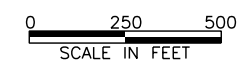
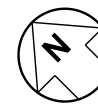
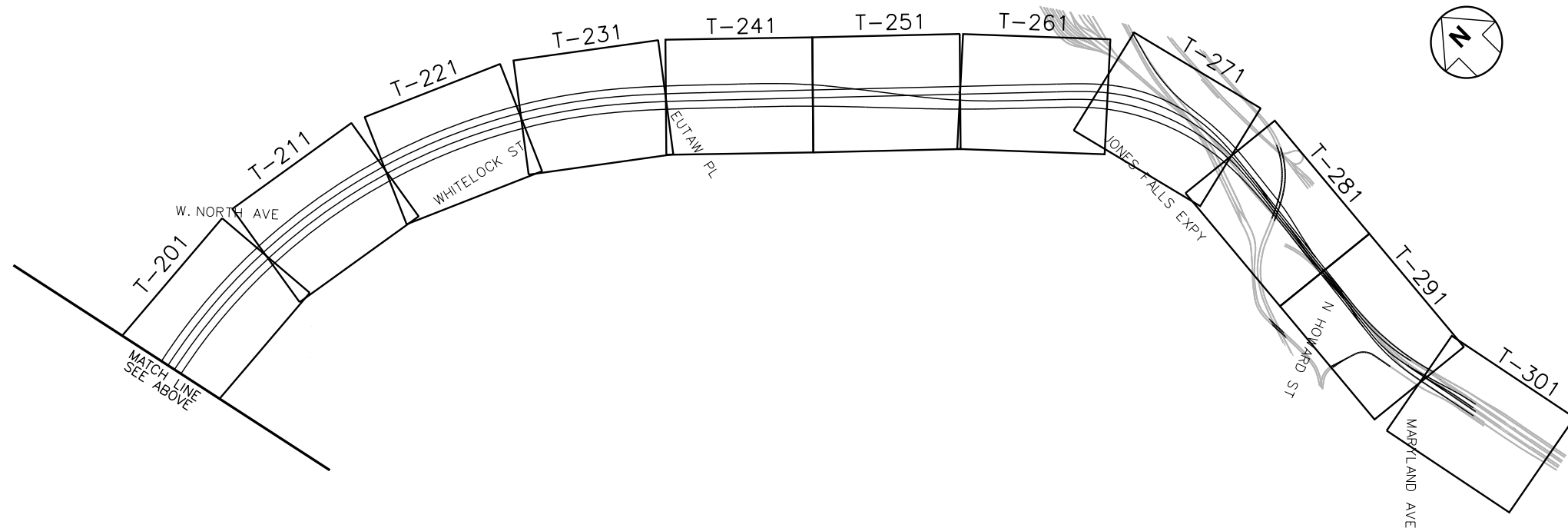
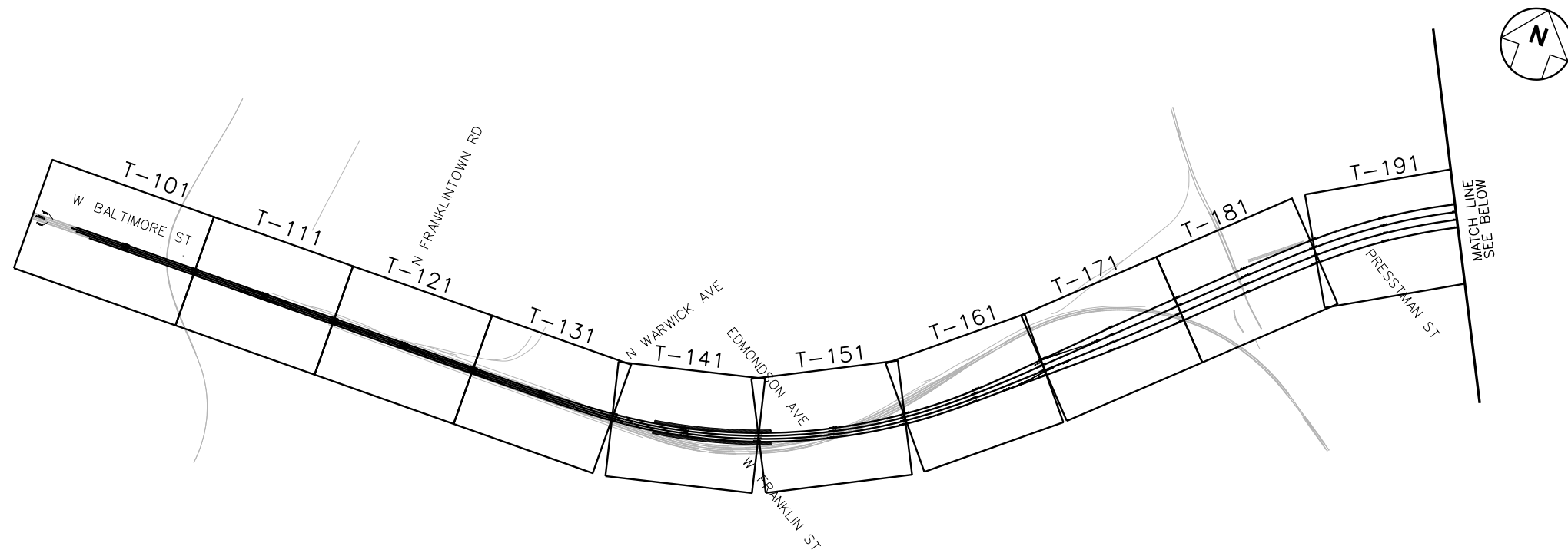


Appendix C



Plan and Profile Drawings



DATE: 09/28/2016
SCALE: 1"=100'
SHEET: 051 OF 051

No.	Revisions	Date	By

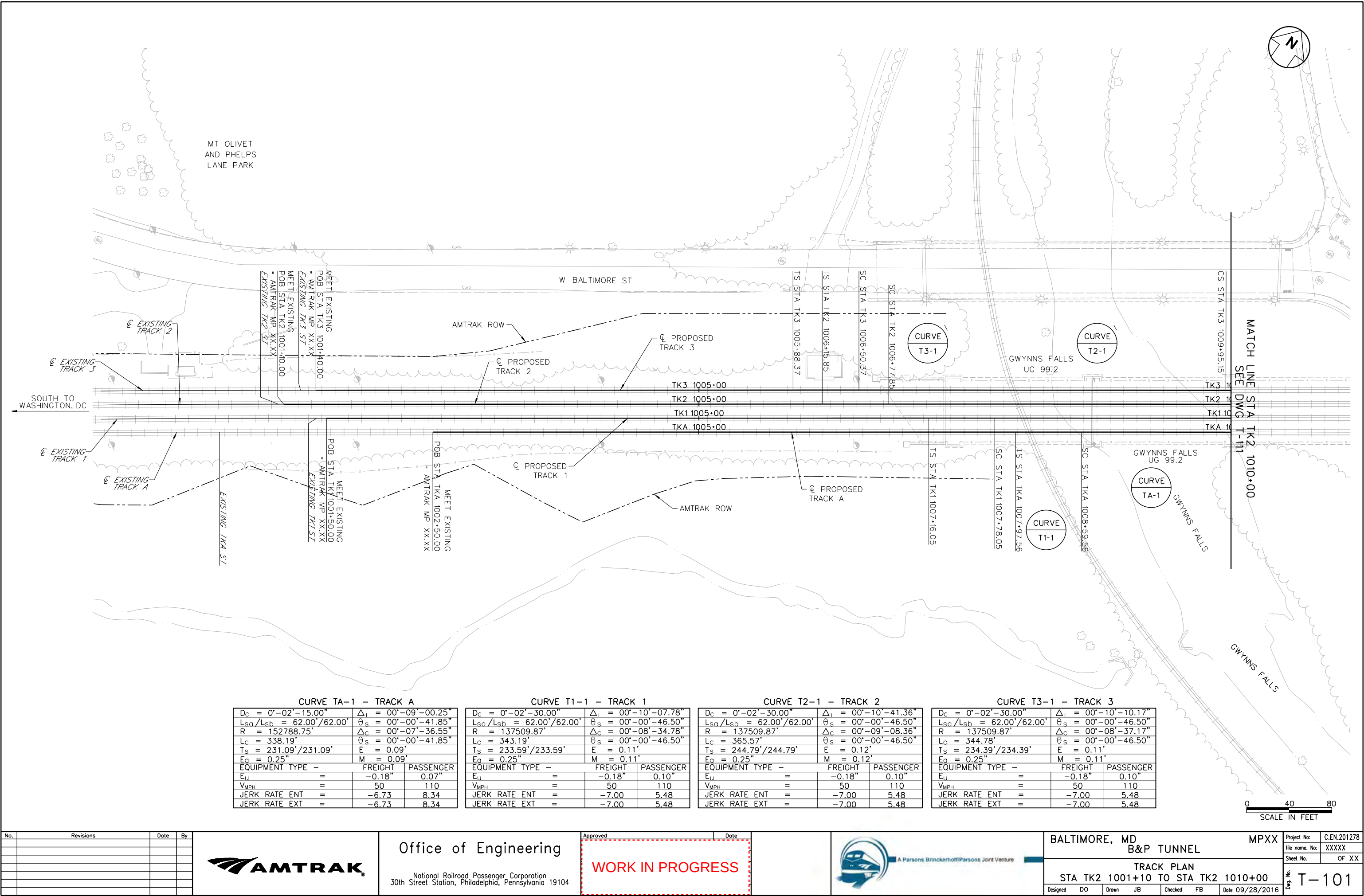


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BALTIMORE, MD B&P TUNNEL				MPXX	Project No: C.EN.201278
KEY MAP				file name: No: XXXXX	Sheet No: OF XX
				Desig. No: T-051	
Designed	DO	Drawn	JB	Checked	FB
				Date	09/28/2016



CURVE TA-1 - TRACK A				CURVE T1-1 - TRACK 1				CURVE T2-1 - TRACK 2				CURVE T3-1 - TRACK 3			
D _c = 0'-02'-15.00"	Δ _i = 00°-09'-00.25"			D _c = 0'-02'-30.00"	Δ _i = 00°-10'-07.78"			D _c = 0'-02'-30.00"	Δ _i = 00°-10'-41.36"			D _c = 0'-02'-30.00"	Δ _i = 00°-10'-10.17"		
L _{sq} /L _{sb} = 62.00'/62.00'	θ _s = 00°-00'-41.85"			L _{sq} /L _{sb} = 62.00'/62.00'	θ _s = 00°-00'-46.50"			L _{sq} /L _{sb} = 62.00'/62.00'	θ _s = 00°-00'-46.50"			L _{sq} /L _{sb} = 62.00'/62.00'	θ _s = 00°-00'-46.50"		
R = 152788.75'	Δ _c = 00°-07'-36.55"			R = 137509.87'	Δ _c = 00°-08'-34.78"			R = 137509.87'	Δ _c = 00°-09'-08.36"			R = 137509.87'	Δ _c = 00°-08'-37.17"		
L _c = 338.19'	θ _s = 00°-00'-41.85"			L _c = 343.19'	θ _s = 00°-00'-46.50"			L _c = 365.57'	θ _s = 00°-00'-46.50"			L _c = 344.78'	θ _s = 00°-00'-46.50"		
T _s = 231.09'/231.09'	E = 0.09'			T _s = 233.59'/233.59'	E = 0.11'			T _s = 244.79'/244.79'	E = 0.12'			T _s = 234.39'/234.39'	E = 0.11'		
E _g = 0.25"	M = 0.09'			E _g = 0.25"	M = 0.11'			E _g = 0.25"	M = 0.12'			E _g = 0.25"	M = 0.11'		
EQUIPMENT TYPE -	FREIGHT	PASSENGER		EQUIPMENT TYPE -	FREIGHT	PASSENGER		EQUIPMENT TYPE -	FREIGHT	PASSENGER		EQUIPMENT TYPE -	FREIGHT	PASSENGER	
E _u =	-0.18"	0.07"		E _u =	-0.18"	0.10"		E _u =	-0.18"	0.10"		E _u =	-0.18"	0.10"	
V _{MPH} =	50	110		V _{MPH} =	50	110		V _{MPH} =	50	110		V _{MPH} =	50	110	
JERK RATE ENT =	-6.73	8.34		JERK RATE ENT =	-7.00	5.48		JERK RATE ENT =	-7.00	5.48		JERK RATE ENT =	-7.00	5.48	
JERK RATE EXT =	-6.73	8.34		JERK RATE EXT =	-7.00	5.48		JERK RATE EXT =	-7.00	5.48		JERK RATE EXT =	-7.00	5.48	

0 40 80
SCALE IN FEET

No.	Revisions	Date	By



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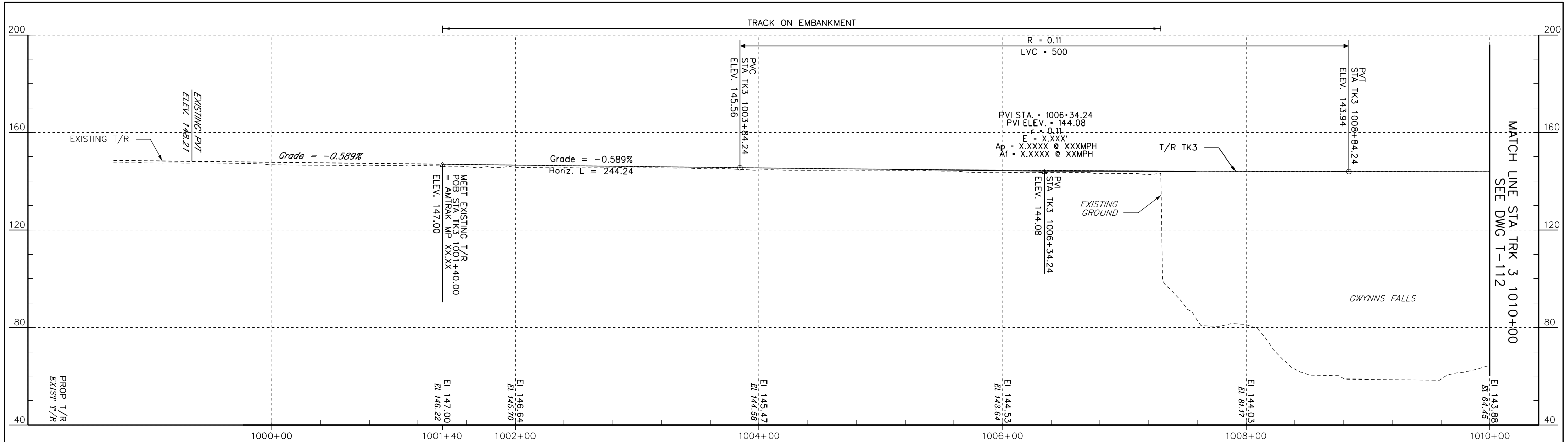
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Date

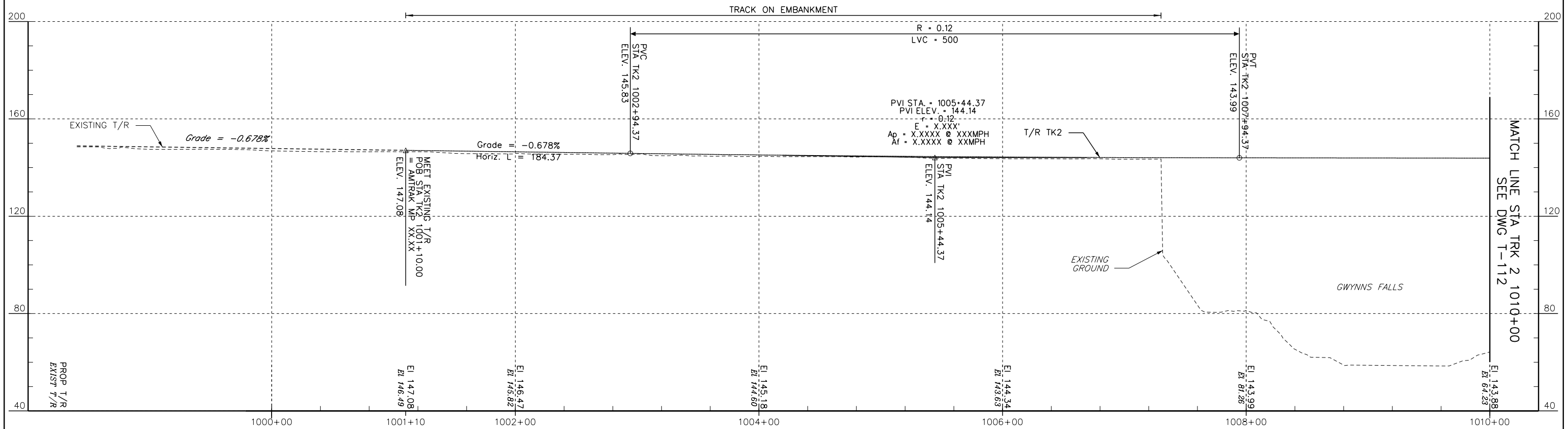
WORK IN PROGRESS



BALTIMORE, MD B&P TUNNEL		MPXX		Project No:	C.EN.201278
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Designed DO		Drawn JB		Sheet No:	OF XX
Checked FB		Date 09/28/2016		Dwg. No:	T-101



PROFILE - TRACK 3



PROFILE - TRACK 2



No.	Revisions	Date	By

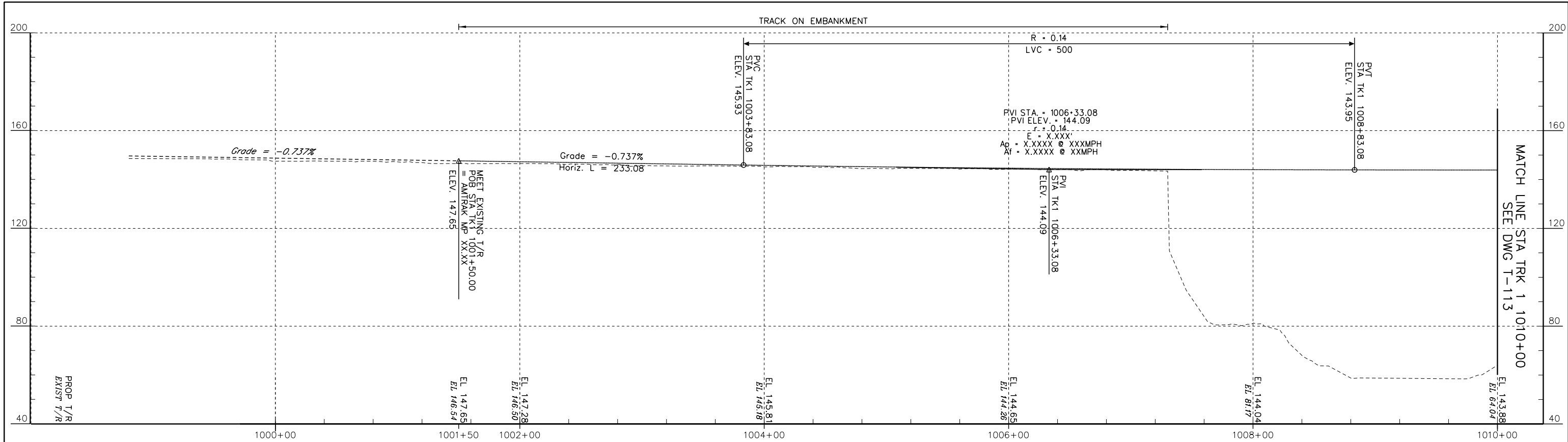


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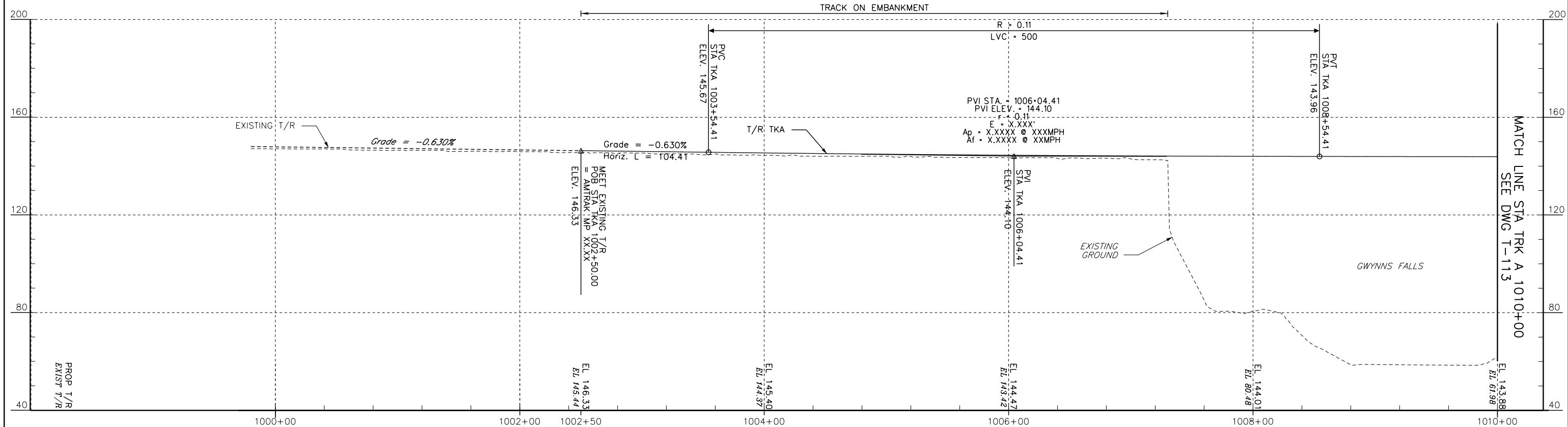
Approved
Date
WORK IN PROGRESS



BALTIMORE, MD B&P TUNNEL		MPXX	
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Designed DO	Drawn JB	Checked FB	Date 09/28/2016



PROFILE - TRACK 1



PROFILE - TRACK A



No.	Revisions	Date	By

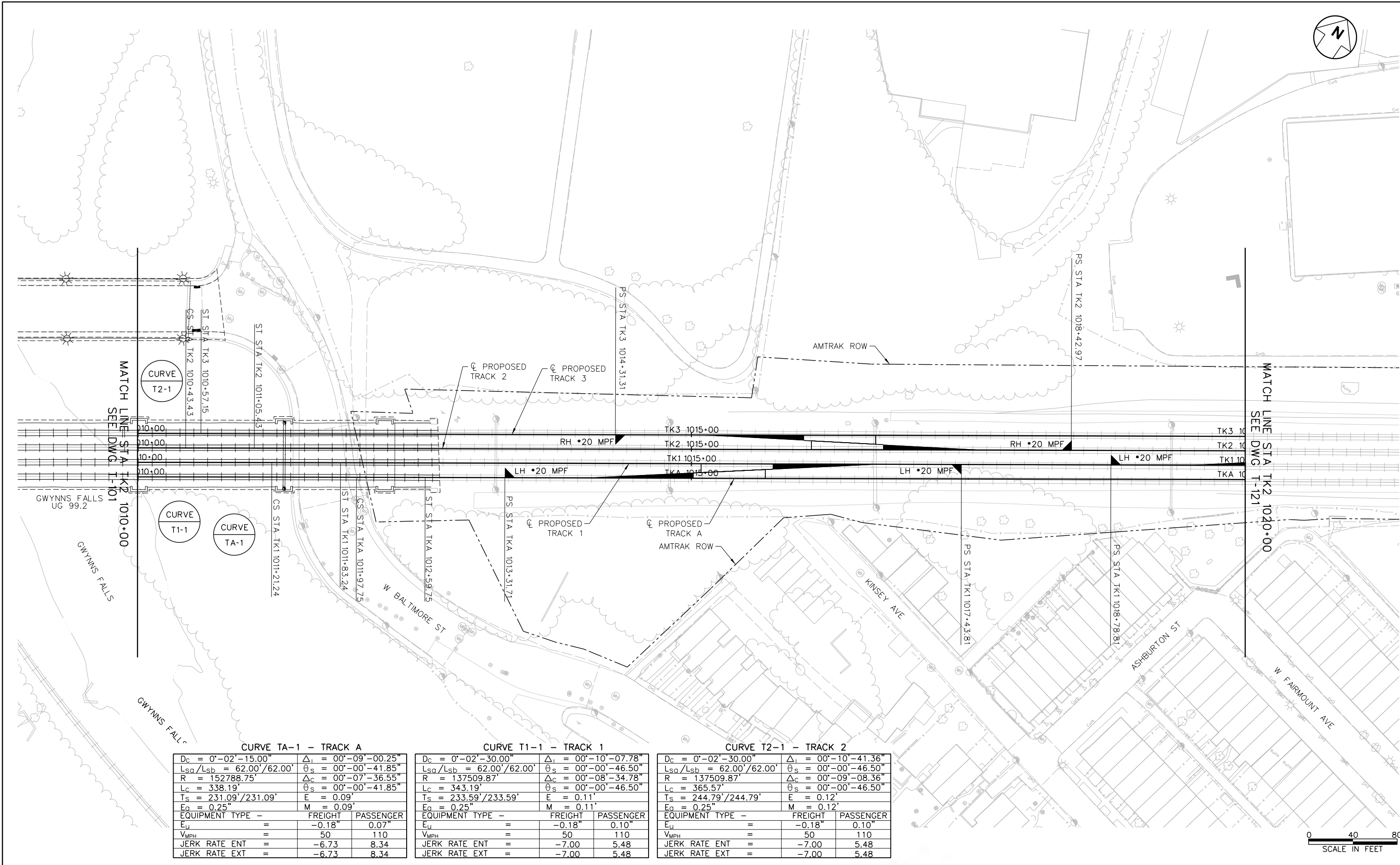


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Date



BALTIMORE, MD B&P TUNNEL				MPXX	Project No: C.EN.201278
PROFILES - TRACK A & TRACK 1 STA. 1000+00 TO STA. 1010+00					File name: No: XXXXX
Designed DO				Drawn JB	Sheet No: OF XX
Checked FB				Date 09/28/2016	Dwg. No: T-103



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Lsg/Lsb = 62.00'/62.00'	θs = 00°-00'-41.85"		
R = 152788.75'	Δc = 00°-07'-36.55"		
Lc = 338.19'	θs = 00°-00'-41.85"		
Ts = 231.09'/231.09'	E = 0.09'		
Ea = 0.25"	M = 0.09'		
EQUIPMENT TYPE -	FREIGHT	PASSENGER	
Eu =	-0.18"	0.07"	
VMPH =	50	110	
JERK RATE ENT =	-6.73	8.34	
JERK RATE EXT =	-6.73	8.34	

CURVE T1-1 - TRACK 1			
Dc = 0'-02'-30.00"	Δi = 00°-10'-07.78"		
Lsg/Lsb = 62.00'/62.00'	θs = 00°-00'-46.50"		
R = 137509.87'	Δc = 00°-08'-34.78"		
Lc = 343.19'	θs = 00°-00'-46.50"		
Ts = 233.59'/233.59'	E = 0.11'		
Ea = 0.25"	M = 0.11'		
EQUIPMENT TYPE -	FREIGHT	PASSENGER	
Eu =	-0.18"	0.10"	
VMPH =	50	110	
JERK RATE ENT =	-7.00	5.48	
JERK RATE EXT =	-7.00	5.48	

CURVE T2-1 - TRACK 2			
Dc = 0'-02'-30.00"	Δi = 00°-10'-41.36"		
Lsg/Lsb = 62.00'/62.00'	θs = 00°-00'-46.50"		
R = 137509.87'	Δc = 00°-09'-08.36"		
Lc = 365.57'	θs = 00°-00'-46.50"		
Ts = 244.79'/244.79'	E = 0.12'		
Ea = 0.25"	M = 0.12'		
EQUIPMENT TYPE -	FREIGHT	PASSENGER	
Eu =	-0.18"	0.10"	
VMPH =	50	110	
JERK RATE ENT =	-7.00	5.48	
JERK RATE EXT =	-7.00	5.48	

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MPXX

Project No: C.EN.201278

file name: No: XXXXX

Sheet No: OF XX

Desig. No: T-111

TRACK PLAN

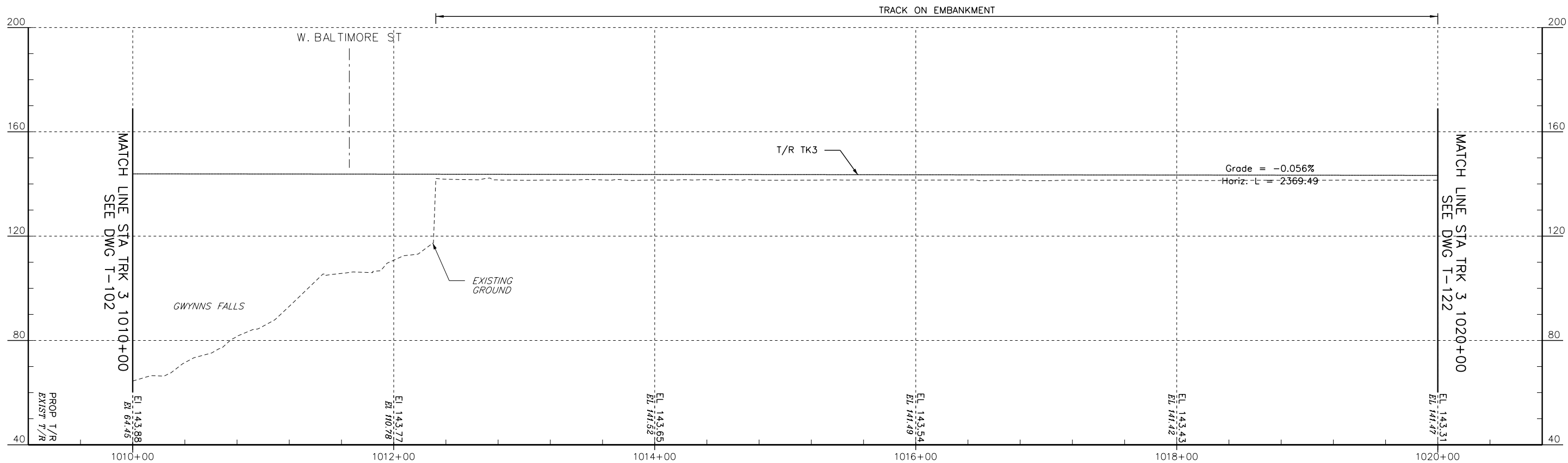
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Designed DO

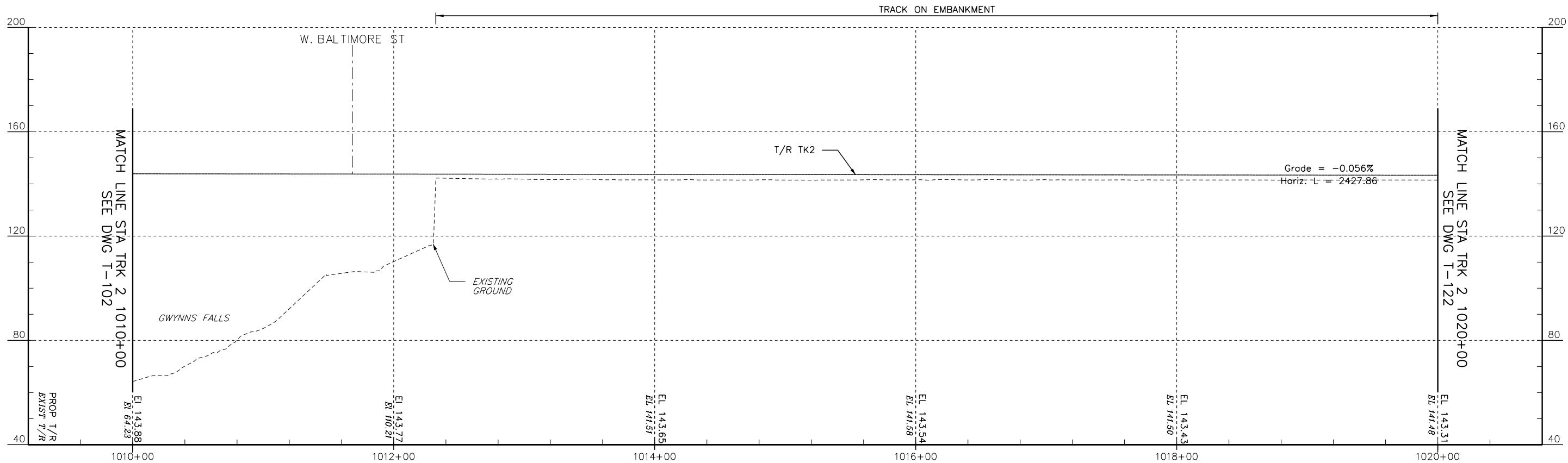
Drawn JB

Checked FB

Date 09/28/2016



PROFILE - TRACK 3



PROFILE - TRACK 2



No.	Revisions	Date	By



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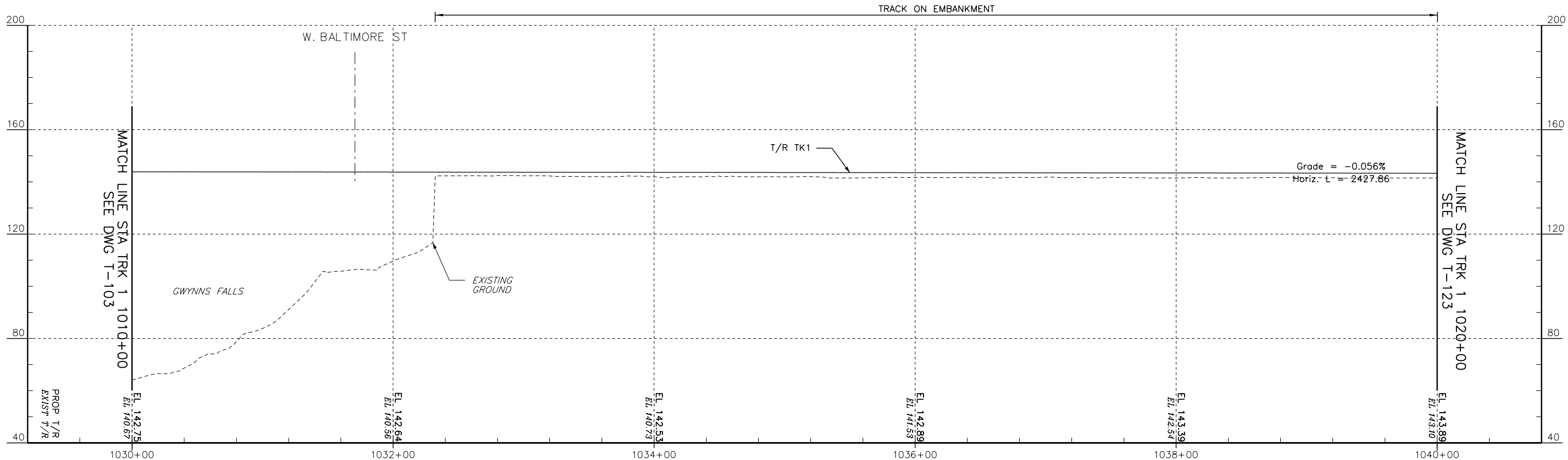
Approved

WORK IN PROGRESS

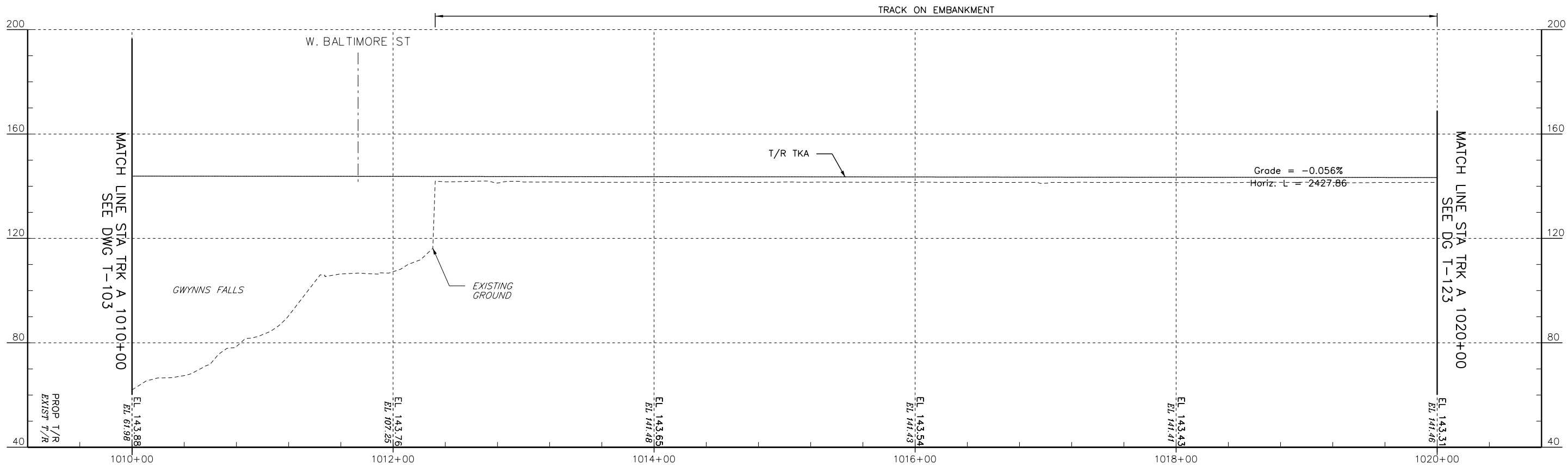
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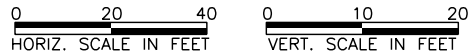
BALTIMORE, MD B&P TUNNEL		MPXX	Project No: C.EN.201278
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Designed DO		Drawn JB	Sheet No: OF XX
Checked FB		Date 09/28/2016	Dwg. No: T-112



PROFILE - TRACK 1



PROFILE - TRACK A



No.	Revisions	Date	By

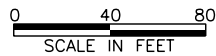
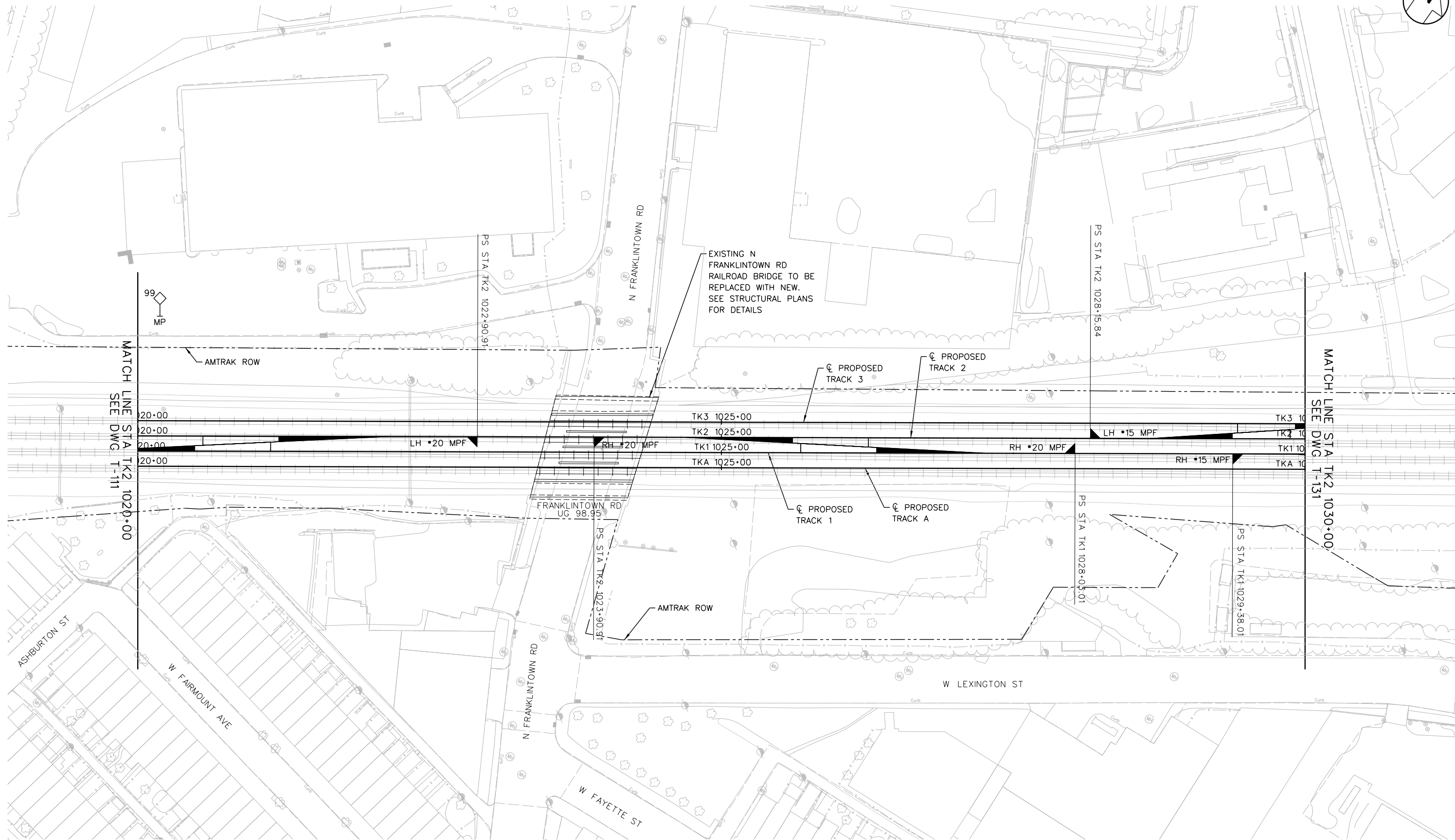


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PROFILES - TRACK A & TRACK 1 STA. 1010+00 TO STA. 1020+00						file name:	XXXXX
						Sheet No.	OF XX
						Dwg. No.	T-113
Designed	DO	Drawn	JB	Checked	FB	Date	09/28/2016



No.	Revisions	Date	By



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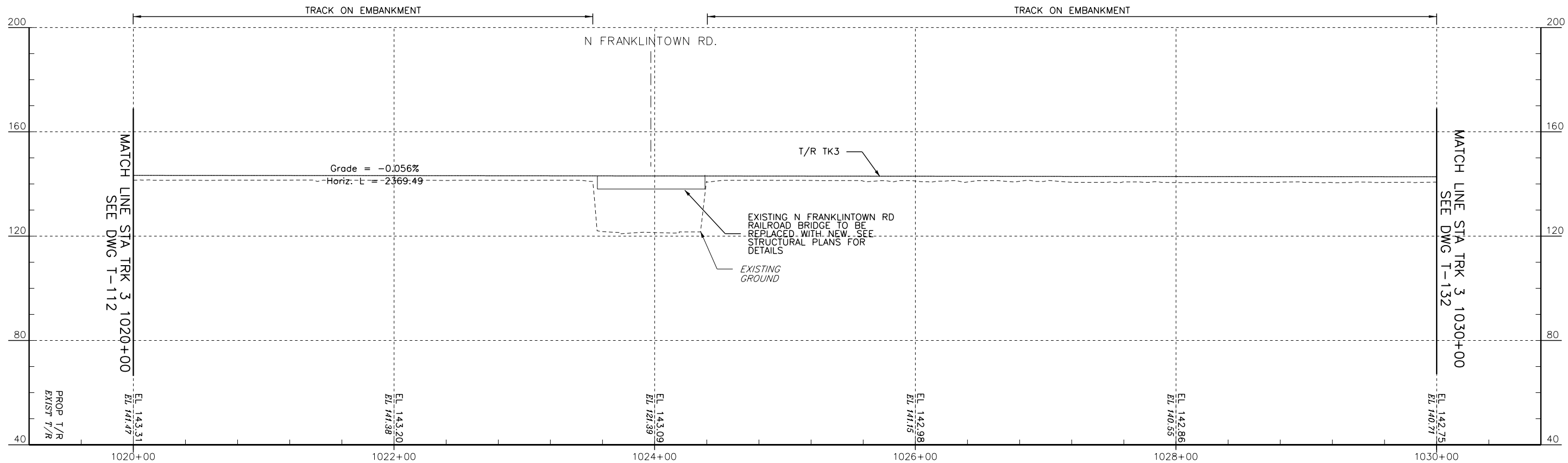
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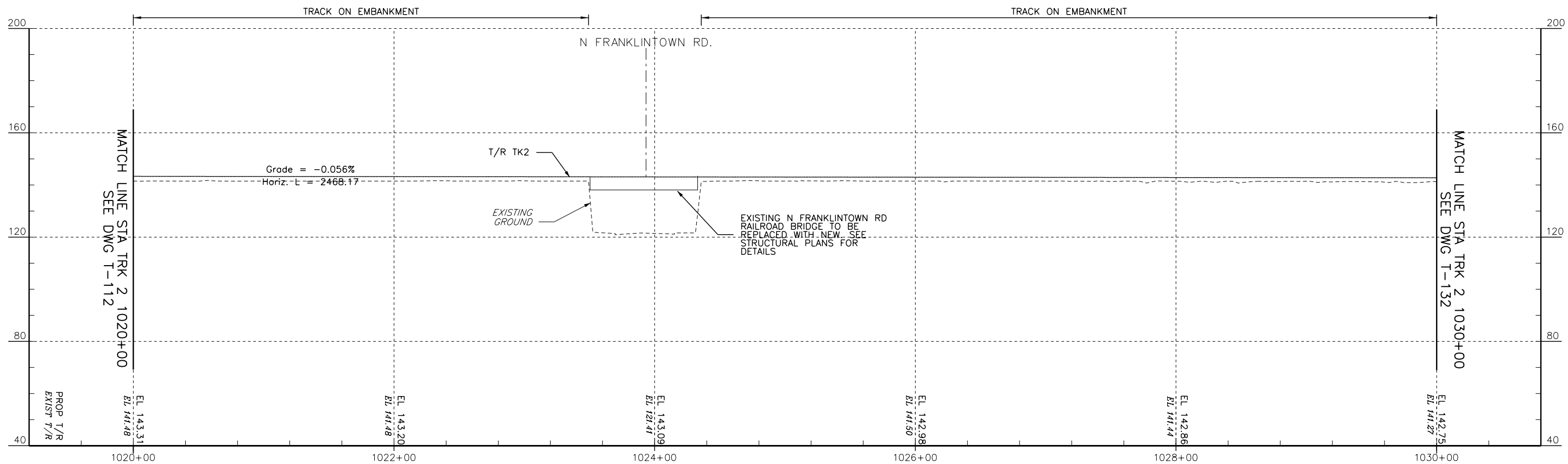
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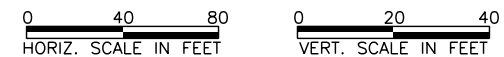
BALTIMORE, MD B&P TUNNEL		MPXX	Project No: C.EN.201278
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Designed DO	Drawn JB	Checked FB	Date 09/28/2016
Dwg. No. T-121			



