



CITY OF KANSAS CITY, MISSOURI

PUBLIC WORKS DEPARTMENT

KANSAS CITY STREETCAR MAIN STREET EXTENSION PROJECT

VOLUME 1 - MAIN LINE

30% SUBMITTAL - AUGUST 2019



UTILITY CONTACTS

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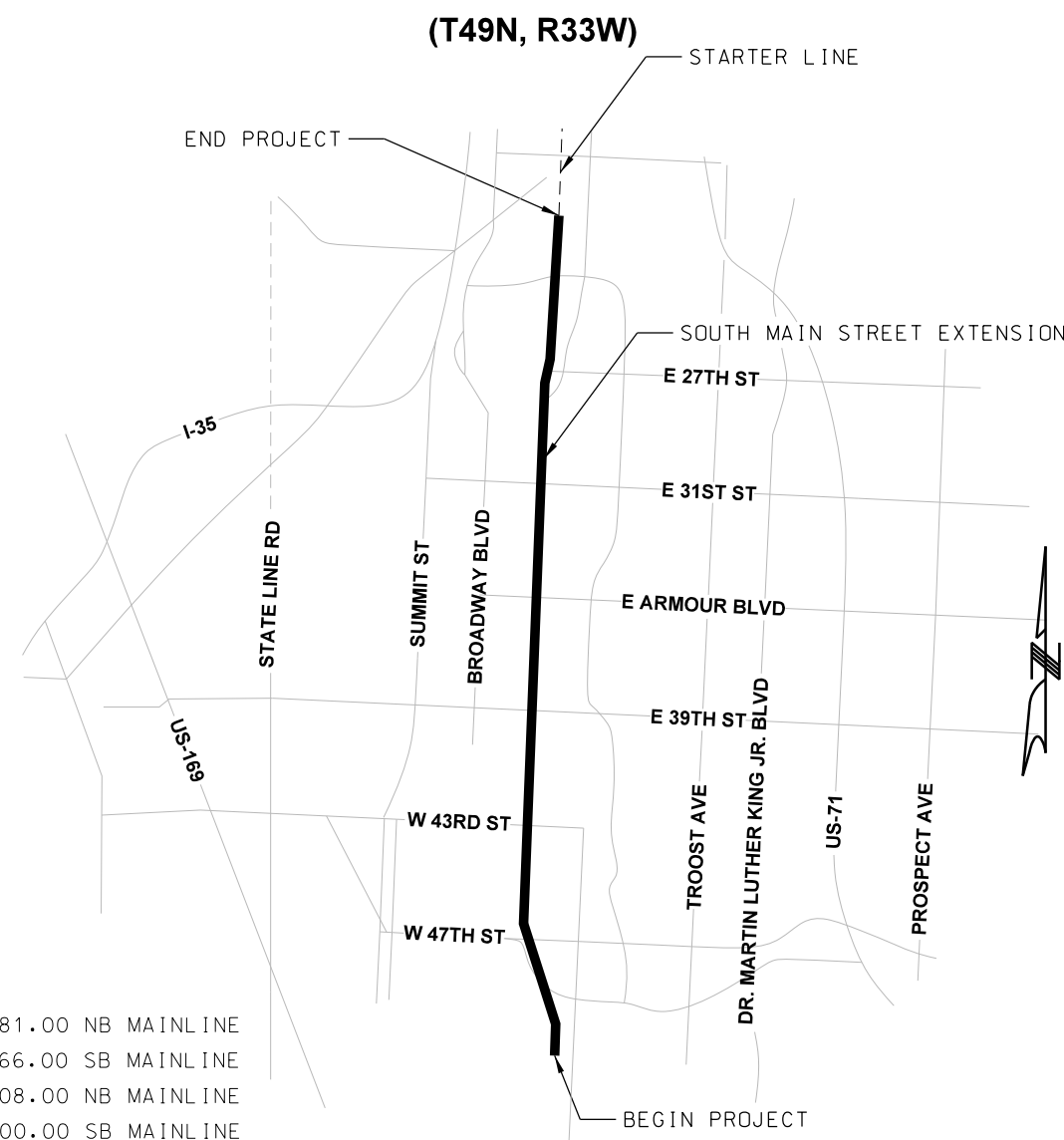
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PROJECT NO.: 89022014-001



RideKC
STREETCAR



APPROVED BY

PROJECT MANAGER

CITY ENGINEER

DIRECTOR OF PUBLIC WORKS

ENTRY NO.

PROJECT NO. 89022014

C.D. NO. 4



10450 Holmes Road
Suite 600
Kansas City, MO 64131-3471
816-360-2700
Certificate of Authority: 000856

LENGTH OF PROJECT		
END OF PROJECT	STA 2184+81.00 NB MAINLINE	
	STA 1181+66.00 SB MAINLINE	
BEGINNING OF PROJECT	STA 2003+08.00 NB MAINLINE	
	STA 1000+00.00 SB MAINLINE	
PROJECT TRACK LENGTH	18173.00 NB	
	18166.00 SB	
EQUATIONS & EXCEPTIONS	N/A	
TOTAL TRACK LENGTH	36339.00 (6.882 MILES)	

SCALE FOR 22"x34"	
FILENAME:	
Title Sheet and Location Map	
CONTRACT NO.:	
CON0077290	
VOLUME:	
1	
DRAWING NO.:	SHEET NO.:
G001	1

SHEET NO.	DRAWING NO.	TITLE	DESCRIPTION
GENERAL			
1	G001	TITLE SHEET AND LOCATION MAP	
2	G010	INDEX OF DRAWINGS	SHEET 1 OF 3
3	G011	INDEX OF DRAWINGS	SHEET 2 OF 3
4	G012	INDEX OF DRAWINGS	SHEET 3 OF 3
5	G030	STANDARD ABBREVIATIONS	SHEET 1 OF 2
6	G031	STANDARD ABBREVIATIONS	SHEET 2 OF 2
7	G035	STANDARD SYMBOLS	
8	G040	GENERAL NOTES	
DEMOLITION PLANS			
9	C501	SOUTHBOUND AND NORTHBOUND TRACK DEMO PLAN	STA 1000+00 TO STA 1001+00 - STA 1001+00 TO STA 1005+00
10	C502	SOUTHBOUND AND NORTHBOUND TRACK DEMO PLAN	STA 1005+00 TO STA 1009+00 - STA 1009+00 TO STA 1013+00
11	C503	SOUTHBOUND AND NORTHBOUND TRACK DEMO PLAN	STA 1013+00 TO STA 1017+00 - STA 1017+00 TO STA 1021+00
12	C504	SOUTHBOUND AND NORTHBOUND TRACK DEMO PLAN	STA 1021+00 TO STA 1025+00 - STA 1025+00 TO STA 1029+00
13	C505	SOUTHBOUND AND NORTHBOUND TRACK DEMO PLAN	STA 1029+00 TO STA 1033+00 - STA 1033+00 TO STA 1037+00
14	C506	SOUTHBOUND AND NORTHBOUND TRACK DEMO PLAN	STA 1037+00 TO STA 1041+00 - STA 1041+00 TO STA 1045+00
15	C507	SOUTHBOUND AND NORTHBOUND TRACK DEMO PLAN	STA 1045+00 TO STA 1049+00 - STA 1049+00 TO STA 1053+00
16	C508	SOUTHBOUND AND NORTHBOUND TRACK DEMO PLAN	STA 1053+00 TO STA 1057+00 - STA 1057+00 TO STA 1061+00
17	C509	SOUTHBOUND AND NORTHBOUND TRACK DEMO PLAN	STA 1061+00 TO STA 1065+00 - STA 1065+00 TO STA 1069+00
18	C510	SOUTHBOUND AND NORTHBOUND TRACK DEMO PLAN	STA 1069+00 TO STA 1073+00 - STA 1073+00 TO STA 1077+00
19	C511	SOUTHBOUND AND NORTHBOUND TRACK DEMO PLAN	STA 1077+00 TO STA 1081+00 - STA 1081+00 TO STA 1085+00
20	C512	SOUTHBOUND AND NORTHBOUND TRACK DEMO PLAN	STA 1085+00 TO STA 1089+00 - STA 1089+00 TO STA 1093+00
21	C513	SOUTHBOUND AND NORTHBOUND TRACK DEMO PLAN	STA 1093+00 TO STA 1097+00 - STA 1097+00 TO STA 1101+00
22	C514	SOUTHBOUND AND NORTHBOUND TRACK DEMO PLAN	STA 1101+00 TO STA 1105+00 - STA 1105+00 TO STA 1109+00
23	C515	SOUTHBOUND AND NORTHBOUND TRACK DEMO PLAN	STA 1109+00 TO STA 1113+00 - STA 1113+00 TO STA 1117+00
24	C516	SOUTHBOUND AND NORTHBOUND TRACK DEMO PLAN	STA 1117+00 TO STA 1121+00 - STA 1121+00 TO STA 1125+00
25	C517	SOUTHBOUND AND NORTHBOUND TRACK DEMO PLAN	STA 1125+00 TO STA 1129+00 - STA 1129+00 TO STA 1133+00
26	C518	SOUTHBOUND AND NORTHBOUND TRACK DEMO PLAN	STA 1133+00 TO STA 1137+00 - STA 1137+00 TO STA 1141+00
27	C519	SOUTHBOUND AND NORTHBOUND TRACK DEMO PLAN	STA 1141+00 TO STA 1145+00 - STA 1145+00 TO STA 1149+00
28	C520	SOUTHBOUND AND NORTHBOUND TRACK DEMO PLAN	STA 1149+00 TO STA 1153+00 - STA 1153+00 TO STA 1157+00
29	C521	SOUTHBOUND AND NORTHBOUND TRACK DEMO PLAN	STA 1157+00 TO STA 1161+00 - STA 1161+00 TO STA 1165+00
30	C522	SOUTHBOUND AND NORTHBOUND TRACK DEMO PLAN	STA 1165+00 TO STA 1169+00 - STA 1169+00 TO STA 1173+00
31	C523	SOUTHBOUND AND NORTHBOUND TRACK DEMO PLAN	STA 1173+00 TO STA 1177+00 - STA 1177+00 TO STA 1181+00
32	C524	SOUTHBOUND AND NORTHBOUND TRACK DEMO PLAN	STA 1181+00 TO STA 1185+00 - STA 1185+00 TO STA 1189+00
TRACK PLAN AND PROFILE			
33	K001	TRACK KEY MAP	TRACK KEY MAP
34	K101	TRACK PLAN AND SOUTHBOUND PROFILE	SB STA BEGIN TO STA 1001+00
35	K102	TRACK PLAN AND SOUTHBOUND PROFILE	SB STA 1001+00 TO STA 1005+00
36	K102A	NORTHBOUND PROFILE	NB STA 2001+00 TO STA 2005+00
37	K103	TRACK PLAN AND SOUTHBOUND PROFILE	SB STA 1005+00 TO STA 1009+00
38	K103A	NORTHBOUND PROFILE	NB STA 2005+00 TO STA 2009+00
39	K104	TRACK PLAN AND SOUTHBOUND PROFILE	SB STA 1009+00 TO STA 1013+00
40	K104A	NORTHBOUND PROFILE	NB STA 2009+00 TO STA 2013+00
41	K105	TRACK PLAN AND SOUTHBOUND PROFILE	SB STA 1013+00 TO STA 1017+00
42	K105A	NORTHBOUND PROFILE	NB STA 2013+00 TO STA 2017+00
43	K106	TRACK PLAN AND SOUTHBOUND PROFILE	SB STA 1017+00 TO STA 1021+00
44	K106A	NORTHBOUND PROFILE	NB STA 2017+00 TO STA 2021+00
45	K107	TRACK PLAN AND SOUTHBOUND PROFILE	SB STA 1021+00 TO STA 1025+00
46	K107A	NORTHBOUND PROFILE	NB STA 2021+00 TO STA 2025+00
47	K108	TRACK PLAN AND SOUTHBOUND PROFILE	SB STA 1025+00 TO STA 1029+00
48	K108A	NORTHBOUND PROFILE	NB STA 2025+00 TO STA 2029+00
49	K109	TRACK PLAN AND SOUTHBOUND PROFILE	SB STA 1029+00 TO STA 1033+00
50	K109A	NORTHBOUND PROFILE	NB STA 2029+00 TO STA 2033+00
51	K110	TRACK PLAN AND SOUTHBOUND PROFILE	SB STA 1033+00 TO STA 1037+00
52	K110A	NORTHBOUND PROFILE	NB STA 2033+00 TO STA 2037+00
53	K111	TRACK PLAN AND SOUTHBOUND PROFILE	SB STA 1037+00 TO STA 1041+00
54	K111A	NORTHBOUND PROFILE	NB STA 2037+00 TO STA 2041+00
55	K112	TRACK PLAN AND SOUTHBOUND PROFILE	SB STA 1041+00 TO STA 1045+00
56	K112A	NORTHBOUND PROFILE	NB STA 2041+00 TO STA 2045+00
57	K113	TRACK PLAN AND SOUTHBOUND PROFILE	SB STA 1045+00 TO STA 1049+00
58	K113A	NORTHBOUND PROFILE	NB STA 2045+00 TO STA 2049+00
59	K114	TRACK PLAN AND SOUTHBOUND PROFILE	SB STA 1049+00 TO STA 1053+00
60	K114A	NORTHBOUND PROFILE	NB STA 1049+00 TO STA 1053+00
61	K115	TRACK PLAN AND SOUTHBOUND PROFILE	SB STA 1053+00 TO STA 1057+00
62	K115A	NORTHBOUND PROFILE	NB STA 1053+00 TO STA 1057+00
63	K116	TRACK PLAN AND SOUTHBOUND PROFILE	SB STA 1057+00 TO STA 1061+00
64	K116A	NORTHBOUND PROFILE	NB STA 2057+00 TO STA 2061+00
65	K117	TRACK PLAN AND SOUTHBOUND PROFILE	SB STA 1061+00 TO STA 1065+00
66	K117A	NORTHBOUND PROFILE	NB STA 2061+00 TO STA 2065+00

SHEET NO.	DRAWING NO.	TITLE	DESCRIPTION
67	K118	TRACK PLAN AND SOUTHBOUND PROFILE	SB STA 1065+00 TO STA 1069+00
68	K118A	NORTHBOUND PROFILE	NB STA 2065+00 TO STA 2069+00
69	K119	TRACK PLAN AND SOUTHBOUND PROFILE	SB STA 1069+00 TO STA 1073+00
70	K119A	NORTHBOUND PROFILE	NB STA 2069+00 TO STA 2073+00
71	K120	TRACK PLAN AND SOUTHBOUND PROFILE	SB STA 1073+00 TO STA 1077+00
72	K120A	NORTHBOUND PROFILE	NB STA 2073+00 TO STA 2077+00
73	K121	TRACK PLAN AND SOUTHBOUND PROFILE	SB STA 1077+00 TO STA 1081+00
74	K121A	NORTHBOUND PROFILE	NB STA 2077+00 TO STA 2081+00
75	K122	TRACK PLAN AND SOUTHBOUND PROFILE	SB STA 1081+00 TO STA 1085+00
76	K122A	NORTHBOUND PROFILE	NB STA 2081+00 TO STA 2085+00
77	K123	TRACK PLAN AND SOUTHBOUND PROFILE	SB STA 1085+00 TO STA 1089+00
78	K123A	NORTHBOUND PROFILE	NB STA 2085+00 TO STA 2089+00
79	K124	TRACK PLAN AND SOUTHBOUND PROFILE	SB STA 1089+00 TO STA 1093+00
80	K124A	NORTHBOUND PROFILE	NB STA 2089+00 TO STA 2093+00
81	K125	TRACK PLAN AND SOUTHBOUND PROFILE	SB STA 1093+00 TO STA 1097+00
82	K125A	NORTHBOUND PROFILE	NB STA 2093+00 TO STA 2097+00
83	K126	TRACK PLAN AND SOUTHBOUND PROFILE	SB STA 1097+00 TO STA 1101+00
84	K126A	NORTHBOUND PROFILE	NB STA 2097+00 TO STA 2101+00
85	K127	TRACK PLAN AND SOUTHBOUND PROFILE	SB STA 1101+00 TO STA 1105+00
86	K127A	NORTHBOUND PROFILE	NB STA 2101+00 TO STA 2105+00
87	K128	TRACK PLAN AND SOUTHBOUND PROFILE	SB STA 1105+00 TO STA 1109+00
88	K128A	NORTHBOUND PROFILE	NB STA 2105+00 TO STA 2109+00
89	K129	TRACK PLAN AND SOUTHBOUND PROFILE	SB STA 1109+00 TO STA 1113+00
90	K129A	NORTHBOUND PROFILE	NB STA 2109+00 TO STA 2113+00
91	K130	TRACK PLAN AND SOUTHBOUND PROFILE	SB STA 1113+00 TO STA 1117+00
92	K130A	NORTHBOUND PROFILE	NB STA 2113+00 TO STA 2117+00
93	K131	TRACK PLAN AND SOUTHBOUND PROFILE	SB STA 1117+00 TO STA 1121+00
94	K131A	NORTHBOUND PROFILE	NB STA 2117+00 TO STA 2121+00
95	K132	TRACK PLAN AND SOUTHBOUND PROFILE	SB STA 1121+00 TO STA 1125+00
96	K132A	NORTHBOUND PROFILE	NB STA 2121+00 TO STA 2125+00
97	K133	TRACK PLAN AND SOUTHBOUND PROFILE	SB STA 1125+00 TO STA 1129+00
98	K133A	NORTHBOUND PROFILE	NB STA 2125+00 TO STA 2129+00
99	K134	TRACK PLAN AND SOUTHBOUND PROFILE	SB STA 1129+00 TO STA 1133+00
100	K134A	NORTHBOUND PROFILE	NB STA 2129+00 TO STA 2133+00
101	K135	TRACK PLAN AND SOUTHBOUND PROFILE	SB STA 1133+00 TO STA 1137+00
102	K135A	NORTHBOUND PROFILE	NB STA 2133+00 TO STA 2137+00
103	K136	TRACK PLAN AND SOUTHBOUND PROFILE	SB STA 1137+00 TO STA 1141+00
104	K136A	NORTHBOUND PROFILE	NB STA 2137+00 TO STA 2141+00
105	K137	TRACK PLAN AND SOUTHBOUND PROFILE	SB STA 1141+00 TO STA 1145+00
106	K137A	NORTHBOUND PROFILE	NB STA 2141+00 TO STA 2145+00
107	K138	TRACK PLAN AND SOUTHBOUND PROFILE	SB STA 1145+00 TO STA 1149+00
108	K138A	NORTHBOUND PROFILE	NB STA 2145+00 TO STA 2149+00
109	K139	TRACK PLAN AND SOUTHBOUND PROFILE	SB STA 1149+00 TO STA 1153+00
110	K139A	NORTHBOUND PROFILE	NB STA 2149+00 TO STA 2153+00
111	K140	TRACK PLAN AND SOUTHBOUND PROFILE	SB STA 1153+00 TO STA 1157+00
112	K140A	NORTHBOUND PROFILE	NB STA 2153+00 TO STA 2157+00
113	K141	TRACK PLAN AND SOUTHBOUND PROFILE	SB STA 1157+00 TO STA 1161+00
114	K141A	NORTHBOUND PROFILE	NB STA 2157+00 TO STA 2161+00
115	K142	TRACK PLAN AND SOUTHBOUND PROFILE	SB STA 1161+00 TO STA 1165+00
116	K142A	NORTHBOUND PROFILE	NB STA 2161+00 TO STA 2165+00
117	K143	TRACK PLAN AND SOUTHBOUND PROFILE	SB STA 1165+00 TO STA 1169+00
118	K143A	NORTHBOUND PROFILE	NB STA 2165+00 TO STA 2169+00
119	K144	TRACK PLAN AND SOUTHBOUND PROFILE	SB STA 1169+00 TO STA 1173+00
120	K144A	NORTHBOUND PROFILE	NB STA 2169+00 TO STA 2173+00
121	K145	TRACK PLAN AND SOUTHBOUND PROFILE	SB STA 1173+00 TO STA 1177+00
122	K145A	NORTHBOUND PROFILE	NB STA 2173+00 TO STA 2177+00
123	K146	TRACK PLAN AND SOUTHBOUND PROFILE	SB STA 1177+00 TO STA 1181+00
124	K146A	NORTHBOUND PROFILE	NB STA 2177+00 TO STA 2181+00
125	K147	TRACK PLAN AND SOUTHBOUND PROFILE	SB STA 1181+00 TO STA 1185+00
126	K147A	NORTHBOUND PROFILE	NB STA 2181+00 TO STA 2185+00
TRACK DETAILS			
127	K901	TRACK SLAB DETAILS	DETAILS
128	K902	115 RE AND 112 TRAM RAIL SECTIONS	DETAILS
129	K903	TRACK SLAB ON STRUCTURE	DETAILS
130	K904	TRANSITON RAIL	DETAILS
131	K905	25 M TURNOUT - STRAIGHT FROG	DETAILS
132	K906	25 M TURNOUT - CURVED FROG	DETAILS
133	K907	MANHOLE REBAR	DETAIL 1 OF 2
134	K908	MANHOLE REBAR	DETAIL 2 OF 2
135	K909	PRECURVED RAIL	DETAILS

TRACK DETAILS			
127	K901	TRACK SLAB DETAILS	DETAILS
128	K902	115 RE AND 112 TRAM RAIL SECTIONS	DETAILS
129	K903	TRACK SLAB ON STRUCTURE	DETAILS
130	K904	TRANSITON RAIL	DETAILS
131	K905	25 M TURNOUT - STRAIGHT FROG	DETAILS
132	K906	25 M TURNOUT - CURVED FROG	DETAILS
133	K907	MANHOLE REBAR	DETAIL 1 OF 2
134	K908	MANHOLE REBAR	DETAIL 2 OF 2
135	K909	PRECURVED RAIL	DETAILS

REV	DATE	DESCRIPTION	DESIGNED BY	JWR			PRELIMINARY PLANS - 30% DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SCALE FOR 22"x34": NOT TO SCALE FILENAME: Index of Drawings SH1 CONTRACT NO.: ***** VOLUME: 1	DRAWING NO.: G010	SHEET NO.: 2
			CHECKED BY	RPB							
			DRAWN BY	MMO							
			CHECKED BY	RPB							
			APPROVED BY	NKS							
PLOT DATE:	8/26/2019		DATE	08/28/2019			NOT FOR CONSTRUCTION		INDEX OF DRAWINGS SHEET 1 OF 3		

SHEET NO.	DRAWING NO.	TITLE	DESCRIPTION
ROADWAY (CIVIL) PLANS			
136	C001	TYPICAL SECTIONS	SHEET 1 OF 5
137	C002	TYPICAL SECTIONS	SHEET 2 OF 5
138	C003	TYPICAL SECTIONS	SHEET 3 OF 5
139	C004	TYPICAL SECTIONS	SHEET 4 OF 5
140	C005	TYPICAL SECTIONS	SHEET 5 OF 5
141	C101	SOUTHBOUND AND NORTHBOUND TRACK CIVIL PLAN	STA 1000+00 TO STA 1001+00 - STA 1001+00 TO STA 1005+00
142	C102	SOUTHBOUND AND NORTHBOUND TRACK CIVIL PLAN	STA 1005+00 TO STA 1009+00 - STA 1009+00 TO STA 1013+00
143	C103	SOUTHBOUND AND NORTHBOUND TRACK CIVIL PLAN	STA 1013+00 TO STA 1017+00 - STA 1017+00 TO STA 1021+00
144	C104	SOUTHBOUND AND NORTHBOUND TRACK CIVIL PLAN	STA 1021+00 TO STA 1025+00 - STA 1025+00 TO STA 1029+00
145	C105	SOUTHBOUND AND NORTHBOUND TRACK CIVIL PLAN	STA 1029+00 TO STA 1033+00 - STA 1033+00 TO STA 1037+00
146	C106	SOUTHBOUND AND NORTHBOUND TRACK CIVIL PLAN	STA 1037+00 TO STA 1041+00 - STA 1041+00 TO STA 1045+00
147	C107	SOUTHBOUND AND NORTHBOUND TRACK CIVIL PLAN	STA 1045+00 TO STA 1049+00 - STA 1049+00 TO STA 1053+00
148	C108	SOUTHBOUND AND NORTHBOUND TRACK CIVIL PLAN	STA 1053+00 TO STA 1057+00 - STA 1057+00 TO STA 1061+00
149	C109	SOUTHBOUND AND NORTHBOUND TRACK CIVIL PLAN	STA 1061+00 TO STA 1065+00 - STA 1065+00 TO STA 1069+00
150	C110	SOUTHBOUND AND NORTHBOUND TRACK CIVIL PLAN	STA 1069+00 TO STA 1073+00 - STA 1073+00 TO STA 1077+00
151	C111	SOUTHBOUND AND NORTHBOUND TRACK CIVIL PLAN	STA 1077+00 TO STA 1081+00 - STA 1081+00 TO STA 1085+00
152	C112	SOUTHBOUND AND NORTHBOUND TRACK CIVIL PLAN	STA 1085+00 TO STA 1089+00 - STA 1089+00 TO STA 1093+00
153	C113	SOUTHBOUND AND NORTHBOUND TRACK CIVIL PLAN	STA 1093+00 TO STA 1097+00 - STA 1097+00 TO STA 1101+00
154	C114	SOUTHBOUND AND NORTHBOUND TRACK CIVIL PLAN	STA 1101+00 TO STA 1105+00 - STA 1105+00 TO STA 1109+00
155	C115	SOUTHBOUND AND NORTHBOUND TRACK CIVIL PLAN	STA 1109+00 TO STA 1113+00 - STA 1113+00 TO STA 1117+00
156	C116	SOUTHBOUND AND NORTHBOUND TRACK CIVIL PLAN	STA 1117+00 TO STA 1121+00 - STA 1121+00 TO STA 1125+00
157	C117	SOUTHBOUND AND NORTHBOUND TRACK CIVIL PLAN	STA 1125+00 TO STA 1129+00 - STA 1129+00 TO STA 1133+00
158	C118	SOUTHBOUND AND NORTHBOUND TRACK CIVIL PLAN	STA 1133+00 TO STA 1137+00 - STA 1137+00 TO STA 1141+00
159	C119	SOUTHBOUND AND NORTHBOUND TRACK CIVIL PLAN	STA 1141+00 TO STA 1145+00 - STA 1145+00 TO STA 1149+00
160	C120	SOUTHBOUND AND NORTHBOUND TRACK CIVIL PLAN	STA 1149+00 TO STA 1153+00 - STA 1153+00 TO STA 1157+00
161	C121	SOUTHBOUND AND NORTHBOUND TRACK CIVIL PLAN	STA 1157+00 TO STA 1161+00 - STA 1161+00 TO STA 1165+00
162	C122	SOUTHBOUND AND NORTHBOUND TRACK CIVIL PLAN	STA 1165+00 TO STA 1169+00 - STA 1169+00 TO STA 1173+00
163	C123	SOUTHBOUND AND NORTHBOUND TRACK CIVIL PLAN	STA 1173+00 TO STA 1177+00 - STA 1177+00 TO STA 1181+00
164	C124	SOUTHBOUND AND NORTHBOUND TRACK CIVIL PLAN	STA 1181+00 TO STA 1185+00
165	C200	TYPICAL STREETCAR STOP DETAILS	DETAILS
166	C201	STREETCAR STOP NORTHBOUND/SOUTHBOUND	SOUTH END PLATFORM
167	C202	STREETCAR STOP NORTHBOUND/SOUTHBOUND	CENTER PLATFORM
168	C203	STREETCAR STOP SOUTHBOUND	45TH STREET PLATFORM
169	C204	STREETCAR STOP NORTHBOUND	43RD STREET PLATFORM
170	C205	STREETCAR STOP SOUTHBOUND	ARMOUR STREET PLATFORM
171	C206	STREETCAR STOP NORTHBOUND	31ST STREET PLATFORM
172	C207	STREETCAR STOP SOUTHBOUND	27TH STREET PLATFORM
173	C208	STREETCAR STOP NORTHBOUND	UNION STATION PLATFORM
174	C401	TPSS SITE PLAN C09	BROOKSIDE BLVD & WARD PKWY
175	C402	TPSS SITE PLAN C10	BROOKSIDE BLVD & 51ST STREET (END OF LINE)
DRAINAGE PLANS			
176	D101	SOUTHBOUND AND NORTHBOUND TRACK DRAINAGE PLAN	STA 1000+00 TO STA 1001+00 - STA 1001+00 TO STA 1005+00
177	D102	SOUTHBOUND AND NORTHBOUND TRACK DRAINAGE PLAN	STA 1005+00 TO STA 1009+00 - STA 1009+00 TO STA 1013+00
178	D103	SOUTHBOUND AND NORTHBOUND TRACK DRAINAGE PLAN	STA 1013+00 TO STA 1017+00 - STA 1017+00 TO STA 1021+00
179	D104	SOUTHBOUND AND NORTHBOUND TRACK DRAINAGE PLAN	STA 1021+00 TO STA 1025+00 - STA 1025+00 TO STA 1029+00
180	D105	SOUTHBOUND AND NORTHBOUND TRACK DRAINAGE PLAN	STA 1029+00 TO STA 1033+00 - STA 1033+00 TO STA 1037+00
181	D106	SOUTHBOUND AND NORTHBOUND TRACK DRAINAGE PLAN	STA 1037+00 TO STA 1041+00 - STA 1041+00 TO STA 1045+00
182	D107	SOUTHBOUND AND NORTHBOUND TRACK DRAINAGE PLAN	STA 1045+00 TO STA 1049+00 - STA 1049+00 TO STA 1053+00
183	D108	SOUTHBOUND AND NORTHBOUND TRACK DRAINAGE PLAN	STA 1053+00 TO STA 1057+00 - STA 1057+00 TO STA 1061+00
184	D109	SOUTHBOUND AND NORTHBOUND TRACK DRAINAGE PLAN	STA 1061+00 TO STA 1065+00 - STA 1065+00 TO STA 1069+00
185	D110	SOUTHBOUND AND NORTHBOUND TRACK DRAINAGE PLAN	STA 1069+00 TO STA 1073+00 - STA 1073+00 TO STA 1077+00
186	D111	SOUTHBOUND AND NORTHBOUND TRACK DRAINAGE PLAN	STA 1077+00 TO STA 1081+00 - STA 1081+00 TO STA 1085+00
187	D112	SOUTHBOUND AND NORTHBOUND TRACK DRAINAGE PLAN	STA 1085+00 TO STA 1089+00 - STA 1089+00 TO STA 1093+00
188	D113	SOUTHBOUND AND NORTHBOUND TRACK DRAINAGE PLAN	STA 1093+00 TO STA 1097+00 - STA 1097+00 TO STA 1101+00
189	D114	SOUTHBOUND AND NORTHBOUND TRACK DRAINAGE PLAN	STA 1101+00 TO STA 1105+00 - STA 1105+00 TO STA 1109+00
190	D115	SOUTHBOUND AND NORTHBOUND TRACK DRAINAGE PLAN	STA 1109+00 TO STA 1113+00 - STA 1113+00 TO STA 1117+00
191	D116	SOUTHBOUND AND NORTHBOUND TRACK DRAINAGE PLAN	STA 1117+00 TO STA 1121+00 - STA 1121+00 TO STA 1125+00
192	D117	SOUTHBOUND AND NORTHBOUND TRACK DRAINAGE PLAN	STA 1125+00 TO STA 1129+00 - STA 1129+00 TO STA 1133+00
193	D118	SOUTHBOUND AND NORTHBOUND TRACK DRAINAGE PLAN	STA 1133+00 TO STA 1137+00 - STA 1137+00 TO STA 1141+00
194	D119	SOUTHBOUND AND NORTHBOUND TRACK DRAINAGE PLAN	STA 1141+00 TO STA 1145+00 - STA 1145+00 TO STA 1149+00
195	D120	SOUTHBOUND AND NORTHBOUND TRACK DRAINAGE PLAN	STA 1149+00 TO STA 1153+00 - STA 1153+00 TO STA 1157+00
196	D121	SOUTHBOUND AND NORTHBOUND TRACK DRAINAGE PLAN	STA 1157+00 TO STA 1161+00 - STA 1161+00 TO STA 1165+00
197	D122	SOUTHBOUND AND NORTHBOUND TRACK DRAINAGE PLAN	STA 1165+00 TO STA 1169+00 - STA 1169+00 TO STA 1173+00
198	D123	SOUTHBOUND AND NORTHBOUND TRACK DRAINAGE PLAN	STA 1173+00 TO STA 1177+00 - STA 1177+00 TO STA 1181+00
199	D124	SOUTHBOUND AND NORTHBOUND TRACK DRAINAGE PLAN	STA 1181+00 TO STA 1185+00
PLATFORM PLANS			
200	P201	TYPICAL PLATFORM PLAN - SQUARE	DETAILS
201	P202	TYPICAL PLATFORM PLAN - RECTANGLE	DETAILS


SHEET NO.	DRAWING NO.	TITLE	DESCRIPTION
202	P203	TYPICAL PLATFORM ELEVATION AND SECTION - SQUARE	DETAILS
203	P204	TYPICAL PLATFORM ELEVATION AND SECTION - RECTANGLE	DETAILS
204	P205	SQUARE SHELTER - PLANS, ELEVATIONS, SECTIONS	DETAILS
205	P206	RECTANGLE SHELTER - PLANS, ELEVATIONS, SECTIONS	DETAILS
SIGNAL PLANS			
206	T101	TRAFFIC SIGNAL LAYOUT PLAN	BROOKSIDE BOULEVARD AND 49TH STREET
207	T102	TRAFFIC SIGNAL LAYOUT PLAN	BROOKSIDE BOULEVARD AND VOLKER BOULEVARD
208	T103	TRAFFIC SIGNAL LAYOUT PLAN	BROOKSIDE BOULEVARD AND WARD PARKWAY
209	T104	TRAFFIC SIGNAL LAYOUT PLAN	BROOKWSIDE BLVD AND 47TH ST/EMANUEL CLEAVER II BLVD
210	T105	TRAFFIC SIGNAL LAYOUT PLAN	MAIN STREET AND 46TH STREET
211	T106	TRAFFIC SIGNAL LAYOUT PLAN	MAIN STREET AND 45TH STREET
212	T107	TRAFFIC SIGNAL LAYOUT PLAN	MAIN STREET AND 43RD STREET
213	T108	TRAFFIC SIGNAL LAYOUT PLAN	MAIN STREET AND 40TH STREET
214	T109	TRAFFIC SIGNAL LAYOUT PLAN	MAIN STREET AND WESTPORT ROAD
215	T110	TRAFFIC SIGNAL LAYOUT PLAN	MAIN STREET AND 39TH STREET
216	T111	TRAFFIC SIGNAL LAYOUT PLAN	MAIN STREET AND 37TH STREET
217	T112	TRAFFIC SIGNAL LAYOUT PLAN	MAIN STREET AND 36TH STREET
218	T113	TRAFFIC SIGNAL LAYOUT PLAN	MAIN STREET AND ARMOUR BOULEVARD
219	T114	TRAFFIC SIGNAL LAYOUT PLAN	MAIN STREET AND LINWOOD BOULEVARD
220	T115	TRAFFIC SIGNAL LAYOUT PLAN	MAIN STREET AND 31TH STREET
221	T116	TRAFFIC SIGNAL LAYOUT PLAN	MAIN STREET AND WARWICK TRAFFICWAY
222	T117	TRAFFIC SIGNAL LAYOUT PLAN	MAIN STREET AND GRAND BOULEVARD
223	T118	TRAFFIC SIGNAL LAYOUT PLAN	MAIN STREET AND 27TH STREET
224	T119	TRAFFIC SIGNAL LAYOUT PLAN	MAIN STREET AND PERSHING ROAD
225	T120	COMBINED SIGNAL / OCS MAST ARM	DETAIL
226	T121	AUXILIARY CABINET	DETAIL
SIGNING AND STRIPING PLANS			
227	S101	SIGNING AND STRIPING PLAN	STA 1000+00 TO STA 1001+00
228	S102	SIGNING AND STRIPING PLAN	STA 1001+00 TO STA 1005+00
229	S103	SIGNING AND STRIPING PLAN	STA 1005+00 TO STA 1009+00
230	S104	SIGNING AND STRIPING PLAN	STA 1009+00 TO STA 1013+00
231	S105	SIGNING AND STRIPING PLAN	STA 1013+00 TO STA 1017+00
232	S106	SIGNING AND STRIPING PLAN	STA 1017+00 TO STA 1021+00
233	S107	SIGNING AND STRIPING PLAN	STA 1021+00 TO STA 1025+00
234	S108	SIGNING AND STRIPING PLAN	STA 1025+00 TO STA 1029+00
235	S109	SIGNING AND STRIPING PLAN	STA 1029+00 TO STA 1033+00
236	S110	SIGNING AND STRIPING PLAN	STA 1033+00 TO STA 1037+00
237	S111	SIGNING AND STRIPING PLAN	STA 1037+00 TO STA 1041+00
238	S112	SIGNING AND STRIPING PLAN	STA 1041+00 TO STA 1045+00
239	S113	SIGNING AND STRIPING PLAN	STA 1045+00 TO STA 1049+00
240	S114	SIGNING AND STRIPING PLAN	STA 1049+00 TO STA 1053+00
241	S115	SIGNING AND STRIPING PLAN	STA 1053+00 TO STA 1057+00
242	S116	SIGNING AND STRIPING PLAN	STA 1057+00 TO STA 1061+00
243	S117	SIGNING AND STRIPING PLAN	STA 1061+00 TO STA 1065+00
244	S118	SIGNING AND STRIPING PLAN	STA 1065+00 TO STA 1069+00
245	S119	SIGNING AND STRIPING PLAN	STA 1069+00 TO STA 1073+00
246	S120	SIGNING AND STRIPING PLAN	STA 1073+00 TO STA 1077+00
247	S121	SIGNING AND STRIPING PLAN	STA 1077+00 TO STA 1081+00
248	S122	SIGNING AND STRIPING PLAN	STA 1081+00 TO STA 1085+00
249	S123	SIGNING AND STRIPING PLAN	STA 1085+00 TO STA 1089+00
250	S124	SIGNING AND STRIPING PLAN	STA 1089+00 TO STA 1093+00
251	S125	SIGNING AND STRIPING PLAN	STA 1093+00 TO STA 1097+00
252	S126	SIGNING AND STRIPING PLAN	STA 1097+00 TO STA 1101+00
253	S127	SIGNING AND STRIPING PLAN	STA 1101+00 TO STA 1105+00
254	S128	SIGNING AND STRIPING PLAN	STA 1105+00 TO STA 1109+00
255	S129	SIGNING AND STRIPING PLAN	STA 1109+00 TO STA 1113+00
256	S130	SIGNING AND STRIPING PLAN	STA 1113+00 TO STA 1117+00
257	S131	SIGNING AND STRIPING PLAN	STA 1117+00 TO STA 1121+00
258	S132	SIGNING AND STRIPING PLAN	STA 1121+00 TO STA 1125+00
259	S133	SIGNING AND STRIPING PLAN	STA 1125+00 TO STA 1129+00
260	S134	SIGNING AND STRIPING PLAN	STA 1129+00 TO STA 1133+00
261	S135	SIGNING AND STRIPING PLAN	STA 1133+00 TO STA 1137+00
262	S136	SIGNING AND STRIPING PLAN	STA 1137+00 TO STA 1141+00
263	S137	SIGNING AND STRIPING PLAN	STA 1141+00 TO STA 1145+00
264	S138	SIGNING AND STRIPING PLAN	STA 1145+00 TO STA 1149+00
265	S139	SIGNING AND STRIPING PLAN	STA 1149+00 TO STA 1153+00
266	S140	SIGNING AND STRIPING PLAN	STA 1153+00 TO STA 1157+00
267	S141	SIGNING AND STRIPING PLAN	STA 1157+00 TO STA 1161+00
268	S142	SIGNING AND STRIPING PLAN	STA 1161+00 TO STA 1165+00
269	S143	SIGNING AND STRIPING PLAN	STA 1165+00 TO STA 1169+00
270	S144	SIGNING AND STRIPING PLAN	STA 1169+00 TO STA 1173+00

REV	DATE	DESCRIPTION	DESIGNED BY JWR		PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SCALE FOR 22"x34": NOT TO SCALE FILENAME: Index of Drawings SH2 CONTRACT NO.: ***** VOLUME: 1	DRAWING NO.: G011	SHEET NO.: 3
			CHECKED BY RPB							
			DRAWN BY MMQ							
			CHECKED BY RPB							
			APPROVED BY NKS							
PLOT DATE: 8/26/2019 6:17:15 PM			DATE: 08/28/2019		NOT FOR CONSTRUCTION		INDEX OF DRAWINGS SHEET 2 OF 3			

SHEET NO.	DRAWING NO.	TITLE	DESCRIPTION
271	S145	SIGNING AND STRIPING PLAN	STA 1173+00 TO STA 1177+00
272	S146	SIGNING AND STRIPING PLAN	STA 1177+00 TO STA 1181+00
273	S147	SIGNING AND STRIPING PLAN	STA 1181+00 TO STA 1185+00
274	S148	SIGNING AND STRIPING PLAN	STA 1185+00 TO STA 1189+00
OVERHEAD CONTACT SYSTEM PLANS			
275	Y001	NOTES	GENERAL SHEETS
276	Y002	SYMBOLS AND ABBREVIATIONS	GENERAL SHEETS
277	Y003	CONDUCTOR PARTICULARS	TECHNICAL SHEETS
278	Y004	VERTICAL ELECTRICAL CLEARANCE REQUIREMENTS	TECHNICAL SHEETS
279	Y005	PANTOGRAPH SECURITY	TECHNICAL SHEETS
280	Y006	TYPICAL OFFSET AND STAGGER DETAILS	TECHNICAL SHEETS
281	Y007	INSTALLATION TENSION CHART	TECHNICAL SHEETS
282	Y008	ALONG TRACK MOVEMENT CHART	TECHNICAL SHEETS
283	Y011	TYPICAL OVERLAP ARRANGEMENT	TYPICAL ARRANGEMENTS
284	Y021	TYPICAL POLE DETAILS	STRUCTURAL DETAILS
285	Y022	FEEDER POLE DETAILS	STRUCTURAL DETAILS
286	Y023	STREETLIGHT POLE DETAILS	STRUCTURAL DETAILS
287	Y024	LIGHT MOUNTING DETAIL	STRUCTURAL DETAILS
288	Y026	TYPICAL POLE FOUNDATION DETAIL	STRUCTURAL DETAILS
289	Y027	FEEDER POLE FOUNDATION DETAIL	STRUCTURAL DETAILS
290	Y028	STREETLIGHT POLE FOUNDATION DETAIL	STRUCTURAL DETAILS
291	Y029	ANCHOR BOLT DETAIL	STRUCTURAL DETAILS
292	Y031	SINGLE PIPE BRACKET ARM	BRACKET ARM ASSEMBLIES
293	Y032	DOUBLE PIPE BRACKET ARM	BRACKET ARM ASSEMBLIES
294	Y033	OVERLAP SINGLE PIPE BRACKET ARM	BRACKET ARM ASSEMBLIES
295	Y036	POLE CLAMP DETAILS	BRACKET ARM ASSEMBLIES
296	Y037	BRACKET ARM POLE SOCKET	BRACKET ARM ASSEMBLIES
297	Y038	OVERLAP BRACKET ARM MOUNTING BRACKET DETAIL	BRACKET ARM ASSEMBLIES
298	Y041	CROSS SPAN DETAILS	SPAN WIRE ARRANGEMENTS
299	Y042	HEADSPAN ASSEMBLY	SPAN WIRE ARRANGEMENTS
300	Y046	PULLOVER ASSEMBLIES (SHEET 1 OF 2)	REGISTRATION ASSEMBLIES
301	Y047	PULLOVER ASSEMBLIES (SHEET 2 OF 2)	REGISTRATION ASSEMBLIES
302	Y048	PENDULUM SUSPENSION ASSEMBLIES	REGISTRATION ASSEMBLIES
303	Y049	SUSPENSION ASSEMBLIES	REGISTRATION ASSEMBLIES
304	Y051	JUMPER ASSEMBLIES	IN-SPAN ASSEMBLIES
305	Y052	SECTION INSULATOR ASSEMBLY	IN-SPAN ASSEMBLIES
306	Y053	TYPICAL SPLICE DETAILS	IN-SPAN ASSEMBLIES
307	Y054	SPAN SPACER AND CONTACT WIRE BRIDGE ASSEMBLIES	IN-SPAN ASSEMBLIES
308	Y056	FEEDER TAP DETAILS	SWITCHING AND FEEDER ASSEMBLIES
309	Y057	SURGE ARRESTER DETAILS	SWITCHING AND FEEDER ASSEMBLIES
310	Y066	FIXED TERMINATION ASSEMBLY	TERMINATION ASSEMBLIES
311	Y067	SPRING TENSIONER TERMINATION ASSEMBLY	TERMINATION ASSEMBLIES
312	Y071	POLE NUMBERING DETAIL	MISCELLANEOUS
313	Y091	POLE FOUNDATION SCHEDULE (SHEET 1 OF 6)	STRUCTURE SCHEDULE
314	Y092	POLE FOUNDATION SCHEDULE (SHEET 2 OF 6)	STRUCTURE SCHEDULE
315	Y093	POLE FOUNDATION SCHEDULE (SHEET 3 OF 6)	STRUCTURE SCHEDULE
316	Y094	POLE FOUNDATION SCHEDULE (SHEET 4 OF 6)	STRUCTURE SCHEDULE
317	Y095	POLE FOUNDATION SCHEDULE (SHEET 5 OF 6)	STRUCTURE SCHEDULE
318	Y096	POLE FOUNDATION SCHEDULE (SHEET 6 OF 6)	STRUCTURE SCHEDULE
319	Y098	KEY MAP	
320	Y099	MASTER OVERLAP CHART (SHEET 1 OF 2)	LAYOUT PLAN
321	Y100	MASTER OVERLAP CHART (SHEET 2 OF 2)	LAYOUT PLAN
322	Y101	SB STA BEGIN TO STA 1001+00	LAYOUT PLAN (SHEET 1 OF 48)
323	Y102	SB STA 1001+00 TO STA 1005+00	LAYOUT PLAN (SHEET 2 OF 48)
324	Y103	SB STA 1005+00 TO STA 1009+00	LAYOUT PLAN (SHEET 3 OF 48)
325	Y104	SB STA 1009+00 TO STA 1013+00	LAYOUT PLAN (SHEET 4 OF 48)
326	Y105	SB STA 1013+00 TO STA 1017+00	LAYOUT PLAN (SHEET 5 OF 48)
327	Y106	SB STA 1017+00 TO STA 1021+00	LAYOUT PLAN (SHEET 6 OF 48)
328	Y107	SB STA 1021+00 TO STA 1025+00	LAYOUT PLAN (SHEET 7 OF 48)
329	Y108	SB STA 1025+00 TO STA 1029+00	LAYOUT PLAN (SHEET 8 OF 48)
330	Y109	SB STA 1029+00 TO STA 1033+00	LAYOUT PLAN (SHEET 9 OF 48)
331	Y110	SB STA 1033+00 TO STA 1037+00	LAYOUT PLAN (SHEET 10 OF 48)
332	Y111	SB STA 1037+00 TO STA 1041+00	LAYOUT PLAN (SHEET 11 OF 48)
333	Y112	SB STA 1041+00 TO STA 1045+00	LAYOUT PLAN (SHEET 12 OF 48)
334	Y113	SB STA 1045+00 TO STA 1049+00	LAYOUT PLAN (SHEET 13 OF 48)
335	Y114	SB STA 1049+00 TO STA 1053+00	LAYOUT PLAN (SHEET 14 OF 48)
336	Y115	SB STA 1053+00 TO STA 1057+00	LAYOUT PLAN (SHEET 15 OF 48)
337	Y116	SB STA 1057+00 TO STA 1061+00	LAYOUT PLAN (SHEET 16 OF 48)
338	Y117	SB STA 1061+00 TO STA 1065+00	LAYOUT PLAN (SHEET 17 OF 48)
339	Y118	SB STA 1065+00 TO STA 1069+00	LAYOUT PLAN (SHEET 18 OF 48)
340	Y119	SB STA 1069+00 TO STA 1073+00	LAYOUT PLAN (SHEET 19 OF 48)

REV	DATE	DESCRIPTION	DESIGNED BY	JWR
			CHECKED BY	RPB
			DRAWN BY	MMQ
			CHECKED BY	RPB
			APPROVED BY	NKS
PLOT DATE:		8/26/2019	DATE	
		6:17:26 PM		
		08/28/2019		



PRELIMINARY PLANS - 30%		DATE: 08-28-2019
 <div>HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856</div>		
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SHEET NO.	DRAWING NO.	TITLE	DESCRIPTION
341	Y120	SB STA 1073+00 TO STA 1077+00	LAYOUT PLAN (SHEET 20 OF 48)
342	Y121	SB STA 1077+00 TO STA 1081+00	LAYOUT PLAN (SHEET 21 OF 48)
343	Y122	SB STA 1081+00 TO STA 1085+00	LAYOUT PLAN (SHEET 22 OF 48)
344	Y123	SB STA 1085+00 TO STA 1089+00	LAYOUT PLAN (SHEET 23 OF 48)
345	Y124	SB STA 1089+00 TO STA 1093+00	LAYOUT PLAN (SHEET 24 OF 48)
346	Y125	SB STA 1093+00 TO STA 1097+00	LAYOUT PLAN (SHEET 25 OF 48)
347	Y126	SB STA 1097+00 TO STA 1101+00	LAYOUT PLAN (SHEET 26 OF 48)
348	Y127	SB STA 1101+00 TO STA 1105+00	LAYOUT PLAN (SHEET 27 OF 48)
349	Y128	SB STA 1105+00 TO STA 1109+00	LAYOUT PLAN (SHEET 28 OF 48)
350	Y129	SB STA 1109+00 TO STA 1113+00	LAYOUT PLAN (SHEET 29 OF 48)
351	Y130	SB STA 1113+00 TO STA 1117+00	LAYOUT PLAN (SHEET 30 OF 48)
352	Y131	SB STA 1117+00 TO STA 1121+00	LAYOUT PLAN (SHEET 31 OF 48)
353	Y132	SB STA 1121+00 TO STA 1125+00	LAYOUT PLAN (SHEET 32 OF 48)
354	Y133	SB STA 1125+00 TO STA 1129+00	LAYOUT PLAN (SHEET 33 OF 48)
355	Y134	SB STA 1129+00 TO STA 1133+00	LAYOUT PLAN (SHEET 34 OF 48)
356	Y135	SB STA 1133+00 TO STA 1137+00	LAYOUT PLAN (SHEET 35 OF 48)
357	Y136	SB STA 1137+00 TO STA 1141+00	LAYOUT PLAN (SHEET 36 OF 48)
358	Y137	SB STA 1141+00 TO STA 1145+00	LAYOUT PLAN (SHEET 37 OF 48)
359	Y138	SB STA 1145+00 TO STA 1149+00	LAYOUT PLAN (SHEET 38 OF 48)
360	Y139	SB STA 1149+00 TO STA 1153+00	LAYOUT PLAN (SHEET 39 OF 48)
361	Y140	SB STA 1153+00 TO STA 1157+00	LAYOUT PLAN (SHEET 40 OF 48)
362	Y141	SB STA 1157+00 TO STA 1161+00	LAYOUT PLAN (SHEET 41 OF 48)
363	Y142	SB STA 1161+00 TO STA 1165+00	LAYOUT PLAN (SHEET 42 OF 48)
364	Y143	SB STA 1165+00 TO STA 1169+00	LAYOUT PLAN (SHEET 43 OF 48)
365	Y144	SB STA 1169+00 TO STA 1173+00	LAYOUT PLAN (SHEET 44 OF 48)
366	Y145	SB STA 1173+00 TO STA 1177+00	LAYOUT PLAN (SHEET 45 OF 48)
367	Y146	SB STA 1177+00 TO STA 1181+00	LAYOUT PLAN (SHEET 46 OF 48)
368	Y147	SB STA 1181+00 TO STA 1185+00	LAYOUT PLAN (SHEET 47 OF 48)
369	Y148	SB STA 1185+00 TO STA 1189+00	LAYOUT PLAN (SHEET 48 OF 48)
TRACTION POWER PLANS			
370	J601	TRACTION POWER SYMBOLS	GENERAL SHEETS
371	J602	TRACTION POWER ABBREVIATIONS	GENERAL SHEETS
372	J605	TRACTION POWER SYSTEM	MASTER SINGLE LINE DIAGRAM
373	J606	TRACTION POWER SYSTEM	MASTER SINGLE LINE DIAGRAM
374	J610	TYPICAL MAINLINE TPSS	SINGLE LINE DIAGRAM
375	J620	TYPICAL PREFABRICATED TPSS	EQUIPMENT LAYOUT PLAN
376	J630	TPSS C9	SITE ELECTRICAL PLAN
377	J631	TPSS C10	SITE ELECTRICAL PLAN
STRUCTURAL PLANS			
378	ST101	MAIN STREET VIADUCT OVER KCTRR	TYPICAL SECTION
379	ST102	MAIN STREET BRIDGE OVER BRUSH CREEK	TYPICAL SECTION
380	W101	BLOCK RETAINING WALL - SOUTHERN TERMINUS PLATFORM	PLAN / ELEVATION VIEW
381	W102	BLOCK RETAINING WALL - SOUTHERN TERMINUS PLATFORM	SECTION VIEW
382	W103	BLOCK RETAINING WALL - SOUTH OF VOLKER BOULEVARD	PLAN / ELEVATION VIEW
383	W104	BLOCK RETAINING WALL - SOUTH OF VOLKER BOULEVARD	SECTION VIEW
384	W105	BLOCK RETAINING WALL - BUS PLAZA PLATFORM	PLAN / ELEVATION VIEW
385	W106	BLOCK RETAINING WALL - BUS PLAZA PLATFORM	SECTION VIEW
PARKING LOT PLANS			
386	PL101	MILL & OVERLAY - PARKING LOT	DEMOLITION PLAN
387	PL102	STRIPING - PARKING LOT	LAYOUT PLAN

KANSAS CITY STREETCAR MAIN STREET EXTENSION		SCALE FOR 22"x34": NOT TO SCALE FILENAME: Index of Drawings SH3 CONTRACT NO.: ***** VOLUME: 1
INDEX OF DRAWINGS SHEET 3 OF 3		DRAWING NO.: G012
		SHEET NO.: 4

STANDARD ABBREVIATIONS

GENERAL ABBREVIATIONS

O
OC or O.C. ON CENTER or ON CENTERS
OCS OVERHEAD CATENARY SYSTEM
OD or O.D. OUTSIDE DIAMETER or OUTSIDE DIMENSION
OFO OVERHEAD FIBER OPTIC
OHC OVERHEAD COAXIAL
OHP OVERHEAD POWER
OHT OVERHEAD TELEPHONE
OPP OPPOSITE

P
P PIPE
(P) PASSENGER
PB PULL BOX
PCC PORTLAND CEMENT CONCRETE
PCCP PORTLAND CEMENT CONCRETE PAVEMENT
PCL PROJECT CONTROL LINE
PE POLYETHYLENE
PED PEDESTRIAN
PF POINT OF FROG
PGL PROFILE GRADE LINE
PKG PARKING
PL PROPERTY LINE
PLUM'G PLUMBING
POL POINT ON LINE
PP POWER POLE
PROP PROPERTY
PR PROPOSED
PEP POLYETHYLENE PIPE
(PO) POWER OPERATED
PSF POUNDS PER SQUARE FOOT
PSI POUNDS PER SQUARE INCH
PET PETROLEUM
PVC POLYVINYL CHLORIDE
PVMT PAVEMENT

Q
QTY QUANTITY
QUAD QUADRANT

R
R RADIUS
RC REINFORCED CONCRETE
RCB REINFORCED CONCRETE BOX
RCH REACH
RCP REINFORCED CONCRETE PIPE
RD ROAD
RE AREA/AREMA
RECT RECTANGLE or RECTIFIER
REF REFERENCE
REINF REINFORCE, REINFORCED or REINFORCEMENT
REM REMOVE
RET RETAINING
REV REVISE, REVISED or REVISION
REQ'D REQUIRED
RGS RIGID GALVANIZED STEEL
RH RIGHT HAND
RR RAILROAD
RRS or RS RAILROAD SIGNAL
RSC RAILROAD SIGNAL & COMMUNICATION
RT RIGHT
RTS RETENTION SWALE
RET W OR RW RETAINING WALL
ROW or R/W RIGHT OF WAY
RVR RIVER
RY RAILWAY

S
S SOUTH or SLOPE
SALV SALVAGE
SB SOUTHBOUND
SC STREET CAR
SD STORM DRAIN
SDC STORM DRAIN CULVERT
SDCB STORM DRAIN CATCH BASIN
SDCO STORM DRAIN CLEAN OUT
SDD STORM DRAIN DITCH
SDMH STORM DRAIN MANHOLE
SDP STORM DRAIN PIPE
SDPS STORM DRAIN PUMP STATION
SDS STORM DRAIN SWALE
SDV STORM DRAIN VAULT
SE SOUTHEAST
SECT SECTION
SGL SUB-GRADE LINE
SHT SHEET
SIG SIGNAL
SIM SIMILAR
SL SEWER LATERAL
SLP SLOPE
SMH SEWER MANHOLE

S/N SOUTH OF NORTH RIGHT-OF-WAY LINE
S/O SOUTH OF
SP SPACE or SPACING or SIGNAL POLE or STATION POINT
SPEC SPECIFICATIONS
SO SQUARE
S/S SOUTH OF SOUTH RIGHT-OF-WAY LINE
SSP SMOOTH STEEL PIPE
ST STREET
STA STATION
STD STANDARD
STL STEEL
STOR STORAGE
STR OR STRUCT STRUCTURE
SW SOUTHWEST, SWITCH or SIDEWALK
SWR OR SS SANITARY SEWER
SYM SYMMETRICAL

T
T or TEL TELEPHONE
TAN TANGENT
TB TOP OF BALLAST
TBC TOP BACK OF CURB
TBD TO BE DETERMINED
TBS TO BE SURVEYED
TCB TRAFFIC CONTROL BOX
TD TRACK DRAIN
TEMP TEMPERATURE or TEMPORARY
TERM TERMINAL
TF TRACK FOOT
TG TOP OF GRADE or TOP OF GRATE
TH TEST HOLE
THK THICK or THICKNESS
THRU THROUGH
TL TRAFFIC LIGHT or TOE LENGTH
TMH TELEPHONE MANHOLE
T.O. TOP OF
TOC TRAFFIC OPERATIONS CENTER
TOD TRANSIT ORIENTED DEVELOPMENT
TOP TOP OF PIPE
T/R or TOR TOP OF RAIL
TOS TOE OF SLOPE
TPSS TRACTION POWER SUBSTATION
TRANS. TRANSITION
TRK TRACK
TS TRAFFIC SIGNAL
T.S. TYPICAL SECTION
TSB TOP OF SUB-BALLAST
TSC TRAFFIC SIGNAL CONDUIT
TV TELEVISION
T/W TOP OF WALL
TYP TYPICAL

U
UD UNDERDRAIN
UFO UNDERGROUND FIBER OPTIC
UG UNDERGROUND
UGC UNDERGROUND COAXIAL
UGP UNDERGROUND POWER
UGT UNDERGROUND TELEPHONE
UNO or UON UNLESS NOTED OTHERWISE
UNK UNKNOWN
UPRR UNION PACIFIC RAILROAD
URC UNREINFORCED CONCRETE
US UNITED STATES

V
V VALVE or VELOCITY
VAR VARIES or VARIABLE
VC VERTICAL CURVE
VCP VITRIFIED CLAY PIPE
VERT VERTICAL
VLT VAULT
VMF VEHICLE MAINTENANCE FACILITY
VMS VARIABLE MESSAGE SIGN

W
W WEST or WATER or WIDTH
W/ WITH
WB WESTBOUND
W/E WEST OF EAST RIGHT-OF-WAY LINE
WIP WROUGHT IRON PIPE
WL WATER LEVEL
WM WATER METER
W/O WITHOUT or WEST OF
WP WEATHERPROOF
WR WIRE RUN
WS WATER SERVICE
WSP WELDED STEEL PIPE
WTR WATER
WV WATER VALVE
W/W WEST OF WEST RIGHT-OF-WAY LINE
WSE WATER SURFACE ELEVATION
WW WING WALL

X
X-DRAIN CROSS DRAIN
X-ING CROSSING
X-SECT CROSS SECTION

> GREATER THAN
≥ GREATER THAN OR EQUAL TO
< LESS THAN
≤ LESS THAN OR EQUAL TO

REV		DATE	DESCRIPTION	DESIGNED BY	JWR			PRELIMINARY PLANS - 30%		DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SCALE FOR 22"x34": NOT TO SCALE FILENAME: Standard Abbreviations SH2 CONTRACT NO.: ***** VOLUME: 1		
				CHECKED BY	RPB			 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	NOT FOR CONSTRUCTION			DRAWING NO.:	SHEET NO.:	
				DRAWN BY	MMO							G031	6	
				CHECKED BY	RPB									
				APPROVED BY	NKS									
PLOT DATE:		8/26/2019	6:17:46 PM	DATE	08/28/2019									

STANDARD SYMBOLS

EXISTING UTILITIES

CATV CCES (SUREWEST)	CTV1
CATV CCES (SUREWEST) PER RECORD DRAWING	CTV1(R)
CATV SPECTRUM	CTV
CATV SPECTRUM PER RECORD DRAWING	CTV(R)
FIBER GOOGLE PER RECORD DRAWING	E3
ELEC KCATA	E3(R)
ELEC KCATA PER RECORD DRAWING	E5
ELEC KCP L	E5(R)
ELEC KCP L PER RECORD DRAWING	E
ELEC LINE	E(R)
ELEC LINE STREET LIGHTS	E1
ELEC LINE STREET LIGHTS PER RECORD DRAWING	E1(R)
ELEC UNION HILL	E4
FIBER ATTD	F1
FIBER CENTURY LINK	F7
FIBER CENTURY LINK PER RECORD DRAWING	F7(R)
FIBER EXTENET	F11
FIBER EXTENET SYSTEMS PER RECORD DRAWING	F11(R)
FIBER GOOGLE	F
FIBER GOOGLE PER RECORD DRAWING	F(R)
FIBER L3	F2
FIBER L3 PER RECORD DRAWING	F2(R)
FIBER QUEST	F3
FIBER SPRINT NEXTEL PER RECORD DRAWING	F9(R)
FIBER SURVEWEST	F4
FIBER SURVEWEST PER RECORD DRAWING	F4(R)

FIBER TRAFFIC	F5
FIBER TWC	F6
FIBER TWC PER RECORD DRAWING	F6(R)
FIBER WINDSTREAM COMM PER RECORD DRAWING	F10(R)
FIBER ZAYO PER RECORD DRAWING	F8(R)
GAS LINE	G
GAS LINE PER RECORD DRAWING	G(R)
GAS SERVICE	GS
GAS SERVICE PER RECORD DRAWING	GS(R)
SANITARY PIPE	TYPE
SANITARY PIPE PER RECORD DRAWING	TYPE
STORM PIPES	TYPE
TELEPHONE ATTD	T1
TELEPHONE ATTD PER RECORD DRAWING	T1(R)
TELEPHONE CCES (SURVEWEST)	T4
TELEPHONE CCES (SURVEWEST) PER RECORD DRAWING	T4(R)
TELEPHONE LINE	T
TELEPHONE LINE PER RECORD DRAWING	T(R)
TELEPHONE MCI	T2
TELEPHONE MCI PER RECORD DRAWING	T2(R)
TELEPHONE UMKC	T7
TELEPHONE UNITE	T8
WATER SERVICES	W/S
WATER SERVICES PER RECORD DRAWING	W/S(R)
WATERLINE	W
WATERLINE PER RECORD DRAWING	W(R)

PROPOSED TRACK

EXISTING TRACK ALIGNMENT	
TRACK ALIGNMENT AND TRACK SLAB	
RIGHT-HAND TURNOUT	
LEFT-HAND TURNOUT	
SAWCUT - ROADWAY	
STOP PLATFORM	

PROPOSED STRIPING

BROKEN LINE	
SOLID LINE	
DOUBLE SOLID LINE	
DOTTED LINE AND AUXILIARY LANE LINE	
SHARED LEFT TURN LINE	
HATCH LINE	
PAVEMENT MARKING ARROWS	
STOP LINE	
YIELD LINE	
CROSSWALK LINES BLOCK STYLE	
CROSSWALK LINES PARALLEL STYLE FOR TINTED CONCRETE CROSSWALKS	

EXISTING TOPO

FENCE		SANITARY MANHOLE	
FENCE		SIGN	
ELEC MANHOLE		STORM INLET	
FIBER MANHOLE		STORM MANHOLE	
FLAG		TELEPHONE MANHOLE	
GAS MANHOLE		TRAFFIC ITEMS	
GUY WIRE		TREES	
HYDRANT		VALVE	
LIGHT POLE		WATER MANHOLE	
METERS		WELL	
OCS			

PROPOSED SIGNAL

TRAFFIC SIGNAL HEAD		OPTICOM DETECTOR	
TRAFFIC SIGNAL HEAD WITH BACK PLATE		RADAR DETECTOR	
PEDESTRIAN SIGNAL HEAD		SIGNAL FACE NUMBER	
MAST ARM POLE		SHOEBOX LUMINAIRE	
SIGNAL PEDESTAL		PAN, TILT AND ZOOM CAMERA	
CONTROLLER		SIGN POST	
SPAN WIRE WITH SIGNAL HEAD			

PROPOSED DRAINAGE

DRAINAGE INLET	
DRAINAGE PIPE	
MANHOLE	


PROPOSED OCS

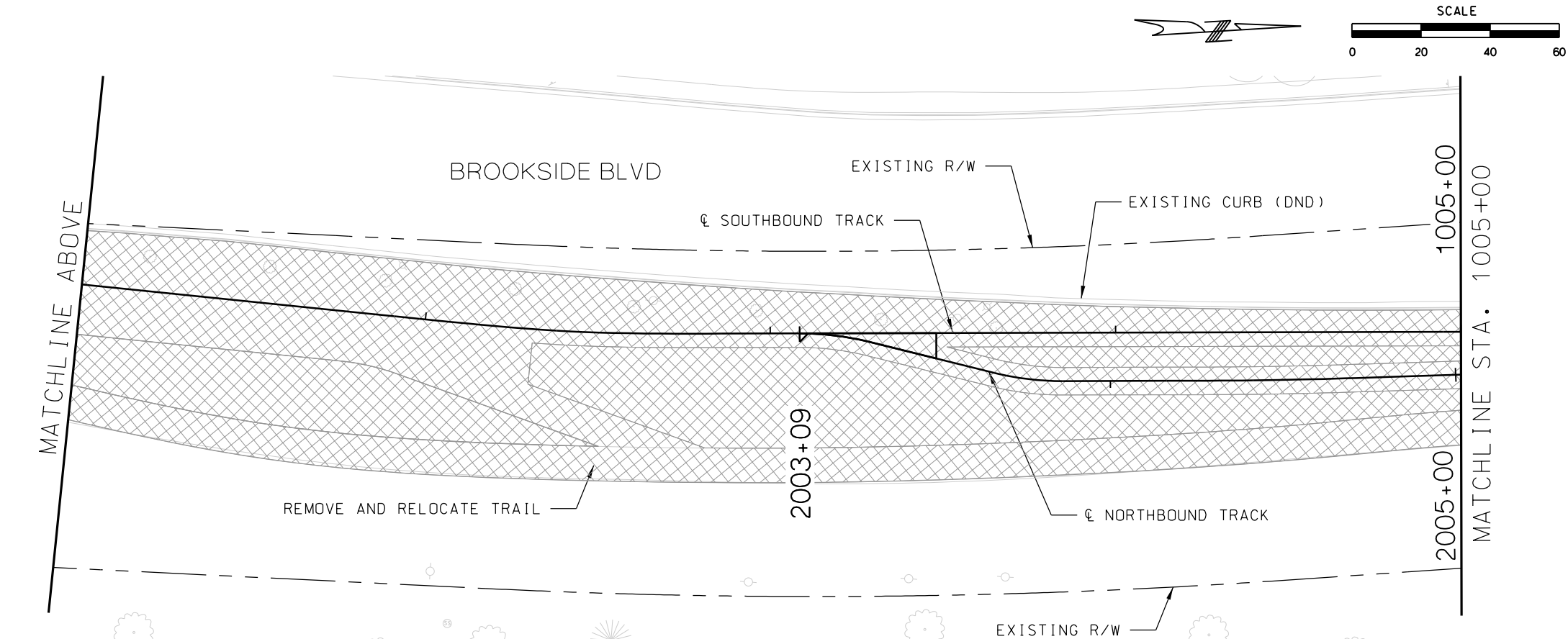
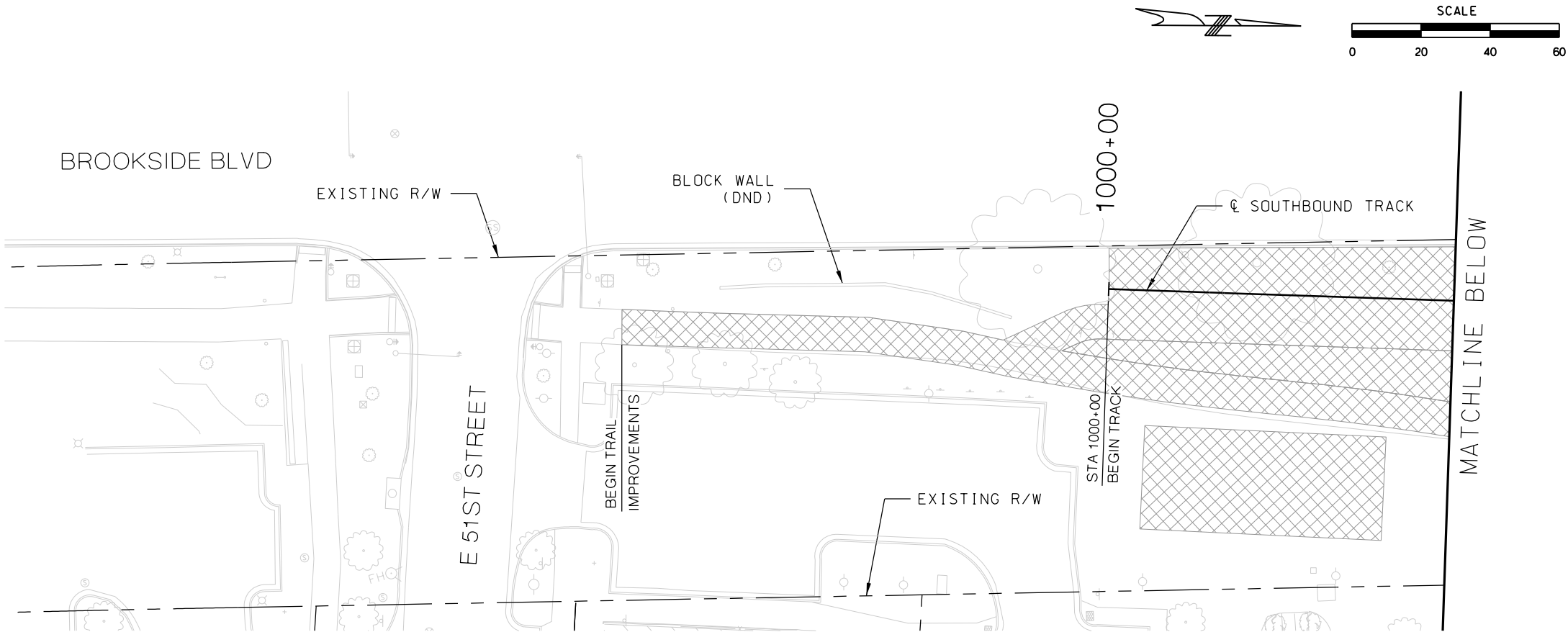
OCS POLE	
OCS SPRING TENSIONNER	
OCS STAGGER CIRCLE	
OCS TEMP LINE	
OCS WIRE	

REV	DATE	DESCRIPTION	DESIGNED BY	JWR		PRELIMINARY PLANS - 30%		DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION		SCALE FOR 22"x34": NOT TO SCALE	
			CHECKED BY	RPB				HDR Engineering, Inc.	STANDARD SYMBOLS		FILENAME:	
			DRAWN BY	MMQ		10450 Holmes Road					Standard Symbols	
			CHECKED BY	RPB		Suite 600					CONTRACT NO.:	
			APPROVED BY	NKS		Kansas City, MO 64131-3471					*****	
						816-360-2700					VOLUME:	
PLOT DATE: 8/26/2019		6:17:54 PM		DATE: 08/28/2019		NOT FOR CONSTRUCTION					DRAWING NO.:	SHEET NO.:
											G035	7

GENERAL NOTES – KANSAS CITY STREETCAR

1.
- ALL MATERIALS AND WORK REQUIRED FOR THE PROJECT SHALL CONFORM TO THE KANSAS CITY METRO CHAPTER APWA STANDARD SPECIFICATIONS (AND SUPPLEMENTS) AND DESIGN CRITERIA, AS REVISED, ADOPTED AND PROVIDED BY KCMO ON THE KCMO.GOV WEBSITE
(<https://www.kcmo.gov/city-hall/departments/public-works/public-works-design-construction-standards>).
2.
- RIGHT-OF-WAY LINES SHOWN ARE BASED ON RECORDED SURVEY INFORMATION ON RECORD WITH THE CITY OF KANSAS CITY AND JACKSON COUNTY.
3.
- CONTRACTOR TO VERIFY VERTICAL CLEARANCES FROM THE PROPOSED TRACKS TO OVERHEAD FACILITIES (ELECTRIC, CABLE, TELEPHONE).
4.
- ALL GRADIENTS ARE IN PERCENT UNLESS NOTED OTHERWISE.
5.
- THE KANSAS CITY STREETCAR TRACK IS DESIGNED PER THE KANSAS CITY STREETCAR DESIGN CRITERIA.
6.
- STATIONING SHOWN ON TYPICAL SECTIONS IS APPROXIMATE. ALL STATIONING REFERS TO SOUTHBOUND TRACK, UNLESS NOTED OTHERWISE.
7.
- GUIDELINES FROM THE AMERICAN RAILWAY ENGINEERING AND MAINTENANCE-OF-WAY ASSOCIATION’S (AREMA) “MANUAL FOR TRACK ENGINEERING”, LATEST EDITION, ARE USED FOR VARIOUS ASPECTS OF THE DESIGN.
8.
- GUIDELINES FROM THE FHWA “MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES” (MUTCD), 2009 EDITION, AND KANSAS CITY PUBLIC WORKS STANDARD DRAWINGS, LATEST REVISION, ARE USED FOR VARIOUS ASPECTS OF THE DESIGN.
9.
- TRACK PROFILES REPRESENT TOP OF RAIL PROFILE UNLESS NOTED OTHERWISE. WHERE APPLICABLE, SIDING TOP OF RAIL PROFILE SIMILAR.
10.
- THE RAIL PROFILE IS ALWAYS CARRIED ON THE LOW RAIL THROUGH SUPERELEVATED HORIZONTAL CURVES AND SPIRALS.
11.
- SUPERELEVATION IS ACCOMPLISHED BY MAINTAINING TOP OF INSIDE (LOW) RAIL AT PROFILE GRADE AND BY RAISING OUTSIDE (HIGH) RAIL AN AMOUNT EQUAL TO THE SUPERELEVATION.
12.
- UTILITIES SHOWN ON THE PLAN SHEETS ARE BASED ON INFORMATION RECEIVED FROM MUNICIPALITIES, AGENCIES, AND PRIVATE COMPANIES. ALL EXISTING UTILITY LOCATIONS ARE APPROXIMATE AND REQUIRE FIELD VERIFICATION THROUGH POTHOLING AND FIELD SURVEY.
13.
- TRACKS ON PLAN AND PROFILE DRAWINGS ARE INDICATED BY CENTERLINE OF TRACK. EXCEPT WHERE INDICATED, OFFSET DISTANCES FROM TRACK TO OTHER FACILITIES ARE MEASURED FROM CENTERLINE OF TRACK.
14.
- SEE SHEETS K102, K120 AND K146 FOR STATIONING THROUGH 25 METER TURNOUTS.
15.
- TURNOUT HEADBLOCK TIES AND SWITCH MACHINES SHALL BE INSTALLED BETWEEN THE RAILS AT THE LOCATION LABELED AS PT_SW ON THE PLANS.
16.
- CONTRACTOR TO REVIEW GEOTECHNICAL REPORT FOR EXISTING CONDITIONS.
17.
- THE KANSAS CITY STREETCAR PROJECT IS FEDERALLY FUNDED; ALL MATERIALS MUST MEET BUY AMERICA REQUIREMENTS.
18.
- THESE GENERAL NOTES ARE GENERAL IN NATURE AND PROJECTWIDE. ANY NOTES ON SPECIFIC SHEETS THAT ARE IN CONFLICT SUPERCEDE THESE GENERAL NOTES.

REV	DATE	DESCRIPTION	DESIGNED BY JWR		PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	GENERAL NOTES	SCALE FOR 22"x34": NOT TO SCALE FILENAME: General Notes CONTRACT NO.: ***** VOLUME: 1 DRAWING NO.: G040 SHEET NO.: 8
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			DRAWN BY MMO						
			CHECKED BY RPB						
			APPROVED BY NKS						
PLOT DATE: 8/26/2019 6:18:00 PM			DATE: 08/28/2019	NOT FOR CONSTRUCTION					



LEGEND


 REMOVAL LIMITS

REV	DATE	DESCRIPTION
PLOT DATE: 8/26/2019		6:19:47 PM

DESIGNED BY	JWR
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DRAWN BY	MMO
CHECKED BY	RPB
APPROVED BY	NKS
DATE	08/28/2019



PRELIMINARY PLANS - 30%DATE: 08-28-2019

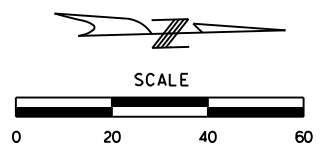
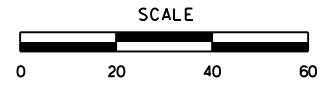
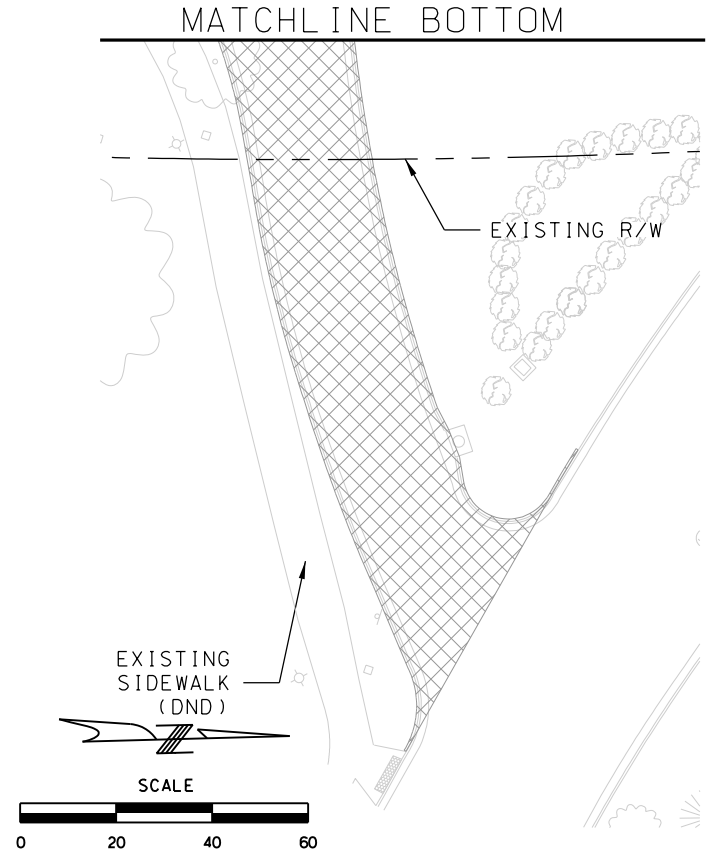
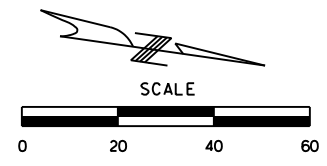
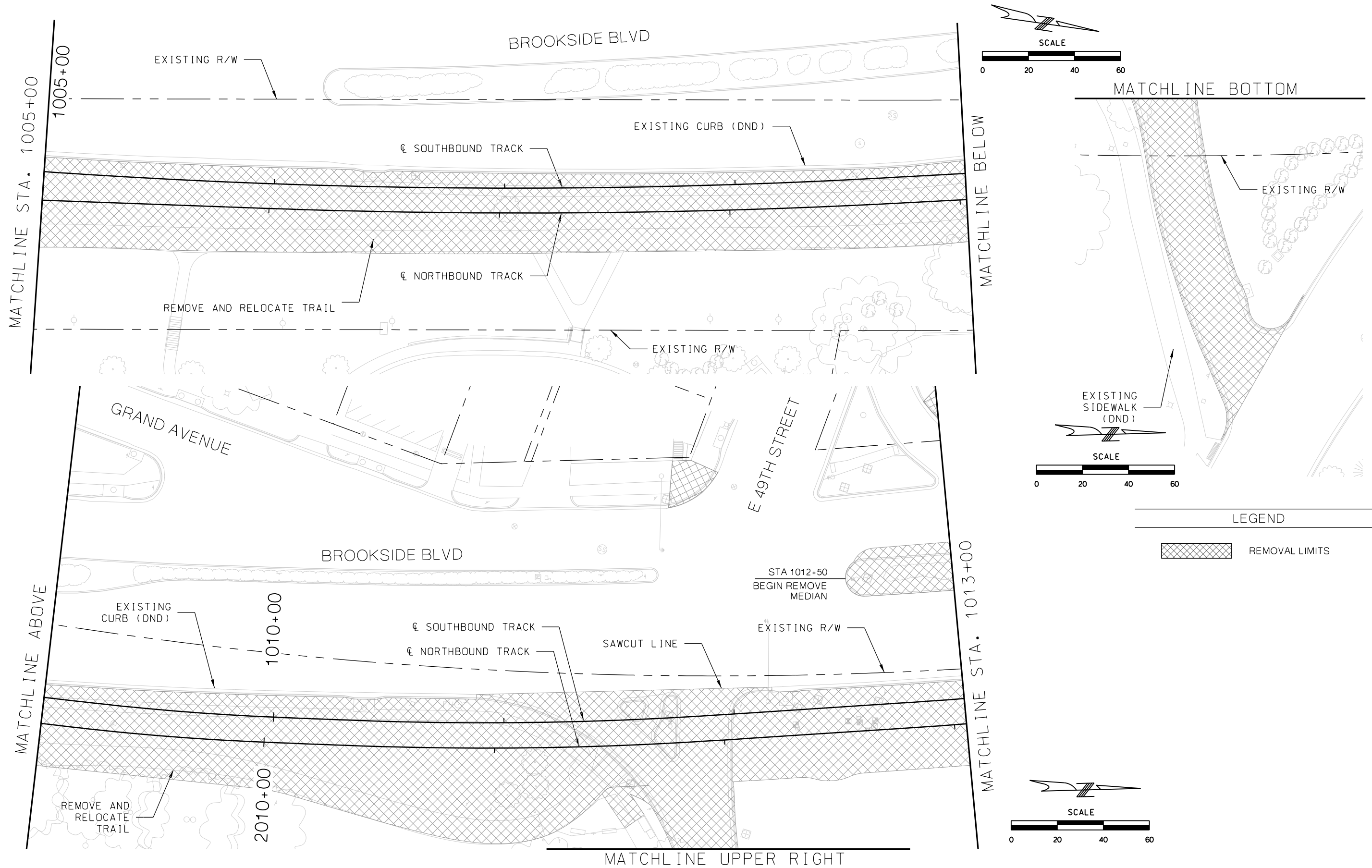


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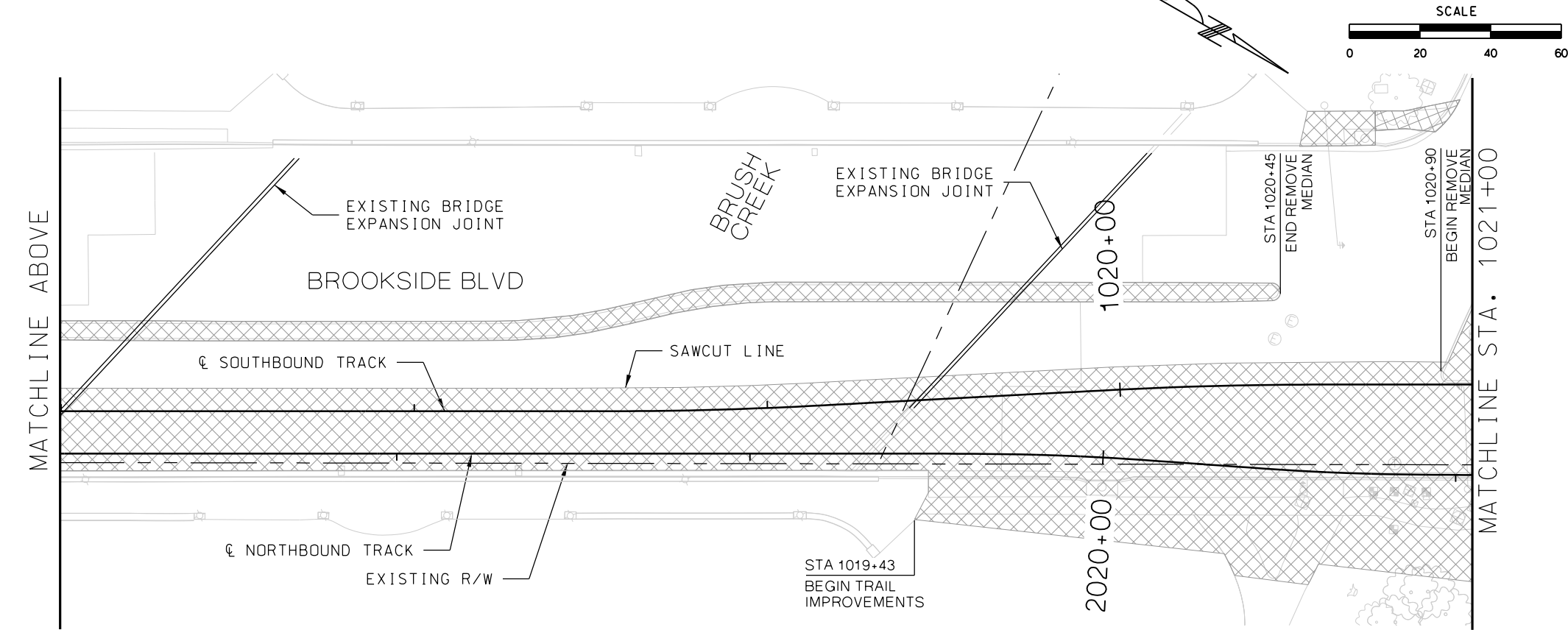
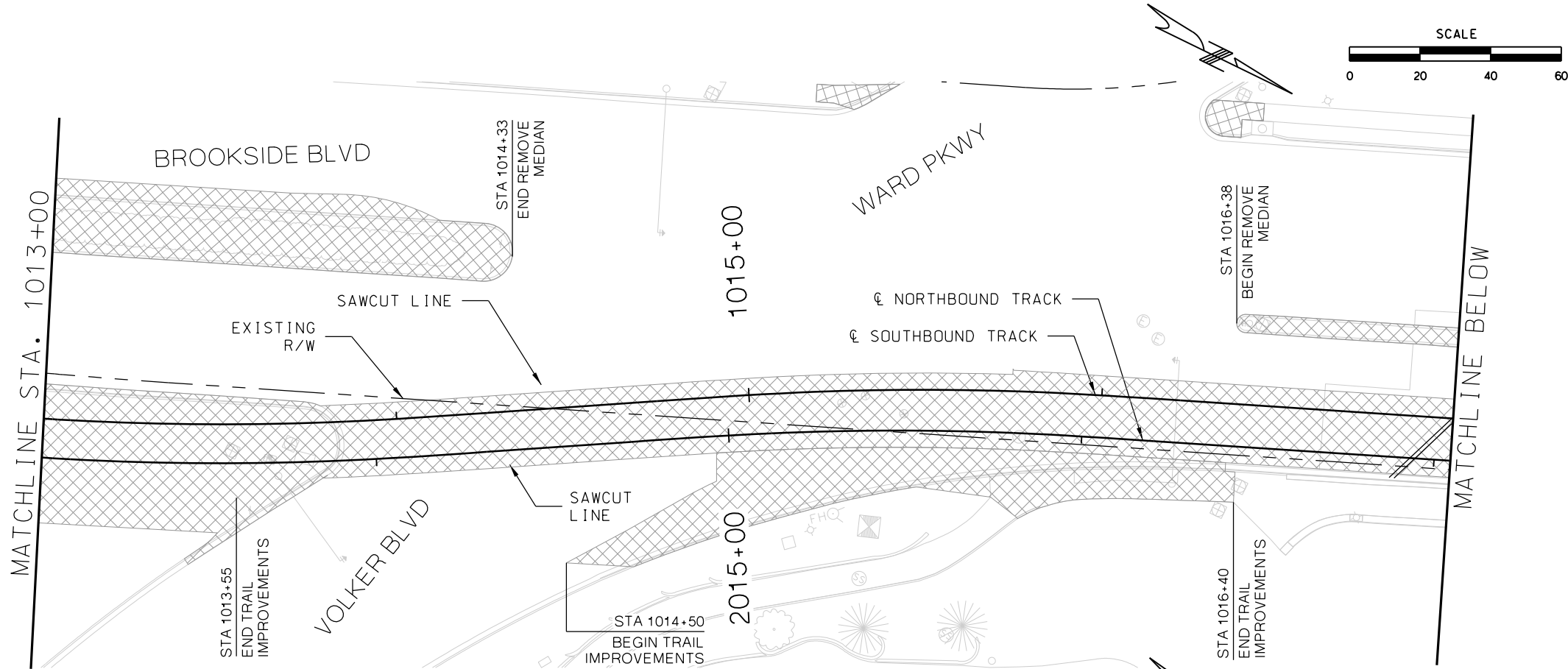
NOT FOR CONSTRUCTION

KANSAS CITY STREETCAR MAIN STREET EXTENSION
SOUTHBOUND AND NORTHBOUND TRACK
DEMOLITION PLAN
STA BEGIN TO STA 1001+00
STA 1001+00 TO STA 1005+00

SCALE FOR 22"x34": H: 1"=20'	
FILENAME: DEMO STA BEGIN - 1005+00	
CONTRACT NO.: *****	
VOLUME: 1	
DRAWING NO.: C501	SHEET NO.: 9



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DESIGNED BY	JWR																																							
CHECKED BY	RPB																																							
DRAWN BY	MMO																																							
CHECKED BY	RPB																																							
APPROVED BY	NKS																																							
PLOT DATE: 8/26/20196:20:06 PM			DATE: 08/28/2019																																					




LEGEND

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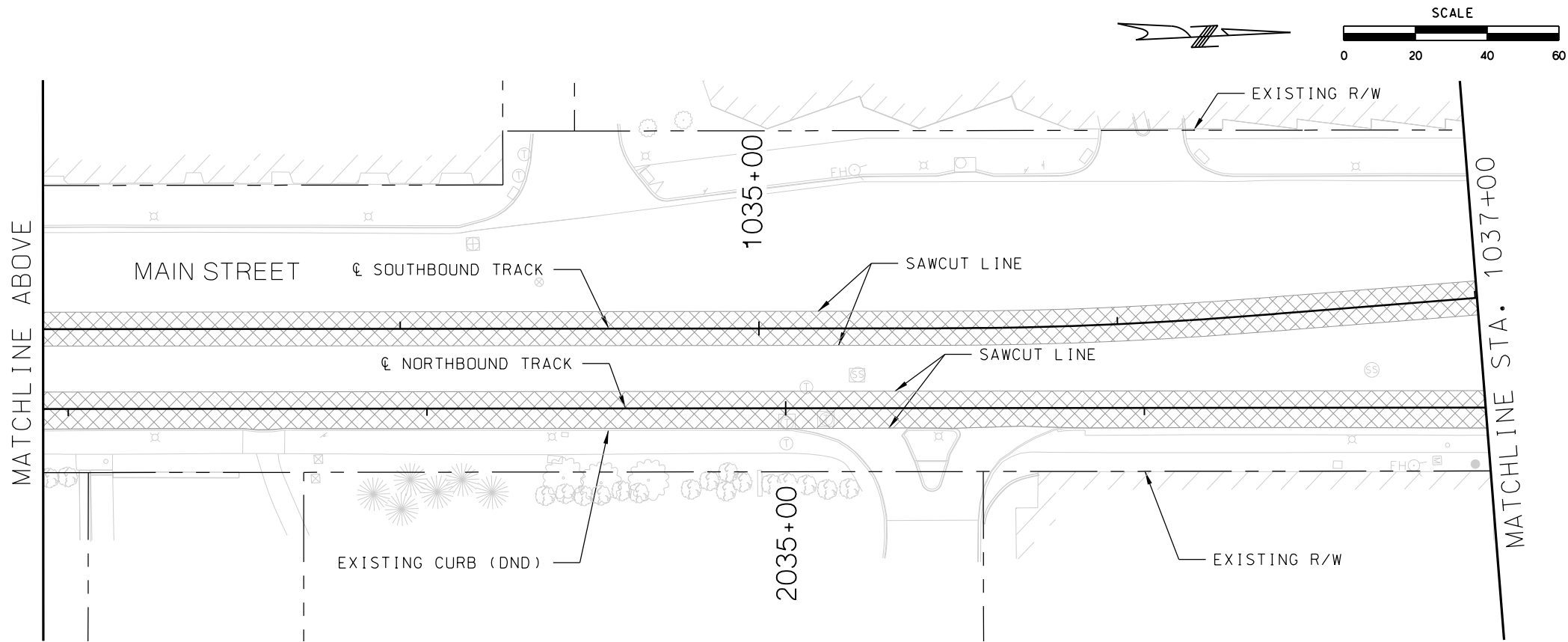
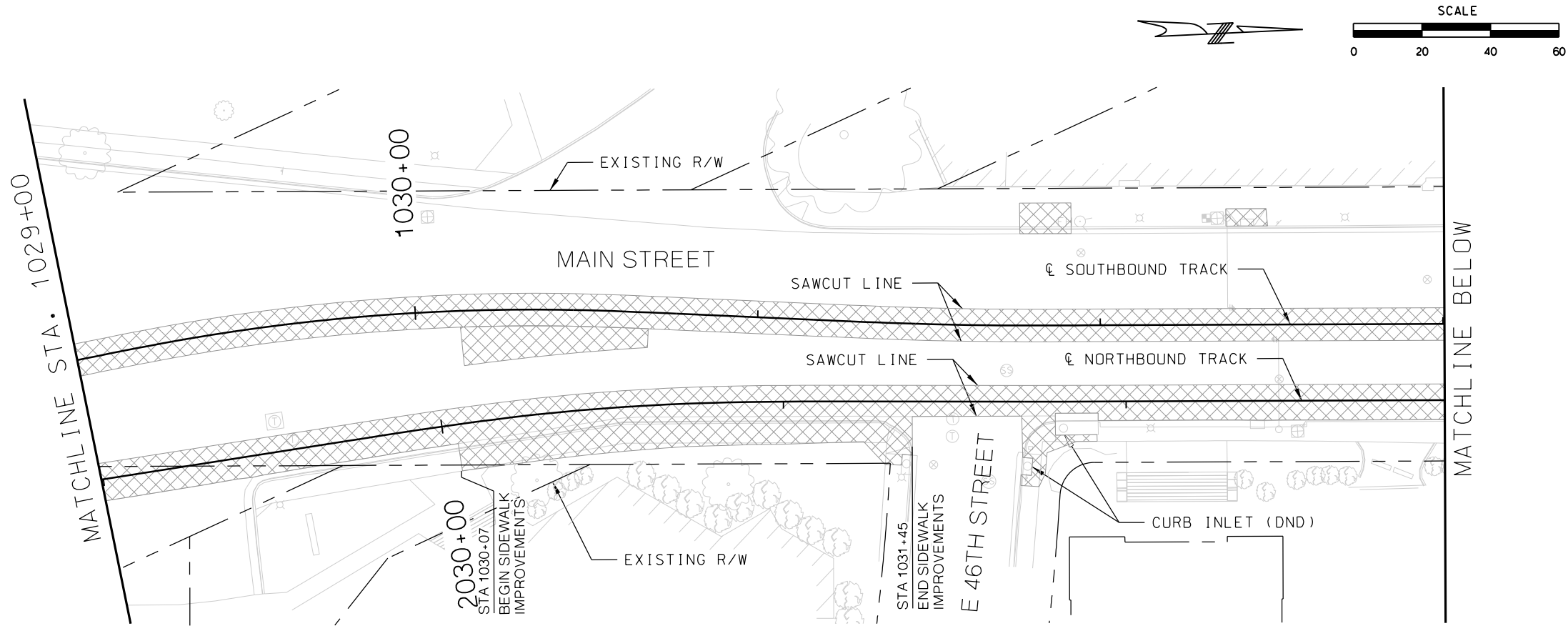
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CHECKED BY	RPB
DRAWN BY	MMO
CHECKED BY	RPB
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DATE	08/28/2019



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KANSAS CITY STREETCAR MAIN STREET EXTENSION	
SOUTHBOUND AND NORTHBOUND TRACK	
DEMOLITION PLAN	
STA 1013+00 TO STA 1017+00	
STA 1017+00 TO STA 1021+00	

SCALE FOR 22"x34": H: 1"=20'	
FILENAME: DEMO STA 1013+00 - 1021+00	
CONTRACT NO.: *****	
VOLUME: 1	
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 REMOVAL LIMITS

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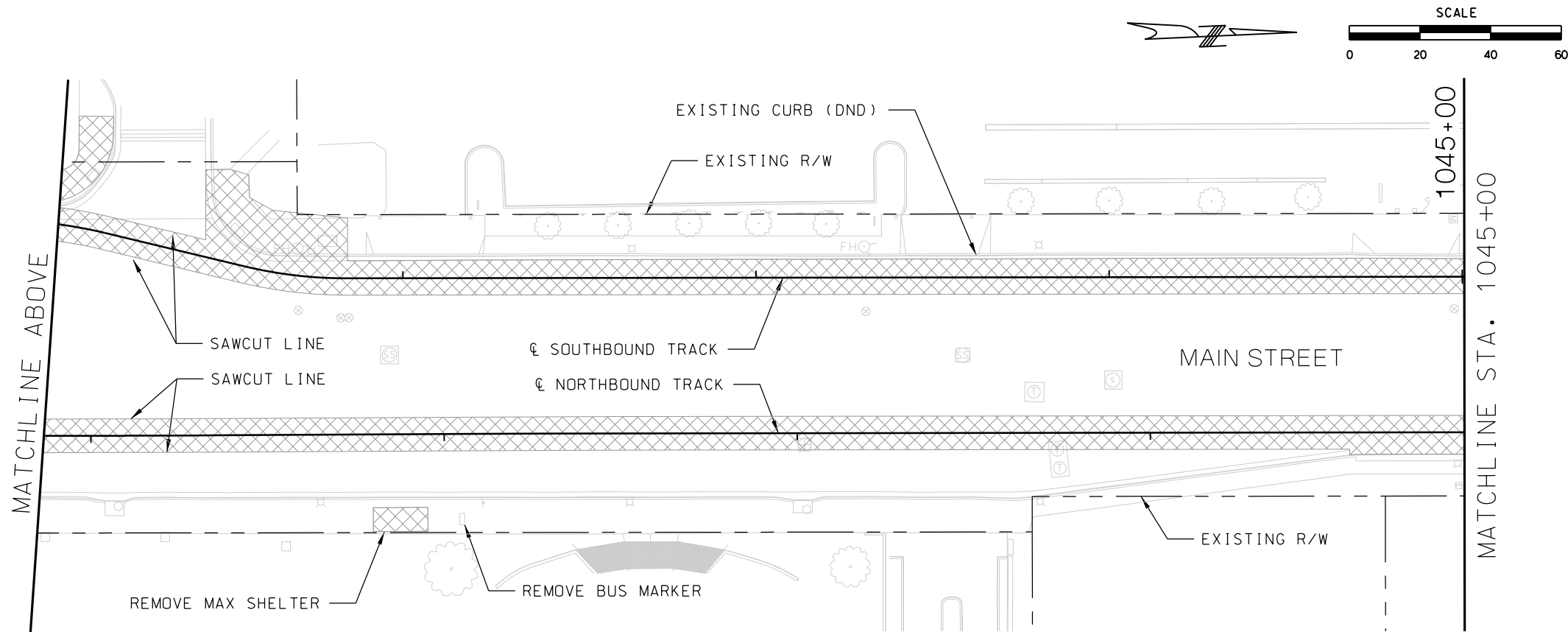
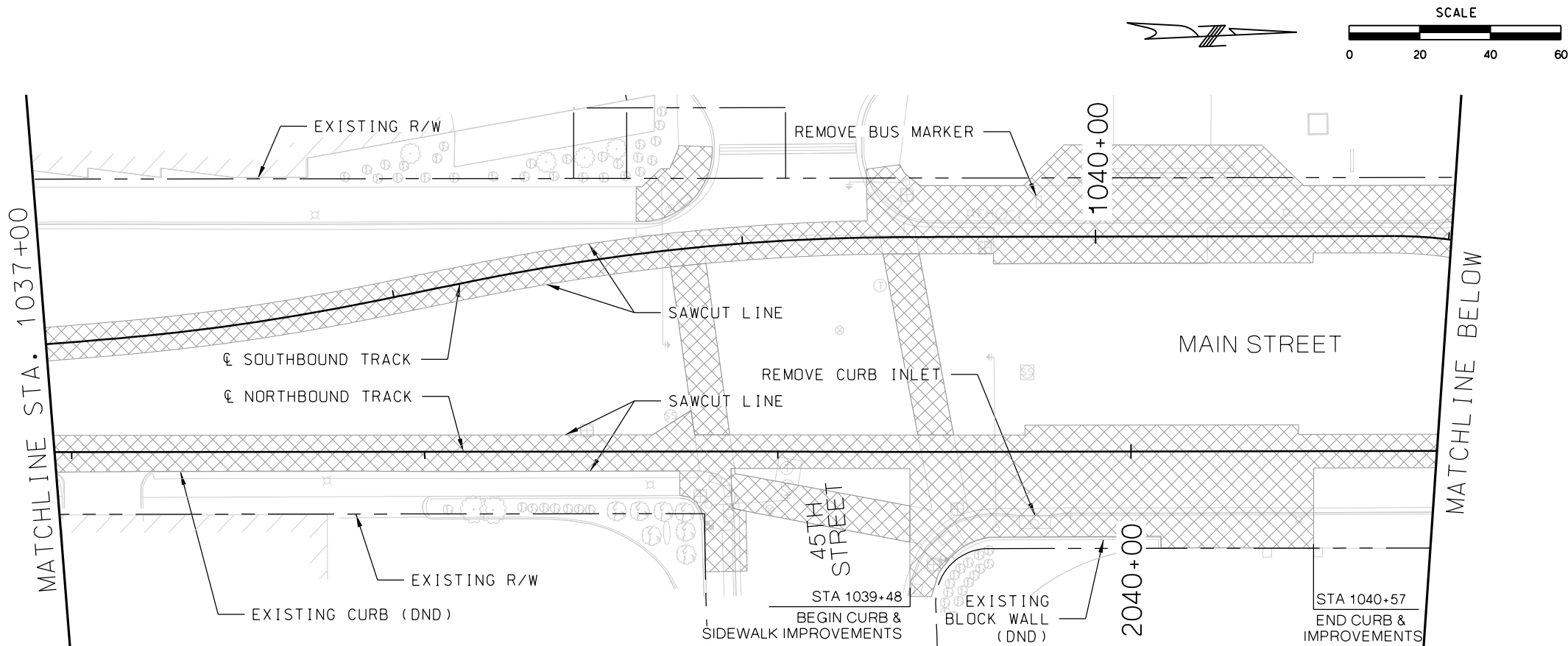
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CHECKED BY	RPB
DRAWN BY	MMO
CHECKED BY	RPB
APPROVED BY	NKS
DATE	08/28/2019



PRELIMINARY PLANS - 30%	DATE: 08-28-2019
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KANSAS CITY STREETCAR MAIN STREET EXTENSION	
SOUTHBOUND AND NORTHBOUND TRACK	
DEMOLITION PLAN	
STA 1029+00 TO STA 1033+00	
STA 1033+00 TO STA 1037+00	

SCALE FOR 22"x34": H: 1"=20'	
FILENAME: DEMO STA 1029-00 - 1037-00	
CONTRACT NO.: *****	
VOLUME: 1	
DRAWING NO.: C505	SHEET NO.: 13



LEGEND


 REMOVAL LIMITS

REV	DATE	DESCRIPTION
PLOT DATE: 8/26/2019		6:21:16 PM

DESIGNED BY	JWR
CHECKED BY	RPB
DRAWN BY	MMO
CHECKED BY	RPB
APPROVED BY	NKS
DATE	08/28/2019



PRELIMINARY PLANS - 30%DATE: 08-28-2019

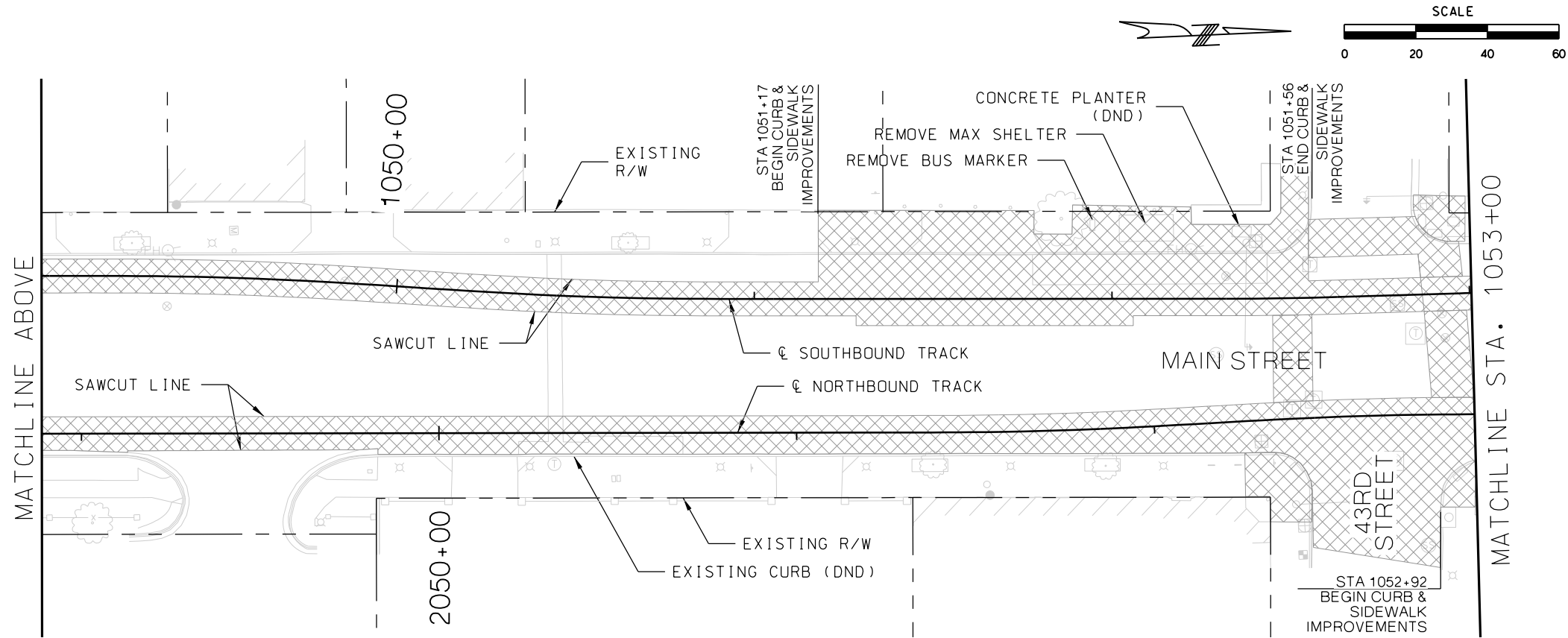
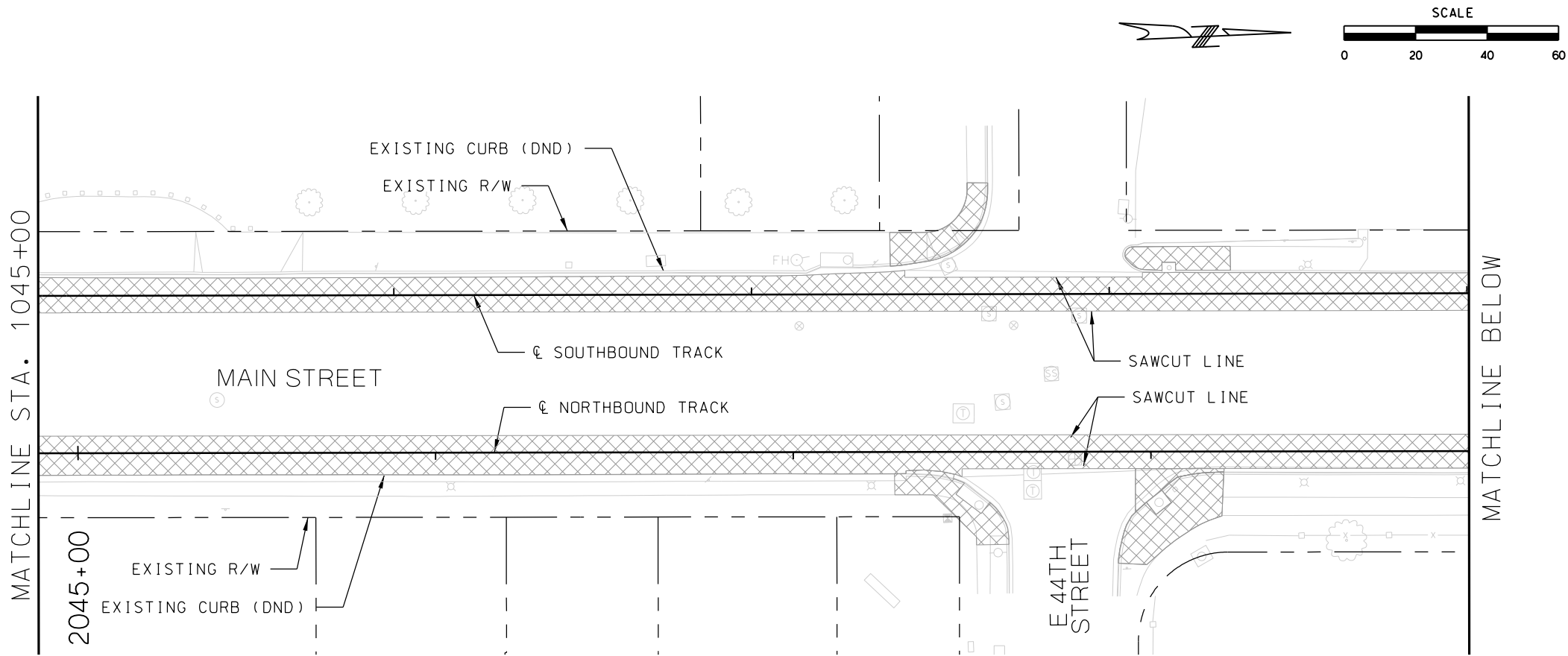


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KANSAS CITY STREETCAR MAIN STREET EXTENSION
SOUTHBOUND AND NORTHBOUND TRACK
DEMOLITION PLAN
STA 1037+00 TO STA 1041+00
STA 1041+00 TO STA 1045+00

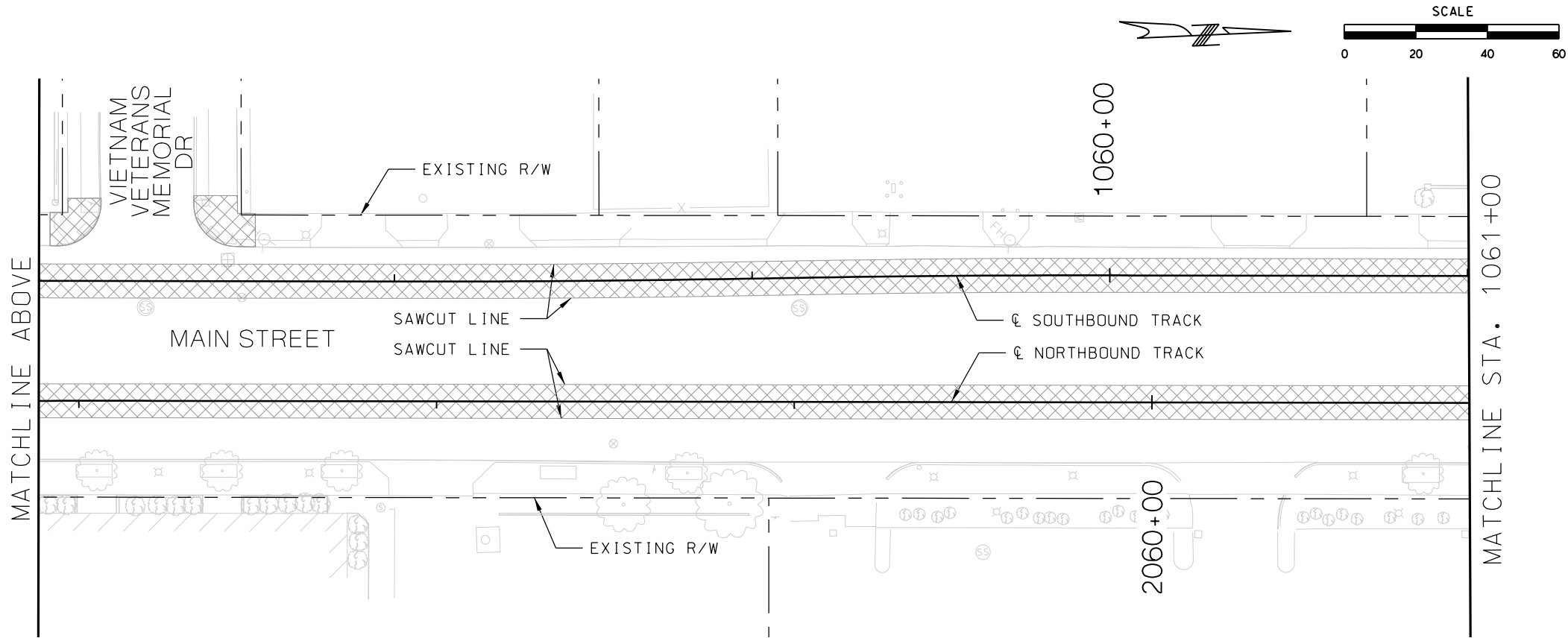
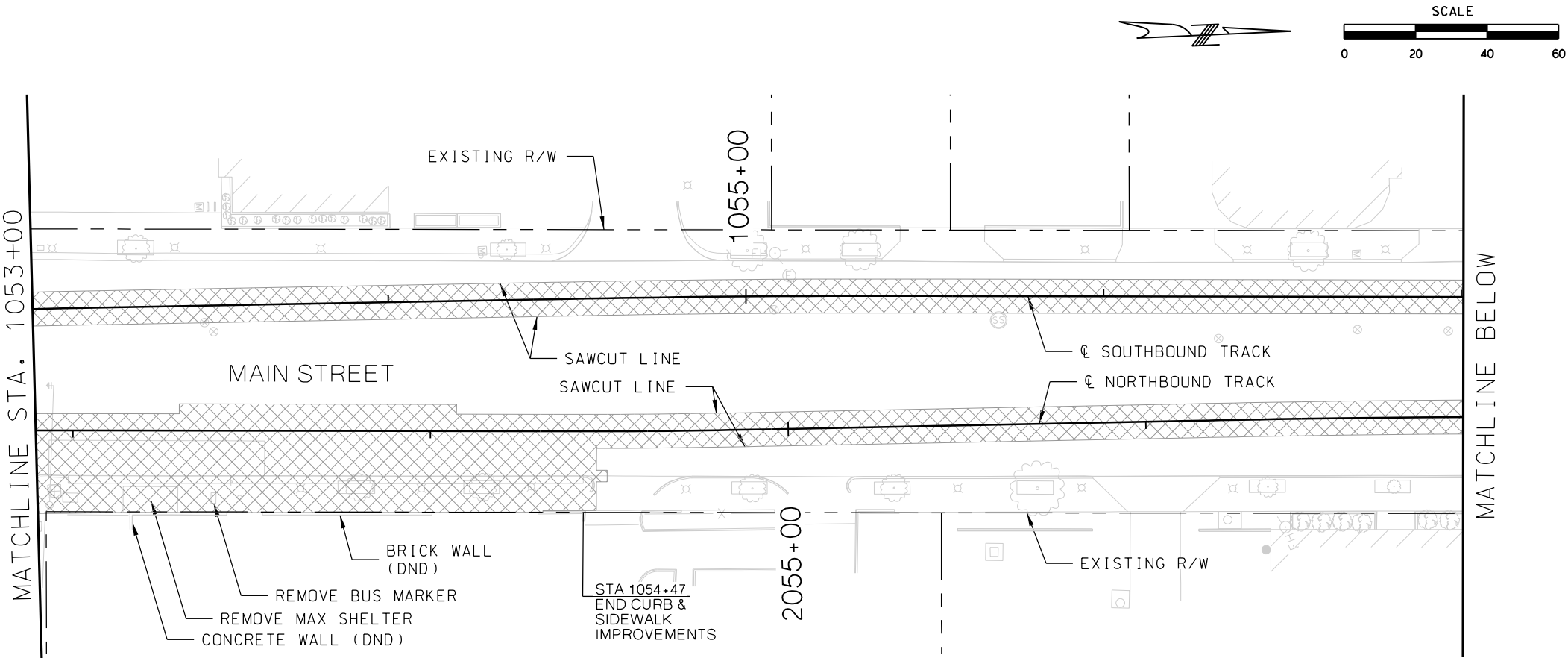
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CONTRACT NO.:	
VOLUME: 1	
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LEGEND


 REMOVAL LIMITS

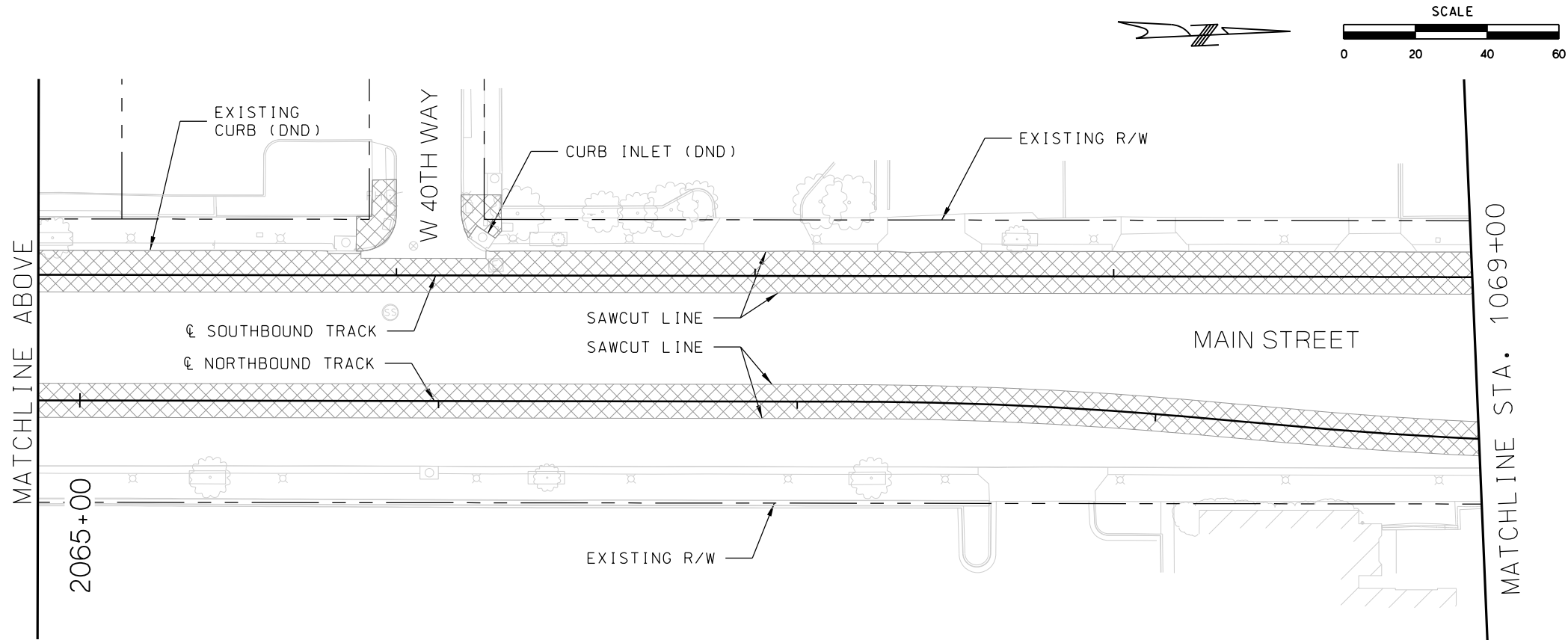
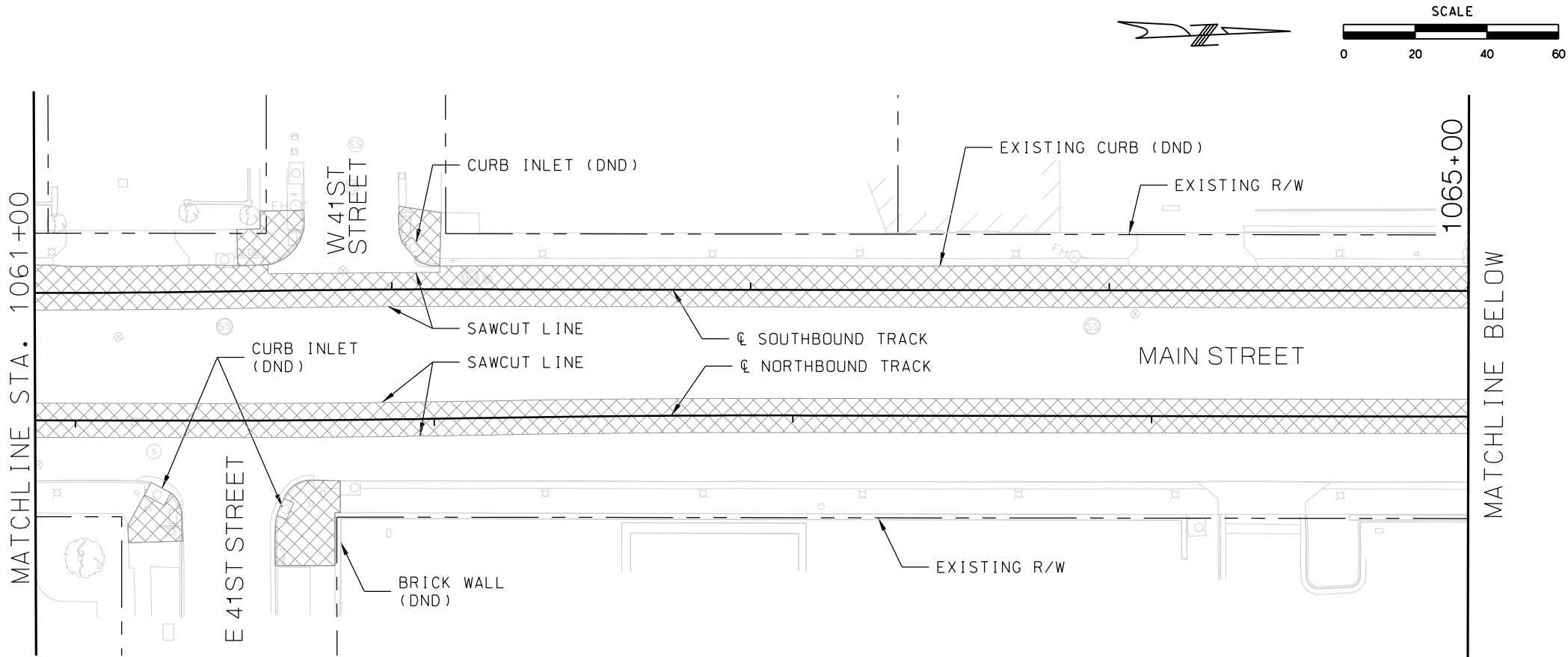
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LEGEND

 REMOVAL LIMITS

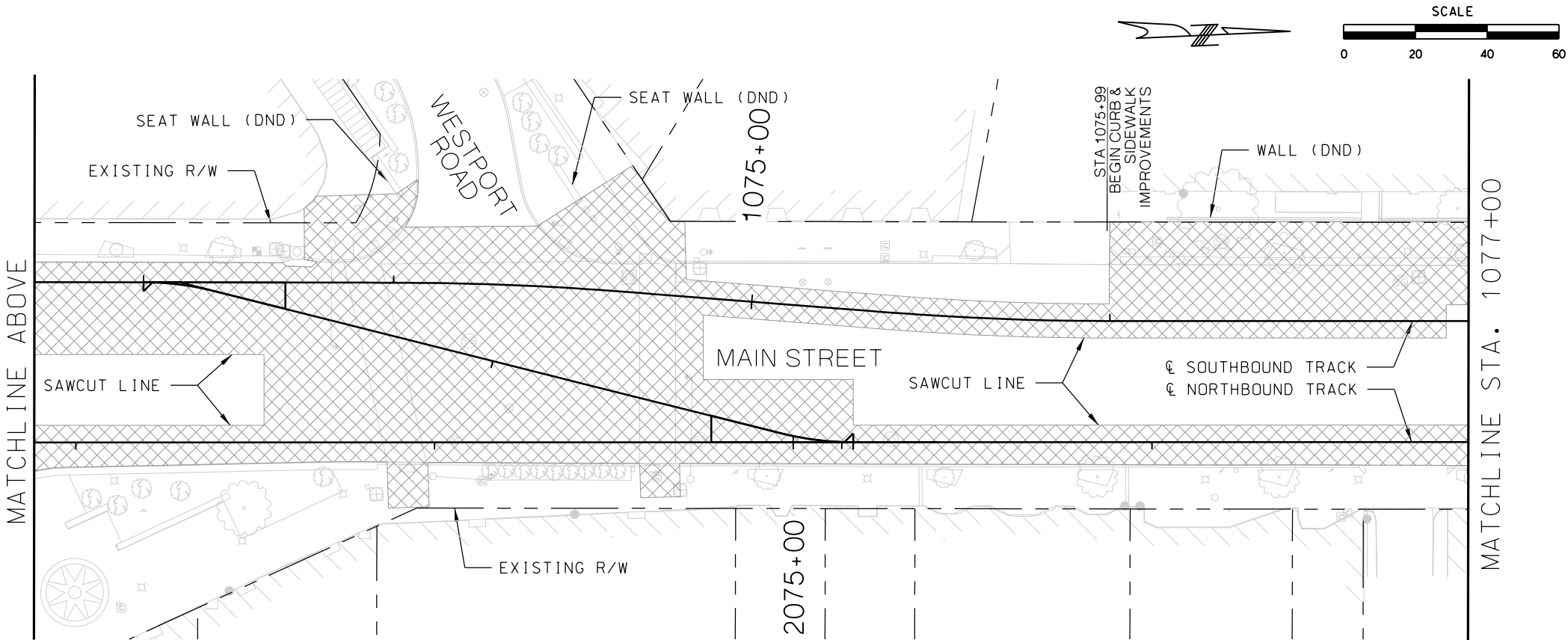
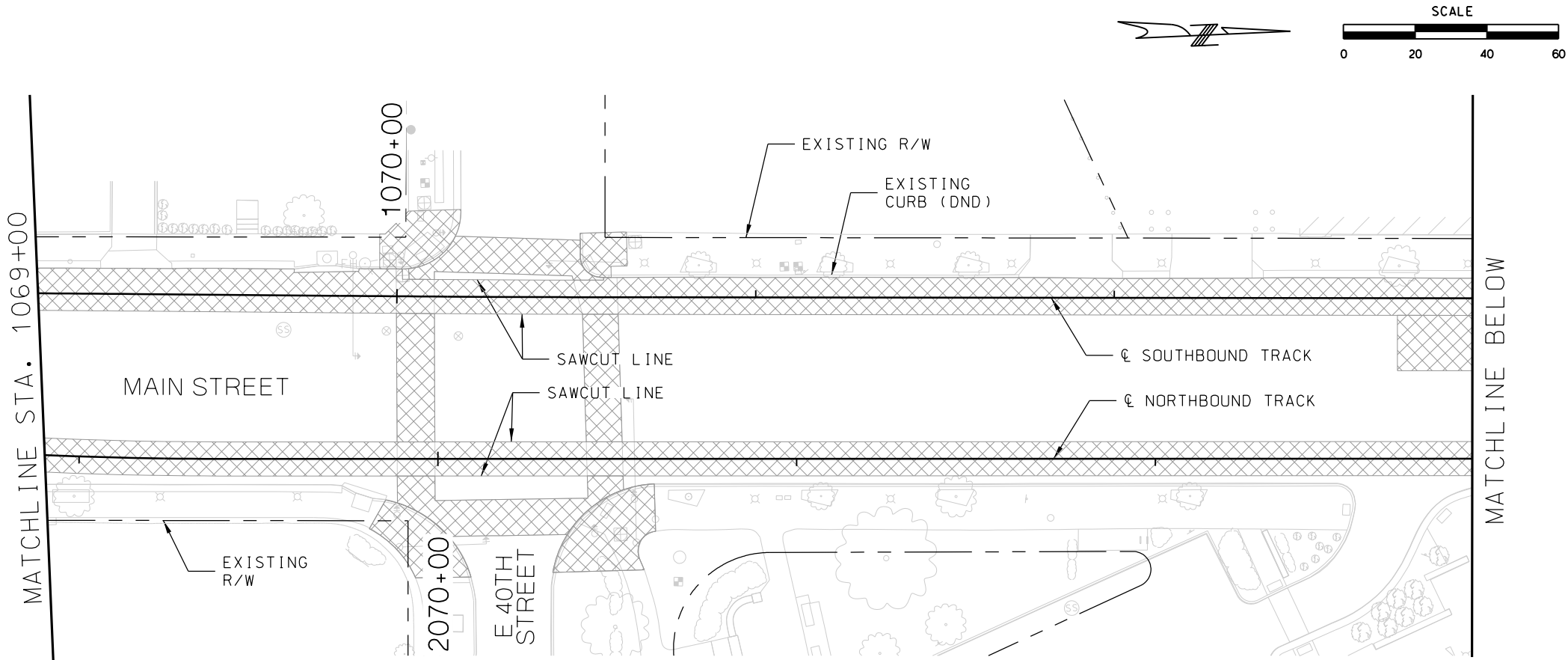
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			CHECKED BY	RPB	 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856		NOT FOR CONSTRUCTION	SOUTHBOUND AND NORTHBOUND TRACK DEMOLITION PLAN STA 1053+00 TO STA 1057+00 STA 1057+00 TO STA 1061+00		FILENAME: DEMO STA 1053+00 - 1061+00	
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PLOT DATE: 8/26/2019			DATE: 08/28/2019						SHEET NO.: 16		



LEGEND

 REMOVAL LIMITS

REV	DATE	DESCRIPTION	DESIGNED BY	JWR	PRELIMINARY PLANS - 30%		DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION		SCALE FOR 22"x34": H: 1"=20'	
			CHECKED BY	RPB	 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856			SOUTHBOUND AND NORTHBOUND TRACK DEMOLITION PLAN STA 1061+00 TO STA 1065+00 STA 1065+00 TO STA 1069+00		FILENAME: DEMO STA 1061+00 - 1069+00	
			DRAWN BY	MMO						CONTRACT NO.:	
			CHECKED BY	RPB						VOLUME:	
			APPROVED BY	NKS						DRAWING NO.: C509	
PLOT DATE: 8/26/2019			DATE: 08/28/2019		NOT FOR CONSTRUCTION					SHEET NO.: 17	



LEGEND


 REMOVAL LIMITS

REV	DATE	DESCRIPTION
PLOT DATE: 8/26/2019		6:22:23 PM

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KANSAS CITY STREETCAR MAIN STREET EXTENSION

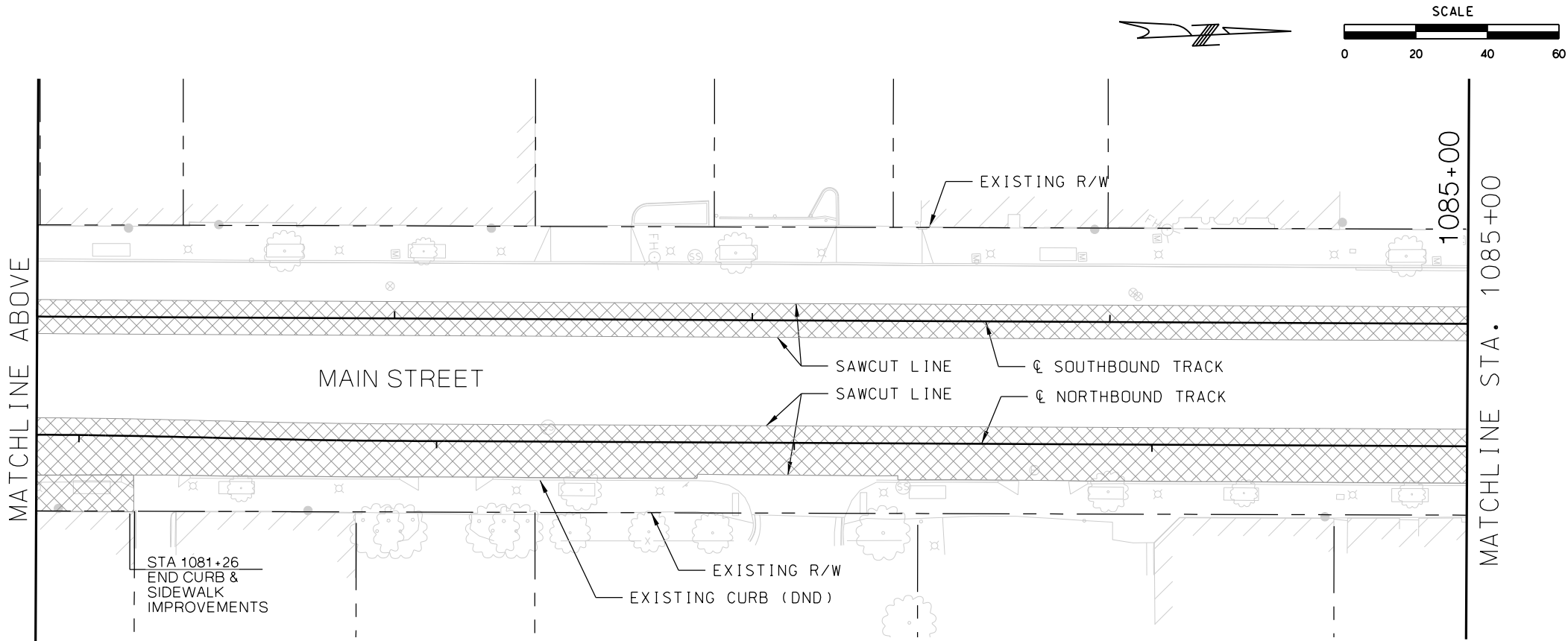
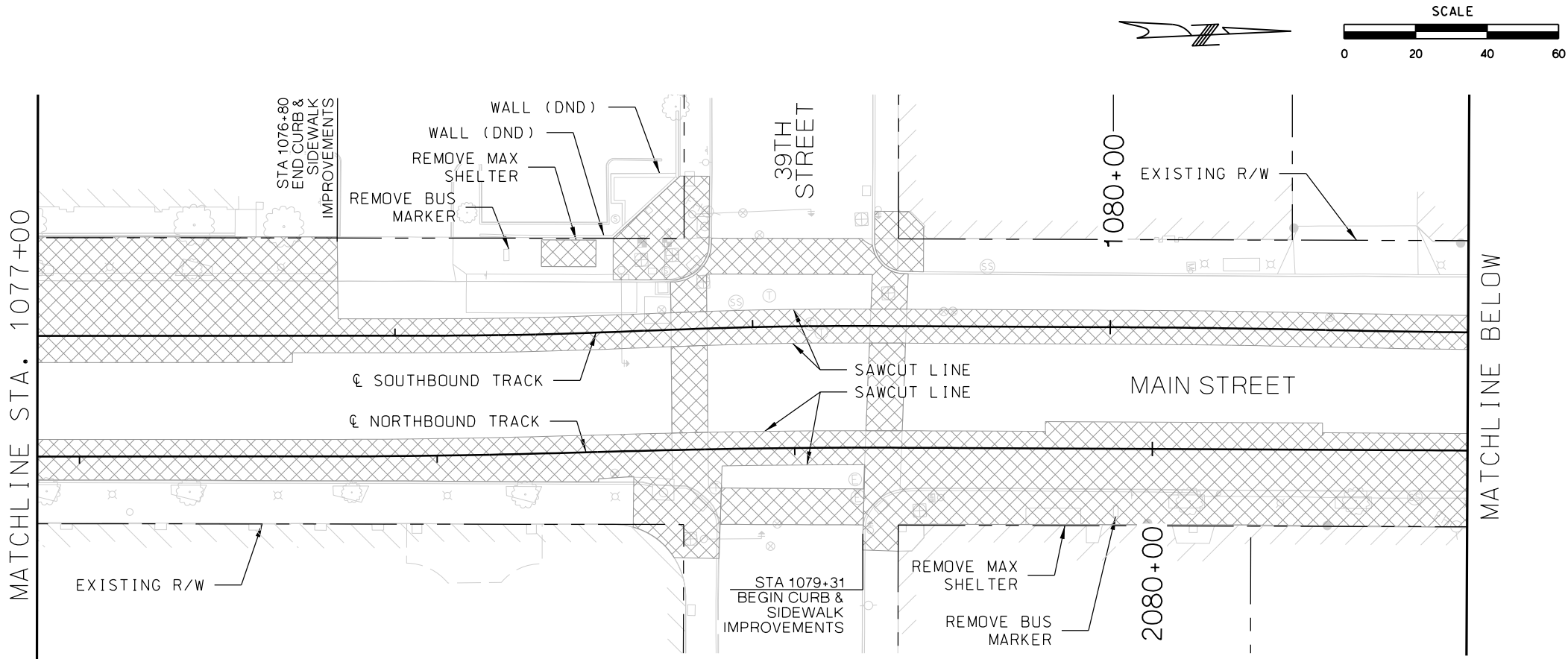
SOUTHBOUND AND NORTHBOUND TRACK

DEMOLITION PLAN

STA 1069+00 TO STA 1073+00

STA 1073+00 TO STA 1077+00

SCALE FOR 22"x34": H: 1"=20'	
FILENAME: DEMO STA 1069-00 - 1077-00	
CONTRACT NO.:	
VOLUME:	
DRAWING NO.: C510	SHEET NO.: 18



LEGEND


 REMOVAL LIMITS

REV	DATE	DESCRIPTION
PLOT DATE: 8/26/2019		6:22:42 PM

DESIGNED BY	JWR
CHECKED BY	RPB
DRAWN BY	MMQ
CHECKED BY	RPB
APPROVED BY	NKS
DATE	08/28/2019



PRELIMINARY PLANS - 30%DATE: 08-28-2019

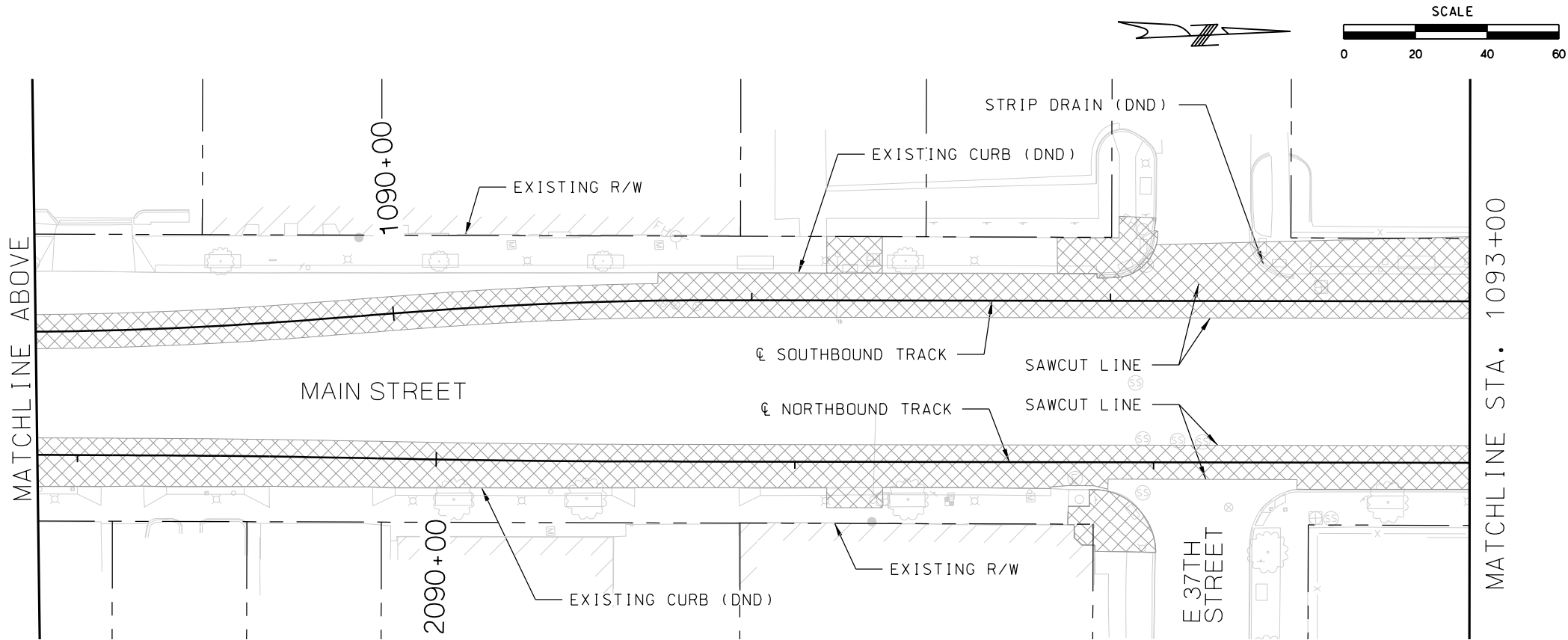
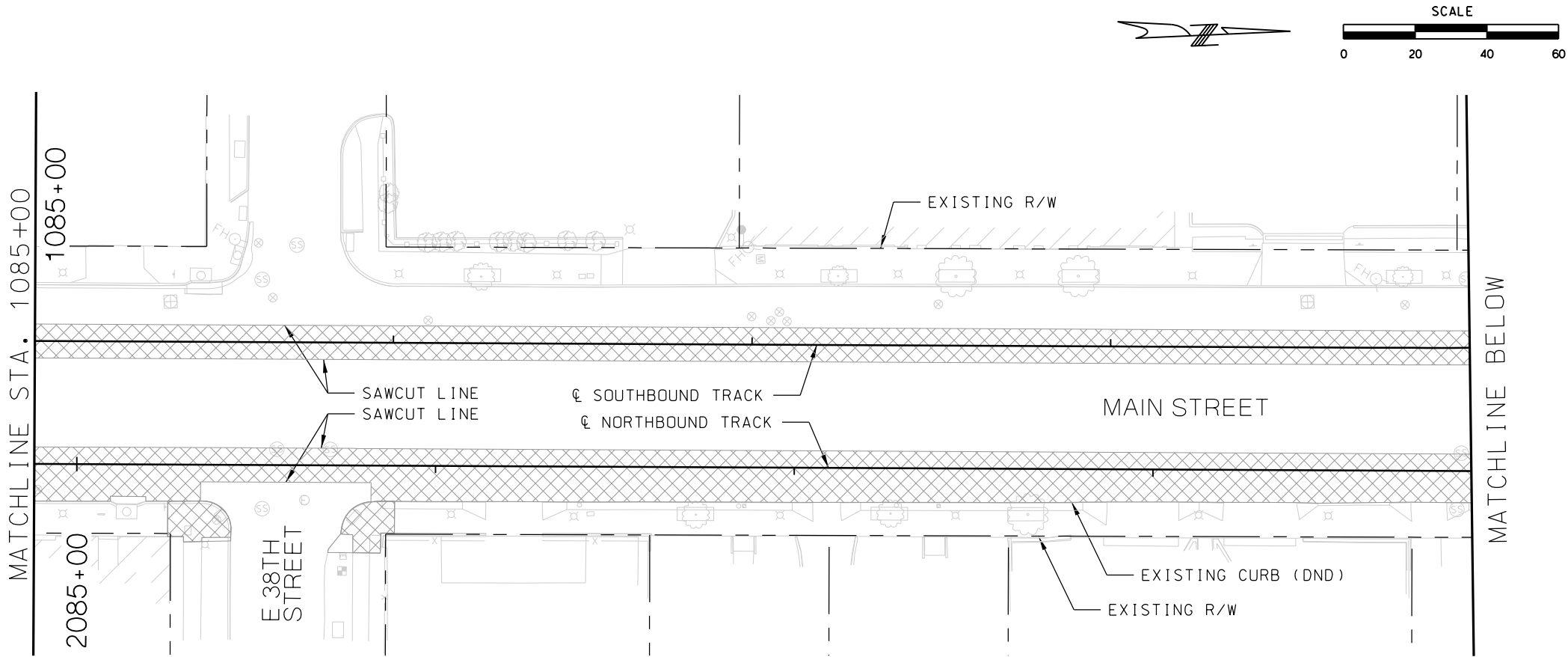


HDR Engineering, Inc.
10450 Holmes Road
Suite 600
Kansas City, MO 64131-3471
816-360-2700
Certificate of Authority: 000856

NOT FOR CONSTRUCTION

KANSAS CITY STREETCAR MAIN STREET EXTENSION
SOUTHBOUND AND NORTHBOUND TRACK
DEMOLITION PLAN
STA 1077+00 TO STA 1081+00
STA 1081+00 TO STA 1085+00

SCALE FOR 22"x34": H: 1"=20'	
FILENAME: DEMO STA 1077-00 - 1085-00	
CONTRACT NO.:	
VOLUME: 1	
DRAWING NO.: C511	SHEET NO.: 19



LEGEND


 REMOVAL LIMITS

REV	DATE	DESCRIPTION
PLOT DATE: 8/26/2019		6:23:00 PM

DESIGNED BY	JWR
CHECKED BY	RPB
DRAWN BY	MMO
CHECKED BY	RPB
APPROVED BY	NKS
DATE	08/28/2019



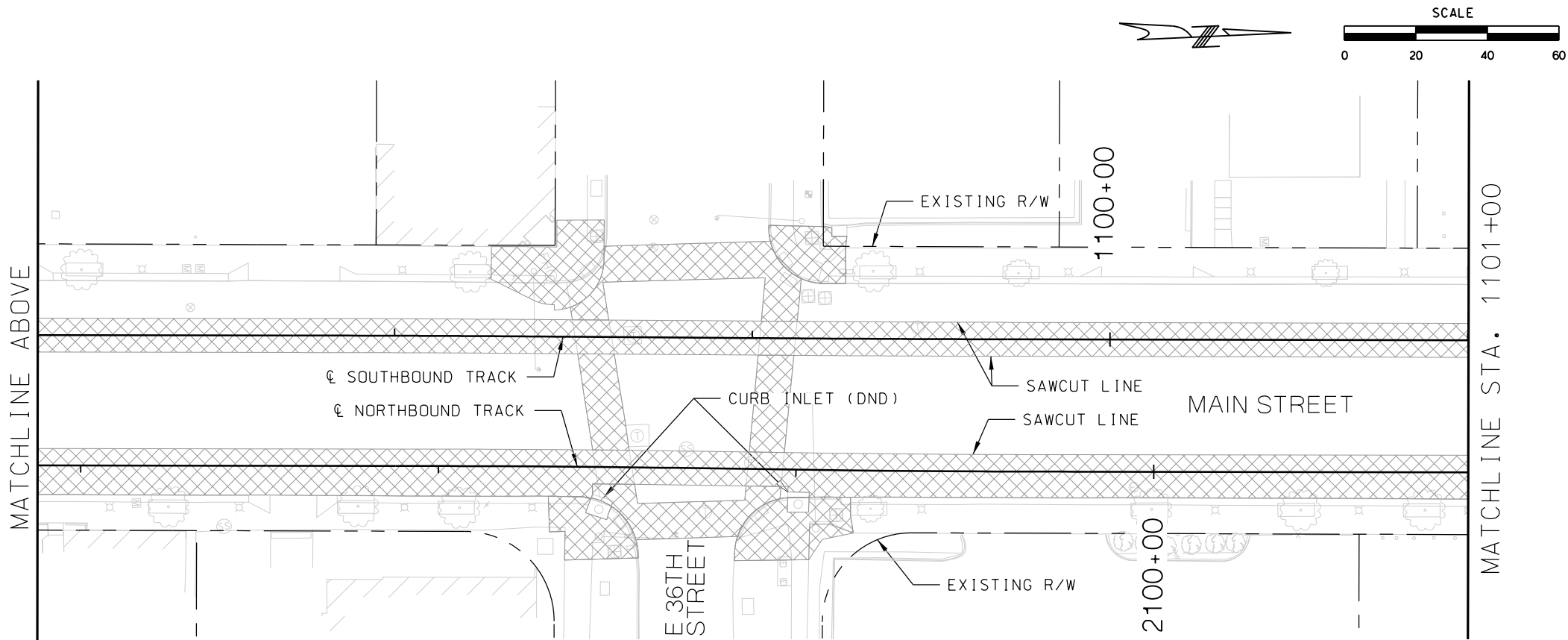
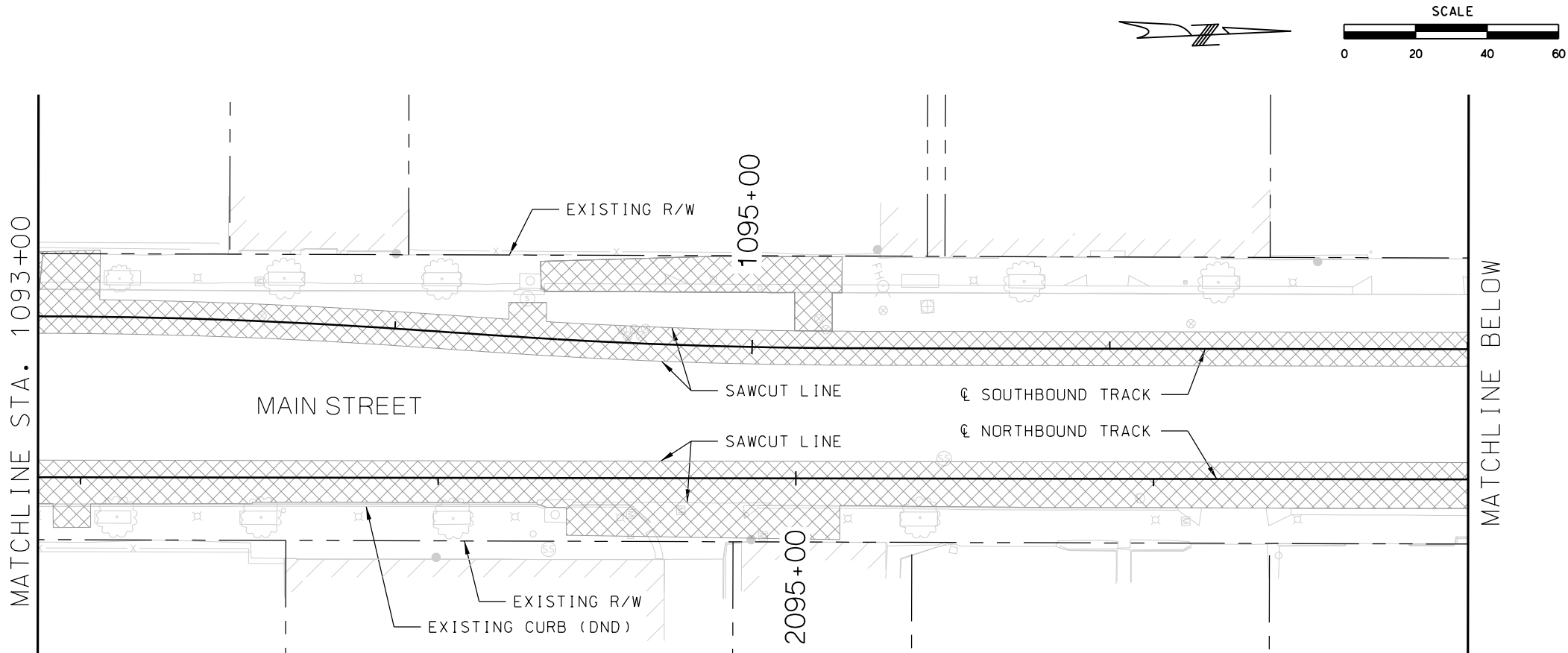
PRELIMINARY PLANS - 30%
DATE: 08-28-2019

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KANSAS CITY STREETCAR MAIN STREET EXTENSION
SOUTHBOUND AND NORTHBOUND TRACK
DEMOLITION PLAN
STA 1085+00 TO STA 1089+00
STA 1089+00 TO STA 1093+00

SCALE FOR 22"x34": H: 1"=20'	
FILENAME: DEMO STA 1085+00 - 1093+00	
CONTRACT NO.: *****	
VOLUME: 1	
DRAWING NO.: C512	SHEET NO.: 20



LEGEND


 REMOVAL LIMITS

REV	DATE	DESCRIPTION
PLOT DATE: 8/26/2019		6:23:24 PM

DESIGNED BY	JWR
CHECKED BY	RPB
DRAWN BY	MMO
CHECKED BY	RPB
APPROVED BY	NKS
DATE	08/28/2019



PRELIMINARY PLANS - 30%DATE: 08-28-2019



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KANSAS CITY STREETCAR MAIN STREET EXTENSION

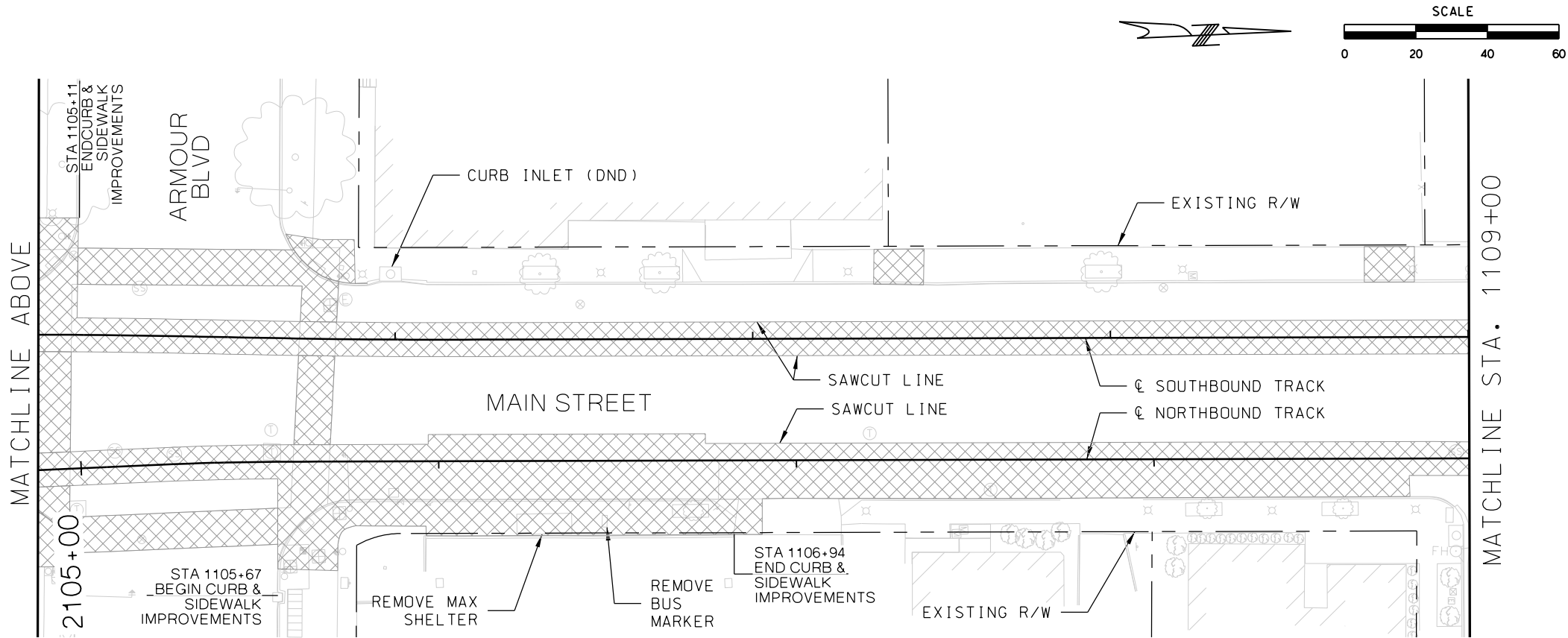
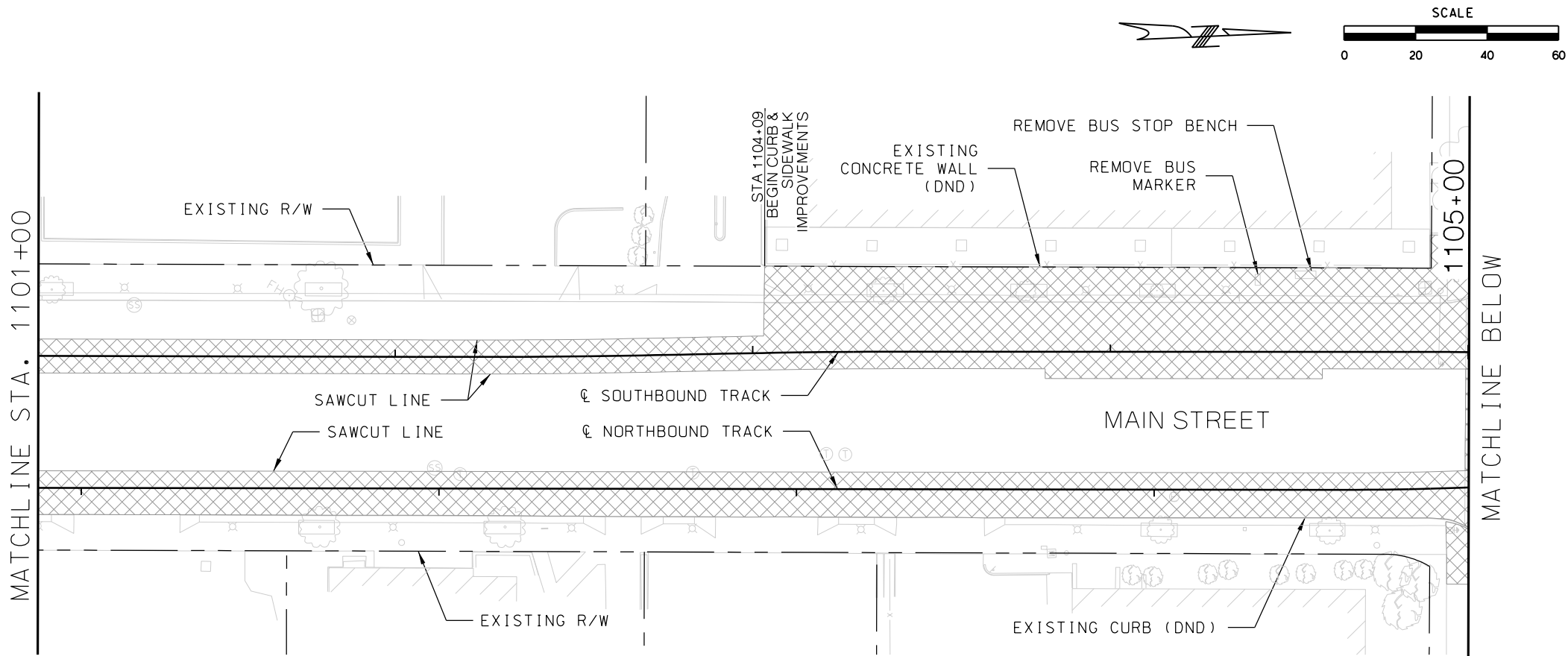
SOUTHBOUND AND NORTHBOUND TRACK

DEMOLITION PLAN

STA 1093+00 TO STA 1097+00


STA 1097+00 TO STA 1101+00

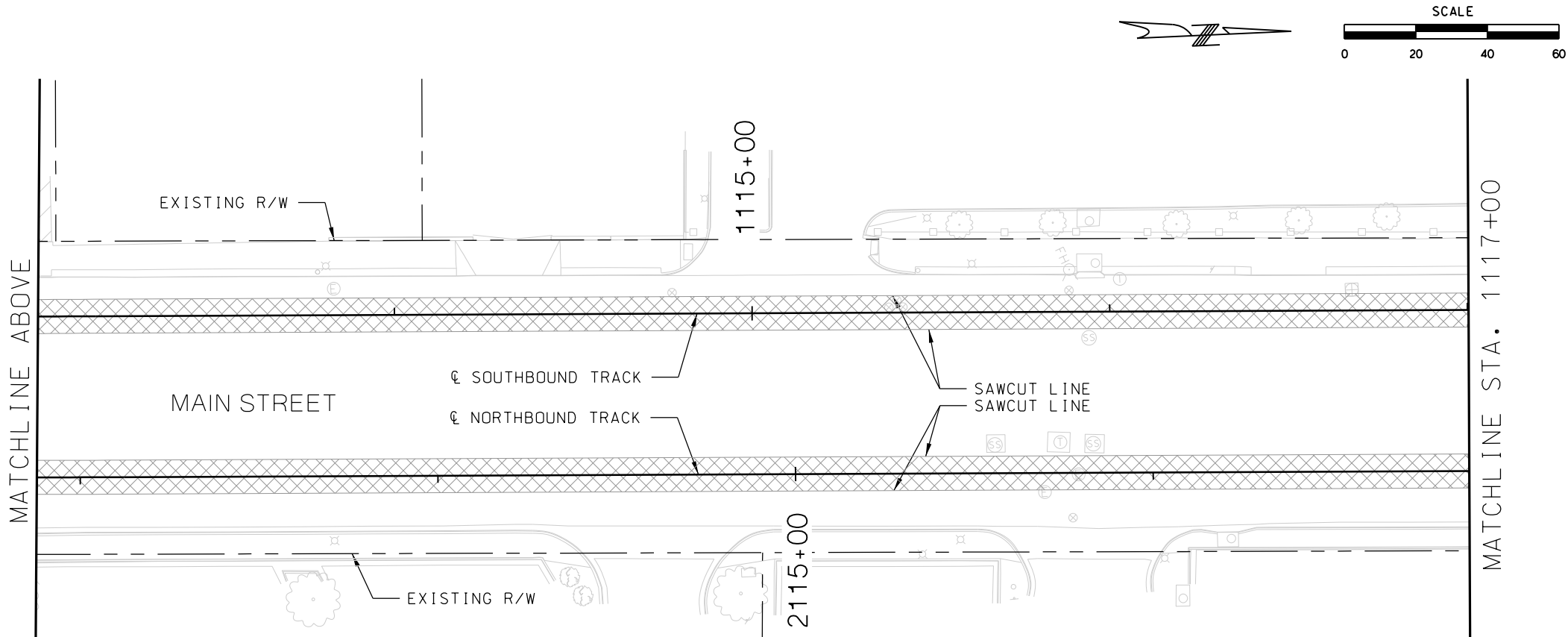
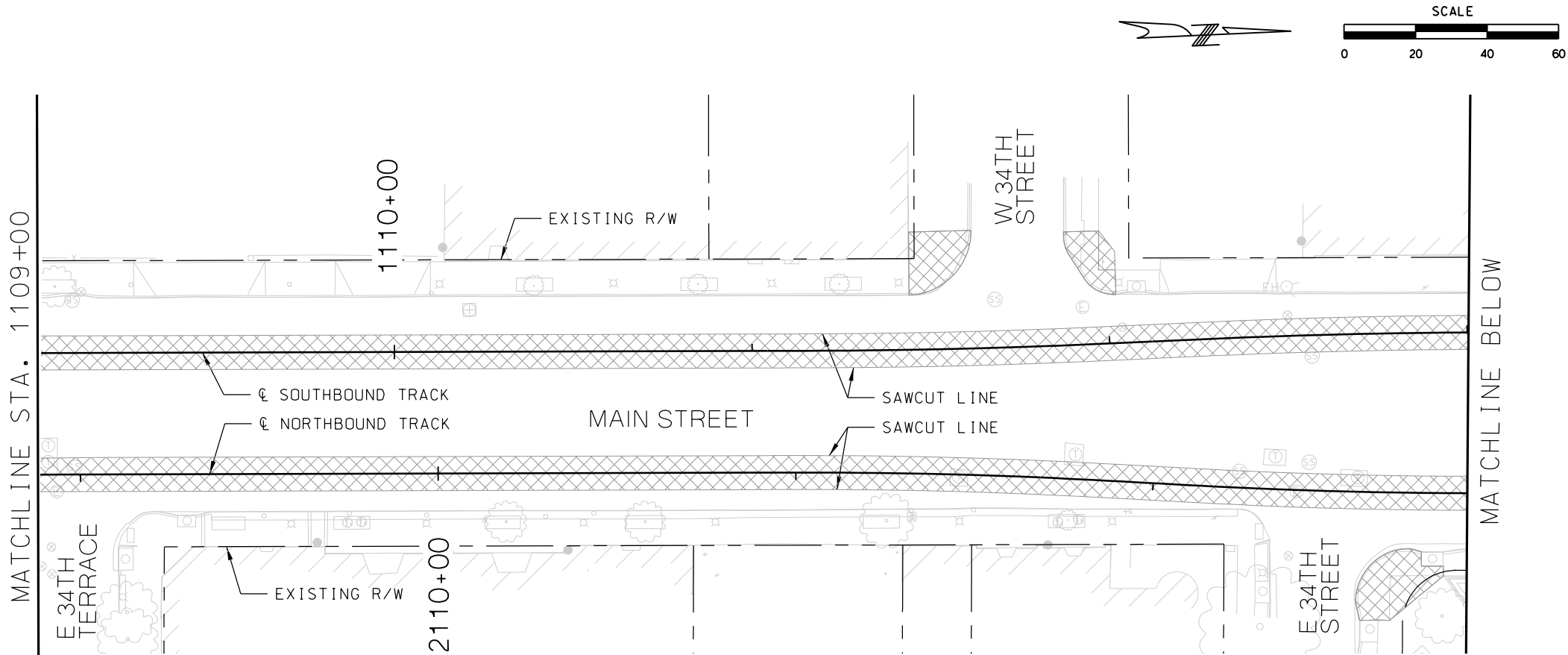
SCALE FOR 22"x34": H: 1"=20'	
FILENAME: DEMO STA 1093+00 - 1101+00	
CONTRACT NO.:	
VOLUME: 1	
DRAWING NO.: C513	SHEET NO.: 21



LEGEND

 REMOVAL LIMITS

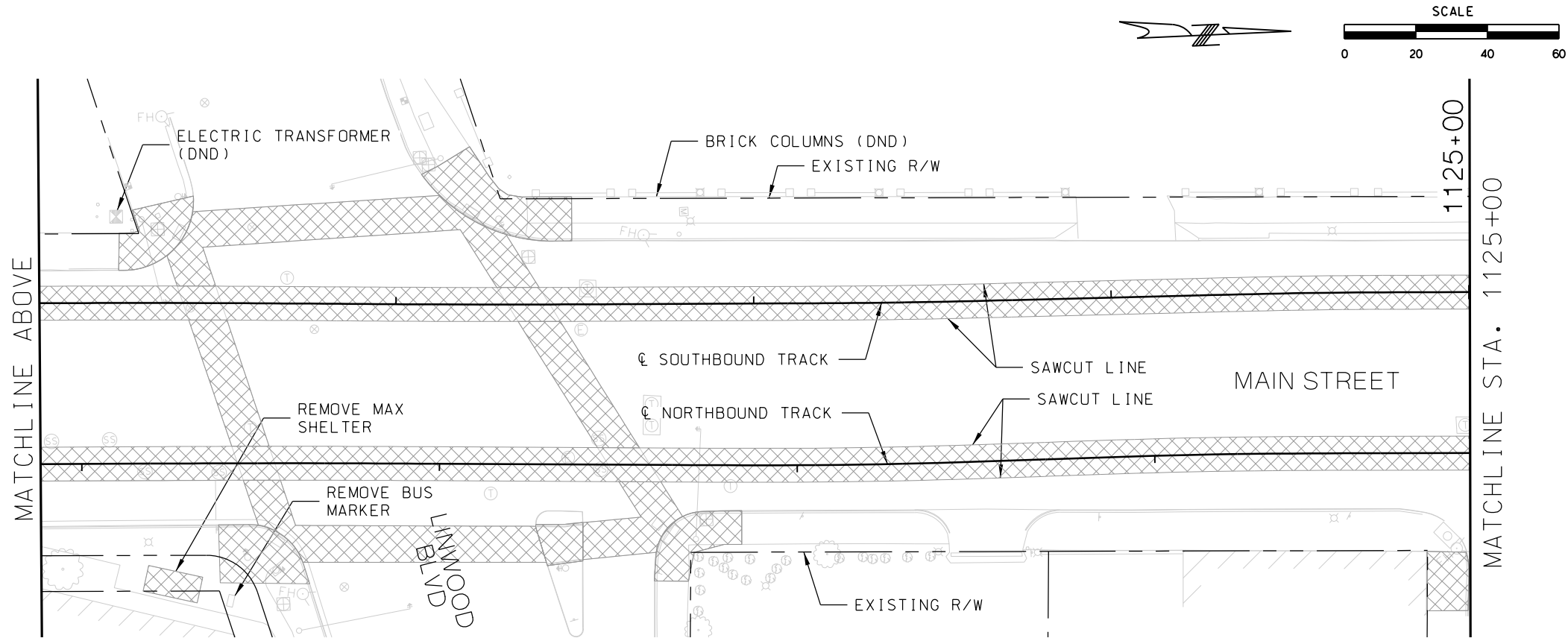
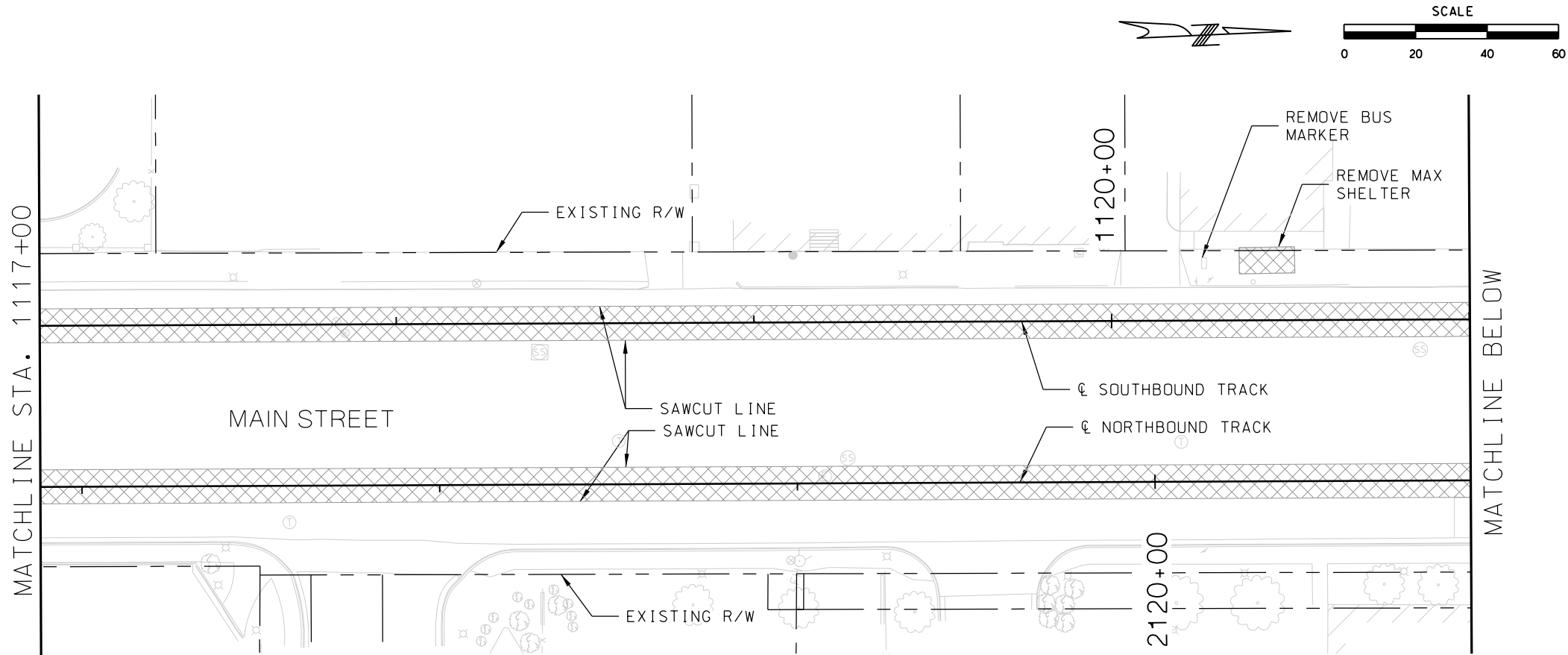
REV	DATE	DESCRIPTION	DESIGNED BY	JWR		PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION SOUTHBOUND AND NORTHBOUND TRACK DEMOLITION PLAN STA 1101+00 TO STA 1105+00 STA 1105+00 TO STA 1109+00	SCALE FOR 22"x34": H: 1"=20'	
			CHECKED BY	RPB		 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	NOT FOR CONSTRUCTION			
			DRAWN BY	MMO						
			CHECKED BY	RPB						
			APPROVED BY	NKS						
PLOT DATE: 8/26/2019			6:23:44 PM		DATE	08/28/2019	DRAWING NO.: C514			
									SHEET NO.: 22	



LEGEND

 REMOVAL LIMITS

REV	DATE	DESCRIPTION	DESIGNED BY	JWR	PRELIMINARY PLANS - 30%		DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION SOUTHBOUND AND NORTHBOUND TRACK DEMOLITION PLAN STA 1109+00 TO STA 1113+00 STA 1113+00 TO STA 1117+00	SCALE FOR 22"x34": H: 1"=20'
			CHECKED BY	RPB					FILENAME:
			DRAWN BY	MMO	10450 Holmes Road				DEMO STA 1109+00 - 1117+00
			CHECKED BY	RPB	Suite 600				CONTRACT NO.:
			APPROVED BY	NKS	Kansas City, MO 64131-3471				VOLUME:
					816-360-2700				1
PLOT DATE: 8/26/2019			DATE	08/28/2019	NOT FOR CONSTRUCTION			DRAWING NO.: C515	SHEET NO.: 23



LEGEND

REMOVAL LIMITS

REV	DATE	DESCRIPTION
PLOT DATE: 8/26/2019		6:24:21 PM

DESIGNED BY	JWR
CHECKED BY	RPB
DRAWN BY	MMO
CHECKED BY	RPB
APPROVED BY	NKS
DATE	08/28/2019



PRELIMINARY PLANS - 30%

DATE: 08-28-2019

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KANSAS CITY STREETCAR MAIN STREET EXTENSION

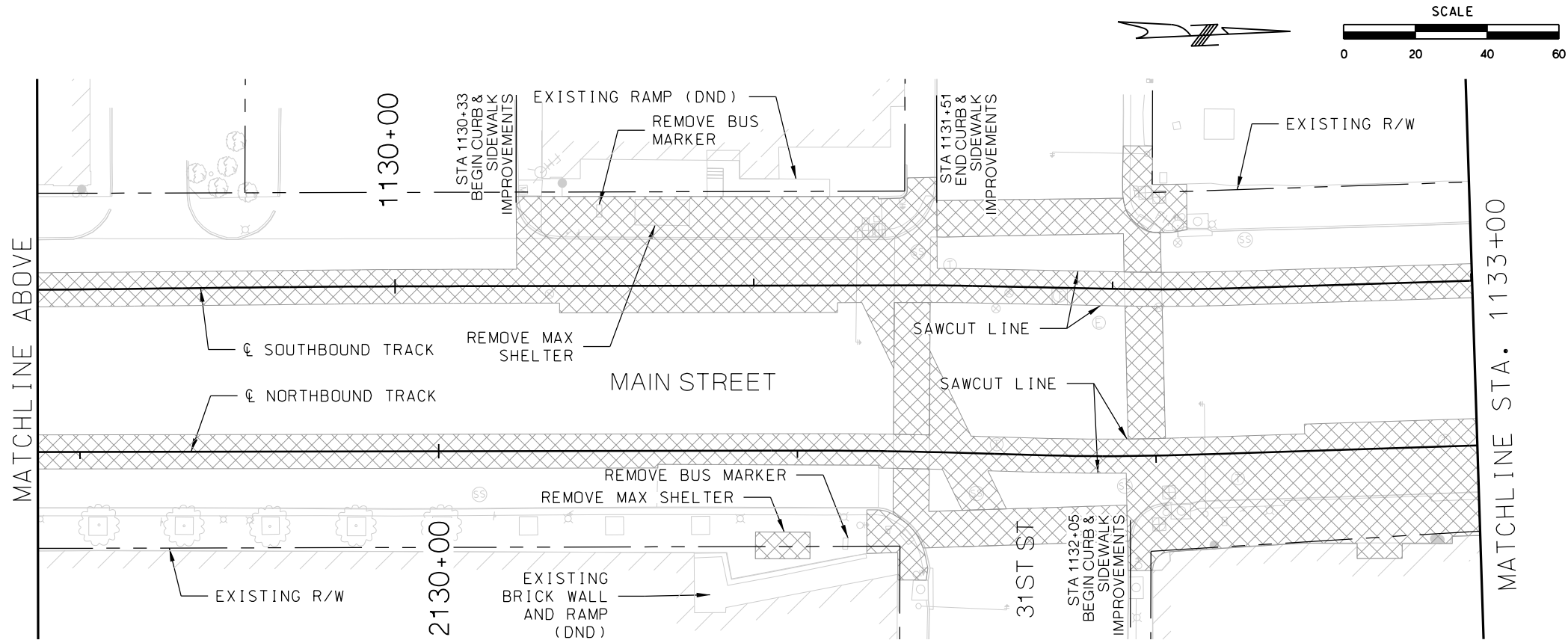
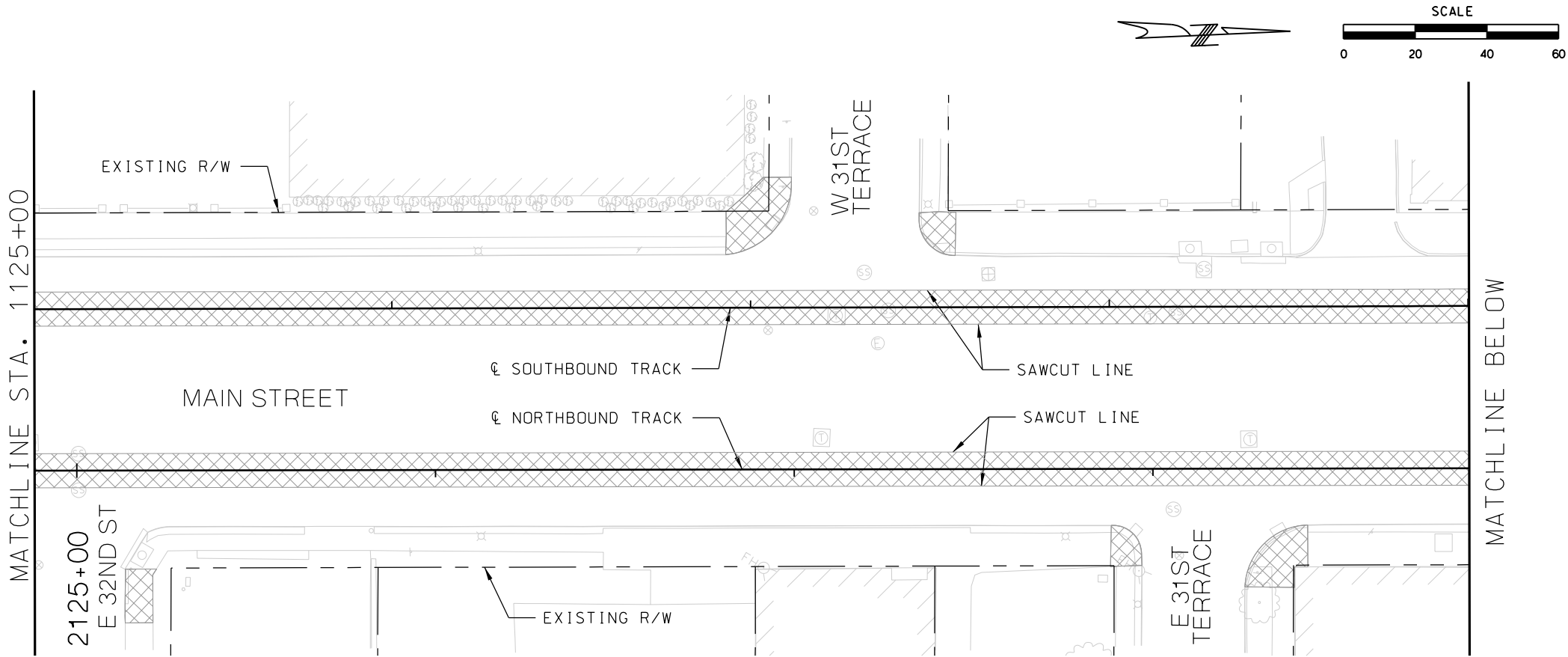
SOUTHBOUND AND NORTHBOUND TRACK

DEMOLITION PLAN

STA 1117+00 TO STA 1121+00

STA 1121+00 TO STA 1125+00

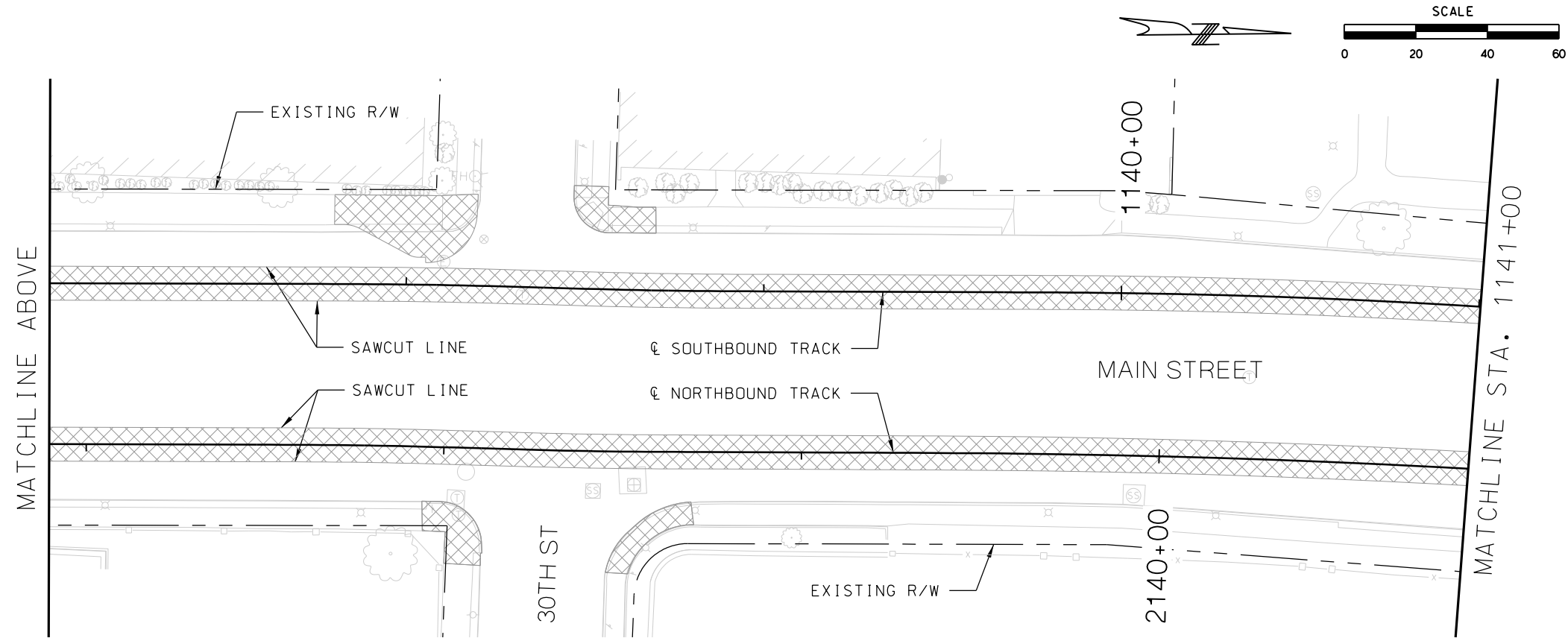
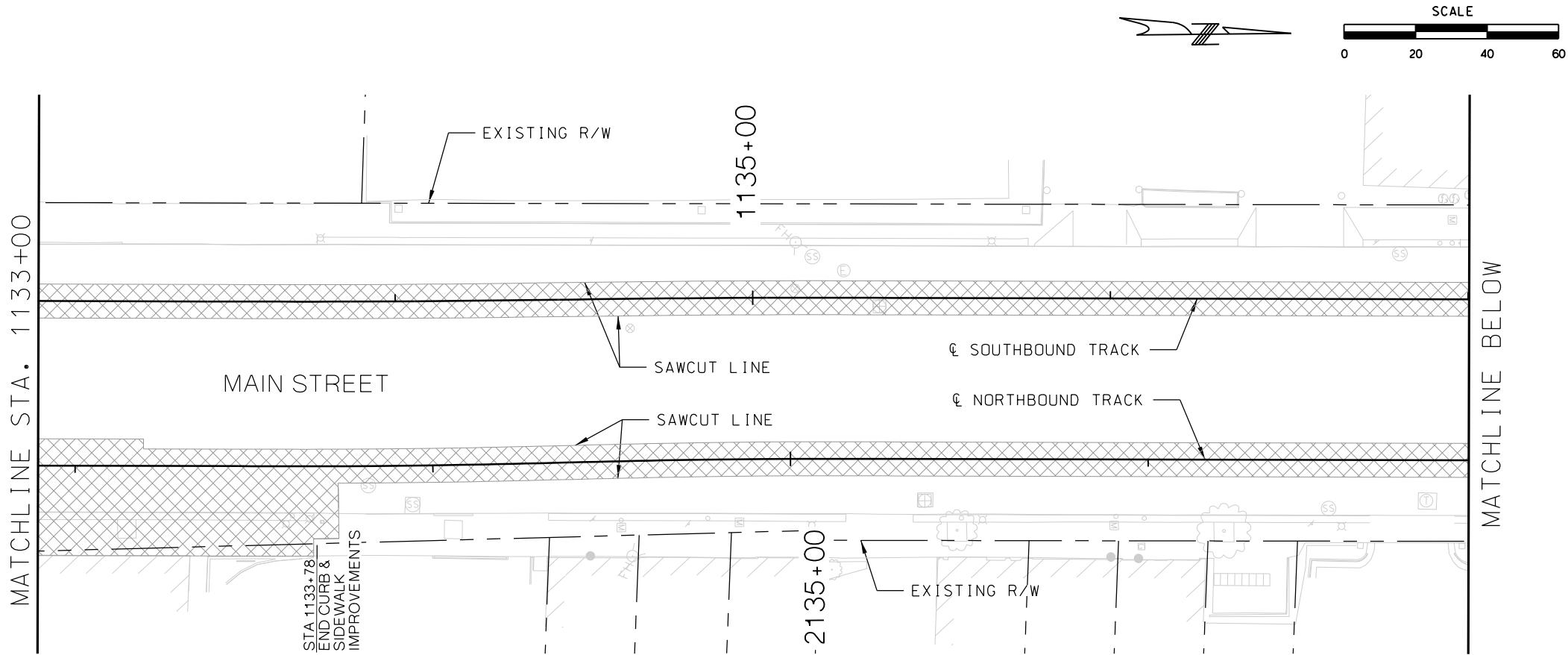
SCALE FOR 22"x34": H: 1"=20'	
FILENAME: DEMO STA 1117-00 - 1125-00	
CONTRACT NO.:	
VOLUME:	
1	
DRAWING NO.: C516	SHEET NO.: 24



LEGEND

 REMOVAL LIMITS

REV	DATE	DESCRIPTION	DESIGNED BY	JWR			PRELIMINARY PLANS - 30%  HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856		DATE: 08-28-2019		KANSAS CITY STREETCAR MAIN STREET EXTENSION SOUTHBOUND AND NORTHBOUND TRACK DEMOLITION PLAN STA 1125+00 TO STA 1129+00 STA 1129+00 TO STA 1133+00		SCALE FOR 22"x34": H: 1"=20' FILENAME: DEMO STA 1125-00 - 1133-00 CONTRACT NO.: ***** VOLUME: 1 DRAWING NO.: C517		SHEET NO.: 25	
			CHECKED BY	RPB												
			DRAWN BY	MMO												
			CHECKED BY	RPB												
			APPROVED BY	NKS												
PLOT DATE: 8/26/2019			6:24:39 PM		DATE		08/28/2019		NOT FOR CONSTRUCTION							



LEGEND


 REMOVAL LIMITS

REV	DATE	DESCRIPTION
PLOT DATE: 8/26/2019		6:24:57 PM

DESIGNED BY	JWR
CHECKED BY	RPB
DRAWN BY	MMO
CHECKED BY	RPB
APPROVED BY	NKS
DATE	08/28/2019



PRELIMINARY PLANS - 30%DATE: 08-28-2019



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KANSAS CITY STREETCAR MAIN STREET EXTENSION

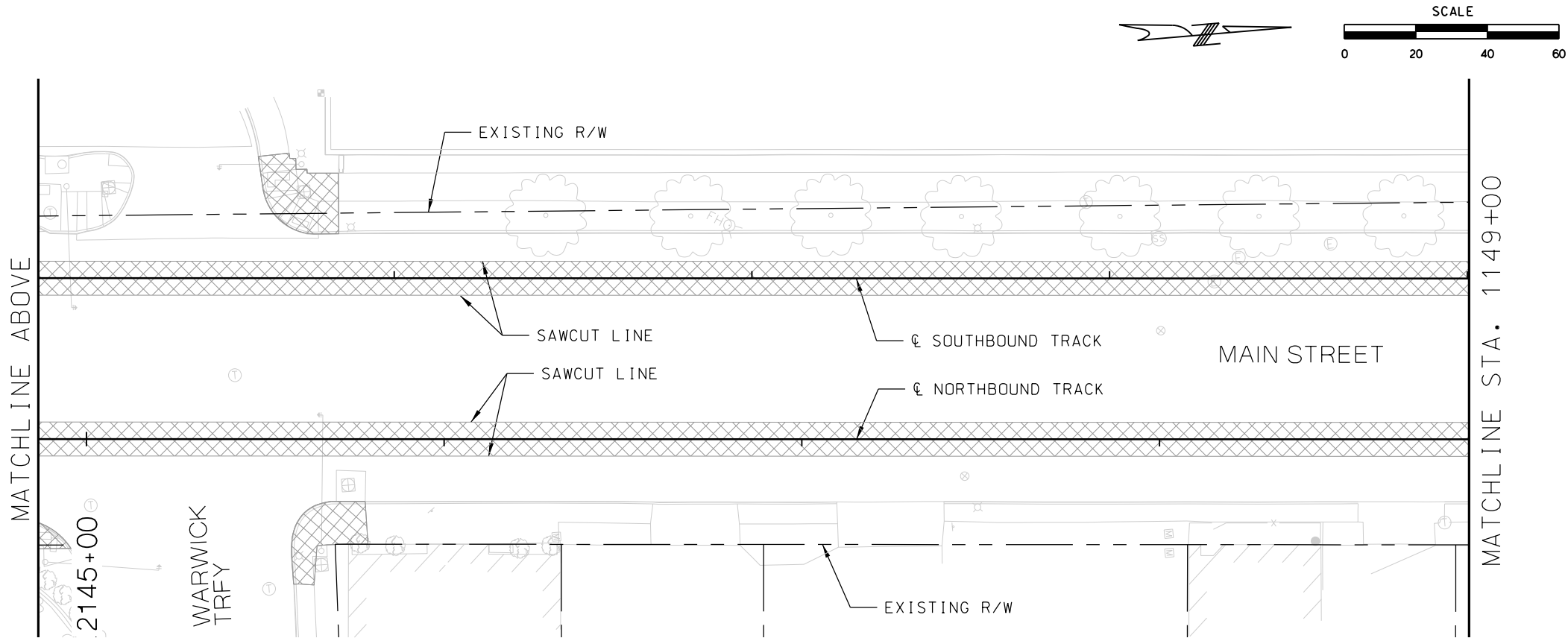
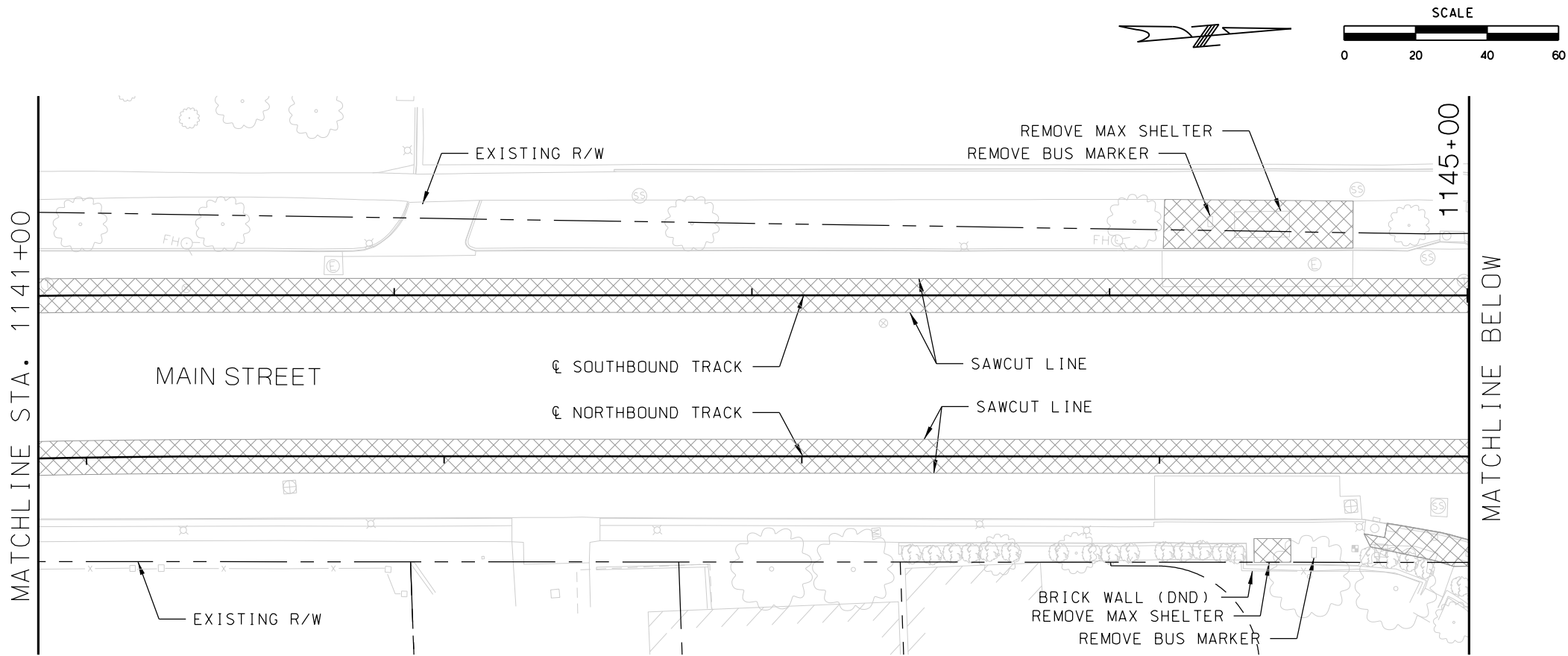
SOUTHBOUND AND NORTHBOUND TRACK

DEMOLITION PLAN

STA 1133+00 TO STA 1137+00


STA 1137+00 TO STA 1141+00

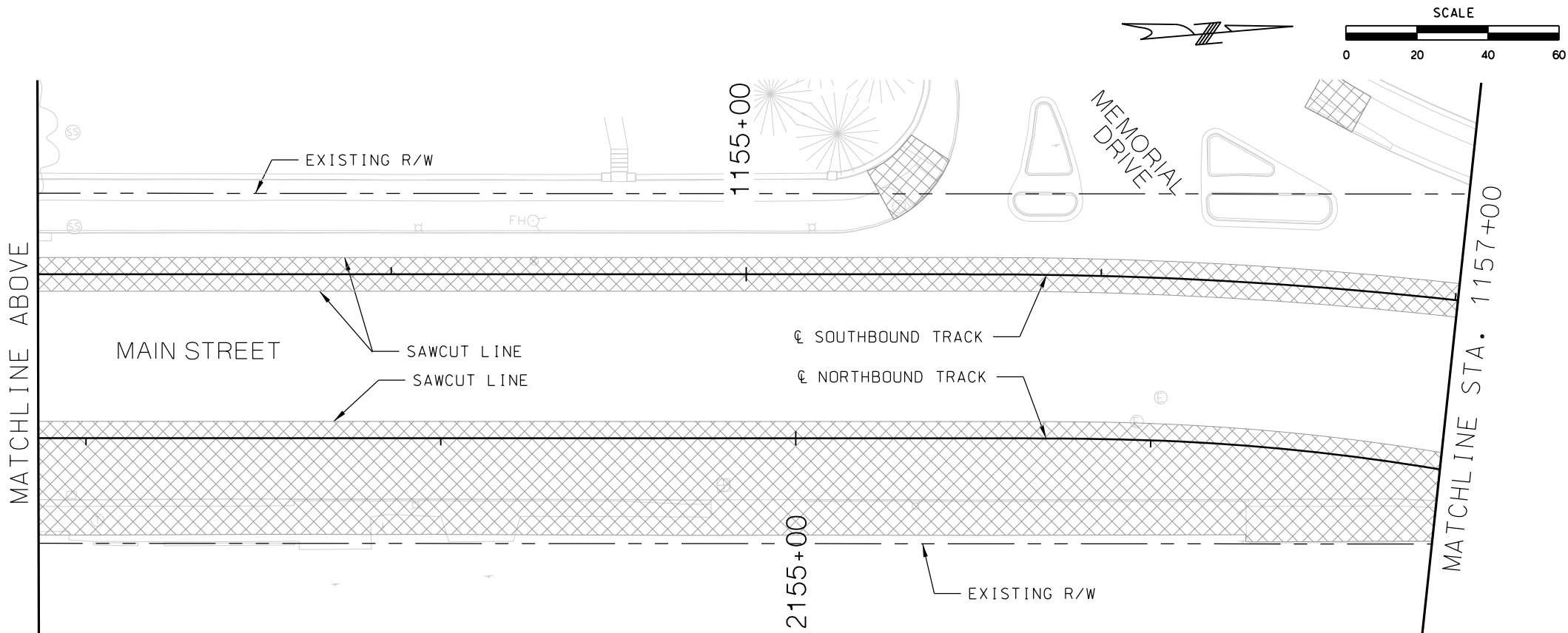
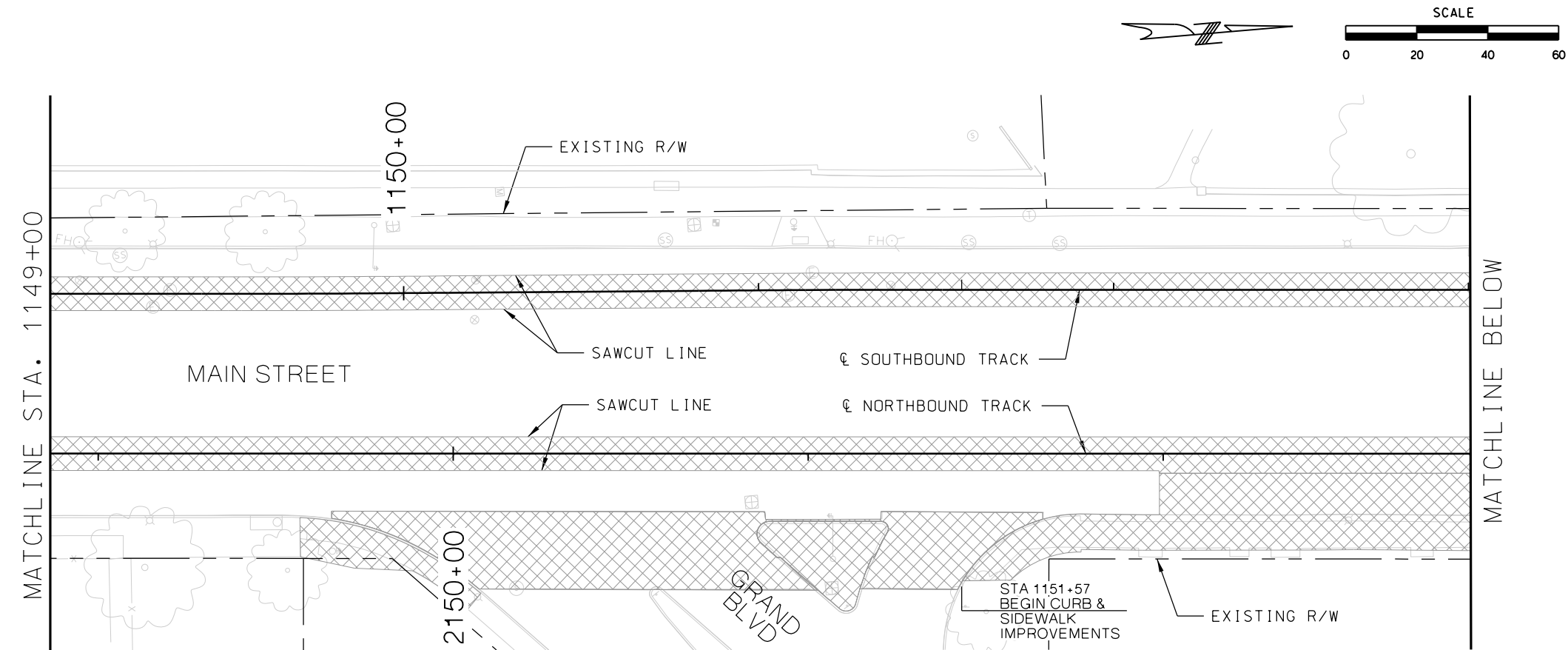
SCALE FOR 22"x34": H: 1"=20'	
FILENAME: DEMO STA 1133+00 - 1141+00	
CONTRACT NO.:	
VOLUME: 1	
DRAWING NO.: C518	SHEET NO.: 26



LEGEND



 REMOVAL LIMITS

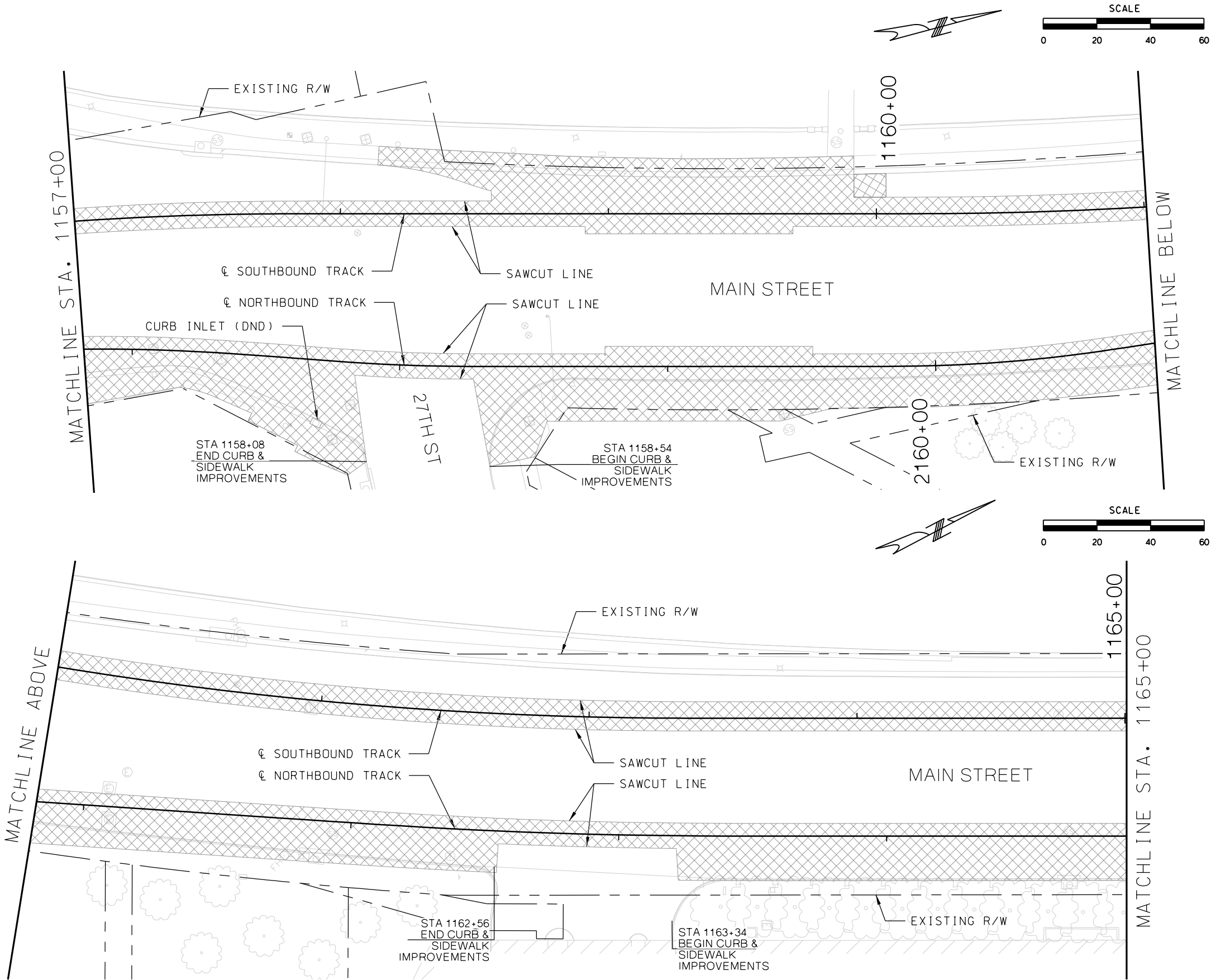
REV		DATE	DESCRIPTION	DESIGNED BY	JWR		PRELIMINARY PLANS - 30%		DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION SOUTHBOUND AND NORTHBOUND TRACK DEMOLITION PLAN STA 1141+00 TO STA 1145+00 STA 1145+00 TO STA 1149+00		SCALE FOR 22"x34": H: 1"=20'	
				CHECKED BY	RPB		 HDR Engineering, Inc.					FILENAME:	
				DRAWN BY	MMO		10450 Holmes Road					DEMO STA 1141+00 - 1149+00	
				CHECKED BY	RPB		Suite 600					CONTRACT NO.:	
				APPROVED BY	NKS		Kansas City, MO 64131-3471					VOLUME:	
							816-360-2700					1	
PLOT DATE:		8/26/2019	6:25:16 PM	DATE	08/28/2019		Certificate of Authority: 000856					DRAWING NO.:	
							NOT FOR CONSTRUCTION					C519	
												SHEET NO.:	
												27	



LEGEND

 REMOVAL LIMITS

REV	DATE	DESCRIPTION	DESIGNED BY	JWR		PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION SOUTHBOUND AND NORTHBOUND TRACK DEMOLITION PLAN STA 1149+00 TO STA 1153+00 STA 1153+00 TO STA 1157+00	SCALE FOR 22"x34": H: 1"=20'		
			CHECKED BY	RPB		 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	NOT FOR CONSTRUCTION				
			DRAWN BY	MMO							
			CHECKED BY	RPB							
			APPROVED BY	NKS							
PLOT DATE: 8/26/2019			6:25:35 PM			DATE	08/28/2019		DRAWING NO.: C520		
									SHEET NO.: 28		




LEGEND

 REMOVAL LIMITS

REV	DATE	DESCRIPTION
PLOT DATE: 8/26/2019		6:25:52 PM

DESIGNED BY	JWR
CHECKED BY	RPB
DRAWN BY	MMQ
CHECKED BY	RPB
APPROVED BY	NKS
DATE	08/28/2019



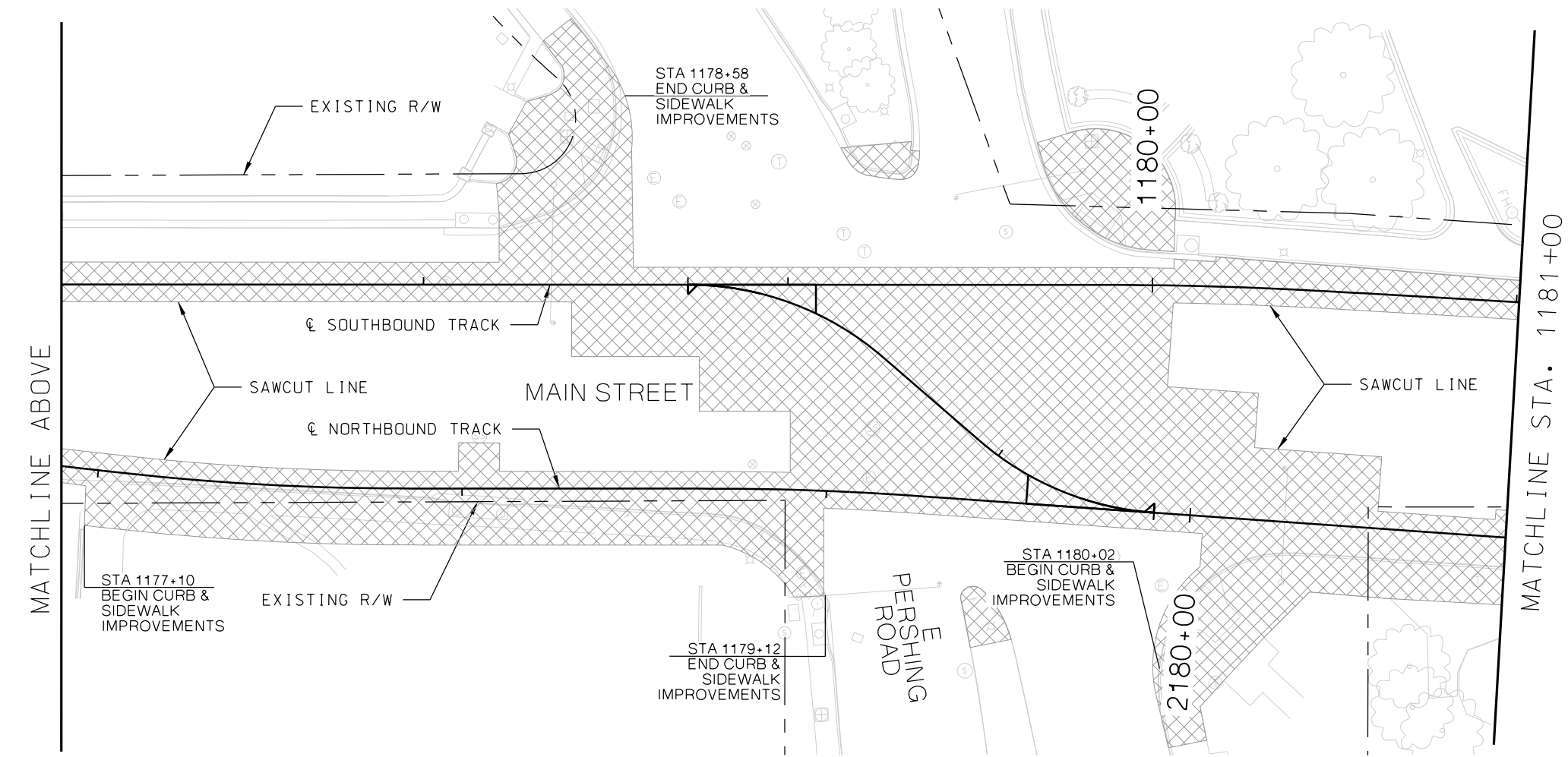
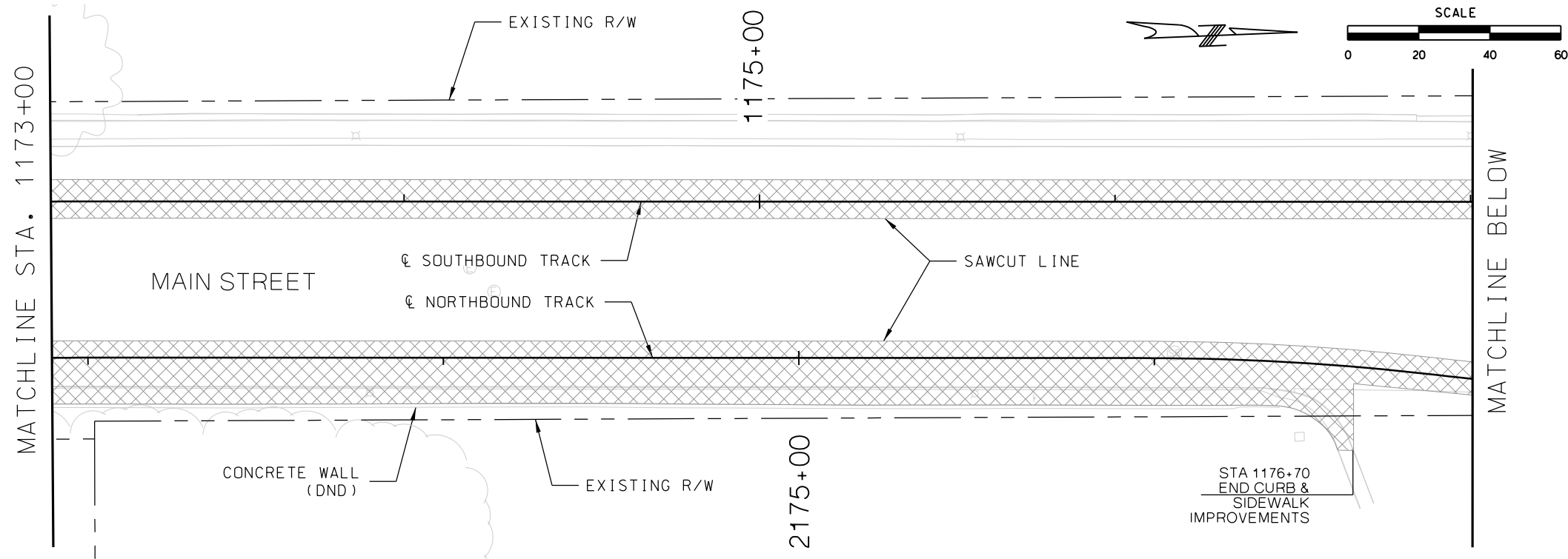
PRELIMINARY PLANS - 30%	DATE: 08-28-2019
 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	
NOT FOR CONSTRUCTION	

KANSAS CITY STREETCAR MAIN STREET EXTENSION	
SOUTHBOUND AND NORTHBOUND TRACK	
DEMOLITION PLAN	
STA 1157+00 TO STA 1161+00	
STA 1161+00 TO STA 1165+00	

SCALE FOR 22"x34": H: 1"=20'	
FILENAME: DEMO STA 1157+00 - 1165+00	
CONTRACT NO.: *****	
VOLUME: 1	
DRAWING NO.: C521	SHEET NO.: 29



REV	DATE	DESCRIPTION	DESIGNED BY JWR		PRELIMINARY PLANS - 30% DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION SOUTHBOUND AND NORTHBOUND TRACK DEMOLITION PLAN STA 1165+00 TO STA 1169+00 STA 1169+00 TO STA 1173+00	SCALE FOR 22"x34": H: 1"=20'	
			CHECKED BY RPB				FILENAME:	
			DRAWN BY MMO				DEMO STA 1165+00 - 1173+00	
			CHECKED BY RPB				CONTRACT NO.:	
			APPROVED BY NKS				*****	
							VOLUME:	
PLOT DATE: 8/26/2019 6:26:10 PM			DATE: 08/28/2019		NOT FOR CONSTRUCTION		1	
							DRAWING NO.: C522	SHEET NO.: 30



LEGEND


 REMOVAL LIMITS

REV	DATE	DESCRIPTION
PLOT DATE: 8/26/2019		6:26:35 PM

DESIGNED BY	JWR
CHECKED BY	RPB
DRAWN BY	MMO
CHECKED BY	RPB
APPROVED BY	NKS
DATE	08/28/2019



PRELIMINARY PLANS - 30%DATE: 08-28-2019



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Certificate of Authority: 000856

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KANSAS CITY STREETCAR MAIN STREET EXTENSION

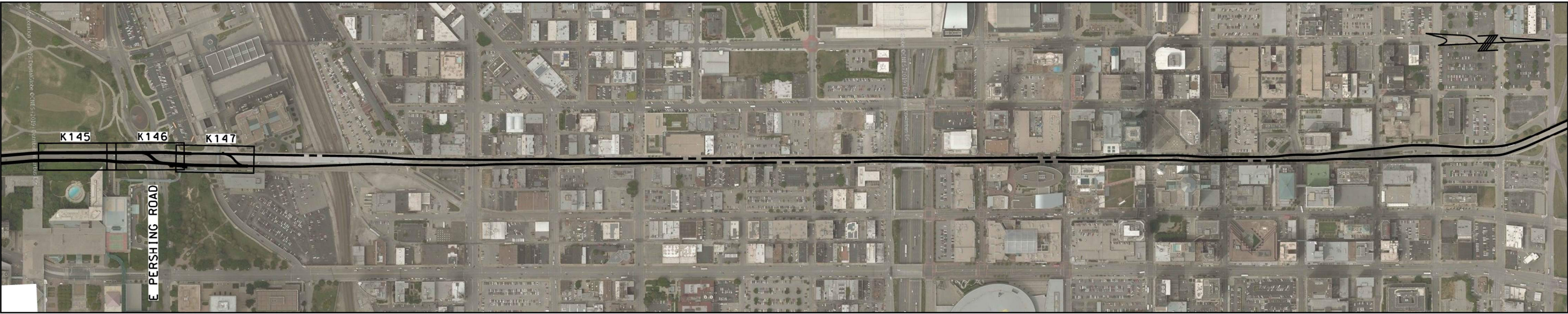
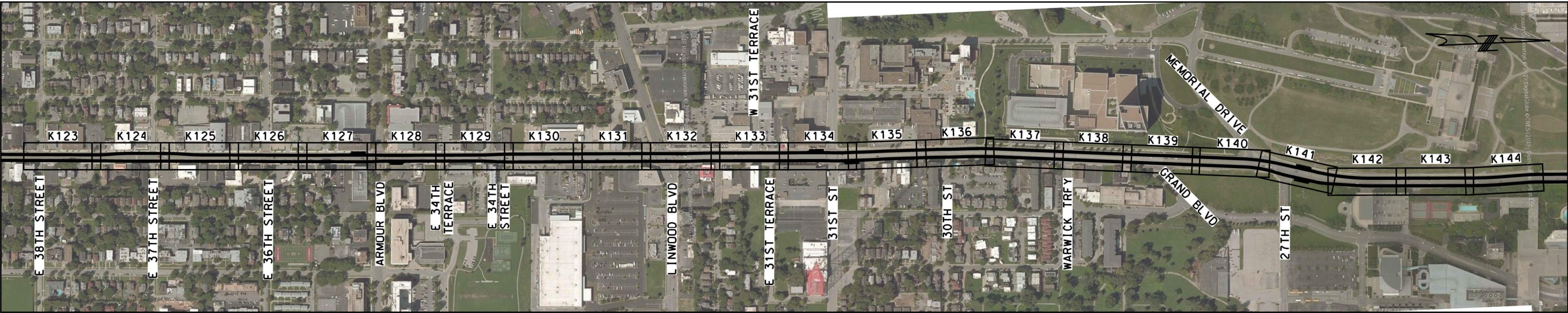
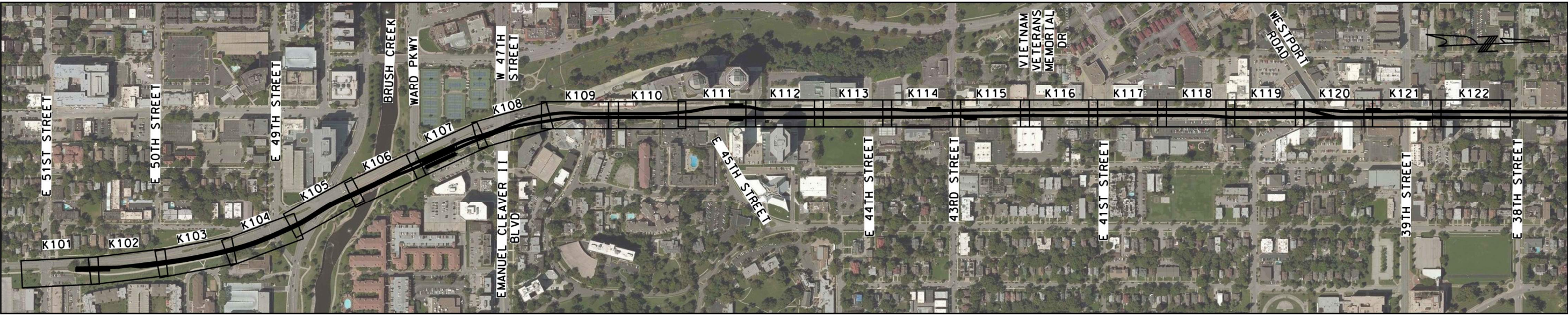
SOUTHBOUND AND NORTHBOUND TRACK

DEMOLITION PLAN

STA 1173+00 TO STA 1177+00

STA 1177+00 TO STA 1181+00

SCALE FOR 22"x34": H: 1"=20'	
FILENAME: DEMO STA 1173+00 - 1181+00	
CONTRACT NO.:	
VOLUME: 1	
DRAWING NO.: C523	SHEET NO.: 31



REV	DATE	DESCRIPTION

PLOT DATE: 8/27/2019

10:31:40 AM

DESIGNED BY	JWR
CHECKED BY	RPB
DRAWN BY	MMO
CHECKED BY	RPB
APPROVED BY	NKS
DATE	08/28/2019



PRELIMINARY PLANS - 30%

DATE: 08-28-2019

HDR Engineering, Inc.

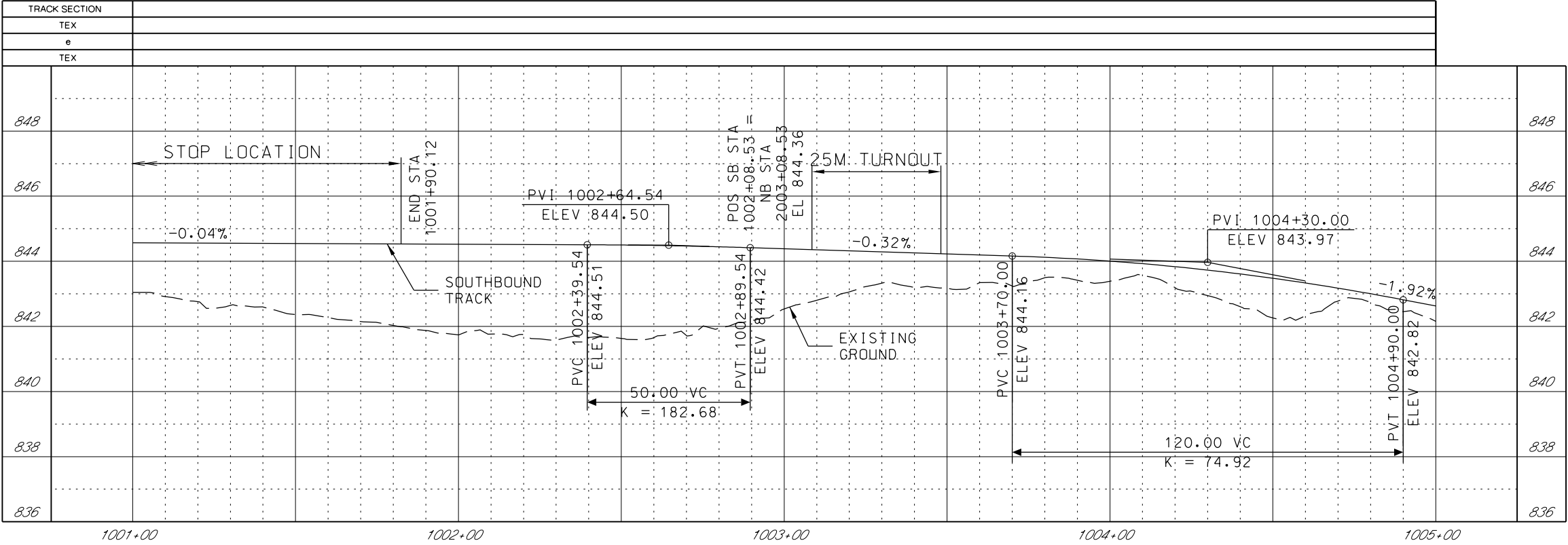
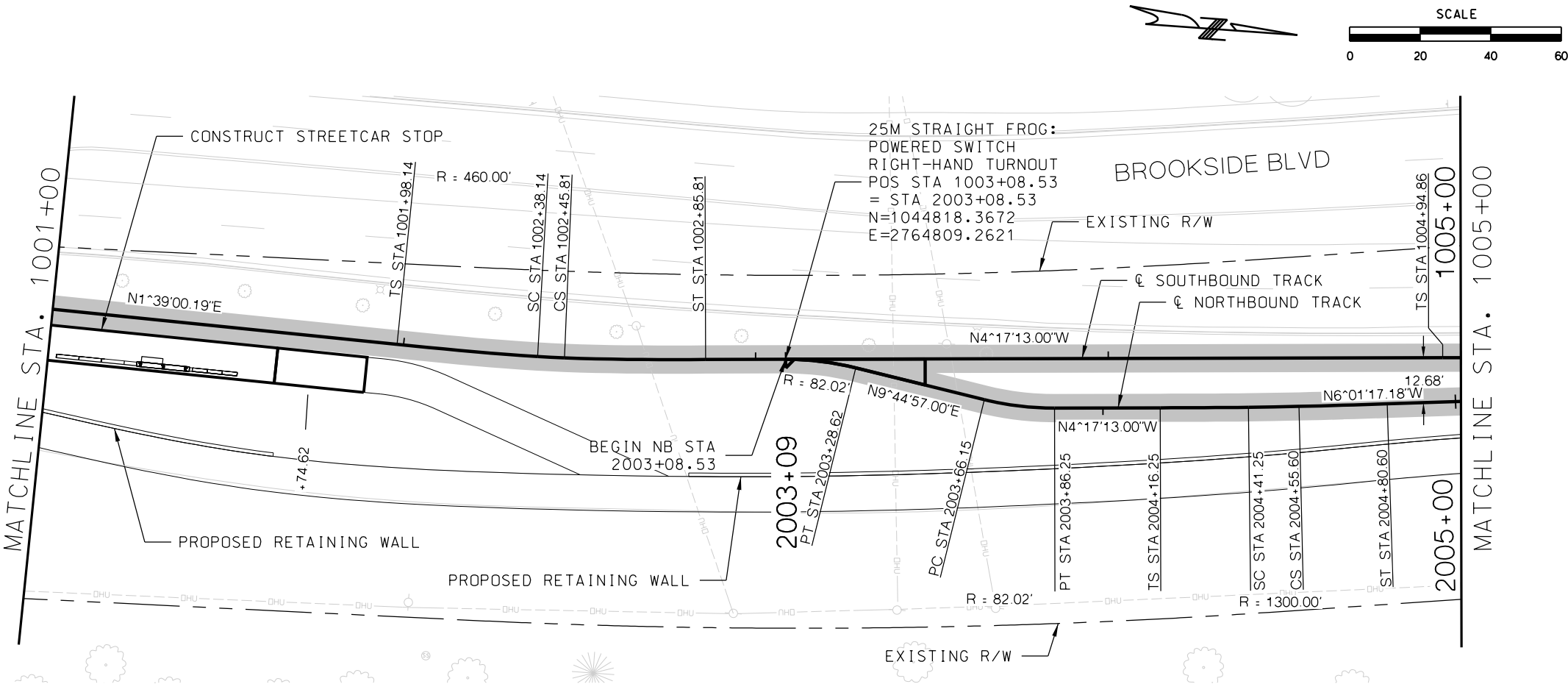
10460 Holmes Road
Suite 600
Kansas City, MO 64131-3471
816-360-2700
Certificate of Authority: 000856

NOT FOR CONSTRUCTION

KANSAS CITY STREETCAR MAIN STREET EXTENSION

TRACK KEY MAP

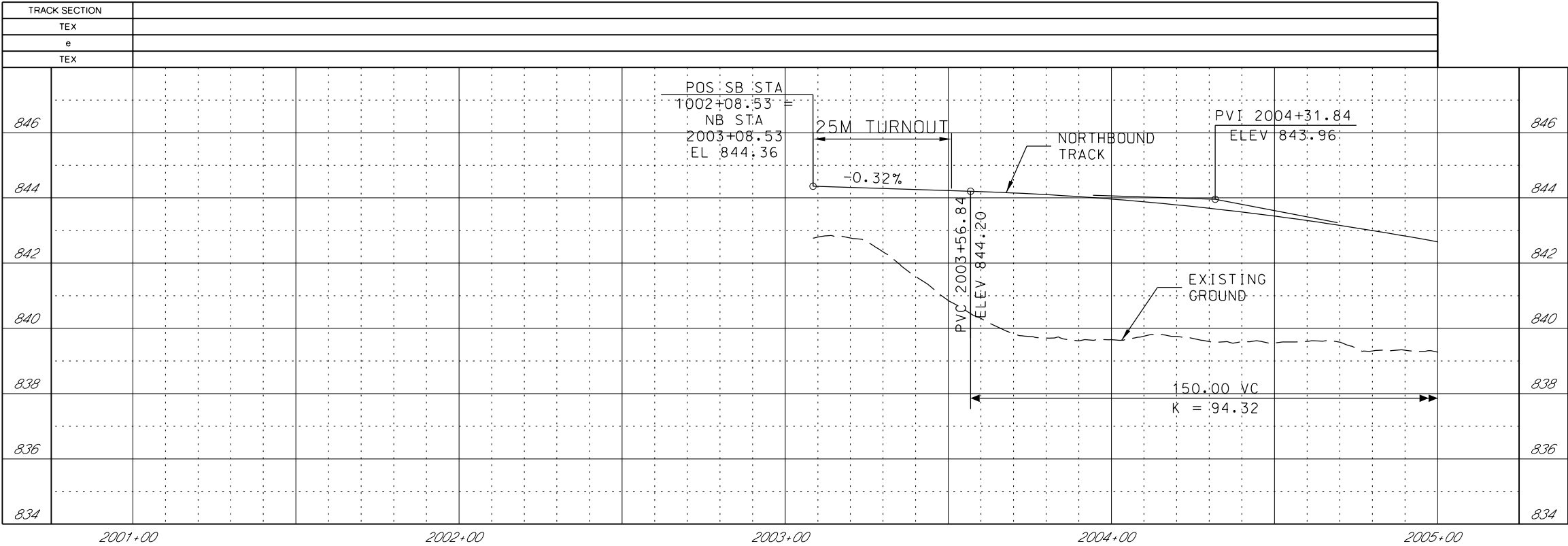
SCALE FOR 22"x34": NOT TO SCALE	
FILENAME: TRACK KEY MAP	
CONTRACT NO.:	
VOLUME: 1	
DRAWING NO.:	SHEET NO.:
K001	33



GENERAL NOTES


1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
3. ALL CURVES ARE BASED ON ARC DEFINITION.
4. PROFILES DESIGNED TO FINAL TOP OF RAIL ELEVATION.
5. PROFILE SHOWN IS AT 30% LEVEL AND IS ONLY INTENDED TO ILLUSTRATE THE EXISTING STREET GRADES AND TO CONFIRM THE LOCATIONS OF THE PLATFORMS AND SPECIAL TRACKWORK.

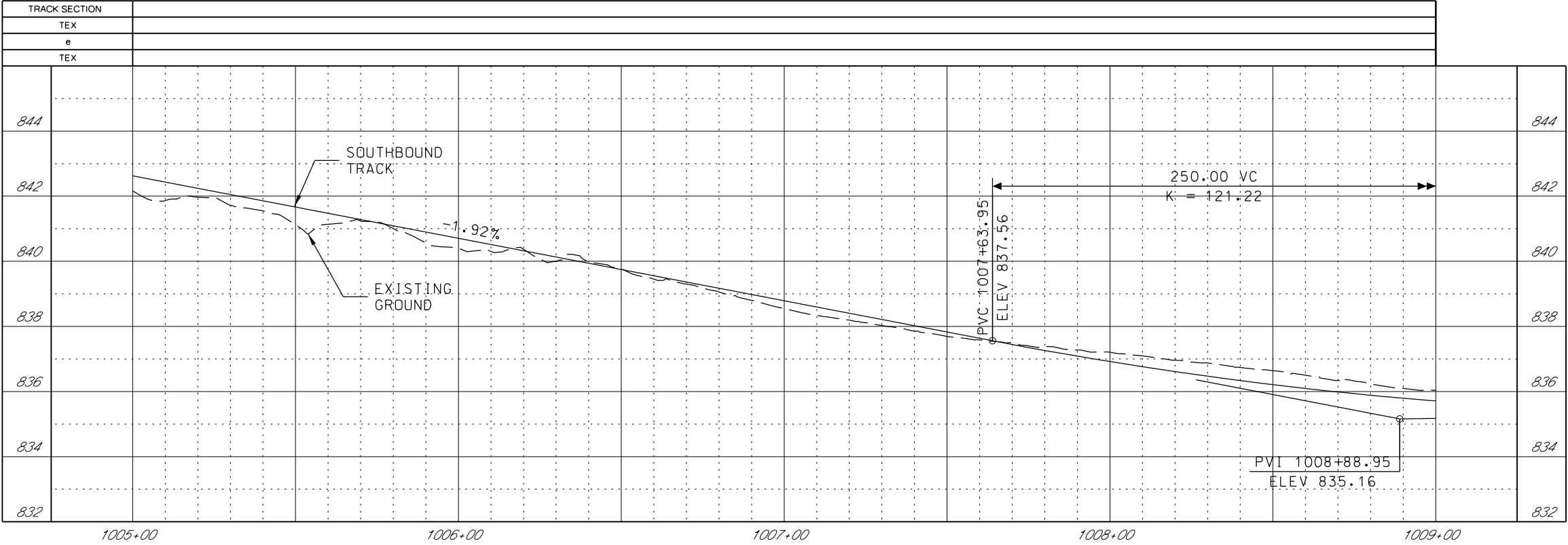
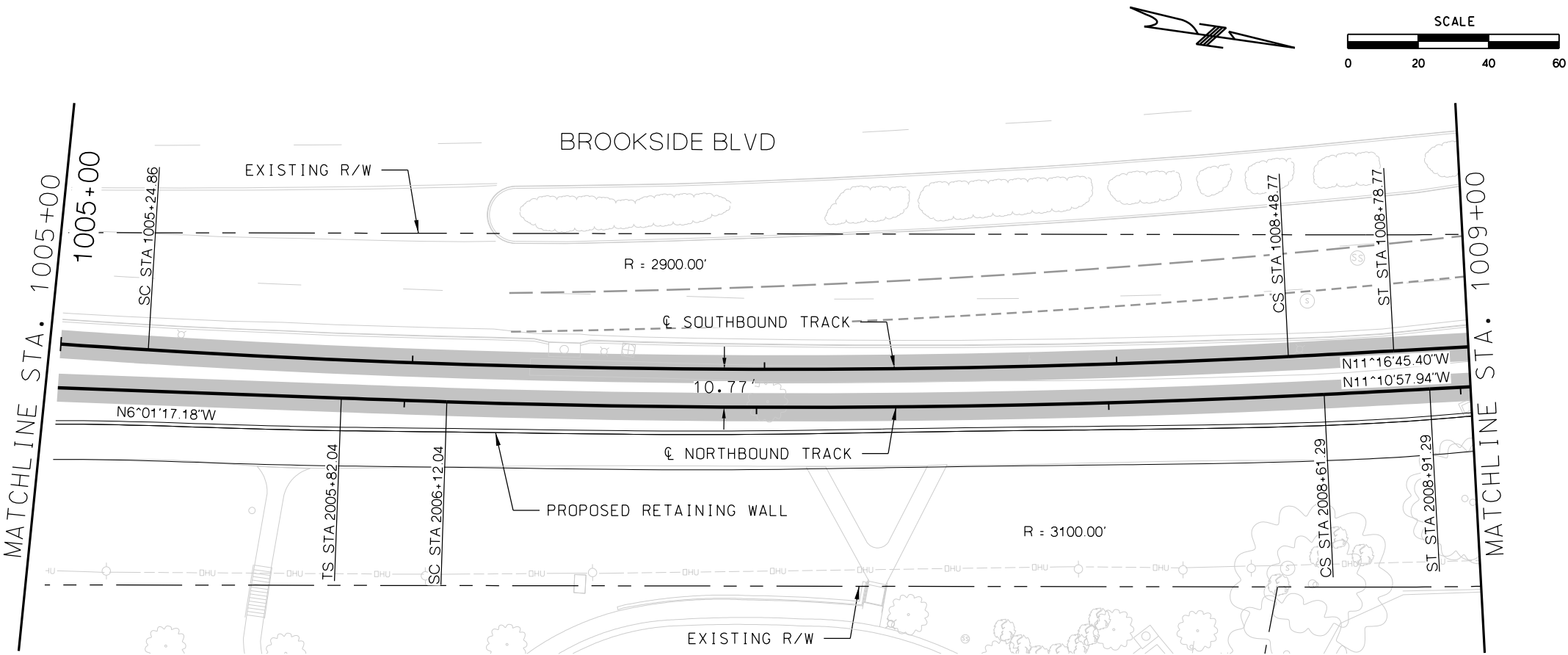
REV	DATE	DESCRIPTION	DESIGNED BY	JWR	PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'
			CHECKED BY	RPB	HDR	HDR Engineering, Inc.		FILENAME:
			DRAWN BY	MMO	10450 Holmes Road			SB P.P. STA 1001+00 - 1005+00
					Suite 600			CONTRACT NO.:
			CHECKED BY	RPB	Kansas City, MO 64131-3471			VOLUME:
			APPROVED BY	NKS	816-360-2700			1
					Certificate of Authority: 000856			DRAWING NO.:
PLOT DATE:	8/27/2019		DATE	08/28/2019				SHEET NO.:
					NOT FOR CONSTRUCTION			K102
								35



GENERAL NOTES


1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
3. ALL CURVES ARE BASED ON ARC DEFINITION.
4. PROFILES DESIGNED TO FINAL TOP OF RAIL ELEVATION.
5. PROFILE SHOWN IS AT 30% LEVEL AND IS ONLY INTENDED TO ILLUSTRATE THE EXISTING STREET GRADES AND TO CONFIRM THE LOCATIONS OF THE PLATFORMS AND SPECIAL TRACKWORK.

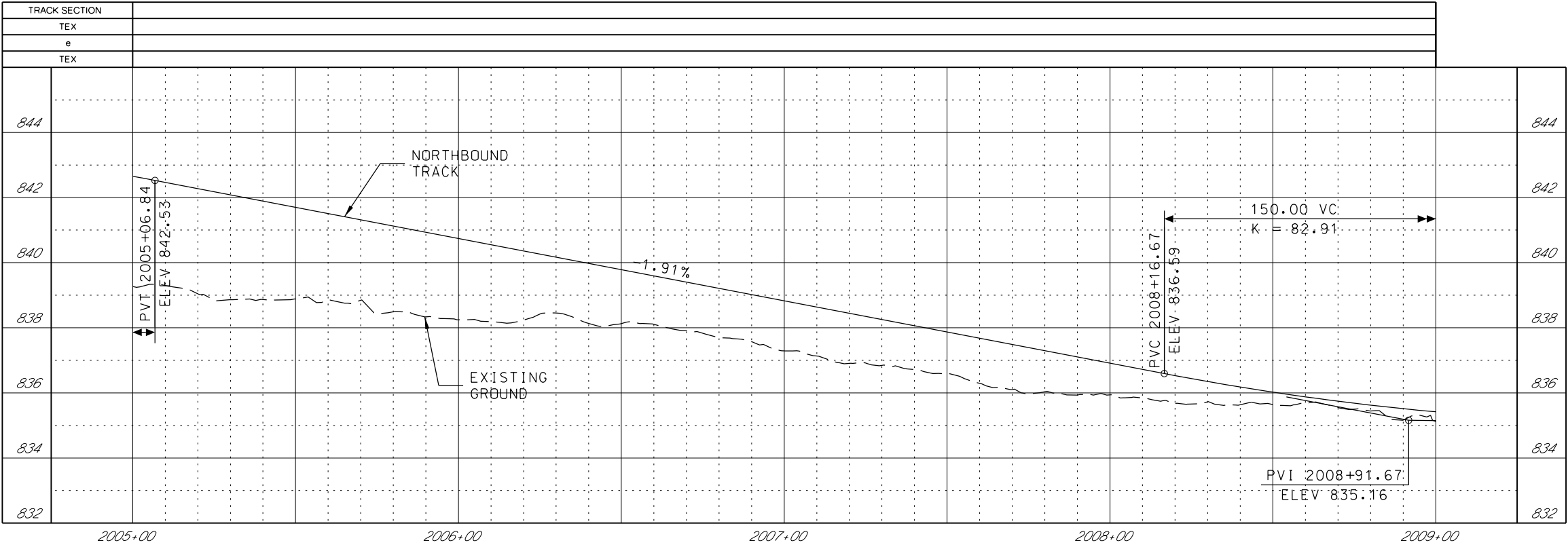
REV	DATE	DESCRIPTION	DESIGNED BY JWR			PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'	
			CHECKED BY RPB			 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	NOT FOR CONSTRUCTION		NORTHBOUND TRACK PROFILE	FILENAME: NB PRO STA 2001+00 - 2005+00
			DRAWN BY MMO						CONTRACT NO.:	
			CHECKED BY RPB						VOLUME: 1	
			APPROVED BY NKS						DRAWING NO.:	SHEET NO.:
PLOT DATE: 8/27/2019			10:08:06 AM	DATE: 08/28/2019				K102A	36	



GENERAL NOTES

1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
3. ALL CURVES ARE BASED ON ARC DEFINITION.
4. PROFILES DESIGNED TO FINAL TOP OF RAIL ELEVATION.
5. PROFILE SHOWN IS AT 30% LEVEL AND IS ONLY INTENDED TO ILLUSTRATE THE EXISTING STREET GRADES AND TO CONFIRM THE LOCATIONS OF THE PLATFORMS AND SPECIAL TRACKWORK.

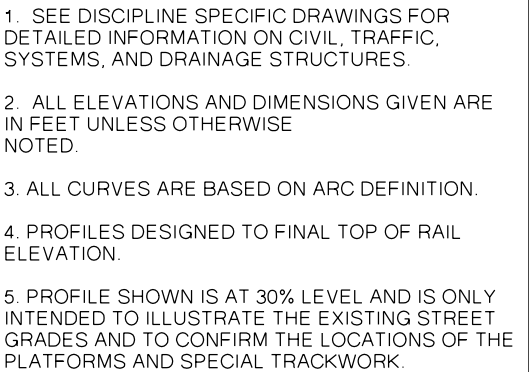
REV	DATE	DESCRIPTION	DESIGNED BY	JWR			PRELIMINARY PLANS - 30%		DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION		SCALE FOR 22"x34": H: 1"=20' V: 1"=2'			
			CHECKED BY	RPB			 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856		NOT FOR CONSTRUCTION			SOUTHBOUND TRACK PLAN AND PROFILE SB STA 1005+00 TO STA 1009+00		FILENAME: SB P.P STA 1005+00 - 1009+00	
			DRAWN BY	MMO										CONTRACT NO.:	
			CHECKED BY	RPB										VOLUME:	
			APPROVED BY	NKS										DRAWING NO.:	
														SHEET NO.:	
PLOT DATE: 8/27/2019			10:08:26 AM		DATE	08/28/2019			K103		37				

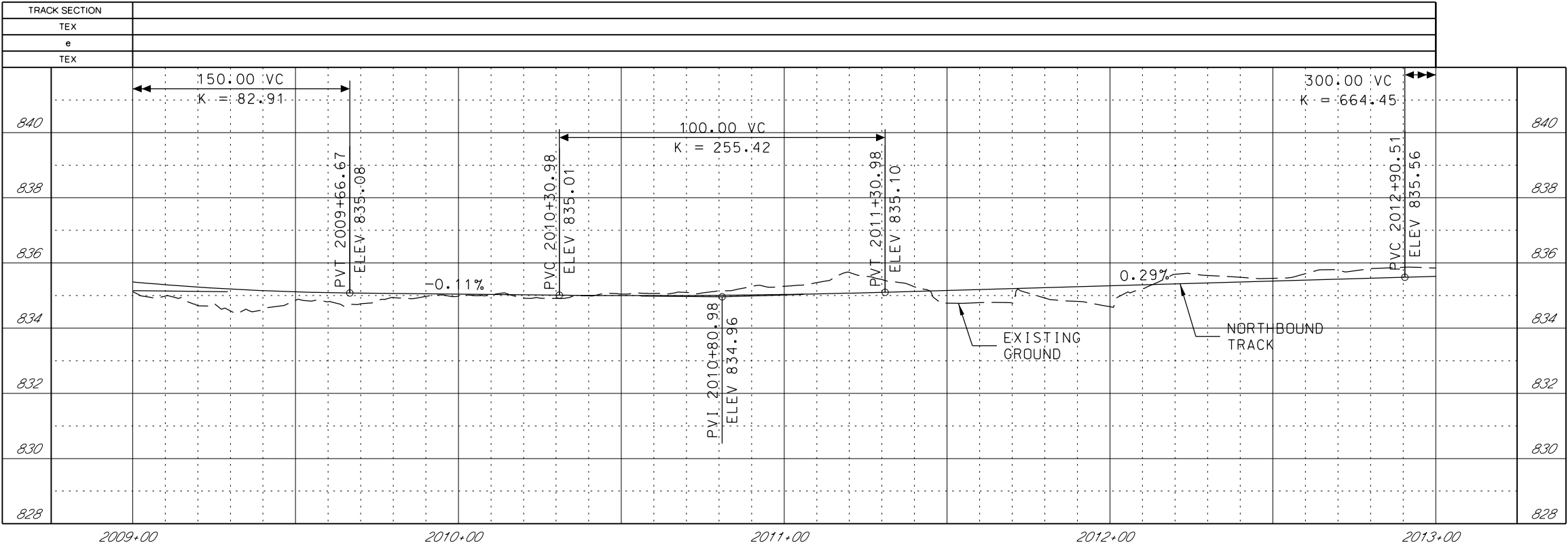


GENERAL NOTES

1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
3. ALL CURVES ARE BASED ON ARC DEFINITION.
4. PROFILES DESIGNED TO FINAL TOP OF RAIL ELEVATION.
5. PROFILE SHOWN IS AT 30% LEVEL AND IS ONLY INTENDED TO ILLUSTRATE THE EXISTING STREET GRADES AND TO CONFIRM THE LOCATIONS OF THE PLATFORMS AND SPECIAL TRACKWORK.


