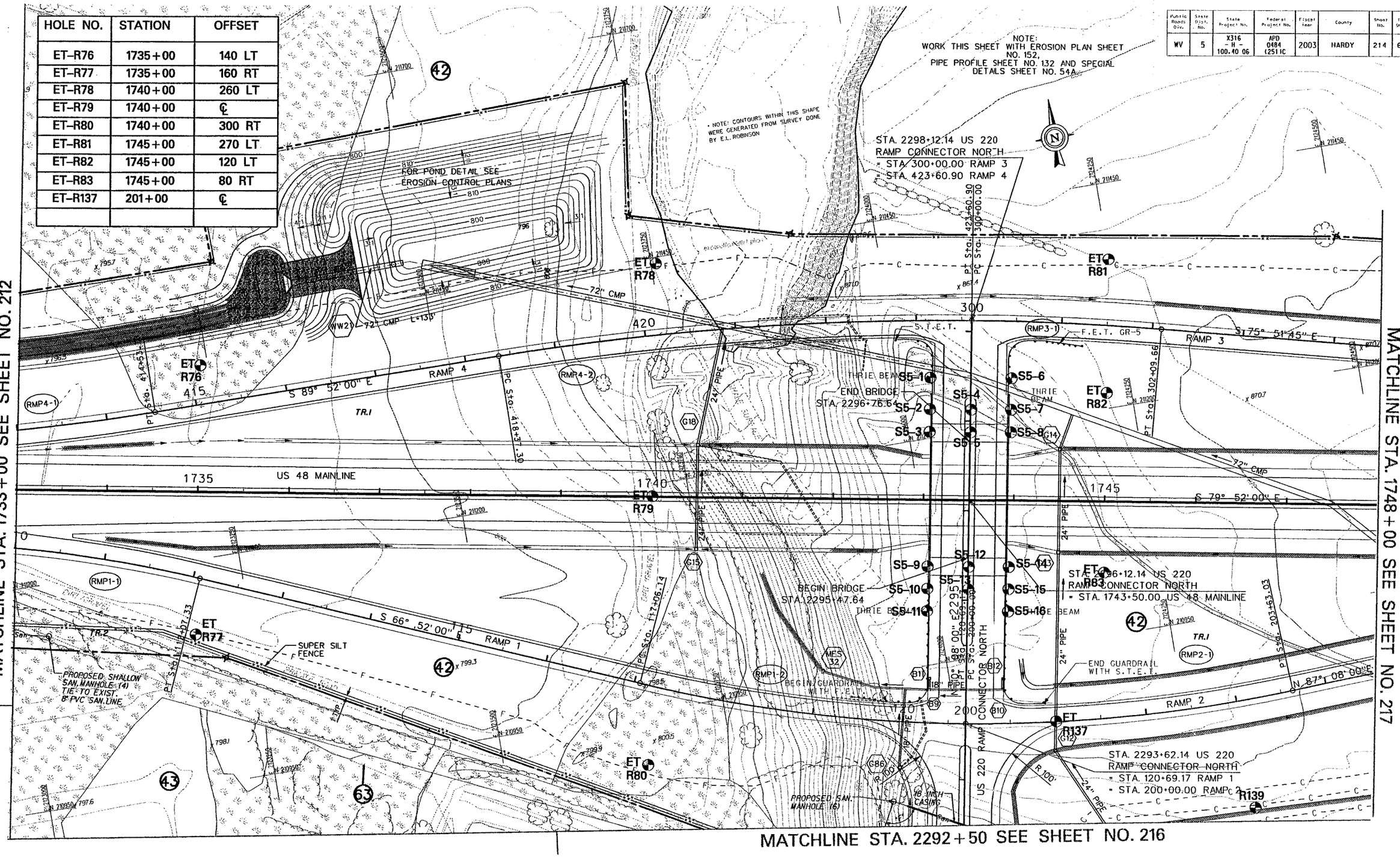
Public Roads Div.	State Dist. No.	State Project No.	Federal Project No.	Fiscal Year	County	Sheet No.	Total Sheets
WV	5	X316 - H - 100.40 06	APD 0484 (251)C	2003	HARDY	214	670

HOLE NO.	STATION	OFFSET
ET-R76	1735+00	140 LT
ET-R77	1735+00	160 RT
ET-R78	1740+00	260 LT
ET-R79	1740+00	℄
ET-R80	1740+00	300 RT
ET-R81	1745+00	270 LT
ET-R82	1745+00	120 LT
ET-R83	1745+00	80 RT
ET-R137	201+00	℄



SCALE : 0 50 ft.

Baker
Michael Baker Jr., Inc.

REVISION NUMBER	SHEET NUMBER	REVISION	DATE	BY

THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

BORING PLAN SHEET

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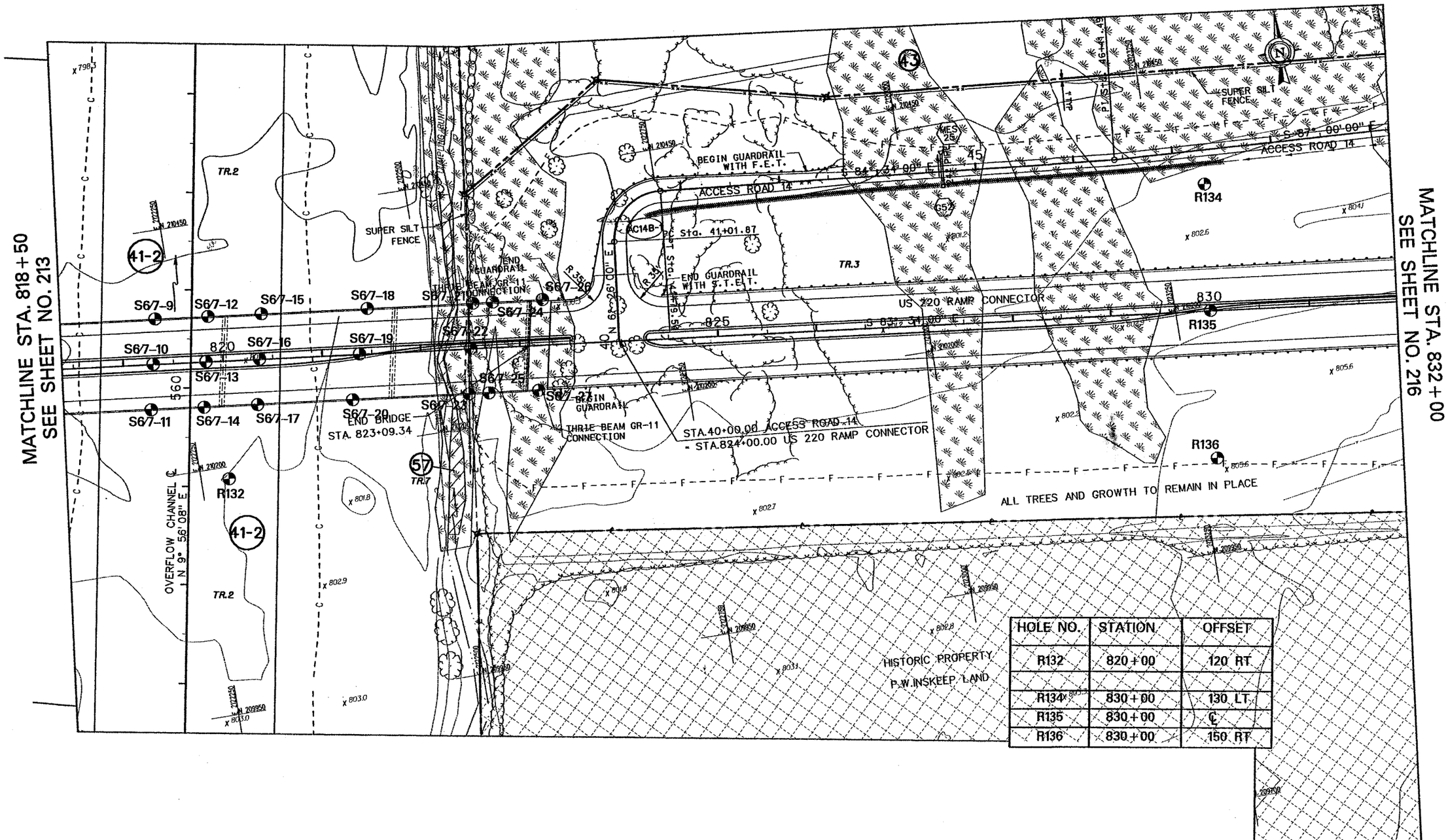
12/04/2003

Public Roads Div.	State Dist. No.	State Project No.	Federal Project No.	Fiscal Year	County	Sheet No.	Total Sheets
WV	5	X316 - H - 100.40 06	APD 0484 (251)C	2003	HARDY	215	670



HOLE NO.	STATION	OFFSET
R132	820+00	120 RT
R134	830+00	130 LT
R135	830+00	℄
R136	830+00	150 RT

SCALE : 0 50 ft.

Baker
Michael Baker Jr., Inc.

