



*Heartland Corridor, Walton Virginia to
Columbus Ohio*

Preliminary Engineering Phase Report



WEST VIVIAN
TUNNEL –
MP
N392.06
KIMBALL, WV

October 14, 2005, Rev. 2



Preliminary Engineering Phase Report

PR219399 - West Vivian
Page 1

October 14, 2005

Norfolk Southern Railway Heartland Corridor, Walton VA to Columbus OH

West Vivian Tunnel – MP N-392.06

Kimball, WV

Statistics: Pocahontas Division
Double-width Tunnel for Main #1 & Main #2
Length = 680'
Concrete lined
Degree of curvature = 5.9 Left (per Track Chart)
Superelevation = 2.0" (per Track Chart)

1.	EXISTING CONDITIONS	2
2.	CLEARANCE IMPROVEMENT ALTERNATIVES	5
3.	PREFERRED ALTERNATIVE.....	6
4.	USGS TOPOGRAPHIC MAP	7
5.	AERIAL PHOTO.....	8
6.	TRACK CHART.....	9
7.	PHOTOS.....	10
8.	ESTIMATE	13
9.	DRAWINGS	15
	Tunnel Clearance Cross Sections	
	Plan and Profile	
	Valuation Map	

1. EXISTING CONDITIONS

1.1 Background

Valuation Maps V-13WV/20-21 (16276, 16277) for the West Vivian Tunnel are dated November 1, 1969 and June 30, 1916, respectively. Parcels for the tunnel were acquired in 1907. It is therefore suspected that the tunnel was constructed in 1907 or shortly afterwards. Additional information on this tunnel was obtained from various sources such as topographic maps, aerial photos, inspection reports, track charts, and field investigations that were performed on March 14, June 13, and July 19, 2005.

1.2 General Area

The tunnel is located in a sparsely populated area with good access to the east portal. No practical access to the west portal for vehicles was observed. The railroad has a yard adjacent to US Rt. 52 just east of the tunnel. This yard can serve as a good staging area. There is a siding track in the yard. A bridge over Elkhorn Creek is located immediately in front of the east portal, requiring equipment to access the tracks east of the bridge several hundred feet from the east portal. The bridge has a walkway on the right side. There are some nearby buildings on both sides of US Rt. 52, but most of the area around the tunnel is rocky, hilly, and wooded. There is another bridge over Elkhorn Creek about 800' west of the west portal.

1.3 Structural Conditions

The tunnel is 680' long with a concrete lining and a nominal width of 30'. It is a double-width tunnel for two tracks. A slide fence circuit is mounted on the south wall. West of the tunnel, there are rock fences on both sides of the track and above the west portal. Ballast covers the top of the liner footing on the right side, however the top of footing is exposed on the left side for the entire length of the tunnel. The existing sub grade appears to be near to the bottom of the footing for the liners. Lowering the invert may undermine the liner. The liner is typically damp at construction joints. There are typical minor spalls and small cracks in each segment of the liner. At several locations, primarily near the portals, the joints are leaking and the track and ballast are wet or icy.

Liner cores were taken on July 19, 2005. Cores were drilled into the liner at locations 200' and 480' into the tunnel from the east portal. The cores were taken at the 5, 2, and 12 o'clock positions at each location. Five samples of concrete from the liner core investigation were saved and tested for compressive strength. The liner probe investigation is summarized in the table below:

Summary of West Vivian Tunnel Liner Core Investigation				
Distance from East Portal	Position	Liner Thickness	Notes	Compressive Strength (sample location within the core)
200	5 o'clock	39"	Sandstone immediately behind liner. No void.	5,349 psi (6")
200	2 o'clock	19"	Sandstone immediately behind liner. No void.	
200	12 o'clock	22"	Large void behind liner.	1,514 psi (6")
480	5 o'clock	40"	No void behind liner.	4,000 psi (30")
480	2 o'clock	38"	Sandstone immediately behind liner. No void.	4,170 psi (3")
480	12 o'clock	37"	No void behind liner.	4,208 psi (6")

A small portion of the tunnel invert material was excavated to expose the base of the tunnel liner footing. The footing thickness was found to be 22". The vertical distance from the top of rail to the base of the footing was measured at 47".

1.4 Track

The track is continuously welded rail of conventional design with wooden cross ties at approximately 19" and a stone ballast section. The ballast is generally clean. The rail is typically 132RE or 141RE. The track is curved at 6.0 degrees to the left for the entire length of the tunnel.

1.5 Geotechnical

The tunnels in the eastern part of the Pocahontas Division (including West Vivian) are located in the Appalachian Plateaus Physiographic Province, a region characterized by deeply incised plateaus underlain by flat-lying sedimentary rock. The tunnels themselves are lined and no rock was exposed. The description of the site geology at each tunnel is based on our observations of the rockmass at the portals and adjacent cuts and the 1968 West Virginia Geologic Map prepared by the West Virginia Geologic and Economic Survey.

The West Vivian Tunnel was excavated through medium- to thick-bedded sandstone of the Pocahontas Formation. Minor interbeds of shale, siltstone, and coal may also be present in this formation, but were not observed in the exposures. Bedding is sub-horizontal.

The rock quality designation, Q, at the portals was determined to be 22. A Q rating between 10 and 40 is considered “Good” with 10 bordering on “Fair” and 40 bordering on “Very Good.” A sample of rock was taken from the portal and tested. Lab testing of the sample indicates that it is sandstone with a compressive strength of 19,400 psi.

The geoprobes indicate that the top of rock is located between 1.5’ to 4.1’ (averaging about 3.5’) below the top of ballast throughout the tunnel for Main #1 and between 1.5’ to 4.3’ (averaging about 3.0’) below the top of ballast throughout the tunnel for Main #2. Top of ballast is typically about 0.8’ below top of low rail.

1.6 Clearances

The laser car measurements indicate that the existing tunnel has adequate horizontal clearances for the composite design template with the exception of about 100’ near the west portal where the “High-Wide Load” may intersect the lower portion of the liner wall by less than 2”. The vertical clearance is deficient by an average of 20” (varies from 17”-25”) on both sides of the tunnel crown. The template encroaches the tunnel lining 10-11 o’clock and 1-2 o’clock positions. Cross sections of the tunnel clearance encroachments are shown in the drawings at the end of this report. The maximum vertical encroachments are summarized in the table below:

Distance (ft) from East Portal	Crown Encroachment (radial inches)	
	Left Side	Right Side
0	23	25
51	23	24
102	21	23
151	19	24
202	20	21
251	20	17
301	17	19
351	18	19
401	19	19
451	20	20
501	21	21
551	19	23
601	19	23
651	18	19

2. CLEARANCE IMPROVEMENT ALTERNATIVES

Given the magnitude of the vertical clearance deficiency, there are several general alternatives that can be used to obtain the clearance; replacing the lining, notching the lining, or using steel ties to lower the track. Combinations of the general methods may be required to obtain a design that is cost effective and that can be constructed within reasonable track outages. Track lowering by excavating or undercutting does not appear feasible due to the proximity of the top of rock to the surface.

2.1 Liner Replacement

To obtain the desired clearance, the concrete roof must be demolished, the native rock excavated to the clearance limits plus the new liner thickness, and a new concrete liner installed. This alternative appears necessary for most the tunnel, though notching may work at portions of the tunnel if the encroachment can be reduced using steel ties or if the liner is definitively shown to be thicker than expected.

