City of Milwaukee
Department of Public Works

Milwaukee Streetcar Project

Vehicle Procurement Package

Request for Proposals

April 6, 2015

Solicitation No. 70-2015

☐Volume 1 - Commercial Provisions

☐Volume 2 – Technical Specifications

☒**Volume 3 – 60% Plan & Profile Sheets**

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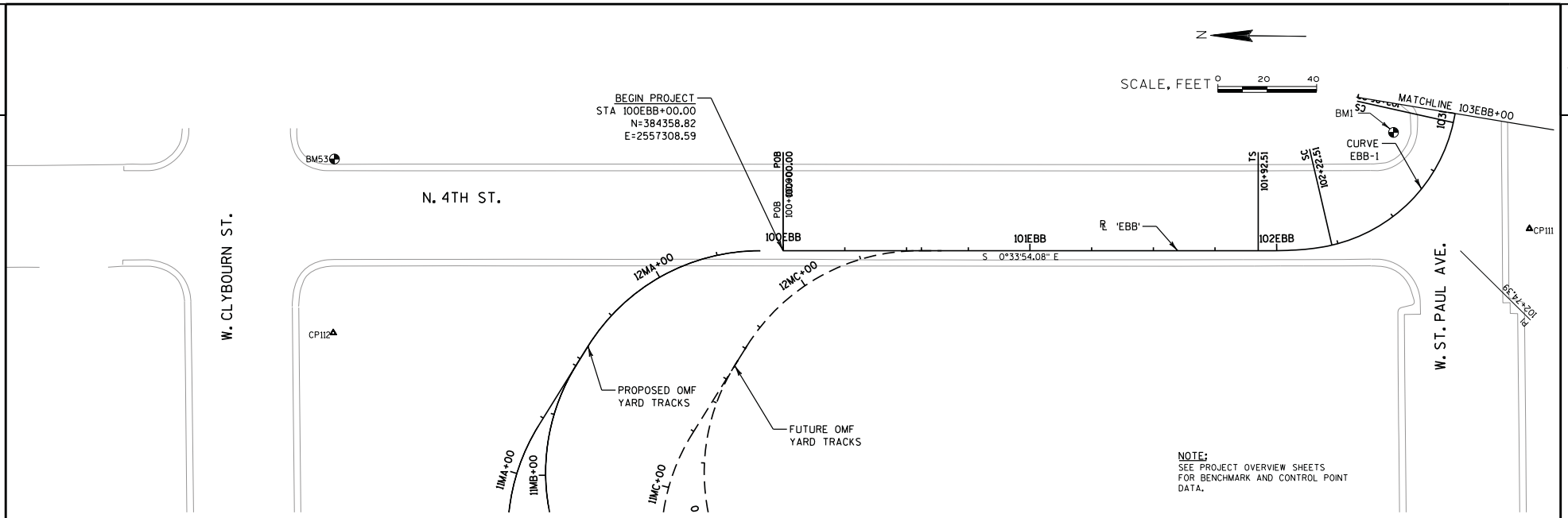
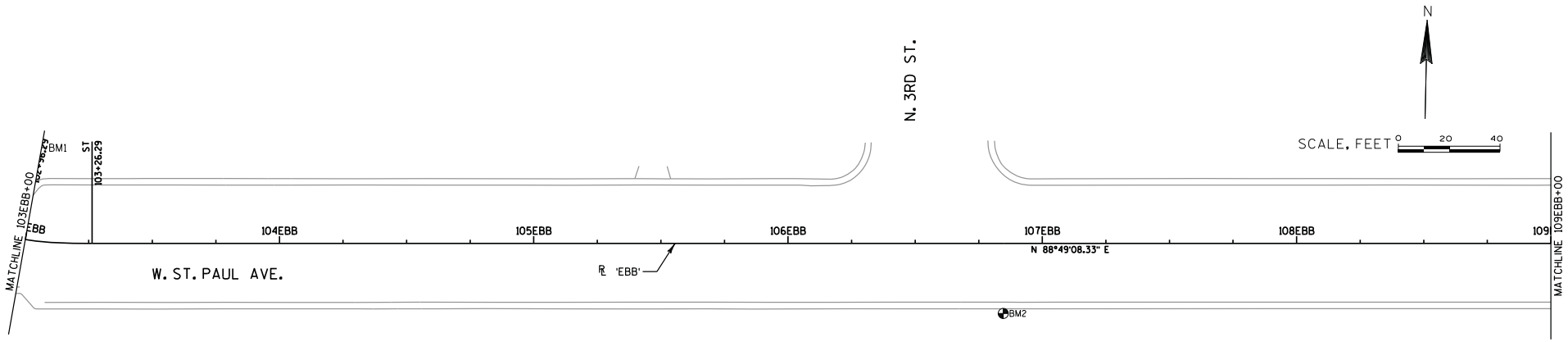


CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
EBB - 1	POB	S 0°33'54.08" E	192.51 '	100+00.00	384358.822	2557308.592								Ea = 0.00" Eu = 1.51" V = 5mph
	TS			101+92.51	384166.321	2557310.490								
	SPI			102+12.57	384146.267	2557310.688			13°05'52.10"	30.00		14.97	0.57	
	SC			102+22.51	384136.502	2557313.062								
	PI			102+74.39	384084.449	2557311.298	87°19'07.50"	65.62	64°25'13.30"	73.78	41.34			
	CC				384152.001	2557376.822								
	CS			102+96.29	384087.798	2557363.273								
	SPI			103+06.34	384085.723	2557373.106			13°05'52.13"	30.00		14.97	0.57	
	ST	N 88°49'08.33" E	769.58 '	103+26.29	384086.136	2557393.157								

PROJECT NO: WK52362008	CITY OF MILWAUKEE	DEPARTMENT OF PUBLIC WORKS	MILWAUKEE STREETCAR	ALIGNMENT PLAN - PHASE 1 (SHEET 1 OF 30)	60% SUBMITTAL	SHEET PRE_354

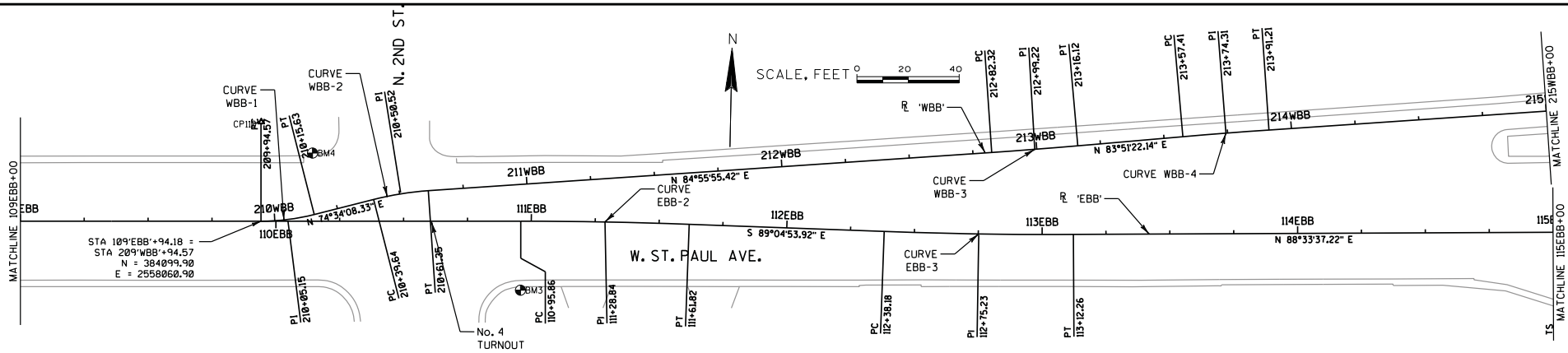
FILE NAME : $$....projectwisefile....$$ PLOT DATE : 8/19/2013 PLOT BY : mqualy PLOT NAME : PLOT SCALE : 1:40



NOTE:
SEE PROJECT OVERVIEW SHEETS FOR BENCHMARK AND CONTROL POINT DATA.

PROJECT NO: WK52362008	CITY OF MILWAUKEE	DEPARTMENT OF PUBLIC WORKS	MILWAUKEE STREETCAR	ALIGNMENT PLAN - PHASE 1 (SHEET 2 OF 30)	60% SUBMITTAL	SHEET PRE_355

FILE NAME : $$....projectwisefile....$$ PLOT DATE : 8/19/2013 PLOT BY : mqualy PLOT NAME : PLOT SCALE : 1:40



NOTE:
SEE PROJECT OVERVIEW SHEETS FOR BENCHMARK AND CONTROL POINT DATA.

CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
WBB -1	POB			209+94.57	384099.903	2558060.907								Ea = 0.00" Eu = 1.17" V = 5mph
	PI			210+05.15	248100.121	2558071.489	67°39'42.35"	84.68	14°15'00.00"	21.06				
	CC				384184.564	2558059.161								
	PT			210+15.63	384102.937	2558081.693								
		N 74°34'08.33" E	24.01 '											

CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
		N 74°34'08.33" E	24.01 '											
WBB -2	PC			210+39.64	384109.326	2558104.838								Ea = 0.00" Eu =0.83" V = 5mph
	PI			210+50.52	384112.221	2558115.327	47°44'47.34"	120.00	10°21'47.10"	21.70				
	CC				383993.652	2558136.767								
	PT			210+61.35	384113.183	2558126.267								
		N 84°55'55.42" E	220.98 '											

CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
		N 84°55'55.42" E	220.98 '											
WBB -3	PC			212+82.32	384132.703	2558346.280								Ea = 0.00" Eu =1.98" V = 30mph
	PI			212+99.22	384134.196	2558363.115	3°10'59.16"	1800.00	1°04'33.28"	33.80				
	CC				385925.666	2558187.274								
	PT			213+16.12	384136.005	2558379.919								
		N 84°55'55.42" E	220.98 '											

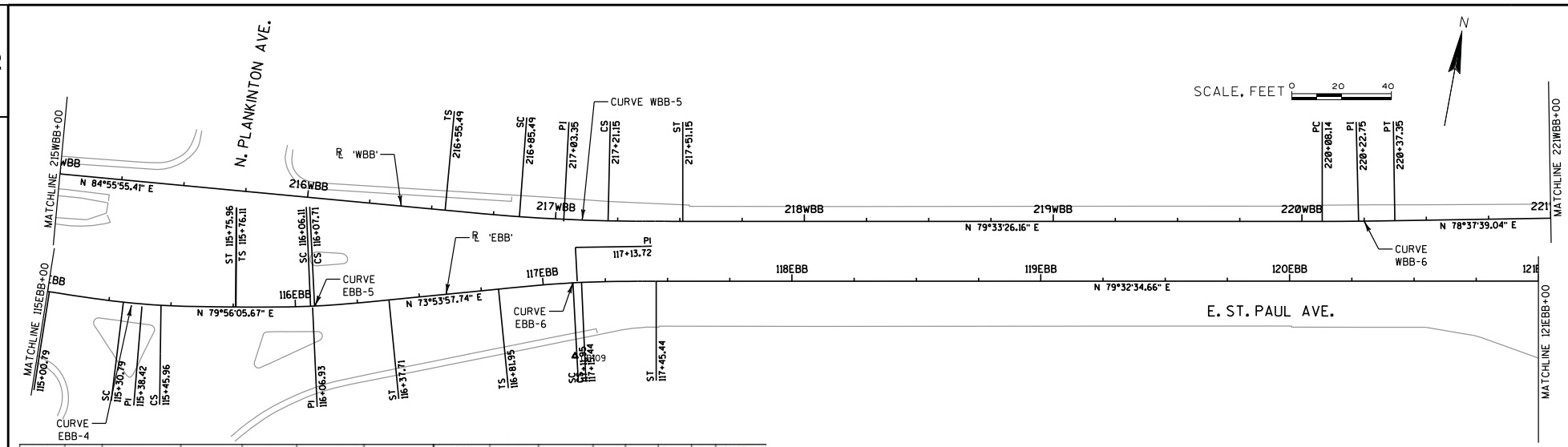
CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
		N 83°51'22.14" E	41.29 '											
WBB -4	PC			213+57.41	384140.424	2558420.971								Ea = 0.00" Eu = 1.98" V = 30mph
	PI			213+74.31	384142.233	2558437.775	3°10'59.16"	1800.00	1°04'33.27"	33.80	16.90			
	CC				382350.762	2558613.616								
	PT			213+91.21	384143.726	2558454.610								
		N 84°55'55.41" E	264.27 '											

CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
		N 88°49'08.33" E	769.58 '											
EBB -2	PC			110+95.86	384101.998	2558162.569								Ea = 0.00" Eu = 1.98" V = 30mph
	PI			111+28.84	384102.678	2558195.543	3°10'59.16"	1800.00	2°05'57.76"	65.96	32.98			
	CC				382302.381	2558199.669								
	PT			111+61.82	384102.150	2558228.519								
		S 89°04'53.92" E	76.36 '											

CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
		S 89°04'53.92" E	76.36 '											
EBB -3	PC			112+38.18	384100.926	2558304.874								Ea = 0.00" Eu = 1.98" V = 30mph
	PI			112+75.23	384100.332	2558341.914	3°10'59.16"	1800.00	2°21'28.87"	74.08	37.04			
	CC				385900.694	2558333.724								
	PT			113+12.26	384101.263	2558378.947								
		N 88°33'37.22" E	188.53 '											

PROJECT NO: WK52362008	CITY OF MILWAUKEE	DEPARTMENT OF PUBLIC WORKS	MILWAUKEE STREETCAR	ALIGNMENT PLAN - PHASE 1 (SHEET 3 OF 30)	60% SUBMITTAL	SHEET PRE_356

FILE NAME : $$....projectwisefile....$$ PLOT DATE : 8/19/2013 PLOT BY : mqualy PLOT NAME : PLOT SCALE : 1:40



CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
		N 88°53'57.22" E	188.53 '											
EBB - 4	TS			115+00.79	384105.999	2558567.421								Ea = 0.00' Eu = 2.97' V = 15mph
	SPI			115+20.80	384106.502	2558587.417			2°51'53.24"	30.00		15.00	0.12	
	SC			115+30.79	384107.253	2558597.391								
	PI			115+38.42	384106.945	2558605.041	19°05'54.94"	300.00	2°53'45.07"	15.16	7.58			
	CC				384406.406	2558574.874								
	CS			115+45.96	384108.772	2558612.476								
	SPI			115+55.96	384110.026	2558622.399			2°51'53.24"	30.00		15.00	0.12	
	ST			115+75.96	384113.522	2558642.094								
		N 79°56'05.67" E	0.15 '											

CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
		N 79°56'05.67" E	0.15 '											
EBB - 5	TS			115+76.11	384113.549	2558642.246								Ea = 0.00' Eu = 2.97' V = 15mph
	SPI			115+96.11	384117.044	2558661.941			2°51'53.24"	30.00		15.00	0.12	
	SC			116+06.11	384119.283	2558671.689								
	PI			116+06.93	384118.935	2558672.592	19°05'54.94"	300.00	0°18'21.45"	1.60	0.80			
	CC				384411.676	2558604.562								
	CS			116+07.71	384119.645	2558673.250								
	SPI			116+17.71	384121.935	2558682.986			2°51'53.24"	30.00		15.00	0.12	
	ST			116+37.71	384127.483	2558702.205								
		N 73°53'57.74" E	44.24 '											

CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
		N 73°53'57.74" E	44.24 '											
EBB - 6	TS			116+81.95	384139.752	2558744.712								Ea = 0.00' Eu = 2.62' V = 15mph
	SPI			117+01.96	384145.299	2558763.929			2°31'39.92"	30.00		15.00	0.11	
	SC			117+11.95	384147.646	2558773.652								
	PI			117+13.72	384148.561	2558775.229	16°51'06.12"	340.00	0°35'17.08"	3.49	1.74			
	CC				383817.142	2558853.444								
	CS			117+15.44	384148.448	2558777.048								
	SPI			117+25.45	384150.695	2558786.794			2°31'39.92"	30.00		15.00	0.11	
	ST			117+45.44	384154.326	2558806.464								
		N 79°32'34.66" E	382.93 '											

NOTE:
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CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
		N 84°55'55.41" E	264.27 '											
WBB - 5	TS			216+55.48	384167.071	2558717.850								Ea = 0.00' Eu =3.54' V = 25mph
	SPI			216+75.48	384168.837	2558737.772			1°13'39.96"	30.00		15.00	0.05	
	SC			216+85.48	384169.934	2558747.713								
	PI			217+03.34	384171.298	2558765.522	8°11'06.40"	700.00	2°55'09.33"	35.67	17.84			
	CC				384865.713	2558670.951								
	CS			217+21.15	384174.746	2558783.048								
	SPI			217+31.15	384176.348	2558792.919			1°13'39.96"	30.00		15.00	0.05	
	ST			217+51.15	384179.973	2558812.589								
		N 79°33'26.16" E	256.99 '											

CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
		N 79°33'26.16" E	256.99 '											
WBB -6	PC			220+08.14	384226.553	2559065.323								Ea = 0.00' Eu = 1.98' V = 30mph
	PI			220+22.74	384229.200	2559079.686	3°10'59.16"	1800.00	0°55'47.12"	29.21	14.60			
	CC				385996.739	2558739.068								
	PT			220+37.35	384232.080	2559094.004								
		N 78°37'39.04" E	67.15 '											

PROJECT NO: WK52362008	CITY OF MILWAUKEE	DEPARTMENT OF PUBLIC WORKS	MILWAUKEE STREETCAR	ALIGNMENT PLAN - PHASE 1 (SHEET 4 OF 30)	60% SUBMITTAL	SHEET PRE_357

FILE NAME : $$....projectwisefile....$$ PLOT DATE : 8/19/2013 PLOT BY : mqualy PLOT NAME : PLOT SCALE : 1:40

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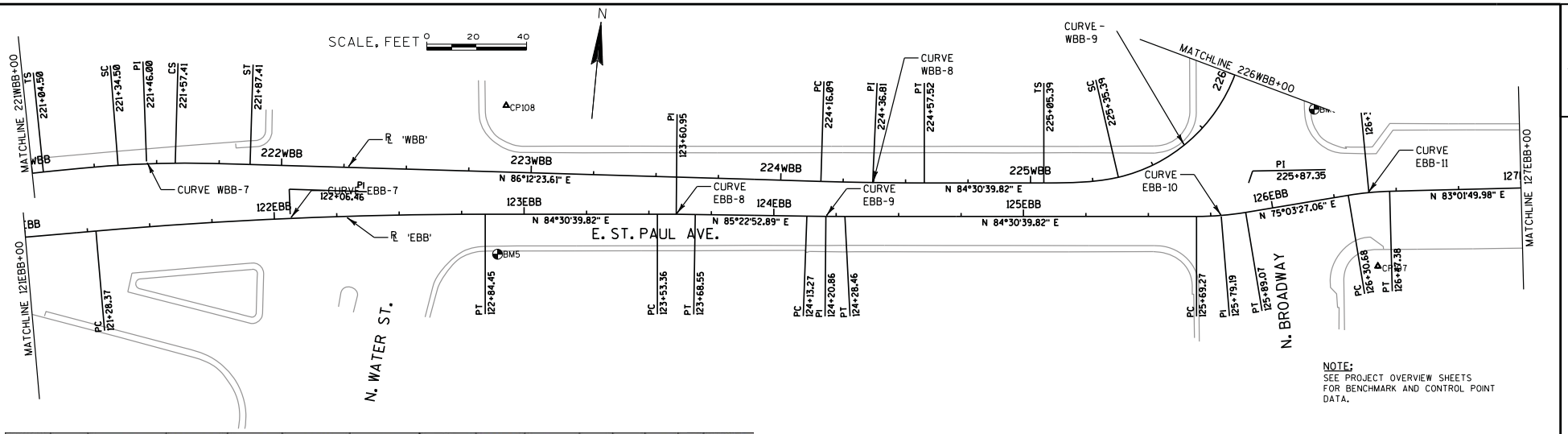

NOTE:
SEE PROJECT OVERVIEW SHEETS FOR BENCHMARK AND CONTROL POINT DATA.

CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
EBB -7		N 79°32'34.66" E	382.93 '											
	PC			121+28.37	384223.826	2559183.032								Ea = 0.00"
	PI			122+06.46	384237.999	2559259.823	3°10'59.16"	1800.00	4°58'05.17"	156.08	78.09			Eu = 1.98"
	CC				382453.722	2559509.729								V = 30mph
	PT			122+84.45	384245.469	2559337.553								
		N 84°30'39.83" E	68.91 '											

CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
EBB -8		N 84°30'39.83" E	68.91 '											
	PC			123+53.36	384252.060	2559406.145								Ea = 0.00"
	PI			123+60.95	384252.786	2559413.705	5°43'46.48"	1000.00	0°52'13.06"	15.19	7.59			Eu = 1.58"
	CC				383256.645	2559501.798								V = 20mph
	PT			123+68.55	384253.398	2559421.275								
		N 83°22'52.89" E	44.72 '											

CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
EBB -9		N 85°22'52.89" E	44.72 '											
	PC			124+13.27	384256.999	2559465.852								Ea = 0.00"
	PI			124+20.86	384257.611	2559473.422	5°43'46.48"	1000.00	0°52'13.06"	15.19	7.59			Eu = 1.58"
	CC				385253.752	2559385.329								V = 20mph
	PT			124+28.46	384258.337	2559480.982								
		N 84°30'39.82" E	140.81 '											

CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
EBB -10		N 84°30'39.82" E	140.81 '											
	PC			125+69.27	384271.806	2559621.149								Ea = 0.00"
	PI			125+79.19	384272.755	2559631.025	47°44'47.34"	120.00	9°27'12.77"	19.86	9.92			Eu = 0.83"
	CC				384391.256	2559609.670								V = 5mph
	PT			125+89.07	384275.314	2559640.612								
		N 75°03'27.06" E	41.61 '											

CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
EBB -11		N 75°03'27.06" E	41.61 '											
	PC			126+30.68	384286.044	2559680.818								Ea = 0.00"
	PI			126+39.05	384288.200	2559688.898	47°44'47.34"	120.00	7°58'22.92"	16.70	8.36			Eu = 0.83"
	CC				384170.102	2559711.760								V = 5mph
	PT			126+47.38	384289.215	2559697.199								
		N 83°01'49.98" E	62.62 '											

CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
WBB - 7		N 78°37'39.04" E	67.15 '											
	TS			221+04.50	384245.321	2559159.835								
	SPI			221+24.50	384249.265	2559179.444			2°08'54.93"	30.00		15.00	0.09	
	SC			221+34.50	384250.869	2559189.316								
	PI			221+46.00	384253.505	2559200.521	14°19'26.20"	400.00	3°16'54.71"	22.91	11.46			Ea = 0.00"
	CC				383856.041	2559253.433								Eu = 3.96"
	CS			221+57.41	384253.892	2559212.024								V = 20mph
	SPI			221+67.41	384254.927	2559221.972			2°08'54.93"	30.00		15.00	0.09	
	ST			221+87.41	384256.250	2559241.930								
		N 86°12'23.61" E	228.68 '											

CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
WBB -8		N 86°12'23.61" E	228.68 '											
	PC			224+16.09	384271.380	2559470.107								Ea = 0.00"
	PI			224+36.80	384272.750	2559490.777	4°05'33.20"	1400.00	1°41'43.79"	41.43	20.72			Eu = 1.77"
	CC				385668.312	2559377.483								V = 25mph
	PT			224+57.51	384274.732	2559511.398								
		N 84°30'39.83" E	47.87 '											

CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
WBB - 9		N 84°30'39.83" E	47.87 '											
	TS			225+05.38	384279.310	2559559.045								
	SPI			225+25.44	384281.229	2559579.009			13°05'49.83"	30.00		14.97	0.57	
	SC			225+35.38	384284.432	2559588.534								
	PI			225+87.34	384287.150	2559640.627	87°18'52.23"	65.62	64°29'16.71"	73.86	41.39			Ea = 0.00"
	CC				384346.630	2559567.619								Eu = 1.51"
	CS			226+09.24	384338.717	2559632.761								V = 5mph
	SPI			226+19.29	384348.693	2559633.972			13°05'49.83"	30.00		14.97	0.57	
	ST			226+39.24	384368.632	2559631.816								
		N 0°10'16.55" W	175.04 '											

PROJECT NO: WK52362008	CITY OF MILWAUKEE	DEPARTMENT OF PUBLIC WORKS	MILWAUKEE STREETCAR	ALIGNMENT PLAN - PHASE 1 (SHEET 5 OF 30)	60% SUBMITTAL	SHEET PRE_358

FILE NAME : $$....projectwisefile....$$ PLOT DATE : 8/19/2013 PLOT BY : mqualy PLOT NAME : PLOT SCALE : 1:40

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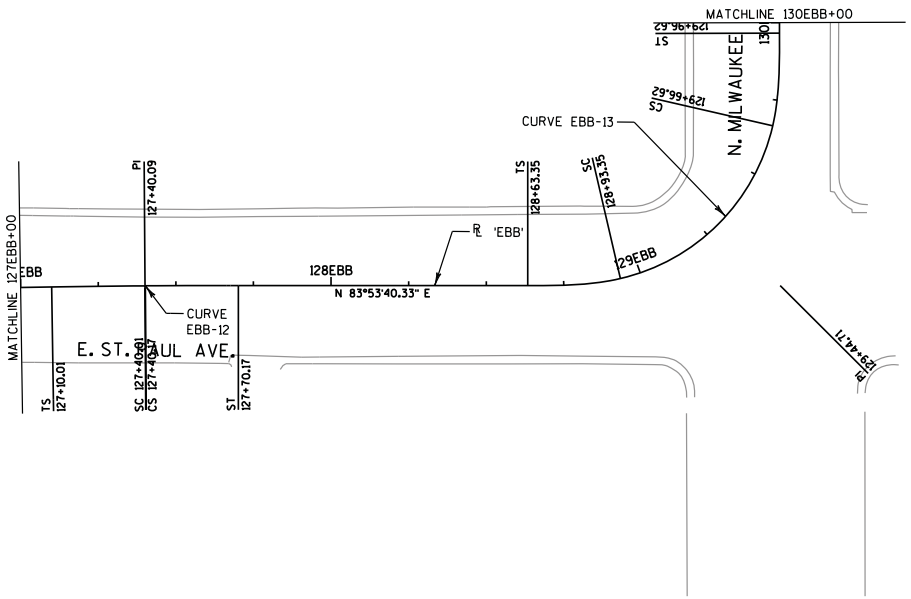
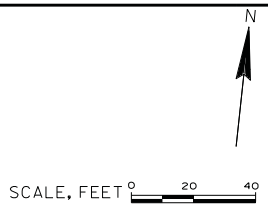
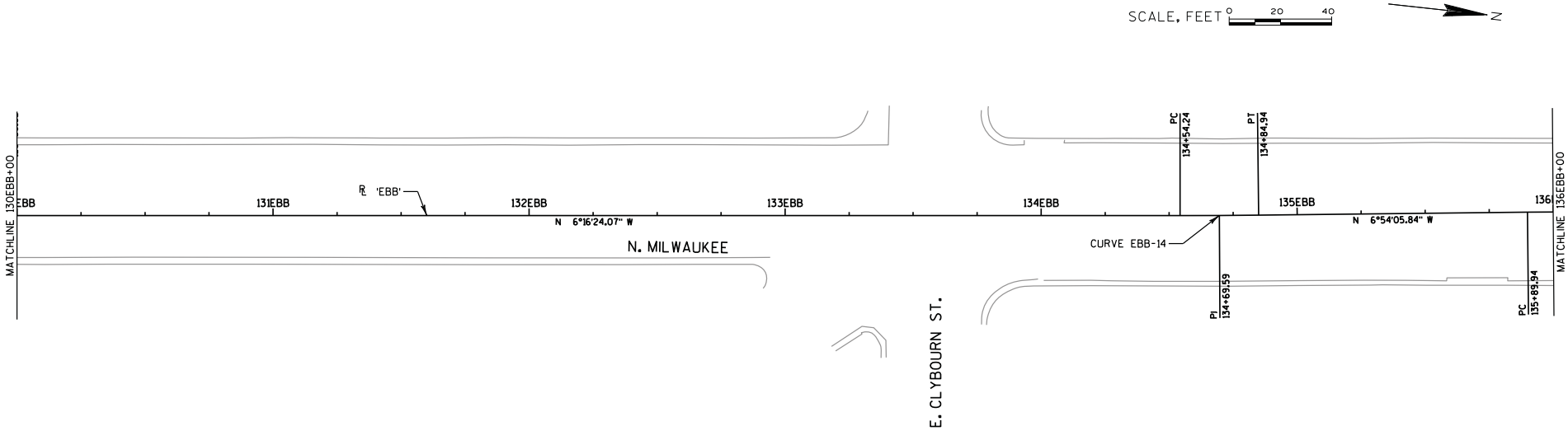




CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
		N 83°01'49.98" E	62.62 '											
EBB - 12	TS			127+10.01	384296.814	2559759.361								
	SPI			127+30.01	384299.241	2559779.214			0°25'46.99"	30.00		15.00	0.02	
	SC			127+40.01	384300.379	2559789.149								
	PI			127+40.09	384300.464	2559789.219	2°51'53.24"	2000.00	0°00'16.38"	0.16	0.08			Ea = 0.00"
	CC				382313.393	2560016.933								Eu = 2.43"
	CS			127+40.17	384300.398	2559789.306								V = 35mph
	SPI			127+50.17	384301.536	2559799.242			0°25'46.99"	30.00		15.00	0.02	
	ST			127+70.17	384303.663	2559819.128								
		N 83°53'40.33" E	93.19 '											

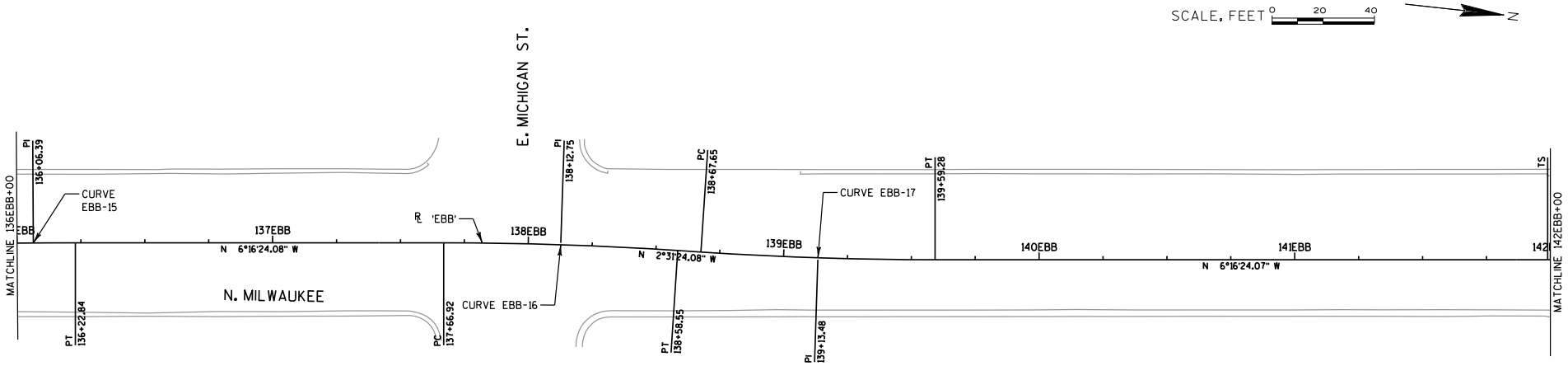
CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
		N 83°53'40.33" E	93.19 '											
EBB - 13	TS			128+63.35	384313.574	2559911.789								
	SPI			128+83.41	384315.707	2559931.730			13°05'52.13"	30.00		14.97	0.57	
	SC			128+93.35	384319.013	2559941.221								
	PI			129+44.71	384322.227	2559992.683	87°19'07.56"	65.62	63°58'20.13"	73.26				Ea = 0.00"
	CC				384380.979	2559919.638								Eu = 1.51"
	CS			129+66.62	384373.182	2559984.790								V = 5mph
	SPI			129+76.67	384383.161	2559985.984			13°05'52.13"	30.00		14.97	0.57	
	ST			129+96.62	384403.095	2559983.793								
		N 6°16'24.07" W	457.62 '											



CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
		N 6°16'24.07" W	457.62 '											
EBB -14	PC			134+54.24	384857.974	2559933.788								Ea = 0.00"
	PI			134+69.59	384873.234	2559932.111	2°02'46.60"	2800.00	0°37'41.77"	30.70	15.35			Eu = 2.26"
	CC				384552.012	2557150.555								V = 40mph
	PT			134+84.94	384888.474	2559930.266								
		N 6°54'05.84" W	105.00 '											

PROJECT NO: WK52362008	CITY OF MILWAUKEE	DEPARTMENT OF PUBLIC WORKS	MILWAUKEE STREETCAR	ALIGNMENT PLAN - PHASE 1 (SHEET 7 OF 30)	60% SUBMITTAL	SHEET PRE_360

FILE NAME : $$....projectwisefile....$$ PLOT DATE : 8/19/2013 PLOT BY : mqualy PLOT NAME : PLOT SCALE : 1:40



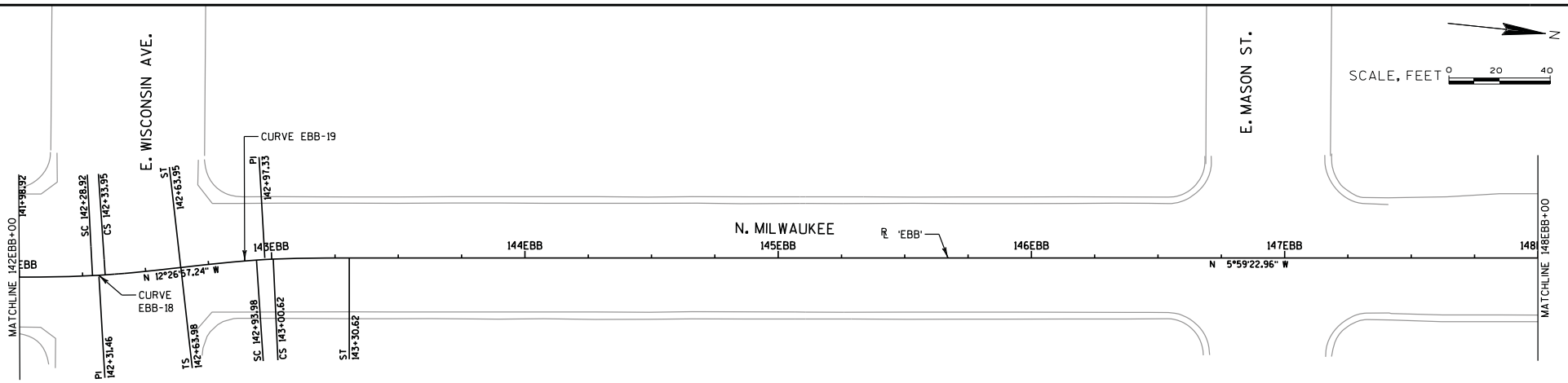
NOTE:
SEE PROJECT OVERVIEW SHEETS FOR BENCHMARK AND CONTROL POINT DATA.

CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
EBB -15		N 6°54'05.84" W	105.00 '											
	PC			135+89.94	384992.713	2559917.648								Ea = 0.00"
	PI			136+06.39	385009.042	2559915.672	1°54'35.49"	3000.00	0°37'41.76"	32.90	16.45			Eu = 2.11"
	CC				385353.208	2562895.910								V = 40mph
	PT			136+22.84	385025.392	2559913.875								
		N 6°16'24.08" W	144.08 '											

CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
EBB - 16		N 6°16'24.08" W	144.08 '											
	PC			137+66.92	385168.614	2559898.130								
	PI			138+12.75	385214.171	2559893.122	4°05'33.20"	1400.00	3°45'00.00"	91.63	45.83			Ea = 0.00"
	CC				385321.595	2561289.747								Eu = 1.77"
	PT			138+58.55	385259.958	2559891.104								V = 25mph
		N 2°31'24.08" W	9.10 '											

CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
EBB - 17		N 2°31'24.08" W	9.10 '											
	PC			138+67.65	385269.046	2559890.704								
	PI			139+13.48	385314.833	2559888.686	4°05'33.20"	1400.00	3°44'59.99"	91.63	45.83			Ea = 0.00"
	CC				385207.409	2558492.061								Eu = 1.77"
	PT			139+59.28	385360.389	2559883.678								V = 25mph
		N 6°16'24.07" W	239.64 '											

2



NOTE:
SEE PROJECT OVERVIEW SHEETS FOR BENCHMARK AND CONTROL POINT DATA.

CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
		N 6°16'24.07" W	239.64 '											
EBB - 18	TS			141+98.92	385598.597	2559857.492								Ea = 0.00" Eu = 2.74" V = 15mph
	SPI			142+18.92	385618.479	2559855.306			2°38'39.91"	30.00		15.00	0.12	
	SC			142+28.92	385628.361	2559853.756								
	PI			142+31.46	385630.940	2559853.936	17°37'46.09"	325.00	0°53'13.34"	5.03	2.52			
	CC				385577.980	2559532.684								
	CS			142+33.95	385633.325	2559852.937								
	SPI			142+43.95	385643.181	2559851.234			2°38'39.91"	30.00		15.00	0.12	
	ST			142+63.95	385662.713	2559846.922								
		N 12°26'57.23" W	0.03 '											

CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
		N 12°26'57.23" W	0.03 '											
EBB - 19	TS			142+63.98	385662.742	2559846.915								Ea = 0.00" Eu = 2.74" V = 15mph
	SPI			142+83.98	385682.274	2559842.604			2°38'39.91"	30.00		15.00	0.12	
	SC			142+93.98	385692.130	2559840.900								
	PI			142+97.33	385695.303	2559839.727	17°37'46.09"	325.00	1°10'14.45"	6.64	3.32			
	CC				385747.475	2560161.153								
	CS			143+00.62	385698.684	2559839.836								
	SPI			143+10.62	385708.573	2559838.335			2°38'39.91"	30.00		15.00	0.12	
	ST			143+30.62	385728.466	2559836.248								
		N 5°59'22.96" W	712.47 '											

PROJECT NO: WK52362008	CITY OF MILWAUKEE	DEPARTMENT OF PUBLIC WORKS	MILWAUKEE STREETCAR	ALIGNMENT PLAN - PHASE 1 (SHEET 9 OF 30)	60% SUBMITTAL	SHEET PRE_362

FILE NAME : $$....projectwisefile....$$ PLOT DATE : 8/19/2013 PLOT BY : mqualy PLOT NAME : PLOT SCALE : 1:40

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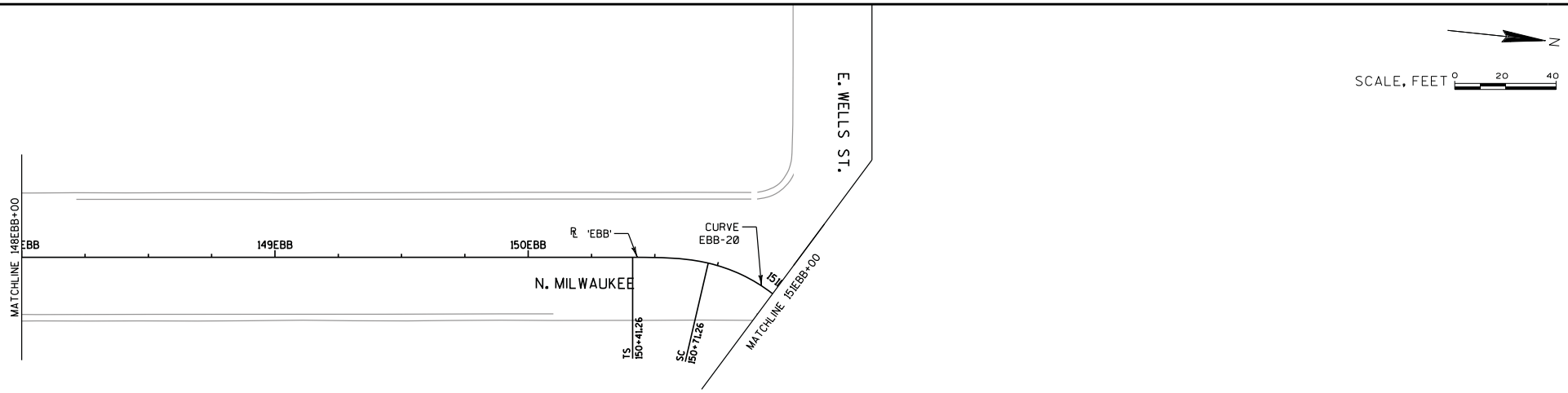

CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
		N 5°59'22.96" W	710.64 '											
	TS			150+41.26	386435.228	2559762.092								
	SPI			150+61.32	386455.173	2559760.000			13°05'52.13"	30.00		14.97	0.57	
	SC			150+71.26	386465.146	2559761.243								
	PI			151+22.98	386516.495	2559753.565	87°19'07.56"	65.62	64°16'50.47"	73.62	41.23			Ea = 0.00"
EBB - 20	CC				386457.026	2559826.356								Eu = 1.51"
	CS			151+44.88	386519.212	2559805.414								V = 5mph
	SPI			151+54.93	386522.419	2559814.939			13°05'52.13"	30.00		14.97	0.57	
	ST			151+74.88	386524.346	2559834.901								
		N 84°29'11.77" E	0.09 '											

PROJECT NO: WK52362008	CITY OF MILWAUKEE	DEPARTMENT OF PUBLIC WORKS	MILWAUKEE STREETCAR	ALIGNMENT PLAN - PHASE 1 (SHEET 10 OF 30)	60% SUBMITTAL	SHEET PRE_363

FILE NAME : $$....projectwisefile....$$ PLOT DATE : 8/19/2013 PLOT BY : mqualy PLOT NAME : PLOT SCALE : 1:40

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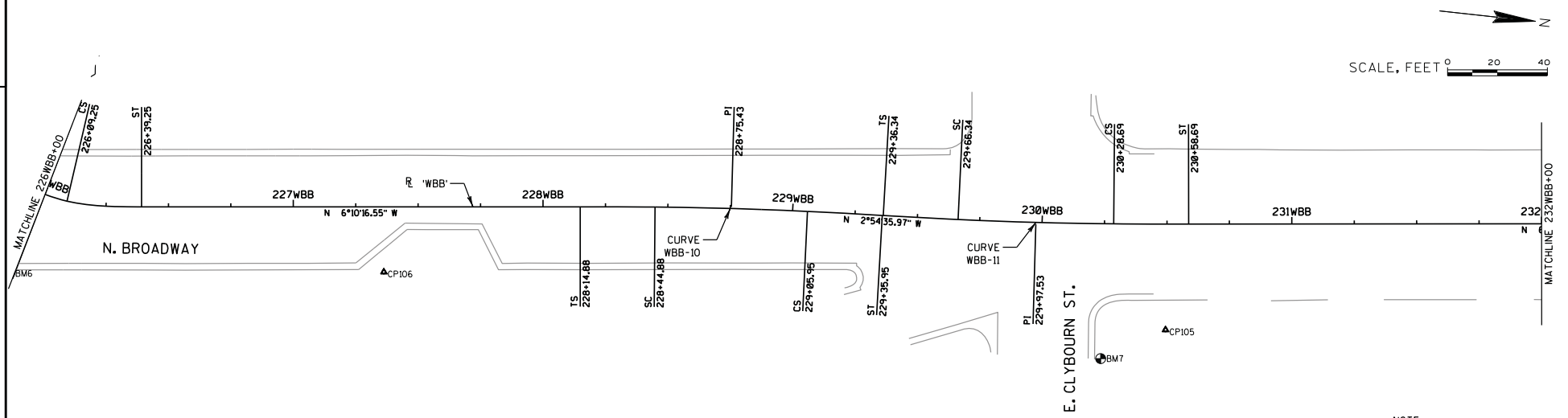

NOTE:
SEE PROJECT OVERVIEW SHEETS FOR BENCHMARK AND CONTROL POINT DATA.

CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
		N 6°10'16.55" W	175.64 '											
WBB - 10	TS			228+14.87	384543.250	2559612.936								
	SPI			228+34.87	384563.134	2559610.786			0°32'13.73"	30.00		15.00	0.02	
	SC			228+44.87	384573.086	2559609.804								
	PI			228+75.42	384603.448	2559606.427	3°34'51.55"	1600.00	2°11'13.12"	58.57	61.07			Ea = 0.00" Eu = 3.03" V = 35mph
	CC				384730.166	2561202.074								
	CS			229+05.95	384633.962	2559604.969								
	SPI			229+15.95	384643.944	2559604.368			0°32'13.73"	30.00		15.00	0.02	
	ST			229+35.95	384663.919	2559603.353								
		N 2°54'35.97" W	0.38 '											

CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
		N 2°54'35.97" W	0.38 '											
WBB - 11	TS			229+36.33	384664.302	2559603.333								
	SPI			229+56.33	384684.277	2559602.318			0°32'13.73"	30.00		15.00	0.02	
	SC			229+66.33	384694.259	2559601.716								
	PI			229+97.52	384725.415	2559600.227	3°34'51.55"	1600.00	2°13'58.57"	62.36	31.18			Ea = 0.00" Eu = 3.03" V = 35mph
	CC				384798.054	2558004.611								
	CS			230+28.69	384756.412	2559596.755								
	SPI			230+38.69	384766.363	2559595.766			0°32'13.73"	30.00		15.00	0.02	
	ST			230+58.69	384786.246	2559593.600								
		N 6°13'02.01" W	296.14 '											

PROJECT NO: WK52362008	CITY OF MILWAUKEE	DEPARTMENT OF PUBLIC WORKS	MILWAUKEE STREETCAR	ALIGNMENT PLAN - PHASE 1 (SHEET 11 OF 30)	60% SUBMITTAL	SHEET PRE_364

FILE NAME : $$....projectwisefile....$$ PLOT DATE : 8/19/2013 PLOT BY : mqualy PLOT NAME : PLOT SCALE : 1:40

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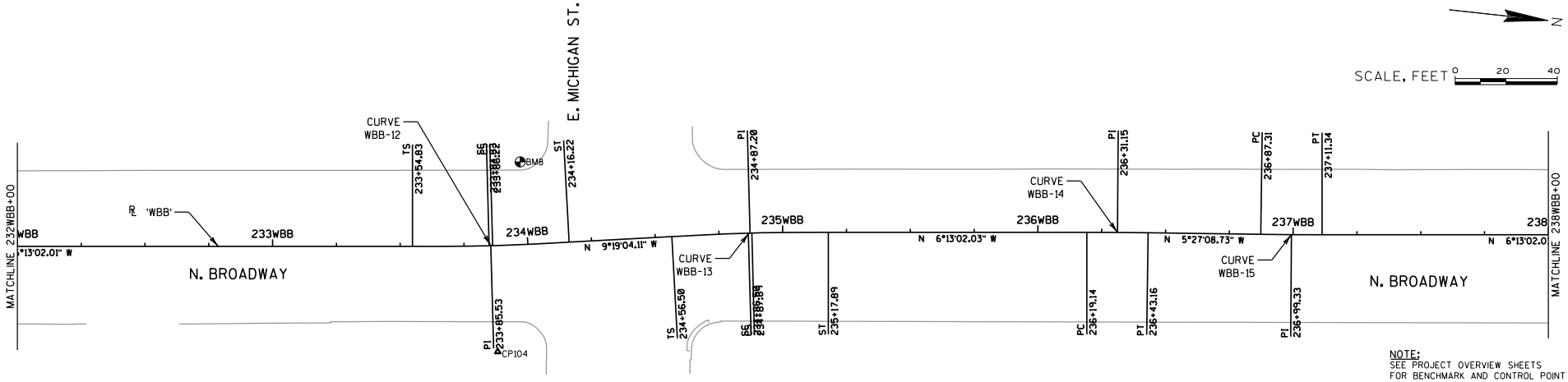

NOTE:
SEE PROJECT OVERVIEW SHEETS FOR BENCHMARK AND CONTROL POINT DATA.

CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
		N 6°13'02.01" W	296.14 '											
WBB - 12	TS			233+54.82	385080.642	2559561.529								
	SPI			233+74.82	385100.525	2559559.363			1°28'54.43"	30.00		15.00	0.06	
	SC			233+84.82	385110.435	2559558.023								
	PI			233+85.52	385111.160	2559558.204	9°52'42.90"	580.00	0°08'13.23"	1.39	0.69			Ea = 0.00" Eu = 4.27" V = 25mph
	CC				385032.733	2558983.251								
	CS			233+86.21	385111.809	2559557.835								
	SPI			233+96.21	385121.717	2559556.472			1°28'54.43"	30.00		15.00	0.06	
	ST			234+16.21	385141.453	2559553.233								
		N 9°19'04.11" W	40.29 '											

CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
		N 9°19'04.11" W	40.29 '											
WBB - 13	TS			234+56.50	385181.209	2559546.711								
	SPI			234+76.50	385200.946	2559543.472			1°28'54.43"	30.00		15.00	0.06	
	SC			234+86.50	385210.853	2559542.109								
	PI			234+87.20	385211.502	2559541.740	9°52'42.90"	580.00	0°08'13.21"	1.39	0.69			Ea = 0.00" Eu = 4.27" V = 25mph
	CC				385289.929	2560116.693								
	CS			234+87.88	385212.227	2559541.921								
	SPI			234+97.88	385222.137	2559540.582			1°28'54.43"	30.00		15.00	0.06	
	ST			235+17.88	385242.020	2559538.416								
		N 6°13'02.03" W	101.25 '											

CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
		N 6°13'02.03" W	101.25 '											
WBB -14	PC			236+19.13	385342.672	2559527.451								
	PI			236+31.14	385354.615	2559526.150	3°10'59.16"	1800.00	0°45'53.31"	24.03	12.01			Ea = 0.00" Eu = 1.98" V = 30mph
	CC				385537.609	2561316.864								
	PT			236+43.16	385366.574	2559525.008								
		N 5°27'08.73" W	44.15 '											

CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
		N 5°27'08.73" W	44.15 '											
WBB -15	PC			236+87.31	385410.523	2559520.813								
	PI			236+99.32	385422.483	2559519.672	3°10'59.16"	1800.00	0°45'53.29"	24.03	12.01			Ea = 0.00" Eu = 1.98" V = 30mph
	CC				385239.489	2557728.957								
	PT			237+11.33	385434.426	2559518.371								
		N 6°13'02.01" W	160.00 '											

PROJECT NO: WK52362008	CITY OF MILWAUKEE	DEPARTMENT OF PUBLIC WORKS	MILWAUKEE STREETCAR	ALIGNMENT PLAN - PHASE 1 (SHEET 12 OF 30)	60% SUBMITTAL	SHEET PRE_365

FILE NAME : $$....projectwisefile....$$ PLOT DATE : 8/19/2013 PLOT BY : mqualy PLOT NAME : PLOT SCALE : 1:40

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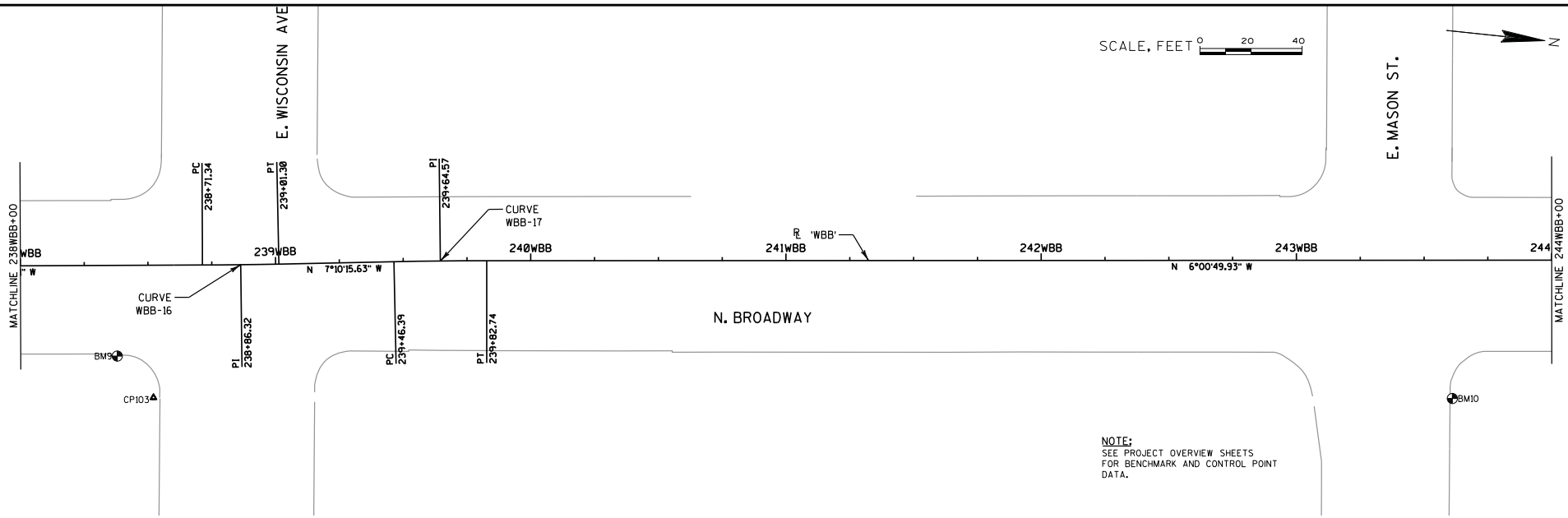

NOTE:
SEE PROJECT OVERVIEW SHEETS FOR BENCHMARK AND CONTROL POINT DATA.

CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
		N 6°13'02.01" W	160.00 '											
WBB -16	PC			238+71.33	385595.485	2559501.043								Ea = 0.00" Eu = 1.98" V = 30mph
	PI			238+86.32	385608.379	2559499.420	3°10'59.16"	1800.00	0°57'13.61"	29.96	14.98			
	CC				385398.548	2557711.630								
	PT			239+01.30	385623.244	2559497.550								
		N 7°10'15.63" W	45.08 '											

CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
		N 7°10'15.63" W	45.08 '											
WBB -17	PC			239+46.39	385667.975	2559491.922								Ea = 0.00" Eu = 1.98" V = 30mph
	PI			239+64.57	385686.010	2559489.653	3°10'59.16"	1800.00	1°09'25.69"	36.35	18.18			
	CC				385892.671	2561277.843								
	PT			239+82.74	385704.087	2559487.749								
		N 6°00'49.93" E	568.31 '											

PROJECT NO: WK52362008	CITY OF MILWAUKEE	DEPARTMENT OF PUBLIC WORKS	MILWAUKEE STREETCAR	ALIGNMENT PLAN - PHASE 1 (SHEET 13 OF 30)	60% SUBMITTAL	SHEET PRE_366

FILE NAME : $$....projectwisefile....$$ PLOT DATE : 8/19/2013 PLOT BY : mqualy PLOT NAME : PLOT SCALE : 1:40

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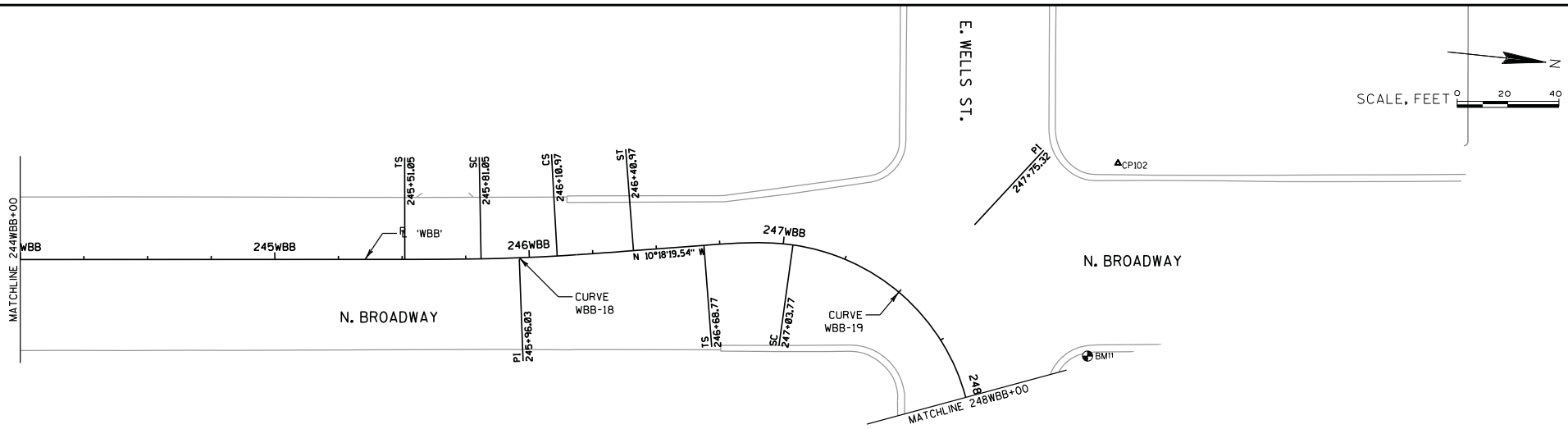

NOTE:
SEE PROJECT OVERVIEW SHEETS FOR BENCHMARK AND CONTROL POINT DATA.

CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
		N 6°00'49.93" E	568.31 '											
WBB - 18	TS			245+51.05	386269.268	2559423.495								Ea = 0.00" Eu = 3.09" V = 25mph
	SPI			245+71.05	386269.268	2559428.207			1°04'27.47"	30.00		15.00	0.05	
	SC			245+81.05	386299.082	2559424.878								
	PI			245+96.03	386313.996	2559423.495	7°09'43.10"	800.00	2°08'34.68"	29.92	14.96			
	CC				386200.365	2558630.992								
	CS			246+10.97	386328.699	2559420.632								
	SPI			246+20.97	386338.569	2559419.027			1°04'27.47"	30.00		15.00	0.05	
	ST			246+40.97	386358.247	2559415.449								
		N 10°18'19.54" W	27.80 '											

CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
		N 10°18'19.54" W	27.80 '											
WBB - 19	TS			246+68.77	386385.598	2559410.476								Ea = 0.00" Eu = 1.21" V = 5mph
	SPI			246+92.16	386408.610	2559406.292			12°13'29.19"	35.00		17.47	0.62	
	SC			247+03.77	386420.321	2559406.684								
	PI			247+75.32	386490.434	2559391.414	69°51'21.11"	82.02	69°50'45.05"	99.99	57.27			
	CC				386417.574	2559488.658								
	CS			248+03.76	386495.475	2559462.993								
	SPI			248+15.47	386499.141	2559474.122			12°13'29.19"	35.00		17.47	0.62	
	ST			248+38.76	386501.590	2559497.383								
		N 83°59'23.89" E	832.28 '											

PROJECT NO: WK52362008	CITY OF MILWAUKEE	DEPARTMENT OF PUBLIC WORKS	MILWAUKEE STREETCAR	ALIGNMENT PLAN - PHASE 1 (SHEET 14 OF 30)	60% SUBMITTAL	SHEET PRE_367

FILE NAME : $$....projectwisefile....$$ PLOT DATE : 8/19/2013 PLOT BY : mqualy PLOT NAME : PLOT SCALE : 1:40

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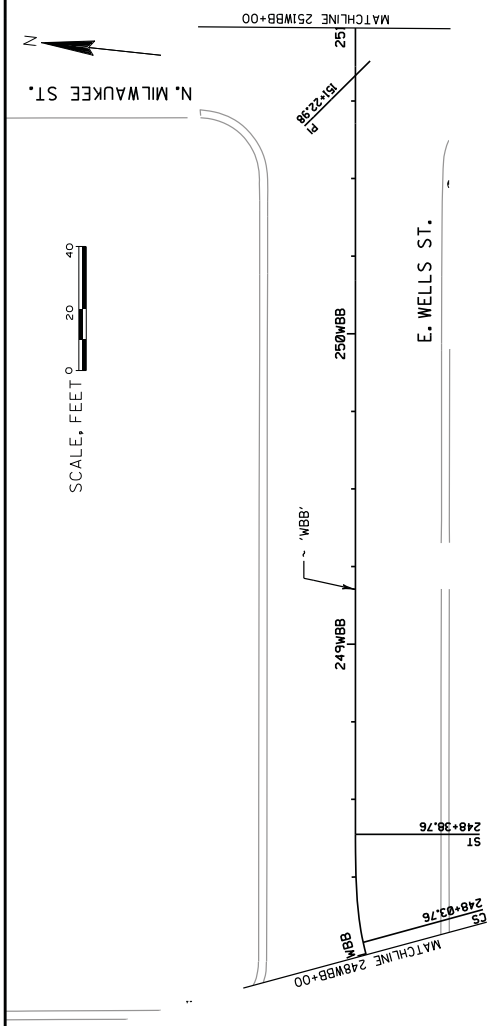

PROJECT NO: WK52362008 | CITY OF MILWAUKEE | DEPARTMENT OF PUBLIC WORKS | MILWAUKEE STREETCAR | ALIGNMENT PLAN - PHASE 1 (SHEET 15 OF 30) | 60% SUBMITTAL | SHEET PRE_368

PLOT DATE : 8/19/2013 PLOT BY : mqualy PLOT NAME : PLOT SCALE : 1:40

FILE NAME : $$....projectwisefile....$$

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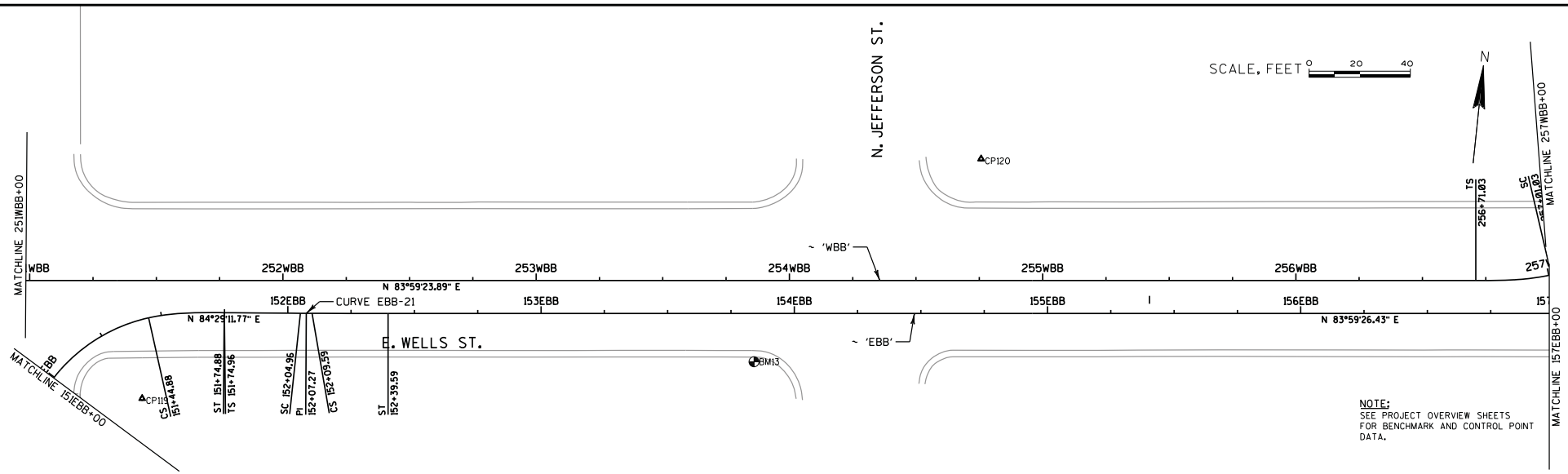

NOTE:
SEE PROJECT OVERVIEW SHEETS FOR BENCHMARK AND CONTROL POINT DATA.

CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
		N 84°29'11.77" E	0.09 '											
EBB - 21	TS			151+74.96	386524.354	2559834.986								Ea = 0.00" Eu = 1.58" V = 40mph
	SPI			151+94.96	386526.276	2559854.893			0°12'53.49"	3000		15.00	0.01	
	SC			152+04.96	386527.274	2559465.602								
	PI			152+07.27	386527.459	2559867.148	1°25'56.62"	4000.00	0°25'56.62"	4.62	2.31			
	CC				390507.300	2559465.602								
	CS			152+09.59	386527.738	2559869.442								
	SPI			152+19.59	386528.748	2559879.391			0°12'53.49"	3000		15.00	0.01	
	ST			152+39.59	386530.841	2559899.281								
		N 83°59'26.43" E	768.02 '											

PROJECT NO: WK52362008	CITY OF MILWAUKEE	DEPARTMENT OF PUBLIC WORKS	MILWAUKEE STREETCAR	ALIGNMENT PLAN - PHASE 1 (SHEET 16 OF 30)	60% SUBMITTAL	SHEET PRE_369

FILE NAME : $$....projectwisefile....$$ PLOT DATE : 8/19/2013 PLOT BY : mqualy PLOT NAME : PLOT SCALE : 1:40

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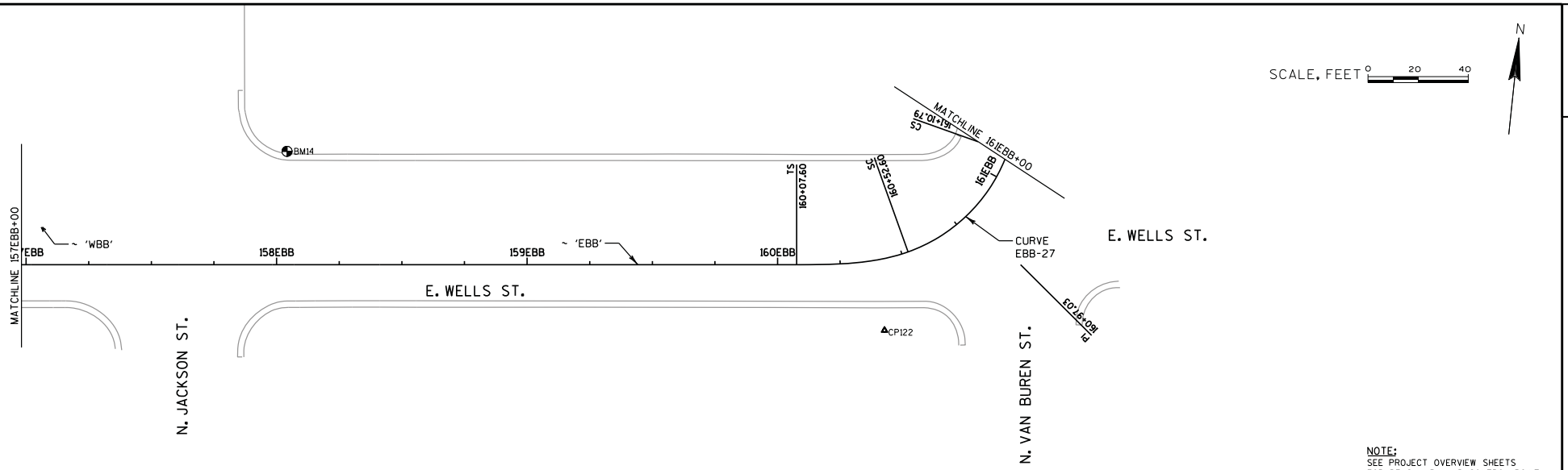
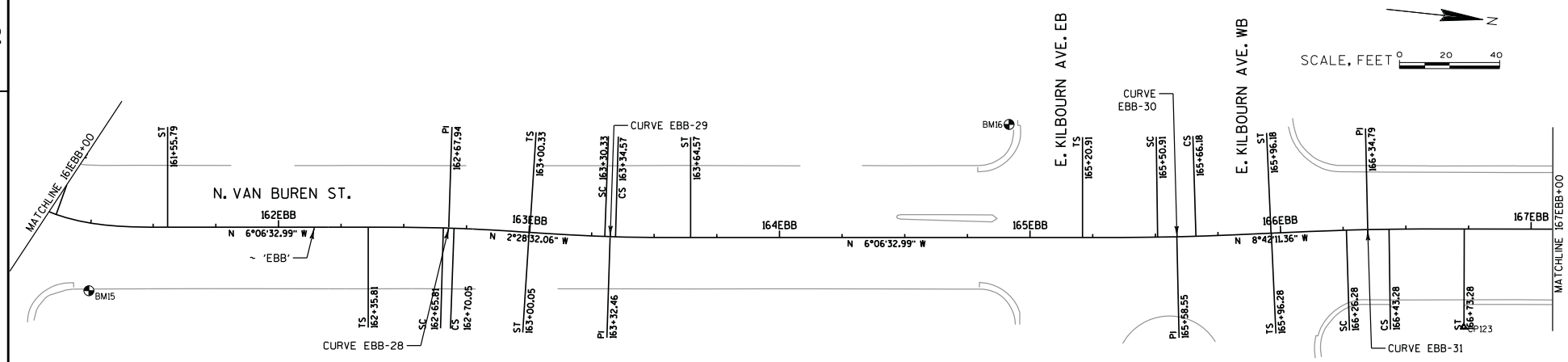


NOTE:
SEE PROJECT OVERVIEW SHEETS FOR BENCHMARK AND CONTROL POINT DATA.

CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
		N 83°59'26.43" E	768.02 '											
EBB - 27	TS			160+07.60	386620.608	2560752.014								Ea = 0.00" Eu = 1.51" V = 5mph
	SPI			160+37.79	386611.245	2560693.097			19°38'44.75"	45.00		22.41	1.28	
	SC			160+52.60	386620.973	2560706.772								
	PI			160+97.03	386620.608	2560752.014	87°18'52.23"	65.62	50°48'29.92"	58.19	31.16			
	CC				386680.124	2560678.362								
	CS			161+10.79	386664.765	2560742.159								
	SPI			161+25.96	386679.513	2560745.710			19°38'44.75"	45.00		22.41	1.28	
	ST			161+55.79	386709.529	2560742.497								
		N 6°06'32.99" W	80.02 '											

PROJECT NO: WK52362008	CITY OF MILWAUKEE	DEPARTMENT OF PUBLIC WORKS	MILWAUKEE STREETCAR	ALIGNMENT PLAN - PHASE 1 (SHEET 17 OF 30)	60% SUBMITTAL	SHEET PRE_370

FILE NAME : $$....projectwisefile....$$ PLOT DATE : 8/19/2013 PLOT BY : mqualy PLOT NAME : PLOT SCALE : 1:40



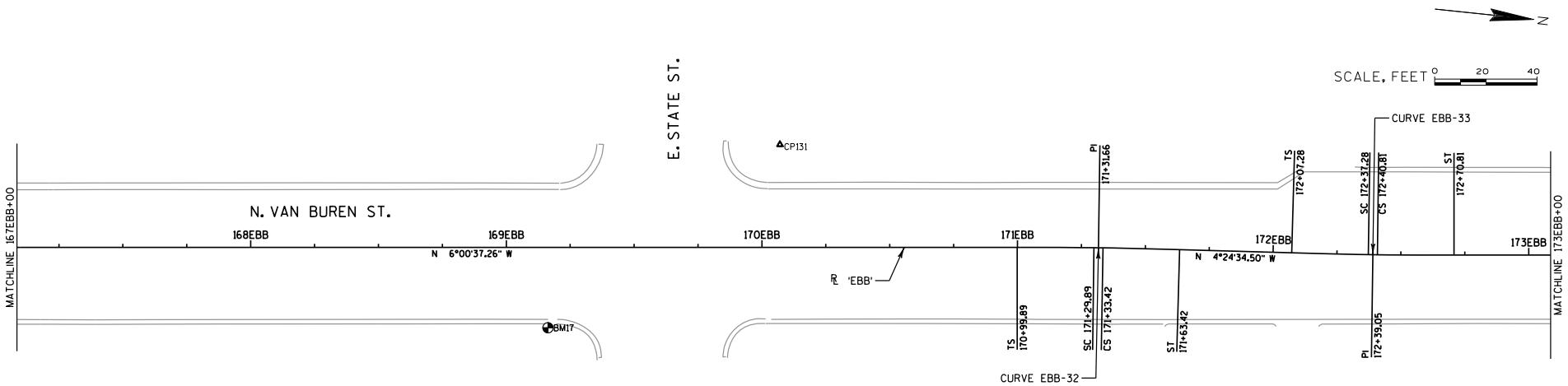
CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
		N 6°06'32.99" W	80.02 '											
EBB - 28	TS			162+35.81	386789.091	2560733.981								
	SPI			162+55.81	386808.978	2560731.853			1°35'29.58"	39.00		15.00	0.07	
	SC			162+65.81	386818.948	2560731.065								
	PI			162+67.94	386821.039	2560730.562	10°36'37.19"	540.00	0°27'01.78"	4.25	2.12			Ea = 0.00" Eu = 2.93" V = 20mph
	CC				386861.482	2561269.387								
	CS			162+70.05	386823.182	2560730.747								
	SPI			162+80.05	386833.158	2560730.038			1°35'29.58"	39.00		15.00	0.07	
	ST			163+00.05	386853.140	2560729.174								
		N 2°28'32.06" W	0.27 '											

CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
		N 2°28'32.06" W	0.27 '											
EBB - 29	TS			163+00.33	386853.414	2560729.162								
	SPI			163+20.33	386873.397	2560728.298			1°35'29.58"	39.00		15.00	0.07	
	SC			163+30.33	386883.372	2560727.589								
	PI			163+32.46	386885.515	2560727.774	10°36'37.19"	540.00	0°27'01.78"	4.25	2.12			Ea = 0.00" Eu = 2.93" V = 20mph
	CC				386845.073	2560188.949								
	CS			163+34.57	386887.606	2560727.271								
	SPI			163+44.58	386897.576	2560726.484			1°35'29.58"	39.00		15.00	0.07	
	ST			163+64.57	386917.463	2560724.355								
		N 6°06'32.99" W	156.34 '											

CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
		N 6°06'32.99" W	156.34 '											
EBB - 30	TS			165+20.91	387072.911	2560707.717								
	SPI			165+40.91	387092.798	2560705.589			0°51'33.97"	39.00		15.00	0.04	
	SC			165+50.91	387102.724	2560704.375								
	PI			165+58.55	387110.339	2560703.711	5°43'46.48"	1000.00	0°52'30.42"	15.27	7.64			Ea = 0.00" Eu = 2.48" V = 25mph
	CC				386981.399	2559711.763								
	CS			165+66.18	387117.870	2560702.407								
	SPI			165+76.18	387127.777	2560701.042			0°51'33.97"	39.00		15.00	0.04	
	ST			165+96.18	387147.547	2560698.016								
		N 8°42'11.36" W	0.10 '											

CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
		N 8°42'11.36" W	0.10 '											
EBB - 31	TS			165+96.28	387147.645	2560698.000								
	SPI			166+16.28	387167.415	2560694.974			0°51'33.97"	30.00		15.00	0.04	
	SC			166+26.28	387177.322	2560693.609								
	PI			166+34.79	387185.706	2560692.174	5°43'46.48"	1000.00	0°52'26.16"	17.00	8.50			Ea = 0.00" Eu = 2.48" V = 25mph
	CC				387313.793	2561684.253								
	CS			166+43.28	387194.180	2560691.433								
	SPI			166+53.28	387204.108	2560690.237			0°51'33.97"	30.00		15.00	0.04	
	ST			166+73.28	387223.999	2560688.142								
		N 6°00'37.26" W	426.61 '											

NOTE:
SEE PROJECT OVERVIEW SHEET FOR BENCHMARK AND CONTROL DATA.



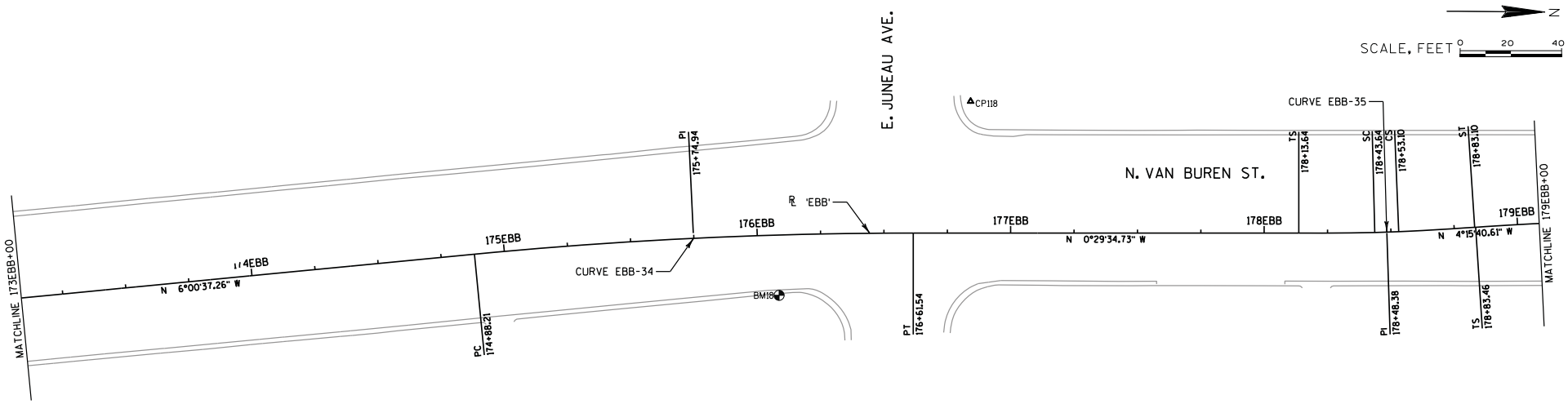
NOTE:
SEE PROJECT OVERVIEW SHEETS FOR BENCHMARK AND CONTROL POINT DATA.

CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
		N 6°00'37.26" W	426.61 '											
EBB - 32	TS			170+99.89	387648.263	2560643.473								
	SPI			171+19.89	387668.153	2560641.379			0°42'58.31"	30.00		15.00	0.03	
	SC			171+29.89	387678.111	2560640.456								
	PI			171+31.66	387679.853	2560640.147	4°46'28.73"	1200.00	0°10'06.14"	3.53	1.76			Ea = 0.00" Eu = 2.97" V = 30mph
	CC				387788.834	2561835.337								
	CS			171+33.42	387681.623	2560640.136								
	SPI			171+43.42	387691.583	2560639.242			0°42'58.31"	30.00		15.00	0.03	
	ST			171+63.42	387711.524	2560637.705								
		N 4°24'34.50" W	43.86 '											

CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
		N 4°24'34.50" W	43.86 '											
EBB - 33	TS			172+07.28	387755.257	2560634.332								
	SPI			172+27.28	387775.198	2560632.795			0°42'58.31"	30.00		15.00	0.03	
	SC			172+37.28	387785.158	2560631.901								
	PI			172+39.05	387786.927	2560631.890	4°46'28.73"	1200.00	0°10'06.14"	3.53	1.76			Ea = 0.00" Eu = 2.97" V = 30mph
	CC				387677.947	2559436.700								
	CS			172+40.81	387788.670	2560631.581								
	SPI			172+50.81	387798.627	2560630.658			0°42'58.31"	30.00		15.00	0.03	
	ST			172+70.81	387818.517	2560628.564								
		N 6°00'37.26" W	217.40 '											

PROJECT NO: WK52362008	CITY OF MILWAUKEE	DEPARTMENT OF PUBLIC WORKS	MILWAUKEE STREETCAR	ALIGNMENT PLAN - PHASE 1 (SHEET 19 OF 30)	60% SUBMITTAL	SHEET PRE_372

FILE NAME : $$....projectwisefile....$$ PLOT DATE : 8/19/2013 PLOT BY : mqualy PLOT NAME : PLOT SCALE : 1:40



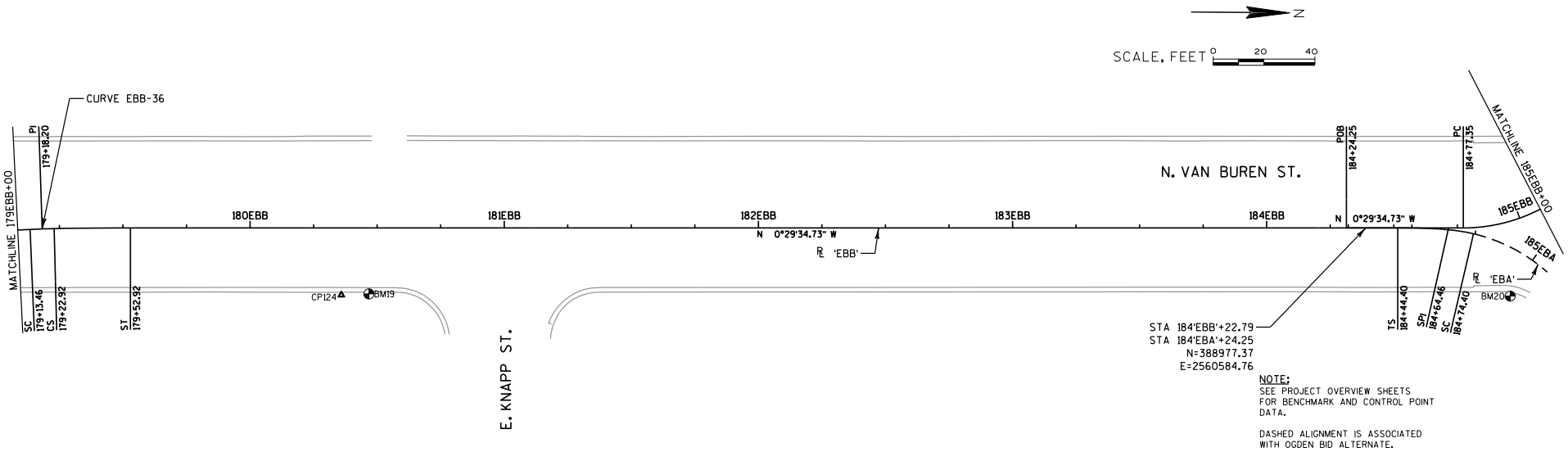
NOTE:
SEE PROJECT OVERVIEW SHEETS FOR BENCHMARK AND CONTROL POINT DATA.

CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
EBB -34	PC	N 6°00'37.26" W	217.40 '	174+88.21	388034.725	2560605.800								Ea = 0.00" Eu =1.98" V = 30mph
	PI			175+74.94	388120.981	2560596.719	3°10'59.16"	1800.00	5°31'02.53"	173.33	86.73			
	CC				388223.199	2562395.906								
	PT			176+61.54	388207.712	2560595.972								
		N 0°29'34.73" W	152.10											

CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
EBB - 35	TS	N 0°29'34.73" W	152.10	178+13.64	388359.804	2560594.664								Ea = 0.00" Eu = 4.13" V = 25mph
	SPI			178+33.64	388379.804	2560594.492			1°52'56.62"	30.00		15.00	0.06	
	SC			178+43.64	388389.799	2560594.156								
	PI			178+48.38	388394.543	2560594.365	9°32'57.47"	600.00	0°54'12.65"	9.46	4.73			
	CC				388369.640	2559994.494								
	CS			178+53.10	388399.252	2560593.763								
	SPI			178+63.10	388409.241	2560593.270			1°52'56.62"	30.00		15.00	0.06	
	ST			178+83.10	388429.186	2560591.783								
		N 4°15'40.62" W	0.36 '											

PROJECT NO: WK52362008	CITY OF MILWAUKEE	DEPARTMENT OF PUBLIC WORKS	MILWAUKEE STREETCAR	ALIGNMENT PLAN - PHASE 1 (SHEET 20 OF 30)	60% SUBMITTAL	SHEET PRE_373

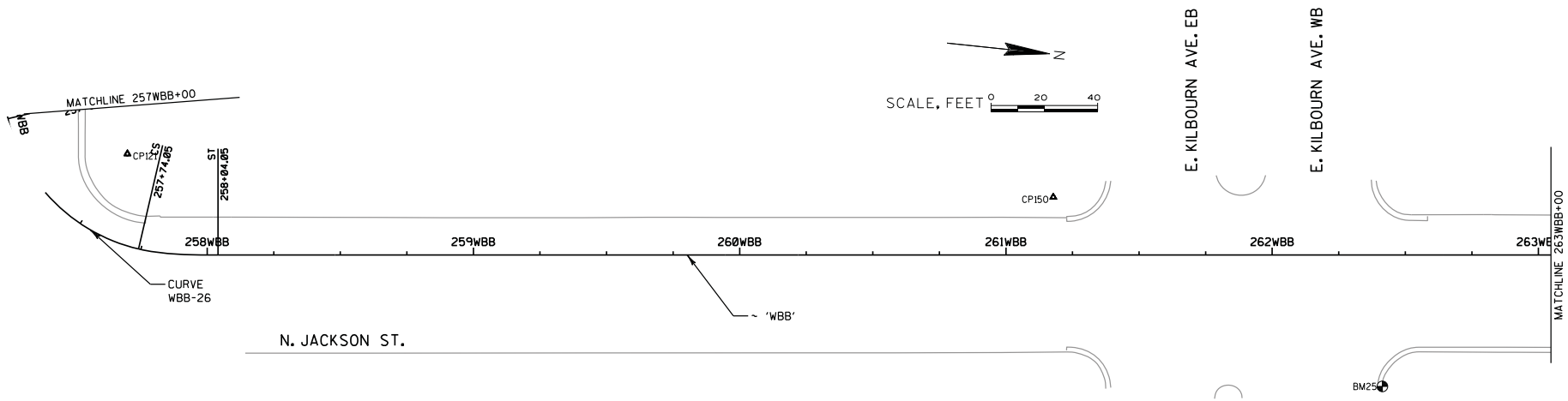
FILE NAME : $$....projectwisefile....$$ PLOT DATE : 8/19/2013 PLOT BY : mqualy PLOT NAME : PLOT SCALE : 1:40



NOTE:
SEE PROJECT OVERVIEW SHEETS FOR BENCHMARK AND CONTROL POINT DATA.

DASHED ALIGNMENT IS ASSOCIATED WITH OGDEN BID ALTERNATE.

CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
		N 4°15'40.62" W	0.36 '											
EBB - 36	TS			178+83.46	388429.546	2560591.757								Ea = 0.00" Eu = 4.13" V = 25mph
	SPI			179+03.46	388449.491	2560590.270			1°52'56.62"	30.00		15.00	0.06	
	SC			179+13.46	388459.479	2560589.777								
	PI			179+18.20	388464.189	2560589.175	9°32'57.47"	600.00	0°54'12.65"	9.46	4.73			
	CC				388489.091	2561189.046								
	CS			179+22.92	388468.933	2560589.384								
	SPI			179+32.93	388478.928	2560589.048			1°52'56.62"	30.00		15.00	0.06	
	ST			179+52.92	388498.928	2560588.876								
		N 0°29'34.73" W	509.45 '											



NOTE:
SEE PROJECT OVERVIEW SHEETS FOR BENCHMARK AND CONTROL POINT DATA.

CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
WBB - 26	TS	N 4°15'40.62" W	0.36 '	256+71.03	386588.732	2560325.084								Ea = 0.00" Eu = 1.51" V = 5mph
	SPI			256+91.09	386590.832	2560345.029			13°05'52.13"	30.00		14.97	0.57	
	SC			257+01.03	386594.121	2560354.525								
	PI			257+52.14	386597.224	2560405.750	87°19'07.55"	65.62	63°45'42.18"	73.02	40.81			
	CC				386656.123	2560333.046								
	CS			257+74.05	386647.978	2560398.155								
	SPI			257+84.10	386657.950	2560399.403			13°05'52.13"	30.00		14.97	0.57	
	ST	N 5°58'02.55" W	1261.02 '	258+04.05	386677.897	2560397.318								

PROJECT NO: WK52362008	CITY OF MILWAUKEE	DEPARTMENT OF PUBLIC WORKS	MILWAUKEE STREETCAR	ALIGNMENT PLAN - PHASE 1 (SHEET 22 OF 30)	60% SUBMITTAL	SHEET PRE_375

FILE NAME : $$....projectwisefile....$$ PLOT DATE : 8/19/2013 PLOT BY : mqualy PLOT NAME : PLOT SCALE : 1:40

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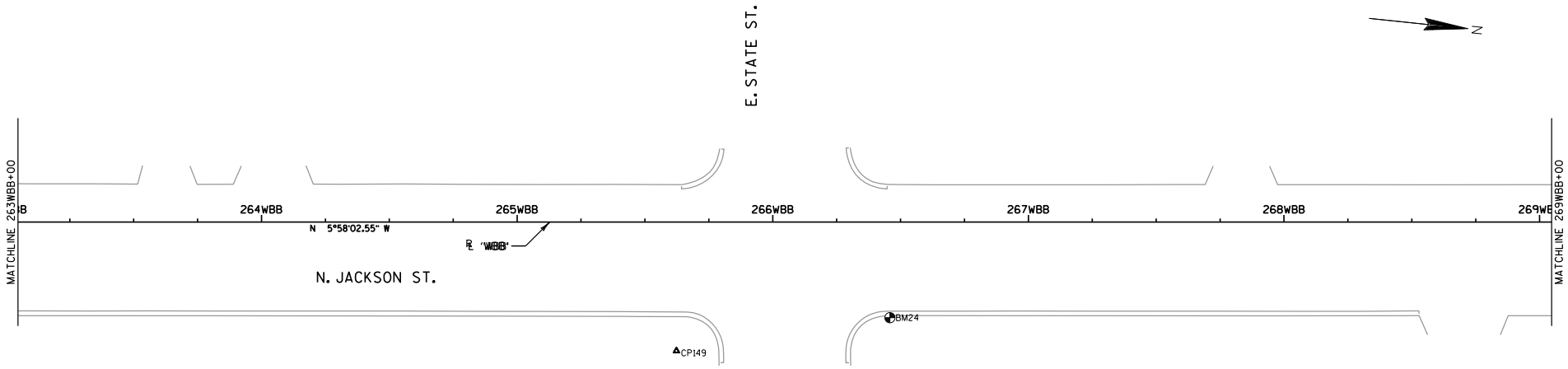
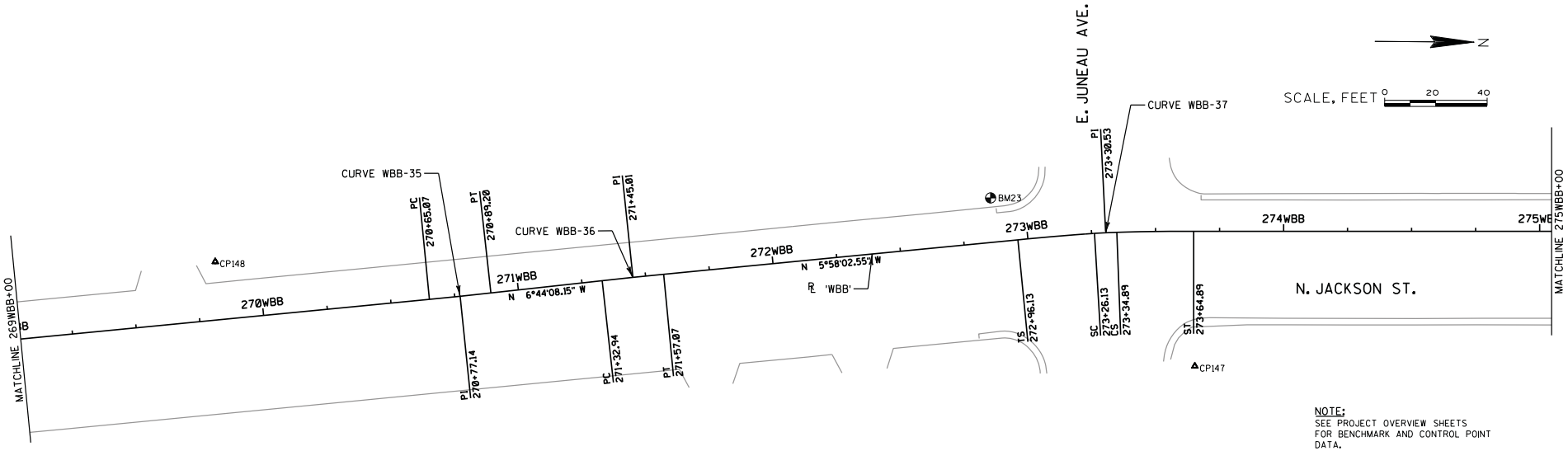


NOTE:
SEE PROJECT OVERVIEW SHEETS FOR BENCHMARK AND CONTROL POINT DATA.

PROJECT NO: WK52362008	CITY OF MILWAUKEE	DEPARTMENT OF PUBLIC WORKS	MILWAUKEE STREETCAR	ALIGNMENT PLAN - PHASE 1 (SHEET 23 OF 30)	60% SUBMITTAL	SHEET PRE_376

FILE NAME : $$....projectwisefile....$$ PLOT DATE : 8/19/2013 PLOT BY : mqualy PLOT NAME : PLOT SCALE : 1:40



NOTE:
SEE PROJECT OVERVIEW SHEETS FOR BENCHMARK AND CONTROL POINT DATA.

CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
		N 5°58'02.55" W	1261.02 '											
WBB -35	PC			270+65.07	387932.079	2560266.220								Ea = 0.00" Eu = 1.98" V = 30mph
	PI			270+77.14	387944.081	2560264.965	3°10'59.16"	1800.00	0°46'05.60"	24.13	12.07			
	CC				387744.947	2558475.974								
	PT			270+89.20	387956.065	2560263.550								
		N 6°44'08.15" W	43.74 '											

CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
		N 6°44'08.15" W	43.74 '											
WBB -36	PC			271+32.94	387999.500	2560258.420								Ea = 0.00" Eu = 1.98" V = 30mph
	PI			271+45.01	388011.485	2560257.005	3°10'59.16"	1800.00	0°46'05.60"	24.13	12.07			
	CC				388210.618	2562045.996								
	PT			271+57.07	388023.487	2560255.750								
		N 5°58'02.55" W	139.05 '											

CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
		N 5°58'02.55" W	139.05 '											
WBB - 37	TS			272+96.13	388161.785	2560241.294								Ea = 0.00" Eu = 3.96" V = 20mph
	SPI			273+16.13	388181.678	2560239.215			2°08'54.93"	30.00		15.00	0.09	
	SC			273+26.13	388191.658	2560238.549								
	PI			273+30.53	388195.998	2560237.718	14°19'26.20"	400.00	1°15'16.77"	8.76	4.38			
	CC				388218.298	2560637.660								
	CS			273+34.89	388200.403	2560238.061								
	SPI			273+44.89	388210.394	2560237.613			2°08'54.93"	30.00		15.00	0.09	
	ST			273+64.89	388230.395	2560237.468								
		N 0°24'55.92" W	524.25'											

PROJECT NO: WK52362008	CITY OF MILWAUKEE	DEPARTMENT OF PUBLIC WORKS	MILWAUKEE STREETCAR	ALIGNMENT PLAN - PHASE 1 (SHEET 24 OF 30)	60% SUBMITTAL	SHEET PRE_377

FILE NAME : $$....projectwisefile....$$ PLOT DATE : 8/19/2013 PLOT BY : mqualy PLOT NAME : PLOT SCALE : 1:40

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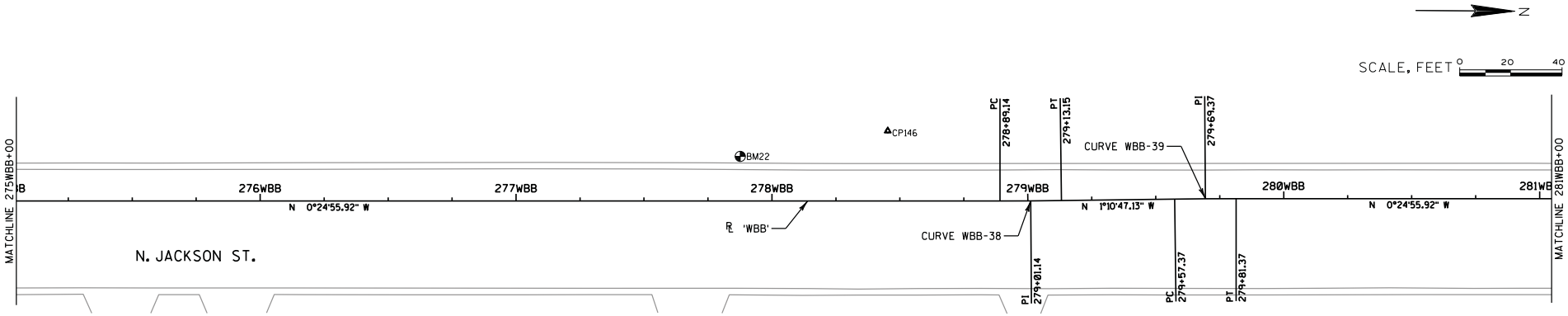

NOTE:
SEE PROJECT OVERVIEW SHEETS FOR BENCHMARK AND CONTROL POINT DATA.

CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
		N 0°24'55.92" W	524.25'											
WBB -38	PC			278+89.14	388754.634	2560233.666								Ea = 0.00" Eu = 1.98" V = 30mph
	PI			279+01.14	388766.639	2560233.579	3°10'59.16"	1800.00	0°45'51.21"	24.01	12.00			
	CC				388741.580	2558433.714								
	PT			279+13.15	388778.641	2560233.332								
		N 1°10'47.13" W	44.22'											

CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
		N 1°10'47.13" W	44.22'											
WBB -39	PC			279+57.37	388822.849	2560232.422								Ea = 0.00" Eu = 1.98" V = 30mph
	PI			279+69.37	388834.851	2560232.175	3°10'59.16"	1800.00	0°45'51.21"	24.01	12.00			
	CC				388859.910	2562032.040								
	PT			279+81.37	388846.855	2560232.087								
		N 0°24'55.92" W	140.58'											

PROJECT NO: WK52362008	CITY OF MILWAUKEE	DEPARTMENT OF PUBLIC WORKS	MILWAUKEE STREETCAR	ALIGNMENT PLAN - PHASE 1 (SHEET 25 OF 30)	60% SUBMITTAL	SHEET PRE_378

FILE NAME : $$....projectwisefile....$$ PLOT DATE : 8/19/2013 PLOT BY : mqualy PLOT NAME : PLOT SCALE : 1:40

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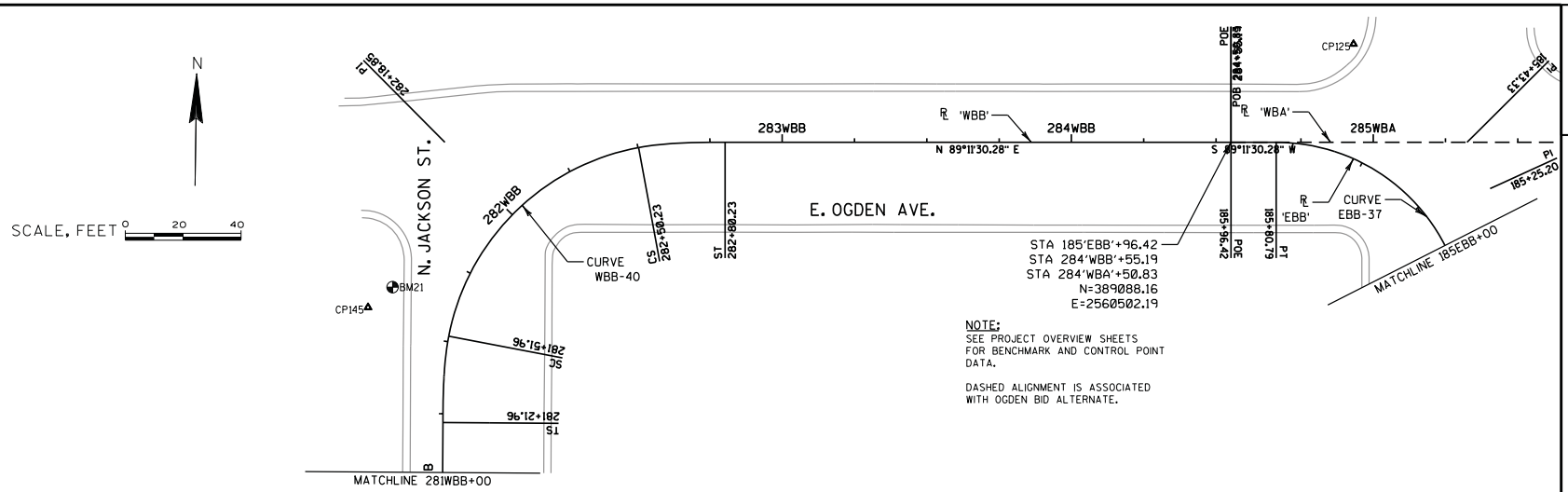


NOTE:
SEE PROJECT OVERVIEW SHEETS FOR BENCHMARK AND CONTROL POINT DATA.

DASHED ALIGNMENT IS ASSOCIATED WITH OGDEN BID ALTERNATE.

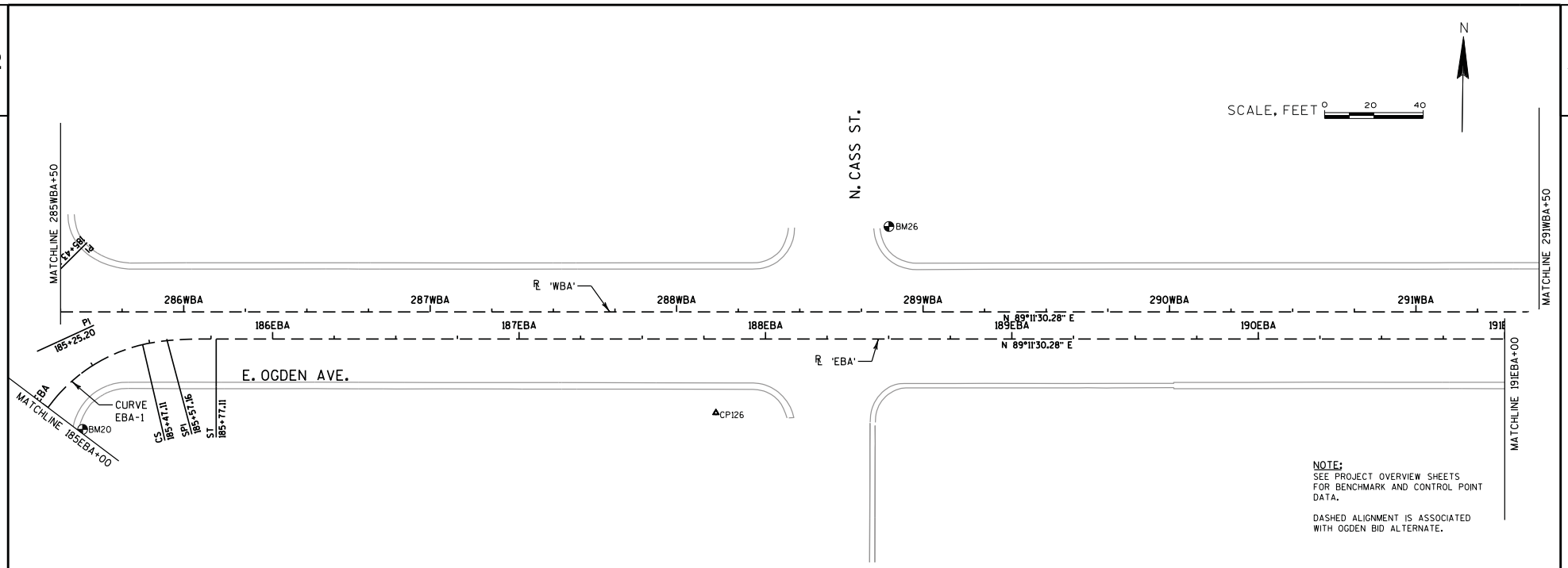
CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
EBB-37	PC	N 0°29'34.73" W	509.45 '	184+77.35	389023.335	2560584.364								Ea = 0.00" Eu = 1.51" V = 5mph
	PI			185+43.33	389089.315	2560583.797	87°18'52.23"	65.62	77°13'05.16"	88.44	52.40			
	CC				389022.770	2560518.747								
	PT	S 89°11'30.28" W	15.06 '	185+80.79	389088.384	2560517.821								
	POE			185+96.42	389088.163	2560502.195								

CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
		N 0°24'55.92" W	140.58 '											
WBB -40	TS			281+21.96	388987.434	2560231.068								Ea = 0.00" Eu = 1.21" V = 5mph
	SPI			281+41.99	389007.468	2560230.923			10°28'41.71"	30.00		14.98	0.46	
	SC			281+51.96	389017.346	2560232.675								
	PI			282+18.85	389084.329	2560230.365	69°51'18.05"	82.02	68°39'02.78"	98.28	56.00			
	CC				389003.015	2560313.435								
	CS			282+50.23	389083.449	2560297.382								
	SPI			282+60.25	389085.413	2560307.220			10°28'41.71"	30.00		14.98	0.46	
	ST	N 89°11'30.28" E	174.96 '	282+80.23	389085.695	2560327.253								
	POE			284+55.19	389088.163	256052.195								

PROJECT NO: WK52362008	CITY OF MILWAUKEE	DEPARTMENT OF PUBLIC WORKS	MILWAUKEE STREETCAR	PLAN AND PROFILE - PHASE 1 (SHEET 26 OF 30)	60% SUBMITTAL	SHEET PRE_379

FILE NAME : $$....projectwisefile....$$ PLOT DATE : 8/19/2013 PLOT BY : mqualy PLOT NAME : PLOT SCALE : 1:40

2



NOTE:
SEE PROJECT OVERVIEW SHEETS FOR BENCHMARK AND CONTROL POINT DATA.

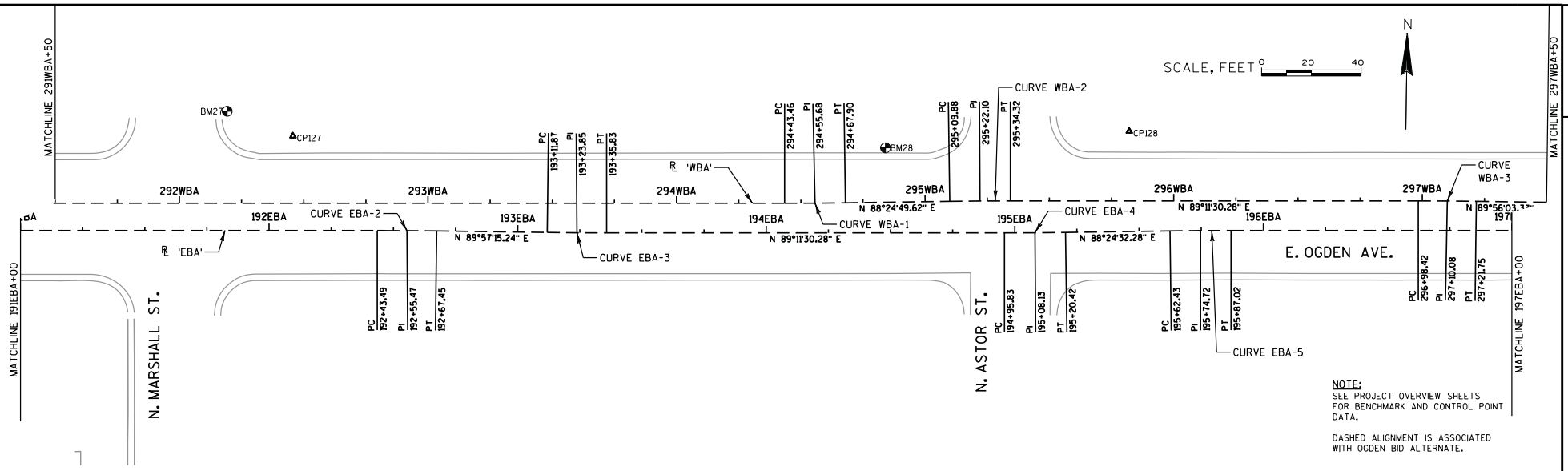
DASHED ALIGNMENT IS ASSOCIATED WITH OGDEN BID ALTERNATE.

CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
EBA - 1	POB			184+24.25	388977.367	2560584.760								
		N 0°29'34.73" W	20.15 '											
	TS			184+44.40	388997.520	2560584.586								
	SPI			184+64.46	389017.574	2560584.414			13°05'52.13"	30.00		14.97	0.57	
	SC			184+74.40	389027.382	2560586.607								
	PI			185+25.20	389078.315	2560583.891	87°19'07.55"	65.62	63°29'20.74"	72.71	40.60			Ea = 0.00" Eu = 1.51" V = 5mph
	CC				389013.063	2560650.642								
	CS			185+47.11	389076.756	2560634.873								
	SPI			185+57.16	389079.172	2560644.628			13°05'52.13"	30.00		14.97	0.57	
	ST			185+77.11	389079.455	2560664.681								
		N 89°11'30.28" E	666.38 '											

PROJECT NO: WK52362008	CITY OF MILWAUKEE	DEPARTMENT OF PUBLIC WORKS	MILWAUKEE STREETCAR	ALIGNMENT PLAN - PHASE 1 (SHEET 27 OF 30)	60% SUBMITTAL	SHEET PRE_380

FILE NAME : $$....projectwisefile....$$ PLOT DATE : 8/19/2013 PLOT BY : mqualy PLOT NAME : PLOT SCALE : 1:40

2



NOTE:
SEE PROJECT OVERVIEW SHEETS FOR BENCHMARK AND CONTROL POINT DATA.

DASHED ALIGNMENT IS ASSOCIATED WITH OGDEN BID ALTERNATE.

CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
EBA -2		N 89°11'30.28" E	666.38 '											
	PC			192+43.49	389088.855	2561330.994								Ea = 0.00"
	PI			192+55.47	389089.024	2561342.970	03°10'59.16"	1800.00	0°45'44.96"	23.95				Eu = 1.98"
	CC				387289.034	2561356.385								V = 30mph
	PT			192+67.45	389089.033	2561354.947								
		N 89°57'15.24" E	44.43 '											

CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
EBA -3		N 89°57'15.24" E	44.43 '											
	PC			193+11.87	389089.069	2561399.375								Ea = 0.00"
	PI			193+23.85	389089.078	2561411.352	03°10'59.16"	1800.00	0°45'44.96"	23.95				Eu = 1.98"
	CC				390889.068	2561397.937								V = 30mph
	PT			193+35.83	389089.247	2561423.329								
		N 89°11'30.28" E	160.00 '											

CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
EBA -4		N 89°11'30.28" E	160.00 '											
	PC			194+95.83	389091.504	2561583.313								Ea = 0.00"
	PI			195+08.13	389091.678	2561595.607	03°10'59.16"	1800.00	0°46'58.00"	24.59				Eu = 1.98"
	CC				390891.325	2561557.921								V = 30mph
	PT			195+20.42	389092.019	2561607.899								
		N 88°24'32.28" E	42.00 '											

CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
EBA -5		N 88°24'32.28" E	42.00 '											
	PC			195+62.43	389093.185	2561649.887								Ea = 0.00"
	PI			195+74.72	389093.527	2561662.178	03°10'59.16"	1800.00	0°46'57.94"	24.59				Eu = 1.98"
	CC				387293.879	2561699.864								V = 30mph
	PT			195+87.02	389093.700	2561674.473								
		N 89°11'30.22" E	659.80											

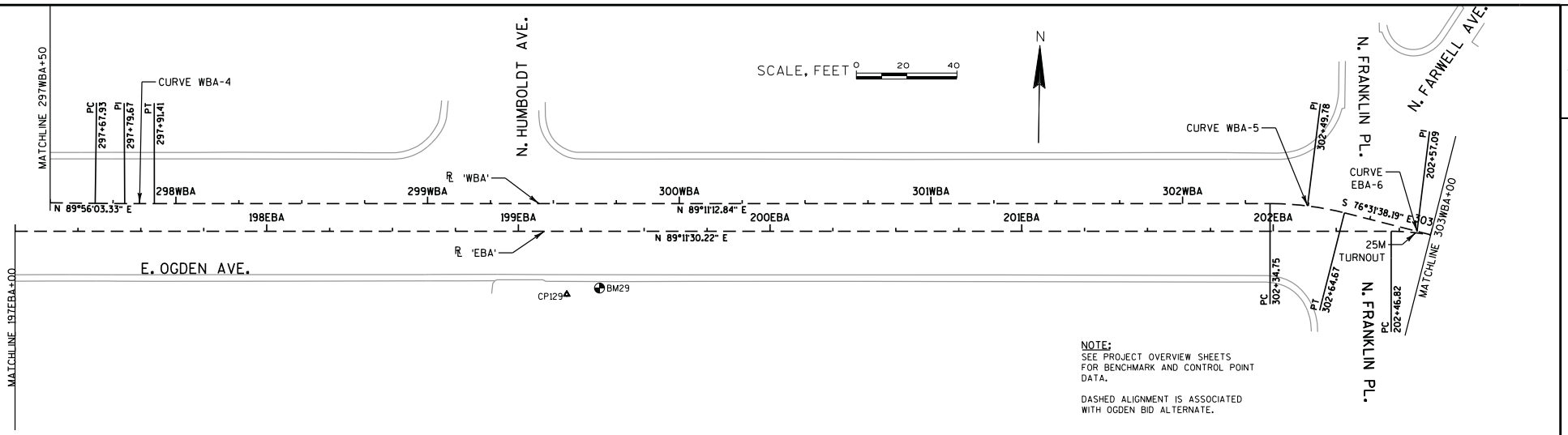
CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
WBA -1	POB			281+50.83	389088.163	2560502.195								
		N 89°11'30.28" E	992.63 '											
	PC			294+43.46	389102.166	2561494.729								Ea = 0.00"
	PI			294+55.68	389102.338	2561506.948	3°10'59.16"	1800.00	0°46'40.66"	24.44	12.220			Eu = 1.98"
	CC				390901.987	2561469.338								V = 30mph
	PT			294+67.90	389102.676	2561519.164								
		N 88°24'49.62" E	41.97 '											

CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
WBA -2		N 88°24'49.62" E	41.97 '											
	PC			295+09.88	389103.838	2561561.120								Ea = 0.00"
	PI			295+22.10	389104.177	2561573.336	3°10'59.16"	1800.00	0°46'40.66"	24.44	12.22			Eu = 1.98"
	CC				387304.528	2561610.946								V = 30mph
	PT			295+34.32	389104.349	2561585.555								
		N 89°11'30.28" E	164.10 '											

CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
WBA -3		N 89°11'30.28" E	164.10 '											
	PC			296+98.42	389106.664	2561749.642								Ea = 0.00"
	PI			297+10.08	389106.828	2561761.305	3°10'59.16"	1800.00	0°44'33.05"	23.33	11.66			Eu = 1.98"
	CC				387306.843	2561775.034								V = 30mph
	PT			297+21.75	389106.842	2561772.968								
		N 89°56'03.33" E	46.18 '											

PROJECT NO: WK52362008	CITY OF MILWAUKEE	DEPARTMENT OF PUBLIC WORKS	MILWAUKEE STREETCAR	ALIGNMENT PLAN - PHASE 1 (SHEET 28 OF 30)	60% SUBMITTAL	SHEET PRE_381

FILE NAME : $$....projectwisefile....$$ PLOT DATE : 8/19/2013 PLOT BY : mqualy PLOT NAME : PLOT SCALE : 1:40



NOTE:
SEE PROJECT OVERVIEW SHEETS FOR BENCHMARK AND CONTROL POINT DATA.