REVISION NUMBER	SHEET NUMBER	REVISION	DATE	BY

THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

BORING PLAN SHEET

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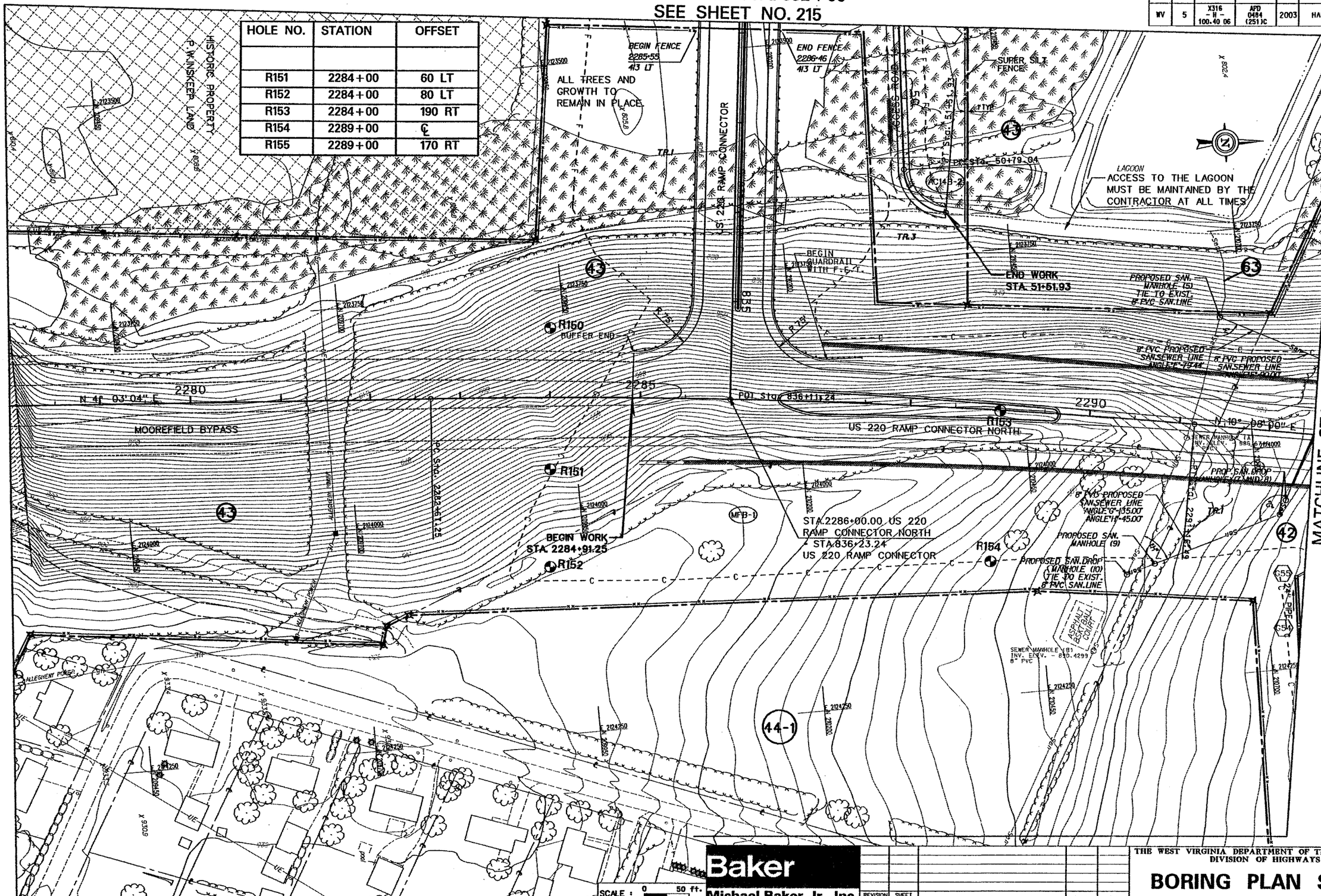
09/04/2003

Public Roads Div.	State Dist. No.	State Project No.	Federal Project No.	Fiscal Year	County	Sheet No.	Total Sheets
WV	5	X316 - H - 100.40 06	APD 0484 (251)C	2003	HARDY	216	670

MATCHLINE STA. 832+00
SEE SHEET NO. 215

HOLE NO.	STATION	OFFSET
R151	2284+00	60 LT
R152	2284+00	80 LT
R153	2284+00	190 RT
R154	2289+00	℄
R155	2289+00	170 RT



SCALE : 0 50 ft.

Baker
Michael Baker Jr., Inc.

REVISION NUMBER	SHEET NUMBER	REVISION	DATE	BY

THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

BORING PLAN SHEET

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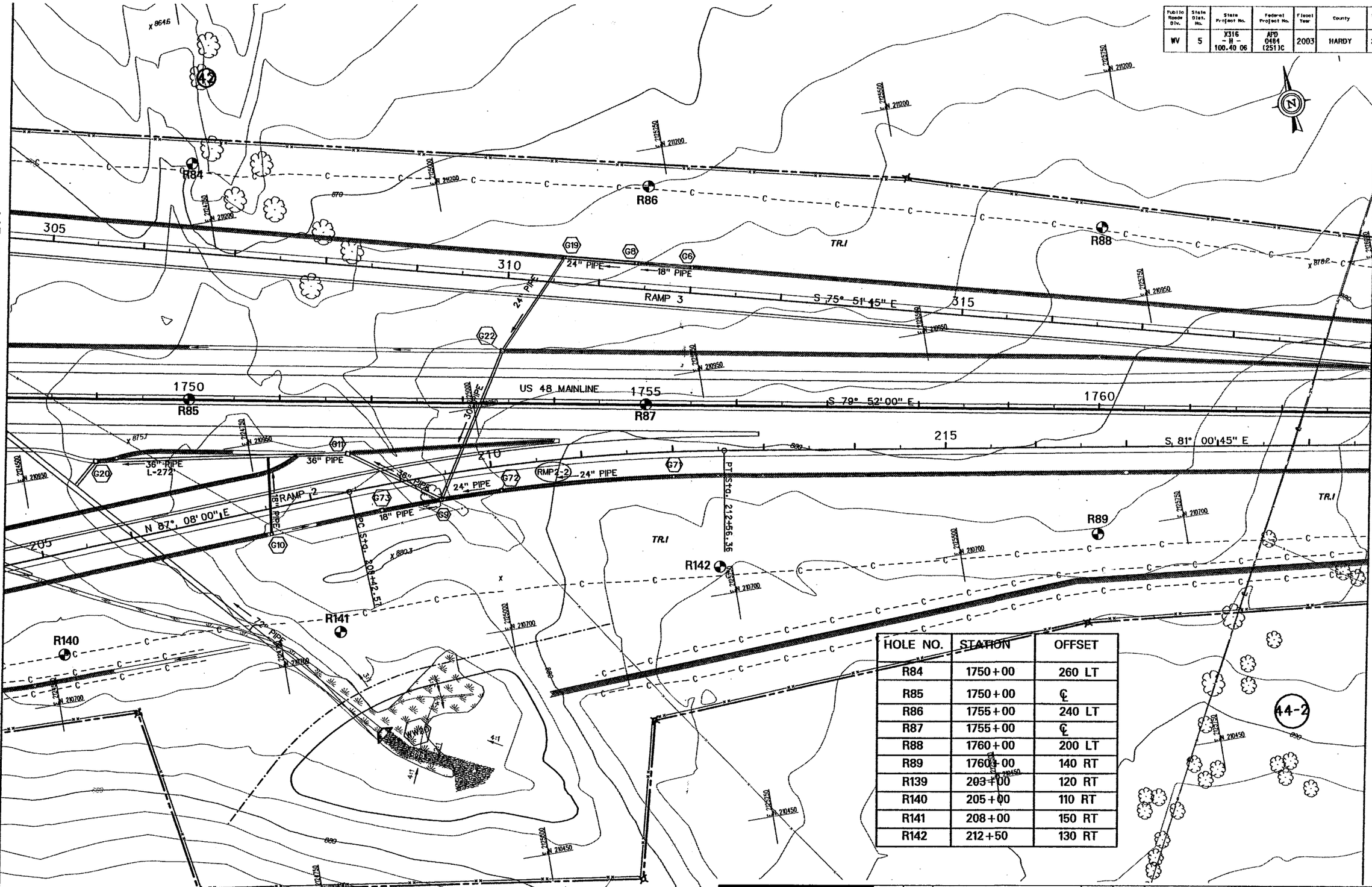
08/12/2003

Public Roads Div.	State Dist. No.	State Project No.	Federal Project No.	Fiscal Year	County	Sheet No.	Total Sheets
WV	5	X316 - H - 100.40 06	APD 0484 (251)C	2003	HARDY	217	670



HOLE NO.	STATION	OFFSET
R84	1750+00	260 LT
R85	1750+00	℄
R86	1755+00	240 LT
R87	1755+00	℄
R88	1760+00	200 LT
R89	1760+00	140 RT
R139	203+00	120 RT
R140	205+00	110 RT
R141	208+00	150 RT
R142	212+50	130 RT

SCALE : 0 50 ft.

Baker
Michael Baker Jr., Inc.

REVISION NUMBER	SHEET NUMBER	REVISION	DATE	BY

THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

BORING PLAN SHEET

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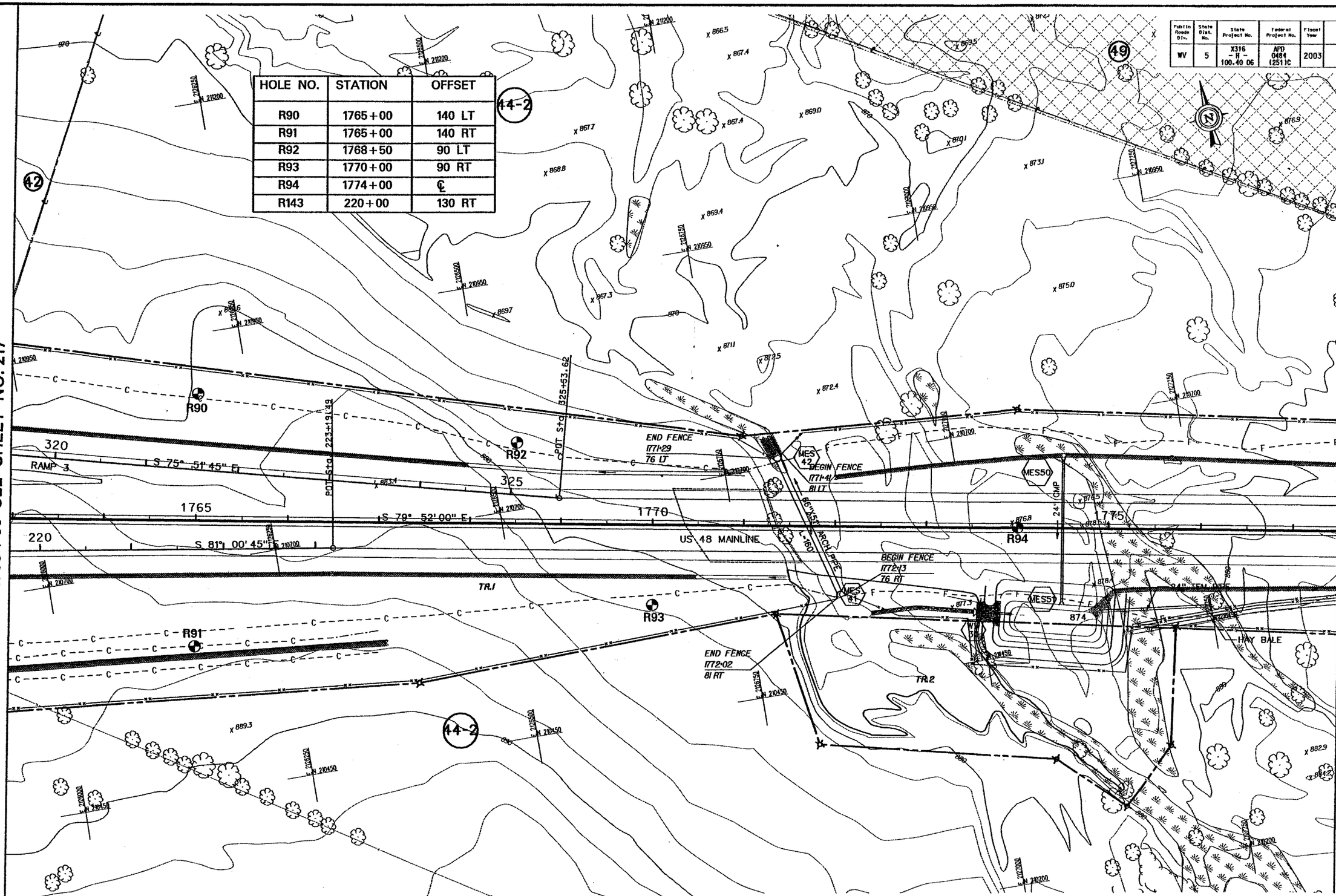
08/12/2003

Public Roads Div.	State Dist. No.	State Project No.	Federal Project No.	Fiscal Year	County	Sheet No.	Total Sheets
WV	5	X316 - H - 100.40 06	APD 0484 (2511C	2003	HARDY	218	670

HOLE NO.	STATION	OFFSET
R90	1765+00	140 LT
R91	1765+00	140 RT
R92	1768+50	90 LT
R93	1770+00	90 RT
R94	1774+00	℄
R143	220+00	130 RT



SCALE : 0 50 ft.