2.2 Notching the Crown

Notching in the upper quadrants of the tunnel crown may not cut entirely through the liner and could be an alternative to complete liner replacement. However, the encroachments are large enough that a minimum liner thickness of at least 10" might not be maintained. The six cores taken in July 2005 varied in thickness from 19" to 39". The liner may be thicker than the expected 26" for substantial portions of the tunnel, thereby allowing deeper notches to be used instead of liner replacement for those areas. However, additional investigations would be required before any apparent additional thickness of concrete can be relied on in the reconstruction. Therefore, deep notching of the tunnel crown will no longer be considered as a viable alternative for achieving the necessary vertical clearance, unless additional investigations in the Final Design Phase conclude that an adequate thickness can be maintained.

A form of notching by means of hydro-demolition would be a viable alternative for achieving the necessary horizontal clearance for the "High-Wide" portion clearance envelope. Hydro-demolition provides the ability to shave off several inches of concrete from the interfering wall. Preliminary calculations indicate that 6" could be shaven off the wall with little adverse effects to the wall stability. This method is necessary for a very small portion of the tunnel, approximately 100' along the lower portion of the right wall, less than 2" deep.

2.3 Steel Ties

Substitution of steel ties for the standard wood ties would permit the rails to be lowered about 6 inches. Transition sections would be constructed at the tunnel approaches for the vertical curves and for a gradual transition in track stiffness. A proper drainage system is required to minimize corrosion of the ties.

Steel ties would not be sufficient to fix the entire clearance deficiencies, but in some cases could be used in conjunction with notching to provide a more economical solution. However, in this case, even with steel ties the amount of encroachment of the tunnel crown would still be

significant enough to eliminate deep notching as a practical alternative. Due to the close proximity of the rail bridge outside the east portal, steel ties would require expensive and impractical bridge modifications in order to lower the bridge. Also, lateral shifting of the track is a concern when using steel ties. Steel ties do not provide any significant advantages that would warrant their expense. Therefore, they will no longer be considered as a viable alternative.

3. PREFERRED ALTERNATIVE

Given the magnitude of the vertical encroachment, liner replacement of the tunnel crown is necessary to achieve the required clearance in the tunnel. Minor notching to fix some horizontal encroachment on the right wall is also recommended. Additional investigations in the final design phase may determine that deep notching is an alternative to liner replacement for some of the tunnel. Drainage improvements are also recommended.

3.1 Preliminary Design

The preliminary design uses replacement of the liner crown. The existing track structure is planned to be flooded with ballast to the top of the rail to provide access into the tunnel for the contractor to work and to protect the track during the construction. The preliminary design also proposes to install a new drainage system and undercut the track to replace the fouled ballast.

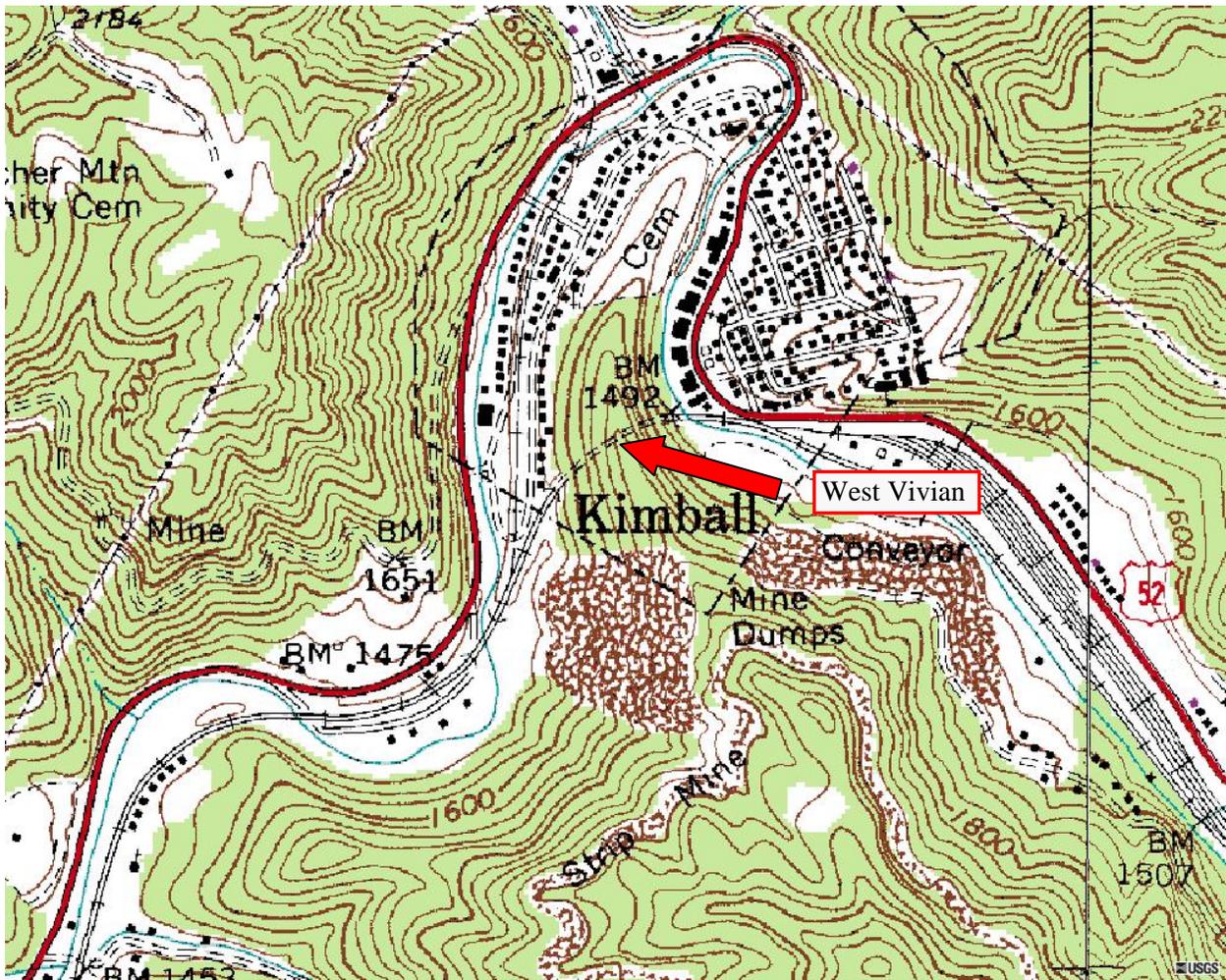
3.2 Schedule

The estimated schedule for completing improvements on this tunnel is twenty-seven (27) weeks from mobilization to demobilization. The schedule assumes one track being closed at a time, for ten hours, five days a week. The schedule assumes 12' of crown removal each day, with concrete removal, rock removal, installation of rock dowels and installation of shotcrete all occurring on the same day for each 12' segment. Drainage improvement operations would be undertaken at the same time as the crown removal, but at different locations in the tunnel.

3.3 Estimate

The total estimated cost for achieving clearance at this location is \$5.1 million (2005 rates) or \$7,512 per foot of tunnel. The work items include mobilization, surveying, liner removal, rock removal, rock dowels, crown installation, rock cut for drainage trench, tunnel drainage system, ballast cleaning, and demobilization. A small allowance is included for minor notching to gain full horizontal clearance. The total cost is made up of tunnel, track, signal, and site work items at \$3.2 million, plus a 30% construction contingency, a 10% engineering allowance, and a 14% construction management allowance.

