

# EASTRIDGE TO BART REGIONAL CONNECTOR PROJECT CAPITOL LIGHT RAIL EXTENSION

PLANS – VOLUME 4: LRT SYSTEMS

PROJECT ADMINISTERED BY:



DESIGNED BY:

BKF ENGINEERS  
1730 N 1<sup>st</sup> Street #600  
San Jose, CA 95112

**95% Design**

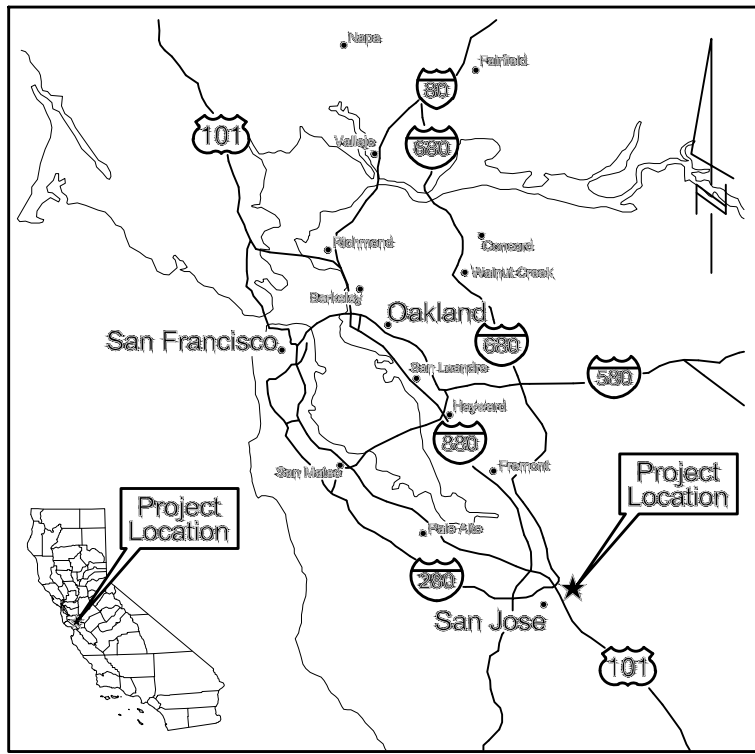
June 30, 2020

EC202006-0134

PARTICIPATING AGENCIES:



*Solutions that move you*



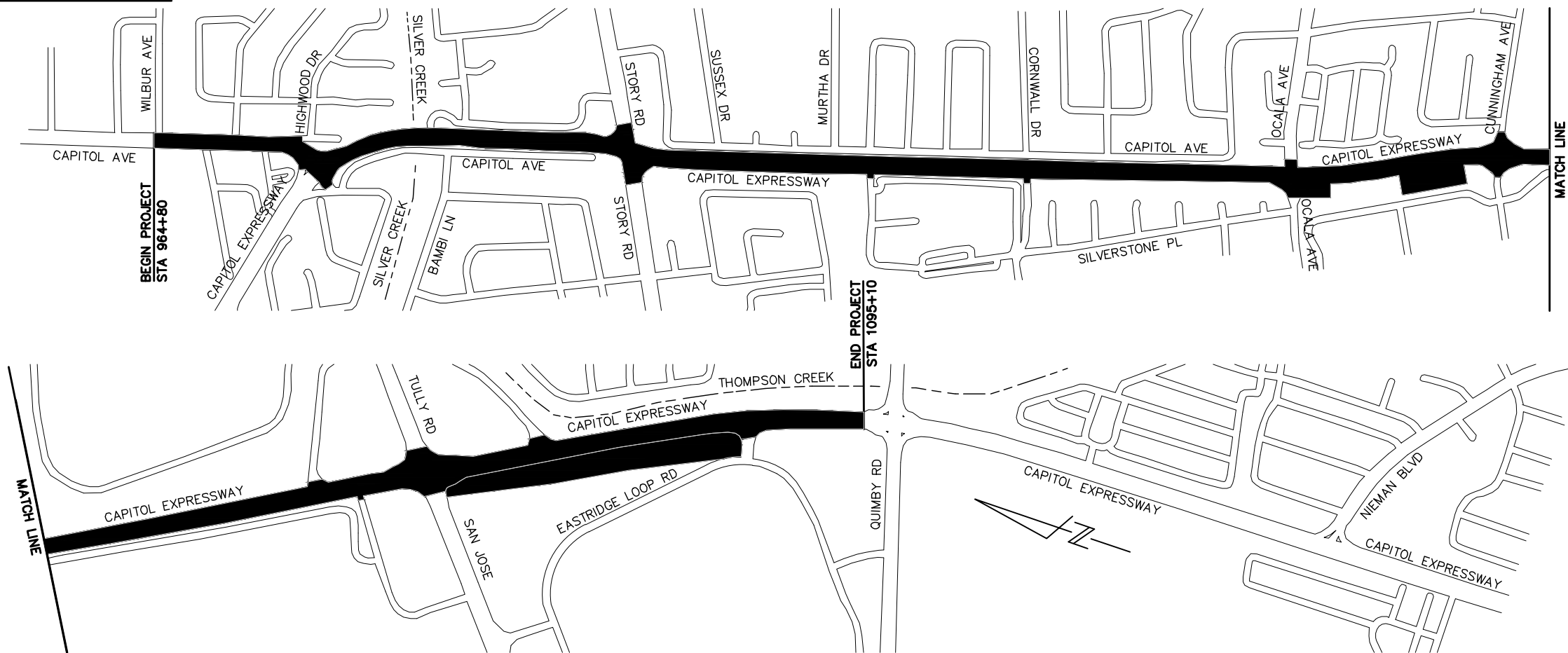
PROJECT LOCATION

SANTA CLARA VALLEY TRANSPORTATION AUTHORITY  
**EASTRIDGE TO BART REGIONAL CONNECTOR**  
**CAPITOL EXPRESSWAY LIGHT RAIL PROJECT**

WILBUR AVENUE TO QUIMBY ROAD

VOLUME 1

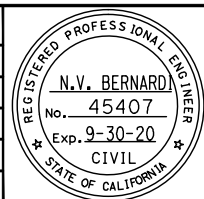
CIVIL  
 TRACK  
 LANDSCAPE



PROJECT SITE MAP

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NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



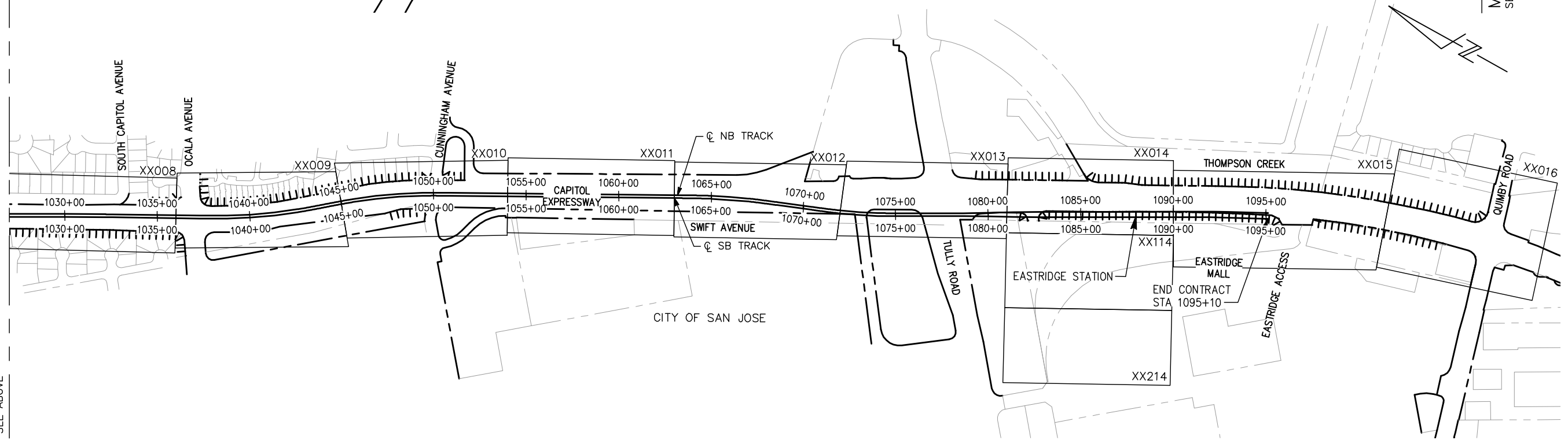
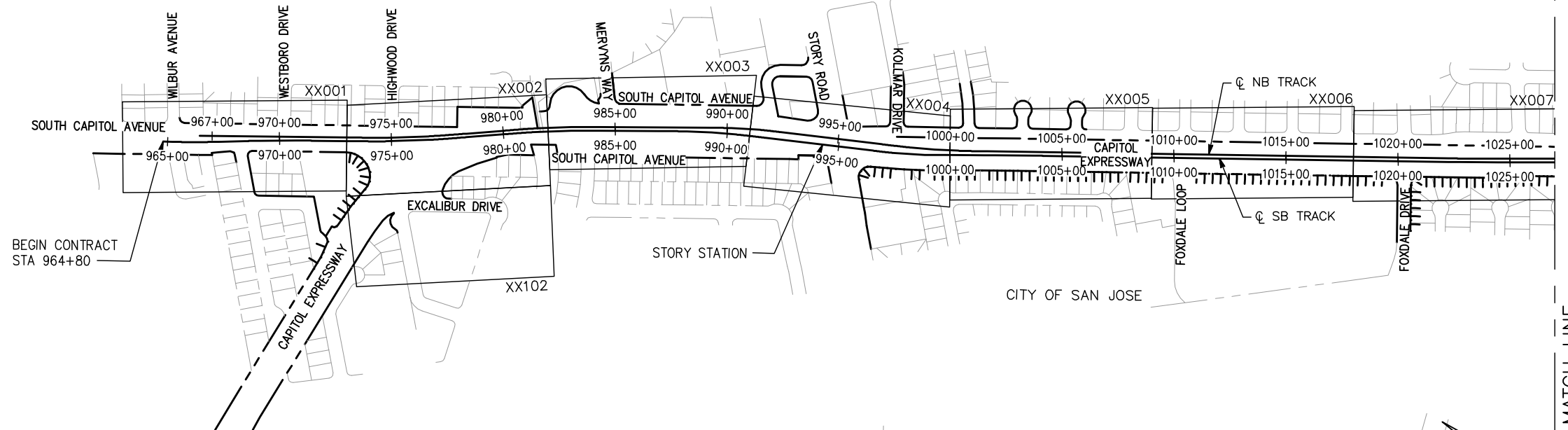
SUBMITTED	
DESIGNED	CHECKED
C. Chi	M. Cosentino
DRAWN	CADD FILE NAME
A. Hernandez	801GN001.dwg



APPROVED	
CADD FILE DATE	SCALE
06/26/20	NTS
SUBMITTAL DATE	BOARD APPROVAL DATE
06/29/20	

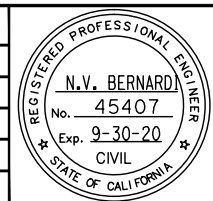
EASTRIDGE TO BART REGIONAL CONNECTOR		
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT		
GENERAL TITLE		
PCA NO.	CONTRACT NO.	FILE LOCATION
000	C801	PROJECTWISE

SHEET	OF
DRAWING NO.	GN001
REVISION	C



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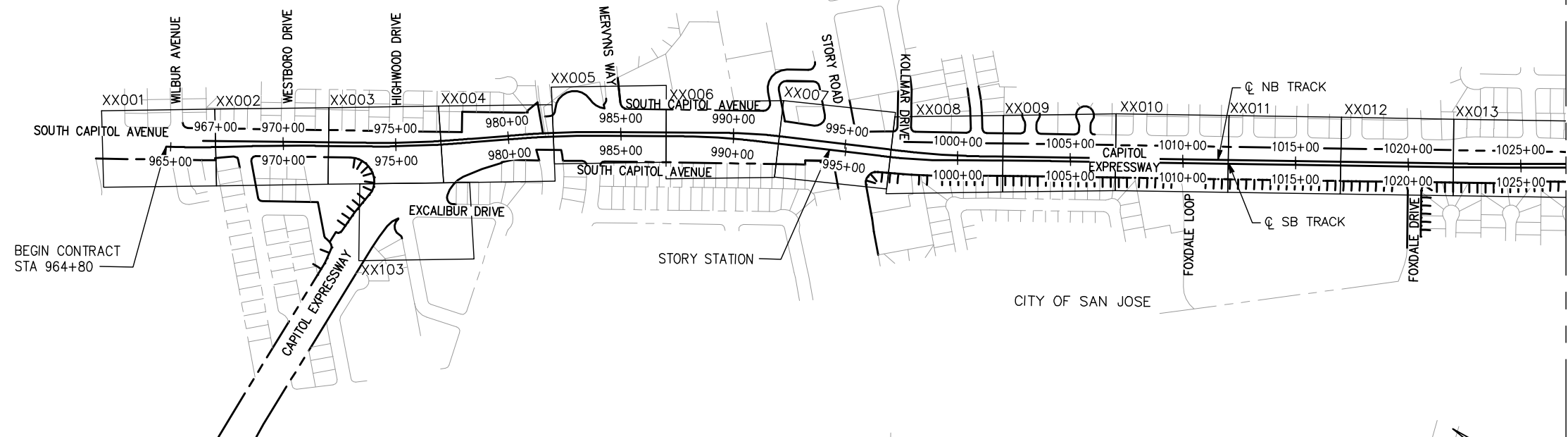
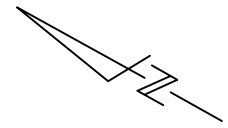
SUBMITTED  
**BKF 100+**  
 YEARS  
 ENGINEERS / SURVEYORS / PLANNERS  
 DESIGNED: C. Chi  
 CHECKED: M. Cosentino  
 DRAWN: A. Hernandez  
 CADD FILE NAME: 801GN002.dwg

Santa Clara Valley  
**Transportation Authority**

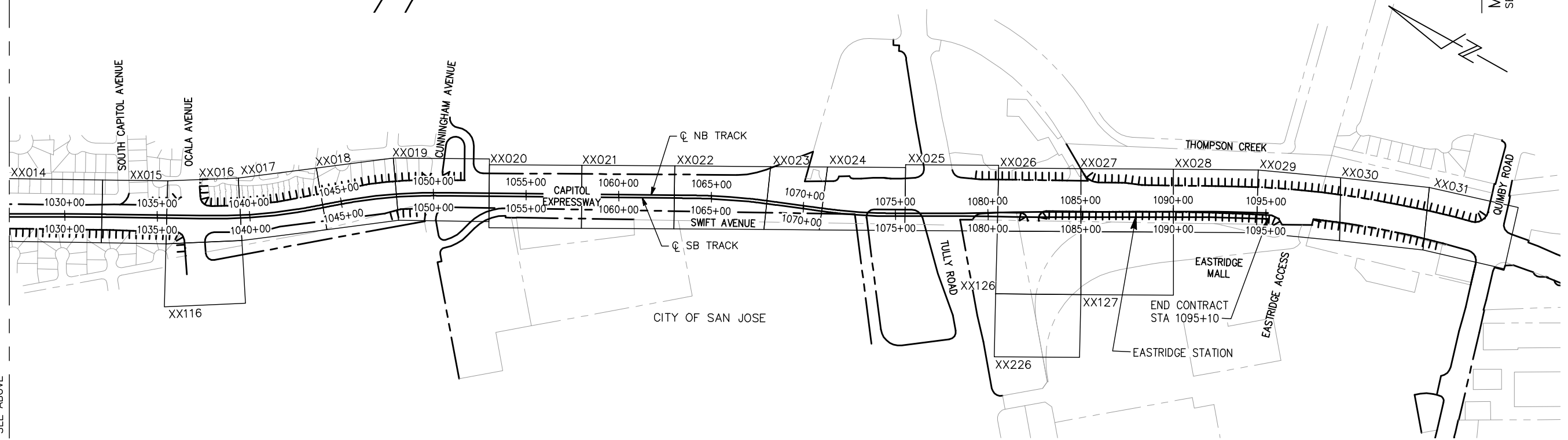
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 YEARS  
 ENGINEERS / SURVEYORS / PLANNERS  
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 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 GENERAL KEYMAP  
 40 - SCALE  
 PCA NO.: 000  
 CONTRACT NO.: C801  
 FILE LOCATION: PROJECTWISE

SHEET OF	GN002
DRAWING NO.	GN002
REVISION	C



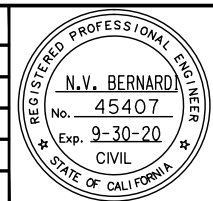
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YEARS  
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CHECKED: M. Cosentino  
DRAWN: A. Hernandez  
CADD FILE NAME: 801GN003.dwg

Santa Clara Valley  
Transportation  
Authority

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YEARS  
ENGINEERS / SURVEYORS / PLANNERS

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EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
GENERAL  
KEYMAP  
20 - SCALE

PCA NO.: 000  
CONTRACT NO.: C801  
FILE LOCATION: PROJECTWISE

SHEET OF	
DRAWING NO.	GN003
REVISION	C

**VOLUME 1**  
**CIVIL, TRACK AND LANDSCAPE**

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EASTRIDGE STATION  
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**ELEVATORS**

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**SIGNAGE**

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**LRT SYSTEMS**

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SUBSTATION DUCTBANK  
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CABLE AND CONDUIT SCHEDULES

**COMMUNICATIONS**

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CTS BLOCK DIAGRAM  
BLOCK DIAGRAM  
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**COMBINED SYSTEM DUCT**

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DETAILS

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**BRT OCALA STATION**

**GENERAL**  
TITLE SHEET  
KEY MAP  
INDEX OF DRAWINGS  
GENERAL ABBREVIATIONS  
GENERAL LEGEND

**CIVIL**

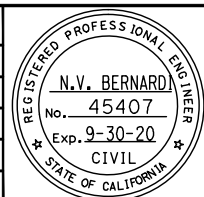
PLAN  
DETAILS

**STRUCTURAL**

DESIGN CRITERIA  
PLAN & ELEVATION  
FOUNDATION DETAILS

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NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
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SUBMITTED  
 DESIGNED: C. Chi  
 CHECKED: M. Cosentino  
 DRAWN: A. Hernandez  
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 SCALE: NTS  
 SUBMITTAL DATE: 06/29/20  
 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 GENERAL  
 DESIGN DRAWING VOLUMES  
 LAYOUT AND ORGANIZATION

SHEET OF  
 DRAWING NO. GN004  
 REVISION C

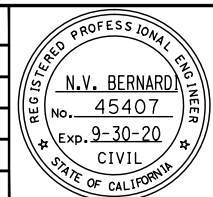
PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

DRAWING INDEX VOLUME 1

SHT NO	DWG NO	REV	TITLE	SHT NO	DWG NO	REV	TITLE	SHT NO	DWG NO	REV	TITLE
<b>GENERAL</b>											
1	GN001	C	GENERAL - TITLE	54	CX003	C	CIVIL - TYPICAL ROADWAY SECTIONS - SB STA 981+92.25 TO STA 994+09.62	112	CP016	C	CIVIL - STREET IMPROVEMENT PLAN - STA 1035+50 TO STA 1039+50
2	GN002	C	GENERAL - KEYMAP - 40 - SCALE	55	CX004	C	CIVIL - TYPICAL ROADWAY SECTIONS - SB STA 995+65.64 TO STA 1028+58.36	113	CP116	C	CIVIL - STREET IMPROVEMENT PLAN - OCALA AVENUE
3	GN003	C	GENERAL - KEYMAP - 20 - SCALE	56	CX005	C	CIVIL - TYPICAL ROADWAY SECTIONS - SB STA 1028+58.36 TO STA 1045+02.72	114	CP017	C	CIVIL - STREET IMPROVEMENT PLAN - STA 1039+50 TO STA 1044+00
4	GN004	C	GENERAL - DESIGN DRAWING VOLUMES - LAYOUT AND ORGANIZATION	57	CX006	C	CIVIL - TYPICAL ROADWAY SECTIONS - SB STA 1045+02.72 TO STA 1052+98.69	115	CP018	C	CIVIL - STREET IMPROVEMENT PLAN - STA 1044+00 TO STA 1048+00
5	GN005	C	GENERAL - SHEET INDEX - 1 - VOLUME 1 (1 OF 4)	58	CX007	C	CIVIL - TYPICAL ROADWAY SECTIONS - SB STA 1052+98.69 TO CS STA 76+63.25	116	CP019	C	CIVIL - STREET IMPROVEMENT PLAN - STA 1048+00 TO STA 1053+00
6	GN006	C	GENERAL - SHEET INDEX - 2 - VOLUME 1 (2 OF 4)	59	CX008	C	CIVIL - TYPICAL ROADWAY SECTIONS - CS STA 78+50.38 TO STA 95+89.40	117	CP020	C	CIVIL - STREET IMPROVEMENT PLAN - STA 1053+00 TO STA 1058+00
7	GN007	C	GENERAL - SHEET INDEX - 3 - VOLUME 1 (3 OF 4)	60	CRO01	C	CIVIL - DEMOLITION PLAN - STA 964+80 TO STA 967+00	118	CP021	C	CIVIL - STREET IMPROVEMENT PLAN - STA 1058+00 TO STA 1063+00
8	GN008	B	GENERAL - SHEET INDEX - 4 - VOLUME 1 (4 OF 4)	61	CRO02	C	CIVIL - DEMOLITION PLAN - STA 967+00 TO STA 972+00	119	CP022	C	CIVIL - STREET IMPROVEMENT PLAN - STA 1063+00 TO STA 1068+00
9	GN009	B	GENERAL - SHEET INDEX - 5 - VOLUME 2 (1 OF 3)	62	CRO03	C	CIVIL - DEMOLITION PLAN - STA 972+00 TO STA 977+00	120	CP023	C	CIVIL - STREET IMPROVEMENT PLAN - STA 1068+00 TO STA 1071+00
10	GN010	B	GENERAL - SHEET INDEX - 6 - VOLUME 2 (2 OF 3)	63	CR103	C	CIVIL - DEMOLITION PLAN - EXCALIBUR DRIVE	121	CP024	C	CIVIL - STREET IMPROVEMENT PLAN - STA 1071+00 TO STA 1075+50
11	GN011	B	GENERAL - SHEET INDEX - 7 - VOLUME 2 (3 OF 3)	64	CRO04	C	CIVIL - DEMOLITION PLAN - STA 977+00 TO STA 982+00	122	CP025	C	CIVIL - STREET IMPROVEMENT PLAN - STA 1075+50 TO STA 1080+50
12	GN012	B	GENERAL - SHEET INDEX - 8 - VOLUME 3 (1 OF 2)	65	CRO05	C	CIVIL - DEMOLITION PLAN - STA 982+00 TO STA 987+00	123	CP026	C	CIVIL - STREET IMPROVEMENT PLAN - STA 1080+50 TO STA 1085+00
13	GN013	B	GENERAL - SHEET INDEX - 9 - VOLUME 3 (2 OF 2)	66	CRO06	C	CIVIL - DEMOLITION PLAN - STA 987+00 TO STA 992+00	124	CP126	C	CIVIL - STREET IMPROVEMENT PLAN - EASTRIDGE LOOP
14	GN014	B	GENERAL - SHEET INDEX - 10 - VOLUME 4 (1 OF 4)	67	CRO07	C	CIVIL - DEMOLITION PLAN - STA 992+00 TO STA 997+00	125	CP226	A	CIVIL - STREET IMPROVEMENT PLAN - EASTRIDGE LOOP - 02
15	GN015	B	GENERAL - SHEET INDEX - 11 - VOLUME 4 (2 OF 4)	68	CRO08	C	CIVIL - DEMOLITION PLAN - STA 997+00 TO STA 1002+00	126	CP027	C	CIVIL - STREET IMPROVEMENT PLAN - STA 1085+00 TO STA 1090+00
16	GN016	B	GENERAL - SHEET INDEX - 12 - VOLUME 4 (3 OF 4)	69	CRO09	C	CIVIL - DEMOLITION PLAN - STA 1002+00 TO STA 1007+00	127	CP127	B	CIVIL - STREET IMPROVEMENT PLAN - EASTRIDGE LOOP - 03
17	GN017	A	GENERAL - SHEET INDEX - 13 - VOLUME 4 (4 OF 4)	70	CRO10	C	CIVIL - DEMOLITION PLAN - STA 1007+00 TO STA 1012+00	128	CP028	C	CIVIL - STREET IMPROVEMENT PLAN - STA 1090+00 TO STA 1094+50
18	GN018	A	GENERAL - SHEET INDEX - 14 - VOLUME 5	71	CRO11	C	CIVIL - DEMOLITION PLAN - STA 1012+00 TO STA 1017+00	129	CP029	C	CIVIL - STREET IMPROVEMENT PLAN - STA 1094+50 TO STA 1095+10
19	GN019	C	GENERAL - ABBREVIATIONS - 1	72	CRO12	C	CIVIL - DEMOLITION PLAN - STA 1017+00 TO STA 1022+00	130	CP030	C	CIVIL - STREET IMPROVEMENT PLAN - TO QUIMBY ROAD
20	GN020	C	GENERAL - ABBREVIATIONS - 2	73	CRO13	C	CIVIL - DEMOLITION PLAN - STA 1022+00 TO STA 1027+00	131	CP031	C	CIVIL - STREET IMPROVEMENT PLAN - QUIMBY ROAD
21	GN021	C	GENERAL - ABBREVIATIONS - 3	74	CRO14	C	CIVIL - DEMOLITION PLAN - STA 1027+00 TO STA 1032+00	132	CP501	B	CIVIL - STREET IMPROVEMENT PLAN - CURVE TABLES - 1
22	GN022	C	GENERAL - ABBREVIATIONS - 4	75	CRO15	C	CIVIL - DEMOLITION PLAN - STA 1032+00 TO STA 1035+50	133	CP502	B	CIVIL - STREET IMPROVEMENT PLAN - CURVE TABLES - 2
23	GN023	C	GENERAL - ABBREVIATIONS - 5	76	CRO16	C	CIVIL - DEMOLITION PLAN - STA 1035+50 TO STA 1039+50	134	CP503	B	CIVIL - STREET IMPROVEMENT PLAN - CURVE TABLES - 3
24	GN024	C	GENERAL - LEGEND - 1	77	CR116	C	CIVIL - DEMOLITION PLAN - OCALA AVENUE	135	CD001	C	CIVIL - CONSTRUCTION DETAILS - 1
25	GN025	C	GENERAL - LEGEND - 2	78	CRO17	C	CIVIL - DEMOLITION PLAN - STA 1039+50 TO STA 1044+00	136	CD002	C	CIVIL - CONSTRUCTION DETAILS - 2 - ISLAND PASSAGEWAYS
26	GN026	C	GENERAL - LEGEND - 3	79	CRO18	C	CIVIL - DEMOLITION PLAN - STA 1044+00 TO STA 1048+00	137	CD003	C	CIVIL - CONSTRUCTION DETAILS - 3 - OCALA TPSS #33
27	GN027	C	GENERAL - LEGEND - 4	80	CRO19	C	CIVIL - DEMOLITION PLAN - STA 1048+00 TO STA 1053+00	138	CD004	C	CIVIL - CONSTRUCTION DETAILS - 4 - EASTRIDGE TPSS #34
28	GN030	C	GENERAL - CONSTRUCTION STAKING SURVEY CONTROL	81	CRO20	C	CIVIL - DEMOLITION PLAN - STA 1053+00 TO STA 1058+00	139	CD005	C	CIVIL - CONSTRUCTION DETAILS - 5 - EAST STORY STATION
29	GN031	C	GENERAL - CONSTRUCTION STAKING SURVEY CONTROL - STA 964+80 TO STA 1013+50	82	CRO21	C	CIVIL - DEMOLITION PLAN - STA 1058+00 TO STA 1063+00	140	CD006	C	CIVIL - CONSTRUCTION DETAILS - 6 - KOLLMAR DR & WEST STORY STATION
30	GN032	C	GENERAL - CONSTRUCTION STAKING SURVEY CONTROL - STA 1013+50 TO STA 1063+50	83	CRO22	C	CIVIL - DEMOLITION PLAN - STA 1063+00 TO STA 1068+00	141	CD007	C	CIVIL - CONSTRUCTION DETAILS - 7 - CONSTRUCTION STAGING AREA
31	GN033	C	GENERAL - CONSTRUCTION STAKING SURVEY CONTROL - STA 1063+50 TO STA "CS" 109+66	84	CRO23	C	CIVIL - DEMOLITION PLAN - STA 1068+00 TO STA 1071+00	142	CD008	B	CIVIL - CONSTRUCTION DETAILS - 8 - LOMBARD AVE, HIGHWOOD DR & EASTRIDGE MALL
				85	CRO24	C	CIVIL - DEMOLITION PLAN - STA 1071+00 TO STA 1075+50	143	CD009	B	CIVIL - CONSTRUCTION DETAILS - 9 - CAPITOL EXPRESSWAY & CAPITOL AVE
				86	CRO25	C	CIVIL - DEMOLITION PLAN - STA 1075+50 TO STA 1080+50	144	CD010	B	CIVIL - CONSTRUCTION DETAILS - 10 - CAPITOL EXPRESSWAY & STORY RD
				87	CRO26	C	CIVIL - DEMOLITION PLAN - STA 1080+50 TO STA 1085+00	145	CD011	B	CIVIL - CONSTRUCTION DETAILS - 11 - RAISED MEDIANS
				88	CR126	C	CIVIL - DEMOLITION PLAN - EASTRIDGE LOOP	146	CD012	B	CIVIL - CONSTRUCTION DETAILS - 12 - CAPITOL EXPRESSWAY & OCALA AVE
				89	CR226	A	CIVIL - DEMOLITION PLAN - EASTRIDGE LOOP - 02	147	CD013	B	CIVIL - CONSTRUCTION DETAILS - 13 - CAPITOL EXPRESSWAY & CUNNINGHAM AVE
				90	CRO27	C	CIVIL - DEMOLITION PLAN - STA 1085+00 TO STA 1090+00	148	CD014	B	CIVIL - CONSTRUCTION DETAILS - 14 - SWIFT LN & MERCEDES DWY
				91	CR127	B	CIVIL - DEMOLITION PLAN - EASTRIDGE LOOP - 03	149	CD015	B	CIVIL - CONSTRUCTION DETAILS - 15 - CAPITOL EXPRESSWAY & TULLY RD
				92	CRO28	C	CIVIL - DEMOLITION PLAN - STA 1090+00 TO STA 1094+50	150	CD016	B	CIVIL - CONSTRUCTION DETAILS - 16 - S CAPITOL AVE AND SUSSEX DR
				93	CRO29	C	CIVIL - DEMOLITION PLAN - STA 1094+50 TO STA 1095+10	151	CD017	B	CIVIL - CONSTRUCTION DETAILS - 17 - CUL-DE-SAC
				94	CRO30	C	CIVIL - DEMOLITION PLAN - TO QUIMBY ROAD	152	CD018	A	CIVIL - CONSTRUCTION DETAILS - 18 - SITE (RESTORATION)
				95	CRO31	C	CIVIL - DEMOLITION PLAN - QUIMBY ROAD	153	CD019	A	CIVIL - CONSTRUCTION DETAILS - 19 - SITE (DEMOLITION)
				96	CP001	C	CIVIL - STREET IMPROVEMENT PLAN - STA 964+80 TO STA 967+00	154	CD020	A	CIVIL - CONSTRUCTION DETAILS - 20 - SITE (RESTORATION)
				97	CP002	C	CIVIL - STREET IMPROVEMENT PLAN - STA 967+00 TO STA 972+00	155	CD021	A	CIVIL - CONSTRUCTION DETAILS - 21 - SITE (RESTORATION)
				98	CP003	C	CIVIL - STREET IMPROVEMENT PLAN - STA 972+00 TO STA 977+00	156	CD022	A	CIVIL - CONSTRUCTION DETAILS - 22 - SITE (RESTORATION)
				99	CP103	C	CIVIL - STREET IMPROVEMENT PLAN - EXCALIBUR DRIVE	157	CD023	A	CIVIL - CONSTRUCTION DETAILS - 23 - SITE (RESTORATION)
				100	CP004	C	CIVIL - STREET IMPROVEMENT PLAN - STA 977+00 TO STA 982+00	158	YC001	C	CIVIL - STAGE CONSTRUCTION PLAN (STAGE 1) - STA 965+00 TO STA 1002+50
				101	CP005	C	CIVIL - STREET IMPROVEMENT PLAN - STA 982+00 TO STA 987+00	159	YC002	C	CIVIL - STAGE CONSTRUCTION PLAN (STAGE 1) - STA 1030+50 TO STA 1068+50
				102	CP006	C	CIVIL - STREET IMPROVEMENT PLAN - STA 987+00 TO STA 992+00	160	YC003	C	CIVIL - STAGE CONSTRUCTION PLAN (STAGE 1) - STA 1068+50 TO STA 1095+00
				103	CP007	C	CIVIL - STREET IMPROVEMENT PLAN - STA 992+00 TO STA 997+00	161	YC004	C	CIVIL - STAGE CONSTRUCTION PLAN (STAGE 2) - STA 965+00 TO STA 1002+50
				104	CP008	C	CIVIL - STREET IMPROVEMENT PLAN - STA 997+00 TO STA 1002+00	162	YC005	C	CIVIL - STAGE CONSTRUCTION PLAN (STAGE 2) - STA 1002+50 TO STA 1042+50
				105	CP009	C	CIVIL - STREET IMPROVEMENT PLAN - STA 1002+00 TO STA 1007+00	163	YC006	C	CIVIL - STAGE CONSTRUCTION PLAN (STAGE 2) - STA 1042+50 TO STA 1082+50
				106	CP010	C	CIVIL - STREET IMPROVEMENT PLAN - STA 1007+00 TO STA 1012+00	164	YC007	C	CIVIL - STAGE CONSTRUCTION PLAN (STAGE 2) - STA 1082+50 TO STA 1095+00
				107	CP011	C	CIVIL - STREET IMPROVEMENT PLAN - STA 1012+00 TO STA 1017+00	165	YC008	C	CIVIL - STAGE CONSTRUCTION PLAN (STAGE 3) - STA 965+50 TO STA 1001+50
				108	CP012	C	CIVIL - STREET IMPROVEMENT PLAN - STA 1017+00 TO STA 1022+00	166	YC009	C	CIVIL - STAGE CONSTRUCTION PLAN (STAGE 3) - STA 1001+50 TO STA 1041+50
				109	CP013	C	CIVIL - STREET IMPROVEMENT PLAN - STA 1022+00 TO STA 1027+00	167	YC010	C	CIVIL - STAGE CONSTRUCTION PLAN (STAGE 3) - STA 1041+50 TO STA 1081+50
				110	CP014	C	CIVIL - STREET IMPROVEMENT PLAN - STA 1027+00 TO STA 1032+00	168	YC011	A	CIVIL - STAGE CONSTRUCTION PLAN (STAGE 3) - STA 1081+50 TO STA 1095+00
				111	CP015	C	CIVIL - STREET IMPROVEMENT PLAN - STA 1032+00 TO STA 1035+50	169	YC012	A	CIVIL - STAGE CONSTRUCTION PLAN (STAGE 4) - STA 974+00 TO STA 1071+00
<b>RIGHT OF WAY</b>											
32	RW000	C	RIGHT OF WAY - KEYMAP								
33	RW001	C	RIGHT OF WAY - PLAN - STA 964+80 TO STA 973+00								
34	RW002	C	RIGHT OF WAY - PLAN - STA 973+00 TO STA 982+00								
35	RW003	C	RIGHT OF WAY - PLAN - STA 982+00 TO STA 991+00								
36	RW004	C	RIGHT OF WAY - PLAN - STA 991+00 TO STA 1000+00								
37	RW005	C	RIGHT OF WAY - PLAN - STA 1000+00 TO STA 1009+00								
38	RW006	C	RIGHT OF WAY - PLAN - STA 1009+00 TO STA 1018+00								
39	RW007	C	RIGHT OF WAY - PLAN - STA 1018+00 TO STA 1027+00								
40	RW008	C	RIGHT OF WAY - PLAN - STA 1027+00 TO STA 1036+00								
41	RW009	C	RIGHT OF WAY - PLAN - STA 1036+00 TO STA 1045+00								
42	RW010	C	RIGHT OF WAY - PLAN - STA 1045+00 TO STA 1054+00								
43	RW011	C	RIGHT OF WAY - PLAN - STA 1054+00 TO STA 1063+00								
44	RW012	C	RIGHT OF WAY - PLAN - STA 1063+00 TO STA 1072+00								
45	RW013	C	RIGHT OF WAY - PLAN - STA 1072+00 TO STA 1081+00								
46	RW113	C	RIGHT OF WAY - PLAN - CONSTRUCTION STAGING AREA								
47	RW014	C	RIGHT OF WAY - PLAN - STA 1081+00 TO STA 1090+00								
48	RW114	A	RIGHT OF WAY - PLAN - EASTRIDGE LOOP								
49	RW214	C	RIGHT OF WAY - PLAN - EASTRIDGE LOOP - 02								
50	RW015	C	RIGHT OF WAY - PLAN - STA 1090+00 TO STA 1095+09								
51	RW016	C	RIGHT OF WAY - PLAN - QUIMBY ROAD								
<b>CIVIL</b>											
52	CX001	C	CIVIL - TYPICAL ROADWAY SECTIONS - SB STA 965+88.41 TO STA 974+83.73								
53	CX002	C	CIVIL - TYPICAL ROADWAY SECTIONS - CN STA 74+95.21 TO SB STA 981+92.25								

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NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



**BKF100+**  
YEARS  
ENGINEERS / SURVEYORS / PLANNERS

DESIGNED: C. Chi  
CHECKED: M. Cosentino  
DRAWN: A. Hernandez  
CADD FILE NAME: 801GN005.dwg

**Santa Clara Valley**  
Transportation  
Authority

**BKF100+**  
YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/06/20  
SCALE: NTS  
SUBMITTAL DATE: 06/29/20  
BOARD APPROVAL DATE:

**EASTRIDGE TO BART REGIONAL CONNECTOR**  
**CAPITOL EXPRESSWAY LIGHT RAIL PROJECT**  
GENERAL  
SHEET INDEX - 1  
VOLUME 1 (1 OF 4)

PCA NO.: 000 CONTRACT NO.: C801 FILE LOCATION: PROJECTWISE

SHEET OF: GN005  
REVISION: C

DRAWING INDEX VOLUME 1

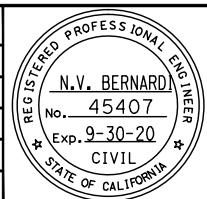
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170	YD001	B	CONSTRUCTION AREA SIGNS	229	YT050	B	TRAFFIC CONTROL PLAN - STAGE 3A - STA 1047+00 TO STA 1054+00	285	DP017	C	DRAINAGE - STORM DRAIN PLAN - STA 1039+50 TO STA 1044+00
171	YD002	B	CONSTRUCTION AREA SIGNS - DETOUR	230	YT051	B	TRAFFIC CONTROL PLAN - STAGE 3A - STA 1061+50 TO STA 1080+00	286	DP018	C	DRAINAGE - STORM DRAIN PLAN - STA 1044+00 TO STA 1048+00
172	YD003	B	CONSTRUCTION AREA SIGNS - DETOUR	231	YT052	B	TRAFFIC CONTROL PLAN - STAGE 3A - STA 1080+00 TO STA 1089+00	287	DP019	C	DRAINAGE - STORM DRAIN PLAN - STA 1048+00 TO STA 1053+00
173	YD004	B	CONSTRUCTION AREA SIGNS - DETOUR	232	YT053	B	TRAFFIC CONTROL PLAN - STAGE 3A - STA 1089+00 TO STA 1095+00	288	DP020	C	DRAINAGE - STORM DRAIN PLAN - STA 1053+00 TO STA 1058+00
174	YD005	B	CONSTRUCTION AREA SIGNS - DETOUR	233	YT054	A	TRAFFIC CONTROL PLAN - STAGE 3A - STA 993+00 TO STA 1042+00	289	DP021	C	DRAINAGE - STORM DRAIN PLAN - STA 1058+00 TO STA 1063+00
175	YD006	B	CONSTRUCTION AREA SIGNS - DETOUR	234	YT055	A	TRAFFIC CONTROL PLAN - STAGE 3A - STA 1042+00 TO STA 1053+00	290	DP022	C	DRAINAGE - STORM DRAIN PLAN - STA 1063+00 TO STA 1068+00
176	YD007	B	CONSTRUCTION AREA SIGNS - DETOUR	235	YT056	A	TRAFFIC CONTROL PLAN - STAGE 3A - STA 978+00 TO STA 988+00	291	DP023	C	DRAINAGE - STORM DRAIN PLAN - STA 1068+00 TO STA 1071+00
177	YD008	B	CONSTRUCTION AREA SIGNS - DETOUR	236	YT057	A	TRAFFIC CONTROL PLAN - STAGE 3A - STA 988+00 TO STA 998+00	292	DP024	C	DRAINAGE - STORM DRAIN PLAN - STA 1071+00 TO STA 1075+50
178	YD009	B	CONSTRUCTION AREA SIGNS - DETOUR	237	YT058	A	TRAFFIC CONTROL PLAN - STAGE 3B - STA 979+00 TO STA 987+00	293	DP025	C	DRAINAGE - STORM DRAIN PLAN - STA 1075+50 TO STA 1080+50
179	YD010	B	CONSTRUCTION AREA SIGNS - DETOUR	238	YT059	A	TRAFFIC CONTROL PLAN - STAGE 3B - STA 987+50 TO STA 1000+00	294	DP026	C	DRAINAGE - STORM DRAIN PLAN - STA 1080+50 TO STA 1085+00
180	YT001	B	TRAFFIC CONTROL PLAN - STAGE 1A - STA 964+80 TO STA 973+00	239	YT060	A	TRAFFIC CONTROL PLAN - STAGE 3B - STA 1036+00 TO STA 1043+00	295	DP126	C	DRAINAGE - STORM DRAIN PLAN - EASTRIDGE LOOP
181	YT002	B	TRAFFIC CONTROL PLAN - STAGE 1A - STA 973+00 TO STA 982+00	240	YT061	A	TRAFFIC CONTROL PLAN - STAGE 3B - STA 1048+00 TO STA 1058+00	296	DP226	A	DRAINAGE - STORM DRAIN PLAN - EASTRIDGE LOOP - 02
182	YT003	B	TRAFFIC CONTROL PLAN - STAGE 1A - STA 982+00 TO STA 991+00	241	YT062	A	TRAFFIC CONTROL PLAN - STAGE 3B - STA 1075+00 TO STA 1085+00	297	DP027	C	DRAINAGE - STORM DRAIN PLAN - STA 1085+00 TO STA 1090+00
183	YT004	B	TRAFFIC CONTROL PLAN - STAGE 1A - STA 991+00 TO STA 1000+00	242	YT063	A	TRAFFIC CONTROL PLAN - STAGE 3C - STA 1031+50 TO STA 1043+00	298	DP127	B	DRAINAGE - STORM DRAIN PLAN - EASTRIDGE LOOP - 03
184	YT005	B	TRAFFIC CONTROL PLAN - STAGE 1A - STA 1034+00 TO STA 1043+00	243	YT064	A	TRAFFIC CONTROL PLAN - STAGE 3C - STA 1045+00 TO STA 1054+00	299	DP028	C	DRAINAGE - STORM DRAIN PLAN - STA 1090+00 TO STA 1094+50
185	YT006	B	TRAFFIC CONTROL PLAN - STAGE 1A - STA 1043+00 TO STA 1052+00	244	YT065	A	TRAFFIC CONTROL PLAN - STAGE 3D - STA 1029+50 TO STA 1041+00	300	DP029	C	DRAINAGE - STORM DRAIN PLAN - STA 1094+50 TO STA 1095+10
186	YT007	B	TRAFFIC CONTROL PLAN - STAGE 1A - STA 1068+00 TO STA 1079+00	245	YT066	A	TRAFFIC CONTROL PLAN - STAGE 4 - STA 969+00 TO STA 981+00	301	DP129	C	DRAINAGE - STORM DRAIN PLAN - EASTRIDGE MALL ACCESS
187	YT008	B	TRAFFIC CONTROL PLAN - STAGE 1A - STA 1079+00 TO STA 1090+00	246	YT067	A	TRAFFIC CONTROL PLAN - STAGE 4 - STA 985+00 TO STA 997+00	302	DP030	C	DRAINAGE - STORM DRAIN PLAN - TO QUIMBY ROAD
188	YT009	B	TRAFFIC CONTROL PLAN - STAGE 1A - STA 1090+00 TO STA 1095+00	247	YT068	A	TRAFFIC CONTROL PLAN - STAGE 4 - STA 1059+00 TO STA 1070+00	303	DP031	C	DRAINAGE - STORM DRAIN PLAN - QUIMBY ROAD
189	YT010	B	TRAFFIC CONTROL PLAN - STAGE 1B - STA 973+00 TO STA 997+00	248	YT069	A	TRAFFIC CONTROL PLAN - STAGE 4 - STA 993+00 TO STA 1002+00	304	DP401	B	DRAINAGE - STORM DRAIN PROFILES
190	YT011	B	TRAFFIC CONTROL PLAN - STAGE 1C - STA 992+00 TO STA 1002+00	249	YT201	A	TRAFFIC CONTROL PLAN - TEMPORARY BIKE RAMPS - 1	305	DP402	B	DRAINAGE - STORM DRAIN PROFILES
191	YT012	B	TRAFFIC CONTROL PLAN - STAGE 1D - STA 973+00 TO STA 982+00	250	YT202	A	TRAFFIC CONTROL PLAN - TEMPORARY BIKE RAMPS - 2	306	DP403	B	DRAINAGE - STORM DRAIN PROFILES
192	YT013	B	TRAFFIC CONTROL PLAN - STAGE 2A - STA 964+80 TO STA 973+00	251	YT203	A	TRAFFIC CONTROL PLAN - TEMPORARY BIKE RAMPS - 3	307	DP404	B	DRAINAGE - STORM DRAIN PROFILES
193	YT014	B	TRAFFIC CONTROL PLAN - STAGE 2A - STA 973+00 TO STA 982+00	252	CY001	C	SIGNING AND STRIPING - PLAN - STA 964+80 TO STA 973+00	308	DP405	B	DRAINAGE - STORM DRAIN PROFILES
194	YT015	B	TRAFFIC CONTROL PLAN - STAGE 2A - STA 982+00 TO STA 991+00	253	CY002	C	SIGNING AND STRIPING - PLAN - STA 973+00 TO STA 982+00	309	DP406	B	DRAINAGE - STORM DRAIN PROFILES
195	YT016	B	TRAFFIC CONTROL PLAN - STAGE 2A - STA 991+00 TO STA 1000+00	254	CY003	C	SIGNING AND STRIPING - PLAN - STA 982+00 TO STA 991+00	310	DP407	B	DRAINAGE - STORM DRAIN PROFILES
196	YT017	B	TRAFFIC CONTROL PLAN - STAGE 2A - STA 1000+00 TO STA 1009+00	255	CY004	C	SIGNING AND STRIPING - PLAN - STA 991+00 TO STA 1000+00	311	DP408	B	DRAINAGE - STORM DRAIN PROFILES
197	YT018	B	TRAFFIC CONTROL PLAN - STAGE 2A - STA 1009+00 TO STA 1018+00	256	CY005	C	SIGNING AND STRIPING - PLAN - STA 1000+00 TO STA 1009+00	312	DP409	B	DRAINAGE - STORM DRAIN PROFILES
198	YT019	B	TRAFFIC CONTROL PLAN - STAGE 2A - STA 1018+00 TO STA 1027+00	257	CY006	C	SIGNING AND STRIPING - PLAN - STA 1009+00 TO STA 1018+00	313	DP410	B	DRAINAGE - STORM DRAIN PROFILES
199	YT020	B	TRAFFIC CONTROL PLAN - STAGE 2A - STA 1027+00 TO STA 1036+00	258	CY007	C	SIGNING AND STRIPING - PLAN - STA 1018+00 TO STA 1027+00	314	DP411	B	DRAINAGE - STORM DRAIN PROFILES
200	YT021	B	TRAFFIC CONTROL PLAN - STAGE 2A - STA 1036+00 TO STA 1045+00	259	CY008	C	SIGNING AND STRIPING - PLAN - STA 1027+00 TO STA 1036+00	315	DP412	B	DRAINAGE - STORM DRAIN PROFILES
201	YT022	B	TRAFFIC CONTROL PLAN - STAGE 2A - STA 1045+00 TO STA 1054+00	260	CY009	C	SIGNING AND STRIPING - PLAN - STA 1036+00 TO STA 1045+00	316	DP413	B	DRAINAGE - STORM DRAIN PROFILES
202	YT023	B	TRAFFIC CONTROL PLAN - STAGE 2A - STA 1054+00 TO STA 1063+00	261	CY010	C	SIGNING AND STRIPING - PLAN - STA 1045+00 TO STA 1054+00	317	DP414	A	DRAINAGE - STORM DRAIN PROFILES
203	YT024	B	TRAFFIC CONTROL PLAN - STAGE 2A - STA 1063+00 TO STA 1072+00	262	CY011	C	SIGNING AND STRIPING - PLAN - STA 1054+00 TO STA 1063+00	318	DP415	A	DRAINAGE - STORM DRAIN PROFILES
204	YT025	B	TRAFFIC CONTROL PLAN - STAGE 2A - STA 1072+00 TO STA 1081+00	263	CY012	C	SIGNING AND STRIPING - PLAN - STA 1063+00 TO STA 1072+00	319	DP416	A	DRAINAGE - STORM DRAIN PROFILES
205	YT026	B	TRAFFIC CONTROL PLAN - STAGE 2A - STA 1081+00 TO STA 1090+00	264	CY013	C	SIGNING AND STRIPING - PLAN - STA 1072+00 TO STA 1081+00	320	DP417	A	DRAINAGE - STORM DRAIN PROFILES
206	YT027	B	TRAFFIC CONTROL PLAN - STAGE 2A - STA 1090+00 TO STA 1095+10	265	CY014	C	SIGNING AND STRIPING - PLAN - STA 1081+00 TO STA 1090+00	321	DP418	A	DRAINAGE - STORM DRAIN PROFILES
207	YT028	B	TRAFFIC CONTROL PLAN - STAGE 2A - STA 973+00 TO STA 982+00	266	CY015	C	SIGNING AND STRIPING - PLAN - STA 1090+00 TO STA 1095+10	322	DP419	A	DRAINAGE - STORM DRAIN PROFILES
208	YT029	B	TRAFFIC CONTROL PLAN - STAGE 2B - STA 1060+00 TO STA 1072+00					323	DD001	C	DRAINAGE - DETAILS
209	YT030	B	TRAFFIC CONTROL PLAN - STAGE 2B - STA 1072+00 TO STA 1081+00					324	DD002	C	DRAINAGE - DETAILS
210	YT031	B	TRAFFIC CONTROL PLAN - STAGE 2C - STA 969+50 TO STA 978+50					325	DD003	C	DRAINAGE - DETAILS
211	YT032	B	TRAFFIC CONTROL PLAN - STAGE 2C - STA 978+50 TO STA 986+00					326	DD004	C	DRAINAGE - DETAILS
212	YT033	B	TRAFFIC CONTROL PLAN - STAGE 2C - STA 986+00 TO STA 996+50					327	DD005	C	DRAINAGE - DETAILS
213	YT034	B	TRAFFIC CONTROL PLAN - STAGE 2C - STA 996+50 TO STA 1007+50					328	DD006	C	DRAINAGE - DETAILS
214	YT035	B	TRAFFIC CONTROL PLAN - STAGE 2C - STA 984+00 TO STA 996+50					329	DD007	A	DRAINAGE - DETAILS
215	YT036	B	TRAFFIC CONTROL PLAN - STAGE 2C - STA 996+50 TO STA 1007+00					330	DD008	A	DRAINAGE - DETAILS
216	YT037	B	TRAFFIC CONTROL PLAN - STAGE 2C - STA 1025+00 TO STA 1036+00					331	DD009	A	DRAINAGE - DETAILS
217	YT038	B	TRAFFIC CONTROL PLAN - STAGE 2C - STA 1036+00 TO STA 1048+00					332	DD010	A	DRAINAGE - DETAILS
218	YT039	B	TRAFFIC CONTROL PLAN - STAGE 2C - STA 1038+50 TO STA 1051+00					333	DD011	A	DRAINAGE - DETAILS
219	YT040	B	TRAFFIC CONTROL PLAN - STAGE 2C - STA 1051+00 TO STA 1062+00					334	DD012	B	DRAINAGE - DETAILS - UNDERDRAIN PROFILES
220	YT041	B	TRAFFIC CONTROL PLAN - STAGE 2C - STA 1034+00 TO STA 1046+00					335	DD013	B	DRAINAGE - DETAILS - UNDERDRAIN PROFILES
221	YT042	B	TRAFFIC CONTROL PLAN - STAGE 2C - STA 1048+00 TO STA 1072+50					336	DD014	B	DRAINAGE - DETAILS - UNDERDRAIN PROFILES
222	YT043	B	TRAFFIC CONTROL PLAN - STAGE 2C - STA 1070+00 TO STA 1082+00					337	DD015	B	DRAINAGE - DETAILS - UNDERDRAIN PROFILES
223	YT044	B	TRAFFIC CONTROL PLAN - STAGE 2C - STA 1071+00 TO STA 1083+00					338	DD016	B	DRAINAGE - DETAILS - UNDERDRAIN PROFILES
224	YT045	B	TRAFFIC CONTROL PLAN - STAGE 3A - STA 969+00 TO STA 981+00					339	DD017	B	DRAINAGE - DETAILS - UNDERDRAIN PROFILES
225	YT046	B	TRAFFIC CONTROL PLAN - STAGE 3A - STA 987+00 TO STA 993+00					340	DD018	B	DRAINAGE - DETAILS - UNDERDRAIN PROFILES
226	YT047	B	TRAFFIC CONTROL PLAN - STAGE 3A - STA 993+00 TO STA 1003+00					341	DD019	B	DRAINAGE - DETAILS - UNDERDRAIN PROFILES
227	YT048	B	TRAFFIC CONTROL PLAN - STAGE 3A - STA 1027+50 TO STA 1039+00					342	DD020	B	DRAINAGE - DETAILS - UNDERDRAIN PROFILES
228	YT049	B	TRAFFIC CONTROL PLAN - STAGE 3A - STA 1039+00 TO STA 1047+00								

DRAINAGE

267	DP001	C	DRAINAGE - STORM DRAIN PLAN - STA 964+80 TO STA 967+00
268	DP002	C	DRAINAGE - STORM DRAIN PLAN - STA 967+00 TO STA 972+00
269	DP003	C	DRAINAGE - STORM DRAIN PLAN - STA 972+00 TO STA 977+00
270	DP103	C	DRAINAGE - STORM DRAIN PLAN - EXCALIBUR DRIVE
271	DP004	C	DRAINAGE - STORM DRAIN PLAN - STA 977+00 TO STA 982+00
272	DP005	C	DRAINAGE - STORM DRAIN PLAN - STA 982+00 TO STA 987+00
273	DP006	C	DRAINAGE - STORM DRAIN PLAN - STA 987+00 TO STA 992+00
274	DP007	C	DRAINAGE - STORM DRAIN PLAN - STA 992+00 TO STA 997+00
275	DP008	C	DRAINAGE - STORM DRAIN PLAN - STA 997+00 TO STA 1002+00
276	DP009	C	DRAINAGE - STORM DRAIN PLAN - STA 1002+00 TO STA 1007+00
277	DP010	C	DRAINAGE - STORM DRAIN PLAN - STA 1007+00 TO STA 1012+00
278	DP011	C	DRAINAGE - STORM DRAIN PLAN - STA 1012+00 TO STA 1017+00
279	DP012	C	DRAINAGE - STORM DRAIN PLAN - STA 1017+00 TO STA 1022+00
280	DP013	C	DRAINAGE - STORM DRAIN PLAN - STA 1022+00 TO STA 1027+00
281	DP014	C	DRAINAGE - STORM DRAIN PLAN - STA 1027+00 TO STA 1032+00
282	DP015	C	DRAINAGE - STORM DRAIN PLAN - STA 1032+00 TO STA 1035+50
283	DP016	C	DRAINAGE - STORM DRAIN PLAN - STA 1035+50 TO STA 1039+50
284	DP116	C	DRAINAGE - STORM DRAIN PLAN - OCALA AVENUE