PROFILE - TRACK 3



PROFILE - TRACK 2



No.	Revisions	Date	By



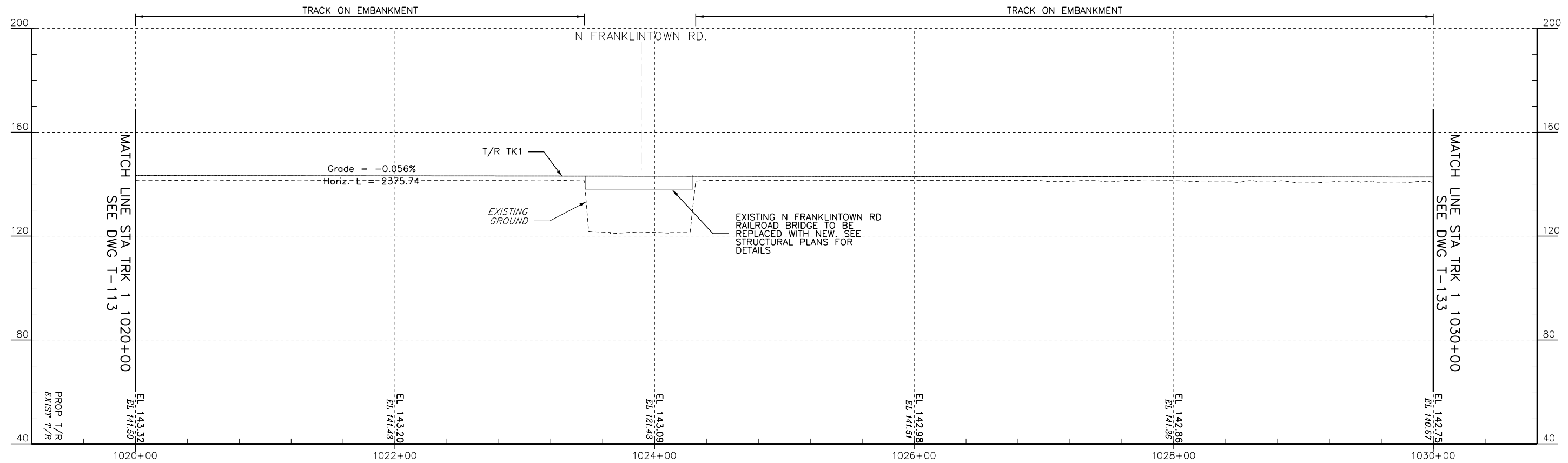
Office of Engineering

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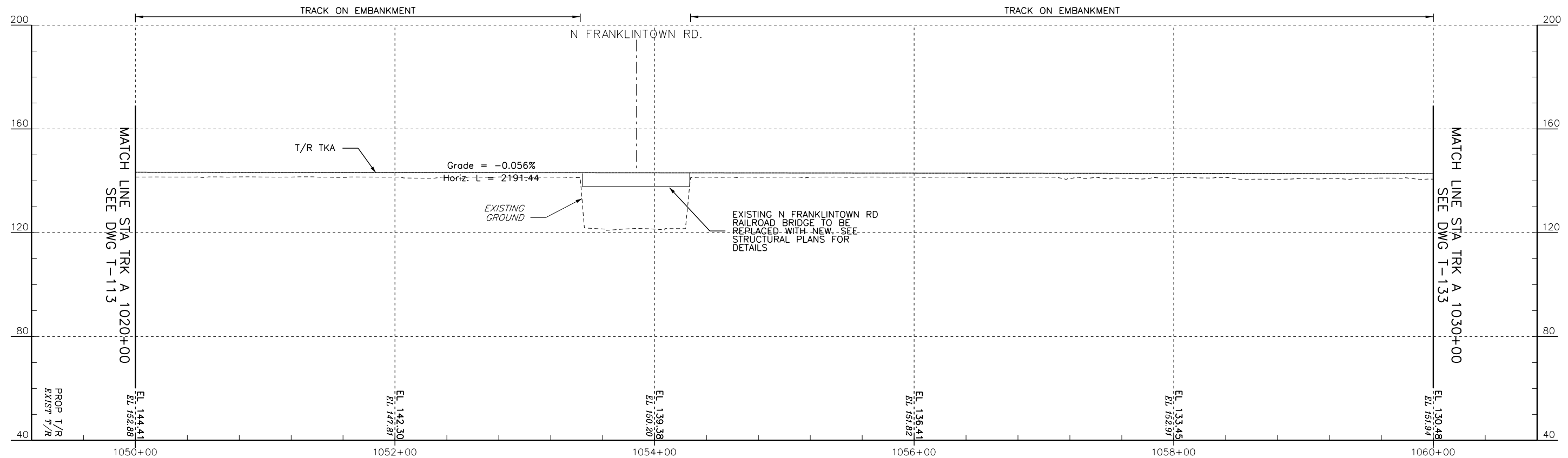
Approved	Date
WORK IN PROGRESS	



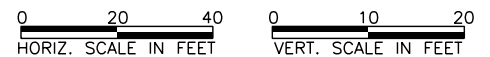
BALTIMORE, MD					MPXX		Project No: C.EN.201278	
B&P TUNNEL							file name: No: XXXXX	
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Designed	DO	Drawn	JB	Checked	FB	Date 09/28/2016		



PROFILE - TRACK 1



PROFILE - TRACK A



No.	Revisions	Date	By



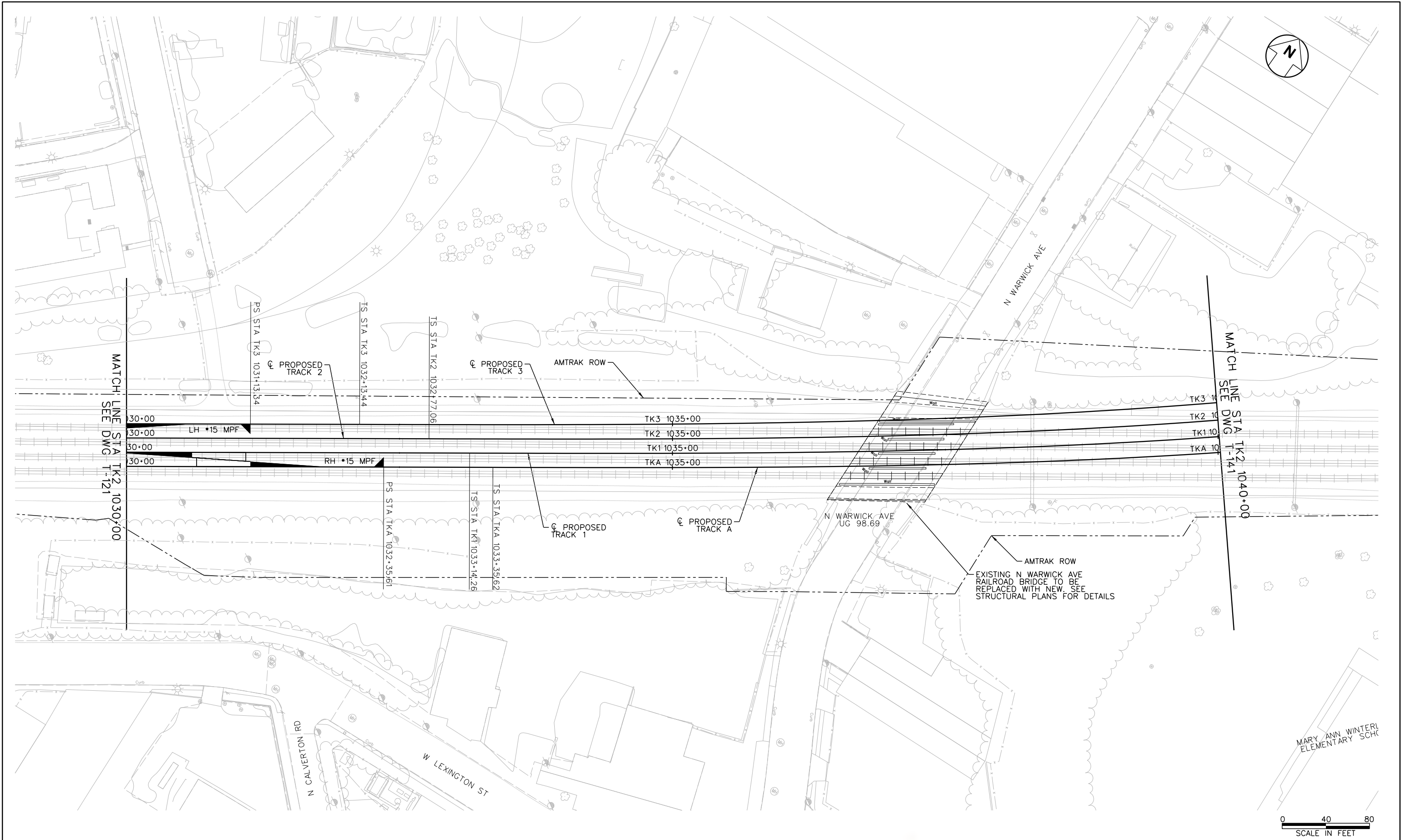
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BALTIMORE, MD B&P TUNNEL		MPXX	Project No: C.EN.201278
PROFILES - TRACK A & TRACK 1 STA. 1020+00 TO STA. 1030+00			file name: No: XXXXX
Designed DO		Drawn JB	Sheet No: OF XX
Checked FB		Date 09/28/2016	Dwg. No: T-123



No.	Revisions	Date	By

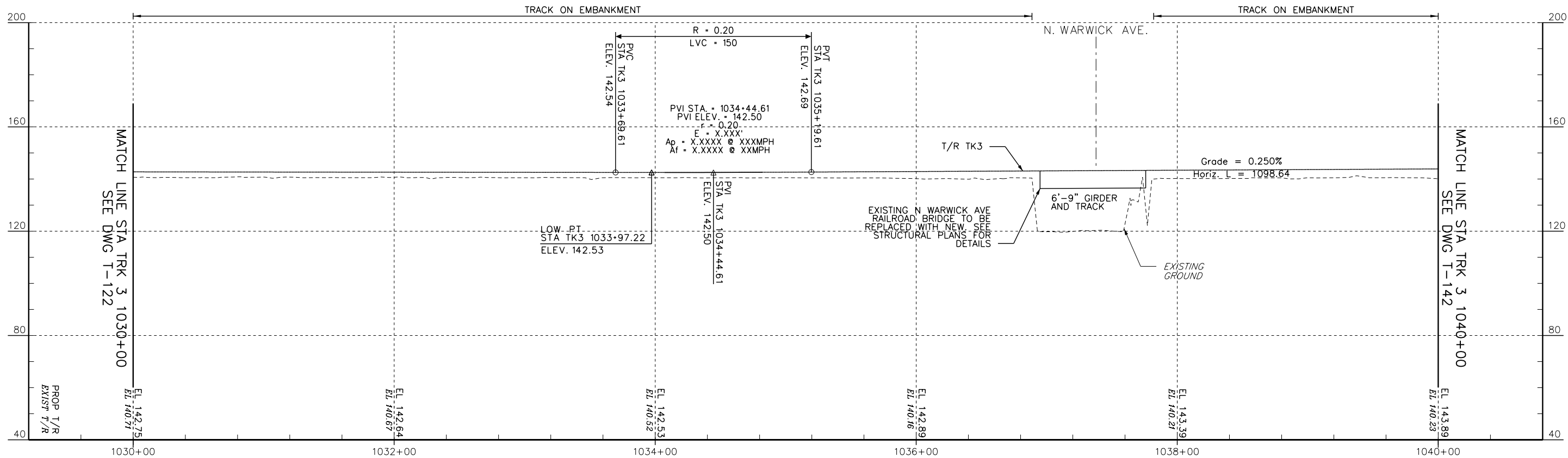


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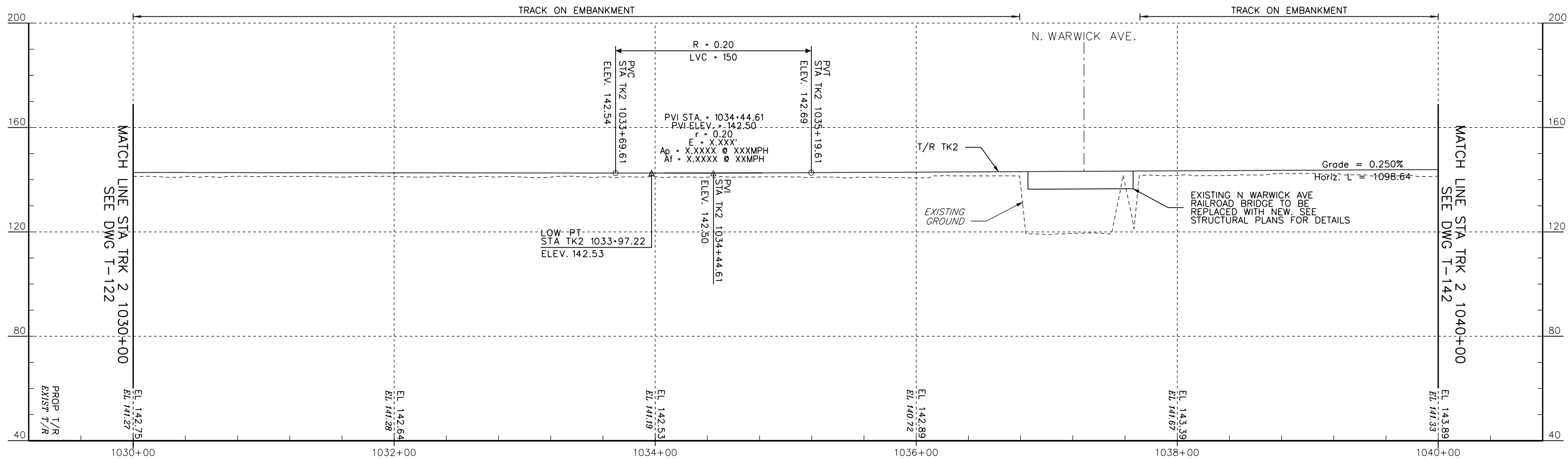
Approved
WORK IN PROGRESS
Date



BALTIMORE, MD B&P TUNNEL		MPXX	Project No: C.EN.201278
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Designed DO	Drawn JB	Checked FB	Date 09/28/2016
Dwg. No. T-131			



PROFILE - TRACK 3



PROFILE - TRACK 2



No.	Revisions	Date	By

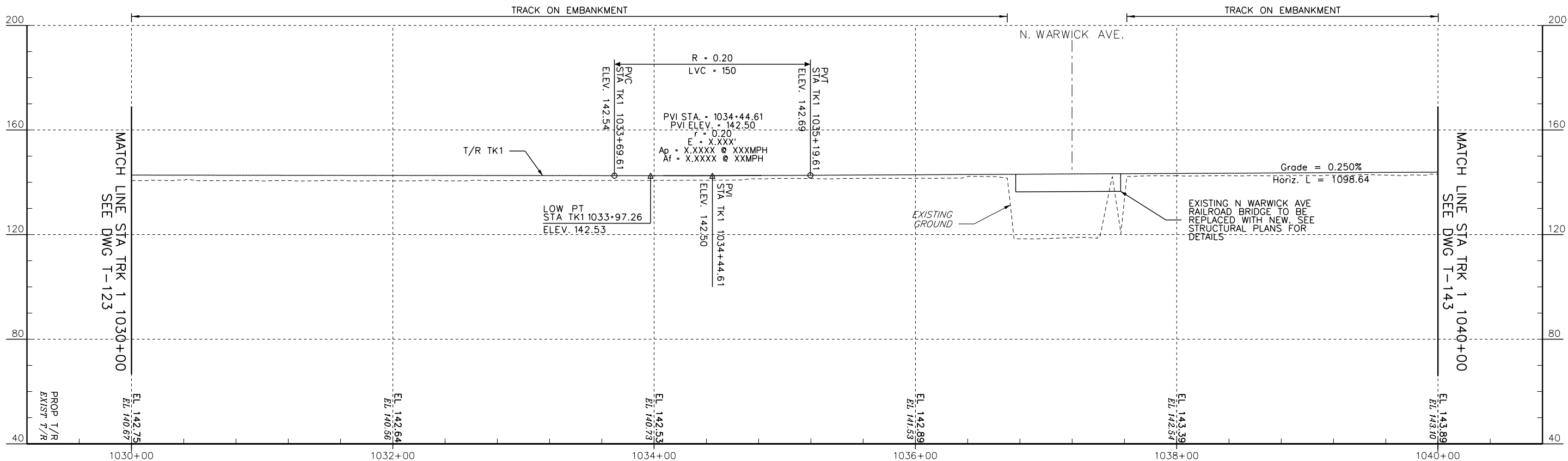


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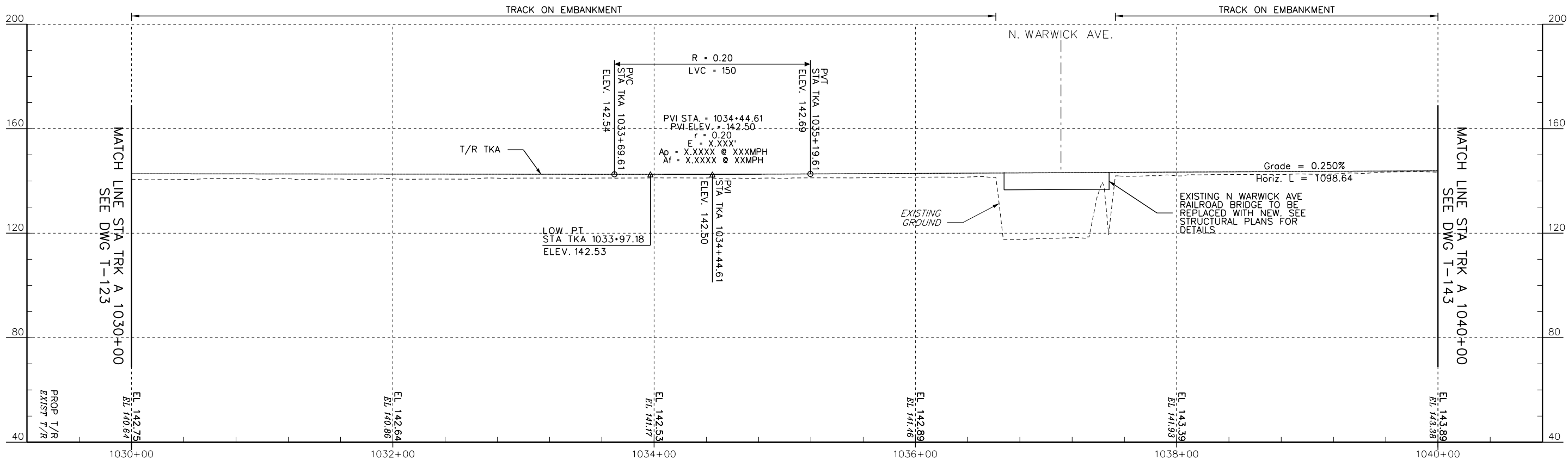
Approved
WORK IN PROGRESS
Date



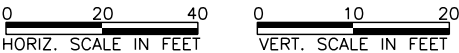
BALTIMORE, MD B&P TUNNEL		MPXX	Project No: C.EN.201278
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		Drawn JB	Sheet No: OF XX
		Checked FB	Dwg. No: T-132
		Date 09/28/2016	



PROFILE - TRACK 1



PROFILE - TRACK A



No.	Revisions	Date	By

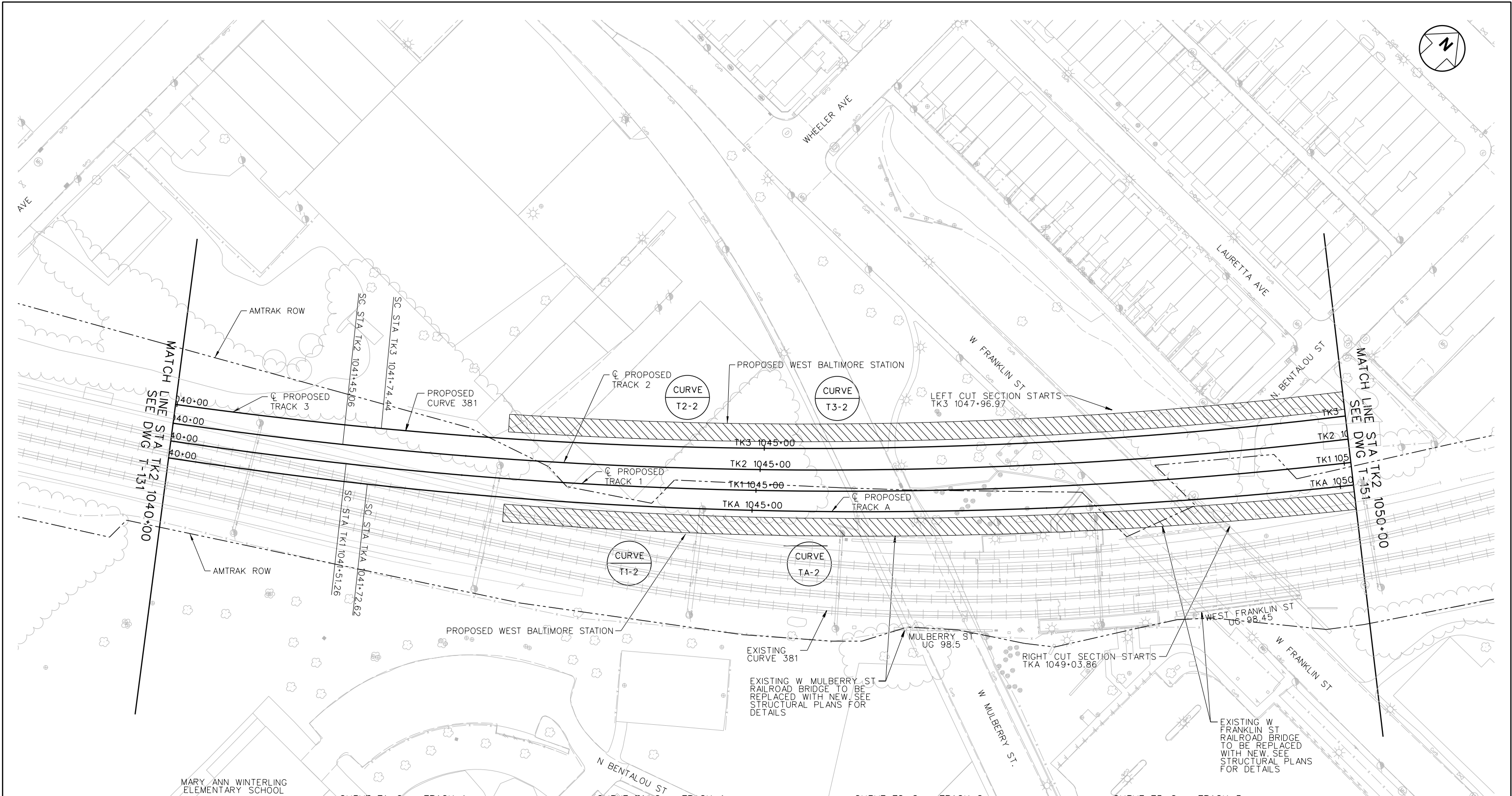


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Date



BALTIMORE, MD B&P TUNNEL				MPXX	Project No:	C.EN.201278
PROFILES - TRACK A & TRACK 1 STA. 1030+00 TO STA. 1040+00				Desig. No.	file name:	XXXXX
					Sheet No.	OF XX
Designed	DO	Drawn	JB	Checked	FB	Date 09/28/2016



CURVE TA-2 - TRACK A			
Dc = 1'-30'-00.00"	Δi = 40'-01'-38.62"		
Lsq/Lsb = 837.00'/372.00'	θs = 06'-16'-38.35"		
R = 3819.83'	Δc = 30'-57'-36.56"		
Lc = 2064.07'	θs = 02'-47'-23.71"		
Ts = 1802.92'/1587.40'	E = 143.79'		
Ea = 1.00"	M = 138.57'		
EQUIPMENT TYPE -	FREIGHT	PASSENGER	
Eu =	1.13"	3.44"	
VMPH =	45	65	
JERK RATE ENT =	16.52	3.75	
JERK RATE EXT =	7.34	1.67	

CURVE T1-2 - TRACK 1			
Dc = 1'-30'-00.00"	Δi = 41'-45'-23.84"		
Lsq/Lsb = 837.00'/837.00'	θs = 06'-16'-38.35"		
R = 3819.83'	Δc = 29'-12'-07.13"		
Lc = 1946.85'	θs = 06'-16'-38.35"		
Ts = 1878.24'/1878.24'	E = 127.48'		
Ea = 5.50"	M = 123.36'		
EQUIPMENT TYPE -	FREIGHT	PASSENGER	
Eu =	-3.37"	5.00"	
VMPH =	45	100	
JERK RATE ENT =	-5.51	1.67	
JERK RATE EXT =	-5.51	1.67	

CURVE T2-2 - TRACK 2			
Dc = 1'-30'-00.00"	Δi = 43'-13'-25.12"		
Lsq/Lsb = 868.00'/837.00'	θs = 06'-30'-35.33"		
R = 3819.83'	Δc = 30'-26'-11.43"		
Lc = 2029.16'	θs = 06'-16'-38.35"		
Ts = 1949.52'/1935.49'	E = 138.82'		
Ea = 5.50"	M = 133.95'		
EQUIPMENT TYPE -	FREIGHT	PASSENGER	
Eu =	-2.88"	5.00"	
VMPH =	50	100	
JERK RATE ENT =	-6.04	1.74	
JERK RATE EXT =	-5.82	1.67	

CURVE T3-2 - TRACK 3			
Dc = 1'-30'-00.00"	Δi = 44'-32'-22.33"		
Lsq/Lsb = 961.00'/372.00'	θs = 07'-12'-26.26"		
R = 137509.87'	Δc = 34'-32'-32.26"		
Lc = 2302.89'	θs = 02'-47'-24.71"		
Ts = 2036.44'/1763.08'	E = 180.37'		
Ea = 1.00"	M = 172.23'		
EQUIPMENT TYPE -	FREIGHT	PASSENGER	
Eu =	1.13"	3.44"	
VMPH =	45	65	
JERK RATE ENT =	18.97	4.30	
JERK RATE EXT =	7.34	1.67	

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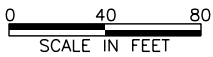
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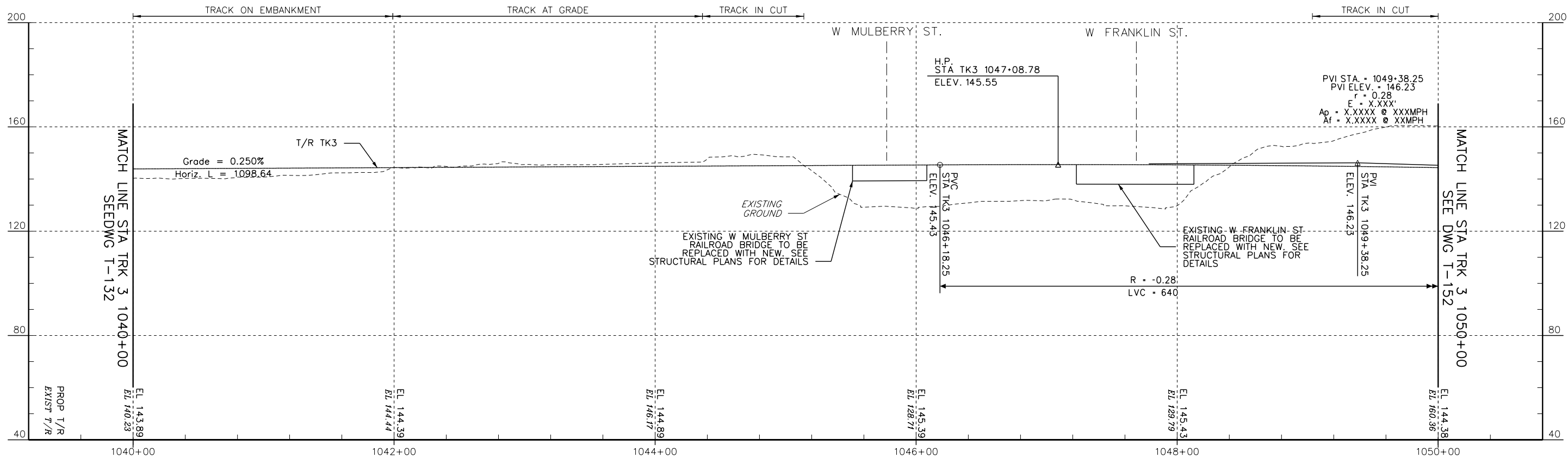
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MPXX

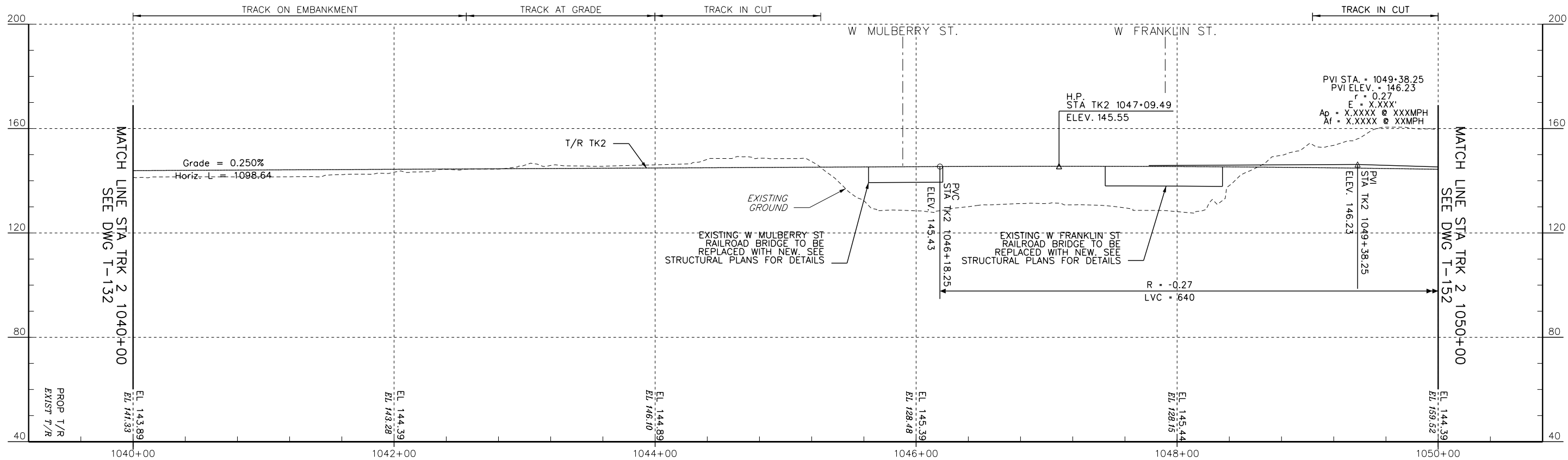
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Dwg. No. T-141





PROFILE - TRACK 3



PROFILE - TRACK 2



No.	Revisions	Date	By

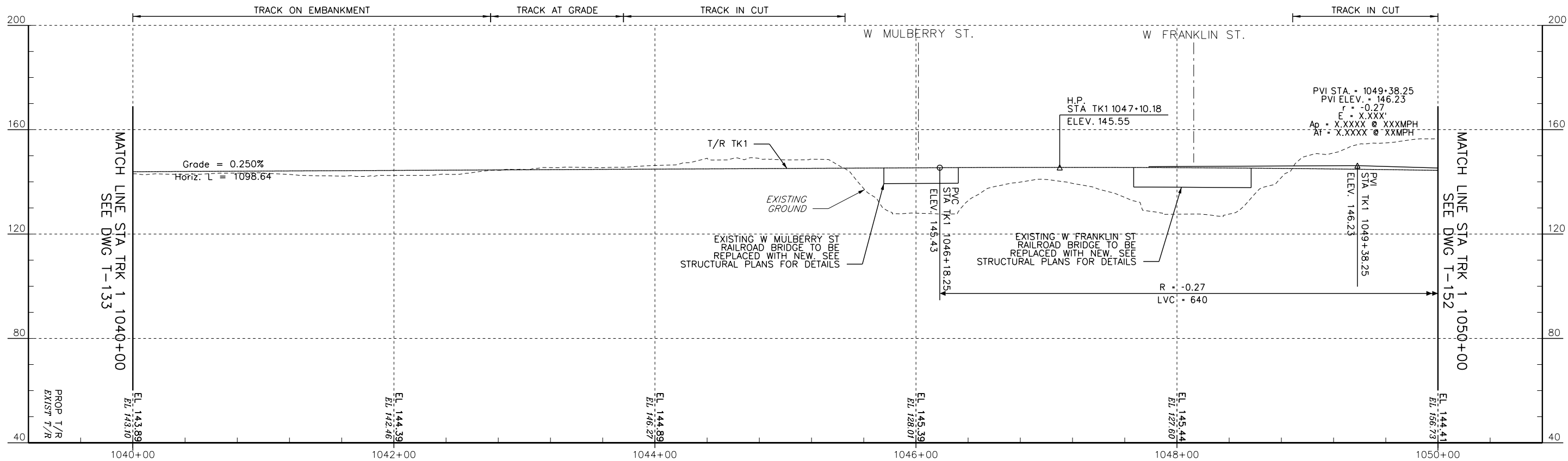


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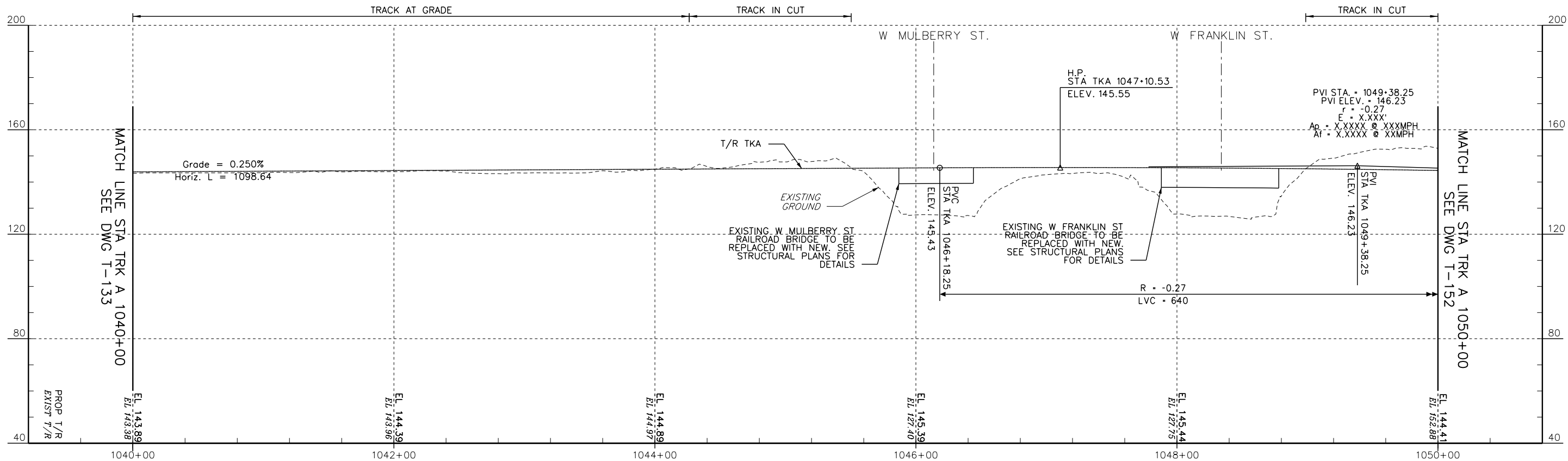
Approved
WORK IN PROGRESS
Date



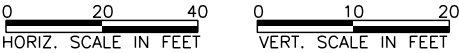
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B&P TUNNEL							file name: No: XXXXX	
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Designed	DO	Drawn	JB	Checked	FB	Date 09/28/2016		



PROFILE — TRACK 1



PROFILE — TRACK A



No.	Revisions	Date	By

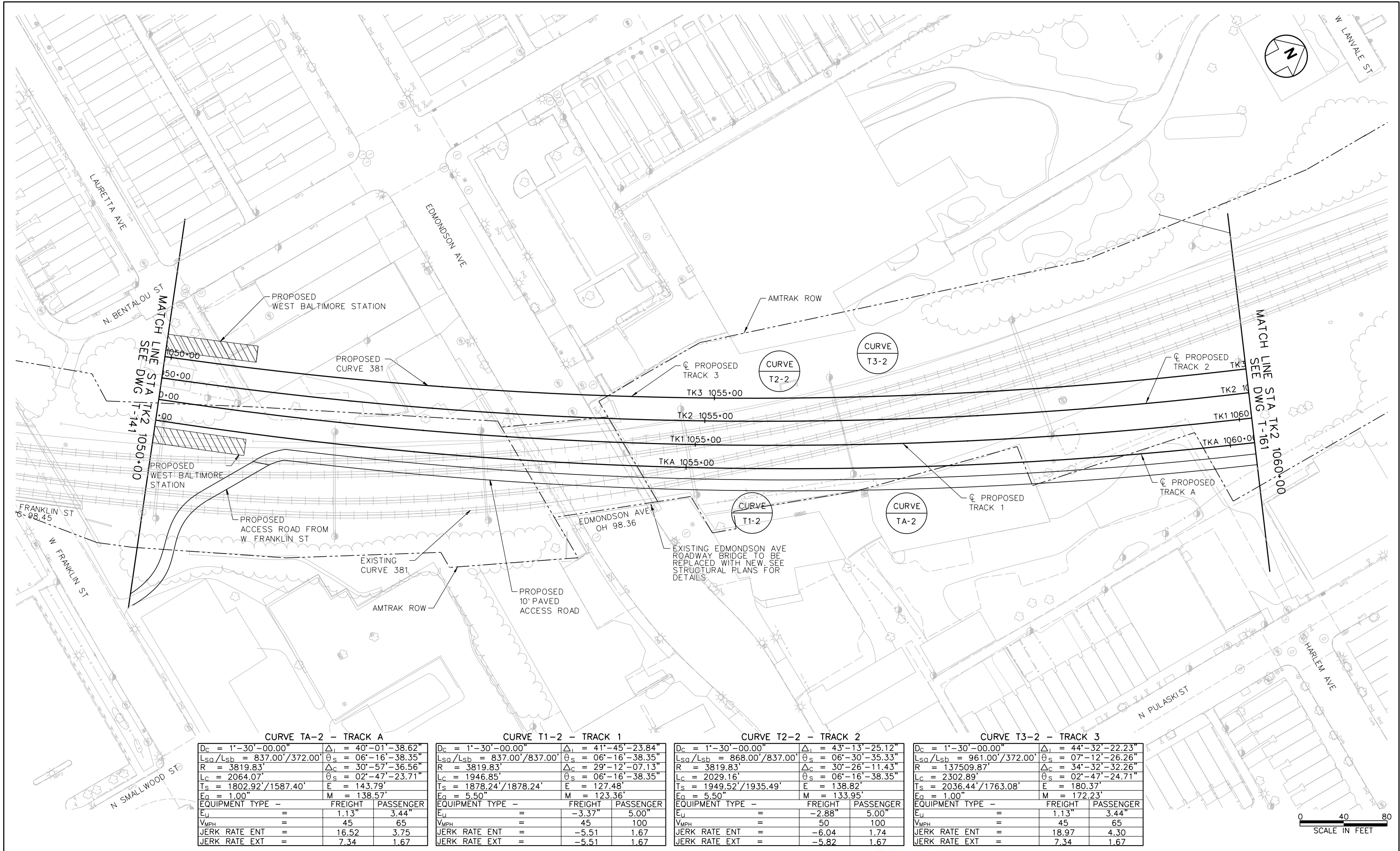


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BALTIMORE, MD B&P TUNNEL		MPXX	Project No: C.EN.201278
PROFILES — TRACK A & TRACK 1 STA. 1040+00 TO STA. 1050+00		Designed DO	File name: No: XXXXX
Drawn JB		Checked FB	Sheet No: OF XX
Date 09/28/2016		Dwg. No: T-143	



CURVE TA-2 - TRACK A			
Dc = 1'-30'-00.00"	Δi = 40'-01'-38.62"		
Lsq/Lsb = 837.00'/372.00'	θs = 06'-16'-38.35"		
R = 3819.83'	Δc = 30'-57'-36.56"		
Lc = 2064.07'	θs = 02'-47'-23.71"		
Ts = 1802.92'/1587.40'	E = 143.79'		
Eo = 1.00"	M = 138.57'		
EQUIPMENT TYPE -	FREIGHT	PASSENGER	
Eu =	1.13"	3.44"	
VMPH =	45	65	
JERK RATE ENT =	16.52	3.75	
JERK RATE EXT =	7.34	1.67	

CURVE T1-2 - TRACK 1			
Dc = 1'-30'-00.00"	Δi = 41'-45'-23.84"		
Lsq/Lsb = 837.00'/837.00'	θs = 06'-16'-38.35"		
R = 3819.83'	Δc = 29'-12'-07.13"		
Lc = 1946.85'	θs = 06'-16'-38.35"		
Ts = 1878.24'/1878.24'	E = 127.48'		
Eo = 5.50"	M = 123.36'		
EQUIPMENT TYPE -	FREIGHT	PASSENGER	
Eu =	-3.37"	5.00"	
VMPH =	45	100	
JERK RATE ENT =	-5.51	1.67	
JERK RATE EXT =	-5.51	1.67	

CURVE T2-2 - TRACK 2			
Dc = 1'-30'-00.00"	Δi = 43'-13'-25.12"		
Lsq/Lsb = 868.00'/837.00'	θs = 06'-30'-35.33"		
R = 3819.83'	Δc = 30'-26'-11.43"		
Lc = 2029.16'	θs = 06'-16'-38.35"		
Ts = 1949.52'/1935.49'	E = 138.82'		
Eo = 5.50"	M = 133.95'		
EQUIPMENT TYPE -	FREIGHT	PASSENGER	
Eu =	-2.88"	5.00"	
VMPH =	50	100	
JERK RATE ENT =	-6.04	1.74	
JERK RATE EXT =	-5.82	1.67	

CURVE T3-2 - TRACK 3			
Dc = 1'-30'-00.00"	Δi = 44'-32'-22.23"		
Lsq/Lsb = 961.00'/372.00'	θs = 07'-12'-26.26"		
R = 137509.87'	Δc = 34'-32'-32.26"		
Lc = 2302.89'	θs = 02'-47'-24.71"		
Ts = 2036.44'/1763.08'	E = 180.37'		
Eo = 1.00"	M = 172.23'		
EQUIPMENT TYPE -	FREIGHT	PASSENGER	
Eu =	1.13"	3.44"	
VMPH =	45	65	
JERK RATE ENT =	18.97	4.30	
JERK RATE EXT =	7.34	1.67	