Baker
Michael Baker Jr., Inc.

REVISION NUMBER	SHEET NUMBER	REVISION	DATE	BY

THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

BORING PLAN SHEET

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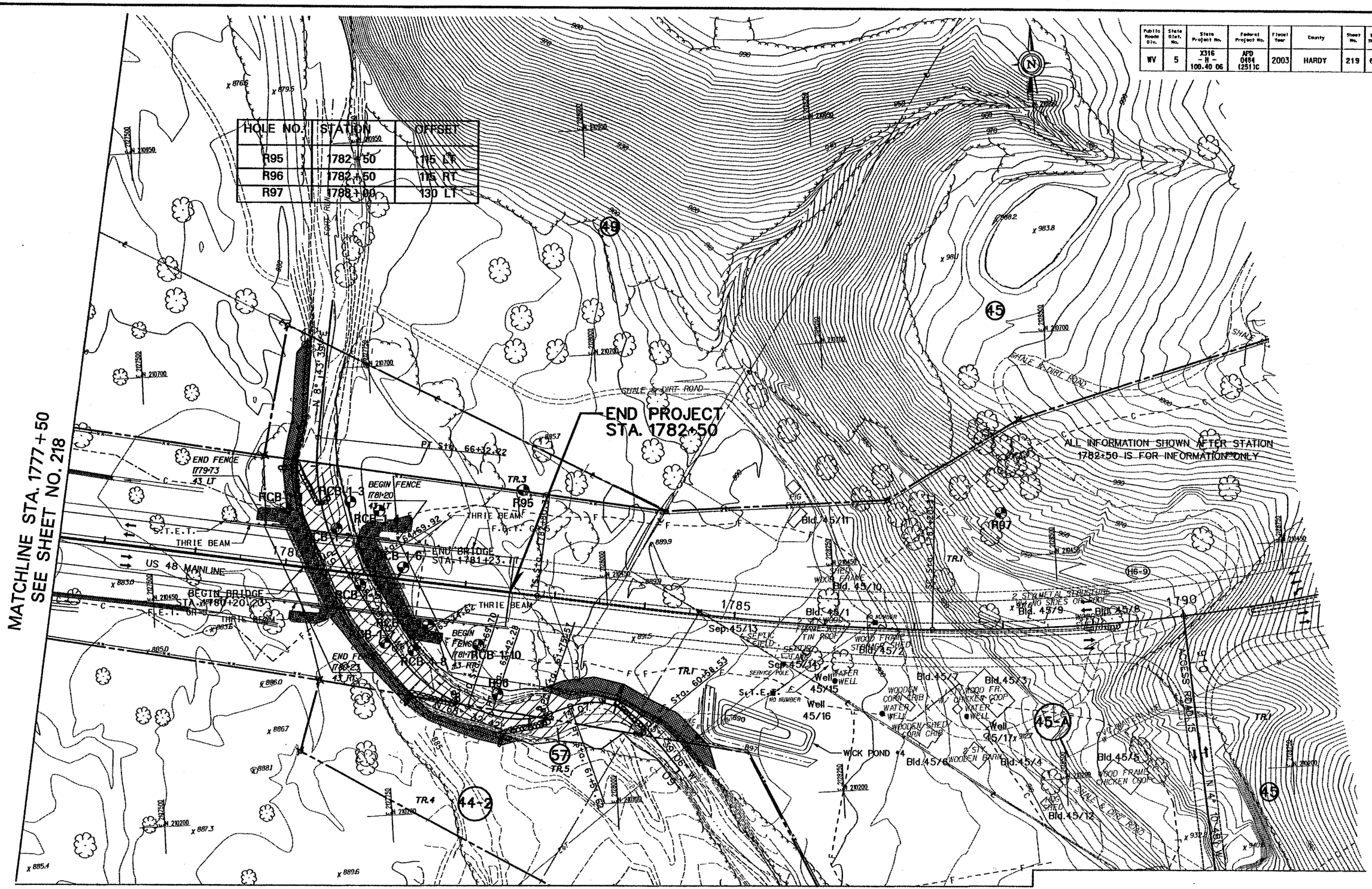
08/12/2003

Public Roads Div.	State Dist. No.	State Project No.	Federal Project No.	Fiscal Year	County	Sheet No.	Total Sheets
WV	5	X316 - H - 100.40 06	APD 0484 (251)C	2003	HARDY	219	670

HOLE NO.	STATION	OFFSET
R95	1782+50	115 LT
R96	1782+50	115 RT
R97	1788+00	130 LT



SCALE : 0 50 ft.

Baker
Michael Baker Jr., Inc.

REVISION NUMBER	SHEET NUMBER	REVISION	DATE	BY

THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

BORING PLAN SHEET

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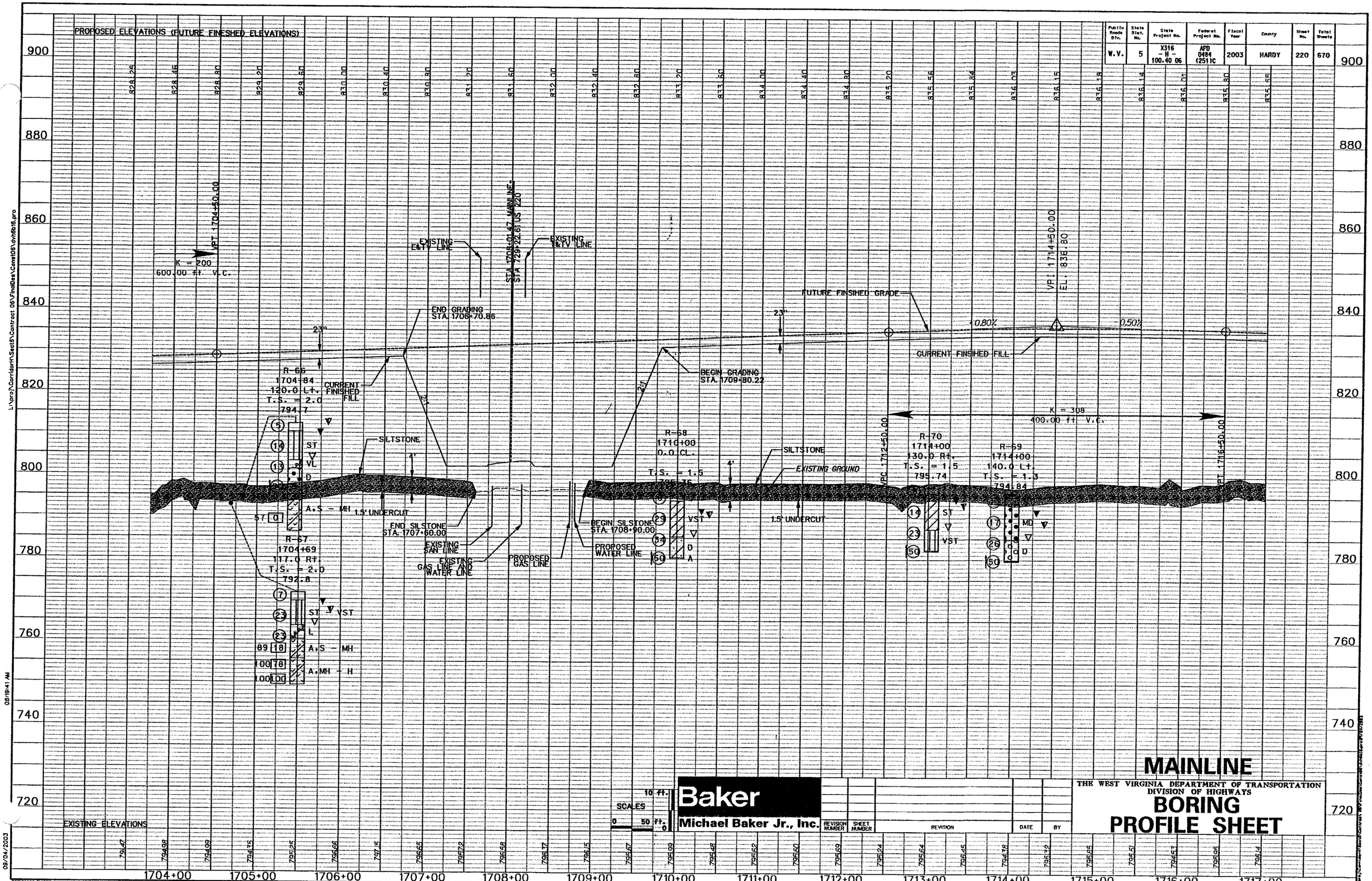
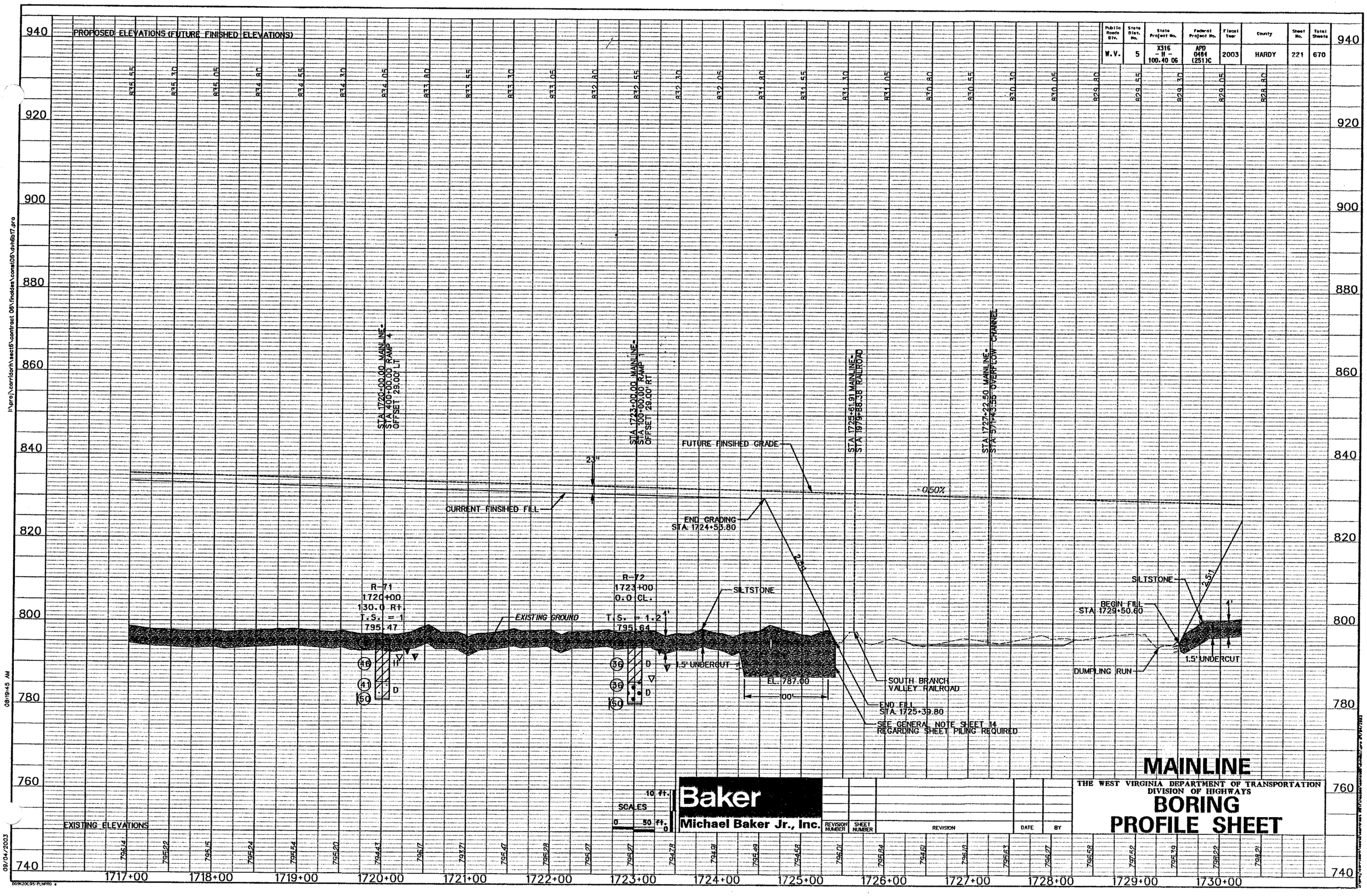
Public Roads Div.	State Dist. No.	State Project No.	Federal Project No.	Fiscal Year	County	Sheet No.	Total Sheets
W.V.	5	X316 - H - 100.40 06	APD 0484 (251)C	2003	HARDY	220	670