<div>REV</div> <div>DATE</div> <div>DESCRIPTION</div>			<div>DESIGNED BY</div> <div>JWR</div>		<div></div>	<div>PRELIMINARY PLANS - 30%</div> <div>DATE: 08-28-2019</div>		<div>KANSAS CITY STREETCAR MAIN STREET EXTENSION</div>		<div>SCALE FOR 22"x34":</div> <div>H: 1"=20' V: 1"=2'</div>	
			<div>CHECKED BY</div> <div>RPB</div>			<div></div> <div>HDR Engineering, Inc.</div>		<div>NORTHBOUND TRACK</div>		<div>FILENAME:</div> <div>NB PRO STA 2005+00 - 2009+00</div>	
			<div>DRAWN BY</div> <div>MMO</div>			<div>10450 Holmes Road</div> <div>Suite 600</div> <div>Kansas City, MO 64131-3471</div> <div>816-360-2700</div> <div>Certificate of Authority: 000856</div>		<div>PROFILE</div>		<div>CONTRACT NO.:</div> <div>*****</div>	
			<div>CHECKED BY</div> <div>RPB</div>					<div>NB STA 2005+00 TO STA 2009+00</div>		<div>VOLUME:</div> <div>1</div>	
			<div>APPROVED BY</div> <div>NKS</div>							<div>DRAWING NO.:</div> <div>K103A</div>	
<div>PLOT DATE:</div> <div>8/27/2019</div>			<div>DATE</div> <div>08/28/2019</div>		<div>NOT FOR CONSTRUCTION</div>				<div>SHEET NO.:</div> <div>38</div>		

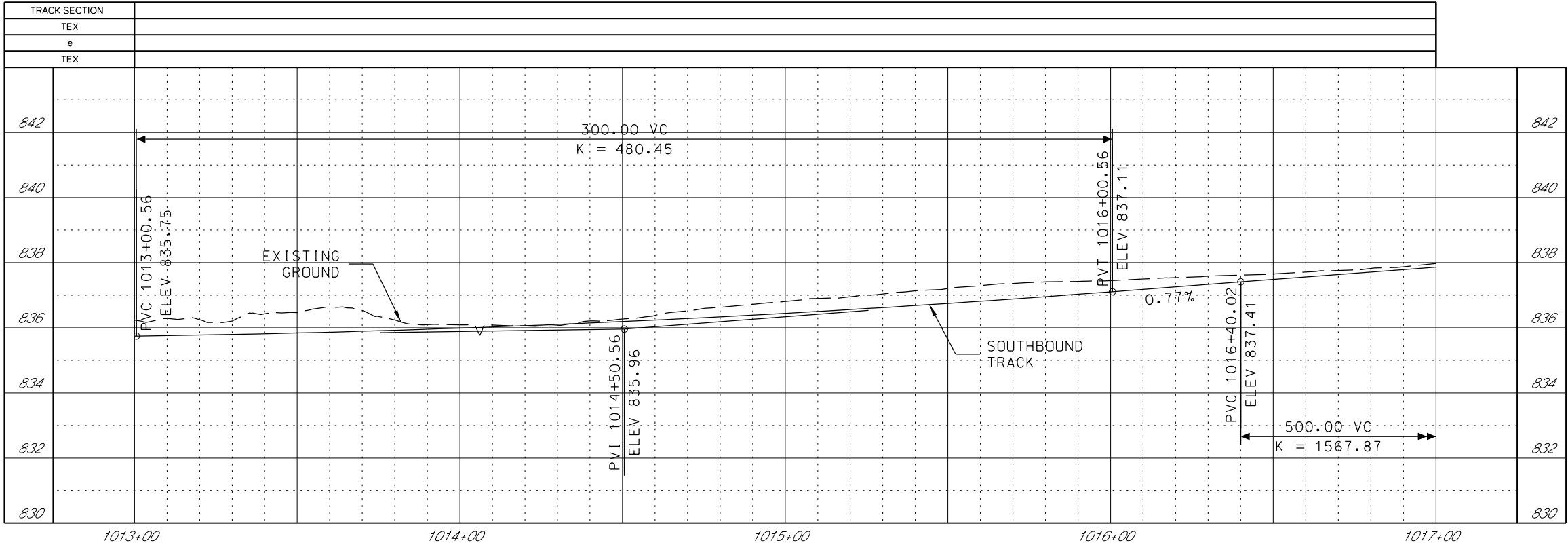
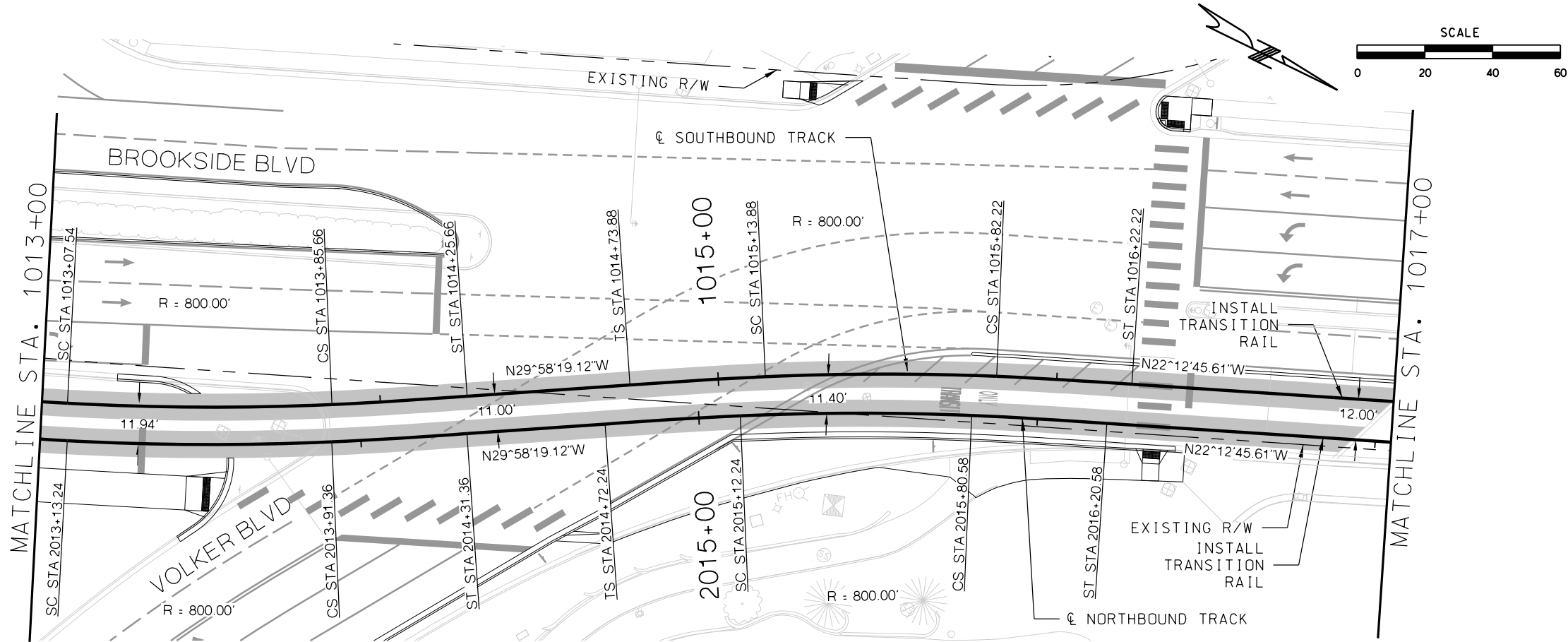




GENERAL NOTES

1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
3. ALL CURVES ARE BASED ON ARC DEFINITION.
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5. PROFILE SHOWN IS AT 30% LEVEL AND IS ONLY INTENDED TO ILLUSTRATE THE EXISTING STREET GRADES AND TO CONFIRM THE LOCATIONS OF THE PLATFORMS AND SPECIAL TRACKWORK.

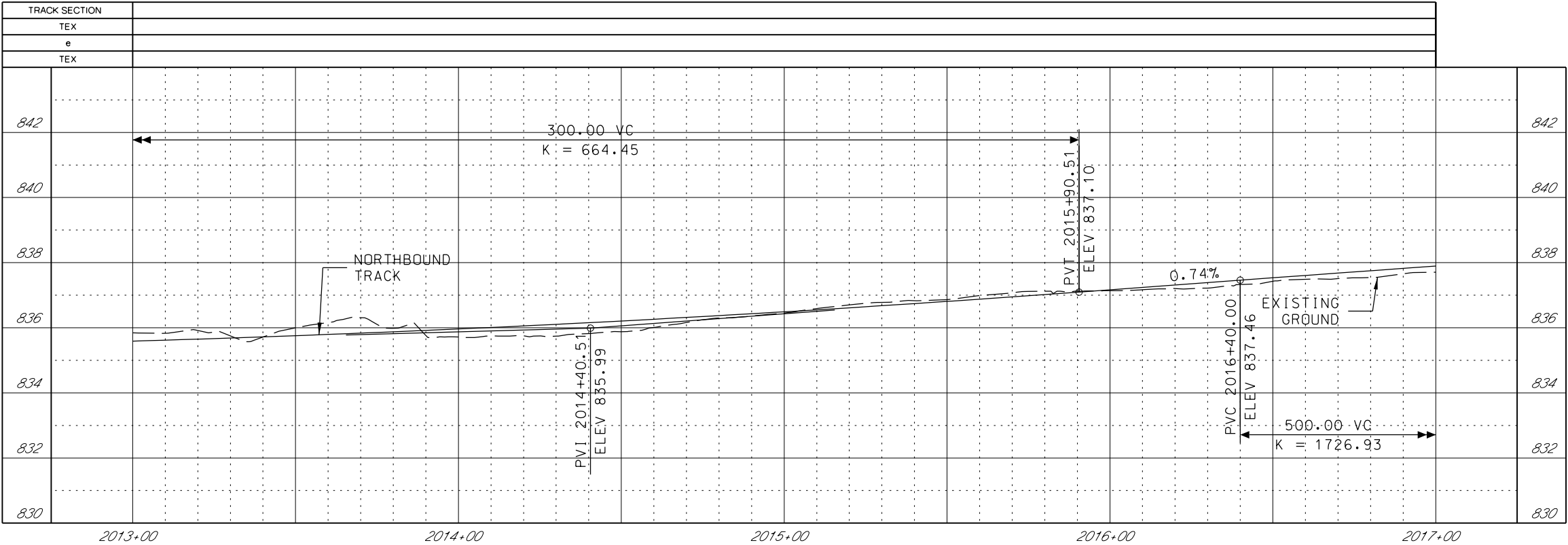
REV	DATE	DESCRIPTION	DESIGNED BY JWR			PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION NORTH BOUND TRACK PROFILE 49TH STREET NB STA 2009+00 TO STA 2013+00	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'	
			CHECKED BY RPB			 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	FILENAME: NB PRO STA 2009+00 - 2013+00			
			DRAWN BY MMO				CONTRACT NO.: *****			
			CHECKED BY RPB				VOLUME: 1			
			APPROVED BY NKS				DRAWING NO.: K104A		SHEET NO.: 40	
PLOT DATE: 8/27/2019 10:09:13 AM			DATE: 08/28/2019			NOT FOR CONSTRUCTION				



GENERAL NOTES



1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
3. ALL CURVES ARE BASED ON ARC DEFINITION.
4. PROFILES DESIGNED TO FINAL TOP OF RAIL ELEVATION.
5. PROFILE SHOWN IS AT 30% LEVEL AND IS ONLY INTENDED TO ILLUSTRATE THE EXISTING STREET GRADES AND TO CONFIRM THE LOCATIONS OF THE PLATFORMS AND SPECIAL TRACKWORK.

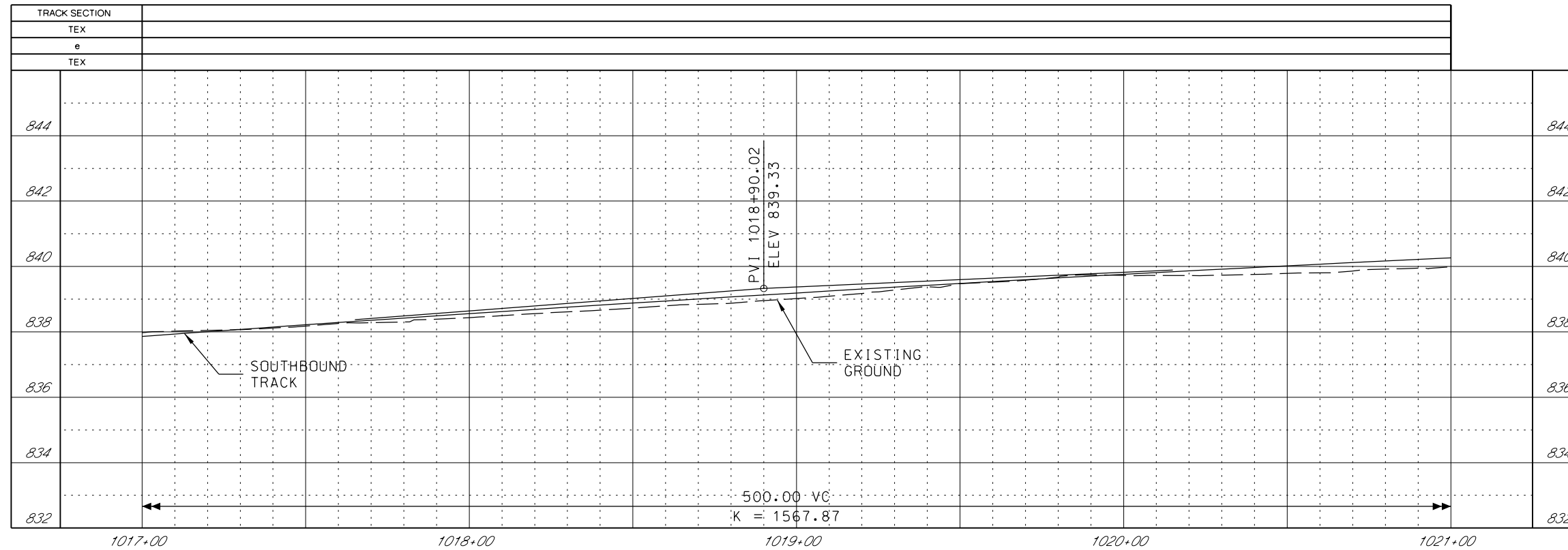
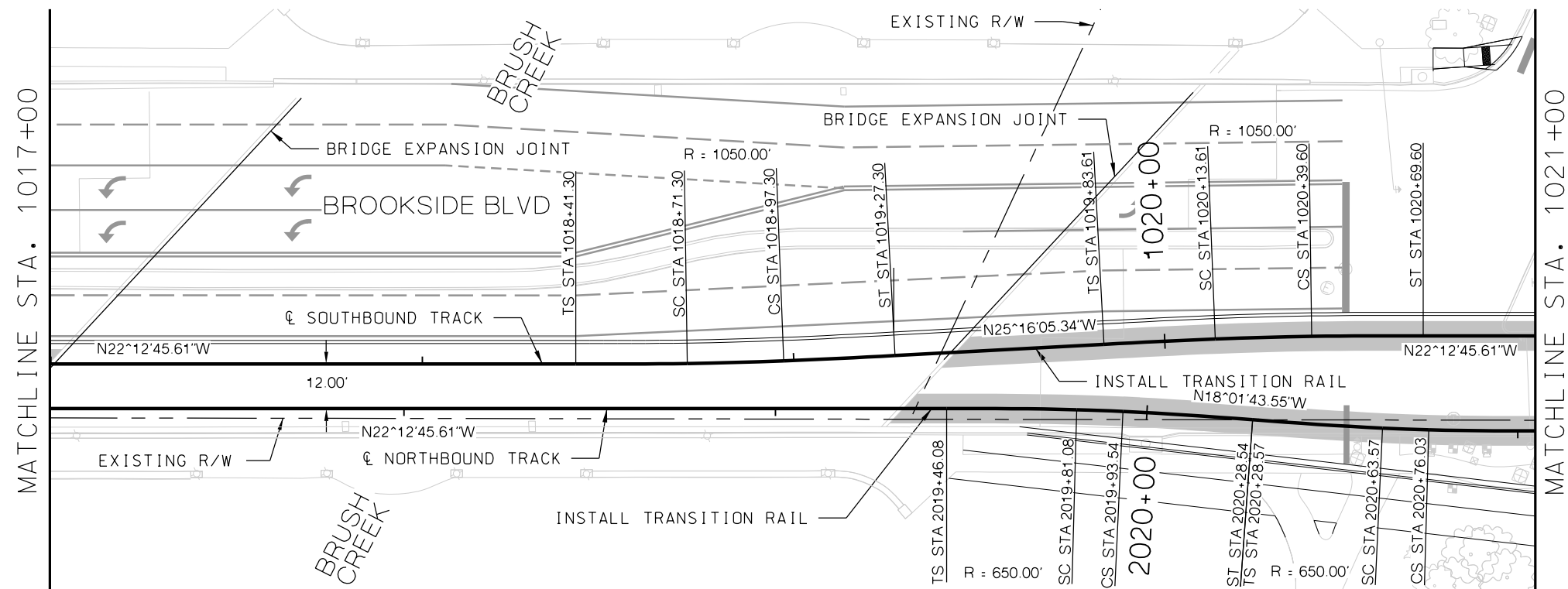
REV	DATE	DESCRIPTION	DESIGNED BY	JWR	PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'
			CHECKED BY	RPB	 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	NOT FOR CONSTRUCTION	SOUTHBOUND TRACK PLAN AND PROFILE VOLKER BOULEVARD SB STA 1013+00 TO STA 1017+00	FILENAME: SB P.P. STA 1013+00 - 1017+00
			DRAWN BY	MMO				CONTRACT NO.:
			CHECKED BY	RPB				VOLUME: 1
			APPROVED BY	NKS				DRAWING NO.: K105
PLOT DATE: 8/27/2019			10:09:43 AM		DATE: 08/28/2019		SHEET NO.: 41	



GENERAL NOTES

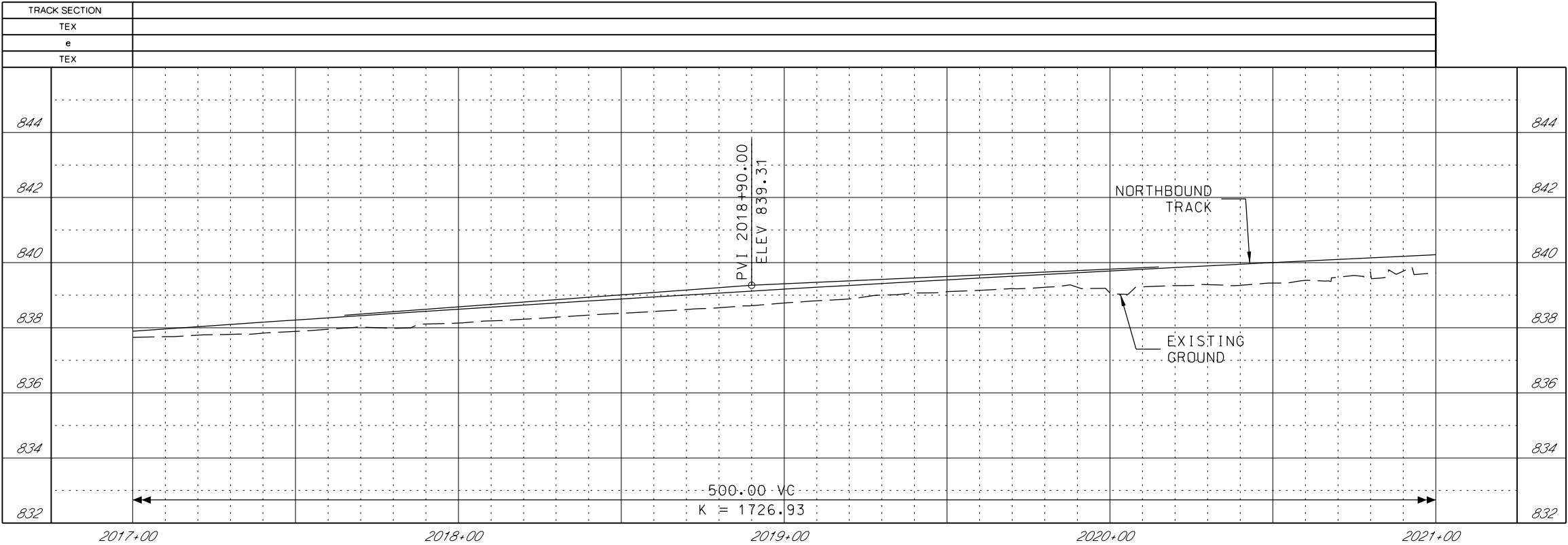
1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
3. ALL CURVES ARE BASED ON ARC DEFINITION.
4. PROFILES DESIGNED TO FINAL TOP OF RAIL ELEVATION.
5. PROFILE SHOWN IS AT 30% LEVEL AND IS ONLY INTENDED TO ILLUSTRATE THE EXISTING STREET GRADES AND TO CONFIRM THE LOCATIONS OF THE PLATFORMS AND SPECIAL TRACKWORK.

REV	DATE	DESCRIPTION	DESIGNED BY JWR			PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION NORTHBOUND TRACK PROFILE VOLKER BOULEVARD NB STA 2013+00 TO STA 2017+00	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'
			CHECKED BY RPB			 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856			FILENAME: NB PRO STA 2013+00 - 2017+00
			DRAWN BY MMO						CONTRACT NO.:
			CHECKED BY RPB						VOLUME: 1
			APPROVED BY NKS						DRAWING NO.:
									SHEET NO.:
PLOT DATE: 8/27/2019 10:09:47 AM			DATE: 08/28/2019			NOT FOR CONSTRUCTION		K105A 42	




1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
3. ALL CURVES ARE BASED ON ARC DEFINITION.
4. PROFILES DESIGNED TO FINAL TOP OF RAIL ELEVATION.
5. PROFILE SHOWN IS AT 30% LEVEL AND IS ONLY INTENDED TO ILLUSTRATE THE EXISTING STREET GRADES AND TO CONFIRM THE LOCATIONS OF THE PLATFORMS AND SPECIAL TRACKWORK.

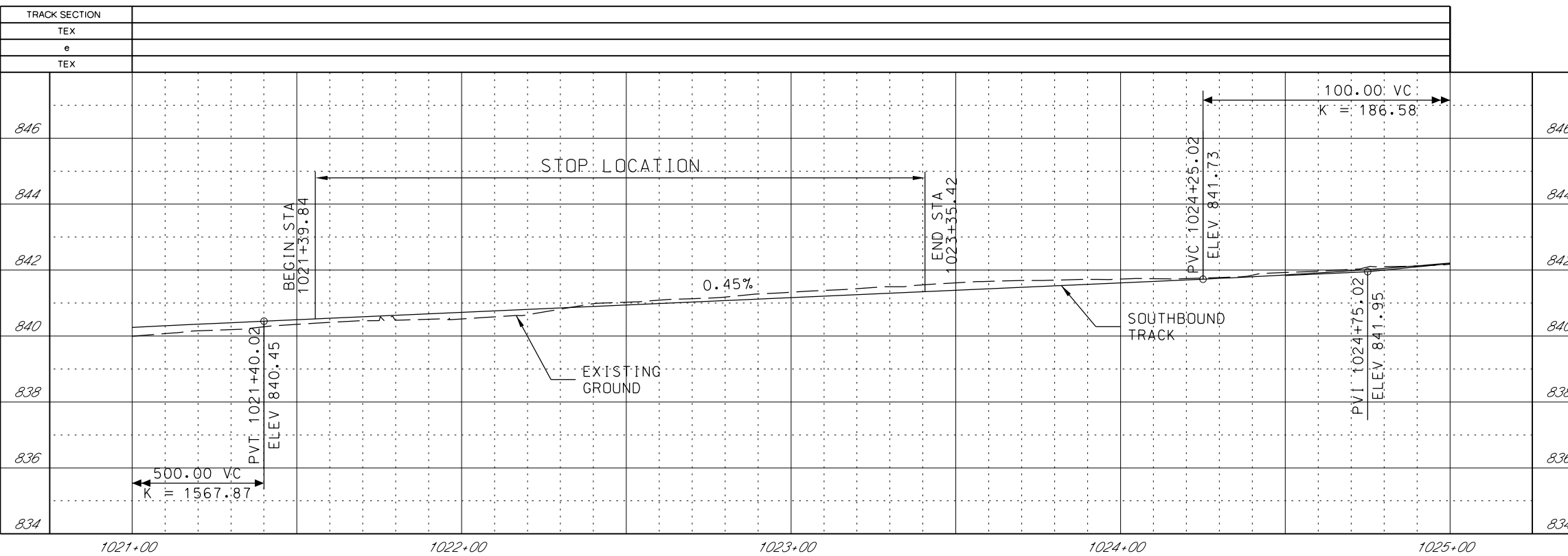
REV	DATE	DESCRIPTION	DESIGNED BY	JWR		PRELIMINARY PLANS - 30% DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION SOUTHBOUND TRACK PLAN AND PROFILE BRUSH CREEK SB STA 1017+00 TO STA 1021+00	SCALE FOR 22"x34": H: 1"=20' V: 1"=2' FILENAME: SB P-P STA 1017+00 - 1021+00 CONTRACT NO.: ***** VOLUME: 1 DRAWING NO.: K106 SHEET NO.: 43
			CHECKED BY	RPB				
			DRAWN BY	MMO				
			CHECKED BY	RPB				
			APPROVED BY	NKS				
PLOT DATE: 8/27/2019 10:10:00 AM			DATE	08/28/2019		NOT FOR CONSTRUCTION		



GENERAL NOTES

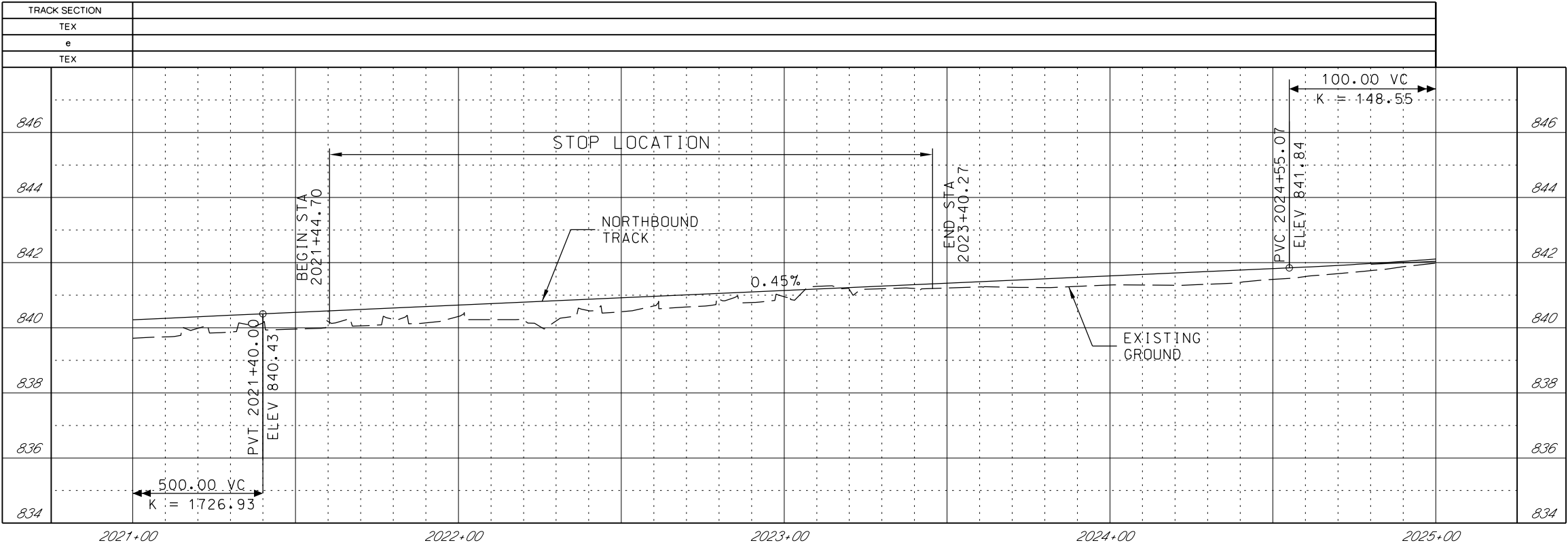
1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
3. ALL CURVES ARE BASED ON ARC DEFINITION.
4. PROFILES DESIGNED TO FINAL TOP OF RAIL ELEVATION.
5. PROFILE SHOWN IS AT 30% LEVEL AND IS ONLY INTENDED TO ILLUSTRATE THE EXISTING STREET GRADES AND TO CONFIRM THE LOCATIONS OF THE PLATFORMS AND SPECIAL TRACKWORK.

REV	DATE	DESCRIPTION	DESIGNED BY JWR			PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION NORTHBOUND TRACK PROFILE BRUSH CREEK NB STA 2017+00 TO STA 2021+00	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'	
			CHECKED BY RPB			 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856			FILENAME: NB PRO STA 2017+00 - 2021+00	
			DRAWN BY MMO						CONTRACT NO.:	
			CHECKED BY RPB						VOLUME: 1	
			APPROVED BY NKS						DRAWING NO.:	SHEET NO.:
PLOT DATE: 8/27/2019 10:10:04 AM			DATE: 08/28/2019			NOT FOR CONSTRUCTION		K106A	44	




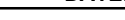
1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
3. ALL CURVES ARE BASED ON ARC DEFINITION.
4. PROFILES DESIGNED TO FINAL TOP OF RAIL ELEVATION.
5. PROFILE SHOWN IS AT 30% LEVEL AND IS ONLY INTENDED TO ILLUSTRATE THE EXISTING STREET GRADES AND TO CONFIRM THE LOCATIONS OF THE PLATFORMS AND SPECIAL TRACKWORK.

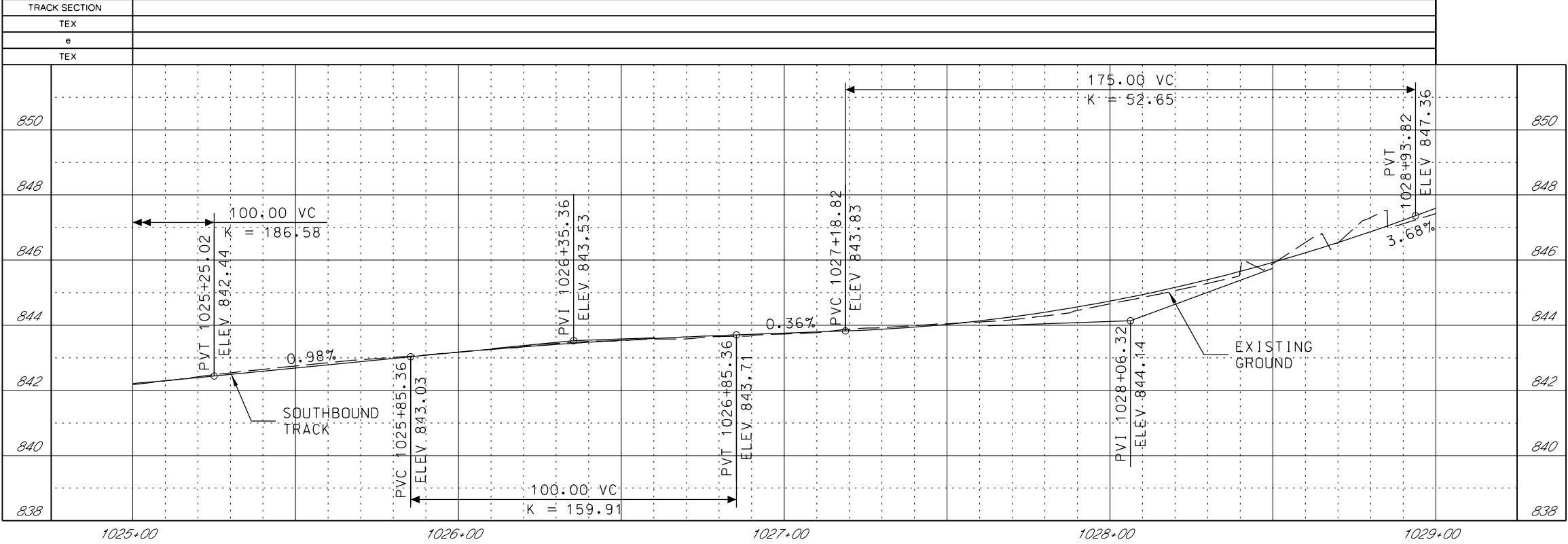
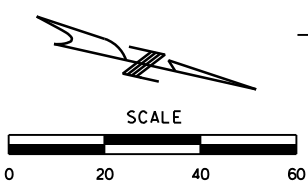
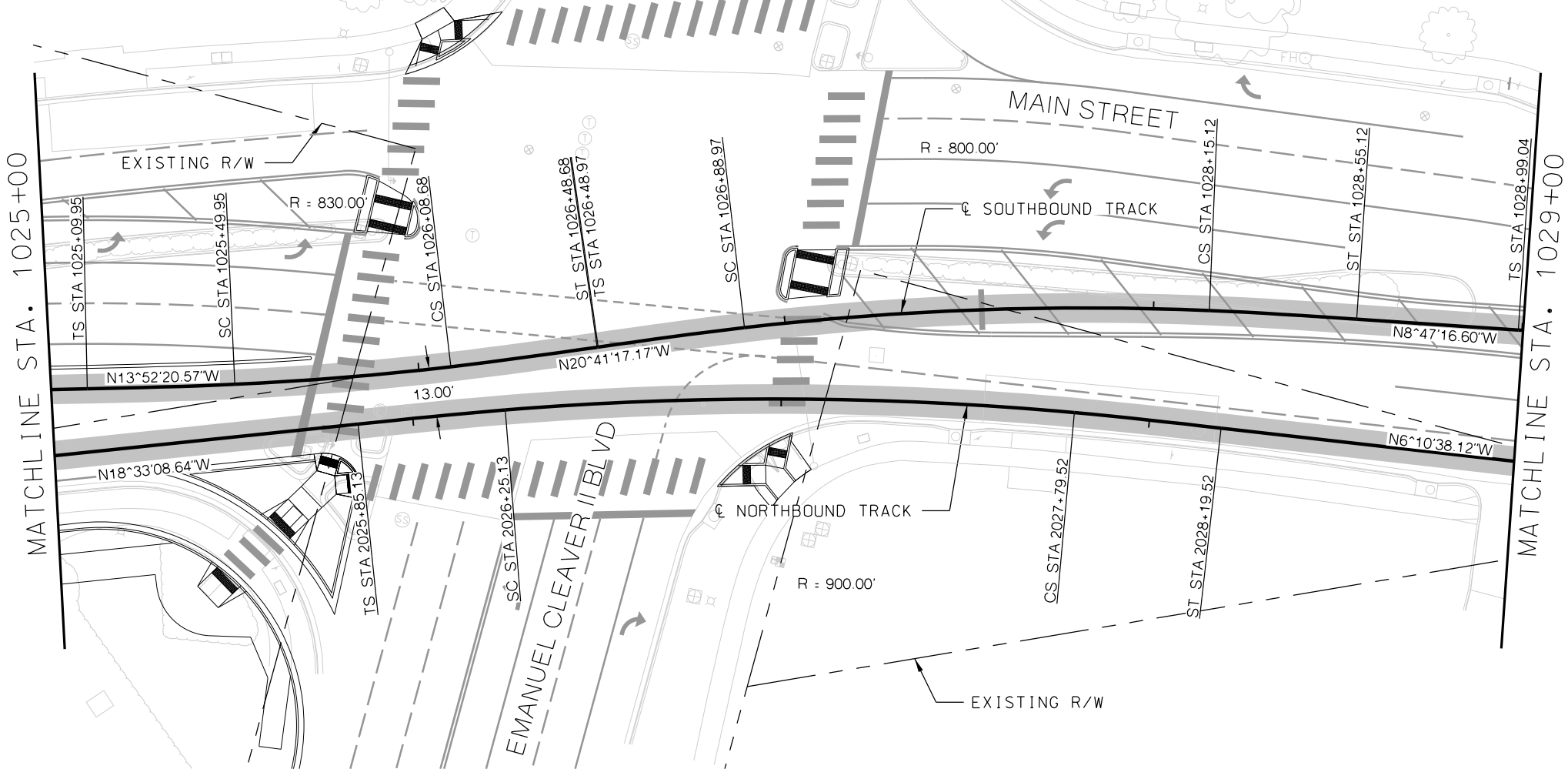
REV	DATE	DESCRIPTION	DESIGNED BY	JWR		PRELIMINARY PLANS - 30%		DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION SOUTHBOUND TRACK PLAN AND PROFILE WARD PARKWAY SB STA 1021+00 TO STA 1025+00	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'	
			CHECKED BY	RPB		 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856				FILENAME: SB_P.P STA 1021+00 - 1025+00	
			DRAWN BY	MMO						CONTRACT NO.:	
			CHECKED BY	RPB						VOLUME: 1	
			APPROVED BY	NKS						DRAWING NO.: K107	SHEET NO.: 45
PLOT DATE: 8/27/2019 10:10:20 AM			DATE: 08/28/2019			NOT FOR CONSTRUCTION					



GENERAL NOTES

1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
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5. PROFILE SHOWN IS AT 30% LEVEL AND IS ONLY INTENDED TO ILLUSTRATE THE EXISTING STREET GRADES AND TO CONFIRM THE LOCATIONS OF THE PLATFORMS AND SPECIAL TRACKWORK.

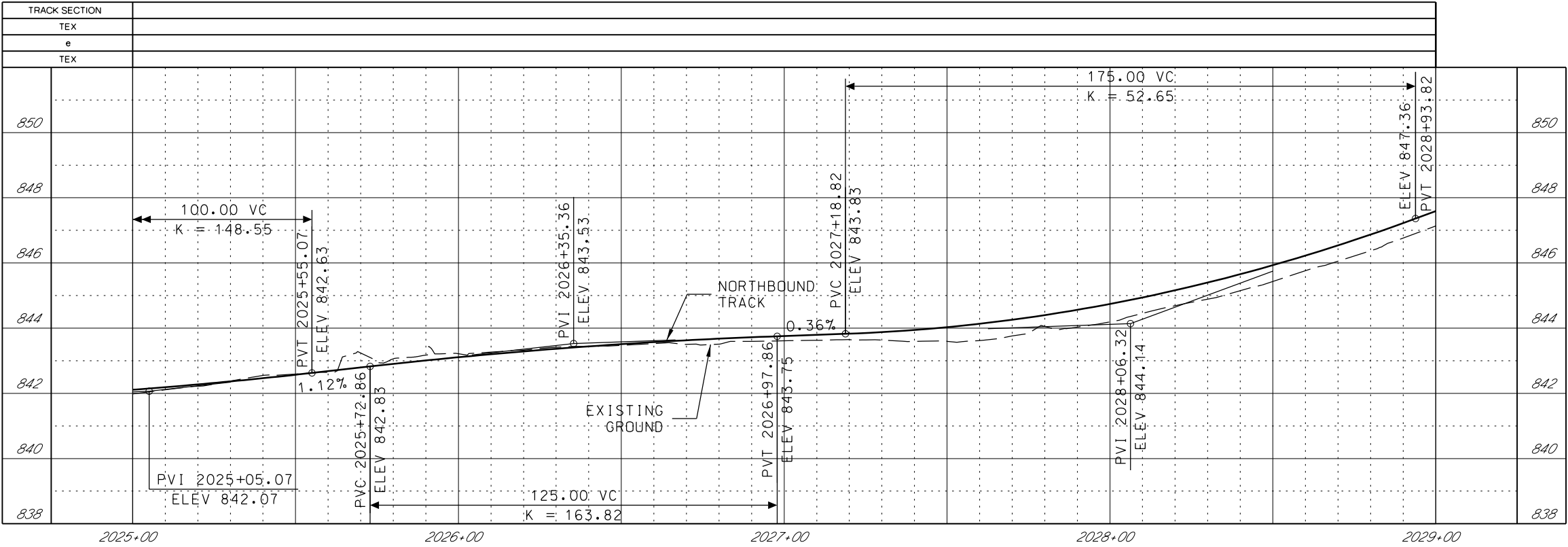
REV	DATE	DESCRIPTION	DESIGNED BY JWR			PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION NORTHBOUND TRACK PROFILE WARD PARKWAY NB STA 2021+00 TO STA 2025+00	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'	
			CHECKED BY RPB			 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856			FILENAME: NB PRO STA 2021+00 - 2025+00	
			DRAWN BY MMO						CONTRACT NO.:	
			CHECKED BY RPB						VOLUME: 1	
			APPROVED BY NKS						DRAWING NO.:	SHEET NO.:
PLOT DATE: 8/27/2019			10:10:25 AM	DATE: 08/28/2019	NOT FOR CONSTRUCTION			K107A	46	



GENERAL NOTES


1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
3. ALL CURVES ARE BASED ON ARC DEFINITION.
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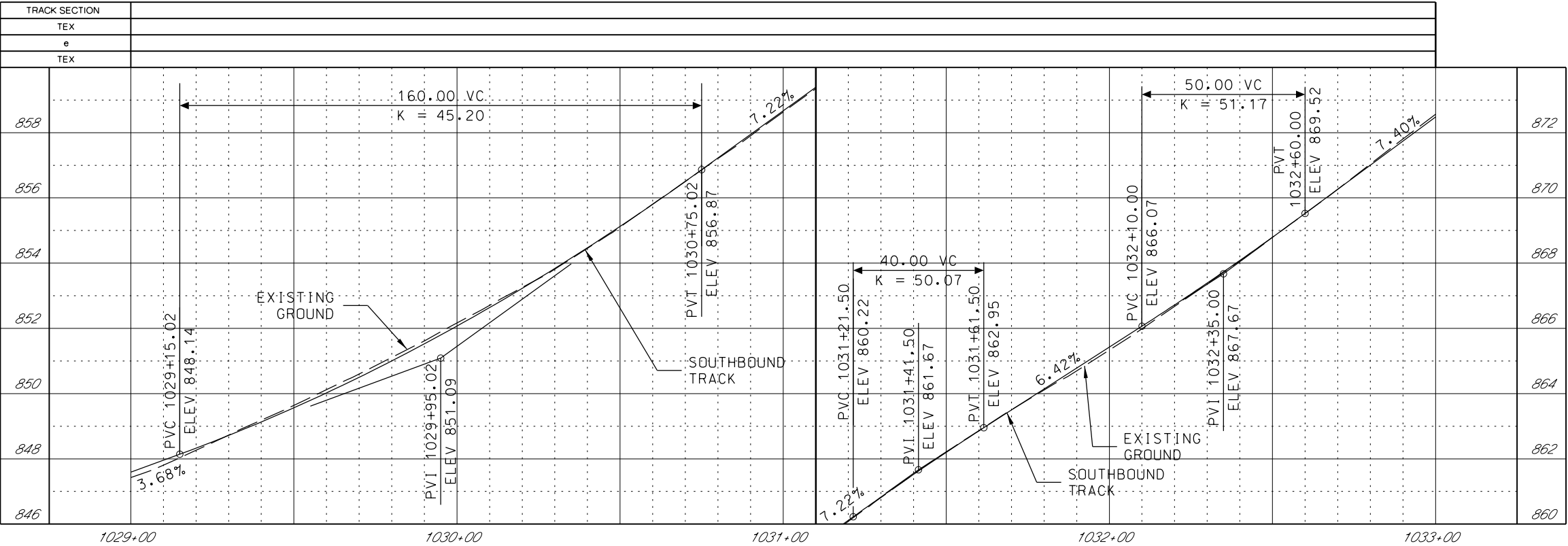
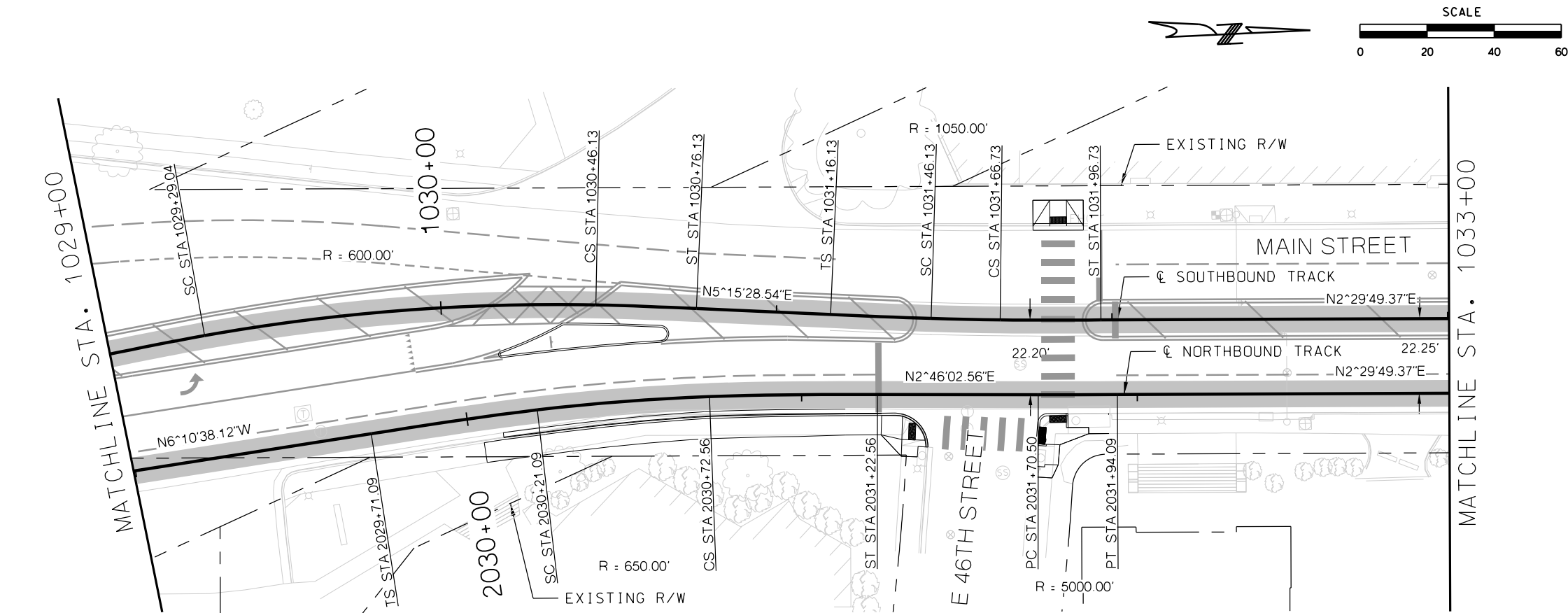
REV	DATE	DESCRIPTION	DESIGNED BY	JWR			PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION SOUTHBOUND TRACK PLAN AND PROFILE EMANUEL CLEAVER II BLVD SB STA 1025+00 TO STA 1029+00	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'
			CHECKED BY	RPB			 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	NOT FOR CONSTRUCTION		FILENAME: SB_P_P_STA 1025+00 - 1029+00
			DRAWN BY	MMO						CONTRACT NO.: *****
			CHECKED BY	RPB						VOLUME: 1
			APPROVED BY	NKS						DRAWING NO.: K108
										SHEET NO.: 47
PLOT DATE: 8/27/2019 10:10:37 AM			DATE	08/28/2019						



GENERAL NOTES

- 1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
- 2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
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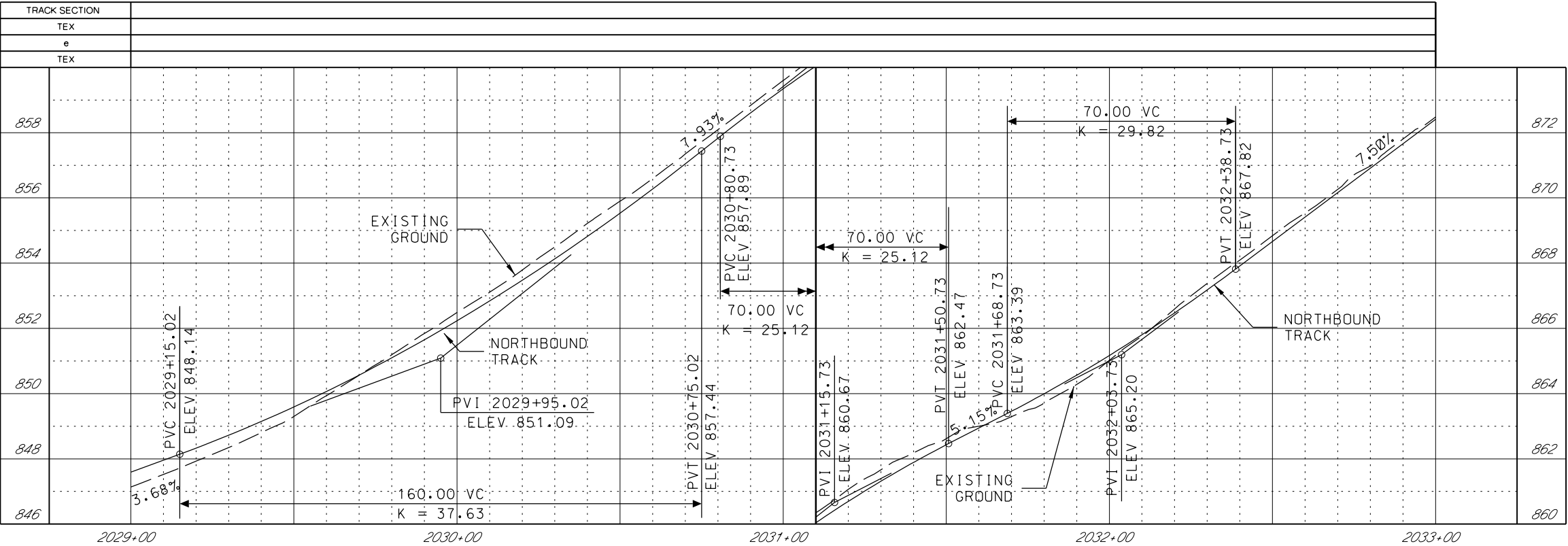
REV	DATE	DESCRIPTION	DESIGNED BY	JWR		PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	NORTHBOUND TRACK PROFILE EMANUEL CLEAVER II BLVD NB STA 2025+00 TO STA 2029+00	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'	
			CHECKED BY	RPB						FILENAME:	
			DRAWN BY	MMO						NB PRO STA 2025+00 - 2029+00	
			CHECKED BY	RPB						CONTRACT NO.:	
			APPROVED BY	NKS						VOLUME:	
PLOT DATE: 8/27/2019			10:10:42 AM		DATE	08/28/2019				DRAWING NO.: K108A	SHEET NO.: 48



GENERAL NOTES

1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
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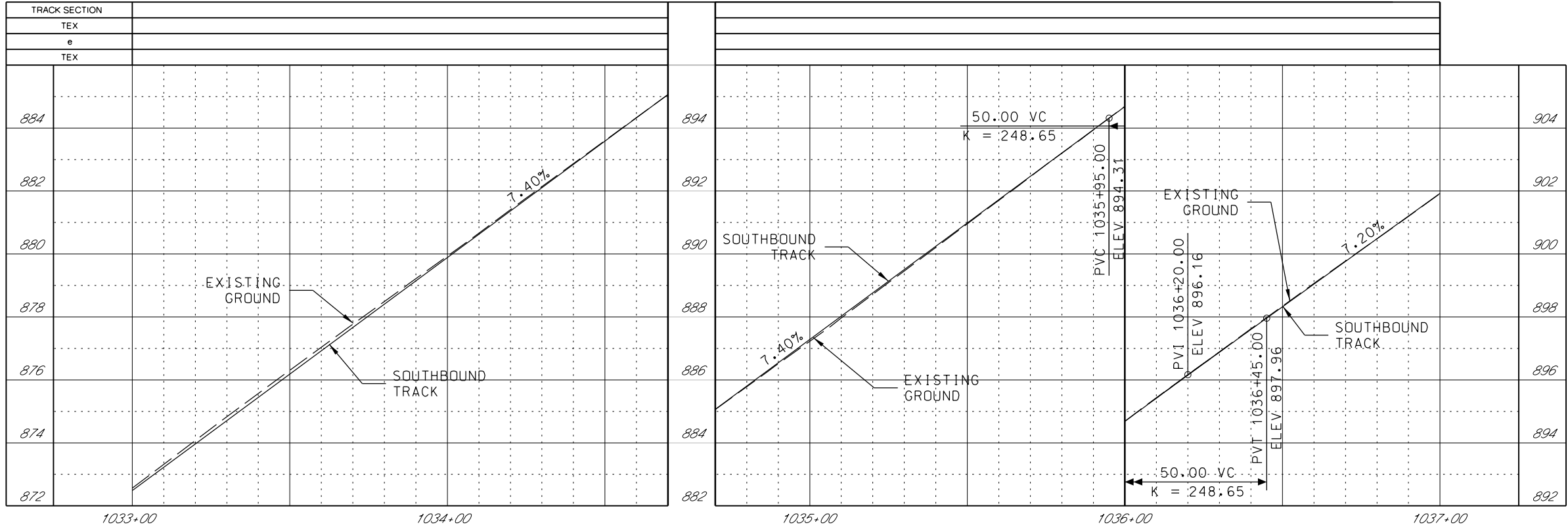
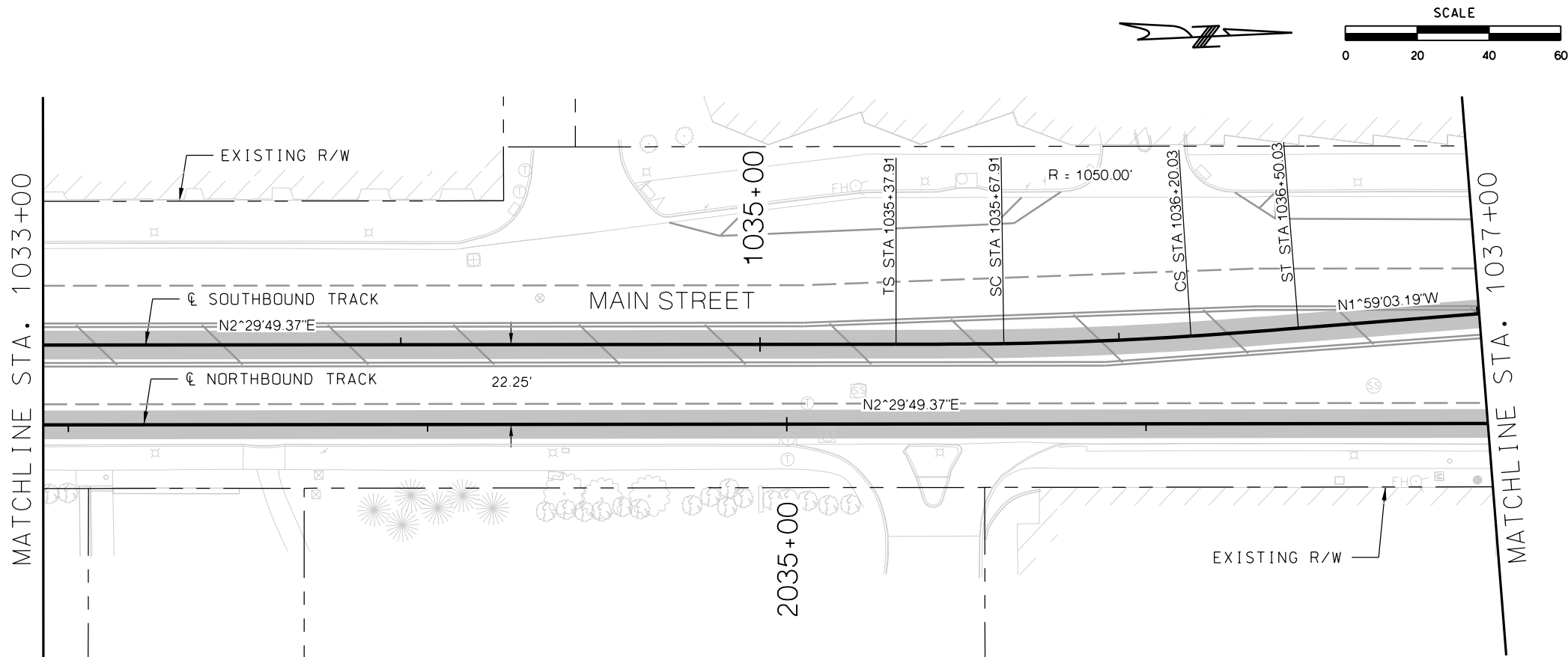
REV	DATE	DESCRIPTION	DESIGNED BY	JWR	<div><div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div></div><div>PRELIMINARY PLANS - 30%<div><div><div></div><div></div><div></div></div><div><div></div><div></div><div></div></div></div><div>10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856</div></div><div>DATE: 08-28-2019</div><div><div>KANSAS CITY STREETCAR MAIN STREET EXTENSION</div><div>SOUTHBOUND TRACK</div><div>PLAN AND PROFILE</div><div>46TH STREET</div><div>SB STA 1029+00 TO STA 1033+00</div></div><div><div>SCALE FOR 22"x34": H: 1"=20' V: 1"=2'</div><div>FILENAME: SB_P.P STA 1029+00 - 1033+00</div><div>CONTRACT NO.: *****</div><div>VOLUME: 1</div><div>DRAWING NO.: K109</div><div>SHEET NO.: 49</div></div></div>	
			CHECKED BY	RPB		
			DRAWN BY	MMO		
			CHECKED BY	RPB		
			APPROVED BY	NKS		
PLOT DATE: 8/27/2019			DATE	08/28/2019	NOT FOR CONSTRUCTION	



GENERAL NOTES

1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
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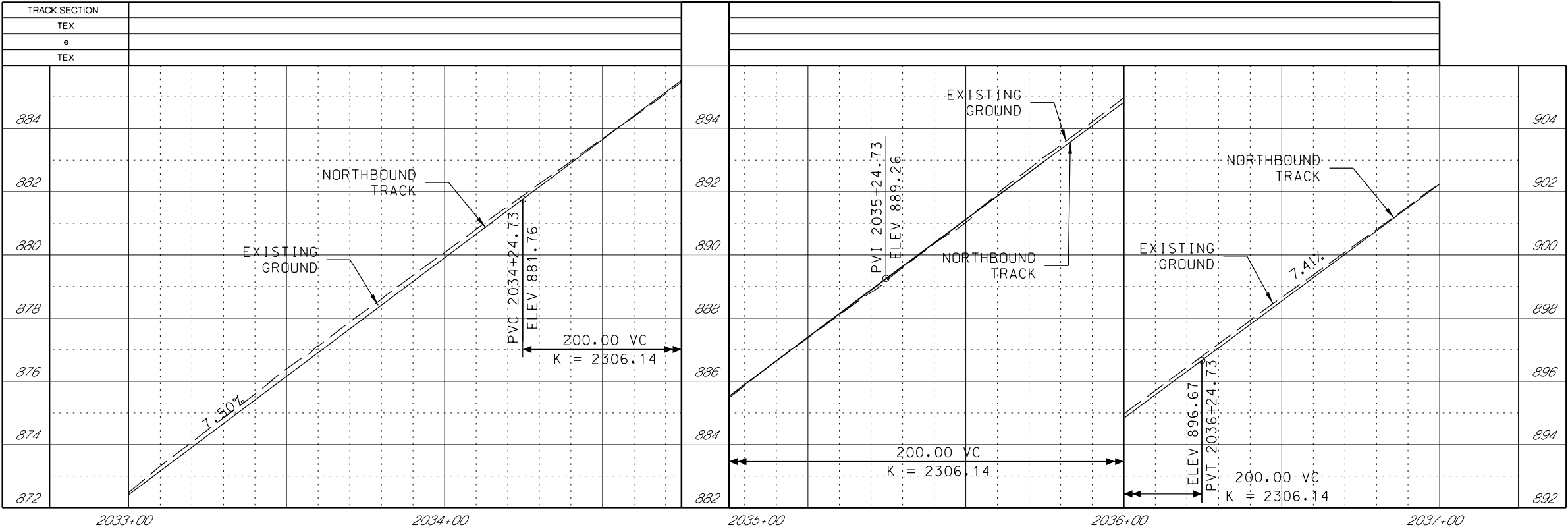
REV	DATE	DESCRIPTION	DESIGNED BY	JWR	PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'
			CHECKED BY	RPB	 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	NOT FOR CONSTRUCTION	NORTHBOUND TRACK PROFILE 46TH STREET NB STA 2029+00 TO STA 2033+00	FILENAME:
			DRAWN BY	MMO				NB PRO STA 2029+00 - 2033+00
			CHECKED BY	RPB				CONTRACT NO.:
			APPROVED BY	NKS				VOLUME:
								1
PLOT DATE: 8/27/2019			10:11:02 AM		DATE: 08/28/2019			DRAWING NO.: K109A
								SHEET NO.: 50



GENERAL NOTES


1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
3. ALL CURVES ARE BASED ON ARC DEFINITION.
4. PROFILES DESIGNED TO FINAL TOP OF RAIL ELEVATION.
5. PROFILE SHOWN IS AT 30% LEVEL AND IS ONLY INTENDED TO ILLUSTRATE THE EXISTING STREET GRADES AND TO CONFIRM THE LOCATIONS OF THE PLATFORMS AND SPECIAL TRACKWORK.

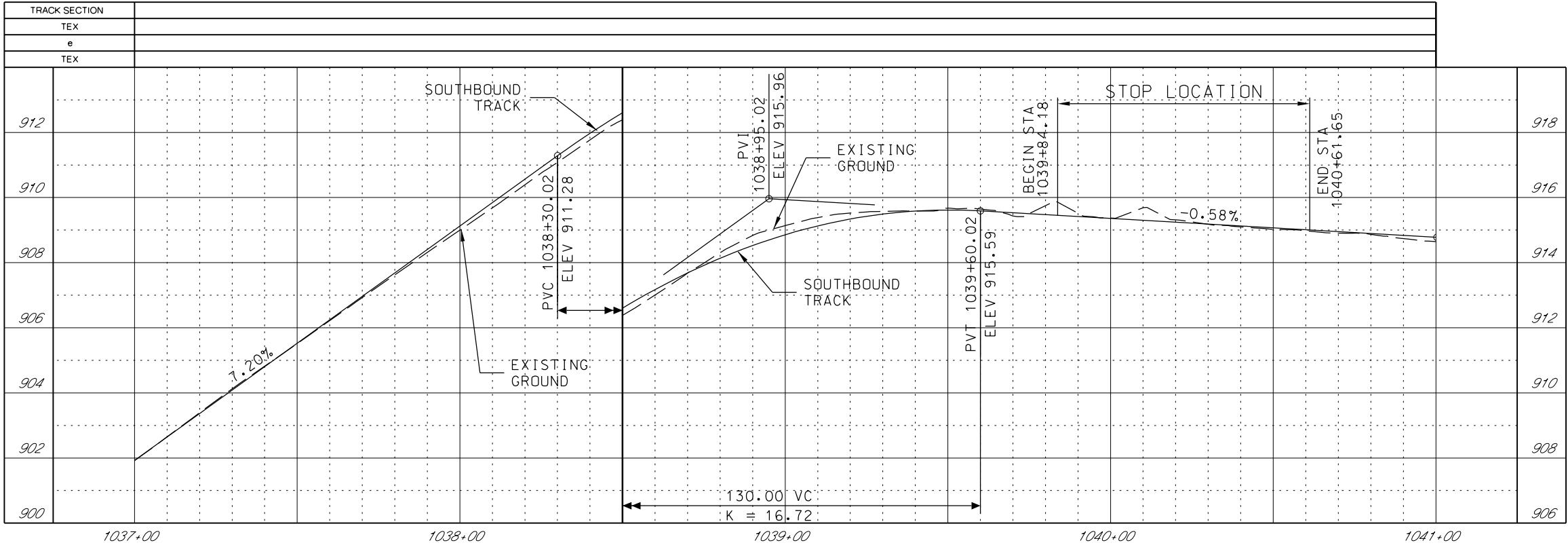
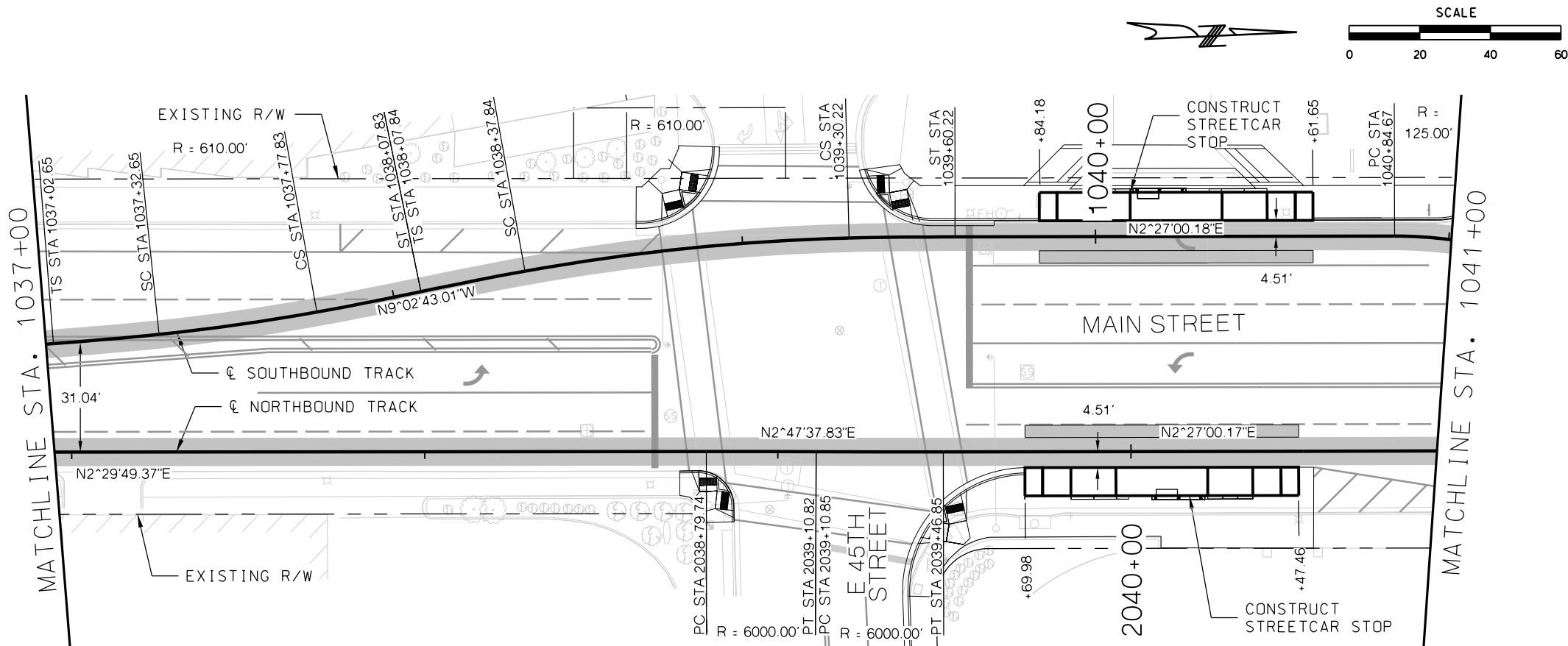
REV		DATE	DESCRIPTION	DESIGNED BY	JWR			PRELIMINARY PLANS - 30%		DATE: 08-28-2019		KANSAS CITY STREETCAR MAIN STREET EXTENSION		SCALE FOR 22"x34": H: 1"=20' V: 1"=2'	
				CHECKED BY	RPB			 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856						FILENAME: SB P.P. STA 1033+00 - 1037+00	
				DRAWN BY	MMO									CONTRACT NO.:	
				CHECKED BY	RPB									VOLUME: 1	
				APPROVED BY	NKS									DRAWING NO.:	
PLOT DATE:		8/27/2019		DATE	08/28/2019			NOT FOR CONSTRUCTION				SOUTHBOUND TRACK PLAN AND PROFILE SB STA 1033+00 TO STA 1037+00		SHEET NO.: 51	



GENERAL NOTES

1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
3. ALL CURVES ARE BASED ON ARC DEFINITION.
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5. PROFILE SHOWN IS AT 30% LEVEL AND IS ONLY INTENDED TO ILLUSTRATE THE EXISTING STREET GRADES AND TO CONFIRM THE LOCATIONS OF THE PLATFORMS AND SPECIAL TRACKWORK.

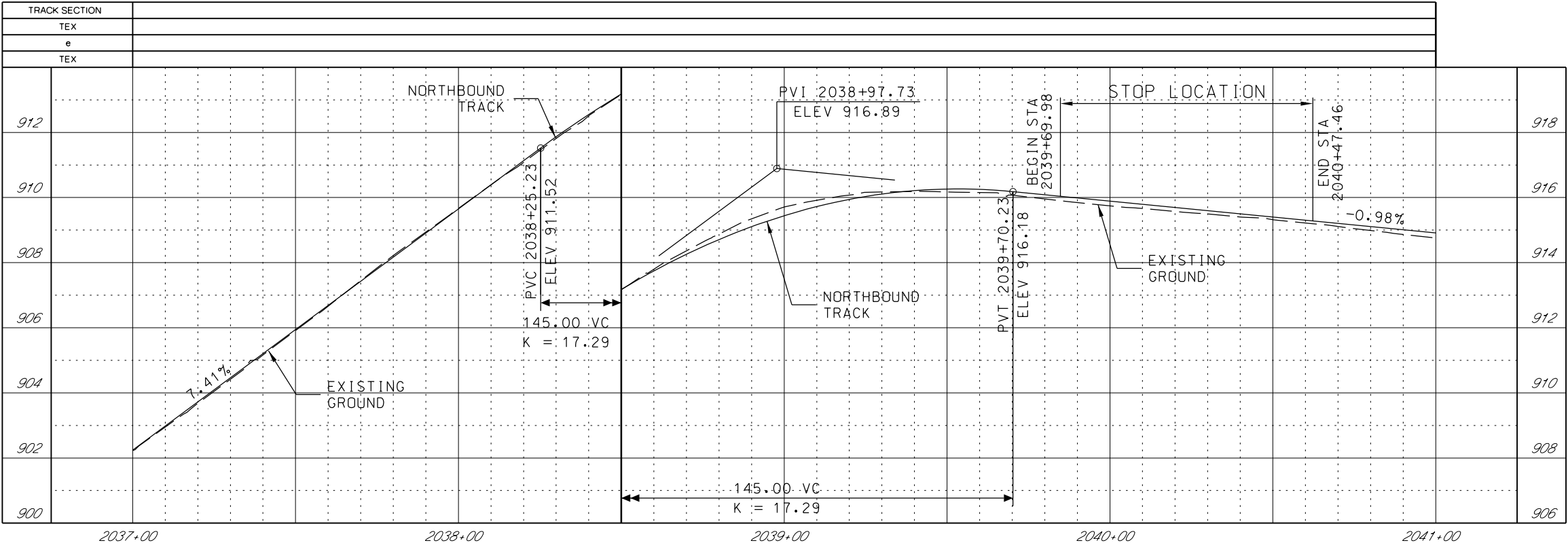
REV	DATE	DESCRIPTION	DESIGNED BY JWR		PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'	
			CHECKED BY RPB					 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	FILENAME: NB PRO STA 2033+00 - 2037+00
			DRAWN BY MMO						CONTRACT NO.:
			CHECKED BY RPB						VOLUME: 1
			APPROVED BY NKS						DRAWING NO.:
PLOT DATE: 8/27/2019		10:11:20 AM	DATE: 08/28/2019		NOT FOR CONSTRUCTION			K110A	52
NORTHBOUND TRACK PROFILE NB STA 2033+00 TO STA 2037+00									



GENERAL NOTES

1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
3. ALL CURVES ARE BASED ON ARC DEFINITION.
4. PROFILES DESIGNED TO FINAL TOP OF RAIL ELEVATION.
5. PROFILE SHOWN IS AT 30% LEVEL AND IS ONLY INTENDED TO ILLUSTRATE THE EXISTING STREET GRADES AND TO CONFIRM THE LOCATIONS OF THE PLATFORMS AND SPECIAL TRACKWORK.

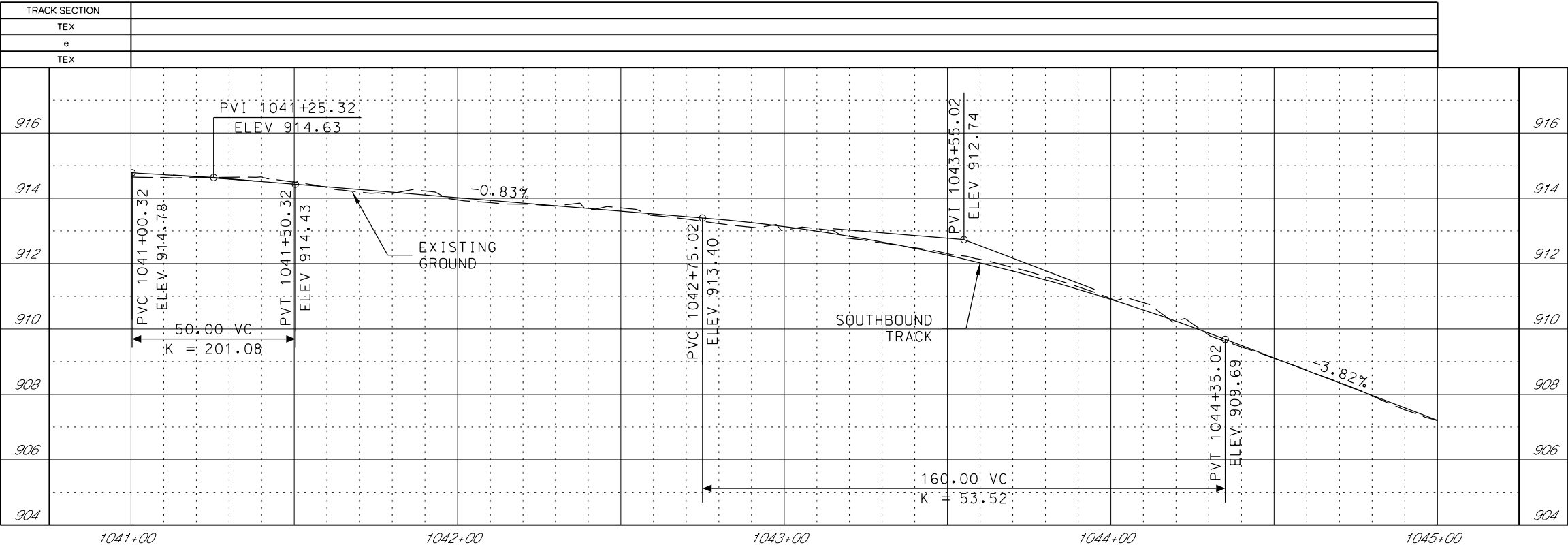
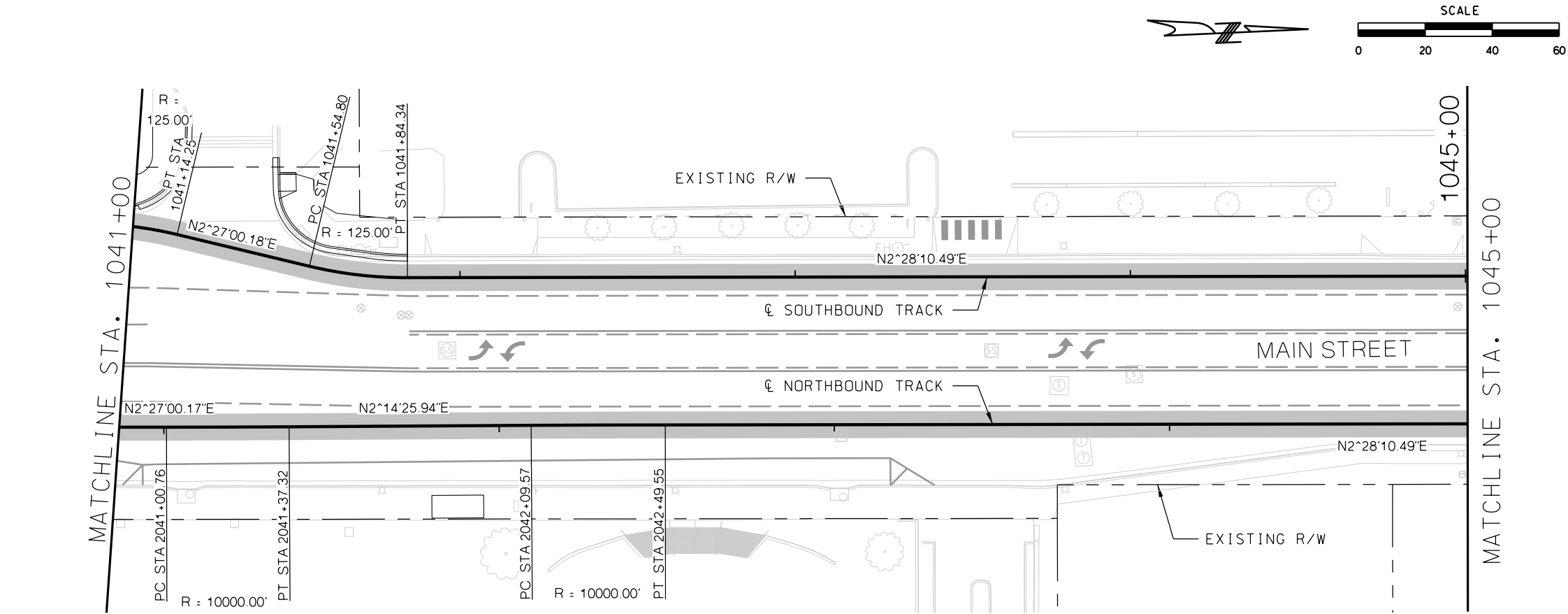
REV	DATE	DESCRIPTION	DESIGNED BY	JWR	<div><div><div></div><div></div><div></div></div><div>RideKC STREETCAR</div></div>		PRELIMINARY PLANS - 30%		DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION			SCALE FOR 22"x34": H: 1"=20' V: 1"=2'	
			CHECKED BY	RPB			HDR			SOUTHBOUND TRACK			FILENAME:	
			DRAWN BY	MMO			10450 Holmes Road			PLAN AND PROFILE			SB P.P. STA 1037+00 - 1041+00	
			CHECKED BY	RPB			Suite 600			45TH STREET			CONTRACT NO.:	
			APPROVED BY	NKS			Kansas City, MO 64131-3471			SB STA 1037+00 TO STA 1041+00			VOLUME:	
PLOT DATE: 8/27/2019			DATE: 08/28/2019		NOT FOR CONSTRUCTION		Certificate of Authority: 000856			DRAWING NO.: K111			SHEET NO.: 53	



GENERAL NOTES

1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
3. ALL CURVES ARE BASED ON ARC DEFINITION.
4. PROFILES DESIGNED TO FINAL TOP OF RAIL ELEVATION.
5. PROFILE SHOWN IS AT 30% LEVEL AND IS ONLY INTENDED TO ILLUSTRATE THE EXISTING STREET GRADES AND TO CONFIRM THE LOCATIONS OF THE PLATFORMS AND SPECIAL TRACKWORK.

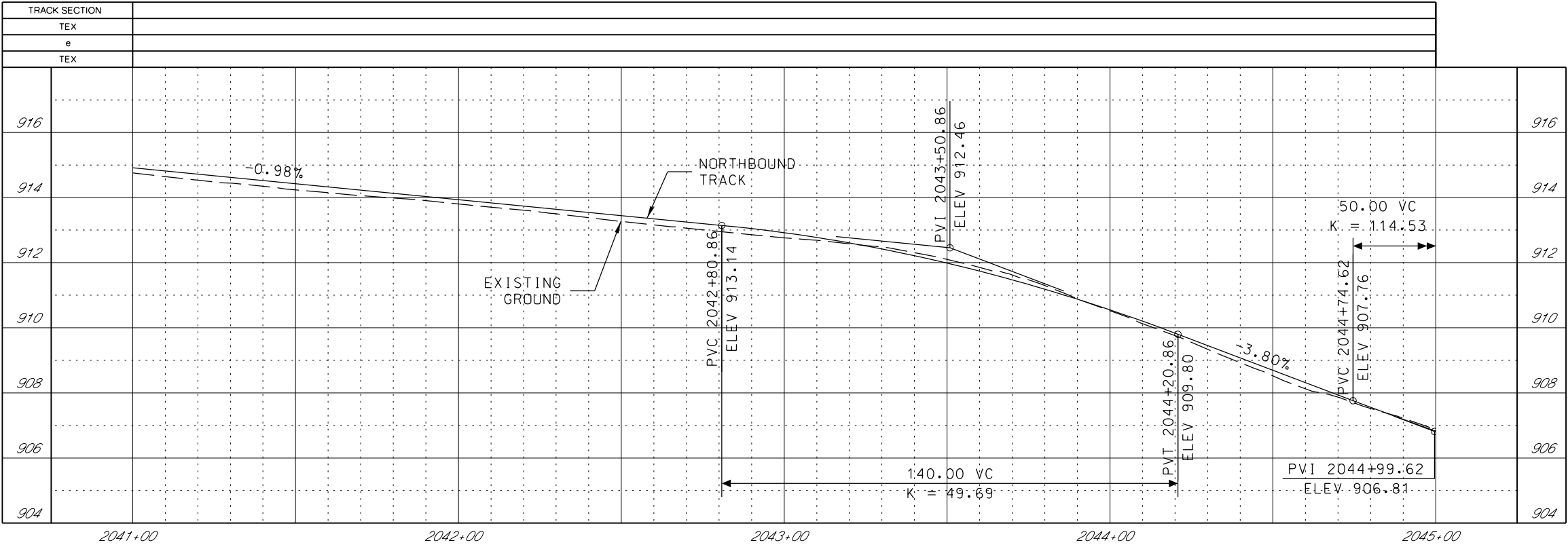
REV	DATE	DESCRIPTION	DESIGNED BY JWR			PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION NORTHBOUND TRACK PROFILE 45TH STREET NB STA 2037+00 TO STA 2041+00	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'	
			CHECKED BY RPB			 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856			FILENAME: NB PRO STA 2037+00 - 2041+00	
			DRAWN BY MMO						CONTRACT NO.: *****	
			CHECKED BY RPB						VOLUME: 1	
			APPROVED BY NKS						DRAWING NO.: K111A	SHEET NO.: 54
PLOT DATE: 8/27/2019			10:11:45 AM	DATE: 08/28/2019	NOT FOR CONSTRUCTION					



GENERAL NOTES

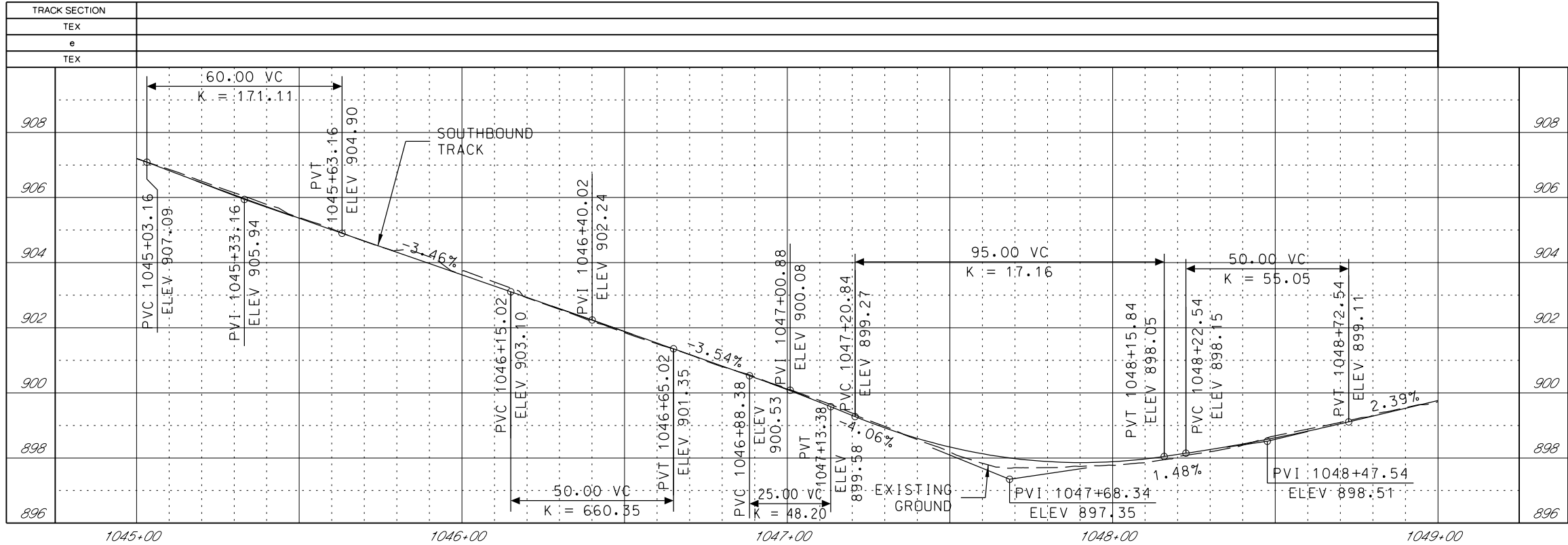
1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
3. ALL CURVES ARE BASED ON ARC DEFINITION.
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5. PROFILE SHOWN IS AT 30% LEVEL AND IS ONLY INTENDED TO ILLUSTRATE THE EXISTING STREET GRADES AND TO CONFIRM THE LOCATIONS OF THE PLATFORMS AND SPECIAL TRACKWORK.

REV	DATE	DESCRIPTION	DESIGNED BY	JWR	PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'
			CHECKED BY	RPB	 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	NOT FOR CONSTRUCTION	SOUTHBOUND TRACK PLAN AND PROFILE SB STA 1041+00 TO STA 1045+00	FILENAME:
			DRAWN BY	MMO				SB P.P. STA 1041+00 - 1045+00
			CHECKED BY	RPB				CONTRACT NO.:
			APPROVED BY	NKS				VOLUME:
PLOT DATE: 8/27/2019			10:11:59 AM		DATE: 08/28/2019			DRAWING NO.: K112
								SHEET NO.: 55



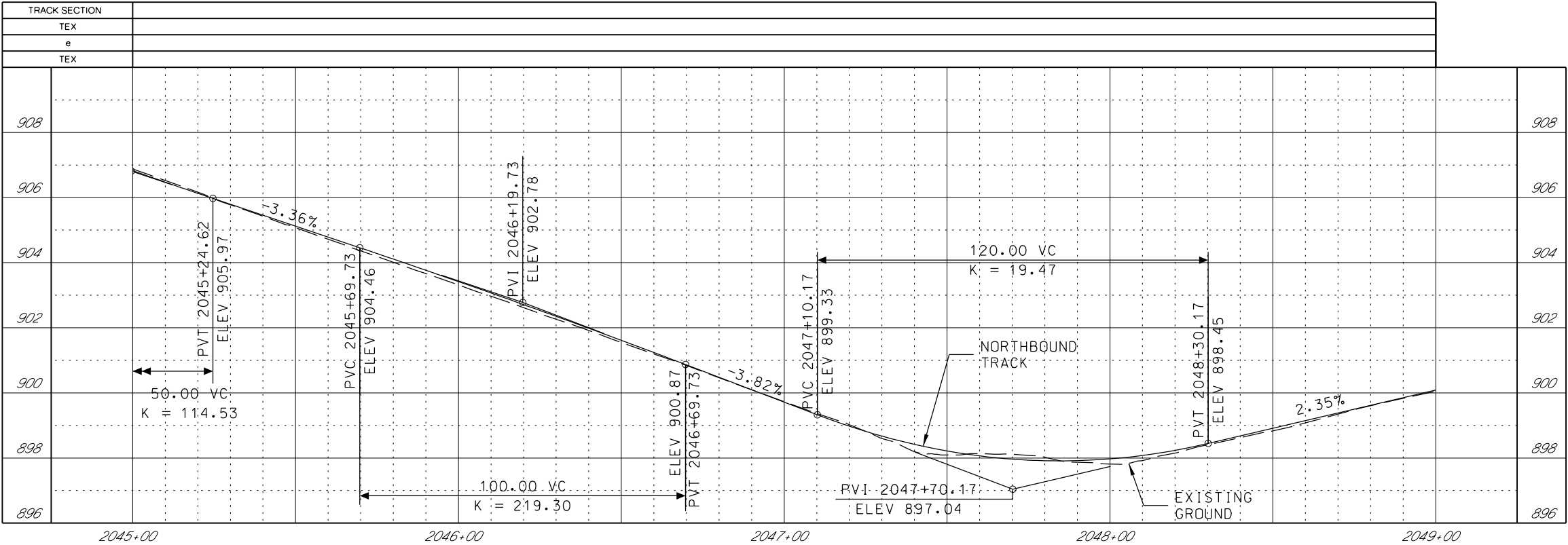
GENERAL NOTES

- 1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
- 2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
- 3. ALL CURVES ARE BASED ON ARC DEFINITION.
- 4. PROFILES DESIGNED TO FINAL TOP OF RAIL ELEVATION.
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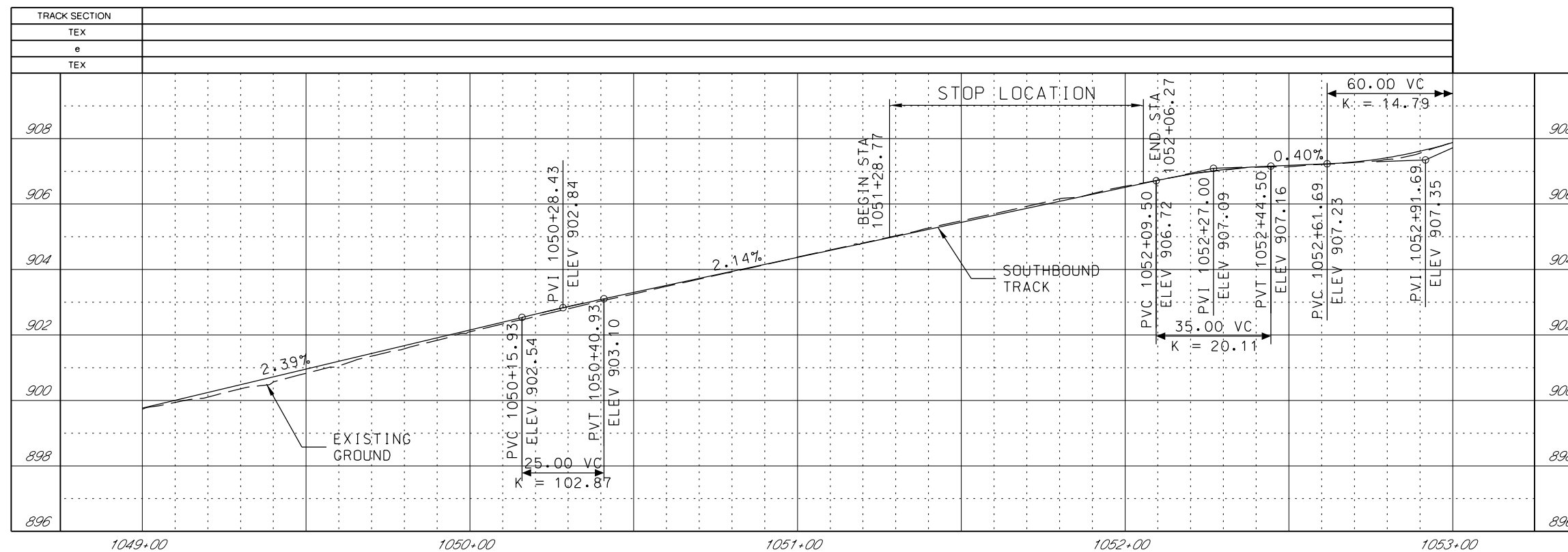
REV	DATE	DESCRIPTION	DESIGNED BY	JWR		<div> <div>PRELIMINARY PLANS - 30%</div> <div>DATE: 08-28-2019</div> <div>  <div> <div>HDR Engineering, Inc.</div> <div> 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856 </div> </div> </div> </div> <div>NOT FOR CONSTRUCTION</div>	<div> <div>KANSAS CITY STREETCAR MAIN STREET EXTENSION</div> <div>SOUTHBOUND TRACK</div> <div>PLAN AND PROFILE</div> <div>44TH STREET</div> <div>SB STA 1045+00 TO STA 1049+00</div> </div>	<div> <div>SCALE FOR 22"x34": H: 1"=20' V: 1"=2'</div> <div> <div>FILENAME: SB P.P. STA 1045+00 - 1049+00</div> <div>CONTRACT NO.:</div> <div>*****</div> <div>VOLUME: 1</div> <div> <div>DRAWING NO.: K113</div> <div>SHEET NO.: 57</div> </div> </div> </div>
			CHECKED BY	RPB				
			DRAWN BY	MMO				
			CHECKED BY	RPB				
			APPROVED BY	NKS				
PLOT DATE: 8/27/2019		10:12:23 AM	DATE	08/28/2019				



GENERAL NOTES

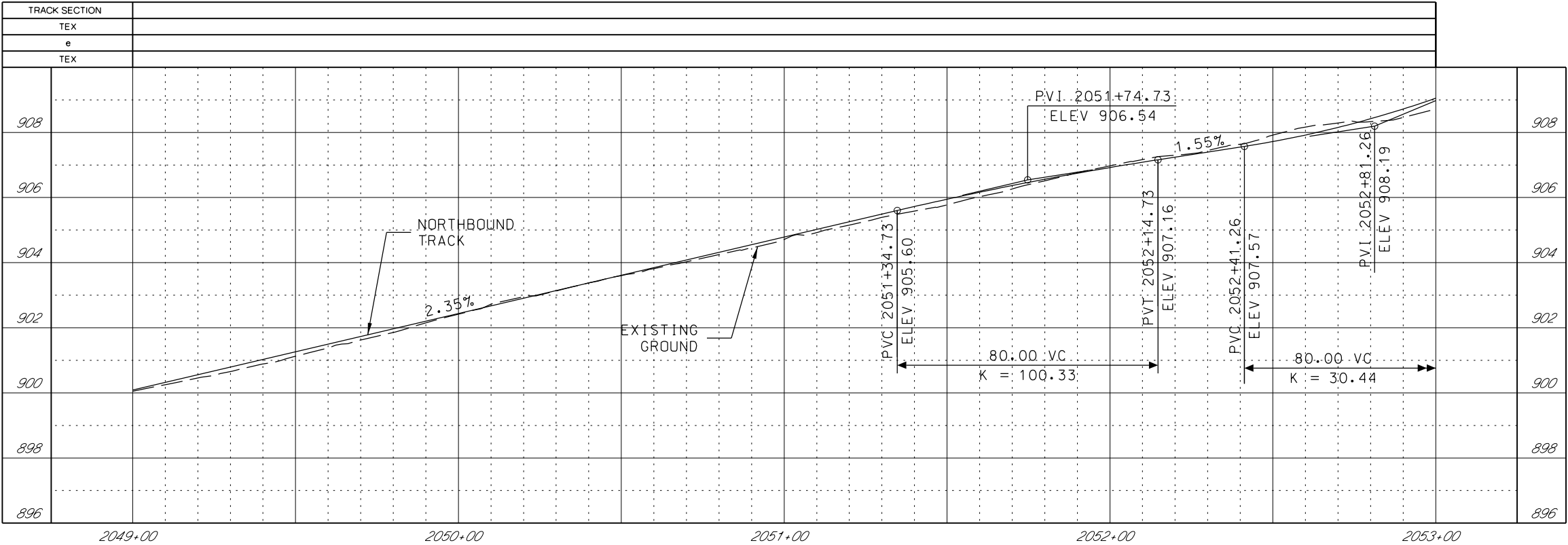
1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
3. ALL CURVES ARE BASED ON ARC DEFINITION.
4. PROFILES DESIGNED TO FINAL TOP OF RAIL ELEVATION.
5. PROFILE SHOWN IS AT 30% LEVEL AND IS ONLY INTENDED TO ILLUSTRATE THE EXISTING STREET GRADES AND TO CONFIRM THE LOCATIONS OF THE PLATFORMS AND SPECIAL TRACKWORK.

REV	DATE	DESCRIPTION	DESIGNED BY	JWR			PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION NORTHBOUND TRACK PROFILE 44TH STREET NB STA 2045+00 TO STA 2049+00	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'
			CHECKED BY	RPB			 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856			
			DRAWN BY	MMO						
			CHECKED BY	RPB						
			APPROVED BY	NKS						
PLOT DATE: 8/27/2019 10:12:27 AM			DATE	08/28/2019			NOT FOR CONSTRUCTION			





1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
3. ALL CURVES ARE BASED ON ARC DEFINITION.
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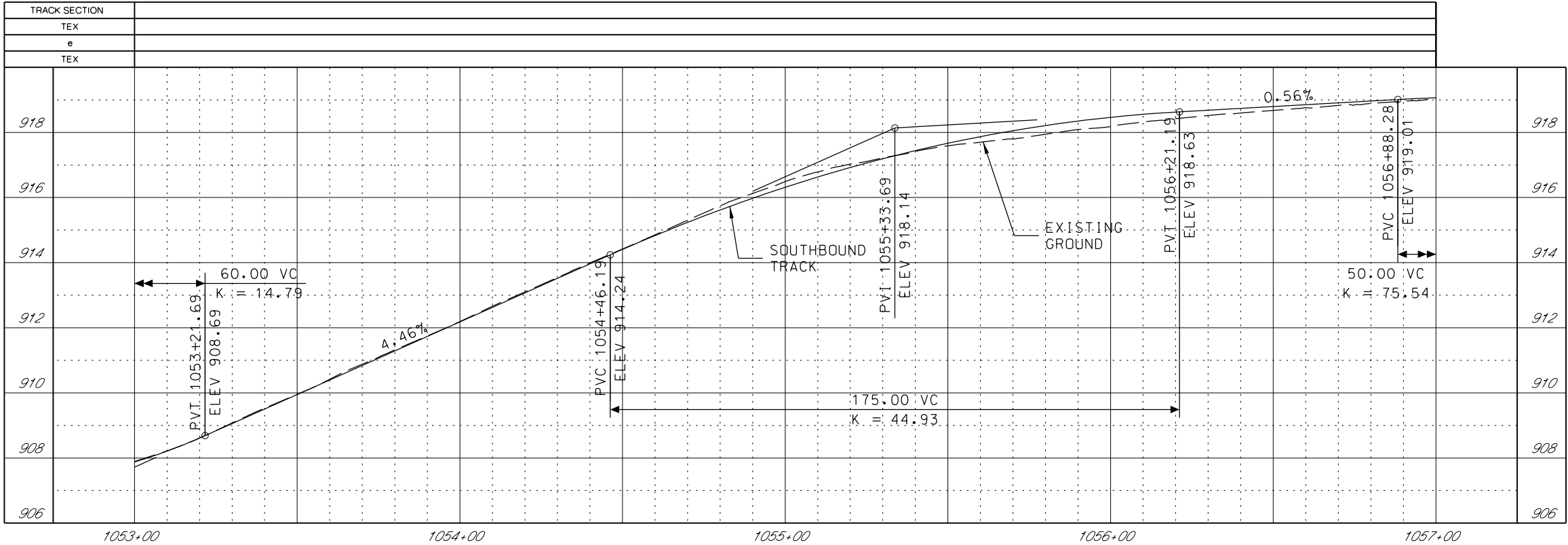
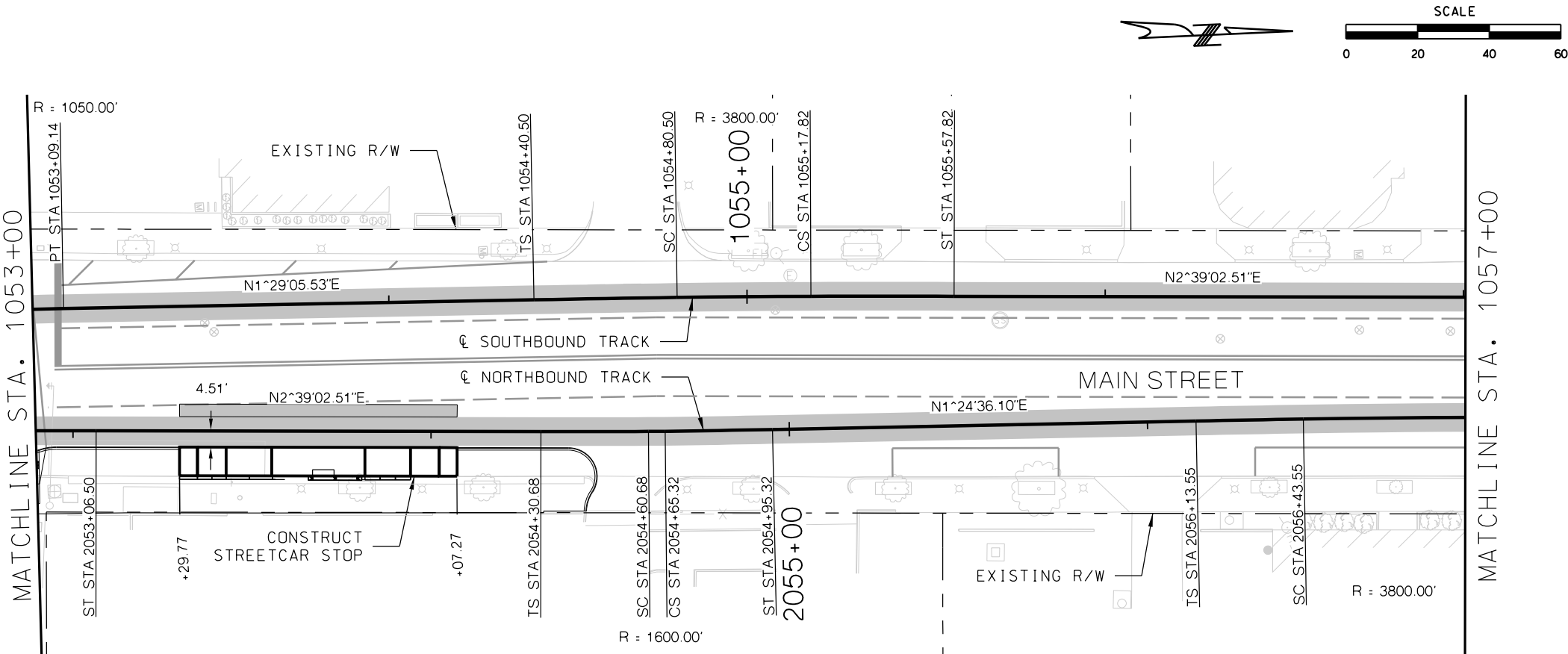
REV	DATE	DESCRIPTION	DESIGNED BY	JWR		PRELIMINARY PLANS - 30%		DATE: 08-28-2019		KANSAS CITY STREETCAR MAIN STREET EXTENSION SOUTHBOUND TRACK PLAN AND PROFILE 43RD STREET SB STA 1049+00 TO STA 1053+00				SCALE FOR 22"x34": H: 1"=20' V: 1"=2'	
			CHECKED BY	RPB		 HDR Engineering, Inc.								FILENAME: SB P-P STA 1049+00 - 1053+00	
			DRAWN BY	MMO		10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-3700 Certificate of Authority: 000856				CONTRACT NO.:					
			CHECKED BY	RPB						*****					
			APPROVED BY	NKS						VOLUME:					
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PLOT DATE: 8/27/2019 10:12:41 AM			DATE: 08/28/2019			NOT FOR CONSTRUCTION				DRAWING NO.: K114		SHEET NO.: 59			



GENERAL NOTES

1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
3. ALL CURVES ARE BASED ON ARC DEFINITION.
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5. PROFILE SHOWN IS AT 30% LEVEL AND IS ONLY INTENDED TO ILLUSTRATE THE EXISTING STREET GRADES AND TO CONFIRM THE LOCATIONS OF THE PLATFORMS AND SPECIAL TRACKWORK.

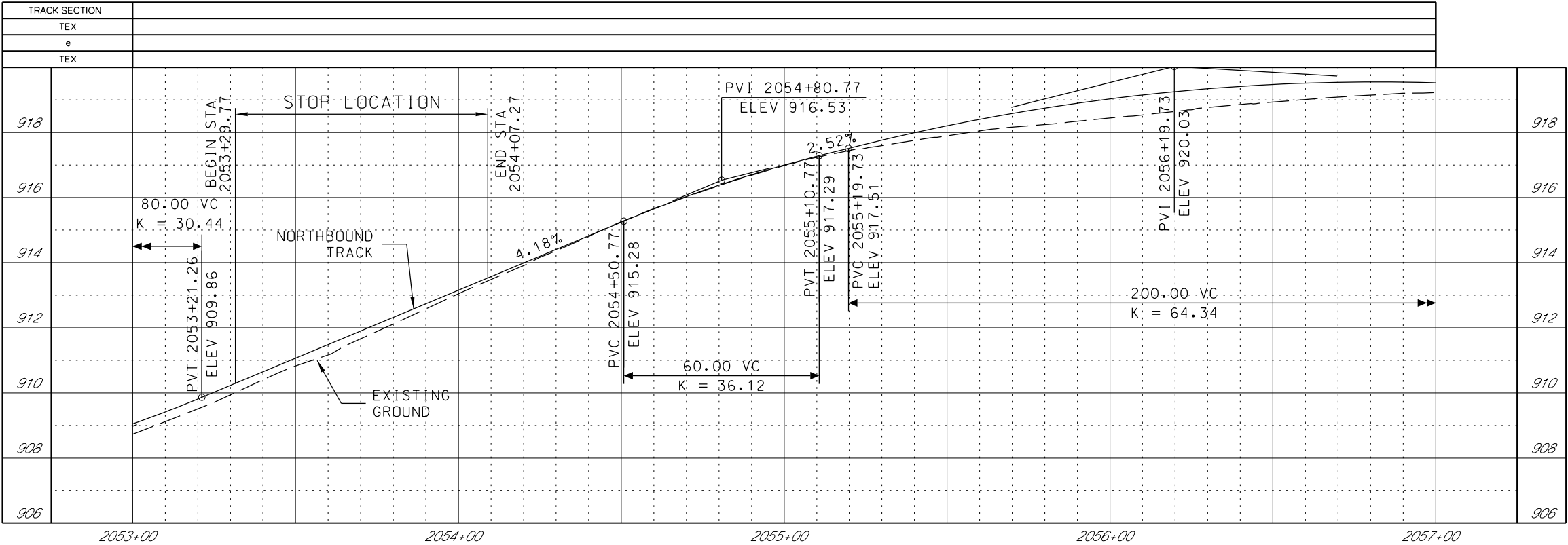
REV	DATE	DESCRIPTION	DESIGNED BY	JWR		PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION NORTHBOUND TRACK PROFILE 43RD STREET NB STA 2049+00 TO STA 2053+00	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'	
			CHECKED BY	RPB		 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	FILENAME: NB PRO STA 2049+00 - 2053+00			
			DRAWN BY	MMO			CONTRACT NO.: *****			
			CHECKED BY	RPB			VOLUME: 1			
			APPROVED BY	NKS			DRAWING NO.: K114A			
PLOT DATE: 8/27/2019			10:12:46 AM		DATE	08/28/2019	NOT FOR CONSTRUCTION		SHEET NO.: 60	



GENERAL NOTES

1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
3. ALL CURVES ARE BASED ON ARC DEFINITION.
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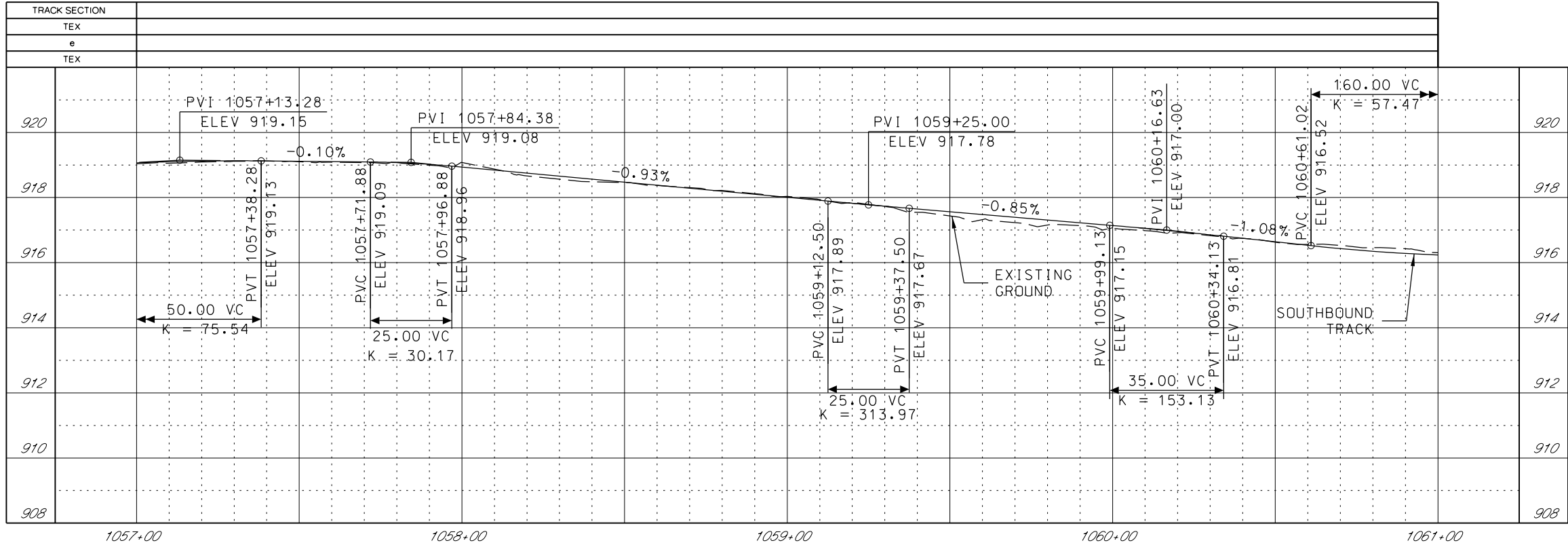
REV	DATE	DESCRIPTION	DESIGNED BY	JWR			PRELIMINARY PLANS - 30%		DATE: 08-28-2019		KANSAS CITY STREETCAR MAIN STREET EXTENSION				SCALE FOR 22"x34": H: 1"=20' V: 1"=2'	
			CHECKED BY	RPB			 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856		NOT FOR CONSTRUCTION		SOUTHBOUND TRACK PLAN AND PROFILE 43RD STREET SB STA 1053+00 TO STA 1057+00				FILENAME: SB P.P. STA 1053+00 - 1057+00	
			DRAWN BY	MMO											CONTRACT NO.:	
			CHECKED BY	RPB											VOLUME:	
			APPROVED BY	NKS											DRAWING NO.:	
PLOT DATE: 8/27/2019			10:13:01 AM				DATE: 08/28/2019				SHEET NO.:					
									K115		61					



GENERAL NOTES

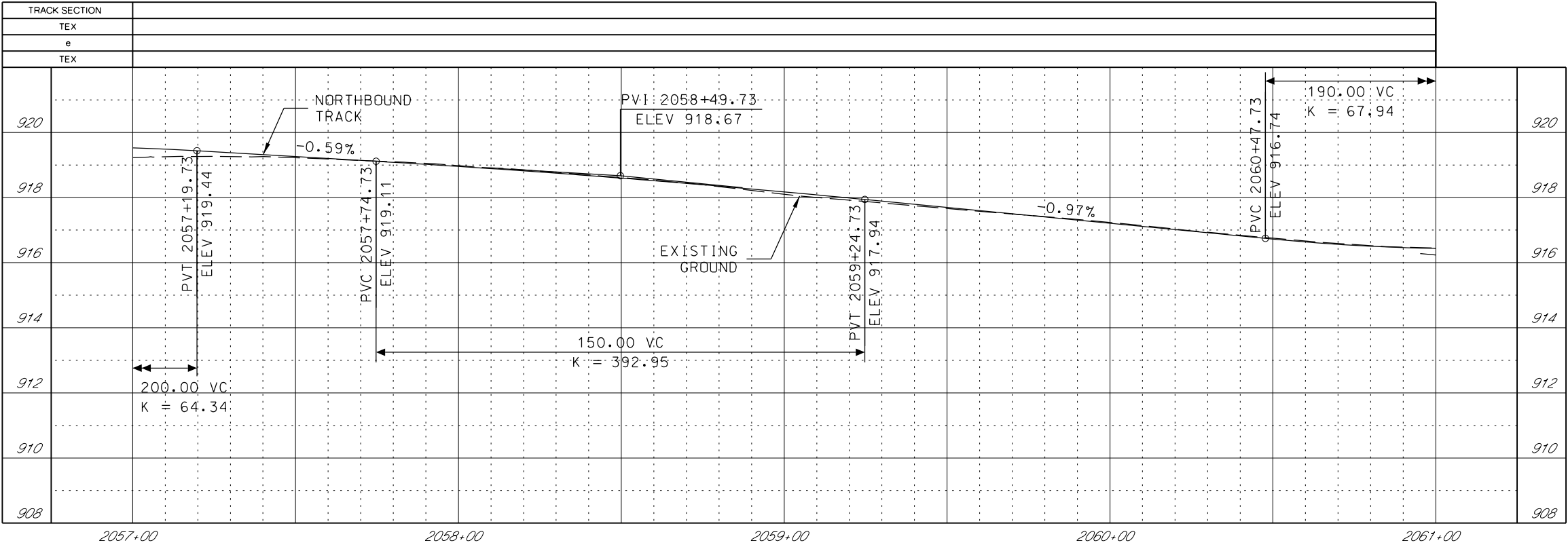
1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
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REV	DATE	DESCRIPTION	DESIGNED BY	JWR	PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'
			CHECKED BY	RPB	 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	NOT FOR CONSTRUCTION	NORTHBOUND TRACK PROFILE 43RD STREET NB STA 2053+00 TO STA 2057+00	FILENAME:
			DRAWN BY	MMO				NB PRO STA 2053+00 - 2057+00
			CHECKED BY	RPB				CONTRACT NO.:
			APPROVED BY	NKS				VOLUME:
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PLOT DATE: 8/27/2019 10:13:05 AM			DATE: 08/28/2019					DRAWING NO.: K115A SHEET NO.: 62




1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
3. ALL CURVES ARE BASED ON ARC DEFINITION.
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5. PROFILE SHOWN IS AT 30% LEVEL AND IS ONLY INTENDED TO ILLUSTRATE THE EXISTING STREET GRADES AND TO CONFIRM THE LOCATIONS OF THE PLATFORMS AND SPECIAL TRACKWORK.

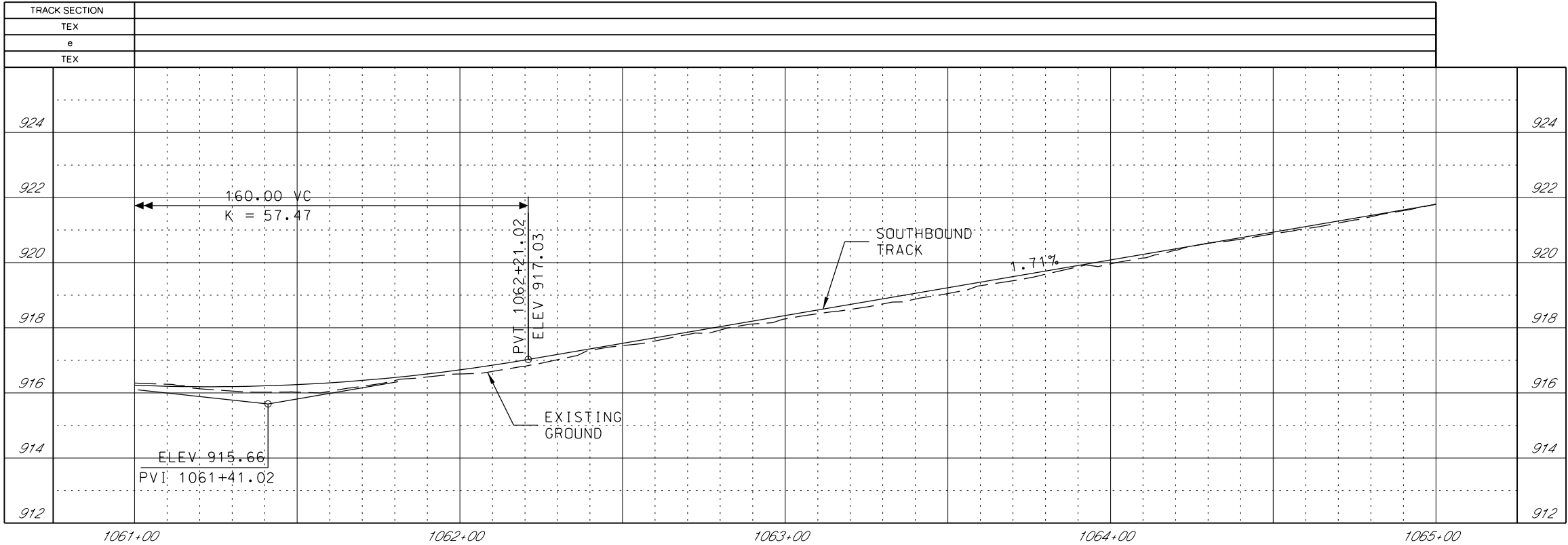
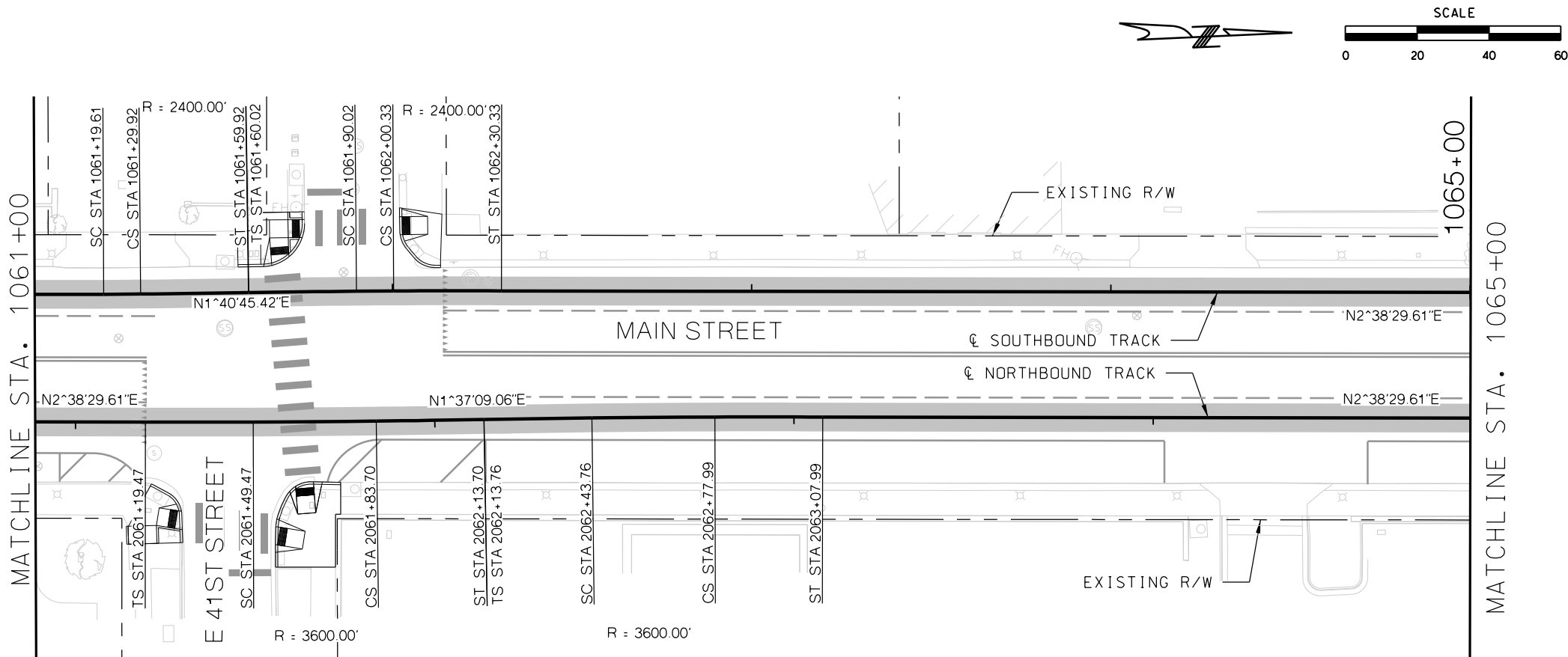
REV	DATE	DESCRIPTION	DESIGNED BY	JWR		<div>PRELIMINARY PLANS - 30%</div> <div> HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856</div> <div>NOT FOR CONSTRUCTION</div>	<div>DATE: 08-28-2019</div> <div>KANSAS CITY STREETCAR MAIN STREET EXTENSION SOUTHBOUND TRACK PLAN AND PROFILE VIETNAM VETRANS MEMORIAL DRIVE SB STA 1057+00 TO STA 1061+00</div>	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'
			CHECKED BY	RPB				FILENAME: SB P.P. STA 1057+00 - 1061+00
			DRAWN BY	MMQ				CONTRACT NO.:
			CHECKED BY	RPB				*****
			APPROVED BY	NKS				VOLUME: 1
								DRAWING NO.: K116
PLOT DATE: 8/27/2019		10:13:17 AM	DATE	08/28/2019				



GENERAL NOTES


1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
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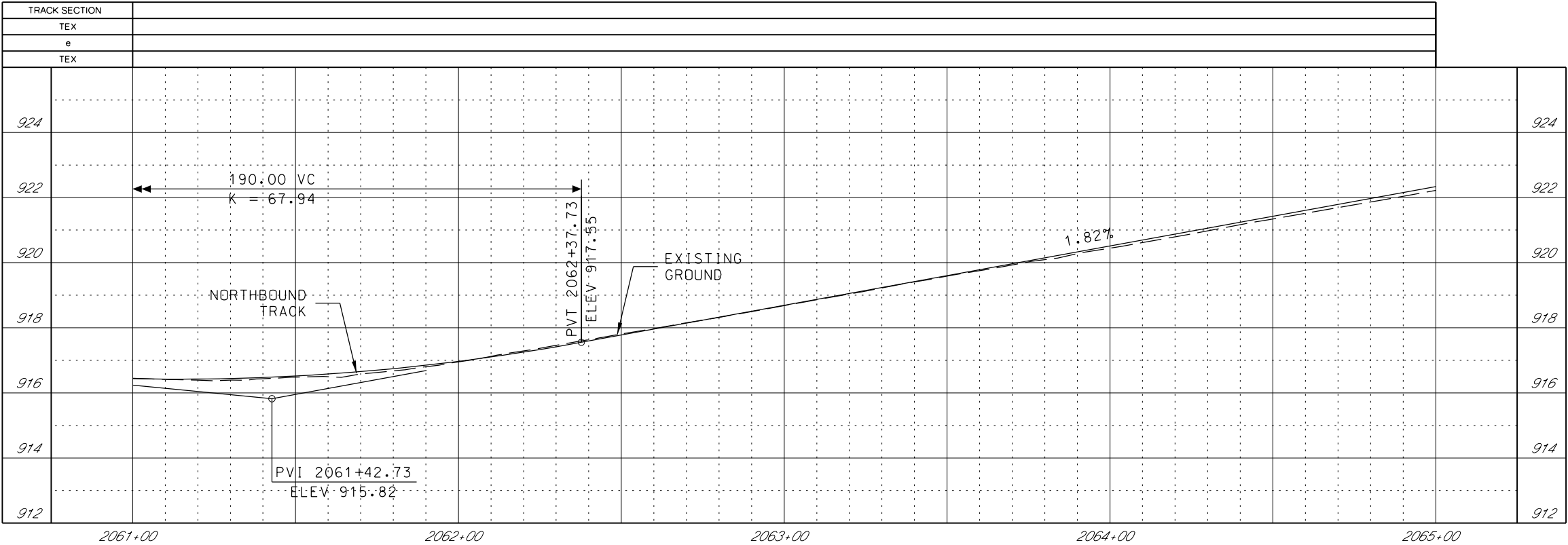
REV	DATE	DESCRIPTION	DESIGNED BY JWR			PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION NORTHBOUND TRACK PROFILE VIETNAM VETRANS MEMORIAL DRIVE NB STA 2057+00 TO STA 2061+00	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'
			CHECKED BY RPB			 HDR Engineering, Inc.	FILENAME: NB PRO STA 2057+00 - 2061+00		
			DRAWN BY MMO			10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	CONTRACT NO.: *****		
			CHECKED BY RPB				VOLUME: 1		
			APPROVED BY NKS				DRAWING NO.: K116A		SHEET NO.: 64
PLOT DATE: 8/27/2019 10:13:22 AM			DATE: 08/28/2019			NOT FOR CONSTRUCTION			



GENERAL NOTES

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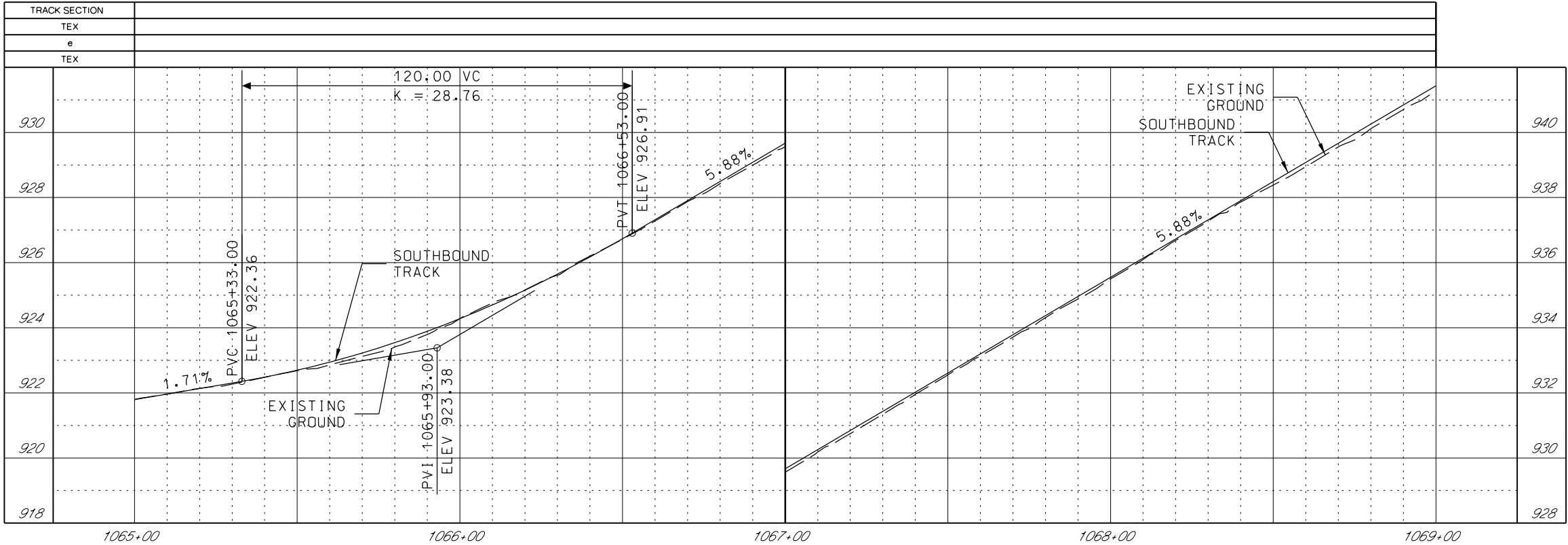
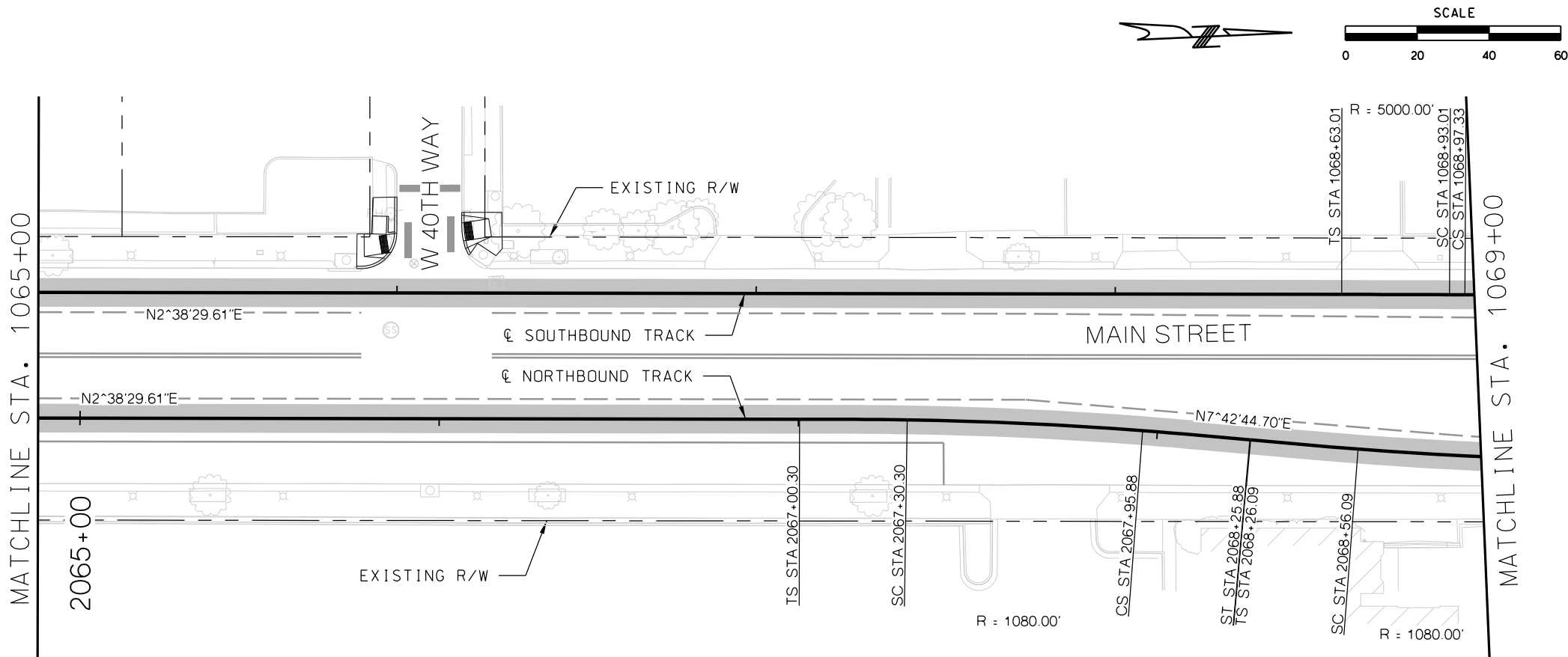
REV	DATE	DESCRIPTION	DESIGNED BY	JWR	PRELIMINARY PLANS - 30%		DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION		SCALE FOR 22"x34": H: 1"=20' V: 1"=2'	
			CHECKED BY	RPB	 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856		NOT FOR CONSTRUCTION	SOUTHBOUND TRACK PLAN AND PROFILE 41ST STREET SB STA 1061+00 TO STA 1065+00		FILENAME: SB P.P STA 1061+00 - 1065+00	
			DRAWN BY	MMO						CONTRACT NO.:	
			CHECKED BY	RPB						VOLUME:	
			APPROVED BY	NKS						DRAWING NO.:	
PLOT DATE: 8/27/2019			10:13:37 AM		DATE		08/28/2019			DRAWING NO.:	SHEET NO.:
										K117	65



GENERAL NOTES

1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
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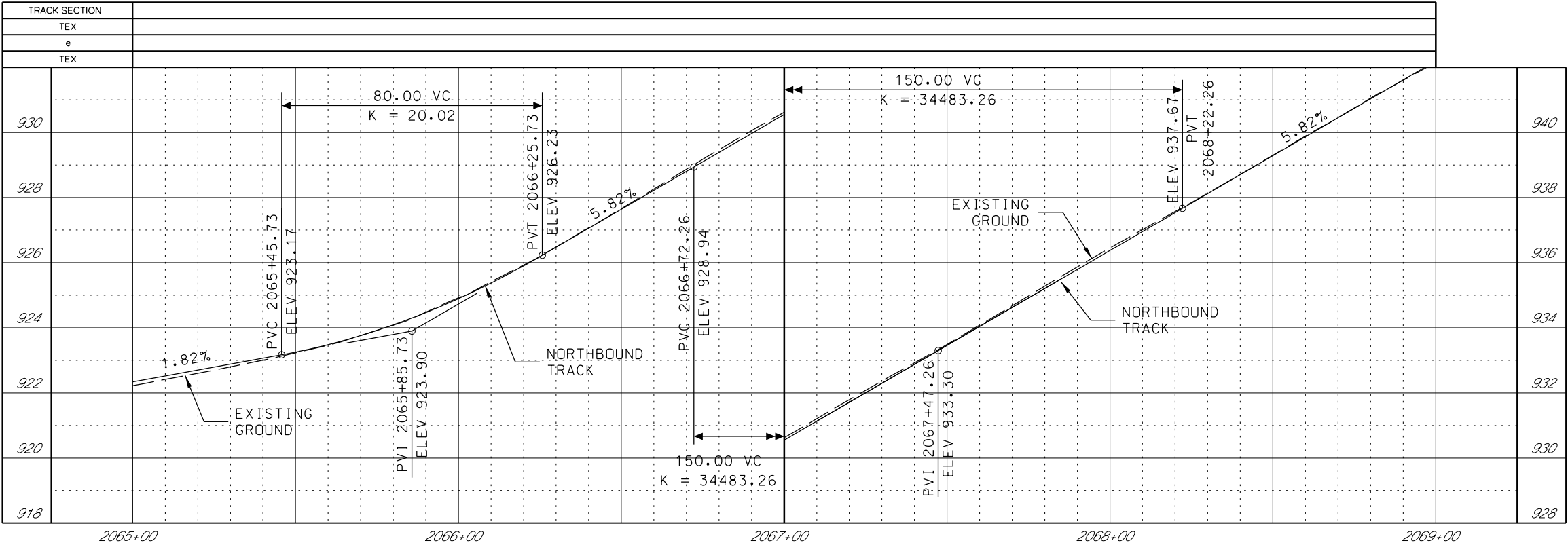
REV	DATE	DESCRIPTION	DESIGNED BY JWR		PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION NORTHBOUND TRACK PROFILE 41ST STREET NB STA 2061+00 TO STA 2065+00	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'	
			CHECKED BY RPB					 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	FILENAME: NB PRO STA 2061+00 - 2065+00
			DRAWN BY MMO						CONTRACT NO.:
			CHECKED BY RPB						VOLUME:
			APPROVED BY NKS						DRAWING NO.:
PLOT DATE: 8/27/2019 10:13:41 AM			DATE: 08/28/2019		NOT FOR CONSTRUCTION			SHEET NO.: 66	



GENERAL NOTES


1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
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4. PROFILES DESIGNED TO FINAL TOP OF RAIL ELEVATION.
5. PROFILE SHOWN IS AT 30% LEVEL AND IS ONLY INTENDED TO ILLUSTRATE THE EXISTING STREET GRADES AND TO CONFIRM THE LOCATIONS OF THE PLATFORMS AND SPECIAL TRACKWORK.

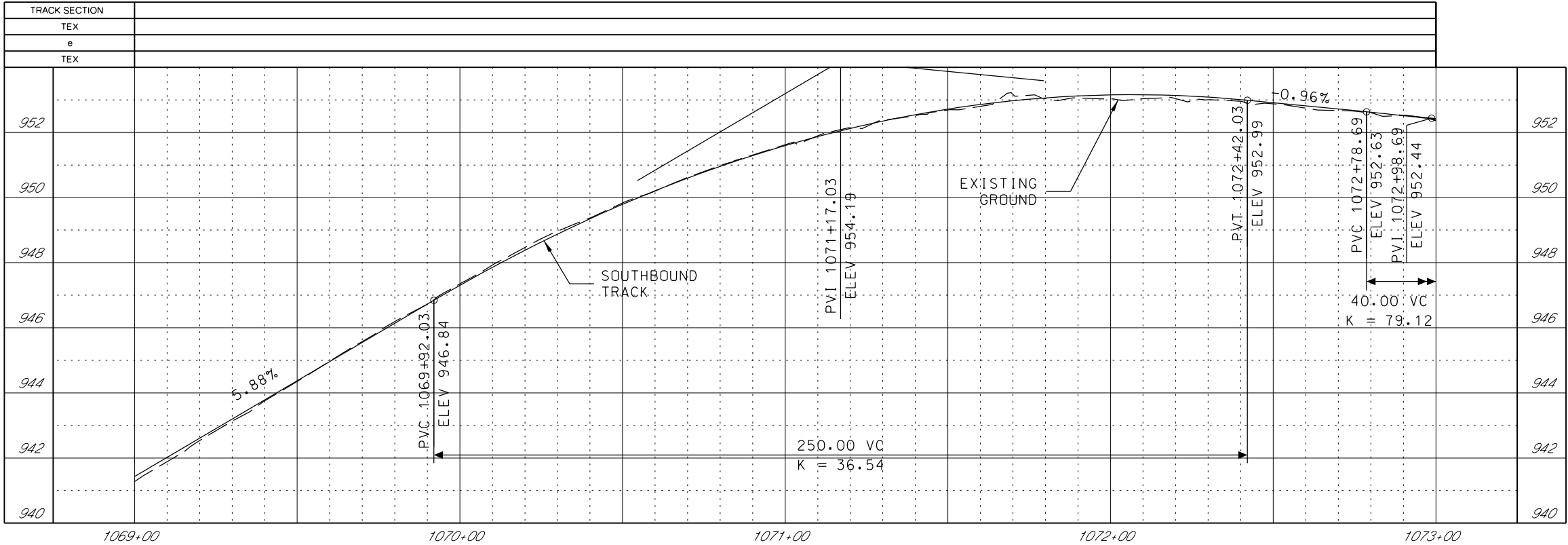
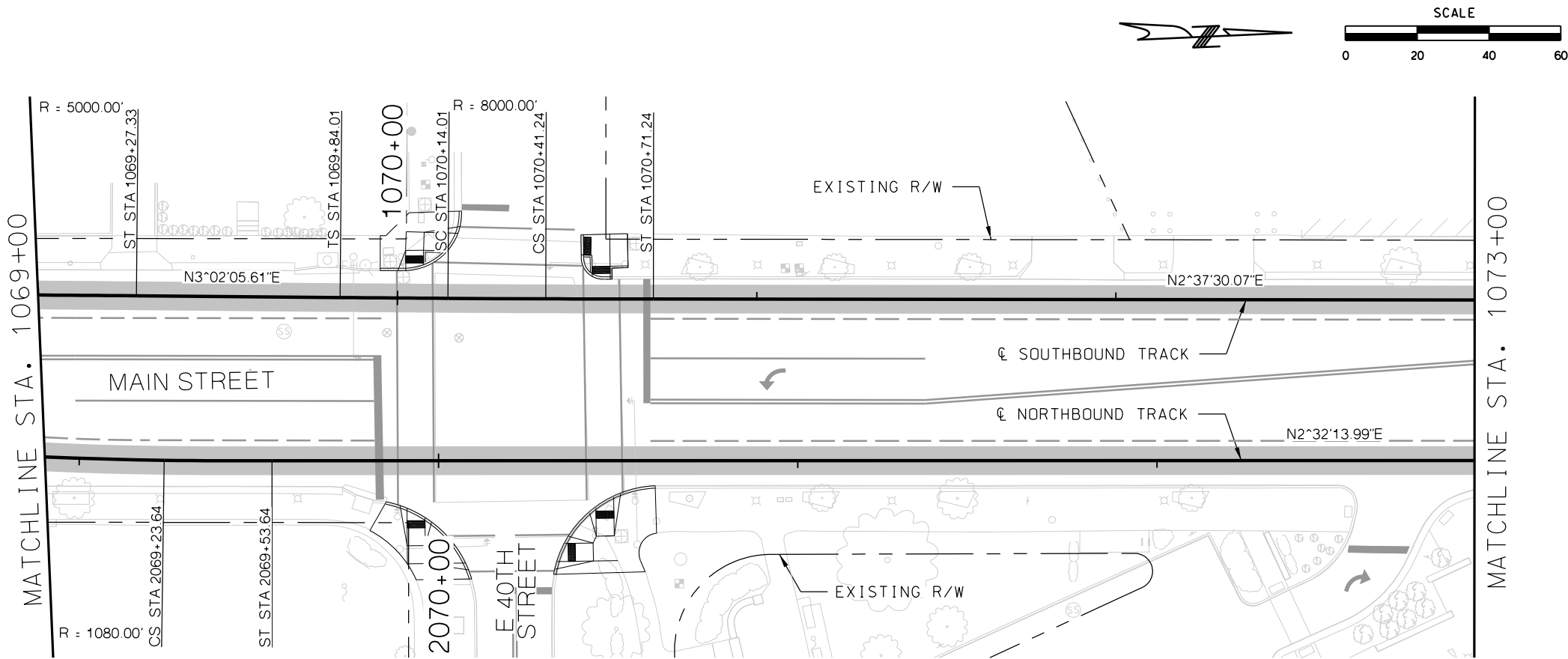
REV	DATE	DESCRIPTION	DESIGNED BY	JWR	PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'
			CHECKED BY	RPB	 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856		SOUTHBOUND TRACK PLAN AND PROFILE 40TH WAY SB STA 1065+00 TO STA 1069+00	FILENAME:
			DRAWN BY	MMO				SB P.P. STA 1065+00 - 1069+00
			CHECKED BY	RPB				CONTRACT NO.:
			APPROVED BY	NKS				VOLUME:
PLOT DATE: 8/27/2019			10:13:55 AM		DATE: 08/28/2019		DRAWING NO.: K118	
					NOT FOR CONSTRUCTION		SHEET NO.: 67	



GENERAL NOTES

1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
3. ALL CURVES ARE BASED ON ARC DEFINITION.
4. PROFILES DESIGNED TO FINAL TOP OF RAIL ELEVATION.
5. PROFILE SHOWN IS AT 30% LEVEL AND IS ONLY INTENDED TO ILLUSTRATE THE EXISTING STREET GRADES AND TO CONFIRM THE LOCATIONS OF THE PLATFORMS AND SPECIAL TRACKWORK.

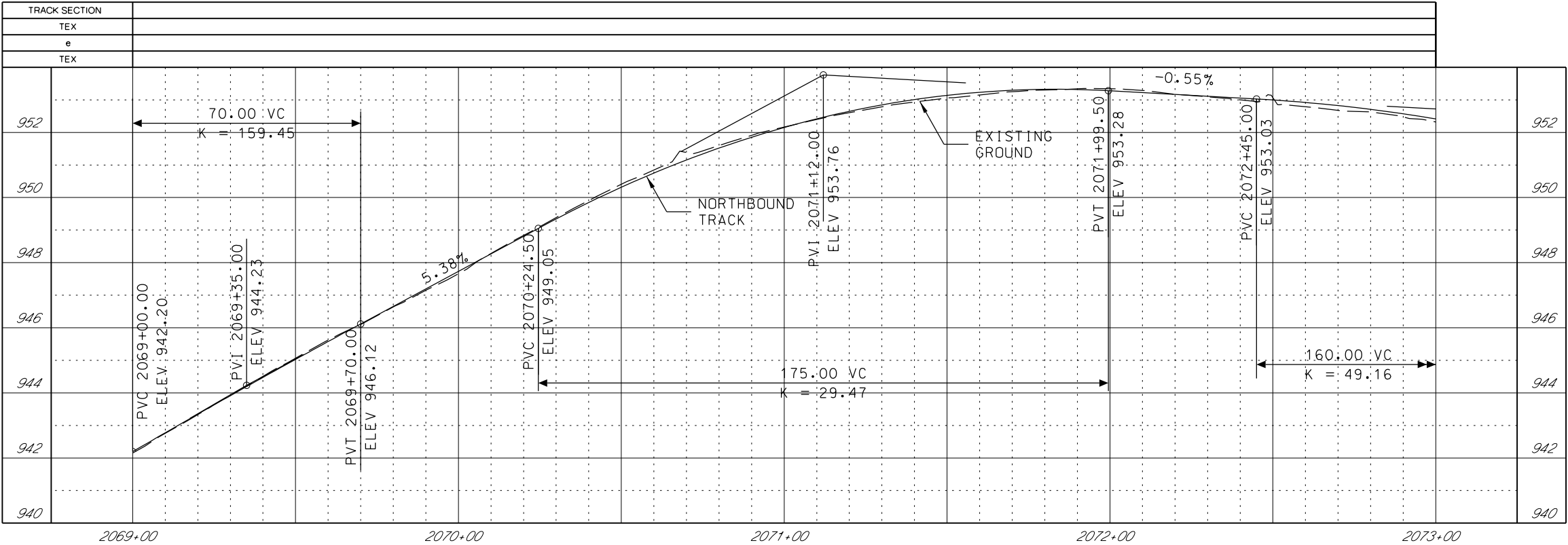
REV	DATE	DESCRIPTION	DESIGNED BY	JWR			PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION NORTHBOUND TRACK PROFILE 40TH WAY NB STA 2065+00 TO STA 2069+00	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'
			CHECKED BY	RPB			 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856			
			DRAWN BY	MMO						
			CHECKED BY	RPB						
			APPROVED BY	NKS						
PLOT DATE: 8/27/2019 10:13:59 AM			DATE	08/28/2019			NOT FOR CONSTRUCTION			FILENAME: NB PRO STA 2065+00 - 2069+00 CONTRACT NO.: ***** VOLUME: 1 DRAWING NO.: K118A SHEET NO.: 68



GENERAL NOTES

1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
3. ALL CURVES ARE BASED ON ARC DEFINITION.
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5. PROFILE SHOWN IS AT 30% LEVEL AND IS ONLY INTENDED TO ILLUSTRATE THE EXISTING STREET GRADES AND TO CONFIRM THE LOCATIONS OF THE PLATFORMS AND SPECIAL TRACKWORK.

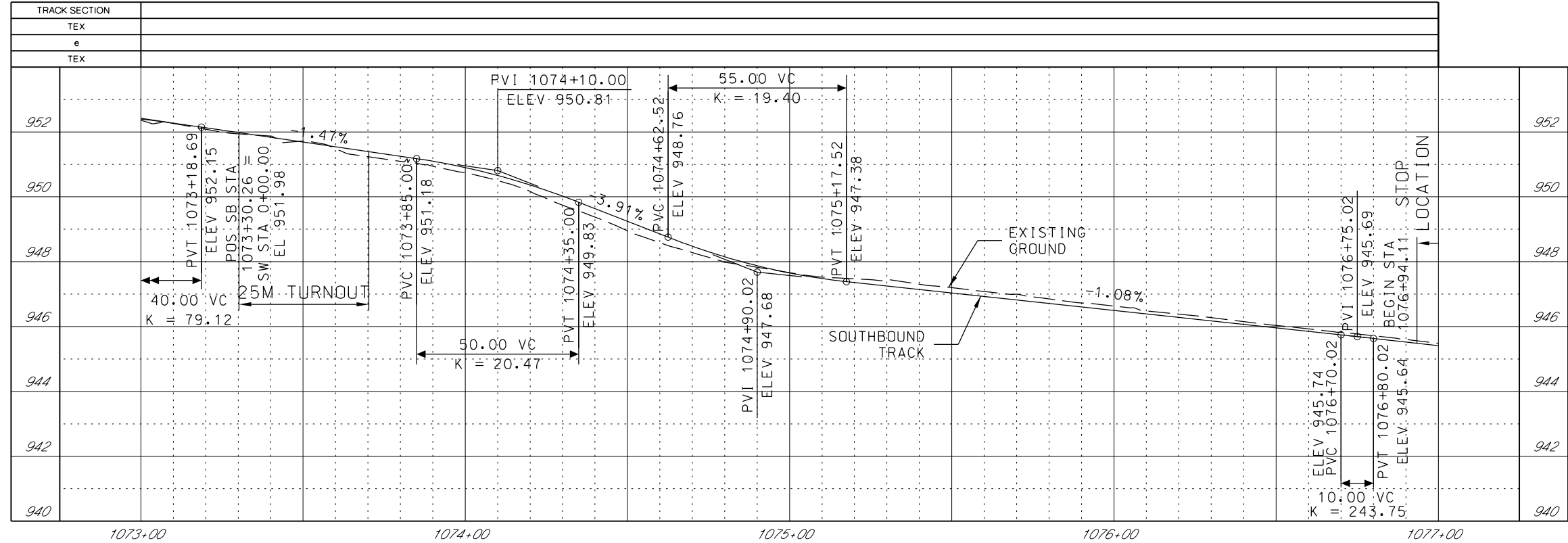
REV	DATE	DESCRIPTION	DESIGNED BY	JWR	PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'
			CHECKED BY	RPB	 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856		SOUTHBOUND TRACK PLAN AND PROFILE 40TH STREET SB STA 1069+00 TO STA 1073+00	FILENAME:
			DRAWN BY	MMO				SB P.P. STA 1069+00 - 1073+00
			CHECKED BY	RPB				CONTRACT NO.:
			APPROVED BY	NKS				VOLUME:
PLOT DATE: 8/27/2019			10:14:15 AM		DATE: 08/28/2019		DRAWING NO.: K119	
					NOT FOR CONSTRUCTION		SHEET NO.: 69	



GENERAL NOTES

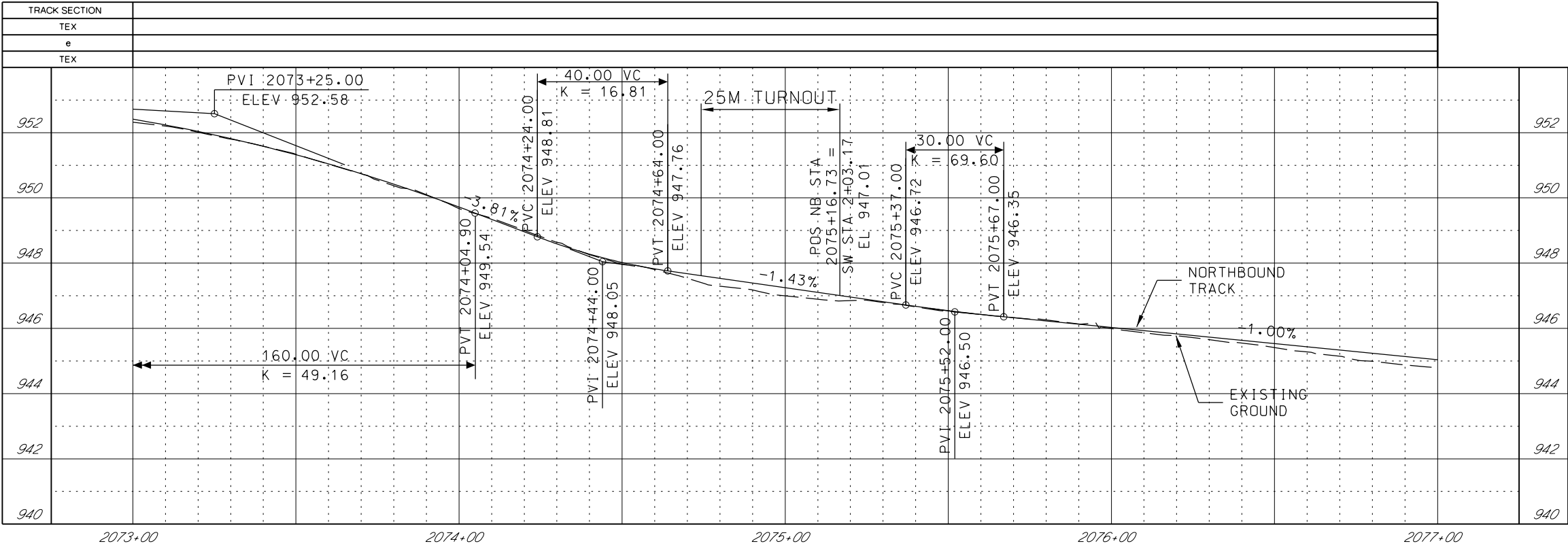
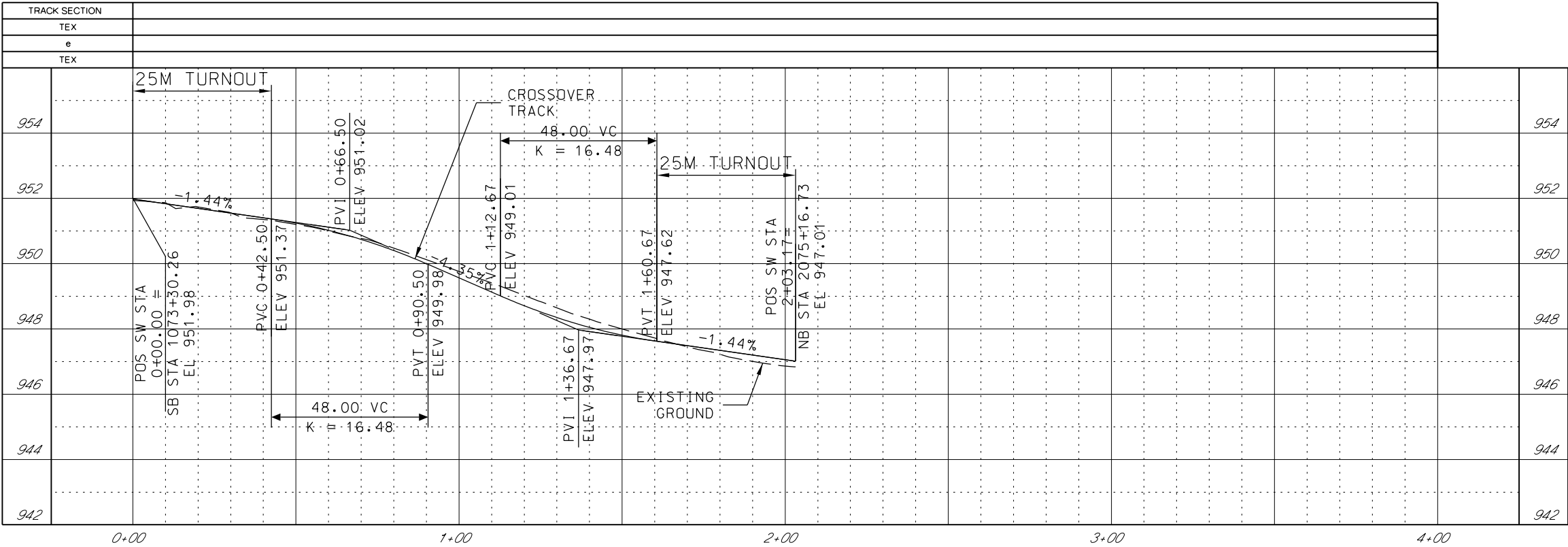
1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
3. ALL CURVES ARE BASED ON ARC DEFINITION.
4. PROFILES DESIGNED TO FINAL TOP OF RAIL ELEVATION.
5. PROFILE SHOWN IS AT 30% LEVEL AND IS ONLY INTENDED TO ILLUSTRATE THE EXISTING STREET GRADES AND TO CONFIRM THE LOCATIONS OF THE PLATFORMS AND SPECIAL TRACKWORK.

REV	DATE	DESCRIPTION	DESIGNED BY	JWR	PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'
			CHECKED BY	RPB	 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	NOT FOR CONSTRUCTION	NORTHBOUND TRACK PROFILE 40TH STREET NB STA 2069+00 TO STA 2073+00	FILENAME:
			DRAWN BY	MMO				NB PRO STA 2069+00 - 2073+00
			CHECKED BY	RPB				CONTRACT NO.:
			APPROVED BY	NKS				VOLUME:
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PLOT DATE: 8/27/2019		10:14:20 AM	DATE: 08/28/2019					DRAWING NO.: K119A
								SHEET NO.: 70



1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
3. ALL CURVES ARE BASED ON ARC DEFINITION.
4. PROFILES DESIGNED TO FINAL TOP OF RAIL ELEVATION.
5. PROFILE SHOWN IS AT 30% LEVEL AND IS ONLY INTENDED TO ILLUSTRATE THE EXISTING STREET GRADES AND TO CONFIRM THE LOCATIONS OF THE PLATFORMS AND SPECIAL TRACKWORK.

REV	DATE	DESCRIPTION	DESIGNED BY	JWR		<div> <div>PRELIMINARY PLANS - 30%</div> <div>DATE: 08-28-2019</div> <div>  <div> <div>HDR Engineering, Inc.</div> <div> 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856 </div> </div> </div> </div> <div>NOT FOR CONSTRUCTION</div>	<div> <div>SCALE FOR 22"x34": H: 1"=20' V: 1"=2'</div> <div> <div>FILENAME: SB P.P. STA 1073+00 - 1077+00</div> <div>CONTRACT NO.:</div> <div>*****</div> <div>VOLUME: 1</div> <div> <div>DRAWING NO.: K120</div> <div>SHEET NO.: 71</div> </div> </div> </div>
			CHECKED BY	RPB			
			DRAWN BY	MMQ			
			CHECKED BY	RPB			
			APPROVED BY	NKS			
PLOT DATE: 8/27/2019		10:14:35 AM	DATE	08/28/2019			



GENERAL NOTES

1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
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5. PROFILE SHOWN IS AT 30% LEVEL AND IS ONLY INTENDED TO ILLUSTRATE THE EXISTING STREET GRADES AND TO CONFIRM THE LOCATIONS OF THE PLATFORMS AND SPECIAL TRACKWORK.

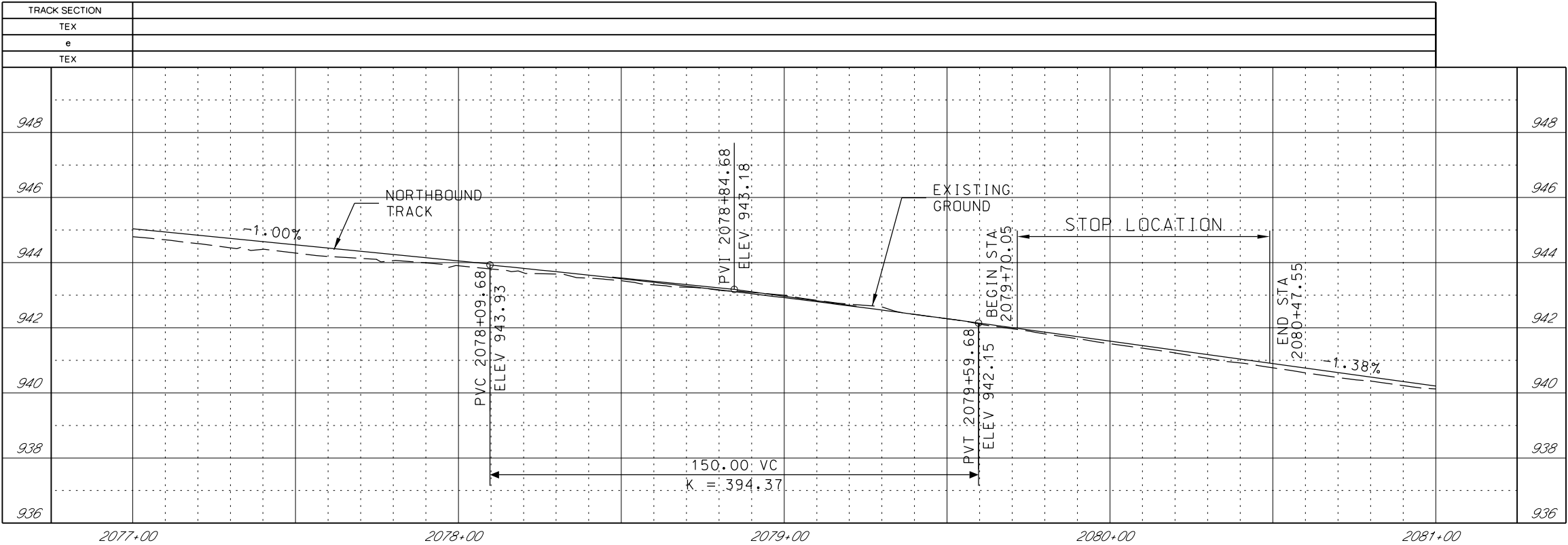
REV	DATE	DESCRIPTION	DESIGNED BY	JWR
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			DRAWN BY	MMO
			CHECKED BY	RPB
			APPROVED BY	NKS
PLOT DATE: 8/27/2019 10:14:45 AM			DATE	08/28/2019



PRELIMINARY PLANS - 30%		DATE: 08-28-2019
10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856		
NOT FOR CONSTRUCTION		


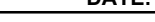
KANSAS CITY STREETCAR MAIN STREET EXTENSION	
NORTHBOUND TRACK	
PROFILE	
WESTPORT ROAD	
NB STA 2073+00 TO STA 2077+00	

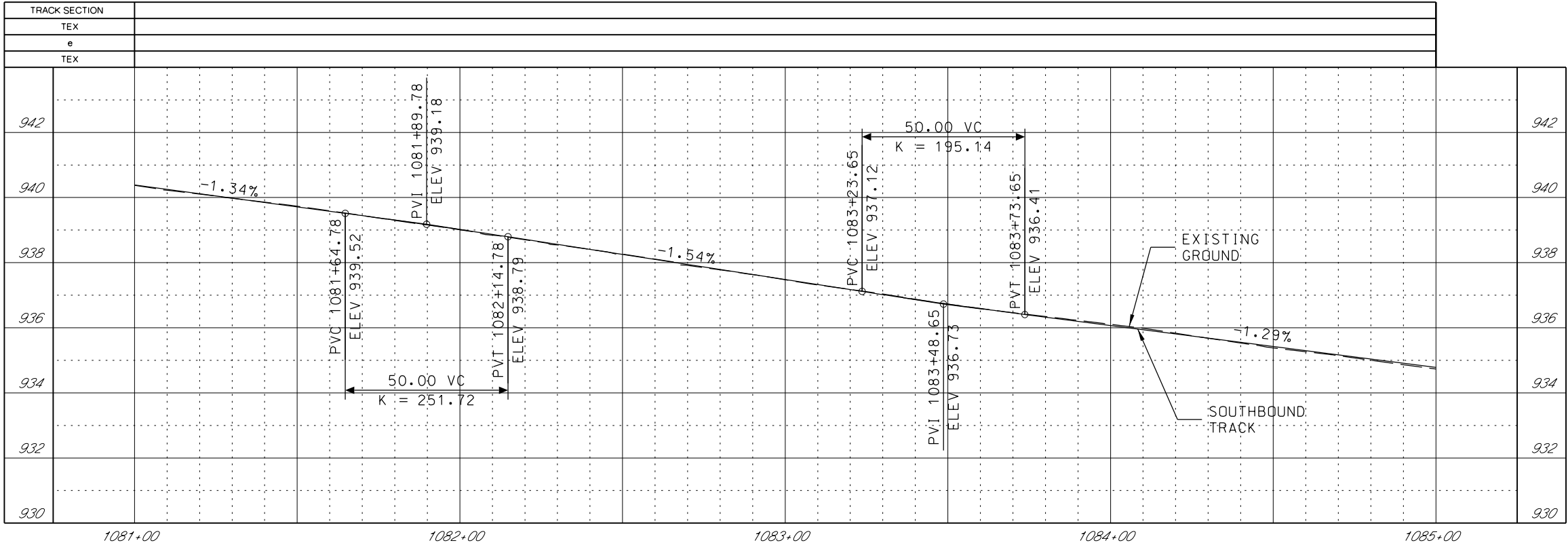
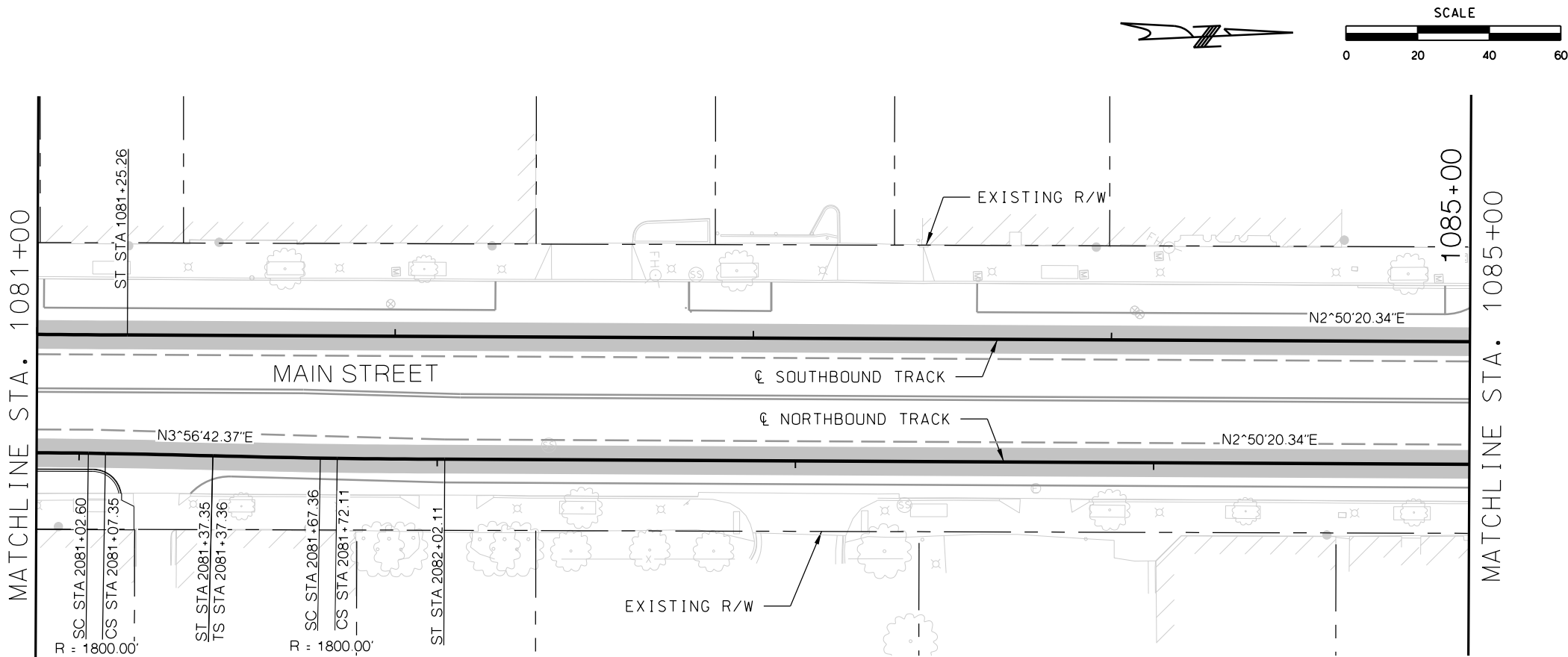
SCALE FOR 22"x34": H: 1"=20' V: 1"=2'	
FILENAME: NB PRO STA 2073-00 - 2077+00	
CONTRACT NO.:	
VOLUME: 1	
DRAWING NO.:	SHEET NO.:
K120A	72



GENERAL NOTES


1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
3. ALL CURVES ARE BASED ON ARC DEFINITION.
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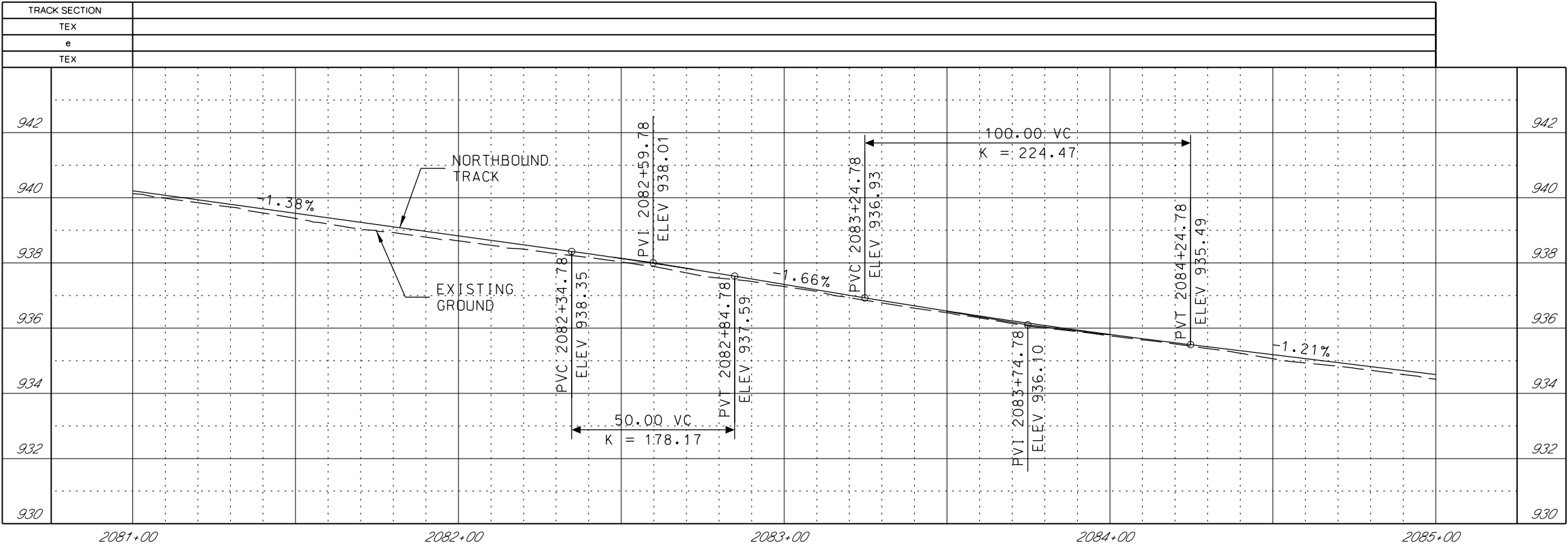
REV	DATE	DESCRIPTION	DESIGNED BY	JWR		PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION NORTHBOUND TRACK PROFILE 39TH STREET NB STA 2077+00 TO STA 2081+00	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'	
			CHECKED BY	RPB		 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	FILENAME:		NB PRO STA 2077+00 - 2081+00	
			DRAWN BY	MMO			CONTRACT NO.:		*****	
			CHECKED BY	RPB			VOLUME:		1	
			APPROVED BY	NKS			DRAWING NO.:		SHEET NO.:	
PLOT DATE: 8/27/2019		10:15:12 AM	DATE	08/28/2019		NOT FOR CONSTRUCTION		K121A	74	



GENERAL NOTES

1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
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5. PROFILE SHOWN IS AT 30% LEVEL AND IS ONLY INTENDED TO ILLUSTRATE THE EXISTING STREET GRADES AND TO CONFIRM THE LOCATIONS OF THE PLATFORMS AND SPECIAL TRACKWORK.

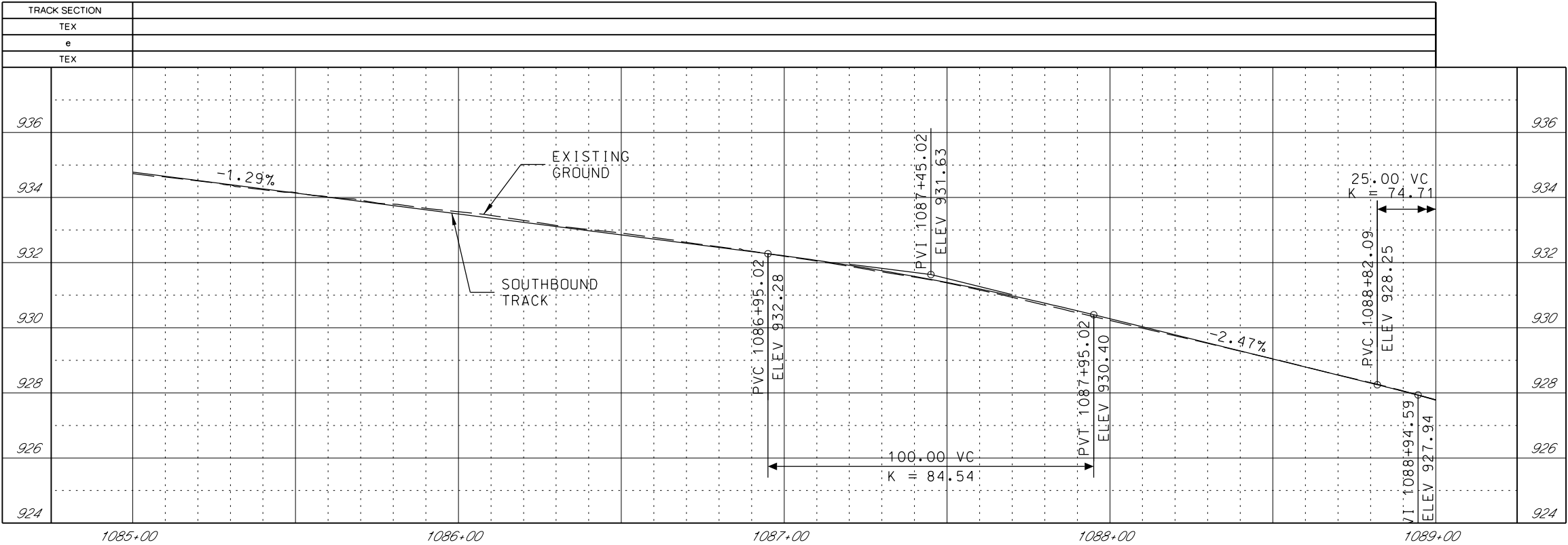
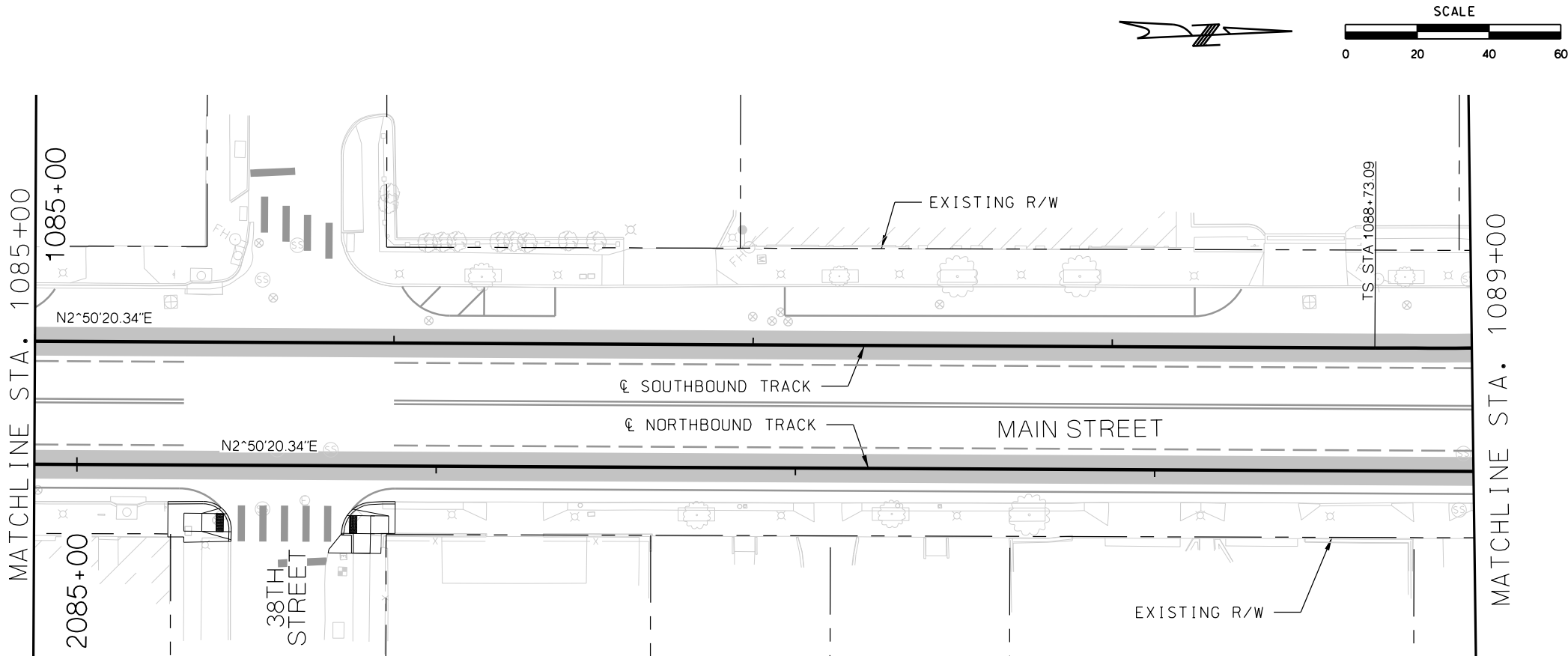
REV	DATE	DESCRIPTION	DESIGNED BY	JWR	PRELIMINARY PLANS - 30%		DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION		SCALE FOR 22"x34": H: 1"=20' V: 1"=2'	
			CHECKED BY	RPB	 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856			SOUTHBOUND TRACK PLAN AND PROFILE SB STA 1081+00 TO STA 1085+00		FILENAME: SB P.P. STA 1081+00 - 1085+00	
			DRAWN BY	MMO						CONTRACT NO.:	
			CHECKED BY	RPB						VOLUME:	
			APPROVED BY	NKS						DRAWING NO.:	
PLOT DATE: 8/27/2019			10:15:30 AM		DATE: 08/28/2019		NOT FOR CONSTRUCTION		SHEET NO.:		75



GENERAL NOTES

1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
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5. PROFILE SHOWN IS AT 30% LEVEL AND IS ONLY INTENDED TO ILLUSTRATE THE EXISTING STREET GRADES AND TO CONFIRM THE LOCATIONS OF THE PLATFORMS AND SPECIAL TRACKWORK.

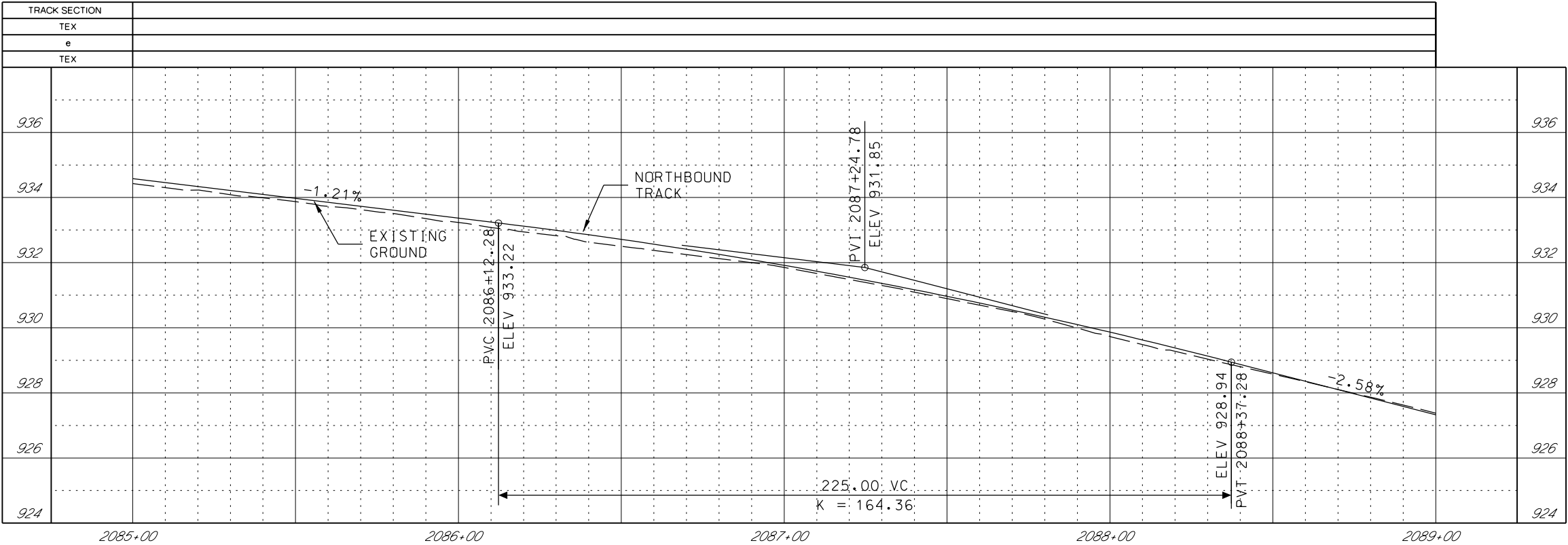
REV	DATE	DESCRIPTION	DESIGNED BY	JWR			PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'	
			CHECKED BY	RPB			 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856			NORTHBOUND TRACK PROFILE NB STA 2081+00 TO STA 2085+00	FILENAME: NB PRO STA 2081+00 - 2085+00
			DRAWN BY	MMO							CONTRACT NO.: *****
			CHECKED BY	RPB							VOLUME: 1
			APPROVED BY	NKS							DRAWING NO.: K122A
											SHEET NO.: 76
PLOT DATE: 8/27/2019 10:15:35 AM			DATE	08/28/2019			NOT FOR CONSTRUCTION				



GENERAL NOTES


1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
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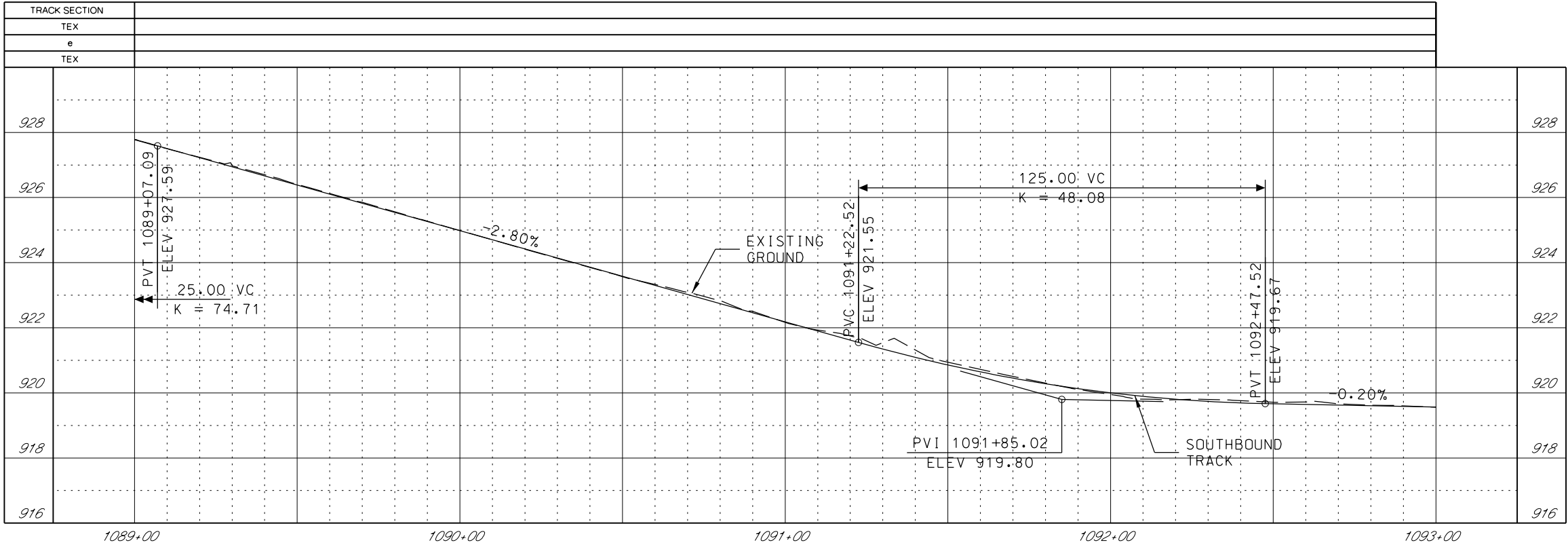
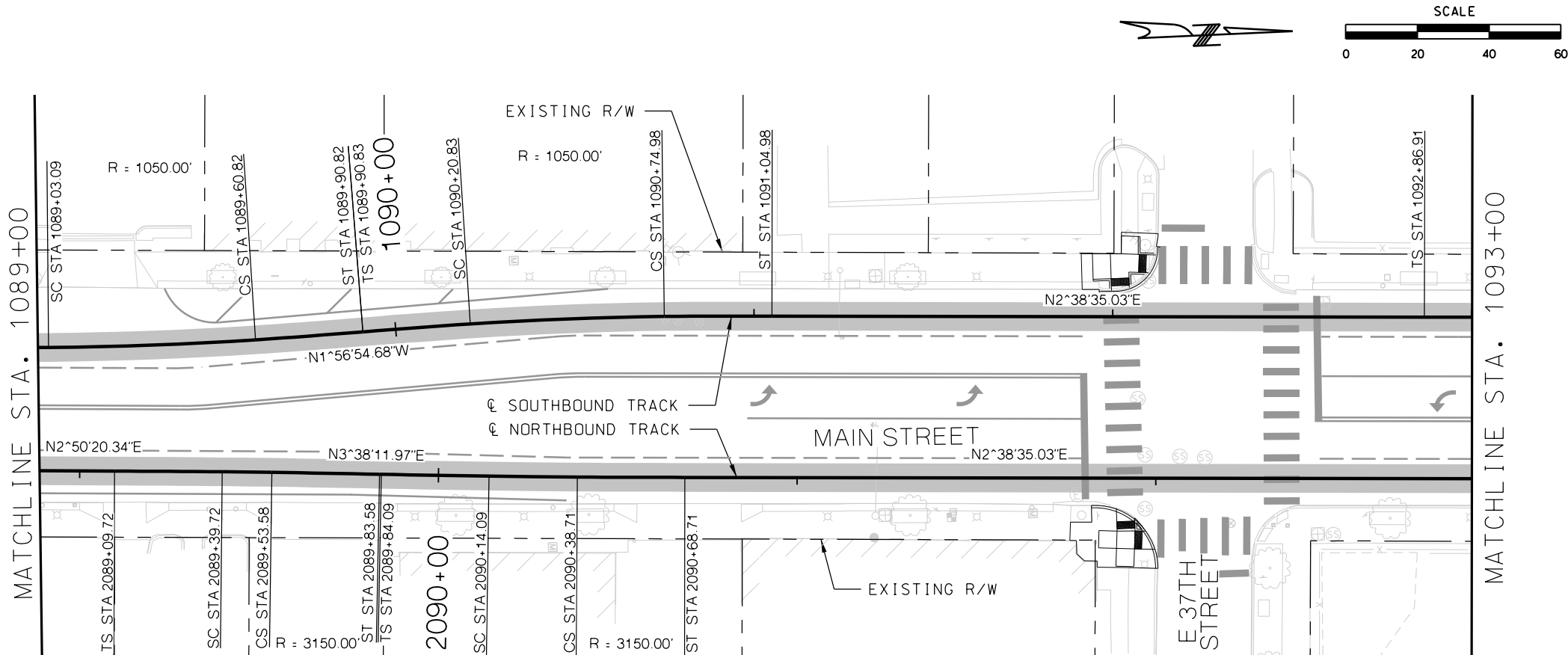
REV	DATE	DESCRIPTION	DESIGNED BY	JWR	<div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div><div>RideKC</div><div>STREETCAR</div></div></div> <div><div>PRELIMINARY PLANS - 30%</div><div>DATE: 08-28-2019</div><div><div><div><div></div><div></div></div><div><div></div><div></div></div></div><div><div>HDR</div><div>HDR Engineering, Inc.</div><div>10450 Holmes Road</div><div>Suite 600</div><div>Kansas City, MO 64131-3471</div><div>816-360-2700</div><div>Certificate of Authority: 000856</div></div></div><div><div>KANSAS CITY STREETCAR MAIN STREET EXTENSION</div><div>SOUTHBOUND TRACK</div><div>PLAN AND PROFILE</div><div>38TH STREET</div><div>SB STA 1085+00 TO STA 1089+00</div></div><div><div>SCALE FOR 22"x34":</div><div>H: 1"=20' V: 1"=2'</div><div>FILENAME:</div><div>SB P.P. STA 1085+00 - 1089+00</div><div>CONTRACT NO.:</div><div>*****</div><div>VOLUME:</div><div>1</div><div>DRAWING NO.:</div><div>K123</div><div>SHEET NO.:</div><div>77</div></div></div>	
			CHECKED BY	RPB		
			DRAWN BY	MMO		
			CHECKED BY	RPB		
			APPROVED BY	NKS		
PLOT DATE: 8/27/2019			DATE: 08/28/2019		NOT FOR CONSTRUCTION	



GENERAL NOTES


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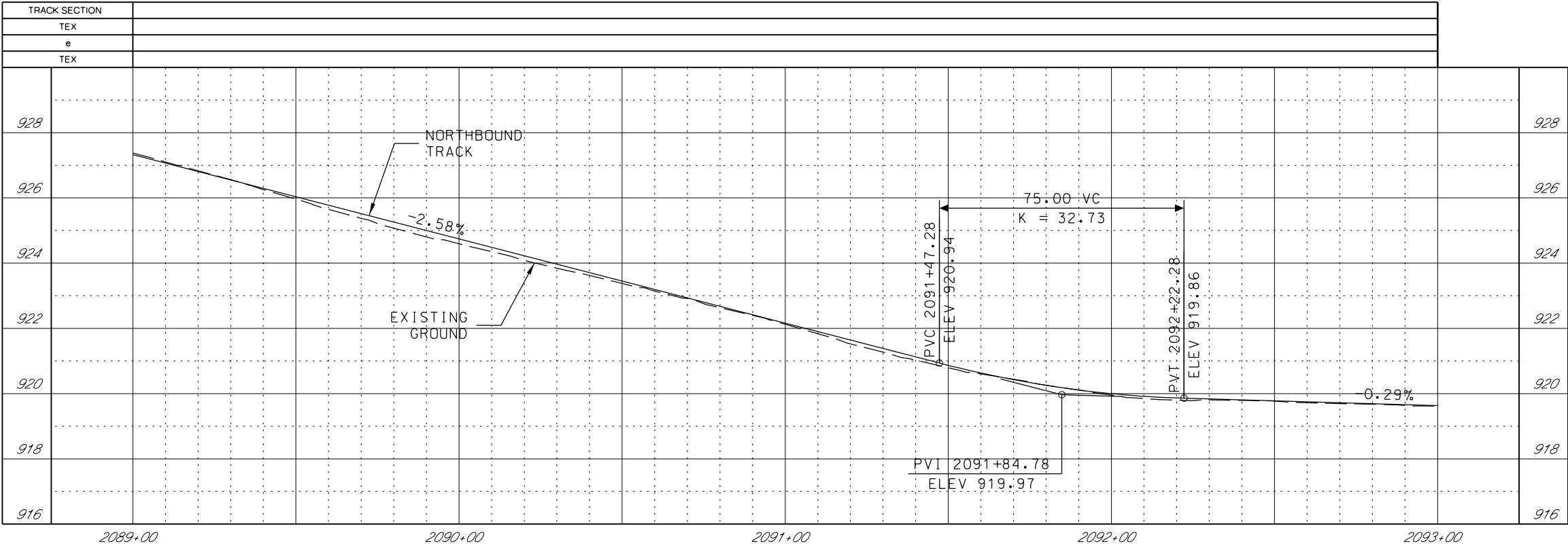
REV	DATE	DESCRIPTION	DESIGNED BY	JWR			PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION NORTHBOUND TRACK PROFILE 38TH STREET NB STA 2085+00 TO STA 2089+00	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'			
			CHECKED BY	RPB			 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	NOT FOR CONSTRUCTION		FILENAME:	NB PRO STA 2085+00 - 2089+00		
			DRAWN BY	MMO						CONTRACT NO.:	*****		
			CHECKED BY	RPB						VOLUME:	1		
			APPROVED BY	NKS						DRAWING NO.:	K123A	SHEET NO.:	78
PLOT DATE: 8/27/2019 10:15:59 AM			DATE	08/28/2019									



GENERAL NOTES


1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
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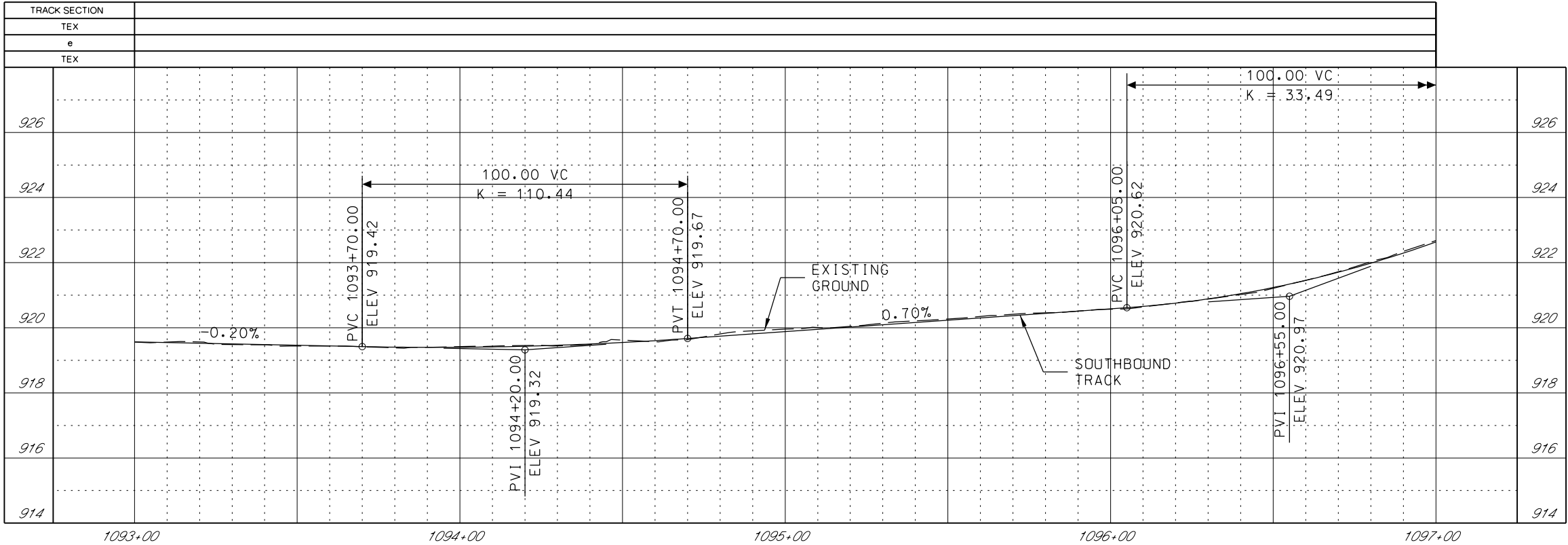
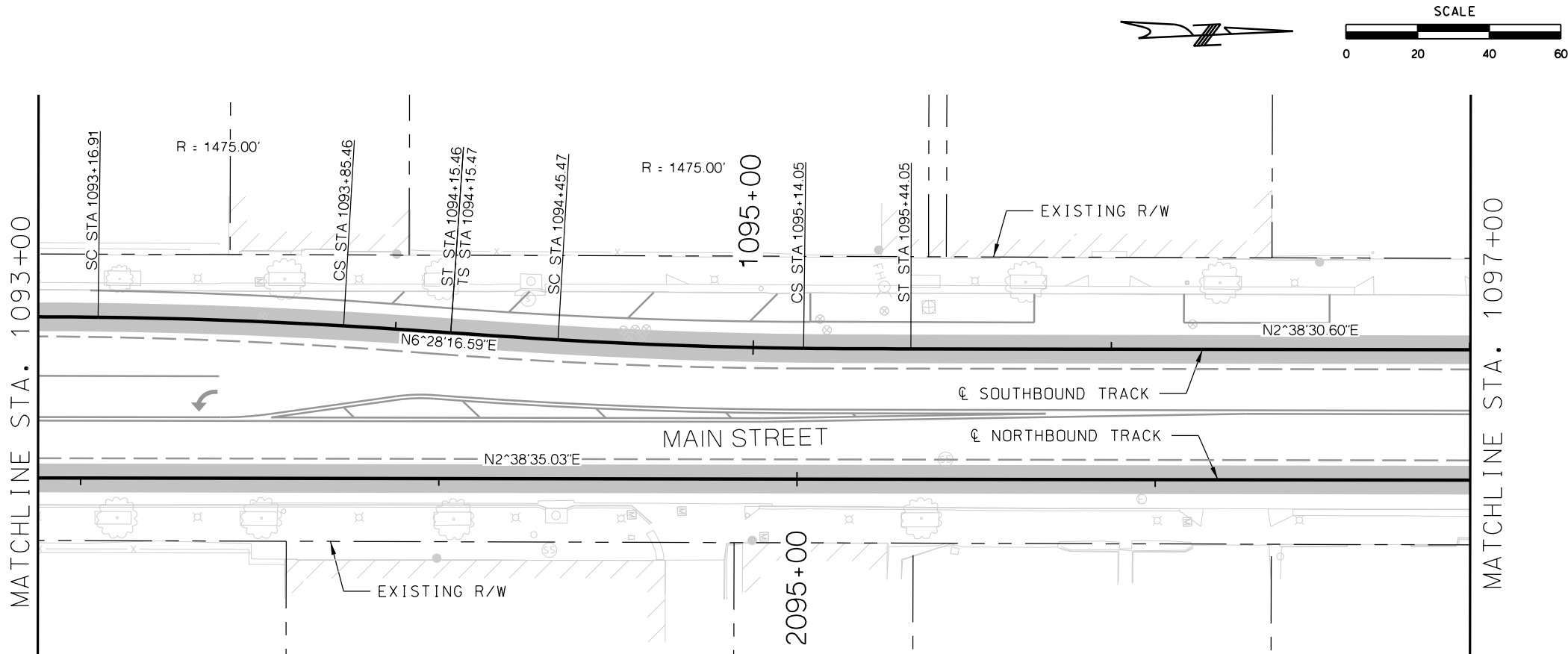
REV	DATE	DESCRIPTION	DESIGNED BY	JWR			PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION SOUTHBOUND TRACK PLAN AND PROFILE 37TH STREET SB STA 1089+00 TO STA 1093+00	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'		
			CHECKED BY	RPB			 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856			FILENAME: SB P.P STA 1089+00 - 1093+00	CONTRACT NO.: *****	
			DRAWN BY	MMO						VOLUME: 1	DRAWING NO.: K124	SHEET NO.: 79
			CHECKED BY	RPB								
			APPROVED BY	NKS								
PLOT DATE: 8/27/2019			10:16:13 AM		DATE	08/28/2019	NOT FOR CONSTRUCTION					



GENERAL NOTES

1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
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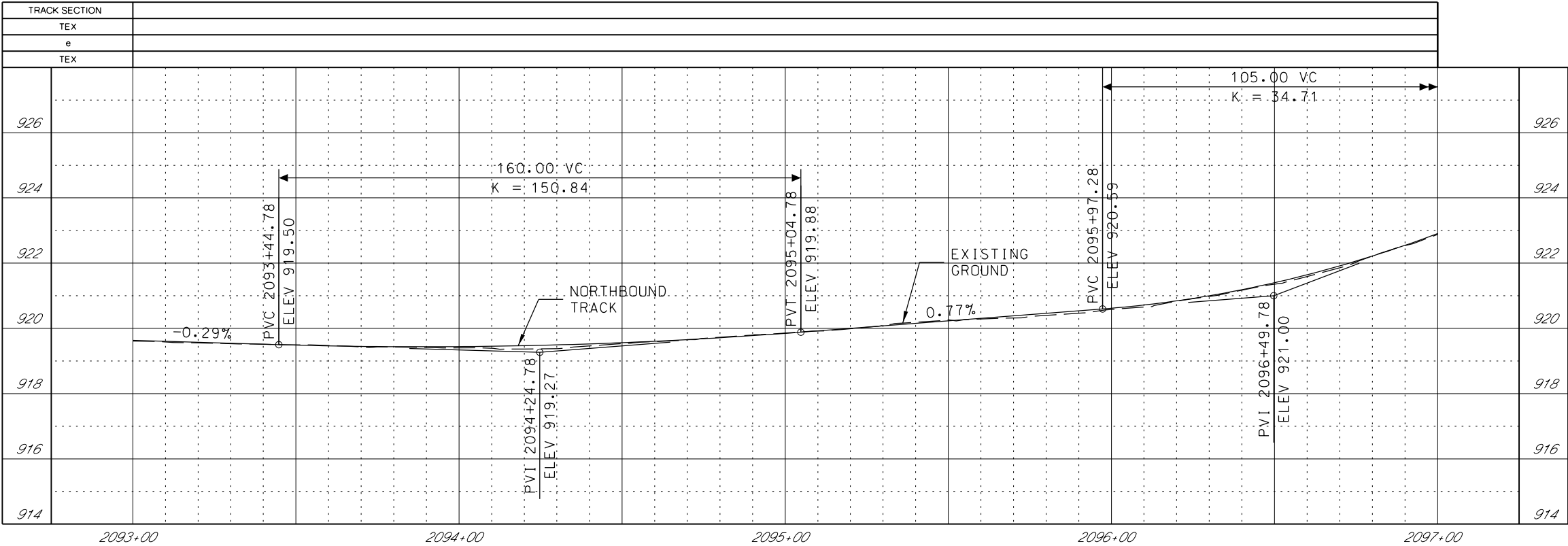
REV	DATE	DESCRIPTION	DESIGNED BY JWR			PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION NORTHBOUND TRACK PROFILE 37TH STREET NB STA 2089+00 TO STA 2093+00	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'	
			CHECKED BY RPB			 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856			FILENAME: NB PRO STA 2089+00 - 2093+00	
			DRAWN BY MMO						CONTRACT NO.: *****	
			CHECKED BY RPB						VOLUME: 1	
			APPROVED BY NKS						DRAWING NO.: K124A	SHEET NO.: 80
PLOT DATE: 8/27/2019 10:16:18 AM			DATE: 08/28/2019			NOT FOR CONSTRUCTION				



GENERAL NOTES

1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
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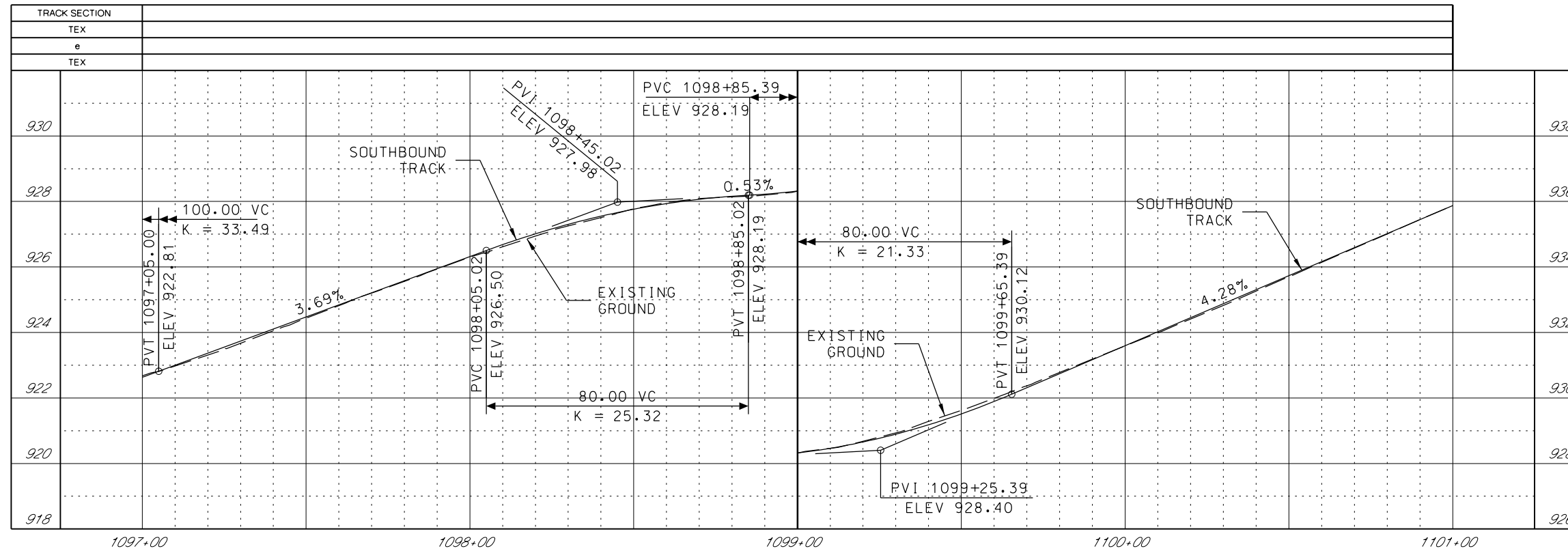
REV	DATE	DESCRIPTION	DESIGNED BY	JWR	PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'
			CHECKED BY	RPB	 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856		SOUTHBOUND TRACK	FILENAME:
			DRAWN BY	MMO			PLAN AND PROFILE	SB P.P. STA 1093+00 - 1097+00
			CHECKED BY	RPB			36TH STREET	CONTRACT NO.:
			APPROVED BY	NKS			SB STA 1093+00 TO STA 1097+00	VOLUME:
PLOT DATE: 8/27/2019			10:16:34 AM		DATE: 08/28/2019		DRAWING NO.: K125	
					NOT FOR CONSTRUCTION		SHEET NO.: 81	



GENERAL NOTES

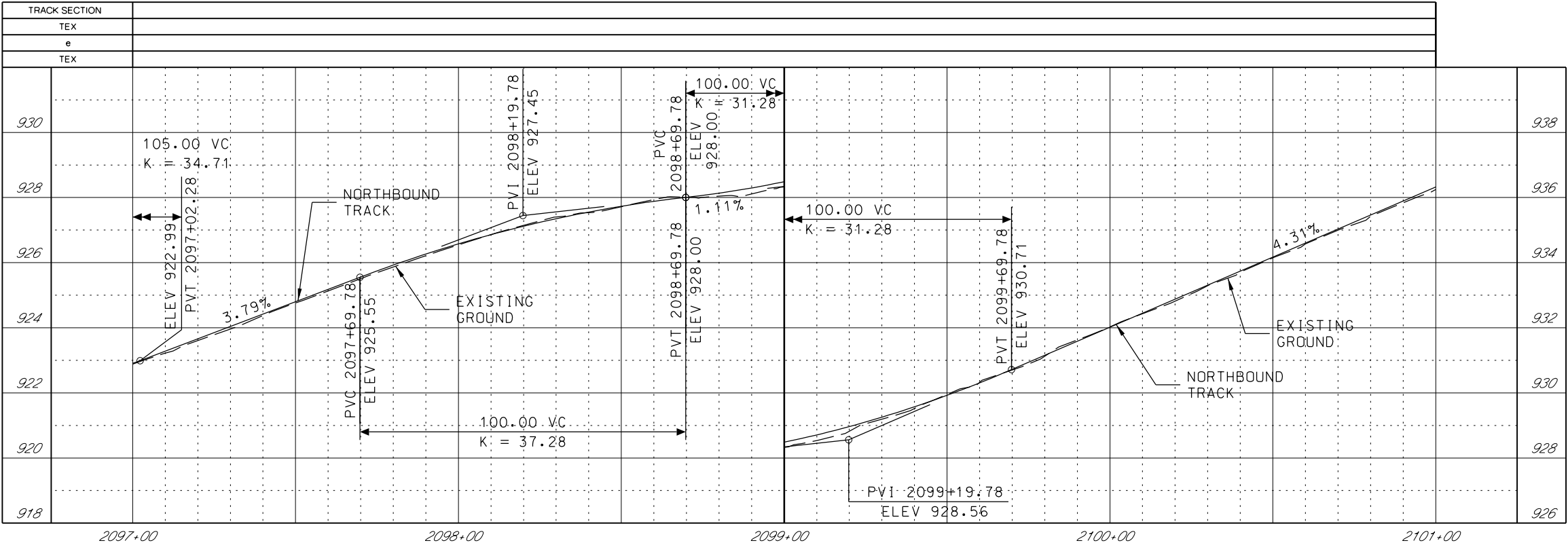
1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
3. ALL CURVES ARE BASED ON ARC DEFINITION.
4. PROFILES DESIGNED TO FINAL TOP OF RAIL ELEVATION.
5. PROFILE SHOWN IS AT 30% LEVEL AND IS ONLY INTENDED TO ILLUSTRATE THE EXISTING STREET GRADES AND TO CONFIRM THE LOCATIONS OF THE PLATFORMS AND SPECIAL TRACKWORK.

REV	DATE	DESCRIPTION	DESIGNED BY	JWR	PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'
			CHECKED BY	RPB	 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	NOT FOR CONSTRUCTION	NORTHBOUND TRACK PROFILE 36TH STREET NB STA 2093+00 TO STA 2097+00	FILENAME:
			DRAWN BY	MMO				NB PRO STA 2093+00 - 2097+00
			CHECKED BY	RPB				CONTRACT NO.:
			APPROVED BY	NKS				VOLUME:
								1
PLOT DATE: 8/27/2019 10:16:39 AM			DATE: 08/28/2019					DRAWING NO.: K125A SHEET NO.: 82



1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
3. ALL CURVES ARE BASED ON ARC DEFINITION.
4. PROFILES DESIGNED TO FINAL TOP OF RAIL ELEVATION.
5. PROFILE SHOWN IS AT 30% LEVEL AND IS ONLY INTENDED TO ILLUSTRATE THE EXISTING STREET GRADES AND TO CONFIRM THE LOCATIONS OF THE PLATFORMS AND SPECIAL TRACKWORK.

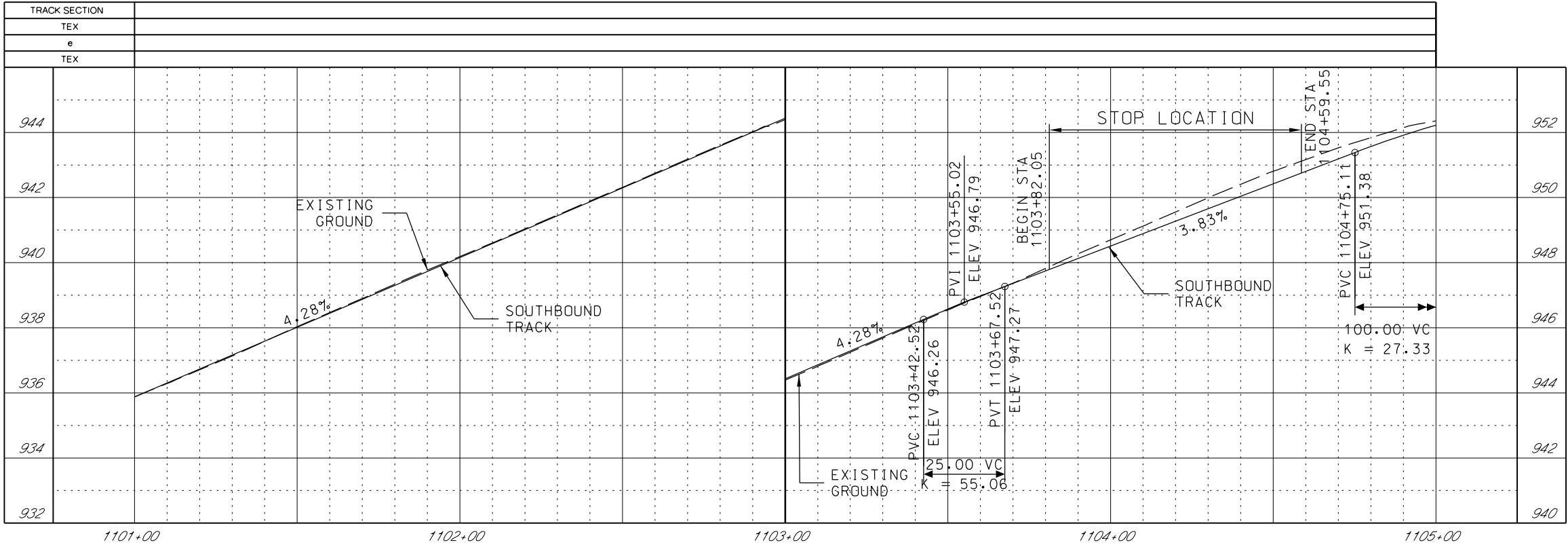
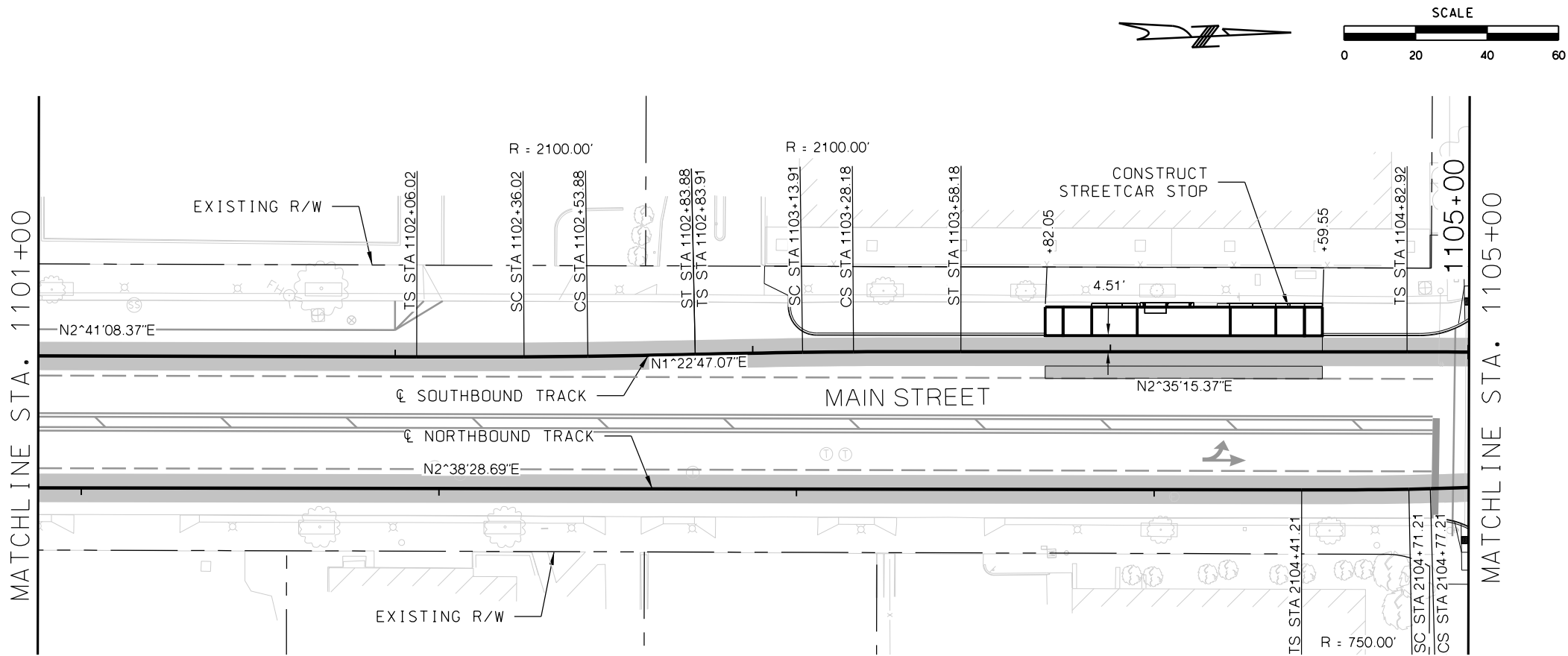
REV	DATE	DESCRIPTION	DESIGNED BY JWR			PRELIMINARY PLANS - 30%		DATE: 08-28-2019		KANSAS CITY STREETCAR MAIN STREET EXTENSION SOUTHBOUND TRACK PLAN AND PROFILE 36TH STREET SB STA 1097+00 TO STA 1101+00	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'	
			CHECKED BY RPB			FILENAME: SB_P.P STA 1097+00 - 1101+00						
			DRAWN BY MMO			CONTRACT NO.: *****						
			CHECKED BY RPB			VOLUME: 1						
			APPROVED BY NKS			DRAWING NO.: K126	SHEET NO.: 83					
PLOT DATE: 8/27/2019		10:16:54 AM	DATE: 08/28/2019			NOT FOR CONSTRUCTION						



GENERAL NOTES

1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
3. ALL CURVES ARE BASED ON ARC DEFINITION.
4. PROFILES DESIGNED TO FINAL TOP OF RAIL ELEVATION.
5. PROFILE SHOWN IS AT 30% LEVEL AND IS ONLY INTENDED TO ILLUSTRATE THE EXISTING STREET GRADES AND TO CONFIRM THE LOCATIONS OF THE PLATFORMS AND SPECIAL TRACKWORK.

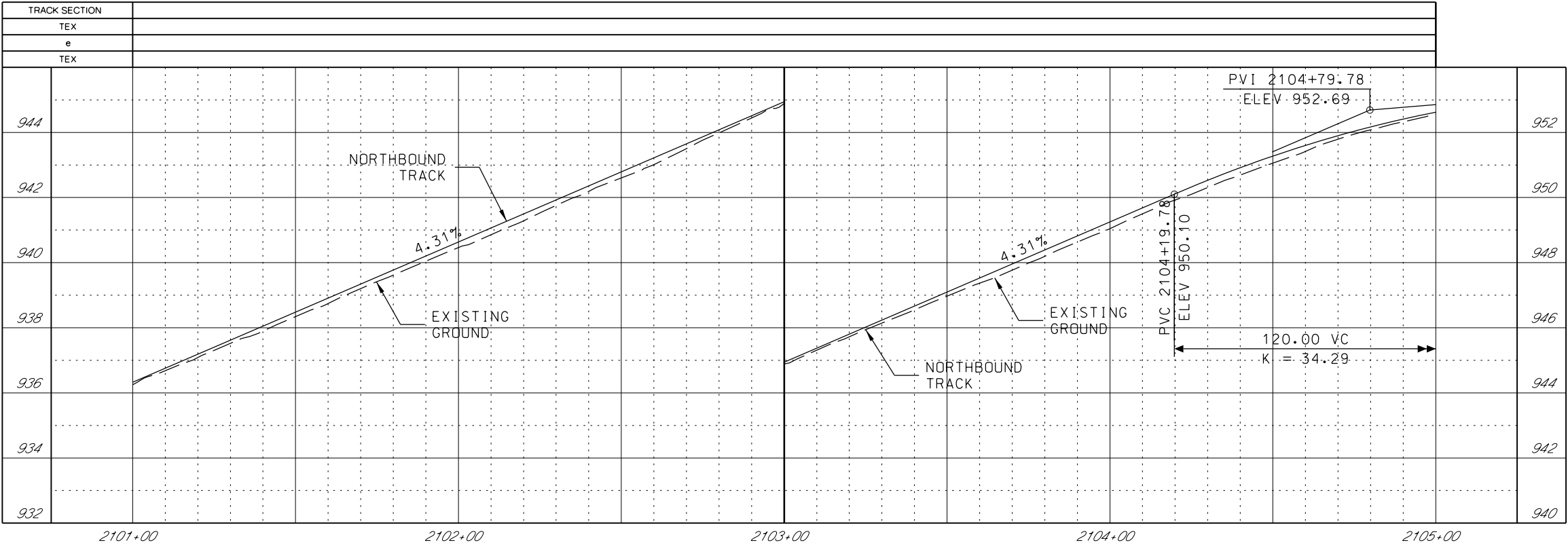
REV	DATE	DESCRIPTION	DESIGNED BY JWR		PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION NORTHBOUND TRACK PROFILE 36TH STREET NB STA 2097+00 TO STA 2101+00	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'
			CHECKED BY RPB					FILENAME: NB PRO STA 2097+00 - 2101+00
			DRAWN BY MMO		10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	CONTRACT NO.:		
			CHECKED BY RPB			VOLUME: 1		
			APPROVED BY NKS			DRAWING NO.: K126A		SHEET NO.: 84
PLOT DATE: 8/27/2019			10:16:58 AM		DATE: 08/28/2019	NOT FOR CONSTRUCTION		



GENERAL NOTES

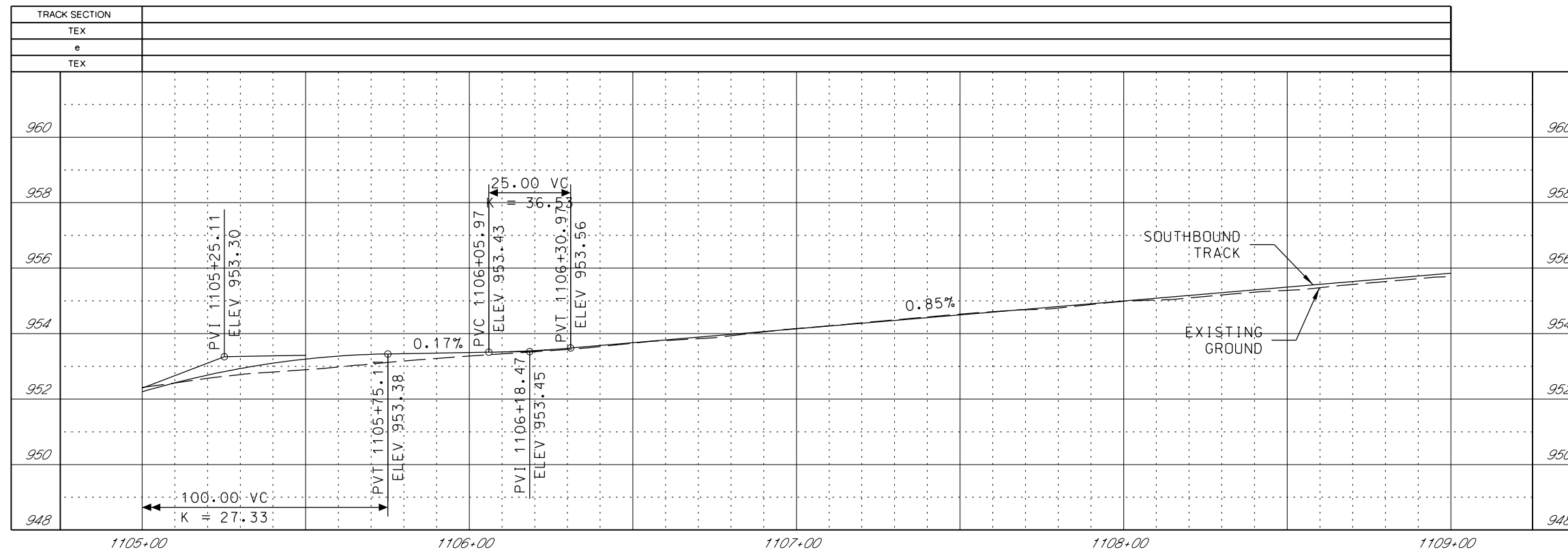
1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
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4. PROFILES DESIGNED TO FINAL TOP OF RAIL ELEVATION.
5. PROFILE SHOWN IS AT 30% LEVEL AND IS ONLY INTENDED TO ILLUSTRATE THE EXISTING STREET GRADES AND TO CONFIRM THE LOCATIONS OF THE PLATFORMS AND SPECIAL TRACKWORK.

REV	DATE	DESCRIPTION	DESIGNED BY	JWR	<div><div>PRELIMINARY PLANS - 30%<div><div>HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856</div></div></div></div> <div><div>DATE: 08-28-2019</div><div>KANSAS CITY STREETCAR MAIN STREET EXTENSION</div></div>	<div>SOUTHBOUND TRACK PLAN AND PROFILE SB STA 1101+00 TO STA 1105+00</div>
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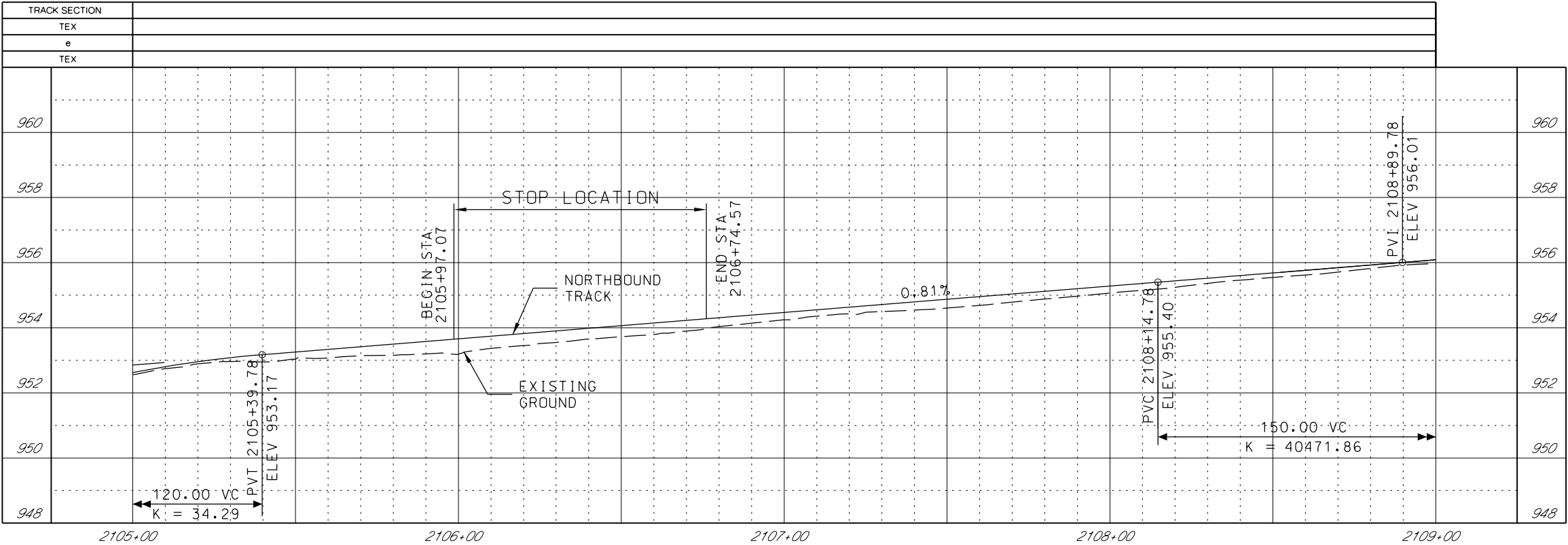
GENERAL NOTES

1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
3. ALL CURVES ARE BASED ON ARC DEFINITION.
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5. PROFILE SHOWN IS AT 30% LEVEL AND IS ONLY INTENDED TO ILLUSTRATE THE EXISTING STREET GRADES AND TO CONFIRM THE LOCATIONS OF THE PLATFORMS AND SPECIAL TRACKWORK.

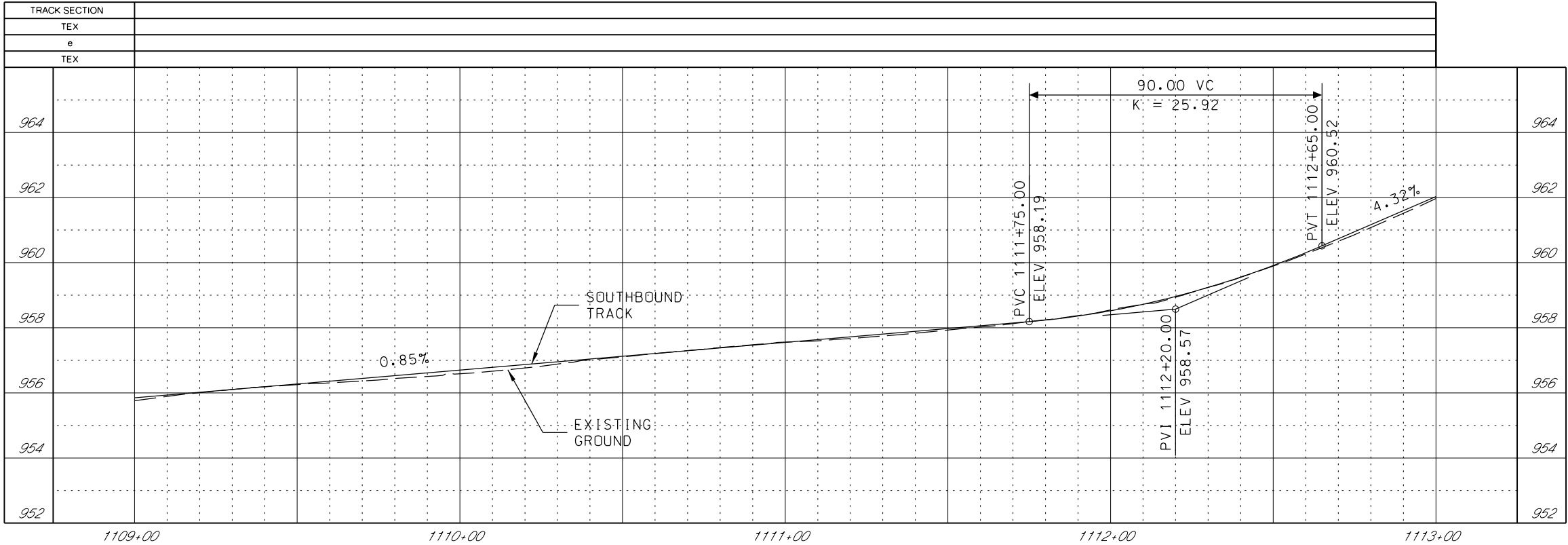
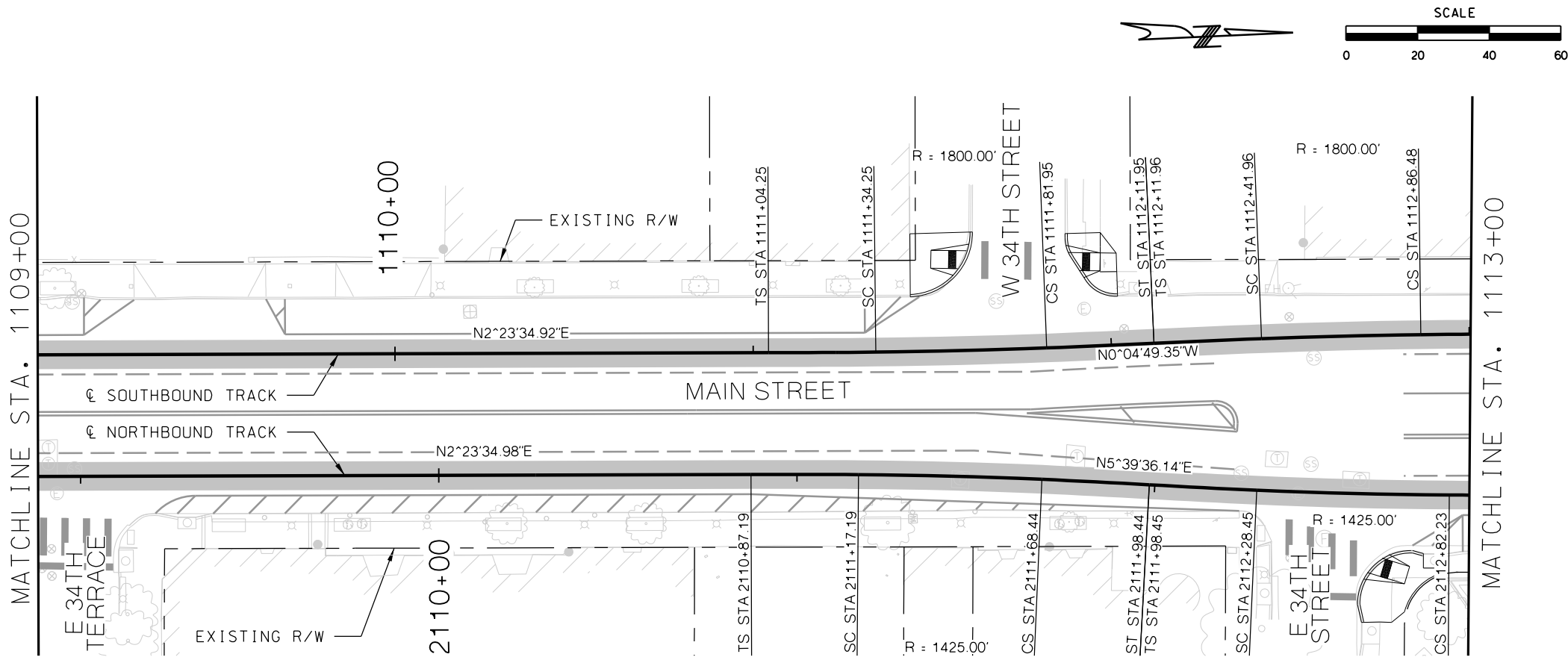
REV	DATE	DESCRIPTION	DESIGNED BY	JWR		<div> <div>PRELIMINARY PLANS - 30%</div> <div>DATE: 08-28-2019</div> <div>  <div> <div>HDR Engineering, Inc.</div> <div>10450 Holmes Road</div> <div>Suite 600</div> <div>Kansas City, MO 64131-3471</div> <div>816-360-2700</div> <div>Certificate of Authority: 000856</div> </div> </div> </div>	<div> <div>NOT FOR CONSTRUCTION</div> </div>	<div> <div>SCALE FOR 22"x34": H: 1"=20' V: 1"=2'</div> <div>FILENAME: SB P.P. STA 1105+00 - 1109+00</div> <div>CONTRACT NO.:</div> <div>*****</div> <div>VOLUME: 1</div> <div>DRAWING NO.: K128</div> <div>SHEET NO.: 87</div> </div>	<div> <div>KANSAS CITY STREETCAR MAIN STREET EXTENSION</div> <div>SOUTHBOUND TRACK</div> <div>PLAN AND PROFILE</div> <div>ARMOUR BOULEVARD</div> <div>SB STA 1105+00 TO STA 1109+00</div> </div>
			CHECKED BY	RPB					
			DRAWN BY	MMQ					
			CHECKED BY	RPB					
			APPROVED BY	NKS					
PLOT DATE: 8/27/2019		10:17:33 AM	DATE	08/28/2019					



GENERAL NOTES

1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
3. ALL CURVES ARE BASED ON ARC DEFINITION.
4. PROFILES DESIGNED TO FINAL TOP OF RAIL ELEVATION.
5. PROFILE SHOWN IS AT 30% LEVEL AND IS ONLY INTENDED TO ILLUSTRATE THE EXISTING STREET GRADES AND TO CONFIRM THE LOCATIONS OF THE PLATFORMS AND SPECIAL TRACKWORK.

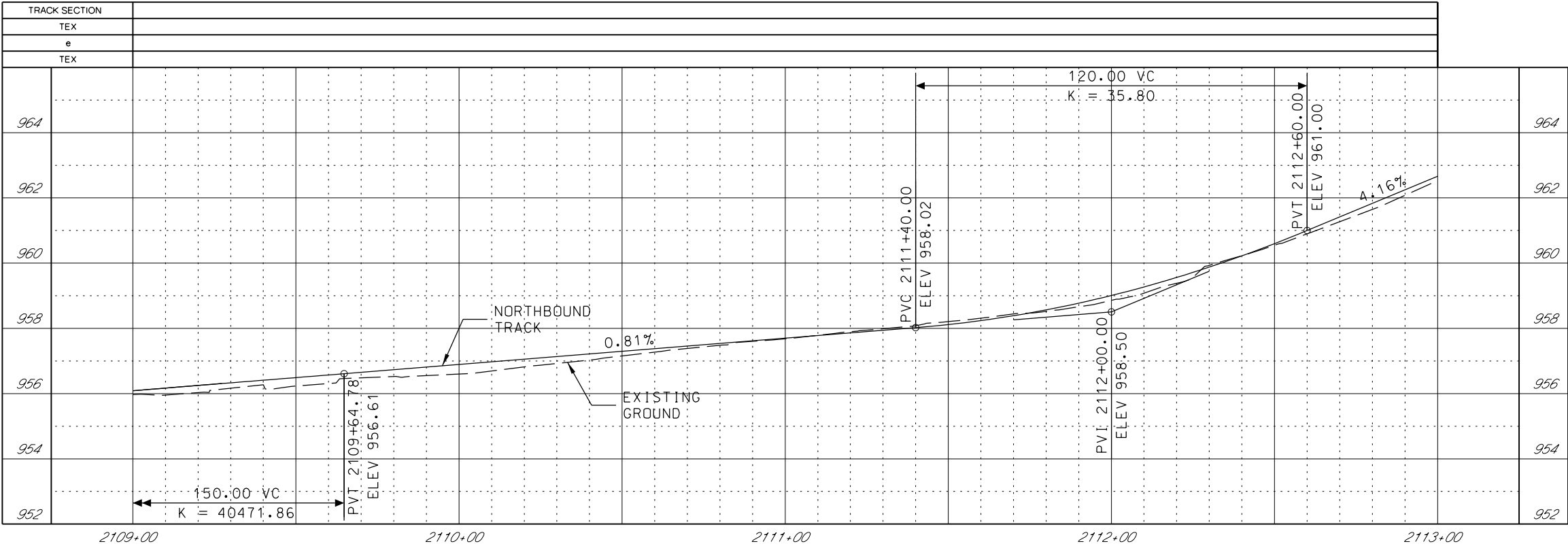
REV	DATE	DESCRIPTION	DESIGNED BY	JWR		PRELIMINARY PLANS - 30% HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	NORTHBOUND TRACK PROFILE ARMOUR BOULEVARD NB STA 2105+00 TO STA 2109+00	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'
			CHECKED BY	RPB						FILENAME: NB PRO STA 2105+00 - 2109+00
			DRAWN BY	MMO						CONTRACT NO.:
			CHECKED BY	RPB						VOLUME: 1
			APPROVED BY	NKS						DRAWING NO.: K128A
PLOT DATE: 8/27/2019 10:17:37 AM			DATE	08/28/2019						SHEET NO.: 88



GENERAL NOTES


1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
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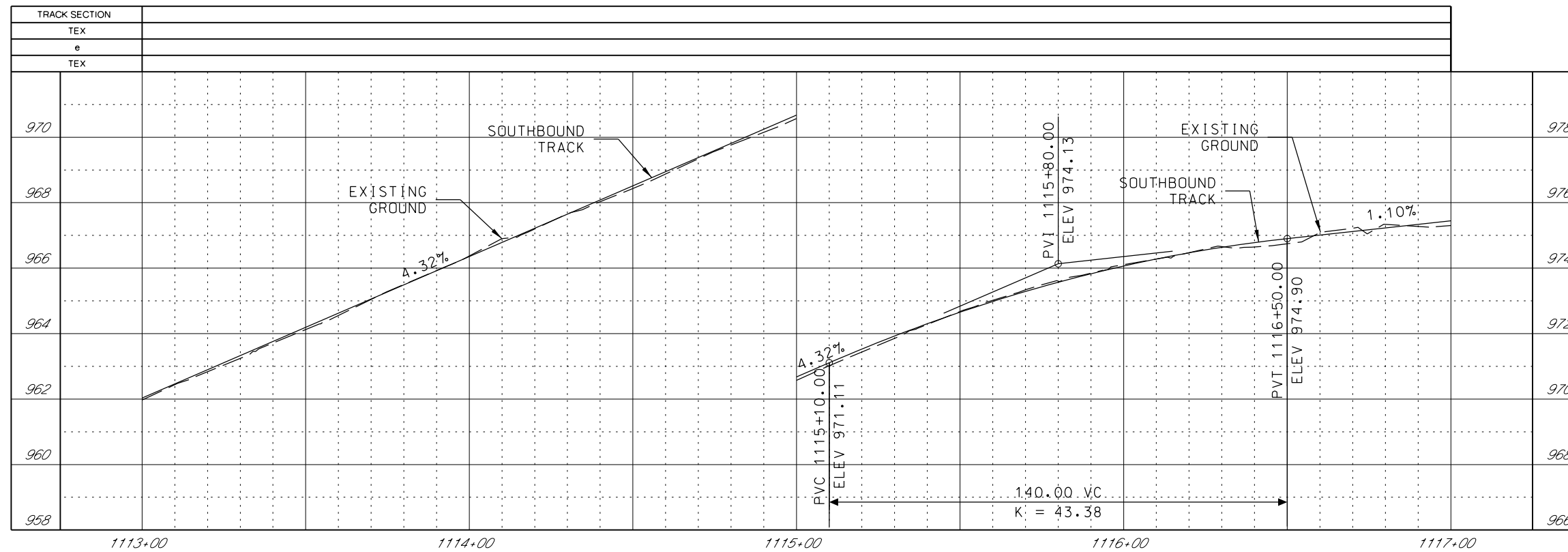
REV	DATE	DESCRIPTION	DESIGNED BY	JWR	<div><div><div><div></div><div></div><div></div></div><div><div>RideKC</div><div>STREETCAR</div></div></div><div><div>PRELIMINARY PLANS - 30%</div><div>DATE: 08-28-2019</div><div><div><div><div></div><div></div><div></div></div><div><div>HDR</div><div>HDR Engineering, Inc.</div></div><div><div>10450 Holmes Road</div><div>Suite 600</div><div>Kansas City, MO 64131-3471</div><div>816-360-2700</div><div>Certificate of Authority: 000856</div></div></div><div><div>KANSAS CITY STREETCAR MAIN STREET EXTENSION</div><div>SOUTHBOUND TRACK</div><div>PLAN AND PROFILE</div><div>34TH WAY</div><div>SB STA 1109+00 TO STA 1113+00</div></div><div><div>SCALE FOR 22"x34":</div><div>H: 1"=20' V: 1"=2'</div><div>FILENAME:</div><div>SB P.P. STA 1109+00 - 1113+00</div><div>CONTRACT NO.:</div><div>*****</div><div>VOLUME:</div><div>1</div><div>DRAWING NO.:</div><div>K129</div><div>SHEET NO.:</div><div>89</div></div></div></div></div>	
			CHECKED BY	RPB		
			DRAWN BY	MMO		
			CHECKED BY	RPB		
			APPROVED BY	NKS		
PLOT DATE: 8/27/2019			DATE	08/28/2019	NOT FOR CONSTRUCTION	



GENERAL NOTES

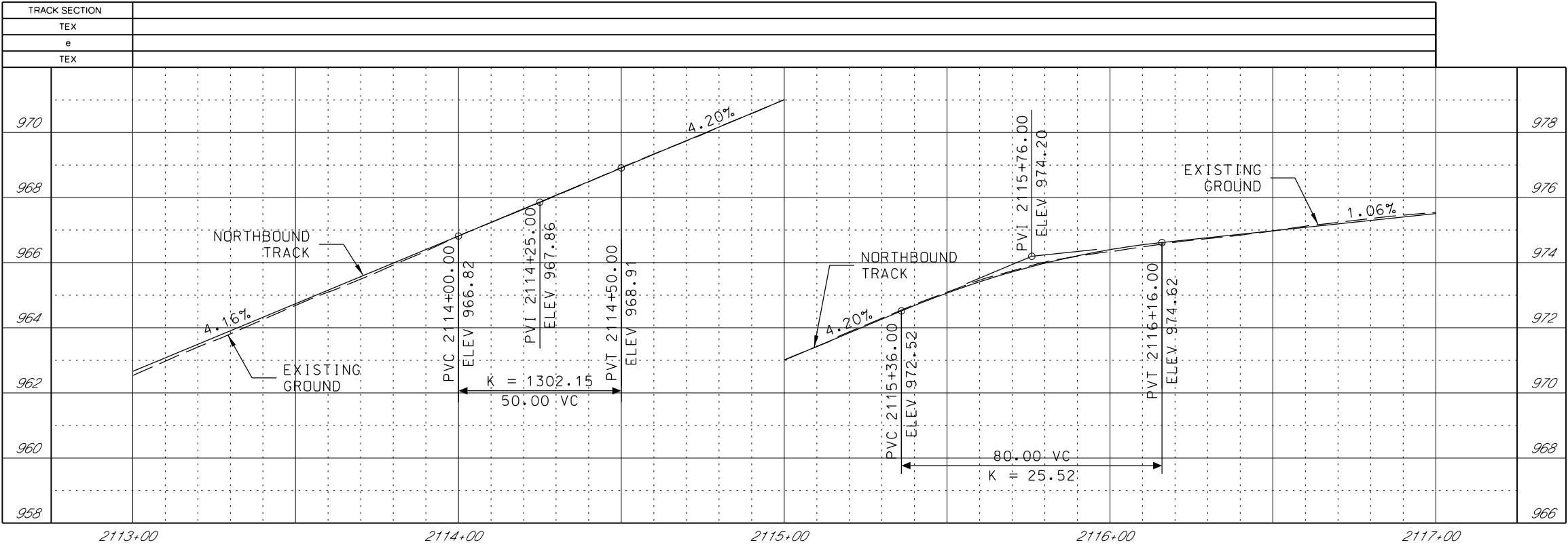
1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
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REV		DATE	DESCRIPTION	DESIGNED BY	JWR			PRELIMINARY PLANS - 30%		DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION NORTHBOUND TRACK PROFILE 34TH WAY NB STA 2109+00 TO STA 2113+00	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'	
				CHECKED BY	RPB			 HDR Engineering, Inc.					FILENAME:
				DRAWN BY	MMO				10450 Holmes Road				NB PRO STA 2109+00 - 2113+00
				CHECKED BY	RPB				Suite 600				CONTRACT NO.:
				APPROVED BY	NKS				Kansas City, MO 64131-3471				VOLUME:
								816-360-2700				1	
PLOT DATE:		8/27/2019		DATE	08/28/2019			Certificate of Authority: 000856				DRAWING NO.:	SHEET NO.:
								NOT FOR CONSTRUCTION				K129A	90



1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
3. ALL CURVES ARE BASED ON ARC DEFINITION.
4. PROFILES DESIGNED TO FINAL TOP OF RAIL ELEVATION.
5. PROFILE SHOWN IS AT 30% LEVEL AND IS ONLY INTENDED TO ILLUSTRATE THE EXISTING STREET GRADES AND TO CONFIRM THE LOCATIONS OF THE PLATFORMS AND SPECIAL TRACKWORK.