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NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



SUBMITTED

**BKF100+**  
YEARS  
ENGINEERS / SURVEYORS / PLANNERS

DESIGNED: C. Chi  
CHECKED: M. Cosentino  
DRAWN: A. Hernandez  
CADD FILE NAME: 801GN006.dwg

Santa Clara Valley  
Transportation  
Authority

APPROVED

**BKF100+**  
YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/06/20  
SCALE: NTS  
SUBMITTAL DATE: 06/29/20  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
GENERAL  
SHEET INDEX - 2  
VOLUME 1 (2 OF 4)

SHEET OF: GN006  
REVISION: C

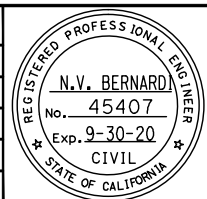
PLA NO: 000 CONTRACT NO: C801 FILE LOCATION: PROJECTWISE

DRAWING INDEX VOLUME 1

SHT NO	DWG NO	REV	TITLE	SHT NO	DWG NO	REV	TITLE	SHT NO	DWG NO	REV	TITLE
<b>UTILITIES</b>				<b>TRACK</b>				<b>LANDSCAPE</b>			
343	UZ001	C	UTILITIES - EXISTING UTILITIES PLAN AND DATA - STA 964+80 TO STA 973+00	399	TG001	C	TRACK - TRACK PLAN AND PROFILE - STA 964+80 TO STA 973+00	452	ET016	C	ELECTRICAL - TRAFFIC SIGNAL PLAN - CAPITOL AVENUE/WILBUR AVENUE
344	UZ002	C	UTILITIES - EXISTING UTILITIES PLAN AND DATA - STA 973+00 TO STA 981+00	400	TG002	C	TRACK - TRACK PLAN AND PROFILE - STA 973+00 TO STA 982+00	453	ET017	B	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 2A, 2B, AND 2C - STA 991+00 TO STA 1000+00
345	UZ003	C	UTILITIES - EXISTING UTILITIES PLAN AND DATA - STA 982+00 TO STA 991+00	401	TG003	C	TRACK - TRACK PLAN AND PROFILE - STA 982+00 TO STA 991+00	454	ET018	B	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 2A, 2B, AND 2C - STA 1036+00 TO STA 1045+00
346	UZ004	C	UTILITIES - EXISTING UTILITIES PLAN AND DATA - STA 991+00 TO STA 1000+00	402	TG004	C	TRACK - TRACK PLAN AND PROFILE - STA 991+00 TO STA 1000+00	455	ET019	B	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 2A, 2B, AND 2C - STA 1045+00 TO STA 1054+00
347	UZ005	C	UTILITIES - EXISTING UTILITIES PLAN AND DATA - STA 1000+00 TO STA 1009+00	403	TG005	C	TRACK - TRACK PLAN AND PROFILE - STA 1000+00 TO STA 1009+00	456	ET020	B	TEMPORARY TRAFFIC SIGNAL PLAN - STAGE 2A, 2B, AND 2C - STA 1072+00 TO STA 1081+00
348	UZ006	C	UTILITIES - EXISTING UTILITIES PLAN AND DATA - STA 1009+00 TO STA 1018+00	404	TG006	C	TRACK - TRACK PLAN AND PROFILE - STA 1009+00 TO STA 1018+00	457	EF800	A	ELECTRICAL GENERAL
349	UZ007	C	UTILITIES - EXISTING UTILITIES PLAN AND DATA - STA 1018+00 TO STA 1027+00	405	TG007	C	TRACK - TRACK PLAN AND PROFILE - STA 1018+00 TO STA 1027+00	458	EF801	B	FIBER OPTIC SYSTEM - STA 973+00 TO STA 982+00
350	UZ008	C	UTILITIES - EXISTING UTILITIES PLAN AND DATA - STA 1027+00 TO STA 1036+00	406	TG008	C	TRACK - TRACK PLAN AND PROFILE - STA 1027+00 TO STA 1036+00	459	EF802	B	FIBER OPTIC SYSTEM - STA 982+00 TO STA 991+00
351	UZ009	C	UTILITIES - EXISTING UTILITIES PLAN AND DATA - STA 1036+00 TO STA 1045+00	407	TG009	C	TRACK - TRACK PLAN AND PROFILE - STA 1036+00 TO STA 1045+00	460	EF803	B	FIBER OPTIC SYSTEM - STA 991+00 TO STA 1000+00
352	UZ010	C	UTILITIES - EXISTING UTILITIES PLAN AND DATA - STA 1045+00 TO STA 1054+00	408	TG010	C	TRACK - TRACK PLAN AND PROFILE - STA 1045+00 TO STA 1054+00	461	EF804	B	FIBER OPTIC SYSTEM - STA 1000+00 TO STA 1009+00
353	UZ011	C	UTILITIES - EXISTING UTILITIES PLAN AND DATA - STA 1054+00 TO STA 1063+00	409	TG011	C	TRACK - TRACK PLAN AND PROFILE - STA 1054+00 TO STA 1063+00	462	EF805	B	FIBER OPTIC SYSTEM - STA 1009+00 TO STA 1018+00
354	UZ012	C	UTILITIES - EXISTING UTILITIES PLAN AND DATA - STA 1063+00 TO STA 1072+00	410	TG012	C	TRACK - TRACK PLAN AND PROFILE - STA 1063+00 TO STA 1072+00	463	EF806	B	FIBER OPTIC SYSTEM - STA 1018+00 TO STA 1027+00
355	UZ013	C	UTILITIES - EXISTING UTILITIES PLAN AND DATA - STA 1072+00 TO STA 1081+00	411	TG013	C	TRACK - TRACK PLAN AND PROFILE - STA 1072+00 TO STA 1081+00	464	EF807	B	FIBER OPTIC SYSTEM - STA 1027+00 TO STA 1036+00
356	UZ014	C	UTILITIES - EXISTING UTILITIES PLAN AND DATA - STA 1081+00 TO STA 1090+00	412	TG014	C	TRACK - TRACK PLAN AND PROFILE - STA 1081+00 TO STA 1090+00	465	EF808	B	FIBER OPTIC SYSTEM - STA 1036+00 TO STA 1045+00
357	UZ114	A	UTILITIES - EXISTING UTILITIES PLAN AND DATA - EASTRIDGE LOOP	413	TG015	C	TRACK - TRACK PLAN AND PROFILE - STA 1090+00 TO STA 1096+00	466	EF809	B	FIBER OPTIC SYSTEM - STA 1045+00 TO STA 1054+00
358	UZ015	C	UTILITIES - EXISTING UTILITIES PLAN AND DATA - STA 1090+00 TO STA 1095+11	414	TG315	C	TRACK - TRACK PLAN AND PROFILE - TRACK T3 AT EASTRIDGE STATION	467	EF810	B	FIBER OPTIC SYSTEM - STA 1054+00 TO STA 1063+00
359	UZ016	A	UTILITIES - EXISTING UTILITIES PLAN AND DATA - QUIMBY ROAD	415	TT301	C	TRACKWORK - TRACK SCHEMATICS - STA 964+80 TO STA 989+50	468	EF811	B	FIBER OPTIC SYSTEM - STA 1063+00 TO STA 1072+00
360	UP001	C	UTILITIES - COMPOSITE UTILITY RELOCATION PLAN - STA 964+80 TO STA 973+00	416	TT302	C	TRACKWORK - TRACK SCHEMATICS - STA 989+50 TO STA 1017+00	469	EF812	B	FIBER OPTIC SYSTEM - STA 1072+00 TO STA 1081+00
361	UP002	C	UTILITIES - COMPOSITE UTILITY RELOCATION PLAN - STA 973+00 TO STA 981+00	417	TT303	C	TRACKWORK - TRACK SCHEMATICS - STA 1017+00 TO STA 1044+00	470	EF813	B	FIBER OPTIC SYSTEM - STA 1081+00 TO STA 1090+00
362	UP003	C	UTILITIES - COMPOSITE UTILITY RELOCATION PLAN - STA 982+00 TO STA 991+00	418	TT304	C	TRACKWORK - TRACK SCHEMATICS - STA 1044+00 TO STA 1071+00	471	EF814	B	FIBER OPTIC SYSTEM - STA 1090+00 TO STA 1095+00
363	UP004	C	UTILITIES - COMPOSITE UTILITY RELOCATION PLAN - STA 991+00 TO STA 1000+00	419	TT305	C	TRACKWORK - TRACK SCHEMATICS - STA 1071+00 TO STA 1095+10.22	472	EF815	B	FIBER OPTIC SYSTEM
364	UP005	C	UTILITIES - COMPOSITE UTILITY RELOCATION PLAN - STA 1000+00 TO STA 1009+00	420	TD301	C	TRACK - TYPICAL TRACK SECTIONS - SHEET 1 OF 3	473	EF816	B	FIBER OPTIC PULLBOX - SPLICING DETAIL
365	UP006	C	UTILITIES - COMPOSITE UTILITY RELOCATION PLAN - STA 1009+00 TO STA 1018+00	421	TD302	C	TRACK - TYPICAL TRACK SECTIONS - SHEET 2 OF 3	474	EF817	B	FIBER OPTIC DETAILS
366	UP007	C	UTILITIES - COMPOSITE UTILITY RELOCATION PLAN - STA 1018+00 TO STA 1027+00	422	TD303	C	TRACK - TYPICAL TRACK SECTIONS - SHEET 3 OF 3	475	EL101	B	STREET LIGHTING (CITY) - STA 964+80 TO STA 973+00
367	UP008	C	UTILITIES - COMPOSITE UTILITY RELOCATION PLAN - STA 1027+00 TO STA 1036+00	423	TD304	B	TRACK - SPECIAL TRACKWORK DETAILS - #8 TURNOUT - BALLASTED	476	EL102	B	STREET LIGHTING (CITY) - STA 973+00 TO STA 982+00
368	UP009	C	UTILITIES - COMPOSITE UTILITY RELOCATION PLAN - STA 1036+00 TO STA 1045+00	424	TD305	B	TRACK - SPECIAL TRACKWORK DETAILS - #8 DOUBLE CROSSOVER - BALLASTED	477	EL103	B	STREET LIGHTING (CITY) - STA 982+00 TO STA 991+00
369	UP010	C	UTILITIES - COMPOSITE UTILITY RELOCATION PLAN - STA 1045+00 TO STA 1054+00	425	TD306	B	TRACK - SPECIAL TRACKWORK DETAILS - #8 DOUBLE CROSSOVER DIAMOND LAYOUT	478	EL104	B	STREET LIGHTING (CITY) - STA 991+00 TO STA 1000+00
370	UP011	C	UTILITIES - COMPOSITE UTILITY RELOCATION PLAN - STA 1054+00 TO STA 1063+00	426	TD307	B	TRACK - SPECIAL TRACKWORK DETAILS - #4 TURNOUT - BALLASTED	479	EL105	B	STREET LIGHTING (CITY) - STA 1000+00 TO STA 1009+00
371	UP012	C	UTILITIES - COMPOSITE UTILITY RELOCATION PLAN - STA 1063+00 TO STA 1072+00	427	TD308	B	TRACK - MISCELLANEOUS TRACKWORK DETAILS - TRACK CONCRETE TIES	480	EL106	B	STREET LIGHTING (CITY) - STA 1009+00 TO STA 1018+00
372	UP013	C	UTILITIES - COMPOSITE UTILITY RELOCATION PLAN - STA 1072+00 TO STA 1081+00	428	TD309	B	TRACK - MISCELLANEOUS TRACKWORK DETAILS - EMERGENCY GUARD RAILS	481	EL107	B	STREET LIGHTING (CITY) - STA 1018+00 TO STA 1027+00
373	UP014	C	UTILITIES - COMPOSITE UTILITY RELOCATION PLAN - STA 1081+00 TO STA 1090+00	429	TD310	B	TRACK - MISCELLANEOUS TRACKWORK DETAILS - DIRECT FIXATION TRACK CONCRETE PEDESTAL	482	EL108	B	STREET LIGHTING (CITY) - STA 1027+00 TO STA 1036+00
374	UP114	A	UTILITIES - COMPOSITE UTILITY RELOCATION PLAN - EASTRIDGE LOOP	430	TD311	B	TRACK - MISCELLANEOUS TRACKWORK DETAILS - INSULATED RAIL JOINT	483	EL109	B	STREET LIGHTING (CITY) - STA 1036+00 TO STA 1045+00
375	UP015	C	UTILITIES - COMPOSITE UTILITY RELOCATION PLAN - STA 1090+00 TO STA 1095+11	431	TD312	B	TRACK - MISCELLANEOUS TRACKWORK DETAILS - STATION PLATFORM ANCHORING	484	EL110	B	STREET LIGHTING (CITY) - STA 1045+00 TO STA 1054+00
376	UP016	A	UTILITIES - COMPOSITE UTILITY RELOCATION PLAN - QUIMBY ROAD	432	TD313	B	TRACK - MISCELLANEOUS TRACKWORK DETAILS - GRADE CROSSING PANELS	485	EL111	B	STREET LIGHTING (CITY) - STA 1054+00 TO STA 1063+00
377	UP151	A	UTILITIES - COMPOSITE UTILITY RELOCATION PLAN - PG&E SERVICE SECTION	433	TD314	B	TRACK - MISCELLANEOUS TRACKWORK DETAILS - RAIL FASTENING DETAILS	486	EL112	B	STREET LIGHTING (CITY) - STA 1063+00 TO STA 1072+00
378	UP301	C	UTILITIES - SANITARY SEWER, WATER PLAN & PROFILE - STA 964+80 TO STA 973+00	434	TD315	B	TRACK - MISCELLANEOUS TRACKWORK DETAILS - TRACK REMOVAL AND SALVAGE	487	EL113	B	STREET LIGHTING (CITY) - STA 1072+00 TO STA 1081+00
379	UP302	C	UTILITIES - SANITARY SEWER, WATER PLAN & PROFILE - STA 973+00 TO STA 981+00	435	TD316	A	TRACK - MISCELLANEOUS TRACKWORK DETAILS - T-3 TRACK AT EASTRIDGE STATION	488	EL114	B	STREET LIGHTING (CITY) - STA 1081+00 TO STA 1090+00
380	UP303	C	UTILITIES - SANITARY SEWER, WATER PLAN & PROFILE - STA 982+00 TO STA 991+00	436	TD316	A	TRACK - MISCELLANEOUS TRACKWORK DETAILS - EMERGENCY AC GRADE CROSSING	489	EL115	B	STREET LIGHTING (CITY) - STA 1090+00 TO STA 1095+10
381	UP304	C	UTILITIES - SANITARY SEWER, WATER PLAN & PROFILE - STA 991+00 TO STA 1000+00					490	EL201	A	EASTRIDGE TRANSIT CENTER - ELECTRICAL PLAN - STA 1081+00 TO STA 1086+00
382	UP305	C	UTILITIES - SANITARY SEWER, WATER PLAN & PROFILE - STA 1000+00 TO STA 1009+00					491	EL202	B	EASTRIDGE TRANSIT CENTER - ELECTRICAL PLAN - EASTRIDGE LOOP
383	UP306	C	UTILITIES - SANITARY SEWER, WATER PLAN & PROFILE - STA 1009+00 TO STA 1018+00					492	EL203	B	EASTRIDGE TRANSIT CENTER - ELECTRICAL PLAN - STA 1086+00 TO STA 1091+00
384	UP307	C	UTILITIES - SANITARY SEWER, WATER PLAN & PROFILE - STA 1018+00 TO STA 1027+00					493	EL204	B	EASTRIDGE TRANSIT CENTER - ELECTRICAL PLAN - STA 1091+00 TO STA 1095+00
385	UP308	C	UTILITIES - SANITARY SEWER, WATER PLAN & PROFILE - STA 1027+00 TO STA 1036+00								
386	UP309	C	UTILITIES - SANITARY SEWER, WATER PLAN & PROFILE - STA 1036+00 TO STA 1045+00								
387	UP310	C	UTILITIES - SANITARY SEWER, WATER PLAN & PROFILE - STA 1045+00 TO STA 1054+00								
388	UP311	C	UTILITIES - SANITARY SEWER, WATER PLAN & PROFILE - STA 1054+00 TO STA 1063+00								
389	UP312	C	UTILITIES - SANITARY SEWER, WATER PLAN & PROFILE - STA 1063+00 TO STA 1072+00								
390	UP313	C	UTILITIES - SANITARY SEWER, WATER PLAN & PROFILE - STA 1072+00 TO STA 1081+00								
391	UP314	C	UTILITIES - SANITARY SEWER, WATER PLAN & PROFILE - STA 1081+00 TO STA 1090+00								
392	UP315	C	UTILITIES - SANITARY SEWER, WATER PLAN & PROFILE - STA 1090+00 TO STA 1095+11								
393	UP316	A	UTILITIES - SANITARY SEWER, WATER PLAN & PROFILE - QUIMBY ROAD								
394	UP401	B	UTILITIES - SANITARY SEWER & WATER - DETAILS - 1								
395	UP402	B	UTILITIES - SANITARY SEWER & WATER - DETAILS - 2								
396	UP403	A	UTILITIES - SANITARY SEWER & WATER - DETAILS - 3								
397	UP404	A	UTILITIES - SANITARY SEWER & WATER - DETAILS - 4								
398	UP405	A	UTILITIES - SANITARY SEWER & WATER - DETAILS - 5								

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NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



SUBMITTED

**BKF100+**  
YEARS  
ENGINEERS / SURVEYORS / PLANNERS

DESIGNED: C. Chi  
CHECKED: M. Cosentino  
DRAWN: A. Hernandez  
CADD FILE NAME: 801GN007.dwg

APPROVED

**BKF100+**  
YEARS  
ENGINEERS / SURVEYORS / PLANNERS

**Santa Clara Valley Transportation Authority**

CADD FILE DATE: 03/06/20  
SCALE: NTS  
SUBMITTAL DATE: 06/29/20  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
GENERAL  
SHEET INDEX - 3  
VOLUME 1 (3 OF 4)

PCA NO.: 000  
CONTRACT NO.: C801  
FILE LOCATION: PROJECTWISE

SHEET	OF
GN007	C



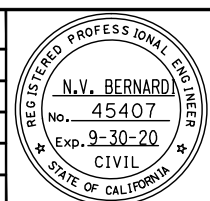


**DRAWING INDEX VOLUME 2**

SHT NO	DWG NO	REV	TITLE	SHT NO	DWG NO	REV	TITLE	SHT NO	DWG NO	REV	TITLE
<b>GENERAL</b>											
1	GN001	C	GENERAL - TITLE	53	SP345	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - DECK CONTOURS - FRAME 4	111	SU327	C	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - FOUNDATION PLAN - FRAME 27
2	GN002	C	GENERAL - KEYMAP - 40 - SCALE	54	SP346	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - DECK CONTOURS - FRAME 5	112	SU328	C	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - FOUNDATION PLAN - FRAME 28
3	GN003	C	GENERAL - KEYMAP - 20 - SCALE	55	SP347	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - DECK CONTOURS - FRAME 6	113	SU329	C	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - FOUNDATION PLAN - FRAME 29
4	GN004	C	GENERAL - DESIGN DRAWING VOLUMES - LAYOUT AND ORGANIZATION	56	SP348	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - DECK CONTOURS - FRAME 7	114	SU330	C	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - FOUNDATION PLAN - FRAME 30
5	GN009	B	GENERAL - SHEET INDEX - 5 - VOLUME 2 (1 OF 3)	57	SP349	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - DECK CONTOURS - FRAME 8	115	SU331	C	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - FOUNDATION PLAN - FRAME 31
6	GN010	B	GENERAL - SHEET INDEX - 6 - VOLUME 2 (2 OF 3)	58	SP350	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - DECK CONTOURS - FRAME 9	116	SU332	C	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - FOUNDATION PLAN - FRAME 32
7	GN011	B	GENERAL - SHEET INDEX - 7 - VOLUME 2 (3 OF 3)	59	SP351	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - DECK CONTOURS - FRAME 10	117	SU333	C	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - FOUNDATION PLAN - FRAME 33
				60	SP352	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - DECK CONTOURS - FRAME 11	118	SU334	C	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - FOUNDATION PLAN - FRAME 34
				61	SP353	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - DECK CONTOURS - FRAME 12	119	SU335	C	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - FOUNDATION PLAN - FRAME 35
				62	SP354	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - DECK CONTOURS - FRAME 13				
				63	SP355	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - DECK CONTOURS - FRAME 14	120	SC301	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ABUTMENT 1 LAYOUT
				64	SP356	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - DECK CONTOURS - FRAME 15				
				65	SP357	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - DECK CONTOURS - FRAME 16	121	SC302	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ABUTMENT 76 LAYOUT
				66	SP358	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - DECK CONTOURS - FRAME 17				
				67	SP359	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - DECK CONTOURS - FRAME 18	122	SC303	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ABUTMENT DETAILS No. 1
				68	SP360	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - DECK CONTOURS - FRAME 19	123	SC304	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ABUTMENT DETAILS No. 2
				69	SP361	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - DECK CONTOURS - FRAME 20	124	SC305	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ABUTMENT DETAILS No. 3
				70	SP362	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - DECK CONTOURS - FRAME 21				
				71	SP363	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - DECK CONTOURS - FRAME 22	125	SC306	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - BENT DETAILS No. 1
				72	SP364	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - DECK CONTOURS - FRAME 23	126	SC307	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - BENT DETAILS No. 2
				73	SP365	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - DECK CONTOURS - FRAME 24	127	SC308	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - BENT DETAILS No. 3
				74	SP366	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - DECK CONTOURS - FRAME 25	128	SC309	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - BENT DETAILS No. 4
				75	SP367	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - DECK CONTOURS - FRAME 26	129	SC310	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - BENT DETAILS No. 5
				76	SP368	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - DECK CONTOURS - FRAME 27	130	SC311	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - BENT DETAILS No. 6
				77	SP369	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - DECK CONTOURS - FRAME 28	131	SC312	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - BENT DETAILS No. 7
				78	SP370	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - DECK CONTOURS - FRAME 29	132	SC313	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - BENT DETAILS No. 8
				79	SP371	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - DECK CONTOURS - FRAME 30	133	SC314	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - BENT DETAILS No. 9
				80	SP372	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - DECK CONTOURS - FRAME 31	134	SC315	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - BENT DETAILS No. 10
				81	SP373	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - DECK CONTOURS - FRAME 32	135	SC316	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - BENT DETAILS No. 11
				82	SP374	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - DECK CONTOURS - FRAME 33	136	SC317	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - BENT DETAILS No. 12
				83	SP375	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - DECK CONTOURS - FRAME 34	137	SC318	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - BENT DETAILS No. 13
				84	SP376	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - DECK CONTOURS - FRAME 35	138	SC319	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - BENT DETAILS No. 14
								139	SC320	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - BENT DETAILS No. 15
				85	SU301	C	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - FOUNDATION PLAN - FRAME 1	140	SC321	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - BENT DETAILS No. 16
				86	SU302	C	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - FOUNDATION PLAN - FRAME 2	141	SC322	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - BENT DETAILS No. 17
				87	SU303	C	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - FOUNDATION PLAN - FRAME 3	142	SC323	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - BENT DETAILS No. 18
				88	SU304	C	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - FOUNDATION PLAN - FRAME 4	143	SC324	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - BENT DETAILS No. 19
				89	SU305	C	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - FOUNDATION PLAN - FRAME 5	144	SC325	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - BENT DETAILS No. 20
				90	SU306	C	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - FOUNDATION PLAN - FRAME 6	145	SC326	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - BENT DETAILS No. 21
				91	SU307	C	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - FOUNDATION PLAN - FRAME 7	146	SC327	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - BENT DETAILS No. 22
				92	SU308	C	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - FOUNDATION PLAN - FRAME 8	147	SC328	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - BENT DETAILS No. 23
				93	SU309	C	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - FOUNDATION PLAN - FRAME 9	148	SC329	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - BENT DETAILS No. 24
				94	SU310	C	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - FOUNDATION PLAN - FRAME 10	149	SC330	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - BENT DETAILS No. 25
				95	SU311	C	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - FOUNDATION PLAN - FRAME 11	150	SC331	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - BENT DETAILS No. 26
				96	SU312	C	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - FOUNDATION PLAN - FRAME 12				
				97	SU313	C	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - FOUNDATION PLAN - FRAME 13	151	SC332	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - FOOTING DETAILS No. 1
				98	SU314	C	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - FOUNDATION PLAN - FRAME 14	152	SC333	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - FOOTING DETAILS No. 2
				99	SU315	C	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - FOUNDATION PLAN - FRAME 15	153	SC334	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - FOOTING DETAILS No. 3
				100	SU316	C	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - FOUNDATION PLAN - FRAME 16	154	SC335	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - FOOTING DETAILS No. 4
				101	SU317	C	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - FOUNDATION PLAN - FRAME 17	155	SC336	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - FOOTING DETAILS No. 5
				102	SU318	C	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - FOUNDATION PLAN - FRAME 18	156	SC337	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - FOOTING DETAILS No. 6
				103	SU319	C	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - FOUNDATION PLAN - FRAME 19				
				104	SU320	C	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - FOUNDATION PLAN - FRAME 20	157	SC338	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - COLUMN DETAILS No. 1
				105	SU321	C	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - FOUNDATION PLAN - FRAME 21	158	SC339	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - COLUMN DETAILS No. 2
				106	SU322	C	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - FOUNDATION PLAN - FRAME 22	159	SC340	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - COLUMN DETAILS No. 3
				107	SU323	C	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - FOUNDATION PLAN - FRAME 23				
				108	SU324	C	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - FOUNDATION PLAN - FRAME 24	160	SC341	A	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - BENT CAP 74 & 75 REINF PLAN
				109	SU325	C	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - FOUNDATION PLAN - FRAME 25				
				110	SU326	C	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - FOUNDATION PLAN - FRAME 26				

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NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



**BKF100+**  
YEARS  
ENGINEERS / SURVEYORS / PLANNERS

DESIGNED: C. Chi      CHECKED: M. Cosentino

DRAWN: A. Hernandez      CADD FILE NAME: 801GN009.dwg



**BKF100+**  
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ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/06/20      SCALE: NTS

SUBMITTAL DATE: 06/29/20      BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT		
GENERAL SHEET INDEX - 5 VOLUME 2 (1 OF 3)		
PCA NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE

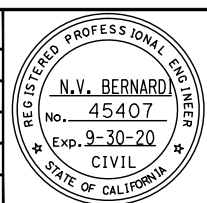
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DRAWING INDEX VOLUME 2

SHT NO	DWG NO	REV	TITLE	SHT NO	DWG NO	REV	TITLE	SHT NO	DWG NO	REV	TITLE
161	SR301	C	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - TYPICAL SECTIONS No. 1	219	SR361	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL SOFFIT REINFORCEMENT - FRAME 15	275	SR417	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - GIRDER DETAILS No. 1
162	SR302	C	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - TYPICAL SECTIONS No. 2	220	SR362	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL SOFFIT REINFORCEMENT - FRAME 16	276	SR418	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - GIRDER DETAILS No. 2
163	SR303	C	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - TYPICAL SECTIONS No. 3	221	SR363	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL SOFFIT REINFORCEMENT - FRAME 17	277	SR419	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - GIRDER DETAILS No. 3
164	SR304	C	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - TYPICAL SECTIONS No. 4	222	SR364	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL SOFFIT REINFORCEMENT - FRAME 18	278	SR420	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - GIRDER DETAILS No. 4
165	SR305	C	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - TYPICAL SECTIONS No. 5	223	SR365	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL SOFFIT REINFORCEMENT - FRAME 19	279	SR421	A	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - GIRDER DETAILS No. 5
166	SR306	C	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - TYPICAL SECTIONS No. 6	224	SR366	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL SOFFIT REINFORCEMENT - FRAME 20	280	SR422	A	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - GIRDER DETAILS No. 6
167	SR307	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - TYPICAL SECTIONS No. 7	225	SR367	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL SOFFIT REINFORCEMENT - FRAME 21	281	SR425	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - PC POST TENSIONED WIDE FLANGE GIRDER DETAILS No. 1
168	SR310	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - GIRDER LAYOUT - FRAME 1	226	SR368	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL SOFFIT REINFORCEMENT - FRAME 22	282	SR426	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - PC POST TENSIONED WIDE FLANGE GIRDER DETAILS No. 2
169	SR311	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - GIRDER LAYOUT - FRAME 2	227	SR369	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL SOFFIT REINFORCEMENT - FRAME 23	283	SR427	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - PC POST TENSIONED WIDE FLANGE GIRDER DETAILS No. 3
170	SR312	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - GIRDER LAYOUT - FRAME 3	228	SR370	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL SOFFIT REINFORCEMENT - FRAME 24				
171	SR313	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - GIRDER LAYOUT - FRAME 4	229	SR371	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL SOFFIT REINFORCEMENT - FRAME 25				
172	SR314	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - GIRDER LAYOUT - FRAME 5	230	SR372	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL SOFFIT REINFORCEMENT - FRAME 26	284	SR428	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - HINGE DETAILS No. 1
173	SR315	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - GIRDER LAYOUT - FRAME 6	231	SR373	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL SOFFIT REINFORCEMENT - FRAME 27	285	SR429	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - HINGE DETAILS No. 2
174	SR316	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - GIRDER LAYOUT - FRAME 7	232	SR374	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL SOFFIT REINFORCEMENT - FRAME 28	286	SR430	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - HINGE DETAILS No. 3
175	SR317	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - GIRDER LAYOUT - FRAME 8-1	233	SR375	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL SOFFIT REINFORCEMENT - FRAME 29	287	SR431	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - HINGE DETAILS No. 4
176	SR318	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - GIRDER LAYOUT - FRAME 8-2	234	SR376	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL SOFFIT REINFORCEMENT - FRAME 30	288	SR432	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - HINGE DETAILS No. 5
177	SR319	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - GIRDER LAYOUT - FRAME 9-1	235	SR377	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL SOFFIT REINFORCEMENT - FRAME 31	289	SR433	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - HINGE DETAILS No. 6
178	SR320	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - GIRDER LAYOUT - FRAME 9-2	236	SR378	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL SOFFIT REINFORCEMENT - FRAME 32	290	SR435	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - HINGE DETAILS No. 8
179	SR321	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - GIRDER LAYOUT - FRAME 10	237	SR379	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL SOFFIT REINFORCEMENT - FRAME 33	291	SR436	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - HINGE DETAILS No. 9
180	SR322	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - GIRDER LAYOUT - FRAME 11	238	SR380	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL SOFFIT REINFORCEMENT - FRAME 34	292	SR437	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - HINGE DETAILS No. 10
181	SR323	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - GIRDER LAYOUT - FRAME 12	239	SR381	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL SOFFIT REINFORCEMENT - FRAME 35	293	SR438	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - HINGE DETAILS No. 11
182	SR324	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - GIRDER LAYOUT - FRAME 13	240	SR382	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL DECK REINFORCEMENT - FRAME 1	294	SR439	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - HINGE DETAILS No. 12
183	SR325	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - GIRDER LAYOUT - FRAME 14	241	SR383	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL DECK REINFORCEMENT - FRAME 2	295	SR440	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - HINGE DETAILS No. 13
184	SR326	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - GIRDER LAYOUT - FRAME 15	242	SR384	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL DECK REINFORCEMENT - FRAME 3	296	SR441	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - HINGE BEARING DETAILS
185	SR327	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - GIRDER LAYOUT - FRAME 16	243	SR385	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL DECK REINFORCEMENT - FRAME 4				
186	SR328	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - GIRDER LAYOUT - FRAME 17	244	SR386	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL DECK REINFORCEMENT - FRAME 5	297	SR442	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - HINGE RESTRAINER DETAILS No. 1
187	SR329	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - GIRDER LAYOUT - FRAME 18	245	SR387	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL DECK REINFORCEMENT - FRAME 6	298	SR443	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - HINGE RESTRAINER DETAILS No. 2
188	SR330	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - GIRDER LAYOUT - FRAME 19	246	SR388	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL DECK REINFORCEMENT - FRAME 7				
189	SR331	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - GIRDER LAYOUT - FRAME 20	247	SR389	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL DECK REINFORCEMENT - FRAME 8	299	SR444	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - JOINT SEAL ASSEMBLY MR = 4" MAX
190	SR332	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - GIRDER LAYOUT - FRAME 21	248	SR390	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL DECK REINFORCEMENT - FRAME 9	300	SR445	A	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - JOINT SEAL ASSEMBLY MR > 4"
191	SR333	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - GIRDER LAYOUT - FRAME 22	249	SR391	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL DECK REINFORCEMENT - FRAME 10				
192	SR334	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - GIRDER LAYOUT - FRAME 23	250	SR392	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL DECK REINFORCEMENT - FRAME 11	301	SD301	A	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - DRAINAGE PLAN No. 1
193	SR335	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - GIRDER LAYOUT - FRAME 24	251	SR393	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL DECK REINFORCEMENT - FRAME 12	302	SD302	A	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - DRAINAGE PLAN No. 2
194	SR336	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - GIRDER LAYOUT - FRAME 25	252	SR394	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL DECK REINFORCEMENT - FRAME 13	303	SD303	A	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - DRAINAGE PLAN No. 3
195	SR337	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - GIRDER LAYOUT - FRAME 26	253	SR395	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL DECK REINFORCEMENT - FRAME 14	304	SD304	A	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - DRAINAGE PLAN No. 4
196	SR338	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - GIRDER LAYOUT - FRAME 27	254	SR396	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL DECK REINFORCEMENT - FRAME 15	305	SD305	A	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - DRAINAGE PLAN No. 5
197	SR339	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - GIRDER LAYOUT - FRAME 28	255	SR397	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL DECK REINFORCEMENT - FRAME 16	306	SD306	A	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - DRAINAGE PLAN No. 6
198	SR340	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - GIRDER LAYOUT - FRAME 29	256	SR398	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL DECK REINFORCEMENT - FRAME 17	307	SD307	A	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - DRAINAGE PLAN No. 7
199	SR341	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - GIRDER LAYOUT - FRAME 30	257	SR399	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL DECK REINFORCEMENT - FRAME 18	308	SD308	A	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - DRAINAGE PLAN No. 8
200	SR342	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - GIRDER LAYOUT - FRAME 31	258	SR400	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL DECK REINFORCEMENT - FRAME 19	309	SD309	A	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - DRAINAGE PLAN No. 9
201	SR343	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - GIRDER LAYOUT - FRAME 32	259	SR401	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL DECK REINFORCEMENT - FRAME 20				
202	SR344	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - GIRDER LAYOUT - FRAME 33	260	SR402	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL DECK REINFORCEMENT - FRAME 21	310	SD310	A	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - DRAINAGE PLAN No. 10
203	SR345	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - GIRDER LAYOUT - FRAME 34	261	SR403	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL DECK REINFORCEMENT - FRAME 22	311	SD311	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - DRAINAGE DETAILS No. 1
204	SR346	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - GIRDER LAYOUT - FRAME 35	262	SR404	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL DECK REINFORCEMENT - FRAME 23	312	SD312	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - DRAINAGE DETAILS No. 2
205	SR347	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL SOFFIT REINFORCEMENT - FRAME 1	263	SR405	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL DECK REINFORCEMENT - FRAME 24	313	SD313	A	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - TEST PILE DETAILS
206	SR348	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL SOFFIT REINFORCEMENT - FRAME 2	264	SR406	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL DECK REINFORCEMENT - FRAME 25				
207	SR349	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL SOFFIT REINFORCEMENT - FRAME 3	265	SR407	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL DECK REINFORCEMENT - FRAME 26	314	SD314	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - PILE DETAILS No. 1
208	SR350	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL SOFFIT REINFORCEMENT - FRAME 4	266	SR408	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL DECK REINFORCEMENT - FRAME 27	315	SD315	A	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - PILE DETAILS No. 2
209	SR351	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL SOFFIT REINFORCEMENT - FRAME 5	267	SR409	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL DECK REINFORCEMENT - FRAME 28				
210	SR352	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL SOFFIT REINFORCEMENT - FRAME 6	268	SR410	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL DECK REINFORCEMENT - FRAME 29	316	SD316	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - SIGNAL FOUNDATION DETAILS No. 1
211	SR353	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL SOFFIT REINFORCEMENT - FRAME 7	269	SR411	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL DECK REINFORCEMENT - FRAME 30	317	SD317	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - SIGNAL FOUNDATION DETAILS No. 2
212	SR354	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL SOFFIT REINFORCEMENT - FRAME 8	270	SR412	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL DECK REINFORCEMENT - FRAME 31				
213	SR355	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL SOFFIT REINFORCEMENT - FRAME 9	271	SR413	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL DECK REINFORCEMENT - FRAME 32	318	SD318	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - TES FOUNDATION DETAILS No. 1
214	SR356	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL SOFFIT REINFORCEMENT - FRAME 10	272	SR414	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL DECK REINFORCEMENT - FRAME 33	319	SD319	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - TES FOUNDATION DETAILS No. 2
215	SR357	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL SOFFIT REINFORCEMENT - FRAME 11	273	SR415	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL DECK REINFORCEMENT - FRAME 34	320	SD320	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - TES FOUNDATION DETAILS No. 3
216	SR358	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL SOFFIT REINFORCEMENT - FRAME 12	274	SR416	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL DECK REINFORCEMENT - FRAME 35	321	SD321	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - TES FOUNDATION DETAILS No. 4
217	SR359	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL SOFFIT REINFORCEMENT - FRAME 13					322	SD322	A	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - IDS POLE DETAILS
218	SR360	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - ADDITIONAL SOFFIT REINFORCEMENT - FRAME 14								

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SUBMITTED

**BKF 100+ YEARS**  
ENGINEERS / SURVEYORS / PLANNERS

DESIGNED: C. Chi  
CHECKED: M. Cosentino  
DRAWN: A. Hernandez  
CADD FILE NAME: 801GN010.dwg

Santa Clara Valley  
Transportation  
Authority

APPROVED

**BKF 100+ YEARS**  
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CADD FILE DATE: 03/06/20  
SCALE: NTS  
SUBMITTAL DATE: 06/29/20  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
GENERAL  
SHEET INDEX - 6  
VOLUME 2 (2 OF 3)

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

SHEET OF DRAWING NO. GN010 REVISION B

DRAWING INDEX VOLUME 2

SHT NO	DWG NO	REV	TITLE
323	SD323	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - METAL RAILING DETAILS
324	SD324	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - SOUND BARRIER DETAILS
325	SD325	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - APPROACH SLAB DETAILS No. 1
326	SD326	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - APPROACH SLAB DETAILS No. 2
327	SD327	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - MISCELLANEOUS POST DETAILS
328	SD328	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - MISCELLANEOUS DETAILS No. 1
329	SD329	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - MISCELLANEOUS DETAILS No. 2
330	SD330	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - MISCELLANEOUS DETAILS No. 3
331	SD331	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - MISCELLANEOUS DETAILS No. 4
332	SD332	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - MISCELLANEOUS DETAILS No. 5
333	SD333	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - MISCELLANEOUS DETAILS No. 6
334	SD334	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - MISCELLANEOUS DETAILS No. 7
335	SD335	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - AESTHETIC DETAILS No. 1
336	SD336	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - AESTHETIC DETAILS No. 2
337	SD337	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - AESTHETIC DETAILS No. 3
338	SD338	B	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - AESTHETIC DETAILS No. 4
339	SD339	A	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - AESTHETIC DETAILS No. 5
340	SD340	A	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - AESTHETIC DETAILS No. 6
341	SD341	A	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - AESTHETIC DETAILS No. 7
342	SD342	A	STRUCTURAL - CAPITOL AERIAL GUIDEWAY - TRAFFIC SIGNAL SUPPORT DETAILS

APPROACH WALLS

343	SP380	C	STRUCTURAL - NORTH APPROACH WALLS - GENERAL NOTES
344	SP381	C	STRUCTURAL - NORTH APPROACH WALLS - RETAINING WALL PLAN No. 1
345	SP382	C	STRUCTURAL - NORTH APPROACH WALLS - RETAINING WALL PLAN No. 2
346	SD381	C	STRUCTURAL - NORTH APPROACH WALLS - RETAINING WALL DETAILS No. 1
347	SD382	C	STRUCTURAL - NORTH APPROACH WALLS - RETAINING WALL DETAILS No. 2
348	SD383	C	STRUCTURAL - NORTH APPROACH WALLS - RETAINING WALL DETAILS No. 3
349	SD384	C	STRUCTURAL - NORTH APPROACH WALLS - RETAINING WALL DETAILS No. 4
350	SD385	C	STRUCTURAL - NORTH APPROACH WALLS - RETAINING WALL DETAILS No. 5
351	SD386	C	STRUCTURAL - NORTH APPROACH WALLS - RETAINING WALL DETAILS No. 6
352	SD387	C	STRUCTURAL - NORTH APPROACH WALLS - MECHANICAL STABILIZED EMBANKMENT DETAILS No. 1
353	SD388	C	STRUCTURAL - NORTH APPROACH WALLS - MECHANICAL STABILIZED EMBANKMENT DETAILS No. 2
354	SD389	C	STRUCTURAL - NORTH APPROACH WALLS - IDS POLE DETAILS
355	SP391	C	STRUCTURAL - SOUTH APPROACH WALLS - RETAINING WALL PLAN No. 1
356	SP392	C	STRUCTURAL - SOUTH APPROACH WALLS - RETAINING WALL PLAN No. 2
357	SP393	C	STRUCTURAL - SOUTH APPROACH WALLS - RETAINING WALL PLAN No. 3
358	SP394	C	STRUCTURAL - SOUTH APPROACH WALLS - RETAINING WALL PLAN No. 4
359	SP395	C	STRUCTURAL - SOUTH APPROACH WALLS - RETAINING WALL PLAN No. 5
360	SP396	C	STRUCTURAL - SOUTH APPROACH WALLS - RETAINING WALL PLAN No. 6
361	SD391	C	STRUCTURAL - SOUTH APPROACH WALLS - RETAINING WALL DETAILS No. 1
362	SD392	C	STRUCTURAL - SOUTH APPROACH WALLS - RETAINING WALL DETAILS No. 2
363	SD393	C	STRUCTURAL - SOUTH APPROACH WALLS - RETAINING WALL DETAILS No. 3
364	SD394	C	STRUCTURAL - SOUTH APPROACH WALLS - RETAINING WALL DETAILS No. 4
365	SD395	C	STRUCTURAL - SOUTH APPROACH WALLS - RETAINING WALL DETAILS No. 5
366	SD401	B	CAPITOL - STORY AERIAL GUIDEWAY - NORTH APPROACH WALLS - MSE WALL WEST FACE 1
367	SD402	B	CAPITOL - STORY AERIAL GUIDEWAY - NORTH APPROACH WALLS - MSE WALL WEST FACE 2
368	SD403	B	CAPITOL - STORY AERIAL GUIDEWAY - NORTH APPROACH WALLS - MSE WALL EAST FACE 1
369	SD404	B	CAPITOL - STORY AERIAL GUIDEWAY - NORTH APPROACH WALLS - MSE WALL EAST FACE 2
370	SD405	B	CAPITOL - STORY AERIAL GUIDEWAY - SOUTH APPROACH WALLS - CIP WALL WEST FACE 1

SHT NO	DWG NO	REV	TITLE
371	SD406	B	CAPITOL - STORY AERIAL GUIDEWAY - SOUTH APPROACH WALLS - CIP WALL WEST FACE 2
372	SD407	B	CAPITOL - STORY AERIAL GUIDEWAY - SOUTH APPROACH WALLS - CIP WALL EAST FACE 1
373	SD408	B	CAPITOL - STORY AERIAL GUIDEWAY - SOUTH APPROACH WALLS - CIP WALL EAST FACE 2
374	SD409	B	CAPITOL - STORY AERIAL GUIDEWAY - SOUTH APPROACH WALLS - FORMLINER DETAILS

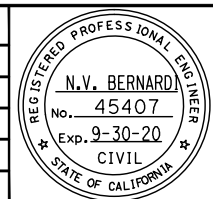
GEOTECHNICAL

375	HP301	B	GEOTECHNICAL - SITE PLAN - STA 964+80 TO STA 1014+00
376	HP302	B	GEOTECHNICAL - SITE PLAN - STA 1014+00 TO STA 1064+10
377	HP303	B	GEOTECHNICAL - SITE PLAN - STA 1064+10 TO STA 1095+05
378	HP304	B	GEOTECHNICAL - LOG OF TEST BORINGS - STA 971+00 TO STA 976+60
379	HP305	B	GEOTECHNICAL - LOG OF TEST BORINGS - STA 975+00 TO STA 980+60
380	HP306	B	GEOTECHNICAL - LOG OF TEST BORINGS - STA 978+25 TO STA 984+00
381	HP307	B	GEOTECHNICAL - LOG OF TEST BORINGS - STA 981+35 TO STA 987+00
382	HP308	B	GEOTECHNICAL - LOG OF TEST BORINGS - STA 984+80 TO STA 990+45
383	HP309	B	GEOTECHNICAL - LOG OF TEST BORINGS - STA 988+00 TO STA 993+65
384	HP310	B	GEOTECHNICAL - LOG OF TEST BORINGS - STA 993+00 TO STA 998+70
385	HP311	B	GEOTECHNICAL - LOG OF TEST BORINGS - STA 993+00 TO STA 998+70
386	HP312	B	GEOTECHNICAL - LOG OF TEST BORINGS - STA 999+50 TO STA 1005+20
387	HP313	B	GEOTECHNICAL - LOG OF TEST BORINGS - STA 1001+00 TO STA 1006+65
388	HP314	B	GEOTECHNICAL - LOG OF TEST BORINGS - STA 1007+00 TO STA 1012+65
389	HP315	B	GEOTECHNICAL - LOG OF TEST BORINGS - STA 1012+00 TO STA 1017+65
390	HP316	B	GEOTECHNICAL - LOG OF TEST BORINGS - STA 1018+00 TO STA 1023+65
391	HP317	B	GEOTECHNICAL - LOG OF TEST BORINGS - STA 1024+00 TO STA 1029+65
392	HP318	B	GEOTECHNICAL - LOG OF TEST BORINGS - STA 1030+00 TO STA 1035+65
393	HP319	B	GEOTECHNICAL - LOG OF TEST BORINGS - STA 1035+00 TO STA 1040+65
394	HP320	B	GEOTECHNICAL - LOG OF TEST BORINGS - STA 1042+00 TO STA 1047+65
395	HP321	B	GEOTECHNICAL - LOG OF TEST BORINGS - STA 1047+00 TO STA 1052+65
396	HP322	B	GEOTECHNICAL - LOG OF TEST BORINGS - STA 1054+00 TO STA 1059+65
397	HP323	B	GEOTECHNICAL - LOG OF TEST BORINGS - STA 1059+00 TO STA 1064+65
398	HP324	B	GEOTECHNICAL - LOG OF TEST BORINGS - STA 1064+00 TO STA 1069+65
399	HP325	B	GEOTECHNICAL - LOG OF TEST BORINGS - STA 1066+80 TO STA 1072+50
400	HP326	B	GEOTECHNICAL - LOG OF TEST BORINGS - STA 1069+00 TO STA 1074+65
401	HP327	B	GEOTECHNICAL - LOG OF TEST BORINGS - STA 1073+35 TO STA 1079+00
402	HP328	B	GEOTECHNICAL - LOG OF TEST BORINGS - STA 1076+00 TO STA 1081+65
403	HP329	B	GEOTECHNICAL - LOG OF TEST BORINGS - STA 1079+00 TO STA 1084+65
404	HP330	B	GEOTECHNICAL - LOG OF TEST BORINGS - STA 1082+30 TO STA 1095+05
405	HP331	B	GEOTECHNICAL - LOG OF TEST BORINGS - STA 101+50 TO STA 107+15
406	HP332	B	GEOTECHNICAL - LOG OF TEST BORINGS - STA 1012+50 TO STA 1025+85
407	HP333	B	GEOTECHNICAL - LOG OF TEST BORINGS - STA 1053+15 TO STA 1058+80
408	HP334	B	GEOTECHNICAL - LOG OF TEST BORINGS - STA 1038+40 TO STA 1044+30
409	HP335	B	GEOTECHNICAL - LOG OF TEST BORINGS - STA 975+35 TO STA 981+00
410	HP336	B	GEOTECHNICAL - LOG OF TEST BORINGS - STA 1029+65 TO STA 1035+30
411	HP337	B	GEOTECHNICAL - LOG OF TEST BORINGS - STA 1005+00 TO STA 1019+50
412	HP338	B	GEOTECHNICAL - LOG OF TEST BORINGS - STA 1047+00 TO STA 1052+65
413	HP339	B	GEOTECHNICAL - LOG OF TEST BORINGS - STA 1059+60 TO STA 1065+20
414	HP340	B	GEOTECHNICAL - LOG OF TEST BORINGS - STA 977+30 TO STA 1084+40
415	HP341	B	GEOTECHNICAL - LOG OF TEST BORINGS - STA 1082+40 TO STA 1088+05
416	HP342	B	GEOTECHNICAL - LOG OF TEST BORINGS - STA 1082+50 TO STA 1088+15
417	HP343	B	GEOTECHNICAL - LOG OF TEST BORINGS - STA 1085+75 TO STA 1091+40
418	HP344	B	GEOTECHNICAL - LOG OF TEST BORINGS - STA 1085+75 TO STA 1091+40
419	HP345	B	GEOTECHNICAL - LOG OF TEST BORINGS - STA 1085+75 TO STA 1091+40
420	HP346	B	GEOTECHNICAL - LOG OF TEST BORINGS - STA 1091+60 TO STA 1095+05

SHT NO	DWG NO	REV	TITLE
<b>CORROSION CONTROL</b>			
421	CC001	A	CORROSION CONTROL - GENERAL NOTES
422	CC101	A	CORROSION CONTROL - AERIAL GUIDEWAY HINGE BOND
423	CC102	A	CORROSION CONTROL - AERIAL GUIDEWAY CORROSION - MONITORING AT BENTS
424	CC103	A	CORROSION CONTROL - AERIAL GUIDEWAY CORROSION - MONITORING AT BENTS
425	CC104	A	CORROSION CONTROL - AERIAL GUIDEWAY CORROSION - MONITORING AT BENTS
426	CC105	A	CORROSION CONTROL - AERIAL GUIDEWAY CORROSION - MONITORING AT ABUTS
427	CC201	A	CORROSION CONTROL - DETAILS

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NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



**BKF100+**  
YEARS  
ENGINEERS / SURVEYORS / PLANNERS

DESIGNED: C. Chi  
CHECKED: M. Cosentino  
DRAWN: A. Hernandez  
CADD FILE NAME: 801GN011.dwg



**BKF100+**  
YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/06/20  
SCALE: NTS  
SUBMITTAL DATE: 06/29/20  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT GENERAL SHEET INDEX - 7 VOLUME 2 (3 OF 3)		
PCA NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE

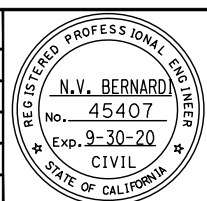
SHEET OF	GN011
DRAWING NO.	GN011
REVISION	B