PROPOSED ELEVATIONS (FUTURE FINISHED ELEVATIONS)
835.55
835.30
835.05
834.80
834.55
834.30
834.05
833.80
833.55
833.30
833.05
832.80
832.55
832.30
832.05
831.80
831.55
831.30
831.05
830.80
830.55
830.30
830.05
829.80
829.55
829.30
829.05
828.80
STA 1720+00.00 MAINLINE-
STA 400+00.00 RAMP 4
OFFSET 29.00' LT
STA 1723+00.00 MAINLINE-
STA 100+00.00 RAMP 1
OFFSET 29.00' RT
STA 1725+61.91 MAINLINE-
STA 1979+88.38 RAILROAD
STA 1727+22.50 MAINLINE-
STA 579+43.55 OVERFLOW CHANNEL
FUTURE FINISHED GRADE
23"
0.50%
CURRENT FINSIHED FILL
END GRADING
STA 1724+55.80
2.5:1
R-71
1720+00
130.0 RT.
T.S. = 1
795.47
EXISTING GROUND
R-72
1723+00
0.0 CL.
T.S. = 1.2
795.64
4'
SILTSTONE
1.5' UNDERCUT
EL. 787.00
100'
SOUTH BRANCH
VALLEY RAILROAD
END FILL
STA 1725+39.80
SEE GENERAL NOTE SHEET 14
REGARDING SHEET PILING REQUIRED
SILTSTONE
2.5:1
BEGIN FILL
STA 1729+50.60
4'
1.5' UNDERCUT
DUMPLING RUN
EXISTING ELEVATIONS
795.14
795.22
795.15
795.24
795.54
795.20
794.43
795.17
793.71
795.47
795.28
795.27
795.27
794.78
794.91
794.49
794.58
796.71
795.84
794.51
796.10
796.63
796.77
796.58
797.52
795.39
798.22
798.21
1717+00
1718+00
1719+00
1720+00
1721+00
1722+00
1723+00
1724+00
1725+00
1726+00
1727+00
1728+00
1729+00
1730+00
940
920
900
880
860
840
820
800
780
760
740
SCALES
10 ft.
0
50 ft.
0
Baker
Michael Baker Jr., Inc.
REVISION NUMBER
SHEET NUMBER
REVISION
DATE
BY
MAINLINE
THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
BORING
PROFILE SHEET
Public Roads Div.
W.V.
State Dist. No.
5
State Project No.
X316 - H - 100.40 06
Federal Project No.
APD 0481 (251)C
Fiscal Year
2003
County
HARDY
Sheet No.
221
Total Sheets
670
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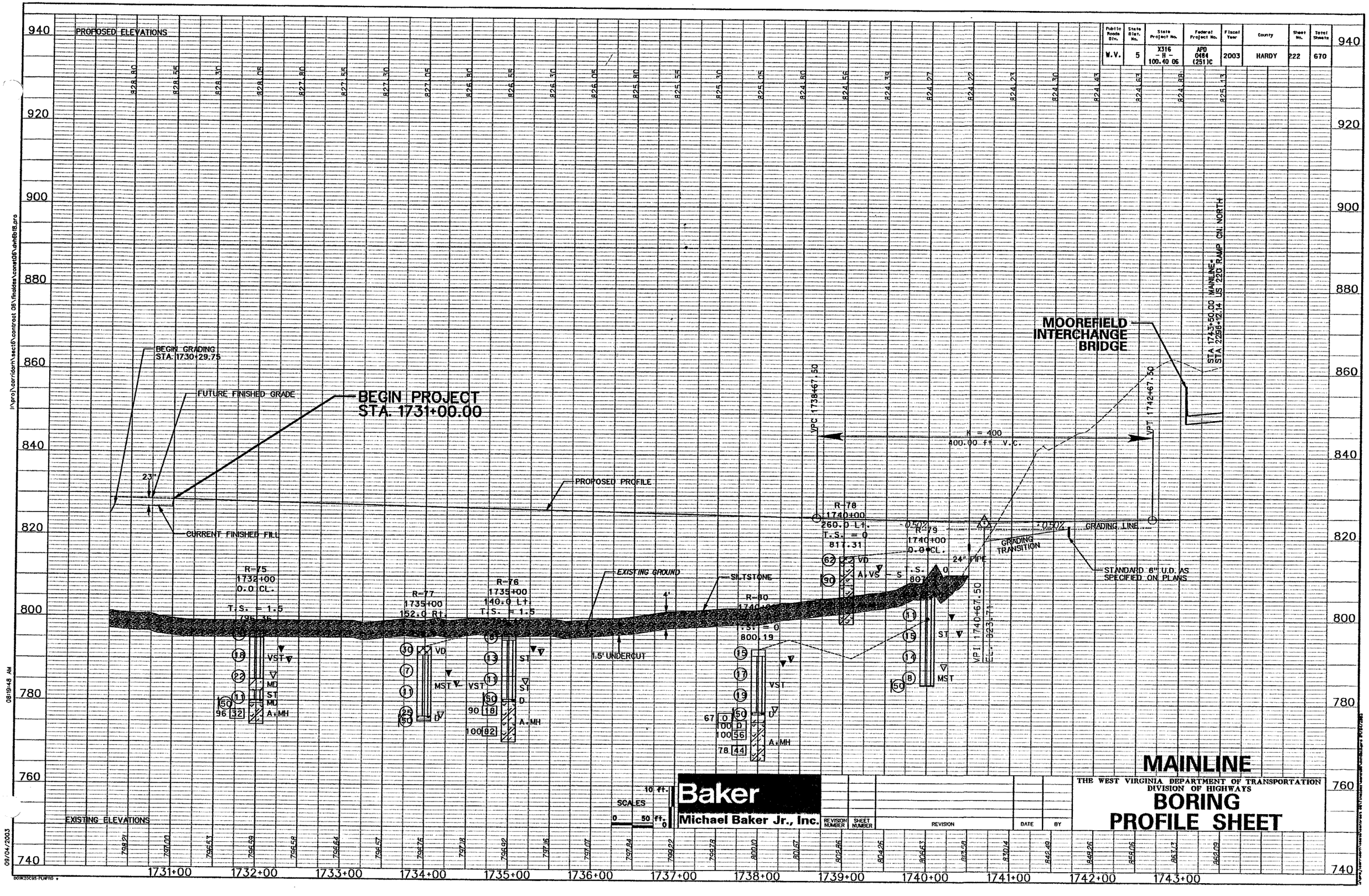

Public Roads Div.	State Dist. No.	State Project No.	Federal Project No.	Fiscal Year	County	Sheet No.	Total Sheets
W.V.	5	X316 - H - 100.40 06	APD 0484 (251)C	2003	HARDY	222	670

Baker
Michael Baker Jr., Inc.

