

BUSINESS HWY 50 WEST IMPROVEMENTS - PHASE II

SEC. 1, 2 & 12, T44N, R13W
COLE COUNTY, MISSOURI

PROJECT NO. 2018-301-0
BID DATE: MARCH 12, 2021



SITE LOCATION MAP

BEARING BASE: GPS TIES TO MISSOURI STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE, NAD83.



**CALL BEFORE YOU
DIG - DRILL - BLAST**
1-800-344-7483
(TOLL FREE)

MISSOURI ONE CALL SYSTEM, INC.

UTILITY STATEMENT:

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM VISIBLE FIELD SURVEY INFORMATION AND MISSOURI ONE-CALL MARKINGS IN PUBLIC RIGHT-OF-WAYS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED, ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE AND ONE-CALL MARKINGS. WHERE UTILITY ELEVATIONS ARE SHOWN ON THE PLANS, THE SURVEYOR HAS PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.

UTILITY COMPANIES
AMEREN MISSOURI:
THREE RIVERS ELEC. COOP.:
AMEREN MISSOURI:
CITY OF JEFFERSON:
CENTURYLINK:
MEDIACOM:
SHO-ME TECHNOLOGIES:
SUDDENLINK CENTRAL MO:
SOCKET:
COLE COUNTY PWS #1:
COLE COUNTY PWS #3:

ELECTRIC
ELECTRIC
GAS
SANITARY SEWER
FIBER OPTIC, TELEPHONE
TELEPHONE, TV
FIBER OPTIC, TV
FIBER OPTIC
WATER
WATER

LEGEND

EXISTING (Light or Dashed)	TEL. PEDESTAL	MAIL BOX
PROPOSED (Heavy or Solid)	POWER POLE	PROPERTY CORNER
EASEMENT	GUY WIRE	TREE
CENTERLINE	WATER VALVE	SANITARY MANHOLE
APPROX. EXISTING PROPERTY LINE	FIRE HYDRANT	GAS VALVE
SECTION LINE	WATER METER	LIGHT POLE
FENCE	STREET SIGN	SATELLITE DISH
ELECTRIC LINE	ABBREVIATIONS: E-ELECTRIC, FO-FIBER OPTIC, G-GAS, S-SAN SEWER	
FIBER OPTIC LINE	SC-SIGNAL CABLE, T-TELEPHONE, W-WATER	
GAS LINE	PL-PROPERTY, CL-CENTER, R/W-RIGHT OF WAY	
SAN. SEWER LINE	#-DIAMETER, R-RADIUS	
TELEPHONE LINE	UG-UNDERGROUND, O-OVERHEAD	
WATER LINE		



SHEET INDEX

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PRINTS ISSUED

2/12/21

REVISIONS:

Central Missouri Professional Services, Inc.

ENGINEERING - SURVEYING - MATERIALS TESTING
2500 E. McCARTY - (573) 634-3455
JEFFERSON CITY, MISSOURI 65101 - (573) 634-8898



Central Missouri Professional Services, Inc.
Missouri State Certificate of Authority #01959



Paul Samson, PE - Engineer
MO# PE-2002016730

BUSINESS HWY 50 WEST
IMPROVEMENTS - PHASE II

COLE COUNTY PUBLIC WORKS

BUSINESS HWY 50 WEST
COLE COUNTY, MISSOURI

CMPS JOB No. 10-053

DRN. BY: C.F.B./P.L.S. CRD. BY:

SCALE:

SHEET TITLE

TITLE SHEET

SHEET NUMBER

1

OF 37 SHEETS

APPROVED BY: *Eric Landwehr*
Eric Landwehr, P.E.
County Engineer

Date: 2/12/21

REMOVAL OF IMPROVEMENTS 202-20.10					
CL STATION	OFFSET	LOCATION	QUANTITY	DESCRIPTION	REMARKS
85+34	50' LT.	BUS. 50 W	4.3 LF	3'X2' RCB W/ HEADWALL	
85+34	61' RT.	BUS. 50 W	4.4 LF	3'X2' RCB W/ HEADWALL	
1+00	50' LT.	ROUTE T	1 EA	ADJUST LIGHT POLE BASE ELEV.	
0+84	60' LT.	ROUTE T	1 EA	ADJUST LIGHTING PULLBOX	
0+23	63' RT.	ROUTE D	1 EA	ADJUST LIGHT POLE BASE ELEV.	
BUS. 50 W / ROUTE T / ROUTE D INTERSECTION			9 EA	STREET SIGNS	SALVAGE SIGN SHEETS TO MODOT
BUS. 50 W / ROUTE T / ROUTE D INTERSECTION			330 SY	ASPHALT PAVEMENT	
89+76	26' RT	BUS. 50 W	1 EA	STREET SIGN	SALVAGE SIGN SHEET TO MODOT
91+36	RT	BUS. 50 W	87 SY	CONCRETE DRIVE APPROACH	
92+14	26' RT.	BUS. 50 W	1 EA	STREET SIGN	SALVAGE SIGN SHEET TO COUNTY
93+86	RT	BUS. 50 W	1 EA	STORM INLET	
93+83 TO 95+40	RT	BUS. 50 W	300 SY	CONCRETE DRIVE APPROACH	
94+14	LT	BUS. 50 W	38 LF	12" CMP	
95+41	RT	BUS. 50 W	1 EA	CONC. INLET TOP	SALVAGE TO COUNTY
97+67	RT	BUS. 50 W	58 LF	12" CMP	
97+68	RT	BUS. 50 W	242 SY	CONCRETE DRIVE APPROACH	
99+75	LT	BUS. 50 W	36 LF	12" CMP	
101+75	RT	BUS. 50 W	30 LF	RAILROAD TIES	
102+08	25' LT.	BUS. 50 W	1 EA	STREET SIGN	SALVAGE SIGN SHEET TO COUNTY
103+29	33' LT.	BUS. 50 W	1 EA	STREET SIGN	SALVAGE SIGN SHEET TO COUNTY
103+45	50' LT.	BUS. 50 W	2 EA	TREES	18" CEDAR, 18" ELM
EXIST. RAINBOW DR.			1145 SY	ASPHALT PAVEMENT	REGRADE ROADBED TO DRAIN
WATER TOWER ACCESS RD.			496 SY	AGGREGATE DRIVEWAY	REGRADE ROADBED TO DRAIN
104+66	94' LT.	BUS. 50 W	31 LF	12" CMP	
1+32	39' LT.	RAINBOW DR.	25 LF	12" CMP	
2+36	18' RT	RAINBOW DR.	1 EA	STREET SIGN	SALVAGE SIGN SHEET TO COUNTY
EXIST. RAINBOW DR.			31 SY	ASPHALT PAVEMENT	
EXIST. RAINBOW DR.			33 LF	24" CLAY PIPE W/ CONC. HEADWALLS	
EXIST. RAINBOW DR.			214 LF	CLEARING FOR DITCH GRADING	
SCHULTE PROPERTY			1 EA	30" ELM TREE	
105+04	23' RT	BUS. 50 W	1 EA	STREET SIGN	SALVAGE SIGN SHEET TO COUNTY
106+47	RT & LT	BUS. 50 W	2 EA	CONCRETE HEADWALLS	
110+50	RT	BUS. 50 W	126 SY	CONCRETE DRIVE APPROACH	
113+26	26' LT	BUS. 50 W	7 LF	3'X2' RCB W/ HEADWALL	
113+55	34' RT	BUS. 50 W	3 LF	3'X2' RCB W/ HEADWALL	
113+25	LT	BUS. 50 W	3000 SF	16" TREE & BRUSH CLEARING	
116+32	24' LT	BUS. 50 W	24 LF	12" CMP	
116+58	25' RT	BUS. 50 W	24 LF	12" CMP	
119+00	25' LT.	BUS. 50 W	24 LF	12" CMP	
119+00 TO 121+50	RT	BUS. 50 W	250 LF	FENCE	
120+61	24' RT	BUS. 50 W	4 LF	3'X2' RCB W/ HEADWALL	
120+75	60' RT	BUS. 50 W	38 LF	18" RCP	
120+61	24' LT	BUS. 50 W	5 LF	3'X2' RCB W/ HEADWALL	
120+50 TO 121+25	LT	BUS. 50 W	75 LF	FENCE	
127+00 TO 129+50	RT	BUS. 50 W	250 LF	FENCE	
128+28	40' RT	BUS. 50 W	4 LF	24" RCP W/ HEADWALL	
128+30	65' RT	BUS. 50 W	26 LF	24" RCP	
128+28	30' LT	BUS. 50 W	13 LF	24" RCP W/ HEADWALL	
133+67	24' RT	BUS. 50 W	4 LF	24" RCP W/ HEADWALL	
133+67	22' LT	BUS. 50 W	5 LF	24" RCP W/ HEADWALL	
134+07	RT	BUS. 50 W	155	ASPHALT DRIVEWAY	
134+32	32' RT	BUS. 50 W	1 EA	STREET SIGN	SALVAGE SIGN SHEET TO COUNTY
136+20	30' RT	BUS. 50 W	46 LF	12" CMP	
136+20	RT	BUS. 50 W	75 LF	CONCRETE CURB	
136+41	32' RT	BUS. 50 W	1 EA	STREET SIGN	SALVAGE SIGN SHEET TO COUNTY
136+50 TO 137+50	LT	BUS. 50 W	3400 SF	CLEARING	
137+58	26' RT	BUS. 50 W	10 LF	4'X8" RCB W/ HEADWALL	
137+58	20' LT	BUS. 50 W	10 LF	4'X8" RCB W/ HEADWALL	
137+62	20' LT	BUS. 50 W	1 EA	STREET SIGN	SALVAGE SIGN SHEET TO COUNTY
140+83	22' LT	BUS. 50 W	1 EA	STREET SIGN	SALVAGE SIGN SHEET TO COUNTY
140+90	47' RT	BUS. 50 W	30 LF	RAILING	
140+90	33' RT	BUS. 50 W	4 LF	24" RCP W/ HEADWALL	
140+90	25' LT.	BUS. 50 W	4 LF	24" RCP W/ HEADWALL	
140+90	LT	BUS. 50 W	550 SF	CLEARING	
141+50 TO 144+50	LT	BUS. 50 W	300 LF	CLEARING FOR DITCH GRADING	
146+40	20' RT	BUS. 50 W	62 LF	12" CMP	
147+33	25' RT	BUS. 50 W	20 LF	12" CMP	
148+85 TO 151+49	20' RT	BUS. 50 W	454 LF	GUARDRAIL W/ END TERMINALS	TO BE REUSED
147+67 TO 151+09	20' LT	BUS. 50 W	352 LF	GUARDRAIL W/ END TERMINALS	TO BE REUSED
152+13 TO 153+13	25' RT	BUS. 50 W	54 SY	CONCRETE SIDEWALK	
153+52 TO 155+27	25' RT	BUS. 50 W	96 SY	CONCRETE SIDEWALK	
156+37	25' RT	BUS. 50 W	12 SY	CONCRETE SIDEWALK RAMP	
BID QUANTITY			1	LUMP SUM	

FLOWABLE BACKFILL 621-46.00					
CL STATION	OFFSET	LOCATION	QUANTITY (CY)	DESCRIPTION	REMARKS
92+00 TO 93+86	RT	BUS. 50 W	2.8	12" X 96" PIPE	
93+86 TO 95+40	RT	BUS. 50 W	4.5	12" X 155" PIPE	
110+09 TO 110+98	RT	BUS. 50 W	5.9	18" X 90" PIPE	
137+58	CL	BUS. 50 W	32.6	4'X8'X45' RCB	DEDUCT FOR 24" RCP
140+90	CL	BUS. 50 W	6.8	24'X57' PIPE	
140+90	48' RT	BUS. 50 W	0.5	PLUG END OF 24" PIPE	
BID QUANTITY			52.9	CY	

FENCING 607-20.10					
CL STATION	OFFSET	LOCATION	QUANTITY (LF)	TYPE	REMARKS
118+00 TO 121+50	RT.	BUS. 50 W	250	WOVEN WIRE W/ BARBED WIRE	
120+50 TO 121+25	LT.	BUS. 50 W	75	5 STRAND BARBED WIRE	
127+00 TO 129+50	RT.	BUS. 50 W	250	WOVEN WIRE W/ BARBED WIRE	
BID QUANTITY			575		

REMOVAL OF EXISTING PAVEMENT 202-20.15					
CL STATION	OFFSET	LOCATION	QUANTITY (SY)	DESCRIPTION	REMARKS
89+75 TO 96+50	CL	BUS. 50 W	2333	MAINLINE PAVEMENT	APPROX 8" ASPH. PAVEMENT OVER 10" CONC. PAVEMENT
98+50 TO 113+50	CL	BUS. 50 W	4000	MAINLINE PAVEMENT	
113+50 TO 128+50	CL	BUS. 50 W	4000	MAINLINE PAVEMENT	
128+50 TO 143+50	CL	BUS. 50 W	4000	MAINLINE PAVEMENT	
143+50 TO 151+47	CL	BUS. 50 W	2125	MAINLINE PAVEMENT	
BID QUANTITY			16,458		

EARTHWORK 203-99.01			
LOCATION	EXCAVATION (CY)	FILL (CY)	REMARKS
BUS. 50 W. / ROUTE T&D	50.00	1073.00	
BUS. 50 W.	10,781	13,918	Does not include removal of existing pavement
RAINBOW DR.	388	52	
ENTRANCE STA. 103+50	596	0	
TOTAL	11,795	15,043	
BID QUANTITY 1 LUMP SUM			

EARTHWORK QUANTITIES ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY. THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING GRADING QUANTITIES.

SUBGRADE AND BASE							
STATION TO STATION	LOCATION	LENGTH (STA)	WIDTH (FT)	FURNISH & PLACE 16" ROCK BASE (SY)	SUBGRADE COMPACTION (STA)	4" TYPE 5 AGGR. BASE (SY)	REMARKS
83+97.71	84+97.88	BUS. 50 W. LT.	100.17	9	1.00	100.17	SHOULDER
84+97.88	85+47.88	BUS. 50 W. LT.	50.00	10	0.5	55.56	SHOULDER WIDTH TAPER
NW QUADRANT BUS. 50 / ROUTE T INTERSECTION						67.96	CURB & GUTTER
83+97.71	84+97.88	BUS. 50 W. RT.	100.17	10	1.00	111.3	SHOULDER
84+97.88	85+47.88	BUS. 50 W. RT.	50.00	10.5	0.5	58.33	SHOULDER WIDTH TAPER
SW QUADRANT BUS. 50 / ROUTE T INTERSECTION						97.87	CURB & GUTTER
SE QUADRANT BUS. 50 / ROUTE T INTERSECTION						85.55	CURB & GUTTER
88+45.23	89+75.00	BUS. 50 W. LT	129.77	3.5		50.47	CURB & GUTTER
89+75.00	94+50.00	BUS. 50 W.	475.00	29	1,530.56		
94+50.00	96+50.00	BUS. 50 W.	500.00	29		1,611.11	
99+50.00	105+50.00	BUS. 50 W.	600.00	29	1,933.33		
0+14.50	0+59.56	RAINBOW DR.	45.06		0.45	206.12	INTERSECTION
0+59.56	2+08.60	RAINBOW DR.	149.04	29	1.49	480.24	
2+08.60	2+83.60	RAINBOW DR.	75.00	27.1	0.75	225.83	
PAVEMENT PATCH		RAINBOW DR.	20.00	24		53.33	
105+50.00	108+00.00	BUS. 50 W.	250.00	29	2.50	805.56	
108+00.00	111+00.00	BUS. 50 W.	300.00	29		986.67	
111+00.00	116+50.00	BUS. 50 W.	550.00	29	5.50	1,772.22	
116+50.00	118+50.00	BUS. 50 W.	200.00	29		644.44	
118+50.00	129+50.00	BUS. 50 W.	1100.00	29	11.00	3,544.44	
129+50.00	131+00.00	BUS. 50 W.	150.00	29		483.33	
131+00.00	132+50.00	BUS. 50 W.	150.00	32		533.33	WIDTH TAPER
132+50.00	133+50.00	BUS. 50 W.	100.00	37	1.00	411.11	WIDTH TAPER
133+50.00	135+00.00	BUS. 50 W.	150.00	39	1.50	650.00	
135+00.00	136+50.00	BUS. 50 W.	150.00	39		650.00	
136+50.00	151+47.57	BUS. 50 W.	1497.57	39	14.98	6,489.47	
BID QUANTITY				6,741.7	47.2	16,876.4	
				303-06.00	210-10.06	304-06.04	

CURB & GUTTER						
STATION TO STATION	LOCATION	MODOT TYPE B CURB & GUTTER (LF)	TYPE A CURB & GUTTER (LF)	REMARKS		
85+47.88	87+57.85	BUS. 50 W.	RT	240.89		SW QUADRANT
85+47.88	86+79.06	BUS. 50 W.	LT.	169.83		NW QUADRANT
88+43.57	89+43.65	BUS. 50 W.	RT.	158.29		SE QUADRANT, INCLUDES FLUME
89+43.65	89+75.00	BUS. 50 W.	RT.	31.35		
88+75.00	91+03.93	BUS. 50 W.	RT.		128.93	
88+19.48	89+75.00	BUS. 50 W.	LT.	155.52		INCLUDES FLUME
89+75.00	90+52.18	BUS. 50 W.	LT.		77.18	
91+00.63	93+04.40	BUS. 50 W.	LT.		293.77	
91+70.85	92+65.90	BUS. 50 W.	RT.		95.05	
94+10.76	94+45.86	BUS. 50 W.	RT.		35.10	
94+32.40	95+61.28	BUS. 50 W.	LT.		128.88	
95+53.48	95+62.28	BUS. 50 W.	RT.		8.80	
95+87.28	97+17.19	BUS. 50 W.	RT.		129.91	
95+88.28	98+66.03	BUS. 50 W.	LT.		377.75	
98+18.36	101+45.80	BUS. 50 W.	RT.		327.44	
100+01.03	103+18.00	BUS. 50 W.	LT.		318.97	
102+45.80	103+16.79	BUS. 50 W.	RT.		70.99	
103+73.79	109+65.18	BUS. 50 W.	RT.		591.39	
103+82.00	105+58.27	BUS. 50 W.	LT.		178.27	
0+14.00	1+17.49	RAINBOW DR.	RT.		131.80	
0+14.00	0+24.11	RAINBOW DR.	RT.		27.29	
0+43.16	2+83.60	RAINBOW DR.	RT.		225.19	
1+48.58	2+83.67	RAINBOW DR.	LT.		140.65	
106+57.40	107+32.47	BUS. 50 W.	LT.		75.07	
107+87.47	112+87.50	BUS. 50 W.	LT.		520.03	
111+39.71	112+87.40	BUS. 50 W.	RT.		147.89	
113+07.40	114+25.21	BUS. 50 W.	RT.		117.81	
113+07.50	114+25.21	BUS. 50 W.	LT.		117.71	
114+50.21	116+38.00	BUS. 50 W.	RT.		185.79	
114+50.21	116+12.99	BUS. 50 W.	LT.		162.78	
116+52.99	118+77.94	BUS. 50 W.	LT.		224.95	
116+82.00	118+66.00	BUS. 50 W.				

BITUMINOUS PAVEMENT AND BASE (PG64-22)									
STATION TO STATION	LOCATION	LENGTH (FT)	1 1/2" BITUMINOUS PAVEMENT		4 1/2" BITUMINOUS BASE		3" BITUMINOUS BASE		REMARKS
			WIDTH (FT)	AREA (SY)	WIDTH (FT)	AREA (SY)	WIDTH (FT)	AREA (SY)	
83+97.71	84+97.88	BUS. 50 W.	100.17	20	222.6				OVERLAY
83+97.71	84+97.88	BUS. 50 W. RT. SHOULDER	100.17	9.5	105.74	8.5	94.605		SHOULDER W/ BASE WIDENING
83+97.71	84+97.88	BUS. 50 W. LT. SHOULDER	100.17	9.5	105.74	8.5	94.605		SHOULDER W/ BASE WIDENING
84+97.88	85+47.88	BUS. 50 W.	50.00	21.5	119.44				OVERLAY 20' TO 23' WIDTH TRANSITION
84+97.88	85+47.88	BUS. 50 W. RT. SHOULDER	50.00	10.25	56.94	10	55.56		8.5' TO 11' SHLDR. WIDTH TRANSITION
84+97.88	85+47.88	BUS. 50 W. LT. SHOULDER	50.00	10.25	56.94	10	55.56		8.5' TO 11' SHLDR. WIDTH TRANSITION
85+47.88	88+75.00	BUS. 50 W.	VARIES		3111.24				OVERLAY -INCLUDES ROUTE T & ROUTE
89+75.00	131+00.00	BUS. 50 W.	4125.00	23.00	10541.67	23.00	10541.67	28.00	13291.67
131+00.00	133+50.00	BUS. 50 W.	250.00	28.00	777.78	28.00	777.78	34.00	944.44
133+50.00	151+47.57	BUS. 50 W.	1797.57	33.00	8591.09	33.00	8591.09	39.00	7789.47
0+11.50	0+59.56	RAINBOW DR			194.53		194.53		206.12
0+59.56	2+08.60	RAINBOW DR	149.04	23.00	380.88	23.00	380.88	28.00	480.24
2+08.60	2+83.60	RAINBOW DR	75.00	21.10	175.83	21.10	175.83	24.20	201.67
PAVEMENT PATCH	RAINBOW DR		20.00	24.00	53.33	24.00	53.33		
BID QUANTITY			22,493.8		19,015.4		22,913.6		
			401-12.02		401-12.01		401-12.00		

STANDARD SIGN ASSEMBLIES													
SIGN NO.	STATION	OFFSET	LOCATION	FLAT SHEET SIGNS - DESCRIPTION, SIZES AND NUMBER OF EACH						PERF. SQUARE STEEL TUBE		36" SURFACE MOUNT DELINEATOR POST (WHITE) EACH	
				STOP R1-1 36"x36"	ALL WAY R1-3P 18"x36"	YIELD R1-2 48"x48"	DO NOT ENTER R5-1 30"x30"	STATE MAINTENANCE ENDS M19-2 18"x12"	STREET NAME W D3-1c 30"x6"	STREET NAME W D3-1c 30"x12"	2"x2" (12 Ga.) POSTS LIN. FT.		2.5"x2.5"x36" ANCHOR (12 Ga.) EACH
1	87+30.00	16' RT.	BUS. 50 W.	1	1					11.50	1		
2	0+53.00	37' RT.	ROUTE D			1	1			11.83	1		
3	0+38.00	16' LT.	ROUTE D	1	1				1	11.00	1		
4	88+77.00	41' RT.	BUS. 50 W.			1	1			10.66	1		
5	89+75.00	15.5' RT.	BUS. 50 W.					1		7.63	1		
6	88+13.00	21' LT.	BUS. 50 W.	1	1					12.21	1		
7	0+35.00	17.3' RT.	ROUTE T	1	1				1	11.00	1		
8	86+55.00	42' LT.	BUS. 50 W.			1	1			12.00	1		
9	85+48.00	24.5' LT	BUS. 50 W.					1		9.17	1		
NW QUADRANT BUS. 50 W/ROUTE T												3	
SW QUADRANT BUS. 50 W/ROUTE D												3	
SE QUADRANT BUS. 50 W/ROUTE T												3	
TOTALS				4	4	3	3	2	2	2		9	
SIGN AREA-EACH (SF)				9.00	0.75	6.00	6.25	1.50	1.25	2.50			
TOTAL SIGN AREA (SF)				36.00	3.00	24.00	18.75	3.00	2.50	5.00			
BID QUANTITY								92.25 SF		97.20	9	9	
								903-50.04		903-12.70	903-12.71	903-60.10	

DITCH LINERS							
STATION TO STATION	LOCATION	C125 EROSION CONTROL BLANKET (SY)	TURF REINFORCEMENT MAT		SCOUR PROTECTION MAT (SF)	ROCK LINING (CY)	REMARKS
			SC250 (SY)	P550 (SY)			
85+16	BUS. 50 W. RT			21.33	192		ANCHOR PATTERN H
0+35	1+15	ENTR. 103+50	53.33				ANCHOR PATTERN D
0+25	1+15	ENTR. 103+50	60.00				ANCHOR PATTERN D
106+55	BUS. 50 W. RT		8.89		80		ANCHOR PATTERN F
107+67	112+92	BUS. 50 W. LT	466.67				ANCHOR PATTERN D
112+92	113+70	BUS. 50 W. LT				117.00	
113+67	BUS. 50 W. RT					26.40	
114+37	BUS. 50 W. LT		7.00		48		ANCHOR PATTERN F
120+83	BUS. 50 W. LT		7.00		48		ANCHOR PATTERN F
120+87	BUS. 50 W. RT			21.33	192		ANCHOR PATTERN F
128+39	BUS. 50 W. RT			10.67	96		ANCHOR PATTERN F
132+82	BUS. 50 W. RT		10.67		96		ANCHOR PATTERN F
135+35	137+55	BUS. 50 W. LT	195.56				ANCHOR PATTERN D
137+80	BUS. 50 W. RT			10.67	96		ANCHOR PATTERN F
138+15	141+00	BUS. 50 W. LT	253.33				ANCHOR PATTERN D
139+71	BUS. 50 W. LT		3.56		32		ANCHOR PATTERN D
141+63	148+00	BUS. 50 W. LT				302.00	
148+61	BUS. 50 W. RT		3.56		32		ANCHOR PATTERN H
	BUS. 50 W.		3.56		32		ANCHOR PATTERN H
BID QUANTITY			1,028.9	44.2	64.0	944.0	446.4
			806-41.10	806-41.20	804-41.21	806-99.01	609-70.00

8" CONCRETE MEDIAN STRIP 608-30.08	
LOCATION	QUANTITY (SY)
BUS. 50 W. / ROUTE T INTERSECTION NW QUAD.	125.0
BUS. 50 W. / ROUTE T INTERSECTION SW QUAD.	62.8
BUS. 50 W. / ROUTE T INTERSECTION SE QUAD.	127.4
BID QUANTITY	315.2

SEGMENTAL BLOCK RETAINING WALL 720-10.00	
LOCATION	QUANTITY (SF)
RETAINING WALL #1	2,020
RETAINING WALL #2	1,654
BID QUANTITY	3,674

SEED & MULCH 805-10.00				
STATION TO STATION	LOCATION			SEED & MULCH (AC)
83+98	86+82	BUS. 50 W. LT		0.13
83+98	87+93	BUS. 50 W. RT		0.23
87+38	97+50	BUS. 50 W. LT		0.18
88+47	97+50	BUS. 50 W. RT		0.30
87+50	108+00	BUS. 50 W. LT		0.50
0+50	2+12	ENTR. 103+50		0.09
0+30	2+84	RAINBOW DR.		0.12
DITCH GRADING				0.06
97+50	108+00	BUS. 50 W. RT		0.57
109+00	123+50	BUS. 50 W. LT		0.59
SCHULTE PROPERTY				0.31
109+00	123+50	BUS. 50 W. RT		0.70
123+50	137+50	BUS. 50 W. LT		0.56
123+50	137+50	BUS. 50 W. RT		0.70
137+50	151+50	BUS. 50 W. LT		0.55
137+50	151+50	BUS. 50 W. RT		0.83
151+50	156+50	BUS. 50 W. RT		0.06
TOTAL ESTIMATED QUANTITY				6.48
BID QUANTITY				1 LS

TEMPORARY SEED & MULCH 806-10.00	
STATION TO STATION	QUANTITY (AC)
	2.0

APPROACHES & DRIVES						
CL STATION	OFFSET	DRIVE WIDTH	DRIVE LENGTH	8" CONCRETE COMMERCIAL APPROACH (SY)	6" AGGREGATE DRIVE (SY)	REMARKS
80+73.75	LT	24	23'	58.14	54.64	
91+37.40	RT	27		94.10		
93+68.64	RT			18.84		CURBS ONLY
94+13.40	LT	16	18	35.32	31.81	
94+77.88	RT	24		123.55		
95+12.72	RT	22		178.91		
97+69.42	RT	37.7		248.57		INCLUDES FLUME
99+83.53	LT	15	6	31.16	15.95	
101+95.80	RT	40	28	204.03	124.44	
103+45.28	RT	27	27	71.58	81.00	
103+50.00	LT	20	200	90.19	495.33	
1+33.03	LT	16	26	29.58	46.22	RAINBOW DR.
107+50.00	LT	15	14	31.16	23.33	
110+50.88	RT	95'		133.72		
116+26.42	LT	15	14	37.70	21.69	
116+60.00	RT	16	5	49.90	7.61	
118+88.50	RT	15	26	48.23	43.33	
118+96.97	LT	18	15	35.32	30.00	
130+55.00	LT	18	15	35.55	30.00	
131+00.00	RT	13	11	48.25	15.66	
131+59.83	RT	28	10	72.82	32.38	
134+06.53	RT	36	12	151.34	43.69	
134+56.35	RT	18		97.36		
134+42.00	LT	18	10	35.55	20.00	
136+17.66	RT	37	22	154.44	86.15	
137+90.74	LT	24	23	43.89	58.67	
141+15.84	LT	12	21	35.44	34.16	
141+62.48	RT	60	27	226.91	180.00	
142+25-144+37	RT.	12	212		282.67	RETAINING WALL
145+08.00	RT	16	28	50.17	49.78	
146+30.48	RT	41	21	51.82	66.80	
146+57.98	RT	16	21	51.82	50.75	
151+20.02	LT	24	15	43.66	36.95	
TOTAL				2,619.1	1,983.3	
				608-50.08	310-07.03	

ADDITIONAL 6" AGGREGATE DRIVE 310-07.04	
STATION TO STATION	QUANTITY (SY)
	175.0

ADDITIONAL 8" CONCRETE APPROACH 608-50.09	
STATION TO STATION	QUANTITY (SY)
	250.0

TEMPORARY AGGREGATE SURFACE 104-10.00	
STATION TO STATION	QUANTITY (SY)
	3,000.0

SIDEWALKS									
STATION TO STATION	LOCATION	LENGTH	WIDTH	4" THICK CONCRETE SIDEWALK (SY)	6" THICK CONCRETE SIDEWALK RAMP (SY)	TRUNCATED DOME PANELS (SF)	REMARKS		
85+47.88	85+55.88	BUS. 50 W. RT.				7.11	16.00		ADA RAMP
85+47.88	85+55.88	BUS. 50 W. LT.				7.11	16.00		ADA RAMP
85+55.88	87+22.04	BUS. 50 W. RT.	166.16	8.0	148.31				CALCULATED AREA
87+22.04	87+34.71	BUS. 50 W. RT.				13.89	16.00		ADA RAMP
85+55.88	86+67.29	BUS. 50 W. LT.	111.42	8.0	100.91				CALCULATED AREA
88+64.97	86+75.08	BUS. 50 W. LT.				13.42	16.00		ADA RAMP
BUS. 50 W. / ROUTE T INTERSECTION NW					36.97				32.00
BUS. 50 W. / ROUTE T INTERSECTION SW					18.81				48.00
BUS. 50 W. / ROUTE T INTERSECTION SE					36.20				16.00
88+51.19	88+73.40	BUS. 50 W. RT.				23.25	16.00		ADA RAMP
88+73.40	91+08.46	BUS. 50 W. RT.	235.06	8.0	214.06				CALCULATED AREA
91+08.46	91+22.42	BUS. 50 W. RT.				10.45			ADA RAMP
91+52.28	91+65.34	BUS. 50 W. RT.				9.50			ADA RAMP
91+65.34	92+70.39	BUS. 50 W. RT.	105.05	8.0	83.38				ADA RAMP
92+70.39	92+89.30	BUS. 50 W. RT.				14.45			ADA RAMP
93+84.72	94+00.01	BUS. 50 W. RT.				11.09			ADA RAMP
94+00.01	94+46.52	BUS. 50 W. RT.	46.51	8.0	41.34				ADA RAMP
94+46.52	94+64.84	BUS. 50 W. RT.				15.53			ADA RAMP
95+29.11	95+45.40	BUS. 50 W. RT.				11.14			ADA RAMP
95+45.40	97+24.27	BUS. 50 W. RT.	178.87	8.0	159.00				ADA RAMP
97+24.27	97+41.56	BUS. 50 W. RT.				12.21			ADA RAMP
97+94.00	98+13.29	BUS. 50 W. RT.				14.27			ADA RAMP
98+13.29	101+52.88	BUS. 50 W. RT.	339.59	8.0	301.86				ADA RAMP
101+52.88	101+70.17	BUS. 50 W. RT.				12.21			ADA RAMP
102+21.44	102+38.73	BUS. 50 W. RT.				12.21			ADA RAMP
102+38.73	103+17.79	BUS. 50 W. RT.	79.06	8.0	70.26				ADA RAMP
103+17.79	103+31.58	BUS. 50 W. RT.				11.82			ADA RAMP
103+59.01</									

STORM DRAINAGE INLETS											
STRUCTURE	LOCATION	MODOT TYPE T	TYPE A / AD INLETS			AREA INLETS		JUNCTION BOXES		REMARKS	
			INLET 2.5' X 3' (EA)	4' X 3' (EA)	6' X 3' (EA)	3' X 3' (EA)	4' X 4' (EA)	3' X 3' (EA)	4' X 4' (EA)		
I-1a	85+64.62 - 16.00' LT.	BUS. 50 W.	1								
I-1b	85+33.78 - 52.64' LT.	BUS. 50 W.				1				NEENAH R3438-A GRATE IN PRECAST LID	
I-2a	85+64.62 - 16.00' RT.	BUS. 50 W.	1								
J-2b	85+33.46 - 62.02' RT.	BUS. 50 W.						1			
I-3	85+74.78 - 16.50' RT.	BUS. 50 W.		1							
I-4	95+41.67 - 32.78' RT.	BUS. 50 W.				1				REMOVE TOP AND SIDE OPENINGS, CAST NEW TOP	
I-5	85+74.78 - 16.50' LT.	BUS. 50 W.			1					CONSTRUCT OVER EXISTING 24" RCP	
I-7	106+30.19 - 31.34' LT.	BUS. 50 W.		1							
J-8	106+46.74 - 24.47' LT.	BUS. 50 W.						1			
I-9	113+00.00 - 16.50' LT.	BUS. 50 W.		1							
I-10	114+37.71 - 16.50' LT.	BUS. 50 W.		1							
I-12	112+99.90 - 16.50' RT.	BUS. 50 W.		1							
I-13	114+37.71 - 16.50' RT.	BUS. 50 W.		1							
J-14	113+54.90 - 33.94' RT.	BUS. 50 W.						1			
I-15	121+02.64 - 16.50' LT.	BUS. 50 W.		1							
I-17	121+02.64 - 16.50' RT.	BUS. 50 W.		1							
J-18	120+61.75 - 32.97' RT.	BUS. 50 W.							1		
I-19	129+70.00 - 16.50' LT.	BUS. 50 W.		1							
J-22	128+28.16 - 23.18' LT.	BUS. 50 W.							1		
I-20	128+50.00 - 16.50' RT.	BUS. 50 W.		1							
J-23	128+28.11 - 40.84' RT.	BUS. 50 W.							1		
J-25	128+28.16 - 23.18' LT.	BUS. 50 W.							1		
J-25	133+67.26 - 24.32' RT.	BUS. 50 W.						1		WITH NEENAH R-1555 MH FRAME AND LID	
I-26	139+50.00 - 21.50' LT.	BUS. 50 W.		1							
I-28	148+50.00 - 21.50' LT.	BUS. 50 W.		1							
I-29	148+50.00 - 21.50' RT.	BUS. 50 W.		1							
BID QUANTITY			2	13	1	1	1	2	6		
			731-00.10	731-10.10	731-10.20	731-20.10	731-20.20	731-30.10	731-30.20		

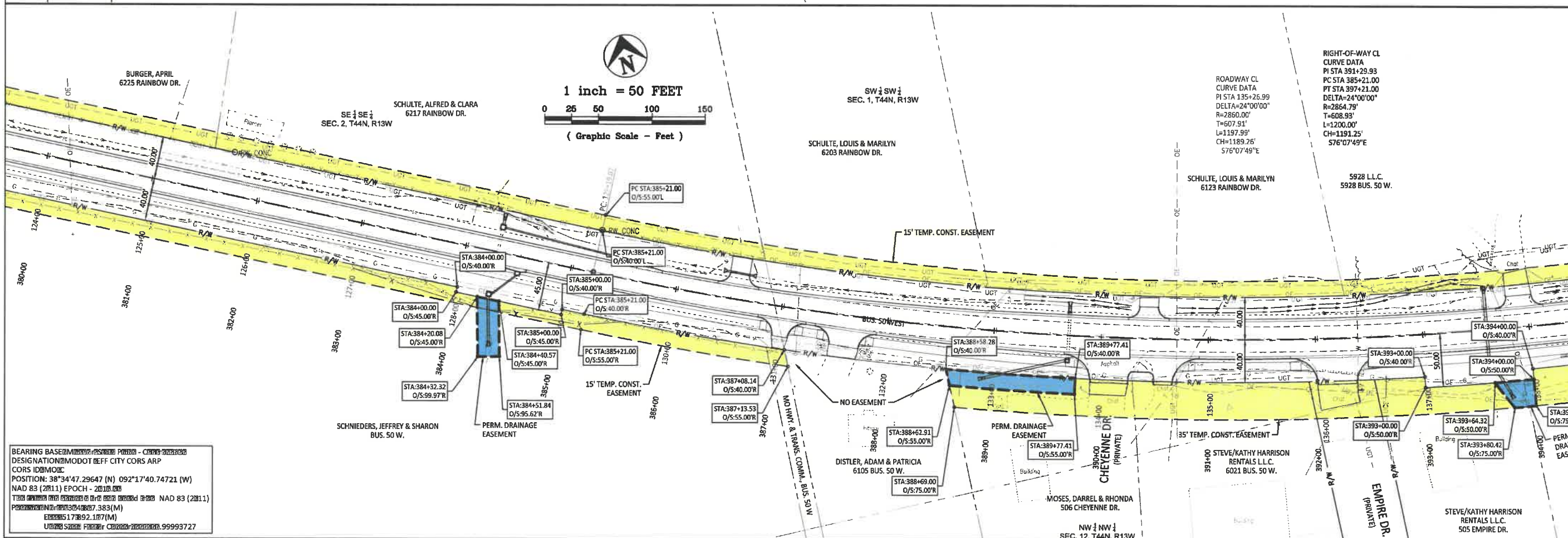
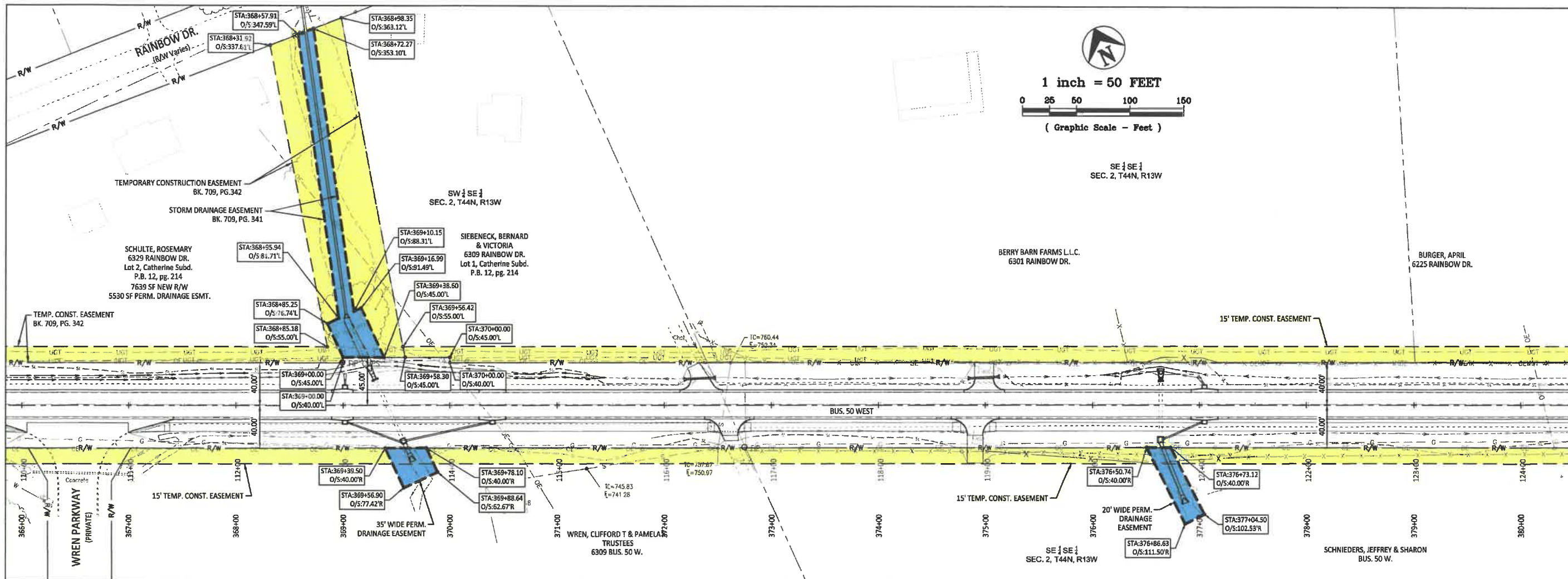
STORM DRAINAGE PIPES																
STRUCTURE TO STRUCTURE	LOCATION	CONCRETE PIPE ANCHOR (EA)	TYPE C PIPE COLLAR (EA)	ALUMINIZED CORRUGATED METAL PIPE			CL III REINFORCED CONCRETE PIPE			CMP FLARED END SECTIONS			REINFORCED CONCRETE FLARED END SECTIONS			REMARKS
				15" (16 GA) (LF)	18" (16 GA) (LP)	24" (16 GA) (LP)	15" (LF)	24" (LF)	36" (LP)	15" (EA)	18" (EA)	24" (EA)	15" (EA)	24" (EA)	36" (EA)	
I-1a TO I-1b	BUS. 50 W. - LT.	2					45.28									
I-2a TO J-2b	BUS. 50 W. - RT.	2				62.72										
J-2b TO OUT	BUS. 50 W. - RT.							4.00							1	
C-1	84+13.40 BUS. 50 W. - LT.			40.00						2						ENTRANCE PIPE
C-2	97+68 BUS. 50 W. - RT.				85.00						2					ENTRANCE PIPE
I-3 TO I-4	BUS. 50 W. - RT.						33.60									
C-3	99+80 BUS. 50 W. - LT.			30.00						2						ENTRANCE PIPE
C-4	103+51 BUS. 50 W. - LT.			38.00						2						ENTRANCE PIPE
C-5	1+34 RAINBOW DR. - LT.			30.00						2						ENTRANCE PIPE
I-6 TO I-7	BUS. 50 W. - LT.						49.00					1				
I-7 TO J-8	BUS. 50 W. - LT.						14.50									
EXIST. TO OUT	BUS. 50 W. - RT.		1					16.00					1			
C-6	107+50 BUS. 50 W. - LT.			30.00						2						ENTRANCE PIPE
C-7	BUS. 50 W. - LT.					316.00					2					
I-9 TO OUT	BUS. 50 W. - LT.						5.00					1				
I-10 TO OUT	BUS. 50 W. - LT.						5.00					1				
I-12 TO J-14	BUS. 50 W. - RT.						54.86									
I-13 TO J-14	BUS. 50 W. - RT.						80.56									
I-11 TO EXST.	BUS. 50 W. - LT.		1						6.00						1	
J-14 TO OUT	BUS. 50 W. - RT.							11.00							1	
C-8	116+32 BUS. 50 W. - LT.			25.00						2						ENTRANCE PIPE
C-9	118+97 BUS. 50 W. - LT.			25.00						2						ENTRANCE PIPE
I-15 TO OUT	BUS. 50 W. - LT.						4.00					1				
I-17 TO J-18	BUS. 50 W. - RT.						39.94									
I-16 TO EXST.	BUS. 50 W. - LT.		1						3.00						1	
J-18 TO OUT	BUS. 50 W. - RT.							53.69							1	
I-19 TO J-22	BUS. 50 W. - LT.						137.69									
I-20 TO J-23	BUS. 50 W. - RT.						30.28									
I-21 TO J-22	BUS. 50 W. - LT.								5.00					1		
J-23 TO OUT	BUS. 50 W. - RT.								41.00					1		
C-10	130+55 BUS. 50 W. - LT.			25.00						2						ENTRANCE PIPE
I-24 TO EXST.	BUS. 50 W. - LT.		1						4.00					1		
J-25 TO OUT	BUS. 50 W. - RT.								77.03					1		
C-11	BUS. 50 W.								99.60					2		INSTALL THROUGH EXST. BOX INCLUDES FITTINGS
I-26 TO OUT	BUS. 50 W. - LT.						12.89					1				
C-12	BUS. 50 W. - LT.								52.43					2		ENTRANCE PIPE
I-28 TO OUT	BUS. 50 W. - LT.		1				21.62					1				
I-29 TO OUT	BUS. 50 W. - RT.		1				32.72					1				
BID QUANTITY		6	4	218.0	90.0	316.0	620.3	295.1	77.7	14	4	2	7	9	5	
		604-10.10	604-10.13	725-03.15	725-03.18	725-03.24	726-10.15	726-10.24	726-10.36	732-00.15	732-00.18	732-00.24	732-06.15	732-06.24	732-06.36	

PAVEMENT MARKING													
STATION TO STATION	OFFSET	LOCATION	ACRYLIC WATERBORNE PAINT				PREFORMED MARKING TAPE, TYPE 2					REMARKS	
			4" SOLID WHITE (LF)	4" SOLID YELLOW (LF)	4" INT. YELLOW (LF)	6" SOLID WHITE (LF)	6" WHITE CROSSWALK (LF)	24" YELLOW HATCH (LF)	24" WHITE STOP BAR (LF)	WHITE TURN ARROWS (EA)	WHITE BIKE/ PED. SYMBOL (EA)		
83+98	84+98	LT.	BUS. 50 W.				100						BIKE/PED EDGE LINE
83+98	85+48	LT.	BUS. 50 W.				150						BIKE/PED EDGE LINE
84+95		LT.	BUS. 50 W.										
83+98	84+98	RT.	BUS. 50 W.				100						BIKE/PED EDGE LINE
83+98	85+48	RT.	BUS. 50 W.				150						BIKE/PED EDGE LINE
84+95		RT.	BUS. 50 W.										
83+98	87+27	C/L	BUS. 50 W.		658								DOUBLE SOLID YELLOW
NW QUADRANT			BUS. 50 W. / ROUTE T	212									ISLAND EDGE LINE
NW QUADRANT			BUS. 50 W. / ROUTE T					58					RT. TURN LANE CROSS WALK EDGELINES
0+98	1+07	LT.	ROUTE T	9									LANE LINE
0+89	1+22	LT.	ROUTE T	33									EDGE LINE
87+27		RT.	BUS. 50 W.							12.0			STOP BAR
87+32			BUS. 50 W.					30					CROSS WALK EDGE LINE
87+41			BUS. 50 W.					30					CROSS WALK EDGE LINE
SW QUADRANT			BUS. 50 W. / ROUTE D					40					RT. TURN LANE CROSS WALK EDGELINES
SW QUADRANT			BUS. 50 W. / ROUTE D	140									ISLAND EDGE LINE
0+75	1+24	RT.	ROUTE D	50									EDGE LINE
0+19			ROUTE D					31					CROSS WALK EDGE LINE
0+28			ROUTE D					31					CROSS WALK EDGE LINE
0+38	1+24	C/L	ROUTE D		172								DOUBLE SOLID YELLOW
0+38			ROUTE D										
0+82	1+24	LT.	ROUTE D	32						12			STOP BAR
0+82	1+52	LT.	ROUTE D	88									LANE LINE
SE QUADRANT			BUS. 50 W. / ROUTE T	204									EDGE LINE
SE QUADRANT			BUS. 50 W. / ROUTE T					66					ISLAND EDGE LINE
0+35			RTE. T								12		RT. TURN LANE CROSS WALK EDGELINES
0+35	1+07		RTE. T		144								STOP BAR
88+26	1+07		BUS. 50 W/ROUTE T	140									DOUBLE SOLID YELLOW
88+13			BUS. 50 W.								12		EDGE LINE
88+13	131+23	C/L	BUS. 50 W.		8620								STOP BAR
0+32			RAINBOW DR.								15		DOUBLE SOLID YELLOW
0+32	2+85		RAINBOW DR.										STOP BAR
131+23	133+50	LT.	BUS. 50 W.		506								DOUBLE SOLID YELLOW
131+23	133+50	RT.	BUS. 50 W.		454								DOUBLE SOLID YELLOW
131+23	133+50	C/L	BUS. 50 W.		454						59		DOUBLE SOLID YELLOW
133+50	151+75	LT.	BUS. 50 W.		1825	456							45° HATCH
133+50	151+75	RT.	BUS. 50 W.		1825	456							TWL TL EDGE LINE
135+00		C/L	BUS. 50 W.								2		TWL TL EDGE LINE
140+00		C/L	BUS. 50 W.								2		1-LT & 1-RT TURN ARROW
145+00		C/L	BUS. 50 W.								2		1-LT & 1-RT TURN ARROW
150+00		C/L	BUS. 50 W.								2		1-LT & 1-RT TURN ARROW
BID QUANTITY				886	14,658	913	500	286	59	63	8	4	
				620-60.01	620-60.02	620-60.03	620-60.04	620-00.01	620-00.02	620-00.03	620-00.04	620-00.05	

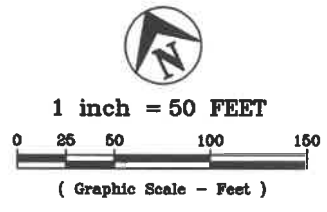
LUMP SUM ITEMS		
ITEM	QUANTITY (LS)	BID ITEM NO.
MOBILIZATION	1	618-10.00
CONSTRUCTION PHASING & TRAFFIC MANAGEMENT	1	616-10.00
TEMPORARY EROSION CONTROL	1	806-20.00
PRE-ENGINEERED PEDESTRIAN BRIDGE	1	703-10.00
TEMPORARY PAVEMENT MARKING	1	620-60.63
CONSTRUCTION STAKING	1	627-40.00

CLASS 3 EXCAVATION IN ROCK 206-31.00	
BID QUANTITY (CY)	50.0

GUARDRAIL & HANDRAIL					
STATION TO STATION	LOCATION	TYPE A GUARDRAIL (LF)	REPLACE EXIST. TYPE A GUARDRAIL (LF)	PEDESTRIAN HANDRAIL 4" RAIL SPACING (LF)	REMARKS
142+25.00	144+40.00	BUS. 50 W. RT.	215.00		
142+25.00	144+98.00	BUS. 50 W. RT.		273	RETAINING WALL #2
146+95.00	151+49.00				



BEARING BASE: NAD 83 (2011) EPOCH - 2011.00
 DESIGNATION: MODOT BEFF CITY CORS ARP
 CORS ID: MODOT
 POSITION: 38°34'47.29647 (N) 092°17'40.74721 (W)
 NAD 83 (2011) EPOCH - 2011.00
 TRANSFORMED TO: NAD 83 (2011)
 EPOCH: 2011.00
 UTM ZONE: 17QUR
 UTM EASTING: 609993.727



PRINTS ISSUED
2/4/21
REVISIONS:

Central Missouri Professional Services, Inc.
 ENGINEERING - SURVEYING - MATERIALS TESTING
 2500 E. McCARTY
 JEFFERSON CITY, MISSOURI 65101
 (573) 634-3655
 (573) 634-8888

Pa [] Sa [] PE - E [] Mbr
 MOPE-200201 [] 30

**BUSINESS HWY 50 WEST
 IMPROVEMENTS - PHASE 2**
 COLE COUNTY PUBLIC WORKS

**RIGHT-OF-WAY
 PLAN**

CMPS JOB No. 10-053
 DRN. BY: C.F.B./P.L.S. CRD. BY:

SCALE: 1" = 50'

SHEET TITLE
**RIGHT-OF-WAY
 PLAN**

SHEET NUMBER
6
 OF 37 SHEETS



1 inch = 50 FEET



(Graphic Scale - Feet)

5928 L.L.C.
5928 BUS. 50 W.
SW 1/4 SW 1/4
SEC. 1, T44N, R13W

HAMBURG, MANDY S.
MILLER, TERRY J.
5918 BUS. 50 W.

MILLER, TERRY J.
& CLIFFORD D.
5922 BUS. 50 W.

SE 1/4 SW 1/4
SEC. 1, T44N, R13W

CITY OF JEFFERSON
RAINBOW DR.
(BINDER PARK)

CITY OF JEFFERSON
RAINBOW DR.
(BINDER PARK)

NW 1/4 NW 1/4
SEC. 12, T44N, R13W

NE 1/4 NW 1/4
SEC. 12, T44N, R13W

BEE SEEN SIGNS, INC.
507 BABE RUTH DR.

PRINTS ISSUED
2/1/21

REVISIONS:

Central Missouri Professional Services, Inc.
ENGINEERING - SURVEYING - MATERIALS TESTING
2500 E. McCARTY
JEFFERSON CITY, MISSOURI 65101
(573) 634-3655
(573) 634-8989



Central Missouri Professional Services, Inc.
Missouri State Certificate of Authority #001658

Plan Scale: PE - ERT/MEER
MODPE-2002010080

BUSINESS HWY 50 WEST IMPROVEMENTS - PHASE 2 COLE COUNTY PUBLIC WORKS

BUSINESS HWY 50 WEST
COLE COUNTY, MISSOURI

CMPJ JOB No. 10-053

DRN. BY: C.F.B./P.L.S. CKD. BY:

SCALE: 1" = 50'

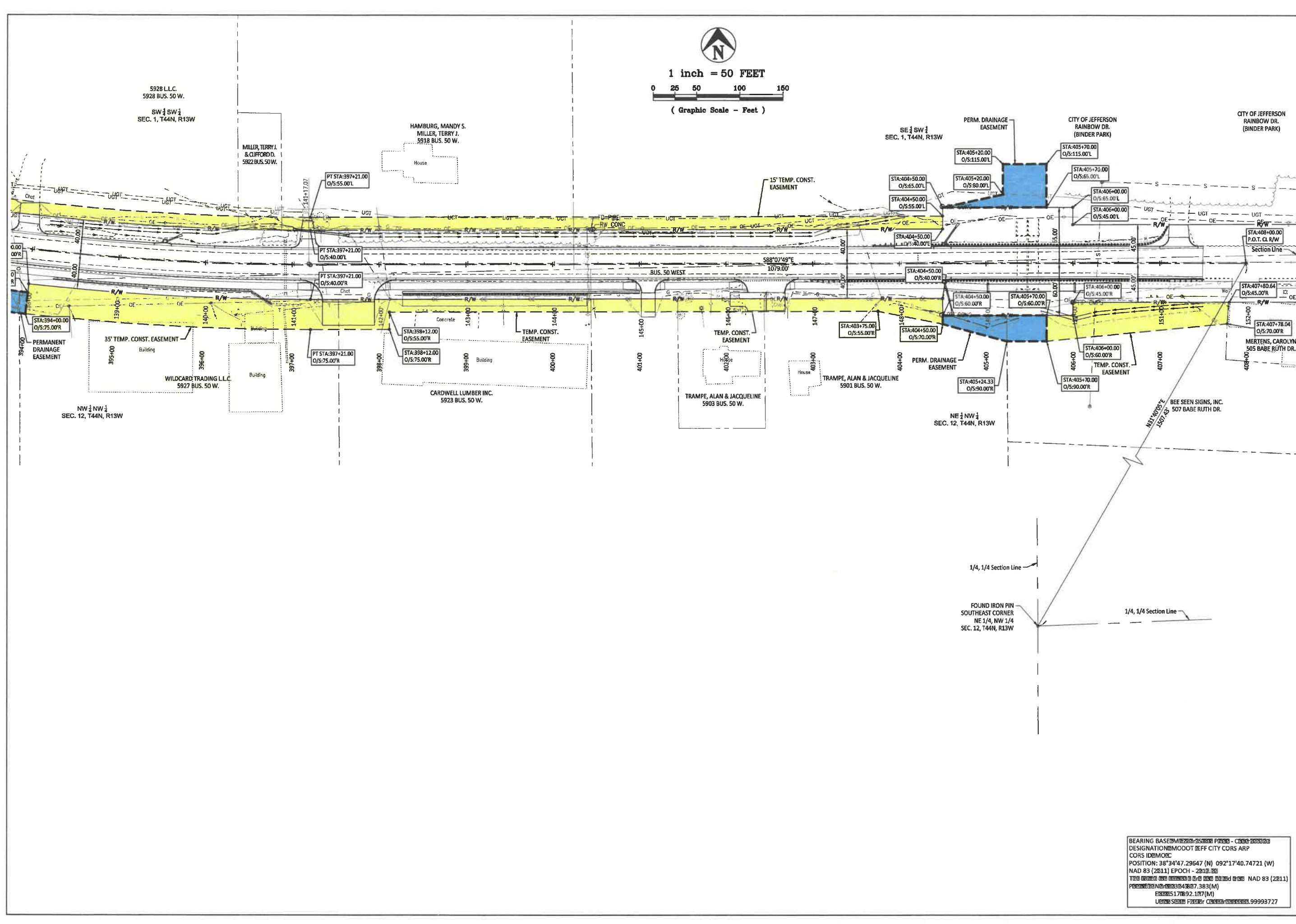
SHEET TITLE
**RIGHT-OF-WAY
PLAN**

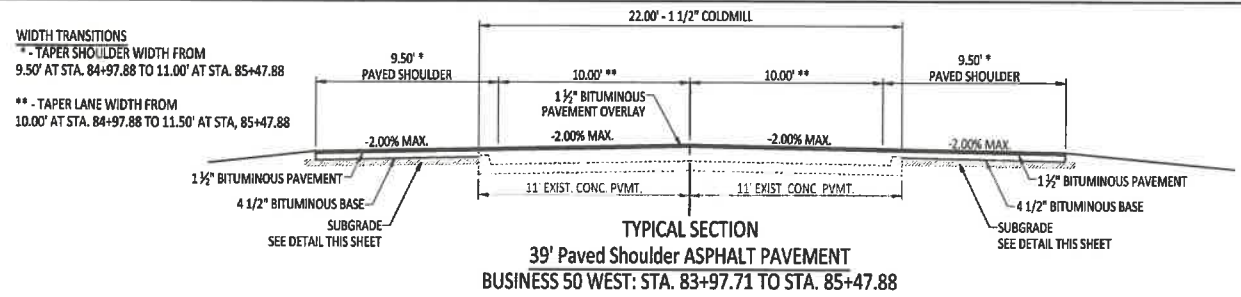
SHEET NUMBER

7

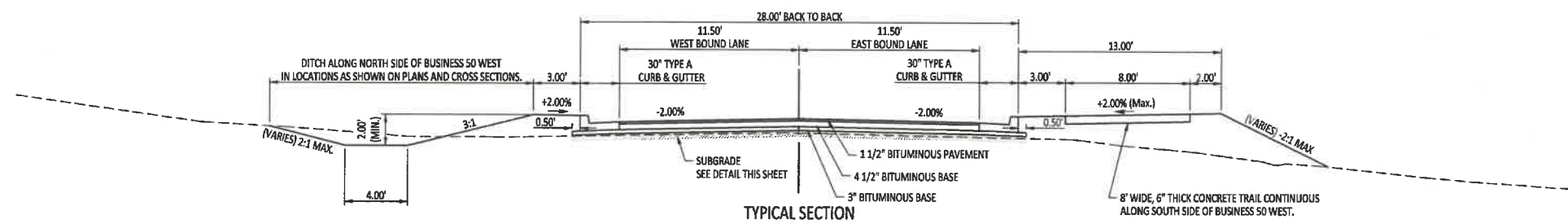
OF 37 SHEETS

BEARING BASELINE
DESIGNATION: MODOT OFF CITY CORNERS
POSITION: 38°34'47.29647 (N) 092°17'40.74721 (W)
NAD 83 (2011) EPOCH - 2011.00
EPOCH 517092.117 (M)
UTM Zone 17T UTM Easting: 999993.727



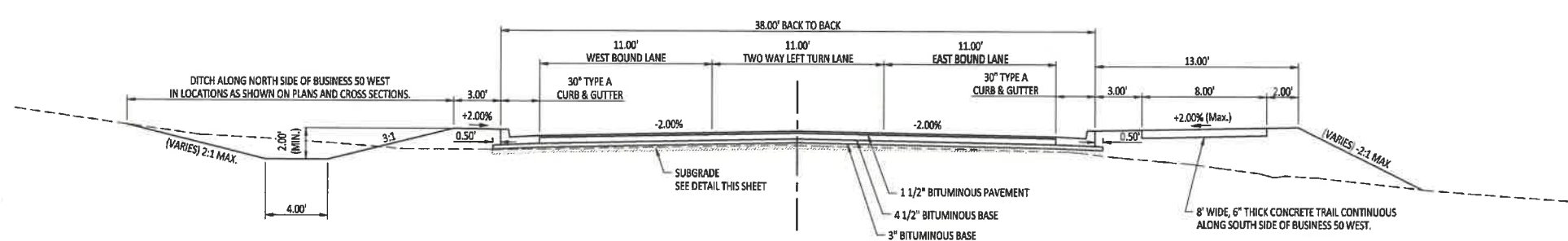


TYPICAL SECTION
39' Paved Shoulder ASPHALT PAVEMENT
 BUSINESS 50 WEST: STA. 83+97.71 TO STA. 85+47.88
 BUSINESS 50 WEST: STA. 85+47.88 TO STA. 89+75.00
 SEE INTERSECTION DETAIL ON SHEET 18

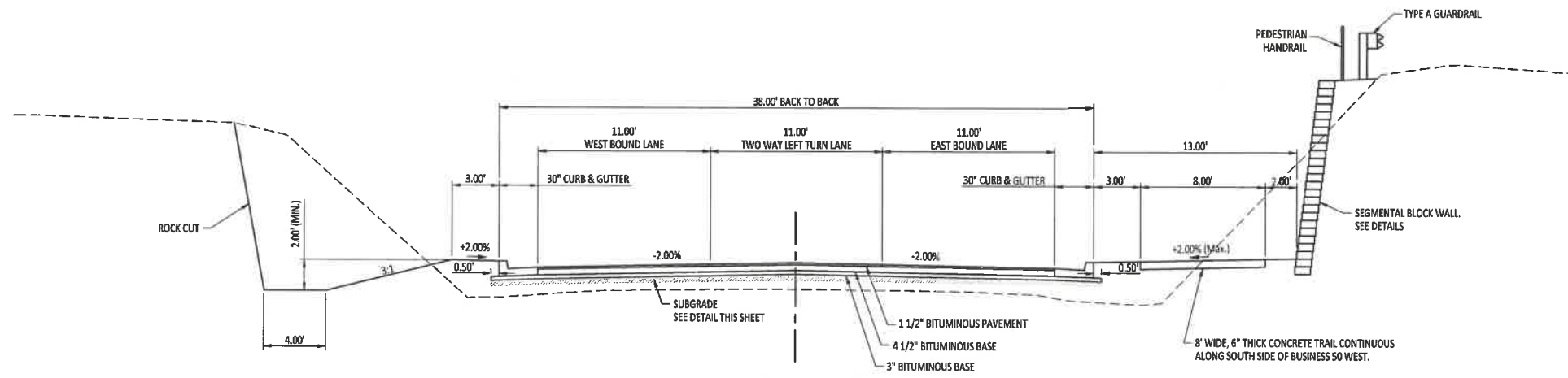


TYPICAL SECTION
28' Back Curb - Back Curb ASPHALT PAVEMENT
 BUSINESS 50 WEST: STA. 89+75.00 TO STA. 131+00.00
 RAINBOW DRIVE: STA. 0+11.50 TO STA. 2+83.60

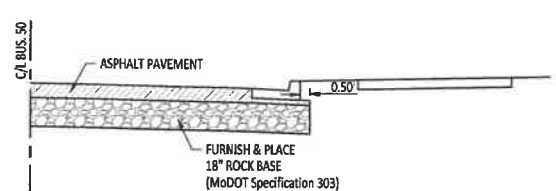
TRANSITION AREA
 From 28' Back Curb - Back Curb To 38' Back Curb - Back Curb
 BUSINESS 50 WEST: STA. 131+00.00 TO STA. 133+50.00



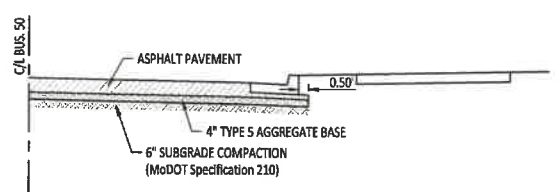
TYPICAL SECTION
38' Back Curb - Back Curb ASPHALT PAVEMENT
 BUSINESS 50 WEST
 STA. 133+50.00 TO STA. 142+25.00
 STA. 145+00.00 TO STA. 151+47.57



TYPICAL SECTION
38' Back Curb - Back Curb With Retaining Wall
 BUSINESS 50 WEST
 STA. 142+25.00 TO STA. 145+00.00



**SUBGRADE - 18\"/>
 BUSINESS 50 WEST
 STA. 89+75 TO STA. 94+50
 STA. 99+50 TO STA. 105+50
 STA. 108+00 TO STA. 111+00
 STA. 116+50 TO STA. 118+50
 STA. 129+50 TO STA. 132+50
 STA. 135+00 TO STA. 136+50**



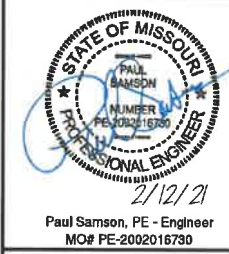
SUBGRADE - AGGREGATE BASE
 BUSINESS 50 WEST
 STA. 83+97.71 TO STA. 85+47.88 (SHOULDERS)
 STA. 94+50 TO STA. 99+50
 STA. 105+50 TO STA. 108+00
 STA. 111+00 TO STA. 116+50
 STA. 118+50 TO STA. 129+50
 STA. 132+50 TO STA. 135+00
 STA. 136+50 TO STA. 151+47.57

RAINBOW DRIVE
 STA. 0+11.50 TO STA. 2+83.60

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REVISIONS:

Central Missouri Professional Services, Inc.
 ENGINEERING - SURVEYING - MATERIALS TESTING
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 (573) 634-8898



BUSINESS HWY 50 WEST IMPROVEMENTS - PHASE 2
 COLE COUNTY PUBLIC WORKS
 BUSINESS HWY 50 WEST
 COLE COUNTY, MISSOURI

CMPS JOB No. 10-053

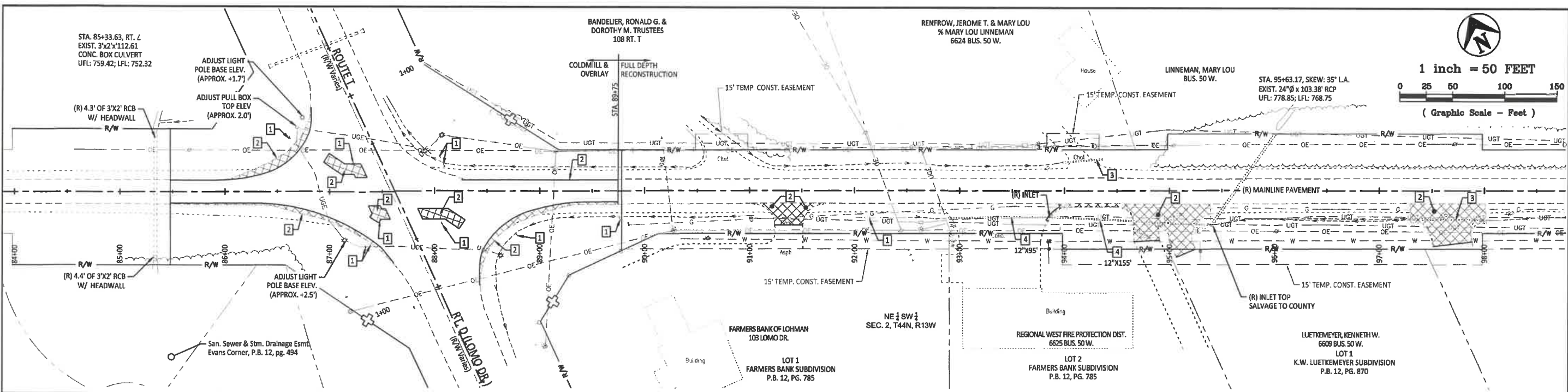
DRN. BY: C.F.B. CKD. BY: P.L.S.