DRAWING INDEX VOLUME 3

SHT NO	DWG NO	REV	TITLE	SHT NO	DWG NO	REV	TITLE	SHT NO	DWG NO	REV	TITLE
<b>GENERAL</b>											
1	GN001	C	GENERAL - TITLE	57	AP588	A	ARCHITECTURAL - STORY STATION - ELEVATOR #1 - ELEVATIONS	112	MM502	C	MECHANICAL - STORY STATION - GROUND FLOOR - SHEET 2 OF 2
2	GN002	C	GENERAL - KEYMAP - 40 - SCALE	58	AP590	A	ARCHITECTURAL - STORY STATION - ACCESS STRUCTURES - ELEVATOR HOISTWAY DETAILS	113	MM510	C	MECHANICAL - STORY STATION - AERIAL CENTER PLATFORM - KEY PLAN-PLATFORM LEVEL
3	GN003	C	GENERAL - KEYMAP - 20 - SCALE	59	AP591	A	ARCHITECTURAL - STORY STATION - ACCESS STRUCTURES - ELEVATOR MISC DETAILS	114	MM511	C	MECHANICAL - STORY STATION - AERIAL CENTER PLATFORM - PLATFORM PLAN 1
4	GN004	C	GENERAL - DESIGN DRAWING VOLUMES - LAYOUT AND ORGANIZATION	60	AP610	C	ARCHITECTURAL - STORY STATION - PEDESTRIAN OVERCROSSING - PLAN	115	MM512	C	MECHANICAL - STORY STATION - AERIAL CENTER PLATFORM - ROOF
5	GN012	B	GENERAL - SHEET INDEX - 8 - VOLUME 3 (1 OF 2)	61	AP611	B	ARCHITECTURAL - STORY STATION - PEDESTRIAN OVERCROSSING - SOUTH ELEVATION	116	MM800	B	MECHANICAL - EASTRIDGE STATION - PLATFORM KEY PLAN
6	GN013	B	GENERAL - SHEET INDEX - 9 - VOLUME 3 (2 OF 2)	62	AP612	A	ARCHITECTURAL - STORY STATION - PEDESTRIAN OVERCROSSING - NORTH ELEVATION	117	MM801	B	MECHANICAL - EASTRIDGE STATION - PLATFORM PLAN
<b>ARCHITECTURAL</b>											
7	AA351	A	ARCHITECTURAL - ABBREVIATIONS AND SYMBOLS	63	AP621	C	ARCHITECTURAL - STORY STATION - WEST PEDESTRIAN OVERCROSSING - PARTIAL SOUTH ELEVATION 1	118	MM802	B	MECHANICAL - EASTRIDGE STATION - ROOF PLAN
8	AA352	B	ARCHITECTURAL - ARCHITECTURAL LEGEND AND - MASTER KEY NOTES	64	AP622	B	ARCHITECTURAL - STORY STATION - WEST PEDESTRIAN OVERCROSSING - PARTIAL SOUTH ELEVATION 2	119	MM911	B	MECHANICAL PIPING DIAGRAMS
9	AA353	A	ARCHITECTURAL - CODE REVIEW	65	AP624	A	ARCHITECTURAL - STORY STATION - WEST PEDESTRIAN OVERCROSSING - PARTIAL NORTH ELEVATION 1	120	MM921	C	MECHANICAL SYSTEM - CONTROL DIAGRAMS
10	AP500	C	ARCHITECTURAL - STORY STATION - AERIAL CENTER PLATFORM - ARCHITECTURAL SITE/GROUND FLOOR PLAN	66	AP625	A	ARCHITECTURAL - STORY STATION - WEST PEDESTRIAN OVERCROSSING - PARTIAL NORTH ELEVATION 2	121	MM922	C	MECHANICAL SYSTEM - SEQUENCE OF OPERATIONS AND DIRECT - DIGITAL CONTROL POINT LIST SCHEDULE
11	AP501	C	ARCHITECTURAL - STORY STATION - AERIAL CENTER PLATFORM - KEY PLAN - PLATFORM LEVEL	67	AP630	A	ARCHITECTURAL - STORY STATION - FENCE SCREEN ELEVATION DETAILS	122	MM931	C	MECHANICAL DETAILS - SHEET 1 OF 4
12	AP502	C	ARCHITECTURAL - STORY STATION - AERIAL CENTER PLATFORM - PARTIAL PLATFORM PLAN 1	68	AP631	A	ARCHITECTURAL - STORY STATION - FENCE SCREEN ELEVATION DETAILS	123	MM932	C	MECHANICAL DETAILS - SHEET 2 OF 4
13	AP503	C	ARCHITECTURAL - STORY STATION - AERIAL CENTER PLATFORM - PARTIAL PLATFORM PLAN 2	69	AP640	A	ARCHITECTURAL - STORY STATION - PEDESTRIAN OVERCROSSING - FENCE SCREEN DETAILS	124	MM933	C	MECHANICAL DETAILS - SHEET 3 OF 4
14	AP504	C	ARCHITECTURAL - STORY STATION - AERIAL CENTER PLATFORM - PARTIAL PLATFORM PLAN 3	70	AP641	A	ARCHITECTURAL - STORY STATION - PEDESTRIAN OVERCROSSING - GUARDRAIL DETAILS	125	MM934	C	MECHANICAL DETAILS - SHEET 4 OF 4
15	AP505	C	ARCHITECTURAL - STORY STATION - AERIAL CENTER PLATFORM - PLATFORM SECTIONS 1	71	AP800	C	ARCHITECTURAL - EASTRIDGE STATION - PLATFORM KEY PLAN	<b>ELECTRICAL</b>			
16	AP506	C	ARCHITECTURAL - STORY STATION - AERIAL CENTER PLATFORM - WEST ELEVATION	72	AP801	C	ARCHITECTURAL - EASTRIDGE STATION - PARTIAL PLATFORM PLAN 1	126	EP400	A	ELECTRICAL GENERAL
17	AP507	C	ARCHITECTURAL - STORY STATION - AERIAL CENTER PLATFORM - EAST ELEVATION	73	AP802	C	ARCHITECTURAL - EASTRIDGE STATION - PARTIAL PLATFORM PLAN 2	127	EP401	B	STORY STATION - ELECTRICAL SITE PLAN
18	AP530	B	ARCHITECTURAL - STORY STATION - WEST ACCESS - GROUND LEVEL PLAN	74	AP803	C	ARCHITECTURAL - EASTRIDGE STATION - PARTIAL PLATFORM PLAN 3	128	EP402	B	STORY STATION - PLATFORM ELECTRICAL PLAN 1
19	AP531	B	ARCHITECTURAL - STORY STATION - WEST ACCESS - POC LEVEL PLAN	75	AP804	C	ARCHITECTURAL - EASTRIDGE STATION - PLATFORM SECTIONS	129	EP403	B	STORY STATION - PLATFORM ELECTRICAL PLAN 2
20	AP532	B	ARCHITECTURAL - STORY STATION - WEST ACCESS - SECTION	76	AP805	C	ARCHITECTURAL - EASTRIDGE STATION - ELEVATIONS	130	EP404	B	STORY STATION - PLATFORM ELECTRICAL PLAN 3
21	AP533	B	ARCHITECTURAL - STORY STATION - WEST ACCESS - WEST ELEVATION	77	AP810	B	ARCHITECTURAL - EASTRIDGE STATION - PLATFORM NORTH ENTRY - ENLARGED PLAN	131	EP405	B	STORY STATION - PEDESTRIAN OVERCROSSING - ELECTRICAL PLAN
22	AP534	B	ARCHITECTURAL - STORY STATION - WEST ACCESS - EAST ELEVATION	78	AP812	B	ARCHITECTURAL - EASTRIDGE STATION - PLATFORM SOUTH ENTRY - ENLARGED PLAN	132	EP406	B	STORY STATION - ELEVATOR #1 AREA - ELECTRICAL PLAN
23	AP540	B	ARCHITECTURAL - STORY STATION - EAST ACCESS - GROUND LEVEL PLAN	79	AP830	A	ARCHITECTURAL - EASTRIDGE STATION - RAMP SECTIONS	133	EP407	B	STORY STATION - ELEVATOR #2 AREA - ELECTRICAL PLAN
24	AP541	B	ARCHITECTURAL - STORY STATION - EAST ACCESS - POC LEVEL PLAN	80	AP831	A	ARCHITECTURAL - EASTRIDGE STATION - STAIRS AND RAMP ELEVATIONS	134	EP408	B	STORY STATION - ELEVATOR #3 AREA - ELECTRICAL PLAN - SHEET 1
25	AP542	B	ARCHITECTURAL - STORY STATION - EAST ACCESS - SECTION	81	AP900	C	ARCHITECTURAL - EASTRIDGE STATION - #34 TPSS SCREEN - PLAN & SECTION	135	EP409	B	STORY STATION - ELEVATOR #3 AREA - ELECTRICAL PLAN - SHEET 2
26	AP543	B	ARCHITECTURAL - STORY STATION - EAST ACCESS - WEST ELEVATION	82	AP901	C	ARCHITECTURAL - EASTRIDGE STATION - #34 TPSS SCREEN - ELEVATIONS	136	EP410	A	STORY STATION - SIGNAL COMM HOUSE
27	AP544	B	ARCHITECTURAL - STORY STATION - EAST ACCESS - EAST ELEVATION	83	AP910	C	ARCHITECTURAL - OCALA STATION - #33 TPSS SCREEN - PLAN	137	EP411	A	STORY STATION - ELECTRICAL DETAILS
28	AP550	B	ARCHITECTURAL - STORY STATION - SOUTH EMERGENCY EXIT - GROUND LEVEL PLAN	84	AP912	C	ARCHITECTURAL - OCALA STATION - #33 TPSS SCREEN - ELEVATIONS	138	EP501	B	EASTRIDGE STATION - PLATFORM ELECTRICAL PLAN 1
29	AP551	B	ARCHITECTURAL - STORY STATION - PLATFORM ACCESS - POC LEVEL PLAN	85	AP915	A	ARCHITECTURAL - TYPICAL TPSS - GATE DETAILS	139	EP502	B	EASTRIDGE STATION - PLATFORM ELECTRICAL PLAN 2
30	AP552	B	ARCHITECTURAL - STORY STATION - PLATFORM ACCESS - PLATFORM LEVEL PLAN	86	AT104	C	ARCHITECTURAL - SHELTER CANOPY - FLOOR PLAN & ROOF PLAN	140	EP503	B	EASTRIDGE STATION - PLATFORM ELECTRICAL PLAN 3
31	AP553	B	ARCHITECTURAL - STORY STATION - PLATFORM ACCESS - SECTION 1	87	AT105	C	ARCHITECTURAL - TYPICAL SHELTER - ELEVATIONS	141	EP504	B	EASTRIDGE STATION - ELECTRICAL BUILDING
32	AP554	A	ARCHITECTURAL - STORY STATION - PLATFORM ACCESS - SECTION 2	88	AT106	C	ARCHITECTURAL - SHELTER CANOPY - REFLECTED CEILING PLAN & SECTIONS	142	EP601	B	LIGHTING DETAILS
33	AP555	B	ARCHITECTURAL - STORY STATION - PLATFORM ACCESS - WEST ELEVATION	89	AT111	C	ARCHITECTURAL - TVM SHELTER CANOPY - PLANS, SECTIONS & ELEVATIONS	143	EP602	A	LIGHTING DETAILS
34	AP556	B	ARCHITECTURAL - STORY STATION - PLATFORM ACCESS - EAST ELEVATION	90	AT142	A	ARCHITECTURAL - SHELTER CANOPY - DETAILS	144	EP603	B	SHELTER LIGHTING DETAILS
35	AP560	B	ARCHITECTURAL - STORY STATION - NORTH EMERGENCY EXIT - GROUND LEVEL & PLATFORM LEVEL PLAN	91	AT200	B	ARCHITECTURAL - STORY STATION - SIGNALS/COMM HOUSE - FLOOR PLAN & ROOF PLAN	145	EP604	A	HANDRAIL LIGHTING DETAILS
36	AP561	B	ARCHITECTURAL - STORY STATION - NORTH ACCESS - PLATFORM LEVEL PLAN	92	AT201	A	ARCHITECTURAL - STORY STATION - SIGNALS/COMM HOUSE - SECTIONS	146	EP605	A	LIGHTING CONTROLS
37	AP563	B	ARCHITECTURAL - STORY STATION - NORTH EMERGENCY EXIT - SECTION 1	93	AT202	A	ARCHITECTURAL - STORY STATION - SIGNALS/COMM HOUSE - EXTERIOR ELEVATIONS	147	EP606	B	LIGHT FIXTURE SCHEDULE - (SHEET 1 OF 2)
38	AP564	B	ARCHITECTURAL - STORY STATION - NORTH ACCESS - SECTION 2	94	AT203	A	ARCHITECTURAL - STORY STATION - SIGNALS/COMM HOUSE - EXTERIOR DETAILS	148	EP607	B	LIGHT FIXTURE SCHEDULE - (SHEET 2 OF 2)
39	AP565	B	ARCHITECTURAL - STORY STATION - NORTH ACCESS - ELEVATIONS	95	AT205	A	ARCHITECTURAL - EASTRIDGE STATION - SIGNALS/COMM HOUSE - FLOOR PLAN & ROOF PLAN	149	EP701	B	STORY STATION - SINGLE LINE DIAGRAM
40	AP566	B	ARCHITECTURAL - STORY STATION - EMERGENCY EXITS ORNAMENTAL - SECURITY FENCE ELEVATIONS AND DETAILS	96	AT206	A	ARCHITECTURAL - EASTRIDGE STATION - SIGNALS/COMM HOUSE - SECTIONS	150	EP702	B	EASTRIDGE STATION - SINGLE LINE DIAGRAM
41	AP567	A	ARCHITECTURAL - STORY STATION - EMERGENCY EXITS ORNAMENTAL - SECURITY FENCE ELEVATIONS AND DETAILS	97	AT207	A	ARCHITECTURAL - EASTRIDGE STATION - SIGNALS/COMM HOUSE - EXTERIOR ELEVATIONS	151	EP703	B	STORY STATION - FIRE ALARM SYSTEM - SHEET 1 OF 3
42	AP568	A	ARCHITECTURAL - STORY & EASTRIDGE STATION - DOOR SCHEDULES & DETAILS	98	AT301	A	ARCHITECTURAL - TYPICAL DETAILS	152	EP704	B	STORY STATION - FIRE ALARM SYSTEM - SHEET 2 OF 3
43	AP569	A	ARCHITECTURAL - STORY & EASTRIDGE STATION - FINISH SCHEDULE	99	AT302	A	ARCHITECTURAL - TYPICAL DETAILS	153	EP705	B	STORY STATION - FIRE ALARM SYSTEM - SHEET 3 OF 3
44	AP570	A	ARCHITECTURAL - STORY & EASTRIDGE STATION - FINISH SCHEDULE	100	AT330	A	ARCHITECTURAL - WINDSCREEN & BENCH - DETAILS	154	EP706	A	STORY STATION - PANEL SCHEDULES - (SHEET 1 OF 3)
45	AP572	A	ARCHITECTURAL - STORY STATION - ACCESS STRUCTURES - GUARDRAIL & GATE DETAILS	101	AT331	A	ARCHITECTURAL - WINDSCREEN & BENCH - DETAILS	155	EP707	A	STORY STATION - PANEL SCHEDULES - (SHEET 2 OF 3)
46	AP573	A	ARCHITECTURAL - GUARDRAIL, HANDRAIL & - STAIR DETAILS	102	AT332	A	ARCHITECTURAL - GRAPHIC DISPLAY KIOSK - DETAILS	156	EP708	A	STORY STATION - PANEL SCHEDULES - (SHEET 3 OF 3)
47	AP574	A	ARCHITECTURAL - STORY STATION - ACCESS STRUCTURES - GUARDRAIL DETAILS	103	AT333	A	ARCHITECTURAL - AMENITIES - DETAILS	157	EP709	A	ELECTRICAL DETAILS
48	AP575	A	ARCHITECTURAL - GUARDRAIL, HANDRAIL & - INTERIOR WALL DETAILS	104	AT334	A	ARCHITECTURAL - ORNAMENT FENCE - DETAILS	<b>PLUMBING</b>			
49	AP580	B	ARCHITECTURAL - STORY STATION - ELEVATOR #2 - ENLARGED PLANS	105	AT335	A	ARCHITECTURAL - DECORATIVE PICKET FENCE - DETAILS	158	MP001	C	PLUMBING - GENERAL NOTES, LEGEND - AND ABBREVIATIONS
50	AP581	B	ARCHITECTURAL - STORY STATION - ELEVATOR #2 - SECTIONS	<b>MECHANICAL</b>				159	MP002	C	PLUMBING - EQUIPMENT SCHEDULES
51	AP582	B	ARCHITECTURAL - STORY STATION - ELEVATOR #2 - ELEVATIONS	106	MM001	C	MECHANICAL - GENERAL NOTES AND LEGEND	160	MP500	C	PLUMBING - STORY STATION - GROUND FLOOR KEY PLAN
52	AP583	B	ARCHITECTURAL - STORY STATION - ELEVATOR #3 - ENLARGED PLANS	107	MM002	C	MECHANICAL - ABBREVIATIONS	161	MP501	C	PLUMBING - STORY STATION - GROUND FLOOR - SHEET 1 OF 3
53	AP584	B	ARCHITECTURAL - STORY STATION - ELEVATOR #3 - SECTIONS	108	MM003	C	MECHANICAL - EQUIPMENT SCHEDULES	162	MP502	C	PLUMBING - STORY STATION - GROUND FLOOR - SHEET 2 OF 3
54	AP585	B	ARCHITECTURAL - STORY STATION - ELEVATOR #3 - ELEVATIONS	109	MM004	C	MECHANICAL - EQUIPMENT SCHEDULES	163	MP503	C	PLUMBING - STORY STATION - GROUND FLOOR - SHEET 3 OF 3
55	AP586	B	ARCHITECTURAL - STORY STATION - ELEVATOR #1 - ENLARGED PLANS	110	MM500	C	MECHANICAL - STORY STATION - GROUND FLOOR KEY PLAN	164	MP510	C	PLUMBING - STORY STATION - AERIAL CENTER PLATFORM - KEY PLAN-PLATFORM LEVEL
56	AP587	A	ARCHITECTURAL - STORY STATION - ELEVATOR #1 - SECTIONS	111	MM501	C	MECHANICAL - STORY STATION - GROUND FLOOR - SHEET 1 OF 2	165	MP511	C	PLUMBING - STORY STATION - AERIAL CENTER PLATFORM - PLATFORM PLAN 1

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**BKF100+**  
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DESIGNED: C. Chi  
CHECKED: M. Cosentino  
DRAWN: A. Hernandez  
CADD FILE NAME: 801GN012.dwg

**Santa Clara Valley**  
Transportation  
Authority

**BKF100+**  
YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/06/19  
SCALE: NTS  
SUBMITTAL DATE: 06/29/20  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
GENERAL  
SHEET INDEX - 8  
VOLUME 3 (1 OF 2)

SHEET OF: GN012  
REVISION: B

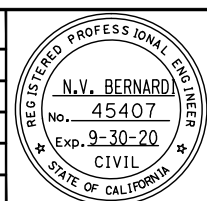
PLA NO: 000 CONTRACT NO: C801 FILE LOCATION: PROJECTWISE

DRAWING INDEX VOLUME 3

SHT NO	DWG NO	REV	TITLE	SHT NO	DWG NO	REV	TITLE	SHT NO	DWG NO	REV	TITLE
166	MP512	C	PLUMBING - STORY STATION - AERIAL CENTER PLATFORM - PLATFORM PLAN 2	220	SD535	C	STRUCTURAL - STORY STATION AND ACCESS STRUCTURES - SOUTH MEDIAN ACCESS STRUCTURE STAIRS SECTIONS	277	SR623	B	STRUCTURAL - STORY STATION POC - TYPICAL SECTION
167	MP513	C	PLUMBING - STORY STATION - AERIAL CENTER PLATFORM - PLATFORM PLAN 3	221	SD536	C	STRUCTURAL - STORY STATION AND ACCESS STRUCTURES - SOUTH MEDIAN ACCESS STRUCTURE STAIRS DETAILS	278	SR624	B	STRUCTURAL - STORY STATION POC - DECK FRAMING DETAILS No. 1
168	MP514	C	PLUMBING - STORY STATION - PEDESTRIAN OVERCROSSING - PLAN	222	SD537	C	STRUCTURAL - STORY STATION AND ACCESS STRUCTURES - SOUTH MEDIAN ACCESS STRUCTURE STAIRS DETAILS	279	SR625	A	STRUCTURAL - STORY STATION POC - DECK FRAMING DETAILS No. 2
169	MP515	A	PLUMBING - STORY STATION - PEDESTRIAN OVERCROSSING - PLAN - SD	223	SD538	C	STRUCTURAL - STORY STATION AND ACCESS STRUCTURES - SOUTH MEDIAN ACCESS STRUCTURE STAIRS DETAILS	280	SR626	A	STRUCTURAL - STORY STATION POC - DECK FRAMING DETAILS No. 3
170	MP800	B	PLUMBING - EASTRIDGE STATION - PLATFORM KEY PLAN	224	SD550	C	STRUCTURAL - STORY STATION AND ACCESS STRUCTURES - NORTH MEDIAN ACCESS STRUCTURE ELEVATION	281	SR627	A	STRUCTURAL - STORY STATION POC - DECK FRAMING DETAILS No. 4
171	MP801	B	PLUMBING - EASTRIDGE STATION - PLATFORM PLAN - SHEET 1 OF 3	225	SD551	C	STRUCTURAL - STORY STATION AND ACCESS STRUCTURES - NORTH MEDIAN ACCESS STRUCTURE COLUMN & FOOTING DETAILS	282	SD623	A	STRUCTURAL - STORY STATION POC - PILE DETAILS
172	MP802	B	PLUMBING - EASTRIDGE STATION - PLATFORM PLAN - SHEET 2 OF 3	226	SD552	C	STRUCTURAL - STORY STATION AND ACCESS STRUCTURES - NORTH MEDIAN ACCESS STRUCTURE STAIR DETAILS No. 1	283	SD624	A	STRUCTURAL - STORY STATION POC - DECK DRAINAGE DETAILS
173	MP803	B	PLUMBING - EASTRIDGE STATION - PLATFORM PLAN - SHEET 3 OF 3	227	SD553	C	STRUCTURAL - STORY STATION AND ACCESS STRUCTURES - NORTH MEDIAN ACCESS STRUCTURE STAIR DETAILS No. 2	284	SD625	A	STRUCTURAL - STORY STATION POC - RAILING DETAILS No. 1
174	MP901	C	PLUMBING - STORY & EASTRIDGE STATIONS - ENLARGED FLOOR PLANS - SHEET 1 OF 2	228	SD560	C	STRUCTURAL - STORY STATION AND ACCESS STRUCTURES - SHELTER SHELTER FOUNDATION & ROOF FRAMING PLAN	285	SD626	A	STRUCTURAL - STORY STATION POC - RAILING DETAILS No. 2
175	MP902	C	PLUMBING - STORY & EASTRIDGE STATIONS - ENLARGED FLOOR PLANS - SHEET 2 OF 2	229	SD561	C	STRUCTURAL - STORY STATION AND ACCESS STRUCTURES - TVM SHELTER CANOPY PLANS & ELEVATIONS	286	SD627	A	STRUCTURAL - STORY STATION POC - RAILING DETAILS No. 3
176	MP911	C	PLUMBING - PIPING DIAGRAMS - SHEET 1 OF 2	230	SD562	C	STRUCTURAL - STORY STATION AND ACCESS STRUCTURES - SHELTER CANOPY ELEVATIONS	287	SD628	A	STRUCTURAL - STORY STATION POC - RAILING DETAILS No. 4
177	MP912	C	PLUMBING - PIPING DIAGRAMS - SHEET 2 OF 2	231	SD563	C	STRUCTURAL - STORY STATION AND ACCESS STRUCTURES - SHELTER CANOPY AND TVM SHELTER CANOPY DETAILS No. 1	<b>SOUND WALL, RETAINING WALL, TPSS, SCREEN WALLS</b>			
178	MP931	C	PLUMBING - TYPICAL DETAILS - SHEET 1 OF 4	232	SD564	C	STRUCTURAL - STORY STATION AND ACCESS STRUCTURES - SHELTER CANOPY AND TVM SHELTER CANOPY DETAILS No. 2	288	SP901	C	STRUCTURAL - NORTH APPROACH WALLS - SOUND WALL
179	MP932	C	PLUMBING - TYPICAL DETAILS - SHEET 2 OF 4	233	SD565	C	STRUCTURAL - STORY STATION AND ACCESS STRUCTURES - SHELTER CANOPY AND TVM SHELTER CANOPY DETAILS No. 3	289	SD901	C	STRUCTURAL - NORTH APPROACH WALLS - SOUND WALL DETAILS
180	MP933	C	PLUMBING - TYPICAL DETAILS - SHEET 3 OF 4	234	SP801	C	STRUCTURAL - EASTRIDGE STATION - GENERAL PLAN	290	SP902	A	STRUCTURAL - CAPITOL AND CUNNINGHAM - RETAINING WALL
181	MP934	C	PLUMBING - TYPICAL DETAILS - SHEET 4 OF 4	235	SU801	C	STRUCTURAL - EASTRIDGE STATION - FOUNDATION PLAN	291	SP910	C	STRUCTURAL - TPSS #33 SCREEN - PLAN
<b>FIRE PROTECTION</b>				236	SD801	C	STRUCTURAL - EASTRIDGE STATION - TYPICAL SECTION	292	SP911	C	STRUCTURAL - TPSS #34 SCREEN - PLAN
182	MFO01	B	FIRE PROTECTION - GENERAL NOTES, LEGEND, - ABBREVIATIONS AND SCHEDULES	237	SD802	C	STRUCTURAL - EASTRIDGE STATION - PLATFORM DETAILS No. 1	293	SD910	C	STRUCTURAL - TPSS #33 AND #34 - TPSS DETAILS No. 1
183	MF500	B	FIRE PROTECTION - STORY STATION - GROUND FLOOR KEY PLAN	238	SD803	C	STRUCTURAL - EASTRIDGE STATION - PLATFORM DETAILS No. 1	294	SD911	A	STRUCTURAL - TPSS #33 AND #34 - TPSS DETAILS No. 2
184	MF501	B	FIRE PROTECTION - STORY STATION - GROUND FLOOR	239	SD812	C	STRUCTURAL - STORY STATION PEDESTRIAN OVERCROSSING - SHELTER CANOPY AND TVM SHELTER CANOPY DETAILS No. 1	295	SD912	A	STRUCTURAL - TPSS #33 AND #34 - TPSS DETAILS No. 3
185	MF510	B	FIRE PROTECTION - STORY STATION - PLATFORM LEVEL - KEY PLAN	240	SD814	C	STRUCTURAL - STORY STATION PEDESTRIAN OVERCROSSING - SHELTER CANOPY AND TVM SHELTER CANOPY DETAILS No. 3	<b>ELEVATORS</b>			
186	MF511	B	FIRE PROTECTION - STORY STATION - PLATFORM LEVEL - SHEET 1 OF 2	241	SD815	C	STRUCTURAL - STORY STATION PEDESTRIAN OVERCROSSING - SHELTER CANOPY AND TVM SHELTER CANOPY DETAILS No. 3	296	VP001	C	GENERAL ELEVATOR - INFORMATION
187	MF512	B	FIRE PROTECTION - STORY STATION - PLATFORM LEVEL - SHEET 2 OF 2	242	SP851	C	STRUCTURAL - EASTRIDGE STATION - EASTRIDGE SIGNALS/COMM HOUSE PLANS	297	VP002	C	PLANS AND HOISTWAY SECTION - ELEVATOR 1 EAST
188	MF800	B	FIRE PROTECTION - EASTRIDGE STATION - KEY PLAN	243	SD851	C	STRUCTURAL - EASTRIDGE STATION - EASTRIDGE SIGNALS/COMM HOUSE DETAILS No. 1	298	VP003	C	PLANS AND HOISTWAY SECTION - ELEVATOR 2 WEST
189	MF801	B	FIRE PROTECTION - EASTRIDGE STATION - PLATFORM PLAN 1 - SHEET 1 OF 3	244	SD852	C	STRUCTURAL - EASTRIDGE STATION - EASTRIDGE SIGNALS/COMM HOUSE DETAILS No. 2	299	VP004	C	PLANS AND HOISTWAY SECTION - ELEVATOR 3 MEDIAN
190	MF802	B	FIRE PROTECTION - EASTRIDGE STATION - PLATFORM PLAN 2 - SHEET 2 OF 3	245	SD853	C	STRUCTURAL - STORY STATION PEDESTRIAN OVERCROSSING - EASTRIDGE SIGNALS/COMM HOUSE DETAILS No. 3	<b>SIGNAGE</b>			
191	MF803	B	FIRE PROTECTION - EASTRIDGE STATION - PLATFORM PLAN 3 - SHEET 3 OF 3	246	SD854	C	STRUCTURAL - STORY STATION PEDESTRIAN OVERCROSSING - EASTRIDGE SIGNALS/COMM HOUSE DETAILS No. 4	300	SG100	B	ARCHITECTURAL - GRAPHIC STANDARDS
192	MF911	B	FIRE PROTECTION - PIPING DIAGRAMS	247	SP581	A	STRUCTURAL - STORY STATION SUPPORTED PLATFORM - SUPPORTED PLATFORM FRAMING PLAN	301	SG101	B	ARCHITECTURAL - SIGN TYPE MENU
193	MF921	B	FIRE PROTECTION - TYPICAL DETAILS - SHEET 1 OF 2	248	SD581	A	STRUCTURAL - STORY STATION SUPPORTED PLATFORM - SUPPORTED PLATFORM DETAILS No. 1	302	SG500	B	ARCHITECTURAL - STORY STATION SIGNAGE LOCATION PLAN - GROUND LEVEL
194	MF922	B	FIRE PROTECTION - TYPICAL DETAILS - SHEET 2 OF 2	249	SD582	A	STRUCTURAL - STORY STATION SUPPORTED PLATFORM - SUPPORTED PLATFORM DETAILS No. 2	303	SG501	B	ARCHITECTURAL - STORY STATION LOCATION PLAN - PLATFORM LEVEL
<b>STRUCTURES</b>				250	SD583	A	STRUCTURAL - STORY STATION SUPPORTED PLATFORM - SUPPORTED PLATFORM DETAILS No. 3	304	SG502	B	ARCHITECTURAL - STORY STATION LOCATION PLAN - PEDESTRIAN BRIDGE
195	SP501	C	STRUCTURAL - STORY STATION AND ACCESS STRUCTURES - ACCESS STRUCTURES GENERAL PLAN	251	SD584	A	STRUCTURAL - STORY STATION SUPPORTED PLATFORM - SUPPORTED PLATFORM DETAILS No. 4	305	SG503	B	ARCHITECTURAL - EASTRIDGE STATION SIGNAGE LOCATION - PLAN PLATFORM LEVEL
196	SP502	C	STRUCTURAL - STORY STATION AND ACCESS STRUCTURES - EAST ACCESS STRUCTURE FRAMING PLAN	252	SD591	A	STRUCTURAL - STORY STATION SIGNALS/COMM HOUSE - SIGNALS/COMM HOUSE DETAILS No. 1	306	SG600	B	ARCHITECTURAL - SIGN TYPE 1: STATION - IDENTIFICATION PYLON
197	SU501	C	STRUCTURAL - STORY STATION AND ACCESS STRUCTURES - EAST ACCESS STRUCTURE FOUNDATION PLAN	253	SD592	A	STRUCTURAL - STORY STATION SIGNALS/COMM HOUSE - SIGNALS/COMM HOUSE DETAILS No. 2	307	SG601	B	ARCHITECTURAL - SIGN TYPE 2: STATION IDENTIFICATION ON - AERIAL GUIDEWAY
198	SP503	B	STRUCTURAL - STORY STATION AND ACCESS STRUCTURES - WEST ACCESS STRUCTURE FRAMING PLAN	254	SD593	A	STRUCTURAL - STORY STATION SIGNALS/COMM HOUSE - SIGNALS/COMM HOUSE DETAILS No. 3	308	SG602	B	ARCHITECTURAL - SIGN TYPE 10: DESTINATION - PLATFORM SIGNAGE
199	SU502	C	STRUCTURAL - STORY STATION AND ACCESS STRUCTURES - WEST ACCESS STRUCTURE FOUNDATION PLAN	255	SP621	C	STRUCTURAL - STORY STATION POC - GENERAL PLAN	309	SG603	B	ARCHITECTURAL - SIGN TYPE 18: ACCESSIBLE SIGNAGE
200	SP504	C	STRUCTURAL - STORY STATION AND ACCESS STRUCTURES - SOUTH MEDIAN ACCESS STRUCTURE FRAMING PLAN	256	SP622	B	STRUCTURAL - STORY STATION POC - GENERAL NOTES	310	SG604	B	ARCHITECTURAL - SIGN TYPE 19: WARNING SIGNAGE
201	SU503	B	STRUCTURAL - SOUTH MEDIAN ACCESS STRUCTURE - FOUNDATION PLAN	257	SP623	A	STRUCTURAL - STORY STATION POC - STAGING SEQUENCE No. 1	311	SG605	B	ARCHITECTURAL - SIGN TYPE 20: RESTRICTIVE SIGNAGE
202	SP505	C	STRUCTURAL - STORY STATION AND ACCESS STRUCTURE - NORTH MEDIAN ACCESS STRUCTURE FRAMING PLAN	258	SP624	A	STRUCTURAL - STORY STATION POC - STAGING SEQUENCE No. 2	312	SG606	B	ARCHITECTURAL - SIGN TYPE 21: INFORMATION SIGNAGE
203	SU504	C	STRUCTURAL - NORTH MEDIAN ACCESS STRUCTURE - FOUNDATION PLAN	259	SU621	B	STRUCTURAL - STORY STATION POC - FOUNDATION PLAN	313	SG607	B	ARCHITECTURAL - SIGN TYPE 18, 19, 20 & 21: - MOUNTING DETAILS
204	SD501	C	STRUCTURAL - STORY STATION AND ACCESS STRUCTURES - ACCESS STRUCTURES PILE DETAILS	260	SC621	A	STRUCTURAL - STORY STATION POC - BENT 1 LAYOUT	314	SG608	B	ARCHITECTURAL - SIGN TYPE 22: ADA BRAILLE - ROOM IDENTIFICATION
205	SP510	C	STRUCTURAL - STORY STATION AND ACCESS STRUCTURES - WEST ACCESS STRUCTURES ELEVATORS ELEVATIONS	261	SC622	A	STRUCTURAL - STORY STATION POC - BENT 2 LAYOUT	315	SG609	B	ARCHITECTURAL - SIGN TYPE 23: OVERHEAD - IDENTIFICATION
206	SP511	C	STRUCTURAL - STORY STATION AND ACCESS STRUCTURES - WEST ACCESS STRUCTURES ELEVATORS ENLARGED PLANS	262	SC623	A	STRUCTURAL - STORY STATION POC - BENTS 3 & 4 LAYOUT No. 1	316	SG610	B	ARCHITECTURAL - SIGN TYPE 24: ADA BRAILLE - ELEVATOR IDENTIFICATION
207	SP512	C	STRUCTURAL - STORY STATION AND ACCESS STRUCTURES - EAST ACCESS STRUCTURES ELEVATORS ENLARGED PLANS	263	SC624	A	STRUCTURAL - STORY STATION POC - BENTS 3 & 4 LAYOUT No. 2	317	SG611	B	ARCHITECTURAL - SIGN TYPE 25: DOUBLE POST - STATION IDENTIFICATION
208	SP513	C	STRUCTURAL - STORY STATION AND ACCESS STRUCTURES - EAST ACCESS STRUCTURES ELEVATOR ENLARGED PLANS	264	SC625	A	STRUCTURAL - STORY STATION POC - BENT DETAILS No. 1	318	SG612	B	ARCHITECTURAL - SIGN TYPE 26: FENCE MOUNTED - STATION IDENTIFICATION
209	SD511	C	STRUCTURAL - STORY STATION AND ACCESS STRUCTURES - EAST & WEST ACCESS STRUCTURES ELEVATORS DETAILS No. 1	265	SC626	A	STRUCTURAL - STORY STATION POC - BENT DETAILS No. 2	319	SG613	B	ARCHITECTURAL - SIGN TYPE 31: KIOSK - STATION IDENTIFICATION
210	SD512	C	STRUCTURAL - STORY STATION AND ACCESS STRUCTURES - EAST & WEST ACCESS STRUCTURES ELEVATORS DETAILS No. 2	266	SC627	A	STRUCTURAL - STORY STATION POC - BENT DETAILS No. 3				
211	SD513	C	STRUCTURAL - STORY STATION AND ACCESS STRUCTURES - EAST & WEST ACCESS STRUCTURES ELEVATORS DETAILS No. 3	267	SC628	A	STRUCTURAL - STORY STATION POC - BENT DETAILS No. 4				
212	SD519	C	STRUCTURAL - STORY STATION AND ACCESS STRUCTURES - EAST, WEST & SOUTH ACCESS STRUCTURES FOUNDATION DETAILS	268	SC629	A	STRUCTURAL - STORY STATION POC - BENT DETAILS No. 5				
213	SD520	C	STRUCTURAL - STORY STATION AND ACCESS STRUCTURES - EAST & WEST ACCESS STRUCTURES STAIRS DETAILS No. 1	269	SC634	B	STRUCTURAL - STORY STATION POC - ARCH LAYOUT No. 1				
214	SD521	C	STRUCTURAL - STORY STATION AND ACCESS STRUCTURES - EAST & WEST ACCESS STRUCTURES STAIRS DETAILS No. 2	270	SC635	B	STRUCTURAL - STORY STATION POC - ARCH LAYOUT No. 2				
215	SP531	C	STRUCTURAL - STORY STATION AND ACCESS STRUCTURES - SOUTH MEDIAN ACCESS STRUCTURE ELEVATOR ELEVATIONS	271	SC636	A	STRUCTURAL - STORY STATION POC - ARCH DETAILS No. 1				
216	SP532	C	STRUCTURAL - STORY STATION AND ACCESS STRUCTURES - SOUTH MEDIAN ACCESS STRUCTURE ELEVATOR ENLARGED PLANS	272	SC637	A	STRUCTURAL - STORY STATION POC - ARCH DETAILS No. 2				
217	SD531	C	STRUCTURAL - STORY STATION AND ACCESS STRUCTURES - SOUTH MEDIAN ACCESS STRUCTURES ELEVATORS DETAILS No. 1	273	SC638	A	STRUCTURAL - STORY STATION POC - ARCH DETAILS No. 3				
218	SD532	C	STRUCTURAL - STORY STATION AND ACCESS STRUCTURES - EAST & WEST ACCESS STRUCTURES ELEVATORS DETAILS No. 2	274	SC639	A	STRUCTURAL - STORY STATION POC - ARCH DETAILS No. 4				
219	SD533	C	STRUCTURAL - STORY STATION AND ACCESS STRUCTURES - EAST & WEST ACCESS STRUCTURES ELEVATORS DETAILS No. 2	275	SR621	B	STRUCTURAL - STORY STATION POC - DECK FRAMING PLAN No. 1				
				276	SR622	B	STRUCTURAL - STORY STATION POC - DECK FRAMING PLAN No. 2				

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NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



SUBMITTED: **BKF 100+** YEARS ENGINEERS / SURVEYORS / PLANNERS

DESIGNED	CHECKED
C. Chi	M. Cosentino
DRAWN	CADD FILE NAME
A. Hernandez	801GN013.dwg

Santa Clara Valley Transportation Authority

APPROVED: **BKF 100+** YEARS ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE	SCALE
03/06/20	NTS
SUBMITTAL DATE	BOARD APPROVAL DATE
06/29/20	

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT GENERAL SHEET INDEX - 9 VOLUME 3 (2 OF 2)		
PCA NO.	CONTRACT NO.	FILE LOCATION
000	C801	PROJECTWISE

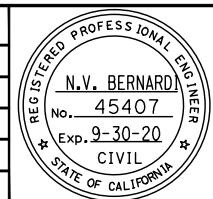
SHEET OF	GN013
REVISION	B

DRAWING INDEX VOLUME 4

SHT NO	DWG NO	REV	TITLE	SHT NO	DWG NO	REV	TITLE	SHT NO	DWG NO	REV	TITLE
<b>GENERAL</b>											
1	GN001	C	GENERAL - TITLE	56	PD204	B	OVERHEAD CONTACT SYSTEM - CANTILEVER ARM ASSEMBLIES - CA-A3, CA-B1, CA-B1H	114	PD403	B	OVERHEAD CONTACT SYSTEM - STAGING PLANS - SHEET 3 OF 3
2	GN002	C	GENERAL - KEYMAP - 40 - SCALE	57	PD205	B	OVERHEAD CONTACT SYSTEM - CANTILEVER ARM ASSEMBLIES - CA-C1	115	PD404	A	OVERHEAD CONTACT SYSTEM - STAGING PLANS - SCAT OCS INSTALLATION RECOMMENDATION
3	GN003	C	GENERAL - KEYMAP - 20 - SCALE	58	PD206	B	OVERHEAD CONTACT SYSTEM - CANTILEVER ARM ASSEMBLIES - CA-D1, CA-D2	<b>LRT SIGNALS</b>			
4	GN004	C	GENERAL - DESIGN DRAWING VOLUMES - LAYOUT AND ORGANIZATION	59	PD207	B	OVERHEAD CONTACT SYSTEM - COUNTERWEIGHT ASSEMBLY - CW-01	116	JG101	C	LRT SIGNALS - ABBREVIATIONS
5	GN014	B	GENERAL - SHEET INDEX - 10 - VOLUME 4 (1 OF 4)	60	PD208	B	OVERHEAD CONTACT SYSTEM - DOWN GUY ASSEMBLY - DGA-1, DGA-2	117	JG102	C	LRT SIGNALS - SYMBOLS
6	GN015	B	GENERAL - SHEET INDEX - 11 - VOLUME 4 (2 OF 4)	61	PD209	B	OVERHEAD CONTACT SYSTEM - FIXED END ASSEMBLY - FT-01	118	JS101	C	LRT SIGNALS - SINGLE LINE PLAN - (SHEET 1 OF 3)
7	GN016	B	GENERAL - SHEET INDEX - 12 - VOLUME 4 (3 OF 4)	62	PD210	B	OVERHEAD CONTACT SYSTEM - FEED POINT RELOCATION - AT EXISTING STR. 12.47C	119	JS102	C	LRT SIGNALS - SINGLE LINE PLAN - (SHEET 2 OF 3)
8	GN017	A	GENERAL - SHEET INDEX - 13 - VOLUME 4 (4 OF 4)	63	PD211	B	OVERHEAD CONTACT SYSTEM - HANGER ASSEMBLIES - HA-01 & HA-02	120	JS103	C	LRT SIGNALS - SINGLE LINE PLAN - (SHEET 3 OF 3)
9	GN019	C	GENERAL - ABBREVIATIONS - 1	64	PD212	B	OVERHEAD CONTACT SYSTEM - HANGER LENGTH TABLES - HS-50 THRU HS-150	121	JD101	C	LRT SIGNALS - DOUBLE LINE PLAN - (SHEET 1 OF 3)
10	GN020	C	GENERAL - ABBREVIATIONS - 2	65	PD213	B	OVERHEAD CONTACT SYSTEM - HANGER LENGTH TABLES - HS-155 THRU HS-240	122	JD102	C	LRT SIGNALS - DOUBLE LINE PLAN - (SHEET 2 OF 3)
11	GN021	C	GENERAL - ABBREVIATIONS - 3	66	PD214	B	OVERHEAD CONTACT SYSTEM - HANGER LENGTH TABLES - NON STANDARD HM- & HT- HANGER SETS	123	JD103	C	LRT SIGNALS - DOUBLE LINE PLAN - (SHEET 3 OF 3)
12	GN022	C	GENERAL - ABBREVIATIONS - 4	67	PD215	B	OVERHEAD CONTACT SYSTEM - HANGER LENGTH TABLES - NON STANDARD HB- & HTS- HANGER SETS	124	JR101	C	LRT SIGNALS - ROUTE & ASPECT PLAN - NORTHBOUND (SHEET 1 OF 2)
13	GN023	C	GENERAL - ABBREVIATIONS - 5	68	PD216	B	OVERHEAD CONTACT SYSTEM - HANGER LENGTH TABLES - OVERLAP SPANS HO- HANGER SETS	125	JR102	C	LRT SIGNALS - ROUTE & ASPECT PLAN - NORTHBOUND (SHEET 2 OF 2)
<b>OVERHEAD CONTACT SYSTEM</b>											
14	PG001	C	OVERHEAD CONTACT SYSTEM - ABBREVIATIONS	69	PD217	B	OVERHEAD CONTACT SYSTEM - JUMPER ASSEMBLIES - TYPE A, B & C	126	JR103	C	LRT SIGNALS - ROUTE & ASPECT PLAN - SOUTHBOUND (SHEET 1 OF 2)
15	PG002	C	OVERHEAD CONTACT SYSTEM - LEGEND	70	PD218	B	OVERHEAD CONTACT SYSTEM - FEED POINT ASSEMBLIES - TYPE F1, F2 & F3	127	JR104	C	LRT SIGNALS - ROUTE & ASPECT PLAN - SOUTHBOUND (SHEET 2 OF 2)
16	PG003	C	OVERHEAD CONTACT SYSTEM - GENERAL NOTES	71	PD219	B	OVERHEAD CONTACT SYSTEM - BY-PASS JUMPER ASSEMBLIES - TYPE BP1 & BP2	128	JR105	C	LRT SIGNALS - ROUTE & ASPECT PLAN - EASTRIDGE INTERLOCKING
17	PG004	C	OVERHEAD CONTACT SYSTEM - TECHNICAL DIRECTIVES - CONDUCTOR PARTICULARS & TENSIONS	72	PD220	B	OVERHEAD CONTACT SYSTEM - POLE MOUNTED DISC SWITCH - DS-01 & BDS-01	129	JC101	C	LRT SIGNAL SYSTEMS - EASTRIDGE INTERLOCKING - SYSTEM BLOCK DIAGRAM
18	PG005	C	OVERHEAD CONTACT SYSTEM - PANTOGRAPH SECURITY ANALYSES	73	PD221	B	OVERHEAD CONTACT SYSTEM - SURGE ARRESTER ASSEMBLY - SU-01	130	JC102	B	LRT SIGNAL SYSTEMS - EASTRIDGE INTERLOCKING - TYPICAL CODED TRACK CIRCUITS
19	PG006	B	OVERHEAD CONTACT SYSTEM - INSTALLATION TENSION TABLES - PARALLEL FEEDERS & MP	74	PD222	B	OVERHEAD CONTACT SYSTEM - KNUCKLE ASSEMBLIES - KN-01, KN-02 & KN-03	131	JC103	C	LRT SIGNAL SYSTEMS - EASTRIDGE INTERLOCKING - TYPICAL POS TRACK CIRCUITS
20	PG007	B	OVERHEAD CONTACT SYSTEM - ALONG TRACK MOVEMENT CHART	75	PD223	B	OVERHEAD CONTACT SYSTEM - MIDPOINT ANCHOR ASSEMBLY - MP-01	132	JC104	C	LRT SIGNAL SYSTEMS - EASTRIDGE INTERLOCKING - TYPICAL SWITCH CIRCUITS. SINGLE SWITCH
21	PG008	A	OVERHEAD CONTACT SYSTEM - INSTALLATION TENSION TABLES - MW AND CW	76	PD224	B	OVERHEAD CONTACT SYSTEM - TYPICAL POLE ASSEMBLY - C3, D3, E3	133	JC105	B	LRT SIGNAL SYSTEMS - EASTRIDGE INTERLOCKING - TYPICAL SIGNAL CIRCUITS. CROSSOVER. 1 OF 3
22	TP101	C	OVERHEAD CONTACT SYSTEM - SECTIONALIZING DIAGRAM	77	PD225	B	OVERHEAD CONTACT SYSTEM - FEEDER POLE ASSEMBLY - C3F, D3F, E3F	134	JC106	B	LRT SIGNAL SYSTEMS - EASTRIDGE INTERLOCKING - TYPICAL SIGNAL CIRCUITS. CROSSOVER. 2 OF 3
23	TP102	A	OVERHEAD CONTACT SYSTEM - SECTIONALIZING DIAGRAM - TPSS 27 - TPSS 28	78	PD227	B	OVERHEAD CONTACT SYSTEM - COUNTERWEIGHT POLE ASSEMBLY - T2	135	JC107	B	LRT SIGNAL SYSTEMS - EASTRIDGE INTERLOCKING - TYPICAL SIGNAL CIRCUITS. CROSSOVER. 3 OF 3
24	PM001	C	OVERHEAD CONTACT SYSTEM - MASTER OVERLAP CHART	79	PD228	B	OVERHEAD CONTACT SYSTEM - GROUNDING ASSEMBLIES - PG-1, DG-1	136	JC108	B	LRT SIGNAL SYSTEMS - EASTRIDGE INTERLOCKING - TYPICAL SIGNAL LIGHTING CIRCUITS
25	PC001	C	OVERHEAD CONTACT SYSTEM - LAYOUT SCHEDULE - 962+23(E) TO 973+00	80	PD229	B	OVERHEAD CONTACT SYSTEM - SURGE ARRESTER GROUNDING DETAILS	137	JC109	B	LRT SIGNAL SYSTEMS - EASTRIDGE INTERLOCKING - TWC INTERROGATOR (ER1V)
26	PC002	C	OVERHEAD CONTACT SYSTEM - LAYOUT SCHEDULE - 973+00 TO 982+00	81	PD230	B	OVERHEAD CONTACT SYSTEM - IN-SPAN ASSEMBLIES - IS-01, IS-02, IS-03 AND SI-01	138	JC110	B	LRT SIGNAL SYSTEMS - EASTRIDGE INTERLOCKING - TWC INTERROGATOR (ER2V)
27	PC003	C	OVERHEAD CONTACT SYSTEM - LAYOUT SCHEDULE - 982+00 TO 991+00	82	PD231	B	OVERHEAD CONTACT SYSTEM - POLE NUMBERING & - RESTRICTED CLEARANCE SIGN	139	JC111	B	LRT SIGNAL SYSTEMS - EASTRIDGE INTERLOCKING - TWC INTERROGATOR (ER3V)
28	PC004	C	OVERHEAD CONTACT SYSTEM - LAYOUT SCHEDULE - 991+00 TO 1000+00	83	PD232	A	OVERHEAD CONTACT SYSTEM - PARALLEL FEEDER ASSEMBLIES - FBA-01, FBA-02, FSA-01	140	JC112	B	LRT SIGNAL SYSTEMS - EASTRIDGE INTERLOCKING - TWC LOOPS (C140V,C141V,C142V,C143)
29	PC005	C	OVERHEAD CONTACT SYSTEM - LAYOUT SCHEDULE - 1000+00 TO 1009+00	84	PD233	A	OVERHEAD CONTACT SYSTEM - PARALLEL FEEDER TERMINATION - ASSEMBLY PFT-01	141	JC113	B	LRT SIGNAL SYSTEMS - EASTRIDGE INTERLOCKING - TWC LOOPS (C150V,C152V)
30	PC006	C	OVERHEAD CONTACT SYSTEM - LAYOUT SCHEDULE - 1009+00 TO 1018+00	85	PD251	B	OVERHEAD CONTACT SYSTEM - TEMPORARY SPRING TENSION ASSEMBLY	142	JC114	B	LRT SIGNAL SYSTEMS - EASTRIDGE INTERLOCKING - TWC LOOPS (C151V,C152V,C153V)
31	PC007	C	OVERHEAD CONTACT SYSTEM - LAYOUT SCHEDULE - 1018+00 TO 1027+00	86	PD252	B	OVERHEAD CONTACT SYSTEM - EXISTING FEEDER DISC SWITCH - POLE 12.47C & 12.48C	143	JC115	B	LRT SIGNAL SYSTEMS - EASTRIDGE INTERLOCKING - TYPICAL TWC LOOP OUTPUTS
32	PC008	C	OVERHEAD CONTACT SYSTEM - LAYOUT SCHEDULE - 1027+00 TO 1036+00	87	PD253	B	OVERHEAD CONTACT SYSTEM - GROUNDING DETAILS - AT CAPITOL AERIAL GUIDEWAY	144	JC116	B	LRT SIGNAL SYSTEMS - EASTRIDGE INTERLOCKING - MICROPROCESSOR "A" MODULE CONFIGURATION
33	PC009	C	OVERHEAD CONTACT SYSTEM - LAYOUT SCHEDULE - 1036+00 TO 1045+00	88	PD254	C	OVERHEAD CONTACT SYSTEM - CROSSOVER ARRANGEMENT - SHEET 1 OF 2	145	JC117	B	LRT SIGNAL SYSTEMS - EASTRIDGE INTERLOCKING - MICROPROCESSOR "B" MODULE CONFIGURATION
34	PC010	C	OVERHEAD CONTACT SYSTEM - LAYOUT SCHEDULE - 1045+00 TO 1054+00	89	PD255	B	OVERHEAD CONTACT SYSTEM - CROSSOVER ARRANGEMENT - SHEET 2 OF 2	146	JC118	B	LRT SIGNAL SYSTEMS - EASTRIDGE INTERLOCKING - LOCAL CONTROL PANEL
35	PC011	C	OVERHEAD CONTACT SYSTEM - LAYOUT SCHEDULE - 1054+00 TO 1063+00	90	PD256	B	OVERHEAD CONTACT SYSTEM - CANTILEVER ARM ASSEMBLY - CA-T1	147	JC119	B	LRT SIGNAL SYSTEMS - EASTRIDGE INTERLOCKING - CONTROL AND INDICATION CHART "A"
36	PC012	C	OVERHEAD CONTACT SYSTEM - LAYOUT SCHEDULE - 1063+00 TO 1072+00	91	PD257	B	OVERHEAD CONTACT SYSTEM - HEADSPAN ASSEMBLY - HD-01	148	JC120	A	LRT SIGNAL SYSTEMS - EASTRIDGE INTERLOCKING - CONTROL AND INDICATION CHART "A"
37	PC013	C	OVERHEAD CONTACT SYSTEM - LAYOUT SCHEDULE - 1072+00 TO 1081+00	92	PD258	A	OVERHEAD CONTACT SYSTEM - BY-PASS JUMPER ASSEMBLIES - TYPE BP3	149	JC121	A	LRT SIGNAL SYSTEMS - EASTRIDGE INTERLOCKING - ELECTROLOGIXS I/O SLOT 1 "A"
38	PC014	C	OVERHEAD CONTACT SYSTEM - LAYOUT SCHEDULE - 1081+00 TO 1090+00	93	PD259	A	OVERHEAD CONTACT SYSTEM - PARALLEL FEEDER ARRANGEMENT - AT STORY STATION	150	JC122	A	LRT SIGNAL SYSTEMS - EASTRIDGE INTERLOCKING - ELECTROLOGIXS I/O SLOT 2 "A"
39	PC015	C	OVERHEAD CONTACT SYSTEM - LAYOUT SCHEDULE - 1090+00 TO 1096+00	94	PD261	B	OVERHEAD CONTACT SYSTEM - OCS PROFILE - WIRE RUN NO. 84	151	JC123	A	LRT SIGNAL SYSTEMS - EASTRIDGE INTERLOCKING - ELECTROLOGIXS I/O SLOTS 3-6 "A"
40	PC101	A	OCS PARALLEL FEEDERS 27-28 - LAYOUT SCHEDULE - 880+00 TO 890+00	95	PD262	B	OVERHEAD CONTACT SYSTEM - OCS PROFILE - WIRE RUN NO. 88	152	JC124	A	LRT SIGNAL SYSTEMS - EASTRIDGE INTERLOCKING - ELECTROLOGIXS I/O SLOTS 7-9 "A"
41	PC102	A	OCS PARALLEL FEEDERS 27-28 - LAYOUT SCHEDULE - 890+00 TO 900+00	96	PD263	B	OVERHEAD CONTACT SYSTEM - OCS PROFILE - WIRE RUN NO. 83	153	JC125	A	LRT SIGNAL SYSTEMS - EASTRIDGE INTERLOCKING - ELECTROLOGIXS I/O SLOT 1 "B"
42	PC103	A	OCS PARALLEL FEEDERS 27-28 - LAYOUT SCHEDULE - 900+00 TO 910+00	97	PD264	B	OVERHEAD CONTACT SYSTEM - OCS PROFILE - WIRE RUN NO. 87	154	JC126	A	LRT SIGNAL SYSTEMS - EASTRIDGE INTERLOCKING - ELECTROLOGIXS I/O SLOT 2 "B"
43	PC104	A	OCS PARALLEL FEEDERS 27-28 - LAYOUT SCHEDULE - 910+00 TO 920+00	98	PD265	B	OVERHEAD CONTACT SYSTEM - OCS PROFILE - WIRE RUN NO. 92	155	JC127	A	LRT SIGNAL SYSTEMS - EASTRIDGE INTERLOCKING - ELECTROLOGIXS I/O SLOTS 3-6 "B"
44	PC105	A	OCS PARALLEL FEEDERS 27-28 - LAYOUT SCHEDULE - 920+00 TO 930+00	99	PD266	B	OVERHEAD CONTACT SYSTEM - OCS PROFILE - WIRE RUN NO. 94	156	JC128	A	LRT SIGNAL SYSTEMS - EASTRIDGE INTERLOCKING - ELECTROLOGIXS I/O SLOTS 7-9 "B"
45	PC106	A	OCS PARALLEL FEEDERS 27-28 - LAYOUT SCHEDULE - 930+00 TO 940+00	100	PD267	B	OVERHEAD CONTACT SYSTEM - OCS PROFILES - WIRE RUN NO. 91	157	JC129	B	LRT SIGNAL SYSTEMS - EASTRIDGE INTERLOCKING - EVENT RECORDER
46	PC107	A	OCS PARALLEL FEEDERS 27-28 - LAYOUT SCHEDULE - 940+00 TO 950+00	101	PD268	B	OVERHEAD CONTACT SYSTEM - OCS PROFILES - WIRE RUN NO. 93	158	JC130	B	LRT SIGNAL SYSTEMS - EASTRIDGE INTERLOCKING - COMMUNICATION SYSTEM DIAGRAM
47	PC108	A	OCS PARALLEL FEEDERS 27-28 - LAYOUT SCHEDULE - 950+00 TO 960+00	102	PD271	B	OVERHEAD CONTACT SYSTEM - POLE EXTENSION ASSEMBLY - PE-01, PE-02, AND PE-03	159	JC131	B	LRT SIGNAL SYSTEMS - EASTRIDGE INTERLOCKING - CROSSING TRACK CIRCUITS
48	PD101	C	OVERHEAD CONTACT SYSTEM - TYPICAL STRUCTURES - AT GRADE	103	PD272	B	OVERHEAD CONTACT SYSTEM - TERMINAL BRACKET ARM - FTA-01	160	JC132	B	LRT SIGNAL SYSTEMS - EASTRIDGE INTERLOCKING - CROSSING CONTROLLER (PED XING 1A & 1B)
49	PD102	C	OVERHEAD CONTACT SYSTEM - TYPICAL STRUCTURES - AT CAPITOL AERIAL GUIDEWAY	104	PD273	B	OVERHEAD CONTACT SYSTEM - PARALLEL FEEDER TERMINATION - ASSEMBLY PFT-02	161	JC133	B	LRT SIGNAL SYSTEMS - EASTRIDGE INTERLOCKING - LIGHTING SURGE PANEL (PED XING 1A & 1B)
50	PD103	C	OVERHEAD CONTACT SYSTEM - UNINSULATED OVERLAP ARRANGEMENT	105	PD274	B	OVERHEAD CONTACT SYSTEM - HEAD GUY ASSEMBLY - HG-01	162	JC134	B	LRT SIGNAL SYSTEMS - EASTRIDGE INTERLOCKING - GATE, LIGHTS & BELL CIRCUITS (PED XING 1A)
51	PD104	C	OVERHEAD CONTACT SYSTEM - INSULATED OVERLAP ARRANGEMENT	106	PD275	A	OVERHEAD CONTACT SYSTEM - MISCELLANEOUS ASSEMBLIES - WAI-01, BH-01A, PSA-01	163	JC135	B	LRT SIGNAL SYSTEMS - EASTRIDGE INTERLOCKING - GATE, LIGHTS & BELL CIRCUITS (PED XING 1B)
52	PD105	C	OVERHEAD CONTACT SYSTEM - MIDPOINT ANCHOR ARRANGEMENT	107	PD301	B	OVERHEAD CONTACT SYSTEM - STRUCTURE AND FOUNDATION SCHEDULE	164	JC136	B	LRT SIGNAL SYSTEMS - EASTRIDGE INTERLOCKING - CROSSING CONTROLLER (PED XING 2A & 2B)
53	PD201	C	OVERHEAD CONTACT SYSTEM - SPLIT TENSION AIRBREAK ASSEMBLY	108	PD302	A	OCS PARALLEL FEEDER 27-28 - STRUCTURE AND FOUNDATION SCHEDULE	165	JC137	B	LRT SIGNAL SYSTEMS - EASTRIDGE INTERLOCKING - LIGHTING SURGE PANEL (PED XING 2A & 2B)
54	PD202	B	OVERHEAD CONTACT SYSTEM - BRACKET ASSEMBLIES	109	PD303	C	OVERHEAD CONTACT SYSTEM - STANDARD POLE FOUNDATION DETAIL - FS2, FS3	166	JC138	B	LRT SIGNAL SYSTEMS - EASTRIDGE INTERLOCKING - GATE, LIGHTS & BELL CIRCUITS (PED XING 2A)
55	PD203	B	OVERHEAD CONTACT SYSTEM - CANTILEVER ARM ASSEMBLIES - CA-A1, CA-A2	110	PD304	B	OVERHEAD CONTACT SYSTEM - FEEDER POLE FOUNDATION DETAIL - FF2, FF3	167	JC139	B	LRT SIGNAL SYSTEMS - EASTRIDGE INTERLOCKING - GATE, LIGHTS & BELL CIRCUITS (PED XING 2B)
				111	PD305	B	OVERHEAD CONTACT SYSTEM - DOWN GUY FOUNDATION DETAIL - FG-1A, FG-1B	168	JC140	C	LRT SIGNAL SYSTEMS - EASTRIDGE INTERLOCKING - POWER DISTRIBUTION
				112	PD401	B	OVERHEAD CONTACT SYSTEM - STAGING PLANS - SHEET 1 OF 3	169	JC1341	B	LRT SIGNAL SYSTEMS - EASTRIDGE INTERLOCKING - EQUIPMENT ROOM LAYOUT
				113	PD402	B	OVERHEAD CONTACT SYSTEM - STAGING PLANS - SHEET 2 OF 3	170	JC142	B	LRT SIGNAL SYSTEMS - EASTRIDGE INTERLOCKING - RACK LAYOUTS