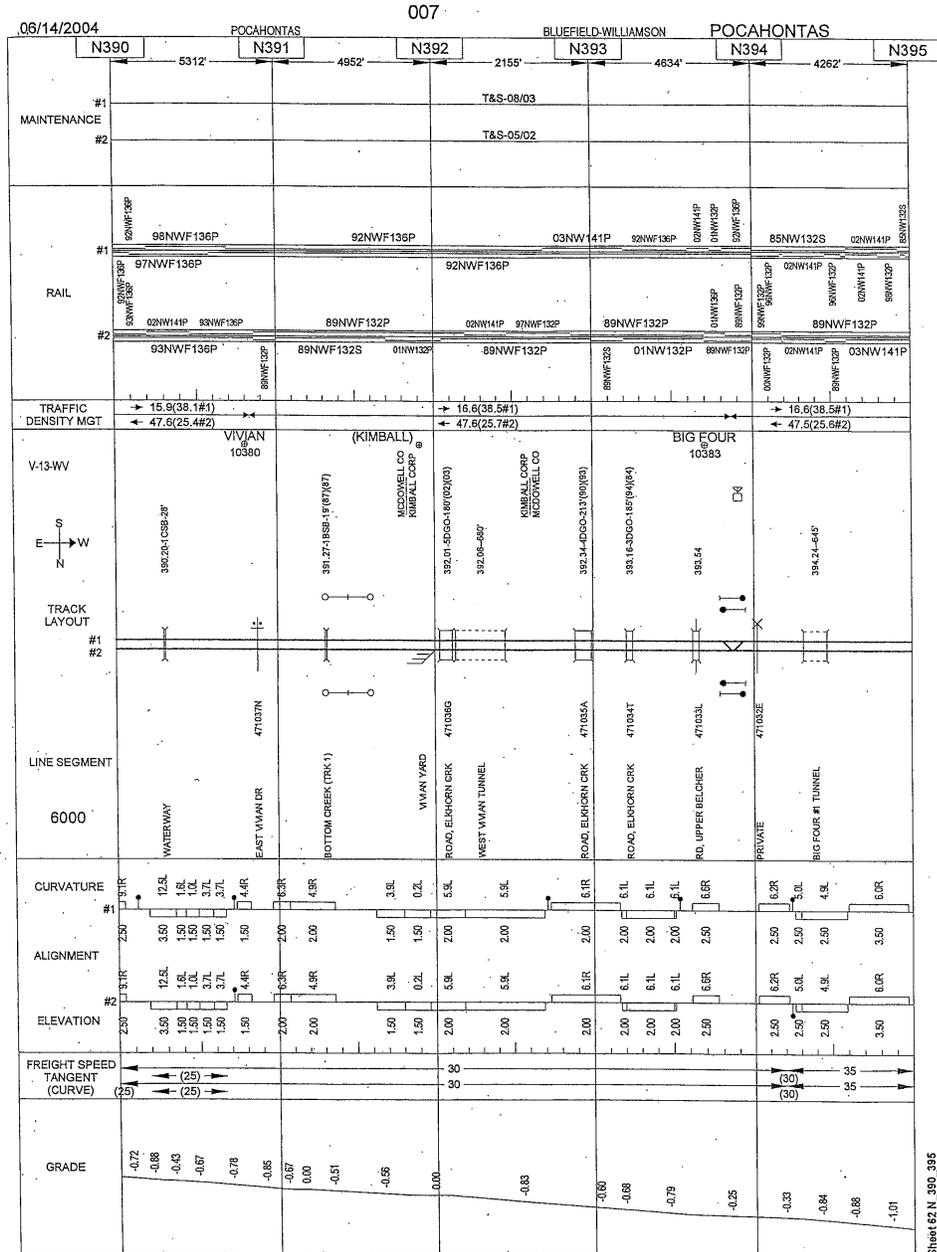
4. USGS TOPOGRAPHIC MAP



5. AERIAL PHOTO



6. TRACK CHART



Sheet 62_N_390_395

7. PHOTOS



Photo 1. East portal



Photo 2. Looking east of tunnel



Photo 3. West portal



Photo 4. Typical view from just inside tunnel, note that ballast covers footing. Wet walls and track at construction joints.



Photo 5. Bridge over Elkhorn Creek east of tunnel.



Photo 6. Train in tunnel. Note wetness at construction joints.

8. ESTIMATE

West Vivian

Tunnel Length **680** ft
 Tunnel Width **30.5** ft
 # of Tracks **2**

	Contractor		Railroad	
Work Window	10	hrs	10	hrs
Setup & Demobilization Allowance	2	hrs	2	hrs
Production Time	8	hrs	8	hrs

Tunnel Work Items	UOM	Quantity	Unit Rate	Total
Mobilization	%	5%		\$130,568.20
Surveying	DY	5	\$1,300.00	\$6,500.00
Rock Dowels 14' with Chain Link Mesh - Crown	EA	1133	\$603.37	\$683,822.93
Crown Removal	SF	32044	\$16.17	\$518,289.60
Wall Hydrodemolition	SF	1525	\$10.38	\$15,829.60
Rock Removal - Crown	CY	1187	\$427.10	\$506,889.60
Crown Installation	SF	32044	\$24.42	\$782,668.53
Rock Cut Drainage Trench	LF	780	\$86.30	\$67,315.20
Tunnel Drainage	LF	780	\$17.48	\$13,632.53
Demobilization	DY	5	\$3,283.20	\$16,416.00
Total Tunnel Work Items	LF	680	\$4,032.25	\$2,741,932.19

Trackwork Items	UOM	Quantity	Unit Rate	Total
Mobilization	DY	1	\$3,110.32	\$3,110.32
Surveying	DY	2	\$1,300.00	\$2,600.00
Track Preparation/Restoration	DY	3	\$3,431.32	\$10,293.96
Undercutting	PF	680	\$38.28	\$26,029.72
Saw Cuts	EA	4	\$6,839.44	\$27,357.76
Panel Track	TF			
Remove Track	TF			
Field Welds	EA	4	\$2,523.78	\$10,095.12
Surfacing & Lining	PF	4200	\$2.45	\$10,304.06
Ballasting Track	TN	1400	\$39.09	\$54,731.32
Equalizing rail	DY	2	\$6,701.14	\$13,402.28
Elastomeric Flangeway Crossing	EA			
Demobilization	DY			
Total Trackwork Items				\$157,924.56