SCALE: 1" = 5'

SHEET TITLE
TYPICAL CROSS SECTIONS

SHEET NUMBER
8
 OF 37 SHEETS

P:\21010001\CPWP\BUS 50 Phase 2\IMPROV\COLE\BUS 50 PHASE 2 - TYPICAL CROSS SECTIONS.dwg, 2/12/2021 9:27:03 AM

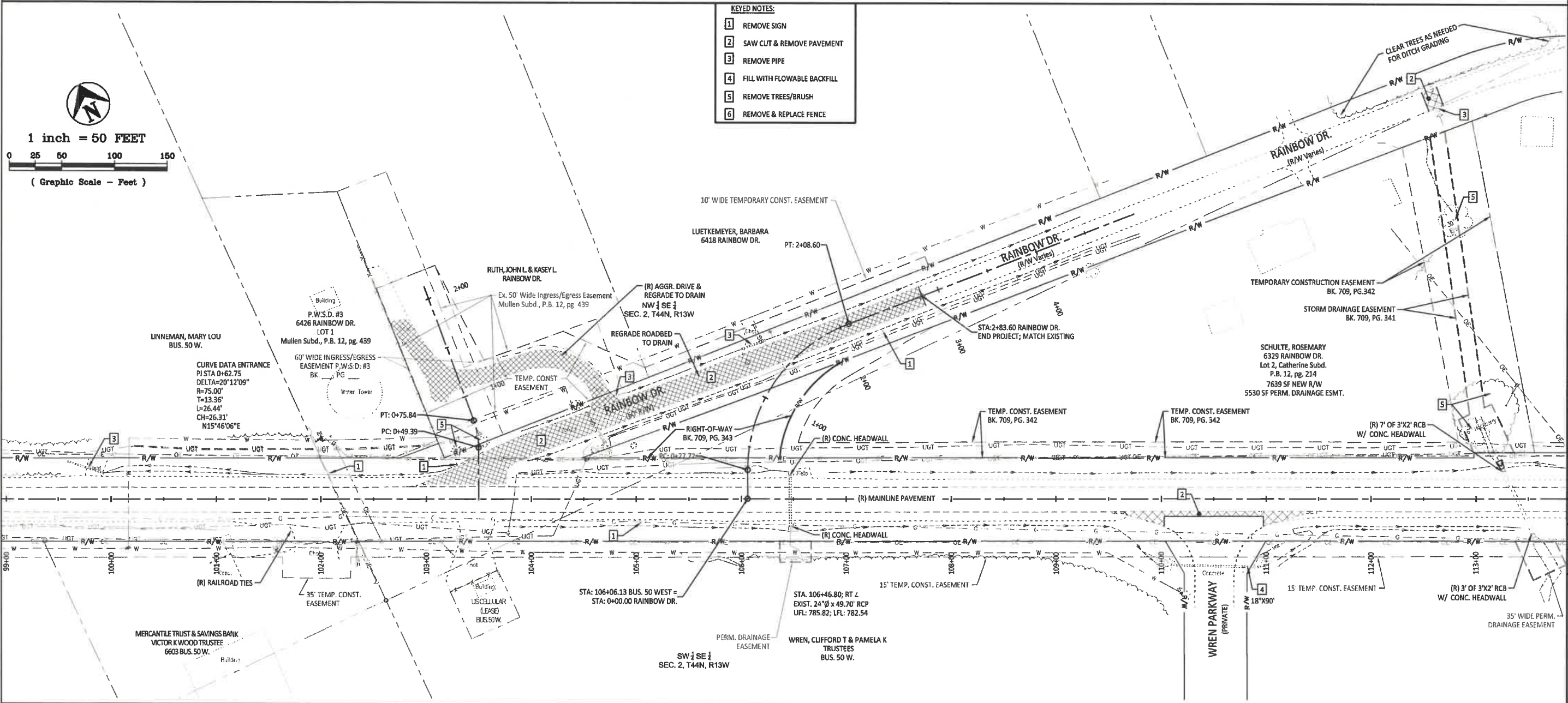


1 inch = 50 FEET

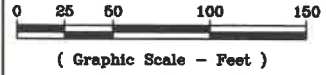


(Graphic Scale - Feet)

- KEYED NOTES:**
- 1 REMOVE SIGN
 - 2 SAW CUT & REMOVE PAVEMENT
 - 3 REMOVE PIPE
 - 4 FILL WITH FLOWABLE BACKFILL
 - 5 REMOVE TREES/BRUSH
 - 6 REMOVE & REPLACE FENCE



1 inch = 50 FEET



(Graphic Scale - Feet)

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(573) 634-8888

Central Missouri Professional Services, Inc.
Missouri State Certificate of Authority #001568

STATE OF MISSOURI
PAUL SAMSON
LICENSED PROFESSIONAL ENGINEER
NUMBER PE-00216730
2/12/21
Paul Samson, PE - Engineer
MC# PE-2002016730

BUSINESS HWY 50 WEST IMPROVEMENTS - PHASE 2
COLE COUNTY PUBLIC WORKS
BUSINESS HWY 50 WEST
COLE COUNTY, MISSOURI

CMPS JOB No. 10-053
DRN. BY: C.F.B./P.L.S. CKD. BY:
SCALE: 1" = 50'
SHEET TITLE
REMOVAL OF IMPROVEMENTS
SHEET NUMBER
9
OF 37 SHEETS

SIEBENECK, BERNARD & VICTORIA
6309 RAINBOW DR.
Lot 1, Catherine Subd.
P.B. 12, pg. 214

STA. 113+39.13; SKEW: 24°56' R.A.
EXIST. 3'x2' x 66.74'
CONCRETE BOX CULVERT
UFL: 745.51; LFL: 742.11



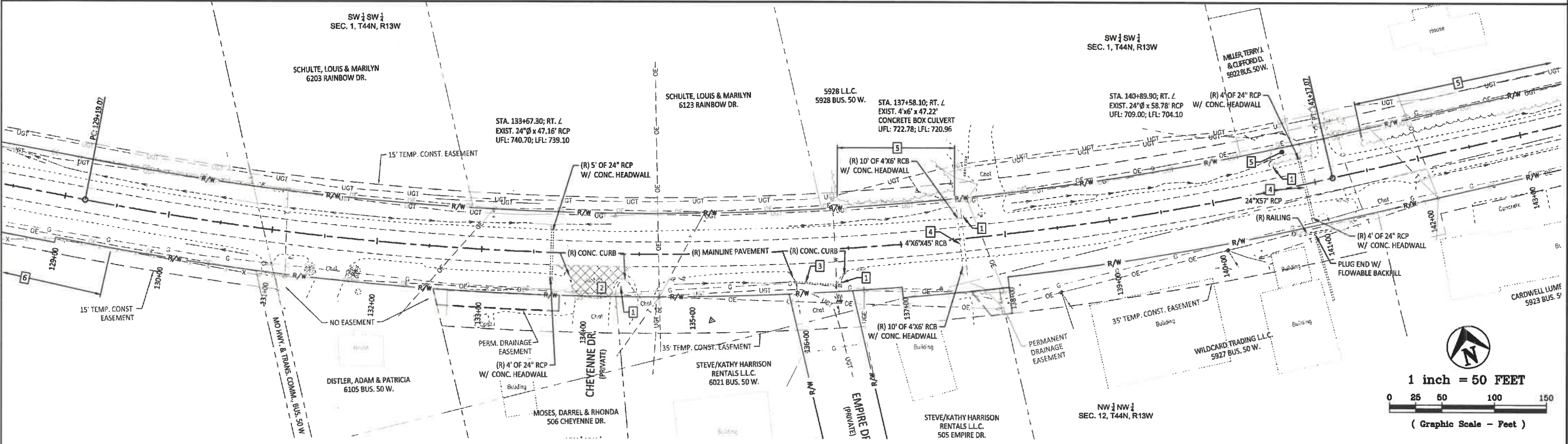
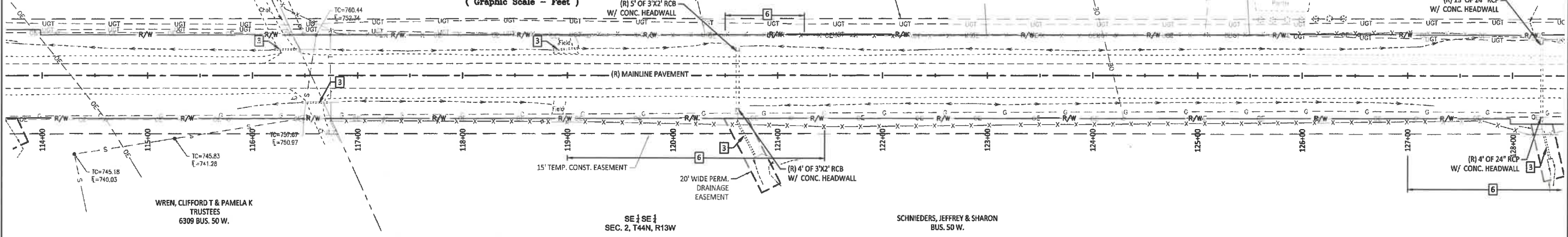
1 inch = 50 FEET
(Graphic Scale - Feet)

BERRY BARN FARMS L.L.C.
6301 RAINBOW DR.

BURGER, APRIL
6225 RAINBOW DR.

SCHULTE, ALFRED & CLARA
6217 RAINBOW DR.

STA. 128+28.10; RT. L.
EXIST. 24"Ø x 71.31' RCP
UFL: 734.88; LFL: 731.12



1 inch = 50 FEET
(Graphic Scale - Feet)

- KEYED NOTES:**
- 1 REMOVE SIGN
 - 2 SAW CUT & REMOVE PAVEMENT
 - 3 REMOVE PIPE
 - 4 FILL WITH FLOWABLE BACKFILL
 - 5 REMOVE TREES/BRUSH
 - 6 REMOVE & REPLACE FENCE

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(573) 634-8888

Central Missouri Professional Services, Inc.
Missouri State Certificate of Authority #001558

STATE OF MISSOURI
PAUL SAMSON
PROFESSIONAL ENGINEER
NUMBER PE-200216730
2/12/21
Paul Samson, PE - Engineer
MO# PE-200216730

BUSINESS HWY 50 WEST IMPROVEMENTS - PHASE 2
COLE COUNTY PUBLIC WORKS
BUSINESS HWY 50 WEST
COLE COUNTY, MISSOURI

CMPS JOB No. 10-053

DRN. BY: C.F.B./P.L.S. CKD. BY:

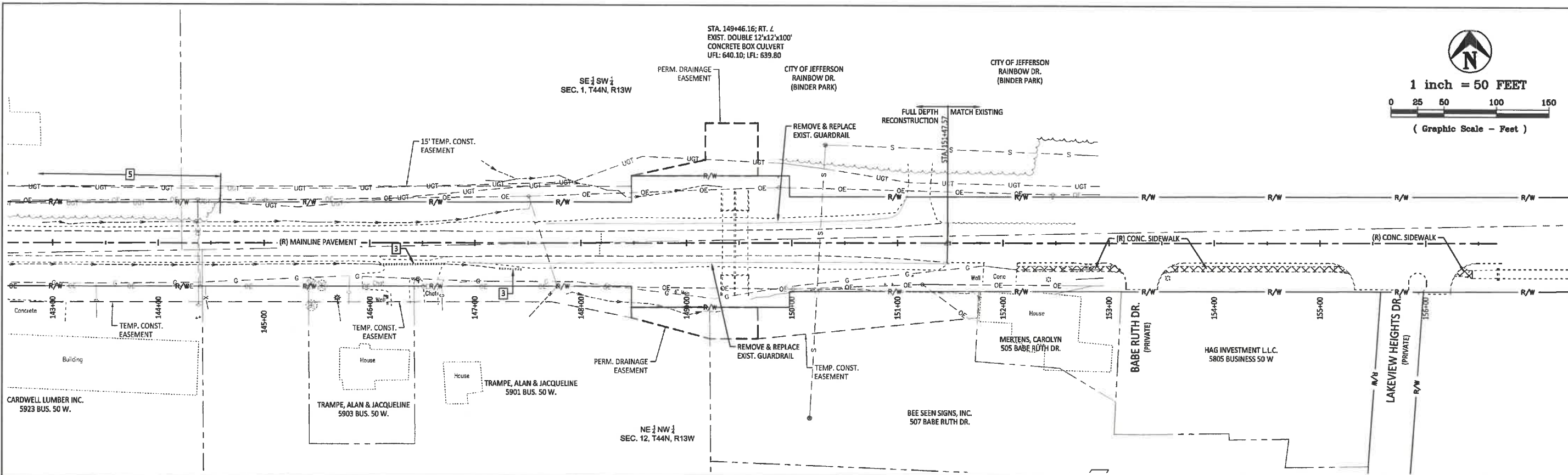
SCALE: 1" = 50'

SHEET TITLE
REMOVAL OF IMPROVEMENTS

SHEET NUMBER

10

OF 37 SHEETS



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 (573) 634-8898

Central Missouri Professional Services, Inc.
 Missouri State Certificate of Authority #001558



2/12/21
 Paul Samson, PE - Engineer
 MO# PE-200216730

BUSINESS HWY 50 WEST IMPROVEMENTS - PHASE 2
COLE COUNTY PUBLIC WORKS
 BUSINESS HWY 50 WEST
 COLE COUNTY, MISSOURI

CMPS JOB No. 10-053

DRN. BY: C.F.B./P.L.S. CRD. BY:

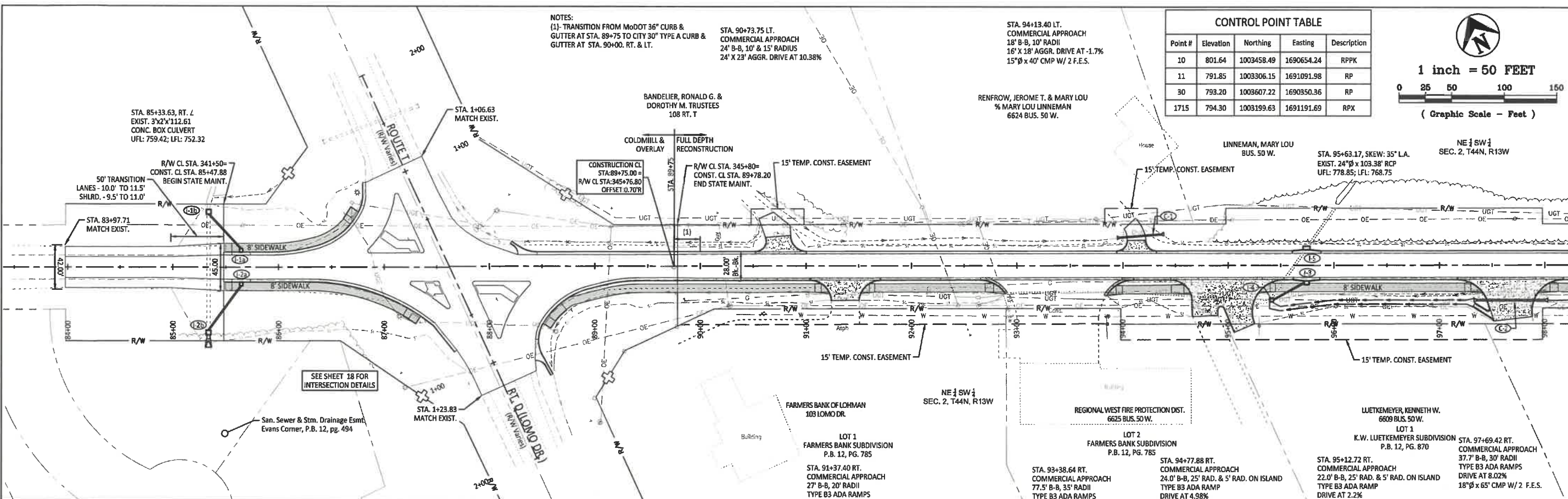
SCALE: 1" = 50'

SHEET TITLE
REMOVAL OF IMPROVEMENTS

SHEET NUMBER
11
 OF 37 SHEETS

- KEYED NOTES:**
- 1 REMOVE SIGN
 - 2 SAW CUT & REMOVE PAVEMENT
 - 3 REMOVE PIPE
 - 4 FILL WITH FLOWABLE BACKFILL
 - 5 REMOVE TREES/BRUSH
 - 6 REMOVE & REPLACE FENCE

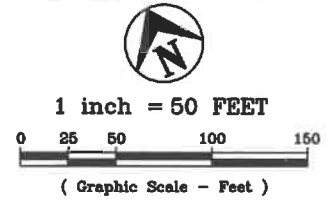
P:\01\101008\001\BUS 50 PHASE 2\DWG\10-053.DWG, 2/12/2021 10:30:54 AM



NOTES:
 (1) TRANSITION FROM MoDOT 36" CURB & GUTTER AT STA. 89+75 TO CITY 30" TYPE A CURB & GUTTER AT STA. 90+00. RT. & LT.

STA. 94+13.40 LT. COMMERCIAL APPROACH 18' B-B, 10' RADII 16" X 18" AGGR. DRIVE AT -1.7% 15"Ø x 40' CMP W/ 2 F.E.S.

CONTROL POINT TABLE				
Point #	Elevation	Northing	Easting	Description
10	801.64	1003458.49	1690654.24	RPPK
11	791.85	1003306.15	1691091.98	RP
30	793.20	1003607.22	1690350.36	RP
1715	794.30	1003199.63	1691191.69	RPX



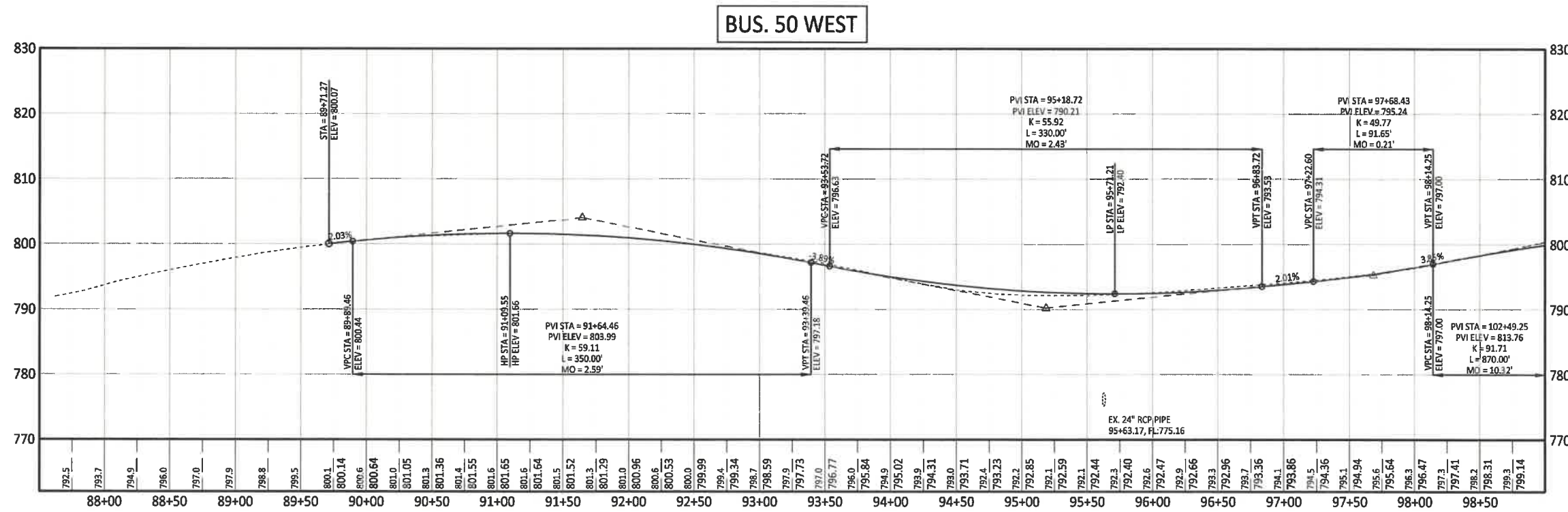
PRINTS ISSUED
2/12/21

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 JEFFERSON CITY, MISSOURI 65101
 (573) 634-3455
 (573) 634-8888

Paul Samson, PE - Engineer
 MO# PE-2002018730

STATE OF MISSOURI
 PAUL SAMSON
 PROFESSIONAL ENGINEER
 NUMBER PE-2002018730



BUSINESS HWY 50 WEST IMPROVEMENTS - PHASE 2
 COLE COUNTY PUBLIC WORKS

BUSINESS HWY 50 WEST
 COLE COUNTY, MISSOURI

CMPS JOB No. 10-053

DRN. BY: C.F.B./P.L.S. CRD. BY:

SCALE: HORZ: 1" = 50' VERT: 1" = 10'

SHEET TITLE
PLAN AND PROFILE

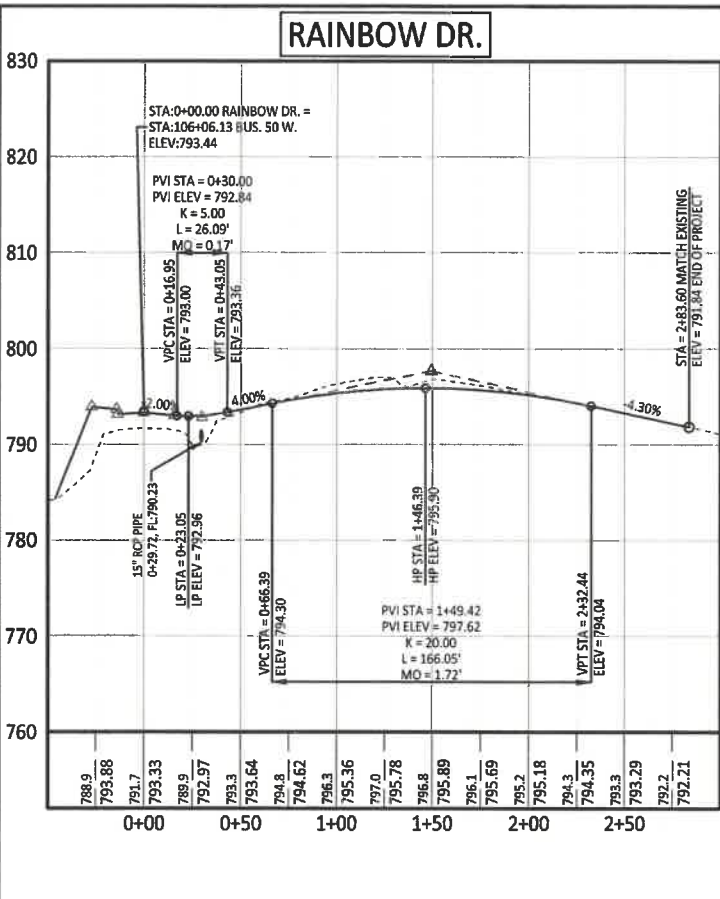
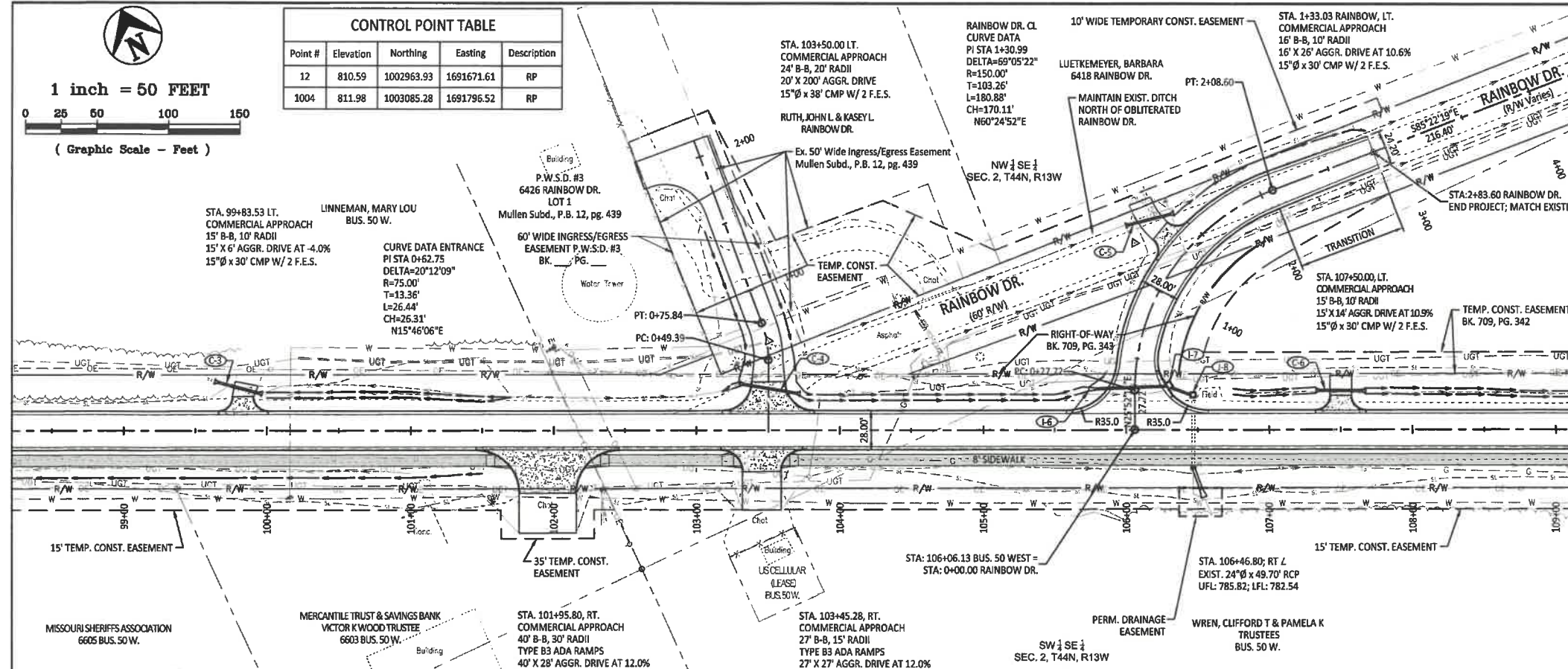
SHEET NUMBER
12

OF 37 SHEETS

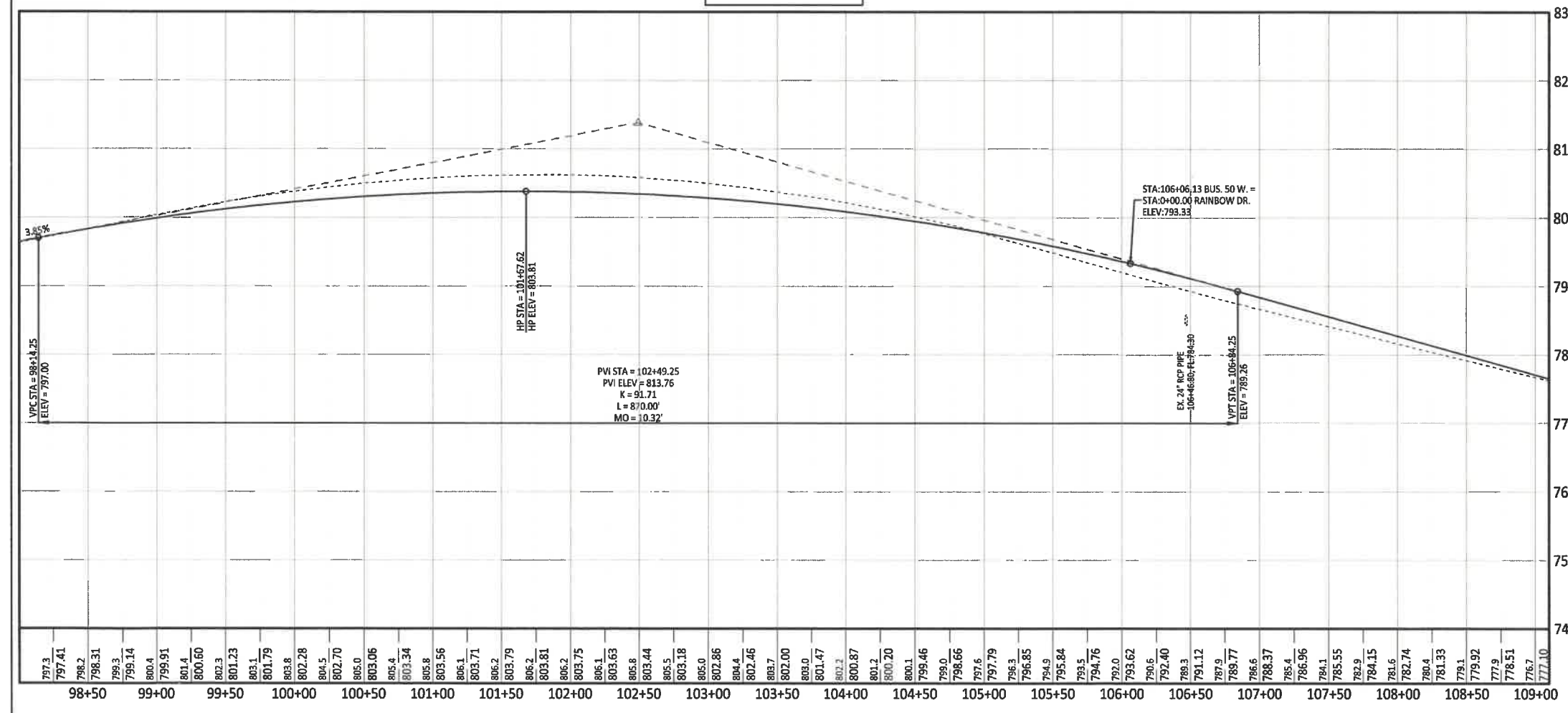


1 inch = 50 FEET
 (Graphic Scale - Feet)

Point #	Elevation	Northing	Easting	Description
12	810.59	1002963.93	1691671.61	RP
1004	811.98	1003085.28	1691796.52	RP



BUS. 50 WEST



PRINTS ISSUED
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 (573) 634-8898

Central Missouri Professional Services, Inc.
 Missouri State Certificate of Authority #001658

STATE OF MISSOURI
 PAUL SAMSON
 LICENSED PROFESSIONAL ENGINEER
 PE-6192-15700
 2/12/21
 Paul Samson, PE - Engineer
 MO# PE-2002016730

BUSINESS HWY 50 WEST IMPROVEMENTS - PHASE 2
 COLE COUNTY PUBLIC WORKS
 BUSINESS HWY 50 WEST
 COLE COUNTY, MISSOURI

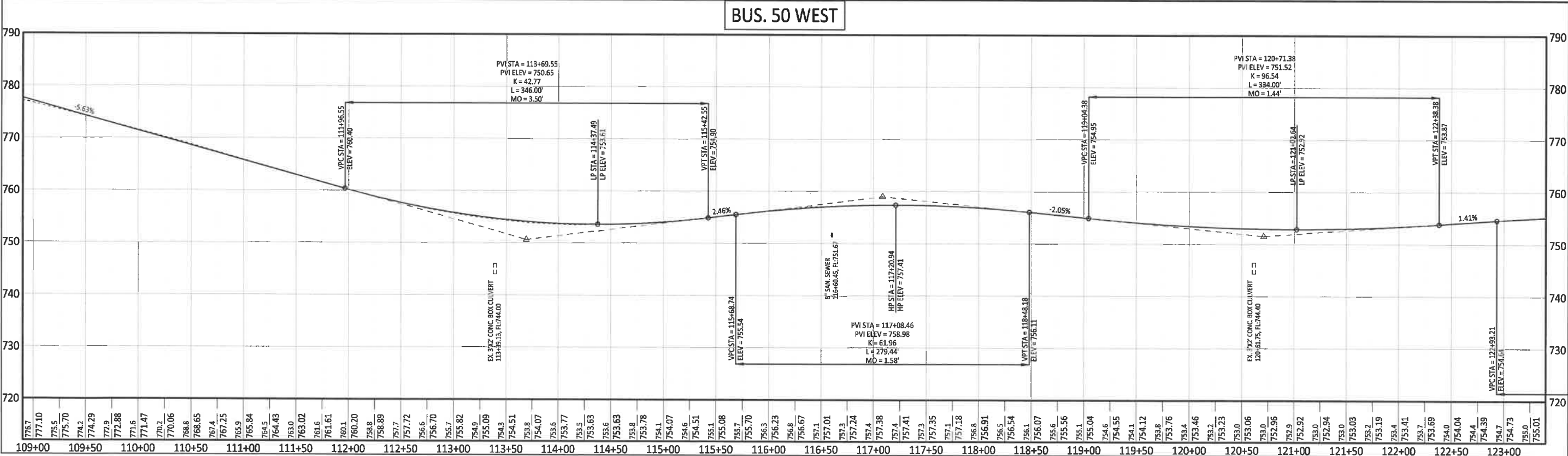
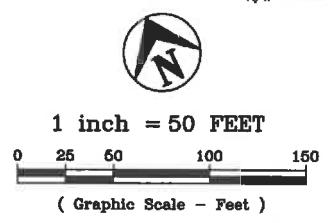
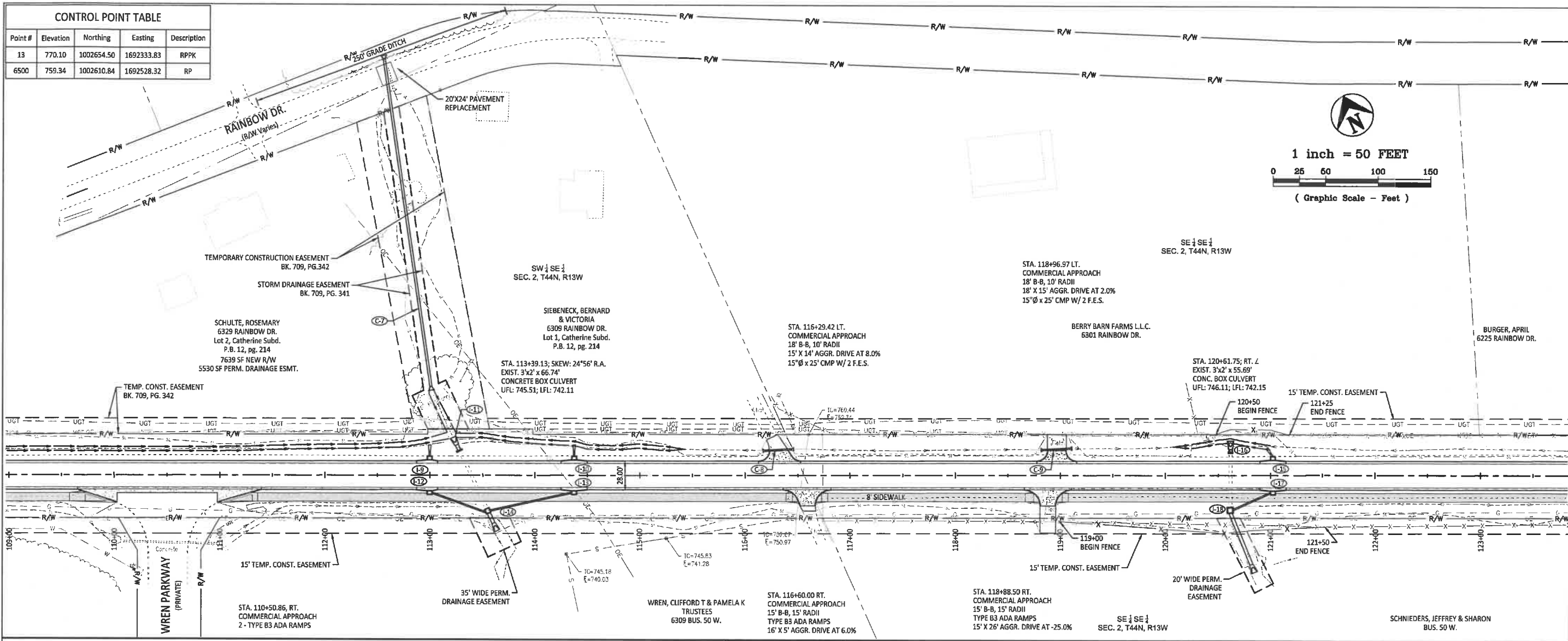
CMPS JOB No. 10-053
 DRN. BY: C.F.B./P.L.S. CRD. BY:

SCALE: HORZ: 1" = 50' VERT: 1" = 10'

SHEET TITLE
PLAN AND PROFILE

SHEET NUMBER
13
 OF 37 SHEETS

Point #	Elevation	Northing	Easting	Description
13	770.10	1002654.50	1692333.83	RPPK
6500	759.34	1002610.84	1692528.32	RP



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(573) 634-8888

Central Missouri Professional Services, Inc.
Missouri State Certificate of Authority #01658

Paul Samson, PE - Engineer
MO# PE-2002016730

BUSINESS HWY 50 WEST IMPROVEMENTS - PHASE 2
COLE COUNTY PUBLIC WORKS

BUSINESS HWY 50 WEST
COLE COUNTY, MISSOURI

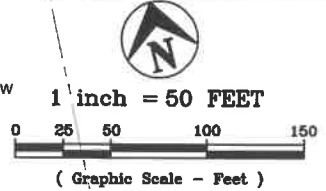
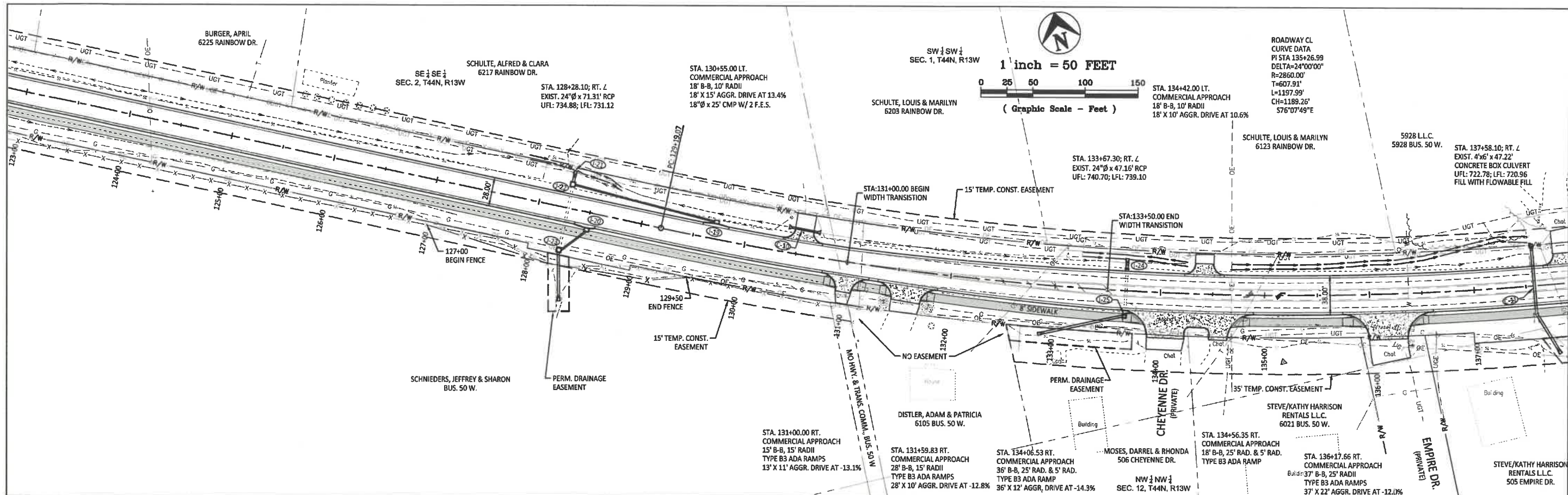
CMPS JOB No. 10-053
DRN. BY: C.F.B./P.L.S. CKD. BY:

SCALE: HORZ: 1" = 50' VERT: 1" = 10'

SHEET TITLE
PLAN AND PROFILE

SHEET NUMBER
14

OF 37 SHEETS



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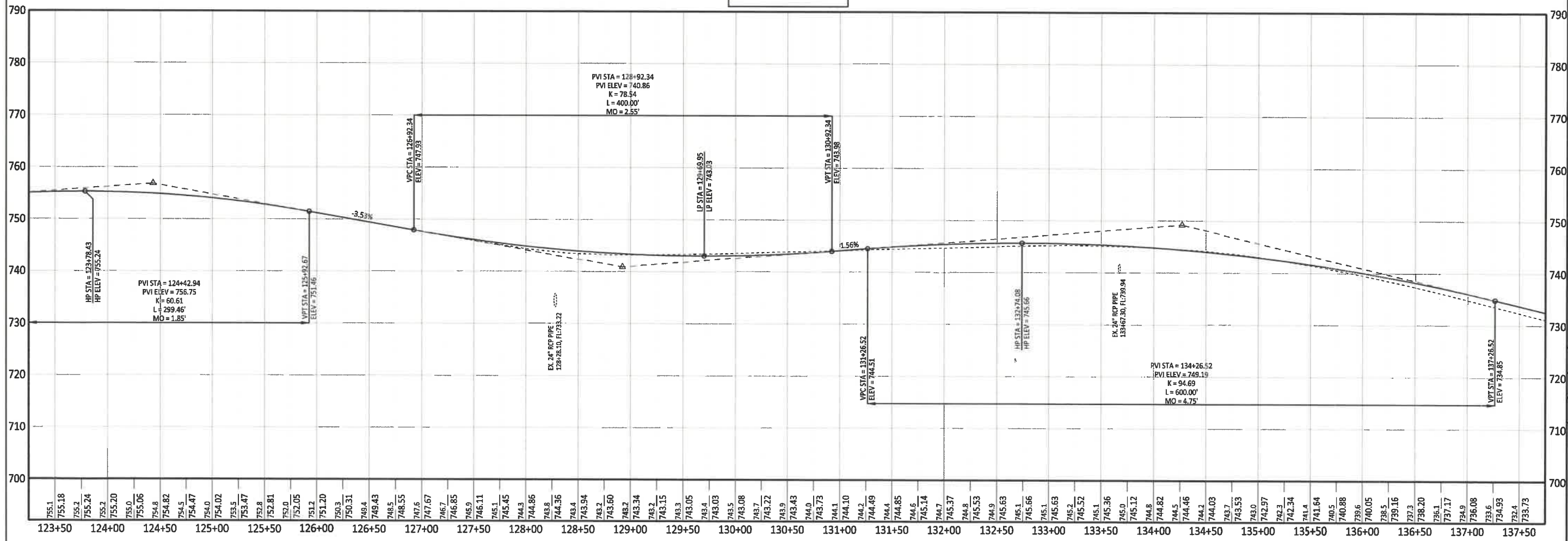
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ENGINEERING - SURVEYING - MATERIALS TESTING
2500 E. MCCARTY
JEFFERSON CITY, MISSOURI 65101
(573) 634-3455
(573) 634-8898

Central Missouri Professional Services, Inc.
Missouri State Certificate of Authority #001558

Paul Samson, PE - Engineer
MO# PE-2002016730

BUS. 50 WEST



BUSINESS HWY 50 WEST IMPROVEMENTS - PHASE 2
COLE COUNTY PUBLIC WORKS
BUSINESS HWY 50 WEST
COLE COUNTY, MISSOURI

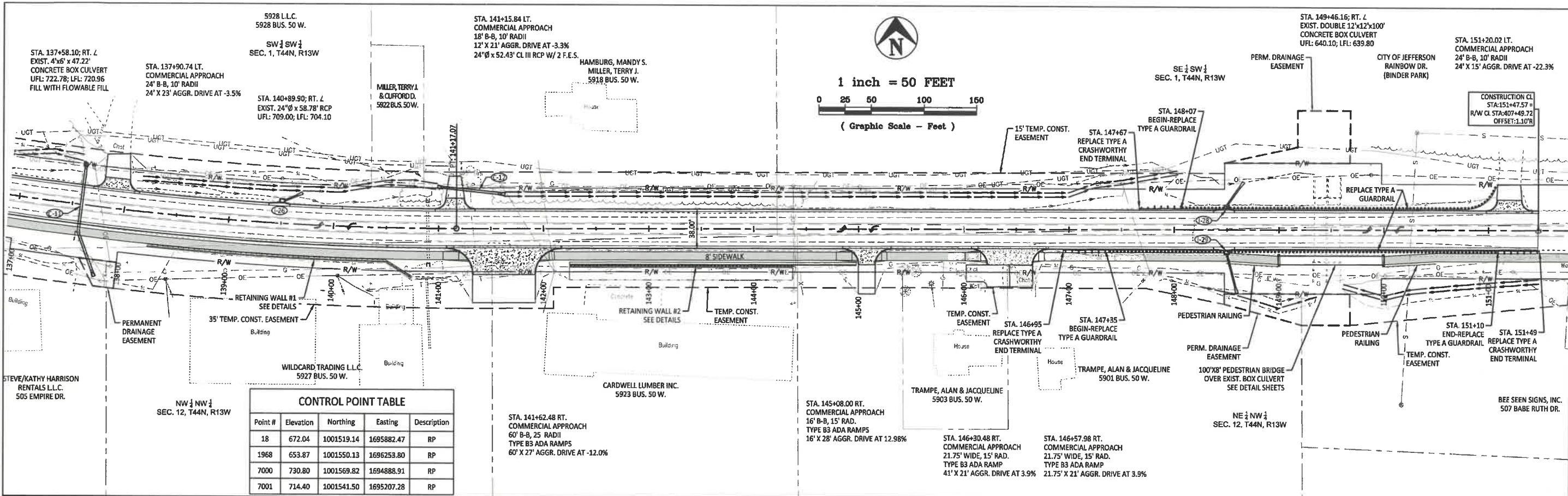
CMPS JOB No. 10-053
DRN. BY: C.F.B./P.L.S. CKD. BY:

SCALE: HORZ: 1" = 50' VERT: 1" = 10'

SHEET TITLE
PLAN AND PROFILE

SHEET NUMBER
15
OF 37 SHEETS

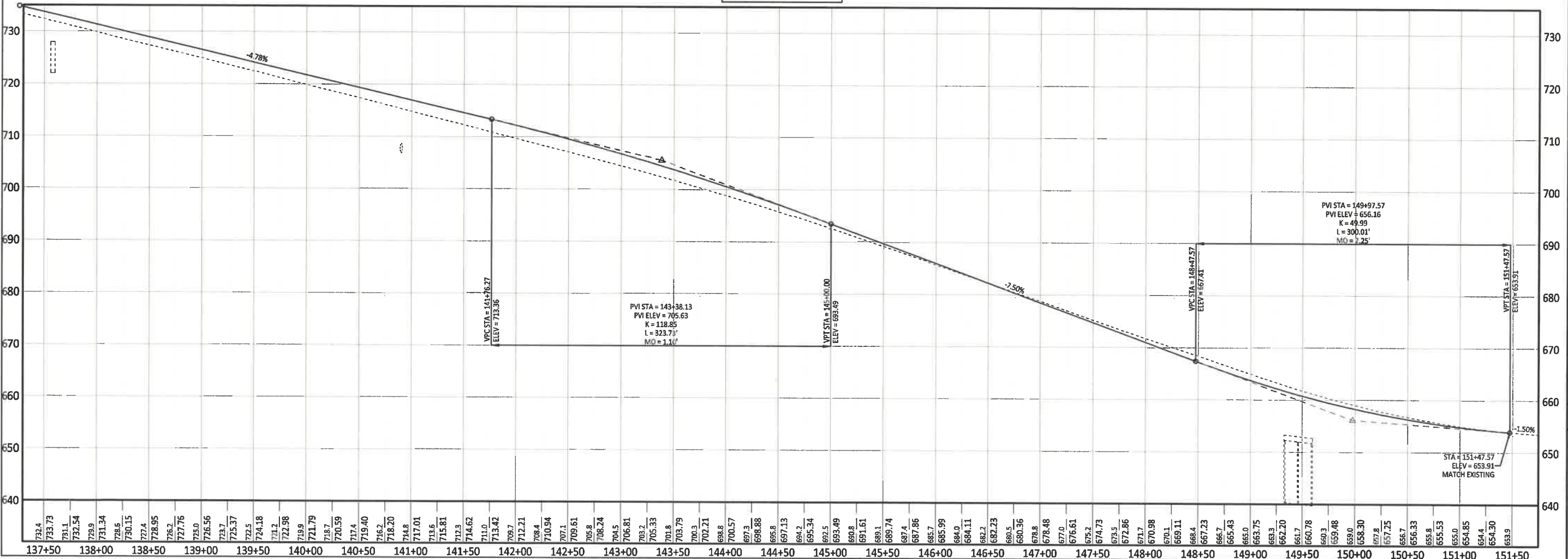
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CONTROL POINT TABLE

Point #	Elevation	Northing	Easting	Description
18	672.04	1001519.14	1695882.47	RP
1968	653.87	1001550.13	1696253.80	RP
7000	730.80	1001569.82	1694888.91	RP
7001	714.40	1001541.50	1695207.28	RP

BUS. 50 WEST



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(573) 634-8888

Central Missouri Professional Services, Inc.
Missouri State Certificate of Authority #01658

STATE OF MISSOURI
PAUL SAMSON
LICENSED PROFESSIONAL ENGINEER
NUMBER PE-200216730
2/12/21
Paul Samson, PE - Engineer
MO# PE-200216730

**BUSINESS HWY 50 WEST
IMPROVEMENTS - PHASE 2**
COLE COUNTY PUBLIC WORKS

BUSINESS HWY 50 WEST
COLE COUNTY, MISSOURI

CMPS JOB No. 10-053
DRN. BY: C.F.B./P.L.S. CRD. BY:

SCALE: HORZ: 1" = 50' VERT: 1" = 10'

SHEET TITLE
PLAN AND PROFILE

SHEET NUMBER
16
OF 37 SHEETS

STA. 151+20.02 LT.
 COMMERCIAL APPROACH
 24' B-B, 10' RADI
 24' X 15' AGGR. DRIVE AT -22.3%

CITY OF JEFFERSON
 RAINBOW DR.
 (BINDER PARK)

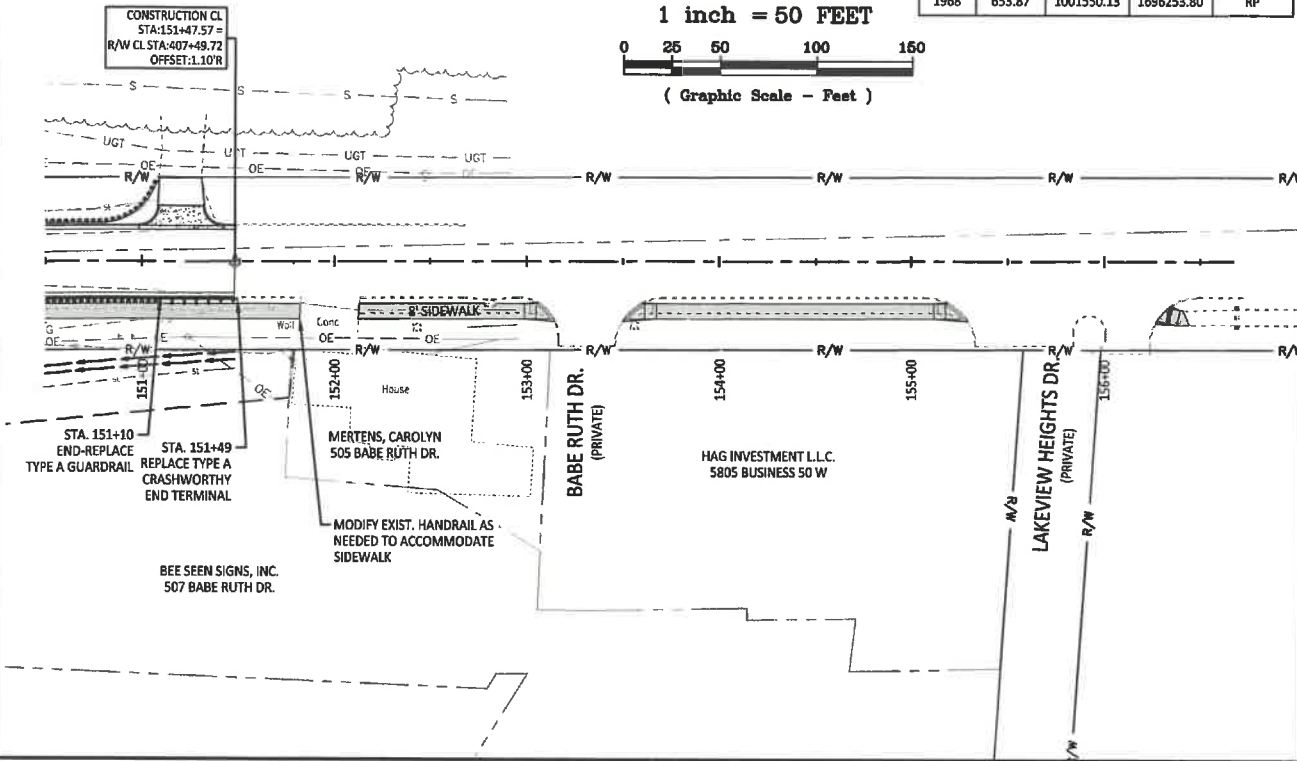


1 inch = 50 FEET



(Graphic Scale - Feet)

CONTROL POINT TABLE				
Point #	Elevation	Northing	Easting	Description
19	652.74	1001490.10	1696466.39	RP
1968	653.87	1001550.13	1696253.80	RP



ALIGNMENT COORDINATE REPORT			
BUSINESS 50 WEST - WEST OF ROUTE T			
STATION	NORTH	EAST	DESCRIPTION
83+00.00	1,003,860.34	1,689,906.91	BEGIN PROJECT
87+62.03	1,003,658.74	1,690,322.64	C/L ROUTE T/D *
BUSINESS 50 WEST - EAST OF ROUTE T			
STATION	NORTH	EAST	DESCRIPTION
87+62.03	1,003,659.51	1,690,322.66	C/L ROUTE T/D *
106+06.13	1,002,854.88	1,691,981.96	STA. 0+00.00 RAINBOW DR
129+19.07	1,001,845.69	1,694,063.12	PC
135+26.99	1,001,580.44	1,694,610.11	PI
141+17.07	1,001,560.61	1,695,217.70	PT
151+47.57	1,001,526.99	1,696,247.66	END PROJECT
* - Coordinates for the C/L of Business 50 West are different for East of Route T/D and West of Route T/D due to a shift in the centerline at the intersection			
ROUTE T			
STATION	NORTH	EAST	DESCRIPTION
0+00.00	1,003,658.74	1,690,322.64	C/L BUSINESS 50 WEST
2+00.00	1,003,858.70	1,690,326.88	END OF PROJECT
ROUTE D			
STATION	NORTH	EAST	DESCRIPTION
0+00.00	1,003,658.74	1,690,322.64	C/L BUSINESS 50 WEST
2+00.00	1,003,458.81	1,690,317.54	END OF PROJECT
RAINBOW DRIVE			
STATION	NORTH	EAST	DESCRIPTION
0+00.00	1,002,854.88	1,691,981.96	C/L BUSINESS 50 WEST
0+27.72	1,002,879.83	1,691,994.06	PC
1+30.99	1,002,972.74	1,692,039.12	PI
2+08.60	1,002,963.82	1,692,141.99	PT
2+83.60	1,002,957.33	1,692,216.71	END PROJECT

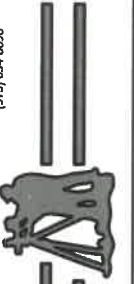
SUPERELEVATION TABLE			
Station	Description	Left Lane	Right Lane
128+24.32'	End Normal Crown	-2.00%	-2.00%
128+72.17'	Level Crown	-2.00%	0.00%
129+20.03'	Reverse Crown	-2.00%	2.00%
129+39.17'	Begin Full Super	-2.80%	2.80%
140+96.97'	End Full Super	-2.80%	2.80%
141+16.11'	Reverse Crown	-2.00%	2.00%
141+63.97'	Level Crown	-2.00%	0.00%
142+11.83'	Begin Normal Crown	-2.00%	-2.00%

PRINTS ISSUED

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REVISIONS:

Central Missouri Professional Services, Inc.
 ENGINEERING - SURVEYING - MATERIALS TESTING
 2500 E. McCARTY
 JEFFERSON CITY, MISSOURI 65101
 (573) 634-3455
 (573) 634-8898



Central Missouri Professional Services, Inc.
 Missouri State Certificate of Authority #01558



2/12/21
 Paul Samson, PE - Engineer
 MO# PE-2002016730

BUSINESS HWY 50 WEST
 IMPROVEMENTS - PHASE 2

COLE COUNTY PUBLIC WORKS

BUSINESS HWY 50 WEST
 COLE COUNTY, MISSOURI

CMPS JOB No. 10-053

DRN. BY: C.F.B./P.L.S. CKD. BY:

SCALE: 1" = 50'

SHEET TITLE


PLAN AND
 PROFILE

SHEET NUMBER

17

OF 37 SHEETS

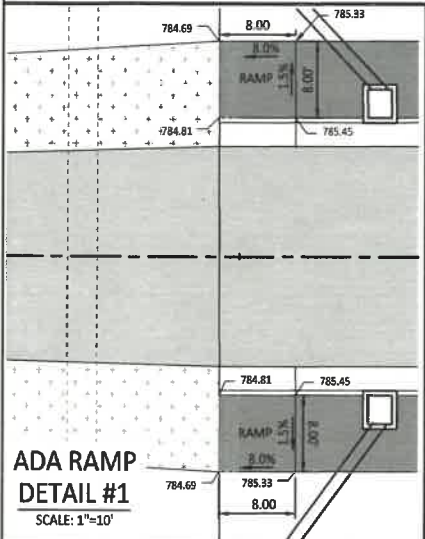
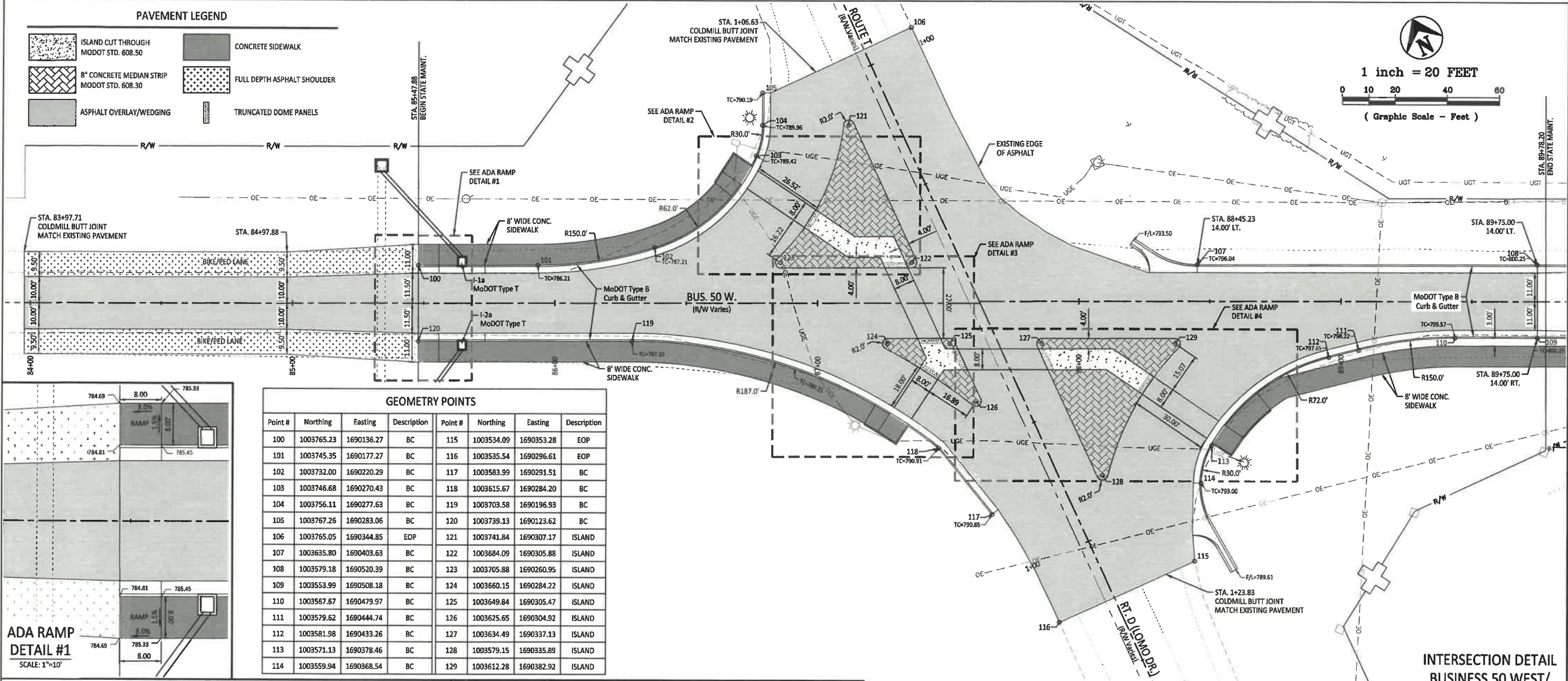
Central Missouri Professional Services, Inc.
ENGINEERING - SURVEYING - MATERIALS TESTING
2500 E. MCCARTHY
JEFFERSON CITY, MISSOURI 65101
(573) 634-3455
(573) 634-8898



Paul Samson, PE - Engineer
MO# PE-200216730

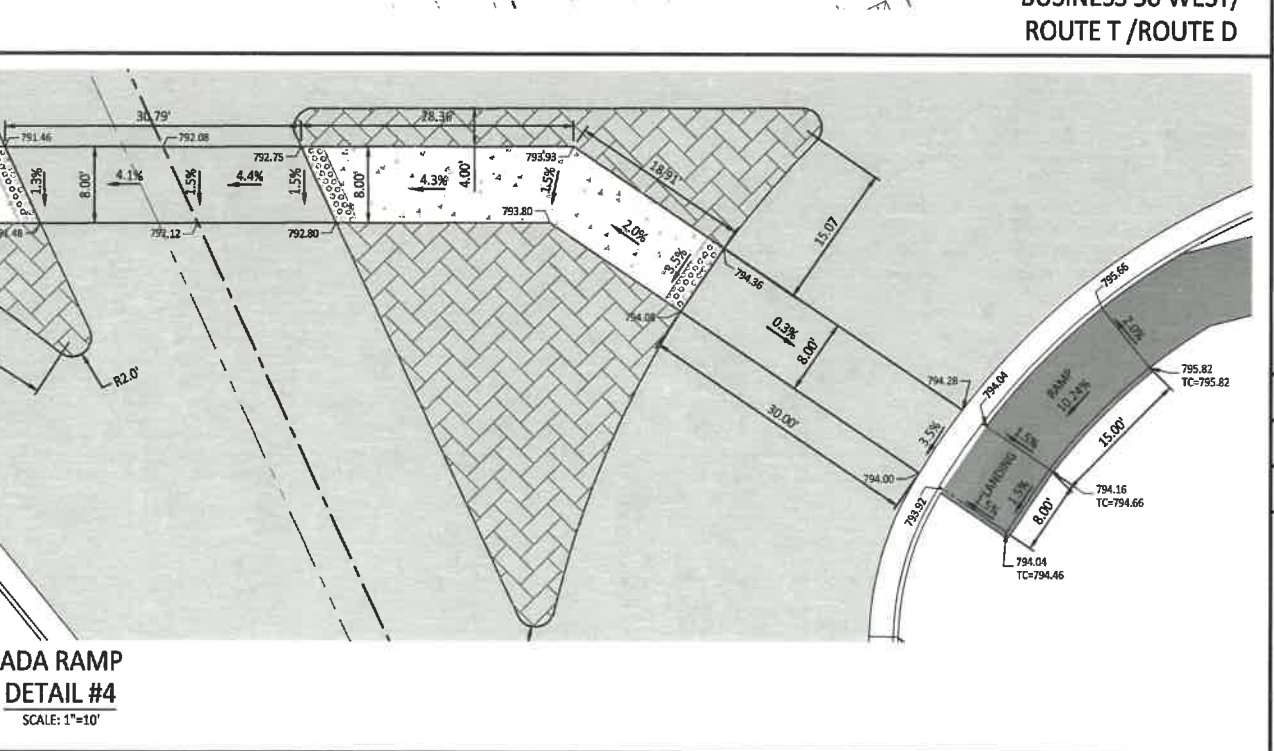
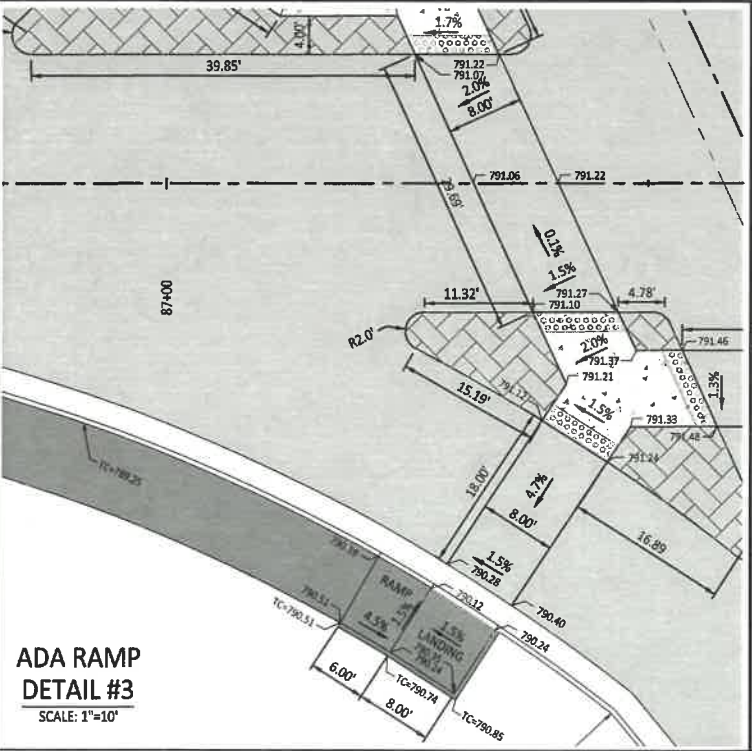
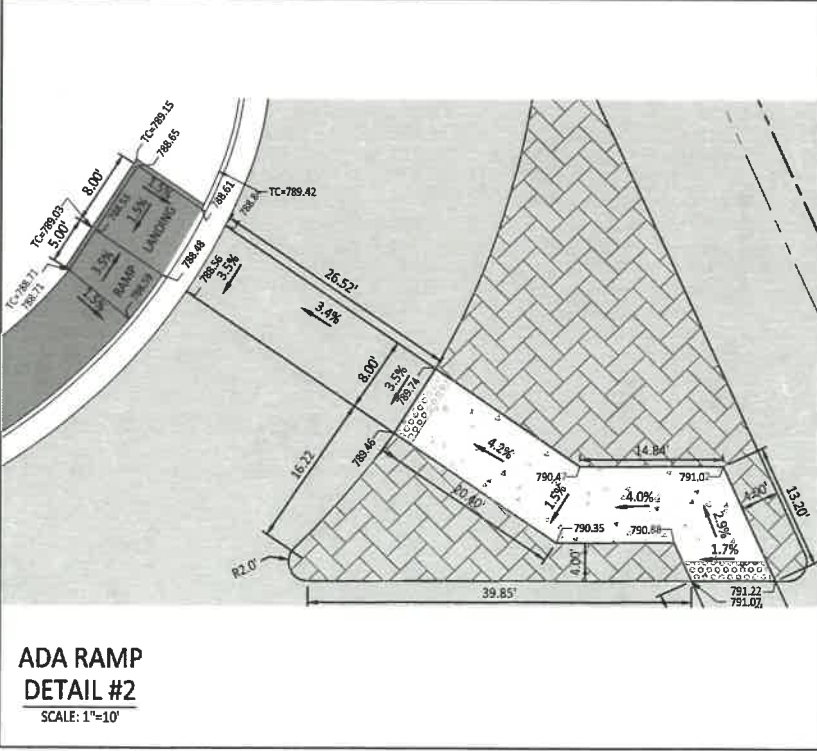
**BUSINESS HWY 50 WEST
IMPROVEMENTS - PHASE 2**
COLE COUNTY PUBLIC WORKS
BUSINESS HWY 50 WEST
COLE COUNTY, MISSOURI

CMPS JOB No. 10-053
DRN. BY: C.F.B./P.I.S. CRD. BY:
SCALE: 1" = 20'
SHEET TITLE
**BUS. 50 / ROUTE T
INTERSECTION**
SHEET NUMBER
18
OF 37 SHEETS