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NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



SUBMITTED: C. Chi (DESIGNED), M. Cosentino (CHECKED)
   
 DRAWN: A. Hernandez, CADD FILE NAME: 801GN014.dwg

APPROVED: BKF 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS
   
 CADD FILE DATE: 03/06/19, SCALE: NTS
   
 SUBMITTAL DATE: 06/29/20, BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR
   
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT
   
 GENERAL SHEET INDEX - 10
   
 VOLUME 4 (1 OF 4)

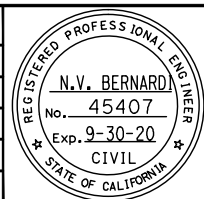
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DRAWING INDEX VOLUME 4

SHT NO	DWG NO	REV	TITLE	SHT NO	DWG NO	REV	TITLE	SHT NO	DWG NO	REV	TITLE
171	JL101	A	LRT SIGNAL SYSTEMS – EASTRIDGE INTERLOCKING – NON-VITAL LOGIC, ELECTROLOGIX "A" (1 OF 18)	229	JL159	A	LRT SIGNAL SYSTEMS – EASTRIDGE INTERLOCKING – VITAL LOGIC, ELECTROLOGIX "B" (17 OF 18)	283	JL325	A	LRT SIGNAL SYSTEMS – CUT SECTION 1011+40. SIGNAL CASE SC1011 – VITAL LOGIC (1 OF 3)
172	JL102	A	LRT SIGNAL SYSTEMS – EASTRIDGE INTERLOCKING – NON-VITAL LOGIC, ELECTROLOGIX "A" (2 OF 18)	230	JL160	A	LRT SIGNAL SYSTEMS – EASTRIDGE INTERLOCKING – VITAL LOGIC, ELECTROLOGIX "B" (18 OF 18)	284	JL326	A	LRT SIGNAL SYSTEMS – CUT SECTION 1011+40. SIGNAL CASE SC1011 – VITAL LOGIC (2 OF 3)
173	JL103	A	LRT SIGNAL SYSTEMS – EASTRIDGE INTERLOCKING – NON-VITAL LOGIC, ELECTROLOGIX "A" (3 OF 18)					285	JL327	A	LRT SIGNAL SYSTEMS – CUT SECTION 1011+40. SIGNAL CASE SC1011 – VITAL LOGIC (3 OF 3)
174	JL104	A	LRT SIGNAL SYSTEMS – EASTRIDGE INTERLOCKING – NON-VITAL LOGIC, ELECTROLOGIX "A" (4 OF 18)	231	JC201	B	LRT SIGNAL SYSTEMS – STORY STATION – SYSTEM BLOCK DIAGRAM				
175	JL105	A	LRT SIGNAL SYSTEMS – EASTRIDGE INTERLOCKING – NON-VITAL LOGIC, ELECTROLOGIX "A" (5 OF 18)	232	JC202	B	LRT SIGNAL SYSTEMS – STORY STATION – CODED TRACK CIRCUITS (1 OF 2)	286	JC351	A	LRT SIGNAL SYSTEMS – CUT SECTION 1028+90. SIGNAL CASE SC1029 – SYSTEM BLOCK DIAGRAM
176	JL106	A	LRT SIGNAL SYSTEMS – EASTRIDGE INTERLOCKING – NON-VITAL LOGIC, ELECTROLOGIX "A" (6 OF 18)	233	JC203	B	LRT SIGNAL SYSTEMS – STORY STATION – CODED TRACK CIRCUITS (2 OF 2)	287	JC352	A	LRT SIGNAL SYSTEMS – CUT SECTION 1028+90. SIGNAL CASE SC1029 – CODED TRACK CIRCUITS (1 OF 2)
177	JL107	A	LRT SIGNAL SYSTEMS – EASTRIDGE INTERLOCKING – NON-VITAL LOGIC, ELECTROLOGIX "A" (7 OF 18)	234	JC204	B	LRT SIGNAL SYSTEMS – STORY STATION – POS TRACK CIRCUITS (1 OF 2)	288	JC353	A	LRT SIGNAL SYSTEMS – CUT SECTION 1028+90. SIGNAL CASE SC1029 – CODED TRACK CIRCUITS (2 OF 2)
178	JL108	A	LRT SIGNAL SYSTEMS – EASTRIDGE INTERLOCKING – NON-VITAL LOGIC, ELECTROLOGIX "A" (8 OF 18)	235	JC205	B	LRT SIGNAL SYSTEMS – STORY STATION – POS TRACK CIRCUITS (2 OF 2)	289	JC354	A	LRT SIGNAL SYSTEMS – CUT SECTION 1028+90. SIGNAL CASE SC1029 – MICROPROCESSOR MODULE CONFIGURATION
179	JL109	A	LRT SIGNAL SYSTEMS – EASTRIDGE INTERLOCKING – NON-VITAL LOGIC, ELECTROLOGIX "A" (9 OF 18)	236	JC206	B	LRT SIGNAL SYSTEMS – STORY STATION – SIGNAL LIGHTING CIRCUITS	290	JC355	A	LRT SIGNAL SYSTEMS – CUT SECTION 1028+90. SIGNAL CASE SC1029 – POWER DISTRIBUTION
180	JL110	A	LRT SIGNAL SYSTEMS – EASTRIDGE INTERLOCKING – NON-VITAL LOGIC, ELECTROLOGIX "A" (10 OF 18)	237	JC207	B	LRT SIGNAL SYSTEMS – STORY STATION – TWC INTERROGATOR (SY1V)	291	JC356	A	LRT SIGNAL SYSTEMS – CUT SECTION 1028+90. SIGNAL CASE SC1029 – SIGNAL CASE – EQUIPMENT LAYOUT
181	JL111	A	LRT SIGNAL SYSTEMS – EASTRIDGE INTERLOCKING – NON-VITAL LOGIC, ELECTROLOGIX "A" (11 OF 18)	238	JC208	B	LRT SIGNAL SYSTEMS – STORY STATION – TWC LOOPS (C123AV,C125AV,C140AV,C142AV)	292	JC357	A	LRT SIGNAL SYSTEMS – CUT SECTION 1028+90. SIGNAL CASE SC1029 – COMMUNICATION SYSTEM DIAGRAM
182	JL112	A	LRT SIGNAL SYSTEMS – EASTRIDGE INTERLOCKING – NON-VITAL LOGIC, ELECTROLOGIX "A" (12 OF 18)	239	JC209	B	LRT SIGNAL SYSTEMS – STORY STATION – MICROPROCESSOR MODULE CONFIGURATION	293	JC358	A	LRT SIGNAL SYSTEMS – CUT SECTION 1028+90. SIGNAL CASE SC1029 – ELECTROLOGIXS I/O SLOTS 1-2
183	JL113	A	LRT SIGNAL SYSTEMS – EASTRIDGE INTERLOCKING – NON-VITAL LOGIC, ELECTROLOGIX "A" (13 OF 18)	240	JC210	B	LRT SIGNAL SYSTEMS – STORY STATION – CONTROL AND INDICATION CHART				
184	JL114	A	LRT SIGNAL SYSTEMS – EASTRIDGE INTERLOCKING – NON-VITAL LOGIC, ELECTROLOGIX "A" (14 OF 18)	241	JC211	A	LRT SIGNAL SYSTEMS – STORY STATION – ELECTROLOGIXS I/O SLOTS 1-2	294	JL351	A	LRT SIGNAL SYSTEMS – CUT SECTION 1028+90. SIGNAL CASE SC1029 – VITAL LOGIC (1 OF 3)
185	JL115	A	LRT SIGNAL SYSTEMS – EASTRIDGE INTERLOCKING – NON-VITAL LOGIC, ELECTROLOGIX "A" (15 OF 18)	242	JC212	A	LRT SIGNAL SYSTEMS – STORY STATION – POS TRACK CIRCUITS (2 OF 2)	295	JL352	A	LRT SIGNAL SYSTEMS – CUT SECTION 1028+90. SIGNAL CASE SC1029 – VITAL LOGIC (2 OF 3)
186	JL116	A	LRT SIGNAL SYSTEMS – EASTRIDGE INTERLOCKING – NON-VITAL LOGIC, ELECTROLOGIX "A" (16 OF 18)	243	JC213	A	LRT SIGNAL SYSTEMS – STORY STATION – ELECTROLOGIXS I/O SLOTS 4-6	296	JL353	A	LRT SIGNAL SYSTEMS – CUT SECTION 1028+90. SIGNAL CASE SC1029 – VITAL LOGIC (3 OF 3)
187	JL117	A	LRT SIGNAL SYSTEMS – EASTRIDGE INTERLOCKING – NON-VITAL LOGIC, ELECTROLOGIX "A" (17 OF 18)	244	JC214	B	LRT SIGNAL SYSTEMS – STORY STATION – HAWK RECORDER				
188	JL118	A	LRT SIGNAL SYSTEMS – EASTRIDGE INTERLOCKING – NON-VITAL LOGIC, ELECTROLOGIX "A" (18 OF 18)	245	JC215	B	LRT SIGNAL SYSTEMS – STORY STATION – COMMUNICATION SYSTEM DIAGRAM	297	JC375	A	LRT SIGNAL SYSTEMS – CUT SECTION 1038+90. SIGNAL CASE SC1039 – SYSTEM BLOCK DIAGRAM
				246	JC216	B	LRT SIGNAL SYSTEMS – STORY STATION – POWER DISTRIBUTION	298	JC376	A	LRT SIGNAL SYSTEMS – CUT SECTION 1038+90. SIGNAL CASE SC1039 – CODED TRACK CIRCUITS (1 OF 2)
189	JL119	A	LRT SIGNAL SYSTEMS – EASTRIDGE INTERLOCKING – VITAL LOGIC, ELECTROLOGIX "A" (1 OF 24)	247	JC217	B	LRT SIGNAL SYSTEMS – STORY STATION – EQUIPMENT ROOM LAYOUT	299	JC377	A	LRT SIGNAL SYSTEMS – CUT SECTION 1038+90. SIGNAL CASE SC1039 – CODED TRACK CIRCUITS (2 OF 2)
190	JL120	A	LRT SIGNAL SYSTEMS – EASTRIDGE INTERLOCKING – VITAL LOGIC, ELECTROLOGIX "A" (2 OF 24)	248	JC218	B	LRT SIGNAL SYSTEMS – STORY STATION – RACK LAYOUTS	300	JC378	A	LRT SIGNAL SYSTEMS – CUT SECTION 1038+90. SIGNAL CASE SC1039 – MICROPROCESSOR MODULE CONFIGURATION
191	JL121	A	LRT SIGNAL SYSTEMS – EASTRIDGE INTERLOCKING – VITAL LOGIC, ELECTROLOGIX "A" (3 OF 24)					301	JC379	A	LRT SIGNAL SYSTEMS – CUT SECTION 1038+90. SIGNAL CASE SC1039 – POWER DISTRIBUTION
192	JL122	A	LRT SIGNAL SYSTEMS – EASTRIDGE INTERLOCKING – VITAL LOGIC, ELECTROLOGIX "A" (4 OF 24)	249	JL201	A	LRT SIGNAL SYSTEMS – STORY STATION – NON-VITAL LOGIC (1 OF 3)	302	JC380	A	LRT SIGNAL SYSTEMS – CUT SECTION 1038+90. SIGNAL CASE SC1039 – SIGNAL CASE – EQUIPMENT LAYOUT
193	JL123	A	LRT SIGNAL SYSTEMS – EASTRIDGE INTERLOCKING – VITAL LOGIC, ELECTROLOGIX "A" (5 OF 24)	250	JL202	A	LRT SIGNAL SYSTEMS – STORY STATION – NON-VITAL LOGIC (2 OF 3)	303	JC381	A	LRT SIGNAL SYSTEMS – CUT SECTION 1038+90. SIGNAL CASE SC1039 – ELECTROLOGIXS I/O SLOTS 1-2
194	JL124	A	LRT SIGNAL SYSTEMS – EASTRIDGE INTERLOCKING – VITAL LOGIC, ELECTROLOGIX "A" (6 OF 24)	251	JL203	A	LRT SIGNAL SYSTEMS – STORY STATION – NON-VITAL LOGIC (3 OF 3)				
195	JL125	A	LRT SIGNAL SYSTEMS – EASTRIDGE INTERLOCKING – VITAL LOGIC, ELECTROLOGIX "A" (7 OF 24)					304	JL375	A	LRT SIGNAL SYSTEMS – CUT SECTION 1038+90. SIGNAL CASE SC1039 – VITAL LOGIC (1 OF 3)
196	JL126	A	LRT SIGNAL SYSTEMS – EASTRIDGE INTERLOCKING – VITAL LOGIC, ELECTROLOGIX "A" (8 OF 24)	252	JL204	A	LRT SIGNAL SYSTEMS – STORY STATION – VITAL LOGIC (1 OF 11)	305	JL376	A	LRT SIGNAL SYSTEMS – CUT SECTION 1038+90. SIGNAL CASE SC1039 – VITAL LOGIC (2 OF 3)
197	JL127	A	LRT SIGNAL SYSTEMS – EASTRIDGE INTERLOCKING – VITAL LOGIC, ELECTROLOGIX "A" (9 OF 24)	253	JL205	A	LRT SIGNAL SYSTEMS – STORY STATION – VITAL LOGIC (2 OF 11)	306	JL377	A	LRT SIGNAL SYSTEMS – CUT SECTION 1038+90. SIGNAL CASE SC1039 – VITAL LOGIC (3 OF 3)
198	JL128	A	LRT SIGNAL SYSTEMS – EASTRIDGE INTERLOCKING – VITAL LOGIC, ELECTROLOGIX "A" (10 OF 24)	254	JL206	A	LRT SIGNAL SYSTEMS – STORY STATION – VITAL LOGIC (3 OF 11)				
199	JL129	A	LRT SIGNAL SYSTEMS – EASTRIDGE INTERLOCKING – VITAL LOGIC, ELECTROLOGIX "A" (11 OF 24)	255	JL207	A	LRT SIGNAL SYSTEMS – STORY STATION – VITAL LOGIC (4 OF 11)	307	JC401	B	LRT SIGNAL SYSTEMS – ALUM ROCK INTERLOCKING – SINGLE LINE SCHEMATIC
200	JL130	A	LRT SIGNAL SYSTEMS – EASTRIDGE INTERLOCKING – VITAL LOGIC, ELECTROLOGIX "A" (12 OF 24)	256	JL208	A	LRT SIGNAL SYSTEMS – STORY STATION – VITAL LOGIC (5 OF 11)	308	JC402	B	LRT SIGNAL SYSTEMS – ALUM ROCK INTERLOCKING – ROUTE AND ASPECTS
201	JL131	A	LRT SIGNAL SYSTEMS – EASTRIDGE INTERLOCKING – VITAL LOGIC, ELECTROLOGIX "A" (13 OF 24)	257	JL209	A	LRT SIGNAL SYSTEMS – STORY STATION – VITAL LOGIC (6 OF 11)	309	JC403	B	LRT SIGNAL SYSTEMS – ALUM ROCK INTERLOCKING – DOUBLE LINE SCHEMATIC
202	JL132	A	LRT SIGNAL SYSTEMS – EASTRIDGE INTERLOCKING – VITAL LOGIC, ELECTROLOGIX "A" (14 OF 24)	258	JL210	A	LRT SIGNAL SYSTEMS – STORY STATION – VITAL LOGIC (7 OF 11)	310	JC404	B	LRT SIGNAL SYSTEMS – ALUM ROCK INTERLOCKING – SYSTEM CONFIGURATION BLOCK DIAGRAM
203	JL133	A	LRT SIGNAL SYSTEMS – EASTRIDGE INTERLOCKING – VITAL LOGIC, ELECTROLOGIX "A" (15 OF 24)	259	JL211	A	LRT SIGNAL SYSTEMS – STORY STATION – VITAL LOGIC (8 OF 11)	311	JC405	A	LRT SIGNAL SYSTEMS – ALUM ROCK INTERLOCKING – ELECTROLOGIXS I/O SLOT 1 PH 1
204	JL134	A	LRT SIGNAL SYSTEMS – EASTRIDGE INTERLOCKING – VITAL LOGIC, ELECTROLOGIX "A" (16 OF 24)	260	JL212	A	LRT SIGNAL SYSTEMS – STORY STATION – VITAL LOGIC (9 OF 11)	312	JC406	A	LRT SIGNAL SYSTEMS – ALUM ROCK INTERLOCKING – CONTROL AND INDICATION CHART-PH 1
205	JL135	A	LRT SIGNAL SYSTEMS – EASTRIDGE INTERLOCKING – VITAL LOGIC, ELECTROLOGIX "A" (17 OF 24)	261	JL213	A	LRT SIGNAL SYSTEMS – STORY STATION – VITAL LOGIC (10 OF 11)	313	JC407	A	LRT SIGNAL SYSTEMS – ALUM ROCK INTERLOCKING – CONTROL AND INDICATION CHART-PH 1
206	JL136	A	LRT SIGNAL SYSTEMS – EASTRIDGE INTERLOCKING – VITAL LOGIC, ELECTROLOGIX "A" (18 OF 24)	262	JL214	A	LRT SIGNAL SYSTEMS – STORY STATION – VITAL LOGIC (11 OF 11)	314	JC408	A	LRT SIGNAL SYSTEMS – ALUM ROCK INTERLOCKING – ELECTROLOGIXS SLOT 2 -PH 1
207	JL137	A	LRT SIGNAL SYSTEMS – EASTRIDGE INTERLOCKING – VITAL LOGIC, ELECTROLOGIX "A" (19 OF 24)					315	JC409	A	LRT SIGNAL SYSTEMS – ALUM ROCK INTERLOCKING – ELECTROLOGIXS I/O SLOTS 4-6 -PH 1
208	JL138	A	LRT SIGNAL SYSTEMS – EASTRIDGE INTERLOCKING – VITAL LOGIC, ELECTROLOGIX "A" (20 OF 24)	263	JC301	B	LRT SIGNAL SYSTEMS – CUT SECTION 968+75. SIGNAL CASE SC968 – SYSTEM BLOCK DIAGRAM	316	JC410	A	LRT SIGNAL SYSTEMS – ALUM ROCK INTERLOCKING – ELECTROLOGIXS I/O SLOTS 7-9 -PH 1
209	JL139	A	LRT SIGNAL SYSTEMS – EASTRIDGE INTERLOCKING – VITAL LOGIC, ELECTROLOGIX "A" (21 OF 24)	264	JC302	B	LRT SIGNAL SYSTEMS – CUT SECTION 968+75. SIGNAL CASE SC968 – CODED TRACK CIRCUITS (1 OF 2)	317	JC411	A	LRT SIGNAL SYSTEMS – ALUM ROCK INTERLOCKING – CONTROL AND INDICATION CHART-PH 2
210	JL140	A	LRT SIGNAL SYSTEMS – EASTRIDGE INTERLOCKING – VITAL LOGIC, ELECTROLOGIX "A" (22 OF 24)	265	JC303	B	LRT SIGNAL SYSTEMS – CUT SECTION 968+75. SIGNAL CASE SC968 – CODED TRACK CIRCUITS (2 OF 2)	318	JC412	A	LRT SIGNAL SYSTEMS – ALUM ROCK INTERLOCKING – CONTROL AND INDICATION CHART-PH 2
211	JL141	A	LRT SIGNAL SYSTEMS – EASTRIDGE INTERLOCKING – VITAL LOGIC, ELECTROLOGIX "A" (23 OF 24)	266	JC304	B	LRT SIGNAL SYSTEMS – CUT SECTION 968+75. SIGNAL CASE SC968 – MICROPROCESSOR MODULE CONFIGURATION	319	JC413	A	LRT SIGNAL SYSTEMS – ALUM ROCK INTERLOCKING – ELECTROLOGIXS I/O SLOT 1 -PH 2
212	JL142	A	LRT SIGNAL SYSTEMS – EASTRIDGE INTERLOCKING – VITAL LOGIC, ELECTROLOGIX "A" (24 OF 24)	267	JC305	B	LRT SIGNAL SYSTEMS – CUT SECTION 968+75. SIGNAL CASE SC968 – POWER DISTRIBUTION	320	JC414	A	LRT SIGNAL SYSTEMS – ALUM ROCK INTERLOCKING – ELECTROLOGIXS I/O SLOT 2 -PH 2
				268	JC306	B	LRT SIGNAL SYSTEMS – CUT SECTION 968+75. SIGNAL CASE SC968 – SIGNAL CASE – EQUIPMENT LAYOUT	321	JC415	A	LRT SIGNAL SYSTEMS – ALUM ROCK INTERLOCKING – ELECTROLOGIXS I/O SLOTS 3-6 -PH 2
213	JL143	A	LRT SIGNAL SYSTEMS – EASTRIDGE INTERLOCKING – VITAL LOGIC, ELECTROLOGIX "B" (1 OF 18)	269	JC307	A	LRT SIGNAL SYSTEMS – CUT SECTION 968+75. SIGNAL CASE SC968 – COMMUNICATION SYSTEM DIAGRAM	322	JC416	A	LRT SIGNAL SYSTEMS – ALUM ROCK INTERLOCKING – ELECTROLOGIXS I/O SLOTS 7-9 -PH 2
214	JL144	A	LRT SIGNAL SYSTEMS – EASTRIDGE INTERLOCKING – VITAL LOGIC, ELECTROLOGIX "B" (2 OF 18)	270	JC308	A	LRT SIGNAL SYSTEMS – CUT SECTION 968+75. SIGNAL CASE SC968 – ELECTROLOGIXS I/O SLOTS 1-2				
215	JL145	A	LRT SIGNAL SYSTEMS – EASTRIDGE INTERLOCKING – VITAL LOGIC, ELECTROLOGIX "B" (3 OF 18)	271	JC309	A	LRT SIGNAL SYSTEMS – CUT SECTION 968+75. SIGNAL CASE SC968 – ELECTROLOGIXS I/O SLOTS 3-4	323	JL401	A	LRT SIGNAL SYSTEMS – ALUM ROCK INTERLOCKING – NON-VITAL LOGIC (1 OF 9)
216	JL146	A	LRT SIGNAL SYSTEMS – EASTRIDGE INTERLOCKING – VITAL LOGIC, ELECTROLOGIX "B" (4 OF 18)					324	JL402	A	LRT SIGNAL SYSTEMS – ALUM ROCK INTERLOCKING – NON-VITAL LOGIC (2 OF 9)
217	JL147	A	LRT SIGNAL SYSTEMS – EASTRIDGE INTERLOCKING – VITAL LOGIC, ELECTROLOGIX "B" (5 OF 18)	272	JL301	A	LRT SIGNAL SYSTEMS – CUT SECTION 968+75. SIGNAL CASE SC968 – VITAL LOGIC (1 OF 4)	325	JL403	A	LRT SIGNAL SYSTEMS – ALUM ROCK INTERLOCKING – NON-VITAL LOGIC (3 OF 9)
218	JL148	A	LRT SIGNAL SYSTEMS – EASTRIDGE INTERLOCKING – VITAL LOGIC, ELECTROLOGIX "B" (6 OF 18)	273	JL302	A	LRT SIGNAL SYSTEMS – CUT SECTION 968+75. SIGNAL CASE SC968 – VITAL LOGIC (2 OF 4)	326	JL404	A	LRT SIGNAL SYSTEMS – ALUM ROCK INTERLOCKING – NON-VITAL LOGIC (4 OF 9)
219	JL149	A	LRT SIGNAL SYSTEMS – EASTRIDGE INTERLOCKING – VITAL LOGIC, ELECTROLOGIX "B" (7 OF 18)	274	JL303	A	LRT SIGNAL SYSTEMS – CUT SECTION 968+75. SIGNAL CASE SC968 – VITAL LOGIC (3 OF 4)	327	JL405	A	LRT SIGNAL SYSTEMS – ALUM ROCK INTERLOCKING – NON-VITAL LOGIC (5 OF 9)
220	JL150	A	LRT SIGNAL SYSTEMS – EASTRIDGE INTERLOCKING – VITAL LOGIC, ELECTROLOGIX "B" (8 OF 18)	275	JL304	A	LRT SIGNAL SYSTEMS – CUT SECTION 968+75. SIGNAL CASE SC968 – VITAL LOGIC (4 OF 4)	328	JL406	A	LRT SIGNAL SYSTEMS – ALUM ROCK INTERLOCKING – NON-VITAL LOGIC (6 OF 9)
221	JL151	A	LRT SIGNAL SYSTEMS – EASTRIDGE INTERLOCKING – VITAL LOGIC, ELECTROLOGIX "B" (9 OF 18)					329	JL407	A	LRT SIGNAL SYSTEMS – ALUM ROCK INTERLOCKING – NON-VITAL LOGIC (7 OF 9)
222	JL152	A	LRT SIGNAL SYSTEMS – EASTRIDGE INTERLOCKING – VITAL LOGIC, ELECTROLOGIX "B" (10 OF 18)	276	JC325	A	LRT SIGNAL SYSTEMS – CUT SECTION 1011+40. SIGNAL CASE SC1011 – SYSTEM BLOCK DIAGRAM	330	JL408	A	LRT SIGNAL SYSTEMS – ALUM ROCK INTERLOCKING – NON-VITAL LOGIC (8 OF 9)
223	JL153	A	LRT SIGNAL SYSTEMS – EASTRIDGE INTERLOCKING – VITAL LOGIC, ELECTROLOGIX "B" (11 OF 18)	277	JC326	A	LRT SIGNAL SYSTEMS – CUT SECTION 1011+40. SIGNAL CASE SC1011 – CODED TRACK CIRCUITS (1 OF 2)	331	JL409	A	LRT SIGNAL SYSTEMS – ALUM ROCK INTERLOCKING – NON-VITAL LOGIC (9 OF 9)
224	JL154	A	LRT SIGNAL SYSTEMS – EASTRIDGE INTERLOCKING – VITAL LOGIC, ELECTROLOGIX "B" (12 OF 18)	278	JC327	A	LRT SIGNAL SYSTEMS – CUT SECTION 1011+40. SIGNAL CASE SC1011 – CODED TRACK CIRCUITS (2 OF 2)				
225	JL155	A	LRT SIGNAL SYSTEMS – EASTRIDGE INTERLOCKING – VITAL LOGIC, ELECTROLOGIX "B" (13 OF 18)	279	JC328	A	LRT SIGNAL SYSTEMS – CUT SECTION 1011+40. SIGNAL CASE SC1011 – MICROPROCESSOR MODULE CONFIGURATION	332	JL410	A	LRT SIGNAL SYSTEMS – ALUM ROCK INTERLOCKING – VITAL LOGIC (1 OF 17)
226	JL156	A	LRT SIGNAL SYSTEMS – EASTRIDGE INTERLOCKING – VITAL LOGIC, ELECTROLOGIX "B" (14 OF 18)	280	JC329	A	LRT SIGNAL SYSTEMS – CUT SECTION 1011+40. SIGNAL CASE SC1011 – POWER DISTRIBUTION	333	JL411	A	LRT SIGNAL SYSTEMS – ALUM ROCK INTERLOCKING – VITAL LOGIC (2 OF 17)
227	JL157	A	LRT SIGNAL SYSTEMS – EASTRIDGE INTERLOCKING – VITAL LOGIC, ELECTROLOGIX "B" (15 OF 18)	281	JC330	A	LRT SIGNAL SYSTEMS – CUT SECTION 1011+40. SIGNAL CASE SC1011 – SIGNAL CASE – EQUIPMENT LAYOUT	334	JL412	A	LRT SIGNAL SYSTEMS – ALUM ROCK INTERLOCKING – VITAL LOGIC (3 OF 17)
228	JL158	A	LRT SIGNAL SYSTEMS – EASTRIDGE INTERLOCKING – VITAL LOGIC, ELECTROLOGIX "B" (16 OF 18)	282	JC331	A	LRT SIGNAL SYSTEMS – CUT SECTION 1011+40. SIGNAL CASE SC1011 – ELECTROLOGIXS I/O SLOTS 1-2	335	JL413	A	LRT SIGNAL SYSTEMS – ALUM ROCK INTERLOCKING – VITAL LOGIC (4 OF 17)

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**BKF100+**  
YEARS  
ENGINEERS / SURVEYORS / PLANNERS

DESIGNED: C. Chi  
CHECKED: M. Cosentino  
DRAWN: A. Hernandez  
CADD FILE NAME: 801GN015.dwg



**BKF100+**  
YEARS  
ENGINEERS / SURVEYORS / PLANNERS

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SCALE: NTS  
SUBMITTAL DATE: 06/29/20  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
GENERAL  
SHEET INDEX - 11  
VOLUME 4 (2 OF 4)

PCA NO.: 000  
CONTRACT NO.: C801  
FILE LOCATION: PROJECTWISE

SHEET OF	
DRAWING NO.	GN015
REVISION	B



DRAWING INDEX VOLUME 4

SHT NO	DWG NO	REV	TITLE	SHT NO	DWG NO	REV	TITLE	SHT NO	DWG NO	REV	TITLE
336	JL414	A	LRT SIGNAL SYSTEMS - ALUM ROCK INTERLOCKING - VITAL LOGIC (5 OF 17)	392	TP130	B	TRACTION POWER - SUBSTATION GROUND GRID - DETAILS	445	KB181	B	COMMUNICATIONS - POWER SINGLE LINE DIAGRAM - IDS CABINET, TYPICAL
337	JL415	A	LRT SIGNAL SYSTEMS - ALUM ROCK INTERLOCKING - VITAL LOGIC (6 OF 17)	393	TP131	B	TRACTION POWER - SUBSTATION GROUNDING DETAILS	446	KB182	B	POWER - SINGLE LINE DIAGRAM - TRACTION POWER SUBSTATION TYPICAL
338	JL416	A	LRT SIGNAL SYSTEMS - ALUM ROCK INTERLOCKING - VITAL LOGIC (7 OF 17)								
339	JL417	A	LRT SIGNAL SYSTEMS - ALUM ROCK INTERLOCKING - VITAL LOGIC (8 OF 17)	394	TP201	C	TRACTION POWER - TPSS #33 EQUIPMENT ARRANGEMENT - PLAN VIEW	447	KC001	B	COMMUNICATIONS - COMBINED SYSTEM DUCTBANK - CABLE PLAN 1 OF 5
340	JL418	A	LRT SIGNAL SYSTEMS - ALUM ROCK INTERLOCKING - VITAL LOGIC (9 OF 17)	395	TP202	A	TRACTION POWER - TPSS #34 EQUIPMENT ARRANGEMENT - PLAN VIEW	448	KC002	B	COMMUNICATIONS - COMBINED SYSTEM DUCTBANK - CABLE PLAN 2 OF 5
341	JL419	A	LRT SIGNAL SYSTEMS - ALUM ROCK INTERLOCKING - VITAL LOGIC (10 OF 17)	396	TP210	A	TRACTION POWER - TPSS #33 EXTERIOR ELEVATION VIEWS - SHEET 1 OF 2	449	KC003	B	COMMUNICATIONS - COMBINED SYSTEM DUCTBANK - CABLE PLAN 3 OF 5
342	JL420	A	LRT SIGNAL SYSTEMS - ALUM ROCK INTERLOCKING - VITAL LOGIC (11 OF 17)	397	TP211	A	TRACTION POWER - TPSS #33 EXTERIOR ELEVATION VIEWS - SHEET 2 OF 2	450	KC004	B	COMMUNICATIONS - COMBINED SYSTEM DUCTBANK - CABLE PLAN 4 OF 5
343	JL421	A	LRT SIGNAL SYSTEMS - ALUM ROCK INTERLOCKING - VITAL LOGIC (12 OF 17)	398	TP212	A	TRACTION POWER - TPSS #33 INTERIOR SECTION VIEWS - SHEET 1 OF 2	451	KC005	B	COMMUNICATIONS - COMBINED SYSTEM DUCTBANK - CABLE PLAN 5 OF 5
344	JL422	A	LRT SIGNAL SYSTEMS - ALUM ROCK INTERLOCKING - VITAL LOGIC (13 OF 17)	399	TP213	A	TRACTION POWER - TPSS #33 INTERIOR SECTION VIEWS - SHEET 2 OF 2	452	KC006	B	COMMUNICATIONS - COMBINED SYSTEM DUCTBANK - OVERALL CABLE PLAN
345	JL423	A	LRT SIGNAL SYSTEMS - ALUM ROCK INTERLOCKING - VITAL LOGIC (14 OF 17)	400	TP214	A	TRACTION POWER - TPSS #34 EXTERIOR ELEVATION VIEWS - SHEET 1 OF 2	453	KC101	B	COMMUNICATIONS - CABLE SCHEDULE - STORY ROAD STATION
346	JL424	A	LRT SIGNAL SYSTEMS - ALUM ROCK INTERLOCKING - VITAL LOGIC (15 OF 17)	401	TP215	A	TRACTION POWER - TPSS #34 EXTERIOR ELEVATION VIEWS - SHEET 2 OF 2	454	KC103	B	COMMUNICATIONS - CABLE SCHEDULE - EASTRIDGE STATION & STA. TO WAYSIDE
347	JL425	A	LRT SIGNAL SYSTEMS - ALUM ROCK INTERLOCKING - VITAL LOGIC (16 OF 17)	402	TP216	A	TRACTION POWER - TPSS #34 INTERIOR SECTION VIEWS - SHEET 1 OF 2	455	KC105	B	COMMUNICATIONS - CABLE SCHEDULE - IDS LOCATIONS 1-4
348	JL426	A	LRT SIGNAL SYSTEMS - ALUM ROCK INTERLOCKING - VITAL LOGIC (17 OF 17)	403	TP217	A	TRACTION POWER - TPSS #34 INTERIOR SECTION VIEWS - SHEET 2 OF 2	456	KC106	B	COMMUNICATIONS - CABLING DETAILS - IDS LOCATIONS 1-4
								457	KD001	B	COMMUNICATIONS - INSTALLATION DETAILS - STATION EQUIPMENT ROOM RACK
349	JP101	B	LRT SIGNAL SYSTEMS - HIGH SIGNAL FOUNDATION	404	TP300	C	TRACTION POWER - TPSS #33 - SUBSTATION EQUIPMENT PLAN	458	KD003	C	COMMUNICATIONS - INSTALLATION DETAILS - TPSS COMMUNICATIONS
350	JP102	B	LRT SIGNAL SYSTEMS - TRACK CIRCUITS AND TWC CONNECTIONS	405	TP301	C	TRACTION POWER - TPSS #34 - SUBSTATION EQUIPMENT PLAN	459	KD004	C	COMMUNICATIONS - INSTALLATION DETAILS - CSD CABLE RACKING / ROUTING
351	JP103	B	LRT SIGNAL SYSTEMS - TWC LOOP					460	KD005	C	COMMUNICATIONS - INSTALLATION DETAILS - STATION COMMS GROUNDING
352	JP104	B	LRT SIGNAL SYSTEMS - SIGNAL/TWC/INS. JOINT INTERFACE	406	PT111	C	TRACTION POWER - TPSS #33 - SUBSTATION DUCTBANK PLAN	461	KD006	C	COMMUNICATIONS - INSTALLATION DETAILS - TYPICAL STA. LOCAL DISTRIBUTION FRAME
353	JP105	B	LRT SIGNAL SYSTEMS - HIGH SIGNAL DETAILS	407	PT112	C	TRACTION POWER - TPSS #34 - SUBSTATION EQUIPMENT PLAN	462	KD008	C	COMMUNICATIONS - INSTALLATION DETAILS CENTRAL - EQUIPMENT ROOM GROUNDING
354	JP106	B	LRT SIGNAL SYSTEMS - SWITCH LAYOUT - TIE INSTALLATION. 1 OF 4	408	PT120	A	TRACTION POWER - TPSS #33 FOUNDATION PLAN	463	KD107	C	COMMUNICATIONS - INSTALLATION DETAILS - PASSENGER INFO. MONITOR MOUNTING
355	JP107	B	LRT SIGNAL SYSTEMS - SWITCH LAYOUT - TIE INSTALLATION. 2 OF 4	409	PT121	A	TRACTION POWER - TPSS #34 FOUNDATION PLAN	464	KD110	C	COMMUNICATIONS - INSTALLATION DETAILS - PUBLIC ADDRESS SPEAKER MOUNTING
356	JP108	B	LRT SIGNAL SYSTEMS - SWITCH LAYOUT - DIRECT FIXATION INSTALLATION. 3 OF 4	410	PT122	A	TRACTION POWER - DUCTBANK STUB-UP DETAILS - AND FOUNDATION SECTIONS	465	KD111	B	COMMUNICATIONS - INSTALLATION DETAILS - PUBLIC ADDRESS SPEAKERS
357	JP109	B	LRT SIGNAL SYSTEMS - SWITCH LAYOUT - DIRECT FIXATION INSTALLATION. 4 OF 4	411	PT123	C	TRACTION POWER - TPSS #33 AND #34 - TYPICAL DUCTBANK SECTIONS	466	KD114	C	COMMUNICATIONS - INSTALLATION DETAILS - TELEPHONE MOUNTING - EMERGENCY
358	JP110	B	LRT SIGNAL SYSTEMS - STANDARD SIGNS	412	PT130	C	TRACTION POWER - DISCONNECT SWITCH AND - CABLE ARRANGEMENT	467	KD115	C	COMMUNICATIONS - INSTALLATION DETAILS - MAINTENANCE TELEPHONE MOUNTING
359	JP111	B	LRT SIGNAL SYSTEMS - SIGNAL CASE FOUNDATION DETAILS - BALLASTED TRACK	413	PT131	A	TRACTION POWER - TPSS #33 - POSITIVE MANHOLE DETAILS - AND DISCONNECT SWITCH LAYOUT	468	KD116	C	COMMUNICATIONS - INSTALLATION DETAILS - TVM AND CID MOUNTING
360	JP112	B	LRT SIGNAL SYSTEMS - PED XING GATE WITH SIDE LIGHTS	414	PT132	A	TRACTION POWER - TPSS #34 - POSITIVE MANHOLE DETAILS - AND DISCONNECT SWITCH LAYOUT	469	KD118	C	COMMUNICATIONS - INSTALLATION DETAILS - CCTV MOUNTING
361	JP113	B	LRT SIGNAL SYSTEMS - RAIL BONDING LAYOUT - SIGNALIZED TURNOUTS	415	PT133	A	TRACTION POWER - NEGATIVE AND COMMUNICATIONS - PULLBOX DETAILS	470	KD119	A	COMMUNICATIONS - INSTALLATION DETAILS - ACCESS CONTROL SYSTEM
362	JP114	B	LRT SIGNAL SYSTEMS - IMPEDANCE BOND INSTALLATION - BALLASTED TRACK. 1 OF 4	416	PT134	A	TRACTION POWER - NEGATIVE DRAINAGE PULLBOX - DETAILS	471	KD120	B	COMMUNICATIONS - INSTALLATION DETAILS - LIGHT POLE CONDUIT CABLE RUN
363	JP115	B	LRT SIGNAL SYSTEMS - IMPEDANCE BOND INSTALLATION - BALLASTED TRACK. 2 OF 4					472	KD122	C	COMMUNICATIONS - INSTALLATION DETAILS - LIGHT POLE BASE VARIATIONS
364	JP116	B	LRT SIGNAL SYSTEMS - IMPEDANCE BOND INSTALLATION - DIRECT FIXATION TRACK. 3 OF 4	417	PT201	A	SUBSTATION TPSS #33 - CABLE AND CONDUIT SCHEDULE - SHEET 1 OF 2	473	KD130	B	COMMUNICATIONS - INSTALLATION DETAILS - ELEVATOR SCADA
365	JP117	B	LRT SIGNAL SYSTEMS - IMPEDANCE BOND INSTALLATION - LAYOUT/CONNECTIONS. 4 OF 4	418	PT202	A	SUBSTATION TPSS #33 - CABLE AND CONDUIT SCHEDULE - SHEET 2 OF 2	474	KD131	B	COMMUNICATIONS - INSTALLATION DETAILS - SCADA RELAY DETAIL
366	JP118	B	LRT SIGNAL SYSTEMS - RAIL BONDING LAYOUT - SIGNALLED CROSSINGS	419	PT203	A	SUBSTATION TPSS #34 - CABLE AND CONDUIT SCHEDULE - SHEET 1 OF 2	475	KD140	B	COMMUNICATIONS - INTRUSION DETECTION SYSTEM - NORTH APPROACH INSTALLATION DETAILS
367	JP119	B	LRT SIGNAL SYSTEMS - GATE MAST ID SIGN	420	PT204	A	SUBSTATION TPSS #34 - CABLE AND CONDUIT SCHEDULE - SHEET 2 OF 2	476	KD142	A	COMMUNICATIONS - INTRUSION DETECTION SYSTEM - STORY STATION INSTALLATION DETAILS
368	JP120	B	LRT SIGNAL SYSTEMS - TWC MARKER SIGN	421	PT210	A	TPSS #33 AND TPSS #34 - MANHOLE AND PULLBOX SCHEDULE	477	KD144	A	COMMUNICATIONS - INTRUSION DETECTION SYSTEM - STORY STATION INSTALLATION DETAILS
369	JP121	B	LRT SIGNAL SYSTEMS - RED DISK AND PED "X" SIGNS					478	KE101	C	COMMUNICATIONS - EQUIPMENT LAYOUT - FLOOR PLAN, STORY STATION, SHEET 1 OF 3
370	JP122	B	LRT SIGNAL SYSTEMS - STANDARD SPEED SIGNS					479	KE102	C	COMMUNICATIONS - EQUIPMENT LAYOUT - FLOOR PLAN, STORY STATION, SHEET 2 OF 3
371	JP123	B	LRT SIGNAL SYSTEMS - SIGN POST INSTALLATION					480	KE103	C	COMMUNICATIONS - EQUIPMENT LAYOUT - FLOOR PLAN, STORY STATION, SHEET 3 OF 3
372	JP124	B	LRT SIGNAL SYSTEMS - SWITCH IDENTIFICATION SIGN					481	KE105	C	COMMUNICATIONS - EQUIPMENT LAYOUT - FLOOR PLAN, EASTRIDGE STATION
373	JP125	B	LRT SIGNAL SYSTEMS - "SWITCH MAY THROW" SIGN					482	KE111	C	COMMUNICATIONS - EQUIPMENT LAYOUT - FLOOR PLAN, RAIL OPS EQUIPMENT ROOM
374	JP126	B	LRT SIGNAL SYSTEMS - SIGNAL CASE DETAILS					483	KE113	C	COMMUNICATIONS - EQUIPMENT LAYOUT - FLOOR PLAN, STORY SIGNALS/COMM ROOM
375	JP127	B	LRT SIGNAL SYSTEMS - TRACK CIRCUIT JUNCTION BOX - DIRECT FIXATION TRACK (AERIAL STRUCTURE)					484	KE114	C	COMMUNICATIONS - EQUIPMENT LAYOUT - FLOOR PLAN, EASTRIDGE COMM ROOM
376	JP128	A	LRT SIGNAL SYSTEMS - TRACK CIRCUIT JUNCTION BOX - BALLAST TRACK APPLICATION					485	KE120	B	COMMUNICATIONS - RACK FACE ELEV - RAIL OPS COMM EQUIPMENT ROOM
								486	KE125	B	COMMUNICATIONS - RACK FACE ELEV - STORY STATION COMM ROOM
								487	KE127	B	COMMUNICATIONS - RACK FACE ELEV - EASTRIDGE STATION COMM ROOM
								488	KE128	B	COMMUNICATIONS - RACK FACE ELEVATION - ALUM ROCK & MCKEE STAT. CTS INTRF.
								489	KE140	B	COMMUNICATIONS - RACK FACE ELEV - IDS CABINET, TYPICAL
								490	KF101	A	STORY STATION - COMM SITE PLAN
								491	KF102	A	STORY STATION - PLATFORM COMM PLAN 1
								492	KF103	A	STORY STATION - PLATFORM COMM PLAN 2
								493	KF104	A	STORY STATION - PLATFORM COMM PLAN 3
								494	KF105	A	STORY STATION - PEDESTRIAN OVERCROSSING - COMM PLAN
								495	KF106	A	STORY STATION - ELEVATOR #1 AREA - COMM PLAN
								496	KF107	A	STORY STATION - ELEVATOR #2 AREA - COMM PLAN
								497	KF108	A	STORY STATION - ELEVATOR #3 AREA - COMM PLAN
								498	KF109	A	STORY STATION - COMM DETAILS
								499	KF201	A	EASTRIDGE STATION - PLATFORM COMM PLAN 1
								500	KF202	A	EASTRIDGE STATION - PLATFORM COMM PLAN 2
								501	KF203	A	EASTRIDGE STATION - PLATFORM COMM PLAN 3

TRACTION POWER

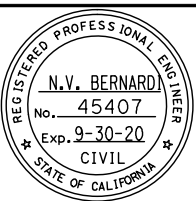
377	TP103	C	TRACTION POWER - SYMBOLS, ABBREVIATIONS - AND DEVICE TABLE
378	TP111	C	TRACTION POWER - TPSS #33-SINGLE LINE METER - AND RELAY DIAGRAM
379	TP112	C	TRACTION POWER - TPSS #34-SINGLE LINE METER - AND RELAY DIAGRAM
380	TP113	C	TRACTION POWER - AC BREAKER - SCHEMATIC DIAGRAM
381	TP114	C	TRACTION POWER - DC MAIN BREAKER - SCHEMATIC DIAGRAM
382	TP115	C	TRACTION POWER - DC FEEDER BREAKER - SCHEMATIC DIAGRAM
383	TP116	C	TRACTION POWER - AC AND DC DISTRIBUTION PANELS
384	TP117	C	TRACTION POWER - NEGATIVE GROUNDING UNIT DIAGRAM
385	TP118	C	TRACTION POWER - TRANSFER TRIP CIRCUIT
386	TP119	A	TRACTION POWER - EXISTING TPSS #28 TRANSFER TRIP - TERMINAL BLOCK CONNECTIONS
387	TP120	C	TRACTION POWER - OCS VOLTAGE MONITORING SCHEMATICS - DIAGRAM
388	TP121	C	TRACTION POWER - COMMUNICATIONS INTERFACE - AND HMI
389	TP122	A	TRACTION POWER - COMMUNICATIONS INTERFACE CABINET - (CIC)
390	TP123	A	TRACTION POWER - COMMUNICATIONS - SCADA BLOCK DIAGRAM
391	TP124	A	TRACTION POWER - TYPICAL SCADA POINTS LIST

COMMUNICATIONS

422	GN016	C	COMMUNICATIONS - GENERAL - ABBREVIATIONS
423	GN018	C	COMMUNICATIONS - GENERAL - SYMBOLS
424	GN021	C	COMMUNICATIONS - GENERAL NOTES - SHEET 1 OF 2
425	GN022	C	COMMUNICATIONS - GENERAL NOTES - SHEET 2 OF 2
426	KB101	C	COMMUNICATIONS - SYSTEM BLOCK DIAGRAM - OVERALL SYSTEM
427	KB104	C	COMMUNICATIONS - SYSTEM BLOCK DIAGRAM - STATIONS SINGLE LINE, SHEET 1 OF 2
428	KB105	C	COMMUNICATIONS - SYSTEM BLOCK DIAGRAM - STATIONS SINGLE LINE, SHEET 2 OF 2
429	KB106	C	COMMUNICATIONS - CTS BLOCK DIAGRAM - CTS TOPOLOGY
430	KB107	C	COMMUNICATIONS - BLOCK DIAGRAM - TYPICAL COMMUNICATIONS NODE
431	KB111	C	COMMUNICATIONS - CTS CABLE DIAGRAM - STORY COMMUNICATIONS NODE
432	KB113	C	COMMUNICATIONS - CTS CABLE DIAGRAM - EASTRIDGE COMMUNICATIONS NODE
433	KB154	C	COMMUNICATIONS - BLOCK DIAGRAM, TYPICAL - PUBLIC ADDRESS SUBSYSTEM
434	KB156	C	COMMUNICATIONS - BLOCK DIAGRAM, TYPICAL - PASSENGER INFO. MONITOR SUBSYSTEM
435	KB157	C	COMMUNICATIONS - BLOCK DIAGRAM, TYPICAL - AUTOMATED FARE COLLECTION SUBSYSTEM
436	KB158	C	COMMUNICATIONS - BLOCK DIAGRAM, TYPICAL - TELEPHONE SUBSYSTEM
437	KB160	C	COMMUNICATIONS - BLOCK DIAGRAM, TYPICAL - CLOSED CIRCUIT TELEVISION SUBSYSTEM
438	KB162	C	COMMUNICATIONS - BLOCK DIAGRAM, TYPICAL - SCADA SUBSYSTEM
439	KB164	C	COMMUNICATIONS - BLOCK DIAGRAM, TYPICAL - INTRUSION DETECTION SUBSYSTEM
440	KB165	A	COMMUNICATIONS - BLOCK DIAGRAM, TYPICAL - ACCESS CONTROL SYSTEM
441	KB166	C	COMMUNICATIONS - BLOCK DIAGRAM, TYPICAL - TRAIN CONTROL INTERFACE
442	KB168	C	COMMUNICATIONS - BLOCK DIAGRAM, TYPICAL - TRACTION POWER SUBSTATION INTERFACE
443	KB179	B	COMMUNICATIONS - POWER SINGLE LINE DIAGRAM - IT ROOM TYPICAL
444	KB180	B	COMMUNICATIONS - POWER SINGLE LINE DIAGRAM - COMM ROOM TYPICAL

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 DESIGNED: C. Chi  
 CHECKED: M. Cosentino  
 DRAWN: A. Hernandez  
 CADD FILE NAME: 801GN016.dwg

Santa Clara Valley  
 Transportation  
 Authority

APPROVED: [Signature]  
 CADD FILE DATE: 03/06/20  
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 SUBMITTAL DATE: 06/29/20  
 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 GENERAL  
 SHEET INDEX - 12  
 VOLUME 4 (3 OF 4)

PCA NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE
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DRAWING INDEX VOLUME 4

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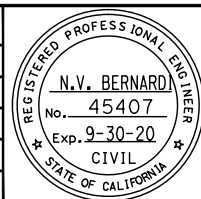
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NO NO REV TITLE

COMBINED SYSTEM DUCT

502	EC000	C	ELECTRICAL – COMBINED SYSTEM DUCT – LEGEND AND NOTES
503	EC001	C	ELECTRICAL – COMBINED SYSTEM DUCT – STA 964+80 TO STA 967+00
504	EC101	C	ELECTRICAL – COMBINED SYSTEM DUCT – STA 964+80 TO STA 967+00
505	EC002	C	ELECTRICAL – COMBINED SYSTEM DUCT – STA 967+00 TO STA 972+00
506	EC003	C	ELECTRICAL – COMBINED SYSTEM DUCT – STA 972+00 TO STA 977+00
507	EC004	C	ELECTRICAL – COMBINED SYSTEM DUCT – STA 977+00 TO STA 982+00
508	EC005	C	ELECTRICAL – COMBINED SYSTEM DUCT – STA 982+00 TO STA 987+00
509	EC006	C	ELECTRICAL – COMBINED SYSTEM DUCT – STA 987+00 TO STA 992+00
510	EC007	C	ELECTRICAL – COMBINED SYSTEM DUCT – STA 992+00 TO STA 997+00
511	EC008	C	ELECTRICAL – COMBINED SYSTEM DUCT – STA 997+00 TO STA 1002+00
512	EC009	C	ELECTRICAL – COMBINED SYSTEM DUCT – STA 1002+00 TO STA 1007+00
513	EC010	C	ELECTRICAL – COMBINED SYSTEM DUCT – STA 1007+00 TO STA 1012+00
514	EC011	C	ELECTRICAL – COMBINED SYSTEM DUCT – STA 1012+00 TO STA 1017+00
515	EC012	C	ELECTRICAL – COMBINED SYSTEM DUCT – STA 1017+00 TO STA 1022+00
516	EC013	C	ELECTRICAL – COMBINED SYSTEM DUCT – STA 1022+00 TO STA 1027+00
517	EC014	C	ELECTRICAL – COMBINED SYSTEM DUCT – STA 1027+00 TO STA 1032+00
518	EC015	C	ELECTRICAL – COMBINED SYSTEM DUCT – STA 1032+00 TO STA 1035+50
519	EC016	C	ELECTRICAL – COMBINED SYSTEM DUCT – STA 1035+50 TO STA 1039+50
520	EC116	C	ELECTRICAL – COMBINED SYSTEM DUCT – STA 1035+50 TO STA 1039+50
521	EC216	B	ELECTRICAL – COMBINED SYSTEM DUCT (AT-GRADE) – PLAN & PROFILE
522	EC017	C	ELECTRICAL – COMBINED SYSTEM DUCT – STA 1039+50 TO STA 1044+00
523	EC018	C	ELECTRICAL – COMBINED SYSTEM DUCT – STA 1044+00 TO STA 1048+00
524	EC019	C	ELECTRICAL – COMBINED SYSTEM DUCT – STA 1048+00 TO STA 1053+00
525	EC020	C	ELECTRICAL – COMBINED SYSTEM DUCT – STA 1053+00 TO STA 1058+00
526	EC021	C	ELECTRICAL – COMBINED SYSTEM DUCT – STA 1058+00 TO STA 1063+00
527	EC022	C	ELECTRICAL – COMBINED SYSTEM DUCT – STA 1063+00 TO STA 1068+00
528	EC023	C	ELECTRICAL – COMBINED SYSTEM DUCT – STA 1068+00 TO STA 1071+00
529	EC024	C	ELECTRICAL – COMBINED SYSTEM DUCT – STA 1071+00 TO STA 1075+50
530	EC025	C	ELECTRICAL – COMBINED SYSTEM DUCT – STA 1075+50 TO STA 1080+50
531	EC026	C	ELECTRICAL – COMBINED SYSTEM DUCT – STA 1080+50 TO STA 1085+00
532	EC027	C	ELECTRICAL – COMBINED SYSTEM DUCT – STA 1085+00 TO STA 1090+00
533	EC028	C	ELECTRICAL – COMBINED SYSTEM DUCT – STA 1090+00 TO STA 1094+50
534	EC029	C	ELECTRICAL – COMBINED SYSTEM DUCT – STA 1094+50 TO STA 1095+11
535	ED401	B	ELECTRICAL – COMBINED SYSTEM DUCT – TYPICAL DUCTBANK SECTIONS
536	ED402	B	ELECTRICAL – COMBINED SYSTEM DUCT – CAPITOL EXPRESSWAY NORTH END
537	ED403	B	ELECTRICAL – COMBINED SYSTEM DUCT – CAPITOL EXPRESSWAY SOUTH END
538	ED404	B	ELECTRICAL – COMBINED SYSTEM DUCT – BENT 47
539	ED405	B	ELECTRICAL – COMBINED SYSTEM DUCT – BENT 48
540	ED406	B	ELECTRICAL – COMBINED SYSTEM DUCT – SIGNAL/COMM/ELECTRICAL ROOM (STORY STATION)
541	ED407	B	ELECTRICAL – COMBINED SYSTEM DUCT – STORY STATION PLATFORM SECTION
542	ED408	B	ELECTRICAL – COMBINED SYSTEM DUCT – DUCT BANKS FROM TPSS #34
543	ED409	B	ELECTRICAL – COMBINED SYSTEM DUCT – PULL BOX DETAILS – 1
544	ED410	B	ELECTRICAL – COMBINED SYSTEM DUCT – PULL BOX DETAILS – 2
545	ED411	B	ELECTRICAL – COMBINED SYSTEM DUCT – CS TROUGH DETAILS
546	ED412	B	ELECTRICAL – COMBINED SYSTEM DUCT – GROUNDING DETAILS
547	ED413	B	ELECTRICAL – COMBINED SYSTEM DUCT – GROUNDING DETAILS
548	ED414	B	ELECTRICAL – COMBINED SYSTEM DUCT – PRECAST GIRDER
549	ED415	B	ELECTRICAL – COMBINED SYSTEM DUCT – TES FEEDER POLE