**Preliminary Engineering Phase Report
MP N-392.06 - West Vivian**

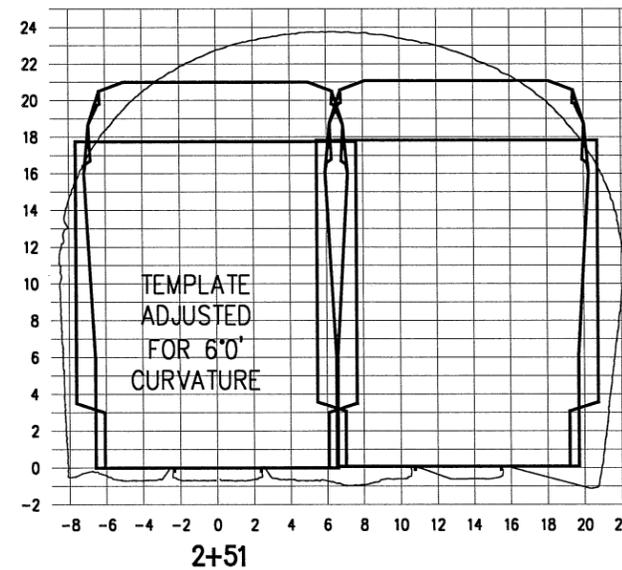
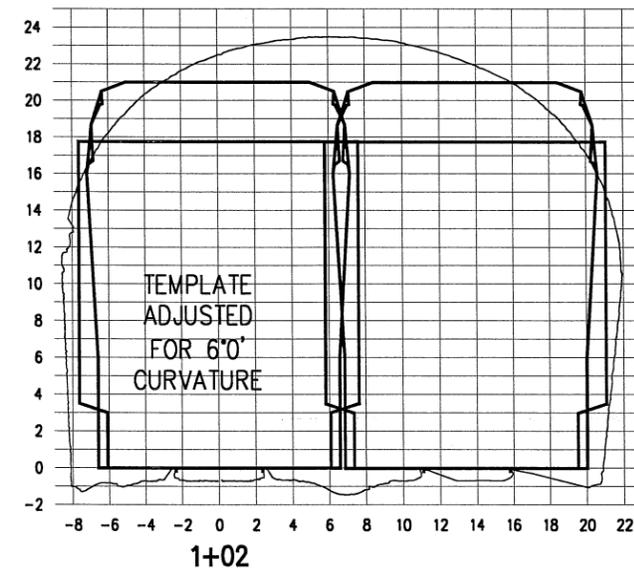
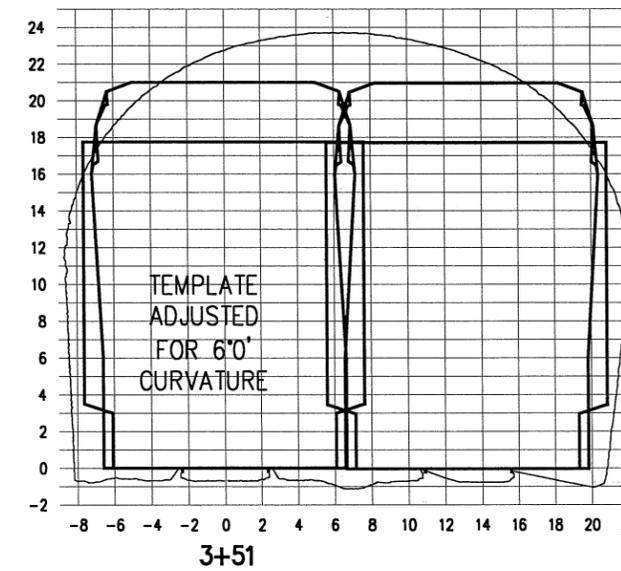
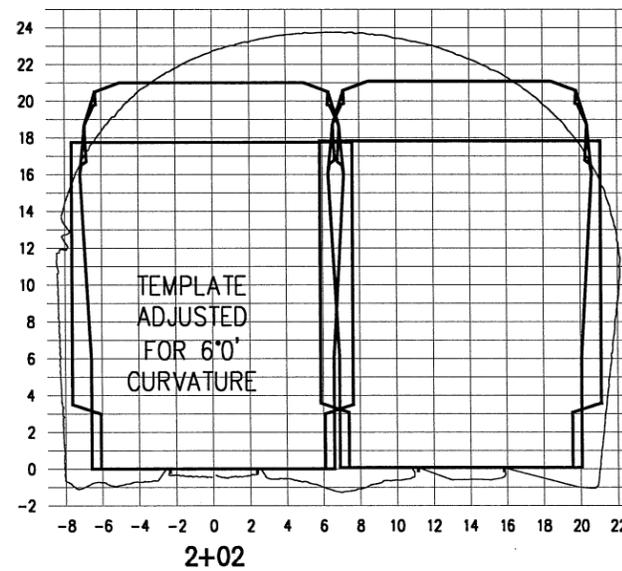
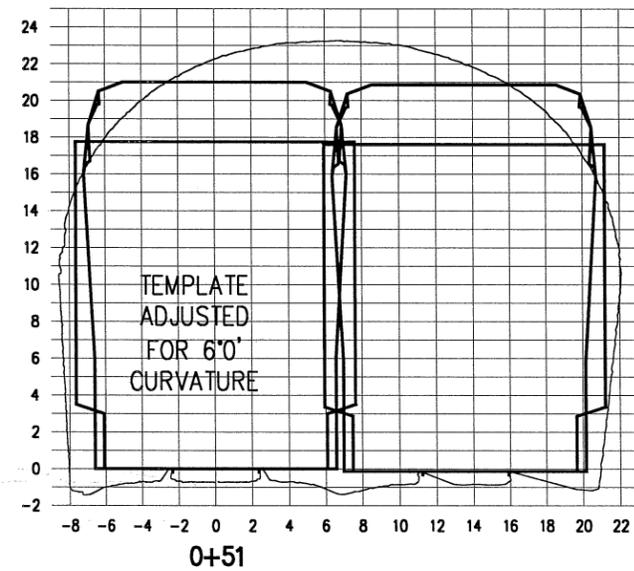
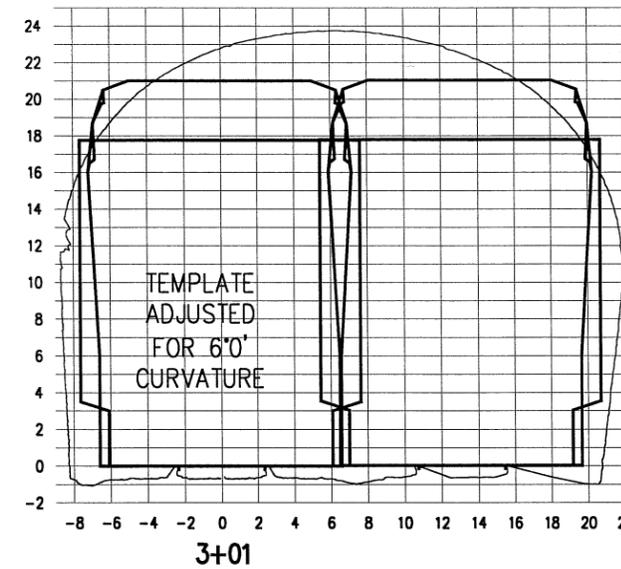
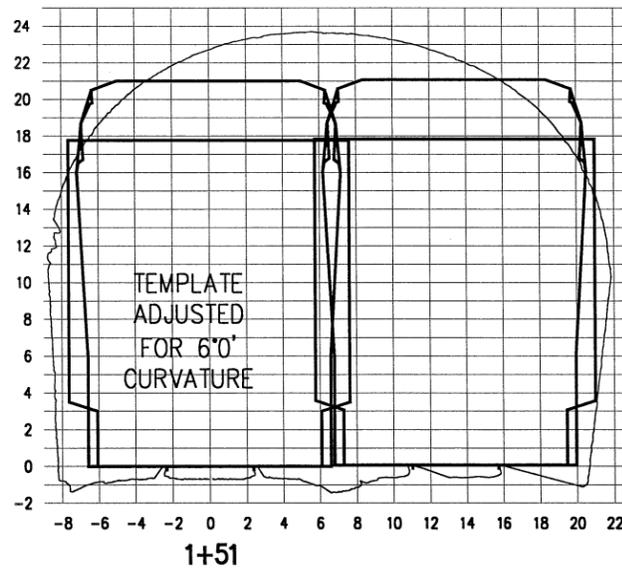
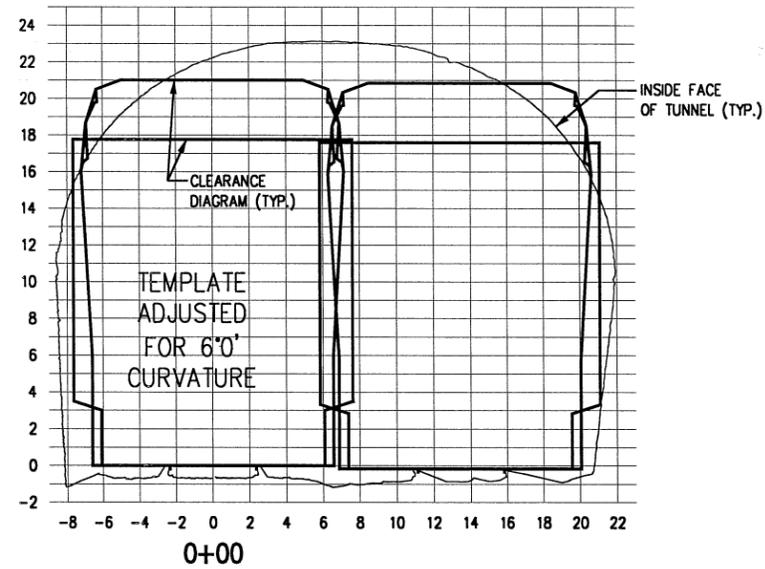
Signal Items	UOM	Quantity	Unit Rate	Total
Mobilization	DY			
Relocate Cables / Track Leads	LF	680	\$13.30	\$9,045.18
Cut-in	EA			
New CP	EA			
Modify CP	EA			
Grade Crossing - Single to Double Track	EA			
Signal Location Modification	EA			
New Cut Section	EA			
Demobilization	DY			
Total Signal Items				\$9,045.18