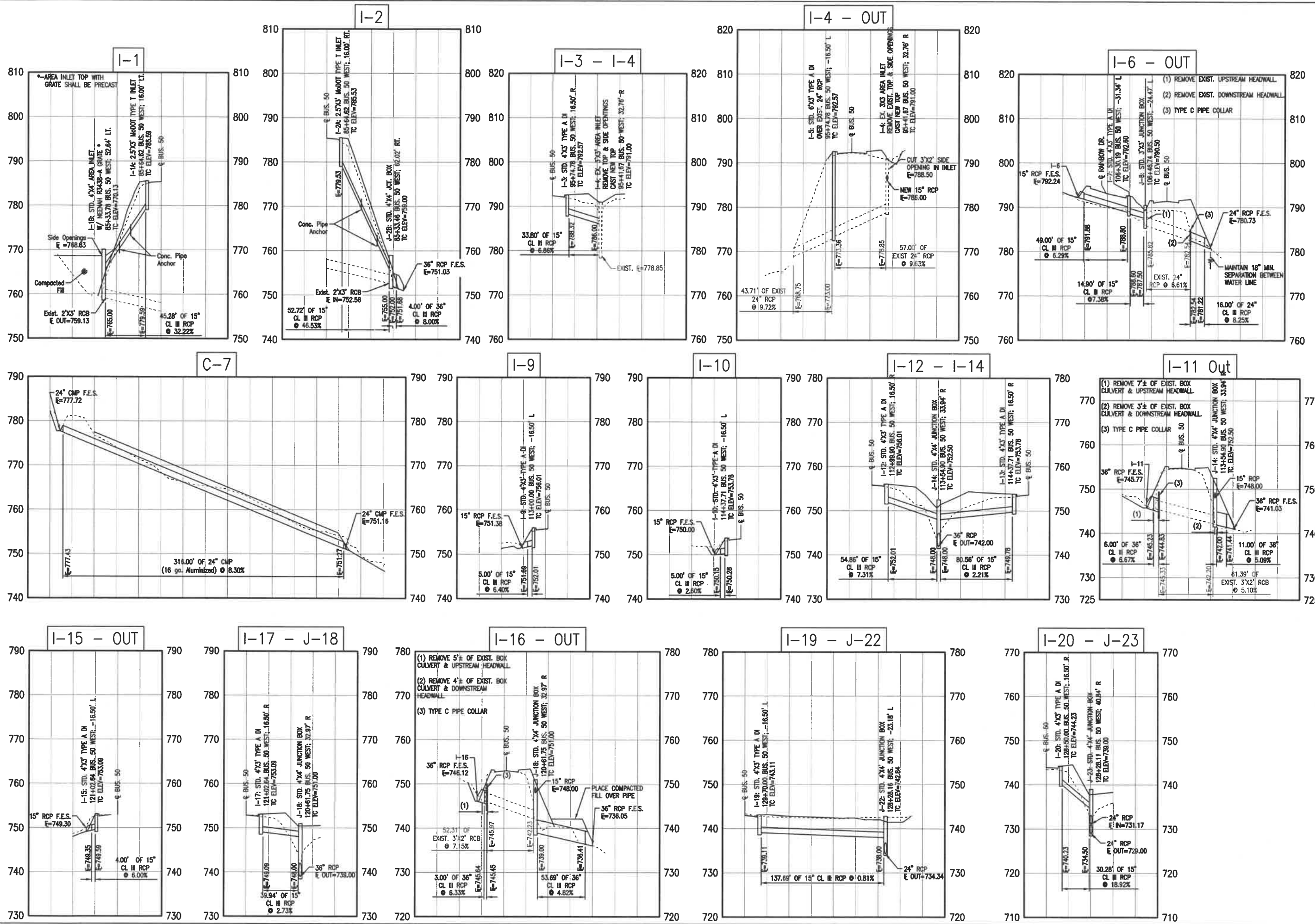


GEOMETRY POINTS

Point #	Northing	Easting	Description	Point #	Northing	Easting	Description
100	1003765.23	1690136.27	BC	115	1003534.09	1690353.28	EOP
101	1003745.35	1690177.27	BC	116	1003535.54	1690296.61	EOP
102	1003732.00	1690220.29	BC	117	1003583.99	1690291.51	BC
103	1003746.68	1690270.43	BC	118	1003615.67	1690284.20	BC
104	1003756.11	1690277.63	BC	119	1003703.58	1690196.93	BC
105	1003767.26	1690283.06	BC	120	1003739.13	1690123.62	BC
106	1003765.05	1690344.85	EDP	121	1003741.84	1690307.17	ISLAND
107	1003635.80	1690403.63	BC	122	1003684.09	1690305.88	ISLAND
108	1003579.18	1690520.39	BC	123	1003705.88	1690260.95	ISLAND
109	1003553.99	1690508.18	BC	124	1003660.15	1690284.22	ISLAND
110	1003567.67	1690479.97	BC	125	1003649.84	1690305.47	ISLAND
111	1003579.62	1690444.74	BC	126	1003625.65	1690304.92	ISLAND
112	1003581.98	1690433.26	BC	127	1003634.49	1690337.13	ISLAND
113	1003571.13	1690378.46	BC	128	1003579.15	1690335.89	ISLAND
114	1003559.94	1690368.54	BC	129	1003612.28	1690382.92	ISLAND



INTERSECTION DETAIL
BUSINESS 50 WEST/
ROUTE T /ROUTE D



PRINTS ISSUED
2/12/21

REVISIONS:

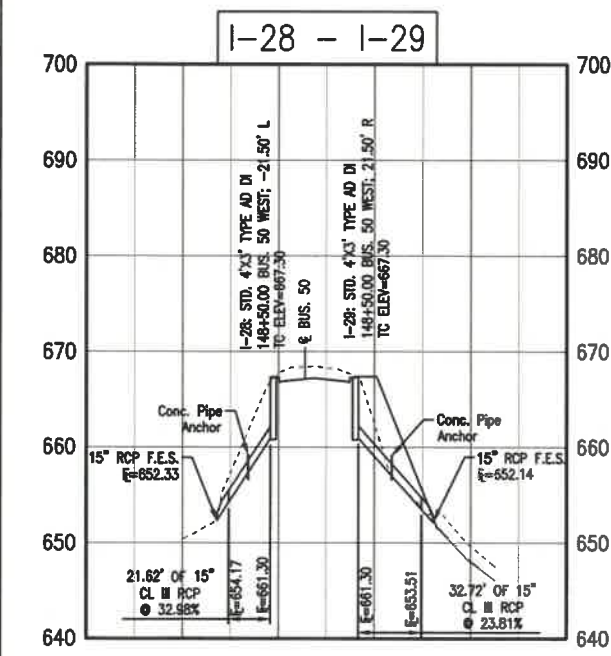
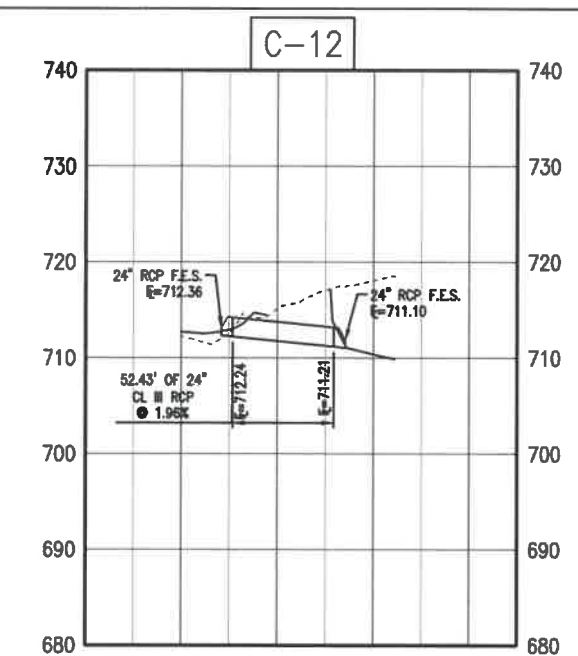
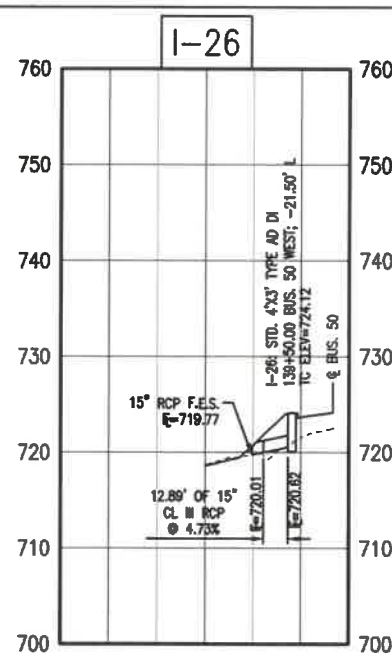
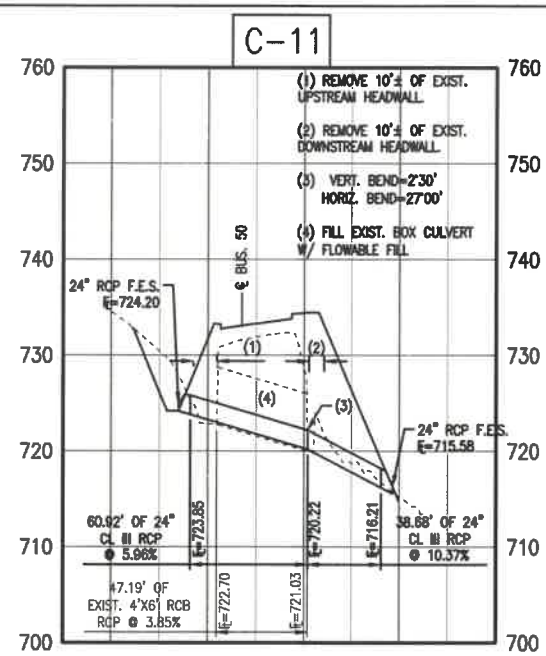
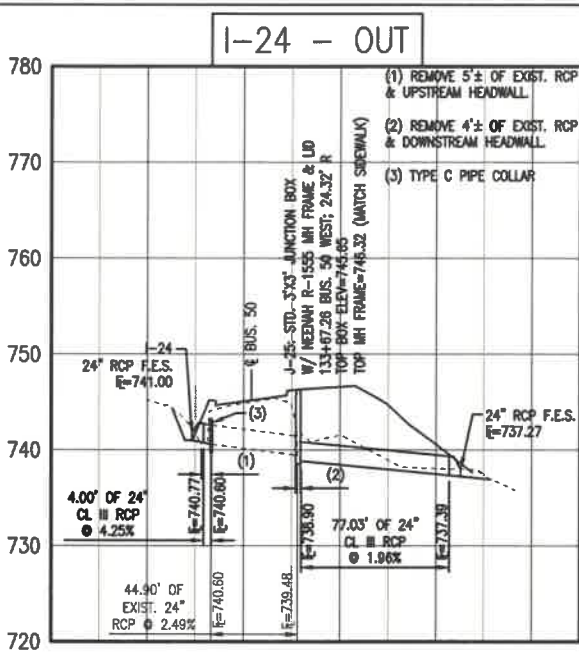
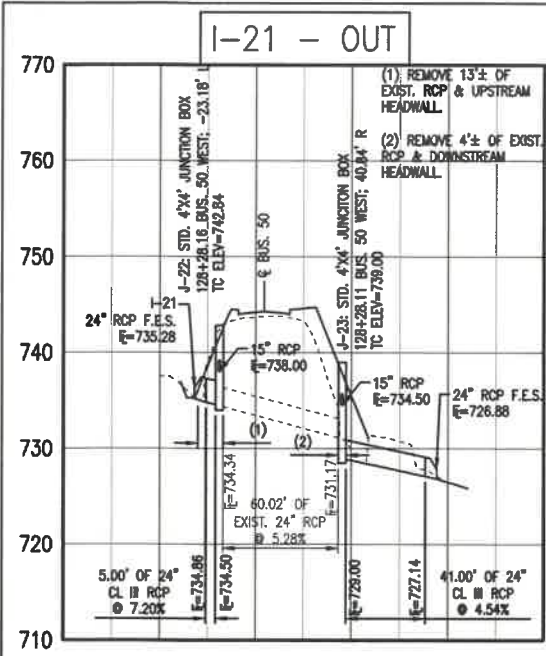
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Central Missouri Professional Services, Inc.
 Missouri State Certificate of Authority #01658

Paul Samson, PE - Engineer
 MO# PE-2002016730

**BUSINESS HWY 50 WEST
 IMPROVEMENTS - PHASE 2**
 COLE COUNTY PUBLIC WORKS

CMPS JOB No. 10-053
 DRN. BY: C.F.B./P.L.S. CRD. BY:
 SCALE: 1"=50'H/10'V
 SHEET TITLE
**STORM SEWER
 PROFILES**
 SHEET NUMBER
19
 OF 37 SHEETS



STORM DRAINAGE STRUCTURES

Inlet No.	Top of Inlet Elev.	Inlet Type	CV/IB Depth	Area (Ac)	Inlet Q (cfs)	Inlet Capacity
I-1A	785.59	2.5'x3' MODDOT T	6.00	0.23	1.70	5.2
I-1B	770.13	4X4 AREA	11.00	11.49	48.54	70.4
I-2A	785.53	2.5'x3' MODDOT T	8.00	0.22	1.65	5.2
J-2B	759.00	4X4 JCT. BOX	7.00	--	--	--
I-3	782.57	4X3 TYPE A	4.25	0.40	2.68	6.6
I-4	791.00	EX. 3X3 AREA	--	4.71	44.31	--
I-5	782.57	6X3 TYPE A	19.57	0.41	2.78	9.9
I-6	--	15" RCP F.E.S.	--	0.39	1.80	--
I-7	792.60	4X3 TYPE A	4.00	0.20	1.33	5.5
J-8	790.50	3X3 JCT. BOX	4.68	--	--	--
I-9	756.01	4X3 TYPE A	4.00	0.47	3.19	5.7
I-10	753.78	4X3 TYPE A	3.50	0.16	1.11	6.6
I-11	--	36" RCP F.E.S.	--	5.85	44.96	--
I-12	756.01	4X3 TYPE A	4.00	0.91	6.11	6.6
I-13	753.78	4X3 TYPE A	4.00	0.26	1.77	6.6
J-14	752.50	4X4 JCT. BOX	10.50	--	--	--
I-15	753.09	4X3 TYPE A	3.50	0.26	1.72	6.6
I-16	--	36" RCP F.E.S.	--	4.80	25.49	--
I-17	753.09	4X3 TYPE A	4.00	0.41	2.74	6.6
J-18	751.00	4X4 JCT. BOX	12.00	--	--	--
I-19	743.11	4X3 TYPE A	4.00	0.63	4.22	6.6
I-20	744.23	4X3 TYPE A	4.00	0.29	1.97	5.2
I-21	--	24" RCP F.E.S.	--	5.77	30.57	--
J-22	742.84	4X4 JCT. BOX	8.50	--	--	--
J-23	739.00	4X4 JCT. BOX	10.00	--	--	--
I-24	--	24" RCP F.E.S.	--	2.18	8.59	--
J-25	745.65	3X3 JCT. BOX	6.75	--	--	--
I-26	724.12	4X3 TYPE A	3.50	0.81	5.48	5.5
J-27	--	NOT USED	--	--	--	--
I-28	667.30	4X3 TYPE A	6.00	0.63	4.20	7.5
I-29	667.30	4X3 TYPE A	6.00	1.05	7.03	7.5

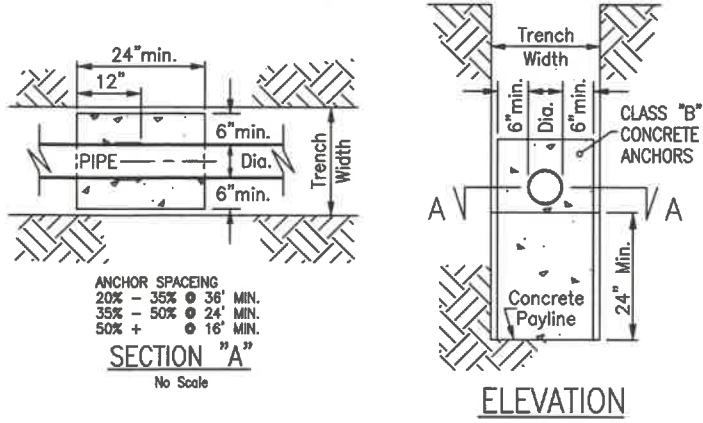
STORM DRAINAGE PIPES

US Structure	DS Structure	Time of Conc.	Pipe Q (cfs)	Storm Drain Length	FL Upstream	FL Downstream	Storm Drain Slope	Storm Drain Dia (in)	Pipe n	Capacity (cfs)	Percent of Capacity	Velocity (ft/s)
I-1a	I-1b	5.00	1.70	45.28	778.59	765.00	RCP 32.22%	15	0.015	31.78	5.3%	25.90
I-2a	J-2b	5.00	1.65	52.72	779.53	755.00	RCP 46.53%	15	0.015	38.19	4.3%	31.12
J-2b	OUT	8.00	49.56	4.00	752.00	751.66	RCP 8.00%	36	0.015	163.50	30.3%	23.13
C-1		10.00	4.05	40.00	793.00	791.00	CMP 5.00%	15	0.024	7.82	51.7%	6.38
C-2		8.00	7.55	65.00	794.40	792.80	CMP 2.46%	18	0.024	8.93	84.6%	5.05
I-3	EX I-4	5.00	2.68	33.80	788.32	786.00	RCP 6.88%	15	0.015	14.67	18.3%	11.85
EX I-4	I-5	8.00	47.57	57.00	778.85	773.36	EX RCP 9.63%	24	0.015	60.85	78.2%	19.37
I-5	OUT	8.05	50.94	43.71	773.00	768.75	EX RCP 9.72%	24	0.015	61.14	83.3%	19.46
C-3		5.00	0.32	30.00	799.50	798.50	CMP 3.33%	15	0.024	6.39	5.0%	5.21
C-4		5.00	0.60	38.00	801.00	800.00	CMP 2.63%	15	0.024	5.68	10.6%	4.63
C-5		10.00	2.65	30.00	797.00	796.00	CMP 3.33%	15	0.024	6.39	41.5%	5.21
I-6	I-7	5.00	1.80	49.00	791.88	788.80	RCP 6.29%	15	0.013	16.20	11.1%	13.20
I-7	J-8	5.06	3.13	14.90	786.60	787.50	RCP 7.38%	15	0.013	17.55	17.8%	14.30
J-8	EXIST	5.08	3.13	49.60	785.82	782.54	EX RCP 6.61%	24	0.013	56.17	5.4%	18.52
EXIST	OUT	5.12	3.13	16.00	782.54	781.22	RCP 8.25%	24	0.013	64.98	4.8%	20.68
C-6		8.00	0.46	30.00	783.90	782.30	CMP 5.33%	15	0.013	14.92	3.1%	12.16
C-7		13.00	20.41	316.00	777.43	751.21	HDP 8.30%	24	0.024	35.30	57.8%	11.24
I-9	OUT	5.00	3.19	5.00	752.01	751.69	RCP 6.40%	15	0.013	16.34	19.5%	13.32
I-10	OUT	5.01	1.11	5.00	750.28	750.15	RCP 2.60%	15	0.013	10.42	10.6%	8.49
I-12	J-14	5.00	8.11	54.86	752.01	748.00	RCP 7.31%	15	0.013	17.46	35.0%	14.23
I-13	I-14	5.00	1.77	80.56	749.78	748.00	RCP 2.21%	15	0.013	9.60	18.4%	7.82
I-11	EXIST	13.00	44.96	6.00	745.23	744.83	RCP 6.67%	36	0.013	172.21	26.1%	24.36
J-14	OUT	13.00	54.52	11.00	742.00	741.44	RCP 5.09%	36	0.013	150.49	36.2%	21.29
C-8		12.00	5.05	25.00	756.00	755.20	CMP 3.20%	15	0.024	6.26	80.6%	5.10
C-9		12.08	2.53	25.00	753.50	752.90	CMP 2.40%	15	0.024	5.42	46.6%	4.42
I-15	OUT	5.00	1.72	4.00	749.59	749.35	RCP 6.00%	15	0.013	15.82	10.9%	12.89
I-17	J-18	5.01	2.74	39.94	749.09	748.00	RCP 2.73%	15	0.013	10.67	25.6%	8.70
I-16	EXIST	5.08	25.49	3.00	745.64	745.45	RCP 6.33%	36	0.013	167.85	15.2%	23.75
J-18	OUT	5.08	28.82	53.68	739.00	736.41	RCP 4.82%	36	0.013	148.49	19.7%	20.72
I-19	J-22	5.00	4.22	137.69	739.11	738.00	RCP 0.81%	15	0.013	5.80	72.7%	4.73
I-20	J-23	5.00	1.97	30.28	740.23	734.50	RCP 18.92%	15	0.013	28.10	7.0%	22.90
C-10		11.00	5.63	25.00	742.80	742.50	CMP 1.20%	18	0.024	6.23	90.4%	3.53
I-21	J-22	11.00	30.57	5.00	734.86	734.50	RCP 7.20%	24	0.013	60.70	50.4%	19.32
J-22	J-23	11.00	35.32	60.02	734.34	731.17	EX RCP 5.28%	24	0.013	51.99	67.9%	16.95
J-23	OUT	11.06	37.54	41.00	729.00	727.14	RCP 4.54%	24	0.013	48.18	77.9%	15.34
I-24	EXIST	10.00	8.59	4.00	740.77	740.60	RCP 4.25%	24	0.013	46.64	18.4%	14.85
EXIST	EXIST	8.59	44.90	740.60	739.48	RCP 2.49%	24	0.013	35.73	24.0%	11.37	
J-25	OUT	10.00	8.59	77.03	738.90	737.39	RCP 1.96%	24	0.013	31.67	27.1%	10.08
C-11		11.00	11.57	99.60	723.85	716.21	RCP 7.67%	24	0.013	62.65	18.5%	19.94
I-26	OUT	5.00	5.48	12.89	720.62	720.01	RCP 4.73%	15	0.013	14.05	39.0%	11.45
C-12		11.00	19.45	52.43	712.24	711.21	RCP 1.96%	24	0.013	31.71	61.3%	10.09
I-28	OUT	5.00	4.20	21.62	661.30	654.17	RCP 32.98%	15	0.013	37.10	11.3%	30.23
I-29	OUT	5.00	7.03	32.72	661.30	653.51	RCP 23.81%	15	0.013	31.52	22.3%	25.68

PIPE TYPE ABBREVIATIONS:
RCP = CLASS III REINFORCED CONCRETE PIPE
CMP = ALUMINIZED CORRUGATED METAL PIPE

PIPE TYPE SUBSTITUTIONS PERMITTED:
PIPES SPECIFIED AS RCP MAY BE SUBSTITUTED WITH HIGH PERFORMANCE CORRUGATED POLYPROPYLENE PIPE (SMOOTH INTERIOR WALL); WITH THE EXCEPTION OF PIPES UNDER STREETS WHERE NO SUBSTITUTION WILL BE PERMITTED.

NO PLASTIC PIPES WILL BE PERMITTED TO BE DISCHARGED INTO OPEN CHANNELS. IF THE CONTRACTOR WISHES TO USE PLASTIC PIPE IN A PIPE RUN THAT DISCHARGES INTO AN OPEN CHANNEL, A 10' LONG SECTION OF THE SPECIFIED PIPE AND SPECIFIED FLARED END SECTION WILL BE REQUIRED AT EACH END OF THE RUN.



CONCRETE PIPE ANCHOR DETAIL
No Scale

PRINTS ISSUED
2/12/21
REVISIONS:

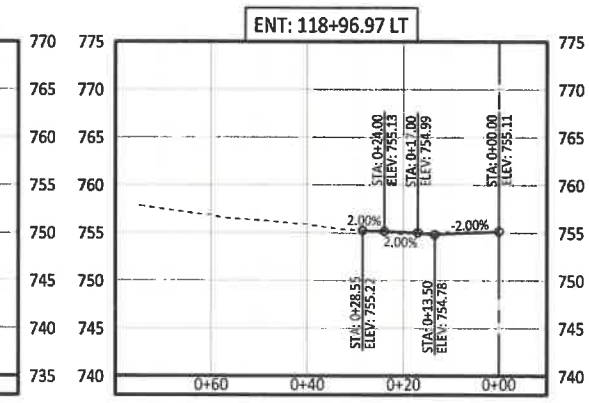
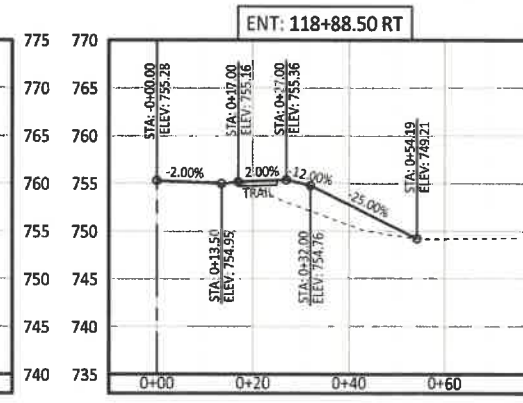
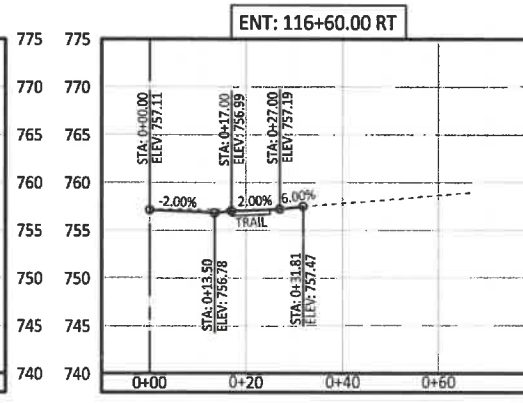
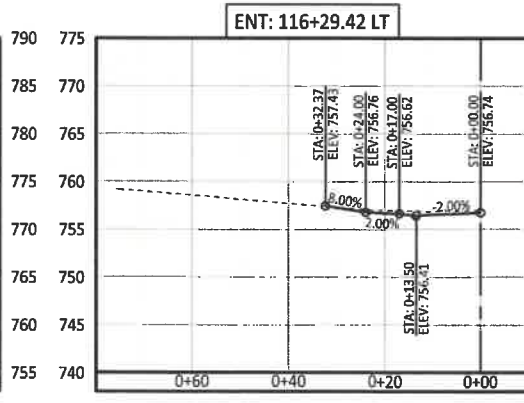
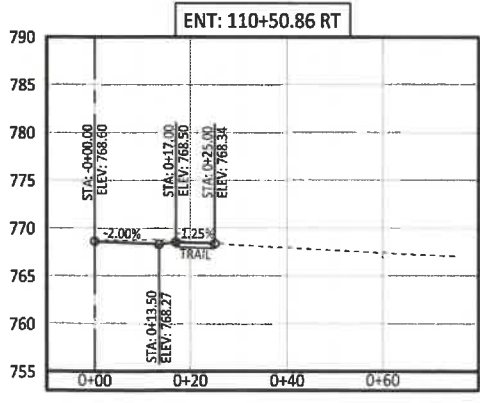
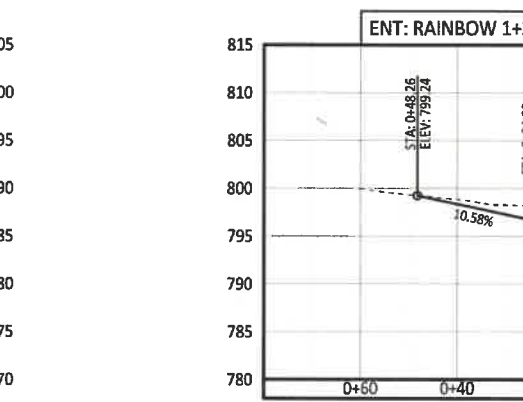
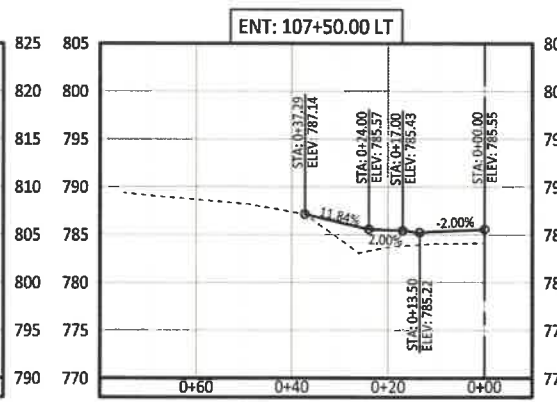
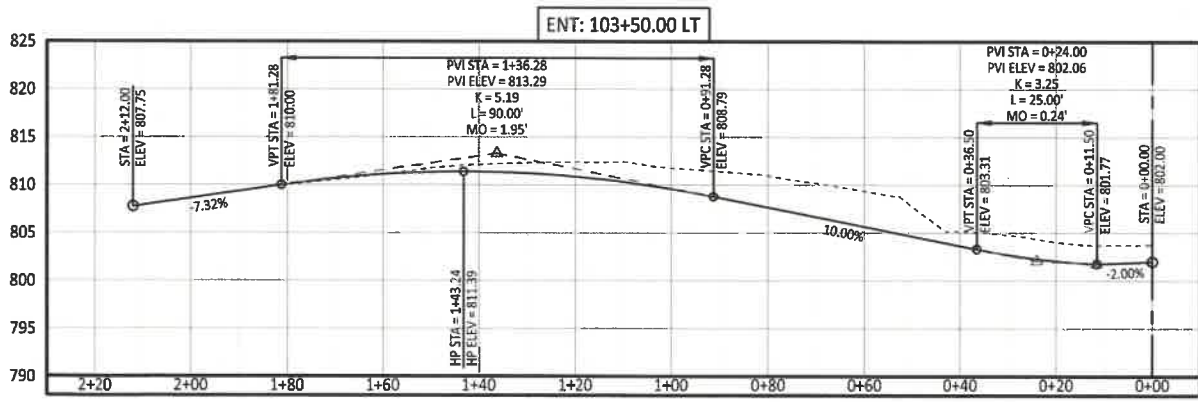
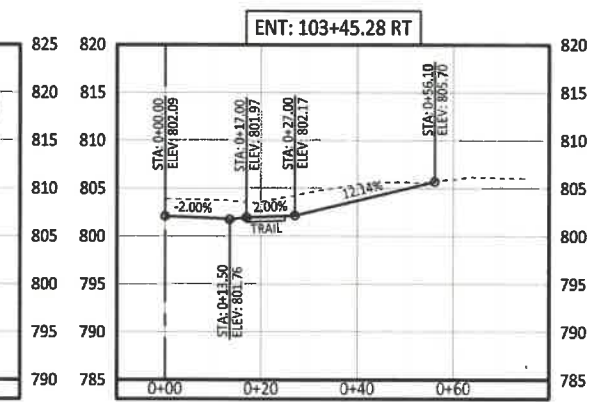
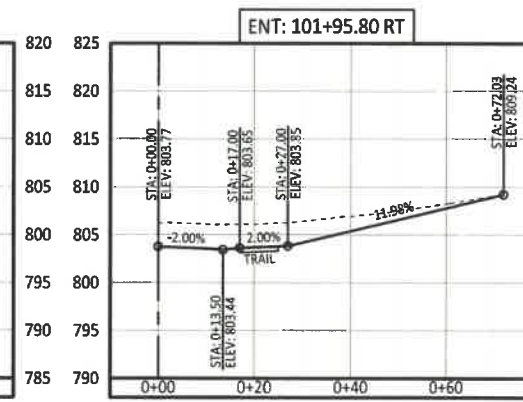
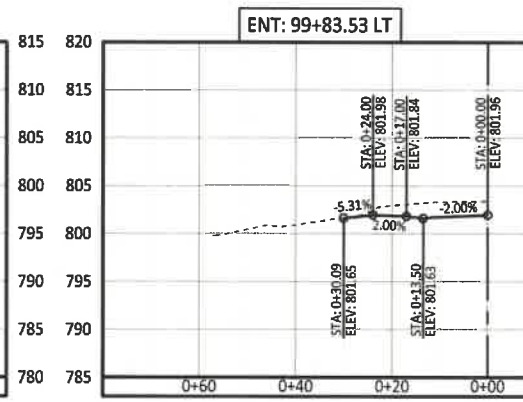
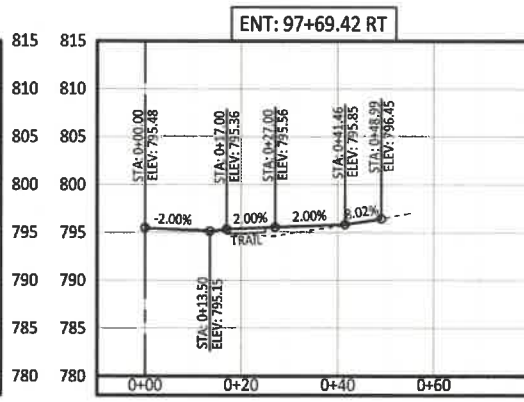
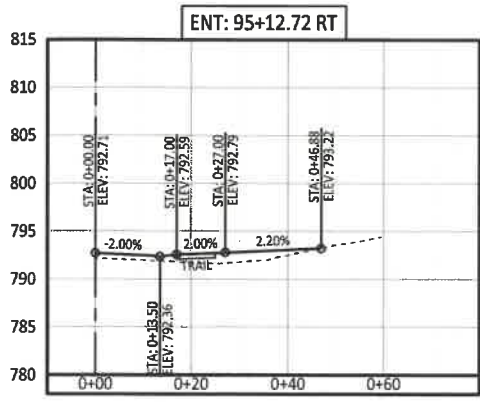
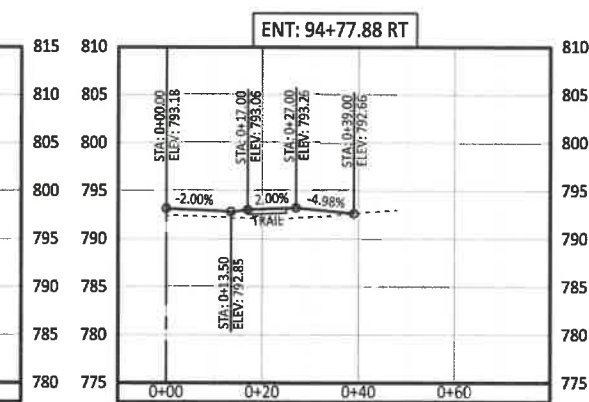
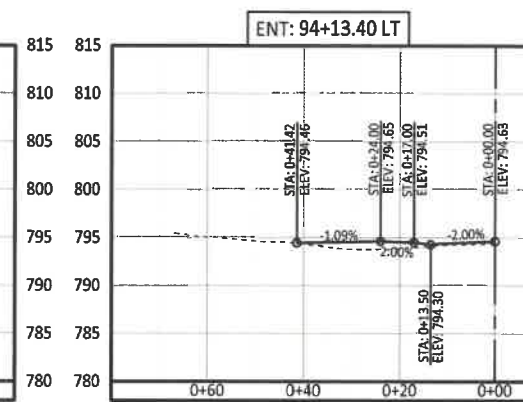
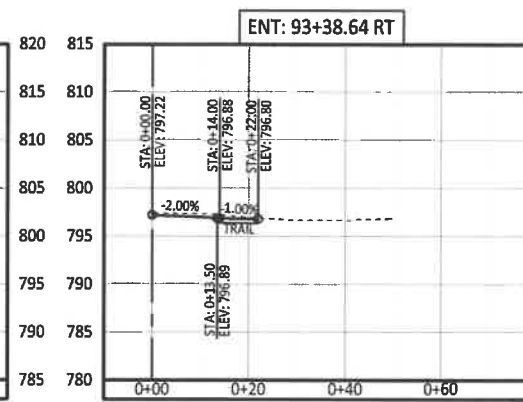
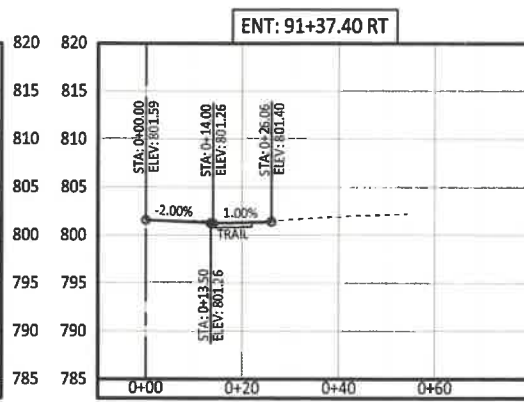
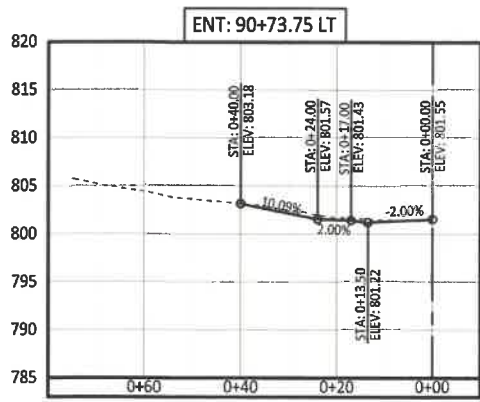
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Paul Samson, PE - Engineer
MO# PE-2002016730

BUSINESS HWY 50 WEST IMPROVEMENTS - PHASE 2
COLE COUNTY PUBLIC WORKS
BUSINESS HWY 50 WEST
COLE COUNTY, MISSOURI

CMP'S JOB No. **10-053**
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SCALE: 1"=50'/10'V
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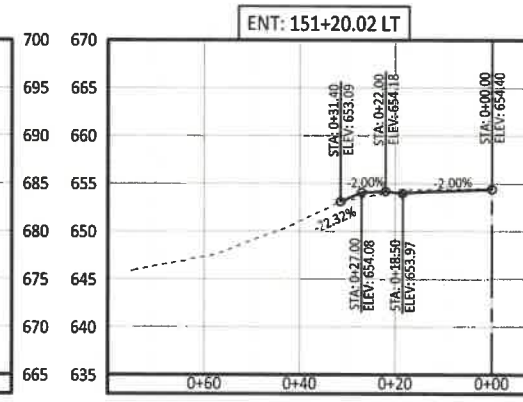
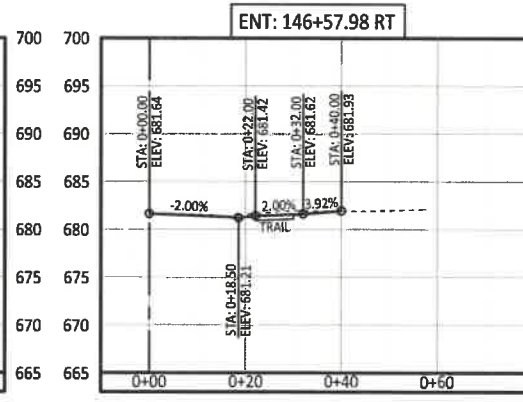
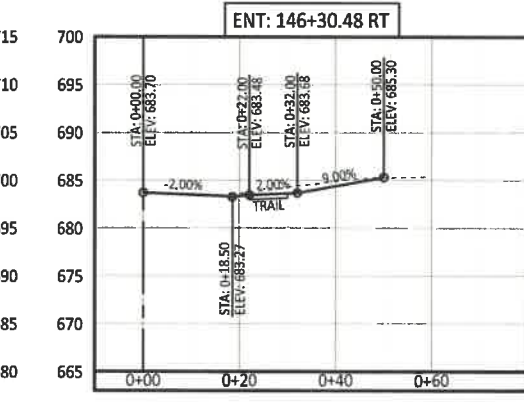
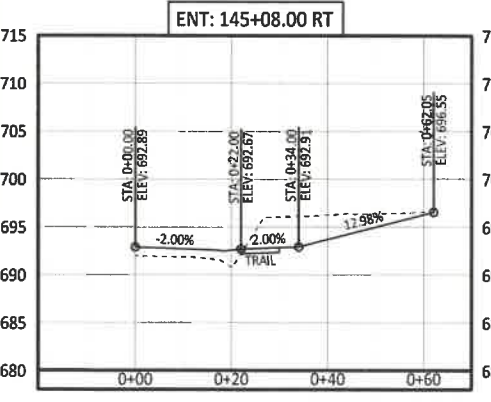
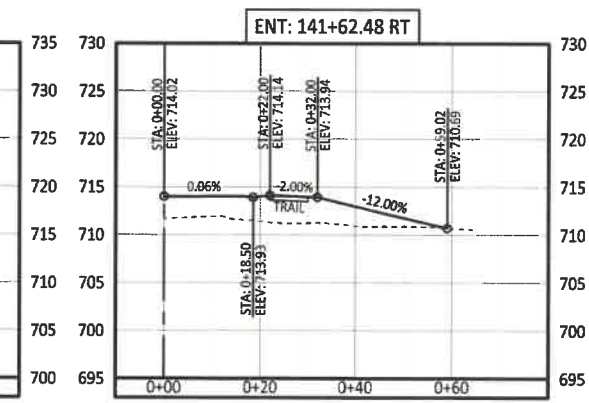
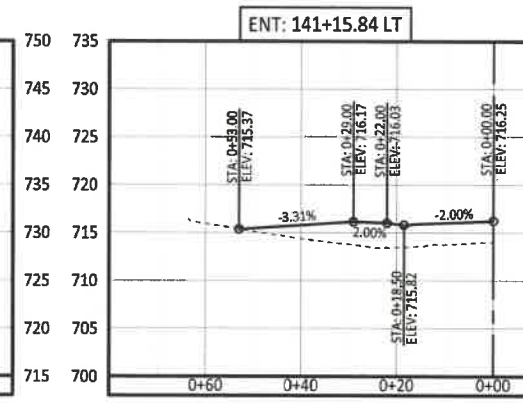
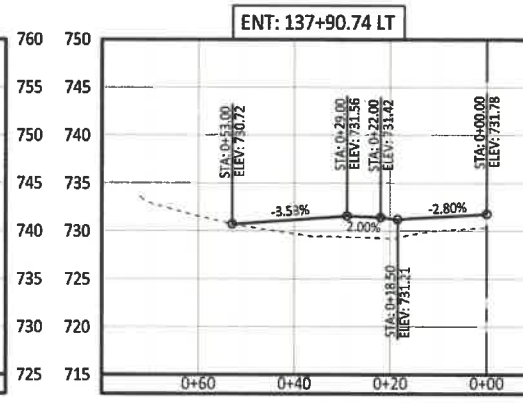
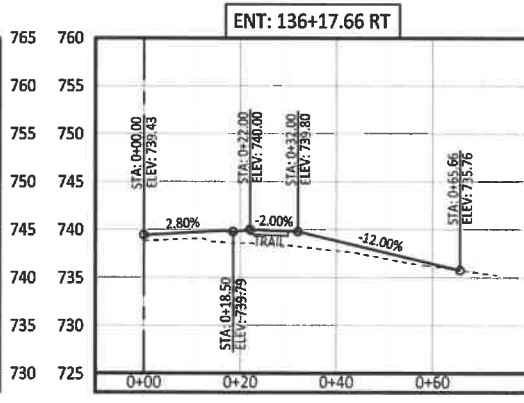
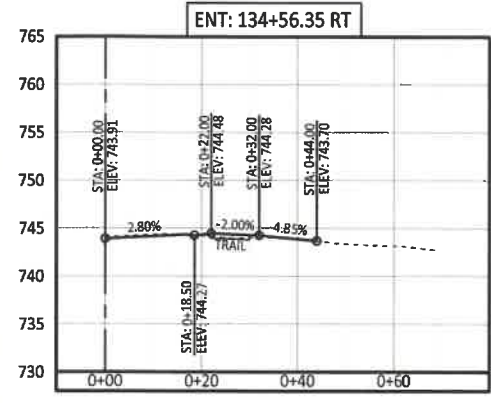
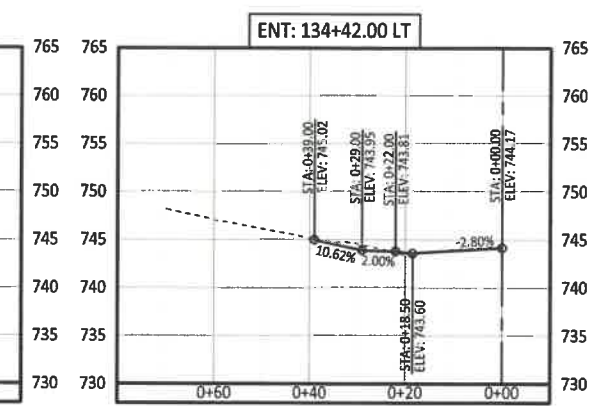
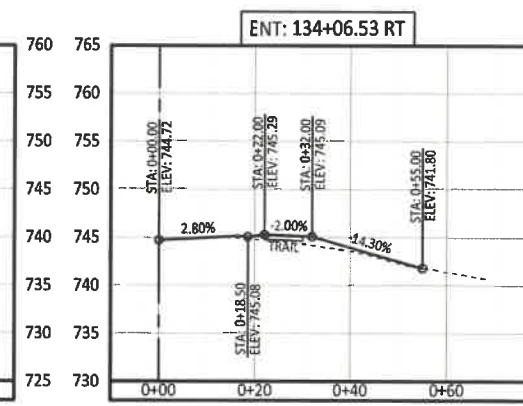
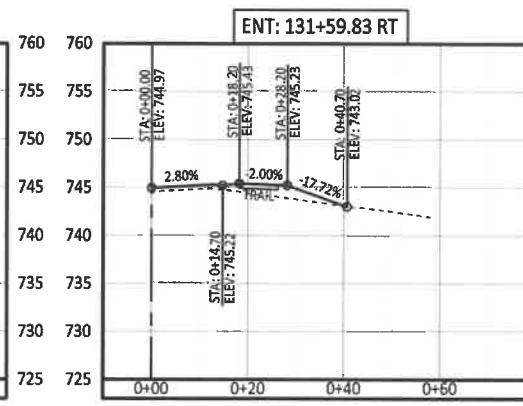
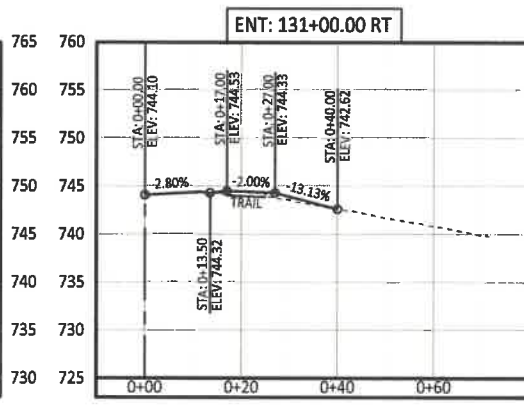
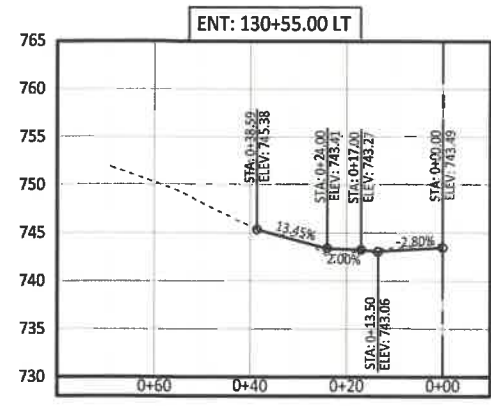
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 (573) 634-8888

Paul Samson, PE - Engineer
MO# PE-2002018730

BUSINESS HWY 50 WEST IMPROVEMENTS - PHASE 2
 COLE COUNTY PUBLIC WORKS

BUSINESS HWY 50 WEST
 COLE COUNTY, MISSOURI

CMPS JOB No. 10-053
 DRN. BY: C.F.B./P.L.S. CRD. BY:
 SCALE: Horz. 1" = 20' Vert. 1" = 10'
 SHEET TITLE
ENTRANCES PROFILES
 SHEET NUMBER
21
 OF 37 SHEETS



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Missouri State Certificate of Authority #001658

PAUL SAMSON
PROFESSIONAL ENGINEER
2/12/21
Paul Samson, PE - Engineer
MO# PE-2002016730

**BUSINESS HWY 50 WEST
IMPROVEMENTS - PHASE 2
COLE COUNTY PUBLIC WORKS**


BUSINESS HWY 50 WEST
COLE COUNTY, MISSOURI

CMPS JOB No. 10-053	
DRN. BY: C.F.B./P.L.S.	CKD. BY:
SCALE: Horz. 1" = 20' Vert. 1"=10'	
SHEET TITLE	
ENTRANCES PROFILES	
SHEET NUMBER	
22	
OF 37 SHEETS	

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(573) 634-888



Paul Samsom, PE - Engineer
MO# PE-2002018730

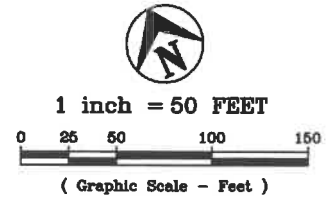
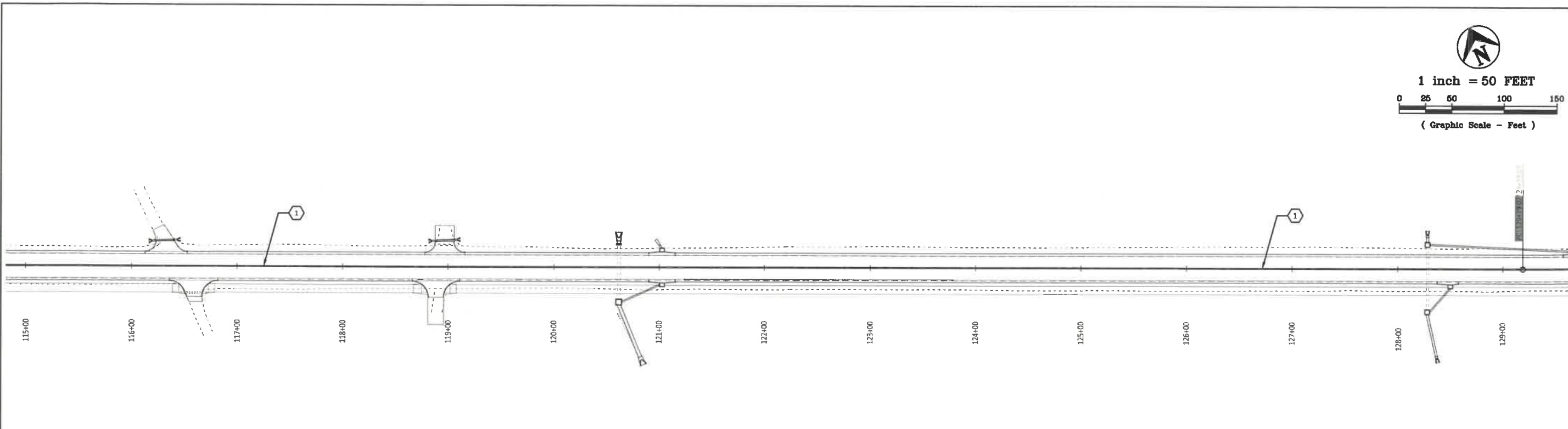
**BUSINESS HWY 50 WEST
IMPROVEMENTS - PHASE 2**
COLE COUNTY PUBLIC WORKS

BUSINESS HWY 50 WEST
COLE COUNTY, MISSOURI

CMPS JOB No. 10-053
DRN. BY: C.F.B./P.L.S. CRD. BY:

SCALE: 1" = 50'

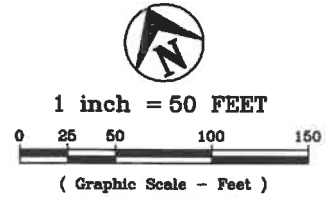
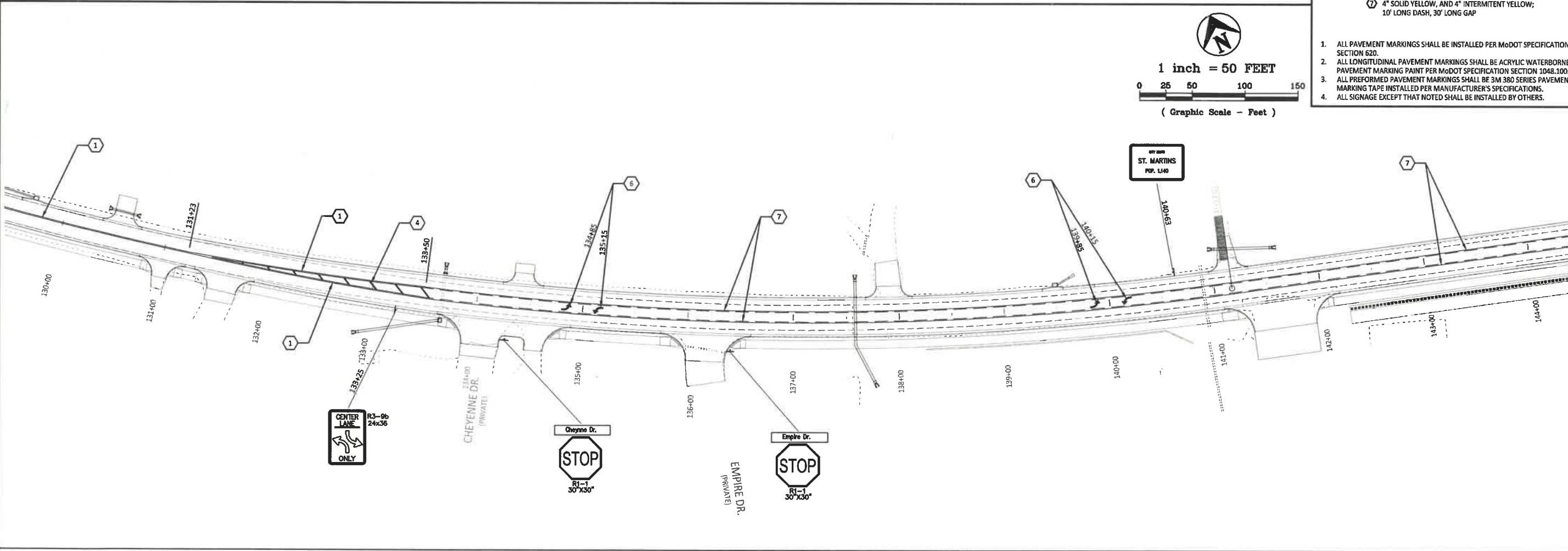
SHEET TITLE
**SIGNING &
STRIPING PLAN**
SHEET NUMBER
24
OF 37 SHEETS



PAVEMENT MARKING LEGEND

- ① 4" DOUBLE SOLID YELLOW
- ② 4" SOLID YELLOW
- ③ 4" SOLID WHITE
- ④ 24" SOLID YELLOW PREFORMED HATCHING @ 45°
- ⑤ 24" SOLID WHITE PREFORMED STOP BAR
- ⑥ PREFORMED WHITE ARROW OR WORD
- ⑦ 4" SOLID YELLOW, AND 4" INTERMITTENT YELLOW; 10' LONG DASH, 30' LONG GAP

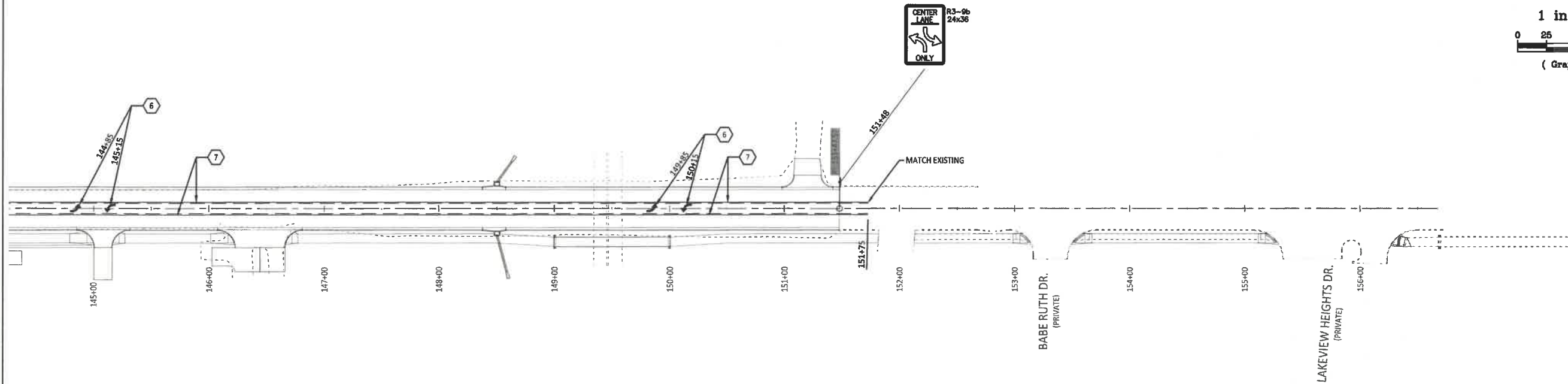
1. ALL PAVEMENT MARKINGS SHALL BE INSTALLED PER MoDOT SPECIFICATION SECTION 620.
2. ALL LONGITUDINAL PAVEMENT MARKINGS SHALL BE ACRYLIC WATERBORNE PAVEMENT MARKING PAINT PER MoDOT SPECIFICATION SECTION 1048.100.
3. ALL PREFORMED PAVEMENT MARKINGS SHALL BE 3M 380 SERIES PAVEMENT MARKING TAPE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
4. ALL SIGNAGE EXCEPT THAT NOTED SHALL BE INSTALLED BY OTHERS.



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1 inch = 50 FEET
 (Graphic Scale - Feet)



- PAVEMENT MARKING LEGEND**
- ① 4" DOUBLE SOLID YELLOW
 - ② 4" SOLID YELLOW
 - ③ 4" SOLID WHITE
 - ④ 24" SOLID YELLOW PREFORMED HATCHING @ 45°
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2/12/21

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Paul Samson, PE - Engineer
MC# PE-2002016730

Central Missouri Professional Services, Inc.
Missouri State Certificate of Authority 0001556

BUSINESS HWY 50 WEST IMPROVEMENTS - PHASE 2
 COLE COUNTY PUBLIC WORKS

BUSINESS HWY 50 WEST
 COLE COUNTY, MISSOURI

CMPJ JOB No. 10-053

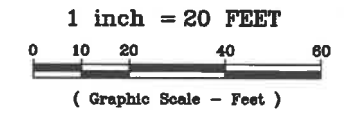
DRN. BY: C.F.B./P.L.S. CRD. BY:

SCALE: 1" = 50'

SHEET TITLE
SIGNING & STRIPING PLAN

SHEET NUMBER
25
 OF 37 SHEETS

P:\2020\BIS\CPW\BIS 50 Phase 2\BIS 50 Phase 2 - SIGNING-STRIPING.DWG - 2/12/2021 10:31:17 AM



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(573) 634-8898

STATE OF MISSOURI
PAUL SAMSON
PROFESSIONAL ENGINEER
NUMBER
PE-200216730
2/12/21
Paul Samson, PE - Engineer
MO# PE-200216730

BUSINESS HWY 50 WEST IMPROVEMENTS - PHASE 2

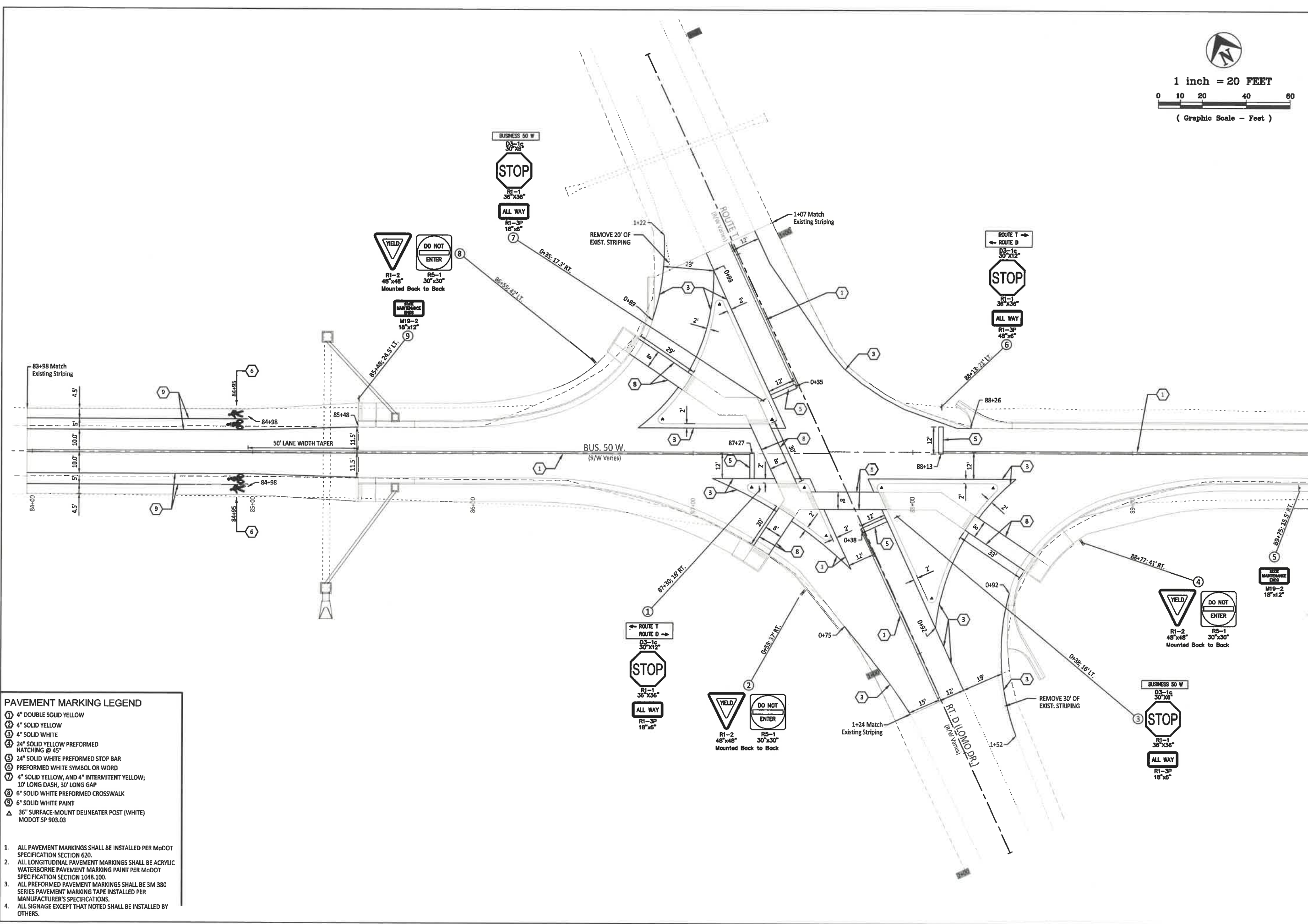
COLE COUNTY PUBLIC WORKS

BUSINESS HWY 50 WEST
COLE COUNTY, MISSOURI

CMPS JOB No. 10-053
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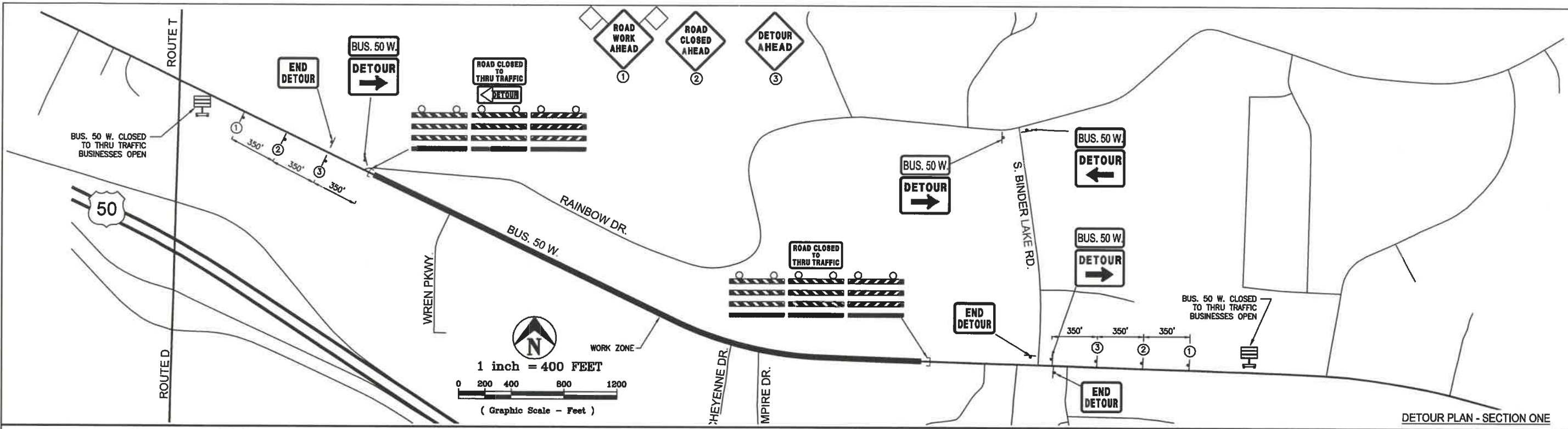
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SHEET TITLE
**SIGNING &
STRIPING PLAN**
SHEET NUMBER
26
OF 37 SHEETS

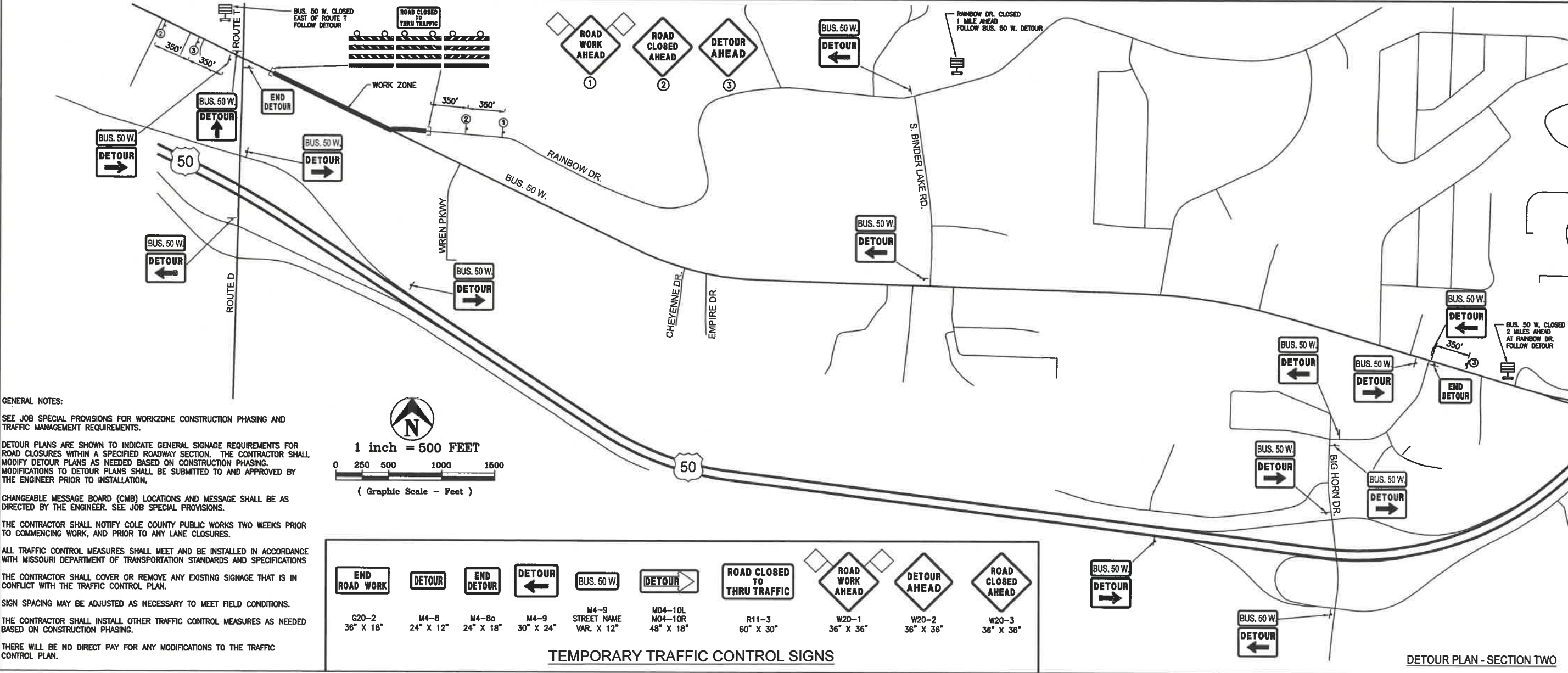


- ### PAVEMENT MARKING LEGEND
- ① 4" DOUBLE SOLID YELLOW
 - ② 4" SOLID YELLOW
 - ③ 4" SOLID WHITE
 - ④ 24" SOLID YELLOW PREFORMED HATCHING @ 45°
 - ⑤ 24" SOLID WHITE PREFORMED STOP BAR
 - ⑥ PREFORMED WHITE SYMBOL OR WORD
 - ⑦ 4" SOLID YELLOW, AND 4" INTERMITTENT YELLOW; 10' LONG DASH, 30' LONG GAP
 - ⑧ 6" SOLID WHITE PREFORMED CROSSWALK
 - ⑨ 6" SOLID WHITE PAINT
 - ▲ 36" SURFACE-MOUNT DELINEATOR POST (WHITE) MODOT SP 903.03
1. ALL PAVEMENT MARKINGS SHALL BE INSTALLED PER MoDOT SPECIFICATION SECTION 620.
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DETOUR PLAN - SECTION ONE



DETOUR PLAN - SECTION TWO

GENERAL NOTES:

SEE JOB SPECIAL PROVISIONS FOR WORKZONE CONSTRUCTION PHASING AND TRAFFIC MANAGEMENT REQUIREMENTS.