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SUBMITTED	
<b>BKF 100+</b> YEARS ENGINEERS / SURVEYORS / PLANNERS	
DESIGNED C. Chi	CHECKED M. Cosentino
DRAWN A. Hernandez	CADD FILE NAME 801GN017.dwg



APPROVED	
<b>BKF 100+</b> YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE 03/06/20	SCALE NTS
SUBMITTAL DATE 06/29/20	BOARD APPROVAL DATE

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT GENERAL SHEET INDEX - 13 VOLUME 4 (4 OF 4)		
PCA NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE

SHEET OF
DRAWING NO. GN017
REVISION A

DRAWING INDEX VOLUME 5

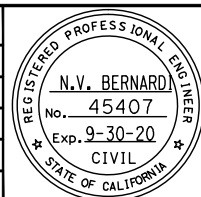
SHT NO	DWG NO	REV	TITLE
<b>GENERAL</b>			
1	GN001	C	GENERAL - TITLE
2	GN002	C	GENERAL - KEYMAP - 40 - SCALE
3	GN003	C	GENERAL - KEYMAP - 20 - SCALE
4	GN004	C	GENERAL - DESIGN DRAWING VOLUMES - LAYOUT AND ORGANIZATION
5	GN018	A	GENERAL - SHEET INDEX - 14 - VOLUME 5
6	GN019	C	GENERAL - ABBREVIATIONS - 1
7	GN020	C	GENERAL - ABBREVIATIONS - 2
8	GN021	C	GENERAL - ABBREVIATIONS - 3
9	GN022	C	GENERAL - ABBREVIATIONS - 4
10	GN023	C	GENERAL - ABBREVIATIONS - 5
11	GN024	C	GENERAL - LEGEND - 1
12	GN025	C	GENERAL - LEGEND - 2
13	GN026	C	GENERAL - LEGEND - 3
14	GN027	C	GENERAL - LEGEND - 4

SHT NO	DWG NO	REV	TITLE
<b>CIVIL</b>			
15	BR100	A	CIVIL - BRT OCALA STATION - KEYMAP
16	BR101	A	CIVIL - BRT OCALA STATION - DEMOLITION & SALVAGE PLAN - EXISTING CONDITION
17	BR111	A	CIVIL - BRT OCALA STATION - IMPROVEMENT PLAN
18	BR121	A	CIVIL - BRT OCALA STATION - UTILITY PLAN - 1
19	BR122	A	CIVIL - BRT OCALA STATION - UTILITY PLAN - 2
20	BR131	A	CIVIL - BRT OCALA STATION - CONSTRUCTION DETAILS - 1
21	BR132	A	CIVIL - BRT OCALA STATION - CONSTRUCTION DETAILS - 2

SHT NO	DWG NO	REV	TITLE
<b>STRUCTURAL</b>			
22	SA100	A	STRUCTURAL - BRT OCALA STATION - STRUCTURAL DESIGN CRITERIA
23	SP101	A	STRUCTURAL - BRT OCALA STATION - BUS SHELTER PLAN & ELEVATION
24	SU101	A	STRUCTURAL - BRT OCALA STATION - FOUNDATION DETAILS No. 1
25	SU102	A	STRUCTURAL - BRT OCALA STATION - FOUNDATION DETAILS No. 2
26	SU103	A	STRUCTURAL - BRT OCALA STATION - FOUNDATION DETAILS No. 3

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<b>BkF 100+</b> YEARS ENGINEERS / SURVEYORS / PLANNERS	
DESIGNED	CHECKED
C. Chi	M. Cosentino
DRAWN	CADD FILE NAME
A. Hernandez	801GN018.dwg



APPROVED	
<b>BkF 100+</b> YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	SCALE
03/06/20	NTS
SUBMITTAL DATE	BOARD APPROVAL DATE
06/29/20	

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT GENERAL SHEET INDEX - 14 VOLUME 5		
PCA NO.	CONTRACT NO.	FILE LOCATION
000	C801	PROJECTWISE

SHEET OF	DRAWING NO.
	GN018
REVISION	
A	

ABBREVIATIONS LIST

A

A AREA, AMPERE, ADJUST TO GRADE  
 AAR ASSOCIATION OF AMERICAN RAILROADS  
 AASHTO AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS  
 AAV AUTOMATIC AIR VENT  
 AB ABANDON, ANCHOR BOLT, AGGREGATE BASE  
 Abn, ABAN ABANDON  
 ABS AUTOMATIC BLOCK SIGNALING  
 ABUT ABUTMENT  
 AC ALTERNATING CURRENT, ASPHALT CONCRETE, ASBESTOS CEMENT (TRANSITE)  
 A/C AIR CONDITIONING  
 ACI AMERICAN CONCRETE INSTITUTE  
 ACK ACKNOWLEDGE  
 ACP ASBESTOS CEMENT PIPE, ACCESS CONTROL PANEL  
 ACR ACCESS CARD READER  
 ACS ADVANCED COMMUNICATIONS SYSTEM  
 ACT'L ACOUSTICAL  
 AD AREA DRAIN, ALGEBRAIC DIFFERENCE  
 ADA AMERICANS WITH DISABILITIES ACT  
 ADC ACCESS DOOR CONTACT  
 ADD ADDITION  
 ADJ ADJACENT  
 ADD'L ADDITIONAL  
 ADM ADD-DROP MULTIPLEXER  
 ADR ACCESS DOOR  
 AFC AUTOMATIC FARE COLLECTION  
 AFF ABOVE FINISHED FLOOR  
 AFG ABOVE FINISHED GRADE  
 AFO AUDIO FREQUENCY OVERLAY TRACK CIRCUIT  
 AFTS ALTERNATIVE FLARE TERMINAL SYSTEM  
 AGC AUTOMATIC GAIN CONTROL  
 AGG AGGREGATE  
 AHD AHEAD  
 AHU AIR HANDLING UNIT  
 ALT ALTERNATE  
 ALUM ALUMINUM  
 AMP AMPERE, AMPLIFIER  
 AN AMBIENT NOISE MICROPHONE  
 ANG ANGLE  
 ANN ANNUNCIATOR  
 ANSI AMERICAN NATIONAL STANDARDS INSTITUTE  
 ANT ANTENNA  
 AP ACCESS PANEL, ANGLE POINT  
 APN ASSESSOR'S PARCEL NUMBER, APPRAISAL NUMBER  
 APPROX APPROXIMATELY  
 ARCH ARCHITECT  
 AREA AMERICAN RAILWAY ENGINEERING ASSOCIATION  
 AREMA AMERICAN RAILWAY ENGINEERING AND MAINTENANCE-OF-WAY ASSOCIATION  
 ARRGT ARRANGEMENT  
 AS AGGREGATE SUBBASE, AMMETER SWITCH  
 ASHRAE AMERICAN SOCIETY OF HEATING REFRIGERATION & AIR CONDITIONERS, INC  
 ASME AMERICAN SOCIETY OF MECHANICAL ENGINEERS  
 ASPE AMERICAN SOCIETY OF PLUMBING ENGINEERS  
 ASPH ASPHALT  
 ASTM AMERICAN SOCIETY OF TESTING MATERIALS  
 ASYNCH ASYNCHRONOUS  
 AT&T AMERICAN TELEPHONE & TELEGRAPH

ATC AUTOMATIC TRAIN CONTROL  
 A/T/C AUTOMATIC TEMPERATURE CONTROL  
 ATZ ALL TRAINS BY ZONE  
 AUX AUXILIARY  
 AVE AVENUE  
 AVG AVERAGE  
 AVI AUTOMATIC VEHICLE IDENTIFICATION  
 AVM ADD - FAIR VENDING MACHINE, ADD VALUE MACHINE  
 AWG AMERICAN WIRE GAUGE  
 AWS AMERICAN WELDING SOCIETY

B

BAT BATTERY  
 BB BEGIN BRIDGE  
 BC BEGIN CURVE, BOTTOM OF CURB, BARE COPPER  
 BCL BARE CEMENT LINED STEEL  
 BCR BEGINNING OF CURB RETURN  
 BD BOARD  
 BDD BACK DRAFT DAMPER  
 BDPL BITUMEN DIPPED PIPELINE  
 BEG BEGIN  
 BETW BETWEEN  
 BC-S BACKFILL-SAND  
 BF-C BACKFILL-CONCRETE  
 BFP BACK FLOW PREVENTER  
 BK BACK, BOOK  
 BKF BACKFILL  
 BKR BREAKER  
 BL BLUE LIGHT STATION  
 BLDG BUILDING  
 BLVD BOULEVARD  
 BLCK BLK  
 BLK'G BLOCKING  
 BLS BLUE LIGHT STATION  
 BM BEAM  
 BOCA BUILDING OFFICIALS AND CODE ADMINISTRATION  
 BOI BARE OUTSIDE AND LINED STEEL  
 BOJ BUILD ON JOB  
 BOT BOTTOM  
 BOW BACK OF WALK  
 BR BRASS, BRIDGE  
 BIO BIORETENTION AREA  
 BRG BEARING  
 BRK BREAK  
 BRKR BREAKER  
 BRT BUS RAPID TRANSIT  
 BSMT BASEMENT  
 BSL BUILDING SETBACK LINE  
 BTWN BETWEEN  
 BTUH BRITISH THERMAL UNITS PER HOUR  
 BVC BEGIN VERTICAL CURVE  
 BW BACK OF WALL, BOTTOM OF WALL, BOTH WAYS

C

C CAUTION, CONDUIT  
 CALTRANS CALIFORNIA DEPARTMENT OF TRANSPORTATION  
 CA CABLE TELEVISION  
 CATV CABLE TELEVISION  
 CAB CABINET  
 CB CONCRETE BARRIER

CC CEMENT COATED STEEL  
 CCAS CENTRAL CONTROL AUDIO SYSTEM  
 CCCL CEMENT COATED CEMENT LINED STEEL  
 CCER CENTRAL CONTROL EQUIPMENT ROOM  
 CCS CENTRAL CONTROL SYSTEM  
 CCTV CLOSED CIRCUIT TELEVISION  
 C/C, C-C CENTER TO CENTER  
 CDF CONTROLLED DENSITY FILL, COMBINED DISTRIBUTION FRAME  
 CEM CEMENT  
 CEN CENTER  
 CF-## CCTV FIXED  
 CF CUBIC FEET  
 CFC CASSETTE FAN COIL  
 CFM CONFORM  
 CG CENTER OF GRAVITY  
 C&G CURB & GUTTER  
 CHBK CHANNEL BANK  
 CID CARD INTERFACE DEVICE  
 CIDH CAST IN DRILLED HOLE  
 CIP CAST IN PLACE, CAST IRON PIPE  
 CIR CIRCLE  
 CJ CONSTRUCTION JOINT  
 CJB COMMUNICATIONS JUNCTION BOX  
 CJP COMPLETE JOINT PENETRATION  
 CK CREEK  
 CKT CIRCUIT  
 CL CEMENT LINED, CHAIN LINK, CLASS  
 CLF CHAIN LINK FENCE  
 CLG CEILING  
 CLGD CEILING DIFFUSER  
 CLGR CEILING REGISTER  
 CLGS CEILING SUPPORT  
 C/L, C CENTER LINE  
 CLKG CAULKING  
 CLR CLEAR, CLEARANCE, CIRCUIT LAYOUT RECORD  
 CMP CORRUGATED METAL PIPE  
 CMS CHANGEABLE MESSAGE SIGN  
 CMU CONCRETE MASONRY UNIT  
 CND CONDUIT  
 CNTRL CONTROLLER  
 CO CLEAN OUT, CENTRAL OFFICE  
 COAX COAXIAL CABLE  
 COL COLUMN  
 COM COMMUNICATIONS (CONDUIT)  
 COMM COMMUNICATIONS  
 COMP COMPOSITION  
 CON CONTACT  
 CONC CONCRETE  
 CONN CONNECTION  
 CONST CONSTRUCTION  
 CONT CONTINUOUS  
 CONT'D CONTINUED  
 CONTR CONTRACTOR, CONTROLLER  
 CP-## CCTV PTZ  
 CP CATHODIC PROTECTION  
 CPB COMMUNICATION PULLBOX  
 CPL CURED IN PLACE LINER  
 CPU CENTRAL PROCESSING UNIT  
 CPUC CALIFORNIA PUBLIC UTILITIES COMMISSION  
 C.R. COMMUNICATIONS ROOM  
 CR CREEK, CURB RAMP  
 CRSI CONCRETE REINFORCING STEEL INSTITUTE

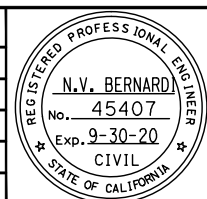
CRT CATHODE RAY TUBE  
 CS COMBINED SYSTEM  
 POINT OF CHANGE FROM, CIRCULAR CURVE TO SPIRAL  
 CSD COMBINED SYSTEMS DUCTBANK  
 CSJ CITY OF SAN JOSE  
 CSP COMMUNICATIONS SPECIALIST, CORRUGATED STEEL PIPE  
 CSS COMMUNICATIONS SYSTEMS  
 CSU CHANNEL SERVICE UNIT  
 CT CERAMIC TILE, COURT, COURTESY TELEPHONE  
 CTC COMMUNICATION TERMINAL CABINET  
 CTCSS CONTINUOUS TONE CODED SQUELCH SYSTEM  
 CTD COATED  
 CTL COAL TAR LINED STEEL  
 CTP CODED TRACK CIRCUIT PROCESSOR (SIGNALS)  
 CTRS CENTERS  
 CTS COMMUNICATION TRANSMISSION SYSTEM  
 CTSK COUNTERSINK  
 CV CONTROL VALVE  
 CW CONTACT WIRE, COLD WATER  
 CWR CONTINUOUS WELDED RAIL  
 CWT COUNTERWEIGHT  
 CXR CARRIER  
 CYL CYLINDER

D

D DEEP  
 DACS DIGITAL ACCESS AND CROSS-CONNECT SYSTEM  
 DAS DATA ACQUISITION SYSTEM  
 DB DIRECT BURIED, DRY BULB, DECIBEL  
 DBA DECIBELS, A SCALE  
 DBC DIRECT BURIED CABLE  
 DBG DISTANCE BETWEEN GUIDE RAILS  
 DBH DIAMETER AT BREST HEIGHT  
 DBL DOUBLE  
 DC DIRECT CURRENT, DISTRIBUTION CABINET, DOOR CONTACT  
 DCCL DIPPED COATED CEMENT LINED (Organic Zinc)  
 DCIL DUCTILE CAST IRON LINED  
 DE DEAD END  
 DEG DEGREE  
 DEH DEAD END HITCH  
 DEPT DEPARTMENT  
 DEST DESTINATION  
 DET DETAIL  
 DF DIRECT FIXATION, DRINKING FOUNTAIN  
 DFK DIPPED & FIBERGLASS KRAFT WRAPPED STEEL (Asphalt Coated)  
 DFE DISTRICT FEEDING EQUIPMENT  
 DFM DISTRIBUTION FEEDER MAIN, DISTRICT FEEDING MATERIAL  
 D/I DROP & INSERT  
 DI DRAINAGE INLET, DUCTILE IRON  
 DIA DIAMETER  
 DIAG DIAGONAL  
 DICL DUCTILE IRON CEMENT LINED  
 DIM DIMENSION  
 DIMS DIMENSIONS  
 DIO DISCRETE I/O (INPUT/OUTPUT)  
 DN DOWN  
 DIP DUCTILE IRON PIPE  
 DIR DIRECTION  
 DISC DISCONNECT  
 DISCONT DISCONTINUOUS

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NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



SUBMITTED

**BKF 100+ YEARS**  
**ENGINEERS / SURVEYORS / PLANNERS**

DESIGNED: C. Chi  
 CHECKED: M. Cosentino  
 DRAWN: A. Hernandez  
 CADD FILE NAME: 801GN019.dwg

**Santa Clara Valley Transportation Authority**

APPROVED

**BKF 100+ YEARS**  
**ENGINEERS / SURVEYORS / PLANNERS**

CADD FILE DATE: 03/06/20  
 SCALE: NTS  
 SUBMITTAL DATE: 06/29/20  
 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 GENERAL  
 ABBREVIATIONS - 1

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

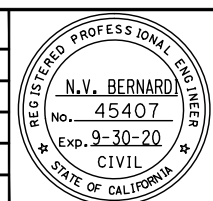
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ABBREVIATIONS LIST

DISP	DISPENSER	EM TRIP	EMERGENCY TRIP	FDR	FEEDER	GIGE	GIGABIT ETHERNET
DIST	DISTRIBUTION	ENCL	ENCLOSURE	FE	FIRE EXTINGUISHER	GL	GLASS
DIV	DIVISION	ENET	ETHERNET	FEP	FRONT END PROCESSOR	GLB	GLU-LAM BEAM
DL	DEAD LOAD	EOL	END OF LINE	FF	FINISHED FLOOR	GLO	GEAR LUBE OIL
DLC	LOOP DETECTOR LEAD IN CABLE (PROPOSED)	EP	EDGE OF PAVEMENT, EMERGENCY POWER	FG	FINISHED GRADE	GM	GAS METER
DLCE	LOOP DETECTOR LEAD IN CABLE (EXISTING)	EPB	EMERGENCY (POWER) PULL BOX	FH	FIRE HYDRANT	GND	GROUND (ELECTRICAL)
DM	DELAY MONITOR	EQ	EQUAL	FHC	FIRE HOSE CABINET	GOV	GOVERNOR
DMOD	DEMODULATE	EQN	EQUATION	FHD	FLAT HEAD	GP	PLANNED GRADING PLANE
DMP	DESIGNATED MATCHING PRODUCT	EQUIP	EQUIPMENT	FHMB	FLAT HEAD MACHINE BOLT	GPS	GLOBAL POSITIONING SYSTEM
DN	DOWN	ER	ELEVATOR ROOM	FHMS	FLAT HEAD MACHINE SCREW	GR	GRADE
DNS	DIFFUSER NECK SIZE	ES	EACH SIDE	FI	FLASHING INLET	GRD	GROUND
DO	DITTO, DOOR OPENING	ESA	ENVIRONMENTALLY SENSITIVE AREA	FIN	FINISH	GRL	GRILLE
DP	DISTRIBUTION PANEL	ESMT	EASEMENT	FIX	FIXTURE	GRS	GALVANIZED RIGID STEEL
DPO	DIAL PULSE-ORIGINATING	ESMU	ENVIRONMENTAL & SECURITY MONITORING UNIT	FK	FIBERGLASS-KRAFT WRAPPED (Asphalt Coated)	GT	GAS TRANSMISSION
DPP	DIGITAL PATCH PANEL	ESP	EXTERNAL STATIC PRESSURE	FKCL	FIBERGLASS-KRAFT WRAPPED-CEMENT LINED	GUI	GRAPHICAL USER INTERFACE
DPT	DIAL PULSE-TERMINATING	ESR	ELECTRICAL SERVICE ROOM	FKCTC	FIBERGLASS-KRAFT WRAPPED & COAL TAR COATED	GYP	GYPSPUM
DR	DOOR, DRIVE	ET	EMERGENCY TELEPHONE	FL	FLOOR, FLOW LINE		
DSO	DIGITAL SIGNAL LEVEL 0, 1 VOICE CHANNEL (64 KBPS)	ETC	ETCETERA	FLASH	FLASHING	H	
DS1	DIGITAL SIGNAL LEVEL 0, 24 DOS (1.544 MBPS)	ETS	ELECTRONIC TEST STATION, EMERGENCY TERMINAL SLOWDOWN,	FLR	FLOOR	H	HEIGHT, HORIZONTAL
DS	DIPPED STEEL, DEVICE SERVER, DISCONNECT SWITCH		EMERGENCY TRIP STATION	FLUOR	FLUORESCENT	HB	HOSE BIBB
DSC	DISPOSABLE SEAT COVER	ETCO	ETEL LINE CONSOLIDATOR	FLEX/C	FLEXIBLE CONNECTION	HC	HOLLOWED CORE
DSS	DESTINATION SIGN SYSTEM	ETEL	EMERGENCY TELEPHONE	FLX	FLEXIBLE (CONDUIT)	H/C	HANDICAPPED
DSU	DATA SERVICE UNIT	ETW	EDGE OF TRAVELLED WAY	FM	FREQUENCY MODULATION	HCS	HEADQUARTERS COMPUTER SYSTEM - AFC
DSX	DIGITAL CROSS CONNECT PANEL	EU	UNBALANCED SUPERELEVATION	FMP	FIRE MANAGEMENT PANEL	HD	HEAD
DTL	DETAIL	EX	EXISTING	FO	FIBER OPTIC CABLE	HDR	HEADER
DVR	DIGITAL VIDEO RECORDER	EXC	EXCAVATE	F/O	FRONT OPENING	HDWD	HARDWOOD
DW	DIPPED WITH TAR	EXHA	EXHAUST FAN	FOC	FACE OF CURB, FIBER OPTIC CABLE	HF	HIGH FREQUENCY
DWG	DRAWING	EXIST	EXISTING	FOM	FIBER OPTIC MODEM	HH	HANDHOLE
DWGS	DRAWINGS	EXP	EXPANSION, EXPRESSWAY	FOT	FIBER OPTIC TERMINAL	HHHB	HEXAGONAL HEAD MACHINE BOLT
DWR	DRIVER WAITING ROOM	EXPWY	EXPRESSWAY	FPC	FIRE PROTECTION CABINET	HL	HEEL LENGTH OF FROG
DWY	DRIVEWAY	EXPRWY	EXPRESSWAY	FPM	FEET PER MINUTE	HM	HOLLOW METAL
		EXT	EXIT, EXTERIOR	FPP	FIBER PATCH PANEL	HORIZ	HORIZONTAL
<b>E</b>		EV	ELEVATOR EQUIPMENT ROOM	FR GRD	FRAME GROUND	HOV	HIGH OCCUPANCY VEHICLE
E	EAST, ELECTRIC	EV (A-D)	EMERGENCY VEHICLE (A-D)	FRM'G	FRAMING	HP	HIGH POINT, HEAT PUMP, HIGH PRESSURE, HINGE POINT, HORSE POWER
(E)	EXISTING	EVC	END VERTICAL CURVE	FRRC	FIRE-RADIO REMOTE CONTROL UNIT	HR	HOURLY
EA	EACH, EMERGENCY ALARM	EVP	EMERGENCY VEHICLE PRE-EMPTION (PROPOSED)	FS	FIRE SERVICE, FINISHED SURFACE	HS	HARDSCAPE, HIGH STRENGTH
Ea	ACTUAL SUPERELEVATION	EVPE	EMERGENCY VEHICLE PRE-EMPTION (EXISTING)	FSK	FREQUENCY SHIFT KEYING	HSG	HOUSING
EASEMT	EASEMENT	EVR	EVENT RECORDER	FT	FEET, FOOT	HSS	HOLLOW STRUCTURAL SECTION
EB	EASTBOUND, END BRIDGE	EW	EACH WAY	FT COMP	FAULT TOLERANT COMPUTER	HSTWY	HOISTWAY
EBP	EMERGENCY BACKUP PANEL	EWC	ELECTRIC WATER COOLER	FTG	FOOTING	HT	HEIGHT, HEATER
EC	END CURVE	EWFC	ELECTRIC WATER COOLER	FURN	FURNACE	HVAC	HEATING VENTILATION AIR CONDITIONING
ECR	END OF CURB RETURN	EWFC	ELECTRIC WATER COOLER	FUT	FUTURE	HW	HARDWARE
EIM	ETHERNET INVERSE MULTIPLEXER	EWFC	ELECTRIC WATER COOLER	F/V	FACE VELOCITY	HWH	HOT WATER HEATER
EF	EACH FACE, EXHAUST FAN	EWFC	ELECTRIC WATER COOLER	FV	FIELD VERIFY	HWY	HIGHWAY
E&H	ELDERLY AND HANDICAP	EWFC	ELECTRIC WATER COOLER	FXO	FOREIGN EXCHANGE, OFFICE END	HYDR	HYDRAULIC
EJ	EXPANSION JOINT	EWFC	ELECTRIC WATER COOLER	FXS	FOREIGN EXCHANGE, STATION END	HZ	HERTZ
EJB	EMERGENCY (POWER) JUNCTION BOX						
EKSU	ELECTRONIC KEY SVC UNIT						
EKTS	ELECTRONIC KEY TEL SYSTEM						
EL	ELEVATION, ELEVATOR, ELECTRICAL DOOR STRIKE						
ELEV	ELEVATION						
ELEC	ELECTRIC, ELECTRICAL						
ELP	EMERGENCY LIGHTING PANEL						
ELS	ELEVATOR SCADA CABINET						
ELSL	ELECTRIC SWITCH LOCK						
E'LY	EASTERLY						
EM	EMERGENCY						
EMB	EMBANKMENT, EMBEDDED						
EMS	ELECTRONIC MESSAGE SIGN						
EMT	ELECTRICAL METALLIC TUBING						
EM PNL	EMERGENCY PANEL						

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NO.	DATE	REVISIONS
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B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



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DESIGNED	CHECKED
C. Chi	M. Cosentino
DRAWN	CADD FILE NAME
A. Hernandez	801GN020.dwg



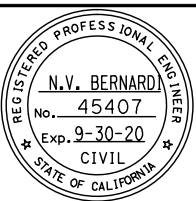
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CADD FILE DATE	SCALE
03/06/20	NTS
SUBMITTAL DATE	BOARD APPROVAL DATE
06/29/20	

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT GENERAL ABBREVIATIONS - 2		
PCA NO.	CONTRACT NO.	FILE LOCATION
000	C801	PROJECTWISE
SHEET	OF	DRAWING NO.
		GN020
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		C

ABBREVIATIONS LIST

IGBT	INSULATED GATE BIPOLAR TRANSDUCER	LF	LINEAR FEET	MPF	MOVEABLE POINT FROG	OCC	OPERATIONS CONTROL CENTER
IJ	INSULATED JOINT	LG	LONG	MPH	MILES PER HOUR	OCI	51.84 MB/S OPTICAL CARRIER
IMP	INSULATED MID-POINT	LH	LEFT HAND	MPOE	MAIN POINT OF ENTRY	OCS	OVERHEAD CONTACT SYSTEM
IN	INCH	LH CURVE	TRACK CURVES TO THE LEFT IN THE DIRECTION OF INCREASED STATIONING	MR	MOVEMENT RATING	OD	OUTSIDE DIAMETER
IND	INDICATION	LL	LANE LINE	MRL	MACHINE-ROOM-LESS	OFFS	OUTSIDE FACE OF STUD
INST	INSTALL	LMA	LUMINAIRE MAST ARM	MS	MACHINE SCREW	OFSH	OUTSIDE FACE OF SHEETING
INSTR	INSTRUCTION	LN	LANE	MSG	MESSAGE	OG	ORIGINAL GROUND
INSUL	INSULATION	LO	LUGS ONLY	MSE	MECHANICALLY STABILIZED EARTH	OGAC	OPEN GRADED ASPHALT CONCRETE
INT	INTERSECTION	LOC	LOCATION	MT	CONDUIT WITH PULL WIRE OR ROPE MAINTENANCE TELEPHONE	OH	OPPOSITE HAND, OVERHEAD
INTFC	INTERFACE	LOL	LAYOUT LINE	MTB	MAINTENANCE TELEPHONE BRIDGE	OHE	OVERHEAD ELECTRICAL EASEMENT
INV	INVERT	LONG	LONGITUDINAL	MTD	MOUNTED	OP	OPERATOR, OVERPASS
I/O	INPUT/OUTPUT	LP	LOW POINT, LOOP	MTJ	MAINTENANCE TELEPHONE JACK	OPG, OPNG	OPENING
IP	IRON PIPE, INTERNET PROTOCOL	LPS	LOW PRESSURE SODIUM	MTL	METAL	OPP	OPPOSITE
IR	IN RUNNING	LRT	LIGHT RAIL TRANSIT	MTS	MAINTENANCE TELEPHONE SET	OPT	OPTIONAL
IRR	IRRIGATION	LRU	LOWEST REPLACEABLE UNIT	MTU	MAINTENANCE TELEPHONE UNIT	OSP	OUTSIDE PLANT
IS	INFORMATION SYSTEM	LRV	LIGHT RAIL VEHICLE	MUX	MULTIPLEX	OSP MM	OUTSIDE PLANT MULTI-MODE
IT	TECHNOLOGY DEPARTMENT	LS	LENGTH OF SPIRAL, LUMP SUM, LANDSCAPE	MVP	MAINTENANCE VEHICLE PULLOUT	OPX	OFF-PREMISE EXTENSION
ITC	INTERFACE TERMINAL CABINET	LSCAPE	LANDSCAPE	MW	MESSENGER WIRE	OPS	OPERATIONS SUPPORT, OPERATIONS
ITS	INTELLIGENT TRANSPORTATION SYSTEM	LSE	LANDSCAPE EASEMENT			OS	OPERATING SYSTEM
		LSS	LIMIT OF STRUCTURAL SECTION			OVHD	OVERHEAD
		LT	LEFT, LIGHT				
		Lt	LEFT				
JAN	JANITOR	LTG(S)	LIGHT(S), LIGHTING	N	NORTH		
J-BOX	JUNCTION BOX	LV	LOW VOLTAGE	(N)	NEW		
JP	JOINT POLE	LVC	LENGTH OF VERTICAL CURVE	NA, N/A	NOT APPLICABLE	P	PAINTED, PEDESTRIAN, POLE, PROTECT, POWER SWITCH MACHINE
J/S	JOULES PER SECOND	LVL	LEVEL	NAT	NATURAL	PA	PUBLIC ADDRESS, PLANTING AREA
JNT	JOINT, JOINT TRENCH	LWSI	LIGHT WEIGHT SHEET IRON	NB	NORTHBOUND	PABX	PRIVATE AUTOMATIC BRANCH EXCHANGE
JPB	PENINSULA CORRIDOR JOINT POWERS BOARD			NC	NETWORK CARD, NORMALLY CLOSED	PAC	PROGRAMMABLE AUTOMATION CONTROLLER
JST	JOIST			NE	NORTHEAST	PAC BELL	PACIFIC BELL
				NEC	NATIONAL ELECTRICAL CODE	PB	PULLBOX
				NEG	NEGATIVE	PC	POINT OF CURVATURE, PRECAST, PIECE, PERSONAL COMPUTER
				NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION	PCC	POINT OF COMPOUND CURVATURE, PORTLAND CEMENT CONCRETE
				NE'LY	NORTHEASTERLY	PCGRS	POLYVINYL CHLORIDE COATED GALVANIZED RIGID STEEL
				NEUT	NEUTRAL	PCM	PULSE CODE MODIFICATION
				NFPA	NATIONAL FIRE PROTECTION AGENCY	PDAC	PUBLIC ADDRESS DIGITAL TO ANALOG CONVERTER
				NGVD	NATIONAL GEODETIC VERTICAL DATUM	PDU	POWER DISTRIBUTION UNIT
				NIC	NOT IN CONTRACT, NETWORK INTERFACE CARD	PE	POLYETHYLENE PIPE
				NIEC	NOT IN ELEVATOR CONTRACT	PEC	PERMIT TO ENTER AND CONSTRUCT
				NIT	NITROGEN PIPE	PED	PEDESTRIAN
				N'LY	NORTHERLY	PERF	PERFORATED
				NM	AMBIENT NOISE MICROPHONE	PET	PROTECTED ENTRANCE TERMINAL
				NMS	NETWORK MANAGEMENT SYSTEM	PEU	PHOTOELECTRIC UNIT (PROPOSED)
				NNE	NORTH NORTHEAST	PEUE	PHOTOELECTRIC UNIT (EXISTING)
				No., NO.	NUMBER	PF	POINT OF FROG
				N/O	NORTH OF	PG&E	PACIFIC GAS AND ELECTRIC
				NO	NORMALLY OPEN	PGEE	PACIFIC GAS AND ELECTRIC EASEMENT
				NOM	NOMINAL	PGL	PACIFIC GRADE LINE
				NP	NORMAL POWER	PH	PHASE
				NRCS	NATURAL RESOURCES CONSERVATION SERVICE	PI	POINT OF INTERSECTION
				NTS	NOT TO SCALE	PIM	PASSENGER INFORMATION MONITOR
				NVP	NON-VITAL PROCESSOR	PITO	POINT OF INTERSECTION OF TURNOUT
				NW'LY	NORTHWESTERLY	PIVC	POINT OF INTERSECTION OF VERTICAL CURVE
						PJB	(NORMAL) POWER JUNCTION BOX
						PK	POWER (NORMAL) CONDUIT
						PL, PL	PLACE, PLASTIC PIPE, PLATE
						P/L	PROPERTY LINE
						PLAS	PLASTER
						PLB	PLUMBING
						PLC	PROGRAMMABLE LOGIC CONTROLLER
						PLL	PHASE LOCKED LOOP

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**BkF 100+**  
YEARS  
ENGINEERS / SURVEYORS / PLANNERS

DESIGNED: C. Chi  
CHECKED: M. Cosentino

DRAWN: A. Hernandez  
CADD FILE NAME: 801GN021.dwg

**Santa Clara Valley**  
Transportation  
Authority

APPROVED

**BkF 100+**  
YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/06/20  
SCALE: NTS

SUBMITTAL DATE: 06/29/20  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
GENERAL  
ABBREVIATIONS - 3

PCA NO.: 000  
CONTRACT NO.: C801  
FILE LOCATION: PROJECTWISE

SHEET OF: GN021  
REVISION: C

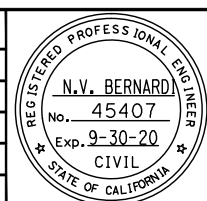
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ABBREVIATIONS LIST

PLF, PLTFM	PLATFORM	R		RT/U	ROOF TOP UNITS	SIM	SIMILAR
PLY	PLYWOOD	R	RADIUS, RISER, RELOCATE, RECEIVE	RW	RETAINING WALL	SJ	CITY OF SAN JOSE
PLB	PERMEABLE MATERIAL	(R)	REMOVE	RWL	RAIN WATER LEADER	SJMC	SAN JOSE MUNICIPAL CODE
PLL	PHASE LOCKED LOOP	R1	RING 1	RWLOL	RETAINING WALL LAYOUT LINE	SJW	SAN JOSE WATER
P/O	PART OF	R/A	RELEASE/ADVANCE, RELOCATE AND ADJUST TO GRADE	R/W	RIGHT-OF-WAY	SJWC	SAN JOSE WATER COMPANY
PM	PERMEABLE MATERIAL	RA	RETURN AIR	RX	RECEIVE	SJWW	SAN JOSE WATER WORKS
PNL	PANEL	RAD	RADIUS, RADIO EQUIPMENT	S	SALVAGE ,SLOPE, SOUTH	SL	SLEEVE, STREETLIGHT
POC	PEDESTRIAN OVERCROSSING, POINT OF CIRCULAR CURVE, POINT OF CONNECTION	RAID	REDUNDANT ARRAY OF INDEPENDENT DISKS	S1	SIGNAL 1	S'LY	SOUTHERLY
POCE	POINT OF CONNECTION EAST	RAM	RANDOM ACCESS MEMORY	S2	SIGNAL 2	SM	SINGLE MODE, SQUARE METERS
POCW	POINT OF CONNECTION WEST	RAR	RETURN AIR REGISTER	SA	SUPPLY AIR, SURGE ARRESTER	SMA	SIGNAL MAST ARM
POE	POWER OVER ETHERNET	RC	REINFORCED CONCRETE, RELAY CASE	SAF	SUPPLY AIR FAN	SMACNA	SHEET METAL & AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION INC
POS	POSITIVE	Rc	CURVE RADIUS	SAN	SANITARY	SMD	SEE MECHANICAL DRAWINGS
POS'N	POSITION	R/C	RATE OF CHANGE OF CIRCULAR CURVE	SAP	SPRINKLER ALARM PANEL	SMU	SIGNAL MONITORING UNIT (EVENT RECORDER)
POT	POINT ON TANGENT	RCB	REINFORCED CONCRETE BOX	SAT REC	SATELLITE RECEIVER	SNMP	SIMPLE NETWORK MANAGEMENT PROTOCOL
PP	POWER PANEL	RCV	REINFORCED CONCRETE PIPE	SAV	STAND ALONE VALIDATOR	SOM	SOMASTIC COATED STEEL
PPBE	PEDESTRIAN PUSH BUTTON (EXISTING)	RD	ROAD	SB	SOUTHBOUND, SPLICE BOX, STANDARD BLACK	SOMCL	SOMASTIC COATED AND LINED STEEL
PPBP	PEDESTRIAN PUSH BUTTON (PROPOSED)	RDWY	ROADWAY	SBC	SBC COMMUNICATIONS INC.	SONET	SYNCHRONOUS OPTICAL NETWORK
PPM	PARTS PER MILLION	RE	RIM ELEVATION	S/C	SAWCUT & CONFORM	SP	SPLICE, SPARE, STATIC, SIGNAL PROCESSOR
PPN	POWER PANEL NORMAL	REC	RECORD, RECORDER	SC	POINT OF CHANGE FROM SPIRAL TO CIRCULAR CURVE, SOLID CORE, SIGNAL CASE, FIBER OPTIC CONNECTOR	SPDT	SINGLE POLE DOUBLE THROW
PPP	PERFORATED PLASTIC PIPE	RECPT	RECEPTACLE	SCADA	SUPERVISORY CONTROL AND DATA ACQUISITION	SPEC	SPECIFICATIONS
PR	PAIR	REF	REFER TO, REFERENCE, REFLECTED	SCAT	SIMPLE CATENARY AUTO TENSIONED	SPK	SPEAKER
PRC	POINT OF REVERSE CIRCULAR CURVE	REINF	REINFORCED, REINFORCEMENT	SCC	SANTA CLARA COUNTY	SPG	SPACING
PREFAB	PREFABRICATED	REL	RELOCATED	SCD	SEE CIVIL DRAWINGS	SPR	SPRINKLER
PRELIM	PRELIMINARY	REM	REMOVE	SCH,SCHED	SCHEDULE	SPKR	SPEAKER
PROJ	PROJECTION	REQ	REQUIRED	SCL	COUNTY OF SANTA CLARA	SQ	SQUARE
PROP	PROPOSED	REQ'D	REQUIRED	SCR	SILICON CONTROLLED RECTIFIER	SR	SIGNAL ROOM
PROT	PROTECTOR, PROTECTION	RET	RETAINING, RETURN	SCU	STATION CONTROL UNIT	ST	AT&T TRADEMARK FOR FIBER OPTIC CONNECTION
PROT BLK	PROTECTION BLOCK	REV	REVISION	SCVWD	SANTA CLARA VALLEY WATER DISTRICT	SRA	SELF RETAINING AREA
PRVC	POINT OF REVERSE VERTICAL CURVE	REX	REQUEST TO EXIT	SCW	SINGLE CONTACT WIRE	SS	SUBSTATION, SPIRAL, SANITARY SEWER POINT OF CHANGE FROM SPIRAL TO ANOTHER STANDARD SCREW PIPE, STAINLESS STEEL
PS	POINT OF SERVICE, POINT OF SWITCH, PRESTRESS, PICO SECOND	RF	RADIO FREQUENCY	SD	STORM DRAIN	S&S	SATURDAY & SUNDAY
P.S.	POWER SUPPLY	RGS	RIGID GALVANIZED STEEL	S/D	SPLITTER DAMPER	SSBM	STRAP AND SADDLE BRACKET METHOD
P/S	PRESTRESS	RGU	RING GENERATED UNIT	SDCB	STORM DRAIN CATCH BASIN	SSC	SPIRAL TO SPIRAL AT CURVE POINT
P&S	POWER AND SUPPORT	RH	RIGHT HAND	SDE	STORM DRAIN EASEMENT	SSD	SEE STRUCTURAL DRAWINGS
PSDE	PRIVATE STORM DRAIN EASEMENT	RH CURVE	TRACK CURVES TO THE RIGHT IN THE DIRECTION OF INCREASING STATIONING	SDMH	STORM DRAIN MANHOLE	SSE	SANITARY SEWER EASEMENT
PSE	PUBLIC SERVICE EASEMENT	RIM	RIM ELEVATION	SDT	SMOKE DETECTION	SSFH	STAINLESS STEEL FLAT HEAD
PS/L	PROTECTOR SHELF/BLOCK	RL	REFERENCE LINE	SE	SOUTHEAST	SSMH	SANITARY SEWER MANHOLE
PSTN	PUBLIC SWITCHED TELEPHONE NETWORK	RLL	RAIN LEADER	SEC	SECONDARY, SECOND	SST	SPIRAL TO SPIRAL AT TANGENT POINT
PSUE	PUBLIC SERVICE UTILITY EASEMENT	RM	ROOM	SECT	SECTION	ST	STREET, POINT OF CHANGE FROM SPIRAL TO TANGENT, STAIRS
PT	POINT, POINT OF TANGENCY, PETROLEUM PRODUCTS (Fuel, oil)	RO	REAR OPENING, ROUGH OPENING	SEL	SELECT, SELECT AUDIO	STA	STATION
PTB	PROTECTED TERMINAL BLOCK	ROM	READ ONLY MEMORY	SERV	SERVICE	STBY	STANDBY
PTT	PACIFIC TELEPHONE AND TELEGRAPH, PUSH TO TALK	ROW	RIGHT-OF-WAY	SEW	SEWER	STD	STANDARD
PTFE	POLYTETRAFLUOROETHYLENE	RPM	REVOLUTIONS PER MINUTE	SF	SQUARE FEET, TRAFFIC SIGNAL FOUNDATION	STL	STEEL
PTTE	PACIFIC TELEPHONE AND TELEGRAPH EASEMENT	RPTR	REPEATER	SFP	SMALL FORM FACTOR PLUGGABLE TRANSCEIVER	STP	SHIELDED TWISTED PAIR
PTZ	PLAN, TILT AND ZOOM	RR	RAILROAD	SG	STANDARD BLACK (Galvanized Coating)	STR	STRANDED, STRUCTURAL
PUZ	PEDESTRIAN UNDERCROSSING	RS	RIVETED STEEL PIPE	SH	SHELF, SIGNAL HOUSE	STRUCT	STRUCTURE, STRUCTURAL
PUD	PERFORATED UNDERDRAIN	RS-232	ELECTRICAL STANDARD FOR BALANCED VOLTAGE DIGITAL CIRCUITS	SHD	SHOWER DRAIN	STW	SPECIAL TRACKWORK
PUE	PUBLIC UTILITY EASEMENT	RS-422	ELECTRICAL STANDARD FOR BALANCED VOLTAGE DIGITAL CIRCUITS	SHLD	SHOULDER	SUB FL	SUB-FLOOR
PVC	POINT OF VERTICAL CURVE	RS-485	STANDARD FOR DATA COMMUNICATIONS OVER MULTI-POINT CIRCUITS	SHR	SHEAR	SUSP	SUSPENDED
PVC	POLYVINYL CHLORIDE	RS-488	STANDARD FOR DATA COMMUNICATION EQUIPMENT	SHT	SHEET	SVC	SERVICE
PVI	POINT OF VERTICAL INTERSECTION	RS-530	MECHANICAL/ELECTRICAL INTERFACE FOR BALANCED VOLTAGE DIGITAL CIRCUITS	SHT'G	SHEATHING	SYM	SYMMETRICAL
PVMT	PAVEMENT	RSVD	RESERVED	SHWR	SHOWER	SW	SIDEWALK, SOUTHWEST, SWITCH
PVT	POINT OF VERTICAL TANGENCY	RT, Rt	RIGHT	SI	SECTION INSULATOR, SHEET IRON PIPE	S/W	SOFTWARE
P&W	POWER & WAY	RTE	ROUTE	S&I	SERVICE AND INSPECTION	SVR	SERVER
PWR	POWER	RTR	ROUTER	SIC	SIGNAL INTERCONNECT CABLE (PROPOSED)	SWAT	SINGLE WIRE AUTO TENSIONED
Q		RTU	REPORT TERMINAL UNIT, REMOTE TERMINAL UNIT	SICE	SIGNAL INTERCONNECT CABLE (EXISTING)	SWGR	SWITCHGEAR
QTY	QUANTITY			SID'G	SIDING	SYM	SYMMETRICAL
				SM	SINGLE MODE, SINGLE MODE FIBER	SYNCH	SYNCHRONIZER, SYNCHRONIZATION
				SIG	SIGNAL, WAYSIDE COLOR LIGHT SIGNAL	SYS	SYSTEM

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 DESIGNED: C. Chi  
 CHECKED: M. Cosentino  
 DRAWN: A. Hernandez  
 CADD FILE NAME: 801GN022.dwg

Santa Clara Valley  
 Transportation  
 Authority

APPROVED: [Signature]  
 CADD FILE DATE: 03/06/20  
 SCALE: NTS  
 SUBMITTAL DATE: 06/29/20  
 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 GENERAL  
 ABBREVIATIONS - 4

SHEET OF: GN022  
 REVISION: C

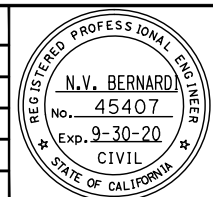
PCA NO.: 000  
 CONTRACT NO.: C801  
 FILE LOCATION: PROJECTWISE

ABBREVIATIONS LIST

I		TWP	TWISTED PAIR	<u>W</u>	
T	TEMPERATURE SWITCH (THERMOSTAT), TOP, TIP, THREAD, TREAD, TRANSMIT	TWR	TOWER	W	WATER, WATTS, WEST, WIDE, WIDTH
T1	TIP 1 OR T1 CARRIER	TYP	TYPICAL	WSE	WATER SERVICE EASEMENT
T2	TIP 2	TX	TRANSMIT	WT	WATER TRANSMISSION, WIDTH
TA	TRUNK AMPLIFIER	T3	TRACK DESIGNATION FOR THE TAIL TRACK AT EASTRIDGE STATION	WV	WATER VALVE
TB	TOP OF BARRIER, TERMINAL BOARD OR BLOCK			WW	WING WALL, WIRE WAY
T&B	TOP & BOTTOM	<u>U</u>		WWF	WELDED WIRE FABRIC
TBD	TO BE DETERMINED	U	UNBALANCED SUPER-ELEVATION	WWLOL	WINGWALL LAYOUT LINE
TBR	TO BE REMOVED	UBC	UNIFORM BUILDING CODE	W/	WITH
T/C	TRAIN CONTROL	UC	UNDER CROSSING	WAN	WIDE AREA NETWORK
TC	TOP OF CURB, TRAFFIC CONTROLLER	UD	UNDERDRAIN	WAO	WORK AREA OUTLET
TCC	TRAIN CONTROLLER	UE	UTILITY EASEMENT	WB	WESTBOUND
TCE	TEMPORARY CONSTRUCTION EASEMENT	UG	UNDERGROUND	WBO	WORK BY OTHERS
TCH	TRAIN CONTROL HOUSE	UH	UNIT HEATER	WC	WATER CLOSET
TCP/IP	TRANSMISSION CONTROL PROTOCOL/INTERNET PROTOCOL	UHF	ULTRA HIGH FREQUENCY	WCDR	WALL CLEANOUT
TCR	TRAIN CONTROL ROOM	UL	UNDERWRITERS LABORATORIES	WCE	WIRE CLEARANCE EASEMENT
TDA	TIRE DERIVED AGGREGATE	UMC	UNIFORM MECHANICAL CODE	WD	WOOD
TDH	TOTAL DYNAMIC HEAD	UNSEL	UNSELECT AUDIO	WDW	WINDOW
TDS	TRANSLINK DATA SERVER (NOW CLIPPER)	UNFIN	UNFINISHED	WG	WAVE GUIDE
TE	TREE EASEMENT	UNK	UNKNOWN	WH	WATER HEATER, WEEP HOLE
TEL	TELEPHONE	UNO	UNLESS NOTED OTHERWISE	WHA	WATER HAMMER ARRESTER
TEMP	TEMPERATURE, TEMPORARY	UON	UNLESS OTHERWISE NOTED	WI	WROUGHT IRON PIPE
TERM	TERMINAL	UP	UNDERPASS	WL	WATER LINE
TES	TRACTION ELECTRIFICATION SYSTEM	UPRR	UNION PACIFIC RAILROAD	WM	WATER METER
TG	TOP OF GRATE	UPS	UNINTERRUPTIBLE POWER SUPPLY	WO	WASTE OIL
T&G	TONGUE AND GROOVE	UR	URINAL	W/O	WEST OF, WITHOUT
TH	TOP OF HEADER	U/S	UNDERSIDE	WP	WEATHER PROOF, WORK POINT
THEO	THEORETICAL	UTP	UNSHIELDED TWISTED PAIN	WS	WRAPPED STEEL PIPE, WEATHER STRIPPING, WOOD SCREW
THK	THICK			W/S	WORKSTATION
THRU	THROUGH	<u>V</u>		WSCL	WRAPPED STEEL PIPE CONCRETE LINED
THWN	THERMOPLASTIC HIGH WATER-RESISTANT NYLON COATED	V	VALVE, VELOCITY, VERTICAL, VOLTS	<u>X</u>	
TL	TOE LENGTH OF FROG, TRAFFIC LOOP	VA	VOLT-AMPERE	XC	CROSSING CASE
TMGB	TELECOMMUNICATIONS MAIN GROUNDING BUSBAR	VAC	VOLT ALTERNATING CURRENT	XCONN	CROSS CONNECT
TO.	TURNOUT, TOP OF	VAR	VARIES	XFMR	TRANSFORMER
TOB	TOP OF BANK	VC	VERTICAL CURVE	XH	CROSSING HOUSE
TOC	TOP OF CONCRETE, TOP OF CURB	VCP	VITRIFIED CLAY PIPE	XING	HIGHWAY GRADE CROSSING
TOM	TOP OF MANHOLE	VCT	VINYL COMPOSITION TILE	X-ING	CROSSING
TOP	TOP OF PLATE	VD	VOLUME DAMPER	XMTR	TRANSMITTER
TOPO	TOPOGRAPHY	VDA	VIDEO DISTRIBUTION AMPLIFIER	X-OVER	CROSSOVER
TOT	TOTAL	VDC	VOLTS DIRECT CURRENT	X/O	CROSSOVER
TOR,T/R	TOP OF RAIL	VDT	VIDEO DISPLAY TERMINAL		
TP	TOP OF PAVEMENT	VDU	VIDEO DISPLAY UNIT	<u>Y</u>	
TPB	TELEPHONE PULL BOX	VENT	VENTILATION	YD	YARD
TPD	TOILET PAPER DISPENSER	VERT	VERTICAL	YMF	YOUNGER MAINTENANCE FACILITY
TPSS	TRACTION POWER SUBSTATION	VEST	VESTIBULE		
TR	TO REMAIN	VF	VOICE FREQUENCY	<u>MISC</u>	
TRANS	TRANSMISSION	VHLC	VITAL HARMON LOGIC CONTROLLER	2W	2 WIRE
TRK	TRACK	VIC	VEHICLE INFORMATION CLERK	4W	4 WIRE
TS	POINT OF CHANGE FROM TANGENT TO SPIRAL, TRAFFIC SIGNAL, TUBE STEEL	VIF	VERIFY IN FIELD	@	AT
TSP	TUBULAR STEEL POLE	VIT	VITREOUS	&	AND
TT	TRANSITION TAPER, TELEPHONE TRUNK & TOLL, TRANSFER TRIP	VM	VOLTMETER	Δd	CENTRAL ANGLE OF CIRCULAR CURVE OF LENGTH Lc
TTRIP	TRANSFER TRIP	VMB	VISUAL MESSAGE BOARD	∠	CURVE ANGLE
TV	TELEVISION	VOIP	VOICE OVER INTERNET PROTOCOL	∠s	CENTRAL ANGLE OF SPIRAL ARC Ls
TVM	TICKET VENDING MACHINE	VP	VITAL PROCESSOR (SIGNALS)	∅	DIAMETER
TW	TOP OF WALL, TRAVELED WAY	VPI	VITAL PROCESSOR INTERLOCKING, VITAL PROCESSOR INTERFACE	#	NUMBER POUNDS
T/W	TOP OF WALL	VSF	SCREW-IN TYPE PROTECTED TERMINAL BLOCK	.	DEGREES
TWC	TRAIN TO WAYSIDE COMMUNICATION	VTA	VALLEY TRANSPORTATION AUTHORITY		
TWL	TRAIN TO WAYSIDE LOOP				

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A	06/18	35% SUBMITTAL SET



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**BKF 100+ YEARS**  
ENGINEERS / SURVEYORS / PLANNERS

DESIGNED: C. Chi  
CHECKED: M. Cosentino

DRAWN: A. Hernandez  
CADD FILE NAME: 801GN023.dwg



APPROVED

**BKF 100+ YEARS**  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/06/20  
SCALE: NTS

SUBMITTAL DATE: 06/29/20  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT GENERAL ABBREVIATIONS - 5			SHEET OF DRAWING NO. GN023 REVISION C
PCA NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE	

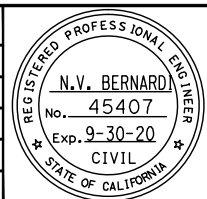


LEGEND

	ABANDONED SYSTEM		GAS TRANSMISSION		STREET LIGHT
	BARRIER RAIL		GRADED DITCH		SANITARY SEWER
	BY OTHER DISCIPLINES		GRINDLINE		SAWCUT LINE
	CABLE TV		GUARD RAIL		STORM DRAIN SYSTEM
	CABLE TV SYSTEM		HEADER WALL WITH CL RAILING		TEMPORARY CONSTRUCTION EASEMENT
	CHAIN LINK FENCE		INDEX CONTOUR		TEMPORARY FENCE
	COLD JOINT		IRRIGATION SYSTEM		TRAFFIC BARRIER (E)
	COMMUNICATION CONDUIT CONCEALED		JOINT TRENCH, EXISTING		CONDUIT, TELEPHONE EXISTING
	CONDUIT, TRAFFIC SIGNAL INTERCONNECT		JOINT TRENCH		CONDUIT, TELEPHONE
	CONDUITS BY OTHERS OR EXISTING		K-RAIL		CONCRETE BARRIER
	CONCRETE DITCH		LIQUID FUEL SYSTEM		TYPE II PEDESTRIAN BARRICADE
	CONCRETE HEADER		LOT LINE / PROPERTY LINE		UNDERDRAIN
	CONCRETE PROTECTION		LOW BARRIER FENCE		CONDUIT, UNDERGROUND AS NOTED IN THE PLANS
	CONDUIT RUN		MEDIAN FENCE		UTILITY PIPELINE VALVE
	CS TROUGH		NATURAL GAS SYSTEM		WATER LINE
	CSD (COMBINED SYSTEM DUCT) - CONCRETE ENCASED		NEW		
	CSD REINFORCED CONCRETE ENCASED		NEW COPPER WIRE/CAT 6		
	CONDUIT RUN, CSJ		NEW FIBER OPTIC CABLE		
	CURB		NEW FIBER OPTIC CABLE		
	CURB & GUTTER		OVERHEAD UTILITY		
	DRAINAGE DITCH (UNLINED)		OVERHEAD CABLE TV		
	EASEMENT		OVERHEAD CABLE TV, TELEPHONE		
	ELECTRICAL		OVERHEAD ELECTRIC		
	ELECTRICAL SYSTEM		OVERHEAD ELECTRIC, CABLE TV		
	ELECTRIC TRANSMISSION		OVERHEAD ELECTRIC CABLE TV, TELEPHONE		
	CSD, EXISTING		OVERHEAD ELECTRIC, TELEPHONE		
	ELECTRICAL SERVICE CONCEALED		OVERHEAD ELECTRIC, TELEPHONE		
	EXISTING		OVERHEAD ELECTRIC TRANSMISSION		
	EXISTING COPPER WIRE/CAT 6		OVERHEAD TELEPHONE		
	EXISTING FIBER OPTIC CABLE		OVERLAND FLOW DIRECTION		
	EXISTING TO BE REMOVED		PERIMETER FENCE		
	EXISTING ABANDONED SYSTEM		POWER CONDUIT CONCEALED		
	EXISTING CONDUIT		RACEWAY CONCEALED IN FLOOR, WALL, CEILING OR BELOW GRADE		
	EXISTING EQUIPMENT TO BE REMOVED		REMOVE EXISTING CL FENCE		
	CONDUIT RUN, EXISTING CSJ		REMOVE EXISTING CURB AND GUTTER		
	EXISTING EASEMENT		REMOVE EXISTING CURB/HEADER		
	EXISTING REMOVED SYSTEM		REMOVED SYSTEM		
	EXISTING RIGHT OF WAY		RETAINING WALL (LOL)		
	EXISTING STORM DRAIN SYSTEM		RETAINING WALL (E)		
	EXISTING TRAFFIC SIGNAL CONDUIT		RIGHT OF WAY		
	EXPANSION JOINT		SANITARY SEWER SYSTEM		
	FENCE		SCORE JOINT		
	FIBER ROLLS		SJ TYPE IV BARRIER		
	FLEXIBLE CONDUIT		STAINLESS STEEL STRIP		
	GAS DISTRIBUTION		STORM DRAIN		
			STORM DRAIN		