REV	DATE	DESCRIPTION	DESIGNED BY	JWR		PRELIMINARY PLANS - 30% DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION SOUTHBOUND TRACK PLAN AND PROFILE SB STA 1113+00 TO STA 1117+00	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'			
			CHECKED BY	RPB				 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-380-2700 Certificate of Authority: 000856	FILENAME: SB P-P STA 1113-00 - 1117-00 CONTRACT NO.: ***** VOLUME: 1	DRAWING NO.: K130	SHEET NO.: 91
			DRAWN BY	MMO							
			CHECKED BY	RPB							
			APPROVED BY	NKS							
PLOT DATE: 8/27/2019 10:18:13 AM			DATE: 08/28/2019								



GENERAL NOTES

1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
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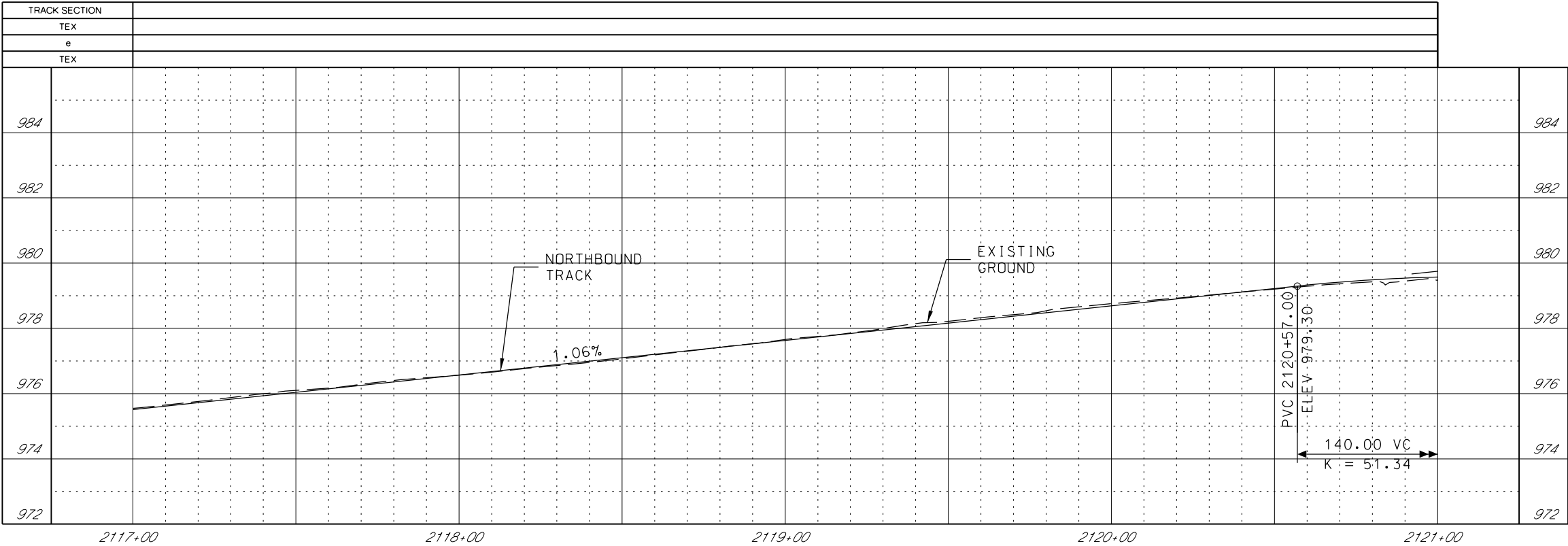
1.10%

EXISTING
GROUND

PVC	1120+55.50
EL	EV. 979.34

$$\frac{165.00 \text{ VC}}{K = 49.30} \gg$$

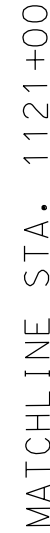
REV	DATE	DESCRIPTION	DESIGNED BY JWR		PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION SOUTHBOUND TRACK PLAN AND PROFILE SB STA 1117+00 TO STA 1121+00	SCALE FOR 22"x34": H 1"=20' V 1"=2'
			CHECKED BY RPB		 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-380-2700 Certificate of Authority: 000856	NOT FOR CONSTRUCTION		FILENAME: SB P.P STA 1117-00 - 1121+00
			DRAWN BY MMO					CONTRACT NO.:
			CHECKED BY RPB					VOLUME: 1
			APPROVED BY NKS					DRAWING NO.:
								SHEET NO.:
PLOT DATE: 8/27/2019		10:18:36 AM	DATE: 08/28/2019				K131	93



GENERAL NOTES

1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
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REV	DATE	DESCRIPTION	DESIGNED BY JWR		PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'					
			CHECKED BY RPB						 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	NOT FOR CONSTRUCTION	NORTHBOUND TRACK PROFILE NB STA 2117+00 TO STA 2121+00	FILENAME: NB PRO STA 2117+00 - 2121+00	
			DRAWN BY MMO									CONTRACT NO.:	
			CHECKED BY RPB									VOLUME: 1	
			APPROVED BY NKS									DRAWING NO.:	SHEET NO.:
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PLOT DATE: 8/27/2019 10:18:40 AM			DATE: 08/28/2019										

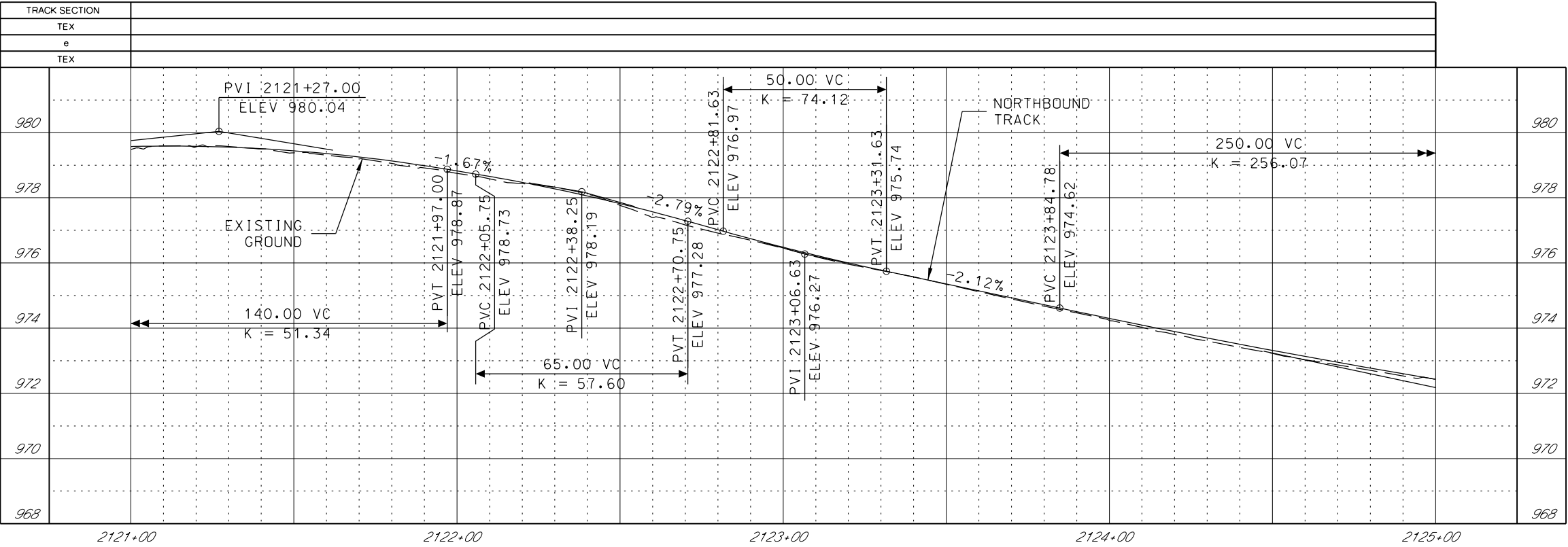


DATE: 08-28-2019

NOT FOR CONSTRUCTION


SOUTHBOUND TRACK
PLAN AND PROFILE
LINWOOD BOULEVARD
SB STA 1121+00 TO STA 1125+00

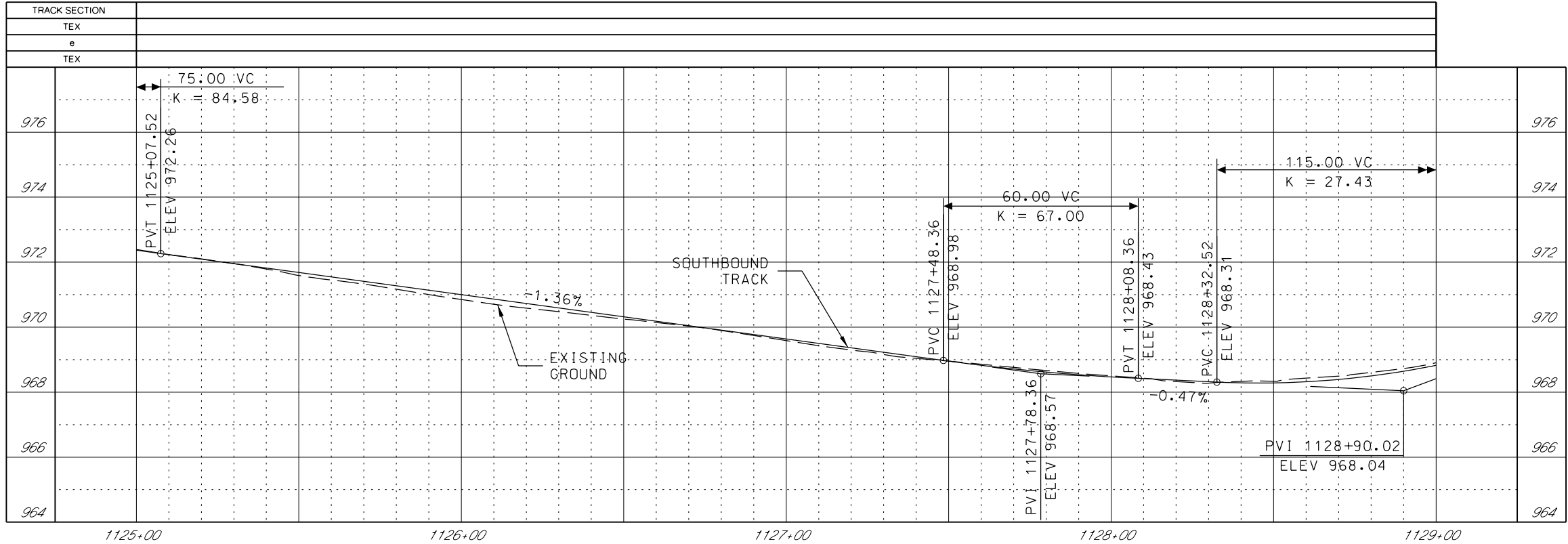
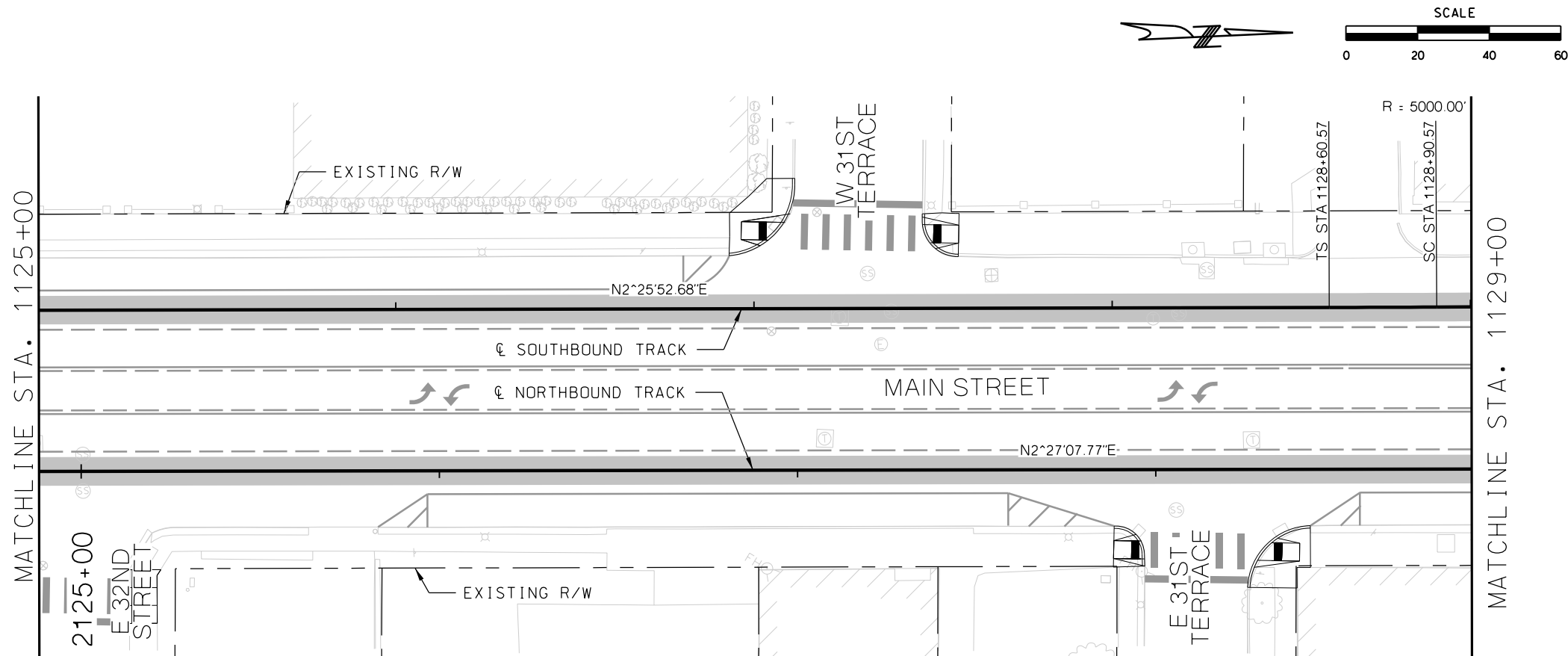
SCALE FOR 22"x34": H: 1"=20' V: 1"=2'	
FILENAME: SB P_P STA 1121+00 - 1125+00	
CONTRACT NO.: *****	
VOLUME: 1	
DRAWING NO.: K132	SHEET NO.: 9



GENERAL NOTES


1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
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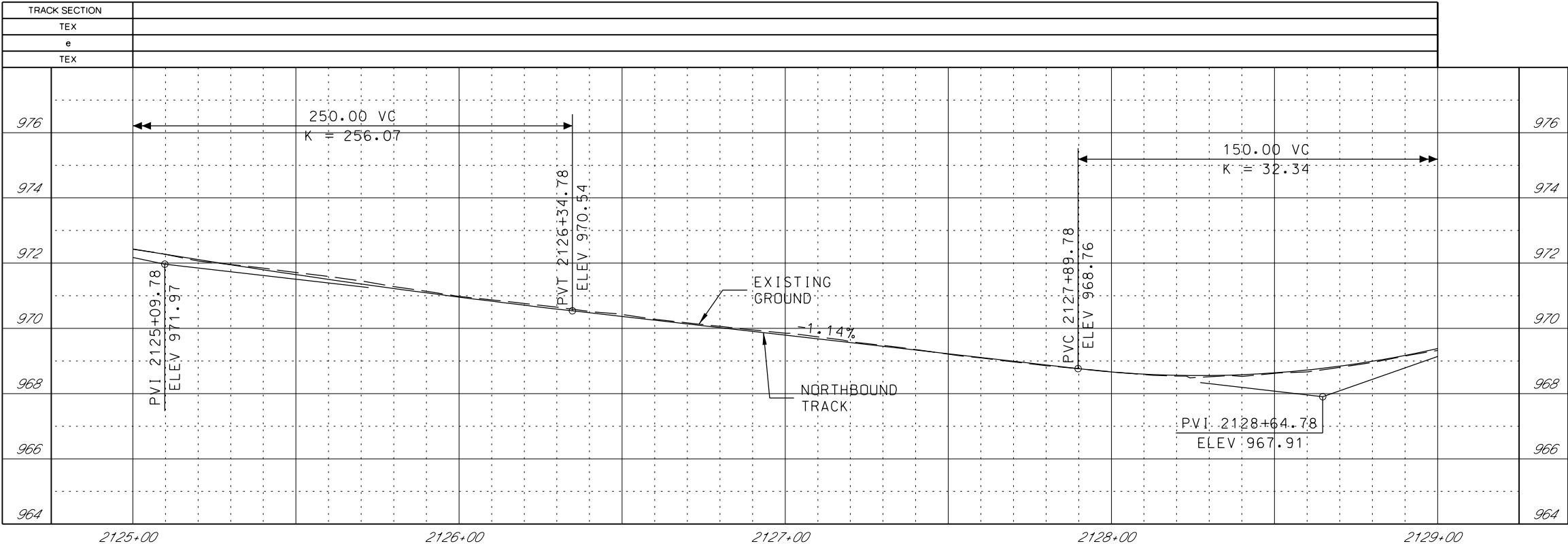
REV	DATE	DESCRIPTION	DESIGNED BY JWR			PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION NORTHBOUND TRACK PROFILE LINWOOD BOULEVARD NB STA 2121+00 TO STA 2125+00	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'			
			CHECKED BY RPB				HDR Engineering, Inc.		10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	FILENAME: NB PRO STA 2121+00 - 2125+00	CONTRACT NO.:	
			DRAWN BY MMO							VOLUME: 1	DRAWING NO.:	SHEET NO.:
			CHECKED BY RPB									
			APPROVED BY NKS									
PLOT DATE: 8/27/2019			DATE: 08/28/2019			NOT FOR CONSTRUCTION		K132A	96			



GENERAL NOTES


1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
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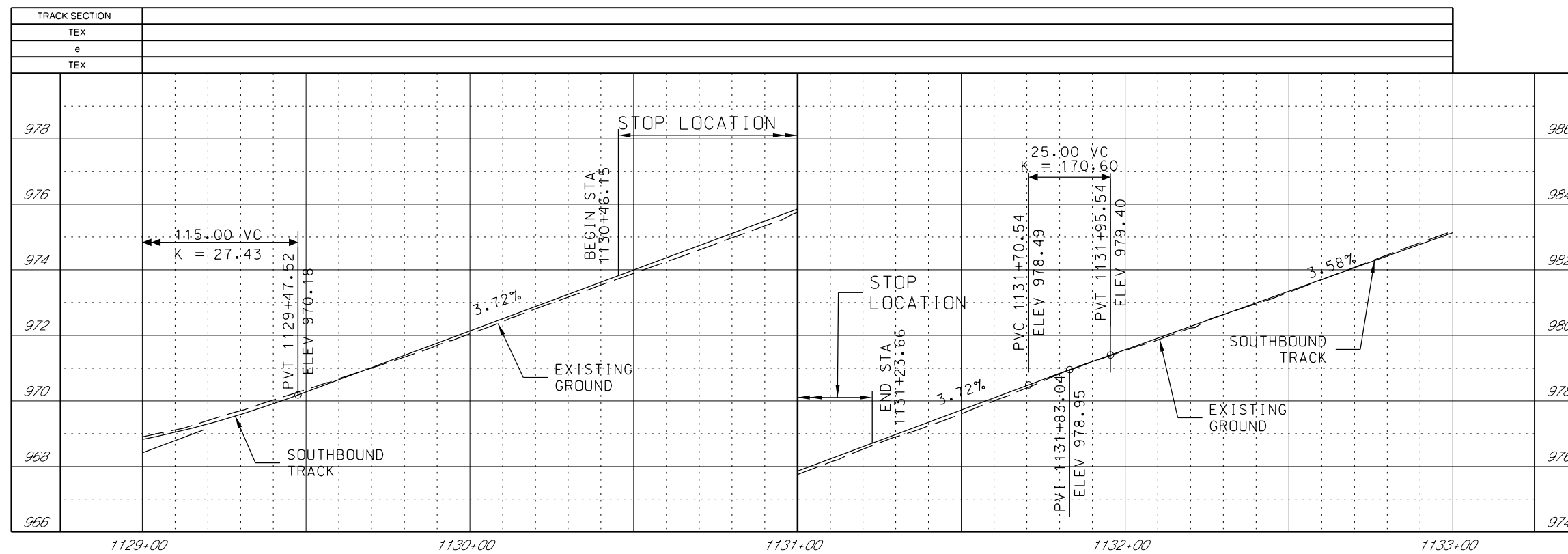
REV	DATE	DESCRIPTION	DESIGNED BY	JWR			PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION SOUTHBOUND TRACK PLAN AND PROFILE 31ST TERRACE SB STA 1125+00 TO STA 1129+00	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'
			CHECKED BY	RPB			 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856			FILENAME: SB P.P. STA 1125+00 - 1129+00
			DRAWN BY	MMO						CONTRACT NO.: *****
			CHECKED BY	RPB						VOLUME: 1
			APPROVED BY	NKS						DRAWING NO.: K133
								SHEET NO.: 97		
PLOT DATE: 8/27/2019 10:19:23 AM			DATE	08/28/2019			NOT FOR CONSTRUCTION			



GENERAL NOTES

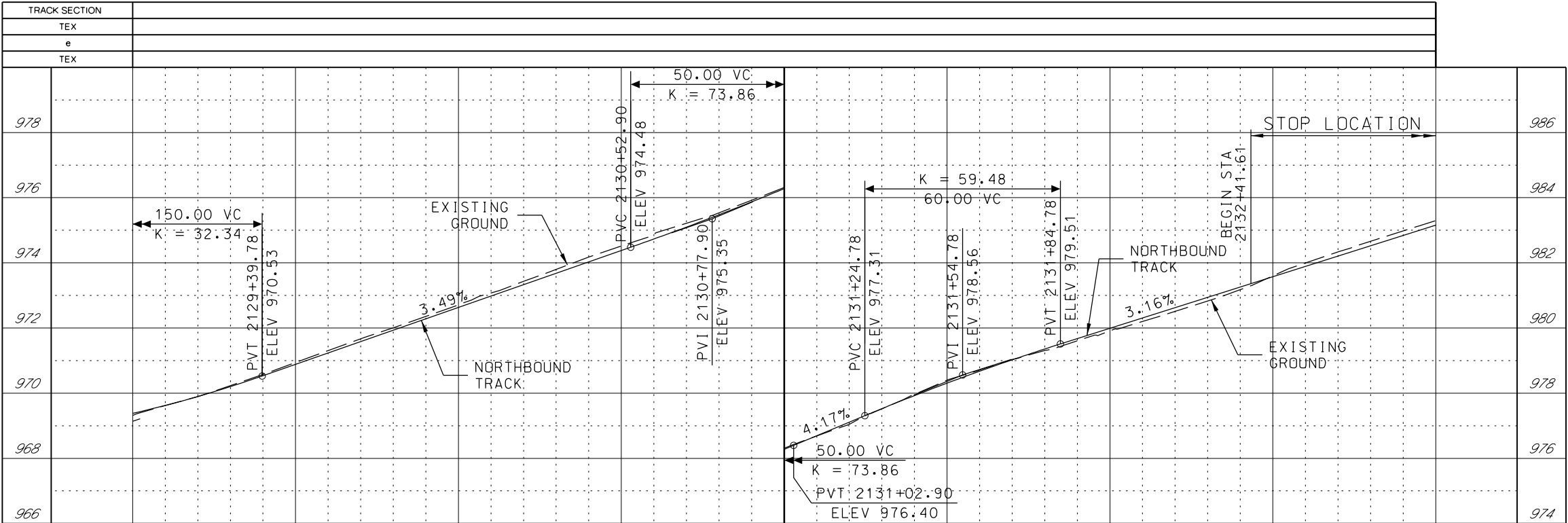
1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
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REV	DATE	DESCRIPTION	DESIGNED BY JWR			PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION NORTHBOUND TRACK PROFILE 31ST TERRACE NB STA 2125+00 TO STA 2129+00	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'
			CHECKED BY RPB			 HDR Engineering, Inc.	FILENAME: NB PRO STA 2125+00 - 2129+00		
			DRAWN BY MMO			10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	CONTRACT NO.: *****		
			CHECKED BY RPB				VOLUME: 1		
			APPROVED BY NKS				DRAWING NO.: K133A		SHEET NO.: 98
PLOT DATE: 8/27/2019 10:19 28 AM			DATE: 08/28/2019			NOT FOR CONSTRUCTION			

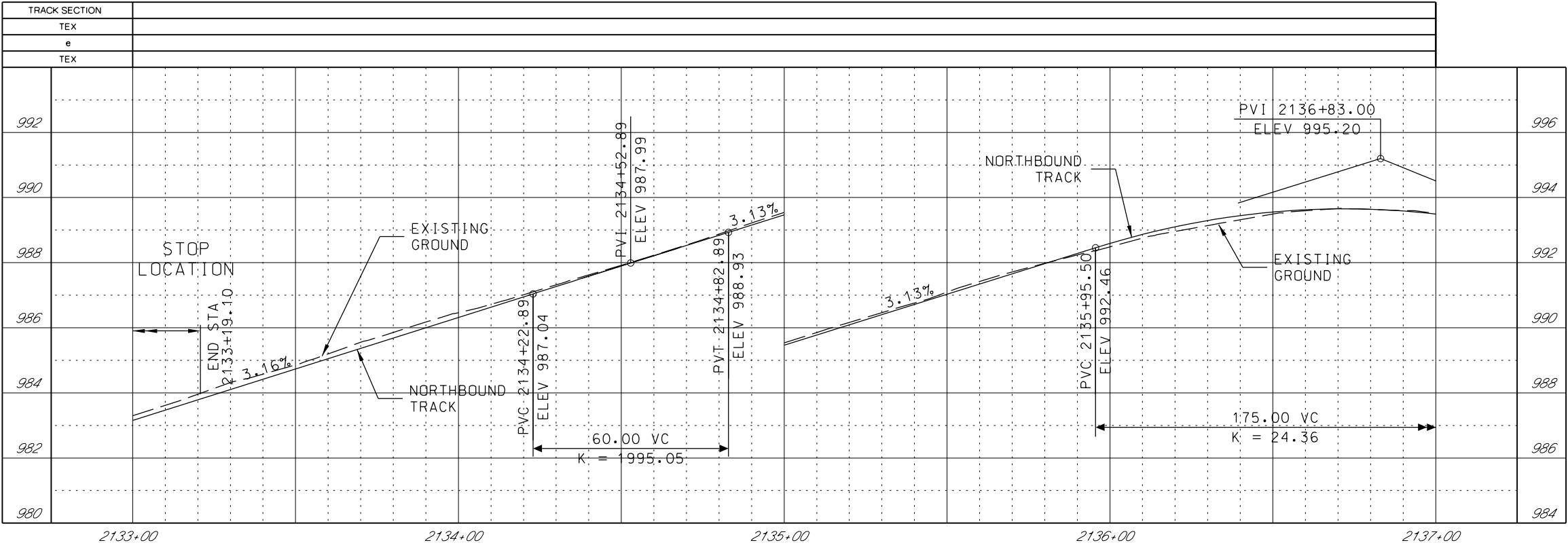


1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
3. ALL CURVES ARE BASED ON ARC DEFINITION.
4. PROFILES DESIGNED TO FINAL TOP OF RAIL ELEVATION.
5. PROFILE SHOWN IS AT 30% LEVEL AND IS ONLY INTENDED TO ILLUSTRATE THE EXISTING STREET GRADES AND TO CONFIRM THE LOCATIONS OF THE PLATFORMS AND SPECIAL TRACKWORK.

REV	DATE	DESCRIPTION	DESIGNED BY	JWR		PRELIMINARY PLANS - 30%		DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION SOUTHBOUND TRACK PLAN AND PROFILE 31ST STREET SB STA 1129+00 TO STA 1133+00		SCALE FOR 22"x34": H: 1"=20' V: 1"=2'	
			CHECKED BY	RPB		 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	NOT FOR CONSTRUCTION				FILENAME: SB P-P STA 1129+00 - 1133+00	
			DRAWN BY	MMO							CONTRACT NO.:	
			CHECKED BY	RPB							VOLUME:	
			APPROVED BY	NKS							1	
											DRAWING NO.: SHEET NO.:	
PLOT DATE: 8/27/2019 10:19:43 AM			DATE	08/28/2019						K134	99	




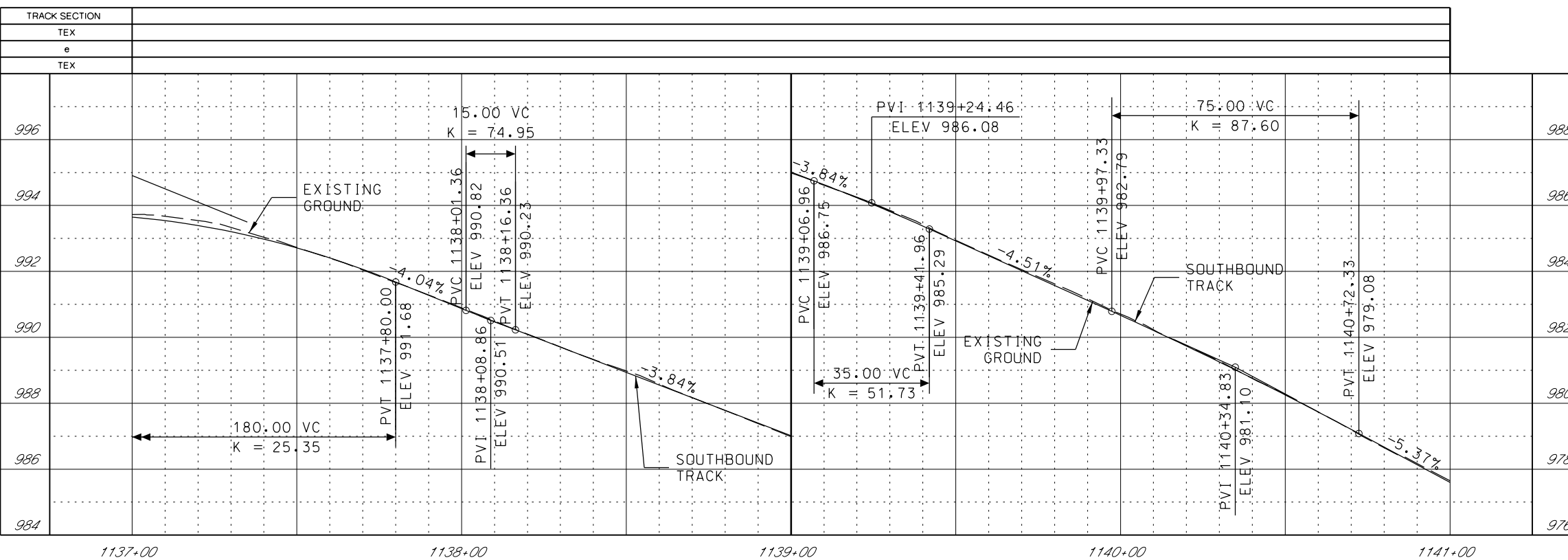
REV	DATE	DESCRIPTION	DESIGNED BY	JWR		PRELIMINARY PLANS - 30% DATE: 08-28-2019		KANSAS CITY STREETCAR MAIN STREET EXTENSION NORTHBOUND TRACK PROFILE 31ST STREET NB STA 2129+00 TO STA 2133+00	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'
			CHECKED BY	RPB		 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	FILENAME:		NB PRO STA 2129+00 - 2133+00
			DRAWN BY	MMO			CONTRACT NO.:		
			CHECKED BY	RPB			VOLUME:		
			APPROVED BY	NKS					
PLOT DATE: 8/27/2019 10:19:48 AM			DATE	08/28/2019		NOT FOR CONSTRUCTION		DRAWING NO.: K134A	SHEET NO.: 100



GENERAL NOTES

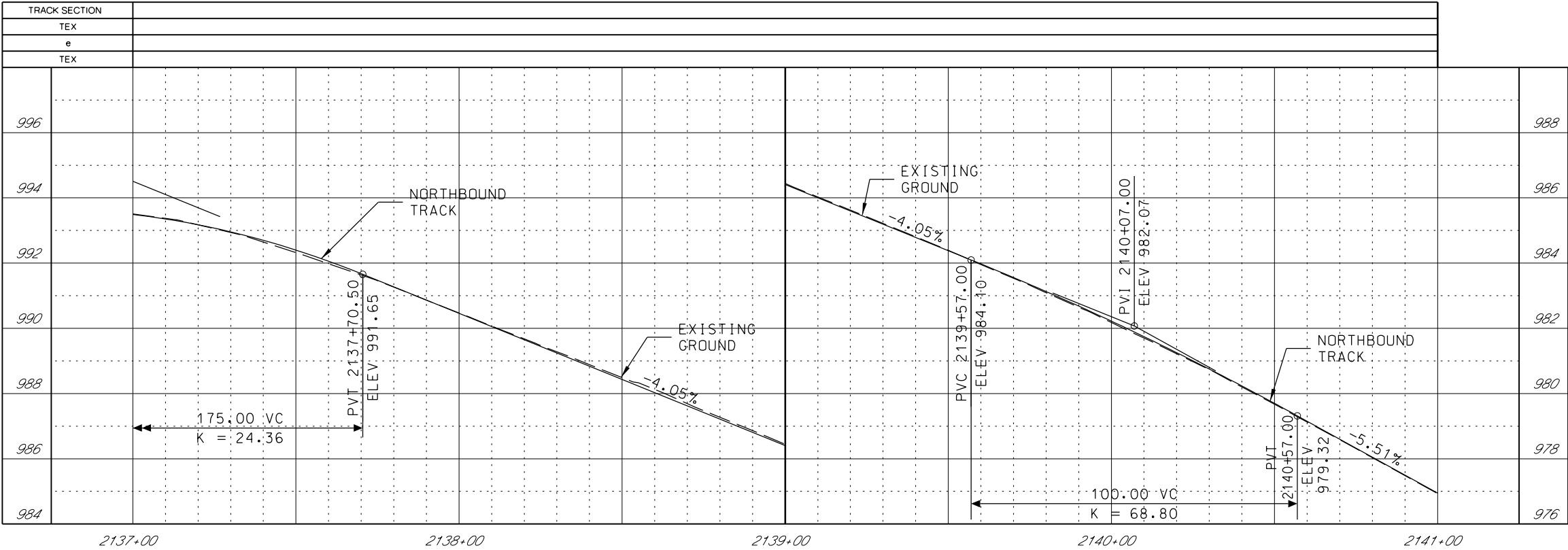
1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
3. ALL CURVES ARE BASED ON ARC DEFINITION.
4. PROFILES DESIGNED TO FINAL TOP OF RAIL ELEVATION.
5. PROFILE SHOWN IS AT 30% LEVEL AND IS ONLY INTENDED TO ILLUSTRATE THE EXISTING STREET GRADES AND TO CONFIRM THE LOCATIONS OF THE PLATFORMS AND SPECIAL TRACKWORK.

REV	DATE	DESCRIPTION	DESIGNED BY	JWR		PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'	
			CHECKED BY	RPB						
			DRAWN BY	MMO						
			CHECKED BY	RPB						
			APPROVED BY	NKS						
PLOT DATE: 8/27/2019			10:20:15 AM		DATE	08/28/2019	NOT FOR CONSTRUCTION		NORTHBOUND TRACK PROFILE NB STA 2133+00 TO STA 2137+00	
FILENAME: NB PRO STA 2133+00 - 2137+00										
CONTRACT NO.: ***** VOLUME: 1										
DRAWING NO.: K135A										SHEET NO.: 102



1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
3. ALL CURVES ARE BASED ON ARC DEFINITION.
4. PROFILES DESIGNED TO FINAL TOP OF RAIL ELEVATION.
5. PROFILE SHOWN IS AT 30% LEVEL AND IS ONLY INTENDED TO ILLUSTRATE THE EXISTING STREET GRADES AND TO CONFIRM THE LOCATIONS OF THE PLATFORMS AND SPECIAL TRACKWORK.

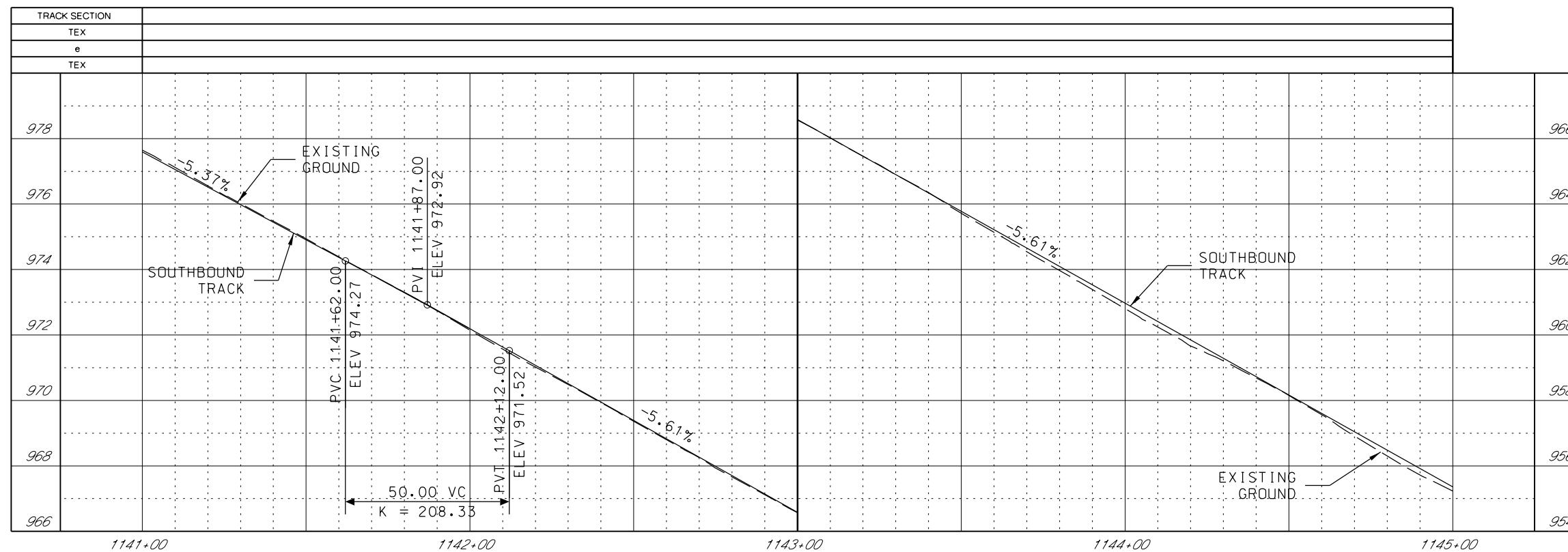
REV	DATE	DESCRIPTION	DESIGNED BY	JWR		<div>PRELIMINARY PLANS - 30%</div> <div>DATE: 08-28-2019</div> <div>  <div>HDR Engineering, Inc.</div> <div>10450 Holmes Road</div> <div>Suite 600</div> <div>Kansas City, MO 64131-3471</div> <div>816-360-2700</div> <div>Certificate of Authority: 000856</div> </div> <div>NOT FOR CONSTRUCTION</div>	<div>KANSAS CITY STREETCAR MAIN STREET EXTENSION</div> <div>SOUTHBOUND TRACK</div> <div>PLAN AND PROFILE</div> <div>30TH STREET</div> <div>SB STA 1137+00 TO STA 1141+00</div>	<div>SCALE FOR 22"x34": H: 1"=20' V: 1"=2'</div> <div>FILENAME: SB_P_P STA 1137+00 - 1141+00</div> <div>CONTRACT NO.: *****</div> <div>VOLUME: 1</div> <div>DRAWING NO.: K136</div> <div>SHEET NO.: 103</div>
			CHECKED BY	RPB				
			DRAWN BY	MMO				
			CHECKED BY	RPB				
			APPROVED BY	NKS				
PLOT DATE: 8/27/2019 10:20:27 AM			DATE: 08/28/2019					



GENERAL NOTES

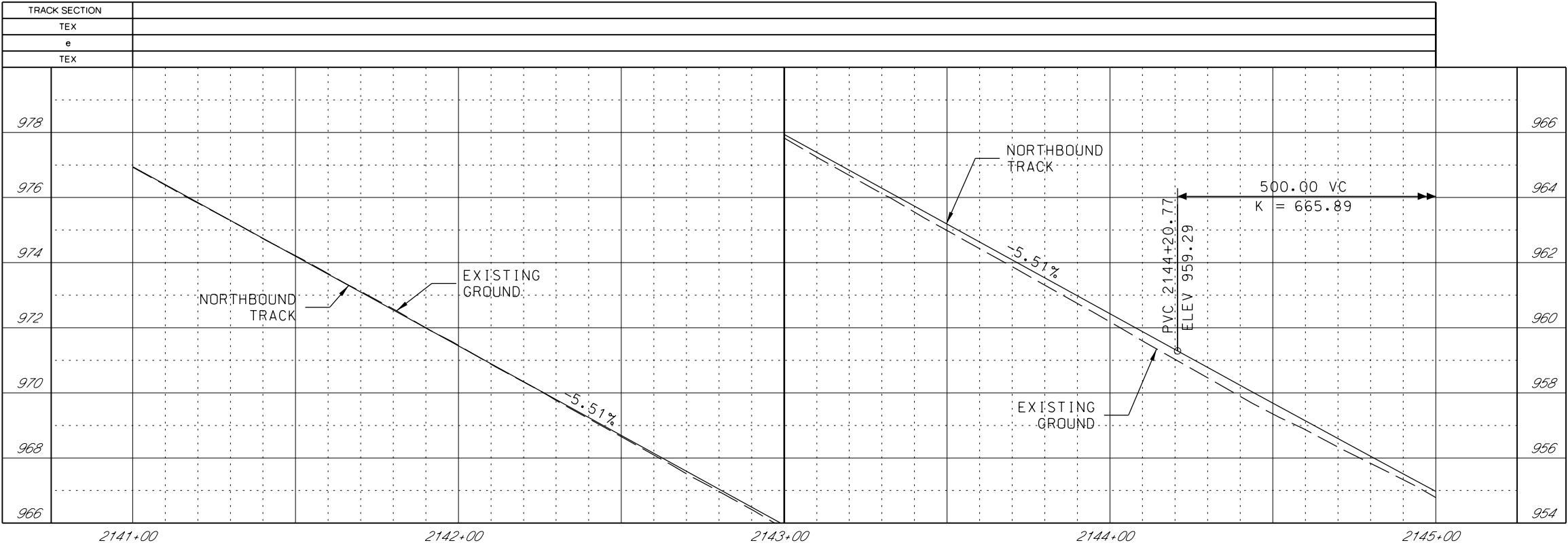
1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
3. ALL CURVES ARE BASED ON ARC DEFINITION.
4. PROFILES DESIGNED TO FINAL TOP OF RAIL ELEVATION.
5. PROFILE SHOWN IS AT 30% LEVEL AND IS ONLY INTENDED TO ILLUSTRATE THE EXISTING STREET GRADES AND TO CONFIRM THE LOCATIONS OF THE PLATFORMS AND SPECIAL TRACKWORK.

REV	DATE	DESCRIPTION	DESIGNED BY JWR		PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION NORTHBOUND TRACK PROFILE 30TH STREET NB STA 2137+00 TO STA 2141+00	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'	
			CHECKED BY RPB					 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	FILENAME: NB PRO STA 2137+00 - 2141+00
			DRAWN BY MMO						CONTRACT NO.:
			CHECKED BY RPB						VOLUME:
			APPROVED BY NKS						DRAWING NO.:
PLOT DATE: 8/27/2019 10:20:31 AM			DATE: 08/28/2019		NOT FOR CONSTRUCTION			SHEET NO.: 104	




1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
3. ALL CURVES ARE BASED ON ARC DEFINITION.
4. PROFILES DESIGNED TO FINAL TOP OF RAIL ELEVATION.
5. PROFILE SHOWN IS AT 30% LEVEL AND IS ONLY INTENDED TO ILLUSTRATE THE EXISTING STREET GRADES AND TO CONFIRM THE LOCATIONS OF THE PLATFORMS AND SPECIAL TRACKWORK.

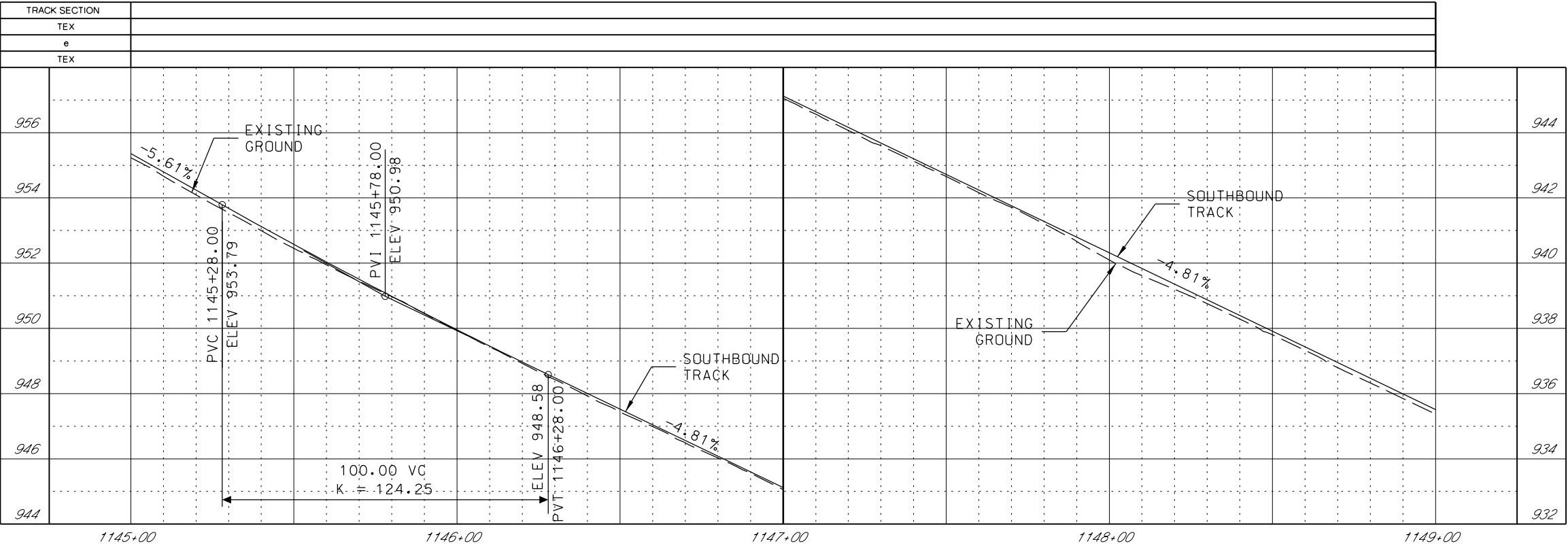
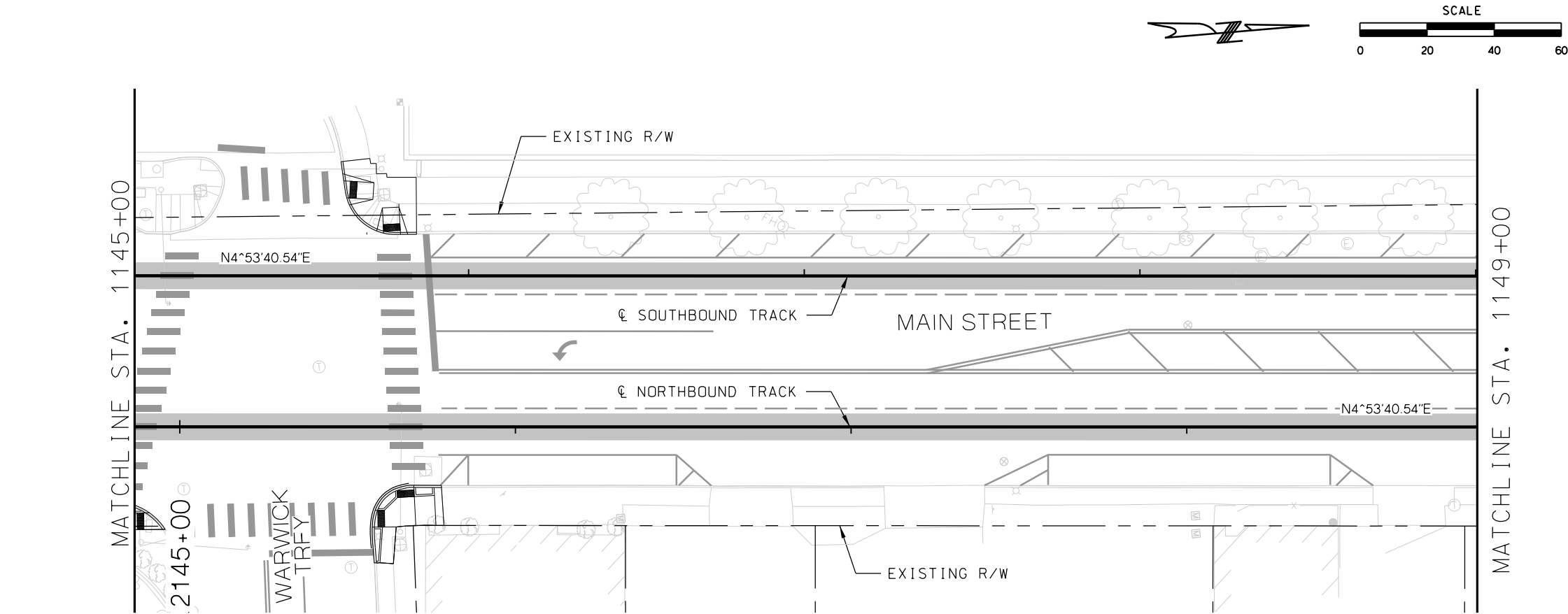
REV	DATE	DESCRIPTION	DESIGNED BY JWR		PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION SOUTHBOUND TRACK PLAN AND PROFILE WARWICK TRAFFICWAY SB STA 1141+00 TO STA 1145+00	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'
			CHECKED BY RPB		 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	NOT FOR CONSTRUCTION		FILENAME:
			DRAWN BY MMO					SB P.P. STA 1141+00 - 1145+00
			CHECKED BY RPB					CONTRACT NO.:
			APPROVED BY NKS					VOLUME:
								1
PLOT DATE: 8/27/2019		10:20:42 AM	DATE: 08/28/2019				DRAWING NO.: K137	SHEET NO.: 105



GENERAL NOTES


1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
3. ALL CURVES ARE BASED ON ARC DEFINITION.
4. PROFILES DESIGNED TO FINAL TOP OF RAIL ELEVATION.
5. PROFILE SHOWN IS AT 30% LEVEL AND IS ONLY INTENDED TO ILLUSTRATE THE EXISTING STREET GRADES AND TO CONFIRM THE LOCATIONS OF THE PLATFORMS AND SPECIAL TRACKWORK.

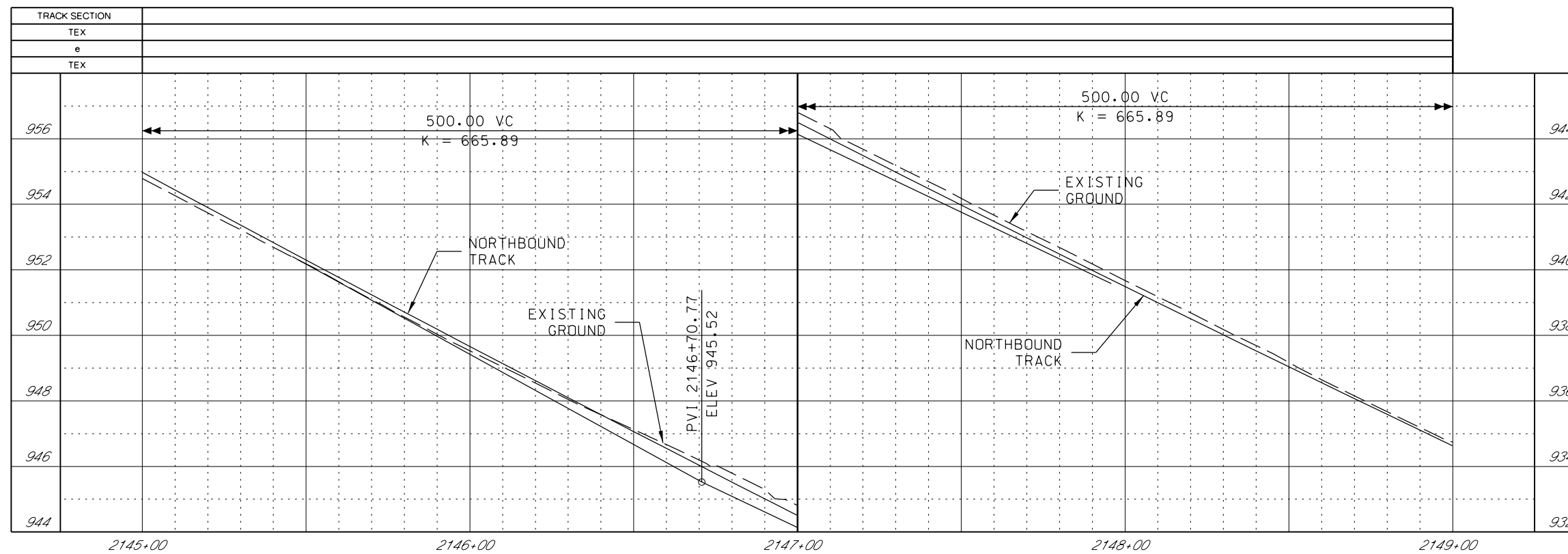
REV	DATE	DESCRIPTION	DESIGNED BY	JWR		PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION NORTHBOUND TRACK PROFILE WARWICK TRAFFICWAY NB STA 2141+00 TO STA 2145+00	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'
			CHECKED BY	RPB		 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856			FILENAME: NB PRO STA 2141+00 - 2145+00
			DRAWN BY	MMO					CONTRACT NO.:
			CHECKED BY	RPB					VOLUME: 1
			APPROVED BY	NKS					DRAWING NO.: K137A
PLOT DATE: 8/27/2019			10:20:46 AM		DATE	08/28/2019	NOT FOR CONSTRUCTION		SHEET NO.: 106



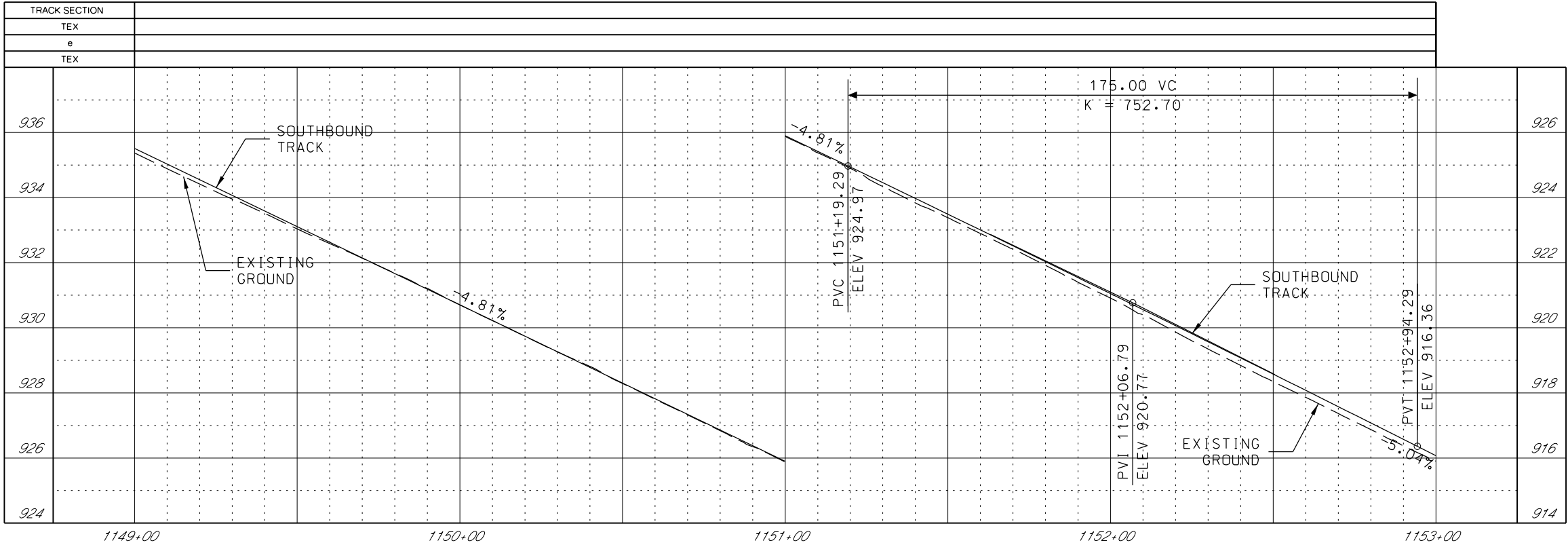
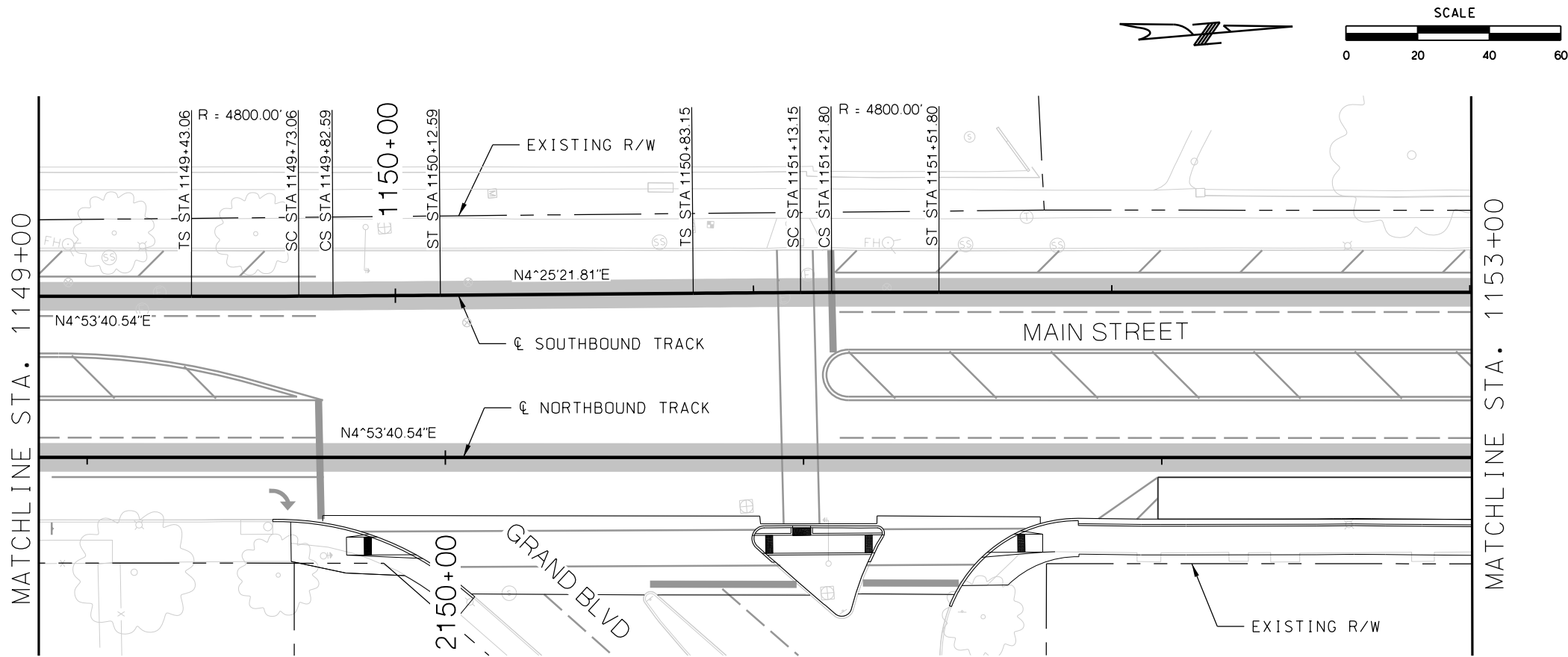
GENERAL NOTES

1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
3. ALL CURVES ARE BASED ON ARC DEFINITION.
4. PROFILES DESIGNED TO FINAL TOP OF RAIL ELEVATION.
5. PROFILE SHOWN IS AT 30% LEVEL AND IS ONLY INTENDED TO ILLUSTRATE THE EXISTING STREET GRADES AND TO CONFIRM THE LOCATIONS OF THE PLATFORMS AND SPECIAL TRACKWORK.

REV	DATE	DESCRIPTION	DESIGNED BY	JWR			PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION SOUTHBOUND TRACK PLAN AND PROFILE WARWICK TRAFFICWAY SB STA 1145+00 TO STA 1149+00	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'
			CHECKED BY	RPB			 HDR Engineering, Inc.			FILENAME: SB_P_P STA 1145+00 - 1149+00
			DRAWN BY	MMO			10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856			CONTRACT NO.: *****
			CHECKED BY	RPB						VOLUME: 1
			APPROVED BY	NKS						DRAWING NO.: K138
										SHEET NO.: 107
PLOT DATE: 8/27/2019 10:21:00 AM			DATE	08/28/2019			NOT FOR CONSTRUCTION			



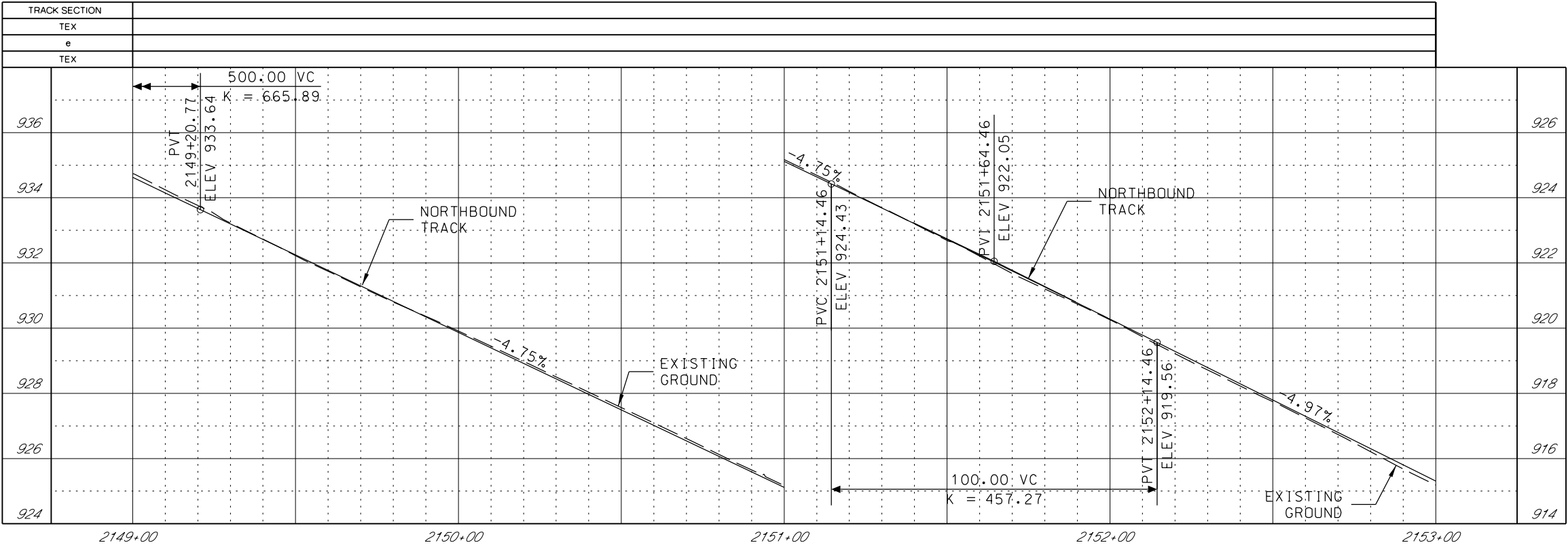
REV	DATE	DESCRIPTION	DESIGNED BY	JWR		PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION NORTHBOUND TRACK PROFILE WARWICK TRAFFICWAY NB STA 2145+00 TO STA 2149+00	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'
			CHECKED BY	RPB		 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	NOT FOR CONSTRUCTION		FILENAME:
			DRAWN BY	MMO					NB PRO STA 2145+00 - 2149+00
			CHECKED BY	RPB					CONTRACT NO.:
			APPROVED BY	NKS					*****
									VOLUME:
PLOT DATE: 8/27/2019 10:21:04 AM			DATE	08/28/2019				DRAWING NO.:	SHEET NO.:
								K138A	108



GENERAL NOTES

1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
3. ALL CURVES ARE BASED ON ARC DEFINITION.
4. PROFILES DESIGNED TO FINAL TOP OF RAIL ELEVATION.
5. PROFILE SHOWN IS AT 30% LEVEL AND IS ONLY INTENDED TO ILLUSTRATE THE EXISTING STREET GRADES AND TO CONFIRM THE LOCATIONS OF THE PLATFORMS AND SPECIAL TRACKWORK.

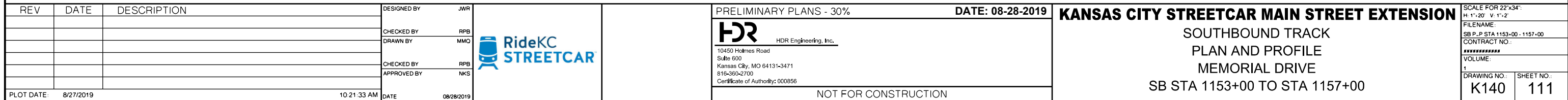
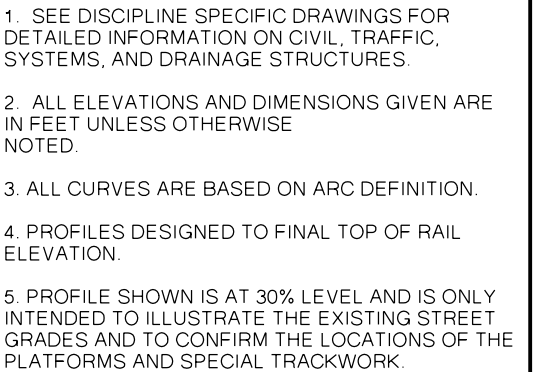
REV	DATE	DESCRIPTION	DESIGNED BY	JWR	PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'
			CHECKED BY	RPB	HDR		SOUTHBOUND TRACK	FILENAME: SB P.P STA 1149+00 - 1153+00
			DRAWN BY	MMO	10450 Holmes Road		PLAN AND PROFILE	CONTRACT NO.:
					Suite 600		GRAND BOULEVARD	VOLUME: 1
			CHECKED BY	RPB	Kansas City, MO 64131-3471		SB STA 1149+00 TO STA 1153+00	DRAWING NO.: K139
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PLOT DATE: 8/27/2019			DATE	08/28/2019	NOT FOR CONSTRUCTION			

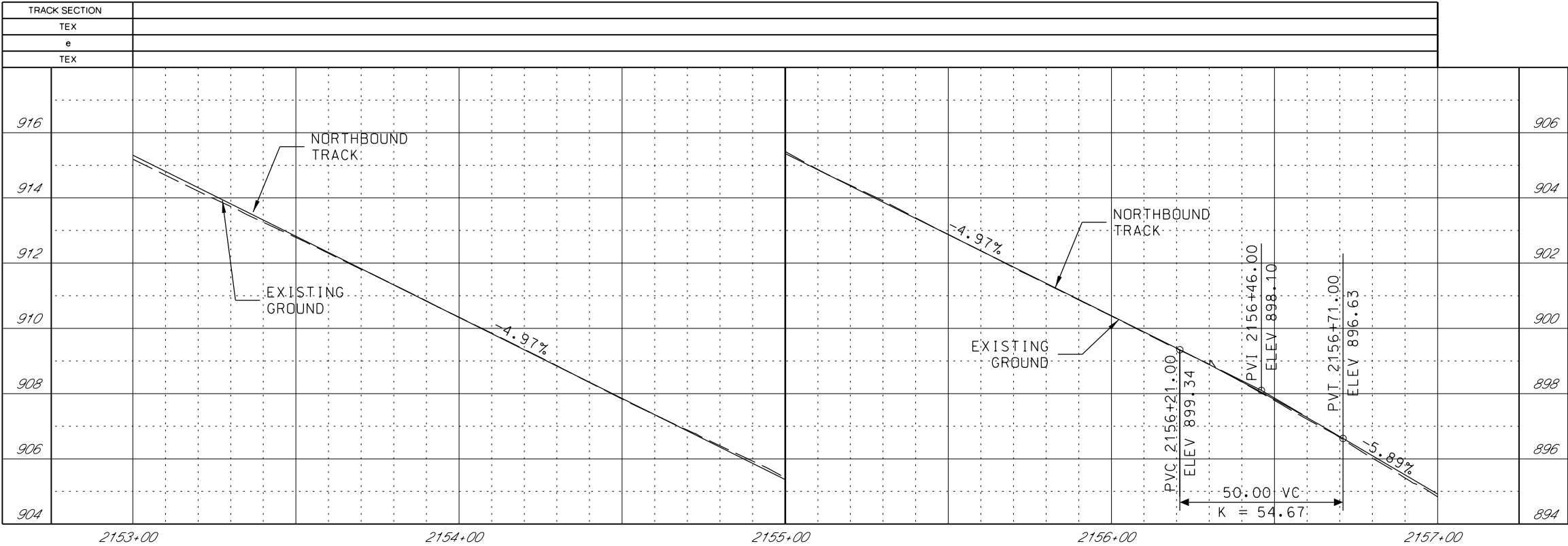


GENERAL NOTES

1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
3. ALL CURVES ARE BASED ON ARC DEFINITION.
4. PROFILES DESIGNED TO FINAL TOP OF RAIL ELEVATION.
5. PROFILE SHOWN IS AT 30% LEVEL AND IS ONLY INTENDED TO ILLUSTRATE THE EXISTING STREET GRADES AND TO CONFIRM THE LOCATIONS OF THE PLATFORMS AND SPECIAL TRACKWORK.

REV	DATE	DESCRIPTION	DESIGNED BY	JWR	PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'
			CHECKED BY	RPB	 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	NOT FOR CONSTRUCTION	NORTHBOUND TRACK PROFILE GRAND BOULEVARD NB STA 2149+00 TO STA 2153+00	FILENAME:
			DRAWN BY	MMO				NB PRO STA 2149+00 - 2153+00
			CHECKED BY	RPB				CONTRACT NO.:
			APPROVED BY	NKS				VOLUME:
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PLOT DATE: 8/27/2019 10:21:19 AM			DATE	08/28/2019				DRAWING NO.: K139A SHEET NO.: 110

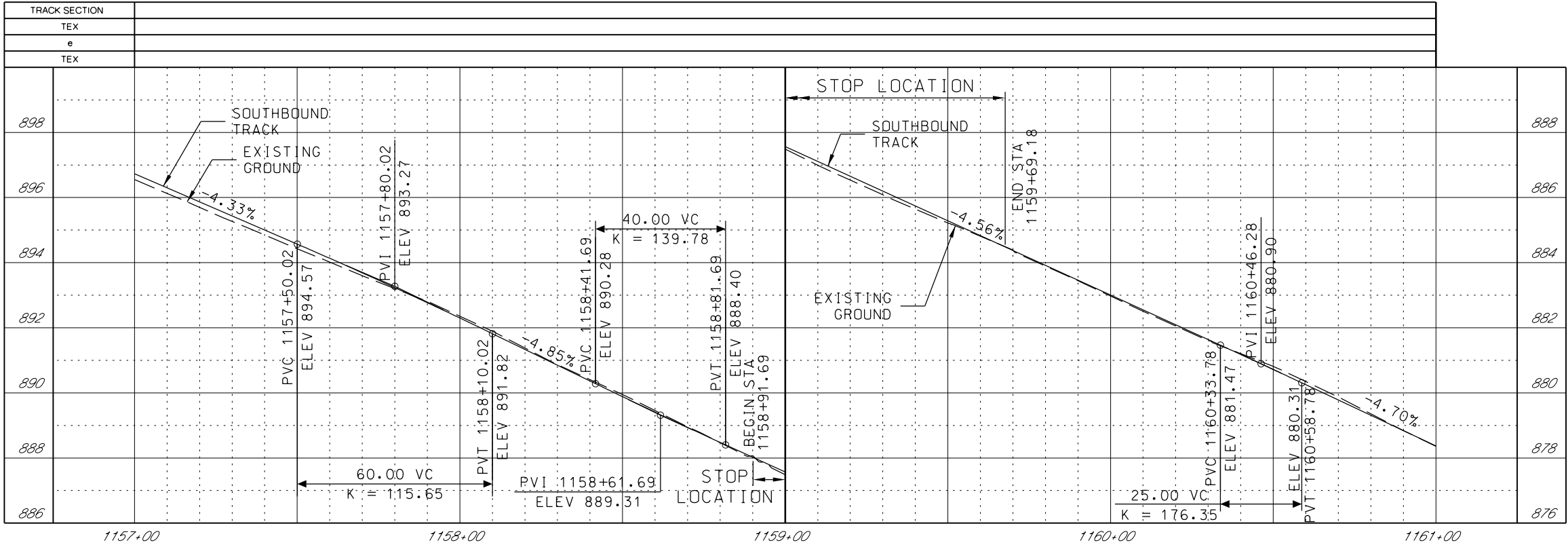
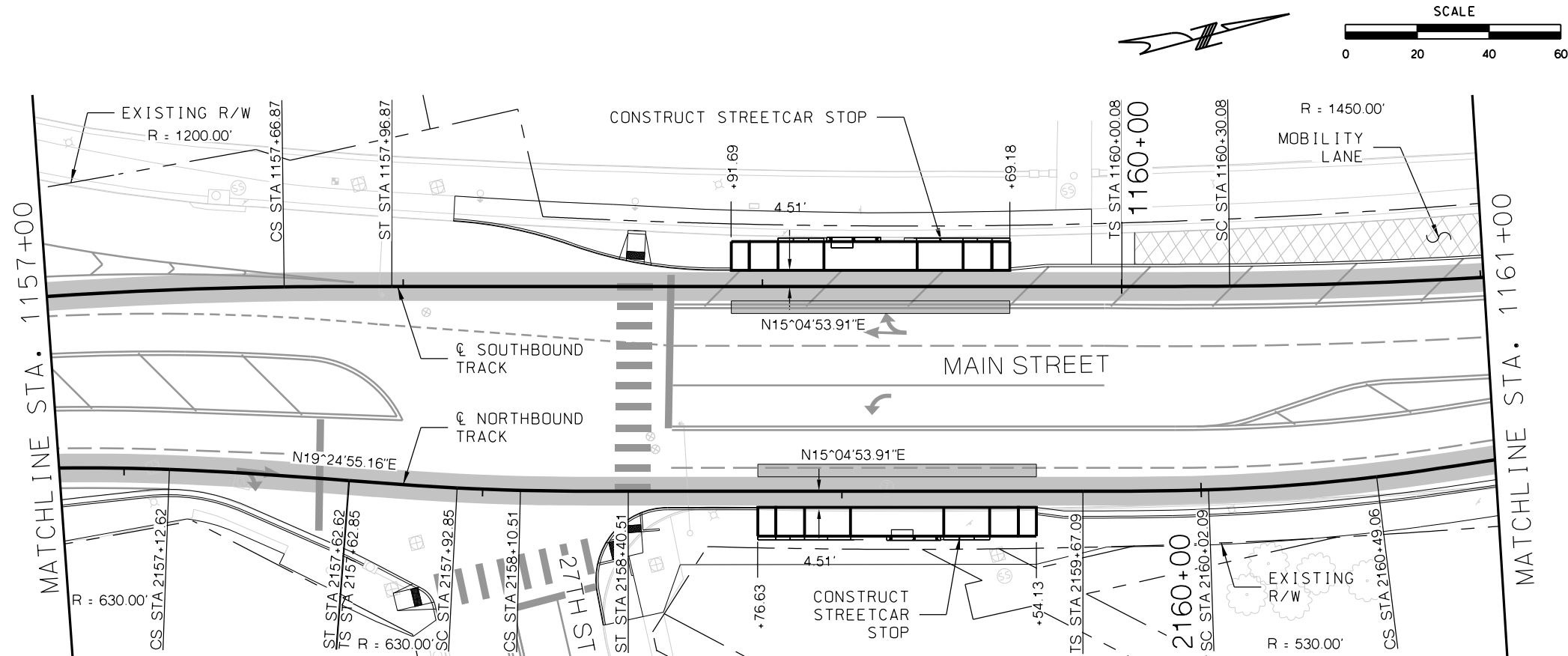




GENERAL NOTES

1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
3. ALL CURVES ARE BASED ON ARC DEFINITION.
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5. PROFILE SHOWN IS AT 30% LEVEL AND IS ONLY INTENDED TO ILLUSTRATE THE EXISTING STREET GRADES AND TO CONFIRM THE LOCATIONS OF THE PLATFORMS AND SPECIAL TRACKWORK.

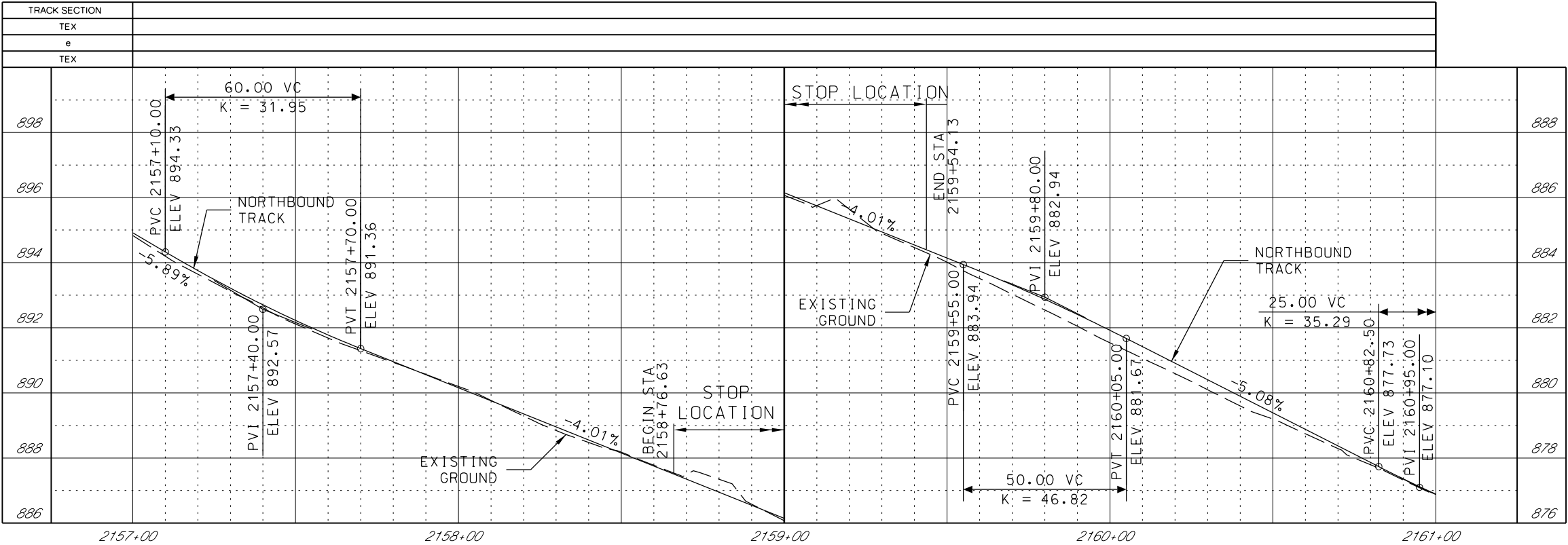
REV	DATE	DESCRIPTION	DESIGNED BY	JWR		PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	NORTHBOUND TRACK PROFILE MEMORIAL DRIVE NB STA 2153+00 TO STA 2157+00	SCALE FOR 22"x34": H: 1"=20' V: 1"=2' FILENAME: NB PRO STA 2153+00 - 2157+00 CONTRACT NO.: ***** VOLUME: 1 DRAWING NO.: K140A SHEET NO.: 112
			CHECKED BY	RPB						
			DRAWN BY	MMO						
			CHECKED BY	RPB						
			APPROVED BY	NKS						
PLOT DATE: 8/27/2019 10:21:38 AM			DATE	08/28/2019	NOT FOR CONSTRUCTION					



GENERAL NOTES

1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
3. ALL CURVES ARE BASED ON ARC DEFINITION.
4. PROFILES DESIGNED TO FINAL TOP OF RAIL ELEVATION.
5. PROFILE SHOWN IS AT 30% LEVEL AND IS ONLY INTENDED TO ILLUSTRATE THE EXISTING STREET GRADES AND TO CONFIRM THE LOCATIONS OF THE PLATFORMS AND SPECIAL TRACKWORK.

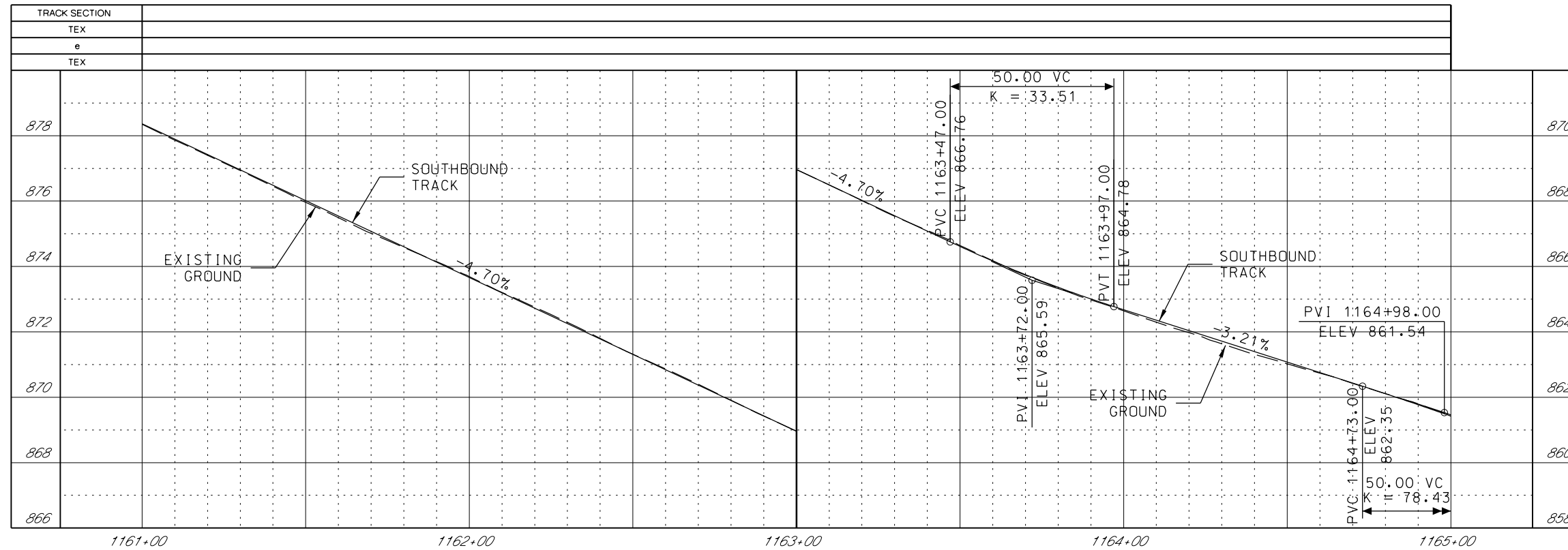
REV	DATE	DESCRIPTION	DESIGNED BY	JWR	PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'
			CHECKED BY	RPB	 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856		SOUTHBOUND TRACK	FILENAME:
			DRAWN BY	MMO			PLAN AND PROFILE	SB P.P. STA 1157+00 - 1161+00
			CHECKED BY	RPB			27TH STREET	CONTRACT NO.:
			APPROVED BY	NKS			SB STA 1157+00 TO STA 1161+00	VOLUME:
PLOT DATE: 8/27/2019			10:21:51 AM		DATE: 08/28/2019			DRAWING NO.:
					NOT FOR CONSTRUCTION			SHEET NO.:
								K141 113




GENERAL NOTES

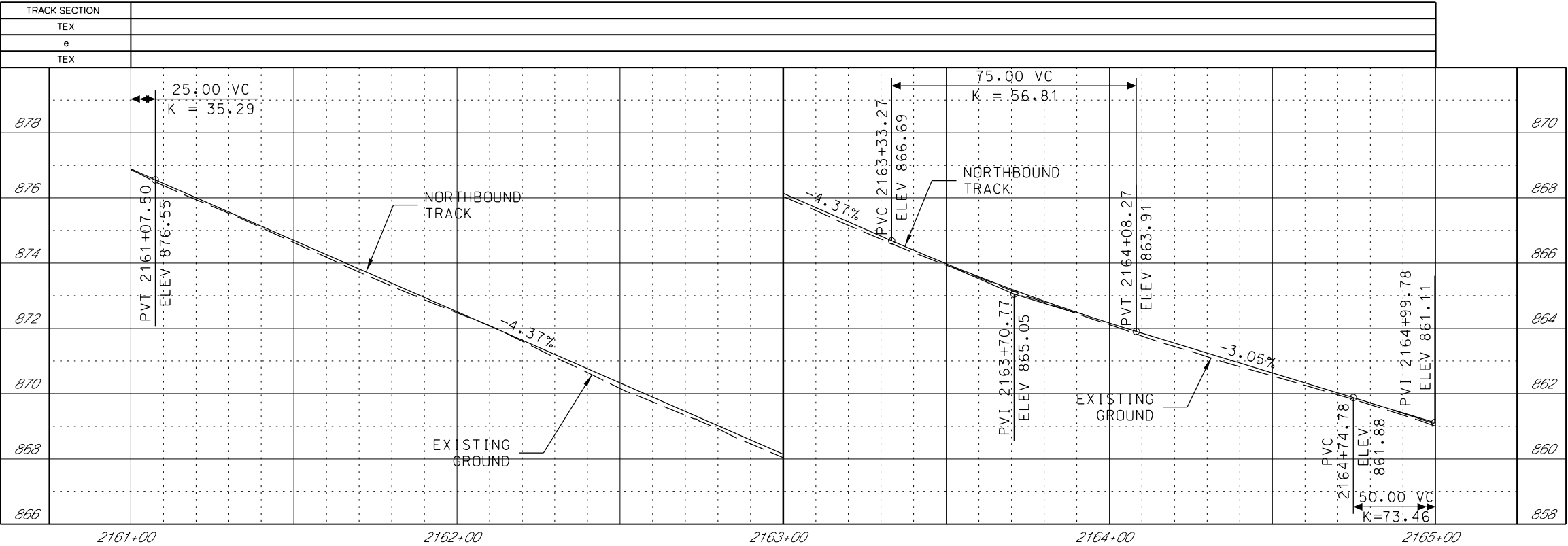
1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
3. ALL CURVES ARE BASED ON ARC DEFINITION.
4. PROFILES DESIGNED TO FINAL TOP OF RAIL ELEVATION.
5. PROFILE SHOWN IS AT 30% LEVEL AND IS ONLY INTENDED TO ILLUSTRATE THE EXISTING STREET GRADES AND TO CONFIRM THE LOCATIONS OF THE PLATFORMS AND SPECIAL TRACKWORK.

REV	DATE	DESCRIPTION	DESIGNED BY JWR		PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION NORTHBOUND TRACK PROFILE 27TH STREET NB STA 2157+00 TO STA 2161+00	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'
			CHECKED BY RPB		 HDR Engineering, Inc.	FILENAME: NB PRO STA 2157+00 - 2161+00		
			DRAWN BY MMO		10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	CONTRACT NO.:		
			CHECKED BY RPB			VOLUME: 1		
			APPROVED BY NKS			DRAWING NO.:		SHEET NO.:
PLOT DATE: 8/27/2019			10:21:56 AM	DATE: 08/28/2019	NOT FOR CONSTRUCTION		K141A	114





1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
3. ALL CURVES ARE BASED ON ARC DEFINITION.
4. PROFILES DESIGNED TO FINAL TOP OF RAIL ELEVATION.
5. PROFILE SHOWN IS AT 30% LEVEL AND IS ONLY INTENDED TO ILLUSTRATE THE EXISTING STREET GRADES AND TO CONFIRM THE LOCATIONS OF THE PLATFORMS AND SPECIAL TRACKWORK.

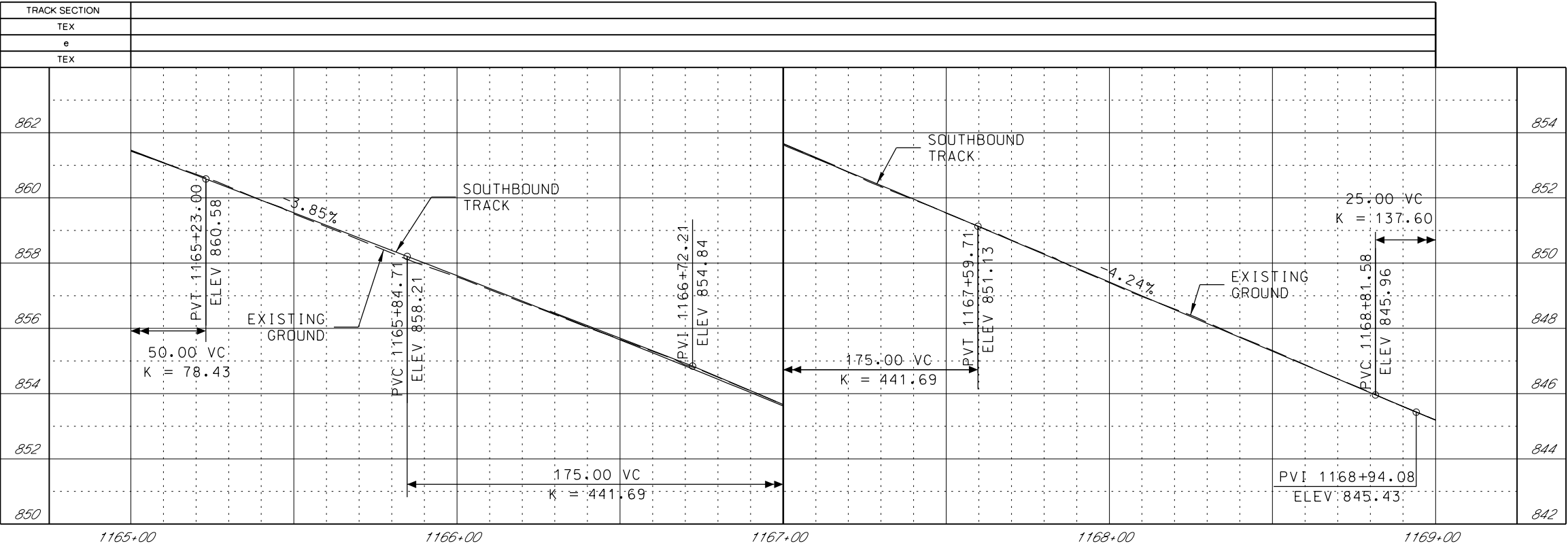
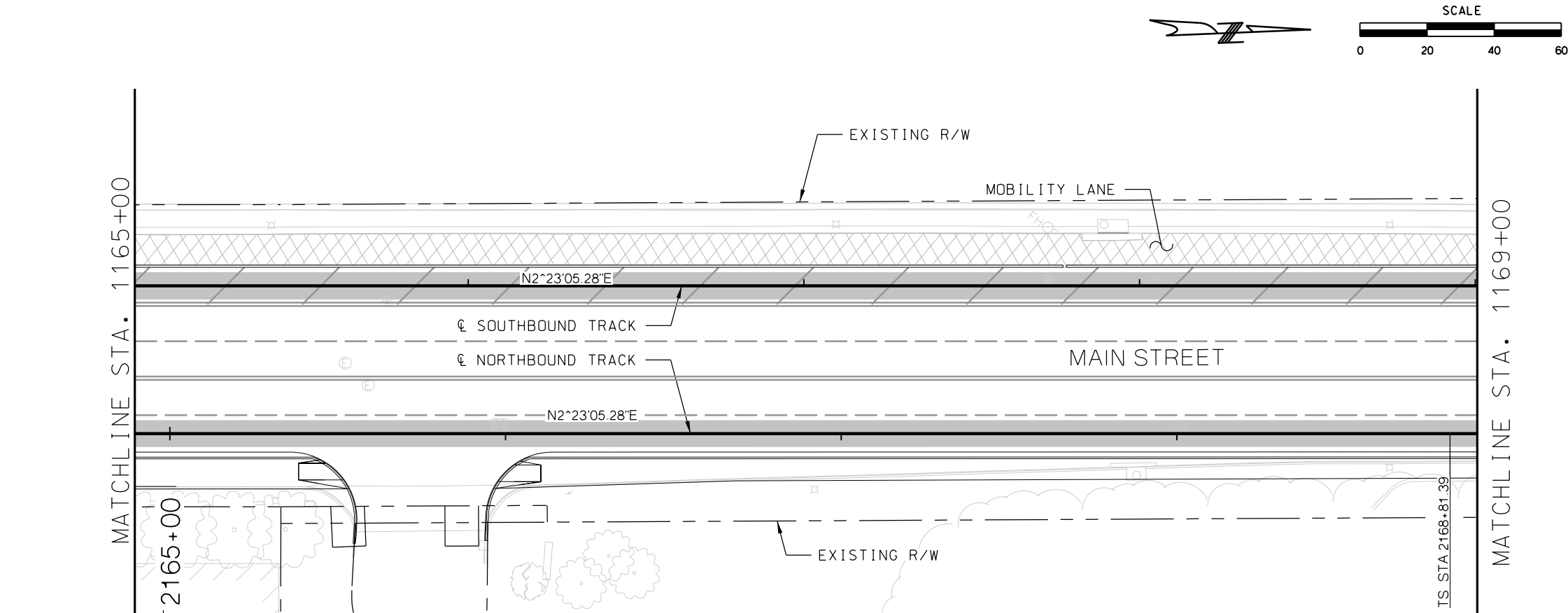
REV	DATE	DESCRIPTION	DESIGNED BY	JWR		PRELIMINARY PLANS - 30%		DATE: 08-28-2019		<h1>KANSAS CITY STREETCAR MAIN STREET EXTENSION</h1> <h2>SOUTHBOUND TRACK</h2> <h2>PLAN AND PROFILE</h2> <h3>SB STA 1161+00 TO STA 1165+00</h3>		SCALE FOR 22"x34": H: 1"=20' V: 1"=2'		
			CHECKED BY	RPB		 HDR HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856			FILENAME:			SB P.P STA 1161+00 - 1165+00		
			DRAWN BY	MMO					CONTRACT NO.:			*****		
			CHECKED BY	RPB					VOLUME:			1		
			APPROVED BY	NKS					DRAWING NO.:			K142	SHEET NO.:	115
PLOT DATE: 8/27/2019 10:22:11 AM			DATE: 08/28/2019				NOT FOR CONSTRUCTION							



GENERAL NOTES

1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
3. ALL CURVES ARE BASED ON ARC DEFINITION.
4. PROFILES DESIGNED TO FINAL TOP OF RAIL ELEVATION.
5. PROFILE SHOWN IS AT 30% LEVEL AND IS ONLY INTENDED TO ILLUSTRATE THE EXISTING STREET GRADES AND TO CONFIRM THE LOCATIONS OF THE PLATFORMS AND SPECIAL TRACKWORK.

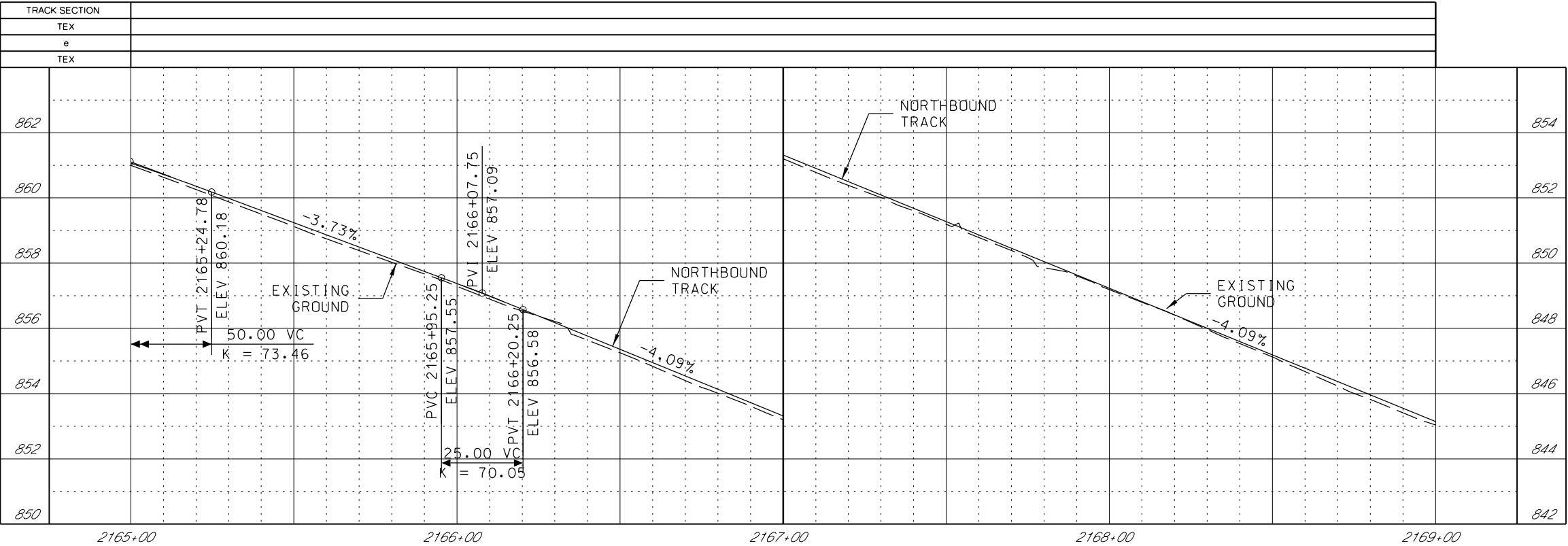
REV	DATE	DESCRIPTION	DESIGNED BY	JWR			PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	NORTHBOUND TRACK PROFILE NB STA 2161+00 TO STA 2165+00	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'
			CHECKED BY	RPB			 <div>HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856</div>				FILENAME: NB PRO STA 2161+00 - 2165+00
			DRAWN BY	MMO							CONTRACT NO.: *****
			CHECKED BY	RPB							VOLUME: 1
			APPROVED BY	NKS							DRAWING NO.: K142A
PLOT DATE: 8/27/2019			10:22:15 AM		DATE	08/28/2019	NOT FOR CONSTRUCTION				



GENERAL NOTES

1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
3. ALL CURVES ARE BASED ON ARC DEFINITION.
4. PROFILES DESIGNED TO FINAL TOP OF RAIL ELEVATION.
5. PROFILE SHOWN IS AT 30% LEVEL AND IS ONLY INTENDED TO ILLUSTRATE THE EXISTING STREET GRADES AND TO CONFIRM THE LOCATIONS OF THE PLATFORMS AND SPECIAL TRACKWORK.

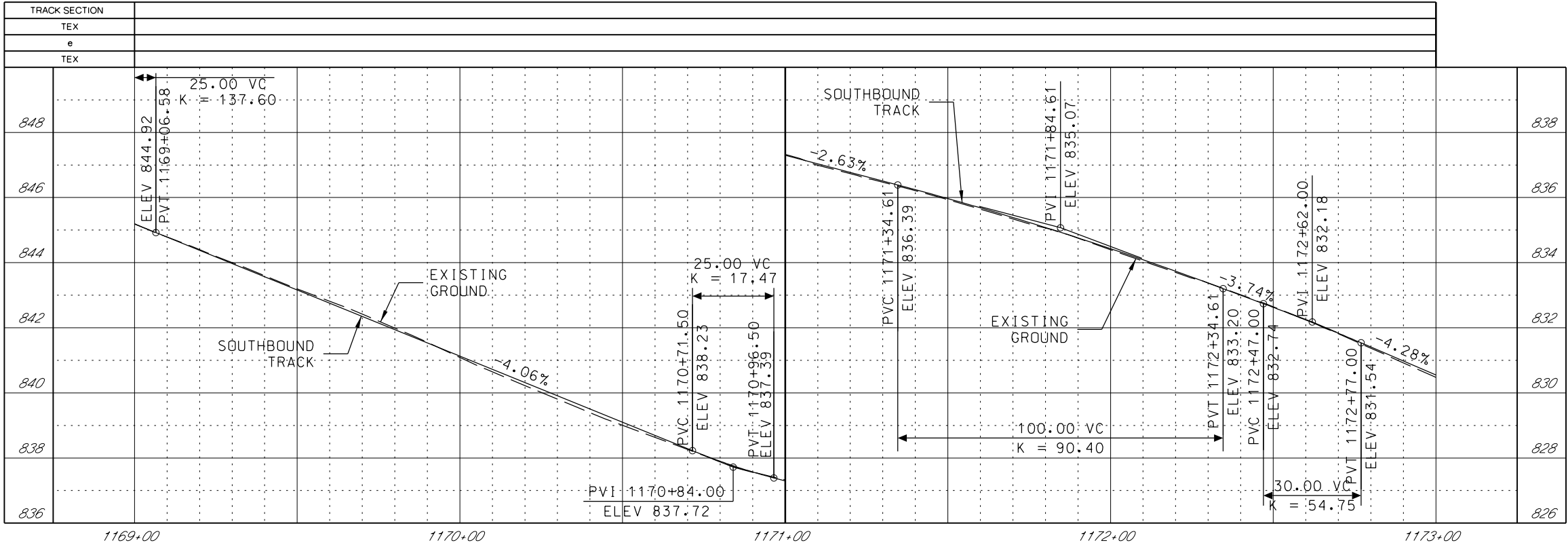
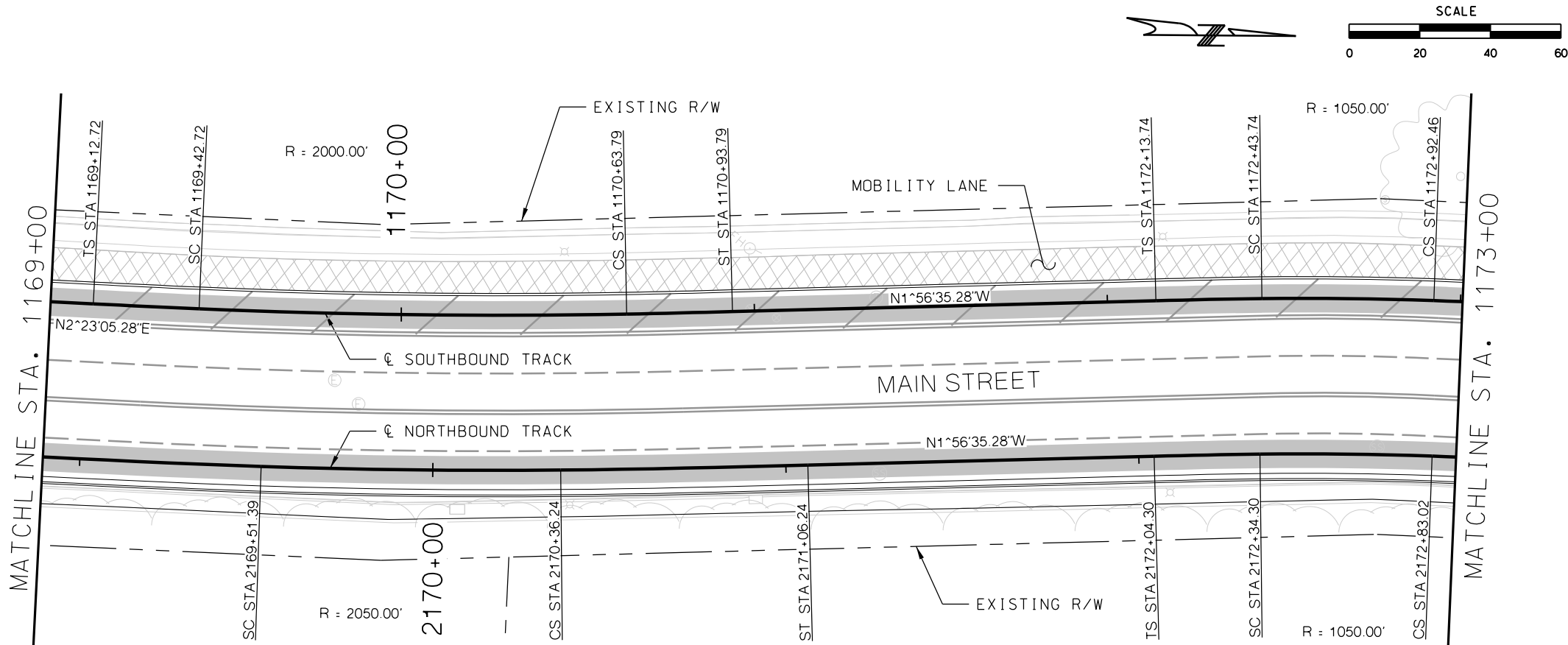
REV	DATE	DESCRIPTION	DESIGNED BY	JWR	PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'
			CHECKED BY	RPB	 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856		SOUTHBOUND TRACK PLAN AND PROFILE SB STA 1165+00 TO STA 1169+00	FILENAME:
			DRAWN BY	MMO				SB P.P. STA 1165+00 - 1169+00
			CHECKED BY	RPB				CONTRACT NO.:
			APPROVED BY	NKS				VOLUME:
PLOT DATE: 8/27/2019			10:22:30 AM		DATE: 08/28/2019		DRAWING NO.: K143	
					NOT FOR CONSTRUCTION		SHEET NO.: 117	



GENERAL NOTES

1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
3. ALL CURVES ARE BASED ON ARC DEFINITION.
4. PROFILES DESIGNED TO FINAL TOP OF RAIL ELEVATION.
5. PROFILE SHOWN IS AT 30% LEVEL AND IS ONLY INTENDED TO ILLUSTRATE THE EXISTING STREET GRADES AND TO CONFIRM THE LOCATIONS OF THE PLATFORMS AND SPECIAL TRACKWORK.

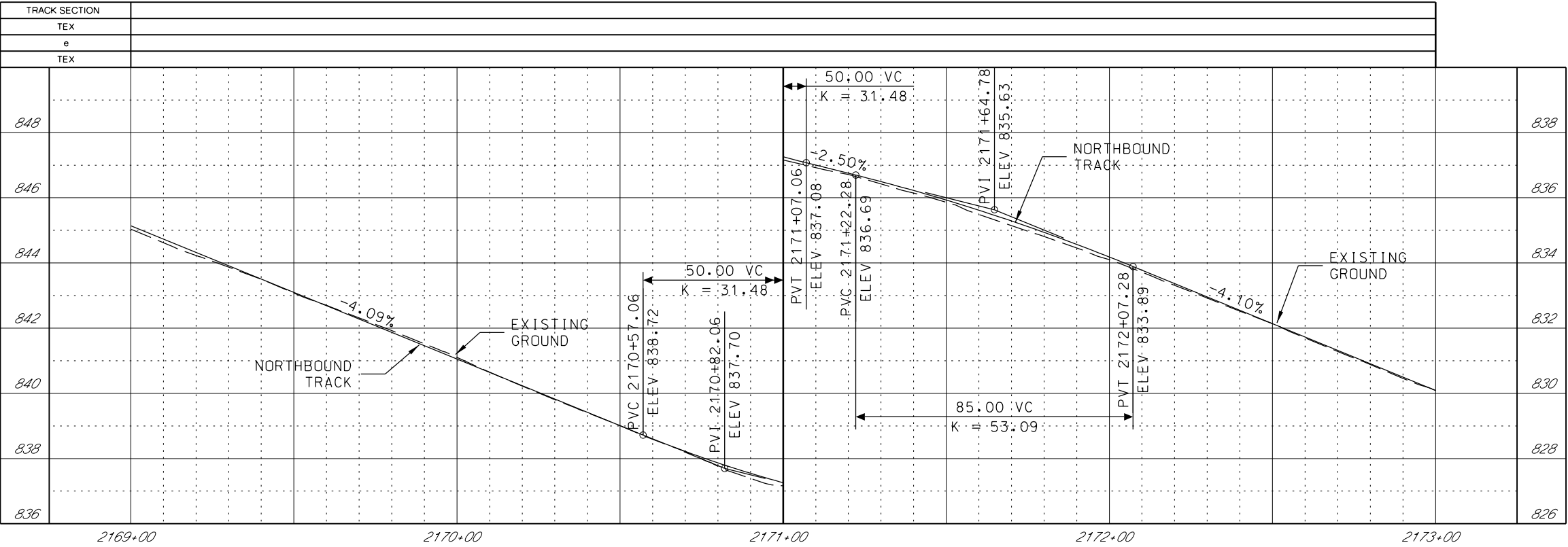
REV	DATE	DESCRIPTION	DESIGNED BY	JWR		PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'	
			CHECKED BY	RPB						 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856
			DRAWN BY	MMO						
			CHECKED BY	RPB						
			APPROVED BY	NKS						
PLOT DATE: 8/27/2019 10:22:35 AM			DATE	08/28/2019	NORTHBOUND TRACK PROFILE NB STA 2165+00 TO STA 2169+00				FILE NAME: NB PRO STA 2165+00 - 2169+00	
									CONTRACT NO.:	
									VOLUME:	
									1	
									DRAWING NO.: K143A	SHEET NO.: 118



GENERAL NOTES

1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
3. ALL CURVES ARE BASED ON ARC DEFINITION.
4. PROFILES DESIGNED TO FINAL TOP OF RAIL ELEVATION.
5. PROFILE SHOWN IS AT 30% LEVEL AND IS ONLY INTENDED TO ILLUSTRATE THE EXISTING STREET GRADES AND TO CONFIRM THE LOCATIONS OF THE PLATFORMS AND SPECIAL TRACKWORK.

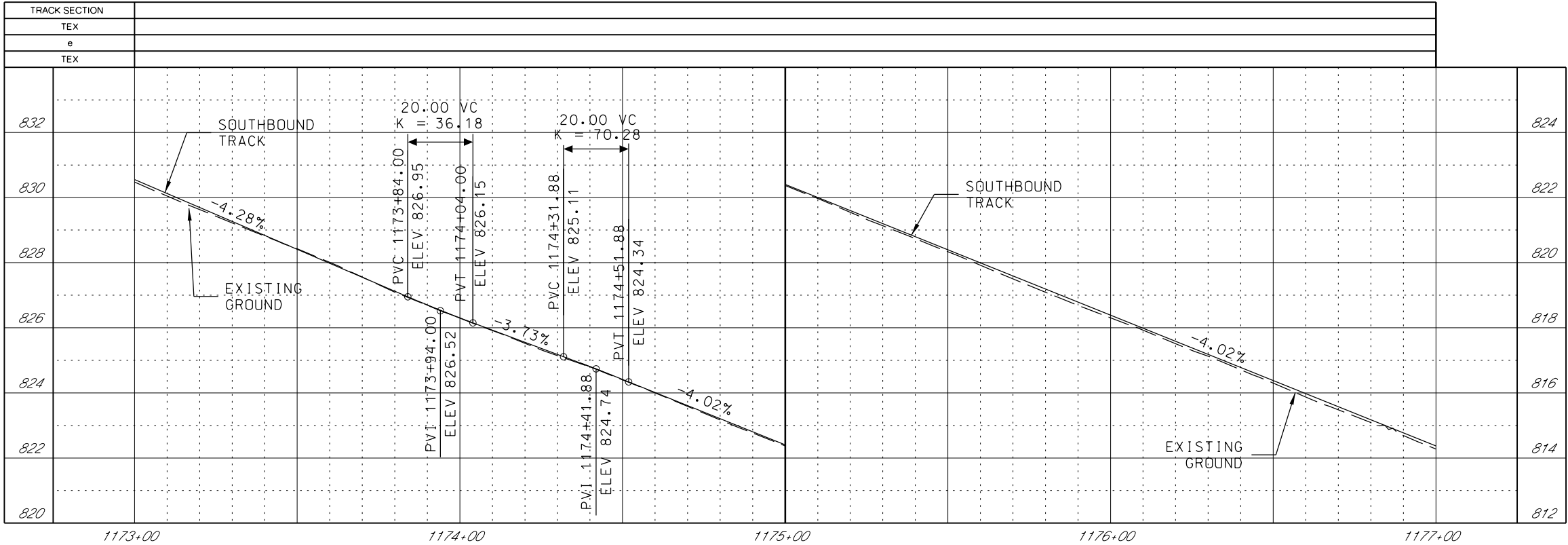
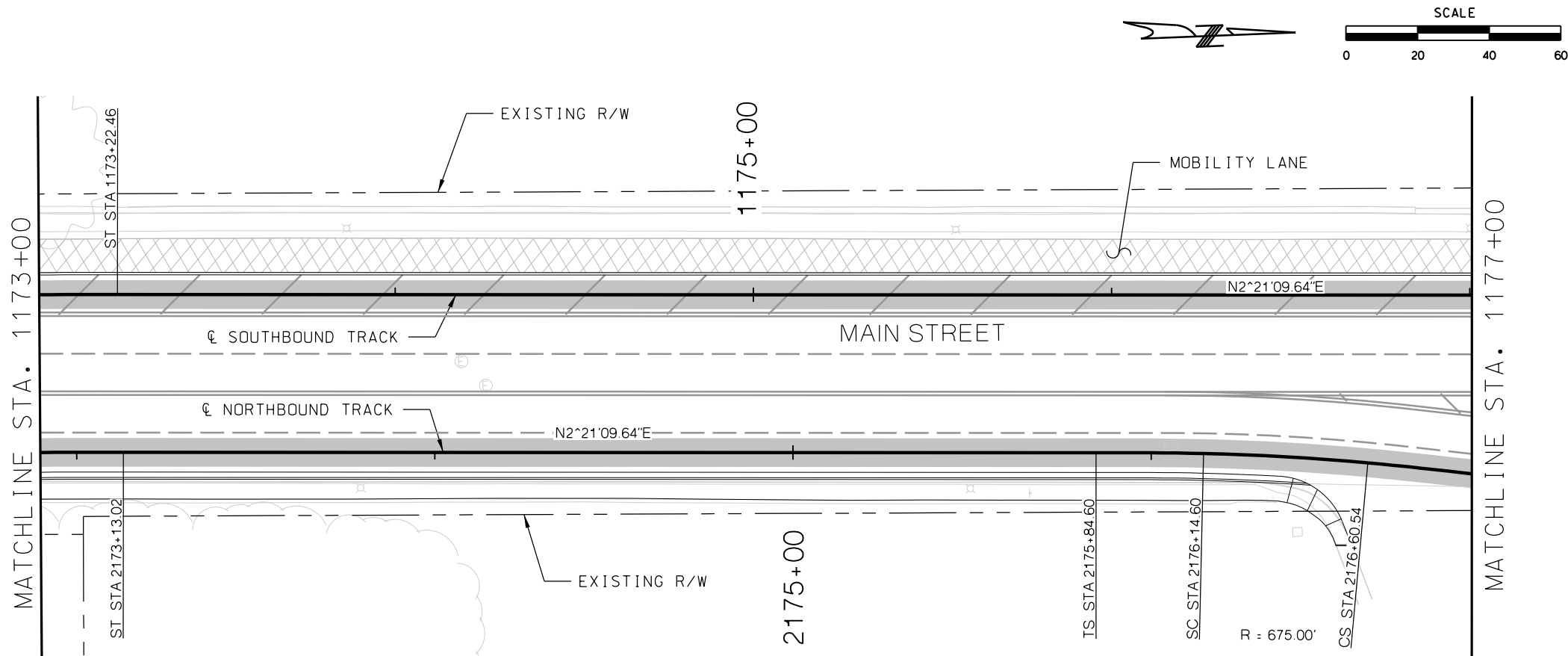
REV	DATE	DESCRIPTION	DESIGNED BY	JWR			PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'
			CHECKED BY	RPB			 HDR Engineering, Inc.	SOUTHBOUND TRACK PLAN AND PROFILE SB STA 1169+00 TO STA 1173+00		FILENAME: SB_P_P STA 1169+00 - 1173+00
			DRAWN BY	MMO			10450 Holmes Road			CONTRACT NO.:
							Suite 600			*****
			CHECKED BY	RPB			Kansas City, MO 64131-3471			VOLUME:
			APPROVED BY	NKS			816-360-2700			1
PLOT DATE: 8/27/2019			10:22:51 AM		DATE	08/28/2019	NOT FOR CONSTRUCTION		DRAWING NO.: K144	SHEET NO.: 119



GENERAL NOTES

- 1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
- 2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
- 3. ALL CURVES ARE BASED ON ARC DEFINITION.
- 4. PROFILES DESIGNED TO FINAL TOP OF RAIL ELEVATION.
- 5. PROFILE SHOWN IS AT 30% LEVEL AND IS ONLY INTENDED TO ILLUSTRATE THE EXISTING STREET GRADES AND TO CONFIRM THE LOCATIONS OF THE PLATFORMS AND SPECIAL TRACKWORK.

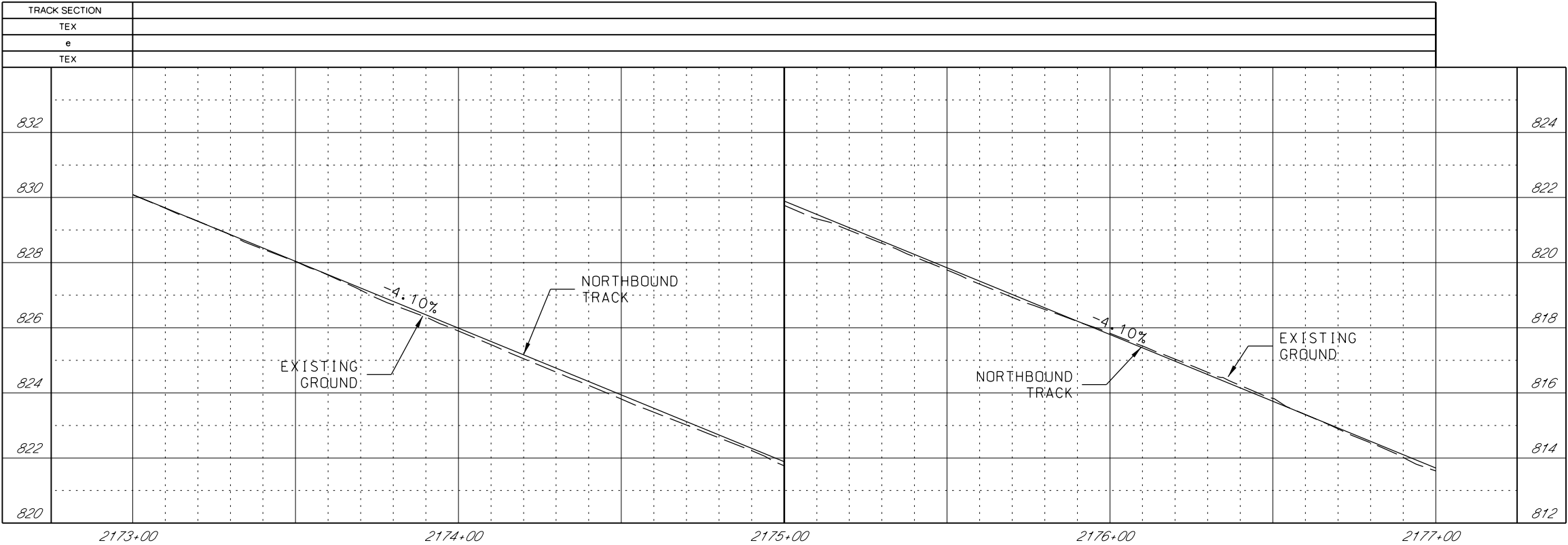
<div>REV</div> <div>DATE</div> <div>DESCRIPTION</div>			<div>DESIGNED BY</div> <div>JWR</div>		<div>PRELIMINARY PLANS - 30%</div> <div>DATE: 08-28-2019</div> <div><div><div>HDR</div><div>HDR Engineering, Inc.</div><div>10450 Holmes Road</div><div>Suite 600</div><div>Kansas City, MO 64131-3471</div><div>816-360-2700</div><div>Certificate of Authority: 000856</div></div></div>	<div>KANSAS CITY STREETCAR MAIN STREET EXTENSION</div> <div>NORTHBOUND TRACK</div> <div>PROFILE</div> <div>NB STA 2169+00 TO STA 2173+00</div>	<div>SCALE FOR 22"x34":</div> <div>H: 1"=20' V: 1"=2'</div>	
			<div>CHECKED BY</div> <div>RPB</div>				<div>FILENAME:</div> <div>NB PRO STA 2169+00 - 2173+00</div>	
			<div>DRAWN BY</div> <div>MMO</div>				<div>CONTRACT NO.:</div> <div>*****</div>	
			<div>CHECKED BY</div> <div>RPB</div>				<div>VOLUME:</div> <div>1</div>	
			<div>APPROVED BY</div> <div>NKS</div>				<div>DRAWING NO.:</div> <div>K144A</div>	
<div>PLOT DATE:</div> <div>8/27/2019</div>			<div>DATE</div> <div>08/28/2019</div>		<div>NOT FOR CONSTRUCTION</div>			<div>SHEET NO.:</div> <div>120</div>



GENERAL NOTES

1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
3. ALL CURVES ARE BASED ON ARC DEFINITION.
4. PROFILES DESIGNED TO FINAL TOP OF RAIL ELEVATION.
5. PROFILE SHOWN IS AT 30% LEVEL AND IS ONLY INTENDED TO ILLUSTRATE THE EXISTING STREET GRADES AND TO CONFIRM THE LOCATIONS OF THE PLATFORMS AND SPECIAL TRACKWORK.

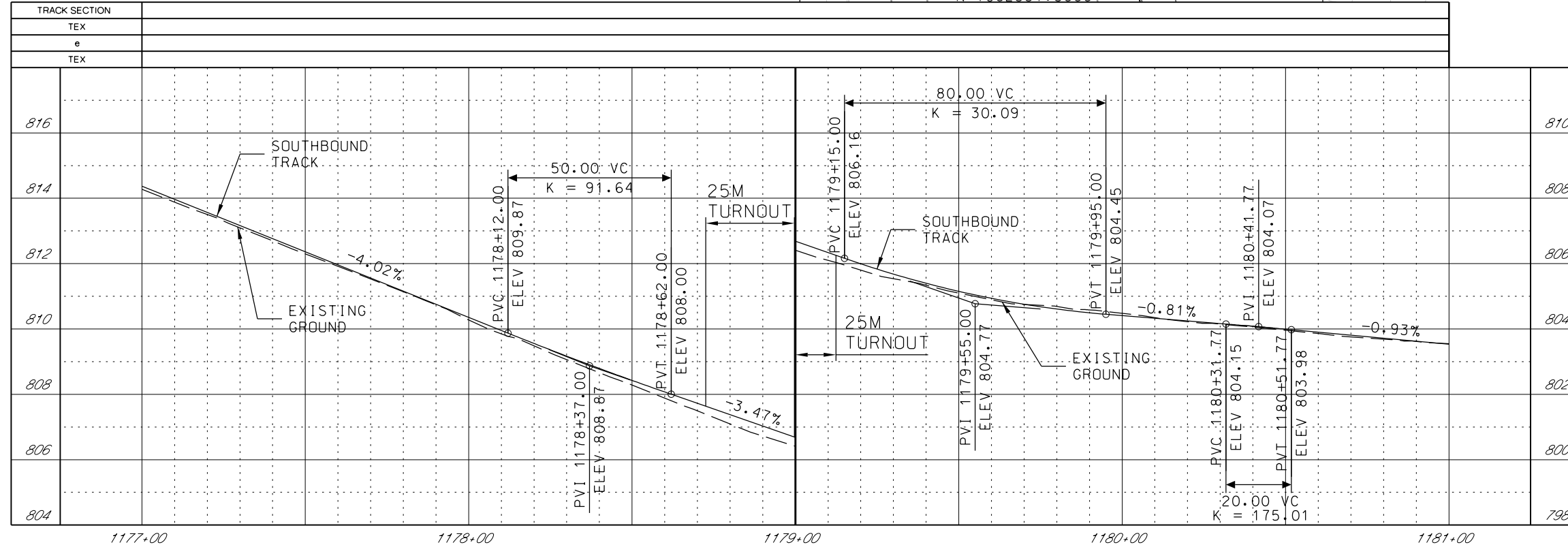
REV	DATE	DESCRIPTION	DESIGNED BY	JWR	PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'
			CHECKED BY	RPB	 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	NOT FOR CONSTRUCTION	SOUTHBOUND TRACK PLAN AND PROFILE SB STA 1173+00 TO STA 1177+00	FILENAME: SB P.P STA 1173+00 - 1177+00
			DRAWN BY	MMO				CONTRACT NO.:
			CHECKED BY	RPB				VOLUME: 1
			APPROVED BY	NKS				DRAWING NO.:
PLOT DATE: 8/27/2019			10:23:10 AM		DATE: 08/28/2019			SHEET NO.: 121



GENERAL NOTES

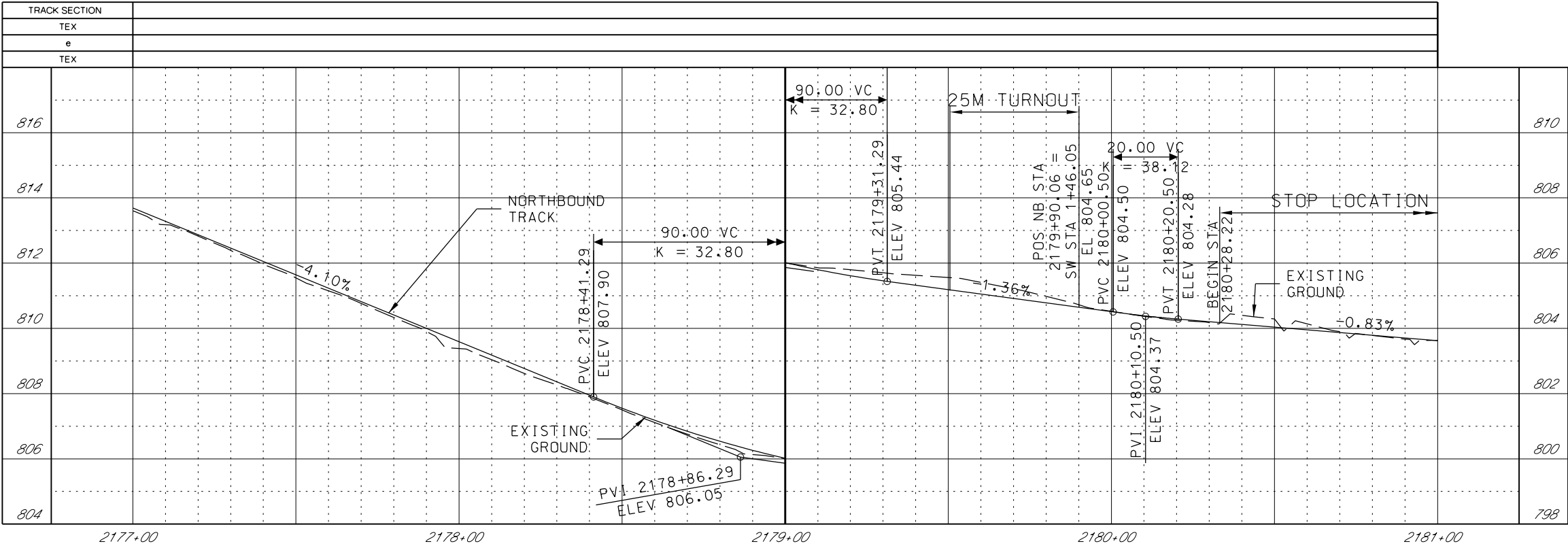
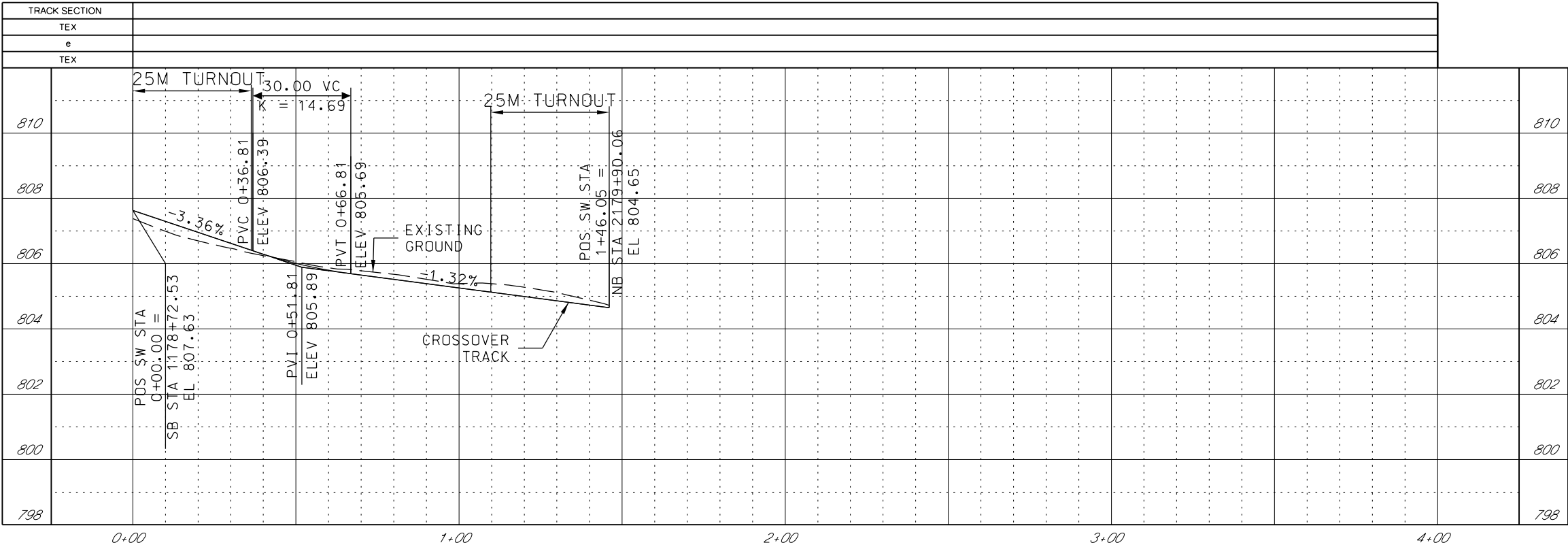
- 1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
- 2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
- 3. ALL CURVES ARE BASED ON ARC DEFINITION.
- 4. PROFILES DESIGNED TO FINAL TOP OF RAIL ELEVATION.
- 5. PROFILE SHOWN IS AT 30% LEVEL AND IS ONLY INTENDED TO ILLUSTRATE THE EXISTING STREET GRADES AND TO CONFIRM THE LOCATIONS OF THE PLATFORMS AND SPECIAL TRACKWORK.

REV	DATE	DESCRIPTION	DESIGNED BY JWR		PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'	
			CHECKED BY RPB			10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856		NOT FOR CONSTRUCTION	FILENAME: NB PRO STA 2173+00 - 2177+00
			DRAWN BY MMO		RideKC STREETCAR				CONTRACT NO.:
			CHECKED BY RPB						VOLUME: 1
			APPROVED BY NKS						DRAWING NO.: K145A
PLOT DATE: 8/27/2019			10:23:14 AM	DATE: 08/28/2019	NORTHBOUND TRACK PROFILE NB STA 2173+00 TO STA 2177+00				



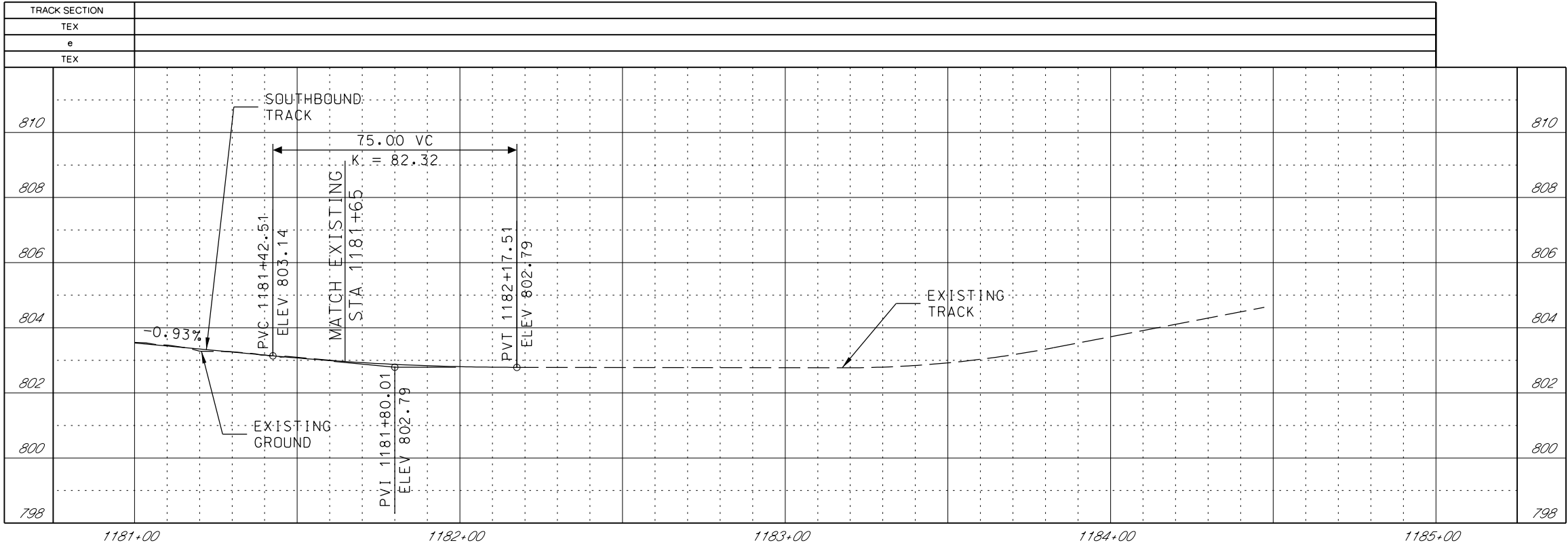
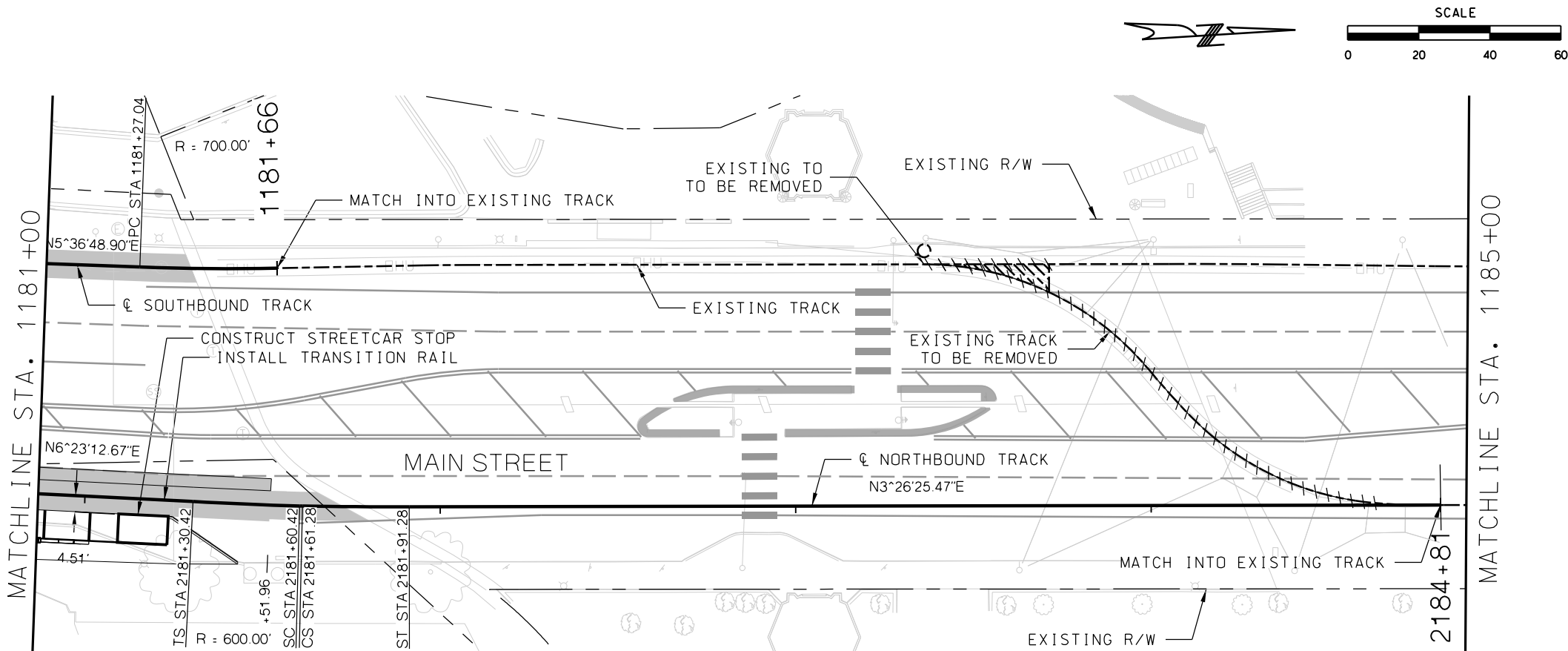
1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
3. ALL CURVES ARE BASED ON ARC DEFINITION.
4. PROFILES DESIGNED TO FINAL TOP OF RAIL ELEVATION.
5. PROFILE SHOWN IS AT 30% LEVEL AND IS ONLY INTENDED TO ILLUSTRATE THE EXISTING STREET GRADES AND TO CONFIRM THE LOCATIONS OF THE PLATFORMS AND SPECIAL TRACKWORK.

REV	DATE	DESCRIPTION	DESIGNED BY	JWR		PRELIMINARY PLANS - 30% DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION SOUTHBOUND TRACK PLAN AND PROFILE PERSHING ROAD SB STA 1177+00 TO STA 1181+00	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'	
			CHECKED BY	RPB				FILENAME:	
			DRAWN BY	MMO				SB P.P STA 1177+00 - 1181+00	
			CHECKED BY	RPB				CONTRACT NO.:	
			APPROVED BY	NKS				VOLUME:	
								1	
PLOT DATE: 8/27/2019 10:23:34 AM			DATE	08/28/2019	NOT FOR CONSTRUCTION		DRAWING NO.:	SHEET NO.:	
							K146	123	



GENERAL NOTES

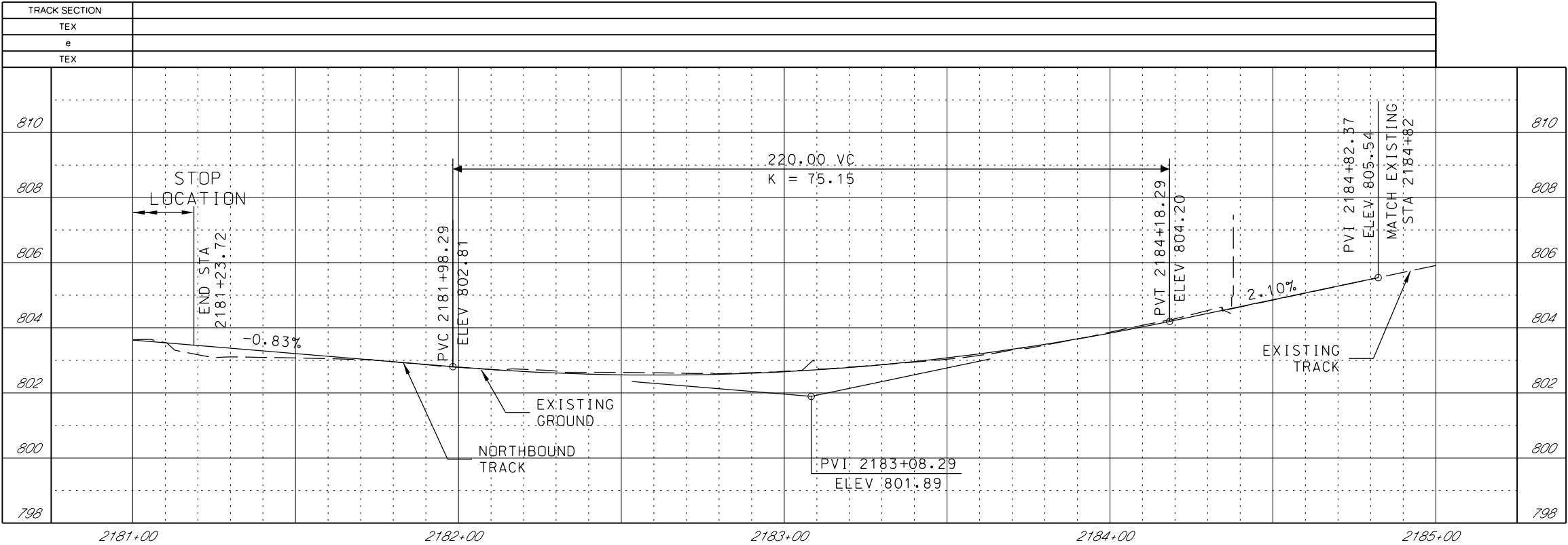
1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
3. ALL CURVES ARE BASED ON ARC DEFINITION.
4. PROFILES DESIGNED TO FINAL TOP OF RAIL ELEVATION.
5. PROFILE SHOWN IS AT 30% LEVEL AND IS ONLY INTENDED TO ILLUSTRATE THE EXISTING STREET GRADES AND TO CONFIRM THE LOCATIONS OF THE PLATFORMS AND SPECIAL TRACKWORK.



GENERAL NOTES


1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
3. ALL CURVES ARE BASED ON ARC DEFINITION.
4. PROFILES DESIGNED TO FINAL TOP OF RAIL ELEVATION.
5. PROFILE SHOWN IS AT 30% LEVEL AND IS ONLY INTENDED TO ILLUSTRATE THE EXISTING STREET GRADES AND TO CONFIRM THE LOCATIONS OF THE PLATFORMS AND SPECIAL TRACKWORK.

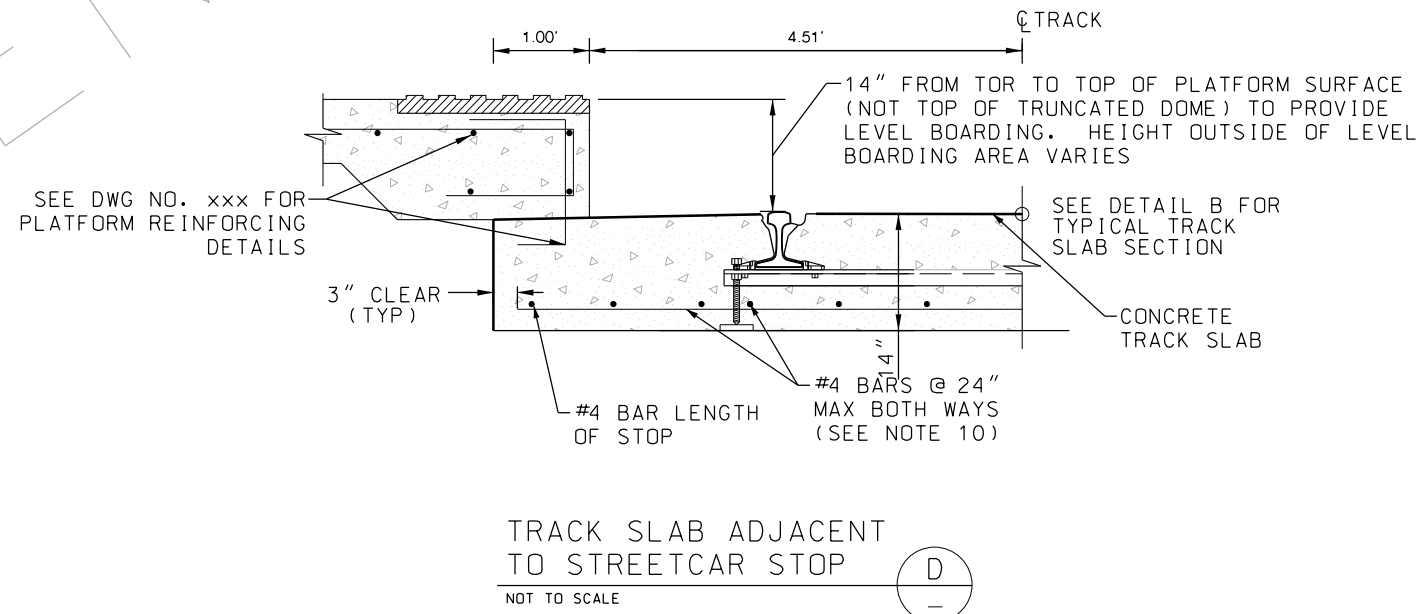
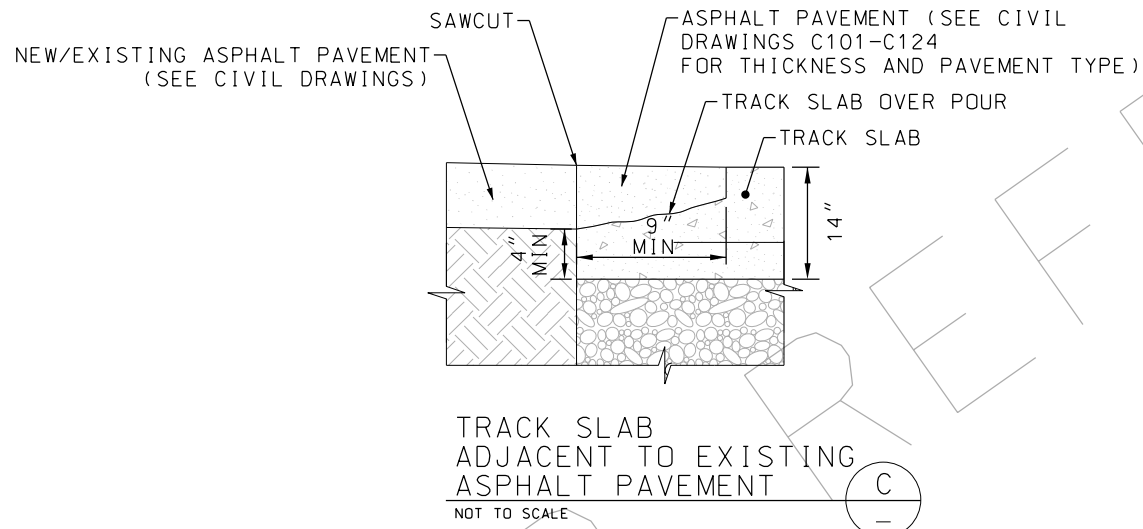
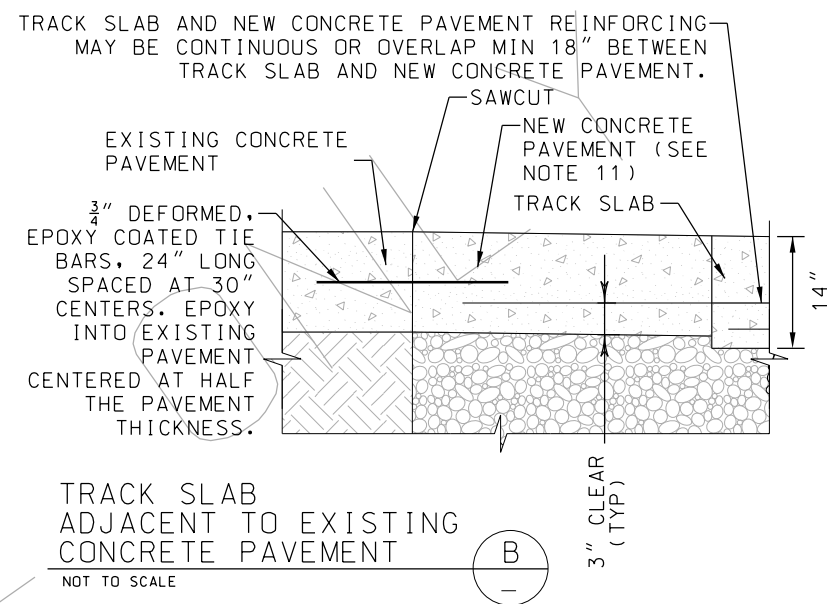
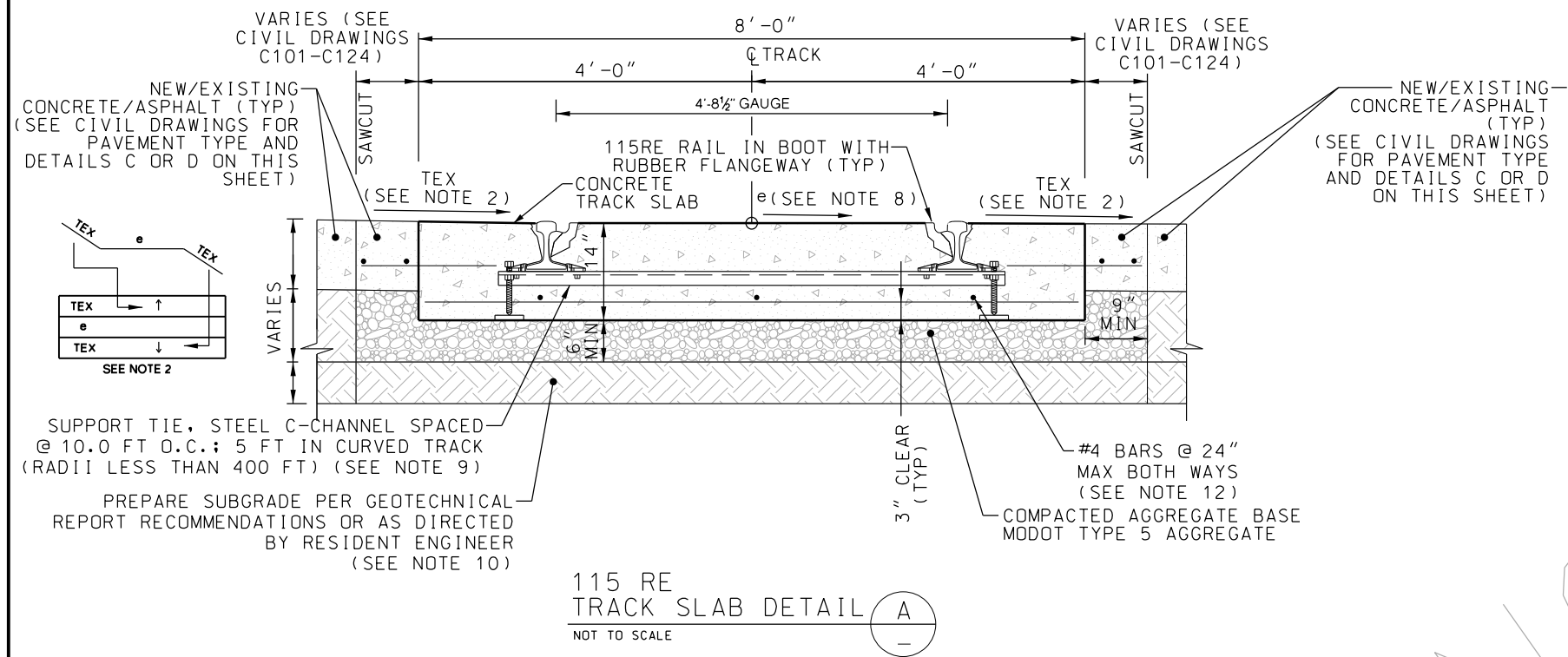
REV	DATE	DESCRIPTION	DESIGNED BY	JWR			PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'	
			CHECKED BY	RPB			 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856			SOUTHBOUND TRACK PLAN AND PROFILE SB STA 1181+00 TO STA 1185+00	FILENAME: SB P.P STA 1181+00 - 1185+00
			DRAWN BY	MMO							CONTRACT NO.:
			CHECKED BY	RPB							VOLUME: 1
			APPROVED BY	NKS							DRAWING NO.:
											SHEET NO.:
PLOT DATE: 8/27/2019 10:23:52 AM			DATE	08/28/2019	NOT FOR CONSTRUCTION		K147	125			



GENERAL NOTES

1. SEE DISCIPLINE SPECIFIC DRAWINGS FOR DETAILED INFORMATION ON CIVIL, TRAFFIC, SYSTEMS, AND DRAINAGE STRUCTURES.
2. ALL ELEVATIONS AND DIMENSIONS GIVEN ARE IN FEET UNLESS OTHERWISE NOTED.
3. ALL CURVES ARE BASED ON ARC DEFINITION.
4. PROFILES DESIGNED TO FINAL TOP OF RAIL ELEVATION.
5. PROFILE SHOWN IS AT 30% LEVEL AND IS ONLY INTENDED TO ILLUSTRATE THE EXISTING STREET GRADES AND TO CONFIRM THE LOCATIONS OF THE PLATFORMS AND SPECIAL TRACKWORK.

REV	DATE	DESCRIPTION	DESIGNED BY	JWR			PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'
			CHECKED BY	RPB			 HDR Engineering, Inc.	NORTHBOUND TRACK PROFILE NB STA 2181+00 TO STA 2185+00		FILENAME: NB PRO STA 2181+00 - 2185+00
			DRAWN BY	MMO			10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856			CONTRACT NO.:
			CHECKED BY	RPB						VOLUME: 1
			APPROVED BY	NKS						DRAWING NO.:
										SHEET NO.:
PLOT DATE: 8/27/2019 10:23:54 AM			DATE	08/28/2019			NOT FOR CONSTRUCTION		K147A	126

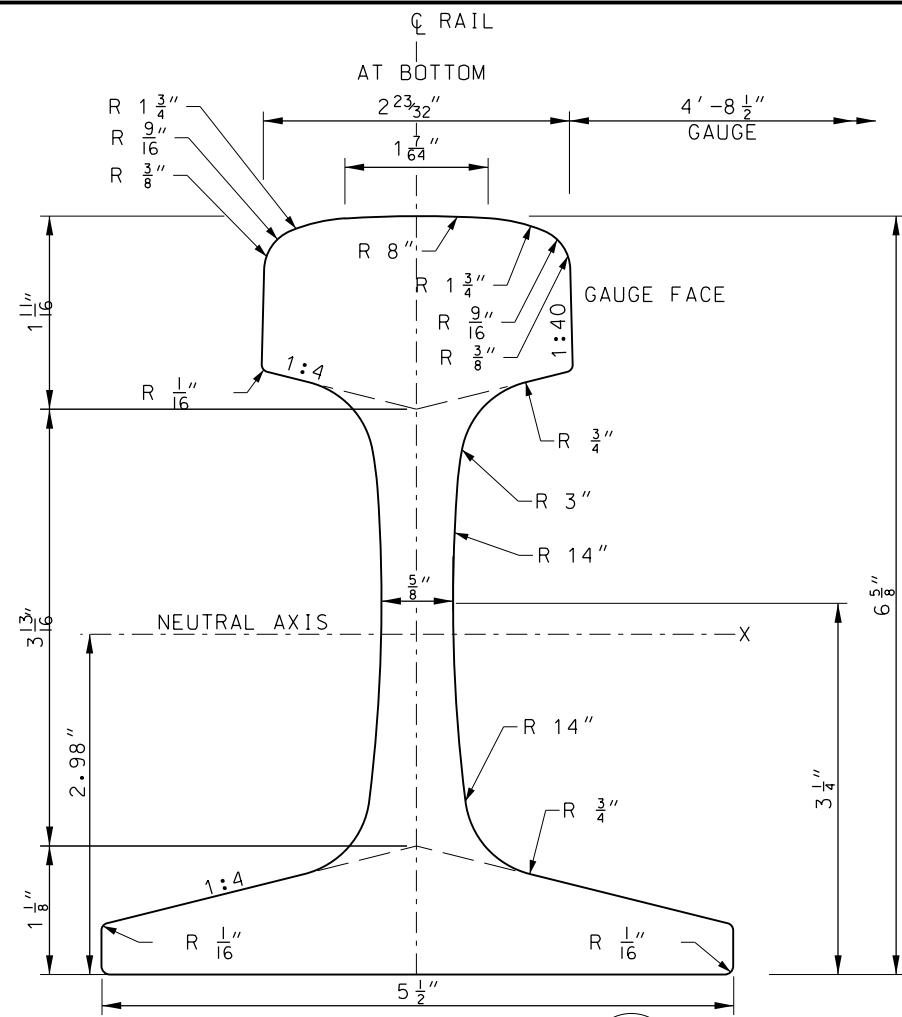


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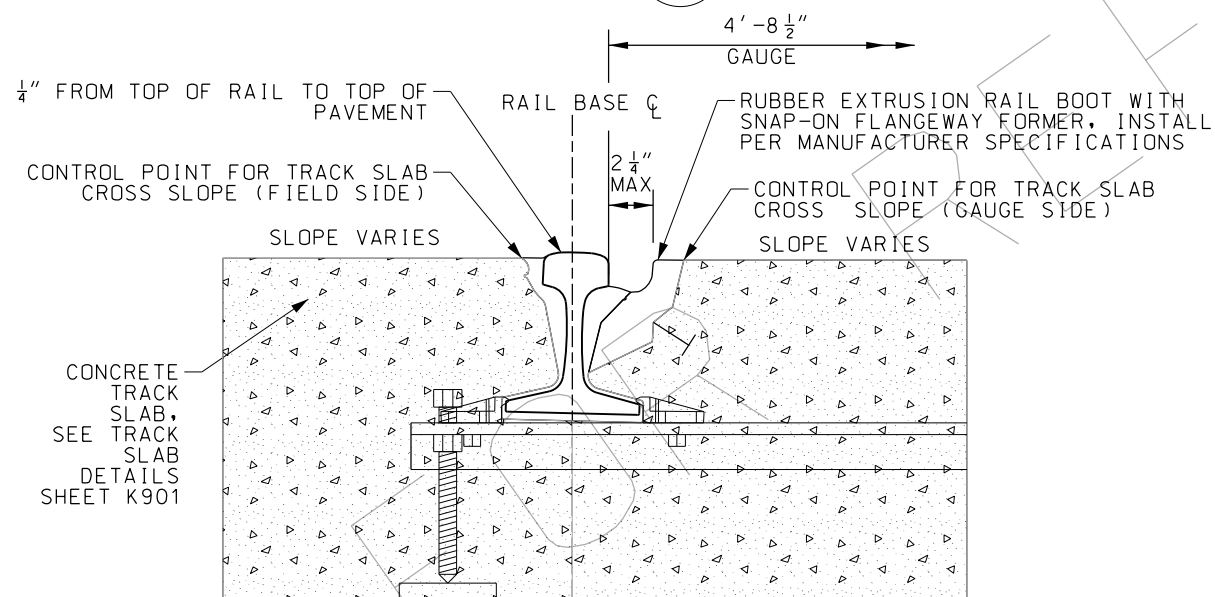
- SEE CIVIL DRAWINGS FOR SAWCUT AND PAVING LIMITS.
- TRACK EDGE CROSS-SLOPE (TEX) ARE SHOWN ON K100 SERIES DRAWINGS AND SHALL BE FIELD ADJUSTED TO MINIMIZE ROADWAY REGRADING. COORDINATE WITH ENGINEER FOR APPROVAL. CROSS-SLOPES ADJACENT TO TRAVEL LANES NOT TO EXCEED 5%, UNLESS ADJACENT TO PARKING LANE OR CURB, WITHOUT APPROVAL OF ENGINEER.
- CONTRACTOR TO SUBMIT TRACK APPURTENANCES (GAUGE TIE, BOOT, FASTENERS, ETC.) FOR REVIEW AND APPROVAL BY ENGINEER PRIOR TO FABRICATION.
- ALL TRACK SHALL HAVE ZERO CANT UNLESS OTHERWISE SPECIFIED.
- REFER TO PROJECT GEOTECHNICAL REPORT FOR ENGINEERING RECOMMENDATIONS REGARDING UNSUITABLE MATERIAL. SUBMIT OVER EXCAVATION BACKFILL MATERIAL FOR REVIEW AND APPROVAL BY ENGINEER.
- RESTRAINING RAIL REQUIRED FOR ALL HORIZONTAL CURVES WITH A RADIUS LESS THAN 400' FOR 115 RE TRACK.
- SEE SYSTEM WIDE ELECTRICAL PLANS FOR THE REQUIRED SYSTEM ELEMENTS INCLUDING DUCT BANKS, INSULATED JOINTS, CROSS BONDING, NEGATIVE RETURN, AND OTHER SYSTEM APPURTENANCES THAT INTERFACE WITH TRACK/CIVIL WORK.
- e IS THE CROSS SLOPE BETWEEN THE RAILS. 0% (TYP). SEE K101 TO K148 DRAWINGS FOR "e" VALUE
- TIE NEEDS TO HAVE ADEQUATE WEEP HOLES. CONTRACTOR TO TAKE EXTRA CARE IN VIBRATING BELOW THE TIE TO ENSURE THERE IS FULL CONCRETE CONSOLIDATION ALL AROUND THE TIE.
- SUBGRADE REQUIRED TO MEET COMPACTION REQUIREMENTS OUTLINED IN THE GEOTECHNICAL REPORT.
- WHERE ADJACENT TO CONCRETE PAVEMENT CONTRACTOR MAY POUR ROADWAY PAVEMENT MONOLITHICALLY WITH TRACK SLAB.
- CONTRACTOR MAY USE GRADE 80 WELDED WIRE FABRIC IN LIEU OF REBAR SO LONG AS IT MEETS THE SAME MINIMUM SPACING OF THE REINFORCING BARS SHOWN IN THE DETAILS.

REV	DATE	DESCRIPTION	DESIGNED BY	JWR	PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SCALE FOR 22"x34": NOT TO SCALE
			CHECKED BY	RPB	HDR	HDR Engineering, Inc.		FILENAME:
			DRAWN BY	MMO	10450 Holmes Road			Track Slab Details
			CHECKED BY	RPB	Suite 600			CONTRACT NO.:
			APPROVED BY	NKS	Kansas City, MO 64131-3471			VOLUME:
					816-360-2700			1
					Certificate of Authority: 000856			DRAWING NO.:
								K901
								SHEET NO.:
								127

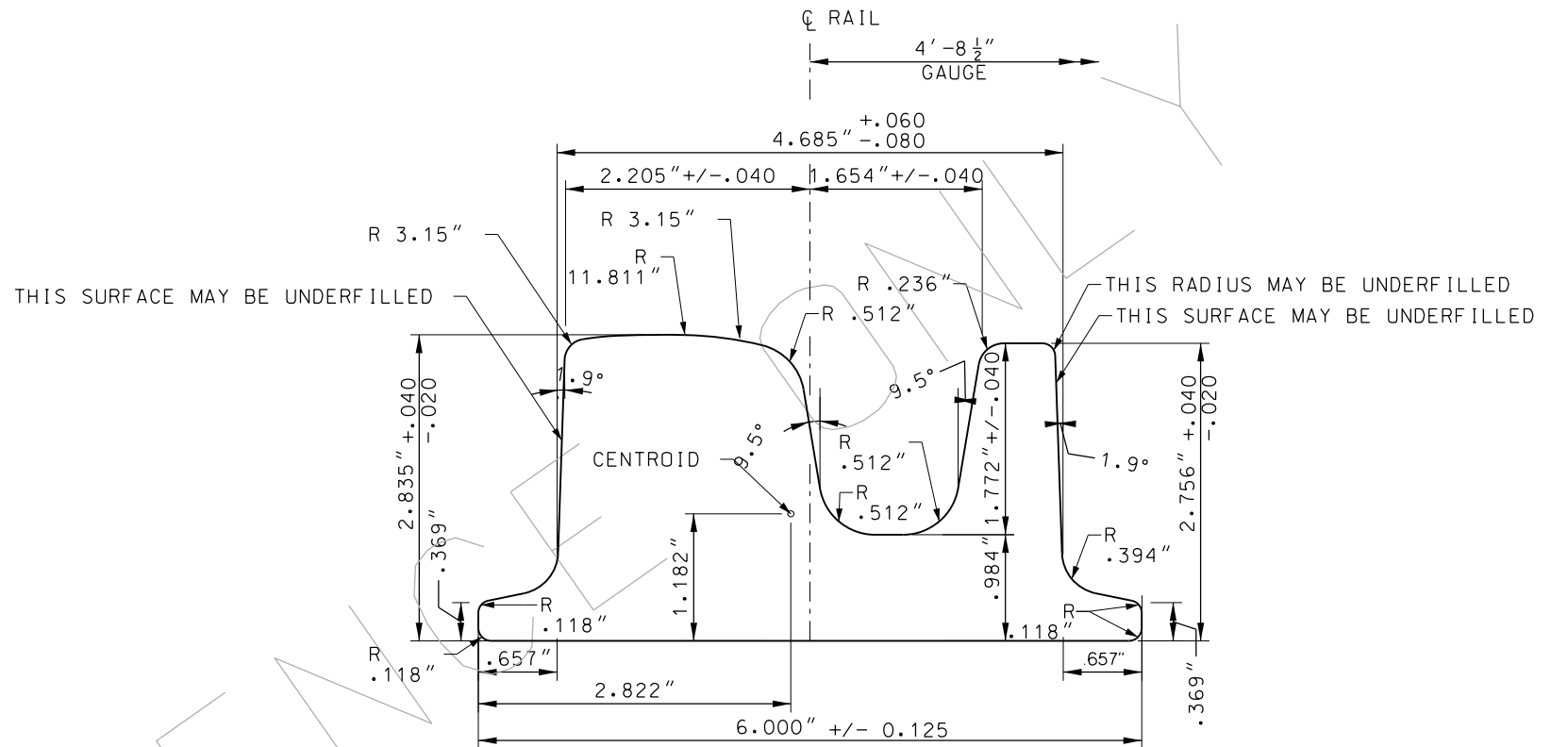
TRACK SLAB DETAILS



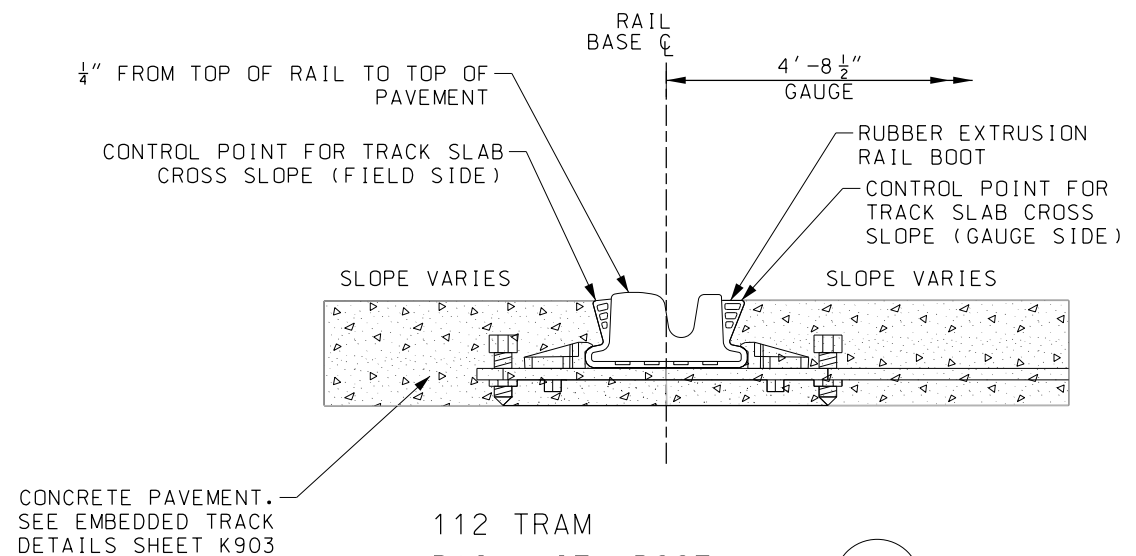
115 RE RAIL SECTION A
NOT TO SCALE



115 RE RAIL WITH FLANGWAY FORMER
NOT TO SCALE



112 TRAM RAIL SECTION B
NOT TO SCALE

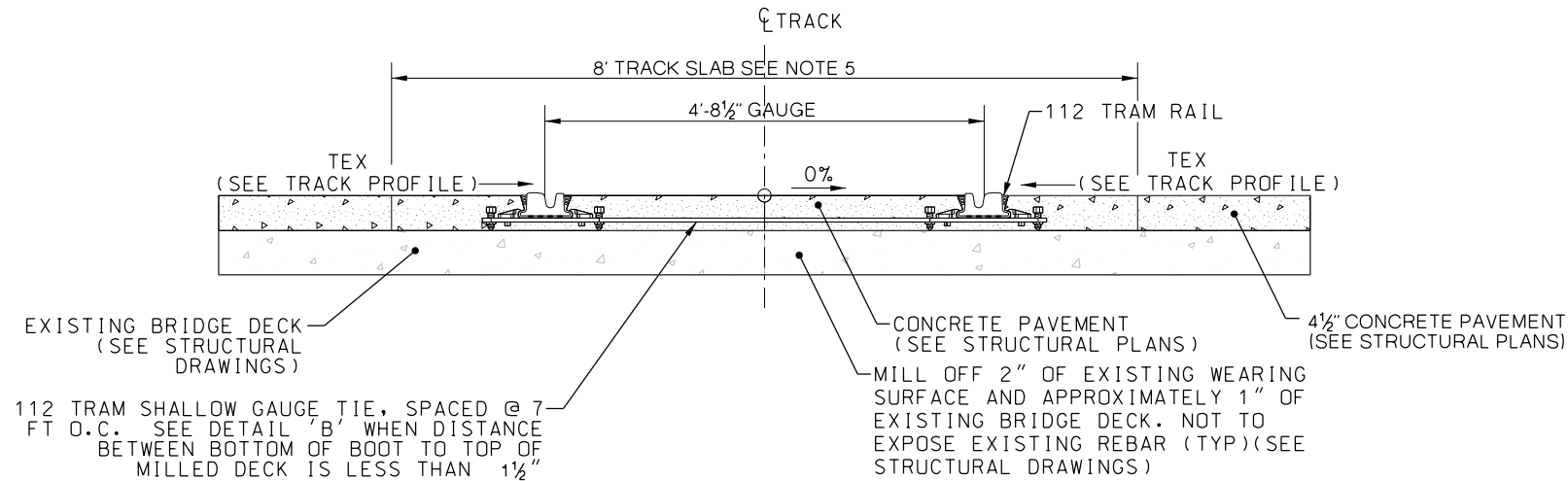


112 TRAM RAIL WITH BOOT
NOT TO SCALE

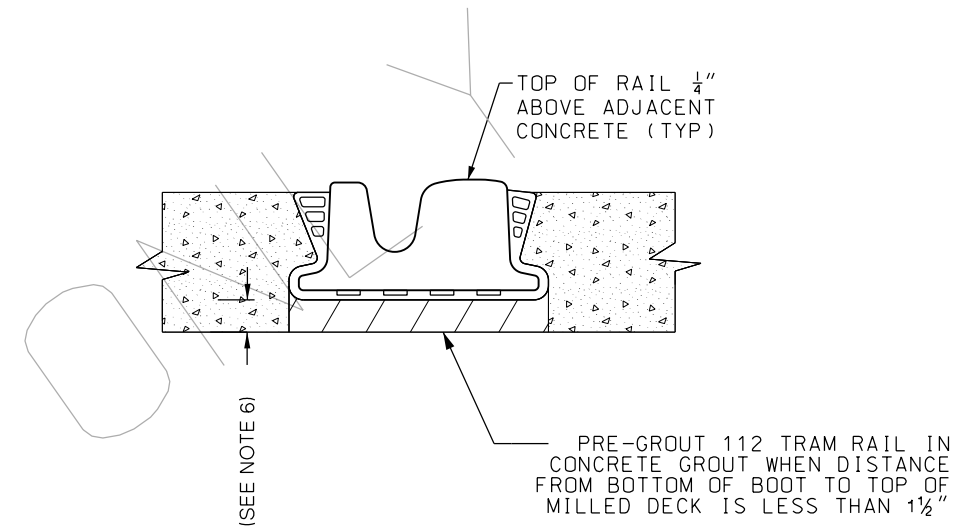
REV	DATE	DESCRIPTION	DESIGNED BY	JWR	PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SCALE FOR 22"x34": NOT TO SCALE
			CHECKED BY	RPB	HDR	HDR Engineering, Inc.	112 and 115 Rail Sections	FILENAME:
			DRAWN BY	MMO	10450 Holmes Road		CONTRACT NO.:	*****
			CHECKED BY	RPB	Suite 600		VOLUME:	1
			APPROVED BY	NKS	Kansas City, MO 64131-3471		DRAWING NO.:	K902
					816-360-2700		SHEET NO.:	128
					Certificate of Authority: 000856			
PLOT DATE: 8/27/2019			10:05:07 AM		DATE: 08/28/2019		NOT FOR CONSTRUCTION	



115 RE AND 112 TRAM
RAIL SECTIONS



112 TRAM EMBEDDED TRACK ON STRUCTURE (A) NOT TO SCALE



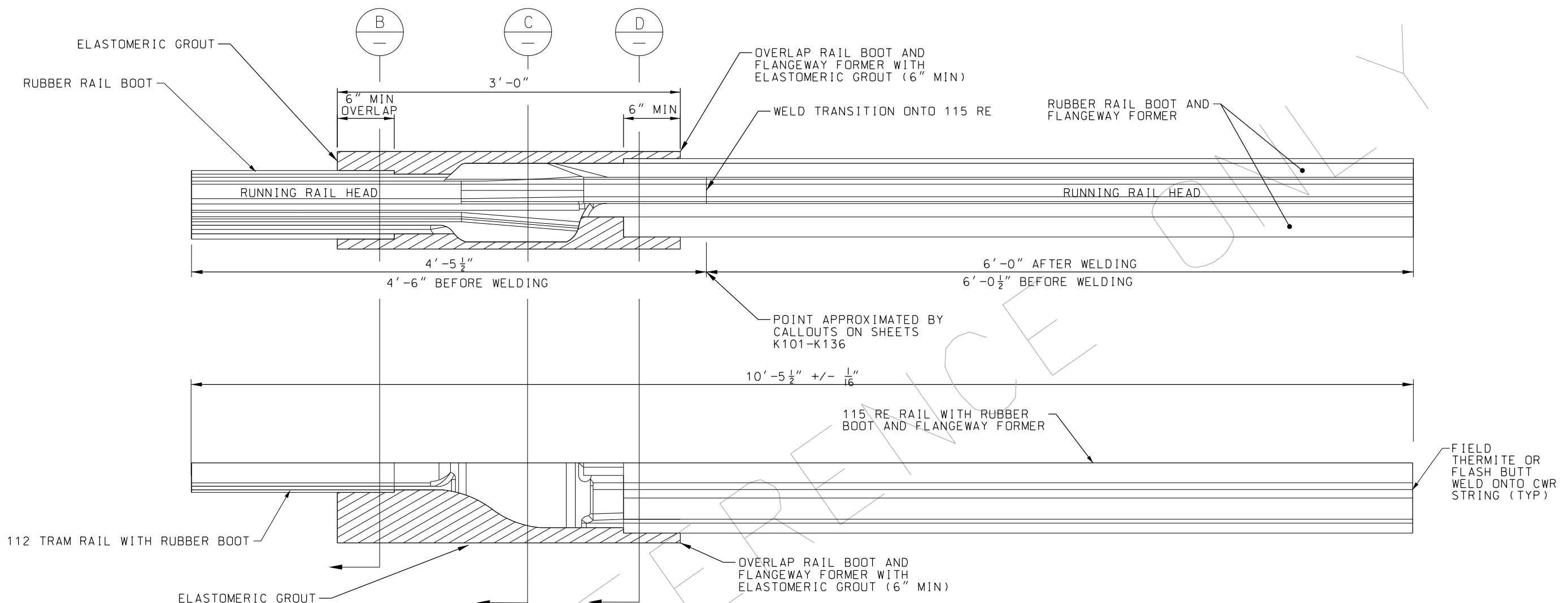
PRE-GROUTED 112 TRAM RAIL ON STRUCTURE (B) NOT TO SCALE

NOTES:

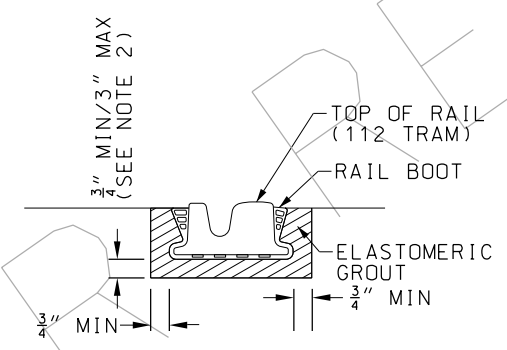
1. DIMENSIONS AND MINIMUM CLEARANCES NOTED IN DETAIL ARE APPROXIMATE AND SHOULD BE UPDATED IN FINAL APPROVED SHOP DRAWINGS PRIOR TO INSTALLATION.
2. TRACK GAUGE IS MEASURED AT 5/8" BELOW TOP OF RAIL AND FROM THE GAUGE FACE TO GAUGE FACE
3. SHALLOW GAUGE TIE SHOULD BE RIGID ENOUGH TO MAINTAIN LINE, GRADE, AND GAUGE OF THE RAIL. GAUGE TIE SHALL BE NO GREATER THAN 1/2" THICK AND 3" WIDE. CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR REVIEW BY ENGINEER.

4. CONTRACTOR TO SUBMIT INSTALLATION PLAN FOR HOLDING GAUGE IN ELASTOMERIC GROUT TROUGH TO ENGINEER FOR REVIEW AND APPROVAL.
5. TRACK SLAB LIMITS ON STRUCTURE SHOWN FOR PAY LIMITS. CONTRACTOR MAY POUR BRIDGE PAVEMENT MONOLITHICALLY WITH TRACK SLAB.
6. PRE-GROUTED RAIL SHALL BE INSTALLED PER MANUFACTURES REQUIREMENTS. MINIMUM DEPTH OF GROUT TO BE VERIFIED BY MANUFACTURER PRIOR TO INSTALLATION AND APPROVED BY ENGINEER.

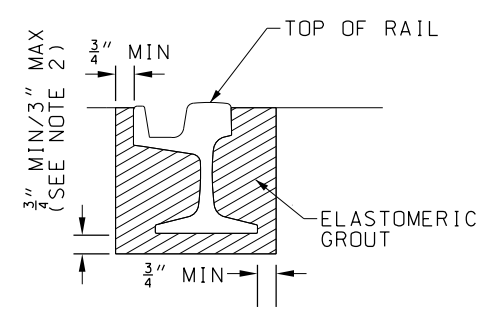
REV	DATE	DESCRIPTION	DESIGNED BY	JWR		PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SCALE FOR 22"x34": NOT TO SCALE FILENAME: Track Slab on Structure CONTRACT NO.: ***** VOLUME: 1	DRAWING NO.: K903	SHEET NO.: 129
			CHECKED BY	RPB							
			DRAWN BY	MMO							
			CHECKED BY	RPB							
			APPROVED BY	NKS							
PLOT DATE: 8/27/2019		10:05:11 AM	DATE	08/28/2019	NOT FOR CONSTRUCTION						



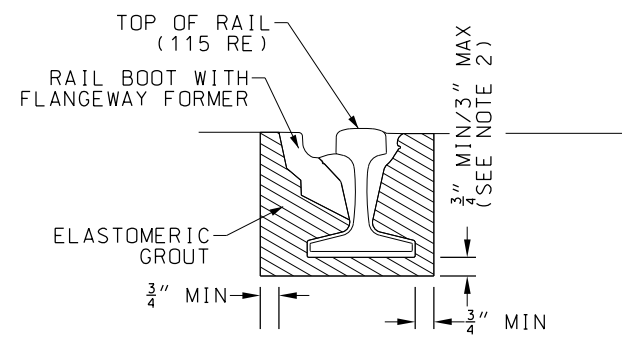
TRANSITION RAIL
PLAN AND ELEVATION (A)
NOT TO SCALE



SECTION (B)
NOT TO SCALE



SECTION (C)
NOT TO SCALE

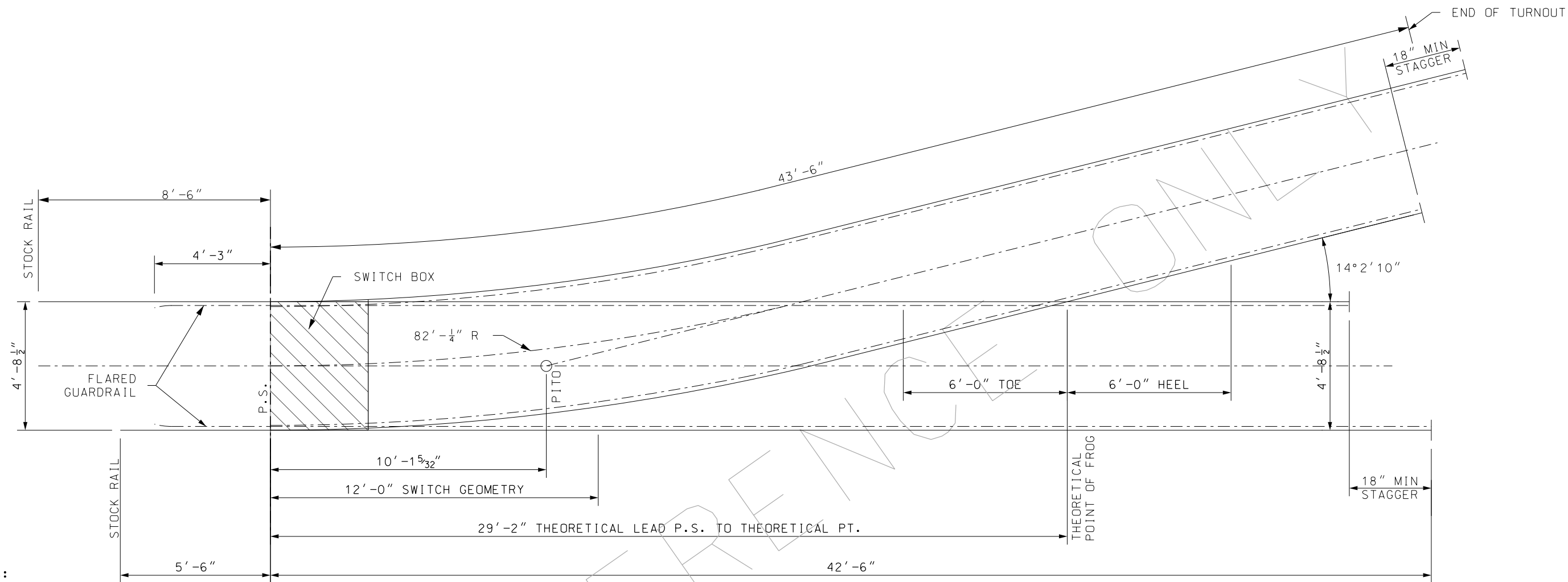


SECTION (D)
NOT TO SCALE

- NOTES:
1. CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR REVIEW AND APPROVAL BY ENGINEER PRIOR TO MANUFACTURING TRANSITION RAIL.
 2. A MINIMUM OF 7" CONCRETE DEPTH BELOW ELASTOMERIC GROUT REQUIRED.
 3. CONTRACTOR TO FOLLOW ELASTOMERIC GROUT MANUFACTURER'S RECOMMENDATION FOR INSTALLATION.

REV	DATE	DESCRIPTION	DESIGNED BY	JWR		PRELIMINARY PLANS - 30%		DATE: 08-28-2019		KANSAS CITY STREETCAR MAIN STREET EXTENSION		TRANSITION RAIL		SCALE FOR 22"x34":	
			CHECKED BY	RPB		 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856		NOT FOR CONSTRUCTION						NOT TO SCALE	
			DRAWN BY	MMO										FILENAME:	
														Transition Rail Detail	
			CHECKED BY	RPB										CONTRACT NO.:	
			APPROVED BY	NKS										VOLUME:	
PLOT DATE:		8/27/2019	10:05:16 AM		DATE	08/28/2019					DRAWING NO.:		SHEET NO.:		
											K904		130		

TRANSITION RAIL



NOTES:

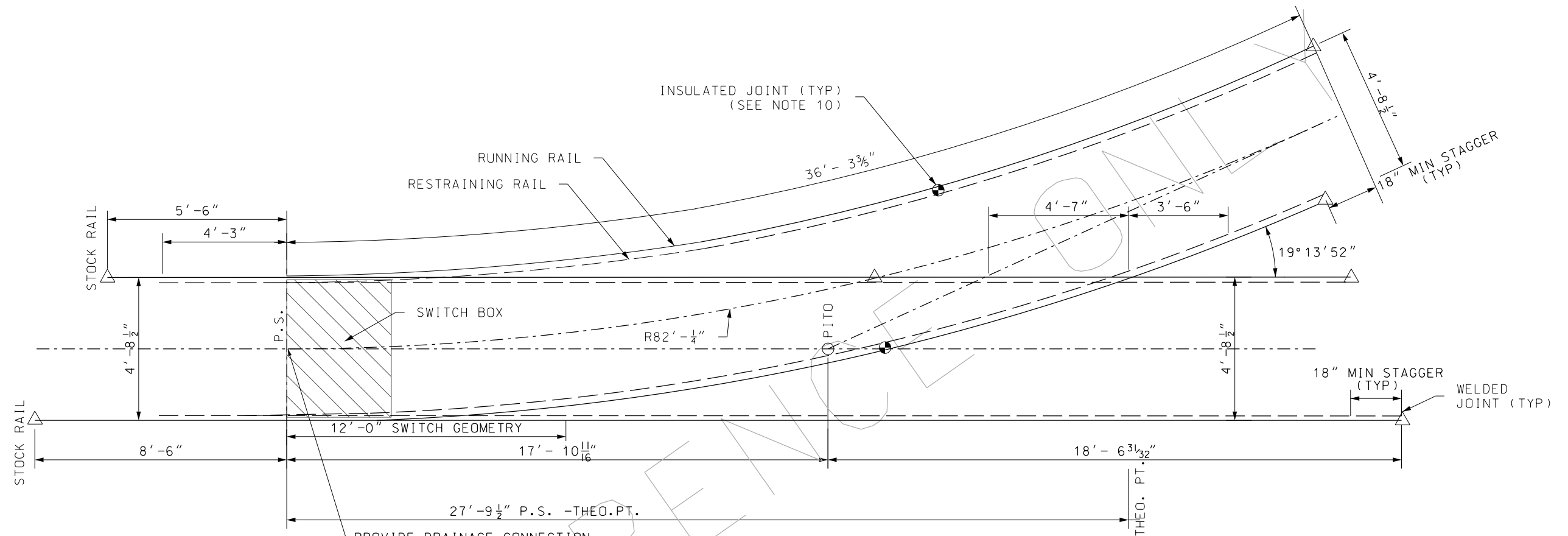
1. THE SWITCH WILL BE POWERED OR MANUAL (SEE SYSTEMS PLANS) WITH ACCOMMODATION FOR POINT DETECTION. THE SWITCH MUST BE TRAILABLE WITH A SPRING AND RETURN MECHANISM (OR OTHER APPROVED MECHANISM). SWITCH MECHANISM AND EARTH BOX SHALL BE INSULATED FOR SIGNALING CIRCUITS.
2. ALL JOINTS AND CONNECTIONS TO BE FIELD WELDED UNLESS NOTED OTHERWISE.
3. ALL DIMENSIONS ARE IN FEET AND INCHES.
4. TURNOUT TO BE FULLY INSULATED FOR ELECTRICAL ISOLATION PROVIDED THROUGH ENCAPSULATION PER MANUFACTURER AND MATERIAL SUPPLIER SPECIFICATIONS AND APPROVED BY ENGINEER. ISOLATION SHALL SATISFY RESISITVITY REQUIREMENTS PER SPECIFICATIONS.
5. SWITCH MACHINE SHALL BE CENTERED BETWEEN TONGUE SWITCHES AFTER GEOMETRY DIMENSIONS AND TOLERANCES HAVE BEEN SATISFIED.
6. ALL GAUGE RODS SHALL BE DRILLED AND SECURED TO TURNOUT AFTER GEOMETRY DIMENSIONS AND TOLERANCES HAVE BEEN SATISFIED.
7. SWITCH BOX DRAIN TO BE CONNECTED TO OVERALL DRAINAGE NETWORK. PROVIDE POWERED CONNECTIONS FOR SWITCH HEATERS AND POWER SWITCHES.
8. EARTHBOX MACHINE AND SWITCH HEATER BOXES SHALL BE DESIGNED FOR HS20 LOADING.
9. LEFT-HAND TURNOUT SHOWN. RIGHT-HAND IS MIRROR IMAGE.
10. FROG SHALL BE FLANGE BEARING WELDED BOLTLESS MANGANESE.
11. SEE TRAIN CONTROL DRAWINGS FOR INSULATED JOINT LOCATION AND LAYOUT.

25M STRAIGHT FROG TURNOUT

NOT TO SCALE



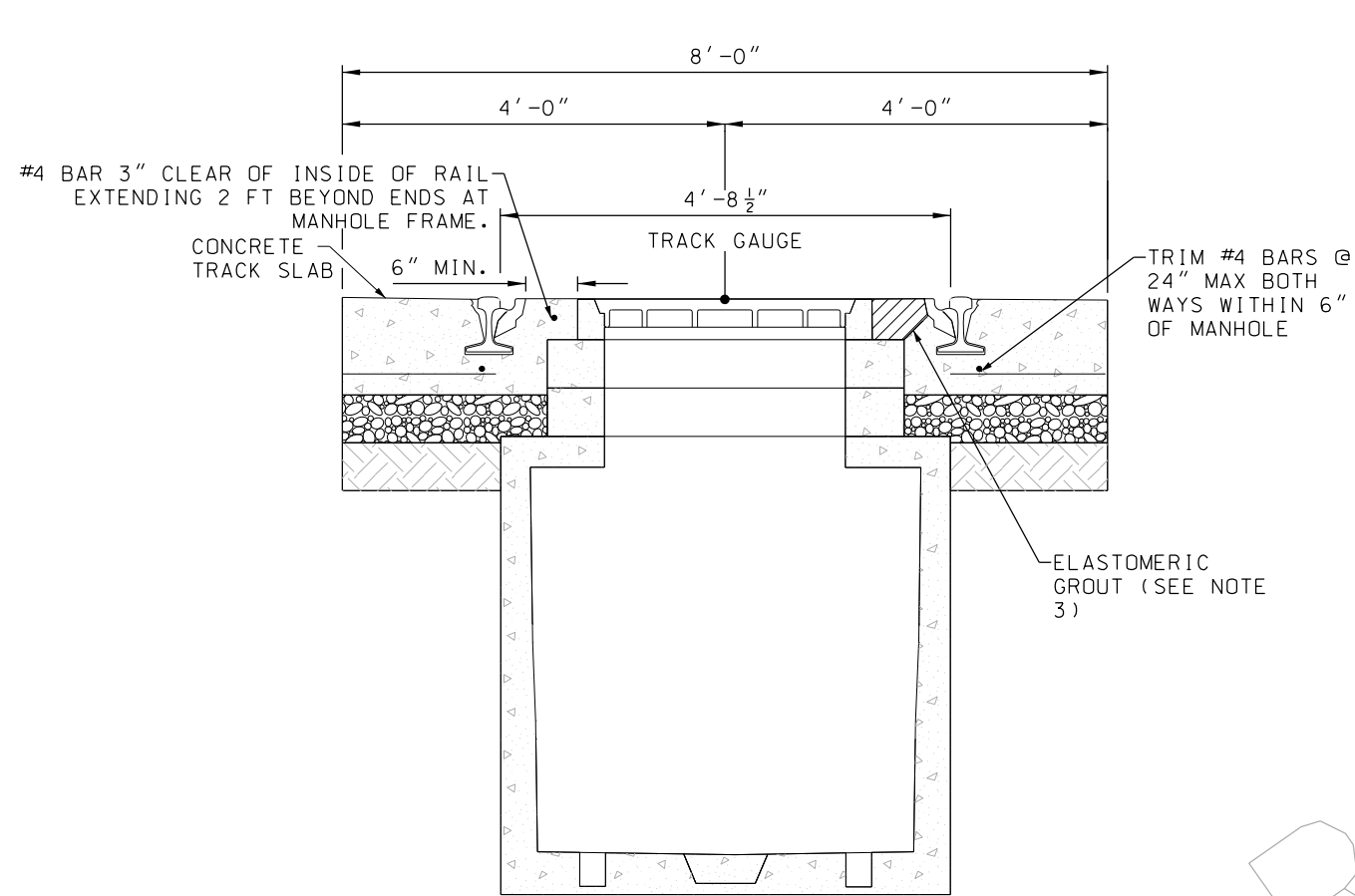
REV	DATE	DESCRIPTION	DESIGNED BY	JWR		PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	25 M TURNOUT - STRAIGHT FROG	SCALE FOR 22"x34": NOT TO SCALE							
			CHECKED BY	RPB		 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	NOT FOR CONSTRUCTION			FILENAME:							
			DRAWN BY	MMQ						25M Turnout Detail							
			CHECKED BY	RPB						CONTRACT NO.:							
			APPROVED BY	NKS						VOLUME:							
PLOT DATE: 8/27/2019			10:05:24 AM			DATE: 08/28/2019				DRAWING NO.:	SHEET NO.:						
										K905	131						



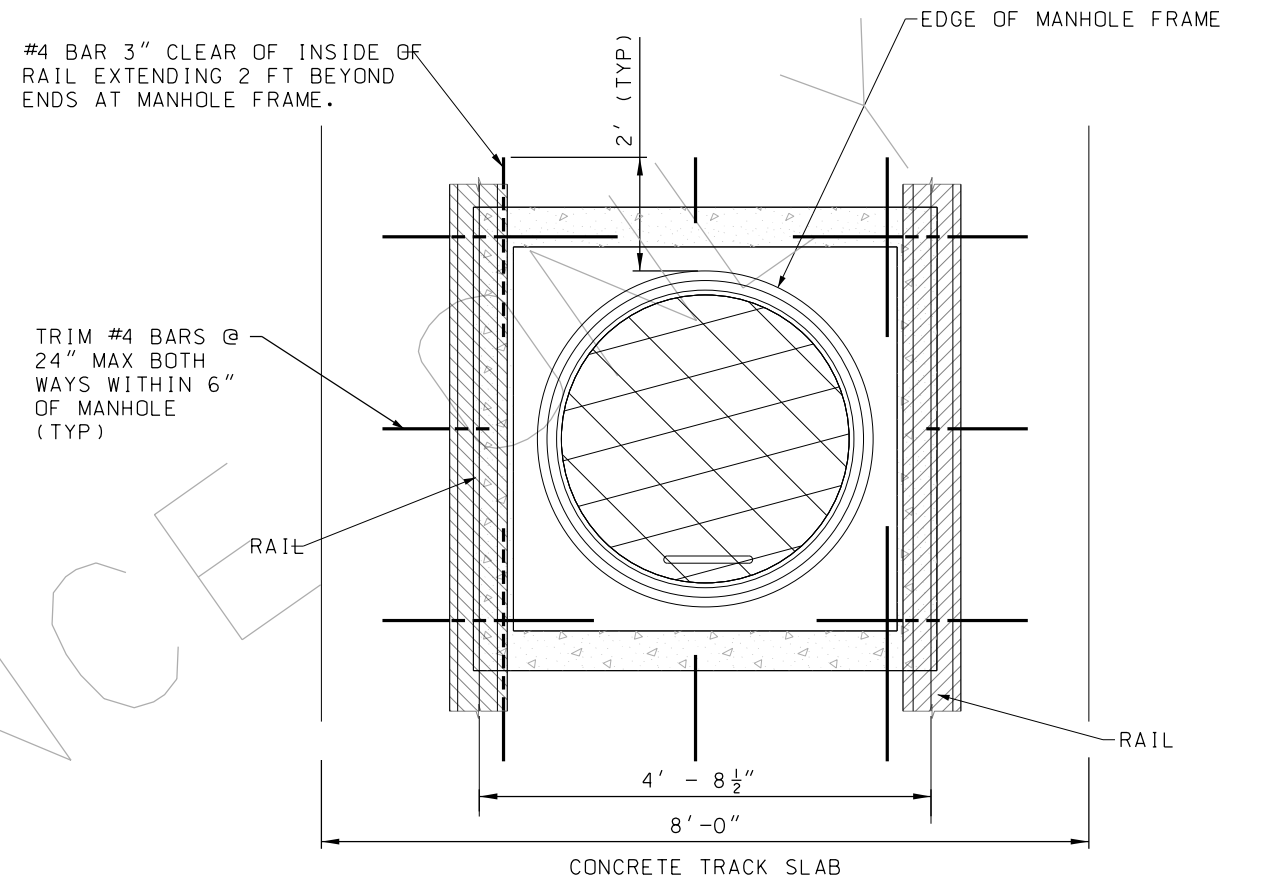
NOTES:

1. THE SWITCH WILL BE POWERED OR MANUAL (SEE SYSTEMS PLANS) WITH ACCOMMODATION FOR POINT DETECTION. THE SWITCH MUST BE TRAILABLE WITH A SPRING AND RETURN MECHANISM (OR OTHER APPROVED MECHANISM). SWITCH MECHANISM AND EARTH BOX SHALL BE INSULATED FOR SIGNALING CIRCUITS.
2. ALL JOINTS AND CONNECTIONS TO BE FIELD WELDED UNLESS NOTED OTHERWISE.
3. ALL DIMENSIONS ARE IN FEET AND INCHES.
4. TURNOUT TO BE FULLY INSULATED FOR ELECTRICAL ISOLATION PROVIDED THROUGH ENCAPSULATION PER MANUFACTURER AND MATERIAL SUPPLIER SPECIFICATIONS AND APPROVED BY ENGINEER. ISOLATION SHALL SATISFY RESISITVITY REQUIREMENTS PER SPECIFICATIONS.
5. SWITCH MACHINE SHALL BE CENTERED BETWEEN TONGUE SWITCHES AFTER GEOMETRY DIMENSIONS AND TOLERANCES HAVE BEEN SATISFIED.
6. ALL GAUGE RODS SHALL BE DRILLED AND SECURED TO TURNOUT AFTER GEOMETRY DIMENSIONS AND TOLERANCES HAVE BEEN SATISFIED.
7. SWITCH BOX DRAIN TO BE CONNECTED TO OVERALL DRAINAGE NETWORK. PROVIDE POWERED CONNECTIONS FOR SWITCH HEATERS AND POWER SWITCHES.
8. EARTHBOX MACHINE AND SWITCH HEATER BOXES SHALL BE DESIGNED FOR HS20 LOADING.
9. LEFT-HAND TURNOUT SHOWN. RIGHT-HAND IS MIRROR IMAGE.
10. FROG SHALL BE FLANGE BEARING WELDED BOLTLESS MANGANESE.
11. SEE TRAIN CONTROL DRAWINGS FOR INSULATED JOINT LOCATION AND LAYOUT.

REV	DATE	DESCRIPTION	DESIGNED BY	JWR	PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SCALE FOR 22"x34": NOT TO SCALE
			CHECKED BY	RPB	HDR	HDR Engineering, Inc.	25M Turnout Detail	FILENAME:
			DRAWN BY	MMQ	10450 Holmes Road		CONTRACT NO.:	*****
			CHECKED BY	RPB	Suite 600		VOLUME:	1
			APPROVED BY	NKS	Kansas City, MO 64131-3471		DRAWING NO.:	K906
					816-360-2700		SHEET NO.:	132
					Certificate of Authority: 000856			
PLOT DATE: 8/27/2019			DATE: 08/28/2019		NOT FOR CONSTRUCTION			



TRACK SLAB WITH MANHOLE
BETWEEN THE RAILS DETAIL
NOT TO SCALE

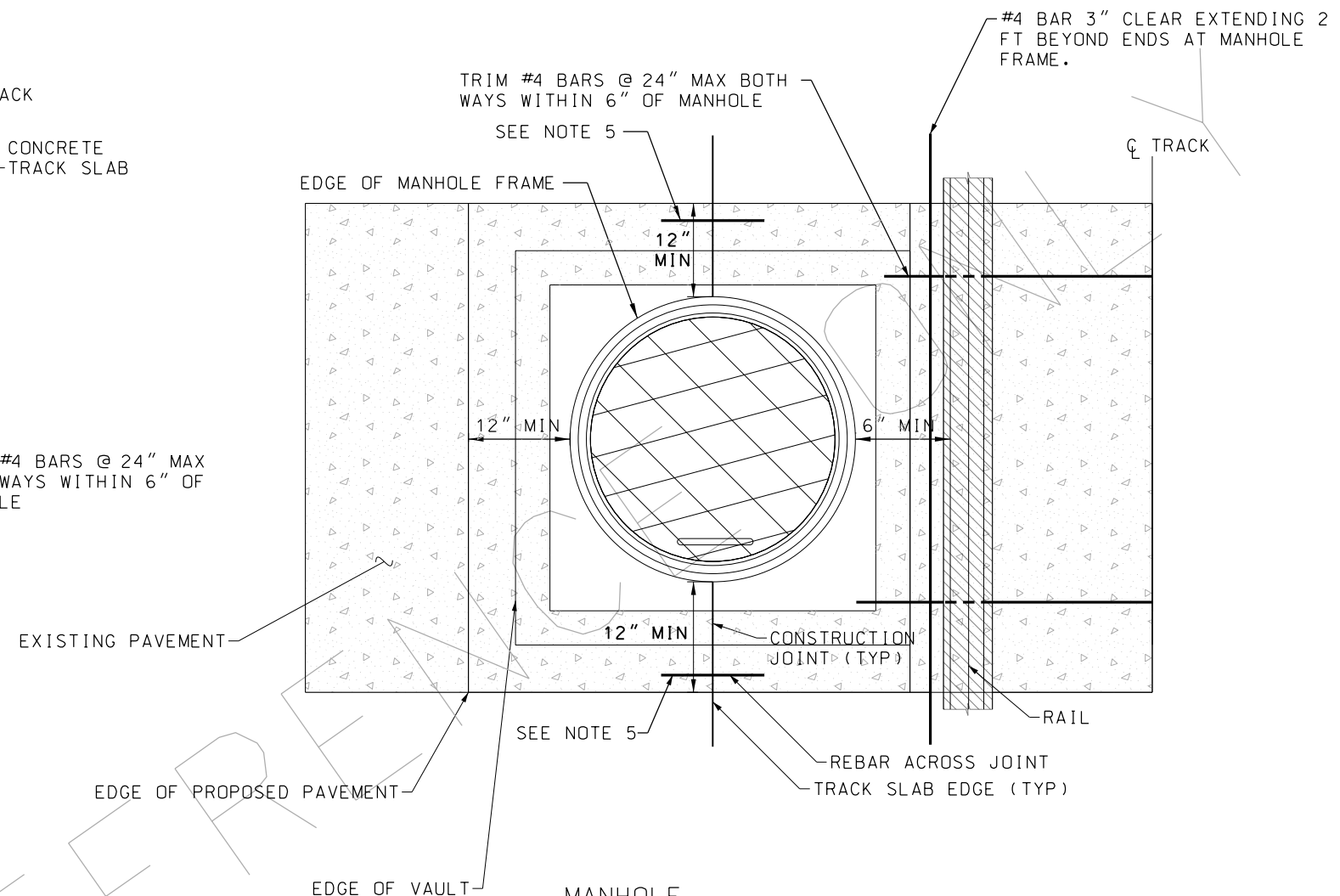
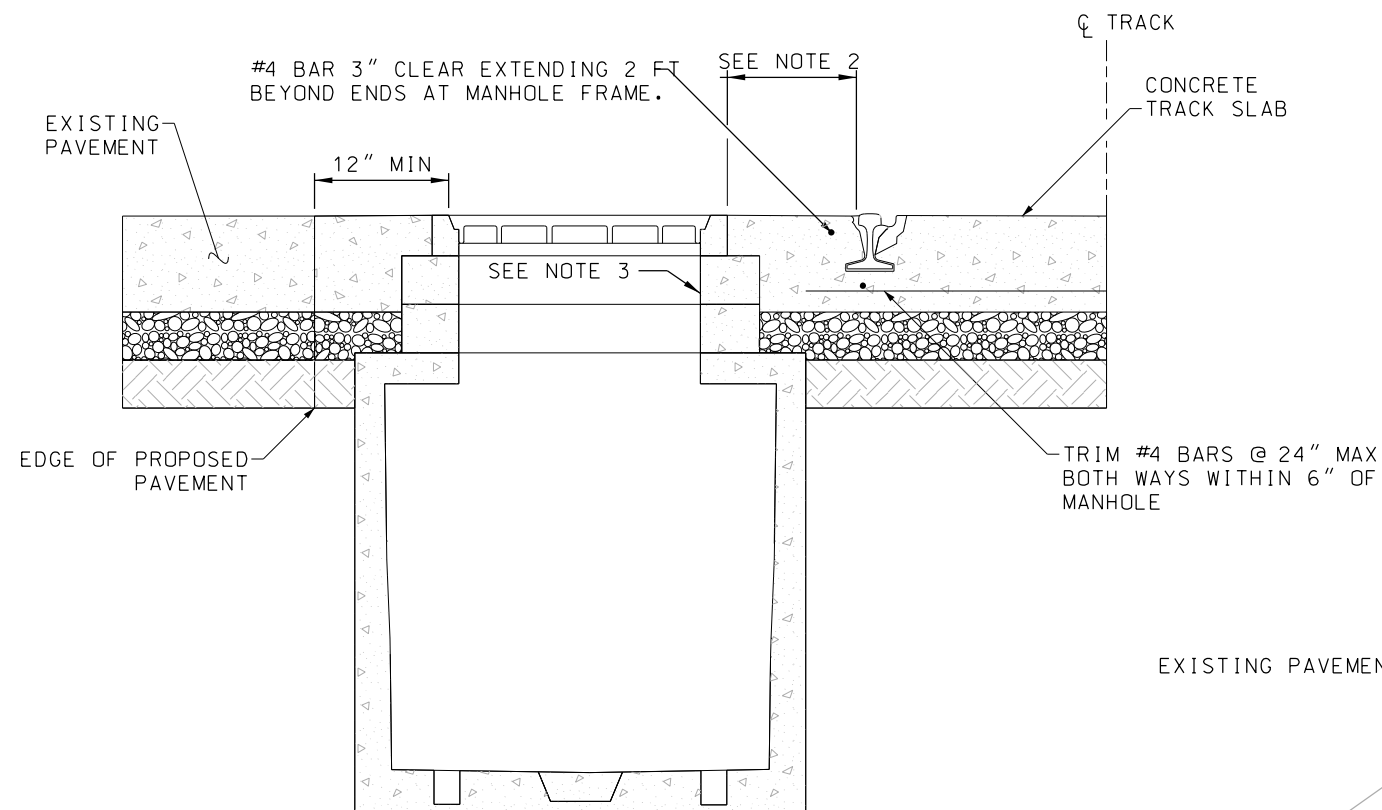


MANHOLE
PLAN VIEW
NOT TO SCALE

NOTES:

1. TRACK GAUGE IS MEASURED AT $\frac{5}{8}$ " BELOW TOP OF RAIL AND FROM THE GAUGE FACE TO GAUGE FACE.
2. WHERE MANHOLE CONFLICTS WITH STEEL GAUGE TIE ADJUST GAUGE TIE(S) IN CONFLICT WITH SPACING NO GREATER THAN $7\frac{1}{2}$ ' TO AVOID CONFLICT. NO GAPS BETWEEN GAUGE TIES SHALL EXCEED 10'.
3. WHERE LESS THAN 6" BETWEEN MANHOLE LID CASTING AND RAIL BOOT, CONTRACTOR SHALL SUBMIT FIELD VERIFIED LOCATION AND OFFSET BETWEEN MANHOLE LID CASTING AND RAIL BOOT TO ENGINEER FOR APPROVAL PRIOR TO FILLING AREA WITH ELASTOMERIC GROUT. NO REBAR SHALL BE PLACED WHERE ELASTOMERIC GROUT IS NEEDED.
4. MANHOLE SHOWN IN DETAIL, BUT SAME REQUIREMENTS APPLY FOR INLETS OF DIFFERENT SHAPES AND MATERIALS.
5. UTILITY LOCATIONS TO BE VERIFIED BY CONTRACTOR IN THE FIELD.

REV	DATE	DESCRIPTION	DESIGNED BY	JWR	PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SCALE FOR 22"x34": NOT TO SCALE
			CHECKED BY	RPB	HDR	HDR Engineering, Inc.		FILENAME: Manhole Rebar Detail 1 of 2
			DRAWN BY	MMO	10450 Holmes Road			CONTRACT NO.:
			CHECKED BY	RPB	Suite 600			VOLUME:
			APPROVED BY	NKS	Kansas City, MO 64131-3471			1
					816-360-2700			DRAWING NO.:
					Certificate of Authority: 000856			SHEET NO.:
								K907 133
PLOT DATE: 8/27/2019			DATE: 08/28/2019					
						NOT FOR CONSTRUCTION		
							MANHOLE REBAR DETAIL SHEET 1 OF 2	



TRACK SLAB WITH MANHOLE NEAR THE RAILS DETAIL

NOT TO SCALE

$$\frac{A}{-}$$

MANHOLE
PLAN VIEW

NOT TO SCALE

#4 BAR 3" CLEAR EXTENDING 2
FT BEYOND ENDS AT MANHOLE
FRAME.

TRIM #4 BARS @ 24" MAX BOTH
WAYS WITHIN 6" OF MANHOLE

SEE NOTE 5 —

12"
MIN

12" MIN

6" MIN

A coordinate plane with a line having a negative slope. The line intersects the y-axis at a point labeled "MIN". An arrow points to this intersection point.

CONSTRUCTION
JOINT (TYP)

SEE NOTE 5-

REBAR ACROSS JOINT
TRACK SLAB EDGE (TYP

-RAIL

EXISTING PAVEMENT

EDGE OF VAULT-

EDGE OF PROPOSED PAVEMENT.

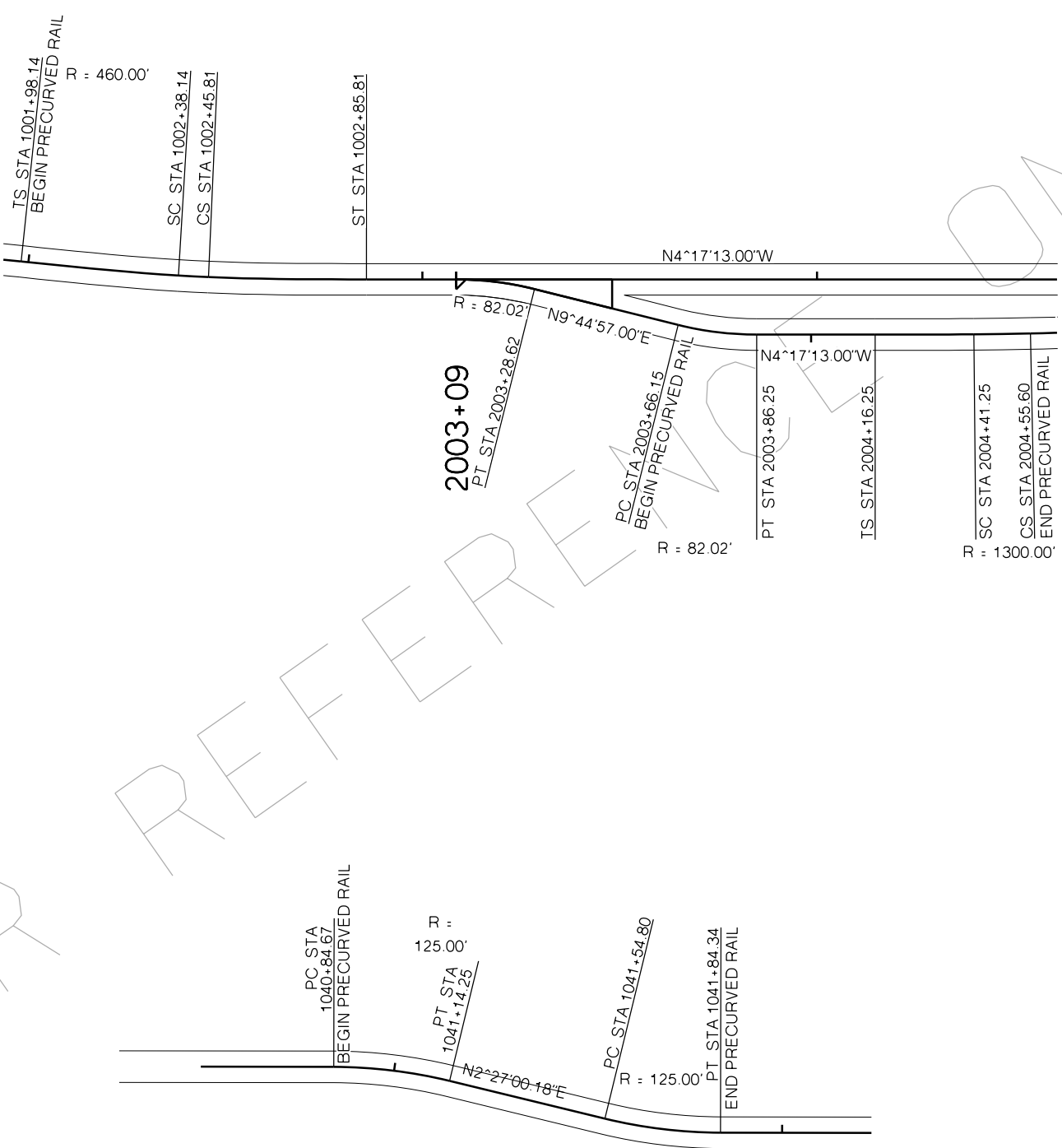
NOTES:

1. WHERE MANHOLE CONFLICTS WITH STEEL GAUGE TIE ADJUST GAUGE TIE(S) IN CONFLICT WITH SPACING NO GREATER THAN $7\frac{1}{2}'$ TO AVOID CONFLICT. NO GAPS BETWEEN GAUGE TIES SHALL EXCEED $10'$.
2. WHERE LESS THAN $6"$ BETWEEN MANHOLE LID CASTING AND RAIL BOOT, CONTRACTOR SHALL SUBMIT FIELD VERIFIED LOCATION AND OFFSET BETWEEN MANHOLE LID CASTING AND RAIL BOOT TO ENGINEER PRIOR TO FILLING AREA WITH ELASTOMERIC GROUT. NO REBAR SHALL BE PLACED WHERE ELASTOMERIC GROUT IS NEEDED.
3. MANHOLE SHOWN IN DETAIL, BUT SAME REQUIREMENTS APPLY FOR INLETS OF DIFFERENT SHAPES AND MATERIALS.
4. UTILITY LOCATIONS TO BE VERIFIED BY CONTRACTOR IN THE FIELD.
5. PER CITY OF MILWAUKEE STANDARD SPECIFICATIONS, TIE BAR IS TO EXTEND $6"$ INTO PAVEMENT ON EITHER SIDE OF THE JOINT.

REV	DATE	DESCRIPTION	DESIGNED BY JWR		PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	MANHOLE REBAR DETAIL SHEET 2 OF 2	SCALE FOR 22"x34": NOT TO SCALE
			CHECKED BY RPB		 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	NOT FOR CONSTRUCTION			FILENAME:
			DRAWN BY MMO						Manhole Rebar Detail 2 of 2
			CHECKED BY RPB						CONTRACT NO.:
			APPROVED BY NKS						*****
									VOLUME:
PLOT DATE: 8/27/2019		10:05:35 AM	DATE 08/28/2019				DRAWING NO.: K908	SHEET NO.: 134	

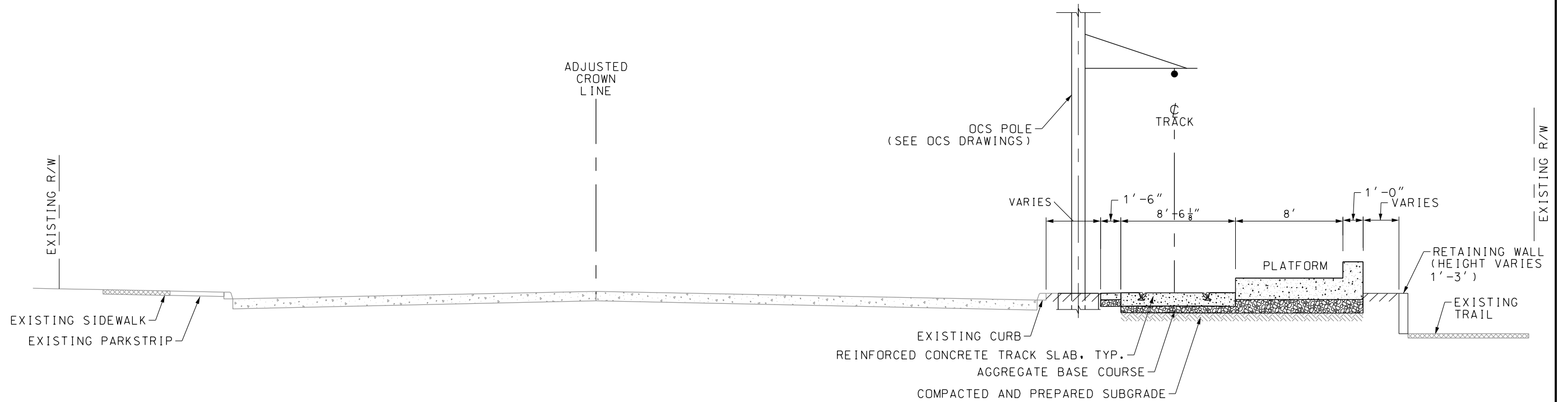
GENERAL NOTES

1. CURVE GEOMETRY SHOWN IS FOR TRACK CENTERLINE.
2. SUPPLIERS SHALL SUBMIT SHOP DRAWINGS FOR ENGINEERS APPROVAL, PER SPECIFICATIONS.

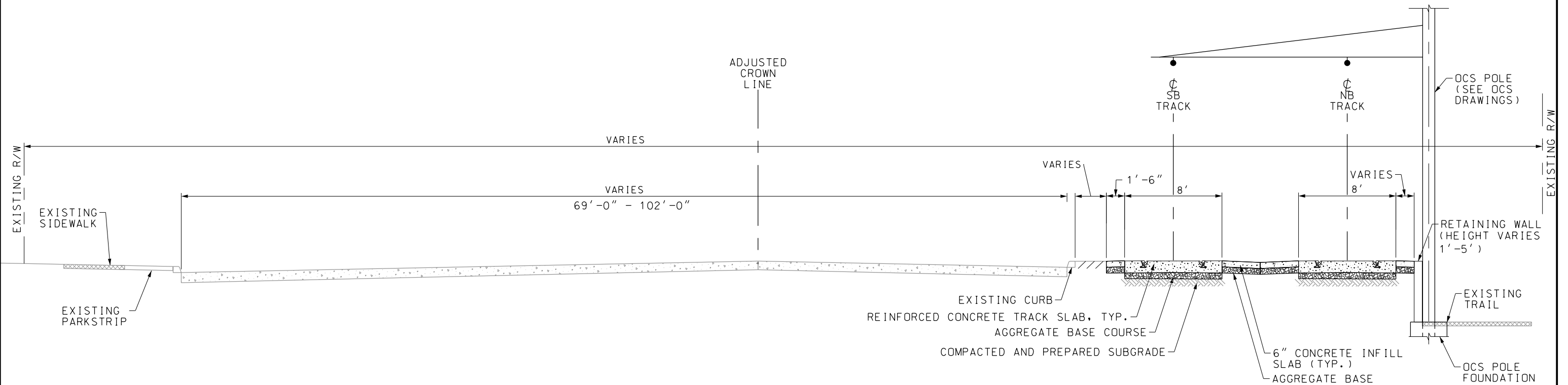


FOR REFERENCE ONLY

REV	DATE	DESCRIPTION	DESIGNED BY	JWR		PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SCALE FOR 22"x34": H: 1"=20'						
			CHECKED BY	RPB						 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	HORIZONTAL PRECURVED RAIL DETAILS	FILENAME: Precurved Rail Detail CONTRACT NO.: ***** VOLUME: 1			
			DRAWN BY	MMO									NOT FOR CONSTRUCTION	DRAWING NO.: K909	SHEET NO.: 135
			CHECKED BY	RPB											
			APPROVED BY	NKS											
PLOT DATE: 8/27/2019 10:05:39 AM			DATE: 08/28/2019												



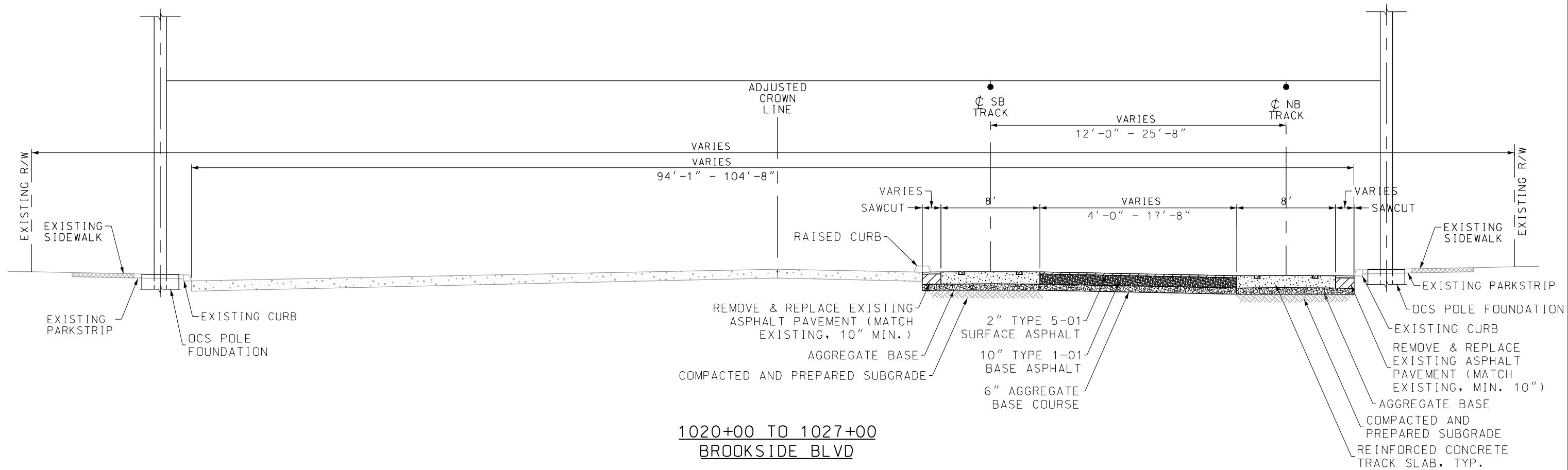
1000+00 TO 1001+00
BROOKSIDE BLVD



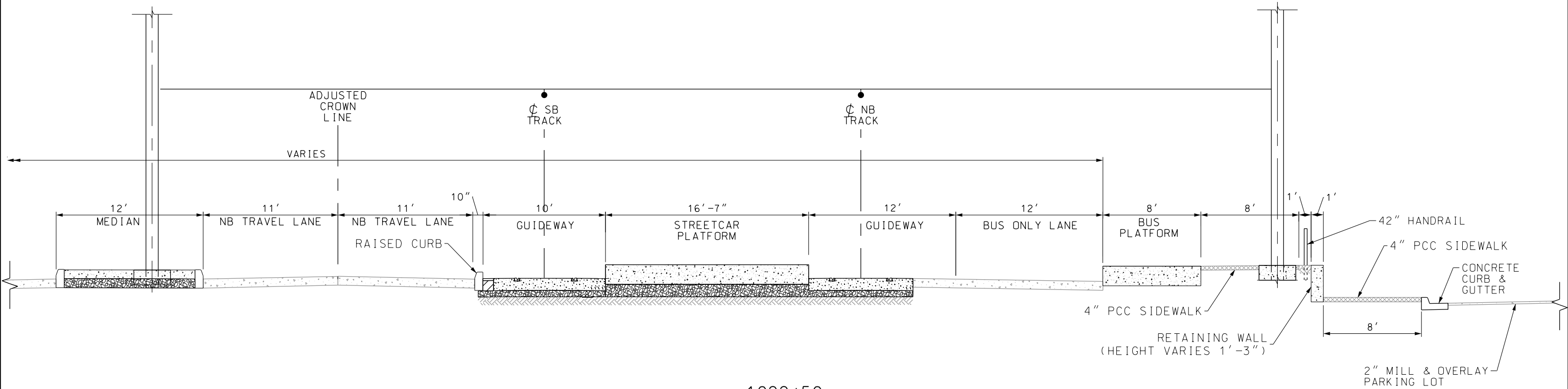
1001+00 TO 1020+00
BROOKSIDE BLVD

REV	DATE	DESCRIPTION	DESIGNED BY	JWR		PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION TYPICAL SECTIONS SHEET 1 OF 5	SCALE FOR 22"x34": NOT TO SCALE	
			CHECKED BY	RPB		 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	NOT FOR CONSTRUCTION		FILENAME: Typical Sections SH1	
			DRAWN BY	MMO					CONTRACT NO.:	
			CHECKED BY	RPB					*****	
			APPROVED BY	NKS					VOLUME:	
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PLOT DATE: 8/27/2019		10:59:38 AM	DATE	08/28/2019				DRAWING NO.:	SHEET NO.:	
								C001	136	






1020+00 TO 1027+00
BROOKSIDE BLVD

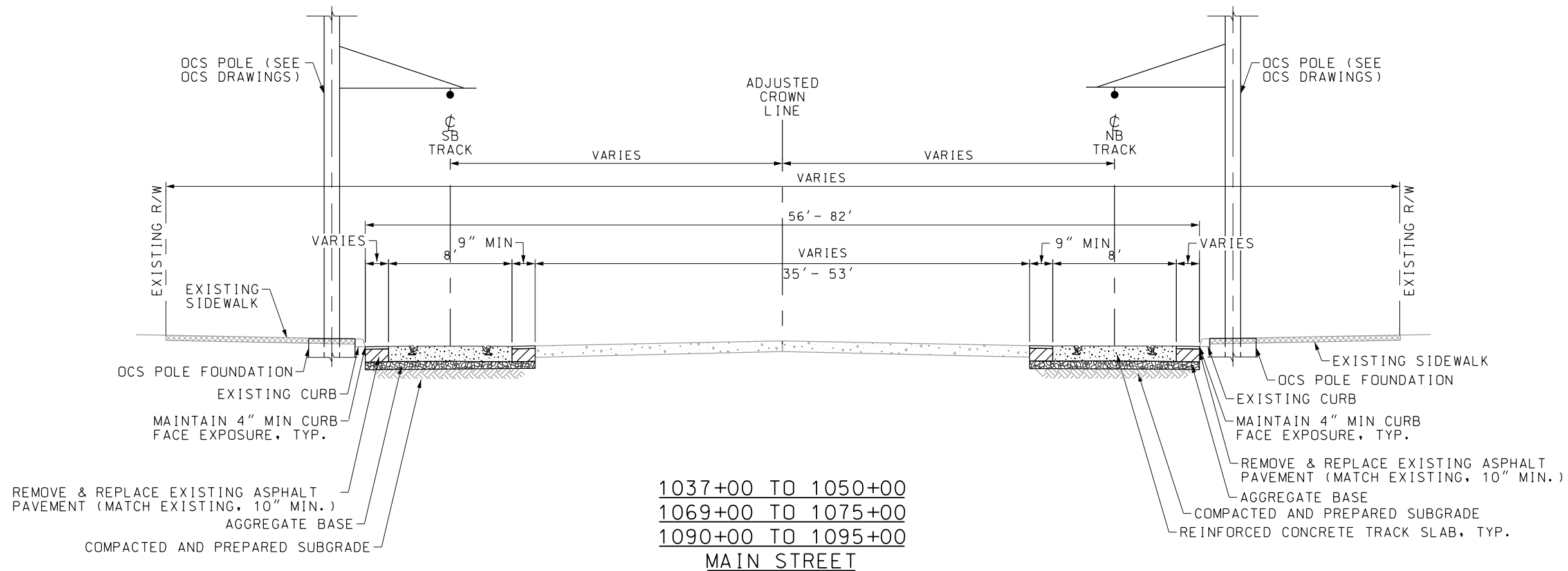
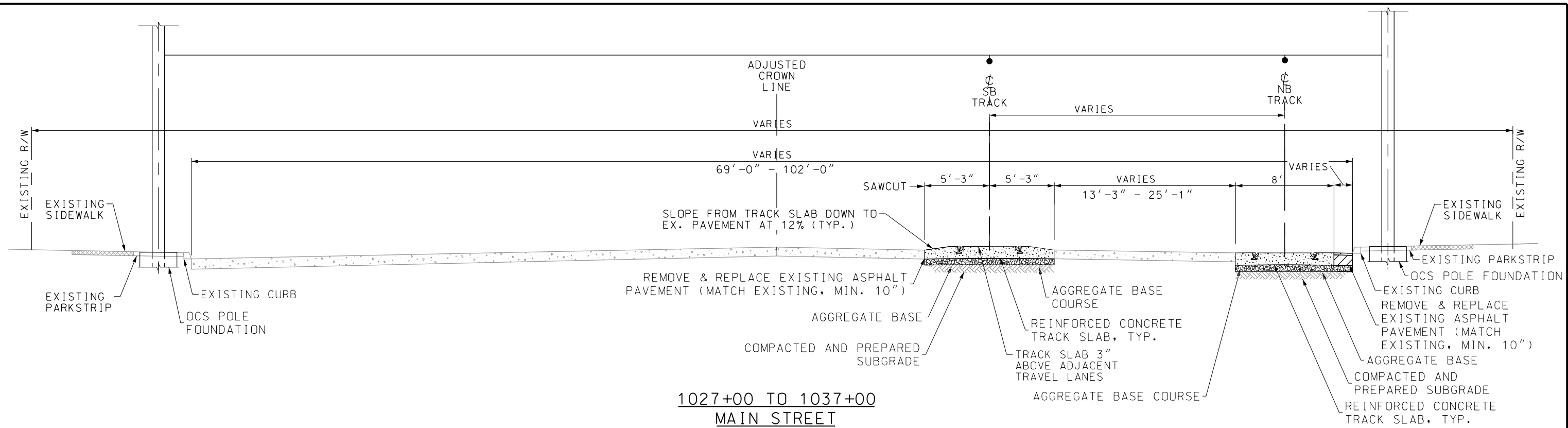


1022+50
BUS PLAZA

REV	DATE	DESCRIPTION	DESIGNED BY	JWR			PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	TYPICAL SECTIONS SHEET 2 OF 5	SCALE FOR 22"x34": NOT TO SCALE	
			CHECKED BY	RPB			 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856				FILENAME:	
			DRAWN BY	MMQ							CONTRACT NO.:	
			CHECKED BY	RPB							*****	
			APPROVED BY	NKS							VOLUME:	
PLOT DATE: 8/27/2019 10:59:43 AM			DATE	08/28/2019			NOT FOR CONSTRUCTION				DRAWING NO.: C002	SHEET NO.: 137



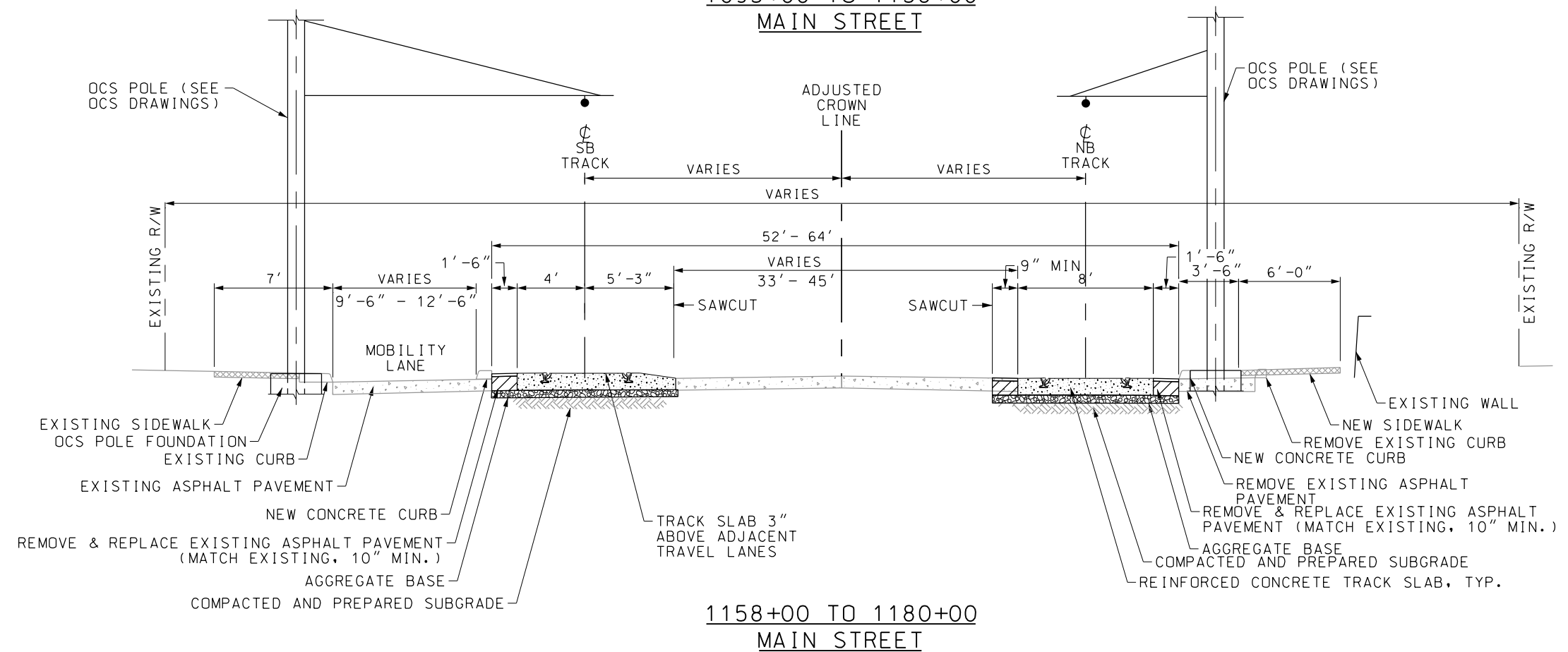
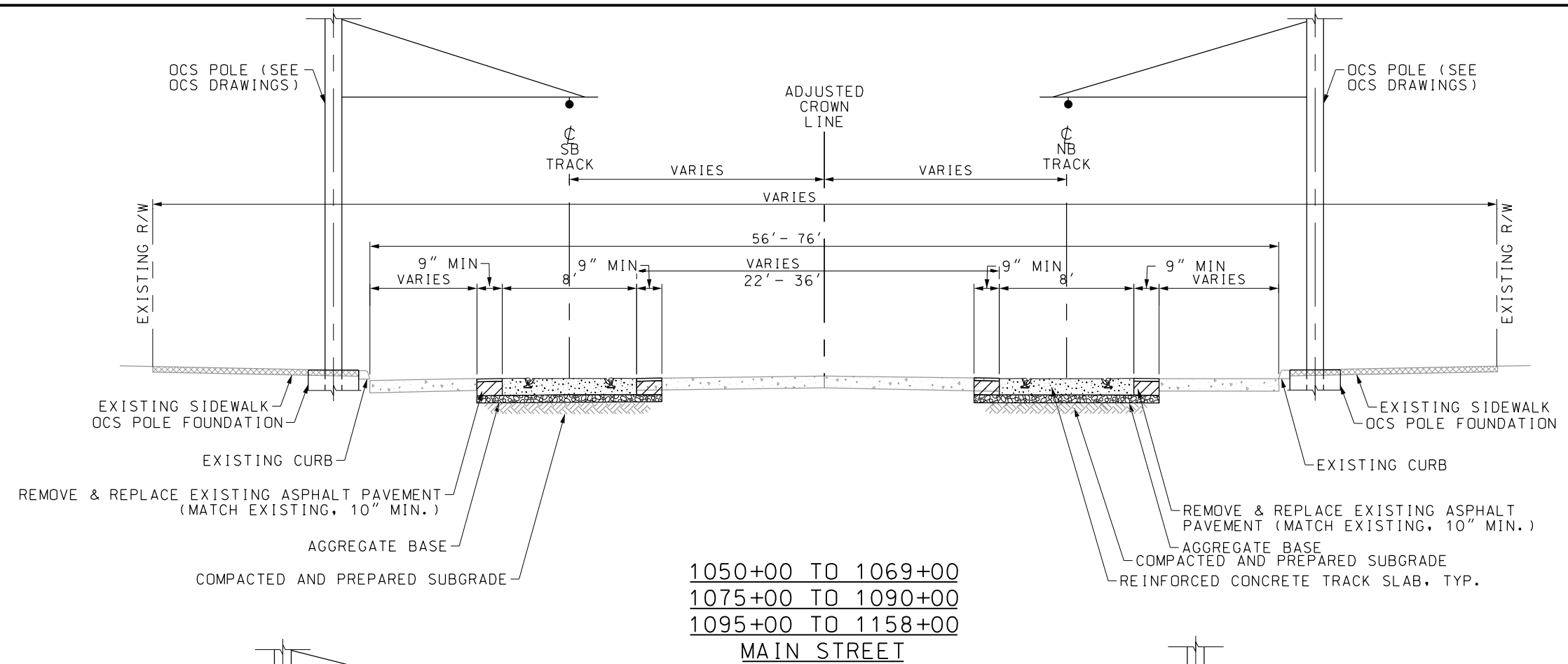
HDR
HDR Engineering, Inc.
10450 Holmes Road
Suite 600
Kansas City, MO 64131-3471
816-360-2700
Certificate of Authority: 000856



REV	DATE	DESCRIPTION	DESIGNED BY	JWR	PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SCALE FOR 22"x34": NOT TO SCALE
			CHECKED BY	RPB	HDR	HDR Engineering, Inc.		FILENAME:
			DRAWN BY	MMO	10450 Holmes Road			Typical Sections SH3
					Suite 600			CONTRACT NO.:
			CHECKED BY	RPB	Kansas City, MO 64131-3471			VOLUME:
			APPROVED BY	NKS	816-360-2700			1
PLOT DATE: 8/27/2019			DATE: 08/28/2019		NOT FOR CONSTRUCTION			DRAWING NO.: C003
								SHEET NO.: 138

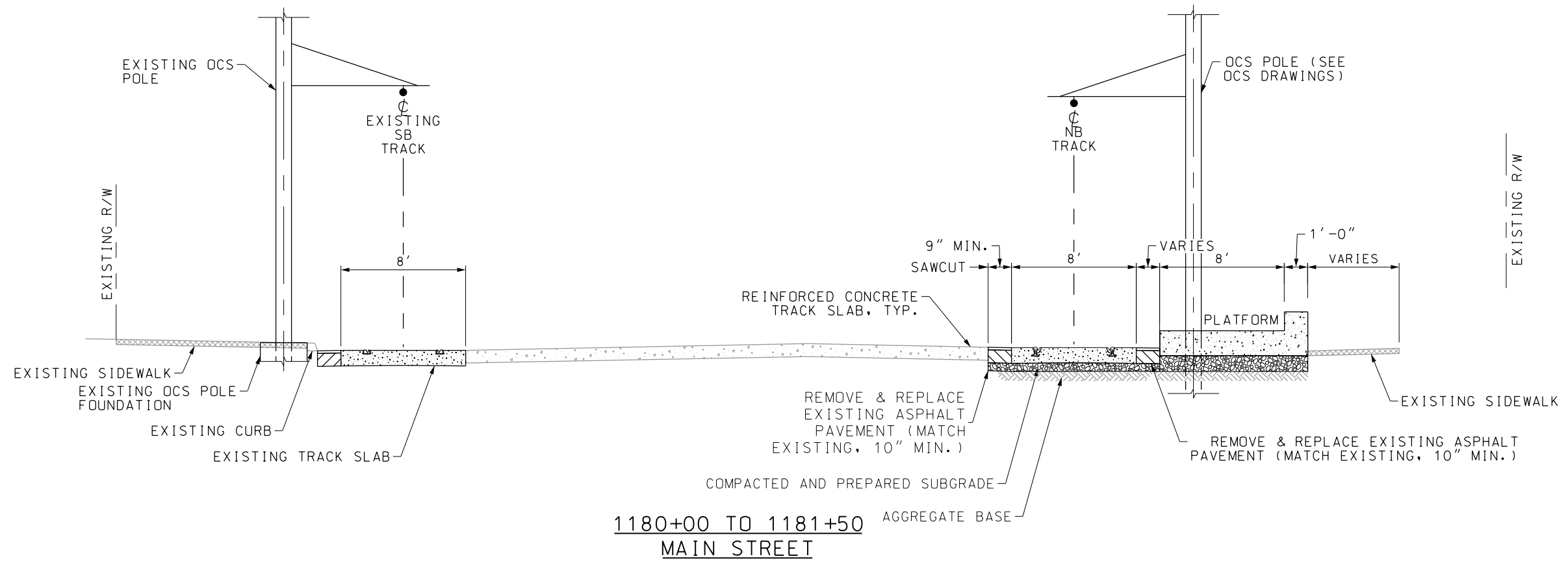


TYPICAL SECTIONS
SHEET 3 OF 5

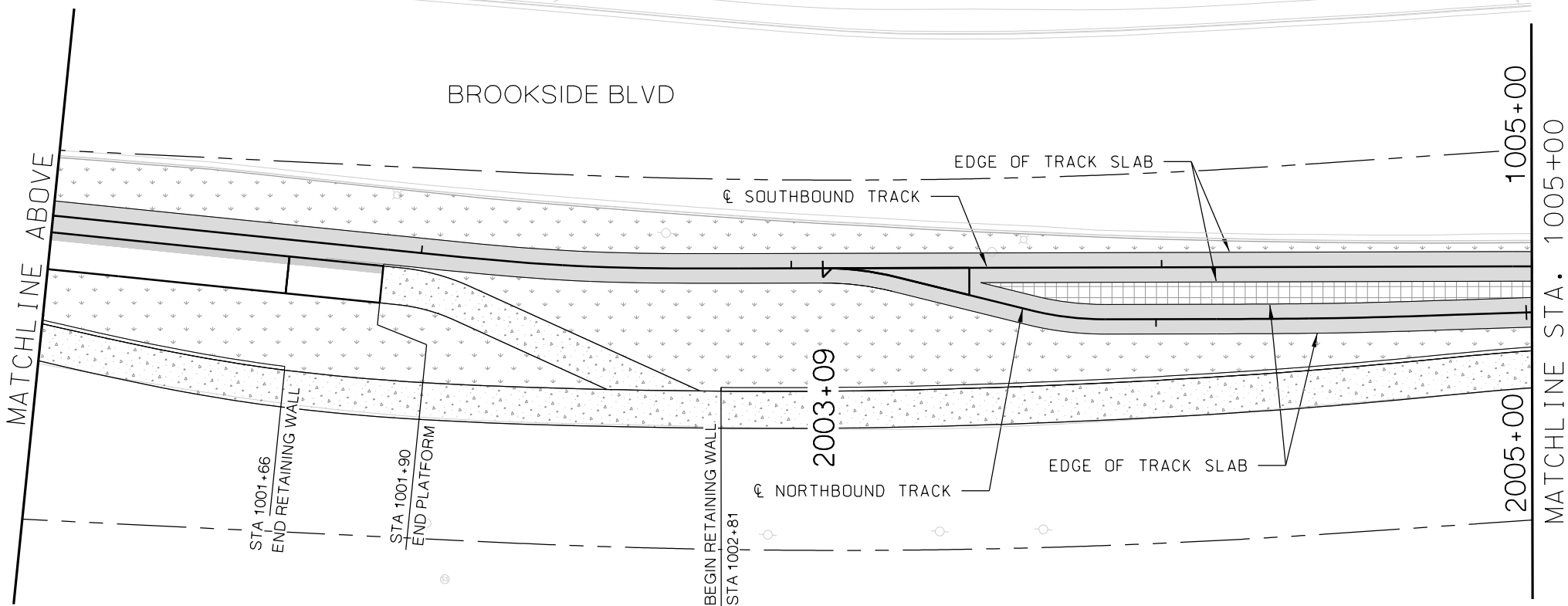
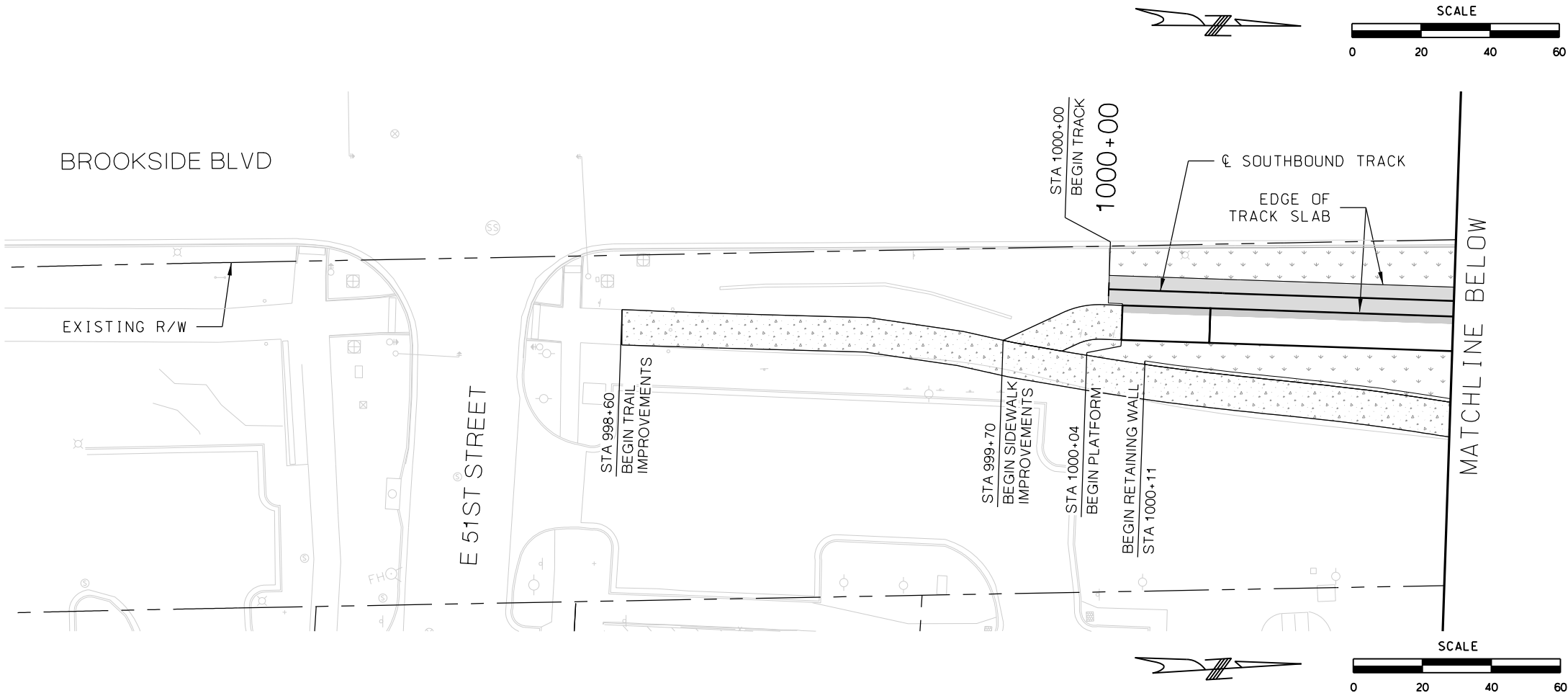


REV	DATE	DESCRIPTION	DESIGNED BY	JWR		PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	TYPICAL SECTIONS SHEET 4 OF 5	SCALE FOR 22"x34": NOT TO SCALE	
			CHECKED BY	RPB		 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	NOT FOR CONSTRUCTION			FILENAME:	
			DRAWN BY	MMO						Typical Sections SH4	
			CHECKED BY	RPB						CONTRACT NO.:	
			APPROVED BY	NKS						VOLUME:	
										1	
PLOT DATE: 8/27/2019		11:00:19 AM	DATE	08/28/2019				DRAWING NO.:	SHEET NO.:	C004	139





REV	DATE	DESCRIPTION	DESIGNED BY	JWR		<div>PRELIMINARY PLANS - 30% DATE: 08-28-2019</div> <div> HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856</div> <div>NOT FOR CONSTRUCTION</div>	<div>KANSAS CITY STREETCAR MAIN STREET EXTENSION</div> <div>TYPICAL SECTIONS SHEET 5 OF 5</div>	SCALE FOR 22"x34": NOT TO SCALE	
			CHECKED BY	RPB				FILENAME:	
			DRAWN BY	MMO				Typical Sections SH5	
			CHECKED BY	RPB				CONTRACT NO.:	
			APPROVED BY	NKS				VOLUME:	
								1	
PLOT DATE: 8/27/2019		11:00:24 AM	DATE	08/28/2019			DRAWING NO.:	SHEET NO.:	
							C005	140	



LEGEND

- TRACK SLAB
- HMAC FULL DEPTH
- CONCRETE SIDEWALK / TRAIL
- CONCRETE INFILL
- ASPHALT PAVEMENT
- BRIDGE MILL AND CONCRETE OVERLAY
- LANDSCAPE
- COLORED, STAMPED CONCRETE

REV	DATE	DESCRIPTION
PLOT DATE: 8/27/2019		11:00:46 AM

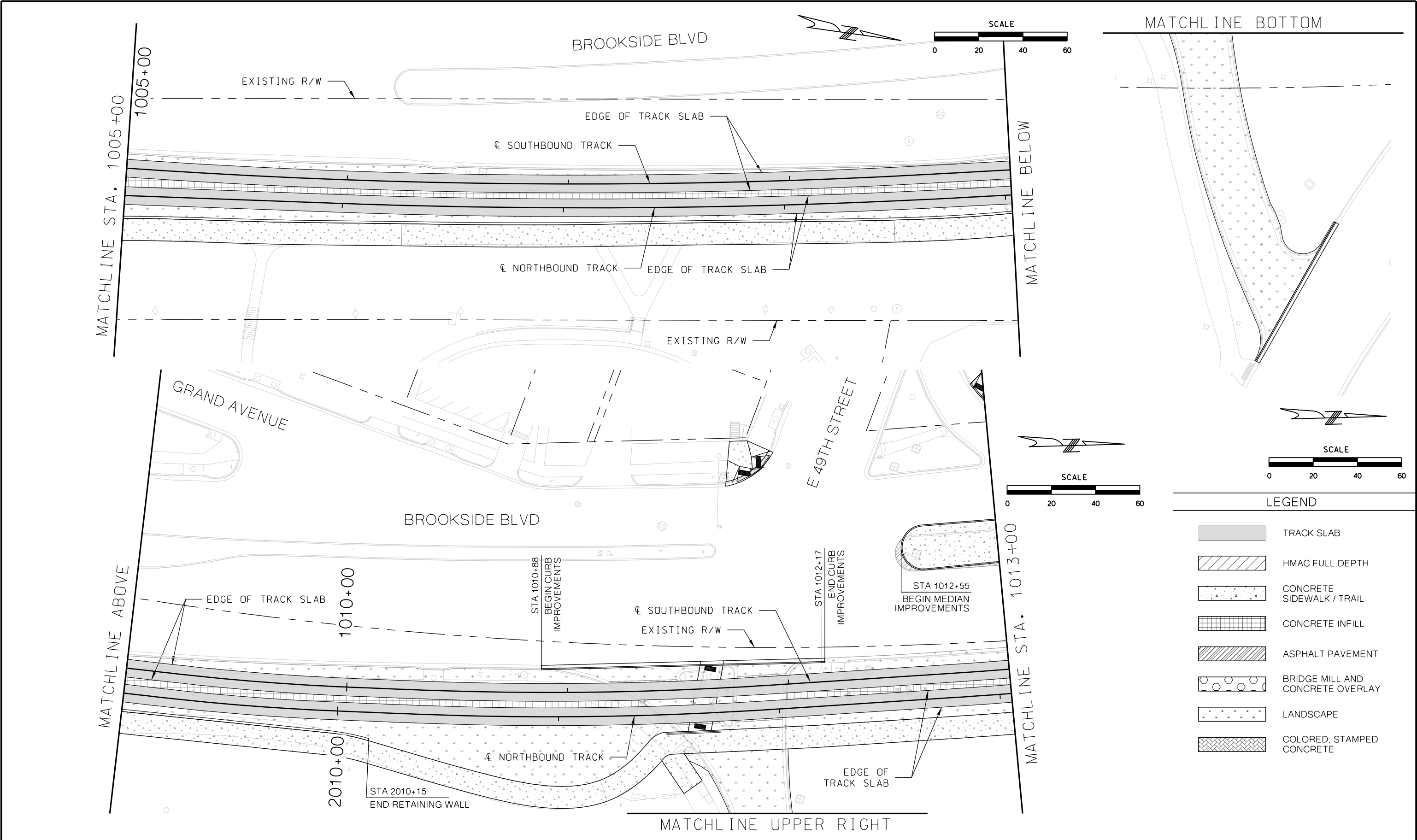
DESIGNED BY	JWR
CHECKED BY	RPB
DRAWN BY	MMO
CHECKED BY	RPB
APPROVED BY	NKS
DATE	08/28/2019