DETOUR PLANS ARE SHOWN TO INDICATE GENERAL SIGNAGE REQUIREMENTS FOR ROAD CLOSURES WITHIN A SPECIFIED ROADWAY SECTION. THE CONTRACTOR SHALL MODIFY DETOUR PLANS AS NEEDED BASED ON CONSTRUCTION PHASING. MODIFICATIONS TO DETOUR PLANS SHALL BE SUBMITTED TO AND APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.

CHANGEABLE MESSAGE BOARD (CMB) LOCATIONS AND MESSAGE SHALL BE AS DIRECTED BY THE ENGINEER. SEE JOB SPECIAL PROVISIONS.

THE CONTRACTOR SHALL NOTIFY COLE COUNTY PUBLIC WORKS TWO WEEKS PRIOR TO COMMENCING WORK, AND PRIOR TO ANY LANE CLOSURES.

ALL TRAFFIC CONTROL MEASURES SHALL MEET AND BE INSTALLED IN ACCORDANCE WITH MISSOURI DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS

THE CONTRACTOR SHALL COVER OR REMOVE ANY EXISTING SIGNAGE THAT IS IN CONFLICT WITH THE TRAFFIC CONTROL PLAN.

SIGN SPACING MAY BE ADJUSTED AS NECESSARY TO MEET FIELD CONDITIONS.

THE CONTRACTOR SHALL INSTALL OTHER TRAFFIC CONTROL MEASURES AS NEEDED BASED ON CONSTRUCTION PHASING.

THERE WILL BE NO DIRECT PAY FOR ANY MODIFICATIONS TO THE TRAFFIC CONTROL PLAN.

TEMPORARY TRAFFIC CONTROL SIGNS

G20-2 36" X 18"	M4-8 24" X 12"	M4-8a 24" X 18"	M4-9 30" X 24"	M4-9 STREET NAME VAR. X 12"	M04-10L M04-10R 48" X 18"	R11-3 60" X 30"	W20-1 36" X 36"	W20-2 36" X 36"	W20-3 36" X 36"	

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Missouri State Certificate of Authority #001568

Paul Samson, PE - Engineer
MO# PE-2002016730

**BUSINESS HWY 50 WEST
IMPROVEMENTS - PHASE 2**
COLE COUNTY PUBLIC WORKS

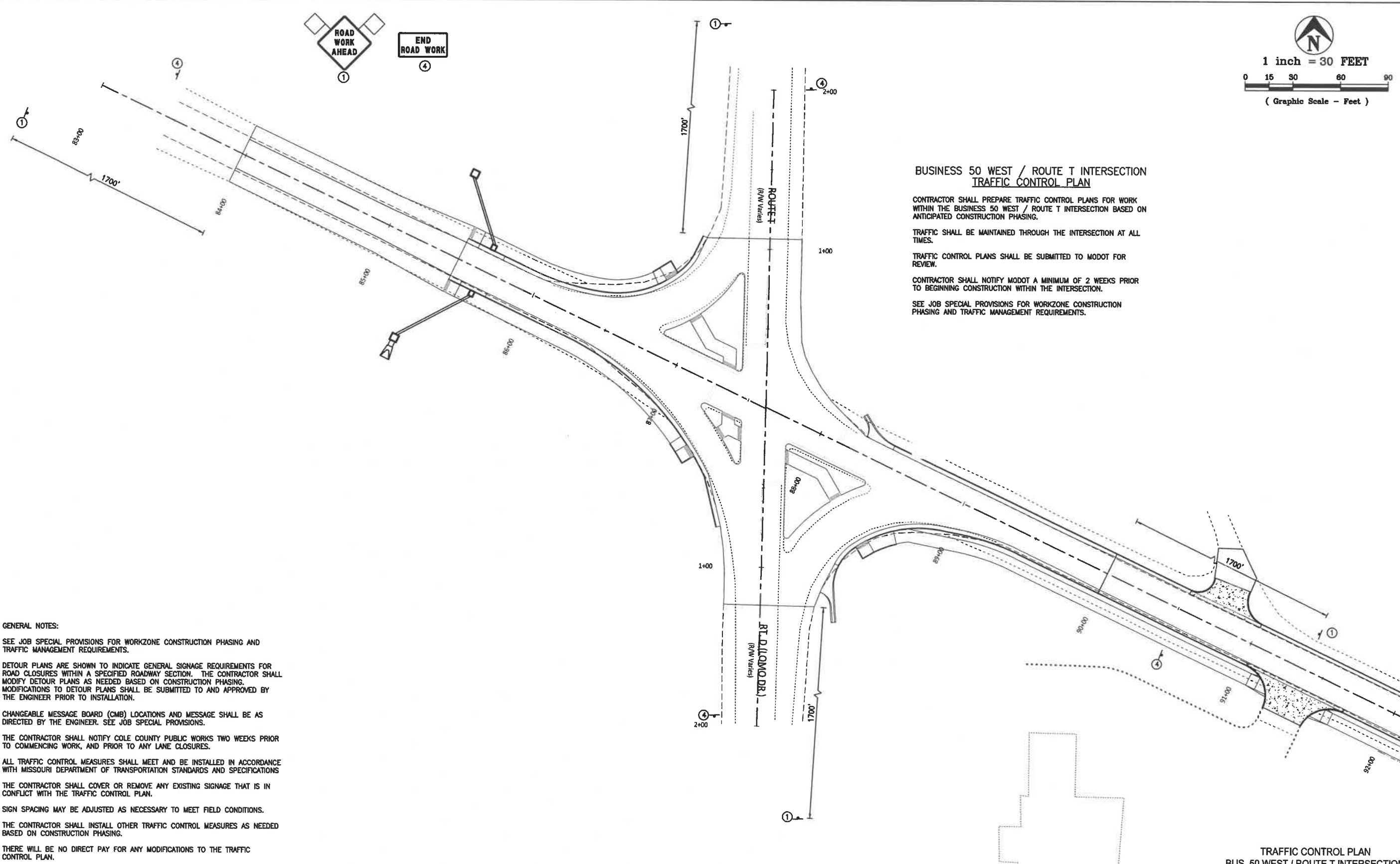
BUSINESS HWY 50 WEST
COLE COUNTY, MISSOURI

CMPS JOB No. 10-053
DRN. BY: C.F.B./P.L.S. CKD. BY:

SCALE: AS SHOWN

SHEET TITLE
TRAFFIC CONTROL PLAN

SHEET NUMBER
27
OF 37 SHEETS



**BUSINESS 50 WEST / ROUTE T INTERSECTION
TRAFFIC CONTROL PLAN**

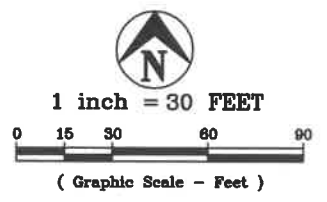
CONTRACTOR SHALL PREPARE TRAFFIC CONTROL PLANS FOR WORK WITHIN THE BUSINESS 50 WEST / ROUTE T INTERSECTION BASED ON ANTICIPATED CONSTRUCTION PHASING.

TRAFFIC SHALL BE MAINTAINED THROUGH THE INTERSECTION AT ALL TIMES.

TRAFFIC CONTROL PLANS SHALL BE SUBMITTED TO MODOT FOR REVIEW.

CONTRACTOR SHALL NOTIFY MODOT A MINIMUM OF 2 WEEKS PRIOR TO BEGINNING CONSTRUCTION WITHIN THE INTERSECTION.

SEE JOB SPECIAL PROVISIONS FOR WORKZONE CONSTRUCTION PHASING AND TRAFFIC MANAGEMENT REQUIREMENTS.



GENERAL NOTES:

SEE JOB SPECIAL PROVISIONS FOR WORKZONE CONSTRUCTION PHASING AND TRAFFIC MANAGEMENT REQUIREMENTS.

DETOUR PLANS ARE SHOWN TO INDICATE GENERAL SIGNAGE REQUIREMENTS FOR ROAD CLOSURES WITHIN A SPECIFIED ROADWAY SECTION. THE CONTRACTOR SHALL MODIFY DETOUR PLANS AS NEEDED BASED ON CONSTRUCTION PHASING. MODIFICATIONS TO DETOUR PLANS SHALL BE SUBMITTED TO AND APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.

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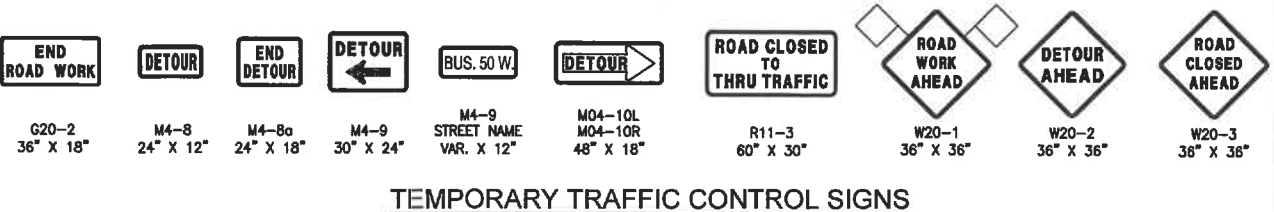
ALL TRAFFIC CONTROL MEASURES SHALL MEET AND BE INSTALLED IN ACCORDANCE WITH MISSOURI DEPARTMENT OF TRANSPORTATION STANDARDS AND SPECIFICATIONS

THE CONTRACTOR SHALL COVER OR REMOVE ANY EXISTING SIGNAGE THAT IS IN CONFLICT WITH THE TRAFFIC CONTROL PLAN.

SIGN SPACING MAY BE ADJUSTED AS NECESSARY TO MEET FIELD CONDITIONS.

THE CONTRACTOR SHALL INSTALL OTHER TRAFFIC CONTROL MEASURES AS NEEDED BASED ON CONSTRUCTION PHASING.

THERE WILL BE NO DIRECT PAY FOR ANY MODIFICATIONS TO THE TRAFFIC CONTROL PLAN.



TEMPORARY TRAFFIC CONTROL SIGNS

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Paul Samson, PE - Engineer
MO# PE-2002016730

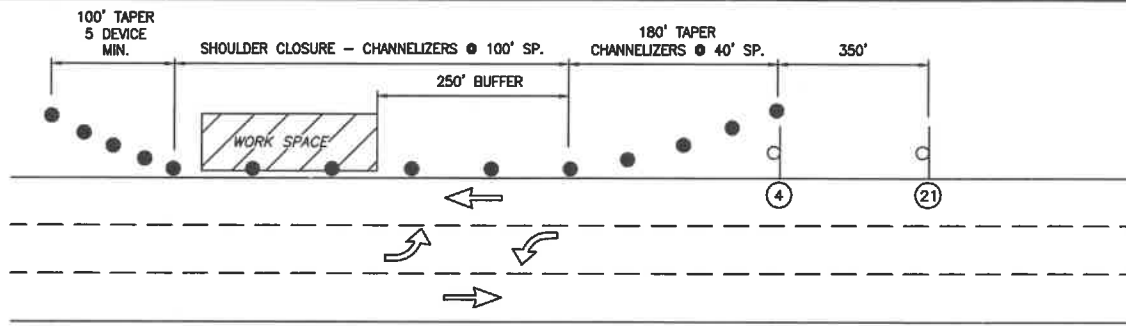
**BUSINESS HWY 50 WEST
IMPROVEMENTS - PHASE 2
COLE COUNTY PUBLIC WORKS**

BUSINESS HWY 50 WEST
COLE COUNTY, MISSOURI

CMPS JOB No. 10-053
DRN. BY: C.F.B./P.L.S. CKD. BY:
SCALE: 1" = 30'
SHEET TITLE
TRAFFIC CONTROL PLAN
SHEET NUMBER
28
OF 37 SHEETS

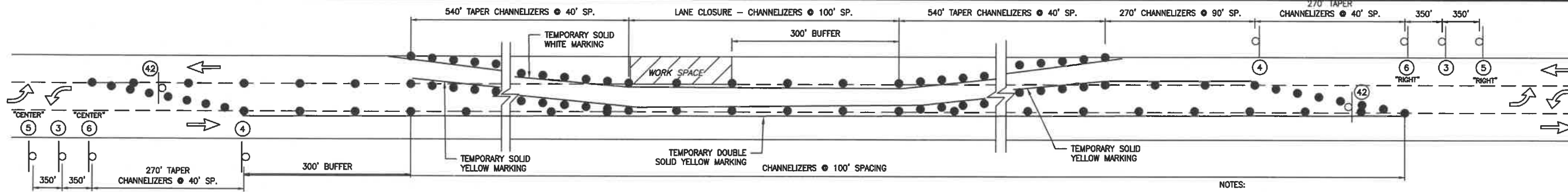
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GENERAL NOTES:
 SEE JOB SPECIAL PROVISIONS FOR WORKZONE CONSTRUCTION PHASING AND TRAFFIC MANAGEMENT REQUIREMENTS.
 DETOUR PLANS ARE SHOWN TO INDICATE GENERAL SIGNAGE REQUIREMENTS FOR ROAD CLOSURES WITHIN A SPECIFIED ROADWAY SECTION. THE CONTRACTOR SHALL MODIFY DETOUR PLANS AS NEEDED BASED ON CONSTRUCTION PHASING. MODIFICATIONS TO DETOUR PLANS SHALL BE SUBMITTED TO AND APPROVED BY THE ENGINEER PRIOR TO INSTALLATION.
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 SIGN SPACING MAY BE ADJUSTED AS NECESSARY TO MEET FIELD CONDITIONS.
 THE CONTRACTOR SHALL INSTALL OTHER TRAFFIC CONTROL MEASURES AS NEEDED BASED ON CONSTRUCTION PHASING.
 THERE WILL BE NO DIRECT PAY FOR ANY MODIFICATIONS TO THE TRAFFIC CONTROL PLAN.



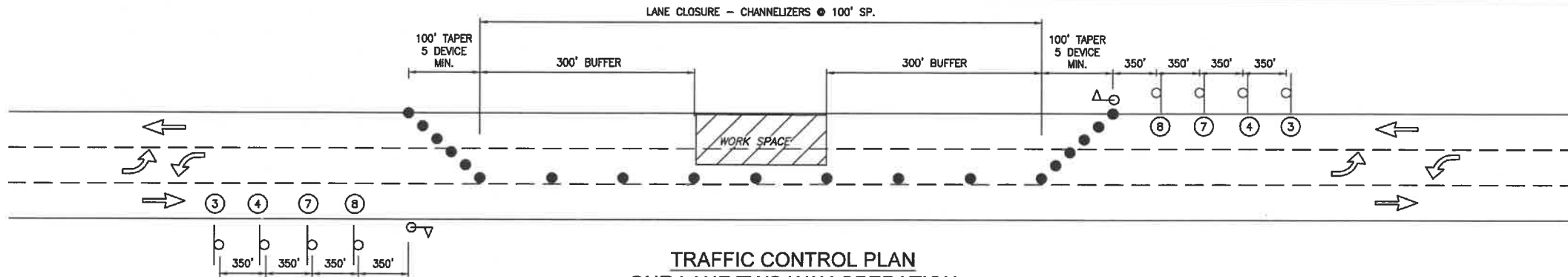
**TRAFFIC CONTROL PLAN
 SHOULDER CLOSURE
 NOT TO SCALE**

NOTES:
 IF WORK ENCLOSES INTO ROADWAY
 (34) SHALL BE ADDED AFTER (21)
 AND (21) SHALL BE ADDED TO OPPOSITE
 SIDE OF ROAD

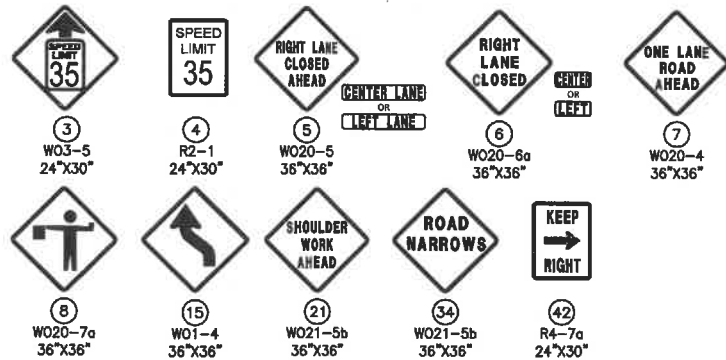


**TRAFFIC CONTROL PLAN
 OUTSIDE LANE CLOSURE
 WITH LANE SHIFT
 NOT TO SCALE**

NOTES:
 SEE JOB SPECIAL PROVISIONS FOR PAVEMENT EDGE TREATMENT
 REMOVAL OF EXISTING PAVEMENT MARKINGS AND PLACEMENT OF TEMPORARY PAVEMENT MARKING SHALL BE REQUIRED FOR LONG TERM LANE CLOSURES.
 FOR SHORT TERM LANE CLOSURES DEVICE SPACING MAY BE REDUCED BY ONE-HALF.
 WHERE FULL LENGTH SHIFTING TAPERS ARE NOT PROVIDED, SIGN SHALL BE INSTALLED IN ADVANCE OF THE LANE SHIFTS.



**TRAFFIC CONTROL PLAN
 ONE-LANE TWO WAY OPERATION
 WITH FLAGGER CONTROL
 NOT TO SCALE**



TRAFFIC CONTROL SIGNS

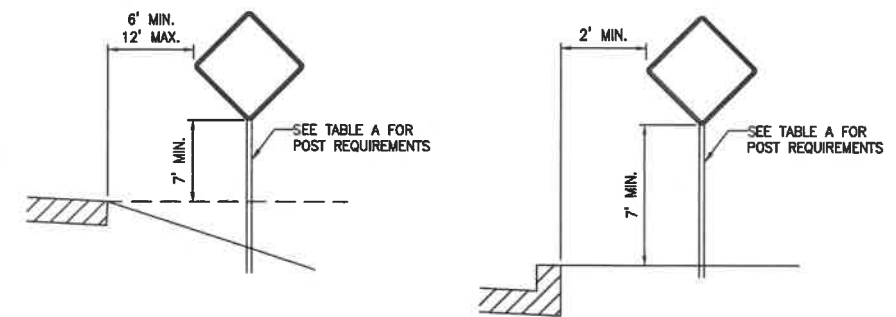
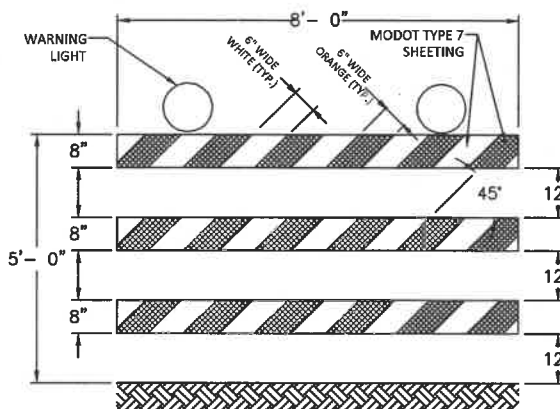
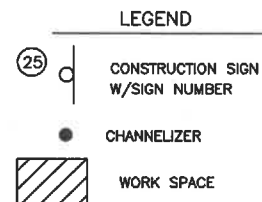


TABLE A

SIGN AREA (SQ. FT.)	U-CHANNEL	WOOD	PERF. SQUARE STEEL TUBING
≤ 10	1 - 3 LB/FT	1 - 4"X4"	1 - 2" 12 GA.
> 10 ≤ 16	2 - 3 LB/FT	2 - 4"X4"	2 - 2" 12 GA.
> 16 ≤ 24	2 - 3 LB/FT	1 - 4"X6"	3 - 2" 12 GA.

SIGNS GREATER THAN 4 FEET IN WIDTH, EXCEPT DIAMOND SHAPE SIGNS, REQUIRE TWO POSTS.

SIGN MOUNTING REQUIREMENTS

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 Missouri State Certificate of Authority #001558

Paul Samson, PE - Engineer
 MO# PE-2002016730

**BUSINESS HWY 50 WEST
 IMPROVEMENTS - PHASE 2**

COLE COUNTY PUBLIC WORKS

BUSINESS HWY 50 WEST
 COLE COUNTY, MISSOURI

CMPS JOB No. 10-053

DRN. BY: C.F.B./P.L.S. CRD. BY:

SCALE: N.T.S.

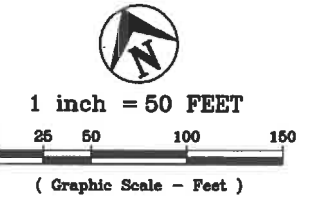
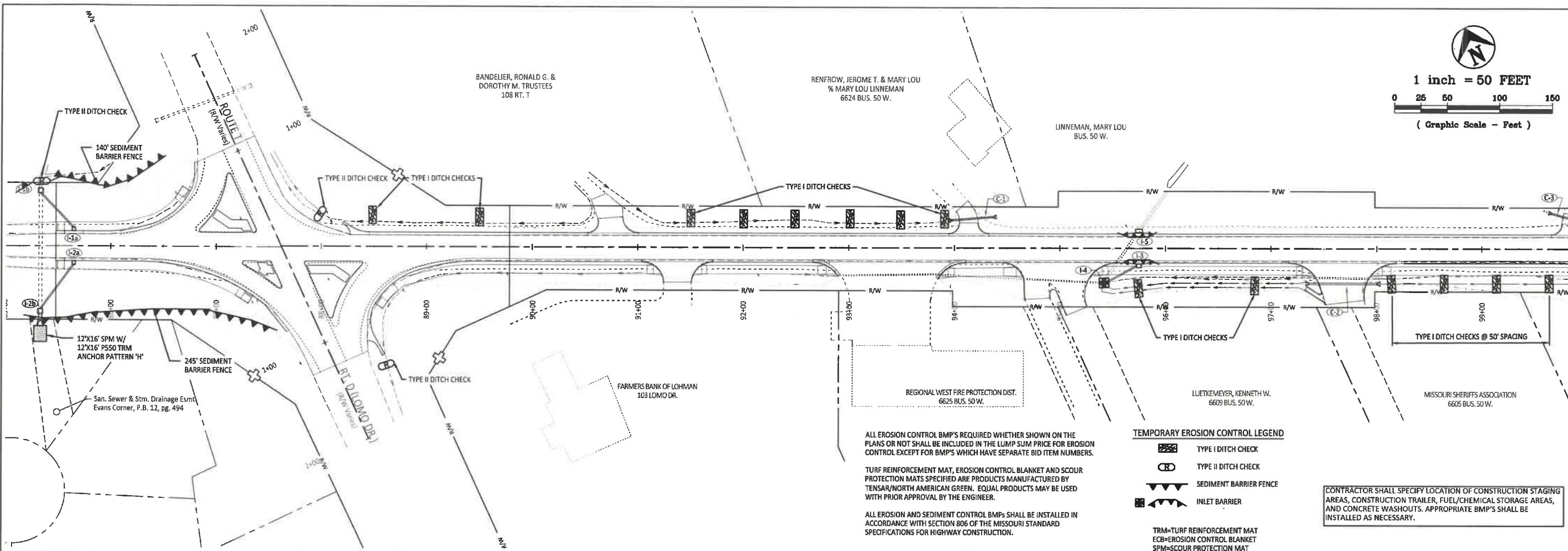
SHEET TITLE

TRAFFIC CONTROL PLAN

SHEET NUMBER

29

OF 37 SHEETS



ALL EROSION CONTROL BMP'S REQUIRED WHETHER SHOWN ON THE PLANS OR NOT SHALL BE INCLUDED IN THE LUMP SUM PRICE FOR EROSION CONTROL EXCEPT FOR BMP'S WHICH HAVE SEPARATE BID ITEM NUMBERS.

TURF REINFORCEMENT MAT, EROSION CONTROL BLANKET AND SCOUR PROTECTION MATS SPECIFIED ARE PRODUCTS MANUFACTURED BY TENSAR/NORTH AMERICAN GREEN. EQUAL PRODUCTS MAY BE USED WITH PRIOR APPROVAL BY THE ENGINEER.

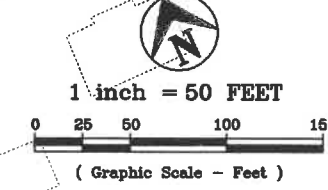
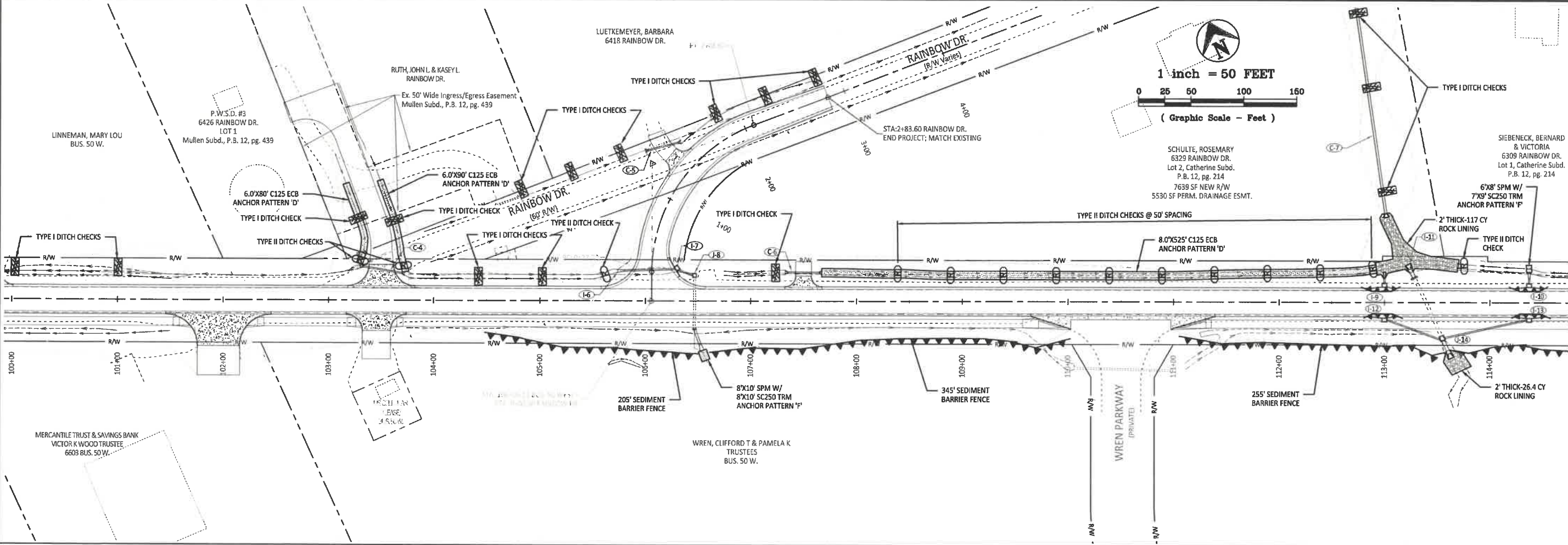
ALL EROSION AND SEDIMENT CONTROL BMP'S SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 806 OF THE MISSOURI STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

TEMPORARY EROSION CONTROL LEGEND

- TYPE I DITCH CHECK
- TYPE II DITCH CHECK
- SEDIMENT BARRIER FENCE
- INLET BARRIER

TRM-TURF REINFORCEMENT MAT
 ECB-EROSION CONTROL BLANKET
 SPM-SCOUR PROTECTION MAT

CONTRACTOR SHALL SPECIFY LOCATION OF CONSTRUCTION STAGING AREAS, CONSTRUCTION TRAILER, FUEL/CHEMICAL STORAGE AREAS, AND CONCRETE WASHOUTS. APPROPRIATE BMP'S SHALL BE INSTALLED AS NECESSARY.



SCHULTE, ROSEMARY
 6329 RAINBOW DR.
 Lot 2, Catherine Subd.
 P.B. 12, pg. 214
 7639 SF NEW R/W
 5530 SF PERM. DRAINAGE ESMT.

PRINTS ISSUED
 2/12/21
 REVISIONS:

Central Missouri Professional Services, Inc.
 ENGINEERING - SURVEYING - MATERIALS TESTING
 2500 E. MCCARTY
 JEFFERSON CITY, MISSOURI 65101
 (573) 634-3485
 (573) 634-8886



Paul Samson, PE - Engineer
 MO# PE-2002016730

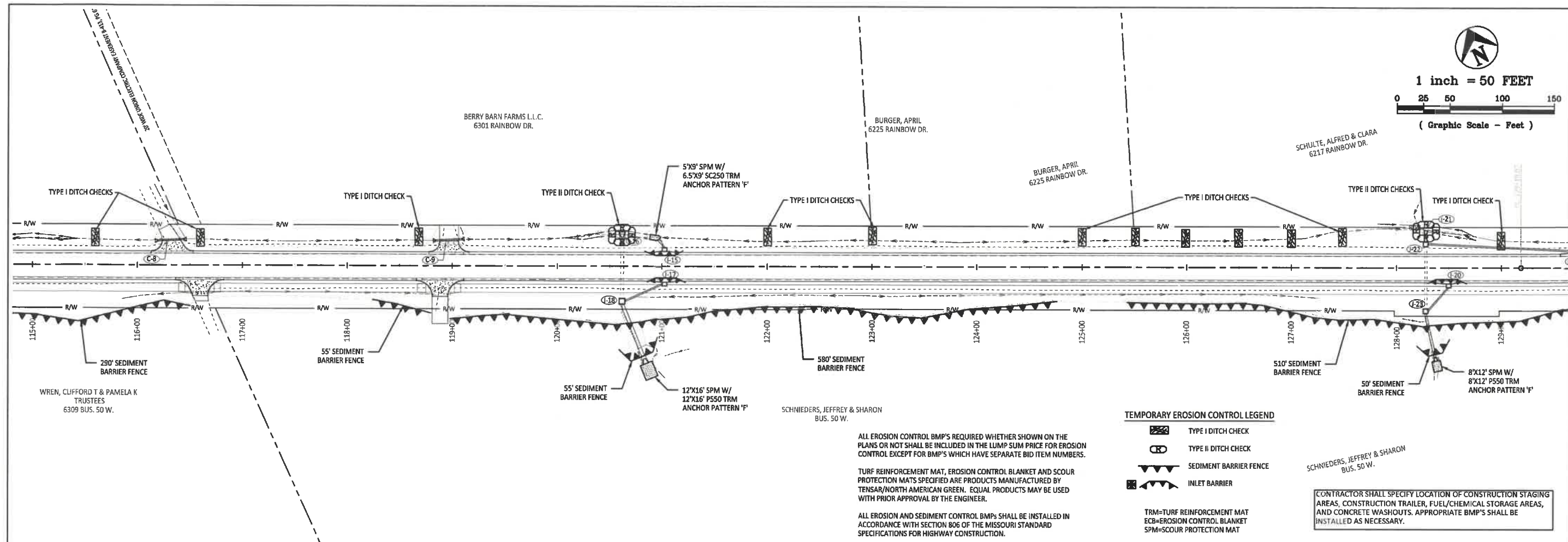
BUSINESS HWY 50 WEST IMPROVEMENTS - PHASE 2
 COLE COUNTY PUBLIC WORKS
 BUSINESS HWY 50 WEST
 COLE COUNTY, MISSOURI

CMPS JOB No. 10-053
 DRN. BY: C.F.B./P.L.S. CRD. BY:

SCALE: 1" = 50'

SHEET TITLE
EROSION CONTROL PLAN

SHEET NUMBER
30
 OF 37 SHEETS



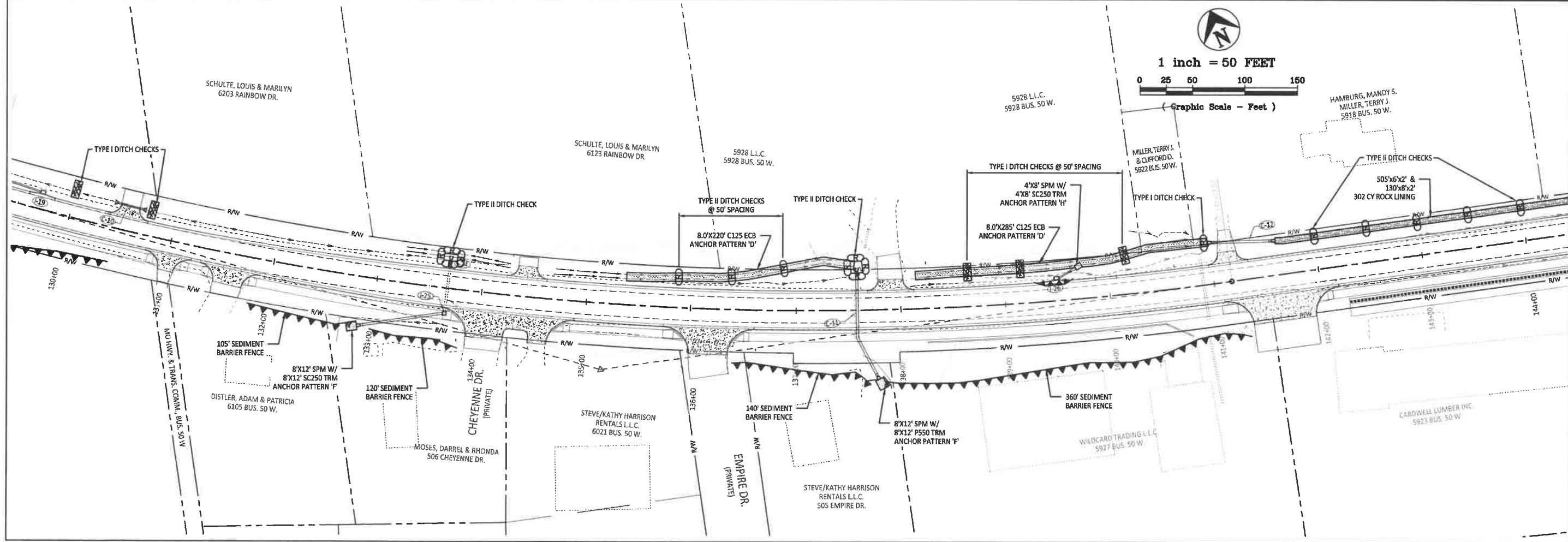
ALL EROSION CONTROL BMP'S REQUIRED WHETHER SHOWN ON THE PLANS OR NOT SHALL BE INCLUDED IN THE LUMP SUM PRICE FOR EROSION CONTROL EXCEPT FOR BMP'S WHICH HAVE SEPARATE BID ITEM NUMBERS.

TURF REINFORCEMENT MAT, EROSION CONTROL BLANKET AND SCOUR PROTECTION MATS SPECIFIED ARE PRODUCTS MANUFACTURED BY TENSAR/NORTH AMERICAN GREEN. EQUAL PRODUCTS MAY BE USED WITH PRIOR APPROVAL BY THE ENGINEER.

ALL EROSION AND SEDIMENT CONTROL BMP'S SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 806 OF THE MISSOURI STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

- TEMPORARY EROSION CONTROL LEGEND**
- TYPE I DITCH CHECK
 - TYPE II DITCH CHECK
 - SEDIMENT BARRIER FENCE
 - INLET BARRIER
- TRM=TURF REINFORCEMENT MAT
ECB=EROSION CONTROL BLANKET
SPM=SCOUR PROTECTION MAT

CONTRACTOR SHALL SPECIFY LOCATION OF CONSTRUCTION STAGING AREAS, CONSTRUCTION TRAILER, FUEL/CHEMICAL STORAGE AREAS, AND CONCRETE WASHOUTS. APPROPRIATE BMP'S SHALL BE INSTALLED AS NECESSARY.



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Central Missouri Professional Services, Inc.
Missouri State Certificate of Authority #001958

STATE OF MISSOURI
PAUL SAMSON
NUMBER PE-2002016730
PROFESSIONAL ENGINEER
2/12/21

Paul Samson, PE - Engineer
MO# PE-2002016730

**BUSINESS HWY 50 WEST
IMPROVEMENTS - PHASE 2**
COLE COUNTY PUBLIC WORKS

BUSINESS HWY 50 WEST
COLE COUNTY, MISSOURI

CMPS JOB No. 10-053
DRN. BY: C.F.B./P.L.S. CRD. BY:

SCALE: 1" = 50'

SHEET TITLE
EROSION CONTROL PLAN

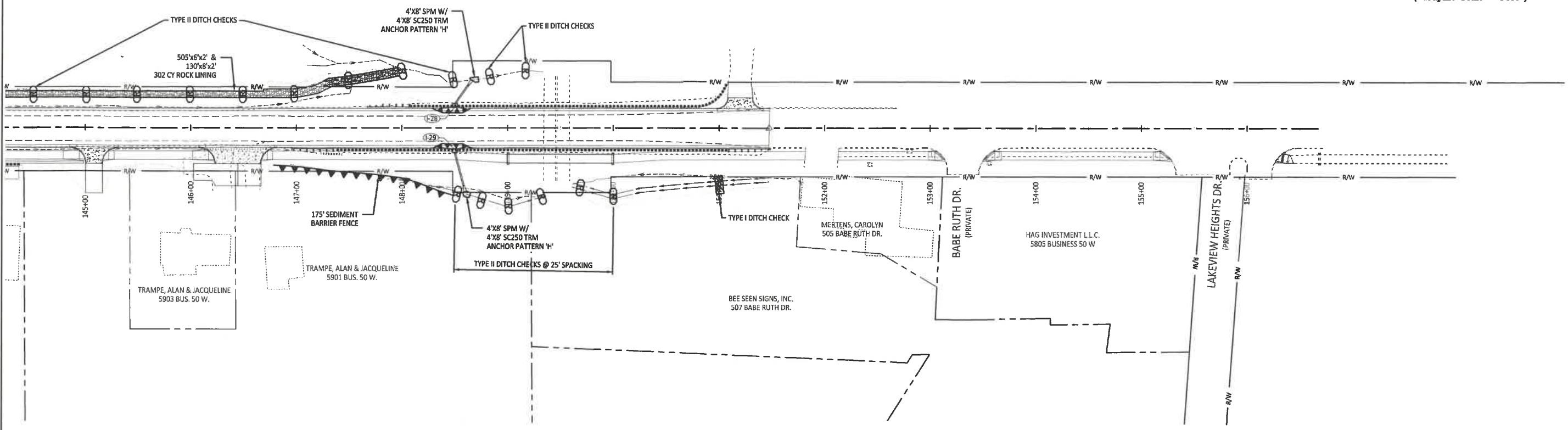
SHEET NUMBER
31
OF 37 SHEETS



1 inch = 50 FEET
 (Graphic Scale - Feet)

CITY OF JEFFERSON
 RAINBOW DR.
 (BINDER PARK)

CITY OF JEFFERSON
 RAINBOW DR.
 (BINDER PARK)



ALL EROSION CONTROL BMP'S REQUIRED WHETHER SHOWN ON THE PLANS OR NOT SHALL BE INCLUDED IN THE LUMP SUM PRICE FOR EROSION CONTROL EXCEPT FOR BMP'S WHICH HAVE SEPARATE BID ITEM NUMBERS.

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TEMPORARY EROSION CONTROL LEGEND

- TYPE I DITCH CHECK
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Paul Samson, PE - Engineer
 MO# PE-2002016730

**BUSINESS HWY 50 WEST
 IMPROVEMENTS - PHASE 2**
 COLE COUNTY PUBLIC WORKS
 BUSINESS HWY 50 WEST
 COLE COUNTY, MISSOURI

CMPS JOB No. 10-053

DRN. BY: C.F.B./P.L.S. CKD. BY:

SCALE: 1" = 50'

SHEET TITLE
**EROSION
 CONTROL PLAN**

SHEET NUMBER
32
 OF 37 SHEETS

P:\2020\1003\COCPW\BUS 50 PHASE 2\EROSION CONTROL PLAN.dwg, 31/2/2021, 10:48:28 AM



Paul Samson, PE - Engineer
MO# PE-2002016730

BUSINESS HWY 50 WEST IMPROVEMENTS - PHASE 2
COLE COUNTY PUBLIC WORKS
BUSINESS HWY 50 WEST
COLE COUNTY, MISSOURI

CMPJ JOB No. 10-053

DRN. BY: C.F.B./P.L.S. CKD. BY:

SCALE: N.T.S.

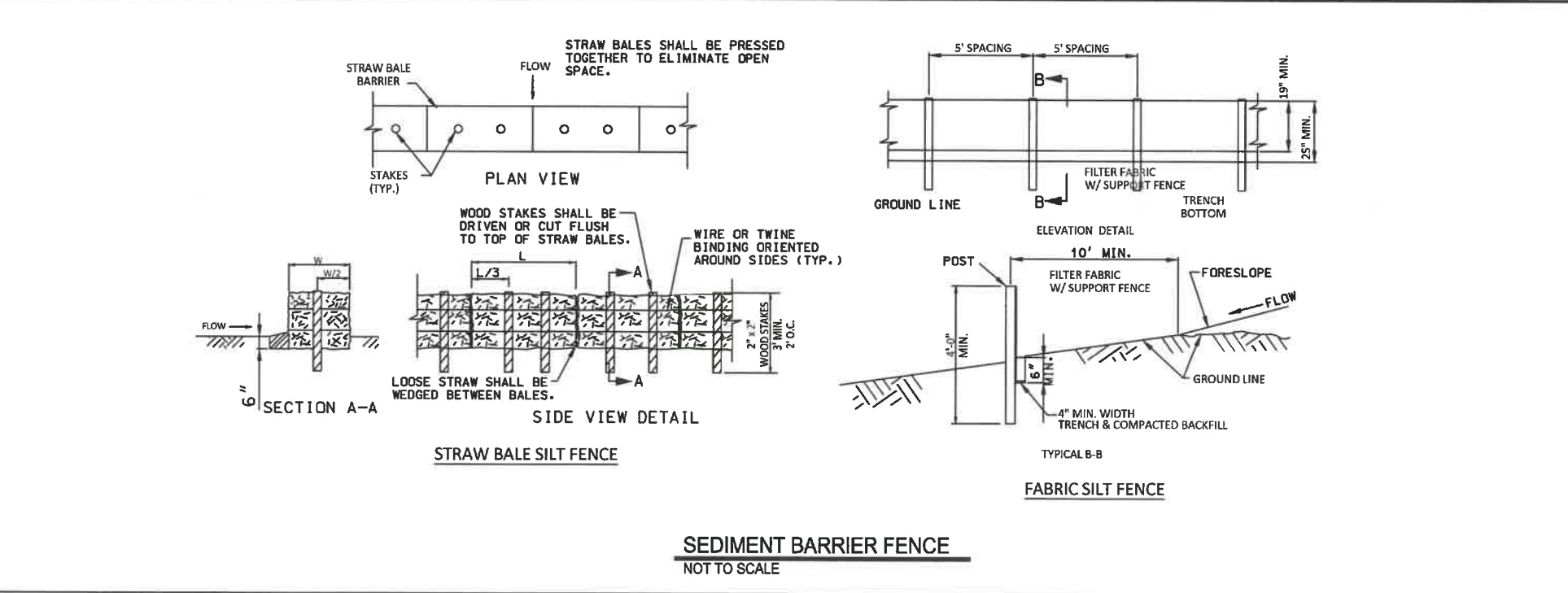
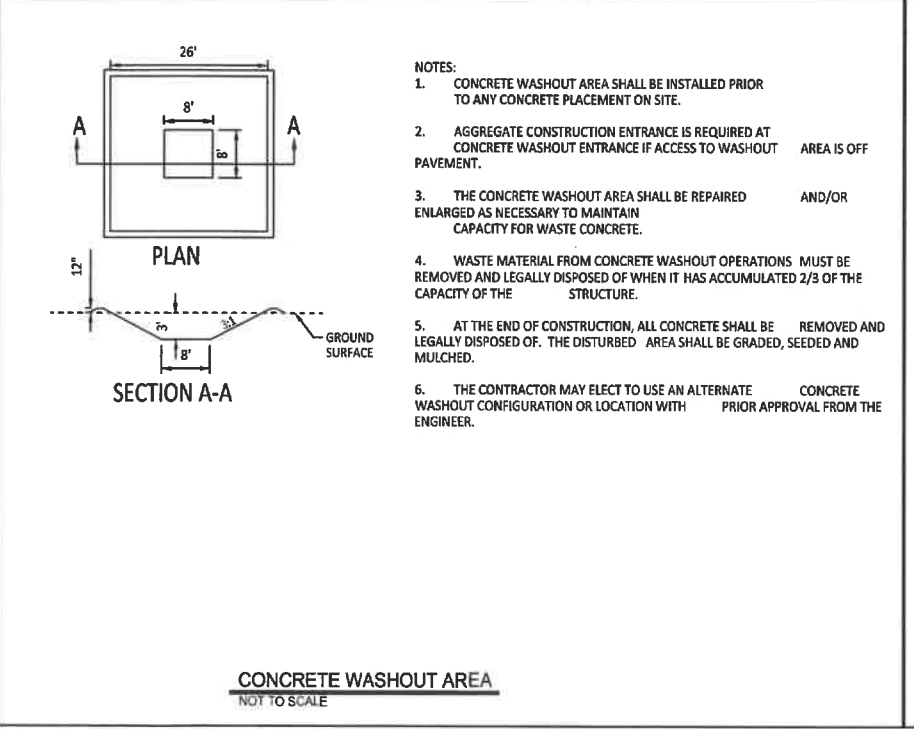
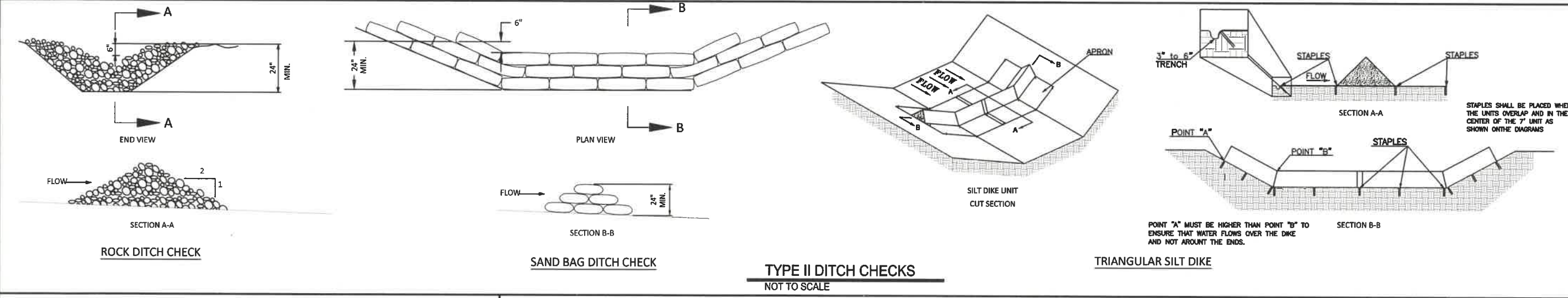
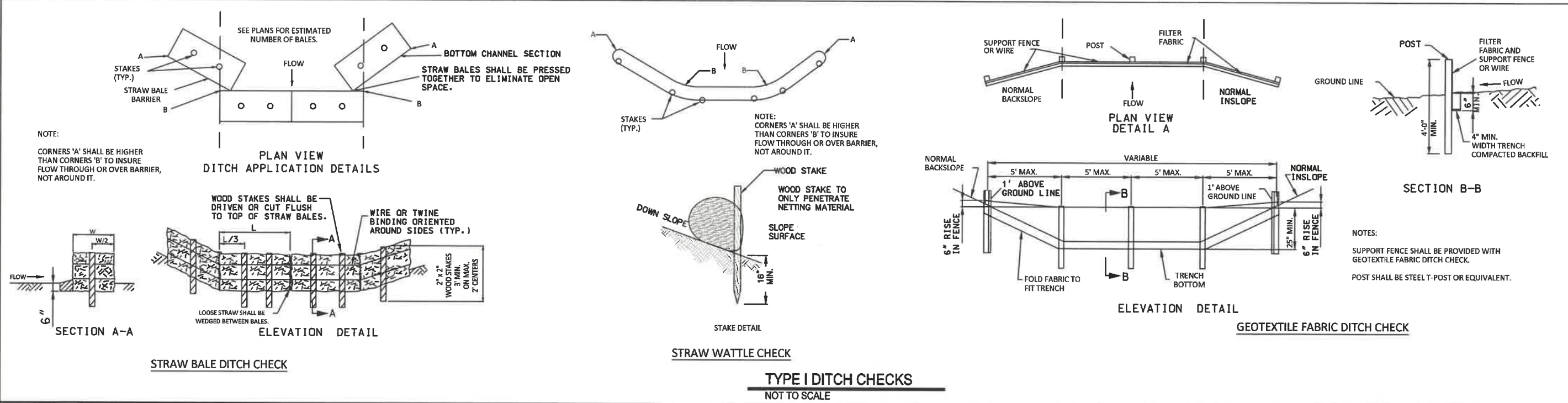
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EROSION CONTROL PLAN

SHEET NUMBER

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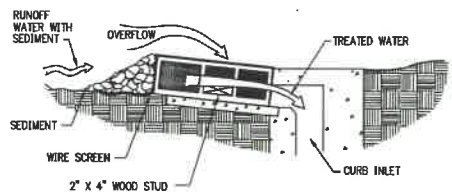
OF 37 SHEETS



BLOCK AND GRAVEL CURB INLET PROTECTION



* GRAVEL SHALL BE COARSE AGGREGATE FROM 1/2" TO 1" IN DIAMETER



CROSS SECTION
NOT TO SCALE

BLOCK AND GRAVEL CURB INLET PROTECTION NOTES:

A) GENERAL NOTES:

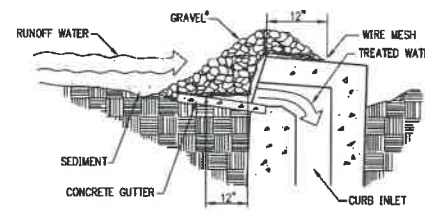
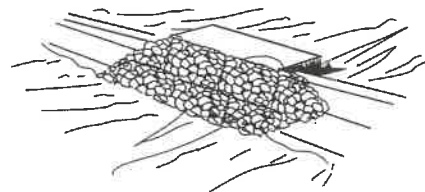
1. TWO CONCRETE BLOCKS SHALL BE PLACED ON THEIR SIDES ADJUTING THE CURB AT EITHER SIDE OF THE INLET OPENING.
2. A 2 X 4 STUD SHALL BE CUT AND PLACED THROUGH THE OUTER HOLES OF EACH SPACER BLOCK TO HELP KEEP THE FRONT BLOCKS IN PLACE.
3. CONCRETE BLOCKS SHALL BE PLACED ON THEIR SIDES ACROSS THE FRONT OF THE INLET AND ABUTTING THE SPACER BLOCKS.
4. WIRE MESH WEAVING SHALL BE PLACED OVER THE OUTSIDE VERTICAL FACE OF THE CONCRETE BLOCKS TO PREVENT STONE FROM BEING WASHED THROUGH THE HOLES IN THE BLOCKS. WIRE MESH WITH 1/2-INCH OPENINGS SHALL BE USED.
5. COARSE AGGREGATE SHALL BE PILED AGAINST THE WIRE TO THE TOP OF THE BARRIER.
6. IF THE STONE BECOMES CLOGGED WITH SEDIMENT SO THAT IT NO LONGER ADEQUATELY PERFORMS ITS FUNCTION, THE STONE MUST BE PULLED AWAY FROM THE BLOCKS AND CLEANED OR REPLACED.

B) INSPECTION AND MAINTENANCE:

1. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN EVENT OF 1/2-INCH OR GREATER, AND REPAIRS SHALL BE MADE AS NEEDED.
2. SEDIMENT SHALL BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE HALF THE DESIGN DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA SO THAT IT WILL NOT ERODE.
3. STRUCTURES SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

AMERICAN PUBLIC WORKS ASSOCIATION
APWA KANSAS CITY METROPOLITAN CHAPTER
 BLOCK AND GRAVEL CURB INLET PROTECTION
STANDARD DRAWING NUMBER ESC-14 ADOPTED

GRAVEL CURB INLET SEDIMENT TRAP



CROSS SECTION
NOT TO SCALE

NOTE:
* USE CLEAN GRAVEL 1/2" TO 1" IN DIAMETER.

GRAVEL CURB INLET SEDIMENT TRAP NOTES:

A) GENERAL NOTES:

1. WIRE MESH WITH 1/2-INCH OPENINGS SHALL BE PLACED OVER THE CURB INLET OPENING SO THAT AT LEAST 12 INCHES OF WIRE EXTENDS ACROSS THE INLET COVER AND AT LEAST 12 INCHES OF WIRE EXTENDS ACROSS THE CONCRETE GUTTER FROM THE INLET OPENING.
2. STONE SHALL BE PILED AGAINST THE WIRE SO AS TO ANCHOR IT AGAINST THE GUTTER AND INLET COVER AND TO COVER THE INLET OPENING COMPLETELY.
3. IF THE STONE BECOMES CLOGGED WITH SEDIMENT SO THAT IT NO LONGER ADEQUATELY PERFORMS ITS FUNCTION, THE STONE MUST BE PULLED AWAY FROM THE BLOCK AND CLEANED OR REPLACED.

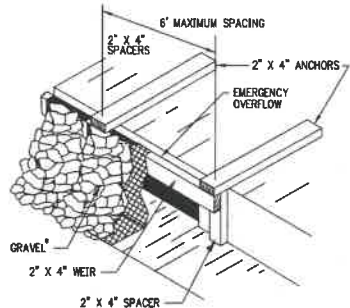
B) INSPECTION AND MAINTENANCE:

1. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN EVENT OF 1/2-INCH OR GREATER AND REPAIRS MADE AS NEEDED.
2. SEDIMENT SHALL BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE HALF THE DESIGN DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA SO THAT IT WILL NOT ERODE.
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AMERICAN PUBLIC WORKS ASSOCIATION
APWA KANSAS CITY METROPOLITAN CHAPTER
 GRAVEL CURB INLET SEDIMENT TRAP
STANDARD DRAWING NUMBER ESC-14 ADOPTED

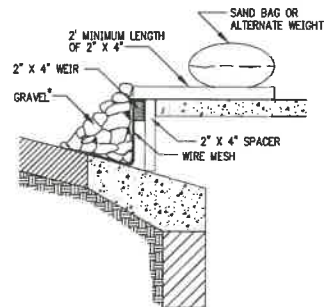
CURB INLET SEDIMENT BARRIER DETAILS
NOT TO SCALE

WOODEN WEIR CURB INLET PROTECTION



PERSPECTIVE VIEW
NOT TO SCALE

NOTE:
* GRAVEL SHALL BE COARSE AGGREGATE FROM 1/2" TO 1" IN DIAMETER.



CROSS SECTION
NOT TO SCALE

WOODEN WEIR CURB INLET PROTECTION NOTES:

A) GENERAL NOTES:

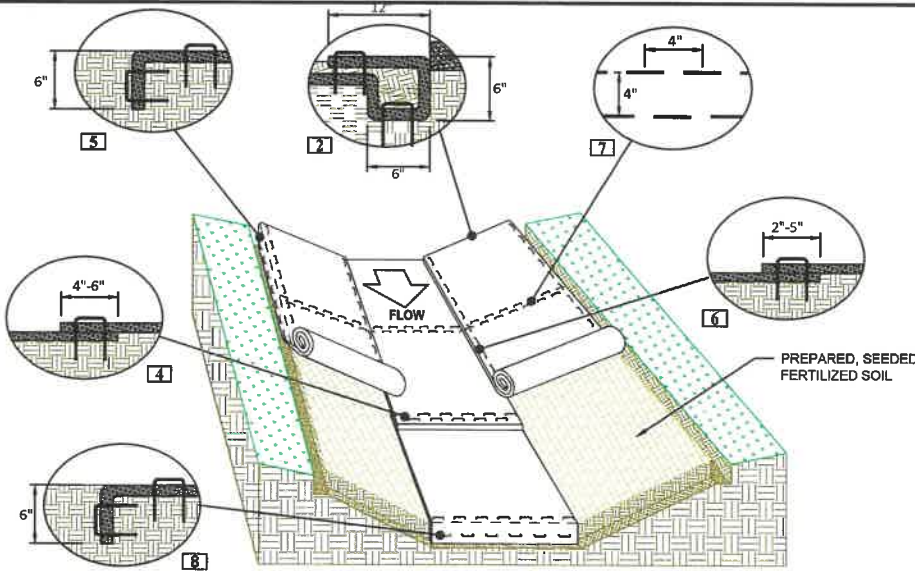
1. ATTACH A CONTINUOUS PIECE OF WIRE MESH THAT IS 30-INCH MINIMUM WIDTH X INLET THROAT LENGTH PLUS 4 FEET TO A 2 X 4 WOODEN WEIR WITH LENGTH EQUAL TO THROAT LENGTH PLUS 2 FEET. WOOD SHOULD BE CONSTRUCTION GRADE LUMBER.
2. PLACE A PIECE OF APPROVED EXTRA-STRENGTH GEOTEXTILE OF THE SAME DIMENSIONS AS THE WIRE MESH OVER THE WEIR AND SECURELY ATTACH IT TO THE 2 X 4 WOODEN WEIR.
3. SECURELY NAIL THE 2 X 4 WEIR TO THE 9-INCH LONG VERTICAL SPACERS WHICH ARE TO BE LOCATED BETWEEN THE WEIR AND INLET FACE AT A MAXIMUM 6-FOOT SPACING.
4. PLACE THE ASSEMBLY AGAINST THE INLET THROAT AND NAIL A MINIMUM OF 2-FOOT LENGTHS OF 2 X 4 BOARD TO THE TOP OF THE WEIR AT SPACER LOCATIONS. THESE 2 X 4 ANCHORS SHALL EXTEND ACROSS THE INLET TOPS AND BE HELD IN PLACE BY SANDBAGS OR ALTERNATE WEIGHT.
5. THE ASSEMBLY SHALL BE PLACED SO THAT THE END SPACERS ARE A MINIMUM OF 1 FOOT BEYOND BOTH ENDS OF THE THROAT OPENING.
6. FORM THE WIRE MESH AND GEOTEXTILE TO THE CONCRETE GUTTER AND AGAINST THE FACE OF CURB ON BOTH SIDES OF THE INLET. PLACE COARSE AGGREGATE OVER THE WIRE MESH AND GEOTEXTILE TO PREVENT WATER FROM ENTERING THE INLET UNDER OR AROUND THE GEOTEXTILE.
7. THIS TYPE OF PROTECTION MUST BE INSPECTED FREQUENTLY AND THE GEOTEXTILE AND STONE REPLACED WHEN CLOGGED WITH SEDIMENT.
8. ASSURE THAT STORM FLOW DOES NOT BYPASS INLET BY INSTALLING TEMPORARY EARTH OR ASPHALT DIKES DIRECTING FLOW INTO INLET.

B) INSPECTION AND MAINTENANCE:

1. THE STRUCTURE SHALL BE INSPECTED AFTER EACH RAIN EVENT OF 1/2-INCH OR GREATER AND REPAIRS SHALL BE MADE AS NEEDED.
2. SEDIMENT SHALL BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE HALF THE DESIGN DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA SO THAT IT WILL NOT ERODE.
3. STRUCTURES SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE REMAINING DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

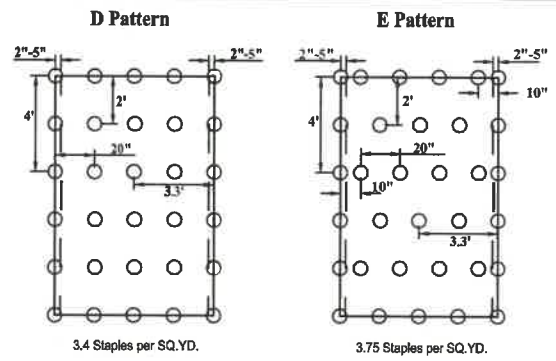
AMERICAN PUBLIC WORKS ASSOCIATION
APWA KANSAS CITY METROPOLITAN CHAPTER
 WOODEN WEIR CURB INLET PROTECTION
STANDARD DRAWING NUMBER ESC-15 ADOPTED

SOURCE: MODIFIED FROM VA. DCR, 1992



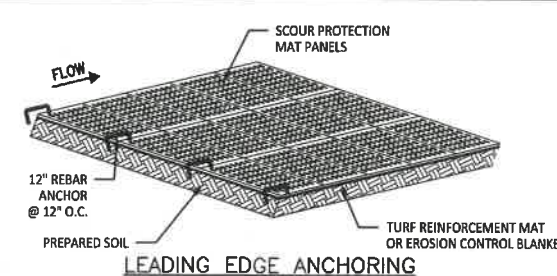
NOTES:
*Horizontal staple spacing should be altered if necessary to allow staples to secure the critical points along the channel surface.
**In loose soil conditions, the use of staple or stake lengths greater than 6"(15cm) may be necessary to properly secure the RECP's.

THESE DETAILS ARE PROVIDED FOR GENERAL INFORMATION ONLY. CONTRACTOR SHALL INSTALL PRODUCTS PER MANUFACTURER'S INSTALLATION SPECIFICATIONS.

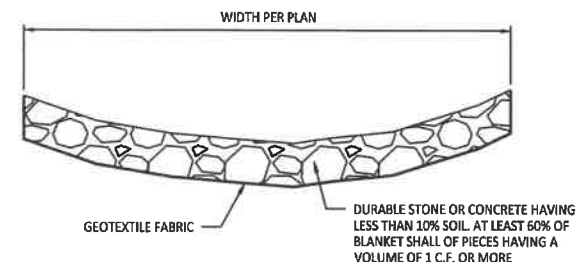


ANCHOR PATTERNS

EROSION CONTROL BLANKET INSTALLATION DETAILS
NOT TO SCALE

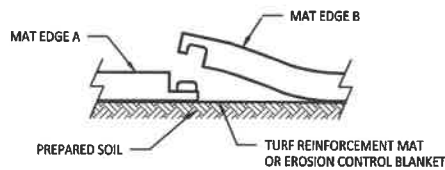


SCOUR PROTECTION MAT INSTALLATION DETAILS
NOT TO SCALE

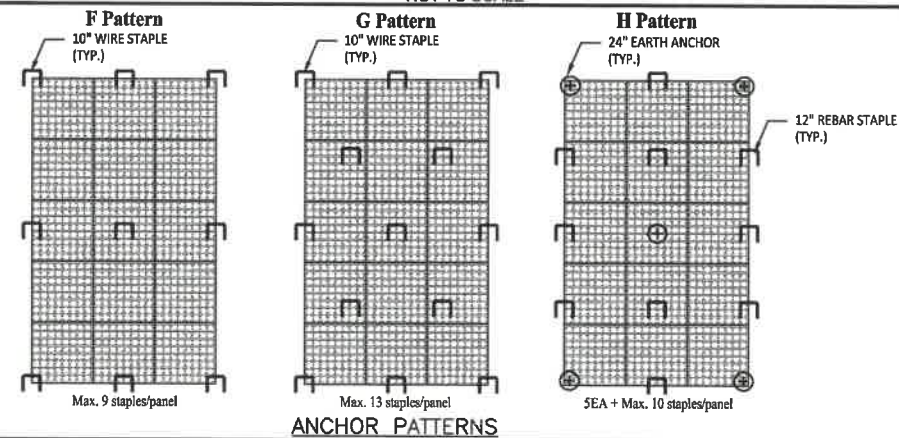


TYPE 2 ROCK BLANKET
NOT TO SCALE

THESE DETAILS ARE PROVIDED FOR GENERAL INFORMATION ONLY. CONTRACTOR SHALL INSTALL PRODUCTS PER MANUFACTURER'S INSTALLATION SPECIFICATIONS.



**TYPICAL SECTION/
PANEL INTERLOCK**



ANCHOR PATTERNS

PRINTS ISSUED
2/12/21

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 (573) 634-8888



Paul Samson, PE - Engineer
 MO# PE-200216730

BUSINESS HWY 50 WEST IMPROVEMENTS - PHASE 2
 COLE COUNTY PUBLIC WORKS

BUSINESS HWY 50 WEST
 COLE COUNTY, MISSOURI

CMPS JOB No. 10-053

DRN. BY: C.F.B./P.L.S. CKD. BY:

SCALE: N.T.S.