Site Items	UOM	Quantity	Unit Rate	Total
Mobilization	DY	1	\$2,483.60	\$2,483.60
Erosion & Sedimentation Control	EA	1	\$11,958.80	\$11,958.80
Site Grading	CY			
Rock Excavation	CY			
Sub-Ballast	CY			
Drainage	LF			
Demobilization	DY			
Total Site Items				\$14,442.40

Special Items	UOM	Quantity	Unit Rate	Total
Mobilization	DY			
Flagging	DY	133	\$821.50	\$109,259.50
Flood Track with Ballast for Protection	TN	2800	\$39.97	\$111,926.06
Remove Flooded Ballast	TN	2800	\$8.74	\$24,474.46
Temporary Bridges	EA			
New Railroad Bridges	EA			
New Highway Bridges	EA			
Invert/Crown Void Grouting	DY			
Demobilization	DY			
Total Specialty Items				\$245,660.01

Subtotal All Items		\$3,169,004.35
Construction Contingency	30%	\$950,701.30
Engineering Allowance	10%	\$411,970.57
Construction Management Allowance	14%	\$576,758.79
Total		\$5,108,435.01

9. DRAWINGS

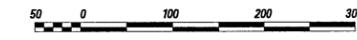


NOTES:

1. HORIZONTAL DATUM IS PARALLEL TO TRACK. WHERE TRACK IS SUPERELEVATED, DATUM IS NOT PARALLEL WITH GROUND.
2. CROSS SECTION GIVEN FOR STA. 0+00 IS A COMPOSITE FOR THE TUNNEL FROM STA. 0+00 THROUGH 0+50. ALL OF THE SECTIONS FOLLOW THIS CONVENTION.

NOT FOR CONSTRUCTION

SCALE: 1" = 100'