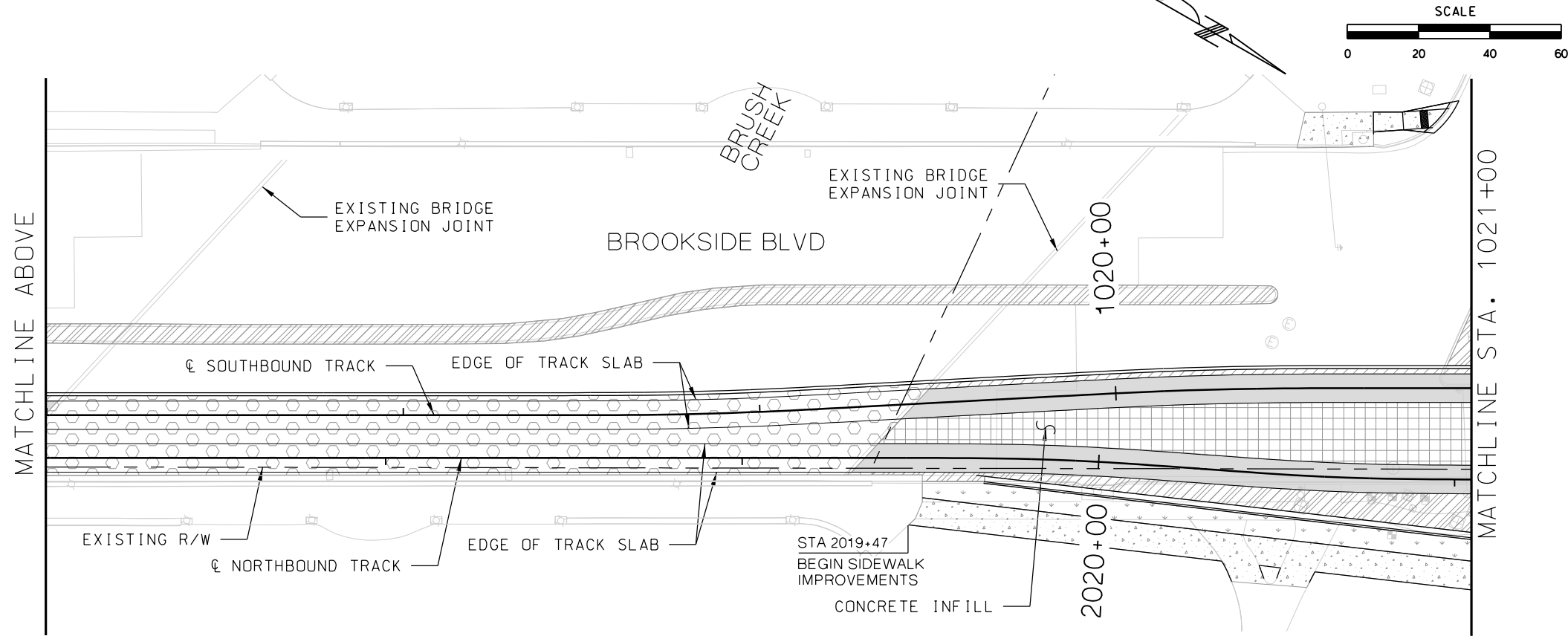
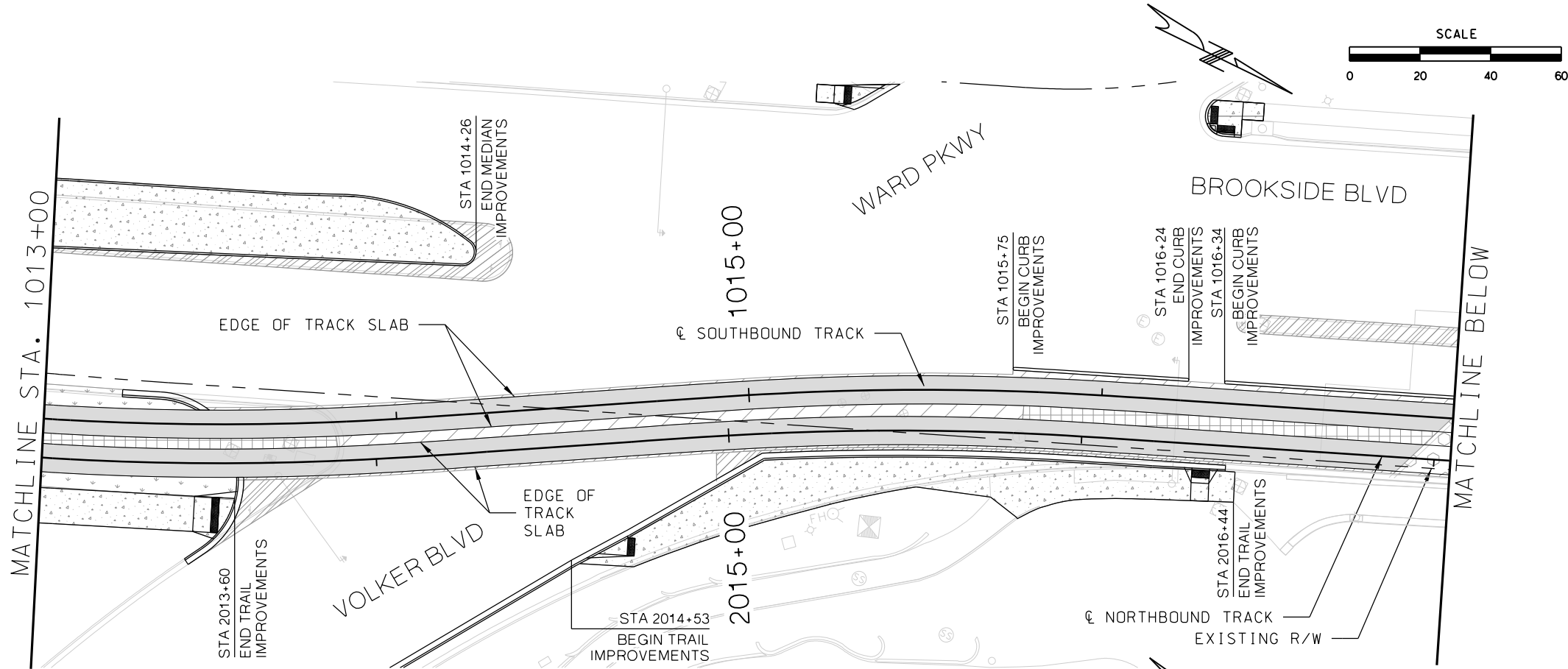
PRELIMINARY PLANS - 30%	DATE: 08-28-2019
HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	
NOT FOR CONSTRUCTION	

KANSAS CITY STREETCAR MAIN STREET EXTENSION	
SOUTHBOUND AND NORTHBOUND TRACK	
CIVIL PLAN	
STA BEGIN TO STA 1001+00	
STA 1001+00 TO STA 1005+00	

SCALE FOR 22"x34": H: 1"=20'	
FILENAME: CIVIL STA BEGIN - 1005+00	
CONTRACT NO.:	
VOLUME:	
DRAWING NO.:	SHEET NO.:
C101	141



<table><tr><th>REV</th><th>DATE</th><th>DESCRIPTION</th></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr></table>			REV	DATE	DESCRIPTION																<table><tr><td>DESIGNED BY</td><td>JWR</td></tr><tr><td>CHECKED BY</td><td>RPB</td></tr><tr><td>DRAWN BY</td><td>MMO</td></tr><tr><td>CHECKED BY</td><td>RPB</td></tr><tr><td>APPROVED BY</td><td>NKS</td></tr></table>		DESIGNED BY	JWR	CHECKED BY	RPB	DRAWN BY	MMO	CHECKED BY	RPB	APPROVED BY	NKS	<div></div>		<div>PRELIMINARY PLANS - 30%<div>DATE: 08-28-2019</div></div> <div><div>HDR Engineering, Inc.</div><div>10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856</div></div> <div>NOT FOR CONSTRUCTION</div>		<div><div>KANSAS CITY STREETCAR MAIN STREET EXTENSION</div><div>SOUTHBOUND AND NORTHBOUND TRACK</div><div>CIVIL PLAN</div><div>STA 1005+00 TO STA 1009+00</div><div>STA 1009+00 TO STA 1013+00</div></div>		<div>SCALE FOR 22"x34": H: 1"=20'</div> <div>FILENAME: CIVIL STA 1005+00 - 1013+00</div> <div>CONTRACT NO.: *****</div> <div>VOLUME: 1</div> <div><div>DRAWING NO.: C102</div><div>SHEET NO.: 142</div></div>	
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CHECKED BY	RPB																																							
DRAWN BY	MMO																																							
CHECKED BY	RPB																																							
APPROVED BY	NKS																																							
<div>PLOT DATE: 8/27/201911:01:02 AM</div>			<div>DATE: 08/28/2019</div>																																					



LEGEND

- TRACK SLAB
- HMAC FULL DEPTH
- CONCRETE SIDEWALK / TRAIL
- CONCRETE INFILL
- ASPHALT PAVEMENT
- BRIDGE MILL AND CONCRETE OVERLAY
- LANDSCAPE
- COLORED, STAMPED CONCRETE

REV	DATE	DESCRIPTION
PLOT DATE: 8/27/2019		11:01:17 AM

DESIGNED BY	JWR
CHECKED BY	RPB
DRAWN BY	MMO
CHECKED BY	RPB
APPROVED BY	NKS
DATE	08/28/2019



PRELIMINARY PLANS - 30%DATE: 08-28-2019

HDR Engineering, Inc.
10450 Holmes Road
Suite 600
Kansas City, MO 64131-3471
816-360-2700
Certificate of Authority: 000856

NOT FOR CONSTRUCTION

KANSAS CITY STREETCAR MAIN STREET EXTENSION

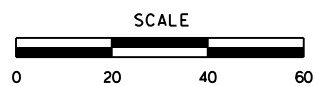
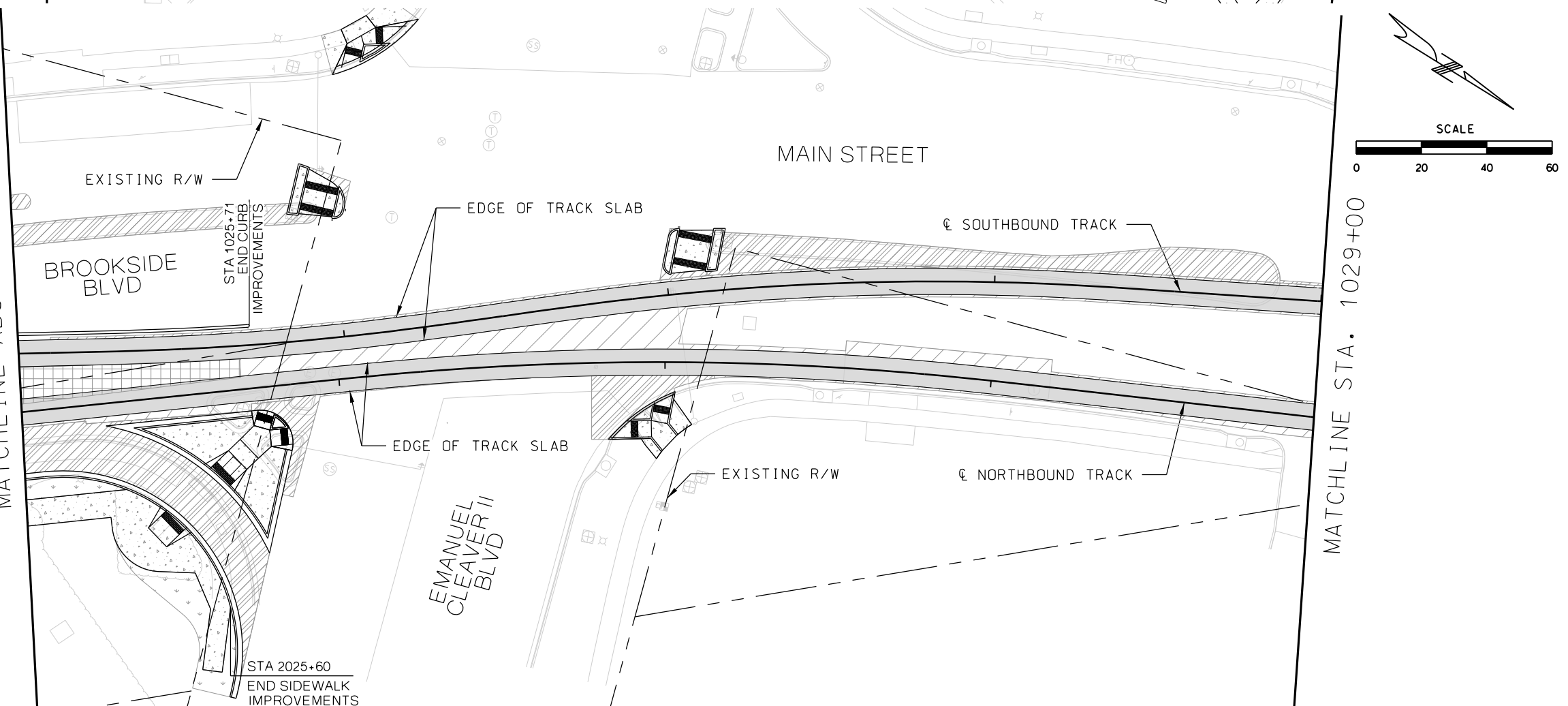
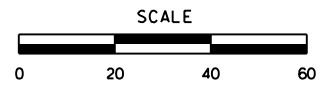
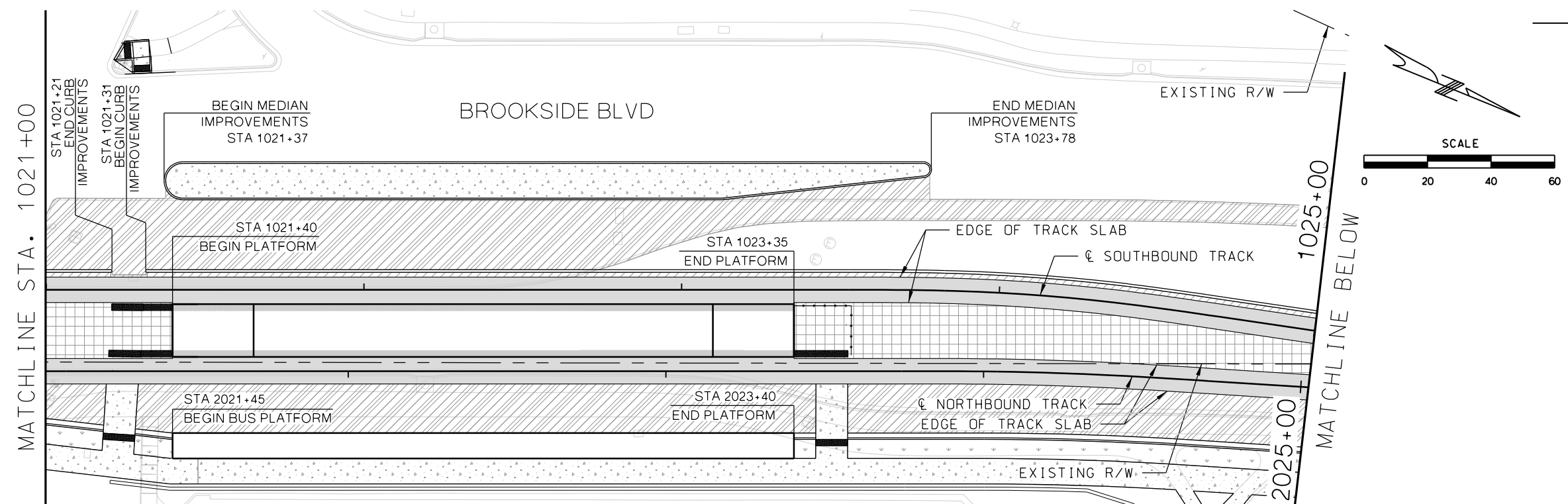
SOUTHBOUND AND NORTHBOUND TRACK

CIVIL PLAN

STA 1013+00 TO STA 1017+00





STA 1017+00 TO STA 1021+00

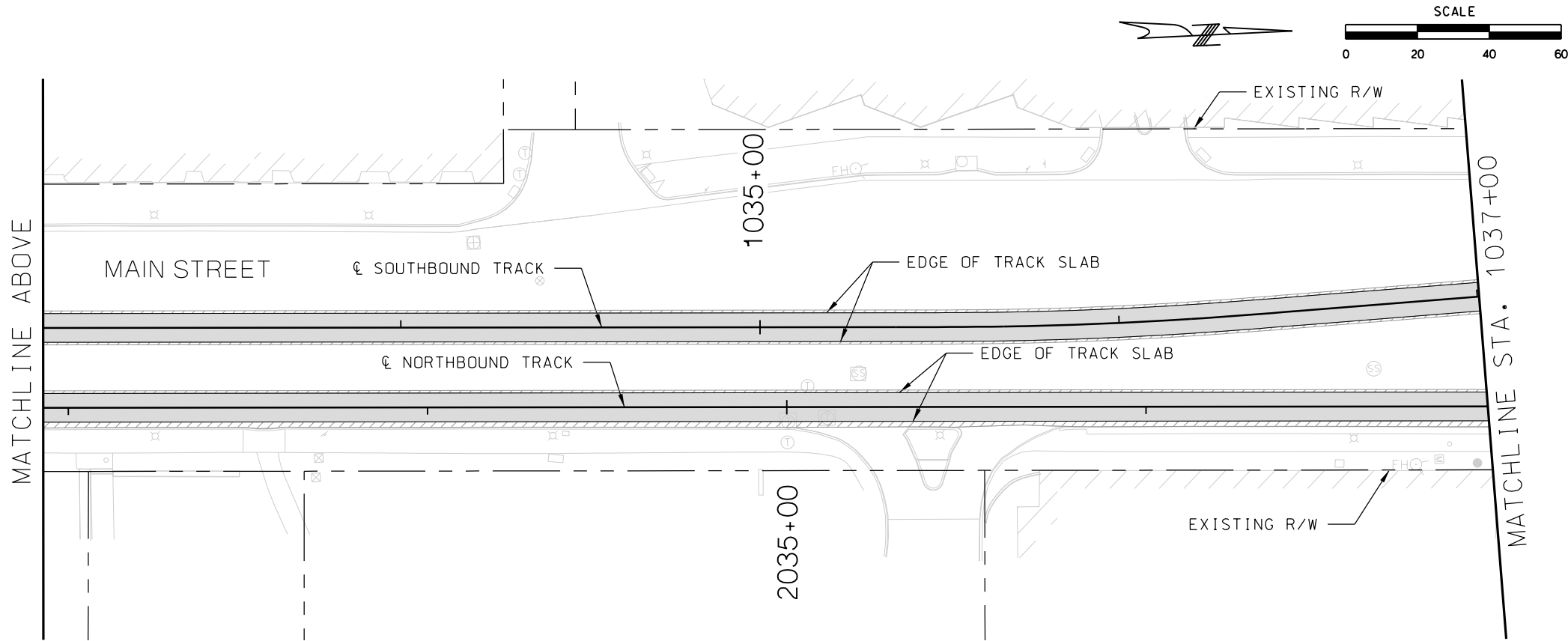
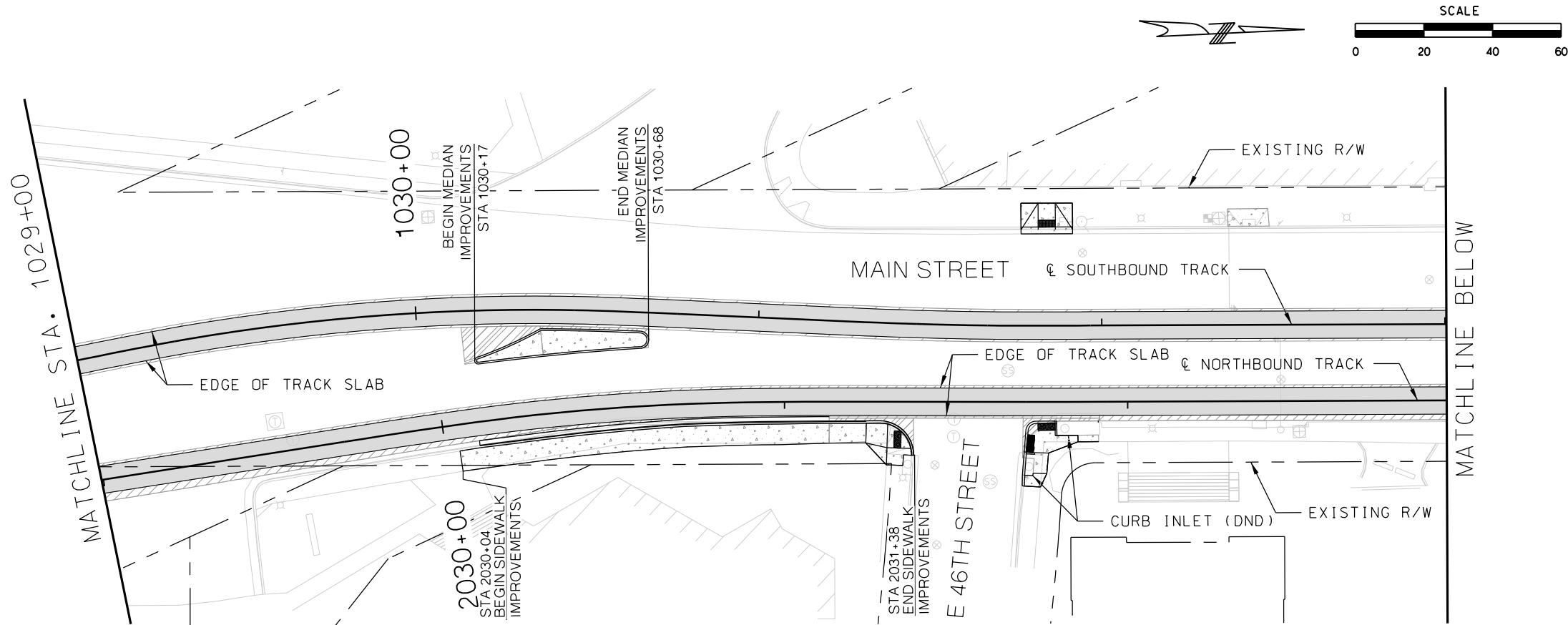
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FILENAME: CIVIL STA 1013+00 - 1021+00	
CONTRACT NO.:	
VOLUME:	
DRAWING NO.:	SHEET NO.:
C103	143



LEGEND

- TRACK SLAB
- HMAC FULL DEPTH
- CONCRETE SIDEWALK / TRAIL
- CONCRETE INFILL
- ASPHALT PAVEMENT
- BRIDGE MILL AND CONCRETE OVERLAY
- LANDSCAPE
- COLORED, STAMPED CONCRETE

<table><tr><th>REV</th><th>DATE</th><th>DESCRIPTION</th></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr></table>			REV	DATE	DESCRIPTION																<table><tr><td>DESIGNED BY</td><td>JWR</td></tr><tr><td>CHECKED BY</td><td>RPB</td></tr><tr><td>DRAWN BY</td><td>MMO</td></tr><tr><td>CHECKED BY</td><td>RPB</td></tr><tr><td>APPROVED BY</td><td>NKS</td></tr></table>		DESIGNED BY	JWR	CHECKED BY	RPB	DRAWN BY	MMO	CHECKED BY	RPB	APPROVED BY	NKS	<div></div>		<table><tr><td colspan="2">PRELIMINARY PLANS - 30%</td><td>DATE: 08-28-2019</td></tr><tr><td colspan="3"><div><div>HDR Engineering, Inc.</div><div>10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856</div></div></td></tr><tr><td colspan="3">NOT FOR CONSTRUCTION</td></tr></table>		PRELIMINARY PLANS - 30%		DATE: 08-28-2019	<div><div>HDR Engineering, Inc.</div><div>10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856</div></div>			NOT FOR CONSTRUCTION			<table><tr><td colspan="2">KANSAS CITY STREETCAR MAIN STREET EXTENSION</td></tr><tr><td colspan="2">SOUTHBOUND AND NORTHBOUND TRACK</td></tr><tr><td colspan="2">CIVIL PLAN</td></tr><tr><td colspan="2">STA 1021+00 TO STA 1025+00</td></tr><tr><td colspan="2">STA 1025+00 TO STA 1029+00</td></tr></table>		KANSAS CITY STREETCAR MAIN STREET EXTENSION		SOUTHBOUND AND NORTHBOUND TRACK		CIVIL PLAN		STA 1021+00 TO STA 1025+00		STA 1025+00 TO STA 1029+00		<table><tr><td colspan="2">SCALE FOR 22"x34": H=1"=20'</td></tr><tr><td colspan="2">FILENAME: CIVIL STA 1021+00 - 1029+00</td></tr><tr><td colspan="2">CONTRACT NO.: *****</td></tr><tr><td colspan="2">VOLUME: 1</td></tr><tr><td>DRAWING NO.: C104</td><td>SHEET NO.: 144</td></tr></table>		SCALE FOR 22"x34": H=1"=20'		FILENAME: CIVIL STA 1021+00 - 1029+00		CONTRACT NO.: *****		VOLUME: 1		DRAWING NO.: C104	SHEET NO.: 144
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DRAWING NO.: C104	SHEET NO.: 144																																																																				
PLOT DATE: 8/27/2019			11:01:37 AM		DATE: 08/28/2019																																																																



LEGEND

- TRACK SLAB
- HMAC FULL DEPTH
- CONCRETE SIDEWALK / TRAIL
- CONCRETE INFILL
- ASPHALT PAVEMENT
- BRIDGE MILL AND CONCRETE OVERLAY
- LANDSCAPE
- COLORED, STAMPED CONCRETE

REV	DATE	DESCRIPTION
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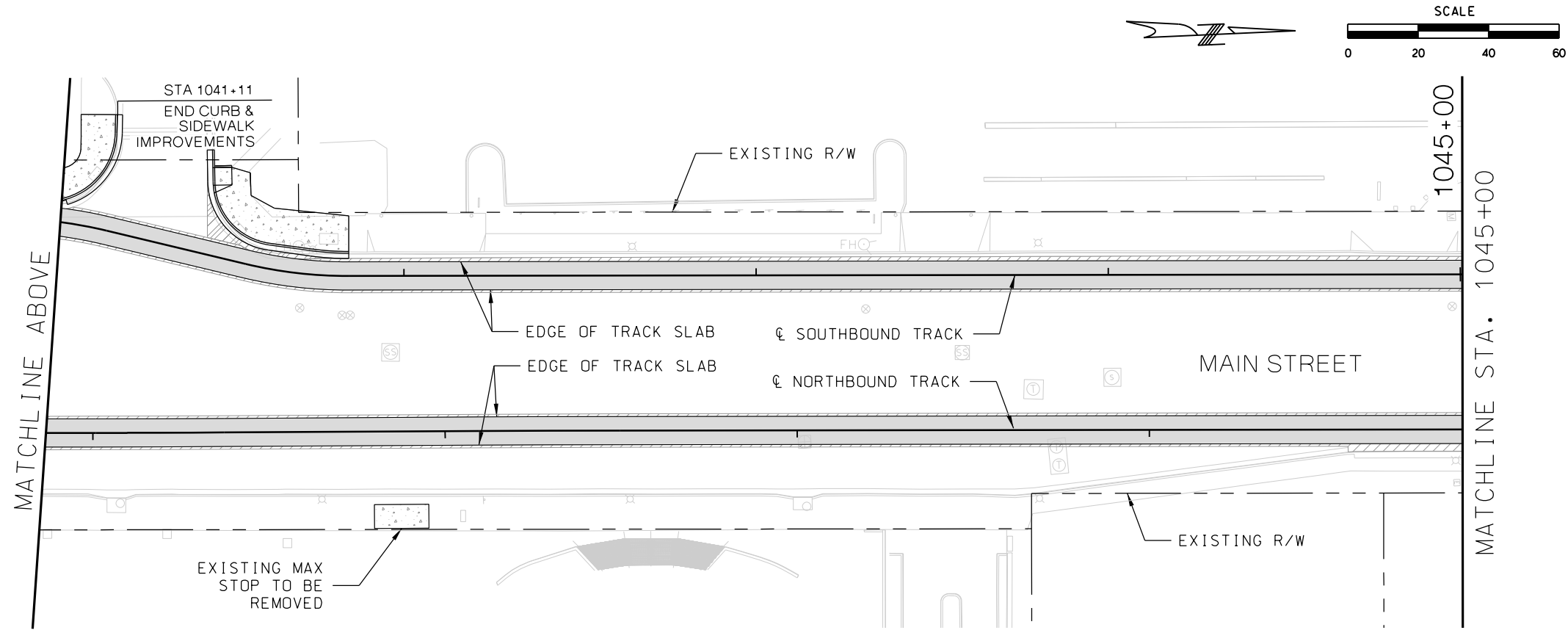
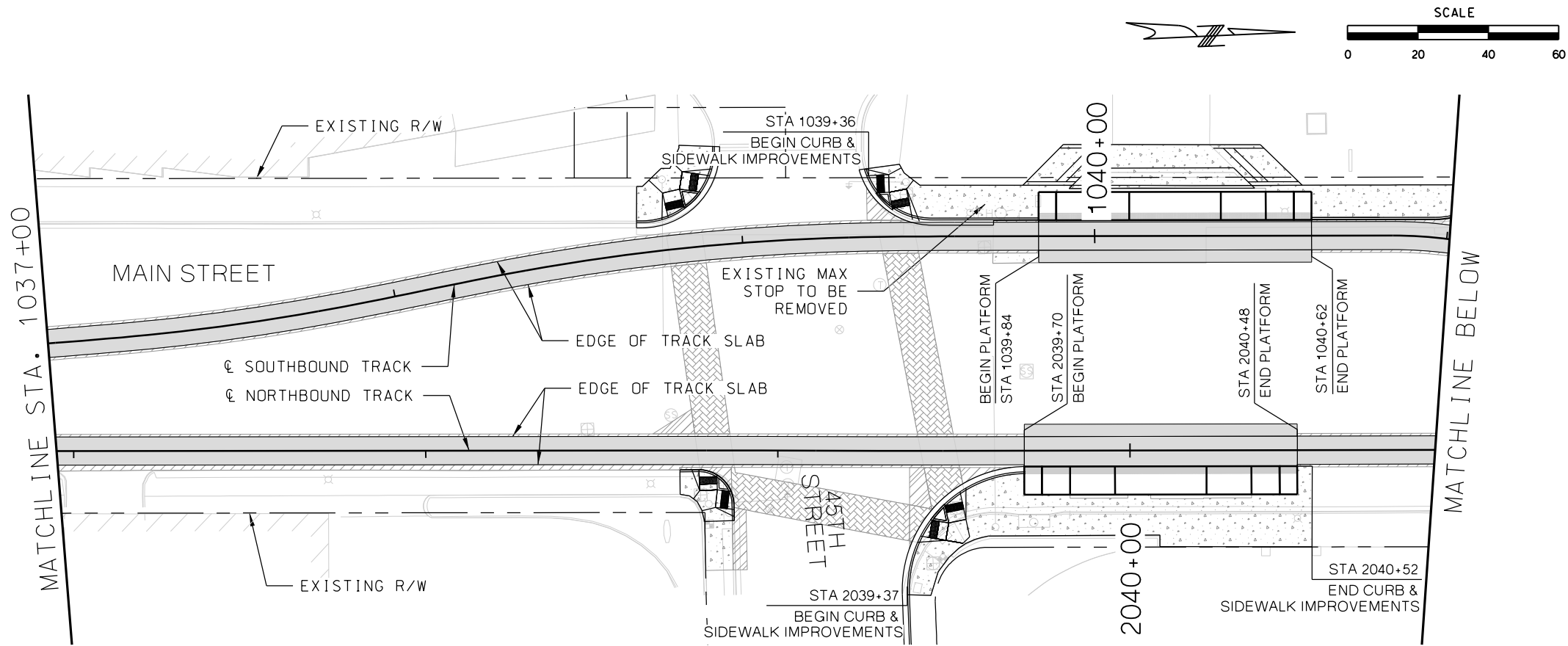
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CHECKED BY	RPB
DRAWN BY	MMO
CHECKED BY	RPB
APPROVED BY	NKS
DATE	08/28/2019



PRELIMINARY PLANS - 30%	DATE: 08-28-2019
HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	
NOT FOR CONSTRUCTION	

KANSAS CITY STREETCAR MAIN STREET EXTENSION	
SOUTHBOUND AND NORTHBOUND TRACK	
CIVIL PLAN	
STA 1029+00 TO STA 1033+00	
STA 1033+00 TO STA 1037+00	

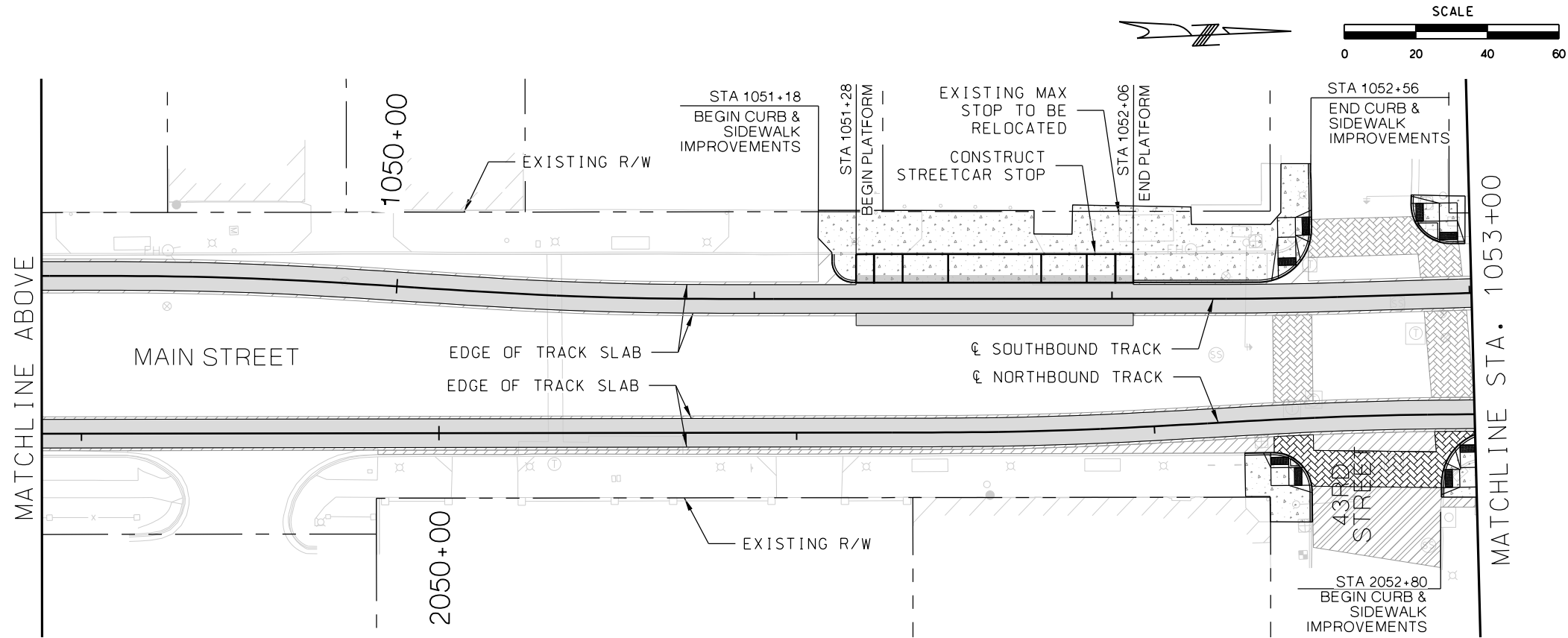
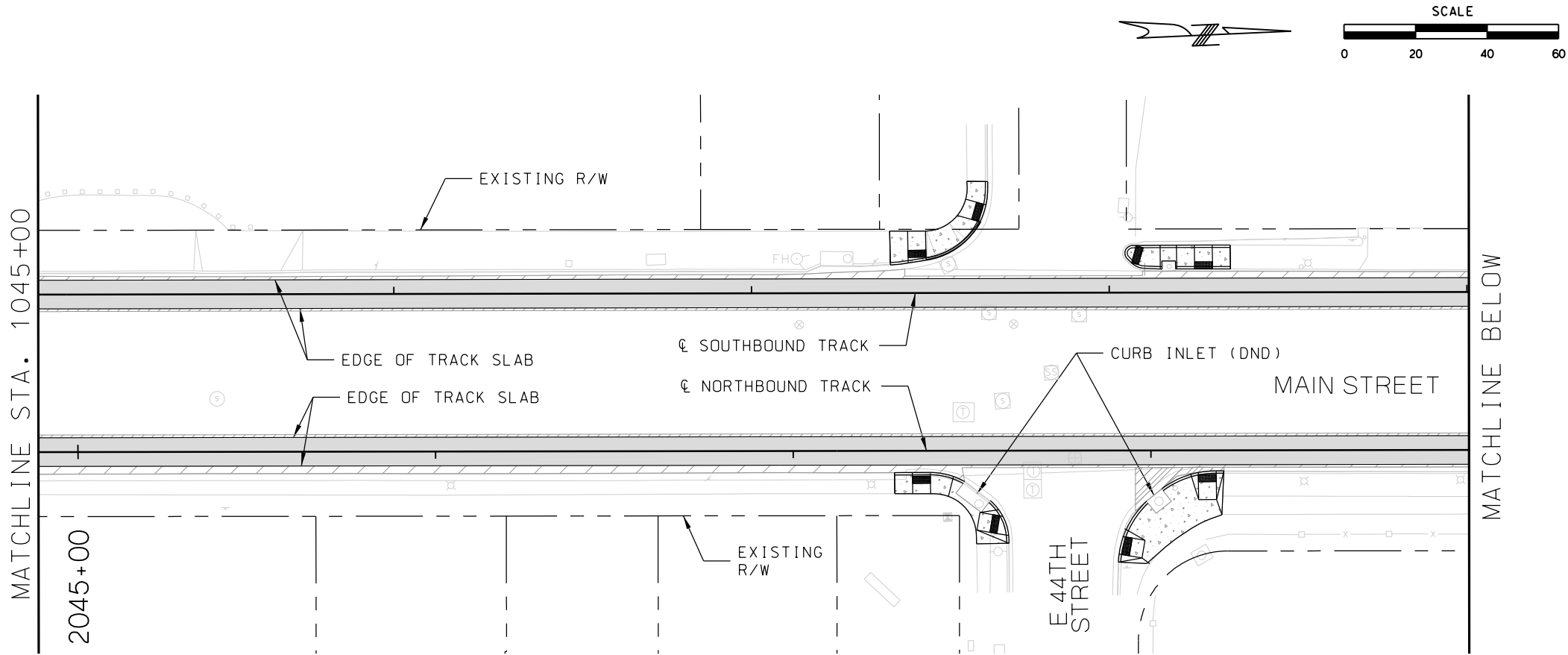
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VOLUME:	
DRAWING NO.:	SHEET NO.:
C105	145



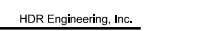

LEGEND

- TRACK SLAB
- HMAC FULL DEPTH
- CONCRETE SIDEWALK / TRAIL
- CONCRETE INFILL
- ASPHALT PAVEMENT
- BRIDGE MILL AND CONCRETE OVERLAY
- LANDSCAPE
- COLORED, STAMPED CONCRETE

REV	DATE	DESCRIPTION	DESIGNED BY	JWR	PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SCALE FOR 22"x34": H: 1"=20'
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			DRAWN BY	MMO	10450 Holmes Road		CIVIL PLAN	CONTRACT NO.:
			CHECKED BY	RPB	Suite 600		STA 1037+00 TO STA 1041+00	VOLUME: 1
			APPROVED BY	NKS	Kansas City, MO 64131-3471		STA 1041+00 TO STA 1045+00	DRAWING NO.: C106
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					Certificate of Authority: 000856			
PLOT DATE: 8/27/2019			DATE: 08/28/2019		NOT FOR CONSTRUCTION			

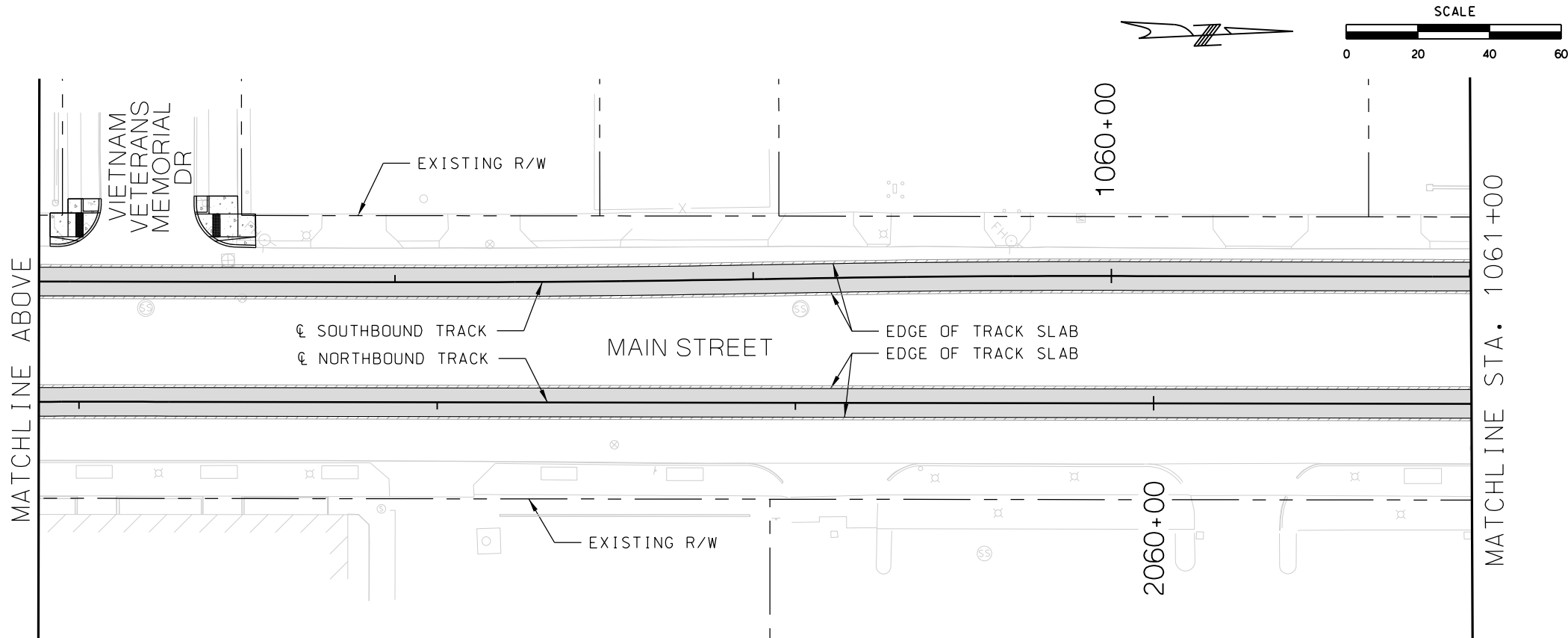
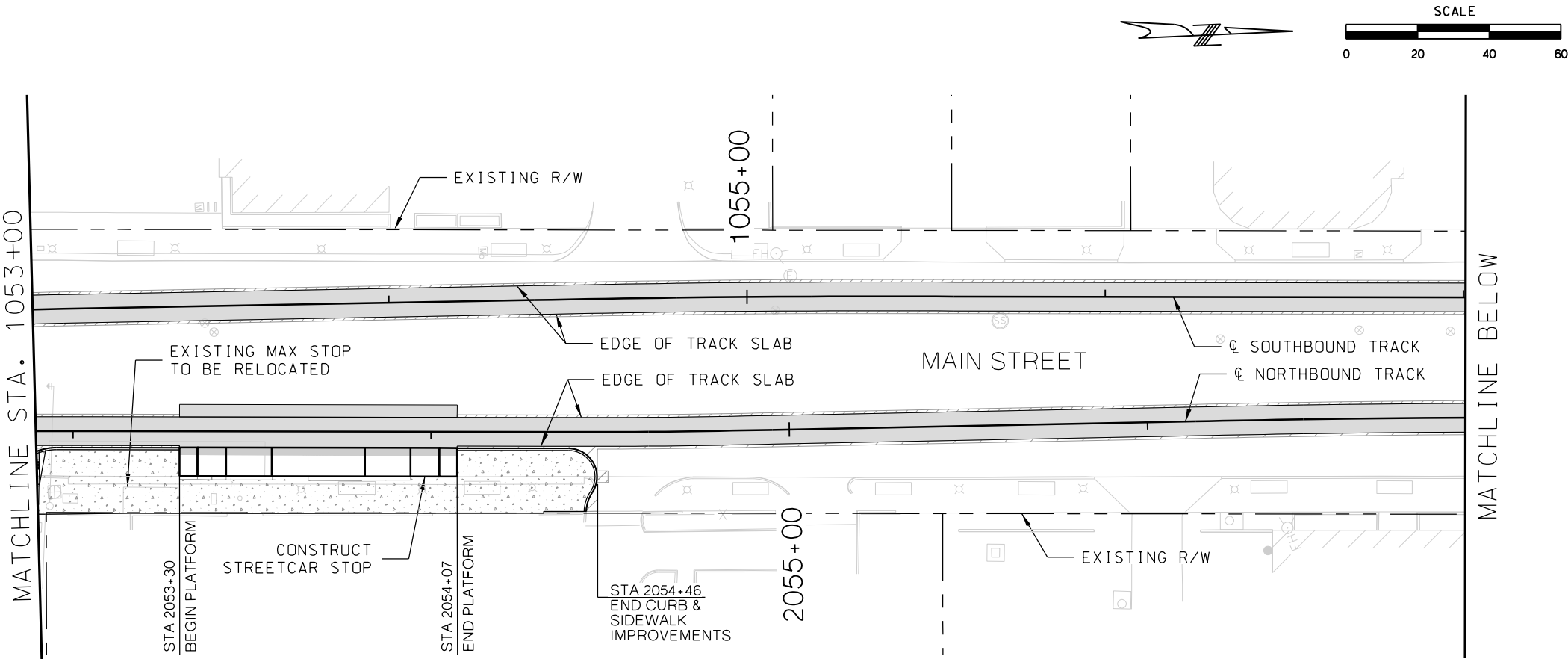


- LEGEND
- TRACK SLAB
 - HMAC FULL DEPTH
 - CONCRETE SIDEWALK / TRAIL
 - CONCRETE INFILL
 - ASPHALT PAVEMENT
 - BRIDGE MILL AND CONCRETE OVERLAY
 - LANDSCAPE
 - COLORED, STAMPED CONCRETE

REV		DATE		DESCRIPTION		DESIGNED BY		JWR			PRELIMINARY PLANS - 30%				DATE: 08-28-2019		KANSAS CITY STREETCAR MAIN STREET EXTENSION SOUTHBOUND AND NORTHBOUND TRACK CIVIL PLAN STA 1045+00 TO STA 1049+00 STA 1049+00 TO STA 1053+00						SCALE FOR 22"x34": H: 1"=20'			
						CHECKED BY		RPB			 HDR Engineering, Inc.												FILENAME:		CIVIL STA 1045+00 - 1053+00	
						DRAWN BY		MMO			10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856						CONTRACT NO.:									
						CHECKED BY		RPB									VOLUME:		1							
						APPROVED BY		NKS									DRAWING NO.:		C107							
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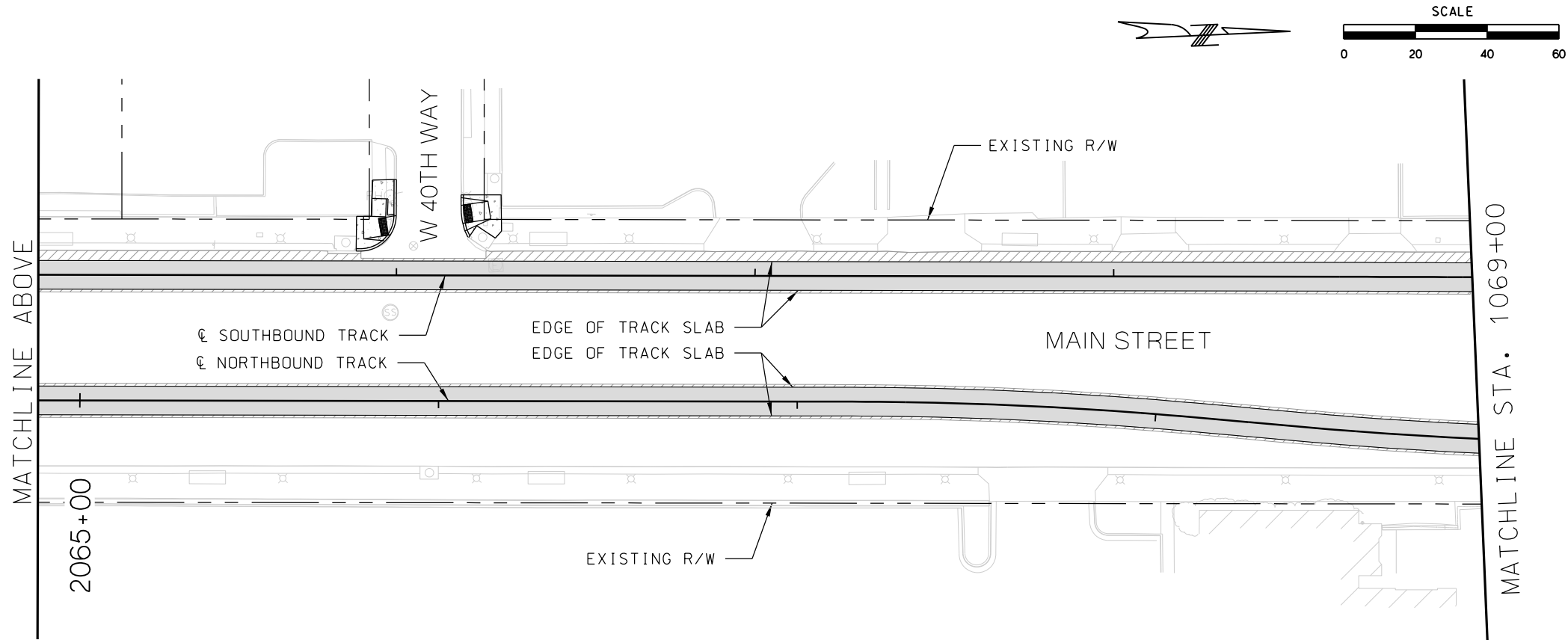
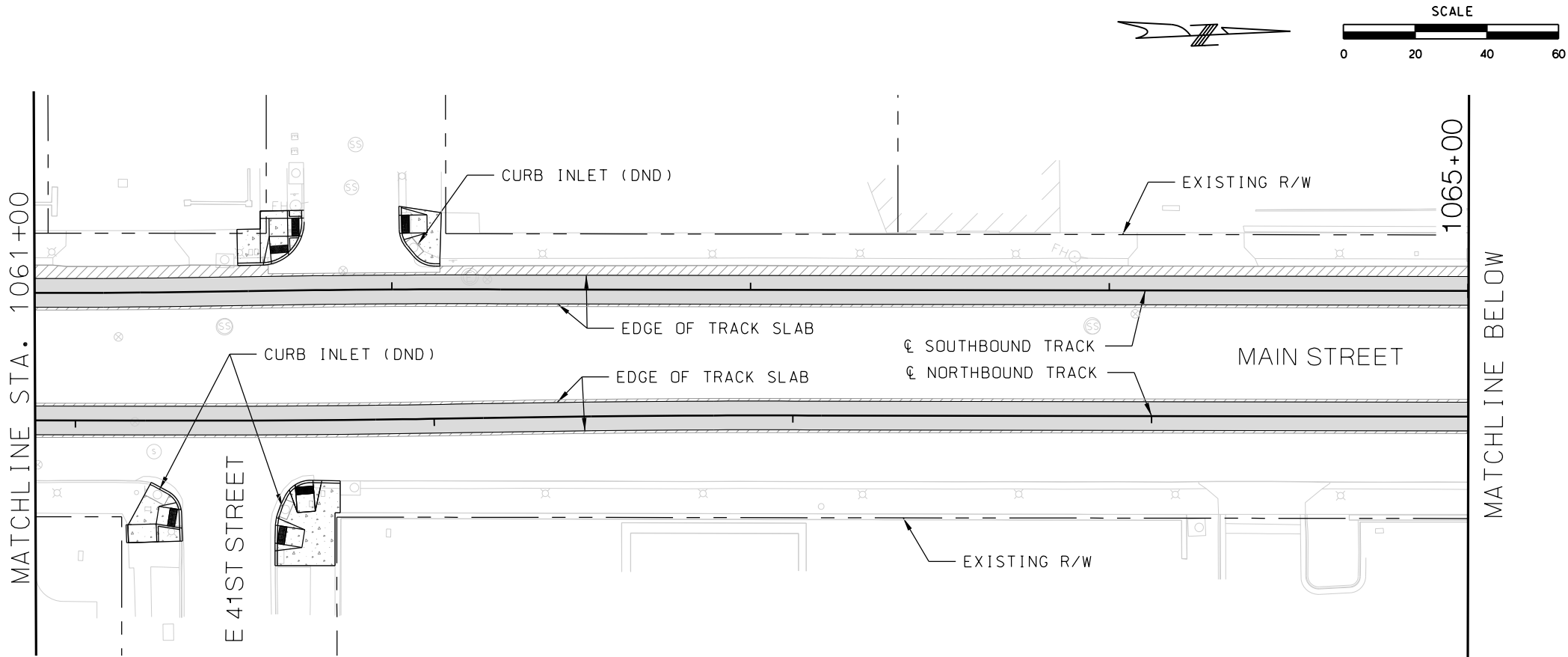
HDR
HDR Engineering, Inc.
10450 Holmes Road
Suite 600
Kansas City, MO 64131-3471
816-360-2700
Certificate of Authority: 000856



LEGEND

- TRACK SLAB
- HMAC FULL DEPTH
- CONCRETE SIDEWALK / TRAIL
- CONCRETE INFILL
- ASPHALT PAVEMENT
- BRIDGE MILL AND CONCRETE OVERLAY
- LANDSCAPE
- COLORED, STAMPED CONCRETE

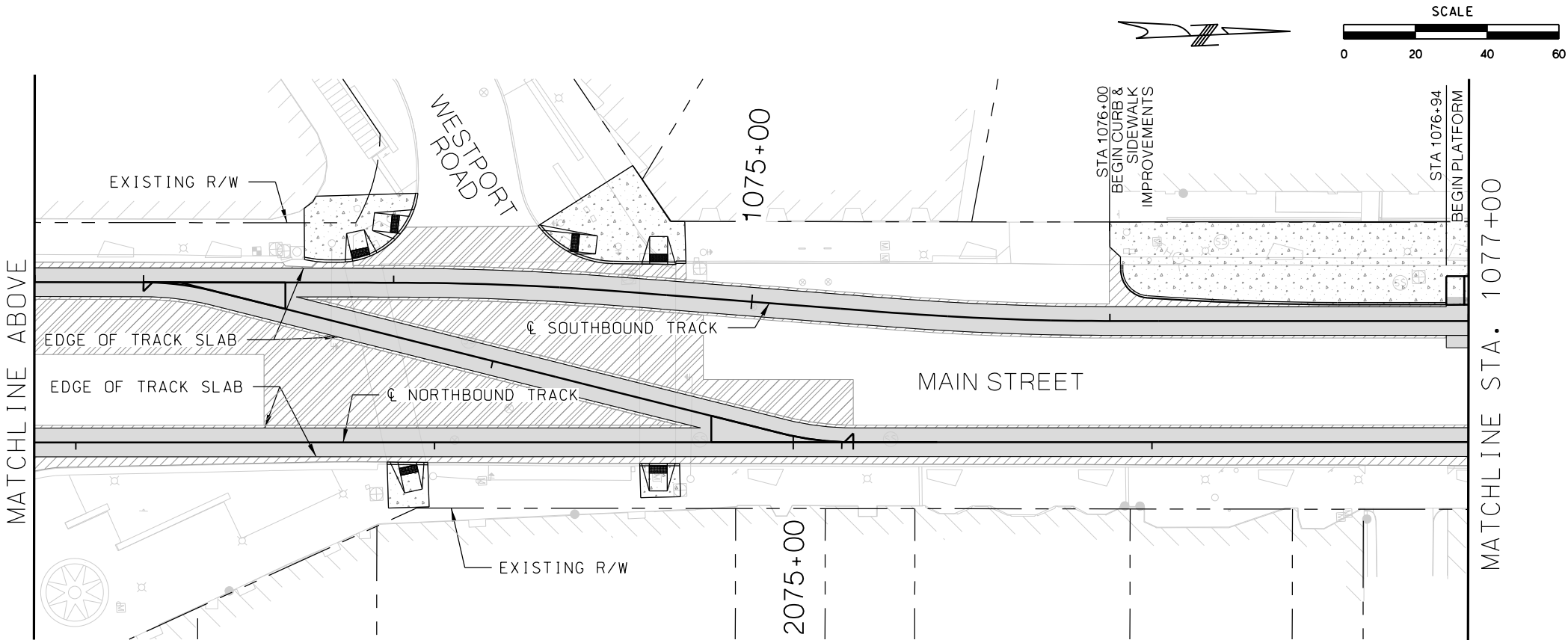
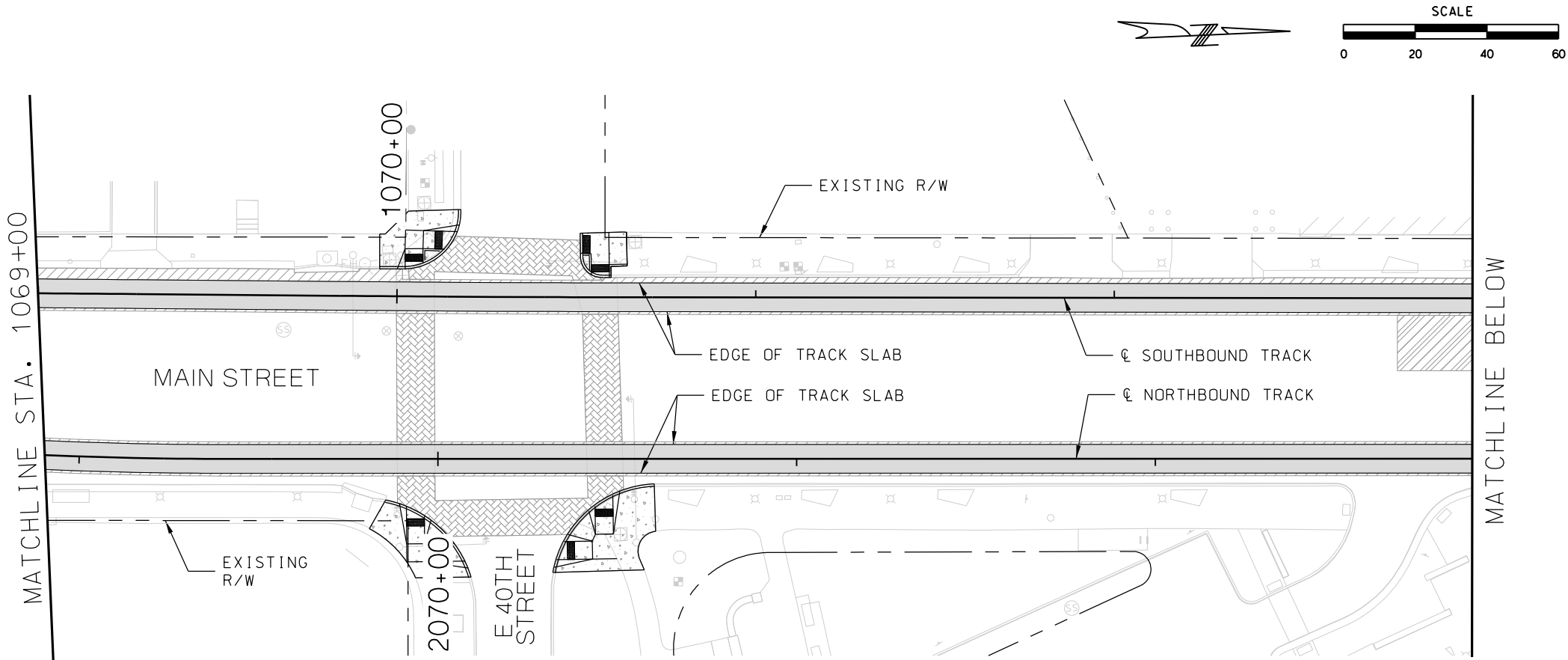
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			CHECKED BY	RPB			 HDR Engineering, Inc.	NOT FOR CONSTRUCTION			
			DRAWN BY	MMO							
			CHECKED BY	RPB							
			APPROVED BY	NKS							
PLOT DATE: 8/27/2019			DATE: 08/28/2019								



LEGEND

- TRACK SLAB
- HMAC FULL DEPTH
- CONCRETE SIDEWALK / TRAIL
- CONCRETE INFILL
- ASPHALT PAVEMENT
- BRIDGE MILL AND CONCRETE OVERLAY
- LANDSCAPE
- COLORED, STAMPED CONCRETE

REV	DATE	DESCRIPTION	DESIGNED BY	JWR				PRELIMINARY PLANS - 30%		DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION		SCALE FOR 22"x34": H: 1"=20'		
			CHECKED BY	RPB				 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856		SOUTHBOUND AND NORTHBOUND TRACK CIVIL PLAN STA 1061+00 TO STA 1065+00 STA 1065+00 TO STA 1069+00					FILENAME: CIVIL STA 1061+00 - 1069+00
			DRAWN BY	MMO								CONTRACT NO.:			
			CHECKED BY	RPB								*****			
			APPROVED BY	NKS								VOLUME: 1			
PLOT DATE: 8/27/2019			11:03:30 AM					DATE: 08/28/2019			NOT FOR CONSTRUCTION			DRAWING NO.: C109	




LEGEND

- TRACK SLAB
- HMAC FULL DEPTH
- CONCRETE SIDEWALK / TRAIL
- CONCRETE INFILL
- ASPHALT PAVEMENT
- BRIDGE MILL AND CONCRETE OVERLAY
- LANDSCAPE
- COLORED, STAMPED CONCRETE

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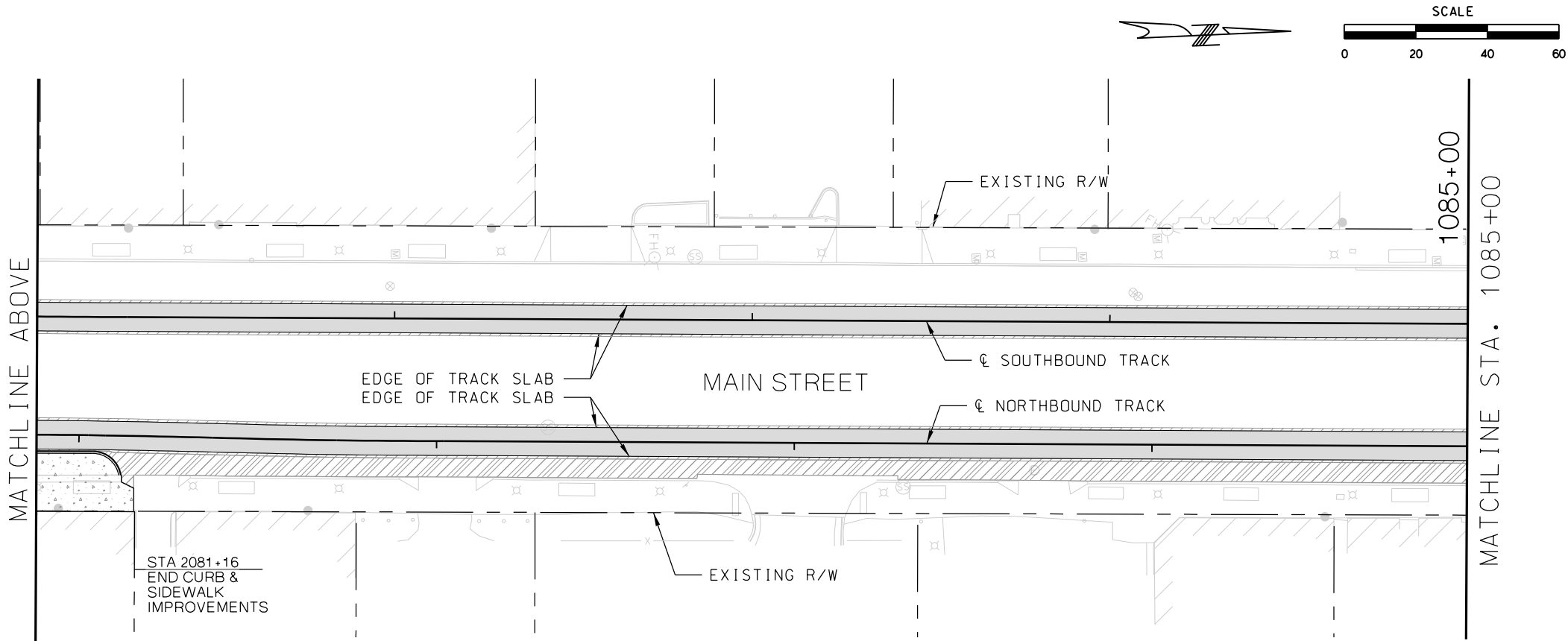
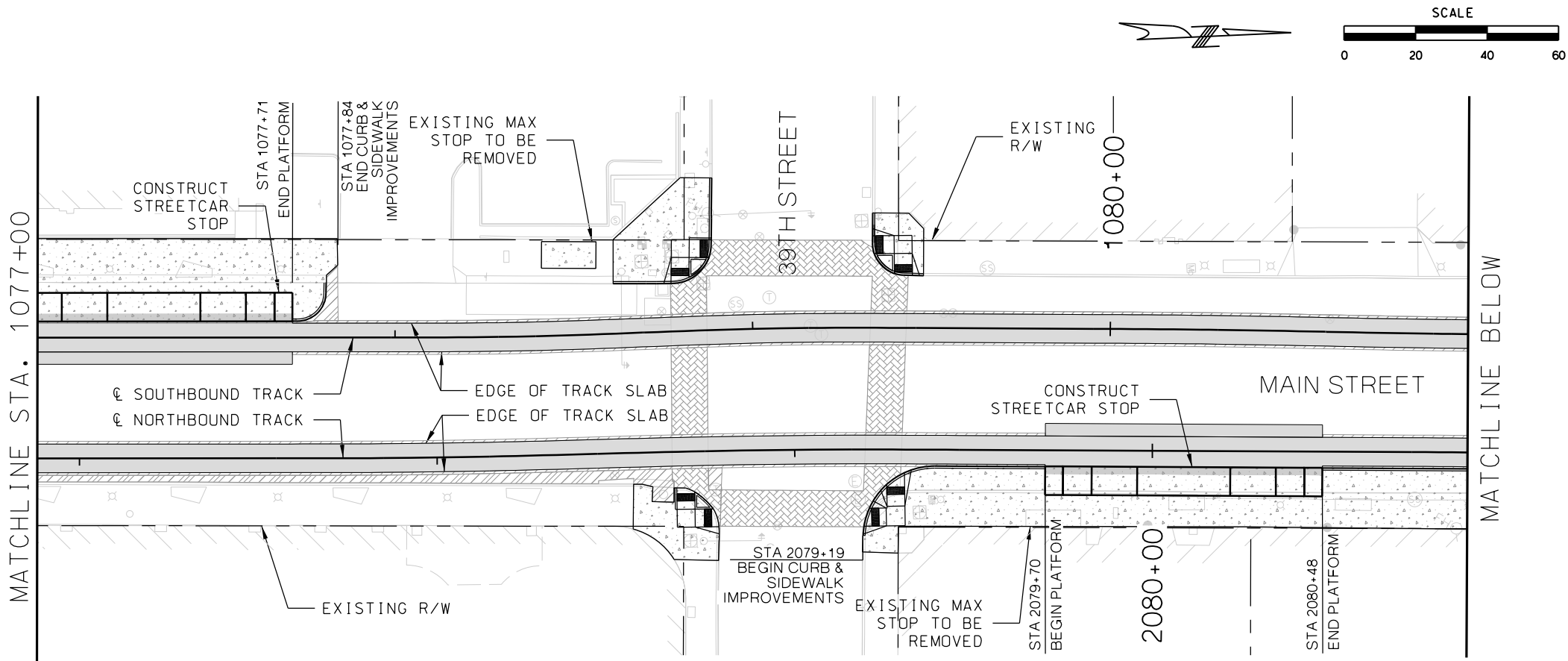
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CHECKED BY	RPB
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APPROVED BY	NKS
DATE	08/28/2019



PRELIMINARY PLANS - 30%	DATE: 08-28-2019
 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	
NOT FOR CONSTRUCTION	

KANSAS CITY STREETCAR MAIN STREET EXTENSION	
SOUTHBOUND AND NORTHBOUND TRACK	
CIVIL PLAN	
STA 1069+00 TO STA 1073+00	
STA 1073+00 TO STA 1077+00	

SCALE FOR 22"x34": H: 1"=20'	
FILENAME: CIVIL STA 1069+00 - 1077+00	
CONTRACT NO.:	
VOLUME:	
DRAWING NO.:	SHEET NO.:
C110	150



LEGEND

- TRACK SLAB
- HMAC FULL DEPTH
- CONCRETE SIDEWALK / TRAIL
- CONCRETE INFILL
- ASPHALT PAVEMENT
- BRIDGE MILL AND CONCRETE OVERLAY
- LANDSCAPE
- COLORED, STAMPED CONCRETE

REV	DATE	DESCRIPTION
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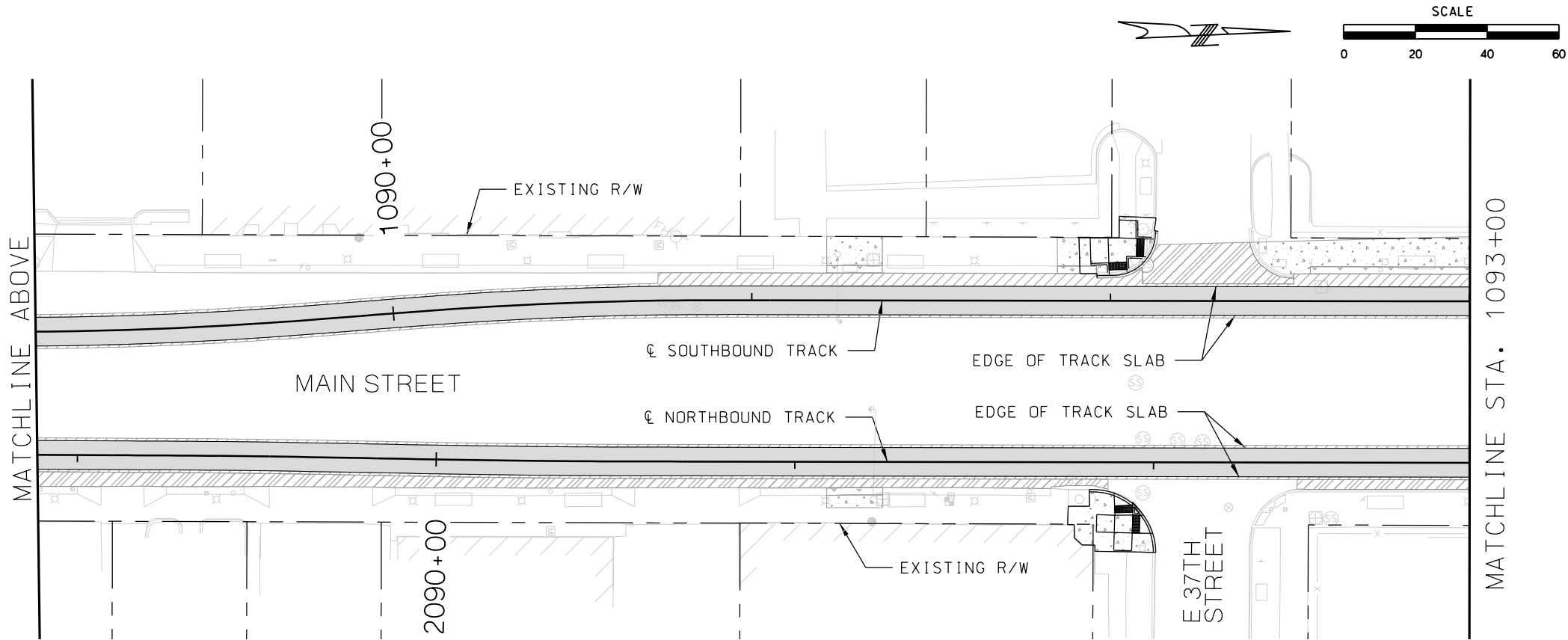
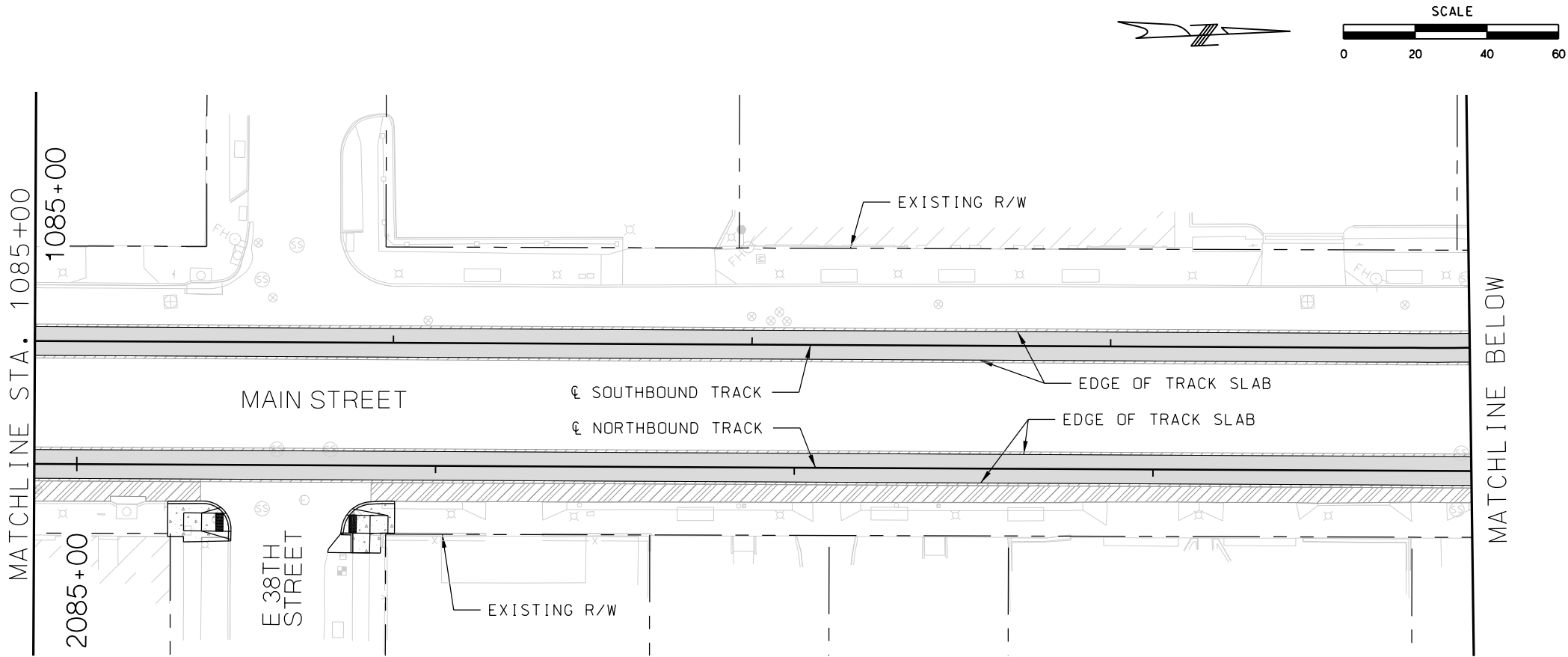
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CHECKED BY	RPB
DRAWN BY	MMO
CHECKED BY	RPB
APPROVED BY	NKS
DATE	08/28/2019



PRELIMINARY PLANS - 30%	DATE: 08-28-2019
HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	
NOT FOR CONSTRUCTION	

KANSAS CITY STREETCAR MAIN STREET EXTENSION	
SOUTHBOUND AND NORTHBOUND TRACK	
CIVIL PLAN	
STA 1077+00 TO STA 1081+00	
STA 1081+00 TO STA 1085+00	

SCALE FOR 22"x34": H: 1"=20'	
FILENAME: CIVIL STA 1077+00 - 1085+00	
CONTRACT NO.:	
VOLUME:	
DRAWING NO.:	SHEET NO.:
C111	151



LEGEND	
	TRACK SLAB
	HMAC FULL DEPTH
	CONCRETE SIDEWALK / TRAIL
	CONCRETE INFILL
	ASPHALT PAVEMENT
	BRIDGE MILL AND CONCRETE OVERLAY
	LANDSCAPE
	COLORED, STAMPED CONCRETE

REV	DATE	DESCRIPTION
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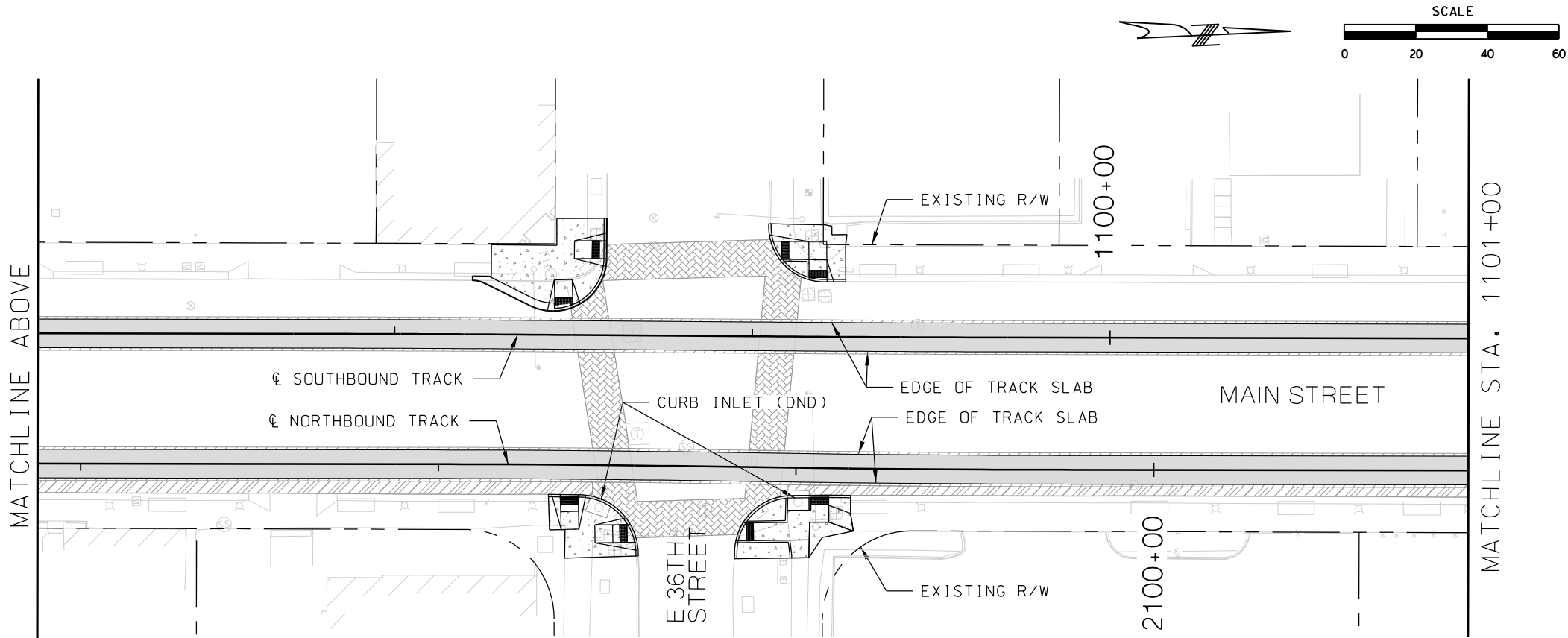
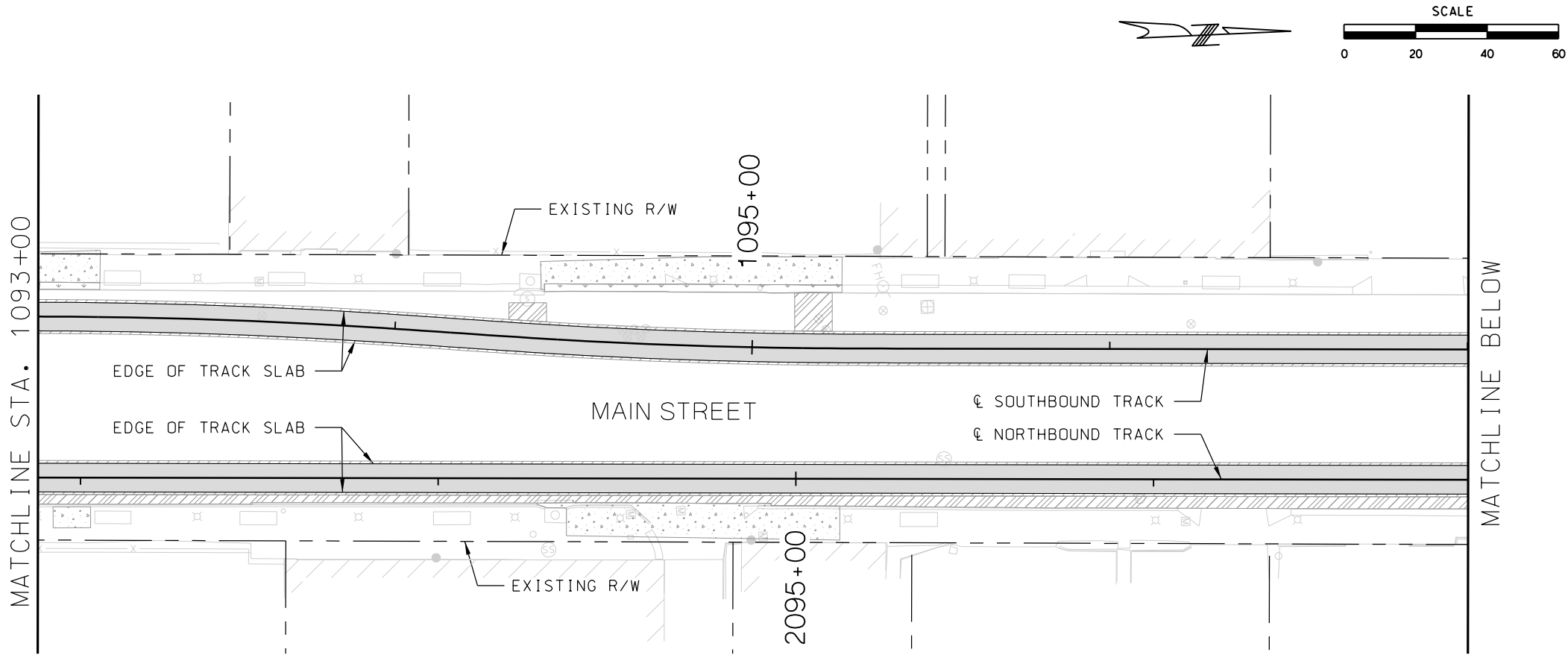
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DRAWN BY	MMO
CHECKED BY	RPB
APPROVED BY	NKS
DATE	08/28/2019



PRELIMINARY PLANS - 30% HDR HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856		DATE: 08-28-2019
NOT FOR CONSTRUCTION		

KANSAS CITY STREETCAR MAIN STREET EXTENSION	
SOUTHBOUND AND NORTHBOUND TRACK	
CIVIL PLAN	
STA 1085+00 TO STA 1089+00	
STA 1089+00 TO STA 1093+00	

SCALE FOR 22"x34": H: 1"=20'	
FILENAME: CIVIL STA 1085+00 - 1093+00	
CONTRACT NO.:	
VOLUME:	
DRAWING NO.:	SHEET NO.:
C112	152



LEGEND

- TRACK SLAB
- HMAC FULL DEPTH
- CONCRETE SIDEWALK / TRAIL
- CONCRETE INFILL
- ASPHALT PAVEMENT
- BRIDGE MILL AND CONCRETE OVERLAY
- LANDSCAPE
- COLORED, STAMPED CONCRETE

REV	DATE	DESCRIPTION
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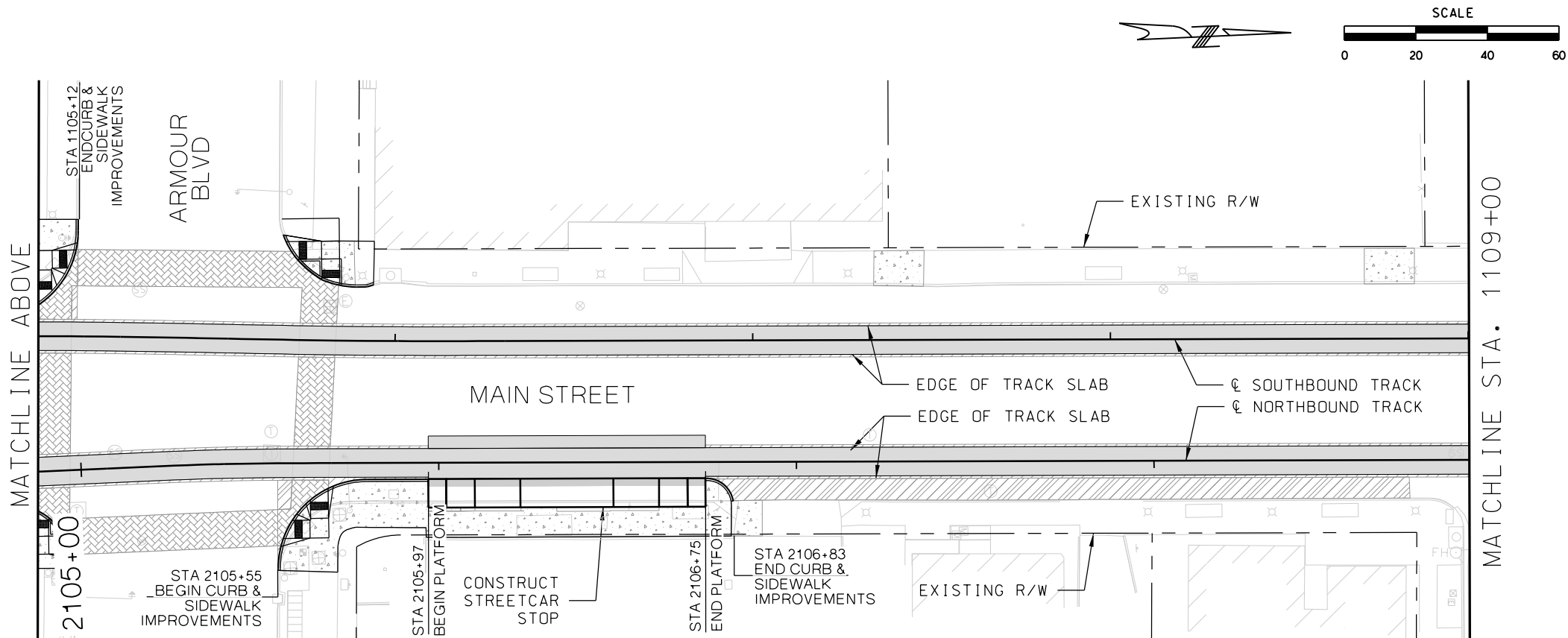
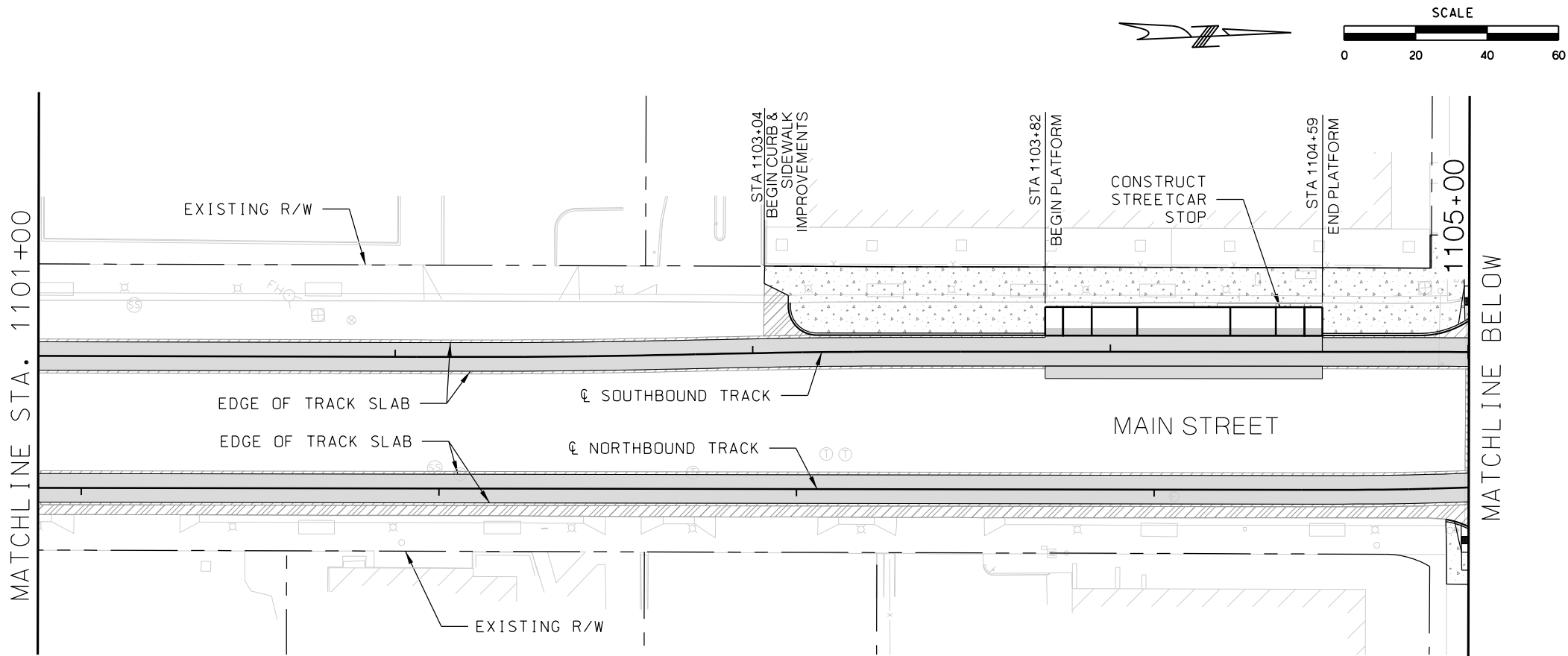
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DRAWN BY	MMO
CHECKED BY	RPB
APPROVED BY	NKS
DATE	08/28/2019



PRELIMINARY PLANS - 30%	DATE: 08-28-2019
HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	
NOT FOR CONSTRUCTION	

KANSAS CITY STREETCAR MAIN STREET EXTENSION	
SOUTHBOUND AND NORTHBOUND TRACK	
CIVIL PLAN	
STA 1093+00 TO STA 1097+00	
STA 1097+00 TO STA 1101+00	

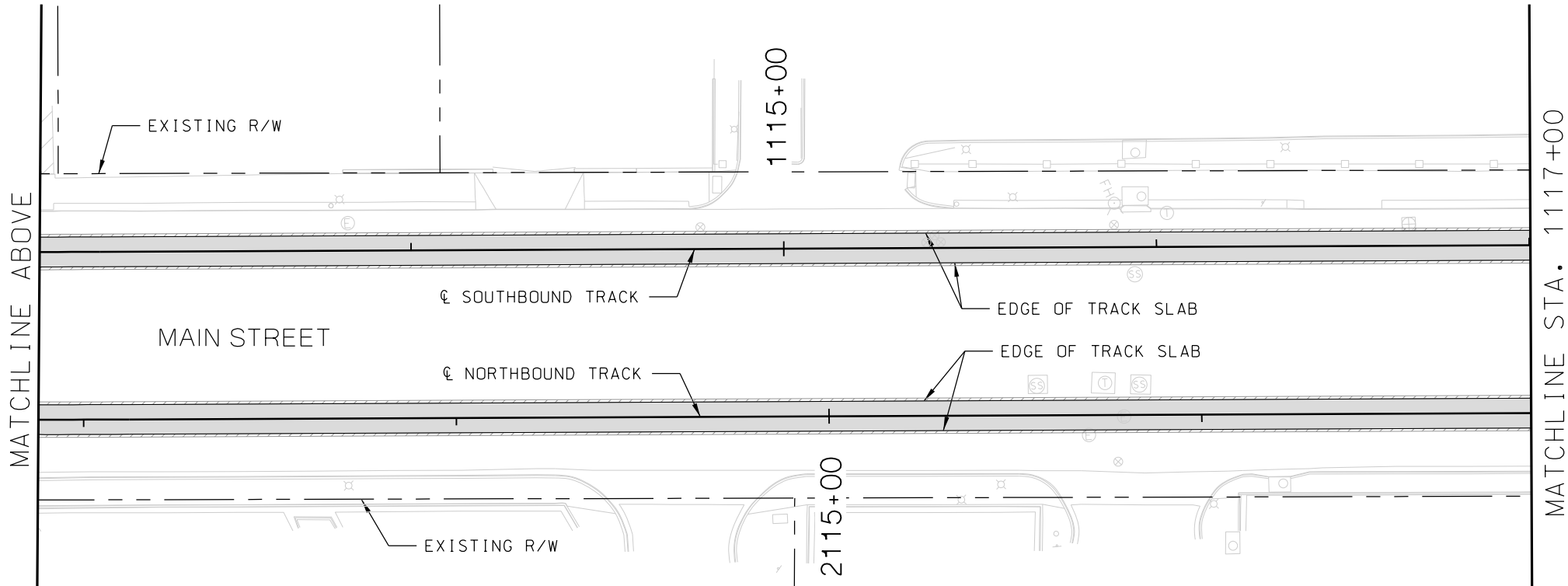
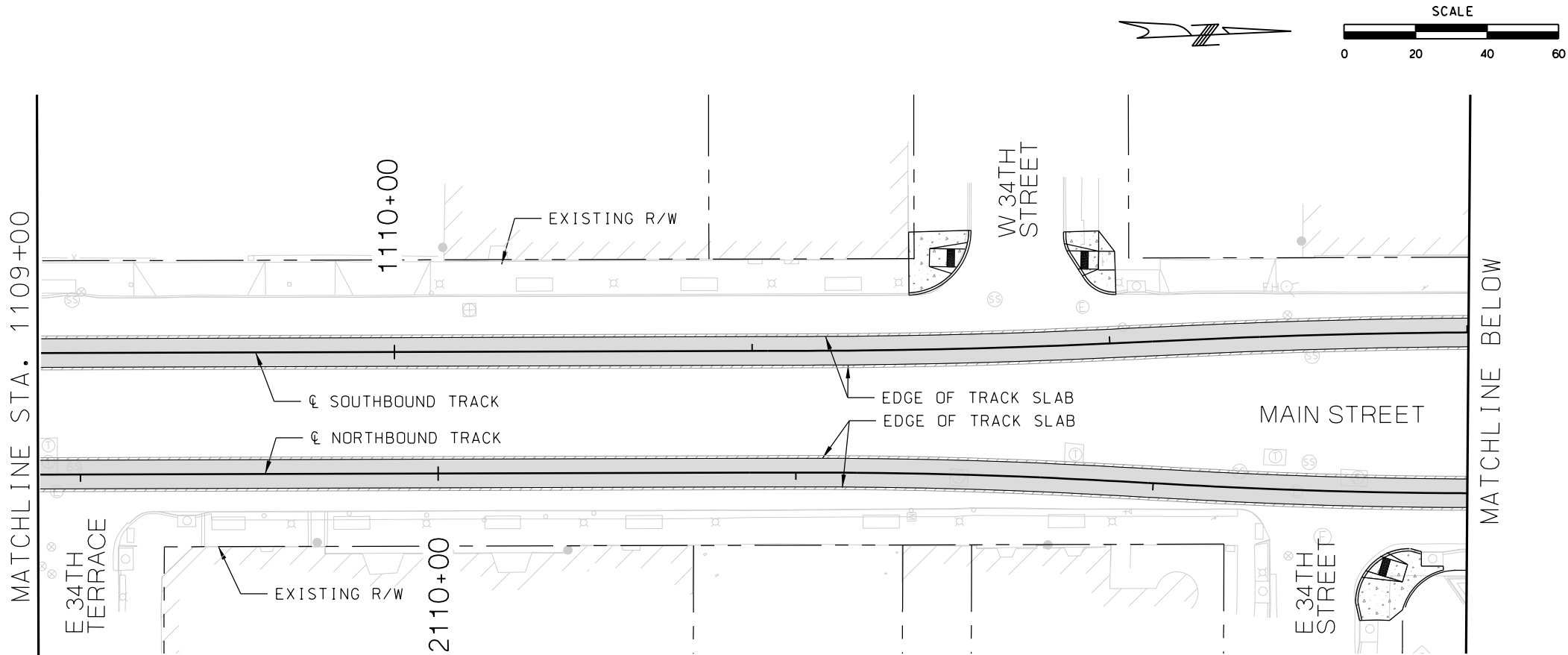
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VOLUME:	
DRAWING NO.:	SHEET NO.:
C113	153



LEGEND

- TRACK SLAB
- HMAC FULL DEPTH
- CONCRETE SIDEWALK / TRAIL
- CONCRETE INFILL
- ASPHALT PAVEMENT
- BRIDGE MILL AND CONCRETE OVERLAY
- LANDSCAPE
- COLORED, STAMPED CONCRETE

REV	DATE	DESCRIPTION	DESIGNED BY	JWR				PRELIMINARY PLANS - 30%		DATE: 08-28-2019		KANSAS CITY STREETCAR MAIN STREET EXTENSION				SCALE FOR 22"x34": H: 1"=20'	
			CHECKED BY	RPB				 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856		NOT FOR CONSTRUCTION							
			DRAWN BY	MMO													
			CHECKED BY	RPB													
			APPROVED BY	NKS													
PLOT DATE: 8/27/2019			DATE: 08/28/2019					11:05:46 AM									



LEGEND

- TRACK SLAB
- HMAC FULL DEPTH
- CONCRETE SIDEWALK / TRAIL
- CONCRETE INFILL
- ASPHALT PAVEMENT
- BRIDGE MILL AND CONCRETE OVERLAY
- LANDSCAPE
- COLORED, STAMPED CONCRETE

REV	DATE	DESCRIPTION
PLOT DATE: 8/27/2019		11:06:23 AM

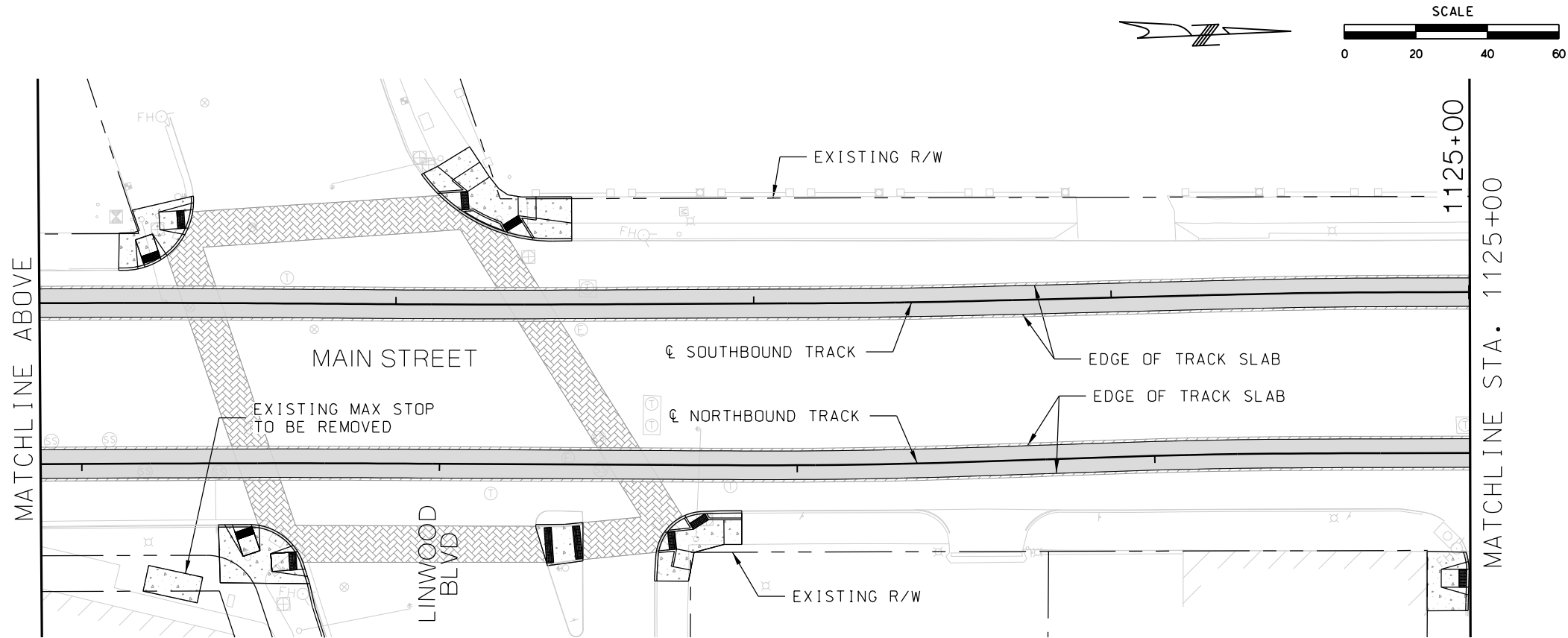
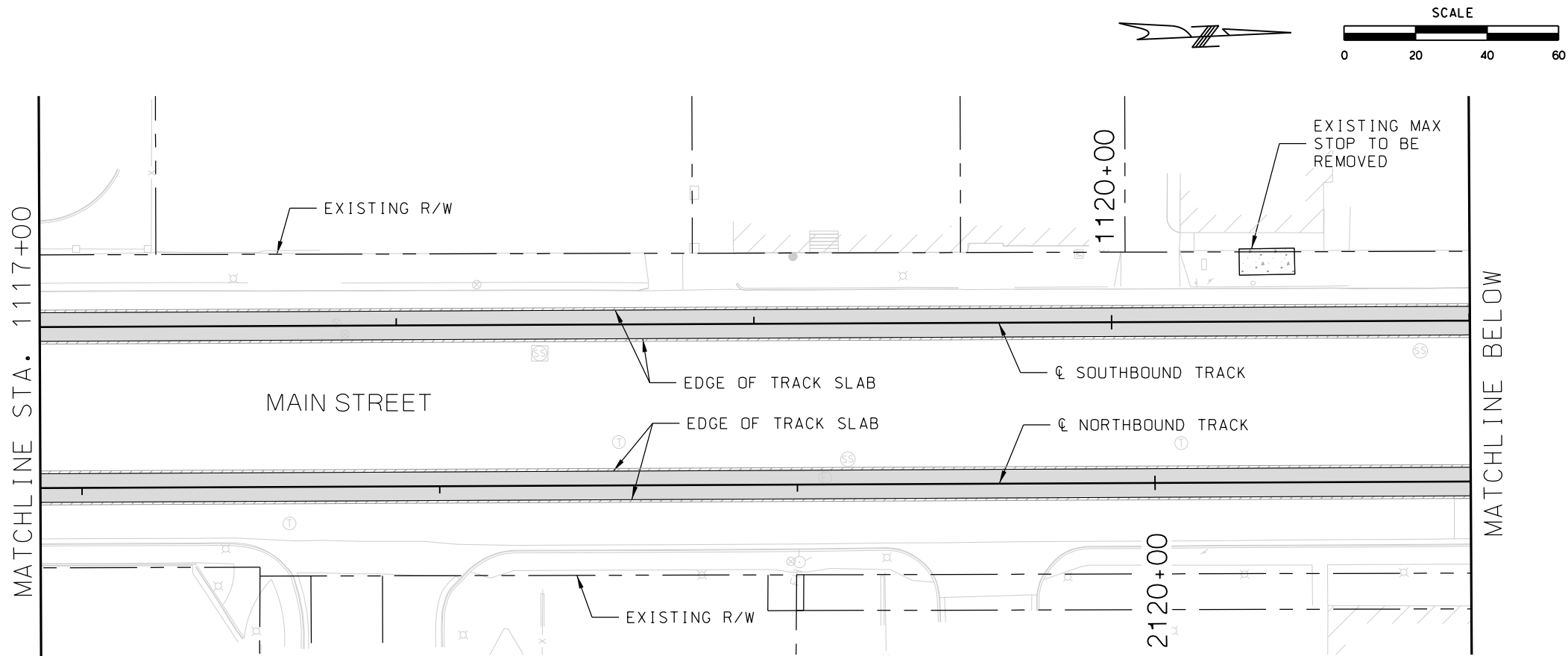
DESIGNED BY	JWR
CHECKED BY	RPB
DRAWN BY	MMO
CHECKED BY	RPB
APPROVED BY	NKS
DATE	08/28/2019



PRELIMINARY PLANS - 30%	DATE: 08-28-2019
HDR HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	
NOT FOR CONSTRUCTION	

KANSAS CITY STREETCAR MAIN STREET EXTENSION	
SOUTHBOUND AND NORTHBOUND TRACK	
CIVIL PLAN	
STA 1109+00 TO STA 1113+00	
STA 1113+00 TO STA 1117+00	

SCALE FOR 22"x34": H: 1"=20'	
FILENAME: CIVIL STA 1109+00 - 1117+00	
CONTRACT NO.:	
VOLUME:	
DRAWING NO.:	SHEET NO.:
C115	155



LEGEND	
	TRACK SLAB
	HMAC FULL DEPTH
	CONCRETE SIDEWALK / TRAIL
	CONCRETE INFILL
	ASPHALT PAVEMENT
	BRIDGE MILL AND CONCRETE OVERLAY
	LANDSCAPE
	COLORED, STAMPED CONCRETE

REV	DATE	DESCRIPTION
PLOT DATE: 8/27/2019		11:06:47 AM

DESIGNED BY	JWR
CHECKED BY	RPB
DRAWN BY	MMO
CHECKED BY	RPB
APPROVED BY	NKS
DATE	08/28/2019

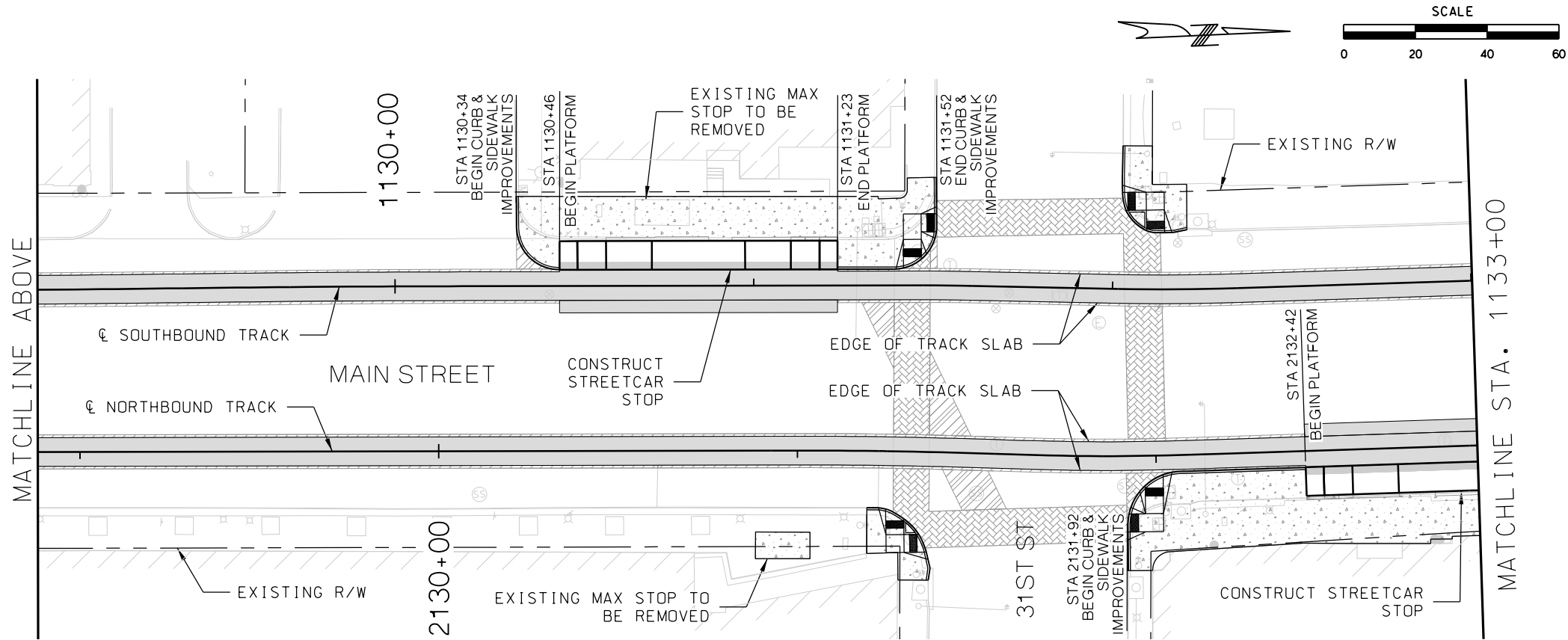
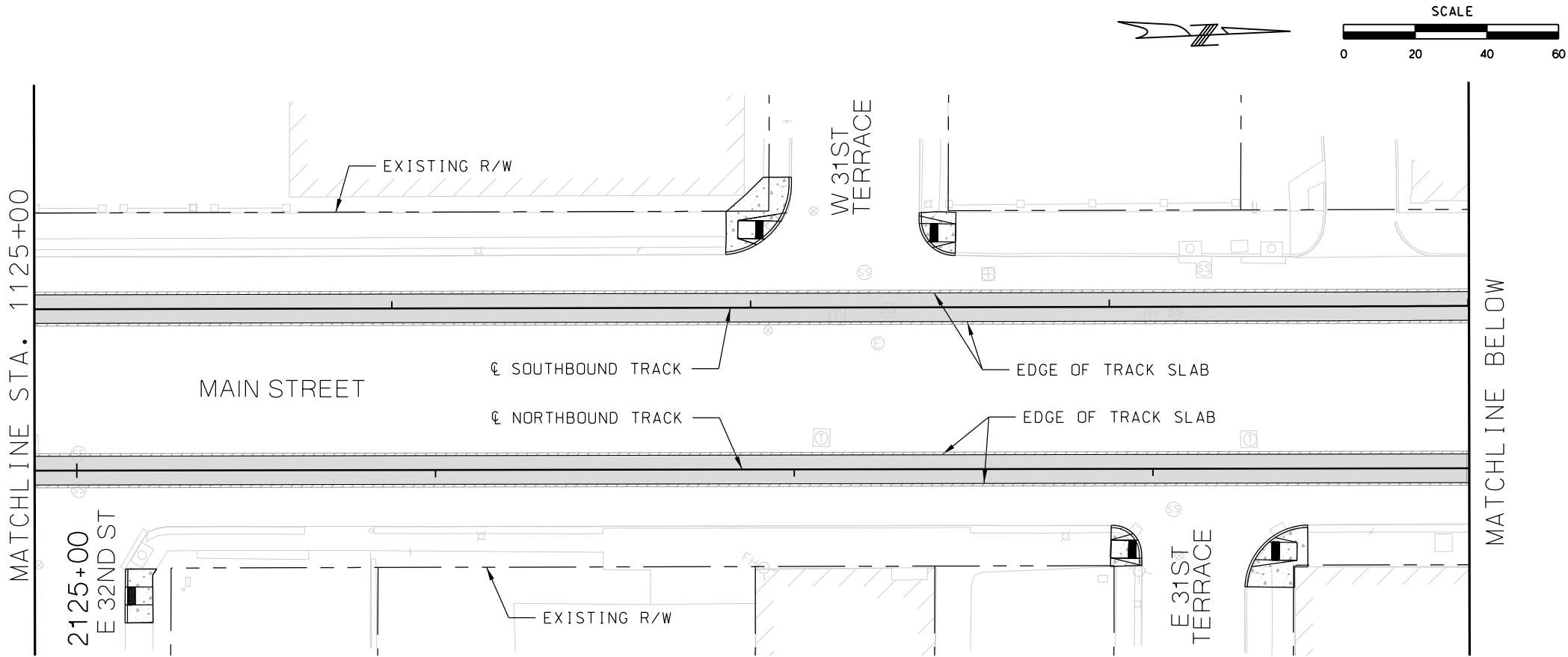
PRELIMINARY PLANS - 30%DATE: 08-28-2019

HDR Engineering, Inc.
10450 Holmes Road
Suite 600
Kansas City, MO 64131-3471
816-360-2700
Certificate of Authority: 000856

NOT FOR CONSTRUCTION

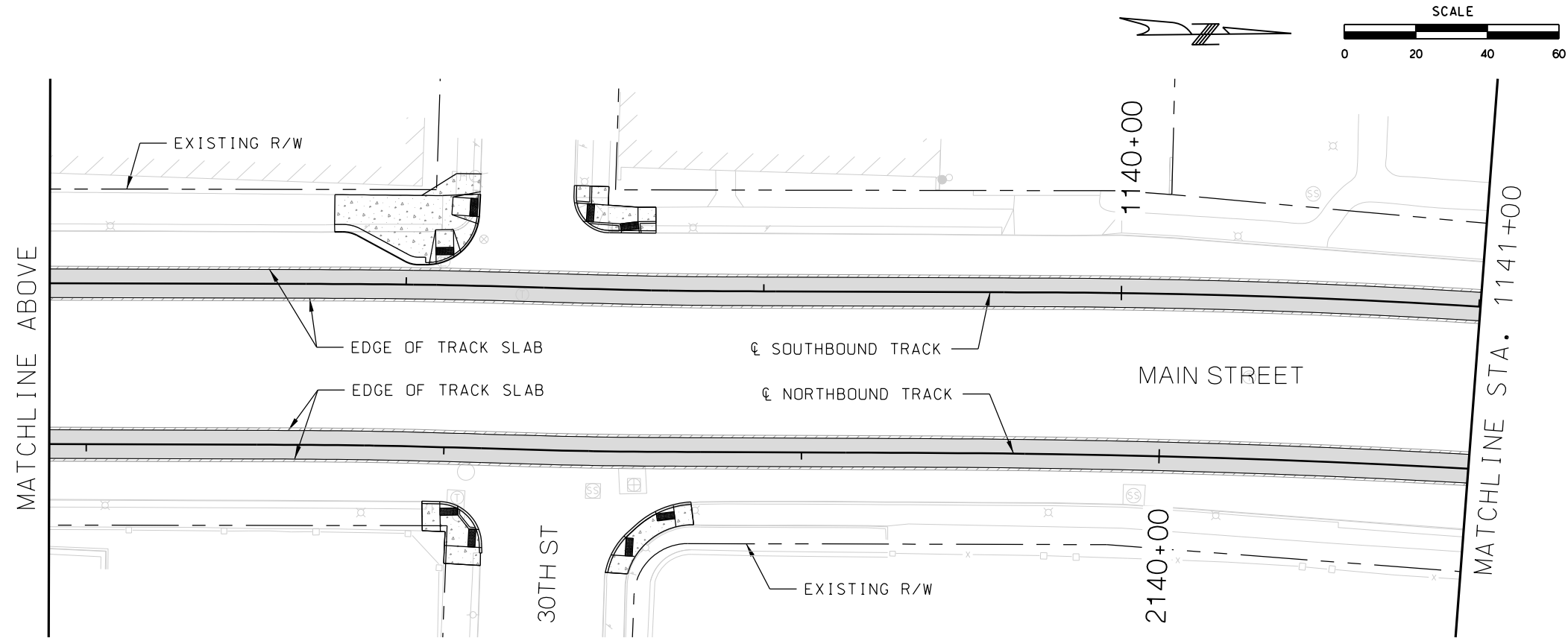
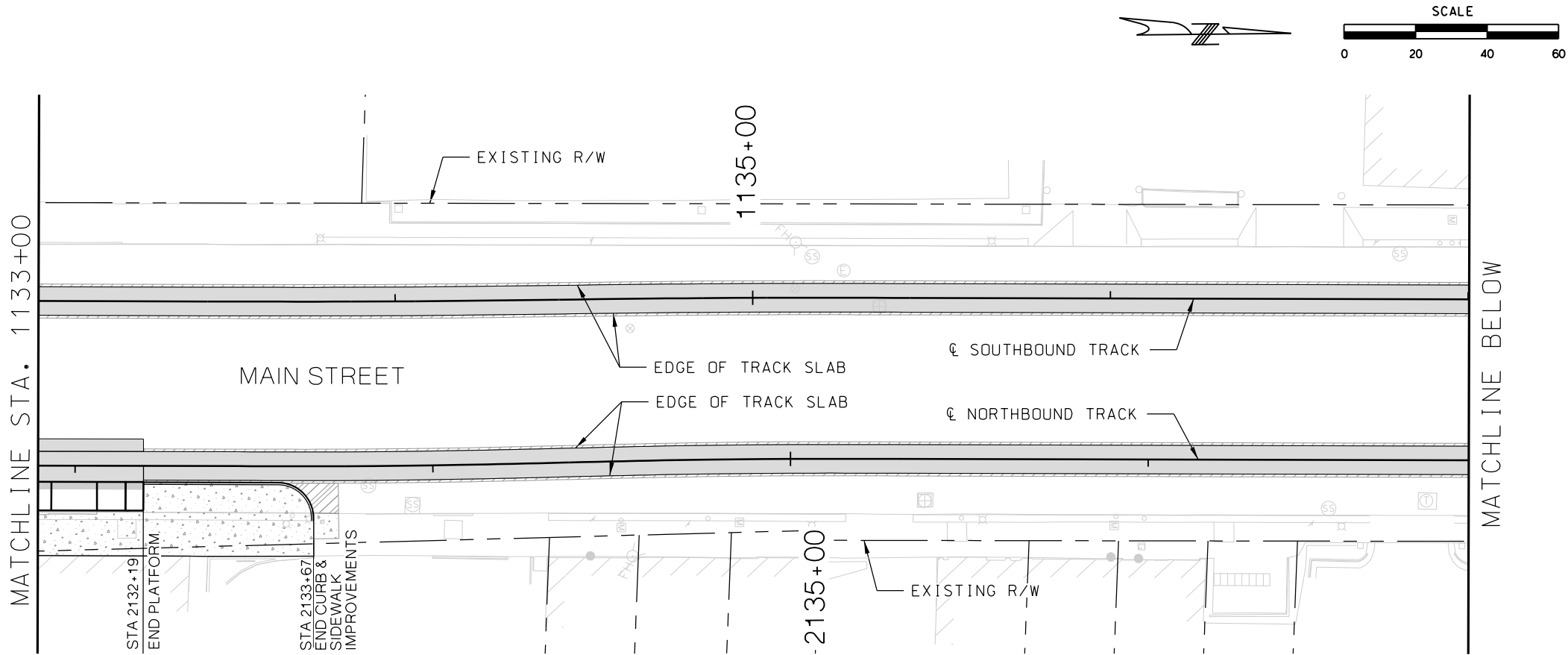
KANSAS CITY STREETCAR MAIN STREET EXTENSION
SOUTHBOUND AND NORTHBOUND TRACK
CIVIL PLAN
STA 1117+00 TO STA 1121+00
STA 1121+00 TO STA 1125+00

SCALE FOR 22"x34": H: 1"=20'	
FILENAME: CIVIL STA 1117+00 - 1125+00	
CONTRACT NO.:	
VOLUME:	
DRAWING NO.: C116	SHEET NO.: 156



- LEGEND
- TRACK SLAB
 - HMAC FULL DEPTH
 - CONCRETE SIDEWALK / TRAIL
 - CONCRETE INFILL
 - ASPHALT PAVEMENT
 - BRIDGE MILL AND CONCRETE OVERLAY
 - LANDSCAPE
 - COLORED, STAMPED CONCRETE

REV	DATE	DESCRIPTION	DESIGNED BY	JWR		<div>PRELIMINARY PLANS - 30%</div> <div>DATE: 08-28-2019</div> <div> HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856</div> <div>NOT FOR CONSTRUCTION</div>	<div>KANSAS CITY STREETCAR MAIN STREET EXTENSION</div> <div>SOUTHBOUND AND NORTHBOUND TRACK</div> <div>CIVIL PLAN</div> <div>STA 1125+00 TO STA 1129+00</div> <div>STA 1129+00 TO STA 1133+00</div>	SCALE FOR 22"x34": H: 1"=20'	
			CHECKED BY	RPB				FILENAME:	
			DRAWN BY	MMO				CIVIL STA 1125+00 - 1133+00	
								CONTRACT NO.:	
			CHECKED BY	RPB				*****	
			APPROVED BY	NKS	VOLUME:				
PLOT DATE: 8/27/2019			11:07:07 AM		DATE	08/28/2019	DRAWING NO.:	SHEET NO.:	
							C117	157	



LEGEND	
	TRACK SLAB
	HMAC FULL DEPTH
	CONCRETE SIDEWALK / TRAIL
	CONCRETE INFILL
	ASPHALT PAVEMENT
	BRIDGE MILL AND CONCRETE OVERLAY
	LANDSCAPE
	COLORED, STAMPED CONCRETE

REV	DATE	DESCRIPTION
PLOT DATE: 8/27/2019		11:07:19 AM

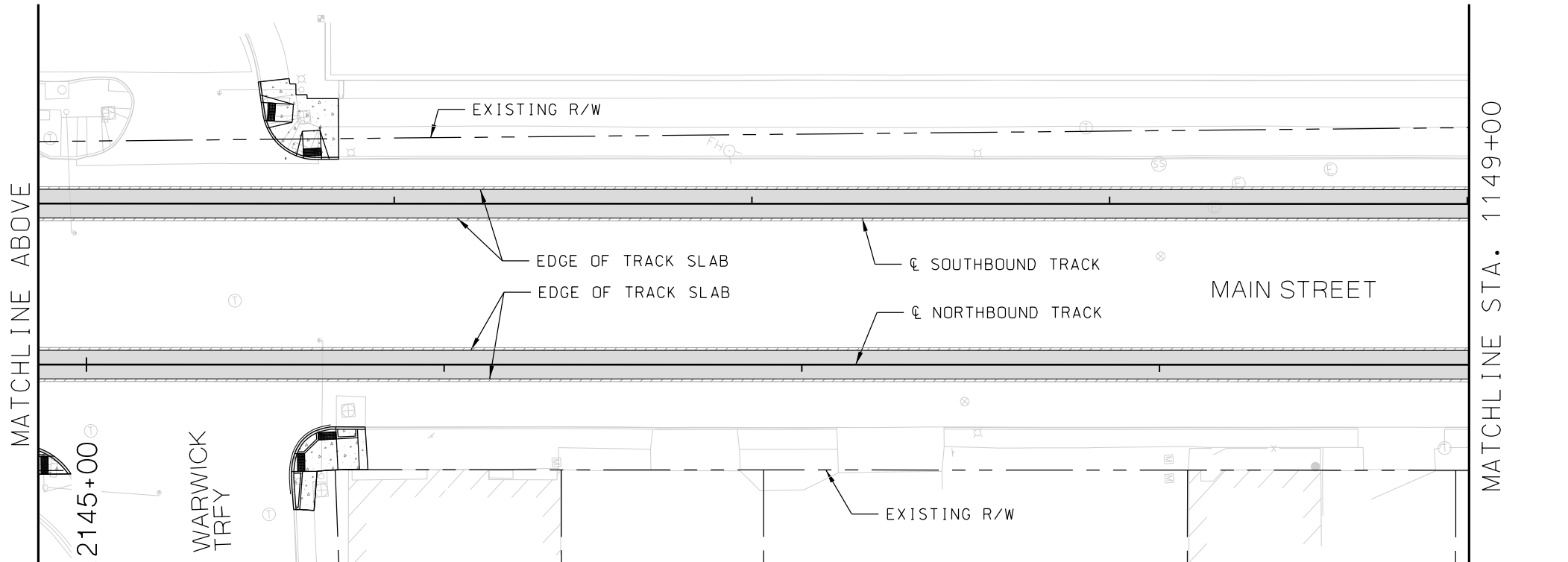
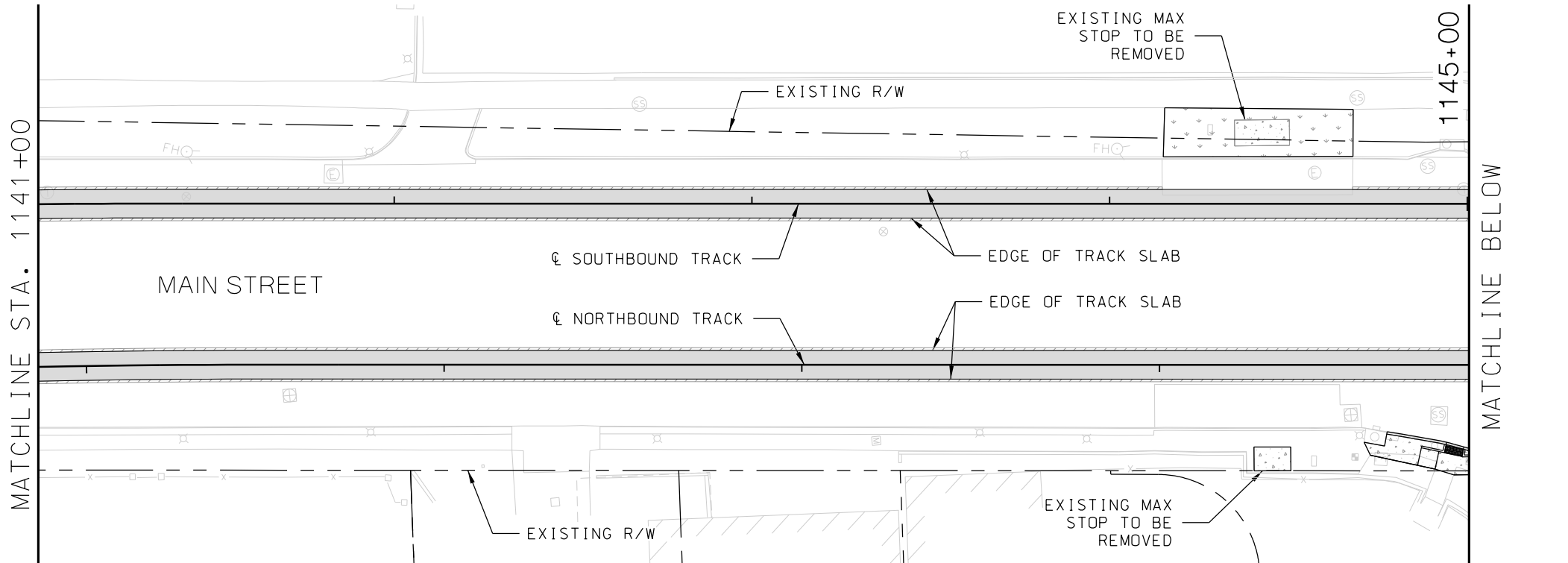
DESIGNED BY	JWR
CHECKED BY	RPB
DRAWN BY	MMO
CHECKED BY	RPB
APPROVED BY	NKS
DATE	08/28/2019



PRELIMINARY PLANS - 30%		DATE: 08-28-2019
HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856		
NOT FOR CONSTRUCTION		

KANSAS CITY STREETCAR MAIN STREET EXTENSION	
SOUTHBOUND AND NORTHBOUND TRACK	
CIVIL PLAN	
STA 1133+00 TO STA 1137+00	
STA 1137+00 TO STA 1141+00	

SCALE FOR 22"x34": H: 1"=20'	
FILENAME: CIVIL STA 1133+00 - 1141+00	
CONTRACT NO.:	
VOLUME:	
DRAWING NO.:	SHEET NO.:
C118	158



LEGEND

- TRACK SLAB
- HMAC FULL DEPTH
- CONCRETE SIDEWALK / TRAIL
- CONCRETE INFILL
- ASPHALT PAVEMENT
- BRIDGE MILL AND CONCRETE OVERLAY
- LANDSCAPE
- COLORED, STAMPED CONCRETE

REV	DATE	DESCRIPTION
PLOT DATE: 8/27/2019		11:07:31 AM

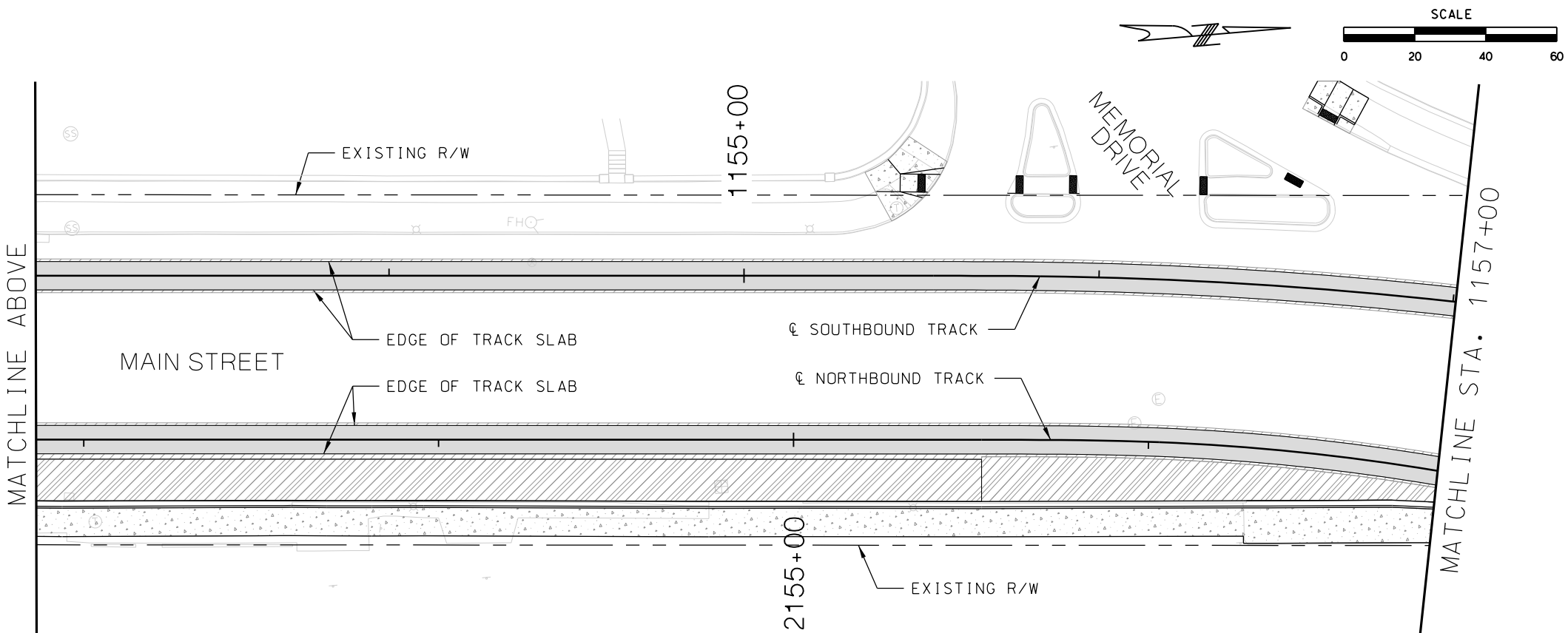
DESIGNED BY	JWR
CHECKED BY	RPB
DRAWN BY	MMO
CHECKED BY	RPB
APPROVED BY	NKS
DATE	08/28/2019

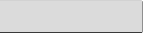
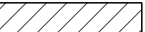

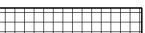

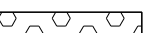
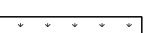



PRELIMINARY PLANS - 30%	DATE: 08-28-2019
HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	
NOT FOR CONSTRUCTION	

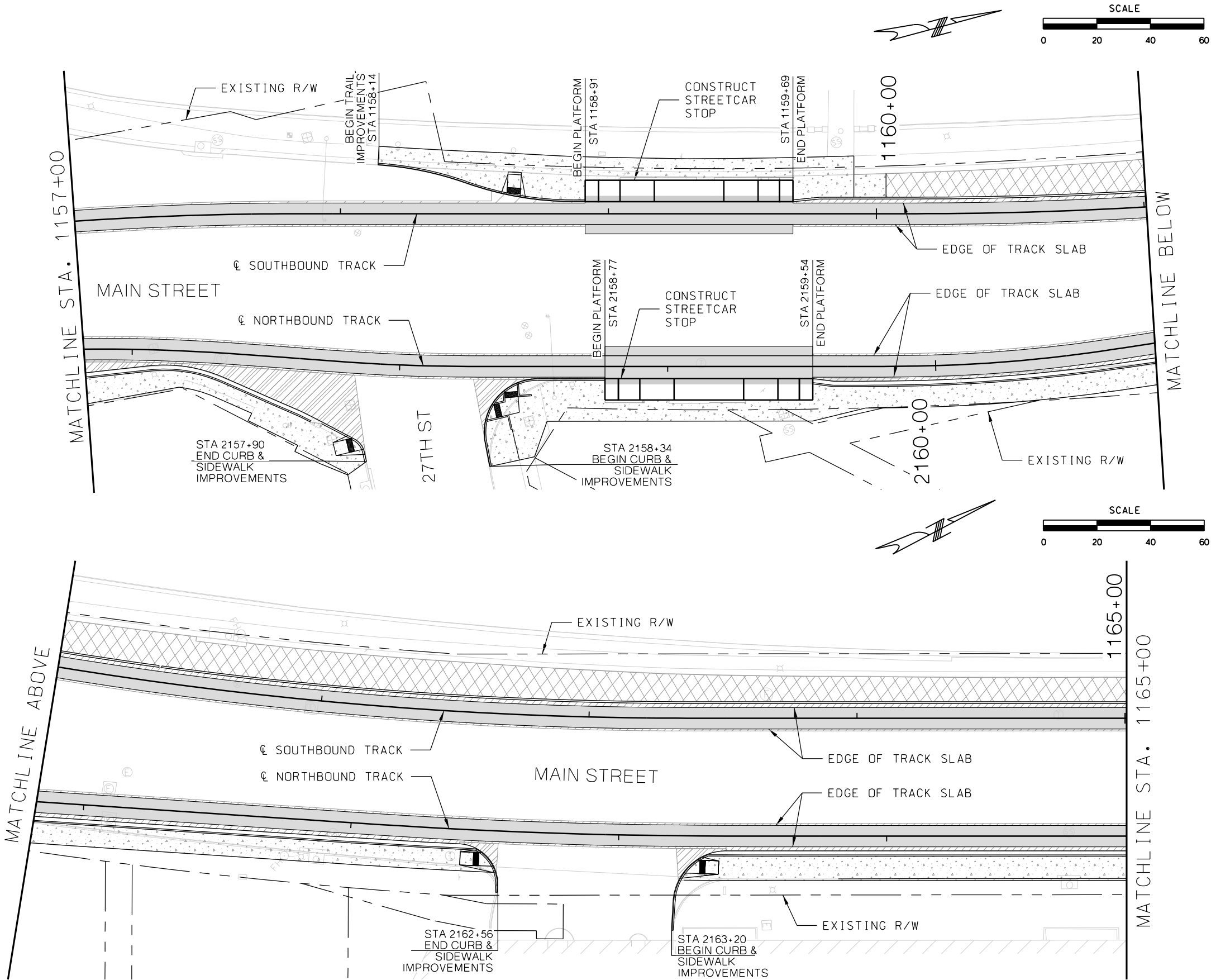
KANSAS CITY STREETCAR MAIN STREET EXTENSION	
SOUTHBOUND AND NORTHBOUND TRACK	
CIVIL PLAN	
STA 1141+00 TO STA 1145+00	
STA 1145+00 TO STA 1149+00	

SCALE FOR 22"x34": H: 1"=20'	
FILENAME: CIVIL STA 1141+00 - 1149+00	
CONTRACT NO.:	
VOLUME:	
DRAWING NO.:	SHEET NO.:
C119	159



LEGEND	
	TRACK SLAB
	HMAC FULL DEPTH
	CONCRETE SIDEWALK / TRAIL
	CONCRETE INFILL
	ASPHALT PAVEMENT
	BRIDGE MILL AND CONCRETE OVERLAY
	LANDSCAPE
	COLORLED, STAMPED CONCRETE

REV	DATE	DESCRIPTION	DESIGNED BY JWR		PRELIMINARY PLANS - 30% DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION SOUTHBOUND AND NORTHBOUND TRACK CIVIL PLAN STA 1149+00 TO STA 1153+00 STA 1153+00 TO STA 1157+00	SCALE FOR 22"x34": H: 1"=20' FILENAME: CIVIL STA 1149-00 - 1157-00 CONTRACT NO.: ***** VOLUME: 1	DRAWING NO.: C120	SHEET NO.: 160
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			DRAWN BY MMO						
			CHECKED BY RPB						
			APPROVED BY NKS						
PLOT DATE: 8/27/2019 11:07:44 AM			DATE: 08/28/2019		10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856				
					NOT FOR CONSTRUCTION				



REV	DATE	DESCRIPTION
PLOT DATE: 8/27/2019		11:07:58 AM

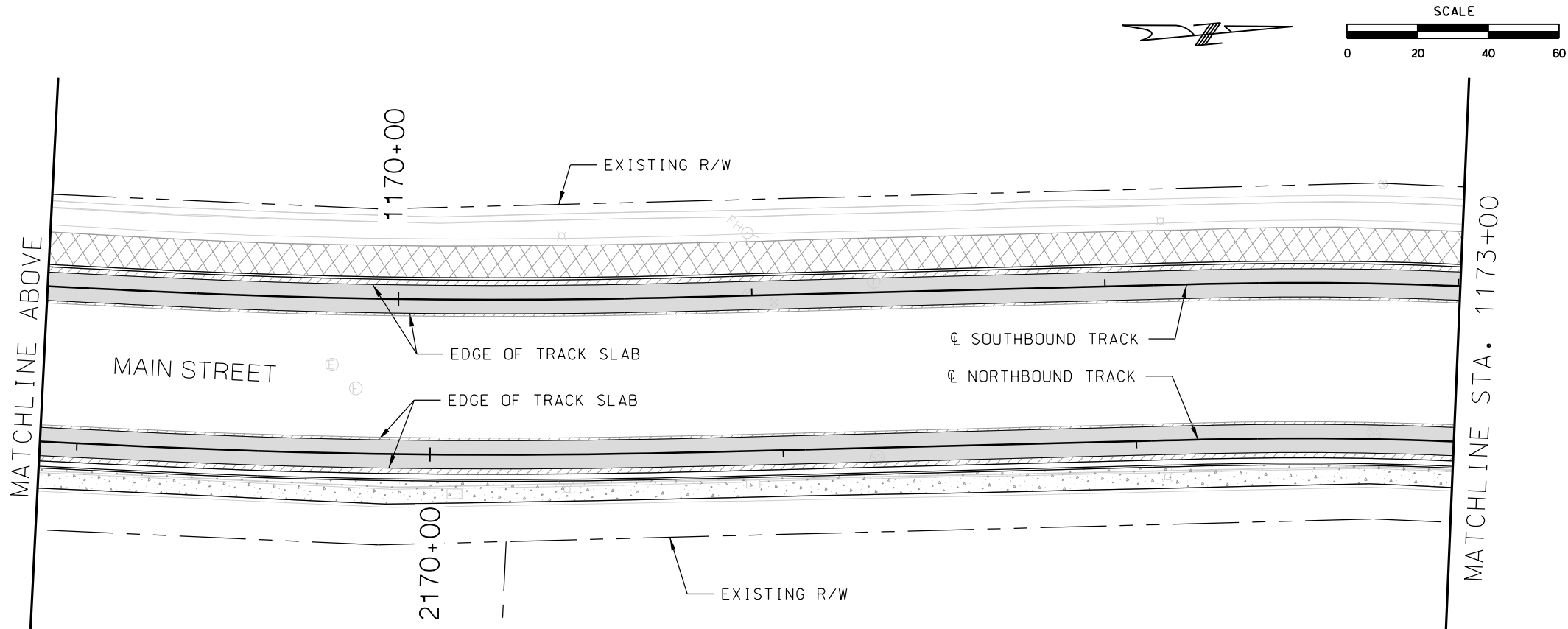
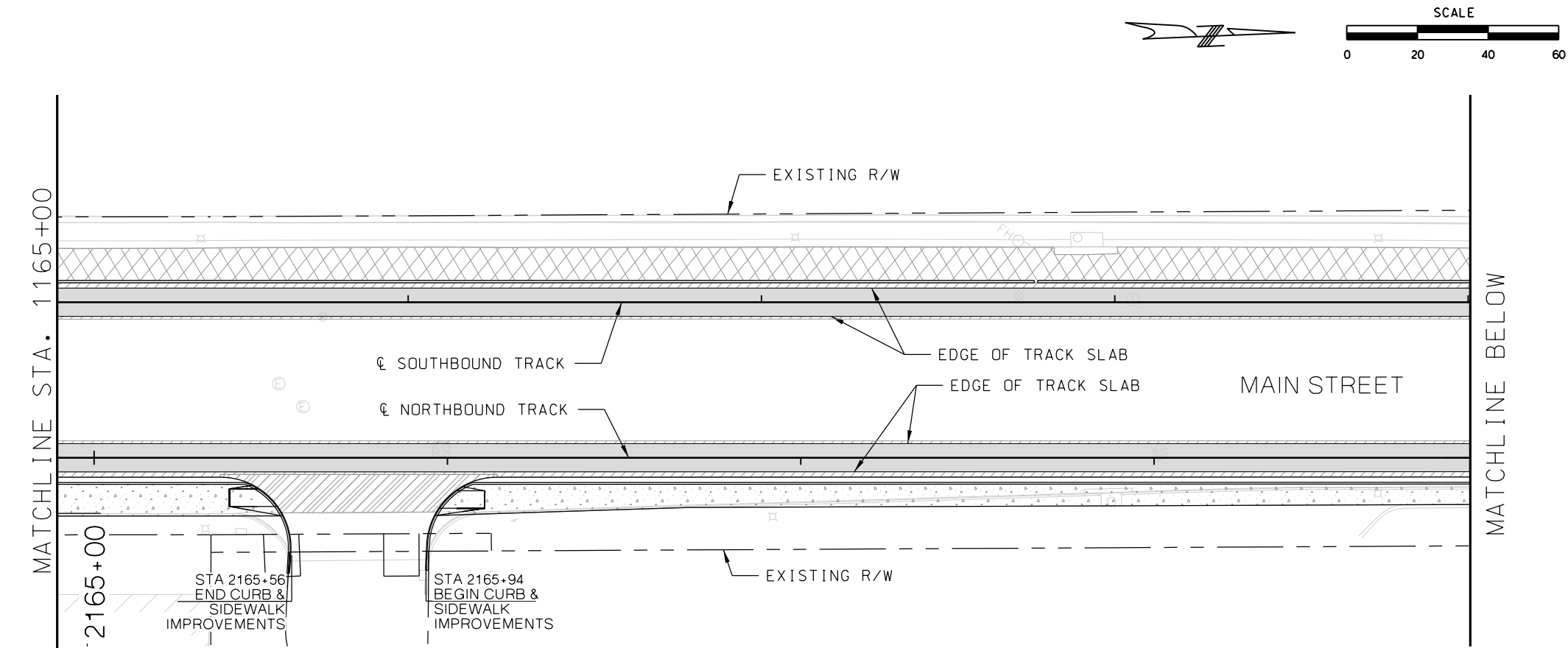
DESIGNED BY	JWR
CHECKED BY	RPB
DRAWN BY	MMO
CHECKED BY	RPB
APPROVED BY	NKS
DATE	08/28/2019



PRELIMINARY PLANS - 30%	DATE: 08-28-2019
HDR HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	NOT FOR CONSTRUCTION

KANSAS CITY STREETCAR MAIN STREET EXTENSION SOUTHBOUND AND NORTHBOUND TRACK CIVIL PLAN STA 1157+00 TO STA 1161+00 STA 1161+00 TO STA 1165+00

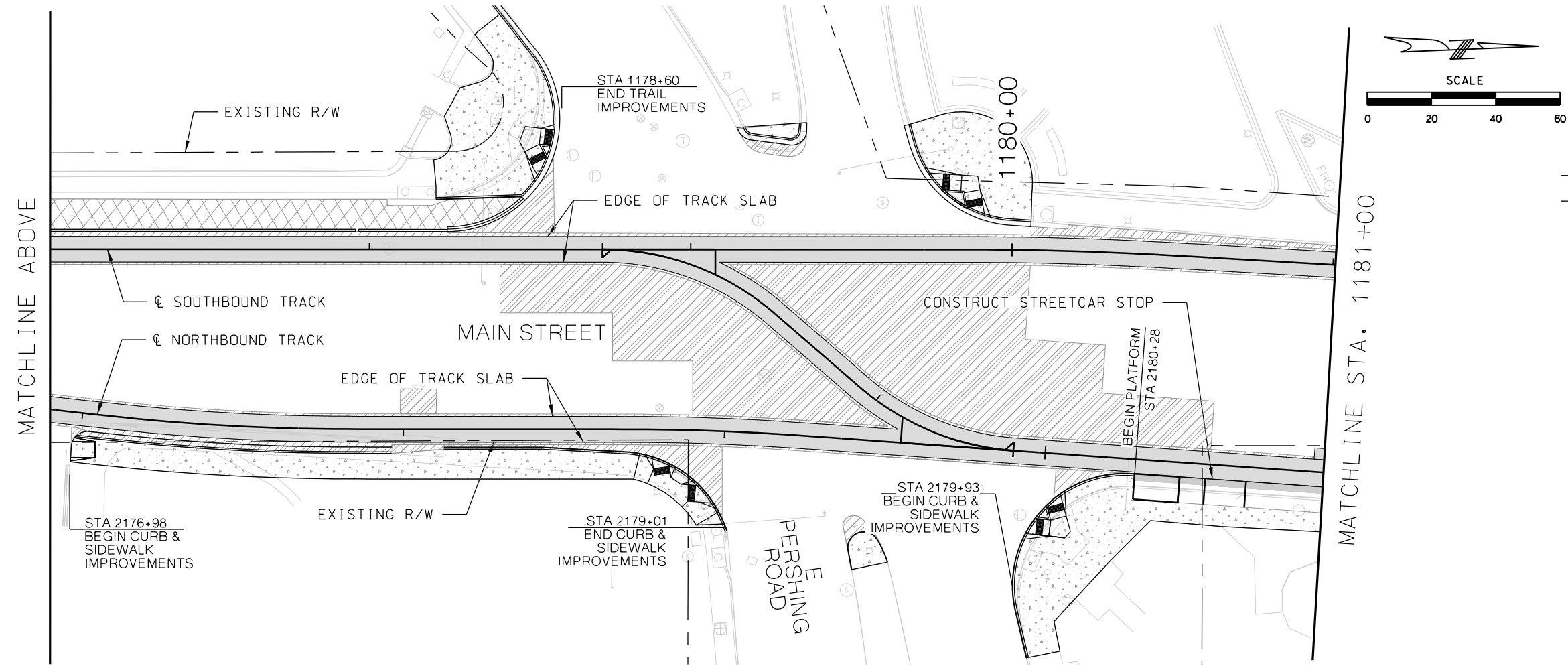
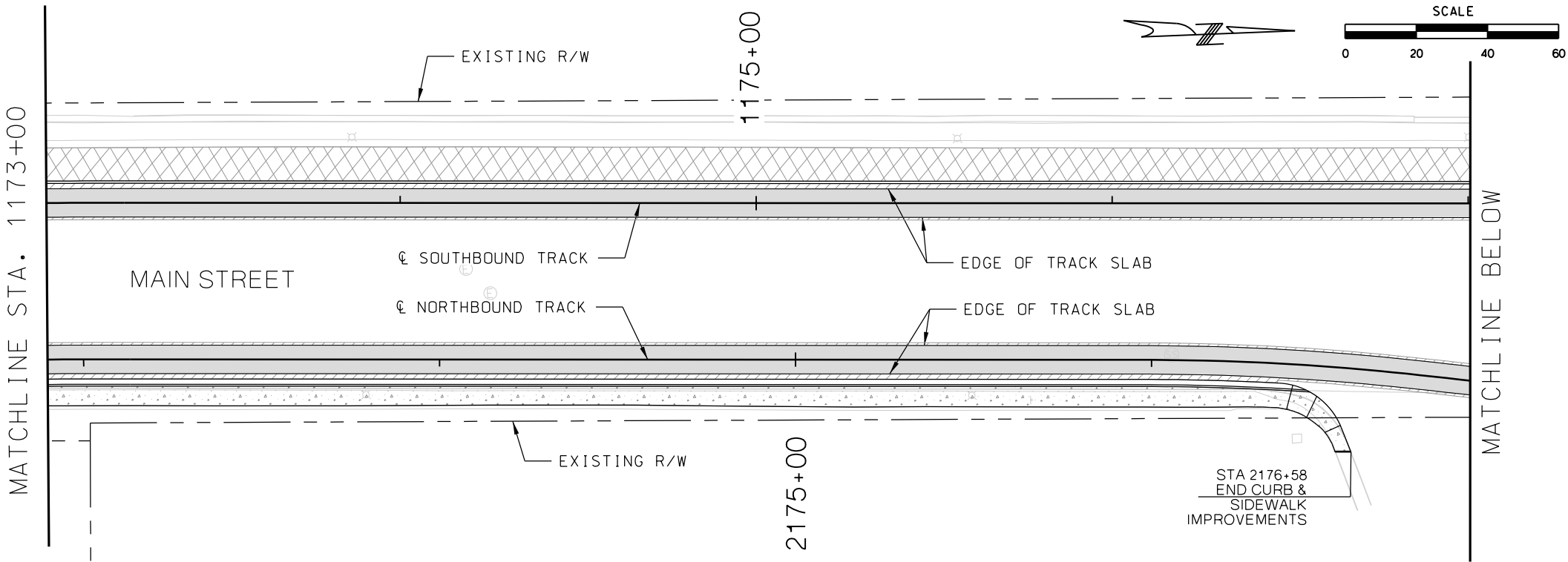
SCALE FOR 22"x34": H: 1"=20'	FILENAME: CIVIL STA 1157+00 - 1165+00
CONTRACT NO.: *****	VOLUME: 1
DRAWING NO.: C121	SHEET NO.: 161



LEGEND

- TRACK SLAB
- HMAC FULL DEPTH
- CONCRETE SIDEWALK / TRAIL
- CONCRETE INFILL
- ASPHALT PAVEMENT
- BRIDGE MILL AND CONCRETE OVERLAY
- LANDSCAPE
- COLORED, STAMPED CONCRETE
- MOBILITY LANE

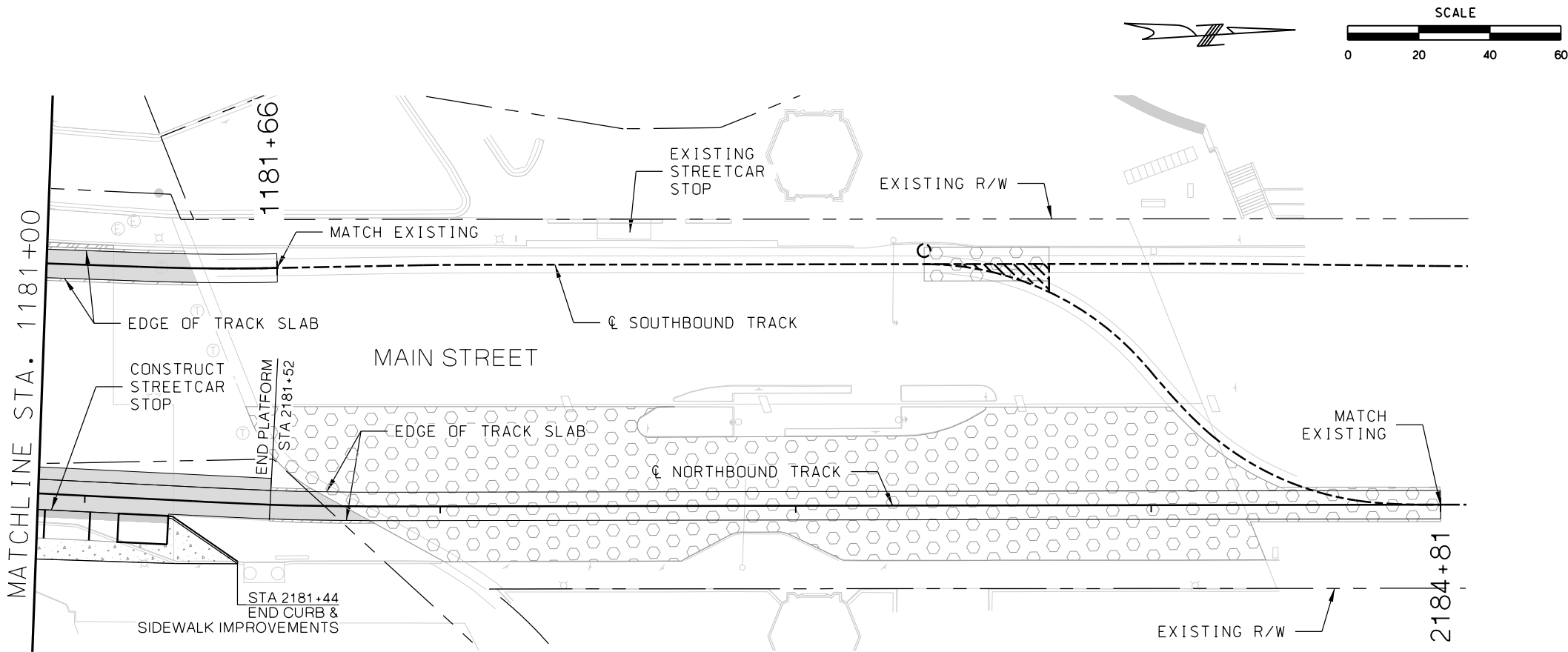
REV	DATE	DESCRIPTION	DESIGNED BY	JWR				PRELIMINARY PLANS - 30%		DATE: 08-28-2019		KANSAS CITY STREETCAR MAIN STREET EXTENSION SOUTHBOUND AND NORTHBOUND TRACK CIVIL PLAN STA 1165+00 TO STA 1169+00 STA 1169+00 TO STA 1173+00				SCALE FOR 22"x34": H: 1"=20'				
			CHECKED BY	RPB				 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856		NOT FOR CONSTRUCTION						FILENAME:		CIVIL STA 1165+00 - 1173+00		
			DRAWN BY	MMO												CONTRACT NO.:		*****		
			CHECKED BY	RPB												VOLUME:		1		
			APPROVED BY	NKS												DRAWING NO.:		C122		
PLOT DATE: 8/27/2019			DATE: 08/28/2019													SHEET NO.:		162		



LEGEND



- TRACK SLAB
- HMAC FULL DEPTH
- CONCRETE SIDEWALK / TRAIL
- CONCRETE INFILL
- ASPHALT PAVEMENT
- BRIDGE MILL AND CONCRETE OVERLAY
- LANDSCAPE
- COLORED STAMPED CONCRETE

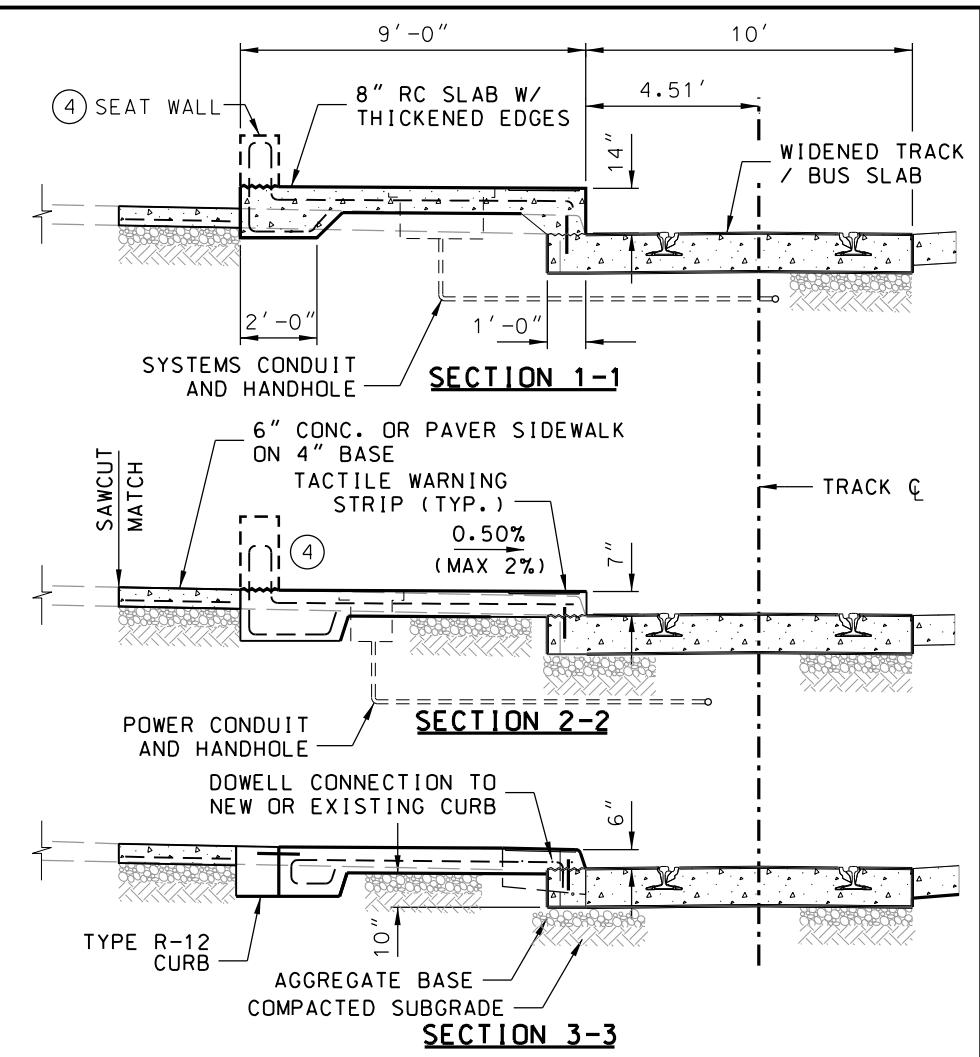
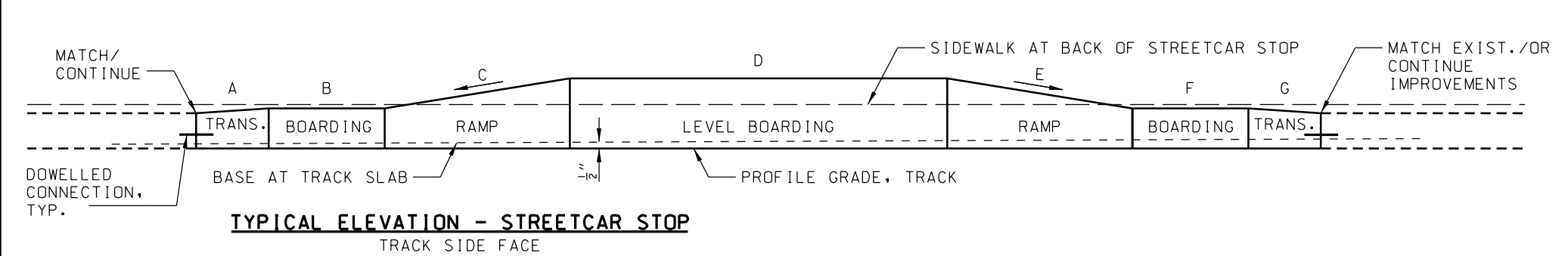
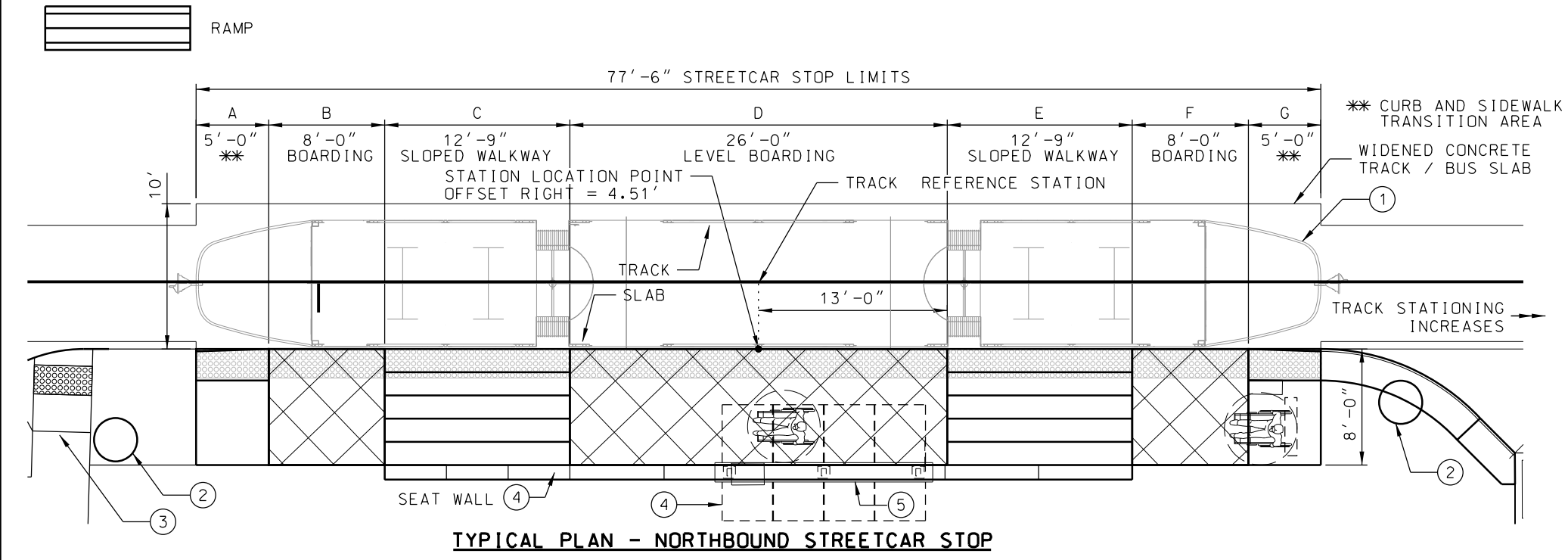
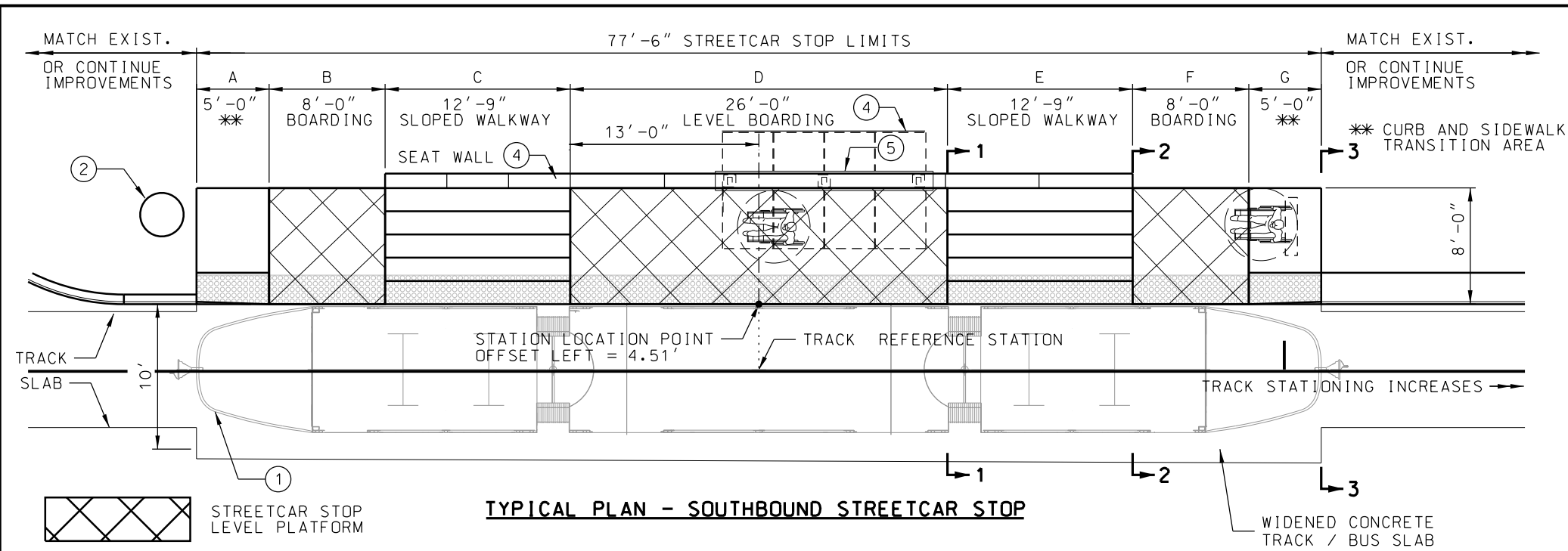
REV	DATE	DESCRIPTION	DESIGNED BY	JWR			PRELIMINARY PLANS - 30%		DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION SOUTHBOUND AND NORTHBOUND TRACK CIVIL PLAN STA 1173+00 TO STA 1177+00 STA 1177+00 TO STA 1181+00		SCALE FOR 22"x34": H: 1"=20'	
			CHECKED BY	RPB								FILENAME:	
			DRAWN BY	MMO			10450 Holmes Road					CIVIL STA 1173+00 - 1181+00	
			CHECKED BY	RPB			Suite 600					CONTRACT NO.:	
			APPROVED BY	NKS			Kansas City, MO 64131-3471					VOLUME:	
PLOT DATE: 8/27/2019			DATE: 08/28/2019				Certificate of Authority: 000856			DRAWING NO.: C123		SHEET NO.: 163	
							NOT FOR CONSTRUCTION						



LEGEND

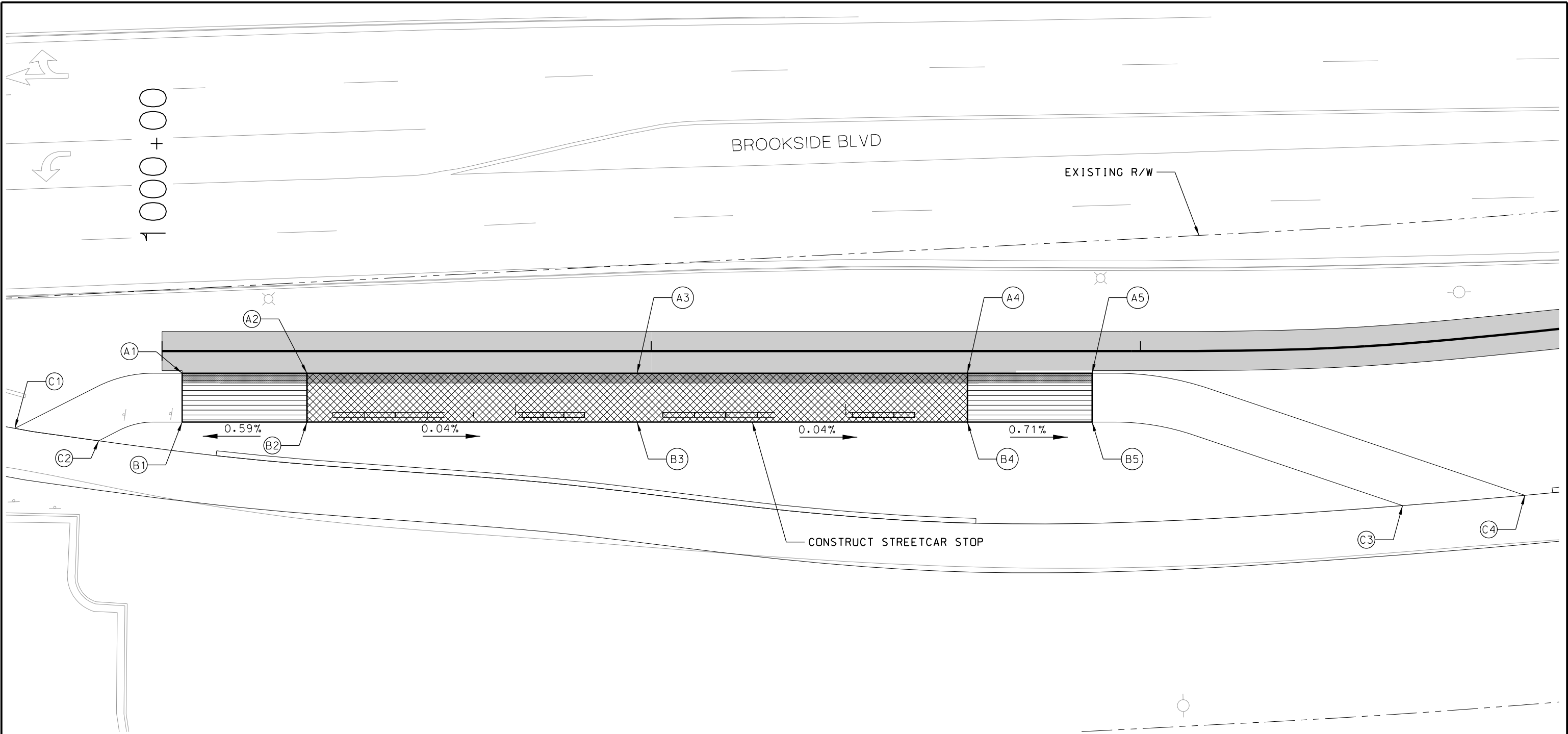
- TRACK SLAB
- HMAC FULL DEPTH
- CONCRETE SIDEWALK / TRAIL
- CONCRETE INFILL
- ASPHALT PAVEMENT
- BRIDGE MILL AND CONCRETE OVERLAY
- LANDSCAPE
- COLORED, STAMPED CONCRETE

REV	DATE	DESCRIPTION	DESIGNED BY	JWR		PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION SOUTHBOUND AND NORTHBOUND TRACK CIVIL PLAN STA 1181+00 TO STA 1185+00	SCALE FOR 22"x34": H: 1"=20'		
			CHECKED BY	RPB		 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	NOT FOR CONSTRUCTION			FILENAME:	
			DRAWN BY	MMO						CIVIL STA 1181+00 - 1189+00	
			CHECKED BY	RPB						CONTRACT NO.:	
			APPROVED BY	NKS						*****	
										VOLUME:	
PLOT DATE: 8/27/2019			11:08:40 AM		DATE	08/28/2019			DRAWING NO.:	SHEET NO.:	
									C124	164	



- NOTES**
- ① TYPICAL STREET CAR ORIENTATION
 - ② OCS POLE LOCATION
 - ③ PEDESTRIAN RAMPS
 - ④ ARCHITECTURE, UTILITIES, AND FURNISHINGS
 - ⑤ HANDHOLE (BACK OF WALL SEAT)

REV	DATE	DESCRIPTION	DESIGNED BY JWR			PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	TYPICAL NORTHBOUND AND SOUTHBOUND STREETCAR STOP DETAILS	SCALE FOR 22"x34":	
			CHECKED BY RPB			FILENAME: TYPICAL STREETCAR STOP DETAILS					
			DRAWN BY MMO			CONTRACT NO.:					
			CHECKED BY RPB			VOLUME:					
			APPROVED BY NKS			DRAWING NO.:	SHEET NO.:				
PLOT DATE: 8/27/2019 11:08:44 AM			DATE: 08/28/2019			NOT FOR CONSTRUCTION				C200	165



LEGEND / NOTES



1. SEE DRAWING P201 FOR PLATFORM INFORMATION.

2. ONLY NON-TYPICAL DIMENSIONS SHOWN. SEE DRAWING C200 FOR TYPICAL STREETCAR STOP DIMENSIONS.

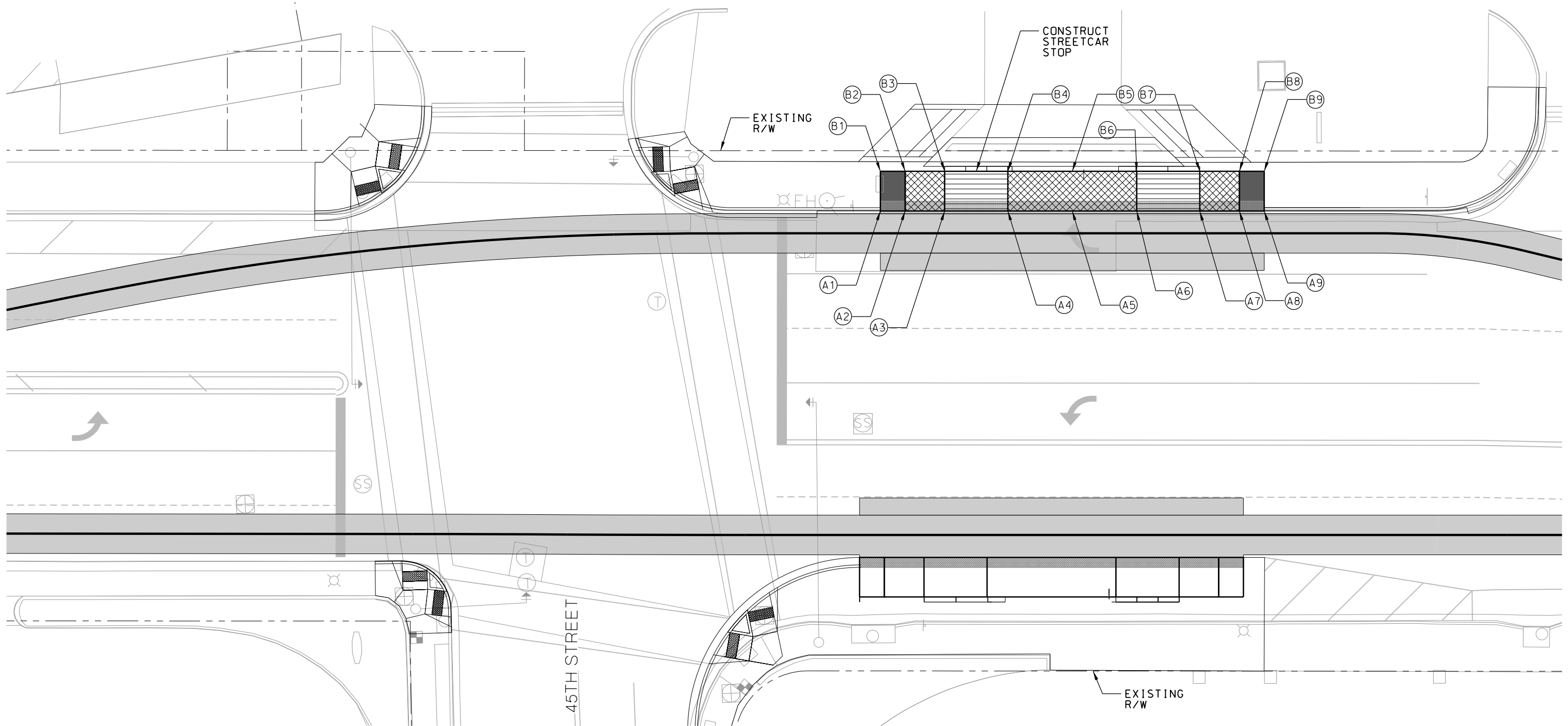
3. ** MATCH EXISTING

SCALE


0 10 20 30


	PASSENGER LOADING PLATFORM	(A1)	N 1044514.06 E 2764811.90 ELEV. 844.61'	(A2)	N 1044539.55 E 2764812.63 ELEV. 845.76'	(A3)	N 1044607.02 E 2764814.58 ELEV. 845.74'	(A4)	N 1044674.49 E 2764816.52 ELEV. 845.71'	(A5)	N 1044684.49 E 2764816.81 ELEV. 844.53'
	RAMP BETWEEN LOADING PLATFORMS	(B1)	N 1044513.77 E 2764821.89 ELEV. 844.65'	(B2)	N 1044539.26 E 2764822.63 ELEV. 845.80'	(B3)	N 1044606.73 E 2764824.57 ELEV. 845.78'	(B4)	N 1044674.20 E 2764826.51 ELEV. 845.75'	(B5)	N 1044684.20 E 2764826.80 ELEV. 844.57'
		(C1)	N 1044479.56 E 2764822.18 ELEV. XXX.XX'	(C2)	N 1044496.59 E 2764825.22 ELEV. XXX.XX'	(C3)	N 1044762.62 E 2764846.13 ELEV. XXX.XX'	(C4)	N 1044787.67 E 2764844.75 ELEV. XXX.XX'		


<table><tr><th>REV</th><th>DATE</th><th>DESCRIPTION</th></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr></table>		REV	DATE	DESCRIPTION																<table><tr><td>DESIGNED BY</td><td>JWR</td></tr><tr><td>CHECKED BY</td><td>RPB</td></tr><tr><td>DRAWN BY</td><td>MMO</td></tr><tr><td>CHECKED BY</td><td>RPB</td></tr><tr><td>APPROVED BY</td><td>NKS</td></tr><tr><td>DATE</td><td>08/28/2019</td></tr></table>	DESIGNED BY	JWR	CHECKED BY	RPB	DRAWN BY	MMO	CHECKED BY	RPB	APPROVED BY	NKS	DATE	08/28/2019	<div></div>	<div><div>PRELIMINARY PLANS - 30%</div><div>DATE: 08-28-2019</div><div><div><div><div><div>HDR</div><div>HDR Engineering, Inc.</div></div><div>10450 Holmes Road</div><div>Suite 600</div><div>Kansas City, MO 64131-3471</div><div>816-360-2700</div><div>Certificate of Authority: 000856</div></div><div>NOT FOR CONSTRUCTION</div></div></div></div>	<div><div><div><div><div><div>KANSAS CITY STREETCAR MAIN STREET EXTENSION</div><div>STREETCAR STOP</div><div>SOUTH END PLATFORM</div><div>NORTHBOUND / SOUTHBOUND</div></div></div></div></div></div>	<div><div>SCALE FOR 22"x34": H: 1"=10'</div><div>FILENAME: SOUTH END PLATFORM</div><div>CONTRACT NO.: *****</div><div>VOLUME: 1</div><div><div>DRAWING NO.: C201</div><div>SHEET NO.: 166</div></div></div>
REV	DATE	DESCRIPTION																																		
DESIGNED BY	JWR																																			
CHECKED BY	RPB																																			
DRAWN BY	MMO																																			
CHECKED BY	RPB																																			
APPROVED BY	NKS																																			
DATE	08/28/2019																																			
<table><tr><td>PLOT DATE: 8/27/2019</td><td>11:08:57 AM</td></tr></table>		PLOT DATE: 8/27/2019	11:08:57 AM																																	
PLOT DATE: 8/27/2019	11:08:57 AM																																			



- LEGEND / NOTES
- SEE DRAWING P201 FOR PLATFORM INFORMATION.
 - ONLY NON-TYPICAL DIMENSIONS SHOWN. SEE DRAWING C200 FOR TYPICAL STREETCAR STOP DIMENSIONS.
 - ** MATCH EXISTING

 PASSENGER LOADING PLATFORM

 RAMP BETWEEN LOADING PLATFORMS

 SLOPE TRANS. AREA

(A1)	N 1048353.35 E 2764037.64 ELEV. 916.06	(A2)	N 1048358.35 E 2764037.85 ELEV. 916.11	(A3)	N 1048366.34 E 2764038.19 ELEV. 916.06	(A4)	N 1048379.08 E 2764038.74 ELEV. 916.57	(A5)	N 1048392.07 E 2764039.29 ELEV. 916.48	(A6)	N 1048405.05 E 2764039.85 ELEV. 916.40	(A7)	N 1048417.79 E 2764040.40 ELEV. 915.73	(A8)	N 1048425.78 E 2764040.74 ELEV. 915.68	(A9)	N 1048430.78 E 2764040.95 ELEV. 915.57
(B1)	N 1048353.69 E 2764029.65 ELEV. 916.10	(B2)	N 1048358.69 E 2764029.86 ELEV. 916.15	(B3)	N 1048366.68 E 2764030.20 ELEV. 916.10	(B4)	N 1048379.42 E 2764030.75 ELEV. 916.61	(B5)	N 1048392.41 E 2764031.30 ELEV. 916.52	(B6)	N 1048405.40 E 2764031.86 ELEV. 916.44	(B7)	N 1048418.13 E 2764032.40 ELEV. 915.77	(B8)	N 1048426.13 E 2764032.74 ELEV. 915.72	(B9)	N 1048431.12 E 2764032.96 ELEV. 915.61

REV	DATE	DESCRIPTION
PLOT DATE: 8/27/2019		11:09:19 AM

DESIGNED BY	LM
CHECKED BY	CJH
DRAWN BY	LM
CHECKED BY	CJH
APPROVED BY	NKS
DATE	8/28/2019



PRELIMINARY PLANS - 30%
HDR HDR Engineering, Inc.
10450 Holmes Road
Suite 600
Kansas City, MO 64131-3471
816-360-2700
Certificate of Authority: 000856

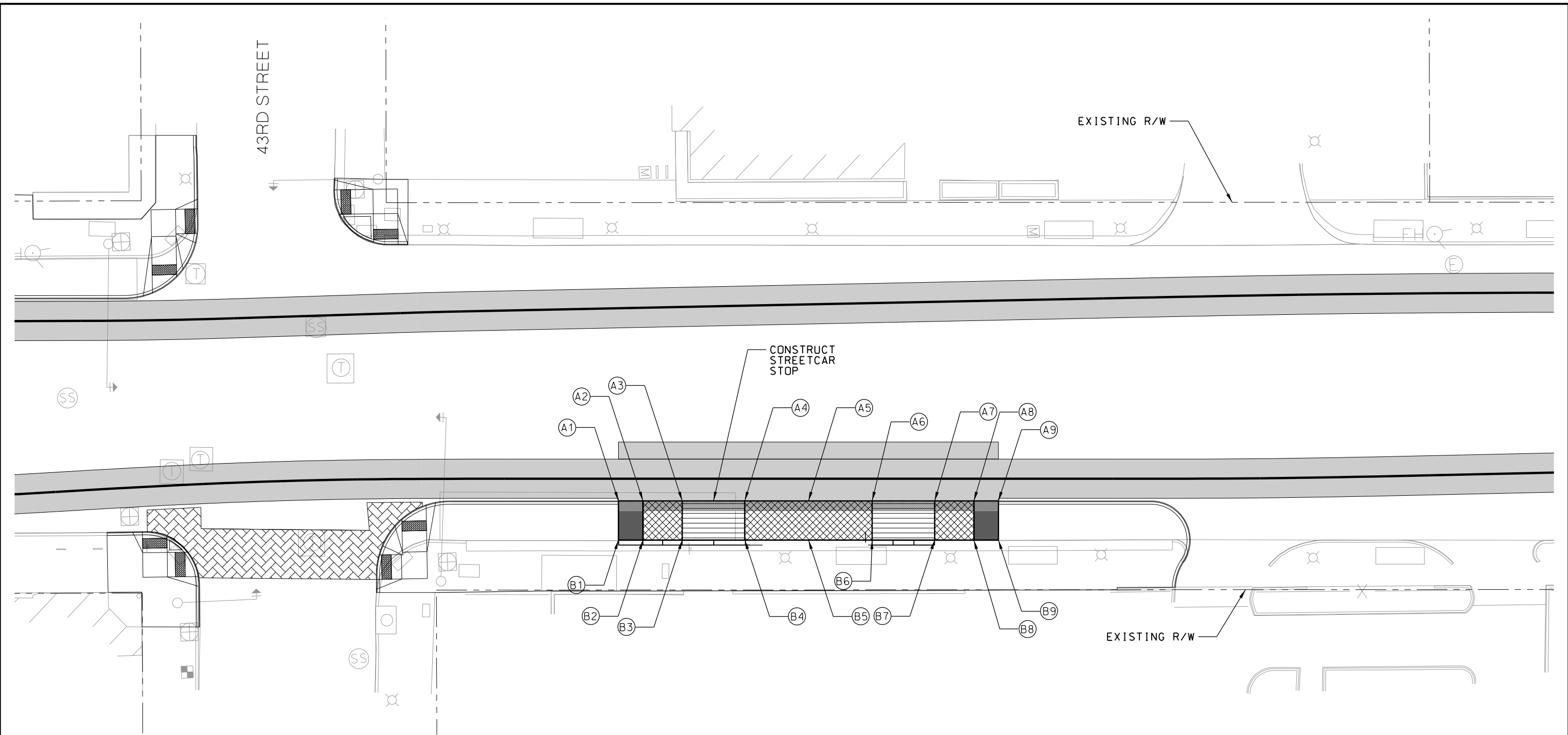
DATE: 08-28-2019
HNTB
The HNTB COMPANIES
INFRASTRUCTURE SOLUTIONS
715 Kirk Drive
Kansas City, MO 64105
Phone: 816-472-1201

NOT FOR CONSTRUCTION

KANSAS CITY STREETCAR MAIN STREET EXTENSION

STREETCAR STOP
45TH STREET PLATFORM
SOUTHBOUND

SCALE FOR 22"x34": H: 1"=10'	
FILENAME: 45TH STREET SB PLATFORM	
CONTRACT NO.: CON0077290	
VOLUME: 1	
DRAWING NO.: C203	SHEET NO.: 168



LEGEND / NOTES

1. SEE DRAWING P201 FOR PLATFORM INFORMATION.

2. ONLY NON-TYPICAL DIMENSIONS SHOWN. SEE DRAWING C200 FOR TYPICAL STREETCAR STOP DIMENSIONS.

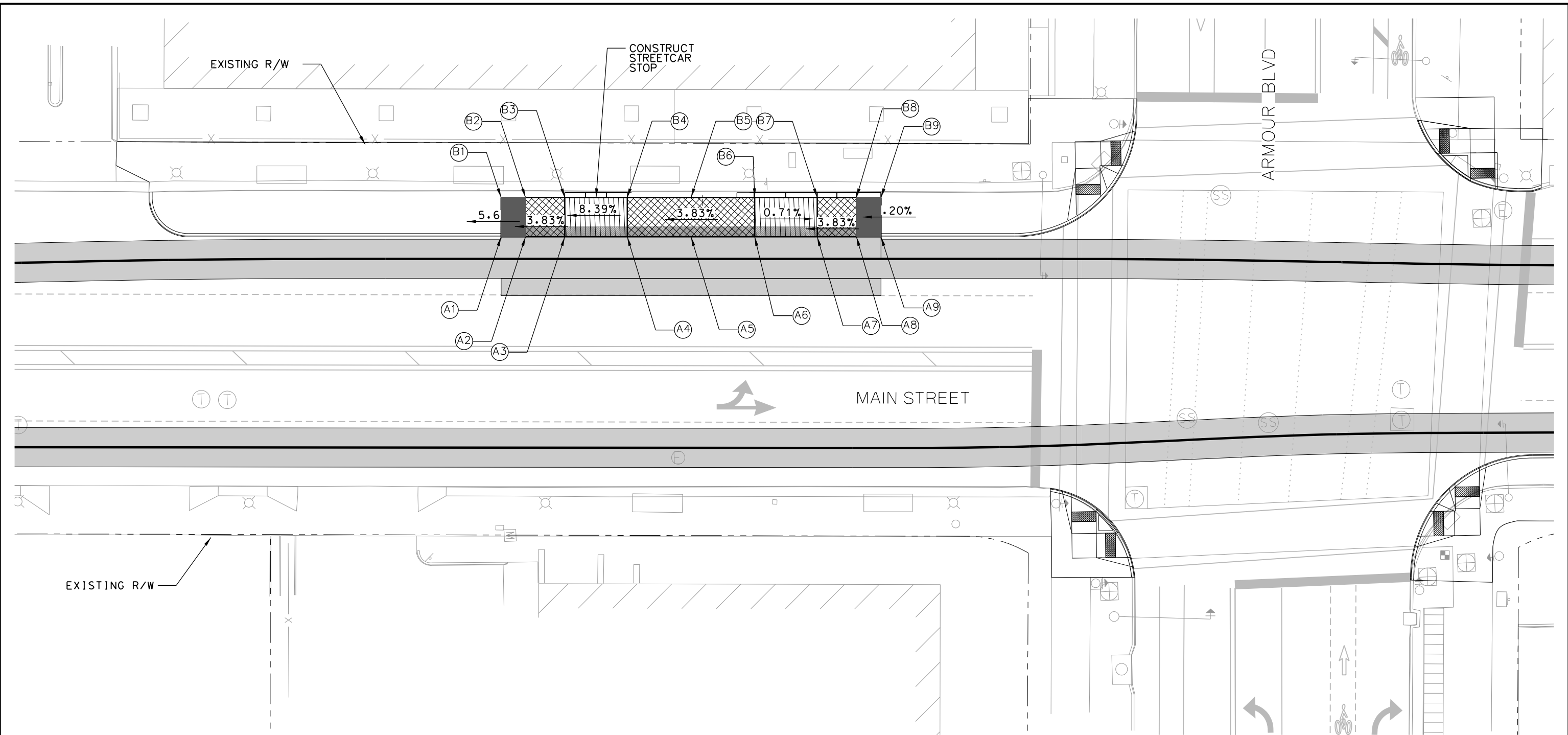
3. ** MATCH EXISTING

PASSENGER LOADING PLATFORM

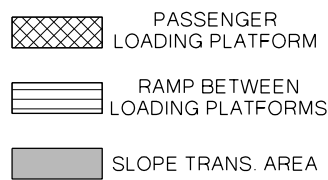
RAMP BETWEEN LOADING PLATFORMS

SLOPE TRANS. AREA

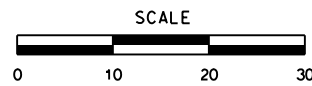
(A1)	N 1049704.83 E 2764160.64 ELEV. 910.78	(A2)	N 1049709.82 E 2764160.87 ELEV. 911.18	(A3)	N 1049717.82 E 2764161.24 ELEV. 911.52	(A4)	N 1049730.55 E 2764161.83 ELEV. 912.53	(A5)	N 1049743.54 E 2764162.43 ELEV. 913.07	(A6)	N 1049756.52 E 2764163.03 ELEV. 913.62	(A7)	N 1049769.26 E 2764163.62 ELEV. 913.56	(A8)	N 1049777.25 E 2764163.99 ELEV. 913.89	(A9)	N 1049782.25 E 2764164.22 ELEV. 914.02
(B1)	N 1049704.46 E 2764168.63 ELEV. 910.82	(B2)	N 1049709.45 E 2764168.86 ELEV. 911.22	(B3)	N 1049717.44 E 2764169.23 ELEV. 911.56	(B4)	N 1049730.18 E 2764169.82 ELEV. 912.57	(B5)	N 1049743.17 E 2764170.42 ELEV. 913.11	(B6)	N 1049756.15 E 2764171.03 ELEV. 913.66	(B7)	N 1049768.89 E 2764171.61 ELEV. 913.60	(B8)	N 1049776.88 E 2764171.98 ELEV. 913.93	(B9)	N 1049781.88 E 2764172.22 ELEV. 914.06



- LEGEND / NOTES
- SEE DRAWING P201 FOR PLATFORM INFORMATION.
 - ONLY NON-TYPICAL DIMENSIONS SHOWN. SEE DRAWING C200 FOR TYPICAL STREETCAR STOP DIMENSIONS.
 - ** MATCH EXISTING



(A1)	N 1054740.47 E 2764353.68 ELEV. 948.31'	(A2)	N 1054745.47 E 2764353.90 ELEV. 948.59'	(A3)	N 1054753.46 E 2764354.26 ELEV. 948.90'	(A4)	N 1054766.19 E 2764354.84 ELEV. 949.97'	(A5)	N 1054779.18 E 2764355.43 ELEV. 950.47'	(A6)	N 1054792.17 E 2764356.01 ELEV. 851.22'	(A7)	N 1054804.91 E 2764356.59 ELEV. 950.87'	(A8)	N 1054812.90 E 2764356.95 ELEV. 951.17'	(A9)	N 1054817.89 E 2764357.18 ELEV. 951.28'
(B1)	N 1054740.83 E 2764345.69 ELEV. 948.35'	(B2)	N 1054745.83 E 2764345.91 ELEV. 948.75'	(B3)	N 1054753.82 E 2764346.27 ELEV. 949.09'	(B4)	N 1054766.56 E 2764346.85 ELEV. 950.21'	(B5)	N 1054779.54 E 2764347.44 ELEV. 950.75'	(B6)	N 1054792.53 E 2764348.02 ELEV. 951.30'	(B7)	N 1054805.27 E 2764348.60 ELEV. 951.24'	(B8)	N 1054813.26 E 2764348.96 ELEV. 951.57'	(B9)	N 1054818.25 E 2764349.19 ELEV. 951.70'



REV	DATE	DESCRIPTION
PLOT DATE: 8/27/2019		11:09:42 AM

DESIGNED BY	JWR
CHECKED BY	RPB
DRAWN BY	MMQ
CHECKED BY	RPB
APPROVED BY	NKS
DATE	08/28/2019



PRELIMINARY PLANS - 30%DATE: 08-28-2019

HDR Engineering, Inc.
10450 Holmes Road
Suite 600
Kansas City, MO 64131-3471
816-360-2700
Certificate of Authority: 000856

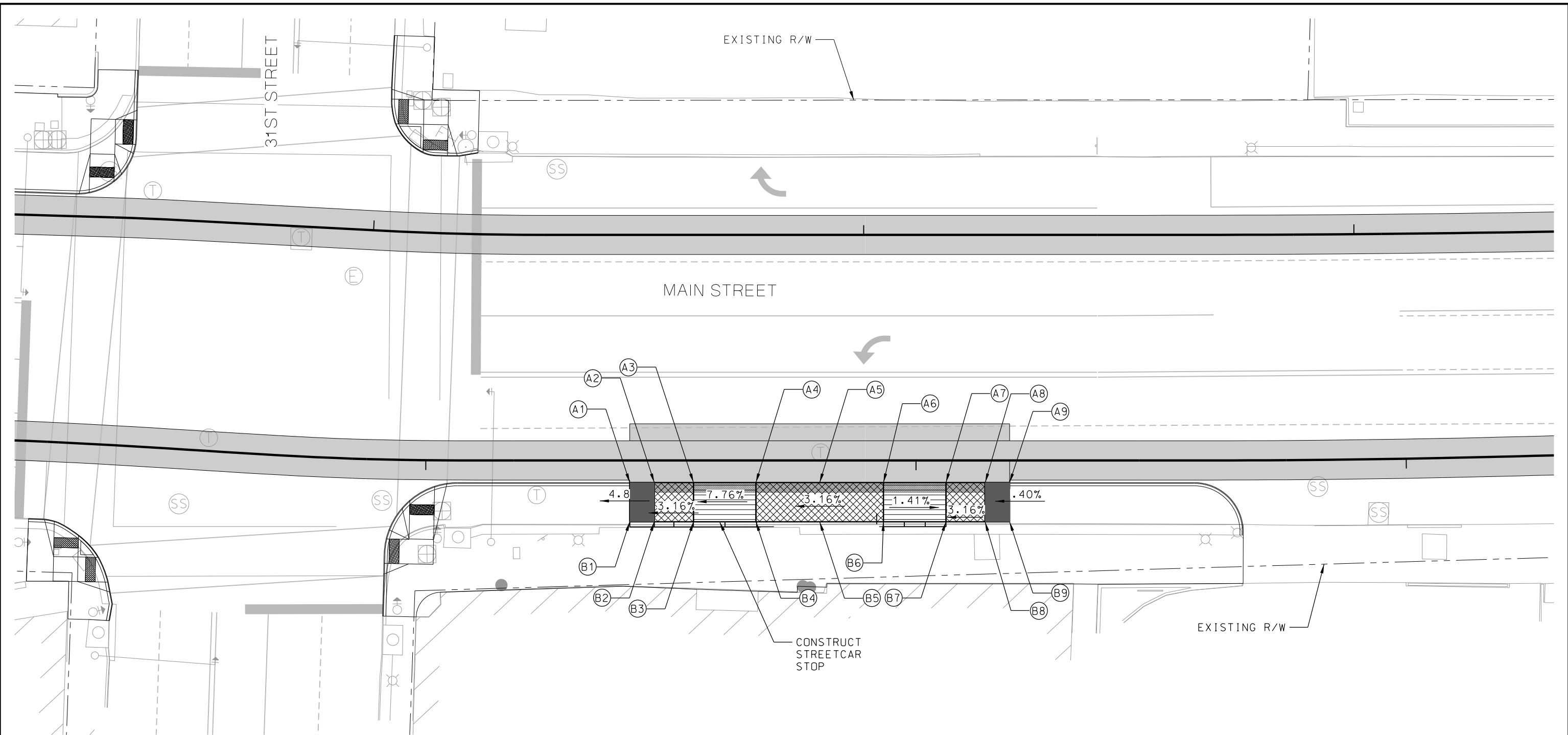
NOT FOR CONSTRUCTION

KANSAS CITY STREETCAR MAIN STREET EXTENSION

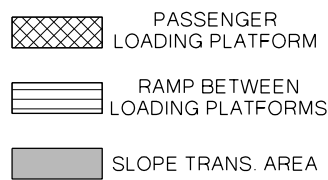
STREETCAR STOP
ARMOUR STREET PLATFORM
SOUTHBOUND

SCALE FOR 22"x34":
H: 1"=10'
FILENAME:
ARMOUR STREET SB PLATFORM
CONTRACT NO.:

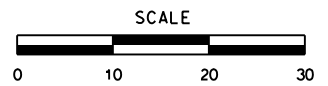
VOLUME:
1
DRAWING NO.: C205
SHEET NO.: 170



- LEGEND / NOTES
- SEE DRAWING P201 FOR PLATFORM INFORMATION.
 - ONLY NON-TYPICAL DIMENSIONS SHOWN. SEE DRAWING C200 FOR TYPICAL STREETCAR STOP DIMENSIONS.
 - ** MATCH EXISTING



(A1)	N 1057607.76 E 2764522.78 ELEV. 981.81'	(A2)	N 1057612.76 E 2764522.84 ELEV. 982.05'	(A3)	N 1057620.75 E 2764522.94 ELEV. 982.30'	(A4)	N 1057633.50 E 2764523.10 ELEV. 983.29'	(A5)	N 1057646.50 E 2764523.26 ELEV. 983.70'	(A6)	N 1057659.50 E 2764523.42 ELEV. 984.11'	(A7)	N 1057672.25 E 2764523.58 ELEV. 983.93'	(A8)	N 1057680.25 E 2764523.68 ELEV. 984.19'	(A9)	N 1057685.25 E 2764523.74 ELEV. 984.26'
(B1)	N 1057607.66 E 2764530.78 ELEV. 981.86'	(B2)	N 1057612.66 E 2764530.84 ELEV. 982.11'	(B3)	N 1057620.66 E 2764530.94 ELEV. 982.39'	(B4)	N 1057633.40 E 2764531.10 ELEV. 983.42'	(B5)	N 1057646.40 E 2764531.26 ELEV. 983.87'	(B6)	N 1057659.40 E 2764531.42 ELEV. 984.32'	(B7)	N 1057672.15 E 2764531.58 ELEV. 984.17'	(B8)	N 1057680.15 E 2764531.68 ELEV. 984.44'	(B9)	N 1057685.15 E 2764531.74 ELEV. 984.54'



REV	DATE	DESCRIPTION
PLOT DATE: 8/27/2019		11:09:51 AM

DESIGNED BY	JWR
CHECKED BY	RPB
DRAWN BY	MMO
CHECKED BY	RPB
APPROVED BY	NKS
DATE	08/28/2019



PRELIMINARY PLANS - 30%DATE: 08-28-2019

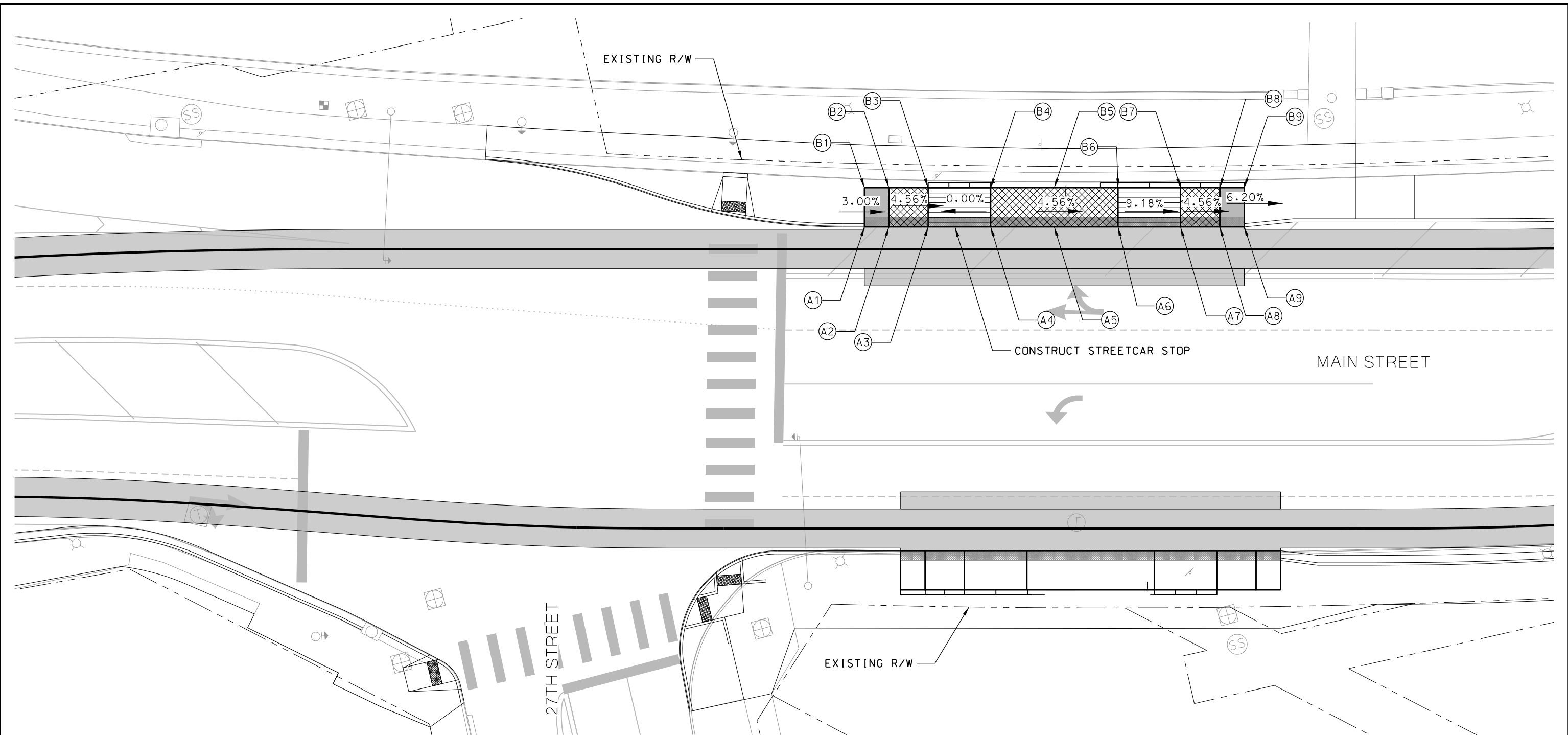
HDR Engineering, Inc.
10450 Holmes Road
Suite 600
Kansas City, MO 64131-3471
816-360-2700
Certificate of Authority: 000856

NOT FOR CONSTRUCTION

KANSAS CITY STREETCAR MAIN STREET EXTENSION

STREETCAR STOP
31ST STREET PLATFORM
NORTHBOUND

SCALE FOR 22"x34": H: 1"=10'	
FILENAME: 31ST STREET NB PLATFORM	
CONTRACT NO.:	
VOLUME: 1	
DRAWING NO.: C206	SHEET NO.: 171



LEGEND / NOTES

1. SEE DRAWING P201 FOR PLATFORM INFORMATION.

PASSENGER LOADING PLATFORM

(A1)

N 1060235.94
E 2764671.78
ELEV. 887.47'

(A2)

N 1060310.76
E 2764691.95
ELEV. 887.32'

(A3)

N 1060248.49
E 2764675.17
ELEV. 886.96'

(A4)

N 1060260.80
E 2764678.48
ELEV. 886.96'

(A5)

N 1060273.22
E 2764682.36
ELEV. 886.37'

(A6)

N 1060285.90
E 2764685.25
ELEV. 885.78'

(A7)

N 1060298.21
E 2764688.57
ELEV. 884.61'

(A8)

N 1060305.94
E 2764690.65
ELEV. 884.25'

(A9)

N 1060310.77
E 2764691.95
ELEV. 883.94'

2. ONLY NON-TYPICAL DIMENSIONS SHOWN. SEE DRAWING C200 FOR TYPICAL STREETCAR STOP DIMENSIONS.

RAMP BETWEEN LOADING PLATFORMS

(B1)

N 1060238.02
E 2764664.06
ELEV. 888.54'

(B2)

N 1060242.85
E 2764665.36
ELEV. 888.40'

(B3)

N 1060250.57
E 2764667.44
ELEV. 888.04'

(B4)

N 1060262.88
E 2764670.76
ELEV. 888.05'

(B5)

N 1060275.43
E 2764674.14
ELEV. 887.46'

(B6)

N 1060287.98
E 2764677.52
ELEV. 886.88'

(B7)

N 1060300.30
E 2764680.84
ELEV. 885.72'

(B8)

N 1060308.02
E 2764682.92
ELEV. 885.36'

(B9)

N 1060312.85
E 2764684.22
ELEV. 885.05'

3. ** MATCH EXISTING

SLOPE TRANS. AREA

SCALE

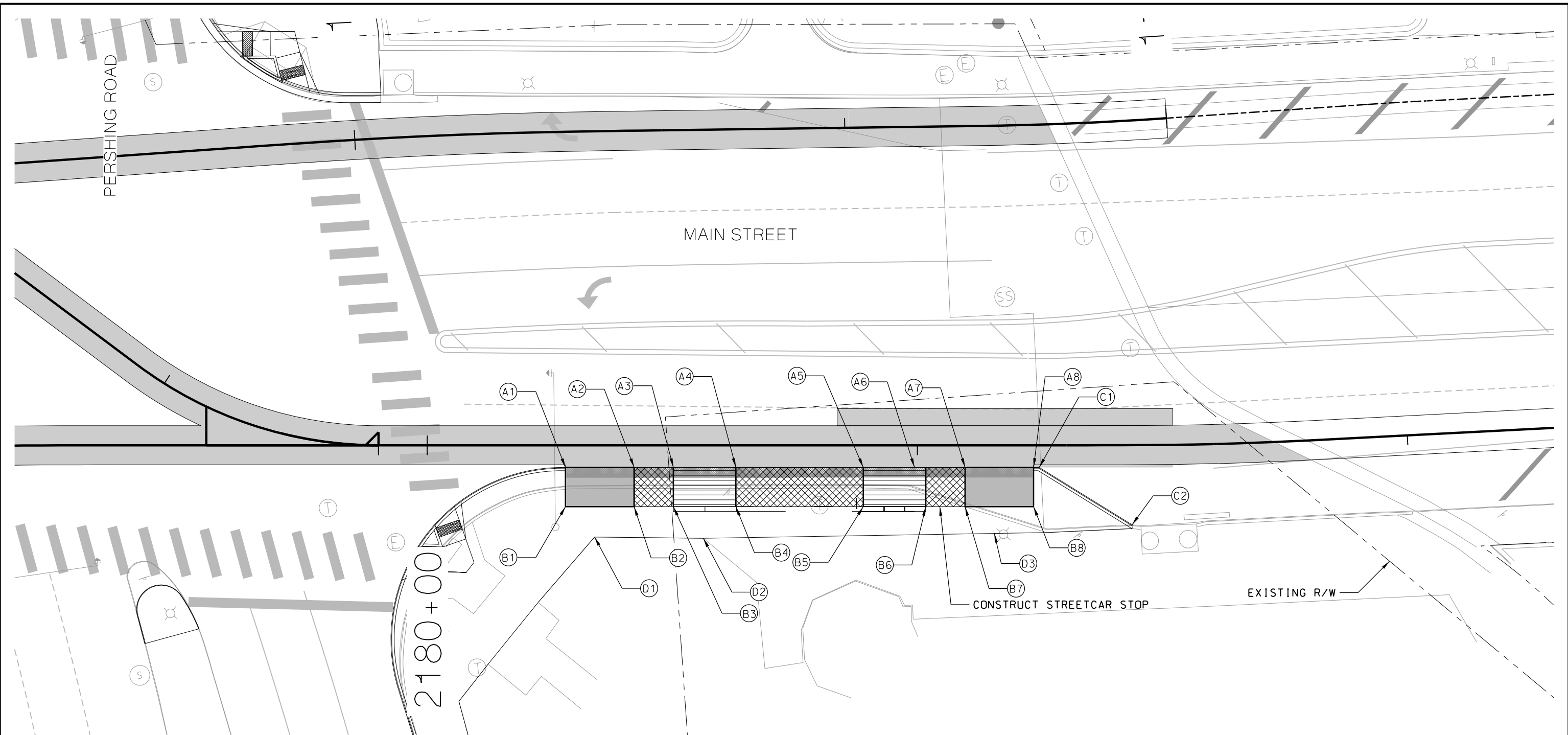
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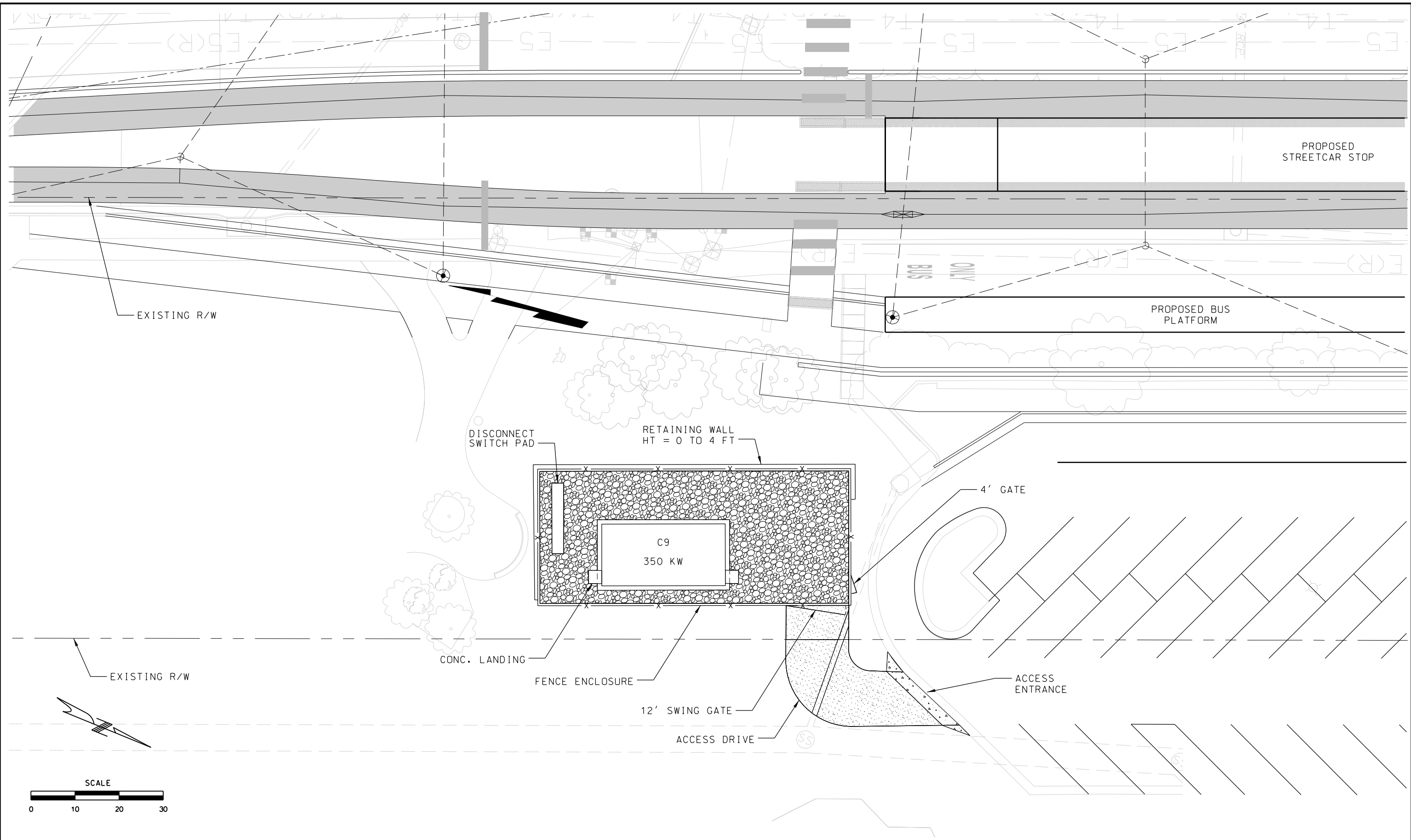
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<table><tr><th>REV</th><th>DATE</th><th>DESCRIPTION</th></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr></table>			REV	DATE	DESCRIPTION																DESIGNED BY JWR		PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	STREETCAR STOP 27TH STREET PLATFORM SOUTHBOUND	SCALE FOR 22"x34": H: 1"=10' FILENAME: 27TH STREET SB PLATFORM CONTRACT NO.: VOLUME: 1 DRAWING NO.: C207 SHEET NO.: 172
REV	DATE	DESCRIPTION																									
			CHECKED BY RPB	 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	NOT FOR CONSTRUCTION																						
			DRAWN BY MMO																								
			CHECKED BY RPB																								
			APPROVED BY NKS																								
PLOT DATE: 8/27/2019			DATE: 08/28/2019																								

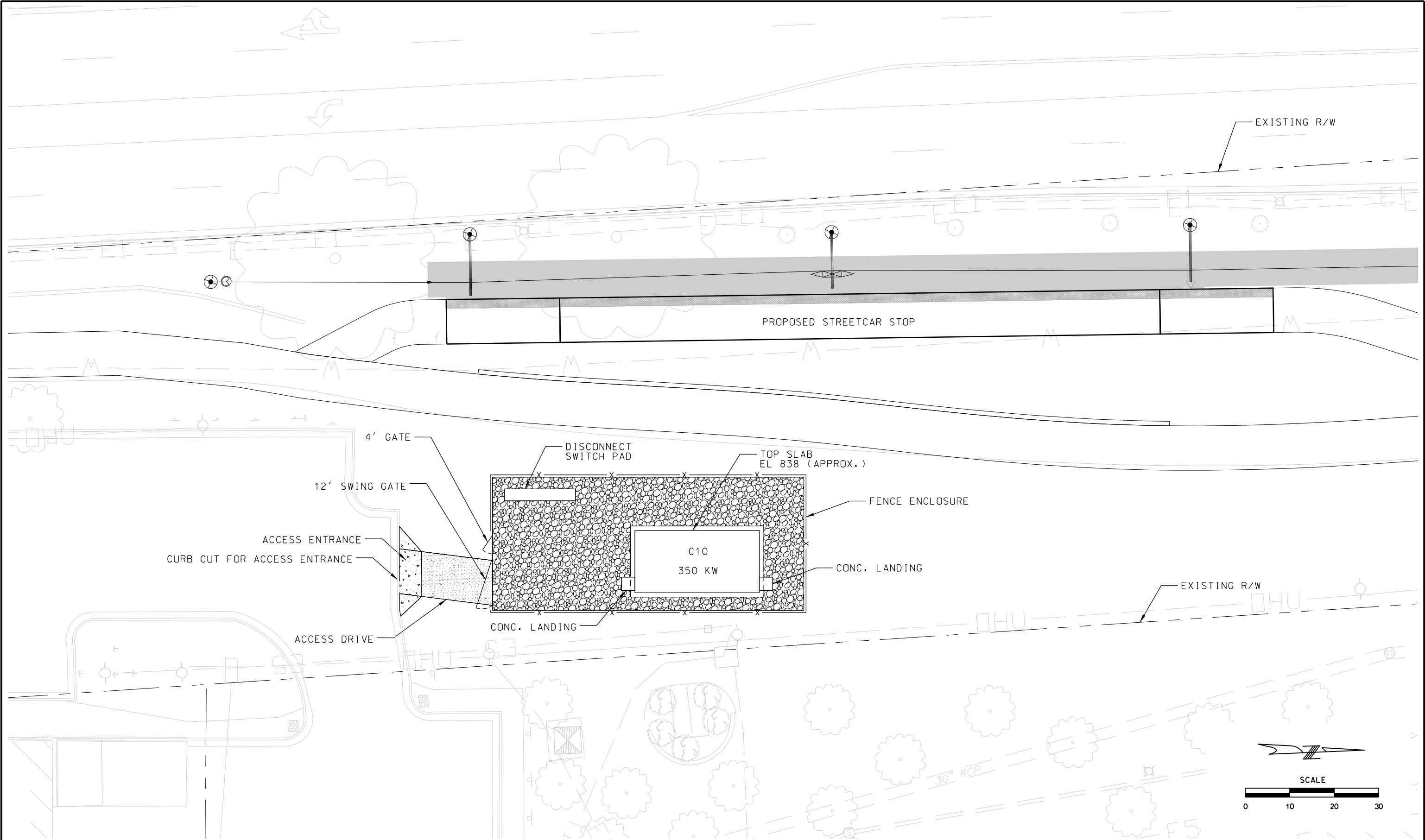


LEGEND / NOTES																		
1. SEE DRAWING P201 FOR PLATFORM INFORMATION.		PASSENGER LOADING PLATFORM	(A1)	N 1062368.81 E 2764877.08 ELEV. 804.72'	(A2)	N 1062382.72 E 2764878.64 ELEV. 804.69'	(A3)	N 1062390.67 E 2764879.53 ELEV. 804.62'	(A4)	N 1062426.90 E 2764880.95 ELEV. 805.10'	(A5)	N 1962429.18 E 2764883.88 ELEV. 804.88'	(A6)	N 1062441.85 E 2764885.26 ELEV. 804.19'	(A7)	N 1062449.80 E 2764886.15 ELEV. 804.13'	(A8)	N 1062463.72 E 2764887.71 ELEV. 803.93'
2. ONLY NON-TYPICAL DIMENSIONS SHOWN. SEE DRAWING C200 FOR TYPICAL STREETCAR STOP DIMENSIONS.		RAMP BETWEEN LOADING PLATFORMS	(B1)	N 1062367.92 E 2764885.03 ELEV. 804.76'	(B2)	N 1062381.83 E 2764886.59 ELEV. 804.73'	(B3)	N 1062389.78 E 2764887.48 ELEV. 804.66'	(B4)	N 1062402.51 E 2764888.44 ELEV. 805.14'	(B5)	N 1062428.29 E 2764891.79 ELEV. 804.92'	(B6)	N 1062440.96 E 2764893.21 ELEV. 804.23'	(B7)	N 1062448.79 E 2764894.09 ELEV. 804.17'	(B8)	N 1062462.83 E 2764895.66 ELEV. 803.97'
3. ** MATCH EXISTING		SLOPE TRANS. AREA	(C1)	N 1062464.83 E 2764887.83 ELEV. XXX.XX'	(C2)	N 1062482.37 E 2764901.58 ELEV. XXX.XX'												
		PASSENGER STORAGE AREA	(D1)	N 1062373.13 E 2764891.85 ELEV. XXX.XX'	(D2)	N 1062395.15 E 2764894.57 ELEV. XXX.XX'	(D3)	N 1062450.99 E 2764899.89 ELEV. XXX.XX'										
<div>SCALE</div> <div><div></div><div>0</div><div>10</div><div>20</div><div>30</div></div>																		

REV	DATE	DESCRIPTION	DESIGNED BY	JWR		PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SCALE FOR 22"x34": H: 1"=10' FILENAME: UNION STATION PLATFORM CONTRACT NO.: VOLUME: 1	
			CHECKED BY	RPB		 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	NOT FOR CONSTRUCTION			
			DRAWN BY	MMO						
			CHECKED BY	RPB						
			APPROVED BY	NKS						
PLOT DATE: 8/27/2019			11:10:10 AM		DATE	08/28/2019	STREETCAR STOP UNION STATION PLATFORM NORTHBOUND		DRAWING NO.: C208	SHEET NO.: 173



REV	DATE	DESCRIPTION	DESIGNED BY	JWR				PRELIMINARY PLANS - 30%		DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SCALE FOR 22"x34":			
			CHECKED BY	RPB				 HDR Engineering, Inc.	10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	TRACTION POWER SUBSTATION (TPSS) C09 SITE PLAN		FILENAME:			
			DRAWN BY	MMO								C401.dgn	CONTRACT NO.:		
			CHECKED BY	RPB								*****	VOLUME:		
			APPROVED BY	NKS								1	DRAWING NO.:	SHEET NO.:	
PLOT DATE: 8/27/2019		10:03:55 AM	DATE	08/28/2019								NOT FOR CONSTRUCTION		C401	174



REV	DATE	DESCRIPTION
PLOT DATE: 8/27/2019		10:04:04 AM

DESIGNED BY	JWR
CHECKED BY	RPB
DRAWN BY	MMO
CHECKED BY	RPB
APPROVED BY	NKS
DATE	08/28/2019



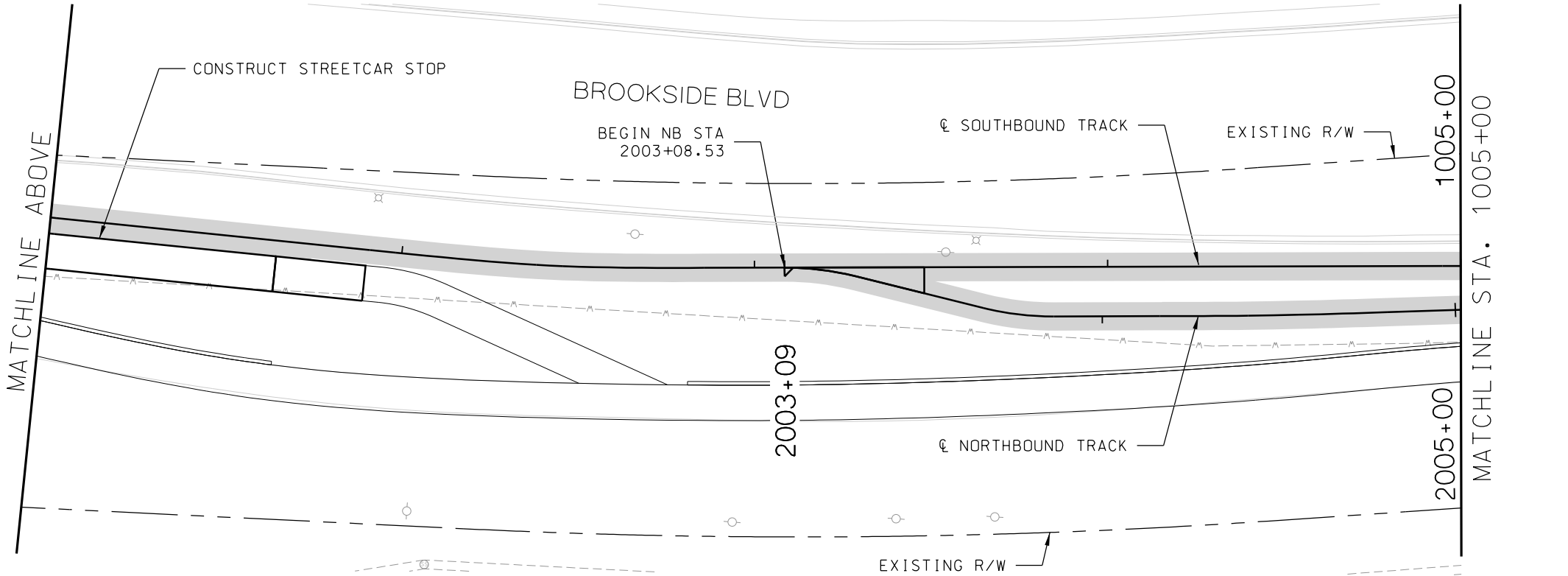
PRELIMINARY PLANS - 30%	DATE: 08-28-2019
HDR HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	
NOT FOR CONSTRUCTION	

KANSAS CITY STREETCAR MAIN STREET EXTENSION
TRACTION POWER SUBSTATION (TPSS)
C10 SITE PLAN

SCALE FOR 22"x34": H: 1"=10'	FILENAME: C402.dgn
CONTRACT NO.:	VOLUME: 1
DRAWING NO.:	SHEET NO.:
C402	175

GENERAL NOTES

1. REFER TO DEMO DRAWINGS FOR INLETS TO BE REMOVED. IF NOT NOTED, INLETS SHALL NOT BE DISTURBED.



REV	DATE	DESCRIPTION
PLOT DATE: 8/27/2019		1:43:02 PM

DESIGNED BY	JWR
CHECKED BY	RPB
DRAWN BY	MMO
CHECKED BY	RPB
APPROVED BY	NKS
DATE	08/28/2019



PRELIMINARY PLANS - 30%DATE: 08-28-2019

HDR Engineering, Inc.
10450 Holmes Road
Suite 600
Kansas City, MO 64131-3471
816-360-2700
Certificate of Authority: 000856

NOT FOR CONSTRUCTION

KANSAS CITY STREETCAR MAIN STREET EXTENSION

SOUTHBOUND AND NORTHBOUND TRACK

DRAINAGE PLAN

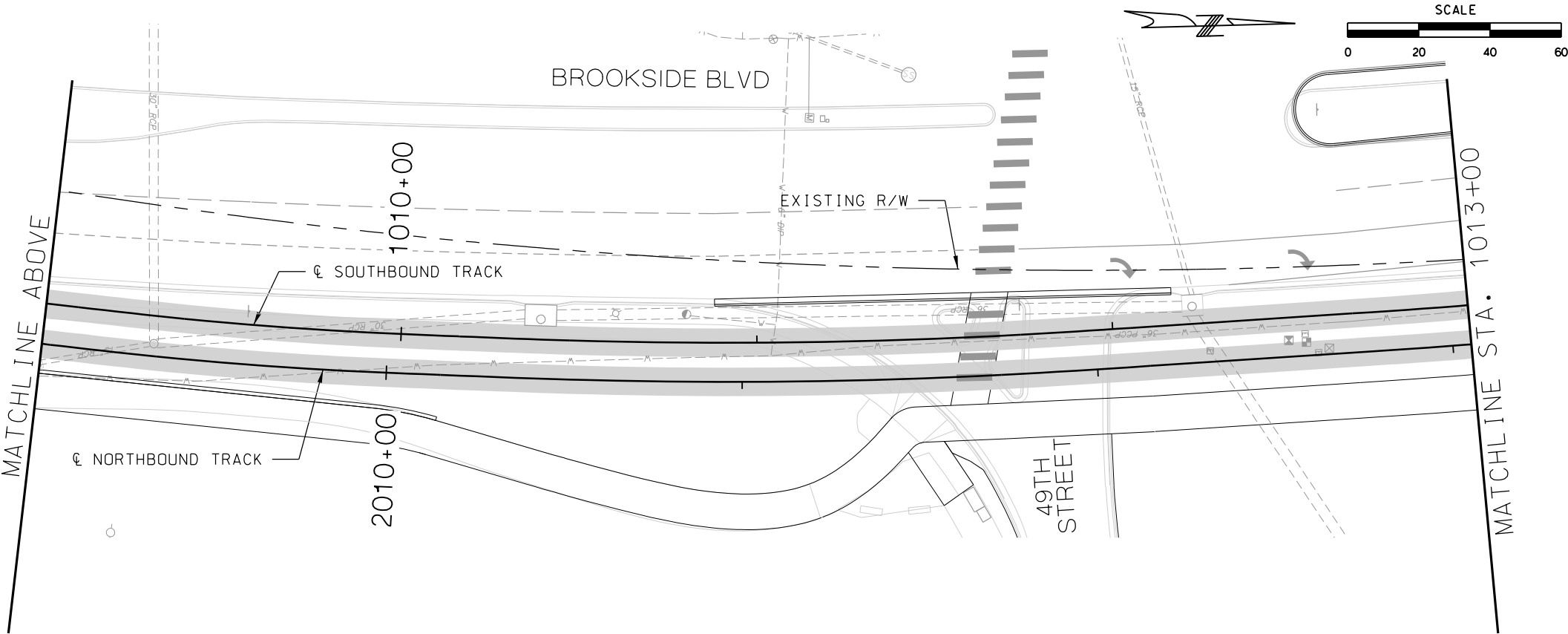
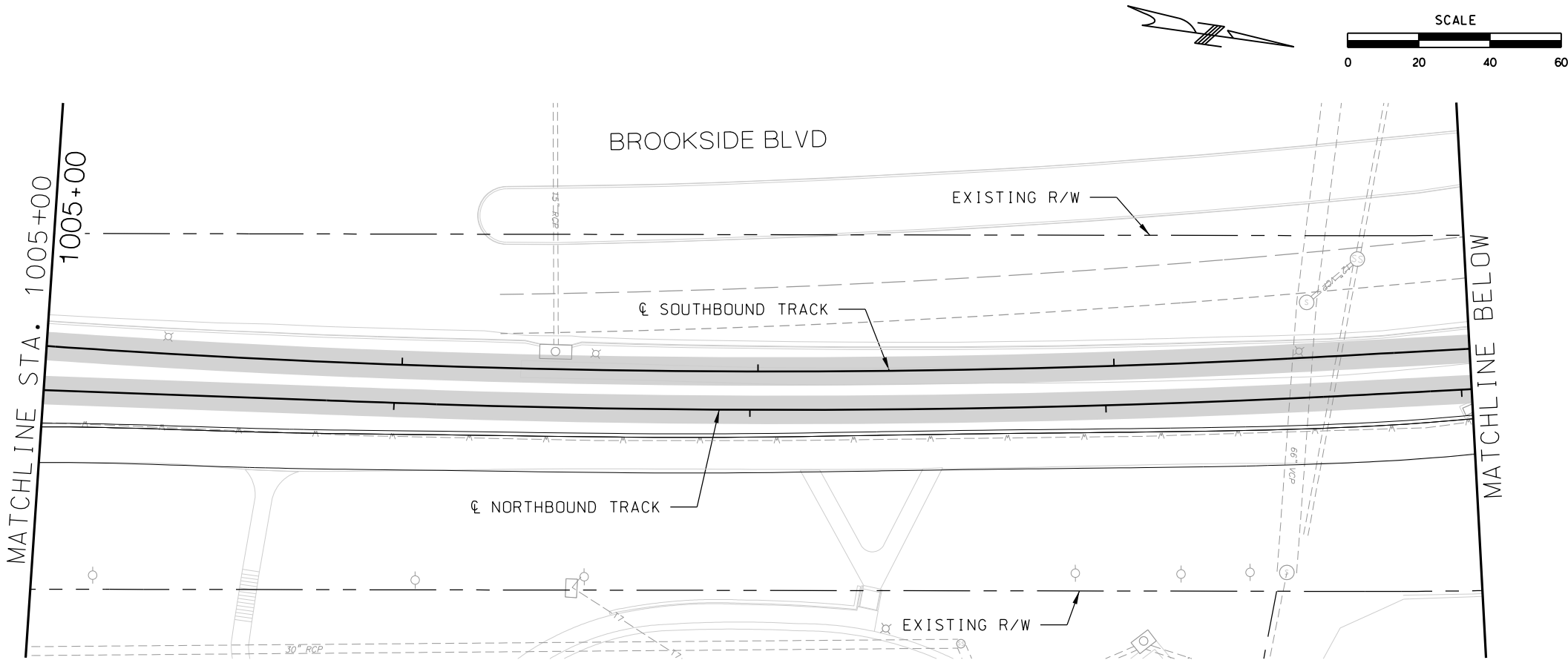
STA BEGIN TO STA 1001+00

STA 1001+00 TO STA 1005+00

SCALE FOR 22"x34": H: 1"=20'	
FILENAME: DRAINAGE STA BEGIN - 1005-00	
CONTRACT NO.:	
VOLUME:	
DRAWING NO.: D101	SHEET NO.: 176

GENERAL NOTES

1. REFER TO DEMO DRAWINGS FOR INLETS TO BE REMOVED. IF NOT NOTED, INLETS SHALL NOT BE DISTURBED.



REV	DATE	DESCRIPTION
PLOT DATE: 8/27/2019		1:43:15 PM

DESIGNED BY	JWR
CHECKED BY	RPB
DRAWN BY	MMO
CHECKED BY	RPB
APPROVED BY	NKS
DATE	08/28/2019



PRELIMINARY PLANS - 30%DATE: 08-28-2019

HDR Engineering, Inc.
10450 Holmes Road
Suite 600
Kansas City, MO 64131-3471
816-360-2700
Certificate of Authority: 000856

NOT FOR CONSTRUCTION

KANSAS CITY STREETCAR MAIN STREET EXTENSION

SOUTHBOUND AND NORTHBOUND TRACK

DRAINAGE PLAN

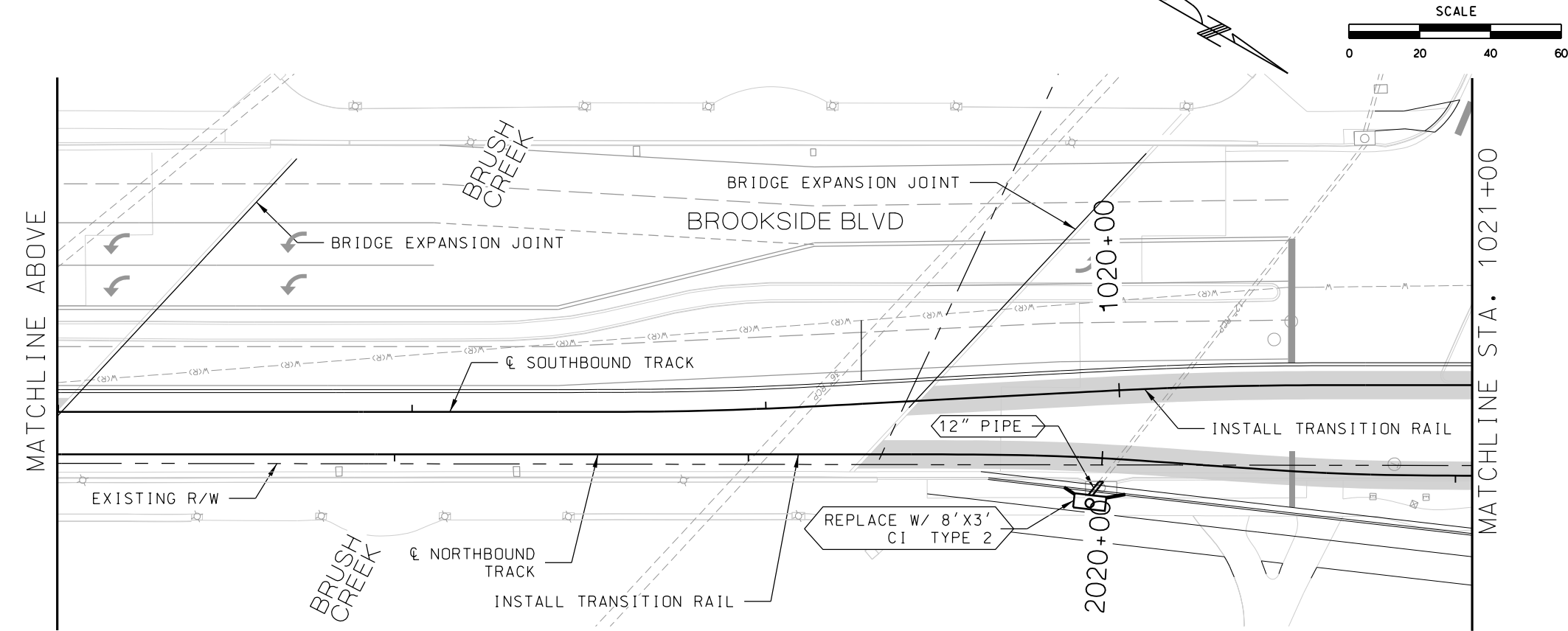
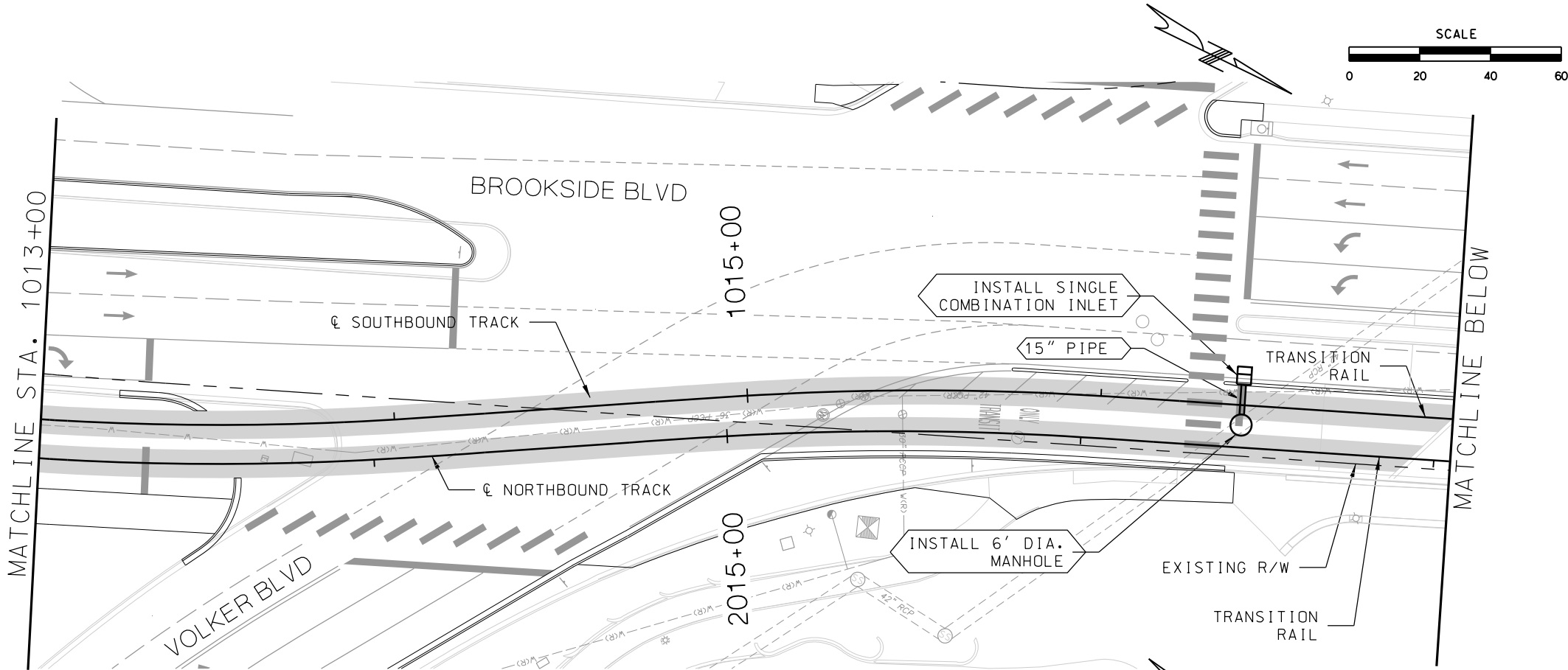
STA 1005+00 TO STA 1009+00

STA 1009+00 TO STA 1013+00

SCALE FOR 22"x34": H: 1"=20'	
FILENAME: DRAINAGE STA 1005+00 - 1013+00	
CONTRACT NO.:	
VOLUME: 1	
DRAWING NO.: D102	SHEET NO.: 177

GENERAL NOTES

1. REFER TO DEMO DRAWINGS FOR INLETS TO BE REMOVED. IF NOT NOTED, INLETS SHALL NOT BE DISTURBED.



REV	DATE	DESCRIPTION
PLOT DATE: 8/27/2019		1:43:40 PM

DESIGNED BY	JWR
CHECKED BY	RPB
DRAWN BY	MMO
CHECKED BY	RPB
APPROVED BY	NKS
DATE	08/28/2019



PRELIMINARY PLANS - 30%DATE: 08-28-2019

HDR Engineering, Inc.
10450 Holmes Road
Suite 600
Kansas City, MO 64131-3471
816-360-2700
Certificate of Authority: 000856

NOT FOR CONSTRUCTION

KANSAS CITY STREETCAR MAIN STREET EXTENSION

SOUTHBOUND AND NORTHBOUND TRACK

DRAINAGE PLAN

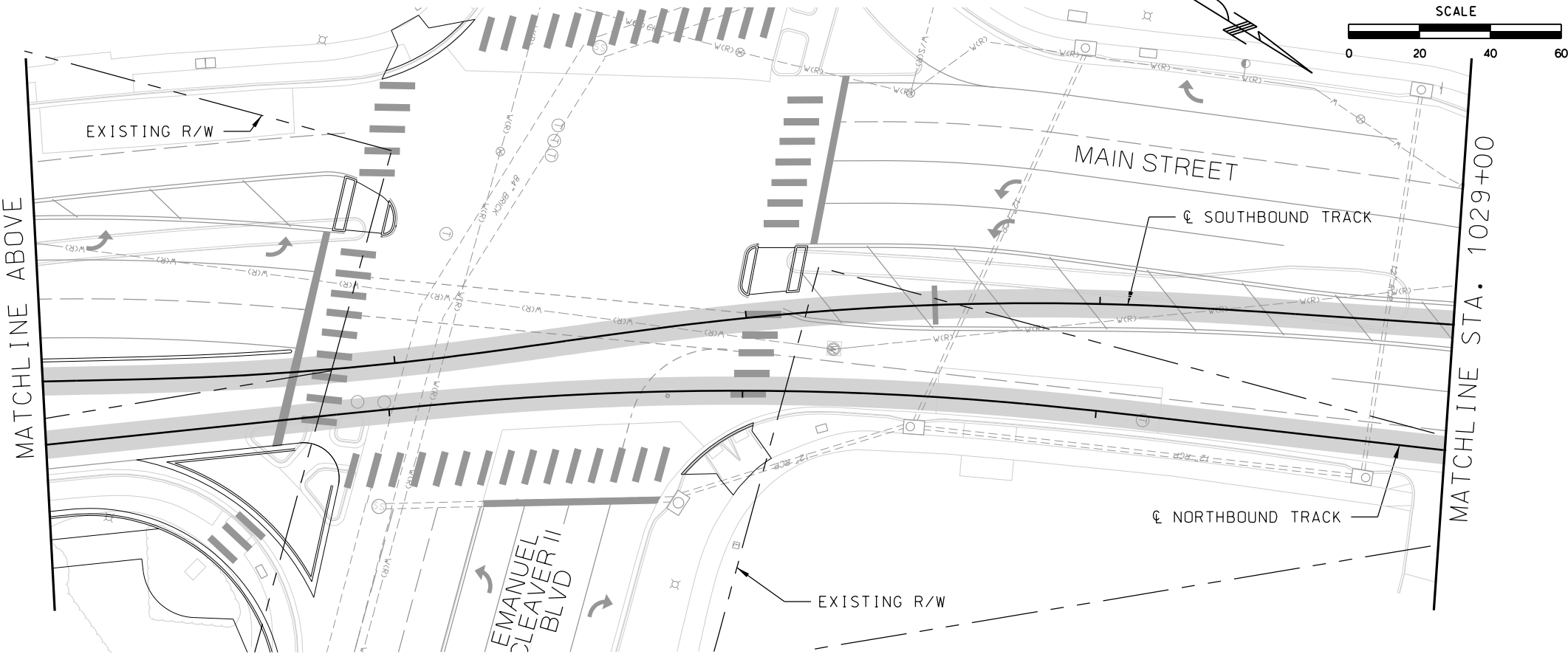
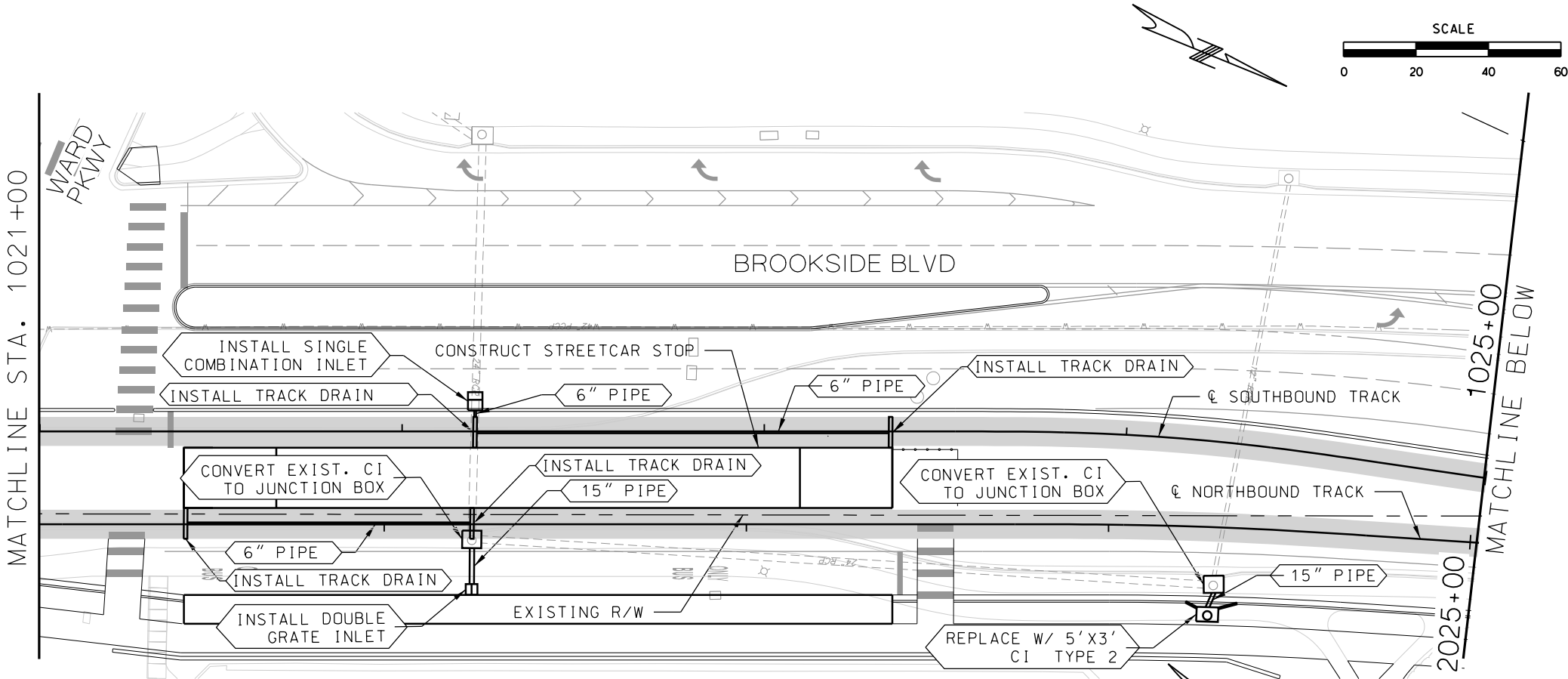
STA 1013+00 TO STA 1017+00

STA 1017+00 TO STA 1021+00

SCALE FOR 22"x34": H: 1"=20'	
FILENAME: DRAINAGE STA 1013-00 - 1021-00	
CONTRACT NO.:	
VOLUME:	
1	
DRAWING NO.: D103	SHEET NO.: 178

GENERAL NOTES


1. REFER TO DEMO DRAWINGS FOR INLETS TO BE REMOVED. IF NOT NOTED, INLETS SHALL NOT BE DISTURBED.
2. THE AREA EAST OF MAIN STREET BETWEEN NORTHBOUND TRACK STATION 2021+00 AND 2025+00 IS AVAILABLE TO BE EVALUATED FOR A GREEN SOLUTION.