No.	Revisions	Date	By

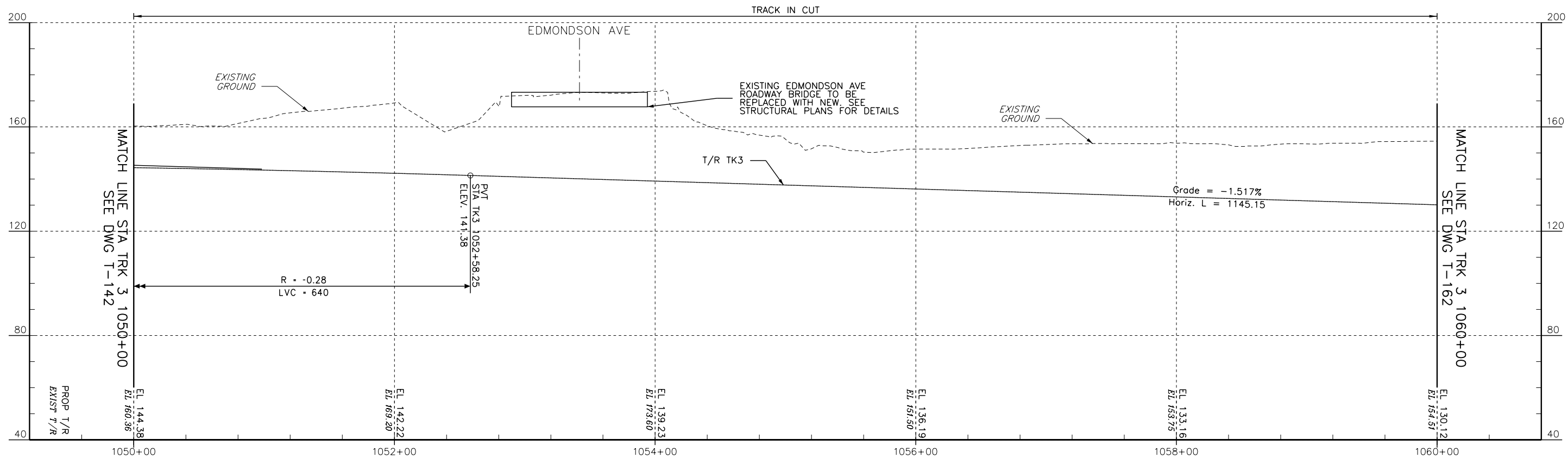


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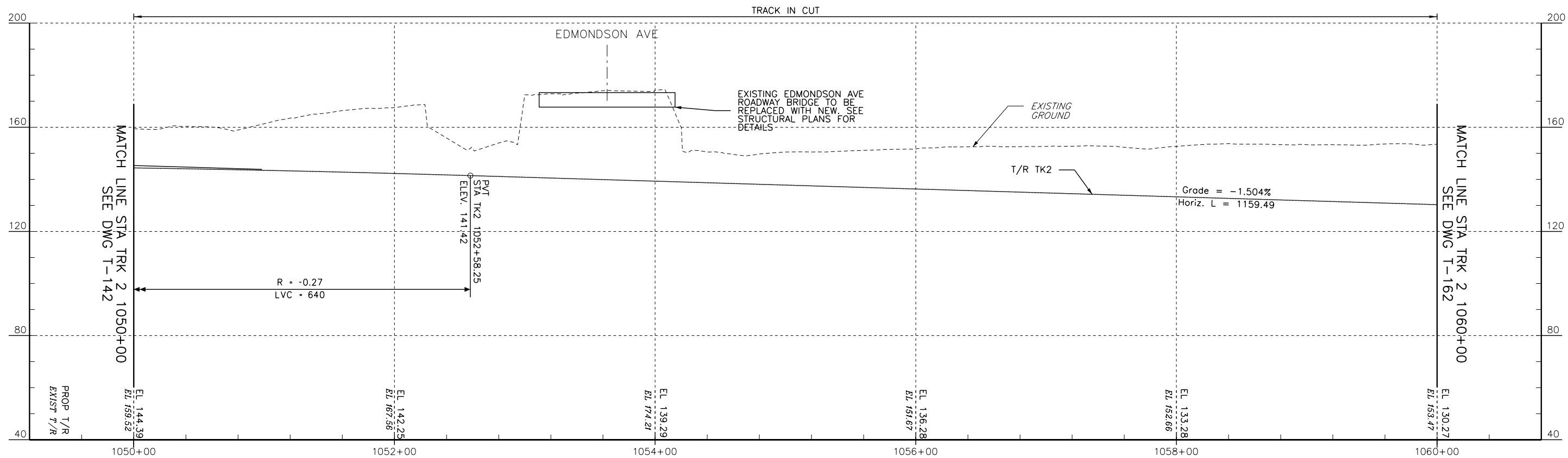
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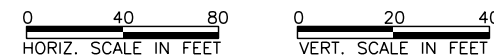
BALTIMORE, MD B&P TUNNEL		MPXX	Project No: C.EN.201278
TRACK PLAN			File name: No: XXXXX
STA TK2 1050+00 TO STA TK2 1060+00			Sheet No: OF XX
Designed DO	Drawn JB	Checked FB	Date 09/28/2016
Dwg. No. T-151			



PROFILE - TRACK 3



PROFILE - TRACK 2



No.	Revisions	Date	By



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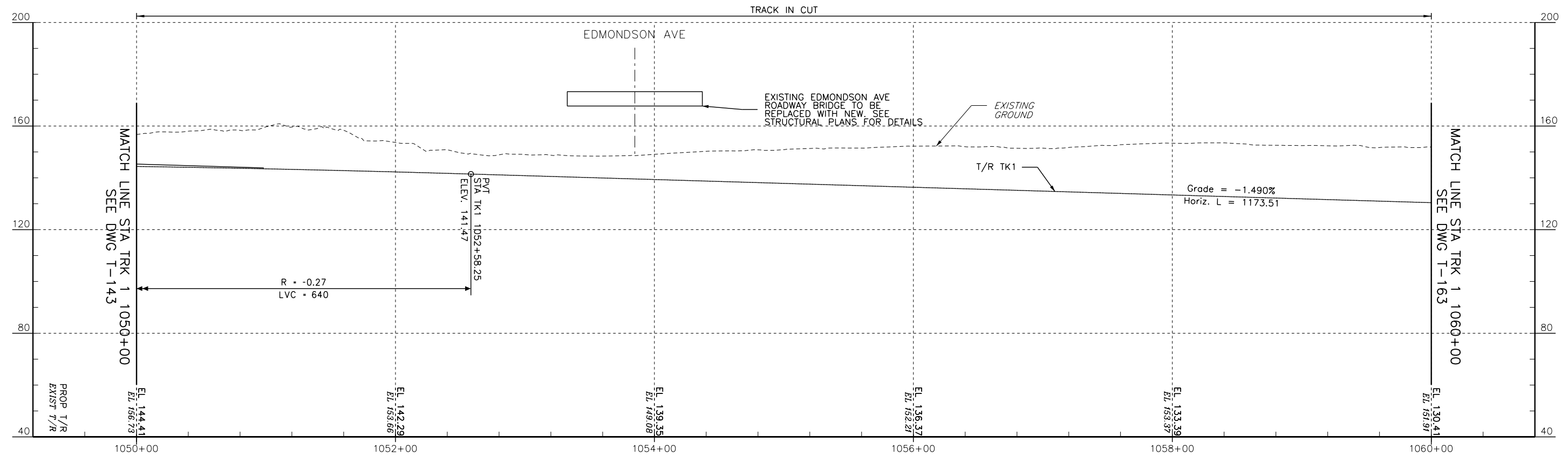
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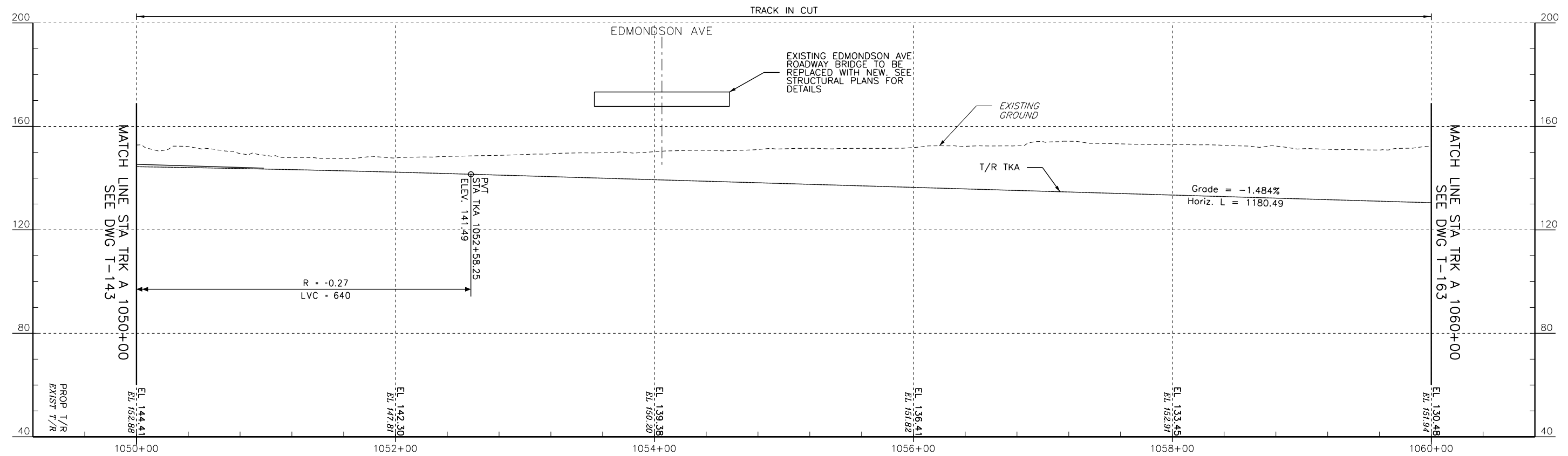
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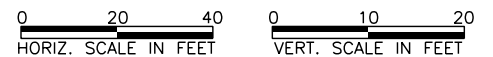
BALTIMORE, MD B&P TUNNEL		MPXX	Project No: C.EN.201278
PROFILES - TRACK 2 & TRACK 3 STA. 1050+00 TO STA. 1060+00			file name: No: XXXXX
Designed DO		Drawn JB	Sheet No: OF XX
Checked FB		Date 09/28/2016	Dwg. No: T-152



PROFILE - TRACK 1



PROFILE - TRACK A



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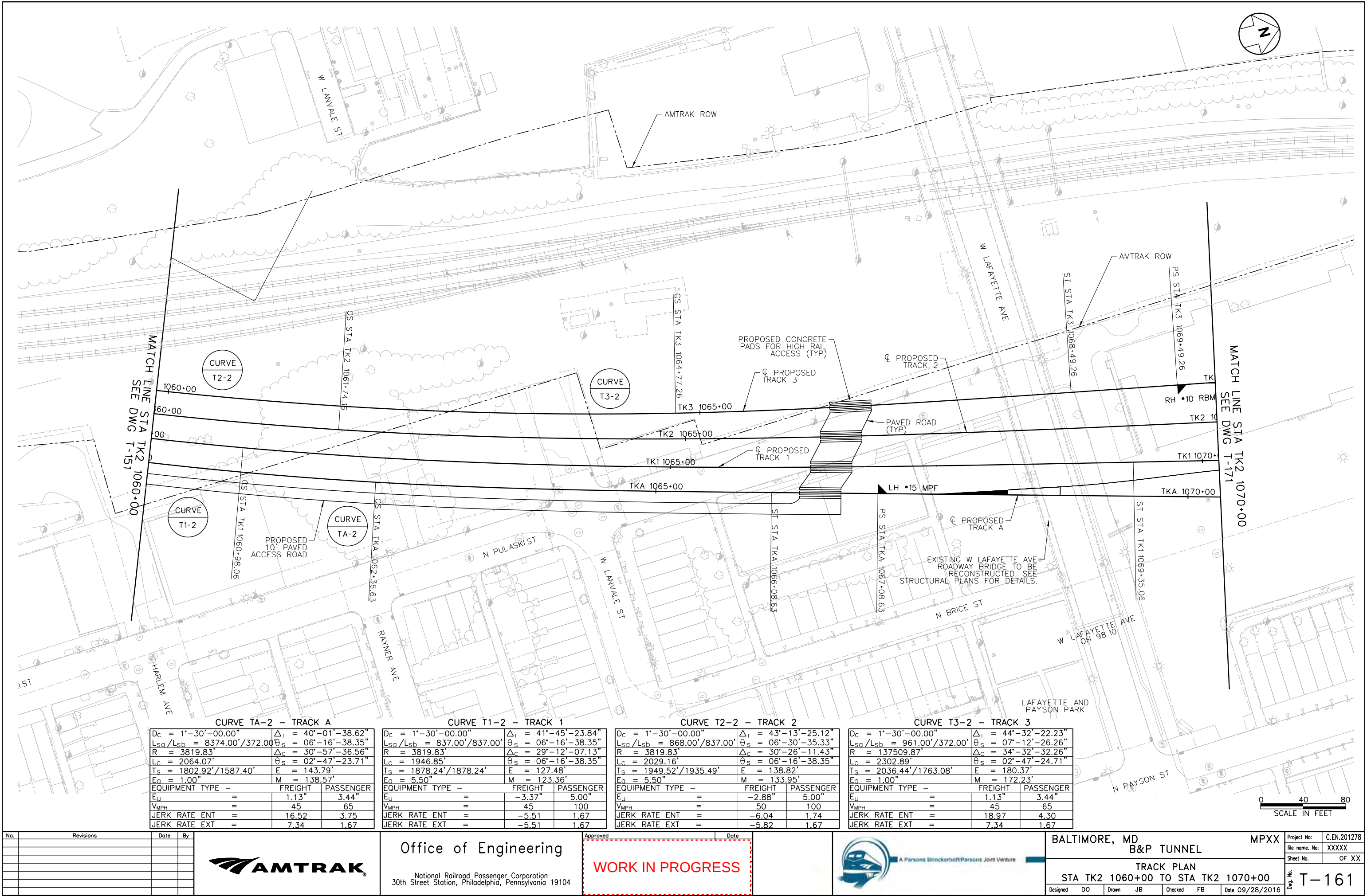
BALTIMORE, MD
B&P TUNNEL

MPXX

PROFILES - TRACK A & TRACK 1
STA. 1050+00 TO STA. 1060+00

Designed DO Drawn JB Checked FB Date 09/28/2016

Project No: C.EN.201278
File name: XXXXX
Sheet No: OF XX
Dwg. No: T-153



CURVE TA-2 - TRACK A				CURVE T1-2 - TRACK 1				CURVE T2-2 - TRACK 2				CURVE T3-2 - TRACK 3			
Dc = 1'-30'-00.00"		Δi = 40'-01'-38.62"		Dc = 1'-30'-00.00"		Δi = 41'-45'-23.84"		Dc = 1'-30'-00.00"		Δi = 43'-13'-25.12"		Dc = 1'-30'-00.00"		Δi = 44'-32'-22.23"	
Lsq/Lsb = 8374.00'/372.00'		θs = 06'-16'-38.35"		Lsq/Lsb = 837.00'/837.00'		θs = 06'-16'-38.35"		Lsq/Lsb = 868.00'/837.00'		θs = 06'-30'-35.33"		Lsq/Lsb = 961.00'/372.00'		θs = 07'-12'-26.26"	
R = 3819.83'		Δc = 30'-57'-36.56"		R = 3819.83'		Δc = 29'-12'-07.13"		R = 3819.83'		Δc = 30'-26'-11.43"		R = 137509.87'		Δc = 34'-32'-32.26"	
Lc = 2064.07'		θs = 02'-47'-23.71"		Lc = 1946.85'		θs = 06'-16'-38.35"		Lc = 2029.16'		θs = 06'-16'-38.35"		Lc = 2302.89'		θs = 02'-47'-24.71"	
Ts = 1802.92'/1587.40'		E = 143.79'		Ts = 1878.24'/1878.24'		E = 127.48'		Ts = 1949.52'/1935.49'		E = 138.82'		Ts = 2036.44'/1763.08'		E = 180.37'	
Ea = 1.00"		M = 138.57'		Ea = 5.50"		M = 123.36'		Ea = 5.50"		M = 133.95'		Ea = 1.00"		M = 172.23'	
EQUIPMENT TYPE -		FREIGHT		EQUIPMENT TYPE -		FREIGHT		EQUIPMENT TYPE -		FREIGHT		EQUIPMENT TYPE -		FREIGHT	
Eu		=		Eu		=		Eu		=		Eu		=	
VMPH		=		VMPH		=		VMPH		=		VMPH		=	
JERK RATE ENT		=		JERK RATE ENT		=		JERK RATE ENT		=		JERK RATE ENT		=	
JERK RATE EXT		=		JERK RATE EXT		=		JERK RATE EXT		=		JERK RATE EXT		=	

No.	Revisions	Date	By

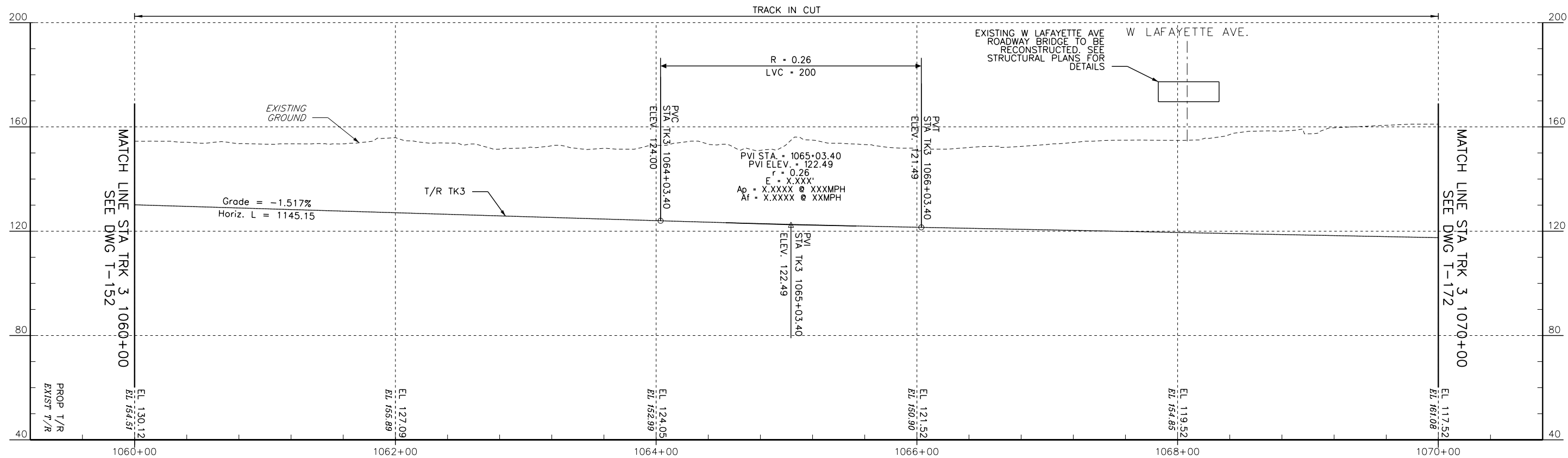


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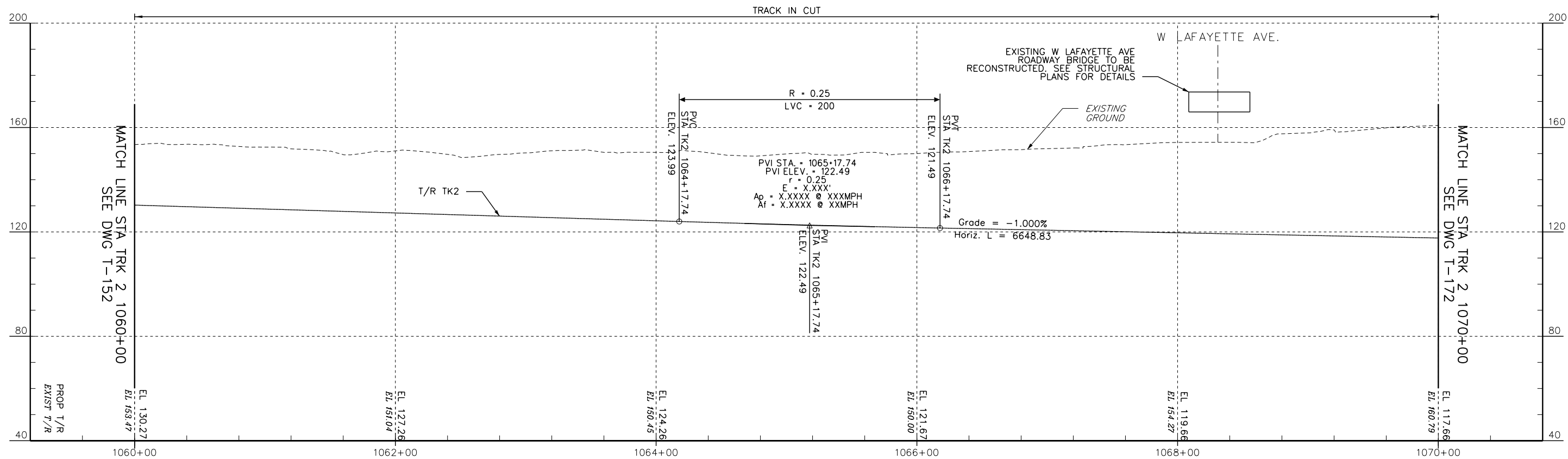
Approved
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Date



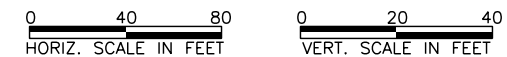
BALTIMORE, MD B&P TUNNEL		MPXX		Project No:	C.EN.201278
TRACK PLAN		STA TK2 1060+00 TO STA TK2 1070+00		File name:	No: XXXXX
Designed DO		Drawn JB		Sheet No:	OF XX
Checked FB		Date 09/28/2016		Dwg. No:	T-161



PROFILE - TRACK 3



PROFILE - TRACK 2



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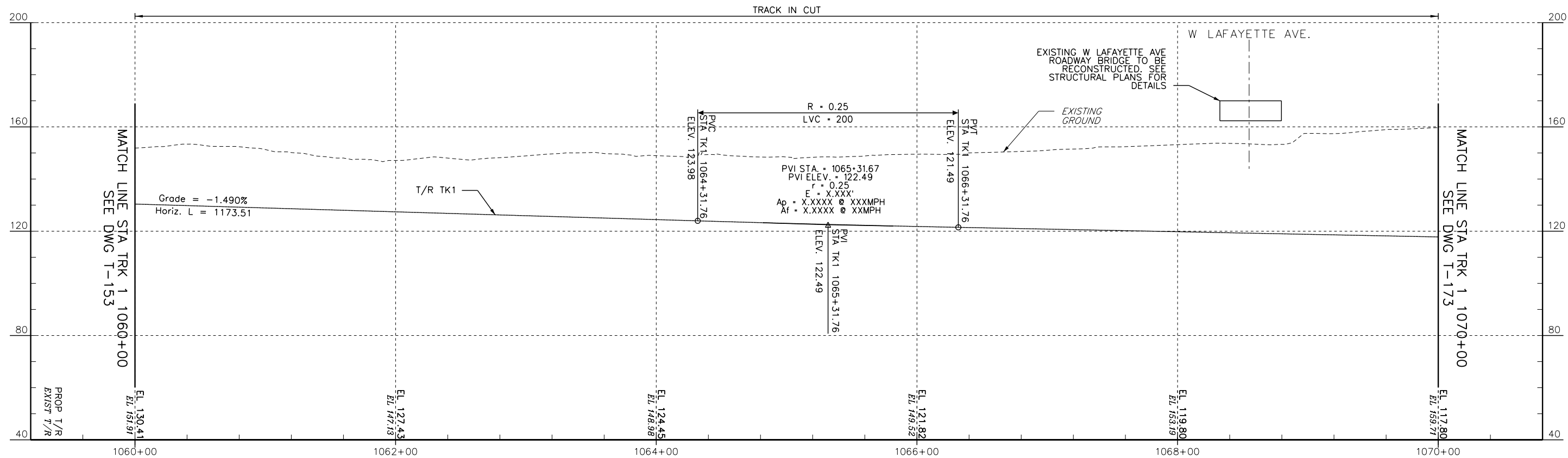
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WORK IN PROGRESS

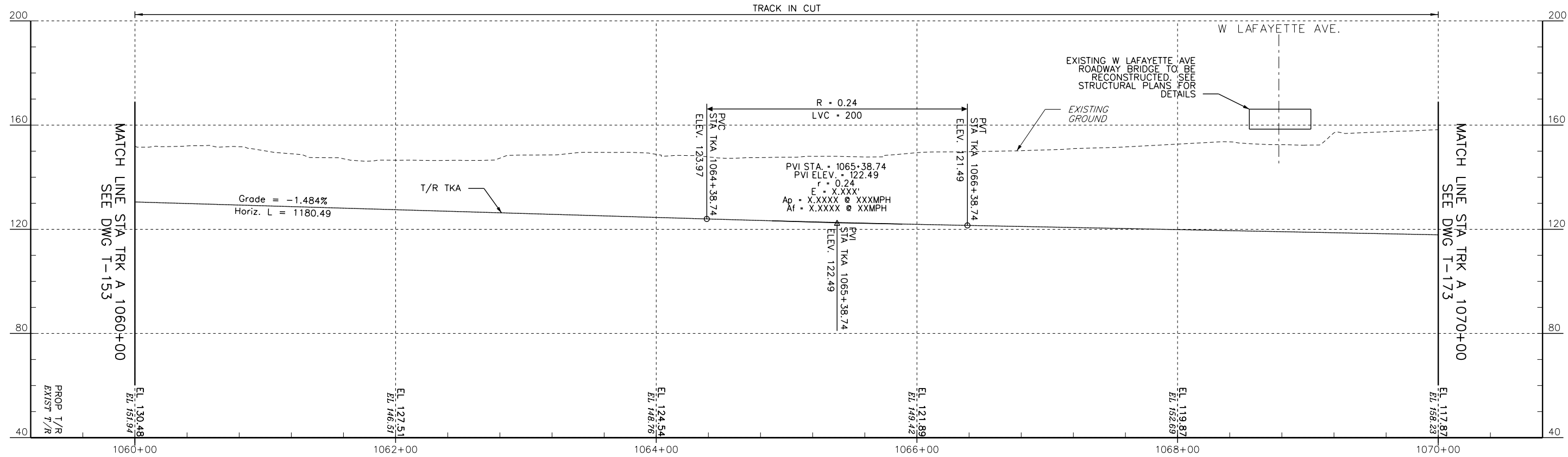
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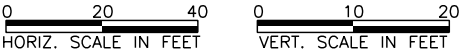
BALTIMORE, MD B&P TUNNEL		MPXX	Project No: C.EN.201278
PROFILES - TRACK 2 & TRACK 3 STA. 1060+00 TO STA. 1070+00		Designed DO	file name: No: XXXXX
		Drawn JB	Sheet No: OF XX
		Checked FB	Dwg. No: T-162
		Date 09/28/2016	



PROFILE - TRACK 1



PROFILE - TRACK A



No.	Revisions	Date	By



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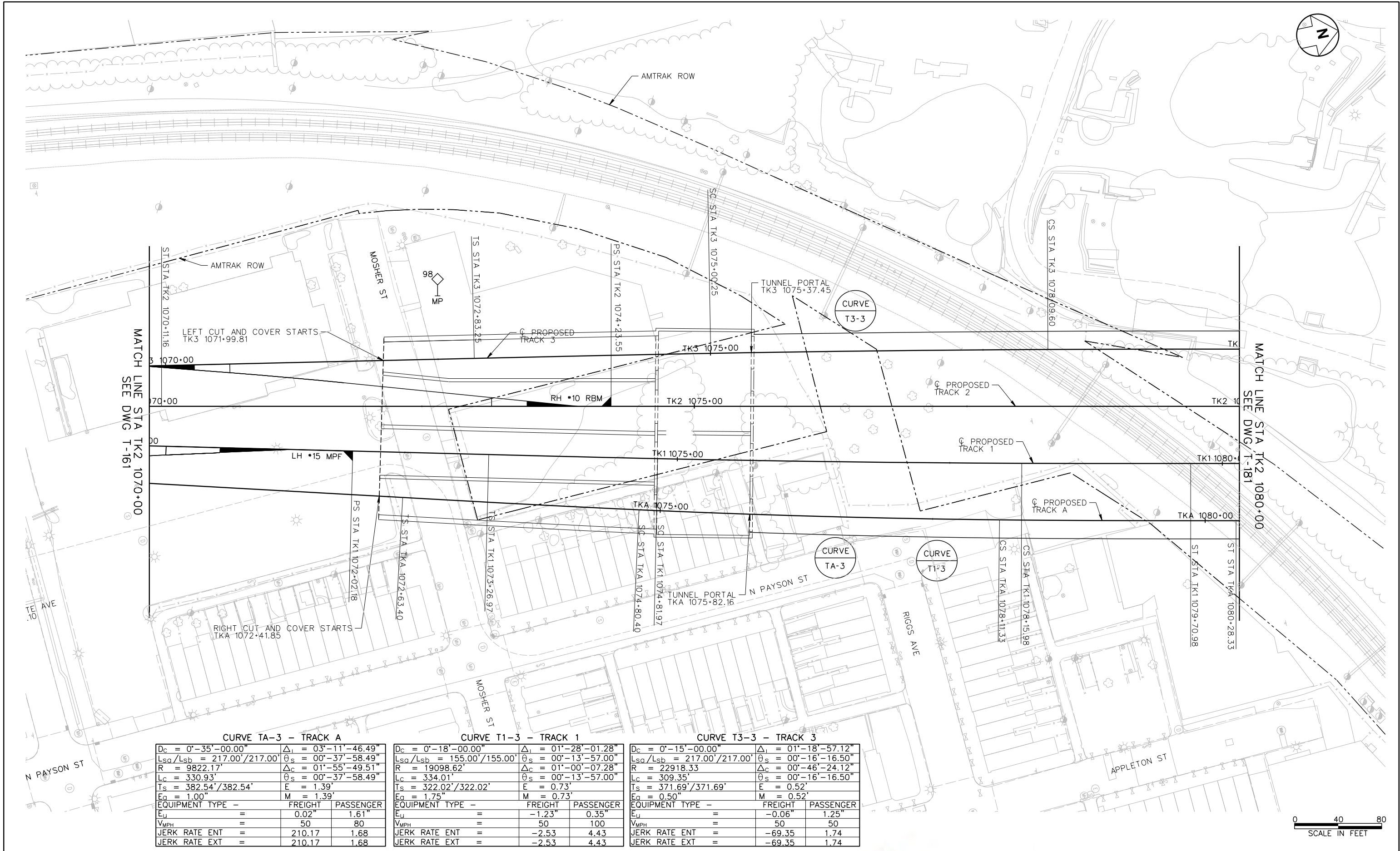
BALTIMORE, MD
B&P TUNNEL

MPXX

PROFILES - TRACK A & TRACK 1
STA. 1060+00 TO STA. 1070+00

Designed DO Drawn JB Checked FB Date 09/28/2016

Project No:	C.EN.201278
File name:	No: XXXXX
Sheet No.	OF XX
Dwg. No.	T-163



CURVE TA-3 - TRACK A			
Dc = 0'-35'-00.00"	Δ _i = 03'-11'-46.49"	Δ _s = 00'-37'-58.49"	
Lsq/Lsb = 217.00'/217.00'	R = 9822.17'	Δ _c = 01'-55'-49.51"	
Lc = 330.93'	Ts = 382.54'/382.54'	Δ _s = 00'-37'-58.49"	
E _o = 1.00"	M = 1.39'		
EQUIPMENT TYPE -	FREIGHT	PASSENGER	
E _u =	0.02"	1.61"	
VMPH =	50	80	
JERK RATE ENT =	210.17	1.68	
JERK RATE EXT =	210.17	1.68	

CURVE T1-3 - TRACK 1			
Dc = 0'-18'-00.00"	Δ _i = 01'-28'-01.28"	Δ _s = 00'-13'-57.00"	
Lsq/Lsb = 155.00'/155.00'	R = 19098.62'	Δ _c = 01'-00'-07.28"	
Lc = 334.01'	Ts = 322.02'/322.02'	Δ _s = 00'-13'-57.00"	
E _o = 1.75"	M = 0.73'		
EQUIPMENT TYPE -	FREIGHT	PASSENGER	
E _u =	-1.23"	0.35"	
VMPH =	50	100	
JERK RATE ENT =	-2.53	4.43	
JERK RATE EXT =	-2.53	4.43	

CURVE T3-3 - TRACK 3			
Dc = 0'-15'-00.00"	Δ _i = 01'-18'-57.12"	Δ _s = 00'-16'-16.50"	
Lsq/Lsb = 217.00'/217.00'	R = 22918.33'	Δ _c = 00'-46'-24.12"	
Lc = 309.35'	Ts = 371.69'/371.69'	Δ _s = 00'-16'-16.50"	
E _o = 0.50"	M = 0.52'		
EQUIPMENT TYPE -	FREIGHT	PASSENGER	
E _u =	-0.06"	1.25"	
VMPH =	50	50	
JERK RATE ENT =	-69.35	1.74	
JERK RATE EXT =	-69.35	1.74	

No.	Revisions	Date	By

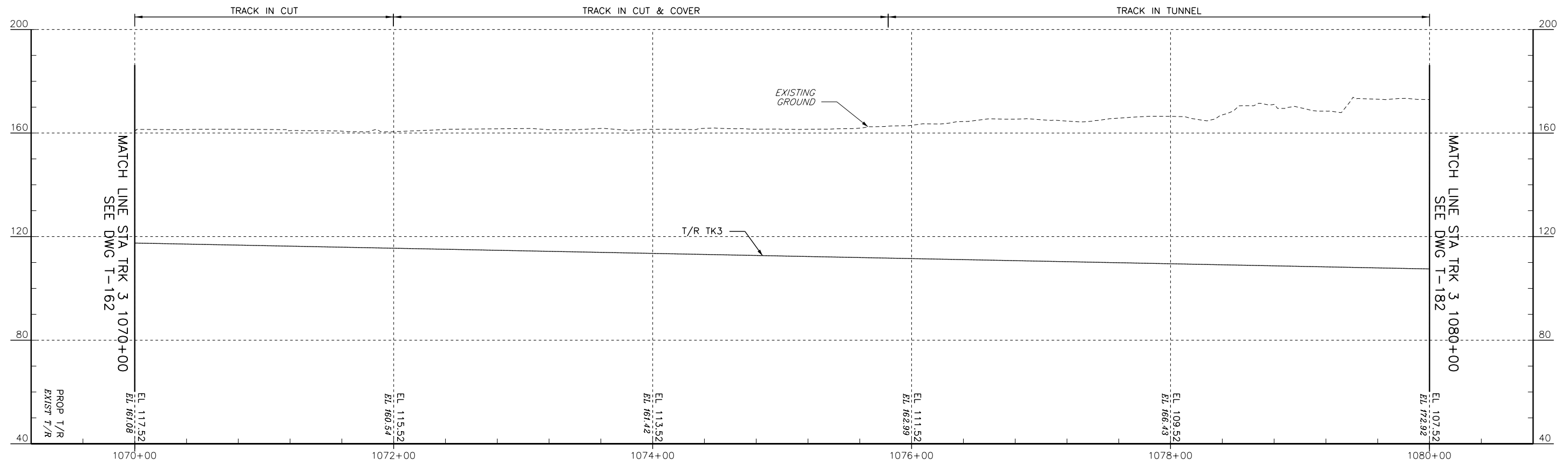


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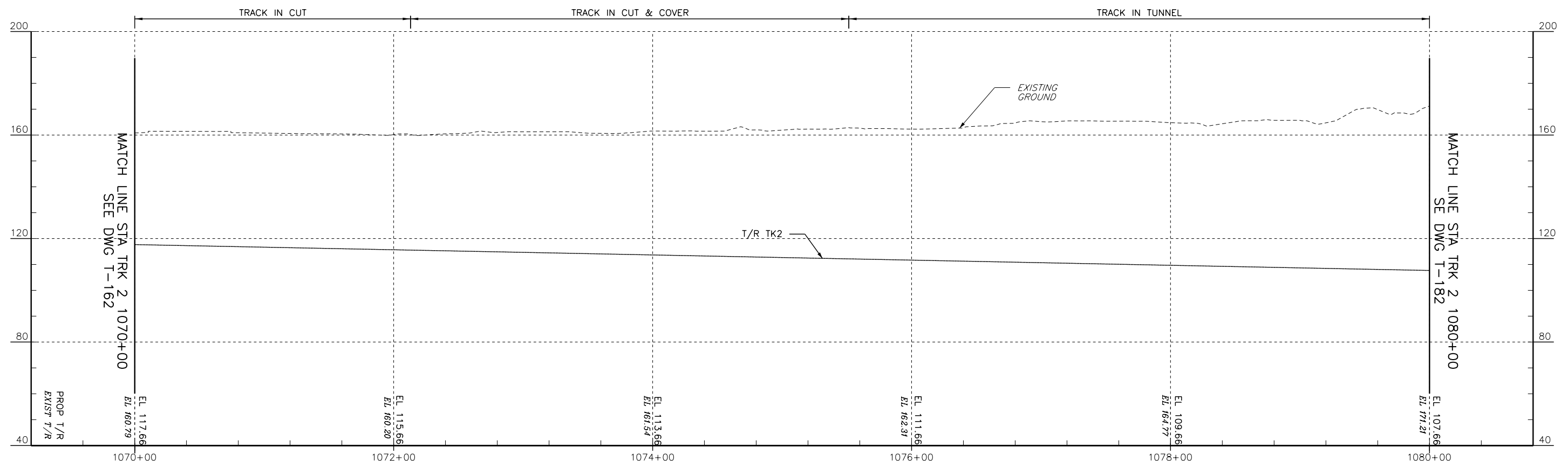
Approved _____ Date _____
WORK IN PROGRESS



BALTIMORE, MD B&P TUNNEL		MPXX	Project No: C.EN.201278
TRACK PLAN			File name: No: XXXXX
STA TK2 1070+00 TO STA TK2 1080+00			Sheet No: OF XX
Designed DO	Drawn JB	Checked FB	Date 09/28/2016
Dwg. No. T-171			



PROFILE - TRACK 3



PROFILE - TRACK 2



No.	Revisions	Date	By

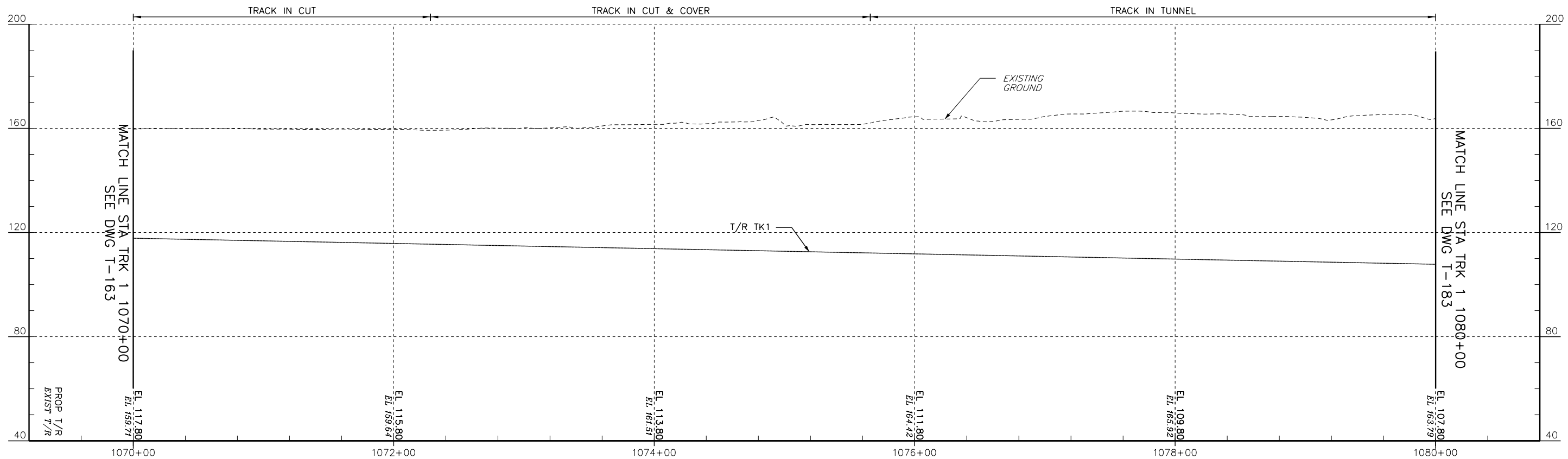


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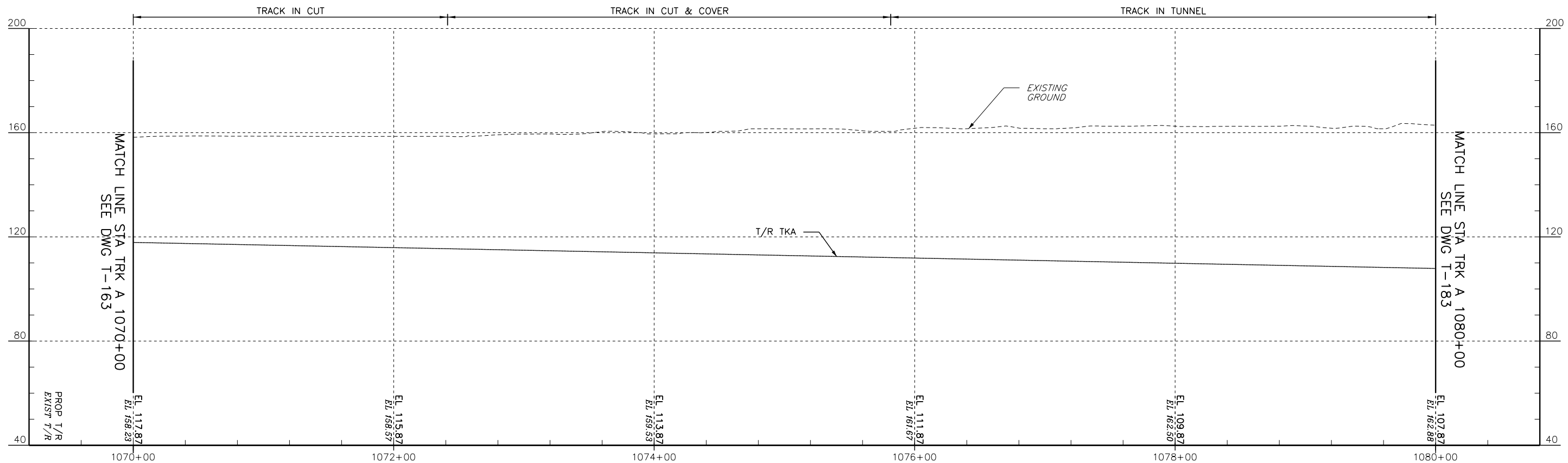
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WORK IN PROGRESS
Date



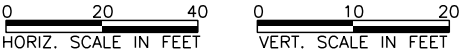
BALTIMORE, MD B&P TUNNEL				MPXX	Project No: C.EN.201278
PROFILES - TRACK 2 & TRACK 3 STA. 1070+00 TO STA. 1080+00				Designed DO	file name: No: XXXXX
				Drawn JB	Sheet No: OF XX
				Checked FB	Dwg. No: T-172
				Date 09/28/2016	