SHEET TITLE

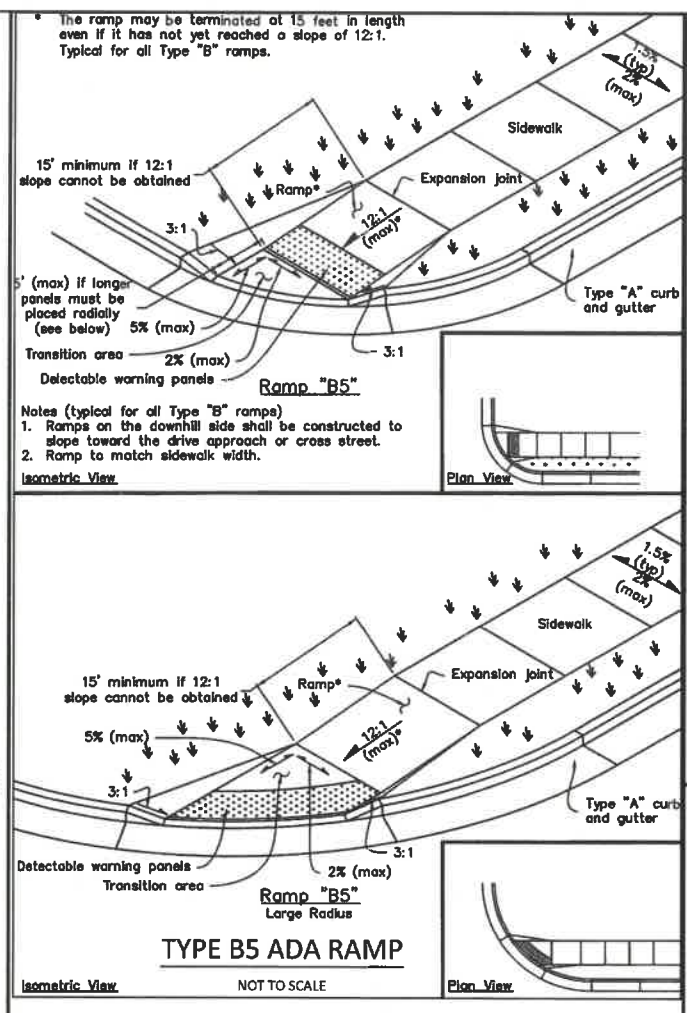
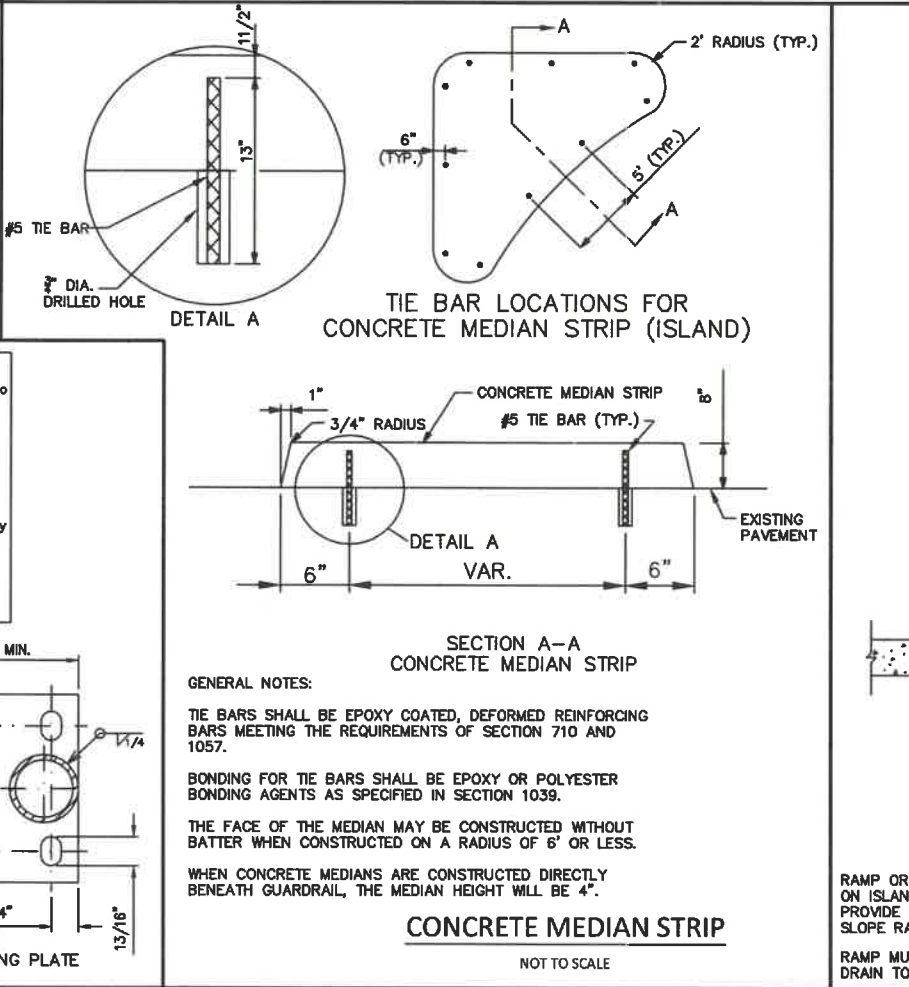
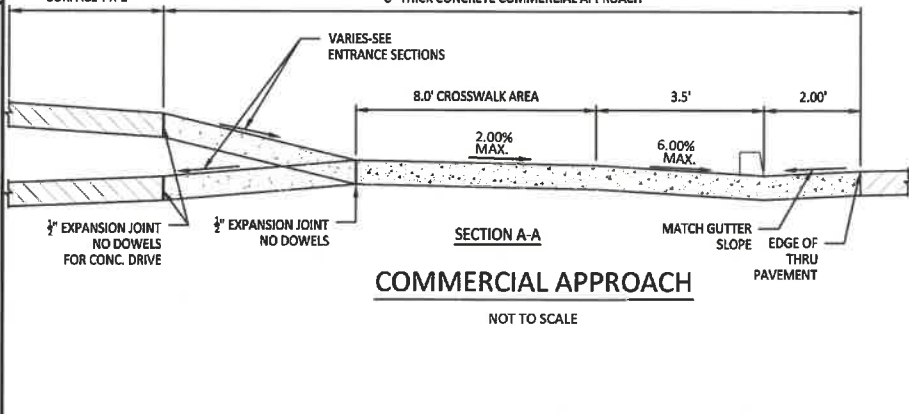
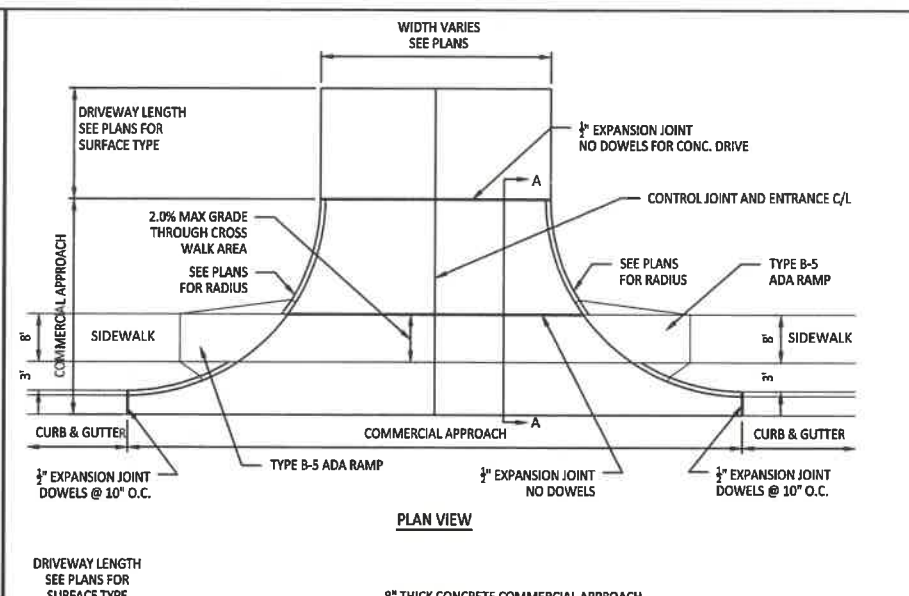
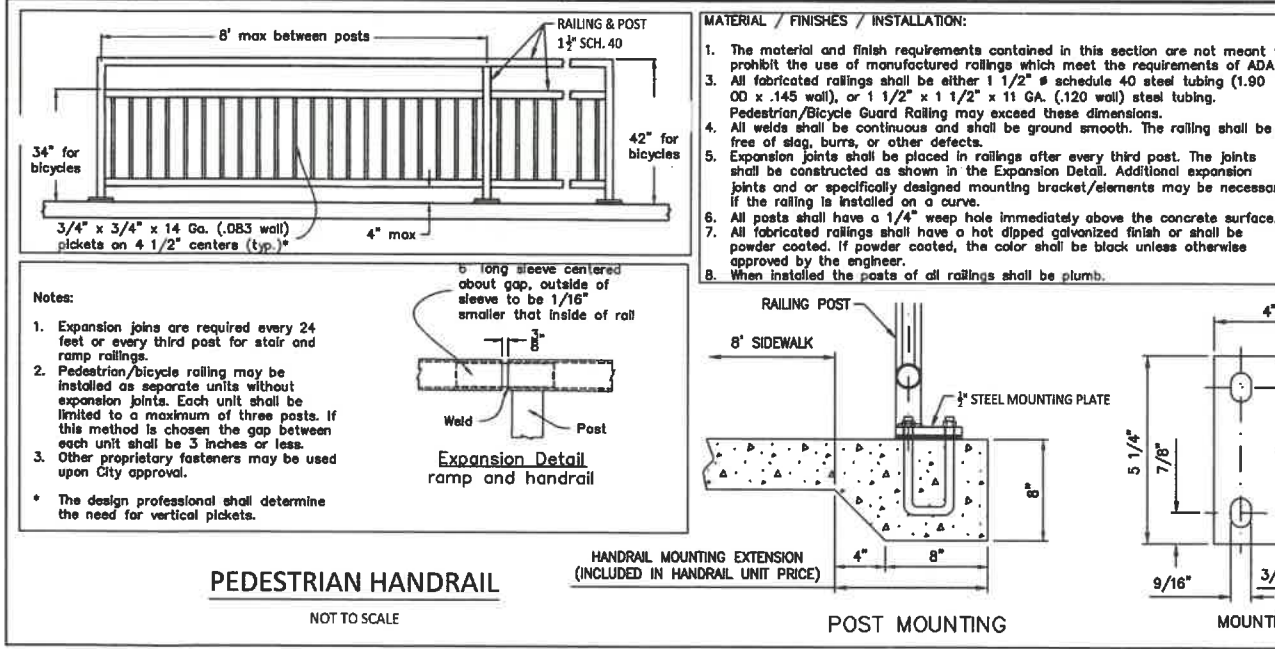
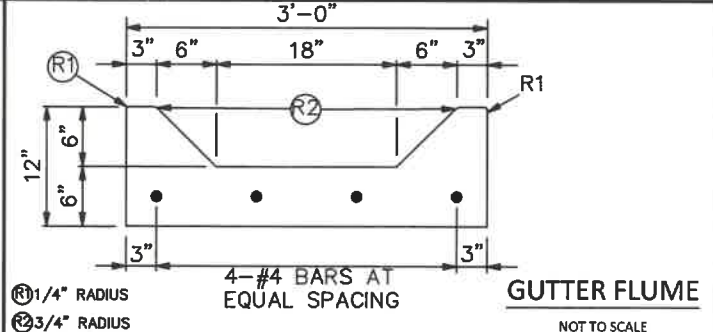
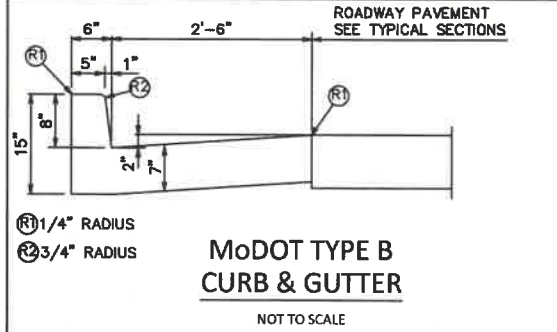
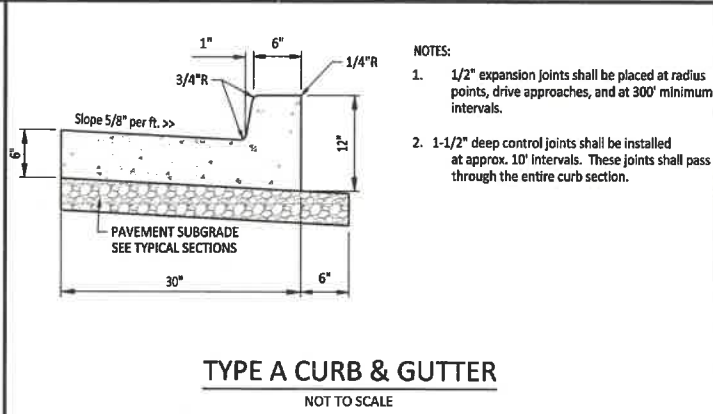
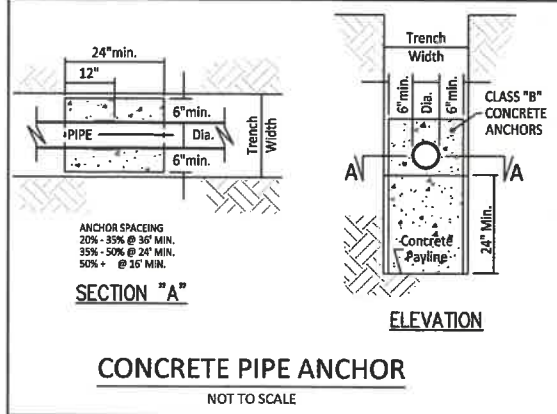
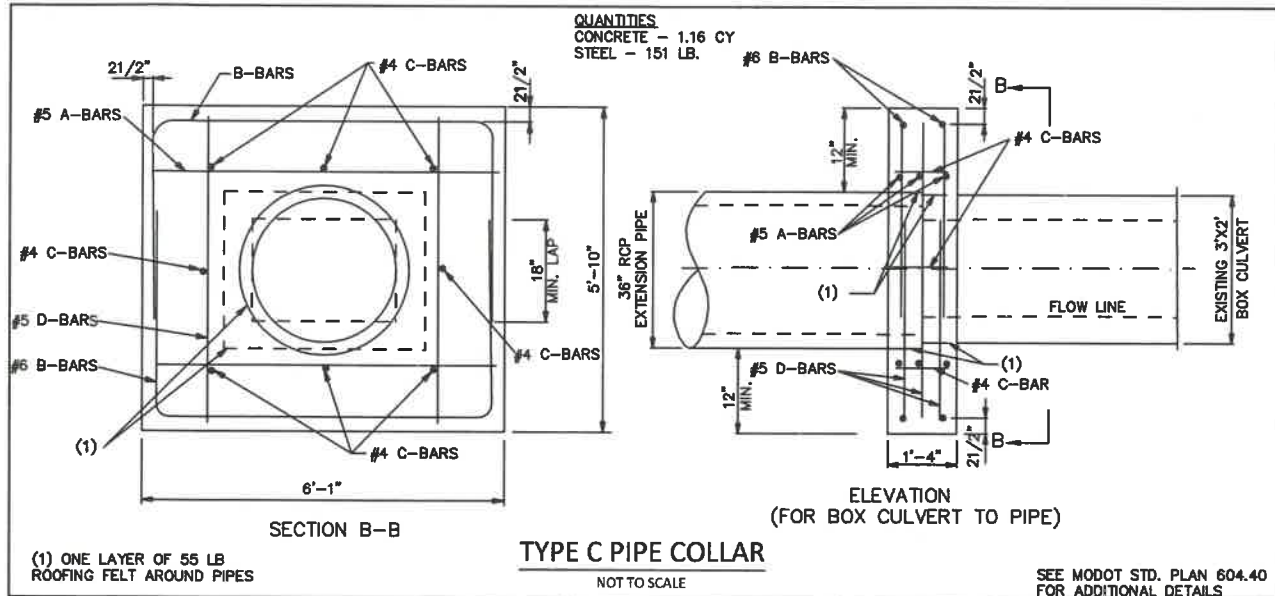
EROSION CONTROL PLAN

SHEET NUMBER

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OF 37 SHEETS

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 REVISIONS:

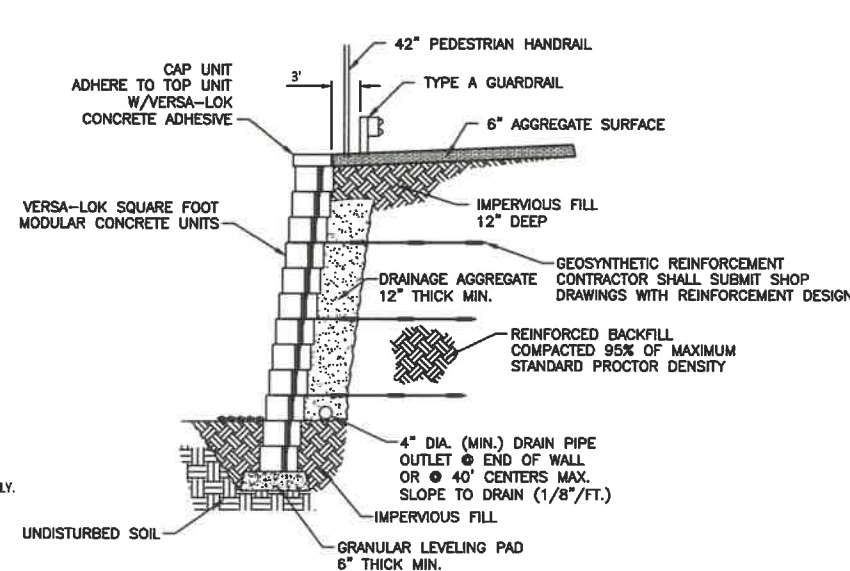
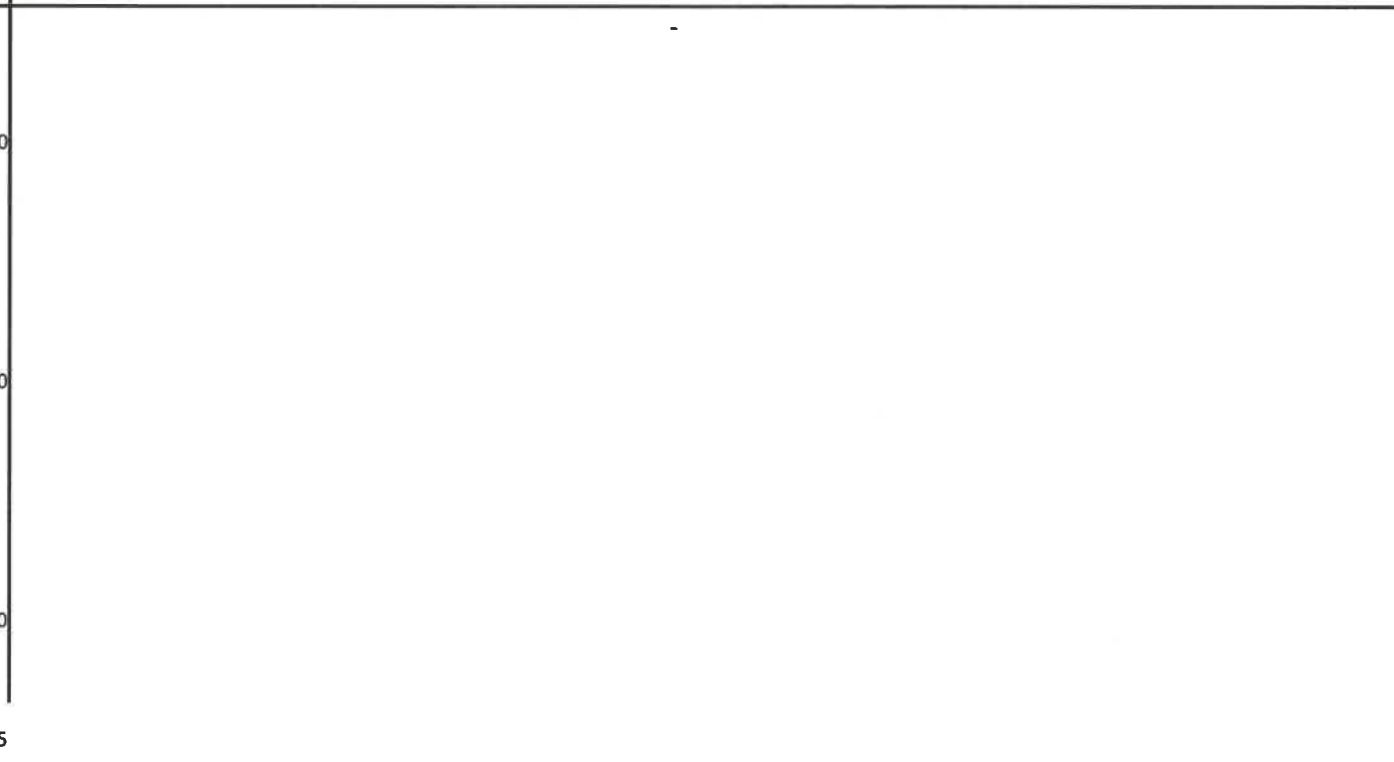
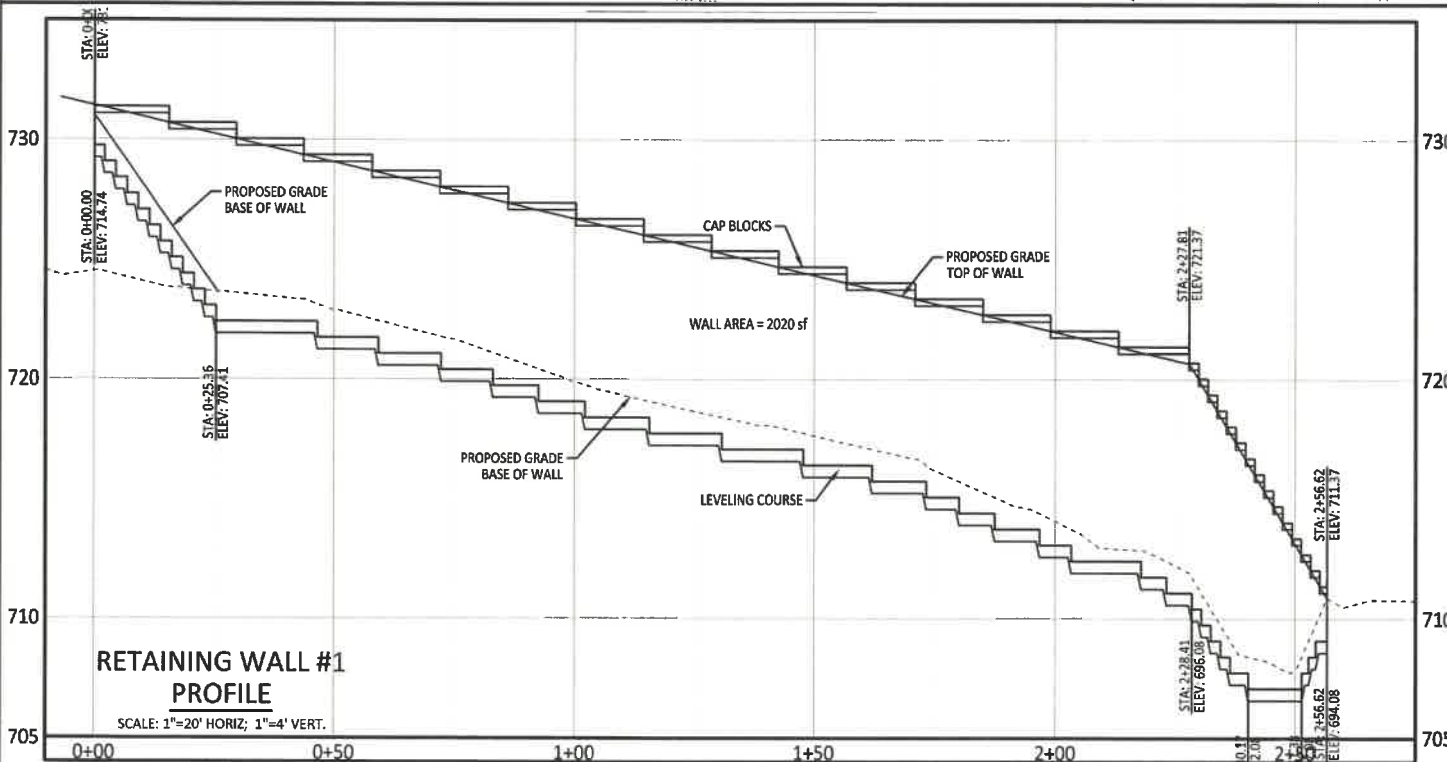
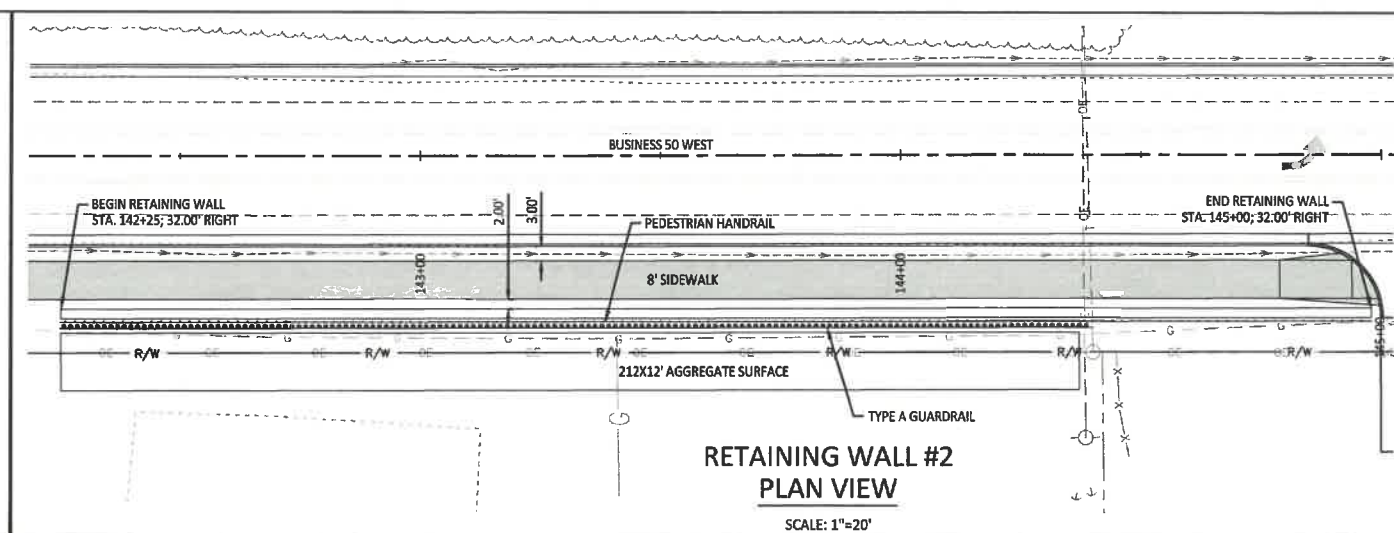
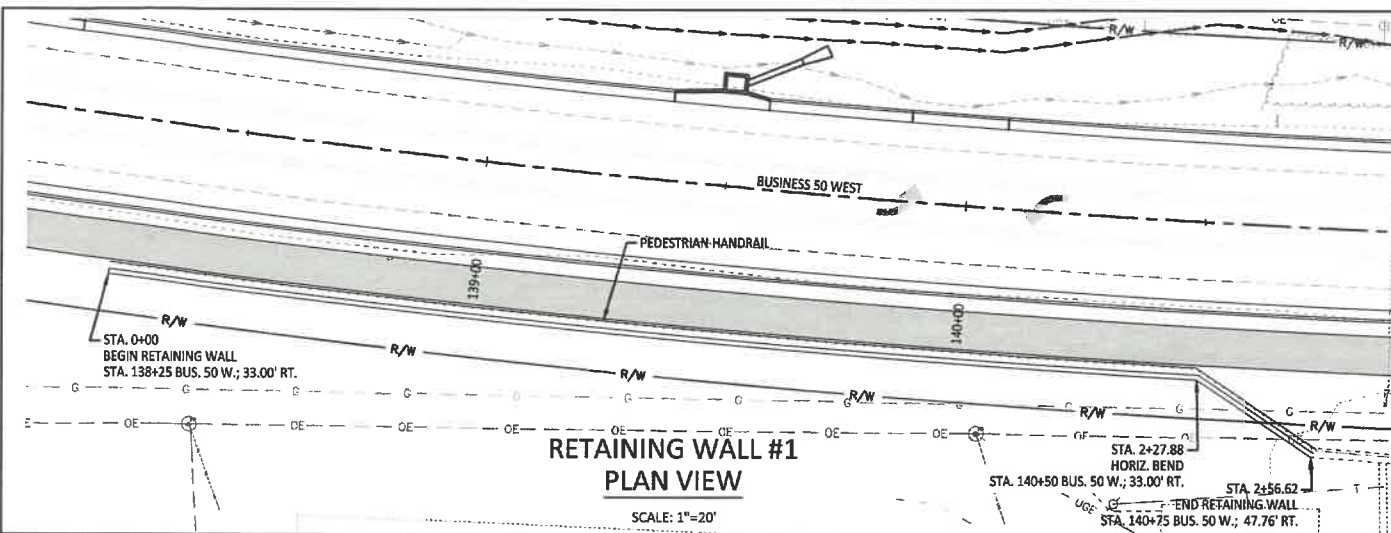
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 (573) 634-8888

Central Missouri Professional Services, Inc.
 Missouri State Certificate of Authority #001558

STATE OF MISSOURI
 PAUL SAMSON
 LICENSE NUMBER
 PE-2002016730
 2/12/21
 Paul Samson, PE - Engineer
 MO# PE-2002016730

BUSINESS HWY 50 WEST IMPROVEMENTS - PHASE 2
COLE COUNTY PUBLIC WORKS
 BUSINESS HWY 50 WEST
 COLE COUNTY, MISSOURI

CMPS JOB No. 10-053
 DRN. BY: P.L.S. CKD. BY:
 SCALE: As Shown
 SHEET TITLE
CONSTRUCTION DETAILS
 SHEET NUMBER
35
 OF 37 SHEETS



NOTES:
- THESE RETAINING WALL DETAILS ARE NOT TO BE USED FOR CONSTRUCTION. THEY ARE INTENDED TO SHOW THE GENERAL WALL LOCATION AND PROFILE ONLY.
- THE CONTRACTOR IS RESPONSIBLE FOR THE RETAINING WALL CONSTRUCTION DETAILS BASED ON THE WALL SYSTEM USED.
- SHOP DRAWINGS FOR THE WALL DESIGN SHALL BE PREPARED BY A MISSOURI REGISTERED PROFESSIONAL ENGINEER USING THE ACTUAL CONDITIONS OF THE PROPOSED SITE.
- VERSA-LOK SQUARE FOOT BLOCK IS THE BASIS FOR THE PROFILE SHOWN, THE CONTRACTOR MAY PROPOSE OTHER WALL SYSTEMS FOR APPROVAL PRIOR TO BIDDING.

PRINTS ISSUED
2/12/21
REVISIONS:

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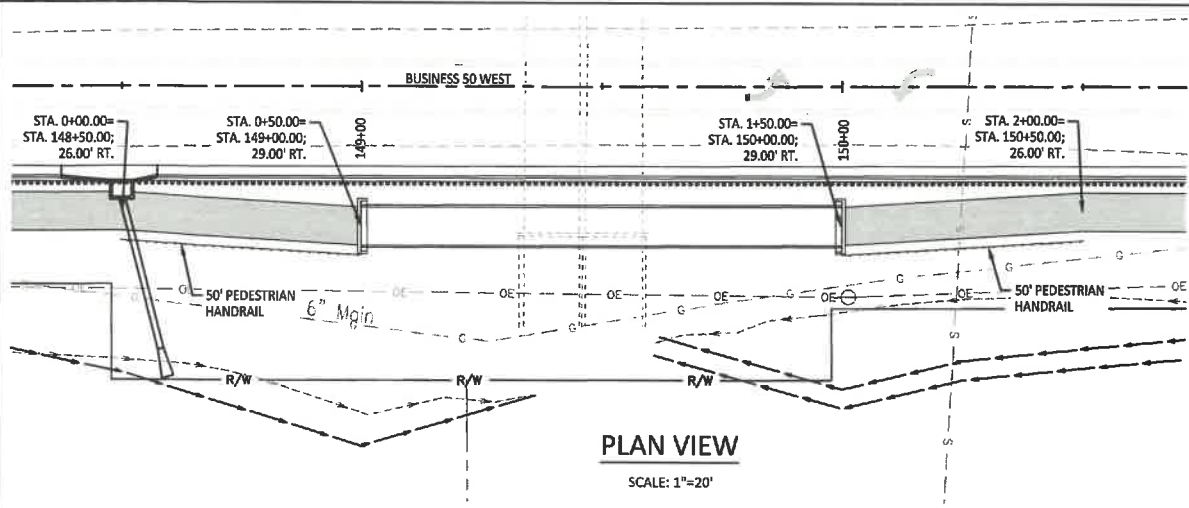
**BUSINESS HWY 50 WEST
IMPROVEMENTS - PHASE 2**
COLE COUNTY PUBLIC WORKS

2/12/21

**BUSINESS HWY 50 WEST
IMPROVEMENTS - PHASE 2**
COLE COUNTY PUBLIC WORKS

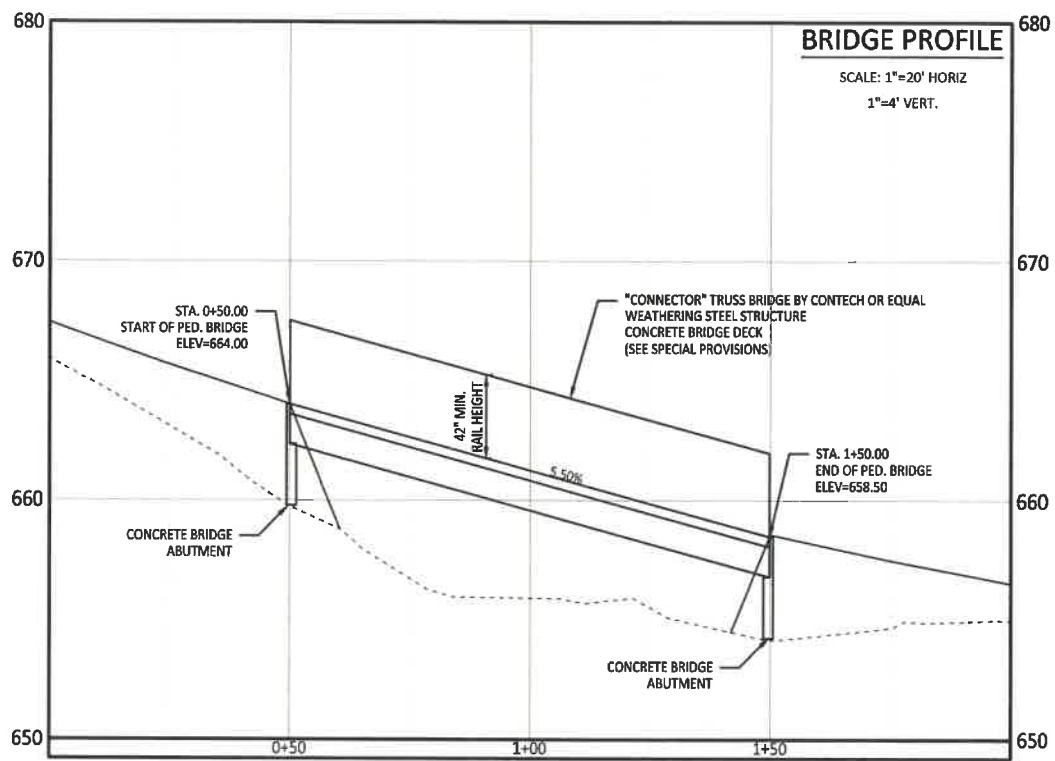
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DRN. BY: P.L.S. CKD. BY:
SCALE: AS SHOWN
SHEET TITLE
**CONSTRUCTION
DETAILS**
SHEET NUMBER
36
OF 37 SHEETS

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PLAN VIEW

SCALE: 1"=20'

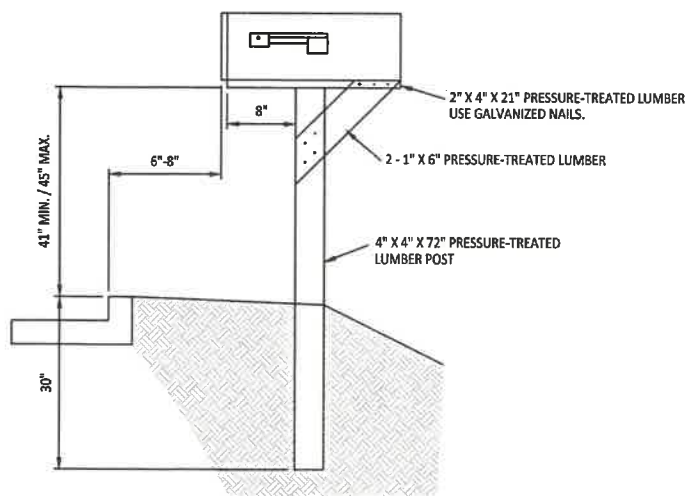


BRIDGE PROFILE

SCALE: 1"=20' HORIZ
1"=4' VERT.

PRE-ENGINEERED PEDESTRIAN BRIDGE

NOT TO SCALE



NOTE: THE CONTRACTOR SHALL REMOVE MAIL BOXES AS NECESSARY DURING CONSTRUCTION. THE CONTRACTOR SHALL TEMPORARILY SET MAIL BOXES WHERE THEY WILL BE ACCESSIBLE TO BOTH THE CARRIER AND THE PATRON. THE CONTRACTOR WILL RE-SET ALL MAIL BOXES AS SHOWN BELOW AT THE COMPLETION OF THE PROJECT. MAIL BOXES WHICH HAVE BEEN DAMAGED WILL BE REPLACED BY THE CONTRACTOR. THE CONTRACTOR SHALL RECEIVE NO DIRECT PAYMENT FOR THIS WORK.

MAIL BOX INSTALLATION

N.T.S.

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(573) 634-8898



Central Missouri Professional Services, Inc.
Missouri State Certificate of Authority #001558



2/12/21

Paul Samson, PE - Engineer
MO# PE-2002016730

BUSINESS HWY 50 WEST
IMPROVEMENTS - PHASE 2

COLE COUNTY PUBLIC WORKS

BUSINESS HWY 50 WEST
COLE COUNTY, MISSOURI

CMPS JOB No. 10-053

DRN. BY: P.L.S. CRD. BY:

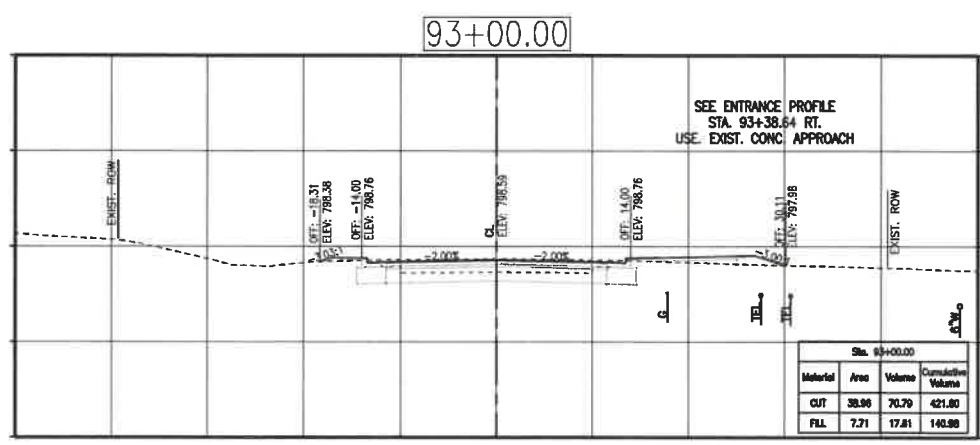
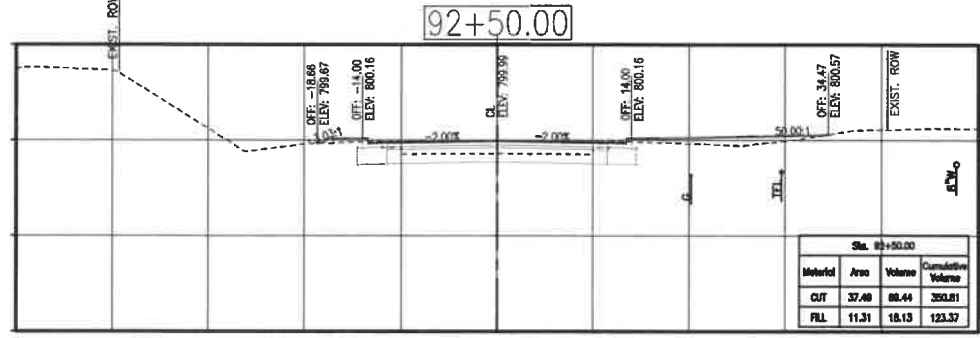
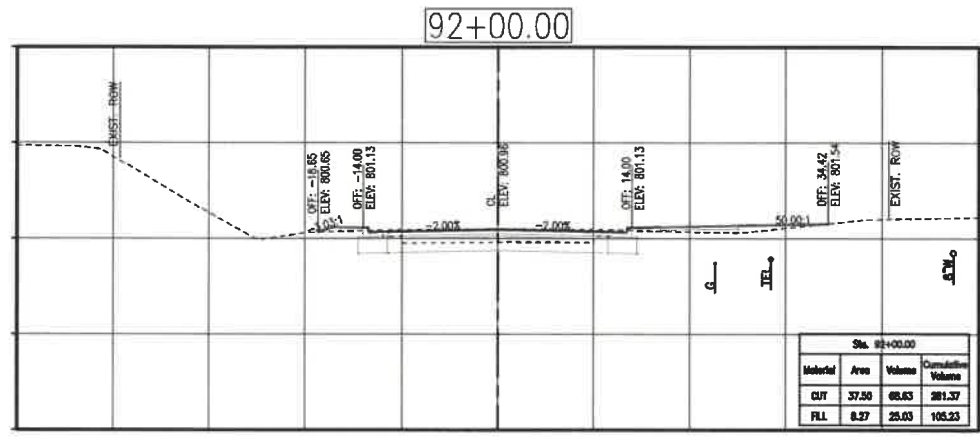
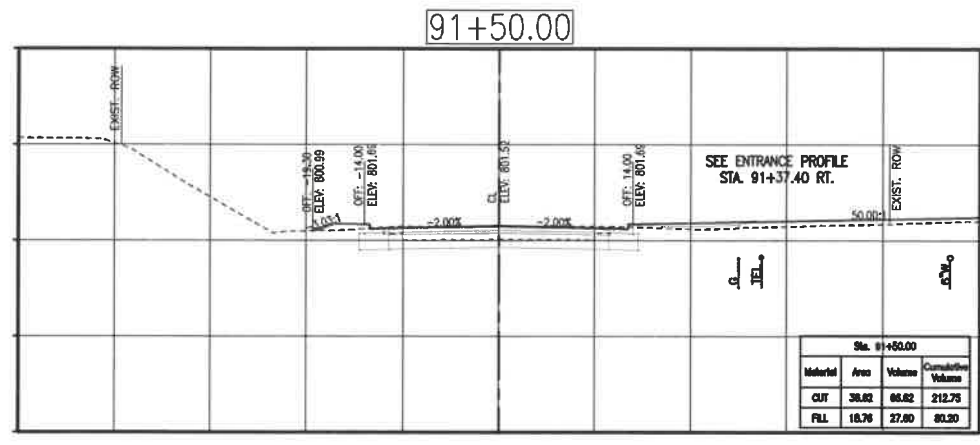
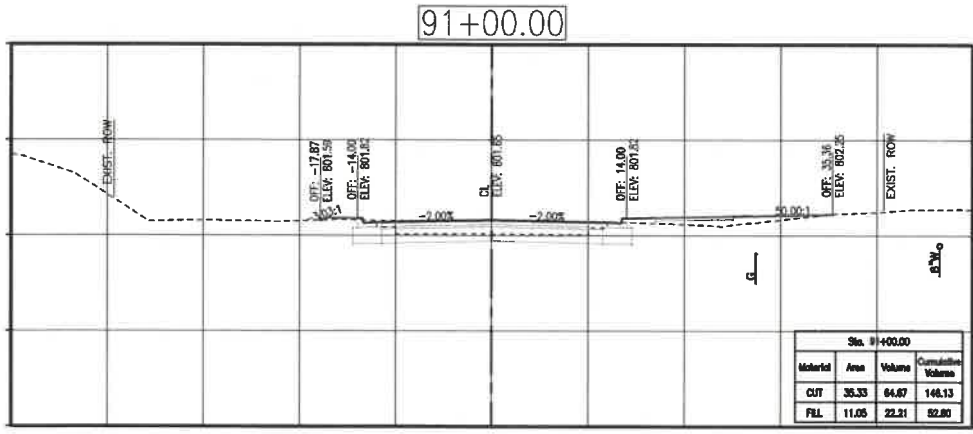
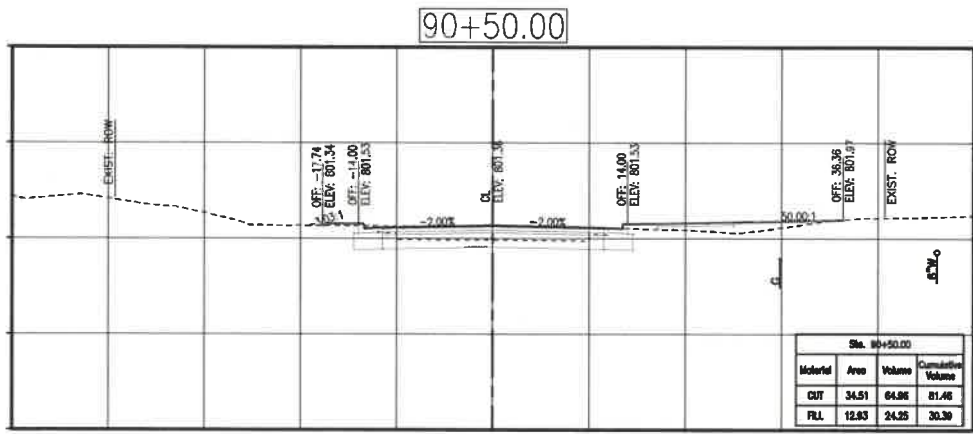
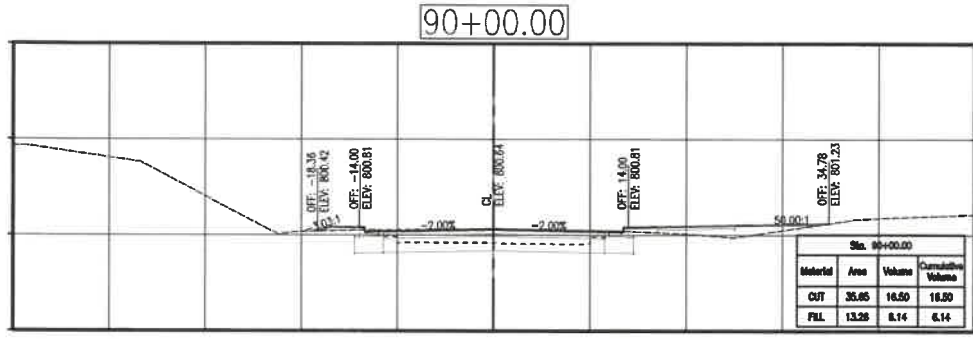
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SHEET TITLE
CONSTRUCTION
DETAILS

SHEET NUMBER

37

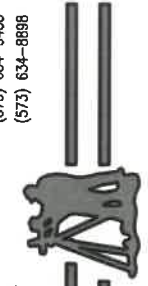
OF 37 SHEETS



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MO# PE-202016730

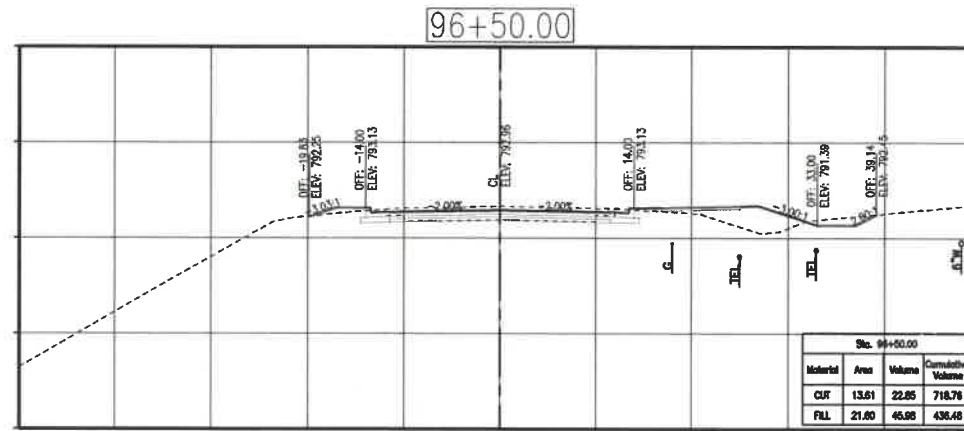
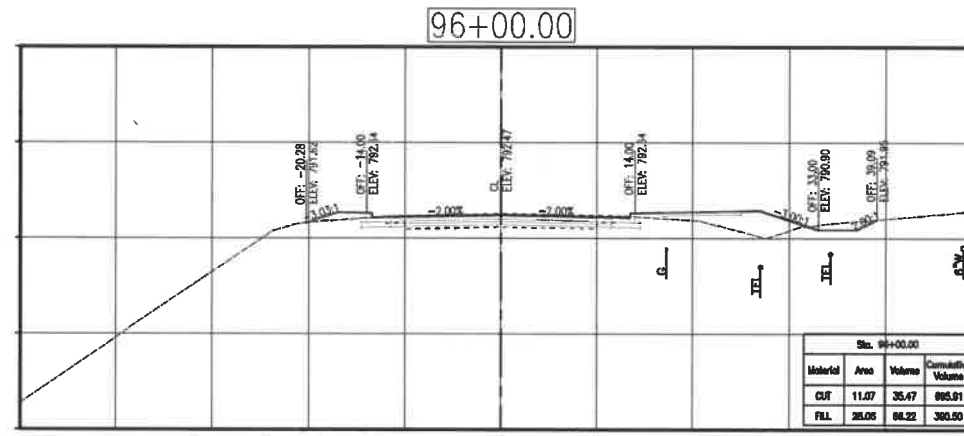
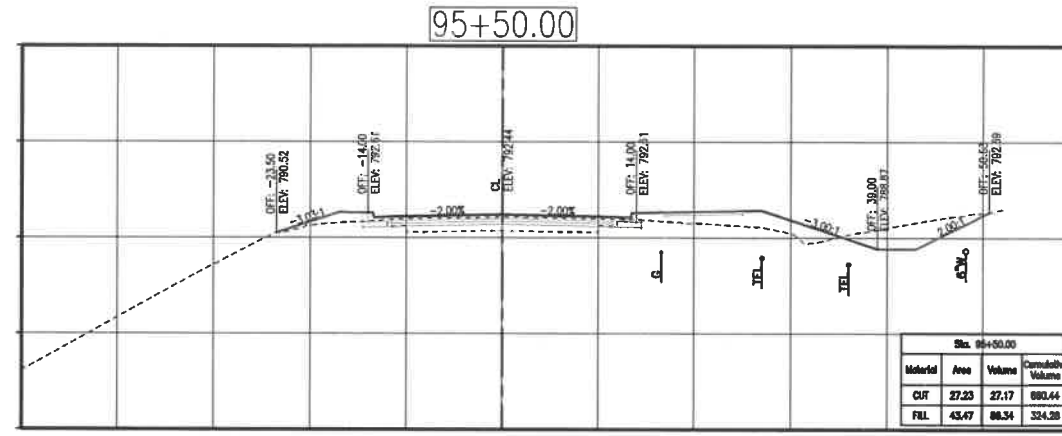
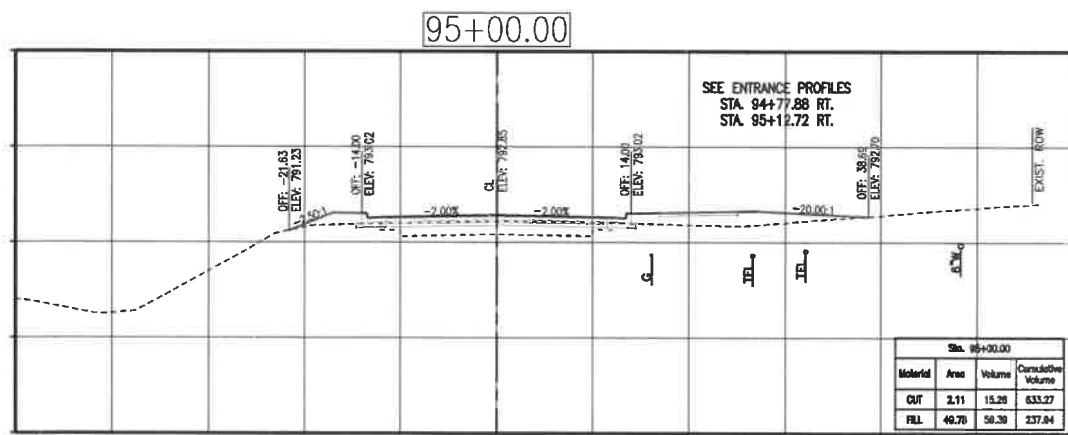
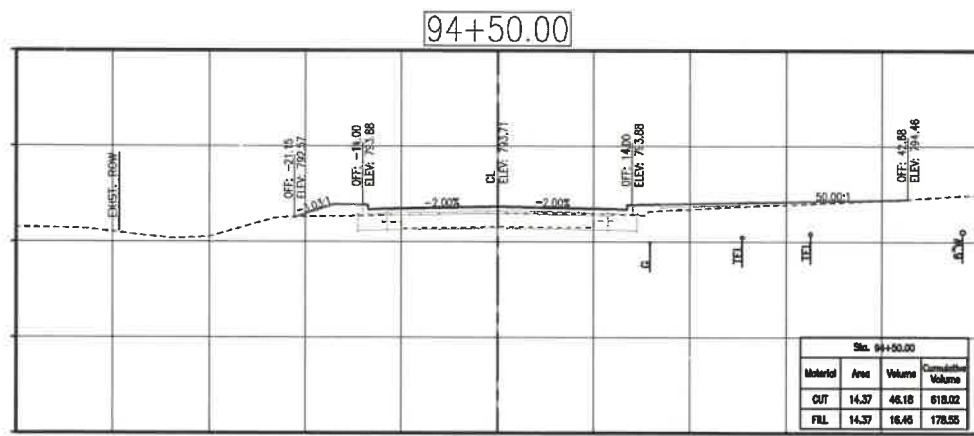
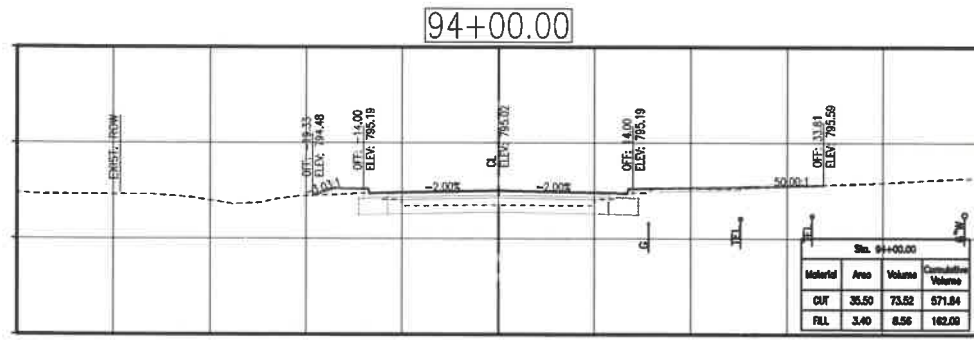
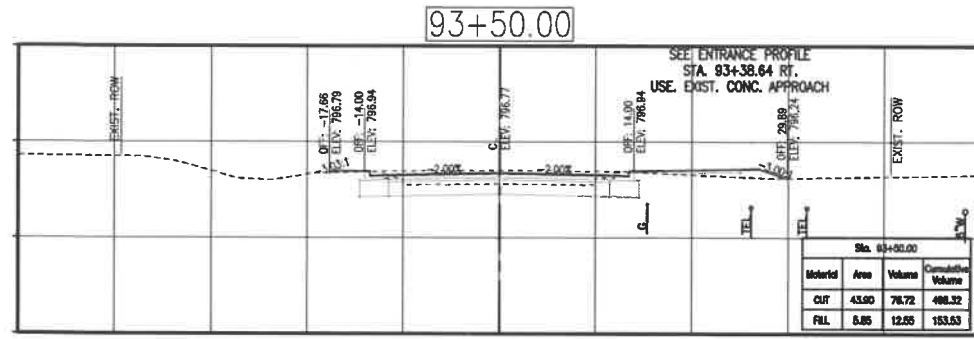
BUSINESS HIGHWAY 50 WEST IMPROVEMENTS - PHASE 2
COLE COUNTY PUBLIC WORKS
BUSINESS HIGHWAY 50 WEST
COLE COUNTY, MISSOURI

CMPS JOB No. 10-053
DRN. BY: P.L.S. CKD. BY: P.L.S.

SCALE: 1"=10'

SHEET TITLE
BUS. 50 WEST CROSS SECTIONS
SHEET NUMBER

1
OF 20 SHEETS



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BUSINESS HIGHWAY 50 WEST IMPROVEMENTS - PHASE 2
COLE COUNTY PUBLIC WORKS
BUSINESS HIGHWAY 50 WEST
COLE COUNTY, MISSOURI

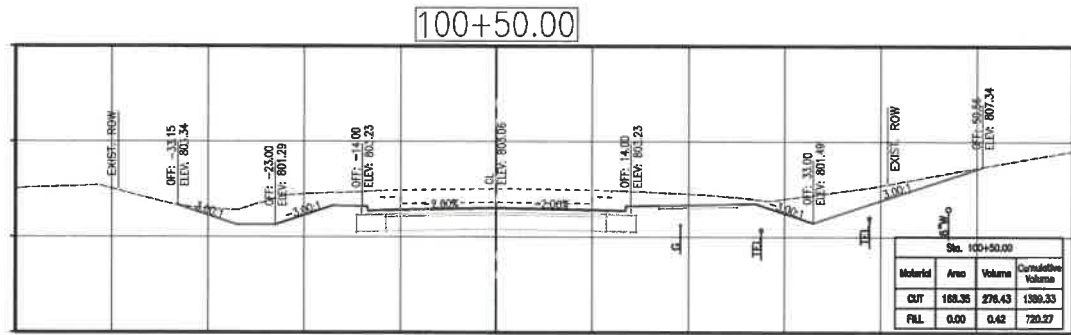
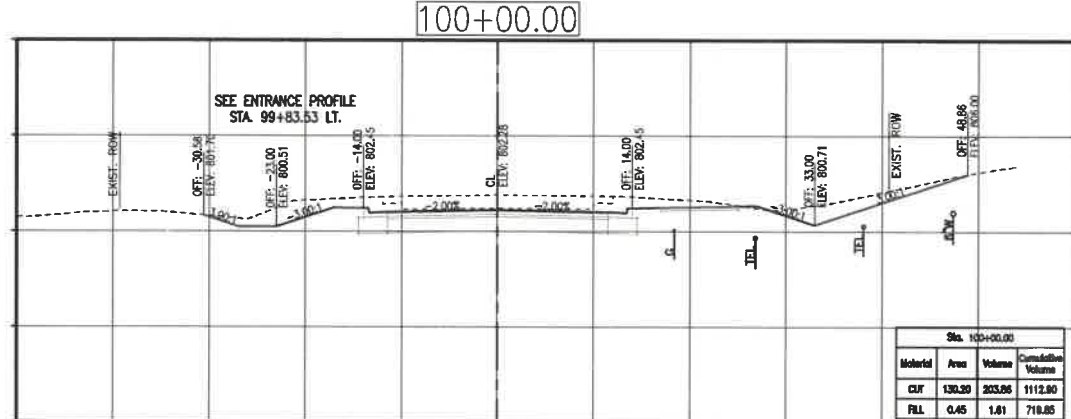
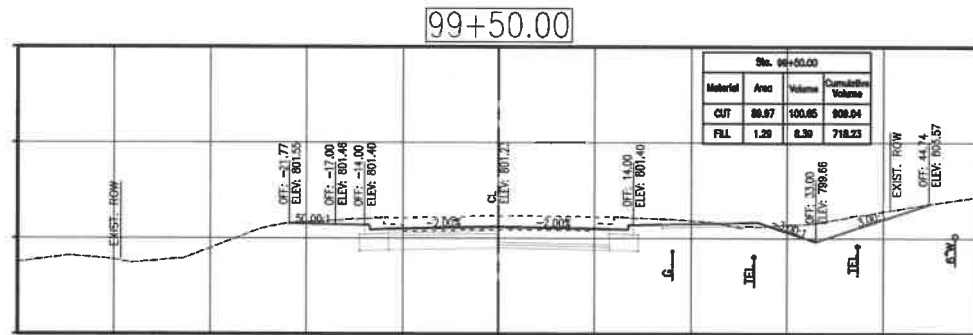
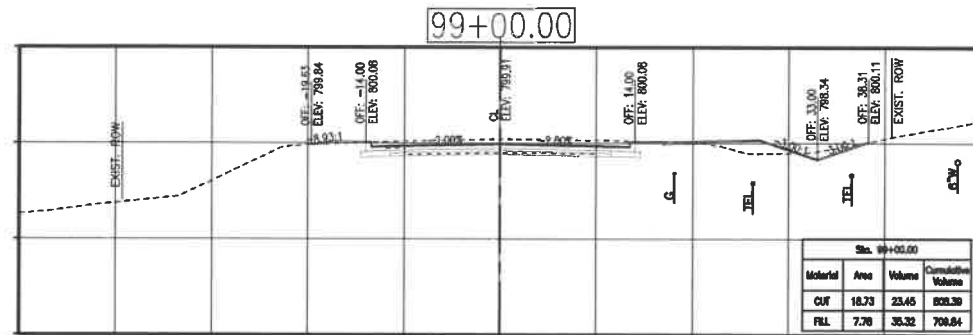
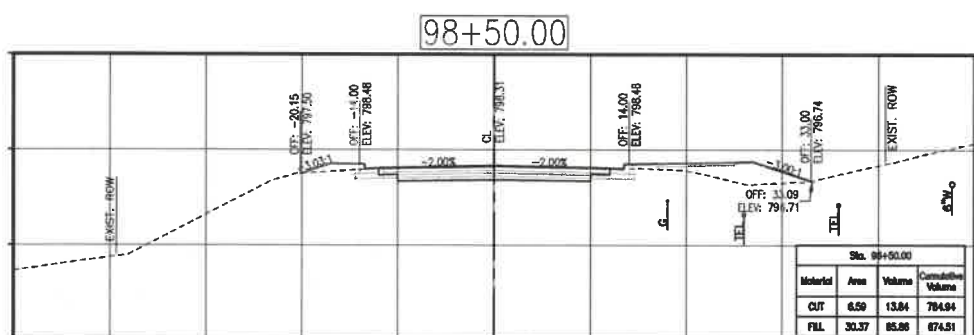
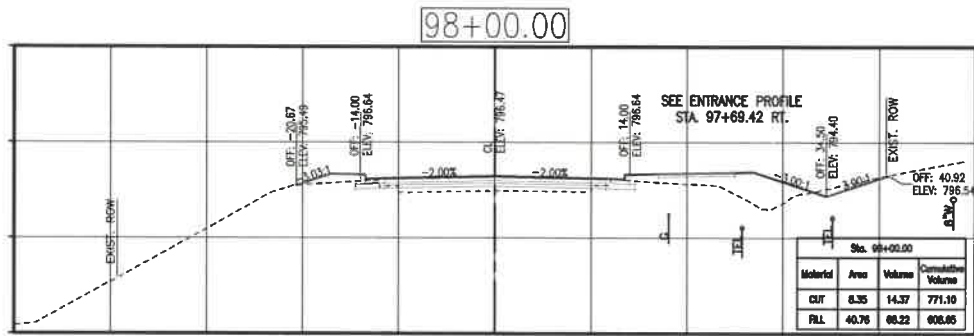
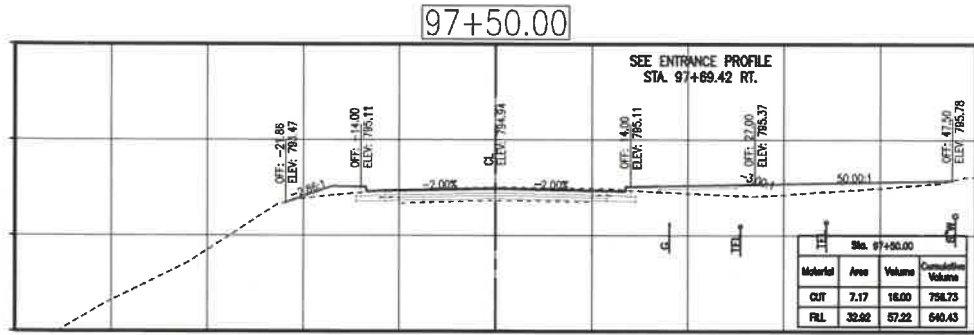
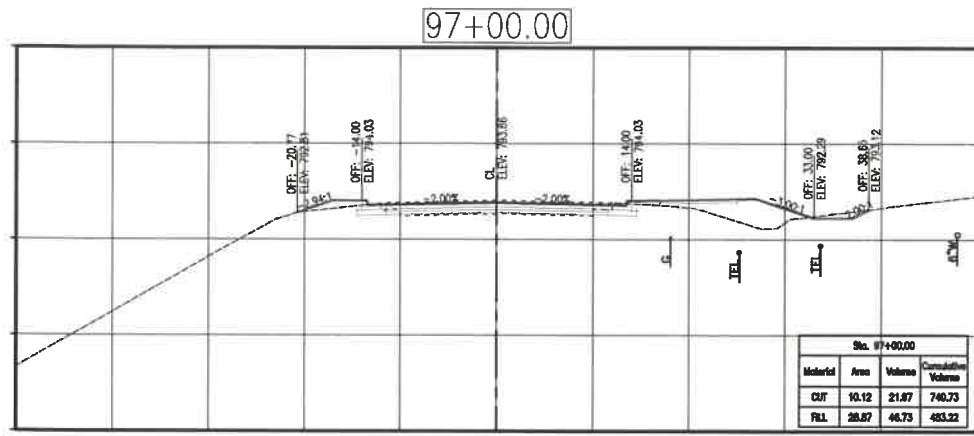
CMPS JOB No. 10-053
DRN. BY: P.L.S. CRD. BY: P.L.S.

SCALE: 1"=10'

SHEET TITLE
BUS. 50 WEST CROSS SECTIONS

SHEET NUMBER
2
OF 20 SHEETS

P:\2010\BUS 50 WEST\BUS 50 WEST.dwg, 2/12/21 11:17:08 AM



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(573) 634-8888



Paul Samson, PE - Engineer
MO# PE-2002016730

**BUSINESS HIGHWAY 50 WEST
IMPROVEMENTS - PHASE 2**
COLE COUNTY PUBLIC WORKS

BUSINESS HIGHWAY 50 WEST
COLE COUNTY, MISSOURI

CMPJ JOB No. 10-053

DRN. BY: P.L.S. CRD. BY: P.L.S.


SCALE: 1"=10'

SHEET TITLE
**BUS. 50 WEST
CROSS SECTIONS**

SHEET NUMBER
3
OF 20 SHEETS

PRINTS ISSUED
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(573) 634-8898



Paul Samson, PE - Engineer
MO# PE-200216730

BUSINESS HIGHWAY 50 WEST IMPROVEMENTS - PHASE 2
COLE COUNTY PUBLIC WORKS
BUSINESS HIGHWAY 50 WEST
COLE COUNTY, MISSOURI

CMPS JOB No. 10-053
DRN. BY: P.L.S. CKD. BY: P.L.S.