REVISION NUMBER	SHEET NUMBER	REVISION	DATE	BY

MAINLINE

THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

BORING PROFILE SHEET

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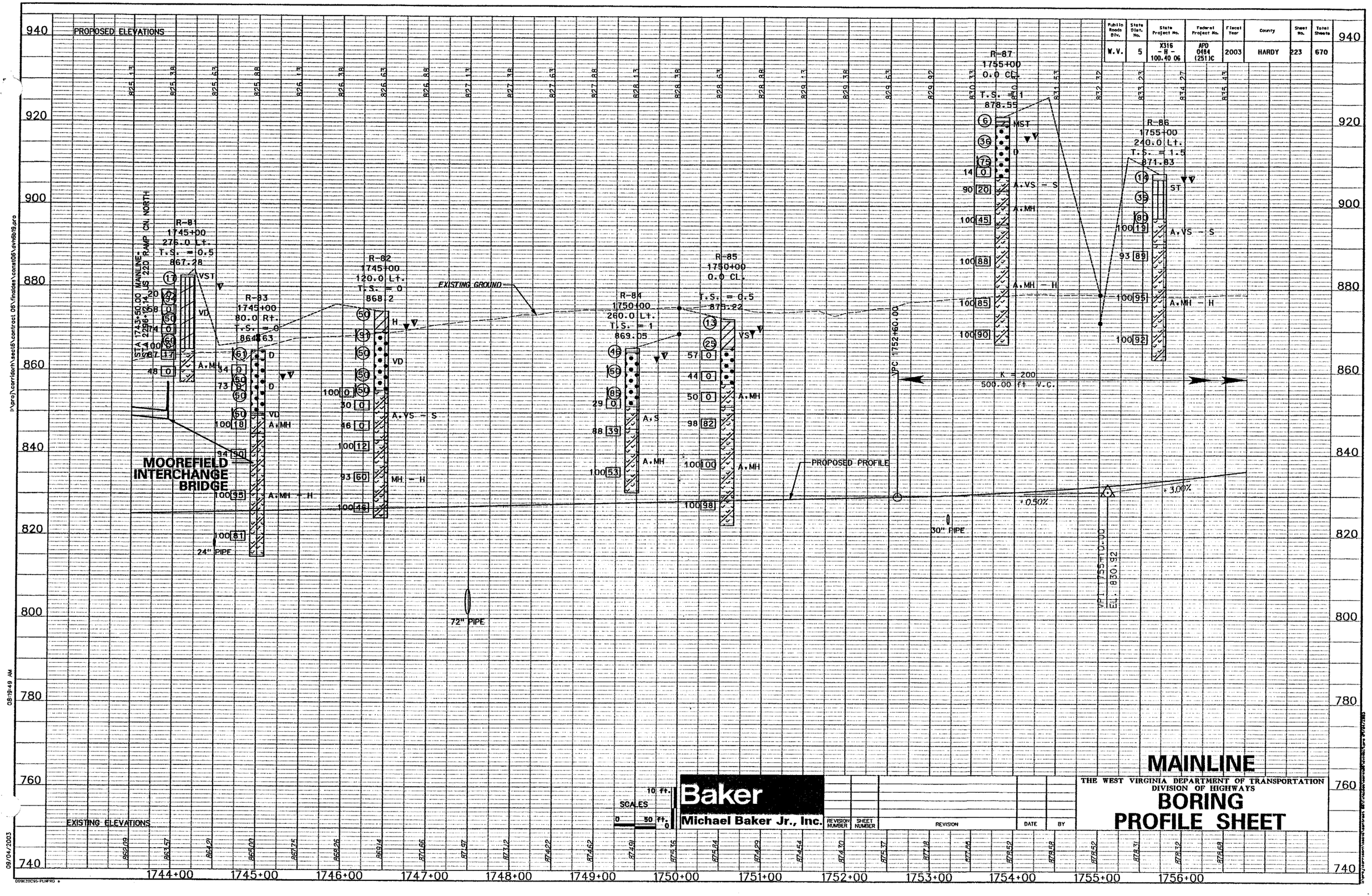

Public Roads Div.	State Dist. No.	State Project No.	Federal Project No.	Fiscal Year	County	Sheet No.	Total Sheets
W.V.	5	X316 - H - 100.40 06	APD 0484 (251)C	2003	HARDY	223	670

SCALES 10 ft. 0 50 ft. 0

Baker
Michael Baker Jr., Inc.

REVISION NUMBER	SHEET NUMBER	REVISION	DATE	BY

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THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

BORING PROFILE SHEET

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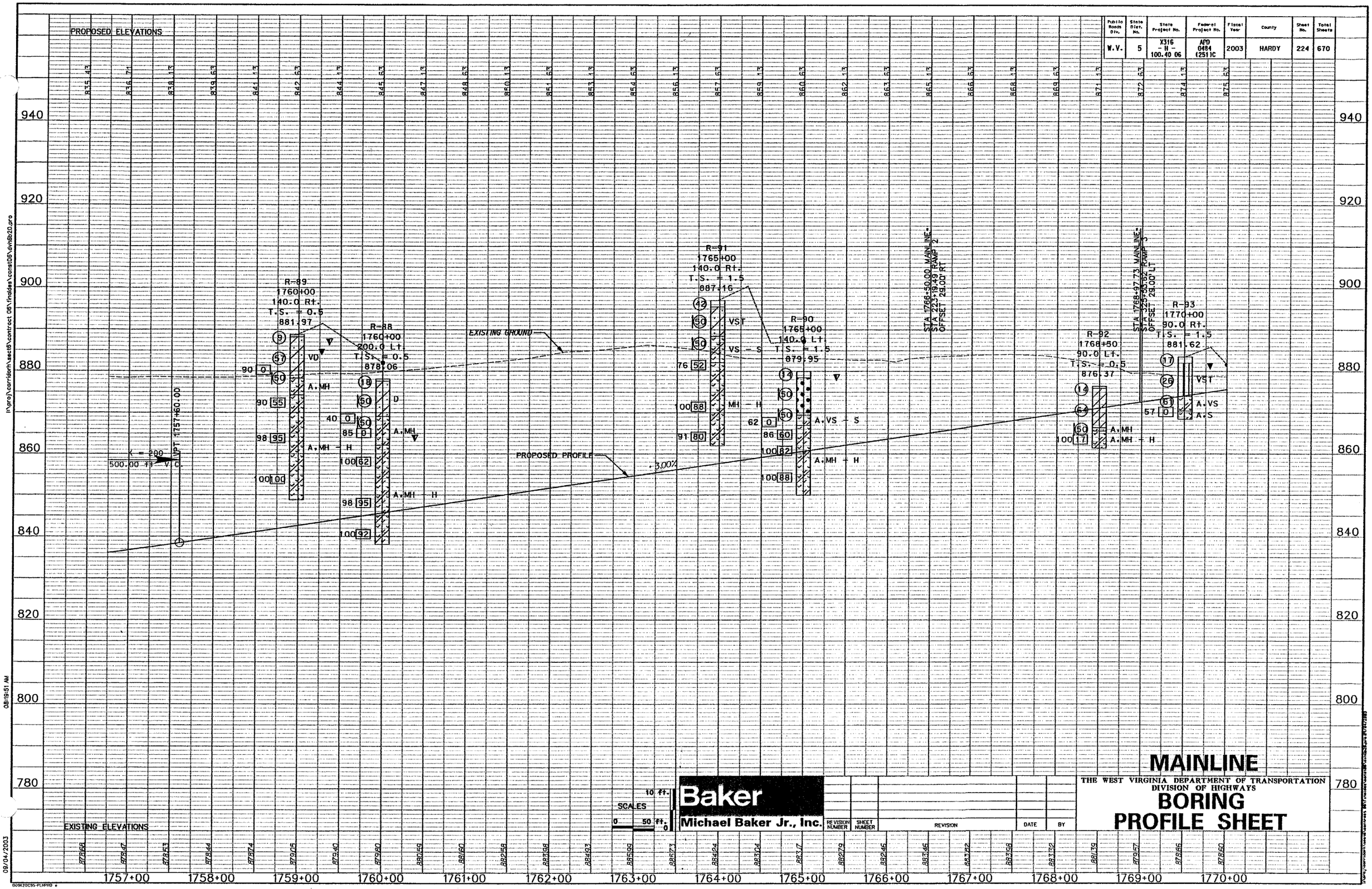
Public Roads Div.	State Dist. No.	State Project No.	Federal Project No.	Fiscal Year	County	Sheet No.	Total Sheets
W.V.	5	X316 - H - 100.40 06	APD 0484 (251)C	2003	HARDY	224	670



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THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

BORING PROFILE SHEET

Baker
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REVISION NUMBER	SHEET NUMBER	REVISION	DATE	BY