REV	DATE	DESCRIPTION
PLOT DATE: 8/27/2019		1:44:04 PM

DESIGNED BY	JWR
CHECKED BY	RPB
DRAWN BY	MMO
CHECKED BY	RPB
APPROVED BY	NKS
DATE	08/28/2019



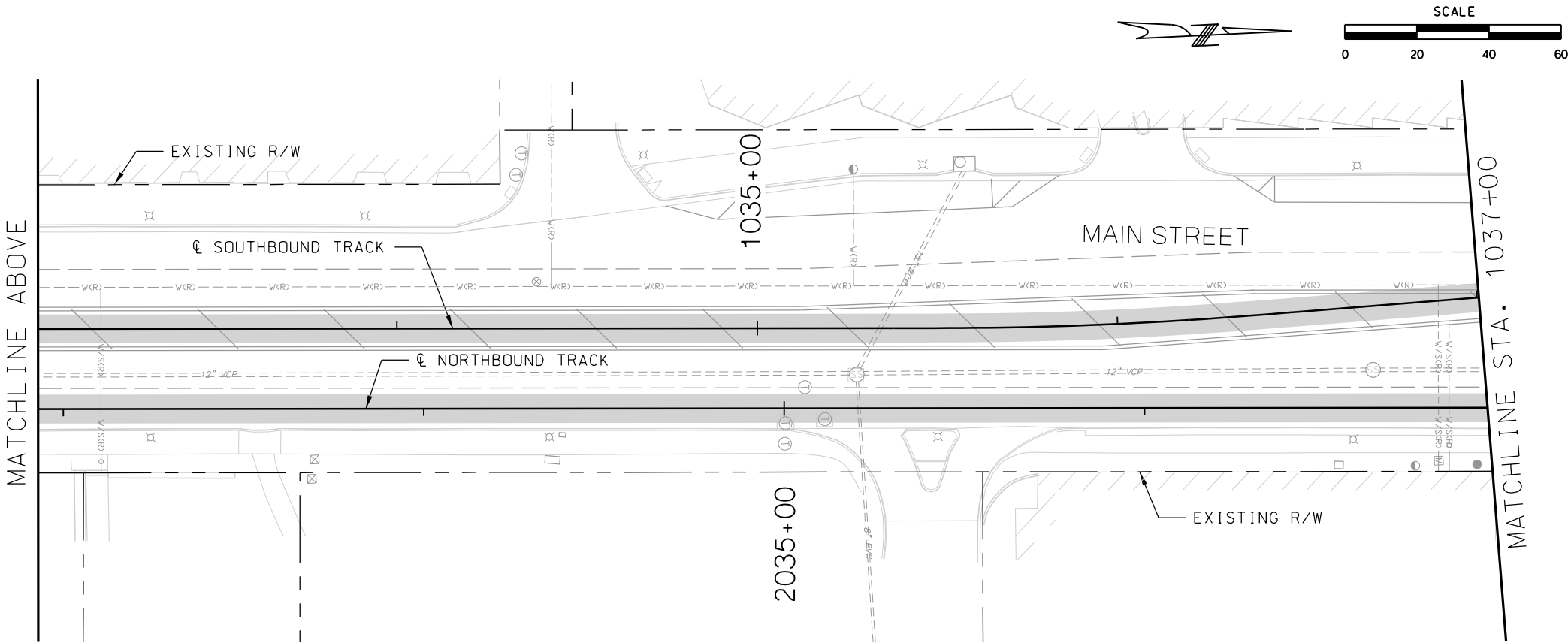
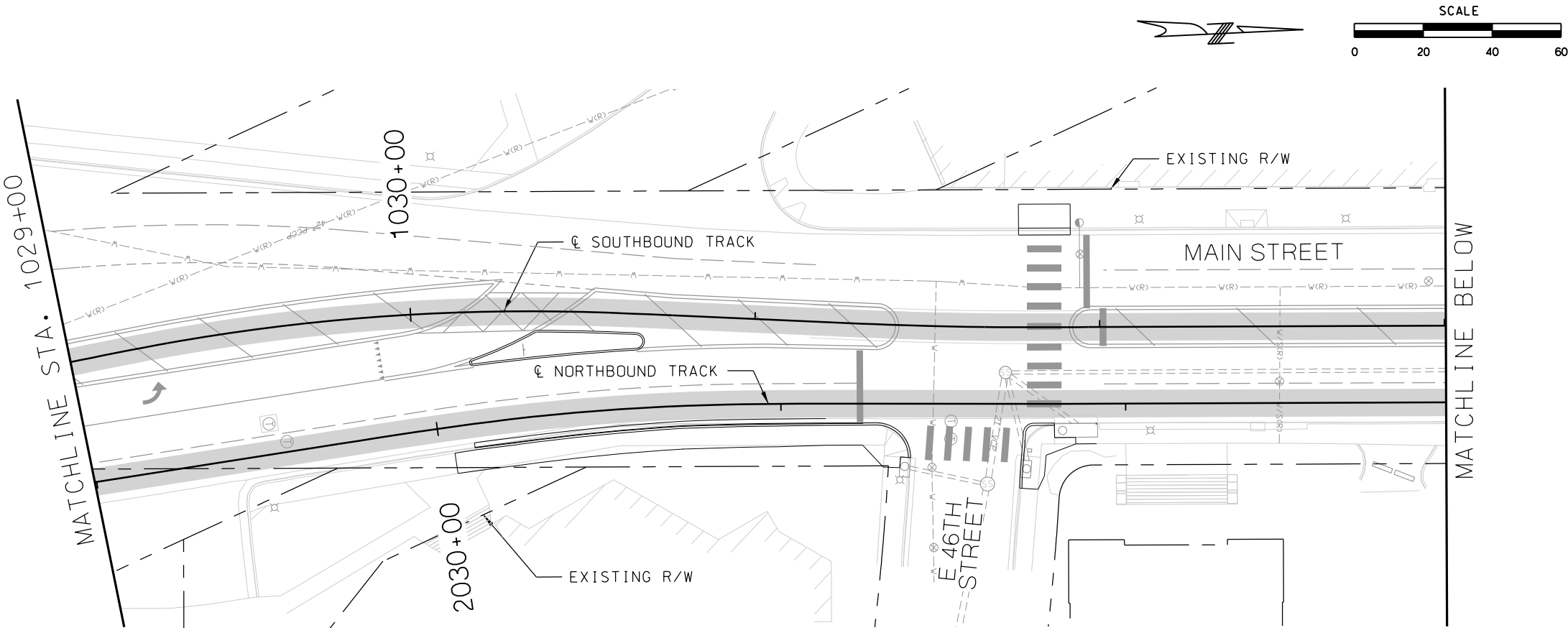
PRELIMINARY PLANS - 30%		DATE: 08-28-2019
 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856		
NOT FOR CONSTRUCTION		

KANSAS CITY STREETCAR MAIN STREET EXTENSION	
SOUTHBOUND AND NORTHBOUND TRACK	
DRAINAGE DPLAN	
STA 1021+00 TO STA 1025+00	
STA 1025+00 TO STA 1029+00	

SCALE FOR 22"x34": H: 1"=20'	
FILENAME: DRAINAGE STA 1021+00 - 1029+00	
CONTRACT NO.:	
VOLUME:	
DRAWING NO.: D104	SHEET NO.: 179

GENERAL NOTES

1. REFER TO DEMO DRAWINGS FOR INLETS TO BE REMOVED. IF NOT NOTED, INLETS SHALL NOT BE DISTURBED.



REV	DATE	DESCRIPTION
PLOT DATE: 8/27/2019		1:44:27 PM

DESIGNED BY	JWR
CHECKED BY	RPB
DRAWN BY	MMO
CHECKED BY	RPB
APPROVED BY	NKS
DATE	08/28/2019



PRELIMINARY PLANS - 30%DATE: 08-28-2019

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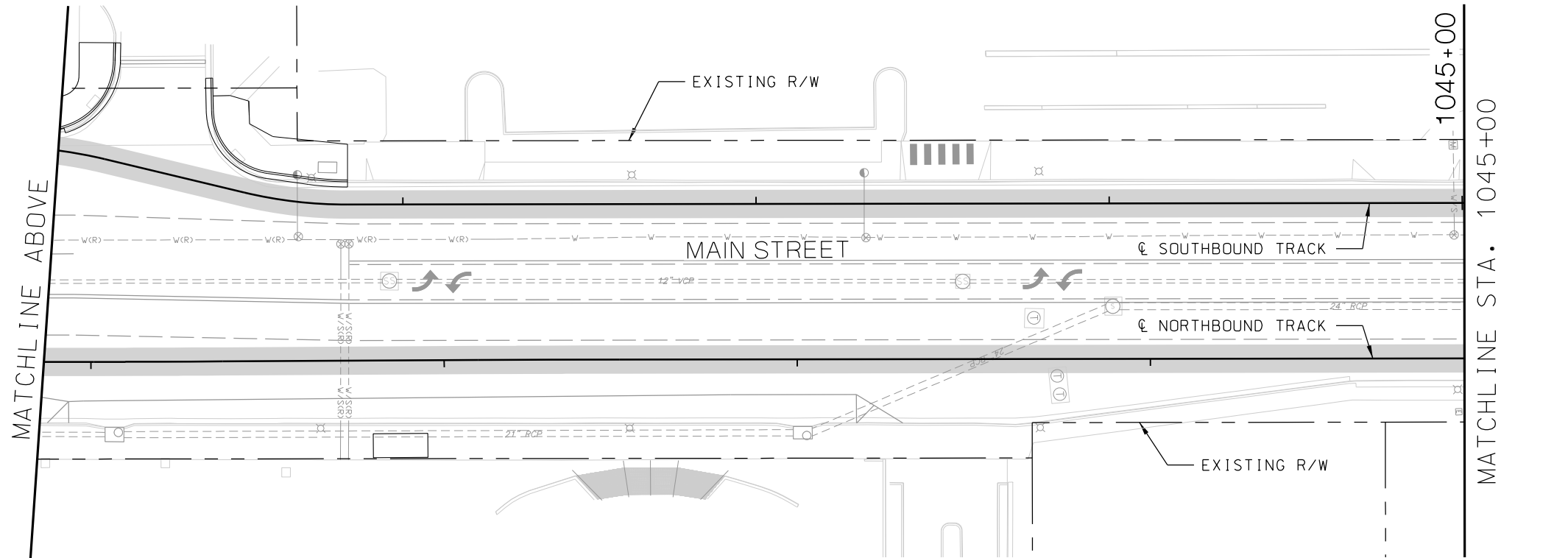
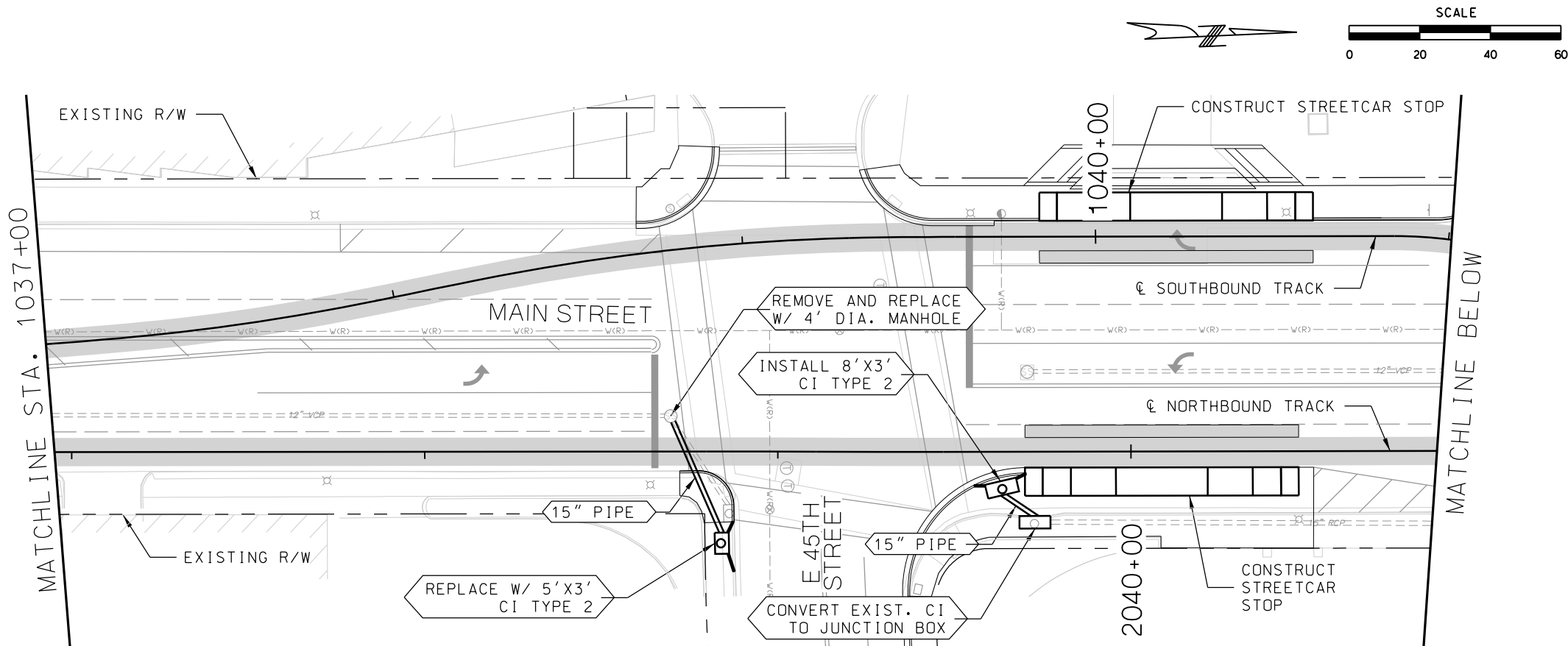
NOT FOR CONSTRUCTION

KANSAS CITY STREETCAR MAIN STREET EXTENSION
SOUTHBOUND AND NORTHBOUND TRACK
DRAINAGE PLAN
STA 1029+00 TO STA 1033+00
STA 1033+00 TO STA 1037+00

SCALE FOR 22"x34": H: 1"=20'	
FILENAME: DRAINAGE STA 1029+00 - 1037+00	
CONTRACT NO.:	
VOLUME: 1	
DRAWING NO.: D105	SHEET NO.: 180

GENERAL NOTES

1. REFER TO DEMO DRAWINGS FOR INLETS TO BE REMOVED. IF NOT NOTED, INLETS SHALL NOT BE DISTURBED.



REV	DATE	DESCRIPTION
PLOT DATE: 8/27/2019		1:45:03 PM

DESIGNED BY	JWR
CHECKED BY	RPB
DRAWN BY	MMO
CHECKED BY	RPB
APPROVED BY	NKS
DATE	08/28/2019



PRELIMINARY PLANS - 30%DATE: 08-28-2019

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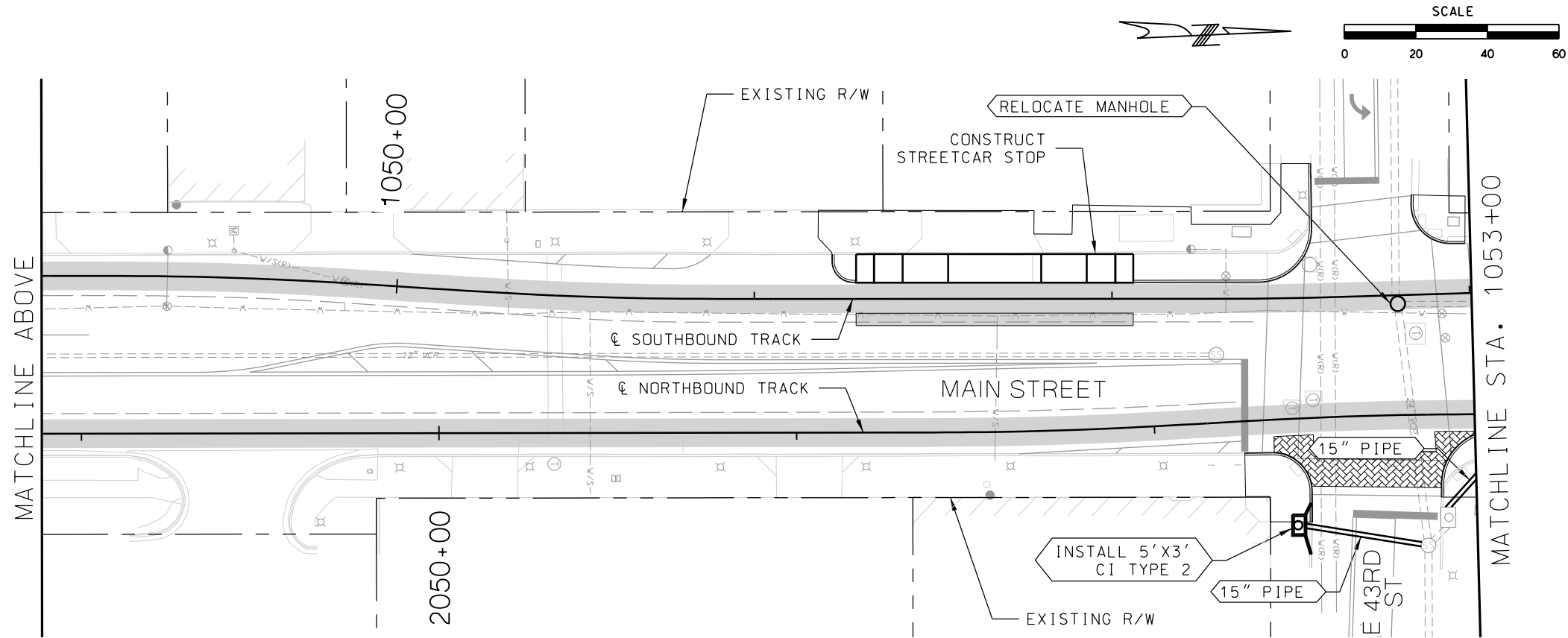
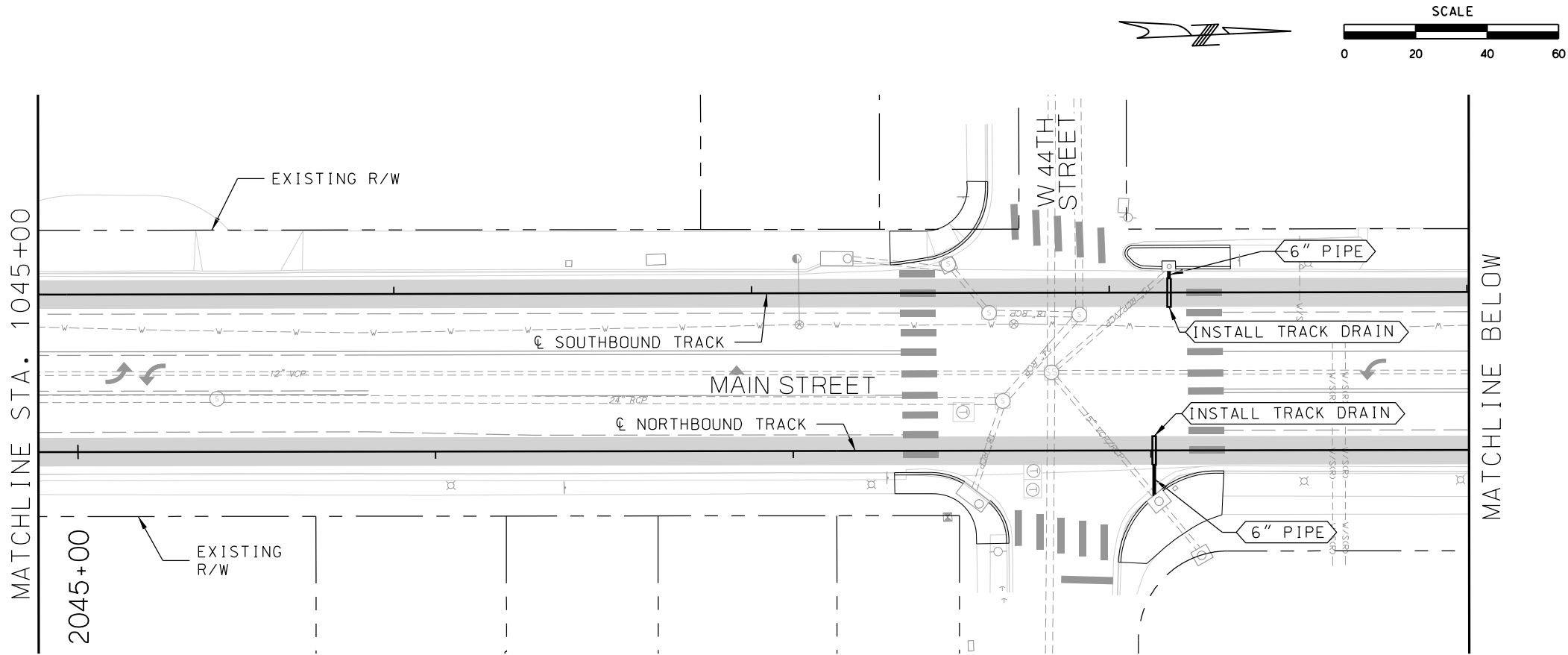
NOT FOR CONSTRUCTION

KANSAS CITY STREETCAR MAIN STREET EXTENSION
SOUTHBOUND AND NORTHBOUND TRACK
DRAINAGE PLAN
STA 1037+00 TO STA 1041+00
STA 1041+00 TO STA 1045+00

SCALE FOR 22"x34": H: 1"=20'	
FILENAME: DRAINAGE STA 1037+00 - 1045+00	
CONTRACT NO.:	
VOLUME:	
DRAWING NO.: D106	SHEET NO.: 181

GENERAL NOTES

1. REFER TO DEMO DRAWINGS FOR INLETS TO BE REMOVED. IF NOT NOTED, INLETS SHALL NOT BE DISTURBED.
2. MILL CREEK TO BE EVALUATED FOR A GREEN SOLUTION.



REV	DATE	DESCRIPTION
PLOT DATE: 8/27/2019		1:45:31 PM

DESIGNED BY	JWR
CHECKED BY	RPB
DRAWN BY	MMO
CHECKED BY	RPB
APPROVED BY	NKS
DATE	08/28/2019



PRELIMINARY PLANS - 30%DATE: 08-28-2019

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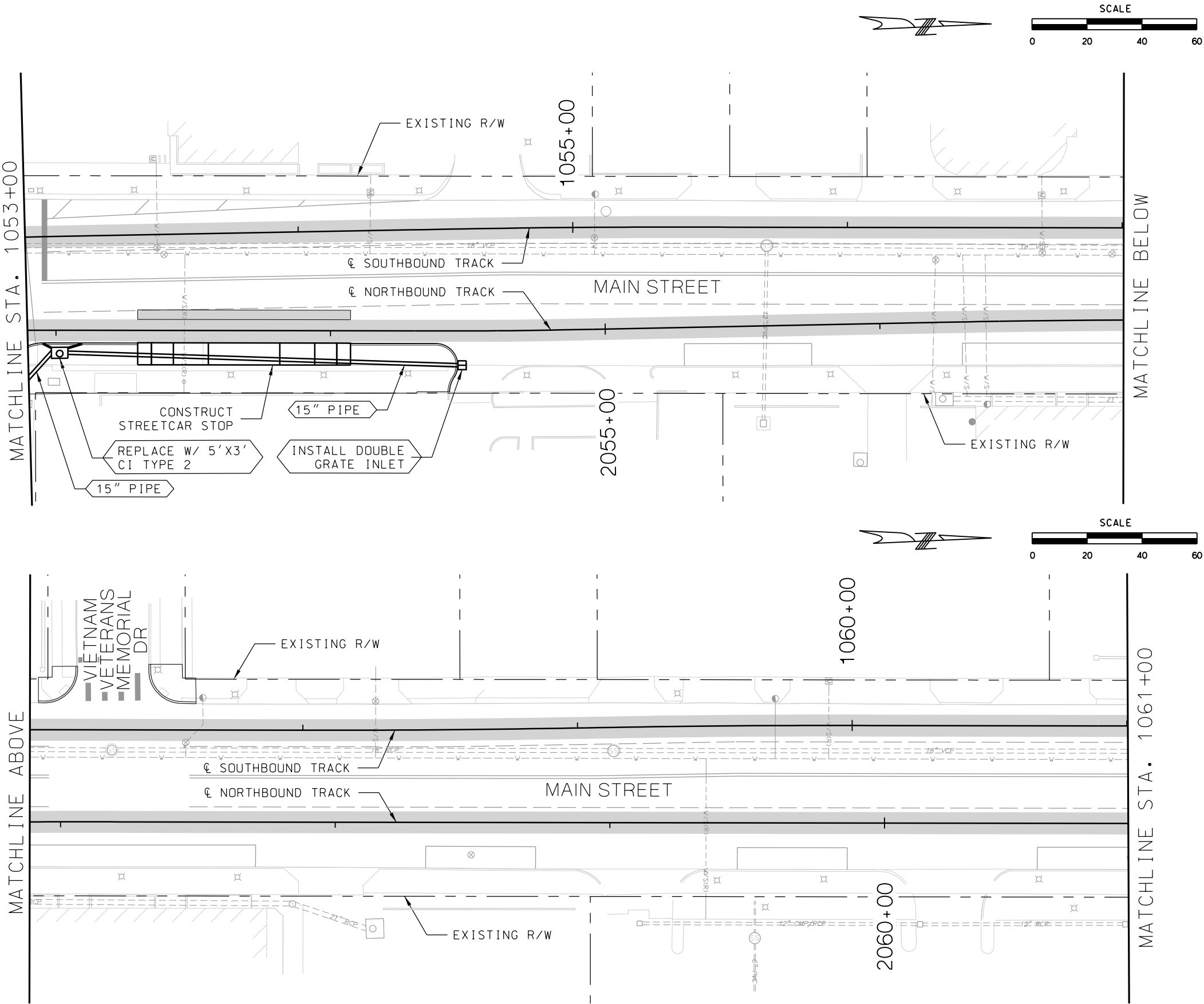
NOT FOR CONSTRUCTION

KANSAS CITY STREETCAR MAIN STREET EXTENSION
SOUTHBOUND AND NORTHBOUND TRACK
DRAINAGE PLAN
STA 1045+00 TO STA 1049+00
STA 1049+00 TO STA 1053+00

SCALE FOR 22"x34": H: 1"=20'	
FILENAME: DRAINAGE STA 1045+00 - 1053+00	
CONTRACT NO.:	
VOLUME:	
1	1
DRAWING NO.: D107	SHEET NO.: 182

GENERAL NOTES

1. REFER TO DEMO DRAWINGS FOR INLETS TO BE REMOVED. IF NOT NOTED, INLETS SHALL NOT BE DISTURBED.



REV	DATE	DESCRIPTION
PLOT DATE: 8/27/2019		1:46:08 PM

DESIGNED BY	JWR
CHECKED BY	RPB
DRAWN BY	MMO
CHECKED BY	RPB
APPROVED BY	NKS
DATE	08/28/2019



PRELIMINARY PLANS - 30%DATE: 08-28-2019

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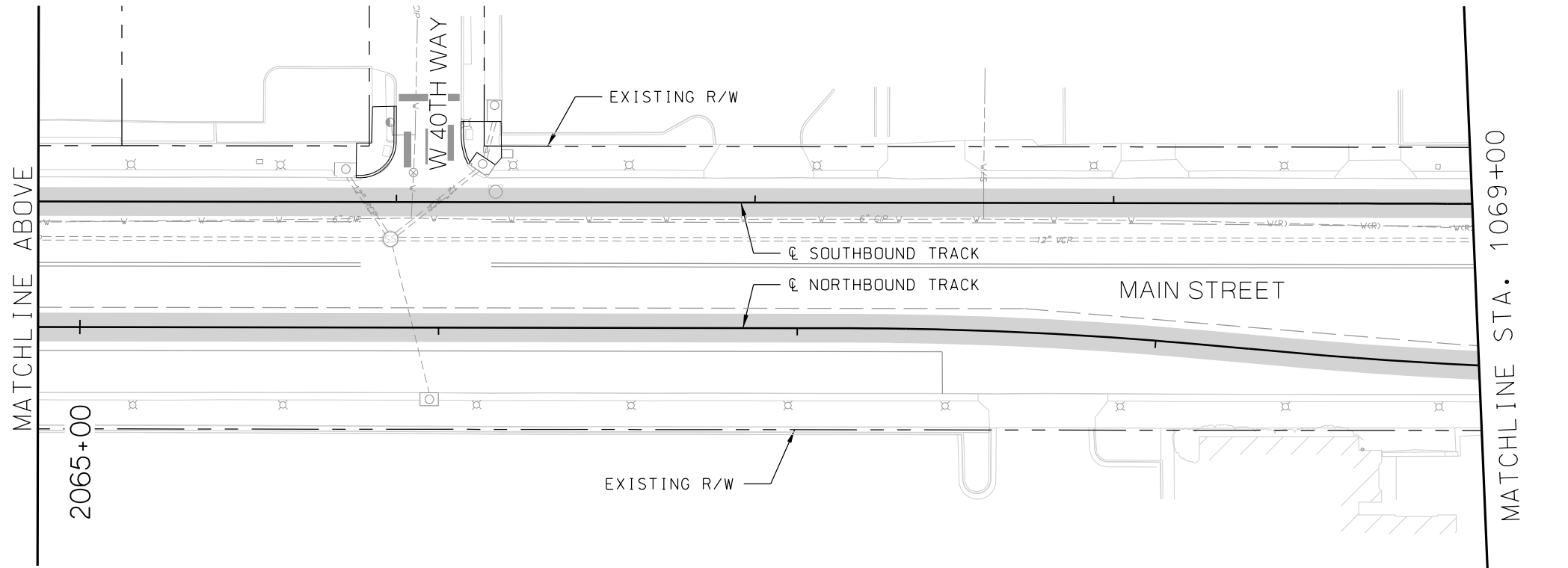
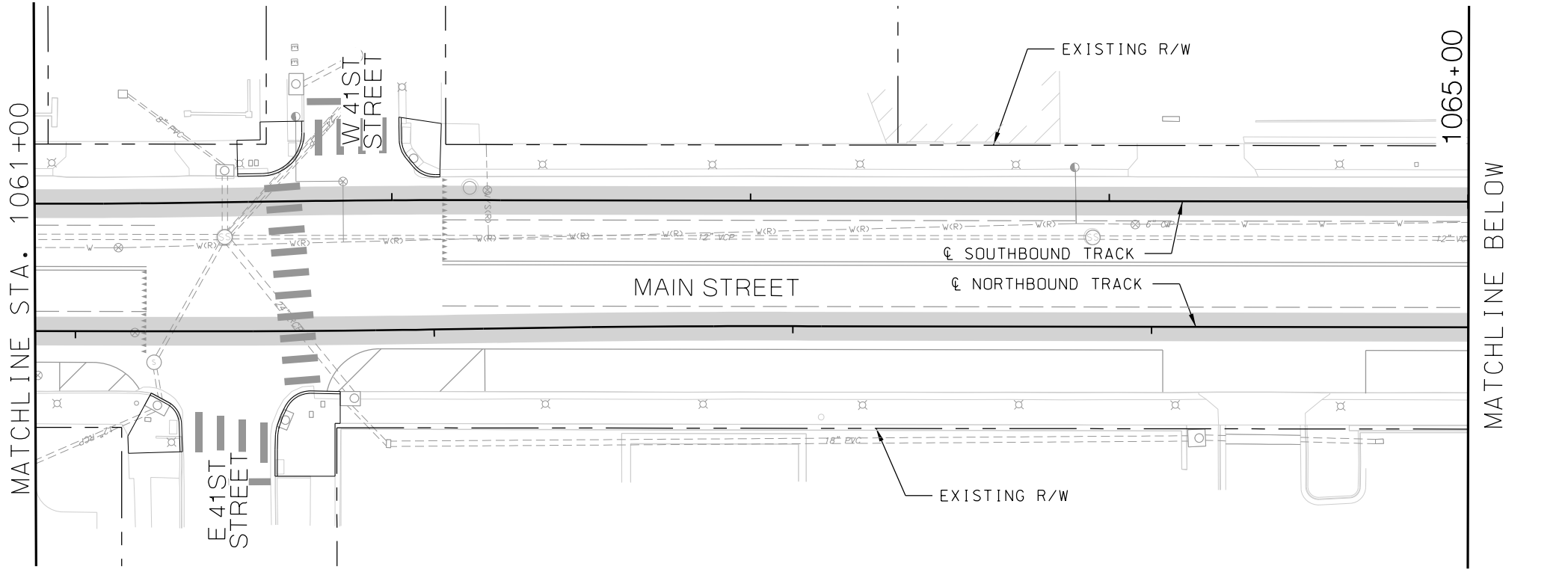
NOT FOR CONSTRUCTION

KANSAS CITY STREETCAR MAIN STREET EXTENSION
SOUTHBOUND AND NORTHBOUND TRACK
DRAINAGE PLAN
STA 1053+00 TO STA 1057+00
STA 1057+00 TO STA 1061+00

SCALE FOR 22"x34": H: 1"=20'	
FILENAME: DRAINAGE STA 1053+00 - 1061+00	
CONTRACT NO.:	
VOLUME:	
DRAWING NO.: D108	SHEET NO.: 183

GENERAL NOTES


1. REFER TO DEMO DRAWINGS FOR INLETS TO BE REMOVED. IF NOT NOTED, INLETS SHALL NOT BE DISTURBED.



REV	DATE	DESCRIPTION
PLOT DATE: 8/27/2019		1:46:40 PM

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CHECKED BY	RPB
DRAWN BY	MMO
CHECKED BY	RPB
APPROVED BY	NKS
DATE	08/28/2019



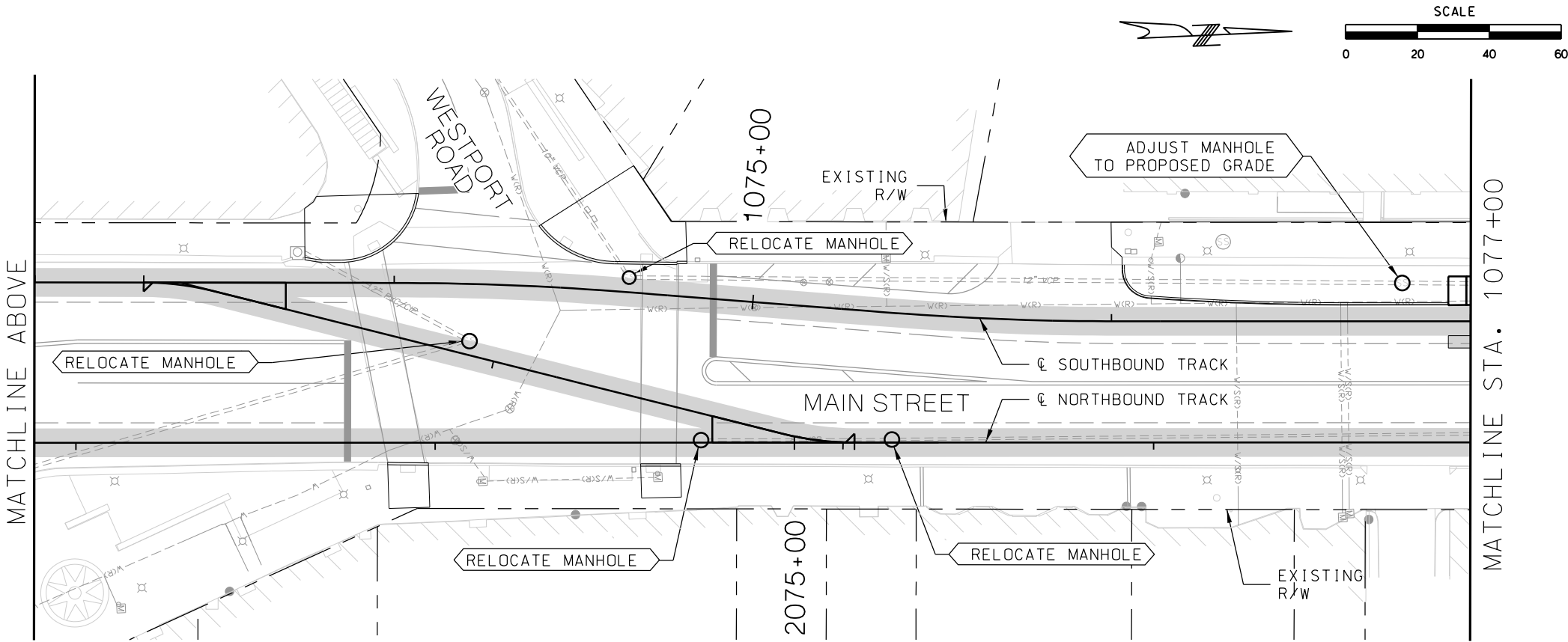
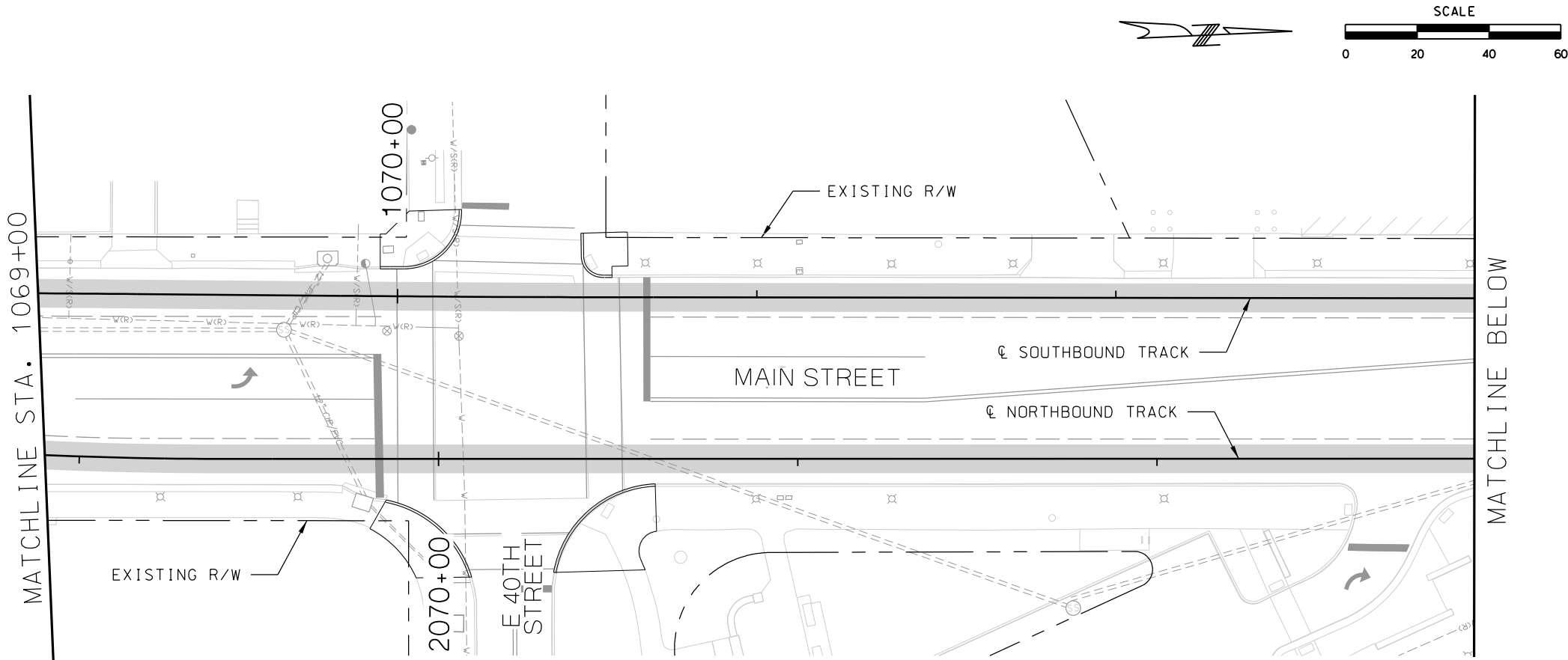
PRELIMINARY PLANS - 30%	DATE: 08-28-2019
 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	
NOT FOR CONSTRUCTION	

KANSAS CITY STREETCAR MAIN STREET EXTENSION SOUTHBOUND AND NORTHBOUND TRACK DRAINAGE PLAN STA 1061+00 TO STA 1065+00 STA 1065+00 TO STA 1069+00	
--	--

SCALE FOR 22"x34": H: 1"=20'	
FILENAME: DRAINAGE STA 1061+00 - 1069+00	
CONTRACT NO.:	
VOLUME:	
1	
DRAWING NO.: D109	SHEET NO.: 184

GENERAL NOTES

1. REFER TO DEMO DRAWINGS FOR INLETS TO BE REMOVED. IF NOT NOTED, INLETS SHALL NOT BE DISTURBED.



REV	DATE	DESCRIPTION
PLOT DATE: 8/27/2019		1:47:07 PM

DESIGNED BY	JWR
CHECKED BY	RPB
DRAWN BY	MMO
CHECKED BY	RPB
APPROVED BY	NKS
DATE	08/28/2019



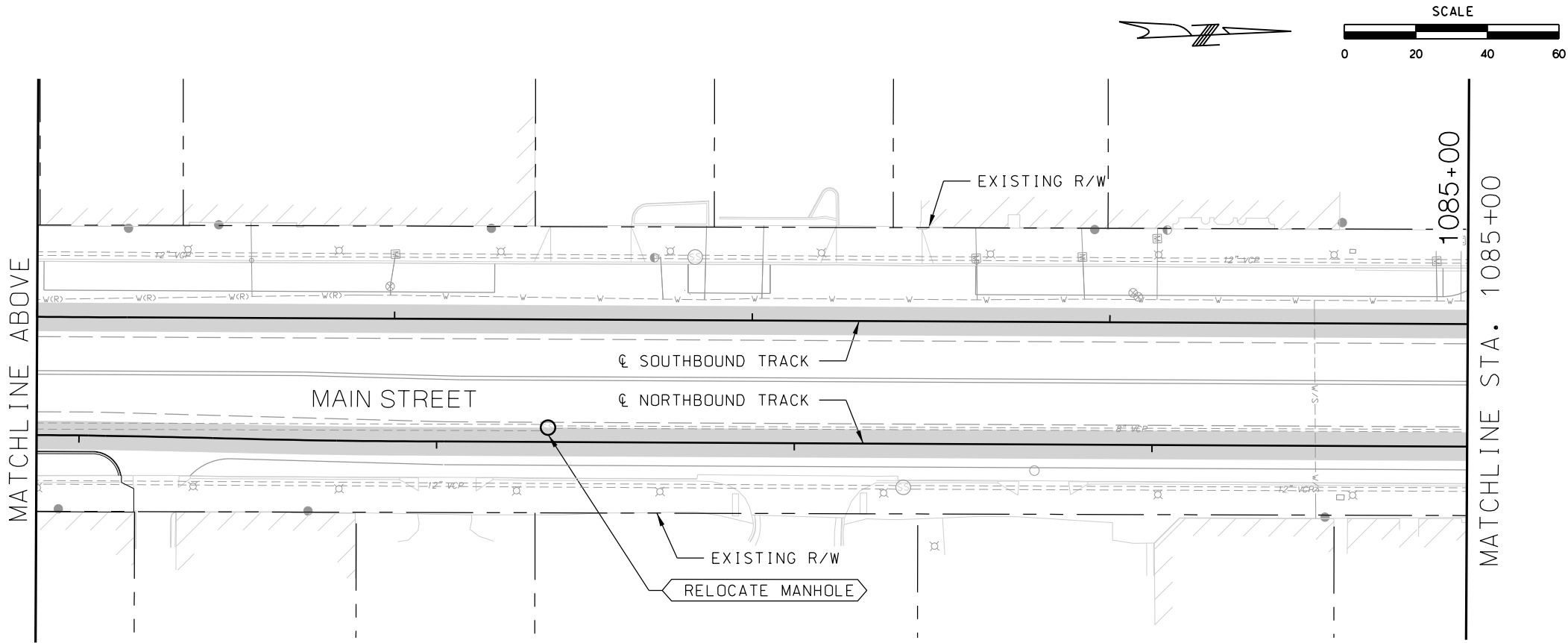
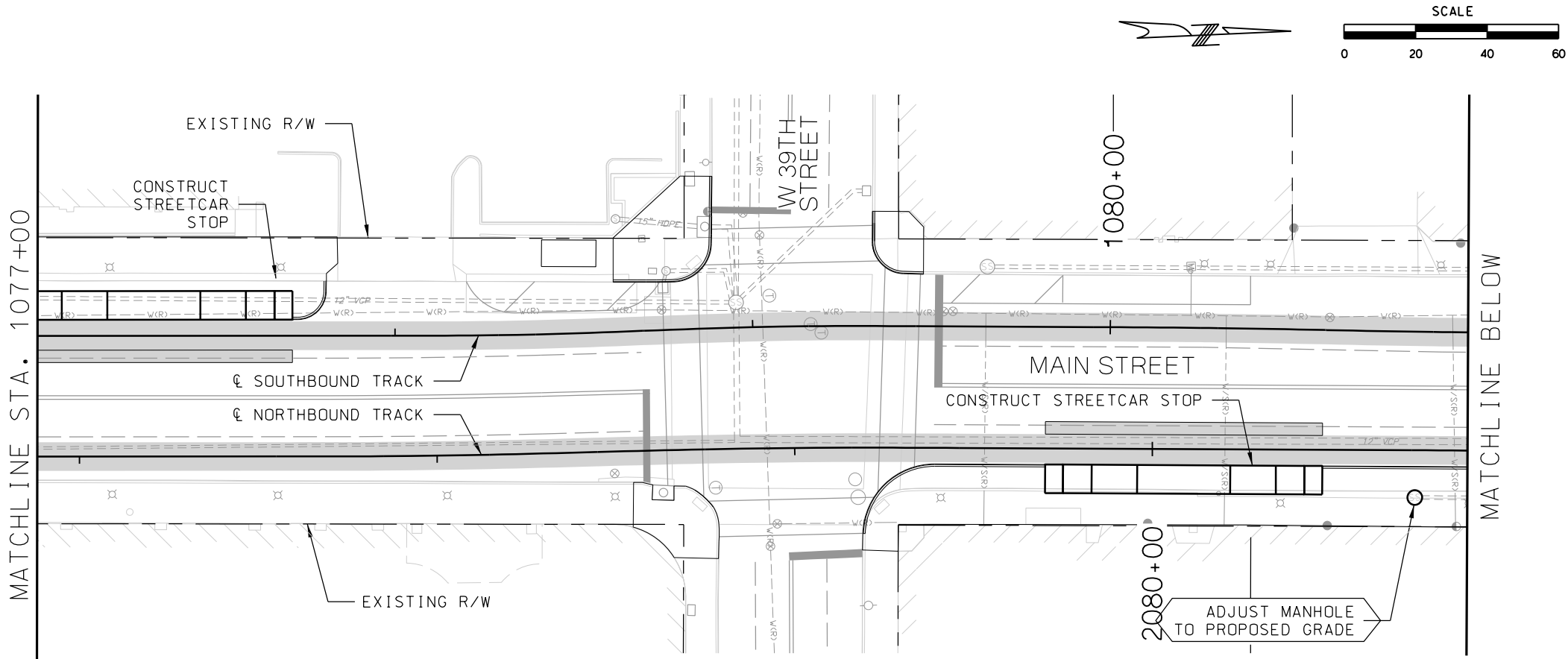
PRELIMINARY PLANS - 30%	DATE: 08-28-2019
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NOT FOR CONSTRUCTION	

KANSAS CITY STREETCAR MAIN STREET EXTENSION
SOUTHBOUND AND NORTHBOUND TRACK
DRAINAGE PLAN
STA 1069+00 TO STA 1073+00
STA 1073+00 TO STA 1077+00

SCALE FOR 22"x34": H: 1"=20'	
FILENAME: DRAINAGE STA 1069+00 - 1077+00	
CONTRACT NO.:	
VOLUME:	
1	
DRAWING NO.:	SHEET NO.:
D110	185

GENERAL NOTES

1. REFER TO DEMO DRAWINGS FOR INLETS TO BE REMOVED. IF NOT NOTED, INLETS SHALL NOT BE DISTURBED.



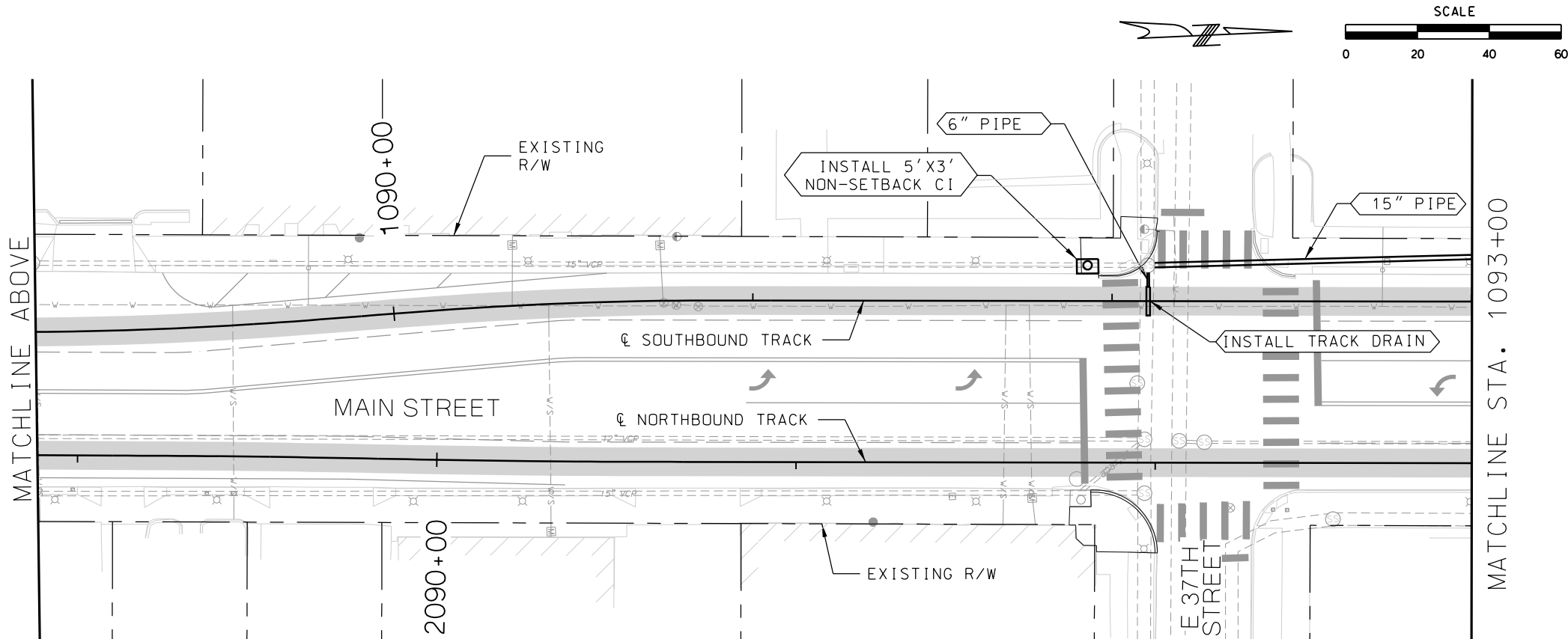
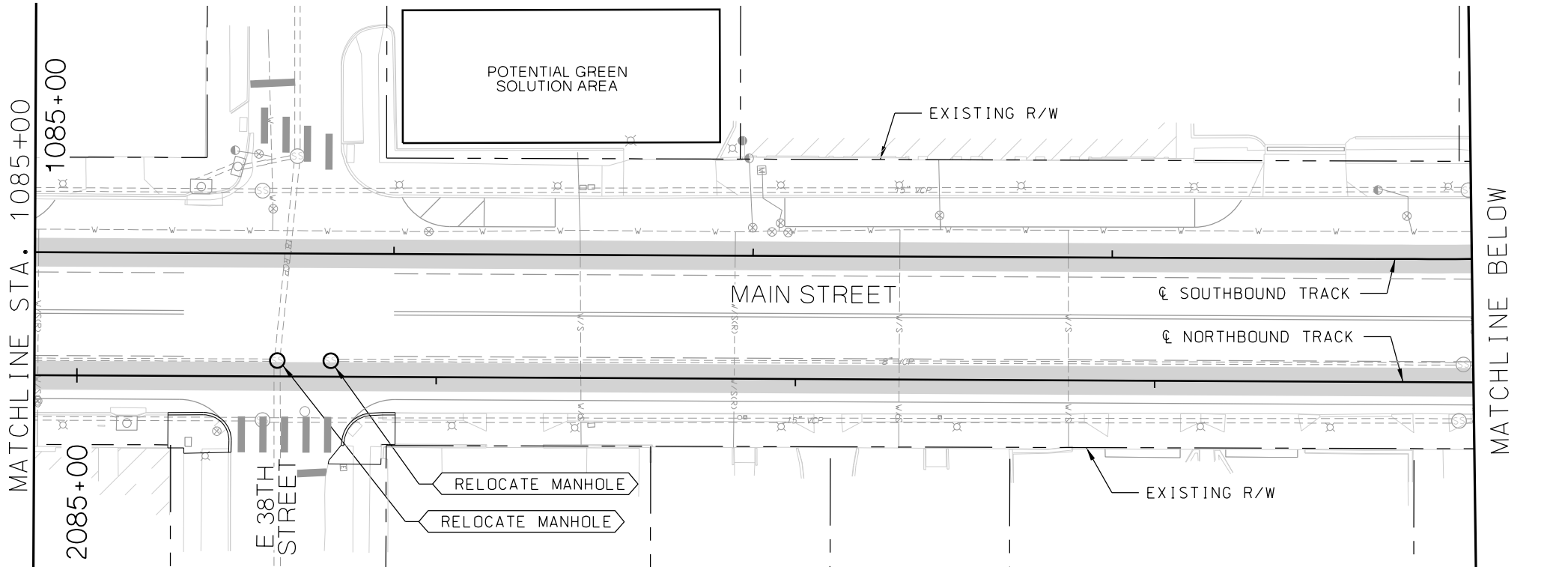
REV	DATE	DESCRIPTION	DESIGNED BY	JWR	<div>PRELIMINARY PLANS - 30% DATE: 08-28-2019 KANSAS CITY STREETCAR MAIN STREET EXTENSION SOUTHBOUND AND NORTHBOUND TRACK DRAINAGE PLAN STA 1077+00 TO STA 1081+00 STA 1081+00 TO STA 1085+00</div>		<div>SCALE FOR 22"x34": H: 1"=20' FILENAME: DRAINAGE STA 1077+00 - 1085+00 CONTRACT NO.: ***** VOLUME: 1 DRAWING NO.: D111 SHEET NO.: 186</div>	
			CHECKED BY	RPB				
			DRAWN BY	MMO				
			CHECKED BY	RPB				
			APPROVED BY	NKS				
PLOT DATE: 8/27/2019 1:47:41 PM			DATE	08/28/2019	NOT FOR CONSTRUCTION			



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GENERAL NOTES

1. REFER TO DEMO DRAWINGS FOR INLETS TO BE REMOVED. IF NOT NOTED, INLETS SHALL NOT BE DISTURBED.



REV	DATE	DESCRIPTION
PLOT DATE: 8/27/2019		1:48:05 PM

DESIGNED BY	JWR
CHECKED BY	RPB
DRAWN BY	MMO
CHECKED BY	RPB
APPROVED BY	NKS
DATE	08/28/2019



PRELIMINARY PLANS - 30%

DATE: 08-28-2019

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KANSAS CITY STREETCAR MAIN STREET EXTENSION

SOUTHBOUND AND NORTHBOUND TRACK

DRAINAGE PLAN

STA 1085+00 TO STA 1089+00

STA 1089+00 TO STA 1093+00

SCALE FOR 22"x34": H: 1"=20'	
FILENAME: DRAINAGE STA 1085+00 - 1093+00	
CONTRACT NO.:	
VOLUME:	
DRAWING NO.: D112	SHEET NO.: 187



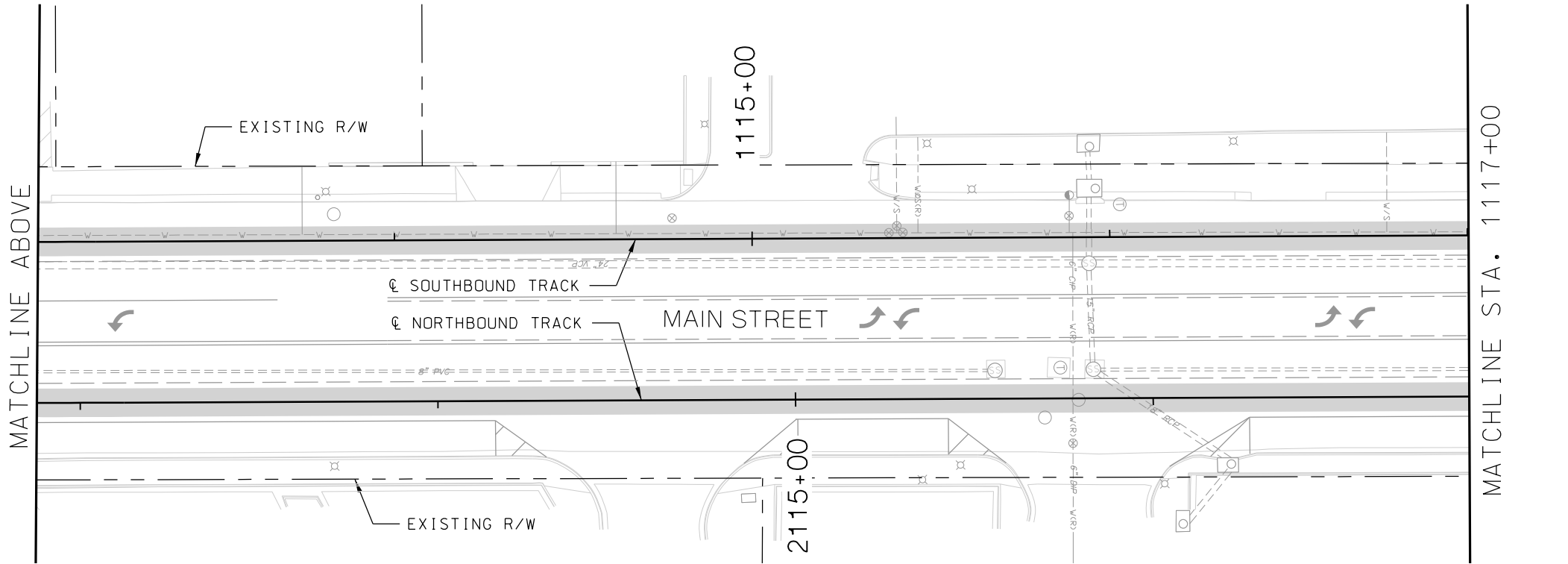
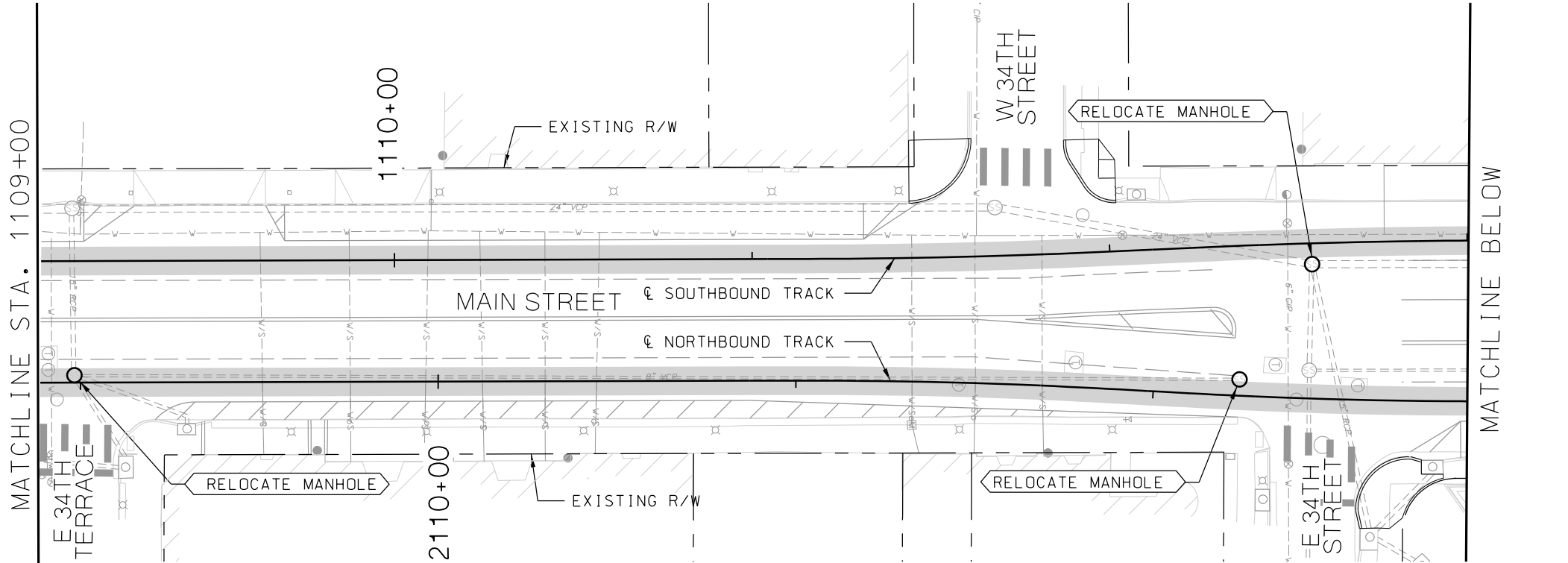
REV	DATE	DESCRIPTION	DESIGNED BY JWR				PRELIMINARY PLANS - 30% DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION SOUTHBOUND AND NORTHBOUND TRACK DRAINAGE PLAN STA 1093+00 TO STA 1097+00 STA 1097+00 TO STA 1101+00	SCALE FOR 22"x34": H: 1" = 20' FILENAME: DRAINAGE STA 1093+00 - 1101+00 CONTRACT NO.: ***** VOLUME: 1	DRAWING NO.: D113	SHEET NO.: 188
			CHECKED BY RPB								
			DRAWN BY MMQ								
			CHECKED BY RPB								
			APPROVED BY NKS								
PLOT DATE: 8/27/2019 1:48:30 PM			DATE: 08/28/2019				10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-380-2700 Certificate of Authority: 000856				
							NOT FOR CONSTRUCTION				




REV	DATE	DESCRIPTION	DESIGNED BY JWR				PRELIMINARY PLANS - 30% DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION SOUTHBOUND AND NORTHBOUND TRACK DRAINAGE PLAN STA 1101+00 TO STA 1105+00 STA 1105+00 TO STA 1109+00	SCALE FOR 22"x34": H: 1"=20' FILENAME: DRAINAGE STA 1101+00 - 1109+00 CONTRACT NO.: ***** VOLUME: 1	DRAWING NO.: D114	SHEET NO.: 189
			CHECKED BY RPB								
			DRAWN BY MMQ								
			CHECKED BY RPB								
			APPROVED BY NKS								
PLOT DATE: 8/27/2019 1:49:05 PM			DATE: 08/28/2019								
					NOT FOR CONSTRUCTION						

GENERAL NOTES

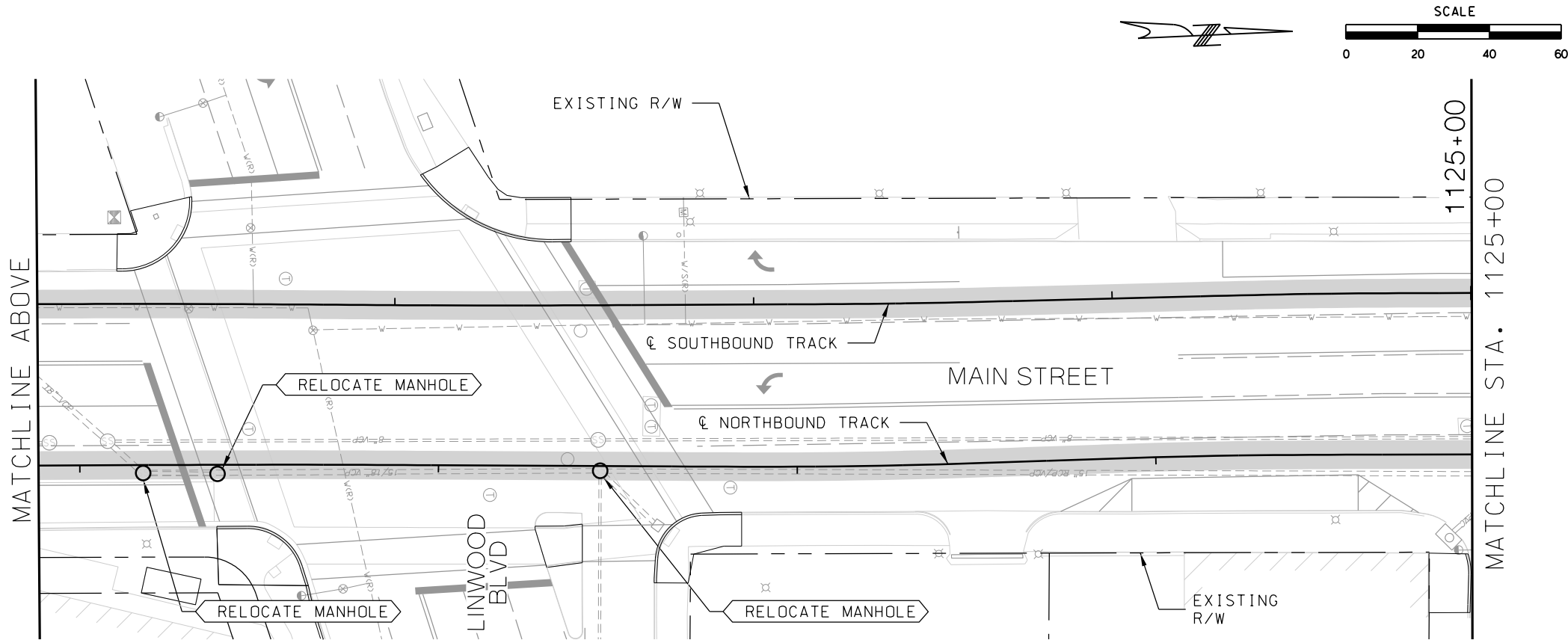
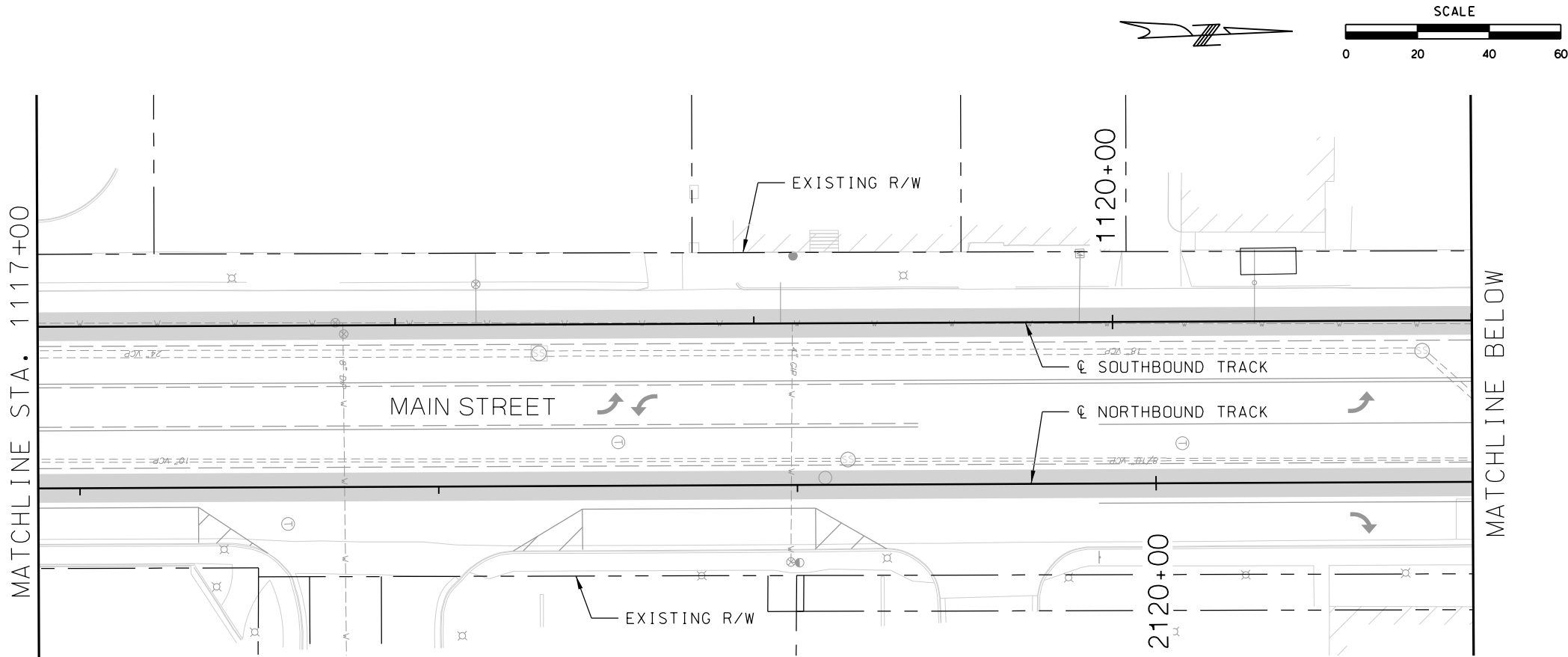
1. REFER TO DEMO DRAWINGS FOR INLETS TO BE REMOVED. IF NOT NOTED, INLETS SHALL NOT BE DISTURBED.



REV	DATE	DESCRIPTION	DESIGNED BY	JWR				PRELIMINARY PLANS - 30%		DATE: 08-28-2019		<div>KANSAS CITY STREETCAR MAIN STREET EXTENSION</div> <div>SOUTHBOUND AND NORTHBOUND TRACK</div> <div>DRAINAGE PLAN</div> <div>STA 1109+00 TO STA 1113+00</div> <div>STA 1113+00 TO STA 1117+00</div>				SCALE FOR 22"x34": H: 1"=20'	
			CHECKED BY	RPB				 <div>HDR Engineering, Inc.</div> <div>10450 Holmes Road</div> <div>Suite 600</div> <div>Kansas City, MO 64131-3471</div> <div>816-360-2700</div> <div>Certificate of Authority: 000856</div>								FILENAME: DRAINAGE STA 1109+00 - 1117+00	
			DRAWN BY	MMO						CONTRACT NO.:							
			CHECKED BY	RPB						VOLUME: 1							
			APPROVED BY	NKS						DRAWING NO.:						SHEET NO.:	
PLOT DATE:		8/27/2019		1:49:25 PM		DATE		08/28/2019				D115		190			

GENERAL NOTES

1. REFER TO DEMO DRAWINGS FOR INLETS TO BE REMOVED. IF NOT NOTED, INLETS SHALL NOT BE DISTURBED.



REV	DATE	DESCRIPTION
PLOT DATE: 8/27/2019		1:49:43 PM

DESIGNED BY	JWR
CHECKED BY	RPB
DRAWN BY	MMO
CHECKED BY	RPB
APPROVED BY	NKS
DATE	08/28/2019



PRELIMINARY PLANS - 30%DATE: 08-28-2019

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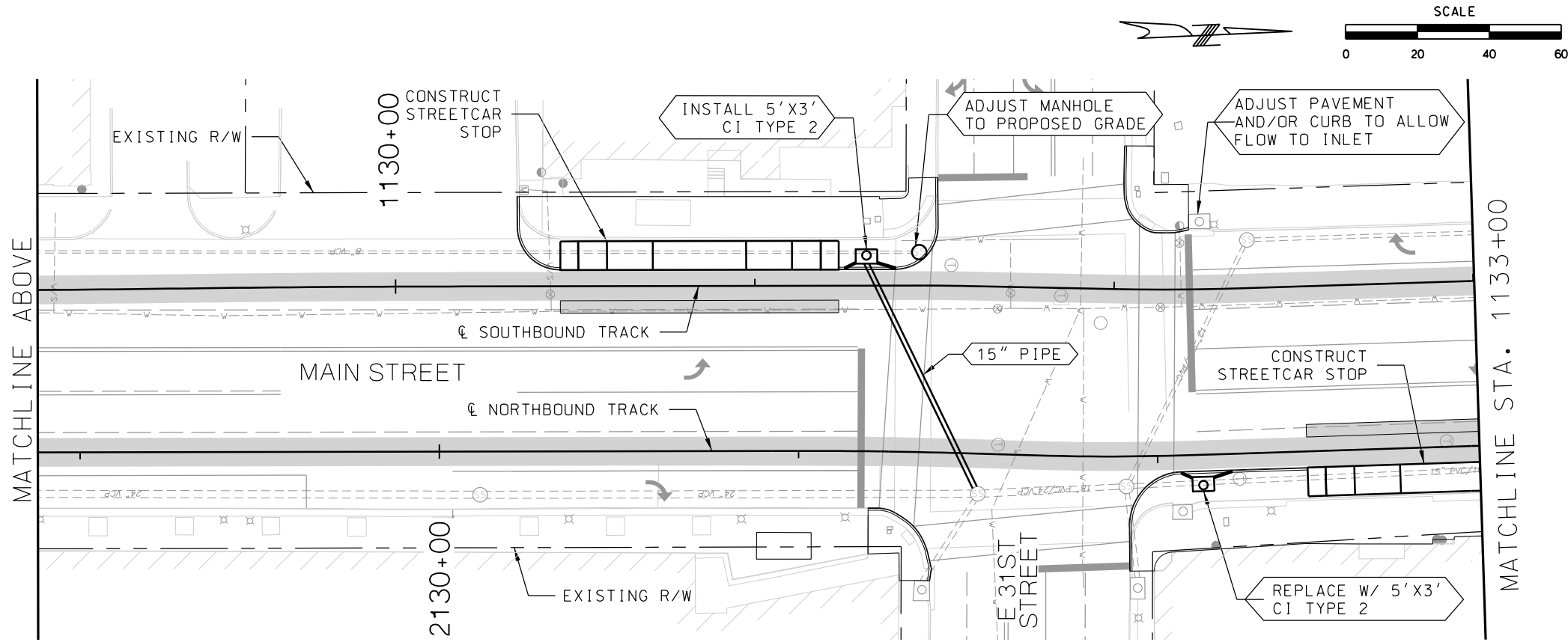
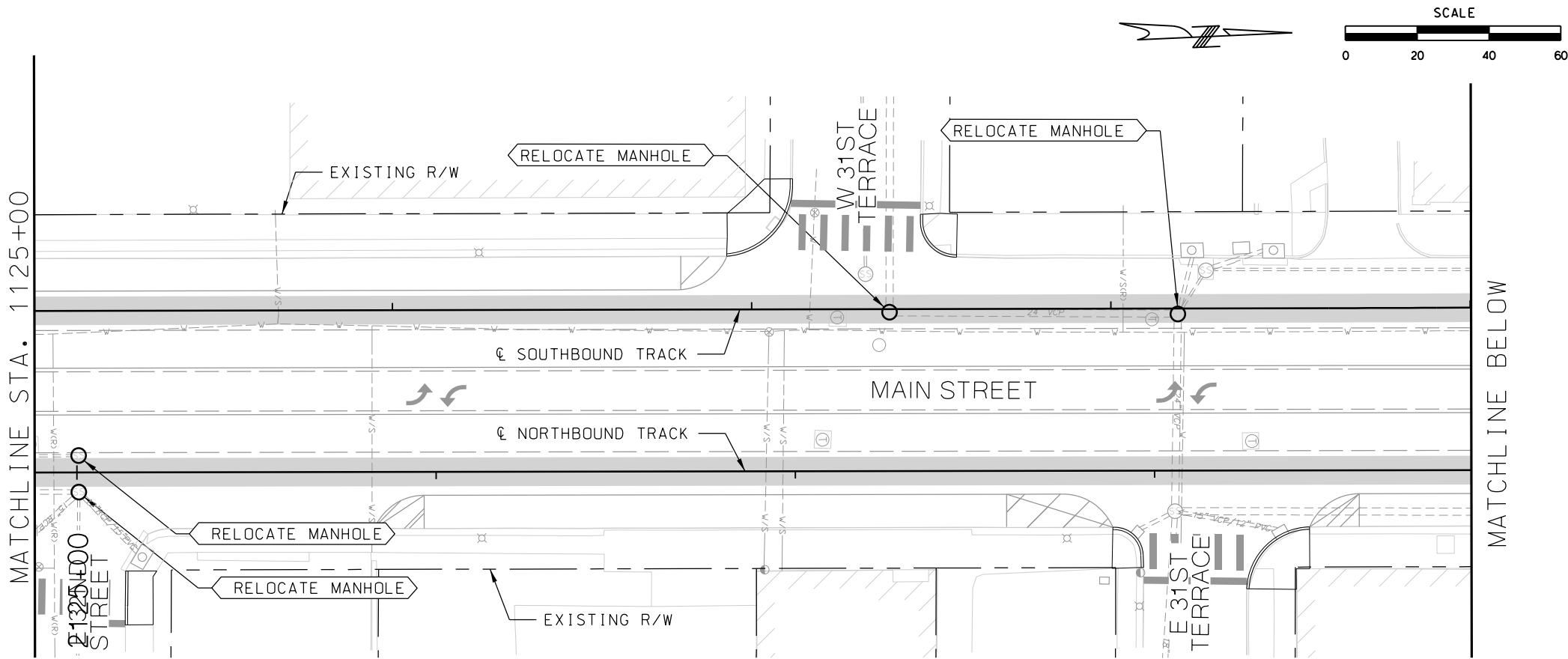
NOT FOR CONSTRUCTION

KANSAS CITY STREETCAR MAIN STREET EXTENSION
SOUTHBOUND AND NORTHBOUND TRACK
DRAINAGE PLAN
STA 1117+00 TO STA 1121+00
STA 1121+00 TO STA 1125+00

SCALE FOR 22"x34": H: 1"=20'	
FILENAME: DRAINAGE STA 1117+00 - 1125+00	
CONTRACT NO.:	
VOLUME:	
DRAWING NO.: D116	SHEET NO.: 191

GENERAL NOTES

1. REFER TO DEMO DRAWINGS FOR INLETS TO BE REMOVED. IF NOT NOTED, INLETS SHALL NOT BE DISTURBED.



REV	DATE	DESCRIPTION
PLOT DATE: 8/27/2019		1:50:08 PM

DESIGNED BY	JWR
CHECKED BY	RPB
DRAWN BY	MMO
CHECKED BY	RPB
APPROVED BY	NKS
DATE	08/28/2019



PRELIMINARY PLANS - 30%
DATE: 08-28-2019

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KANSAS CITY STREETCAR MAIN STREET EXTENSION

SOUTHBOUND AND NORTHBOUND TRACK

DRAINAGE PLAN

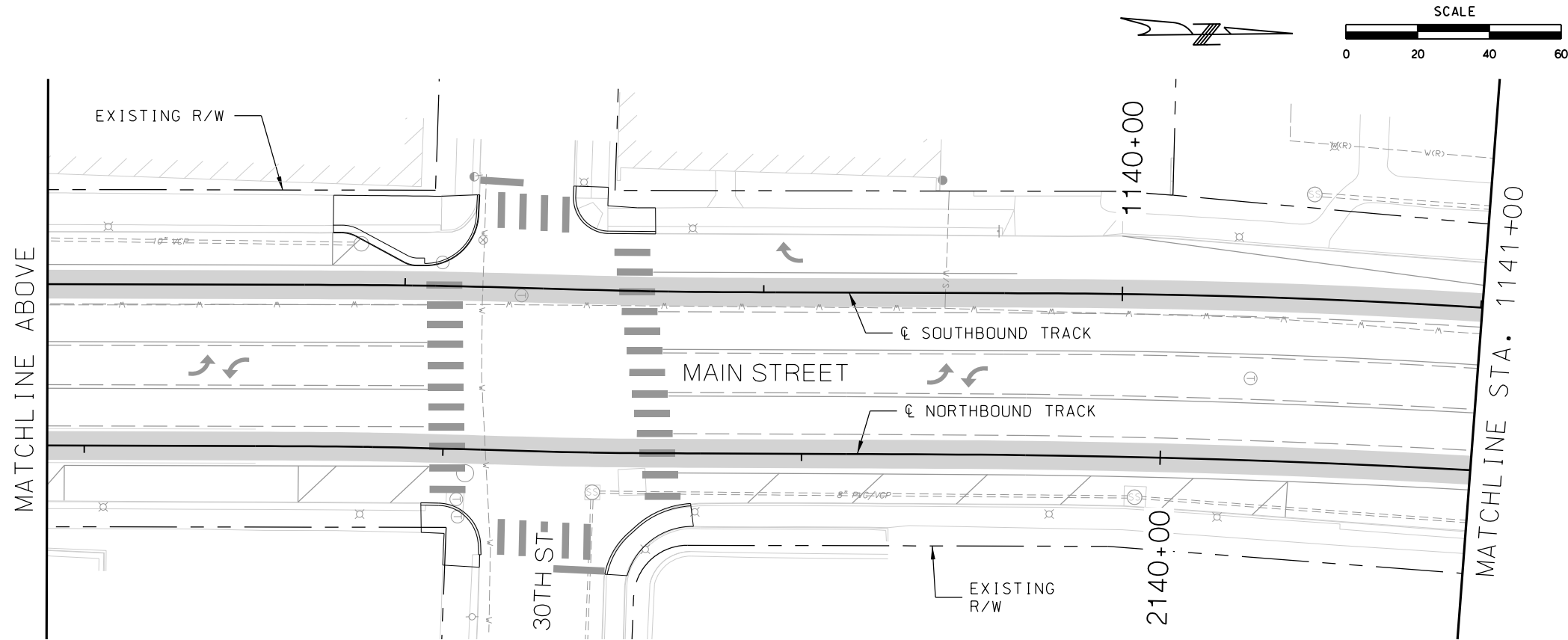
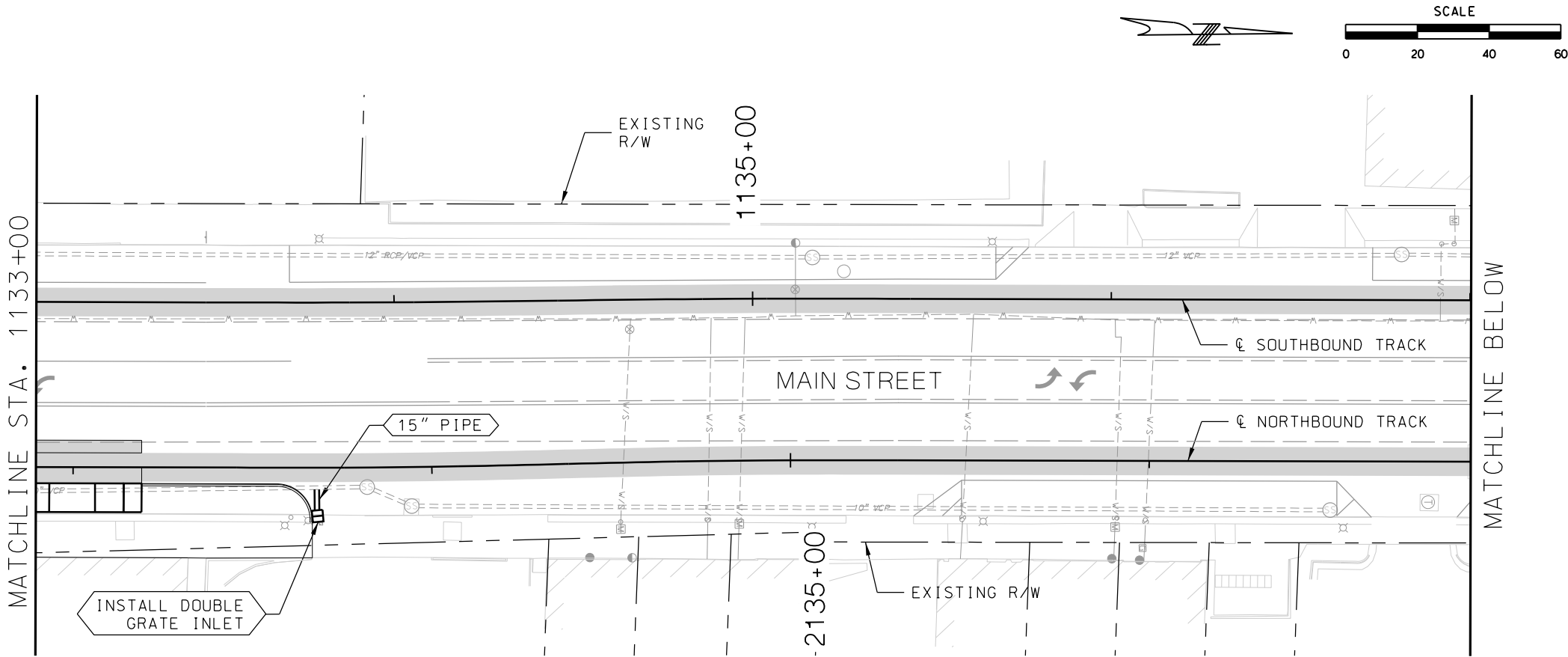
STA 1125+00 TO STA 1129+00

STA 1129+00 TO STA 1133+00

SCALE FOR 22"x34": H: 1"=20'	
FILENAME: DRAINAGE STA 1125+00 - 1133+00	
CONTRACT NO.:	
VOLUME:	
DRAWING NO.: D117	SHEET NO.: 192

GENERAL NOTES

1. REFER TO DEMO DRAWINGS FOR INLETS TO BE REMOVED. IF NOT NOTED, INLETS SHALL NOT BE DISTURBED.



REV	DATE	DESCRIPTION
PLOT DATE: 8/27/2019		1:50:28 PM

DESIGNED BY	JWR
CHECKED BY	RPB
DRAWN BY	MMO
CHECKED BY	RPB
APPROVED BY	NKS
DATE	08/28/2019



PRELIMINARY PLANS - 30%DATE: 08-28-2019

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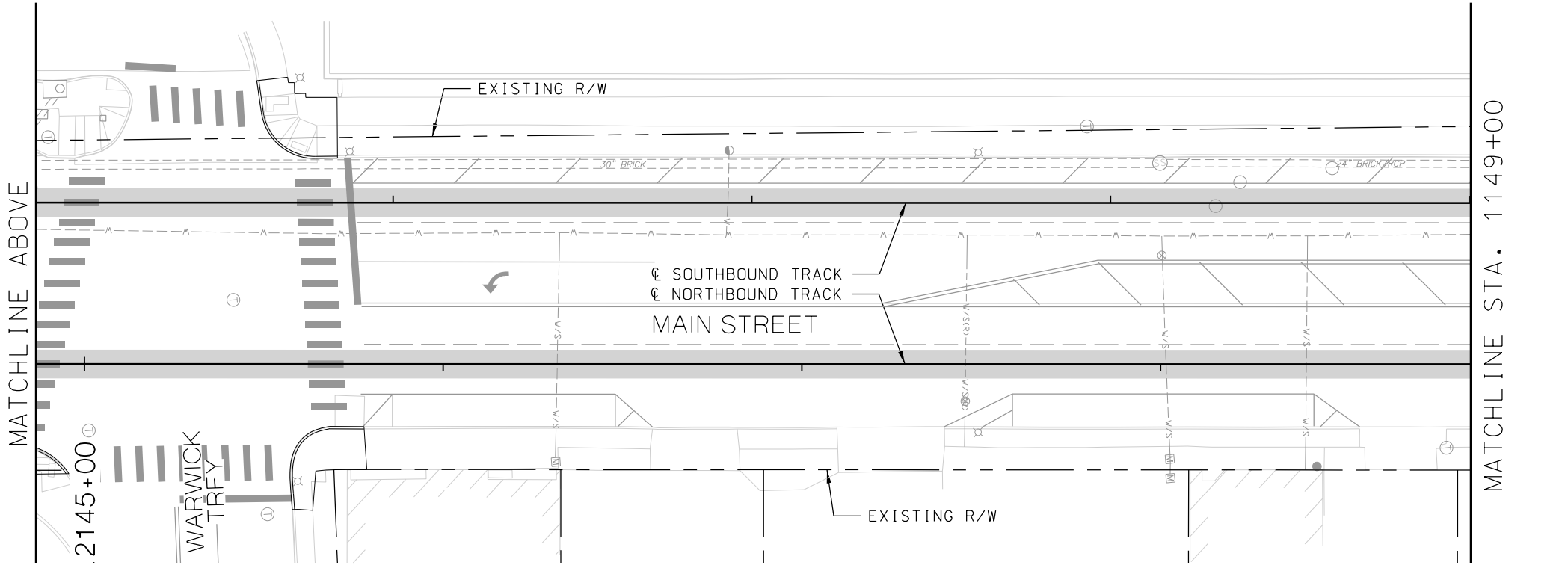
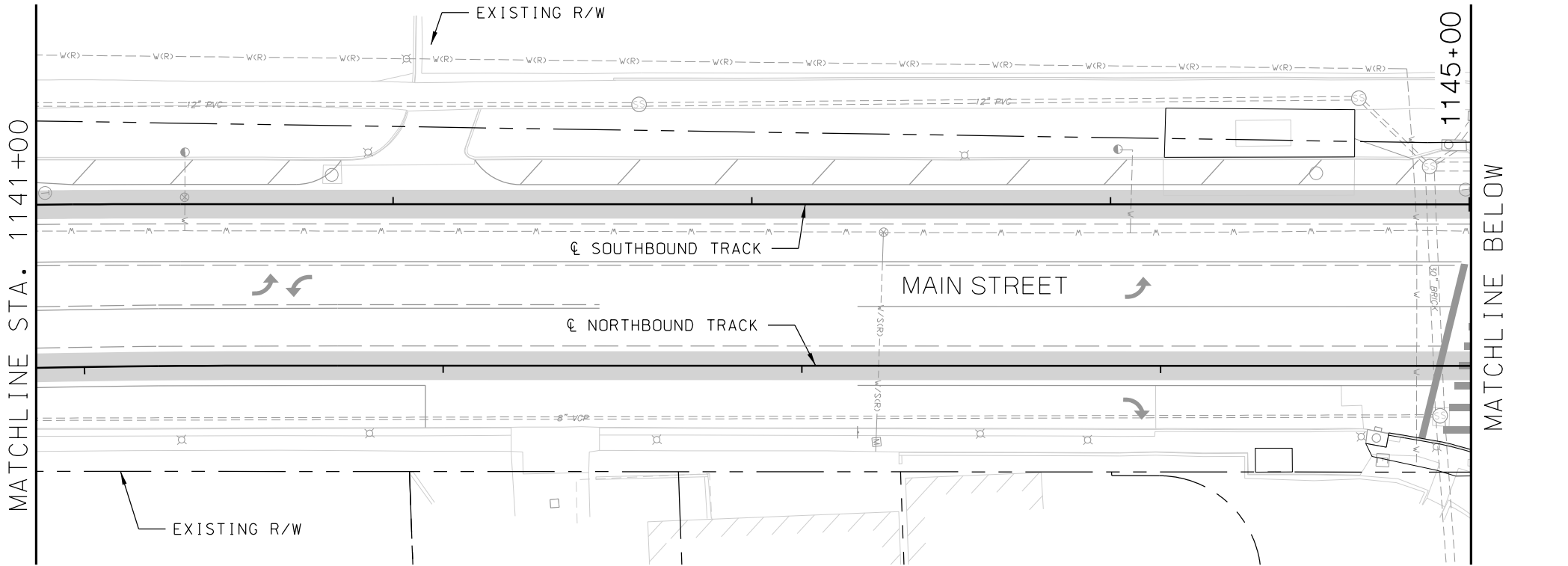
NOT FOR CONSTRUCTION

KANSAS CITY STREETCAR MAIN STREET EXTENSION
SOUTHBOUND AND NORTHBOUND TRACK
DRAINAGE PLAN
STA 1133+00 TO STA 1137+00
STA 1137+00 TO STA 1141+00

SCALE FOR 22"x34": H: 1"=20'	
FILENAME: DRAINAGE STA 1133+00 - 1141+00	
CONTRACT NO.:	
VOLUME: 1	
DRAWING NO.: D118	SHEET NO.: 193

GENERAL NOTES

1. REFER TO DEMO DRAWINGS FOR INLETS TO BE REMOVED. IF NOT NOTED, INLETS SHALL NOT BE DISTURBED.



REV	DATE	DESCRIPTION
PLOT DATE: 8/27/2019		1:50:44 PM

DESIGNED BY	JWR
CHECKED BY	RPB
DRAWN BY	MMO
CHECKED BY	RPB
APPROVED BY	NKS
DATE	08/28/2019



PRELIMINARY PLANS - 30%DATE: 08-28-2019

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816-360-2700
Certificate of Authority: 000856

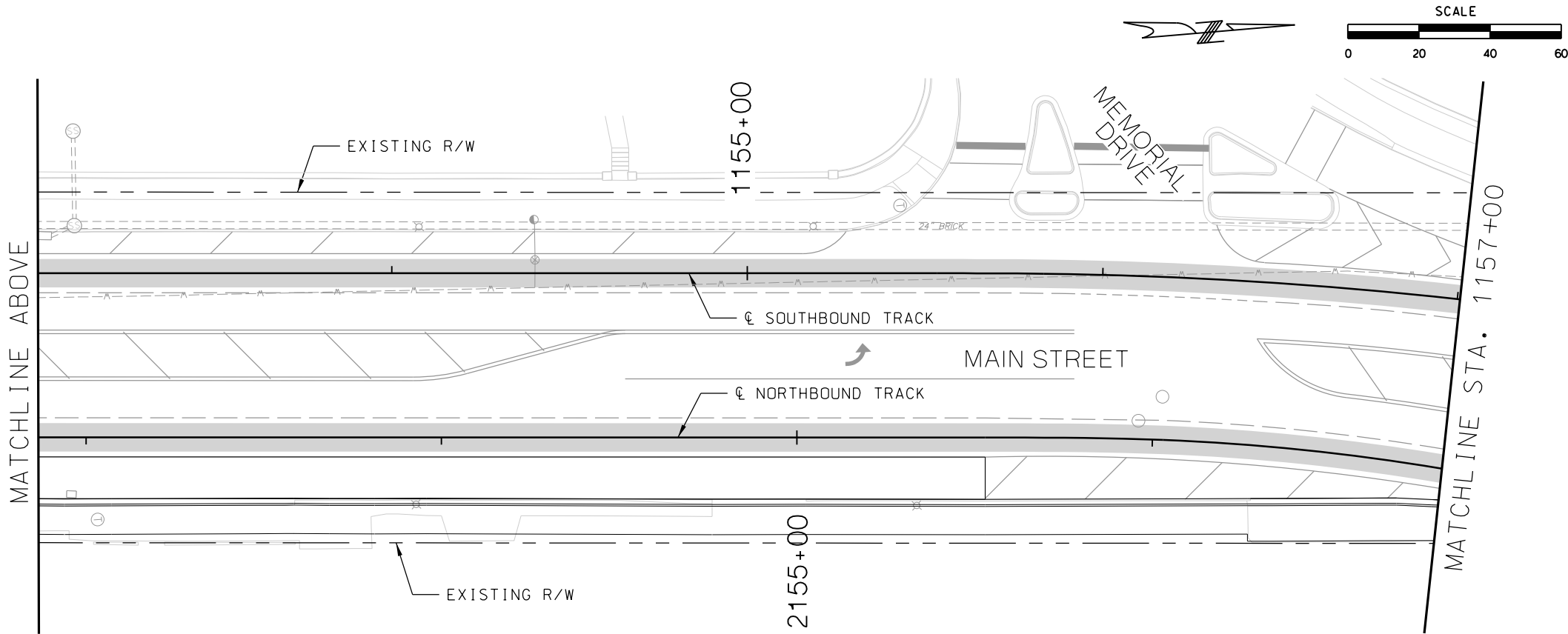
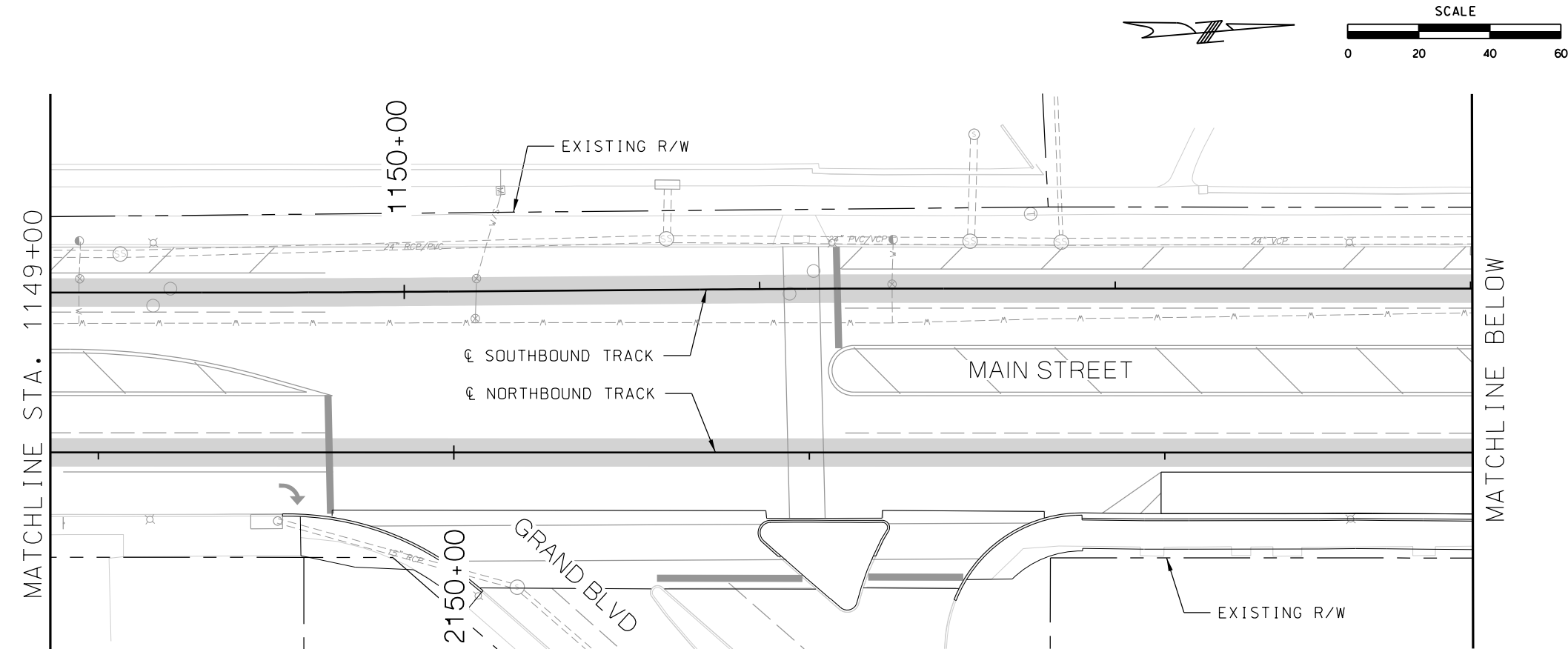
NOT FOR CONSTRUCTION

KANSAS CITY STREETCAR MAIN STREET EXTENSION
SOUTHBOUND AND NORTHBOUND TRACK
DRAINAGE PLAN
STA 1141+00 TO STA 1145+00
STA 1145+00 TO STA 1149+00

SCALE FOR 22"x34": H: 1"=20'	
FILENAME: DRAINAGE STA 1141+00 - 1149+00	
CONTRACT NO.:	
VOLUME:	
DRAWING NO.: D119	SHEET NO.: 194

GENERAL NOTES


1. REFER TO DEMO DRAWINGS FOR INLETS TO BE REMOVED. IF NOT NOTED, INLETS SHALL NOT BE DISTURBED.



REV	DATE	DESCRIPTION
PLOT DATE: 8/27/2019		1:50:59 PM

DESIGNED BY	JWR
CHECKED BY	RPB
DRAWN BY	MMO
CHECKED BY	RPB
APPROVED BY	NKS
DATE	08/28/2019



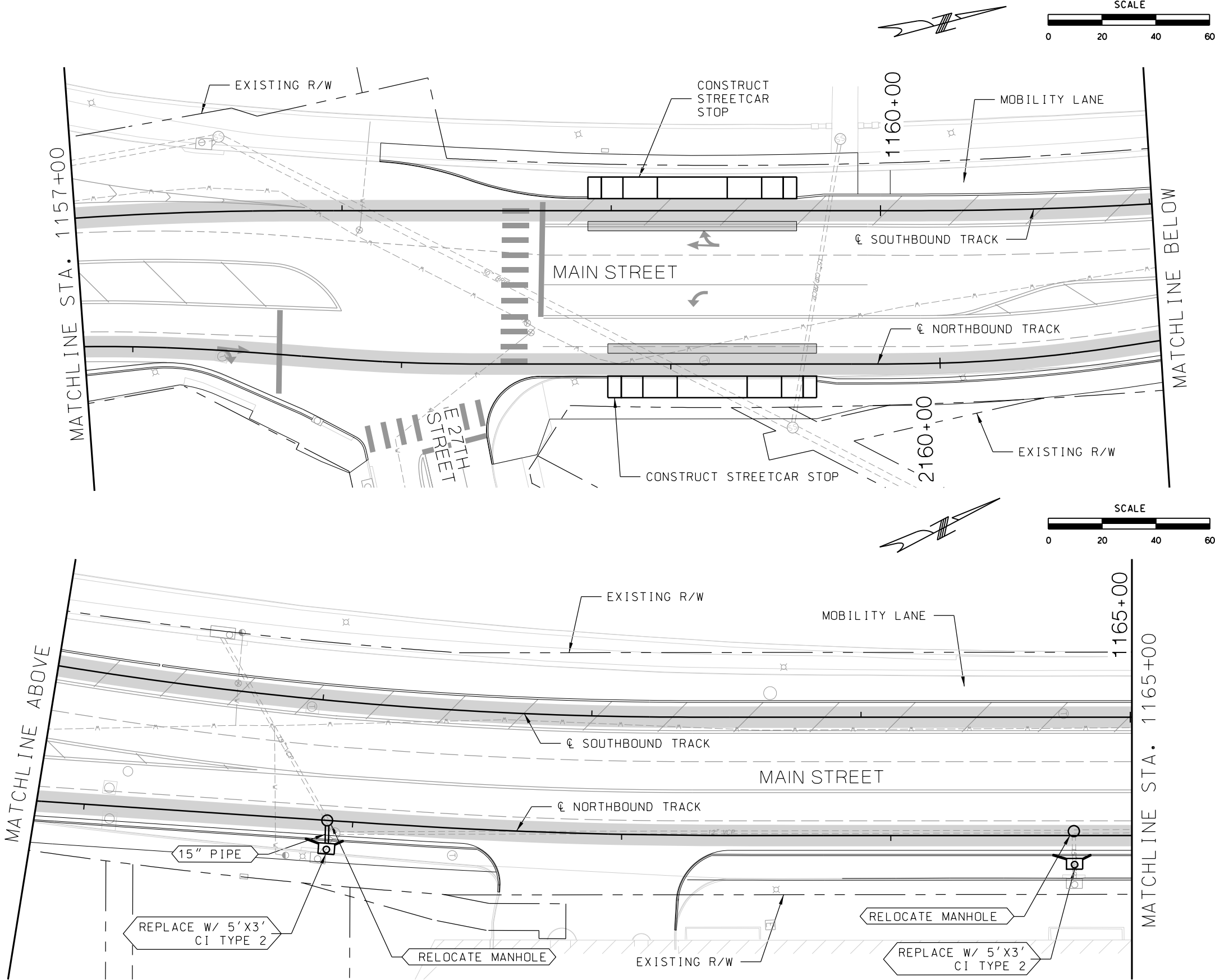
PRELIMINARY PLANS - 30%	DATE: 08-28-2019
 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64113-3471 816-360-2700 Certificate of Authority: 000856	
NOT FOR CONSTRUCTION	

KANSAS CITY STREETCAR MAIN STREET EXTENSION	
SOUTHBOUND AND NORTHBOUND TRACK	
DRAINAGE PLAN	
STA 1149+00 TO STA 1153+00	
STA 1153+00 TO STA 1157+00	

SCALE FOR 22"x34": H: 1"=20'	
FILENAME: DRAINAGE STA 1149+00 - 1157+00	
CONTRACT NO.:	
VOLUME:	
1	
DRAWING NO.:	SHEET NO.:
D120	195

GENERAL NOTES

1. REFER TO DEMO DRAWINGS FOR INLETS TO BE REMOVED. IF NOT NOTED, INLETS SHALL NOT BE DISTURBED.



REV	DATE	DESCRIPTION
PLOT DATE: 8/27/2019		1:51:14 PM

DESIGNED BY	JWR
CHECKED BY	RPB
DRAWN BY	MMO
CHECKED BY	RPB
APPROVED BY	NKS
DATE	08/28/2019



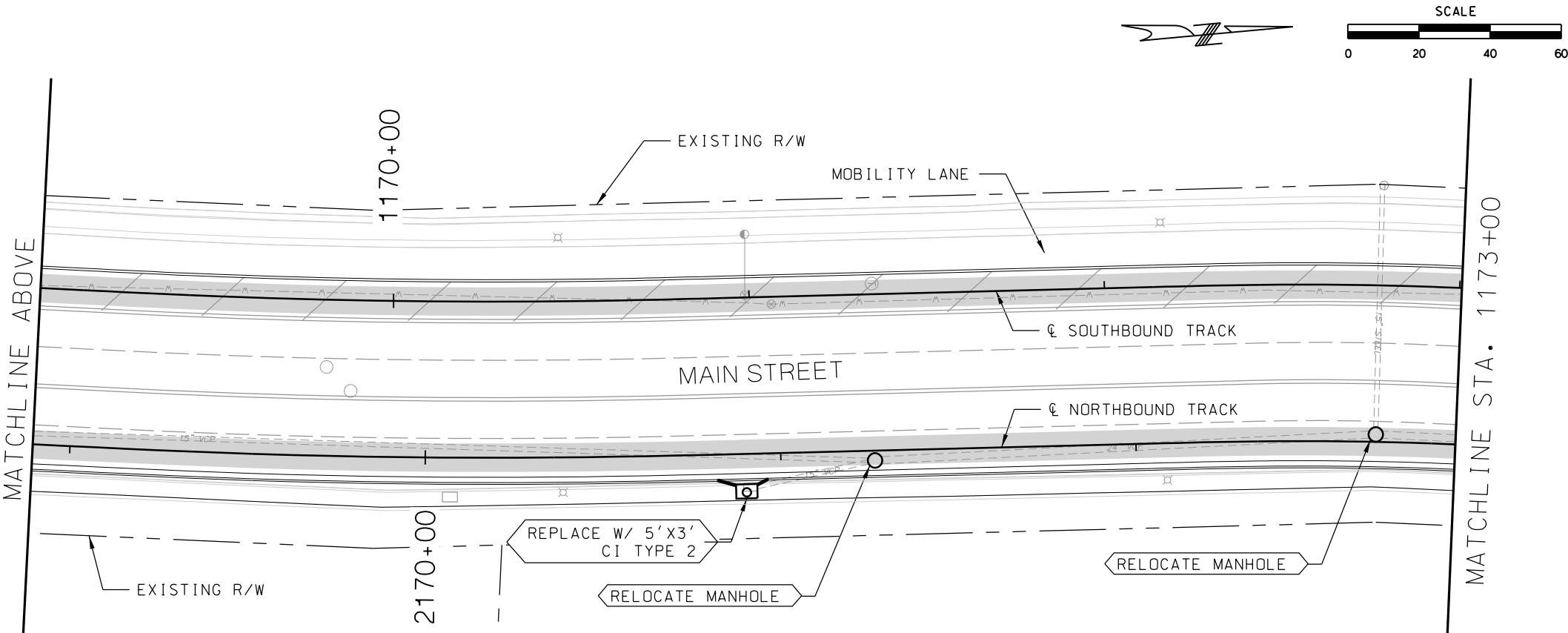
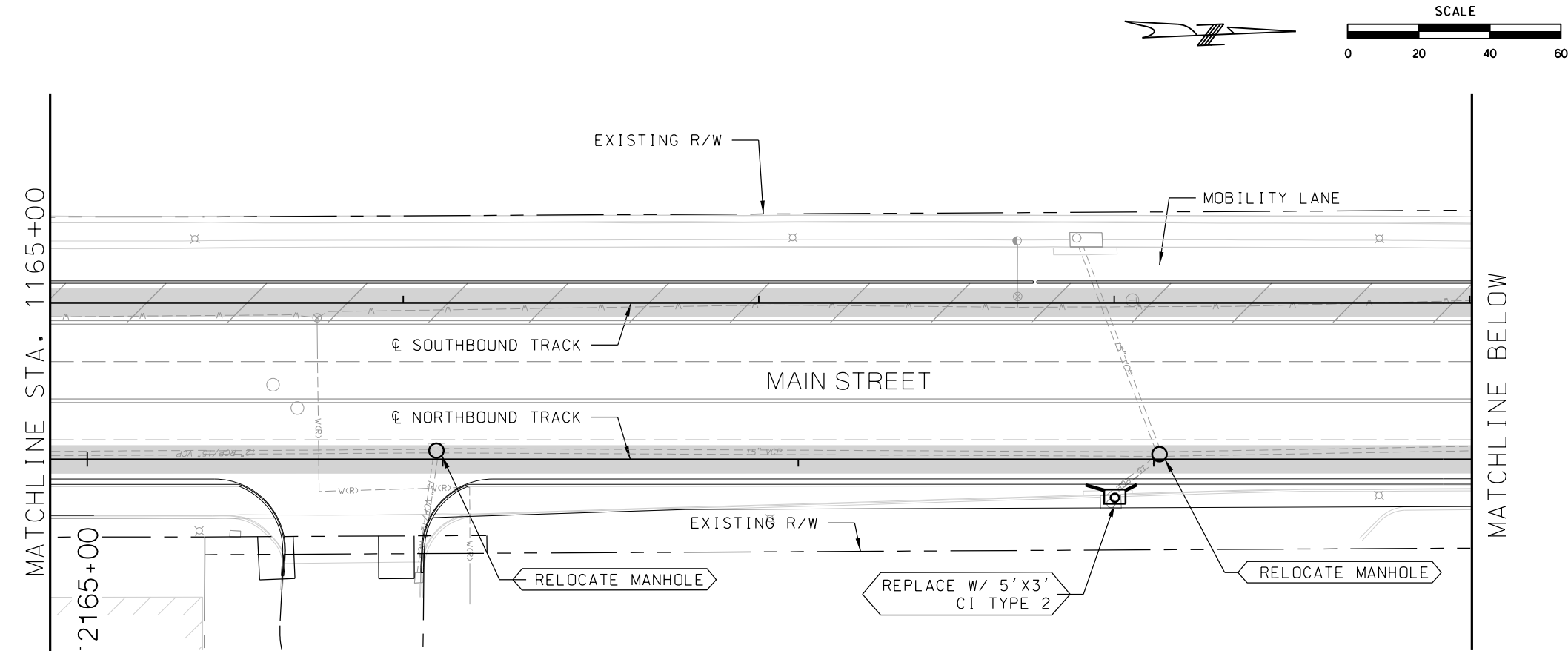
PRELIMINARY PLANS - 30%	DATE: 08-28-2019
HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	
NOT FOR CONSTRUCTION	

KANSAS CITY STREETCAR MAIN STREET EXTENSION	
SOUTHBOUND AND NORTHBOUND TRACK	
DRAINAGE PLAN	
STA 1157+00 TO STA 1161+00	
STA 1161+00 TO STA 1165+00	

SCALE FOR 22"x34": H: 1"=20'	
FILENAME: DRAINAGE STA 1157+00 - 1165+00	
CONTRACT NO.:	
VOLUME:	
DRAWING NO.: D121	SHEET NO.: 196

GENERAL NOTES


1. REFER TO DEMO DRAWINGS FOR INLETS TO BE REMOVED. IF NOT NOTED, INLETS SHALL NOT BE DISTURBED.



REV	DATE	DESCRIPTION
PLOT DATE: 8/27/2019		1:51:27 PM

DESIGNED BY	JWR
CHECKED BY	RPB
DRAWN BY	MMO
CHECKED BY	RPB
APPROVED BY	NKS
DATE	08/28/2019



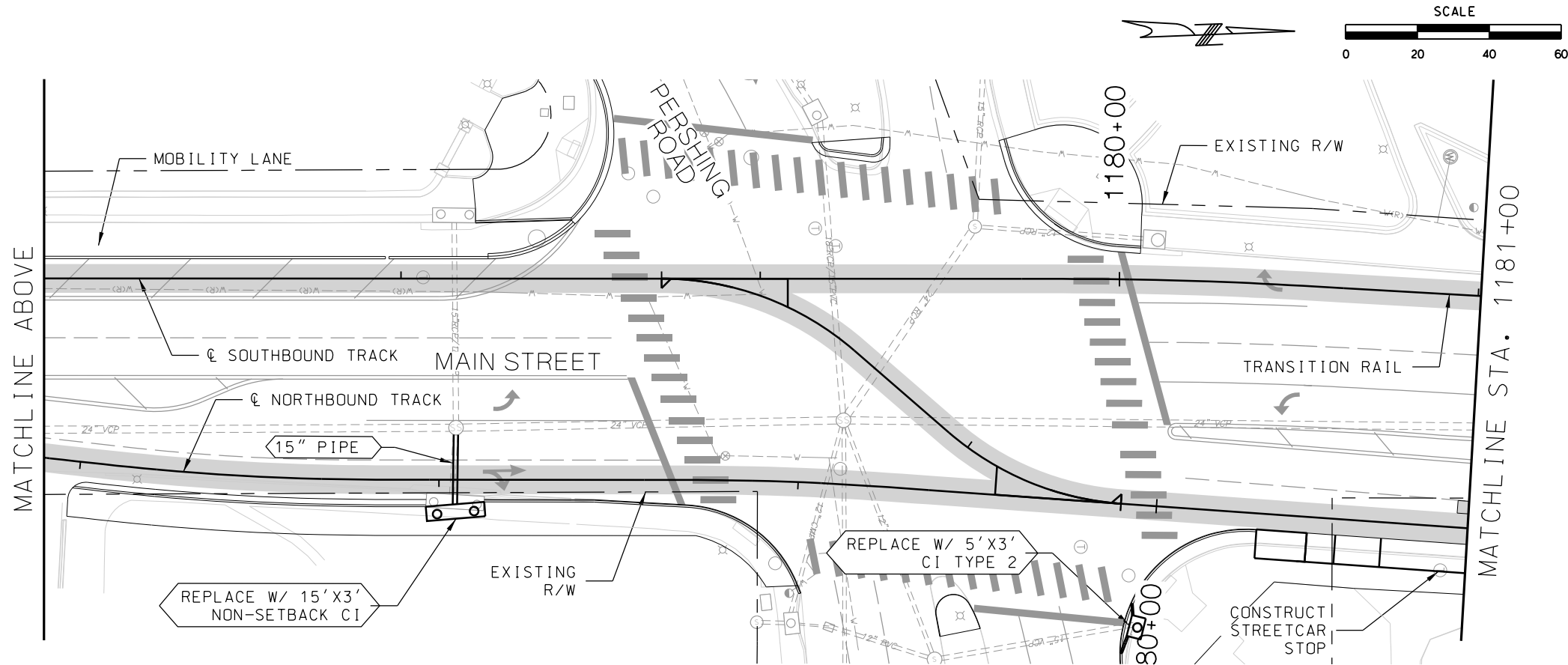
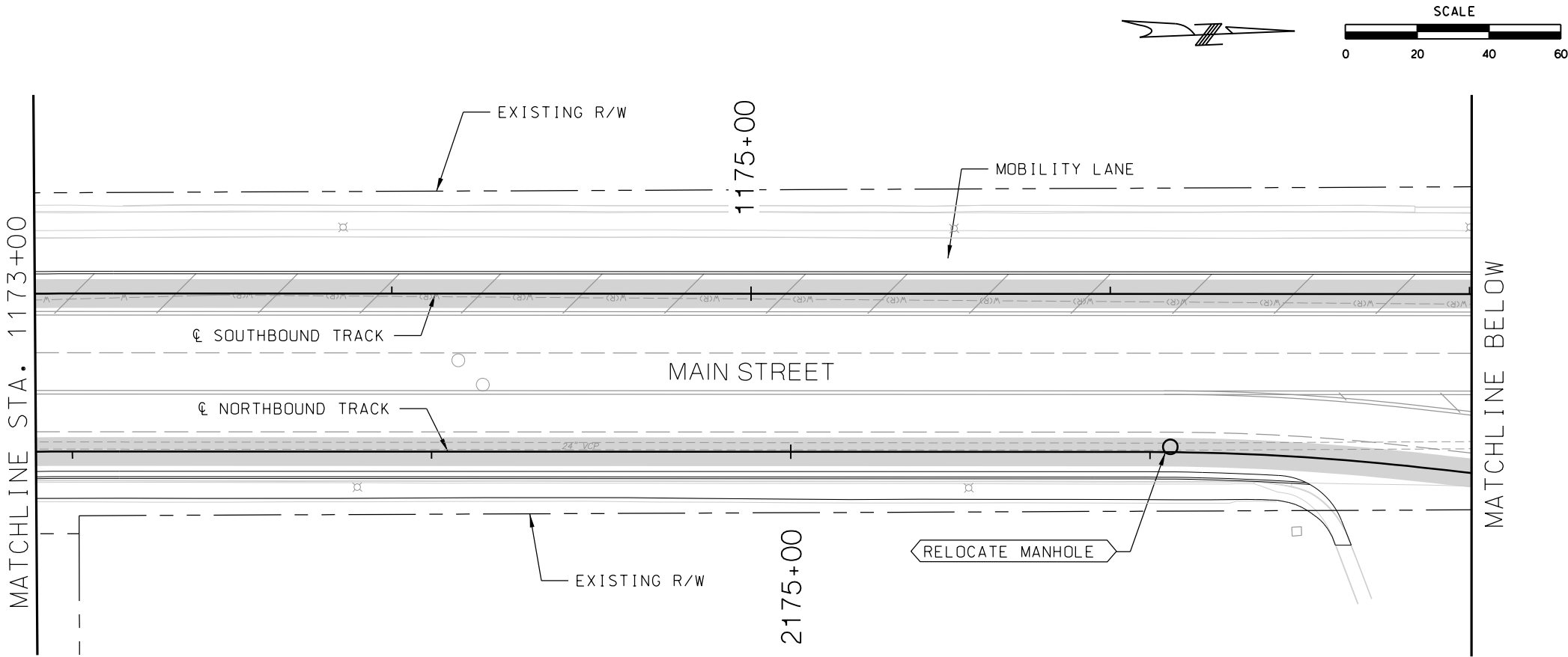
PRELIMINARY PLANS - 30%		DATE: 08-28-2019
 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856		
NOT FOR CONSTRUCTION		

KANSAS CITY STREETCAR MAIN STREET EXTENSION	
SOUTHBOUND AND NORTHBOUND TRACK	
DRAINAGE PLAN	
STA 1165+00 TO STA 1169+00	
STA 1169+00 TO STA 1173+00	

SCALE FOR 22"x34": H: 1"=20'	
FILENAME: DRAINAGE STA 1165+00 - 1173+00	
CONTRACT NO.:	
VOLUME: 1	
DRAWING NO.: D122	SHEET NO.: 197

GENERAL NOTES

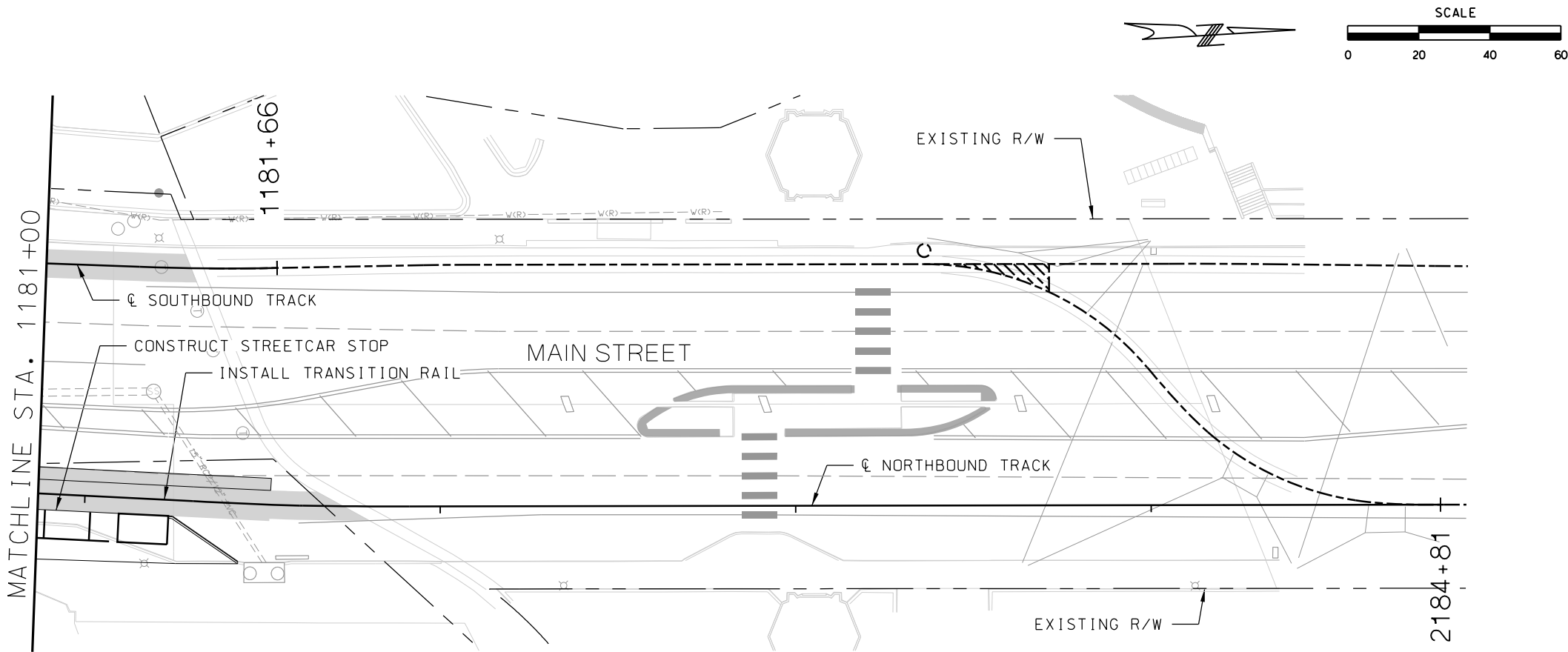
1. REFER TO DEMO DRAWINGS FOR INLETS TO BE REMOVED. IF NOT NOTED, INLETS SHALL NOT BE DISTURBED.




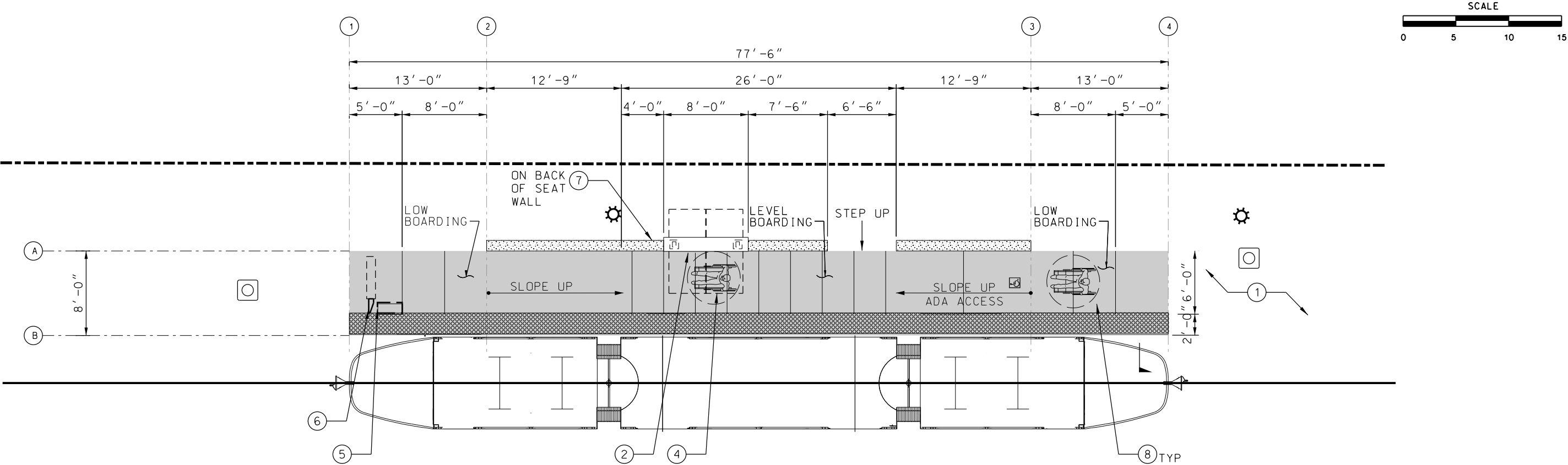
REV	DATE	DESCRIPTION	DESIGNED BY	JWR		PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION SOUTHBOUND AND NORTHBOUND TRACK DRAINAGE PLAN STA 1173+00 TO STA 1177+00 STA 1177+00 TO STA 1181+00	SCALE FOR 22"x34": H: 1"=20'	
			CHECKED BY	RPB					 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	FILENAME:
			DRAWN BY	MMO						DRAINAGE STA 1173+00 - 1181+00
										CONTRACT NO.:
			CHECKED BY	RPB						*****
			APPROVED BY	NKS						VOLUME:
										1
PLOT DATE: 8/27/2019			1:51:46 PM			DATE	08/28/2019	DRAWING NO.	SHEET NO.	
						NOT FOR CONSTRUCTION		D123	198	

GENERAL NOTES

1. REFER TO DEMO DRAWINGS FOR INLETS TO BE REMOVED. IF NOT NOTED, INLETS SHALL NOT BE DISTURBED.



REV	DATE	DESCRIPTION	DESIGNED BY	JWR		PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION SOUTHBOUND AND NORTHBOUND TRACK DRAINAGE PLAN STA 1181+00 TO STA 1185+00	SCALE FOR 22"x34": H: 1"=20'
			CHECKED BY	RPB		 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856			
			DRAWN BY	MMO			FILENAME: DRAINAGE STA 1181+00 - 1189+00		
			CHECKED BY	RPB			CONTRACT NO.:		
			APPROVED BY	NKS			VOLUME: 1		
PLOT DATE: 8/27/2019		1:52:00 PM	DATE	08/28/2019		NOT FOR CONSTRUCTION		DRAWING NO.: D124	SHEET NO.: 199



GENERAL NOTES:

- 1 SEE CIVIL DWGS FOR ADDITIONAL INFORMATION.

2 PLATFORM CONC PAVING TO MATCH DOWNTOWN KCMO STANDARD W/ WHITE PORTLAND CEMENT APPEARANCE.

3 SEE CIVIL DWGS FOR PLATFORM STRUCTURAL REQUIREMENTS, EXPANSION JOINTS, REINFORCEMENT, ETC.
- 4 PAVING ADJACENT TO PLATFORM TO MATCH EXIST SIDEWALK MATERIAL

5 SEE CIVIL DWGS FOR TOPOGRAPHIC ELEVATIONS

KEYNOTES:

- 1 WALKWAYS/SIDEWALKS

2 SHELTER

3 SHELTER BENCH

4 CANOPY ABOVE

5 TICKET VENDING MACHINE (FUTURE)

6 SIGN KIOSK MARKER
- 7 COMM HANDHOLE

8 PLATFORM PAVING

LEGEND:

- PLATFORM
- EXIST R/W
- SERVICE EQUIPMENT
- METER
- CONC LOW WALL
- OCS CATENARY POLE, SEE OVERHEAD CONTACT SYSTEM DWGS
- OCS W/ LIGHT POLE
- ADA ACCESSIBLE ROUTE

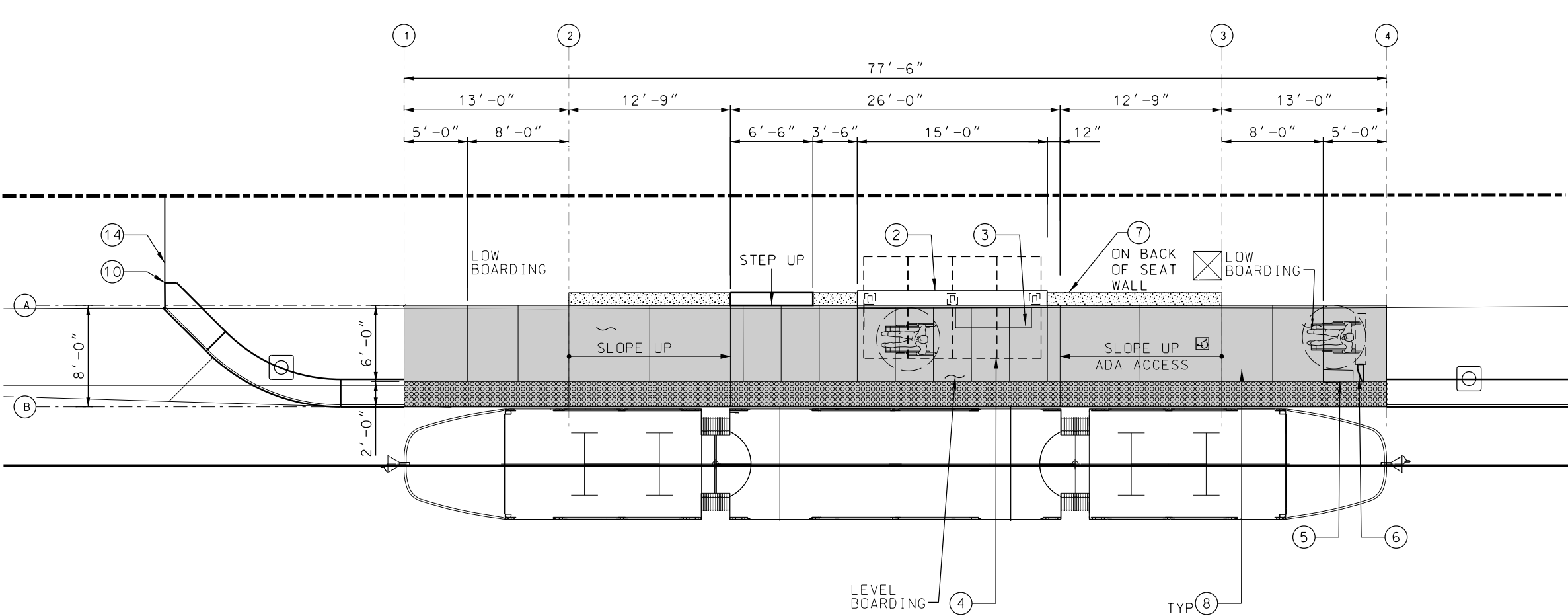
EXIST OR RELOCATED LIGHT POLEDETECTABLE WARNING TILETRKADA 5'-0" CLEAR AREA

REV			DATE		DESCRIPTION		DESIGNED BY		JWR	
							CHECKED BY		RPB	
							DRAWN BY		MMO	
							CHECKED BY		RPB	
							APPROVED BY		NKS	
PLOT DATE:			8/27/2019		10:53:22 AM		DATE		08/28/2019	

PRELIMINARY PLANS - 30%
DATE: 08-28-2019
HDR Engineering, Inc.
10450 Holmes Road
Suite 600
Kansas City, MO 64131-3471
816-360-2700
Certificate of Authority: 000856

TYPICAL PLATFORM PLAN
SQUARE

SCALE FOR 22"x34":
1" = 10'
FILENAME:
TYP PLATFORM PLAN - SQUARE
CONTRACT NO.:
VOLUME:
1
DRAWING NO.:
P201
SHEET NO.:
200



GENERAL NOTES:

- 1 SEE CIVIL DWGS FOR ADDITIONAL INFORMATION.

2 PLATFORM CONC PAVING TO MATCH DOWNTOWN KCMO STANDARD W/ WHITE PORTLAND CEMENT APPEARANCE.

3 SEE CIVIL DWGS FOR PLATFORM STRUCTURAL REQUIREMENTS, EXPANSION JOINTS, REINFORCEMENT, ETC.
- 4 PAVING ADJACENT TO PLATFORM TO MATCH EXIST SIDEWALK MATERIAL

5 SEE CIVIL DWGS FOR TOPOGRAPHIC ELEVATIONS

KEYNOTES:

- 1 WALKWAYS/SIDEWALKS

2 SHELTER

3 SHELTER BENCH

4 CANOPY ABOVE

5 TICKET VENDING MACHINE (FUTURE)

6 SIGN KIOSK MARKER
- 7 COMM HANDHOLE

8 PLATFORM PAVING

LEGEND:

- PLATFORM

EXIST R/W

SERVICE EQUIPMENT

METER

CONC LOW WALL

OCS CATENARY POLE, SEE OVERHEAD CONTACT SYSTEM DWGS

OCS W/ LIGHT POLE

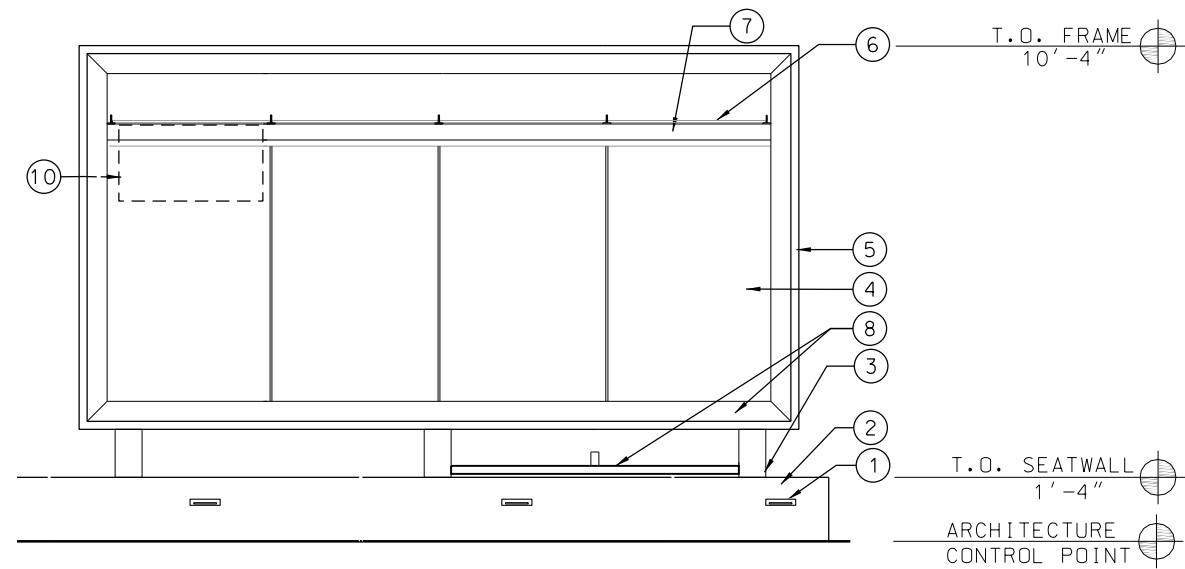
ADA ACCESSIBLE ROUTE
- EXIST OR RELOCATED LIGHT POLE

DETECTABLE WARNING TILE

TRK

ADA 5'-0" CLEAR AREA

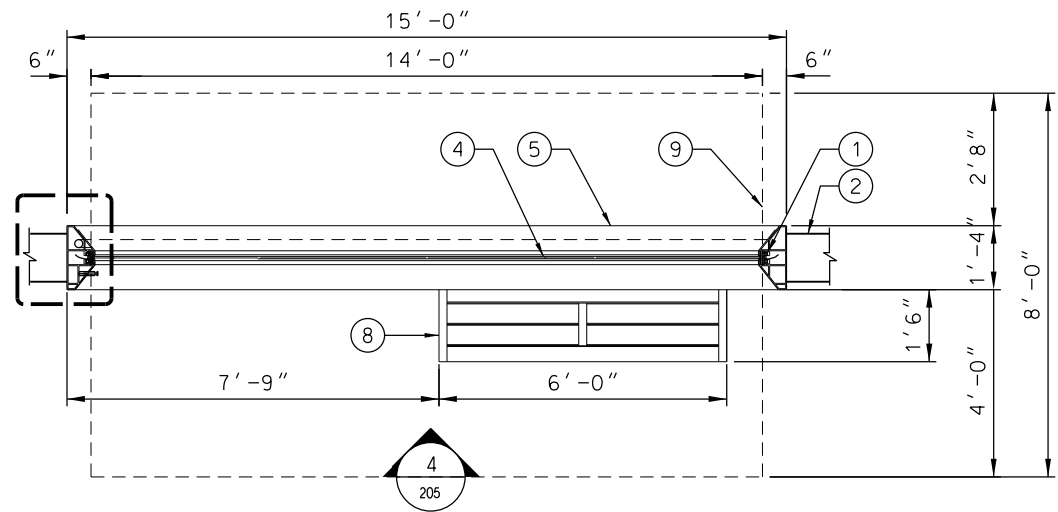
REV	DATE	DESCRIPTION	DESIGNED BY	JWR	PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SCALE FOR 22"x34": 1" = 10'
			CHECKED BY	RPB	HDR Engineering, Inc.		TYPICAL PLATFORM PLAN RECTANGLE	FILENAME: TYP PLATFORM PLAN - RECTANGLE
			DRAWN BY	MMO	10450 Holmes Road			CONTRACT NO.:
					Suite 600			VOLUME:
			CHECKED BY	RPB	Kansas City, MO 64131-3471			1
			APPROVED BY	NKS	816-360-2700			DRAWING NO.: P202
					Certificate of Authority: 000856			SHEET NO.: 201
PLOT DATE: 8/27/2019			10:00:49 AM		DATE: 08/28/2019		NOT FOR CONSTRUCTION	



FRONT ELEVATION

1/2" = 1'-0"

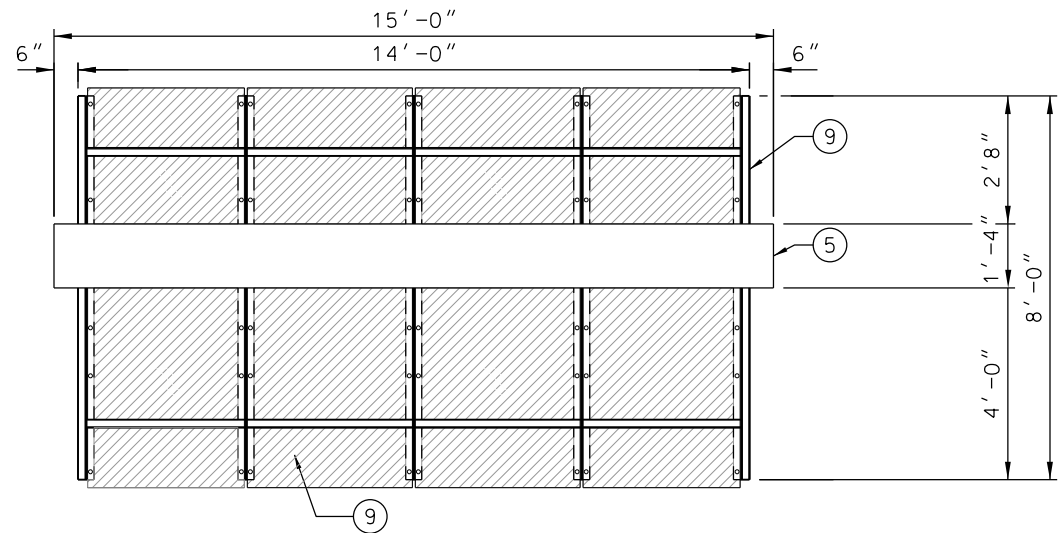
4
205



SHELTER FLOOR PLAN

1/2" = 1'-0"

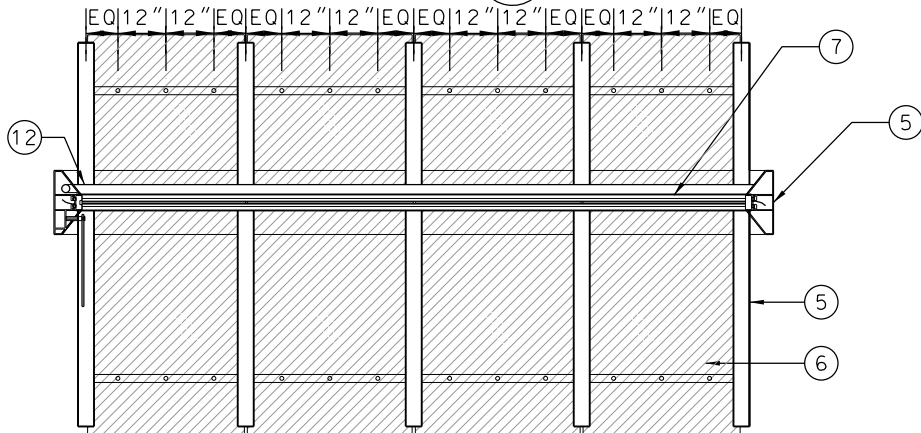
1
205



ROOF PLAN

1/2" = 1'-0"

2
205



REFLECTED CEILING PLAN

1/2" = 1'-0"

3
P206

KEYNOTES:

- 1 RECESSED CONTINUOUS LED LIGHT FIXTURE
- 2 CAST-IN-PLACE CONC
- 3 HSS POST
- 4 LAMINATED TEMPERED GLASS PANELS
- 5 ALUMINUM CLADDING
- 6 ACRYLIC ROOF PANEL
- 7 HSS BEAM
- 8 IPE WOOD BENCH
- 9 CANOPY
- 10 VARIABLE MESSAGE SIGN (FUTURE)
- 11 RAIN GUTTER

GENERAL NOTES:

1. BASE DESIGN FOR THE SHELTER STRUCTURE IS AN EXTRUDED ALUMINUM FRAME W/ WELDED CONNECTIONS AT THE JOINTS.

REV	DATE	DESCRIPTION	DESIGNED BY	JWR
			CHECKED BY	RPB
			DRAWN BY	MMO
			CHECKED BY	RPB
			APPROVED BY	NKS
PLOT DATE: 8/27/2019			DATE	08/28/2019

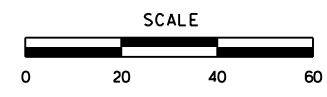
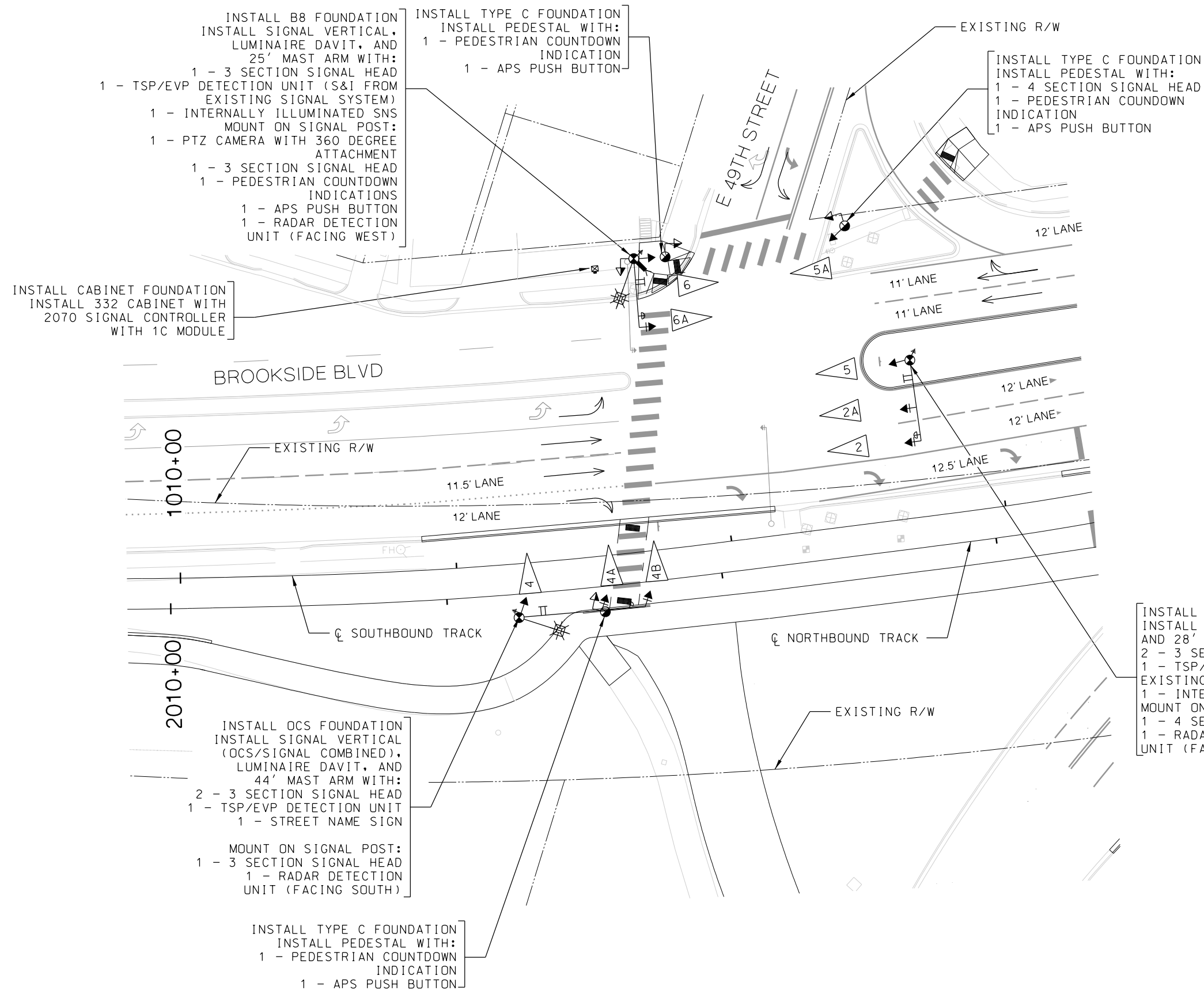


PRELIMINARY PLANS - 30%		DATE: 08-28-2019
HDR HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856		
NOT FOR CONSTRUCTION		

KANSAS CITY STREETCAR MAIN STREET EXTENSION

RECTANGLE SHELTER
PLANS, ELEVATIONS, SECTIONS

SCALE FOR 22"x34": 1/2"=1'-0"	
FILENAME: RECTANGLE - PLAN, ELEV, SECTION	
CONTRACT NO.:	
VOLUME:	
DRAWING NO.: P206	SHEET NO.: 205



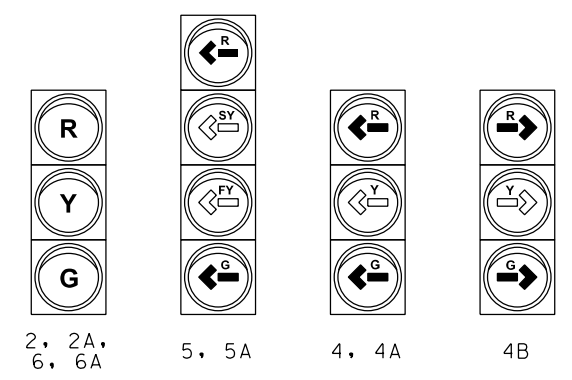
INTERSECTION NOTES

1. REMOVE ALL EXISTING SIGNAL EQUIPMENT FROM THIS SIGNAL SYSTEM.

LEGEND

- ← TRAFFIC SIGNAL HEAD
- ← TRAFFIC SIGNAL HEAD WITH BACK PLATE
- ← PEDESTRIAN SIGNAL HEAD
- ⊕ MAST ARM POLE
- ⊙ SIGNAL PEDESTAL
- ⊠ CONTROLLER
- ⌋ SPAN WIRE WITH SIGNAL HEAD
- ⊕ OPTICOM DETECTOR
- ⊕ RADAR DETECTOR
- 5 SIGNAL FACE NUMBER
- ⊠ SHOEBOX LUMINAIRE
- ⌋ PAN, TILT AND ZOOM CAMERA
- ⌋ SIGN POST

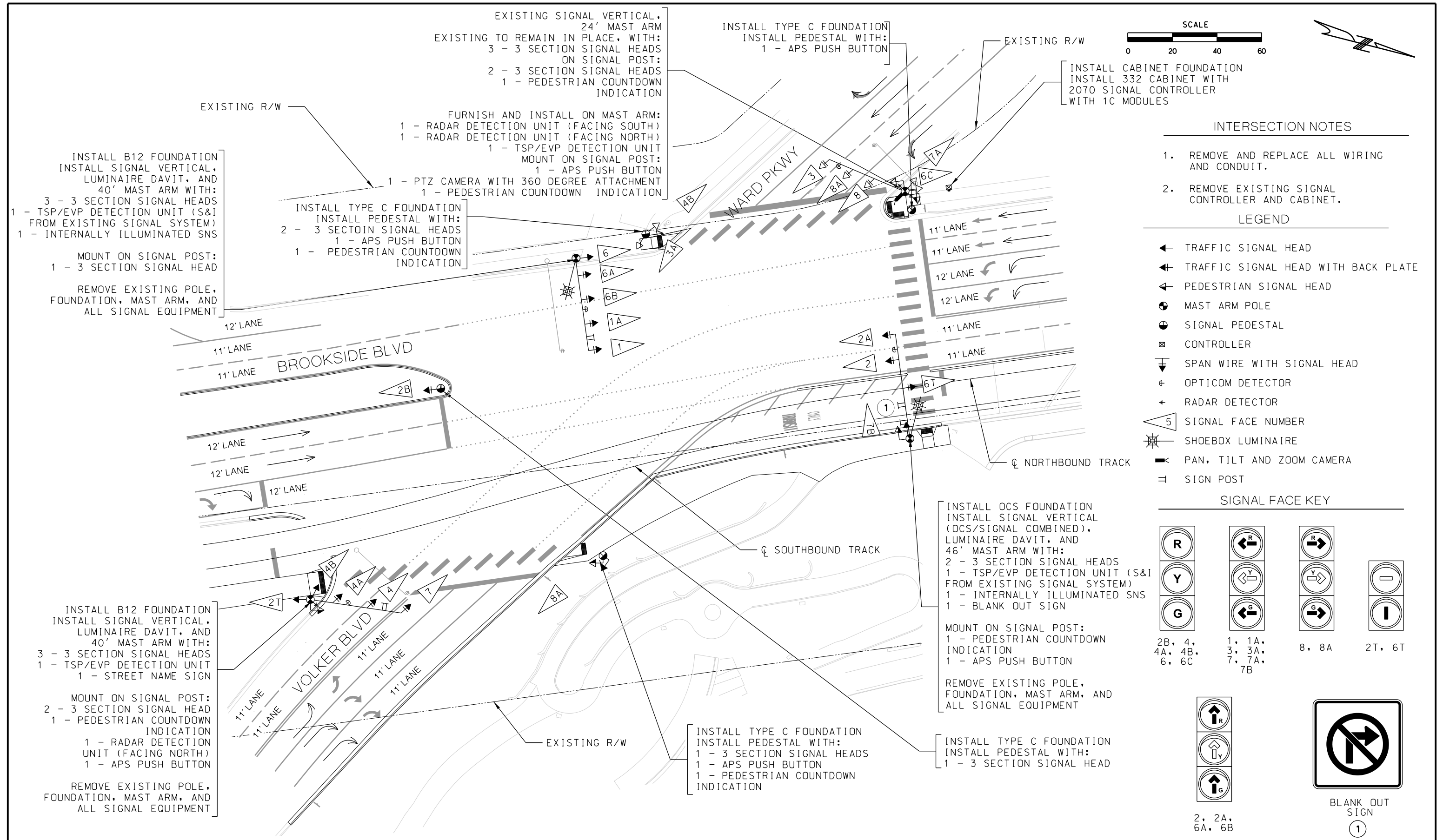
SIGNAL FACE KEY




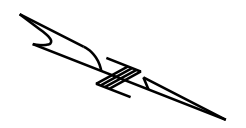
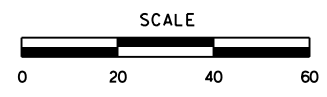
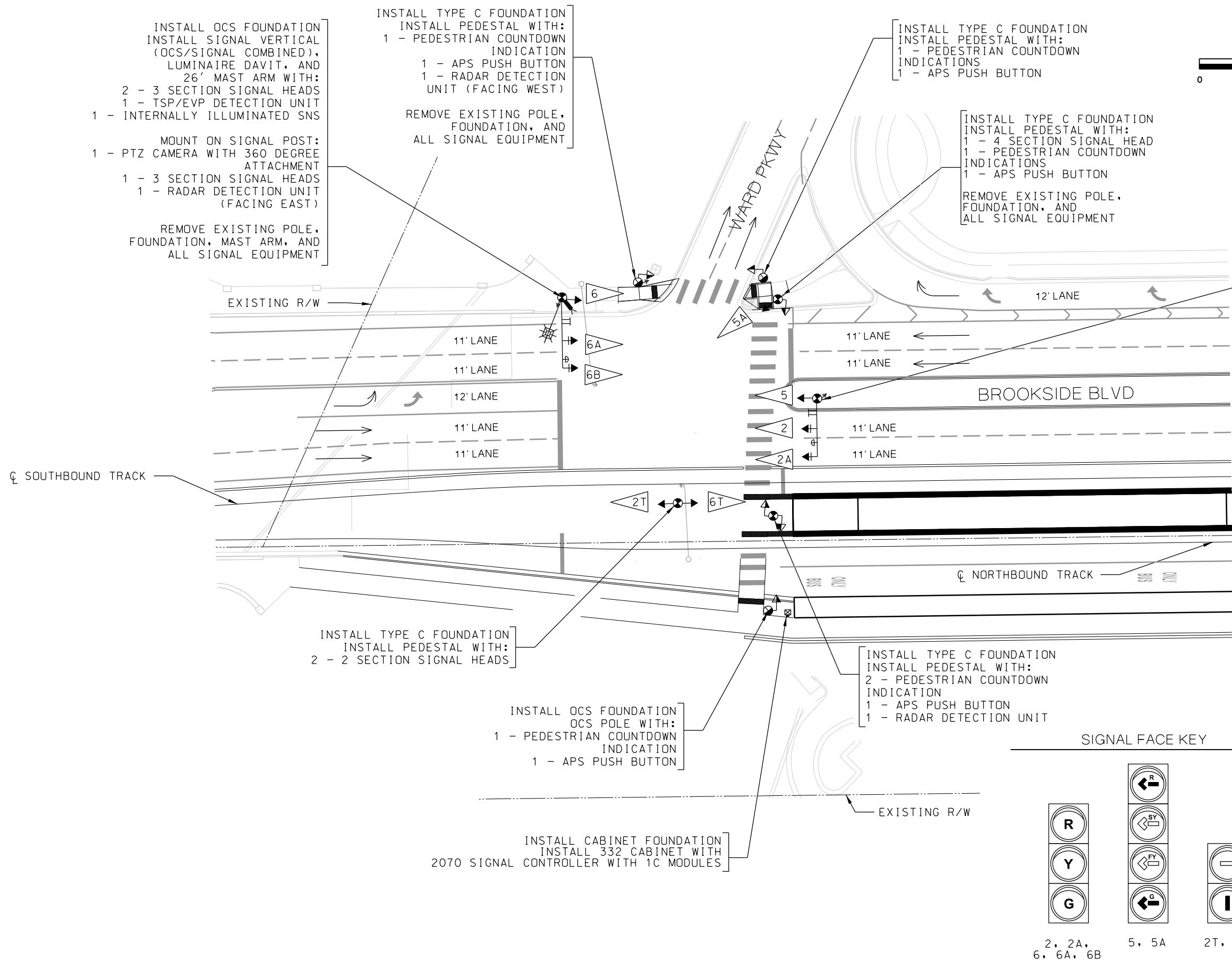
REV	DATE	DESCRIPTION	DESIGNED BY	AJH				PRELIMINARY PLANS - 30%		DATE: 08-28-2019		KANSAS CITY STREETCAR MAIN STREET EXTENSION	TRAFFIC SIGNAL LAYOUT PLAN BROOKSIDE BLVD AND 49TH STREET		SCALE FOR 22"x34": H: 1"=20'	
			CHECKED BY	MJM				 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856					FILENAME: T101.dgn		CONTRACT NO.:	
			DRAWN BY	SY											*****	
			CHECKED BY	MJM											VOLUME:	
			APPROVED BY	NKS											1	
PLOT DATE: 8/25/2019 11:56:17 AM			DATE						NOT FOR CONSTRUCTION				DRAWING NO.: T101		SHEET NO.: 206	

TRAFFIC SIGNAL LAYOUT PLAN
BROOKSIDE BLVD AND 49TH STREET

NOT FOR CONSTRUCTION



<table><tr><th>REV</th><th>DATE</th><th>DESCRIPTION</th></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr></table>			REV	DATE	DESCRIPTION																DESIGNED BY AJH			PRELIMINARY PLANS - 30%		DATE: 08-28-2019		KANSAS CITY STREETCAR MAIN STREET EXTENSION				SCALE FOR 22"x34": H: 1"=20'	
REV	DATE	DESCRIPTION																															
			CHECKED BY MJM		HDR HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856		TRAFFIC SIGNAL LAYOUT PLAN BROOKSIDE BLVD AND WARD PKWY / VOLKER BLVD		FILENAME: T102.dgn																								
			DRAWN BY SY		NOT FOR CONSTRUCTION				CONTRACT NO.: *****																								
			CHECKED BY MJM						VOLUME: 1																								
			APPROVED BY NKS						DRAWING NO.: T102																								
PLOT DATE: 8/25/2019 11:56:24 AM			DATE						SHEET NO.: 207																								



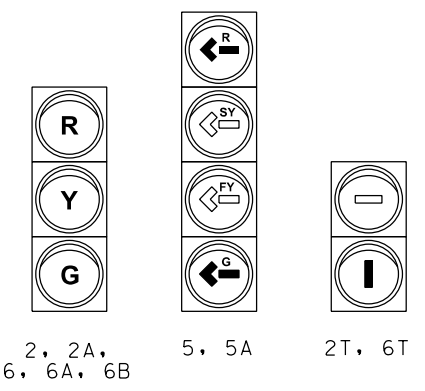
INTERSECTION NOTES



1. REMOVE ALL EXISTING SIGNAL EQUIPMENT FROM THIS SIGNAL SYSTEM.
- INSTALL OCS FOUNDATION
INSTALL SIGNAL VERTICAL (OCS/SIGNAL COMBINED), LUMINAIRE DAVIT, AND 21' MAST ARM WITH:
2 - 3 SECTION SIGNAL HEADS
1 - TSP/EVP DETECTION UNIT (S&I FROM EXISTING SIGNAL SYSTEM)
1 - INTERNALLY ILLUMINATED SNS
- MOUNT ON SIGNAL POST:
1 - 4 SECTION SIGNAL HEAD
1 - RADAR DETECTION UNIT (FACING WEST)
- REMOVE EXISTING POLE, FOUNDATION, MAST ARM, AND ALL SIGNAL EQUIPMENT

LEGEND

- TRAFFIC SIGNAL HEAD
- TRAFFIC SIGNAL HEAD WITH BACK PLATE
- PEDESTRIAN SIGNAL HEAD
- MAST ARM POLE
- SIGNAL PEDESTAL
- CONTROLLER
- SPAN WIRE WITH SIGNAL HEAD
- OPTICOM DETECTOR
- RADAR DETECTOR
- SIGNAL FACE NUMBER
- SHOEBOX LUMINAIRE
- PAN, TILT AND ZOOM CAMERA
- SIGN POST

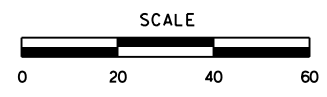
SIGNAL FACE KEY



<table><tr><th>REV</th><th>DATE</th><th>DESCRIPTION</th></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr></table>			REV	DATE	DESCRIPTION																DESIGNED BY AJH		PRELIMINARY PLANS - 30% DATE: 08-28-2019		KANSAS CITY STREETCAR MAIN STREET EXTENSION		SCALE FOR 22"x34": H: 1"=20'	
REV	DATE	DESCRIPTION																										
			CHECKED BY MJM	 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	TRAFFIC SIGNAL LAYOUT PLAN BROOKSIDE BLVD AND WARD PKWY		FILENAME: T103.dgn																					
			DRAWN BY SY				CONTRACT NO.: *****																					
			CHECKED BY MJM				VOLUME: 1																					
			APPROVED BY NKS				DRAWING NO.: T103	SHEET NO.: 208																				
PLOT DATE: 8/25/2019 11:56:36 AM			DATE																									

INSTALL OCS FOUNDATION
INSTALL SIGNAL VERTICAL
(OCS/SIGNAL COMBINED),
LUMINAIRE DAVIT AND
28' MAST ARM WITH:
2 - 3 SECTION SIGNAL HEADS
1 - TSP/EVP DETECTION UNIT
1 - INTERNALLY ILLUMINATED SNS

MOUNT ON SIGNAL POST:
1 - PTZ CAMERA WITH 360
DEGREE ATTACHMENT
1 - 3 SECTION SIGNAL HEAD
1 - RADAR DETECTION
UNIT (FACING NORTH)



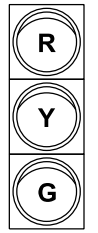
INTERSECTION NOTES

1. REMOVE AND REPLACE ALL WIRING AND CONDUIT.
2. REMOVE PEDESTRIAN HYBRID BEACON NORTH OF 46TH ST

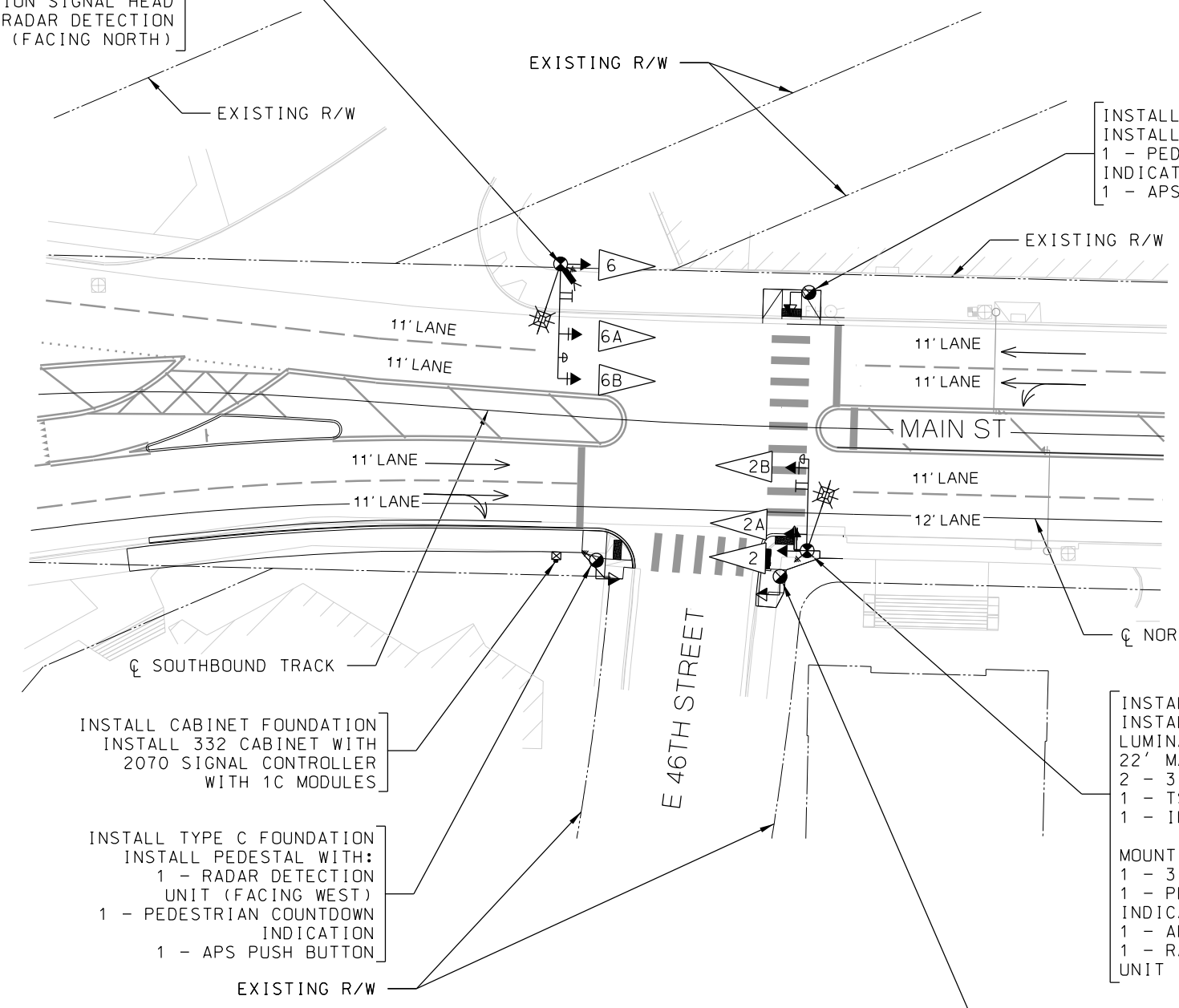
LEGEND

- TRAFFIC SIGNAL HEAD
- TRAFFIC SIGNAL HEAD WITH BACK PLATE
- PEDESTRIAN SIGNAL HEAD
- MAST ARM POLE
- SIGNAL PEDESTAL
- CONTROLLER
- SPAN WIRE WITH SIGNAL HEAD
- OPTICOM DETECTOR
- RADAR DETECTOR
- SIGNAL FACE NUMBER
- SHOEBOX LUMINAIRE
- PAN, TILT AND ZOOM CAMERA
- SIGN POST

SIGNAL FACE KEY



2, 2A, 2B
6, 6A, 6B



INSTALL CABINET FOUNDATION
INSTALL 332 CABINET WITH
2070 SIGNAL CONTROLLER
WITH 1C MODULES

INSTALL TYPE C FOUNDATION
INSTALL PEDESTAL WITH:
1 - RADAR DETECTION
UNIT (FACING WEST)
1 - PEDESTRIAN COUNTDOWN
INDICATION
1 - APS PUSH BUTTON

INSTALL TYPE C FOUNDATION
INSTALL PEDESTAL WITH:
1 - PEDESTRIAN COUNTDOWN
INDICATION
1 - APS PUSH BUTTON

INSTALL B8 FOUNDATION
INSTALL SIGNAL VERTICAL,
LUMINAIRE DAVIT AND
22' MAST ARM WITH:
2 - 3 SECTION SIGNAL HEADS (OPTICALLY LIMITED)
1 - TSP/EVP DETECTION UNIT
1 - INTERNALLY ILLUMINATED SNS

MOUNT ON SIGNAL POST:
1 - 3 SECTION SIGNAL HEAD
1 - PEDESTRIAN COUNTDOWN
INDICATIONS
1 - APS PUSH BUTTON
1 - RADAR DETECTION
UNIT (FACING EAST)

INSTALL TYPE C FOUNDATION
INSTALL PEDESTAL WITH:
1 - PEDESTRIAN COUNTDOWN
INDICATION
1 - APS PUSH BUTTON

REV	DATE	DESCRIPTION	DESIGNED BY AJH		PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION		SCALE FOR 22"x34": H: 1"=20'		
			CHECKED BY MJM		 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	NOT FOR CONSTRUCTION			FILENAME: T105.dgn		
			DRAWN BY SY						CONTRACT NO.:		
			CHECKED BY MJM						VOLUME: 1		
			APPROVED BY NKS						DRAWING NO.:	SHEET NO.:	
PLOT DATE: 8/25/2019			11:57:35 AM	DATE					T105	210	

REV	DATE	DESCRIPTION	DESIGNED BY A.J.H.		PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION TRAFFIC SIGNAL LAYOUT PLAN MAIN ST AND 45TH ST	SCALE FOR 22"x34": H: 1"=20'	
			CHECKED BY M.J.M.		 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	NOT FOR CONSTRUCTION		FILENAME: T106.dgn	
			DRAWN BY S.Y.					CONTRACT NO.:	
			CHECKED BY M.J.M.					VOLUME: 1	
			APPROVED BY N.K.S.					DRAWING NO.:	
								SHEET NO.:	
PLOT DATE: 8/25/2019		11:58:03 AM	DATE					T106	211

INSTALL TYPE C FOUNDATION
SALVAGE AND INSTALL PEDESTAL WITH:
1 - PEDESTRIAN COUNTDOWN
INDICATION
1 - APS PUSH BUTTON

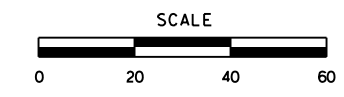
EXISTING 332 CABINET WITH
2070 SIGNAL CONTROLLER
TO REMAIN IN PLACE

INSTALL TYPE C FOUNDATION
SALVAGE AND INSTALL PEDESTAL WITH:
1 - PEDESTRIAN COUNTDOWN
INDICATION
1 - APS PUSH BUTTON

EXISTING SIGNAL VERTICAL
AND 21' MAST ARM
EXISTING TO REMAIN IN PLACE WITH:
1 - 3 SECTION SIGNAL HEAD
ON SIGNAL POST:
1 - 3 SECTION SIGNAL HEAD
1 - PEDESTRIAN COUNTDOWN INDICATION
1 - APS PUSH BUTTON

FURNISH AND INSTALL ON MAST ARM:
1 - TSP/EVP DETECTION UNIT

MOUNT ON SIGNAL POST:
1 - RADAR DETECTION
UNIT (FACING WEST)



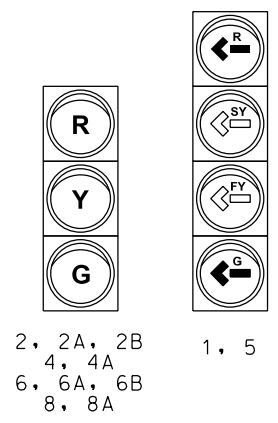
INTERSECTION NOTES

1. REMOVE AND REPLACE ALL WIRING AND CONDUIT.
2. INSTALL AUXILIARY CABINET TO EXISTING SIGNAL CONTROLLER CABINET

LEGEND

- TRAFFIC SIGNAL HEAD
- TRAFFIC SIGNAL HEAD WITH BACK PLATE
- PEDESTRIAN SIGNAL HEAD
- MAST ARM POLE
- SIGNAL PEDESTAL
- CONTROLLER
- SPAN WIRE WITH SIGNAL HEAD
- OPTICOM DETECTOR
- RADAR DETECTOR
- SIGNAL FACE NUMBER
- SHOEBOX LUMINAIRE
- PAN, TILT AND ZOOM CAMERA

SIGNAL FACE KEY



INSTALL B12 FOUNDATION
INSTALL SIGNAL VERTICAL,
LUMINAIRE DAVIT, AND
36' MAST ARM WITH:
2 - 3 SECTION SIGNAL HEAD
1 - 4 SECTION SIGNAL HEAD
1 - TSP/EVP DETECTION UNIT (S&I FROM
EXISTING SIGNAL SYSTEM)
1 - INTERNALLY ILLUMINATED SNS

MOUNT ON SIGNAL POST:
1 - 3 SECTION SIGNAL HEAD
1 - PTZ CAMERA WITH 360 DEGREE
ATTACHMENT
1 - RADAR DETECTION
UNIT (FACING SOUTH)
1 - PEDESTRIAN COUNTDOWN
INDICATION
1 - APS PUSH BUTTON

REMOVE EXISTING POLE,
FOUNDATION, MAST ARM, AND
ALL SIGNAL EQUIPMENT

EXISTING PEDESTAL
TO REMAIN IN PLACE WITH:
1 - APS PUSH BUTTON

EXISTING SIGNAL VERTICAL,
LUMINAIRE DAVIT, AND
25' MAST ARM
TO REMAIN IN PLACE WITH:
1 - 3 SECTION SIGNAL HEAD
ON SIGNAL POST:
1 - 3 SECTION SIGNAL HEAD
2 - PEDESTRIAN COUNTDOWN INDICATIONS

FURNISH AND INSTALL ON MAST ARM:
1 - TSP/EVP DETECTION UNIT

MOUNT ON SIGNAL POST:
1 - RADAR DETECTION
UNIT (FACING EAST)

INSTALL TYPE C FOUNDATION
SALVAGE AND INSTALL PEDESTAL WITH:
1 - APS PUSH BUTTON

INSTALL B12 FOUNDATION
INSTALL SIGNAL VERTICAL,
LUMINAIRE DAVIT, AND
46' MAST ARM WITH:
2 - 3 SECTION SIGNAL HEAD
1 - 4 SECTION SIGNAL HEAD
1 - TSP/EVP DETECTION UNIT (S&I FROM
EXISTING SIGNAL SYSTEM)
1 - INTERNALLY ILLUMINATED SNS

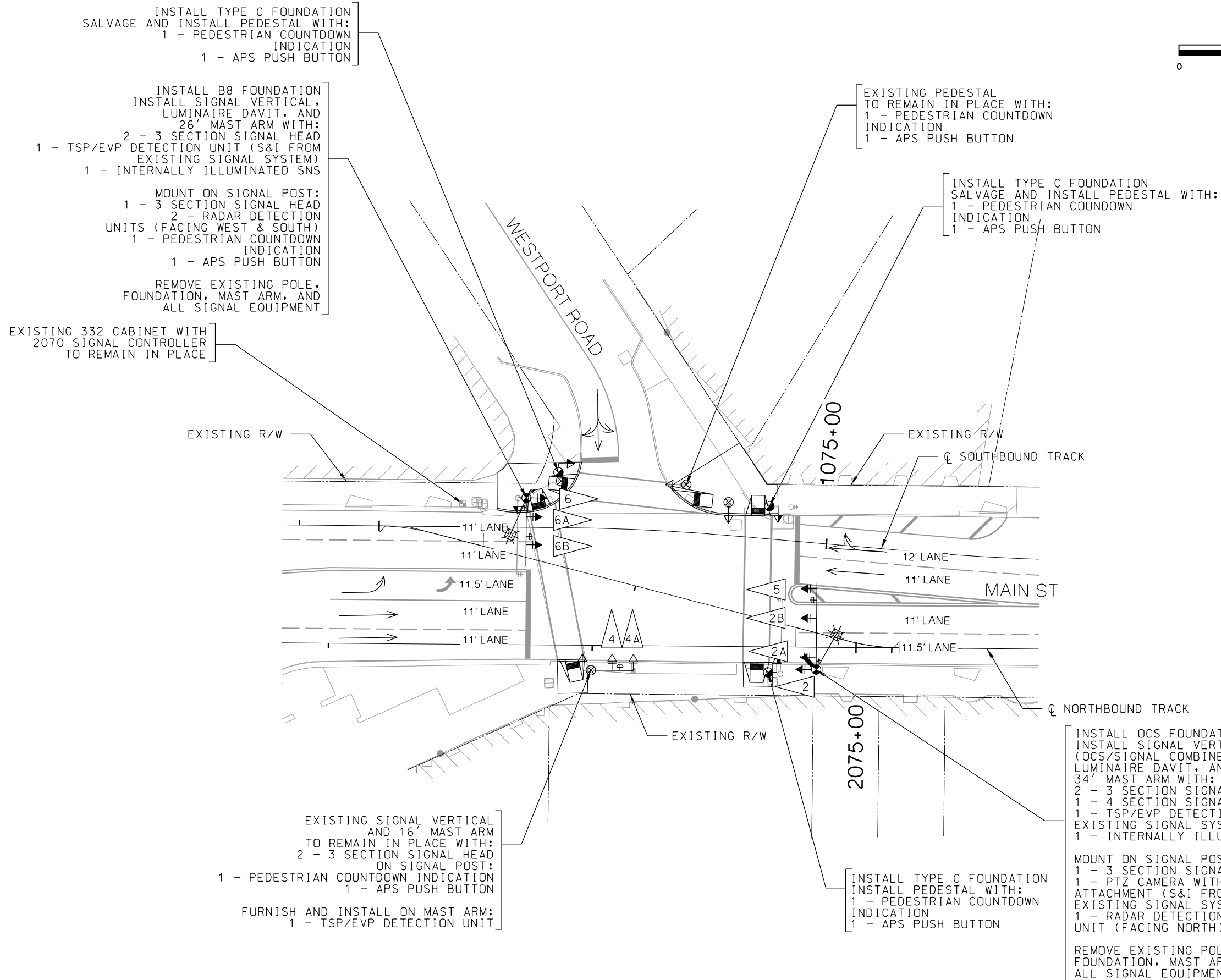
MOUNT ON SIGNAL POST:
1 - 3 SECTION SIGNAL HEAD
1 - RADAR DETECTION
UNIT (FACING NORTH)

REMOVE EXISTING POLE,
FOUNDATION, MAST ARM, AND
ALL SIGNAL EQUIPMENT

INSTALL TYPE C FOUNDATION
SALVAGE AND INSTALL PEDESTAL WITH:
1 - PEDESTRIAN COUNTDOWN INDICATION
1 - APS PUSH BUTTON

INSTALL TYPE C FOUNDATION
SALVAGE AND INSTALL PEDESTAL WITH:
1 - PEDESTRIAN COUNTDOWN INDICATION
1 - APS PUSH BUTTON

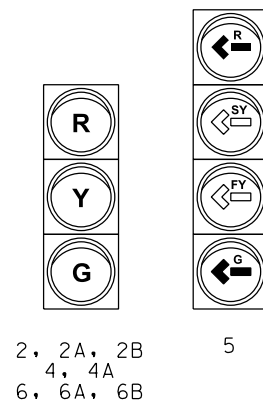
REV	DATE	DESCRIPTION	DESIGNED BY	JWR	PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SCALE FOR 22"x34": H: 1"=20'
			CHECKED BY	RPB	 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	NOT FOR CONSTRUCTION	TRAFFIC SIGNAL LAYOUT PLAN MAIN ST AND 40TH ST	FILENAME: T108.dgn
			DRAWN BY	MMO				CONTRACT NO.:
			CHECKED BY	RPB				VOLUME: 1
			APPROVED BY	NKS				DRAWING NO.: T108
PLOT DATE: 8/25/2019			DATE: 08/22/2019					SHEET NO.: 213



- INTERSECTION NOTES
1. REMOVE AND REPLACE ALL WIRING AND CONDUIT.
 2. INSTALL AUXILIARY CABINET TO EXISTING SIGNAL CONTROLLER CABINET

- LEGEND
- ← TRAFFIC SIGNAL HEAD
 - ← TRAFFIC SIGNAL HEAD WITH BACK PLATE
 - ← PEDESTRIAN SIGNAL HEAD
 - ⊕ MAST ARM POLE
 - ⊙ SIGNAL PEDESTAL
 - ⊠ CONTROLLER
 - ⌞ SPAN WIRE WITH SIGNAL HEAD
 - ⊕ OPTICOM DETECTOR
 - ⊕ RADAR DETECTOR
 - 5 SIGNAL FACE NUMBER
 - ⊗ SHOEBOX LUMINAIRE
 - ◀ PAN, TILT AND ZOOM CAMERA

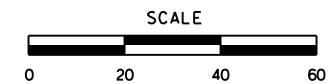
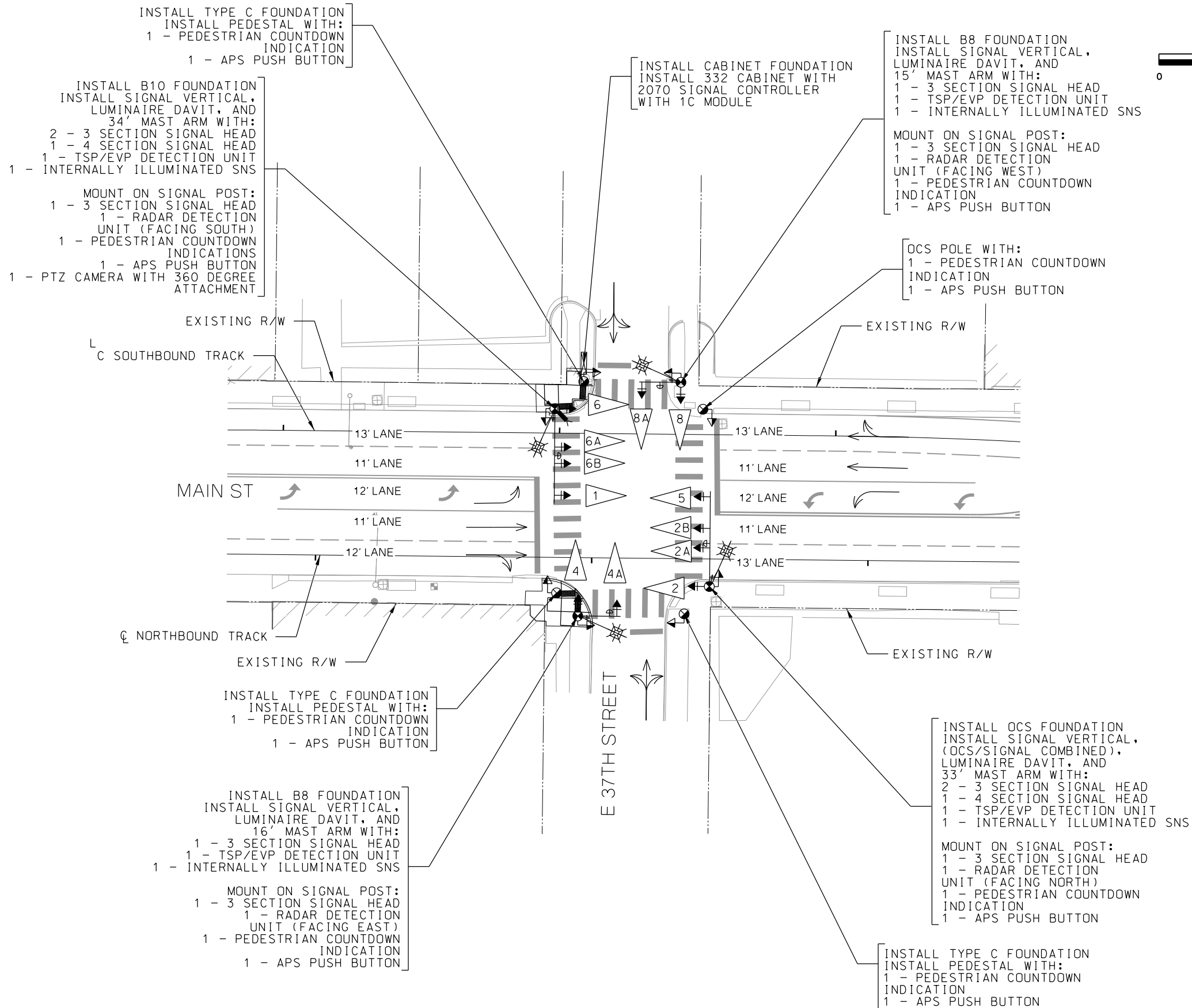
SIGNAL FACE KEY



REV			DATE		DESCRIPTION		DESIGNED BY		JWR		PRELIMINARY PLANS - 30%		DATE: 08-28-2019		KANSAS CITY STREETCAR MAIN STREET EXTENSION		SCALE FOR 22"x34":	
																	H: 1"=20'	
																	FILENAME:	
																	T109.dgn	
																	CONTRACT NO.:	
																	VOLUME:	
																	DRAWING NO.:	
																	SHEET NO.:	
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																	214	

NOT FOR CONSTRUCTION

</



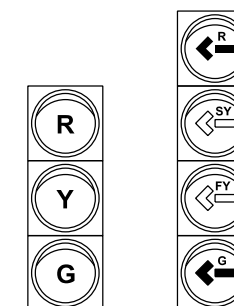
INTERSECTION NOTES

1. INSTALL NEW WIRING AND CONDUIT.
2. REMOVE PEDESTRIAN HYBRID BEACON SOUTH OF 37TH STREET.

LEGEND

- ← TRAFFIC SIGNAL HEAD
- ← TRAFFIC SIGNAL HEAD WITH BACK PLATE
- ← PEDESTRIAN SIGNAL HEAD
- MAST ARM POLE
- SIGNAL PEDESTAL
- ⊠ CONTROLLER
- ⌋ SPAN WIRE WITH SIGNAL HEAD
- ⊕ OPTICOM DETECTOR
- ⊕ RADAR DETECTOR
- 5 SIGNAL FACE NUMBER
- ⊠ SHOEBOX LUMINAIRE
- ⌋ PAN, TILT AND ZOOM CAMERA

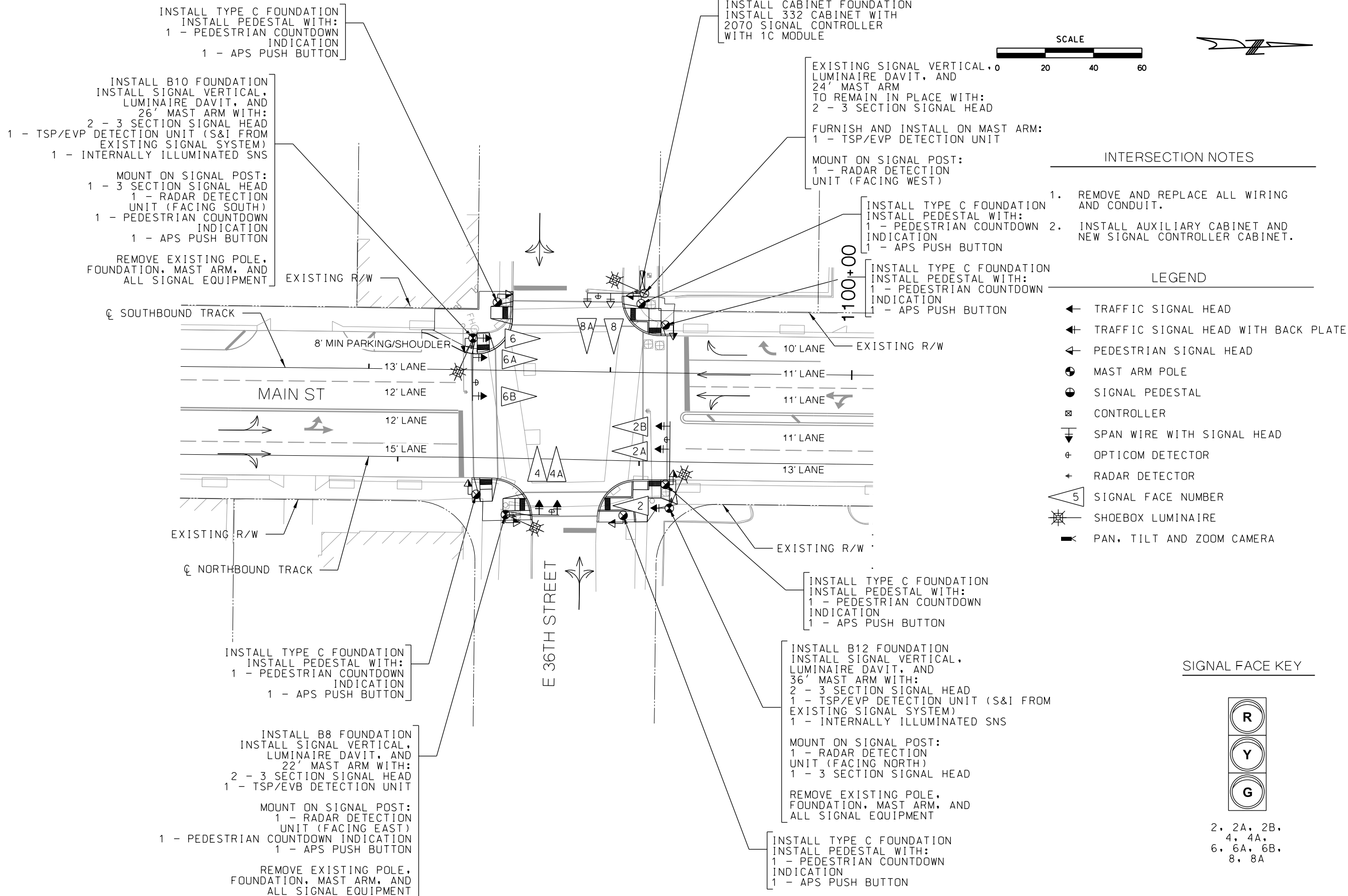
SIGNAL FACE KEY



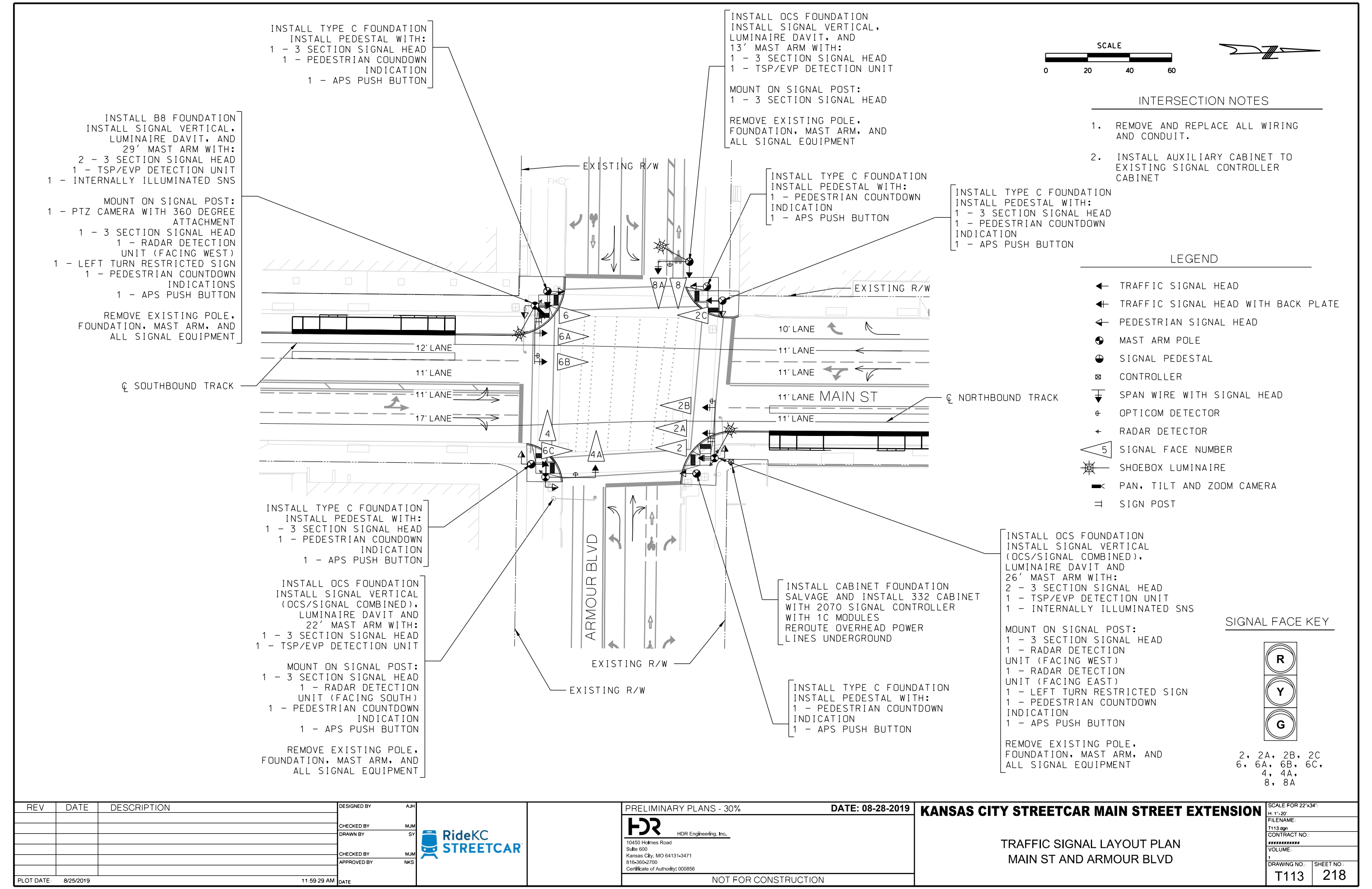
2, 2A, 2B
4, 4A
6, 6A, 6B
8, 8A

1, 5

REV	DATE	DESCRIPTION	DESIGNED BY	JWR		PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	TRAFFIC SIGNAL LAYOUT PLAN MAIN ST AND 37TH ST	SCALE FOR 22"x34": H: 1"=20'	
			CHECKED BY	RPB		 HDR Engineering, Inc.	FILENAME: T111.dgn				
			DRAWN BY	MMO		10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	CONTRACT NO.:				
			CHECKED BY	RPB		NOT FOR CONSTRUCTION	*****				
			APPROVED BY	NKS			VOLUME: 1				
							DRAWING NO.: T111			SHEET NO.: 216	
PLOT DATE: 8/25/2019		11:58:48 AM	DATE	08/22/2019							



REV	DATE	DESCRIPTION	DESIGNED BY	JWR	<div>PRELIMINARY PLANS - 30% DATE: 08-28-2019 KANSAS CITY STREETCAR MAIN STREET EXTENSION TRAFFIC SIGNAL LAYOUT PLAN MAIN ST AND 36TH ST</div>		<div>SCALE FOR 22"x34": H: 1"=20' FILENAME: T112.dgn CONTRACT NO.: VOLUME: DRAWING NO.: SHEET NO.: T112 217</div>	
			CHECKED BY	RPB				
			DRAWN BY	MMO				
			CHECKED BY	RPB				
			APPROVED BY	NKS				
PLOT DATE: 8/25/2019 11:58:59 AM			DATE: 08/22/2019		NOT FOR CONSTRUCTION			



INSTALL TYPE C FOUNDATION
INSTALL PEDESTAL WITH:
1 - 3 SECTION SIGNAL HEAD
1 - PEDESTRIAN COUNTDOWN
INDICATION
1 - APS PUSH BUTTON

INSTALL OCS FOUNDATION
INSTALL SIGNAL VERTICAL,
LUMINAIRE DAVIT, AND
13' MAST ARM WITH:
1 - 3 SECTION SIGNAL HEAD
1 - TSP/EVP DETECTION UNIT

MOUNT ON SIGNAL POST:
1 - 3 SECTION SIGNAL HEAD

REMOVE EXISTING POLE,
FOUNDATION, MAST ARM, AND
ALL SIGNAL EQUIPMENT

INSTALL TYPE C FOUNDATION
INSTALL PEDESTAL WITH:
1 - PEDESTRIAN COUNTDOWN
INDICATION
1 - APS PUSH BUTTON

INSTALL TYPE C FOUNDATION
INSTALL PEDESTAL WITH:
1 - 3 SECTION SIGNAL HEAD
1 - PEDESTRIAN COUNTDOWN
INDICATION
1 - APS PUSH BUTTON

INSTALL B8 FOUNDATION
INSTALL SIGNAL VERTICAL,
LUMINAIRE DAVIT, AND
29' MAST ARM WITH:
2 - 3 SECTION SIGNAL HEAD
1 - TSP/EVP DETECTION UNIT
1 - INTERNALLY ILLUMINATED SNS

MOUNT ON SIGNAL POST:
1 - PTZ CAMERA WITH 360 DEGREE
ATTACHMENT
1 - 3 SECTION SIGNAL HEAD
1 - RADAR DETECTION
UNIT (FACING WEST)
1 - LEFT TURN RESTRICTED SIGN
1 - PEDESTRIAN COUNTDOWN
INDICATIONS
1 - APS PUSH BUTTON

REMOVE EXISTING POLE,
FOUNDATION, MAST ARM, AND
ALL SIGNAL EQUIPMENT

INSTALL TYPE C FOUNDATION
INSTALL PEDESTAL WITH:
1 - 3 SECTION SIGNAL HEAD
1 - PEDESTRIAN COUNTDOWN
INDICATION
1 - APS PUSH BUTTON

INSTALL OCS FOUNDATION
INSTALL SIGNAL VERTICAL
(OCS/SIGNAL COMBINED),
LUMINAIRE DAVIT AND
22' MAST ARM WITH:
1 - 3 SECTION SIGNAL HEAD
1 - TSP/EVP DETECTION UNIT

MOUNT ON SIGNAL POST:
1 - 3 SECTION SIGNAL HEAD
1 - RADAR DETECTION
UNIT (FACING SOUTH)
1 - PEDESTRIAN COUNTDOWN
INDICATION
1 - APS PUSH BUTTON

REMOVE EXISTING POLE,
FOUNDATION, MAST ARM, AND
ALL SIGNAL EQUIPMENT

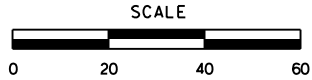
INSTALL CABINET FOUNDATION
SALVAGE AND INSTALL 332 CABINET
WITH 2070 SIGNAL CONTROLLER
WITH 1C MODULES
REROUTE OVERHEAD POWER
LINES UNDERGROUND

INSTALL TYPE C FOUNDATION
INSTALL PEDESTAL WITH:
1 - PEDESTRIAN COUNTDOWN
INDICATION
1 - APS PUSH BUTTON

INSTALL OCS FOUNDATION
INSTALL SIGNAL VERTICAL
(OCS/SIGNAL COMBINED),
LUMINAIRE DAVIT AND
26' MAST ARM WITH:
2 - 3 SECTION SIGNAL HEAD
1 - TSP/EVP DETECTION UNIT
1 - INTERNALLY ILLUMINATED SNS

MOUNT ON SIGNAL POST:
1 - 3 SECTION SIGNAL HEAD
1 - RADAR DETECTION
UNIT (FACING WEST)
1 - RADAR DETECTION
UNIT (FACING EAST)
1 - LEFT TURN RESTRICTED SIGN
1 - PEDESTRIAN COUNTDOWN
INDICATION
1 - APS PUSH BUTTON

REMOVE EXISTING POLE,
FOUNDATION, MAST ARM, AND
ALL SIGNAL EQUIPMENT



INTERSECTION NOTES

1. REMOVE AND REPLACE ALL WIRING AND CONDUIT.
2. INSTALL AUXILIARY CABINET TO EXISTING SIGNAL CONTROLLER CABINET



LEGEND

- TRAFFIC SIGNAL HEAD
- TRAFFIC SIGNAL HEAD WITH BACK PLATE
- PEDESTRIAN SIGNAL HEAD
- MAST ARM POLE
- SIGNAL PEDESTAL
- CONTROLLER
- SPAN WIRE WITH SIGNAL HEAD
- OPTICOM DETECTOR
- RADAR DETECTOR
- SIGNAL FACE NUMBER
- SHOEBOX LUMINAIRE
- PAN, TILT AND ZOOM CAMERA
- SIGN POST

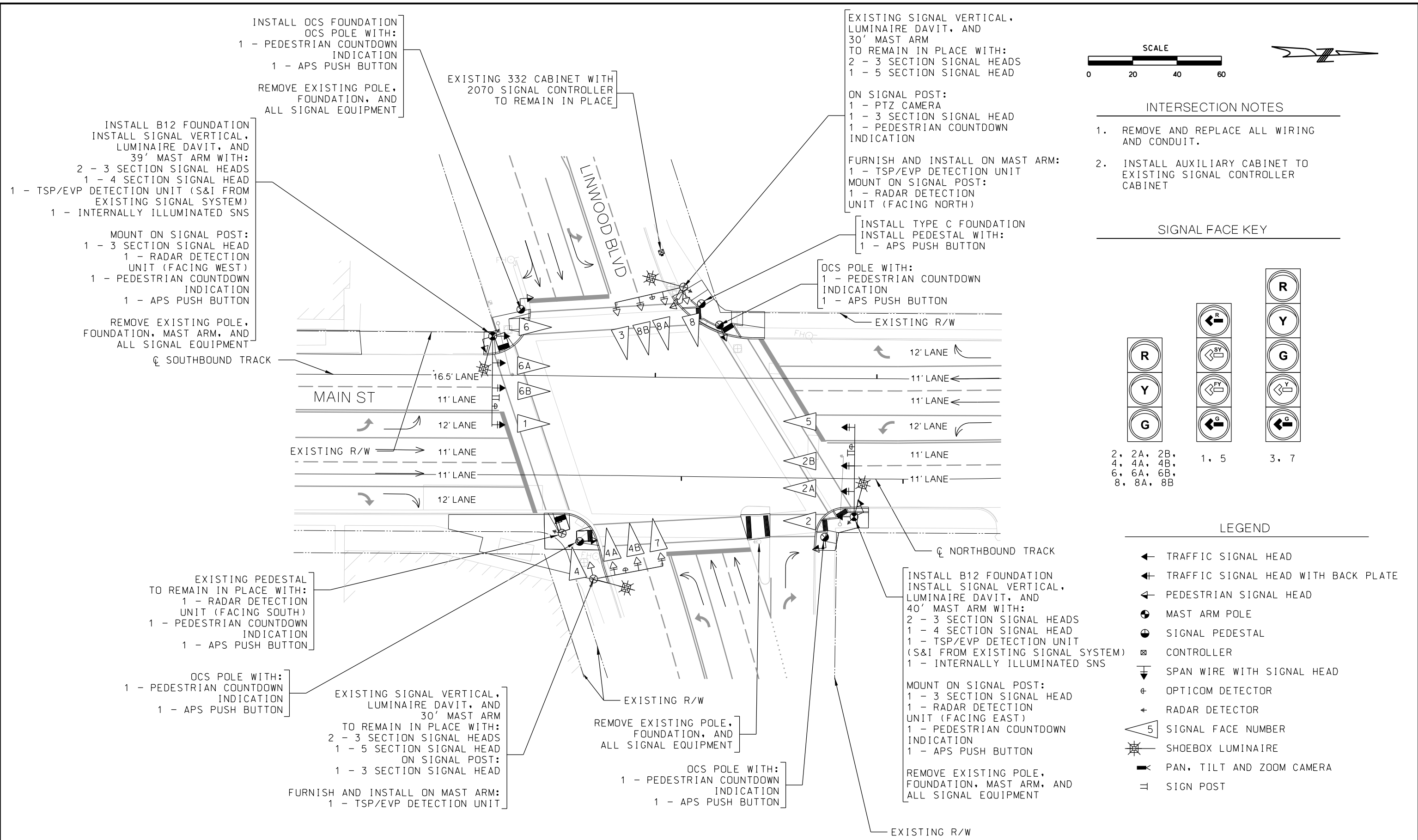
SIGNAL FACE KEY



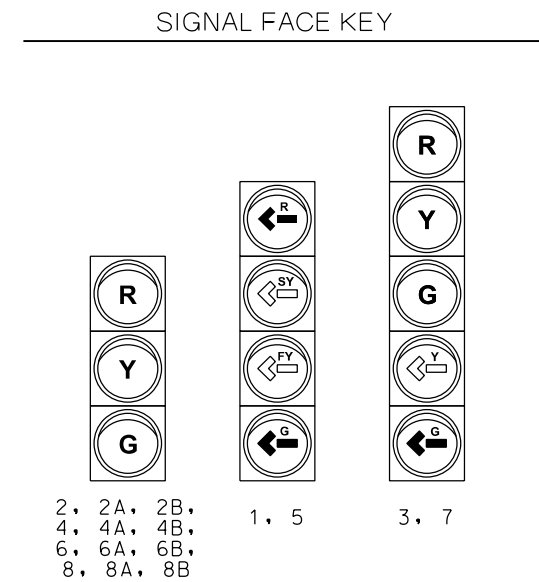
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6, 6A, 6B, 6C,
4, 4A,
8, 8A

REV	DATE	DESCRIPTION	DESIGNED BY AJH		PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	TRAFFIC SIGNAL LAYOUT PLAN MAIN ST AND ARMOUR BLVD	SCALE FOR 22"x34": H: 1"=20' FILENAME: T113.dgn CONTRACT NO.: ***** VOLUME: 1	
			CHECKED BY MJM		 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	NOT FOR CONSTRUCTION				
			DRAWN BY SY							
			CHECKED BY MJM							
			APPROVED BY NKS							
PLOT DATE: 8/25/2019			11:59:29 AM	DATE					DRAWING NO.: T113	SHEET NO.: 218

TRAFFIC SIGNAL LAYOUT PLAN
MAIN ST AND ARMOUR BLVD



- INTERSECTION NOTES
1. REMOVE AND REPLACE ALL WIRING AND CONDUIT.
 2. INSTALL AUXILIARY CABINET TO EXISTING SIGNAL CONTROLLER CABINET



- LEGEND
- TRAFFIC SIGNAL HEAD
 - TRAFFIC SIGNAL HEAD WITH BACK PLATE
 - PEDESTRIAN SIGNAL HEAD
 - MAST ARM POLE
 - SIGNAL PEDESTAL
 - CONTROLLER
 - SPAN WIRE WITH SIGNAL HEAD
 - OPTICOM DETECTOR
 - RADAR DETECTOR
 - SIGNAL FACE NUMBER
 - SHOEBOX LUMINAIRE
 - PAN, TILT AND ZOOM CAMERA
 - SIGN POST

REV			DATE		DESCRIPTION		DESIGNED BY		AJH		PRELIMINARY PLANS - 30%		DATE: 08-28-2019		KANSAS CITY STREETCAR MAIN STREET EXTENSION		SCALE FOR 22"x34":	
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																	SHEET NO.:	
																	T114	
																	219	

PLOT DATE: 8/25/2019

11:59:54 AM

DATE

NOT FOR CONSTRUCTION

RideKC STREETCAR

HDR Engineering, Inc.

10450 Holmes Road

Suite 600

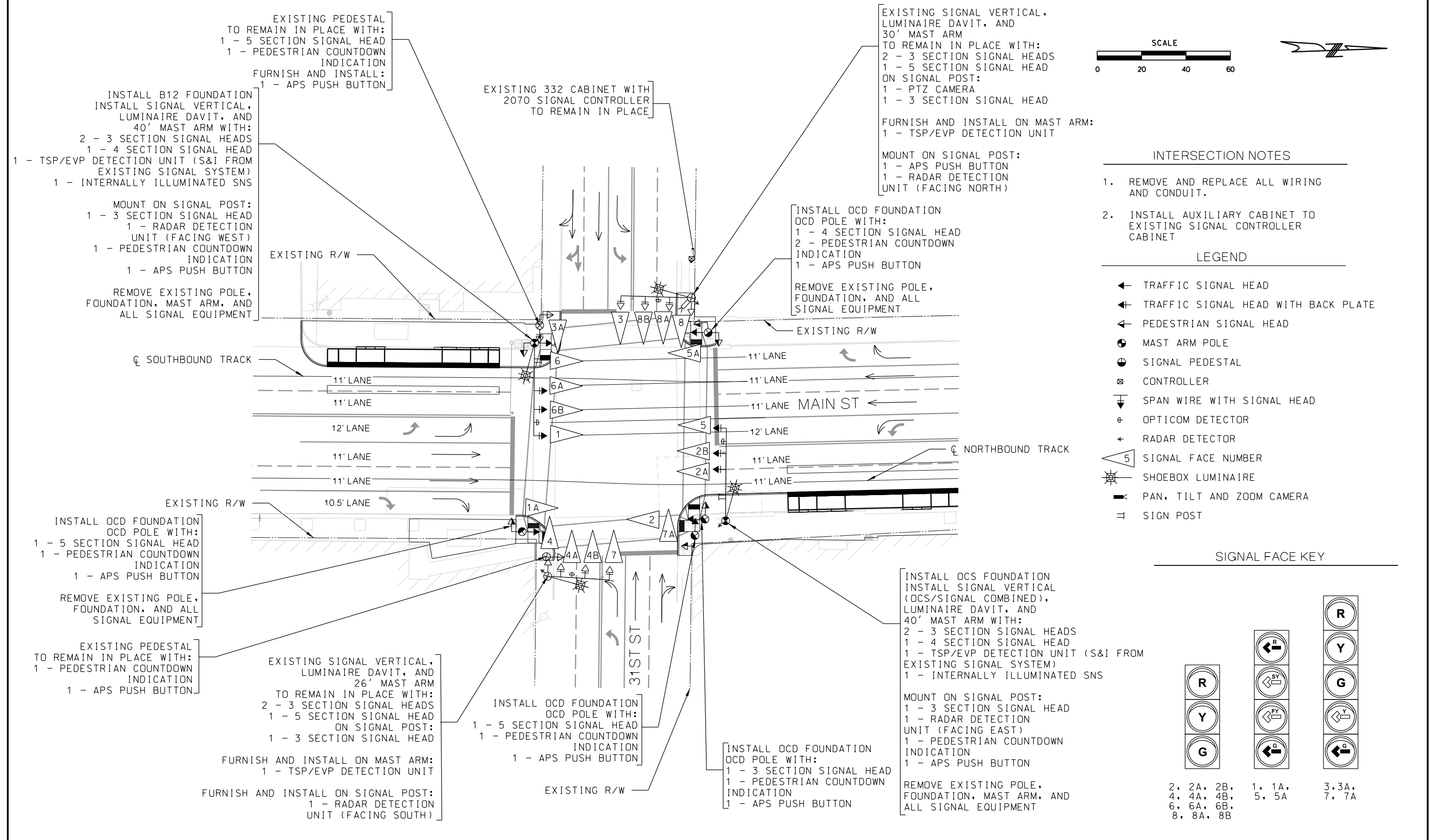
Kansas City, MO 64131-3471



816-360-2700

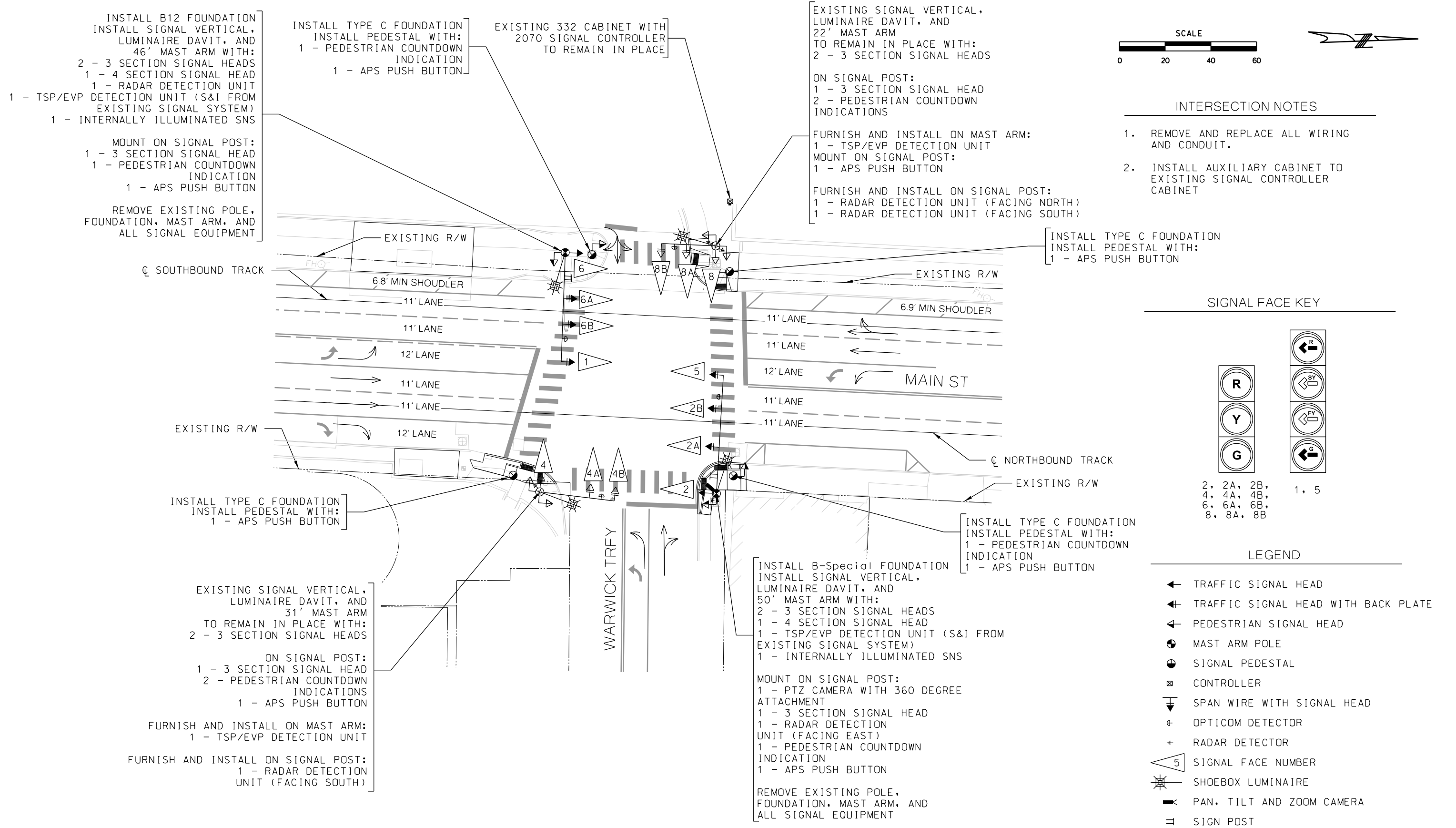
Certificate of Authority: 000856

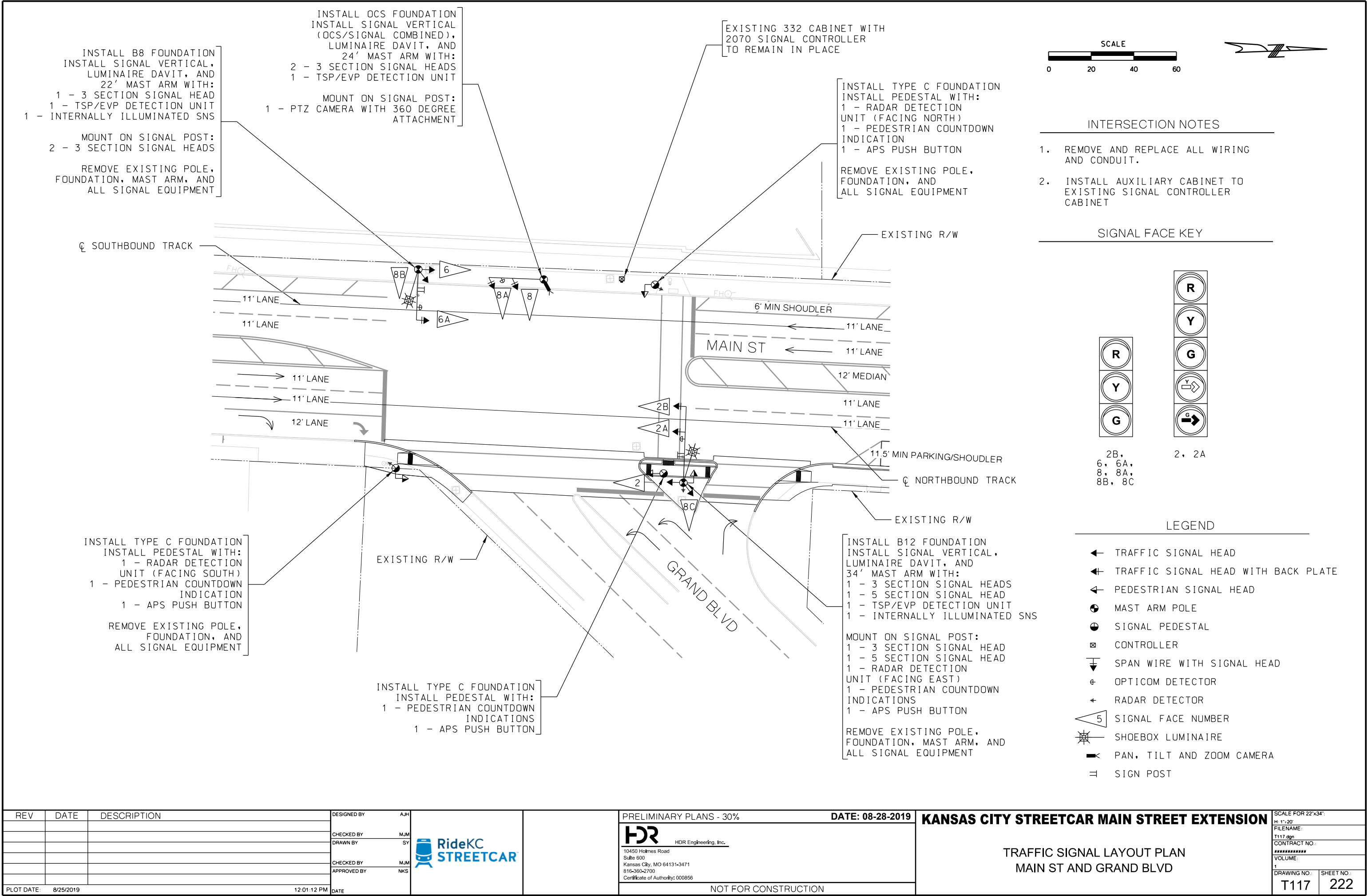
TRAFFIC SIGNAL LAYOUT PLAN

MAIN ST AND LINWOOD BLVD



REV		DATE	DESCRIPTION	DESIGNED BY	AJH		PRELIMINARY PLANS - 30%		DATE: 08-28-2019		KANSAS CITY STREETCAR MAIN STREET EXTENSION		SCALE FOR 22"x34": H: 1"=20'		
				CHECKED BY	MJM		 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856					TRAFFIC SIGNAL LAYOUT PLAN		FILENAME: T115.dgn	
				DRAWN BY	SY							MAIN ST AND 31ST ST		CONTRACT NO.: *****	
				CHECKED BY	MJM									VOLUME: 1	
				APPROVED BY	NKS									DRAWING NO.: T115	
														SHEET NO.: 220	
PLOT DATE:		8/25/2019	12:00:22 PM	DATE											





REV	DATE	DESCRIPTION

DESIGNED BY	AJH
CHECKED BY	MJM
DRAWN BY	SY
CHECKED BY	MJM
APPROVED BY	NKS



PRELIMINARY PLANS - 30%DATE: 08-28-2019

HDR Engineering, Inc.
10450 Holmes Road
Suite 600
Kansas City, MO 64131-3471
816-360-2700
Certificate of Authority: 000856

NOT FOR CONSTRUCTION

KANSAS CITY STREETCAR MAIN STREET EXTENSION

TRAFFIC SIGNAL LAYOUT PLAN
MAIN ST AND GRAND BLVD

SCALE FOR 22"x34": H: 1"=20'	FILENAME: T117.dgn
CONTRACT NO.: *****	
VOLUME: 1	
DRAWING NO.: T117	SHEET NO.: 222

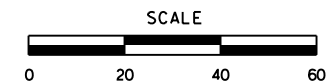
EXISTING 332 CABINET WITH
2070 SIGNAL CONTROLLER
TO REMAIN IN PLACE

INSTALL OCS FOUNDATION
OCS POLE WITH:
1 - 3 SECTION SIGNAL HEAD
(S&I FROM EXISTING SIGNAL
SYSTEM)
1 - RADAR DETECTION
UNIT (FACING NORTH)

REMOVE EXISTING POLE AND
FOUNDATION

EXISTING PEDESTAL
TO REMAIN IN PLACE WITH:
1 - PEDESTRIAN COUNTDOWN
INDICATION
1 - APS PUSH BUTTON

FURNISH AND INSTALL:
1 - TSP/EVP DETECTION UNIT



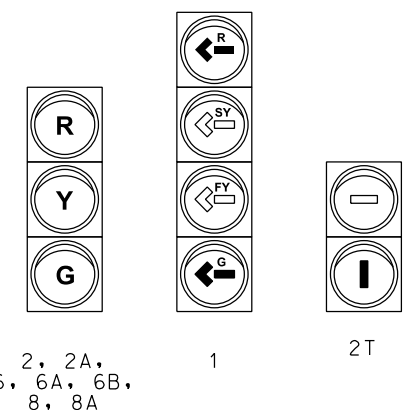
INTERSECTION NOTES

1. REMOVE AND REPLACE ALL WIRING AND CONDUIT.
2. INSTALL AUXILIARY CABINET TO EXISTING SIGNAL CONTROLLER CABINET

LEGEND

- TRAFFIC SIGNAL HEAD
- TRAFFIC SIGNAL HEAD WITH BACK PLATE
- PEDESTRIAN SIGNAL HEAD
- MAST ARM POLE
- SIGNAL PEDESTAL
- CONTROLLER
- SPAN WIRE WITH SIGNAL HEAD
- OPTICOM DETECTOR
- RADAR DETECTOR
- SIGNAL FACE NUMBER
- SHOEBOX LUMINAIRE
- PAN, TILT AND ZOOM CAMERA
- SIGN POST

SIGNAL FACE KEY



INSTALL B-Special FOUNDATION
INSTALL SIGNAL VERTICAL,
LUMINAIRE DAVIT, AND
56' MAST ARM WITH:
1 - 2 SECTION SIGNAL HEAD
2 - 3 SECTION SIGNAL HEADS
1 - 4 SECTION SIGNAL HEAD
1 - TSP/EVP DETECTION UNIT
1 - INTERNALLY ILLUMINATED SNS

MOUNT ON SIGNAL POST:
1 - PTZ CAMERA WITH 360 DEGREE
ATTACHMENT
2 - 3 SECTION SIGNAL HEADS

REMOVE EXISTING POLE,
FOUNDATION, MAST ARM, AND
ALL SIGNAL EQUIPMENT

INSTALL TYPE C FOUNDATION
INSTALL PEDESTAL WITH:
1 - PEDESTRIAN COUNTDOWN
INDICATION
1 - APS PUSH BUTTON

REMOVE EXISTING POLE,
FOUNDATION, AND
ALL SIGNAL EQUIPMENT

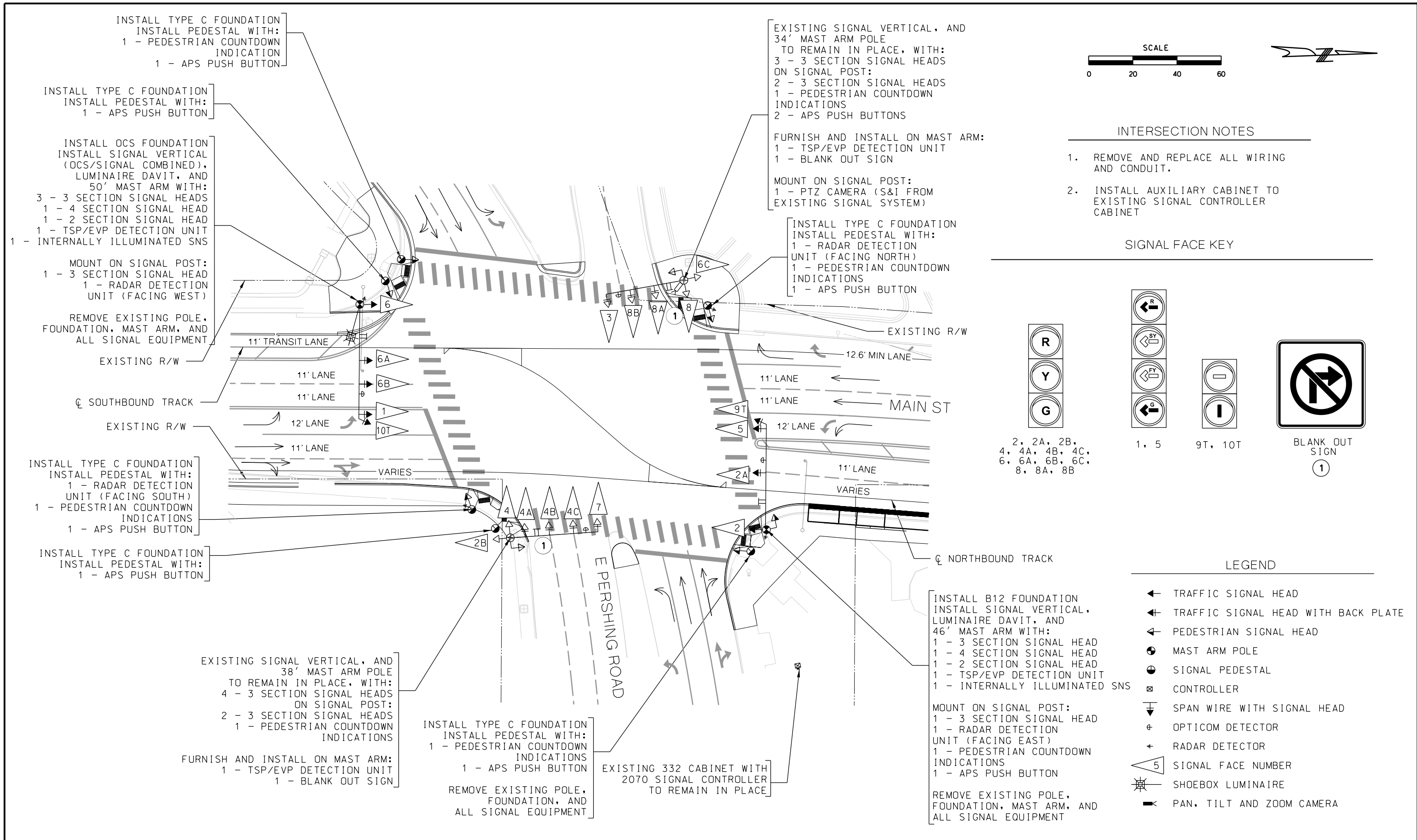
INSTALL TYPE C FOUNDATION
INSTALL PEDESTAL WITH:
1 - APS PUSH BUTTON



INSTALL B8 FOUNDATION
INSTALL SIGNAL VERTICAL,
LUMINAIRE DAVIT, AND
18' MAST ARM WITH:
1 - 3 SECTION SIGNAL HEAD
1 - TSP/EVP DETECTION UNIT
1 - INTERNALLY ILLUMINATED SNS

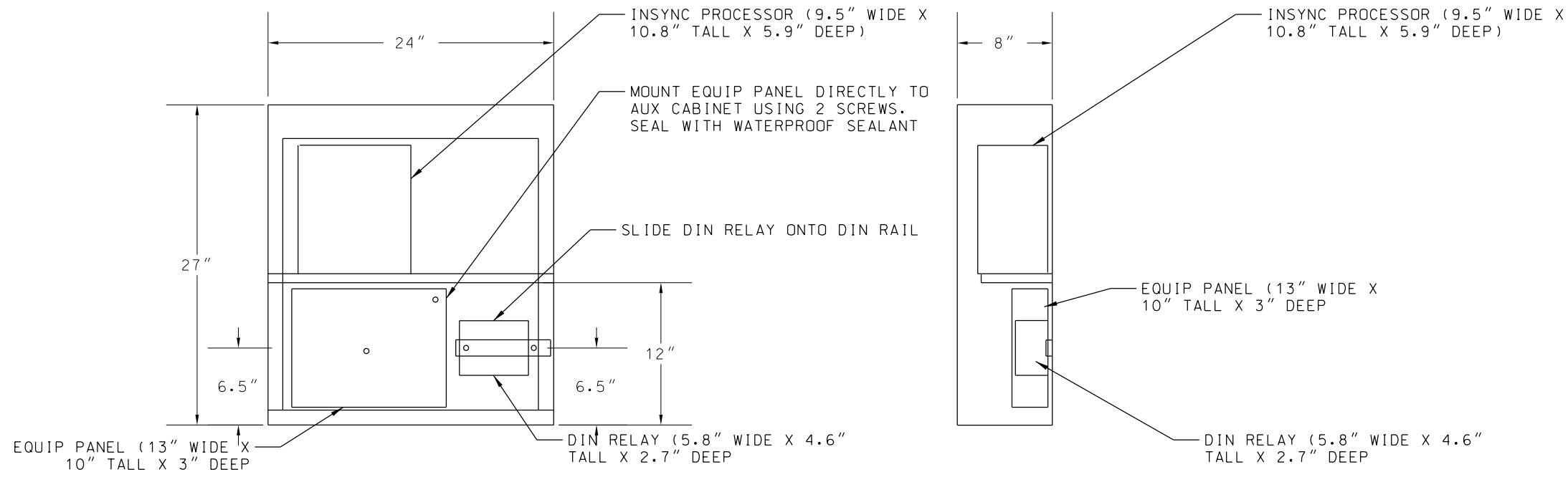
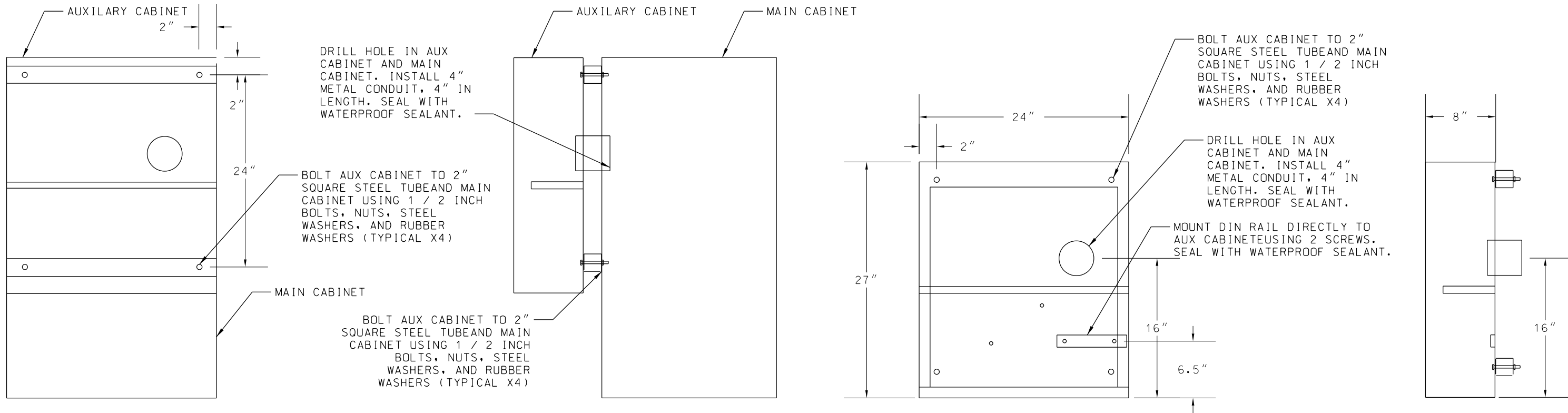
MOUNT ON SIGNAL POST:
1 - 3 SECTION SIGNAL HEAD
2 - PEDESTRIAN COUNTDOWN
INDICATIONS
1 - APS PUSH BUTTON
1 - RADAR DETECTION
UNIT (FACING EAST)
1 - RADAR DETECTION
UNIT (FACING SOUTH)


REMOVE EXISTING POLE,
FOUNDATION, MAST ARM, AND
ALL SIGNAL EQUIPMENT

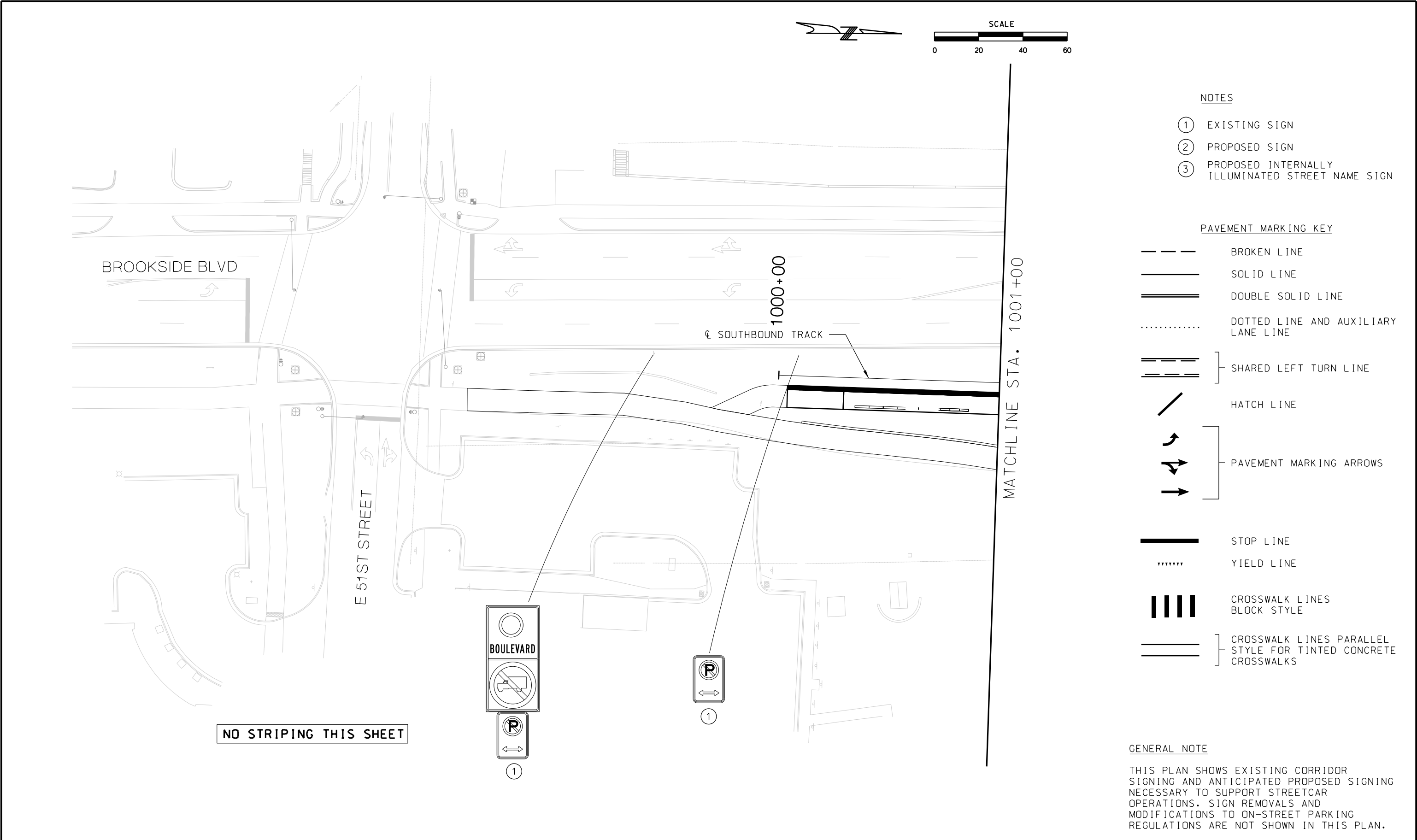
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			CHECKED BY	MJM	HDR		TRAFFIC SIGNAL LAYOUT PLAN	FILENAME: T118.dgn
			DRAWN BY	SY	10450 Holmes Road		MAIN ST AND 27TH ST	CONTRACT NO.:
					Suite 600			VOLUME:
			CHECKED BY	MJM	Kansas City, MO 64131-3471			1
			APPROVED BY	NKS	816-360-2700			DRAWING NO.:
					Certificate of Authority: 000856			SHEET NO.:
PLOT DATE: 8/25/2019			12:01:37 PM		NOT FOR CONSTRUCTION			T118
			DATE					223



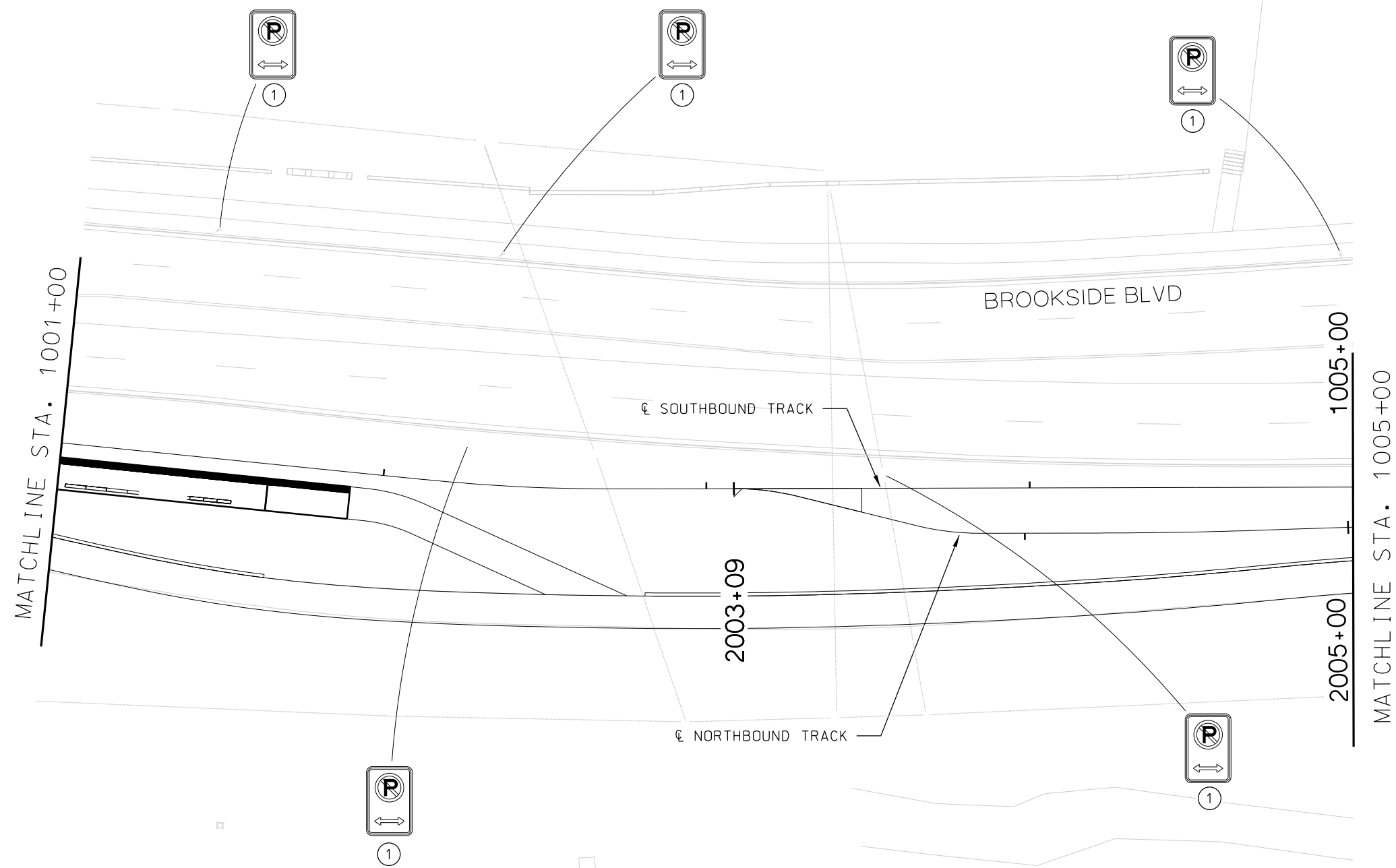
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REV	DATE	DESCRIPTION																																								
DESIGNED BY	AJH																																									
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DRAWN BY	SY																																									
CHECKED BY	MJM																																									
APPROVED BY	NKS																																									
DATE																																										
			 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856			FILENAME: T119.dgn																																				
					NOT FOR CONSTRUCTION			CONTRACT NO.: *****																																		
								VOLUME: 1																																		
								DRAWING NO.:	SHEET NO.:																																	
PLOT DATE: 8/25/2019 12:02:03 PM								T119	224																																	



REV	DATE	DESCRIPTION	DESIGNED BY	AJH	<div></div>	PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION		SCALE FOR 22"x34": H: 1"=20'	
			CHECKED BY	MJM		<div><div>HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856</div></div>		TRAFFIC SIGNAL DETAILS AUXILIARY CABINET MOUNTING DETAIL		FILENAME:	
			DRAWN BY	SY						CONTRACT NO.:	
			CHECKED BY	MJM						VOLUME:	
			APPROVED BY	NKS						1	
PLOT DATE: 8/27/2019			4:58:05 PM		DATE	NOT FOR CONSTRUCTION				DRAWING NO.:	SHEET NO.:
										T121	226



REV		DATE	DESCRIPTION	DESIGNED BY	AJH				PRELIMINARY PLANS - 30%		DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SCALE FOR 22"x34": H: 1"=20'		
				CHECKED BY	MJM				 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856		SIGNING AND STRIPING PLAN SB STA 1000+00 TO STA 1001+00		FILENAME: S101.dgn		
				DRAWN BY	SY								CONTRACT NO.:		
				CHECKED BY	MJM								VOLUME:		
				APPROVED BY	NKS								DRAWING NO.:		
PLOT DATE:			8/25/2019	12:02:20 PM					DATE	NOT FOR CONSTRUCTION					SHEET NO.: S101 227




- NOTES
- ① EXISTING SIGN
 - ② PROPOSED SIGN
 - ③ PROPOSED INTERNALLY ILLUMINATED STREET NAME SIGN

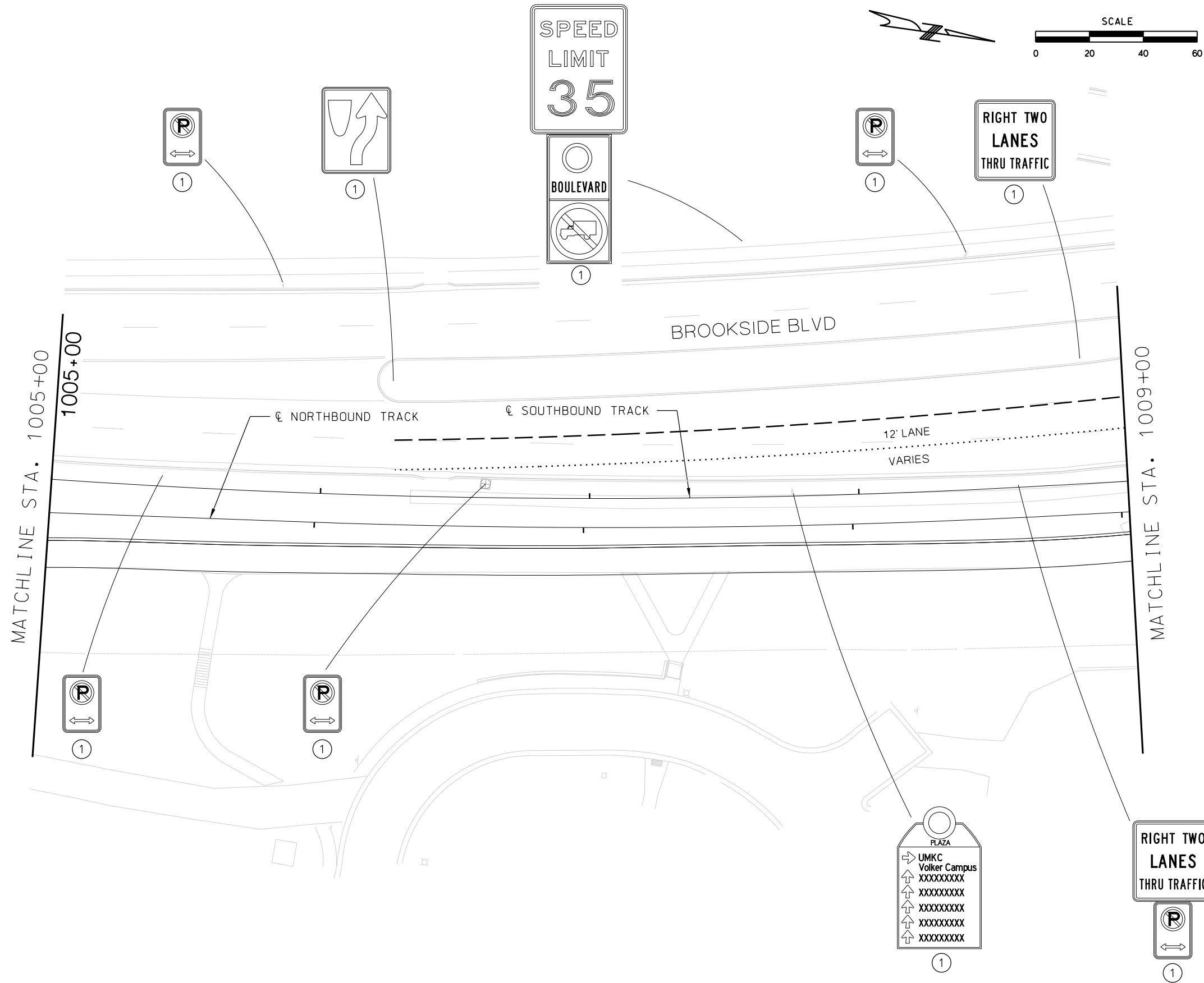
- PAVEMENT MARKING KEY
- BROKEN LINE
 - SOLID LINE
 - DOUBLE SOLID LINE
 - DOTTED LINE AND AUXILIARY LANE LINE
 - SHARED LEFT TURN LINE
 - HATCH LINE
 - PAVEMENT MARKING ARROWS
 - STOP LINE
 - YIELD LINE
 - CROSSWALK LINES BLOCK STYLE
 - CROSSWALK LINES PARALLEL STYLE FOR TINTED CONCRETE CROSSWALKS

NO STRIPING THIS SHEET

GENERAL NOTE

THIS PLAN SHOWS EXISTING CORRIDOR SIGNING AND ANTICIPATED PROPOSED SIGNING NECESSARY TO SUPPORT STREETCAR OPERATIONS. SIGN REMOVALS AND MODIFICATIONS TO ON-STREET PARKING REGULATIONS ARE NOT SHOWN IN THIS PLAN.

REV	DATE	DESCRIPTION	DESIGNED BY	AJH				PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SCALE FOR 22"x34": H: 1"=20'		
			CHECKED BY	MJM				 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	SIGNING AND STRIPING PLAN SB STA 1001+00 TO STA 1005+00		FILENAME: S102.dgn		
			DRAWN BY	SY							CONTRACT NO.:		
			CHECKED BY	MJM							VOLUME: 1		
			APPROVED BY	NKS							DRAWING NO.:	SHEET NO.:	
PLOT DATE: 8/25/2019			12:02:32 PM					S102			228		



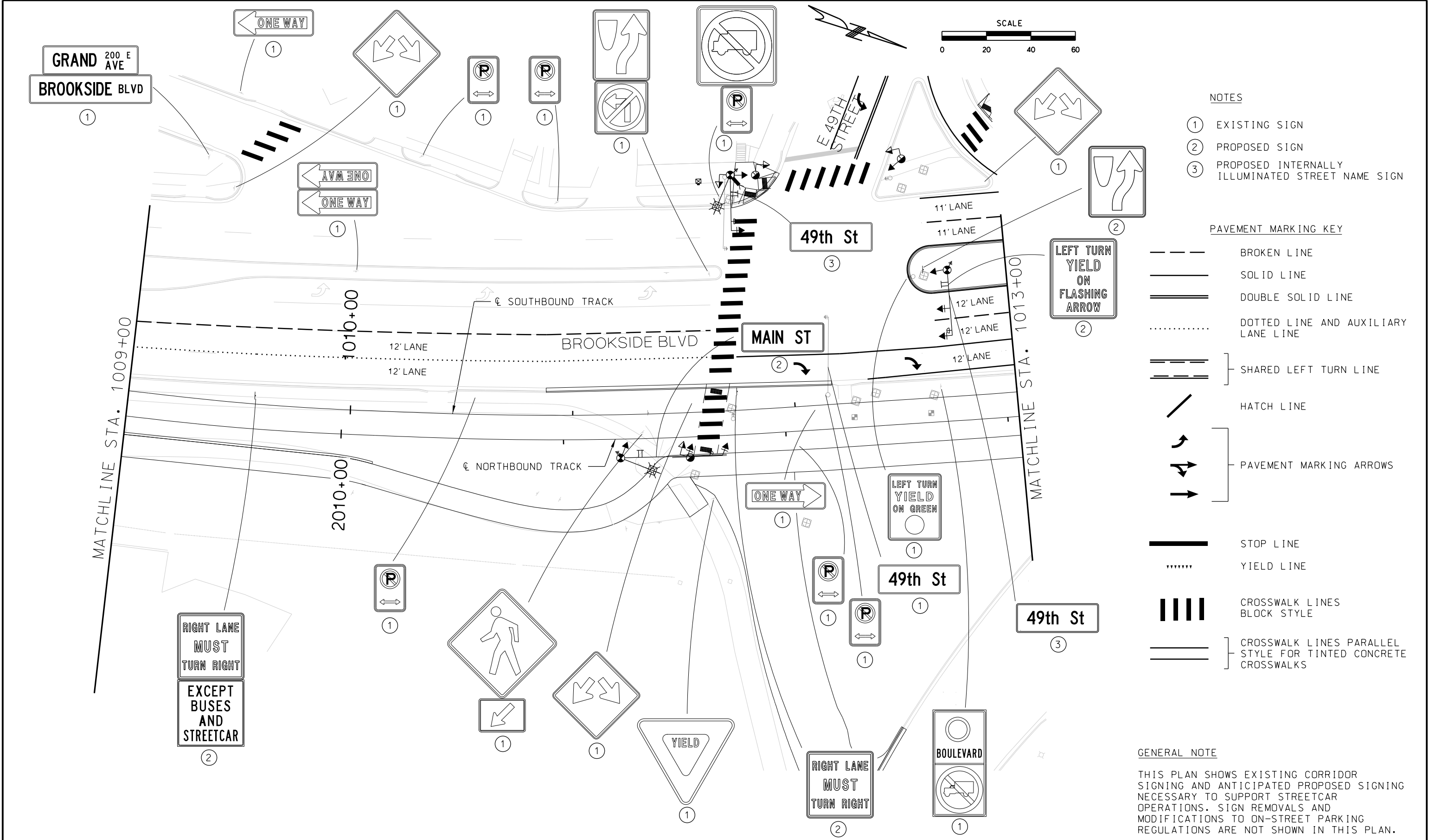
- NOTES
- ① EXISTING SIGN
 - ② PROPOSED SIGN
 - ③ PROPOSED INTERNALLY ILLUMINATED STREET NAME SIGN

- PAVEMENT MARKING KEY
- BROKEN LINE
 - SOLID LINE
 - DOUBLE SOLID LINE
 - DOTTED LINE AND AUXILIARY LANE LINE
 - SHARED LEFT TURN LINE
 - HATCH LINE
 - PAVEMENT MARKING ARROWS
 - STOP LINE
 - YIELD LINE
 - CROSSWALK LINES BLOCK STYLE
 - CROSSWALK LINES PARALLEL STYLE FOR TINTED CONCRETE CROSSWALKS

GENERAL NOTE

THIS PLAN SHOWS EXISTING CORRIDOR SIGNING AND ANTICIPATED PROPOSED SIGNING NECESSARY TO SUPPORT STREETCAR OPERATIONS. SIGN REMOVALS AND MODIFICATIONS TO ON-STREET PARKING REGULATIONS ARE NOT SHOWN IN THIS PLAN.