DASHED ALIGNMENT IS ASSOCIATED WITH OGDEN BID ALTERNATE.

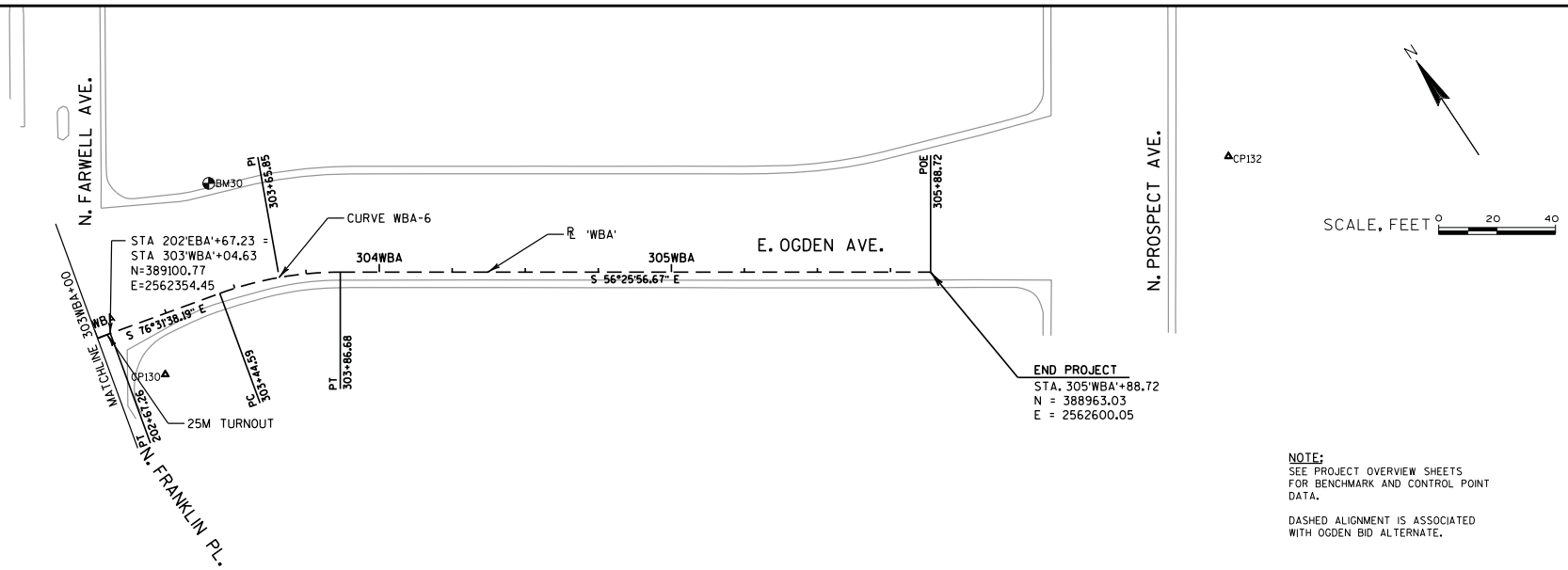
CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
EBA -6	PC	N 89°11'30.22" E	659.80	202+46.82	389103.008	2562334.206								Ea = 0.00" Eu = 1.21" V = 5mph
	PI			202+57.09	389103.153	2562344.480	69°51'21.11"	82.02	14°16'51.59"	20.44				
	CC				389020.996	2562335.364								
	PT			202+67.26	389100.759	2562354.473								
	POE			202+67.26	389100.759	2562354.473								

CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
WBA -4		N 89°56'03.33" E	46.18 '											
	PC			297+67.93	389106.895	2561819.148								Ea = 0.00" Eu = 1.98" V = 30mph
	PI			297+79.67	389106.908	2561830.888	3°10'59.16"	1800.00	0°44'50.49"	23.48	11.74			
	CC				390906.894	2561817.083								
	PT			297+91.41	389107.075	2561842.626								
		N 89°11'12.84" E	443.34 '											

CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
WBA -5		N 89°11'12.84" E	443.34 '											
	PC			302+34.75	389113.366	2562285.922								Ea = 0.00" Eu = 0.83" V = 5mph
	PI			302+49.78	389113.580	2562300.958	47°44'47.34"	120.00	14°17'08.97"	29.92	15.04			
	CC				388993.378	2562287.625								
	PT			302+64.67	389110.076	2562315.583								
		S 76°31'38.19" E	79.93 '											

PROJECT NO: WK52362008	CITY OF MILWAUKEE	DEPARTMENT OF PUBLIC WORKS	MILWAUKEE STREETCAR	ALIGNMENT PLAN - PHASE 1 (SHEET 29 OF 30)	60% SUBMITTAL	SHEET PRE_382

FILE NAME : $$....projectwisefile....$$ PLOT DATE : 8/19/2013 PLOT BY : mqualy PLOT NAME : PLOT SCALE : 1:40



NOTE:
SEE PROJECT OVERVIEW SHEETS FOR BENCHMARK AND CONTROL POINT DATA.

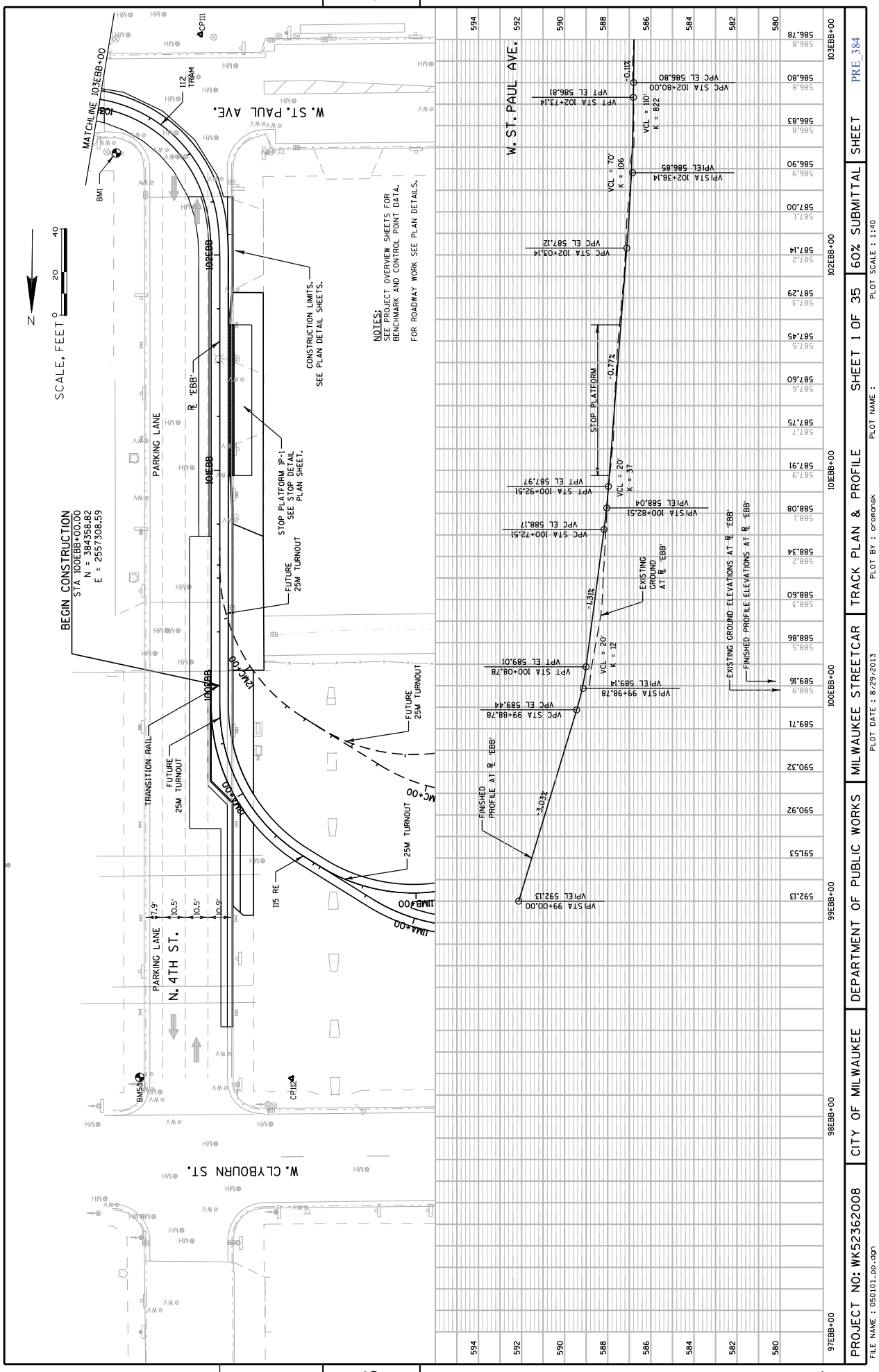
DASHED ALIGNMENT IS ASSOCIATED WITH OGDEN BID ALTERNATE.

CURVE NO.	DESC	BEARING	DISTANCE	STATION	NORTHING	EASTING	Dc (Arc)	RADIUS	D	L	T	K	P	Ea/Eu SPEED
WBA -6	PC	S 76°31'38.19" E	79.93 '	303+44.59	389091.454	2562393.310								Ea = 0.00" Eu = 0.83" V = 5mph
	PI			303+65.85	389086.501	2562413.987	47°44'47.34"	120.00	20°05'41.52"	42.09	21.26			
	CC				388974.757	2562365.352								
	PT			303+86.68	389074.745	2562431.703								
	POE	S 56°25'56.67" E	202.04 '	305+88.72	388963.033	2562600.048								

PROJECT NO: WK52362008	CITY OF MILWAUKEE	DEPARTMENT OF PUBLIC WORKS	MILWAUKEE STREETCAR	ALIGNMENT PLAN - PHASE 1 (SHEET 30 OF 30)	60% SUBMITTAL	SHEET PRE_383

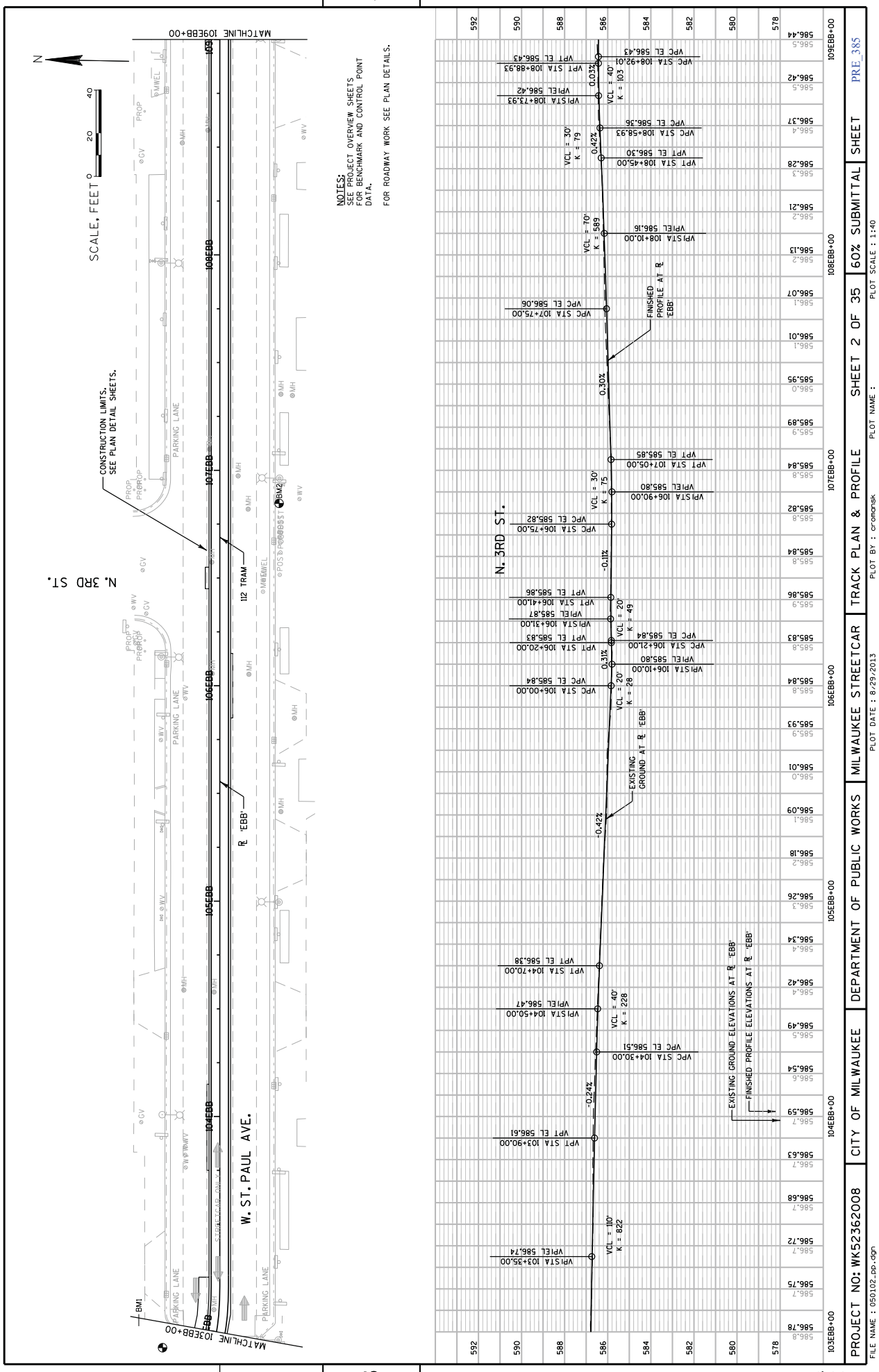
FILE NAME : $$....projectwisefile....$$ PLOT DATE : 8/19/2013 PLOT BY : mqualy PLOT NAME : PLOT SCALE : 1:40

5


W. ST. PAUL AVE.
W. CLYBOURN ST.
N. 4TH ST.
PARKING LANE
MATCHLINE 103EBB+00
BEGIN CONSTRUCTION
STA 100EBB+00.00
N = 384358.82
E = 2557308.59
SCALE, FEET
NOTES:
SEE PROJECT OVERVIEW SHEETS FOR BENCHMARK AND CONTROL POINT DATA.
FOR ROADWAY WORK SEE PLAN DETAILS.
CONSTRUCTION LIMITS. SEE PLAN DETAIL SHEETS.
STOP PLATFORM IP-1 SEE STOP DETAIL PLAN SHEET.
FUTURE 25M TURNOUT
TRANSITION RAIL
25M TURNOUT
EXISTING GROUND AT R "EBB"
FINISHED PROFILE AT R "EBB"
EXISTING GROUND ELEVATIONS AT R "EBB"
FINISHED PROFILE ELEVATIONS AT R "EBB"
STOP PLATFORM
VPC STA 102+80.00
VPC EL 586.80
VPT STA 102+73.14
VPT EL 586.81
VPI STA 102+38.14
VPI EL 586.85
VPC STA 102+03.14
VPC EL 587.12
VPT STA 100+92.51
VPT EL 587.97
VPI STA 100+82.51
VPI EL 588.04
VPC STA 100+72.51
VPC EL 588.17
VPT STA 100+08.78
VPT EL 589.01
VPI STA 99+98.78
VPI EL 589.14
VPC STA 99+88.78
VPC EL 589.44
VPI STA 99+00.00
VPI EL 592.13
VCL = 110'
K = 822
VCL = 70'
K = 106
VCL = 20'
K = 37
VCL = 20'
K = 12
-0.11%
-0.77%
-1.31%
-3.03%
PROJECT NO: WK52362008
CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
MILWAUKEE STREETCAR
TRACK PLAN & PROFILE
SHEET 1 OF 35
60% SUBMITTAL
SHEET
PRE_384
PLOT SCALE : 1:40
PLOT NAME :
PLOT BY : cromansk
PLOT DATE : 8/29/2013
FILE NAME : 050101_pp.dgn

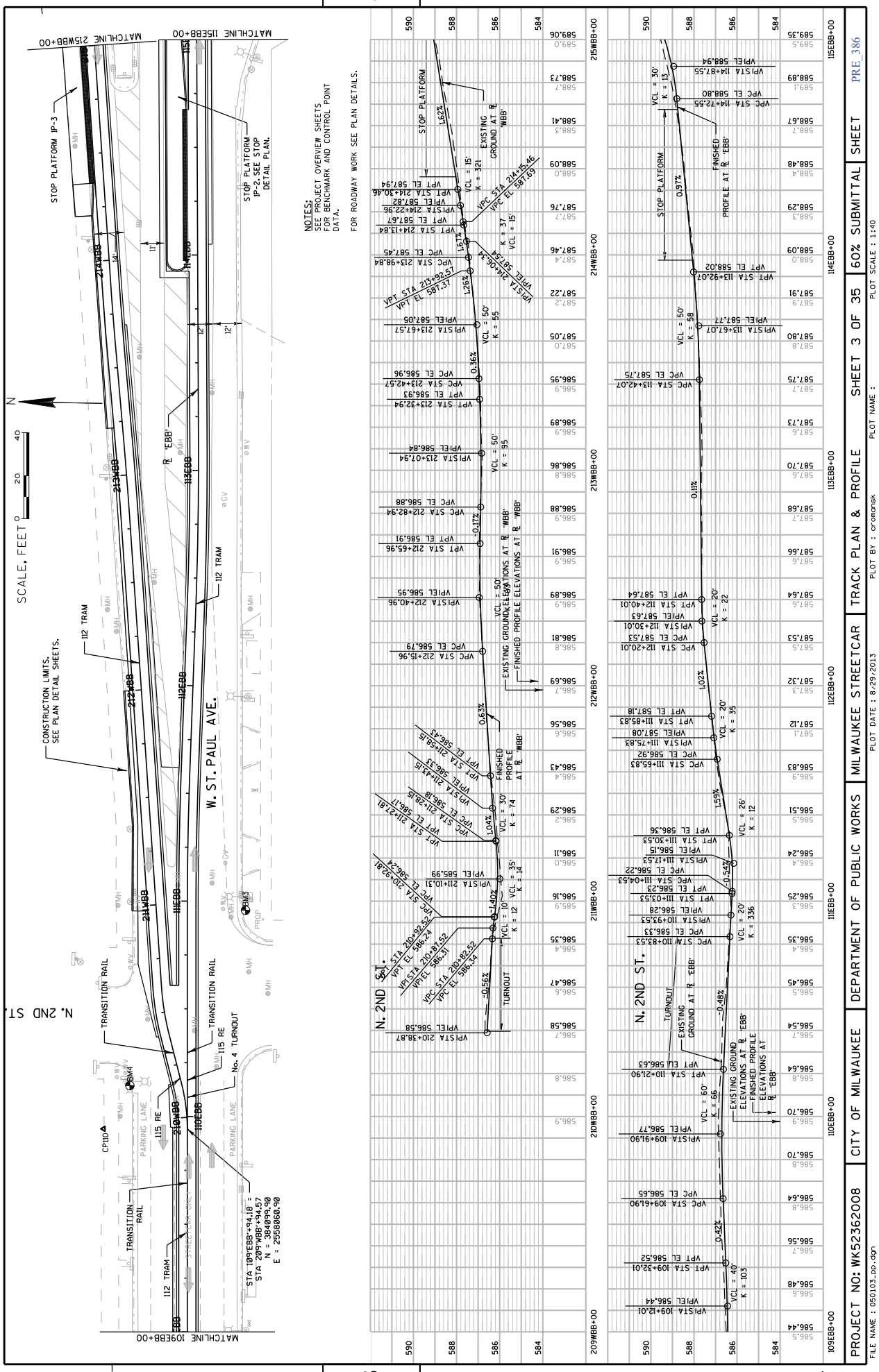
5

5


SCALE, FEET
0 20 40
N
MATCHLINE 103EBB+00
MATCHLINE 109EBB+00
W. ST. PAUL AVE.
N. 3RD ST.
PARKING LANE
STREETCAR ONLY
CONSTRUCTION LIMITS. SEE PLAN DETAIL SHEETS.
112 TRAM
℄ 'EBB'
BM1
BM2
NOTES:
SEE PROJECT OVERVIEW SHEETS FOR BENCHMARK AND CONTROL POINT DATA.
FOR ROADWAY WORK SEE PLAN DETAILS.
N. 3RD ST.
VPC EL 586.43
VPC STA 108+92.01
VPT EL 586.43
VPT STA 108+88.93
VCL = 40'
K = 103
0.03%
VPIEL 586.42
VPISTA 108+73.93
VPC EL 586.36
VPC STA 108+58.93
VPT EL 586.30
VPT STA 108+45.00
VCL = 30'
K = 79
0.42%
VPIEL 586.16
VPISTA 108+10.00
VCL = 70'
K = 589
FINISHED PROFILE AT ℄ 'EBB'
VPC EL 586.06
VPC STA 107+75.00
0.30%
VPT EL 585.85
VPT STA 107+05.00
VPIEL 585.80
VPISTA 106+90.00
VCL = 30'
K = 75
VPC EL 585.82
VPC STA 106+75.00
-0.11%
VPT EL 585.86
VPT STA 106+41.00
VPIEL 585.87
VPISTA 106+31.00
VCL = 20'
K = 49
VPT EL 585.83
VPT STA 106+20.00
VPC EL 585.84
VPC STA 106+21.00
0.31%
VPIEL 585.80
VPISTA 106+10.00
VPC EL 585.84
VPC STA 106+00.00
VCL = 20'
K = 28
EXISTING GROUND AT ℄ 'EBB'
-0.42%
VPT EL 586.38
VPT STA 104+70.00
VPIEL 586.47
VPISTA 104+50.00
VCL = 40'
K = 228
VPC EL 586.51
VPC STA 104+30.00
-0.24%
VPT EL 586.61
VPT STA 103+90.00
VCL = 110'
K = 822
VPIEL 586.74
VPISTA 103+35.00
EXISTING GROUND ELEVATIONS AT ℄ 'EBB'
FINISHED PROFILE ELEVATIONS AT ℄ 'EBB'
592 590 588 586 584 582 580 578
586.44 586.42 586.37 586.28 586.21 586.13 586.07 586.01 585.95 585.89 585.84 585.82 585.84 585.86 585.83 585.84 585.93 586.01 586.09 586.18 586.26 586.34 586.42 586.49 586.54 586.59 586.63 586.68 586.72 586.75 586.78
103EBB+00 104EBB+00 105EBB+00 106EBB+00 107EBB+00 108EBB+00 109EBB+00
PROJECT NO: WK52362008
CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
MILWAUKEE STREETCAR
TRACK PLAN & PROFILE
SHEET 2 OF 35
60% SUBMITTAL
SHEET
PRE_385
FILE NAME : 050102_pp.dgn
PLOT DATE : 8/29/2013
PLOT BY : cromansk
PLOT NAME :
PLOT SCALE : 1:40

5

5



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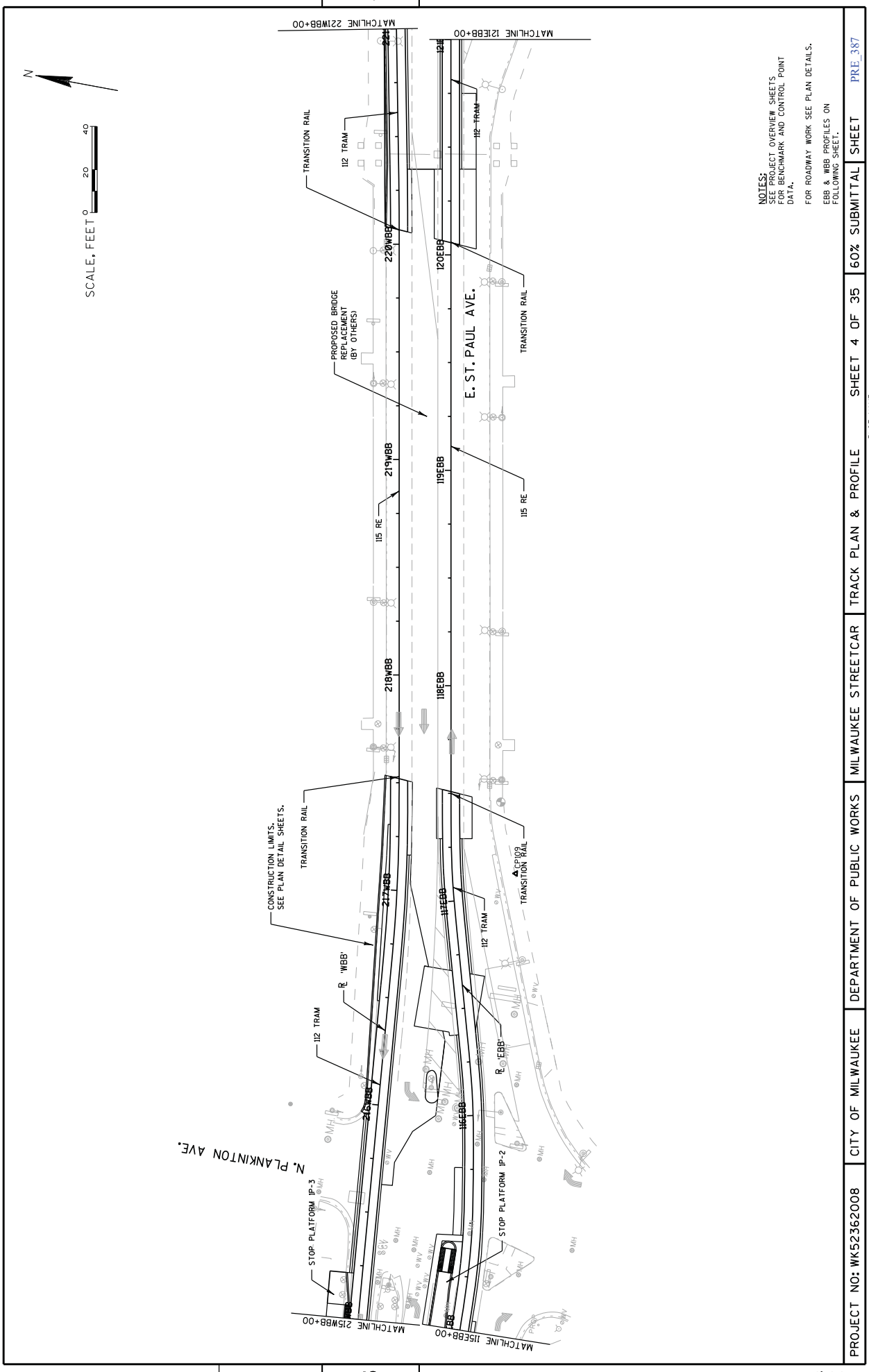
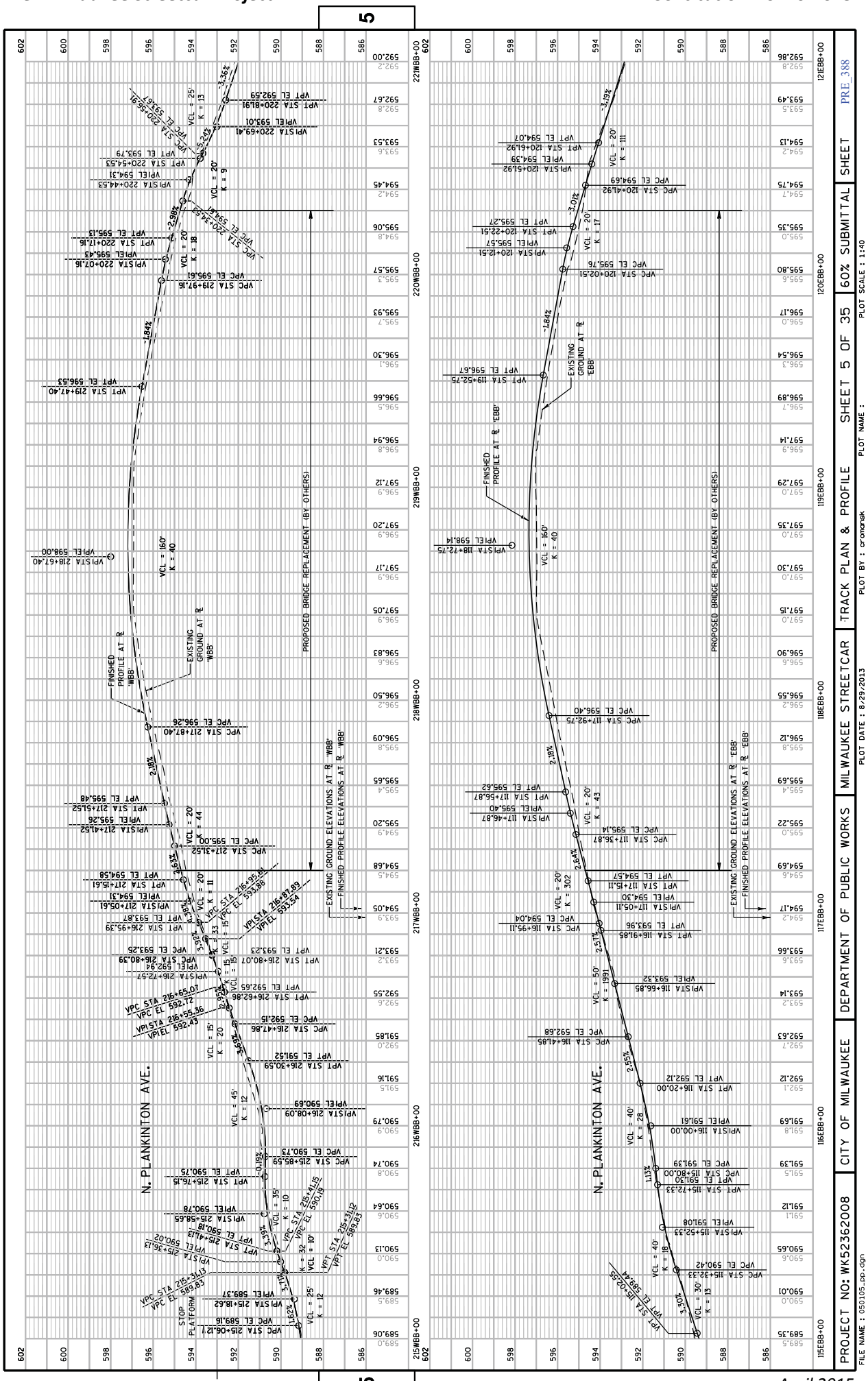
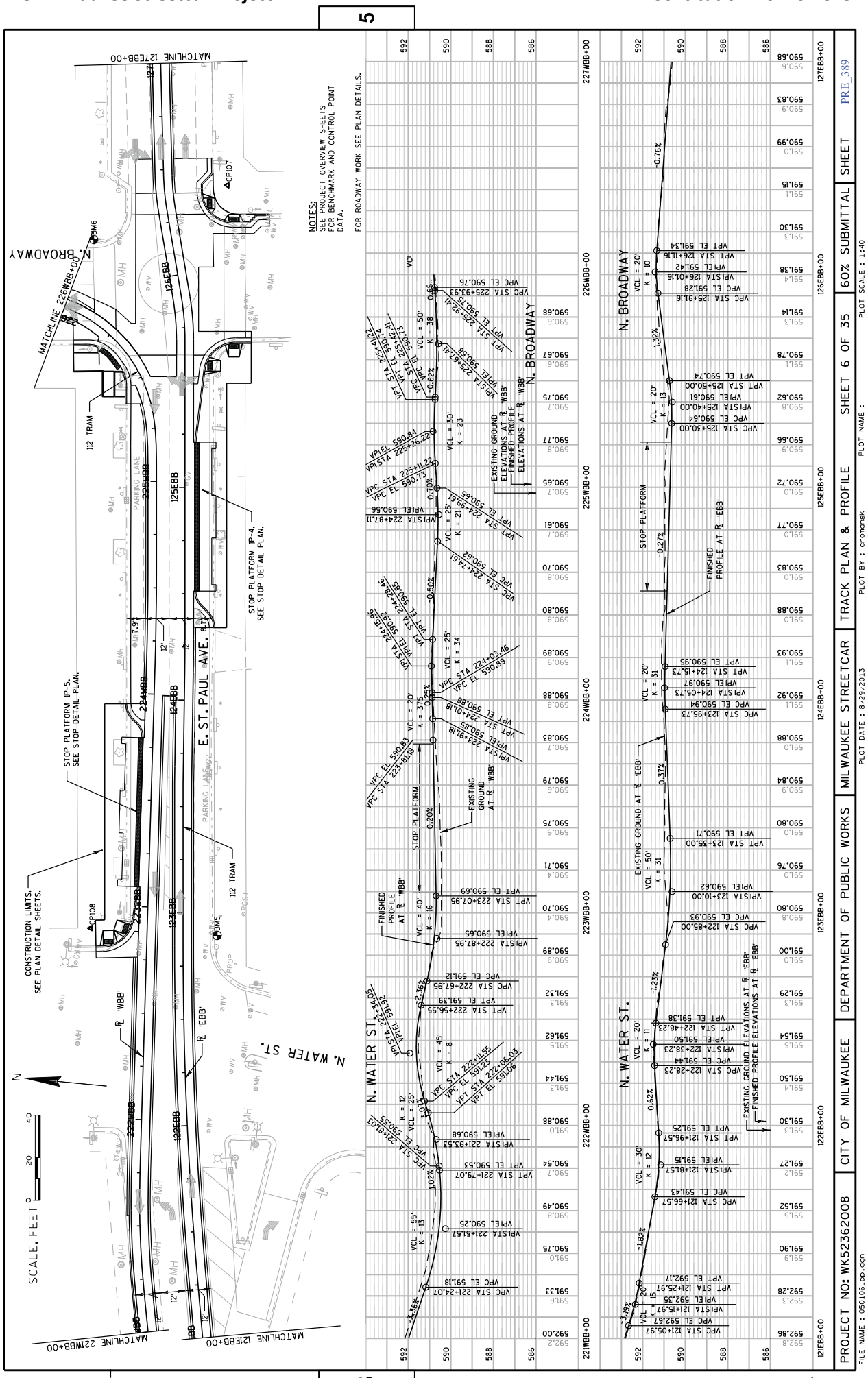
PROJECT NO: WK52362008	CITY OF MILWAUKEE / DEPARTMENT OF PUBLIC WORKS / MILWAUKEE STREETCAR / TRACK PLAN & PROFILE / SHEET 3 OF 35 / 60% SUBMITTAL / SHEET PRE_386
FILE NAME : 050103_pp.dgn	PLOT DATE : 8/29/2013 / PLOT BY : cromansk / PLOT NAME : / PLOT SCALE : 1:40

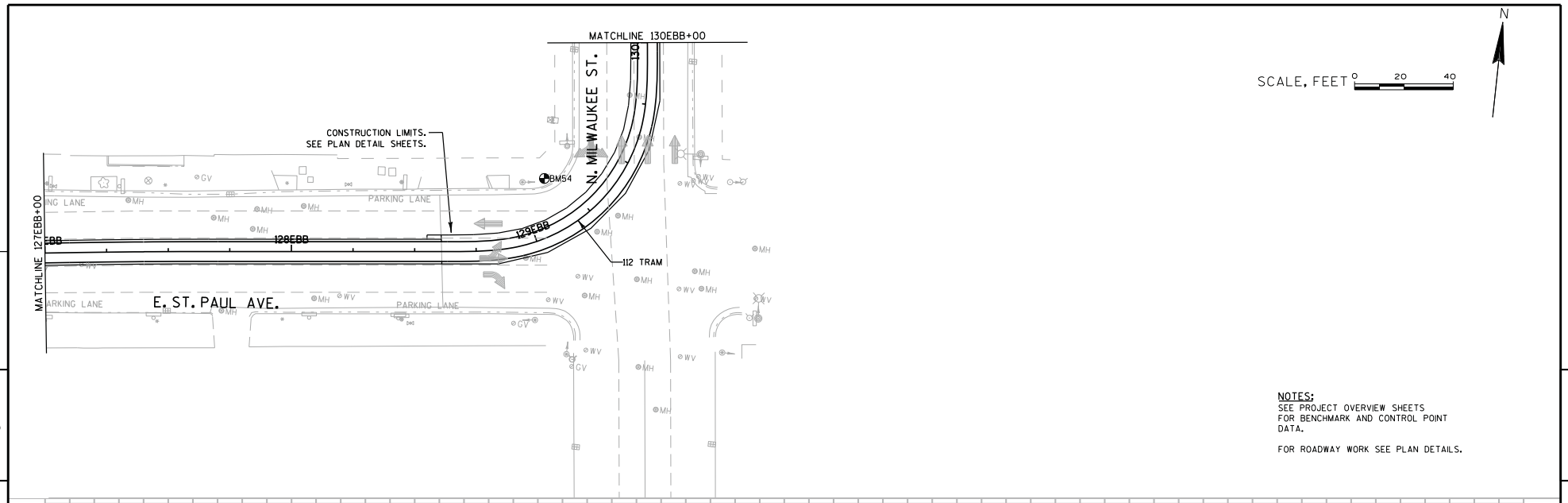
5


MATCHLINE 22IWBB+00
MATCHLINE 12IEBB+00
N
SCALE, FEET 0 20 40
TRANSITION RAIL
112 TRAM
220WBB
120EBB
PROPOSED BRIDGE REPLACEMENT (BY OTHERS)
E. ST. PAUL AVE.
219WBB
119EBB
115 RE
218WBB
118EBB
CONSTRUCTION LIMITS, SEE PLAN DETAIL SHEETS.
217WBB
117EBB
CP109
℄ 'WBB'
℄ 'EBB'
216WBB
116EBB
N. PLANKINTON AVE.
STOP PLATFORM IP-3
STOP PLATFORM IP-2
MATCHLINE 25WBB+00
MATCHLINE 15EBB+00
NOTES:
SEE PROJECT OVERVIEW SHEETS FOR BENCHMARK AND CONTROL POINT DATA.
FOR ROADWAY WORK SEE PLAN DETAILS.
EBB & WBB PROFILES ON FOLLOWING SHEET.
PROJECT NO: WK52362008
CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
MILWAUKEE STREETCAR
TRACK PLAN & PROFILE
SHEET 4 OF 35
60% SUBMITTAL
SHEET
PRE_387
FILE NAME : 050104_pp.dgn
PLOT DATE : 8/29/2013
PLOT BY : cromansk
PLOT NAME :
PLOT SCALE : 1:40

5

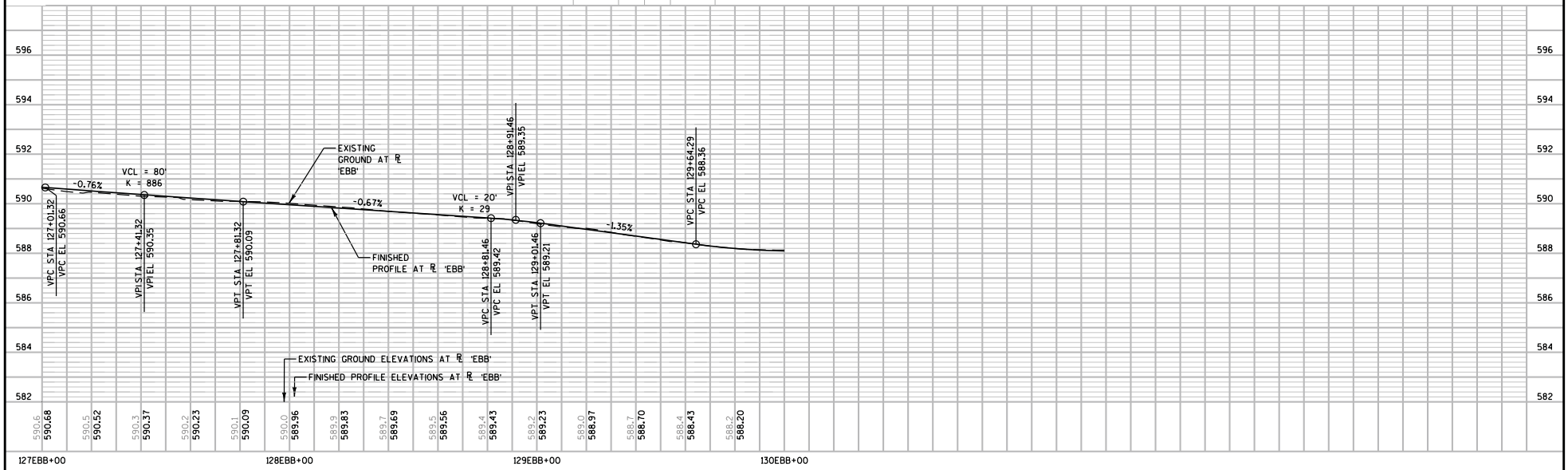

N. PLANKINTON AVE.
PROPOSED BRIDGE REPLACEMENT (BY OTHERS)
EXISTING GROUND ELEVATIONS AT ℄ 'WBB'
FINISHED PROFILE ELEVATIONS AT ℄ 'WBB'
EXISTING GROUND ELEVATIONS AT ℄ 'EBB'
FINISHED PROFILE ELEVATIONS AT ℄ 'EBB'
FINISHED PROFILE AT ℄ 'WBB'
EXISTING GROUND AT ℄ 'WBB'
FINISHED PROFILE AT ℄ 'EBB'
EXISTING GROUND AT ℄ 'EBB'
STOP PLATFORM
PROJECT NO: WK52362008
CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
MILWAUKEE STREETCAR
TRACK PLAN & PROFILE
SHEET 5 OF 35
60% SUBMITTAL
SHEET
PRE_388
PLOT SCALE : 1:40
PLOT BY : cromansk
PLOT DATE : 8/29/2013
PLOT NAME :
FILE NAME : 050105_pp.dgn


NOTES:
SEE PROJECT OVERVIEW SHEETS FOR BENCHMARK AND CONTROL POINT DATA.
FOR ROADWAY WORK SEE PLAN DETAILS.
N. BROADWAY
E. ST. PAUL AVE.
N. WATER ST.
MATCHLINE 226WBB+00
MATCHLINE 227EBB+00
MATCHLINE 221WBB+00
MATCHLINE 121EBB+00
112 TRAM
PARKING LANE
STOP PLATFORM IP-4, SEE STOP DETAIL PLAN.
STOP PLATFORM IP-5, SEE STOP DETAIL PLAN.
CONSTRUCTION LIMITS, SEE PLAN DETAIL SHEETS.
℄ 'WBB'
℄ 'EBB'
SCALE, FEET
PROJECT NO: WK52362008
CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
MILWAUKEE STREETCAR
TRACK PLAN & PROFILE
SHEET 6 OF 35
60% SUBMITTAL
SHEET
PRE_389
FILE NAME : 050106_pp.dgn
PLOT DATE : 8/29/2013
PLOT BY : cromansk
PLOT NAME :
PLOT SCALE : 1:40



NOTES:
SEE PROJECT OVERVIEW SHEETS FOR BENCHMARK AND CONTROL POINT DATA.