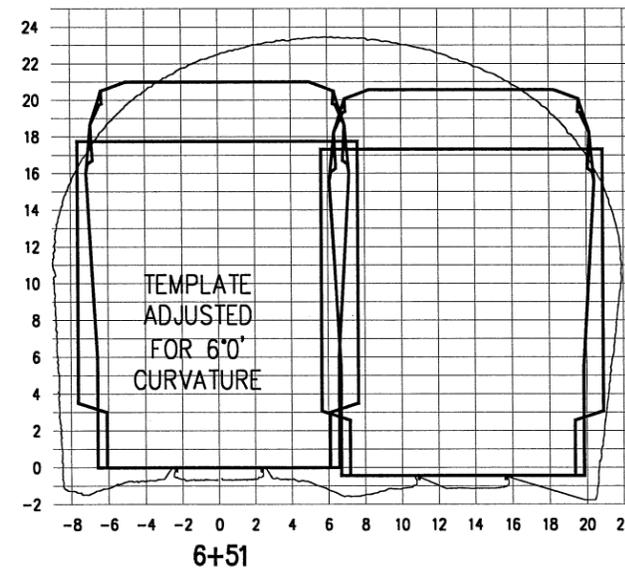
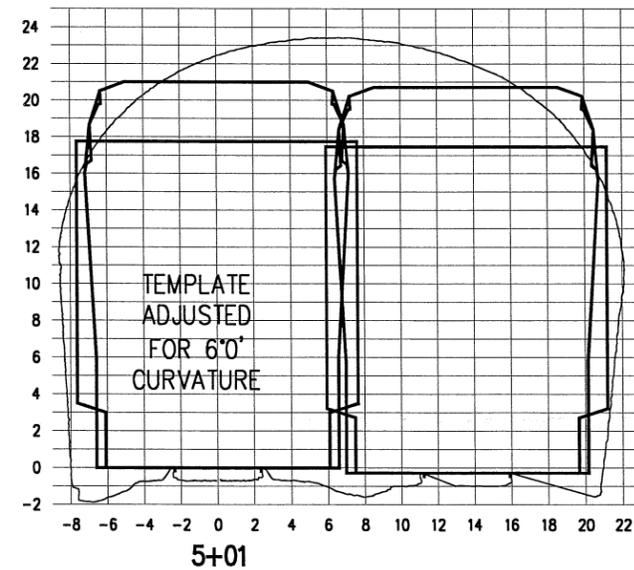
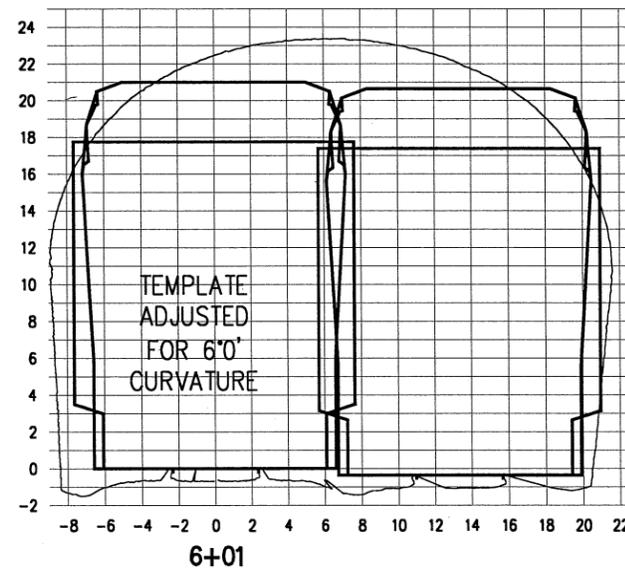
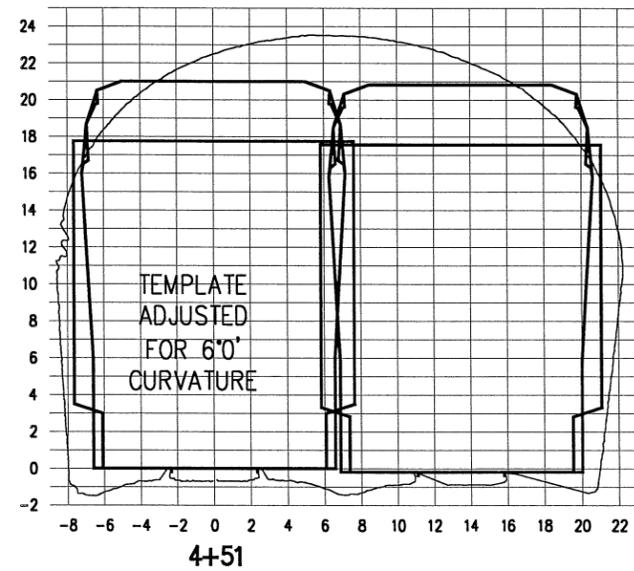
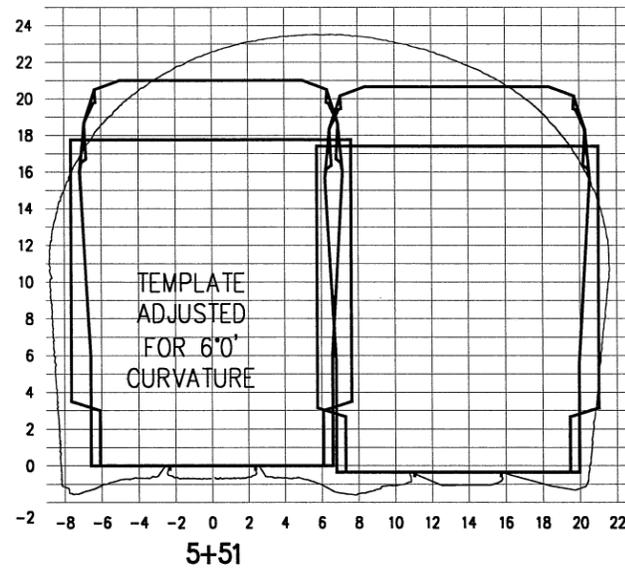
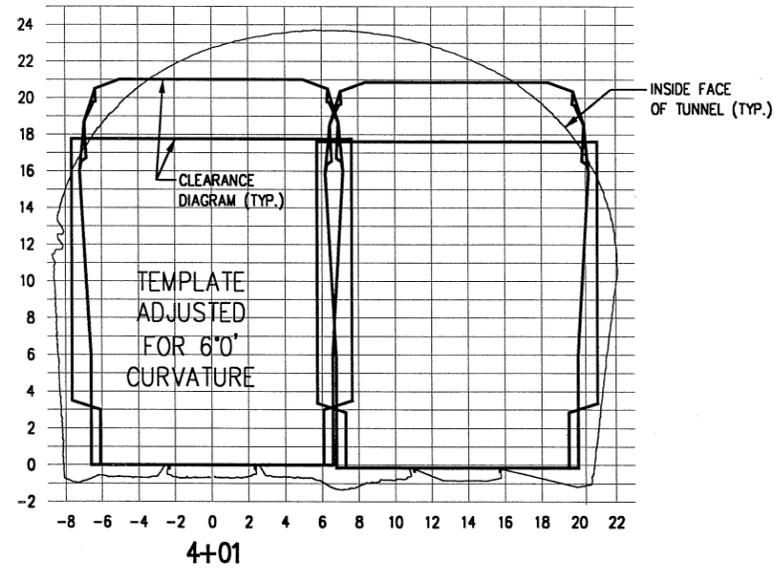


NORFOLK SOUTHERN

OPERATING COMPANY
POCAHONTAS
OFFICE OF THE CHIEF ENGINEER - DESIGN AND CONSTRUCTION - ATLANTA, GA

PT	DJL	8/5/05	PRELIMINARY ENGINEERING PHASE REPORT
REV	BY	DATE	DESCRIPTION
LOCATION: WEST VIVIAN TUNNEL, KIMBALL, WV			
TITLE: TUNNEL CLEARANCE CROSS SECTIONS - 1 OF 2			
DGN	PTD NO.	WRN	16276 & 16277
DWN	FILE NO.		N-392.06
CHR	DATE		APRIL 8, 2005

FILE NAME = #FILES
DATE/TIME = #DATES
#TIME#

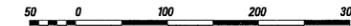


NOTES:

1. HORIZONTAL DATUM IS PARALLEL TO TRACK. WHERE TRACK IS SUPERELEVATED, DATUM IS NOT PARALLEL WITH GROUND.
2. CROSS SECTION GIVEN FOR STA. 0+00 IS A COMPOSITE FOR THE TUNNEL FROM STA. 0+00 THROUGH 0+50. ALL OF THE SECTIONS FOLLOW THIS CONVENTION.

NOT FOR CONSTRUCTION

SCALE: 1" = 100'



NS NORFOLK SOUTHERN

OPERATING DIVISION
OFFICE OF THE CHIEF ENGINEER - DESIGN AND CONSTRUCTION - ATLANTA, GA.