REV			DATE	DESCRIPTION	DESIGNED BY	AJH		PRELIMINARY PLANS - 30%		DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SCALE FOR 22"x34": H: 1"=20'	
					CHECKED BY	MJM						FILENAME: S103.dgn	
					DRAWN BY	SY		10450 Holmes Road				CONTRACT NO.:	
					CHECKED BY	MJM		Suite 600				VOLUME:	
					APPROVED BY	NKS		Kansas City, MO 64131-3471				DRAWING NO.:	
PLOT DATE:			8/25/2019		DATE			816-360-2700				SHEET NO.:	
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								NOT FOR CONSTRUCTION				S103	
												229	



REV	DATE	DESCRIPTION
PLOT DATE: 8/25/2019		12:02:57 PM

DESIGNED BY	AJH
CHECKED BY	MJM
DRAWN BY	SY
CHECKED BY	MJM
APPROVED BY	NKS



PRELIMINARY PLANS - 30%DATE: 08-28-2019

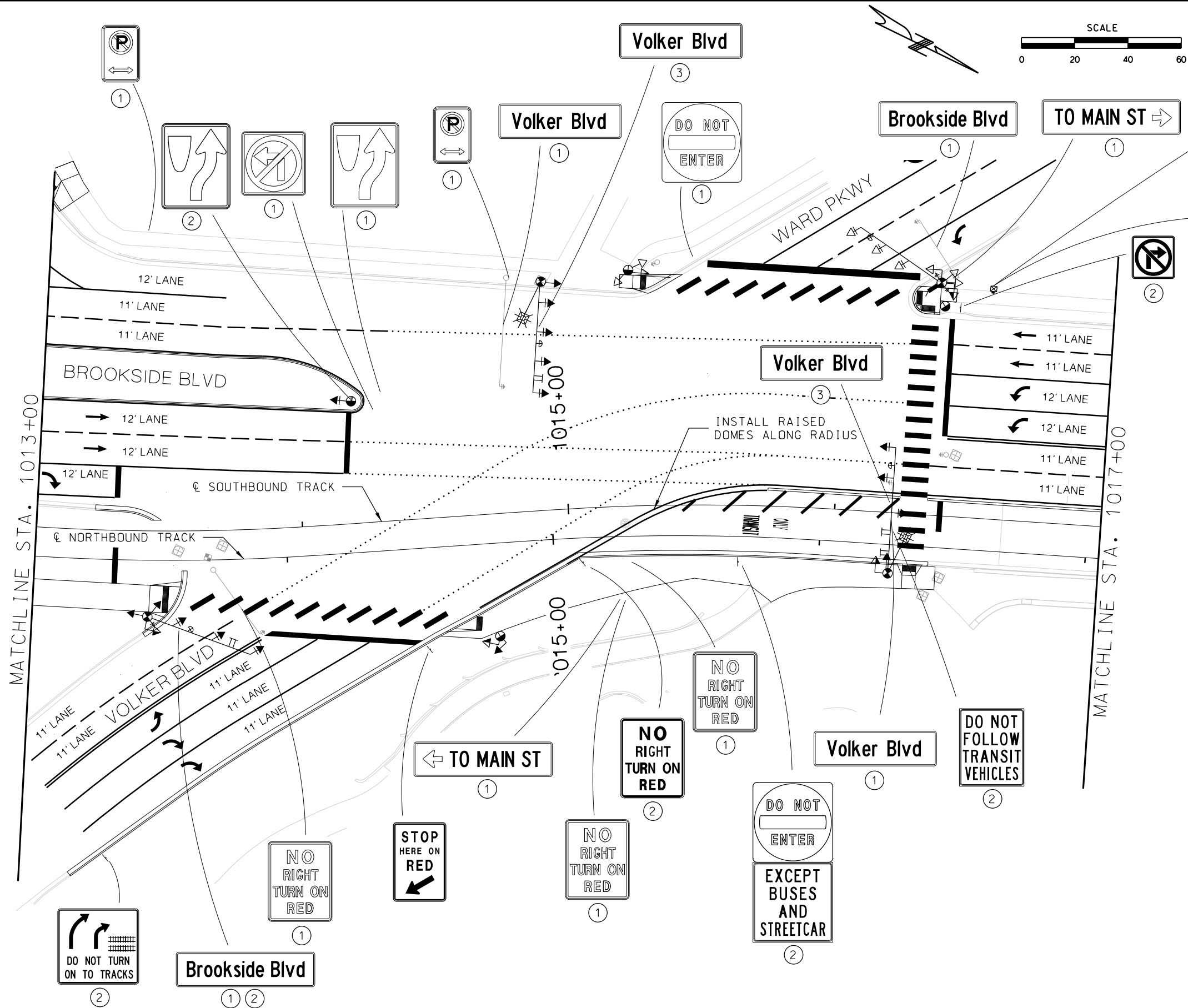
HDR Engineering, Inc.
10450 Holmes Road
Suite 600
Kansas City, MO 64131-3471
816-360-2700
Certificate of Authority: 000856

NOT FOR CONSTRUCTION

KANSAS CITY STREETCAR MAIN STREET EXTENSION

SIGNING AND STRIPING PLAN
SB STA 1009+00 TO STA 1013+00

SCALE FOR 22"x34":
H: 1"=20'
FILENAME:
S104.dgn
CONTRACT NO.:
VOLUME:
DRAWING NO.: S104
SHEET NO.: 230



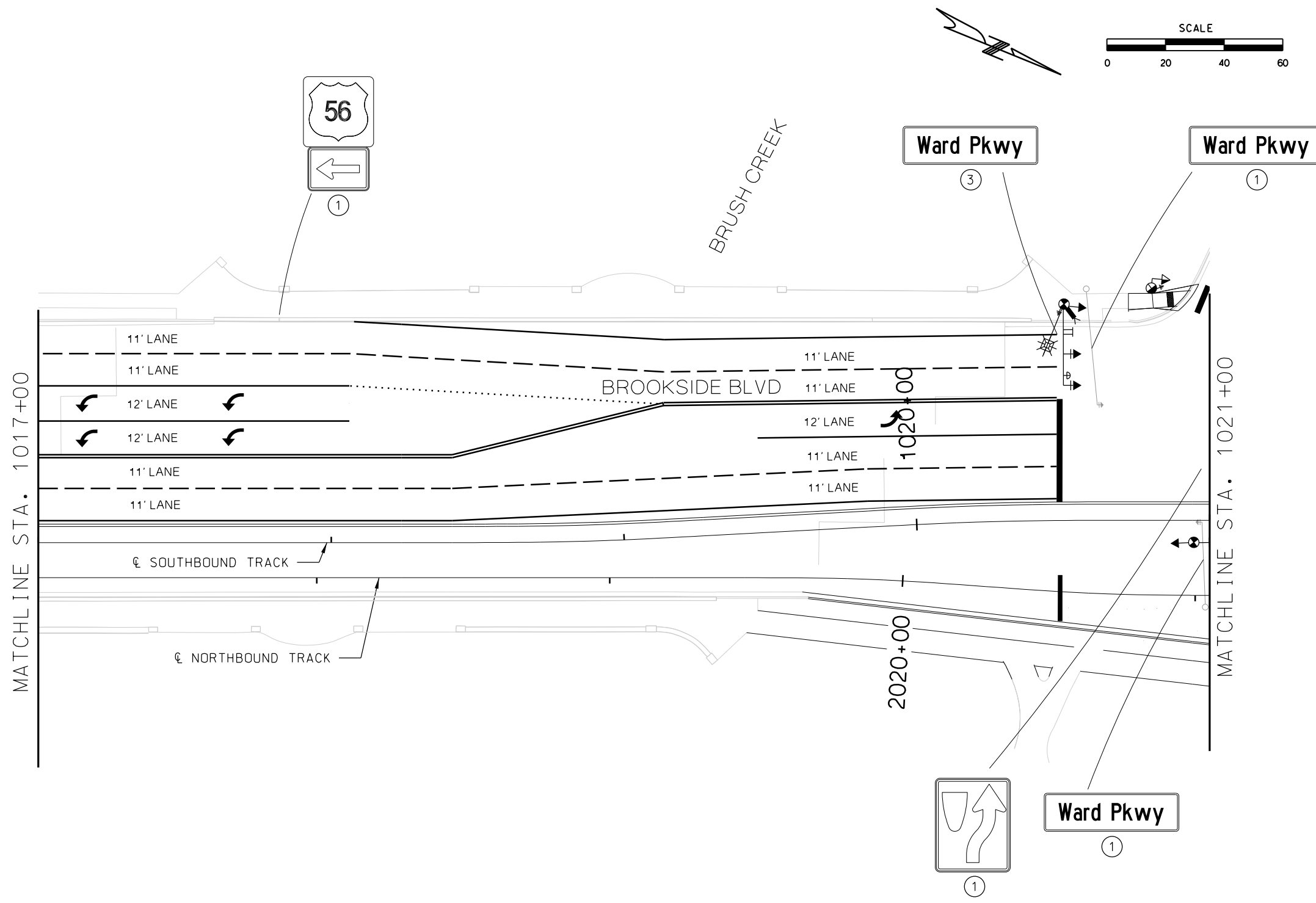
- NOTES
- ① EXISTING SIGN
 - ② PROPOSED SIGN
 - ③ PROPOSED INTERNALLY ILLUMINATED STREET NAME SIGN

- PAVEMENT MARKING KEY
- BROKEN LINE
 - SOLID LINE
 - DOUBLE SOLID LINE
 - DOTTED LINE AND AUXILIARY LANE LINE
 - SHARED LEFT TURN LINE
 - HATCH LINE
 - PAVEMENT MARKING ARROWS
 - STOP LINE
 - YIELD LINE
 - CROSSWALK LINES BLOCK STYLE
 - CROSSWALK LINES PARALLEL STYLE FOR TINTED CONCRETE CROSSWALKS

GENERAL NOTE

THIS PLAN SHOWS EXISTING CORRIDOR SIGNING AND ANTICIPATED PROPOSED SIGNING NECESSARY TO SUPPORT STREETCAR OPERATIONS. SIGN REMOVALS AND MODIFICATIONS TO ON-STREET PARKING REGULATIONS ARE NOT SHOWN IN THIS PLAN.

REV			DATE	DESCRIPTION	DESIGNED BY	AJH		PRELIMINARY PLANS - 30%		DATE: 08-28-2019		KANSAS CITY STREETCAR MAIN STREET EXTENSION		SCALE FOR 22"x34": H: 1"=20'	
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					DRAWN BY	SY		10450 Holmes Road				SB STA 1013+00 TO STA 1017+00		S105.dgn	
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					APPROVED BY	NKS		Kansas City, MO 64131-3471						VOLUME:	
PLOT DATE:			8/25/2019					816-360-2700						1	
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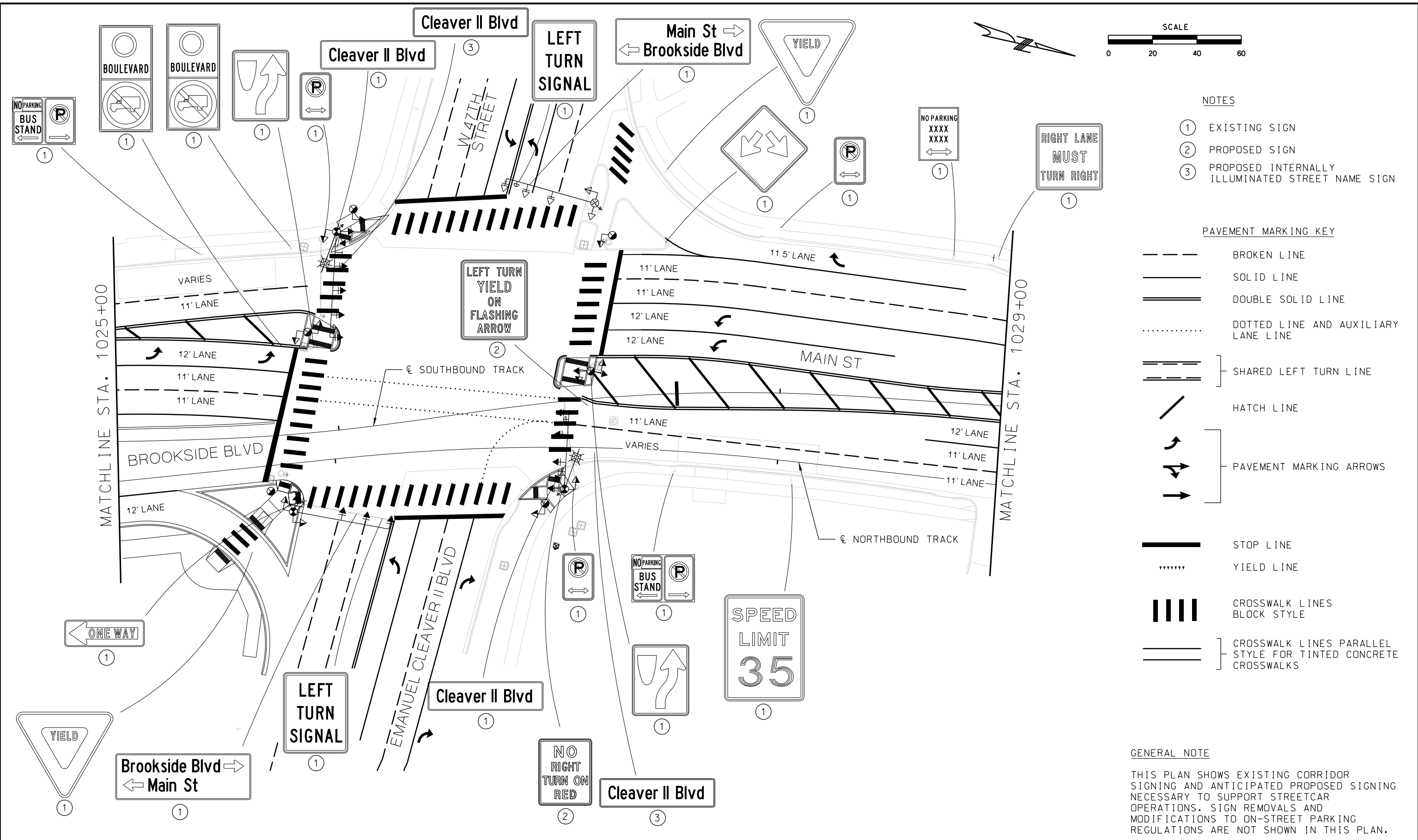
- NOTES
- ① EXISTING SIGN
 - ② PROPOSED SIGN
 - ③ PROPOSED INTERNALLY ILLUMINATED STREET NAME SIGN

- PAVEMENT MARKING KEY
- BROKEN LINE
 - SOLID LINE
 - DOUBLE SOLID LINE
 - DOTTED LINE AND AUXILIARY LANE LINE
 - SHARED LEFT TURN LINE
 - HATCH LINE
 - PAVEMENT MARKING ARROWS
 - STOP LINE
 - YIELD LINE
 - CROSSWALK LINES BLOCK STYLE
 - CROSSWALK LINES PARALLEL STYLE FOR TINTED CONCRETE CROSSWALKS

GENERAL NOTE

THIS PLAN SHOWS EXISTING CORRIDOR SIGNING AND ANTICIPATED PROPOSED SIGNING NECESSARY TO SUPPORT STREETCAR OPERATIONS. SIGN REMOVALS AND MODIFICATIONS TO ON-STREET PARKING REGULATIONS ARE NOT SHOWN IN THIS PLAN.

REV			DATE		DESCRIPTION		DESIGNED BY		AJH			PRELIMINARY PLANS - 30%				DATE: 08-28-2019		KANSAS CITY STREETCAR MAIN STREET EXTENSION				SCALE FOR 22"x34": H: 1"=20'			
							CHECKED BY		MJM			 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856										FILENAME:			
							DRAWN BY		SY													S106.dgn			
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							CHECKED BY		MJM															VOLUME:	
							APPROVED BY		NKS										DRAWING NO.:						
PLOT DATE:			8/25/2019								DATE										SHEET NO.:				
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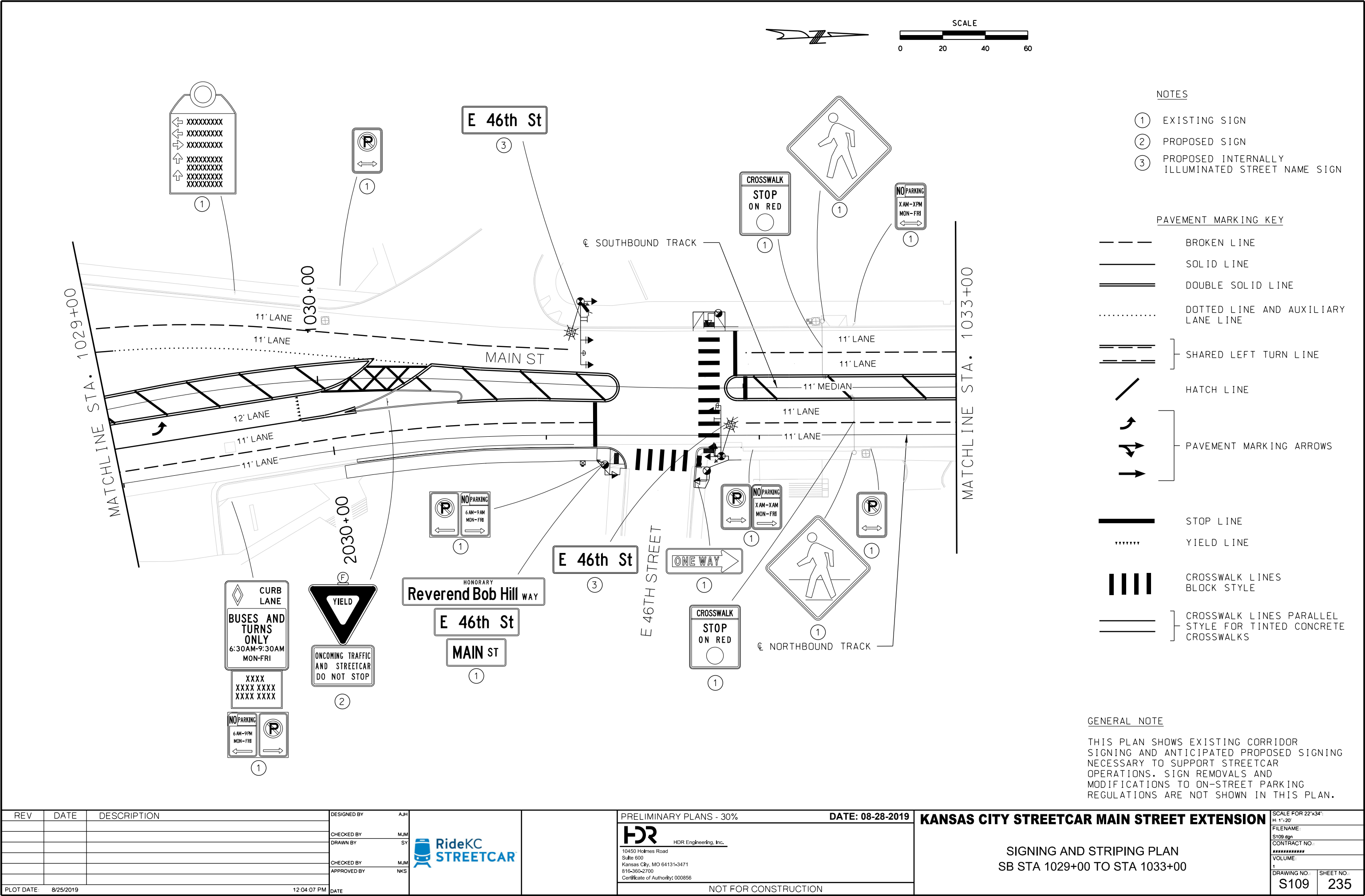
- NOTES
- ① EXISTING SIGN
 - ② PROPOSED SIGN
 - ③ PROPOSED INTERNALLY ILLUMINATED STREET NAME SIGN

- PAVEMENT MARKING KEY
- BROKEN LINE
 - SOLID LINE
 - DOUBLE SOLID LINE
 - DOTTED LINE AND AUXILIARY LANE LINE
 - SHARED LEFT TURN LINE
 - HATCH LINE
 - PAVEMENT MARKING ARROWS
 - STOP LINE
 - YIELD LINE
 - CROSSWALK LINES BLOCK STYLE
 - CROSSWALK LINES PARALLEL STYLE FOR TINTED CONCRETE CROSSWALKS

GENERAL NOTE

THIS PLAN SHOWS EXISTING CORRIDOR SIGNING AND ANTICIPATED PROPOSED SIGNING NECESSARY TO SUPPORT STREETCAR OPERATIONS. SIGN REMOVALS AND MODIFICATIONS TO ON-STREET PARKING REGULATIONS ARE NOT SHOWN IN THIS PLAN.

REV			DATE	DESCRIPTION	DESIGNED BY	AJH		PRELIMINARY PLANS - 30%		DATE: 08-28-2019		KANSAS CITY STREETCAR MAIN STREET EXTENSION		SCALE FOR 22"x34": H: 1"=20'	
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					CHECKED BY	MJM		Suite 600						CONTRACT NO.:	
					APPROVED BY	NKS		Kansas City, MO 64131-3471						VOLUME:	
PLOT DATE:			8/25/2019					816-360-2700						1	
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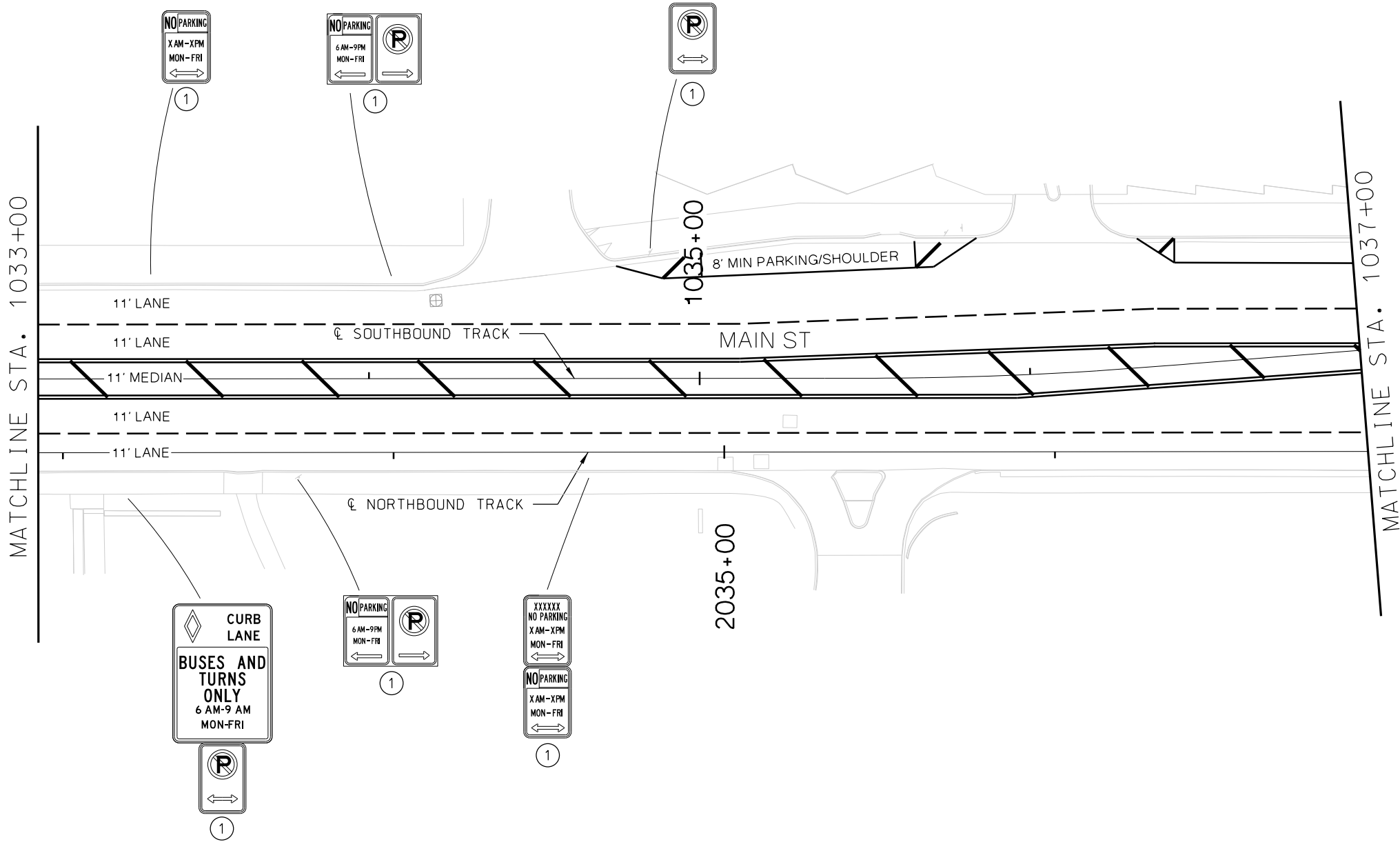
- ① EXISTING SIGN
- ② PROPOSED SIGN
- ③ PROPOSED INTERNALLY ILLUMINATED STREET NAME SIGN



PAVEMENT MARKING KEY

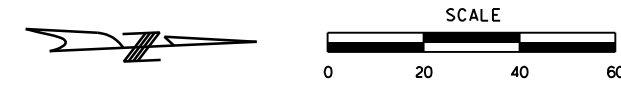
- BROKEN LINE
- SOLID LINE
- DOUBLE SOLID LINE
- DOTTED LINE AND AUXILIARY LANE LINE
- SHARED LEFT TURN LINE
- HATCH LINE
- PAVEMENT MARKING ARROWS
- STOP LINE
- YIELD LINE
- CROSSWALK LINES BLOCK STYLE
- CROSSWALK LINES PARALLEL STYLE FOR TINTED CONCRETE CROSSWALKS

GENERAL NOTE

THIS PLAN SHOWS EXISTING CORRIDOR SIGNING AND ANTICIPATED PROPOSED SIGNING NECESSARY TO SUPPORT STREETCAR OPERATIONS. SIGN REMOVALS AND MODIFICATIONS TO ON-STREET PARKING REGULATIONS ARE NOT SHOWN IN THIS PLAN.



REV	DATE	DESCRIPTION	DESIGNED BY	AJH		PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SCALE FOR 22"x34": H: 1"=20'			
			CHECKED BY	MJM						 <div>HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856</div>	SIGNING AND STRIPING PLAN SB STA 1033+00 TO STA 1037+00	FILENAME: S110.dgn
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			CHECKED BY	MJM								VOLUME: 1
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PLOT DATE: 8/25/2019			12:04:23 PM		DATE	NOT FOR CONSTRUCTION			SHEET NO.: 236			



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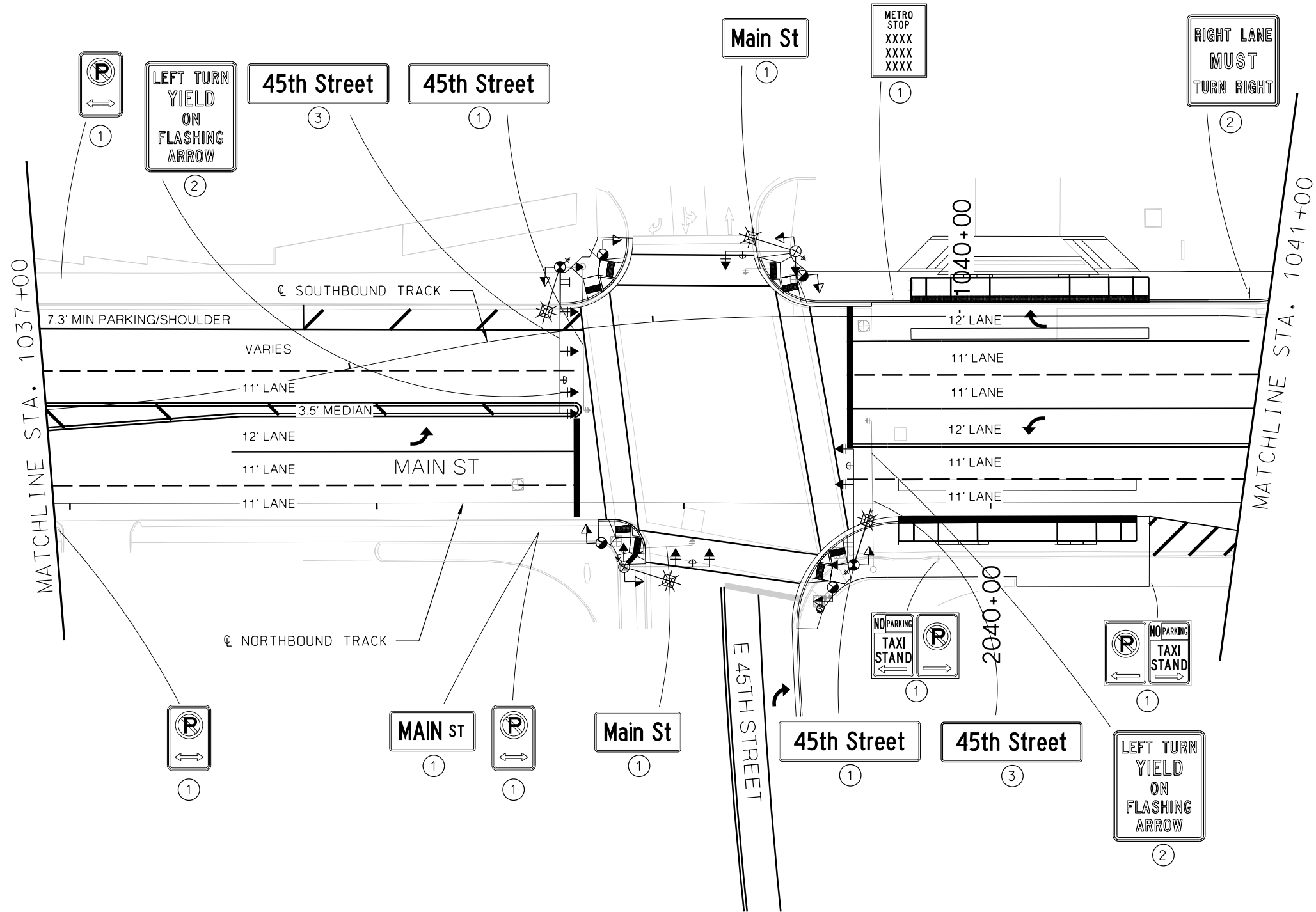
- ① EXISTING SIGN
- ② PROPOSED SIGN
- ③ PROPOSED INTERNALLY ILLUMINATED STREET NAME SIGN

PAVEMENT MARKING KEY

- BROKEN LINE
- SOLID LINE
- DOUBLE SOLID LINE
- DOTTED LINE AND AUXILIARY LANE LINE
- SHARED LEFT TURN LINE
- HATCH LINE
- PAVEMENT MARKING ARROWS
- STOP LINE
- YIELD LINE
- CROSSWALK LINES BLOCK STYLE
- CROSSWALK LINES PARALLEL STYLE FOR TINTED CONCRETE CROSSWALKS

GENERAL NOTE

THIS PLAN SHOWS EXISTING CORRIDOR SIGNING AND ANTICIPATED PROPOSED SIGNING NECESSARY TO SUPPORT STREETCAR OPERATIONS. SIGN REMOVALS AND MODIFICATIONS TO ON-STREET PARKING REGULATIONS ARE NOT SHOWN IN THIS PLAN.



REV			DATE	DESCRIPTION	DESIGNED BY	AJH		PRELIMINARY PLANS - 30%		DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION		SCALE FOR 22"x34": H: 1"=20'	
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					CHECKED BY	MJM		Suite 600					VOLUME:	
					APPROVED BY	NKS		Kansas City, MO 64131-3471					DRAWING NO.:	
PLOT DATE:			8/25/2019		DATE		816-360-2700		Certificate of Authority: 000856				SHEET NO.:	
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NOTES

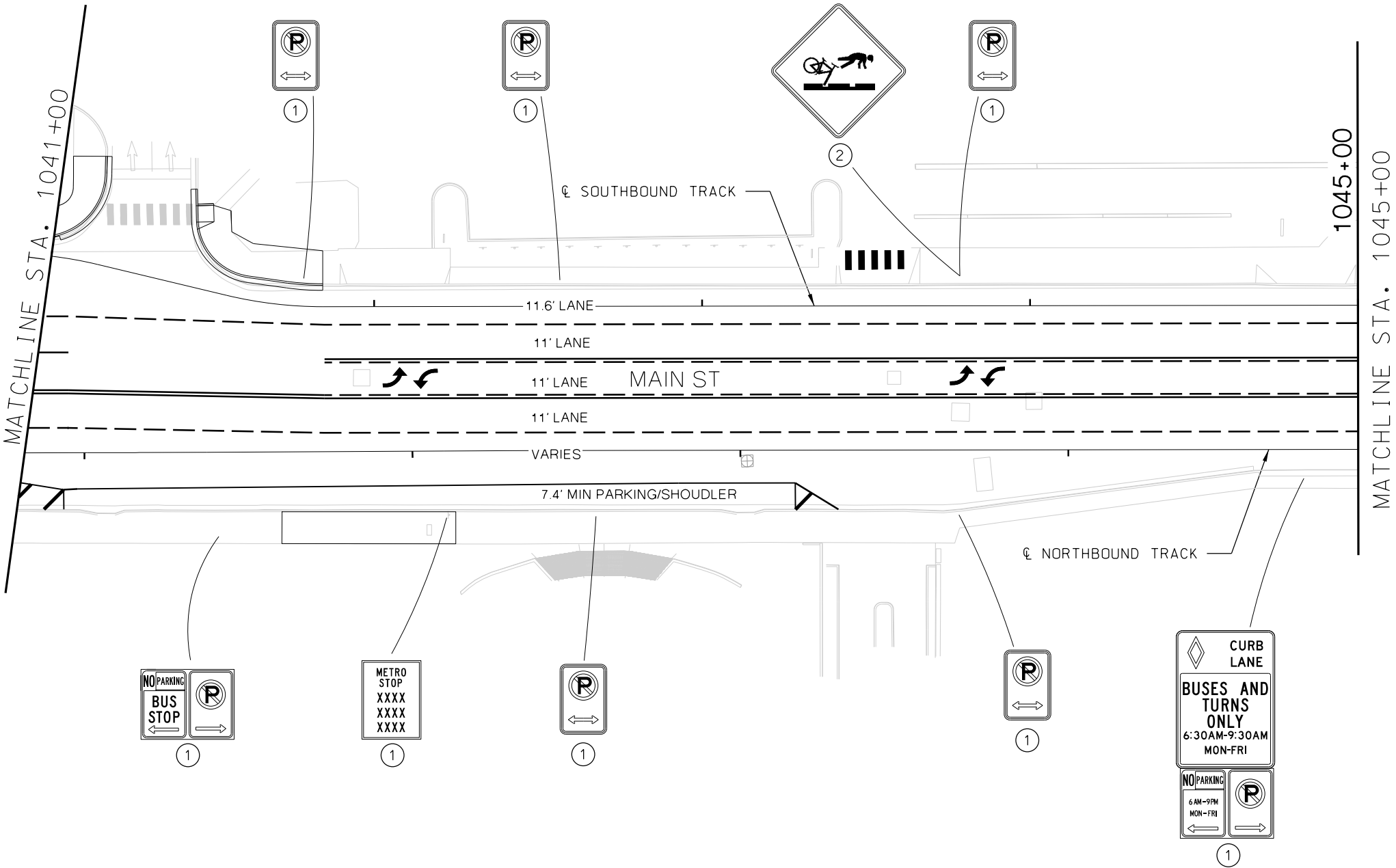
- ① EXISTING SIGN
- ② PROPOSED SIGN
- ③ PROPOSED INTERNALLY ILLUMINATED STREET NAME SIGN

PAVEMENT MARKING KEY

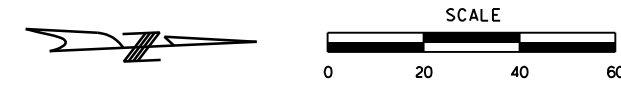
- BROKEN LINE
- SOLID LINE
- DOUBLE SOLID LINE
- DOTTED LINE AND AUXILIARY LANE LINE
- SHARED LEFT TURN LINE
- HATCH LINE
- PAVEMENT MARKING ARROWS
- STOP LINE
- YIELD LINE
- CROSSWALK LINES BLOCK STYLE
- CROSSWALK LINES PARALLEL STYLE FOR TINTED CONCRETE CROSSWALKS

GENERAL NOTE

THIS PLAN SHOWS EXISTING CORRIDOR SIGNING AND ANTICIPATED PROPOSED SIGNING NECESSARY TO SUPPORT STREETCAR OPERATIONS. SIGN REMOVALS AND MODIFICATIONS TO ON-STREET PARKING REGULATIONS ARE NOT SHOWN IN THIS PLAN.



REV	DATE	DESCRIPTION	DESIGNED BY	AJH	<div></div>	PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION		SCALE FOR 22"x34": H: 1"=20'	
			CHECKED BY	MJM		<div><div>HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856</div></div>		SIGNING AND STRIPING PLAN SB STA 1041+00 TO STA 1045+00		FILENAME: S112.dgn	
			DRAWN BY	SY						CONTRACT NO.:	
			CHECKED BY	MJM						VOLUME: 1	
			APPROVED BY	NKS						DRAWING NO.:	
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PLOT DATE: 8/25/2019			DATE: 12-04-54 PM			NOT FOR CONSTRUCTION				S112	238



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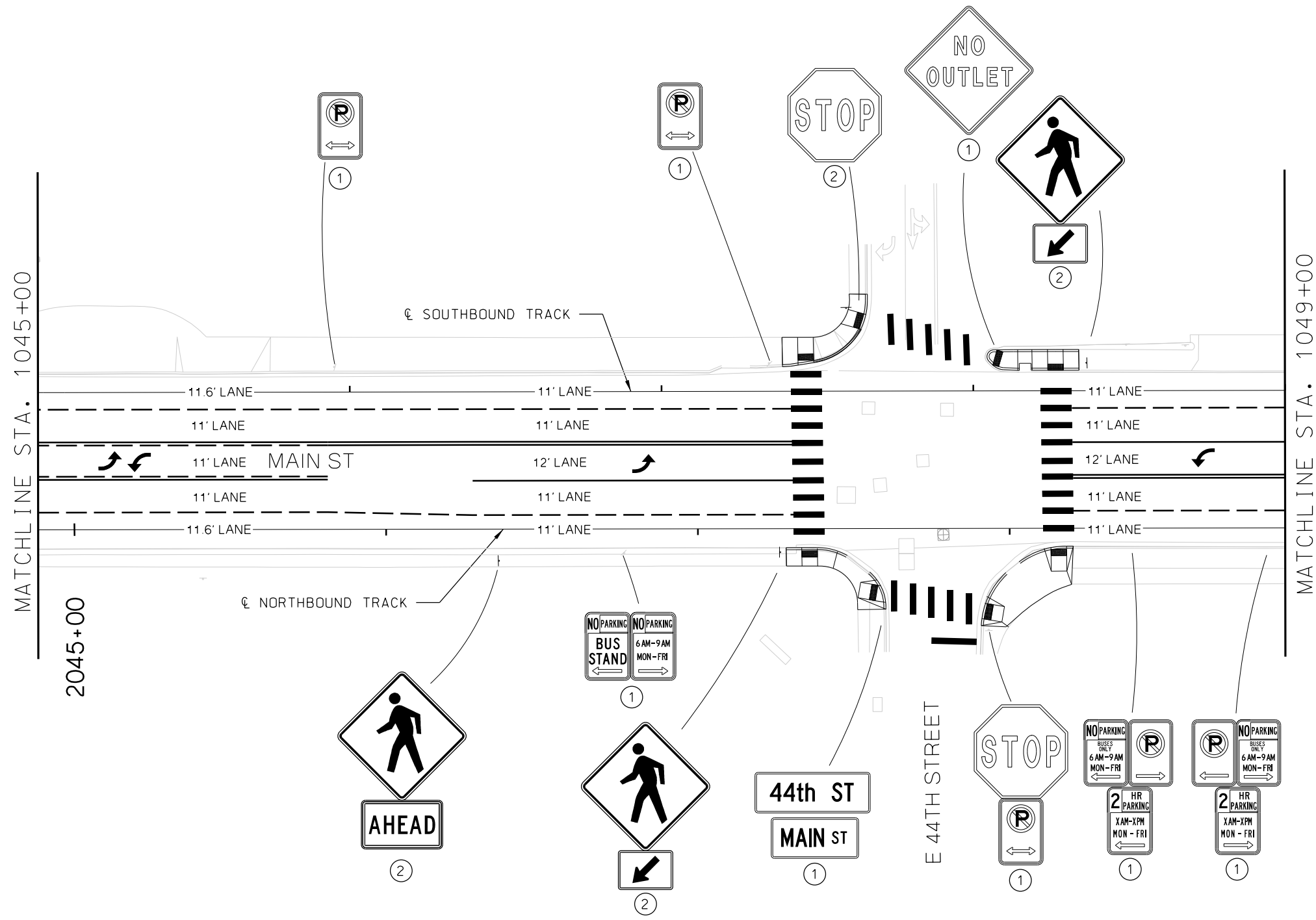
- ① EXISTING SIGN
- ② PROPOSED SIGN
- ③ PROPOSED INTERNALLY ILLUMINATED STREET NAME SIGN



PAVEMENT MARKING KEY

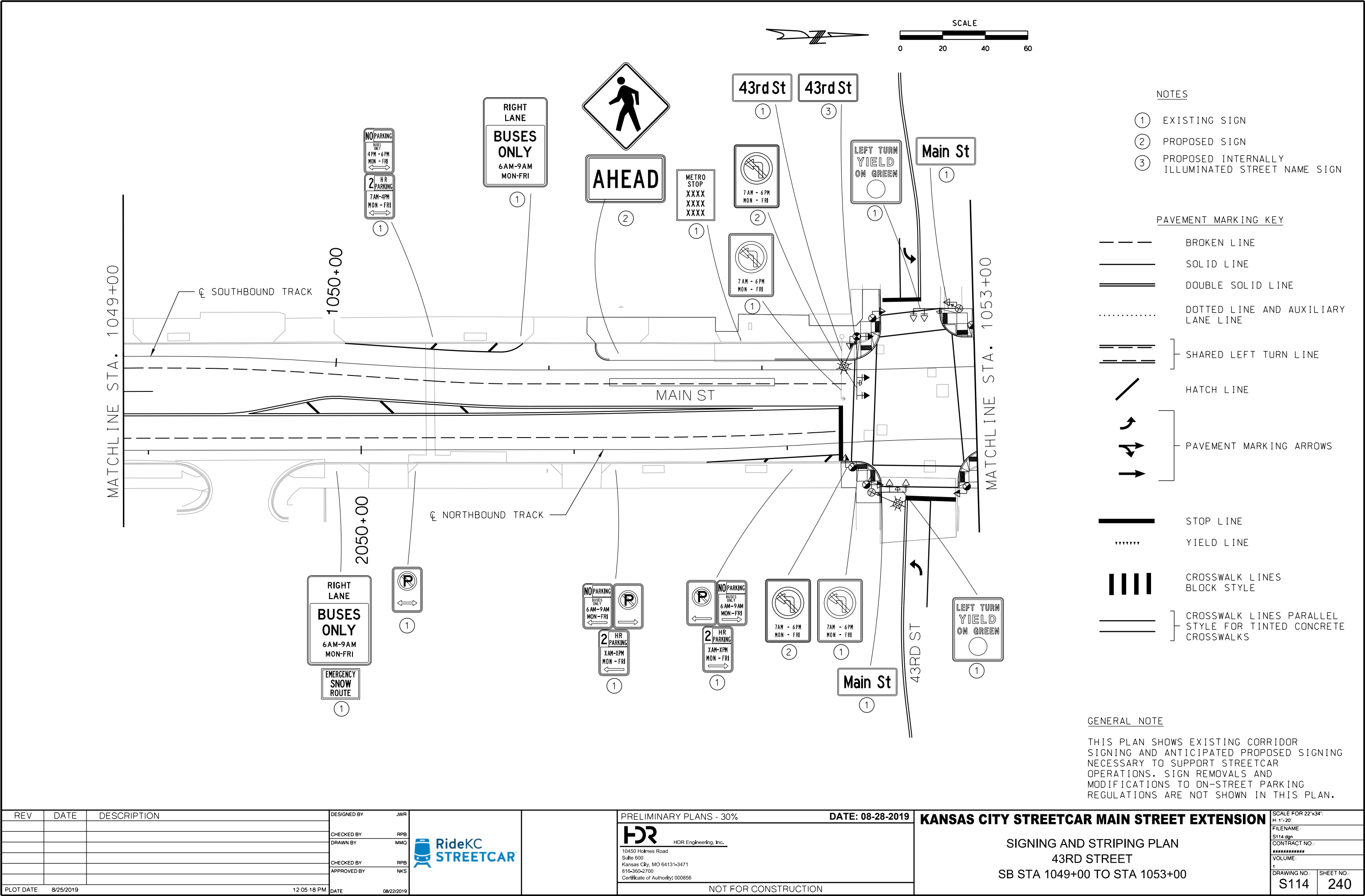
- BROKEN LINE
- SOLID LINE
- DOUBLE SOLID LINE
- DOTTED LINE AND AUXILIARY LANE LINE
- SHARED LEFT TURN LINE
- HATCH LINE
- PAVEMENT MARKING ARROWS
- STOP LINE
- YIELD LINE
- CROSSWALK LINES BLOCK STYLE
- CROSSWALK LINES PARALLEL STYLE FOR TINTED CONCRETE CROSSWALKS

GENERAL NOTE

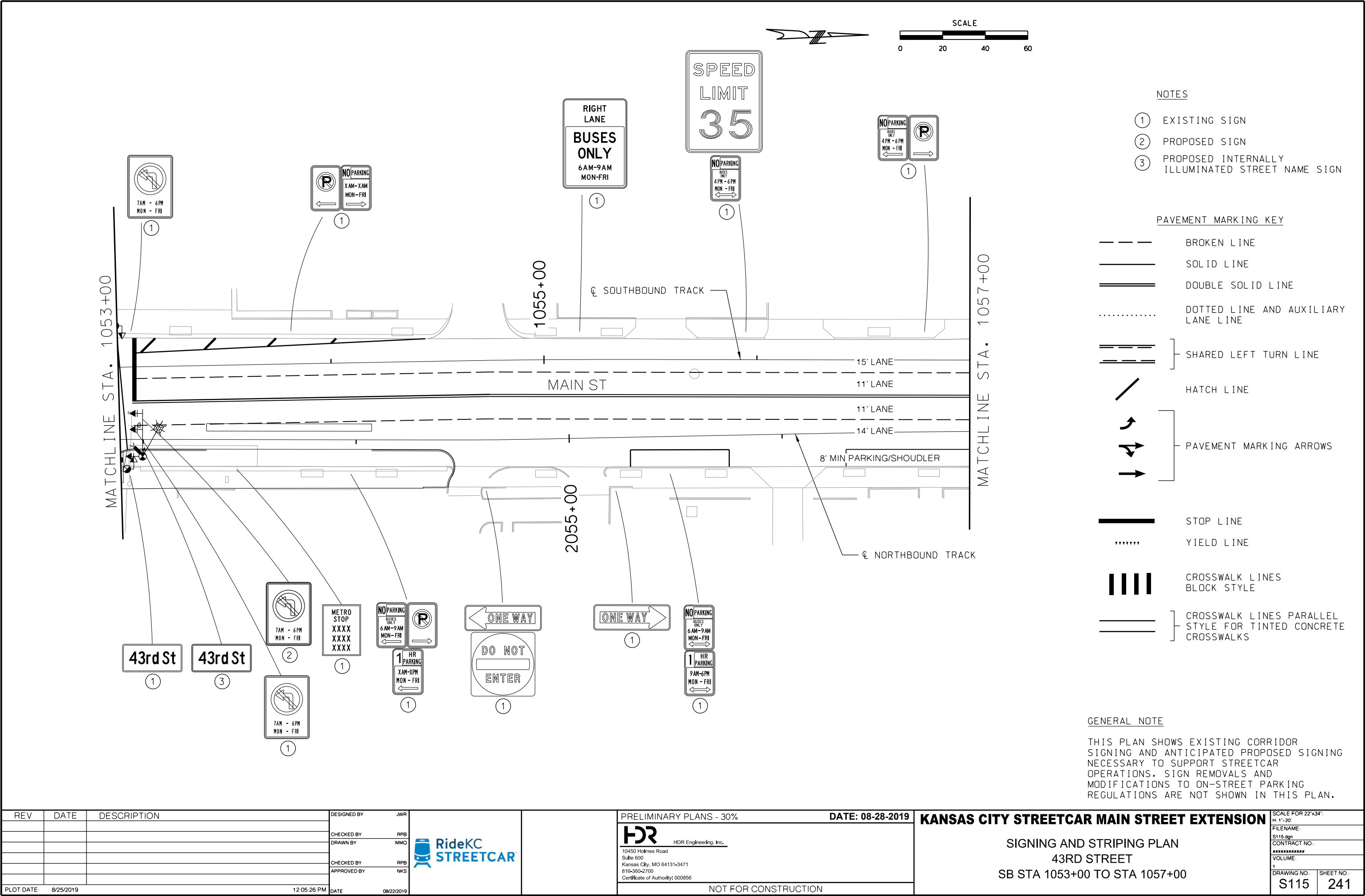
THIS PLAN SHOWS EXISTING CORRIDOR SIGNING AND ANTICIPATED PROPOSED SIGNING NECESSARY TO SUPPORT STREETCAR OPERATIONS. SIGN REMOVALS AND MODIFICATIONS TO ON-STREET PARKING REGULATIONS ARE NOT SHOWN IN THIS PLAN.



REV			DATE			DESCRIPTION			DESIGNED BY			A.J.H.			<div></div>	PRELIMINARY PLANS - 30%						DATE: 08-28-2019						KANSAS CITY STREETCAR MAIN STREET EXTENSION												SCALE FOR 22"x34": H: 1"=20'							
									CHECKED BY			M.J.M.				<div><div>HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856</div></div>						NOT FOR CONSTRUCTION						SIGNING AND STRIPING PLAN SB STA 1045+00 TO STA 1049+00												FILENAME: S113.dgn				CONTRACT NO.: *****			
									DRAWN BY			S.V.																												VOLUME: 1				DRAWING NO.: S113		SHEET NO.: 239	
									CHECKED BY			M.J.M.																																			
									APPROVED BY			N.K.S.																																			
PLOT DATE:			8/25/2019													DATE																															



REV	DATE	DESCRIPTION	DESIGNED BY	JWR			PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SCALE FOR 22"x34": H: 1" = 20'
			CHECKED BY	RPB			 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	NOT FOR CONSTRUCTION		FILENAME: S114.dgn
			DRAWN BY	MMO						CONTRACT NO.: *****
			CHECKED BY	RPB						VOLUME: 1
			APPROVED BY	NKS						DRAWING NO.: S114
PLOT DATE: 8/25/2019 12:05:18 PM			DATE	08/22/2019						



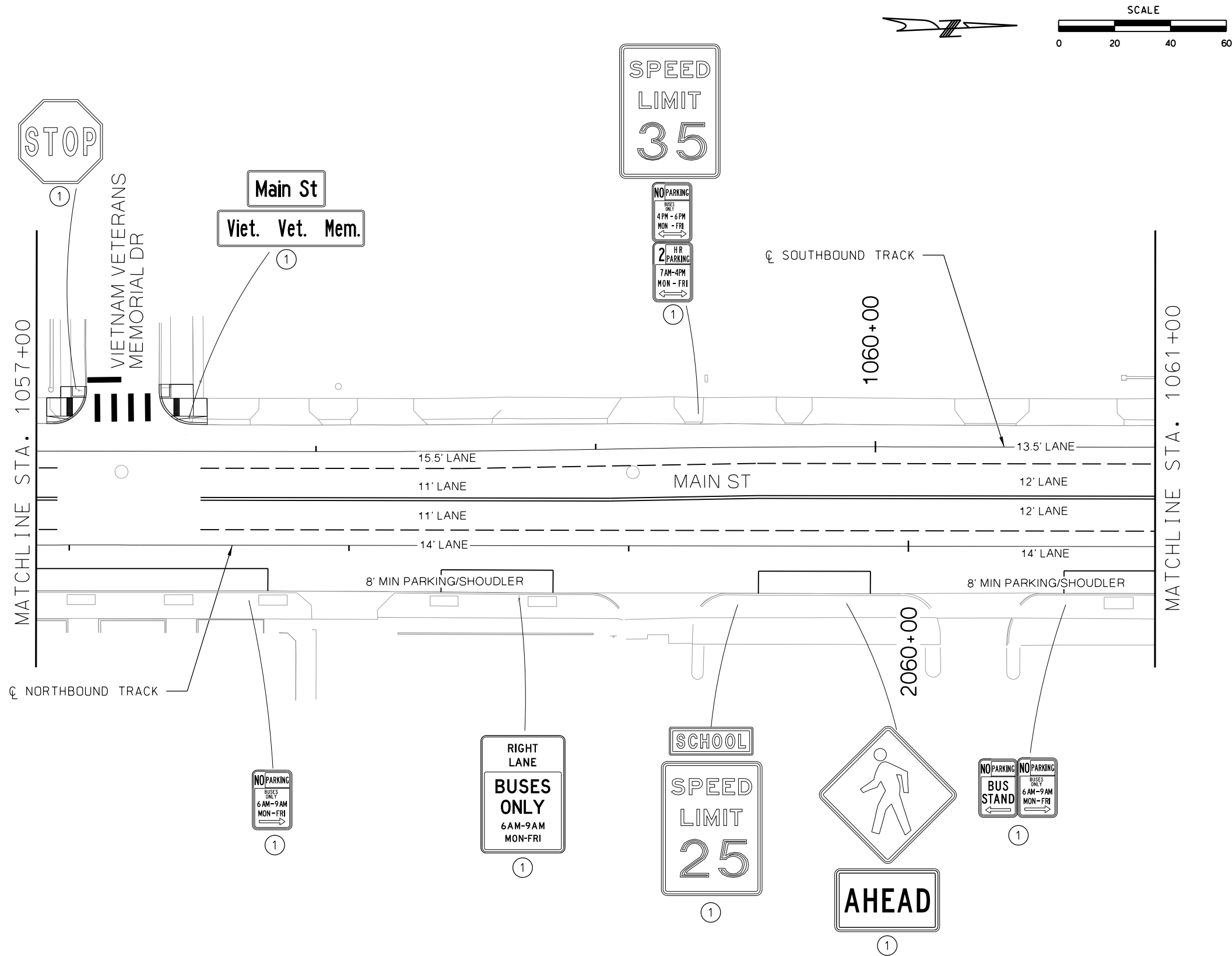
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PLOT DATE: 8/25/2019		12:05:26 PM

DESIGNED BY	JWR
CHECKED BY	RPB
DRAWN BY	MMO
CHECKED BY	RPB
APPROVED BY	NKS
DATE	08/22/2019



PRELIMINARY PLANS - 30%	DATE: 08-28-2019
HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	
NOT FOR CONSTRUCTION	

KANSAS CITY STREETCAR MAIN STREET EXTENSION		SCALE FOR 22"x34": H: 1"=20'
SIGNING AND STRIPING PLAN		FILENAME: S115.dgn
43RD STREET		CONTRACT NO.:
SB STA 1053+00 TO STA 1057+00		VOLUME: 1
DRAWING NO.:	SHEET NO.:	
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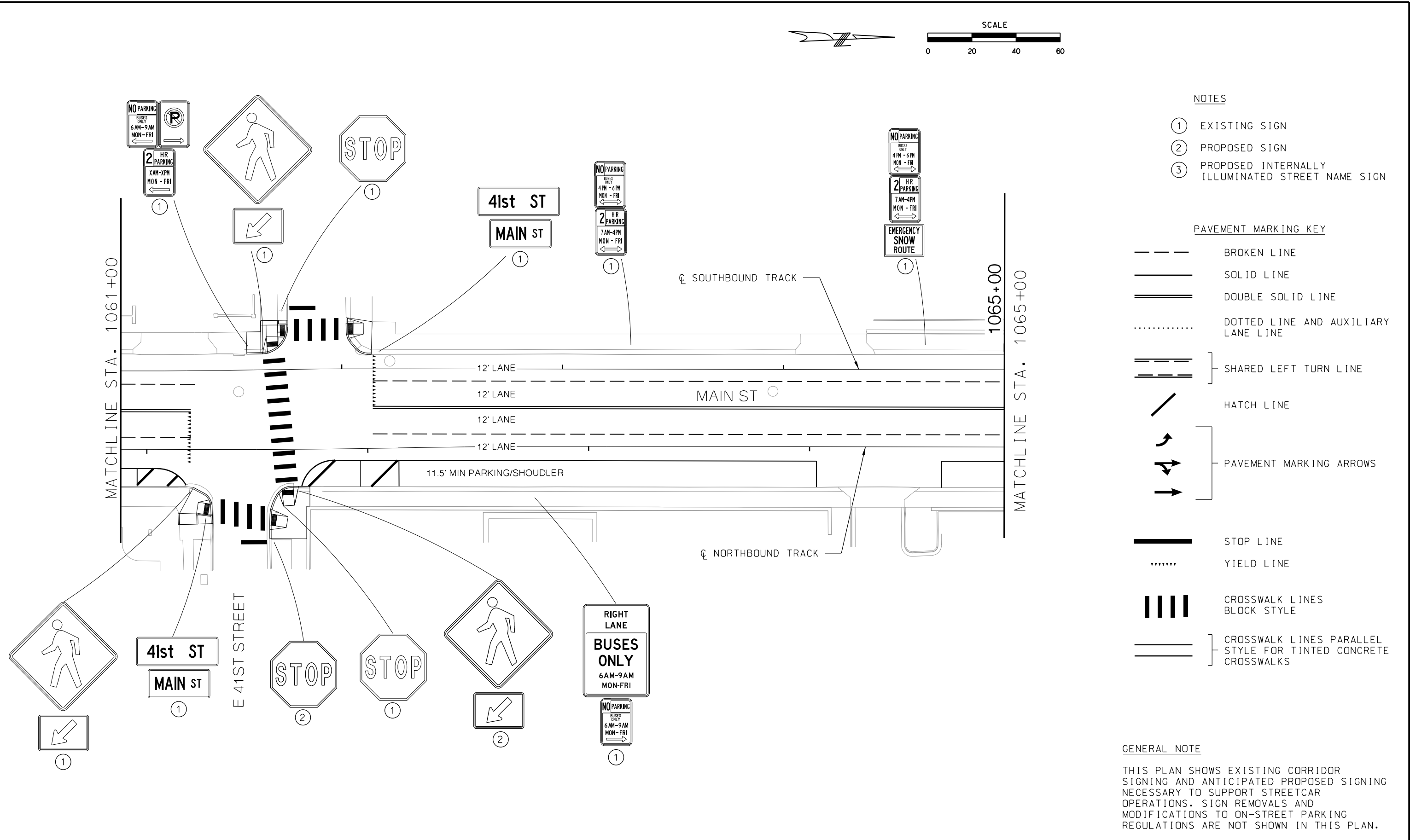
- NOTES
- ① EXISTING SIGN
 - ② PROPOSED SIGN
 - ③ PROPOSED INTERNALLY ILLUMINATED STREET NAME SIGN

- PAVEMENT MARKING KEY
- BROKEN LINE
 - SOLID LINE
 - DOUBLE SOLID LINE
 - DOTTED LINE AND AUXILIARY LANE LINE
 - SHARED LEFT TURN LINE
 - HATCH LINE
 - PAVEMENT MARKING ARROWS
 - STOP LINE
 - YIELD LINE
 - CROSSWALK LINES BLOCK STYLE
 - CROSSWALK LINES PARALLEL STYLE FOR TINTED CONCRETE CROSSWALKS

GENERAL NOTE

THIS PLAN SHOWS EXISTING CORRIDOR SIGNING AND ANTICIPATED PROPOSED SIGNING NECESSARY TO SUPPORT STREETCAR OPERATIONS. SIGN REMOVALS AND MODIFICATIONS TO ON-STREET PARKING REGULATIONS ARE NOT SHOWN IN THIS PLAN.

REV	DATE	DESCRIPTION	DESIGNED BY	JWR		PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SIGNING AND STRIPING PLAN VIETNAM VETERANS MEMORIAL DRIVE SB STA 1057+00 TO STA 1061+00	SCALE FOR 22"x34": H: 1" = 20'		
			CHECKED BY	RPB						 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	FILENAME: S116.dgn	
			DRAWN BY	MMO							CONTRACT NO.:	
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			APPROVED BY	NKS							DRAWING NO.:	
PLOT DATE: 8/25/2019			DATE: 08/22/2019							SHEET NO.:		
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NOTES

- ① EXISTING SIGN
- ② PROPOSED SIGN
- ③ PROPOSED INTERNALLY ILLUMINATED STREET NAME SIGN

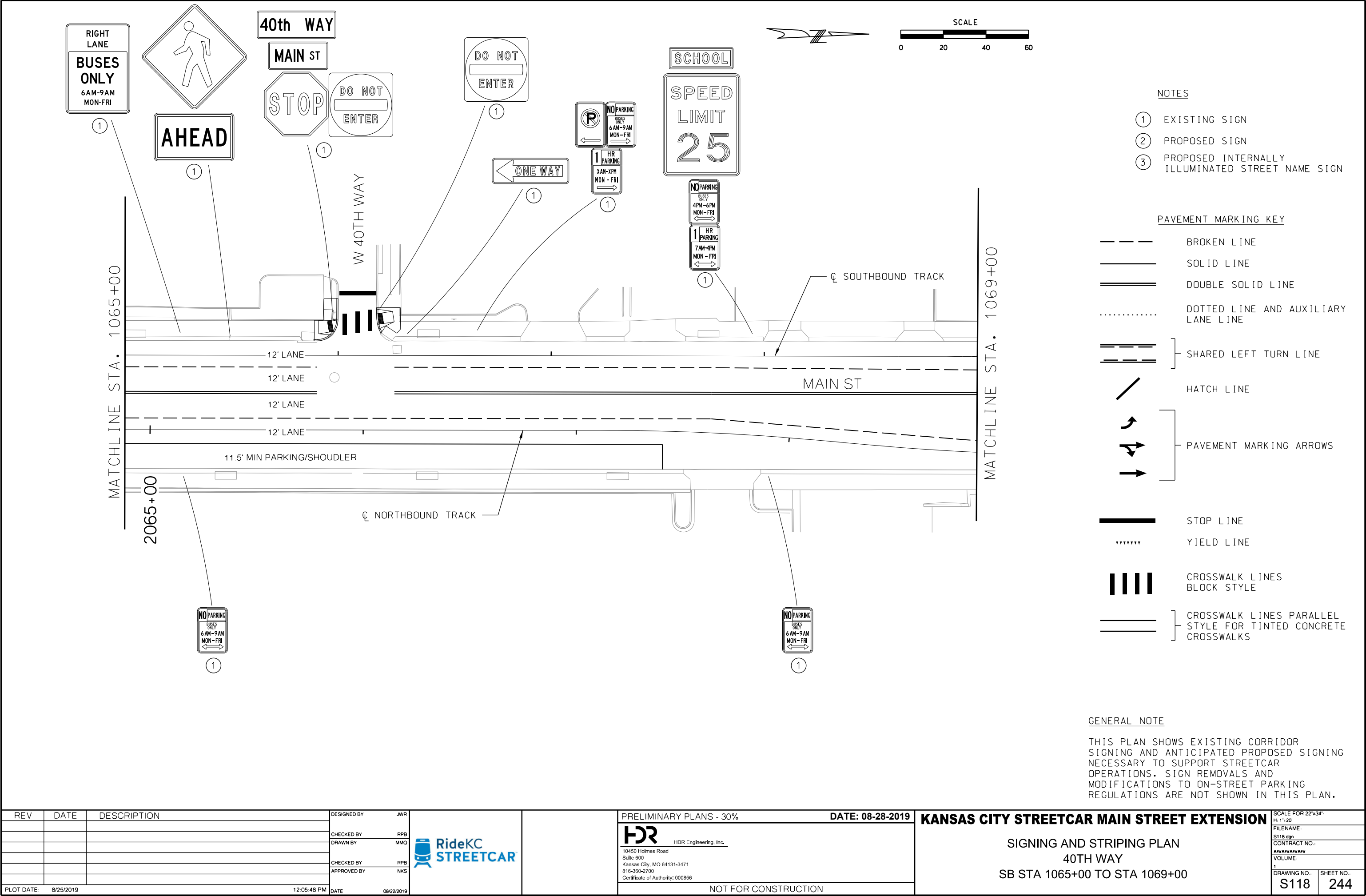
PAVEMENT MARKING KEY

- BROKEN LINE
- SOLID LINE
- DOUBLE SOLID LINE
- DOTTED LINE AND AUXILIARY LANE LINE
- SHARED LEFT TURN LINE
- HATCH LINE
- PAVEMENT MARKING ARROWS
- STOP LINE
- YIELD LINE
- CROSSWALK LINES BLOCK STYLE
- CROSSWALK LINES PARALLEL STYLE FOR TINTED CONCRETE CROSSWALKS

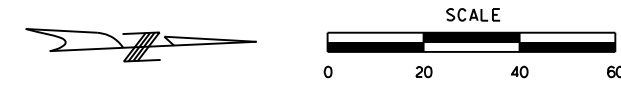
GENERAL NOTE

THIS PLAN SHOWS EXISTING CORRIDOR SIGNING AND ANTICIPATED PROPOSED SIGNING NECESSARY TO SUPPORT STREETCAR OPERATIONS. SIGN REMOVALS AND MODIFICATIONS TO ON-STREET PARKING REGULATIONS ARE NOT SHOWN IN THIS PLAN.

REV	DATE	DESCRIPTION	DESIGNED BY	JWR		PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SCALE FOR 22"x34": H: 1"=20'		
			CHECKED BY	RPB		 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	NOT FOR CONSTRUCTION		FILENAME: S117.dgn		
			DRAWN BY	MMO					CONTRACT NO.:		
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			APPROVED BY	NKS					DRAWING NO.:	SHEET NO.:	
PLOT DATE: 8/25/2019			12:05:40 PM			DATE: 08/22/2019			S117	243	



REV	DATE	DESCRIPTION	DESIGNED BY	JWR				PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SCALE FOR 22"x34": H: 1"=20'
			CHECKED BY	RPB				 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	SIGNING AND STRIPING PLAN 40TH WAY SB STA 1065+00 TO STA 1069+00		FILENAME: S118.dgn
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			CHECKED BY	RPB							VOLUME: 1
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PLOT DATE: 8/25/2019		12:05:48 PM		DATE: 08/22/2019			NOT FOR CONSTRUCTION				



NOTES

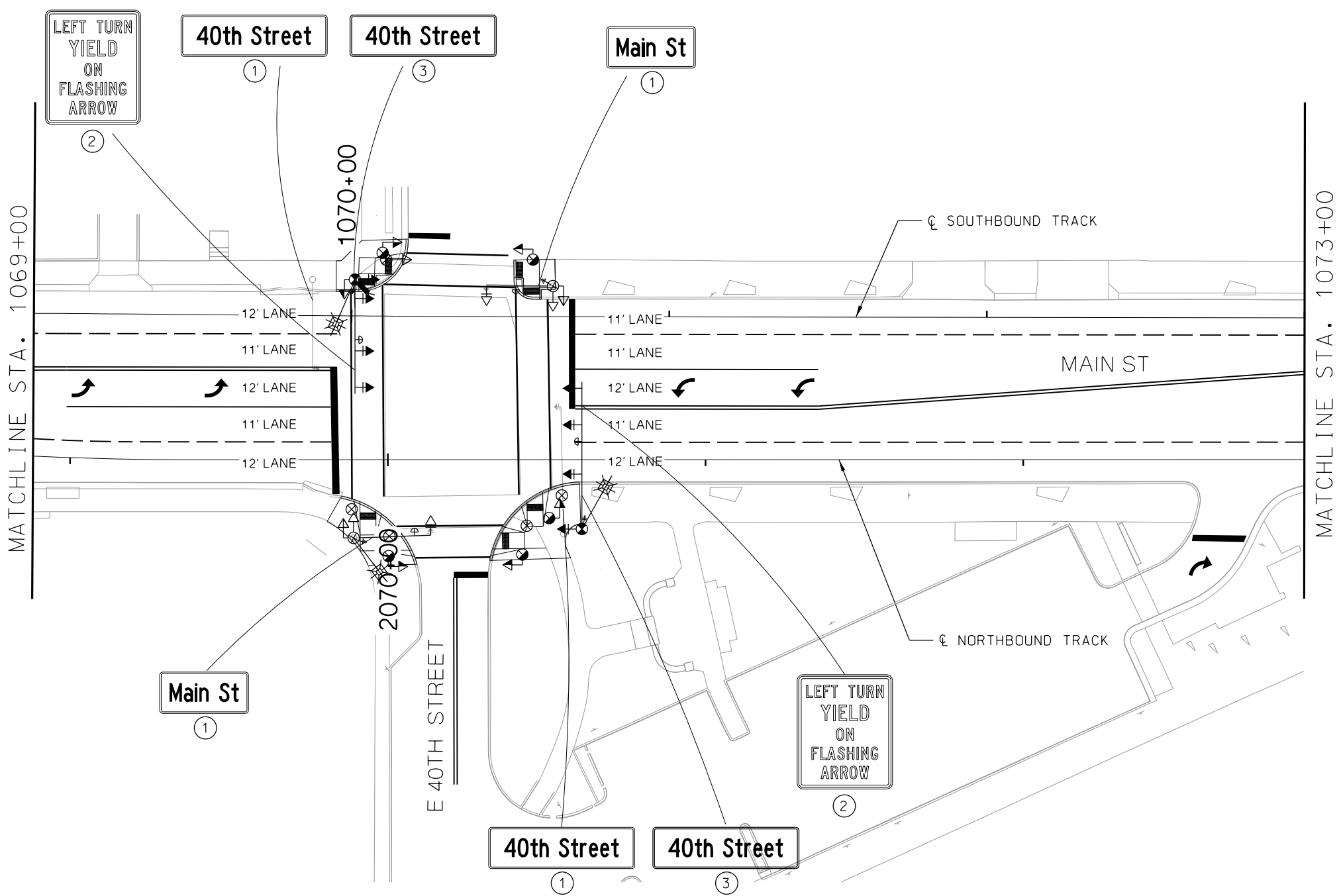
- ① EXISTING SIGN
- ② PROPOSED SIGN
- ③ PROPOSED INTERNALLY ILLUMINATED STREET NAME SIGN



PAVEMENT MARKING KEY

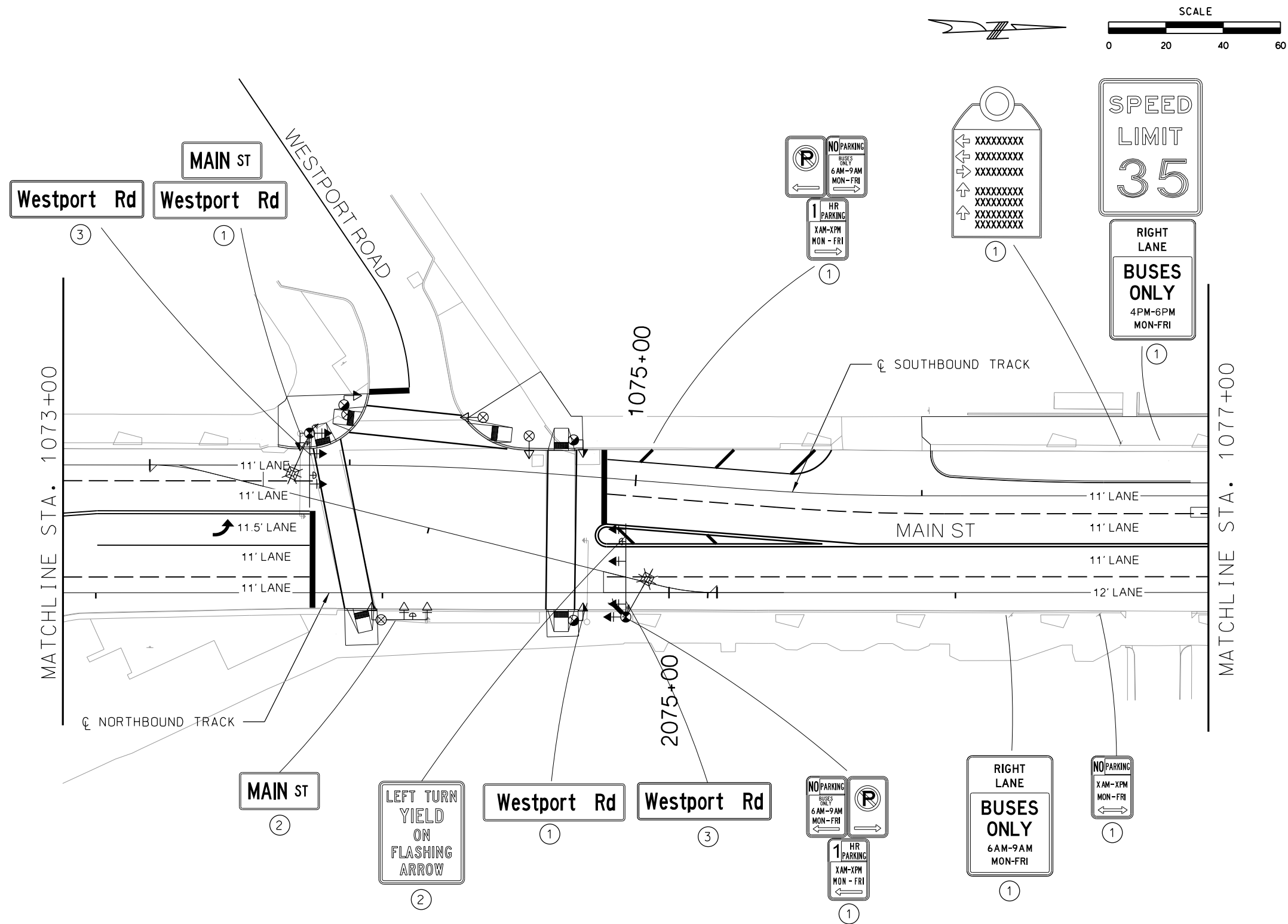
- BROKEN LINE
- SOLID LINE
- DOUBLE SOLID LINE
- DOTTED LINE AND AUXILIARY LANE LINE
- SHARED LEFT TURN LINE
- HATCH LINE
- PAVEMENT MARKING ARROWS
- STOP LINE
- YIELD LINE
- CROSSWALK LINES BLOCK STYLE
- CROSSWALK LINES PARALLEL STYLE FOR TINTED CONCRETE CROSSWALKS

GENERAL NOTE

THIS PLAN SHOWS EXISTING CORRIDOR SIGNING AND ANTICIPATED PROPOSED SIGNING NECESSARY TO SUPPORT STREETCAR OPERATIONS. SIGN REMOVALS AND MODIFICATIONS TO ON-STREET PARKING REGULATIONS ARE NOT SHOWN IN THIS PLAN.



REV			DATE		DESCRIPTION		DESIGNED BY		JWR			PRELIMINARY PLANS - 30%				DATE: 08-28-2019		KANSAS CITY STREETCAR MAIN STREET EXTENSION				SCALE FOR 22"x34": H: 1"=20'		
							CHECKED BY		RPB			 HDR Engineering, Inc.						SIGNING AND STRIPING PLAN				FILENAME: S119.dgn		
							DRAWN BY		MMO			10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856						40TH STREET				CONTRACT NO.: *****		
																		SB STA 1069+00 TO STA 1073+00				VOLUME: 1		
							CHECKED BY		RPB													DRAWING NO.:		
							APPROVED BY		NKS													SHEET NO.:		
PLOT DATE:			8/25/2019		12:05:55 PM		DATE		08/22/2019												S119		245	



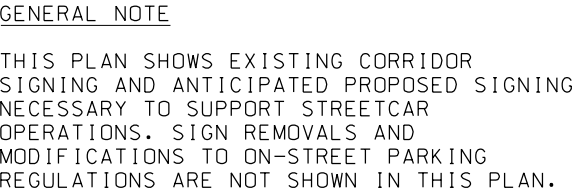
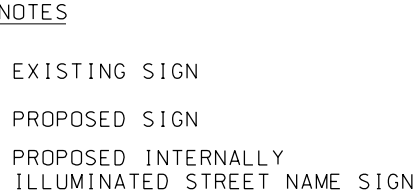
- NOTES
- ① EXISTING SIGN
 - ② PROPOSED SIGN
 - ③ PROPOSED INTERNALLY ILLUMINATED STREET NAME SIGN


- PAVEMENT MARKING KEY
- BROKEN LINE
 - SOLID LINE
 - DOUBLE SOLID LINE
 - DOTTED LINE AND AUXILIARY LANE LINE
 - SHARED LEFT TURN LINE
 - HATCH LINE
 - PAVEMENT MARKING ARROWS
 - STOP LINE
 - YIELD LINE
 - CROSSWALK LINES BLOCK STYLE
 - CROSSWALK LINES PARALLEL STYLE FOR TINTED CONCRETE CROSSWALKS

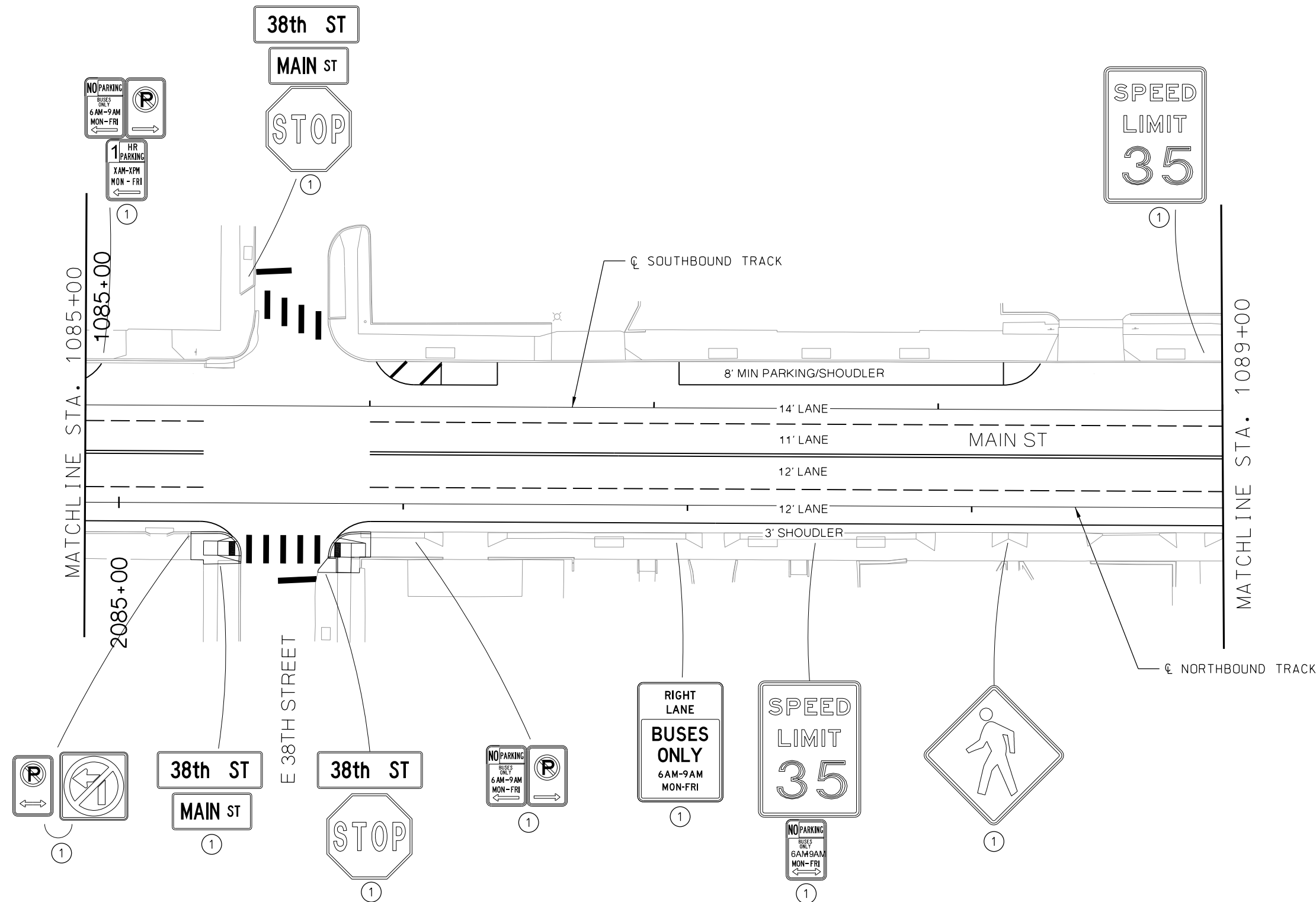
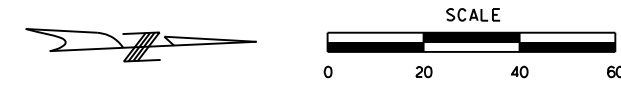
GENERAL NOTE

THIS PLAN SHOWS EXISTING CORRIDOR SIGNING AND ANTICIPATED PROPOSED SIGNING NECESSARY TO SUPPORT STREETCAR OPERATIONS. SIGN REMOVALS AND MODIFICATIONS TO ON-STREET PARKING REGULATIONS ARE NOT SHOWN IN THIS PLAN.

REV	DATE	DESCRIPTION	DESIGNED BY	JWR			PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SCALE FOR 22"x34": H: 1"=20'			
			CHECKED BY	RPB			 HDR Engineering, Inc.	10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856			FILENAME: S120.dgn		
			DRAWN BY	MMO							10450 Holmes Road	SIGNING AND STRIPING PLAN	CONTRACT NO.:
											Suite 600	WESTPORT ROAD	VOLUME: 1
			CHECKED BY	RPB							Kansas City, MO 64131-3471	SB STA 1073+00 TO STA 1077+00	DRAWING NO.:
			APPROVED BY	NKS							816-360-2700		SHEET NO.:
PLOT DATE: 8/25/2019			DATE: 08/22/2019				NOT FOR CONSTRUCTION			S120	246		



REV	DATE	DESCRIPTION	DESIGNED BY JWR			 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	PRELIMINARY PLANS - 30% DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SCALE FOR 22"x34": H: 1" = 20' FILENAME: S122.dgn CONTRACT NO.: ***** VOLUME: 1 DRAWING NO.: S122 SHEET NO.: 248
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			CHECKED BY RPB						
			APPROVED BY NKS						
PLOT DATE: 8/25/2019 12:06:16 PM			DATE: 08/22/2019			NOT FOR CONSTRUCTION		SIGNING AND STRIPING PLAN SB STA 1081+00 TO STA 1085+00	



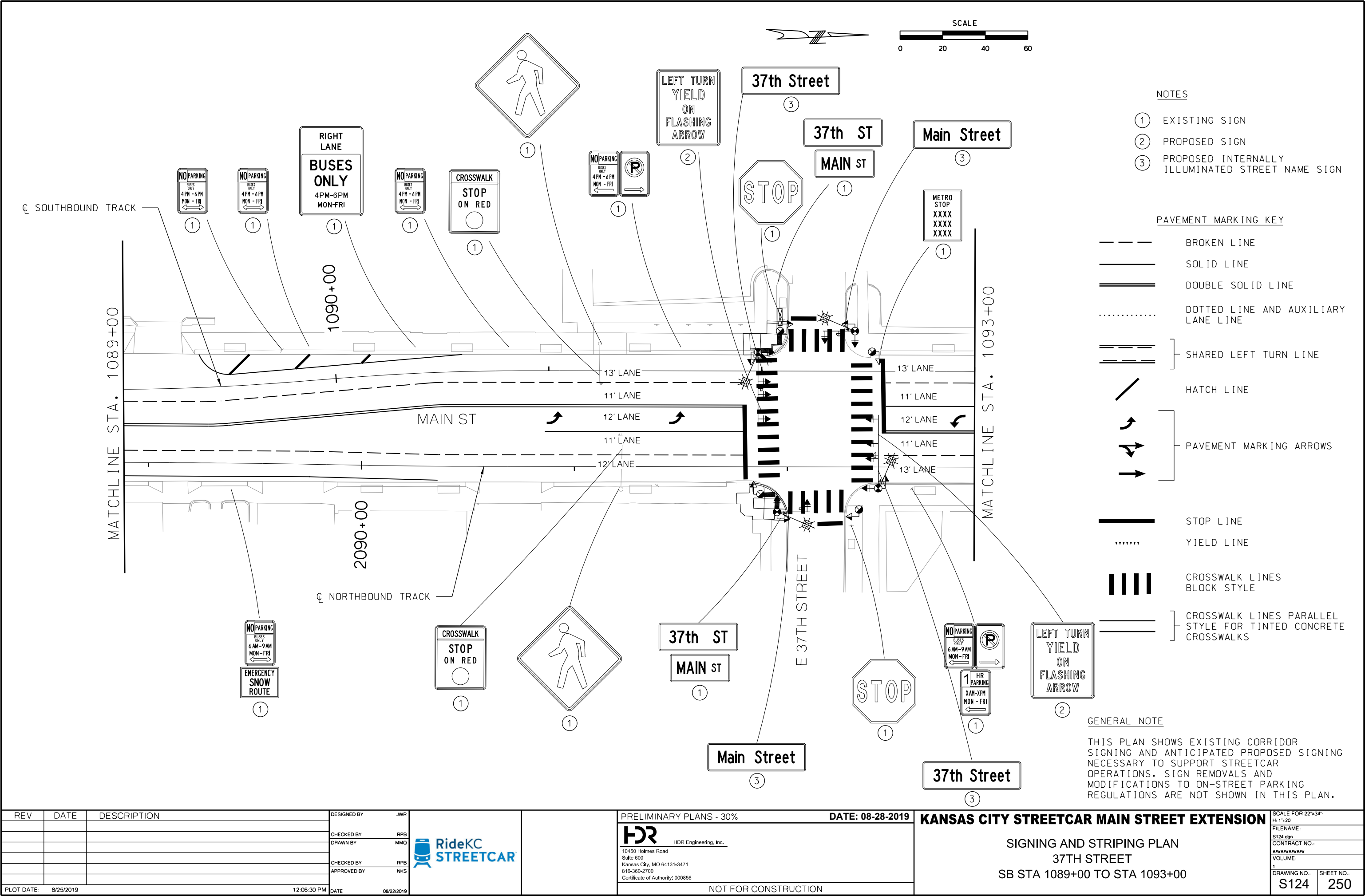
- NOTES
- ① EXISTING SIGN
 - ② PROPOSED SIGN
 - ③ PROPOSED INTERNALLY ILLUMINATED STREET NAME SIGN

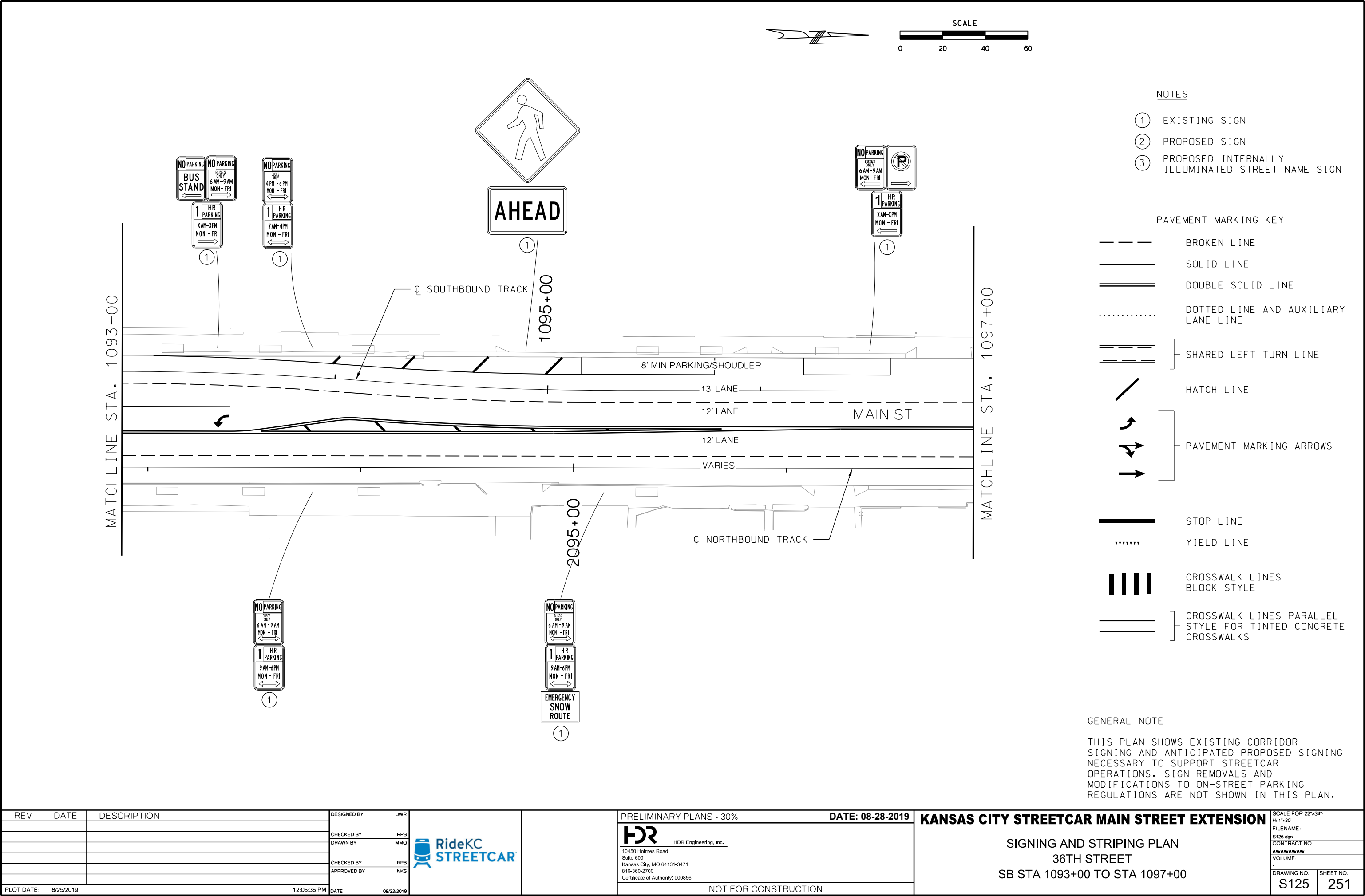
- PAVEMENT MARKING KEY
- BROKEN LINE
 - SOLID LINE
 - DOUBLE SOLID LINE
 - DOTTED LINE AND AUXILIARY LANE LINE
 - SHARED LEFT TURN LINE
 - HATCH LINE
 - PAVEMENT MARKING ARROWS
 - STOP LINE
 - YIELD LINE
 - CROSSWALK LINES BLOCK STYLE
 - CROSSWALK LINES PARALLEL STYLE FOR TINTED CONCRETE CROSSWALKS

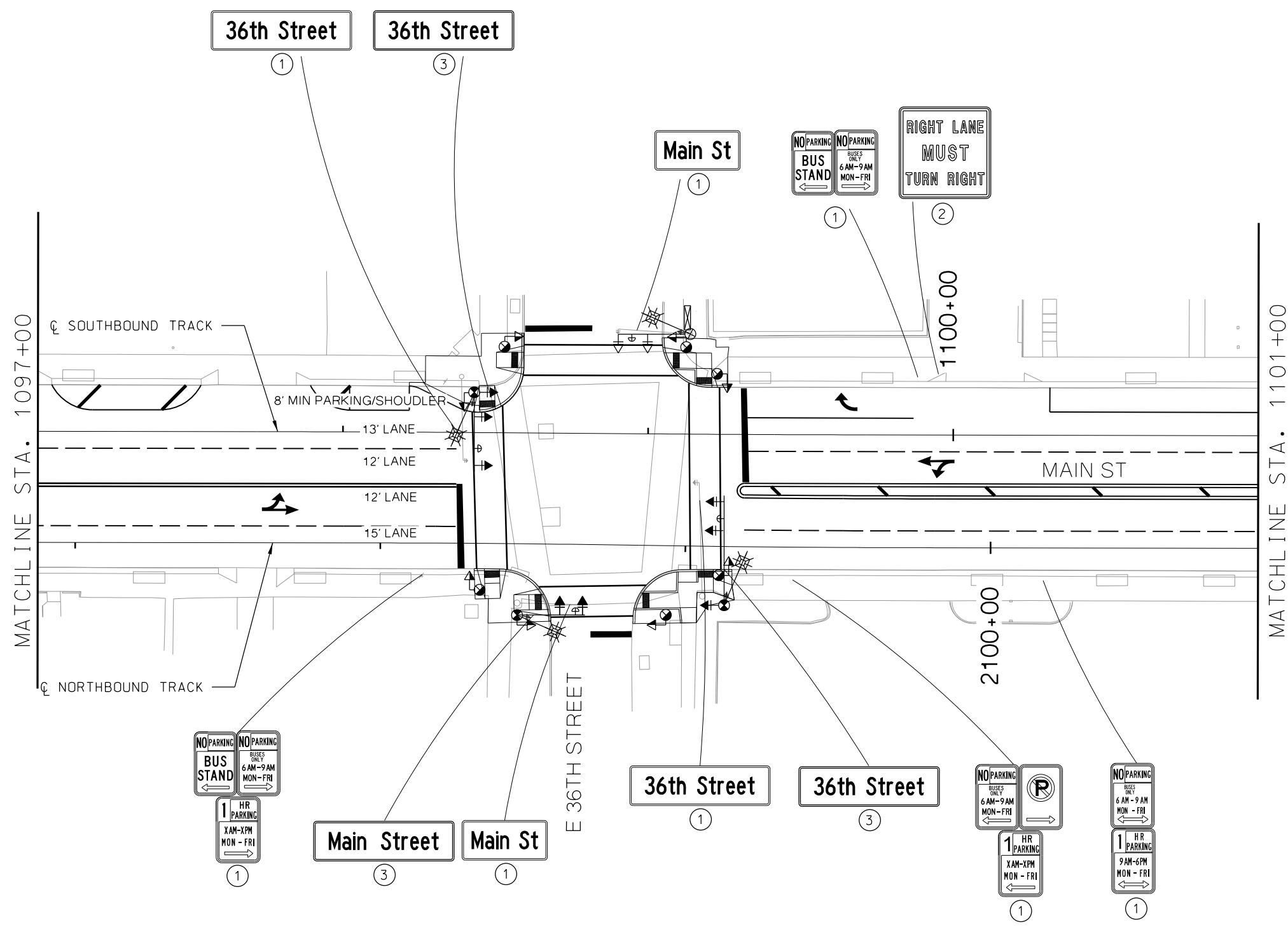
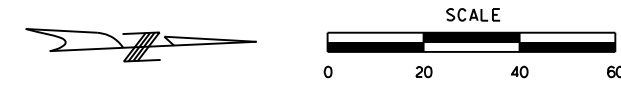
GENERAL NOTE

THIS PLAN SHOWS EXISTING CORRIDOR SIGNING AND ANTICIPATED PROPOSED SIGNING NECESSARY TO SUPPORT STREETCAR OPERATIONS. SIGN REMOVALS AND MODIFICATIONS TO ON-STREET PARKING REGULATIONS ARE NOT SHOWN IN THIS PLAN.

REV			DATE			DESCRIPTION			DESIGNED BY			JWR			<div><div></div><div>RideKC STREETCAR</div></div>			PRELIMINARY PLANS - 30%						DATE: 08-28-2019						KANSAS CITY STREETCAR MAIN STREET EXTENSION												SCALE FOR 22"x34": H: 1"=20'							
									CHECKED BY			RPB						<div><div>HDR</div><div>HDR Engineering, Inc.</div><div>10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856</div></div>						NOT FOR CONSTRUCTION						SIGNING AND STRIPING PLAN 38TH STREET SB STA 1085+00 TO STA 1089+00												FILENAME: S123.dgn				CONTRACT NO.: *****			
									DRAWN BY			MMO																														CONTRACT NO.:							
									CHECKED BY			RPB														VOLUME: 1																							
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PLOT DATE:			8/25/2019						DATE			08/22/2019																																					







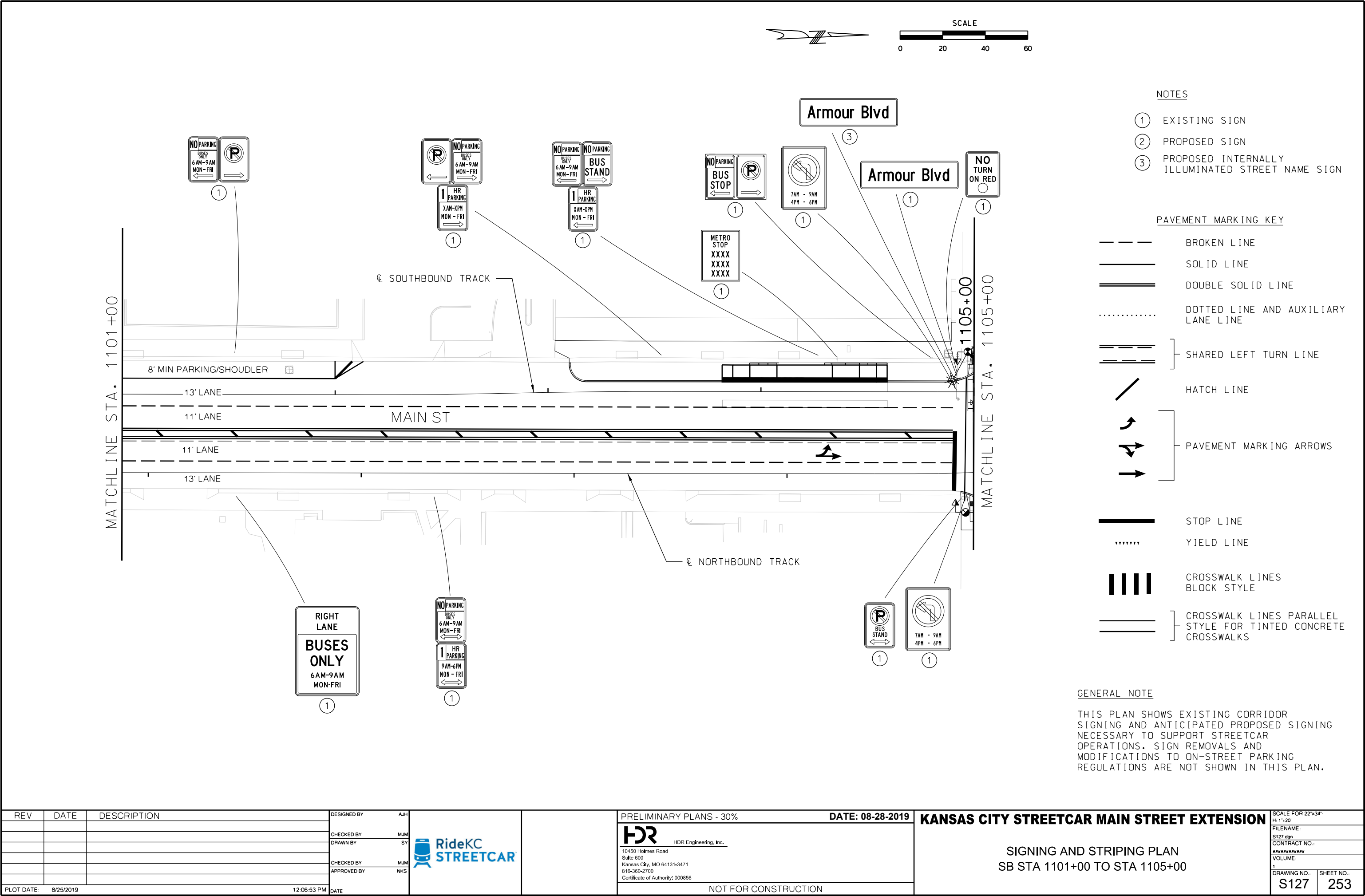
- NOTES
- ① EXISTING SIGN
 - ② PROPOSED SIGN
 - ③ PROPOSED INTERNALLY ILLUMINATED STREET NAME SIGN

- PAVEMENT MARKING KEY
- BROKEN LINE
 - SOLID LINE
 - DOUBLE SOLID LINE
 - DOTTED LINE AND AUXILIARY LANE LINE
 - SHARED LEFT TURN LINE
 - HATCH LINE
 - PAVEMENT MARKING ARROWS
 - STOP LINE
 - YIELD LINE
 - CROSSWALK LINES BLOCK STYLE
 - CROSSWALK LINES PARALLEL STYLE FOR TINTED CONCRETE CROSSWALKS

GENERAL NOTE

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REV			DATE	DESCRIPTION	DESIGNED BY	JWR		PRELIMINARY PLANS - 30%		DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION		SCALE FOR 22"x34": H: 1"=20'	
					CHECKED BY	RPB					SIGNING AND STRIPING PLAN		FILENAME: S126.dgn	
					DRAWN BY	MMO		10450 Holmes Road			36TH STREET		CONTRACT NO.:	
					CHECKED BY	RPB		Suite 600			SB STA 1097+00 TO STA 1101+00		VOLUME:	
					APPROVED BY	NKS		Kansas City, MO 64131-3471					DRAWING NO.:	
PLOT DATE:			8/25/2019	12:06:42 PM	DATE	08/22/2019	Certificate of Authority: 000856		NOT FOR CONSTRUCTION				SHEET NO.:	
													1	
													S126	
													252	



REV	DATE	DESCRIPTION	DESIGNED BY A.J.H.		<div> <div>PRELIMINARY PLANS - 30%</div> <div>DATE: 08-28-2019</div> <div>  <div> <div>HDR Engineering, Inc.</div> <div> 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856 </div> </div> </div> </div>	<div> <div>KANSAS CITY STREETCAR MAIN STREET EXTENSION</div> <div>SIGNING AND STRIPING PLAN</div> <div>SB STA 1109+00 TO STA 1113+00</div> </div>	<div> <div>SCALE FOR 22"x34": H: 1" = 20'</div> <div>FILENAME: S129.dgn</div> <div>CONTRACT NO.:</div> <div>*****</div> <div>VOLUME: 1</div> <div>DRAWING NO.: S129</div> <div>SHEET NO.: 255</div> </div>
			CHECKED BY M.J.M.				
			DRAWN BY SY				
			CHECKED BY M.J.M.				
			APPROVED BY NKS				
PLOT DATE: 8/25/2019		12:07:15 PM	DATE				



NOTES

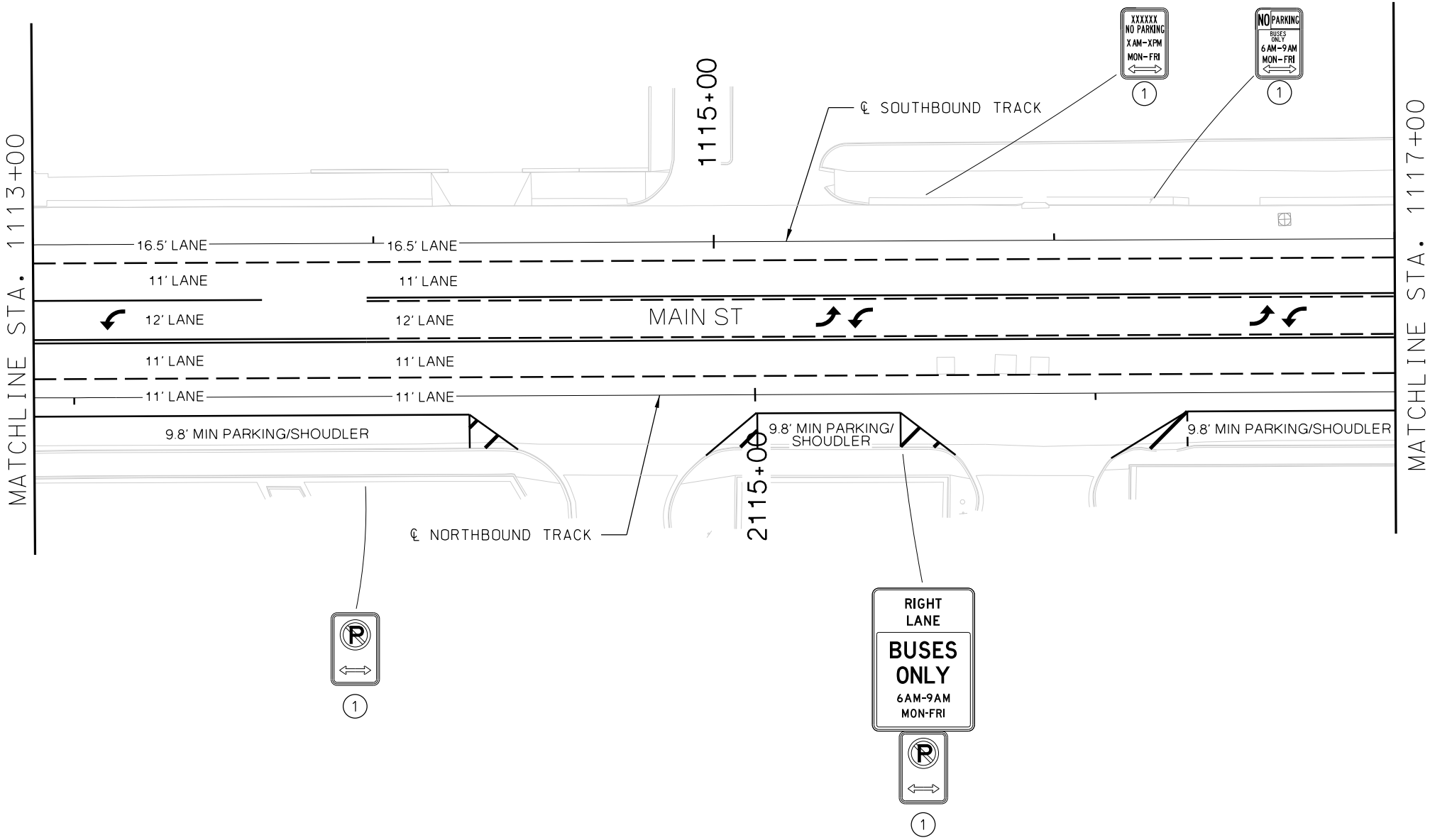
- ① EXISTING SIGN
- ② PROPOSED SIGN
- ③ PROPOSED INTERNALLY ILLUMINATED STREET NAME SIGN

PAVEMENT MARKING KEY

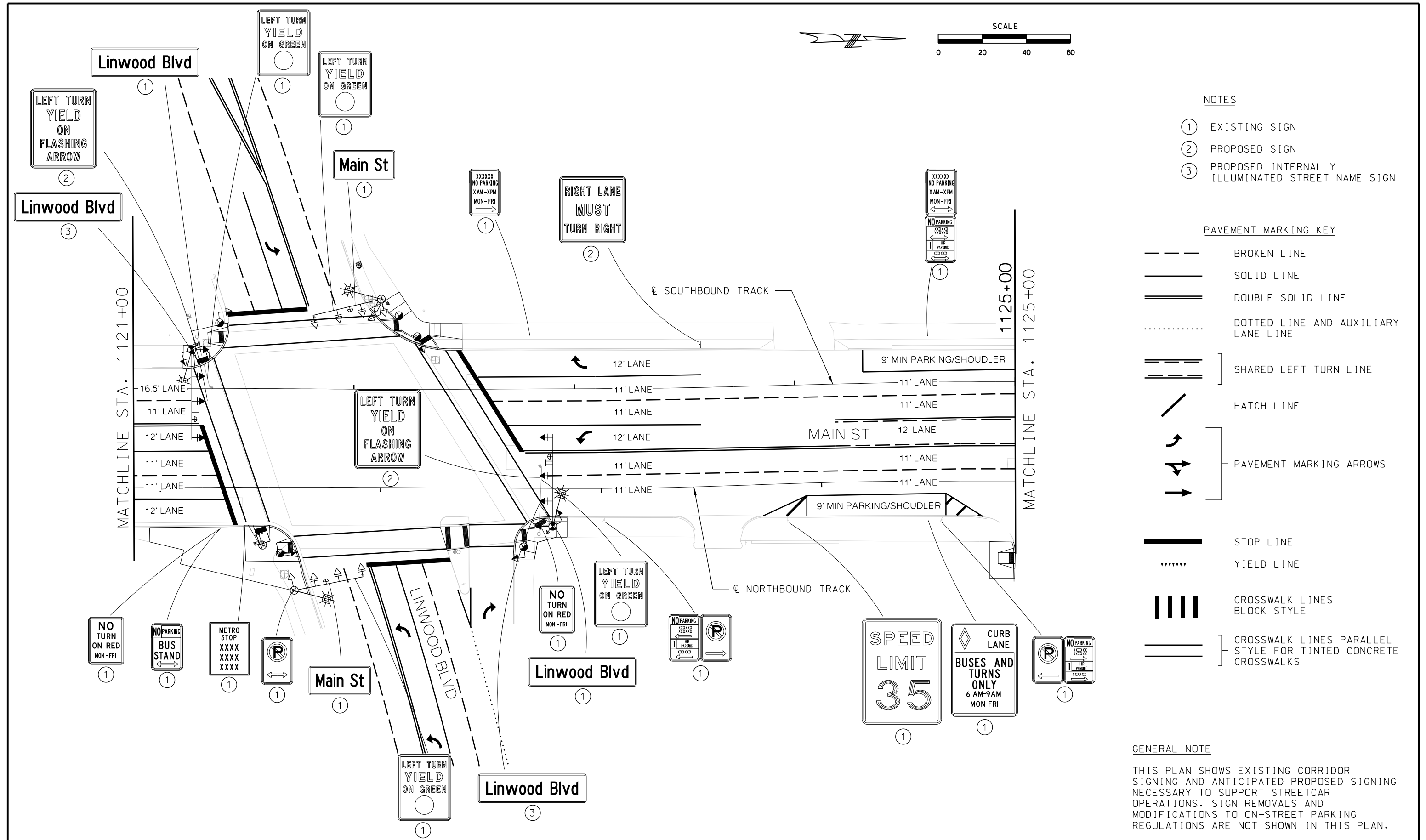
- BROKEN LINE
- SOLID LINE
- DOUBLE SOLID LINE
- DOTTED LINE AND AUXILIARY LANE LINE
- SHARED LEFT TURN LINE
- HATCH LINE
- PAVEMENT MARKING ARROWS
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- YIELD LINE
- CROSSWALK LINES BLOCK STYLE
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GENERAL NOTE

THIS PLAN SHOWS EXISTING CORRIDOR SIGNING AND ANTICIPATED PROPOSED SIGNING NECESSARY TO SUPPORT STREETCAR OPERATIONS. SIGN REMOVALS AND MODIFICATIONS TO ON-STREET PARKING REGULATIONS ARE NOT SHOWN IN THIS PLAN.



REV	DATE	DESCRIPTION	DESIGNED BY	AJH	<div></div>	PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION		SCALE FOR 22"x34": H: 1"=20'	
			CHECKED BY	MJM		<div><div>HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856</div></div>		SIGNING AND STRIPING PLAN SB STA 1113+00 TO STA 1117+00		FILENAME: S130.dgn	
			DRAWN BY	SY						CONTRACT NO.:	
			CHECKED BY	MJM						VOLUME:	
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PLOT DATE: 8/25/2019			DATE: 12-07-27 PM			NOT FOR CONSTRUCTION				SHEET NO.: 256	



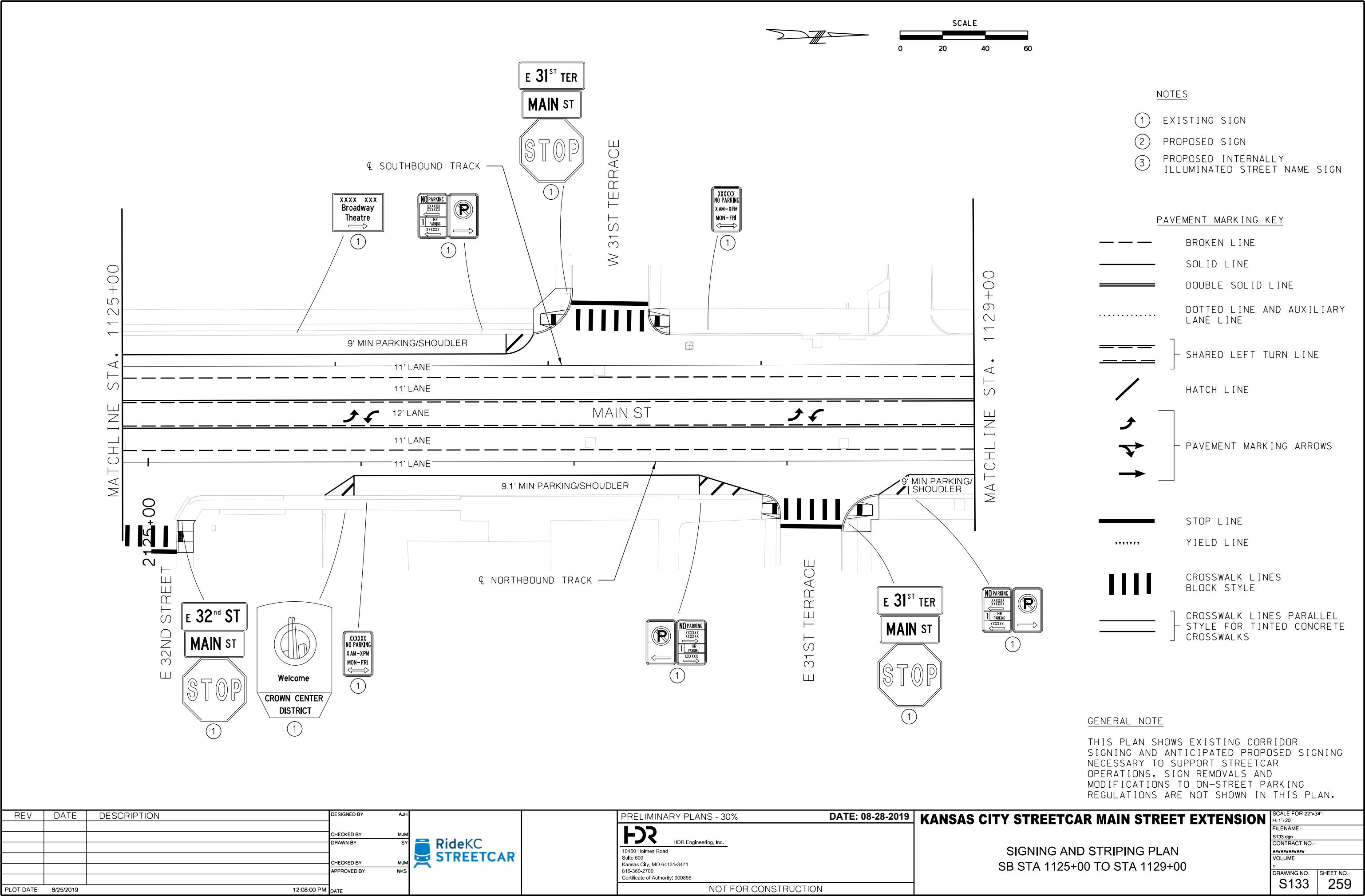
- NOTES
- ① EXISTING SIGN
 - ② PROPOSED SIGN
 - ③ PROPOSED INTERNALLY ILLUMINATED STREET NAME SIGN

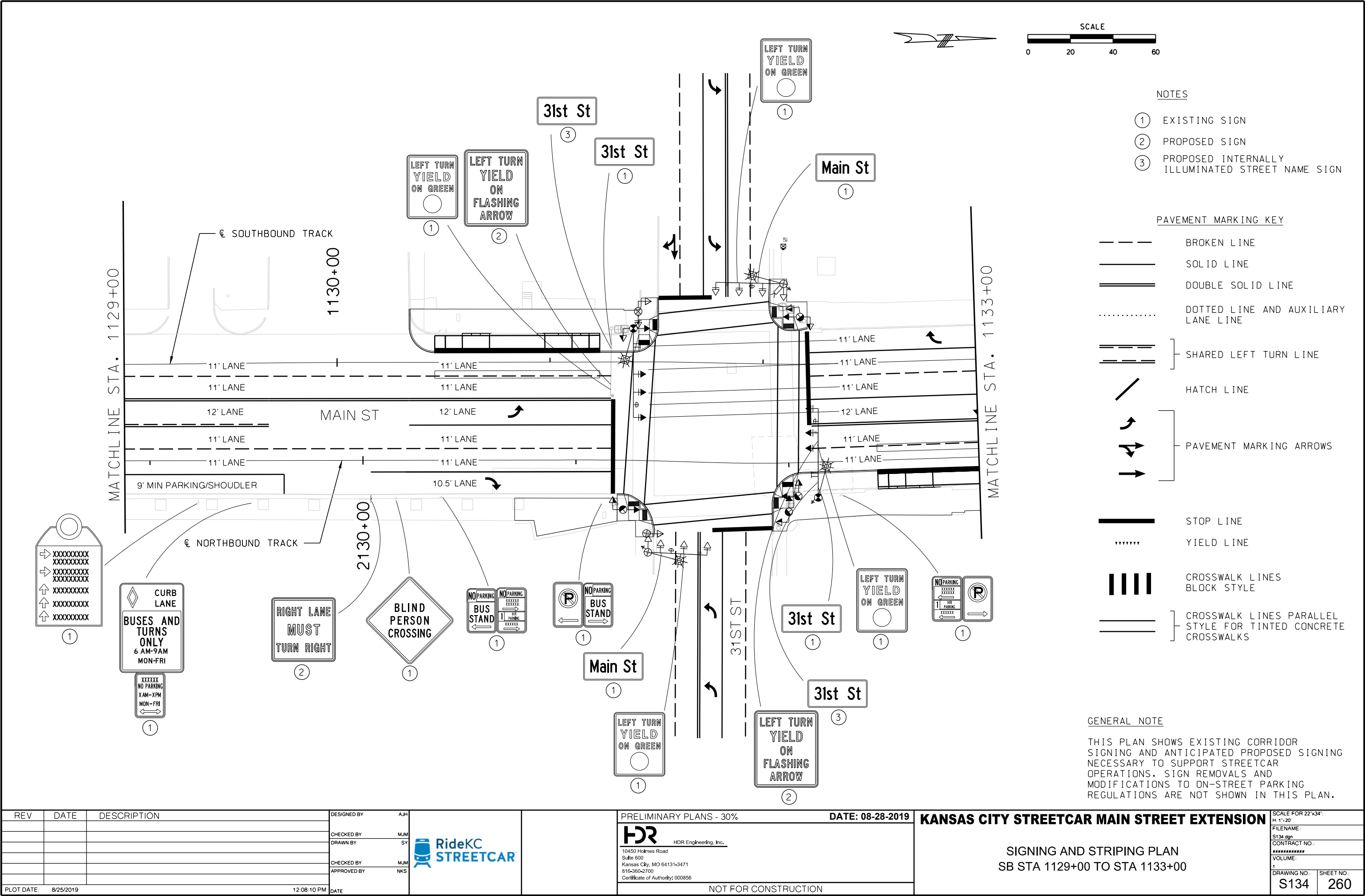
- PAVEMENT MARKING KEY
- BROKEN LINE
 - SOLID LINE
 - DOUBLE SOLID LINE
 - DOTTED LINE AND AUXILIARY LANE LINE
 - SHARED LEFT TURN LINE
 - HATCH LINE
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GENERAL NOTE

THIS PLAN SHOWS EXISTING CORRIDOR SIGNING AND ANTICIPATED PROPOSED SIGNING NECESSARY TO SUPPORT STREETCAR OPERATIONS. SIGN REMOVALS AND MODIFICATIONS TO ON-STREET PARKING REGULATIONS ARE NOT SHOWN IN THIS PLAN.

<table><tr><th>REV</th><th>DATE</th><th>DESCRIPTION</th></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr><tr><td> </td><td> </td><td> </td></tr></table>			REV	DATE	DESCRIPTION																<div>DESIGNED BY AJH</div> <div>CHECKED BY MJM</div> <div>DRAWN BY SY</div> <div>CHECKED BY MJM</div> <div>APPROVED BY NKS</div> <div>PLOT DATE: 8/25/201912:07:49 PMDATE</div>		<div></div>		<div>PRELIMINARY PLANS - 30%DATE: 08-28-2019</div> <div><div>HDR Engineering, Inc.</div><div>10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856</div></div> <div>NOT FOR CONSTRUCTION</div>		<div>KANSAS CITY STREETCAR MAIN STREET EXTENSION</div> <div>SIGNING AND STRIPING PLAN SB STA 1121+00 TO STA 1125+00</div>		<div>SCALE FOR 22"x34": H: 1"=20'</div> <div>FILENAME: S132.dgn</div> <div>CONTRACT NO.: *****</div> <div>VOLUME: 1</div> <div><div>DRAWING NO.: S132</div><div>SHEET NO.: 258</div></div>	
REV	DATE	DESCRIPTION																												





REV	DATE	DESCRIPTION
PLOT DATE: 8/25/2019		12:08:10 PM

DESIGNED BY	AJH
CHECKED BY	MJM
DRAWN BY	SY
CHECKED BY	MJM
APPROVED BY	NKS
DATE	



PRELIMINARY PLANS - 30%
DATE: 08-28-2019

HDR Engineering, Inc.
10450 Holmes Road
Suite 600
Kansas City, MO 64131-3471
816-360-2700
Certificate of Authority: 000856

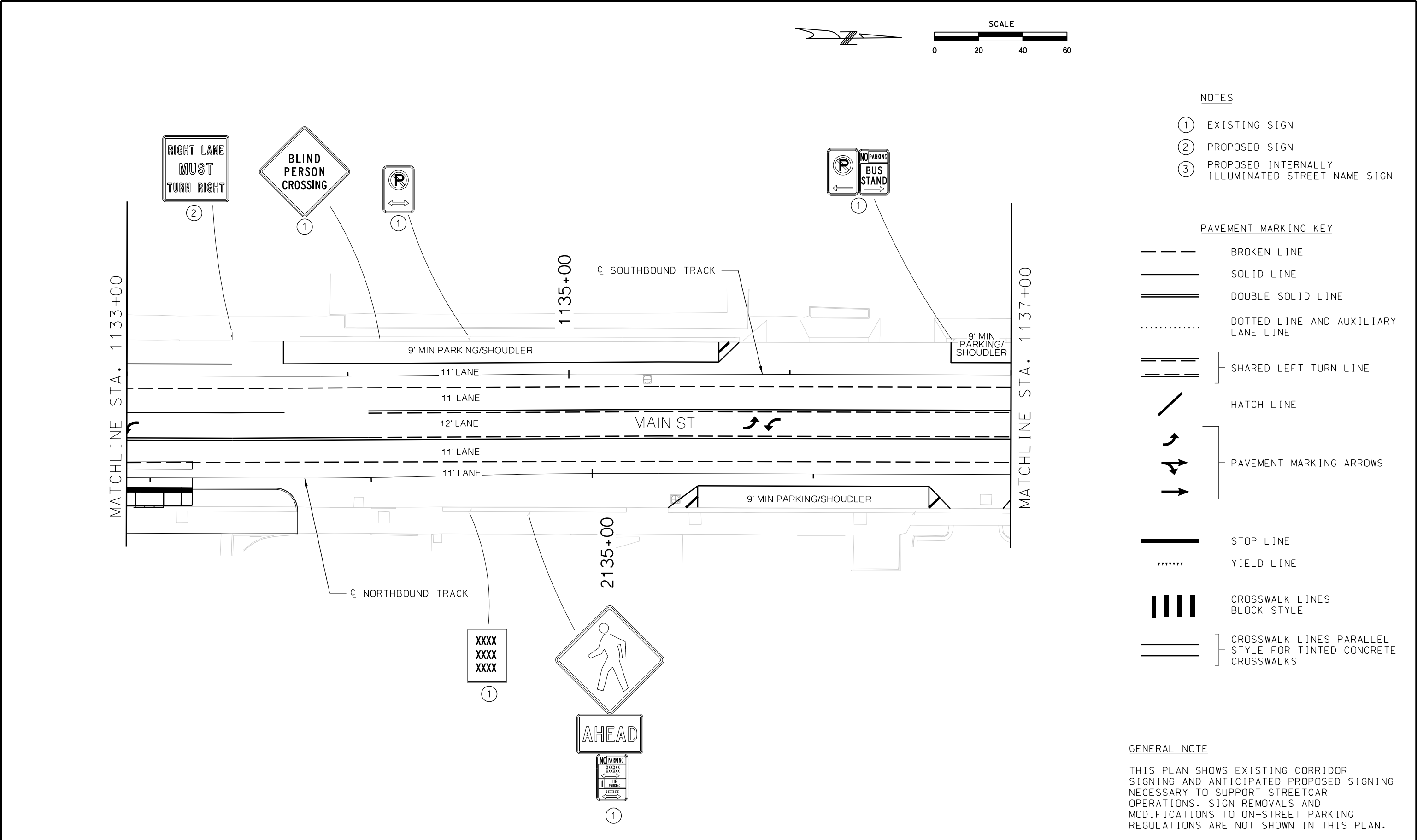
NOT FOR CONSTRUCTION

KANSAS CITY STREETCAR MAIN STREET EXTENSION

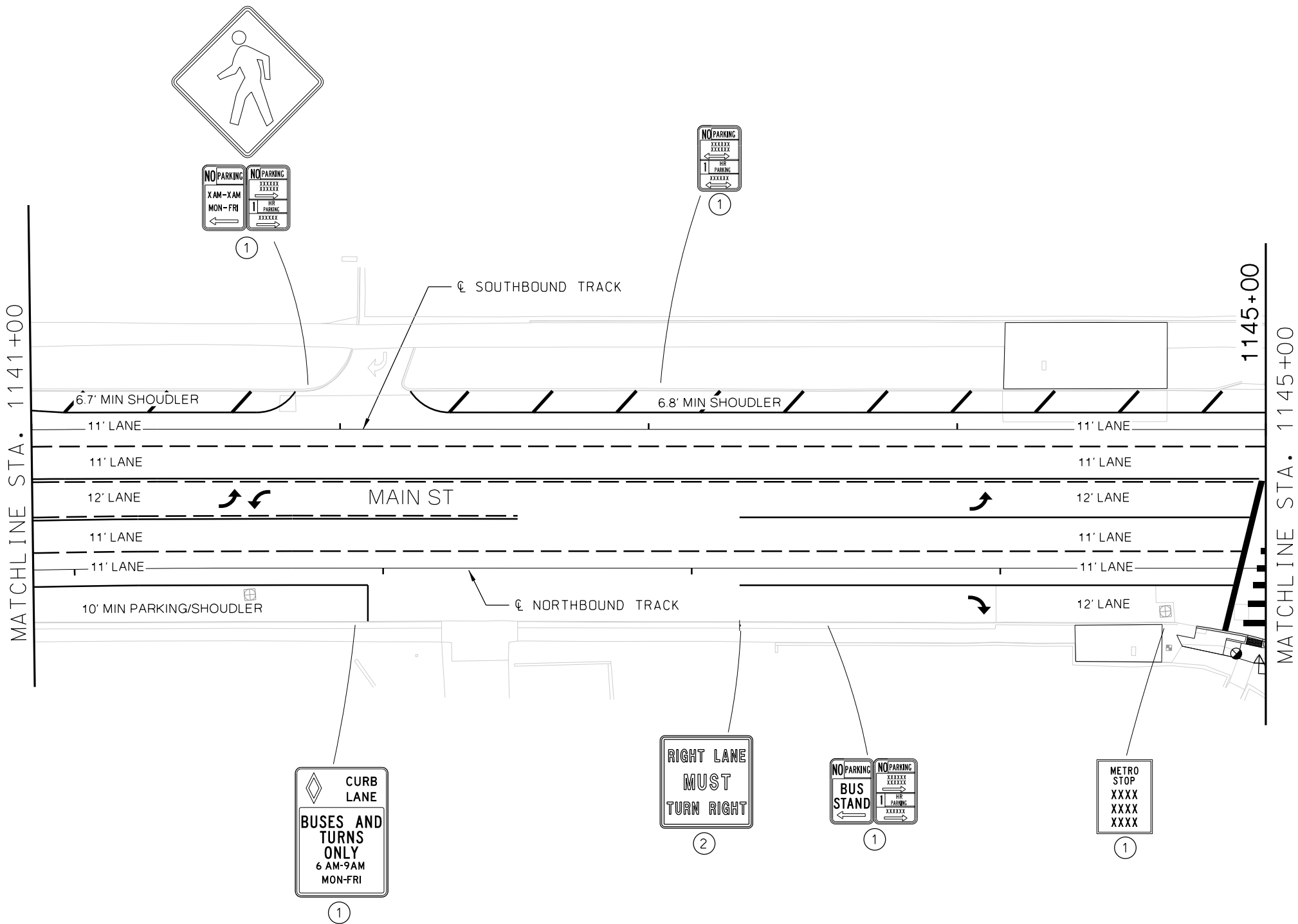
SIGNING AND STRIPING PLAN
SB STA 1129+00 TO STA 1133+00

SCALE FOR 22"x34":
H: 1"=20'
FILENAME:
S134.dgn
CONTRACT NO.:

VOLUME:
1
DRAWING NO.: S134
SHEET NO.: 260



REV	DATE	DESCRIPTION	DESIGNED BY	AJH	PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION
			CHECKED BY	MJM	HDR		SIGNING AND STRIPING PLAN SB STA 1133+00 TO STA 1137+00
			DRAWN BY	SY	HDR Engineering, Inc.		
			CHECKED BY	MJM	10450 Holmes Road		
			APPROVED BY	NKS	Suite 600		
					Kansas City, MO 64131-3471		
PLOT DATE: 8/25/2019			12:08:22 PM		NOT FOR CONSTRUCTION		SCALE FOR 22"x34": H: 1"=20'
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							CONTRACT NO.:
							VOLUME: 1
							DRAWING NO.: S135
							SHEET NO.: 261




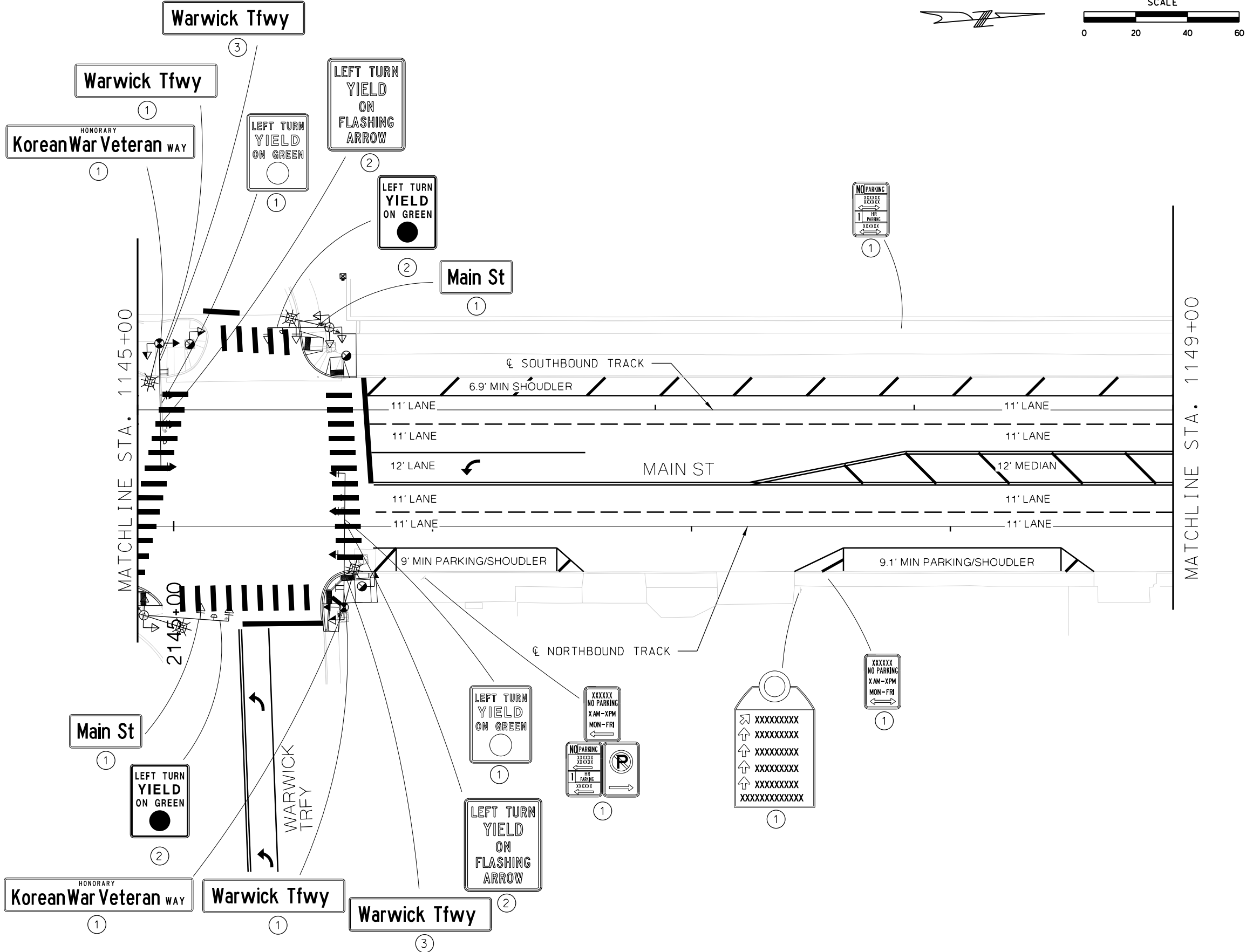
- NOTES
- ① EXISTING SIGN
 - ② PROPOSED SIGN
 - ③ PROPOSED INTERNALLY ILLUMINATED STREET NAME SIGN

- PAVEMENT MARKING KEY
- BROKEN LINE
 - SOLID LINE
 - DOUBLE SOLID LINE
 - DOTTED LINE AND AUXILIARY LANE LINE
 - SHARED LEFT TURN LINE
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GENERAL NOTE

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REV	DATE	DESCRIPTION	DESIGNED BY	AJH				PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SCALE FOR 22"x34": H: 1"=20'			
			CHECKED BY	MJM				 <div>HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856</div>	NOT FOR CONSTRUCTION		SIGNING AND STRIPING PLAN SB STA 1141+00 TO STA 1145+00		FILENAME: S137.dgn	
			DRAWN BY	SY							CONTRACT NO.:			
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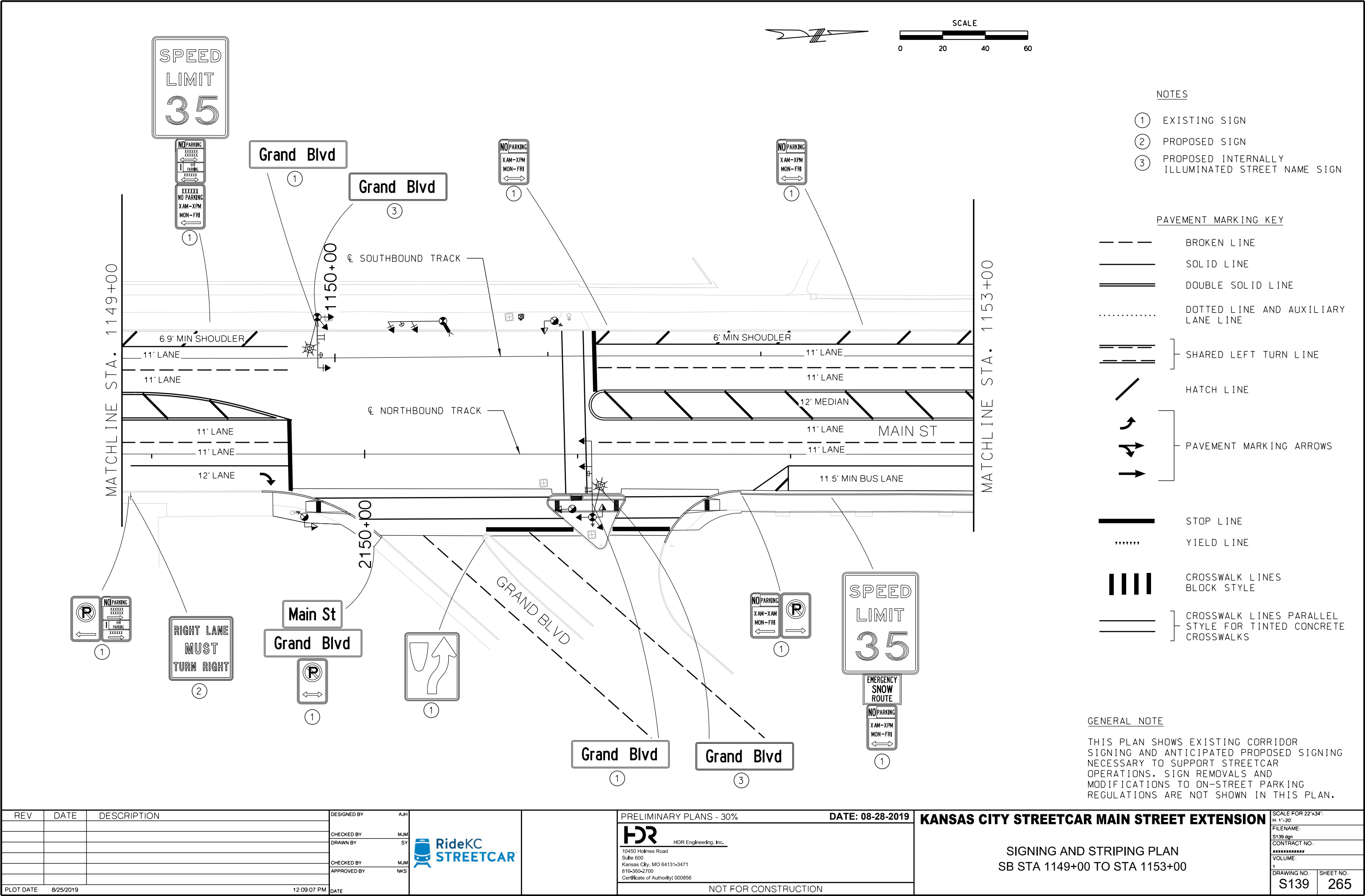
- NOTES
- ① EXISTING SIGN
 - ② PROPOSED SIGN
 - ③ PROPOSED INTERNALLY ILLUMINATED STREET NAME SIGN

- PAVEMENT MARKING KEY
- BROKEN LINE
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REV	DATE	DESCRIPTION	DESIGNED BY	AJH	PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SCALE FOR 22"x34": H: 1"=20'
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			CHECKED BY	MJM	Suite 600			VOLUME: 1
			APPROVED BY	NKS	Kansas City, MO 64131-3471			DRAWING NO.:
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					Certificate of Authority: 000856			
PLOT DATE: 8/25/2019			DATE		NOT FOR CONSTRUCTION			S138 264



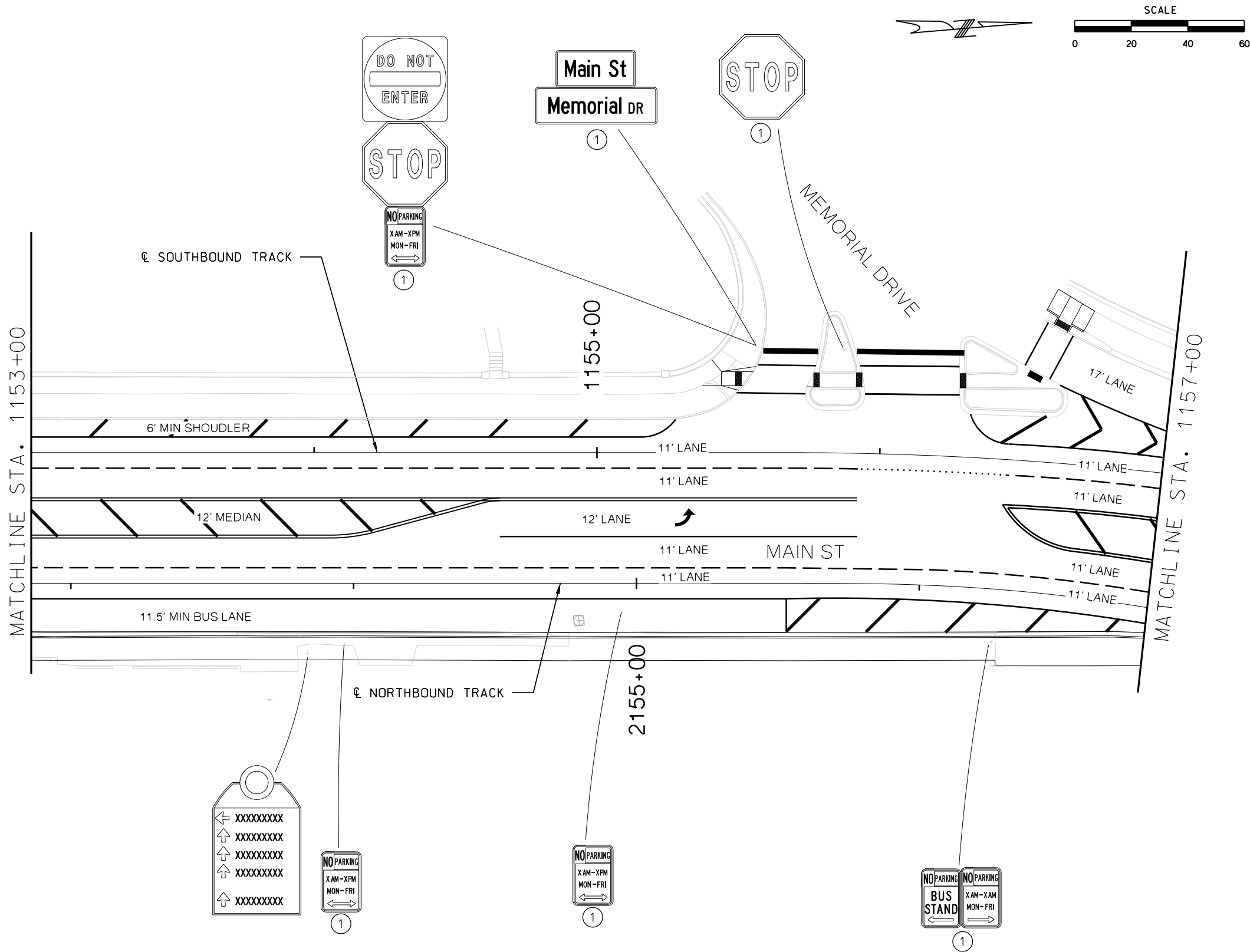
REV	DATE	DESCRIPTION

DESIGNED BY	AJH
CHECKED BY	MJM
DRAWN BY	SY
CHECKED BY	MJM
APPROVED BY	NKS



PRELIMINARY PLANS - 30%	DATE: 08-28-2019
HDR HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	
NOT FOR CONSTRUCTION	

KANSAS CITY STREETCAR MAIN STREET EXTENSION		SCALE FOR 22"x34": H: 1"=20'
SIGNING AND STRIPING PLAN SB STA 1149+00 TO STA 1153+00		FILENAME: S139.dgn
		CONTRACT NO.:
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DRAWING NO.:	SHEET NO.:	
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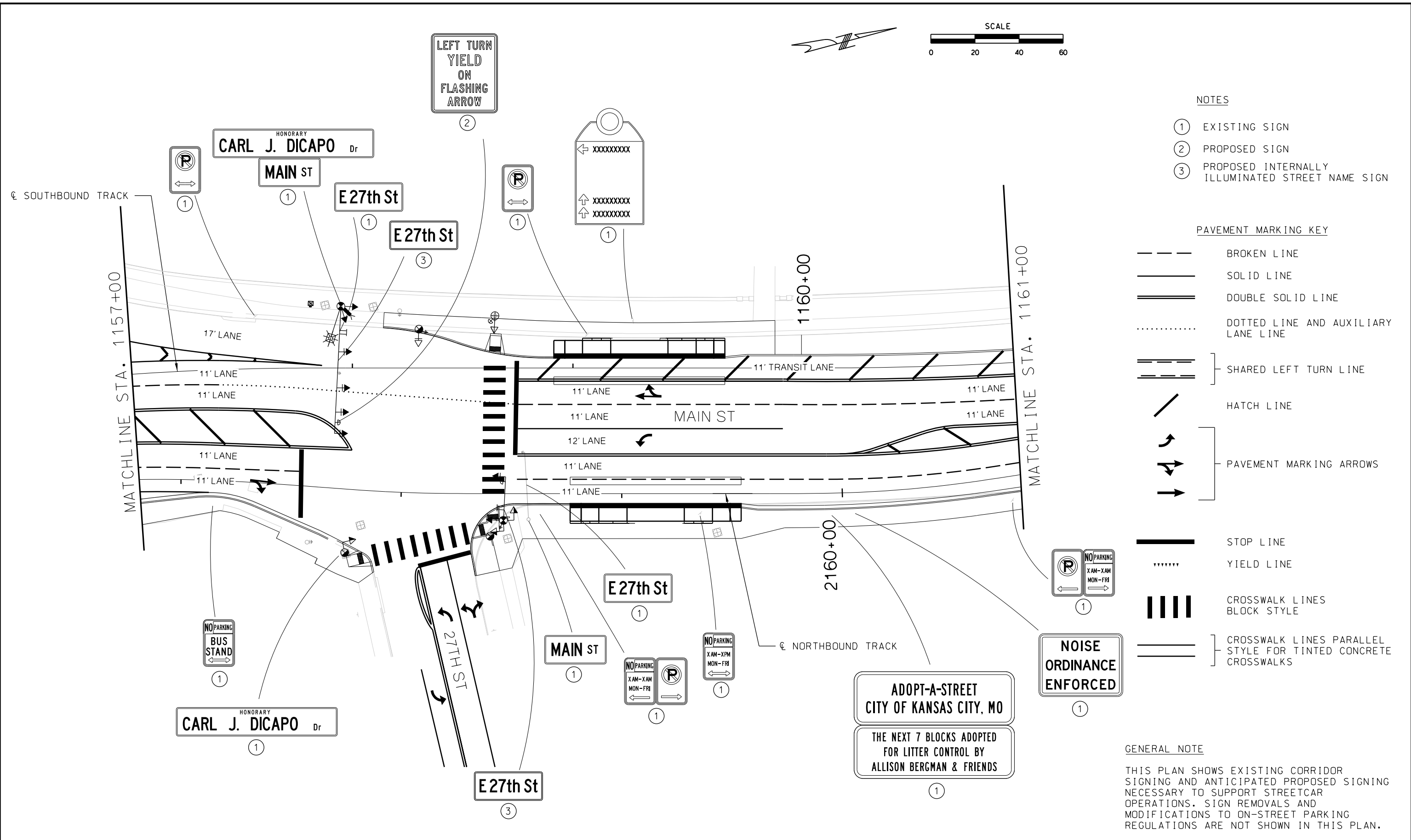
- NOTES
- ① EXISTING SIGN
 - ② PROPOSED SIGN
 - ③ PROPOSED INTERNALLY ILLUMINATED STREET NAME SIGN

- PAVEMENT MARKING KEY
- BROKEN LINE
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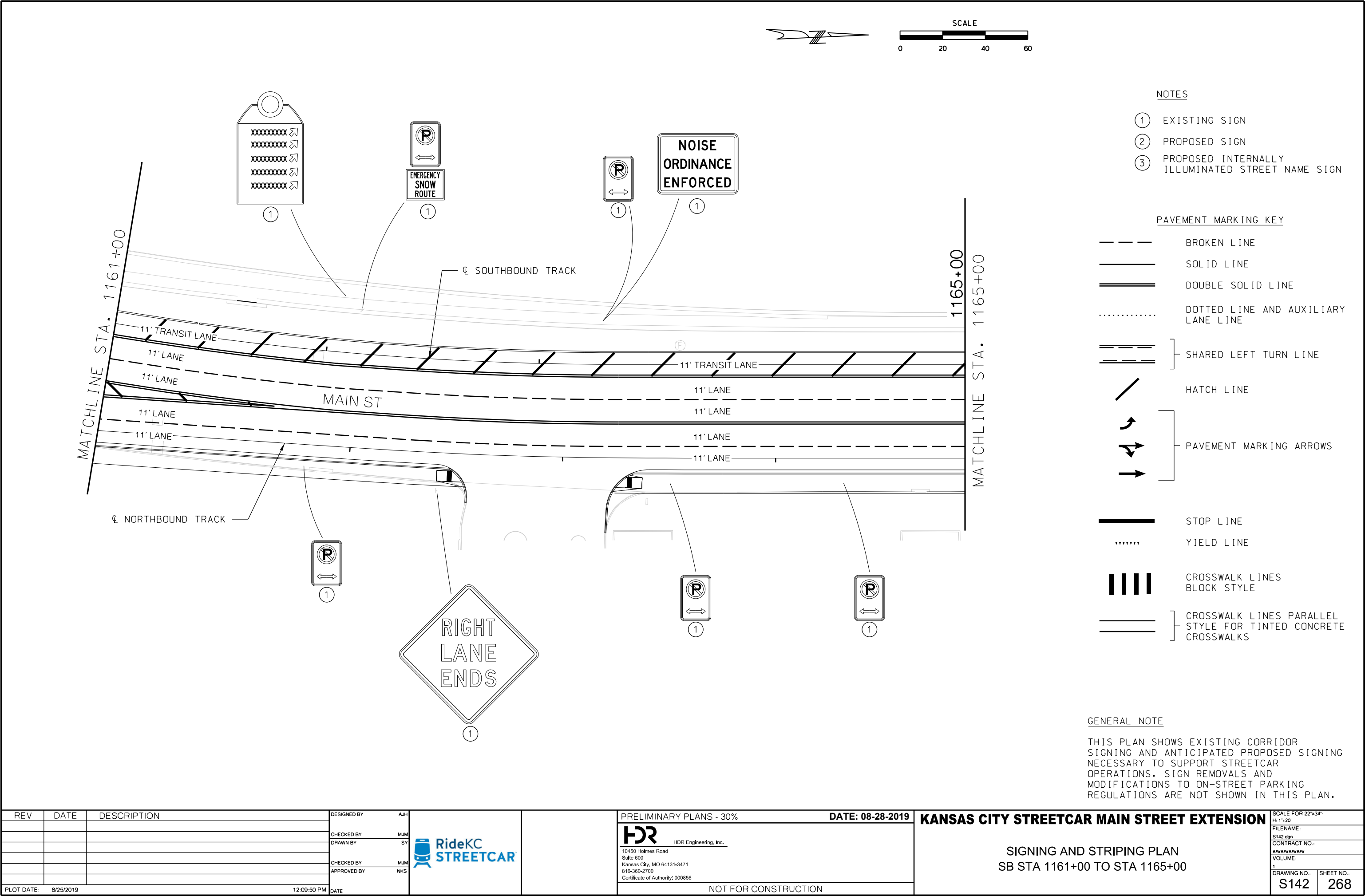
GENERAL NOTE

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REV	DATE	DESCRIPTION	DESIGNED BY	AJH		PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SCALE FOR 22"x34": H: 1"=20'	
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			DRAWN BY	SY					CONTRACT NO.:	
			CHECKED BY	MJM					VOLUME:	1
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PLOT DATE: 8/25/2019			12:09:19 PM		DATE	NOT FOR CONSTRUCTION		SIGNING AND STRIPING PLAN MEMORIAL DRIVE SB STA 1153+00 TO STA 1157+00		



REV			DATE		DESCRIPTION		DESIGNED BY		AJH		PRELIMINARY PLANS - 30%		DATE: 08-28-2019		KANSAS CITY STREETCAR MAIN STREET EXTENSION		SCALE FOR 22"x34":	
							CHECKED BY		MJM		HDR				SIGNING AND STRIPING PLAN		H: 1"=20'	
							DRAWN BY		SY		10450 Holmes Road				27TH STREET		S141.dgn	
							CHECKED BY		MJM		Suite 600				SB STA 1157+00 TO STA 1161+00		CONTRACT NO.:	
							APPROVED BY		NKS		Kansas City, MO 64131-3471						VOLUME:	
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PLOT DATE:			8/25/2019								Certificate of Authority: 000856						DRAWING NO.:	
											NOT FOR CONSTRUCTION						SHEET NO.:	
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																	267	



REV	DATE	DESCRIPTION	DESIGNED BY	AJH	PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SCALE FOR 22"x34": H: 1"=20'
			CHECKED BY	MJM	HDR		SIGNING AND STRIPING PLAN SB STA 1161+00 TO STA 1165+00	FILENAME: S142.dgn
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			APPROVED BY	NKS	Kansas City, MO 64131-3471			1
					816-360-2700			DRAWING NO.:
PLOT DATE: 8/25/2019			DATE		NOT FOR CONSTRUCTION			SHEET NO.:
								S142 268



NOTES

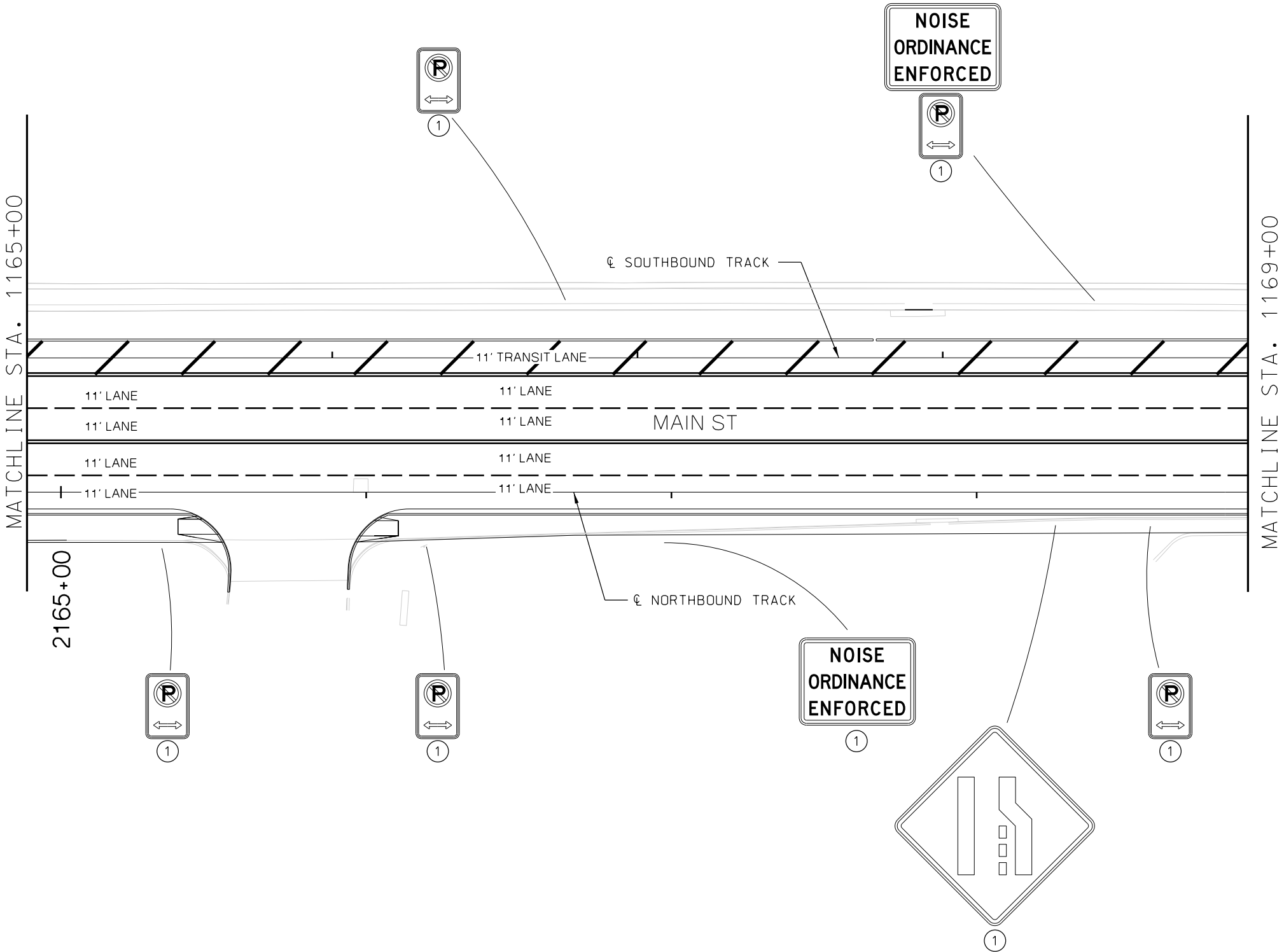
- ① EXISTING SIGN
- ② PROPOSED SIGN
- ③ PROPOSED INTERNALLY ILLUMINATED STREET NAME SIGN


PAVEMENT MARKING KEY

- BROKEN LINE
- SOLID LINE
- DOUBLE SOLID LINE
- DOTTED LINE AND AUXILIARY LANE LINE
- SHARED LEFT TURN LINE
- HATCH LINE
- PAVEMENT MARKING ARROWS
- STOP LINE
- YIELD LINE
- CROSSWALK LINES BLOCK STYLE
- CROSSWALK LINES PARALLEL STYLE FOR TINTED CONCRETE CROSSWALKS

GENERAL NOTE

THIS PLAN SHOWS EXISTING CORRIDOR SIGNING AND ANTICIPATED PROPOSED SIGNING NECESSARY TO SUPPORT STREETCAR OPERATIONS. SIGN REMOVALS AND MODIFICATIONS TO ON-STREET PARKING REGULATIONS ARE NOT SHOWN IN THIS PLAN.



REV	DATE	DESCRIPTION	DESIGNED BY	AJH		PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SCALE FOR 22"x34": H: 1"=20'		
			CHECKED BY	MJM		 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	NOT FOR CONSTRUCTION		FILENAME: S143.dgn		
			DRAWN BY	SY					CONTRACT NO.:		
			CHECKED BY	MJM					VOLUME:		
			APPROVED BY	NKS					DRAWING NO.:		
PLOT DATE: 8/25/2019			DATE						SHEET NO.:		
									S143 269		

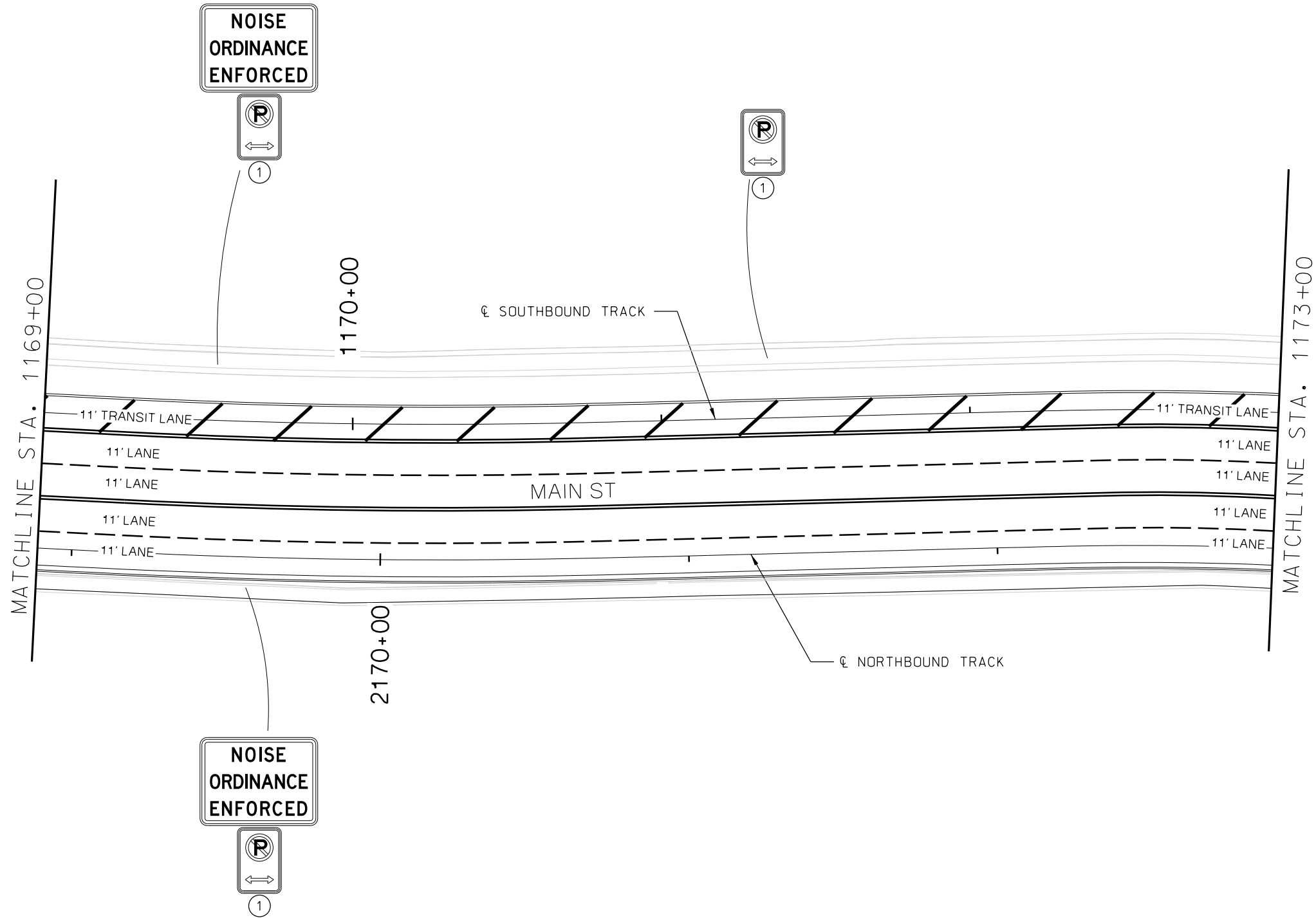


- NOTES
- ① EXISTING SIGN
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REV	DATE	DESCRIPTION	DESIGNED BY	AJH	PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SCALE FOR 22"x34": H: 1"=20'
			CHECKED BY	MJM	HDR		SIGNING AND STRIPING PLAN SB STA 1169+00 TO STA 1173+00	FILENAME: S144.dgn
			DRAWN BY	SY	10450 Holmes Road			CONTRACT NO.:
			CHECKED BY	MJM	Suite 600			VOLUME:
			APPROVED BY	NKS	Kansas City, MO 64131-3471			1
					816-360-2700			DRAWING NO.: S144
PLOT DATE: 8/25/2019			DATE: 12:10:23 PM		NOT FOR CONSTRUCTION			SHEET NO.: 270



NOTES

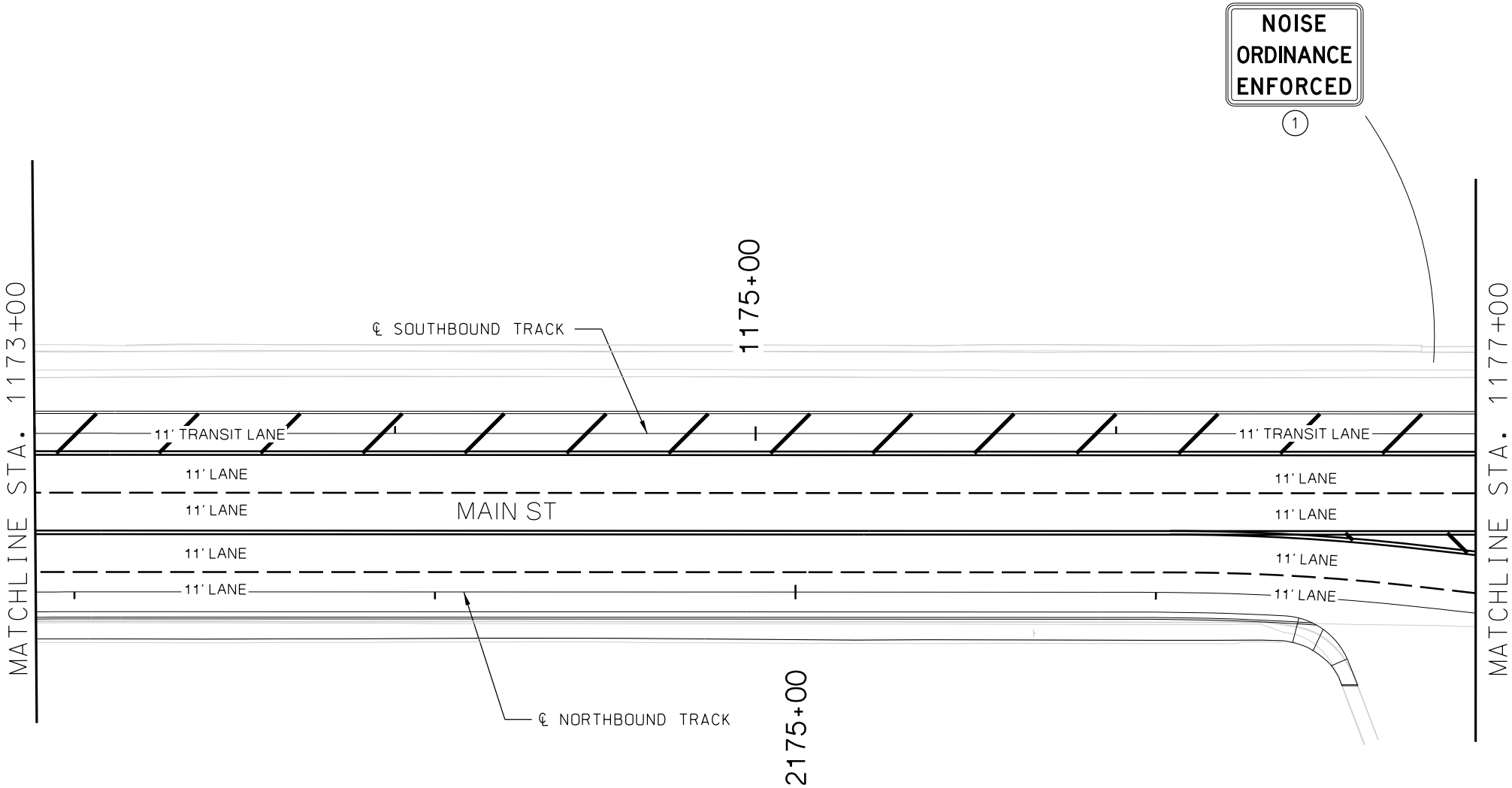
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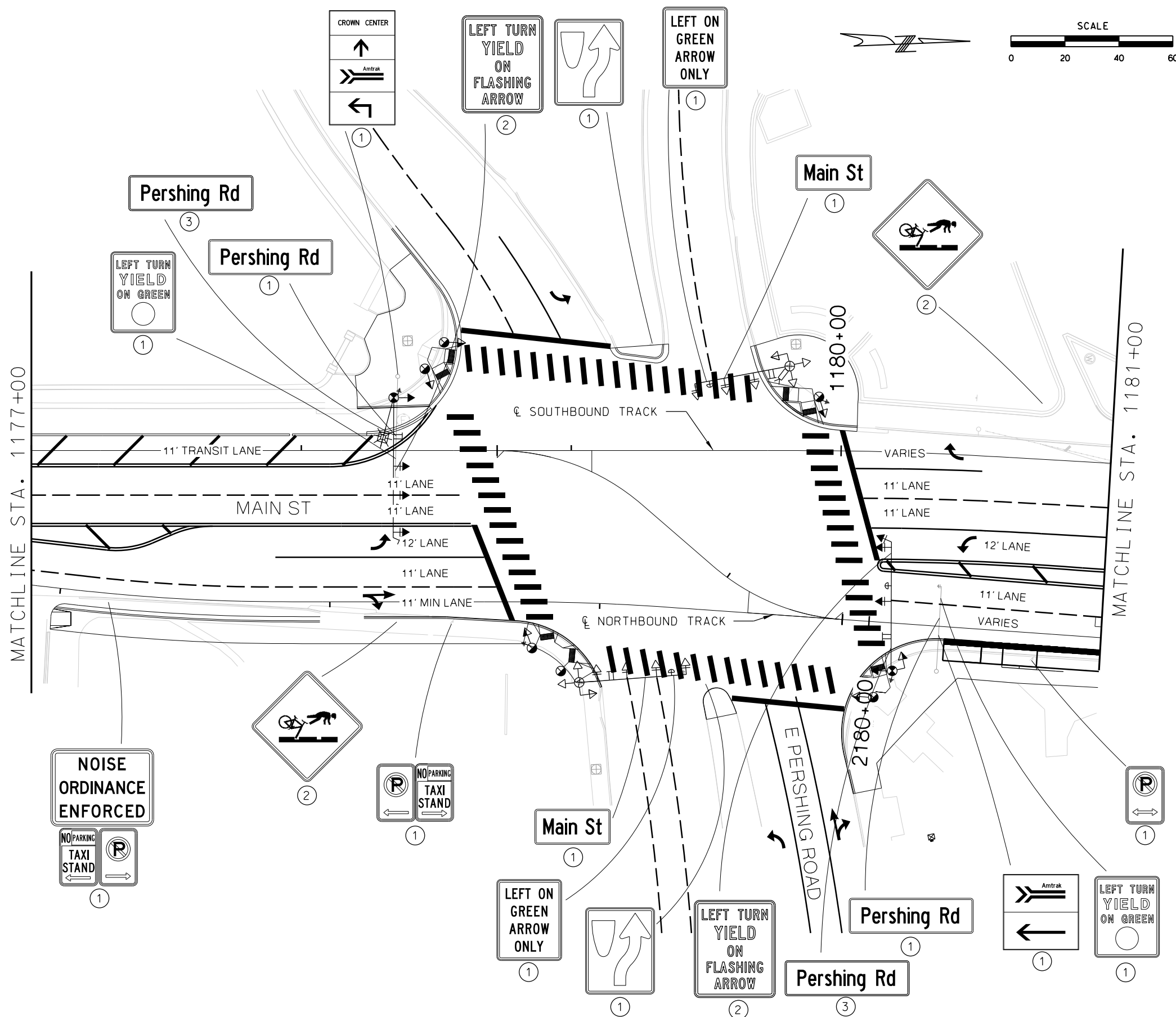
GENERAL NOTE

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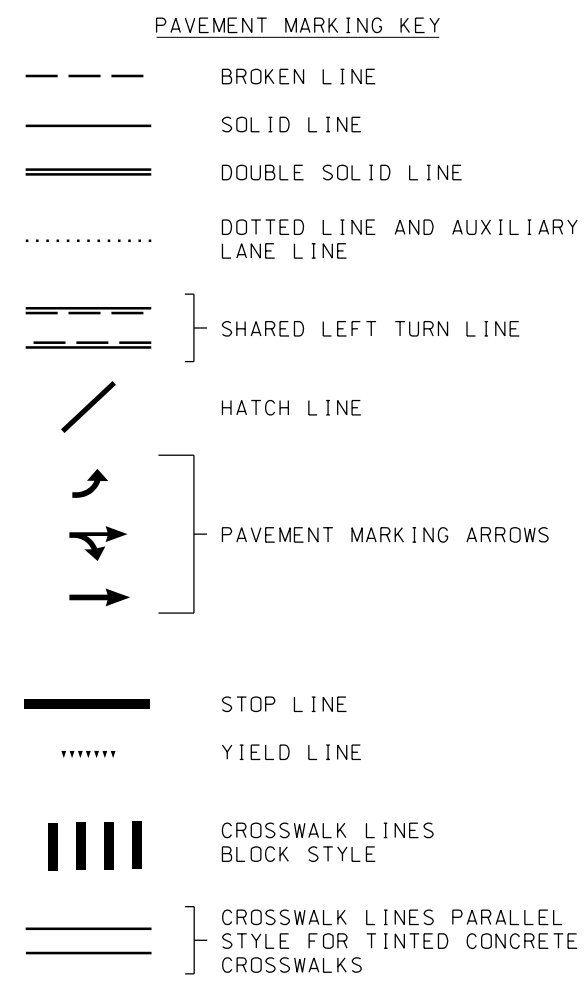


REV	DATE	DESCRIPTION	DESIGNED BY	AJH				PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SCALE FOR 22"x34": H: 1"=20'		
			CHECKED BY	MJM				 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	NOT FOR CONSTRUCTION			FILENAME: S145.dgn	
			DRAWN BY	SY								CONTRACT NO.:	
			CHECKED BY	MJM								VOLUME: 1	
			APPROVED BY	NKS								DRAWING NO.:	SHEET NO.:
PLOT DATE: 8/25/2019			12:10:39 PM		DATE				S145	271			

SIGNING AND STRIPING PLAN
SB STA 1173+00 TO STA 1177+00



- NOTES
- ① EXISTING SIGN
 - ② PROPOSED SIGN
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GENERAL NOTE

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REV	DATE	DESCRIPTION	DESIGNED BY	AJH		PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SIGNING AND STRIPING PLAN SB STA 1177+00 TO STA 1181+00	SCALE FOR 22"x34": H: 1"=20'
			CHECKED BY	MJM		 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	NOT FOR CONSTRUCTION			FILENAME: S146.dgn
			DRAWN BY	SY						CONTRACT NO.:
			CHECKED BY	MJM						VOLUME:
			APPROVED BY	NKS						1
PLOT DATE: 8/25/2019		12:10:57 PM	DATE					DRAWING NO.: S146	SHEET NO.: 272	



NOTES

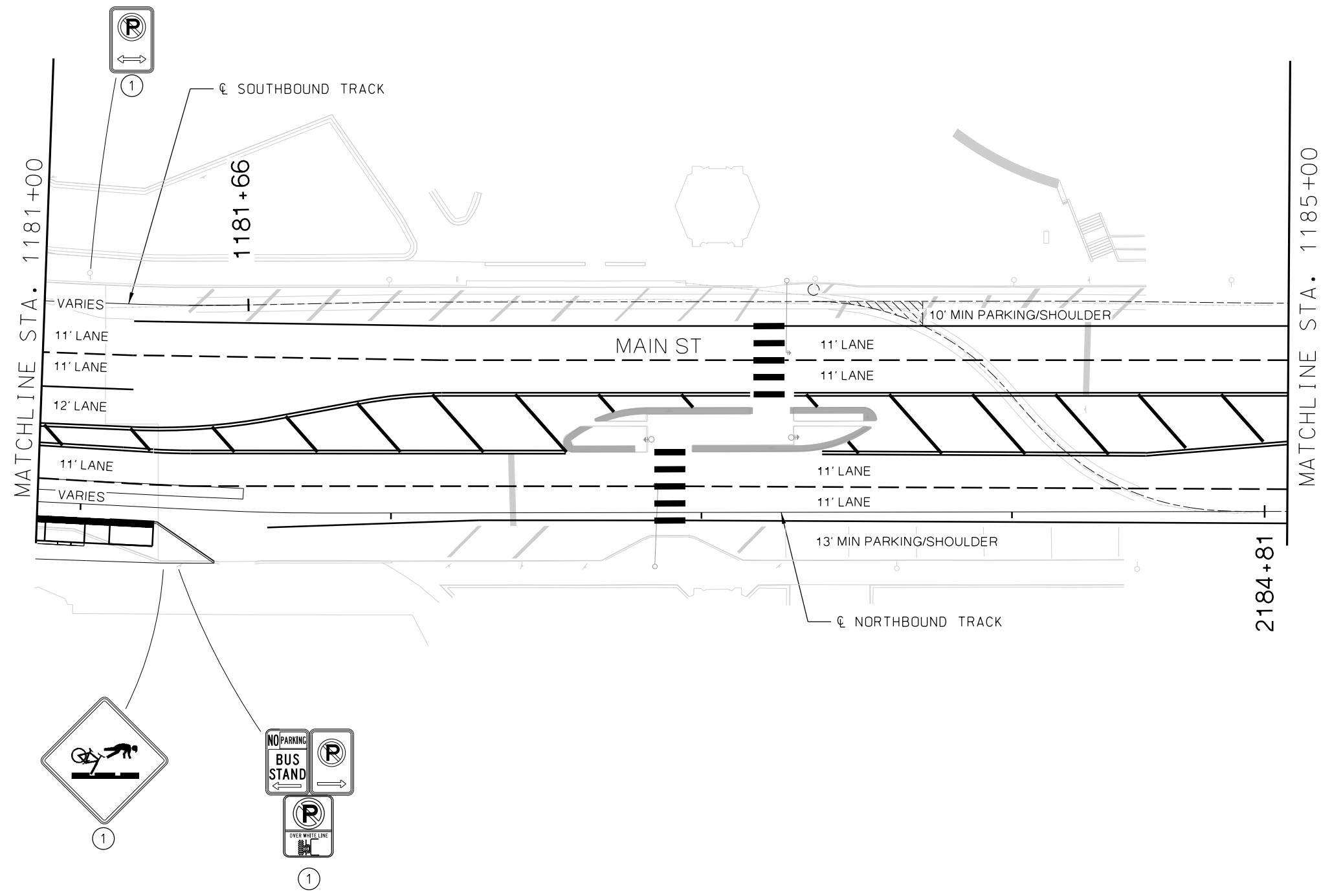
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REV			DATE		DESCRIPTION		DESIGNED BY		A.J.H.		PRELIMINARY PLANS - 30%		DATE: 08-28-2019		KANSAS CITY STREETCAR MAIN STREET EXTENSION		SCALE FOR 22"x34": H: 1"=20'	
							CHECKED BY		M.J.M.		HDR				SIGNING AND STRIPING PLAN		FILENAME: S147.dgn	
							DRAWN BY		S.V.		10450 Holmes Road				SB STA 1181+00 TO STA 1185+00		CONTRACT NO.:	
											Suite 600						VOLUME:	
							CHECKED BY		M.J.M.		Kansas City, MO 64131-3471						1	
							APPROVED BY		N.K.S.		816-360-2700						DRAWING NO.:	
											Certificate of Authority: 000856						SHEET NO.:	
PLOT DATE:			8/25/2019		12:11:15 PM		DATE				NOT FOR CONSTRUCTION						147	
																	273	




NOTES

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- ③ PROPOSED INTERNALLY ILLUMINATED STREET NAME SIGN

PAVEMENT MARKING KEY


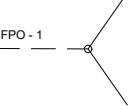




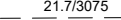
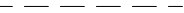








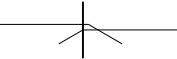








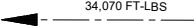

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REV	DATE	DESCRIPTION	DESIGNED BY	JWR		PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SCALE FOR 22"x34": H: 1"= 20'	
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			DRAWN BY	MMO					CONTRACT NO.:	
			CHECKED BY	RPB					VOLUME: 1	
			APPROVED BY	NKS					DRAWING NO.:	SHEET NO.:
									S148	274
PLOT DATE: 8/25/2019 12:11:32 PM			DATE	08/22/2019	NOT FOR CONSTRUCTION					

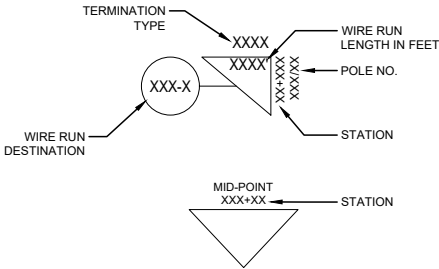
SIGNING AND STRIPING PLAN
SB STA 1185+00 TO END

SYMBOLS

	SPAN LENGTH IN FEET BETWEEN POLES / SUPPORTS		TYPICAL ASSEMBLY ALLOCATION
	DISTANCE IN FEET BETWEEN CROSS CONTACT CLAMP AND TRACK POINT OF SWITCH		CROSS CONTACT WIRE BRIDGE
	STAGGER / OFFSET, DIRECTION FROM TRACK CENTERLINE, VALUES IN INCHES		FLOATING/ UNREGISTERED CONTACT WIRE
	HEIGHT (FT) / TENSION (LBS)		SPAN WIRE
	SPRING TENSIONER		BRACKET ARM GUY WIRE
	BUILDING ATTACHMENT		CL TRACK
	EXISTING POLE		CONTACT WIRE JUMPER ASSEMBLY (JRA-1)
	NEW POLE		JUMPER ASSEMBLY (JRA-2) (EQUALIZER FEEDER TAP)
	POINT OVERLAP		FEEDER TAP FROM OCS POLE TO CONTACT WIRE
	OVERLAP BRACKET ARM		BULL RING AND SPAN WIRES
	BRACKET ARM		FEEDING POINT
	CROSS SPAN		FLEXIBLE HANGER
	SECTION INSULATOR		
	MOMENT ARROW - POLE BENDING MOMENT		
	CONTACT WIRE TERMINATION		



SPAN SPACER



ABBREVIATIONS:

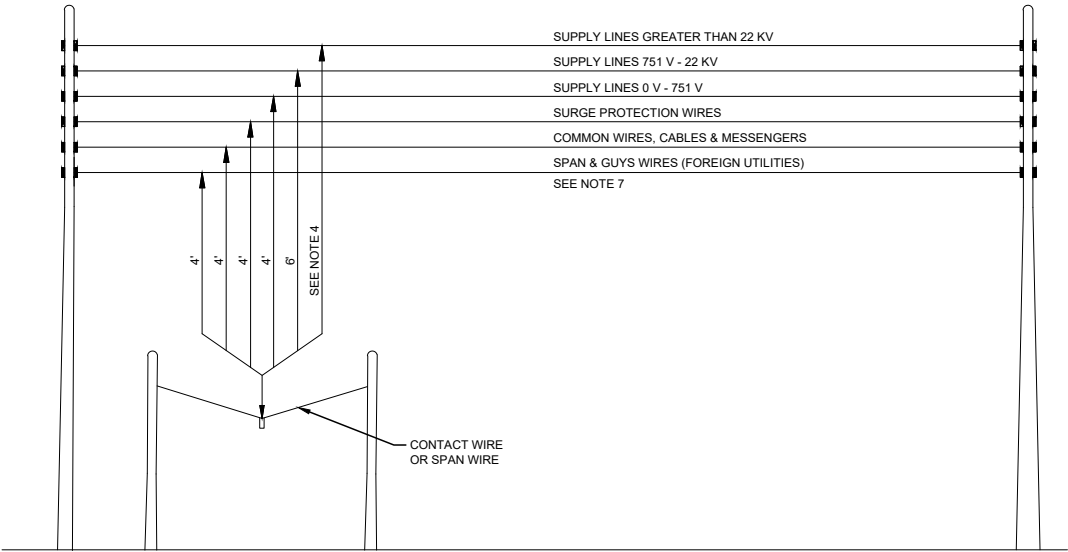
ACI	AMERICAN CONCRETE INSTITUTE	IN	INCHES	SB	SOUTHBOUND
ADJ.	ADJACENT	INCU	INCHES CUBED	SBT	SOUTHBOUND TRACK
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	KC	KANSAS CITY	SCHED / SCH	SCHEDULE
A/R	AS REQUIRED	KCMIL	THOUSAND CIRCULAR MILS	SHT.	SHEET
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	KSI	KIPS PER SQUARE INCH	SPTA	SPRING TENSIONER ASSEMBLY
ATM	ALONG TRACK MOVEMENT	KV	KILOVOLT	SQ	SQUARE
AWG	AMERICAN WIRE GAUGE	LBS	POUNDS	SS	STAINLESS STEEL
AWS	AMERICAN WELDING SOCIETY	MAX.	MAXIMUM	STA	STATIONING
CAT	CATALOG	MIN.	MINIMUM	STL	STEEL
CL / CL	CENTERLINE	MM	MILLIMETER	SW	SWITCH
CU	COPPER	MOD.	MODIFIED	TEMP.	TEMPERATURE
CW	CONTACT WIRE	MP	MILEPOST	T/F	TOP OF FOUNDATION
DIA.	DIAMETER	MPH	MILES PER HOUR	TOR	TOP OF RAIL
DIM.	DIMENSION	MW	MESSANGER WIRE	TSW	TRACK SWITCH
DWG.	DRAWING	N/A	NOT APPLICABLE	TYP.	TYPICAL
EPR	ETHYLENE PROPYLENE RUBBER	NB	NORTHBOUND	UNC	COARSE UNIFIED THREADS
°F	DEGREES FAHRENHEIT	NBT	NORTHBOUND TRACK	V	VOLTS
FT	FOOT, FEET	NO.	NUMBER	VERT.	VERTICAL
GALV.	GALVANIZED	NOM.	NOMINAL	W/	WITH
GR	GRADE	NTS	NOT TO SCALE	@	AT
HD	HEAD	OCS	OVERHEAD CONTACT SYSTEM	&	AND
HDG	HOT-DIP GALVANIZED	OCSS	OCS SUPPORT	Ø	DIAMETER
HEX.	HEXAGONAL	O.D.	OUTSIDE DIAMETER	'	FOOT, FEET
HORIZ	HORIZONTAL	PL	PLATE	"	INCHES
HSS	HOLLOW STRUCTURAL SECTION	PO	PULLOFF		
HT	HEIGHT	PSI	POUNDS PER SQUARE INCH		
HR	HANGER	QTY.	QUANTITY		
HRL	HIGH RAIL LINE	REINF.	REINFORCED		
I.D.	INSIDE DIAMETER	REQ'D	REQUIRED		
IEEE	INSTITUTE OF ELECTRICAL & ELECTRONICS ENGINEERS	RTRC	REINFORCED THERMOSETTING RESIN CONDUIT		
		R/W / ROW	RIGHT OF WAY		

REV	DATE	DESCRIPTION	DESIGNED BY	PFW		PRELIMINARY PLANS – 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	OVERHEAD CONTACT SYSTEM GENERAL SYMBOLS AND ABBREVIATIONS	SCALE FOR 22"x34": NO SCALE	
			CHECKED BY	DSK						FILENAME: Y002.dwg	
			DRAWN BY	DSK						CONTRACT NO.: CON0077290	
			CHECKED BY	PFW						VOLUME: 1	
			APPROVED BY	NKS						DRAWING NO.: SHEET NO.:	
										Y002 276	
PLOT DATE: 8/27/2019			2:18:35 PM		DATE	8/28/2019	NOT FOR CONSTRUCTION				

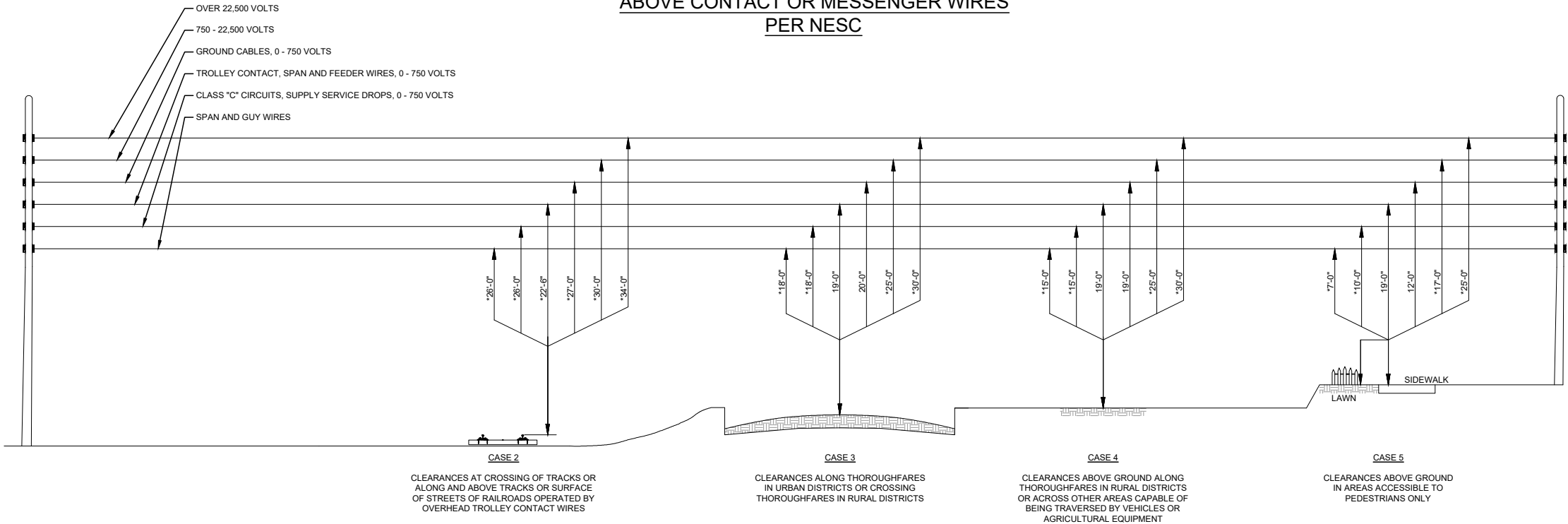
CONDUCTORS	CONTACT WIRE	SPAN WIRE				STITCH ROPE	HANGER WIRE	FEED TAP WIRE	FLEXIBLE HANGER WIRE
SIZE	350 KCMIL	1/4	5/16	3/8	1/2	11 MM	4 MM	250 KCMIL	3/16
MATERIAL	BRONZE (80)	GALVANIZED STEEL	GALVANIZED STEEL	GALVANIZED STEEL	GALVANIZED STEEL	PHILLYSTRAN	STAINLESS STEEL	COPPER	BRONZE
MAKE-UP	SOLID GROOVED TROLLEY WIRE	7 WIRE STRAND	7 WIRE STRAND	7 WIRE STRAND	7 WIRE STRAND	BONDED JACKET TO SYNTHETIC ROPE	SOLID	61 WIRE	7X7 CONCENTRIC STAND CLASS G STAMINA
TYPE	MAGNESIUM COPPER	SIEMENS-MARTIN	UTILITIES GRADE	UTILITIES GRADE	UTILITIES GRADE	HPTG 11200I	---	---	ALLOY 80 BRONZE
STRAND DIAMETER (IN)	N/A	0.080	0.109	0.120	0.165	---	---	---	0.1875
OVERALL DIAMETER (IN)	0620	0.250	0.3125	0.375	0.500	0.433	0.157 (4mm)	0.576	0.1875
CROSS SECTIONAL AREA (IN²)	0.2758	0.490	0.766	0.110	0.196	0.147	0.019	0.235	---
ASTM STANDARD	B9	A475	A475	A475	A475	---	---	B8, B33	B173
INSULATION	---	---	---	---	---	POLYURETHANE	---	0.109" EPR / 0.06" CROSS-LINKED POLYOLEFIN	---
WEIGHT - NO ICE (LBS/FT)	1.062	0.121	0.225	0.273	0.517	0.07	0.057	0.772	0.081
BREAKING LOAD (LBS)	16,410	3,150	6,000	11,500	25,000	11,200	1,123	7,940	1,400
MODULUS OF ELASTICITY (PSI)	16 x 10 ⁶	29 x 10 ⁶	29 x 10 ⁶	29 x 10 ⁶	29 x 10 ⁶	---	28 x 10 ⁶	16 x 10 ⁶	16 x 10 ⁶
THERMAL COEFFICIENT (°F)	9.4 x 10 ⁻⁶	6.7 x 10 ⁻⁶	6.7 x 10 ⁻⁶	6.7 x 10 ⁻⁶	6.7 x 10 ⁻⁶	---	17.3 x 10 ⁻⁶	9.4 x 10 ⁻⁶	9.4 x 10 ⁻⁶
NORMAL TENSION @ 60°F - NO WIND (LBS)	2480	---	---	---	---	---	---	---	---
WEIGHT WITH 1/2" RADIAL ICE (LBS/FT)	1.760	---	---	---	---	---	---	---	---
TYPICAL SECTION									

NOTES:

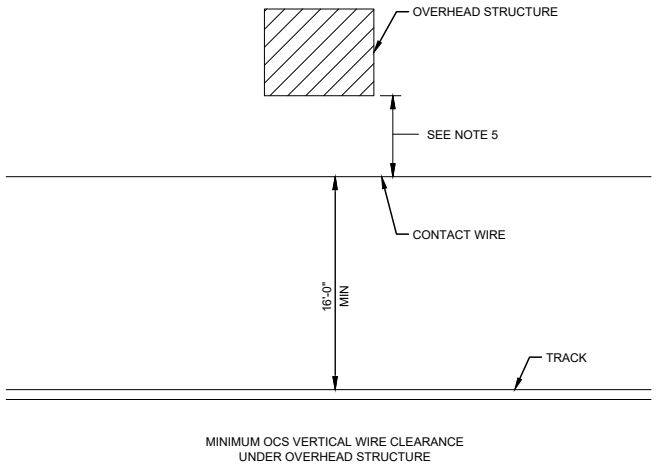
- FOR NOTES REFER TO DRAWING Y001. FOR SYMBOLS AND ABBREVIATIONS REFER TO DRAWING Y002.
- ALL CLEARANCES SHALL CONFORM TO NATIONAL ELECTRICAL SAFETY CODE (NEC) UNLESS INDICATED OTHERWISE.
- ALL CLEARANCES ARE MINIMUM VALUES.
- VERTICAL CLEARANCES ABOVE GROUND OR RAILS, SHALL APPLY TO CONTACT WIRES UNDER THE FOLLOWING CONDITIONS:
 - CONDUCTOR TEMPERATURE OF 0°F AND 120°F, ICE, NO WIND, WITH FINAL SAG IN THE WIRE
 - SPAN LENGTHS NOT GREATER THAN 120 FT FOR SINGLE CONTACT SYSTEMS
- CLEARANCE UNDER BRIDGES SHALL, AT A MINIMUM, PROVIDE FOR THE NORMAL ELECTRICAL PASSING CLEARANCE OF 6 INCHES, UNDER PANTOGRAPH UPLIFT CONDITIONS, AND INCORPORATING ALL CONSTRUCTION TOLERANCES FOR THE TRACK , OCS, AND OVERHEAD STRUCTURES.
- SPAN WIRES ASSOCIATED WITH THE OCS MAY BE CLOSER TO THE CONTACT WIRE AND SHALL BE PROTECTED FROM ACCIDENTAL ENERGIZATION WITH SPAN SPACERS, INSULATION OR USE OF SPAN ROPE IN LIEU OF STEEL GUY WIRE.
- WHERE MINIMUM CLEARANCE CANNOT BE OBTAINED, CONTRACTOR SHALL TAKE DIRECTION FROM ENGINEER.



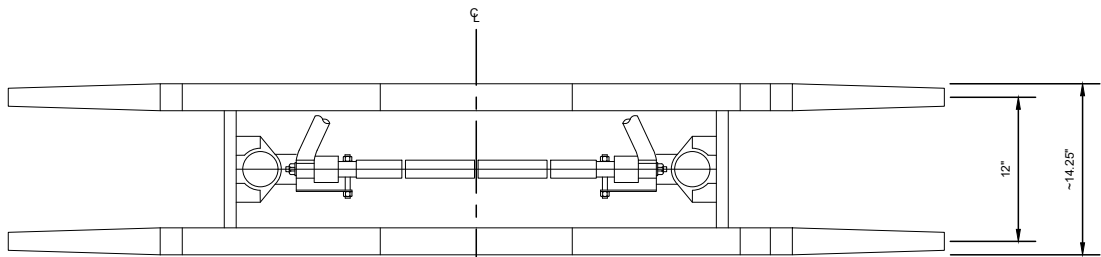
NON-OCS CONDUCTOR CLEARANCES
ABOVE CONTACT OR MESSENGER WIRES
PER NEC



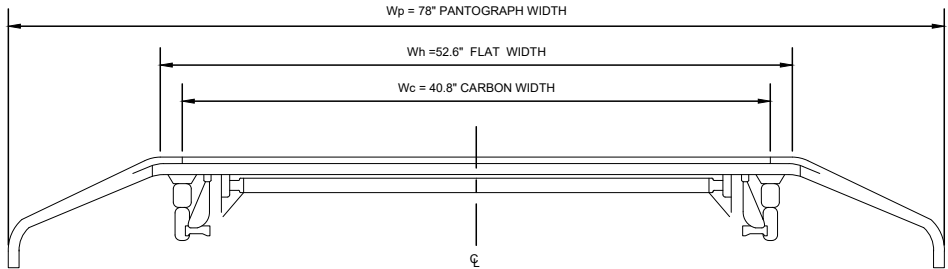
OCS WIRE CLEARANCES ABOVE GROUND OR RAILS



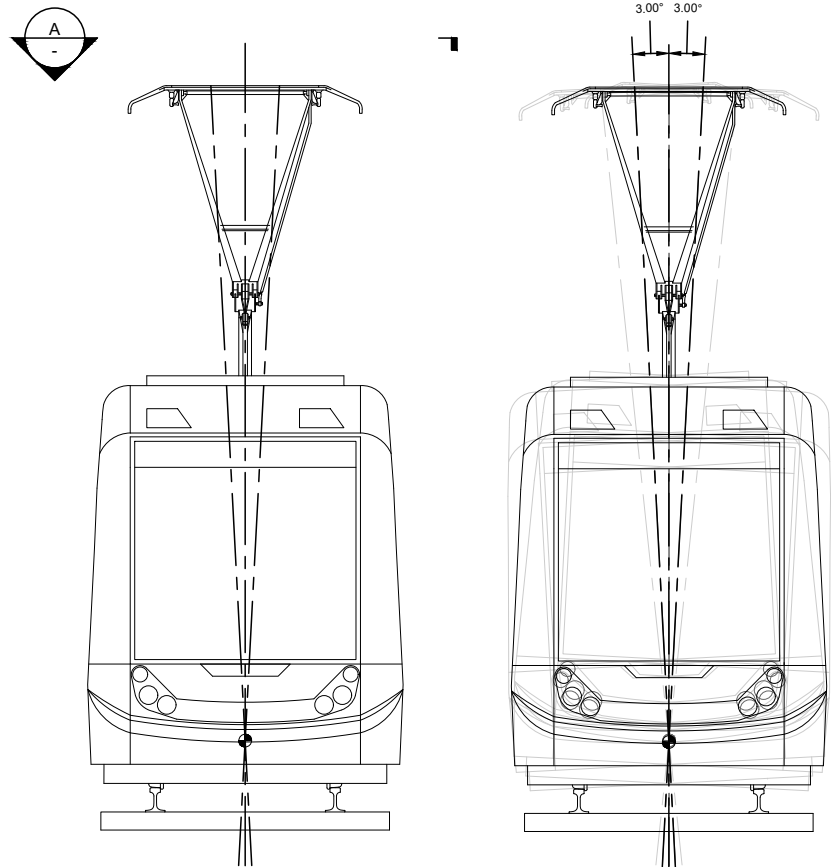
REV	DATE	DESCRIPTION	DESIGNED BY	PFW				PRELIMINARY PLANS – 30%	DATE: 08-28-2019	 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	 The HNTB COMPANIES INFRASTRUCTURE SOLUTIONS 300 Apollo Drive Chelmsford, MA 01824 Phone: 978-905-4000	KANSAS CITY STREETCAR MAIN STREET EXTENSION	OVERHEAD CONTACT SYSTEM TECHNICAL SHEETS VERTICAL ELECTRICAL CLEARANCE REQUIREMENTS	SCALE FOR 22' x34': NOT TO SCALE FILENAME: Y004.dwg CONTRACT NO.: CON0077290 VOLUME: 1 DRAWING NO.: Y004	SHEET NO.: 278
			CHECKED BY	CRW											
			DRAWN BY	DSK											
			CHECKED BY	PFW											
			APPROVED BY	NKS											
PLOT DATE: 8/27/2019			2:18:42 PM		DATE	8/28/2019	NOT FOR CONSTRUCTION								



A PLAN VIEW PAN HEAD
SCALE: NTS



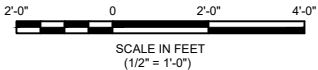
SIDE VIEW PAN HEAD
SCALE: NTS



END VIEW STREETCAR STATIC/DYNAMIC POSITION
SCALE: NTS

KANSAS CITY STREETCAR PANTOGRAPH SECURITY			
SINGLE CONTACT WIRE			
TRACK PARAMETERS			
ALIGNMENT		1.00	IN
GAGE TOLERANCE		1.50	IN
RAIL WEAR		0.60	IN
WHEEL FL WEAR		0.36	IN
WHEEL/RAIL CLEARANCE		0.24	IN
CROSS LEVEL EFFECT			
CROSS LEVEL TOLERANCE		0.96	IN
TRACK GAGE		56.50	IN
RAIL HEAD WIDTH		2.72	IN
TOTAL CROSS LEVEL EFFECT		3.79	IN
PANTO PARAMETERS			
WIDTH OVER HORNS		78	IN
WIDTH ON FLAT		52.6	IN
CARBON WIDTH		40.80	IN
PANTO SWAY		2.04	IN
HORIZ HORN LENGTH		11.95	IN
VEHICLE PARAMETERS			
ROLL AT:		3.00	DEGREES
		11.44	IN
ROLL POINT ABOVE TOR		15.74	IN
LATERAL MOVEMENT		1.25	IN
TOTAL VEHICLE/PANTOGRAPH MOVEMENT			
		13.63	IN
50% REDUCTION INTO WIND (PER AREMA)		6.82	IN
WIRE PARAMETERS			
	DIAM. IN	WT/FT	TENSION #
CW	0.62	1.06	2480
CW HEIGHT FT		19.5	
SPAN LENGTH (TANGENT)		125.00	
WIND @ OPERATING CONDITION MPH			55
MAX WIND (W/ 10% GUST)	MPH	60.50	
ALLOWABLE MOVEMENT BEFORE HORN		26.30	
TOTAL WIRE MOVEMENT			
FROM PANTO CL		11.39	ON CARBON
FINAL LOCATION OF WIRE		14.91	FROM START OF HORN
ALLOWABLE STAGGER		11.91	(SAFETY FACTOR 3" BEFORE HORN)

BLOW OFF CALCULATION	
ARRANGEMENT	SINGLE WIRE
TYPE	CW
DIAMETER (IN)	0.62
WEIGHT (LBS/FT)	1.06
HANGER WT (LBS/FT)	0
SYSTEM WT (LBS/FT)	1.06
TENSION (LBS)	2480
SPAN (FT)	125
SYSTEM HGHT (FT)	N/A
WIND SPEED (MPH)	60.5
WIND PRESSURE (LBS/SQFT)	9.370
WIND FORCE (LBS)	0.48
HANGER TENSION (LBS)	N/A
BLOW OFF (FT)	0.38
BLOW OFF (IN)	4.58



NOTES:

- VALUES SHOWN ARE CONSERVATIVE AND BASED ON INDUSTRY PRACTICE.
- SAFE OPERATING ZONE ON PANTOGRAPH HEAD IS BASED ON VEHICLE ROLL OF 3° AND 55 MPH WINDS WITH 10" GUST BLOWOFF FOR A CONSTANT TENSIONED CONTACT WIRE WITH 2,480 LBS. TENSION.
- BLOWOFF IS BASED ON A SPAN LENGTH OF 125 FEET. MAXIMUM TYPICAL SPAN LENGTH IS 120 FEET.
- MAXIMUM STAGGER TO BE 9 INCHES. MAXIMUM MID-ORDINATE TO BE 18 INCHES WITH A 9 INCH OFFSET AT PULLOVERS.
- PANTOGRAPH CENTER IS LOCATED DIRECTLY OVER THE TRUCK KING PIN AND RIDES ALONG THE TRACK CENTER LINE.
- ELECTRICAL AND MECHANICAL CLEARANCE NOT SHOWN ON THIS DRAWING.

REV	DATE	DESCRIPTION	DESIGNED BY	PFW
			CHECKED BY	CRW
			DRAWN BY	DSK
			CHECKED BY	PFW
			APPROVED BY	NKS
PLOT DATE: 8/27/2019			2:18:46 PM	DATE 8/28/2019



PRELIMINARY PLANS – 30%



DATE: 08-28-2019



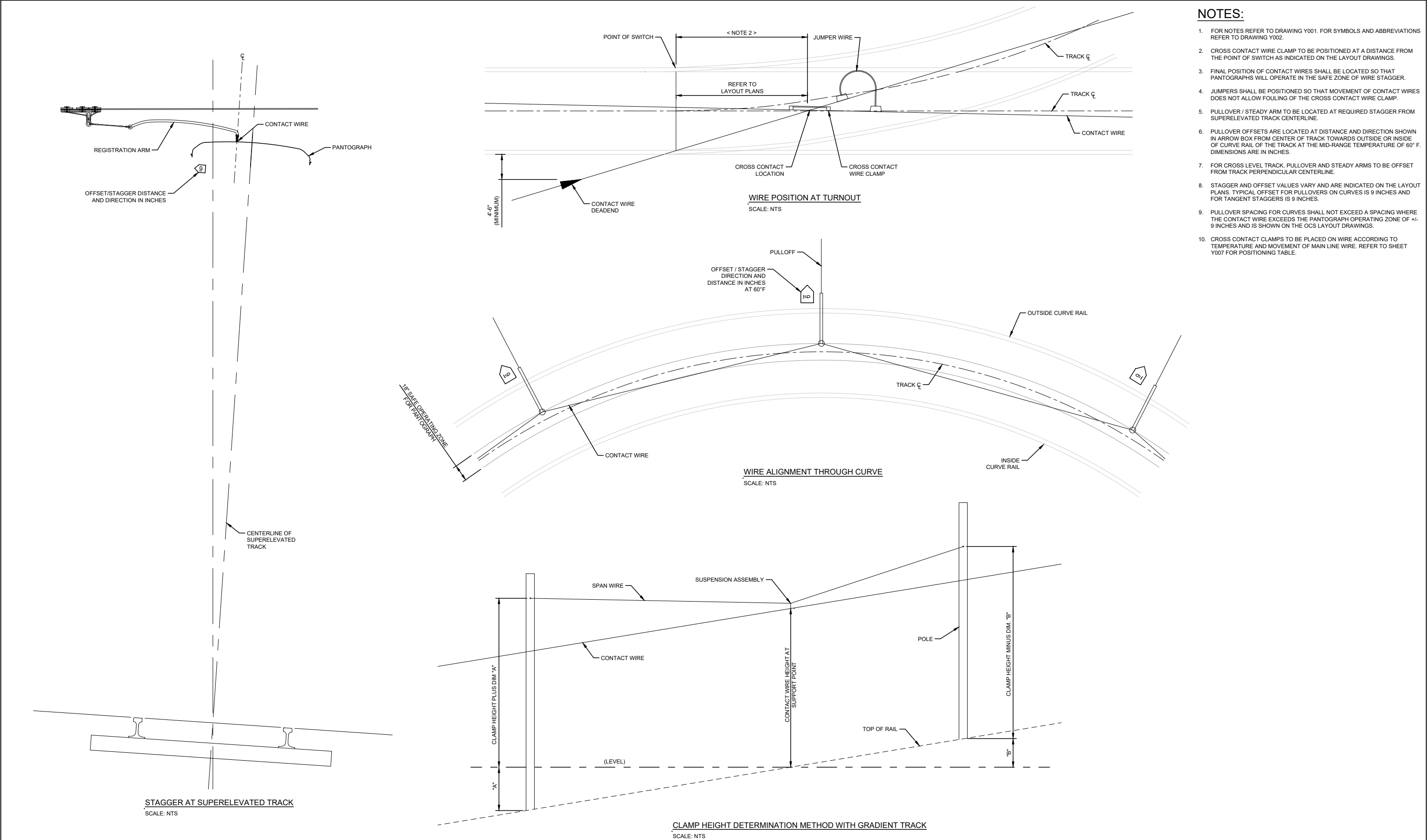
NOT FOR CONSTRUCTION

KANSAS CITY STREETCAR MAIN STREET EXTENSION

OVERHEAD CONTACT SYSTEM
TECHNICAL SHEETS
PANTOGRAPH SECURITY

SCALE FOR 22"x34":
NOT TO SCALE

FILENAME: Y005.dwg
CONTRACT NO.: CON0077290
VOLUME: 1
DRAWING NO.: Y005
SHEET NO.: 279



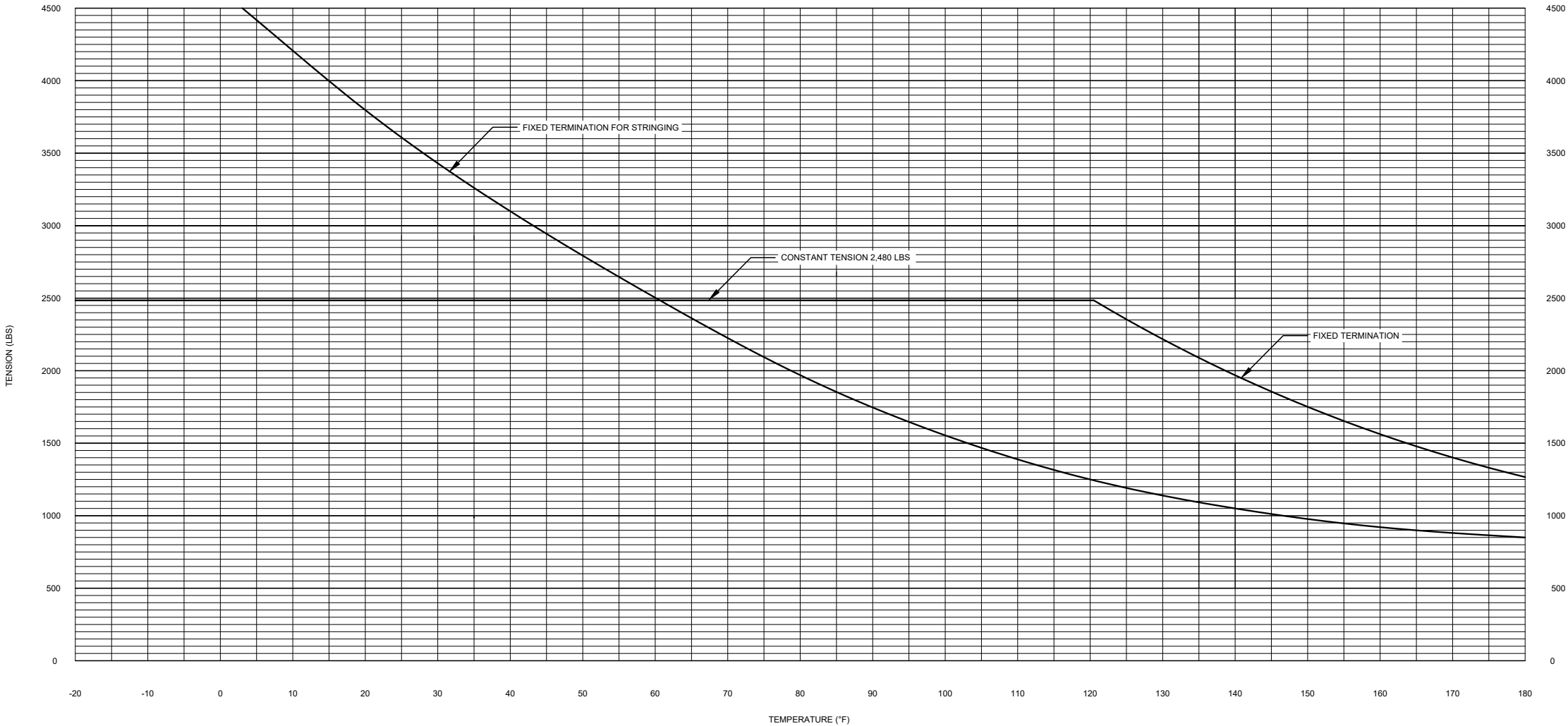
REV			DATE		DESCRIPTION		DESIGNED BY		PFW			PRELIMINARY PLANS – 30%				DATE: 08-28-2019		KANSAS CITY STREETCAR MAIN STREET EXTENSION				SCALE FOR 22" x34": NOT TO SCALE			
							CHECKED BY		CRW			 HDR Engineering, Inc.				 HNTB				OVERHEAD CONTACT SYSTEM TECHNICAL SHEETS TYPICAL OFFSET AND STAGGER DETAILS				FILENAME: Y006.dwg	
							DRAWN BY		DSK			10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856				The HNTB COMPANIES INFRASTRUCTURE SOLUTIONS 300 Apollo Drive Chelmsford, MA 01824 Phone: 978-905-4000								CONTRACT NO.: CON0077290	
							CHECKED BY		PFW															VOLUME: 1	
							APPROVED BY		NKS															DRAWING NO.: SHEET NO.: Y006 280	
PLOT DATE: ----						-----						DATE		8/28/2019		NOT FOR CONSTRUCTION									

NOTES:

1. FOR NOTES REFER TO DRAWING Y001. FOR SYMBOLS AND ABBREVIATIONS REFER TO DRAWING Y002.
2. FIXED TENSION VALUES CORRESPOND TO CONTACT WIRES NOT SUBJECTED TO WIND OR ICE.
3. INITIAL TENSION VALUE OF 2,480 LBS AT 60°F WAS USED IN CALCULATING CONTACT WIRE INSTALLATION TENSIONS.
4. TENSION CHART BASED ON TENSOREX SPRING WITH WIRE MOVEMENT OF 25.59 INCHES.

TENSION INSTALLATION CHART	
RULING SPAN = 120 FT	
TEMP. °F	TENSION (LB)
-20	5440
-15	5241
-10	5042
-5	4844
0	4648
5	4453
10	4260
15	4068
20	3879
25	3692
30	3508
35	3328
40	3152
45	2980
50	2813
55	2653
60	2480
65	2353
70	2215
75	2086
80	1965
85	1854
90	1751
95	1657
100	1572
105	1494
110	1423
115	1359
120	1300

INSTALLATION TENSION ASSUMED
TO BE 2480 LBS @ 60° F



INSTALLATION TENSION CHART

120' RULING SPAN (350 KCML ALLOY 80 BRONZE CONTACT WIRE)

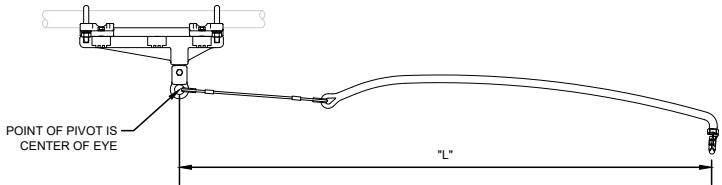
REV	DATE	DESCRIPTION	DESIGNED BY	PFW		<div>PRELIMINARY PLANS – 30%</div> <div><div><div>HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856</div></div><div><div>The HNTB COMPANIES INFRASTRUCTURE SOLUTIONS 300 Apollo Drive Chelmsford, MA 01824 Phone: 978-905-4000</div></div></div> <div>DATE: 08-28-2019</div> <div>NOT FOR CONSTRUCTION</div>	<div>KANSAS CITY STREETCAR MAIN STREET EXTENSION</div> <div>OVERHEAD CONTACT SYSTEM TECHNICAL SHEETS INSTALLATION TENSION CHART</div>			<div>SCALE FOR 22"x34": NO SCALE</div> <div>FILENAME: Y007.dwg</div> <div>CONTRACT NO.: CON0077290</div> <div>VOLUME: 1</div> <div>DRAWING NO.: Y007</div> <div>SHEET NO.: 281</div>		
			CHECKED BY	CRW								
			DRAWN BY	DSK								
			CHECKED BY	PFW								
			APPROVED BY	NKS								
PLOT DATE: 8/27/2019			2:18:53 PM		DATE	8/28/2019						

NOTES:

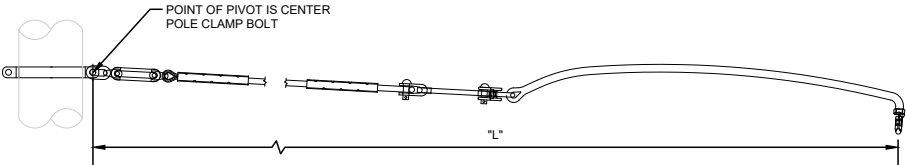
- FOR NOTES REFER TO DRAWING Y001. FOR SYMBOLS AND ABBREVIATIONS REFER TO DRAWING Y002.
- NEUTRAL POSITION IS AT 60°F.
- STAGGER CHANGE "X" IS LIMITED BY PANTOGRAPH SECURITY.
- STAGGER CHANGE "X" IS FOR CANTILEVER SUPPORT.
- ALONG TRACK MOVEMENT FOR SINGLE CONTACT WIRE AND CATENARY.

TOTAL ALONG TRACK MOVEMENT - "ATM" (IN)															
TEMP (°F)	DISTANCE FROM MID-POINT/FIXED TERMINATION (FT)														
	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600
0	-1.35	-2.03	-2.71	-3.38	-4.06	-4.74	-5.41	-6.09	-6.77	-7.44	-8.12	-8.80	-9.48	-10.15	-10.83
10	-1.13	-1.69	-2.26	-2.82	-3.38	-3.95	-4.51	-5.08	-5.64	-6.20	-6.77	-7.33	-7.90	-8.46	-9.02
20	-0.90	-1.35	-1.80	-2.26	-2.71	-3.16	-3.61	-4.06	-4.51	-4.96	-5.41	-5.87	-6.32	-6.77	-7.22
30	-0.68	-1.02	-1.35	-1.69	-2.03	-2.37	-2.71	-3.05	-3.38	-3.72	-4.06	-4.40	-4.74	-5.08	-5.41
40	-0.45	-0.68	-0.90	-1.13	-1.35	-1.58	-1.80	-2.03	-2.26	-2.48	-2.71	-2.93	-3.16	-3.38	-3.61
50	-0.23	-0.34	-0.45	-0.56	-0.68	-0.79	-0.90	-1.02	-1.13	-1.24	-1.35	-1.47	-1.58	-1.69	-1.80
60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
70	0.23	0.34	0.45	0.56	0.68	0.79	0.90	1.02	1.13	1.24	1.35	1.47	1.58	1.69	1.80
80	0.45	0.68	0.90	1.13	1.35	1.58	1.80	2.03	2.26	2.48	2.71	2.93	3.16	3.38	3.61
90	0.68	1.02	1.35	1.69	2.03	2.37	2.71	3.05	3.38	3.72	4.06	4.40	4.74	5.08	5.41
100	0.90	1.35	1.80	2.26	2.71	3.16	3.61	4.06	4.51	4.96	5.41	5.87	6.32	6.77	7.22
110	1.13	1.69	2.26	2.82	3.38	3.95	4.51	5.08	5.64	6.20	6.77	7.33	7.90	8.46	9.02
120	1.35	2.03	2.71	3.38	4.06	4.74	5.41	6.09	6.77	7.44	8.12	8.80	9.48	10.15	10.83

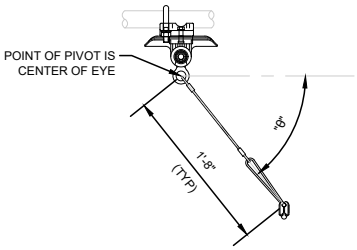
STAGGER CHANGE - "X" (IN)																							
ATM (IN)	LENGTH OF "PO" ASSEMBLIES - "L" (FT)				LENGTH OF "FPO" ASSEMBLIES - "L" (FT)						ANGLE OF "TYPE P" ASSEMBLIES - "Θ" (°)												
	2.0	4.0	4.5	5.0	10.0	12.0	14.0	16.0	18.0	20.0	25	30	35	40	45	50	55	60	65	70	75	80	85
1	0.02	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.00	0.00
2	0.08	0.04	0.04	0.03	0.02	0.01	0.01	0.01	0.01	0.01	0.08	0.08	0.07	0.07	0.06	0.06	0.05	0.05	0.04	0.03	0.02	0.02	0.01
3	0.19	0.09	0.08	0.08	0.04	0.03	0.03	0.02	0.02	0.02	0.19	0.18	0.17	0.16	0.15	0.13	0.12	0.10	0.09	0.07	0.05	0.04	0.02
4	0.34	0.17	0.15	0.13	0.07	0.06	0.05	0.04	0.04	0.03	0.33	0.32	0.30	0.28	0.26	0.24	0.21	0.18	0.15	0.13	0.09	0.06	0.03
5	0.53	0.26	0.23	0.21	0.10	0.09	0.07	0.07	0.06	0.05	0.52	0.50	0.47	0.44	0.41	0.37	0.33	0.29	0.24	0.20	0.15	0.10	0.05
6	0.76	0.38	0.33	0.30	0.15	0.13	0.11	0.09	0.08	0.08	0.76	0.72	0.68	0.64	0.59	0.54	0.48	0.42	0.35	0.29	0.22	0.14	0.07
7	1.04	0.51	0.46	0.41	0.20	0.17	0.15	0.13	0.11	0.10	1.04	0.99	0.94	0.88	0.81	0.73	0.66	0.57	0.48	0.39	0.30	0.20	0.10
8	1.37	0.67	0.60	0.54	0.27	0.22	0.19	0.17	0.15	0.13	1.36	1.30	1.23	1.15	1.06	0.97	0.86	0.75	0.64	0.52	0.39	0.26	0.13
9	1.75	0.85	0.76	0.68	0.34	0.28	0.24	0.21	0.19	0.17	1.74	1.67	1.58	1.47	1.36	1.24	1.10	0.96	0.81	0.66	0.50	0.33	0.17
10	2.18	1.05	0.93	0.84	0.42	0.35	0.30	0.26	0.23	0.21	2.18	2.08	1.97	1.84	1.70	1.55	1.38	1.20	1.02	0.82	0.62	0.42	0.21
11	2.67	1.28	1.13	1.02	0.51	0.42	0.36	0.32	0.28	0.25	2.67	2.55	2.41	2.26	2.08	1.89	1.69	1.47	1.25	1.01	0.76	0.51	0.26



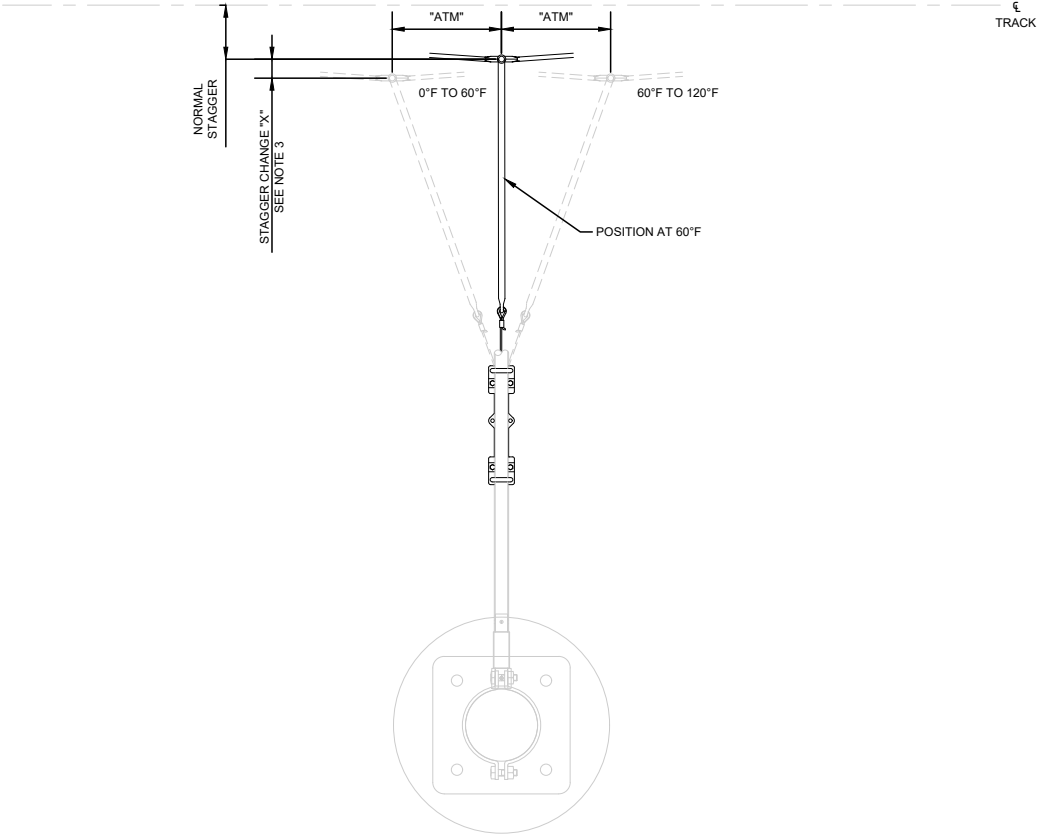
1 "PO" ASSEMBLIES
SCALE: NTS



2 "FPO" ASSEMBLIES
SCALE: NTS

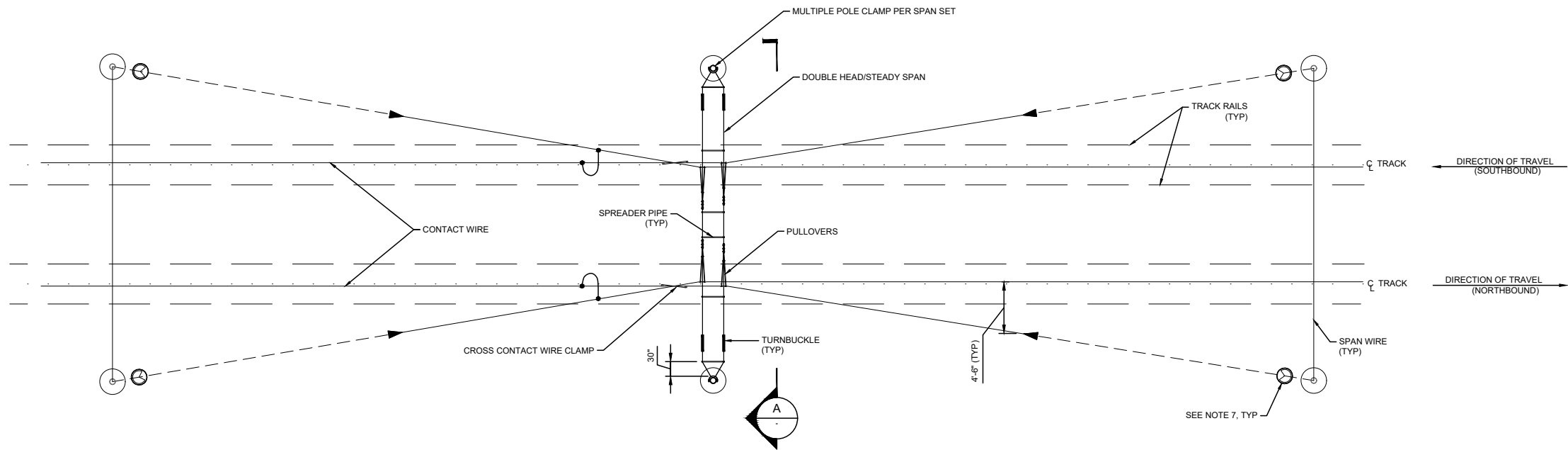


1 "TYPE P" ASSEMBLIES
SCALE: NTS

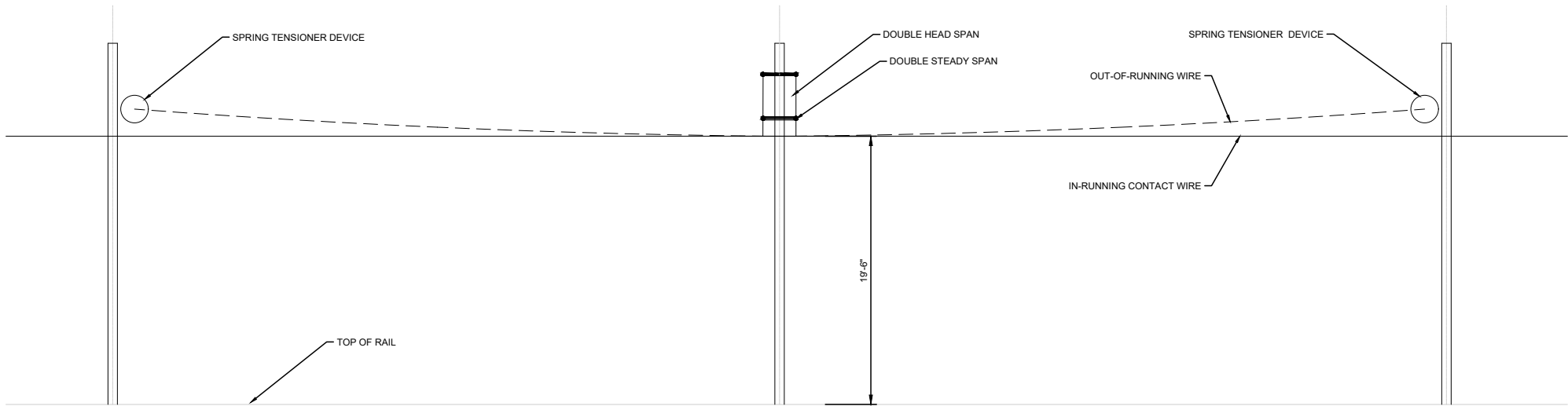


CW REGISTRATION MOVEMENT & STAGGER CHANGE
SCALE: NTS

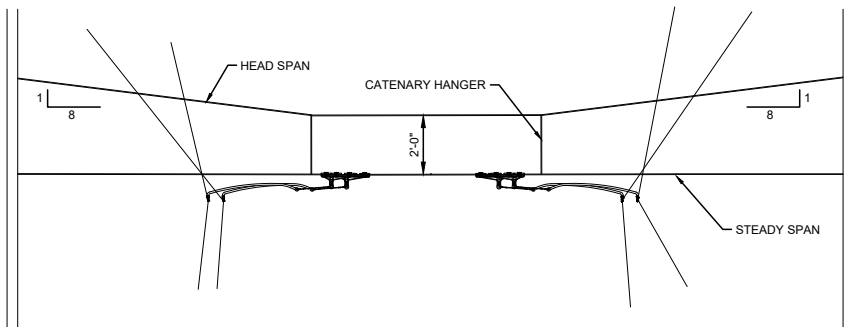
REV	DATE	DESCRIPTION	DESIGNED BY	PFW		PRELIMINARY PLANS – 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	OVERHEAD CONTACT SYSTEM TECHNICAL SHEETS ALONG TRACK MOVEMENT CHART	SCALE FOR 22"x34": NOT TO SCALE FILENAME: Y008.dwg CONTRACT NO.: CON0077290 VOLUME: 1 DRAWING NO.: Y008 SHEET NO.: 282
			CHECKED BY	CRW						
			DRAWN BY	DSK						
			CHECKED BY	PFW						
			APPROVED BY	NKS						
PLOT DATE: ----			DATE							



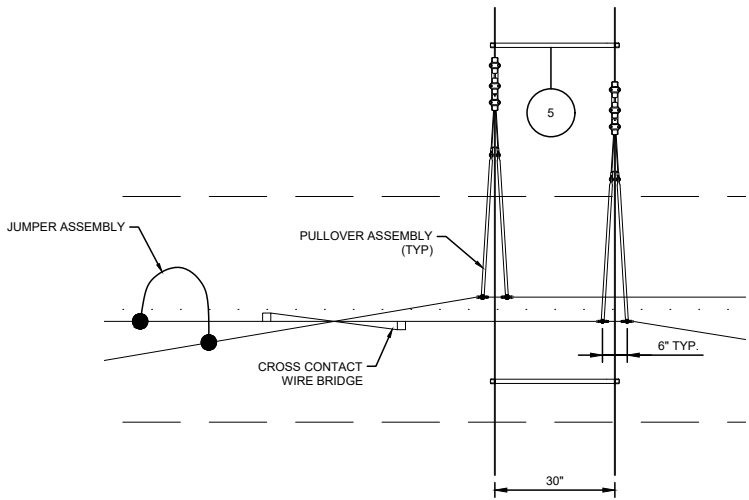
SINGLE CONTACT WIRE - TYPICAL OVERLAP PLAN, OLP-1
SCALE: NTS



SINGLE CONTACT WIRE - TYPICAL OVERLAP ELEVATION
SCALE: NTS



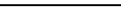

A SECTION
SCALE: NO SCALE

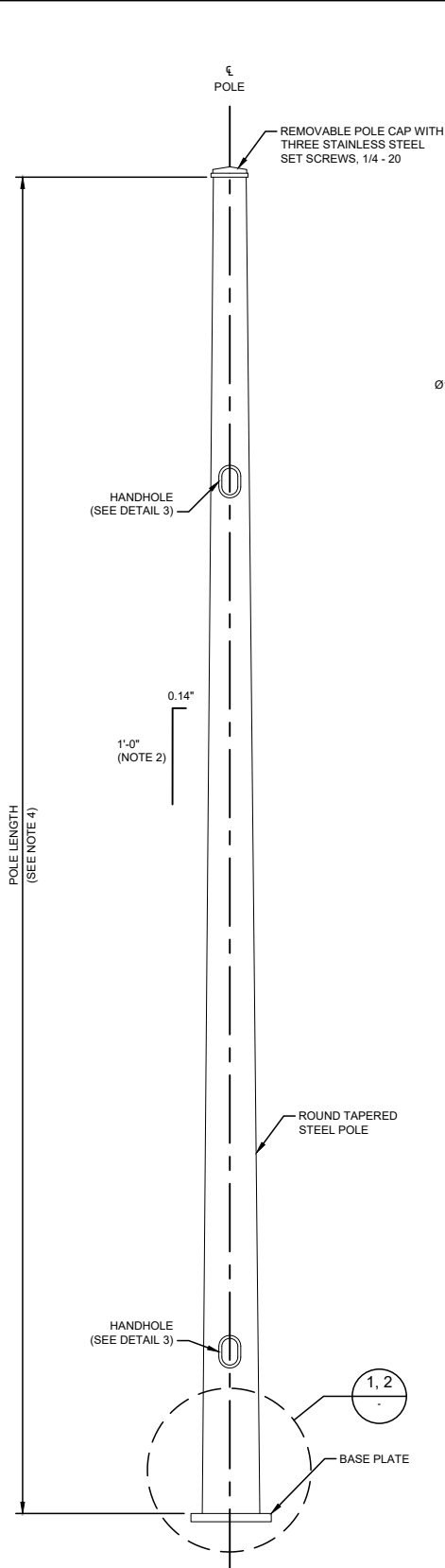


1 DETAIL - X-CONTACT WIRE CLAMP
SCALE: NTS

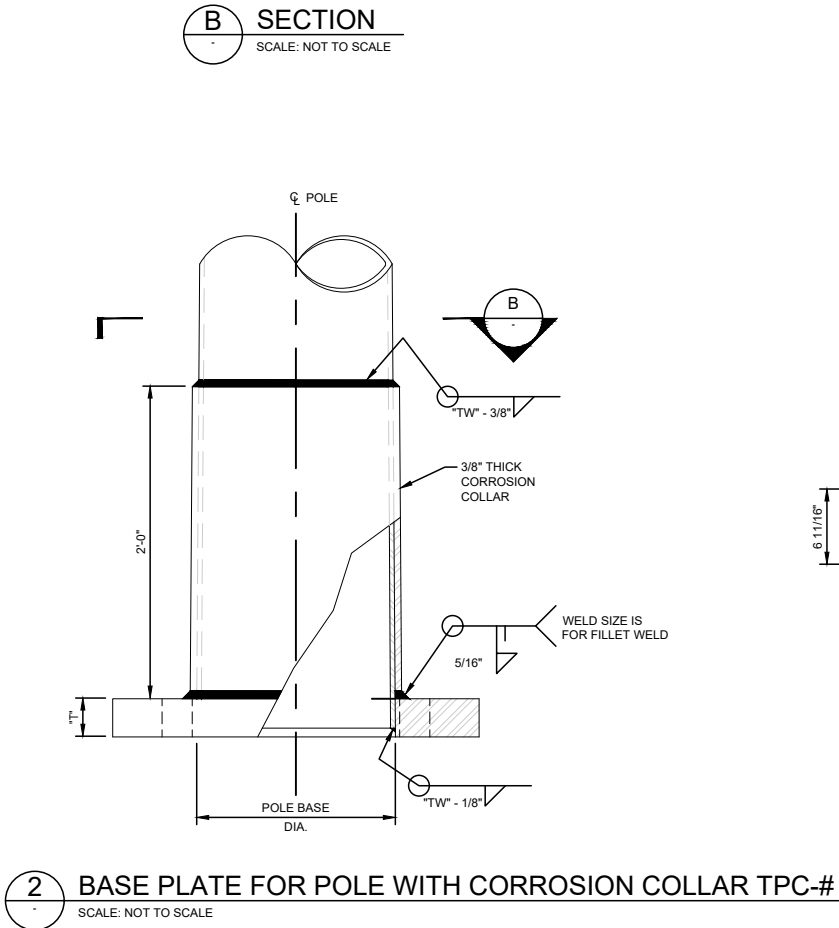
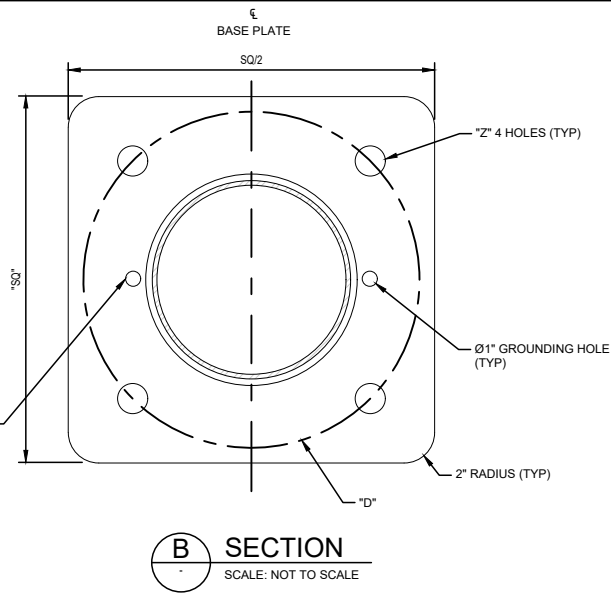
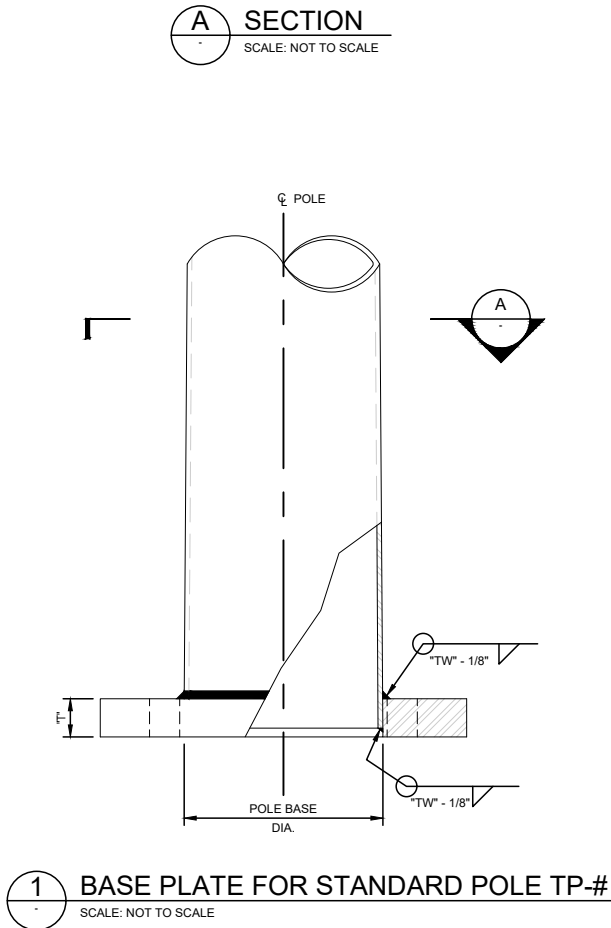
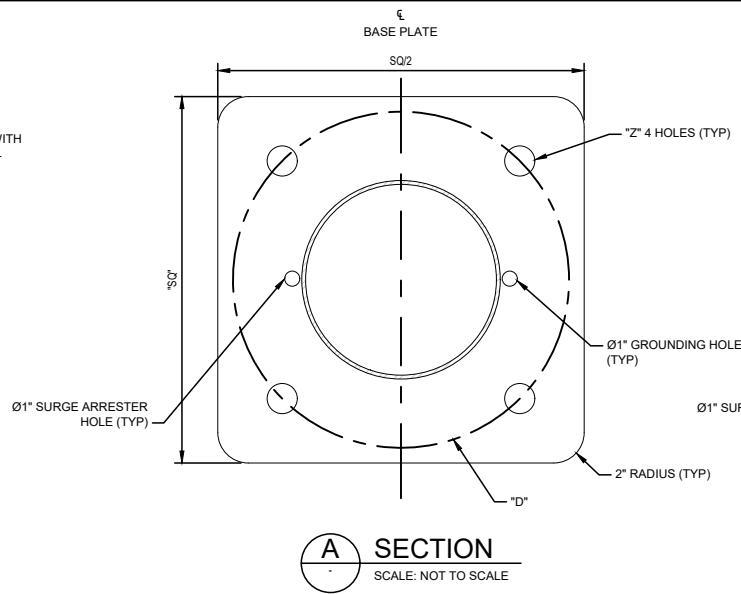
NOTES:

1. FOR NOTES REFER TO DRAWING Y001. FOR SYMBOLS AND ABBREVIATIONS REFER TO DRAWING Y002.
2. OVERLAP SHOWN IS FOR TYPICAL ARRANGEMENT FOR SINGLE CONTACT WIRE SYSTEM AND MAY VARY. SPAN LENGTHS, HANGER SPACING, AND WIRE ELEVATIONS MAY VARY ACCORDING TO LOCATION.
3. IN-SPAN INSULATORS AND TERMINATION DEVICES TO BE A MINIMUM OF 1'-6" FROM EDGE OF RAIL. THIS DIMENSION SHALL BE INCREASED ALONG SEGMENTS OF SUPER ELEVATED TRACK IN ORDER TO MAINTAIN PANTOGRAPH CLEARANCE.
4. POLE AND HANGER SPACING VARY ACCORDING TO OVERLAP LOCATION. REFER TO OCS LAYOUT DRAWINGS AND / OR OCS PROFILE DRAWINGS FOR ADDITIONAL INFORMATION.
5. IF NOT OTHERWISE NOTED ON LAYOUT PLAN, USE A RISE OF 1:100 TO DETERMINE CONTACT WIRE CLAMP HEIGHT FROM PULLOVER.
6. STEADY SPAN TO BE TENSIONED TO 1,000 LBS AND HAVE TURNBUCKLES AT EACH POLE AS SHOWN.
7. OMIT SPRING TENSIONER WHERE CONTACT WIRE DEAD END IS SHOWN ON LAYOUT.
8. FOR OVERLAP DETAIL FOR BRACKET ARMS, SEE DRAWING Y033.

REV	DATE	DESCRIPTION	DESIGNED BY	PFW			PRELIMINARY PLANS – 30%		DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SCALE FOR 22"x34":	
			CHECKED BY	CRW			 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	 The HNTB COMPANIES INFRASTRUCTURE SOLUTIONS 300 Apollo Drive Chelmsford, MA 01824 Phone: 978-905-4000	OVERHEAD CONTACT SYSTEM TYPICAL ARRANGEMENTS TYPICAL OVERLAP ARRANGEMENT		FILENAME: Y011.dwg	
			DRAWN BY	DSK							CONTRACT NO.: CON0077290	
			CHECKED BY	PFW							VOLUME: 1	
			APPROVED BY	NKS							DRAWING NO.: SHEET NO.:	
PLOT DATE: ----			DATE		8/28/2019		NOT FOR CONSTRUCTION			Y011	283	

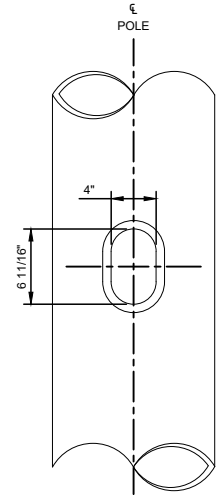


ROUND TAPERED POLE ASSEMBLY
SCALE: NOT TO SCALE

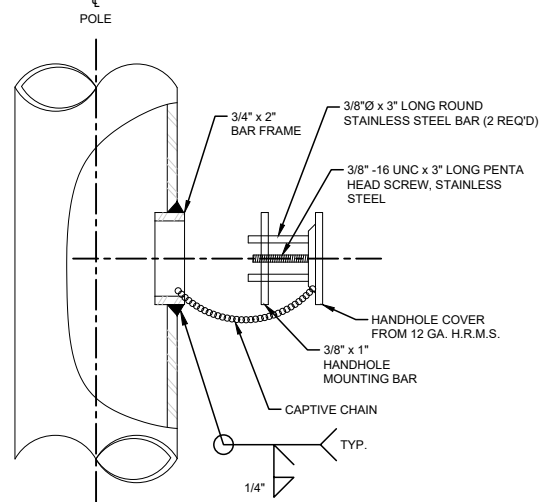


POLE DESIGNATION							
POLE TYPE	POLE BASE OUTSIDE DIAMETER (IN)	WALL THICKNESS "TW" (IN)	POLE BASE				ANCHOR BOLT DIA. (IN)
			SQUARE "SQ" (IN)	BOLT CIRCLE "D" (IN)	THICKNESS "T"	ANCHOR BOLT HOLE "Z"	
TP-1	8	0.5000	21	21	1 1/4	1 3/4	1 1/2
TP-2	9	0.5000	21	21	1 1/4	2	1 3/4
TP-3	10	0.5000	21	21	1 3/4	2	1 3/4
TP-4	12	0.5000	21	21	1 3/4	2 1/4	2
TP-5	14	0.6250	21	21	2	2 1/4	2

* POLE BASE DIAMETER IS MEASURED AT GROUND LEVEL.

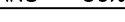


3 HANDHOLE DETAIL
SCALE: NOT TO SCALE
NOTE: USE HANDHOLE DETAIL WITH STREETLIGHTS AND TRAFFIC SIGNALS



NOTES:

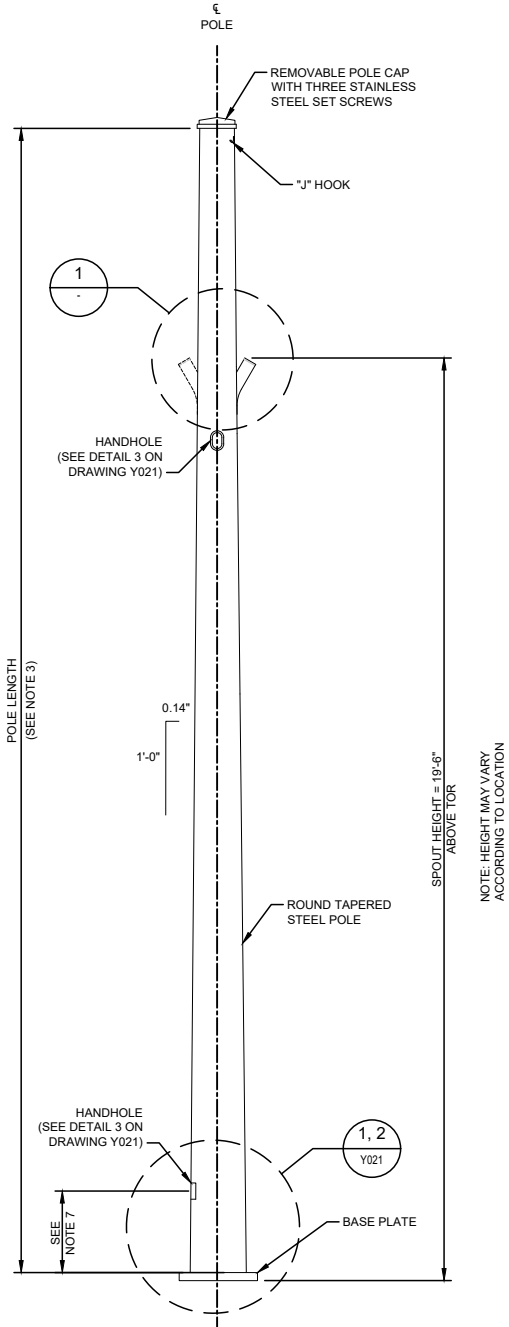
- FOR NOTES REFER TO DRAWING Y001. FOR SYMBOLS AND ABBREVIATIONS, REFER TO DRAWING Y002.
- THE FABRICATION OF POLE ASSEMBLY SHALL BE IN CONFORMANCE WITH THE REQUIREMENTS OF THE AISC SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF THE STRUCTURAL STEEL OF BUILDINGS AND IEEE STANDARD 1630, LATEST EDITION.
- POLE SHALL HAVE A UNIFORM TAPER OF FOURTEEN HUNDREDTHS (0.14) OF AN INCH PER LINEAR FOOT. THE 0.14" : 1' SLOPE IS THE REDUCTION RATE IN DIAMETER.
- WELDING SHALL BE IN CONFORMANCE WITH THE AWS D1.1 SPECIFICATIONS OF LATEST EDITION. SIZE OF WELD FOR BASE PLATE AND HANDHOLES DETERMINED BY MANUFACTURER.
- FOR POLE LENGTH AND TYPE, REFER TO POLE SCHEDULE DRAWINGS Y091 THRU Y096.
- FOR POLE TAG DETAILS, REFER TO DRAWING Y071.
- SURGE ARRESTOR HOLE IS ONLY NECESSARY FOR POLES WITH SURGE ARRESTOR ATTACHED AS SHOWN IN DRAWING Y057.
- POLE FABRICATOR SHALL PROVIDE SHOP DRAWINGS SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MISSOURI.
- IF POLE IS MADE OF FORMED PLATE AND WELDED, WELD SHALL BE FLUSH WITH SURFACE OF POLE.

REV	DATE	DESCRIPTION	DESIGNED BY	PFW		PRELIMINARY PLANS – 30%		DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION		SCALE FOR 22"x34": NOT TO SCALE	
			CHECKED BY	CRW		 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	 The HNTB COMPANIES INFRASTRUCTURE SOLUTIONS 300 Apollo Drive Chelmsford, MA 01824 Phone: 978-905-4000	OVERHEAD CONTACT SYSTEM STRUCTURAL DETAILS TYPICAL POLE DETAIL		FILENAME: Y021.dwg		
			DRAWN BY	DSK						CONTRACT NO.: CON0077290		
			CHECKED BY	PFW						VOLUME: 1		
			APPROVED BY	NKS						DRAWING NO.: SHEET NO.: Y021 284		
PLOT DATE: 8/27/2019			2:19:12 PM		DATE	8/28/2019	NOT FOR CONSTRUCTION					

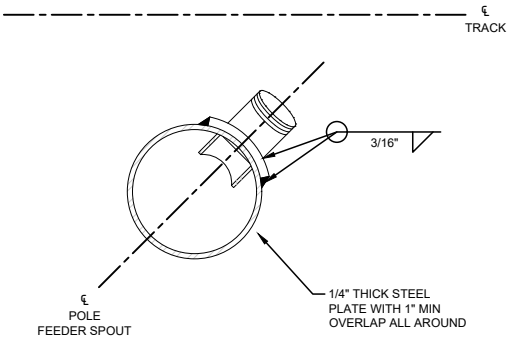
POLE DESIGNATION							
POLE TYPE	POLE BASE OUTSIDE DIAMETER (IN)	WALL THICKNESS "TW" (IN)	POLE BASE				ANCHOR BOLT DIA. (IN)
			SQUARE "SQ" (IN)	BOLT CIRCLE "D" (IN)	THICKNESS "T" (IN)	ROUND HOLE "Z" (IN)	
TP-1F	8	0.5000	21	21	1 1/4	1 3/4	1 1/2
TP-2F	9	0.5000	21	21	1 1/4	2	1 3/4
TP-3F	10	0.5000	21	21	1 3/4	2	1 3/4
TP-4F	12	0.5000	21	21	1 3/4	2 1/4	2
TP-5F	14	0.6250	21	21	2	2 1/4	2

NOTES:

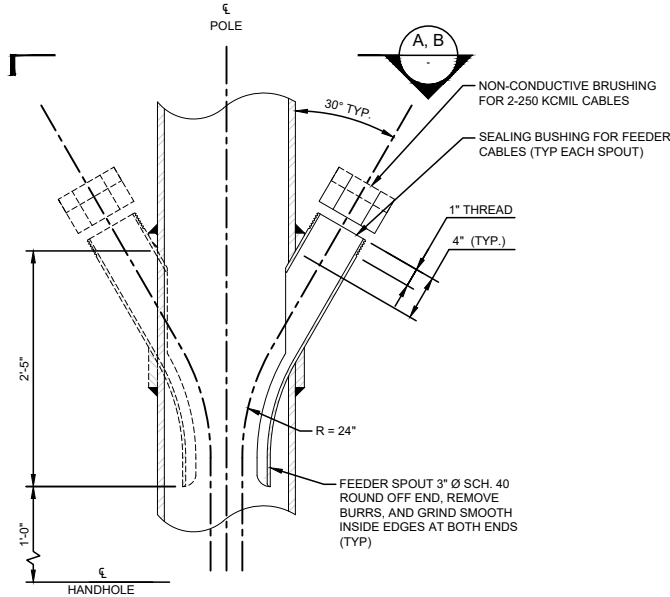
- FOR NOTES REFER TO DRAWING Y001. FOR SYMBOLS AND ABBREVIATIONS, REFER TO DRAWING Y002.
- FOR POLE NOTES, BASEPLATE AND POLE MARKER DETAILS, REFER TO DRAWING Y071.
- PROVIDE REINFORCEMENT AT SPOUT WHERE REQUIRED BY VENDOR CALCULATIONS & TESTING.
- FOR POLE LENGTH AND TYPE SEE POLE SCHEDULE DRAWINGS Y091 THRU Y096.
- HANDHOLES ONLY REQUIRED FOR FEEDER TAP POLES OR COMBINED POLES WITH STREETLIGHTS AND TRAFFIC SIGNALS.
- FOR BASE PLATE DETAILS, REFER TO DRAWING Y021.
- IF FOUNDATION POLE IS ABOVE GRADE, HANDHOLE TO BE 1'-6" ABOVE BASE PLATE. IF POLE IS EMBEDDED, HANDHOLE TO BE 2'-6" ABOVE BASE PLATE.
- STREET LIGHT AND TRAFFIC LIGHT POLES NOT TO BE USED AS FEEDER POLES.