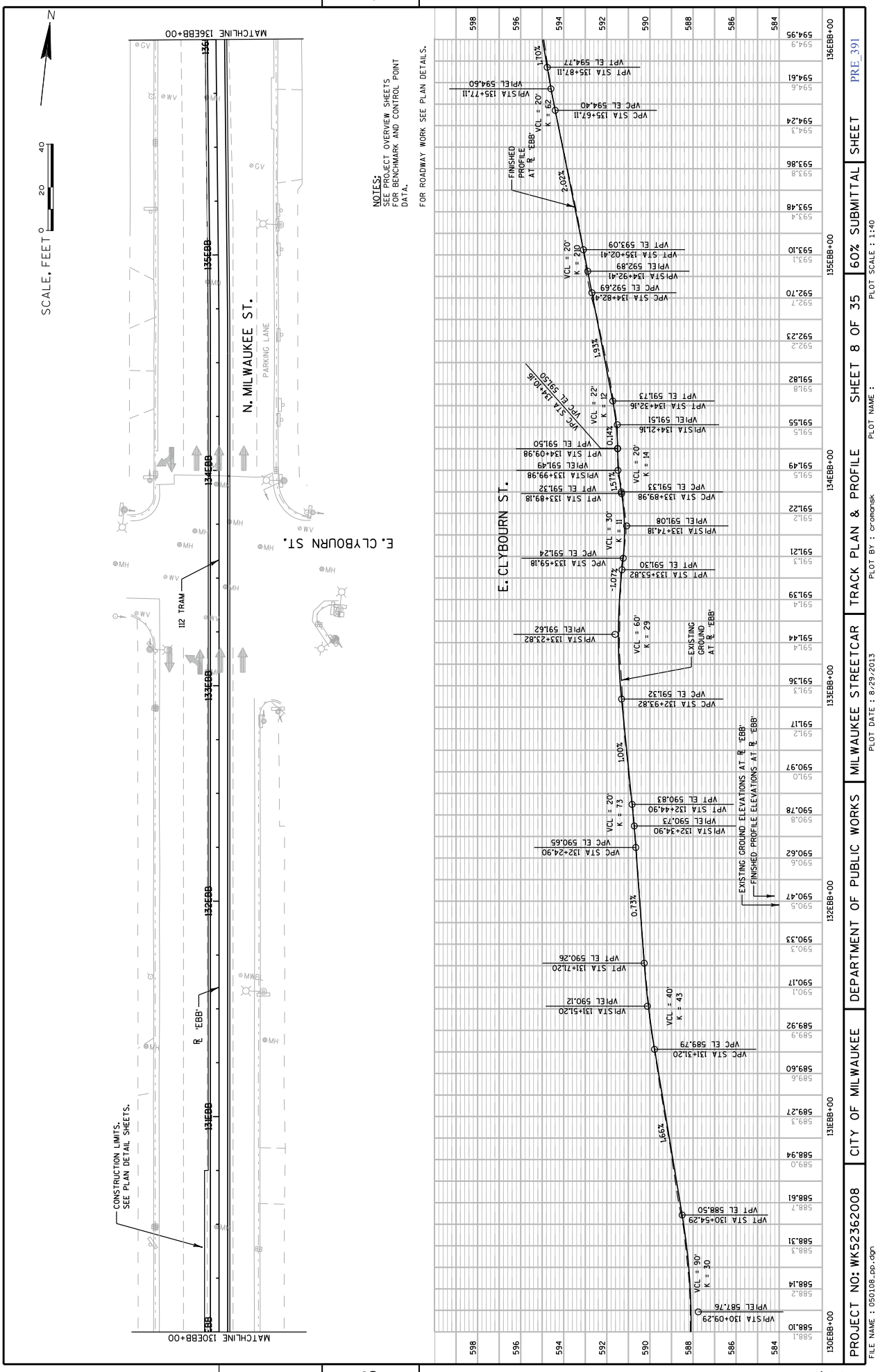
FOR ROADWAY WORK SEE PLAN DETAILS.



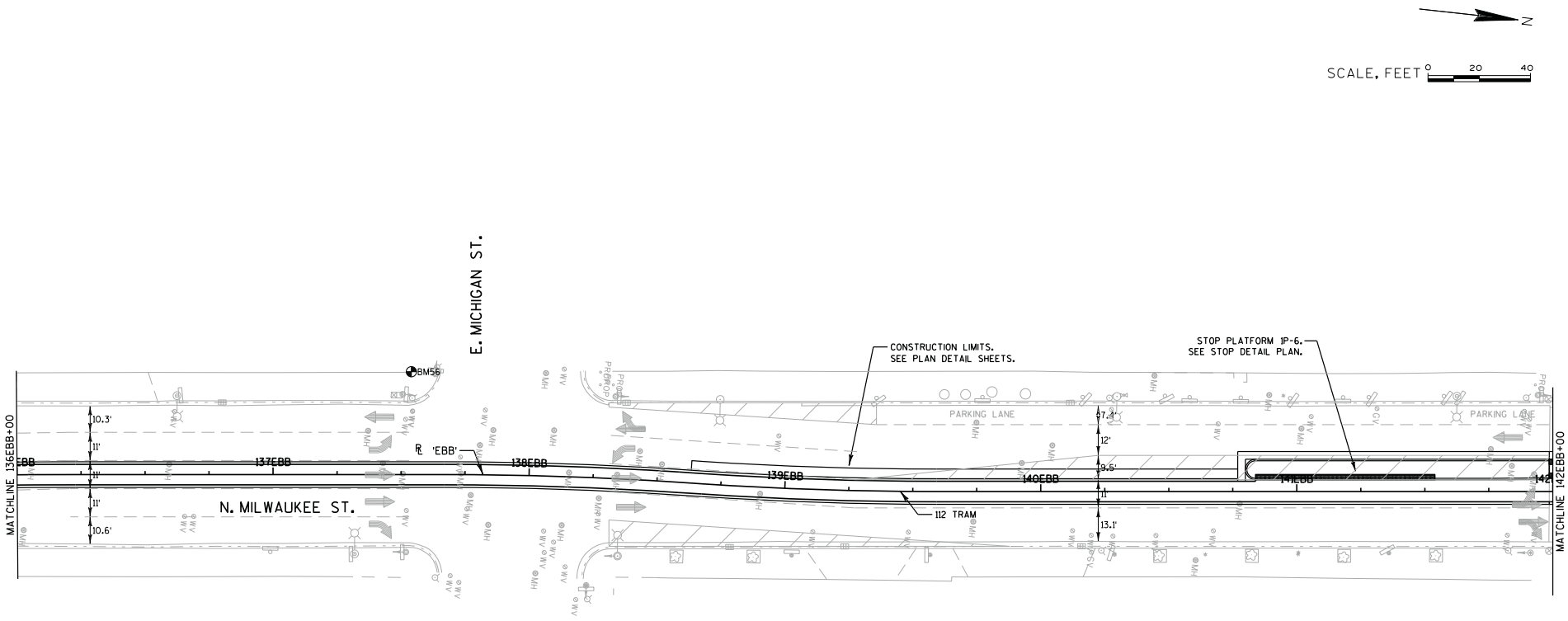
PROJECT NO: WK52362008	CITY OF MILWAUKEE	DEPARTMENT OF PUBLIC WORKS	MILWAUKEE STREETCAR	TRACK PLAN & PROFILE SHEET 7 OF 35	60% SUBMITTAL	SHEET PRE_390

FILE NAME : 050107_pp.dgn PLOT DATE : 8/29/2013 PLOT BY : cromansk PLOT NAME : PLOT SCALE : 1:40

5


SCALE, FEET
0 20 40
N
MATCHLINE 136EBB+00
MATCHLINE 130EBB+00
N. MILWAUKEE ST.
PARKING LANE
E. CLYBOURN ST.
112 TRAM
℄ 'EBB'
CONSTRUCTION LIMITS. SEE PLAN DETAIL SHEETS.
NOTES:
SEE PROJECT OVERVIEW SHEETS FOR BENCHMARK AND CONTROL POINT DATA.
FOR ROADWAY WORK SEE PLAN DETAILS.
FINISHED PROFILE AT ℄ 'EBB'
EXISTING GROUND AT ℄ 'EBB'
EXISTING GROUND ELEVATIONS AT ℄ 'EBB'
FINISHED PROFILE ELEVATIONS AT ℄ 'EBB'
VCL = 90' K = 30
VCL = 40' K = 43
VCL = 20' K = 73
VCL = 60' K = 29
VCL = 30' K = 11
VCL = 20' K = 14
VCL = 22' K = 12
VCL = 20' K = 210
VCL = 20' K = 62
VPI STA 130+09.29 VPI EL 587.76
VPT STA 130+54.29 VPT EL 588.50
VPC STA 131+31.20 VPC EL 589.79
VPI STA 131+51.20 VPI EL 590.12
VPT STA 131+71.20 VPT EL 590.26
VPC STA 132+24.90 VPC EL 590.65
VPI STA 132+34.90 VPI EL 590.73
VPT STA 132+44.90 VPT EL 590.83
VPC STA 132+93.82 VPC EL 591.32
VPI STA 133+23.82 VPI EL 591.62
VPC STA 133+59.18 VPC EL 591.24
VPT STA 133+53.82 VPT EL 591.30
VPI STA 133+74.18 VPI EL 591.08
VPC STA 133+89.18 VPC EL 591.32
VPT STA 133+89.98 VPT EL 591.32
VPC STA 133+89.98 VPC EL 591.33
VPI STA 133+99.98 VPI EL 591.49
VPT STA 134+09.98 VPT EL 591.50
VPI STA 134+21.16 VPI EL 591.51
VPT STA 134+32.16 VPT EL 591.73
VPC STA 134+10.16 VPC EL 591.50
VPC STA 134+82.4 VPC EL 592.69
VPI STA 134+92.41 VPI EL 592.89
VPT STA 135+02.41 VPT EL 593.09
VPC STA 135+67.11 VPC EL 594.40
VPI STA 135+77.11 VPI EL 594.60
VPT STA 135+87.11 VPT EL 594.77
1.70%
2.02%
1.93%
0.14%
1.57%
-1.07%
1.00%
0.73%
1.66%
PROJECT NO: WK52362008
CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
MILWAUKEE STREETCAR
TRACK PLAN & PROFILE
SHEET 8 OF 35
60% SUBMITTAL
SHEET
PRE_391
FILE NAME : 050108_pp.dgn
PLOT DATE : 8/29/2013
PLOT BY : cromansk
PLOT NAME :
PLOT SCALE : 1:40

5



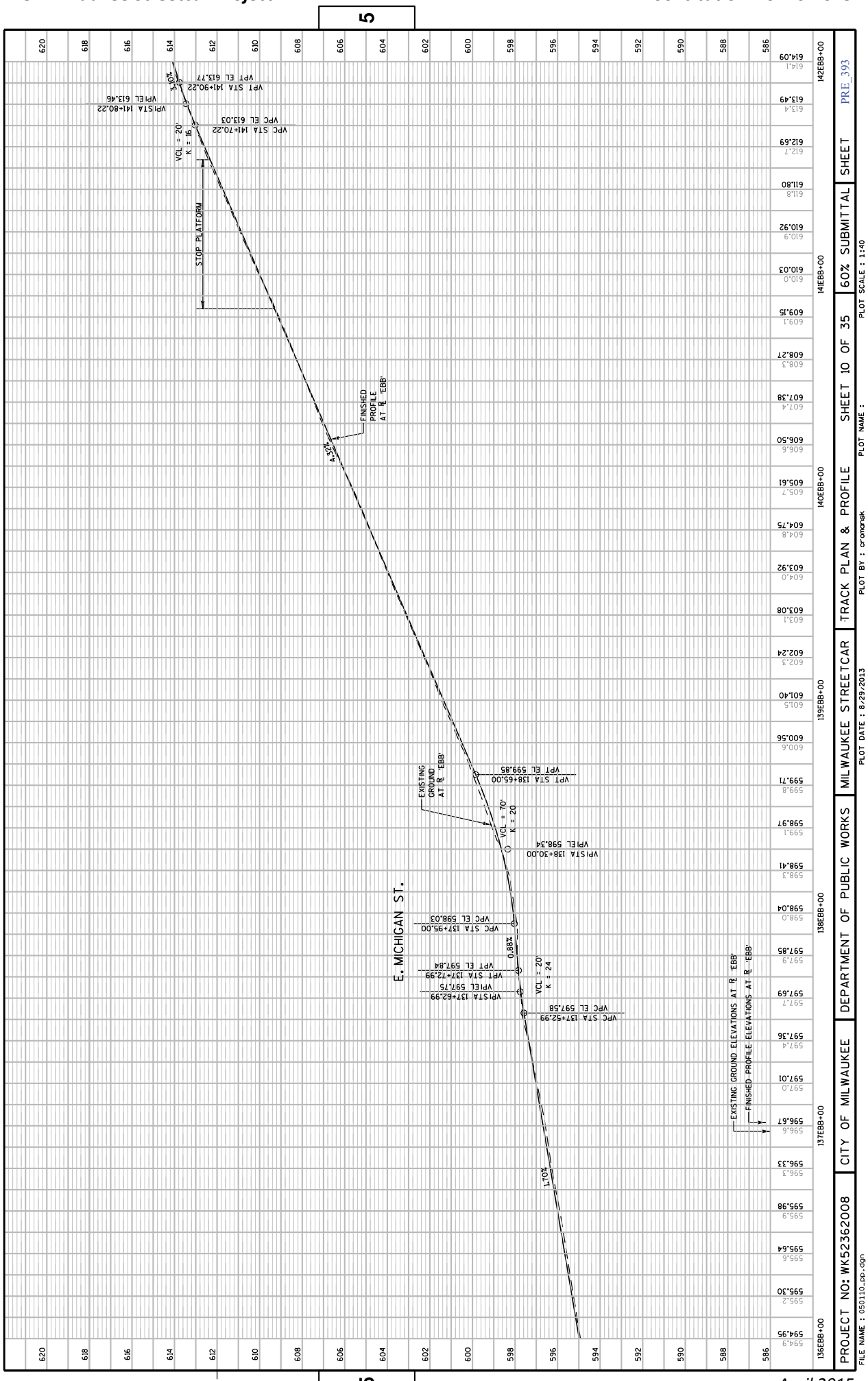
NOTES:
SEE PROJECT OVERVIEW SHEETS FOR BENCHMARK AND CONTROL POINT DATA.

FOR ROADWAY WORK SEE PLAN DETAILS.

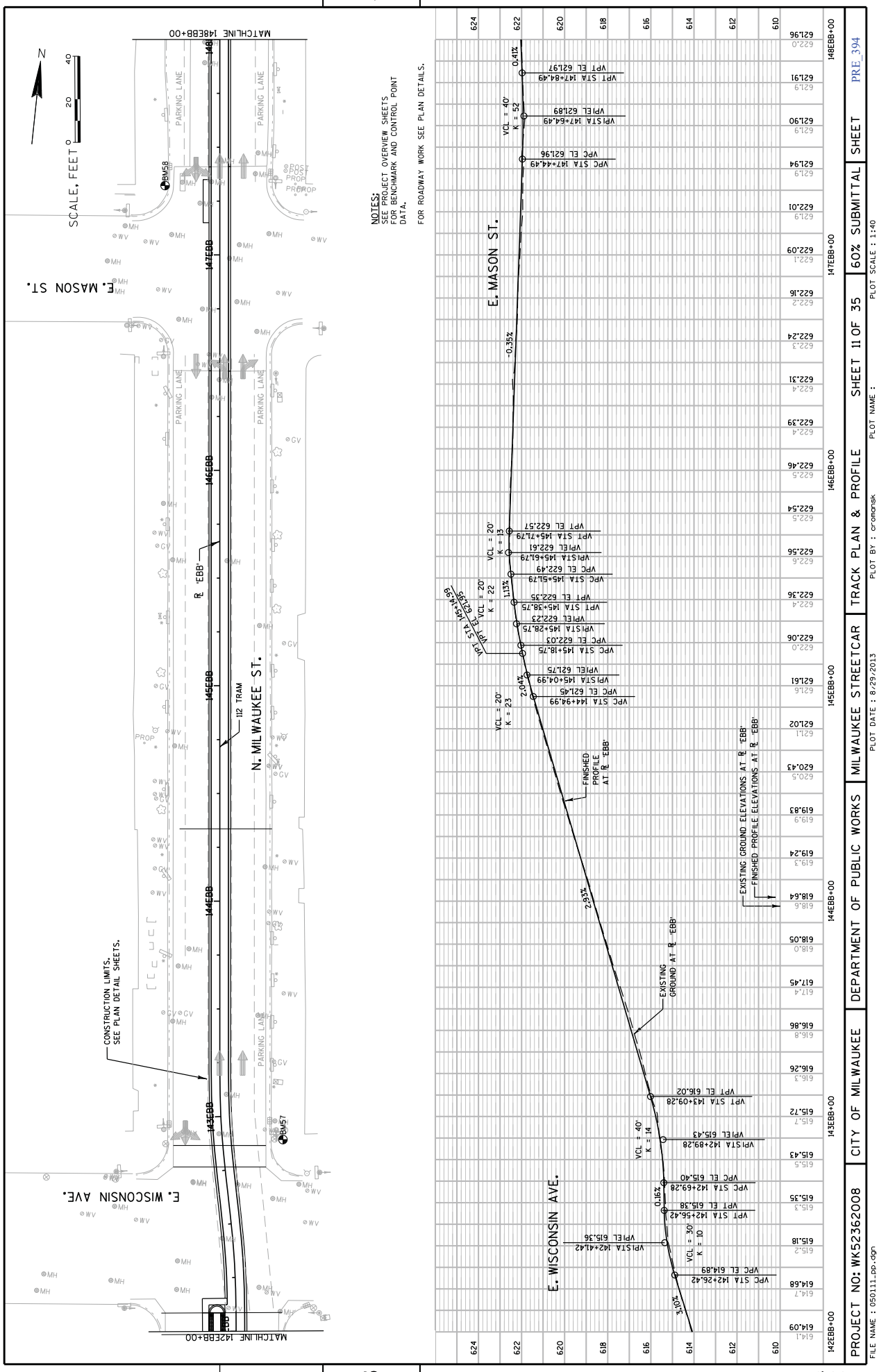
EBB & WBB PROFILES ON FOLLOWING SHEETS.

PROJECT NO: WK52362008	CITY OF MILWAUKEE	DEPARTMENT OF PUBLIC WORKS	MILWAUKEE STREETCAR	TRACK PLAN & PROFILE SHEET 9 OF 35	60% SUBMITTAL	SHEET PRE_392

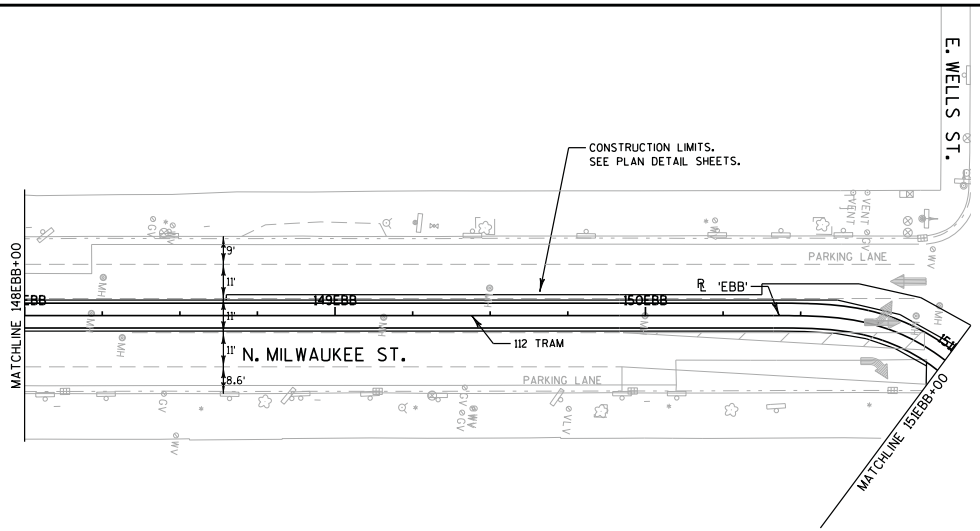
FILE NAME : 050109_pp.dgn PLOT DATE : 8/29/2013 PLOT BY : cromansk PLOT NAME : PLOT SCALE : 1:40


5
620
618
616
614
612
610
608
606
604
602
600
598
596
594
592
590
588
586
614.09
613.49
612.69
611.80
610.92
610.03
609.15
608.27
607.38
606.50
605.61
604.75
603.92
603.08
602.24
601.40
600.56
599.71
598.97
598.41
598.04
597.85
597.69
597.36
597.01
596.67
596.33
595.98
595.64
595.30
594.95
136EBB+00
137EBB+00
138EBB+00
139EBB+00
140EBB+00
141EBB+00
142EBB+00
3.70%
VPT STA 141+90.22
VPT EL 613.77
VPIEL 613.46
VPISTA 141+80.22
VPC EL 613.03
VPC STA 141+70.22
VCL = 20'
K = 16
STOP PLATFORM
FINISHED PROFILE AT ℄ 'EBB'
4.32%
EXISTING GROUND AT ℄ 'EBB'
VPT STA 138+65.00
VPT EL 599.85
VCL = 70'
K = 20
VPISTA 138+30.00
VPIEL 598.34
E. MICHIGAN ST.
VPC STA 137+95.00
VPC EL 598.03
0.88%
VPT EL 597.84
VPT STA 137+72.99
VPIEL 597.75
VPISTA 137+62.99
VCL = 20'
K = 24
VPC STA 137+52.99
VPC EL 597.58
1.70%
EXISTING GROUND ELEVATIONS AT ℄ 'EBB'
FINISHED PROFILE ELEVATIONS AT ℄ 'EBB'
PROJECT NO: WK52362008
CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
MILWAUKEE STREETCAR
TRACK PLAN & PROFILE
SHEET 10 OF 35
60% SUBMITTAL
SHEET
PRE_393
FILE NAME : 050110_pp.dgn
PLOT DATE : 8/29/2013
PLOT BY : cromansk
PLOT NAME :
PLOT SCALE : 1:40

5


SCALE, FEET
0
20
40
N
MATCHLINE 148EBB+00
MATCHLINE 142EBB+00
E. MASON ST.
E. WISCONSIN AVE.
N. MILWAUKEE ST.
PARKING LANE
CONSTRUCTION LIMITS. SEE PLAN DETAIL SHEETS.
112 TRAM
℄ 'EBB'
BM58
BM57
NOTES:
SEE PROJECT OVERVIEW SHEETS FOR BENCHMARK AND CONTROL POINT DATA.
FOR ROADWAY WORK SEE PLAN DETAILS.
FINISHED PROFILE AT ℄ 'EBB'
EXISTING GROUND AT ℄ 'EBB'
EXISTING GROUND ELEVATIONS AT ℄ 'EBB'
FINISHED PROFILE ELEVATIONS AT ℄ 'EBB'
0.41%
-0.35%
2.04%
1.13%
2.93%
0.16%
3.10%
VCL = 40'
K = 52
VCL = 20'
K = 13
VCL = 20'
K = 22
VCL = 20'
K = 23
VCL = 40'
K = 14
VCL = 30'
K = 10
VPT STA 147+84.49
VPT EL 621.97
VPIEL 621.89
VPISTA 147+64.49
VPC EL 621.96
VPC STA 147+44.49
VPT EL 622.57
VPT STA 145+71.79
VPIEL 622.61
VPISTA 145+61.79
VPC EL 622.49
VPC STA 145+51.79
VPT EL 622.35
VPT STA 145+38.75
VPIEL 622.23
VPISTA 145+28.75
VPC EL 622.03
VPC STA 145+18.75
VPIEL 621.75
VPISTA 145+04.99
VPC EL 621.45
VPC STA 144+94.99
VPT EL 621.35
VPT STA 145+14.99
VPT EL 616.02
VPT STA 143+09.28
VPIEL 615.43
VPISTA 142+89.28
VPC EL 615.40
VPC STA 142+69.28
VPT EL 615.38
VPT STA 142+55.42
VPIEL 615.36
VPISTA 142+41.42
VPC EL 614.89
VPC STA 142+26.42
148EBB+00
147EBB+00
146EBB+00
145EBB+00
144EBB+00
143EBB+00
142EBB+00
PROJECT NO: WK52362008
CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
MILWAUKEE STREETCAR
TRACK PLAN & PROFILE
SHEET 11 OF 35
60% SUBMITTAL
SHEET
PRE_394
FILE NAME : 050111_pp.dgn
PLOT DATE : 8/29/2013
PLOT BY : cromansk
PLOT NAME :
PLOT SCALE : 1:40

5



SCALE, FEET 0 20 40

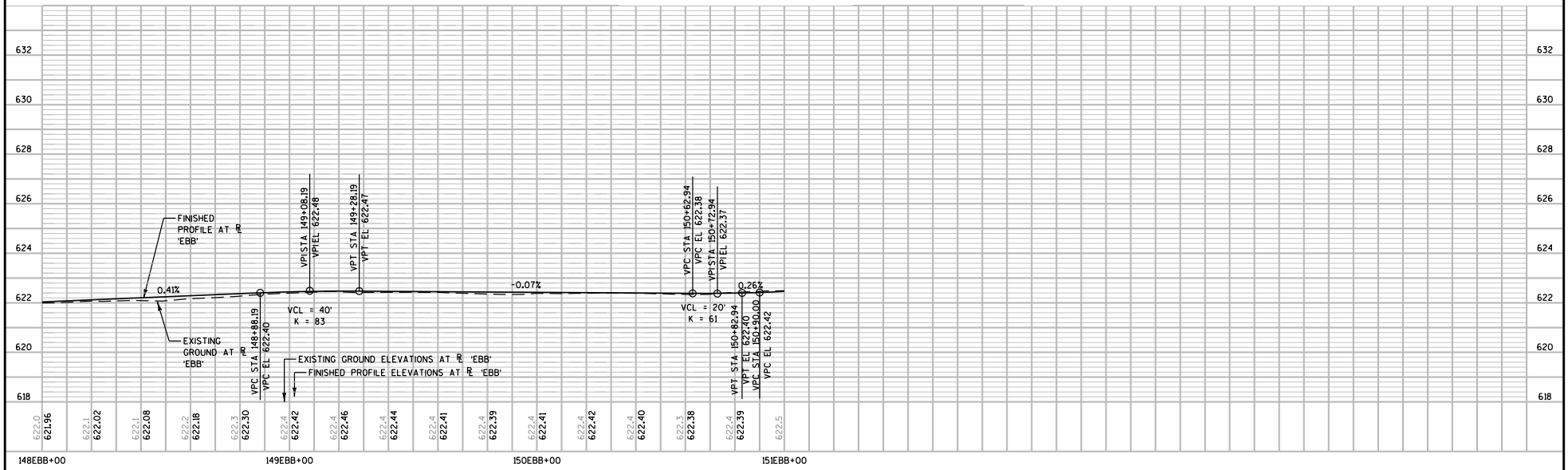
N

5

5

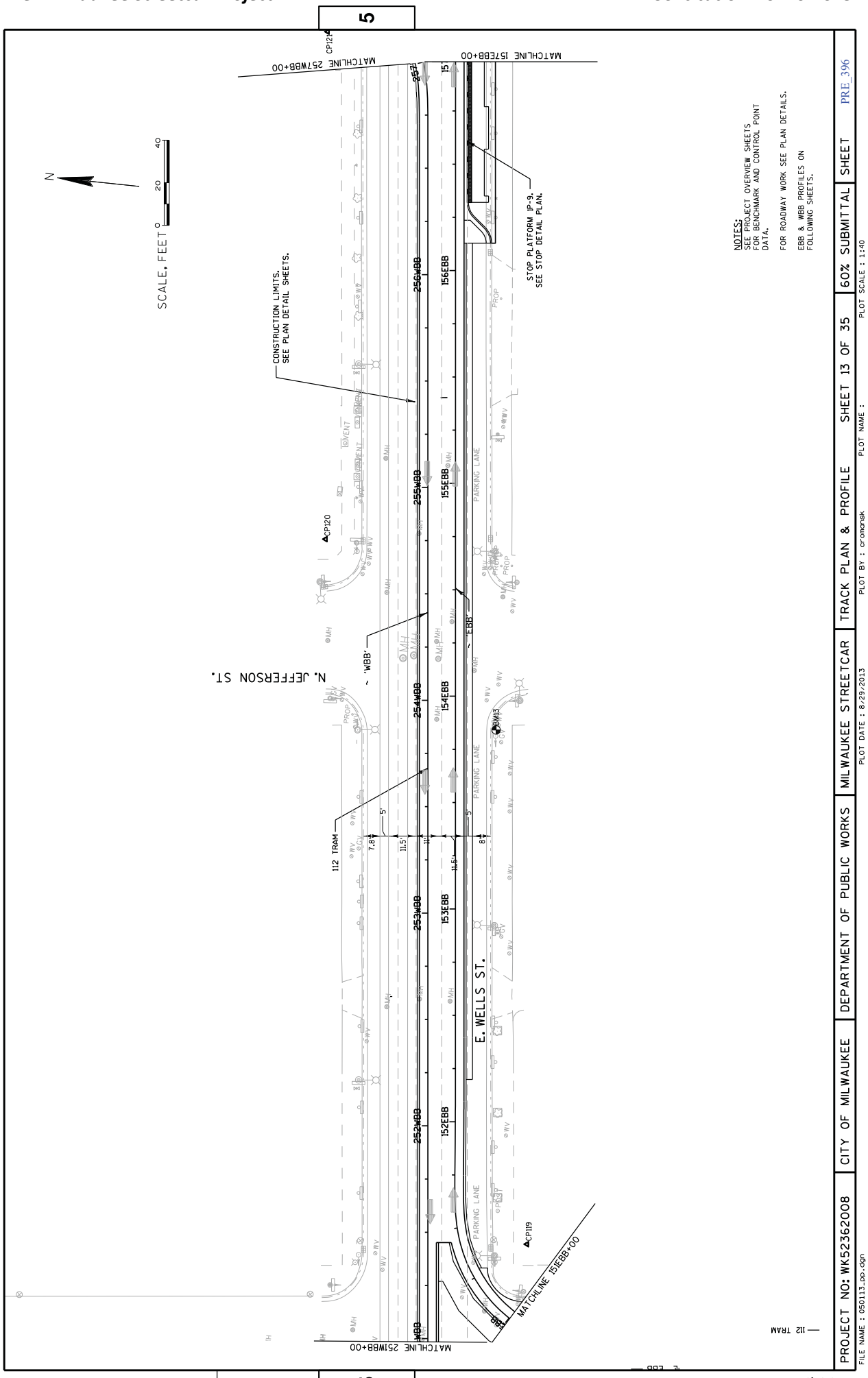
NOTES:
SEE PROJECT OVERVIEW SHEETS FOR BENCHMARK AND CONTROL POINT DATA.

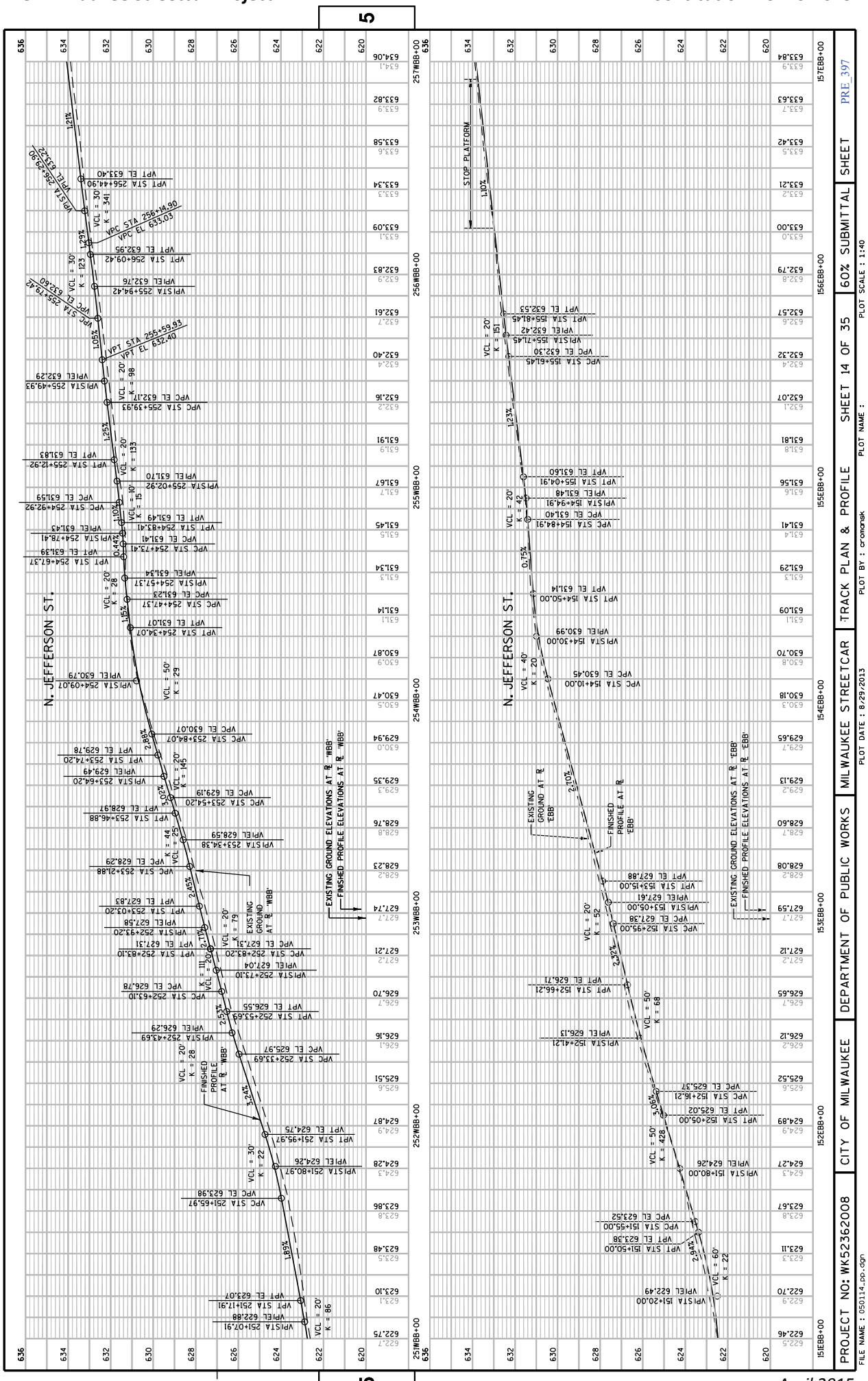
FOR ROADWAY WORK SEE PLAN DETAILS.