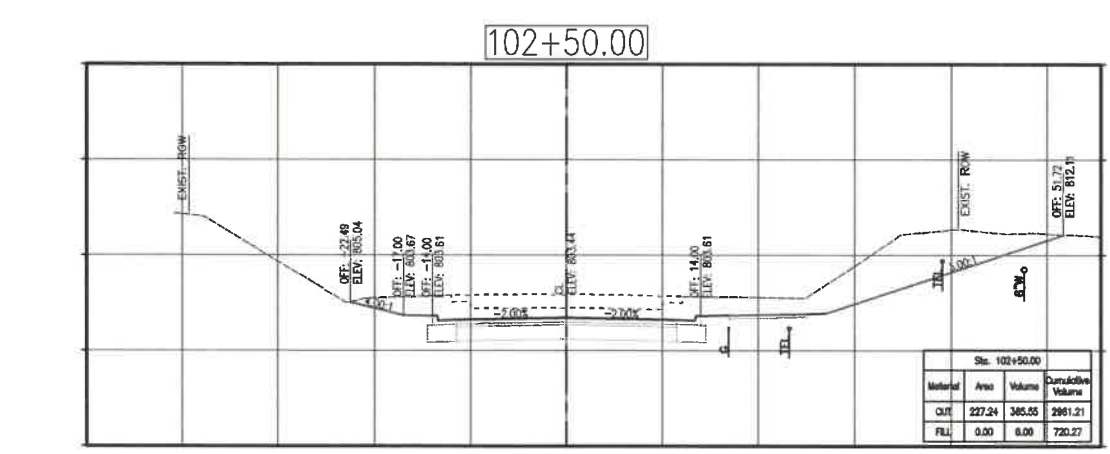
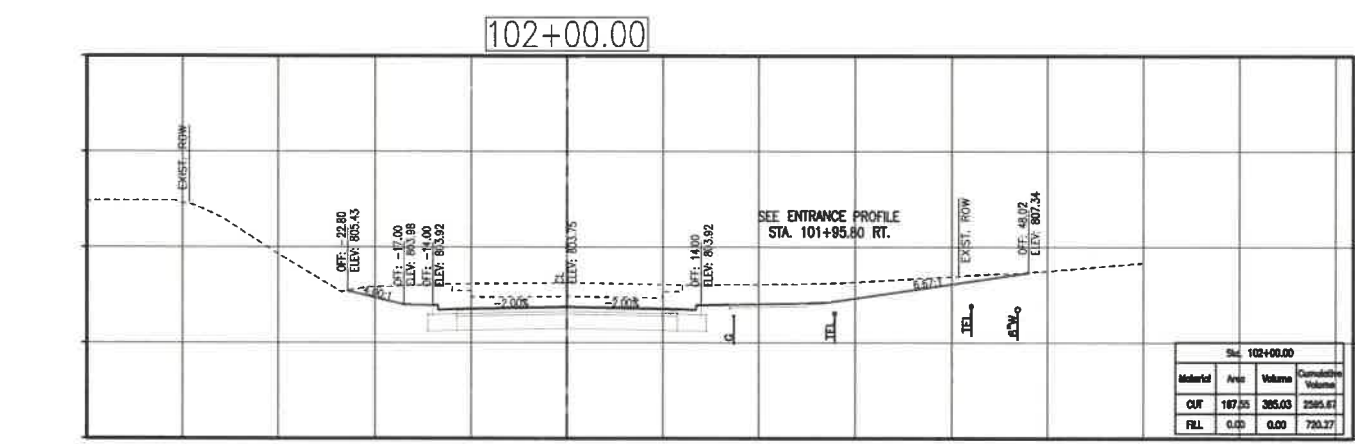
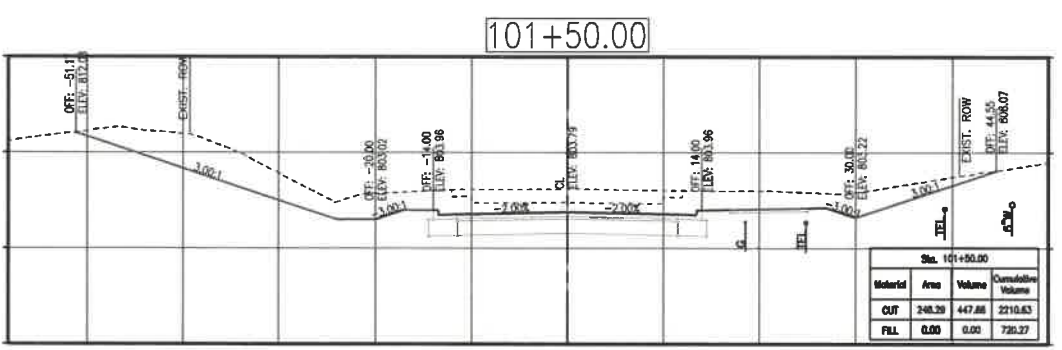
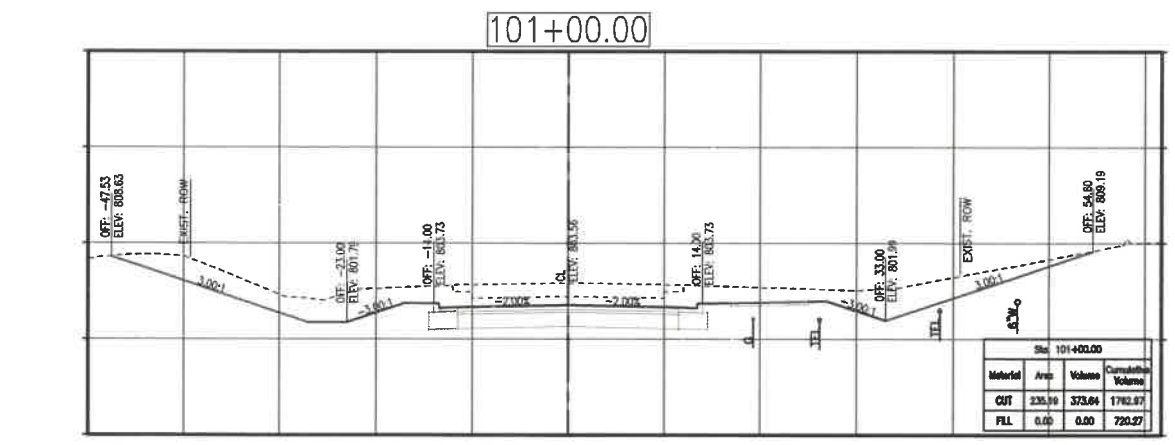
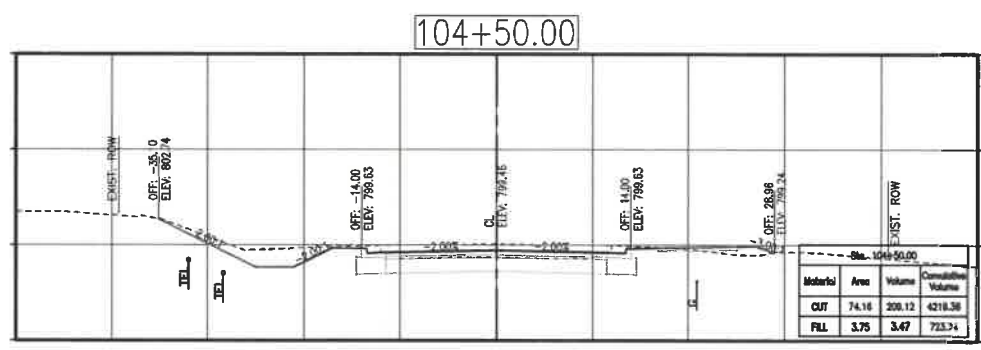
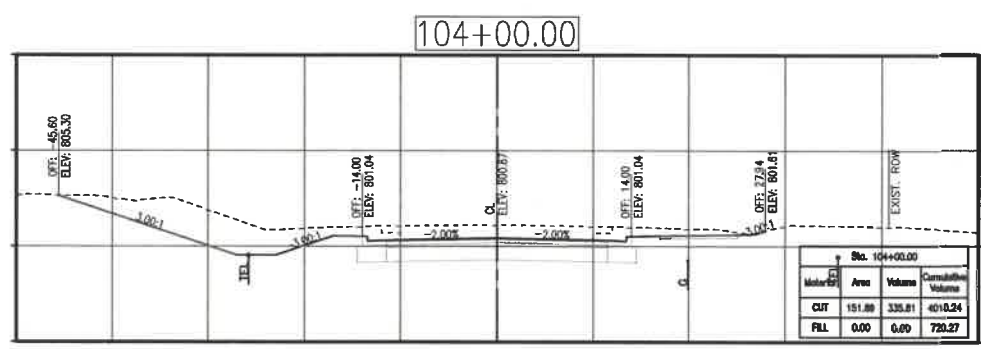
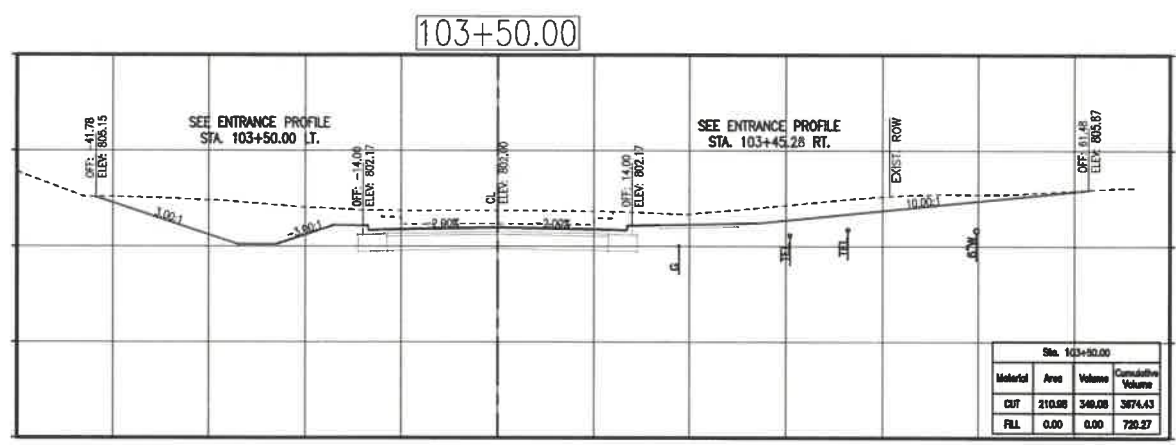
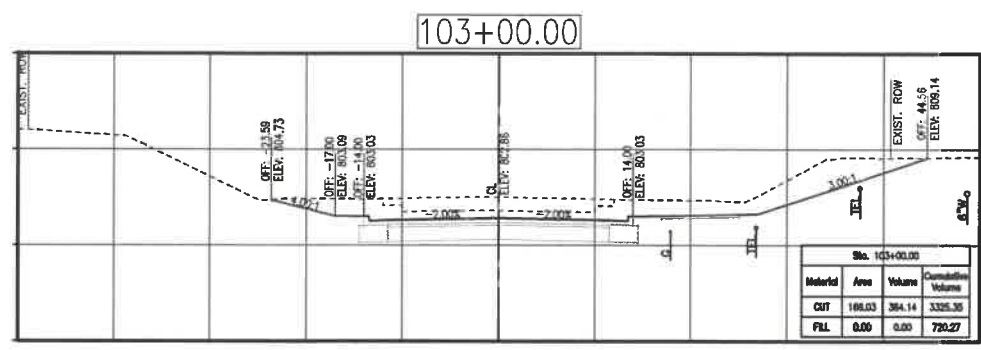
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SHEET TITLE
BUS. 50 WEST CROSS SECTIONS

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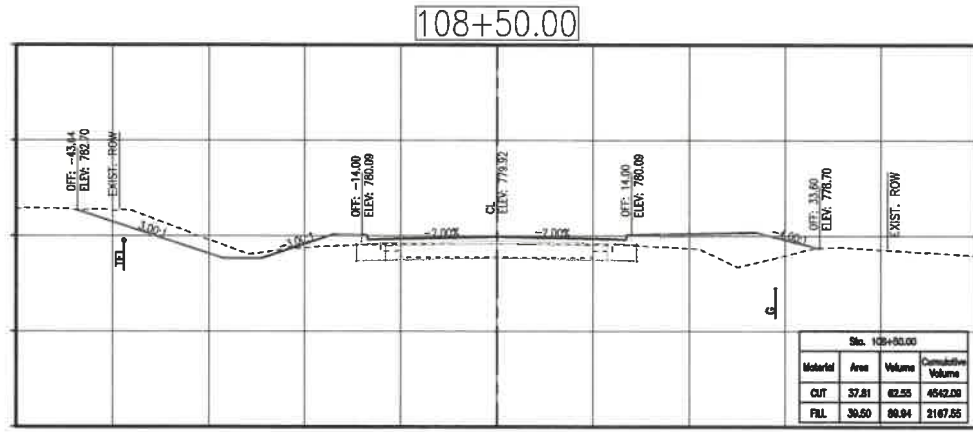
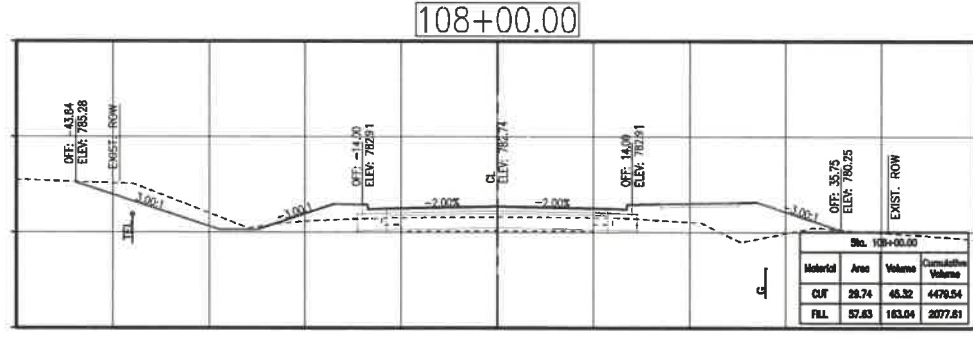
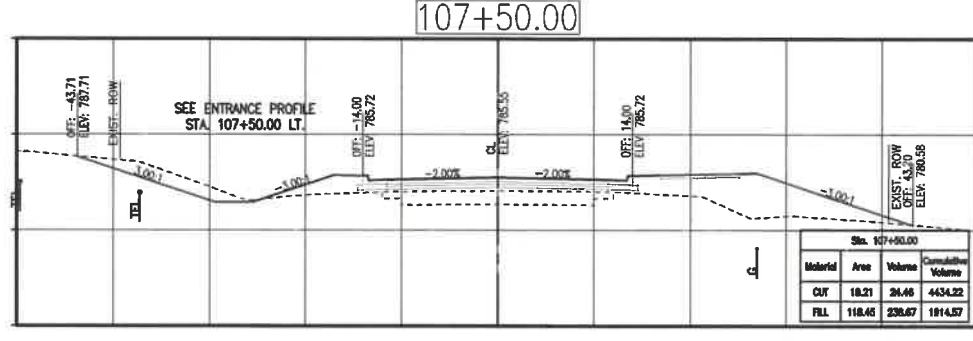
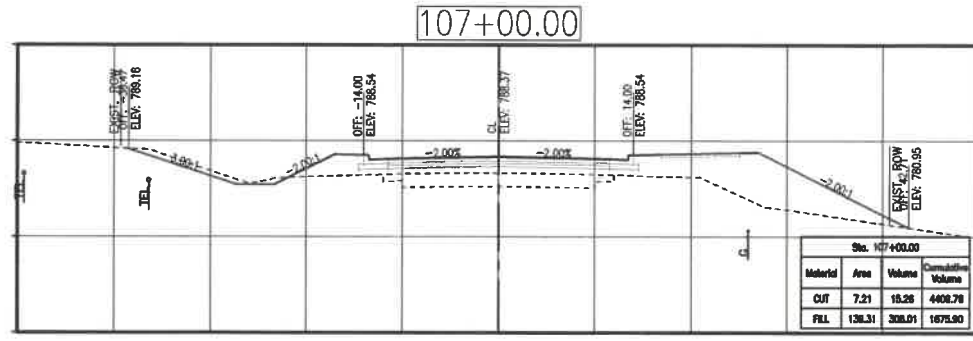
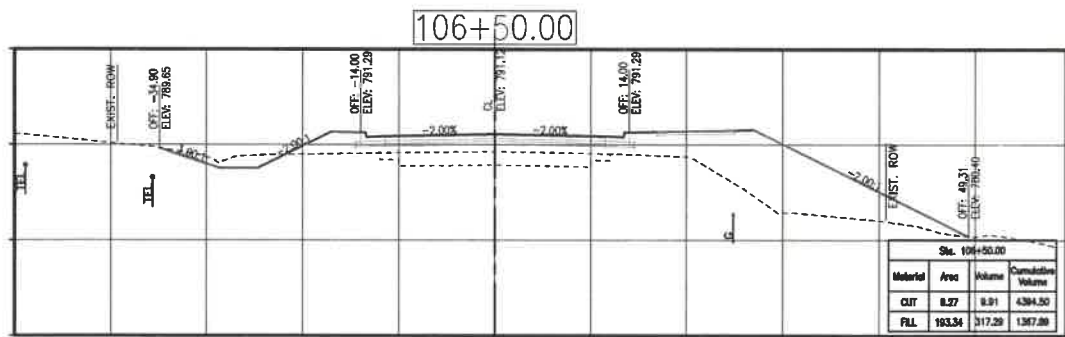
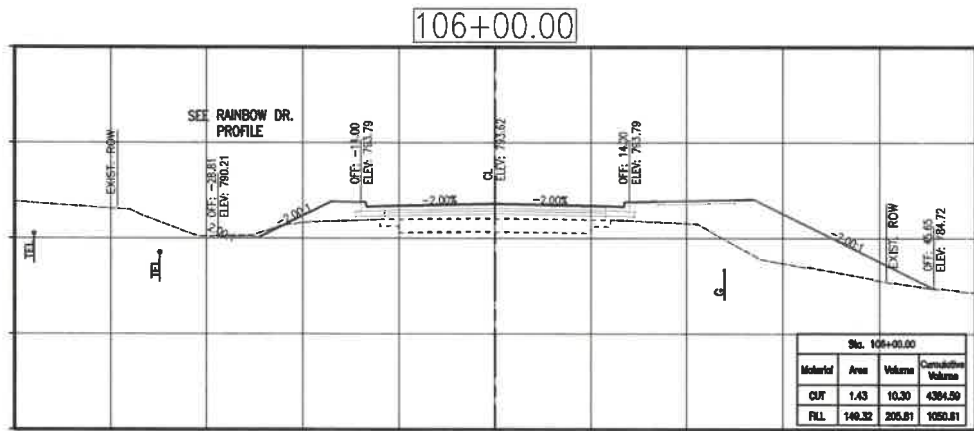
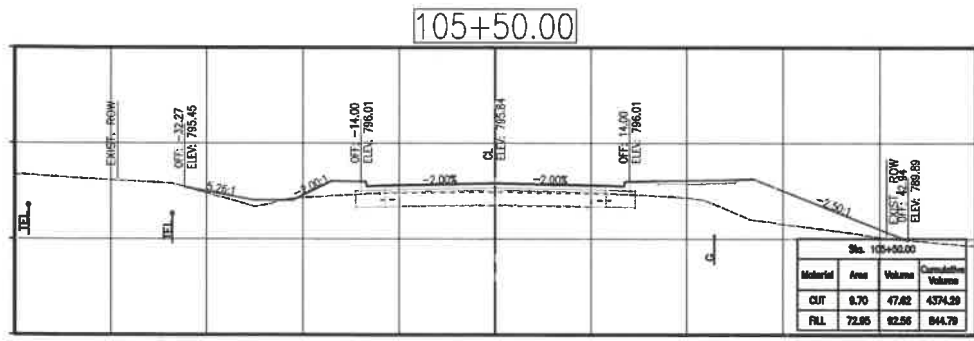
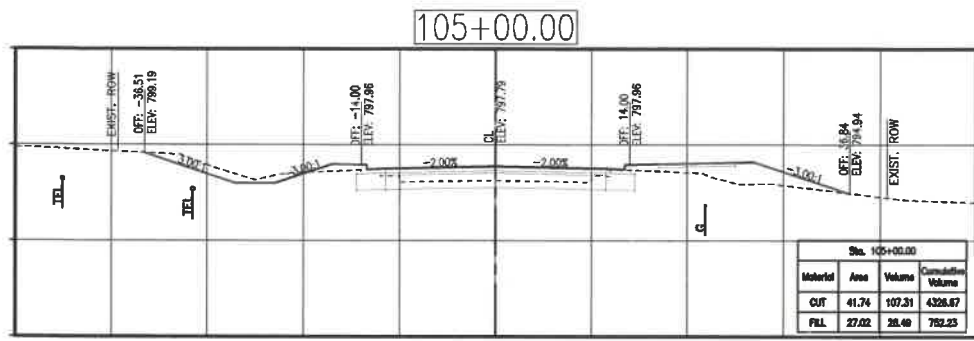
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OF 20 SHEETS



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Paul Samson, PE - Engineer
 MO# PE-200216730

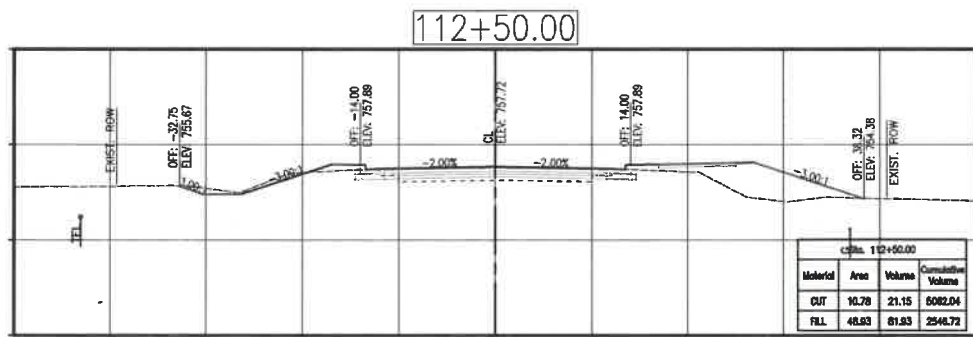
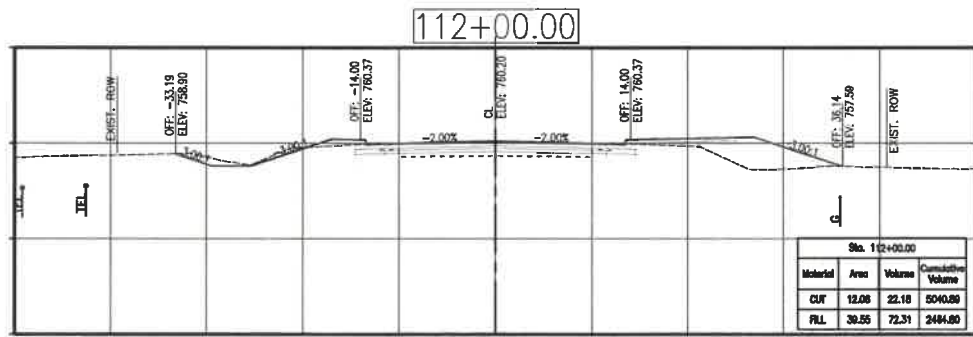
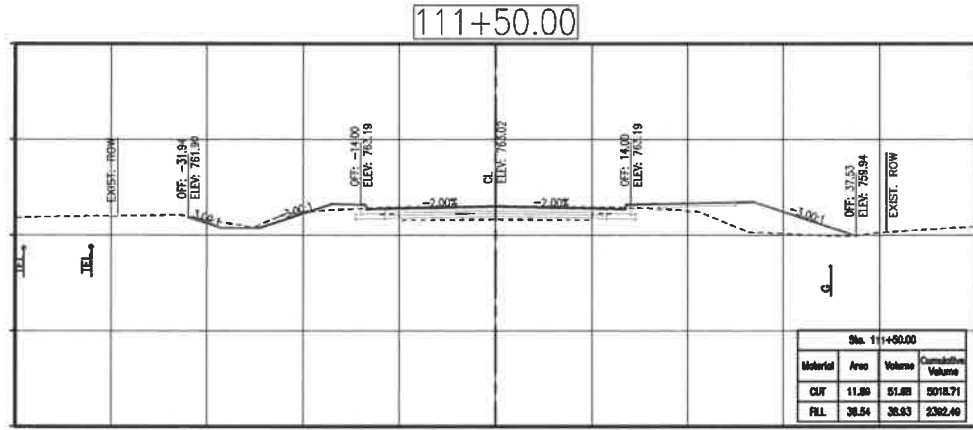
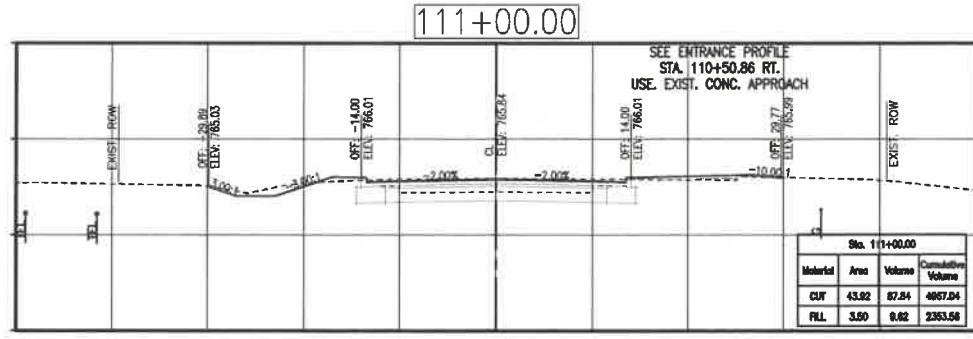
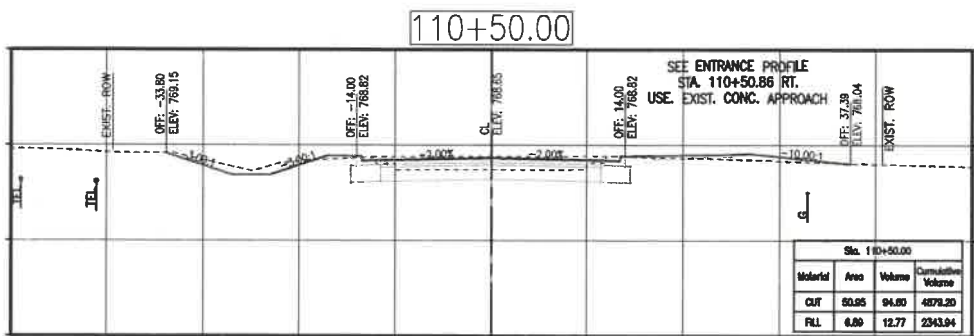
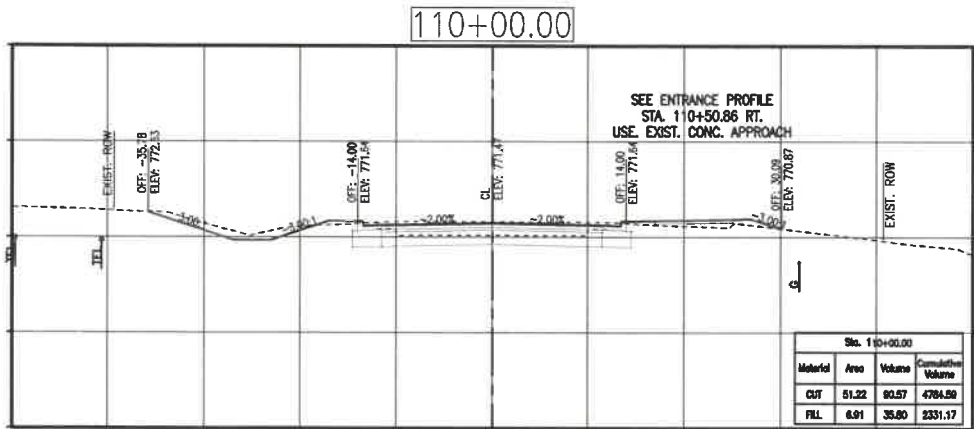
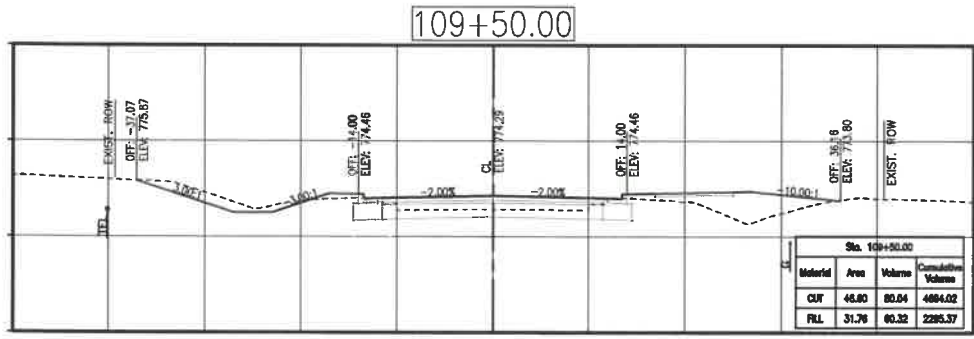
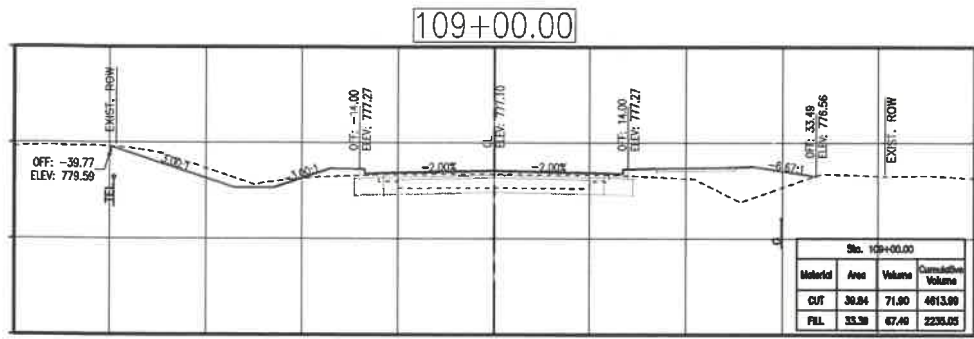
BUSINESS HIGHWAY 50 WEST IMPROVEMENTS - PHASE 2
COLE COUNTY PUBLIC WORKS
 BUSINESS HIGHWAY 50 WEST
 COLE COUNTY, MISSOURI

CMPS JOB No. 10-053
 DRN. BY: P.L.S. CRD. BY: P.L.S.

SCALE: 1"=10'

SHEET TITLE
BUS. 50 WEST CROSS SECTIONS

SHEET NUMBER
5
 OF 20 SHEETS



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MO# PE-2002016730

**BUSINESS HIGHWAY 50 WEST
IMPROVEMENTS - PHASE 2**

COLE COUNTY PUBLIC WORKS

**BUSINESS HIGHWAY 50 WEST
COLE COUNTY, MISSOURI**

CMPS JOB No. 10-053

DRN. BY: P.L.S. CRD. BY: P.L.S.

SCALE: 1"=10'

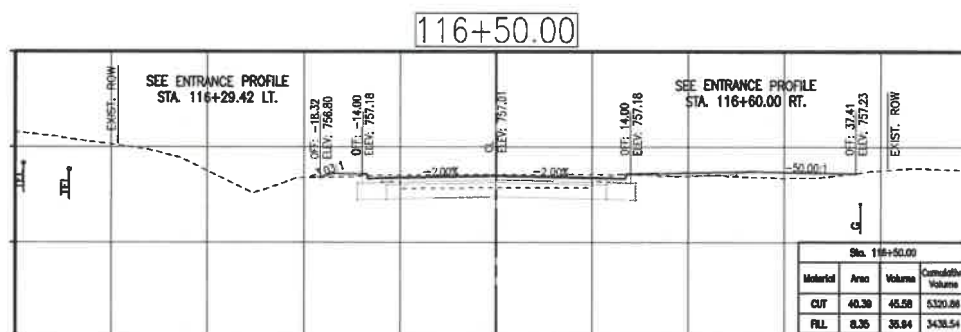
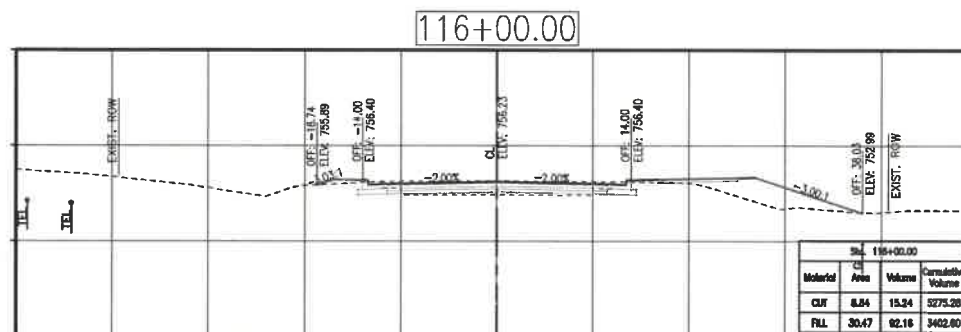
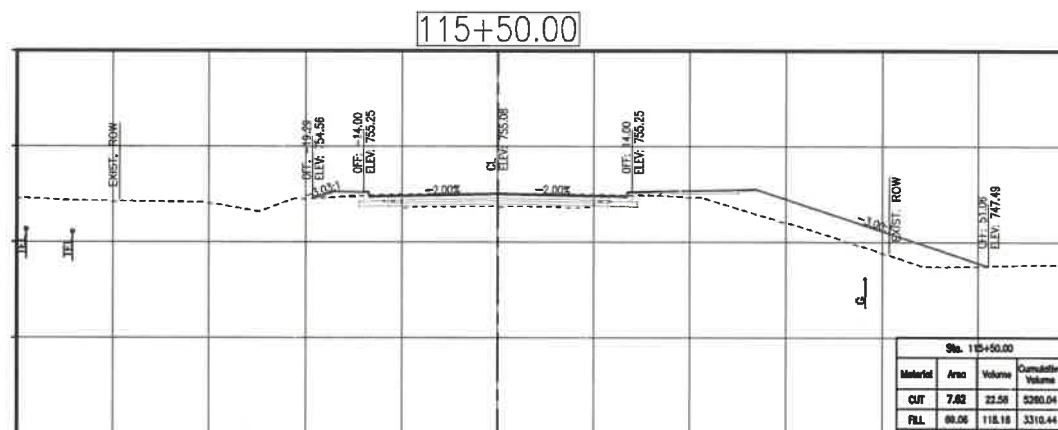
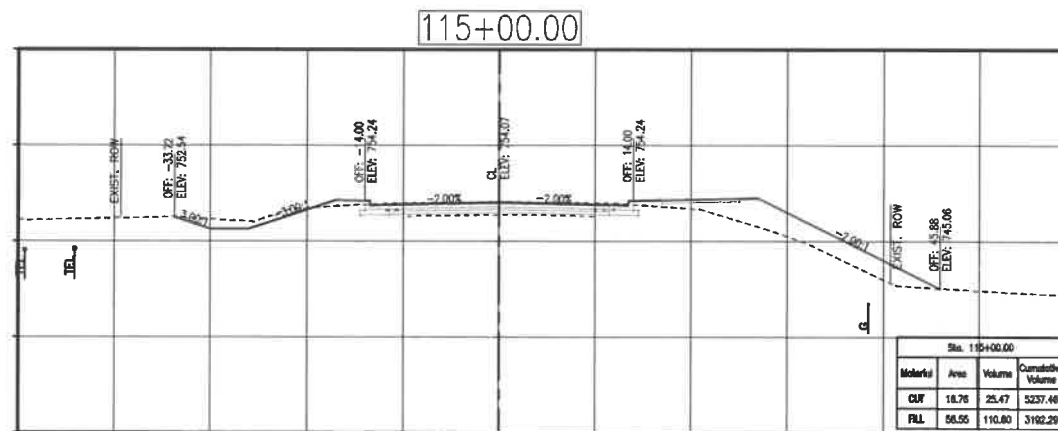
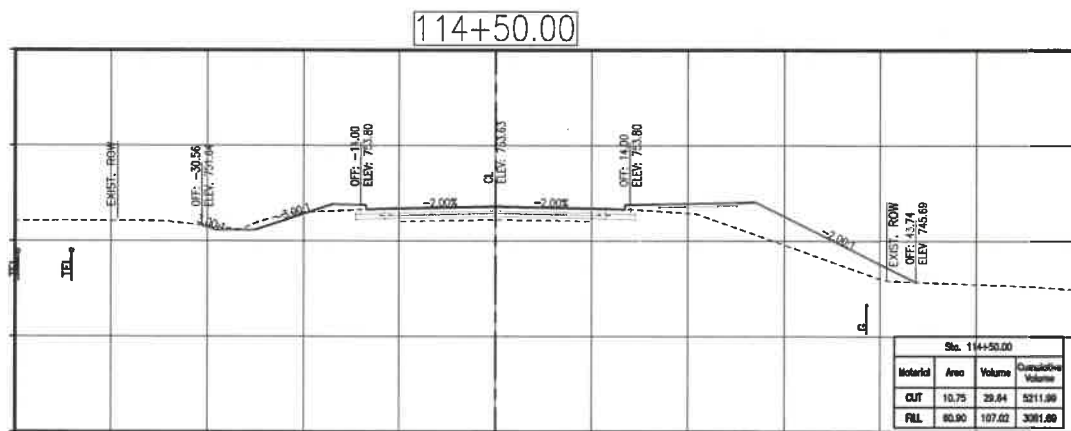
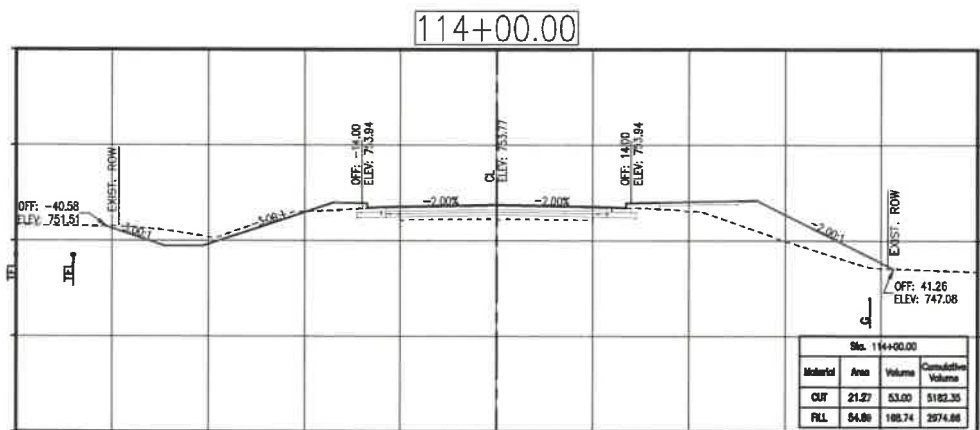
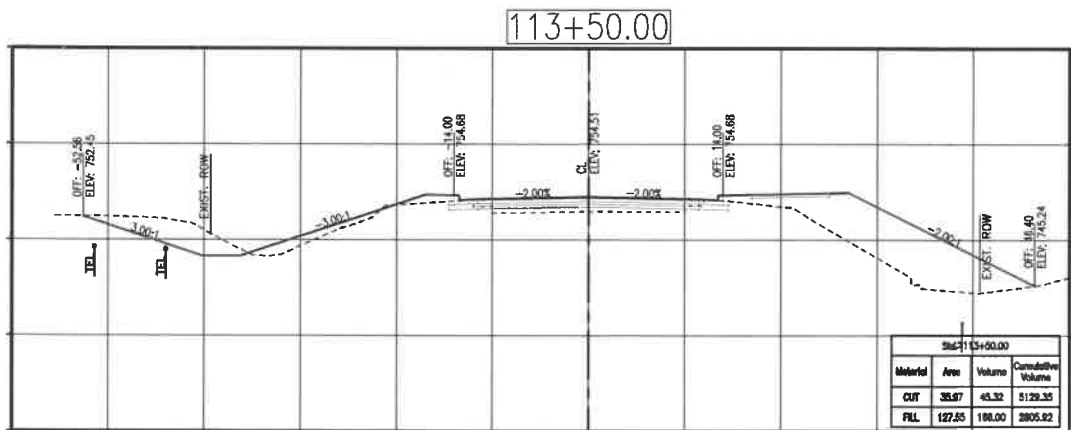
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**BUS. 50 WEST
CROSS SECTIONS**

SHEET NUMBER

6

OF 20 SHEETS



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2/12/21
Paul Samson, PE - Engineer
MO# PE-200216730

**BUSINESS HIGHWAY 50 WEST
IMPROVEMENTS - PHASE 2**

COLE COUNTY PUBLIC WORKS
BUSINESS HIGHWAY 50 WEST
COLE COUNTY, MISSOURI

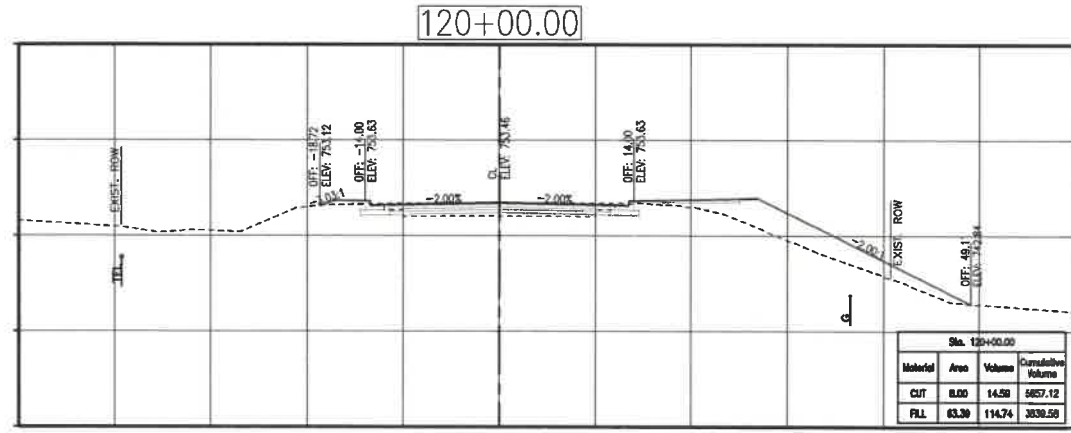
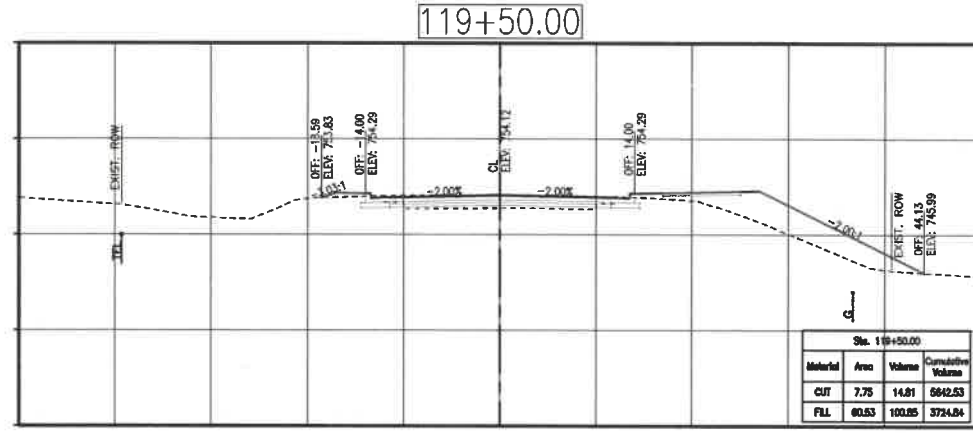
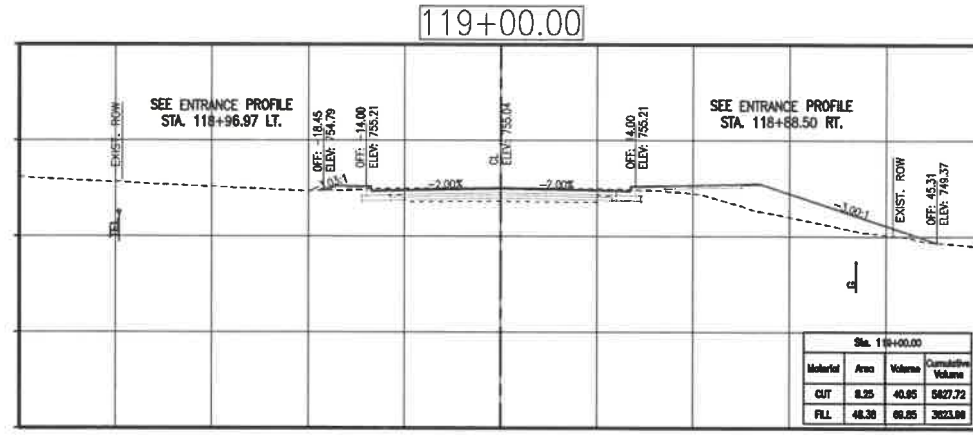
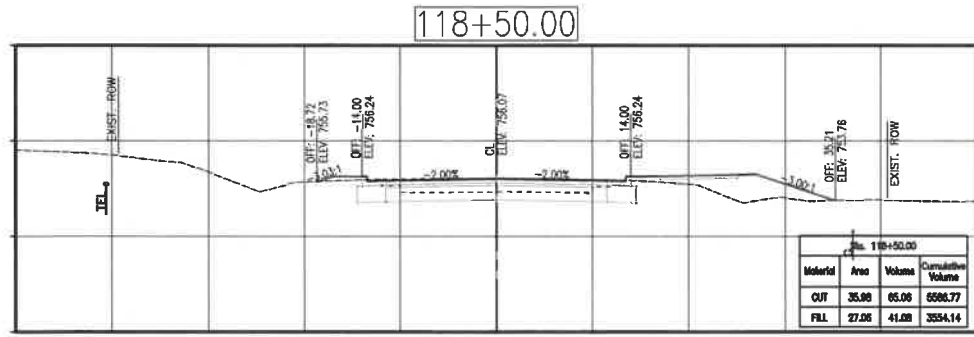
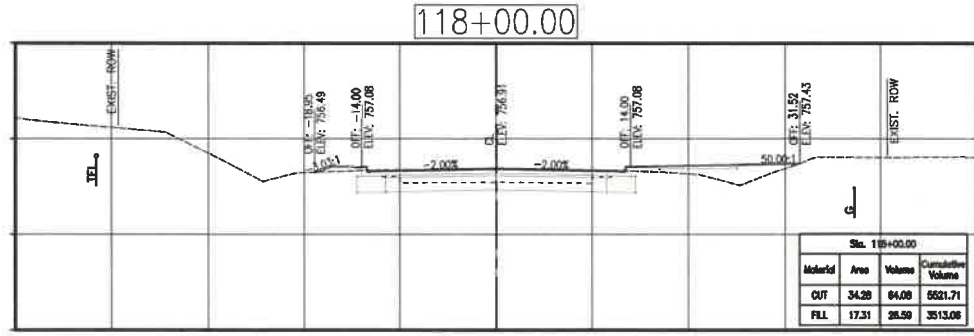
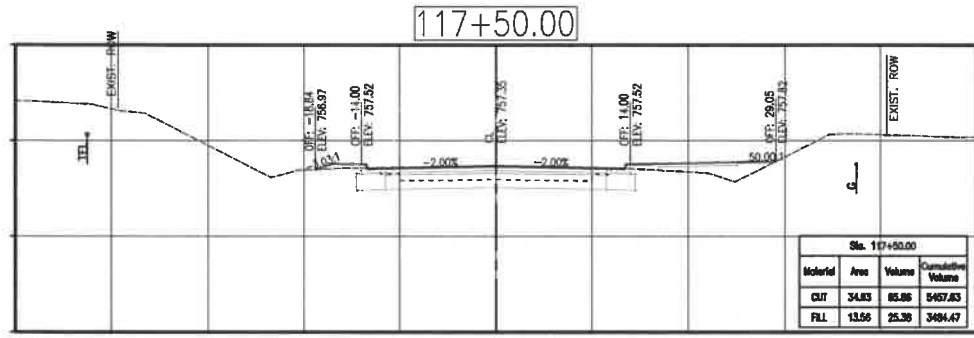
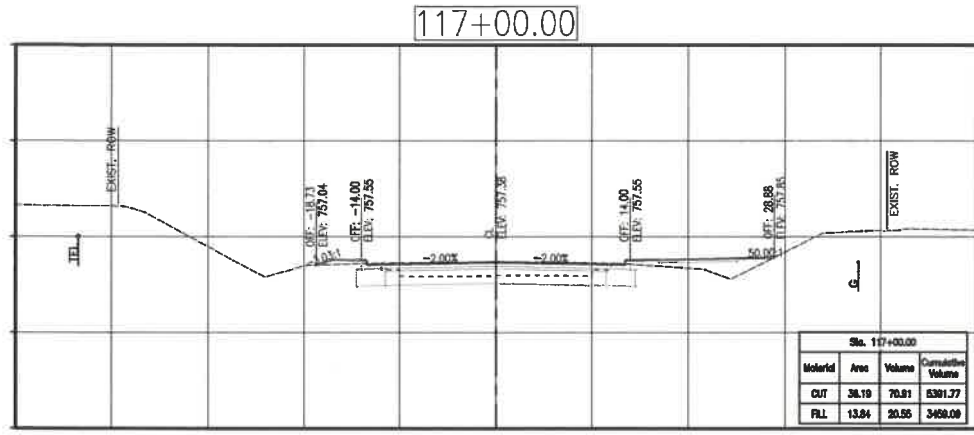
CMPS JOB No. 10-053

DRN. BY: P.L.S. CKD. BY: P.L.S.

SCALE: 1"=10'

SHEET TITLE
**BUS. 50 WEST
CROSS SECTIONS**

SHEET NUMBER
7
OF 20 SHEETS



PRINTS ISSUED
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2/12/21
Paul Samson, PE - Engineer
MO# PE-202016730

**BUSINESS HIGHWAY 50 WEST
IMPROVEMENTS - PHASE 2**
COLE COUNTY PUBLIC WORKS
BUSINESS HIGHWAY 50 WEST
COLE COUNTY, MISSOURI

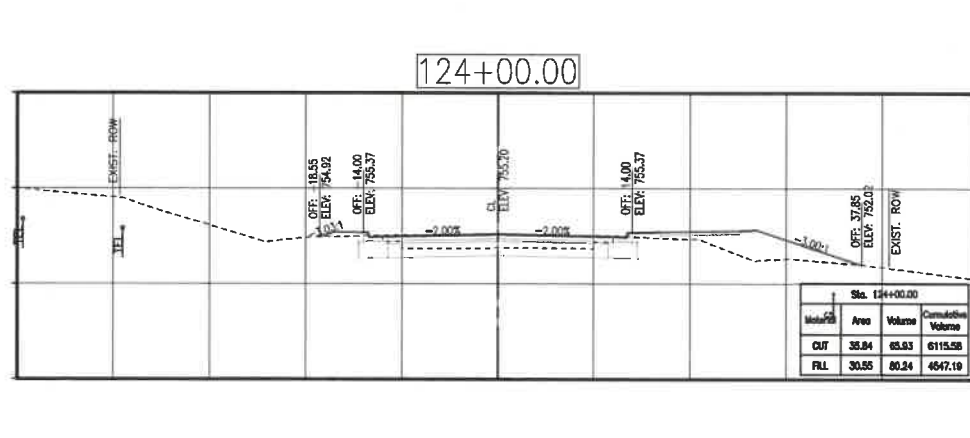
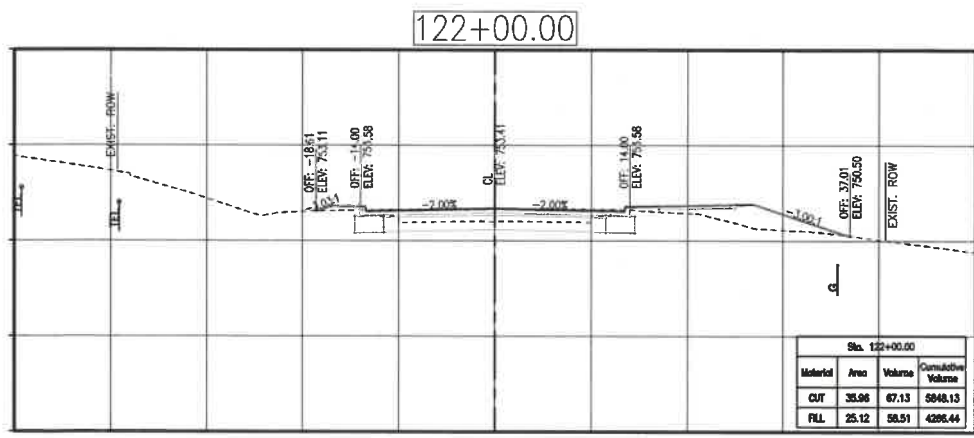
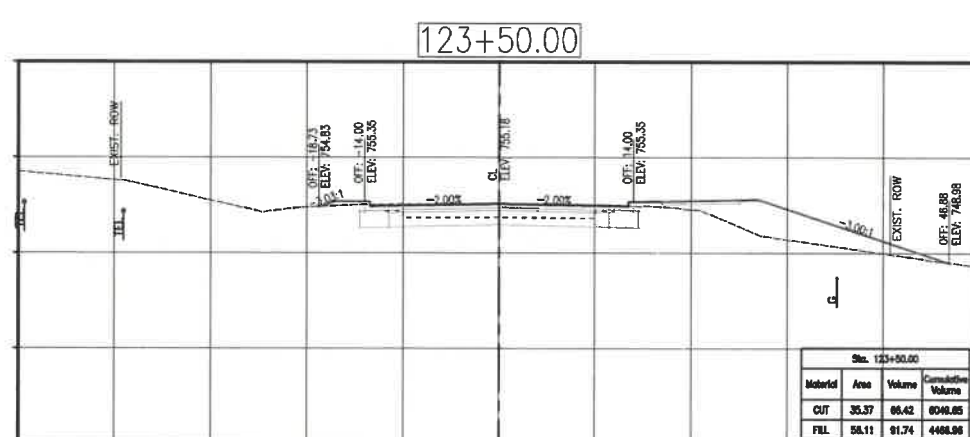
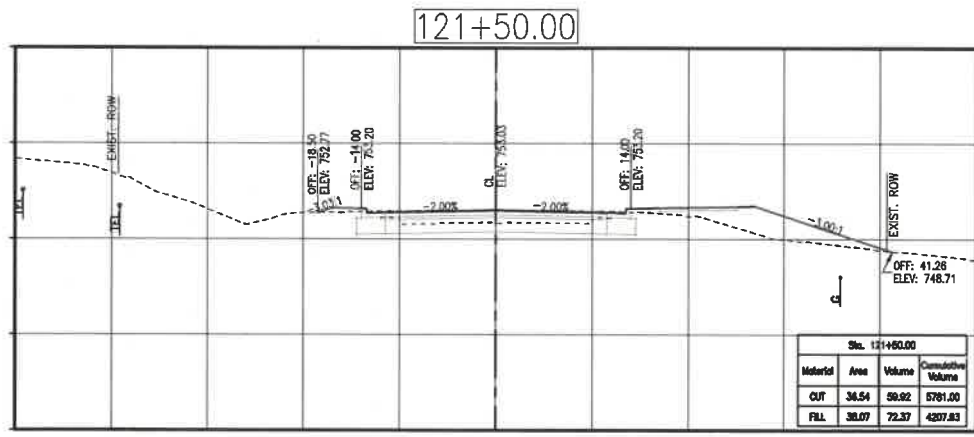
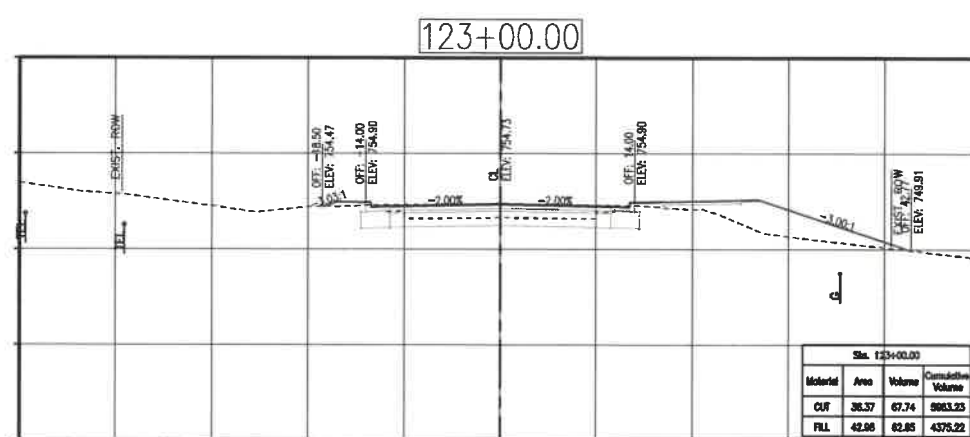
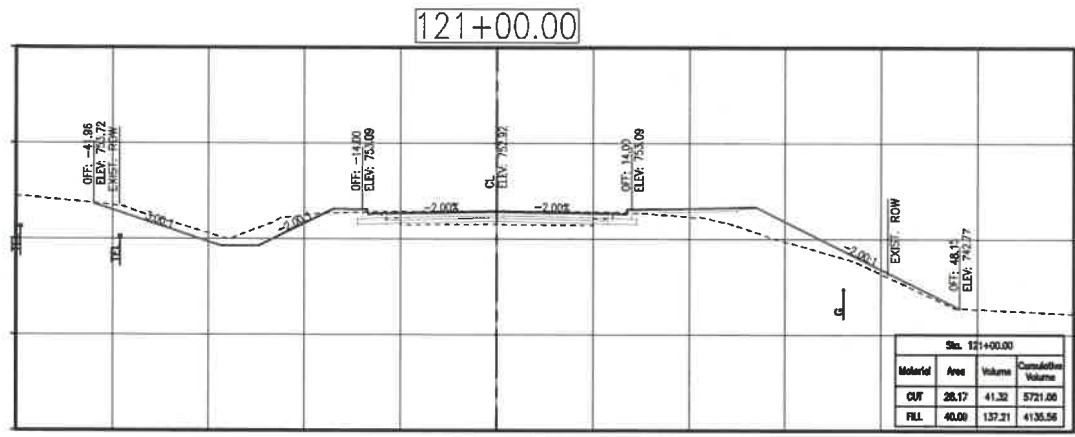
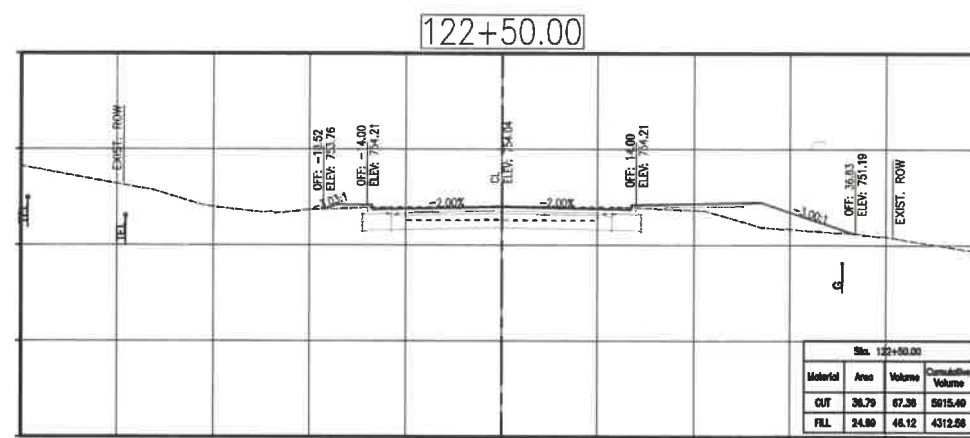
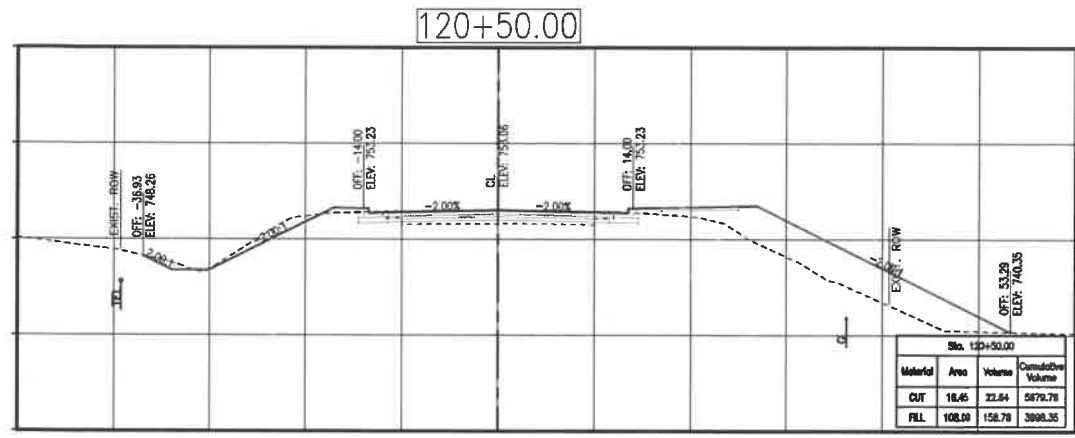
CMPS JOB No. 10-053
DRN. BY: P.L.S. CRD. BY: P.L.S.

SCALE: 1"=10'

SHEET TITLE
**BUS. 50 WEST
CROSS SECTIONS**

SHEET NUMBER
8
OF 20 SHEETS

P:\2020\10-053_CPMPS_BUS 50 PHASE 2\BUS 50 PHASE 2\CROSS SECTIONS\117+50.00.DWG



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(573) 634-8898



2/12/21
Paul Samson, PE - Engineer
MO# PE-2002016730

**BUSINESS HIGHWAY 50 WEST
IMPROVEMENTS - PHASE 2**
COLE COUNTY PUBLIC WORKS
BUSINESS HIGHWAY 50 WEST
COLE COUNTY, MISSOURI

CMPS JOB No. 10-053

DRN. BY: P.L.S. CKD. BY: P.L.S.