HERN Jun 29, 2020 - 6:28pm C:\cadd\lib\p\cherman\west\mns\8389\_801GN024.dwg

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



SUBMITTED

**BkF 100+**  
YEARS  
ENGINEERS / SURVEYORS / PLANNERS

DESIGNED: C. Chi  
CHECKED: M. Cosentino

DRAWN: A. Hernandez  
CADD FILE NAME: 801GN024.dwg

**Santa Clara Valley**  
Transportation  
Authority

APPROVED



**BkF 100+**  
YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/06/20  
SCALE: NTS

SUBMITTAL DATE: 06/29/20  
BOARD APPROVAL DATE:

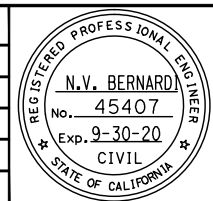
EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT GENERAL LEGEND - 1			SHEET OF DRAWING NO. GN024 REVISION C
PCA NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE	

LEGEND

<p>15+00 "A"-2</p>  <p>3-PHASE FUSE ISOLATOR</p>  <p>16" AC (FULL DEPTH) (TYPE A)</p> <p>10" AC (TYPE A) &amp; 375 mm AB CL 3</p> <p>14" AC (FULL DEPTH) (TYPE A)</p> <p>AC PAVEMENT STRUCTURAL SECTION. (SEE TYPICAL ROADWAY SECTIONS)</p> <p>ABANDON IF APPLIED TO CONDUIT REMOVE CONDUCTORS</p> <p>ADVANCED PROCESSING CONTROLLER</p> <p>ALIGN</p> <p>AMMETER</p> <p>AMMETER SWITCH</p> <p>AUXILIARY SWITCH</p> <p>BATTERY</p> <p>BATTERY LIGHTING UNIT (EMERGENCY) AT +96 AFF</p> <p>BENCH TYPE 1</p> <p>BENCH TYPE 2A</p> <p>BENCH TYPE 2B</p> <p>BENCH TYPE 2C</p> <p>BIKE LOCKERS</p> <p>BIKE RACKS</p> <p>BOLLARD</p> <p>GROUND BUS</p> <p>NEUTRAL BUS</p> <p>CABLE TERMINATION</p> <p>CATHODIC PROTECTION</p> <p>CANTILEVER MAST ARM</p> <p>CANTILEVER MAST ARM (E)</p> <p>CATCH BASIN</p> <p>CATCH BASIN (E)</p> <p>CCTV CAMERA LOCATION (NIC)</p> <p>CCTV CAMERA</p> <p>CCTV CAMERA WITH PAN TILT ZOOM</p> <p>CIRCUIT BREAKER (RATING &amp; No. OF POLES AS INDICATED)</p> <p>CENTER POINT</p> <p>CITY OF SAN JOSE FLAT GRATE INLET</p> <p>CITY OF SAN JOSE HOODED INLET</p> <p>CITY OF SAN JOSE MANHOLE</p> <p>CIRCUIT BREAKER</p>	<p>CLEANOUT</p> <p>COMMUNICATION SYSTEM PULL BOX OR MANHOLE - SEE ADJACENT SYMBOL FOR TYPE - (TYPE 'C' SHOWN)</p> <p>CONDUIT IDENTIFICATION. NUMBER DENOTES CONDUIT NUMBER</p> <p>CONDUIT RISER</p> <p>EXISTING CONDUIT RISER</p> <p>CONDUIT RUN NUMBER</p> <p>CONDUIT TERMINATION</p> <p>CONDUIT TURNED DOWN</p> <p>CONDUIT TURNED UP AND CAPPED</p> <p>CONCRETE PULLBOX, STATE #3 1/2 UON</p> <p>CONDUIT RISER</p> <p>CONDUIT TURNED-UP</p> <p>CONNECT NEW &amp; EXIST CONDUIT. REMOVE CONDUCTORS AS INDICATED</p> <p>INSTALL CONDUIT INTO EXIST PULL BOX</p> <p>INSTALL PULL BOX IN EXIST CONDUIT</p> <p>CONSTRUCTION NOTE NUMBER</p> <p>CLASS 'T' PULL OUT</p> <p>CREEK</p> <p>PULL BOX, CS POWER</p> <p>PULL BOX, TE INDICATES TRACTION ELECTRIFICATION XXX INDICATES PULL BOX No.</p> <p>PULL BOX, CS COMMUNICATIONS</p> <p>CS INDICATES COMMUNICATION &amp; SIGNAL PULL BOX XXX INDICATES PULL BOX No.</p> <p>PULL BOX, CSJ #3 1/2 UON</p> <p>CURB RETURN IDENTIFICATION LETTER</p> <p>DRIVEWAY</p> <p>INDICATES SECTION A OR DETAIL No. 1 DWG No. XXXXX (WHERE INDICATED OR SHOWN)</p> <p>DEMAND METER</p> <p>PROPOSED EMERGENCY VEHICLE PRE-EMPTION</p> <p>DETECTOR INSTALLED ON SIGNAL HEAD</p> <p>DIRECTION OF FLOW</p> <p>DIRECTION OF FLOW</p> <p>DRAINAGE SYSTEM No./ SANITARY SEWER SYSTEM No.</p> <p>DRAINAGE UNIT No.</p> <p>DRAINAGE INLET ON STRUCTURE</p>	<p>ELECTRIC HANDHOLE</p> <p>ELECTRIC MANHOLE</p> <p>ELECTRIC SWITCH BOX</p> <p>ELECTROLIER, EASTRIDGE LOOP ROAD</p> <p>ELECTROLIER</p> <p>ELECTROLIER, EXISTING</p> <p>ELECTROLIER, DOUBLE</p> <p>ELECTROLIER WITH (1) LIGHT FIXTURE</p> <p>ELECTROLIER WITH (1) LIGHT FIXTURE</p> <p>ELECTROLIER WITH (2) LIGHT FIXTURES</p> <p>ELECTRICAL EQUIPMENT</p> <p>ELECTRICAL MANHOLE</p> <p>ELECTRICAL PULL BOX</p> <p>EQUIPMENT TO BE REMOVED AND BECOME PROPERTY OF THE CONTRACTOR</p> <p>PULL BOX, EXISTING CSJ #3 1/2 UON</p> <p>ELECTROLIER, EXISTING</p> <p>ELECTROLIER, EXISTING WITH (1) LIGHT FIXTURE</p> <p>ELECTROLIER, EXISTING WITH (2) LIGHT FIXTURES</p> <p>ELECTROLIER, EXISTING WITH (2) LIGHT FIXTURES</p> <p>EMERGENCY INFO PHONE</p> <p>EXISTING SIGN TO REMAIN</p> <p>EXISTING STORM DRAIN MANHOLE</p> <p>EXISTING STORM DRAIN INLET</p> <p>EXISTING STORM DRAIN FIELD INLET</p> <p>EXISTING SYSTEM TO BE ABANDONED</p> <p>EXISTING SYSTEM TO BE REMOVED</p> <p>EXOTHERMIC CONNECTION</p> <p>EXOTHERMIC WELD</p> <p>PULLBOX, FIBER OPTIC NOMINAL INSIDE DIMENSIONS: 430 x 760 x 600 D</p> <p>PULLBOX, FIBER OPTIC WITH SPACE FOR SPLICE NOMINAL INSIDE DIMENSIONS: 760 x 1140 x 600 D</p> <p>FLAGPOLE</p> <p>FLOAT SWITCH</p> <p>FLOOD LIGHT</p> <p>FLOODLIGHT, ARROWS INDICATE DIRECTION OF BEAM</p> <p>FUSE</p> <p>FUSIBLE SWITCH</p> <p>GAS DETECTOR SENSOR</p> <p>GROUND</p>
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NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



SUBMITTED

**BKF 100+**  
YEARS  
ENGINEERS / SURVEYORS / PLANNERS

DESIGNED: C. Chi  
CHECKED: M. Cosentino  
DRAWN: A. Hernandez  
CADD FILE NAME: 801GN025.dwg

Santa Clara Valley  
Transportation  
Authority

APPROVED

**BKF 100+**  
YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/06/20  
SCALE: NTS  
SUBMITTAL DATE: 06/29/20  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT GENERAL LEGEND - 2			SHEET OF DRAWING NO. GN025 REVISION C
PCA NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE	

LEGEND

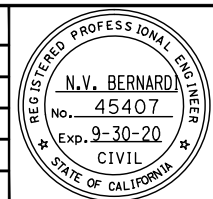
	GROUND GRID
	GROUND PIGTAIL
	GROUND ROD
	GROUND ROD EXOTHERMICALLY WELDED
	GROUND ROD IN GROUND BOX
	GROUND ROD IN TEST WELL
	GROUND WELL
	GUIDEWAY COLUMN
	HANDHOLE
	HAND-OFF-AUTO SELECTOR SWITCH
	HAND RAIL LIGHT
	HIGH-INTENSITY DISCHARGE OR INCANDESCENT LAMP FIXTURE (SUBSCRIPT "X" DENOTES FIXTURE TYPE)
	HID FIXTURE (SUBSCRIPT "X" DENOTES FIXTURE TYPE)
	HOLDING AREA BOLLARD LIGHT
	HOME RUN
	HOMERUN CONDUIT
	HORIZONTAL CONTROL
	HORIZONTAL & VERTICAL CONTROL
	HYDRANT
	HYDRANT (E)
	TEMPORARY TERMINAL BOX
	INDICATION LIGHT (A = AMBER)
	INLET PROTECTION
	INSTALL NEW SIGN
	INVERTER
	JAGGED RIP-RAP PAVING
	JUNCTION BOX
	JUNCTION BOX IN ACCESSIBLE LOCATION
	BLANKED JUNCTION BOX
	WALL-MOUNTED JUNCTION BOX
	KEY NOTES
	KILOWATT-HOUR METER
	LAYOUT POINT OF BEGINNING
	LIGHT FIXTURE TAG
	LIGHT POLE
	LIGHTING HANDHOLE
	LIQUID FUEL VALVE
	LIQ FUEL VALVE BOX

	EXIT LIGHT (CEILING- OR SURFACE-MOUNTED). PROVIDE DIRECTIONAL ARROWS AND SINGLE OR DOUBLE SIGN FACE AS SHOWN ON DRAWING. (SOLID INDICATES SIGN FACING, ARROWS INDICATE DIRECTION)
	PARKING LOT LIGHT
	PEDESTRIAN LIGHT
	LIGHTING ARRESTER
	LIGHTNING GRID
	LIGHT FIXTURE, FLUORESCENT SURFACE OR PENDANT-MOUNT (SUBSCRIPT "X" DENOTES FIXTURE TYPE)
	LOOP-C
	LOOP-5Q
	DOUBLE LUMINAIRE, POLE MOUNTED
	POLE MOUNTED LUMINAIRE
	LOOP, DETECTOR, INDUCTIVE
	LOOP DETECTOR, LRT ADVANCE
	LOOP DETECTOR, LRT RELEASE
	LRT SIGNAL/IDS CAMERA POLE FOUNDATION
	MANHOLE
	METALLIC WATER PIPE GROUND
	MICROPHONE/PA SPEAKER
	MOTOR
	MOTOR
	MOTOR SWITCH
	MOTOR WITH INTEGRAL DISCONNECT SWITCH
	MOTOR X- SIZE INDICATED
	NORMAL & EMERGENCY POWER PANEL
	NATURAL GAS VALVE
	NAT GAS VALVE BOX
	NORMALLY OPEN CONTACT
	NORMALLY CLOSED OPEN CONTACT
	OPERATING COIL
	PACKAGE CONTROLLER/FURNISHED WITH MECHANICAL EQUIPMENT UNO
	PANEL BOARD
	FAN CONTROL PANEL
	MOTOR CONTROL PANEL
	REFRIGERATION CONTROL PANEL
	VENTILATION CONTROL PANEL
	DISTRIBUTION PANEL
	BRANCH CIRCUIT PANELBOARD (277/480V)

	BRANCH CIRCUIT PANELBOARD (120/208V OR 120/240V)
	PEDESTRIAN BARRICADE
	PEDESTRIAN SIGNAL
	PHASE FAILURE RELAY IN 3-PHASE SYSTEM
	PHOTO CENTER
	PHOTOELECTRIC CELL
	PHOTOELECTRIC CELL ON ROOF, AIM NORTH
	PIPE ELBOW
	PIPE VAULT
	WORKING POINT, POINT OF MINIMUM VERTICAL CLEARANCE
	POLE
	POWER POLE
	POWER POLE (E)
	POST
	TELEPHONE STANCHION
	PULL BOX
	PULL BOX
	PULL BOX (E)
	PULL BOX, # 3 1/2, UON
	PULL BOX/MANHOLE TYPE (TYPE 'D' SHOWN)
	PULL BOX, POWER SYSTEM OR MANHOLE - SEE ADJACENT SYMBOL FOR TYPE - (TYPE 'P' SHOWN)
	NEWSPAPER STAND
	RACEWAY DOWN
	RACEWAY EXPOSED
	RACEWAY UP
	RECEPTACLE, WALL-MOUNTED DUPLEX AFF UNO NEMA 5-20R
	RECEPTACLE, DOUBLE DUPLEX AT +380 AFF UNO NEMA 5-20R
	RECEPTACLE, SPECIAL PURPOSE (30 AMP 2 POLE OR AS NOTED)
	RECESSED CEILING LIGHT
	RECTIFIER
	REDUCER
	RELOCATE EXISTING SIGN
	REMOVE AND BECOME PROPERTY OF THE CONTRACTOR
	REMOVE AND SALVAGE EQUIPMENT
	REMOVE EXISTING SIGN
	RR SIGNAL
	RR SWITCH
	RR SWITCH BOX
	SANITARY SEWER ITEM
	SANITARY SEWER ITEM

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NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



SUBMITTED

**BkF 100+ YEARS**  
ENGINEERS / SURVEYORS / PLANNERS

DESIGNED: C. Chi  
CHECKED: M. Cosentino

DRAWN: A. Hernandez  
CADD FILE NAME: 801GN026.dwg

**Santa Clara Valley Transportation Authority**

APPROVED

**BkF 100+ YEARS**  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/06/20  
SCALE: NTS

SUBMITTAL DATE: 06/29/20  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
GENERAL  
LEGEND - 3

PCA NO.: 000  
CONTRACT NO.: C801  
FILE LOCATION: PROJECTWISE

SHEET OF: GN026  
REVISION: C

LEGEND

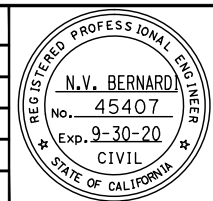
- SECTION A OR DETAIL No. 1  
DWG No. XXXXX (WHERE INDICATED OR SHOWN)
- SECTION CORNER
- SECURITY LIGHTING FIXTURE (SUBSCRIPT "X" DENOTES FIXTURE TYPE)
- SEWER CLEANOUT/FLUSHING INLET
- SHEET NOTE REFERENCE
- SIGN
- ILLUMINATED SIGN
- SIGNAL POLE
- PROPOSED SIGNAL
- EXISTING SIGNAL
- REMOVE, SALVAGE OR RELOCATE
- LRT SIGNAL W/BACKPLATE
- SIGNAL LIGHT, FLASHING OR NON-FLASHING
- SINGLE LUMINAIRE, POLE MOUNTED
- SINGLE LUMINAIRE, POLE MOUNTED WITH PA SPEAKERS
- SINGLE LUMINAIRE, POLE MOUNTED WITH PA SPEAKERS AND VMB
- SINGLE LUMINAIRE, PEDESTAL MOUNTED
- SINGLE POLE TOGGLE SWITCH
- SOFFIT LIGHT FIXTURE
- SPLICE
- SOFFIT LUMINAIRE
- EXISTING SOFFIT LUMINAIRE
- SPLICE NEW TO EXISTING CONDUCTORS
- SPRINKLER HEAD
- COMBINATION STARTER - MOTOR AT AFF TO TOP
- MAGNETIC 2- OR 3- POLE MOTOR STARTER, SUBSCRIPT INDICATES NEMA SIZE
- COMBINATION MAGNETIC MOTOR STARTER, WITH MOTOR CIRCUIT PROTECTOR. SUBSCRIPT INDICATES NEMA SIZE
- STREET LIGHTS
- STRIPING DETAIL NUMBER PER CALTRANS JULY 2004 STANDARD PLANS
- SURFACE MOUNTED FLUORESCENT LIGHT
- SURGE ARRESTOR, 3-PHASE
- SINGLE POLE SWITCH AT AFF
- 3 WAY SWITCH AT AFF
- MANUAL MOTOR STARTER SWITCH
- THERMAL OVERLOAD SWITCH
- DISCONNECT SWITCH
- STORM DRAIN MANHOLE

- DISCONNECT SWITCH (PLAN)
- FUSED DISCONNECT SWITCH:  
SUBSCRIPT INDICATES:  
SWITCH RATING (AMPERES)  
NUMBER OR POLES  
WP = WEATHERPROOF (NEMA-3R)
- NON-FUSED DISCONNECT SWITCH:  
SUBSCRIPT INDICATES:  
SWITCH RATING (AMPERES)  
NF = NON-FUSED  
WP = WEATHERPROOF (NEMA-3R)
- TELEPHONE OUTLET
- TELEPHONE HANDHOLE
- TELEPHONE MANHOLE
- TELEPHONE POLE
- TEMPORARY BUS STOP
- TDS POLE DOWN GUY
- TDS POLE FOUNDATION
- THERMOSTAT
- TRACK ALIGNMENT CURVE IDENTIFICATION No.
- TRANSFORMER
- TRANSFORMER - DELTA WINDINGS
- TRANSFORMER - WYE WINDINGS
- CURRENT TRANSFORMER
- POWER TRANSFORMER (PLAN)
- POTENTIAL TRANSFORMER
- TRAFFIC SIGNAL (E)
- TRAFFIC SIGNAL, ARROW W/BACKPLATE
- TRAFFIC SIGNAL CONTROLLER CABINET W/DOOR SWING
- TRAFFIC SIGNAL W/ARM & POLE (E)
- TRAFFIC SIGNAL W/BACKPLATE & ELECTROLIER
- TRAFFIC SIGNAL WITH BACKPLATE
- TRAFFIC SIGNAL EXTENDED
- TEMPORARY TRAFFIC STRIPE
- TRANSMISSION TOWER
- TRASH RECEPTACLE
- TREE GRATE WITH TREE GUARD
- TREE TO REMAIN
- TREE TO BE REMOVED
- TREES & BRUSH

- TUBULAR STEEL POLE
- TVM
- TV MANHOLE
- TV HANDHOLE
- TV BOX
- TYPE I PEDESTRIAN BARRICADE
- TYPE III OR III M SERVICE CABINET W/DOOR SWING
- TYPICAL DUCTBANK CROSS SECTION CALL OUT
- UNDERGROUND CONDUIT DUCT (INDICATE TYPE, SIZE AND NUMBER OF CONDUITS BY CROSS SECTION IDENTIFICATION OF EACH RUN, OR BY NOTATION)  
UP, DOWN OR UP/DOWN WALL LIGHT
- UTILITY
- UTILITY BOX
- UTILITY BOX
- UTILITY BOX (E)
- UTILITY MANHOLE
- UTILITY VAULT
- VERTICAL CONTROL
- VOLTMETER
- VOLTMETER SWITCH
- WALL MOUNTED FLUORESCENT LIGHT
- WATER METER
- WATER VALVE
- WATER VALVE BOX
- WATTMETER
- WATT HOUR METER
- WIND TURBINE
- INDICATES CALTRANS STANDARD PLAN SHEET No.
- INDICATES DETAIL No.
- INDICATES SECTION No.
- INDICATES DRAWING No. SHOWN ON
- INDICATES DETAIL No.
- INDICATES DRAWING No. SHOWN ON

HERN Jun 29, 2020 - 6:28pm C:\cadd\lib\p\chermandez\west\mns3589\801GN027.dwg

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



SUBMITTED

**BKF 100+ YEARS**  
ENGINEERS / SURVEYORS / PLANNERS

DESIGNED: C. Chi  
CHECKED: M. Cosentino

DRAWN: A. Hernandez  
CADD FILE NAME: 801GN027.dwg

**Santa Clara Valley Transportation Authority**

APPROVED

**BKF 100+ YEARS**  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/06/20  
SCALE: NTS

SUBMITTAL DATE: 06/29/20  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT GENERAL LEGEND - 4			SHEET OF DRAWING NO. GN027 REVISION C
PCA NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE	

**NOTES:**

1. HORIZONTAL AND VERTICAL DATUM PER SANTA CLARA VALLEY TRANSPORTATION AUTHORITY CAPITOL EXTENSION LIGHT RAIL PROJECT CONTROL REPORT CREATED BY HMH ENGINEERS, DATED JANUARY 24, 2017.
2. THE FINAL COORDINATES, BASED ON NAD83. EPOCH 1991.35 ARE LISTED IN U.S. SURVEY FEET ON THE CALIFORNIA COORDINATE SYSTEM OF 1983, ZONE 3.
3. THE ELEVATIONS, BASED ON NAVD88. ARE ALSO PRESENTED IN U.S. SURVEY FEET.
4. THE COMBINED SCALED FACTOR IS 0.99995410. MULTIPLY BY 1.0000459 TO OBTAIN GROUND DISTANCES.
5. SEE SANTA CLARA VALLEY TRANSPORTATION AUTHORITY CAPITOL EXTENSION LIGHT RAIL PROJECT CONTROL REPORT. CREATED BY HMH ENGINEERS, DATED JANUARY 24, 2017.

**LEGEND:**

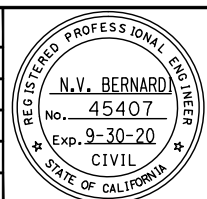
- SURVEY CONTROL POINT

Point #	Northing	Easting	Elev	Description	Stationing
18	1954703.89	6174996.29	116.27	FD VTA ALUM DISK "18" AT CAPITOL EXPRWY & CAPITOL AVE IN WALK AT +/- CENTER OF CAPITOL AVE AT N SIDE OF HIGHWOOD DR	"SB" 974+85.80 12.71' Rt
41	1955228.15	6174671.61	114.49	FD VTA ALUM CAP "41" IN W WALK CAPITOL AT SW CORNER OF LOMBARD & CAPITOL	"SB" 968+68.89 43.89' Rt
341	1955616.43	6174593.39	115.63	FD VTA ALUM CAP "341" IN NE CURB RETURN CAPITOL AVE AT WILBUR AVE, +/- 18' FROM ECR	"SB" 964+90.65 79.26' Lt
342	1954836.24	6174890.20	114.82	FD VTA ALUM CAP "342" IN W CURB CAPITOL AVE N OF HIGHWOOD DR +/- 34' S OF BC OF CURB	"SB" 973+19.28 41.93' Rt
344	1953426.40	6175648.45	115.28	FD VTA ALUM CAP "344" IN W CURB OF W FRONTAGE RD OF CAPITOL EXPRWY AT +/- PL BETW HOUSE #'s 937 & 953 CAPITOL EXPRWY	"SB" 989+27.28 101.53' Rt
347	1952302.69	6176400.82	116.54	FD VTA ALUM CAP "347" IN E WALK OF E FRONTAGE RD OF CAPITOL EXPRWY AT +/- 1' N OF ECR AT NE CORNER OF S CAPITOL AVE & TUDOR CT	"SB" 1002+73.18 113.82' Lt
348	1951610.56	6176767.92	118.01	FD VTA ALUM CAP "348" IN AC PAVING AT +/- E CURB LINE OF E FRONTAGE RD OF CAPITOL EXPRWY, 8.8' N OF S CURB BRISTOL DR	"SB" 1010+55.91 110.51' Lt
349	1950975.04	6177109.26	119.21	FD VTA ALUM CAP "349" IN AC PAVING 1.6' E OF E CURB LINE OF E FRONTAGE RD OF CAPITOL EXPRWY, 6.6' N OF S CURB COVENTRY DR	"SB" 1017+77.29 111.68' Lt
350	1950300.69	6177475.23	118.20	FD VTA ALUM CAP "350" IN AC PAVING 7.2' W OF E CURB LINE OF E FRONTAGE RD OF CAPITOL EXPRWY, 11.2' N OF S CURB WOODMOOR DR AT "DO NOT ENTER" BUBBLE	"SB" 1025+46.25 113.40' Lt
351	1949443.62	6178195.81	119.47	FD VTA ALUM CAP "351" IN N CURB OCALA AVE +/- 90.2' W OF EVERWOOD CT, EAST OF CAPITOL EXPRWY	"SB" 1036+36.92 341.24' Lt
352	1948504.35	6178202.68	119.16	FD VTA ALUM CAP "352" IN E CURB OF JOHNNY MONTGOMERY DR (AIRPORT FRONTAGE) +/- 115.8' S OF ROBERT FOWLER WAY, OPPOSITE AMELIA REID AVIATION BLDG (N OF CUNNINGHAM)	"SB" 1044+44.68 180.05' Rt
355	1946816.18	6179274.93	127.87	FD VTA ALUM CAP "355" IN AC PAVING 10.8' E OF W CURB SWIFT AVE (AIRPORT FRONTAGE) +/- 183.7' N ALONG SWIFT AVE OF 2nd PG&E TOWER (IN MEDIAN OF CAPITOL) S OF CUNNINGHAM AVE	"SB" 1064+78.78 102.17' Rt
357	1945238.74	6180381.17	135.38	FD VTA ALUM CAP "357" IN E CURB CAPITOL EXPRWY AT SOUTH MOST EXIT OF EVERGREEN SHOPPING CENTER, 14.8' S OF S BLDG LINE OF IN-N-OUT (2950 CAPITOL EXPRWY)	"SB" 1083+97.21 200.76' Lt
358	1944701.70	6180862.54	134.68	FD VTA ALUM CAP "358" IN 1" IP ON E LEVEE THOMPSON CREEK ALONG GLEN HANLEIGH DR AT +/- N CURBLINE OF GLEN HARDY CT PRODUCED, +/- 6.6' W OF CL FENCE AT E R/W CREEK	"SB" 1091+00.52 360.39' Lt
359	1944236.62	6181093.59	136.63	FD VTA ALUM CAP "359" IN 1" IP ON E LEVEE THOMPSON CREEK ALONG GLEN HANLEIGH DR +/- 28.9' S OF N CURB GLEN FENTON WAY, 6.9' W OF CL FENCE AT E R/W OF CREEK	"CS" 95+81.94 260.53' Lt
1044	1943068.71	6181411.15	143.63	FD BR CAP "SCVWD" IN S CURB QUIMBY RD AT +/- C/L OF BRIDGE OVER THOMPSON CREEK +/- 197' E OF CAPITOL EXPRWY	"CS" 107+51.06 210.77' Lt
6901	1949658.83	6177806.03	118.82	FD BRASS PIN IN CONC AT C/L BC AT S END E FRONTAGE RD OF CAPITOL EXPRWY 17.9' W OF E CURB, +/- 34.5' N OF N CURB S CAPITOL AVE PRODUCED (AFTER IT TURNS EAST)	"SB" 1032+65.65 95.38' Lt
6903	1949241.82	6177921.37	120.18	FD 3/4" IP & TAG "SANTA CLARA COUNTY SURVEYOR" IN MON WELL AT INTERSECTION OF OCALA AVE & CAPITOL EXPRWY	"SB" 1036+88.69 4.46' Lt
6904	1945749.09	6179996.02	133.76	FD 3/4" IP & TAG "SANTA CLARA COUNTY SURVEYOR" IN MON WELL AT INTERSECTION OF TULLY RD & CAPITOL EXPRWY (S'LY OF 2 WELLS)	"SB" 1077+63.94 105.70' Lt
6907	1943051.23	6181203.84	144.78	FD 3/4" IP & TAG "SANTA CLARA COUNTY SURVEYOR" IN MON WELL AT INTERSECTION OF QUIMBY RD & CAPITOL EXPRWY	"CS" 107+27.95 4.07' Lt
6908	1942387.48	6181289.50	146.55	FD SET SPIKE & WASHER W/ "PSOMAS FOR VTA 6908" IN 1" IP IN MEDIAN OF CAPITOL EXPRWY +/- 670' S OF QUIMBY, 6.9' W OF E CURB MEDIAN, +/- 40' N OF N LOT LINE OF MOBILE HOME PARK	

ALL DIMENSIONS ARE IN FEET UNLESS OTHERWISE SHOWN

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NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



SUBMITTED

**BkF 100+ YEARS**  
ENGINEERS / SURVEYORS / PLANNERS

DESIGNED: J. Simmons  
CHECKED: D. Thresh

DRAWN: A. Lara  
CADD FILE NAME: 801GN030.dwg

APPROVED

**BkF 100+ YEARS**  
ENGINEERS / SURVEYORS / PLANNERS

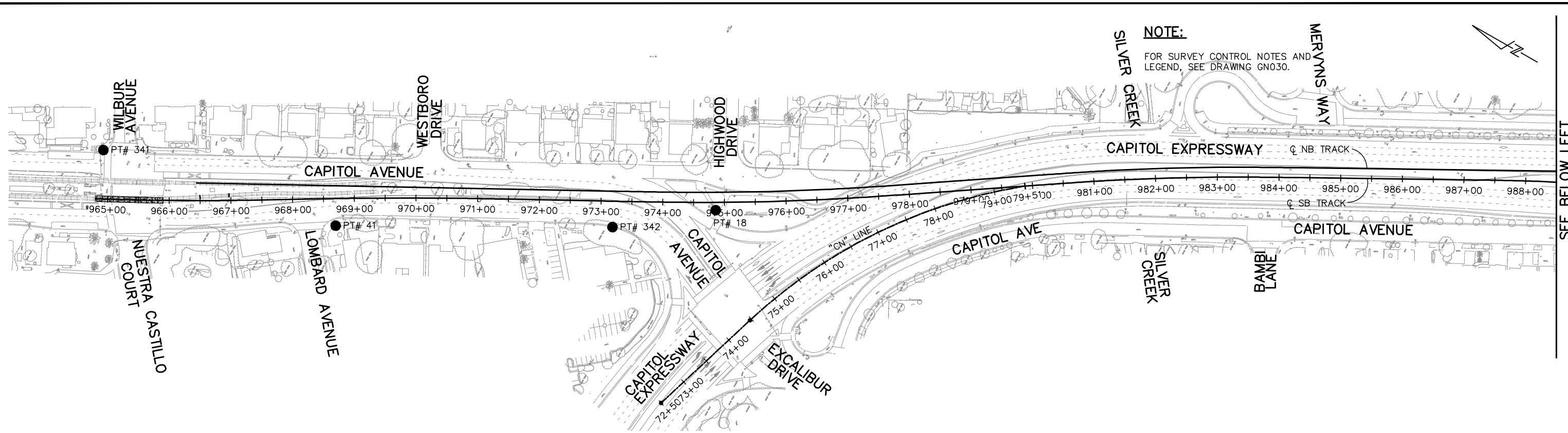
**Santa Clara Valley Transportation Authority**

CADD FILE DATE: 03/06/20  
SCALE: NTS

SUBMITTAL DATE: 06/29/20  
BOARD APPROVAL DATE:

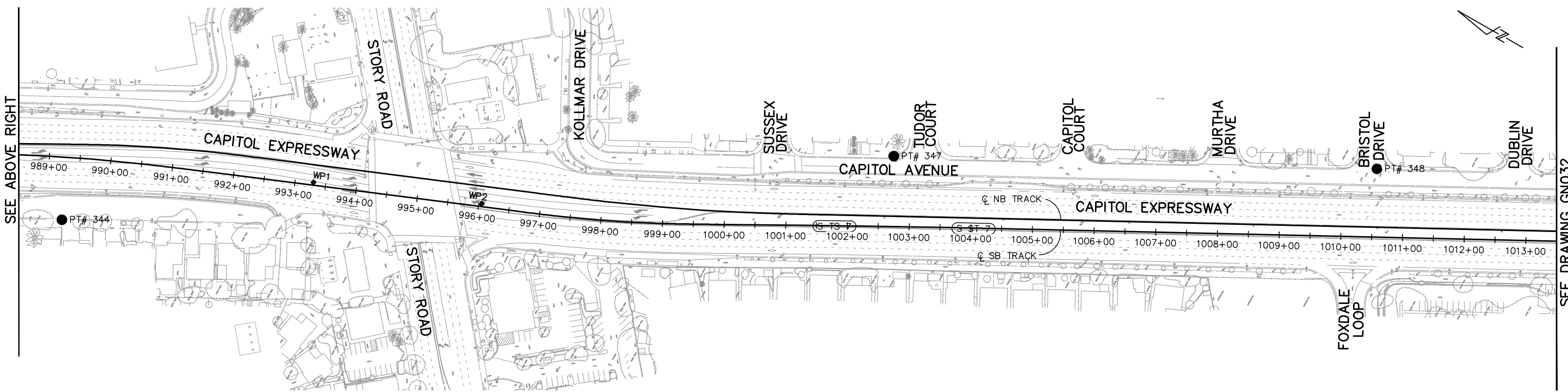
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PCA NO. 000	CONTRACT NO. C801
FILE LOCATION PROJECTWISE	

SHEET OF	DRAWING NO. GN030
REVISION	C



**NOTE:**  
FOR SURVEY CONTROL NOTES AND  
LEGEND, SEE DRAWING GN030.

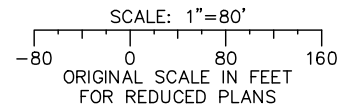
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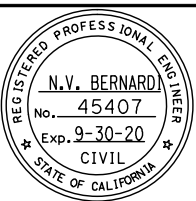
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DESIGNED: J. Simmons  
CHECKED: D. Thresh  
DRAWN: A. Lara  
CADD FILE NAME: 801GN031.dwg



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CADD FILE DATE: 03/06/20  
SCALE: 1" = 80'  
SUBMITTAL DATE: 06/29/20  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT GENERAL CONSTRUCTION STAKING SURVEY CONTROL STA 964+80 TO STA 1013+50			SHEET OF DRAWING NO. GN031 REVISION C
PCA NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE	

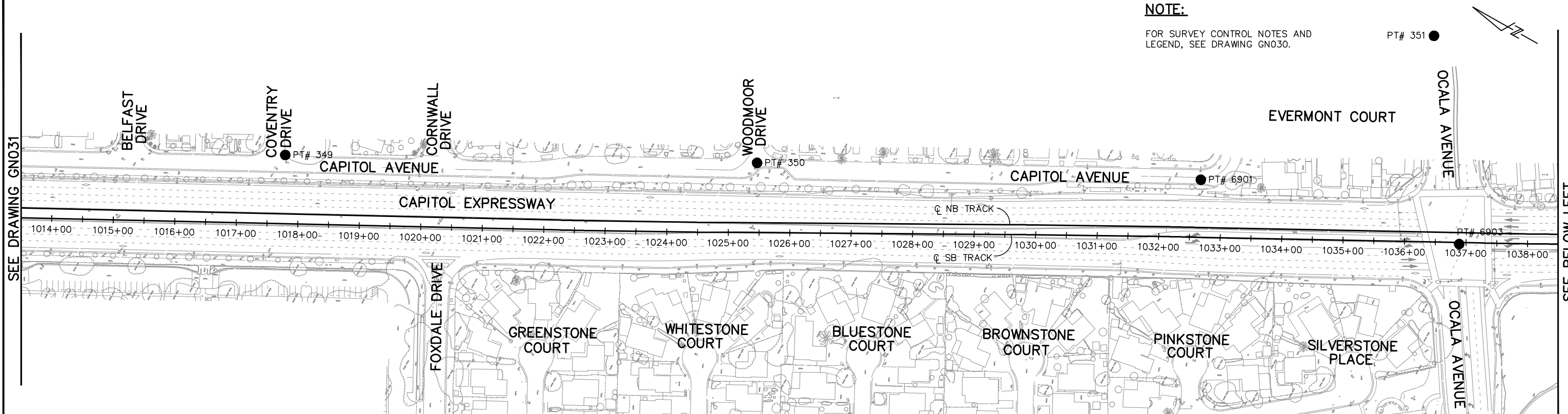
**NOTE:**

FOR SURVEY CONTROL NOTES AND LEGEND, SEE DRAWING GN030.

PT# 351 ●

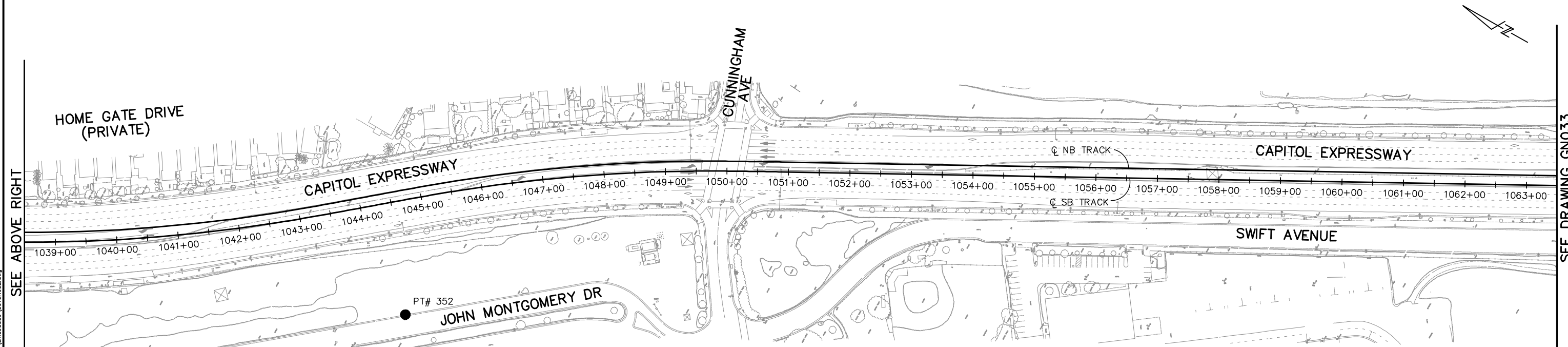
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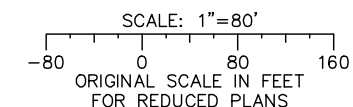


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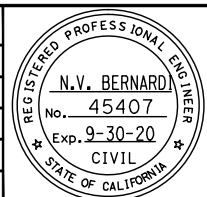


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A	06/18	35% SUBMITTAL SET



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DESIGNED: J. Simmons  
CHECKED: D. Thresh

DRAWN: A. Lara  
CADD FILE NAME: 801GN032.dwg

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Transportation  
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CADD FILE DATE: 03/06/20  
SUBMITTAL DATE: 06/29/20

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BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT GENERAL			SHEET OF
CONSTRUCTION STAKING SURVEY CONTROL STA 1013+50 TO STA 1063+50			DRAWING NO. GN032
			REVISION C
PCA NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE	



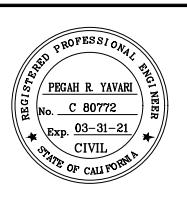


OCS ABBREVIATIONS

<b>A</b>		<b>H</b>		<b>R</b>		<b>MISC</b>	
A	AREA, AMPERE	HA	HANGER	R	RADIUS	&	AND
AB	ANCHOR BOLT, AIRBREAK, AGGREGATE BASE	H.S.	HIGH STRENGTH	RD	ROAD	∠	ANGLE
AC	ALTERNATING CURRENT, ASPHALT CONCRETE	HT	HEIGHT	REV	REVISION	~	APPROXIMATELY
ACC.	ACCESS	<b>L</b>		REQ'D	REQUIRED	⊙	AT
ACI	AMERICAN CONCRETE INSTITUTE	IDS	INTRUSION DETECTION SYSTEM	RGS	RIGID GALVANIZED STEEL	°	DEGREES
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	IN	INCH, INCHES	<b>S</b>		∅	DIAMETER
ASSY	ASSEMBLY	IOL	INSULATED OVERLAP	SB	SOUTHBOUND	'	FOOT, FEET
ASTM	AMERICAN SOCIETY OF TESTING MATERIALS	IR	IN-RUNNING WIRE	SCAT	SIMPLE CATENARY AUTO-TENSIONED	"	INCH, INCHES
ATM	ALONG TRACK MOVEMENT	<b>K</b>		SCH	SCHEDULE	#	NUMBER
AVE	AVENUE	KCMIL	THOUSAND CIRCULAR MILS	SE	SUPERELEVATED	%	PERCENT
AWG	AMERICAN WIRE GAUGE	KIP	THOUSAND POUNDS	S.H.	SYSTEM HEIGHT	Δ	POLE RAKE
AWS	AMERICAN WELDING SOCIETY	KSI	THOUSAND POUNDS PER SQUARE INCH	SI	SECTION INSULATOR		
		KV	KILOVOLT	SQ	SQUARE		
				SS	SUBSTATION, STAINLESS STEEL, POINT OF CHANGE FROM SPIRAL TO ANOTHER SPIRAL STATION		
<b>C</b>		<b>L</b>		STA	STATION		
C	CELSIUS, COMBINER, CONDUCTOR	L	LENGTH	<b>I</b>			
CIDH	CAST IN DRILLED HOLE	LB	POUND	T3	TRACK DESIGNATION FOR THE TAIL TRACK AT EASTRIDGE STATION		
CIR	CIRCLE	LBS	POUNDS	TEMP	TEMPORARY, TEMPERATURE		
☉	CENTER LINE	LBF	POUNDS FORCE	TES	TRACTION ELECTRIFICATION SYSTEM		
CLR	CLEAR, CLEARANCE	LRT	LIGHT RAIL TRANSIT	THRU	THROUGH		
COEFF	COEFFICIENT	LRV	LIGHT RAIL VEHICLE	TOR, T/R	TOP OF RAIL		
COMM	COMMUNICATIONS	<b>M</b>		TPSS	TRACTION POWER SUBSTATION		
CPUC	CALIFORNIA PUBLIC UTILITIES COMMISSION	MAX	MAXIMUM	TYP	TYPICAL		
CSPE	CHLOROSULFONATED POLYETHYLENE	MECH	MECHANICAL	<b>U</b>			
CW	CONTACT WIRE	MIN	MINIMUM	UOL	UNINSULATED OVERLAP		
CWA	COUNTERWEIGHT ASSEMBLY	MISC	MISCELLANEOUS	<b>V</b>			
CWAH	COUNTERWEIGHT ANCHOR HEIGHT	ML	MAINLINE	VDC	VOLTS DIRECT CURRENT		
CWH	CONTACT WIRE HEIGHT	MP	MIDPOINT	VTA	VALLEY TRANSPORTATION AUTHORITY		
<b>D</b>		MPA	MIDPOINT ANCHOR	<b>W</b>			
DC	DIRECT CURRENT	MW	MESSENGER WIRE	W	WATER, WEST, WATTS		
DIA	DIAMETER	<b>N</b>		W/	WITH		
DWG	DRAWING	N/A	NOT APPLICABLE	WP	WEATHER PROOF, WORK POINT		
DWGS	DRAWINGS	NB	NORTHBOUND	WR	WIRE RUN		
<b>E</b>		N.C.	NORMALLY CLOSED	<b>X</b>			
(E), EXIST	EXISTING	NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION	X/O	CROSSOVER		
E <sub>a</sub>	ACTUAL SUPER-ELEVATION	NO.	NUMBER				
ELEC	ELECTRIC / ELECTRICAL	N.O.	NOMINALLY OPEN				
EPR	ETHYLENE PROPYLENE RUBBER	NOM	NOMINAL				
EQ	EQUAL	NTS	NOT TO SCALE				
EXP	EXPANSION	<b>O</b>					
<b>F</b>		OCS	OVERHEAD CONTACT SYSTEM				
F	FAHRENHEIT	OD	OUTSIDE DIAMETER				
FA	FIXED ANCHOR	OL	OVERLAP				
FDN	FOUNDATION	OR	OUT-OF-RUNNING WIRE				
FLX	FLEXIBLE	<b>P</b>					
FSH	FEEDER SPOUT HEIGHT	PF	PARALLEL FEEDER				
FT	FOOT, FEET, FIXED TERMINATION	PROJ	PROJECTION				
<b>G</b>		PSI	POUNDS PER SQUARE INCH				
GALV	GALVANIZED	PUC	PUBLIC UTILITIES COMMISSION				
GO	GENERAL ORDER	PVC	POLYVINYL CHLORIDE				
GRS	GALVANIZED RIGID STEEL						

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 Engineers Architects Planners  
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 CHECKED: P. YAVARI  
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 CADD FILE NAME: 801PG001.dwg

Santa Clara Valley  
 Transportation  
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CADD FILE DATE: 5/15/2020  
 SCALE: NTS  
 SUBMITTAL DATE: 06/29/20  
 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 OVERHEAD CONTACT SYSTEM  
 ABBREVIATIONS

PCA NO.: 000  
 CONTRACT NO.: C801  
 FILE LOCATION: PROJECTWISE

SHEET	OF
DRAWING NO.	PG001
REVISION	C

# OCS LEGEND

## MASTER SCHEMATIC LAYOUT

	NEW PASSENGER STATION
	EXISTING PASSENGER STATION
	INSULATED OVERLAP
	UNINSULATED OVERLAP
	COUNTERWEIGHT POLE
	FIXED ANCHOR POLE
	DOWN GUY
	MIDPOINT ANCHOR
	SIMPLE CATENARY (SCAT) AUTO-TENSIONED
	OUT-OF-RUNNING WIRE
	TRACTION POWER SUBSTATION
	SECTION INSULATOR
	AIRBREAK
	POLE-MOUNTED DISCONNECT SWITCH
	N.O. NORMALLY OPEN
	N.C. NORMALLY CLOSED
	ELEVATED STRUCTURE
	WIRE RUN #

## LAYOUT SCHEDULE

	NEW OCS POLE AND CANTILEVER ON GROUND
	NEW OCS POLE AND CANTILEVER ON ELEVATED STRUCTURE
	NEW OCS POLE AND CANTILEVER ON CONCRETE PEDESTAL ON ELEVATED STRUCTURE
	EXISTING OCS POLE AND CANTILEVER
	DOWN GUY
	SIMPLE CATENARY (SCAT) AUTO-TENSIONED
	OUT-OF-RUNNING WIRE
	SECTION INSULATOR
	CONTINUITY JUMPER - CROSSOVER
	IN-SPAN INSULATOR
	EQUALIZING JUMPER
	CONTINUITY JUMPER - OVERLAP
	HEADSPAN
	AIRBREAK
	FEEDER POLE AND FEEDER TAP
	FEEDER POLE WITH DISCONNECT SWITCH AND FEEDER TAP
	N.O. NORMALLY OPEN
	N.C. NORMALLY CLOSED
	PARALLEL FEEDER CABLE
	PARALLEL FEEDER EQUALIZING TAP

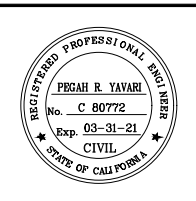
	VERSINE OF THE SPAN IN INCHES
	INDICATES DIRECTION OF 12" STAGGER OF CONTACT WIRE FROM PROJECTED Q TRACK + INDICATES PULL-OFF - INDICATES PUSH-OFF
	INSULATED KNUCKLE
	NORTH ARROW
	TES STRUCTURE/FOUNDATION STATIONING TES STRUCTURE NUMBER
	LENGTH OF HALF-TENSION SECTION IN FEET (AT ANCHOR POLE/MIDPOINT ANCHOR)

## SYMBOLS ON DETAILS

	SECTION LETTER
	DRAWING NUMBER WHERE SHOWN / "-" WHERE SHOWN ON SAME DRAWING

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<b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
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DRAWN	CADD FILE NAME
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CADD FILE DATE	SCALE
5/15/2020	NTS
SUBMITTAL DATE	BOARD APPROVAL DATE
06/29/20	

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT OVERHEAD CONTACT SYSTEM LEGEND		
PCA NO.	CONTRACT NO.	FILE LOCATION
000	C801	PROJECTWISE
SHEET OF	DRAWING NO.	REVISION
	PG002	C

**OCS GENERAL NOTES**

**A. TES STRUCTURAL NOTES:**

- ALL STRUCTURAL STEEL SHALL BE ASTM STANDARDS A36, A572, A595, A53, A500 AND A514, OR AS NOTED ON THE DRAWING AND SPECIFICATIONS.
- HOT DIPPED GALVANIZING SHALL BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A123 FOR STRUCTURAL STEEL AND ASTM A153 FOR STEEL HARDWARE.
- ALL FIELD CONNECTIONS SHALL BE BOLTED UNLESS OTHERWISE NOTED.
- FOR LOCATION OF DOWN GUYS, SEE OCS LAYOUT SCHEDULE DRAWINGS.
- ALL DESIGN FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL BE PERFORMED IN ACCORDANCE WITH THE AISC MANUAL OF STEEL CONSTRUCTION, LATEST EDITION.
- ALL WELDING SHALL CONFORM TO STRUCTURAL WELDING CODE AWS D1.1., LATEST EDITION. ELECTRODES SHALL BE 70KSI.
- ALL CONNECTION BOLTS SHALL BE EITHER ASTM A307 UNFINISHED MACHINE BOLT OR ASTM A325 HIGH TENSION BOLT, HEXAGONAL HEAD COMPLETE WITH HEX NUT AND WASHER, AS INDICATED ON CONTRACT PLANS AND SHALL BE GALVANIZED IN ACCORDANCE WITH THE SPECIFICATION, UNLESS OTHERWISE NOTED.
- SIZE OF ALL BOLT HOLES TO BE 1/16" LARGER THAN BOLT DIAMETER, UNLESS OTHERWISE NOTED.
- ALL DIMENSIONS, DETAILS, ELEVATIONS, AND OFFSETS WITH RESPECT TO THE SOUTHBOUND TRACK, FOR TES STRUCTURES AND GUY ANCHOR FOUNDATIONS, SHALL BE VERIFIED PRIOR TO FABRICATION OF TES POLES AND OCS SUPPORTS.
- ALL CONCRETE WORK SHALL CONFORM TO THE ACI-318 LATEST EDITION.
- CONCRETE COMPRESSIVE STRENGTH SHALL BE 4000 PSI AT 28 DAYS.
- REINFORCING STEEL SHALL BE NEW BILLET STEEL CONFORMING TO ASTM A706, GRADE 60. IN ADDITION, WELDABILITY REQUIREMENTS OF ASTM A706 SHALL BE MET.
- CHAMFER ALL EXPOSED CONCRETE EDGES 3/4" UNLESS OTHERWISE NOTED.

**B. OVERHEAD CONTACT SYSTEM (OCS) NOTES:**

- OCS SCOPE INCLUDES THE INSTALLATION OF A NEW OVERHEAD CONTACT SYSTEM TO SUPPORT THE VTA'S EXTENSION OF THE TASMAN LINE FROM ALUM ROCK STATION TO EASTRIDGE STATION AND THE INSTALLATION OF NEW PARALLEL AERIAL FEEDER CABLES BETWEEN TRACTION POWER SUBSTATIONS #27 AND #28. OCS INSTALLATION IS FURTHER DESCRIBED IN THE DIVISION 1 SPECIFICATIONS SCOPE OF WORK AND INCLUDES ALL NEW TES POLES, FOUNDATIONS, CANTILEVERS, ASSEMBLIES, COMPONENTS, WIRING AND SMALL PART STEEL WORK TO PROVIDE A COMPLETE WORKING SYSTEM. INCLUDED ARE ANY DISCONNECT SWITCHES, JUMPERS, AND ELECTRICAL CONNECTIONS AS NEEDED AND DESCRIBED HEREIN, AND AS FURTHER DESCRIBED IN THE CONTRACT TECHNICAL SPECIFICATIONS.
- THE ASSEMBLIES CONTAINED IN THE DESIGN DRAWINGS AND THE LRT STANDARD DETAILS SHALL BE USED IN THE CONSTRUCTION AND SHALL MEET ALL DIMENSIONAL AND SPECIFICATION REQUIREMENTS. ONLY APPROVED HARDWARE AND COMPONENTS SHALL BE USED. ALL OVERHEAD CONTACT SYSTEM ASSEMBLIES AND STRUCTURAL ELEMENTS SHALL CLEAR THE PANTOGRAPH DYNAMIC ENVELOPE.
- AESTHETICS IS A MAJOR CONSIDERATION IN THE SELECTION OF HARDWARE AND IN ORDER TO MINIMIZE VISUAL IMPACT, WELL BLENDED, LOW PROFILE ASSEMBLIES AND COMPONENTS ARE REQUIRED. ALL MATERIAL AND COMPONENTS ARE SUBJECT TO APPROVAL.
- STEEL WIRE ROPE, THIMBLES, COMPRESSION FITTINGS FOR WIRE TERMINATIONS SHALL MEET REQUIRED SPECIFICATIONS. CONSISTENCY OF TYPE SHALL BE MAINTAINED FOR ALL APPLICATIONS.
- OVERHEAD CONTACT SYSTEM WIRE HEIGHTS ARE REFERENCED TO THE TOP OF HIGH RAIL LEVEL OF THE TRACK AT EACH SUPPORT LOCATION.
- INSTALLATION OF THE OVERHEAD CONTACT SYSTEM SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE RULES SPECIFIED IN CPUC GO-95, GO-143B AND THE APPLICABLE STATE AND LOCAL CODES.
- THE CONTRACTOR SHALL VERIFY THE ALONG TRACK STATIONING, OFFSET, AND ELEVATION RELATIVE TO SOUTHBOUND TOP OF HIGH RAIL AND FOUNDATION TYPE INCLUDING THE ANCHOR BOLT PATTERNS PRIOR TO FINAL FABRICATION AND INSTALLATION OF POLES, GUYS AND HARDWARE.
- UNLESS OTHERWISE NOTED, ALL TES POLE OFFSET DIMENSIONS ARE MEASURED FROM THE CENTERLINE OF SOUTHBOUND TRACK TO CENTERLINE OF POLE AT TRACK LEVEL AND MUST BE VERIFIED PRIOR TO THE FABRICATION OF ANY CATENARY ASSEMBLIES.
- THE TES STRUCTURE LAYOUTS AND STATIONINGS ARE BASED ON THE TRACK ALIGNMENT PLAN AND PROFILE DRAWINGS. CHANGES TO THE ALIGNMENT MAY REQUIRE REVISIONS TO THE ASSOCIATED OCS LAYOUT PLAN OR PLANS.
- POLE RAKE REFERENCE LINE IS PARALLEL TO THE TRACK IN THE DIRECTION OF INCREASING TRACK STATION, RAKE ANGLE SHALL BE MEASURED COUNTER CLOCKWISE STARTING FROM THE REFERENCE LINE. FIGURES 1 & 2 ARE FOR ILLUSTRATION.
- DIMENSION OF STAGGER IS REFERENCED FROM CENTERLINE OF TRACK.
- CONTRACTOR SHALL ENSURE THAT ALL PARTS FIT AND MUST PROVIDE A FULLY WORKABLE OCS INSTALLATION. CONTRACTOR SHALL BE RESPONSIBLE FOR REVISING MATERIALS AS REQUIRED.
- RAKE SHOWN ON LAYOUT SCHEDULES TO BE VERIFIED AFTER POLE SHOP DRAWINGS ARE SUBMITTED AND APPROVED.
- CONTRACTOR SHALL TEST THE OCS INSTALLATION AND ENSURE SMOOTH OPERATION OF THE PANTOGRAPH AND ALL STAGGERS ARE WITHIN THE SAFE OPERATING PANTOGRAPH ZONE.
- ALL FINAL HEIGHTS AND STAGGERS SHALL BE DOCUMENTED ON AS-BUILT LAYOUT DRAWINGS FOR VTA RECORDS.
- FOR ADDITIONAL OCS DETAILS REFER TO VTA STANDARD DETAILS, DRAWINGS STE-001 TO STE-037.