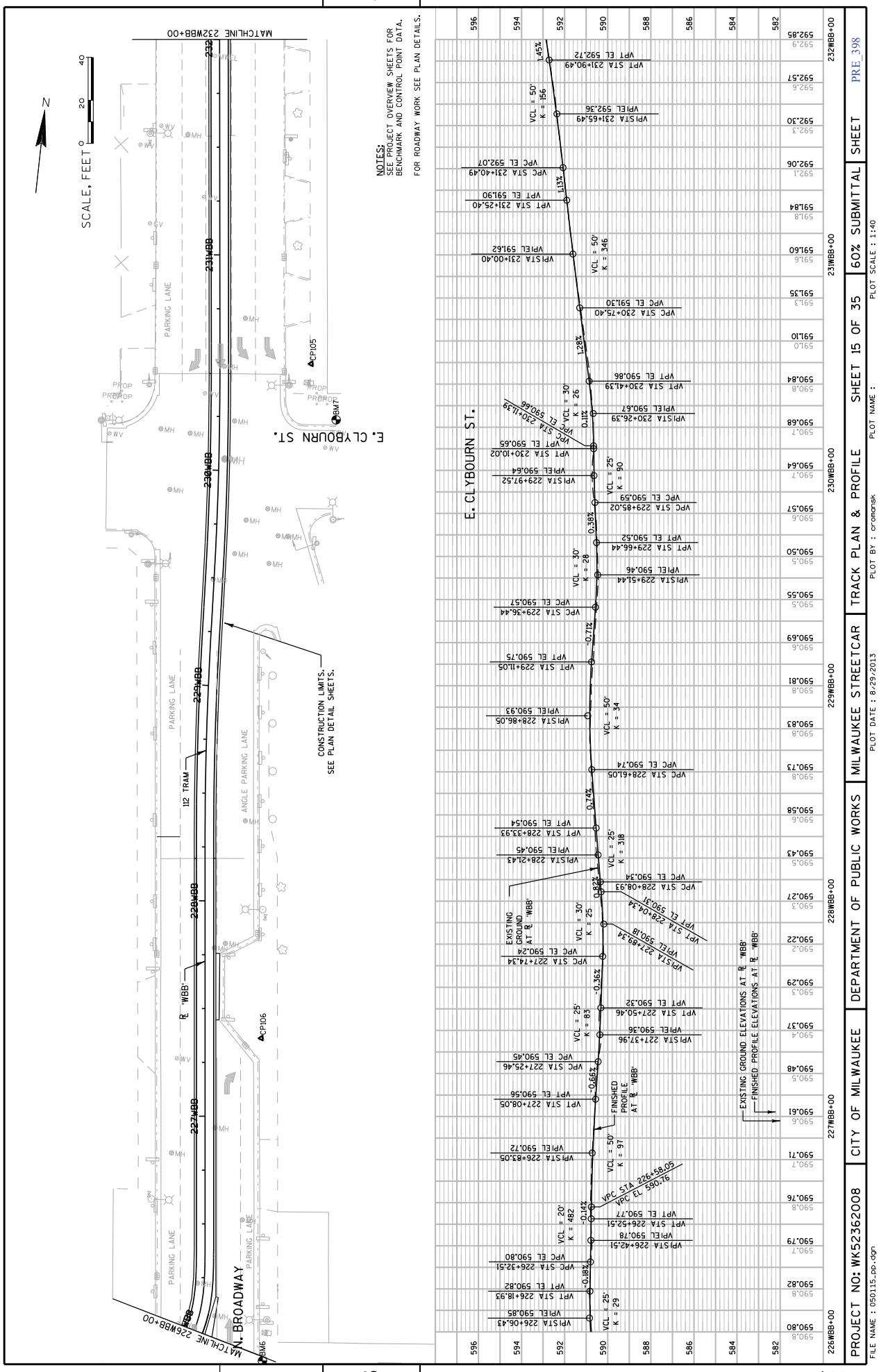
PROJECT NO: WK52362008	CITY OF MILWAUKEE	DEPARTMENT OF PUBLIC WORKS	MILWAUKEE STREETCAR	TRACK PLAN & PROFILE SHEET 12 OF 35	60% SUBMITTAL	SHEET PRE_395

FILE NAME : 050112_pp.dgn PLOT DATE : 8/29/2013 PLOT BY : cromansk PLOT NAME : PLOT SCALE : 1:40


5
MATCHLINE 257WBB+00
MATCHLINE 157EBB+00
SCALE, FEET
0 20 40
N
CONSTRUCTION LIMITS.
SEE PLAN DETAIL SHEETS.
STOP PLATFORM IP-9.
SEE STOP DETAIL PLAN.
256WBB
156EBB
255WBB
155EBB
254WBB
154EBB
253WBB
153EBB
252WBB
152EBB
N. JEFFERSON ST.
E. WELLS ST.
PARKING LANE
112 TRAM
CP120
CP119
BM13
MATCHLINE 151EBB+00
MATCHLINE 251WBB+00
NOTES:
SEE PROJECT OVERVIEW SHEETS
FOR BENCHMARK AND CONTROL POINT
DATA.
FOR ROADWAY WORK SEE PLAN DETAILS.
EBB & WBB PROFILES ON
FOLLOWING SHEETS.
PROJECT NO: WK52362008
CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
MILWAUKEE STREETCAR
TRACK PLAN & PROFILE
SHEET 13 OF 35
60% SUBMITTAL
SHEET
PRE_396
FILE NAME : 050113_pp.dgn
PLOT DATE : 8/29/2013
PLOT BY : cromonsk
PLOT NAME :
PLOT SCALE : 1:40
5

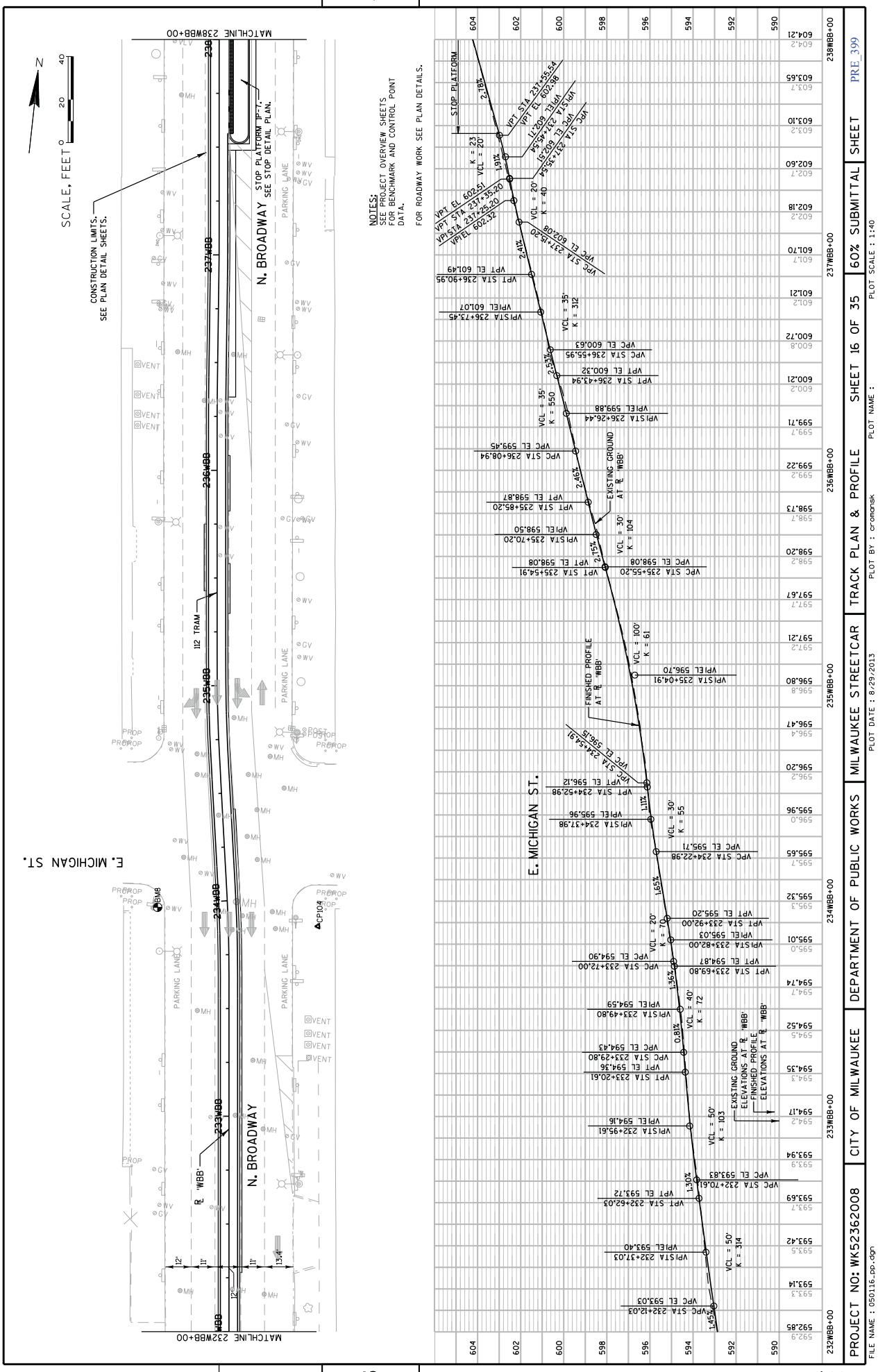

N. JEFFERSON ST.
EXISTING GROUND ELEVATIONS AT R. 'WBB'
FINISHED PROFILE ELEVATIONS AT R. 'WBB'
EXISTING GROUND ELEVATIONS AT R. 'EBB'
FINISHED PROFILE ELEVATIONS AT R. 'EBB'
STOP PLATFORM
PROJECT NO: WK52362008
CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
MILWAUKEE STREETCAR
TRACK PLAN & PROFILE
SHEET 14 OF 35
60% SUBMITTAL
SHEET
PRE_397
PLOT SCALE : 1:40
PLOT BY : cromansk
PLOT DATE : 8/29/2013
PLOT NAME :
FILE NAME : 050114_pp.dgn

5


NOTES:
SEE PROJECT OVERVIEW SHEETS FOR BENCHMARK AND CONTROL POINT DATA.
FOR ROADWAY WORK SEE PLAN DETAILS.
SCALE, FEET
MATCHLINE 232WBB+00
MATCHLINE 226WBB+00
E. CLYBOURN ST.
N. BROADWAY
PARKING LANE
ANGLE PARKING LANE
CONSTRUCTION LIMITS. SEE PLAN DETAIL SHEETS.
112 TRAM
℄ 'WBB'
EXISTING GROUND AT ℄ 'WBB'
FINISHED PROFILE AT ℄ 'WBB'
EXISTING GROUND ELEVATIONS AT ℄ 'WBB'
FINISHED PROFILE ELEVATIONS AT ℄ 'WBB'
VPC STA 226+58.05
VPC EL 590.76
PROJECT NO: WK52362008
CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
MILWAUKEE STREETCAR
TRACK PLAN & PROFILE
SHEET 15 OF 35
60% SUBMITTAL
SHEET
PRE_398
FILE NAME : 050115_pp.dgn
PLOT DATE : 8/29/2013
PLOT BY : cromonsk
PLOT NAME :
PLOT SCALE : 1:40

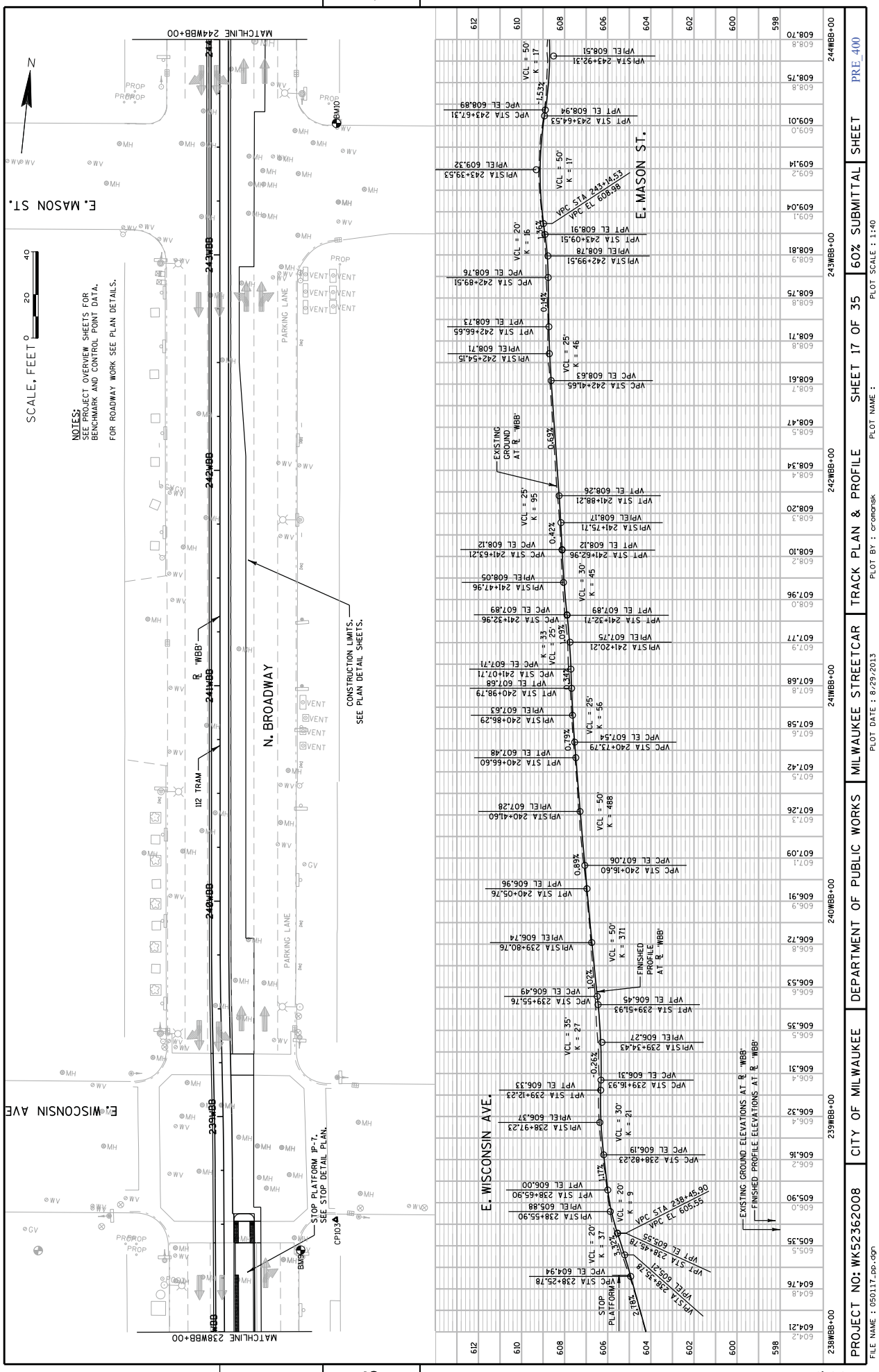
5

5


SCALE, FEET
0 20 40
N
CONSTRUCTION LIMITS.
SEE PLAN DETAIL SHEETS.
MATCHLINE 238WBB+00
MATCHLINE 232WBB+00
N. BROADWAY
E. MICHIGAN ST.
STOP PLATFORM
SEE STOP DETAIL PLAN.
PARKING LANE
112 TRAM
℄ 'WBB'
NOTES:
SEE PROJECT OVERVIEW SHEETS
FOR BENCHMARK AND CONTROL POINT DATA.
FOR ROADWAY WORK SEE PLAN DETAILS.
STOP PLATFORM
EXISTING GROUND AT ℄ 'WBB'
FINISHED PROFILE AT ℄ 'WBB'
EXISTING GROUND ELEVATIONS AT ℄ 'WBB'
FINISHED PROFILE ELEVATIONS AT ℄ 'WBB'
PROJECT NO: WK52362008
CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
MILWAUKEE STREETCAR
TRACK PLAN & PROFILE
SHEET 16 OF 35
60% SUBMITTAL
SHEET
PRE_399
FILE NAME : 050116_pp.dgn
PLOT DATE : 8/29/2013
PLOT BY : cromansk
PLOT NAME :
PLOT SCALE : 1:40

5

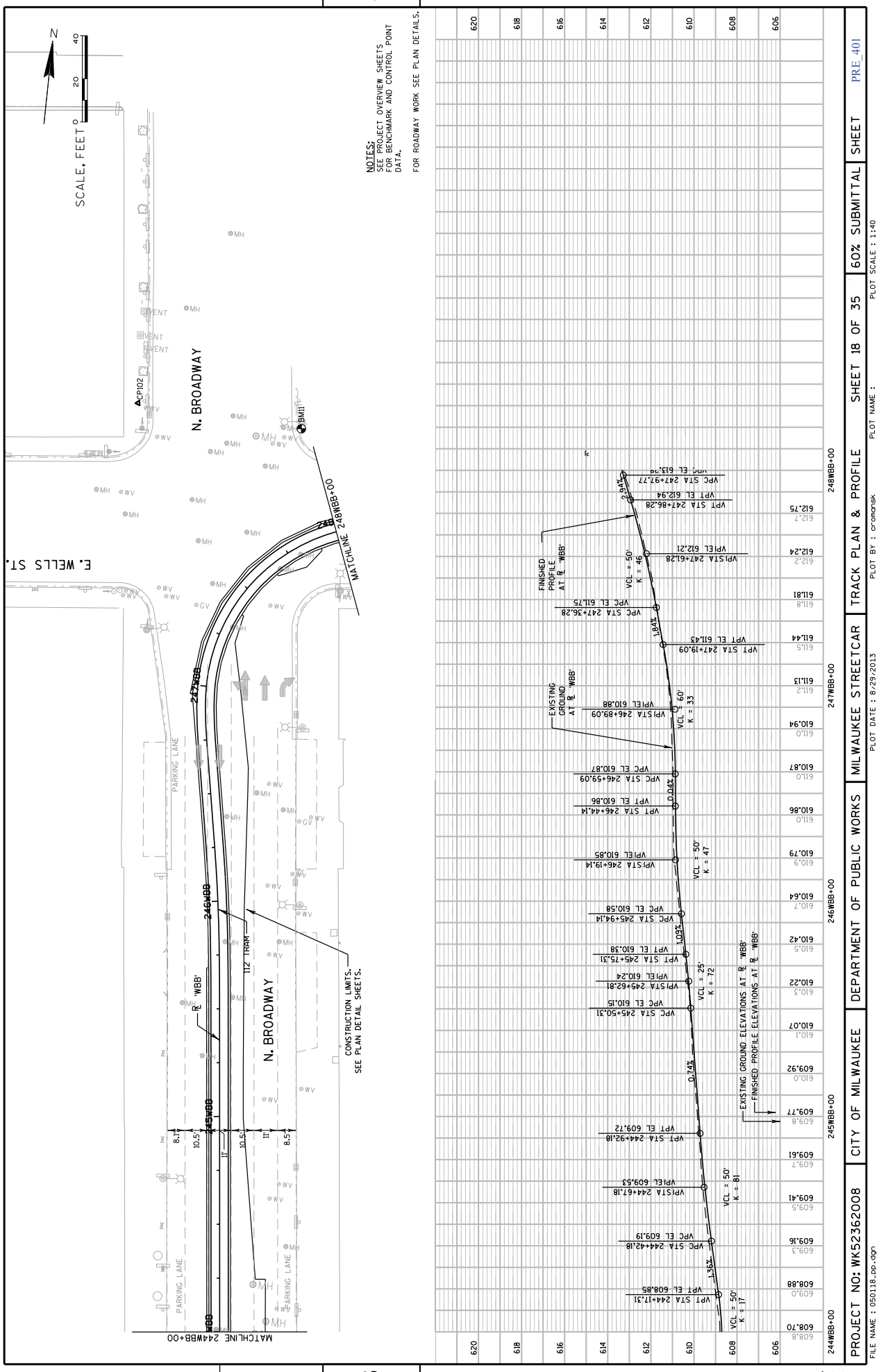
5



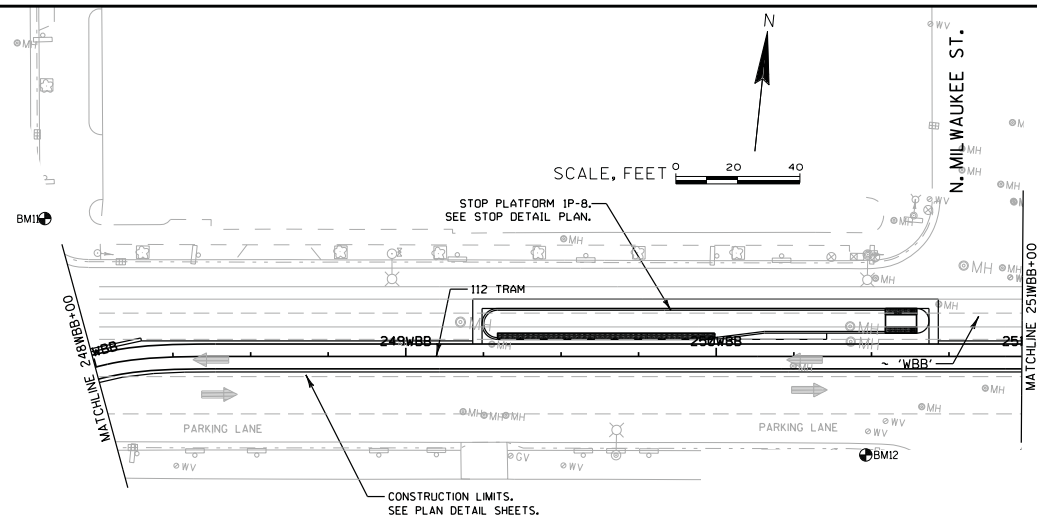
E. MASON ST.
E. WISCONSIN AVE.
N. BROADWAY
MATCHLINE 244WBB+00
MATCHLINE 238WBB+00
SCALE, FEET
NOTES:
SEE PROJECT OVERVIEW SHEETS FOR BENCHMARK AND CONTROL POINT DATA.
FOR ROADWAY WORK SEE PLAN DETAILS.
CONSTRUCTION LIMITS. SEE PLAN DETAIL SHEETS.
STOP PLATFORM IP-7. SEE STOP DETAIL PLAN.
112 TRAM
PARKING LANE
EXISTING GROUND AT ℄ 'WBB'
FINISHED PROFILE AT ℄ 'WBB'
EXISTING GROUND ELEVATIONS AT ℄ 'WBB'
FINISHED PROFILE ELEVATIONS AT ℄ 'WBB'
STOP PLATFORM
PROJECT NO: WK52362008
CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
MILWAUKEE STREETCAR
TRACK PLAN & PROFILE
SHEET 17 OF 35
60% SUBMITTAL
SHEET
PRE_400
PLOT SCALE : 1:40
PLOT BY : cromonsk
PLOT NAME :
PLOT DATE : 8/29/2013
FILE NAME : 050117_pp.dgn

5

5

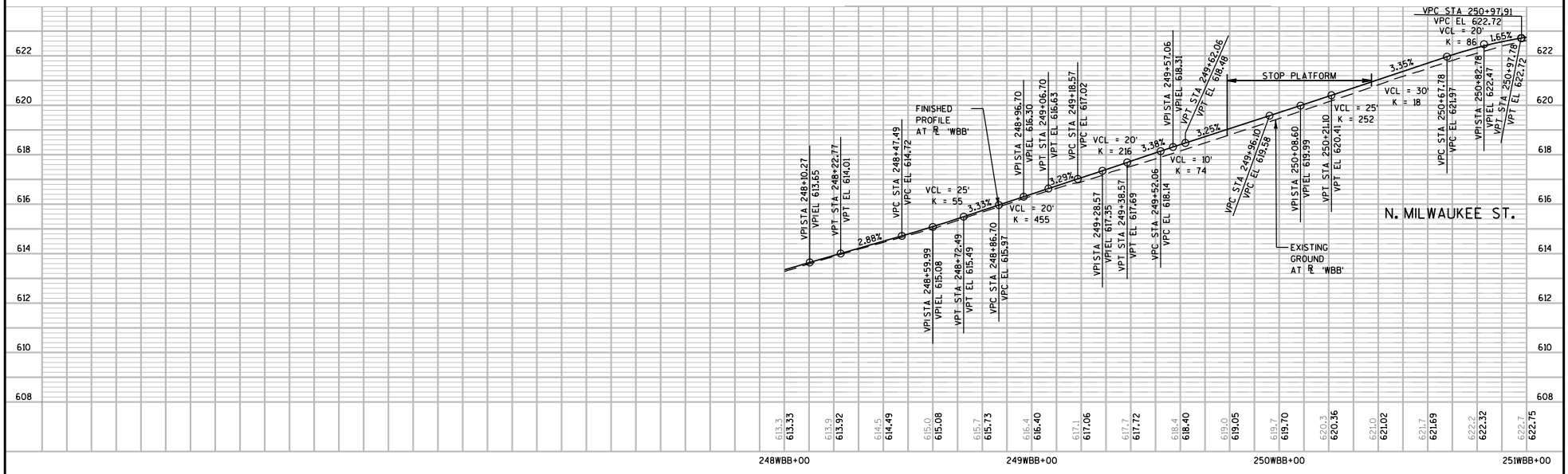

NOTES:
SEE PROJECT OVERVIEW SHEETS FOR BENCHMARK AND CONTROL POINT DATA.
FOR ROADWAY WORK SEE PLAN DETAILS.
SCALE, FEET
N. BROADWAY
E. WELLS ST.
MATCHLINE 248WBB+00
MATCHLINE 244WBB+00
CONSTRUCTION LIMITS. SEE PLAN DETAIL SHEETS.
PARKING LANE
112' TRAM
℄ 'WBB'
EXISTING GROUND ELEVATIONS AT ℄ 'WBB'
FINISHED PROFILE ELEVATIONS AT ℄ 'WBB'
FINISHED PROFILE AT ℄ 'WBB'
EXISTING GROUND AT ℄ 'WBB'
PROJECT NO: WK52362008
CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
MILWAUKEE STREETCAR
TRACK PLAN & PROFILE
SHEET 18 OF 35
60% SUBMITTAL
SHEET
PRE_401
FILE NAME : 050118_pp.dgn
PLOT DATE : 8/29/2013
PLOT BY : cromansk
PLOT NAME :
PLOT SCALE : 1:40

5



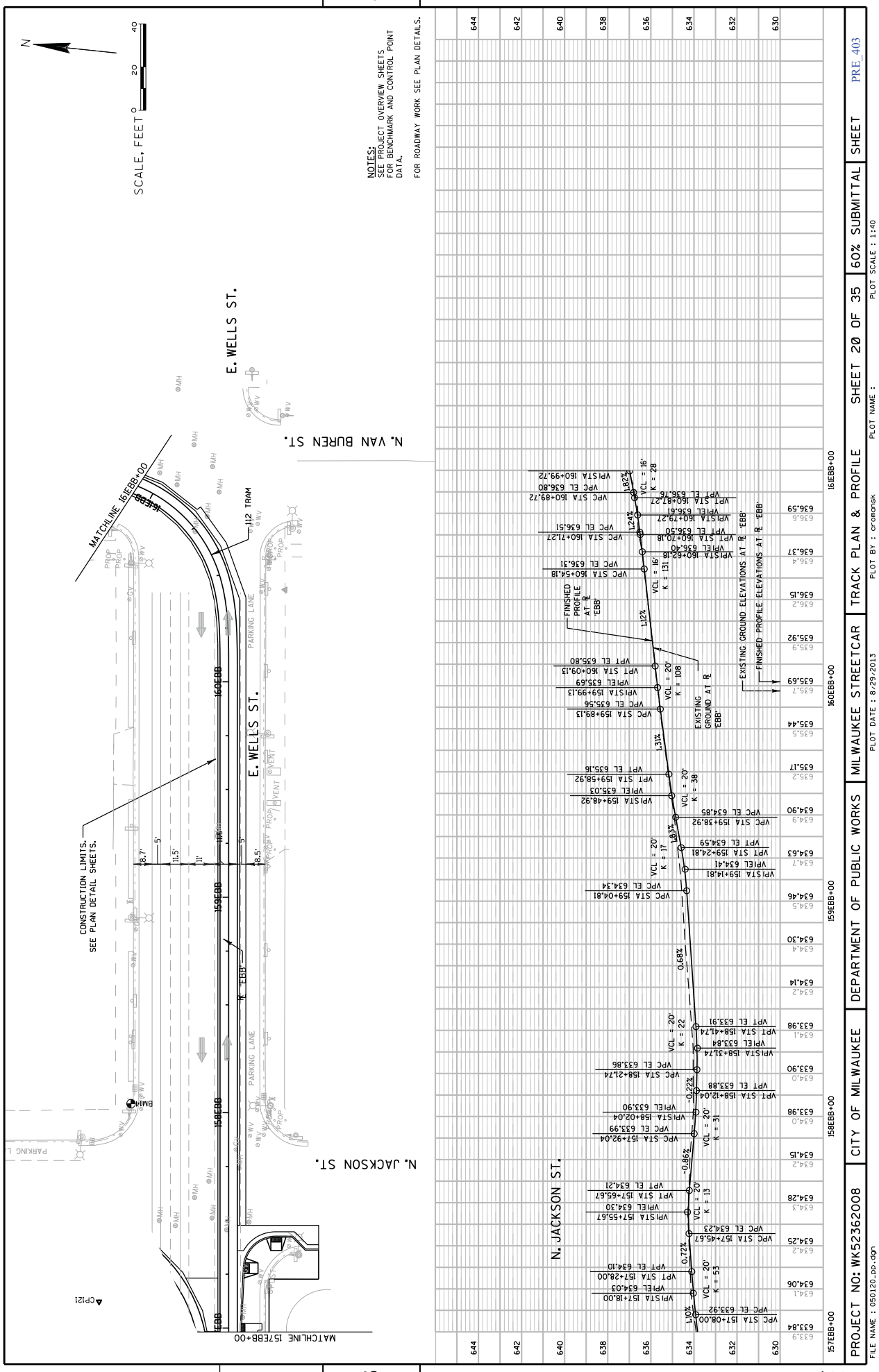
NOTES:
SEE PROJECT OVERVIEW SHEETS FOR BENCHMARK AND CONTROL POINT DATA.

FOR ROADWAY WORK SEE PLAN DETAILS.

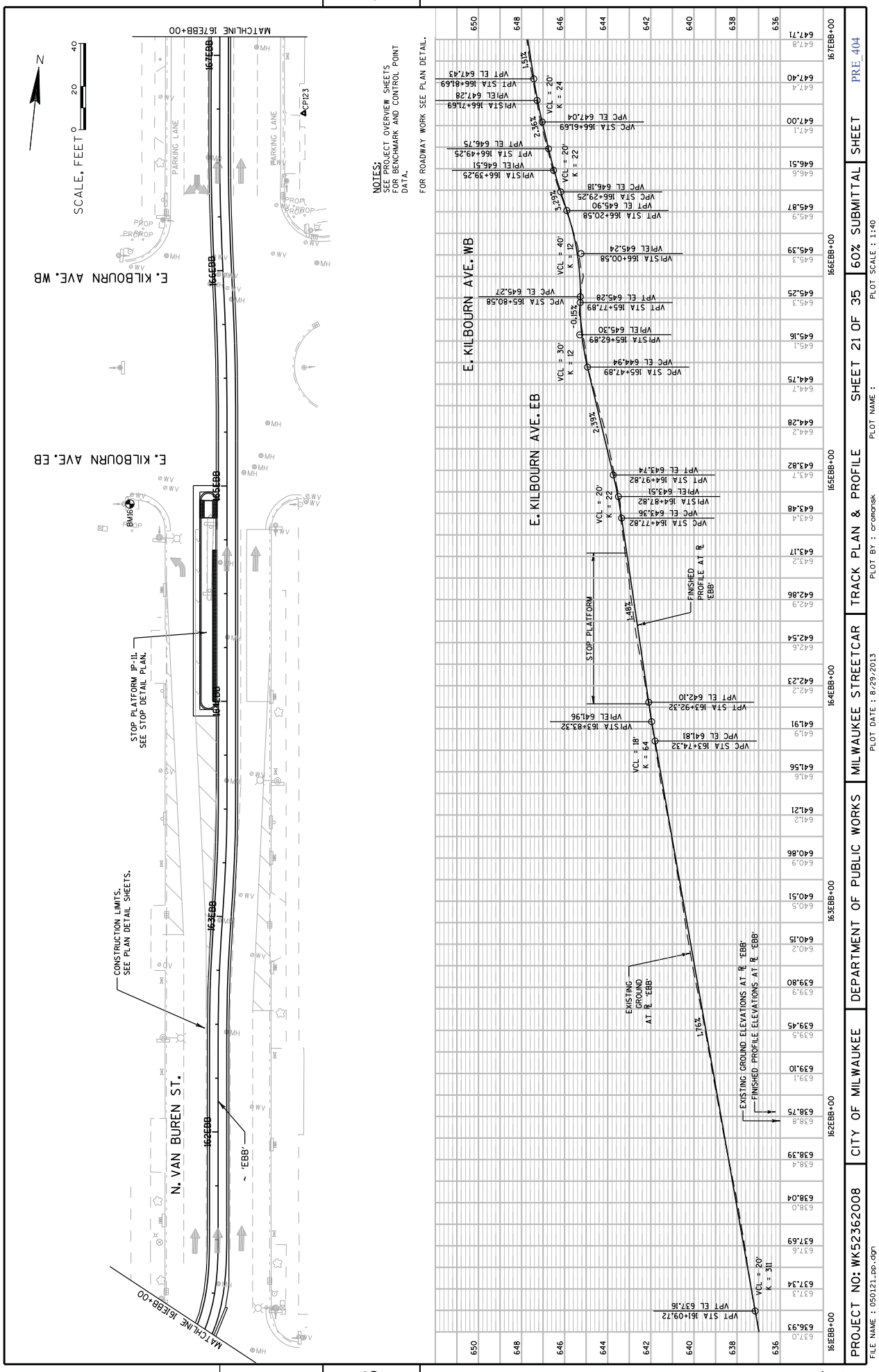


PROJECT NO: WK52362008	CITY OF MILWAUKEE	DEPARTMENT OF PUBLIC WORKS	MILWAUKEE STREETCAR	TRACK PLAN & PROFILE SHEET 19 OF 35	60% SUBMITTAL	SHEET PRE_402

FILE NAME : 050119_pp.dgn PLOT DATE : 8/29/2013 PLOT BY : cromansk PLOT NAME : PLOT SCALE : 1:40


5
SCALE, FEET
0 20 40
NOTES:
SEE PROJECT OVERVIEW SHEETS FOR BENCHMARK AND CONTROL POINT DATA.
FOR ROADWAY WORK SEE PLAN DETAILS.
E. WELLS ST.
N. VAN BUREN ST.
N. JACKSON ST.
MATCHLINE 161EBB+00
MATCHLINE 157EBB+00
112 TRAM
CONSTRUCTION LIMITS. SEE PLAN DETAIL SHEETS.
PARKING LANE
EXISTING GROUND ELEVATIONS AT ℄ 'EBB'
FINISHED PROFILE ELEVATIONS AT ℄ 'EBB'
FINISHED PROFILE AT ℄ 'EBB'
EXISTING GROUND AT ℄ 'EBB'
PROJECT NO: WK52362008
CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
MILWAUKEE STREETCAR
TRACK PLAN & PROFILE
SHEET 20 OF 35
60% SUBMITTAL
SHEET
PRE_403
FILE NAME : 050120_pp.dgn
PLOT DATE : 8/29/2013
PLOT BY : cromonsk
PLOT NAME :
PLOT SCALE : 1:40
5

5



SCALE, FEET
0 20 40
N
MATCHLINE 167EBB+00
MATCHLINE 161EBB+00
E. KILBOURN AVE. WB
E. KILBOURN AVE. EB
N. VAN BUREN ST.
PARKING LANE
PROP
STOP PLATFORM IP-11. SEE STOP DETAIL PLAN.
CONSTRUCTION LIMITS. SEE PLAN DETAIL SHEETS.
~ 'EBB'
NOTES:
SEE PROJECT OVERVIEW SHEETS FOR BENCHMARK AND CONTROL POINT DATA.
FOR ROADWAY WORK SEE PLAN DETAIL.
E. KILBOURN AVE. WB
E. KILBOURN AVE. EB
STOP PLATFORM
FINISHED PROFILE AT ℞ 'EBB'
EXISTING GROUND AT ℞ 'EBB'
EXISTING GROUND ELEVATIONS AT ℞ 'EBB'
FINISHED PROFILE ELEVATIONS AT ℞ 'EBB'
VCL = 20' K = 311
VPT STA 161+09.72
VPT EL 637.16
VCL = 18' K = 64
VPC STA 163+74.32
VPC EL 641.81
VPIEL 641.96
VPISTA 163+83.32
VPT STA 163+92.32
VPT EL 642.10
VCL = 20' K = 22
VPC STA 164+77.82
VPC EL 643.36
VPIEL 643.51
VPISTA 164+87.82
VPT STA 164+97.82
VPT EL 643.74
VCL = 30' K = 12
VPC STA 165+47.89
VPC EL 644.94
VPIEL 645.30
VPISTA 165+62.89
VPT STA 165+77.89
VPT EL 645.28
VPC STA 165+80.58
VPC EL 645.27
VCL = 40' K = 12
VPIEL 645.24
VPISTA 166+00.58
VPT STA 166+20.58
VPC STA 166+29.25
VPC EL 646.18
VPC STA 166+39.25
VPIEL 646.51
VPT STA 166+49.25
VPT EL 646.75
VCL = 20' K = 22
VPC STA 166+61.69
VPC EL 647.04
VPIEL 647.28
VPISTA 166+71.69
VPT STA 166+81.69
VPT EL 647.43
VCL = 20' K = 24
1.51%
2.36%
3.29%
-0.15%
2.39%
1.48%
1.76%
PROJECT NO: WK52362008
CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
MILWAUKEE STREETCAR
TRACK PLAN & PROFILE
SHEET 21 OF 35
60% SUBMITTAL
SHEET
PRE_404
FILE NAME : 050121_pp.dgn
PLOT DATE : 8/29/2013
PLOT BY : cromansk
PLOT NAME :
PLOT SCALE : 1:40