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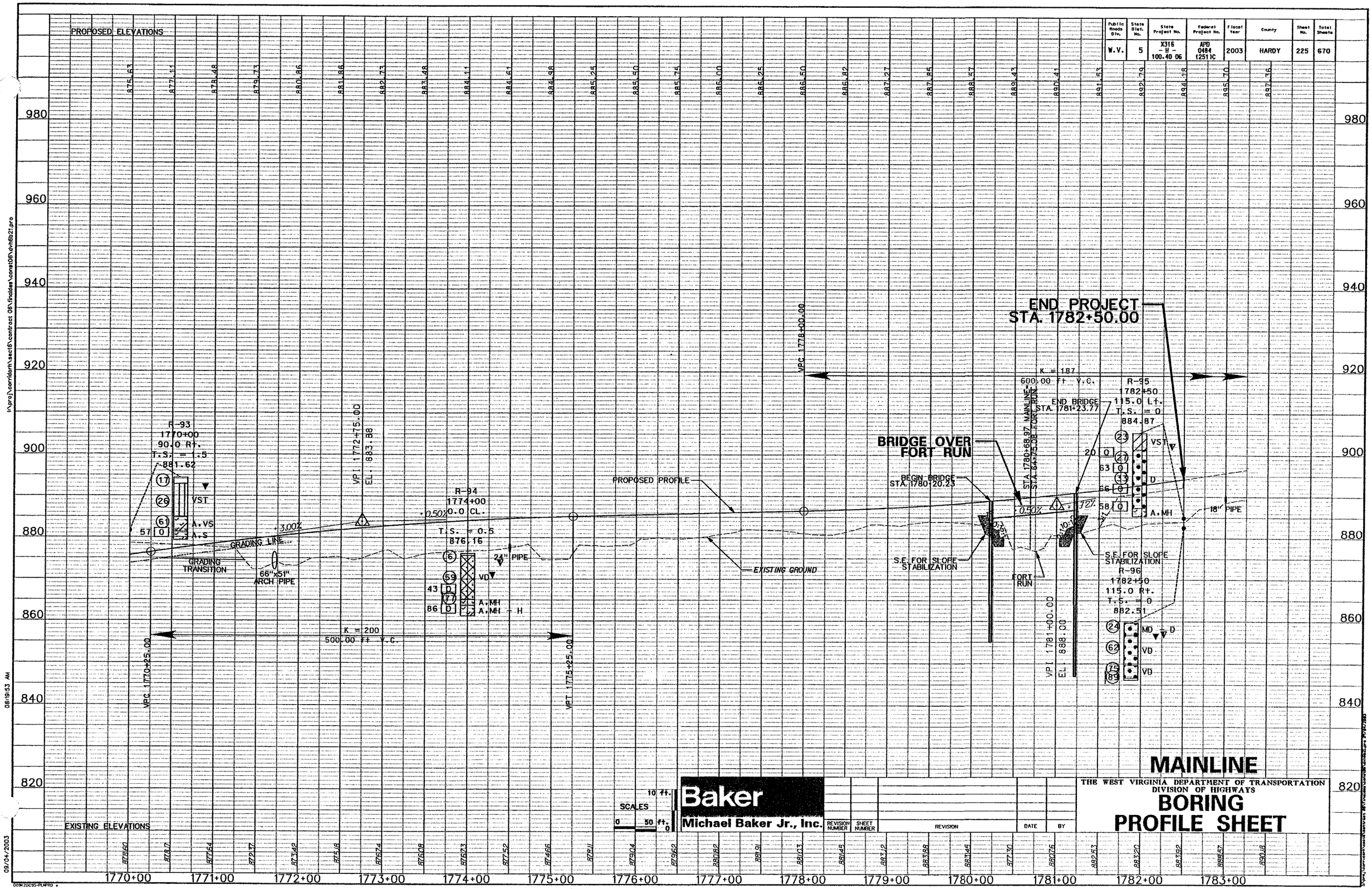
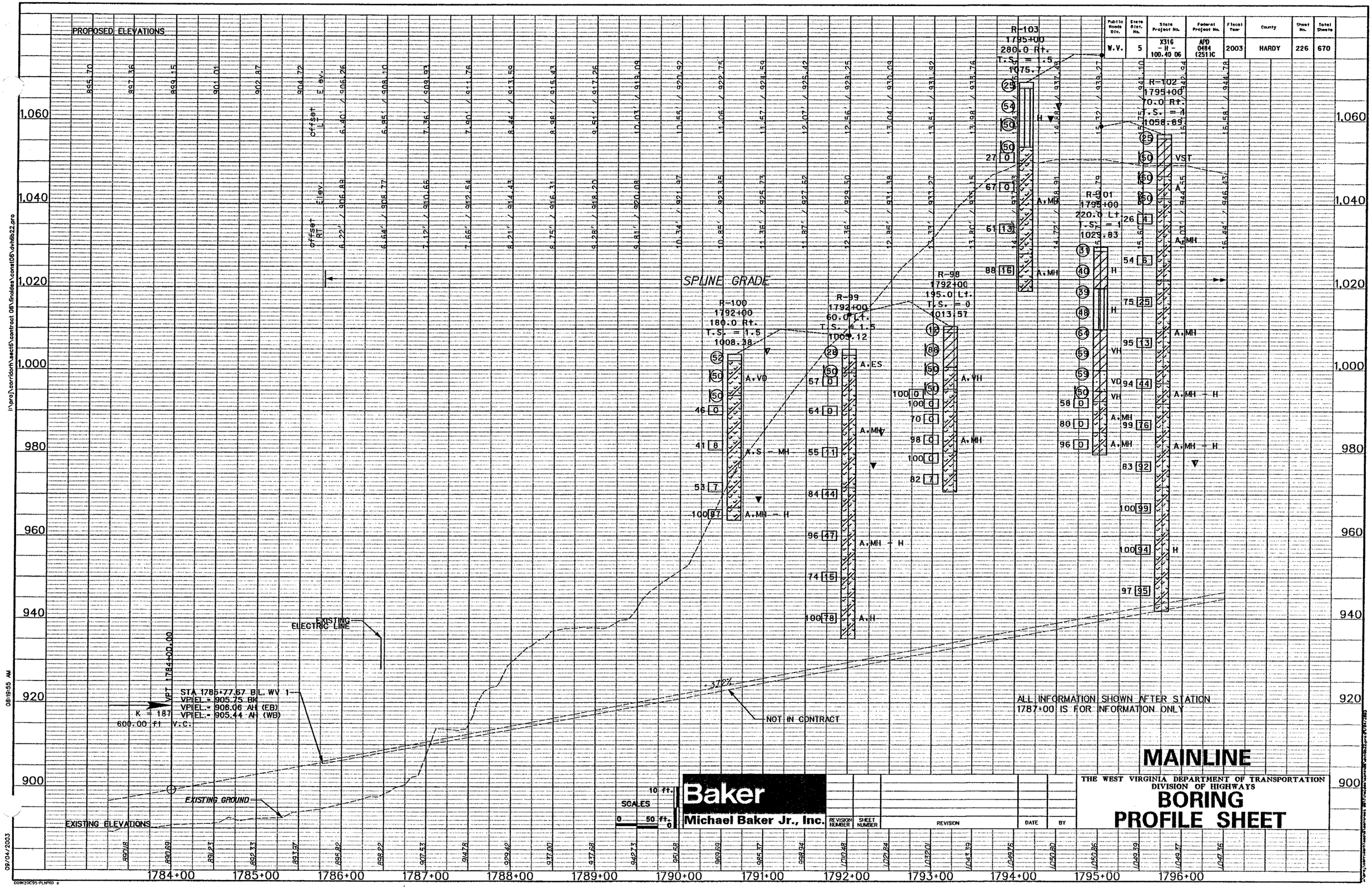
Public Roads Div.	State Dist. No.	State Project No.	Federal Project No.	Fiscal Year	County	Sheet No.	Total Sheets
W.V.	5	X316 - H - 100.40 06	APD 0484 (251)C	2003	HARDY	225	670



Public Roads Div.	State Dist. No.	State Project No.	Federal Project No.	Fiscal Year	County	Sheet No.	Total Sheets
W.V.	5	X316 - H - 100.40 06	APD 0484 (251)C	2003	HARDY	226	670



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DIVISION OF HIGHWAYS

BORING PROFILE SHEET

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Michael Baker Jr., Inc.

REVISION NUMBER	SHEET NUMBER	REVISION	DATE	BY

SCALES 10 ft. 0 50 ft. 0

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Public Roads Div.	State Dist. No.	State Project No.	Federal Project No.	Fiscal Year	County	Sheet No.	Total Sheets
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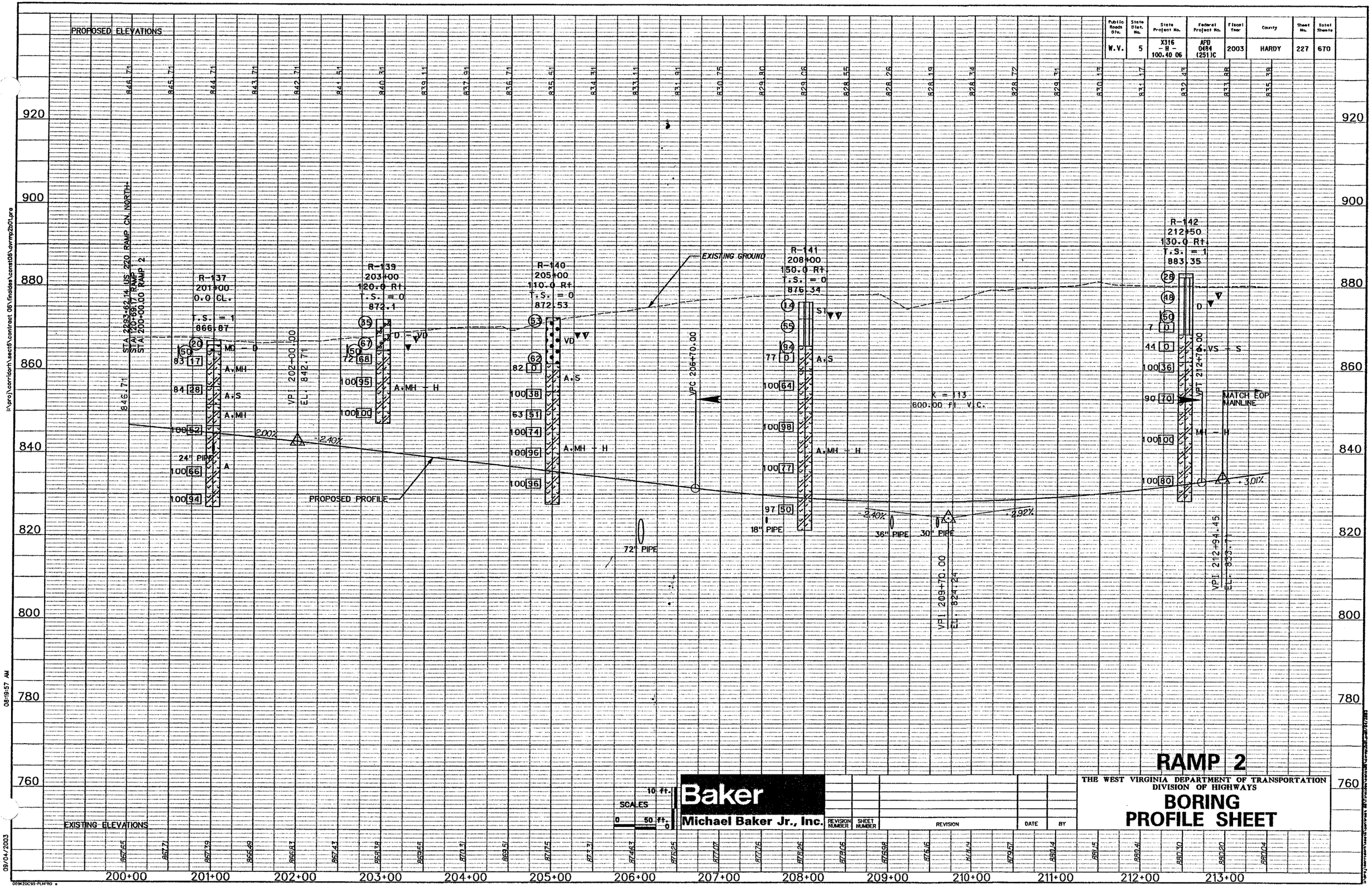


SCALES
10 ft.
0 50 ft.