**C. DESCRIPTION OF OCS DRAWING SERIES:**

LEGEND	
DRAWING SERIES	DESCRIPTION
PG-	<u>GENERAL</u> LEGEND, ABBREVIATIONS, GENERAL NOTES. DRAWINGS GIVING INFORMATION ABOUT OVERHEAD WIRES, CABLES, TENSIONS, CLEARANCES AND LOAD EFFECTS.
TP-	<u>TRACTION POWER SUBSTATION</u> TPSS SINGLE LINE AND SCHEMATICS FOR AC AND DC SWITCHGEAR, AC AND DC DISTRIBUTION PANELS, TRANSFER TRIP CONTROL, OCS VOLTAGE MONITORING, AND EQUIPMENT LAYOUT.
PM-	<u>SITE SPECIFIC PLANS</u> MASTER SCHEMATIC LAYOUT  A SINGLE LINE DIAGRAM SHOWING CATENARY, SUBSTATIONS, OCS OVERLAPS, MIDPOINTS, STATION STOPS, AERIAL STRUCTURES AND GRADE CROSSINGS IN LINEAR SCALE ALONG TRACK.
PC-	<u>OCS LAYOUT SCHEDULES</u> A SET OF SINGLE LINE PLANIMETRIC DRAWINGS SHOWING POLE LOCATIONS, OCS ASSEMBLIES FOR EACH POLE AND ALL INSTALLATION DIMENSIONING.
PD 100 SERIES	<u>TYPICAL ARRANGEMENTS</u> DRAWINGS SHOWING BASIC OCS AND STRUCTURAL DETAILS.
PD 200 SERIES	<u>OCS STANDARD DETAILS</u> BASIC DESIGN TYPICAL DRAWINGS: CANTILEVER ASSEMBLIES, POLE TYPES, HANGER SETS, IN-SPAN ASSEMBLIES, TERMINATION ASSEMBLIES.
PD 250 SERIES	<u>OCS NON-STANDARD DETAILS</u> NON-STANDARD DRAWINGS SPECIFIC TO THIS CONTRACT OR TO A SPECIFIC LOCATION IN THIS CONTRACT.
PD 260 SERIES	<u>OCS PROFILES</u> OCS PROFILES SHOWING HANGER ARRANGEMENT FOR SPANS WHERE CONTACT WIRE TRANSITIONS FROM 18'-0" TO 15'-0" AND 15'-0" TO 18'-0" ABOVE TOP OF RAIL.
PD 270 SERIES	<u>OCS NON-STANDARD DETAILS, TPSS #27-#28</u> NON-STANDARD DRAWINGS SPECIFIC TO THIS CONTRACT BETWEEN TPSS #27 AND TPSS #28.
PD 300 SERIES	<u>OCS FOUNDATION DETAILS</u> TES STRUCTURE AND FOUNDATION SCHEDULE, CIDH FOUNDATION DETAILS.
PD 400 SERIES	<u>ALUM ROCK INTERFACE STAGING</u> CONSTRUCTION STAGING DETAILS AT INTERFACE BETWEEN EXISTING AND NEW OCS SYSTEM.

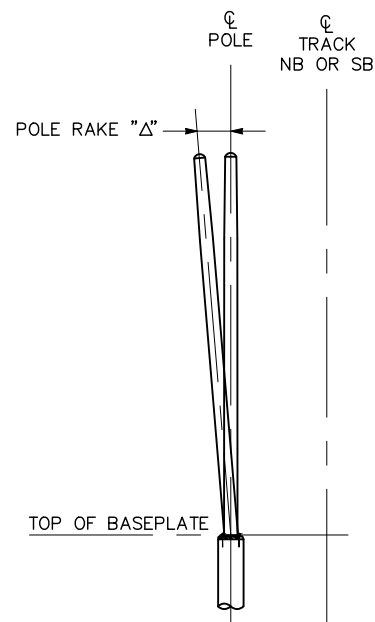


FIGURE - 1

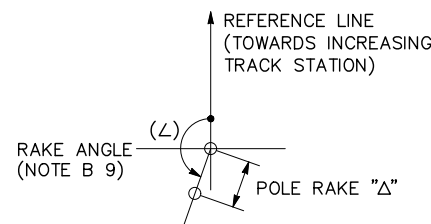
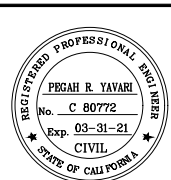


FIGURE - 2

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NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



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DRAWN: G. KOLA  
CADD FILE NAME: 801PG003.dwg

**Santa Clara Valley Transportation Authority**

**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 5/15/2020  
SCALE: NTS  
SUBMITTAL DATE: 06/29/20  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
OVERHEAD CONTACT SYSTEM  
GENERAL NOTES

PCA NO.: 000  
CONTRACT NO.: C801  
FILE LOCATION: PROJECTWISE

SHEET OF: PG003  
REVISION: C

**CAPITOL EXPRESSWAY TECHNICAL INFORMATION**

OVERHEAD CONTACT SYSTEM CONDUCTORS				
CONDUCTOR PARTICULARS	UNITS	SIMPLE CATENARY AUTO-TENSIONED (SCAT)		
		CONTACT WIRE	MESSENGER WIRE	PARALLEL FEEDER
MATERIAL	-	HARD DRAWN COPPER	HARD DRAWN COPPER	ALUMINUM (AAC/TW)
TYPE	-	ASTM B47	ASTM B8, B-1, CLASS AA	ASTM B230, B778
MAKE UP	-	SOLID GROOVED	BARE STRANDED	BARE STRANDED
NOMINAL SIZE	-	350 KCMIL	500 KCMIL	1000 KCMIL
WEIGHT	LB/FT	1.063	1.544	0.938
DIAMETER	IN	0.620	0.811	1.037
CROSS SECTIONAL AREA	SQ IN	0.2758	0.3928	0.786
MINIMUM BREAKING STRENGTH	LB	11,825	21,941	17,200
COEFF OF THERMAL EXP	PER °F	9.4 x 10 <sup>-6</sup>	9.4 x 10 <sup>-6</sup>	1.28 x 10 <sup>-5</sup>
MODULUS OF ELASTICITY	PSI	17.0 x 10 <sup>6</sup>	17.0 x 10 <sup>6</sup>	8.5 x 10 <sup>6</sup>
NOMINAL TENSION (60°F)	LB	3000	4800	3000
MAXIMUM TENSION (20°F, RS = 157.6')	LB	3000	4800	5918.4
MINIMUM TENSION (130°F, RS = 157.6')	LB	3000	4800	1127.1

FEEDERS AND JUMPERS				
CONDUCTOR PARTICULARS	JUMPER CABLE	PARALLEL FEEDER EQUALIZING TAP	BYPASS DISCONNECT SWITCH CABLES	SUBSTATION FEEDERS
MATERIAL	COPPER	COPPER	COPPER	COPPER
SIZE	350 KCMIL	500 KCMIL	500 KCMIL	500 KCMIL
STRANDS	259 CLASS G	259 CLASS G	259 CLASS G	61 CLASS C
TYPE	ASTM B173	ASTM B173	ASTM B173	ASTM B8
WEIGHT	LB/FT	1.110	1.924	1.815
NOMINAL DIAMETER	IN	0.773	1.223	1.091
CROSS SECTIONAL AREA	SQ IN	0.469	1.175	0.935
INSULATION	-	2KV	2KV	2KV

ANCILLARY WIRES AND KEVLAR ROPE			
MATERIAL	DESCRIPTION	BREAKING STRENGTH (MIN)	USAGE
GALV STEEL	EXTRA HIGH STRENGTH - 5/16"	11,200 LBF	CROSS SPANS / CANTILEVERS
GALV STEEL	HIGH STRENGTH - 1/2"	18,800 LBF	MIDPOINT ANCHOR WIRE / TERMINATIONS
GALV STEEL	HIGH STRENGTH - 5/8"	29,600 LBF	DOWN GUY
GALV STEEL	HIGH STRENGTH - 3/4"	40,800 LBF	DOWN GUY
STAINLESS STEEL	7/19 AIRCRAFT WIRE - 1/4"	6,400 LBF	CANTILEVERS / HANGERS
STAINLESS STEEL	19/7 NON-ROTATING - 1/2"	20,520 LBF	COUNTERWEIGHT TERMINATION
COPPER	NO. 4 AWG FLEX INSULATED, 2KV	1,900 LBF	SURGE ARRESTER GROUNDING
COPPER	4/0 FLEX	9,200 LBF	TES POLE, DOWN GUY GROUNDING, SUBSTATION GROUND MAT
ARAMID FIBER	PHILLYSTRAN KEVLAR ROPE - 1/2"	15,400 LBF	TERMINATION ANCILLARY ROPE

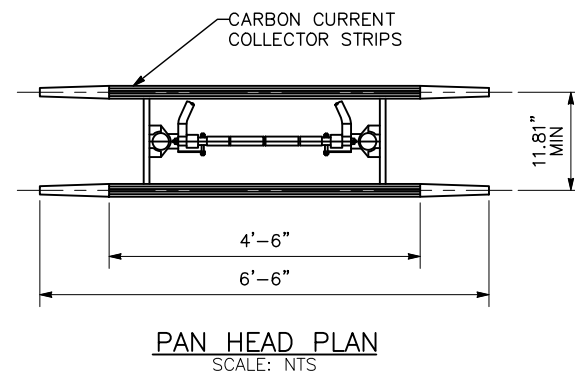
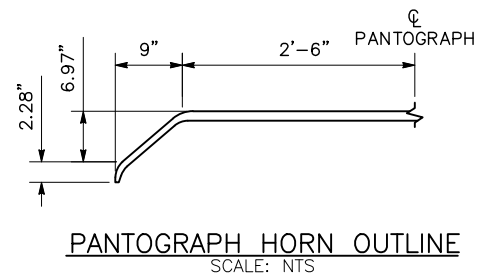
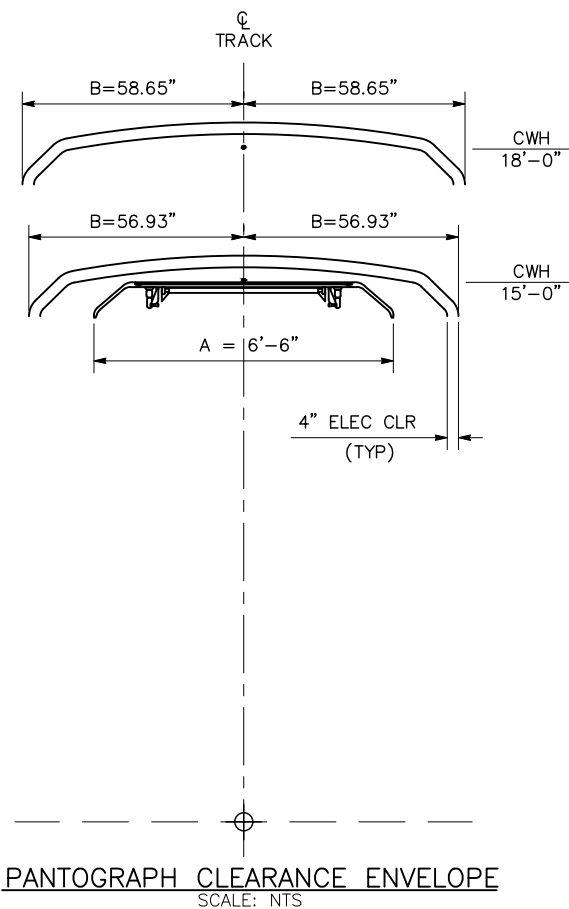
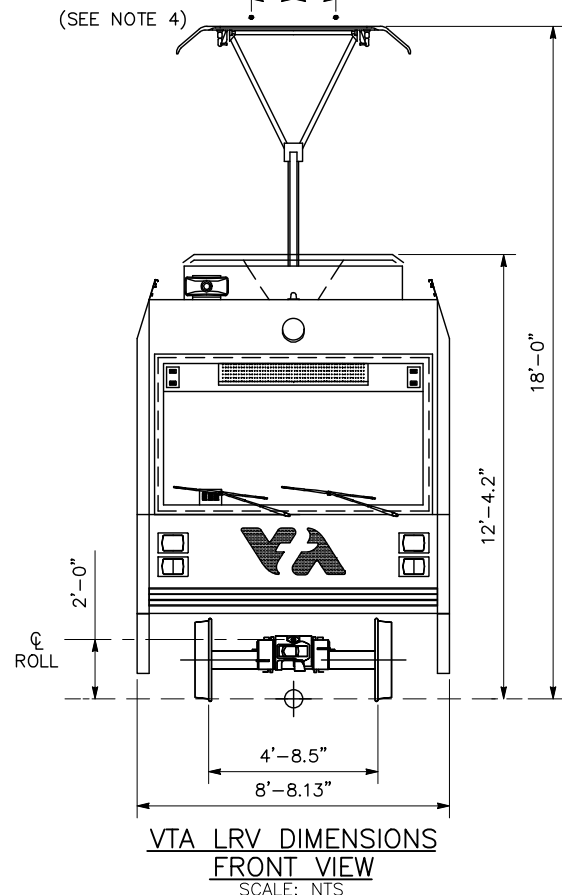
**NOTES:**

- FOR ABBREVIATIONS AND GENERAL NOTES SEE DWGS PG001 AND PG003.

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<table border="1"> <tr> <th>NO.</th> <th>DATE</th> <th>REVISIONS</th> </tr> <tr> <td>C</td> <td>06/20</td> <td>95% SUBMITTAL SET</td> </tr> <tr> <td>B</td> <td>03/19</td> <td>65% SUBMITTAL SET</td> </tr> <tr> <td>A</td> <td>06/18</td> <td>35% SUBMITTAL SET</td> </tr> </table>	NO.	DATE	REVISIONS	C	06/20	95% SUBMITTAL SET	B	03/19	65% SUBMITTAL SET	A	06/18	35% SUBMITTAL SET		SUBMITTED <b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942		APPROVED 	EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT OVERHEAD CONTACT SYSTEM TECHNICAL DIRECTIVES CONDUCTOR PARTICULARS & TENSIONS	SHEET OF DRAWING NO. PG004 REVISION C
	NO.	DATE	REVISIONS															
	C	06/20	95% SUBMITTAL SET															
B	03/19	65% SUBMITTAL SET																
A	06/18	35% SUBMITTAL SET																
DESIGNED G. KOLA	CHECKED P. YAVARI	CADD FILE DATE 5/15/2020	SCALE NTS															
DRAWN G. KOLA	CADD FILE NAME 801PG004.dwg	SUBMITTAL DATE 06/29/20	BOARD APPROVAL DATE															
PCA NO. 000		CONTRACT NO. C801		FILE LOCATION PROJECTWISE														

MAXIMUM CW POSITION  
AT 18'-0" = 14.00"



**CLEARANCE ENVELOPE DETAILS:**

WIDTH OF PANTOGRAPH = A = 78"  
 FULL SWAY OF VEHICLE = 2.49 DEGREES EACH SIDE OF CENTERLINE ABOVE CENTER OF ROLL  
 TRACK IS VTA MAINTENANCE CLASS  
 HEIGHT OF ENVELOPE FOR PANTOGRAPH CLEARANCE PURPOSES = CW HEIGHT + UPLIFT + CARBON WEAR = 216" + 3" + 1" = 220"

**CLEARANCE ENVELOPE AT 220.00":**

SWAY @ 2.49 DEGREES = 8.53" (ABOVE TRUCK ROLL CENTER)  
 SWAY OF PANTOGRAPH = 1.18"  
 LATERAL SHIFT = 2.50"  
 TOTAL SWAY = 12.21"

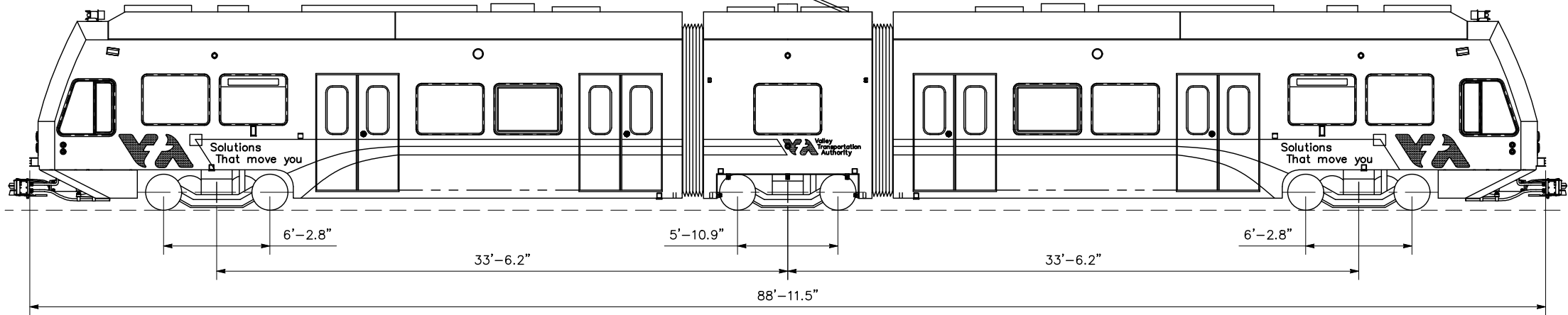
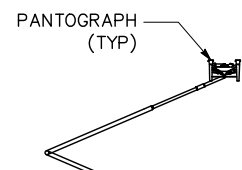
TRACK ALLOWANCES: ALIGNMENT @ 0.25" 0.25"  
 (VTA CLASS) CROSS LEVEL @ 0.25" 0.98"  
 GAUGE TOLERANCE 0.63"  
 TOTAL TRACK TOLERANCE EFFECTS = 1.86"

TOTAL LATERAL MOVEMENT S = SWAY + TRACK TOLERANCE EFFECTS = 12.21" + 1.86" = 14.07"  
 (WHICH IS EQUIVALENT TO 3.66° OF ROTATION ABOVE TOP OF RAIL)

REQUIRED LATERAL CLEARANCE EACH SIDE OF SUPERELEVATED TRACK CENTERLINE AT 220", B = TOTAL LATERAL MOVEMENT + ELECTRICAL CLEARANCE + FAILURE SAFETY ALLOWANCE + HALF PANTOGRAPH WIDTH = 14.07" + 4" + 1.58" + 39" = 58.65"

CLEARANCE ENVELOPE MEASUREMENT BEYOND END OF STATIC PANTOGRAPH = 57.65" - 1/2 PANTOGRAPH WIDTH = 57.65" - 39" = 18.65"

PANTOGRAPH CLEARANCE ENVELOPE  
SCALE: NTS



LRV DIMENSIONS - SIDE VIEW  
SCALE: NTS

TRACK PARAMETERS	
DESCRIPTION	INCHES
GAUGE	56.50
GAUGE TOLERANCE	0.63
TRACK CLASS FOR MAINTENANCE - VTA CLASS:	
HORIZONTAL ALIGNMENT TOLERANCE	0.25
CROSS LEVEL TOLERANCE	0.25
SUPERELEVATION - MAXIMUM	6.0

VEHICLE PARAMETERS	
DESCRIPTION	INCHES
TRACK ROLL CENTER HEIGHT	23.90
LATERAL SHIFT AT TRACK ROLL CENTER	2.5
MAXIMUM VEHICLE ROLL ANGLE BY DEGREE	2.49

PANTOGRAPH PARAMETERS	
DESCRIPTION	INCHES
OVERALL WIDTH OVER HORN	78.0
CARBON WIDTH	54.0
WIDTH OVER HORN POINTS OF INTERSECTION	60.0
PANTOGRAPH CARBON WEAR ALLOWANCE	1.0
PANTOGRAPH SWAY AT ALL HEIGHTS	1.18
PANTOGRAPH UPLIFT ALLOWANCE	3.0
FAILURE SAFETY ALLOWANCE	1.58
CLEARANCE (ELEC)	4.0

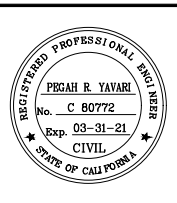
OCS PARAMETERS	
DESCRIPTION	INCHES
POLE OFFSET - NORMAL MINIMUM	84.0
DESIGN STAGGER - TANGENT (MAX)	14.0
DESIGN STAGGER - CURVE (MAX)	14.0
STAGGER INSTALLATION TOLERANCE	1.0
POLE DEFLECTION AT CWH DUE TO WIND (55 MPH)	2.0
STATIC POLE DEFLECTION AT ANY HEIGHT	2.0% OF HT.

**NOTES:**

- FOR ABBREVIATIONS AND GENERAL NOTES SEE DWGS PG001 AND PG003.
- ANALYSES INCLUDED IS ENSURE PROPER CONTACT WIRE POSITIONING AS WELL AS CLEARANCES TO PANTOGRAPH.
- PARAMETERS ARE BASED ON THE VTA KINKISHARYO VEHICLE.
- THE MAXIMUM CW POSITION INCLUDES ALL DYNAMIC AND CLIMATIC FACTORS, INCLUDING WIND BLOW OFF AT MID-SPAN. 14 INCHES REPRESENTS THE MAXIMUM ALLOWABLE POSITION AT SUPPORTS AND ALSO REPRESENTS THE MAXIMUM ALLOWABLE POSITION AT MID-SPAN INCLUDING WIND BLOW OFF. ANY DEVIATION FROM THE DESIGN STAGGER MUST BE VERIFIED BY THE CONTRACTOR FOR ALL OPERATING CONDITIONS AS DEFINED IN THE CONTRACT DOCUMENT AND VTA CRITERIA.

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A	06/18	35% SUBMITTAL SET



SUBMITTED

**HNTB** HNTB Corporation  
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CADD FILE NAME: 801PG005.dwg

Santa Clara Valley  
Transportation  
Authority

APPROVED

**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 5/15/2020  
SCALE: NTS  
SUBMITTAL DATE: 06/29/20  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
OVERHEAD CONTACT SYSTEM  
PANTOGRAPH SECURITY ANALYSES

PCB NO.: 000  
CONTRACT NO.: C801  
FILE LOCATION: PROJECTWISE

SHEET OF  
DRAWING NO.: PG005  
REVISION: C

PARALLEL FEEDER CABLE TENSION INSTALLATION CHART			
AAC/TW 1000 KCMIL ALUMINUM CONDUCTOR (LBS)			
TEMP. °F	RULING SPAN 157.6 FT	RULING SPAN 175.5 FT	RULING SPAN 186 FT
20	5918.4	5806.2	5736.7
25	5517.0	5412.4	5347.9
30	5121.5	5025.9	4967.4
35	4733.5	4648.8	4597.3
40	4355.1	4283.3	4240.1
45	3989.1	3932.4	3898.7
50	3638.7	3599.3	3576.2
55	3307.7	3287.4	3275.7
60	3000.0	3000.0	3000.0
65	2719.2	2739.4	2750.8
70	2467.8	2507.0	2528.6
75	2246.6	2302.3	2332.8
80	2054.7	2123.9	2161.6
85	1889.7	1969.2	2012.6
90	1748.5	1835.5	1882.9
95	1627.5	1719.7	1770.0
100	1523.7	1619.0	1671.3
105	1434.0	1531.2	1584.6
110	1356.1	1454.0	1508.1
115	1288.0	1385.9	1440.2
120	1227.9	1325.4	1379.6
125	1174.6	1271.2	1325.2
130	1127.1	1222.6	1276.1

MPA TENSION INSTALLATION CHART		
1/2" 19 STRAND HS GALVANIZED STEEL WIRE ROPE (LBS)		
TEMP. °F	RULING SPAN 175 FT	RULING SPAN 180 FT
20	2447.0	2430.1
25	2317.9	2302.9
30	2192.8	2179.6
35	2072.0	2060.8
40	1956.0	1947.0
45	1845.5	1838.7
50	1740.7	1736.2
55	1642.1	1639.9
60	1550.0	1550.0
65	1464.4	1466.5
70	1385.4	1389.4
75	1312.7	1318.5
80	1246.2	1253.5
85	1185.4	1194.1
90	1129.9	1139.8
95	1079.4	1090.2
100	1033.3	1044.9
105	991.3	1003.6
110	952.9	965.7
115	917.7	930.9
120	885.5	899.0
125	855.8	869.5
130	828.5	842.4

**NOTES:**

- FOR ABBREVIATIONS, LEGEND AND GENERAL NOTES SEE DWGS PG001, PG002, AND PG003.
- TENSION VALUES ARE BASED ON A NOMINAL TEMPERATURE OF 60°F.

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				DESIGNED G. KOLA		CHECKED P. YAVARI		
				DRAWN G. KOLA	CADD FILE NAME 801PG006.dwg	SUBMITTAL DATE 06/29/20	BOARD APPROVAL DATE	

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	TEMP. °F	DISTANCE FROM FIXED ANCHOR (FT)																											
		100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	2400	2500	2600	2700	2800
ALONG TRACK MOVEMENT AWAY FROM FIXED ANCHOR (IN)	130	0.79	1.58	2.37	3.16	3.95	4.74	5.53	6.32	7.11	7.90	8.69	9.48	10.26	11.05	11.84	12.63	13.42	14.21	15.00	15.79	16.58	17.37	18.16	18.95	19.74	20.53	21.32	22.11
	125	0.73	1.47	2.20	2.93	3.67	4.40	5.13	5.87	6.60	7.33	8.07	8.80	9.53	10.26	11.00	11.73	12.46	13.20	13.93	14.66	15.40	16.13	16.86	17.60	18.33	19.06	19.80	20.53
	120	0.68	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	11.51	12.18	12.86	13.54	14.21	14.89	15.57	16.24	16.92	17.60	18.27	18.95
	115	0.62	1.24	1.86	2.48	3.10	3.72	4.34	4.96	5.58	6.20	6.82	7.44	8.07	8.69	9.31	9.93	10.55	11.17	11.79	12.41	13.03	13.65	14.27	14.89	15.51	16.13	16.75	17.37
	110	0.56	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	9.59	10.15	10.72	11.28	11.84	12.41	12.97	13.54	14.10	14.66	15.23	15.79
	105	0.51	1.02	1.52	2.03	2.54	3.05	3.55	4.06	4.57	5.08	5.58	6.09	6.60	7.11	7.61	8.12	8.63	9.14	9.64	10.15	10.66	11.17	11.67	12.18	12.69	13.20	13.71	14.21
	100	0.45	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	7.67	8.12	8.57	9.02	9.48	9.93	10.38	10.83	11.28	11.73	12.18	12.63
	95	0.39	0.79	1.18	1.58	1.97	2.37	2.76	3.16	3.55	3.95	4.34	4.74	5.13	5.53	5.92	6.32	6.71	7.11	7.50	7.90	8.29	8.69	9.08	9.48	9.87	10.26	10.66	11.05
	90	0.34	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	5.75	6.09	6.43	6.77	7.11	7.44	7.78	8.12	8.46	8.80	9.14	9.48
	85	0.28	0.56	0.85	1.13	1.41	1.69	1.97	2.26	2.54	2.82	3.10	3.38	3.67	3.95	4.23	4.51	4.79	5.08	5.36	5.64	5.92	6.20	6.49	6.77	7.05	7.33	7.61	7.90
	80	0.23	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	3.84	4.06	4.29	4.51	4.74	4.96	5.19	5.41	5.64	5.87	6.09	6.32
	75	0.17	0.34	0.51	0.68	0.85	1.02	1.18	1.35	1.52	1.69	1.86	2.03	2.20	2.37	2.54	2.71	2.88	3.05	3.21	3.38	3.55	3.72	3.89	4.06	4.23	4.40	4.57	4.74
	70	0.11	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	1.92	2.03	2.14	2.26	2.37	2.48	2.59	2.71	2.82	2.93	3.05	3.16
	65	0.06	0.11	0.17	0.23	0.28	0.34	0.39	0.45	0.51	0.56	0.62	0.68	0.73	0.79	0.85	0.90	0.96	1.02	1.07	1.13	1.18	1.24	1.30	1.35	1.41	1.47	1.52	1.58
ALONG TRACK MOVEMENT TOWARD FIXED ANCHOR (IN)	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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	55	-0.06	-0.11	-0.17	-0.23	-0.28	-0.34	-0.39	-0.45	-0.51	-0.56	-0.62	-0.68	-0.73	-0.79	-0.85	-0.90	-0.96	-1.02	-1.07	-1.13	-1.18	-1.24	-1.30	-1.35	-1.41	-1.47	-1.52	-1.58
	50	-0.11	-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	-1.92	-2.03	-2.14	-2.26	-2.37	-2.48	-2.59	-2.71	-2.82	-2.93	-3.05	-3.16
	45	-0.17	-0.34	-0.51	-0.68	-0.85	-1.02	-1.18	-1.35	-1.52	-1.69	-1.86	-2.03	-2.20	-2.37	-2.54	-2.71	-2.88	-3.05	-3.21	-3.38	-3.55	-3.72	-3.89	-4.06	-4.23	-4.40	-4.57	-4.74
	40	-0.23	-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	-3.84	-4.06	-4.29	-4.51	-4.74	-4.96	-5.19	-5.41	-5.64	-5.87	-6.09	-6.32
	35	-0.28	-0.56	-0.85	-1.13	-1.41	-1.69	-1.97	-2.26	-2.54	-2.82	-3.10	-3.38	-3.67	-3.95	-4.23	-4.51	-4.79	-5.08	-5.36	-5.64	-5.92	-6.20	-6.49	-6.77	-7.05	-7.33	-7.61	-7.90
	30	-0.34	-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	-5.75	-6.09	-6.43	-6.77	-7.11	-7.44	-7.78	-8.12	-8.46	-8.80	-9.14	-9.48
	25	-0.39	-0.79	-1.18	-1.58	-1.97	-2.37	-2.76	-3.16	-3.55	-3.95	-4.34	-4.74	-5.13	-5.53	-5.92	-6.32	-6.71	-7.11	-7.50	-7.90	-8.29	-8.69	-9.08	-9.48	-9.87	-10.26	-10.66	-11.05
20	-0.45	-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	-7.67	-8.12	-8.57	-9.02	-9.48	-9.93	-10.38	-10.83	-11.28	-11.73	-12.18	-12.63	

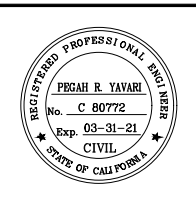
**AUTO-TENSION OCS TEMPERATURE TABLE**  
 INDICATES EFFECT OF TEMPERATURE CHANGE ON SYSTEM LENGTH

**NOTES:**

- FOR ABBREVIATIONS, LEGEND, AND GENERAL NOTES SEE DWGS PG001, PG002, AND PG003.
- TABLE SHOWS ALONG TRACK POSITION OF CONTACT WIRE REGISTRATION CLAMP ATTACHMENT RELATIVE TO TES POLE CENTER LINE FOR THE DESIGN TEMPERATURE RANGE.
- INTERMEDIATE VALUES TO BE INTERPOLATED.
- VALUES PROVIDED ABOVE ARE TO BE USED TO VERIFY THE CORRECT INSTALLATION OF OCS ASSEMBLIES IN PLACE UPON COMPLETION OF THE PROJECT. CONTRACTOR SHALL MAKE ADJUSTMENTS AS REQUIRED.
- REFER TO OCS LAYOUT SCHEDULE DRAWINGS AND MASTER OVERLAP CHART FOR TENSION SECTION LENGTHS.
- FOR RECOMMENDED OCS INSTALLATION PROCEDURES REFER TO DWG PD404.

STAGGER CHANGE IN ACROSS TRACK DIRECTION DUE TO ALONG TRACK MOVEMENT (IN)													
ATM (IN)	CANTILEVER ARM SWING RADIUS (FT)												
	6	7	8	9	10	11	12	13	14	15	16	17	18
2	0.03	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01
4	0.11	0.10	0.08	0.07	0.07	0.06	0.06	0.05	0.05	0.04	0.04	0.04	0.04
6	0.25	0.21	0.19	0.17	0.15	0.14	0.13	0.12	0.11	0.10	0.09	0.09	0.08
8	0.45	0.38	0.33	0.30	0.27	0.24	0.22	0.21	0.19	0.18	0.17	0.16	0.15
10	0.70	0.60	0.52	0.46	0.42	0.38	0.35	0.32	0.30	0.28	0.26	0.25	0.23
12	1.01	0.86	0.75	0.67	0.60	0.55	0.50	0.46	0.43	0.40	0.38	0.35	0.33
14	1.37	1.17	1.03	0.91	0.82	0.74	0.68	0.63	0.58	0.55	0.51	0.48	0.45
16	1.80	1.54	1.34	1.19	1.07	0.97	0.89	0.82	0.76	0.71	0.67	0.63	0.59
18	2.29	1.95	1.70	1.51	1.36	1.23	1.13	1.04	0.97	0.90	0.85	0.80	0.75
20	2.83	2.42	2.11	1.87	1.68	1.52	1.40	1.29	1.19	1.11	1.04	0.98	0.93
22	3.44	2.93	2.55	2.26	2.03	1.85	1.69	1.56	1.45	1.35	1.26	1.19	1.12

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



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DESIGNED: G. KOLA  
 CHECKED: P. YAVARI  
 DRAWN: G. KOLA  
 CADD FILE NAME: 801PG007.dwg

**Santa Clara Valley Transportation Authority**

**BKF** 100+ YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 5/15/2020  
 SUBMITTAL DATE: 06/29/20  
 SCALE: NTS  
 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 OVERHEAD CONTACT SYSTEM  
 ALONG TRACK MOVEMENT CHART

SHEET OF: PG007  
 REVISION: B

PCA NO.: 000  
 CONTRACT NO.: C801  
 FILE LOCATION: PROJECTWISE

WIRE RUN #87 (RULING SPAN LENGTH: 157 FEET)			
TEMP °F	MESSENGER WIRE		CONTACT WIRE
	UNLOADED (LBS)	LOADED (LBS)	(LBS)
20	5717.4	6396.3	4435.0
25	5453.2	6170.3	4240.6
30	5195.3	5951.4	4049.4
35	4944.5	5739.8	3862.0
40	4701.5	5535.8	3678.9
45	4467.3	5339.7	3500.6
50	4242.5	5151.6	3327.6
55	4028.0	4971.7	3160.5
60	3824.4	4800.0	3000.0
65	3632.0	4636.5	2846.6
70	3451.3	4481.0	2700.7
75	3282.4	4333.5	2562.8
80	3125.1	4193.7	2433.1
85	2979.3	4061.4	2311.8
90	2844.3	3936.3	2198.7
95	2719.8	3818.2	2093.9
100	2605.0	3706.6	1997.0
105	2499.3	3601.2	1907.5
110	2401.9	3501.7	1825.2
115	2312.2	3407.7	1749.4
120	2229.5	3319.0	1679.7
125	2153.1	3235.1	1615.5
130	2082.5	3155.8	1556.4

WIRE RUN #88 (RULING SPAN LENGTH: 161 FEET)			
TEMP °F	MESSENGER WIRE		CONTACT WIRE
	UNLOADED (LBS)	LOADED (LBS)	(LBS)
20	5648.2	6362.3	4420.0
25	5387.7	6140.6	4227.0
30	5133.9	5926.0	4037.4
35	4887.5	5718.7	3851.7
40	4649.3	5519.1	3670.4
45	4420.0	5327.3	3494.0
50	4200.6	5143.5	3323.1
55	3991.5	4967.7	3158.2
60	3793.3	4800.0	3000.0
65	3606.5	4640.3	2848.9
70	3431.2	4488.5	2705.3
75	3267.4	4344.4	2569.7
80	3115.0	4207.8	2442.2
85	2973.6	4078.5	2322.9
90	2842.8	3956.2	2211.7
95	2722.0	3840.5	2108.6
100	2610.5	3731.2	2013.2
105	2507.8	3627.8	1925.0
110	2413.0	3530.2	1843.8
115	2325.5	3437.9	1768.9
120	2244.7	3350.6	1699.9
125	2169.9	3268.0	1636.4
130	2100.7	3189.8	1577.8

WIRE RUN #89 AND #90 (RULING SPAN LENGTH: 184.5 FEET)			
TEMP °F	MESSENGER WIRE		CONTACT WIRE
	UNLOADED (LBS)	LOADED (LBS)	(LBS)
20	5241.5	6169.6	4329.0
25	5006.6	5972.9	4145.0
30	4780.1	5783.4	3965.2
35	4562.7	5601.3	3790.0
40	4354.8	5426.4	3620.0
45	4157.0	5258.9	3455.5
50	3969.5	5098.8	3297.1
55	3792.5	4945.8	3145.1
60	3626.1	4800.0	3000.0
65	3470.1	4661.1	2862.1
70	3324.3	4528.9	2731.5
75	3188.4	4403.1	2608.4
80	3061.9	4283.6	2492.8
85	2944.3	4170.1	2384.7
90	2835.0	4062.3	2283.7
95	2733.6	3959.9	2189.7
100	2639.3	3862.7	2102.3
105	2551.8	3770.3	2021.2
110	2470.3	3682.5	1945.9
115	2394.5	3599.0	1876.1
120	2323.8	3519.7	1811.2
125	2257.9	3444.2	1751.1
130	2196.2	3372.3	1695.1

WIRE RUN #91 AND #92 (RULING SPAN LENGTH: 163 FEET)			
TEMP °F	MESSENGER WIRE		CONTACT WIRE
	UNLOADED (LBS)	LOADED (LBS)	(LBS)
20	5613.5	6345.4	4412.5
25	5354.9	6125.8	4220.2
30	5103.2	5913.4	4031.4
35	4859.1	5708.3	3846.5
40	4623.3	5510.8	3666.1
45	4396.6	5321.2	3490.7
50	4179.8	5139.5	3320.9
55	3973.5	4965.7	3157.1
60	3778.1	4800.0	3000.0
65	3594.0	4642.2	2850.0
70	3421.3	4492.2	2707.6
75	3260.1	4349.8	2573.1
80	3110.0	4214.8	2446.7
85	2970.9	4086.9	2328.4
90	2842.1	3965.9	2218.2
95	2723.1	3851.5	2115.9
100	2613.2	3743.2	2021.2
105	2511.9	3640.9	1933.7
110	2418.3	3544.1	1852.9
115	2331.9	3452.6	1778.5
120	2252.0	3366.0	1709.9
125	2178.1	3284.1	1646.7
130	2109.6	3206.4	1588.3

WIRE RUN #93 (RULING SPAN LENGTH: 138 FEET)			
TEMP °F	MESSENGER WIRE		CONTACT WIRE
	UNLOADED (LBS)	LOADED (LBS)	(LBS)
20	6039.6	6559.4	4503.1
25	5760.2	6314.2	4302.5
30	5485.4	6075.3	4104.6
35	5216.1	5843.2	3909.7
40	4952.9	5618.5	3718.4
45	4696.7	5401.4	3531.1
50	4448.5	5192.4	3348.5
55	4209.3	4991.9	3171.3
60	3980.0	4800.0	3000.0
65	3761.5	4617.0	2835.4
70	3554.6	4442.8	2678.2
75	3359.9	4277.6	2529.1
80	3177.9	4121.3	2388.4
85	3008.7	3973.6	2256.6
90	2852.2	3834.3	2133.9
95	2708.1	3703.1	2020.3
100	2575.7	3579.8	1915.6
105	2454.5	3463.9	1819.5
110	2343.7	3354.9	1731.5
115	2242.4	3252.6	1651.1
120	2149.7	3156.5	1577.6
125	2064.9	3066.2	1510.6
130	1987.3	2981.3	1449.3

WIRE RUN #94 (RULING SPAN LENGTH: 152 FEET)			
TEMP °F	MESSENGER WIRE		CONTACT WIRE
	UNLOADED (LBS)	LOADED (LBS)	(LBS)
20	5803.5	6439.0	4453.4
25	5534.9	6207.8	4257.3
30	5272.1	5983.6	4064.3
35	5016.0	5766.6	3874.8
40	4767.4	5557.1	3689.5
45	4527.0	5355.5	3508.7
50	4295.8	5162.1	3333.1
55	4074.6	4976.9	3163.3
60	3864.1	4800.0	3000.0
65	3664.9	4631.5	2843.7
70	3477.4	4471.4	2694.9
75	3301.8	4319.4	2554.1
80	3138.3	4175.5	2421.6
85	2986.6	4039.4	2297.6
90	2846.3	3910.8	2182.2
95	2716.9	3789.4	2075.1
100	2597.8	3674.8	1976.3
105	2488.3	3566.8	1885.2
110	2387.6	3465.0	1801.4
115	2295.0	3368.9	1724.4
120	2209.8	3278.3	1653.8
125	2131.3	3192.8	1588.9
130	2058.9	3112.1	1529.2

WIRE RUN #95 (RULING SPAN LENGTH: 117 FEET)			
TEMP °F	MESSENGER WIRE		CONTACT WIRE
	UNLOADED (LBS)	LOADED (LBS)	(LBS)
20	6371.8	6738.1	4571.7
25	6079.9	6473.5	4365.4
30	5791.2	6214.1	4161.0
35	5506.1	5960.6	3958.9
40	5225.3	5713.4	3759.5
45	4949.5	5473.1	3563.3
50	4679.7	5240.5	3370.9
55	4416.7	5015.9	3182.9
60	4161.6	4800.0	3000.0
65	3915.7	4593.2	2823.0
70	3680.1	4395.9	2652.9
75	3456.0	4208.3	2490.4
80	3244.5	4030.7	2336.4
85	3046.5	3863.1	2191.6
90	2862.4	3705.3	2056.5
95	2692.7	3557.3	1931.6
100	2537.1	3418.6	1816.8
105	2395.3	3289.0	1712.0
110	2266.5	3168.0	1616.7
115	2149.8	3055.1	1530.4
120	2044.1	2949.8	1452.4
125	1948.6	2851.6	1381.9
130	1862.1	2760.0	1318.2

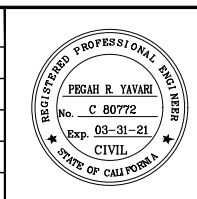
WIRE RUN #96 (RULING SPAN LENGTH: 102 FEET)			
TEMP °F	MESSENGER WIRE		CONTACT WIRE
	UNLOADED (LBS)	LOADED (LBS)	(LBS)
20	6586.2	6859.8	4615.5
25	6287.8	6583.1	4405.7
30	5991.7	6310.7	4197.4
35	5698.1	6043.1	3990.8
40	5407.7	5780.9	3786.5
45	5121.0	5524.9	3584.6
50	4838.8	5275.6	3385.9
55	4561.8	5033.7	3190.8
60	4291.1	4800.0	3000.0
65	4027.9	4575.1	2814.4
70	3773.3	4359.8	2634.9
75	3529.0	4154.4	2462.5
80	3296.1	3959.5	2298.2
85	3076.3	3775.4	2143.1
90	2870.7	3602.2	1998.0
95	2680.1	3439.9	1863.6
100	2505.2	3288.4	1740.3
105	2345.8	3147.2	1628.0
110	2201.6	3016.0	1526.6
115	2071.8	2894.3	1435.4
120	1955.3	2781.6	1353.7
125	1850.8	2677.1	1280.6
130	1757.3	2580.3	1215.1

**NOTES:**

- FOR ABBREVIATIONS, LEGEND, AND GENERAL NOTES SEE DWGS PG001, PG002, AND PG003.
- TABLES SHOWS STRINGING (UNLOADED/LOADED) TENSIONS FOR EACH NEW WIRE RUN.
- INTERMEDIATE VALUES TO BE INTERPOLATED.

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NO.	DATE	REVISIONS
A	06/20	95% SUBMITTAL SET



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DESIGNED: G. KOLA  
CHECKED: P. YAVARI  
DRAWN: G. KOLA  
CADD FILE NAME: 801PG008.dwg

**Santa Clara Valley Transportation Authority**

**BKF** 100+ YEARS  
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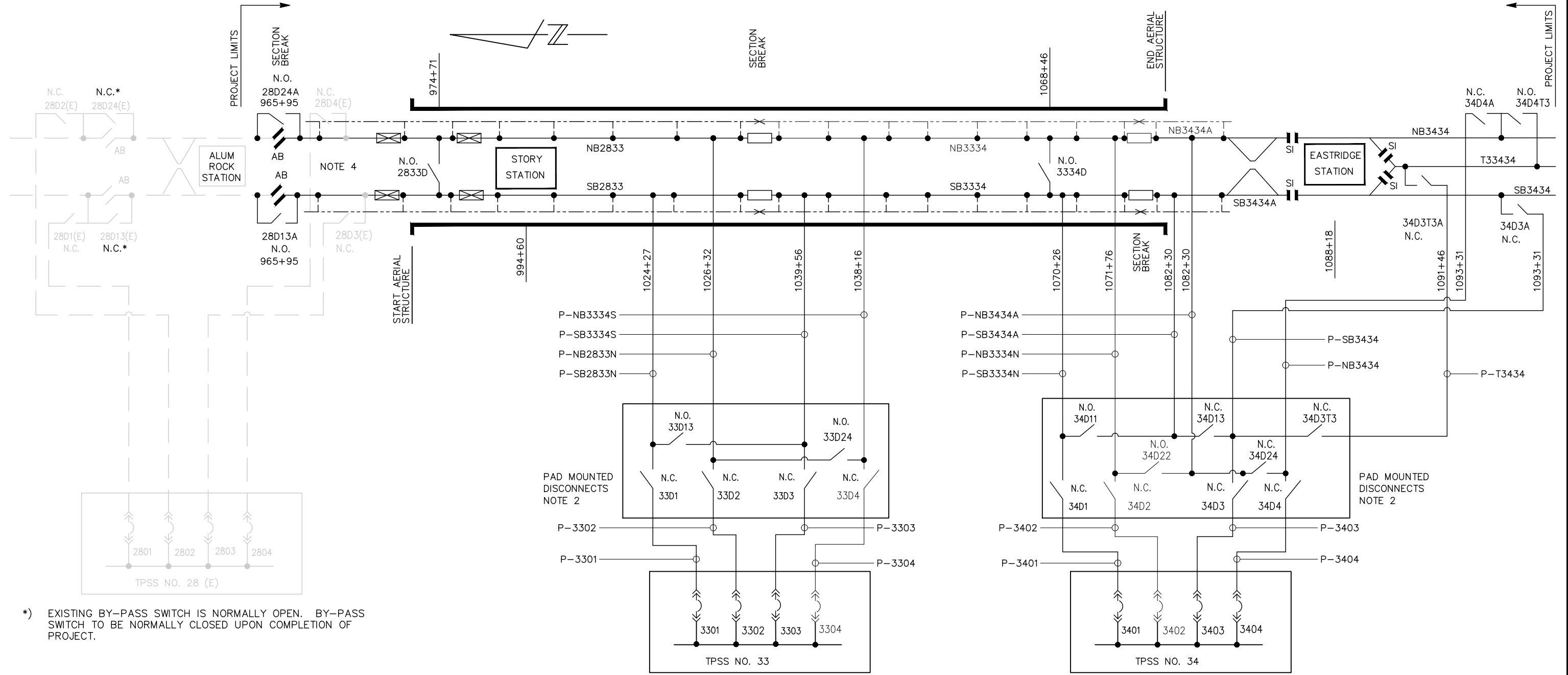
CADD FILE DATE: 5/15/2020  
SCALE: NTS  
SUBMITTAL DATE: 06/29/20  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
OVERHEAD CONTACT SYSTEM  
INSTALLATION TENSION TABLES  
MW AND CW

PCA NO.: 000  
CONTRACT NO.: C801  
FILE LOCATION: PROJECTWISE

SHEET OF: PG008  
DRAWING NO.: PG008  
REVISION: A





\*) EXISTING BY-PASS SWITCH IS NORMALLY OPEN. BY-PASS SWITCH TO BE NORMALLY CLOSED UPON COMPLETION OF PROJECT.

- NOTES:**
- FOR ABBREVIATION, LEGEND, AND GENERAL NOTES SEE DWGS PG001, PG002, AND PG003.
  - PAD MOUNTED SWITCHES LOCATED AT SUBSTATION SITE, SEE DWG PT130.
  - APPROXIMATE STATIONING FOR EACH TPSS LOCATION:  
TPSS #33 - 1038+00  
TPSS #34 - 1083+20
  - EXISTING FEED ARRANGEMENT MODIFIED TO ALLOW FURTHER SECTIONALIZATION. AIR BREAKS ADDED.
  - FOR TRACTION POWER CONDUIT AND CABLE SCHEDULE SEE DWGS PT201 THROUGH PT204.

LEGEND	
(E)	EXISTING
N.O.	NORMALLY OPEN
N.C.	NORMALLY CLOSED
##0#	FEEDER DESIGNATION
##D#	DISCONNECT SWITCH DESIGNATION
NB####	TRACK CIRCUIT DESIGNATION
SB####	
T####	
P-###	OCS POSITIVE FEEDER DESIGNATION
AB	AIR BREAK
SI	SECTION INSULATOR

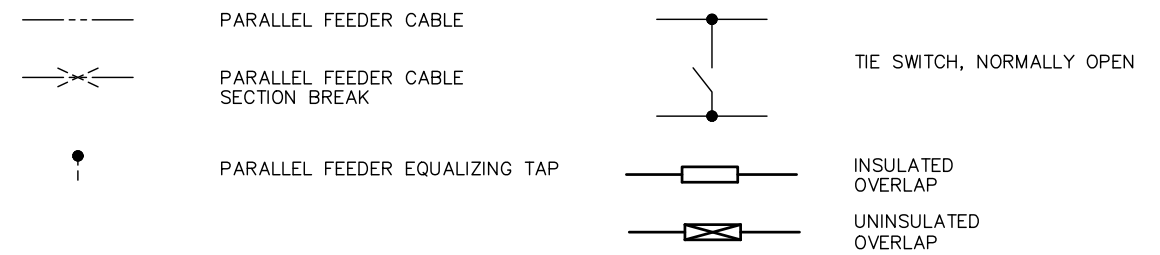
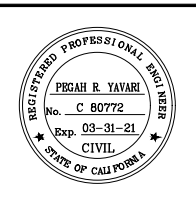


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NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



**HNTB** HNTB Corporation  
 Engineers Architects Planners  
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 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942

DESIGNED: G. KOLA  
 CHECKED: P. YAVARI  
 DRAWN: G. KOLA  
 CADD FILE NAME: 801TP101.dwg

**Santa Clara Valley Transportation Authority**

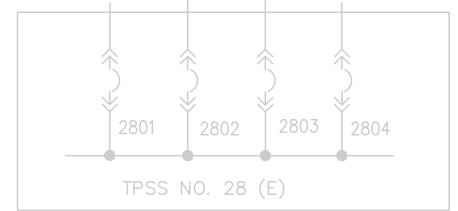
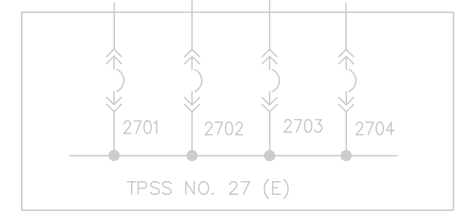
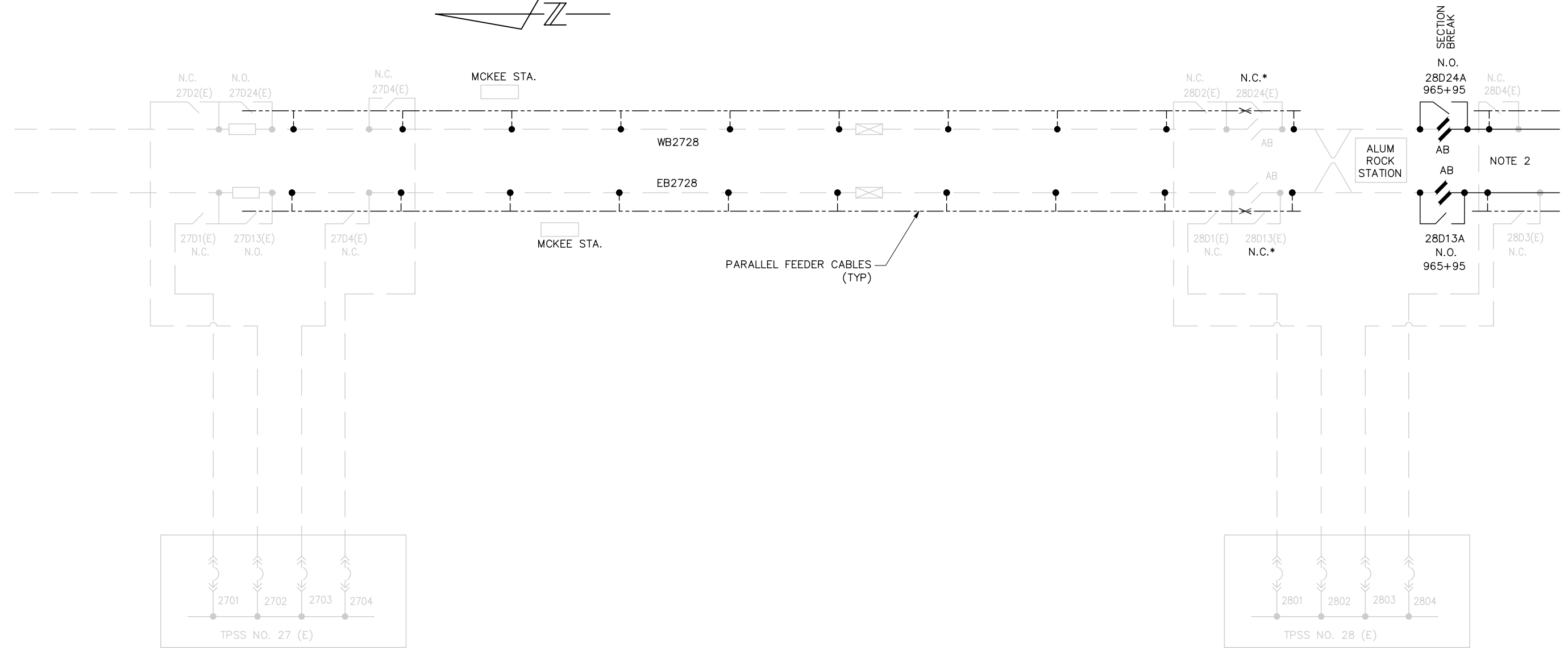
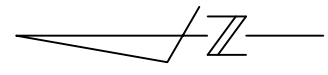
**BKF** 100+ YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 5/15/2020  
 SUBMITTAL DATE: 06/29/20  
 SCALE: NTS  
 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 OVERHEAD CONTACT SYSTEM  
 SECTIONALIZING DIAGRAM

SHEET OF TP101 REVISION C

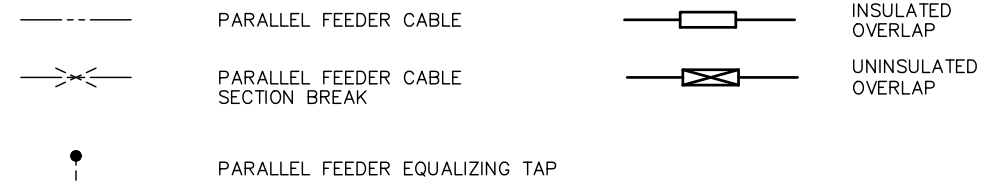
PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE



\*) EXISTING BY-PASS SWITCH IS NORMALLY OPEN. BY-PASS SWITCH TO BE NORMALLY CLOSED UPON COMPLETION OF PROJECT.