PROFILE — TRACK 1



PROFILE — TRACK A



No.	Revisions	Date	By

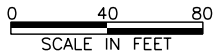
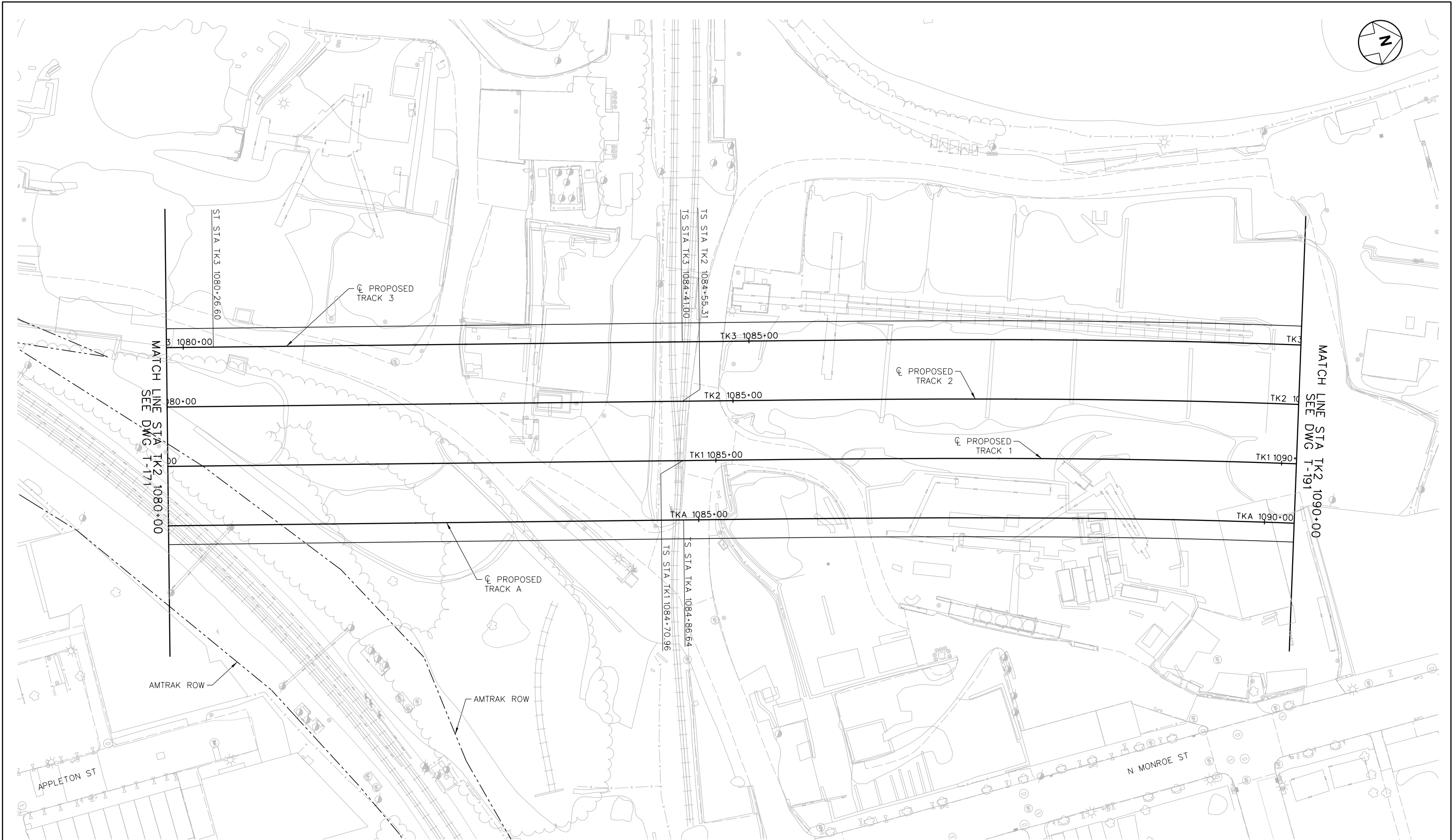


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BALTIMORE, MD B&P TUNNEL				MPXX	Project No: C.EN.201278
PROFILES — TRACK A & TRACK 1 STA. 1070+00 TO STA. 1080+00				Designed DO	file name: No: XXXXX
				Drawn JB	Sheet No. OF XX
				Checked FB	Dwg. No. T-173
				Date 09/28/2016	



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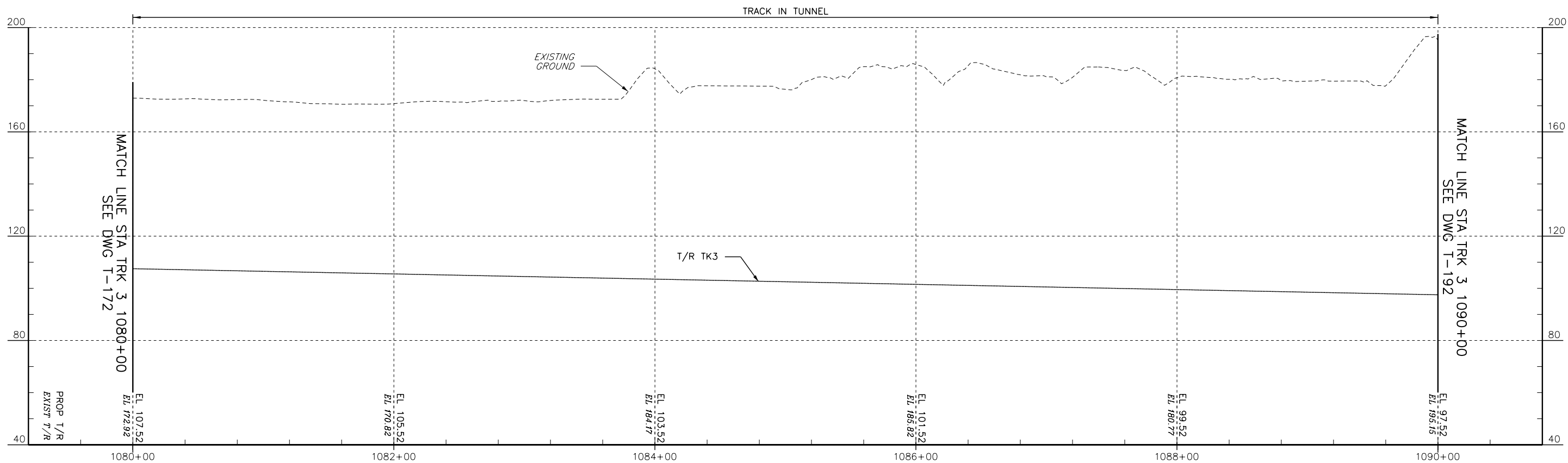
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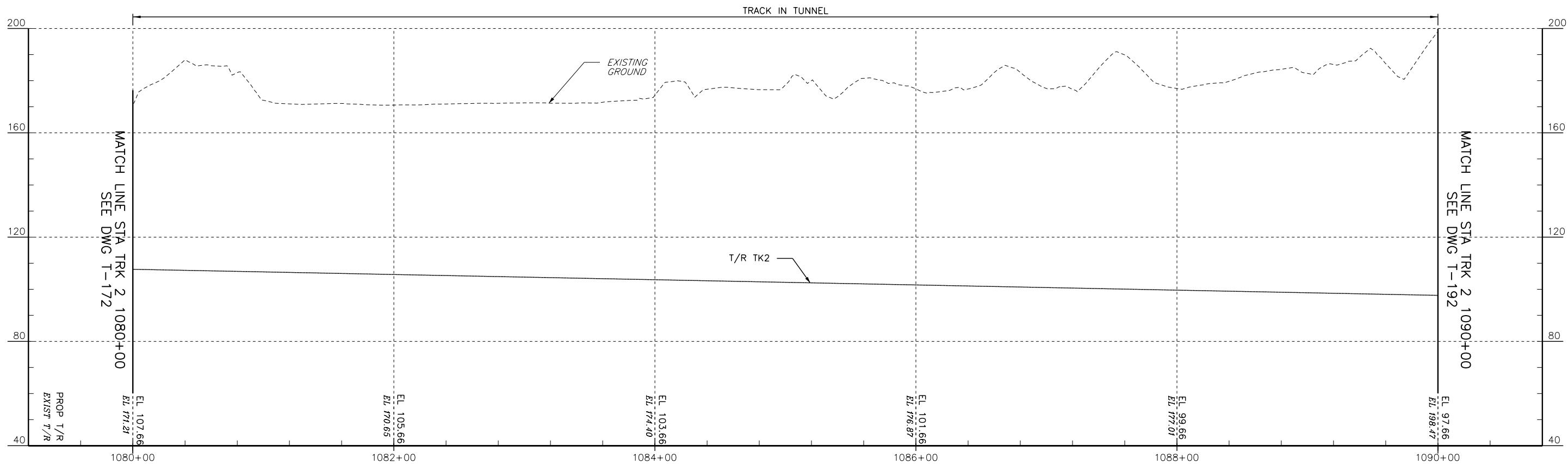
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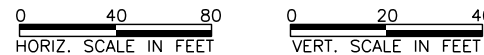
BALTIMORE, MD		MPXX		Project No:	C.EN.201278
B&P TUNNEL				file name:	No: XXXXX
				Sheet No.	OF XX
				Dwg. No.	T-181
TRACK PLAN					
STA TK2 1080+00 TO STA TK2 1090+00					
Designed	DO	Drawn	JB	Checked	FB
				Date 09/28/2016	



PROFILE - TRACK 3



PROFILE - TRACK 2



No.	Revisions	Date	By



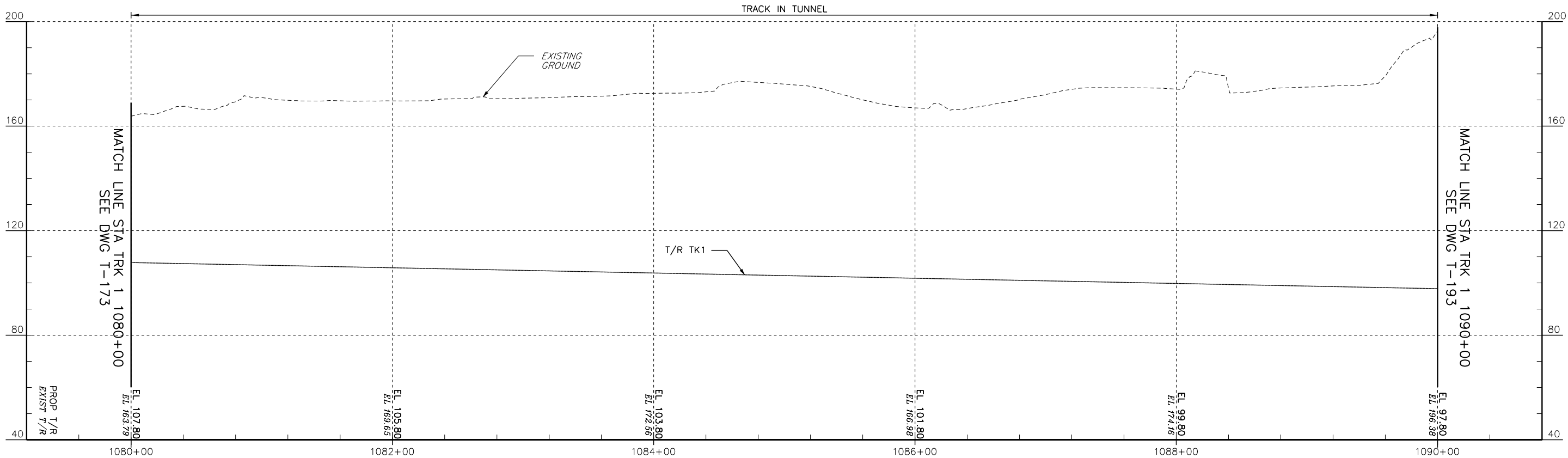
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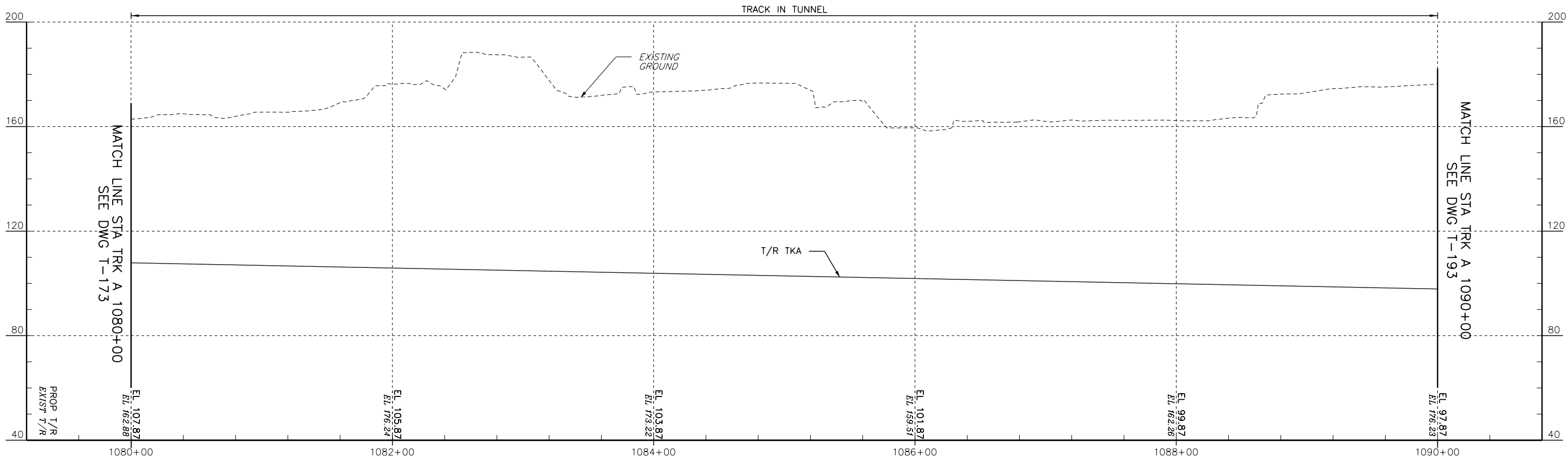
Approved	Date
WORK IN PROGRESS	



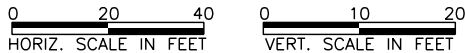
BALTIMORE, MD B&P TUNNEL		MPXX	Project No: C.EN.201278
PROFILES - TRACK 2 & TRACK 3 STA. 1080+00 TO STA. 1090+00		Designed DO	file name: No: XXXXX
Drawn JB		Checked FB	Sheet No: OF XX
Date 09/28/2016		Dwg. No: T-182	



PROFILE - TRACK 1



PROFILE - TRACK A



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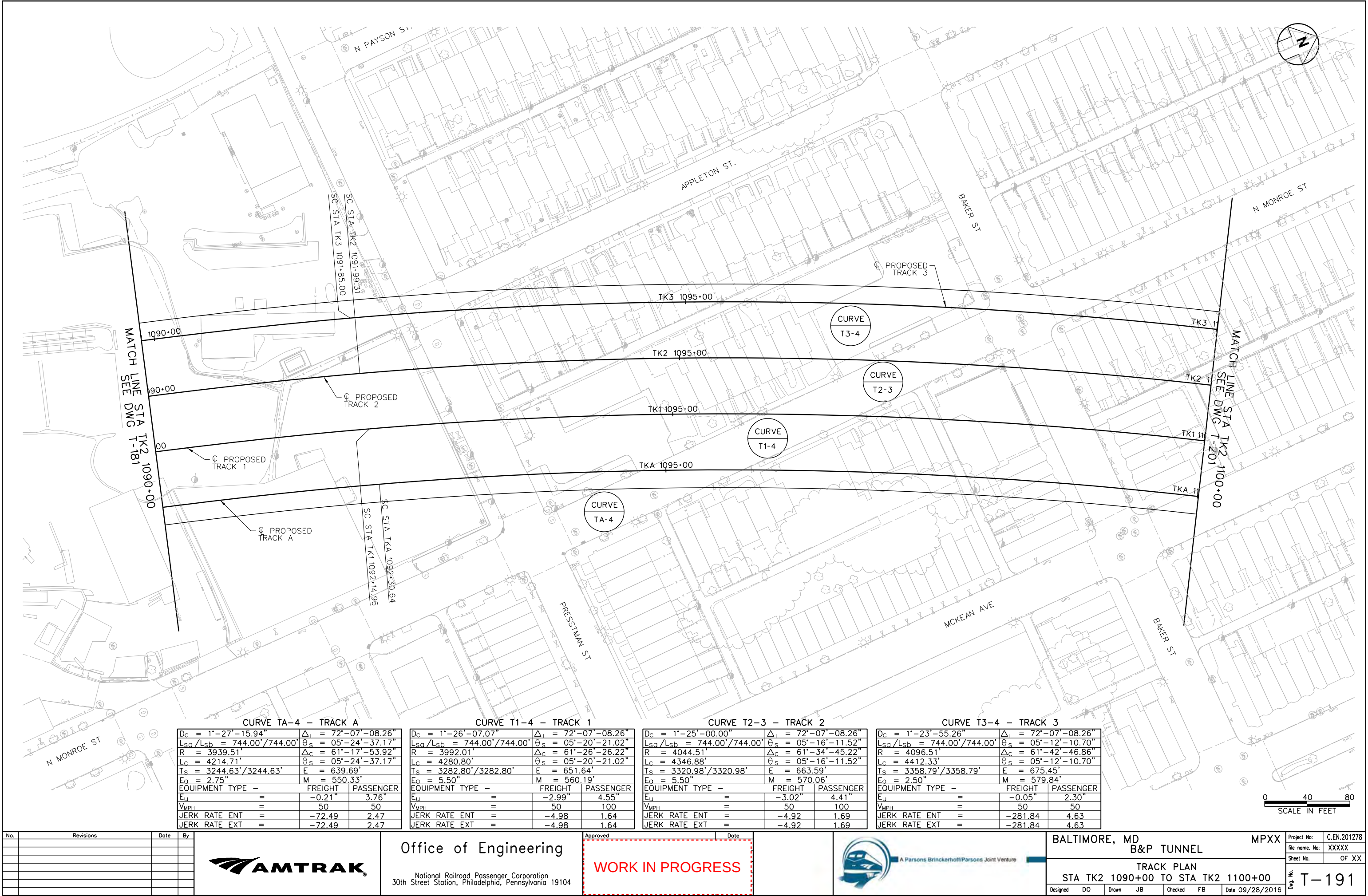
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MPXX

PROFILES - TRACK A & TRACK 1
STA. 1080+00 TO STA. 1090+00

Designed DO Drawn JB Checked FB Date 09/28/2016

Project No:	C.EN.201278
File name:	No: XXXXX
Sheet No.	OF XX
Dwg. No.	T-183



CURVE TA-4 - TRACK A			
Dc = 1'-27'-15.94"	Δi = 72'-07'-08.26"	Δs = 05'-24'-37.17"	
Lsq/Lsb = 744.00'/744.00'	θs = 05'-24'-37.17"	Δc = 61'-17'-53.92"	
R = 3939.51'	Δc = 61'-17'-53.92"	θs = 05'-24'-37.17"	
Lc = 4214.71'	θs = 05'-24'-37.17"	E = 639.69'	
Ts = 3244.63'/3244.63'	E = 639.69'	M = 550.33'	
Ea = 2.75"	M = 550.33'		
EQUIPMENT TYPE -	FREIGHT	PASSENGER	
Eu =	-0.21"	3.76"	
VMPH =	50	50	
JERK RATE ENT =	-72.49	2.47	
JERK RATE EXT =	-72.49	2.47	

CURVE T1-4 - TRACK 1			
Dc = 1'-26'-07.07"	Δi = 72'-07'-08.26"	Δs = 05'-20'-21.02"	
Lsq/Lsb = 744.00'/744.00'	θs = 05'-20'-21.02"	Δc = 61'-26'-26.22"	
R = 3992.01'	Δc = 61'-26'-26.22"	θs = 05'-20'-21.02"	
Lc = 4280.80'	θs = 05'-20'-21.02"	E = 651.64'	
Ts = 3282.80'/3282.80'	E = 651.64'	M = 560.19'	
Ea = 5.50"	M = 560.19'		
EQUIPMENT TYPE -	FREIGHT	PASSENGER	
Eu =	-2.99"	4.55"	
VMPH =	50	100	
JERK RATE ENT =	-4.98	1.64	
JERK RATE EXT =	-4.98	1.64	

CURVE T2-3 - TRACK 2			
Dc = 1'-25'-00.00"	Δi = 72'-07'-08.26"	Δs = 05'-16'-11.52"	
Lsq/Lsb = 744.00'/744.00'	θs = 05'-16'-11.52"	Δc = 61'-34'-45.22"	
R = 4044.51'	Δc = 61'-34'-45.22"	θs = 05'-16'-11.52"	
Lc = 4346.88'	θs = 05'-16'-11.52"	E = 663.59'	
Ts = 3320.98'/3320.98'	E = 663.59'	M = 570.06'	
Ea = 5.50"	M = 570.06'		
EQUIPMENT TYPE -	FREIGHT	PASSENGER	
Eu =	-3.02"	4.41"	
VMPH =	50	100	
JERK RATE ENT =	-4.92	1.69	
JERK RATE EXT =	-4.92	1.69	

CURVE T3-4 - TRACK 3			
Dc = 1'-23'-55.26"	Δi = 72'-07'-08.26"	Δs = 05'-12'-10.70"	
Lsq/Lsb = 744.00'/744.00'	θs = 05'-12'-10.70"	Δc = 61'-42'-46.86"	
R = 4096.51'	Δc = 61'-42'-46.86"	θs = 05'-12'-10.70"	
Lc = 4412.33'	θs = 05'-12'-10.70"	E = 675.45'	
Ts = 3358.79'/3358.79'	E = 675.45'	M = 579.84'	
Ea = 2.50"	M = 579.84'		
EQUIPMENT TYPE -	FREIGHT	PASSENGER	
Eu =	-0.05"	2.30"	
VMPH =	50	50	
JERK RATE ENT =	-281.84	4.63	
JERK RATE EXT =	-281.84	4.63	

No.	Revisions	Date	By

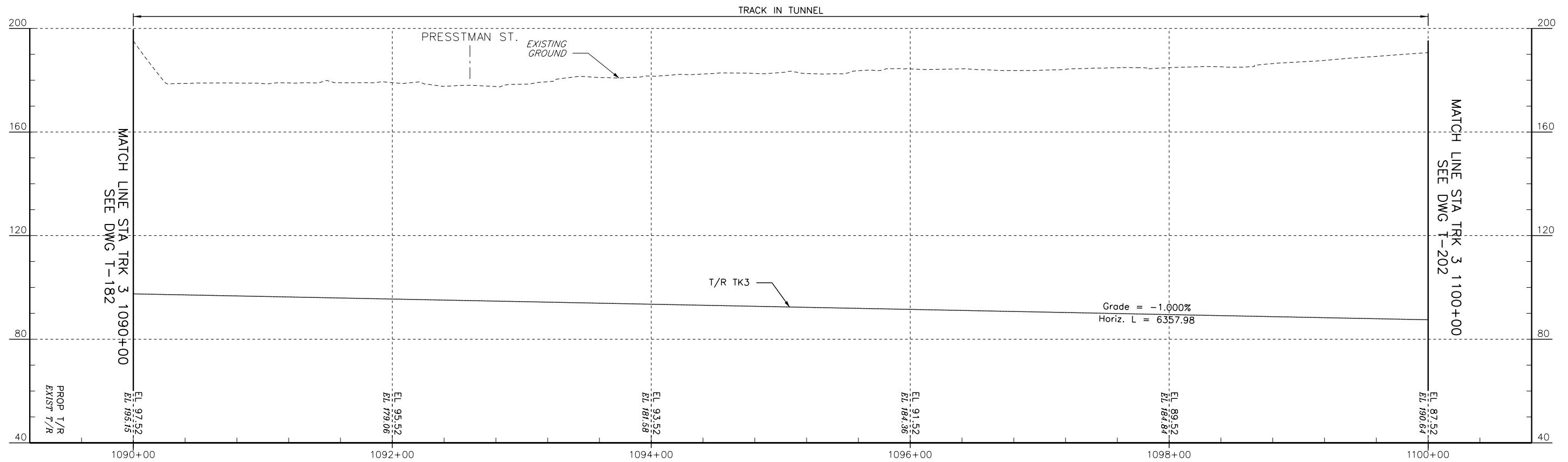


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National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

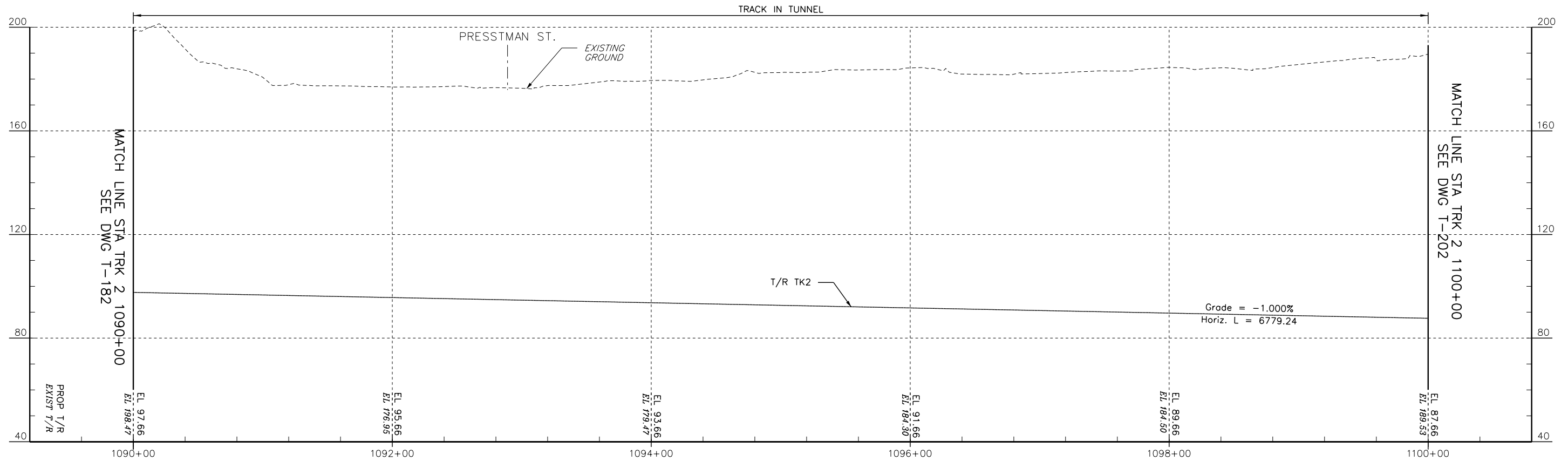
Approved _____ Date _____
WORK IN PROGRESS



BALTIMORE, MD B&P TUNNEL		MPXX	Project No: C.EN.201278
TRACK PLAN			File name: XXXXX
STA TK2 1090+00 TO STA TK2 1100+00			Sheet No: OF XX
Designed DO	Drawn JB	Checked FB	Date 09/28/2016
Dwg. No. T-191			



PROFILE - TRACK 3



PROFILE - TRACK 2



No.	Revisions	Date	By



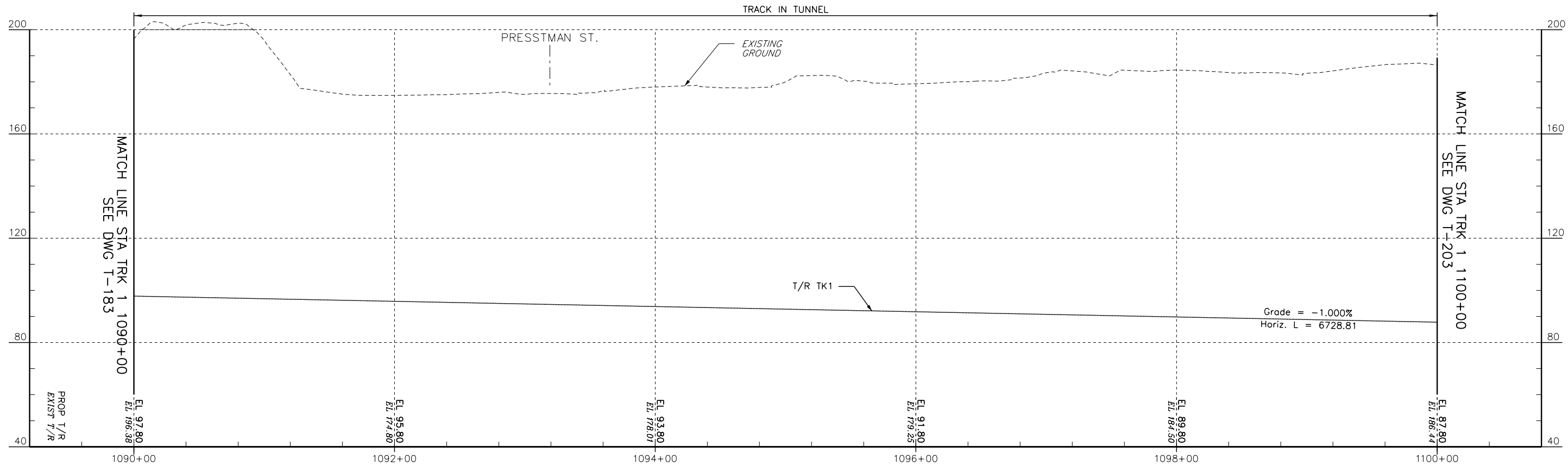
Office of Engineering

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30th Street Station, Philadelphia, Pennsylvania 19104

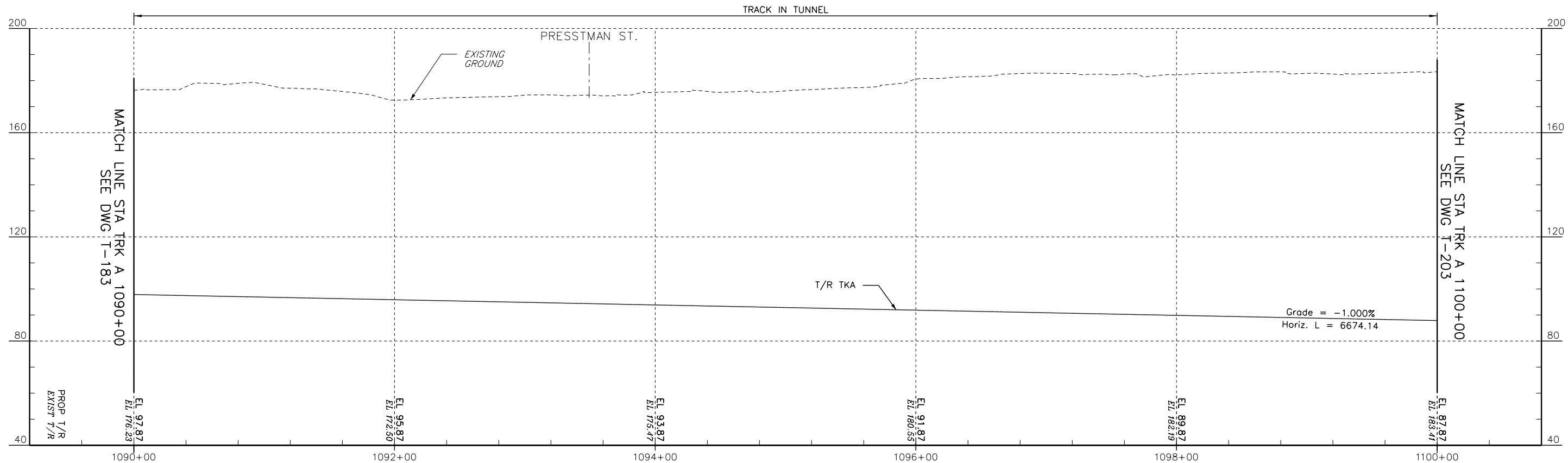
Approved	Date
WORK IN PROGRESS	



BALTIMORE, MD					MPXX		Project No: C.EN.201278	
B&P TUNNEL							file name: No: XXXXX	
PROFILES – TRACK 2 & TRACK 3 STA. 1090+00 TO STA. 1100+00							Sheet No. OF X	
Designed DO		Drawn JB		Checked FB		Date 09/28/2016		Dwg. No: T-192



PROFILE - TRACK 1



PROFILE - TRACK A



No.	Revisions	Date	By



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30th Street Station, Philadelphia, Pennsylvania 19104

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WORK IN PROGRESS	



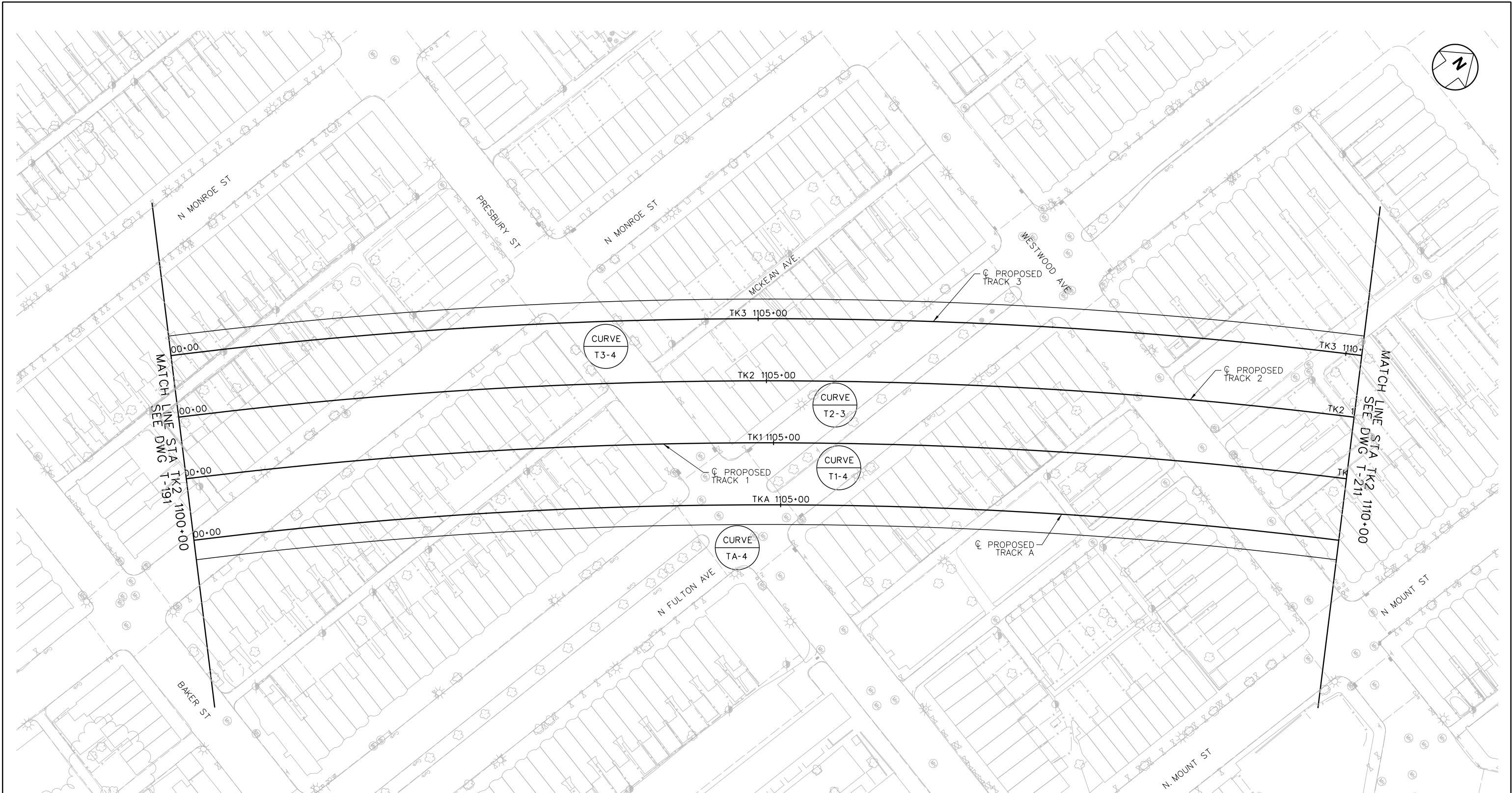
BALTIMORE, MD
B&P TUNNEL

MPXX

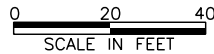
PROFILES - TRACK A & TRACK 1
STA. 1090+00 TO STA. 1100+00

Designed DO Drawn JB Checked FB Date 09/28/2016

Project No:	C.EN.201278
File name:	No: XXXXX
Sheet No.	OF XX
Dwg. No.	T-193



CURVE TA-4 - TRACK A				CURVE T1-4 - TRACK 1				CURVE T2-3 - TRACK 2				CURVE T3-4 - TRACK 3			
Dc = 1'-27'-15.94"		Δ_1 = 72°-07'-08.26"		Dc = 1'-26'-07.07"		Δ_1 = 72°-07'-08.26"		Dc = 1'-25'-00.00"		Δ_1 = 72°-07'-08.26"		Dc = 1'-23'-55.26"		Δ_1 = 72°-07'-08.26"	
Lsq/Lsb = 744.00'/744.00'		θ_s = 05°-24'-37.17"		Lsq/Lsb = 744.00'/744.00'		θ_s = 05°-20'-21.02"		Lsq/Lsb = 744.00'/744.00'		θ_s = 05°-16'-11.52"		Lsq/Lsb = 744.00'/744.00'		θ_s = 05°-12'-10.70"	
R = 3939.51'		Δ_c = 61°-17'-53.92"		R = 3992.01'		Δ_c = 61°-26'-26.22"		R = 4044.51'		Δ_c = 61°-34'-45.22"		R = 4096.51'		Δ_c = 61°-42'-46.86"	
Lc = 4214.71'		θ_s = 05°-24'-37.17"		Lc = 4280.80'		θ_s = 05°-20'-21.02"		Lc = 4346.88'		θ_s = 05°-16'-11.52"		Lc = 4412.33'		θ_s = 05°-12'-10.70"	
Ts = 3244.63'/3244.63'		E = 639.69'		Ts = 3282.80'/3282.80'		E = 651.64'		Ts = 3320.98'/3320.98'		E = 663.59'		Ts = 3358.79'/3358.79'		E = 675.45'	
Ea = 2.75"		M = 550.33'		Ea = 5.50"		M = 560.19'		Ea = 5.50"		M = 570.06'		Ea = 2.50"		M = 579.84'	
EQUIPMENT TYPE -		FREIGHT		FREIGHT		FREIGHT		FREIGHT		FREIGHT		FREIGHT		FREIGHT	
Eu		= -0.21"		= -2.99"		= -3.02"		= -3.02"		= -3.02"		= -0.05"		= -0.05"	
VMPH		= 50		= 50		= 50		= 50		= 50		= 50		= 50	
JERK RATE ENT		= -72.49		= -4.98		= -4.92		= -4.92		= -4.92		= -281.84		= -281.84	
JERK RATE EXT		= -72.49		= -4.98		= -4.92		= -4.92		= -4.92		= -281.84		= -281.84	
EQUIPMENT TYPE -		PASSENGER		PASSENGER		PASSENGER		PASSENGER		PASSENGER		PASSENGER		PASSENGER	
Eu		= 3.76"		= 4.55"		= 4.41"		= 4.41"		= 4.41"		= 2.30"		= 2.30"	
VMPH		= 50		= 100		= 100		= 100		= 100		= 50		= 50	
JERK RATE ENT		= 2.47		= 1.64		= 1.69		= 1.69		= 1.69		= 4.63		= 4.63	
JERK RATE EXT		= 2.47		= 1.64		= 1.69		= 1.69		= 1.69		= 4.63		= 4.63	



Revisions

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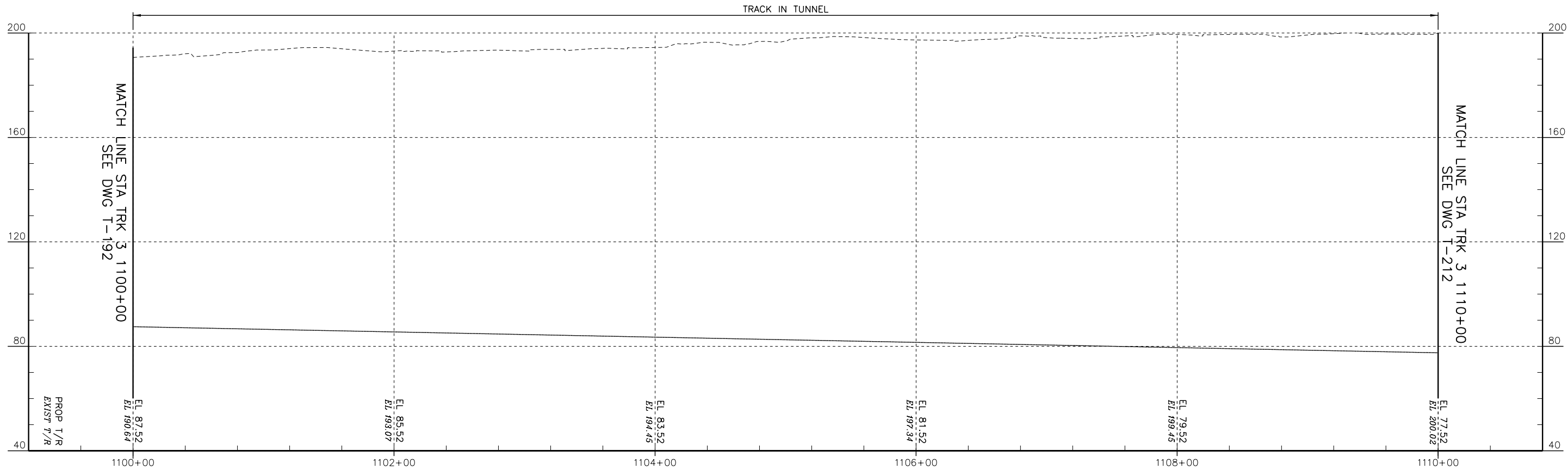
BALTIMORE, MD
B&P TUNNEL

TRACK PLAN
STA TK2 1100+00 TO STA TK2 1110+00

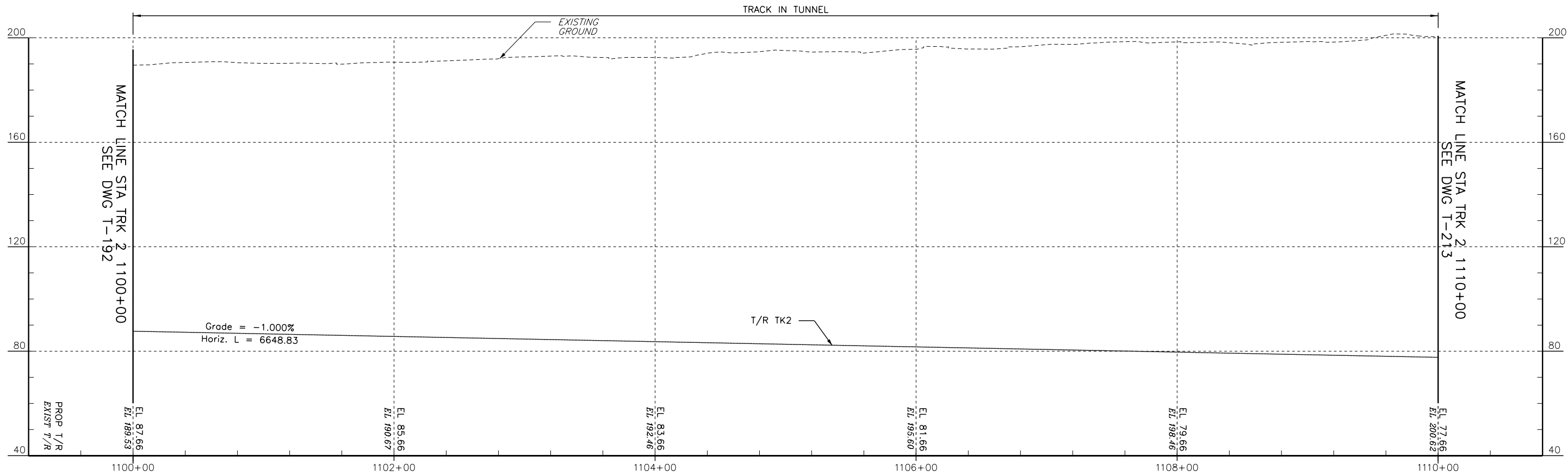
Designed DO Drawn JB Checked FB Date 09/28/2016

MPXX

Project No: C.EN.201278
File name: No: XXXXX
Sheet No: OF XX
Dwg. No: T-201



PROFILE - TRACK 3



PROFILE - TRACK 2



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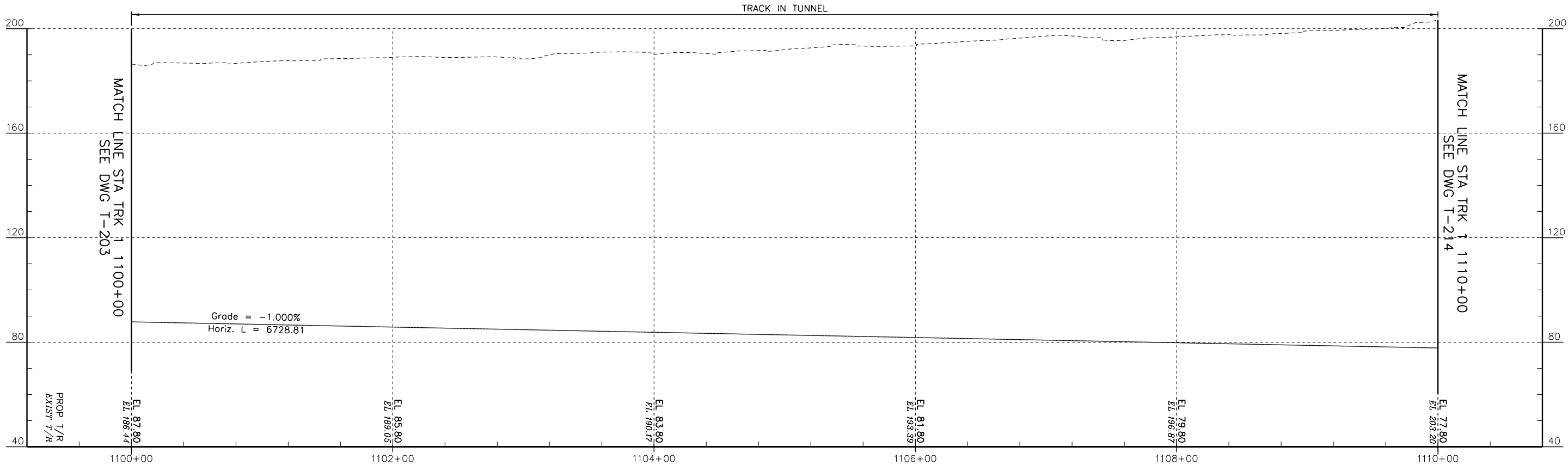
Approved