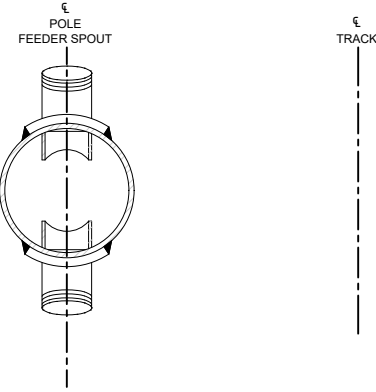
ROUND TAPERED FEEDER POLE ASSEMBLY (TP-XF)
SCALE: NOT TO SCALE



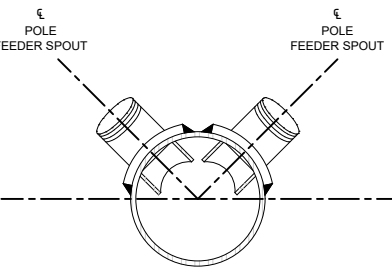
A SINGLE SPOUT CONDUIT
SCALE: NOT TO SCALE



1 WELDED FEEDER SPOUT DETAIL
SCALE: NOT TO SCALE
NOTE: REQUIRED REINFORCEMENT AT SPOUT PENDING VENDOR CALCULATION AND TESTING



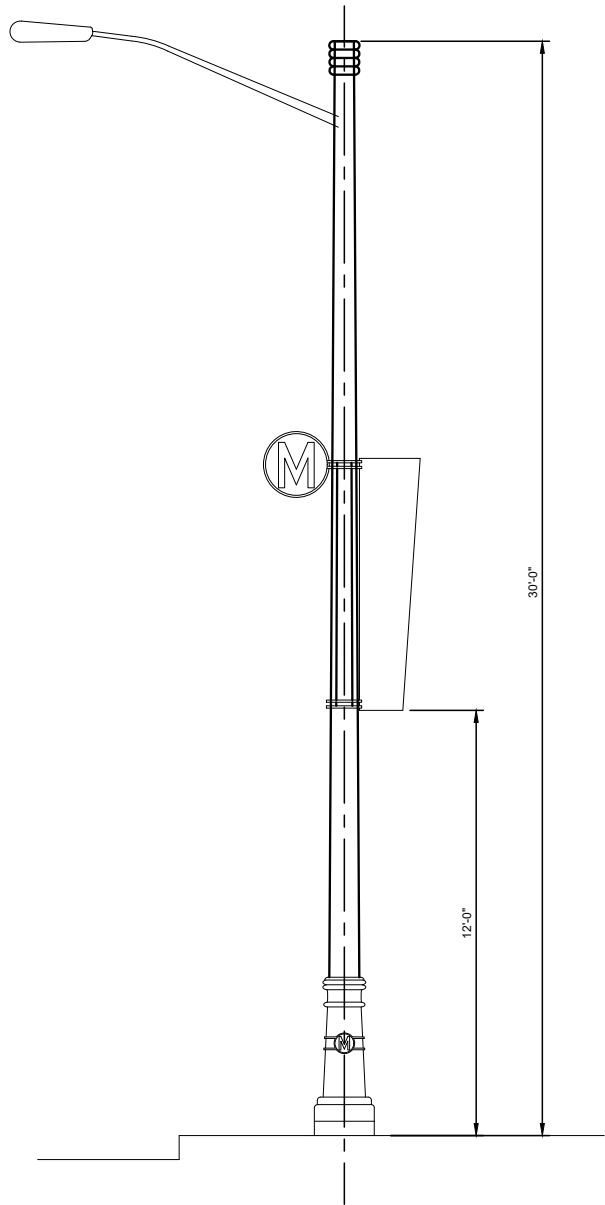
B DOUBLE SPOUT CONDUIT
SCALE: NOT TO SCALE



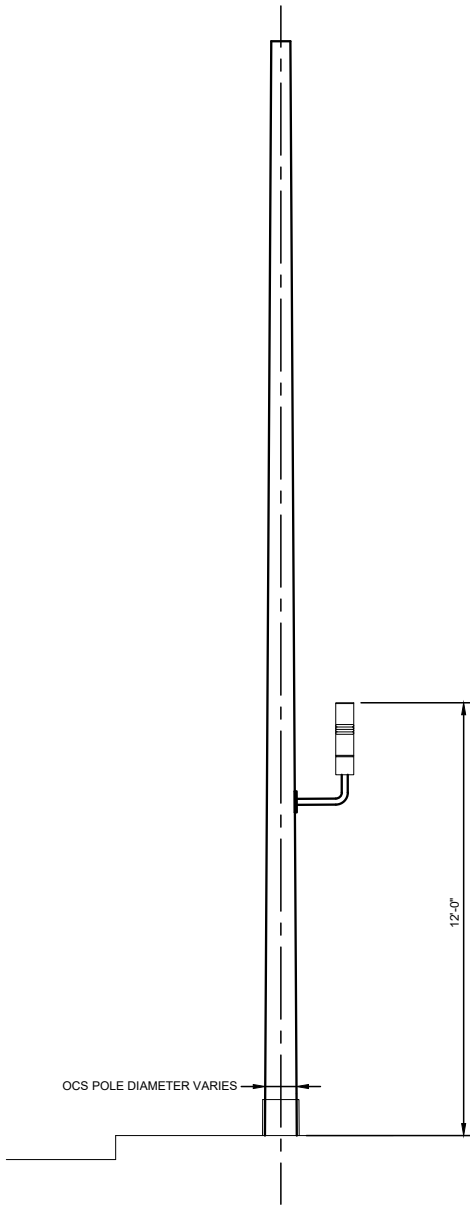
B DOUBLE SPOUT CONDUIT 45°
SCALE: NOT TO SCALE

REV	DATE	DESCRIPTION	DESIGNED BY	PFW		PRELIMINARY PLANS – 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	OVERHEAD CONTACT SYSTEM STRUCTURAL DETAILS FEEDER POLE DETAILS	SCALE FOR 22"x34": NOT TO SCALE	
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			DRAWN BY	DSK						CONTRACT NO.: CON0077290	
			CHECKED BY	PFW						VOLUME: 1	
			APPROVED BY	NKS						DRAWING NO.: Y022	SHEET NO.: 285
PLOT DATE: 8/27/2019			2:19:21 PM		DATE	8/28/2019	NOT FOR CONSTRUCTION				

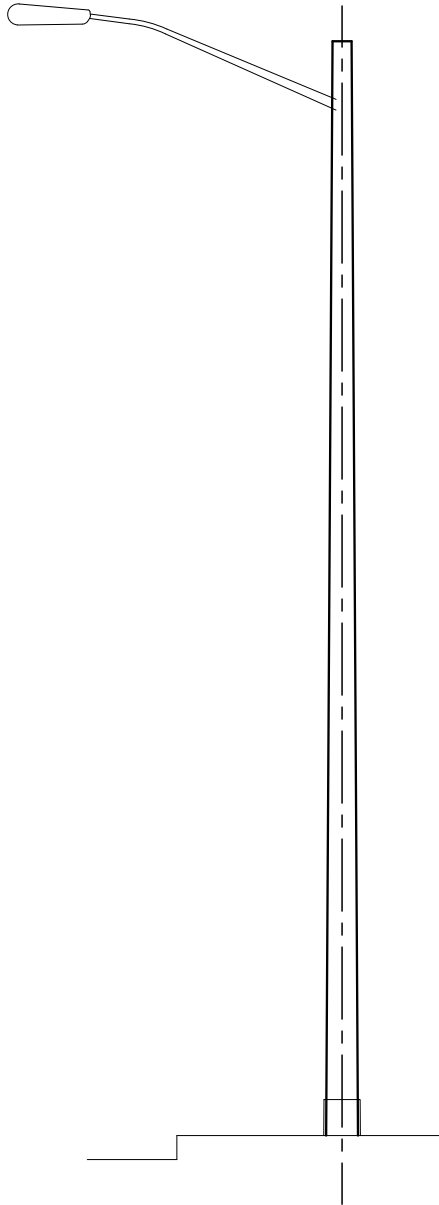
- NOTES:**
- FOR NOTES REFER TO DRAWING Y001. FOR SYMBOLS AND ABBREVIATIONS, REFER TO DRAWING Y002.
 - WHERE OCS POLES ARE IN THE SAME LOCATION AS AN EXISTING STREETLIGHT OR LAMP POST POLE, THE STREETLIGHT POLE AND FOUNDATION SHALL BE REMOVED AND REPLACED WITH AN OCS POLE AND FOUNDATION. CARE SHALL BE EXERCISED DURING FOUNDATION REMOVAL TO NOT DAMAGE ANY CONDUITS OR WIRES.
 - COMBINED STREETLIGHT OCS POLES ARE IDENTIFIED ON THE LAYOUT DRAWINGS.
 - EXISTING WIRES AND CONDUITS MAY REQUIRE INSTALLATION OF A PULL BOX TO TERMINATE WIRES AND CONDUITS AND RUN NEW CONDUITS AND WIRES INTO COMBINED FOUNDATIONS. REFER TO POLE FOUNDATION DETAILS, DRAWING Y027, FOR MEANS AND METHODS.
 - OCS ATTACHMENTS MAY BE EITHER SPAN WIRES OR BRACKET ARMS.



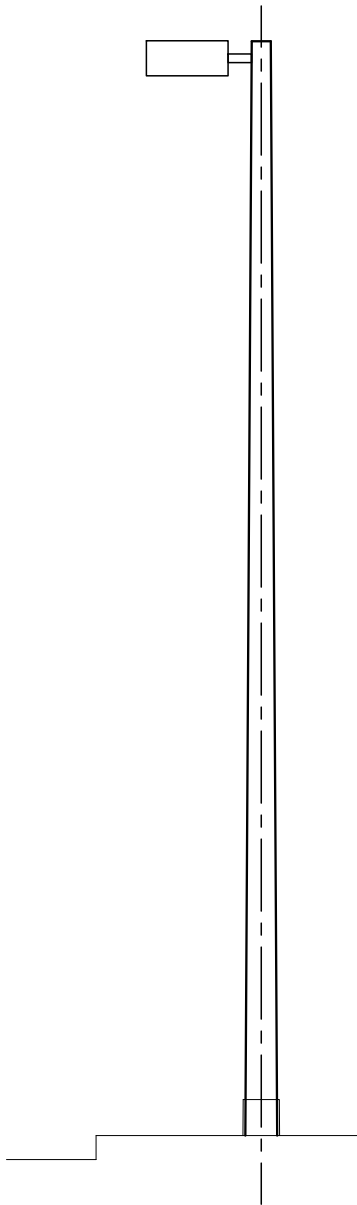
M STREETLIGHT POLE-TYPE 1
SCALE: NOT TO SCALE



LANTERN POLE-TYPE 2
SCALE: NOT TO SCALE

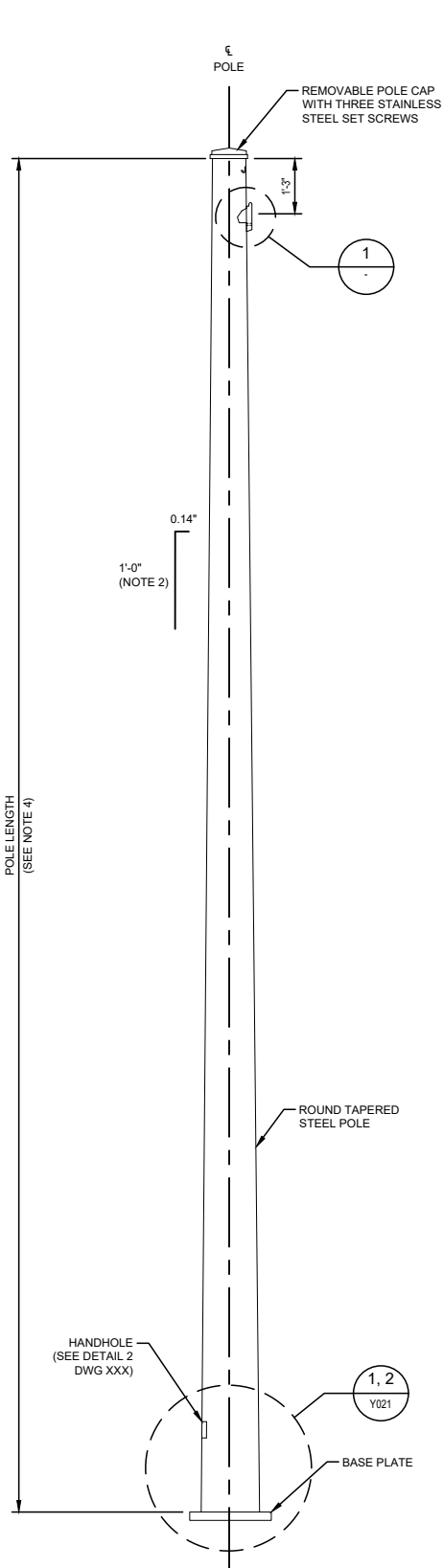


STANDARD STREETLIGHT POLE-TYPE 3
SCALE: NOT TO SCALE

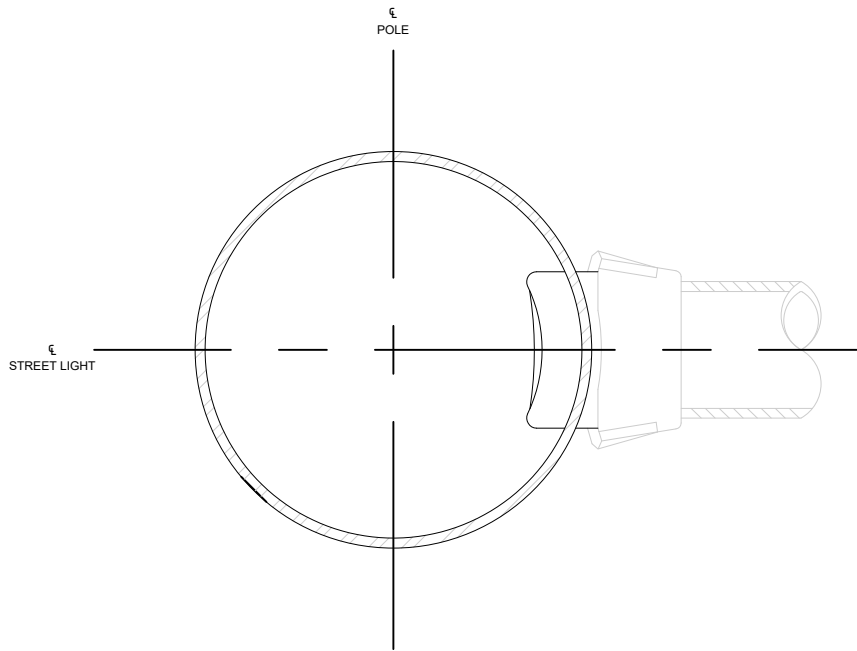


LANTERN POLE-TYPE 4
SCALE: NOT TO SCALE

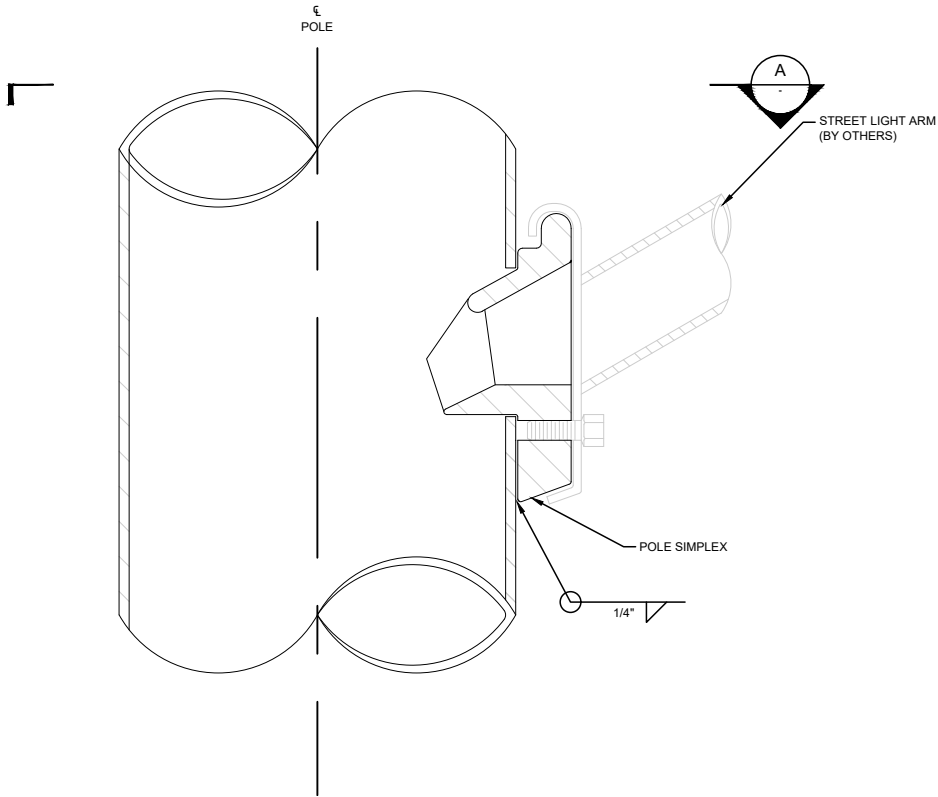
REV	DATE	DESCRIPTION	DESIGNED BY	PFW		PRELIMINARY PLANS – 30%	DATE: 08-28-2019	 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	 The HNTB COMPANIES INFRASTRUCTURE SOLUTIONS 300 Apollo Drive Chelmsford, MA 01824 Phone: 978-905-4000	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SCALE FOR 22"x34": NOT TO SCALE FILENAME: Y023.dwg CONTRACT NO.: CON0077290 VOLUME: 1	
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			DRAWN BY	DSK								
			CHECKED BY	PFW								
			APPROVED BY	NKS								
PLOT DATE: 8/27/2019			2:19:24 PM		DATE	8/28/2019	NOT FOR CONSTRUCTION					
OVERHEAD CONTACT SYSTEM STRUCTURAL DETAILS STREETLIGHT POLE DETAIL											DRAWING NO.: Y023	SHEET NO.: 286



ROUND TAPERED POLE ASSEMBLY
SCALE: NOT TO SCALE



A SECTION
SCALE: NOT TO SCALE



1 STREET LIGHT MOUNTING DETAIL
SCALE: NOT TO SCALE

NOTES:

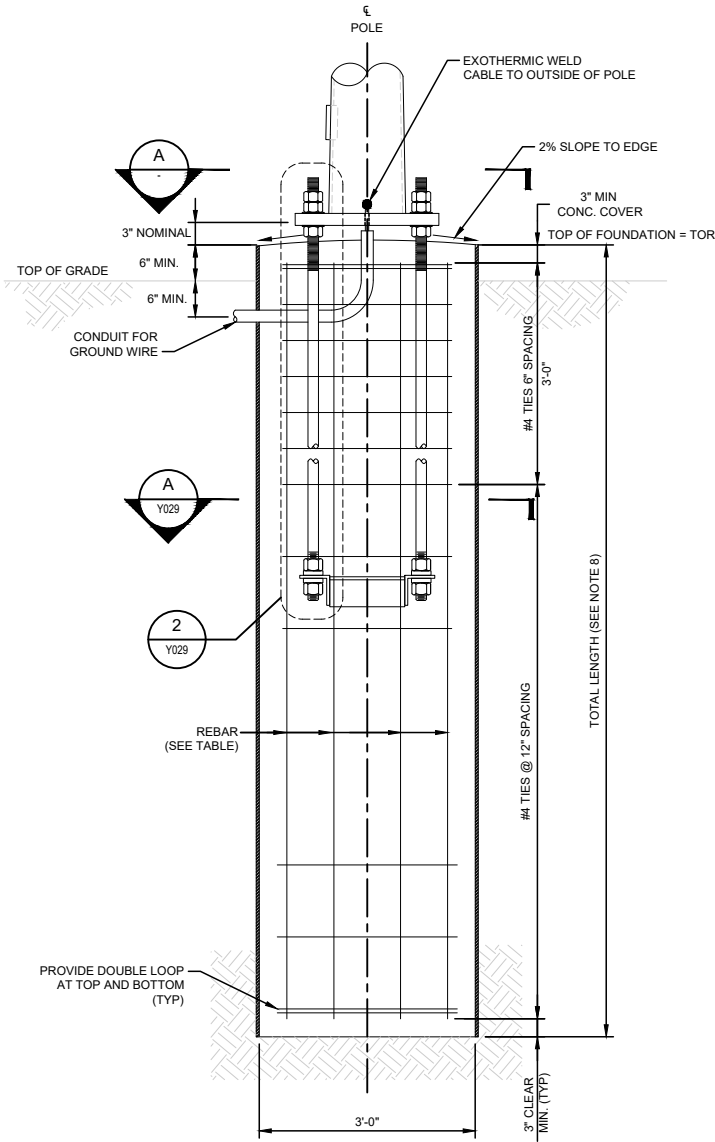
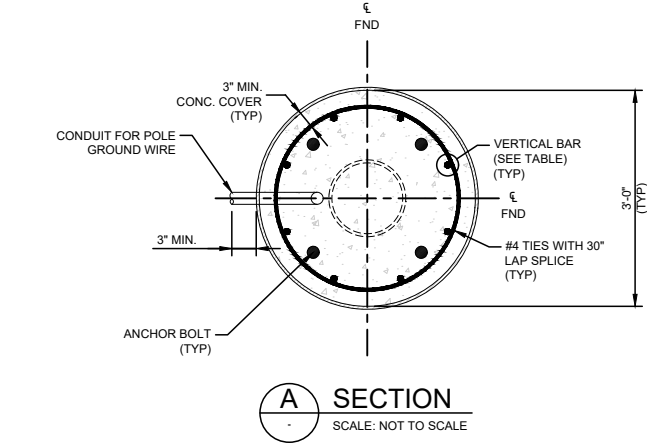
1. THE FABRICATION OF POLE ASSEMBLY SHALL BE IN CONFORMANCE WITH THE REQUIREMENTS OF THE AISC SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF THE STRUCTURAL STEEL OF BUILDINGS AND IEEE STANDARD 1630, LATEST EDITION.
2. POLE SHALL HAVE A UNIFORM TAPER OF FOURTEEN HUNDREDTHS (0.14) OF AN INCH PER LINEAR FOOT. THE 0.14" : 1' SLOPE IS THE REDUCTION RATE IN DIAMETER.
3. WELDING SHALL BE IN CONFORMANCE WITH THE AWS D1.1 SPECIFICATIONS OF LATEST EDITION. SIZE OF WELD FOR BASE PLATE AND HANDHOLES DETERMINED BY MANUFACTURER.
4. FOR POLE LENGTH AND TYPE, REFER TO POLE SCHEDULE DRAWINGS Y091 THRU Y096.
5. FOR POLE TAG DETAILS, REFER TO DRAWING Y071.
6. SURGE ARRESTOR HOLE IS ONLY NECESSARY FOR POLES WITH SURGE ARRESTOR ATTACHED AS SHOWN IN DRAWING Y057.
7. POLE FABRICATOR SHALL PROVIDE SHOP DRAWINGS SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MISSOURI.

POLE DESIGNATION							
POLE TYPE	POLE BASE OUTSIDE DIAMETER (IN)	WALL THICKNESS "TW" (IN)	POLE BASE				ANCHOR BOLT DIA. (IN)
			SQUARE "SQ" (IN)	BOLT CIRCLE "D" (IN)	THICKNESS "T"	ANCHOR BOLT HOLE "Z"	
TP/TPC-1L	8	0.5000	21	21	1 1/4	1 3/4	1 1/2
TP/TPC-2L	9	0.5000	21	21	1 1/4	2	1 3/4
TP/TPC-3L	10	0.5000	21	21	1 3/4	2	1 3/4
TP/TPC-4L	12	0.5000	21	21	1 3/4	2 1/4	2
TP/TPC-5L	14	0.6250	21	21	2	2 1/4	2

REV	DATE	DESCRIPTION	DESIGNED BY	PFW		PRELIMINARY PLANS – 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	OVERHEAD CONTACT SYSTEM STRUCTURAL DETAILS LIGHT MOUNTING DETAIL	SCALE FOR 22"x34": NOT TO SCALE	
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			DRAWN BY	DSK						CONTRACT NO.: CON0077290	
			CHECKED BY	PFW						VOLUME: 1	
			APPROVED BY	NKS						DRAWING NO.: SHEET NO.:	
										Y024 287	
PLOT DATE: 8/27/2019			2:19:32 PM		DATE	8/28/2019	NOT FOR CONSTRUCTION				

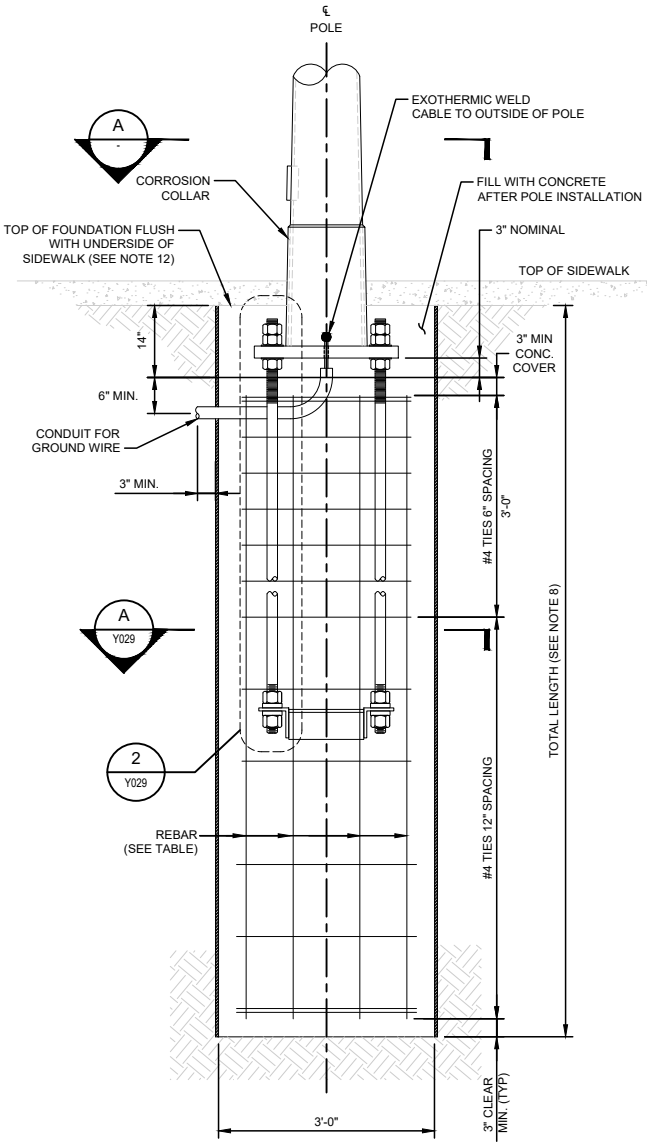
NOTES:

- FOR NOTES REFER TO DRAWING Y001. FOR SYMBOLS AND ABBREVIATIONS, REFER TO DRAWING Y002.
- ANCHOR BOLTS SHALL BE HOT-DIP GALVANIZED STEEL CONFORMING TO ASTM F1554 GRADE 55. ALL NUTS AND PLATE WASHERS SHALL BE HOT-DIP GALVANIZED STEEL CONFORMING TO ASTM A563 AND F436, RESPECTIVELY.
- PROTECT ANCHOR BOLTS ABOVE TOP OF FOUNDATION FROM DAMAGE AND RESIDUE CONCRETE DURING FOUNDATION CONSTRUCTION.
- CAP AND PROTECT THE CONDUITS DURING CONSTRUCTION.
- GROUND ROD LOCATION AND ORIENTATION RELATIVE TO TRACK AND FOUNDATION IS VARIABLE. THE INSTALLER SHALL TAKE CARE TO AVOID ANY UTILITIES BURIED ADJACENT TO THE FOUNDATION AND SHALL LOCATE GROUND ROD ACCORDINGLY.
- GROUND RESISTANCE FOR THE POLE SHALL BE 25 OHMS OR LESS.
- FOR FOUNDATIONS LOCATED IN LANDSCAPE AREA, TOP OF FOUNDATIONS SHOULD BE LEVEL WITH TOP OF FINISH GRADE.
- FOR SITE SPECIFIC FOUNDATION TYPE AND EMBEDMENT, SEE FOUNDATION SCHEDULE DRAWINGS.
- CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4.0 KSI. CONCRETE SHALL HAVE A MAXIMUM 3/8" COARSE AGGREGATE.
- REINFORCING STEEL SHALL CONFORM TO THE REQUIREMENTS OF ASTM A615 GRADE 60. REINFORCING STEEL SHALL BE EPOXY COATED.
- WHEN EMBEDDING THE BASE PLATE IN THE FOUNDATION IS NOT POSSIBLE, CONTRACTOR SHALL REFERENCE THE BASE PLATE ABOVE FOUNDATION DETAIL.
- WHERE ROUND POLE FOUNDATIONS ARE IN LANDSCAPE AREAS, USE FOUNDATION FD-1. FOR ALL PAVED AND SIDEWALK AREAS, USE FOUNDATION FD-2.



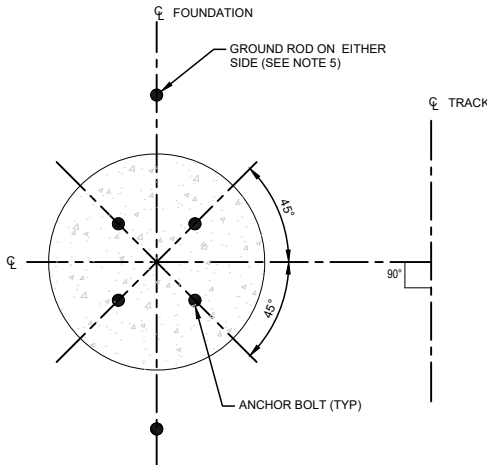
ROUND POLE FOUNDATION - FD-1
BASE PLATE ABOVE GRADE

SCALE: NOT TO SCALE



ROUND POLE FOUNDATION - FD-2
BASE PLATE BELOW GRADE

SCALE: NOT TO SCALE



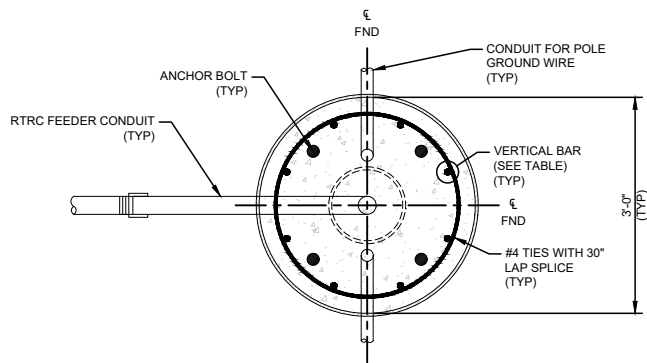
ANCHOR BOLT ORIENTATION

SCALE: NOT TO SCALE

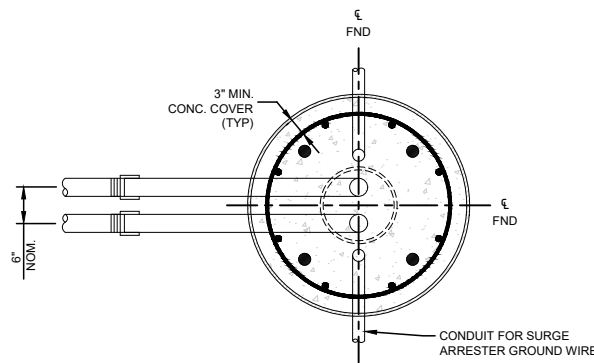
FOUNDATION/ ANCHOR BOLT TABLE							
FDN. TYPE	FOUNDATION		ANCHOR BOLT				
	VERTICAL REBAR		BOLT CIRCLE "B" (IN)	ANCHOR BOLT DIA. "A" (IN)	ANCHOR BOLT PROJECTION "P" (IN)	ANCHOR BOLT LENGTH "C" (IN)	"D" (IN)
	SIZE	TOTAL					
FD-1 / FD-2	#9	8	21	*	11	66	14.85

* REFER TO DRAWINGS XXX, XXX, AND XXX FOR ANCHOR BOLT DIAMETER

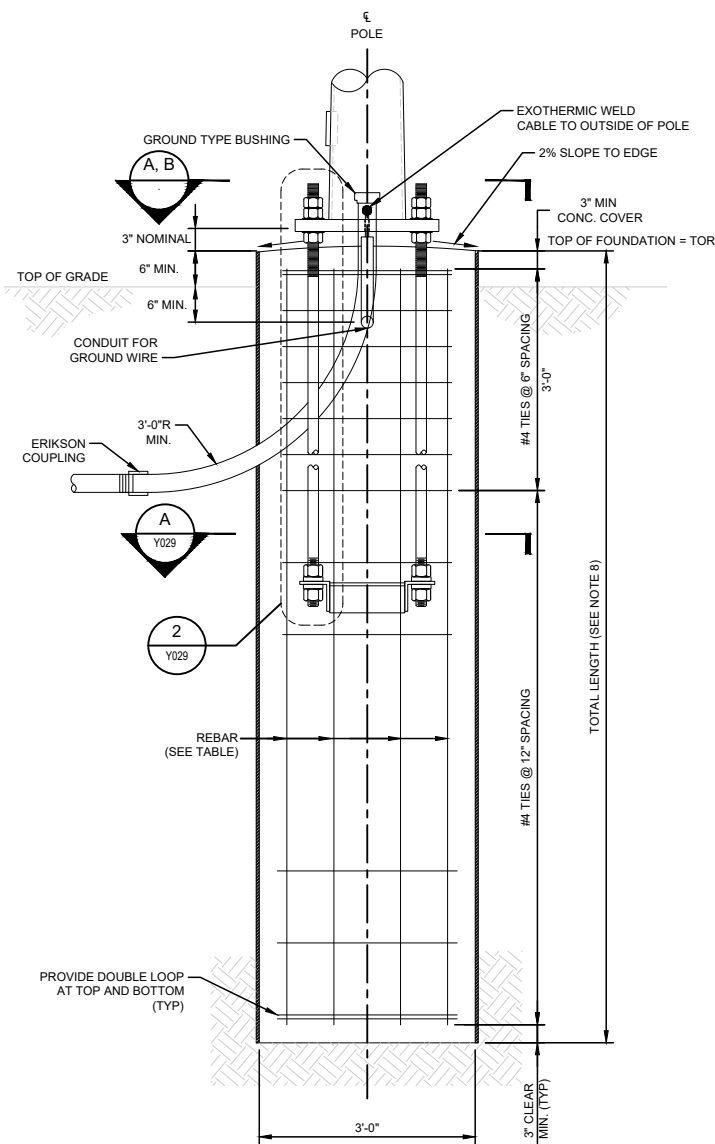
REV	DATE	DESCRIPTION	DESIGNED BY	PFW		PRELIMINARY PLANS – 30%	DATE: 08-28-2019	 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	 The HNTB COMPANIES INFRASTRUCTURE SOLUTIONS 300 Apollo Drive Chelmsford, MA 01824 Phone: 978-905-4000	KANSAS CITY STREETCAR MAIN STREET EXTENSION	OVERHEAD CONTACT SYSTEM STRUCTURAL DETAILS TYPICAL POLE FOUNDATION DETAIL	SCALE FOR 22"x34": NOT TO SCALE	
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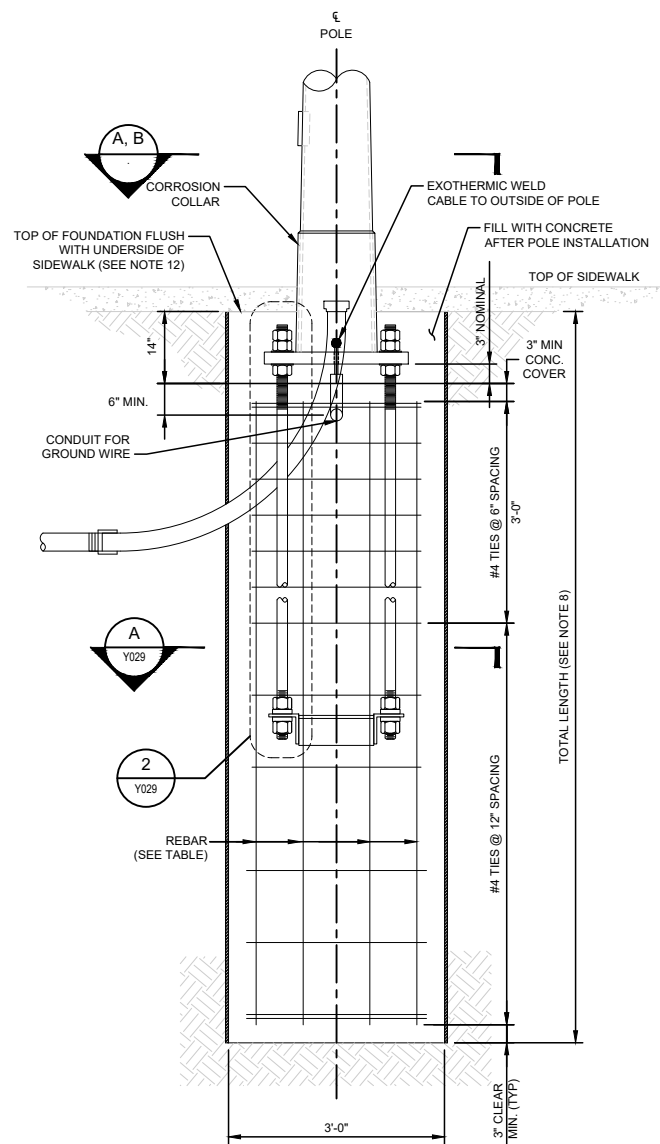
A SINGLE FEEDER LOCATION
SCALE: NOT TO SCALE



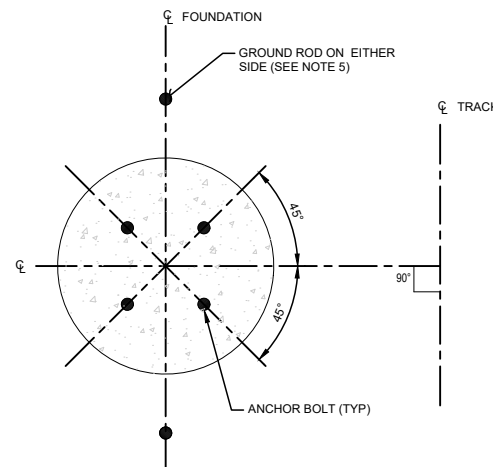
B DOUBLE FEEDER LOCATION
SCALE: NOT TO SCALE



ROUND POLE FOUNDATION - FD-1F
BASE PLATE ABOVE GRADE
SCALE: NOT TO SCALE



ROUND POLE FOUNDATION - FD-2F
BASE PLATE BELOW GRADE
SCALE: NOT TO SCALE



ANCHOR BOLT ORIENTATION
SCALE: NOT TO SCALE

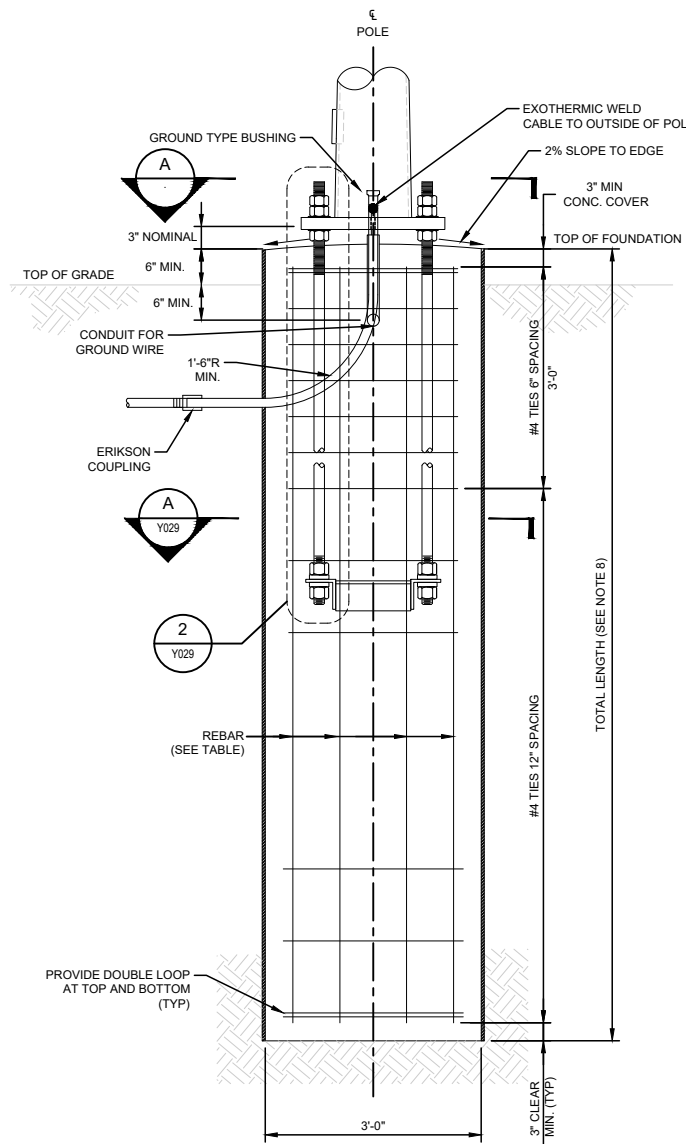
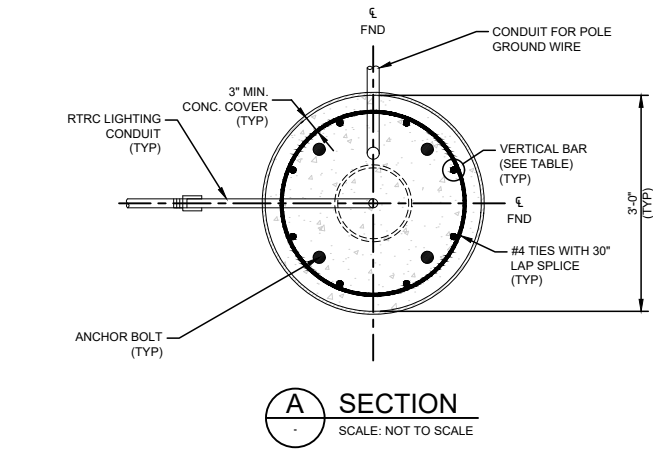
FOUNDATION/ ANCHOR BOLT TABLE							
FDN. TYPE	FOUNDATION		ANCHOR BOLT				
	VERTICAL REBAR		BOLT CIRCLE "B" (IN)	ANCHOR BOLT DIA. "A" (IN)	ANCHOR BOLT PROJECTION "P" (IN)	ANCHOR BOLT LENGTH "C" (IN)	"D" (IN)
FD-1F / FD-2F	SIZE	TOTAL	21	*	11	66	14.85

* REFER TO DRAWINGS XXX, XXX, AND XXX FOR ANCHOR BOLT DIAMETER

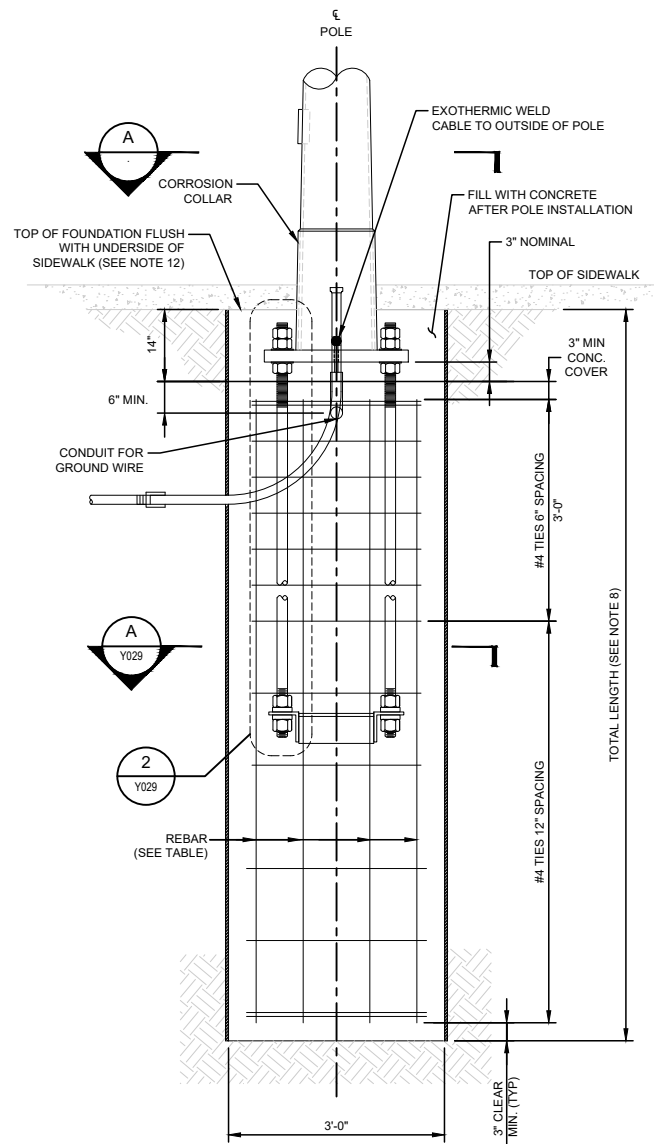
NOTES:

- FOR NOTES REFER TO DRAWING Y001. FOR SYMBOLS AND ABBREVIATIONS, REFER TO DRAWING Y002.
- ANCHOR BOLTS SHALL BE HOT-DIP GALVANIZED STEEL CONFORMING TO ASTM F1554 GRADE 55. ALL NUTS AND PLATE WASHERS SHALL BE HOT-DIP GALVANIZED STEEL CONFORMING TO ASTM A563 AND F436, RESPECTIVELY.
- PROTECT ANCHOR BOLTS ABOVE TOP OF FOUNDATION FROM DAMAGE AND RESIDUE CONCRETE DURING FOUNDATION CONSTRUCTION.
- CAP AND PROTECT THE CONDUITS DURING CONSTRUCTION.
- GROUND ROD LOCATION AND ORIENTATION RELATIVE TO TRACK AND FOUNDATION IS VARIABLE. THE INSTALLER SHALL TAKE CARE TO AVOID ANY UTILITIES BURIED ADJACENT TO THE FOUNDATION AND SHALL LOCATE GROUND ROD ACCORDINGLY.
- GROUND RESISTANCE FOR THE POLE SHALL BE 25 OHMS OR LESS.
- FOR FOUNDATIONS LOCATED IN LANDSCAPE AREA, TOP OF FOUNDATIONS SHOULD BE LEVEL WITH TOP OF FINISH GRADE.
- FOR SITE SPECIFIC FOUNDATION TYPE AND EMBEDMENT, SEE FOUNDATION SCHEDULE DRAWINGS.
- CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4.0 KSI. CONCRETE SHALL HAVE A MAXIMUM 3/8" COARSE AGGREGATE.
- REINFORCING STEEL SHALL CONFORM TO THE REQUIREMENTS OF ASTM A615 GRADE 60. REINFORCING STEEL SHALL BE EPOXY COATED.
- WHEN EMBEDDING THE BASE PLATE IN THE FOUNDATION IS NOT POSSIBLE, CONTRACTOR SHALL REFERENCE THE BASE PLATE ABOVE FOUNDATION DETAIL.
- WHERE ROUND POLE FOUNDATIONS ARE IN LANDSCAPE AREAS, USE FOUNDATION FD-1. FOR ALL PAVED AND SIDEWALK AREAS, USE FOUNDATION FD-2.

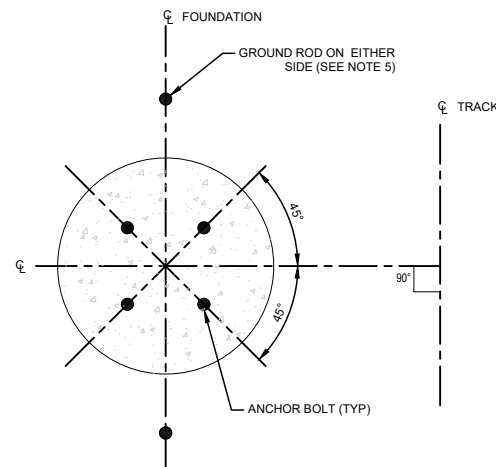
REV	DATE	DESCRIPTION	DESIGNED BY	PFW		PRELIMINARY PLANS – 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION		SCALE FOR 22"x34": NOT TO SCALE	
			CHECKED BY	CRW		 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	 The HNTB COMPANIES INFRASTRUCTURE SOLUTIONS 300 Apollo Drive Chelmsford, MA 01824 Phone: 978-905-4000	OVERHEAD CONTACT SYSTEM STRUCTURAL DETAILS FEEDER POLE FOUNDATION DETAIL		FILENAME: Y027.dwg	
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PLOT DATE: 8/27/2019			2:19:42 PM		DATE 8/28/2019	NOT FOR CONSTRUCTION				Y027	289



ROUND POLE FOUNDATION - FD-1L
BASE PLATE ABOVE GRADE
SCALE: NOT TO SCALE



ROUND POLE FOUNDATION - FD-2L
BASE PLATE BELOW GRADE
SCALE: NOT TO SCALE



ANCHOR BOLT ORIENTATION
SCALE: NOT TO SCALE

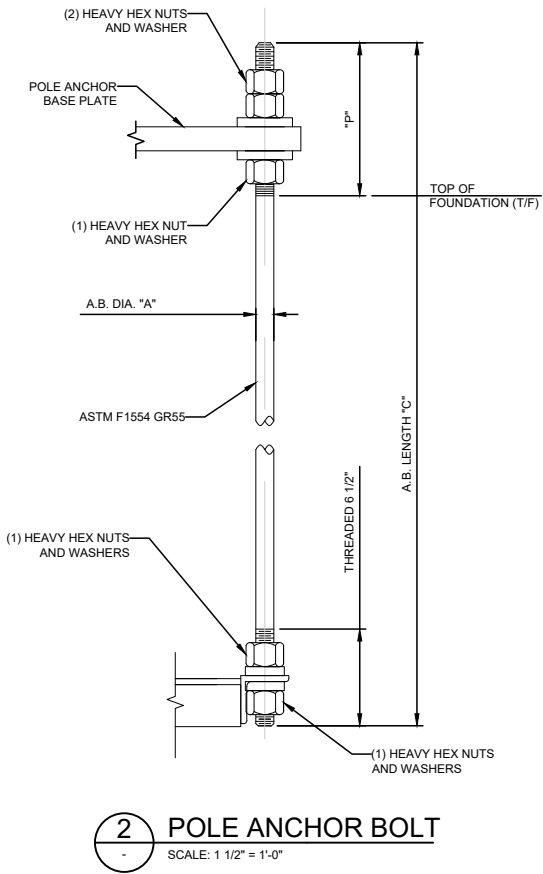
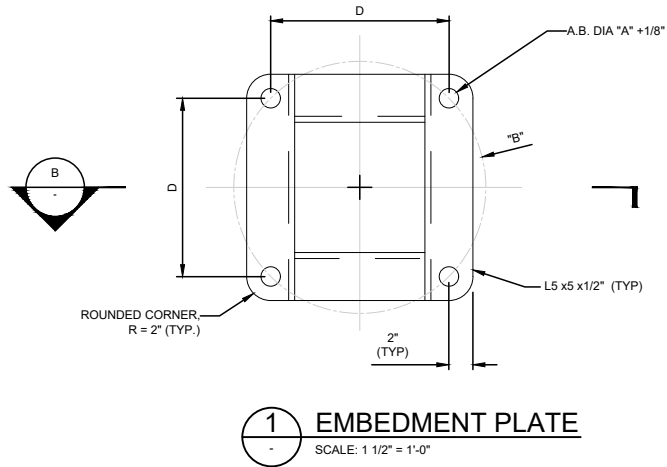
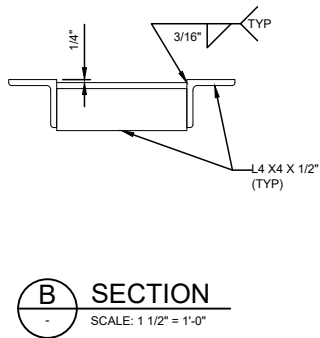
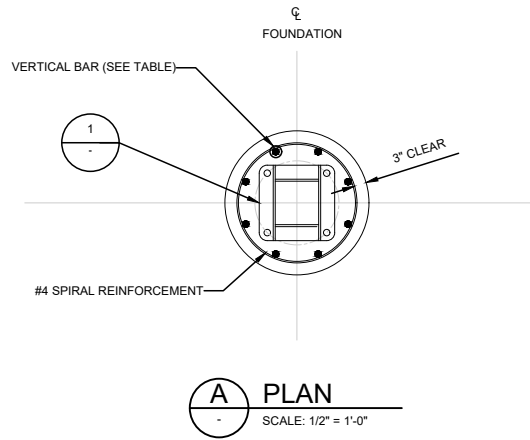
FOUNDATION/ ANCHOR BOLT TABLE							
FDN. TYPE	FOUNDATION		ANCHOR BOLT				
	VERTICAL REBAR		BOLT CIRCLE "B" (IN)	ANCHOR BOLT DIA. "A" (IN)	ANCHOR BOLT PROJECTION "P" (IN)	ANCHOR BOLT LENGTH "C" (IN)	"D" (IN)
	SIZE	TOTAL					
FD-1L / FD-2L	#9	8	21	*	11	66	14.85

* REFER TO DRAWINGS XXX, XXX, AND XXX FOR ANCHOR BOLT DIAMETER

NOTES:

- FOR NOTES REFER TO DRAWING Y001. FOR SYMBOLS AND ABBREVIATIONS, REFER TO DRAWING Y002.
- ANCHOR BOLTS SHALL BE HOT-DIP GALVANIZED STEEL CONFORMING TO ASTM F1554 GRADE 55. ALL NUTS AND PLATE WASHERS SHALL BE HOT-DIP GALVANIZED STEEL CONFORMING TO ASTM A563 AND F436, RESPECTIVELY.
- PROTECT ANCHOR BOLTS ABOVE TOP OF FOUNDATION FROM DAMAGE AND RESIDUE CONCRETE DURING FOUNDATION CONSTRUCTION.
- CAP AND PROTECT THE CONDUITS DURING CONSTRUCTION.
- GROUND ROD LOCATION AND ORIENTATION RELATIVE TO TRACK AND FOUNDATION IS VARIABLE. THE INSTALLER SHALL TAKE CARE TO AVOID ANY UTILITIES BURIED ADJACENT TO THE FOUNDATION AND SHALL LOCATE GROUND ROD ACCORDINGLY.
- GROUND RESISTANCE FOR THE POLE SHALL BE 25 OHMS OR LESS.
- FOR FOUNDATIONS LOCATED IN LANDSCAPE AREA, TOP OF FOUNDATIONS SHOULD BE LEVEL WITH TOP OF FINISH GRADE.
- FOR SITE SPECIFIC FOUNDATION TYPE AND EMBEDMENT, SEE FOUNDATION SCHEDULE DRAWINGS.
- CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4.0 KSI. CONCRETE SHALL HAVE A MAXIMUM 3/8" COARSE AGGREGATE.
- REINFORCING STEEL SHALL CONFORM TO THE REQUIREMENTS OF ASTM A615 GRADE 60. REINFORCING STEEL SHALL BE EPOXY COATED.
- WHEN EMBEDDING THE BASE PLATE IN THE FOUNDATION IS NOT POSSIBLE, CONTRACTOR SHALL REFERENCE THE BASE PLATE ABOVE FOUNDATION DETAIL.
- WHERE ROUND POLE FOUNDATIONS ARE IN LANDSCAPE AREAS, USE FOUNDATION FD-1. FOR ALL PAVED AND SIDEWALK AREAS, USE FOUNDATION FD-2.

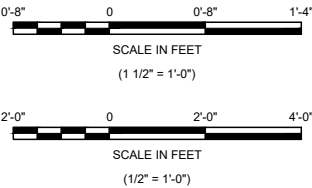
REV	DATE	DESCRIPTION	DESIGNED BY	PFW		PRELIMINARY PLANS – 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	OVERHEAD CONTACT SYSTEM STRUCTURAL DETAILS STREETLIGHT POLE FOUNDATION DETAIL		SCALE FOR 22"x34": NOT TO SCALE	
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											Y028	290
PLOT DATE: 8/27/2019			2:19:47 PM		DATE	8/28/2019	NOT FOR CONSTRUCTION					



- NOTES:
- FOR NOTES REFER TO DRAWING Y001. FOR SYMBOLS AND ABBREVIATIONS, REFER TO DRAWING Y002.
 - FOR POLE ANCHOR BASE PLATE DETAILS REFER TO DRAWING Y021.
 - FOR FOUNDATION TYPE AND EMBEDMENT LENGTH, REFER TO POLE AND FOUNDATION SCHEDULE ON DRAWINGS Y091 THRU Y096.
 - SLOPE CONCRETE AWAY FROM ANCHOR BOLTS FOR WATER RUNOFF.
 - FOR ADDITIONAL GROUNDING DETAIL, REFER TO DRAWING XXX.

FOUNDATION TYPE	FOUNDATION/ ANCHOR BOLT TABLE						
	VERTICAL REBAR		ANCHOR BOLT				
	SIZE	TOTAL	BOLT CIRCLE "B" (IN)	ANCHOR BOLT DIA. "A" (IN)	ANCHOR BOLT PROJECTION "P" (IN)	ACHOR BOLT LENGTH "C" (IN)	"D" (IN)
FD-1	#9	8	21	*	11	66	17.68

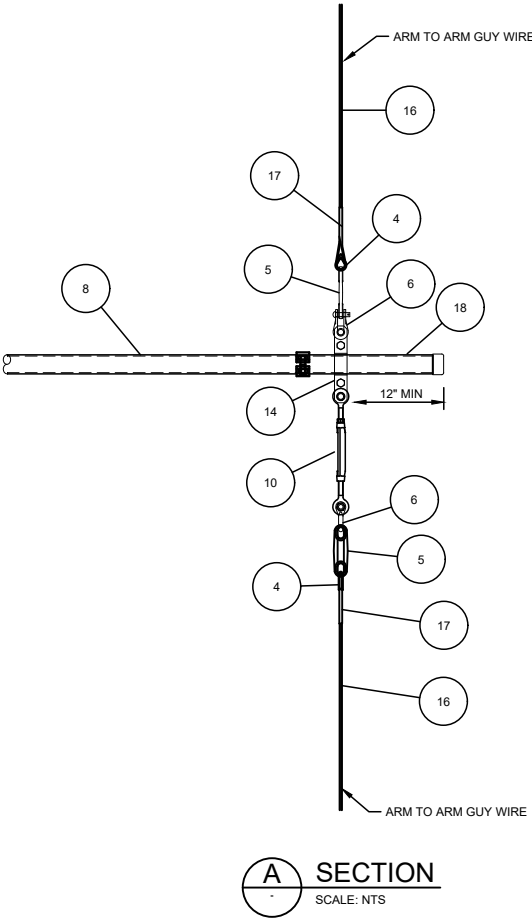
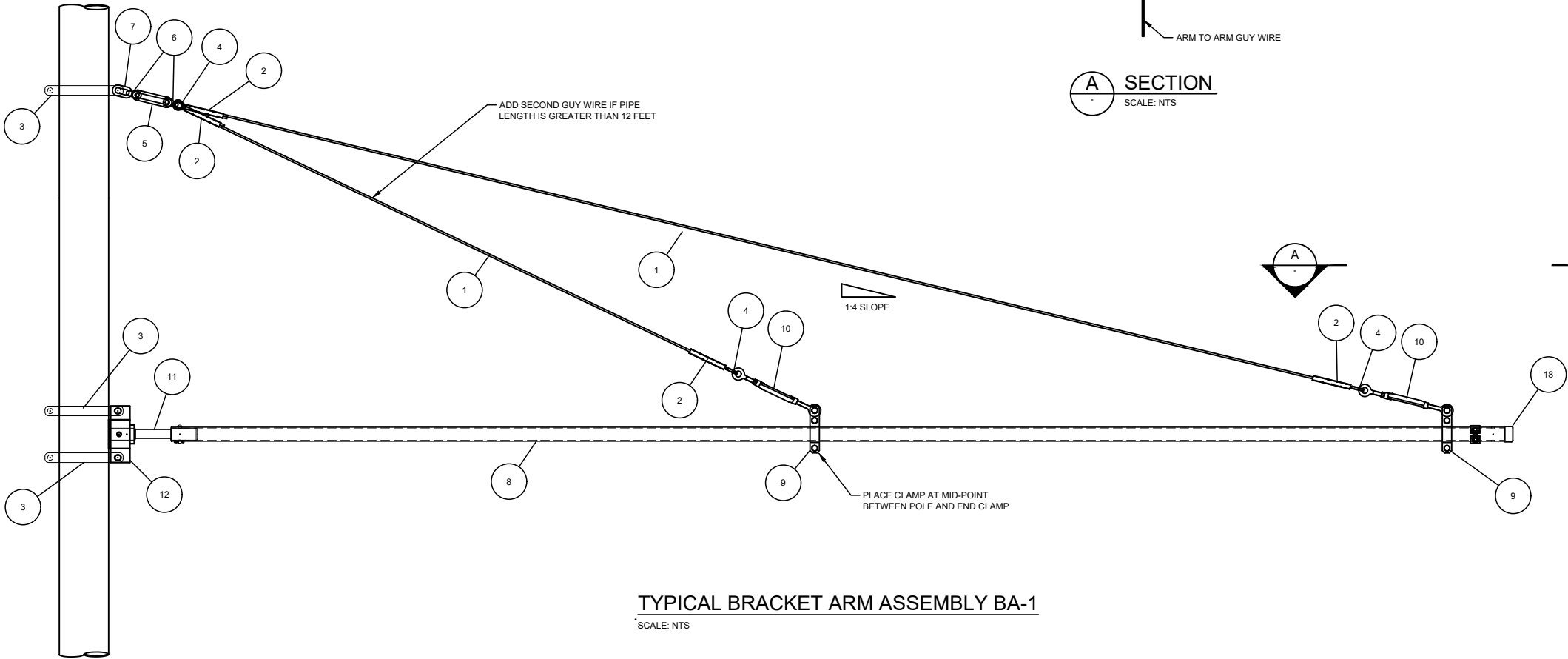
* REFER TO DRAWING XXX FOR ANCHOR BOLT DIAMETER



REV	DATE	DESCRIPTION	DESIGNED BY	PFW		PRELIMINARY PLANS – 30% DATE: 08-28-2019	 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	 The HNTB COMPANIES INFRASTRUCTURE SOLUTIONS 300 Apollo Drive Chelmsford, MA 01824 Phone: 978-905-4000	KANSAS CITY STREETCAR MAIN STREET EXTENSION	OVERHEAD CONTACT SYSTEM STRUCTURAL DETAILS ANCHOR BOLT DETAIL	SCALE FOR 22"x34": SCALE AS NOTED	
			CHECKED BY	CRW							FILENAME:	Y029.dwg
			DRAWN BY	DSK							CONTRACT NO.:	CON0077290
			CHECKED BY	PFW							VOLUME:	1
			APPROVED BY	NKS							DRAWING NO.:	Y029
PLOT DATE: ----			DATE		8/28/2019	NOT FOR CONSTRUCTION				SHEET NO.: 291		

BILL OF MATERIALS			
ITEM NO.	DESCRIPTION	SUPPLIER	PART NUMBER
1	WIRE, SPAN, 5/16", UTILITIES GRADE	-	-
2	TERMINATION, SPAN WIRE, 5/16"	MAC	E0493-01
3	POLE CLAMP DETAILS	SEE DRAWING Y036	
4	THIMBLE, 5/16", STL HDG	MAC	E0492-01
5	LOOP INSULATOR	MAC	D2864-01
6	SHACKLE FOR LOOP INSULATOR	MAC	E0928-02
7	CHAIN LINK	MAC	E0159-01
8	PIPE, STEEL, 2 IN., HDG, SCHEDULE 40	-	-
9	PIPE CLEVIS TWO PIECE G2.0"	MAC	C0145-02
10	TURNBUCKLE, EYE & EYE	MAC	D0138-01
11	STRUT INSULATOR 2" SCHEDULE 40 PIPE	IMPULSE	056909-3002
12	BRACKET ARM POLE SOCKET	SEE DRAWING Y037	
14	PIPE CLEVIS TWO PIECE G2.0"	MAC	V9350
16	WIRE, SPAN, 1/4", SIEMENS-MARTIN	ASTM A475	-
17	SLEEVE, NICOPRESS	NICOPRESS	28-10-F6
18	PIPE END CAP	-	-

*PIPE END FINIAL TO BE FURNISHED BY CONTRACTOR AND SUBMITTED TO RESIDENT ENGINEER FOR APPROVAL



NOTES:

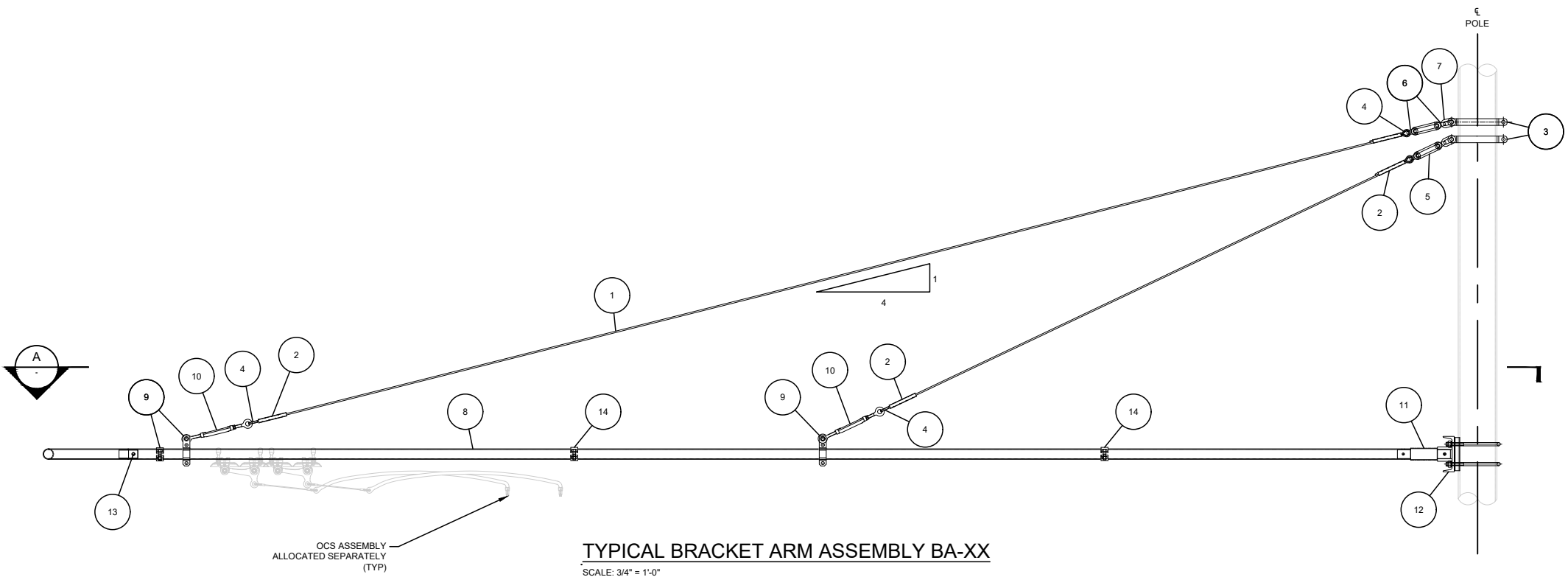
1. FOR NOTES REFER TO DRAWING Y001. FOR SYMBOLS AND ABBREVIATIONS REFER TO DRAWING Y002.
2. CONTACT WIRE SUSPENSION ASSEMBLY ALLOCATED SEPARATELY.
3. SIZE OF DOUBLE CLAMP DEPENDANT UPON POLE SIZE.
4. BRACKET ARM GUY WIRE AT END OF ARM TO BE CLAMPED TO OCS POLE AT A 1:4 SLOPE.
5. USE INSIDE GUY WIRE WHEN BRACKET ARM PIPE IS GREATER THAN 12 FEET LONG.
6. CONTRACTOR TO FURNISH PIPE END FINIAL FOR APPROVAL BY KC STREETCAR. PIPE END FINIAL TO FIT OVER OUTSIDE OF PIPE AND BE SECURED USING A 1/4 INCH SQUARE HEAD SET SCREW.
7. CONTRACTOR SHALL ONLY HOT BEND STEEL PLATES.
8. MAXIMUM REACH OF BRACKET ARM BA-1 IS 17 FEET.
9. ITEMS NOT REQUIRED WHEN CANTILEVERS ARE INSTALLED BACK-TO-BACK.

REV	DATE	DESCRIPTION	DESIGNED BY	PFW		PRELIMINARY PLANS – 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	OVERHEAD CONTACT SYSTEM BRACKET ARM ASSEMBLIES SINGLE PIPE BRACKET ARM	SCALE FOR 22"x34":	
			CHECKED BY	CRW						FILENAME:	
			DRAWN BY	DSK						Y031.dwg	
			CHECKED BY	PFW						CONTRACT NO.:	
			APPROVED BY	NKS						CON0077290	
										VOLUME:	
										1	
PLOT DATE: ----			DATE		8/28/2019	NOT FOR CONSTRUCTION				DRAWING NO.:	SHEET NO.:
										Y031	292

BILL OF MATERIALS			
ITEM NO.	DESCRIPTION	SUPPLIER	PART NUMBER
1	WIRE, SPAN, 5/16"	-	-
2	TERMINATION, SPAN WIRE, 5/16"	MAC	E0493-01
3	CLAMP FOR POLE, SINGLE SPAN	SEE DRAWING XXX	
4	THIMBLE, 5/16", STL HDG	MAC	KMA-140-4
5	LOOP INSULATOR	MAC	D2864-01
6	SHACKLE FOR LOOP INSULATOR	MAC	KMA-010-3
7	CHAIN LINK	MAC	E0159-01
8	PIPE, STEEL, 2 IN., HDG, SCHEDULE 80	-	-
9	PIPE CLAMP FOR 2" PIPE, SINGLE CLEVIS	MAC	KMC-676-1
10	TURNBUCKLE, EYE & EYE	MAC	D0138-01
11	STRUT INSULATOR 2" SCHEDULE 80 PIPE	MAC	KMA-675
12	MOUNTING BRACKET	SEE DRAWING XXX	
13	1/2" Ø CLEVIS PIN WITH COTTER KEY	-	-
14	PIPE CLAMP FOR 2" PIPE	MAC	KMC-676-3
15	WIRE, SPAN, 1/4"	-	-
16	SLEEVE, NICOPRESS	NICOPRESS	188-8-VF6
17	STEEL STRAP, 1/2" THICK BY 1 5/8" WIDE	-	-

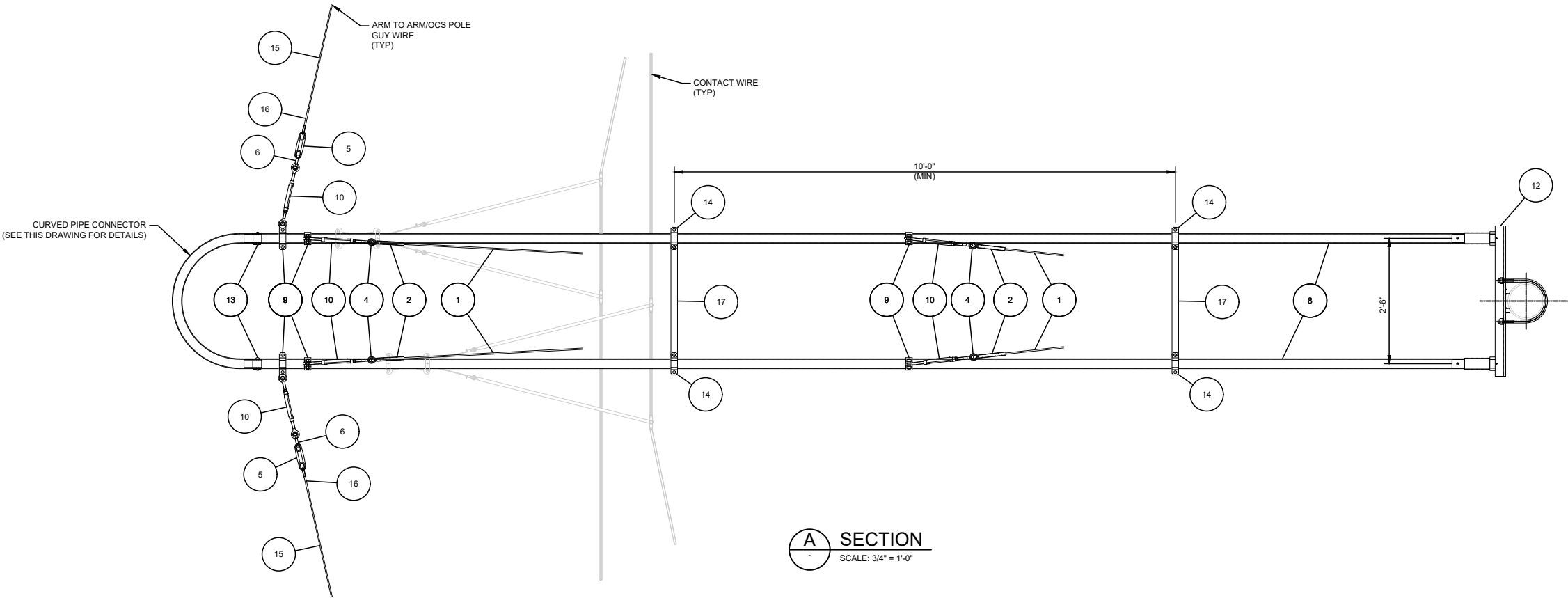
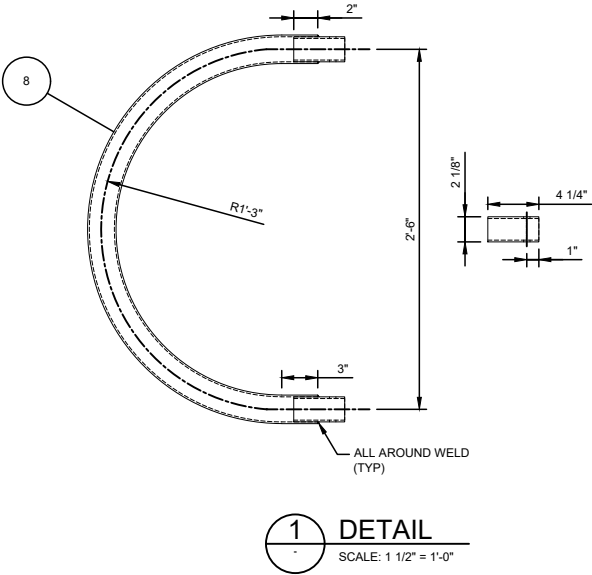
NOTES:

1. FOR NOTES REFER TO DRAWING Y001. FOR SYMBOLS AND ABBREVIATIONS REFER TO DRAWING Y002.
2. ARRANGEMENTS SHOWN ARE TYPICAL AND CONSTRUCTION CREWS MAY MAKE ALTERATIONS OR ADJUSTMENTS TO SUIT FIELD CONDITIONS.
3. BRACKET ARMS SHALL BE HORIZONTAL WITH RESPECT TO GROUND.
4. ASSEMBLY TYPE SUSPENDED FROM BRACKET ARM VARIES AND IS INDICATED ON LAYOUT PLANS.



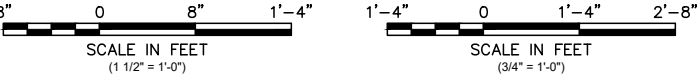
TYPICAL BRACKET ARM ASSEMBLY BA-XX

SCALE: 3/4" = 1'-0"

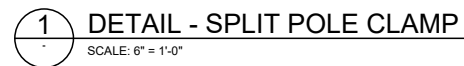


A SECTION

SCALE: 3/4" = 1'-0"



REV	DATE	DESCRIPTION	DESIGNED BY	PFW		PRELIMINARY PLANS – 30%	DATE: 08-28-2019	 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	 The HNTB COMPANIES INFRASTRUCTURE SOLUTIONS 300 Apollo Drive Chelmsford, MA 01824 Phone: 978-905-4000	KANSAS CITY STREETCAR MAIN STREET EXTENSION	OVERHEAD CONTACT SYSTEM BRACKET ARM ASSEMBLIES OVERLAP SINGLE PIPE BRACKET ARM	SCALE FOR 22"x34": SCALE AS NOTED FILENAME: Y033.dwg CONTRACT NO.: CON0077290 VOLUME: 1 DRAWING NO.: Y033	SHEET NO.: 294				
			CHECKED BY	CRW													
			DRAWN BY	DSK													
			CHECKED BY	PFW													
			APPROVED BY	NKS													
PLOT DATE: 8/27/2019			2:20:04 PM											NOT FOR CONSTRUCTION			
			DATE 8/28/2019														

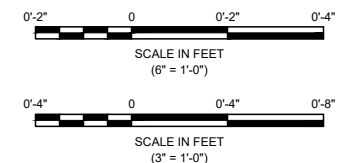


1. FOR NOTES REFER TO DRAWING Y001.FOR SYMBOLS AND ABBREVIATIONS REFER TO DRAWING Y002.
2. BEAM CLAMP ROD TO BE STEEL, ASTM A572, GRADE 65 HOT FORGED FOR BENDING. CLAMPS SHALL BE CAST STEEL PER ASTM A216. PARTS SHALL BE HOT DIPPED GALVANIZED PER ASTM A153 FOR ROD AND ASTM A385.
3. NUTS SHALL BE HEAVY HEX HEAD, CONFORMING TO ASTM A385 AND HOT DIPPED GALVANIZED PER ASTM A153 FOR ROD.
4. BOLTS TO BE GRADE 8.

TABLE 1				
SIZE	"A"	"B"	"C"	"D"
1	3-1/2"	8"	3-1/8"	6-3/8"
2	4-1/2"	9"	3-5/8"	7-3/8"
3	5-9/16"	10-1/16"	4-5/32"	8-7/16"
4	6-5/8"	11-1/8"	4-11/16"	9-1/2"
5	7-5/8"	12-1/8"	5-3/16"	10-1/2"
6	8-5/8"	13-1/8"	5-11/16"	11-1/2"
7	9-5/8"	14-1/8"	6-3/16"	12-1/2"
8	10-3/4"	15-1/4"	6-3/4"	13-5/8"
9	11-3/4"	16-1/4"	7-1/4"	14-5/8"



TYPICAL MULTIPLE POLE CLAMP



REV	DATE	DESCRIPTION	DESIGNED BY	PFW
			CHECKED BY	CRW
			DRAWN BY	DSK
			CHECKED BY	PFW
			APPROVED BY	NKS
PLOT DATE: ----			DATE	8/28/2019



DATE: 08-28-2019

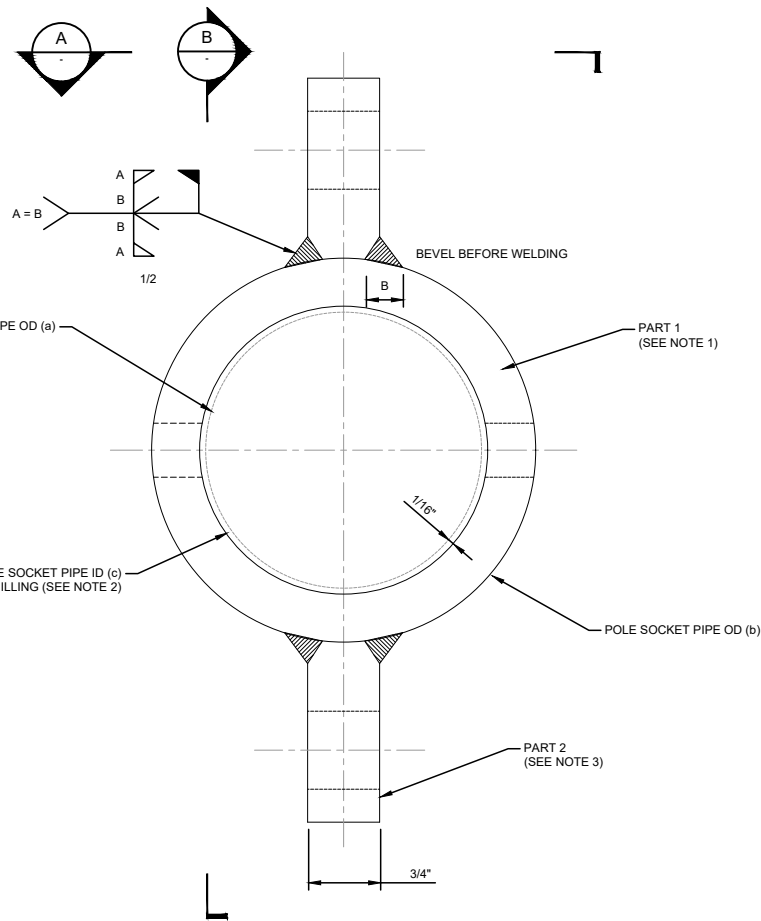
HNTB

The HNTB COMPANIES
INFRASTRUCTURE SOLUTIONS
300 Apollo Drive
Chelmsford, MA 01824
Phone: 978-905-4000

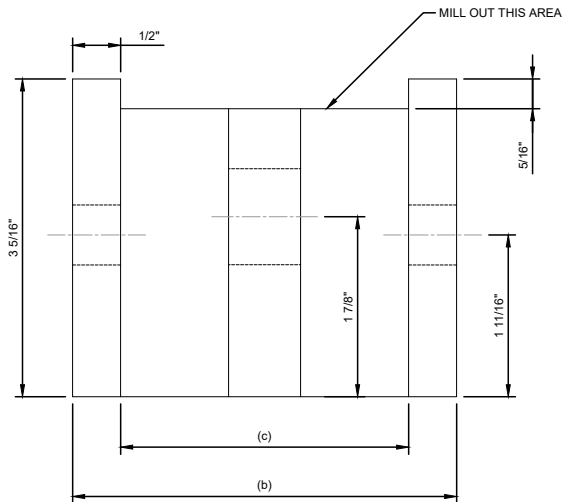
KANSAS CITY STREETCAR MAIN STREET EXTENSION

OVERHEAD CONTACT SYSTEM BRACKET ARM ASSEMBLIES POLE CLAMP DETAILS

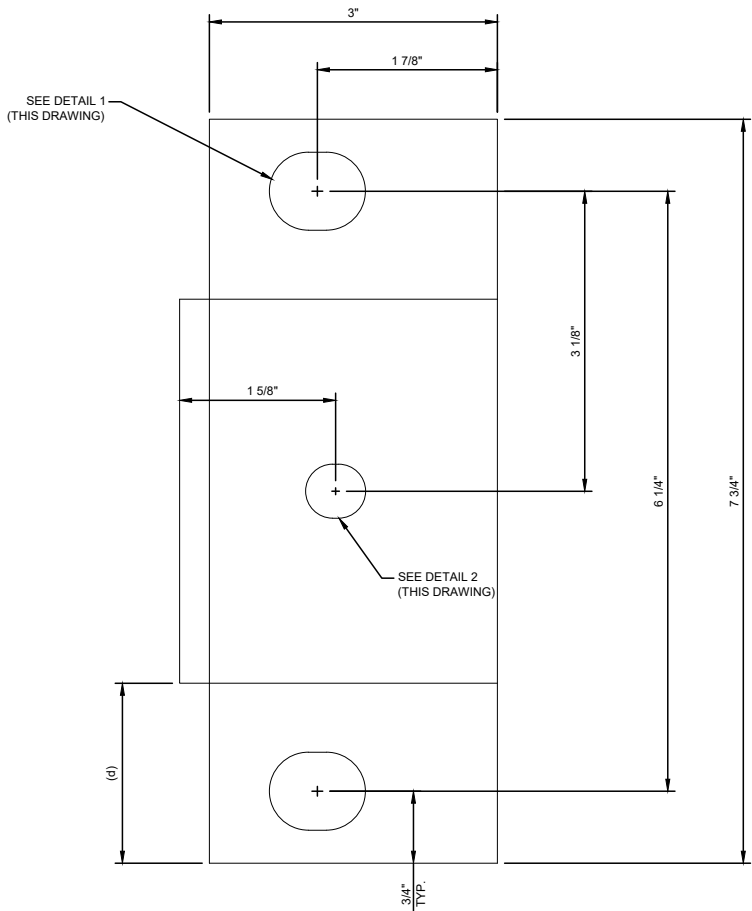
SCALE FOR 22"x34":
SCALE AS NOTED
FILENAME:
Y036.dwg
CONTRACT NO.:
CON0077290
VOLUME:
1
DRAWING NO.: SHEET NO.:
Y036 295



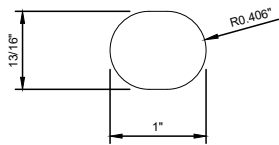
BRACKET ARM POLE SOCKET
SCALE: 6" = 1'-0"



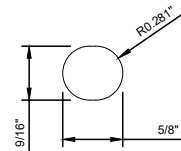
A PLAN VIEW
SCALE: 6" = 1'-0"



B SIDE VIEW
SCALE: 6" = 1'-0"



1 DETAIL
SCALE: 6" = 1'-0"

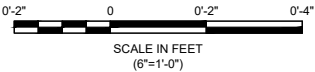


2 DETAIL
SCALE: 6" = 1'-0"

NOTES:

- FOR NOTES REFER TO DRAWING Y001. FOR SYMBOLS AND ABBREVIATIONS REFER TO DRAWING Y002.
- MAKE PART 1 FROM DOUBLE EXTRA HEAVY STEEL PIPE, ASTM A53, TYPE "S", GRADE "B" (SEE TABLE 1 FOR POLE SOCKET PIPE SIZE).
- MILL POLE SOCKET PIPE INSIDE DIAMETER TO PROVIDE 1/16" CLEARANCE AROUND CANTILEVER PIPE WHEN INSERTED (SEE DIMENSION (c) IN TABLE).
- PART 2 TO BE MADE FROM A36 STEEL.
- COMPLETED UNIT TO BE HOT DIP GALVANIZED PER ASTM A153.
- TOLERANCES $\pm 5/32$ INCHES.
- ALL DIMENSIONS IN INCHES.
- GRIND SHARP EDGES.
- SUPPLY WITH 1/2"-12 X 4-1/4" LONG BOLT WITH NUT AND LOCKWASHER, ALL GALVANIZED.
- CHECK FIT WITH PIPE AND/OR INSULATOR PRIOR TO GALVANIZING. POLE SOCKET TO FIT WITH POLE CLAMP AND 2" PIPE. MAKE ALTERNATIONS AS NEEDED.
- SOCKET IS MAC PRODUCTS PART NO. KMA-344.

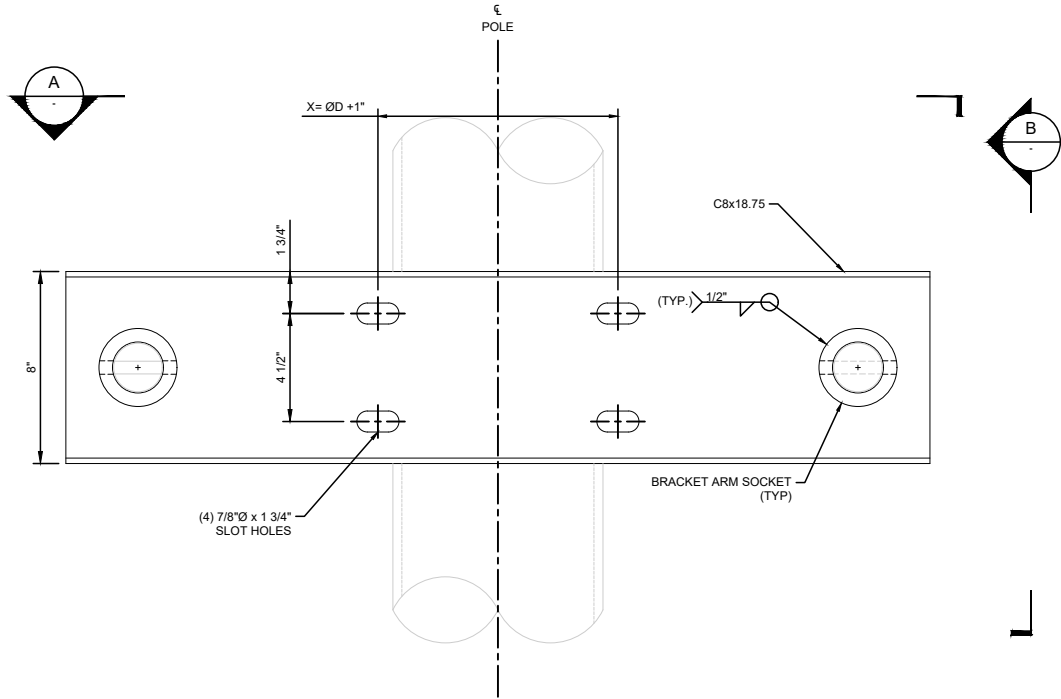
TABLE 1					
CANTILEVER PIPE SIZE	(a)	POLE SOCKET PIPE SIZE	(b)	(c)	(d)
2"	2 3/8"	3"	3 1/2"	2 1/2"	2 1/8"
2 1/2"	2 7/8"	3 1/2"	4"	3"	1 7/8"



REV	DATE	DESCRIPTION	DESIGNED BY	PFW		PRELIMINARY PLANS – 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	OVERHEAD CONTACT SYSTEM BRACKET ARM ASSEMBLIES BRACKET ARM POLE SOCKET	SCALE FOR 22"x34": 6" = 1'-0"				
			CHECKED BY	CRW							 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	 The HNTB COMPANIES INFRASTRUCTURE SOLUTIONS 300 Apollo Drive Chelmsford, MA 01824 Phone: 978-905-4000	FILENAME: Y037.dwg CONTRACT NO.: CON0077290 VOLUME: 1 DRAWING NO.: Y037	SHEET NO.: 296
			DRAWN BY	DSK										
			CHECKED BY	PFW										
			APPROVED BY	NKS										
PLOT DATE: 8/27/2019			2: 20:11 PM		DATE	8/28/2019	NOT FOR CONSTRUCTION							

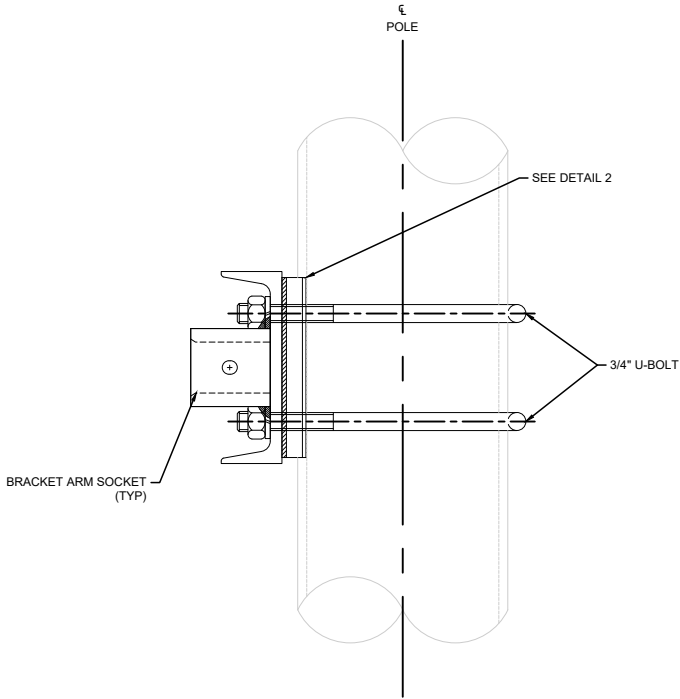
NOTES:

- FOR NOTES REFER TO DRAWING Y001. FOR SYMBOLS AND ABBREVIATIONS REFER TO DRAWING Y002.
- BOLTS AND CLEVIS PINS SHALL BE STEEL CONFORMING TO ASTM A325, TYPE 1, AND GALVANIZED IN CONFORMANCE WITH ASTM A153, CLASS C.
- NUTS SHALL BE STEEL CONFORMING TO ASTM A563, GRADE DH, AND GALVANIZED IN CONFORMANCE WITH ASTM 153, CLASS C.
- WASHERS SHALL BE FLAT AND GALVANIZED HARDENED STEEL FOR USE WITH FASTENERS TO ASTM A325.
- FOR LOCATION OF DOUBLE CANTILEVER ARMS REFER TO LAYOUT PLANS.
- DOUBLE CANTILEVER BEAM USED FOR OVERLAPS.



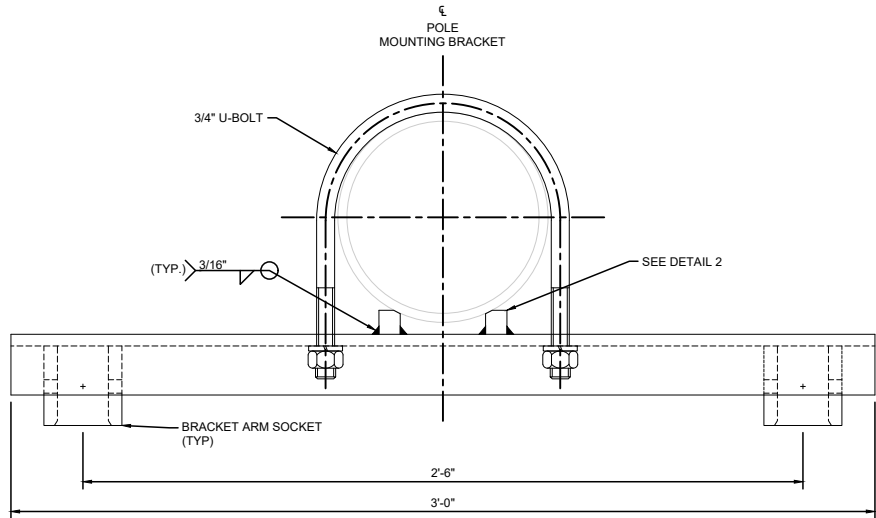
DOUBLE CANTILEVER ARM MOUNTING BRACKET

SCALE: 3" = 1'-0"



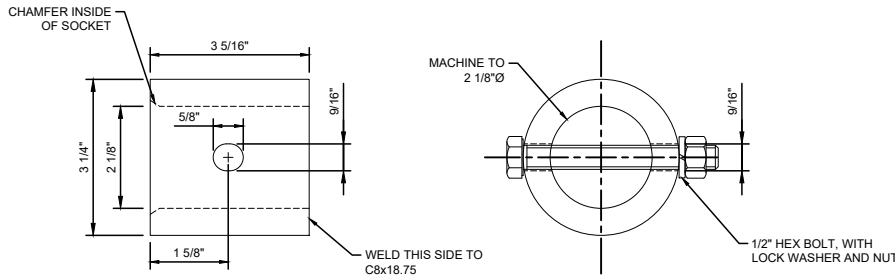
B VIEW

SCALE: 3" = 1'-0"



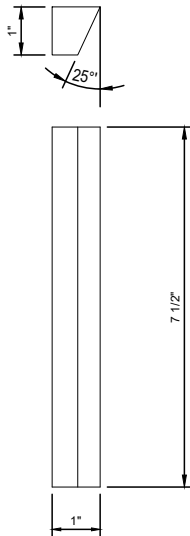
A VIEW

SCALE: 3" = 1'-0"



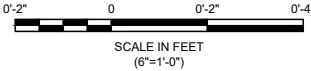
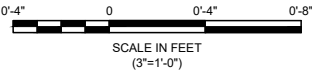
1 BRACKET ARM SOCKET DETAIL

SCALE: 6" = 1'-0"

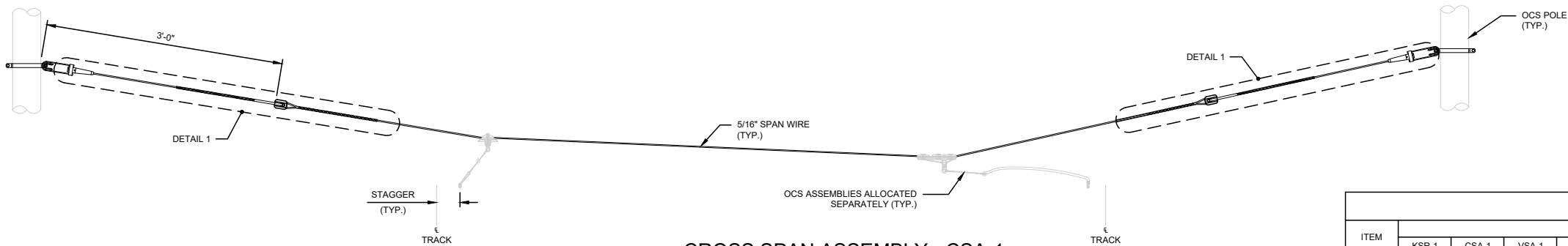


2 DETAIL

SCALE: 6" = 1'-0"



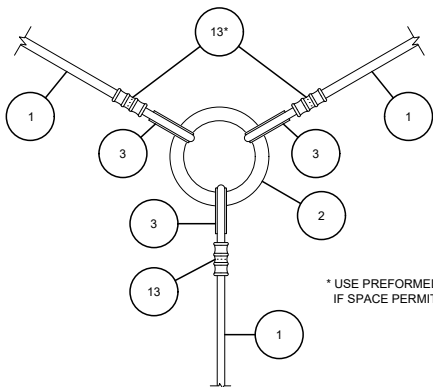
REV	DATE	DESCRIPTION	DESIGNED BY	PFW			PRELIMINARY PLANS – 30%		DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION		SCALE FOR 22"x34":	
			CHECKED BY				 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	 The HNTB COMPANIES INFRASTRUCTURE SOLUTIONS 300 Apollo Drive Chelmsford, MA 01824 Phone: 978-905-4000	OVERHEAD CONTACT SYSTEM BRACKET ARM ASSEMBLIES OVERLAP BRACKET ARM MOUNTING BRACKET DETAIL		FILENAME: BORDER-1.dwg		
			DRAWN BY	DSK							CONTRACT NO.:		
			CHECKED BY	PFW							CON0077290		
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PLOT DATE: ----			DATE			NOT FOR CONSTRUCTION					1		
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													SHEET NO.: 297



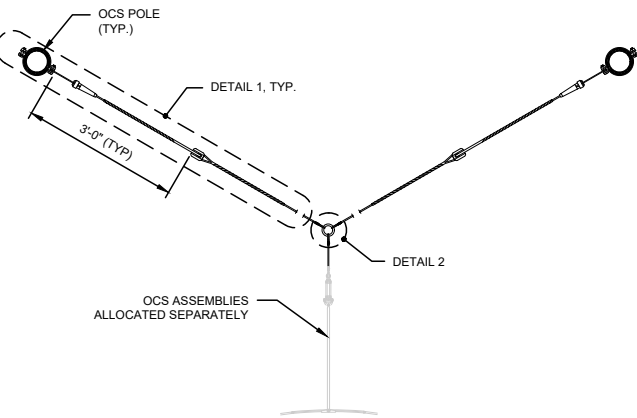
CROSS SPAN ASSEMBLY - CSA-1

SCALE: 1/2" = 1'-0"

NOTE: FOR MULTIPLE CSA-1, USE A SPREADER PIPE AS SHOWN ON U-OCSD29.

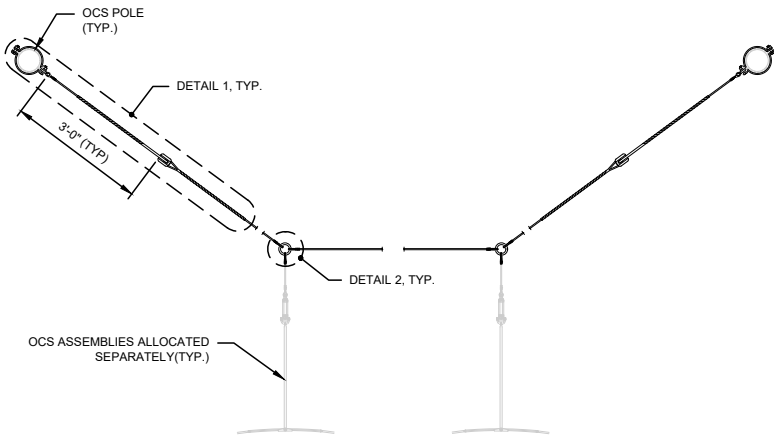


2 DETAIL
SCALE: 3" = 1'-0"



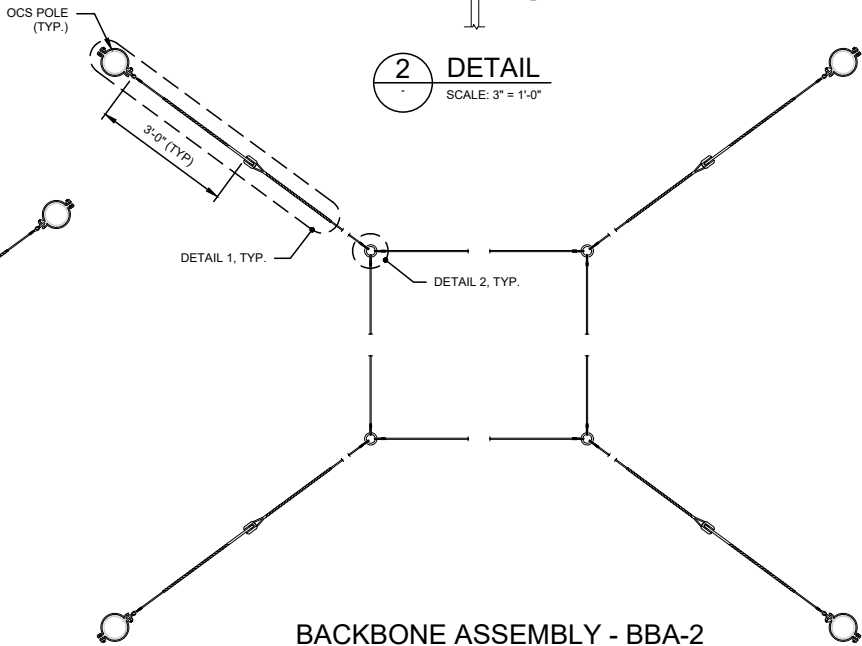
VEE SPAN ASSEMBLY - VSA-1

SCALE: 3/8" = 1'-0"



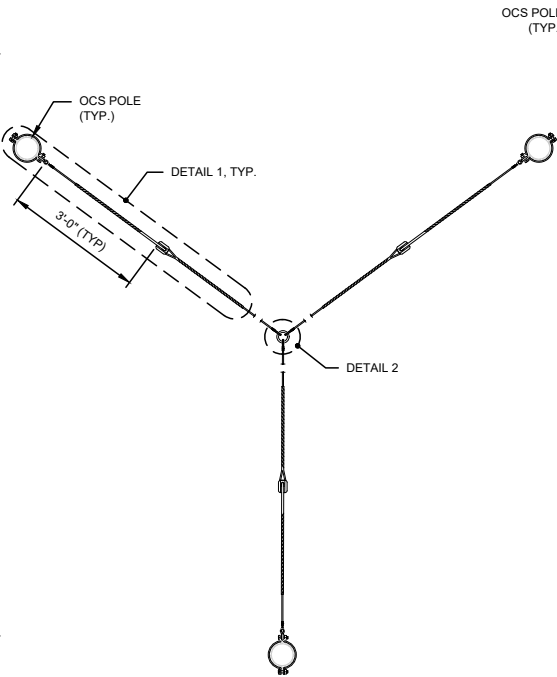
BACKBONE ASSEMBLY - BBA-1

SCALE: 3/8" = 1'-0"



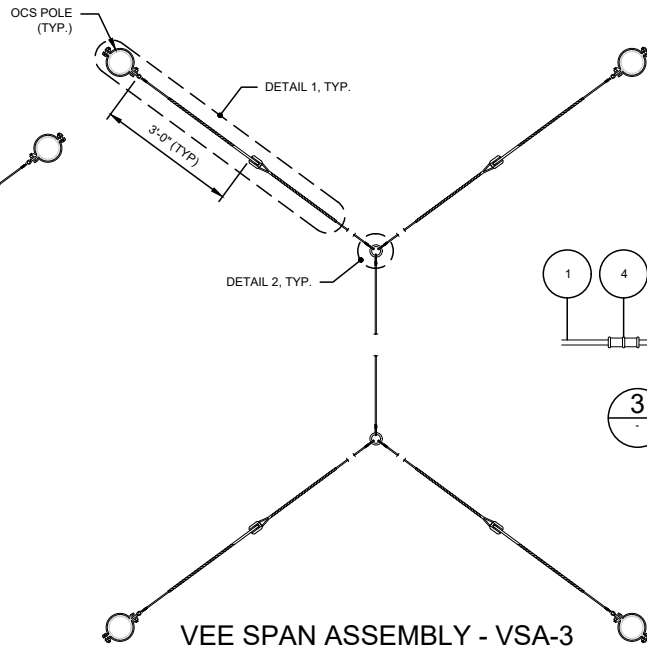
BACKBONE ASSEMBLY - BBA-2

SCALE: 3/8" = 1'-0"



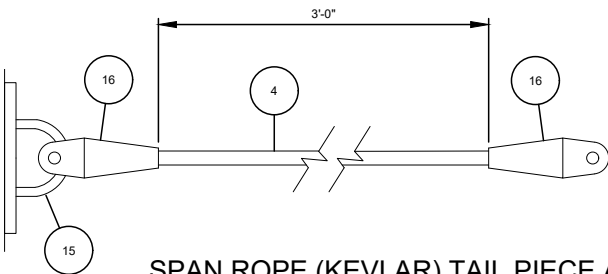
VEE SPAN ASSEMBLY - VSA-2

SCALE: 3/8" = 1'-0"



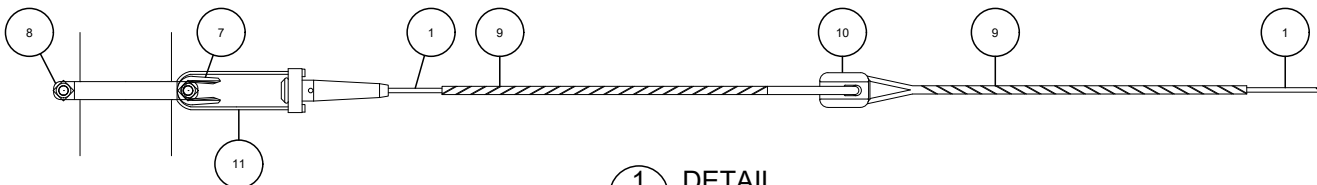
VEE SPAN ASSEMBLY - VSA-3

SCALE: 3/8" = 1'-0"



SPAN ROPE (KEVLAR) TAIL PIECE ASSEMBLY, KSR-1

SCALE: 3" = 1'-0"

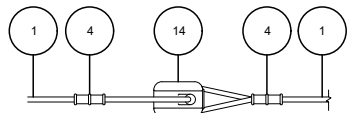


1 DETAIL
SCALE: 3" = 1'-0"

NOTES:

- FOR NOTES REFER TO DRAWING Y001. FOR SYMBOLS AND ABBREVIATIONS REFER TO DRAWING Y002.
- REFER TO LAYOUT PLANS FOR CROSS SPAN LOCATIONS.
- CONTRACTOR TO DETERMINE CORRECT POLE CLAMP SIZE.
- IF INADEQUATE SPACE PREVENTS USE OF PREFORMED END FITTING USE CRIMP CONNECTION AT JB PORCELAIN INSULATOR AS SHOWN IN DETAIL 3.

ITEM	QTY.							DESCRIPTION	SUPPLIER	PART NO.
	KSR-1	CSA-1	VSA-1	VSA-2	VSA-3	BBA-1	BBA-2			
1	-	A/R	A/R	A/R	A/R	A/R	A/R	STEEL SPAN WIRE, 5/16"	ASTM A475	-
2	-	-	1	1	2	2	4	BULL RING	MAC	E1427-01
3	-	2	5	6	10	8	16	THIMBLE, 5/16"	CROSBY	1037559
4	A/R	-	-	-	-	-	-	SPAN ROPE, KEVLAR 11MM	PHILLYSTRAN	HPTG 11200I
5	4	-	-	-	-	-	-	CRIMP SLEEVE	NICOPRESS	18-24-J8
6	1	-	-	-	-	-	-	PREFORM GRIP FOR KEVLAR	PHILLYSTRAN	PLP-2558
7	2	-	-	-	-	-	-	THIMBLE	CROSBY	1037595
8	A/R	A/R	A/R	A/R	A/R	A/R	A/R	POLE CLAMP	-	SEE DWG. Y036
9	-	4	4	6	8	4	8	PREFORMED BIG-GRIP	PREFORMED LINE PRODUCTS	GDE-2106
10	-	2	2	3	4	2	4	JB PORCELAIN INSULATOR	MACLEAN	DP54-3
11								STRANDWISE, 5/16"	MACLEAN	5251
12								THIMBLE, KEVLAR 11MMØ	PHILLYSTRAN	CL37719
13								CRIMP SLEEVE, 5/16" SPAN WIRE	NICOPRESS	18-13-G9
14								SHACKLE	MAC	D0331-01
15								EYE PLATE FOR BUILDING	MAC	E1234-01
16								END TERMINATION, 11MMØ KEVLAR	PHILLYSTRAN	ESA 5112



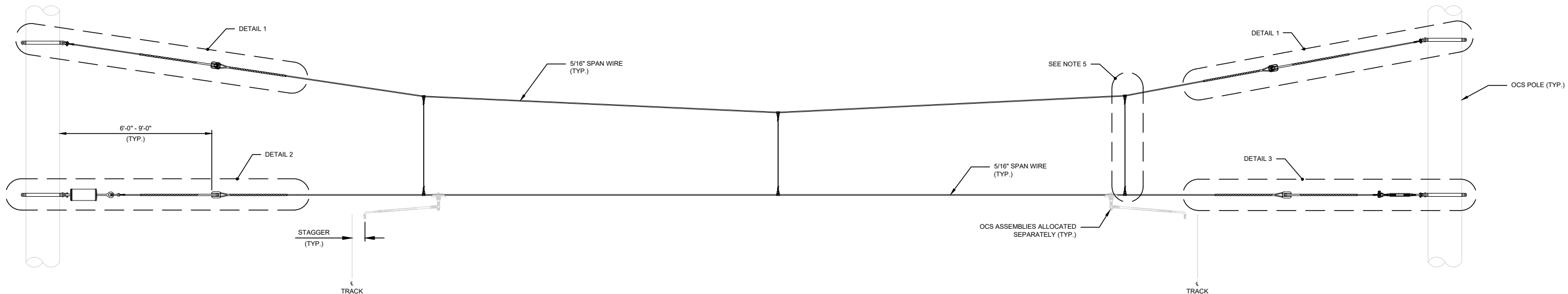
3 DETAIL
SCALE: 1 1/2" = 1'-0"

2'-8" 0 2'-8" 5'-4"
SCALE IN FEET
(3/8"=1'-0")

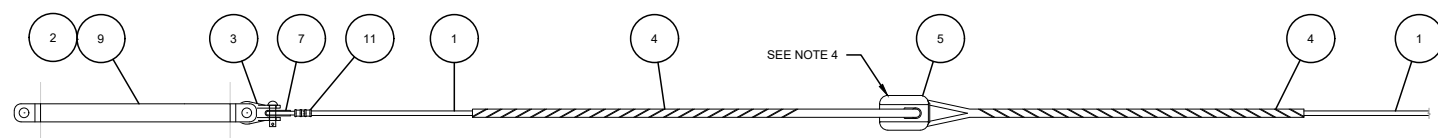
0'-8" 0 0'-8" 1'-4"
SCALE IN FEET
(1 1/2"=1'-0")

0'-4" 0 0'-4" 0'-8"
SCALE IN FEET
(3"=1'-0")

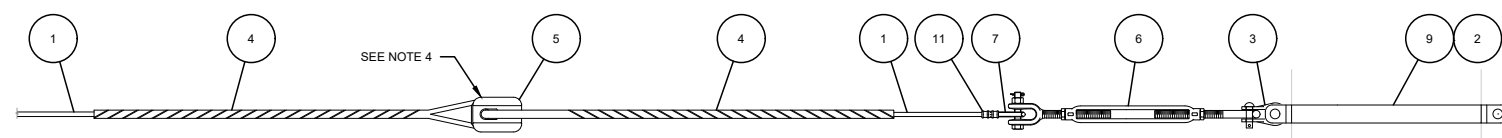
REV	DATE	DESCRIPTION	DESIGNED BY	PFW		PRELIMINARY PLANS – 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	OVERHEAD CONTACT SYSTEM SPAN WIRE ARRANGEMENTS CROSS SPAN DETAILS	SCALE FOR 22"x34": SCALE AS NOTED FILENAME: Y041.dwg CONTRACT NO.: CON0077290 VOLUME: 1 DRAWING NO.: Y041 SHEET NO.: 298
			CHECKED BY	CRW						
			DRAWN BY	DSK						
			CHECKED BY	PFW						
			APPROVED BY	NKS						
PLOT DATE: 8/27/2019		2:20:21 PM		DATE						



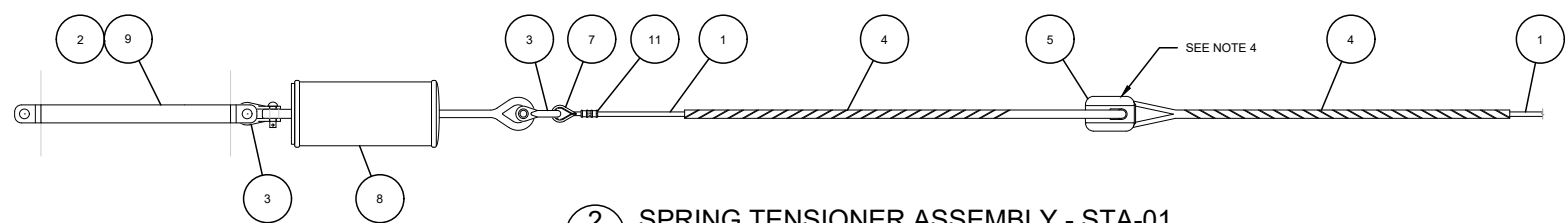
HEAD SPAN ASSEMBLY - HSA-2
SCALE: 1/2" = 1'-0"



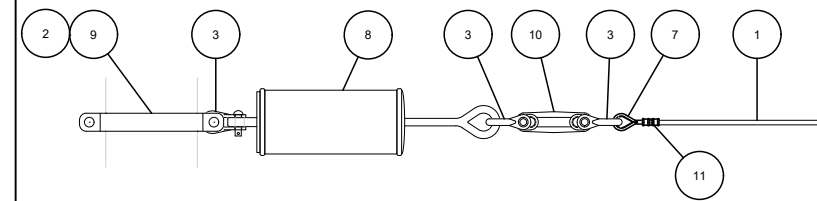
1 TAIL PIECE ASSEMBLY - TP-01
SCALE: 1 1/2" = 1'-0"



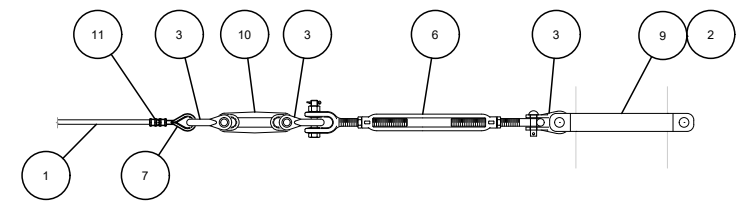
3 TAIL PIECE ASSEMBLY - TP-02
SCALE: 1 1/2" = 1'-0"



2 SPRING TENSIONER ASSEMBLY - STA-01
SCALE: 1 1/2" = 1'-0"



4 SPRING TENSIONER ASSEMBLY - STA-02
SCALE: 1 1/2" = 1'-0"
(TO BE USED WHERE A MINIMUM 6'-0" CLEARANCE FROM FACE OF POLE TO INSULATOR CANNOT BE ACHIEVED)

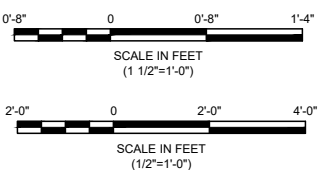


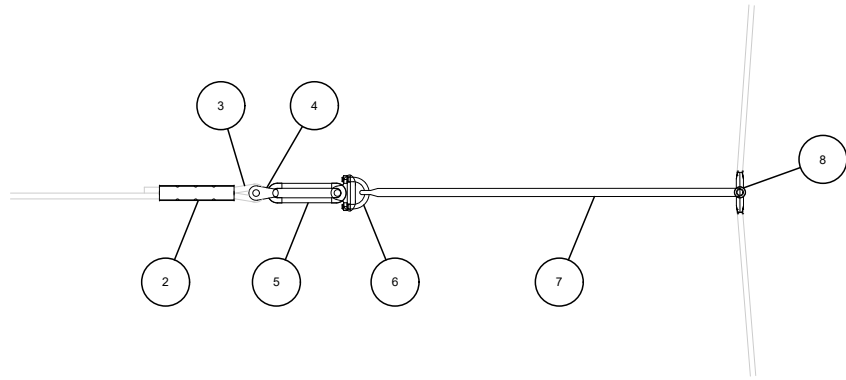
5 TAIL PIECE ASSEMBLY - TP-03
SCALE: 1 1/2" = 1'-0"
(TO BE USED WHERE A MINIMUM 6'-0" CLEARANCE FROM FACE OF POLE TO INSULATOR CANNOT BE ACHIEVED)

BILL OF MATERIAL			
ITEM	DESCRIPTION	MFR.	PART NO.
1	STEEL SPAN WIRE, 5/16"	ASTM A475	-
2	BEAM CLAMP	MAC	SEE DWG. Y036
3	SHACKLE, TYPE 2	K+M	D0231-02
4	PREFORMED BIG-GRIP	PREFORMED LINE PRODUCTS	GDE-2106
5	JB PORCELAIN INSULATOR	MACLEAN	DP54-3
6	HG-227 JAW & EYE TURNBUCKLE	CROSBY	1031975
7	THIMBLE, 5/16"	CROSBY	1037559
8	SPRING, CROSS SPAN	SIEMENS	8WL1080
9	POLE CLAMP	-	SEE DWG. Y036
10	INSULATOR, CLEVIS-TONGUE	MAC	D0107-01
11	COMPRESSION FITTING	NICO PRESS	28-13-G9

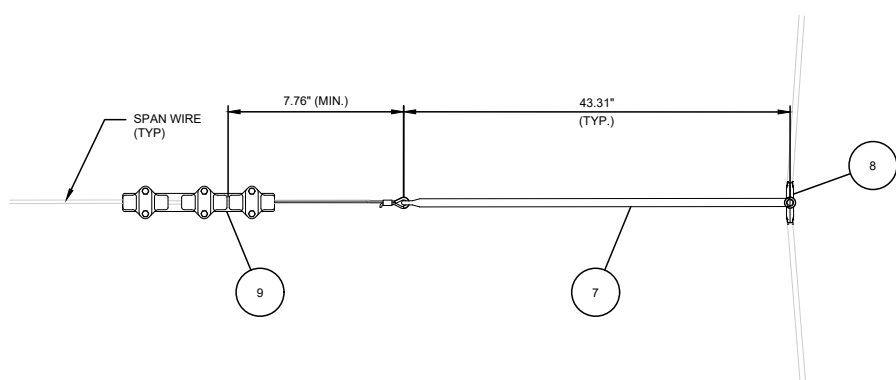
NOTES:

- FOR NOTES REFER TO DRAWING Y001. FOR SYMBOLS AND ABBREVIATIONS REFER TO DRAWING Y002.
- INSTALL SPRING IN ACCORDANCE TO MANUFACTURE'S RECOMMENDATIONS.
- FOR LOCATION OF SPRING TENSIONER DEVICES REFER TO LAYOUT PLANS.
- SEE NOTE 4 ON DRAWING Y041 FOR ADDITIONAL INFORMATION ON INSULATOR PLACEMENT ALONG SPAN WIRES.
- FOR HEAD SPAN HANGER ASSEMBLY DETAIL, REFER TO DRAWING Y049.

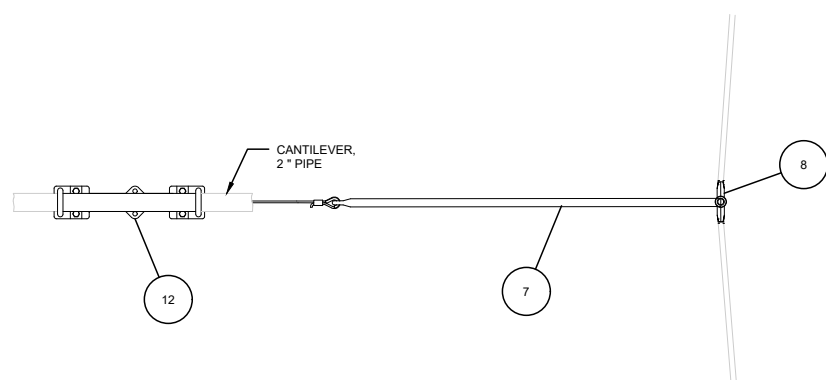




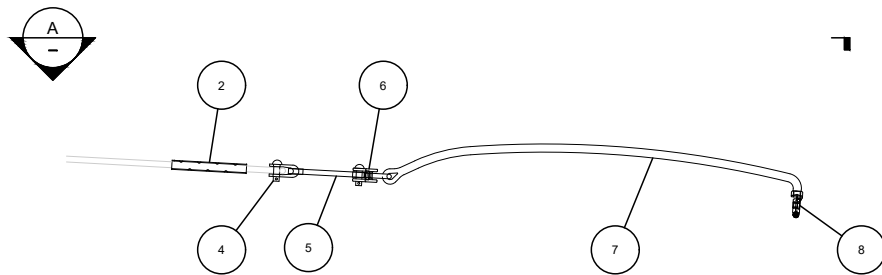
A PLAN VIEW
SCALE: NTS



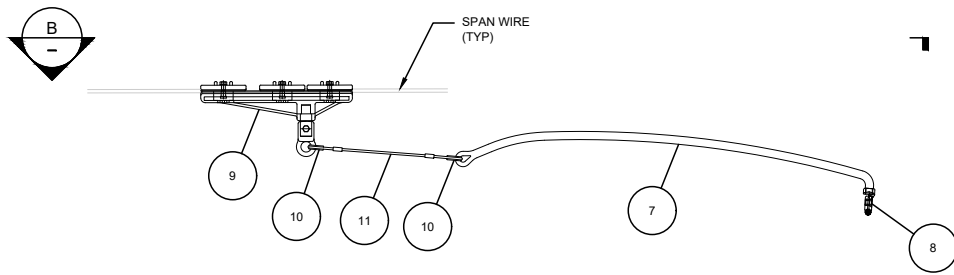
B PLAN VIEW
SCALE: NTS



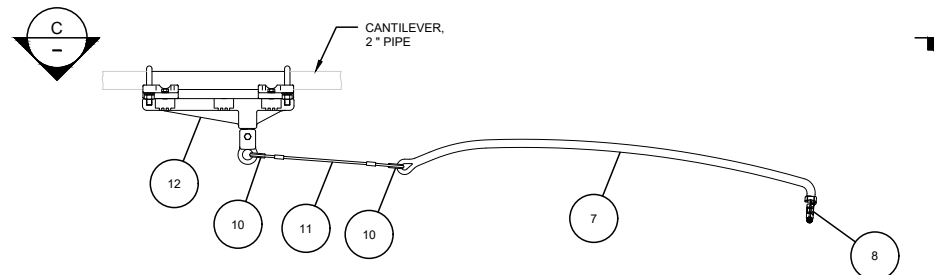
C PLAN VIEW
SCALE: NTS



**FPO-1
FLYING PULLOVER**
SCALE: NTS
(LINE ANGLE < 8°)
ASSEMBLY WEIGHT: 6.895 LBS



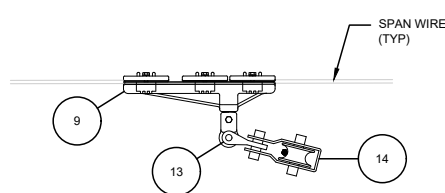
**PO-1
PULLOVER**
SCALE: NTS
(LINE ANGLE < 8°)
ASSEMBLY WEIGHT: 15.406 LBS



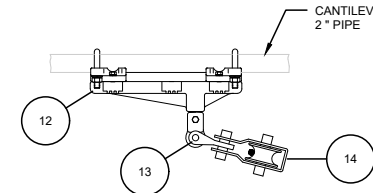
**PO-1A
PULLOVER**
SCALE: NTS
(LINE ANGLE < 8°)
ASSEMBLY WEIGHT: 11.501 LBS

BILL OF MATERIAL											
ITEM	QTY.								DESCRIPTION	SUPPLIER	PART NO.
	FPO-1	PO-1	PO-1A	CWP-1	CWP-1A	CWP-1B	CWP-2	CWP-3			
2	1	-	-	-	-	-	1	1	TERMINATION, SPAN WIRE 5/16"	MAC	E0493-01
3	1	-	-	-	-	-	1	1	THIMBLE OPEN PATTERN, 5/16" G-408	CROSBY	1037559
4	1	-	-	-	-	-	1	1	SHACKLE FOR LOOP INSULATOR	MAC	E0928-02
5	1	-	-	-	-	-	1	1	LOOP INSULATOR	MAC	D2864-01
6	1	-	-	-	-	-	-	-	CONNECTION FORK W/ U-BOLT	MAC	E1225-01
7	1	1	1	-	-	-	-	-	STEADY ARM ROD, 3.61 FT	MAC	C1813-07
8	1	1	1	-	-	-	-	-	CLAMP, CONTACT WIRE	MAC	B0348-01
9	-	1	-	1	-	1	-	-	LINE INSULATOR, G2 SYNTHETIC	MAC	C1673-01
10	-	2	2	-	-	2	-	-	THIMBLE, J SYNTHETIC	MAC	D0719-01
11	-	1	1	-	-	1	-	-	HANGER WIRE WITH ONE LOOP	MAC	D1340-04
12	-	-	1	-	1	-	-	-	G2 SYNTHETIC, FOR PIPE	MAC	C1685-05
13	-	-	-	1	1	-	-	-	CLEVIS TONGUE	MAC	E0112-01
14	-	-	-	1	1	1	1	1	PULLEY	MAC	300221
15	-	-	-	-	-	-	-	1	SUSPENSION ANGLE CLAMP	MAC	95-LC1057

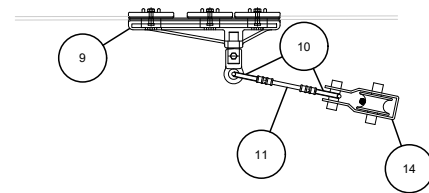
NOTES: ITEM 2 CAN BE SUBSTITUTED WITH A 5/16" PREFORMED END FITTING IF SPACE PERMITS (PREFORM GDE-2106).
ITEM 11 SHALL BE 7 3/4 INCHES IN TOTAL LENGTH, EDGE TO EDGE, AFTER CREATING SECOND LOOP.



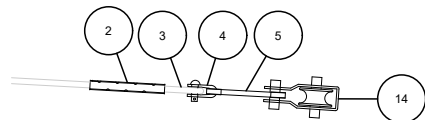
**CWP-1
CONTACT WIRE PULLOVER**
SCALE: NTS
ASSEMBLY WEIGHT: 4.908 LBS



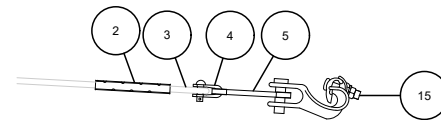
**CWP-1A
CONTACT WIRE PULLOVER**
SCALE: NTS
ASSEMBLY WEIGHT: 6.892 LBS



**CWP-1B
CONTACT WIRE PULLOVER**
SCALE: NTS
ASSEMBLY WEIGHT: 4.788 LBS



**CWP-2
CONTACT WIRE PULLOVER**
SCALE: NTS
ASSEMBLY WEIGHT: 1.571 LBS

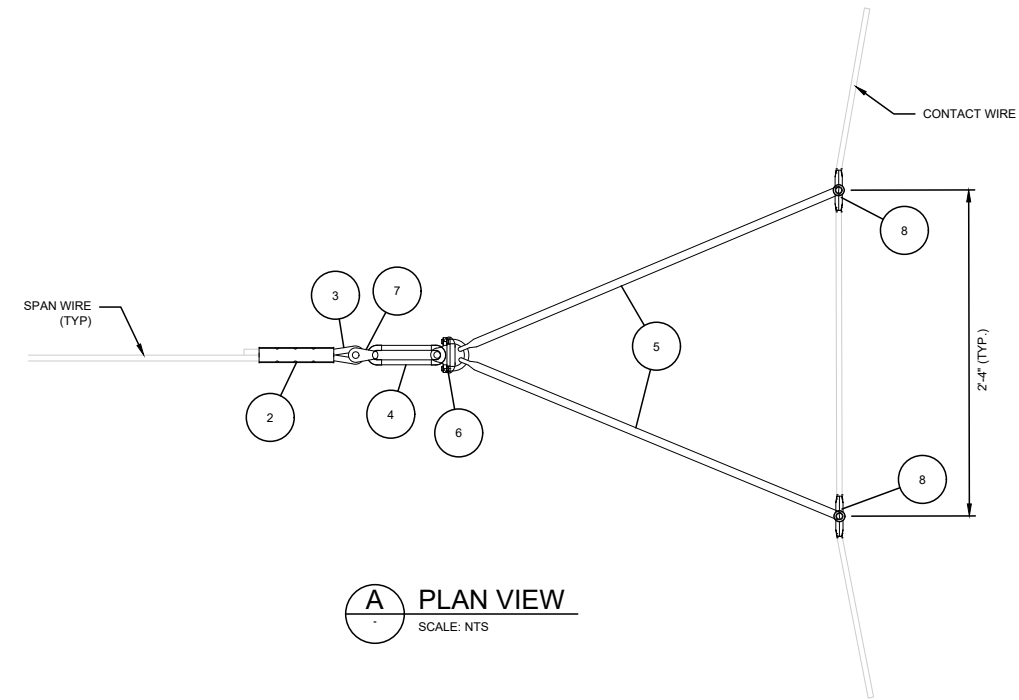


**CWP-3
CONTACT WIRE PULLOVER**
SCALE: NTS
ASSEMBLY WEIGHT: 2.191 LBS

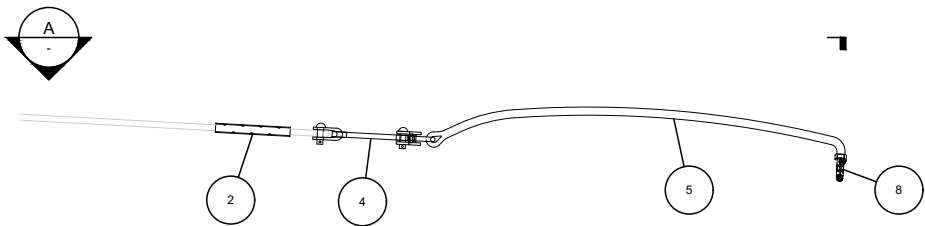
NOTES:

- FOR NOTES REFER TO DRAWING Y001. FOR SYMBOLS AND ABBREVIATIONS REFER TO DRAWING Y002.
- GUY WIRE FOR FLYING PULLOVERS MAY VARY. USE OF 4 mm HANGER WIRE FOR SHORT RUNS MAY BE SUBSTITUTED. IF LENGTH IS 3 FEET OR LESS.
- USE SPAN SPACER TO PREVENT FOULING AT SPAN WIRE FOR FLOATING PULLOVER. SEE DRAWING Y054 FOR DETAILS.
- WHEN CONNECTING TO CANTILEVER PIPE, SUBSTITUTE LINE INSULATOR, ITEM 9, WITH G2 SYNTHETIC FOR PIPE, ITEM 12, AS SHOWN ON THIS DRAWING.
- MAXIMUM LOADING ON SINGLE PULLOVER IS 425 LBS.

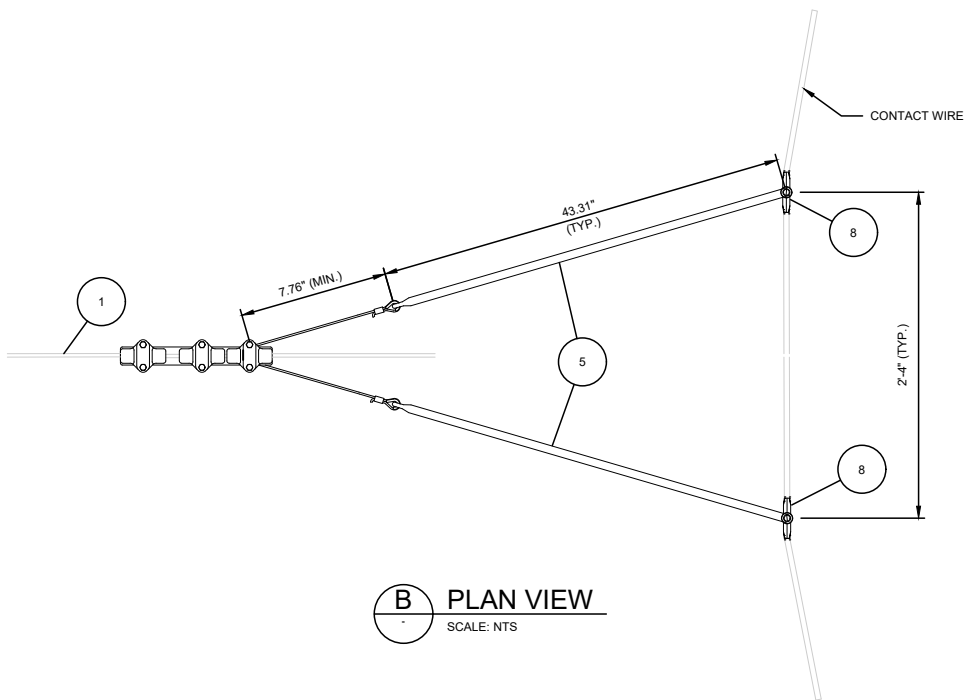
REV	DATE	DESCRIPTION	DESIGNED BY	PFW		PRELIMINARY PLANS – 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION OVERHEAD CONTACT SYSTEM REGISTRATION ASSEMBLIES PULLOVER ASSEMBLIES (SHEET 1 OF 2)	SCALE FOR 22"x34": NOT TO SCALE FILENAME: Y046.dwg CONTRACT NO.: CON0077290 VOLUME: 1 DRAWING NO.: Y046 SHEET NO.: 300	
			CHECKED BY	CRW						
			DRAWN BY	DSK						
			CHECKED BY	PFW						
			APPROVED BY	NKS						
PLOT DATE: 8/27/2019			2:20:32 PM							



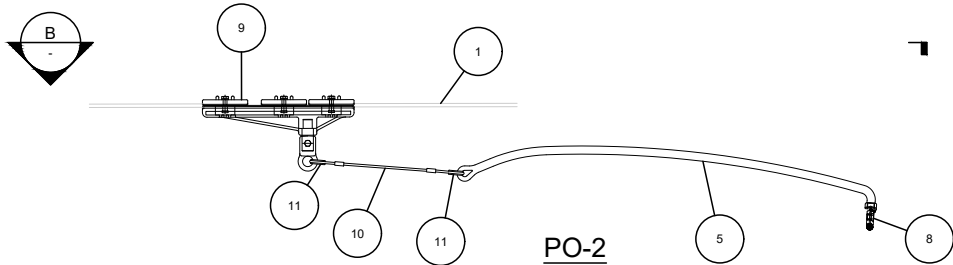
A PLAN VIEW
SCALE: NTS



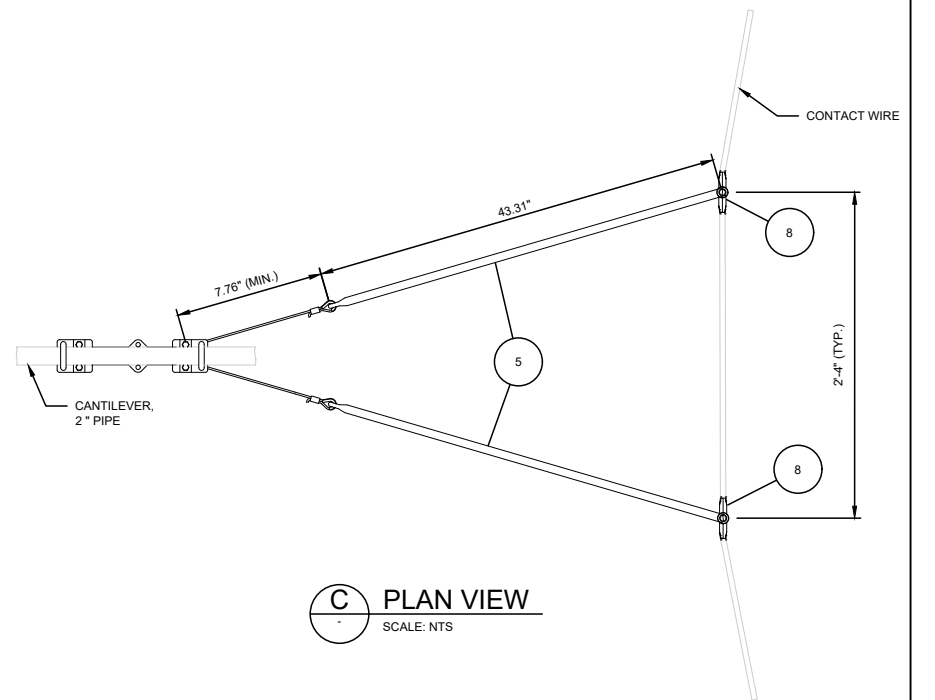
**FPO-2
FLYING PULLOVER**
SCALE: NTS
(LINE ANGLE ≥ 8°)
ASSEMBLY WEIGHT: 12.484 LBS



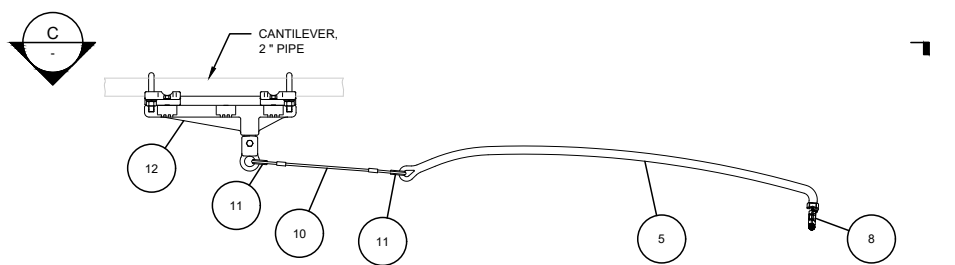
B PLAN VIEW
SCALE: NTS



**PO-2
PULLOVER**
SCALE: NTS
(LINE ANGLE ≥ 8°)
ASSEMBLY WEIGHT: 9.610 LBS



C PLAN VIEW
SCALE: NTS



**PO-2A
PULLOVER**
SCALE: NTS
(LINE ANGLE ≥ 8°)
ASSEMBLY WEIGHT: 17.390 LBS

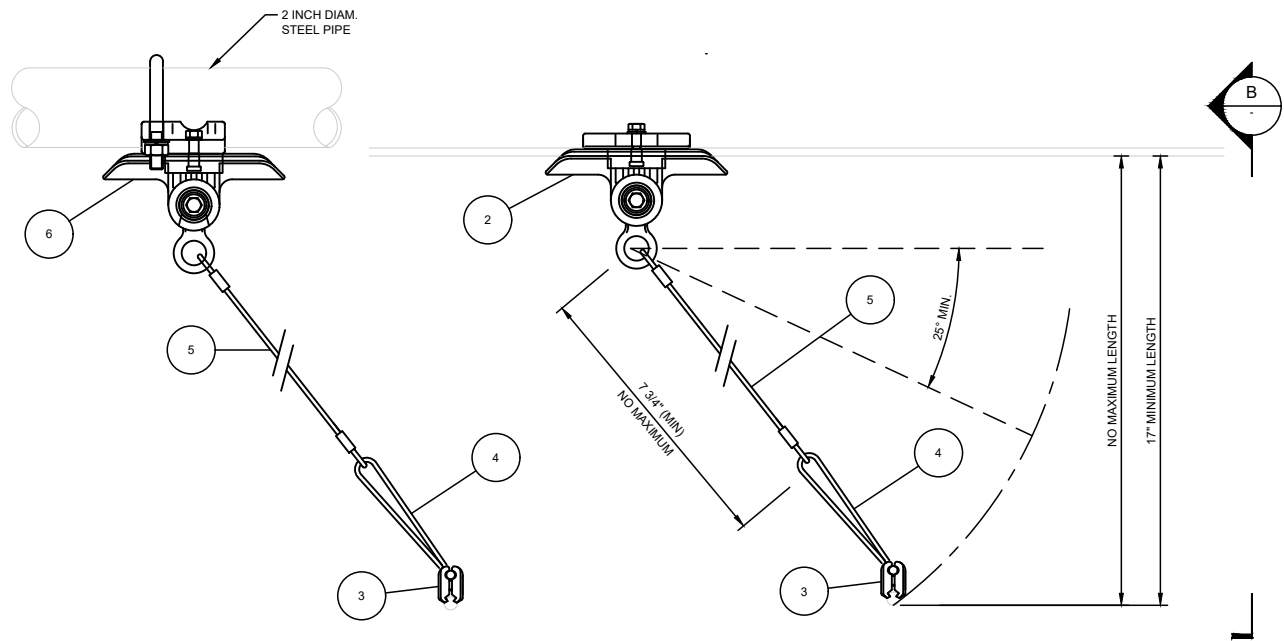
BILL OF MATERIAL						
ITEM	QTY.			DESCRIPTION	SUPPLIER	PART NO.
	FPO-2	PO-2	PO-2A			
2	1	-	-	TERMINATION, SPAN WIRE 5/16"	MAC	E0493-01
3	1	-	-	THIMBLE OPEN PATTERN, 5/16" G-408	CROSBY	1037559
4	1	-	-	LOOP INSULATOR	MAC	D2864-01
5	2	2	2	STEADY ARM ROD, 3.61 FT	MAC	C1813-07
6	1	-	-	CONNECTION FORK W/ U-BOLT	MAC	E1225-01
7	1	-	-	SHACKLE FOR LOOP INSULATOR	MAC	E0928-02
8	2	2	2	CLAMP, CONTACT WIRE	MAC	B0348-01
9	-	1	-	LINE INSULATOR, G2 SYNTHETIC	MAC	C1673-01
10	-	2	2	HANGER WIRE WITH ONE LOOP, 4MM, SST	MAC	D1340-04
11	-	4	4	THIMBLE, J SYNTHETIC	MAC	D0719-01
12	-	-	1	LINE INSULATOR, G2 SYNTHETIC, FOR PIPE	MAC	C1685-01

NOTES: ITEM 2 CAN BE SUBSTITUTED WITH A 5/16" PREFORMED END FITTING IF SPACE PERMITS (PREFORM GDE-2106).
ITEM 11 SHALL BE 7 3/4 INCHES IN TOTAL LENGTH, EDGE TO EDGE, AFTER CREATING SECOND LOOP.

NOTES:

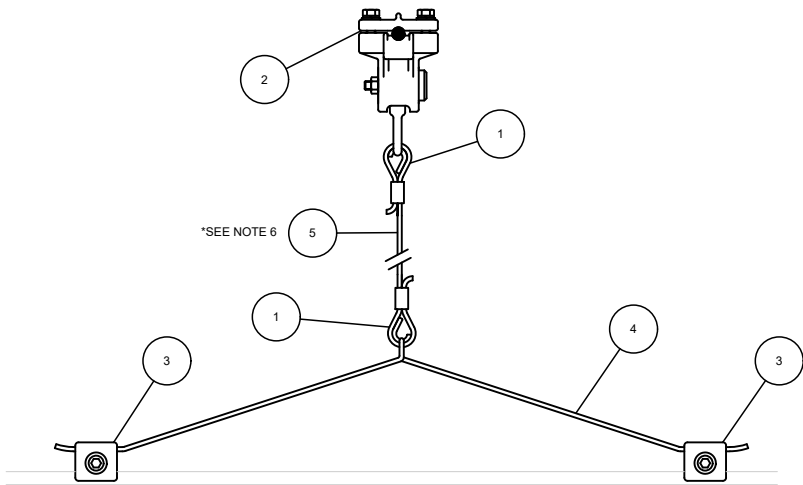
- FOR NOTES REFER TO DRAWING Y001. FOR SYMBOLS AND ABBREVIATIONS REFER TO DRAWING Y002.
- USE SPAN SPACER TO PREVENT FOULING AT SPAN WIRE FOR FLOATING PULLOVER. SEE DRAWING Y054 FOR DETAILS.
- GUY WIRE FOR FLYING PULLOVERS MAY VARY. USE OF 4 mm HANGER WIRE FOR SHORT RUNS MAY BE SUBSTITUTED. IF LENGTH IS 3 FEET OR LESS.
- HANGER WIRE, ITEM 5 FOR ASSEMBLY PO-2 AND PO-2A. LENGTHS IS TYPICALLY 7.76". LENGTH MAY BE LENGTHEN TO SUIT CONDITIONS. MAXIMUM LENGTH IS 15 3/4".
- MAXIMUM LOADING FOR A DOUBLE PULLOVER ASSEMBLY IS 865 LBS.

REV	DATE	DESCRIPTION	DESIGNED BY	PFW		PRELIMINARY PLANS – 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	OVERHEAD CONTACT SYSTEM REGISTRATION ASSEMBLIES PULLOVER ASSEMBLIES (SHEET 2 OF 2)	SCALE FOR 22"x34": NOT TO SCALE	
			CHECKED BY	CRW						FILENAME: Y047.dwg	
			DRAWN BY	DSK						CONTRACT NO.: CON0077290	
			CHECKED BY	PFW						VOLUME: 1	
			APPROVED BY	NKS						DRAWING NO.: SHEET NO.: Y047 301	
PLOT DATE: 8/27/2019			2:20:38 PM		DATE	8/28/2019	NOT FOR CONSTRUCTION				



TYPE P-1A
SCALE: NTS
ASSEMBLY WEIGHT: 4.537 LBS

TYPE P-1
SCALE: NTS
ASSEMBLY WEIGHT: 3.721 LBS



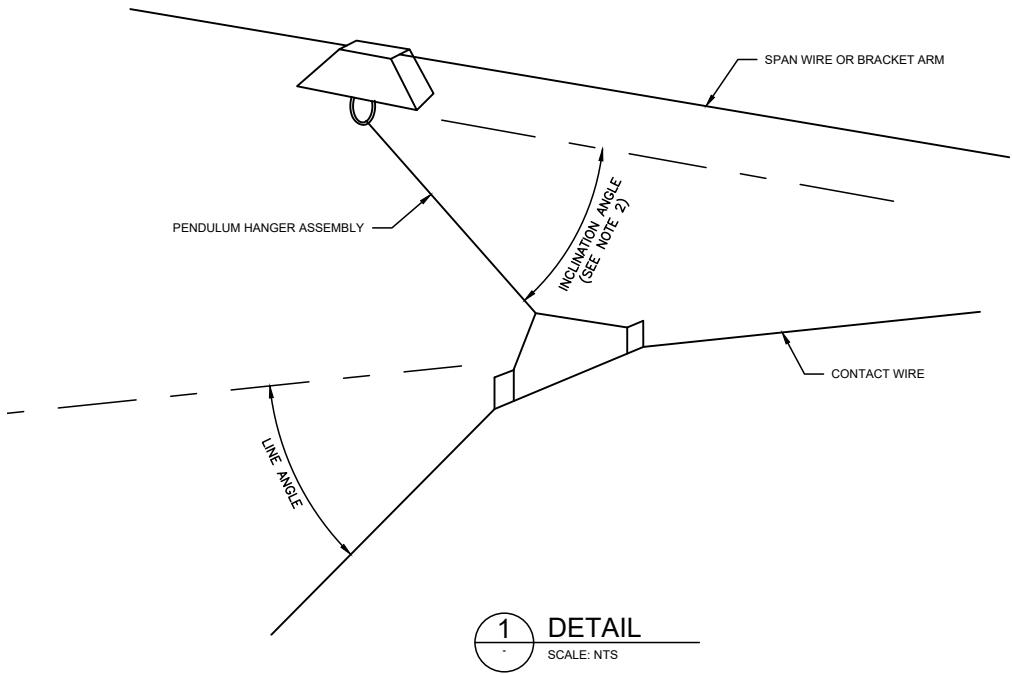
B VIEW
SCALE: NTS

NOTES:

- FOR NOTES REFER TO DRAWING Y001. FOR SYMBOLS AND ABBREVIATIONS REFER TO DRAWING Y002.
- MAXIMUM LINE ANGLE FOR P-1 PENDULUM IS 4 DEGREES, SEE DETAIL 1. INCLINATION ANGLE NOT TO EXCEED 25°.
- TOTAL ASSEMBLY WEIGHTS LISTED IN THE TABLE DO NOT INCLUDE THE WEIGHT OF THE SPAN WIRE OR TROLLEY WIRE.
- LENGTH OF HANGER WIRE FOR SINGLE PENDULUM HANGER TO BE MEASURED IN THE FIELD SO THAT CONTACT WIRE HANGS AT THE REQUIRED HEIGHT. USE HANGER WIRE BENDING TOOL TO FORM LOOPS.
- CONTACT WIRE CLAMP TO BE VERTICAL AFTER FINAL INSTALLATION.
- IF INCLINATION ANGLE IS BETWEEN 85° AND 90°, USE A FLEXIBLE HANGER SUPPORT ASSEMBLY. SEE DETAIL FOR ASSEMBLY FH-1 DRAWING Y049.

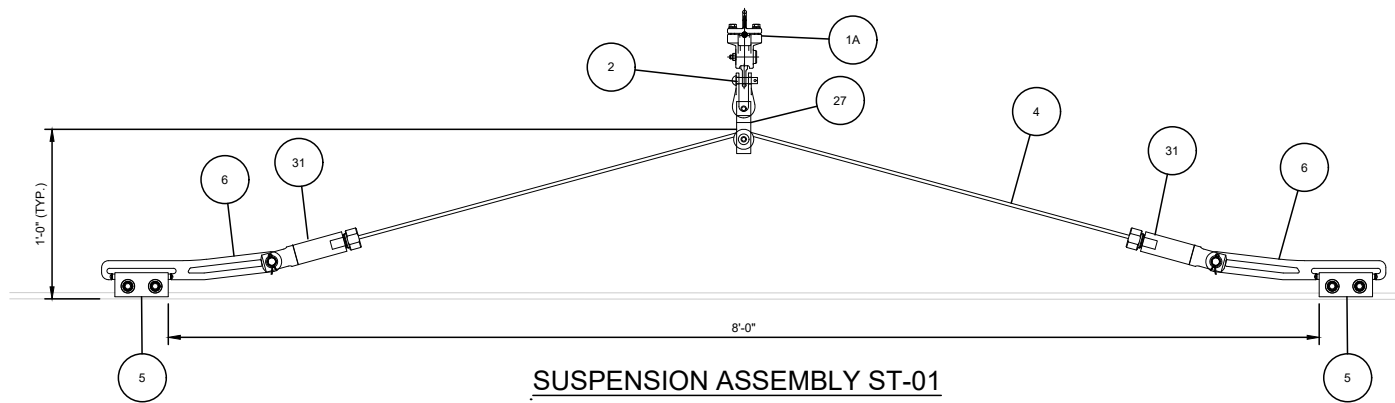
PENDULUM HANGER - BILL OF MATERIALS						
ITEM	QTY.		DESCRIPTION	SUPPLIER	PART NUMBER	WEIGHT (LBS)
	P-1	P-1A				
1	2	2	THIMBLE, J SYNTHETIC	MAC	D0719-01	0.004
2	1	-	LINE INSULATOR, G1 FOR SPAN WIRE	MAC	C1670-01	1.477
3	2	2	CLAMP FOR CONTACT WIRE	MAC	D1618-02	0.352
4	1	1	PULLOFF BOW, TYPE 2	MAC	D0916-02	1.323
5	1	1	HANGER WIRE	MAC	D1340-05	0.209
6	-	1	LINE INSULATOR, G1, FOR 2" PIPE	MAC	C1682-02	2.293

ASSEMBLY WEIGHT (LBS): P-1 = 3.721; P-1A = 4.537



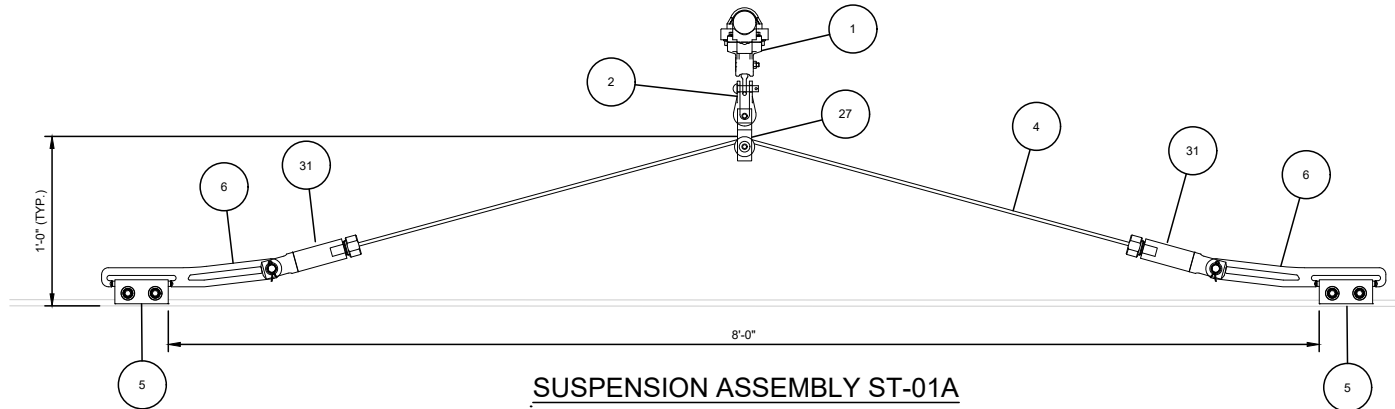
1 DETAIL
SCALE: NTS

REV	DATE	DESCRIPTION	DESIGNED BY	PFW		PRELIMINARY PLANS – 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	OVERHEAD CONTACT SYSTEM REGISTRATION ASSEMBLIES PENDULUM SUSPENSION ASSEMBLIES	SCALE FOR 22"x34": NOT TO SCALE	
			CHECKED BY	CRW						FILENAME: Y048.dwg	
			DRAWN BY	DSK						CONTRACT NO.: CON0077290	
			CHECKED BY	PFW						VOLUME: 1	
			APPROVED BY	NKS						DRAWING NO.: SHEET NO.:	
										Y048 302	
PLOT DATE: 8/27/2019			2:20:44 PM		DATE	8/28/2019	NOT FOR CONSTRUCTION				



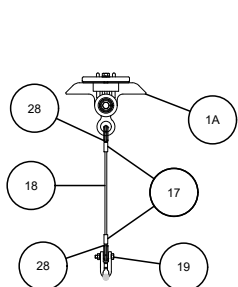
SUSPENSION ASSEMBLY ST-01

SCALE: 1-1/2" = 1'-0"



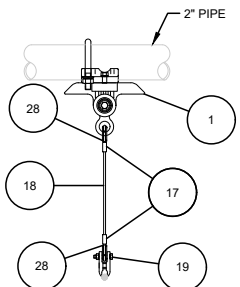
SUSPENSION ASSEMBLY ST-01A

SCALE: 1-1/2" = 1'-0"



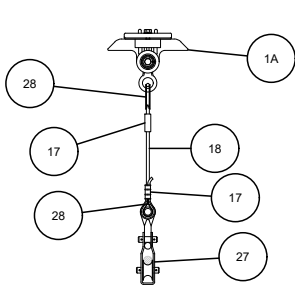
STRAIGHT LINE HANGER FH-1

SCALE: 1-1/2" = 1'-0"



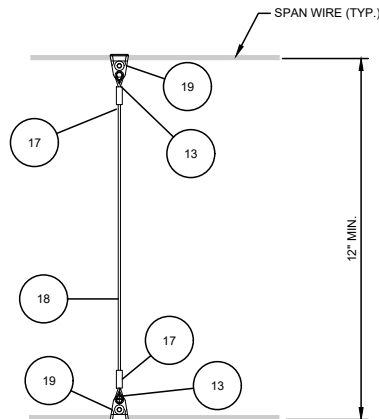
STRAIGHT LINE HANGER FH-1A

SCALE: 1-1/2" = 1'-0"



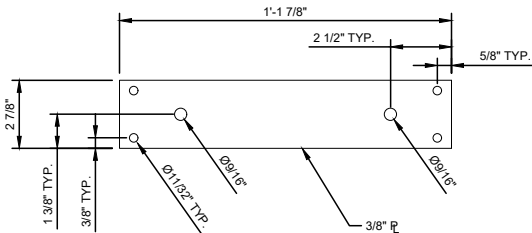
STRAIGHT LINE HANGER FH-2

SCALE: 1-1/2" = 1'-0"



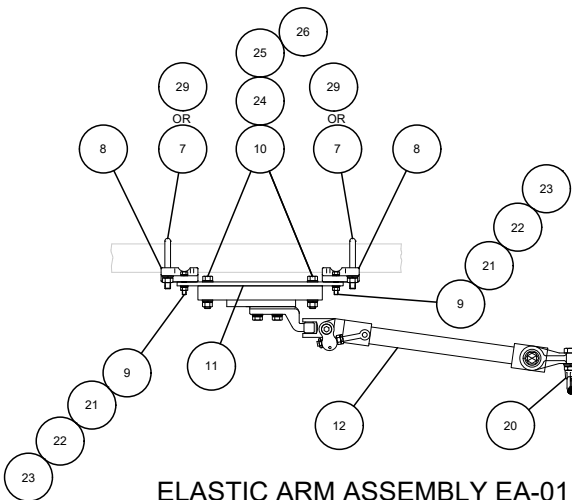
HEAD SPAN HANGER ASSEMBLY

SCALE: 1-1/2" = 1'-0"



1 ADAPTER PLATE - ITEM 11

SCALE: NTS



ELASTIC ARM ASSEMBLY EA-01

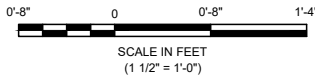
SCALE: 1-1/2" = 1'-0"

EA-01 IS FOR 2" Ø PIPE
EA-02 IS FOR 12 GA. 1 5/8"X1 5/8" UNISTRUT

NOTES:

1. FOR NOTES REFER TO DRAWING Y001. FOR SYMBOLS AND ABBREVIATIONS REFER TO DRAWING Y002.

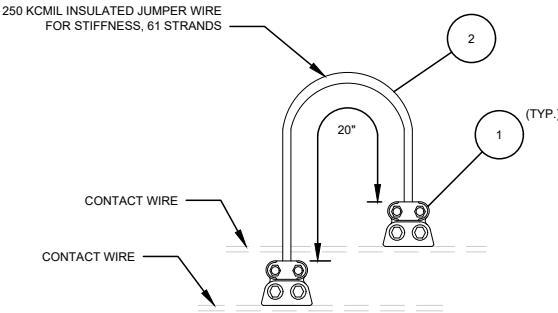
BILL OF MATERIALS			
ITEM NO.	DESCRIPTION	SUPPLIER	PART NUMBER
1	LINE INSULATOR, TYPE G1 FOR 2" PIPE	MAC	C1682-02
1A	LINE INSULATOR, TYPE G1 FOR SPAN	MAC	C1670-01
2	SHACKLE, TYPE 1	MAC	D0231-01
4	STITCH ROPE , 11MMØ KEVLAR	PHILLYSTRAN	HPTG11200I
5	CONTACT WIRE CLAMP FOR DELTA SUSP.	MAC	D1618-01
6	PULLOFF BRACKET FOR DELTA SUSP.	MAC	D3289-01
7	U-BOLT	MAC	D2340-05
8	JOINING PIECE	MAC	C1851-01
9	HEX HEAD BOLT, SS, Ø8MM X 50MM LONG	---	---
10	HEX HEAD BOLT, SS, Ø12MM X 75MM LONG	---	---
11	STEEL ADAPTER PLATE	---	DETAIL 1
12	ELASTIC ARM	MAC	B0676-03
13	THIMBLE, J SYNTHETIC	K+M	D0719-01
17	CRIMP SLEEVE, 3/16" WIRE	NICOPRESS	18-6-X
18	WIRE ROPE, 3/16" BRONZE	---	---
19	CLAMP, CATENARY HANGER	MAC	KMA-238
20	CLAMP, CONTACT WIRE	MAC	B0348-01
21	WASHER, FLAT, SS, FOR Ø8MM BOLT	---	---
22	WASHER, SPLIT LOCK, SS, FOR Ø8MM BOLT	---	---
23	NUT, SS, FOR Ø8MM BOLT	---	---
24	WASHER, FLAT, SS, FOR Ø12MM BOLT	---	---
25	WASHER, SPLIT LOCK, SS, FOR Ø12MM BOLT	---	---
26	NUT, SS, FOR Ø12MM BOLT	---	---
27	PULLEY	MAC	300221
28	THIMBLE, 3/16", S.S.	---	---
29	T-BOLT FOR UNISTRUT	MAC	350 373
30	MESSENGER CABLE INSULATOR, ROTATABLE	MAC	D2363-01
31	END TERMINATION FOR KEVLAR ROPE	PHILLYSTRAN	ESA 5112



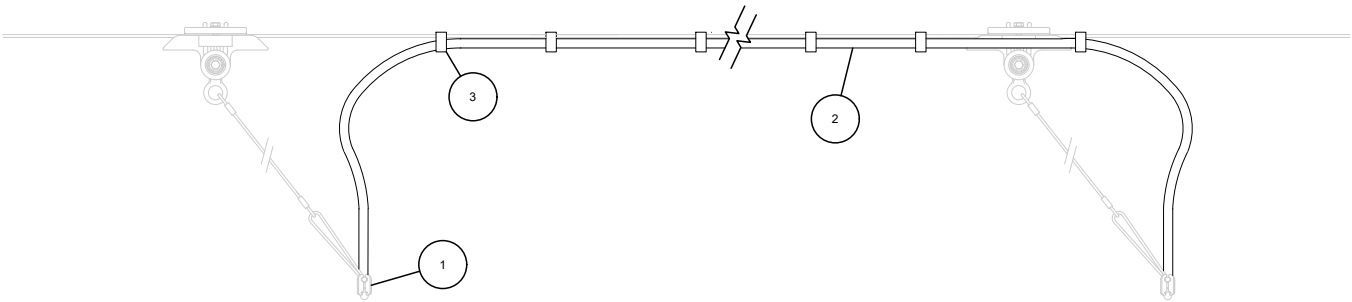
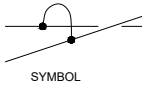
REV	DATE	DESCRIPTION	DESIGNED BY	PFW		PRELIMINARY PLANS – 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	OVERHEAD CONTACT SYSTEM REGISTRATION ASSEMBLIES SUSPENSION ASSEMBLIES	SCALE FOR 22"x34": SCALE AS NOTED					
			CHECKED BY	CRW							 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	 The HNTB COMPANIES INFRASTRUCTURE SOLUTIONS 300 Apollo Drive Chelmsford, MA 01824 Phone: 978-905-4000	FILENAME: Y049.dwg		
			DRAWN BY	DSK										CONTRACT NO.: CON0077290	
			CHECKED BY	PFW											VOLUME: 1
			APPROVED BY	NKS											
PLOT DATE: 8/27/2019			2: 20: 48 PM		DATE	8/28/2019	NOT FOR CONSTRUCTION		SHEET NO.: 303						

NOTES:

1. FOR NOTES REFER TO DRAWING Y001. FOR SYMBOLS AND ABBREVIATIONS REFER TO DRAWING Y002.
2. JUMPER CABLES ATTACHED TO SINGLE CONTACT WIRES SHALL BE INSULATED.

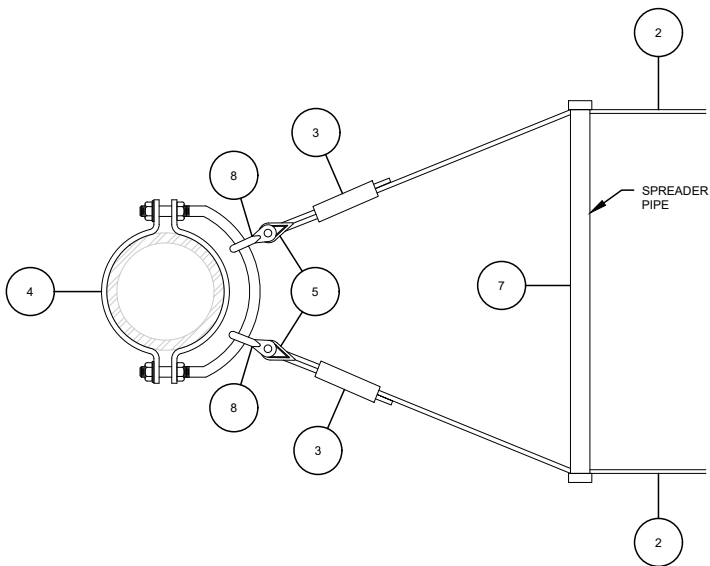


JUMPER ASSEMBLY - JRA-1
SCALE: NTS

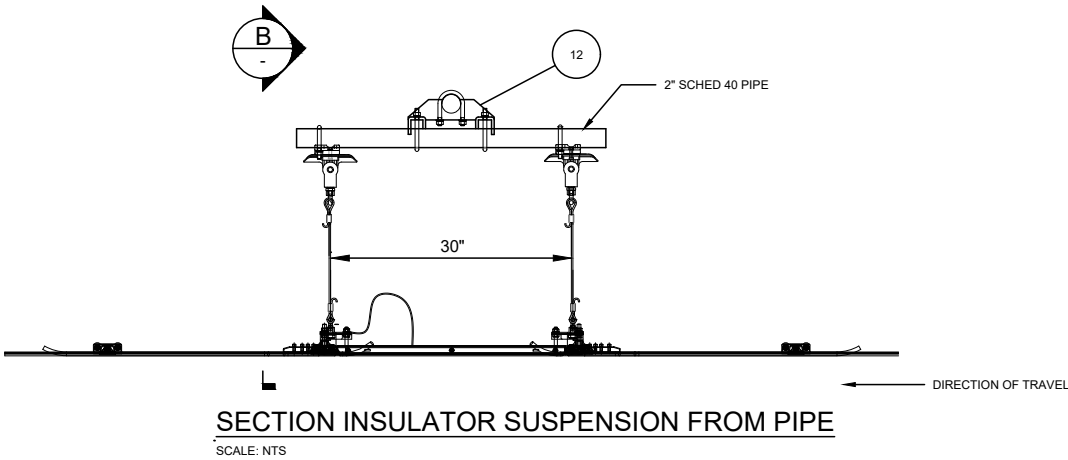


EQUALIZING JUMPER ASSEMBLY - JRA-2
SCALE: NTS

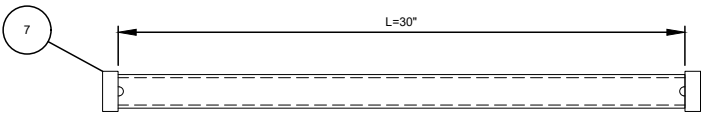
BILL OF MATERIALS					
ITEM	QTY.		DESCRIPTION	SUPPLIER	PART NUMBER
	JRA-1	JRA-2			
1	2	2	FEED TAP CLAMP EAR	MAC	D0445-01
2	A/R	A/R	250 KCMIL INSULATED FEEDER CABLE	-	2,000 V
3	-	AR	MESSENGER HANGER LASHING TIE	T & B	TYM5418X



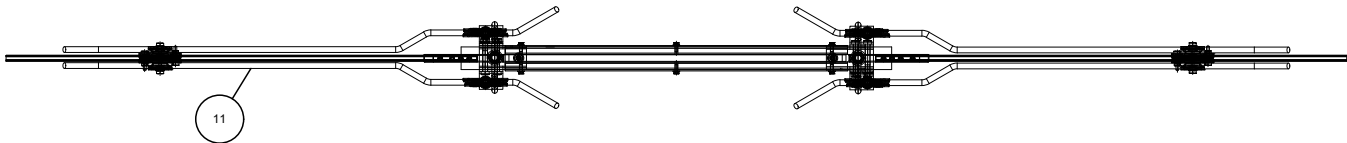
SPAN WIRE TRAPEZE - PLAN VIEW
SCALE: NTS



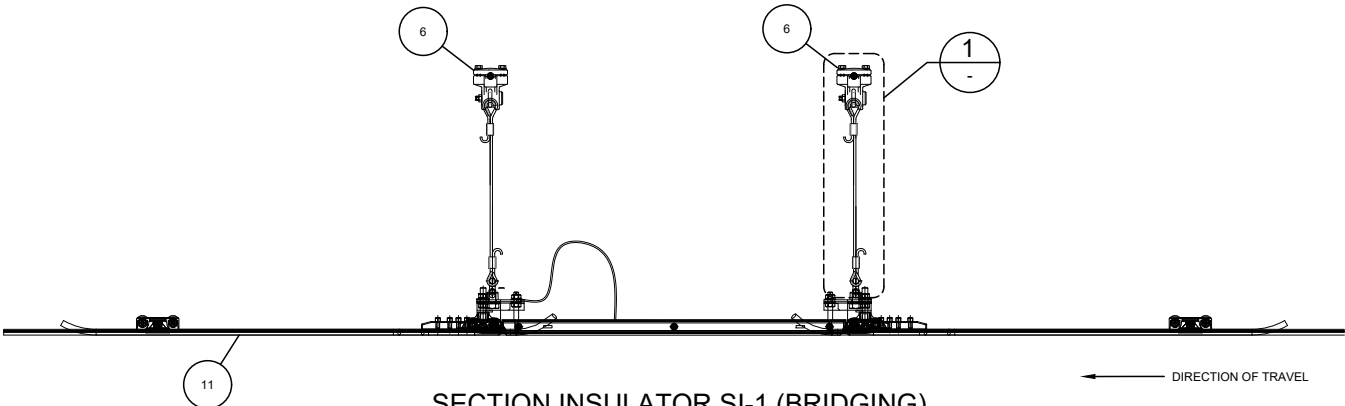
SECTION INSULATOR SUSPENSION FROM PIPE
SCALE: NTS



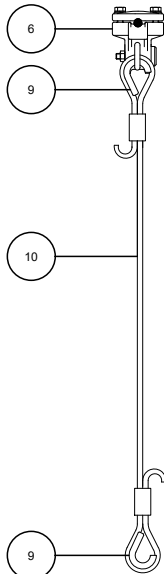
SPREADER PIPE
SCALE: NTS



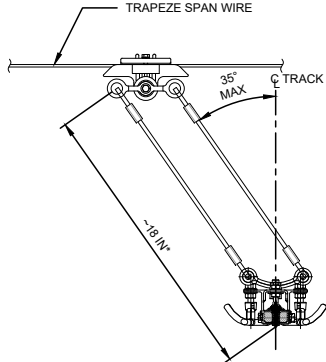
PLAN VIEW, SI-1
SCALE: NTS



SECTION INSULATOR SI-1 (BRIDGING)
SCALE: NTS

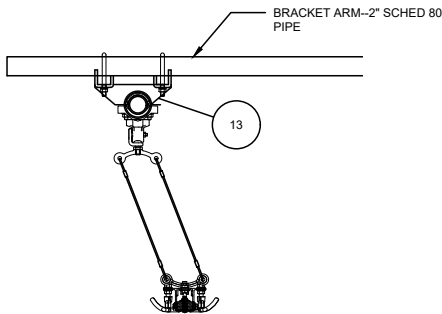


1 DETAIL
SCALE: NTS



A SECTION
SCALE: NTS

* FINAL LENGTH OF HANGER WIRES SHALL BE DETERMINED IN THE FIELD



B SECTION
SCALE: NTS

NOTES:

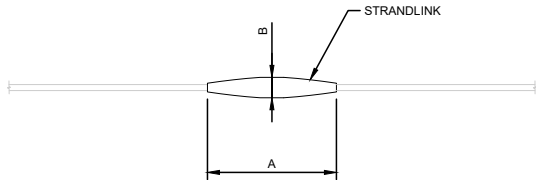
- FOR NOTES REFER TO DRAWING Y001. FOR SYMBOLS AND ABBREVIATIONS REFER TO DRAWING Y002.
- FOR LOCATION AND TYPE OF SECTIONNER REFER TO LAYOUT DRAWINGS.
- SECTIONNERS TO BE SUSPENDED WITH INCLINED PENDULUM SUSPENSION USING PARALLEL PARALLELOGRAM HANGERS.
- MAXIMUM LINE ANGLE FOR SECTIONNER TO BE 2 DEGREES IN A 120 FOOT SPAN. MAXIMUM HANGER WIRE ANGLE SHALL NOT EXCEED 35 DEGREES OFF VERTICAL.
- CROSS SPAN SUSPENSION TO BE TIGHT WITH MINIMAL SAG.
- SECTIONNER OVER TRACK TO BE ON CENTERLINE.
- RUNNER PLANE OF SECTIONNER TO BE PARALLEL WITH TRACK PLANE. ADJUST LINE INSULATOR DOUBLE EYE HANGERS AS NEEDED.
- INSTALL AND ADJUST SECTIONNER AND SUSPENSION ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
- INSTALL JB INSULATORS IN DOUBLE SPAN WIRES AS SHOWN ON DETAIL 1 OF DRAWING Y041.
- SECTIONNER JUMPER WIRE TO BE ON LEAVING END SO THAT ENTERING PANTOGRAPH BRIDGES ENTERING CONTACT WIRE AND MIDDLE RUNNER. IF LEAVING WIRE IS DEAD AND GROUNDED, JUMPER WIRE WILL ACT AS A FUSE.

BILL OF MATERIAL, SI-2, SI-3			
ITEM	DESCRIPTION	SUPPLIER	PART NO.
1	SECTION INSULATOR-DIODE: NON-BRIDGING	MAC	B1170-03
2	WIRE, SPAN, 5/16"	-	-
3	TERMINATION, SPAN WIRE, 5/16", COMPRESSION SLEEVE	MAC	E0493-01
4	CLAMP FOR POLE, MULTIPLE SPANS	SEE DRAWING Y036	
5	THIMBLE, 5/16", STL HDG	MAC	E0492-01
6	LINE INSULATOR, TYPE G1 SYNTHETIC, SPAN WIRE	MAC	C1669-01
7	PIPE, SPREADING 30" [762mm]	MAC	E0114-06
8	SHACKLE	MAC	D0231-01
9	THIMBLE, INSULATED J	MAC	D0719-01
10	HANGER WIRE WITH ONE LOOP, 4 MM Ø SOLID SS	MAC	D1340-05
11	SECTION INSULATOR - BRIDGING	MAC	B1170-03
12	SUPPORT X BRACKET FOR SECTIONNER	MAC	103456
13	SECTION INSULATOR SUSPENSION TO STEEL PIPE	MAC	103456

REV	DATE	DESCRIPTION	DESIGNED BY	PFW		PRELIMINARY PLANS – 30%	DATE: 08-28-2019	 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	 The HNTB COMPANIES INFRASTRUCTURE SOLUTIONS 300 Apollo Drive Chelmsford, MA 01824 Phone: 978-905-4000	KANSAS CITY STREETCAR MAIN STREET EXTENSION	OVERHEAD CONTACT SYSTEM IN-SPAN ASSEMBLIES SECTION INSULATOR ASSEMBLY	SCALE FOR 22"x34": NOT TO SCALE	
			CHECKED BY	CRW								FILENAME: Y052.dwg	
			DRAWN BY	DSK								CONTRACT NO.: CON0077290	
			CHECKED BY	PFW								VOLUME: 1	
			APPROVED BY	NKS								DRAWING NO.: SHEET NO.: Y052 305	
PLOT DATE: 8/27/2019			2: 20: 56 PM		DATE	8/28/2019	NOT FOR CONSTRUCTION						

NOTES:

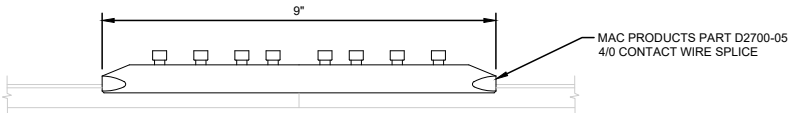
1. FOR NOTES REFER TO DRAWING Y001. FOR SYMBOLS AND ABBREVIATIONS REFER TO DRAWING Y002.
2. CONTACT WIRE SPLICE TO BE LOCATED NO FURTHER THAN 10' FROM REGISTRATION OR STEADY ARM.



SPAN WIRE SPLICE

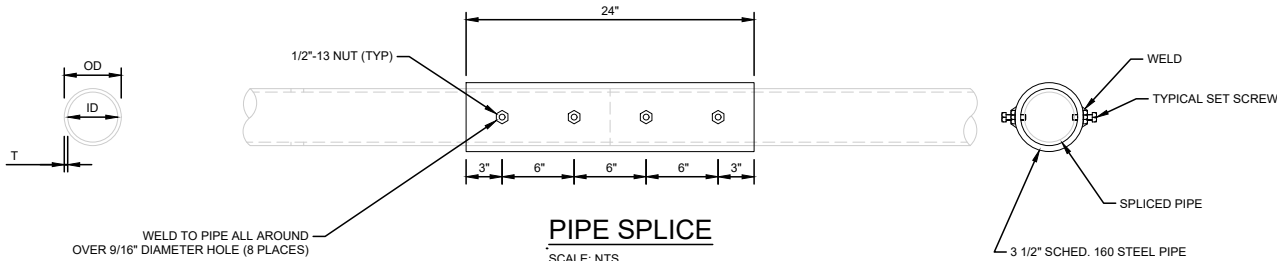
SCALE: NTS

STRANDLINK (UNIVERSAL GRADE)				
WIRE SIZE	RANGE (INCHES)	DIM 'A' (INCHES)	DIM 'B' (INCHES)	MACLEAN CAT NO.
1/4"	0.215-0.270	7.62	1.13	5040
5/16"	0.270-0.315	9.28	1.26	5041
3/8"	0.325-0.392	10.62	1.45	5042
1/2"	0.455-0.520	10.75	1.70	5044



CONTACT WIRE SPLICE

SCALE: NTS



PIPE SPLICE

SCALE: NTS

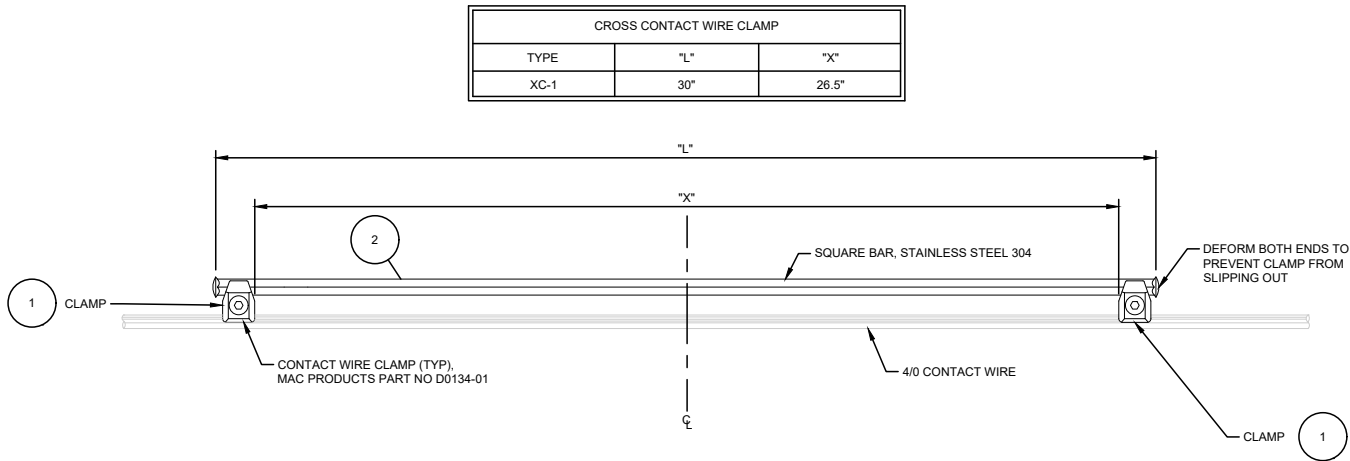
*PROVIDE 8 1/2 -13 SS STEEL 304 SET SCREWS. ASSEMBLY TO BE HDG, CHASE THREADS AFTER GALVANIZING.

PIPE SPLICE			
SIZE OF PIPE JOINED	OD	ID	T
2" PIPE (SCHED. 40)	2.375"	2.067"	0.154"
2" PIPE (SCHED. 80)	2.375"	1.939"	0.218"
3 1/2 " PIPE	4"	2.728"	0.636"

REV	DATE	DESCRIPTION	DESIGNED BY	PFW		PRELIMINARY PLANS – 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	OVERHEAD CONTACT SYSTEM IN-SPAN ASSEMBLIES TYPICAL SPLICE DETAILS	SCALE FOR 22"x34": NOT TO SCALE	
			CHECKED BY	CRW						FILENAME: Y053.dwg	
			DRAWN BY	DSK						CONTRACT NO.: CON0077290	
			CHECKED BY	PFW						VOLUME: 1	
			APPROVED BY	NKS						DRAWING NO.: SHEET NO.:	
										Y053 306	
PLOT DATE: ----			DATE		8/28/2019	NOT FOR CONSTRUCTION					

NOTES:

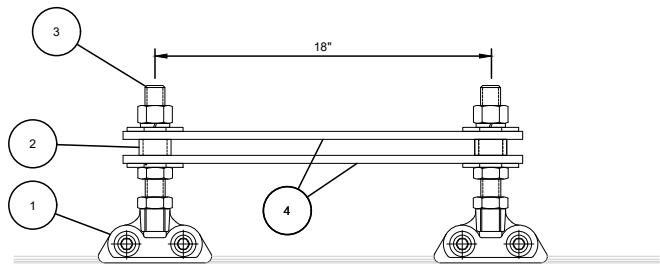
- FOR NOTES REFER TO DRAWING Y001. FOR SYMBOLS AND ABBREVIATIONS REFER TO DRAWING Y002.
- CROSS CONTACT CLAMPS TO BE POSITIONED ON UNDER RUNNING WIRES AFTER BOTH SETS OF CONTACT WIRES ARE PROPERLY TENSIONED AND TERMINATED.
- CLAMP TO BE ATTACHED TO UNDER RUNNING WIRE WITH CENTER POSITION DIRECTLY OVER CROSSING WIRE AFTER INSTALLATION OF UNDER RUNNING CONTACT WIRE. IN CONSTANT TENSIONED SECTIONS, RELEASE OF WEIGHTS AFTER WIRE STRINGING WILL AUTOMATICALLY POSITION THE CROSS CONTACT WIRE CLAMP.
- USE POSITION CHART TO CHECK CLAMP POSITION AFTER CONTACT WIRE STRINGING PROCESS IS COMPLETE. MAKE ADJUSTMENTS AS REQUIRED.
- MAXIMUM WIRE RUN LENGTH IS 3,000 FT SPRING TO SPRING WITH A THEORETICAL MID-POINT LENGTH TO EACH SPRING OF 1,500 FT.
- FOR ALONG TRACK MOVEMENT, REFER TO DRAWING Y008.



CROSS CONTACT WIRE CLAMP XC-1

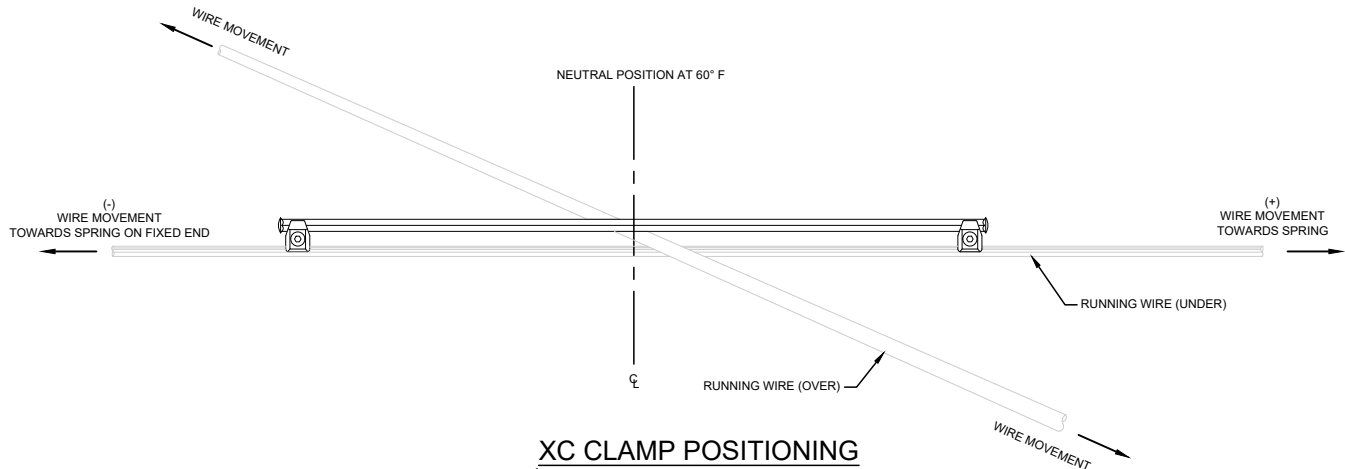
SCALE: NTS

BILL OF MATERIALS				
ITEM NO.	QTY	DESCRIPTION	SUPPLIER	PART NUMBER
1	2	CW CLAMP, ETB, WITH 5/8" THREAD, FOR ## CW	MAC	B0348-01
2	2	GLASTIC SPACER, GRADE 1130	MAC	KMA-672
3	2	5/8" THREADED ROD 7" LONG, WITH 2 NUTS, 2 LOCK WASHERS, 1 WASHER	-	-
4	2	GLASTIC BAR, GRADE 1130, 14" x 1.5" x 1/4"	MAC	KMA-673





SPAN SPACER ASSEMBLY

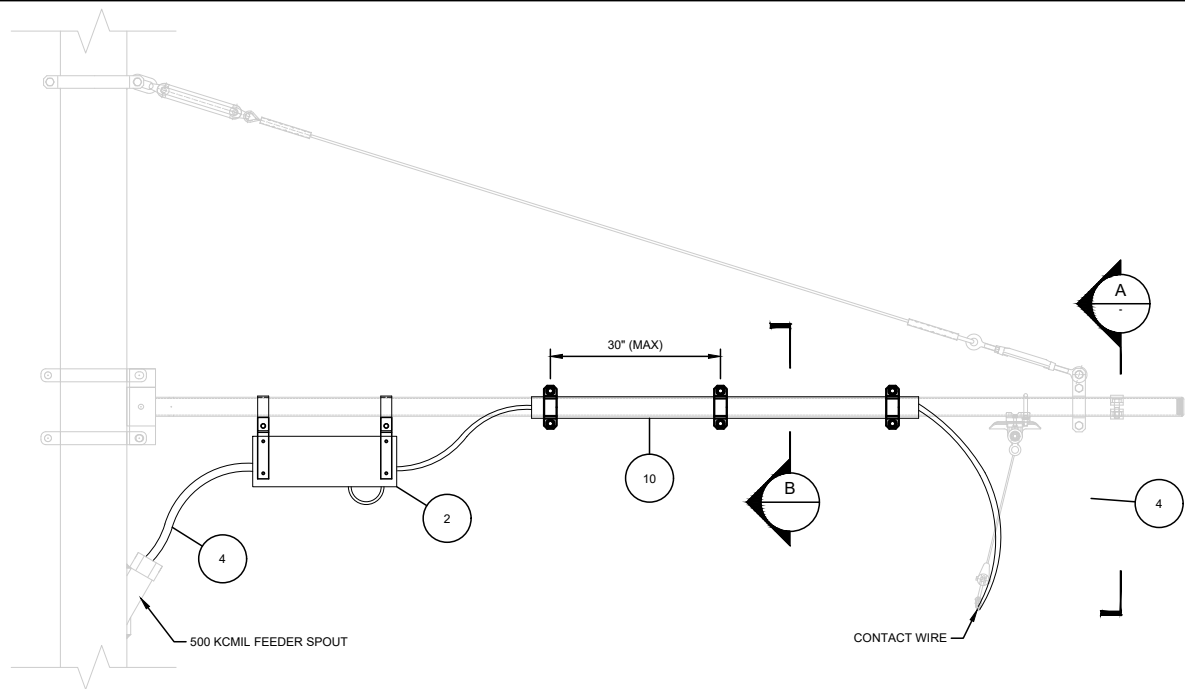
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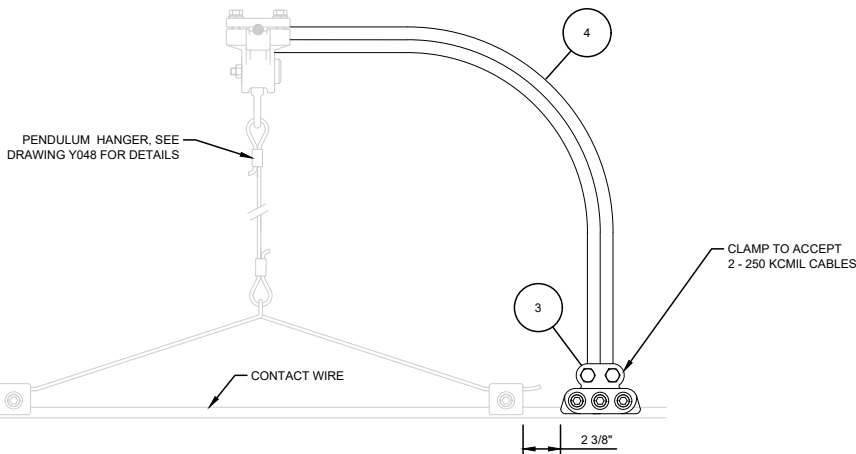
XC CLAMP POSITIONING

SCALE: NTS

REV	DATE	DESCRIPTION	DESIGNED BY	PFW		PRELIMINARY PLANS – 30%  HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	 The HNTB COMPANIES INFRASTRUCTURE SOLUTIONS 300 Apollo Drive Chelmsford, MA 01824 Phone: 978-905-4000	KANSAS CITY STREETCAR MAIN STREET EXTENSION OVERHEAD CONTACT SYSTEM IN-SPAN ASSEMBLIES SPAN SPACER AND CONTACT WIRE BRIDGE ASSEMBLIES	SCALE FOR 22"x34": NOT TO SCALE	
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			DRAWN BY	DSK					CONTRACT NO.: CON0077290	
			CHECKED BY	PFW					VOLUME: 1	
			APPROVED BY	NKS					DRAWING NO.: SHEET NO.:	
									Y054 307	
PLOT DATE: ----			DATE						8/28/2019	

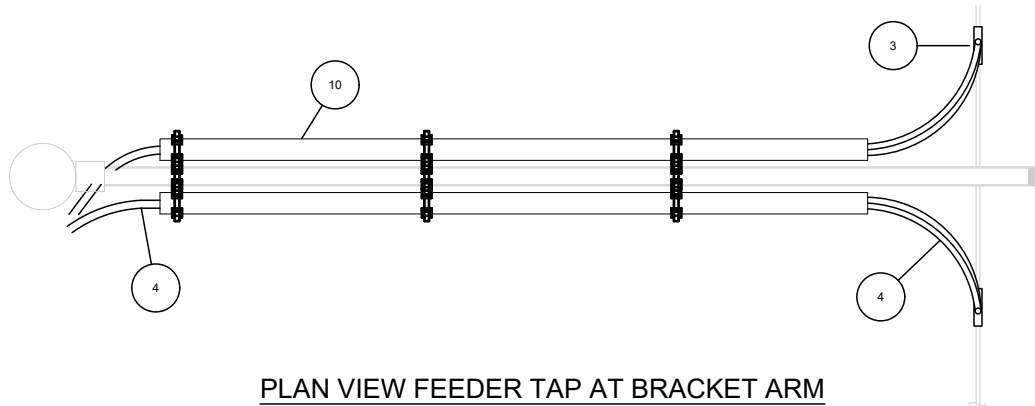


FEEDER TAP ASSEMBLY AT CANTILEVER FTA-1
SCALE: NTS

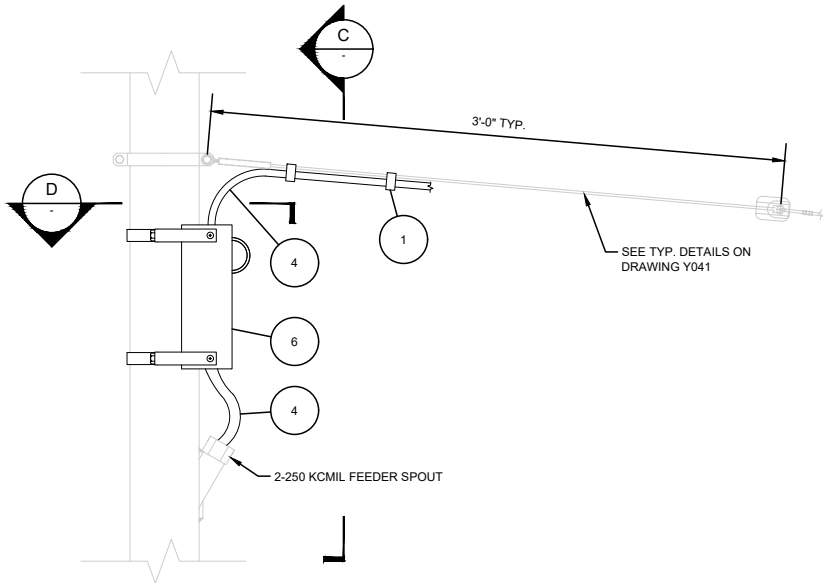


A SECTION
SCALE: NTS

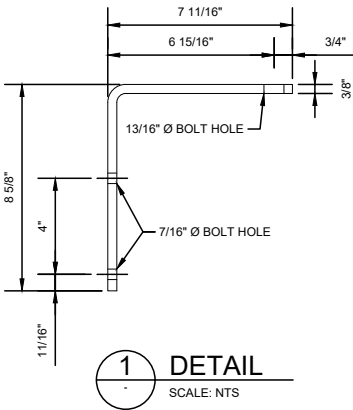
BILL OF MATERIALS - FEEDER TAP SUPPORT				
ITEM NO.	QTY.	DESCRIPTION	SUPPLIER	PART NUMBER
1	A/R	MESSENGER HANGER LASHING TIE	T & B	TYM5418X
2	1	DISCONNECT SWITCH, PIPE MOUNT	MAC	XXX
3	A/R	CLAMP EAR FOR FEEDER TAP CABLE	MAC	D0445-01
4	A/R	250 KCMIL INSULATED FEEDER CABLE	-	2,000 V
5	A/R	CABLE INSULATOR CLAMP FOR PIPE	MAC	XXX
6	1	POLE DISCONNECT SWITCH, POLE MOUNT	MAC	XXX
7	4	3/8 Ø STEEL BOLT W/ NUT	-	-
8	8	WASH FOR 3/8\" Ø BOLT	-	-
9	4	LOCKWASH FOR 3/8\" Ø BOLT	-	-
10	2	TUBE, G10-FR4 GLASS REINFORCED EPOXY, O.D. = 2 3/8"	-	-
11	AR	THREADED ROD, 5/8" X 11" LONG	-	-
12	AR	HEX NUT, 5/8", WITH LOCKWASHER	-	-
13	AR	GALVANIZED PLATE, 5/16" THICK, FOR 2" PIPE CLAMP	MAC	KMC-676-3-1



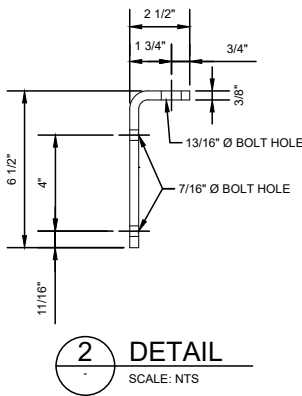
PLAN VIEW FEEDER TAP AT BRACKET ARM
SCALE: NTS



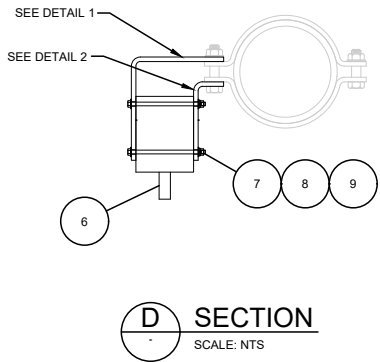
FEEDER TAP ASSEMBLY AT SPAN WIRE FTA-2
SCALE: NTS



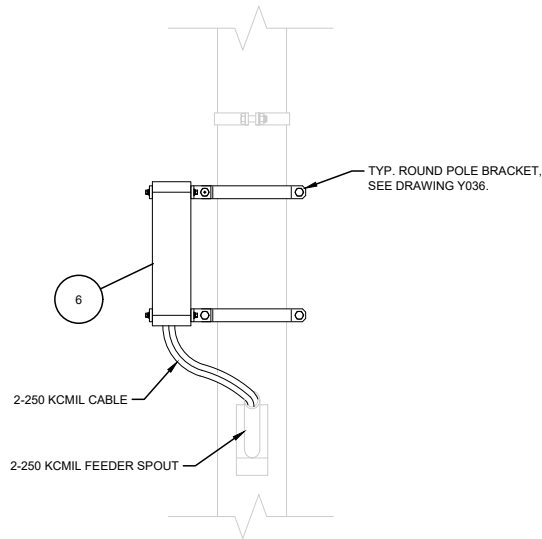
1 DETAIL
SCALE: NTS



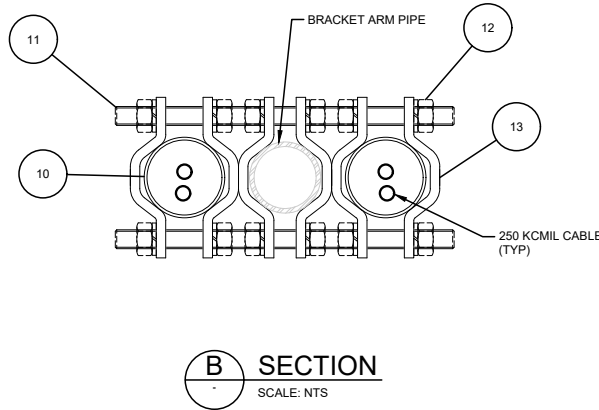
2 DETAIL
SCALE: NTS



D SECTION
SCALE: NTS



C SECTION
SCALE: NTS



B SECTION
SCALE: NTS

NOTES:

- FOR NOTES REFER TO DRAWING Y001. FOR SYMBOLS AND ABBREVIATIONS REFER TO DRAWING Y002.
- ARRANGEMENTS SHOWN ARE TYPICAL AND CONSTRUCTION CREWS MAY MAKE ALTERATIONS OR ADJUSTMENTS TO SUIT FIELD CONDITIONS.
- LASHING TIE TO HAVE HOOK PLACED OVER SPAN WIRE AND BENT TIGHT. LOOP END FOR FEEDER CABLE PLACED IN LOOP TO BE PULLED UP TIGHT.
- FEEDER CABLE TO BE BENT AWAY FROM SPAN AND LINE INSULATOR AS IT PASSES BY THEM.
- ADD POLE CLAMP WITH INSULATOR AT POLE IF CABLE TOUCHES POLE.
- END OF RISER PIPE TO HAVE A BUSHING SEALING THE PIPE. IF SEAL IS INSUFFICIENT, APPLY DUCT SEAL PACKED AROUND FEEDER CABLE IN A CONE SHAPE FOR WATER RUNOFF.
- PREFERRED DISCONNECT SWITCH ASSEMBLY TO USE IS FTA-2. USE FTA-1 ONLY WHERE FTA-2 CANNOT BE USED.

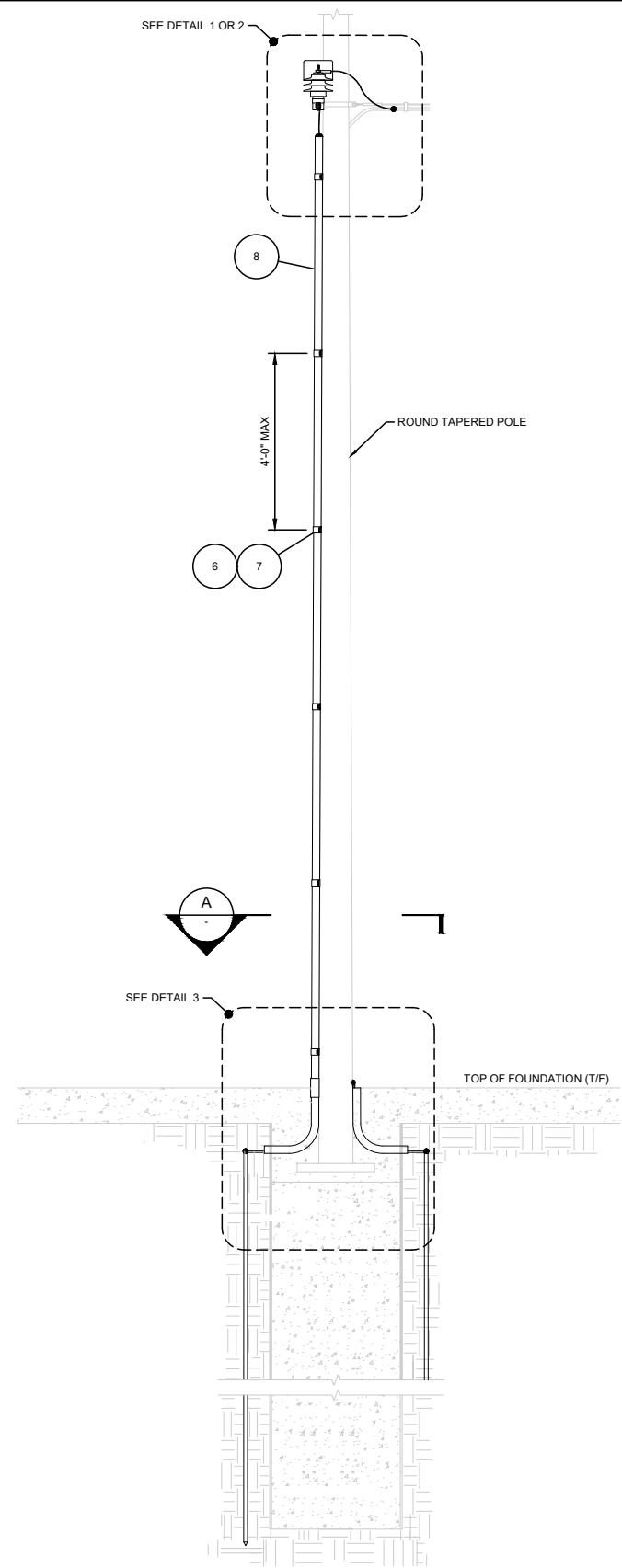
REV	DATE	DESCRIPTION	DESIGNED BY	PFW
			CHECKED BY	CRW
			DRAWN BY	DSK
			CHECKED BY	PFW
			APPROVED BY	NKS
PLOT DATE: 8/27/2019			DATE	8/28/2019



PRELIMINARY PLANS – 30%		DATE: 08-28-2019
HDR HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856		HNTB The HNTB COMPANIES INFRASTRUCTURE SOLUTIONS 300 Apollo Drive Chelmsford, MA 01824 Phone: 978-905-4000
NOT FOR CONSTRUCTION		

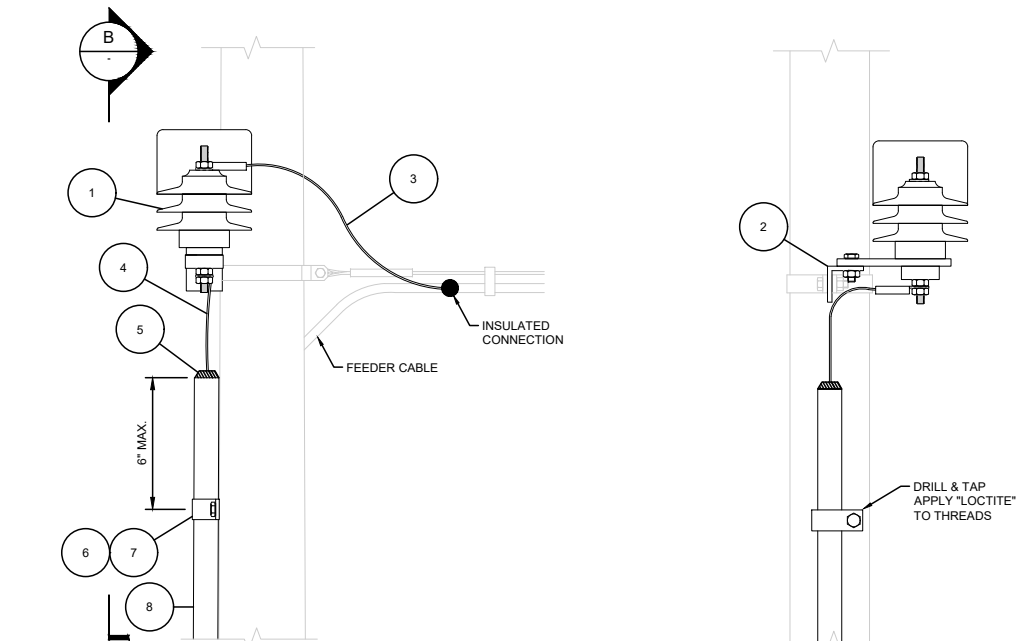
KANSAS CITY STREETCAR MAIN STREET EXTENSION	
OVERHEAD CONTACT SYSTEM SWITCHING AND FEEDER ASSEMBLIES FEEDER TAP DETAILS	

SCALE FOR 22"x34": NOT TO SCALE	
FILENAME: Y056.dwg	
CONTRACT NO.: CON0077290	
VOLUME: 1	
DRAWING NO.: Y056	SHEET NO.: 308



SURGE ARRESTER ASSEMBLY, SAA-1

SCALE: NTS
(*FOUNDATION REINFORCEMENT NOT SHOWN FOR CLARITY)

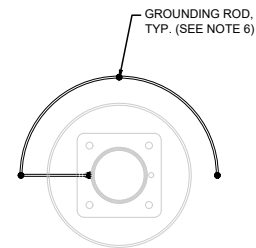


1 ARRESTER INSTALLATION DETAIL

SCALE: NTS

B SIDE VIEW

SCALE: NTS



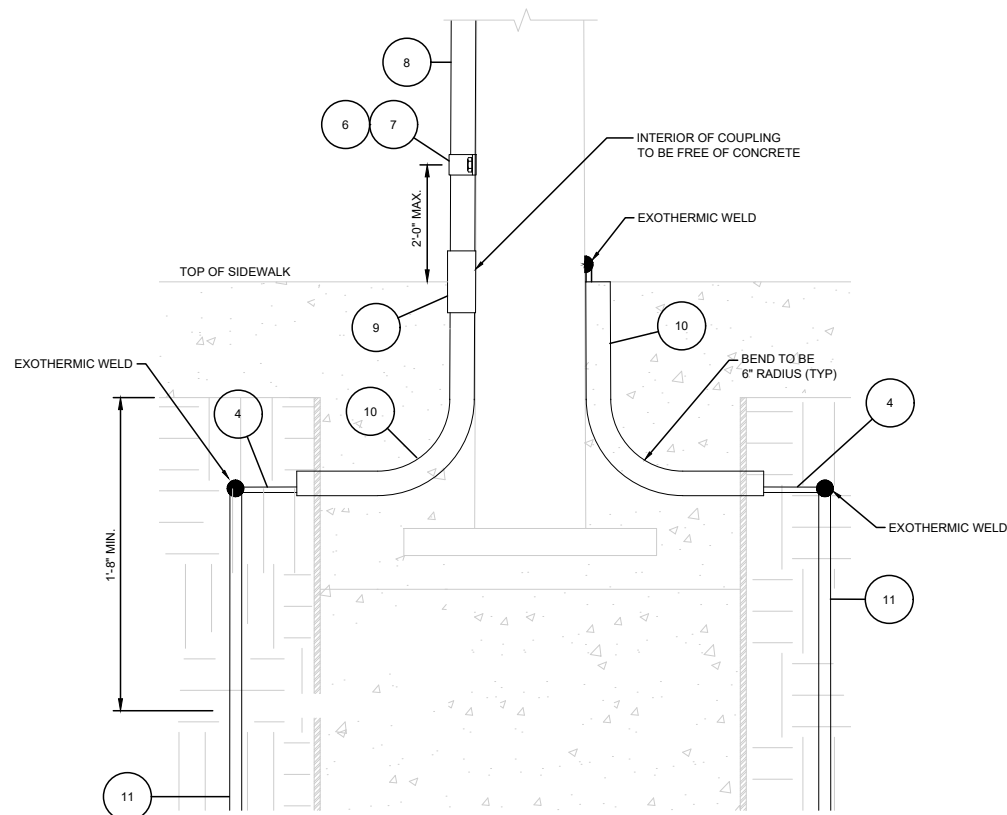
A SECTION

SCALE: NTS

NOTES:

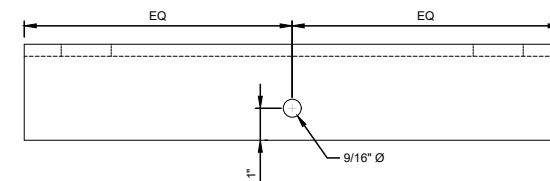
1. FOR NOTES REFER TO DRAWING Y001. FOR SYMBOLS AND ABBREVIATIONS REFER TO DRAWING Y002.
2. ARRANGEMENTS SHOWN ARE TYPICAL AND CONSTRUCTION CREWS MAY MAKE ALTERATIONS OR ADJUSTMENTS TO SUIT FIELD CONDITIONS.
3. CONDUIT ELBOW SLEEVE TO PROTRUDE THROUGH FOUNDATION AND BE CUT SHORT IF REQUIRED.
4. OCS POLE SHALL HAVE A SEPARATE POLE GROUND AND BE A 4/0 AWG BARE WIRE RAN TO A SEPARATE GROUND ROD.
5. SURGE ARRESTERS ARE REQUIRED AT ALL OCS FEEDER POLES AS INDICATED ON THE LAYOUT AND POLE SCHEDULE.
6. INSTALL ADDITIONAL GROUNDING RODS TO ACHIEVE A RESISTANCE TO GROUND OF NO MORE THAN 5 OHMS.

BILL OF MATERIALS - SURGE ARRESTER				
ITEM NO.	QTY.	DESCRIPTION	SUPPLIER	PART NUMBER
1	1	3KV MCOV PDV-65 ARRESTER	HUBBEL OHIO BRASS	
2	1	3" X 3" X 3/8" GLASTIC ANGLE, 3 IN LONG	ROCHLING	2886
3	A/R	NO. 2 AWG STRANDED INSULATED CU WIRE	-	-
4	A/R	4/0 AWG INSULATED COPPER WIRE	-	-
5	1	DUCT SEAL	-	-
6	A/R	CONDUIT CLAMP	-	-
7	A/R	1/4"-20 X 3/4" S.S. BOLT	-	-
8	A/R	FRE CONDUIT - 3/4" ABOVE GROUND	FRE	10-7500
9	1	COUPLING - 3/4"	-	-
10	1	FRE CONDUIT ELBOW 3/4"	FRE	-
11	A/R	GROUND ROD 3/4 X 10'	-	-
12	2	L3X3X3/8, GALV.	DETAIL 3 ON XXX	-
13	2	5/8" DIA. FULLY THREADED ROD W/ NUTS & WASHERS	-	-

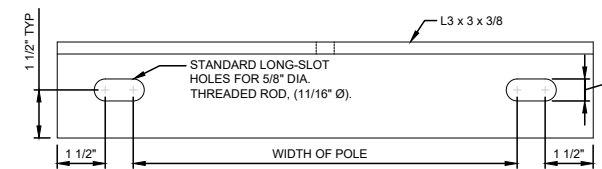


3 POLE AND ARRESTER GROUNDING DETAIL

SCALE: NTS



PLAN VIEW



FRONT VIEW

4 SURGE ARRESTER SUPPORT ANGLE

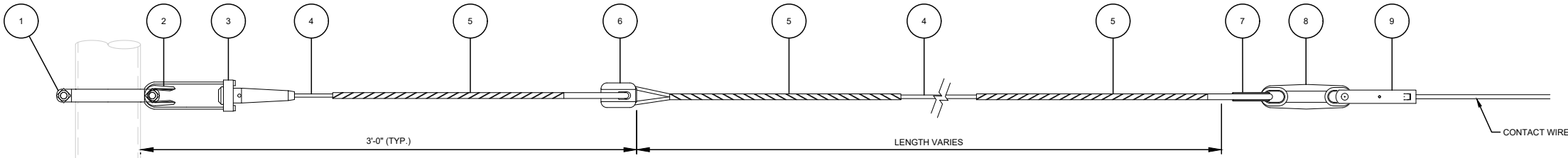
SCALE: NTS

REV	DATE	DESCRIPTION	DESIGNED BY	PFW			PRELIMINARY PLANS - 30%  HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856		DATE: 08-28-2019  The HNTB COMPANIES INFRASTRUCTURE SOLUTIONS 300 Apollo Drive Chelmsford, MA 01824 Phone: 978-905-4000		KANSAS CITY STREETCAR MAIN STREET EXTENSION		OVERHEAD CONTACT SYSTEM SWITCHING AND FEEDER ASSEMBLIES SURGE ARRESTER DETAILS		SCALE FOR 22"x34": NOT TO SCALE FILENAME: Y057.dwg CONTRACT NO.: CON0077290 VOLUME: 1 DRAWING NO.: Y057 SHEET NO.: 309	
			CHECKED BY	CRW												
			DRAWN BY	DSK												
			CHECKED BY	PFW												
			APPROVED BY	NKS												
PLOT DATE: 8/27/2019			2:21:15 PM		DATE	8/28/2019	NOT FOR CONSTRUCTION									

NOTES:

1. FOR NOTES REFER TO DRAWING Y001. FOR SYMBOLS AND ABBREVIATIONS REFER TO DRAWING Y002.

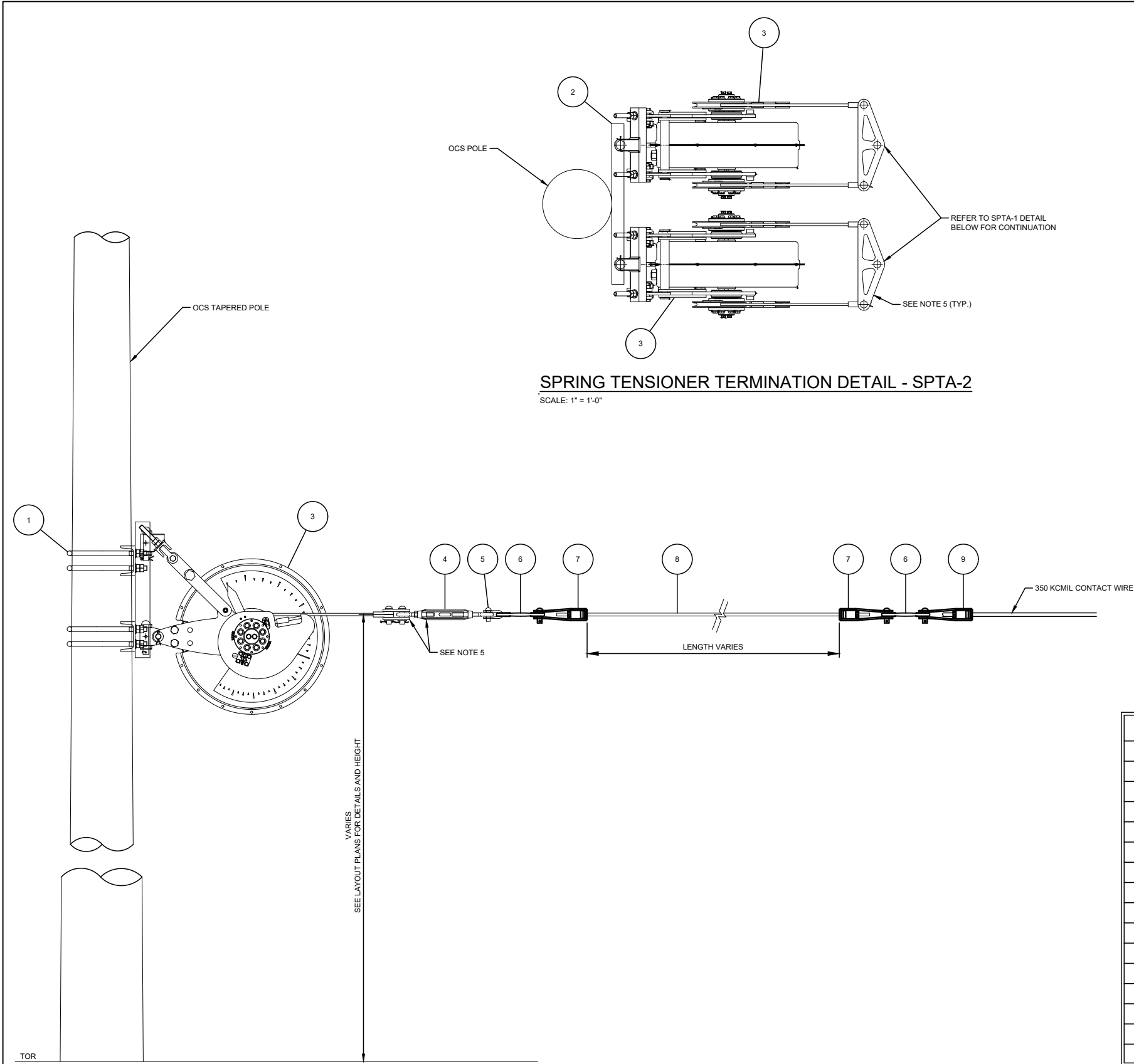
BILL OF MATERIALS				
ITEM	QTY.	DESCRIPTION	SUPPLIER	PART NUMBER
	FXTA-1			
1	1	POLE CLAMP	MAC	SEE DWG. Y036
2	1	THIMBLE, XX	CROSBY	XXX
3	1	STRANDVISE	MCLEAN	XXX
4	A/R	5/16" STEEL SPAN WIRE	ASTM A475	EHS
5	3	5/16" PREFORMED END FITTING	PREFORMED LINE PRODUCTS	GDE-2106
6	1	JB PORCELAIN INSULATOR	MACLEAN	DP54-3
7	1	5/16" THIMBLE	CROSBY	103738
8	1	INSULATOR - LOOP	MAC	D2786-01
9	1	DEADEND CLAMP FOR GROOVED CW	FLURY	610.047.000



FIXED TERMINATION ASSEMBLY FXTA-1

SCALE: NTS

REV	DATE	DESCRIPTION	DESIGNED BY	PFW		<div><div><div><div>HDR Engineering, Inc.</div><div>10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856</div></div><div><div><div>The HNTB COMPANIES INFRASTRUCTURE SOLUTIONS 300 Apollo Drive Chelmsford, MA 01824 Phone: 978-905-4000</div></div></div></div></div>	PRELIMINARY PLANS – 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION		SCALE FOR 22"x34": NOT TO SCALE	
			CHECKED BY	CRW			FILENAME: Y066.dwg					
			DRAWN BY	DSK			CONTRACT NO.: CON0077290					
			CHECKED BY	PFW			VOLUME: 1					
			APPROVED BY	NKS			DRAWING NO.: Y066	SHEET NO.: 310				
PLOT DATE: ----			DATE		8/28/2019	NOT FOR CONSTRUCTION		OVERHEAD CONTACT SYSTEM TERMINATION ASSEMBLIES FIXED TERMINATION ASSEMBLY				



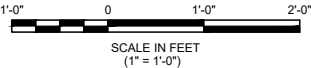
- NOTES:
- 1. FOR NOTES REFER TO DRAWING Y001. FOR SYMBOLS AND ABBREVIATIONS REFER TO DRAWING Y002.
 - 2. INSTALL AND SET SPRING POSITION SPRING IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. MID-RANGE TEMPERATURE IS 60°F.
 - 3. FOR LOCATION OF SPRING TENSIONER DEVICES REFER TO LAYOUT PLANS.
 - 4. SETTING CHARTS TO BE PROVIDED BY SPRING MANUFACTURER.
 - 5. DEADEND ASSEMBLY ATTACHES TO SPRING YOKE PLATE.

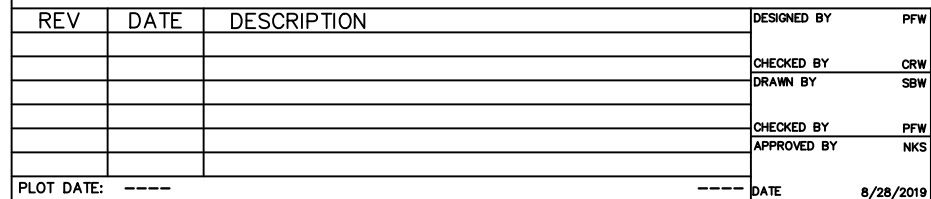
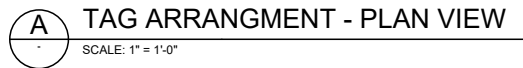
BILL OF MATERIALS				
ITEM NO.	QTY.		DESCRIPTION	PART NUMBER
	SPTA-01	SPTA-02		
1	1	---	SINGLE MOUNTING BRACKET FOR ROUND POLES	PFISTERER 0007004080-19*
2	---	1	DOUBLE MOUNTING BRACKET FOR ROUND POLES	--- SEE DRAWING Y038*
3	1	2	TENSOREX C+ 2 SPRINGS, 1125 KG (2480 LBS) PULL	PFISTERER 000700680-104
4	1	2	HG-226 EYE & EYE, TURNBUCKLE	CROSBY 1031314
5	1	2	SHACKLE FOR LOOP INSULATOR	MAC PRODUCTS D0231-01
6	2	4	INSULATOR - LOOP	MAC D2786-01
7	2	4	DEADEND CLAMP FOR SPAN WIRE	MAC PRODUCTS 301223
8	A/R	A/R	5/16" STEEL SPAN WIRE	ASTM A475 EHS
9	1	2	DEADEND CLAMP FOR GROOVED CW	FLURY 610.047.000

*CONTRACTOR TO DETERMINE DIAMETER REQUIREMENTS

CONTACT WIRE LENGTH CHANGE (FT)												
TEMPERATURE	DISTANCE FROM FIXED POINT OR MID POINT (FT)											
(°F)	200	400	600	800	1,000	1,200	1,400	1,500	1,600	1,800	2,000	2,200
120	0.112	0.225	0.338	0.451	0.564	0.067	0.789	0.846	0.902	1.015	1.128	1.240
110	0.094	0.188	0.282	0.376	0.470	0.056	0.658	0.705	0.752	0.846	0.940	1.034
100	0.075	0.150	0.225	0.300	0.376	0.045	0.526	0.564	0.601	0.676	0.752	0.827
90	0.056	0.112	0.169	0.225	0.282	0.033	0.394	0.423	0.451	0.507	0.564	0.620
80	0.039	0.075	0.112	0.150	0.188	0.022	0.263	0.282	0.300	0.338	0.376	0.4136
70	0.018	0.037	0.564	0.075	0.940	0.112	0.131	0.141	0.150	0.169	0.188	0.206
60	0	0	0	0	0	0	0	0	0	0	0	0
50	0.018	0.037	0.564	0.075	0.940	0.112	0.131	0.141	0.150	0.169	0.188	0.206
40	0.039	0.075	0.112	0.150	0.188	0.022	0.263	0.282	0.300	0.338	0.376	0.4136
30	0.056	0.112	0.169	0.225	0.282	0.033	0.394	0.423	0.451	0.507	0.564	0.620
20	0.075	0.150	0.225	0.300	0.376	0.045	0.526	0.564	0.601	0.676	0.752	0.827
10	0.094	0.188	0.282	0.376	0.470	0.056	0.658	0.705	0.752	0.846	0.940	1.034
0	0.112	0.225	0.338	0.451	0.564	0.067	0.789	0.846	0.902	1.015	1.128	1.240
-20	0.131	0.263	0.394	0.526	0.658	0.789	0.921	0.987	1.052	1.184	1.316	1.447

SPRING TENSIONER TERMINATION DETAIL - SPTA-1
SCALE: 1" = 1'-0"





NOTES:

1. FOR NOTES REFER TO DRAWING Y001. FOR SYMBOLS AND ABBREVIATIONS REFER TO DRAWING Y002.
2. FOR POLE NUMBER TAG DETAILS, SEE DRAWING Y071.
3. FOR RAKING ORIENTATION, REFER TO BASE MOMENT ARROW ORIENTATION ON OCS LAYOUT PLANS.

[illegible]

REV	DATE	DESCRIPTION	DESIGNED BY	PFW		PRELIMINARY PLANS – 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION OVERHEAD CONTACT SYSTEM STRUTURE SCHEDULE POLE AND FOUNDATION SCHEDULE (SHEET 1 OF 6)	SCALE FOR 22"x34": NO SCALE	
			CHECKED BY	CRW		 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	HNTB The HNTB COMPANIES INFRASTRUCTURE SOLUTIONS 300 Apollo Drive Chelmsford, MA 01824 Phone: 978-905-4000		FILENAME: Y091.dwg	
			DRAWN BY	SBW					CONTRACT NO.: CON0077290	
			CHECKED BY	PFW					VOLUME: 1	
			APPROVED BY	NKS					DRAWING NO.: Y091	
									SHEET NO.: 313	
PLOT DATE: 8/27/2019			2: 21:33 PM		DATE: 8/28/2019					

1. SEE DRAWING Y091 FOR NOTES AND POLE NUMBERING METHOD.

[illegible]

REV	DATE	DESCRIPTION	DESIGNED BY	PFW		<div> <div>PRELIMINARY PLANS – 30%</div> <div>  <div>HDR Engineering, Inc.</div> </div> <div> <div>10450 Holmes Road</div> <div>Suite 600</div> <div>Kansas City, MO 64131-3471</div> <div>816-360-2700</div> <div>Certificate of Authority: 000856</div> </div> </div> <div> <div>DATE: 08-28-2019</div> <div>  <div>The HNTB COMPANIES</div> <div>INFRASTRUCTURE SOLUTIONS</div> <div>300 Apollo Drive</div> <div>Chelmsford, MA 01824</div> <div>Phone: 978-905-4000</div> </div> </div>	<div> <div>KANSAS CITY STREETCAR MAIN STREET EXTENSION</div> <div>OVERHEAD CONTACT SYSTEM</div> <div>STRUTURE SCHEDULE</div> <div>POLE AND FOUNDATION SCHEDULE</div> <div>(SHEET 2 OF 6)</div> </div>	<div> <div>SCALE FOR 22"x34": NO SCALE</div> <div>FILENAME: Y092.dwg</div> <div>CONTRACT NO.: CON0077290</div> <div>VOLUME: 1</div> <div>DRAWING NO.: Y092</div> <div>SHEET NO.: 314</div> </div>
			CHECKED BY	CRW				
			DRAWN BY	SBW				
			CHECKED BY	PFW				
			APPROVED BY	NKS				
PLOT DATE: 8/27/2019		2:21:40 PM	DATE	8/28/2019				

1. SEE DRAWING Y091 FOR NOTES AND POLE NUMBERING METHOD.

[illegible]

REV	DATE	DESCRIPTION	DESIGNED BY	PFW		<div>PRELIMINARY PLANS – 30%</div> <div> HDR Engineering, Inc.</div> <div>10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856</div>	<div>DATE: 08-28-2019</div> <div> The HNTB COMPANIES INFRASTRUCTURE SOLUTIONS</div> <div>300 Apollo Drive Chelmsford, MA 01824 Phone: 978-905-4000</div>	<div>KANSAS CITY STREETCAR MAIN STREET EXTENSION</div> <div>OVERHEAD CONTACT SYSTEM STRUTURE SCHEDULE POLE AND FOUNDATION SCHEDULE (SHEET 3 OF 6)</div>	<div>SCALE FOR 22"x34": NO SCALE</div> <div>FILENAME: Y093.dwg</div> <div>CONTRACT NO.: CON0077290</div> <div>VOLUME: 1</div> <div>DRAWING NO.: Y093</div> <div>SHEET NO.: 315</div>
			CHECKED BY	CRW					
			DRAWN BY	SBW					
			CHECKED BY	PFW					
			APPROVED BY	NKS					
PLOT DATE: 8/27/2019			2:21:46 PM		DATE	8/28/2019			

1. SEE DRAWING Y091 FOR NOTES AND POLE NUMBERING METHOD.

[illegible]

REV	DATE	DESCRIPTION	DESIGNED BY	PFW		<div>PRELIMINARY PLANS – 30%</div> <div><div>HDR Engineering, Inc.</div></div> <div><div>10450 Holmes Road</div><div>Suite 600</div><div>Kansas City, MO 64131-3471</div><div>816-360-2700</div><div>Certificate of Authority: 000856</div></div> <div><div>DATE: 08-28-2019</div><div><div><div>The HNTB COMPANIES</div><div>INFRASTRUCTURE SOLUTIONS</div><div>300 Apollo Drive</div><div>Chelmsford, MA 01824</div><div>Phone: 978-905-4000</div></div></div></div>	<div>KANSAS CITY STREETCAR MAIN STREET EXTENSION</div> <div>OVERHEAD CONTACT SYSTEM</div> <div>STRUTURE SCHEDULE</div> <div>POLE AND FOUNDATION SCHEDULE</div> <div>(SHEET 4 OF 6)</div>	SCALE FOR 22"x34": NO SCALE
			CHECKED BY	CRW				FILENAME: Y094.dwg
			DRAWN BY	SBW				CONTRACT NO.: CON0077290
			CHECKED BY	PFW				VOLUME: 1
			APPROVED BY	NKS				DRAWING NO.: Y094
								SHEET NO.: 316
PLOT DATE: 8/27/2019		2:21:52 PM	DATE	8/28/2019				

NOTES:

1. SEE DRAWING Y091 FOR NOTES AND POLE NUMBERING METHOD.

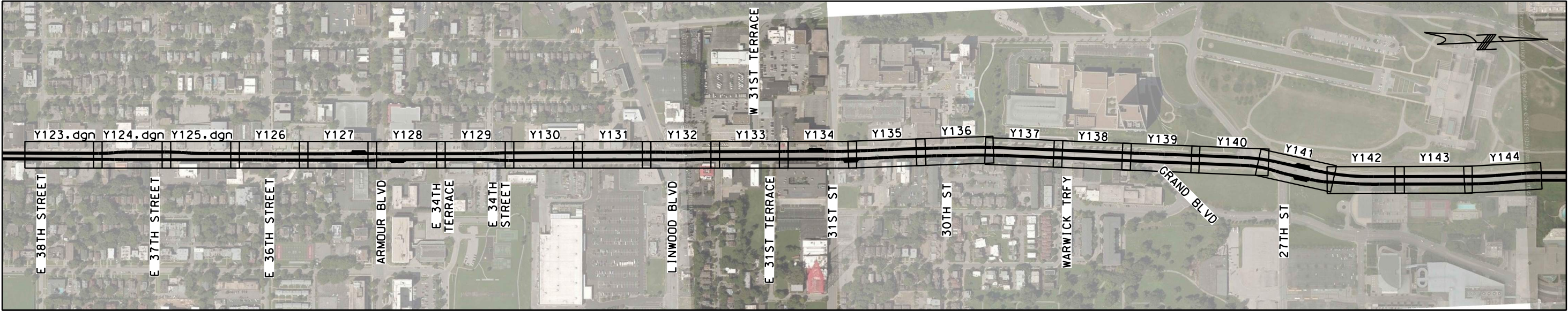
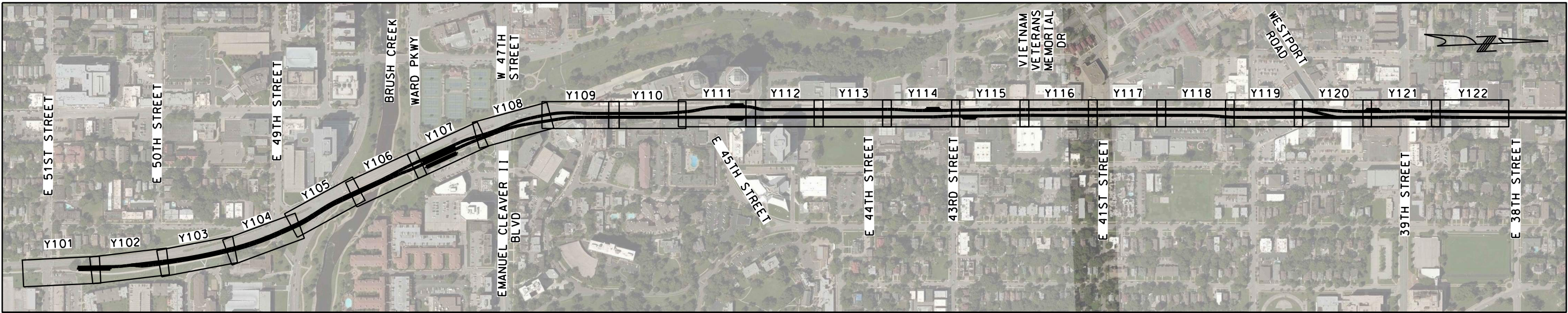
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REV	DATE	DESCRIPTION	DESIGNED BY	PFW		PRELIMINARY PLANS – 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION OVERHEAD CONTACT SYSTEM STRUTURE SCHEDULE POLE AND FOUNDATION SCHEDULE (SHEET 5 OF 6)	SCALE FOR 22"x34": NO SCALE	
			CHECKED BY	CRW		 HDR Engineering, Inc.	 The HNTB COMPANIES		FILENAME: Y095.dwg	
			DRAWN BY	SBW		10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	INFRASTRUCTURE SOLUTIONS 300 Apollo Drive Chelmsford, MA 01824 Phone: 978-905-4000		CONTRACT NO.: CON0077290	
			CHECKED BY	PFW					VOLUME: 1	
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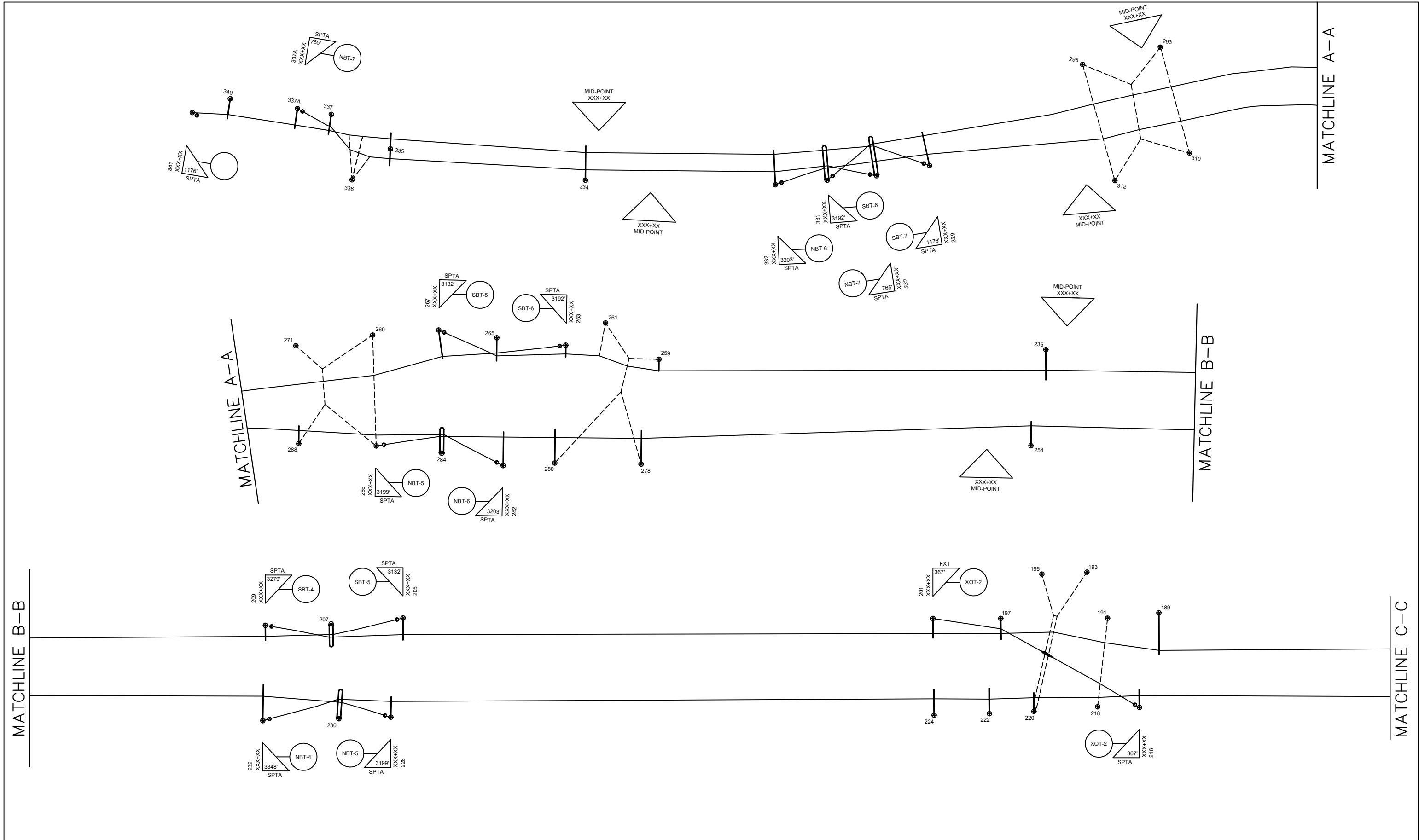
1. SEE DRAWING Y091 FOR NOTES AND POLE NUMBERING METHOD.


[illegible]

REV	DATE	DESCRIPTION	DESIGNED BY	PFW		<div>PRELIMINARY PLANS – 30%</div> <div> HDR Engineering, Inc.</div> <div>10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856</div> <div> The HNTB COMPANIES INFRASTRUCTURE SOLUTIONS 300 Apollo Drive Chelmsford, MA 01824 Phone: 978-905-4000</div>	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION OVERHEAD CONTACT SYSTEM STRUTURE SCHEDULE POLE AND FOUNDATION SCHEDULE (SHEET 6 OF 6)	SCALE FOR 22"x34": NO SCALE FILENAME: Y096.dwg CONTRACT NO.: CON0077290 VOLUME: 1		
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			APPROVED BY	NKS							
PLOT DATE: 8/27/2019			2:22:06 PM		DATE: 8/28/2019	NOT FOR CONSTRUCTION					

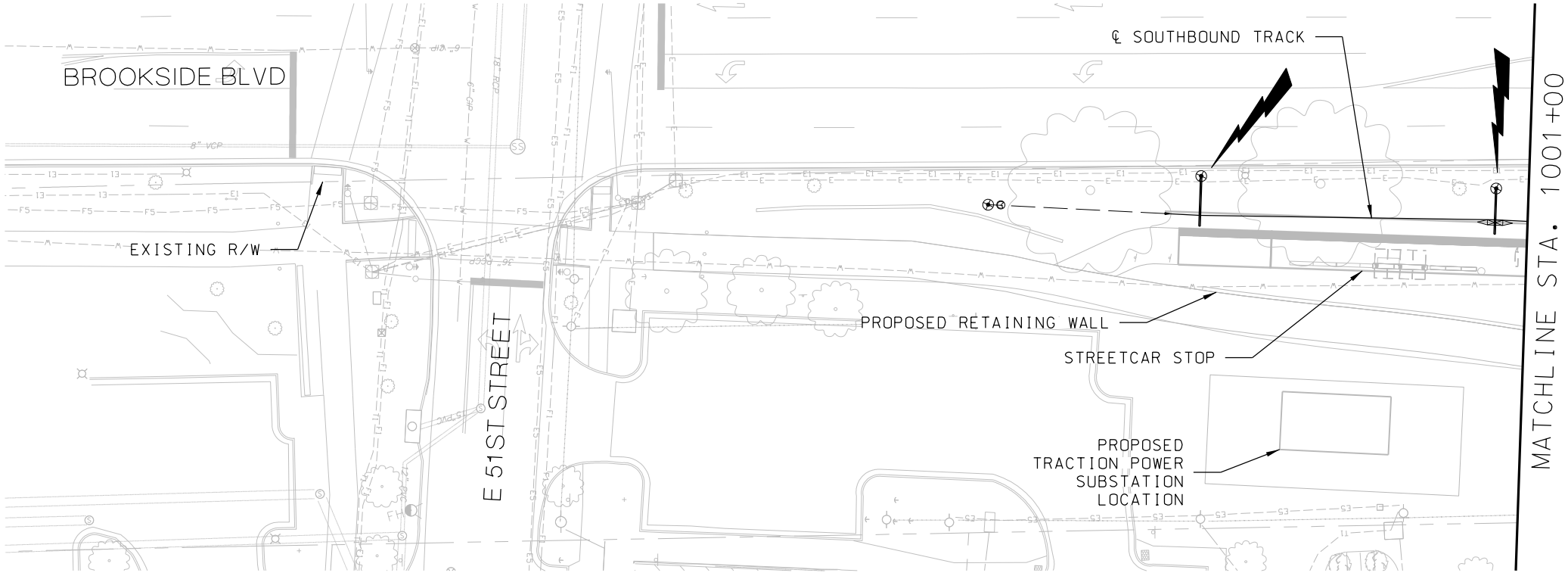


REV	DATE	DESCRIPTION	DESIGNED BY	PFW				PRELIMINARY PLANS - 30%		DATE: 08-28-2019		KANSAS CITY STREETCAR MAIN STREET EXTENSION				SCALE FOR 22"x34": NOT TO SCALE	
			CHECKED BY	DSK				 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856		 The HNTB COMPANIES INFRASTRUCTURE SOLUTIONS 300 Apollo Drive Chelmsford, MA 01824 Phone: 978-905-4000		OVERHEAD CONTACT SYSTEM LAYOUT PLAN KEY MAP				FILENAME:	
			DRAWN BY	DSK												FILE#	
			CHECKED BY	PFW												CONTRACT NO.:	
			APPROVED BY	NKS												CON0077290	
																VOLUME:	
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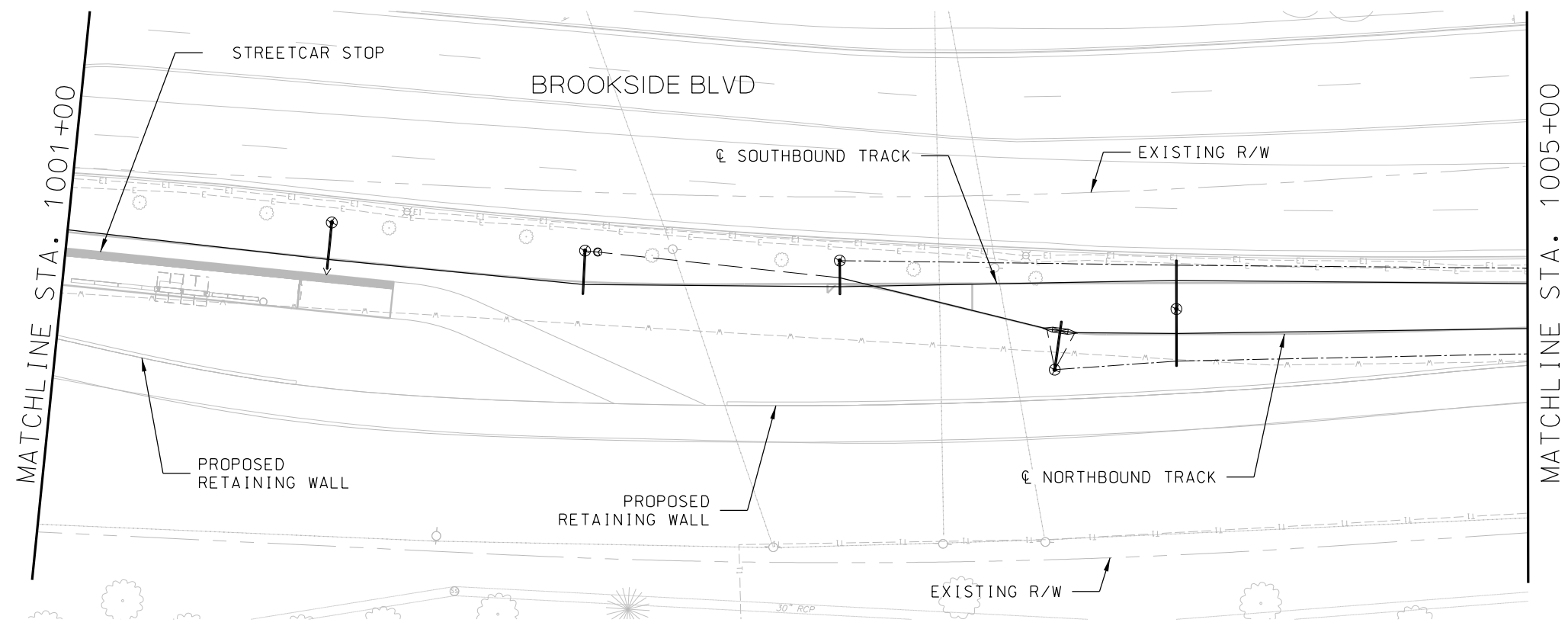
REV	DATE	DESCRIPTION	DESIGNED BY	PFW		PRELIMINARY PLANS – 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	OVERHEAD CONTACT SYSTEM LAYOUT PLAN MASTER OVERLAP CHART (SHEET 1 OF 2)	SCALE FOR 22"x34": NOT TO SCALE FILENAME: BORDER-1.dwg CONTRACT NO.: CON0077290 VOLUME: 1 DRAWING NO.: Y099 SHEET NO.: 320
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			DRAWN BY	CRW						
			CHECKED BY	PFW						
			APPROVED BY	NKS						
PLOT DATE: ----			DATE		8/28/2019					

- NOTES:
- 1. FOR NOTES, REFER TO DRAWING Y001.
FOR SYMBOLS AND ABBREVIATIONS,
REFER TO DRAWING Y002.
 - 2. POLE NUMBERS SHOWN ON LAYOUT
DRAWINGS ARE TEMPORARY.