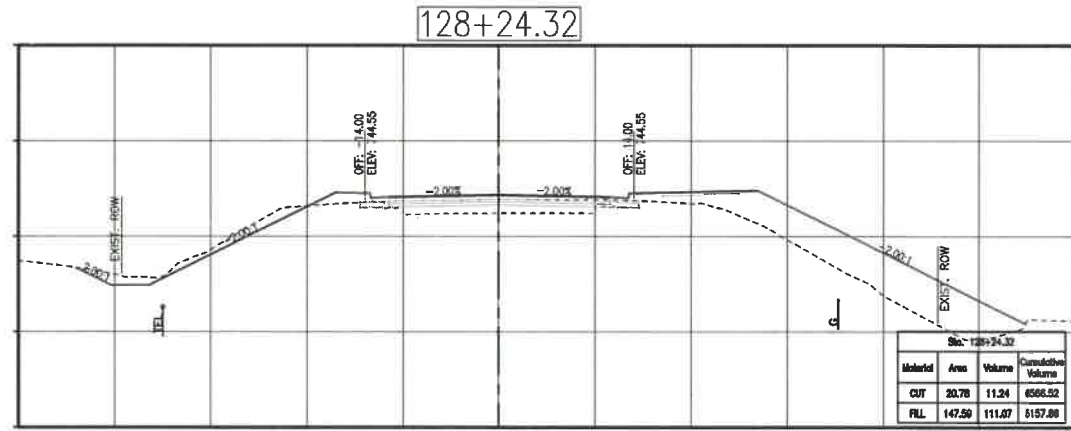
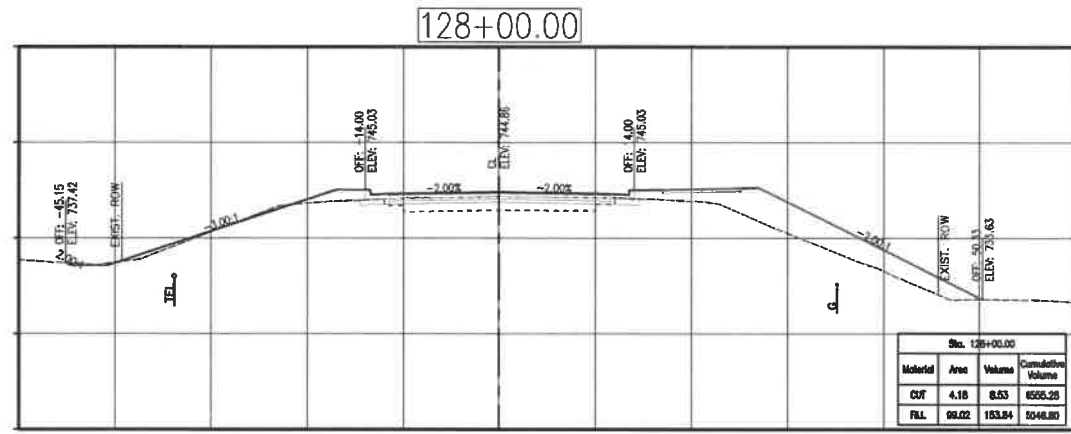
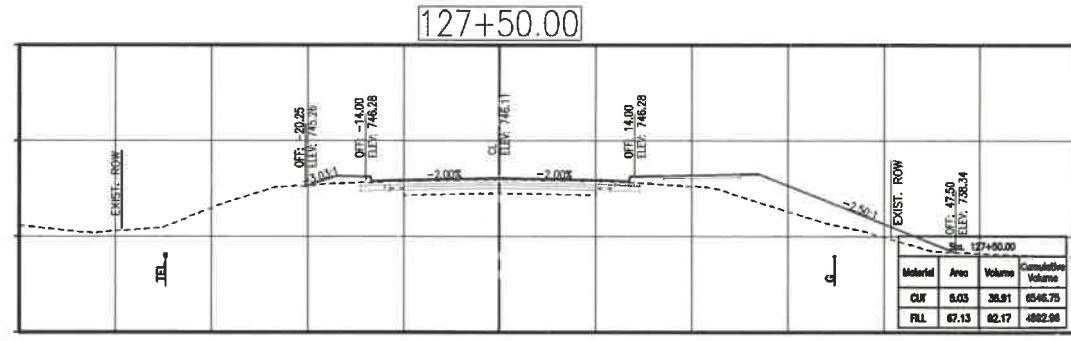
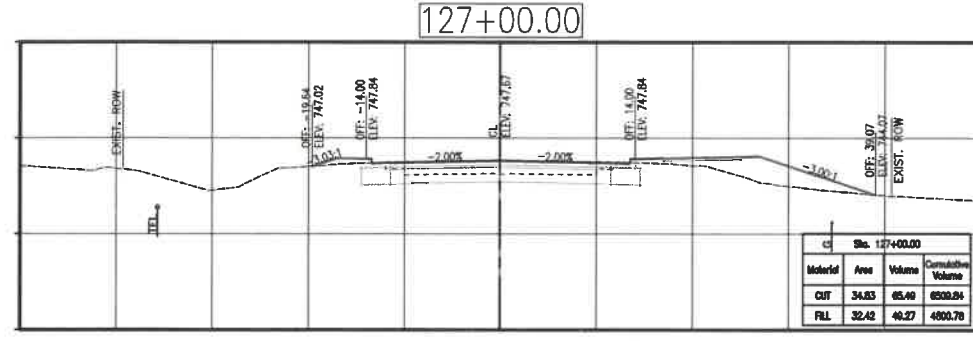
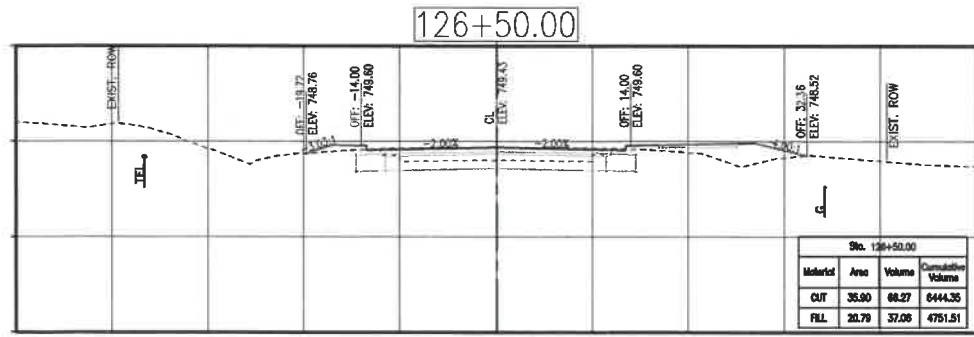
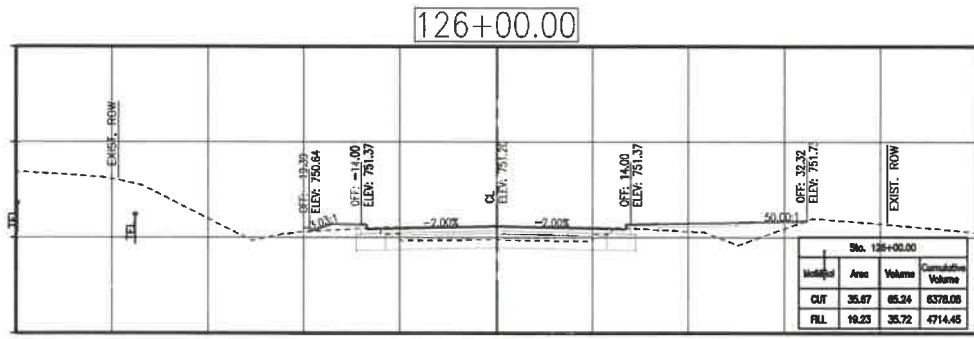
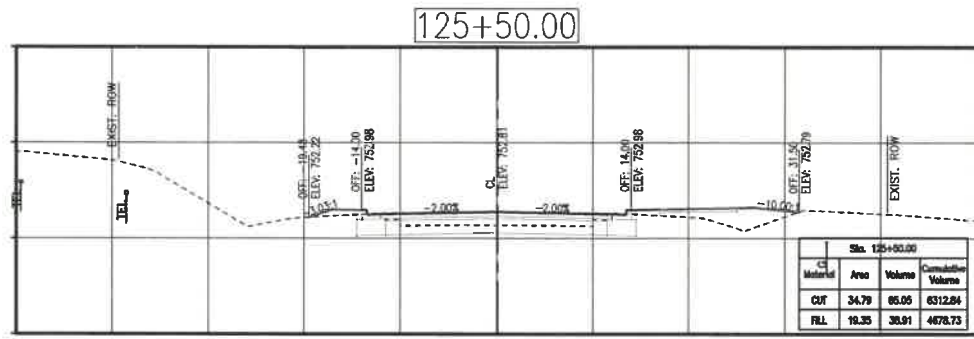
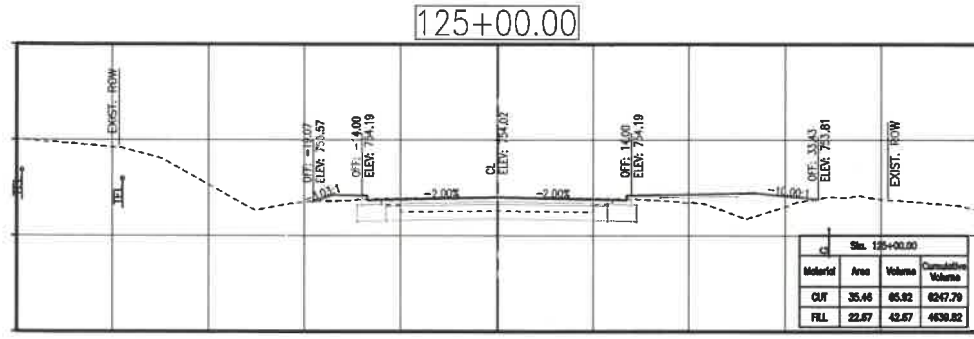
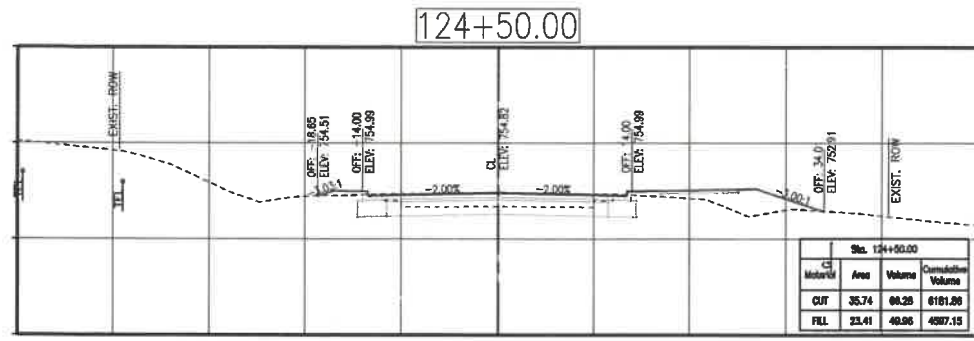
SCALE: 1"=10'

SHEET TITLE
**BUS. 50 WEST
CROSS SECTIONS**

SHEET NUMBER

9

OF 20 SHEETS



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(573) 634-8888



Paul Samson, PE - Engineer
MO# PE-2002016730

BUSINESS HIGHWAY 50 WEST IMPROVEMENTS - PHASE 2
COLE COUNTY PUBLIC WORKS
BUSINESS HIGHWAY 50 WEST
COLE COUNTY, MISSOURI

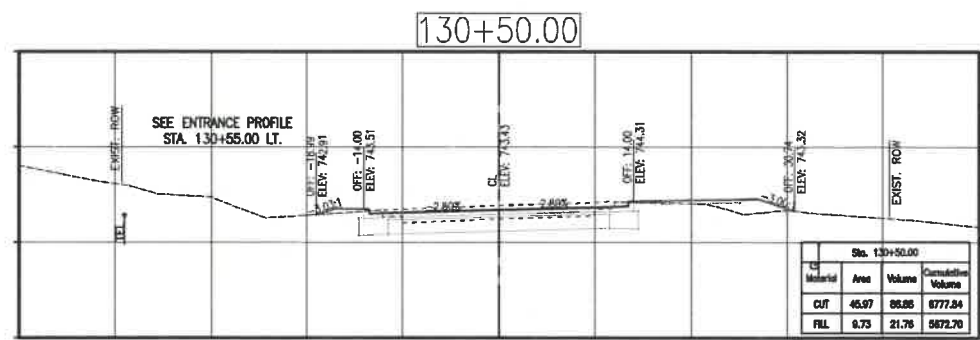
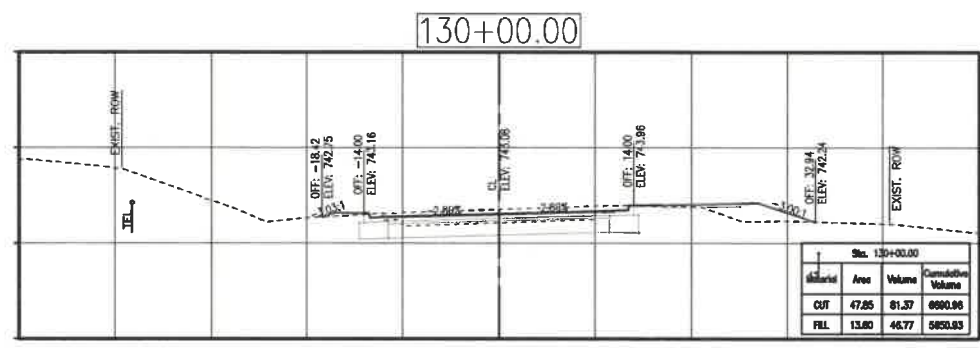
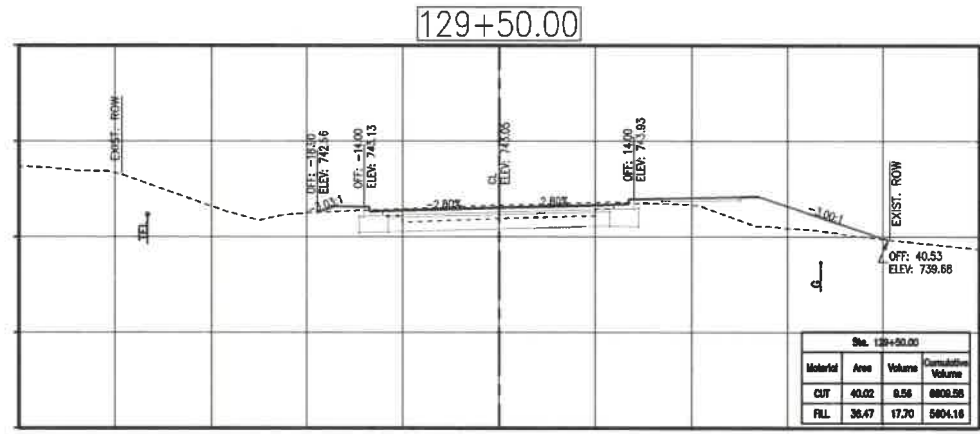
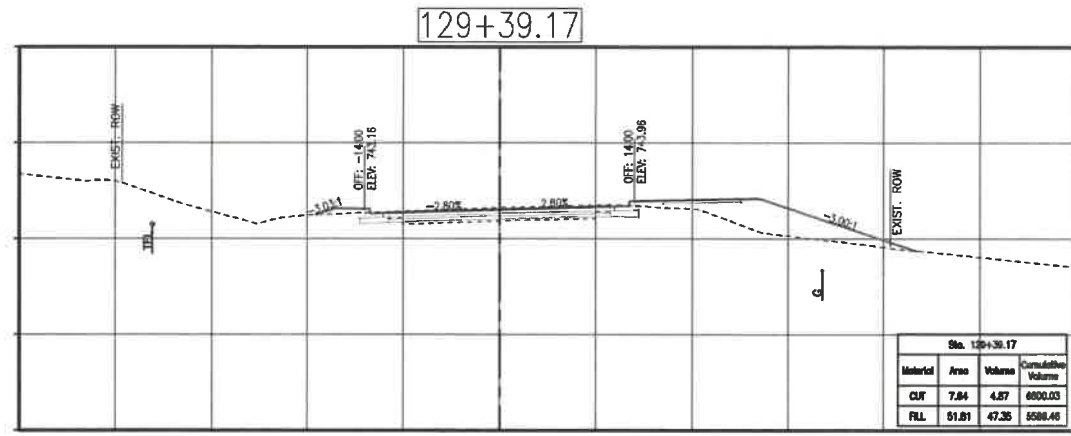
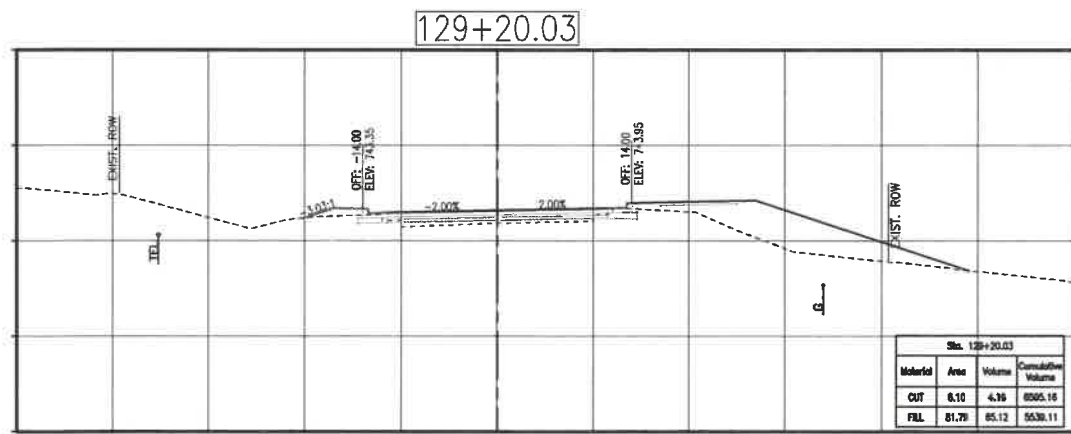
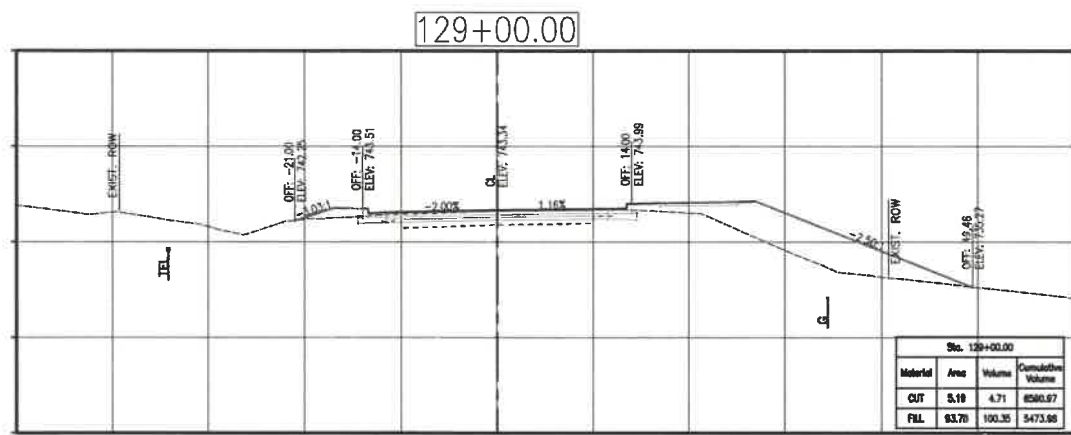
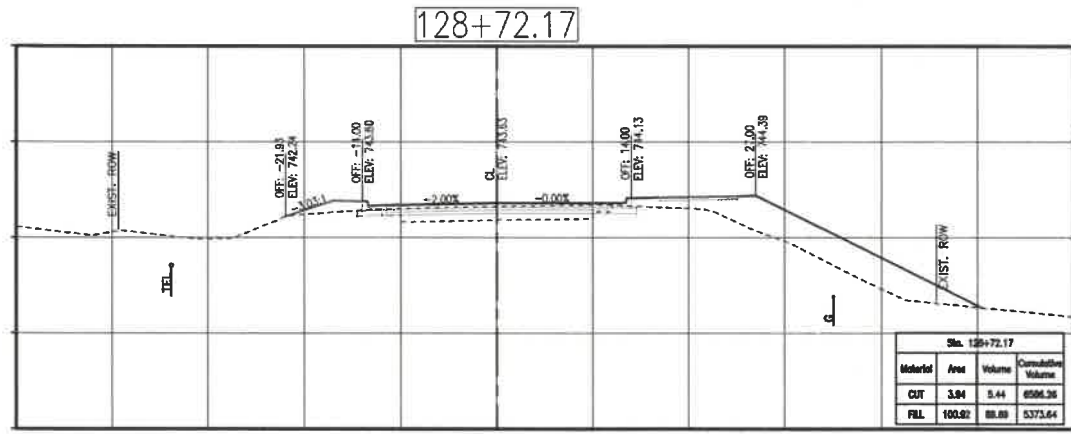
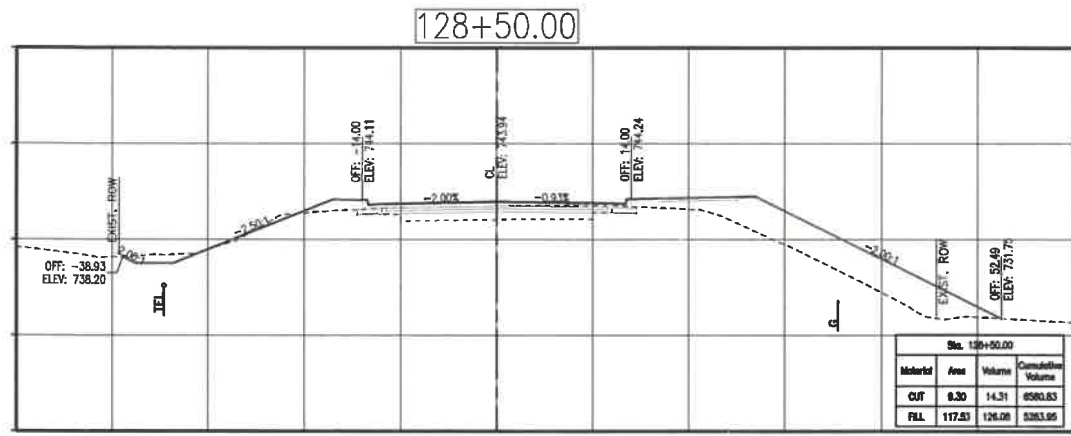
CMPS JOB No. 10-053
DRN. BY: P.L.S. CRD. BY: P.L.S.

SCALE: 1"=10'

SHEET TITLE
BUS. 50 WEST CROSS SECTIONS

SHEET NUMBER
10
OF 20 SHEETS

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 (573) 634-8888

Paul Samson, PE - Engineer
MO# PE-2002016730

**BUSINESS HIGHWAY 50 WEST
IMPROVEMENTS - PHASE 2**
 COLE COUNTY PUBLIC WORKS
 BUSINESS HIGHWAY 50 WEST
 COLE COUNTY, MISSOURI

CMPS JOB No. 10-053

DRN. BY: P.L.S. CRD. BY: P.L.S.

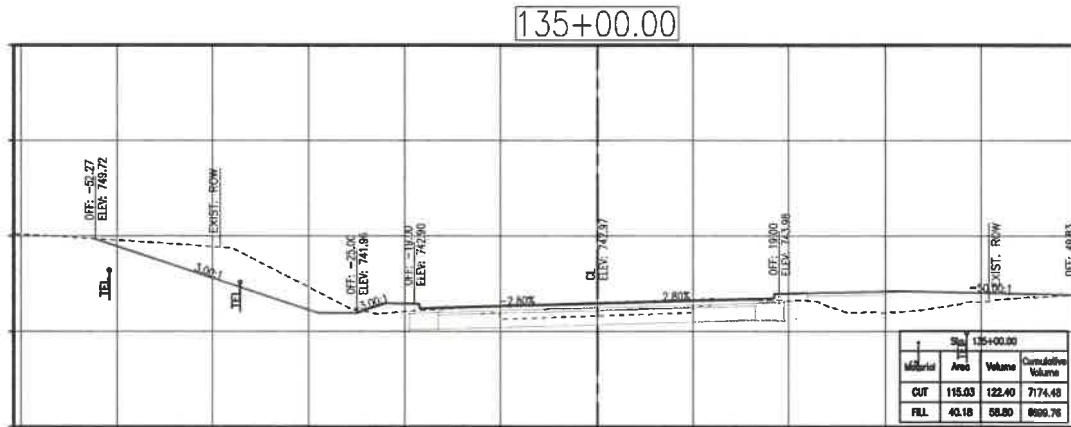
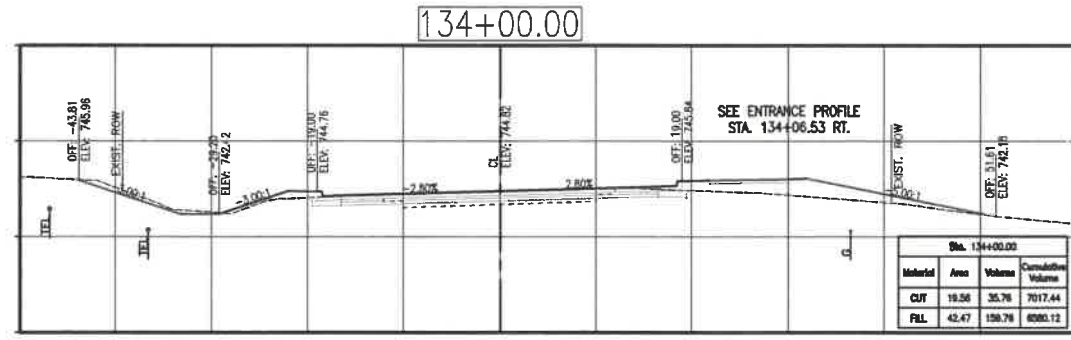
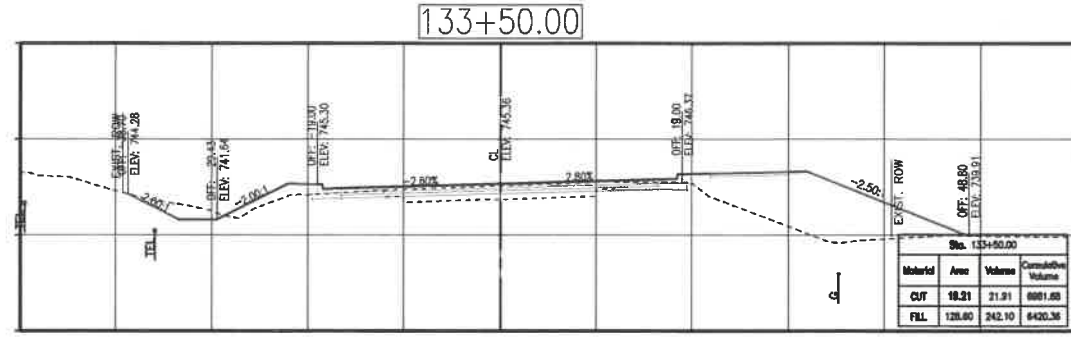
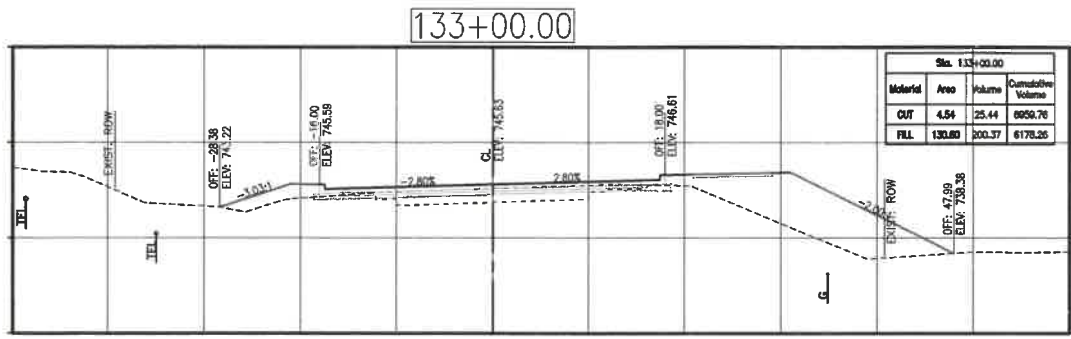
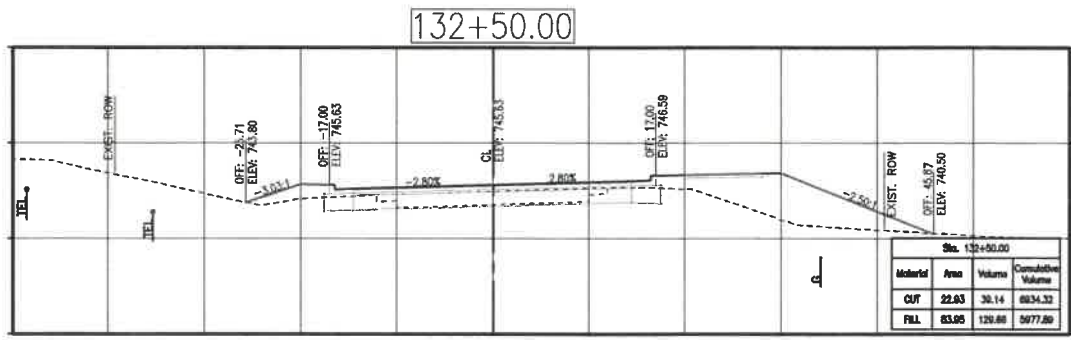
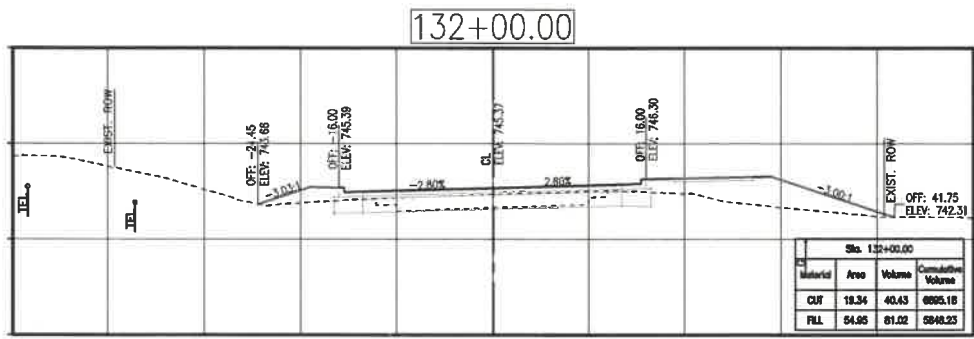
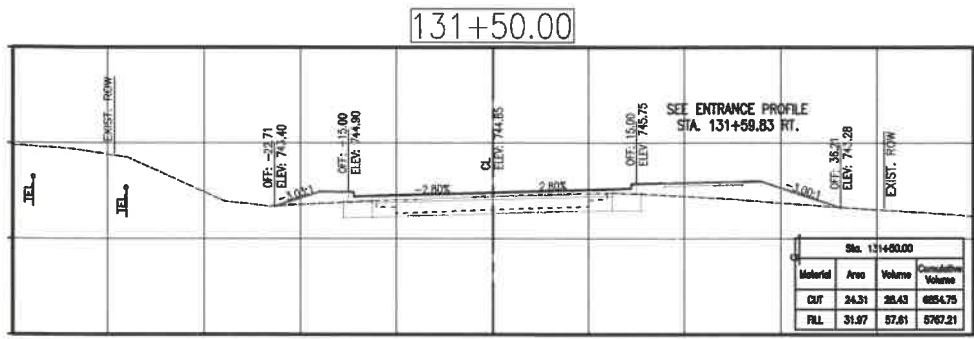
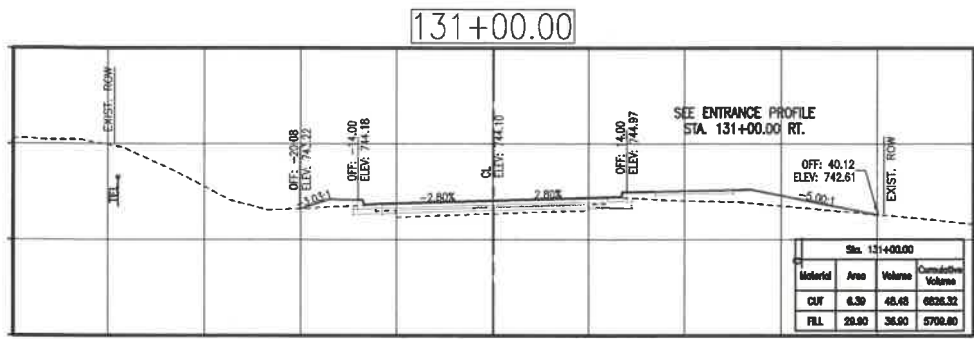
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SHEET TITLE
**BUS. 50 WEST
CROSS SECTIONS**

SHEET NUMBER

11

OF 20 SHEETS



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(573) 634-8888



2/12/21
Paul Samson, PE - Engineer
MO# PE-2002016700

**BUSINESS HIGHWAY 50 WEST
IMPROVEMENTS - PHASE 2
COLE COUNTY PUBLIC WORKS**

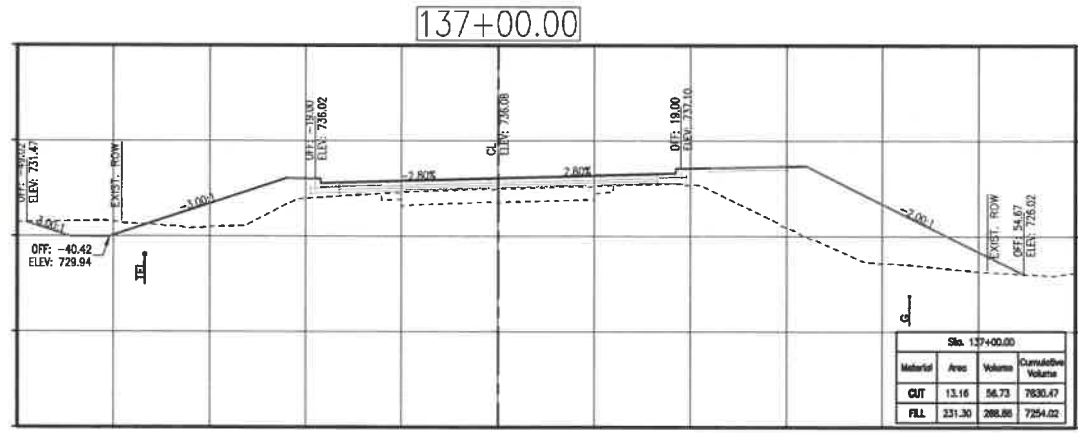
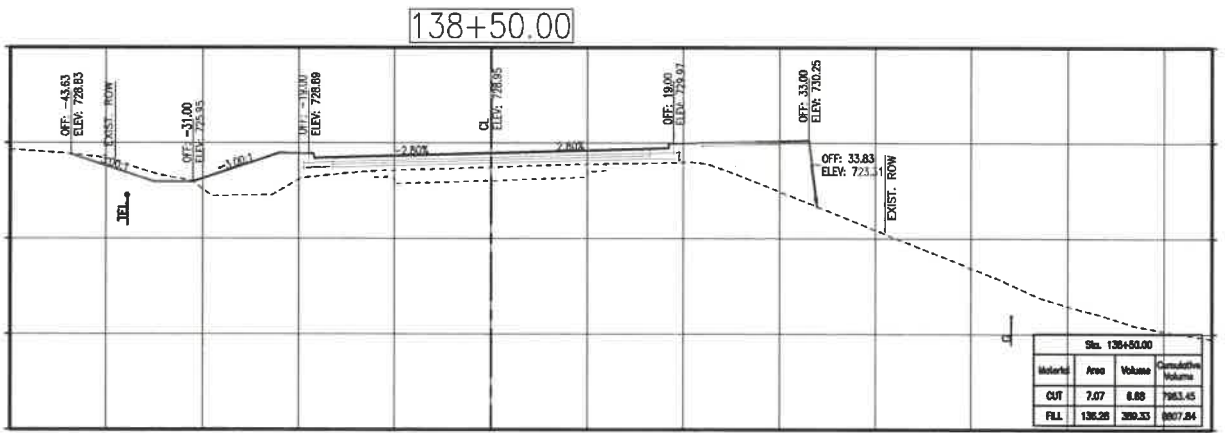
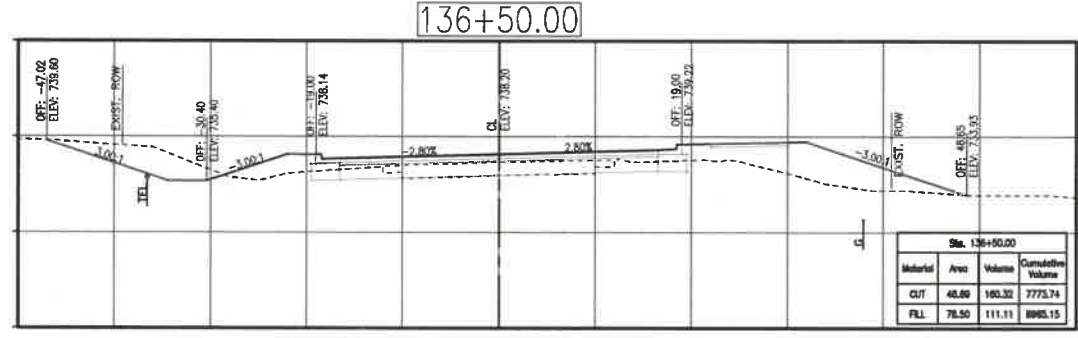
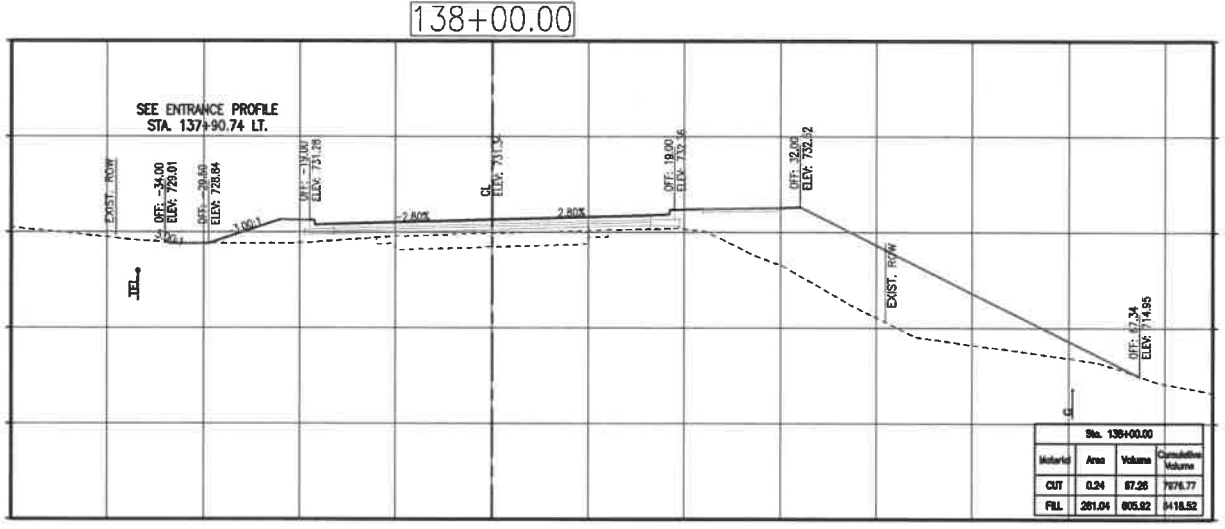
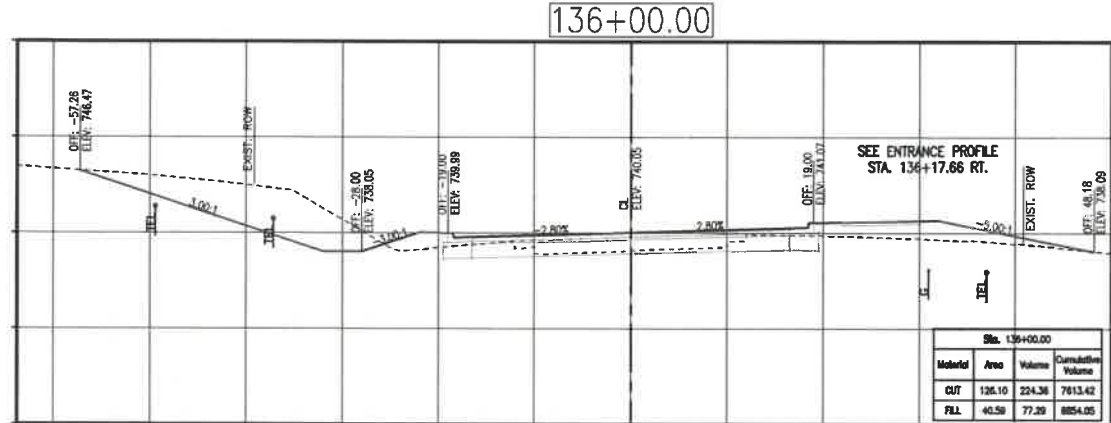
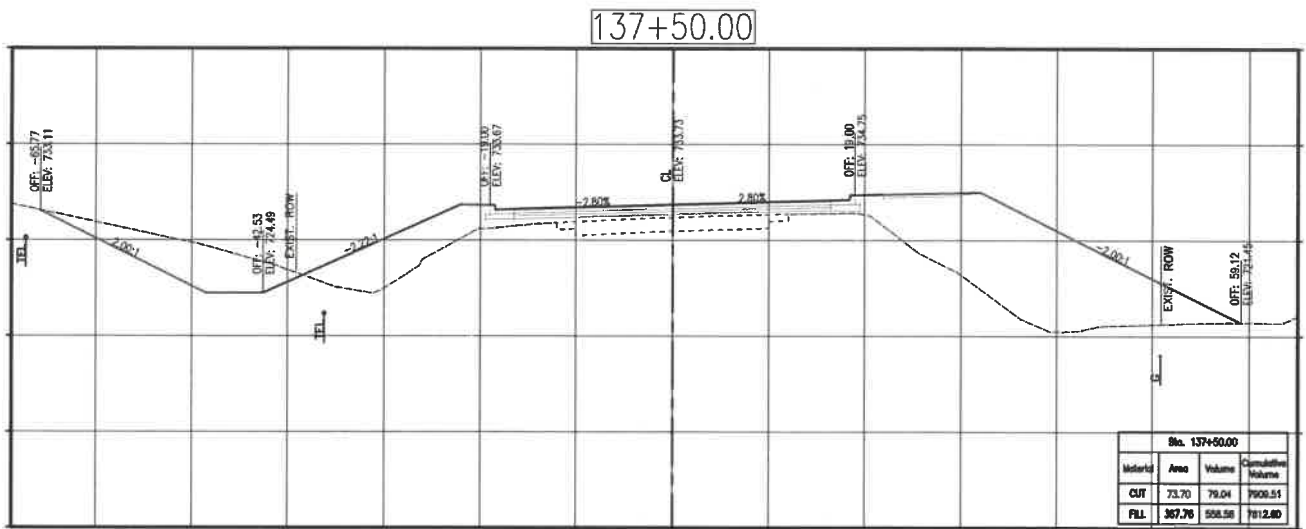
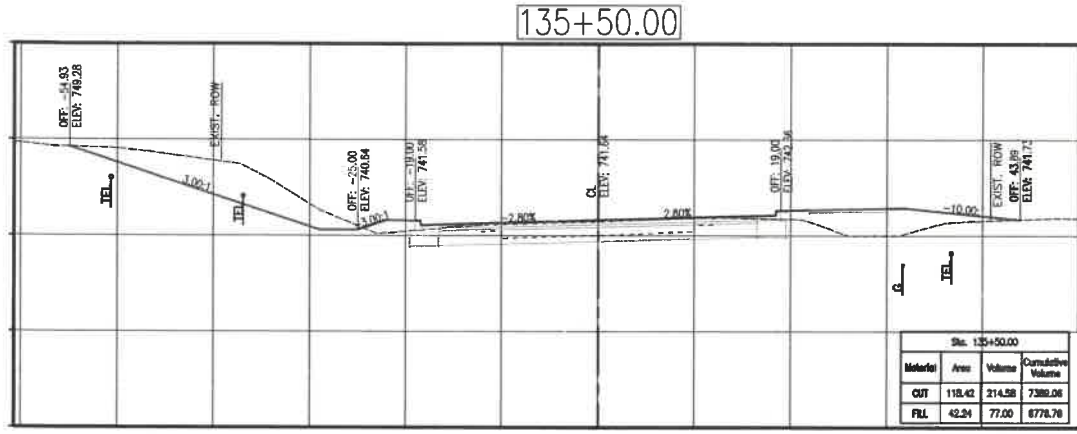
BUSINESS HIGHWAY 50 WEST
COLE COUNTY, MISSOURI

CMPS JOB No. 10-053
DRN. BY: P.L.S. CKD. BY: P.L.S.

SCALE: 1"=10'

SHEET TITLE
**BUS. 50 WEST
CROSS SECTIONS**

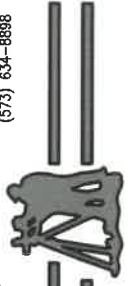
SHEET NUMBER
12
OF 20 SHEETS



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(573) 634-8888



Paul Samson, PE - Engineer
MO# PE-200216730

**BUSINESS HIGHWAY 50 WEST
IMPROVEMENTS - PHASE 2**

COLE COUNTY PUBLIC WORKS
BUSINESS HIGHWAY 50 WEST
COLE COUNTY, MISSOURI

CMPS JOB No. 10-053

DRN. BY: P.L.S. CKD. BY: P.L.S.

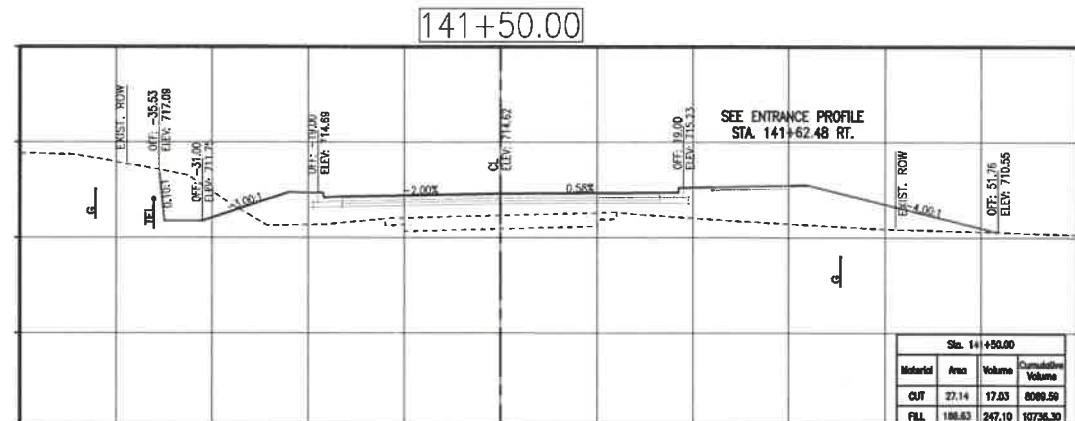
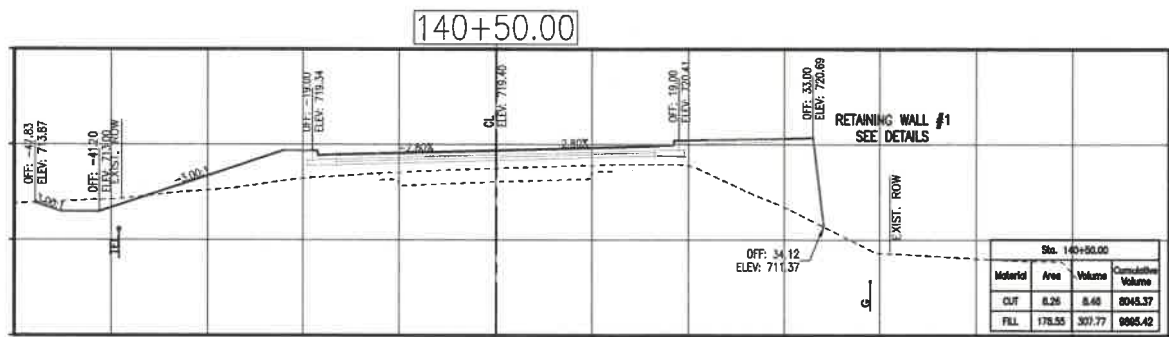
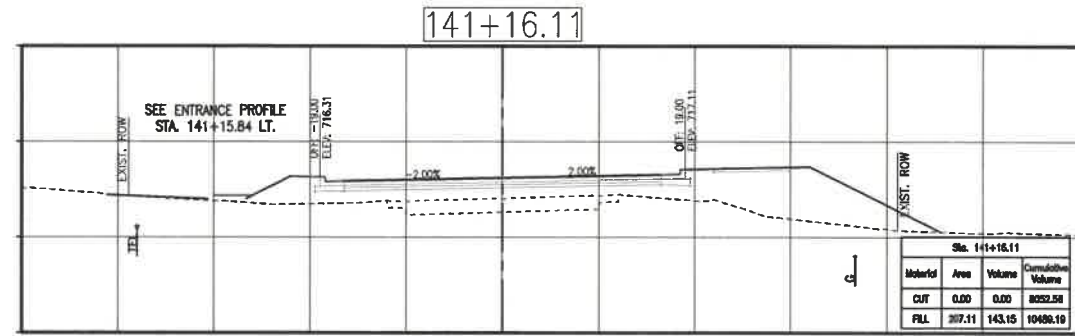
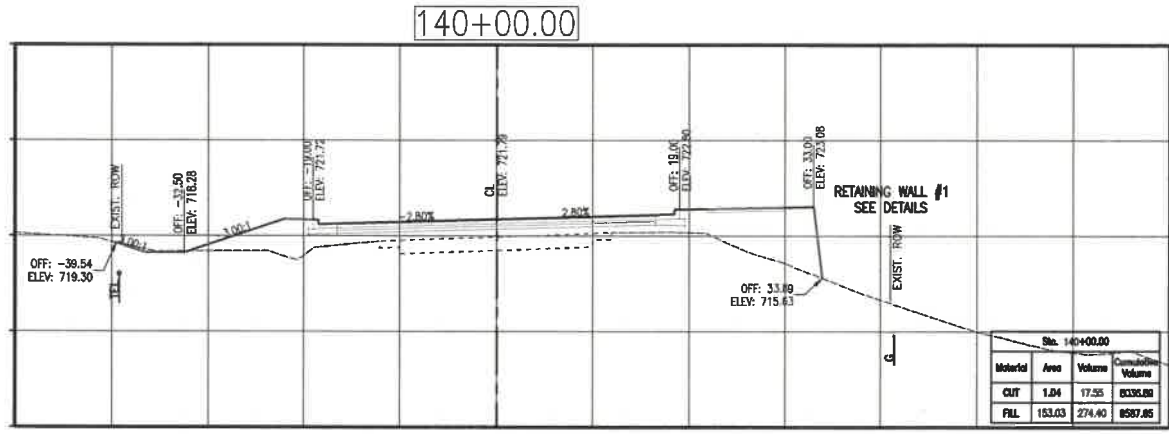
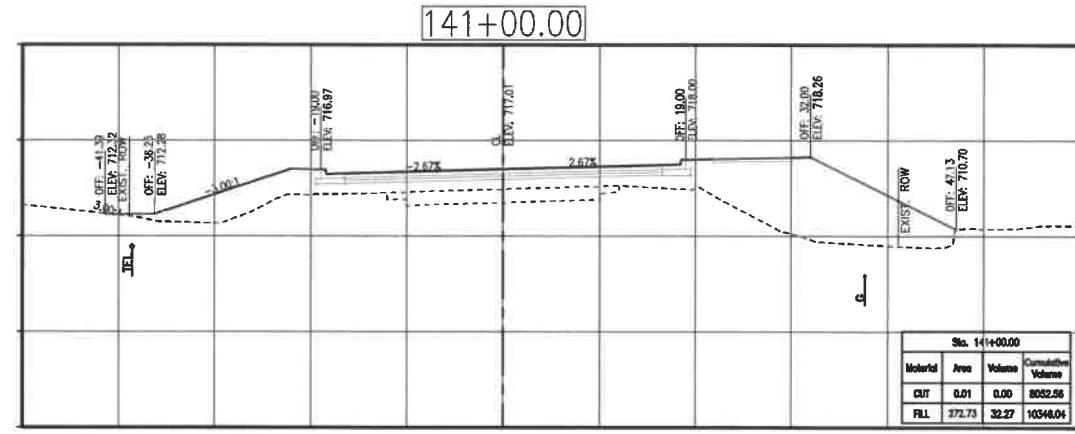
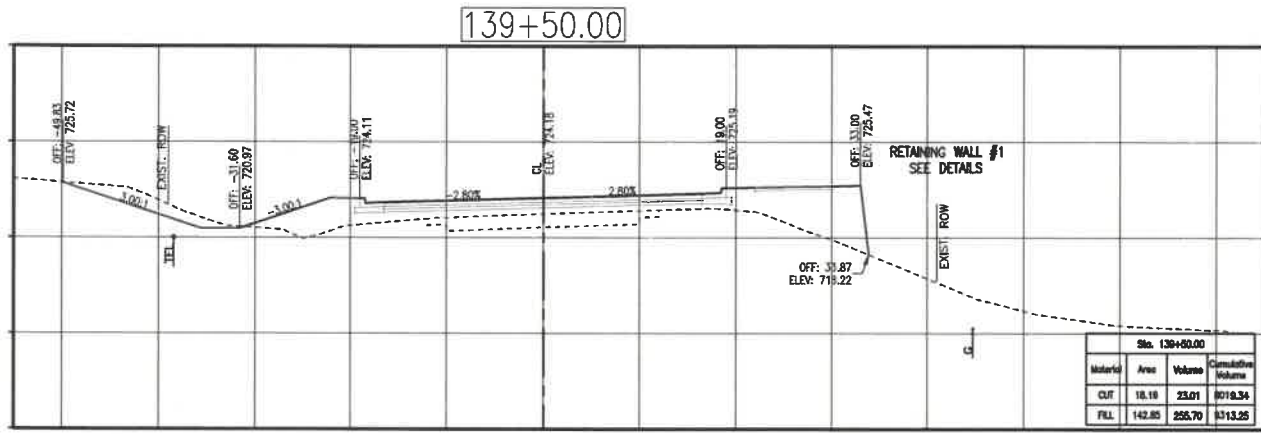
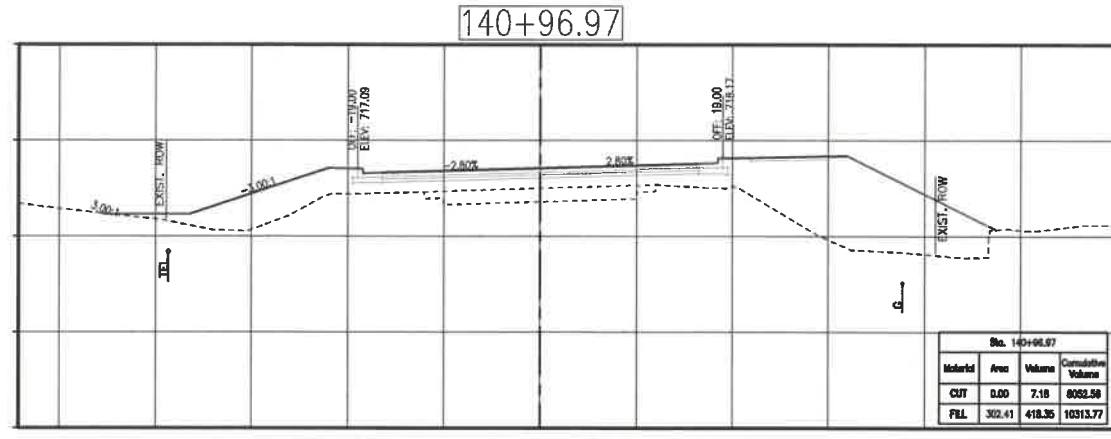
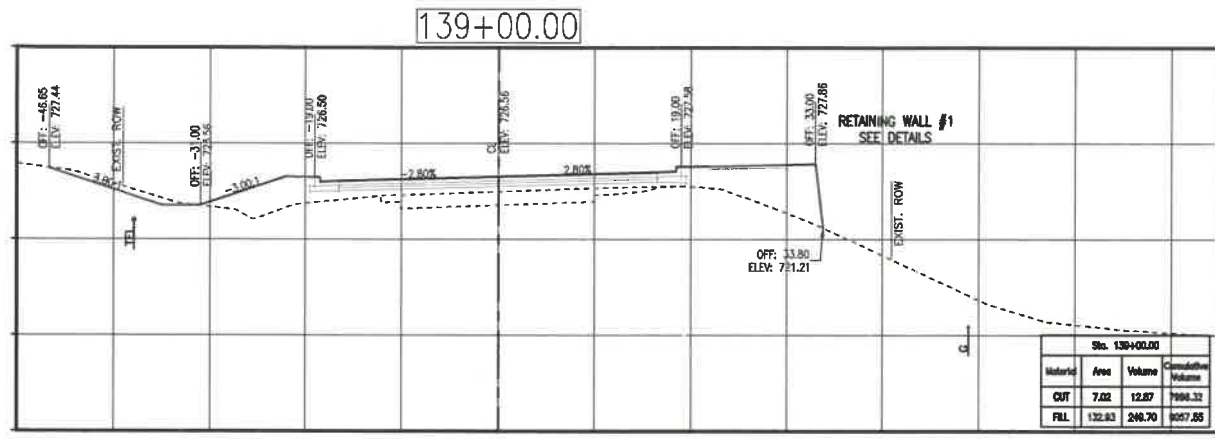
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SHEET TITLE
**BUS. 50 WEST
CROSS SECTIONS**

SHEET NUMBER

13

OF 20 SHEETS



PRINTS ISSUED
2/12/21

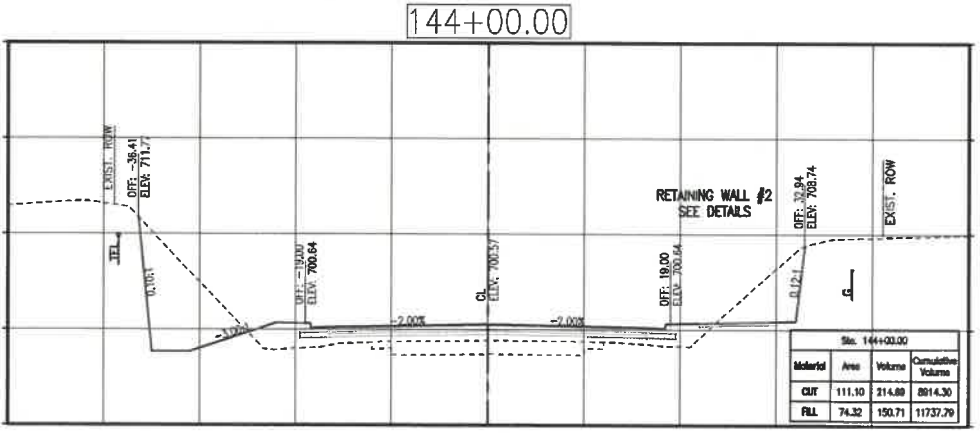
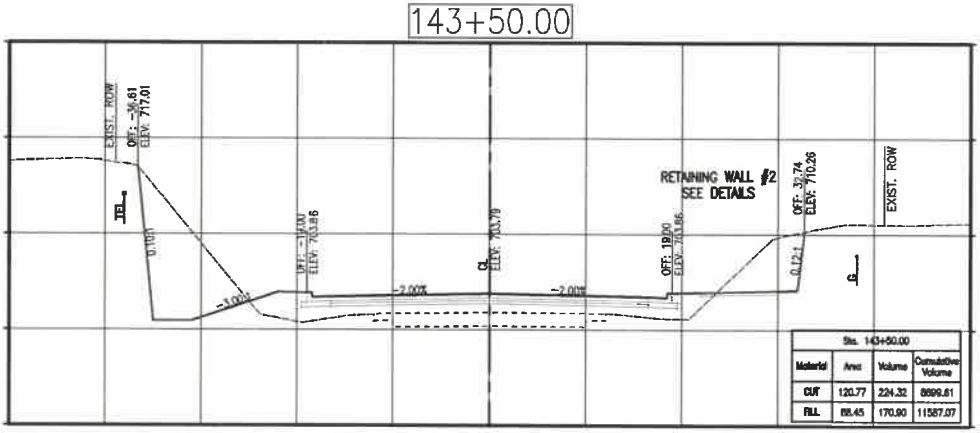
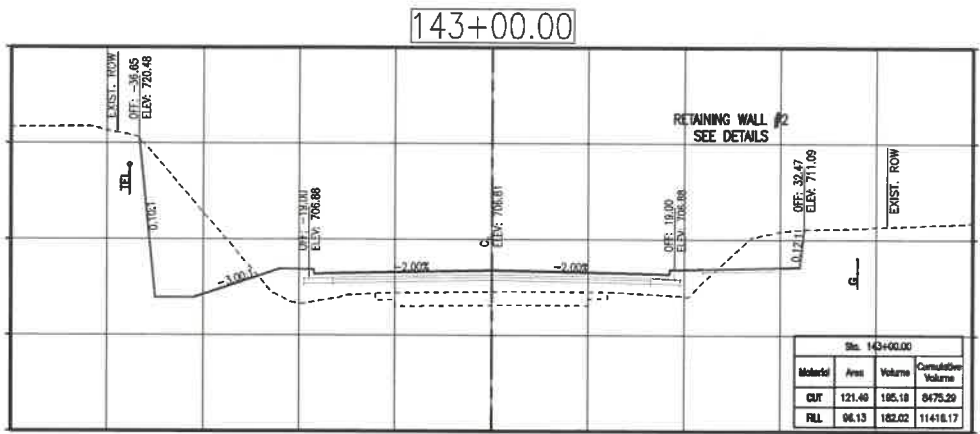
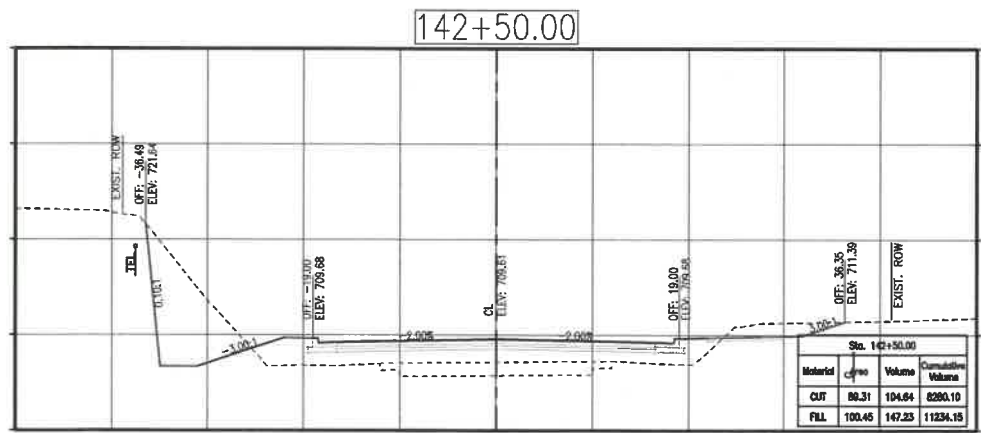
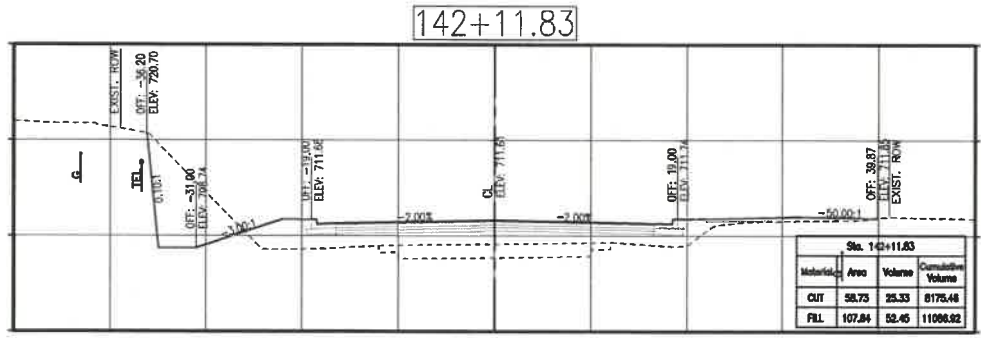
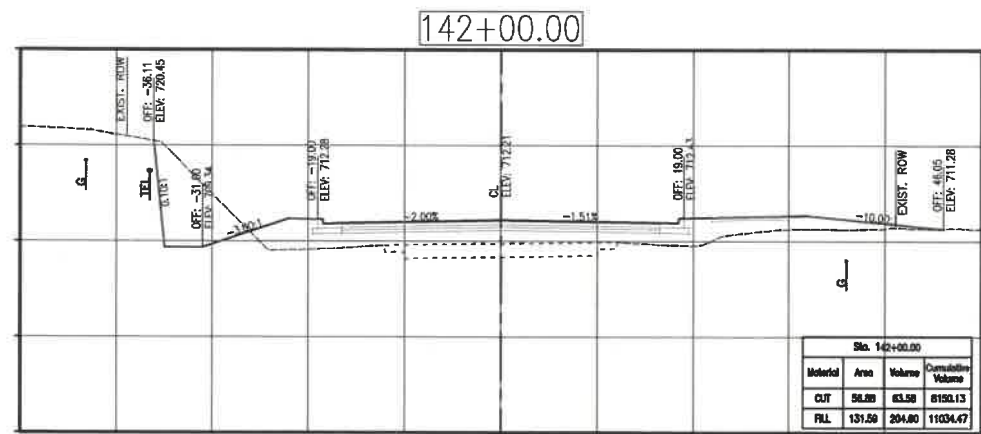
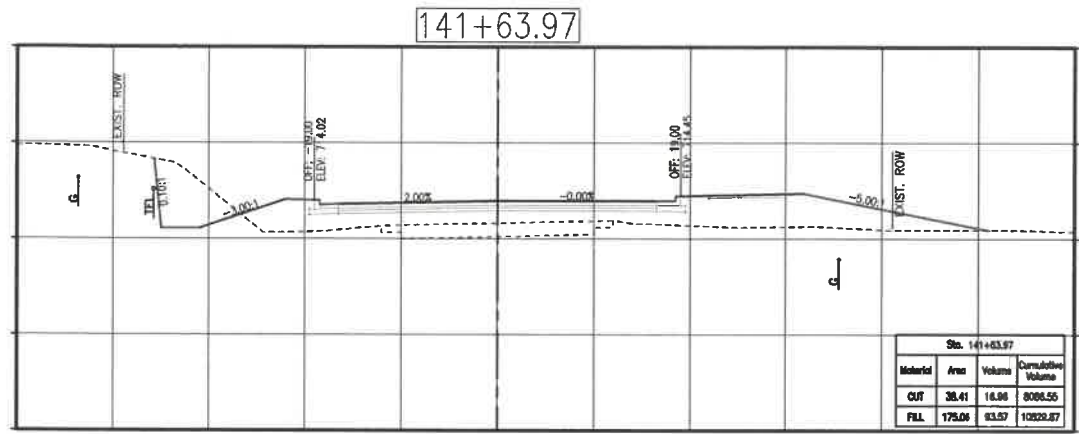
REVISIONS:

Central Missouri Professional Services, Inc.
ENGINEERING - SURVEYING - MATERIALS TESTING
2500 E. McCARTY
JEFFERSON CITY, MISSOURI 65101
(573) 634-3455
(573) 634-8888

Paul Samson, PE - Engineer
MO# PE-2002016730

**BUSINESS HIGHWAY 50 WEST
IMPROVEMENTS - PHASE 2**
COLE COUNTY PUBLIC WORKS
BUSINESS HIGHWAY 50 WEST
COLE COUNTY, MISSOURI

CMPS JOB No. 10-053
DRN. BY: P.L.S. CRD. BY: P.L.S.
SCALE: 1"=10'
SHEET TITLE
**BUS. 50 WEST
CROSS SECTIONS**
SHEET NUMBER
14
OF 20 SHEETS



PRINTS ISSUED
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Paul Samson, PE - Engineer
MO# PE-200218730

**BUSINESS HIGHWAY 50 WEST
IMPROVEMENTS - PHASE 2**

COLE COUNTY PUBLIC WORKS

BUSINESS HIGHWAY 50 WEST
COLE COUNTY, MISSOURI

CMPS JOB No. 10-053

DRN. BY: P.L.S. CRD. BY: P.L.S.

SCALE: 1"=10'

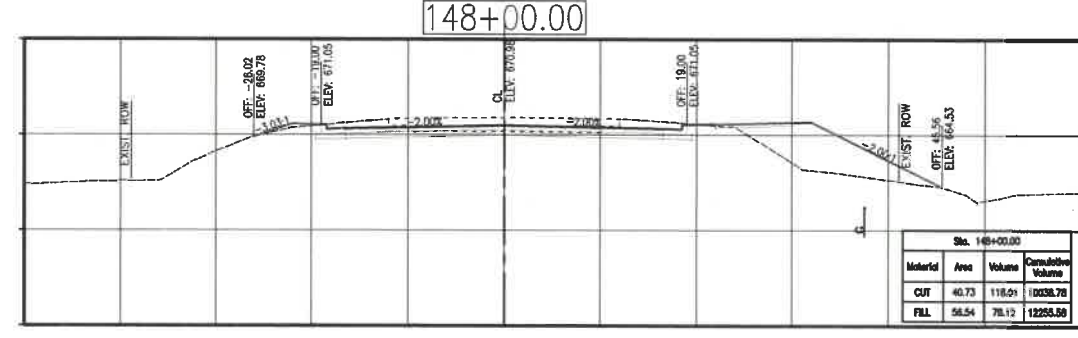
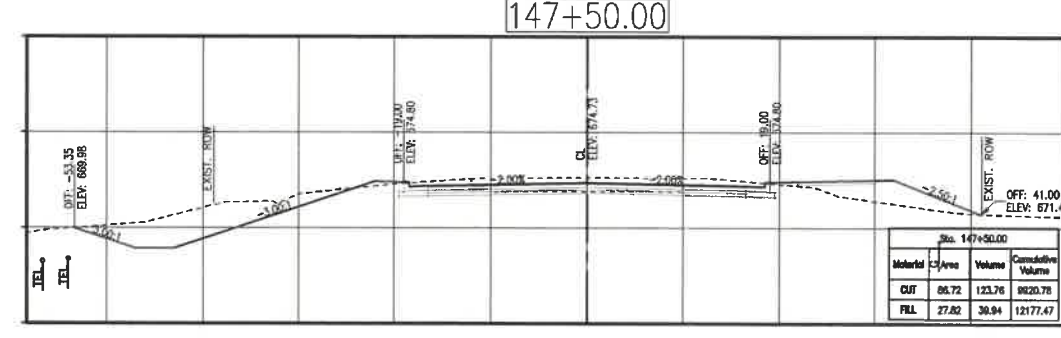
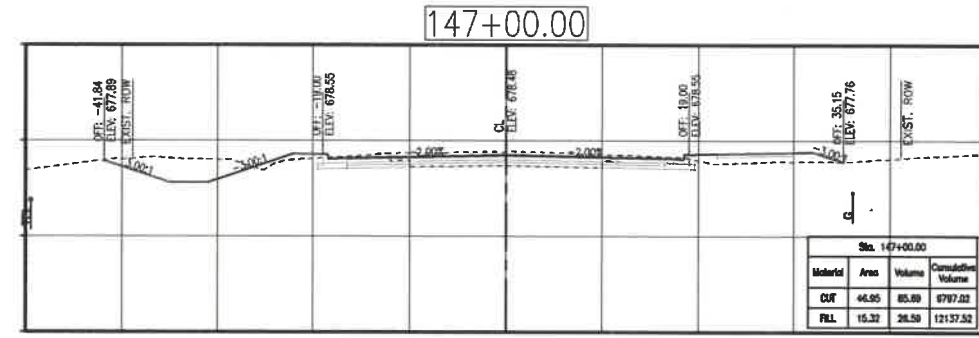
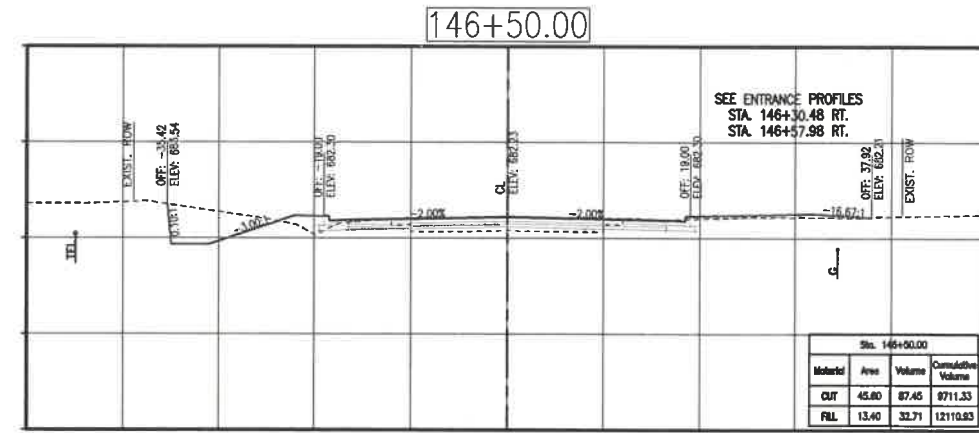
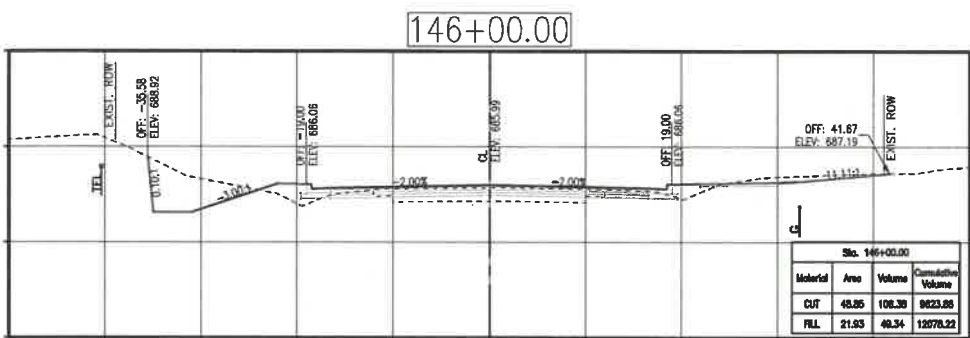
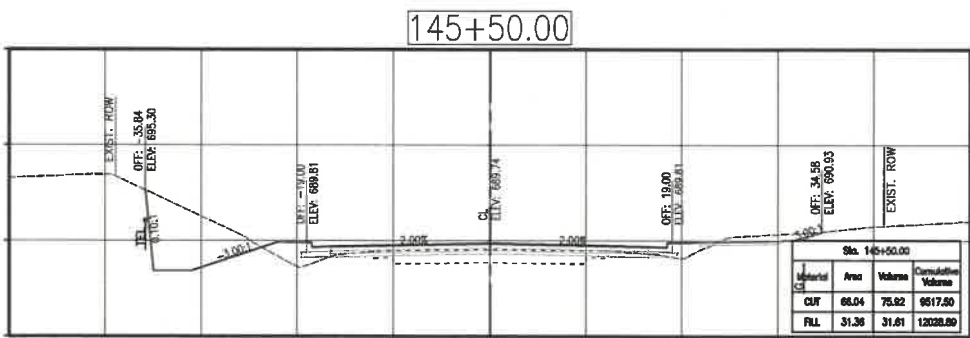
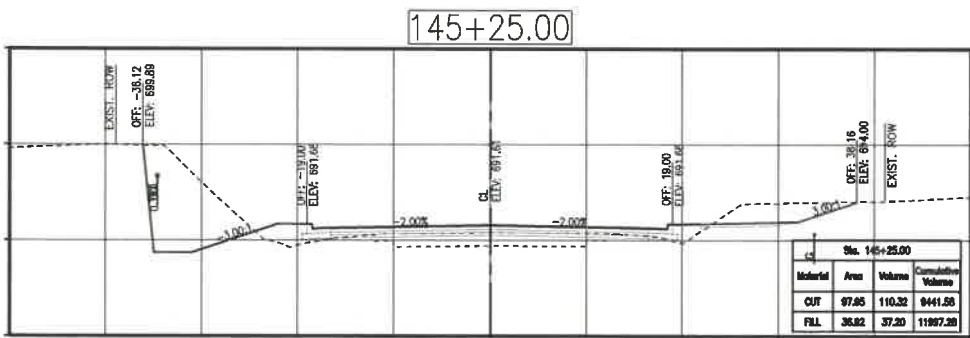
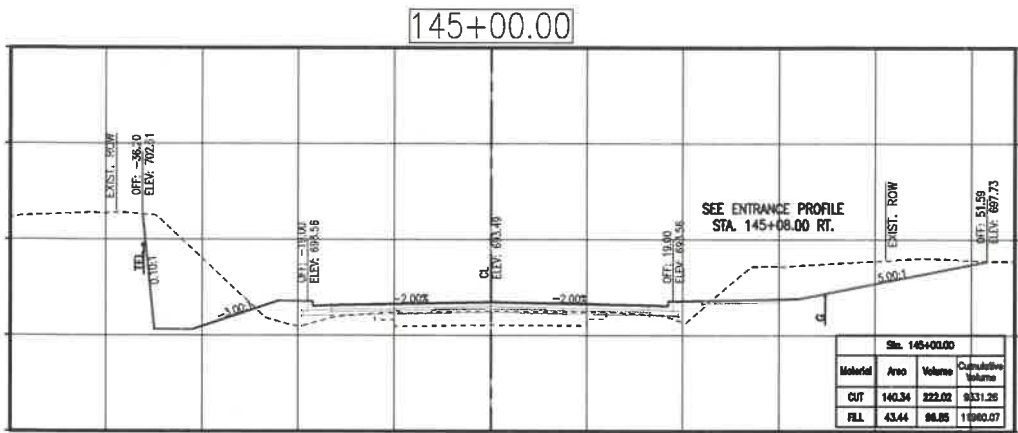
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**BUS. 50 WEST
CROSS SECTIONS**

SHEET NUMBER

15

OF 20 SHEETS

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PRINTS ISSUED
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(573) 634-8888

Paul Samson, PE - Engineer
MO# PE-2002016730

BUSINESS HIGHWAY 50 WEST IMPROVEMENTS - PHASE 2
COLE COUNTY PUBLIC WORKS
BUSINESS HIGHWAY 50 WEST
COLE COUNTY, MISSOURI

CMPS JOB No. 10-053

DRN. BY: P.L.S. CRD. BY: P.L.S.