WORK IN PROGRESS

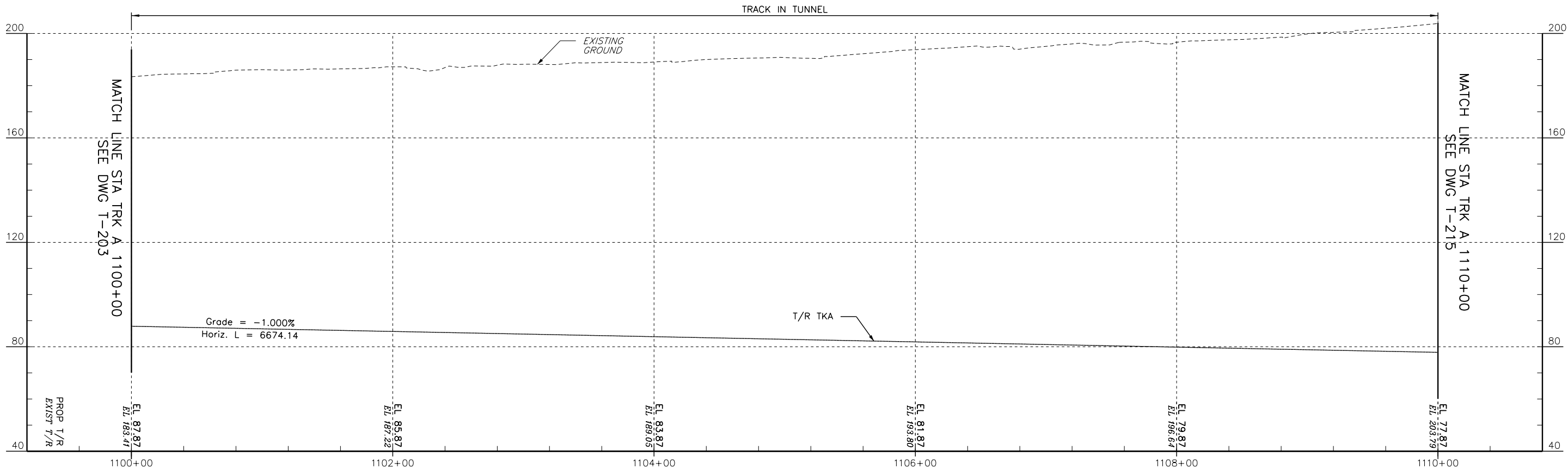
Date



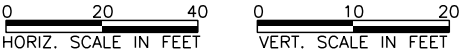
BALTIMORE, MD B&P TUNNEL		MPXX	Project No: C.EN.201278
PROFILES - TRACK 2 & TRACK 3 STA. 1100+00 TO STA. 1110+00			File name: No: XXXXX
Designed DO		Drawn JB	Sheet No: OF XX
Checked FB		Date 09/28/2016	Dwg. No: T-202



PROFILE - TRACK 1



PROFILE - TRACK A



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30th Street Station, Philadelphia, Pennsylvania 19104

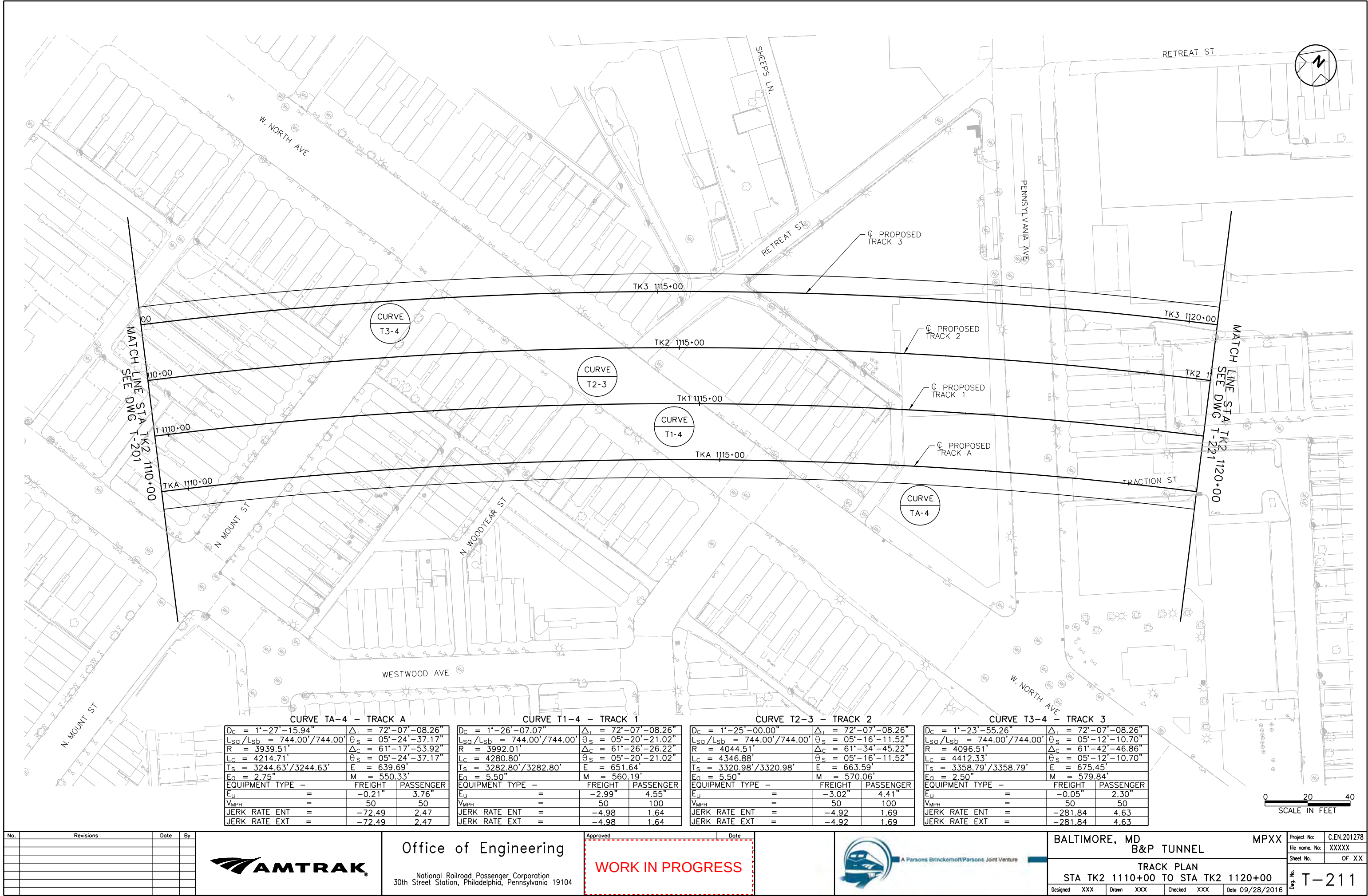
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Date



BALTIMORE, MD B&P TUNNEL		MPXX	Project No: C.EN.201278
			File name: No: XXXXX
			Sheet No: OF XX
			Dwg. No: T-203
Designed	DO	Drawn	JB
Checked	FB	Date	09/28/2016



CURVE TA-4 - TRACK A				CURVE T1-4 - TRACK 1				CURVE T2-3 - TRACK 2				CURVE T3-4 - TRACK 3			
Dc = 1'-27'-15.94"		Δi = 72'-07'-08.26"		Dc = 1'-26'-07.07"		Δi = 72'-07'-08.26"		Dc = 1'-25'-00.00"		Δi = 72'-07'-08.26"		Dc = 1'-23'-55.26"		Δi = 72'-07'-08.26"	
Lsq/Lsb = 744.00'/744.00'		θs = 05°-24'-37.17"		Lsq/Lsb = 744.00'/744.00'		θs = 05°-20'-21.02"		Lsq/Lsb = 744.00'/744.00'		θs = 05°-16'-11.52"		Lsq/Lsb = 744.00'/744.00'		θs = 05°-12'-10.70"	
R = 3939.51'		Δc = 61°-17'-53.92"		R = 3992.01'		Δc = 61°-26'-26.22"		R = 4044.51'		Δc = 61°-34'-45.22"		R = 4096.51'		Δc = 61°-42'-46.86"	
Lc = 4214.71'		θs = 05°-24'-37.17"		Lc = 4280.80'		θs = 05°-20'-21.02"		Lc = 4346.88'		θs = 05°-16'-11.52"		Lc = 4412.33'		θs = 05°-12'-10.70"	
Ts = 3244.63'/3244.63'		E = 639.69'		Ts = 3282.80'/3282.80'		E = 651.64'		Ts = 3320.98'/3320.98'		E = 663.59'		Ts = 3358.79'/3358.79'		E = 675.45'	
Eo = 2.75"		M = 550.33'		Eo = 5.50"		M = 560.19'		Eo = 5.50"		M = 570.06'		Eo = 2.50"		M = 579.84'	
EQUIPMENT TYPE -		FREIGHT		EQUIPMENT TYPE -		FREIGHT		EQUIPMENT TYPE -		FREIGHT		EQUIPMENT TYPE -		FREIGHT	
Eu		=		Eu		=		Eu		=		Eu		=	
VMPH		=		VMPH		=		VMPH		=		VMPH		=	
JERK RATE ENT		=		JERK RATE ENT		=		JERK RATE ENT		=		JERK RATE ENT		=	
JERK RATE EXT		=		JERK RATE EXT		=		JERK RATE EXT		=		JERK RATE EXT		=	

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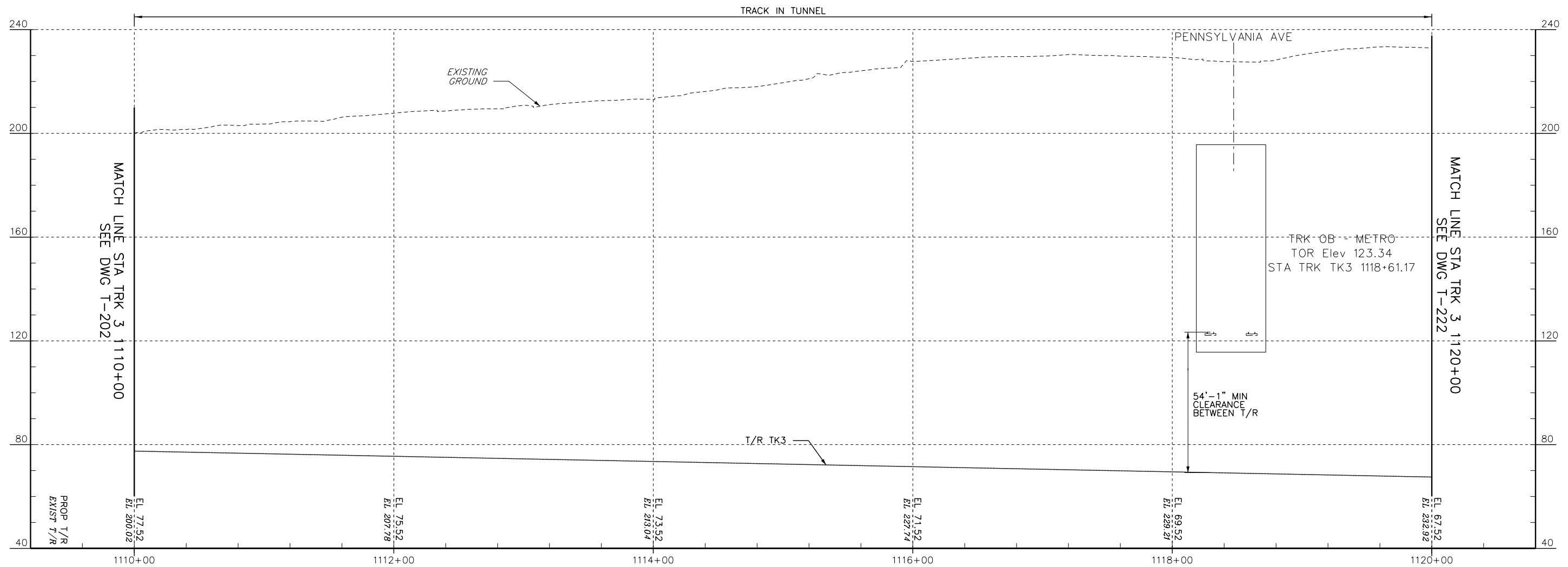
BALTIMORE, MD
B&P TUNNEL

TRACK PLAN
STA TK2 1110+00 TO STA TK2 1120+00

Designed XXX Drawn XXX Checked XXX Date 09/28/2016

MPXX

Project No: C.EN.201278
File name: No: XXXXX
Sheet No: OF XX
Dwg. No: T-211



PROFILE - TRACK 3

0 40 80
HORIZ. SCALE IN FEET

0 20 40
VERT. SCALE IN FEET

No.	Revisions	Date	By



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A Parsons Brinckerhoff/Parsons Joint Venture

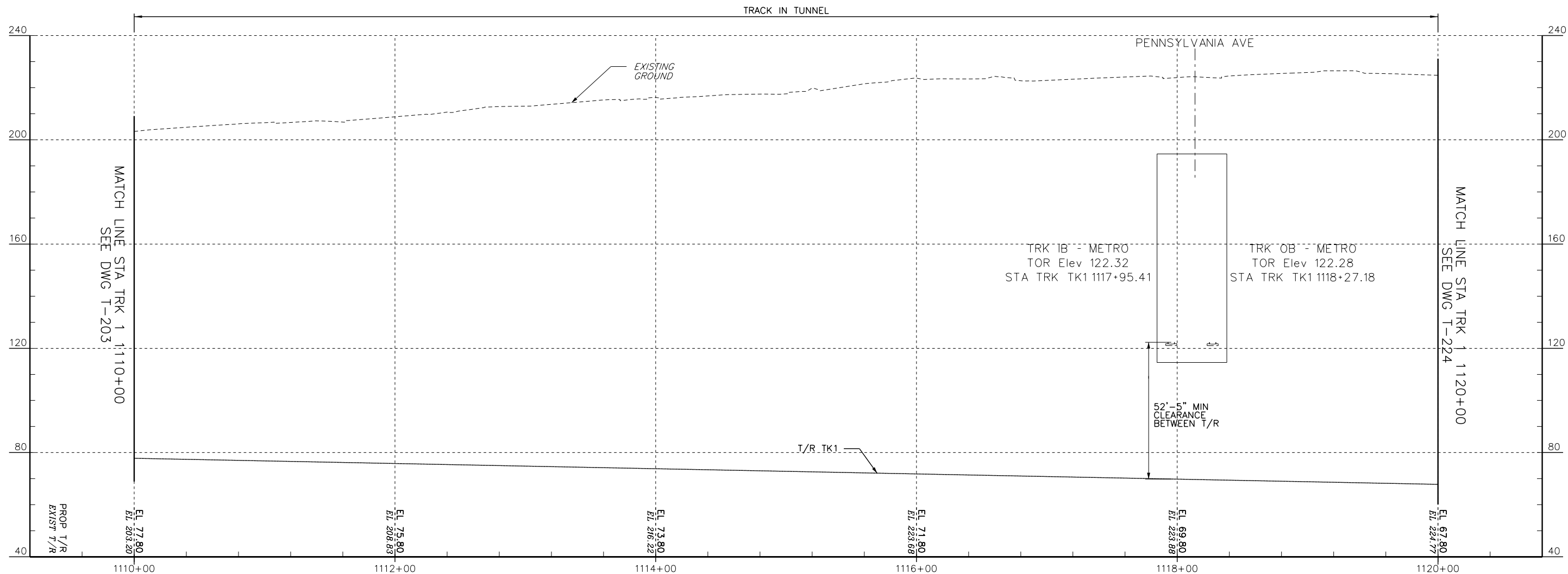
BALTIMORE, MD
B&P TUNNEL

MPXX

PROFILE - TRACK 3
STA. 1110+00 TO STA. 1120+00

Designed DO Drawn JB Checked FB Date 09/28/2016

Project No: C.EN.201278
File name: No: XXXXX
Sheet No: OF XX
Dwg. No: T-212



PROFILE - TRACK 1



No.	Revisions	Date	By

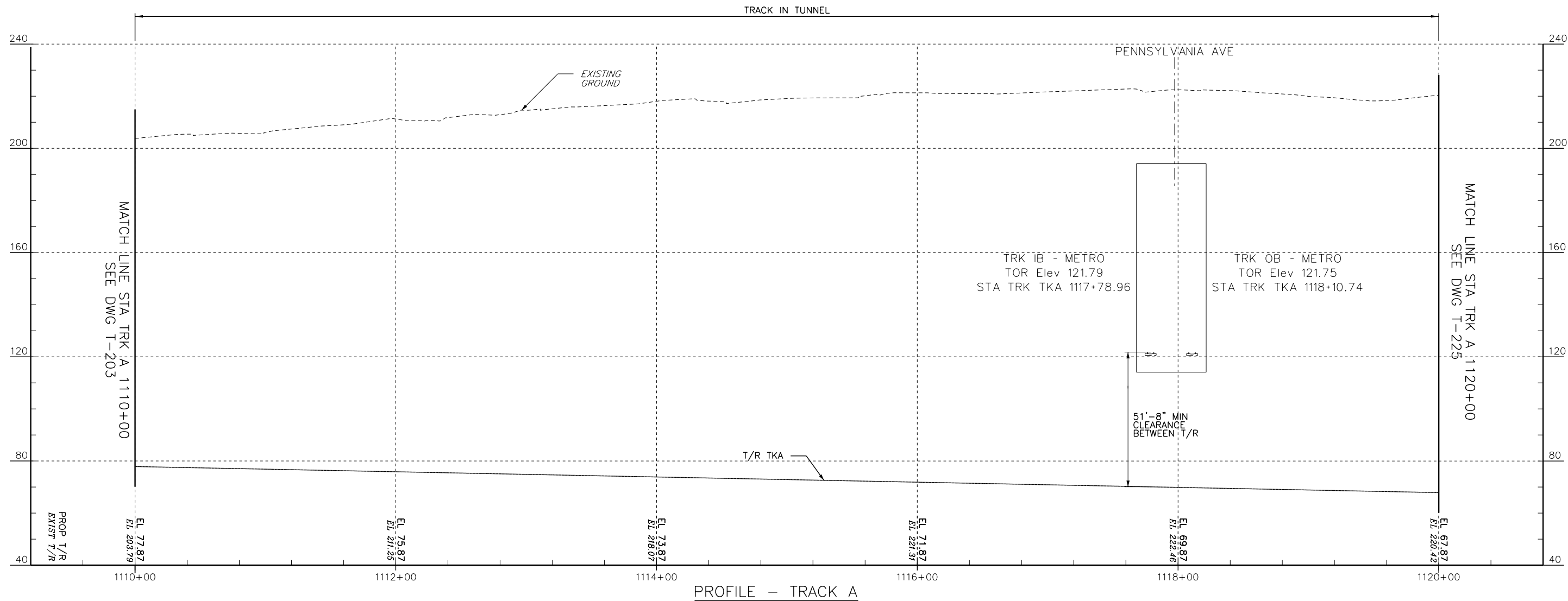


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Date



BALTIMORE, MD B&P TUNNEL		MPXX	Project No: C.EN.201278
PROFILE - TRACK 1 STA. 1110+00 TO STA. 1120+00		Designed	file name: No: XXXXX
		Drawn	Sheet No: OF XX
		Checked	Desig. No: T-214
		Date 09/28/2016	



No.	Revisions	Date	By



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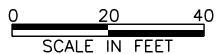
Approved

WORK IN PROGRESS

Date



BALTIMORE, MD B&P TUNNEL		MPXX	Project No: C.EN.201278
PROFILE — TRACK A STA. 1110+00 TO STA. 1120+00			file name: No: XXXXX
Designed		Drawn	Sheet No: OF XX
Checked		Date 09/28/2016	Dwg. No: T-215



CURVE TA-4 - TRACK A			
Dc = 1'-27'-15.94"	Δ _i = 72°-07'-08.26"		
Lsq/Lsb = 744.00'/744.00'	θ _s = 05°-24'-37.17"		
R = 3939.51'	Δ _c = 61°-17'-53.92"		
Lc = 4214.71'	θ _s = 05°-24'-37.17"		
Ts = 3244.63'/3244.63'	E = 639.69'		
Ea = 2.75"	M = 550.33'		
EQUIPMENT TYPE -	FREIGHT	PASSENGER	
E _u =	-0.21"	3.76"	
V _{MPH} =	50	50	
JERK RATE ENT =	-72.49	2.47	
JERK RATE EXT =	-72.49	2.47	

CURVE T1-4 - TRACK 1			
Dc = 1'-26'-07.07"	Δ _i = 72°-07'-08.26"		
Lsq/Lsb = 744.00'/744.00'	θ _s = 05°-20'-21.02"		
R = 3992.01'	Δ _c = 61°-26'-26.22"		
Lc = 4280.80'	θ _s = 05°-20'-21.02"		
Ts = 3282.80'/3282.80'	E = 651.64'		
Ea = 5.50"	M = 560.19'		
EQUIPMENT TYPE -	FREIGHT	PASSENGER	
E _u =	-2.99"	4.55"	
V _{MPH} =	50	100	
JERK RATE ENT =	-4.98	1.64	
JERK RATE EXT =	-4.98	1.64	

CURVE T2-3 - TRACK 2			
Dc = 1'-25'-00.00"	Δ _i = 72°-07'-08.26"		
Lsq/Lsb = 744.00'/744.00'	θ _s = 05°-16'-11.52"		
R = 4044.51'	Δ _c = 61°-34'-45.22"		
Lc = 4346.88'	θ _s = 05°-16'-11.52"		
Ts = 3320.98'/3320.98'	E = 663.59'		
Ea = 5.50"	M = 570.06'		
EQUIPMENT TYPE -	FREIGHT	PASSENGER	
E _u =	-3.02"	4.41"	
V _{MPH} =	50	100	
JERK RATE ENT =	-4.92	1.69	
JERK RATE EXT =	-4.92	1.69	

CURVE T3-4 - TRACK 3			
Dc = 1'-23'-55.26"	Δ _i = 72°-07'-08.26"		
Lsq/Lsb = 744.00'/744.00'	θ _s = 05°-12'-10.70"		
R = 4096.51'	Δ _c = 61°-42'-46.86"		
Lc = 4412.33'	θ _s = 05°-12'-10.70"		
Ts = 3358.79'/3358.79'	E = 675.45'		
Ea = 2.50"	M = 579.84'		
EQUIPMENT TYPE -	FREIGHT	PASSENGER	
E _u =	-0.05"	2.30"	
V _{MPH} =	50	50	
JERK RATE ENT =	-281.84	4.63	
JERK RATE EXT =	-281.84	4.63	

No.	Revisions	Date	By

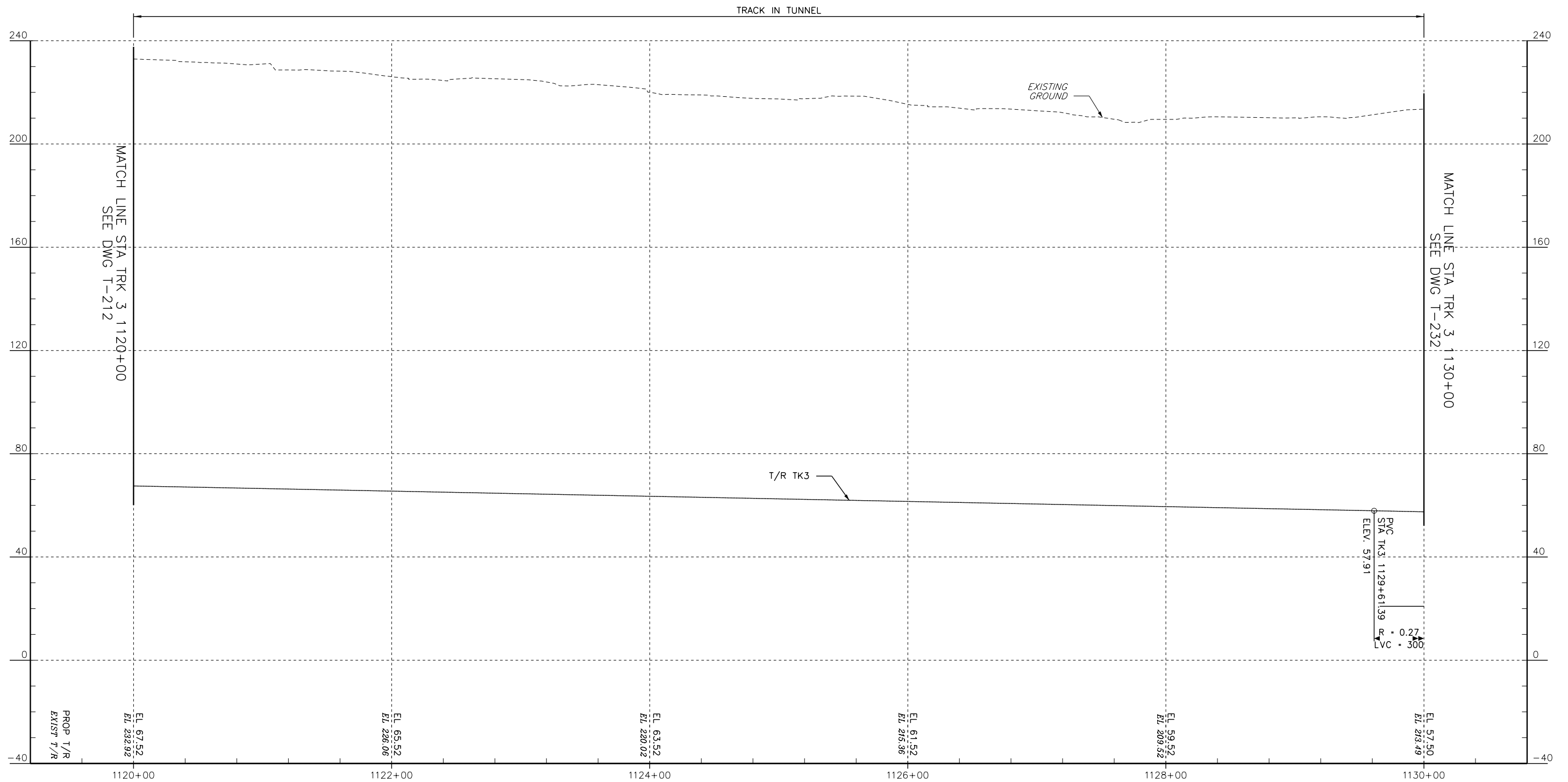


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WORK IN PROGRESS
Date



BALTIMORE, MD B&P TUNNEL		MPXX	Project No: C.EN.201278
TRACK PLAN			File name: No: XXXXX
STA TK2 1120+00 TO STA TK2 1130+00			Sheet No: OF XX
Designed	Drawn	Checked	Date 09/28/2016
Dwg. No. T-221			



PROFILE - TRACK 3



No.	Revisions	Date	By



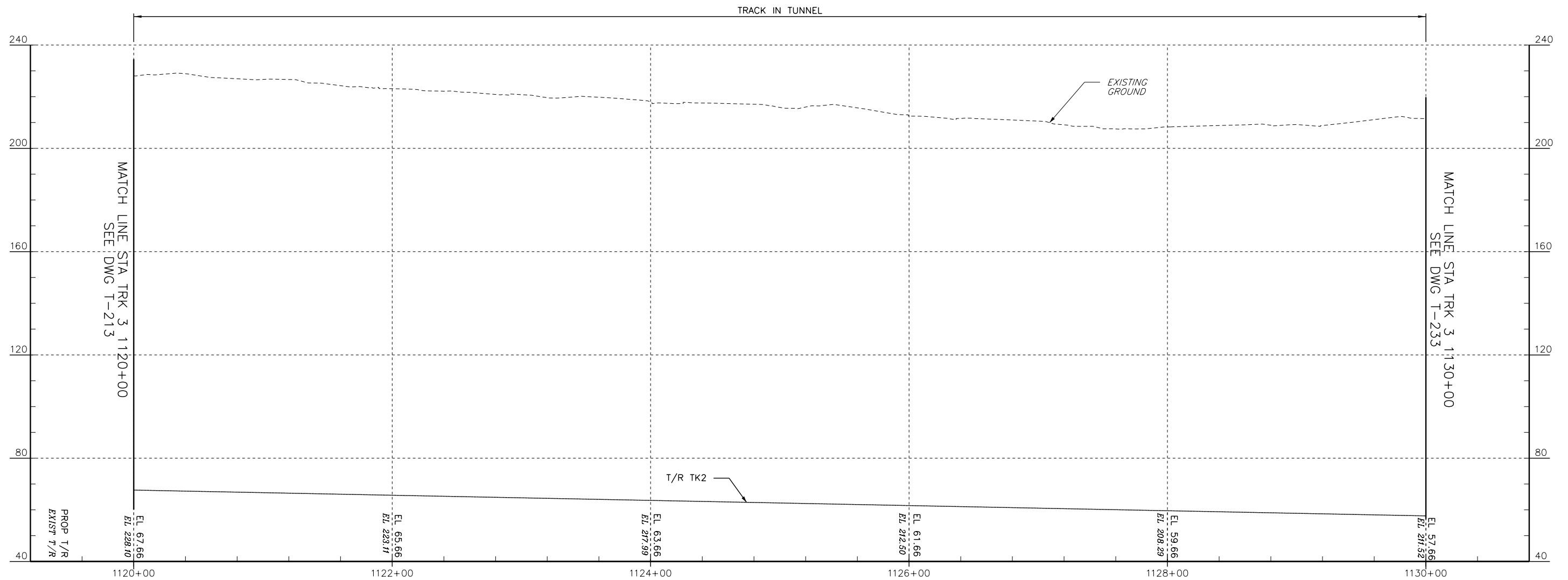
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30th Street Station, Philadelphia, Pennsylvania 19104

Approved	Date
WORK IN PROGRESS	



BALTIMORE, MD B&P TUNNEL		MPXX	
PROFILE - TRACK 3 STA. 1120+00 TO STA. 1130+00		Project No:	C.EN.201278
Designed		File name:	No: XXXXX
Drawn		Sheet No.	OF XX
Checked		Des. No.	T-222
Date 09/28/2016			



PROFILE - TRACK 2

0 40 80
HORIZ. SCALE IN FEET

0 20 40
VERT. SCALE IN FEET

No.	Revisions	Date	By

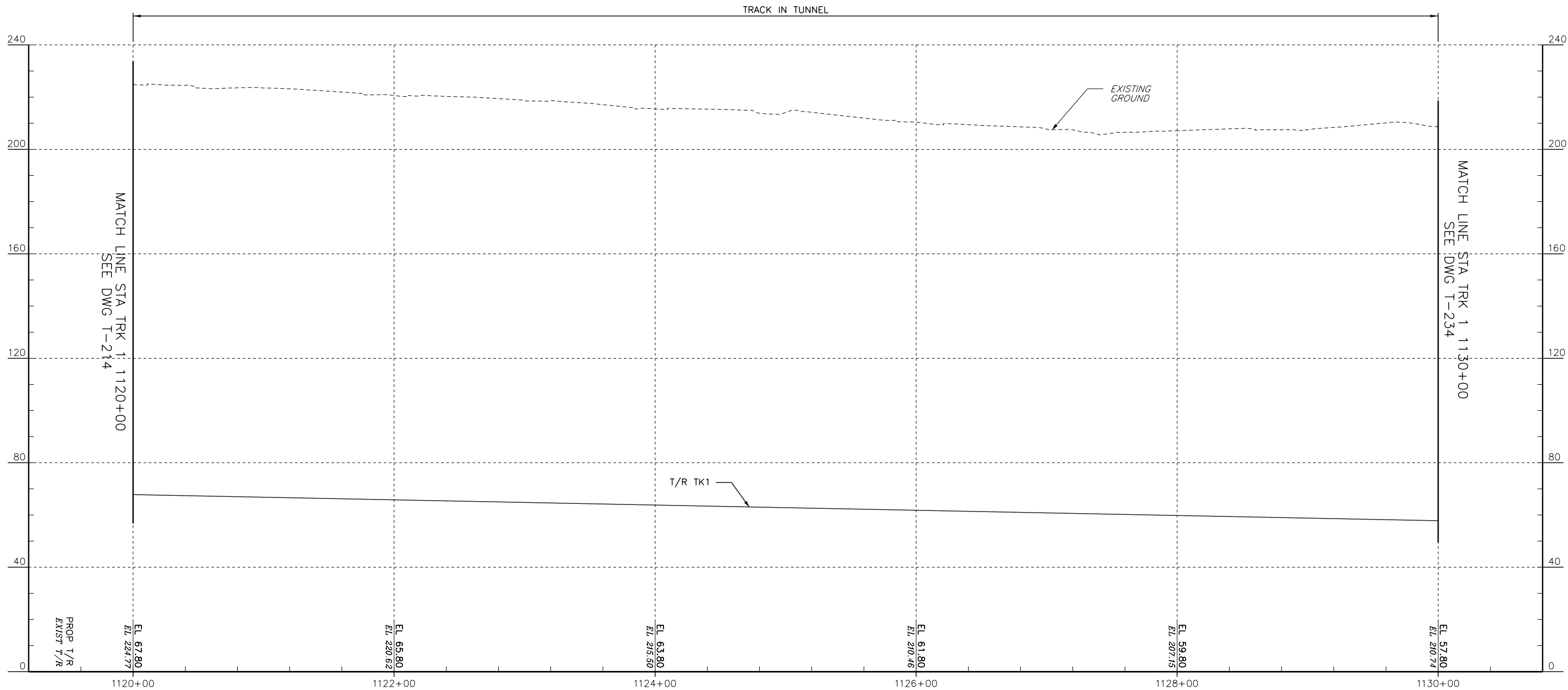


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National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

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WORK IN PROGRESS
Date



BALTIMORE, MD B&P TUNNEL				MPXX	Project No:	C.EN.201278
PROFILE - TRACK 2 STA. 1120+00 TO STA. 1130+00				Desg. No.	file name:	XXXXX
					Sheet No.	OF XX
Designed DO	Drawn JB	Checked FB	Date 09/28/2016	T-223		



PROFILE - TRACK 1



No.	Revisions	Date	By



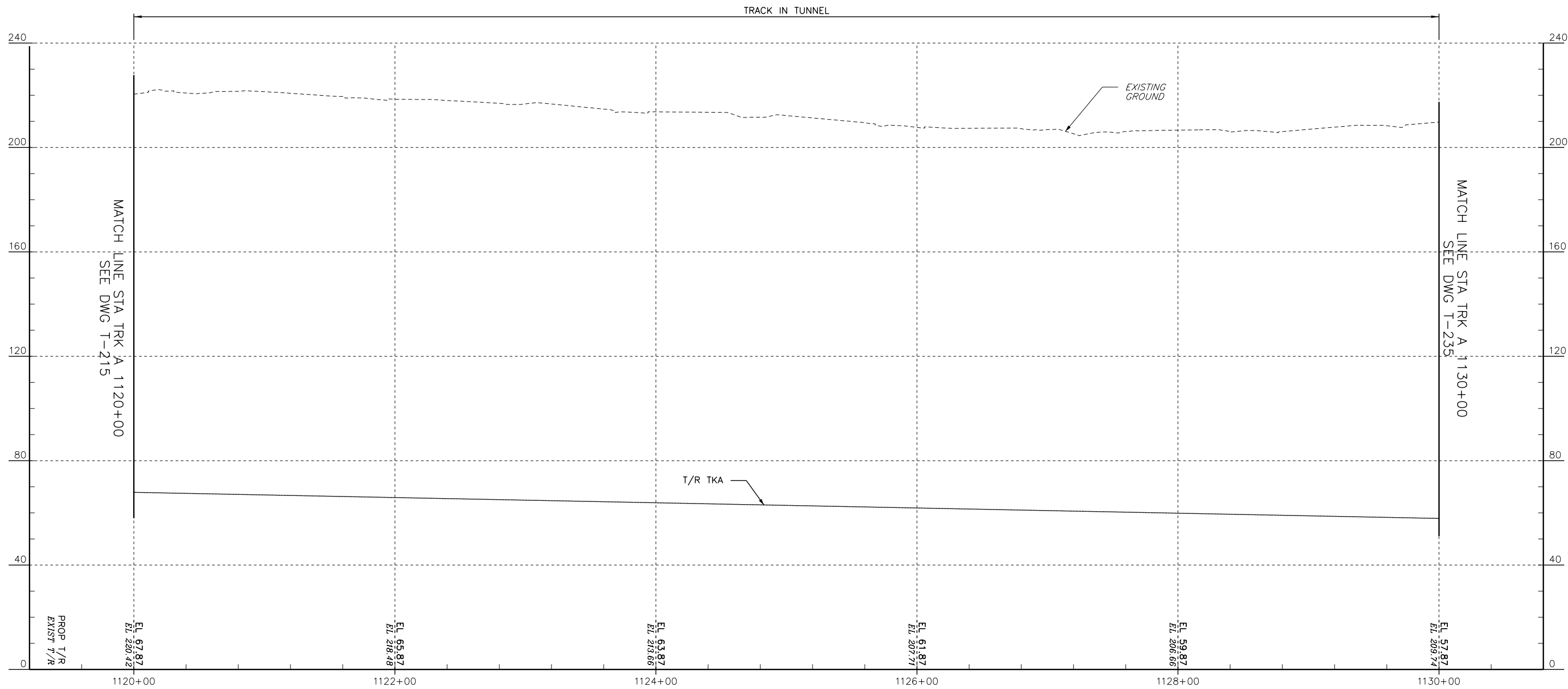
Office of Engineering

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30th Street Station, Philadelphia, Pennsylvania 19104

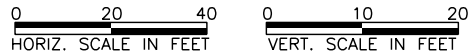
Approved	Date
WORK IN PROGRESS	



BALTIMORE, MD B&P TUNNEL				MPXX	Project No: C.EN.201278
PROFILE - TRACK 1 STA. 1120+00 TO STA. 1130+00					file name: No: XXXXX
Designed DO				Drawn JB	Sheet No: OF XX
Checked FB				Date 09/28/2016	Dwg. No: T-224



PROFILE — TRACK A



No.	Revisions	Date	By



Office of Engineering

National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

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WORK IN PROGRESS

Date



BALTIMORE, MD B&P TUNNEL				MPXX	Project No: C.EN.201278
PROFILE — TRACK A STA. 1120+00 TO STA. 1130+00				file name: No: XXXXX	Sheet No: OF XX
				Desig. No. T-225	
Designed DO	Drawn JB	Checked FB	Date 09/28/2016		

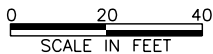


CURVE TA-4 - TRACK A			
Dc = 1'-27'-15.94"	Δ _i = 72°-07'-08.26"	Δ _s = 05°-24'-37.17"	
L _{sq} /L _{sb} = 744.00'/7442.00'	θ _s = 05°-24'-37.17"	Δ _c = 61°-17'-53.92"	
R = 3939.51'		θ _s = 05°-24'-37.17"	
L _c = 4214.71'		E = 639.69'	
T _s = 3244.63'/3244.63'		M = 550.33'	
E _a = 2.75"			
EQUIPMENT TYPE -	FREIGHT	PASSENGER	
E _u	-0.21"	3.76"	
V _{MPH}	50	50	
JERK RATE ENT	-72.49	2.47	
JERK RATE EXT	-72.49	2.47	

CURVE T1-4 - TRACK 1			
Dc = 1'-26'-07.07"	Δ _i = 72°-07'-08.26"	Δ _s = 05°-20'-21.02"	
L _{sq} /L _{sb} = 744.00'/744.00'	θ _s = 05°-20'-21.02"	Δ _c = 61°-26'-26.22"	
R = 3992.01'		θ _s = 05°-20'-21.02"	
L _c = 4280.80'		E = 651.64'	
T _s = 3282.80'/3282.80'		M = 560.19'	
E _a = 5.50"			
EQUIPMENT TYPE -	FREIGHT	PASSENGER	
E _u	-2.99"	4.55"	
V _{MPH}	50	100	
JERK RATE ENT	-4.98	1.64	
JERK RATE EXT	-4.98	1.64	

CURVE T2-3 - TRACK 2			
Dc = 1'-25'-00.00"	Δ _i = 72°-07'-08.26"	Δ _s = 05°-16'-11.52"	
L _{sq} /L _{sb} = 744.00'/744.00'	θ _s = 05°-16'-11.52"	Δ _c = 61°-34'-45.22"	
R = 4044.51'		θ _s = 05°-16'-11.52"	
L _c = 4346.88'		E = 663.59'	
T _s = 3320.98'/3320.98'		M = 570.06'	
E _a = 5.50"			
EQUIPMENT TYPE -	FREIGHT	PASSENGER	
E _u	-3.02"	4.41"	
V _{MPH}	50	100	
JERK RATE ENT	-4.92	1.69	
JERK RATE EXT	-4.92	1.69	

CURVE T3-4 - TRACK 3			
Dc = 1'-23'-55.26"	Δ _i = 72°-07'-08.26"	Δ _s = 05°-12'-10.70"	
L _{sq} /L _{sb} = 744.00'/744.00'	θ _s = 05°-12'-10.70"	Δ _c = 61°-42'-46.86"	
R = 4096.51'		θ _s = 05°-12'-10.70"	
L _c = 4412.33'		E = 675.45'	
T _s = 3358.79'/3358.79'		M = 579.84'	
E _a = 2.50"			
EQUIPMENT TYPE -	FREIGHT	PASSENGER	
E _u	-0.05"	2.30"	
V _{MPH}	50	50	
JERK RATE ENT	-281.84	4.63	
JERK RATE EXT	-281.84	4.63	



No.	Revisions	Date	By



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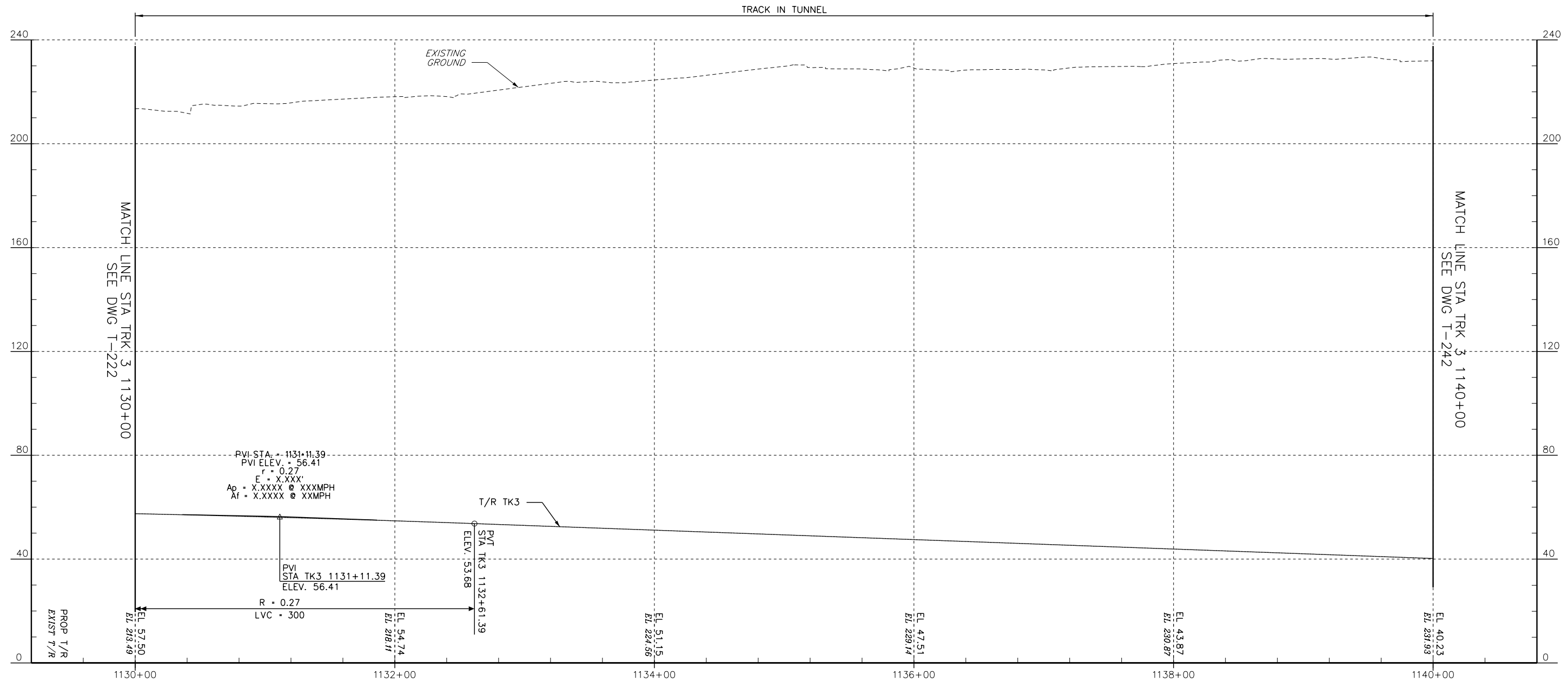
BALTIMORE, MD
B&P TUNNEL