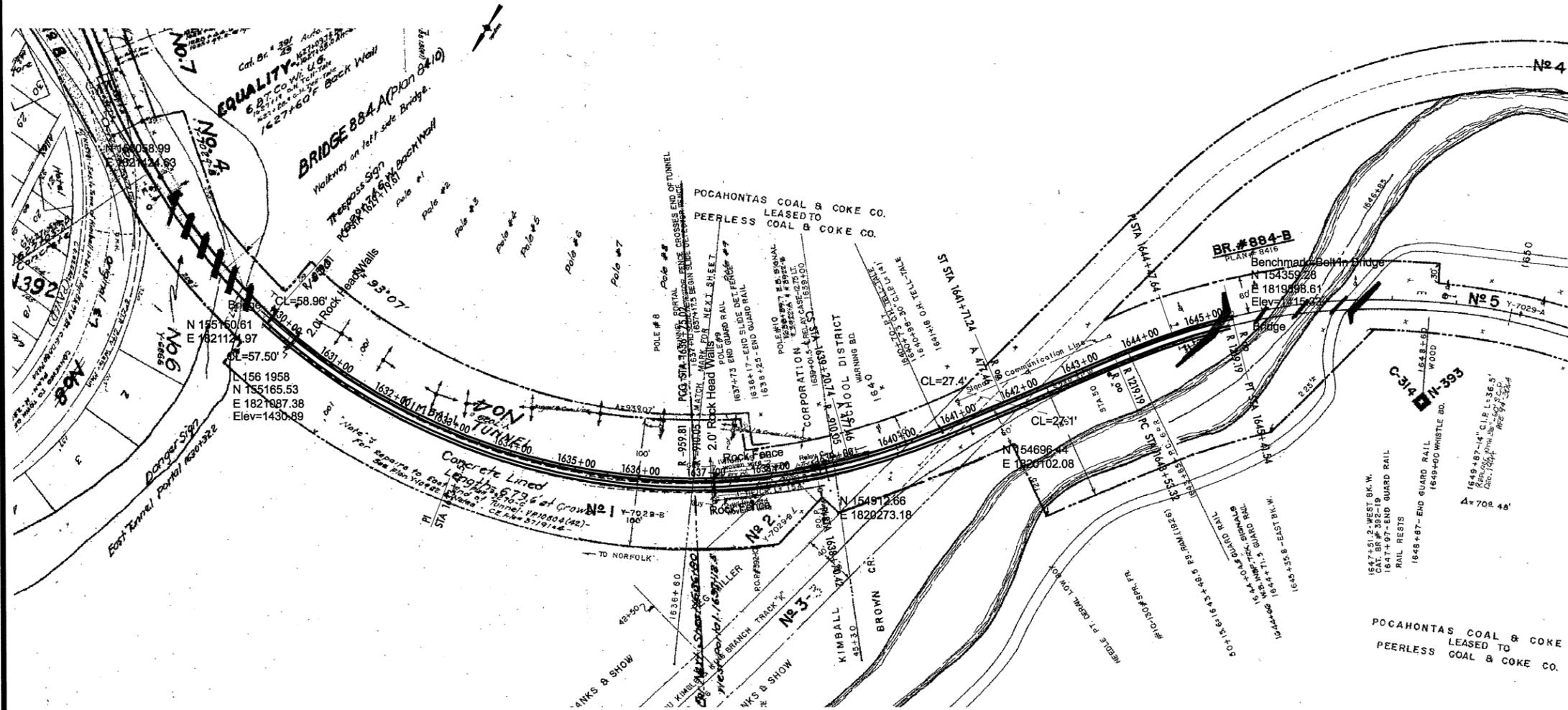
PI	DJL	8/5/05	PRELIMINARY ENGINEERING PHASE REPORT
REV	BY	DATE	DESCRIPTION
LOCATION: WEST VIVIAN TUNNEL, KIMBALL, WV			
TITLE: TUNNEL CLEARANCE CROSS SECTIONS - 2 OF 2			
DESIGN	FILE NO.	16276 & 16277	MILE POST N-392.06
CHK	DATE	APRIL 8, 2005	DRAWING NUMBER

FILE NAME = #FILE# DATE/TIME = #DATE#

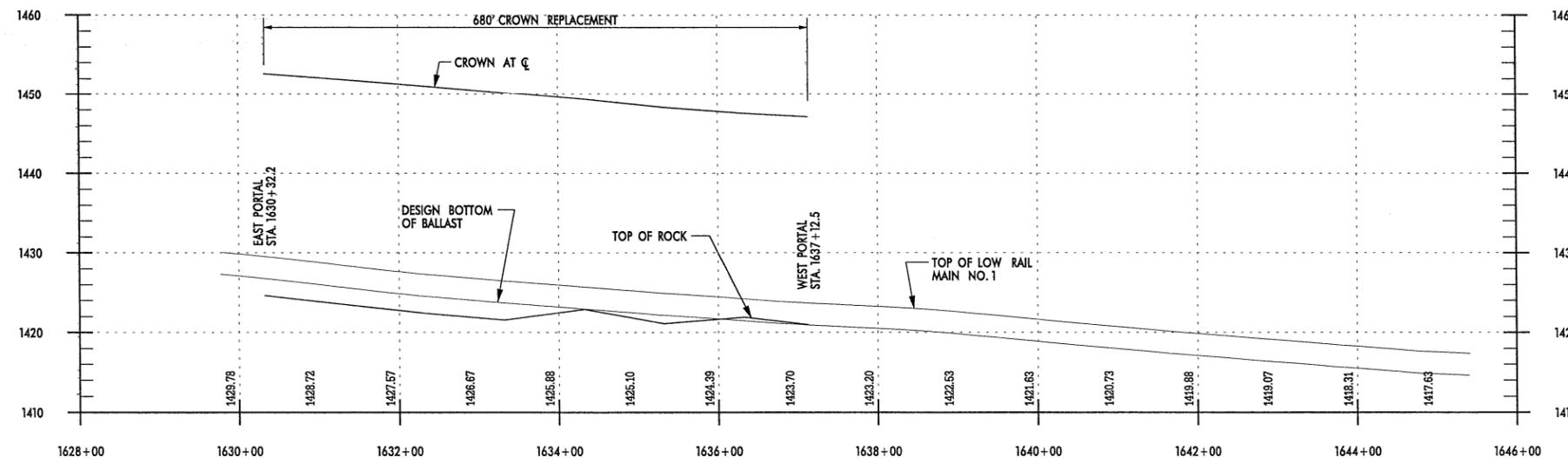
WEST VIVIAN CURVE DATA

Project Name: West Vivian
Horizontal Alignment Name: 3

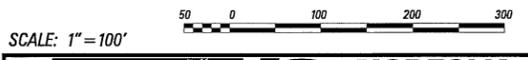
STATION	NORTHING	EASTING	
Element: Circular			
PC (.....)	1629+79.67	155135.55	1821132.88
PI (.....)	1633+43.57	155200.49	1820374.82
CC (.....)	1636+75.02	154191.15	1820961.60
PCC (.....)	1636+75.02	155011.71	1820463.70
Radius:	959.81		
Delta:	41°31'40"	Left	
Degree of Curvature(Chord):	5°58'20"		
Length:	695.67		
Length(Chord):	695.35		
Tangent:	363.90		
Chord:	680.54		
Middle Ordinate:	62.34		
External:	66.67		
Tangent Direction:	280°16'47"		
Radial Direction:	10°16'47"		
Chord Direction:	259°30'57"		
Radial Direction:	328°45'07"		
Tangent Direction:	238°45'07"		
Element: Circular			
PCC (.....)	1636+75.02	155011.71	1820463.70
PI (.....)	1637+98.69	154947.56	1820357.97
CC (.....)	1639+20.74	154857.51	1820273.19
CS (.....)	1639+20.74	154857.51	1820273.19
Radius:	910.05		
Delta:	15°28'40"	Left	
Degree of Curvature(Chord):	6°17'57"		
Length:	245.84		
Length(Chord):	245.72		
Tangent:	123.67		
Chord:	245.09		
Middle Ordinate:	8.29		
External:	8.37		
Tangent Direction:	238°45'07"		
Radial Direction:	328°45'07"		
Chord Direction:	231°00'47"		
Radial Direction:	313°16'26"		
Tangent Direction:	223°16'26"		
Element: Clothoid			
CS (..... 43)	1639+20.74	154857.51	1820273.19
SPI (..... 44)	1640+04.39	154796.61	1820215.85
ST (..... 45)	1641+71.24	154660.33	1820119.04
Entrance Radius:	910.05		
Exit Radius:	0.00		
Length:	250.50		
Angle:	7°53'08"	Left	
Constant:	477.46		
Long Tangent:	167.17		
Short Tangent:	83.65		
Long Chord:	250.29		
Xsr:	250.03		
Ysr:	11.48		
Pi:	2.87		
Ki:	125.17		
Tangent Direction:	223°16'26"		
Radial Direction:	313°16'26"		
Chord Direction:	218°01'00"		
Radial Direction:	305°23'18"		
Tangent Direction:	215°23'18"		
Element: Linear			
ST (..... 45)	1641+71.24	154660.33	1820119.04
PC (..... 38)	1643+53.32	154511.89	1820013.60
Tangent Direction:	215°23'18"		
Tangent Length:	182.08		
Element: Circular			
PC (..... 38)	1643+53.32	154511.89	1820013.60
PI (.....)	1644+47.64	154434.99	1819958.98
CC (..... 39)	1645+41.54	155217.94	1819019.66
PT (..... 40)	1645+41.54	154367.41	1819893.17
Radius:	1219.19		
Delta:	8°50'52"	Right	
Degree of Curvature(Chord):	4°42'03"		
Length:	188.27		
Length(Chord):	188.22		
Tangent:	94.32		
Chord:	188.09		
Middle Ordinate:	3.63		
External:	3.64		
Tangent Direction:	215°23'18"		
Radial Direction:	305°23'18"		
Chord Direction:	219°48'44"		
Radial Direction:	314°14'11"		
Tangent Direction:	224°14'11"		



WEST VIVIAN PLAN
SCALE: 1"=100'



WEST VIVIAN PROFILE
SCALE: 1"=100' HORIZ.
1"=10' VERT.