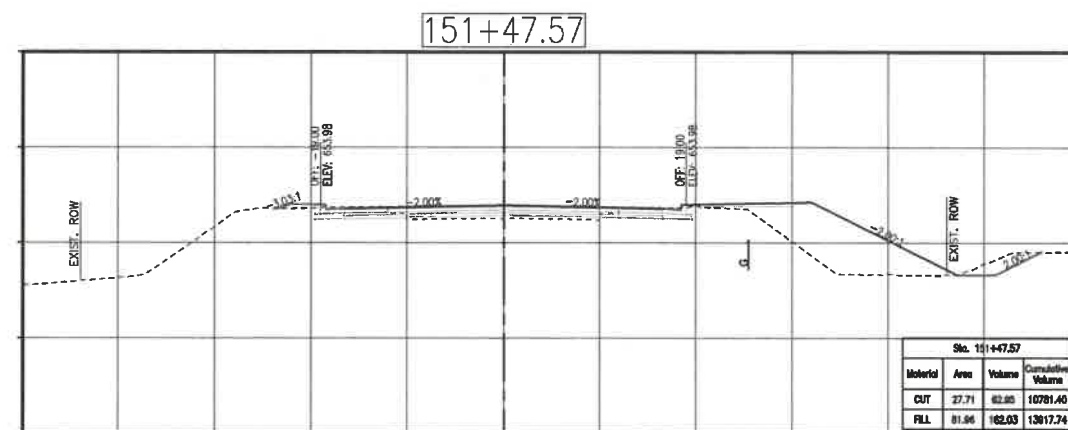
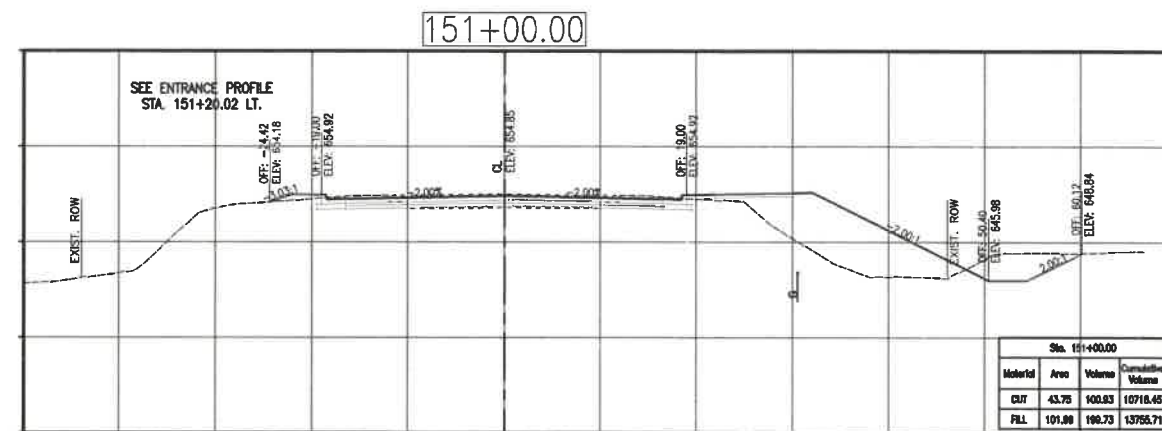
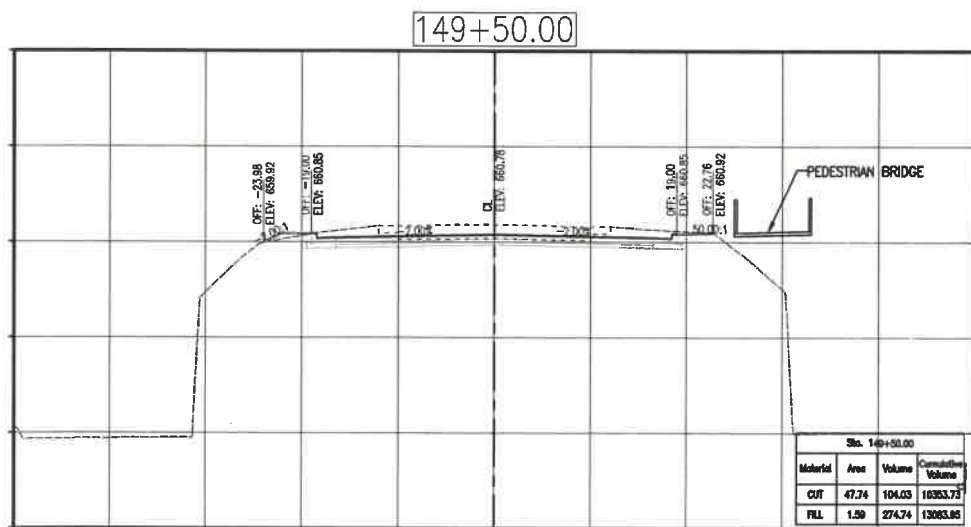
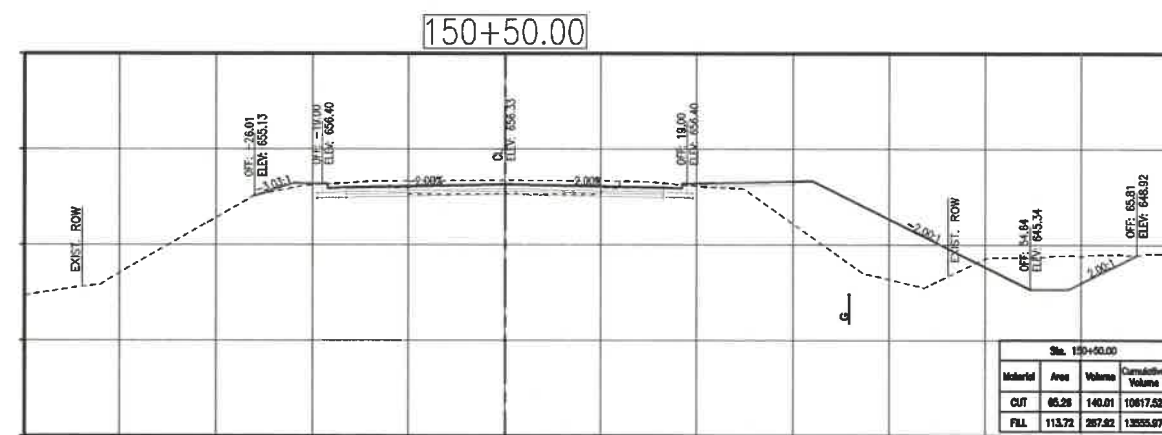
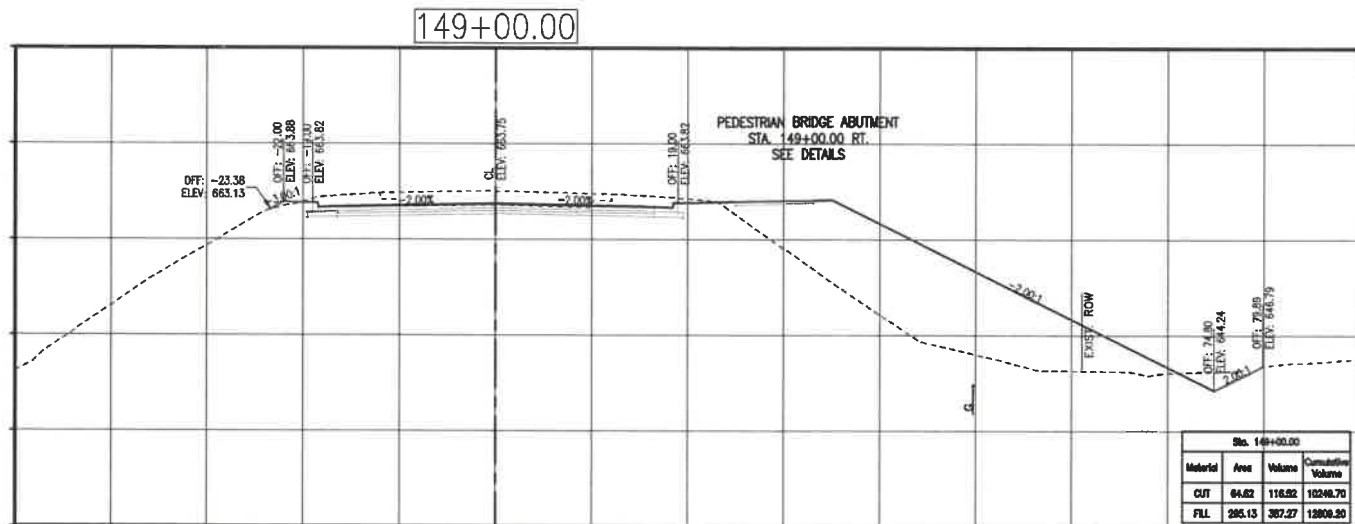
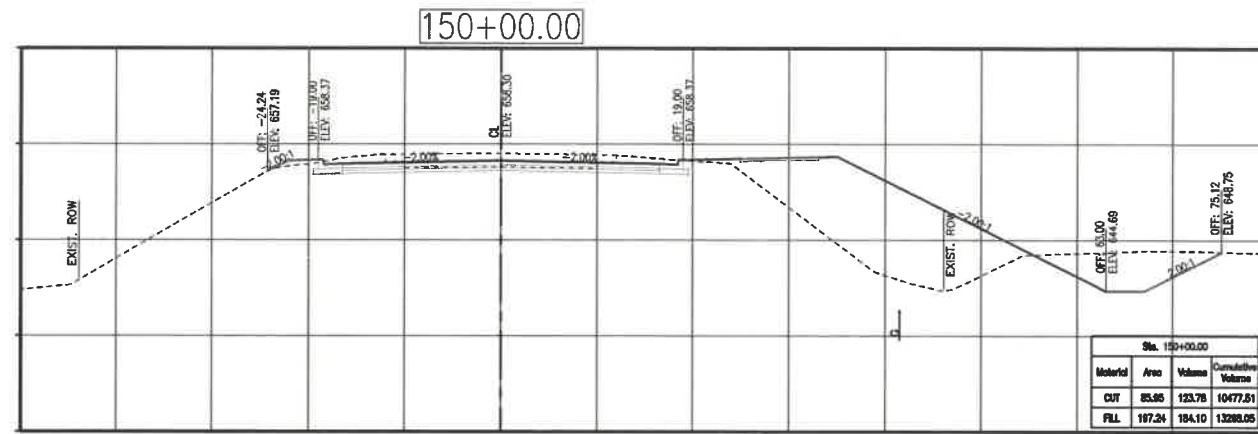
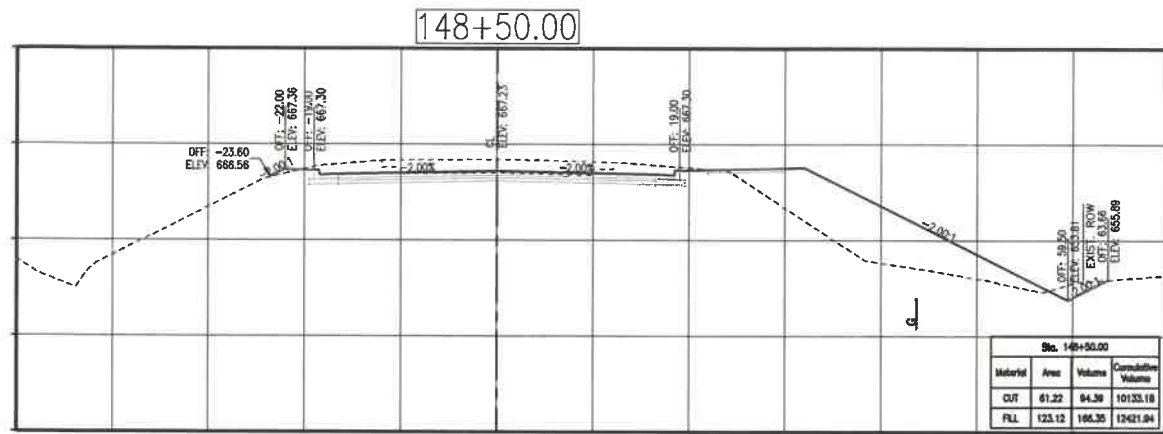
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SHEET TITLE
BUS. 50 WEST CROSS SECTIONS

SHEET NUMBER

16

OF 20 SHEETS



PRINTS ISSUED
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Central Missouri Professional Services, Inc.
Missouri State Certificate of Authority #001558



2/12/21
Paul Samson, PE - Engineer
MO# PE-2002016730

**BUSINESS HIGHWAY 50 WEST
IMPROVEMENTS - PHASE 2**
COLE COUNTY PUBLIC WORKS
BUSINESS HIGHWAY 50 WEST
COLE COUNTY, MISSOURI

CMPJ JOB No. 10-053

DRN. BY: P.L.S. CRD. BY: P.L.S.

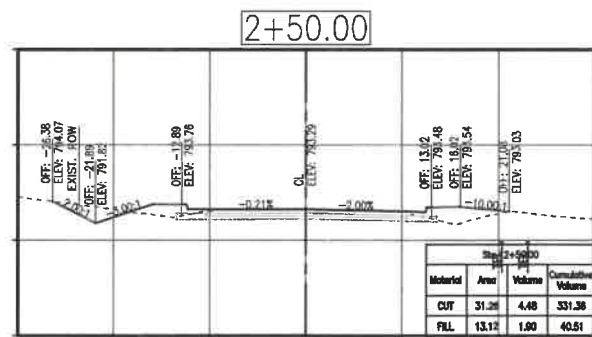
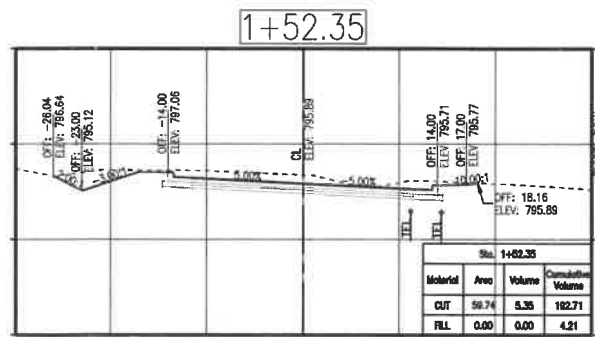
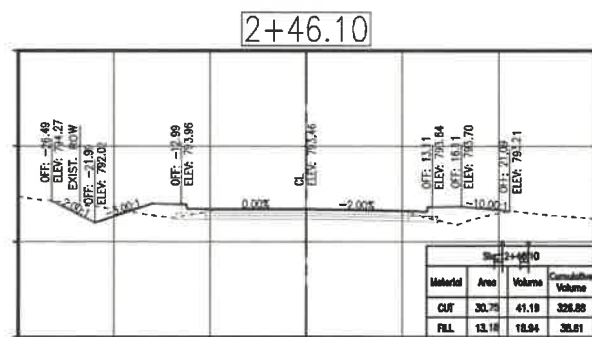
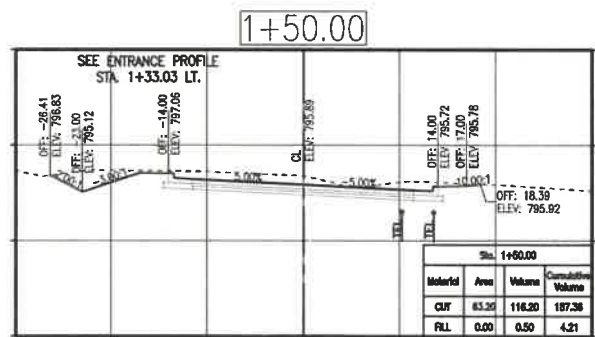
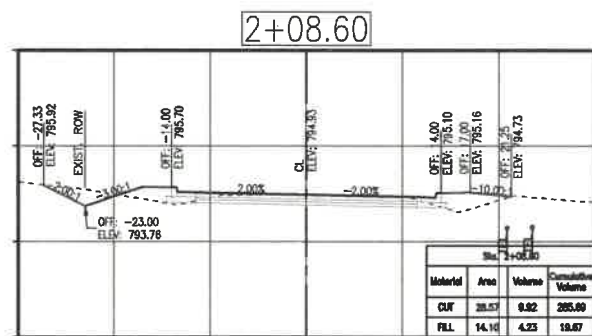
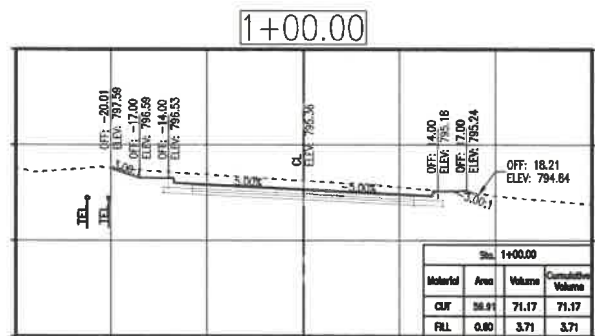
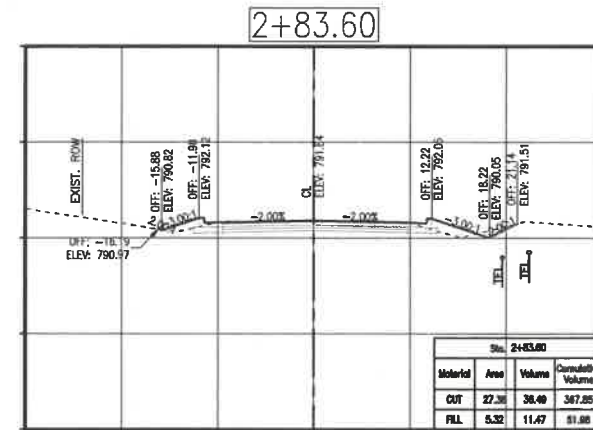
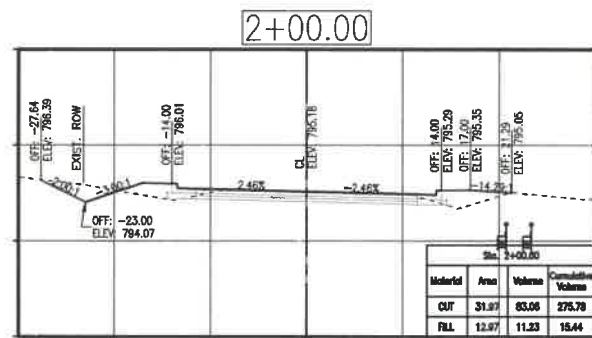
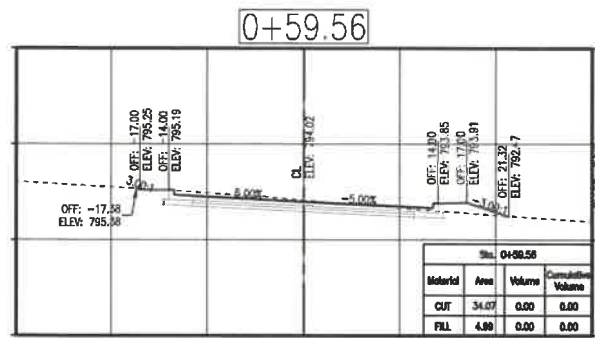
SCALE: 1"=10'

SHEET TITLE
**BUS. 50 WEST
CROSS SECTIONS**

SHEET NUMBER

17

OF 20 SHEETS



PRINTS ISSUED
2/12/21

REVISIONS:

Central Missouri Professional Services, Inc.
ENGINEERING - SURVEYING - MATERIALS TESTING
2500 E. MCCARTY
JEFFERSON CITY, MISSOURI 65101
(573) 634-3455
(573) 634-8898



Central Missouri Professional Services, Inc.
Missouri State Certificate of Authority #001598



Paul Samson, PE - Engineer
MO# PE-2002016730

**BUSINESS HIGHWAY 50 WEST
IMPROVEMENTS - PHASE 2**

COLE COUNTY PUBLIC WORKS

BUSINESS HIGHWAY 50 WEST
COLE COUNTY, MISSOURI

CMPJ JOB No. 10-053

DRN. BY: P.L.S. | CRD. BY: P.L.S.

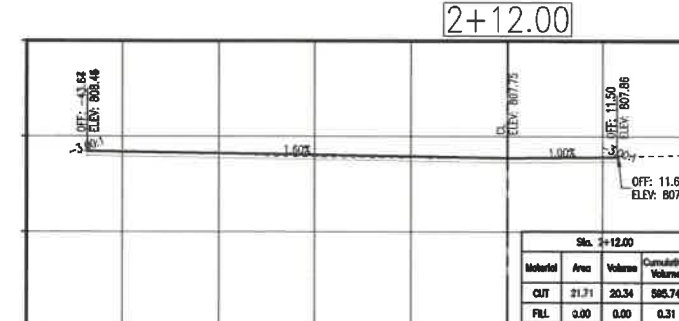
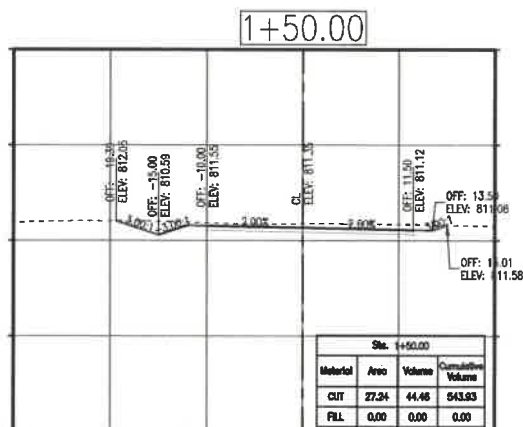
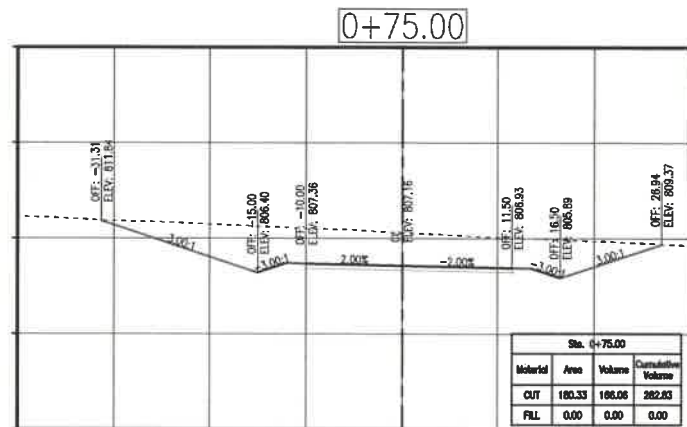
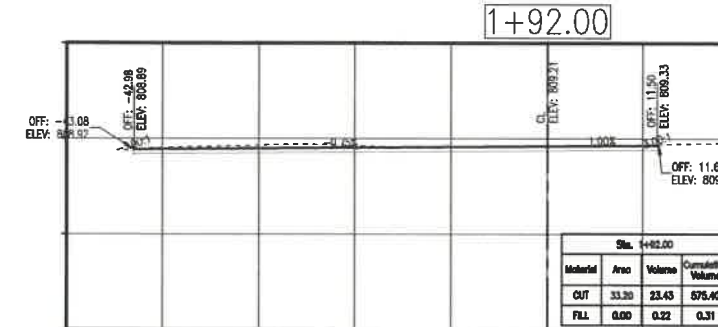
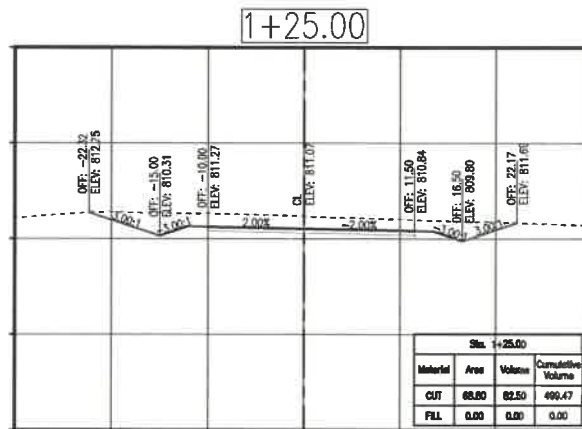
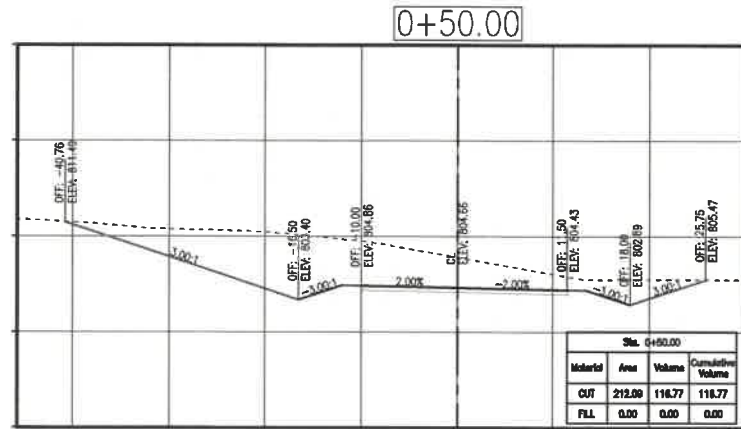
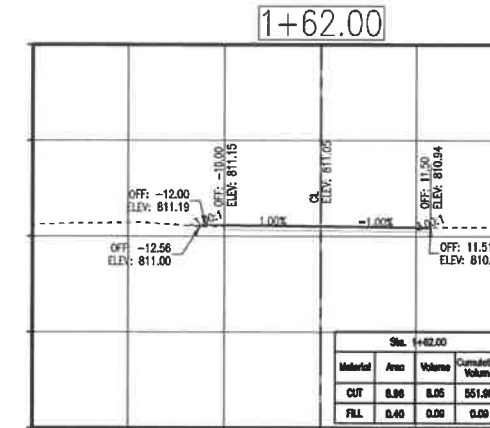
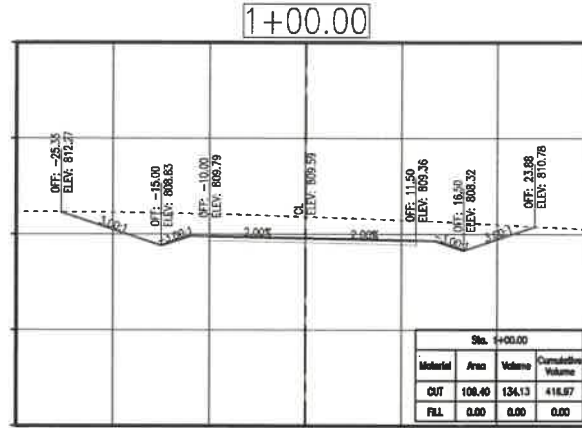
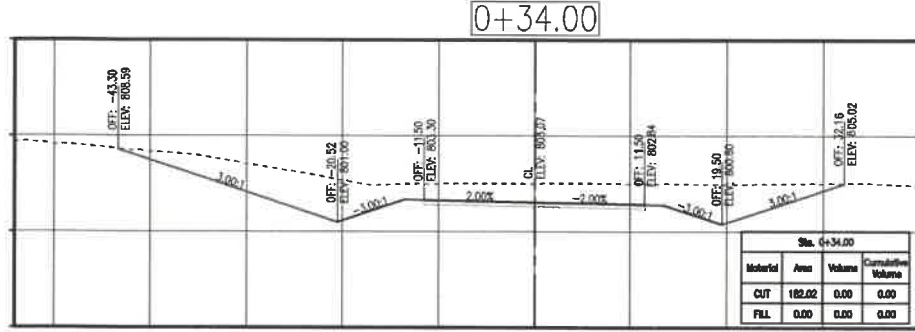
SCALE: 1" = 10'

SHEET TITLE
**RAINBOW DRIVE
CROSS SECTIONS**

SHEET NUMBER

18


OF 20 SHEETS



PRINTS ISSUED
2/12/21

REVISIONS:

Central Missouri Professional Services, Inc.
ENGINEERING - SURVEYING - MATERIALS TESTING
2500 E. McCARTY
JEFFERSON CITY, MISSOURI 65101
(573) 634-3455
(573) 634-8898



Paul Samson, PE - Engineer
MO# PE-2002016730

BUSINESS HIGHWAY 50 WEST IMPROVEMENTS - PHASE 2
COLE COUNTY PUBLIC WORKS
BUSINESS HIGHWAY 50 WEST
COLE COUNTY, MISSOURI

CMPS JOB No. 10-053

DRN. BY: P.L.S. CKD. BY: P.L.S.

SCALE: 1"=10'

SHEET TITLE
ENTR. 103+50.00
CROSS SECTIONS

SHEET NUMBER
19
OF 20 SHEETS

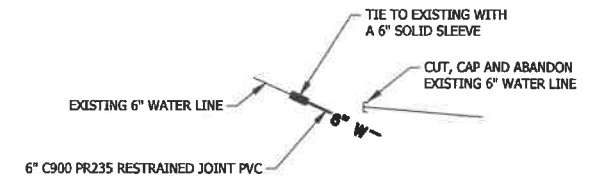
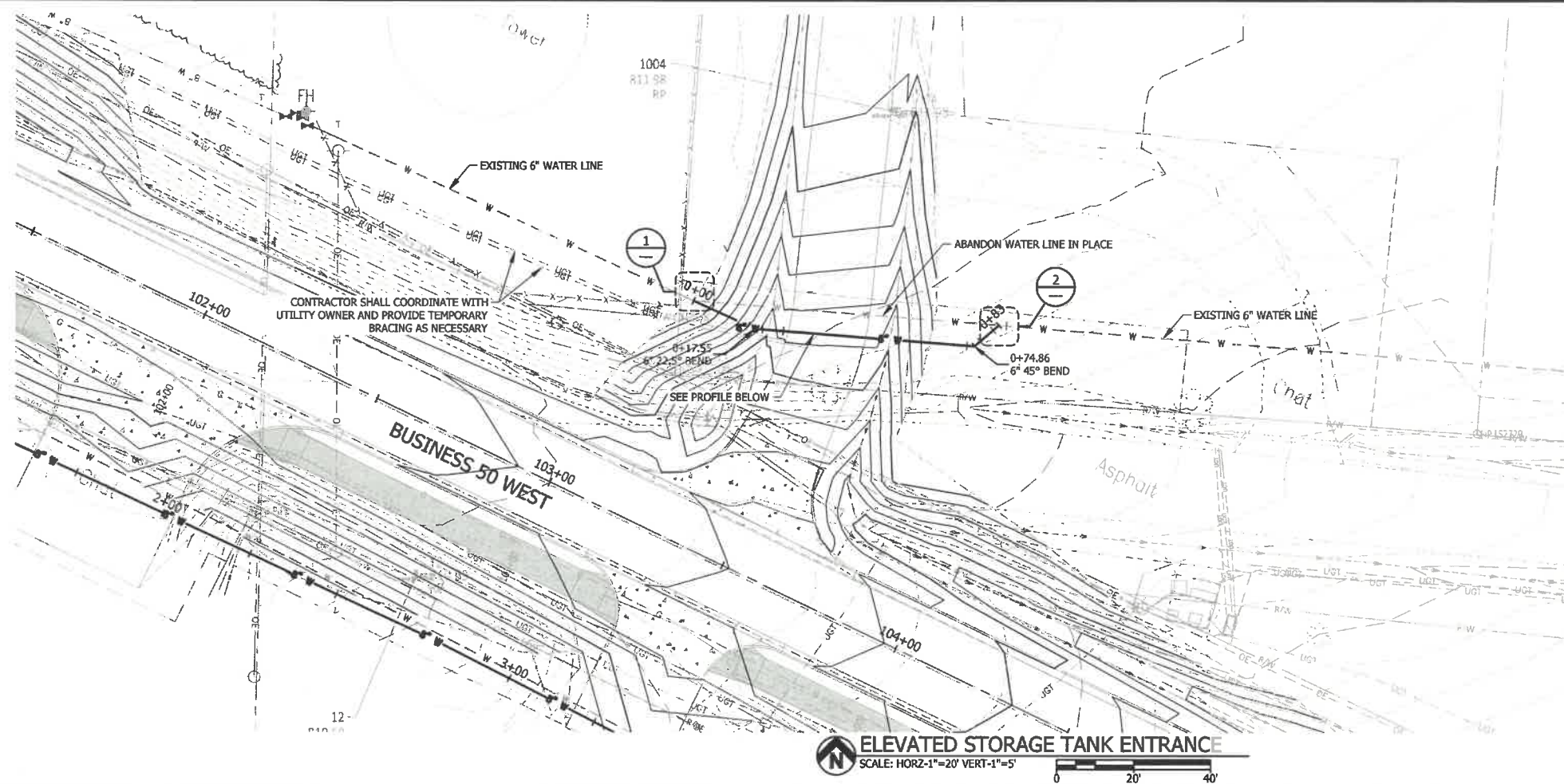
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BUS. 50 WEST Total Volume Table						
Station	Fill Area	Cut Area	Fill Volume	Cut Volume	Cumulative Fill Vol	Cumulative Cut Vol
89+75.00	0.00	0.00	0.00	0.00	0.00	0.00
90+00.00	13.26	35.65	6.14	16.50	6.14	16.50
90+50.00	12.93	34.51	24.25	64.96	30.39	81.46
91+00.00	11.05	35.33	22.21	64.67	52.60	146.13
91+50.00	18.76	36.62	27.60	66.62	80.20	212.75
92+00.00	8.27	37.50	25.03	68.63	105.23	281.37
92+50.00	11.31	37.49	18.13	69.44	123.37	350.81
93+00.00	7.71	38.96	17.61	70.79	140.98	421.60
93+50.00	5.85	43.90	12.55	76.72	153.53	498.32
94+00.00	3.40	35.50	8.56	73.52	162.09	571.84
94+50.00	14.37	14.37	16.45	46.18	178.55	618.02
95+00.00	49.78	2.11	58.39	15.26	237.94	633.27
95+50.00	43.47	27.23	86.34	27.17	324.28	660.44
96+00.00	28.06	11.07	66.22	35.47	390.50	695.91
96+50.00	21.60	13.61	45.98	22.85	436.48	718.76
97+00.00	28.87	10.12	46.73	21.97	483.22	740.73
97+50.00	32.92	7.17	57.22	16.00	540.43	756.73
98+00.00	40.76	8.35	68.22	14.37	608.65	771.10
98+50.00	30.37	6.59	65.86	13.84	674.51	784.94
99+00.00	7.78	18.73	35.32	23.45	709.84	808.39
99+50.00	1.29	89.97	8.39	100.65	718.23	909.04
100+00.00	0.45	130.20	1.61	203.86	719.85	1112.90
100+50.00	0.00	168.35	0.42	276.43	720.27	1389.33
101+00.00	0.00	235.19	0.00	373.64	720.27	1762.97
101+50.00	0.00	248.29	0.00	447.66	720.27	2210.63
102+00.00	0.00	167.55	0.00	385.03	720.27	2595.67
102+50.00	0.00	227.24	0.00	365.55	720.27	2961.21
103+00.00	0.00	166.03	0.00	364.14	720.27	3325.35
103+50.00	0.00	210.98	0.00	349.08	720.27	3674.43
104+00.00	0.00	151.69	0.00	335.81	720.27	4010.24
104+50.00	3.75	74.16	3.47	209.12	723.74	4219.36
105+00.00	27.02	41.74	28.49	107.31	752.23	4326.67
105+50.00	72.95	9.70	92.56	47.62	844.79	4374.29
106+00.00	149.32	1.43	205.81	10.30	1050.61	4384.59
106+50.00	193.34	9.27	317.29	9.91	1367.89	4394.50
107+00.00	139.31	7.21	308.01	15.26	1675.90	4409.76
107+50.00	118.45	19.21	238.67	24.46	1914.57	4434.22
108+00.00	57.63	29.74	163.04	45.32	2077.61	4479.54
108+50.00	39.50	37.81	89.94	62.55	2167.55	4542.09
109+00.00	33.39	39.84	67.49	71.90	2235.05	4613.99
109+50.00	31.76	46.60	60.32	80.04	2295.37	4694.02
110+00.00	6.91	51.22	35.80	90.57	2331.17	4784.59
110+50.00	6.89	50.95	12.77	94.60	2343.94	4879.20
111+00.00	3.50	43.92	9.62	87.84	2353.56	4967.04
111+50.00	38.54	11.89	38.93	51.68	2392.49	5018.71
112+00.00	39.55	12.06	72.31	22.18	2464.80	5040.89
112+50.00	48.93	10.78	81.93	21.15	2546.72	5062.04
113+00.00	51.72	12.98	93.20	21.99	2639.92	5084.04
113+50.00	127.55	35.97	166.00	45.32	2805.92	5129.35
114+00.00	54.69	21.27	168.74	53.00	2974.66	5182.35
114+50.00	60.90	10.75	107.02	29.84	3081.69	5211.99
115+00.00	58.55	16.76	110.60	25.47	3192.29	5237.46
115+50.00	68.06	7.62	118.16	22.58	3310.44	5260.04
116+00.00	30.47	8.84	92.16	15.24	3402.60	5275.28
116+50.00	8.35	40.39	35.94	45.58	3438.54	5320.86
117+00.00	13.84	38.19	20.55	70.91	3459.09	5391.77
117+50.00	13.56	34.93	25.38	65.86	3484.47	5457.63
118+00.00	17.31	34.28	28.59	64.08	3513.06	5521.71
118+50.00	27.06	35.98	41.08	65.06	3554.14	5586.77
119+00.00	48.38	8.25	68.85	40.95	3623.99	5627.72

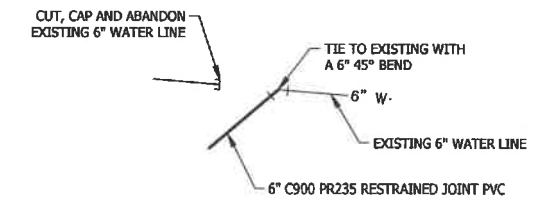
BUS. 50 WEST Total Volume Table						
Station	Fill Area	Cut Area	Fill Volume	Cut Volume	Cumulative Fill Vol	Cumulative Cut Vol
119+50.00	60.53	7.75	100.85	14.81	3724.84	5642.53
120+00.00	63.39	8.00	114.74	14.59	3839.58	5657.12
120+50.00	108.09	16.45	158.78	22.64	3998.35	5679.76
121+00.00	40.09	28.17	137.21	41.32	4135.56	5721.08
121+50.00	38.07	36.54	72.37	59.92	4207.93	5781.00
122+00.00	25.12	35.96	58.51	67.13	4266.44	5848.13
122+50.00	24.69	36.79	46.12	67.36	4312.56	5915.49
123+00.00	42.98	36.37	62.65	67.74	4375.22	5983.23
123+50.00	56.11	35.37	91.74	66.42	4466.96	6049.65
124+00.00	30.55	35.84	80.24	65.93	4547.19	6115.58
124+50.00	23.41	35.74	49.96	66.28	4597.15	6181.86
125+00.00	22.67	35.46	42.67	65.92	4639.82	6247.79
125+50.00	19.35	34.79	38.91	65.05	4678.73	6312.84
126+00.00	19.23	35.67	35.72	65.24	4714.45	6378.08
126+50.00	20.79	35.90	37.06	66.27	4751.51	6444.35
127+00.00	32.42	34.83	49.27	65.49	4800.78	6509.84
127+50.00	67.13	5.03	92.17	36.91	4892.96	6546.75
128+00.00	99.02	4.18	153.84	8.53	5046.80	6555.28
128+24.32	147.59	20.78	111.07	11.24	5157.86	6566.52
128+50.00	117.53	9.30	126.08	14.31	5283.95	6580.83
128+72.17	100.92	3.94	89.69	5.44	5373.64	6586.26
129+00.00	93.78	5.19	100.35	4.71	5473.98	6590.97
129+20.03	81.79	6.10	65.12	4.19	5539.11	6595.16
129+39.17	51.81	7.64	47.35	4.87	5586.46	6600.03
129+50.00	38.47	40.02	17.70	9.56	5604.16	6609.58
130+00.00	13.60	47.85	46.77	81.37	5650.93	6690.96
130+50.00	9.73	45.97	21.76	86.88	5672.70	6777.84
131+00.00	29.90	6.39	36.90	48.48	5709.60	6826.32
131+50.00	31.97	24.31	57.61	28.43	5767.21	6854.75
132+00.00	54.95	19.34	81.02	40.43	5848.23	6895.18
132+50.00	83.95	22.93	129.66	39.14	5977.89	6934.32
133+00.00	130.60	4.54	200.37	25.44	6178.26	6959.76
133+50.00	128.60	19.21	242.10	21.91	6420.36	6981.68
134+00.00	42.47	19.56	159.76	35.76	6580.12	7017.44
134+50.00	22.80	17.92	60.85	34.65	6640.96	7052.08
135+00.00	40.18	115.03	58.80	122.40	6699.76	7174.48
135+50.00	42.24	118.42	77.00	214.58	6776.76	7389.06
136+00.00	40.59	126.10	77.29	224.36	6854.05	7613.42
136+50.00	78.50	48.69	111.11	160.32	6965.15	7773.74
137+00.00	231.30	13.16	288.86	56.73	7254.02	7830.47
137+50.00	367.76	73.70	558.58	79.04	7812.60	7909.51
138+00.00	281.04	0.24	605.92	67.26	8418.52	7976.77
138+50.00	136.28	7.07	389.33	6.68	8807.84	7983.45
139+00.00	132.93	7.02	249.70	12.87	9057.55	7996.32
139+50.00	142.65	18.19	255.70	23.01	9313.25	8019.34
140+00.00	153.03	1.04	274.40	17.55	9587.65	8036.89
140+50.00	178.55	8.26	307.77	8.48	9895.42	8045.37
140+96.97	302.41	0.00	418.35	7.18	10313.77	8052.56
141+00.00	272.73	0.01	32.27	0.00	10346.04	8052.56
141+16.11	207.11	0.00	143.15	0.00	10489.19	8052.56
141+50.00	186.63	27.14	247.10	17.03	10736.30	8069.59
141+63.97	175.06	38.41	93.57	16.96	10829.87	8086.55
142+00.00	131.59	56.88	204.60	63.58	11034.47	8150.13
142+11.83	107.84	58.73	52.45	25.33	11086.92	8175.46
142+50.00	100.45	89.31	147.23	104.64	11234.15	8280.10
143+00.00	96.13	121.49	182.02	195.19	11416.17	8475.29
143+50.00	88.45	120.77	170.90	224.32	11587.07	8699.61
144+00.00	74.32	111.10	150.71	214.69	11737.79	8914.30
144+50.00	61.15	99.44	125.44	194.94	11863.23	9109.24
145+00.00	43.44	140.34	96.85	222.02	11960.07	9331.26

BUS. 50 WEST Total Volume Table						
Station	Fill Area	Cut Area	Fill Volume	Cut Volume	Cumulative Fill Vol	Cumulative Cut Vol
145+25.00	36.92	97.95	37.20	110.32	11997.28	9441.58
145+50.00	31.36	66.04	31.61	75.92	12028.89	9517.50
146+00.00	21.93	48.85	49.34	106.38	12078.22	9623.88
146+50.00	13.40	45.60	32.71	87.45	12110.93	9711.33
147+00.00	15.32	46.95	26.59	85.69	12137.52	9797.02
147+50.00	27.82	86.72	39.94	123.76	12177.47	9920.78
148+00.00	58.54	40.73	78.12	118.01	12255.58	10038.78
148+50.00	123.12	61.22	186.35	94.39	12421.94	10133.18
149+00.00	295.13	64.62	387.27	116.52	12809.20	10249.70
149+50.00	1.59	47.74	274.74	104.03	13083.95	10353.73
150+00.00	197.24	85.95	184.10	123.78	13268.05	10477.51
150+50.00	113.72	65.26	287.92	140.01	13555.97	10617.52
151+00.00	101.99	43.75	199.73	100.93	13755.71	10718.45
151+47.57	81.96	27.71	162.03	62.95	13917.74	10781.40

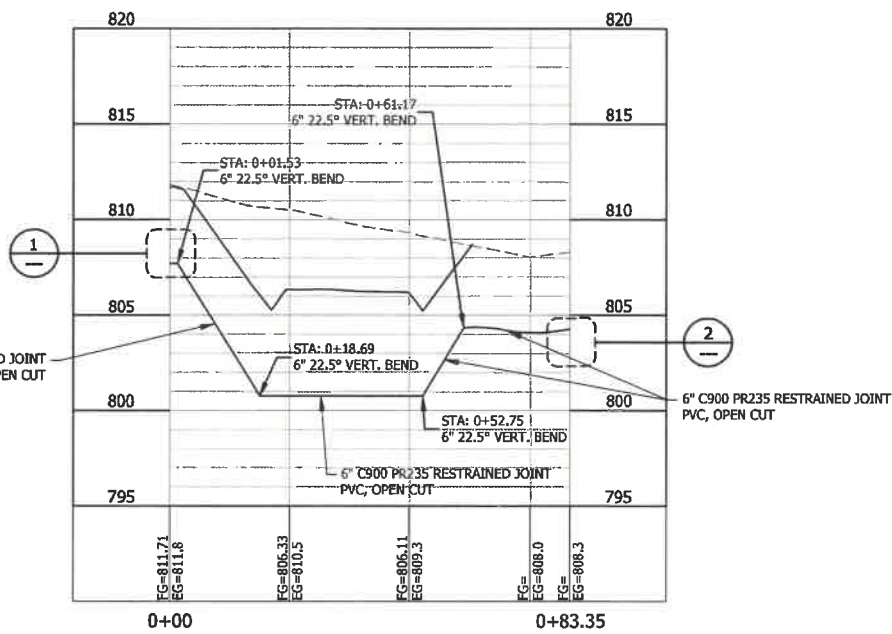
RAINBOW DR. Total Volume Table						
Station	Fill Area	Cut Area	Fill Volume	Cut Volume	Cumulative Fill Vol	Cumulative Cut Vol
0+59.58	4.99	34.07	0.00	0.00	0.00	0.00
1+00.00	0.60	59.91	3.71	71.17	3.71	71.17
1+50.00	0.00	63.20	0.50	116.20	4.21	187.36
1+52.35	0.00	59.74	0.00	5.35	4.21	192.71
2+00.00	12.97	31.97	11.23	83.06	15.44	275.78
2+08.60	14.10	28.57	4.23	9.92	19.67	285.69
2+46.10	13.18	30.75	18.94	41.19	38.61	326.88
2+50.00	13.12	31.26	1.90	4.48	40.51	331.36
2+83.60	5.32	27.38	11.47	36.49	51.96	367.85



1 DETAIL C-101-1
NOT TO SCALE



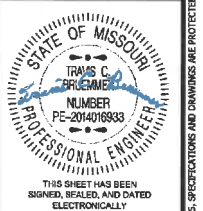
2 DETAIL C-101-2
NOT TO SCALE



Drawing Name: [unreadable] | Project Name: Tank Entrance Relocation | Date: 2/12/2021 3:05:44 PM
 Drawing No: 7031.102 | Scale: 1" = 20' HORIZ, 1" = 5' VERT

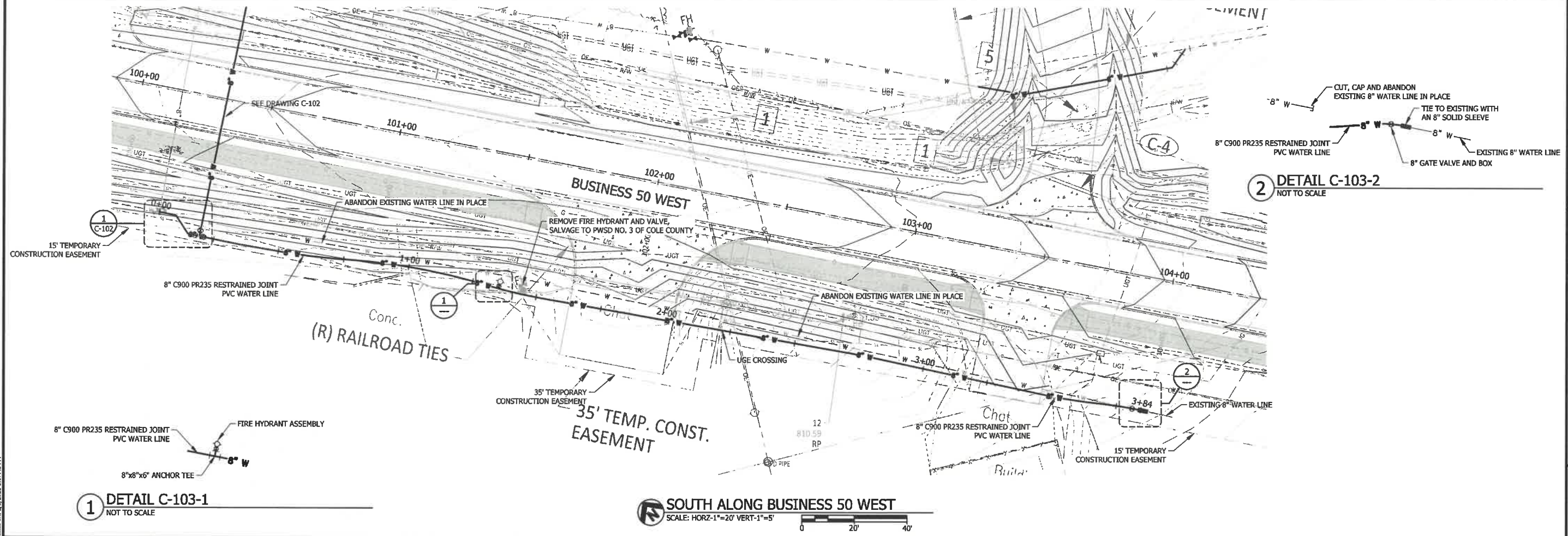
Bartlett & West
 1719 SOUTHRIDGE DR., SUITE 100 - JEFFERSON CITY, MO 65109-4000
 CERTIFICATE OF AUTHORITY NO. 000187 - ENGINEERING
 www.bartlettwest.com

**PLAN AND PROFILE
 ELEVATED STORAGE TANK ENTRANCE
 WATER LINE RELOCATION**
 BUSINESS 50 WEST WATER LINE RELOCATION
 PWS# NO. 3 OF COLE COUNTY, MISSOURI



SEALED DATE:	02-12-2021
DESIGNED BY:	KJL
DRAWN BY:	KAK
APPROVED BY:	TCB
DESIGN PRD#:	7031.102
DATE:	FEBRUARY 2021
DRAWING NO:	C-101
SHEET NO:	2 of 5

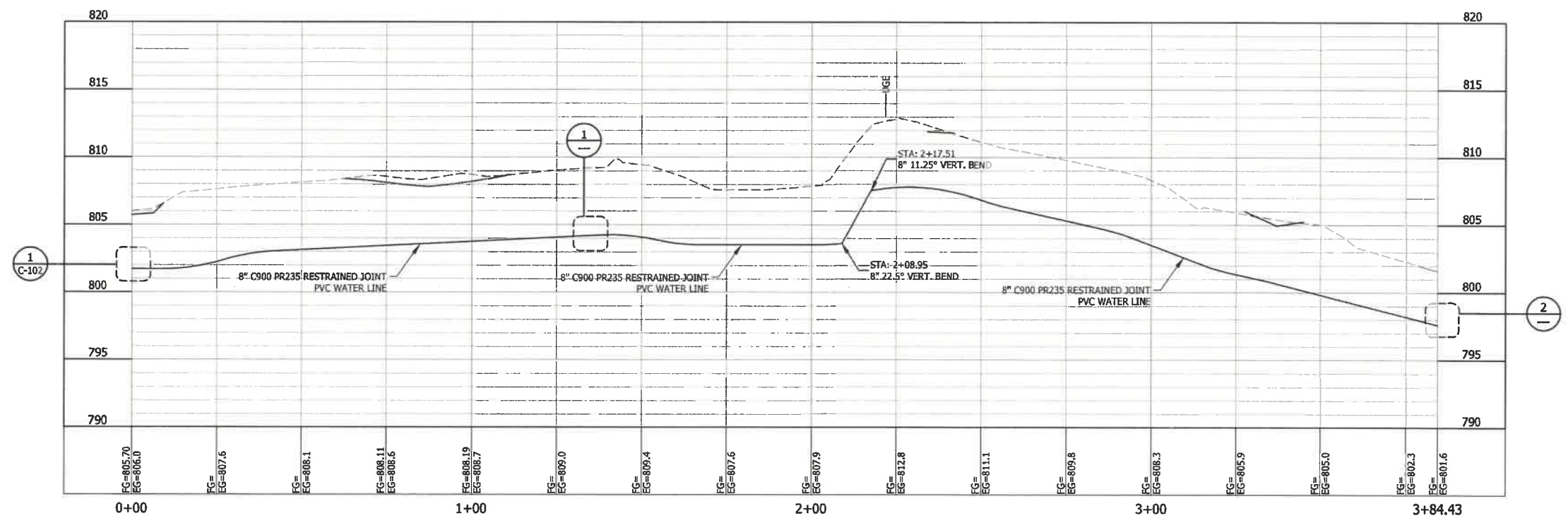
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2 DETAIL C-103-2
NOT TO SCALE

1 DETAIL C-103-1
NOT TO SCALE

SOUTH ALONG BUSINESS 50 WEST
SCALE: HORZ-1"=20' VERT-1"=5'



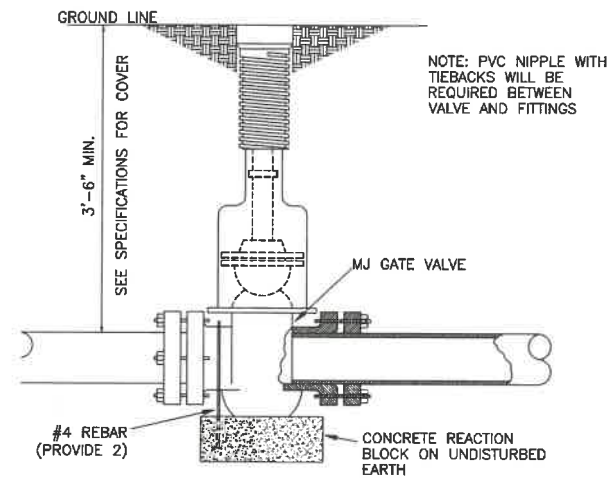
PLAN AND PROFILE
SOUTH ALONG BUSINESS 50 WEST
WATER LINE RELOCATION
BUSINESS 50 WEST WATER LINE RELOCATION
PWSD NO. 3 OF COLE COUNTY, MISSOURI



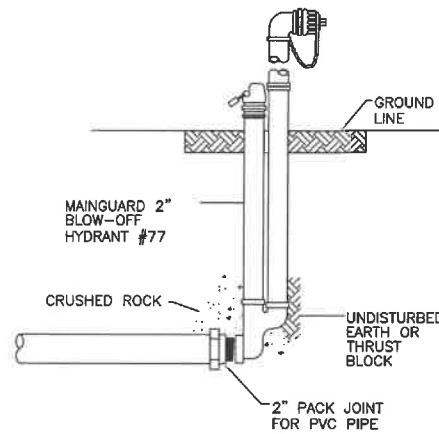
SEALED DATE:	02-12-2021
DESIGNED BY:	KJL
DRAWN BY:	KAK
APPROVED BY:	TCB
DESIGN PROJ.:	7031.102
DATE:	FEBRUARY 2021
DRAWING NO.:	C-103
SHEET NO.:	4 of 5

Bartlett & West
17719 SOUTHRIDGE DR., SUITE 100 - JEFFERSON CITY, MO 65109-4000
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CERTIFICATE OF AUTHORITY NO. 000187 - ENGINEERING
www.bartlettwest.com

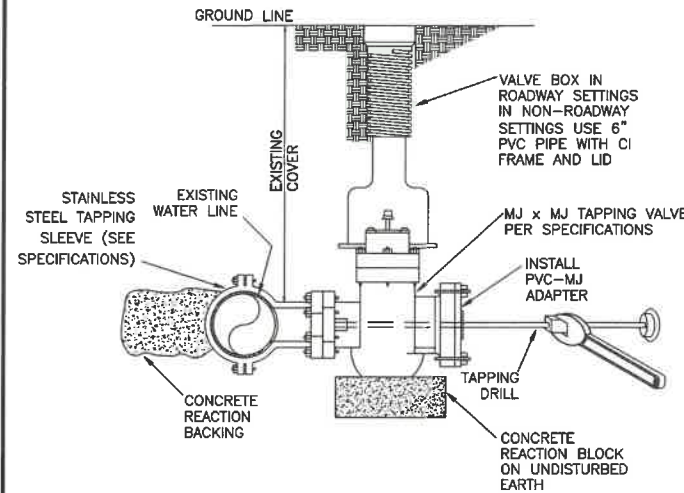
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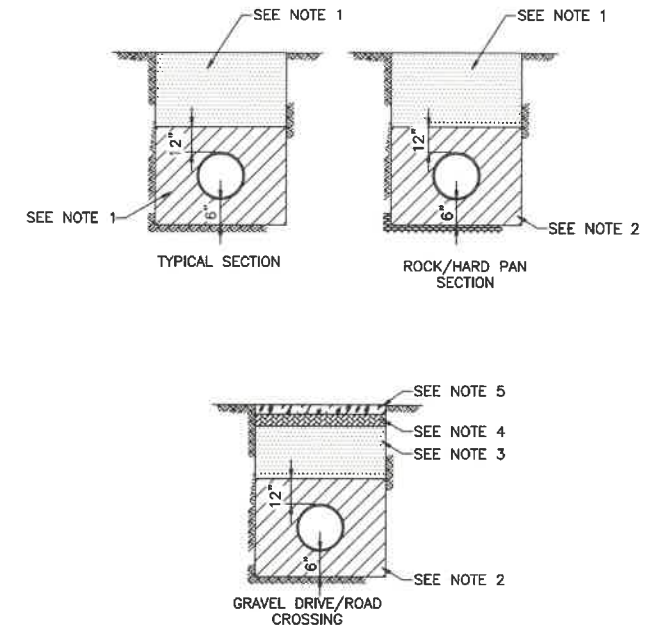
MECHANICAL JOINT VALVE SETTING



END CLEANOUT DETAIL

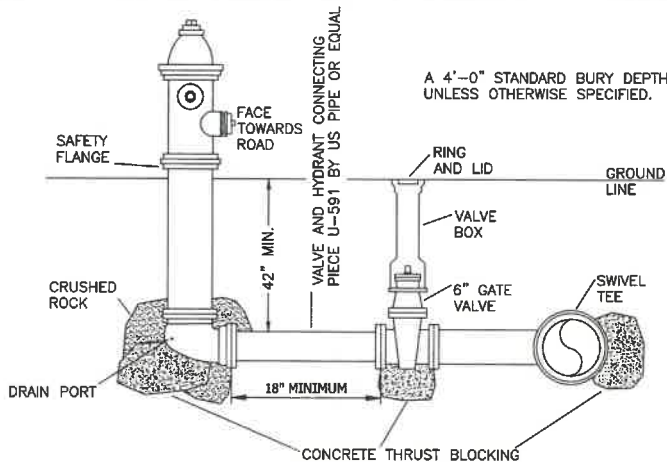


WET TAP DETAIL

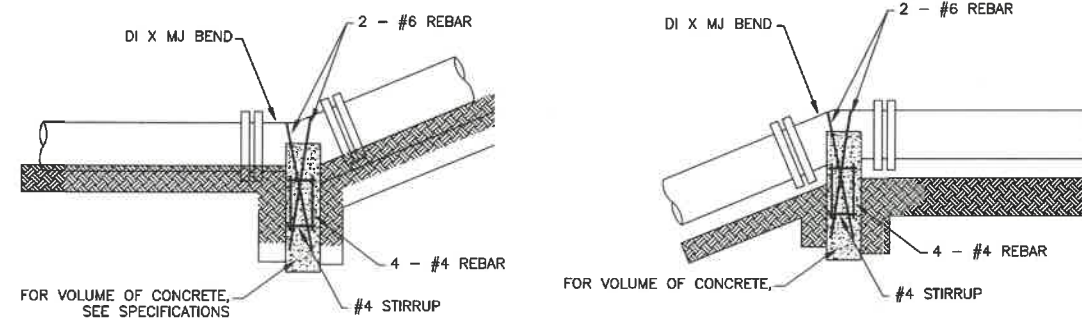


- BEDDING & BACKFILL NOTES:**
- SUITABLE EARTH EXCAVATED MATERIAL FREE FROM DEBRIS, MUCK, MUD BALLS, ROCK, AND HARD OBJECTS LARGER THAN 2" DIA
 - SAND OR LIMESTONE SCREENINGS, MAX 1/4" SIZE
 - 1" CLEAN ROCK
 - 4" OF 2 1/2" BASE ROCK
 - 4" OF 1" ROAD ROCK
- GENERAL NOTES:**
- COVER OVER THE PIPE SHALL BE 42" UNLESS OTHERWISE SHOWN ON THE PLANS.
 - BEDDING MATERIAL SHALL BE TAMPED IN LAYERS UNDER THE PIPE HAUNCHES AND AROUND THE PIPE TO TOP OF PIPE TO PROVIDE A UNIFORM BEARING SURFACE.
 - UTILITY CROSSINGS SHALL BE BACKFILLED WITH 1" CLEAN ROCK.

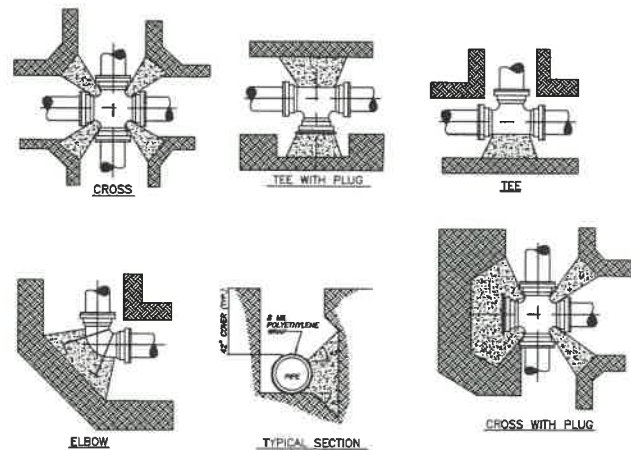
TRENCH DETAILS



FIRE HYDRANT SETTING FOR NEW CONSTRUCTION

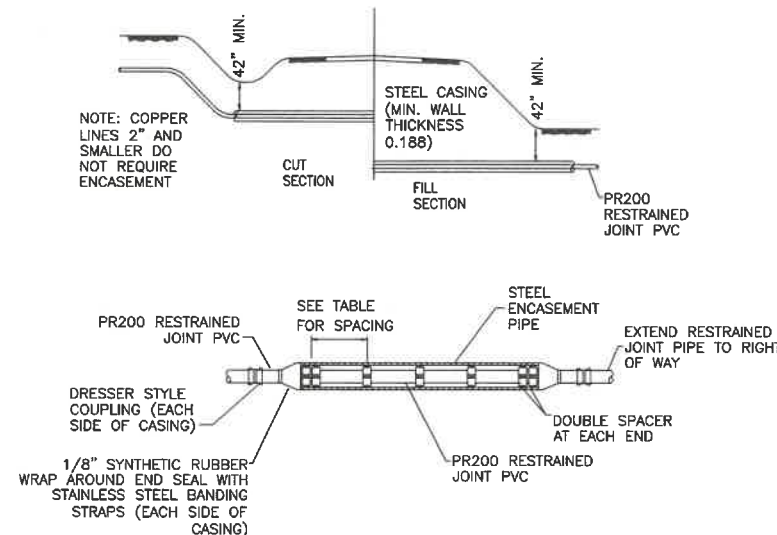


VERTICAL BEND THRUST BLOCK DETAIL



- THRUST BLOCKS SHALL BE FORMED AND POURED AGAINST UNDISTURBED SOIL. KEEP "T" BOLTS CLEAR OF CONCRETE, WRAPPED IN 8 MIL VINYL PLASTIC PROTECTOR FOR FUTURE ACCESS, WITH A MINIMUM OF 1" CONCRETE THICKNESS BETWEEN THE FITTING AND SOIL.
- BEFORE POURING, PLUGS SHALL BE WRAPPED WITH VISQUEEN AND A BOARD PLACED IN FRONT.
- CONCRETE SHALL BE 3000 P.S.I. MINIMUM.
- SEE SPECIFICATIONS FOR THRUST BLOCK AREA

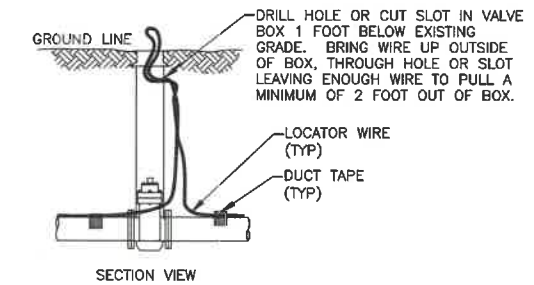
THRUST BLOCK DETAIL



- NOTE:**
- CROSSING TO INCLUDE CASING, RESTRAINED JOINT PVC PIPE, JOINTING, FITTINGS, DIRECTIONAL BORING, LABOR, EQUIPMENT AND OTHER ITEMS REQUIRED TO INSTALL THE CROSSING PER MODOT PERMIT AND DETAILS. ALL DESIGNATED HIGHWAY AND ROAD CROSSINGS OF EACH PIPE SIZE AND CLASS WILL BE BID AT THE SAME PRICE REGARDLESS OF LENGTH.
 - SKIDS TO BE BACI SPACERS (INSULATORS) OR EQUAL USE DOUBLE SPACERS AT END & ONE EACH SIDE OF A JOINT

SPACING TABLE	
Carrier Pipe Diameter (in)	Skid Spacing Maximum (ft)
3 OR LESS	3
4	4.5
6	6
8	7
10	8.5
12	9.5
12+	10

TYPICAL HIGHWAY AND ROAD CROSSING



- NOTES:**
- LOCATOR WIRE TO BE 12 GAUGE, SOLID COPPER WIRE WITH BLUE PE-45 INSULATION
 - DUCT TAPE LOCATOR WIRE TO TOP OF PIPE ON EACH SIDE OF BELL AND ONE IN THE MIDDLE OF THE PIPE.
 - AT ALL ENDS OF WATER LINES, THE LOCATOR WIRE SHALL BE EXTENDED 2' ABOVE THE TOP OF THE GROUND AND BE ACCESSIBLE. THERE SHALL BE NO MORE THAN ONE SPLICE BETWEEN ACCESS POINTS AT VALVES.
 - DO NOT WRAP WIRE AROUND BOLTS, NUTS, ETC.
 - SPLICE LOCATOR WIRE USING SPLICING KIT 3M DBR/Y. DUCT TAPE LOCATOR WIRE TO PIPE ON EACH END OF THE SPLICE.
 - WHERE CALLED FOR ON THE PLANS FOR A SPLICE BOX, THE SPLICE BOX SHALL BE IDENTICAL TO A VALVE BOX RISER AND LID WITH THE INSTALLATION OF THE WIRE IDENTICAL TO THAT IN A VALVE BOX.
 - CONTRACTOR SHALL CONDUCT TRACER WIRE CONTINUITY TEST WITH OWNERS REPRESENTATIVE PRESENT. LOCATOR WIRE INSTALLATION AND CONTINUITY SHALL BE WARRANTED UNDER THE SAME 1 YEAR PIPE AND WORKMANSHIP WARRANTY.

LOCATOR WIRE DETAIL

Bartlett & West

1719 SOUTHBRIDGE DR., SUITE 100 - JEFFERSON CITY, MO 65109-4000
PHONE 573.524.3181
CERTIFICATE OF AUTHORITY NO. 03-0000000000
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CONSTRUCTION DETAILS
WATER LINE RELOCATION
BUSINESS 50 WEST WATER LINE RELOCATION
PWSD NO. 3 OF COLE COUNTY, MISSOURI



SEALING DATE: 02-12-2021
DESIGNED BY: KCL
DRAWN BY: KAK
APPROVED BY: TCB
DESIGN PROJ: 7031.102
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DRAWING NO: C-501
SHEET NO: 5 of 5