TRACK PLAN
STA TK2 1130+00 TO STA TK2 1140+00

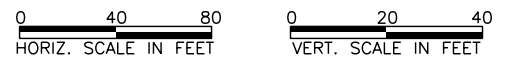
Designed Drawn Checked Date 09/28/2016

MPXX
Project No: C.EN.201278
File name: No: XXXXX
Sheet No: OF XX
Des. No: T-231

STATES
STRAIGHT
SCALE: 1"=40'
STANDARD PEN TABLE NO



PROFILE - TRACK 3



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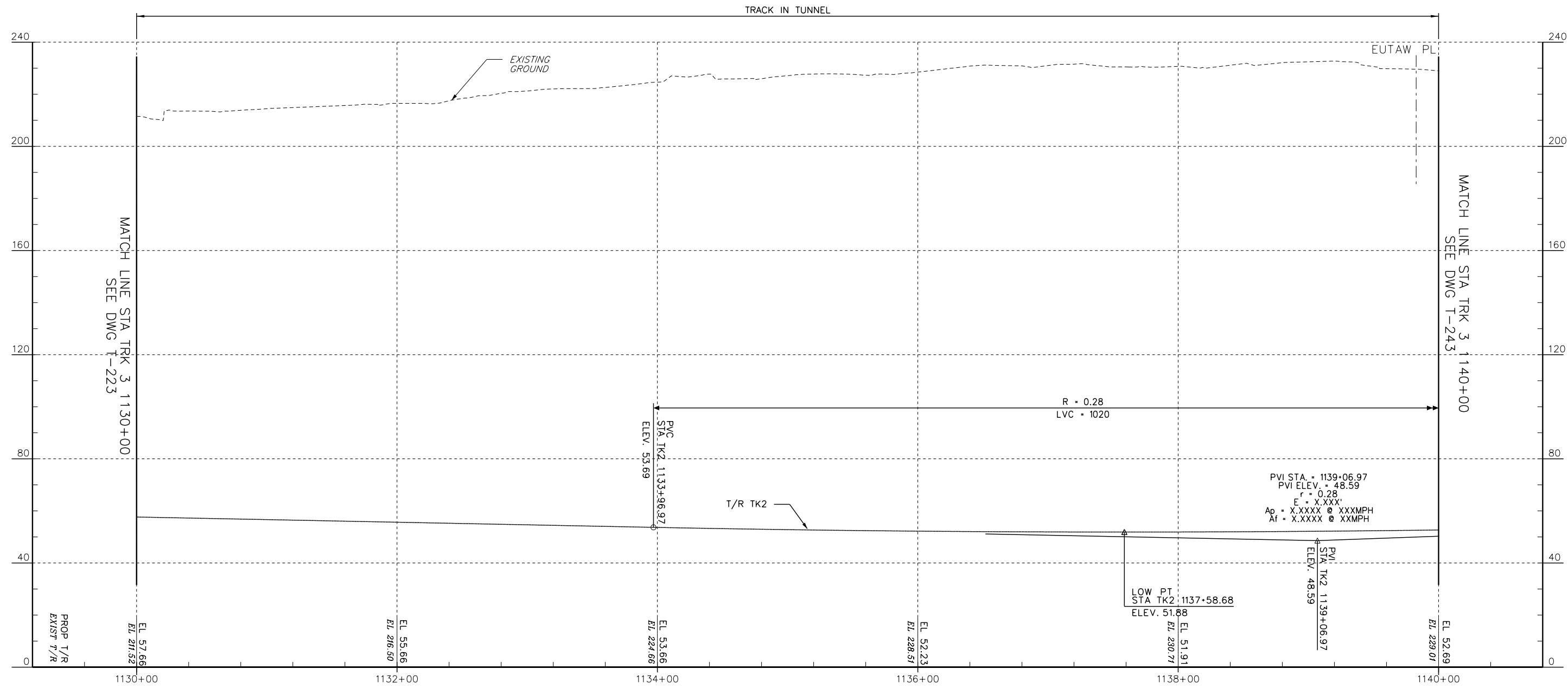
Approved

WORK IN PROGRESS

Date



BALTIMORE, MD B&P TUNNEL				MPXX	Project No: C.EN.201278
PROFILE - TRACK 3 STA. 1130+00 TO STA. 1140+00					file name: XXXXX
Designed DO				Drawn JB	Sheet No. OF XX
Checked FB				Date 09/28/2016	Dwg. No. T-232



PROFILE - TRACK 2



No.	Revisions	Date	By



Office of Engineering

National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

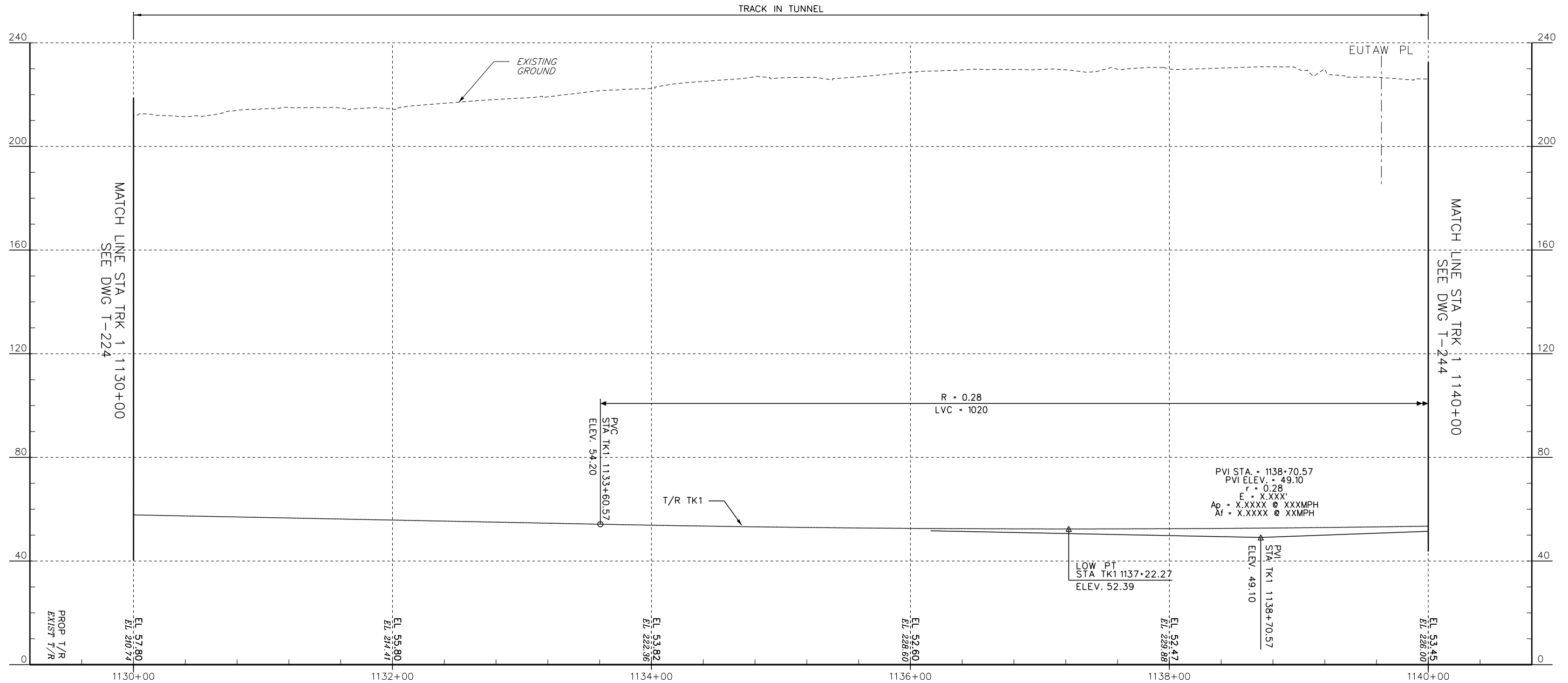
Approved

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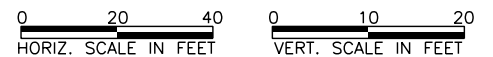
Date



BALTIMORE, MD B&P TUNNEL				MPXX	Project No: C.EN.201278
PROFILE - TRACK 2 STA. 1130+00 TO STA. 1140+00					file name: No: XXXXX
Designed DO	Drawn JB	Checked FB	Date 09/28/2016		Sheet No. OF XX
					Dwg. No. T-233



PROFILE - TRACK 1



No.	Revisions	Date	By



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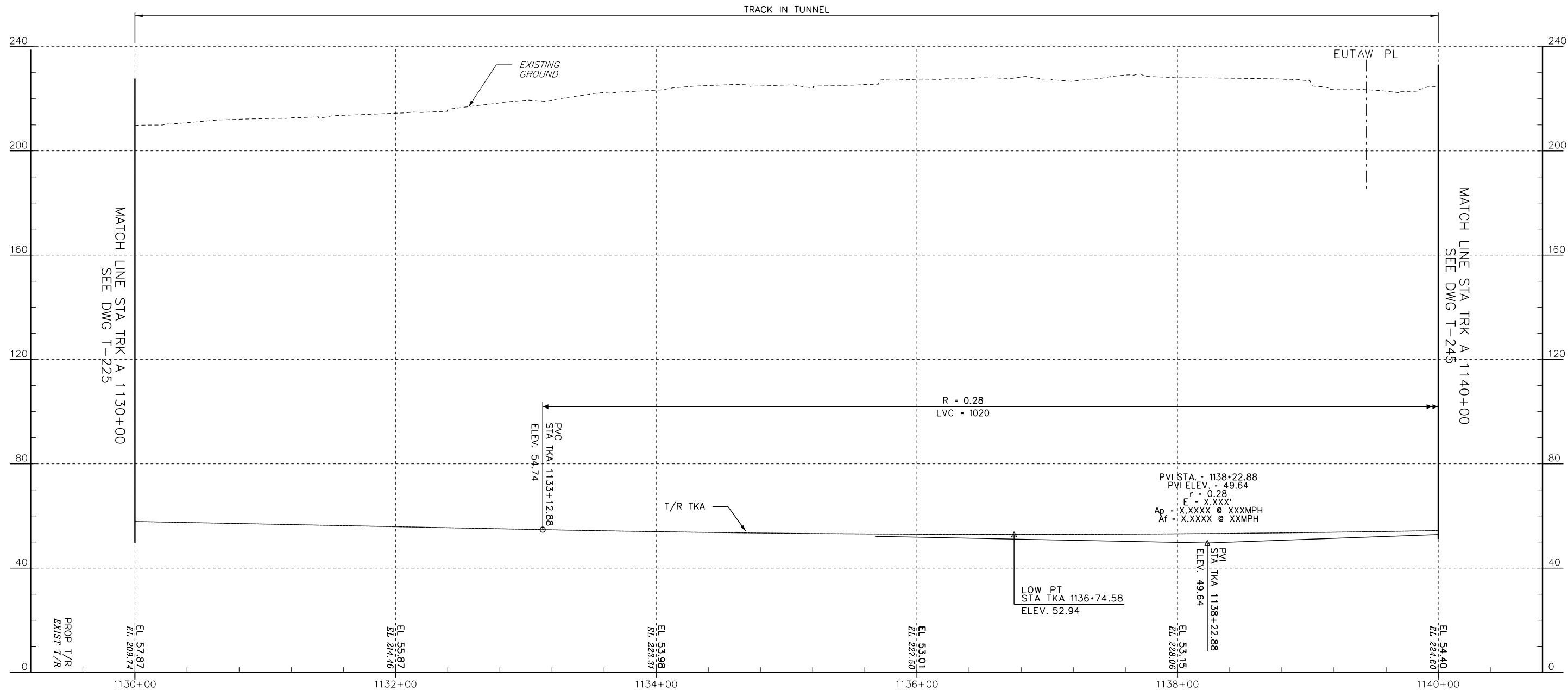
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Date



BALTIMORE, MD B&P TUNNEL				MPXX	Project No: C.EN.201278
PROFILE - TRACK 1 STA. 1130+00 TO STA. 1140+00					file name: XXXXX
Designed DO				Drawn JB	Sheet No. OF XX
Checked FB				Date 09/28/2016	Des. No. T-234



PROFILE - TRACK A



No.	Revisions	Date	By

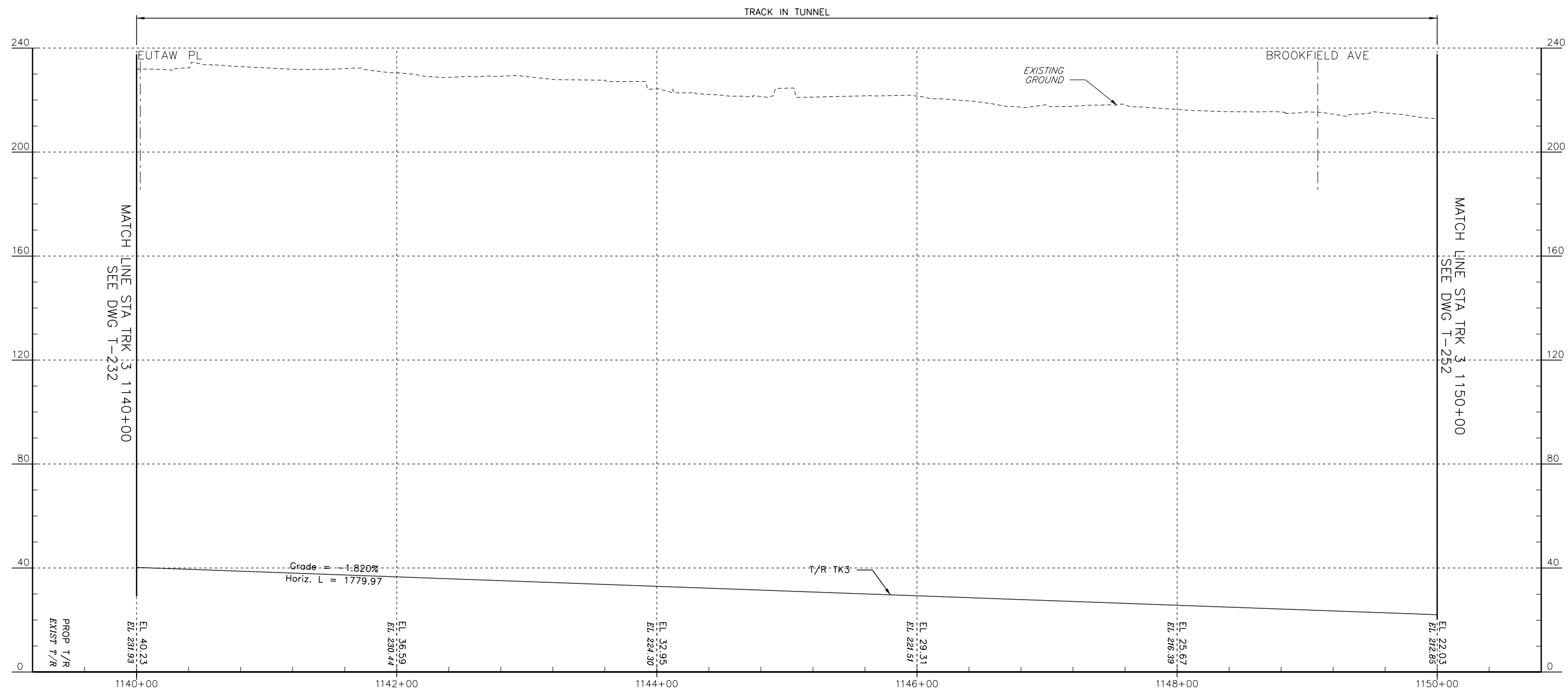


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BALTIMORE, MD B&P TUNNEL		MPXX	Project No: C.EN.201278
PROFILE - TRACK A STA. 1130+00 TO STA. 1140+00		Designed DO	file name: No: XXXXX
		Drawn JB	Sheet No: OF XX
		Checked FB	Dwg. No: T-235
		Date 09/28/2016	



PROFILE - TRACK 3

0 40 80
HORIZ. SCALE IN FEET

0 20 40
VERT. SCALE IN FEET

No.	Revisions	Date	By



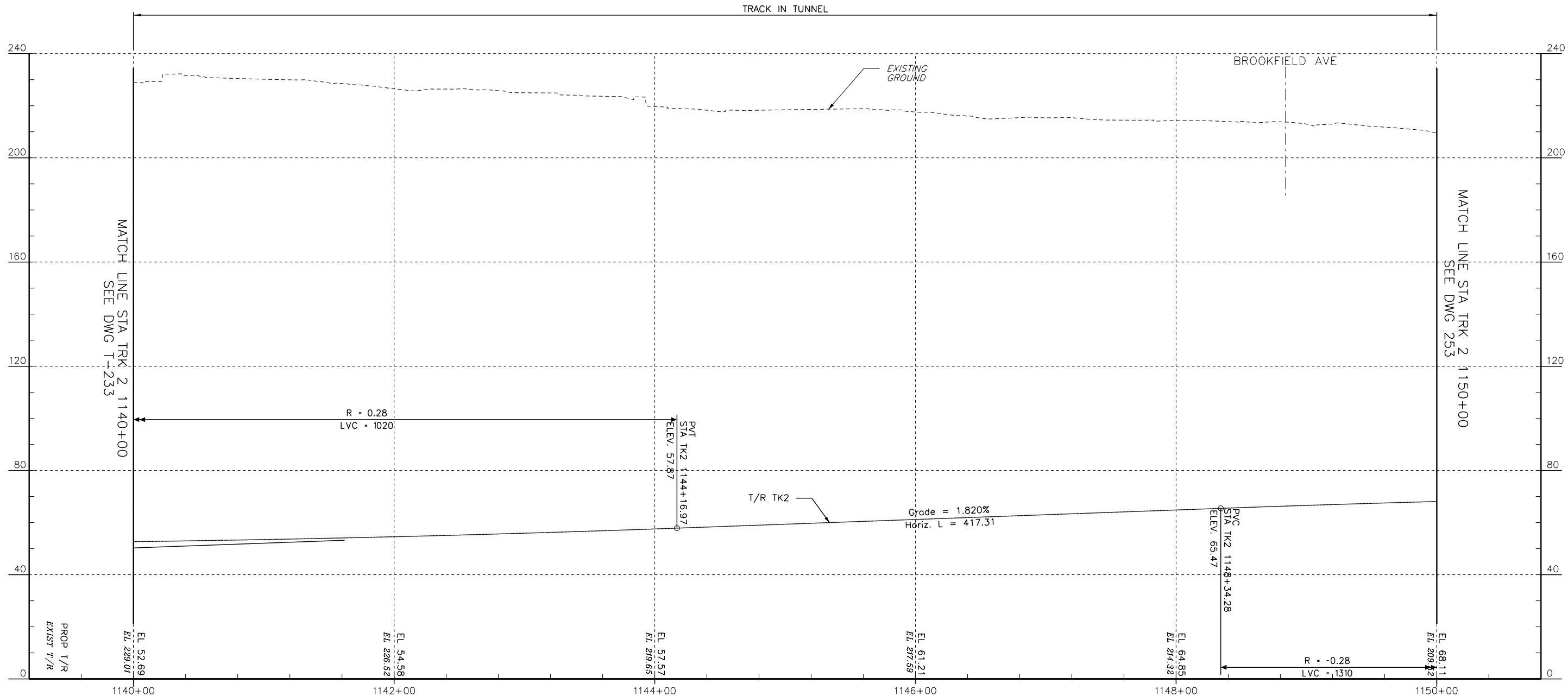
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BALTIMORE, MD B&P TUNNEL				MPXX	Project No: C.EN.201278
PROFILE - TRACK 3 STA. 1140+00 TO STA. 1150+00					file name: XXXXX
Designed DO				Drawn JB	Sheet No. OF XX
Checked FB				Date 09/28/2016	Dwg. No. T-242



PROFILE - TRACK 2



No.	Revisions	Date	By



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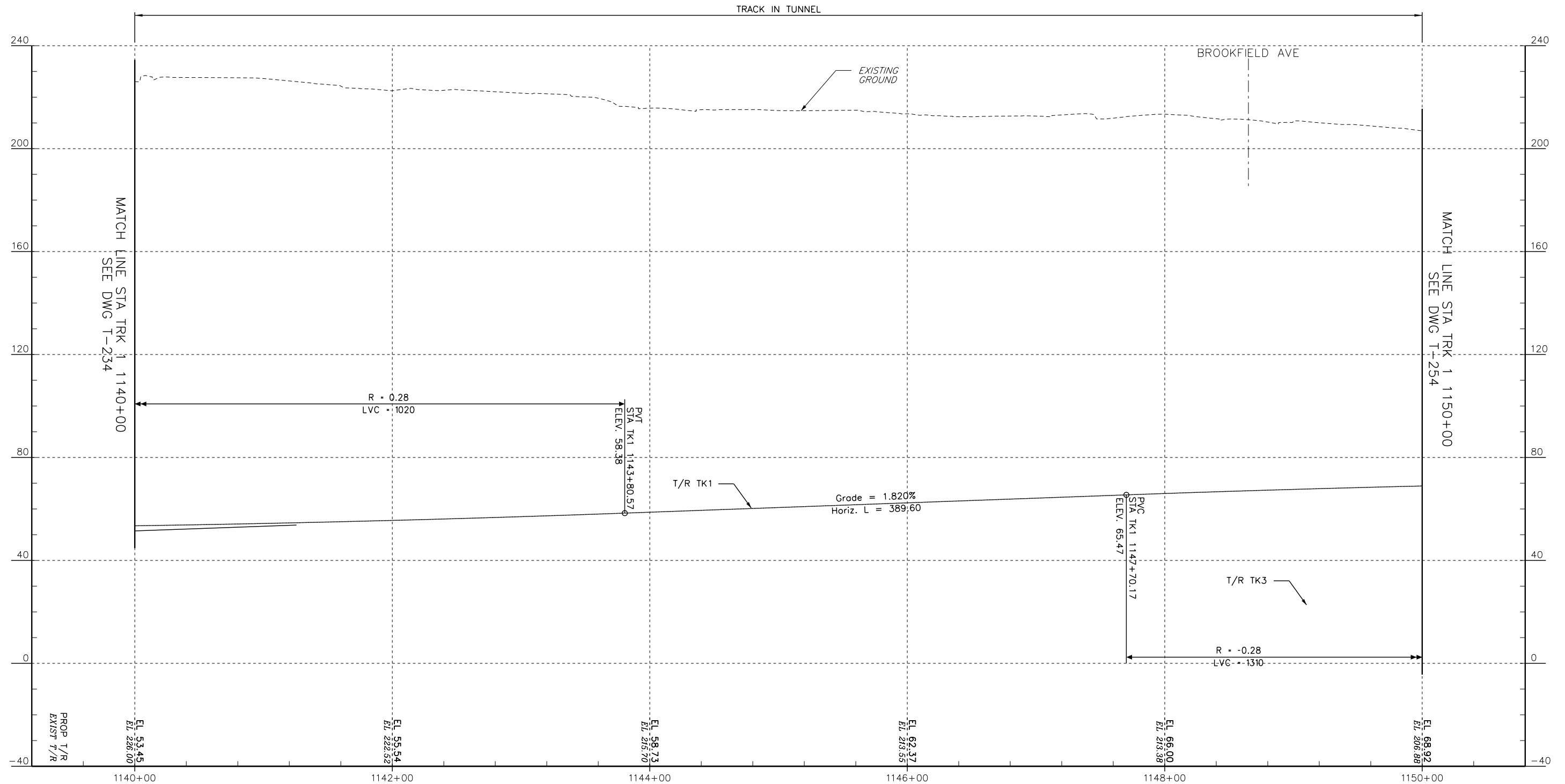
Approved

WORK IN PROGRESS

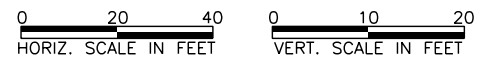
Date



BALTIMORE, MD B&P TUNNEL				MPXX	Project No: C.EN.201278
PROFILE - TRACK 2 STA. 1140+00 TO STA. 1150+00					file name: No: XXXXX
Designed DO				Drawn JB	Sheet No. OF XX
Checked FB				Date 09/28/2016	Dwg. No. T-243



PROFILE - TRACK 1



No.	Revisions	Date	By



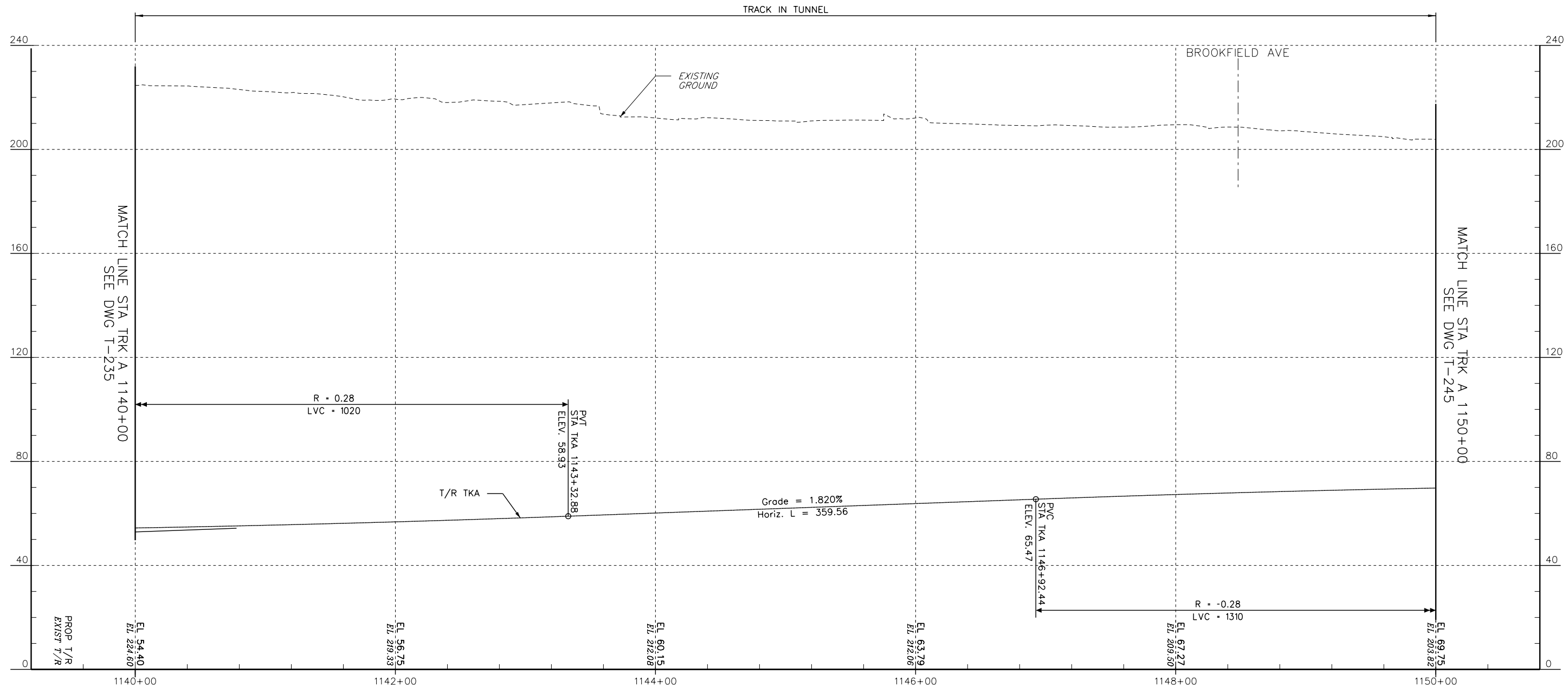
Office of Engineering

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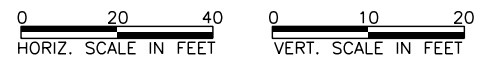
Approved	Date
WORK IN PROGRESS	



BALTIMORE, MD B&P TUNNEL		MPXX	Project No: C.EN.201278
PROFILE - TRACK 1 STA. 1140+00 TO STA. 1150+00			file name: No: XXXXX
			Sheet No: OF XX
			Des. No: T-244
Designed DO	Drawn JB	Checked FB	Date 09/28/2016



PROFILE — TRACK A



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BALTIMORE, MD B&P TUNNEL				MPXX	Project No: C.EN.201278
PROFILE — TRACK A STA. 1140+00 TO STA. 1150+00					file name: No: XXXXX
Designed DO				Drawn JB	Sheet No. OF XX
Checked FB				Date 09/28/2016	Dwg. No. T-245



CURVE TA-5 - TRACK A			
Dc = 0'-32'-00.00"	Δi = 02°-55'-36.47"	Δs = 00°-34'-43.19"	
Lsq/Lsb = 217.00'/217.00'	R = 10743.00'	Lc = 331.78'	Es = 382.95'/382.95'
Eo = 0.75"	M = 1.28'		
EQUIPMENT TYPE -	FREIGHT	PASSENGER	
Eu =	-0.01"	1.64"	
Vmph =	45	45	
JERK RATE ENT =	822.28	1.66	
JERK RATE EXT =	822.28	1.66	

CURVE TA-6 - TRACK A			
Dc = 0'-32'-00.00"	Δi = 02°-55'-36.47"	Δs = 00°-34'-43.19"	
Lsq/Lsb = 217.00'/217.00'	R = 10743.00'	Lc = 331.78'	Es = 382.95'/382.95'
Eo = 0.75"	M = 1.28'		
EQUIPMENT TYPE -	FREIGHT	PASSENGER	
Eu =	-0.01"	1.64"	
Vmph =	45	45	
JERK RATE ENT =	822.28	1.66	
JERK RATE EXT =	822.28	1.66	

CURVE T3-5 - TRACK 3			
Dc = 1'-26'-00.00"	Δi = 08°-21'-40.17"	Δs = 01°-59'-58.01"	
Lsq/Lsb = 279.00'/279.00'	R = 3997.48'	Lc = 304.35'	Es = 431.75'/431.75'
Eo = 2.50"	M = 2.90'		
EQUIPMENT TYPE -	FREIGHT	PASSENGER	
Eu =	-0.01"	2.42"	
Vmph =	50	50	
JERK RATE ENT =	712.89	1.65	
JERK RATE EXT =	712.89	1.65	

CURVE T3-6 - TRACK 3			
Dc = 1'-26'-00.00"	Δi = 08°-21'-40.17"	Δs = 01°-59'-58.01"	
Lsq/Lsb = 279.00'/279.00'	R = 3997.48'	Lc = 304.35'	Es = 431.75'/431.75'
Eo = 2.50"	M = 2.90'		
EQUIPMENT TYPE -	FREIGHT	PASSENGER	
Eu =	-0.01"	2.42"	
Vmph =	50	50	
JERK RATE ENT =	712.89	1.65	
JERK RATE EXT =	712.89	1.65	

No.	Revisions	Date	By

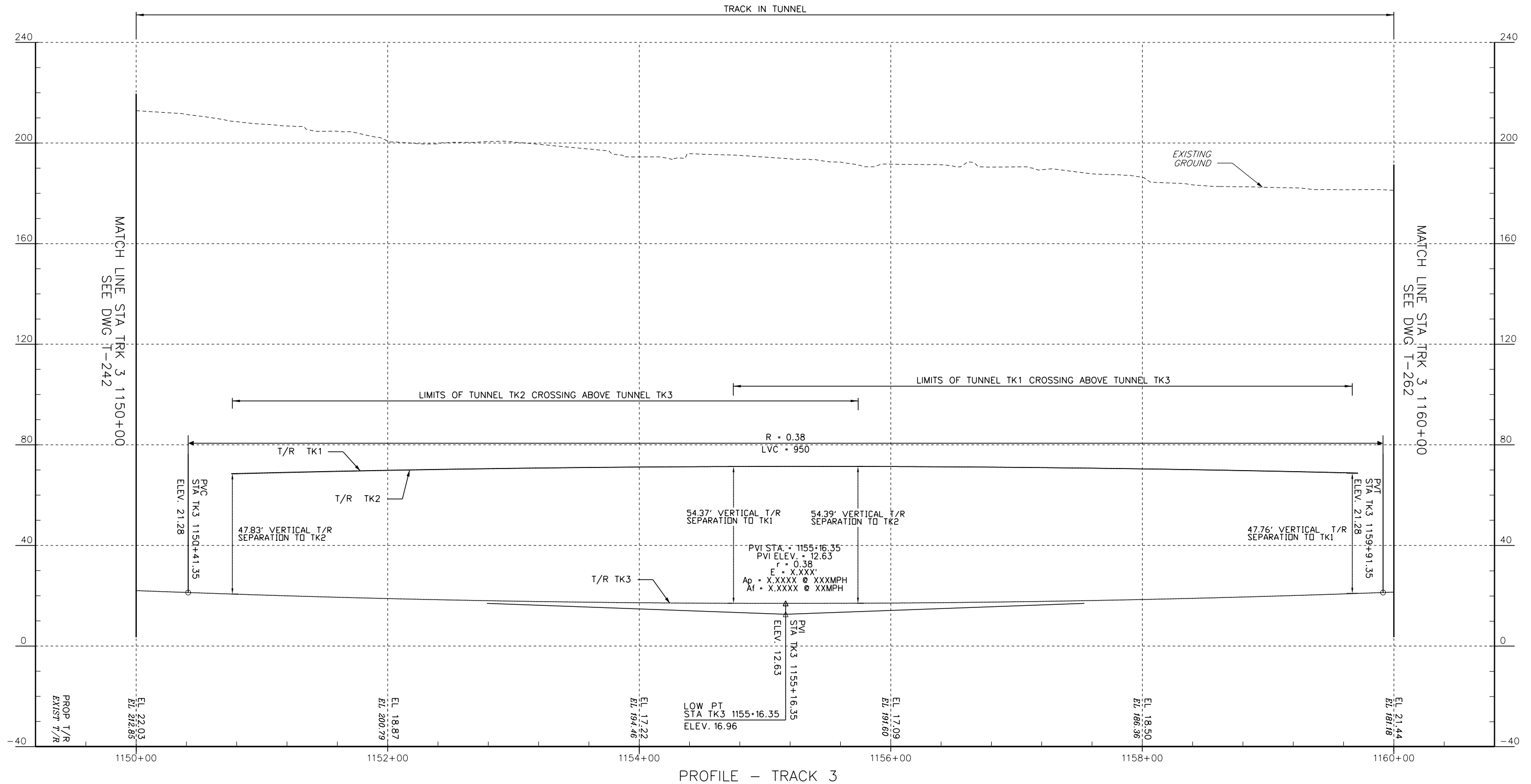


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Date



BALTIMORE, MD B&P TUNNEL		MPXX	Project No: C.EN.201278
TRACK PLAN			File name: No: XXXXX
STA TK2 1150+00 TO STA TK2 1160+00			Sheet No: OF XX
Designed	Drawn	Checked	Date 09/28/2016
T-251			



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30th Street Station, Philadelphia, Pennsylvania 19104

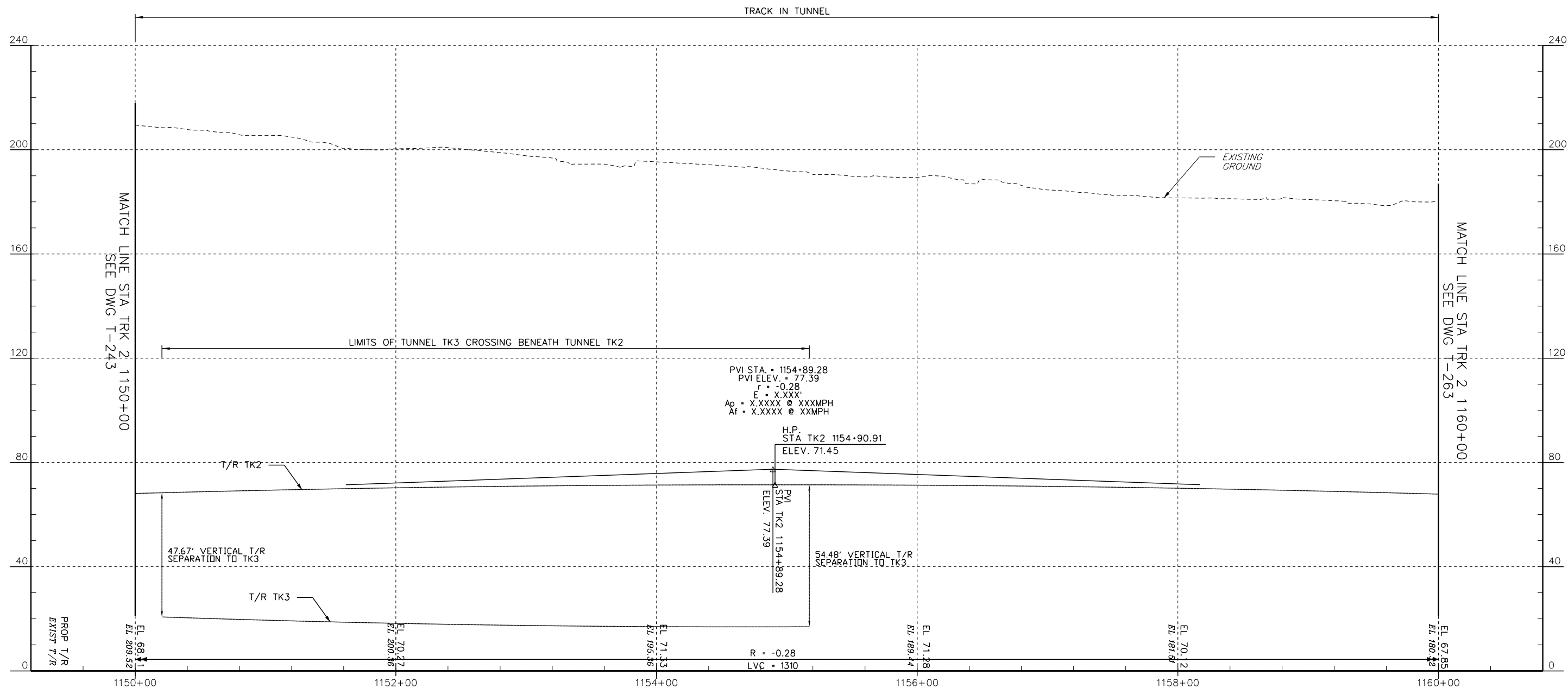
Approved

WORK IN PROGRESS

Date



BALTIMORE, MD B&P TUNNEL				MPXX	Project No: C.EN.201278
PROFILE - TRACK 3 STA. 1150+00 TO STA. 1160+00					file name: No: XXXXX
Designed DO				Drawn JB	Sheet No: OF XX
Checked FB				Date 09/28/2016	Des. No: T-252



PROFILE - TRACK 2

0 40 80
HORIZ. SCALE IN FEET

0 20 40
VERT. SCALE IN FEET

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A Parsons Brinckerhoff/Parsons Joint Venture

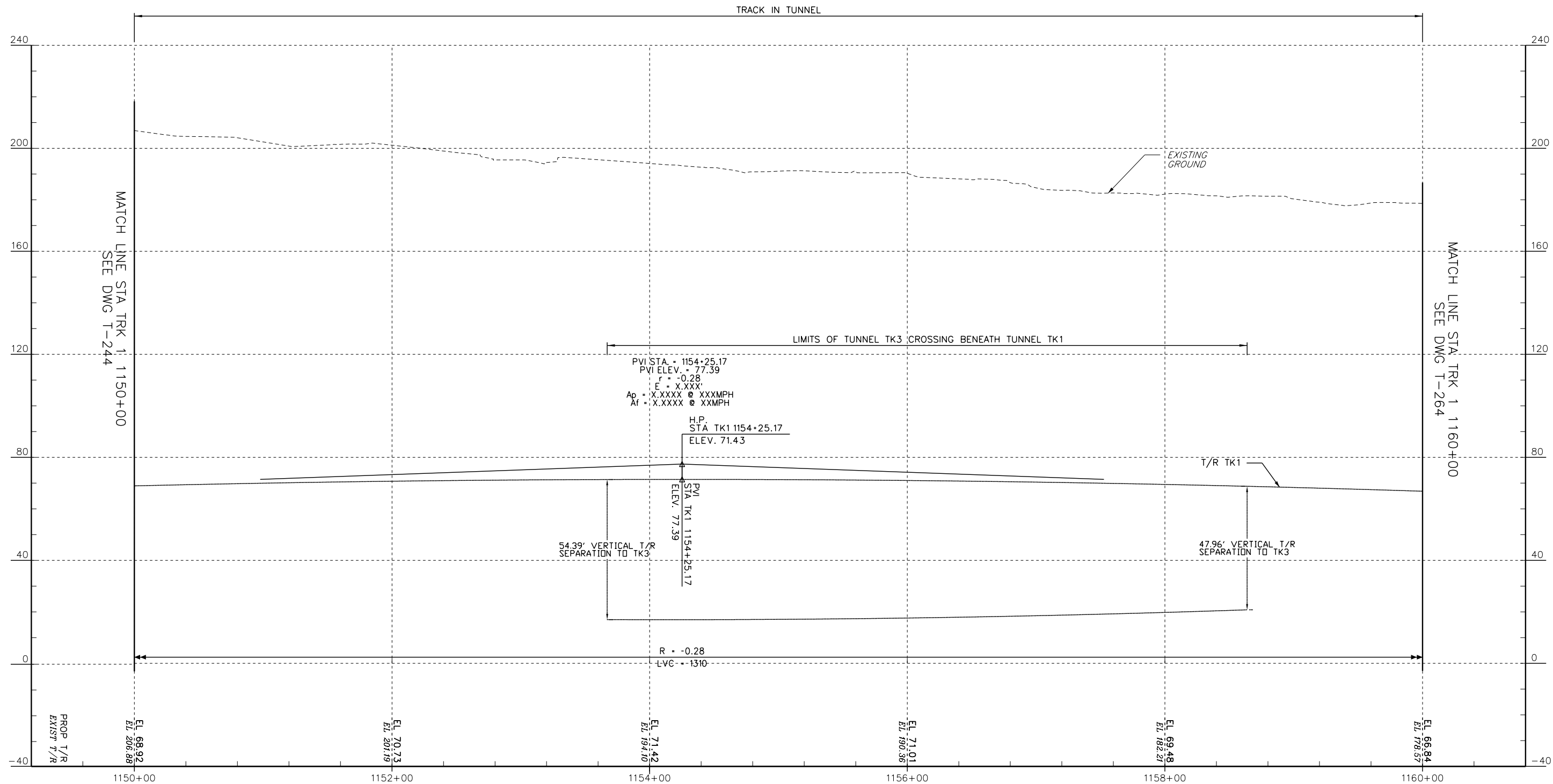
BALTIMORE, MD
B&P TUNNEL

MPXX

PROFILE - TRACK 2
STA. 1150+00 TO STA. 1160+00

Designed DO Drawn JB Checked FB Date 09/28/2016

Project No: C.EN.201278
File name: No: XXXXX
Sheet No: OF XX
Dwg. No: T-253



PROFILE - TRACK 1



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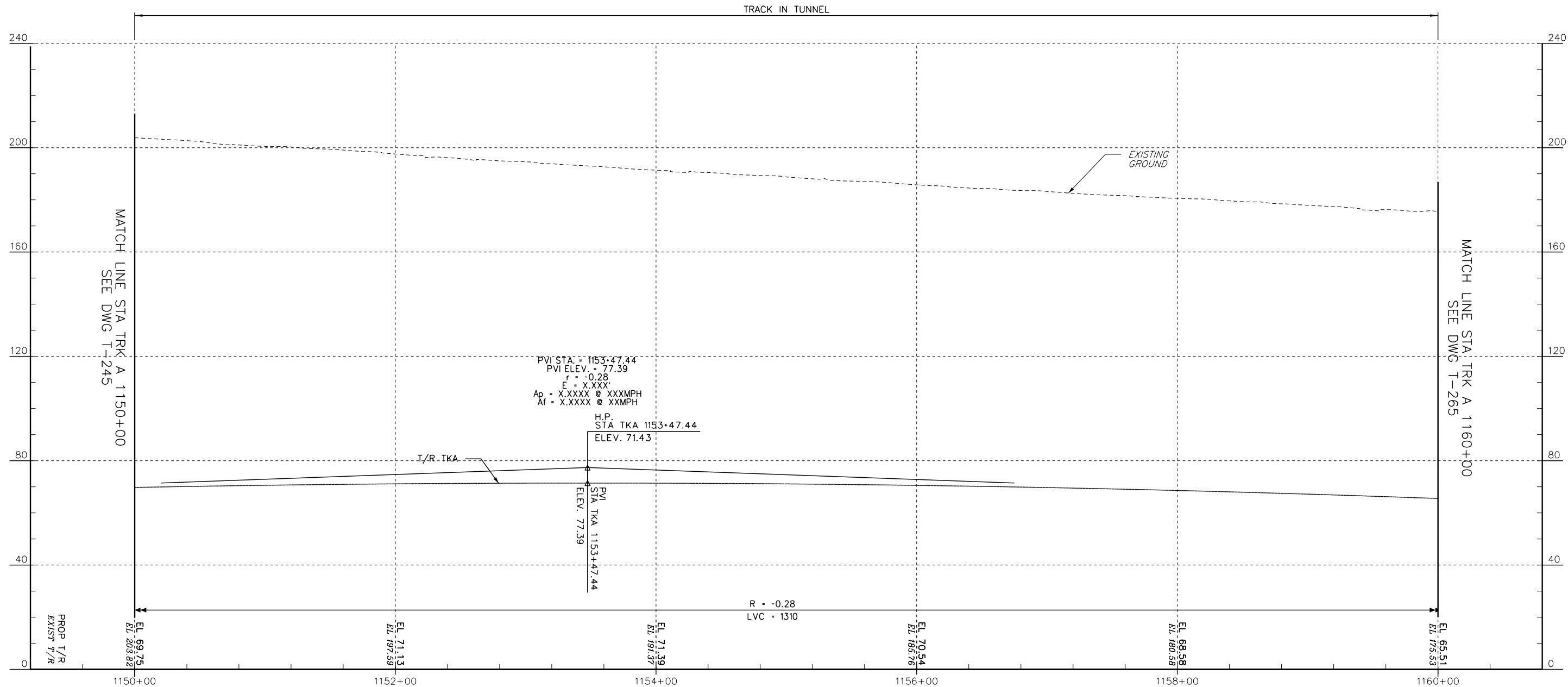
Approved