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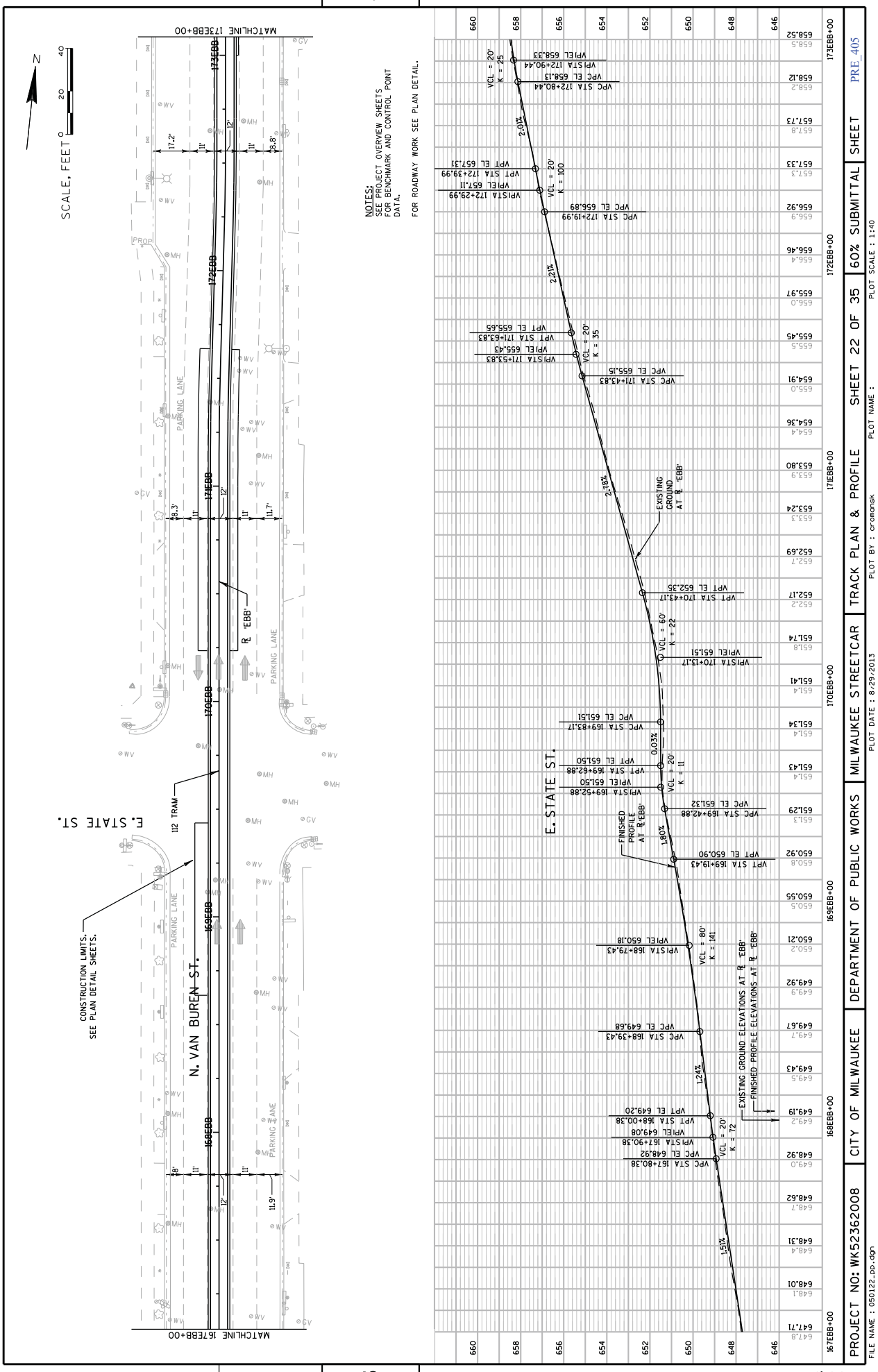
SCALE, FEET
0 20 40
N
MATCHLINE 173EBB+00
MATCHLINE 167EBB+00
E. STATE ST.
N. VAN BUREN ST.
112 TRAM
CONSTRUCTION LIMITS.
SEE PLAN DETAIL SHEETS.
PARKING LANE
℄ 'EBB'
NOTES:
SEE PROJECT OVERVIEW SHEETS
FOR BENCHMARK AND CONTROL POINT
DATA.
FOR ROADWAY WORK SEE PLAN DETAIL.
EXISTING GROUND AT ℄ 'EBB'
FINISHED PROFILE AT ℄ 'EBB'
EXISTING GROUND ELEVATIONS AT ℄ 'EBB'
FINISHED PROFILE ELEVATIONS AT ℄ 'EBB'
2.30%
2.22%
2.18%
0.03%
1.80%
1.24%
1.51%
VCL = 20' K = 25
VCL = 20' K = 100
VCL = 20' K = 35
VCL = 60' K = 22
VCL = 20' K = 11
VCL = 80' K = 141
VCL = 20' K = 72
VPC STA 172+80.44
VPC EL 658.13
VPI STA 172+90.44
VPI EL 658.33
VPT STA 172+39.99
VPT EL 657.31
VPI STA 172+29.99
VPI EL 657.11
VPC STA 172+19.99
VPC EL 656.89
VPC STA 171+43.83
VPC EL 655.15
VPT STA 171+63.83
VPT EL 655.65
VPI STA 171+53.83
VPI EL 655.43
VPT STA 170+43.17
VPT EL 652.35
VPI STA 170+13.17
VPI EL 651.51
VPC STA 169+83.17
VPC EL 651.51
VPT STA 169+62.88
VPT EL 651.50
VPI STA 169+52.88
VPI EL 651.50
VPC STA 169+42.88
VPC EL 651.32
VPT STA 169+19.43
VPT EL 650.90
VPI STA 168+79.43
VPI EL 650.18
VPC STA 168+39.43
VPC EL 649.68
VPT STA 168+00.38
VPT EL 649.20
VPI STA 167+90.38
VPI EL 649.08
VPC STA 167+80.38
VPC EL 648.92
173EBB
172EBB
171EBB
170EBB
169EBB
168EBB
17.2'
28.8'
28.3'
11.7'
11.9'
8'
11'
12'
PROP
MH
WV
AV
173EBB+00
172EBB+00
171EBB+00
170EBB+00
169EBB+00
168EBB+00
167EBB+00
660
658
656
654
652
650
648
646
PRE_405
SHEET
60% SUBMITTAL
SHEET 22 OF 35
TRACK PLAN & PROFILE
MILWAUKEE STREETCAR
DEPARTMENT OF PUBLIC WORKS
CITY OF MILWAUKEE
PROJECT NO: WK5362008
PLOT SCALE : 1:40
PLOT NAME :
PLOT BY : cromansk
PLOT DATE : 8/29/2013
FILE NAME : 050122_pp.dgn

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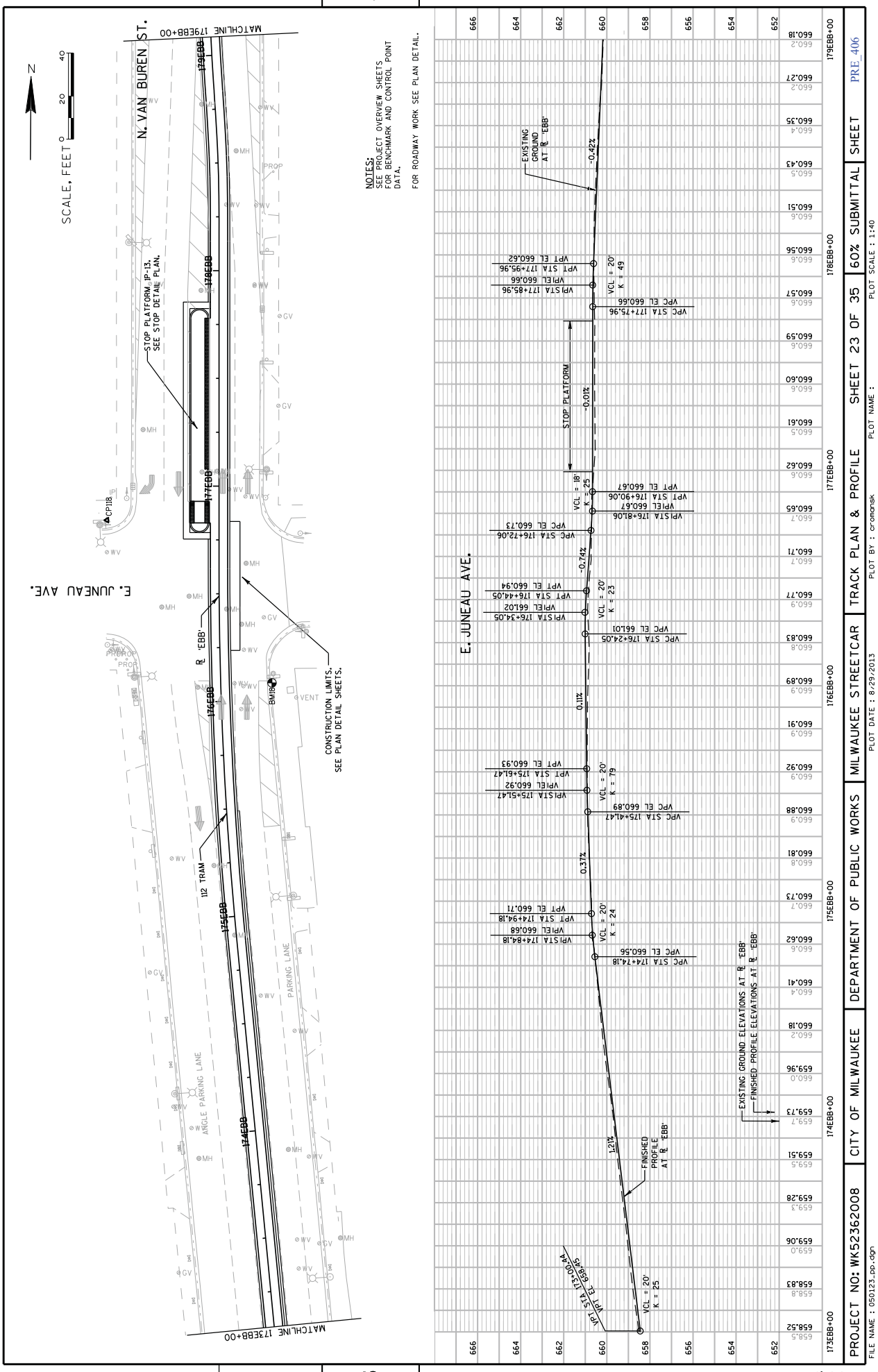
SCALE, FEET
0
20
40
N
N. VAN BUREN ST.
E. JUNEAU AVE.
MATCHLINE 173EBB+00
MATCHLINE 179EBB+00
173EBB
174EBB
175EBB
176EBB
177EBB
178EBB
179EBB
STOP PLATFORM, JP-13.
SEE STOP DETAIL PLAN.
CONSTRUCTION LIMITS.
SEE PLAN DETAIL SHEETS.
℄ 'EBB'
112 TRAM
ANGLE PARKING LANE
PARKING LANE
BM180
CP118
NOTES:
SEE PROJECT OVERVIEW SHEETS
FOR BENCHMARK AND CONTROL POINT
DATA.
FOR ROADWAY WORK SEE PLAN DETAIL.
E. JUNEAU AVE.
EXISTING GROUND AT ℄ 'EBB'
-0.42%
STOP PLATFORM
-0.01%
-0.74%
0.11%
0.37%
1.21%
VCL = 20'
K = 49
VCL = 18'
K = 25
VCL = 20'
K = 23
VCL = 20'
K = 79
VCL = 20'
K = 24
VCL = 20'
K = 25
VPC STA 173+38.79
VPC EL 658.83
VPT STA 173+100.49
VPT EL 659.28
VPC STA 174+74.18
VPC EL 660.56
VPIS STA 174+84.18
VPI EL 660.68
VPT STA 174+94.18
VPT EL 660.71
VPC STA 175+41.47
VPC EL 660.89
VPIS STA 175+51.47
VPI EL 660.92
VPT STA 175+61.47
VPT EL 660.93
VPC STA 176+24.05
VPC EL 661.01
VPIS STA 176+34.05
VPI EL 661.02
VPT STA 176+44.05
VPT EL 660.94
VPC STA 176+72.06
VPC EL 660.73
VPIS STA 176+81.06
VPI EL 660.67
VPT STA 176+90.06
VPT EL 660.67
VPC STA 177+75.96
VPC EL 660.66
VPIS STA 177+85.96
VPI EL 660.66
VPT STA 177+95.96
VPT EL 660.62
EXISTING GROUND ELEVATIONS AT ℄ 'EBB'
FINISHED PROFILE ELEVATIONS AT ℄ 'EBB'
FINISHED PROFILE AT ℄ 'EBB'
666
664
662
660
658
656
654
652
173EBB+00
174EBB+00
175EBB+00
176EBB+00
177EBB+00
178EBB+00
179EBB+00
658.52
658.83
659.06
659.28
659.51
659.73
659.96
660.18
660.41
660.62
660.73
660.81
660.88
660.91
660.92
660.89
660.83
660.77
660.71
660.65
660.62
660.61
660.60
660.59
660.57
660.56
660.51
660.43
660.35
660.27
660.18
PROJECT NO: WK52362008
CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
MILWAUKEE STREETCAR
TRACK PLAN & PROFILE
SHEET 23 OF 35
60% SUBMITTAL
SHEET
PRE_406
FILE NAME : 050123_pp.dgn
PLOT DATE : 8/29/2013
PLOT BY : cromansk
PLOT NAME :
PLOT SCALE : 1:40

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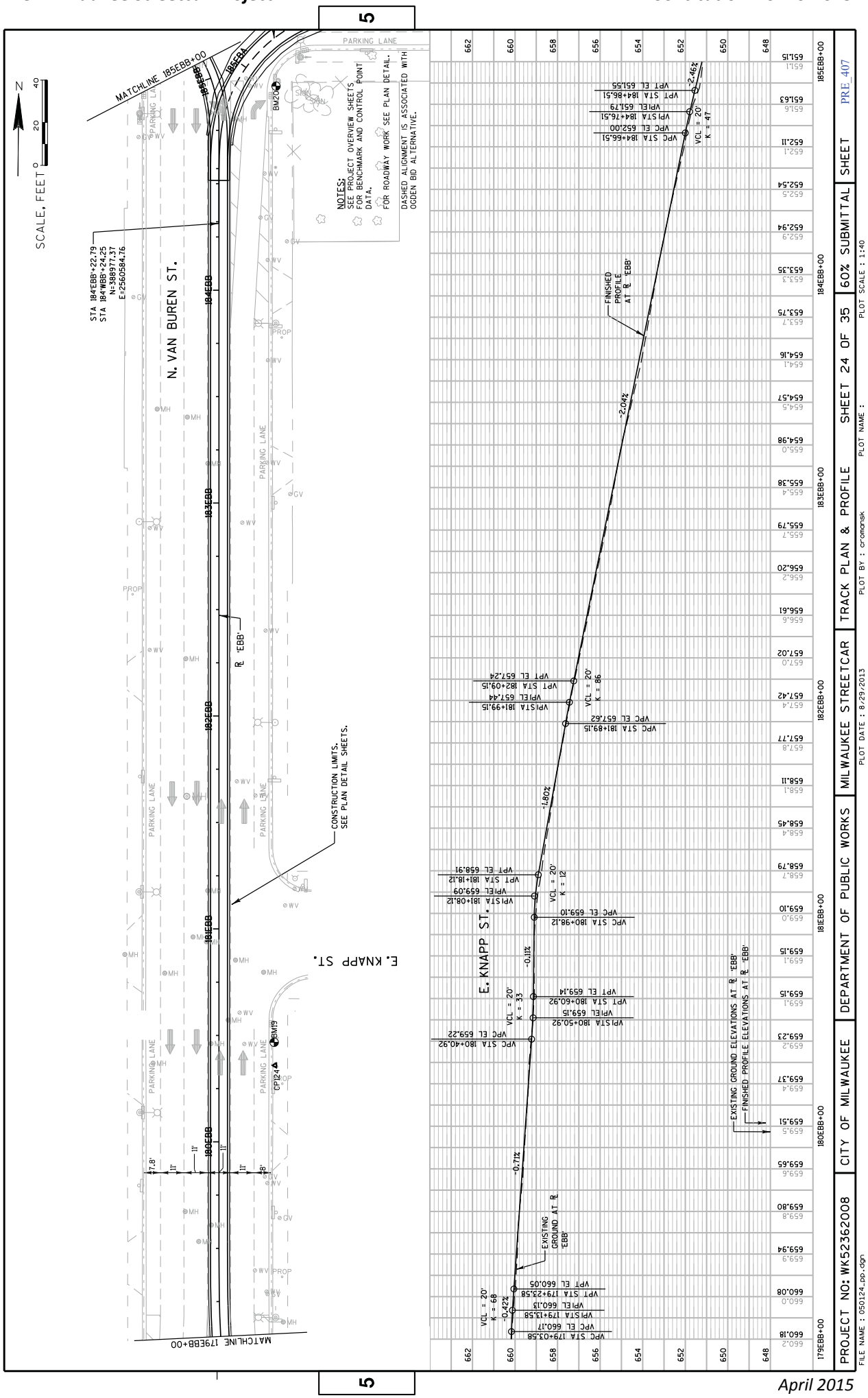
5
SCALE, FEET
0 20 40
N
MATCHLINE 185EBB+00
MATCHLINE 179EBB+00
N. VAN BUREN ST.
E. KNAPP ST.
PARKING LANE
STA 184EBB+22.79
STA 184WBB+24.25
N=388977.37
E=2560584.76
NOTES:
SEE PROJECT OVERVIEW SHEETS FOR BENCHMARK AND CONTROL POINT DATA.
FOR ROADWAY WORK SEE PLAN DETAIL.
DASHED ALIGNMENT IS ASSOCIATED WITH OGDEN BID ALTERNATIVE.
CONSTRUCTION LIMITS. SEE PLAN DETAIL SHEETS.
℄ 'EBB'
FINISHED PROFILE AT ℄ 'EBB'
EXISTING GROUND ELEVATIONS AT ℄ 'EBB'
FINISHED PROFILE ELEVATIONS AT ℄ 'EBB'
EXISTING GROUND AT ℄ 'EBB'
VCL = 20' K = 47
VCL = 20' K = 86
VCL = 20' K = 12
VCL = 20' K = 33
VCL = 20' K = 68
-2.46%
-2.04%
-1.80%
-0.11%
-0.71%
-0.42%
PROJECT NO: WK52362008
CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
MILWAUKEE STREETCAR
TRACK PLAN & PROFILE
SHEET 24 OF 35
60% SUBMITTAL
SHEET
PRE_407
FILE NAME : 050124_pp.dgn
PLOT DATE : 8/29/2013
PLOT BY : cromansk
PLOT NAME :
PLOT SCALE : 1:40

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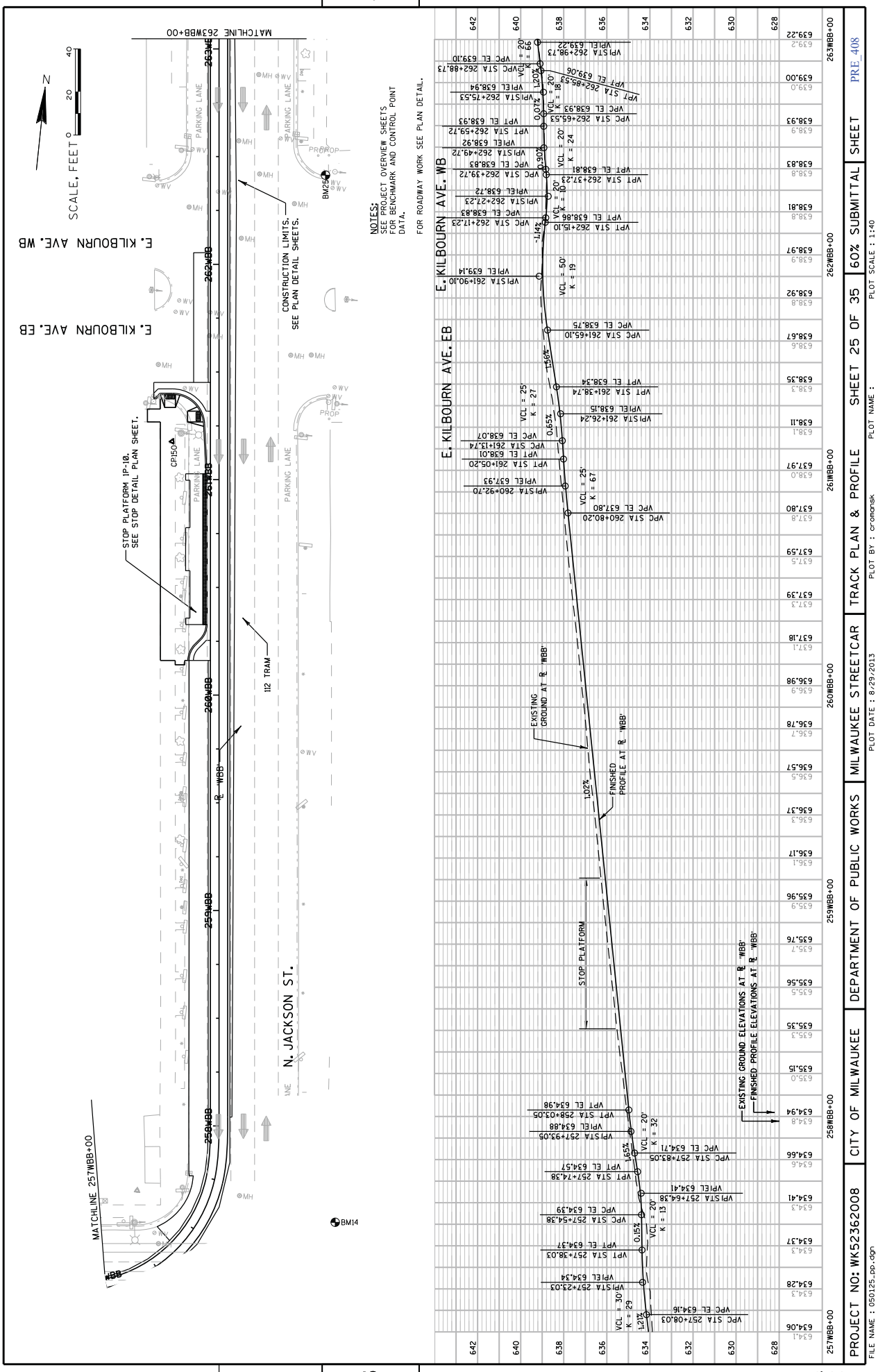
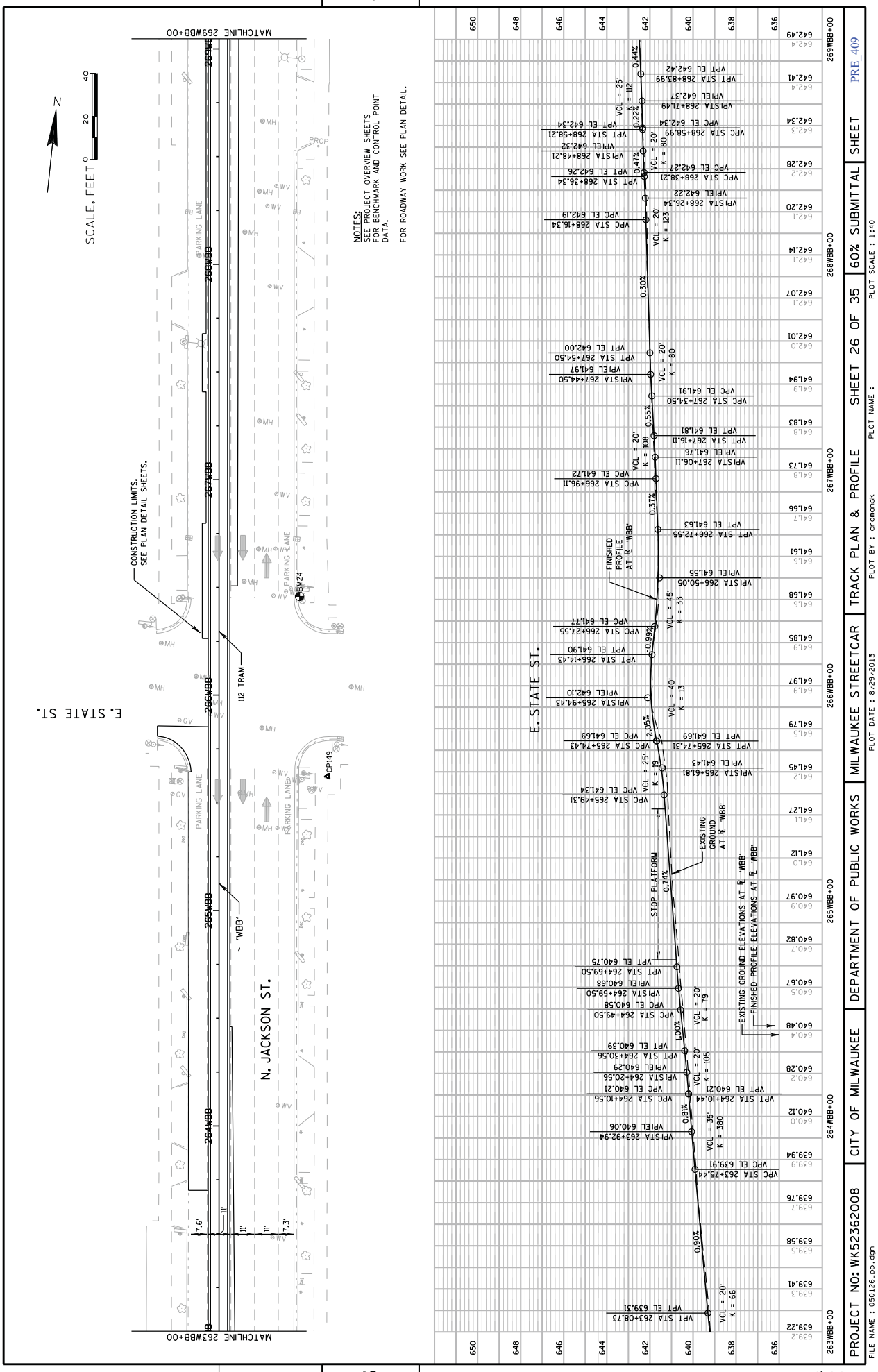


MATCHLINE 263WBB+00
SCALE, FEET
E. KILBOURN AVE. WB
E. KILBOURN AVE. EB
PARKING LANE
CONSTRUCTION LIMITS. SEE PLAN DETAIL SHEETS.
NOTES: SEE PROJECT OVERVIEW SHEETS FOR BENCHMARK AND CONTROL POINT DATA.
FOR ROADWAY WORK SEE PLAN DETAIL.
STOP PLATFORM IP-10. SEE STOP DETAIL PLAN SHEET.
112 TRAM
N. JACKSON ST.
MATCHLINE 257WBB+00
BM14
BM25
CP150
EXISTING GROUND AT ℄ 'WBB'
FINISHED PROFILE AT ℄ 'WBB'
STOP PLATFORM
EXISTING GROUND ELEVATIONS AT ℄ 'WBB'
FINISHED PROFILE ELEVATIONS AT ℄ 'WBB'
PROJECT NO: WK52362008
CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
MILWAUKEE STREETCAR
TRACK PLAN & PROFILE
SHEET 25 OF 35
60% SUBMITTAL
SHEET
PRE_408
FILE NAME : 050125_pp.dgn
PLOT DATE : 8/29/2013
PLOT BY : cromonsk
PLOT NAME :
PLOT SCALE : 1:40

5

5


SCALE, FEET 0 20 40
N
MATCHLINE 269WBB+00
MATCHLINE 263WBB+00
E. STATE ST.
N. JACKSON ST.
CONSTRUCTION LIMITS. SEE PLAN DETAIL SHEETS.
112 TRAM
~ 'WBB'
PARKING LANE
NOTES:
SEE PROJECT OVERVIEW SHEETS FOR BENCHMARK AND CONTROL POINT DATA.
FOR ROADWAY WORK SEE PLAN DETAIL.
FINISHED PROFILE AT ℄ 'WBB'
EXISTING GROUND AT ℄ 'WBB'
EXISTING GROUND ELEVATIONS AT ℄ 'WBB'
FINISHED PROFILE ELEVATIONS AT ℄ 'WBB'
STOP PLATFORM
PROJECT NO: WK52362008
CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
MILWAUKEE STREETCAR
TRACK PLAN & PROFILE
SHEET 26 OF 35
60% SUBMITTAL
SHEET
PRE_409
FILE NAME : 050126_pp.dgn
PLOT DATE : 8/29/2013
PLOT BY : cromonsk
PLOT NAME :
PLOT SCALE : 1:40

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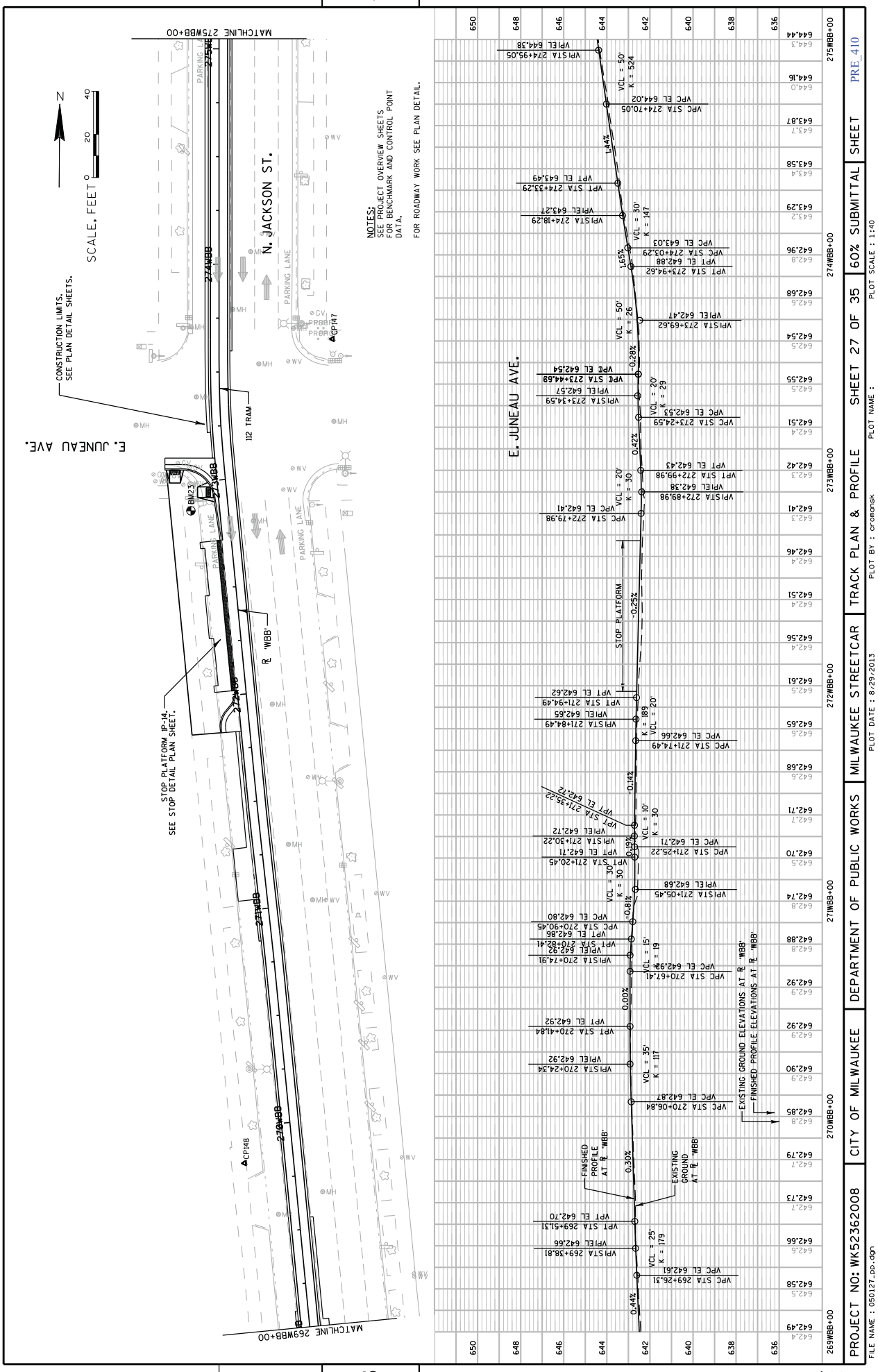
MATCHLINE 275WBB+00
MATCHLINE 269WBB+00
N. JACKSON ST.
E. JUNEAU AVE.
PARKING LANE
SCALE, FEET
0 20 40
N
CONSTRUCTION LIMITS. SEE PLAN DETAIL SHEETS.
112 TRAM
℄ 'WBB'
STOP PLATFORM JP-14. SEE STOP DETAIL PLAN SHEET.
BM23
CP147
CP148
NOTES:
SEE PROJECT OVERVIEW SHEETS FOR BENCHMARK AND CONTROL POINT DATA.
FOR ROADWAY WORK SEE PLAN DETAIL.
STOP PLATFORM
EXISTING GROUND ELEVATIONS AT ℄ 'WBB'
FINISHED PROFILE ELEVATIONS AT ℄ 'WBB'
FINISHED PROFILE AT ℄ 'WBB'
EXISTING GROUND AT ℄ 'WBB'
PRE_410
60% SUBMITTAL
SHEET
SHEET 27 OF 35
TRACK PLAN & PROFILE
MILWAUKEE STREETCAR
DEPARTMENT OF PUBLIC WORKS
CITY OF MILWAUKEE
PROJECT NO: WK52362008
PLOT SCALE : 1:40
PLOT NAME :
PLOT BY : cromansk
PLOT DATE : 8/29/2013
FILE NAME : 050127_pp.dgn

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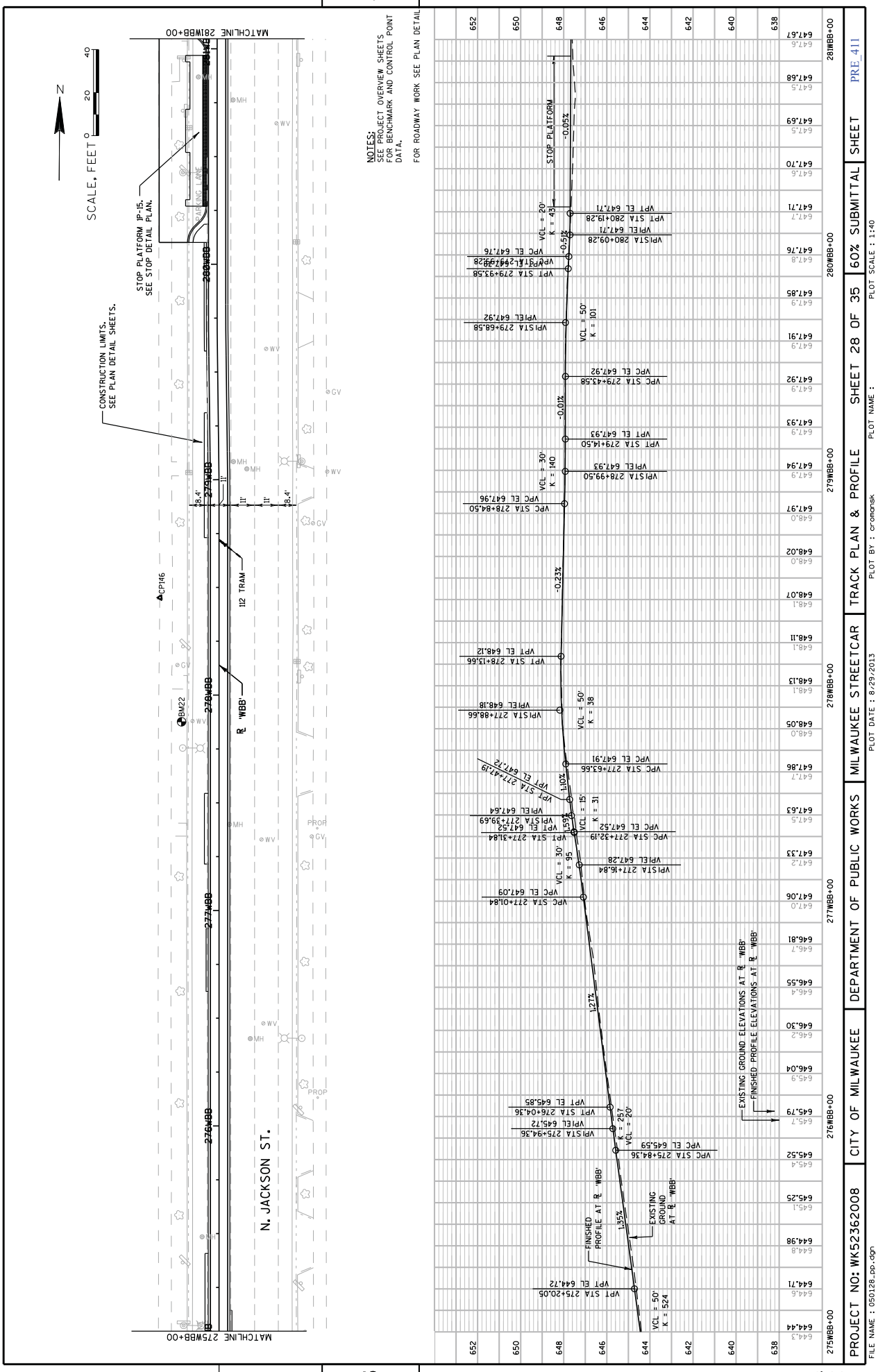
5