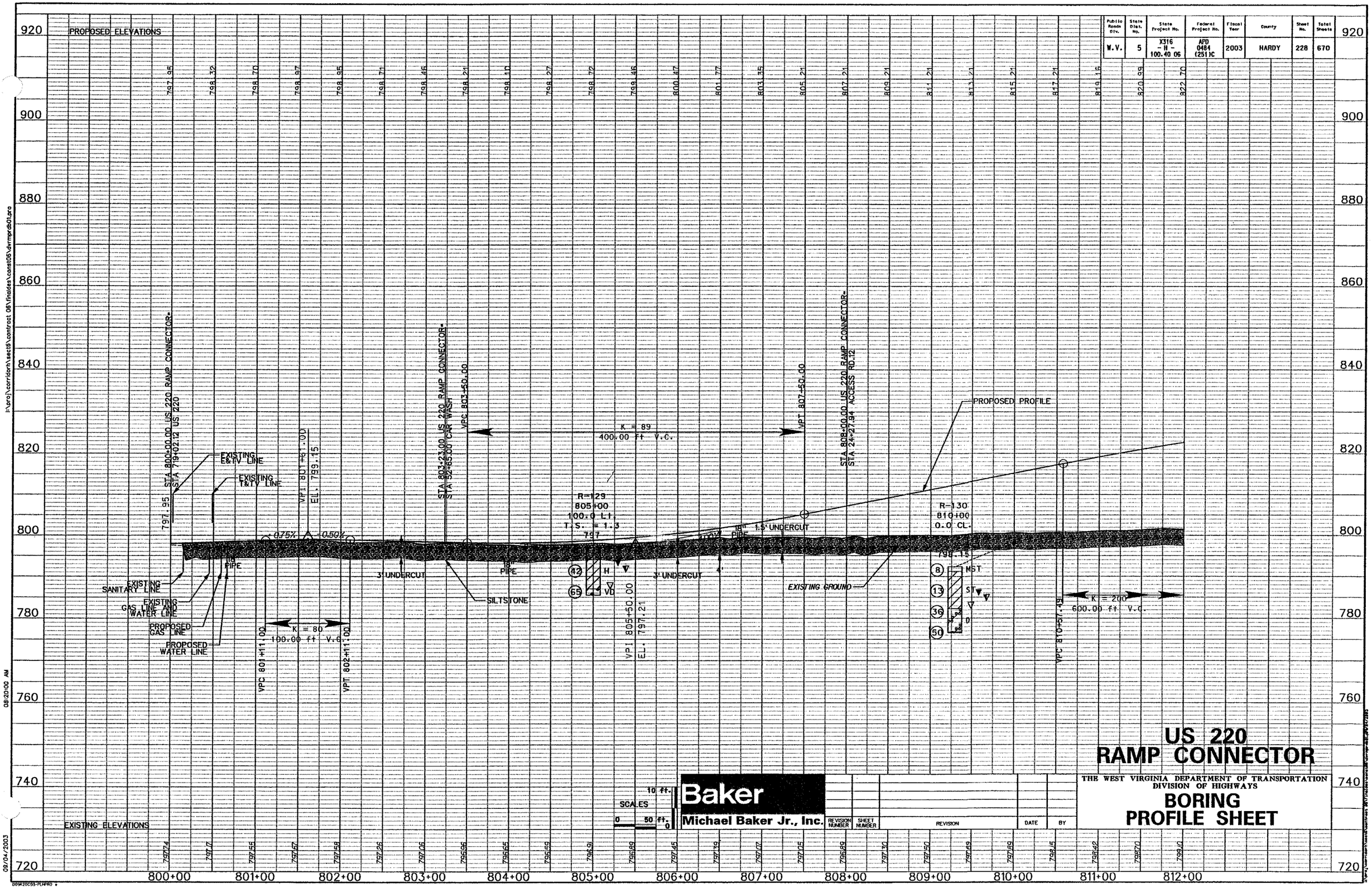
Baker
Michael Baker Jr., Inc.

REVISION NUMBER	SHEET NUMBER	REVISION	DATE	BY

THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

RAMP 2

BORING PROFILE SHEET



Public Roads Div.	State Dist. No.	State Project No.	Federal Project No.	Fiscal Year	County	Sheet No.	Total Sheets
W.V.	5	X316 - H - 100.40 06	APD 0484 (251)C	2003	HARDY	228	670

US 220 RAMP CONNECTOR

THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

BORING PROFILE SHEET

Baker
Michael Baker Jr., Inc.

REVISION NUMBER	SHEET NUMBER	REVISION	DATE	BY

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Public Roads Div.	State Dist. No.	State Project No.	Federal Project No.	Fiscal Year	County	Sheet No.	Total Sheets
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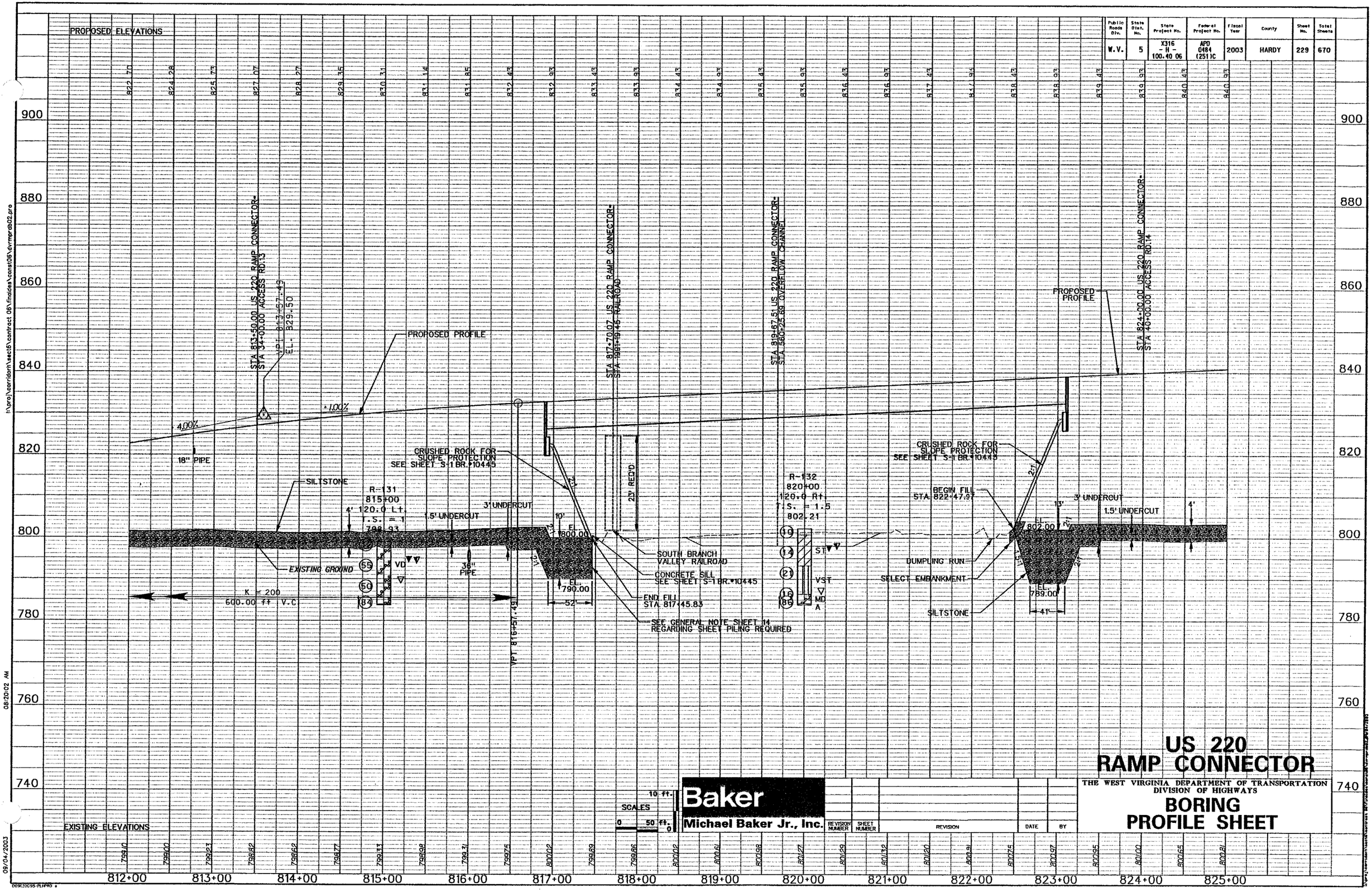
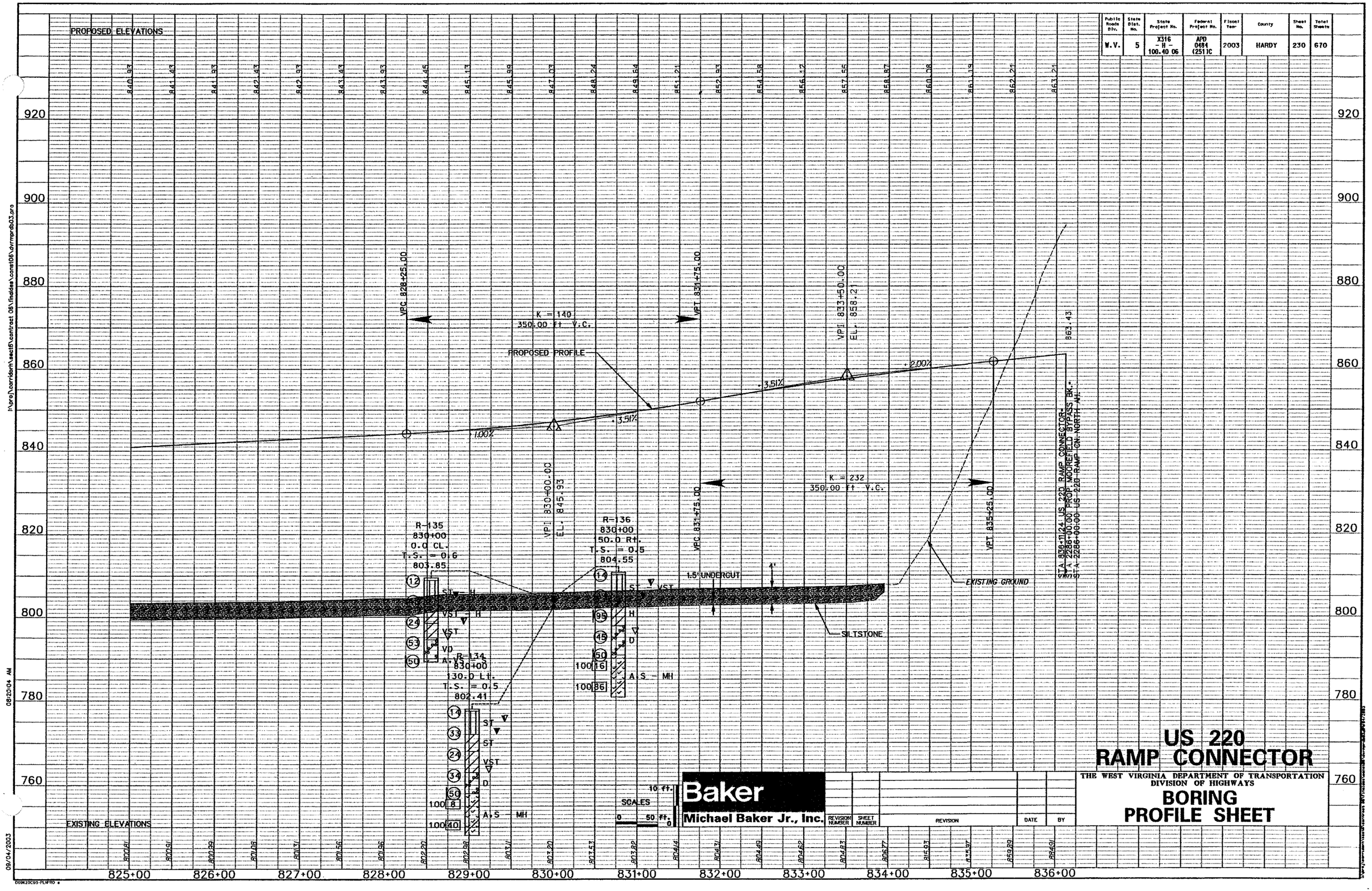