WORK IN PROGRESS

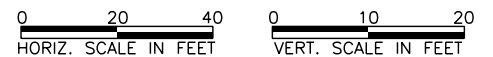
Date



BALTIMORE, MD B&P TUNNEL		MPXX	Project No: C.EN.201278
PROFILE - TRACK 1 STA. 1150+00 TO STA. 1160+00		Desig. No. T-254	file name: No: XXXXX
Designed DO	Drawn JB	Checked FB	Sheet No. OF XX
Date 09/28/2016		Date 09/28/2016	



PROFILE - TRACK A



No.	Revisions	Date	By



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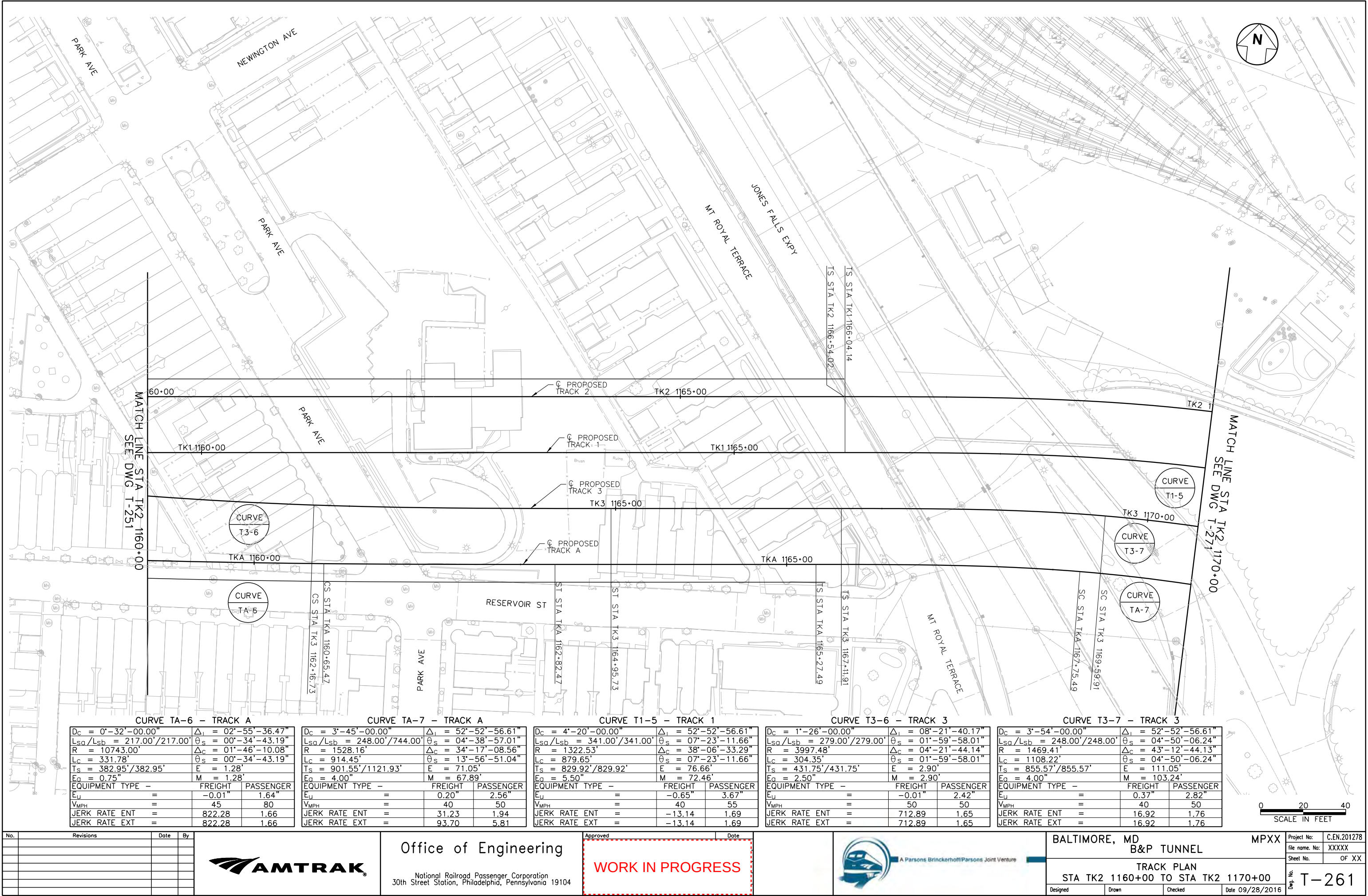
Approved

WORK IN PROGRESS

Date



BALTIMORE, MD B&P TUNNEL				MPXX	Project No:	C.EN.201278
PROFILE - TRACK A STA. 1150+00 TO STA. 1160+00				Desg. No.	file name. No:	XXXXXX
					Sheet No.	OF XX
Designed DO	Drawn JB	Checked FB	Date 09/28/2016	T-255		



CURVE TA-6 - TRACK A			
Dc = 0'-32'-00.00"	Δ _i = 02'-55'-36.47"		
L _{sq} /L _{sb} = 217.00'/217.00'	θ _s = 00'-34'-43.19"		
R = 10743.00'	Δ _c = 01'-46'-10.08"		
L _c = 331.78'	θ _s = 00'-34'-43.19"		
T _s = 382.95'/382.95'	E = 1.28'		
E _q = 0.75"	M = 1.28'		
EQUIPMENT TYPE -	FREIGHT	PASSENGER	
E _u =	-0.01"	1.64"	
V _{MPH} =	45	80	
JERK RATE ENT =	822.28	1.66	
JERK RATE EXT =	822.28	1.66	

CURVE TA-7 - TRACK A			
Dc = 3'-45'-00.00"	Δ _i = 52'-52'-56.61"		
L _{sq} /L _{sb} = 248.00'/248.00'	θ _s = 04'-38'-57.01"		
R = 1528.16'	Δ _c = 34'-17'-08.56"		
L _c = 914.45'	θ _s = 13'-56'-51.04"		
T _s = 901.55'/1121.93'	E = 71.05'		
E _q = 4.00"	M = 67.89'		
EQUIPMENT TYPE -	FREIGHT	PASSENGER	
E _u =	0.20"	2.56"	
V _{MPH} =	40	50	
JERK RATE ENT =	31.23	1.94	
JERK RATE EXT =	93.70	5.81	

CURVE T1-5 - TRACK 1			
Dc = 4'-20'-00.00"	Δ _i = 52'-52'-56.61"		
L _{sq} /L _{sb} = 341.00'/341.00'	θ _s = 07'-23'-11.66"		
R = 1322.53'	Δ _c = 38'-06'-33.29"		
L _c = 879.65'	θ _s = 07'-23'-11.66"		
T _s = 829.92'/829.92'	E = 76.66'		
E _q = 5.50"	M = 72.46'		
EQUIPMENT TYPE -	FREIGHT	PASSENGER	
E _u =	-0.65"	3.67"	
V _{MPH} =	40	55	
JERK RATE ENT =	-13.14	1.69	
JERK RATE EXT =	-13.14	1.69	

CURVE T3-6 - TRACK 3			
Dc = 1'-26'-00.00"	Δ _i = 08'-21'-40.17"		
L _{sq} /L _{sb} = 279.00'/279.00'	θ _s = 01'-59'-58.01"		
R = 3997.48'	Δ _c = 04'-21'-44.14"		
L _c = 304.35'	θ _s = 01'-59'-58.01"		
T _s = 431.75'/431.75'	E = 2.90'		
E _q = 2.50"	M = 2.90'		
EQUIPMENT TYPE -	FREIGHT	PASSENGER	
E _u =	-0.01"	2.42"	
V _{MPH} =	50	50	
JERK RATE ENT =	712.89	1.65	
JERK RATE EXT =	712.89	1.65	

CURVE T3-7 - TRACK 3			
Dc = 3'-54'-00.00"	Δ _i = 52'-52'-56.61"		
L _{sq} /L _{sb} = 248.00'/248.00'	θ _s = 04'-50'-06.24"		
R = 1469.41'	Δ _c = 43'-12'-44.13"		
L _c = 1108.22'	θ _s = 04'-50'-06.24"		
T _s = 855.57'/855.57'	E = 111.05'		
E _q = 4.00"	M = 103.24'		
EQUIPMENT TYPE -	FREIGHT	PASSENGER	
E _u =	0.37"	2.82"	
V _{MPH} =	40	50	
JERK RATE ENT =	16.92	1.76	
JERK RATE EXT =	16.92	1.76	

No.	Revisions	Date	By



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National Railroad Passenger Corporation
30th Street Station, Philadelphia, Pennsylvania 19104

Approved

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Date

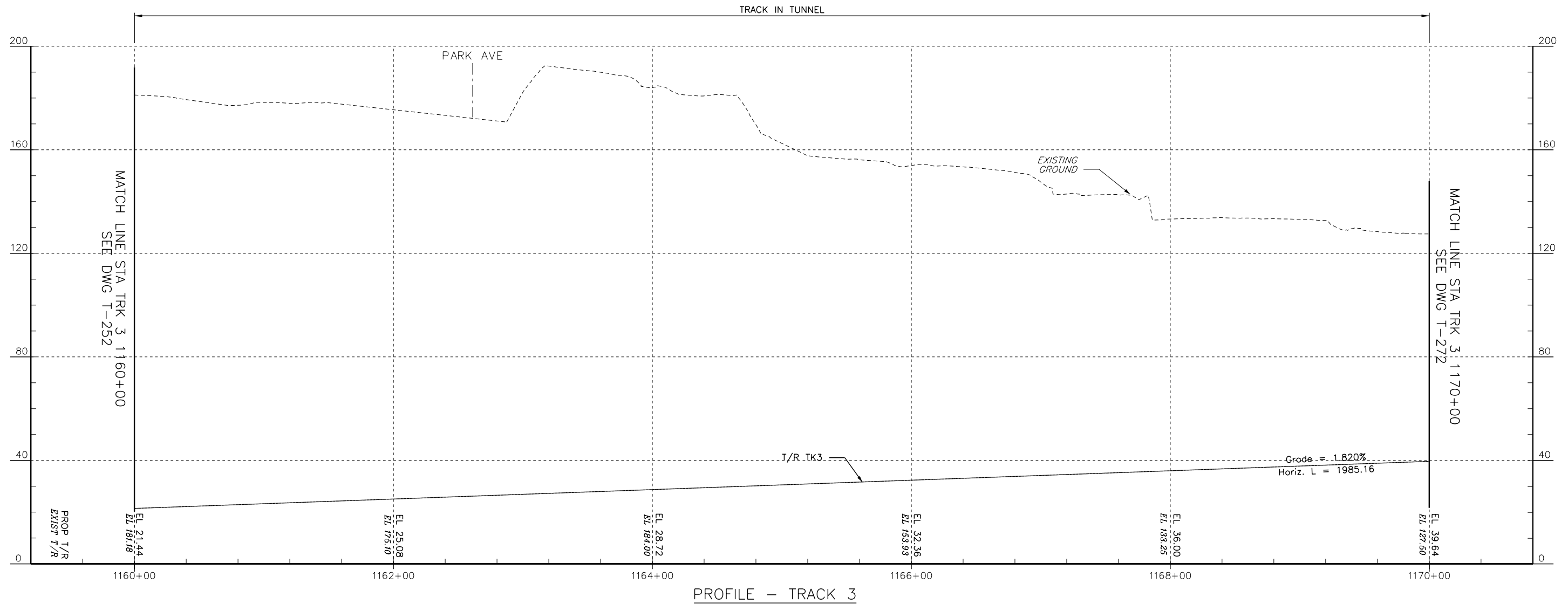


BALTIMORE, MD
B&P TUNNEL

TRACK PLAN
STA TK2 1160+00 TO STA TK2 1170+00

Designed Drawn Checked Date 09/28/2016

MPXX
Project No: C.EN.201278
File name: No: XXXXX
Sheet No: OF XX
Dwg. No: T-261



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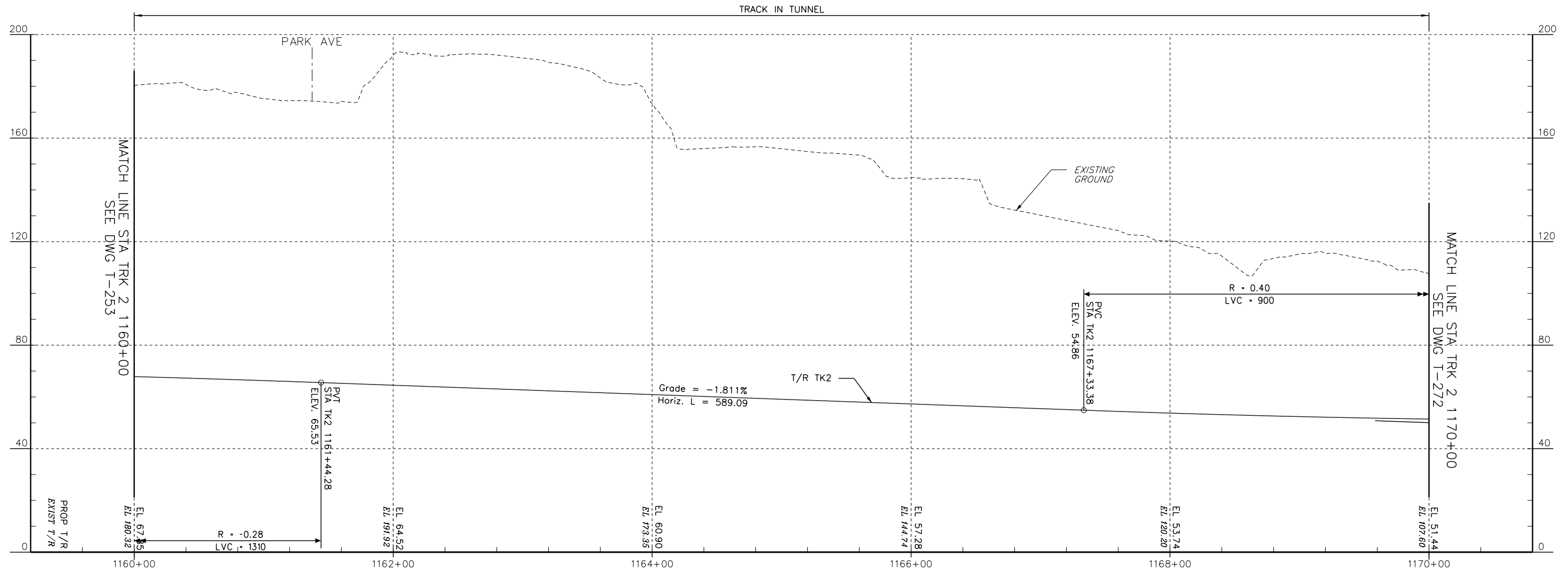
Approved

WORK IN PROGRESS

Date



BALTIMORE, MD B&P TUNNEL				MPXX	Project No: C.EN.201278
PROFILE - TRACK 3 STA. 1160+00 TO STA. 1170+00					file name: No: XXXXX
Designed DO				Drawn JB	Sheet No. OF XX
Checked FB				Date 09/28/2016	Dwg. No. T-262



PROFILE - TRACK 2



No.	Revisions	Date	By

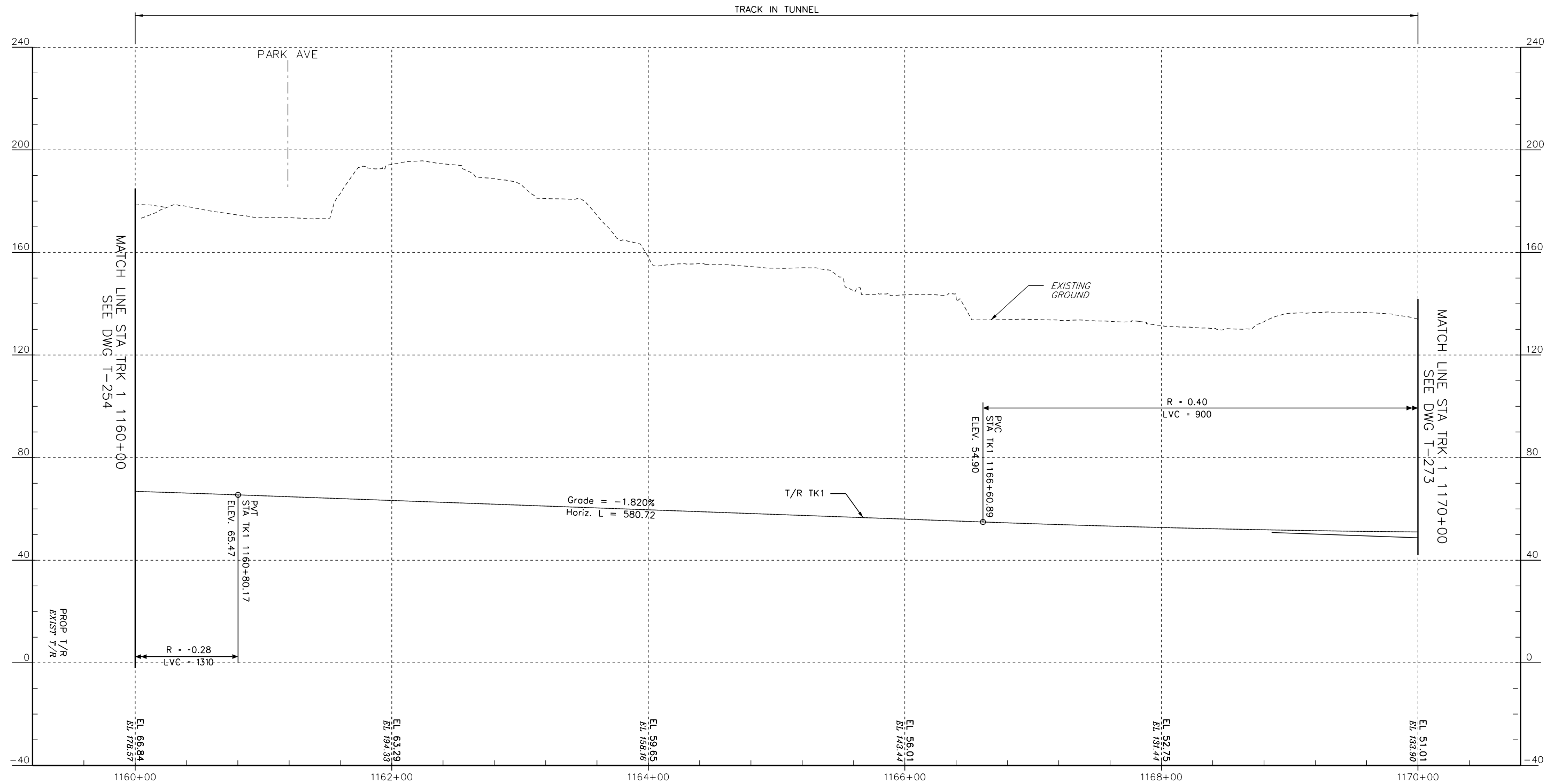


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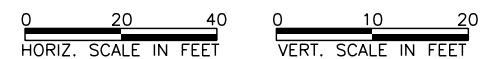
Approved
WORK IN PROGRESS
Date



BALTIMORE, MD B&P TUNNEL				MPXX	Project No: C.EN.201278
PROFILE - TRACK 2 STA. 1160+00 TO STA. 1170+00					file name: No: XXXXX
Designed DO				Drawn JB	Sheet No: OF XX
Checked FB				Date 09/28/2016	Dwg. No: T-263



PROFILE - TRACK 1



No.	Revisions	Date	By



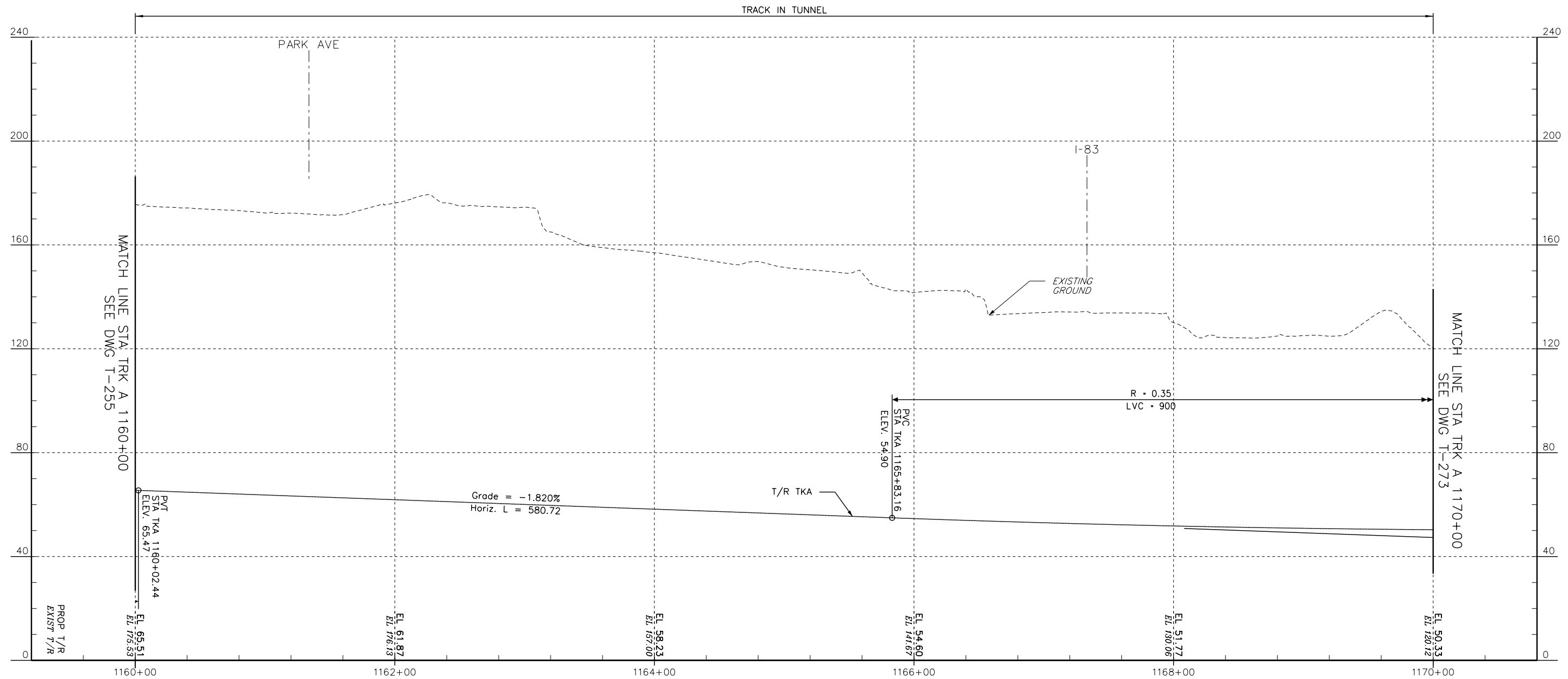
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30th Street Station, Philadelphia, Pennsylvania 19104

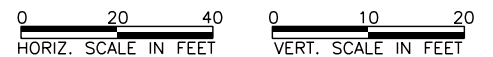
Approved	Date
WORK IN PROGRESS	



BALTIMORE, MD B&P TUNNEL		MPXX	Project No: C.EN.201278
PROFILE - TRACK 1 STA. 1160+00 TO STA. 1170+00			file name: No: XXXXX
			Sheet No: OF XX
			Dwg. No: T-264
Designed DO	Drawn JB	Checked FB	Date 09/28/2016



PROFILE - TRACK A



No.	Revisions	Date	By



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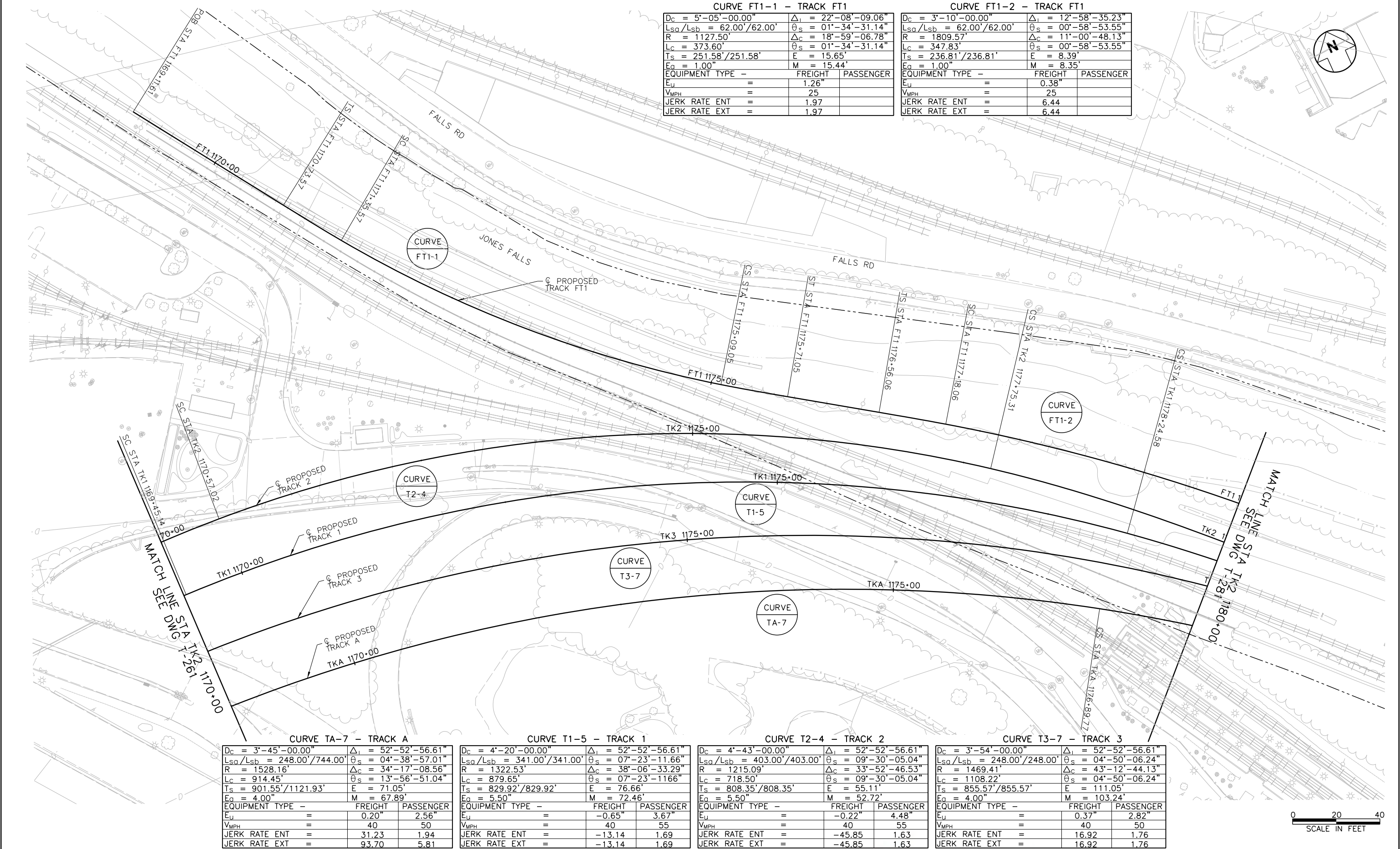
Date



BALTIMORE, MD B&P TUNNEL				MPXX	Project No: C.EN.201278
PROFILE - TRACK A STA. 1160+00 TO STA. 1170+00					file name: No: XXXXX
Designed DO				Drawn JB	Sheet No: OF XX
Checked FB				Date 09/28/2016	Dwg. No: T-265

CURVE FT1-1 - TRACK FT1					
Dc = 5'-05'-00.00"		Δ _i = 22'-08'-09.06"			
Lsq/Lsb = 62.00'/62.00'		θ _s = 01'-34'-31.14"			
R = 1127.50'		Δ _c = 18'-59'-06.78"			
Lc = 373.60'		θ _s = 01'-34'-31.14"			
Ts = 251.58'/251.58'		E = 15.65'			
Ea = 1.00"		M = 15.44'			
EQUIPMENT TYPE -		FREIGHT	PASSENGER		
Eu		1.26"			
VMPH		25			
JERK RATE ENT		1.97			
JERK RATE EXT		1.97			

CURVE FT1-2 - TRACK FT1					
Dc = 3'-10'-00.00"		Δ _i = 12'-58'-35.23"			
Lsq/Lsb = 62.00'/62.00'		θ _s = 00'-58'-53.55"			
R = 1809.57'		Δ _c = 11'-00'-48.13"			
Lc = 347.83'		θ _s = 00'-58'-53.55"			
Ts = 236.81'/236.81'		E = 8.39'			
Ea = 1.00"		M = 8.35'			
EQUIPMENT TYPE -		FREIGHT	PASSENGER		
Eu		0.38"			
VMPH		25			
JERK RATE ENT		6.44			
JERK RATE EXT		6.44			



CURVE TA-7 - TRACK A					
Dc = 3'-45'-00.00"		Δ _i = 52'-52'-56.61"			
Lsq/Lsb = 248.00'/744.00'		θ _s = 04'-38'-57.01"			
R = 1528.16'		Δ _c = 34'-17'-08.56"			
Lc = 914.45'		θ _s = 13'-56'-51.04"			
Ts = 901.55'/1121.93'		E = 71.05'			
Ea = 4.00"		M = 67.89'			
EQUIPMENT TYPE -		FREIGHT	PASSENGER		
Eu		0.20"	2.56"		
VMPH		40	50		
JERK RATE ENT		31.23	1.94		
JERK RATE EXT		93.70	5.81		

CURVE T1-5 - TRACK 1					
Dc = 4'-20'-00.00"		Δ _i = 52'-52'-56.61"			
Lsq/Lsb = 341.00'/341.00'		θ _s = 07'-23'-11.66"			
R = 1322.53'		Δ _c = 38'-06'-33.29"			
Lc = 879.65'		θ _s = 07'-23'-11.66"			
Ts = 829.92'/829.92'		E = 76.66'			
Ea = 5.50"		M = 72.46'			
EQUIPMENT TYPE -		FREIGHT	PASSENGER		
Eu		-0.65"	3.67"		
VMPH		40	55		
JERK RATE ENT		-13.14	1.69		
JERK RATE EXT		-13.14	1.69		

CURVE T2-4 - TRACK 2					
Dc = 4'-43'-00.00"		Δ _i = 52'-52'-56.61"			
Lsq/Lsb = 403.00'/403.00'		θ _s = 09'-30'-05.04"			
R = 1215.09'		Δ _c = 33'-52'-46.53"			
Lc = 718.50'		θ _s = 09'-30'-05.04"			
Ts = 808.35'/808.35'		E = 55.11'			
Ea = 5.50"		M = 52.72'			
EQUIPMENT TYPE -		FREIGHT	PASSENGER		
Eu		-0.22"	4.48"		
VMPH		40	55		
JERK RATE ENT		-45.85	1.63		
JERK RATE EXT		-45.85	1.63		

CURVE T3-7 - TRACK 3					
Dc = 3'-54'-00.00"		Δ _i = 52'-52'-56.61"			
Lsq/Lsb = 248.00'/248.00'		θ _s = 04'-50'-06.24"			
R = 1469.41'		Δ _c = 43'-12'-44.13"			
Lc = 1108.22'		θ _s = 04'-50'-06.24"			
Ts = 855.57'/855.57'		E = 111.05'			
Ea = 4.00"		M = 103.24'			
EQUIPMENT TYPE -		FREIGHT	PASSENGER		
Eu		0.37"	2.82"		
VMPH		40	50		
JERK RATE ENT		16.92	1.76		
JERK RATE EXT		16.92	1.76		

No.	Revisions	Date	By



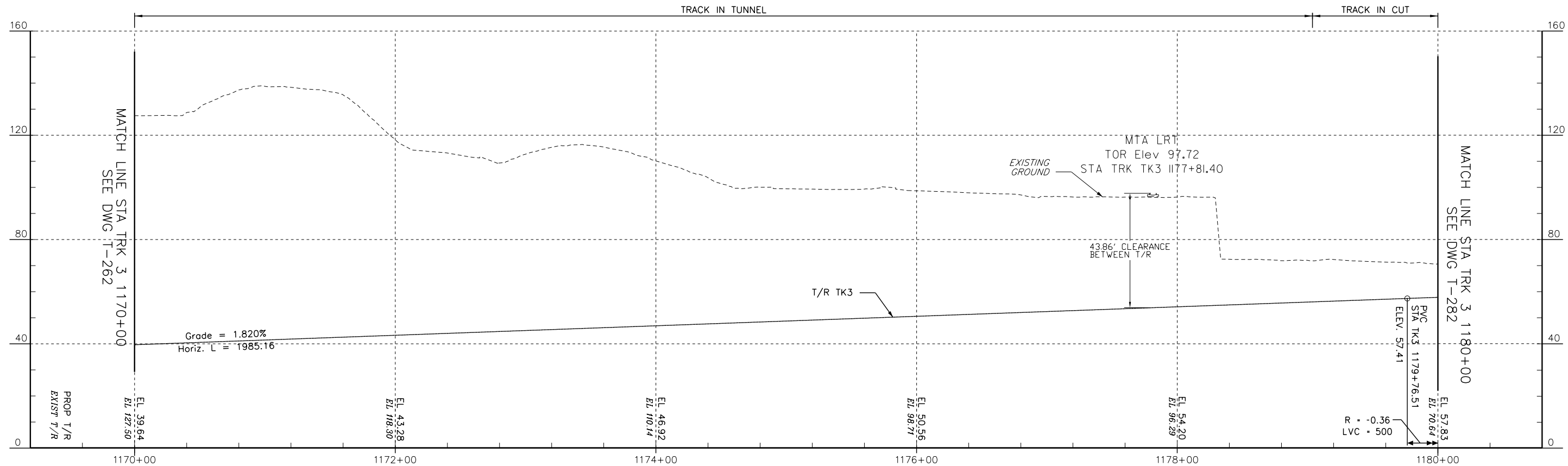
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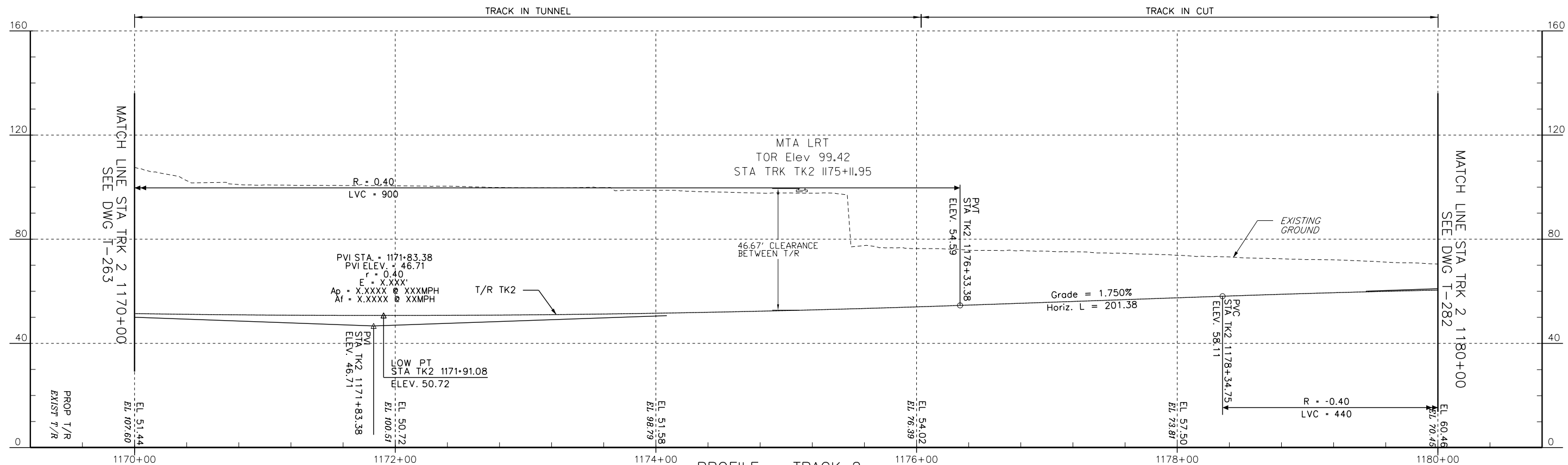


BALTIMORE, MD B&P TUNNEL		MPXX	Project No: C.EN.201278
TRACK PLAN STA TK2 1170+00 TO STA TK2 1180+00		Designed	File name: No: XXXXX
Date 09/28/2016		Drawn	Sheet No: OF XX
Checked		Dwg. No: T-271	

DATE: 09/28/2016
SCALE: 1"=40'
STANDARD PEN TABLE NO.



PROFILE - TRACK 3



PROFILE - TRACK 2

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HORIZ. SCALE IN FEET

0 20 40
VERT. SCALE IN FEET

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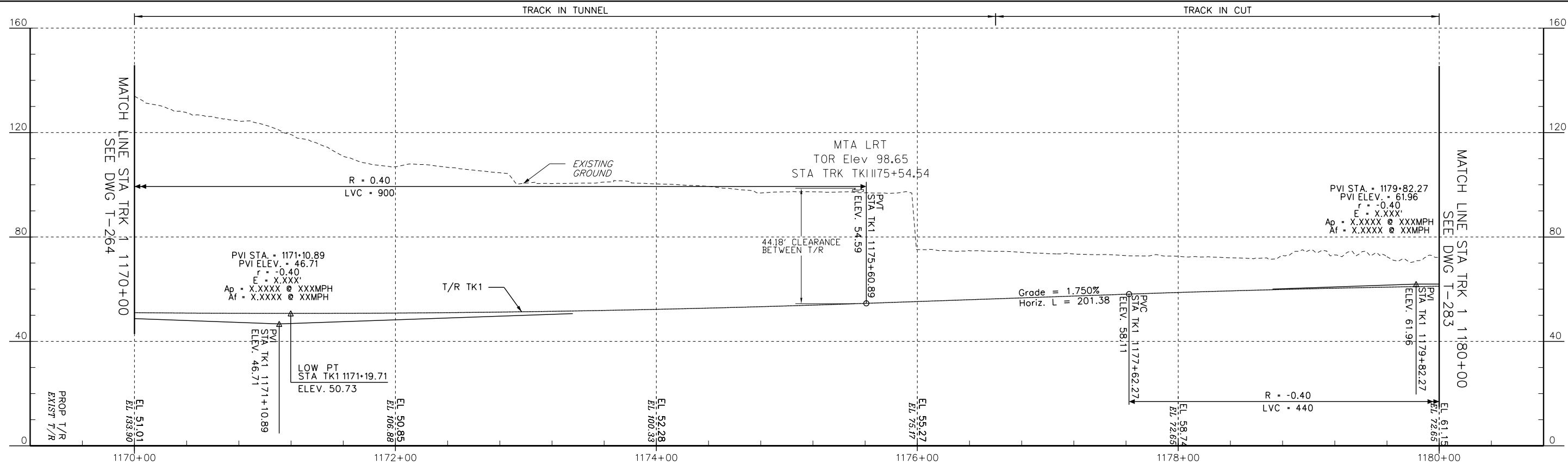
Approved

WORK IN PROGRESS

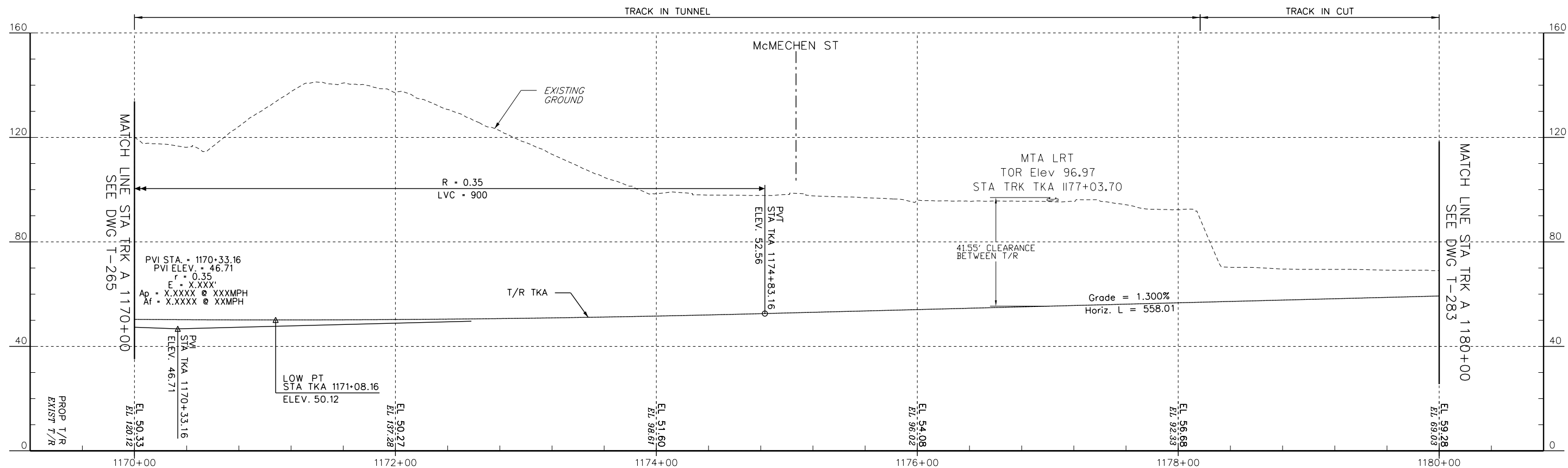
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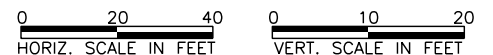
BALTIMORE, MD B&P TUNNEL	MPXX	Project No: C.EN.201278
PROFILES - TRACK 2 & TRACK 3 STA. 1170+00 TO STA. 1180+00		File name: No: XXXXX
Designed DO	Drawn JB	Checked FB
Date 09/28/2016		Sheet No: OF XX
		Dwg. No: T-272