SCALE, FEET
0 20 40
N
MATCHLINE 281WBB+00
MATCHLINE 275WBB+00
STOP PLATFORM IP-15.
SEE STOP DETAIL PLAN.
CONSTRUCTION LIMITS.
SEE PLAN DETAIL SHEETS.
112 TRAM
℄ 'WBB'
N. JACKSON ST.
NOTES:
SEE PROJECT OVERVIEW SHEETS FOR BENCHMARK AND CONTROL POINT DATA.
FOR ROADWAY WORK SEE PLAN DETAIL
STOP PLATFORM
-0.05%
-0.51%
-0.01%
-0.23%
1.10%
1.59%
1.27%
1.35%
VCL = 20'
K = 43
VCL = 50'
K = 101
VCL = 30'
K = 140
VCL = 50'
K = 38
VCL = 15'
K = 31
VCL = 30'
K = 95
K = 257
VCL = 20'
VCL = 50'
K = 524
EXISTING GROUND ELEVATIONS AT ℄ 'WBB'
FINISHED PROFILE ELEVATIONS AT ℄ 'WBB'
FINISHED PROFILE AT ℄ 'WBB'
EXISTING GROUND AT ℄ 'WBB'
PROJECT NO: WK52362008
CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
MILWAUKEE STREETCAR
TRACK PLAN & PROFILE
SHEET 28 OF 35
60% SUBMITTAL
SHEET
PRE_411
PLOT SCALE : 1:40
PLOT NAME :
PLOT BY : cromonsk
PLOT DATE : 8/29/2013
FILE NAME : 050128_pp.dgn

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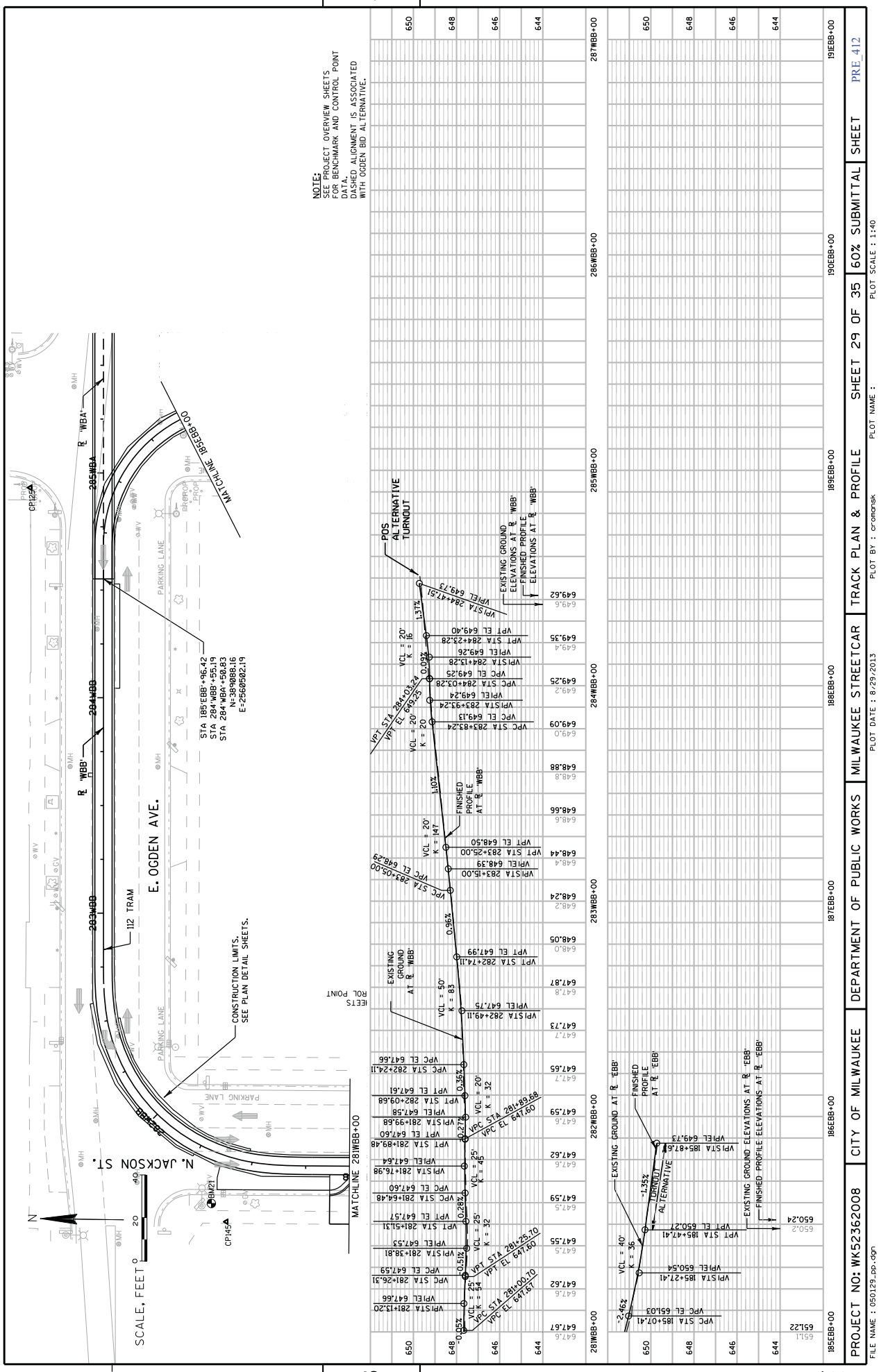
NOTE:
SEE PROJECT OVERVIEW SHEETS FOR BENCHMARK AND CONTROL POINT DATA.
DASHED ALIGNMENT IS ASSOCIATED WITH OGDEN BID ALTERNATIVE.
E. OGDEN AVE.
N. JACKSON ST.
112 TRAM
CONSTRUCTION LIMITS. SEE PLAN DETAIL SHEETS.
MATCHLINE 281WBB+00
MATCHLINE 185EBB+00
STA 185'EBB'+96.42
STA 284'WBB'+55.19
STA 284'WBA'+56.83
N=389088.16
E=2560502.19
POS ALTERNATIVE TURNOUT
EXISTING GROUND ELEVATIONS AT ℄ 'WBB'
FINISHED PROFILE ELEVATIONS AT ℄ 'WBB'
EXISTING GROUND AT ℄ 'WBB'
FINISHED PROFILE AT ℄ 'WBB'
EXISTING GROUND AT ℄ 'EBB'
FINISHED PROFILE AT ℄ 'EBB'
EXISTING GROUND ELEVATIONS AT ℄ 'EBB'
FINISHED PROFILE ELEVATIONS AT ℄ 'EBB'
SCALE, FEET
PROJECT NO: WK52362008
CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
MILWAUKEE STREETCAR
TRACK PLAN & PROFILE
SHEET 29 OF 35
60% SUBMITTAL
SHEET
PRE_412
PLOT SCALE : 1:40
PLOT BY : cromonsk
PLOT DATE : 8/29/2013
PLOT NAME :
FILE NAME : 050129_pp.dgn

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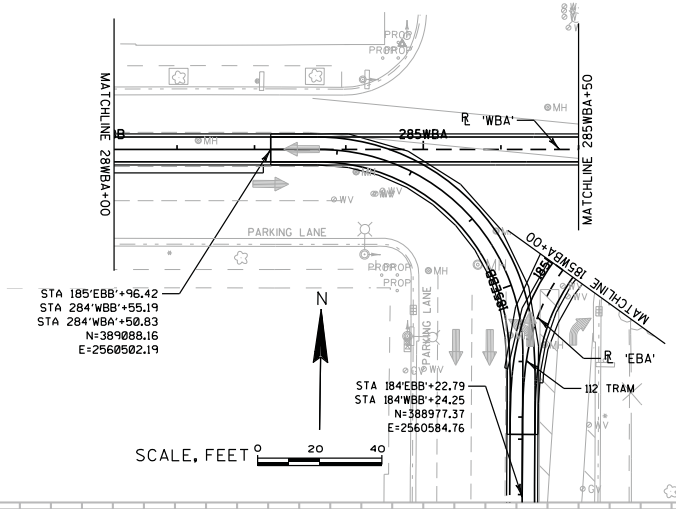
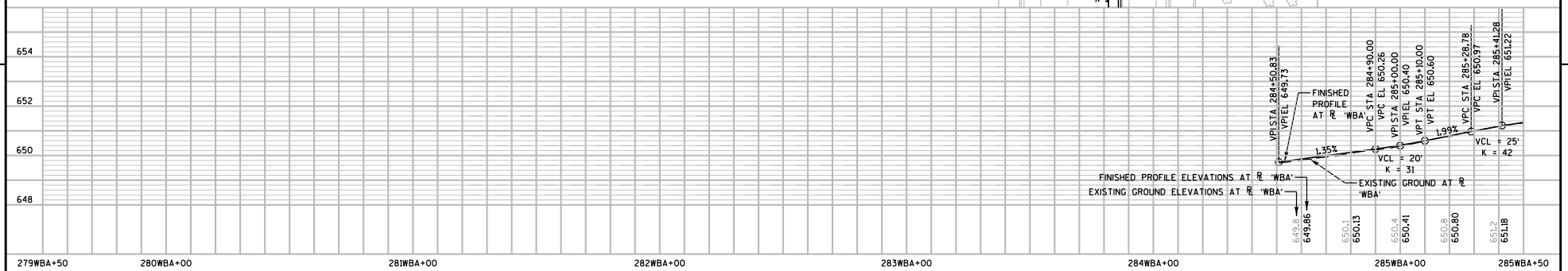
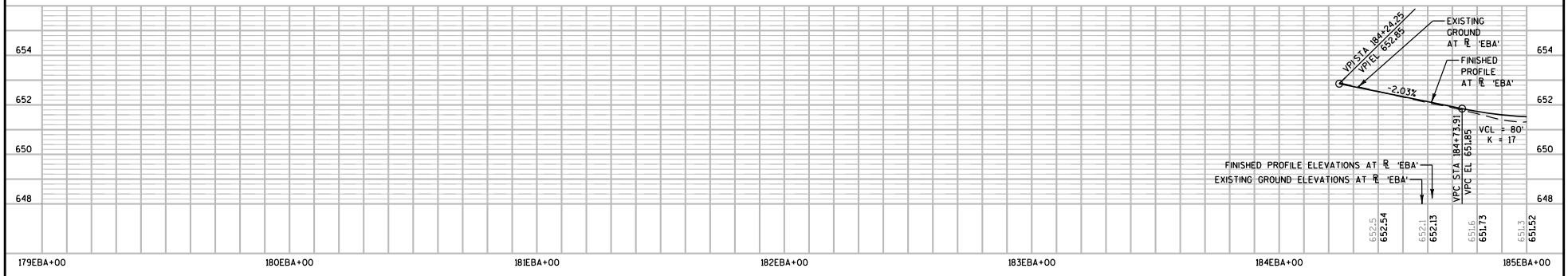


NOTES:
SEE PROJECT OVERVIEW SHEETS FOR BENCHMARK AND CONTROL POINT DATA.
DASHED ALIGNMENT IS ASSOCIATED WITH OGDEN BID ALTERNATIVE.

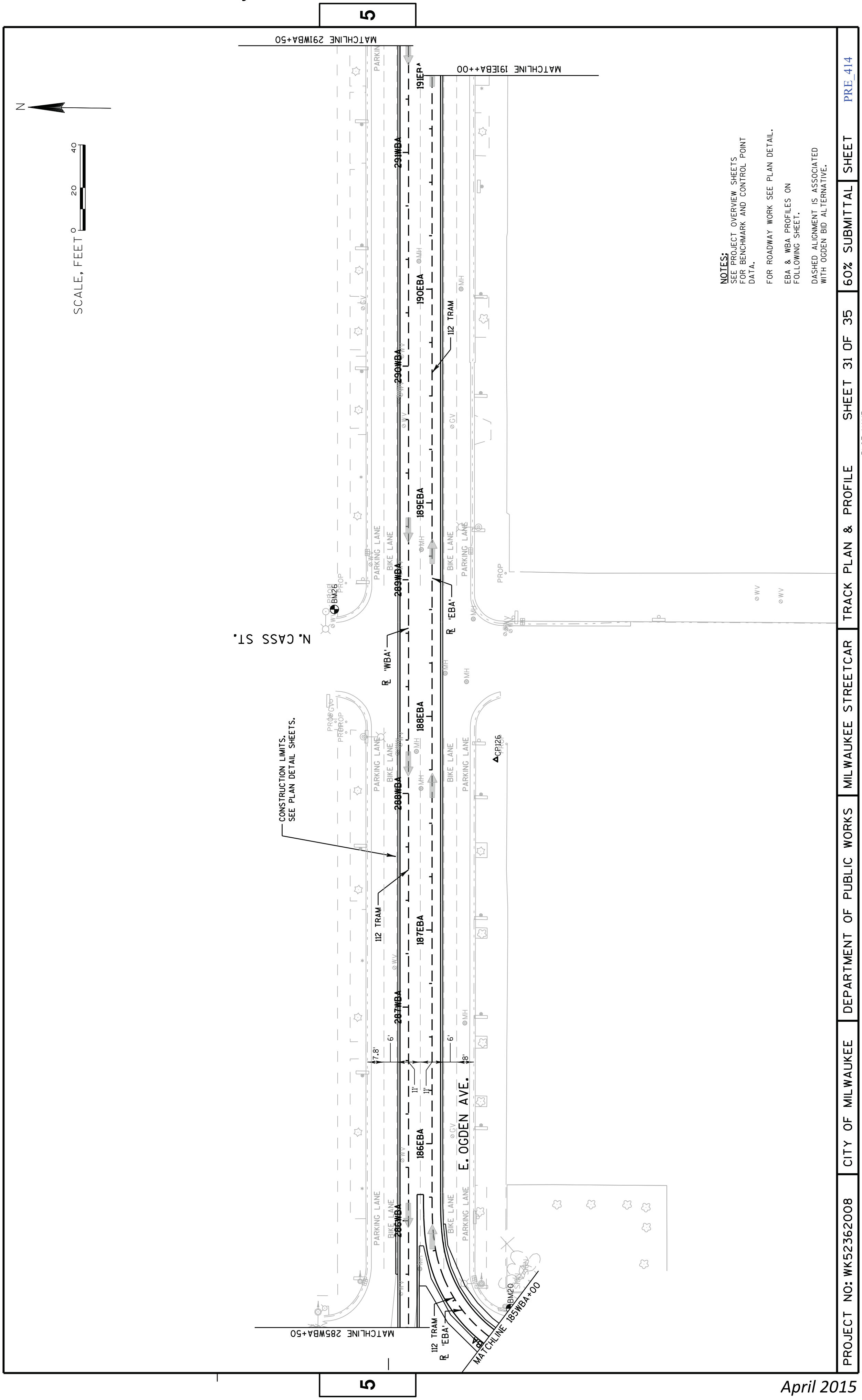
5

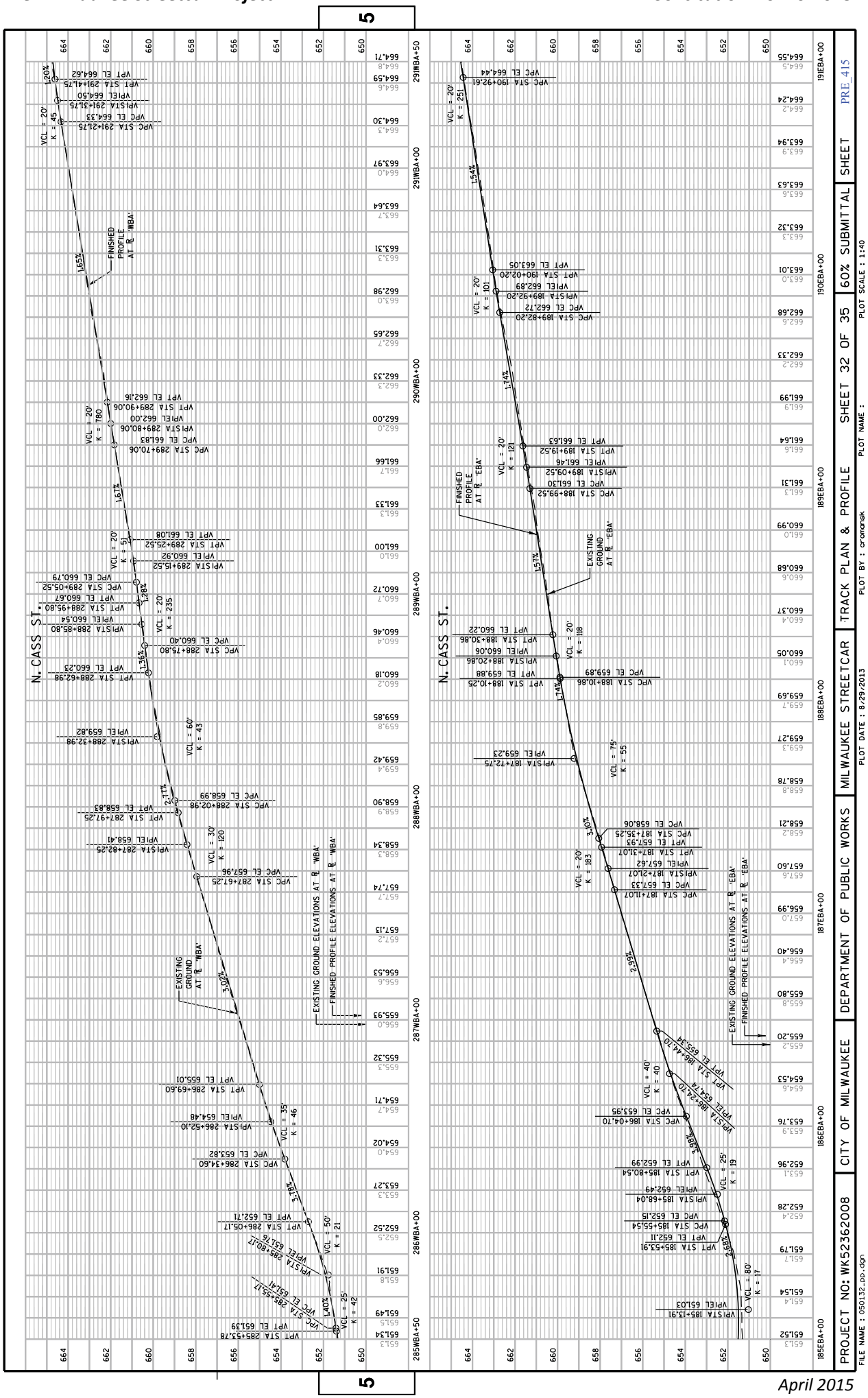


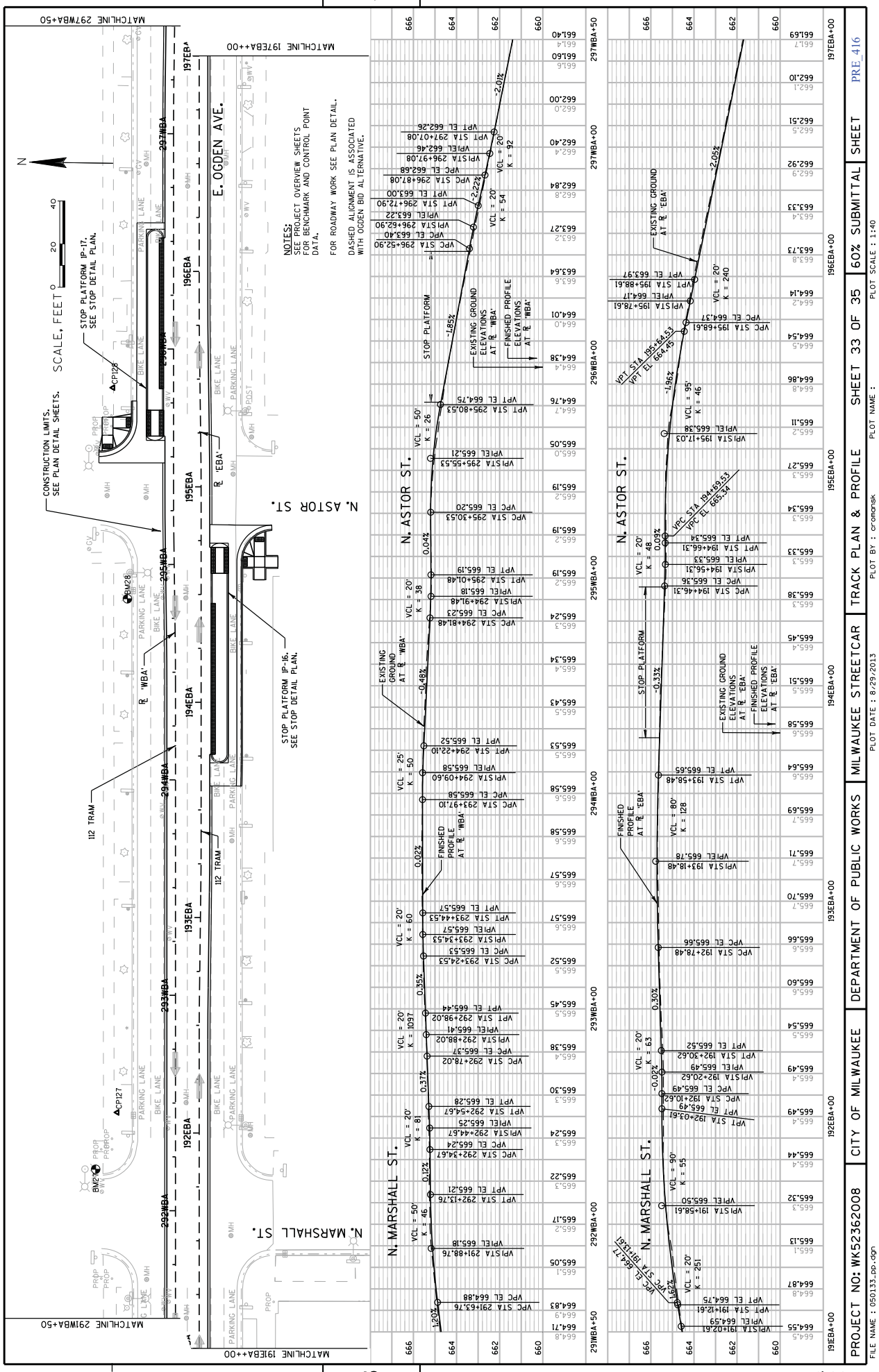


PROJECT NO: WK52362008	CITY OF MILWAUKEE	DEPARTMENT OF PUBLIC WORKS	MILWAUKEE STREETCAR	TRACK PLAN & PROFILE SHEET 30 OF 35	60% SUBMITTAL	SHEET PRE_413

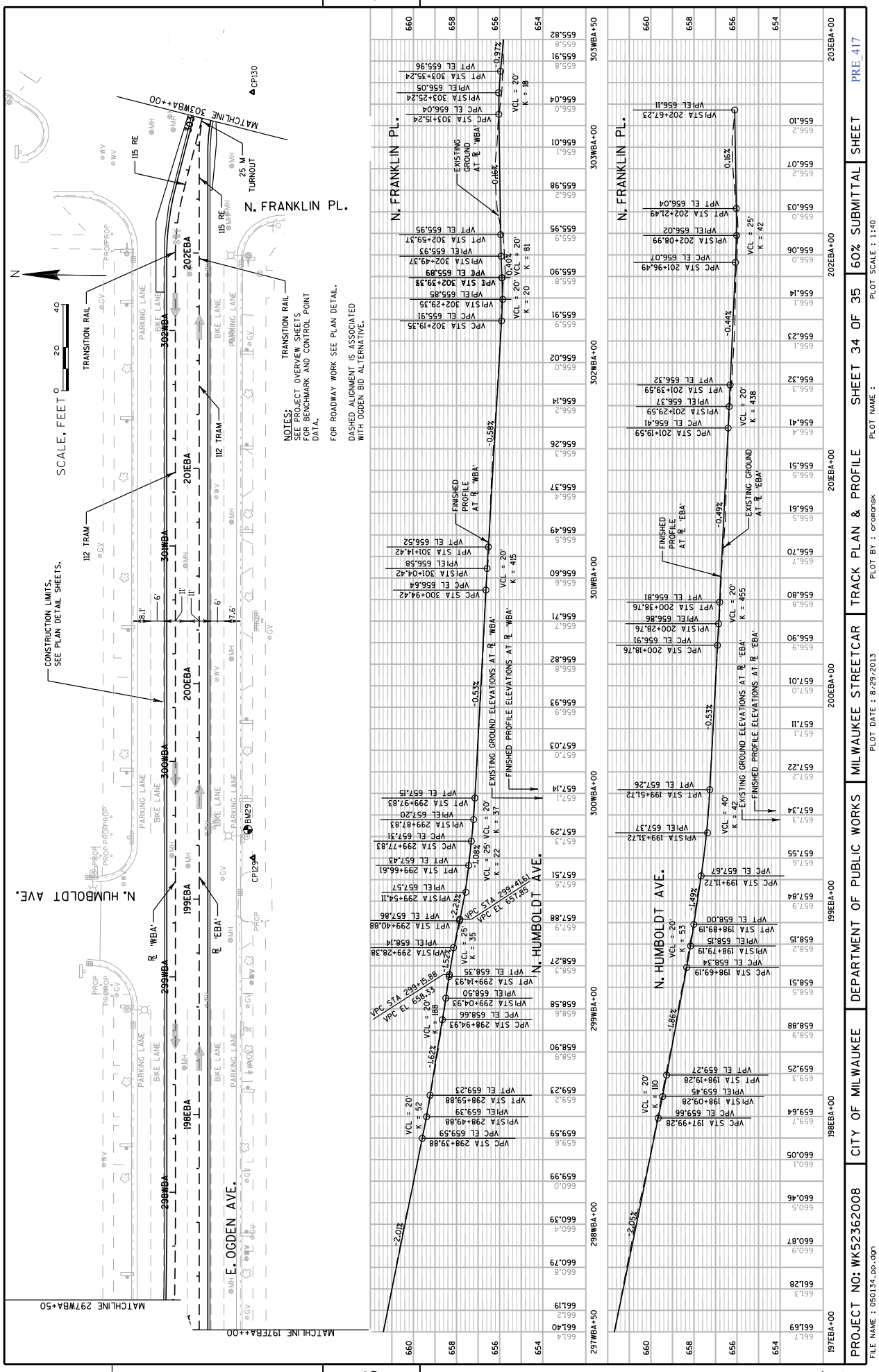
FILE NAME : 050130_pp.dgn PLOT DATE : 8/29/2013 PLOT BY : cromansk PLOT NAME : PLOT SCALE : 1:40


5
MATCHLINE 291WBA+50
MATCHLINE 191EBA++00
SCALE, FEET
0
20
40
N
NOTES:
SEE PROJECT OVERVIEW SHEETS FOR BENCHMARK AND CONTROL POINT DATA.
FOR ROADWAY WORK SEE PLAN DETAIL.
EBA & WBA PROFILES ON FOLLOWING SHEET.
DASHED ALIGNMENT IS ASSOCIATED WITH OGDEN BID ALTERNATIVE.
N. CASS ST.
E. OGDEN AVE.
CONSTRUCTION LIMITS. SEE PLAN DETAIL SHEETS.
112 TRAM
PARKING LANE
BIKE LANE
MATCHLINE 285WBA+50
MATCHLINE 185WBA+00
PROJECT NO: WK52362008
CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
MILWAUKEE STREETCAR
TRACK PLAN & PROFILE
SHEET 31 OF 35
60% SUBMITTAL
SHEET
PRE_414
FILE NAME : 050131_pp.dgn
PLOT DATE : 8/29/2013
PLOT BY : cromansk
PLOT NAME :
PLOT SCALE : 1:40


N. CASS ST.
FINISHED PROFILE AT ℄ 'WBA'
EXISTING GROUND AT ℄ 'WBA'
EXISTING GROUND ELEVATIONS AT ℄ 'WBA'
FINISHED PROFILE ELEVATIONS AT ℄ 'WBA'
FINISHED PROFILE AT ℄ 'EBA'
EXISTING GROUND AT ℄ 'EBA'
EXISTING GROUND ELEVATIONS AT ℄ 'EBA'
FINISHED PROFILE ELEVATIONS AT ℄ 'EBA'
PROJECT NO: WK52362008
CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
MILWAUKEE STREETCAR
TRACK PLAN & PROFILE
SHEET 32 OF 35
60% SUBMITTAL
SHEET
PRE_415
FILE NAME : 050132_pp.dgn
PLOT DATE : 8/29/2013
PLOT BY : cromansk
PLOT NAME :
PLOT SCALE : 1:40

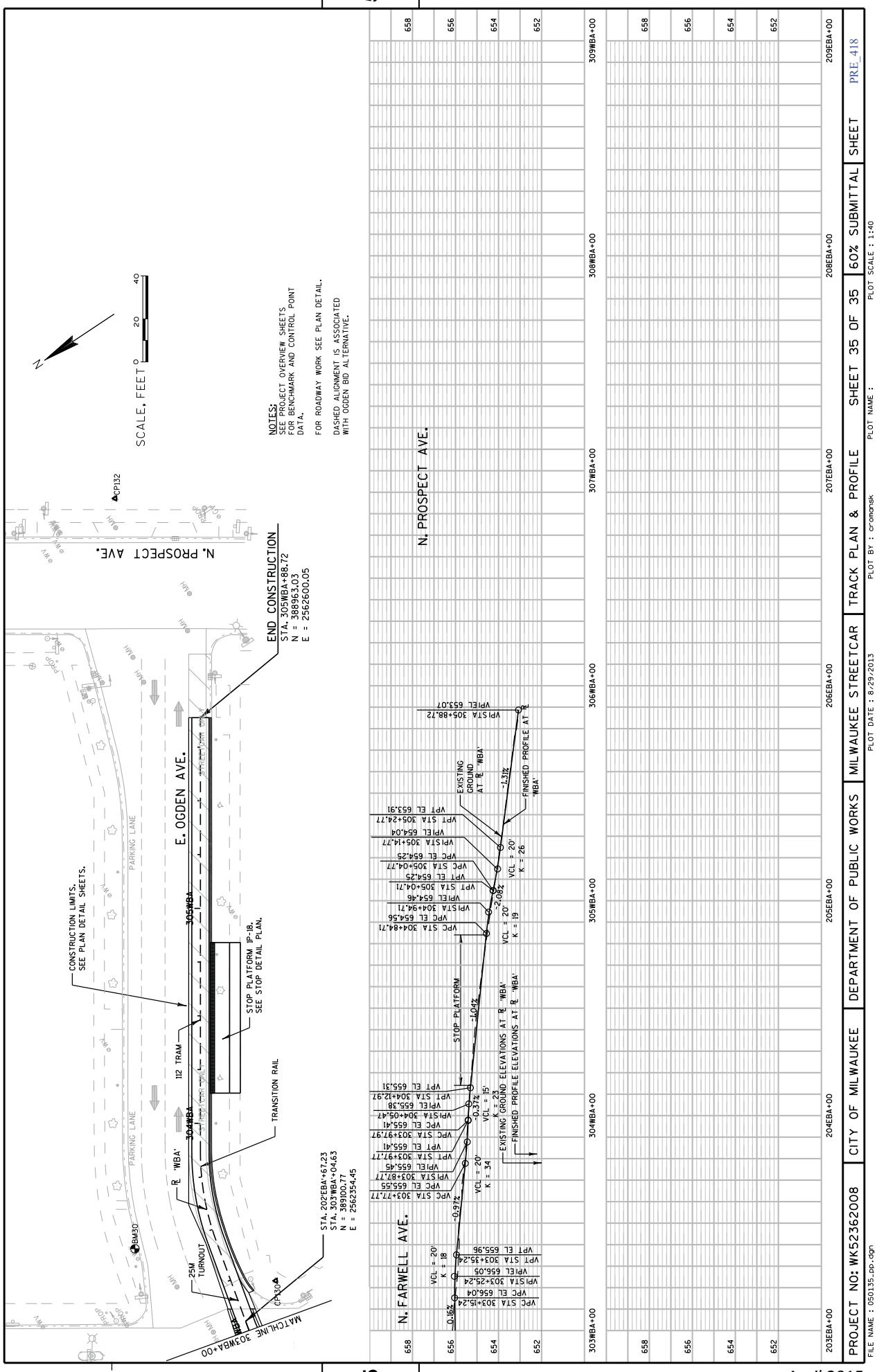

5
MATCHLINE 297WBA+50
MATCHLINE 197EBA+00
MATCHLINE 291WBA+50
MATCHLINE 191EBA+00
E. OGDEN AVE.
N. ASTOR ST.
N. MARSHALL ST.
SCALE, FEET
0 20 40
NOTES:
SEE PROJECT OVERVIEW SHEETS FOR BENCHMARK AND CONTROL POINT DATA.
FOR ROADWAY WORK SEE PLAN DETAIL.
DASHED ALIGNMENT IS ASSOCIATED WITH OGDEN BID ALTERNATIVE.
STOP PLATFORM IP-17. SEE STOP DETAIL PLAN.
STOP PLATFORM IP-16. SEE STOP DETAIL PLAN.
CONSTRUCTION LIMITS. SEE PLAN DETAIL SHEETS.
112 TRAM
PARKING LANE
BIKE LANE
EXISTING GROUND ELEVATIONS AT ℄ 'WBA'
FINISHED PROFILE ELEVATIONS AT ℄ 'WBA'
EXISTING GROUND AT ℄ 'EBA'
EXISTING GROUND ELEVATIONS AT ℄ 'EBA'
FINISHED PROFILE AT ℄ 'WBA'
FINISHED PROFILE AT ℄ 'EBA'
STOP PLATFORM
PROJECT NO: WK52362008
CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
MILWAUKEE STREETCAR
TRACK PLAN & PROFILE
SHEET 33 OF 35
60% SUBMITTAL
SHEET
PRE_416
FILE NAME : 050133_pp.dgn
PLOT DATE : 8/29/2013
PLOT BY : cromonsk
PLOT NAME :
PLOT SCALE : 1:40
5

5


N. FRANKLIN PL.
N. HUMBOLDT AVE.
E. OGDEN AVE.
SCALE, FEET
0 20 40
TRANSITION RAIL
112 TRAM
115 RE
25 M TURNOUT
CONSTRUCTION LIMITS, SEE PLAN DETAIL SHEETS.
NOTES:
SEE PROJECT OVERVIEW SHEETS FOR BENCHMARK AND CONTROL POINT DATA.
FOR ROADWAY WORK SEE PLAN DETAIL.
DASHED ALIGNMENT IS ASSOCIATED WITH OGDEN BID ALTERNATIVE.
MATCHLINE 303WBA++00
MATCHLINE 297WBA+50
MATCHLINE 197EBA++00
PROJECT NO: WK52362008
CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
MILWAUKEE STREETCAR
TRACK PLAN & PROFILE
SHEET 34 OF 35
60% SUBMITTAL
SHEET
PRE_417
FILE NAME : 050134_pp.dgn
PLOT DATE : 8/29/2013
PLOT BY : cromonsk
PLOT NAME :
PLOT SCALE : 1:40

5

5


SCALE, FEET
0 20 40
N
NOTES:
SEE PROJECT OVERVIEW SHEETS FOR BENCHMARK AND CONTROL POINT DATA.
FOR ROADWAY WORK SEE PLAN DETAIL.
DASHED ALIGNMENT IS ASSOCIATED WITH OGDEN BID ALTERNATIVE.
N. PROSPECT AVE.
CP132
END CONSTRUCTION
STA. 305WBA+88.72
N = 388963.03
E = 2562600.05
E. OGDEN AVE.
PARKING LANE
CONSTRUCTION LIMITS. SEE PLAN DETAIL SHEETS.
305WBA
304WBA
112 TRAM
STOP PLATFORM JP-18. SEE STOP DETAIL PLAN.
TRANSITION RAIL
℄ 'WBA'
BM30
25M TURNOUT
CP130
STA. 202EBA'+67.23
STA. 303WBA'+04.63
N = 389100.77
E = 2562354.45
MATCHLINE 303WBA+00
N. FARWELL AVE.
N. PROSPECT AVE.
658
656
654
652
303WBA+00
304WBA+00
305WBA+00
306WBA+00
307WBA+00
308WBA+00
309WBA+00
203EBA+00
204EBA+00
205EBA+00
206EBA+00
207EBA+00
208EBA+00
209EBA+00
VPC STA 303+15.24
VPC EL 656.04
VPI STA 303+25.24
VPI EL 656.05
VPT STA 303+35.24
VPT EL 655.96
VCL = 20'
K = 18
-0.16%
VPC STA 303+77.77
VPC EL 655.55
VPI STA 303+87.77
VPI EL 655.45
VPT STA 303+97.77
VPT EL 655.41
VPC STA 303+97.97
VPC EL 655.41
VPI STA 304+05.47
VPI EL 655.38
VPT STA 304+12.97
VPT EL 655.31
-0.97%
VCL = 20'
K = 34
-0.37%
VCL = 15'
K = 23
EXISTING GROUND ELEVATIONS AT ℄ 'WBA'
FINISHED PROFILE ELEVATIONS AT ℄ 'WBA'
STOP PLATFORM
-1.04%
VPC STA 304+84.71
VPC EL 654.56
VPI STA 304+94.71
VPI EL 654.46
VPT STA 305+04.71
VPT EL 654.25
VPC STA 305+04.77
VPC EL 654.25
VPI STA 305+14.77
VPI EL 654.04
VPT STA 305+24.77
VPT EL 653.91
-2.082
VCL = 20'
K = 19
VCL = 20'
K = 26
EXISTING GROUND AT ℄ 'WBA'
-1.31%
FINISHED PROFILE AT ℄ 'WBA'
VPI STA 305+88.72
VPI EL 653.07
PROJECT NO: WK52362008
CITY OF MILWAUKEE
DEPARTMENT OF PUBLIC WORKS
MILWAUKEE STREETCAR
TRACK PLAN & PROFILE
SHEET 35 OF 35
60% SUBMITTAL
SHEET
PRE_418
FILE NAME : 050135_pp.dgn
PLOT DATE : 8/29/2013
PLOT BY : cromansk
PLOT NAME :
PLOT SCALE : 1:40

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