Public Roads Div.	State Dist. No.	State Project No.	Federal Project No.	Fiscal Year	County	Sheet No.	Total Sheets
W.V.	5	X316 - H - 100.40 06	APD 0484 (251)C	2003	HARDY	230	670



US 220 RAMP CONNECTOR

THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

BORING PROFILE SHEET

Baker
Michael Baker Jr., Inc.

REVISION NUMBER	SHEET NUMBER	REVISION	DATE	BY

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Public Roads Div.	State Dist. No.	State Project No.	Federal Project No.	Fiscal Year	County	Sheet No.	Total Sheets
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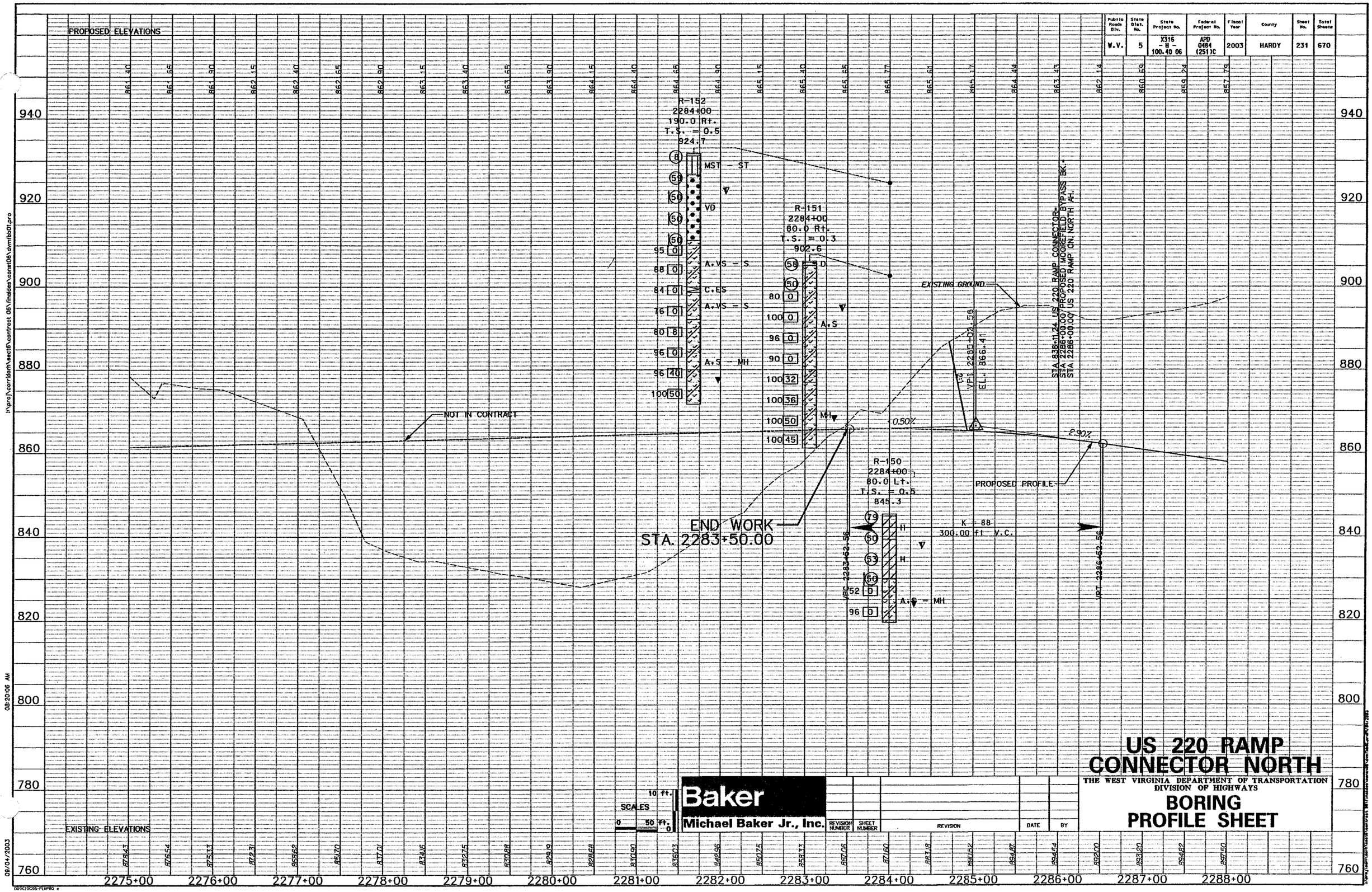

US 220 RAMP CONNECTOR NORTH

THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

BORING PROFILE SHEET

Baker
Michael Baker Jr., Inc.

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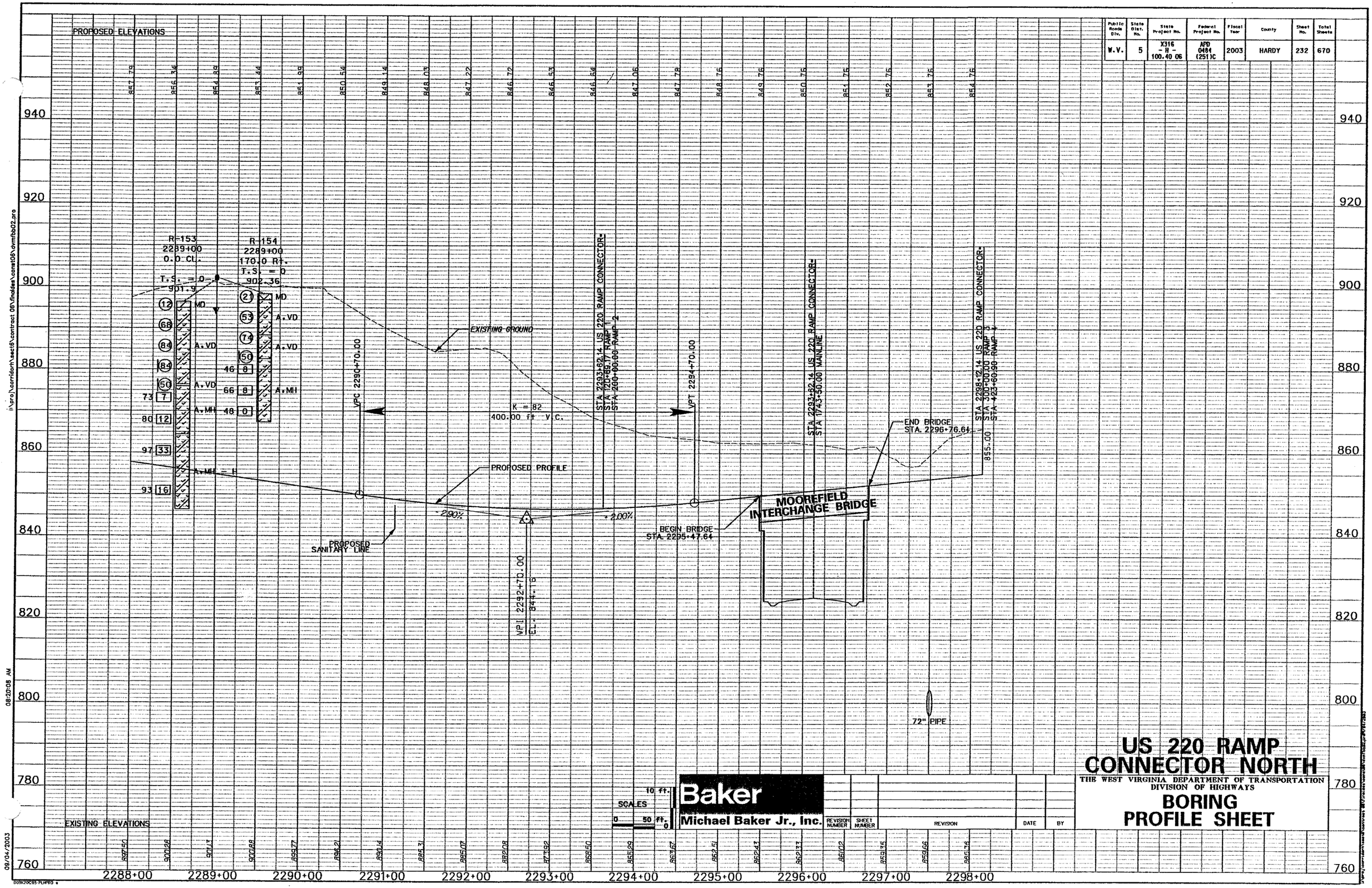
Public Roads Div.	State Dist. No.	State Project No.	Federal Project No.	Fiscal Year	County	Sheet No.	Total Sheets
W.V.	5	X316 - H - 100.40 06	APD 0484 (251)C	2003	HARDY	232	670