PROFILE - TRACK 1



PROFILE - TRACK A



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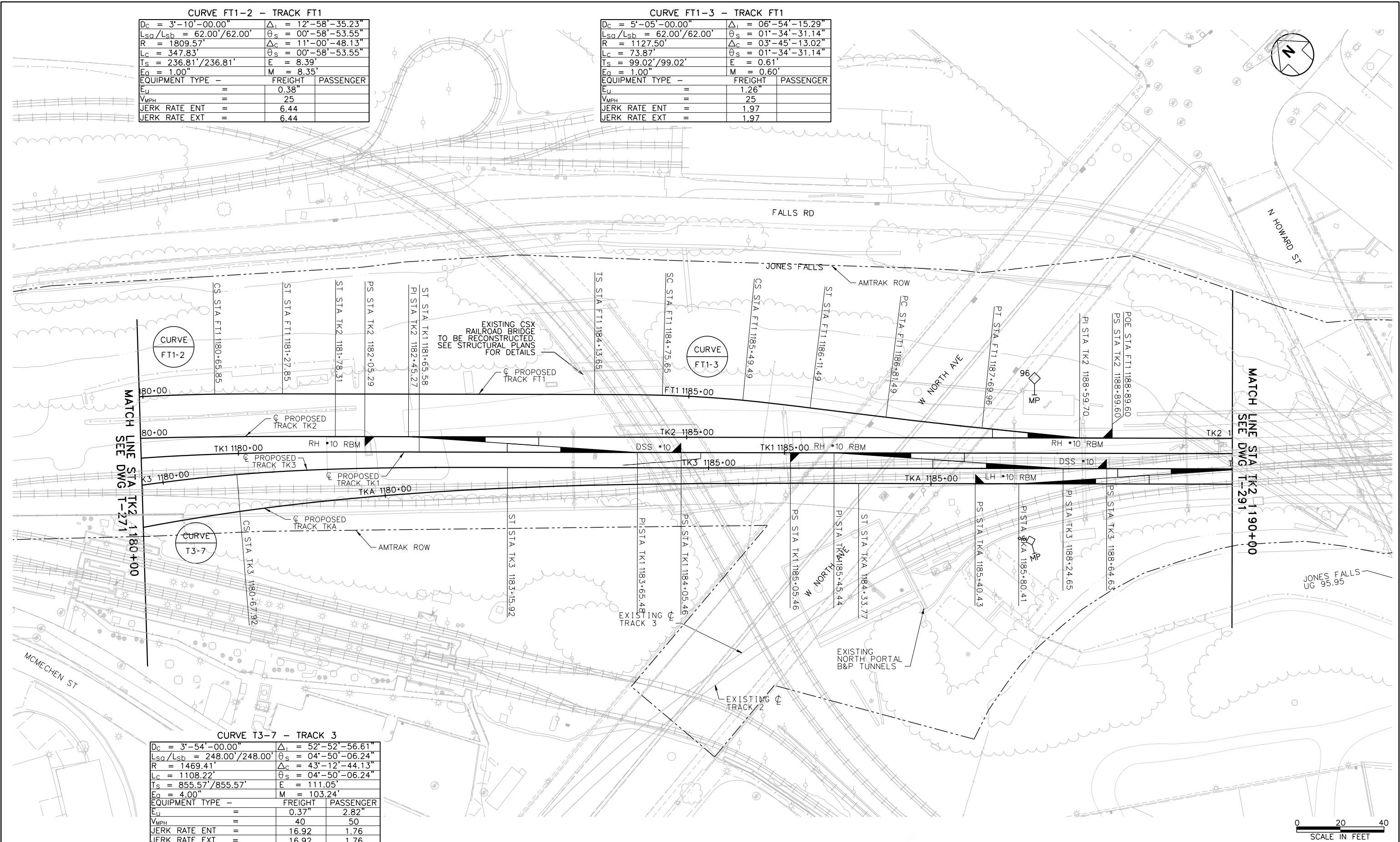


BALTIMORE, MD B&P TUNNEL	MPXX	Project No: C.EN.201278
PROFILES - TRACK A & TRACK 1 STA. 1170+00 TO STA. 1180+00	Designed DO Drawn JB Checked FB Date 09/28/2016	File name: No: XXXXX Sheet No: OF XX Dwg. No: T-273

CURVE FT1-2 - TRACK FT1			
$D_c = 3'-10'-00.00"$	$\Delta_i = 12'-58'-35.23"$		
$L_{sq}/L_{sb} = 62.00'/62.00'$	$\theta_s = 00'-58'-53.55"$		
$R = 1809.57'$	$\Delta_c = 11'-00'-48.13"$		
$L_c = 347.83'$	$\theta_s = 00'-58'-53.55"$		
$T_s = 236.81'/236.81'$	$E = 8.39'$		
$E_o = 1.00"$	$M = 8.35'$		
EQUIPMENT TYPE -	FREIGHT	PASSENGER	
E_u	0.38"		
VMPH	25		
JERK RATE ENT	6.44		
JERK RATE EXT	6.44		

CURVE FT1-3 - TRACK FT1			
$D_c = 5'-05'-00.00"$	$\Delta_i = 06'-54'-15.29"$		
$L_{sq}/L_{sb} = 62.00'/62.00'$	$\theta_s = 01'-34'-31.14"$		
$R = 1127.50'$	$\Delta_c = 03'-45'-13.02"$		
$L_c = 73.87'$	$\theta_s = 01'-34'-31.14"$		
$T_s = 99.02'/99.02'$	$E = 0.61'$		
$E_o = 1.00"$	$M = 0.60'$		
EQUIPMENT TYPE -	FREIGHT	PASSENGER	
E_u	1.26"		
VMPH	25		
JERK RATE ENT	1.97		
JERK RATE EXT	1.97		

CURVE T3-7 - TRACK 3			
$D_c = 3'-54'-00.00"$	$\Delta_i = 52'-52'-56.61"$		
$L_{sq}/L_{sb} = 248.00'/248.00'$	$\theta_s = 04'-50'-06.24"$		
$R = 1469.41'$	$\Delta_c = 43'-12'-44.13"$		
$L_c = 1108.22'$	$\theta_s = 04'-50'-06.24"$		
$T_s = 855.57'/855.57'$	$E = 111.05'$		
$E_o = 4.00"$	$M = 103.24'$		
EQUIPMENT TYPE -	FREIGHT	PASSENGER	
E_u	0.37"	2.82"	
VMPH	40	50	
JERK RATE ENT	16.92	1.76	
JERK RATE EXT	16.92	1.76	



0 20 40
SCALE IN FEET

STATES
STANDARD
PEN TABLE NO

No.	Revisions	Date	By

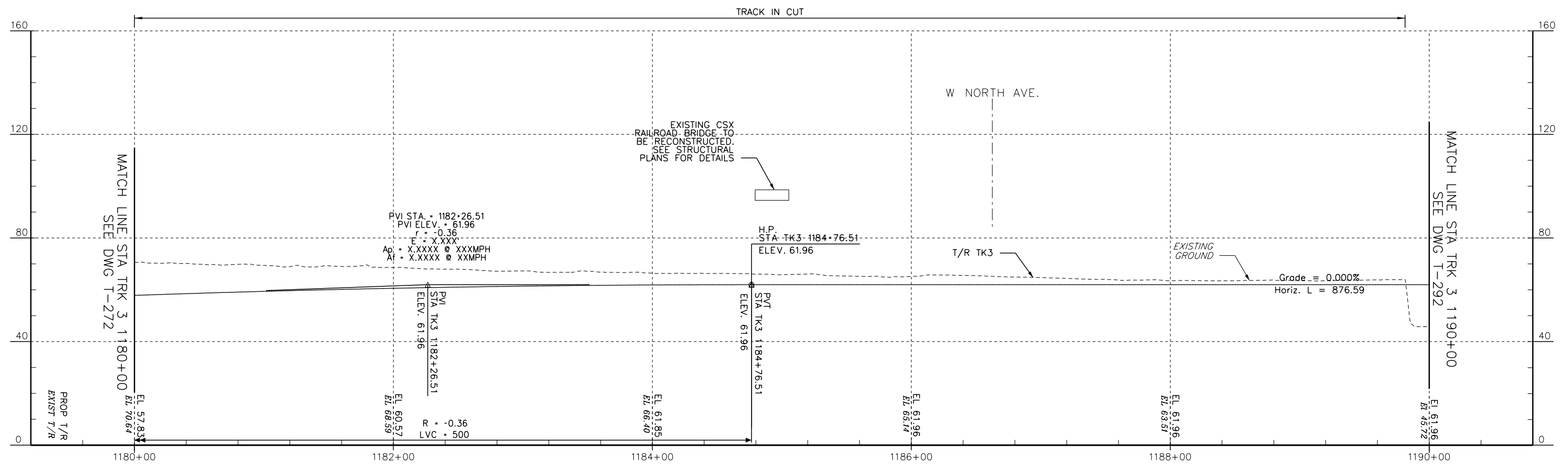


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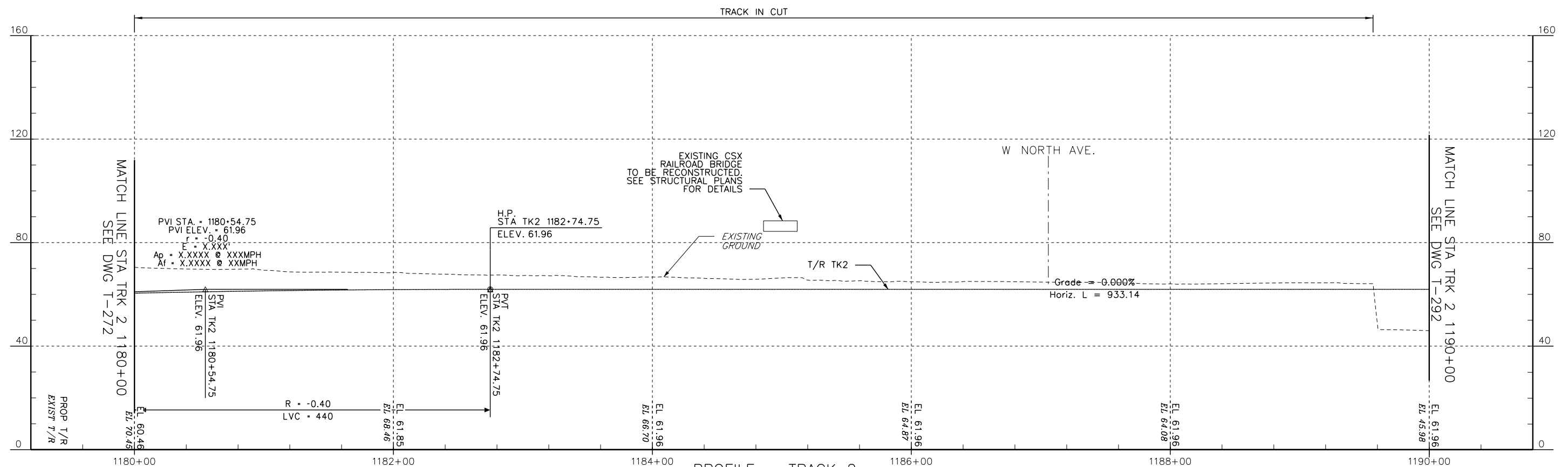
Approved	Date
WORK IN PROGRESS	



BALTIMORE, MD B&P TUNNEL		MPXX	Project No: C.EN.201278
TRACK PLAN			file name: No: XXXXX
STA TK2 1180+00 TO STA TK2 1190+00			Sheet No: OF XX
Designed	Drawn	Checked	Date 09/28/2016
Dwg. No. T-281			



PROFILE – TRACK 3



PROFILE – TRACK 2

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B&P TUNNEL

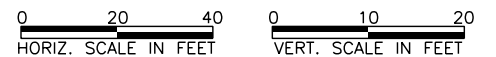
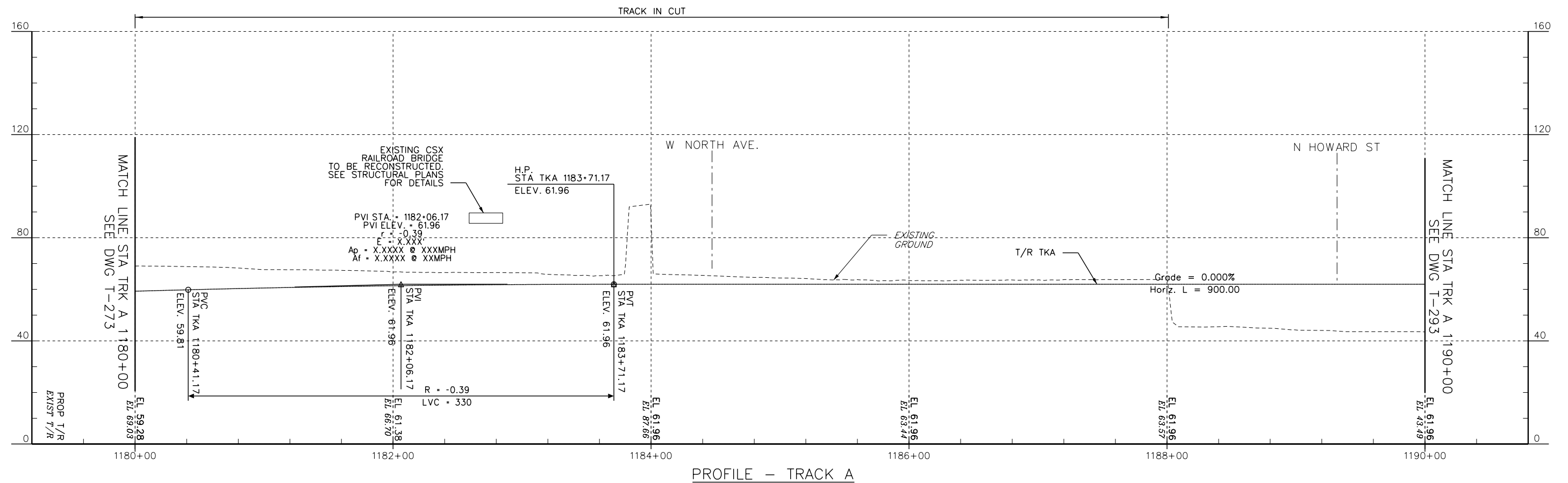
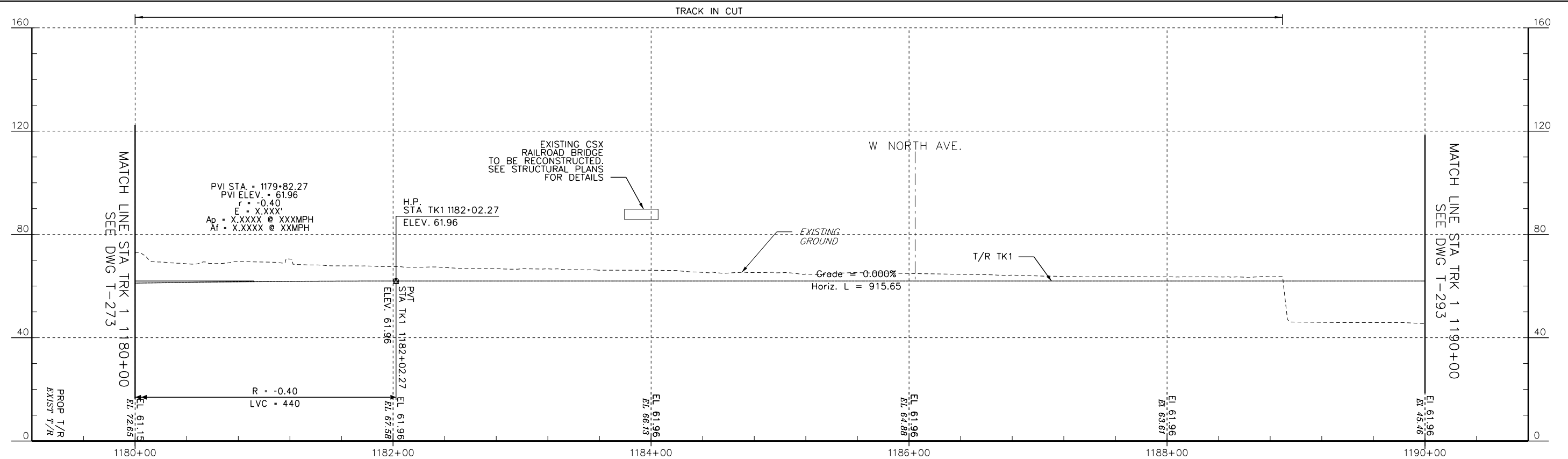
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PROFILES - TRACK 2 & TRACK 3
STA. 1180+00 TO STA. 1190+00

Designed	DO	Drawn	JB	Checked	FB	Date	09/28/2016
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Project No:	C.EN.201278
Contract No:	XXXXXX
Sheet No.	OF XX

T-282

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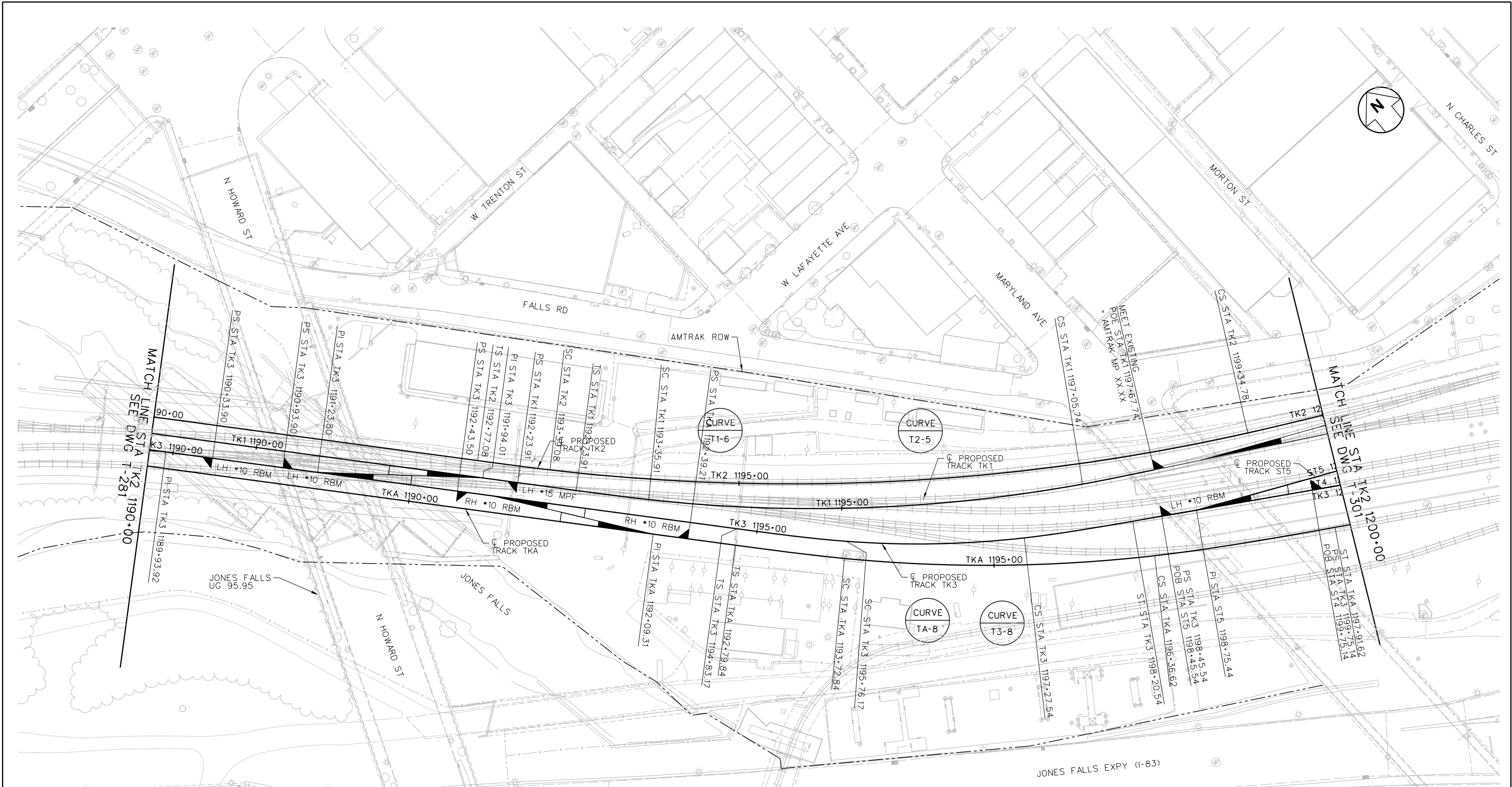


BALTIMORE, MD	MPXX
B&P TUNNEL	

PROFILES - TRACK A & TRACK 1
STA. 1180+00 TO STA. 1190+00

Designed	DO	Drawn	JB	Checked	FB	Date	09/28/2016
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Project No:	C.EN.201278
File name. No:	XXXXX
Sheet No.	OF XX
Ung. No.	T-283



CURVE TA-8 - TRACK A			
Dc = 4'-35'-00.00"	Δi = 17'-46'-18.11"		
Lso/Lsb = 93.00'/155.00'	θs = 02'-07'-50.45"		
R = 1250.42'	Δc = 12'-05'-23.57"		
Lc = 263.85'	θs = 03'-33'-04.09"		
Ts = 243.72'/271.43'	E = 6.99'		
Ea = 1.50"	M = 6.95'		
EQUIPMENT TYPE -	FREIGHT	PASSENGER	
E _u	1.39"	1.39"	
V _{MPH}	30	30	
JERK RATE ENT	2.24	2.24	
JERK RATE EXT	3.73	3.73	

CURVE T1-6 - TRACK 1			
Dc = 4'-30'-00.00"	Δi = 19'-25'-24.76"		
Lso/Lsb = 62.00'/62.00'	θs = 01'-23'-40.71"		
R = 1273.57'	Δc = 16'-38'-03.34"		
Lc = 369.75'	θs = 01'-23'-40.71"		
Ts = 248.99'/248.99'	E = 13.54'		
Ea = 1.00"	M = 13.39'		
EQUIPMENT TYPE -	FREIGHT	PASSENGER	
E _u	0.97"	1.83"	
V _{MPH}	25	30	
JERK RATE ENT	2.56	1.13	
JERK RATE EXT	2.56	1.13	

CURVE T2-5 - TRACK 2			
Dc = 3'-15'-00.00"	Δi = 21'-22'-30.85"		
Lso/Lsb = 62.00'/62.00'	θs = 01'-00'-26.51"		
R = 1763.18'	Δc = 19'-21'-37.82"		
Lc = 595.79'	θs = 01'-00'-26.51"		
Ts = 363.78'/363.78'	E = 25.47'		
Ea = 1.00"	M = 25.11'		
EQUIPMENT TYPE -	FREIGHT	PASSENGER	
E _u	1.05"	1.05"	
V _{MPH}	30	30	
JERK RATE ENT	1.97	1.97	
JERK RATE EXT	1.97	1.97	

CURVE T3-8 - TRACK 3			
Dc = 7'-10'-00.00"	Δi = 17'-30'-31.71"		
Lso/Lsb = 93.00'/93.00'	θs = 03'-19'-49.18"		
R = 800.00'	Δc = 10'-50'-53.35"		
Lc = 151.47'	θs = 03'-19'-49.18"		
Ts = 169.76'/169.76'	E = 3.60'		
Ea = 1.50"	M = 3.58'		
EQUIPMENT TYPE -	FREIGHT	PASSENGER	
E _u	1.63"	3.01"	
V _{MPH}	25	30	
JERK RATE ENT	2.28	1.03	
JERK RATE EXT	2.28	1.03	

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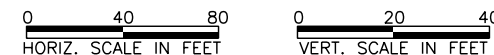
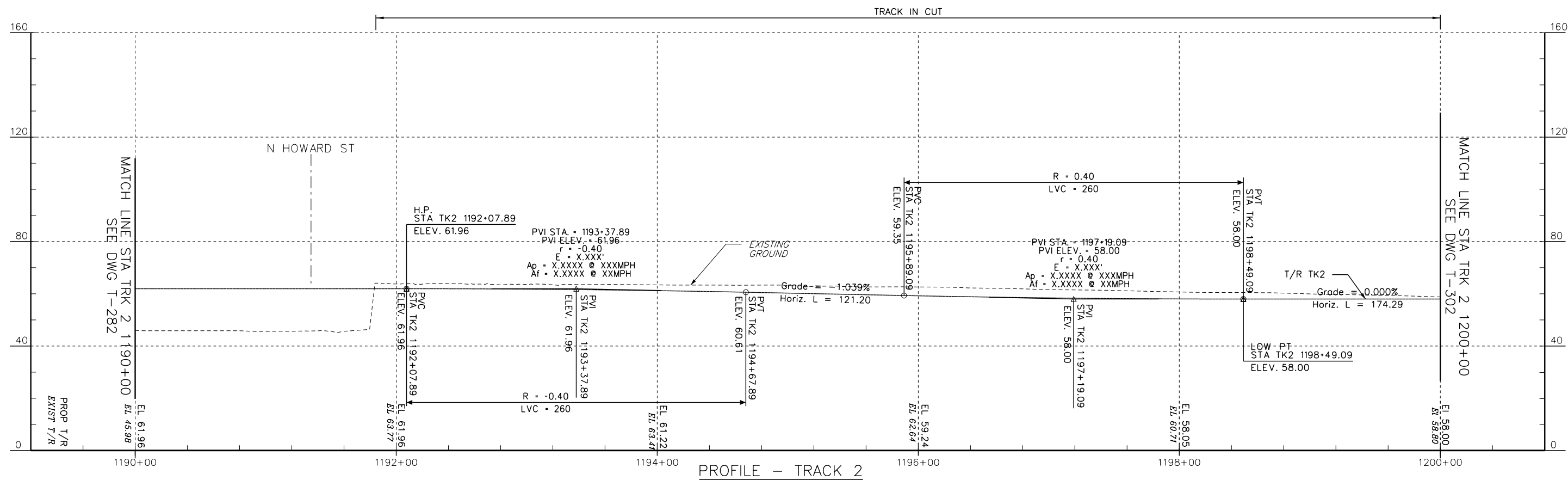
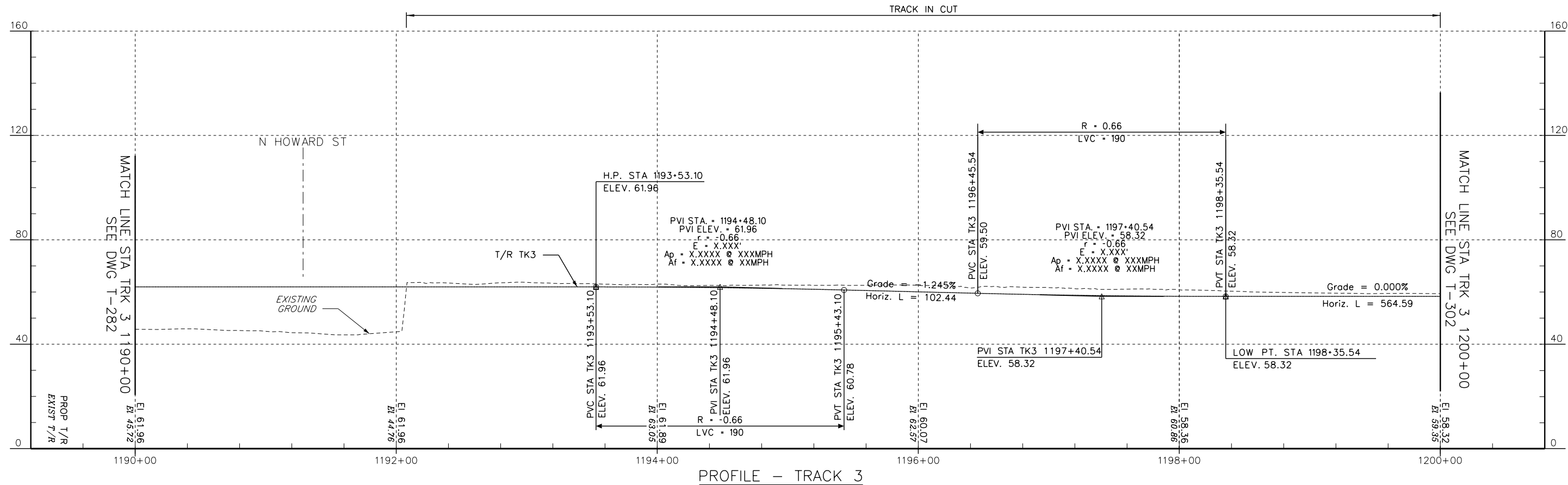
TRACK PLAN
STA TK2 1190+00 TO STA TK2 1200+00

Designed Drawn Checked Date 09/28/2016

MPXX

Project No: C.EN.201278
File name: No: XXXXX
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Dwg. No: T-291

DATE: 09/28/2016
SCALE: 1"=100'
STANDARD PEN TABLE: NO



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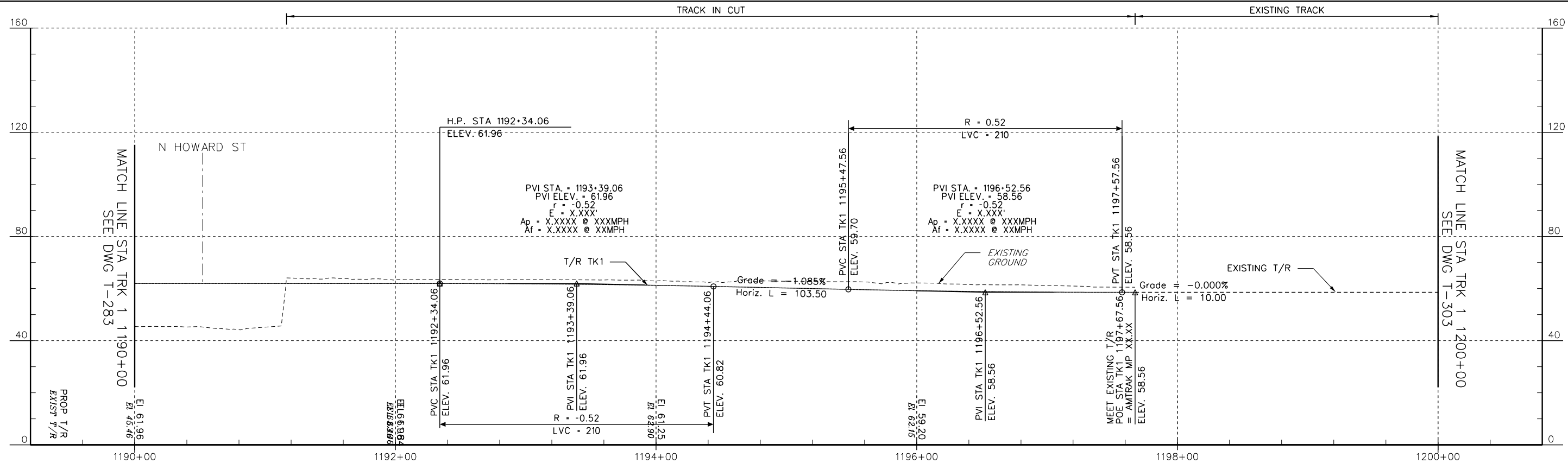
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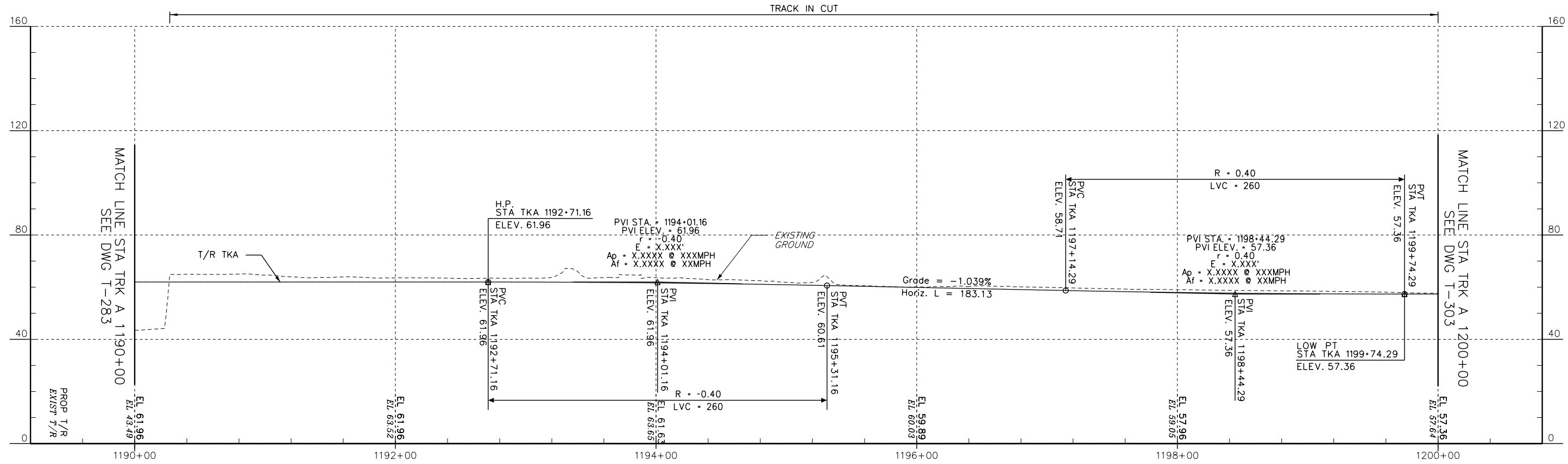
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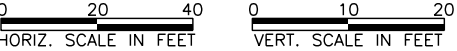
BALTIMORE, MD B&P TUNNEL	MPXX	Project No: C.EN.201278
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Date 09/28/2016		
		Sheet No: OF XX
		Dwg. No: T-292



PROFILE - TRACK 1



PROFILE - TRACK A



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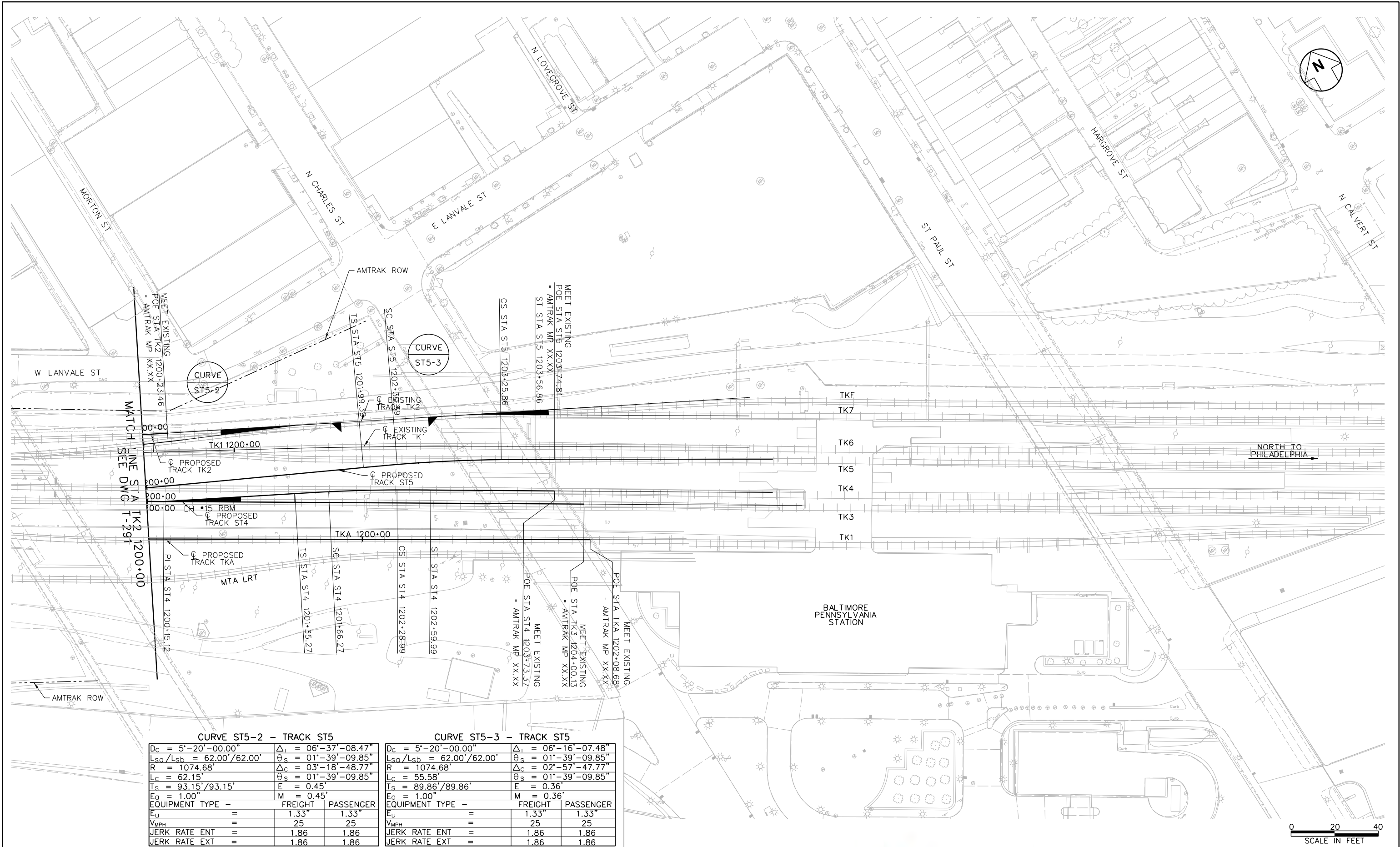


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PROFILES - TRACK A & TRACK 1 STA. 1190+00 TO STA. 1200+00			File name: No: XXXXX
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CURVE ST5-2 - TRACK ST5			
Dc = 5'-20'-00.00"	Δ _i = 06'-37'-08.47"	Δ _s = 01'-39'-09.85"	
L _{sq} /L _{sb} = 62.00'/62.00'	R = 1074.68'	Δ _c = 03'-18'-48.77"	
L _c = 62.15'	T _s = 93.15'/93.15'	Δ _s = 01'-39'-09.85"	
E _o = 1.00"	E = 0.45'	M = 0.45'	
EQUIPMENT TYPE -	FREIGHT	PASSENGER	
E _u	1.33"	1.33"	
V _{MPH}	25	25	
JERK RATE ENT	1.86	1.86	
JERK RATE EXT	1.86	1.86	

CURVE ST5-3 - TRACK ST5			
Dc = 5'-20'-00.00"	Δ _i = 06'-16'-07.48"	Δ _s = 01'-39'-09.85"	
L _{sq} /L _{sb} = 62.00'/62.00'	R = 1074.68'	Δ _c = 02'-57'-47.77"	
L _c = 55.58'	T _s = 89.86'/89.86'	Δ _s = 01'-39'-09.85"	
E _o = 1.00"	E = 0.36'	M = 0.36'	
EQUIPMENT TYPE -	FREIGHT	PASSENGER	
E _u	1.33"	1.33"	
V _{MPH}	25	25	
JERK RATE ENT	1.86	1.86	
JERK RATE EXT	1.86	1.86	

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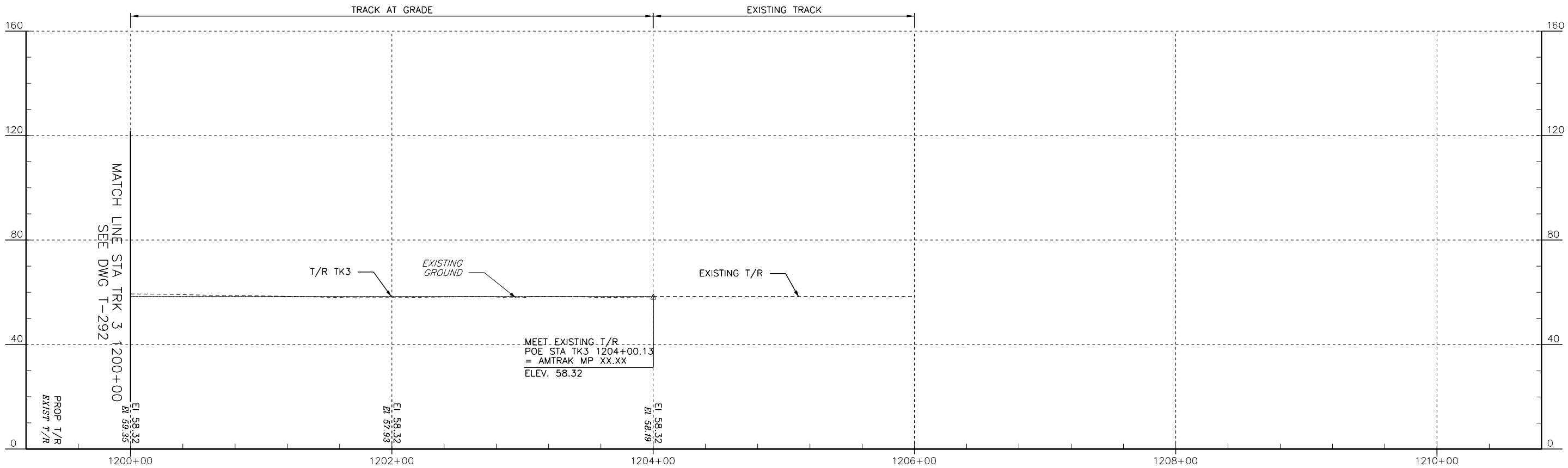
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Sheet No: OF XX

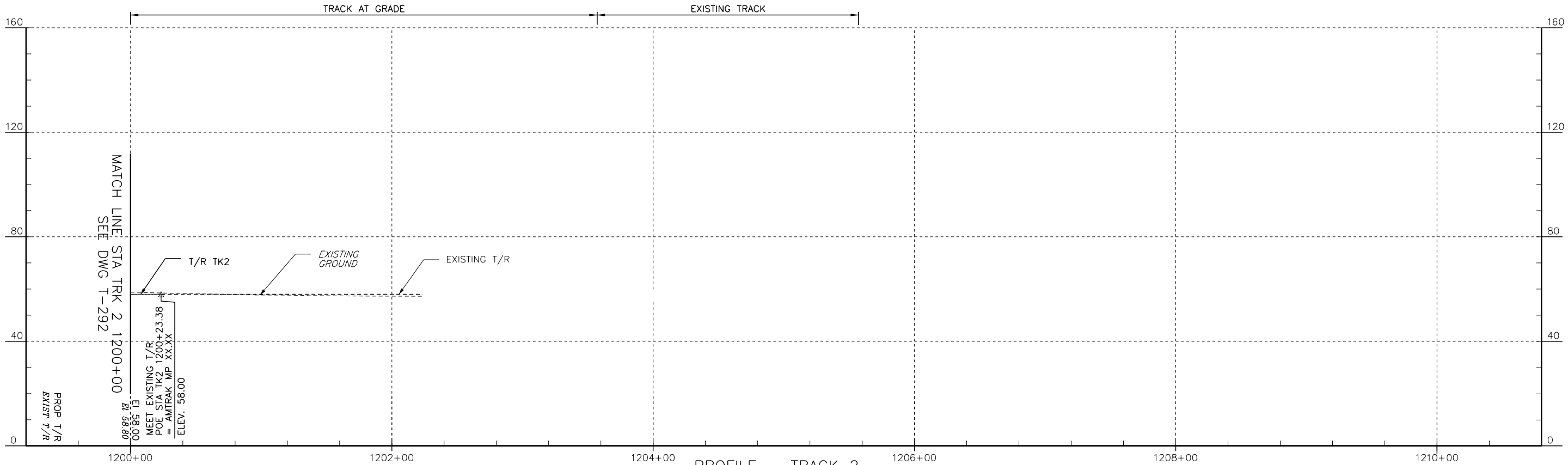
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Designed: Drawn: Checked: Date 09/28/2016

TRACK PLAN
STA TK2 1200+00 TO STA TK2 1200+23.46



PROFILE – TRACK 3



PROFILE – TRACK 2



No.	Revisions	Date	By

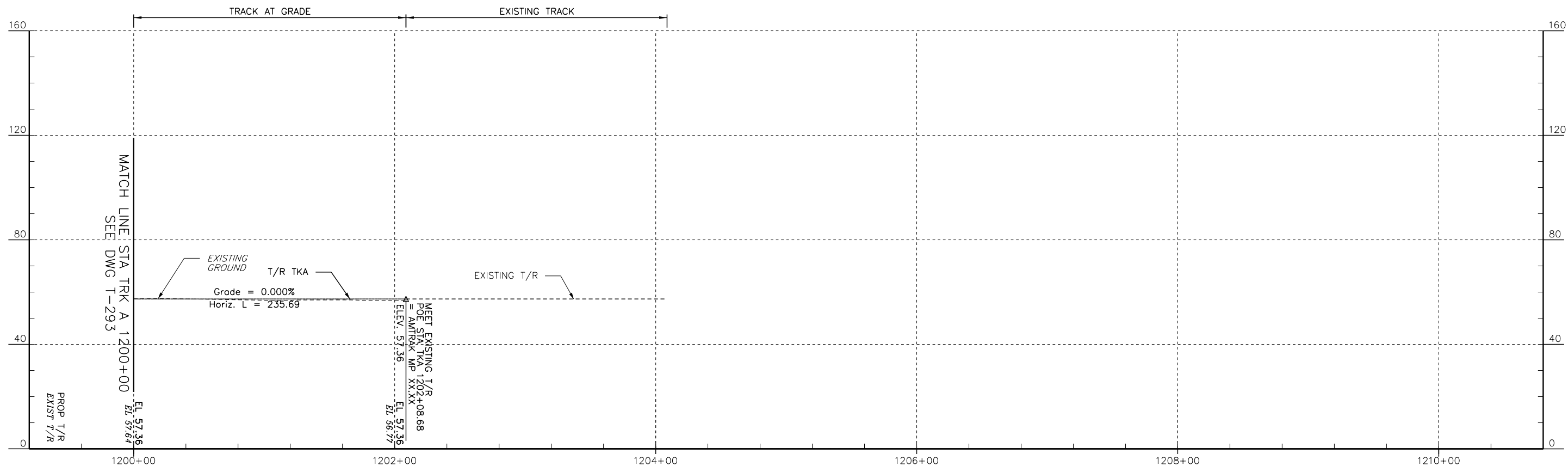


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PROFILES – TRACK 2 & TRACK 3 STA. 1200+00 TO STA. 1210+00			file name: No: XXXXX
Designed DO		Drawn JB	Sheet No: OF XX
Checked FB		Date 09/28/2016	Dwg. No: T-302



PROFILE - TRACK A



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PROFILES - TRACK A & TRACK 1 STA. 1200+00 TO STA. 1210+00			file name: No: XXXXX
			Sheet No: OF XX
			Desig. No: T-303
Designed DO	Drawn JB	Checked FB	Date 09/28/2016