NOT FOR CONSTRUCTION

PROJECT	WEST VIVIAN TUNNEL, KIMBALL, WV
TITLE	PLAN AND PROFILE
DATE	APRIL 8, 2005
SCALE	1"=100'
DRAWING NUMBER	N-392.06

NORFOLK SOUTHERN

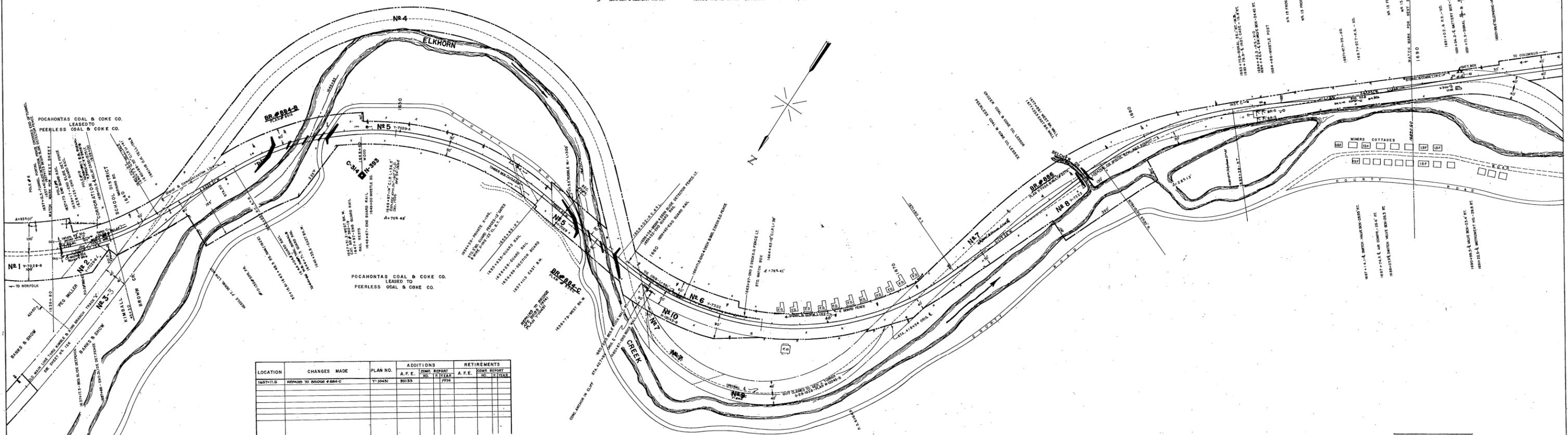
OPERATING DIVISION
OFFICE OF THE CHIEF ENGINEER - DESIGN AND CONSTRUCTION - ATLANTA, GA.



FILE NAME: P:\NSR\28395\CAD\surv\Info\392.06 West Vivian\392.06 west vivian.dgn
DATE/TIME: 10/22/2005 02:26:21 PM

SCHEDULE OF PROPERTY									
NO.	GRANTOR	GRANTEE	INSTRUMENT	DATE	RECORD	CUST. NO.	REMARKS		
1	SAML. A. CROZER, ET AL. TRUST.	N.W. RY. CO.	DEED	AUG. 1, 1907	DB 50 147	OCT. 15, 1907	8012-A	CEM 2 9 488	
2	CROZER LAND ASSOCIATION	"	"	AUG. 6, 1908	DB 55 120	APR. 29, 1914	8017	5 224	
3	BANKS & MASL	"	"	OCT. 18, 1889	DB 14 84	DEC. 21, 1889	8018	6 351	
4	JOHN T. BELCHER, ET UX.	W. V. & I. RR. CO.	"	FEBY. 8, 1892	DB 15 224	FEBY. 25, 1892	8022	5 51	PART QUITCLAIMED TO GEO. J. TURNER 8-28-38 V.R.A. 8913 PLAN N-10045-B
5	SAML. A. CROZER	N.W. RY. CO.	"	AUG. 1, 1907	DB 50 147	OCT. 15, 1907	8012-A	21 488	
6	SAML. A. CROZER, ET AL. TRUSTEES, CROZER LAND ASSOCIATION	"	"	APR. 28, 1908	DB 51 369	APR. 29, 1908	8019-A	33 97	
7	ANDREW BELCHER, ET UX.	"	"	FEBY. 25, 1910	DB 55 394	MAR. 7, 1910	8019	6 354	QUIT CLAIM CEM. 37 9 161
8	CIRIUS GOAL & COKE CO. LESSEE	W. V. & I. RR. CO.	"	MAY 8, 1890	DB 14 116	SEPT. 25, 1890	8019-A	33 97	354 PART QUITCLAIMED TO GEO. J. TURNER 8-28-38 V.R.A. 8913 PLAN N-10045-B
9	ANDREW BELCHER, ET UX.	"	"	APR. 28, 1908	DB 51 369	APR. 29, 1908	8019-A	33 97	
10	ANDREW BELCHER, ET UX.	"	"	MAY 2, 1910	DB 56 403	APR. 9, 1910	8019-A	37 157	
11	VIRGINIA FUEL CO., LESSEE	"	"	SEPT. 3, 1888	DB 23 378	JANU. 9, 1889	8020		QUITCLAIMED TO GEO. J. TURNER 8-28-38 V.R.A. 8913 PLAN N-10045-B
12	SAMM-HARRIS	"	"	JUNE 24, 1838	DB 139 345	JULY 25, 1938	87634		V.R.A. 8912-C-C-50835 PLAN N-10045-B CE. DB. 84 812 1/2 ACRES
13	GEO. J. TURNER	"	"	"	"	"	"	"	"
14	NORFOLK & WESTERN RY. CO.	RECCO LEGATO ET AL.	QUITCLAIM	APRIL 18, 1995	"	"	"	"	"

This map was not prepared or intended for use as a real estate title map. The railway company does not represent or suggest that the property lines and right-of-way lines shown on the map are accurate or that any other information on the map is correct. The company does not represent that it has checked this map for accuracy.



LOCATION	CHANGES MADE	PLAN NO.	ADDITIONS		RETIREMENTS	
			A. F. E.	COMP. REPORT	A. F. E.	COMP. REPORT
162771.6	REFERS TO BRIDGE # 884-C	Y-10431	89123	NO. 1 YEAR	7794	