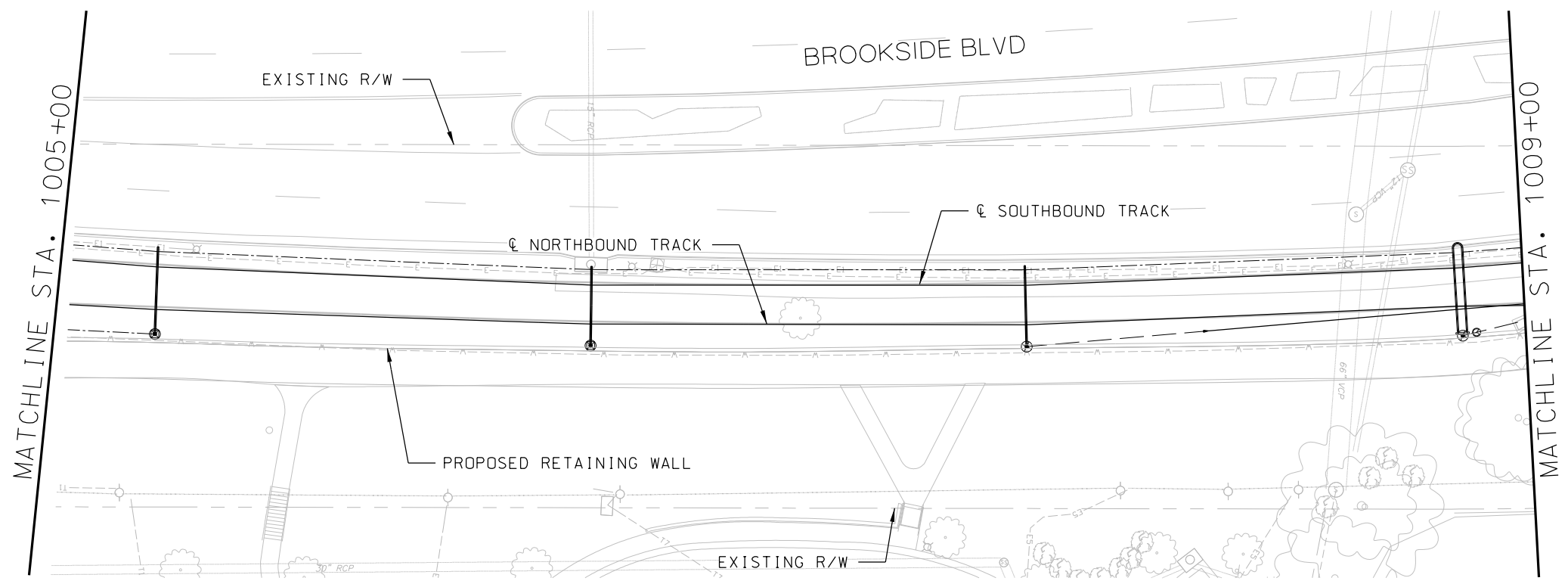
REV	DATE	DESCRIPTION	DESIGNED BY	PFW				PRELIMINARY PLANS - 30%		DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION OVERHEAD CONTACT SYSTEM LAYOUT PLAN (SHEET 1 OF 48) SB STA BEGIN TO STA 1001+00	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'	
			CHECKED BY	DSK				 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	 The HNTB COMPANIES INFRASTRUCTURE SOLUTIONS 300 Apollo Drive Chelmsford, MA 01824 Phone: 978-905-4000				
			DRAWN BY	DSK									
			CHECKED BY	PFW									
			APPROVED BY	NKS									
PLOT DATE: 8/27/2019			DATE: 08/28/2019				NOT FOR CONSTRUCTION				DRAWING NO.: Y101	SHEET NO.: 322	

- NOTES:
- 1. FOR NOTES, REFER TO DRAWING Y001.
FOR SYMBOLS AND ABBREVIATIONS,
REFER TO DRAWING Y002.
 - 2. POLE NUMBERS SHOWN ON LAYOUT
DRAWINGS ARE TEMPORARY.



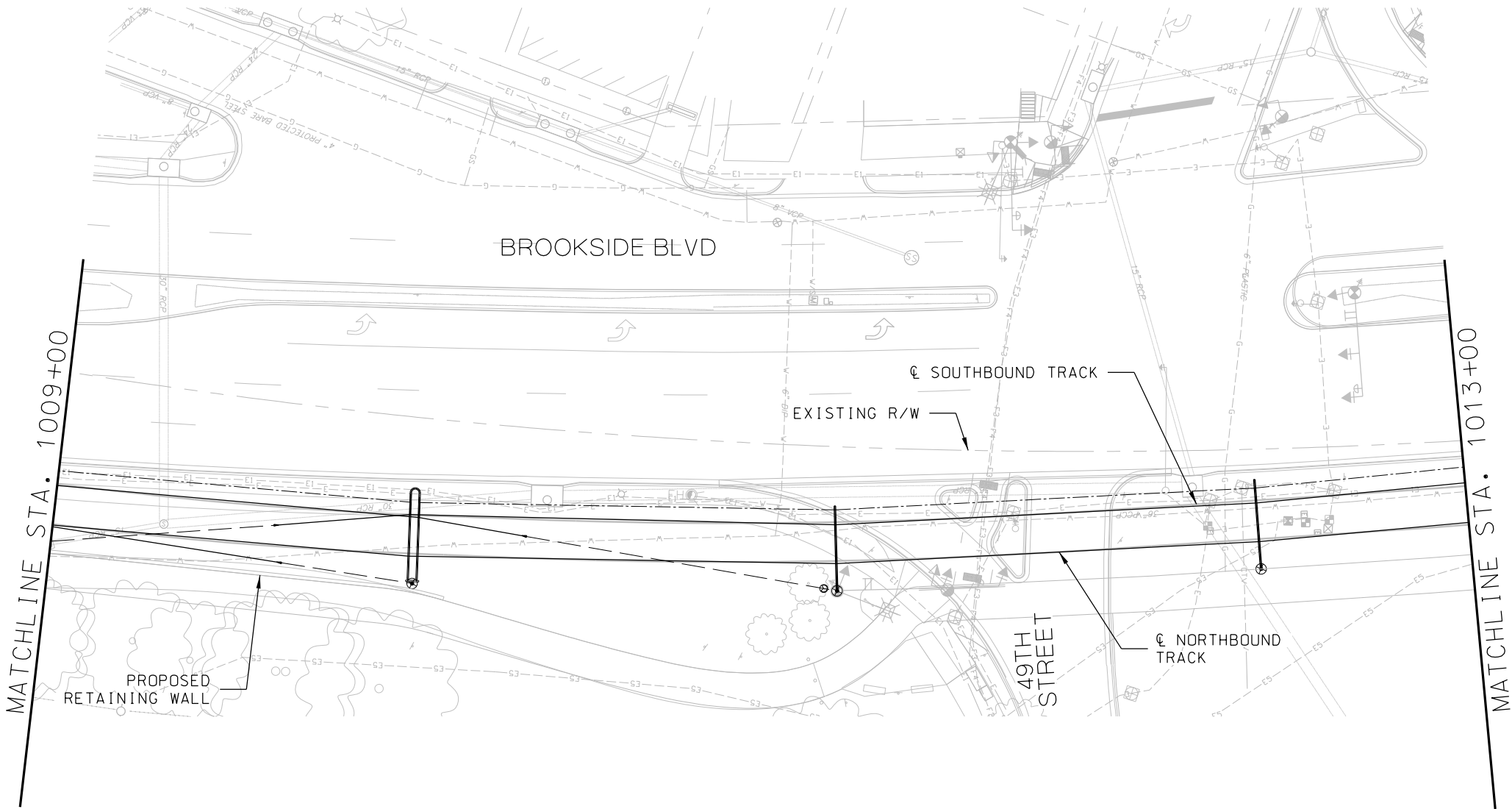
REV		DATE	DESCRIPTION	DESIGNED BY	PFW				PRELIMINARY PLANS - 30%		DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION		SCALE FOR 22"x34": H: 1"=20' V: 1"=2'							
				CHECKED BY	DSK				 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856		 The HNTB COMPANIES INFRASTRUCTURE SOLUTIONS 300 Apollo Drive Chelmsford, MA 01824 Phone: 978-905-4000										
				DRAWN BY	DSK											FILENAME:					
				CHECKED BY	PFW											CONTRACT NO.:					
				APPROVED BY	NKS											VOLUME:					
PLOT DATE:			8/27/2019	12:34:58 PM					DATE	08/28/2019	NOT FOR CONSTRUCTION							DRAWING NO.:		Y102	
																		SHEET NO.:		323	

- NOTES:
- 1. FOR NOTES, REFER TO DRAWING Y001.
FOR SYMBOLS AND ABBREVIATIONS,
REFER TO DRAWING Y002.
 - 2. POLE NUMBERS SHOWN ON LAYOUT
DRAWINGS ARE TEMPORARY.



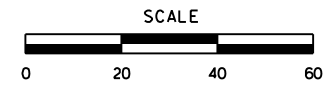
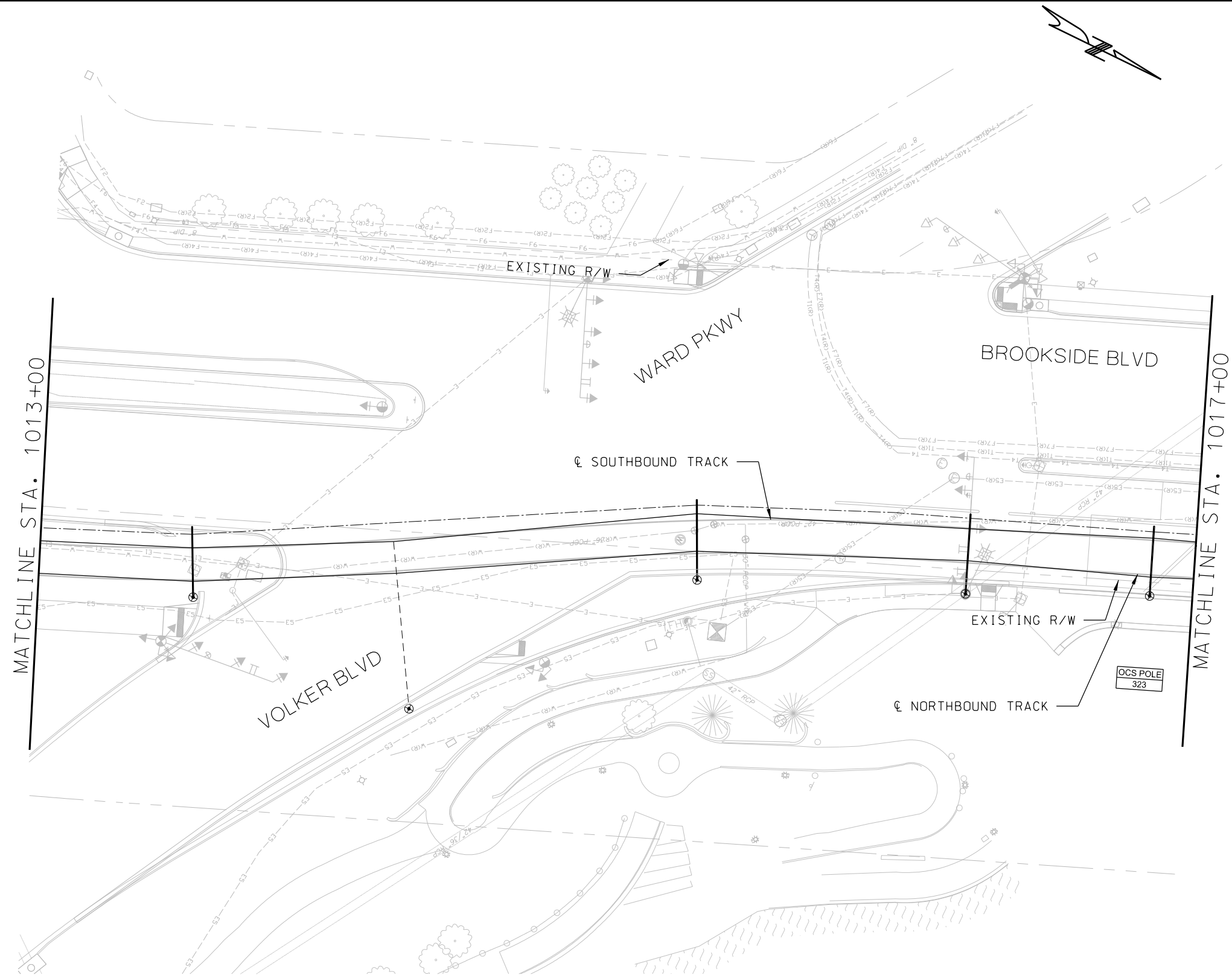
REV	DATE	DESCRIPTION	DESIGNED BY	PFW		<div>PRELIMINARY PLANS - 30%</div> <div><div><div>HDR Engineering, Inc.</div></div><div><div>10450 Holmes Road</div><div>Suite 600</div><div>Kansas City, MO 64131-3471</div><div>816-360-2700</div><div>Certificate of Authority: 000856</div></div></div> <div><div><div>The HNTB COMPANIES</div><div>INFRASTRUCTURE SOLUTIONS</div><div>300 Apollo Drive</div><div>Chelmsford, MA 01824</div><div>Phone: 978-905-4000</div></div></div> <div>NOT FOR CONSTRUCTION</div>	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION		SCALE FOR 22"x34": H: 1"=20' V: 1"=2'	
			CHECKED BY	DSK			OVERHEAD CONTACT SYSTEM		FILENAME:		
			DRAWN BY	DSK			LAYOUT PLAN		SFILES		
			CHECKED BY	PFW			(SHEET 3 OF 48)		CONTRACT NO.:		
			APPROVED BY	NKS			SB STA 1005+00 TO STA 1009+00		CON0077290		
PLOT DATE: 8/27/2019			DATE: 08/28/2019				VOLUME: 1		DRAWING NO.:		
							Y103		SHEET NO.:		
									324		

- NOTES:
- 1. FOR NOTES, REFER TO DRAWING Y001.
FOR SYMBOLS AND ABBREVIATIONS,
REFER TO DRAWING Y002.
 - 2. POLE NUMBERS SHOWN ON LAYOUT
DRAWINGS ARE TEMPORARY.



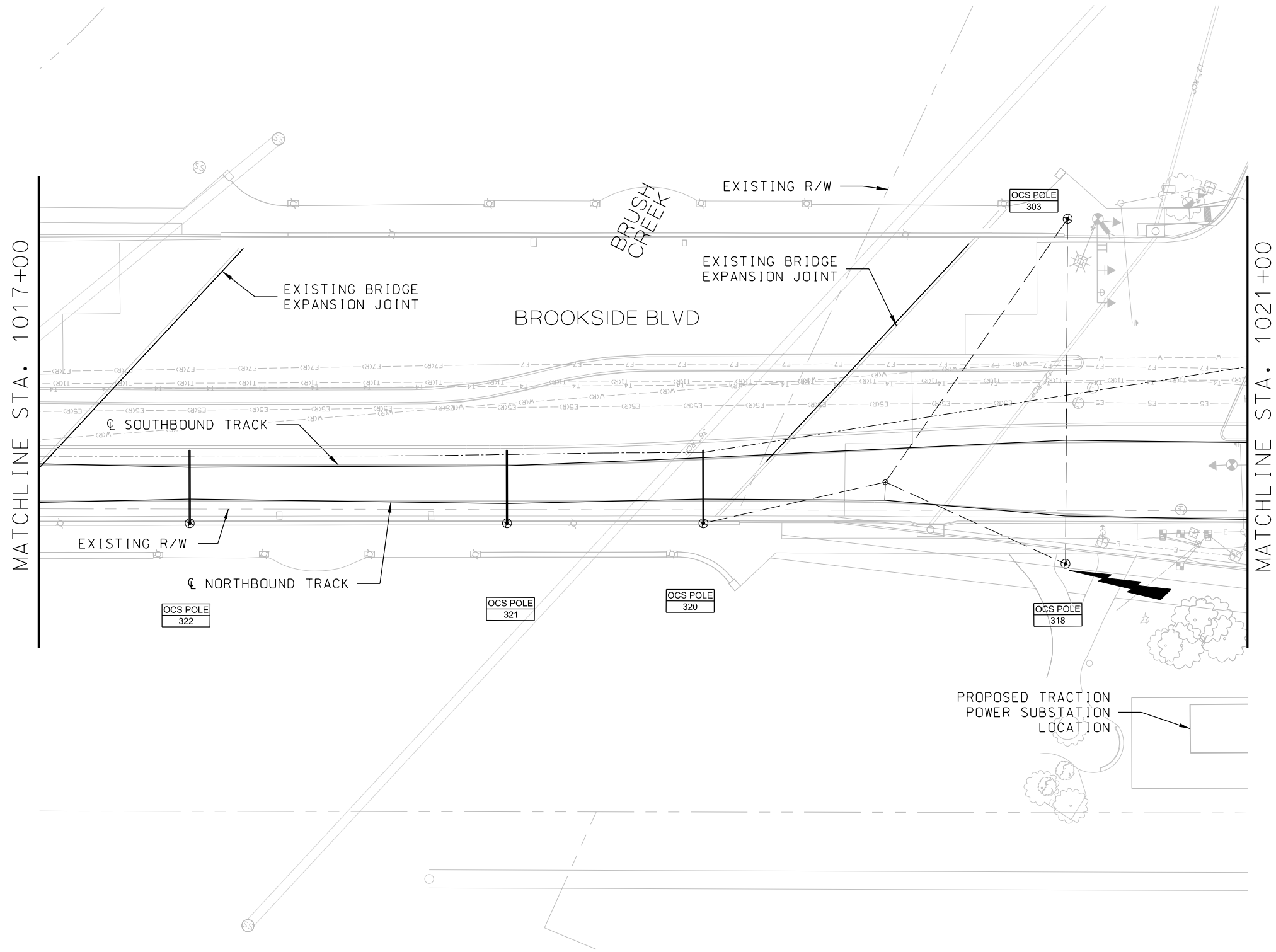
REV	DATE	DESCRIPTION	DESIGNED BY	PFW		PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	OVERHEAD CONTACT SYSTEM LAYOUT PLAN (SHEET 4 OF 48) SB STA 1009+00 TO STA 1013+00	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'	
			CHECKED BY	DSK						FILENAME:	
			DRAWN BY	DSK						FILESS	
			CHECKED BY	PFW						CONTRACT NO.:	
			APPROVED BY	NKS						CON0077290	
										VOLUME:	
PLOT DATE: 8/27/2019			12:35:49 PM			DATE: 08/28/2019			DRAWING NO.: Y104		SHEET NO.: 325

- NOTES:
1. FOR NOTES, REFER TO DRAWING Y001.
FOR SYMBOLS AND ABBREVIATIONS,
REFER TO DRAWING Y002.
 2. POLE NUMBERS SHOWN ON LAYOUT
DRAWINGS ARE TEMPORARY.



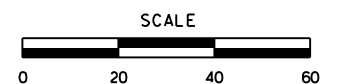
REV	DATE	DESCRIPTION	DESIGNED BY	PFW		PRELIMINARY PLANS - 30%		DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION		SCALE FOR 22"x34": H: 1"=20' V: 1"=2'		
			CHECKED BY	DSK		 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	 The HNTB COMPANIES INFRASTRUCTURE SOLUTIONS 300 Apollo Drive Chelmsford, MA 01824 Phone: 978-905-4000	OVERHEAD CONTACT SYSTEM LAYOUT PLAN (SHEET 5 OF 48) SB STA 1013+00 TO STA 1017+00		FILENAME:		DRAWING NO.: Y105	SHEET NO.: 326
			DRAWN BY	DSK						FILE:			
			CHECKED BY	PFW						CONTRACT NO.:			
			APPROVED BY	NKS						VOLUME:			
PLOT DATE: 8/27/2019			12:36:06 PM		DATE: 08/28/2019	NOT FOR CONSTRUCTION							

- NOTES:
- 1. FOR NOTES, REFER TO DRAWING Y001.
FOR SYMBOLS AND ABBREVIATIONS,
REFER TO DRAWING Y002.
 - 2. POLE NUMBERS SHOWN ON LAYOUT
DRAWINGS ARE TEMPORARY.



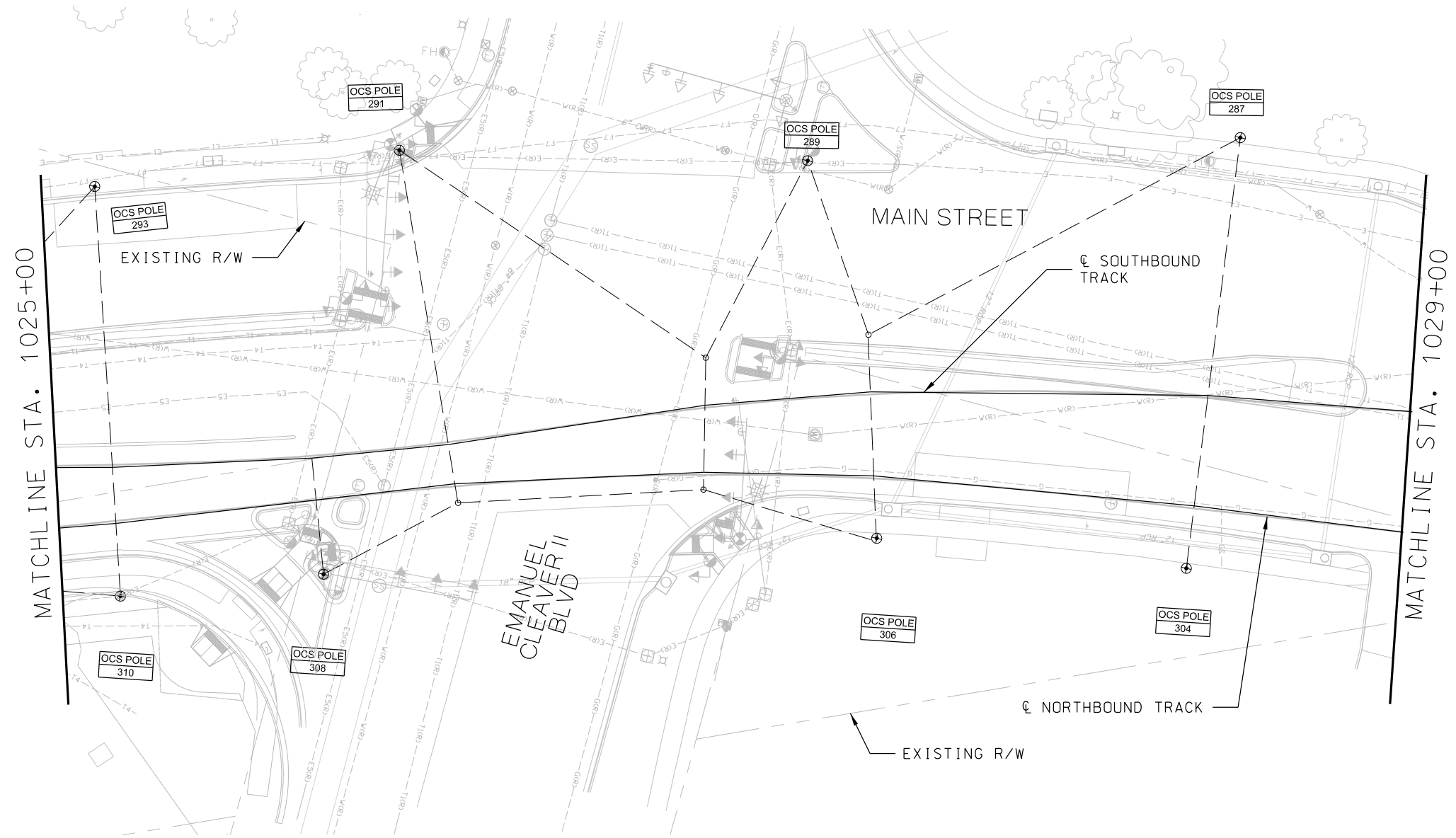
REV		DATE	DESCRIPTION	DESIGNED BY	PFW		PRELIMINARY PLANS - 30%	DATE: 08-28-2019	<div><div> HDR Engineering, Inc.</div><div> The HNTB COMPANIES INFRASTRUCTURE SOLUTIONS</div></div>	<div><div>KANSAS CITY STREETCAR MAIN STREET EXTENSION</div><div>OVERHEAD CONTACT SYSTEM LAYOUT PLAN (SHEET 6 OF 48)</div><div>SB STA 1017+00 TO STA 1021+00</div></div>	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'	
			CHECKED BY	DSK	FILENAME:							
			DRAWN BY	DSK	\$FILES							
			CHECKED BY	PFW	CONTRACT NO.:							
			APPROVED BY	NKS	CON0077290							
					VOLUME:							
PLOT DATE: 8/27/2019			12:36:22 PM	DATE	08/28/2019		NOT FOR CONSTRUCTION				DRAWING NO.:	SHEET NO.:
											Y106	327

1. FOR NOTES, REFER TO DRAWING Y001.
FOR SYMBOLS AND ABBREVIATIONS,
REFER TO DRAWING Y002.
2. POLE NUMBERS SHOWN ON LAYOUT
DRAWINGS ARE TEMPORARY.



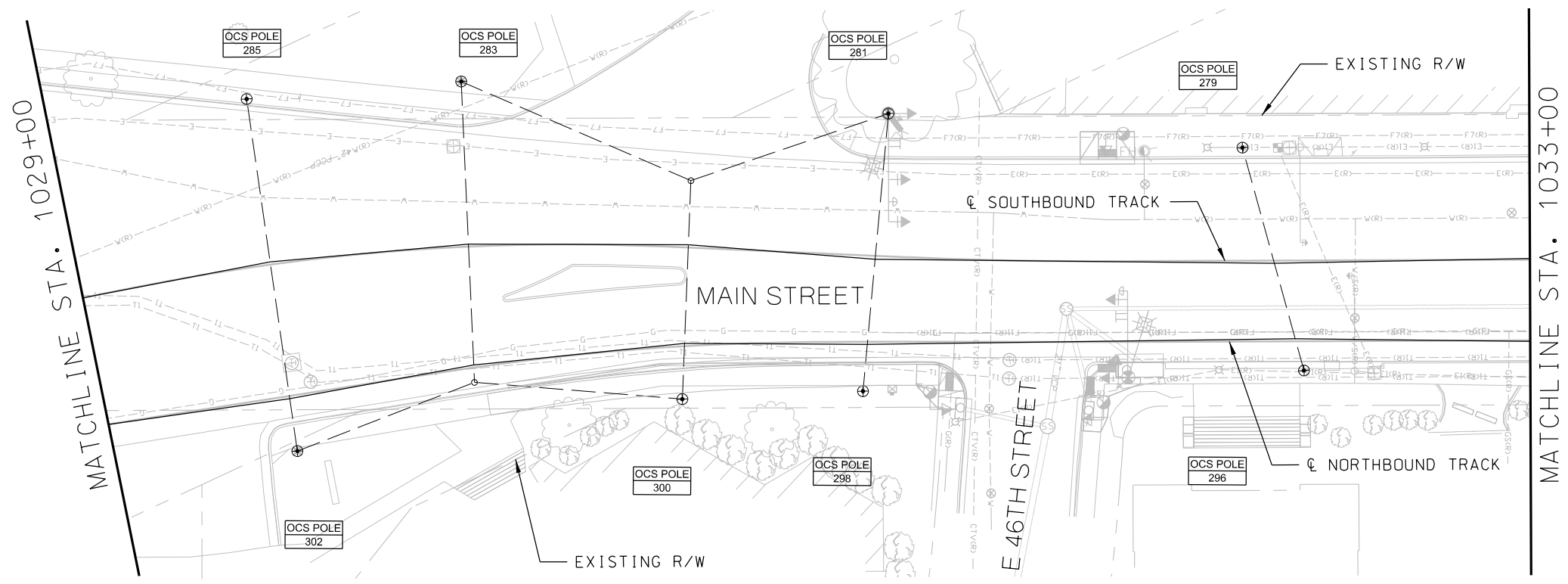
REV	DATE	DESCRIPTION	DESIGNED BY	PFW		<div>PRELIMINARY PLANS - 30%</div> <div> HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856</div> <div> The HNTB COMPANIES INFRASTRUCTURE SOLUTIONS 300 Apollo Drive Chelmsford, MA 01824 Phone: 978-905-4000</div> <td rowspan="6"><div>DATE: 08-28-2019</div><div><div>KANSAS CITY STREETCAR MAIN STREET EXTENSION</div><div>OVERHEAD CONTACT SYSTEM</div><div>LAYOUT PLAN</div><div>(SHEET 7 OF 48)</div><div>SB STA 1021+00 TO STA 1025+00</div></div><td colspan="2">SCALE FOR 22"x34": H: 1"=20' V: 1"=2'</td></td>	<div>DATE: 08-28-2019</div> <div><div>KANSAS CITY STREETCAR MAIN STREET EXTENSION</div><div>OVERHEAD CONTACT SYSTEM</div><div>LAYOUT PLAN</div><div>(SHEET 7 OF 48)</div><div>SB STA 1021+00 TO STA 1025+00</div></div> <td colspan="2">SCALE FOR 22"x34": H: 1"=20' V: 1"=2'</td>	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'	
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PLOT DATE: 8/27/2019 12:36:36 PM			DATE	08/28/2019	DRAWING NO.:	SHEET NO.:			
					Y107	328			

- NOTES:
- 1. FOR NOTES, REFER TO DRAWING Y001.
FOR SYMBOLS AND ABBREVIATIONS,
REFER TO DRAWING Y002.
 - 2. POLE NUMBERS SHOWN ON LAYOUT
DRAWINGS ARE TEMPORARY.

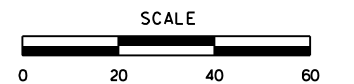
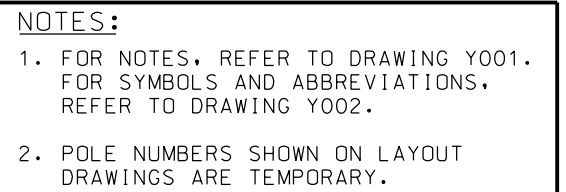



REV		DATE	DESCRIPTION	DESIGNED BY	PFW				PRELIMINARY PLANS - 30%		DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION OVERHEAD CONTACT SYSTEM LAYOUT PLAN (SHEET 8 OF 48) SB STA 1025+00 TO STA 1029+00		SCALE FOR 22"x34": H: 1"=20' V: 1"=2'	
				CHECKED BY	DSK				HDR Engineering, Inc.		 The HNTB COMPANIES INFRASTRUCTURE SOLUTIONS 300 Apollo Drive Chelmsford, MA 01824 Phone: 978-905-4000			FILENAME:	
				DRAWN BY	DSK				10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	\$FILES					
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												Y108		329	

- NOTES:
- 1. FOR NOTES, REFER TO DRAWING Y001.
FOR SYMBOLS AND ABBREVIATIONS,
REFER TO DRAWING Y002.
 - 2. POLE NUMBERS SHOWN ON LAYOUT
DRAWINGS ARE TEMPORARY.

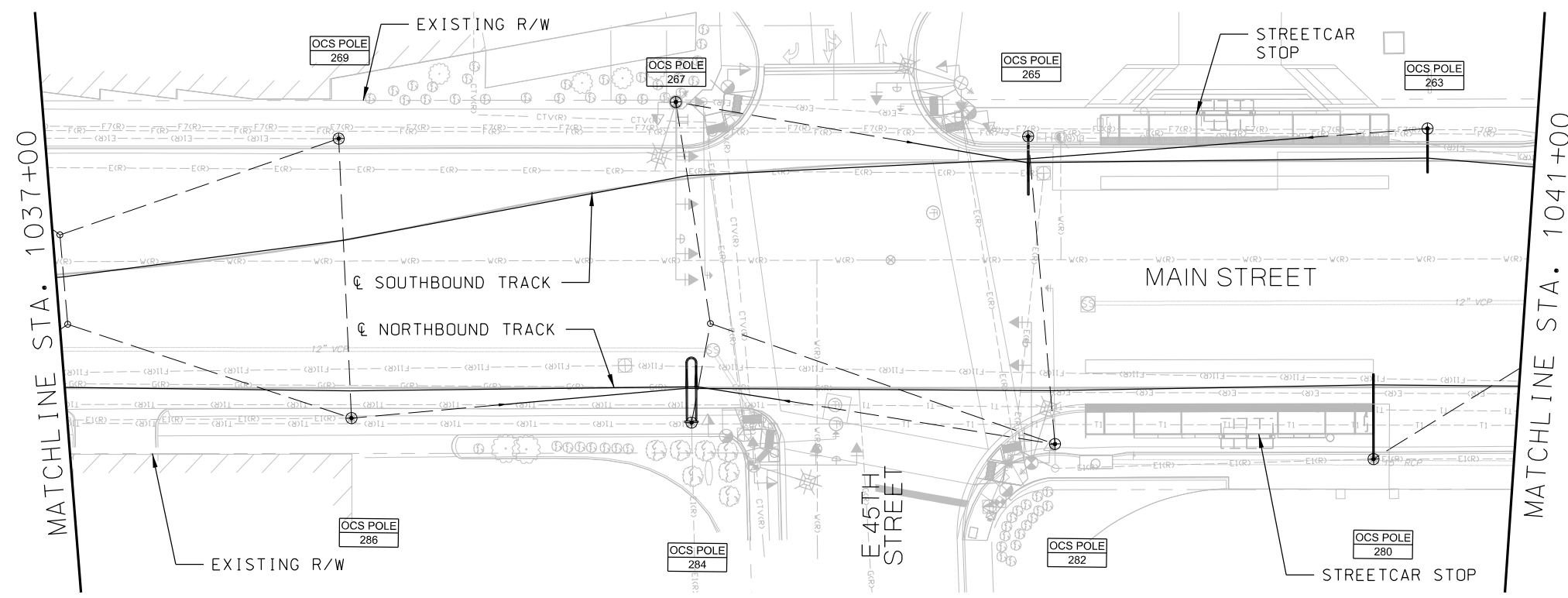


REV		DATE	DESCRIPTION	DESIGNED BY		PFW		PRELIMINARY PLANS - 30%				DATE: 08-28-2019		KANSAS CITY STREETCAR MAIN STREET EXTENSION				SCALE FOR 22"x34": H: 1"=20' V: 1"=2'					
				CHECKED BY		DSK		 HDR Engineering, Inc.				 HNTB The HNTB COMPANIES INFRASTRUCTURE SOLUTIONS 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856						OVERHEAD CONTACT SYSTEM LAYOUT PLAN (SHEET 9 OF 48) SB STA 1029+00 TO STA 1033+00				FILENAME:	
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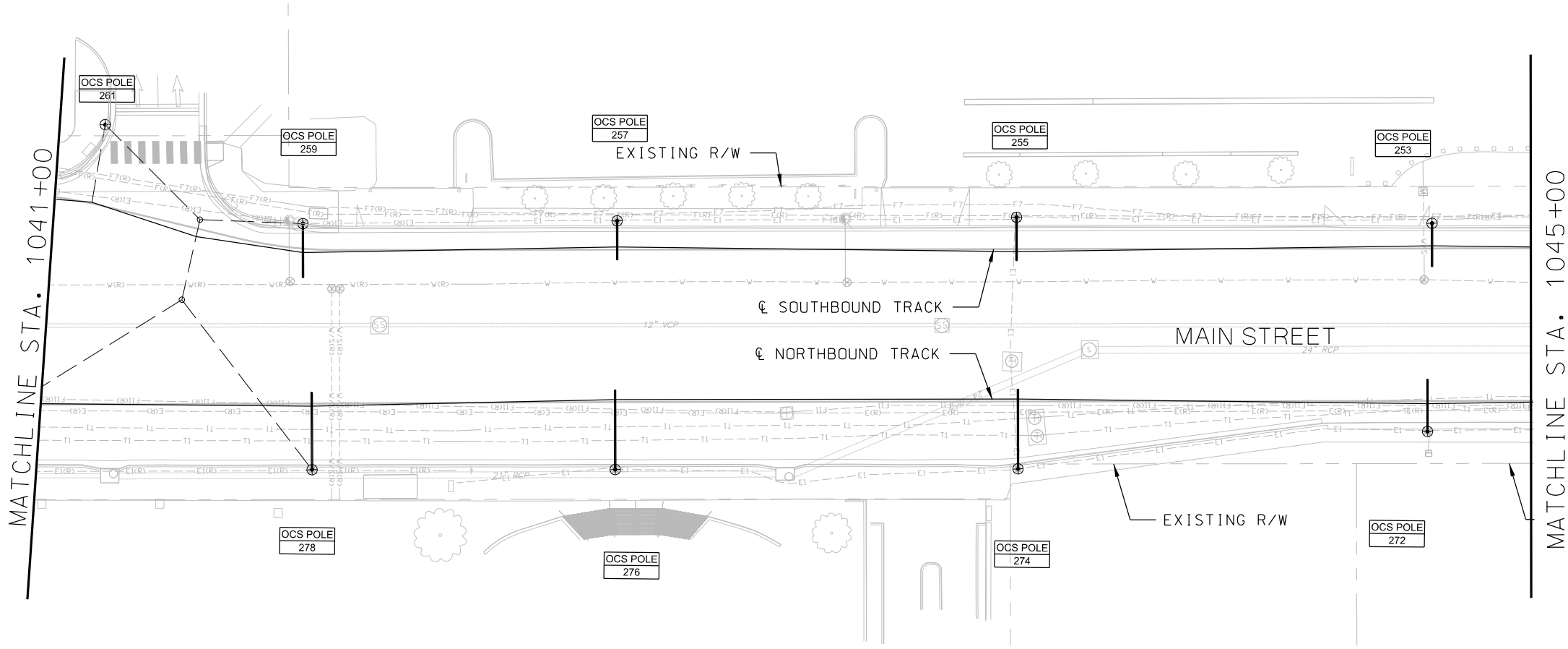
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			CHECKED BY	PFW				
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- NOTES:
- 1. FOR NOTES, REFER TO DRAWING Y001.
FOR SYMBOLS AND ABBREVIATIONS,
REFER TO DRAWING Y002.
 - 2. POLE NUMBERS SHOWN ON LAYOUT
DRAWINGS ARE TEMPORARY.



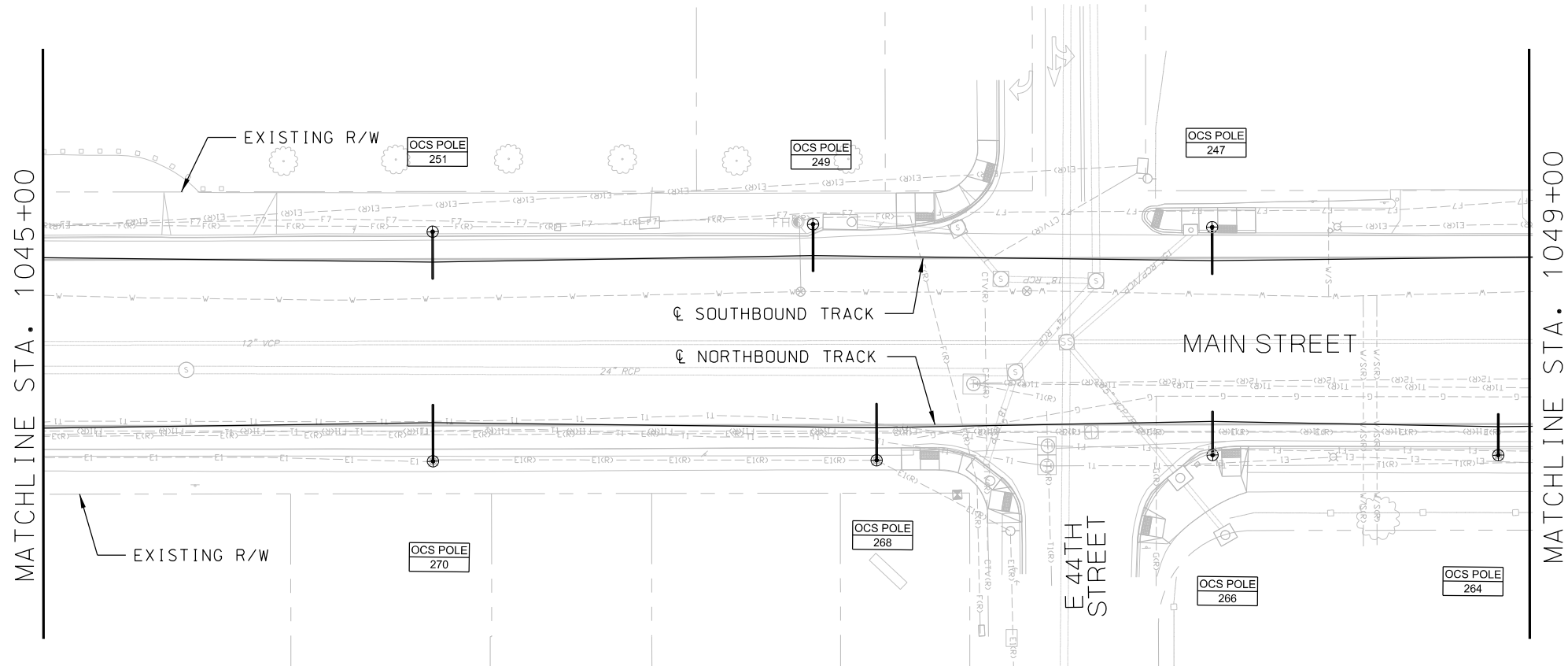
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			DRAWN BY	DSK		10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856		The HNTB COMPANIES INFRASTRUCTURE SOLUTIONS 300 Apollo Drive Chelmsford, MA 01824 Phone: 978-905-4000		LAYOUT PLAN			SFILES		
			CHECKED BY	PFW						(SHEET 11 OF 48)			CONTRACT NO.:		
			APPROVED BY	NKS						SB STA 1037+00 TO STA 1041+00			VOLUME:		
PLOT DATE: 8/27/2019			DATE: 08/28/2019										DRAWING NO.:		
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													Y111		
													332		

- NOTES:
- 1. FOR NOTES, REFER TO DRAWING Y001.
FOR SYMBOLS AND ABBREVIATIONS,
REFER TO DRAWING Y002.
 - 2. POLE NUMBERS SHOWN ON LAYOUT
DRAWINGS ARE TEMPORARY.



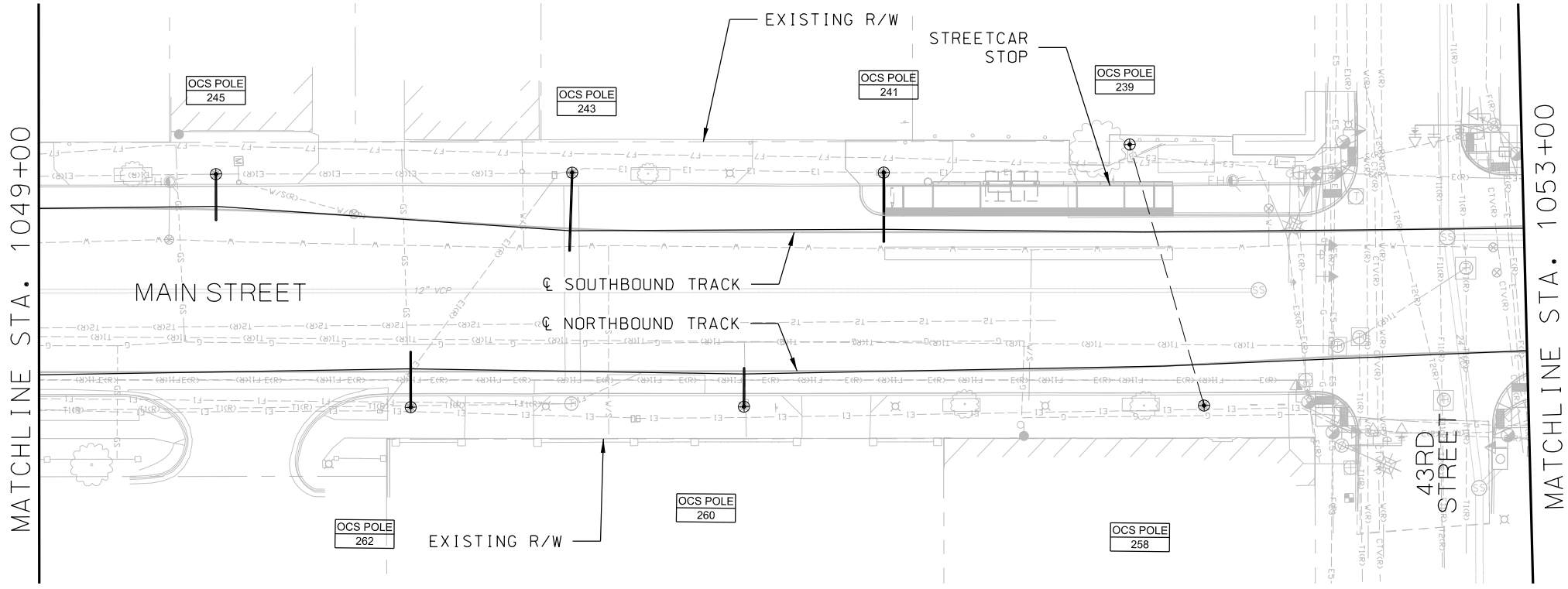
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				CHECKED BY		DSK		 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856				 The HNTB COMPANIES INFRASTRUCTURE SOLUTIONS 300 Apollo Drive Chelmsford, MA 01824 Phone: 978-905-4000						FILENAME:					
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- NOTES:
- 1. FOR NOTES, REFER TO DRAWING Y001.
FOR SYMBOLS AND ABBREVIATIONS,
REFER TO DRAWING Y002.
 - 2. POLE NUMBERS SHOWN ON LAYOUT
DRAWINGS ARE TEMPORARY.



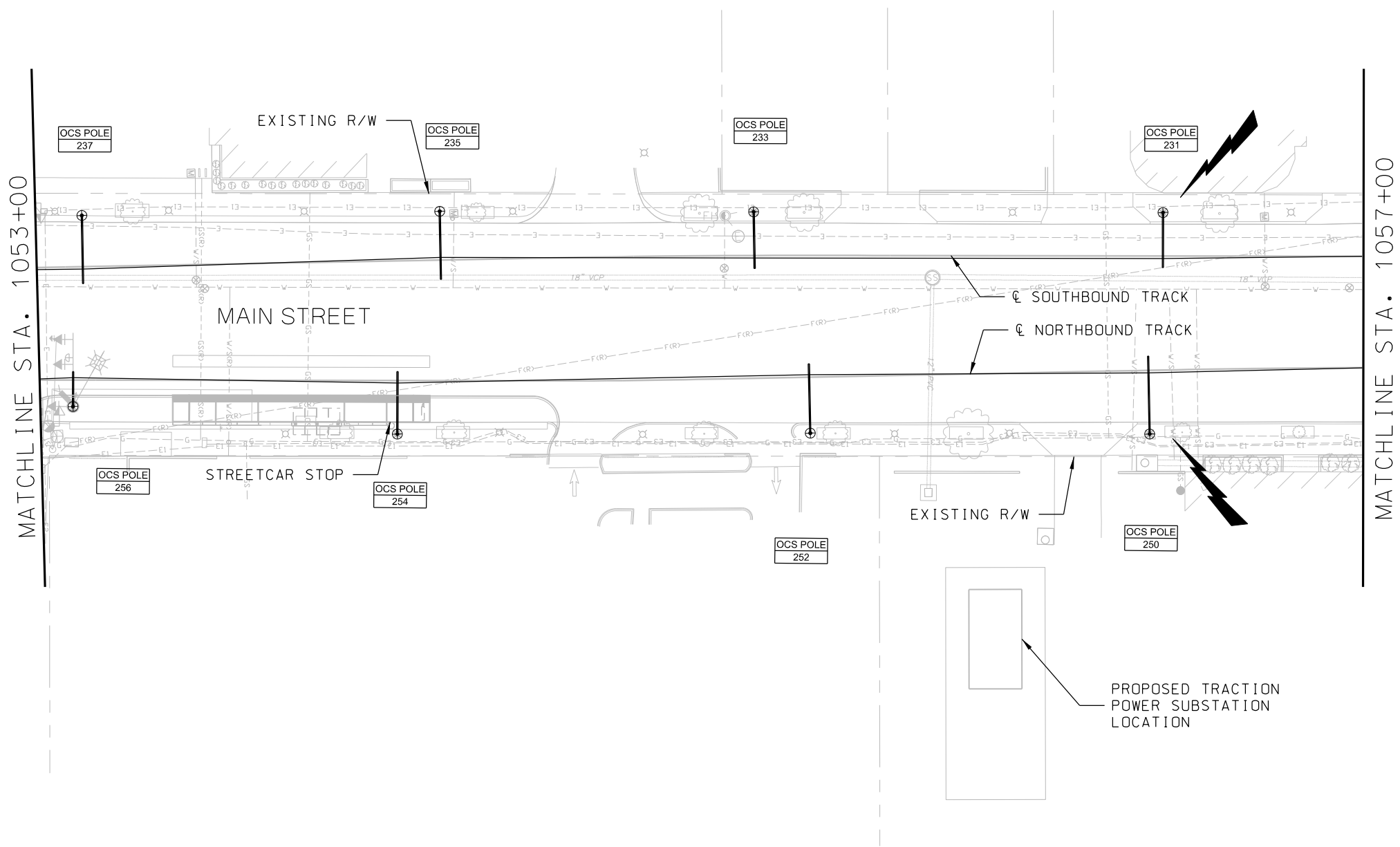
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			CHECKED BY	DSK		 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	 The HNTB COMPANIES INFRASTRUCTURE SOLUTIONS 300 Apollo Drive Chelmsford, MA 01824 Phone: 978-905-4000	OVERHEAD CONTACT SYSTEM			FILENAME:		
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			CHECKED BY	PFW				(SHEET 13 OF 48)			CONTRACT NO.:		
			APPROVED BY	NKS				SB STA 1045+00 TO STA 1049+00			VOLUME:		
PLOT DATE: 8/27/2019			DATE: 08/28/2019				NOT FOR CONSTRUCTION		DRAWING NO.:		SHEET NO.:		
							Y113		334				

- NOTES:
- 1. FOR NOTES, REFER TO DRAWING Y001.
FOR SYMBOLS AND ABBREVIATIONS,
REFER TO DRAWING Y002.
 - 2. POLE NUMBERS SHOWN ON LAYOUT
DRAWINGS ARE TEMPORARY.



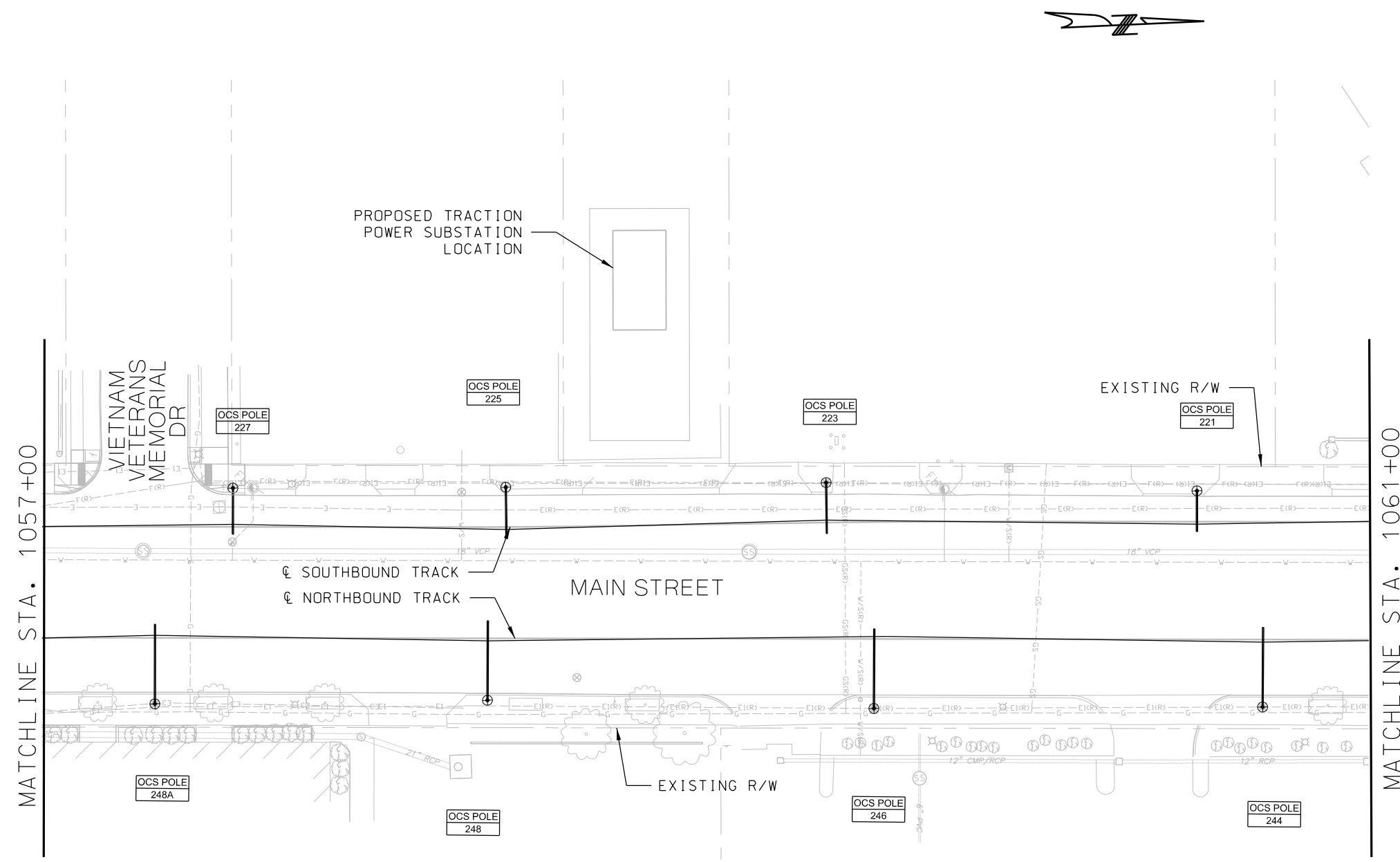
REV	DATE	DESCRIPTION	DESIGNED BY	PFW		PRELIMINARY PLANS - 30%	 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	 The HNTB COMPANIES INFRASTRUCTURE SOLUTIONS 300 Apollo Drive Chelmsford, MA 01824 Phone: 978-905-4000	KANSAS CITY STREETCAR MAIN STREET EXTENSION OVERHEAD CONTACT SYSTEM LAYOUT PLAN (SHEET 14 OF 48) SB STA 1049+00 TO STA 1053+00	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'				
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- NOTES:
- 1. FOR NOTES, REFER TO DRAWING Y001.
FOR SYMBOLS AND ABBREVIATIONS,
REFER TO DRAWING Y002.
 - 2. POLE NUMBERS SHOWN ON LAYOUT
DRAWINGS ARE TEMPORARY.



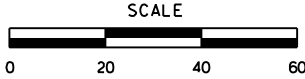
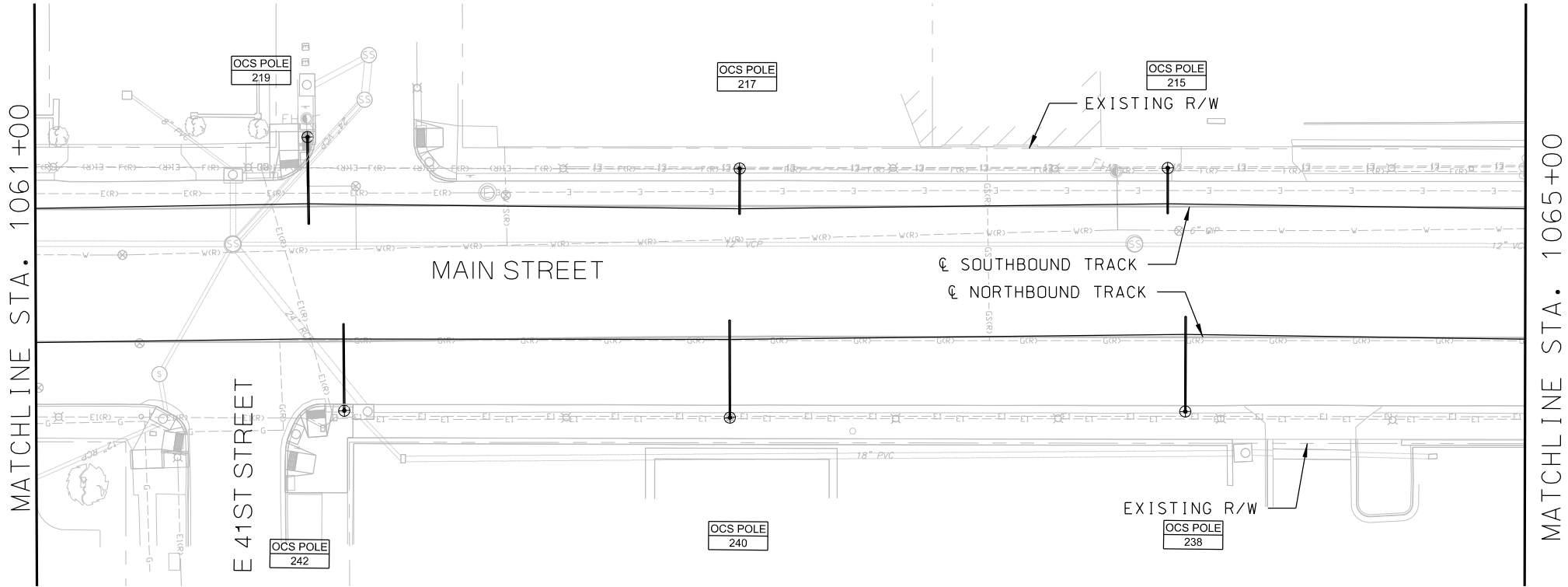
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- NOTES:
- 1. FOR NOTES, REFER TO DRAWING Y001.
FOR SYMBOLS AND ABBREVIATIONS,
REFER TO DRAWING Y002.
 - 2. POLE NUMBERS SHOWN ON LAYOUT
DRAWINGS ARE TEMPORARY.



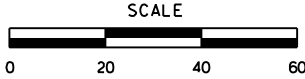
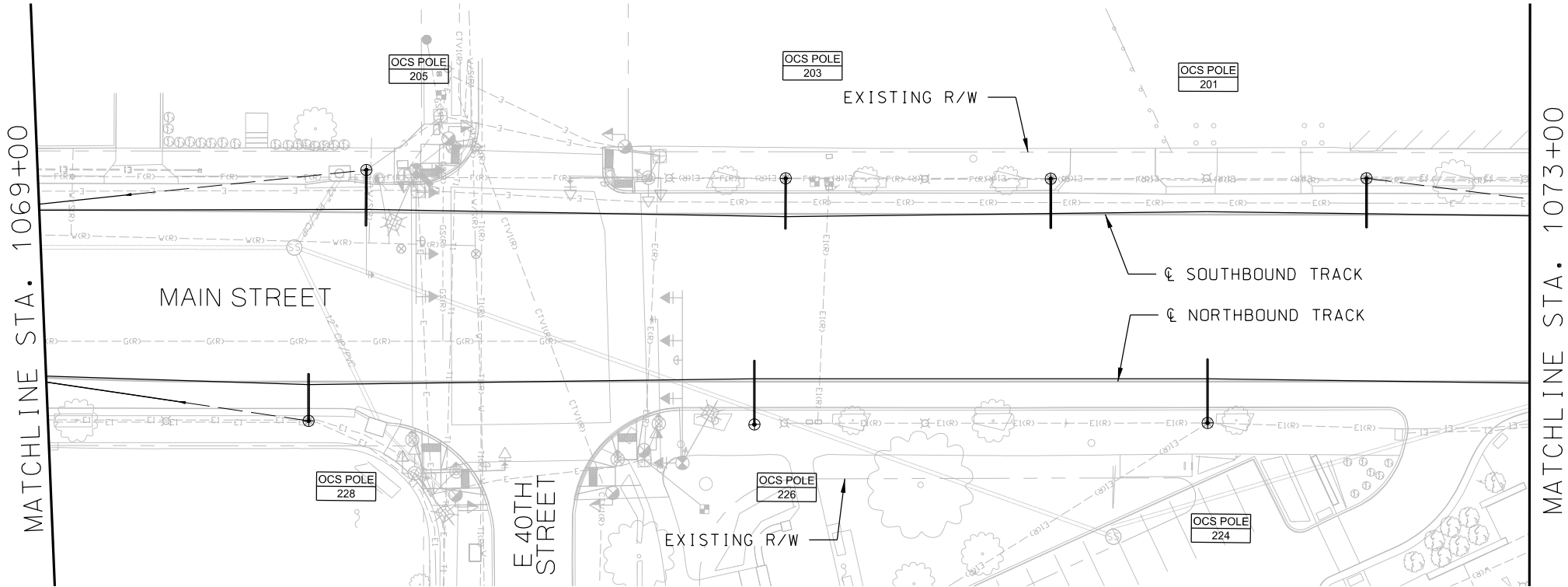
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			DRAWN BY	DSK				LAYOUT PLAN			SHEET NO.:				
			CHECKED BY	PFW				(SHEET 16 OF 48)			DRAWING NO.:				
			APPROVED BY	NKS				SB STA 1057+00 TO STA 1061+00			SHEET NO.:				
PLOT DATE: 8/27/2019			12:41:15 PM			DATE: 08/28/2019			NOT FOR CONSTRUCTION			CONTRACT NO.: CON0077290			
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												DRAWING NO.: Y116			
												SHEET NO.: 337			


- NOTES:
- 1. FOR NOTES, REFER TO DRAWING Y001.
FOR SYMBOLS AND ABBREVIATIONS,
REFER TO DRAWING Y002.
 - 2. POLE NUMBERS SHOWN ON LAYOUT
DRAWINGS ARE TEMPORARY.



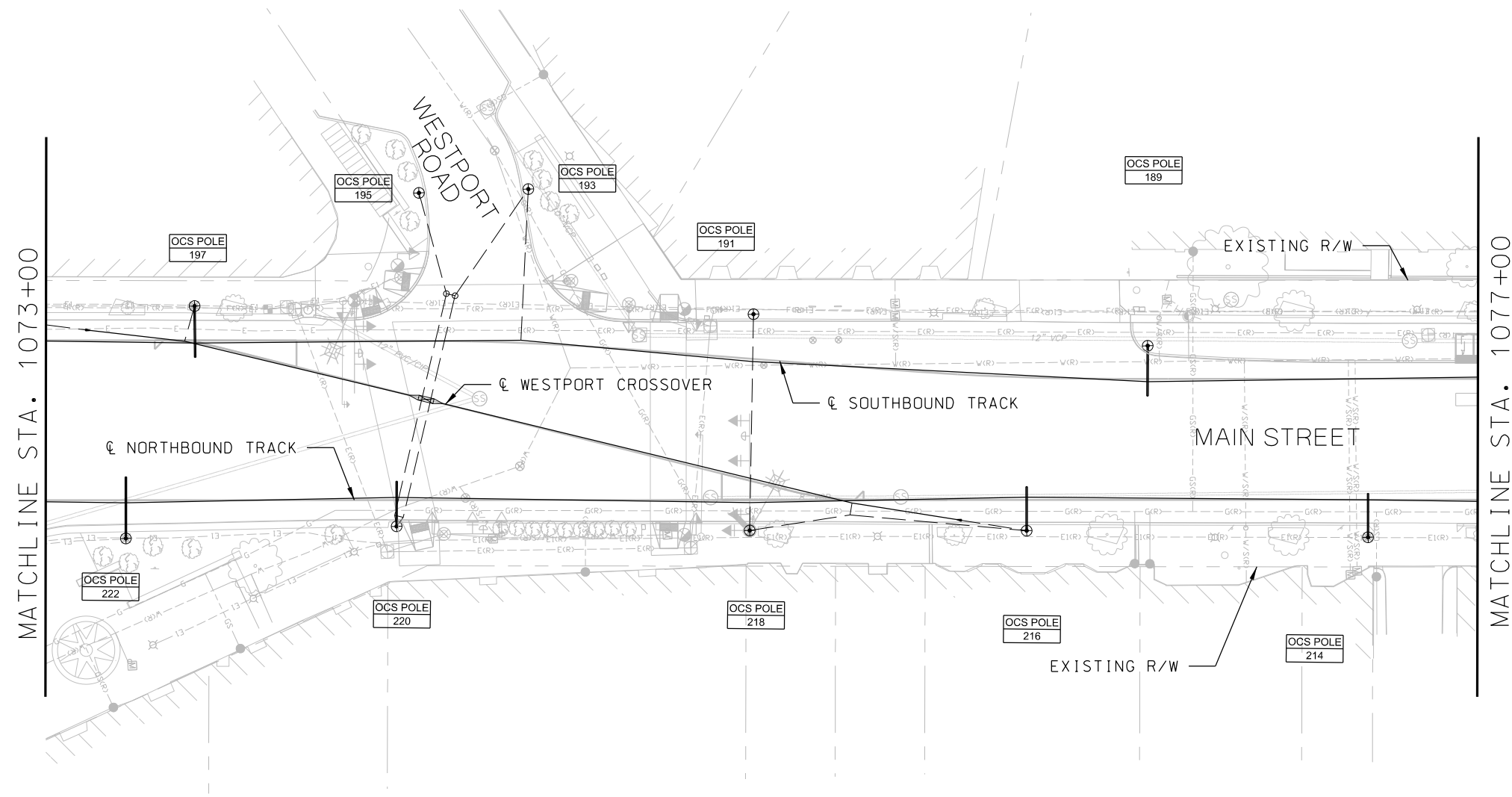
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				APPROVED BY	NKS				Kansas City, MO 64131-3471		300 Apollo Drive		SB STA 1061+00 TO STA 1065+00		CON0077290
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- NOTES:
- 1. FOR NOTES, REFER TO DRAWING Y001.
FOR SYMBOLS AND ABBREVIATIONS,
REFER TO DRAWING Y002.
 - 2. POLE NUMBERS SHOWN ON LAYOUT
DRAWINGS ARE TEMPORARY.



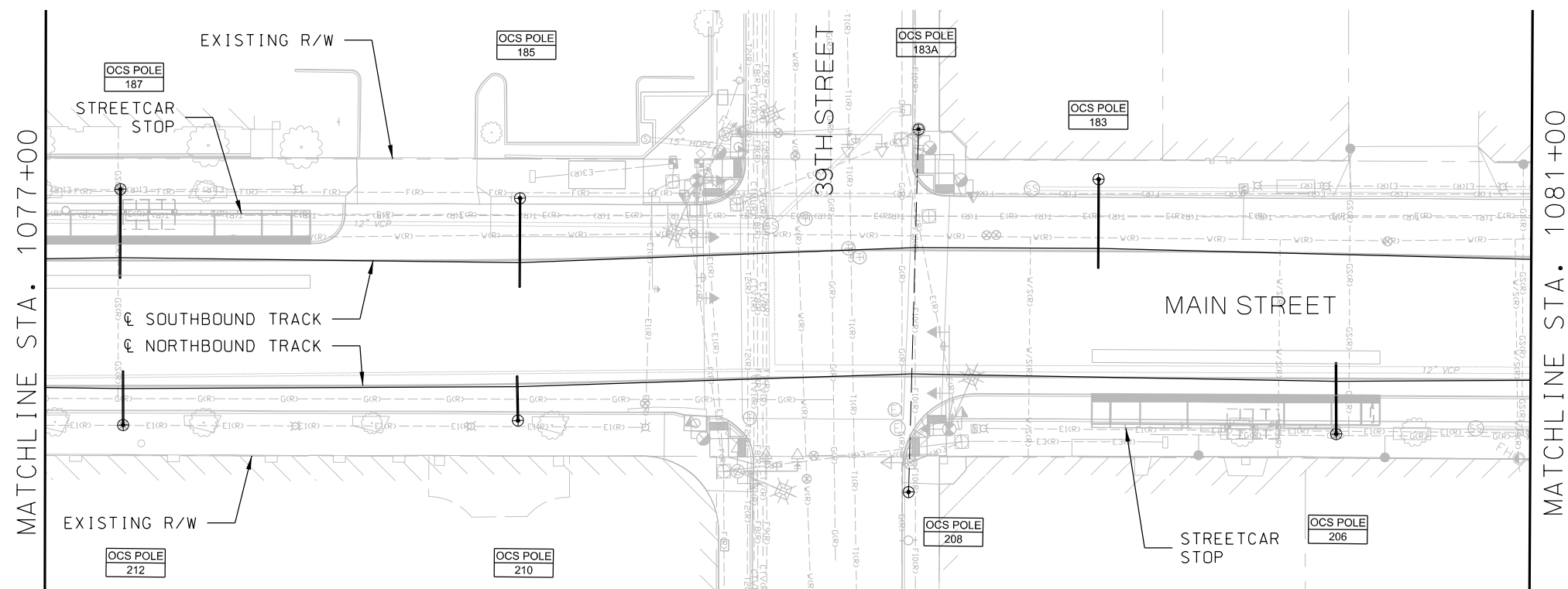
REV	DATE	DESCRIPTION	DESIGNED BY	PFW		PRELIMINARY PLANS - 30%	DATE: 08-28-2019	 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	 The HNTB COMPANIES INFRASTRUCTURE SOLUTIONS 300 Apollo Drive Chelmsford, MA 01824 Phone: 978-905-4000	KANSAS CITY STREETCAR MAIN STREET EXTENSION OVERHEAD CONTACT SYSTEM LAYOUT PLAN (SHEET 19 OF 48) SB STA 1069+00 TO STA 1073+00	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'	
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- NOTES:
- 1. FOR NOTES, REFER TO DRAWING Y001.
FOR SYMBOLS AND ABBREVIATIONS,
REFER TO DRAWING Y002.
 - 2. POLE NUMBERS SHOWN ON LAYOUT
DRAWINGS ARE TEMPORARY.



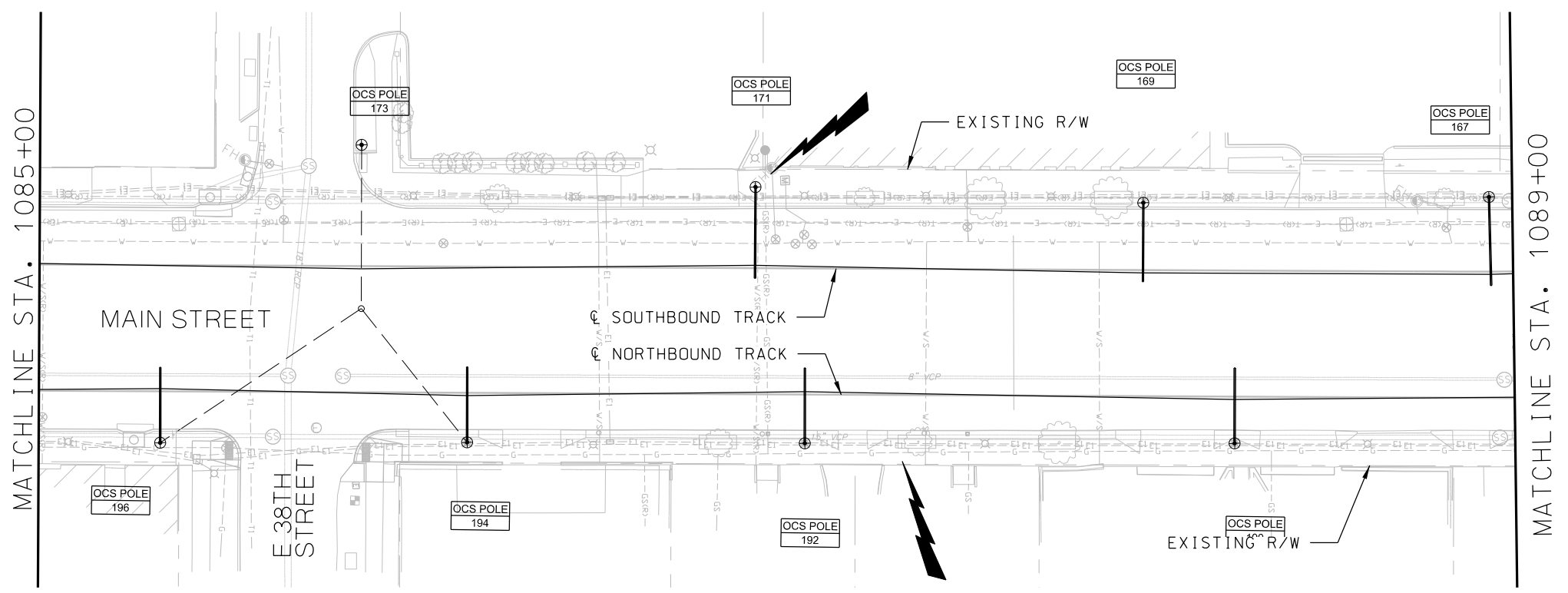
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				CHECKED BY	DSK				HDR Engineering, Inc.						The HNTB COMPANIES INFRASTRUCTURE SOLUTIONS		
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				CHECKED BY	PFW			10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	300 Apollo Drive Chelmsford, MA 01824 Phone: 978-905-4000								
				APPROVED BY	NKS												
PLOT DATE: 8/27/2019			12:42:22 PM	DATE	08/28/2019			NOT FOR CONSTRUCTION									
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- NOTES:
- 1. FOR NOTES, REFER TO DRAWING Y001.
FOR SYMBOLS AND ABBREVIATIONS,
REFER TO DRAWING Y002.
 - 2. POLE NUMBERS SHOWN ON LAYOUT
DRAWINGS ARE TEMPORARY.



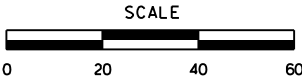
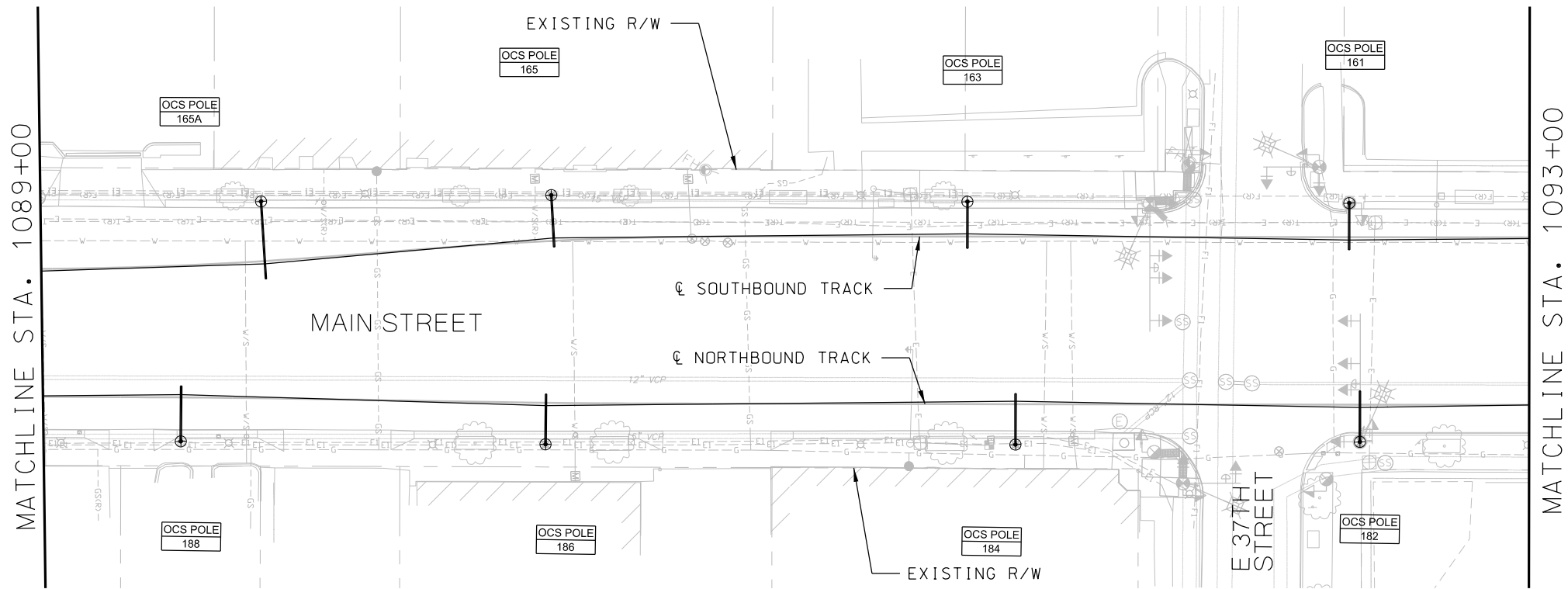
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				CHECKED BY	PFW								(SHEET 21 OF 48)		CONTRACT NO.:	
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- NOTES:
- 1. FOR NOTES, REFER TO DRAWING Y001.
FOR SYMBOLS AND ABBREVIATIONS,
REFER TO DRAWING Y002.
 - 2. POLE NUMBERS SHOWN ON LAYOUT
DRAWINGS ARE TEMPORARY.

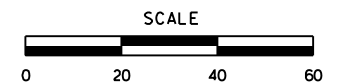
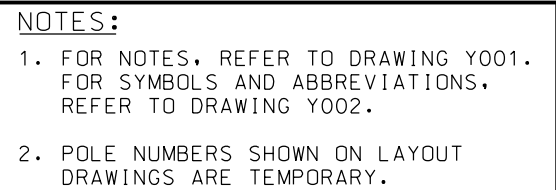


REV		DATE	DESCRIPTION	DESIGNED BY		PFW		PRELIMINARY PLANS - 30%		DATE: 08-28-2019		KANSAS CITY STREETCAR MAIN STREET EXTENSION OVERHEAD CONTACT SYSTEM LAYOUT PLAN (SHEET 23 OF 48) SB STA 1085+00 TO STA 1089+00				SCALE FOR 22"x34": H: 1"=20' V: 1"=2'	
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- NOTES:
1. FOR NOTES, REFER TO DRAWING Y001.
FOR SYMBOLS AND ABBREVIATIONS,
REFER TO DRAWING Y002.
 2. POLE NUMBERS SHOWN ON LAYOUT
DRAWINGS ARE TEMPORARY.

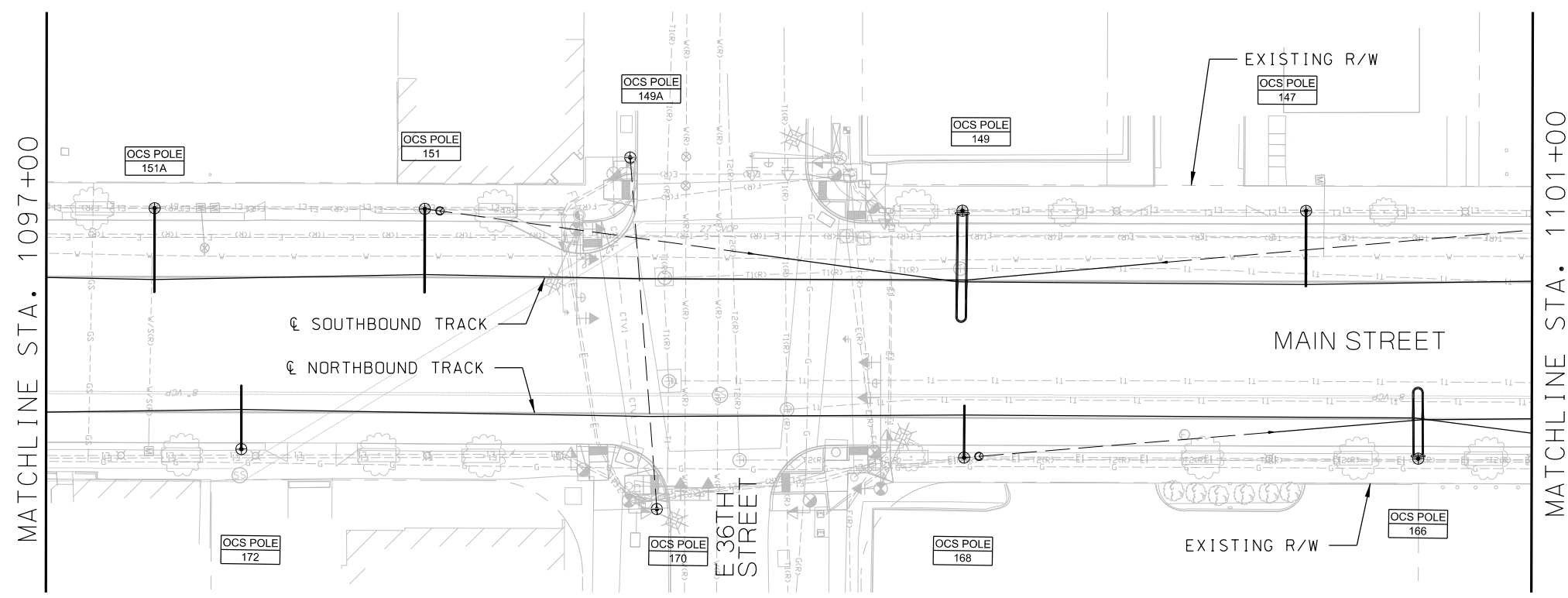


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			CHECKED BY	DSK		 HDR Engineering, Inc.		 The HNTB COMPANIES INFRASTRUCTURE SOLUTIONS 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	OVERHEAD CONTACT SYSTEM			FILENAME:			
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												SHEET NO.:			
												345			



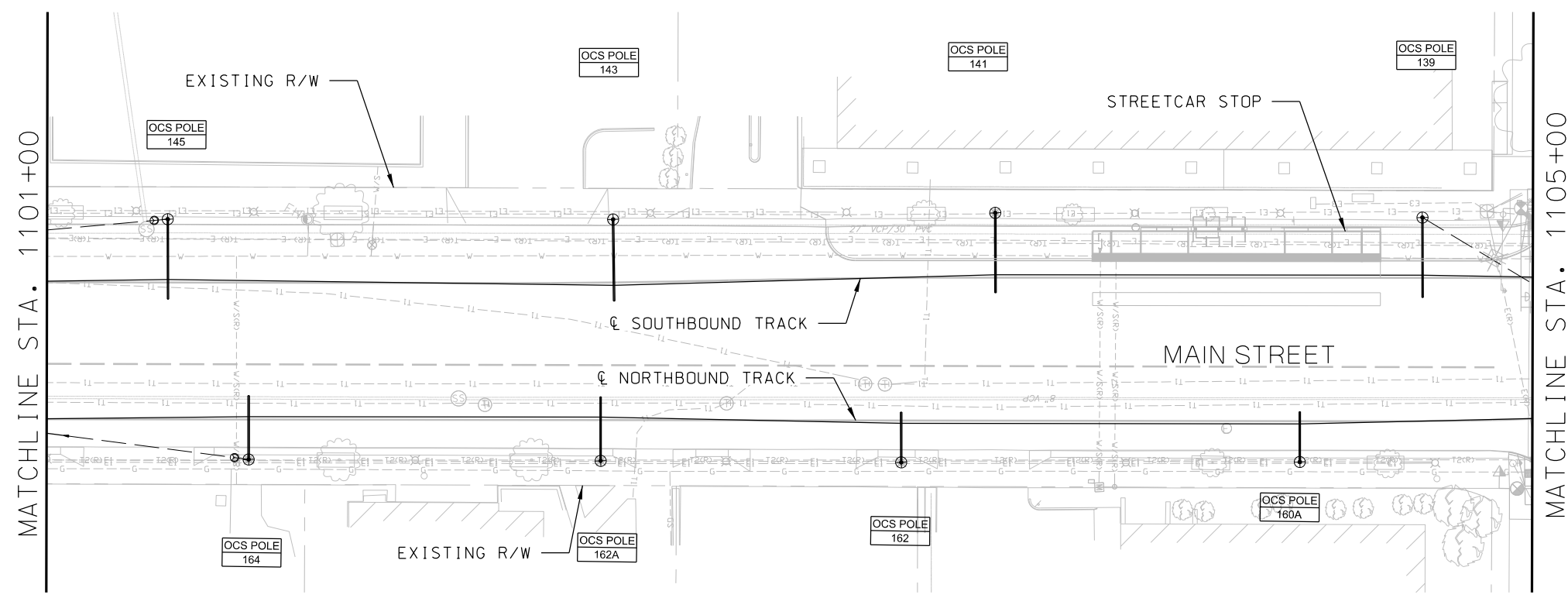
REV	DATE	DESCRIPTION	DESIGNED BY	PFW		<div> <div>PRELIMINARY PLANS - 30%</div> <div> <div>DATE: 08-28-2019</div> <div> <div> <div>HDR</div> <div>HDR Engineering, Inc.</div> <div>10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856</div> </div> <div> <div>HNTB</div> <div>The HNTB COMPANIES INFRASTRUCTURE SOLUTIONS 300 Apollo Drive Chelmsford, MA 01824 Phone: 978-905-4000</div> </div> </div> <div>NOT FOR CONSTRUCTION</div> </div> </div>	<div> <div>KANSAS CITY STREETCAR MAIN STREET EXTENSION</div> <div>OVERHEAD CONTACT SYSTEM LAYOUT PLAN (SHEET 25 OF 48)</div> <div>SB STA 1093+00 TO STA 1097+00</div> </div>	<div> <div>SCALE FOR 22"x34": H: 1"=20' V: 1"=2'</div> <div>FILENAME:</div> <div>SP:LESS</div> <div>CONTRACT NO.: CON0077290</div> <div>VOLUME: 1</div> <div>DRAWING NO.: Y125</div> <div>SHEET NO.: 346</div> </div>
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			CHECKED BY	PFW				
			APPROVED BY	NKS				
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- NOTES:
- 1. FOR NOTES, REFER TO DRAWING Y001. FOR SYMBOLS AND ABBREVIATIONS, REFER TO DRAWING Y002.
 - 2. POLE NUMBERS SHOWN ON LAYOUT DRAWINGS ARE TEMPORARY.



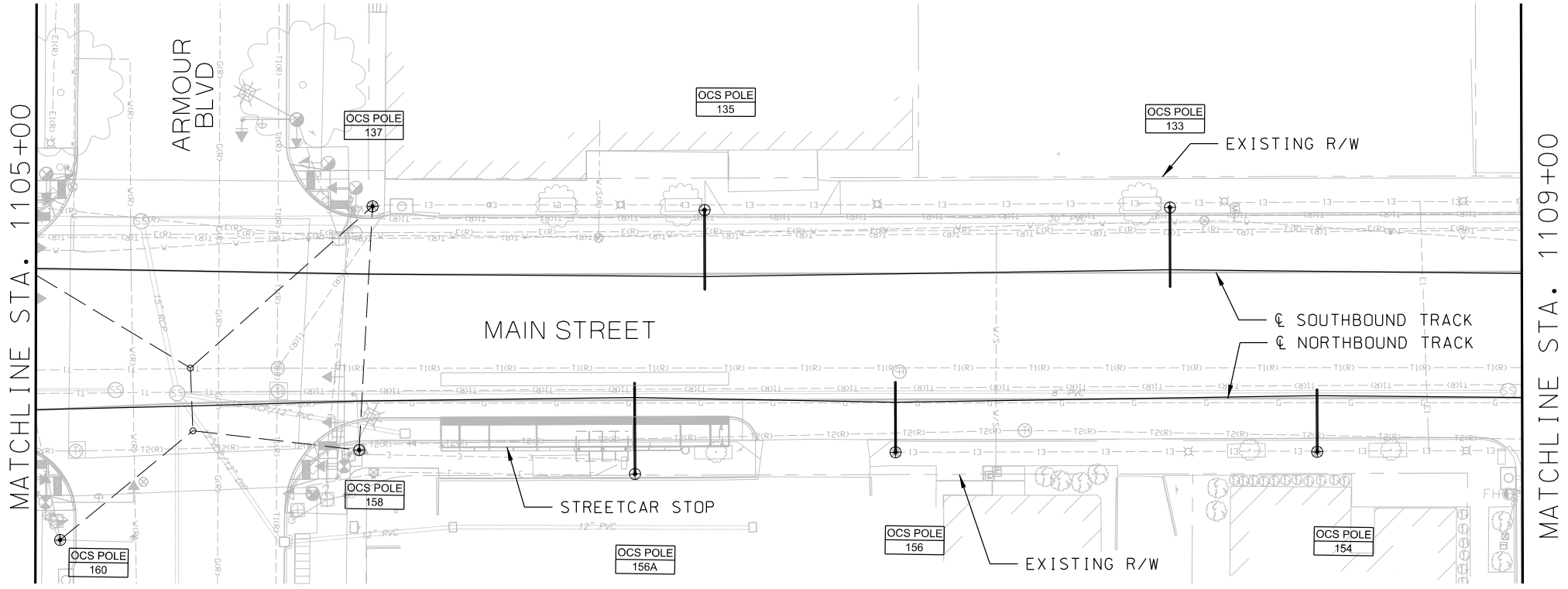
REV		DATE	DESCRIPTION	DESIGNED BY	PFW		PRELIMINARY PLANS - 30%		DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION			SCALE FOR 22"x34": H: 1"=20' V: 1"=2'				
				CHECKED BY	DSK		 HDR Engineering, Inc.			 HNTB		OVERHEAD CONTACT SYSTEM		FILENAME:			
				DRAWN BY	DSK		10450 Holmes Road			The HNTB COMPANIES		LAYOUT PLAN		SFILES			
							Suite 600			INFRASTRUCTURE SOLUTIONS		(SHEET 26 OF 48)		CONTRACT NO.:			
				CHECKED BY	PFW		Kansas City, MO 64131-3471			300 Apollo Drive		SB STA 1097+00 TO STA 1101+00		CON0077290			
				APPROVED BY	NKS		816-360-2700			Chelmsford, MA 01824				VOLUME:			
							Certificate of Authority: 000856			Phone: 978-905-4000				1			
PLOT DATE:			8/27/2019	12:46:36 PM			DATE	08/28/2019		NOT FOR CONSTRUCTION					DRAWING NO.:		
													Y126			SHEET NO.:	
																347	

- NOTES:
- 1. FOR NOTES, REFER TO DRAWING Y001.
FOR SYMBOLS AND ABBREVIATIONS,
REFER TO DRAWING Y002.
 - 2. POLE NUMBERS SHOWN ON LAYOUT
DRAWINGS ARE TEMPORARY.



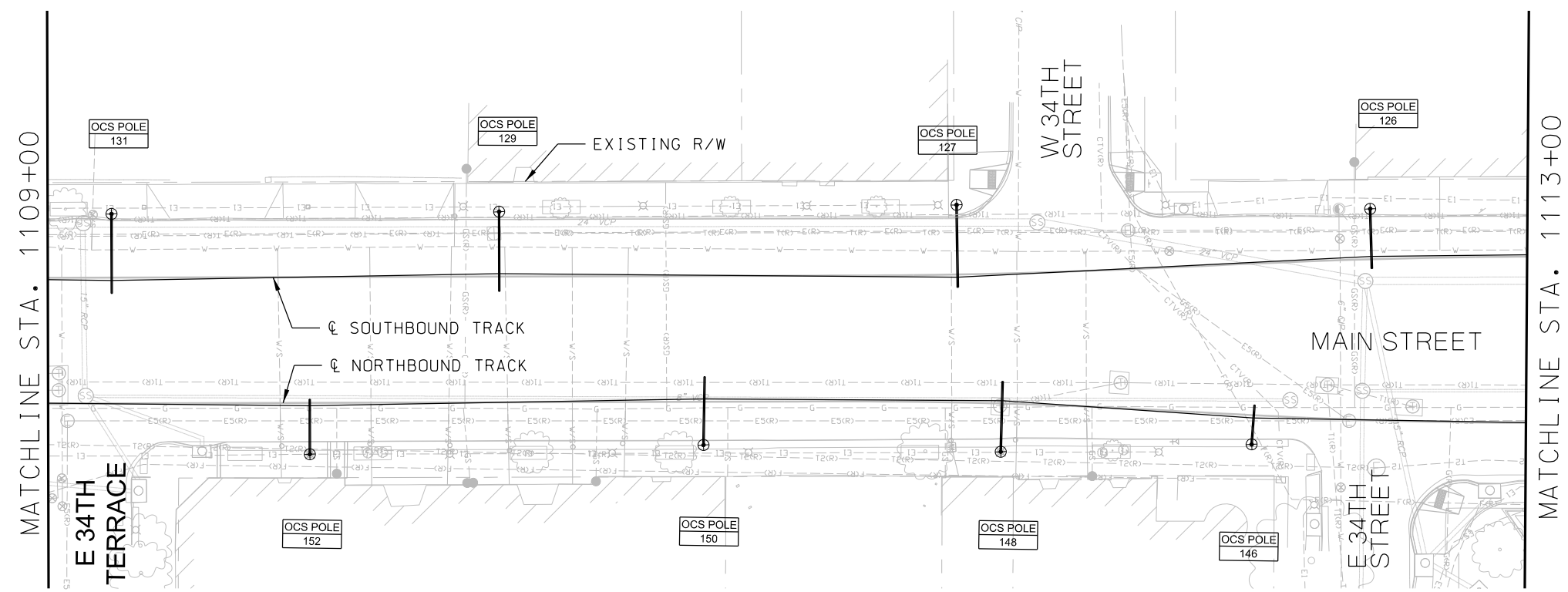
REV		DATE	DESCRIPTION	DESIGNED BY	PFW				PRELIMINARY PLANS - 30%		DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION		SCALE FOR 22"x34": H: 1"=20' V: 1"=2'			
				CHECKED BY	DSK					HDR Engineering, Inc.						The HNTB COMPANIES INFRASTRUCTURE SOLUTIONS 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	300 Apollo Drive Chelmsford, MA 01824 Phone: 978-905-4000
				DRAWN BY	DSK												
				CHECKED BY	PFW												
				APPROVED BY	NKS												
PLOT DATE:		8/27/2019	12:46:51 PM	DATE	08/28/2019					NOT FOR CONSTRUCTION				OVERHEAD CONTACT SYSTEM LAYOUT PLAN (SHEET 27 OF 48) SB STA 1101+00 TO STA 1105+00		FILENAME: \$FILES CONTRACT NO.: CON0077290 VOLUME: 1 DRAWING NO.: Y127 SHEET NO.: 348	

- NOTES:
- 1. FOR NOTES, REFER TO DRAWING Y001.
FOR SYMBOLS AND ABBREVIATIONS,
REFER TO DRAWING Y002.
 - 2. POLE NUMBERS SHOWN ON LAYOUT
DRAWINGS ARE TEMPORARY.



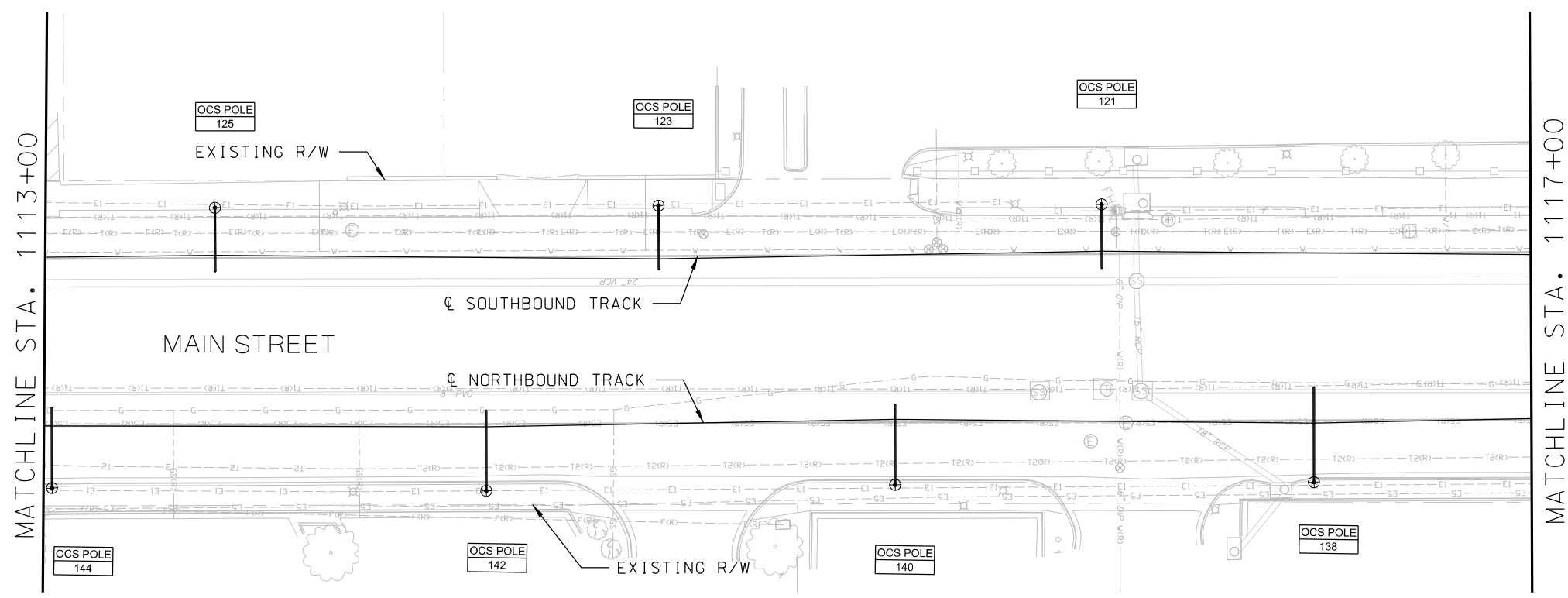
REV	DATE	DESCRIPTION	DESIGNED BY	PFW		PRELIMINARY PLANS - 30%		DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION			SCALE FOR 22"x34": H: 1"=20' V: 1"=2'			
			CHECKED BY	DSK		 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	 The HNTB COMPANIES INFRASTRUCTURE SOLUTIONS 300 Apollo Drive Chelmsford, MA 01824 Phone: 978-905-4000	OVERHEAD CONTACT SYSTEM			FILENAME:				
			DRAWN BY	DSK				LAYOUT PLAN			SHEET NO.:				
			CHECKED BY	PFW				(SHEET 28 OF 48)			CONTRACT NO.:				
			APPROVED BY	NKS				SB STA 1105+00 TO STA 1109+00			VOLUME:				
PLOT DATE: 8/27/2019			12:47:08 PM			DATE: 08/28/2019			DRAWING NO.:			1			
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												349			

- NOTES:
- 1. FOR NOTES, REFER TO DRAWING Y001.
FOR SYMBOLS AND ABBREVIATIONS,
REFER TO DRAWING Y002.
 - 2. POLE NUMBERS SHOWN ON LAYOUT
DRAWINGS ARE TEMPORARY.

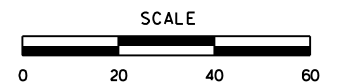
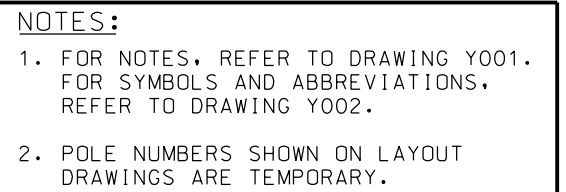


REV		DATE	DESCRIPTION	DESIGNED BY	PFW			PRELIMINARY PLANS - 30%		DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION		SCALE FOR 22"x34": H: 1"=20' V: 1"=2'				
				CHECKED BY	DSK			 HDR Engineering, Inc.		 HNTB		OVERHEAD CONTACT SYSTEM		FILENAME:			
				DRAWN BY	DSK			10450 Holmes Road		The HNTB COMPANIES		LAYOUT PLAN		FILE #			
								Suite 600		INFRASTRUCTURE SOLUTIONS		(SHEET 29 OF 48)		CONTRACT NO.:			
				CHECKED BY	PFW			Kansas City, MO 64131-3471		300 Apollo Drive		SB STA 1109+00 TO STA 1113+00		CON0077290			
				APPROVED BY	NKS			816-360-2700		Chelmsford, MA 01824				VOLUME:			
								Certificate of Authority: 000856		Phone: 978-905-4000				1			
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														Y129		350	

- NOTES:
- 1. FOR NOTES, REFER TO DRAWING Y001.
FOR SYMBOLS AND ABBREVIATIONS,
REFER TO DRAWING Y002.
 - 2. POLE NUMBERS SHOWN ON LAYOUT
DRAWINGS ARE TEMPORARY.

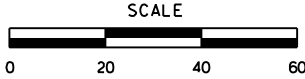
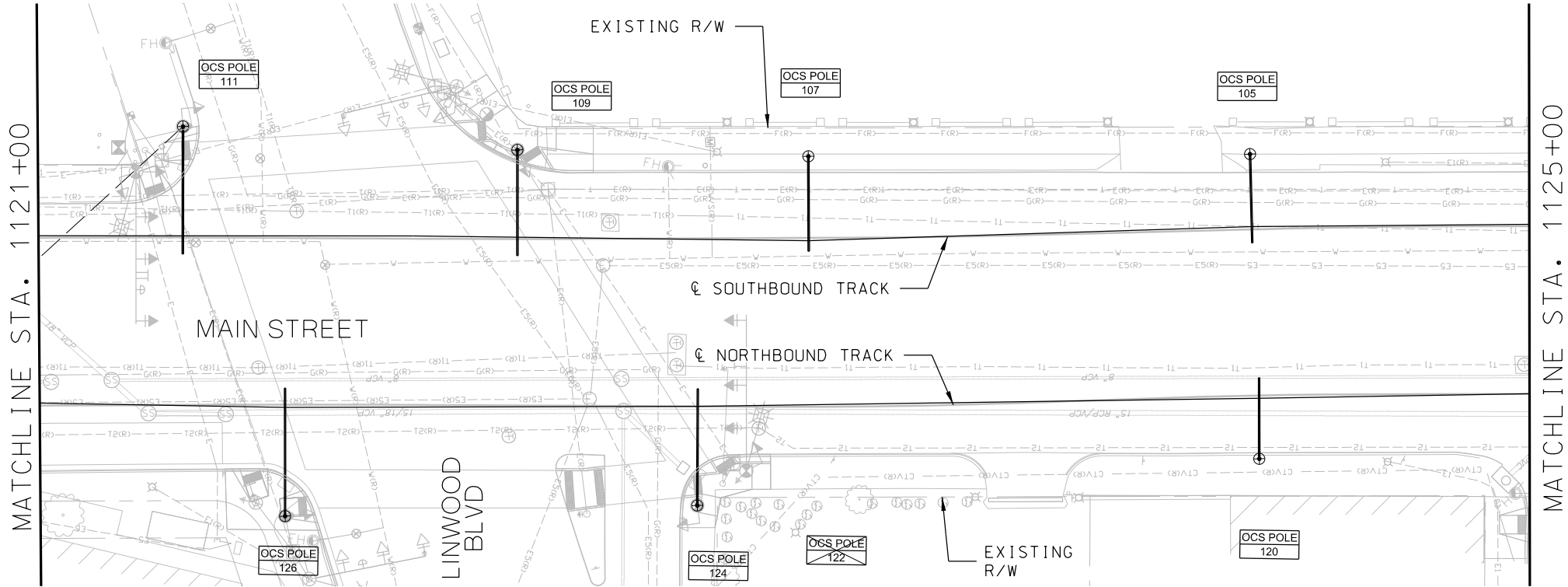




REV		DATE	DESCRIPTION	DESIGNED BY	PFW			PRELIMINARY PLANS - 30%		DATE: 08-28-2019		KANSAS CITY STREETCAR MAIN STREET EXTENSION OVERHEAD CONTACT SYSTEM LAYOUT PLAN (SHEET 30 OF 48) SB STA 1113+00 TO STA 1117+00				SCALE FOR 22"x34": H: 1"=20' V: 1"=2'	
				CHECKED BY	DSK			 HDR Engineering, Inc.		 HNTB						FILENAME:	
				DRAWN BY	DSK			10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856		The HNTB COMPANIES INFRASTRUCTURE SOLUTIONS 300 Apollo Drive Chelmsford, MA 01824 Phone: 978-905-4000		CONTRACT NO.:					
				CHECKED BY	PFW							VOLUME:					
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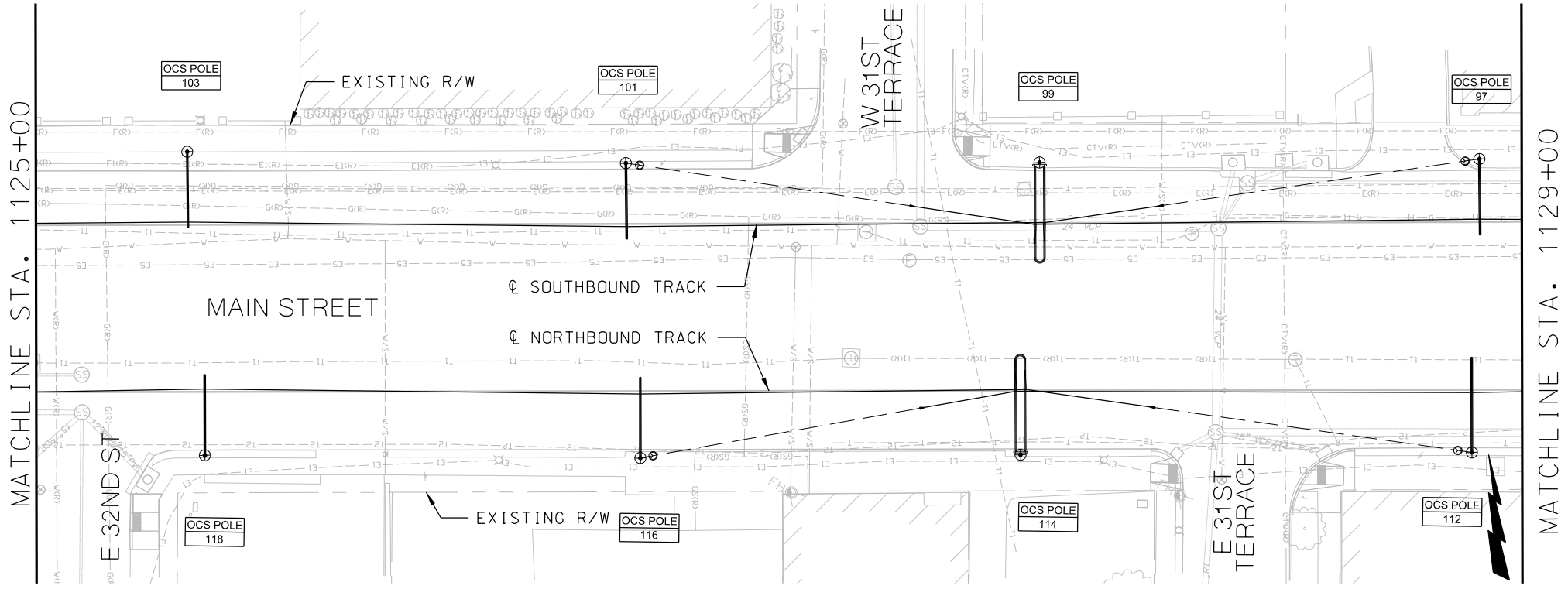
REV	DATE	DESCRIPTION	DESIGNED BY	PFW		<div><div>PRELIMINARY PLANS - 30%</div><div><div>HDR Engineering, Inc.</div></div><div><div>10450 Holmes Road</div><div>Suite 600</div><div>Kansas City, MO 64131-3471</div><div>816-360-2700</div><div>Certificate of Authority: 000856</div></div></div> <div><div>DATE: 08-28-2019</div><div><div>The HNTB COMPANIES</div><div>INFRASTRUCTURE SOLUTIONS</div><div>300 Apollo Drive</div><div>Chelmsford, MA 01824</div><div>Phone: 978-905-4000</div></div></div>	<div><div>SCALE FOR 22"x34": H: 1"=20' V: 1"=2'</div><div>FILENAME: \$FILE\$\$</div><div>CONTRACT NO.: CON0077290</div><div>VOLUME: 1</div><div>DRAWING NO.: Y131</div><div>SHEET NO.: 352</div></div>
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			APPROVED BY	NKS			
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- NOTES:
- 1. FOR NOTES, REFER TO DRAWING Y001.
FOR SYMBOLS AND ABBREVIATIONS,
REFER TO DRAWING Y002.
 - 2. POLE NUMBERS SHOWN ON LAYOUT
DRAWINGS ARE TEMPORARY.



REV		DATE	DESCRIPTION	DESIGNED BY	PFW			PRELIMINARY PLANS - 30%		DATE: 08-28-2019		KANSAS CITY STREETCAR MAIN STREET EXTENSION OVERHEAD CONTACT SYSTEM LAYOUT PLAN (SHEET 32 OF 48) SB STA 1121+00 TO STA 1125+00		SCALE FOR 22"x34": H: 1"=20' V: 1"=2'	
				CHECKED BY	DSK			 HDR Engineering, Inc.		 The HNTB COMPANIES INFRASTRUCTURE SOLUTIONS				FILENAME:	
				DRAWN BY	DSK			10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856		300 Apollo Drive Chelmsford, MA 01824 Phone: 978-905-4000				FILELESS	
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				APPROVED BY	NKS									CON0077290	
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												Y132		353	

- NOTES:
- 1. FOR NOTES, REFER TO DRAWING Y001.
FOR SYMBOLS AND ABBREVIATIONS,
REFER TO DRAWING Y002.
 - 2. POLE NUMBERS SHOWN ON LAYOUT
DRAWINGS ARE TEMPORARY.

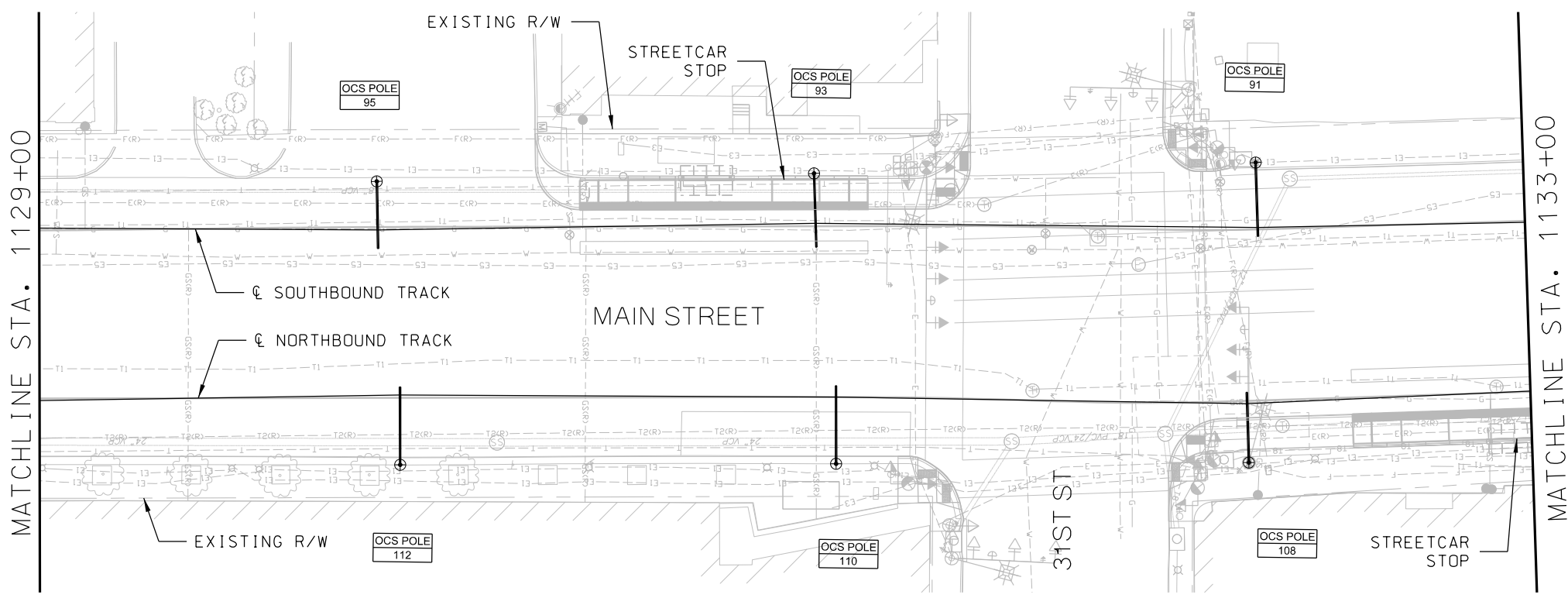


REV		DATE	DESCRIPTION	DESIGNED BY		PFW		PRELIMINARY PLANS - 30%				DATE: 08-28-2019		KANSAS CITY STREETCAR MAIN STREET EXTENSION				SCALE FOR 22"x34": H: 1"=20' V: 1"=2'			
				CHECKED BY		DSK		 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856				 The HNTB COMPANIES INFRASTRUCTURE SOLUTIONS 300 Apollo Drive Chelmsford, MA 01824 Phone: 978-905-4000						FILENAME:			
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NOT FOR CONSTRUCTION

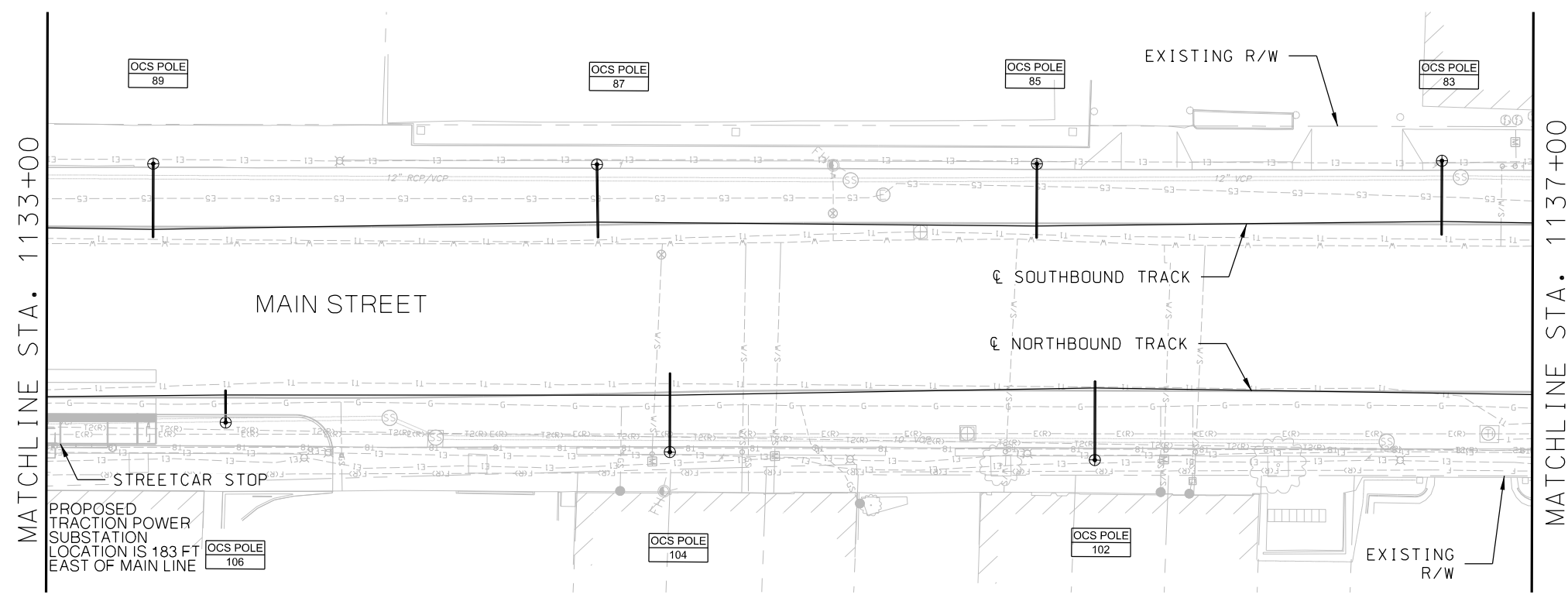
OVERHEAD CONTACT SYSTEM
LAYOUT PLAN
(SHEET 33 OF 48)
SB STA 1125+00 TO STA 1129+00

- NOTES:
- 1. FOR NOTES, REFER TO DRAWING Y001.
FOR SYMBOLS AND ABBREVIATIONS,
REFER TO DRAWING Y002.
 - 2. POLE NUMBERS SHOWN ON LAYOUT
DRAWINGS ARE TEMPORARY.



REV		DATE	DESCRIPTION	DESIGNED BY	PFW					PRELIMINARY PLANS - 30%		DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION		SCALE FOR 22"x34": H: 1"=20' V: 1"=2'		
				CHECKED BY	DSK					 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856		 The HNTB COMPANIES INFRASTRUCTURE SOLUTIONS 300 Apollo Drive Chelmsford, MA 01824 Phone: 978-905-4000					
				DRAWN BY	DSK												
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PLOT DATE: 8/27/2019			12:48:51 PM	DATE	08/28/2019									NOT FOR CONSTRUCTION			

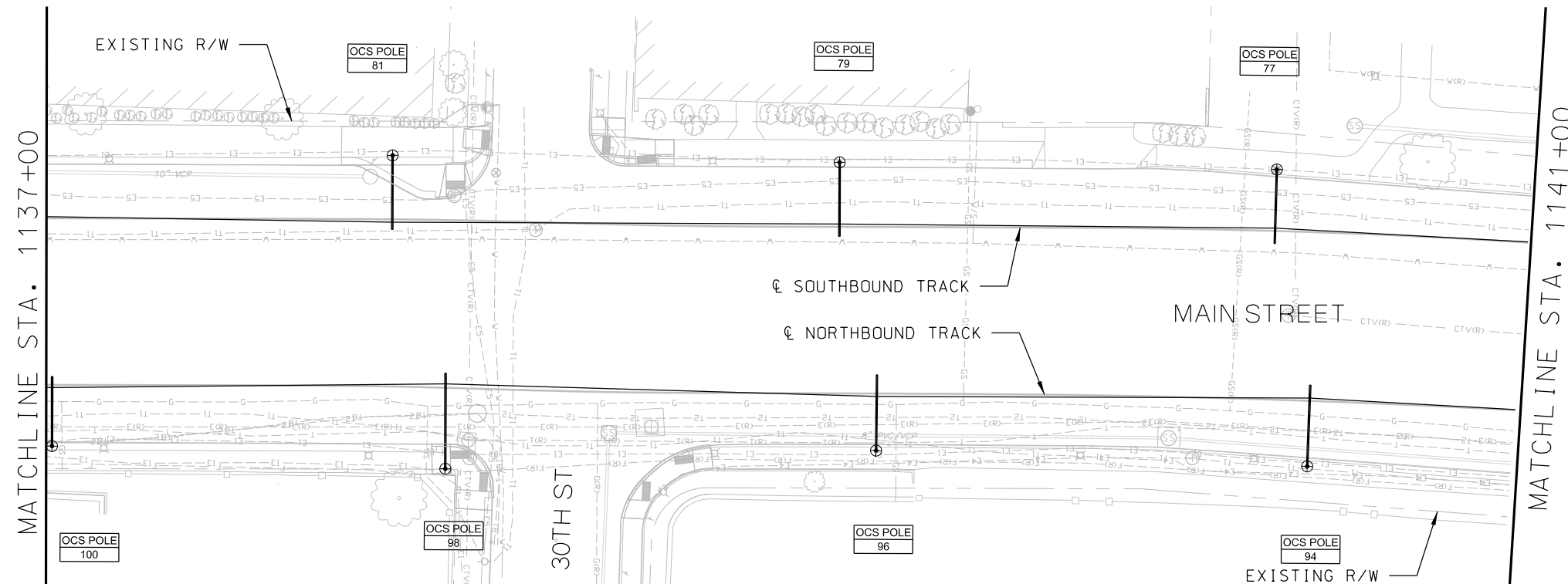
- NOTES:
- 1. FOR NOTES, REFER TO DRAWING Y001.
FOR SYMBOLS AND ABBREVIATIONS,
REFER TO DRAWING Y002.
 - 2. POLE NUMBERS SHOWN ON LAYOUT
DRAWINGS ARE TEMPORARY.



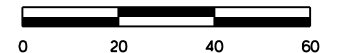
REV			DATE		DESCRIPTION		DESIGNED BY	PFW		PRELIMINARY PLANS - 30%		DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION		SCALE FOR 22"x34": H: 1"=20' V: 1"=2'	
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							CHECKED BY	PFW		10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856					CONTRACT NO.: CON0077290	
							APPROVED BY	NKS		300 Apollo Drive Chelmsford, MA 01824 Phone: 978-905-4000					VOLUME: 1	
PLOT DATE:			8/27/2019		12:49:08 PM		DATE	08/28/2019	NOT FOR CONSTRUCTION				DRAWING NO.: Y135		SHEET NO.: 356	

NOTES:

1. FOR NOTES, REFER TO DRAWING Y001.
FOR SYMBOLS AND ABBREVIATIONS,
REFER TO DRAWING Y002.
2. POLE NUMBERS SHOWN ON LAYOUT
DRAWINGS ARE TEMPORARY.

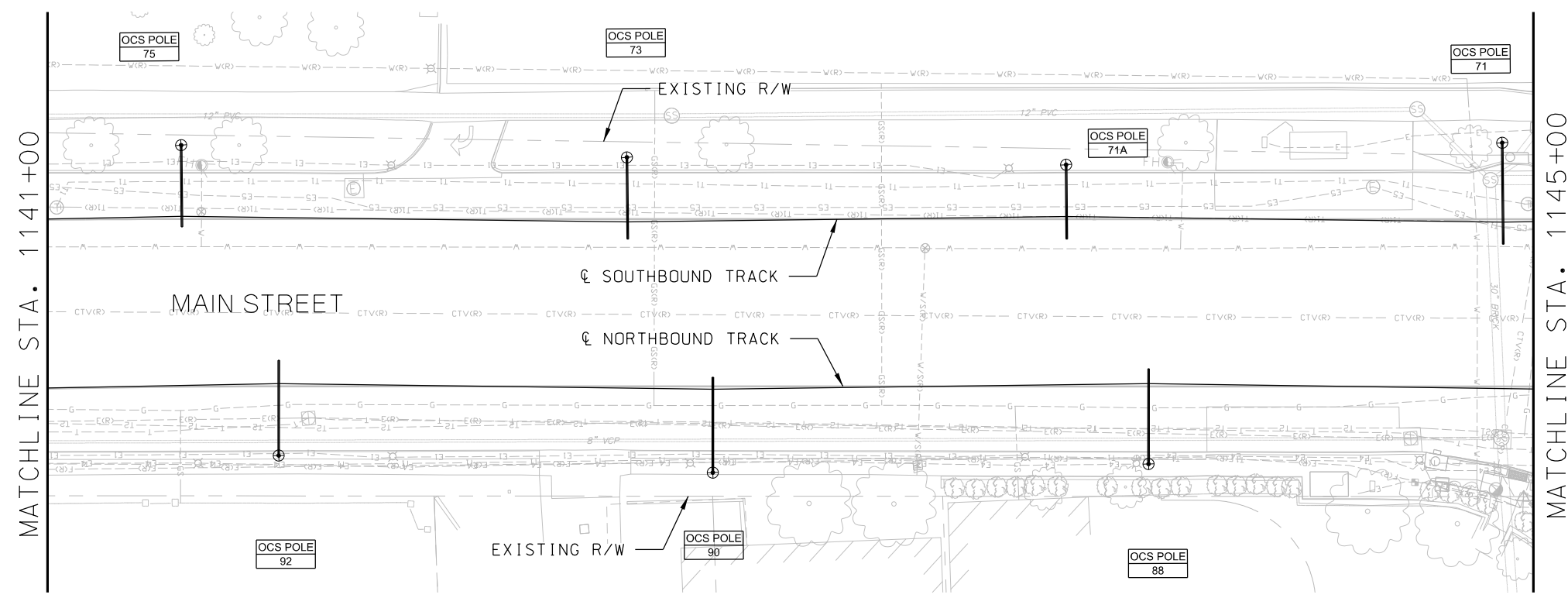


SCALE



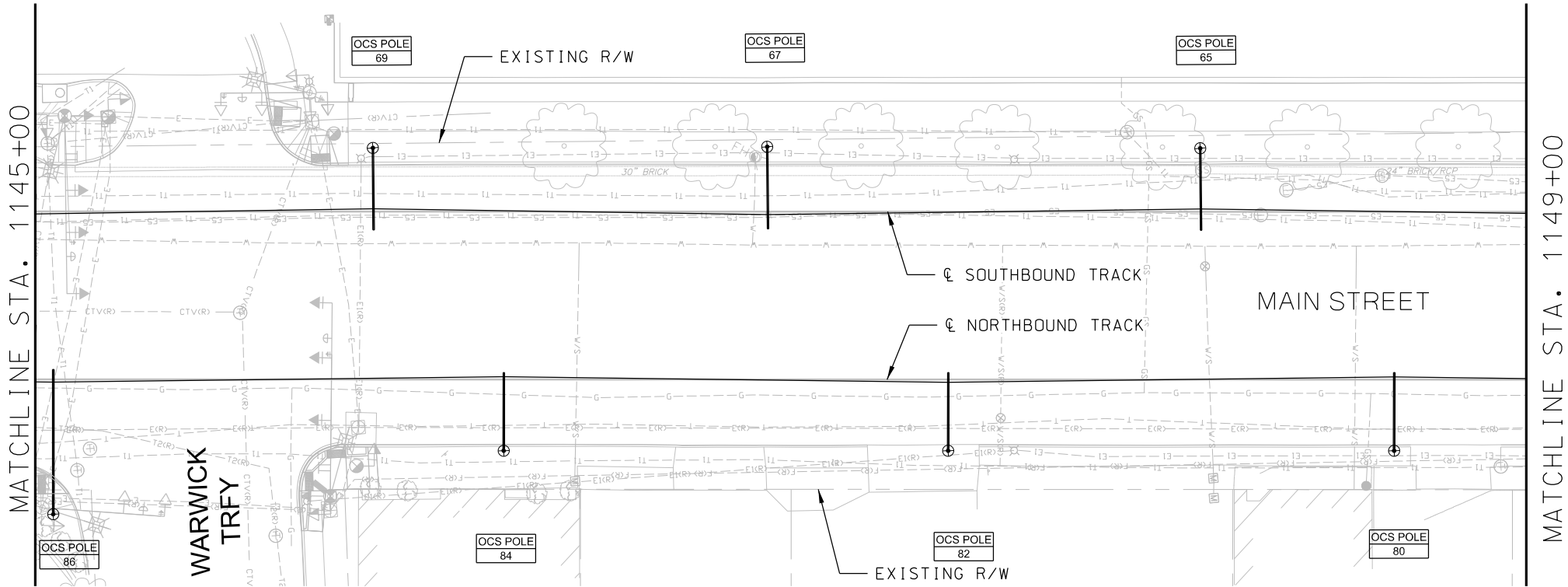
REV	DATE	DESCRIPTION	DESIGNED BY	PFW		<div><div>PRELIMINARY PLANS - 30%</div><div><div>HDR Engineering, Inc.</div></div><div><div>10450 Holmes Road</div><div>Suite 600</div><div>Kansas City, MO 64131-3471</div><div>816-360-2700</div><div>Certificate of Authority: 000856</div></div></div> <div><div>DATE: 08-28-2019</div><div><div>The HNTB COMPANIES</div><div>INFRASTRUCTURE SOLUTIONS</div><div>300 Apollo Drive</div><div>Chelmsford, MA 01824</div><div>Phone: 978-905-4000</div></div></div>	<div><div>SCALE FOR 22"x34": H: 1"=20' V: 1"=2'</div><div><div>FILENAME:</div><div>\$FILE\$\$</div></div><div><div>CONTRACT NO.:</div><div>CON0077290</div></div><div><div>VOLUME:</div><div>1</div></div><div><div>DRAWING NO.:</div><div>Y136</div></div><div><div>SHEET NO.:</div><div>357</div></div></div>
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			CHECKED BY	PFW			
			APPROVED BY	NKS			
PLOT DATE: 8/27/2019 12:49:28 PM			DATE	08/28/2019		<div><div>NOT FOR CONSTRUCTION</div></div>	<div><div>KANSAS CITY STREETCAR MAIN STREET EXTENSION</div><div>OVERHEAD CONTACT SYSTEM</div><div>LAYOUT PLAN</div><div>(SHEET 36 OF 48)</div><div>SB STA 1137+00 TO STA 1141+00</div></div>

- NOTES:
- 1. FOR NOTES, REFER TO DRAWING Y001.
FOR SYMBOLS AND ABBREVIATIONS,
REFER TO DRAWING Y002.
 - 2. POLE NUMBERS SHOWN ON LAYOUT
DRAWINGS ARE TEMPORARY.



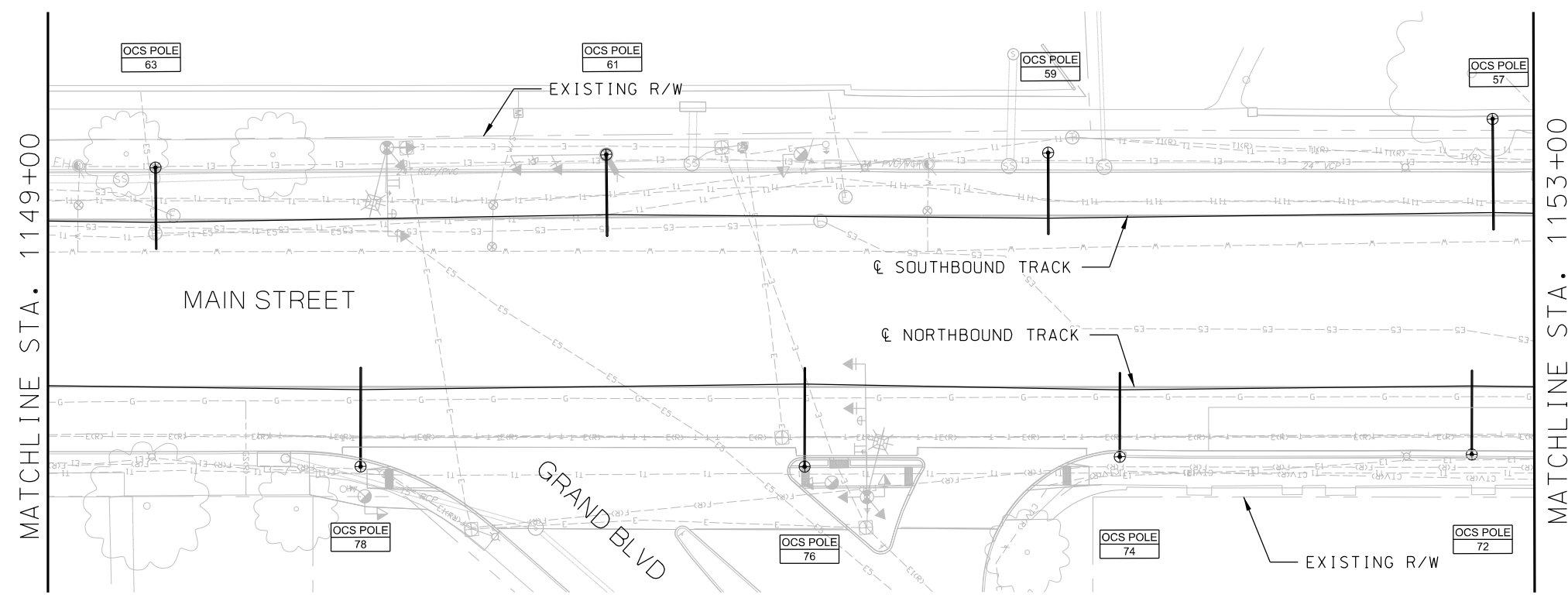
REV	DATE	DESCRIPTION	DESIGNED BY	PFW		PRELIMINARY PLANS - 30%		DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION			SCALE FOR 22"x34": H: 1"=20' V: 1"=2'		
			CHECKED BY	DSK		 HDR Engineering, Inc.		 The HNTB COMPANIES INFRASTRUCTURE SOLUTIONS 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	OVERHEAD CONTACT SYSTEM			FILENAME:		
			DRAWN BY	DSK					LAYOUT PLAN			SFILES		
			CHECKED BY	PFW					(SHEET 37 OF 48)			CONTRACT NO.:		
			APPROVED BY	NKS					SB STA 1141+00 TO STA 1145+00			VOLUME:		
PLOT DATE: 8/27/2019		12:49:48 PM		DATE	08/28/2019		NOT FOR CONSTRUCTION					DRAWING NO.:		
													SHEET NO.:	
													Y137	
													358	

- NOTES:
1. FOR NOTES, REFER TO DRAWING Y001.
FOR SYMBOLS AND ABBREVIATIONS,
REFER TO DRAWING Y002.
 2. POLE NUMBERS SHOWN ON LAYOUT
DRAWINGS ARE TEMPORARY.



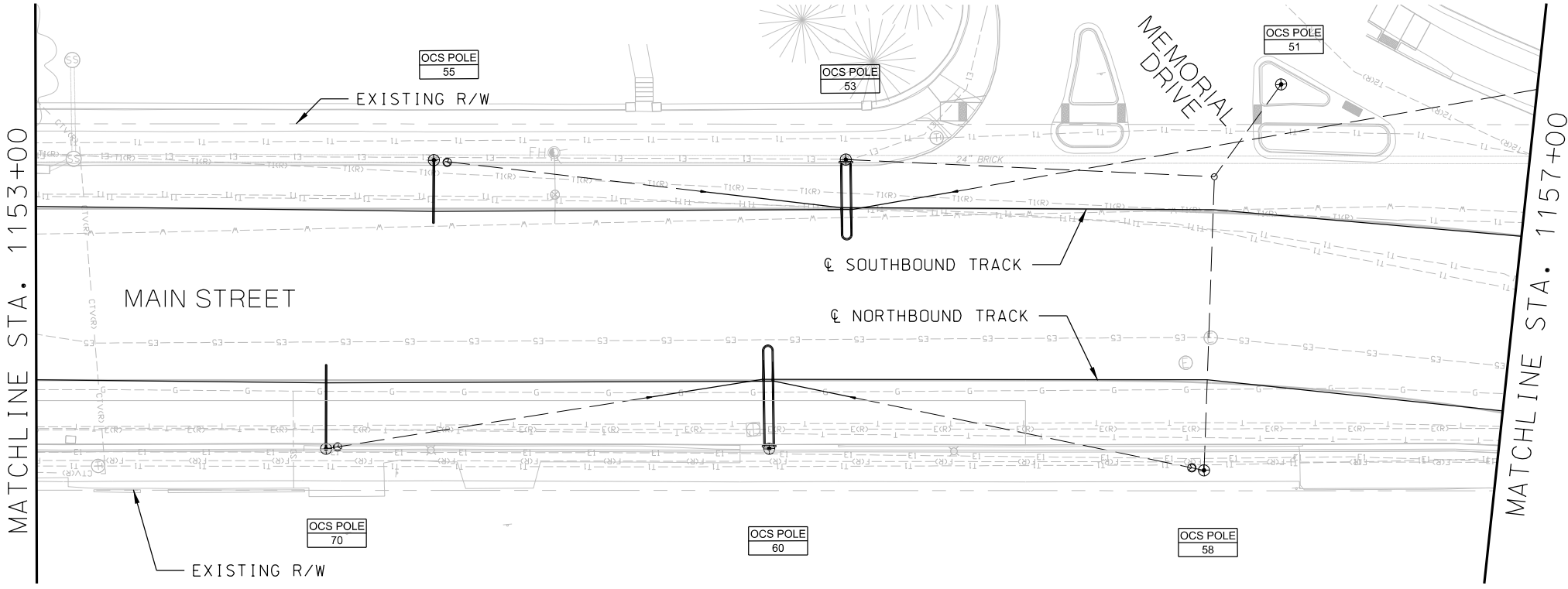
REV	DATE	DESCRIPTION	DESIGNED BY	PFW		PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION OVERHEAD CONTACT SYSTEM LAYOUT PLAN (SHEET 38 OF 48) SB STA 1145+00 TO STA 1149+00		SCALE FOR 22"x34": H: 1"=20' V: 1"=2'			
			CHECKED BY	DSK		 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	 The HNTB COMPANIES INFRASTRUCTURE SOLUTIONS 300 Apollo Drive Chelmsford, MA 01824 Phone: 978-905-4000			FILENAME:			
			DRAWN BY	DSK						CONTRACT NO.:			
			CHECKED BY	PFW						VOLUME:			
			APPROVED BY	NKS						DRAWING NO.:			
PLOT DATE: 8/27/2019			12:50:23 PM			DATE: 08/28/2019			SHEET NO.:				
						NOT FOR CONSTRUCTION		Y138		359			

- NOTES:
- 1. FOR NOTES, REFER TO DRAWING Y001.
FOR SYMBOLS AND ABBREVIATIONS,
REFER TO DRAWING Y002.
 - 2. POLE NUMBERS SHOWN ON LAYOUT
DRAWINGS ARE TEMPORARY.



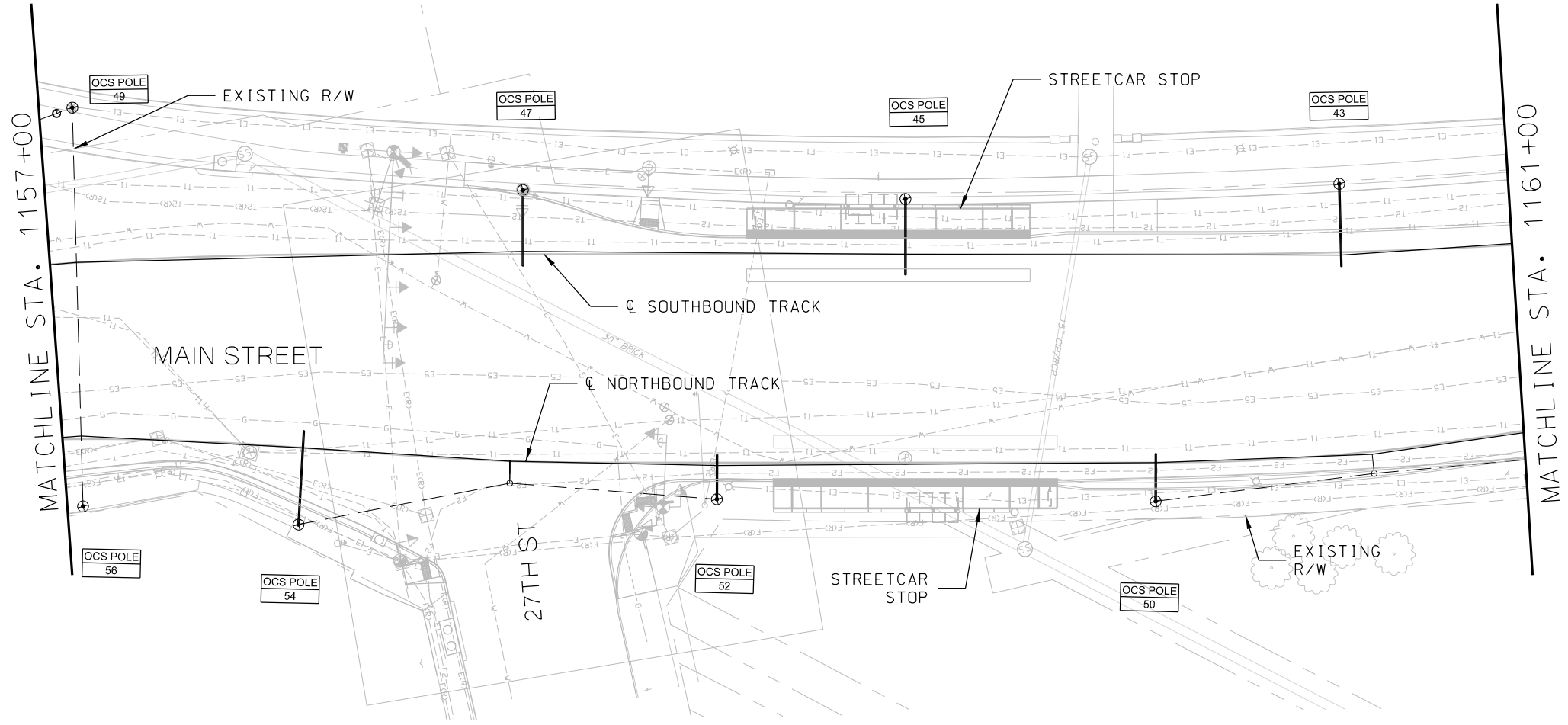
REV		DATE	DESCRIPTION	DESIGNED BY	PFW				PRELIMINARY PLANS - 30%		DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION		SCALE FOR 22"x34": H: 1"=20' V: 1"=2'			
				CHECKED BY	DSK				 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	 The HNTB COMPANIES INFRASTRUCTURE SOLUTIONS 300 Apollo Drive Chelmsford, MA 01824 Phone: 978-905-4000							
				DRAWN BY	DSK												
				CHECKED BY	PFW												
				APPROVED BY	NKS												
PLOT DATE:			8/27/2019	12:50:48 PM		DATE	08/28/2019	NOT FOR CONSTRUCTION						OVERHEAD CONTACT SYSTEM LAYOUT PLAN (SHEET 39 OF 48) SB STA 1149+00 TO STA 1153+00		FILENAME: \$FILES CONTRACT NO.: CON0077290 VOLUME: 1 DRAWING NO.: Y139 SHEET NO.: 360	

- NOTES:
- 1. FOR NOTES, REFER TO DRAWING Y001.
FOR SYMBOLS AND ABBREVIATIONS,
REFER TO DRAWING Y002.
 - 2. POLE NUMBERS SHOWN ON LAYOUT
DRAWINGS ARE TEMPORARY.

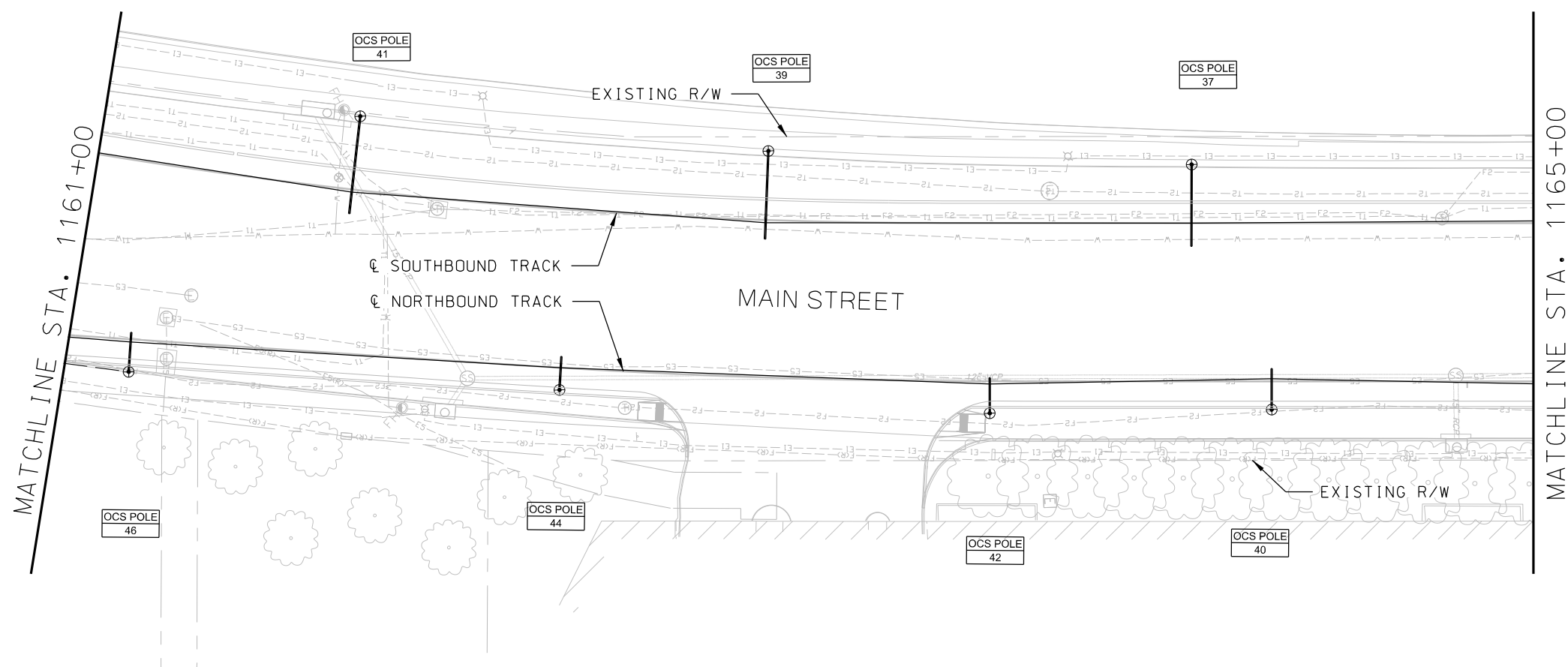


REV	DATE	DESCRIPTION	DESIGNED BY	PFW		PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION OVERHEAD CONTACT SYSTEM LAYOUT PLAN (SHEET 40 OF 48) SB STA 1153+00 TO STA 1157+00	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'		
			CHECKED BY	DSK		 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	 The HNTB COMPANIES INFRASTRUCTURE SOLUTIONS 300 Apollo Drive Chelmsford, MA 01824 Phone: 978-905-4000				
			DRAWN BY	DSK							
			CHECKED BY	PFW							
			APPROVED BY	NKS							
PLOT DATE: 8/27/2019			12:51:05 PM		DATE	08/28/2019	NOT FOR CONSTRUCTION			FILENAME: SFILES	
										CONTRACT NO.: CON0077290	
										VOLUME: 1	
										DRAWING NO.: Y140	
										SHEET NO.: 361	

- NOTES:
- 1. FOR NOTES, REFER TO DRAWING Y001.
FOR SYMBOLS AND ABBREVIATIONS,
REFER TO DRAWING Y002.
 - 2. POLE NUMBERS SHOWN ON LAYOUT
DRAWINGS ARE TEMPORARY.

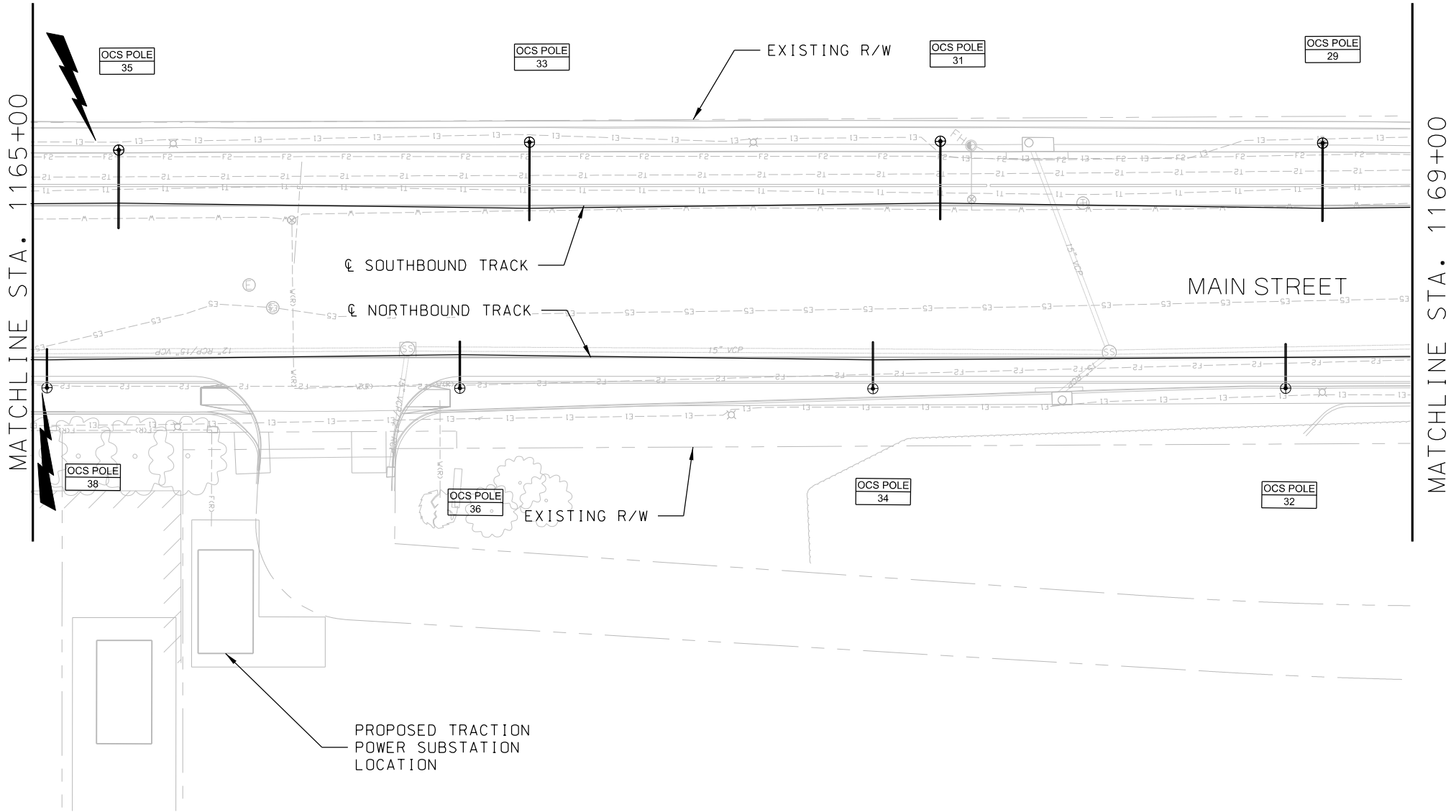


- NOTES:
- 1. FOR NOTES, REFER TO DRAWING Y001.
FOR SYMBOLS AND ABBREVIATIONS,
REFER TO DRAWING Y002.
 - 2. POLE NUMBERS SHOWN ON LAYOUT
DRAWINGS ARE TEMPORARY.



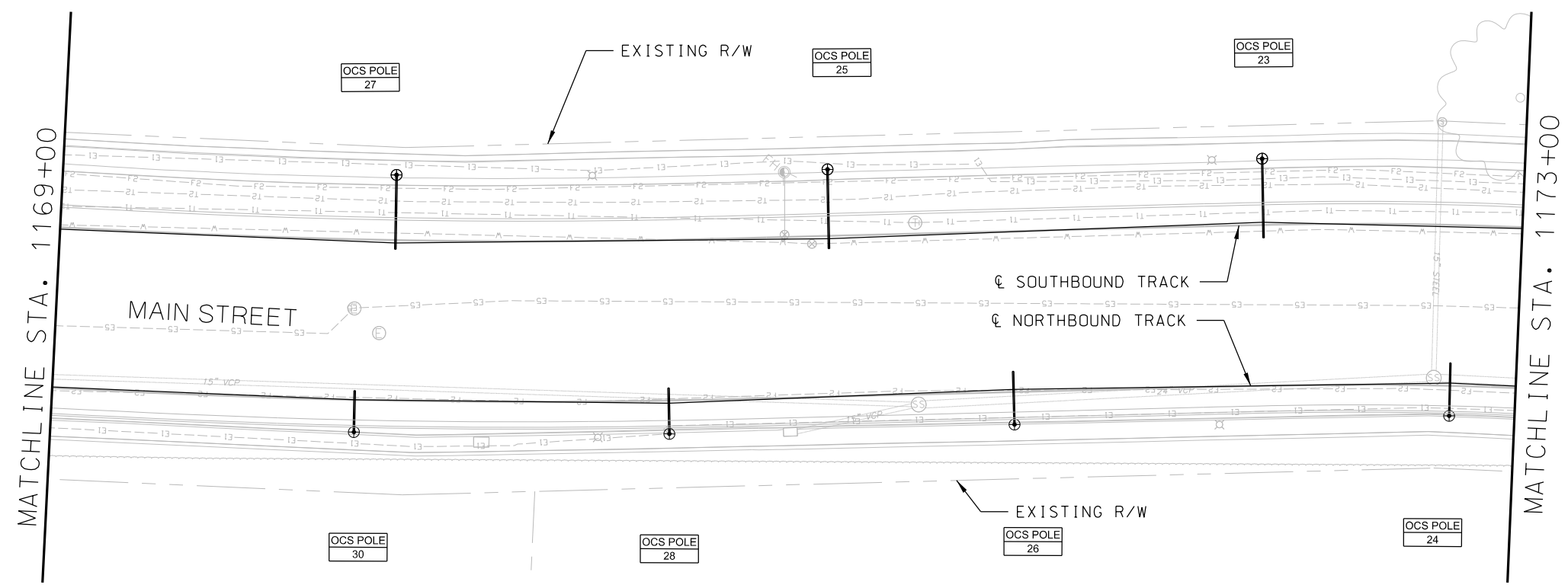
REV		DATE	DESCRIPTION	DESIGNED BY	PFW				PRELIMINARY PLANS - 30%		DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION		SCALE FOR 22"x34": H: 1"=20' V: 1"=2'		
				CHECKED BY	DSK				 HDR Engineering, Inc.	 The HNTB COMPANIES INFRASTRUCTURE SOLUTIONS						
				DRAWN BY	DSK						10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856					300 Apollo Drive Chelmsford, MA 01824 Phone: 978-905-4000
				CHECKED BY	PFW											
				APPROVED BY	NKS											
PLOT DATE:		8/27/2019		12:51:59 PM		DATE	08/28/2019		NOT FOR CONSTRUCTION				OVERHEAD CONTACT SYSTEM LAYOUT PLAN (SHEET 42 OF 48) SB STA 1161+00 TO STA 1165+00		FILENAME:	
										CONTRACT NO.:						
										CON0077290						
														VOLUME:		
														1		
														DRAWING NO.:		
														Y142		
														SHEET NO.:		
														363		

- NOTES:
- 1. FOR NOTES, REFER TO DRAWING Y001.
FOR SYMBOLS AND ABBREVIATIONS,
REFER TO DRAWING Y002.
 - 2. POLE NUMBERS SHOWN ON LAYOUT
DRAWINGS ARE TEMPORARY.



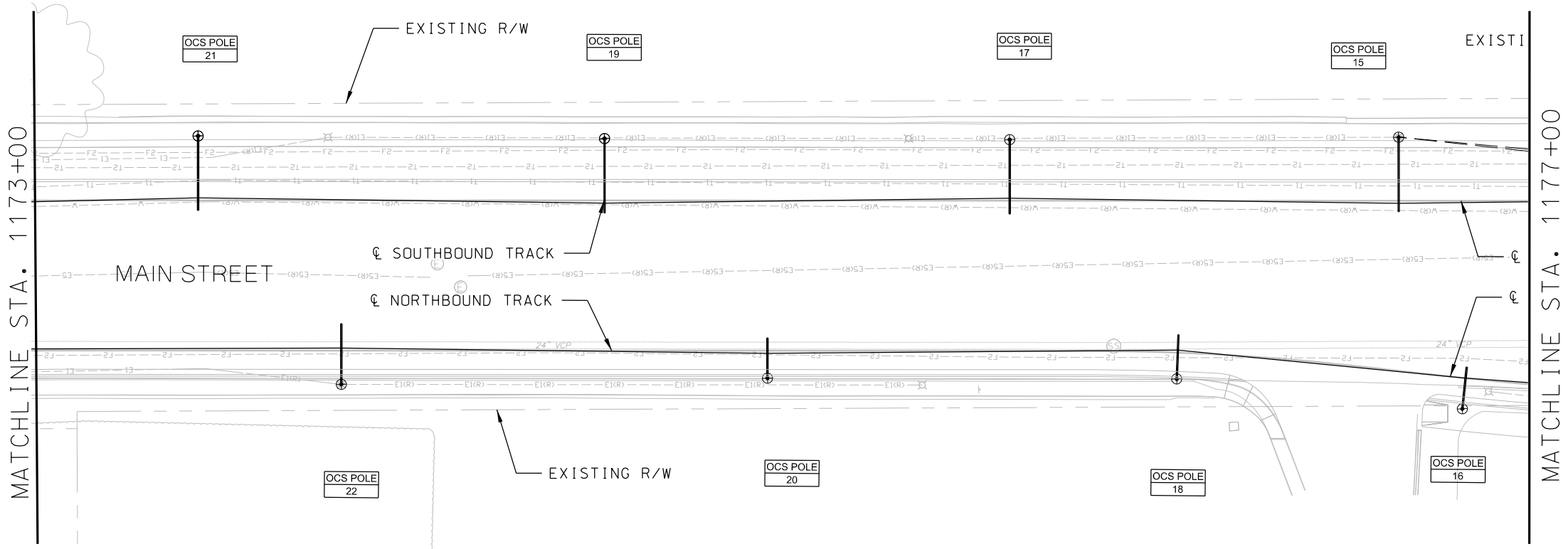
REV	DATE	DESCRIPTION	DESIGNED BY	PFW		<div>PRELIMINARY PLANS - 30%</div> <div><div><div><div>HDR</div><div>HDR Engineering, Inc.</div></div><div>10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856</div></div><div><div><div>HNTB</div><div>The HNTB COMPANIES INFRASTRUCTURE SOLUTIONS</div></div><div>300 Apollo Drive Chelmsford, MA 01824 Phone: 978-905-4000</div></div></div> <div>NOT FOR CONSTRUCTION</div>	DATE: 08-28-2019	<div>KANSAS CITY STREETCAR MAIN STREET EXTENSION</div> <div>OVERHEAD CONTACT SYSTEM</div> <div>LAYOUT PLAN</div> <div>(SHEET 43 OF 48)</div> <div>SB STA 1165+00 TO STA 1169+00</div>		SCALE FOR 22"x34": H: 1"=20' V: 1"=2'	
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			APPROVED BY	NKS			VOLUME:				
							1				
PLOT DATE: 8/27/2019			12:52:22 PM				DATE			08/28/2019	DRAWING NO.:
								Y143	364		

- NOTES:
- 1. FOR NOTES, REFER TO DRAWING Y001.
FOR SYMBOLS AND ABBREVIATIONS,
REFER TO DRAWING Y002.
 - 2. POLE NUMBERS SHOWN ON LAYOUT
DRAWINGS ARE TEMPORARY.



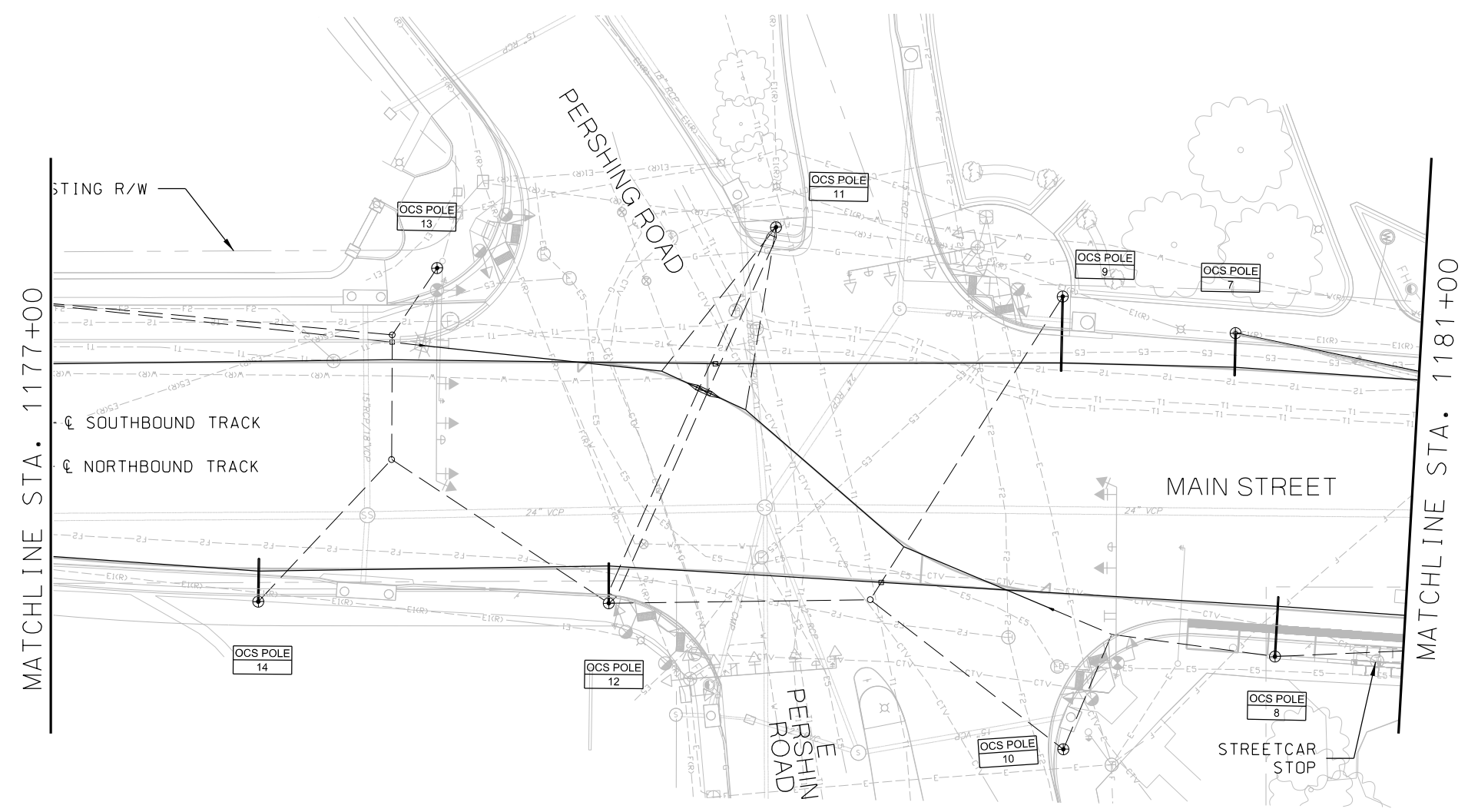
REV		DATE	DESCRIPTION	DESIGNED BY	PFW		PRELIMINARY PLANS - 30%		DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION			SCALE FOR 22"x34": H: 1"=20' V: 1"=2'			
				CHECKED BY	DSK		 HDR Engineering, Inc.		 HNTB				OVERHEAD CONTACT SYSTEM		FILENAME:	
				DRAWN BY	DSK		10450 Holmes Road		The HNTB COMPANIES				LAYOUT PLAN		SFILES	
				CHECKED BY	PFW		Suite 600		INFRASTRUCTURE SOLUTIONS				(SHEET 44 OF 48)		CONTRACT NO.:	
				APPROVED BY	NKS		Kansas City, MO 64131-3471		300 Apollo Drive				SB STA 1169+00 TO STA 1173+00		CON0077290	
PLOT DATE:		8/27/2019	12:52:44 PM	DATE	08/28/2019		816-360-2700		Chelmsford, MA 01824			VOLUME:				
							Certificate of Authority: 000856		Phone: 978-905-4000			1				
												DRAWING NO.:				
												Y144				
												SHEET NO.:				
												365				

- NOTES:
1. FOR NOTES, REFER TO DRAWING Y001.
FOR SYMBOLS AND ABBREVIATIONS,
REFER TO DRAWING Y002.
 2. POLE NUMBERS SHOWN ON LAYOUT
DRAWINGS ARE TEMPORARY.



REV	DATE	DESCRIPTION	DESIGNED BY	PFW		PRELIMINARY PLANS - 30%	DATE: 08-28-2019	 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	 The HNTB COMPANIES INFRASTRUCTURE SOLUTIONS 300 Apollo Drive Chelmsford, MA 01824 Phone: 978-905-4000	KANSAS CITY STREETCAR MAIN STREET EXTENSION OVERHEAD CONTACT SYSTEM LAYOUT PLAN (SHEET 45 OF 48) SB STA 1173+00 TO STA 1177+00	SCALE FOR 22"x34": H: 1"=20' V: 1"=2'		
			CHECKED BY	DSK							FILENAME:		
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			CHECKED BY	PFW							CON0077290		
			APPROVED BY	NKS							VOLUME:		
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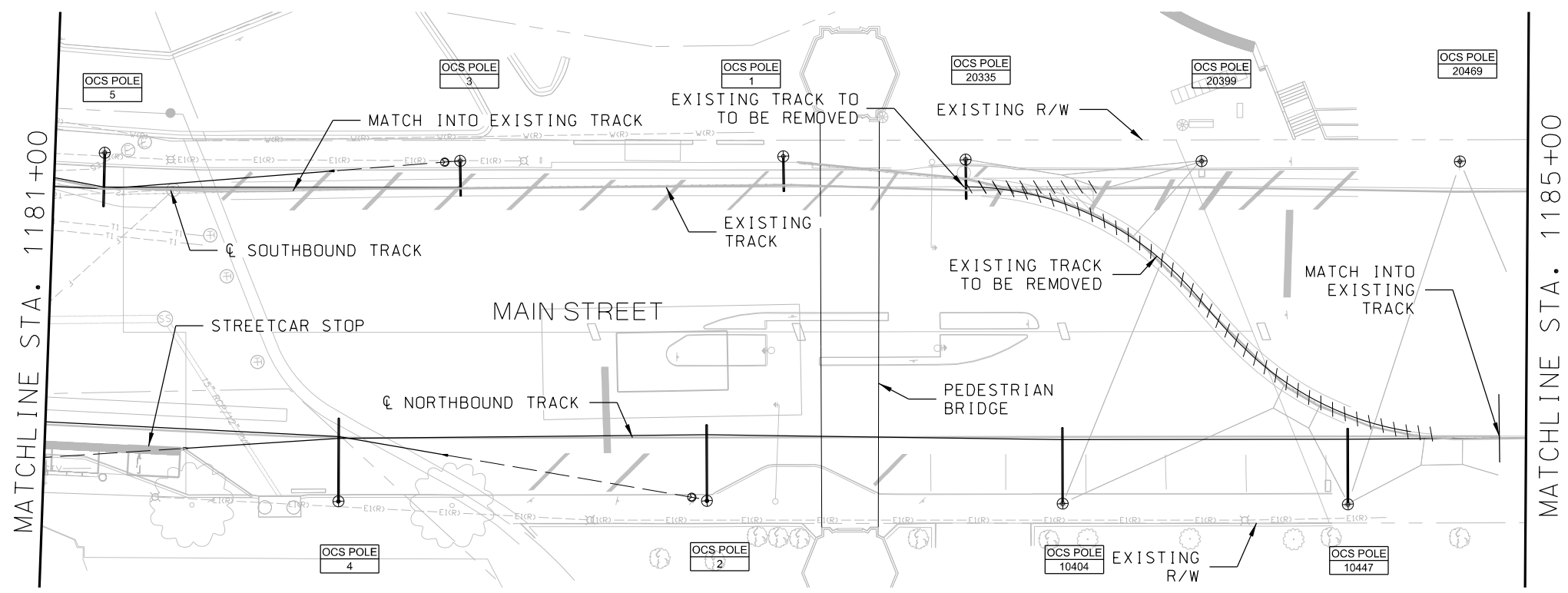
- NOTES:
- 1. FOR NOTES, REFER TO DRAWING Y001.
FOR SYMBOLS AND ABBREVIATIONS,
REFER TO DRAWING Y002.
 - 2. POLE NUMBERS SHOWN ON LAYOUT
DRAWINGS ARE TEMPORARY.



REV	DATE	DESCRIPTION	DESIGNED BY	PFW				PRELIMINARY PLANS - 30%		DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION		SCALE FOR 22"x34": H: 1"=20' V: 1"=2'		
			CHECKED BY	DSK				 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	 The HNTB COMPANIES INFRASTRUCTURE SOLUTIONS 300 Apollo Drive Chelmsford, MA 01824 Phone: 978-905-4000	OVERHEAD CONTACT SYSTEM LAYOUT PLAN (SHEET 46 OF 48) SB STA 1177+00 TO STA 1181+00		FILENAME:		FILE#	
			DRAWN BY	DSK								CONTRACT NO.:		CON0077290	
			CHECKED BY	PFW								VOLUME:		1	
			APPROVED BY	NKS								DRAWING NO.:		Y146	
												SHEET NO.:		367	
PLOT DATE: 8/27/2019 12:53:30 PM			DATE	08/28/2019			NOT FOR CONSTRUCTION								

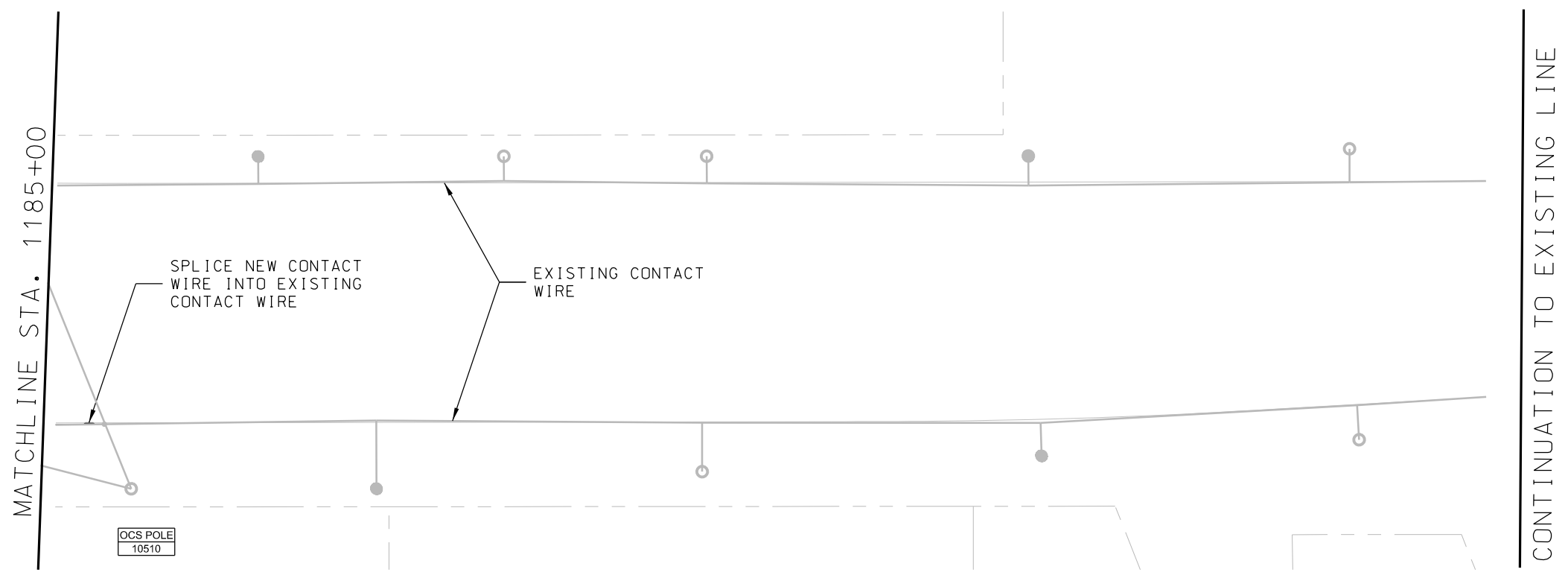



- NOTES:
- 1. FOR NOTES, REFER TO DRAWING Y001.
FOR SYMBOLS AND ABBREVIATIONS,
REFER TO DRAWING Y002.
 - 2. POLE NUMBERS SHOWN ON LAYOUT
DRAWINGS ARE TEMPORARY.



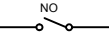















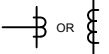























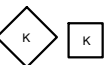

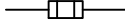















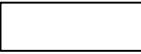









REV		DATE	DESCRIPTION	DESIGNED BY	PFW				PRELIMINARY PLANS - 30%		DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION		SCALE FOR 22"x34": H: 1"=20' V: 1"=2'		
				CHECKED BY	DSK				 HDR Engineering, Inc.	 The HNTB COMPANIES INFRASTRUCTURE SOLUTIONS						
				DRAWN BY	DSK						10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856					300 Apollo Drive Chelmsford, MA 01824 Phone: 978-905-4000
				CHECKED BY	PFW						NOT FOR CONSTRUCTION					
				APPROVED BY	NKS											
PLOT DATE: 8/27/2019			12:53:46 PM	DATE	08/28/2019										OVERHEAD CONTACT SYSTEM LAYOUT PLAN (SHEET 47 OF 48) SB STA 1181+00 TO STA 1185+00	

- NOTES:
- 1. FOR NOTES, REFER TO DRAWING Y001. FOR SYMBOLS AND ABBREVIATIONS, REFER TO DRAWING Y002.
 - 2. POLE NUMBERS SHOWN ON LAYOUT DRAWINGS ARE TEMPORARY.



REV		DATE	DESCRIPTION	DESIGNED BY	PFW				PRELIMINARY PLANS - 30%		DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION OVERHEAD CONTACT SYSTEM LAYOUT PLAN (SHEET 48 OF 48) SB STA 1185+00 TO STA 1189+00		SCALE FOR 22"x34": H: 1"=20' V: 1"=2'		
				CHECKED BY	DSK				 HDR Engineering, Inc.		 The HNTB COMPANIES INFRASTRUCTURE SOLUTIONS			FILENAME:		
				DRAWN BY	DSK									SFILES		
				CHECKED BY	PFW				10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856		300 Apollo Drive Chelmsford, MA 01824 Phone: 978-905-4000			CONTRACT NO.:		
				APPROVED BY	NKS									CON0077290		
														VOLUME:		
PLOT DATE:			8/27/2019	12:54:03 PM		DATE	08/28/2019	NOT FOR CONSTRUCTION		DRAWING NO.:		Y148	SHEET NO.:	369		

TRACTION POWER SYMBOLS

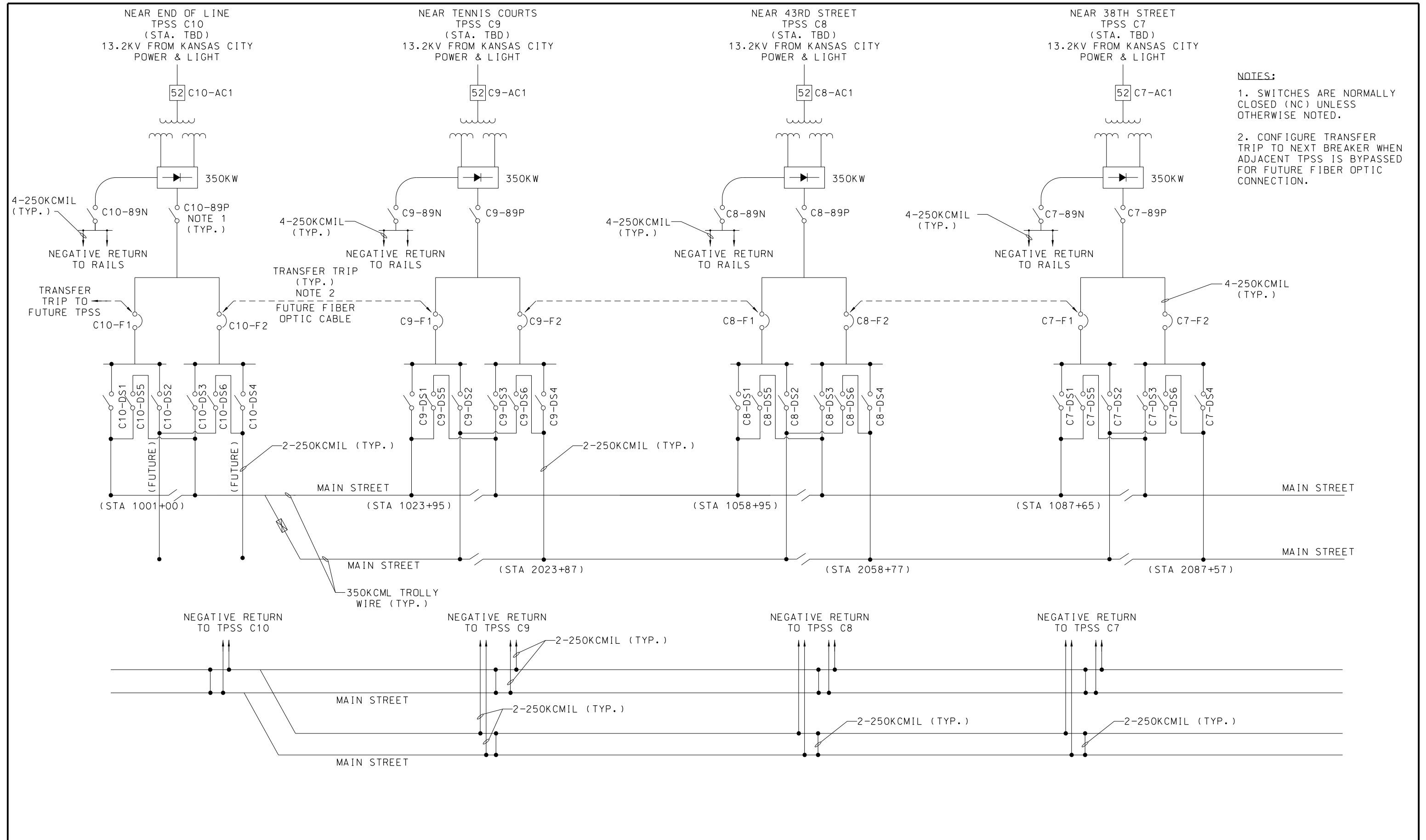
	DISCONNECT SWITCH IS NORMALLY CLOSED (NC), UNLESS DESIGNATED WITH (NO) NORMALLY OPEN		ANNUNCIATOR / SAS ALARM		EXTERIOR LIGHT		RELAY OPERATING COIL. INSIDE NUMBER DESIGNATES DEVICE FUNCTION. OUTSIDE NUMBER DESIGNATES QUANTITY OF DEVICES
	FUSED DISCONNECT SWITCH		AMMETER		GROUND		EMERGENCY STOP PUSHBUTTON
	LOW VOLTAGE CIRCUIT BREAKER		VOLTMETER		CHASSIS		RECTIFIER OVERTEMP ALARM (1ST. STAGE)
	POTENTIAL TRANSFORMER		KILOWATT HOUR METER		EMERGENCY LIGHT		RECTIFIER OVERTEMP TRIP (2ND. STAGE)
	CURRENT TRANSFORMER		KILOVAR HOUR METER		THREE-WAY SWITCH		UNDERVOLTAGE RELAY
	RECTIFIER TRANSFORMER, 12 PULSE		AMMETER SWITCH		PHASE		REVERSE CURRENT RELAY
	RECTIFIER TRANSFORMER, 6 PULSE OR POWER TRANSFORMER		KILOWATT METER				AC CIRCUIT BREAKER REAR DOOR SWITCH
	INTERPHASE TRANSFORMER		SCADA				FEEDER BREAKER REAR DOOR SWITCH
	DELTA, TRANSFORMER CONNECTION		EMERGENCY TRIP STATION				RECTIFIER DOOR SWITCH
	WYE, TRANSFORMER CONNECTION		CURRENT TRANSDUCER				TRANSFORMER DOOR SWITCH
	SURGE ARRESTER		VOLTAGE TRANSDUCER				MANUAL TRANSFER OR SELECTOR DEVICE
	TRACTION RECTIFIER		MECHANICAL KEY INTERLOCK				REV. PHASE OR PHASE-BAL. CURRENT RELAY
	FUSE		UTILITY GROUND CONNECTION				PHASE SEQUENCE
	DRAWOUT FUSE		INTERLOCK				TRANSFORMER OVERTEMP ALARM (1ST STAGE)
	SHUNT OR TPSS BUS CONNECTION		SMOKE DETECTOR				TRANSFORMER OVERTEMP TRIP (2ND STAGE)
	WITHDRAWABLE DC CIRCUIT BREAKER WITH SERIES TRIP UNIT		RECEPTACLE				PHASE VAULT TIME OVERCURRENT RELAY (INST. AND TIME DELAY)
	DIRECTION OF CONTROL OR RELAY INFLUENCE LINE		MH/HH VAULT				GROUND FAULT TIME OVERCURRENT RELAY (INST. AND TIME DELAY)
	DIODE		FLOURESCENT LIGHT				AC CIRCUIT BREAKER
	CONTACTOR		INSULATED OVERLAP (IOL)				AC OVERVOLTAGE
	WITHDRAWABLE MEDIUM VOLTAGE AC BREAKER		SECTION INSULATOR (SI)				GROUNDING STRUCTURE
	CABLE POTHEAD/CABLE CONNECTOR						HOT STRUCTURE

TRACTION POWER ABBREVIATIONS

<u>A</u>		SEQ.	SEQUENCE
A	AMPERE	SI	SECTION INSULATOR
A	AMMETER	STA.	STATIONING
A	ANNUNCIATOR / SAS ALARM	<u>I</u>	
AC	ALTERNATING CURRENT,AC BREAKER	TBD	TO BE DECIDED
AS	AMMETER SWITCH	TPD	TRACTION POWER DUCTBANK
AT	CURRENT TRANSDUCER	TPSS	TRACTION POWER SUBSTATION
<u>B</u>		TYP.	TYPICAL
BAL.	BALANCE	<u>U</u>	
<u>C</u>		<u>V</u>	
CB	CIRCUIT BREAKER	V	VOLT
CT	CURRENT TRANSFORMER	V	VOLTMETER
<u>D</u>		VAC	VOLT ALTERNATING CURRENT
DC	DIRECT CURRENT	VDC	VOLT DIRECT CURRENT
DR	DUCTBANK/RACEWAY	VT	CURRENT TRANSDUCER
DS	DISCONNECT SWITCH	VT	VAULT
<u>E</u>		<u>W</u>	
ETS	EMERGENCY TRIP STATION	<u>X</u>	
<u>F</u>		<u>Y</u>	
F	DC FEEDER BREAKER	<u>Z</u>	
<u>G</u>			
GFI	GROUND FAULT INTERRUPTER		
GND	GROUND		
<u>H</u>			
HH	HAND HOLE		
HR	HOUR		
HTS	HEAVY TRACTION SERVICE		
<u>I</u>			
INST.	INSTANTANEOUS		
IOS	INSULATED OVERLAP		
<u>J</u>			
<u>K</u>			
K	MECHANICAL KEY INTERLOCK		
KCMIL	THOUSANDS CIRCULAR MILS		
KV	KILOVOLT		
KVA	KILOVOLT AMPERE		
KVAC	KILOVOLT ALTERNATING CURRENT		
KW	KILOWATT		
<u>L</u>			
<u>M</u>			
MH	MANHOLE		
<u>N</u>			
N	NEGATIVE / GROUND		
NEG	NEGATIVE / GROUND		
NC	NORMALLY CLOSED		
NO	NORMALLY OPEN		
NR	NEGATIVE FEEDER		
<u>O</u>			
OCS	OVERHEAD CONTACT SYSTEM		
<u>P</u>			
P_POS	POSITIVE		
PF	POSITIVE FEEDER		
PT	POTENTIAL TRANSFORMER		
<u>Q</u>			
<u>R</u>			
R	RECTIFIER		
RT	RECTIFIER TRANSFORMER		
REV.	REVERSE		
ROR	DC RATE OF RISE RELAY		
RTU	REMOTE TERMINAL UNIT		
<u>S</u>			
SAS	SUBSTATION AUTOMATION SYSTEM		
SC	SUPERVISORY CONTROL AND DATA ACQUISITION		
SCADA	SUPERVISORY CONTROL AND DATA ACQUISITION		
SD	SMOKE DETECTOR		

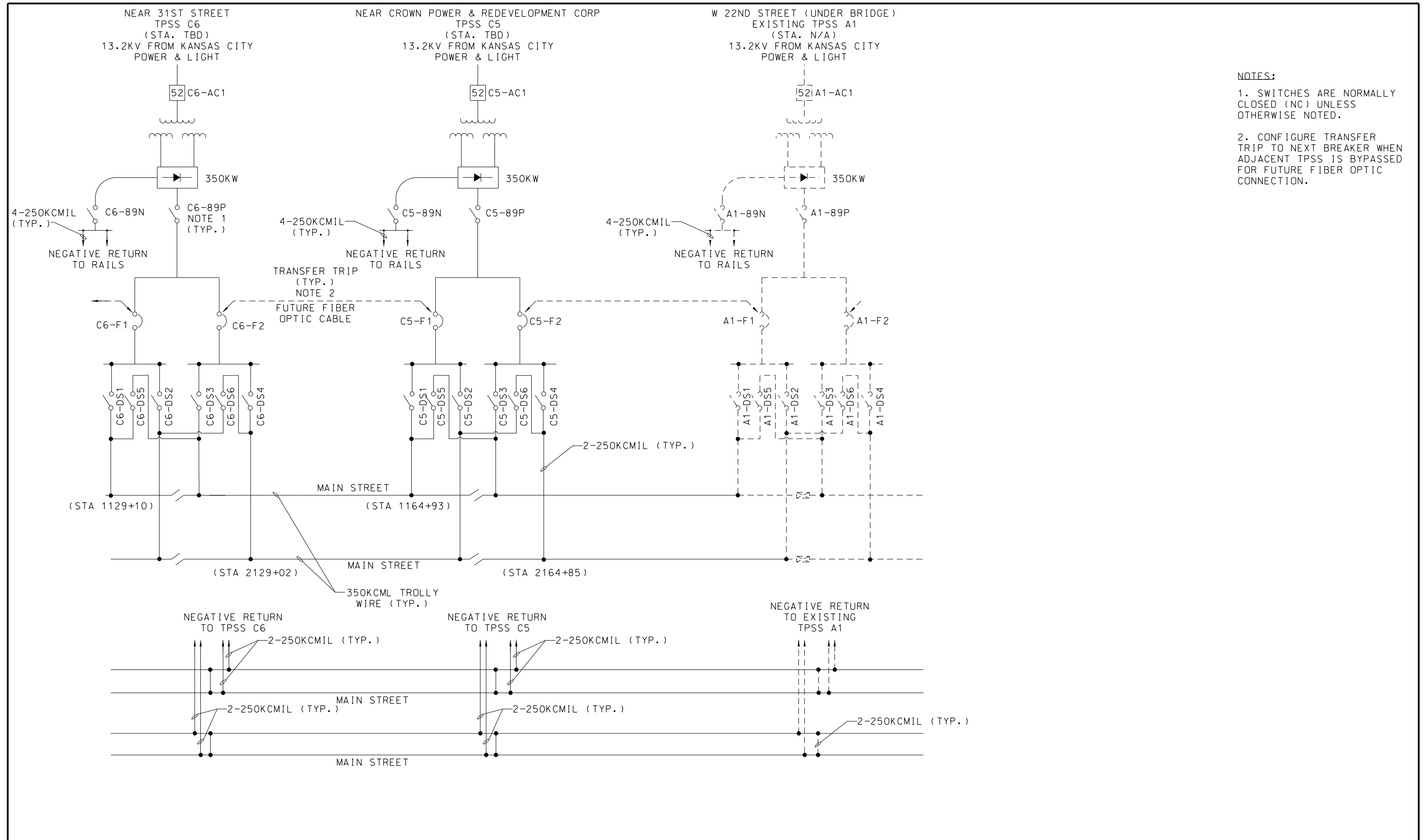
NOTE:
1. SEE CITY OF KANSAS CITY STANDARD PLANS FOR ADDITIONAL ABBREVIATIONS

REV	DATE	DESCRIPTION	DESIGNED BY	TJL		PRELIMINARY PLANS – 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SCALE FOR 22"x34":	
			CHECKED BY	AA		 <div>HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856</div>	 <div>The HNTB COMPANIES INFRASTRUCTURE SOLUTIONS 300 Apollo Drive Chelmsford, MA 01824 Phone: 978-905-4000</div>		FILENAME: J602.dwg	
			DRAWN BY	TJL					CONTRACT NO.: CON0077290	
			CHECKED BY	AA					VOLUME: 1	
			APPROVED BY	NKS					DRAWING NO.: J602	
									SHEET NO.: 371	
PLOT DATE: ----			DATE		06/28/2019	NOT FOR CONSTRUCTION				



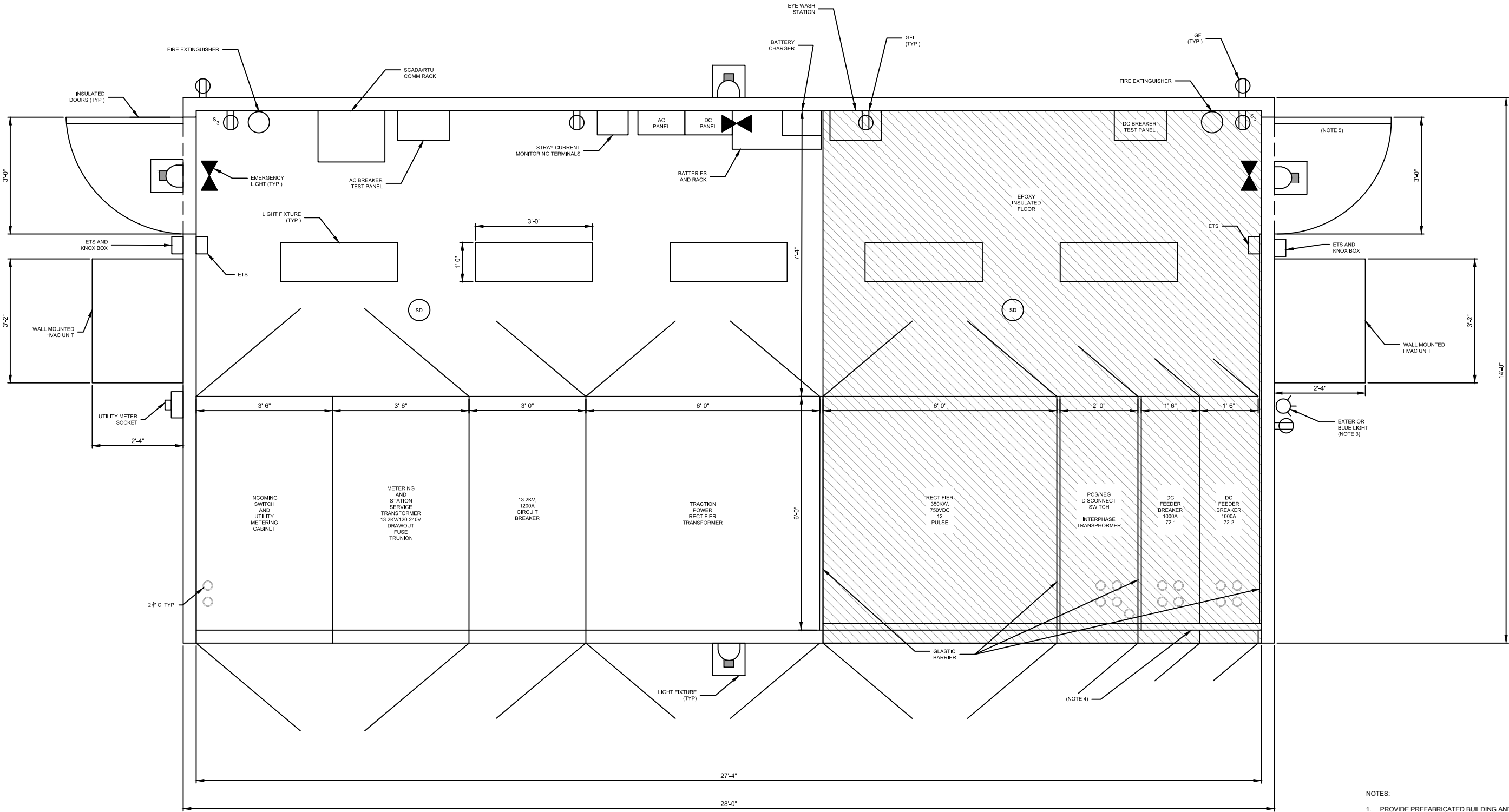
- NOTES:
1. SWITCHES ARE NORMALLY CLOSED (NC) UNLESS OTHERWISE NOTED.
 2. CONFIGURE TRANSFER TRIP TO NEXT BREAKER WHEN ADJACENT TPSS IS BYPASSED FOR FUTURE FIBER OPTIC CONNECTION.

REV			DATE	DESCRIPTION	DESIGNED BY	JWR			PRELIMINARY PLANS - 30%		DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION		SCALE FOR 22"x34": NOT TO SCALE	
					CHECKED BY	RPB						TRACTION POWER		FILENAME:	
					DRAWN BY	MMO			10450 Holmes Road			MASTER SINGLE LINE DIAGRAM		One Line Diagram SH1	
					CHECKED BY	RPB			Suite 600			SHEET 1 OF 2		CONTRACT NO.:	
					APPROVED BY	NKS			Kansas City, MO 64131-3471					VOLUME:	
PLOT DATE:			8/27/2019	3:16:37 PM	DATE	08/28/2019	Certificate of Authority: 000856		NOT FOR CONSTRUCTION				DRAWING NO.:	SHEET NO.:	
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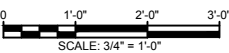




- NOTES:
1. SWITCHES ARE NORMALLY CLOSED (NC) UNLESS OTHERWISE NOTED.
 2. CONFIGURE TRANSFER TRIP TO NEXT BREAKER WHEN ADJACENT TPSS IS BYPASSED FOR FUTURE FIBER OPTIC CONNECTION.

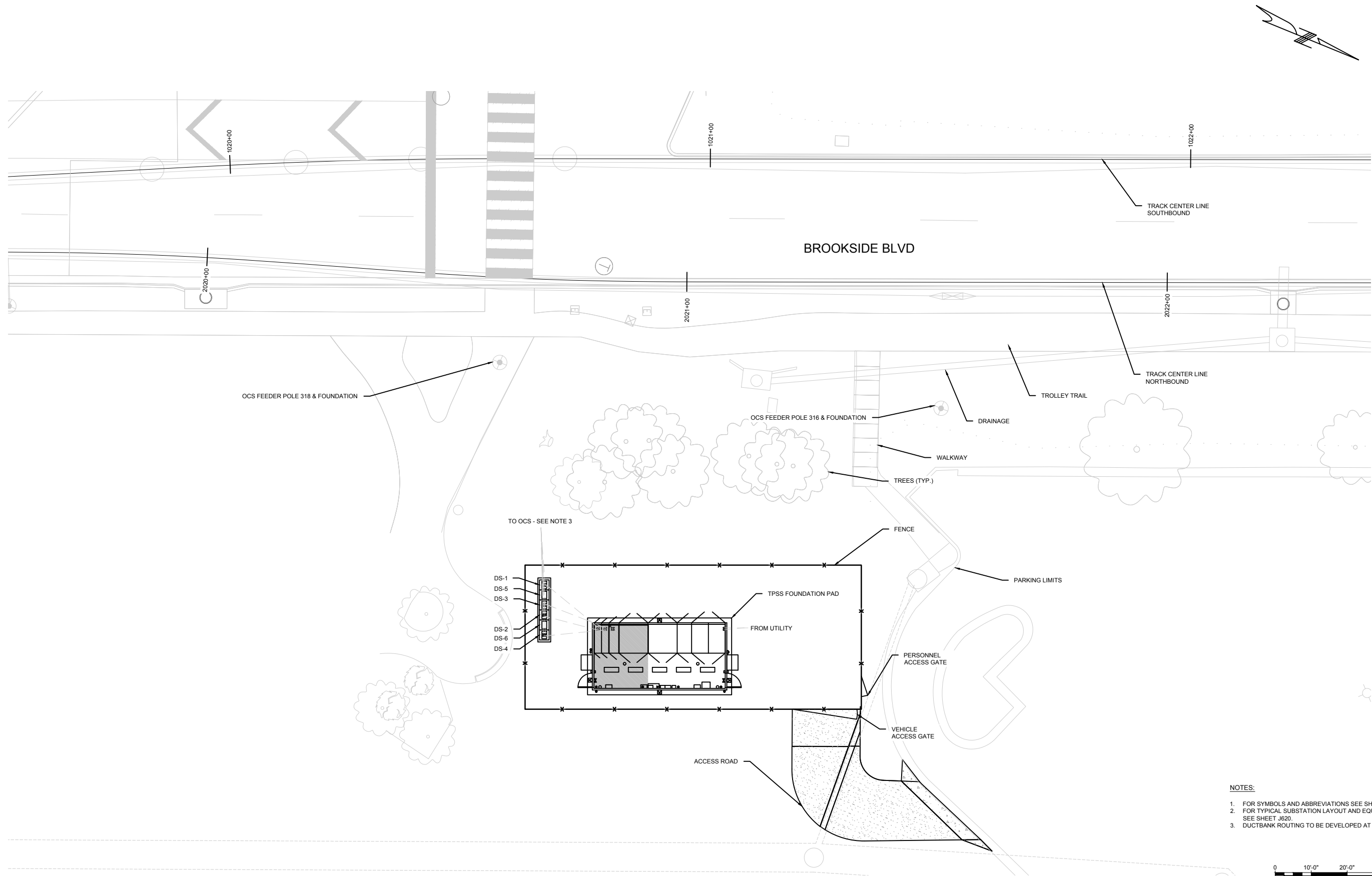
REV			DATE		DESCRIPTION		DESIGNED BY		JWR		PRELIMINARY PLANS - 30%		DATE: 08-28-2019		KANSAS CITY STREETCAR MAIN STREET EXTENSION		SCALE FOR 22"x34":	
							CHECKED BY		RPB		HDR						FILENAME:	
							DRAWN BY		MMQ		HDR Engineering, Inc.						One Line Diagram SH2	
							CHECKED BY		RPB		10450 Holmes Road						CONTRACT NO.:	
							APPROVED BY		NKS		Suite 600						VOLUME:	
											Kansas City, MO 64131-3471						1	
PLOT DATE:			8/27/2019				DATE		08/28/2019		816-360-2700						DRAWING NO.:	
											Certificate of Authority: 000856						SHEET NO.:	
											NOT FOR CONSTRUCTION						J602	
																	373	



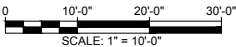
- NOTES:
1. PROVIDE PREFABRICATED BUILDING AND EQUIPMENT UNDER THIS CONTRACT.
 2. EQUIPMENT DIMENSIONS ARE APPROXIMATE. SUBMIT FINAL DIMENSIONS FOR APPROVAL.
 3. LOCATE EXTERIOR BLUE LIGHT AS DIRECTED BY CITY.
 4. INSTALL RECTIFIER AND DC SWITCHGEAR 2" OFF OF REAR WALL. THERE SHOULD BE NO GAP BEHIND THE AC SWITCHGEAR.
 5. PROVIDE 1/2" GLASTIC ON INTERIOR OF DOOR AND INSULATE OVER PANEL BARS.



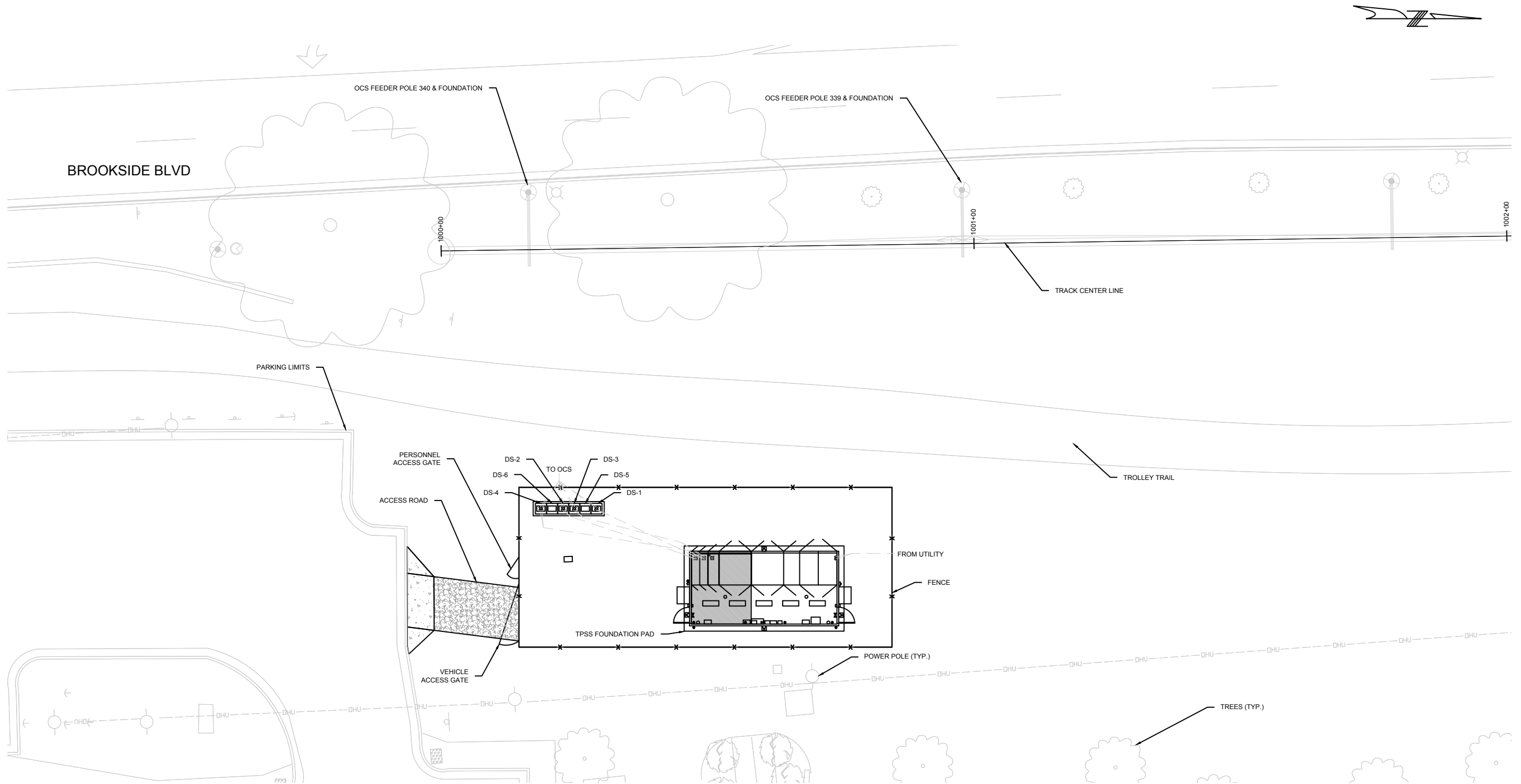
REV	DATE	DESCRIPTION	DESIGNED BY	TJL			PRELIMINARY PLANS – 30%		DATE: 08-28-2019		KANSAS CITY STREETCAR MAIN STREET EXTENSION				SCALE FOR 22"x34":	
			CHECKED BY	AA			 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856		 The HNTB COMPANIES INFRASTRUCTURE SOLUTIONS 300 Apollo Drive Chelmsford, MA 01824 Phone: 978-905-4000						FILENAME:	
			DRAWN BY	KMZ							CONTRACT NO.:					
			CHECKED BY	AA							CON0077290		VOLUME:			
			APPROVED BY	NKS							1		DRAWING NO.:			
PLOT DATE: ----			DATE				06/28/2019			NOT FOR CONSTRUCTION			J620		SHEET NO.:	
												375				



- NOTES:
1. FOR SYMBOLS AND ABBREVIATIONS SEE SHEETS J601 AND J602.
 2. FOR TYPICAL SUBSTATION LAYOUT AND EQUIPMENT CALLOUTS SEE SHEET J620.
 3. DUCTBANK ROUTING TO BE DEVELOPED AT NEXT SUBMITTAL.

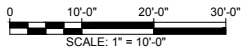



REV	DATE	DESCRIPTION	DESIGNED BY	TJL		PRELIMINARY PLANS – 30%	DATE: 08-28-2019	<div><div><div><div></div><div>HDR Engineering, Inc.</div></div><div><div><div>10450 Holmes Road</div><div>Suite 600</div><div>Kansas City, MO 64131-3471</div><div>816-360-2700</div><div>Certificate of Authority: 000856</div></div><div><div><div></div><div>The HNTB COMPANIES</div><div>INFRASTRUCTURE SOLUTIONS</div><div>300 Apollo Drive</div><div>Chelmsford, MA 01824</div><div>Phone: 978-905-4000</div></div></div></div></div></div>	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SCALE FOR 22"x34":	
			CHECKED BY	AA						FILENAME:	
			DRAWN BY	KMZ						J630.dwg	
			CHECKED BY	AA						CONTRACT NO.:	
			APPROVED BY	NKS						CON0077290	
										VOLUME:	
PLOT DATE: ----			DATE		06/28/2019	NOT FOR CONSTRUCTION		TRACTION POWER TPSS C9 SITE ELECTRICAL PLAN		DRAWING NO.:	SHEET NO.:
										J630	376

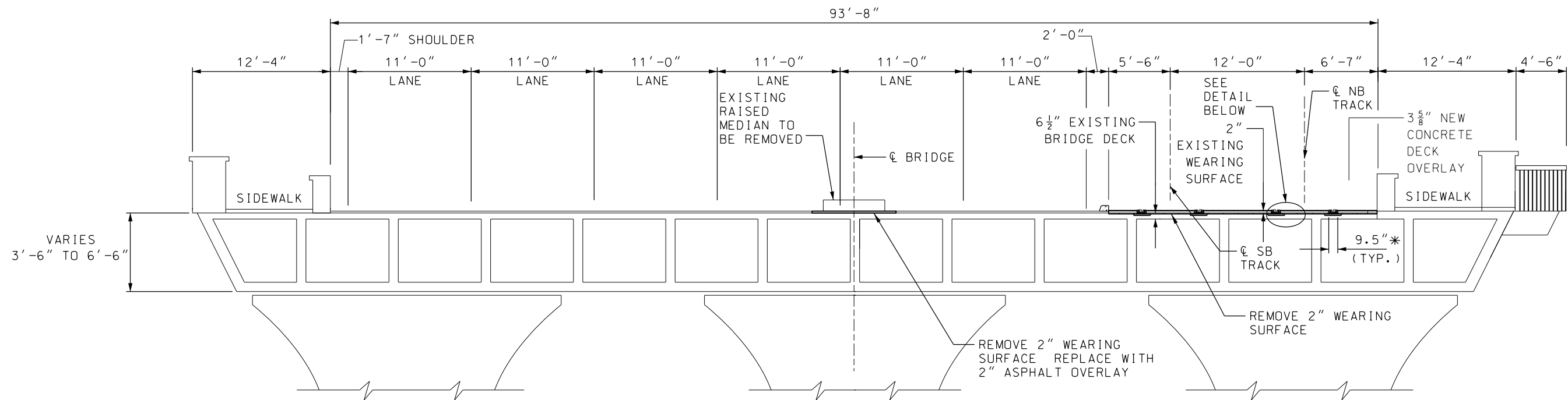


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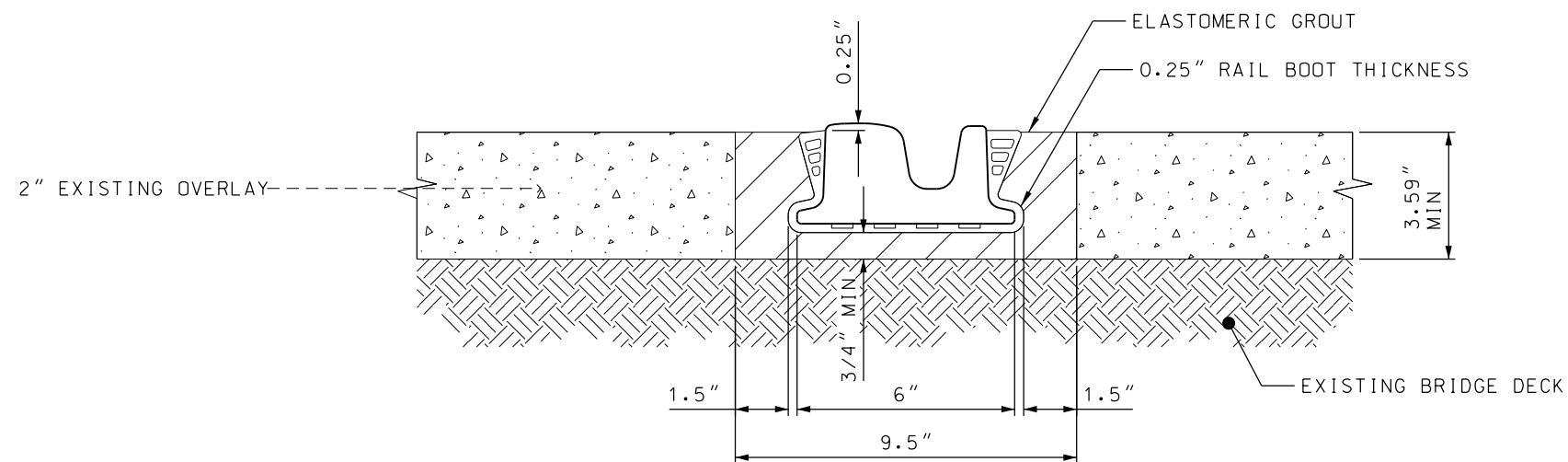
1. FOR SYMBOLS AND ABBREVIATIONS SEE SHEETS J601 AND J602.
2. FOR TYPICAL SUBSTATION LAYOUT AND EQUIPMENT CALLOUTS SEE SHEET J620.
3. DUCTBANK ROUTING TO BE DEVELOPED AT NEXT SUBMITTAL.



REV	DATE	DESCRIPTION	DESIGNED BY	TJL		PRELIMINARY PLANS – 30%		DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION		SCALE FOR 22"x34":	
			CHECKED BY	AA		 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	 The HNTB COMPANIES INFRASTRUCTURE SOLUTIONS 300 Apollo Drive Chelmsford, MA 01824 Phone: 978-905-4000	TRACTION POWER TPSS C10 SITE ELECTRICAL PLAN		FILENAME: J631.dwg		
			DRAWN BY	TJL						CONTRACT NO.: CON0077290		
			CHECKED BY	AA						VOLUME: 1		
			APPROVED BY	NKS						DRAWING NO.: SHEET NO.:		
PLOT DATE: ----			DATE							NOT FOR CONSTRUCTION		J631
			06/28/2019									



TYPICAL SECTION
(LOOKING NORTH)



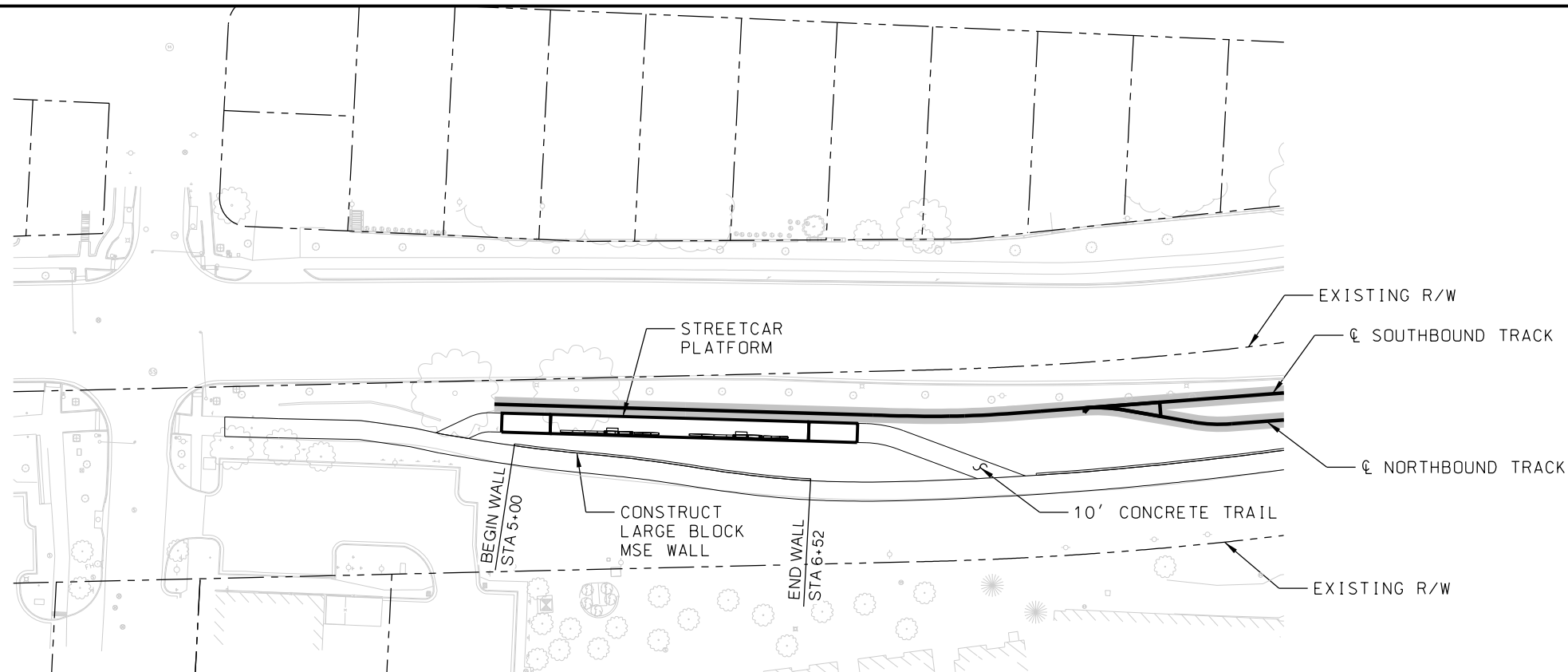
**GROUTED 112 TRAM
RAIL ON BRIDGE**
(NOT TO SCALE)

NOTES:

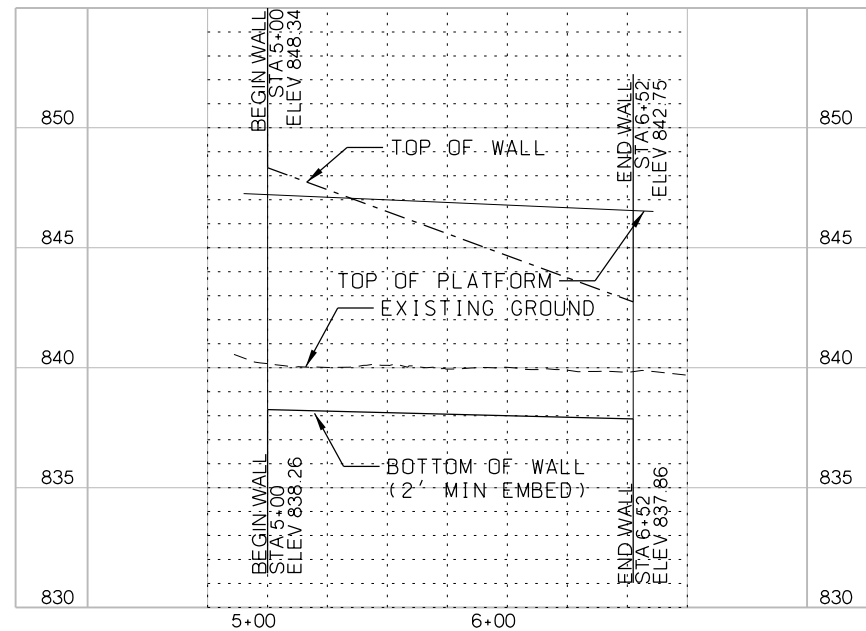
ALL STRUCTURE SHOWN IS EXISTING. NEW
CONSTRUCTION SHOWN IS HEAVY SOLID LINES.

*MILL AN ADDITIONAL 1/2" X 18" STRIP BELOW EACH RAIL.

REV	DATE	DESCRIPTION	DESIGNED BY	JWR		PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION BRUSH CREEK STRUCTURE TYPICAL SECTION	SCALE FOR 22"x34": NOT TO SCALE FILENAME: Structures - Brush Creek CONTRACT NO.: ***** VOLUME: 1		
			CHECKED BY	RPB		 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	NOT FOR CONSTRUCTION		DRAWING NO.:	SHEET NO.:	
			DRAWN BY	MMO					ST102	379	
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			APPROVED BY	NKS							
PLOT DATE: 8/27/2019		9:33:20 AM	DATE	08/28/2019							



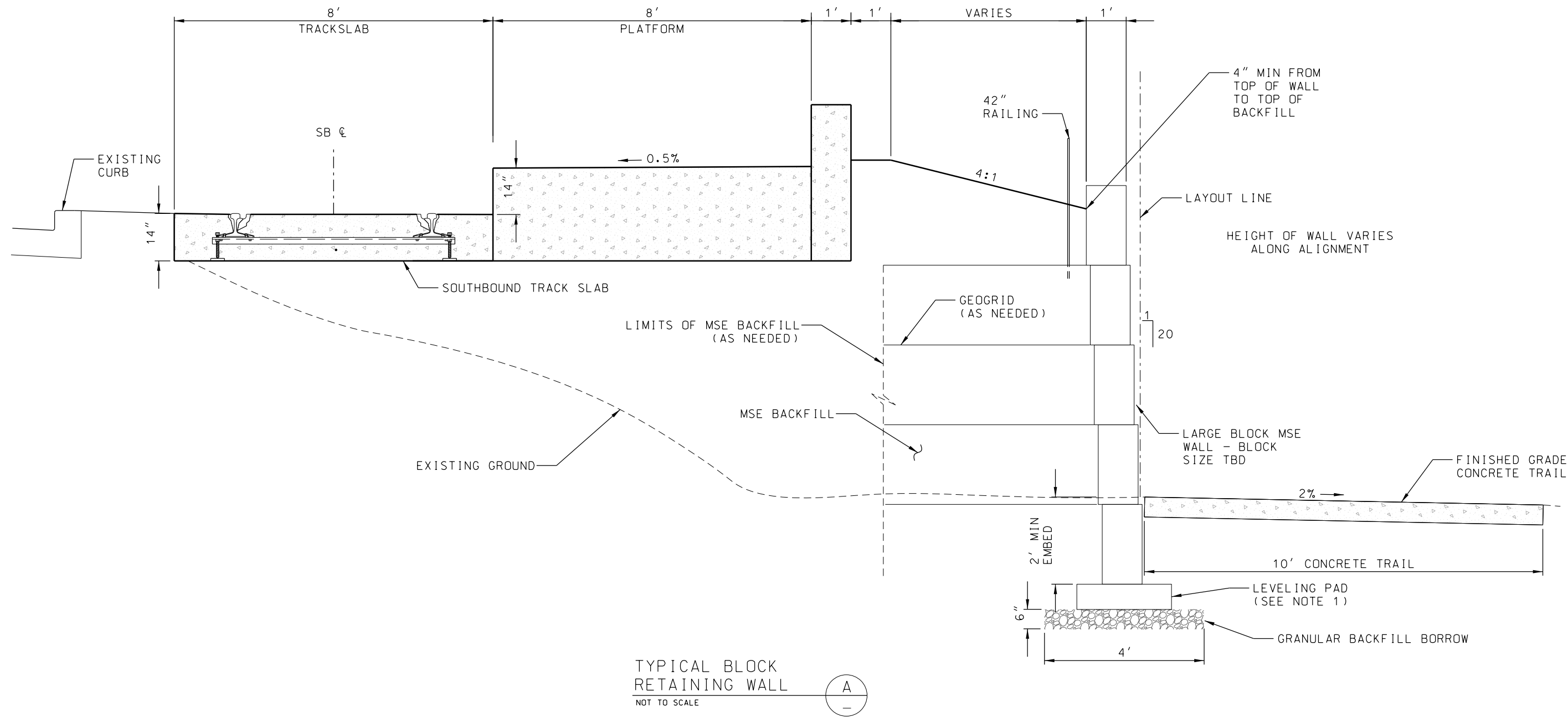
BLOCK WALL
PLAN VIEW
NOT TO SCALE



BLOCK WALL
ELEVATION VIEW
NOT TO SCALE





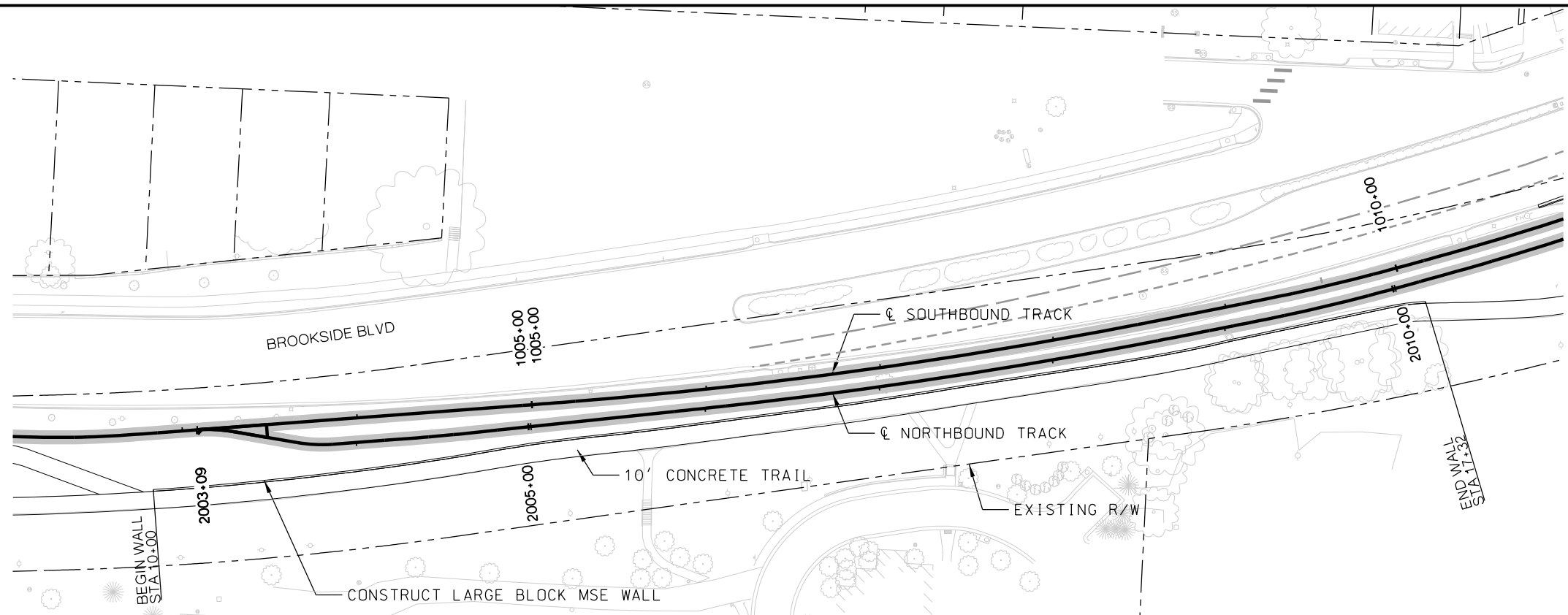
REV	DATE	DESCRIPTION	DESIGNED BY	JWR		 <div>HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856</div>	PRELIMINARY PLANS - 30% DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	BLOCK RETAINING WALL SOUTHERN TERMINUS PLATFORM PLAN / ELEVATION VIEW	SCALE FOR 22"x34": NOT TO SCALE FILENAME: Rt. Wall - S. Terminus - Plan & Elev CONTRACT NO.: VOLUME: 1 DRAWING NO.: SHEET NO.: W101 380
			CHECKED BY	RPB						
			DRAWN BY	MMO						
			CHECKED BY	RPB						
			APPROVED BY	NKS						
PLOT DATE: 8/27/2019 9:33:41 AM			DATE: 08/28/2019							



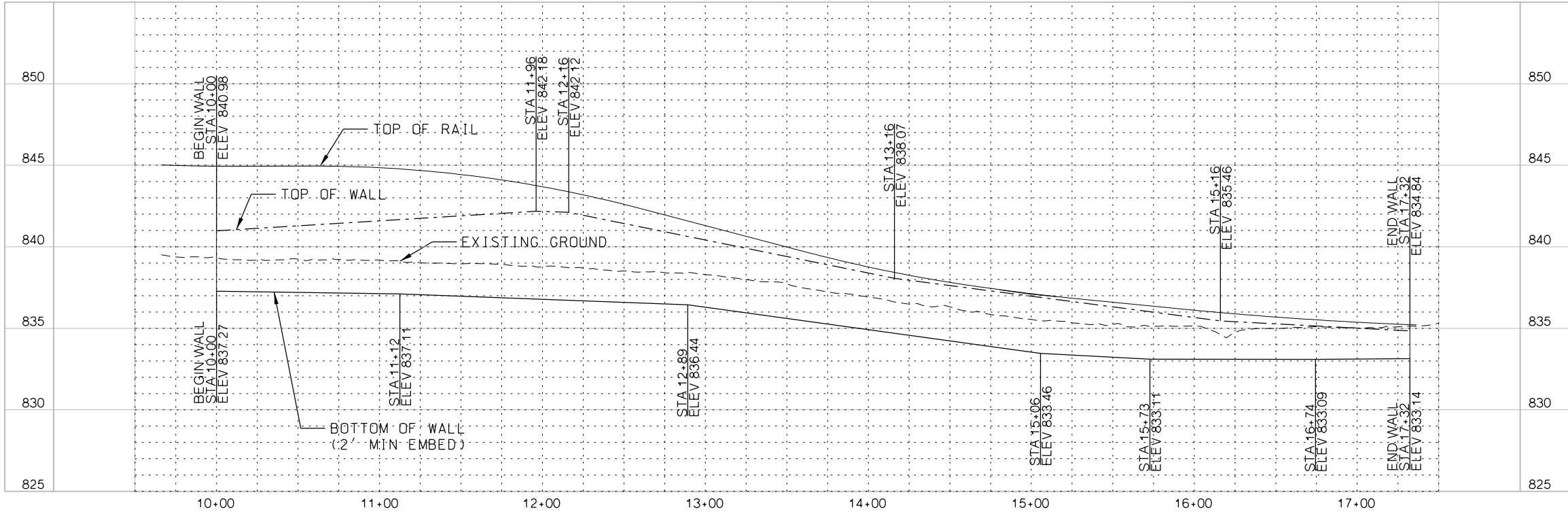
NOTES:

1. USE NON-SHRINK CONCRETE AS NECESSARY FOR LEVELING PAD TO MAINTAIN PROPER HORIZONTAL AND VERTICAL ALIGNMENT.
2. WALL TO BE DESIGNED BY WALL MANUFACTURER. SHALL BE SIGNED AND SEALED BY MISSOURI PROFESSIONAL ENGINEER.
3. WALL DESIGN PARAMETERS TO BE PROVIDED WITH FINAL PLANS.

REV	DATE	DESCRIPTION	DESIGNED BY	JWR				PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SCALE FOR 22"x34":	
			CHECKED BY	RPB				 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	NOT TO SCALE		FILENAME:	
			DRAWN BY	MMQ					Rt. Wall - S. Terminus - Typical			
			CHECKED BY	RPB					CONTRACT NO.:			
			APPROVED BY	NKS					VOLUME:			
PLOT DATE:		8/27/2019	DATE:					08/28/2019	DRAWING NO.:		SHEET NO.:	



BLOCK WALL
PLAN VIEW
NOT TO SCALE



BLOCK WALL
ELEVATION VIEW
NOT TO SCALE



REV	DATE	DESCRIPTION
PLOT DATE: 8/27/2019		9:34:06 AM

DESIGNED BY	JWR
CHECKED BY	RPB
DRAWN BY	MMQ
CHECKED BY	RPB
APPROVED BY	NKS
DATE	08/28/2019



PRELIMINARY PLANS - 30%
DATE: 08-28-2019

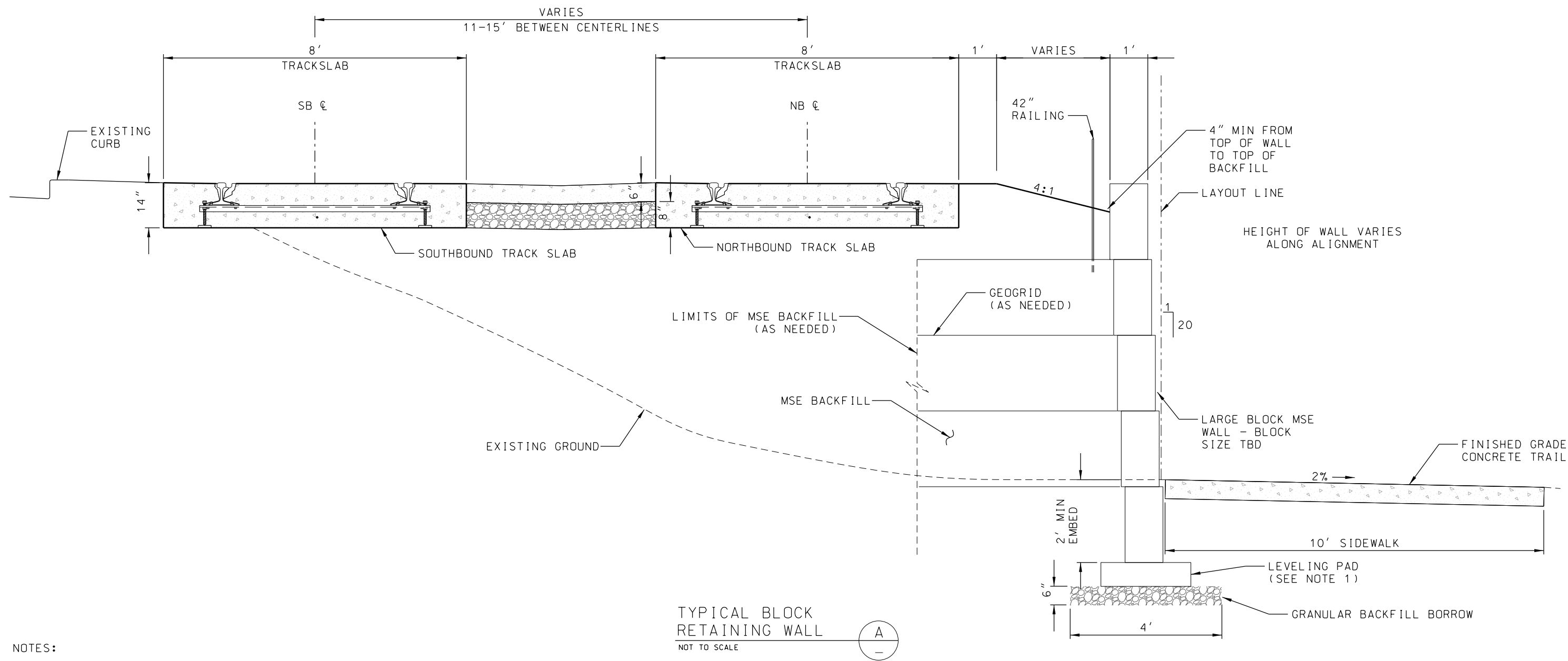
HDR Engineering, Inc.
10450 Holmes Road
Suite 600
Kansas City, MO 64131-3471
816-360-2700
Certificate of Authority: 000856

NOT FOR CONSTRUCTION

KANSAS CITY STREETCAR MAIN STREET EXTENSION

BLOCK RETAINING WALL
SOUTH OF VOLKER BOULEVARD
PLAN / ELEVATION VIEW

SCALE FOR 22"x34": NOT TO SCALE FILENAME: Rt Wall - S. of Volker - Plan & Elev CONTRACT NO.: VOLUME: 1	DRAWING NO.: W103	SHEET NO.: 382
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NOTES:

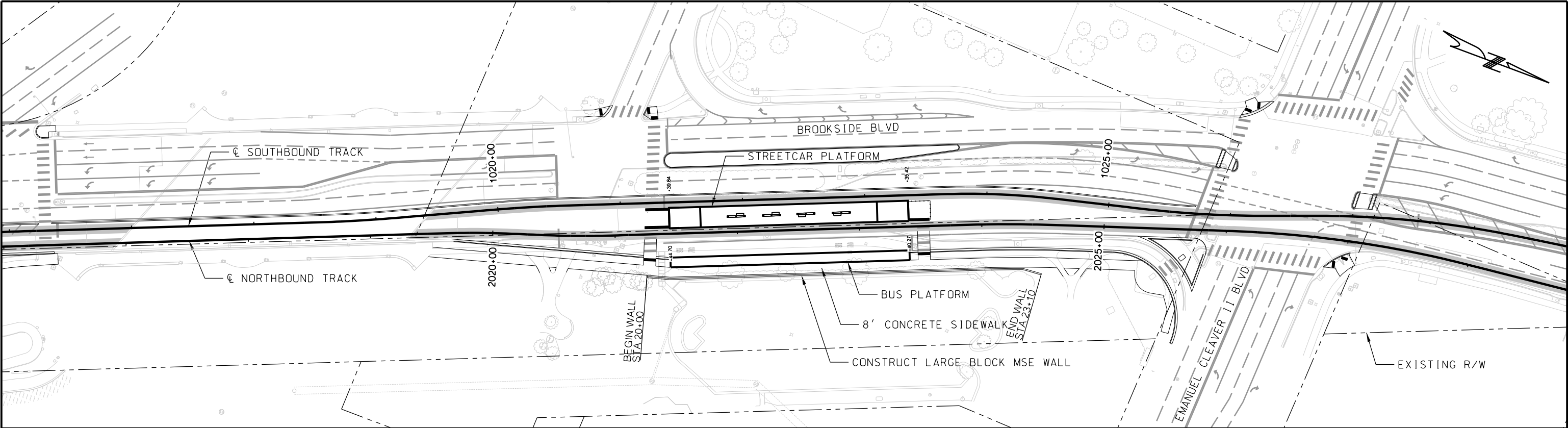
1. USE NON-SHRINK CONCRETE AS NECESSARY FOR LEVELING PAD TO MAINTAIN PROPER HORIZONTAL AND VERTICAL ALIGNMENT.
2. WALL TO BE DESIGNED BY WALL MANUFACTURER. SHALL BE SIGNED AND SEALED BY MISSOURI PROFESSIONAL ENGINEER.
3. WALL DESIGN PARAMETERS TO BE PROVIDED WITH FINAL PLANS.

REV	DATE	DESCRIPTION	DESIGNED BY	JWR	PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	SCALE FOR 22"x34": NOT TO SCALE
			CHECKED BY	RPB	HDR	HDR Engineering, Inc.		FILENAME:
			DRAWN BY	MMO	10450 Holmes Road			Rt. Wall - S. of Volker - Typical
			CHECKED BY	RPB	Suite 600			CONTRACT NO.:
			APPROVED BY	NKS	Kansas City, MO 64131-3471			VOLUME:
					816-360-2700			1
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PLOT DATE: 8/27/2019			DATE: 08/28/2019					SHEET NO.:
								W104 383

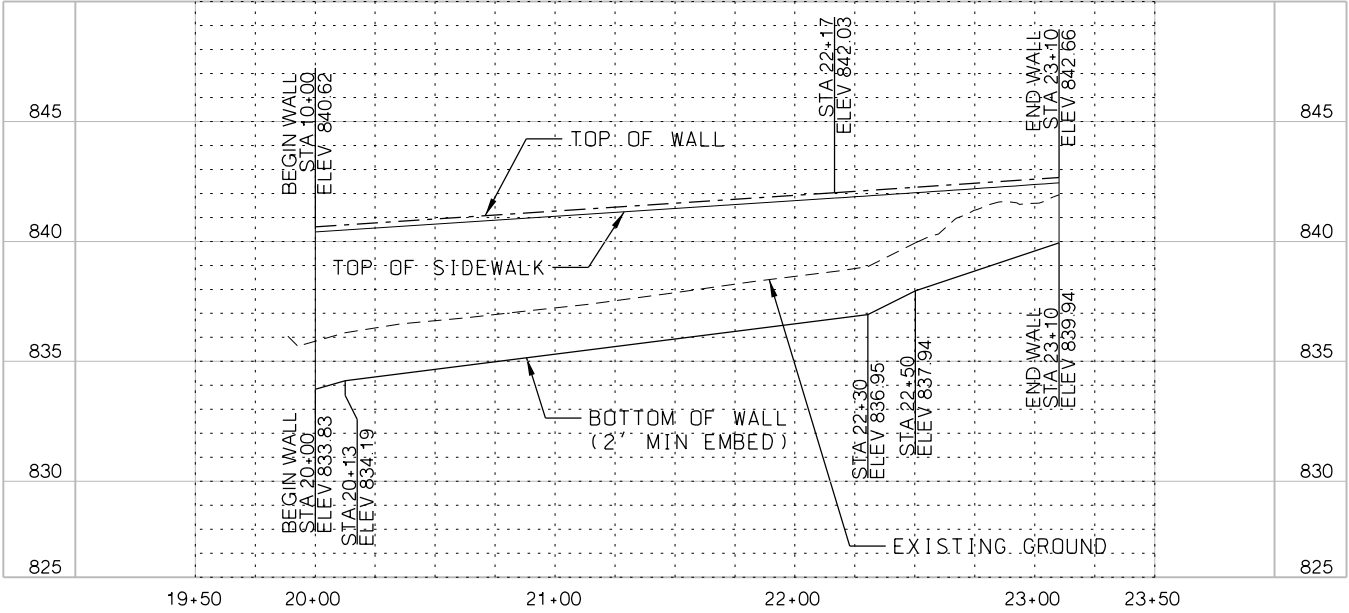


NOT FOR CONSTRUCTION

BLOCK RETAINING WALL
SOUTH OF VOLKER BOULEVARD
SECTION VIEW



BLOCK WALL
PLAN VIEW
NOT TO SCALE



BLOCK WALL
ELEVATION VIEW
NOT TO SCALE



REV	DATE	DESCRIPTION
PLOT DATE: 8/27/2019		9:34:24 AM

DESIGNED BY	JWR
CHECKED BY	RPB
DRAWN BY	MMO
CHECKED BY	RPB
APPROVED BY	NKS
DATE	08/28/2019

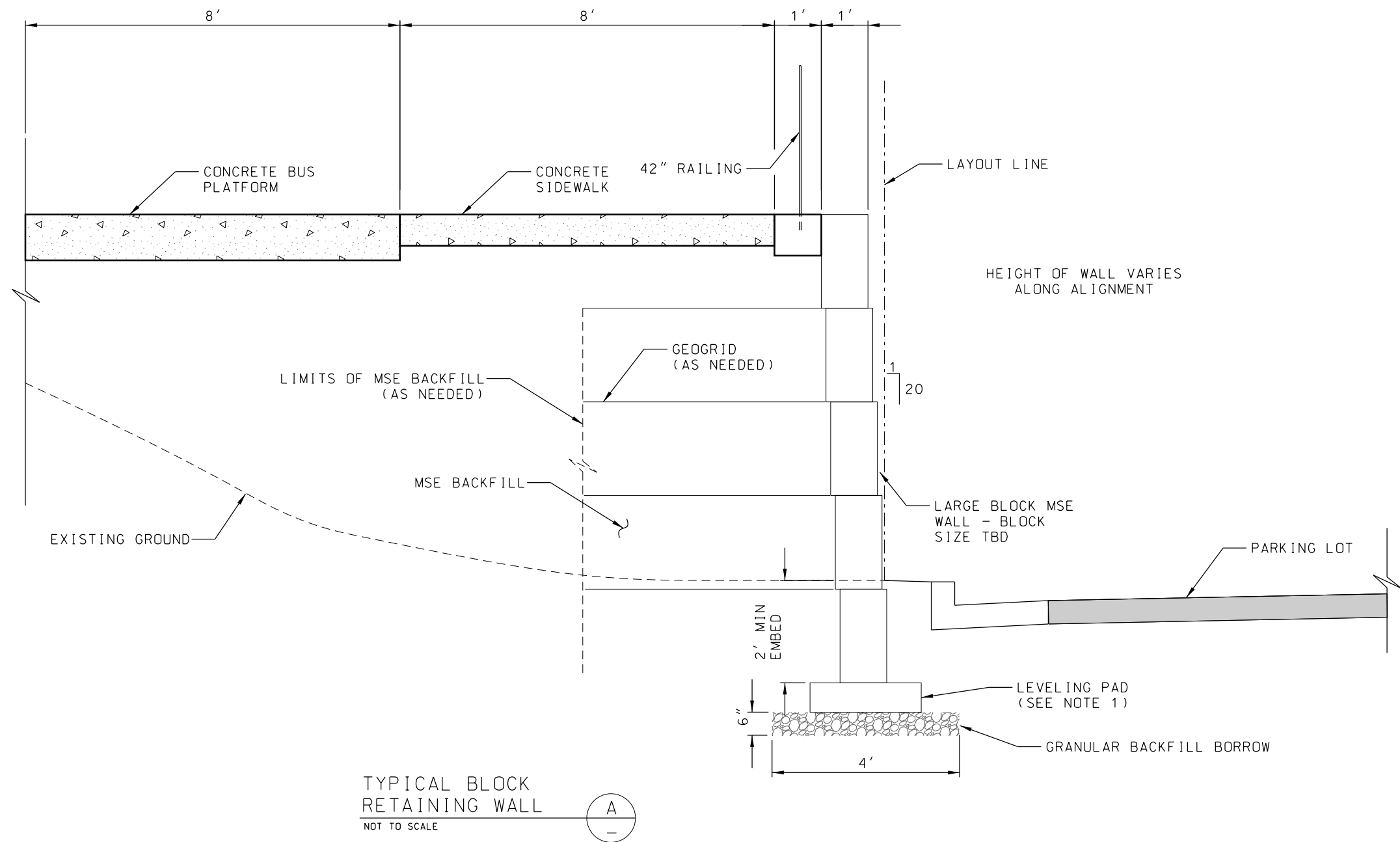


PRELIMINARY PLANS - 30%	DATE: 08-28-2019
HDR HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856	
NOT FOR CONSTRUCTION	

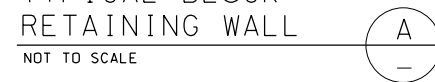
KANSAS CITY STREETCAR MAIN STREET EXTENSION

**BLOCK RETAINING WALL
BUS PLAZA PLATFORM
PLAN / ELEVATION VIEW**

SCALE FOR 22"x34": NOT TO SCALE FILENAME: Rt Wall - Bus Plaza - Plan & Elev CONTRACT NO.: VOLUME: 1	DRAWING NO.: W105	SHEET NO.: 384
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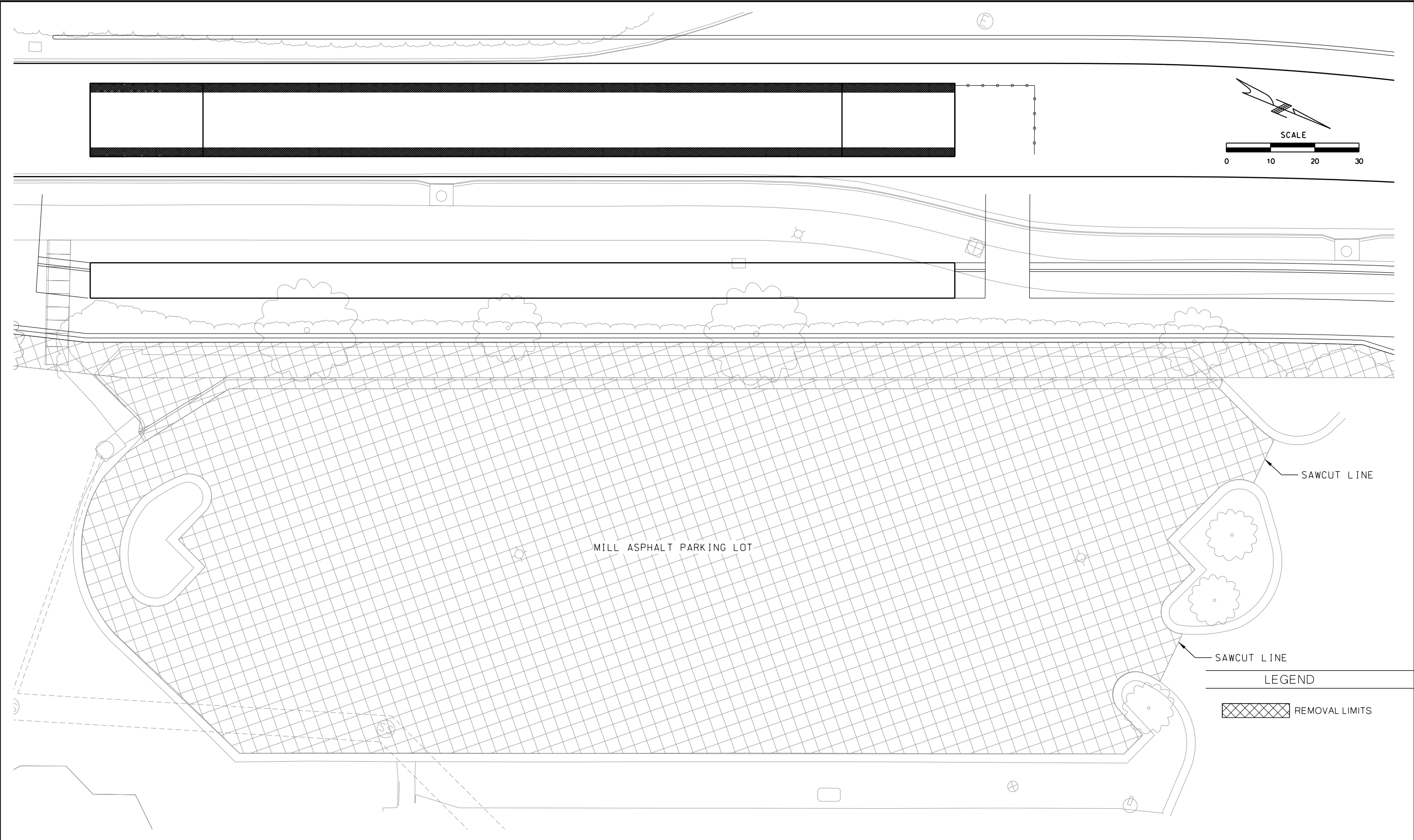
TYPICAL BLOCK
RETAINING WALL
NOT TO SCALE



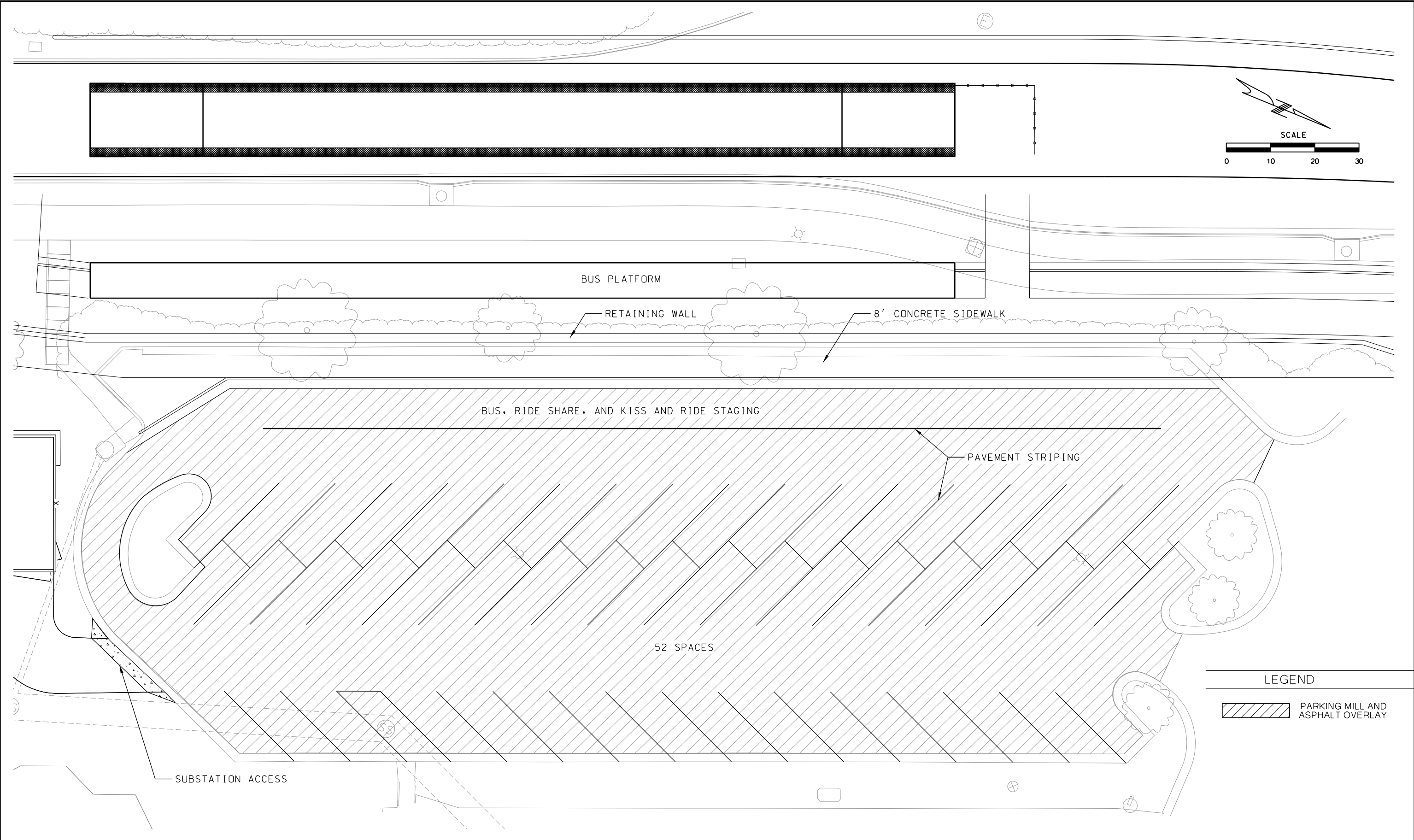
NOTES:

1. USE NON-SHRINK CONCRETE AS NECESSARY FOR LEVELING PAD TO MAINTAIN PROPER HORIZONTAL AND VERTICAL ALIGNMENT.
2. WALL TO BE DESIGNED BY WALL MANUFACTURER. SHALL BE SIGNED AND SEALED BY MISSOURI PROFESSIONAL ENGINEER.
3. WALL DESIGN PARAMETERS TO BE PROVIDED WITH FINAL PLANS.

REV	DATE	DESCRIPTION	DESIGNED BY	JWR		PRELIMINARY PLANS - 30%		DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION		SCALE FOR 22"x34": NOT TO SCALE	
			CHECKED BY	RPB		 HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856		NOT FOR CONSTRUCTION	BLOCK RETAINING WALL BUS PLAZA PLATFORM SECTION VIEW		FILENAME: Rt. Wall - Bus Plaza - Typical	
			DRAWN BY	MMO							CONTRACT NO.:	
			CHECKED BY	RPB							VOLUME:	
			APPROVED BY	NKS							DRAWING NO.:	
PLOT DATE: 8/27/2019			DATE: 08/28/2019								1	SHEET NO.:
											W106	385



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REV	DATE	DESCRIPTION																																						
DESIGNED BY	LM																																							
CHECKED BY	CJH																																							
DRAWN BY	LM																																							
CHECKED BY	CJH																																							
APPROVED BY	NKS																																							
PLOT DATE: 8/26/2019 9:13:08 AM			DATE: 8/28/2019																																					



REV	DATE	DESCRIPTION	DESIGNED BY LM			PRELIMINARY PLANS - 30%	DATE: 08-28-2019	KANSAS CITY STREETCAR MAIN STREET EXTENSION	STRIPING PARKING LOT	SCALE FOR 22"x34":	
			CHECKED BY C.J.H.			 <div>HDR Engineering, Inc. 10450 Holmes Road Suite 600 Kansas City, MO 64131-3471 816-360-2700 Certificate of Authority: 000856</div>	 <div>The HNTB COMPANIES INFRASTRUCTURE SOLUTIONS 715 Kirk Drive Kansas City, MO 64105 Phone: 816-472-1201</div>			H: 1"=10'	FILENAME:
			DRAWN BY LM							PL102	CONTRACT NO.:
			CHECKED BY C.J.H.							CON0077290	VOLUME:
			APPROVED BY NKS							1	DRAWING NO.:
PLOT DATE: 8/26/2019 9:09:40 AM			DATE: 8/28/2019			NOT FOR CONSTRUCTION				PL102	387