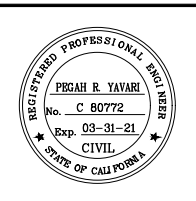
- NOTES:**
- FOR ABBREVIATION, LEGEND, AND GENERAL NOTES SEE DWGS PG001, PG002, AND PG003.
  - EXISTING FEED ARRANGEMENT MODIFIED TO ALLOW FURTHER SECTIONALIZATION. AIR BREAKS ADDED.
  - SEE DWG TP101 FOR SECTIONALIZING DIAGRAM BETWEEN TPSS 28 AND TPSS 34.

LEGEND	
(E)	EXISTING
N.O.	NORMALLY OPEN
N.C.	NORMALLY CLOSED
##O#	FEEDER DESIGNATION
##D#	DISCONNECT SWITCH DESIGNATION
WB####	TRACK CIRCUIT DESIGNATION
EB####	TRACK CIRCUIT DESIGNATION
AB	AIR BREAK



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NO.	DATE	REVISIONS
A	06/20	95% SUBMITTAL SET



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 DRAWN: G. KOLA CADD FILE NAME: 801TP102.dwg

**Santa Clara Valley Transportation Authority**

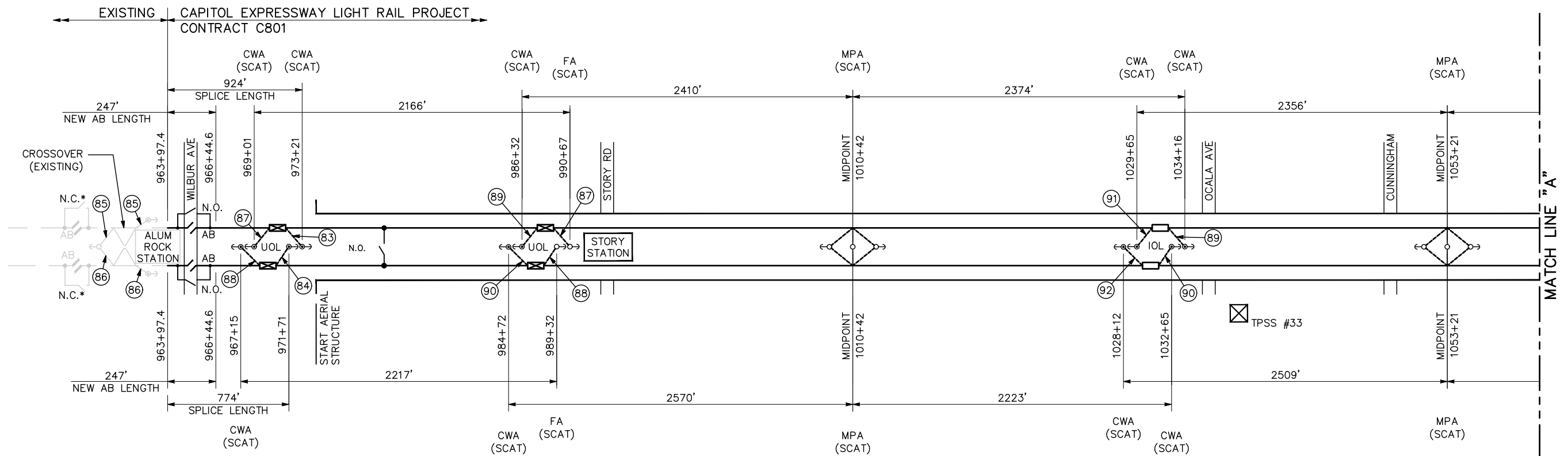
**BKF** 100+ YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 5/15/2020 SCALE: NTS  
 SUBMITTAL DATE: 06/29/20 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 OVERHEAD CONTACT SYSTEM  
 SECTIONALIZING DIAGRAM  
 TPSS 27 - TPSS 28

PCA NO.: 000 CONTRACT NO.: C801 FILE LOCATION: PROJECTWISE

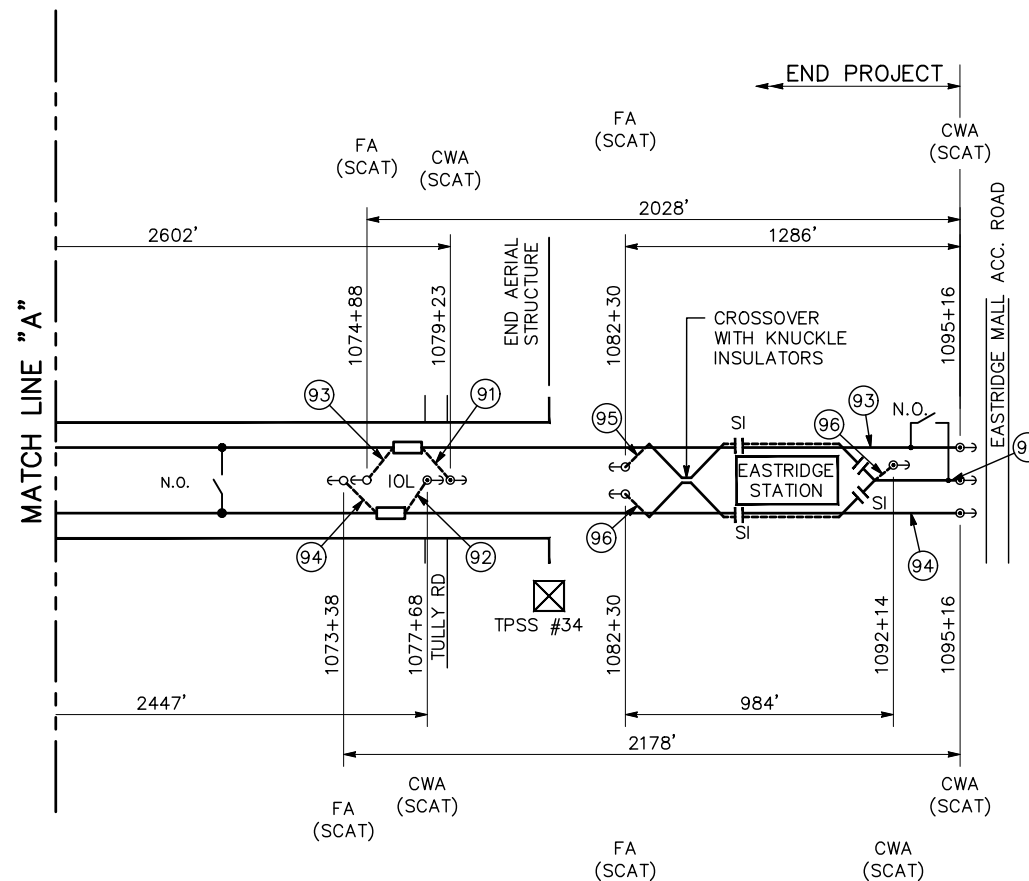
SHEET	OF
TP102	A



\*) EXISTING BY-PASS SWITCH IS NORMALLY OPEN. BY-PASS SWITCH TO BE NORMALLY CLOSED UPON COMPLETION OF PROJECT.

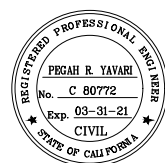
**NOTES:**

1. FOR ABBREVIATIONS, LEGEND, AND GENERAL NOTES SEE DWGS PG001, PG002, AND PG003.
2. THIS DRAWING SHALL BE USED AS A KEY PLAN ONLY. FOR INSTALLATION REQUIREMENTS SEE OCS LAYOUT SCHEDULE AND ASSEMBLY DRAWINGS.
3. THIS DRAWING DOES NOT SHOW THE FEEDER SWITCH LOCATIONS. FOR THE SECTIONALIZING DIAGRAM SEE DWG TP101.



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NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



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 DRAWN: G. KOLA  
 CADD FILE NAME: 807PM001.dwg



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 ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 5/15/2020  
 SUBMITTAL DATE: 06/29/20  
 SCALE: NTS  
 BOARD APPROVAL DATE:

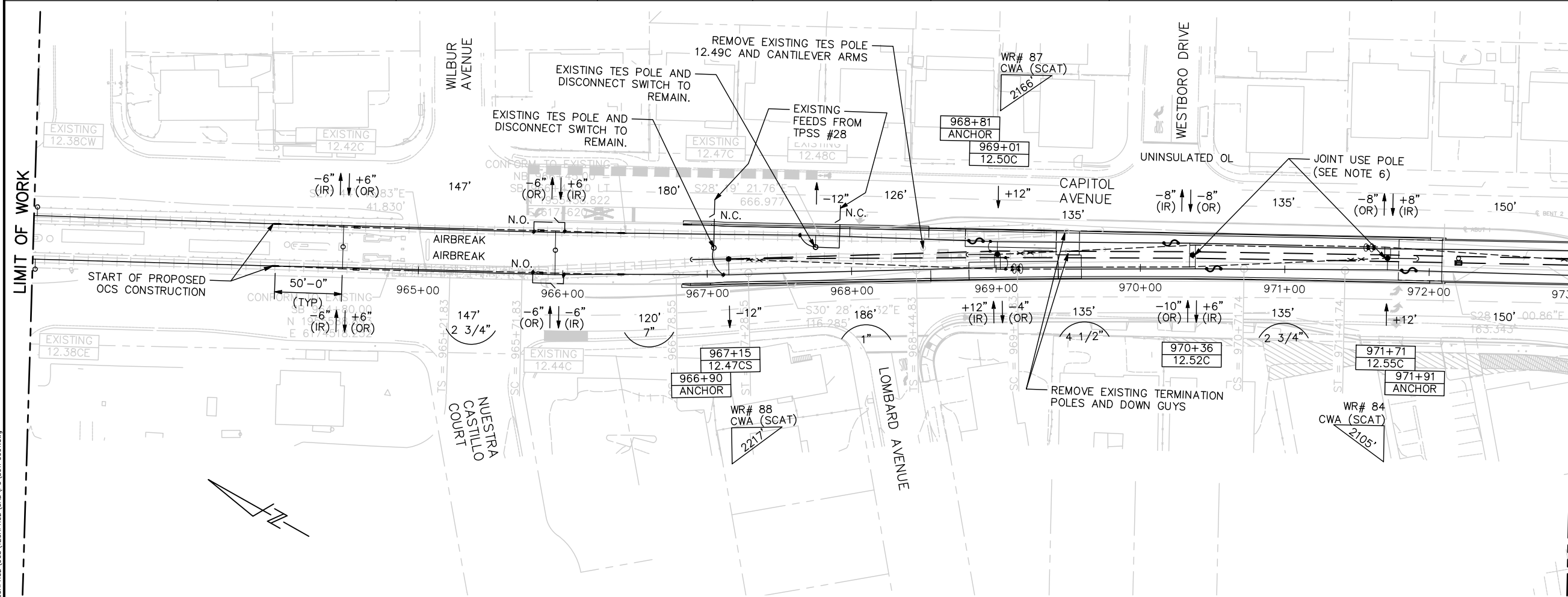
EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 OVERHEAD CONTACT SYSTEM  
 MASTER OVERLAP CHART

SHEET OF: PM001  
 REVISION: C

PCA NO.: 000  
 CONTRACT NO.: C801  
 FILE LOCATION: PROJECTWISE

OCS LAYOUT SCHEDULE NORTHBOUND TRACK

STRUCTURE NO.	12.38CW	12.42C	12.44C	12.47C	12.48C	ANCHOR	12.50C	12.52C	12.55C	ANCHOR
STATIONING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	SEE SB	SEE SB	SEE SB	SEE SB	SEE SB
CL OF POLE TO CL OF NB TRACK	EXISTING	SEE SB	SEE SB	EXISTING	EXISTING	10.351	9.708	7.561	7.162	7.170
FOUNDATION TYPE	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	FG-1A	SEE SB	SEE SB	SEE SB	SEE SB
GUY ANCHOR TYPE	-	-	-	-	-	DGA-1	-	-	-	SEE SB
POLE TYPE - LENGTH	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	-	SEE SB	SEE SB	SEE SB	-
POLE RAKE	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	-	SEE SB	SEE SB	SEE SB	-
MESSENGER WIRE HEIGHT	EXISTING	22'-6"	22'-6"	-	22'-6"	-	ANCHOR HEIGHT	22'-2"	20'-11" (IR) / 22'-8" (OR)	20'-2" (OR) / 21'-11" (IR)
CONTACT WIRE HEIGHT	EXISTING	18'-9" (OR) / 18'-0" (IR)	18'-0" (IR) / 18'-9" (OR)	-	18'-0"	-	20'-8" (CWA)	17'-8"	16'-11" (IR) / 17'-8" (OR)	16'-11" (OR) / 16'-2" (IR)
CANTILEVER TYPE	EXISTING	CA-D2	CA-D1	REMOVE CANTILEVER	CA-B1	-	CA-A1	CA-B1 (IR) / CA-C1 (OR)	CA-C1 (OR) / CA-A1 (IR)	-
HANGER SET	-	ADJUST HANGER SET AS NEEDED	HB-147	HS-180	-	-	-	-	-	SEE OCS PROFILES (PD260 SERIES)
JUMPER TYPE	EXISTING	-	TYPE BP1	-	TYPE F2	-	TYPE C, TYPE F3	TYPE C	TYPE A	-
MISCELLANEOUS	-	AB-01	BDS-01	-	(2) BH-01	DG-1	CW-01, FSA-01	FSA-01	FSA-01	-
MISCELLANEOUS	-	-	-	-	-	-	-	-	-	-



**NOTES:**

- FOR ABBREVIATIONS, LEGEND AND GENERAL NOTES SEE DWGS PG001, PG002 AND PG003.
- FOR AIRBREAK ASSEMBLY DETAILS SEE DWG PD201.
- FOR UNINSULATED OVERLAP DETAILS SEE DWG PD103.
- FOR TYPICAL OCS STRUCTURE AT GRADE SEE DWG PD101.

**NOTES (CONTINUED):**

- FOR TYPICAL OCS STRUCTURE ON ELEVATED STRUCTURE SEE DWG PD102.
- REFER TO COMMUNICATIONS DRAWINGS FOR ADDITIONAL DETAILS.

GRAPHIC SCALE: 40' 0' 40' 80'

OCS LAYOUT SCHEDULE SOUTHBOUND TRACK

STRUCTURE NO.	12.38CE	12.42C	12.44C	ANCHOR	12.47CS	ANCHOR	12.50C	12.52C	12.55C	ANCHOR
STATIONING	EXISTING	EXISTING	EXISTING	966+90	967+15	968+81	969+01	970+36	971+71	971+91
CL OF POLE TO CL OF SB TRACK	EXISTING	14.756	16.389	10.000	10.000	10.000	10.000	9.083	9.083	9.083
FOUNDATION TYPE	EXISTING	EXISTING	EXISTING	FG-1B	FS2	SEE NB	FS2	FS2	FS2	FG-1A
GUY ANCHOR TYPE	-	-	-	DGA-1, DGA-2	-	SEE NB	-	-	-	DGA-1
POLE TYPE - LENGTH	EXISTING	EXISTING	EXISTING	-	T2-30	-	T2-30	C3-30	T2-30	-
POLE RAKE	EXISTING	EXISTING	EXISTING	-	0.5"-90'	-	0"-0'	0.5"-90'	0"-0'	-
MESSENGER WIRE HEIGHT	EXISTING	22'-6"	22'-6"	-	ANCHOR HEIGHT	22'-6"	-	23'-4" (IR) / 21'-7" (OR)	22'-8" (OR) / 20'-11" (IR)	20'-8" ANCHOR HEIGHT
CONTACT WIRE HEIGHT	EXISTING	18'-0" (IR) / 18'-9" (OR)	18'-9" (OR) / 18'-0" (IR)	-	21'-0" (CWA)	18'-0"	-	17'-7" (IR) / 18'-4" (OR)	17'-8" (OR) / 16'-11" (IR)	16'-2" ANCHOR HEIGHT
CANTILEVER TYPE	EXISTING	CA-D1	CA-D2	-	CA-B1	-	CA-A1 (IR) / CA-C1 (OR)	CA-C1 (OR) / CA-A1 (IR)	CA-A1	-
HANGER SET	-	ADJUST HANGER SET AS NEEDED	HB-147	HS-120	-	-	-	-	-	SEE OCS PROFILES (PD260 SERIES)
JUMPER TYPE	EXISTING	-	TYPE BP1	-	TYPE F2A	-	TYPE A, TYPE F3	TYPE C	TYPE C	-
MISCELLANEOUS	-	AB-01, (2) BH-01	BDS-01, (2) BH-01	DG-1	CW-01, (2) BH-01, PG-1	-	BT-03, FBA-02, FSA-01	BT-04, FBA-02, FSA-01	CW-01, BT-03, FBA-02	DG-1
MISCELLANEOUS	-	-	-	-	(2) PFT-01 (24'-6"/28'-6")	-	PG-1	PG-1	FSA-01, PG-1	-

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET

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DRAWN: P. WHITE  
CADD FILE NAME: 801PC001.dwg

**Santa Clara Valley Transportation Authority**

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ENGINEERS / SURVEYORS / PLANNERS

APPROVED: 5/15/2020  
SCALE: 1"=40'  
SUBMITTAL DATE: 06/29/20  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
OVERHEAD CONTACT SYSTEM  
LAYOUT SCHEDULE  
962+23(E) TO 973+00

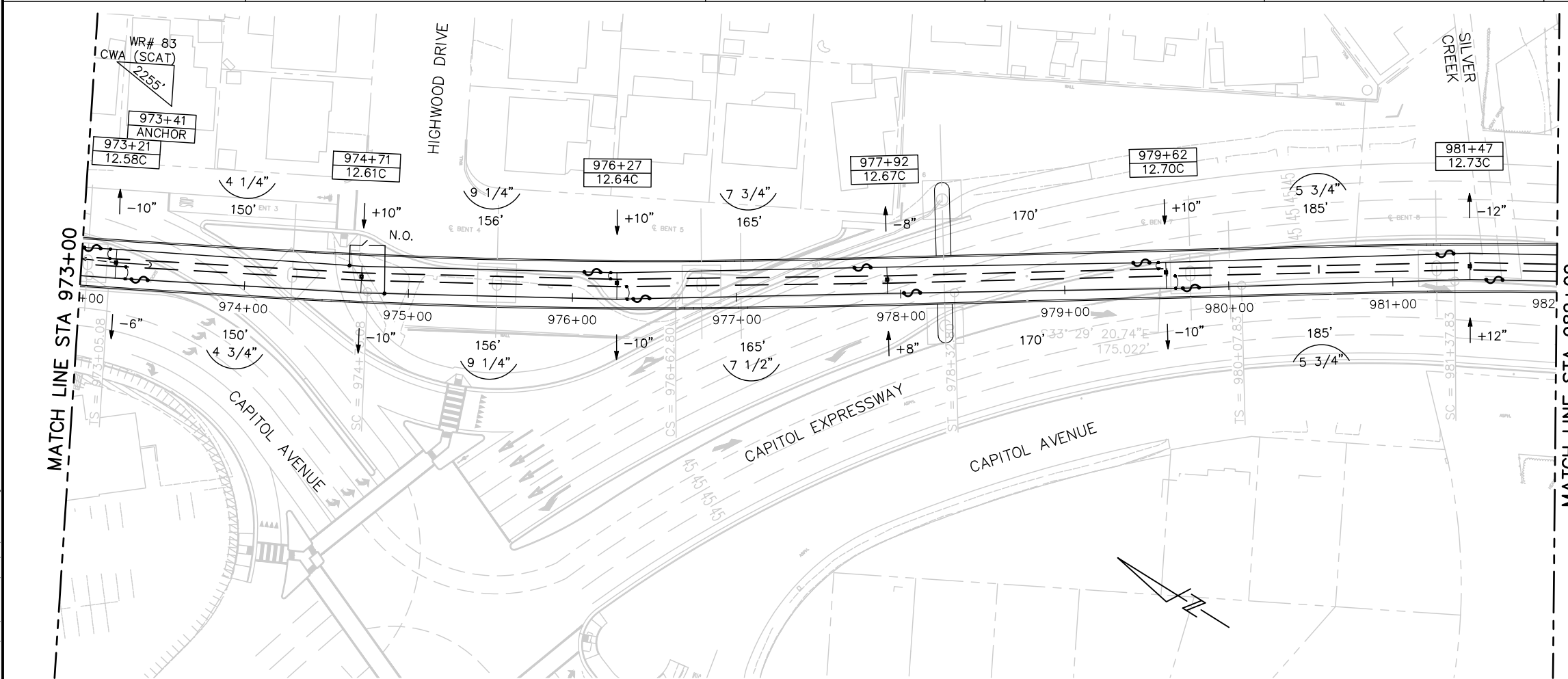
PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

SHEET OF DRAWING NO. PC001 REVISION C

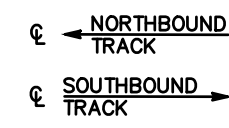
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OCS LAYOUT SCHEDULE NORTHBOUND TRACK

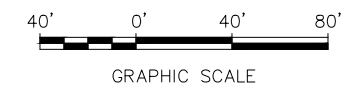
STRUCTURE NO.	12.58C	ANCHOR	12.61C	12.64C	12.67C	12.70C	12.73C
STATIONING	SEE SB	SEE SB	SEE SB	SEE SB	SEE SB	SEE SB	SEE SB
☉ OF POLE TO ☉ OF NB TRACK	7.220	7.220	7.176	7.033	6.922	6.917	6.917
FOUNDATION TYPE	SEE SB	SEE SB	SEE SB	SEE SB	SEE SB	SEE SB	SEE SB
GUY ANCHOR TYPE	-	DGA-1	-	-	-	-	-
POLE TYPE - LENGTH	SEE SB	-	SEE SB	SEE SB	SEE SB	SEE SB	SEE SB
POLE RAKE	SEE SB	-	SEE SB	SEE SB	SEE SB	SEE SB	SEE SB
MESSANGER WIRE HEIGHT	19'-11"	ANCHOR HEIGHT	19'-6"	19'-6"	19'-6"	19'-6"	19'-6"
CONTACT WIRE HEIGHT	15'-5"	18'-5" (CWA)	15'-0"	15'-0"	15'-0"	15'-0"	15'-0"
CANTILEVER TYPE	CA-B1	-	CA-A2	CA-A2	CA-B1	CA-A1	CA-B1
HANGER SET	SEE OCS PROFILES (PD260 SERIES)		HS-155	HS-165	HS-170	HS-185	-
JUMPER TYPE	TYPE C, TYPE F3	-	SEE SB	TYPE C, TYPE F3	TYPE C	TYPE C, TYPE F3	TYPE C
MISCELLANEOUS	CW-01, FSA-01	DG-1	FSA-01	FSA-01	FSA-01	FSA-01	FSA-01
MISCELLANEOUS							OM-3R, OM-3L



- NOTES:**
- FOR ABBREVIATIONS, SYMBOLS AND GENERAL NOTES SEE DWG PG001, PG002 AND PG003.
  - FOR TYPICAL OCS STRUCTURE AT CAPITOL AERIAL GUIDEWAY SEE DWG PD102.
  - FOR ANCHORAGE DETAIL FS2 (MOD) AND FG-1A (MOD) SEE STRUCTURAL DRAWINGS.
  - BY-PASS ASSEMBLY TYPE BP3 TO CONNECT BETWEEN THE CATENARY ON NORTHBOUND AND SOUTHBOUND.



- NOTES (CONTINUED):**
- IN-SPAN ASSEMBLIES TO BE INSTALLED IN THE SOUTH SIDE SPAN OF THE STRUCTURE WHERE ALLOCATED.

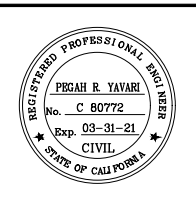


OCS LAYOUT SCHEDULE SOUTHBOUND TRACK

STRUCTURE NO.	12.58C	ANCHOR	12.61C	12.64C	12.67C	12.70C	12.73C
STATIONING	973+21	973+41	974+71	976+27	977+92	979+62	981+47
☉ OF POLE TO ☉ OF SB TRACK	9.083	9.083	9.083	9.083	9.083	9.083	9.083
FOUNDATION TYPE	FS2 (MOD)	FG-1A (MOD)	FS2 (MOD)	FS2 (MOD)	FS2 (MOD)	FS2 (MOD)	FS2 (MOD)
GUY ANCHOR TYPE	-	SEE NB	-	-	-	-	-
POLE TYPE - LENGTH	T2-30	-	C3-28	C3-28	C3-28	C3-28	C3-28
POLE RAKE	0.5"-270°	-	1.0"-270°	1.0"-270°	0"-0°	0.5"-270°	1.0"-90°
MESSANGER WIRE HEIGHT	19'-11"	-	19'-6"	19'-6"	19'-6"	19'-6"	19'-6"
CONTACT WIRE HEIGHT	15'-5"	-	15'-0"	15'-0"	15'-0"	15'-0"	15'-0"
CANTILEVER TYPE	CA-B1	-	CA-B1	CA-B1	CA-A1	CA-B1	CA-A2
HANGER SET	SEE OCS PROFILES (PD260 SERIES)		HS-155	HS-165	HS-170	HS-185	-
JUMPER TYPE	TYPE C, TYPE F3	-	TYPE BP3 (SEE NOTE 4)	TYPE C, TYPE F3	TYPE C	TYPE C, TYPE F3	TYPE C
MISCELLANEOUS	(2) BH-01, FBA-02, FSA-01	-	(2) BH-01, FBA-02, FSA-01, BDS-1	(2) BH-01, FBA-02, FSA-01	(2) BH-01, FBA-02, FSA-01,	(2) BH-01, FBA-02, FSA-01, FKN-01	(2) BH-01, FBA-02, FSA-01
MISCELLANEOUS	PG-1	-	PG-1	PG-1	PG-1	PG-1	PG-1

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NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



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DRAWN: P. WHITE  
CADD FILE NAME: 801PC002.dwg

**Santa Clara Valley Transportation Authority**

**BKF 100+ YEARS**  
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CAISO FILE DATE: 5/15/2020  
SCALE: 1"=40'  
SUBMITTAL DATE: 06/29/20  
BOARD APPROVAL DATE:

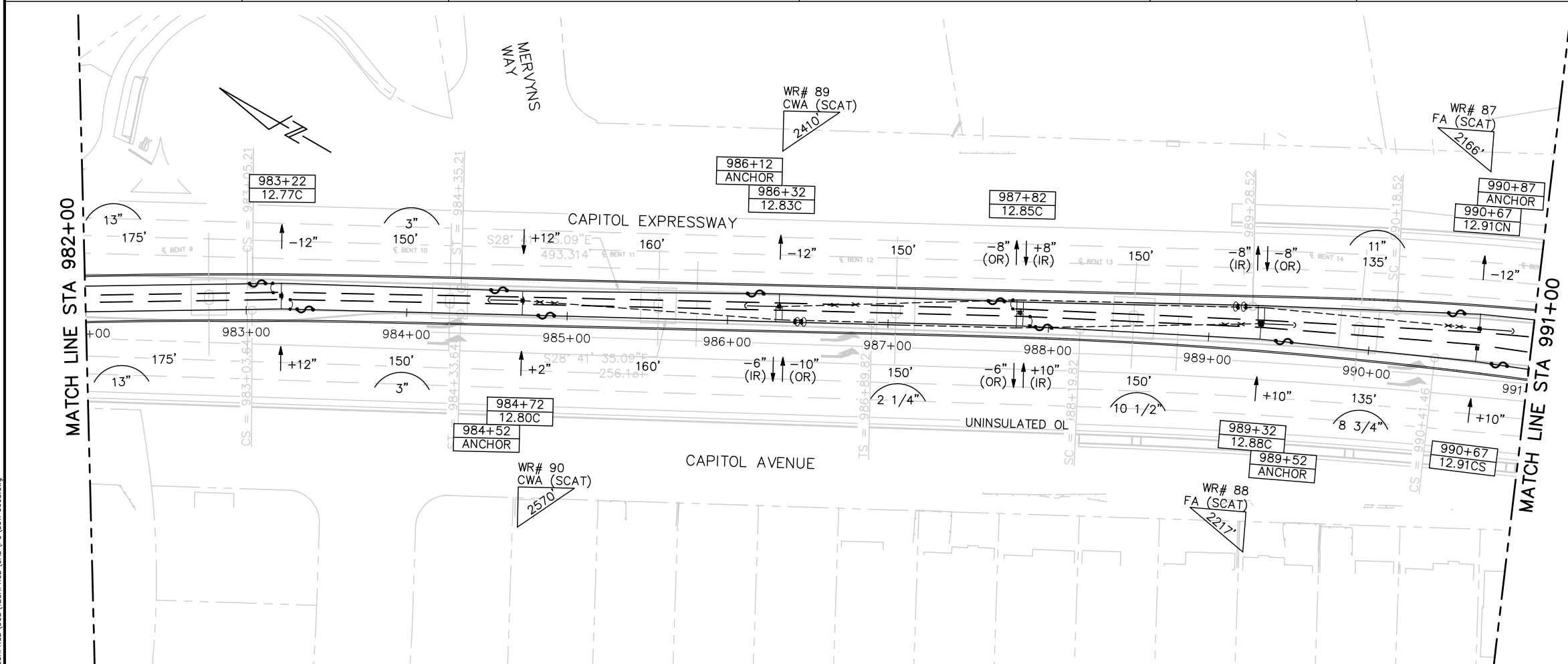
EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
OVERHEAD CONTACT SYSTEM  
LAYOUT SCHEDULE  
973+00 TO 982+00

PCA NO: 000 CONTRACT NO: C801 FILE LOCATION: PROJECTWISE

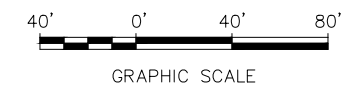
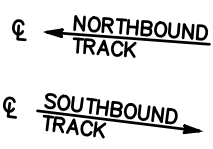
SHEET OF: PC002  
REVISION: C

OCS LAYOUT SCHEDULE NORTHBOUND TRACK

STRUCTURE NO.	12.77C	ANCHOR	12.80C	ANCHOR	12.83C	12.85C	12.88C	ANCHOR	12.91CN	ANCHOR
STATIONING	SEE SB	SEE SB	SEE SB	SEE SB	SEE SB	SEE SB	SEE SB	SEE SB	990+67 (SB)	990+87 (SB)
CL OF POLE TO CL OF NB TRACK	6.917	6.917	6.917	6.917	6.917	7.241	10.367	10.996	8.000	8.000
FOUNDATION TYPE	SEE SB	SEE SB	SEE SB	FG-1A (MOD)	SEE SB	SEE SB	SEE SB	SEE SB	FS2 (MOD)	FG-1A (MOD)
GUY ANCHOR TYPE	-	SEE SB	-	DGA-1	-	-	-	SEE SB	-	DGA-1
POLE TYPE - LENGTH	SEE SB	-	SEE SB	-	SEE SB	SEE SB	SEE SB	-	D3-28	-
POLE RAKE	SEE SB	-	SEE SB	-	SEE SB	SEE SB	SEE SB	-	0.5"-270"	-
MESSANGER WIRE HEIGHT	19'-6"	-	19'-6"	-	ANCHOR HEIGHT 19'-6"	19'-0" (OR) / 20'-9" (IR)	19'-0" (IR) / 20'-9" (OR)	-	19'-6"	18'-8" (FA)
CONTACT WIRE HEIGHT	15'-0"	-	15'-0"	-	18'-0" (CWA) 15'-0"	15'-9" (OR) / 15'-0" (IR)	15'-0" (IR) / 15'-9" (OR)	-	15'-0"	16'-8" (FA)
CANTILEVER TYPE	CA-B1	-	CA-A1	-	CA-B1	CA-C1 (OR) / CA-A1 (IR)	CA-B1 (IR) / CA-C1 (OR)	-	CA-B1	-
HANGER SET	HS-175	HS-150	-	HS-160	-	-	HO-1B	-	-	-
JUMPER TYPE	TYPE C, TYPE F3	-	TYPE C	-	TYPE C	TYPE C, TYPE F3	TYPE A	-	TYPE C	-
MISCELLANEOUS	FSA-01	-	FSA-01	DG-1	CW-01, FSA-01	FSA-01	FSA-01	-	FT-01, (2) BH-01, FBA-01	DG-1
MISCELLANEOUS	OM-3R, OM-3L	-	OM-3R, OM-3L	-	-	-	-	-	FSA-01, PG-1	-



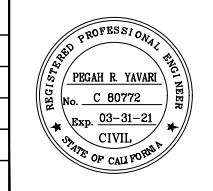
- NOTES:**
- FOR ABBREVIATIONS, LEGEND, AND GENERAL NOTES SEE DWGS PG001, PG002 AND PG003.
  - FOR UNINSULATED OVERLAP DETAILS SEE DWG PD103.
  - FOR TYPICAL OCS STRUCTURE AT CAPITOL AERIAL GUIDEWAY SEE DWG PD102.
  - FOR ANCHORAGE DETAIL FS2 (MOD), FS2 (MOD2), AND FG-1A (MOD) SEE STRUCTURAL DRAWINGS.



OCS LAYOUT SCHEDULE SOUTHBOUND TRACK

STRUCTURE NO.	12.77C	ANCHOR	12.80C	ANCHOR	12.83C	12.85C	12.88C	ANCHOR	12.91CS
STATIONING	983+22	984+52	984+72	986+12	986+32	987+82	988+32	989+52	990+67
CL OF POLE TO CL OF SB TRACK	9.083	9.083	9.083	9.083	9.083	9.083	10.667	11.500	9.083
FOUNDATION TYPE	FS2 (MOD)	FG-1A (MOD)	FS2 (MOD)	SEE NB	FS2 (MOD)	FS2 (MOD)	FS2 (MOD2)	FG-1A (MOD)	FS2 (MOD)
GUY ANCHOR TYPE	-	DGA-1	-	SEE NB	-	-	-	DGA-1	-
POLE TYPE - LENGTH	C3-28	-	T2-28	-	T2-28	C3-28	D3-28	-	C3-28
POLE RAKE	1.0"-90"	-	0"-0"	-	0"-0"	0.5"-90"	1.0"-90"	-	1.5"-90"
MESSANGER WIRE HEIGHT	19'-6"	-	ANCHOR HEIGHT 19'-6"	-	20'-9" (IR) / 19'-0" (OR)	20'-9" (OR) / 19'-0" (IR)	19'-6"	18'-8" (FA)	19'-6"
CONTACT WIRE HEIGHT	15'-0"	-	18'-0" (CWA) 15'-0"	-	15'-0" (IR) / 15'-9" (OR)	15'-9" (OR) / 15'-0" (IR)	15'-0"	16'-8" (FA)	15'-0"
CANTILEVER TYPE	CA-A2	-	CA-A1	-	CA-B1 (IR) / CA-C1 (OR)	CA-C1 (OR) / CA-A2 (IR)	CA-A2	-	CA-A2
HANGER SET	HS-175	HS-150	-	HO-1A	-	-	-	HS-135	-
JUMPER TYPE	TYPE C, TYPE F3	-	TYPE C	-	TYPE A	TYPE C, TYPE F3	TYPE C	-	TYPE C
MISCELLANEOUS	(2) BH-01, FBA-02	DG-1	CW-01, (2) BH-01, FBA-02	-	BT-03, FBA-02	BT-04, FBA-02	FT-01, BT-03, FBA-02	DG-1	(2) BH-01, FBA-01
MISCELLANEOUS	FSA-01, PG-1	-	FSA-01, PG-1	-	FSA-01, PG-1	FSA-01, PG-1	FSA-01, PG-1	-	FSA-01, PG-1

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



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CADD FILE NAME: 801PC003.dwg

**Santa Clara Valley Transportation Authority**

**BKF 100+ YEARS**  
ENGINEERS / SURVEYORS / PLANNERS

SCALE: 1"=40'  
SUBMITTAL DATE: 5/15/2020  
BOARD APPROVAL DATE: 06/29/20

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
OVERHEAD CONTACT SYSTEM  
LAYOUT SCHEDULE  
982+00 TO 991+00

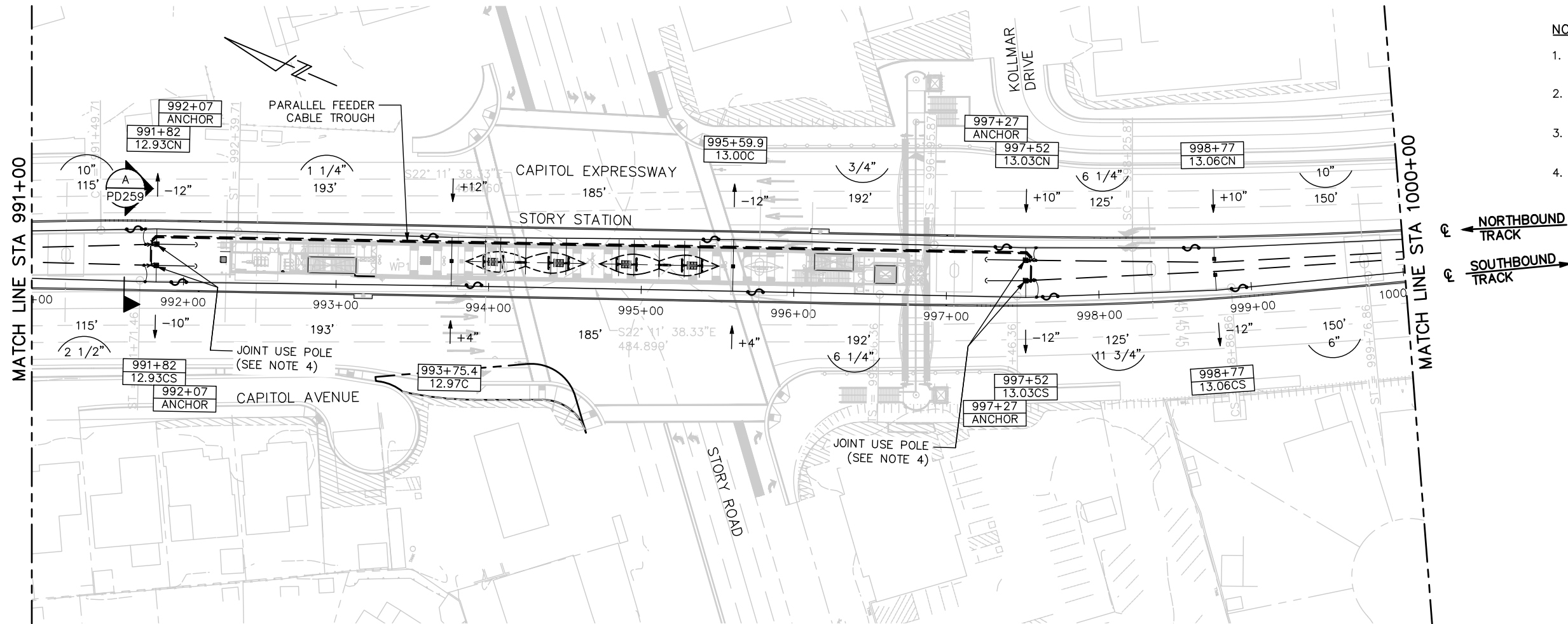
PCA NO: 000 CONTRACT NO: C801 FILE LOCATION: PROJECTWISE

SHEET OF: PC003  
REVISION: C

Jun 22, 2020 - 2:40pm \\net\0\kennedy2\008\68691\_via\_capitol\_expressway\14\_extension\TECHPROD\OCS\TECHPROD\CAD\PC\801PC003.dwg

OCS LAYOUT SCHEDULE NORTHBOUND TRACK

STRUCTURE NO.	12.93CN	ANCHOR	12.97C	13.00C	ANCHOR	13.03CN	13.06CN
STATIONING	991+82 (SB)	992+07 (SB)	SEE SB	SEE SB	997+27 (SB)	997+52 (SB)	998+77 (SB)
CL OF POLE TO CL OF SB TRACK	9.000	9.000	16.542	16.542	9.000	9.000	8.000
FOUNDATION TYPE	FF2 (MOD2)	FG-1A (MOD)	SEE SB	SEE SB	FG-1A (MOD)	FF2 (MOD2)	FS2 (MOD)
GUY ANCHOR TYPE	-	DGA-1	-	-	DGA-1	-	-
POLE TYPE - LENGTH	D3F-25	-	SEE SB	SEE SB	-	D3F-25	C3-28
POLE RAKE	0.5"-270°	-	SEE SB	SEE SB	-	1.5"-270°	1.5"-270°
MESSANGER WIRE HEIGHT	19'-6"	-	19'-6"	19'-6"	-	19'-6"	19'-6"
CONTACT WIRE HEIGHT	15'-0"	-	15'-0"	15'-0"	-	15'-0"	15'-0"
CANTILEVER TYPE	CA-B1	-	CA-A1	CA-B1	-	CA-A2	CA-A2
HANGER SET	HS-115	HS-195	-	HS-185	-	HS-190	HS-125
JUMPER TYPE	TYPE C, TYPE F3, TYPE PF	-	TYPE C	TYPE C	-	TYPE C, TYPE F3, TYPE PF	TYPE C
MISCELLANEOUS	(2) BH-01, PG-1	DG-1	-	-	DG-1	(2) BH-01, PG-1	(2) BH-01, FBA-01
MISCELLANEOUS	PFT-01 (23'-6")	-	-	-	-	PFT-01 (23'-6")	FSA-01, PG-1



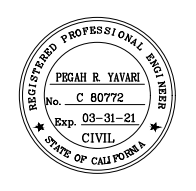
- NOTES:**
- FOR ABBREVIATIONS, LEGEND, AND GENERAL NOTES SEE DWGS PG001, PG002, AND PG003.
  - FOR TYPICAL OCS STRUCTURE AT CAPITOL AERIAL GUIDEWAY SEE DWG PD102.
  - FOR ANCHORAGE DETAIL FS2 (MOD), FF2 (MOD2), AND FG-1A (MOD) SEE STRUCTURAL DRAWINGS.
  - REFER TO COMMUNICATIONS DRAWINGS FOR ADDITIONAL DETAILS.

OCS LAYOUT SCHEDULE SOUTHBOUND TRACK

STRUCTURE NO.	12.93CS	ANCHOR	12.97C	13.00C	ANCHOR	13.03CS	13.06CS
STATIONING	991+82	992+07	993+75.4	995+59.9	997+27	997+52	998+77
CL OF POLE TO CL OF SB TRACK	10.000	10.000	16.542	16.542	10.000	10.000	9.083
FOUNDATION TYPE	FF2 (MOD2)	FG-1A (MOD)	FS2 (MOD)	FS2 (MOD)	FG-1A (MOD)	FF2 (MOD2)	FS2 (MOD)
GUY ANCHOR TYPE	-	DGA-1	-	-	DGA-1	-	-
POLE TYPE - LENGTH	D3F-25	-	C3-20-P	C3-20-P	-	D3F-25	C3-28
POLE RAKE	1.0"-90°	-	0"-0°	0"-0°	-	0.5"-90°	0.5"-90°
MESSANGER WIRE HEIGHT	19'-6"	-	19'-6"	19'-6"	-	19'-6"	19'-6"
CONTACT WIRE HEIGHT	15'-0"	-	15'-0"	15'-0"	-	15'-0"	15'-0"
CANTILEVER TYPE	CA-B1	-	CA-A1	CA-A1	-	CA-B1	CA-B1
HANGER SET	HS-115	HS-195	-	HS-185	-	HS-190	HS-125
JUMPER TYPE	TYPE C, TYPE F3, TYPE PF	-	TYPE C	TYPE C	-	TYPE C, TYPE F3, TYPE PF	TYPE C
MISCELLANEOUS	(2) BH-01, PG-1	DG-1	(2) BH-01, FSA-02	(2) BH-01, FSA-02	DG-1	(2) BH-01, PG-1	(2) BH-01, FBA-01
MISCELLANEOUS	PFT-01 (23'-6")	-	PG-1	PG-1	-	PFT-01 (23'-6")	FSA-01, PG-1

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NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



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**Santa Clara Valley Transportation Authority**

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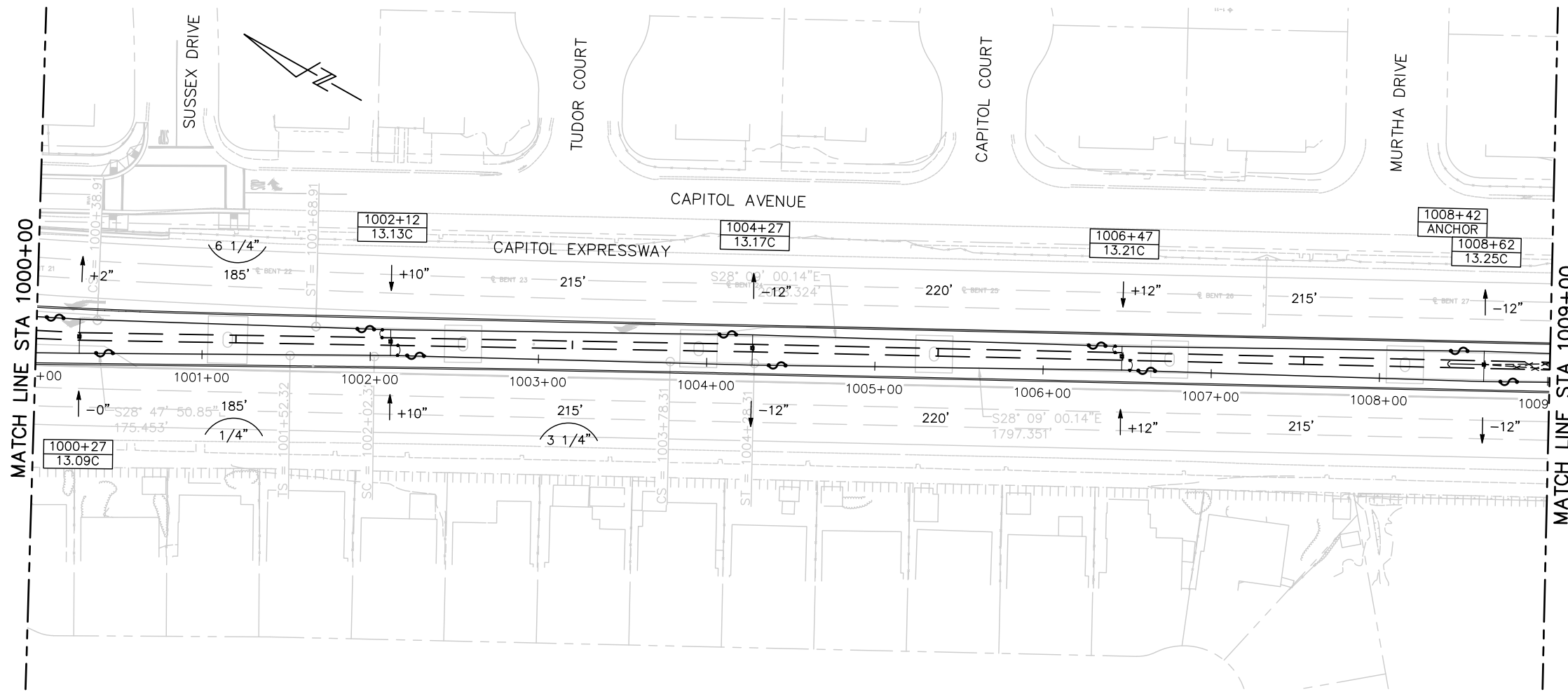
EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
OVERHEAD CONTACT SYSTEM  
LAYOUT SCHEDULE  
991+00 TO 1000+00

PCA NO.: 000  
CONTRACT NO.: C801  
FILE LOCATION: PROJECTWISE

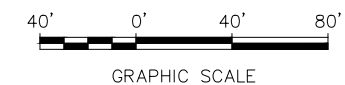
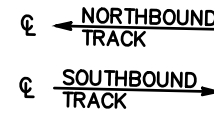
SHEET OF: PC004  
REVISION: C

OCS LAYOUT SCHEDULE NORTHBOUND TRACK

STRUCTURE NO.	13.09C	13.13C	13.17C	13.21C	ANCHOR	13.25C
STATIONING	SEE SB	SEE SB	SEE SB	SEE SB	SEE SB	SEE SB
CL OF POLE TO CL OF NB TRACK	10.049	7.838	6.917	6.917	6.917	6.917
FOUNDATION TYPE	SEE SB	SEE SB	SEE SB	SEE SB	SEE SB	SEE SB
GUY ANCHOR TYPE	-	-	-	-	SEE SB	-
POLE TYPE - LENGTH	SEE SB	SEE SB	SEE SB	SEE SB	-	SEE SB
POLE RAKE	SEE SB	SEE SB	SEE SB	SEE SB	-	SEE SB
MESSANGER WIRE HEIGHT	19'-6"	19'-6"	19'-6"	19'-6"	-	19'-6"
CONTACT WIRE HEIGHT	15'-0"	15'-0"	15'-0"	15'-0"	-	15'-0"
CANTILEVER TYPE	CA-A2	CA-A1	CA-B1	CA-A1	-	CA-B1
HANGER SET	-	HS-185	HS-215	HS-220	HS-215	-
JUMPER TYPE	TYPE C	TYPE C, TYPE F3	TYPE C	TYPE C, TYPE F3	-	TYPE C
MISCELLANEOUS	FSA-01	FSA-01	FSA-01	FSA-01	-	FSA-01
MISCELLANEOUS						



- NOTES:**
- FOR ABBREVIATIONS, LEGEND, AND GENERAL NOTES SEE DWGS PG001, PG002, AND PG003.
  - FOR TYPICAL OCS STRUCTURE AT CAPITOL AERIAL GUIDEWAY SEE DWG PD102.
  - FOR ANCHORAGE DETAIL FS2 (MOD) AND FG-1A (MOD) SEE STRUCTURAL DRAWINGS.

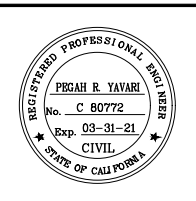


OCS LAYOUT SCHEDULE SOUTHBOUND TRACK

STRUCTURE NO.	13.09C	13.13C	13.17C	13.21C	ANCHOR	13.25C
STATIONING	1000+27	1002+12	1004+27	1006+47	1008+42	1008+62
CL OF POLE TO CL OF SB TRACK	10.000	9.083	9.083	9.083	9.083	9.083
FOUNDATION TYPE	FS2 (MOD)	FS2 (MOD)	FS2 (MOD)	FS2 (MOD)	FG-1A (MOD)	FS2 (MOD)
GUY ANCHOR TYPE	-	-	-	-	DGA-1	-
POLE TYPE - LENGTH	C3-28	C3-28	C3-28	C3-28	-	D3-28
POLE RAKE	0.5"-270°	0"-0°	0"-0°	0"-0°	-	0"-0°
MESSANGER WIRE HEIGHT	19'-6"	19'-6"	19'-6"	19'-6"	-	19'-6"
CONTACT WIRE HEIGHT	15'-0"	15'-0"	15'-0"	15'-0"	-	15'-0"
CANTILEVER TYPE	CA-B1	CA-A1	CA-B1	CA-A1	-	CA-B1
HANGER SET	-	HS-185	HS-215	HS-220	HS-215	-
JUMPER TYPE	TYPE C	TYPE C, TYPE F3	TYPE C	TYPE C, TYPE F3	-	TYPE C
MISCELLANEOUS	(2) BH-01, FBA-02, FSA-01, FKN-01	(2) BH-01, FBA-02, FSA-01, FKN-01	(2) BH-01, FBA-02, FSA-01, FKN-01	(2) BH-01, FBA-02, FSA-01, FKN-01	DG-1	(2) BH-01, FBA-02, FSA-01, FKN-01
MISCELLANEOUS	PG-1	PG-1	PG-1	PG-1	PG-1	PG-1

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NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



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CADD FILE NAME: 801PC005.dwg

**Santa Clara Valley Transportation Authority**

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CAAD FILE DATE: 5/15/2020  
SCALE: 1"=40'  
SUBMITTAL DATE: 06/29/20  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
OVERHEAD CONTACT SYSTEM  
LAYOUT SCHEDULE  
1000+00 TO 1009+00

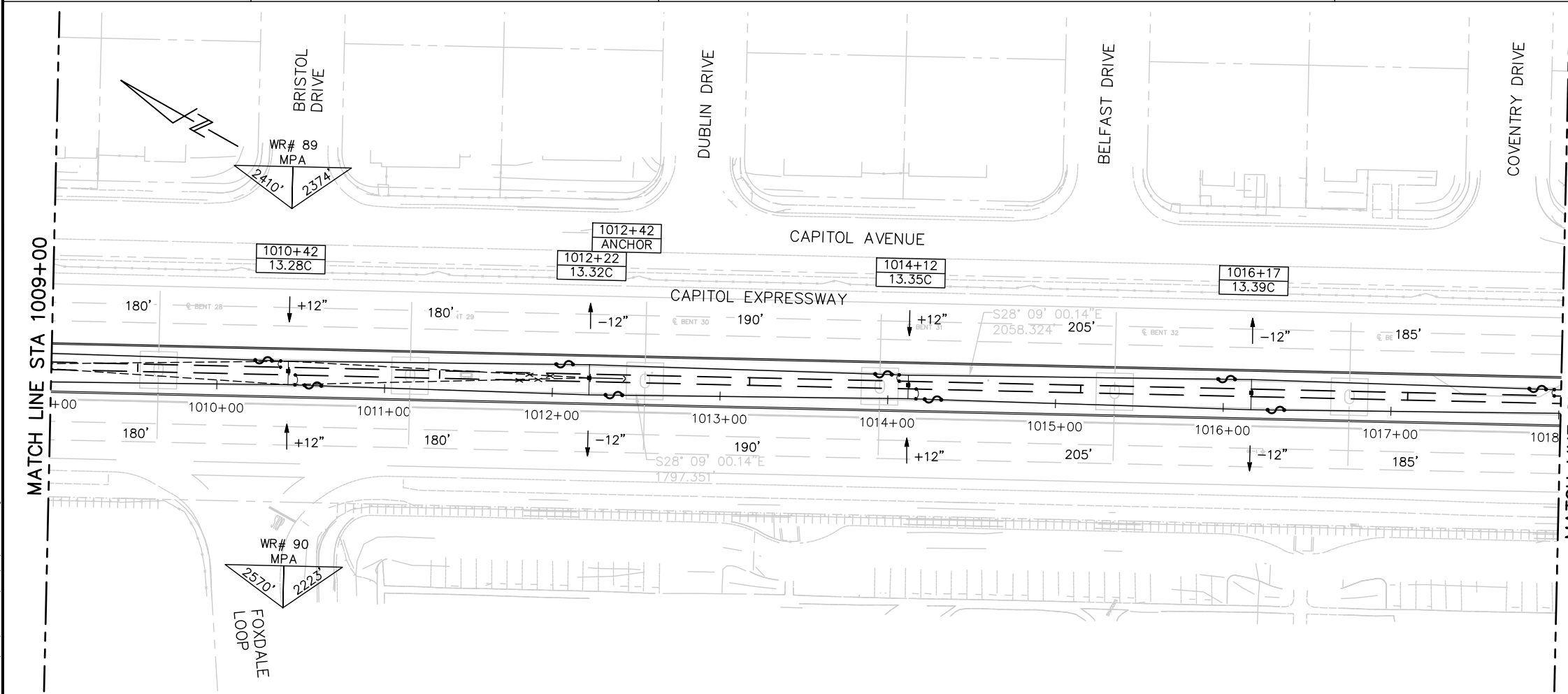
PCA NO: 000  
CONTRACT NO: C801  
FILE LOCATION: PROJECTWISE

SHEET OF: PC005  
REVISION: C

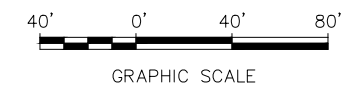
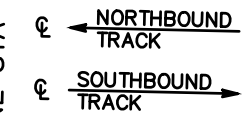


OCS LAYOUT SCHEDULE NORTHBOUND TRACK

STRUCTURE NO.	13.28C	13.32C	ANCHOR	13.35C	13.39C
STATIONING	SEE SB	SEE SB	SEE SB	SEE SB	SEE SB
CL OF POLE TO CL OF NB TRACK	6.917	6.917	6.917	6.917	6.917
FOUNDATION TYPE	SEE SB	SEE SB	SEE SB	SEE SB	SEE SB
GUY ANCHOR TYPE	-	-	SEE SB	-	-
POLE TYPE - LENGTH	SEE SB	SEE SB	-	SEE SB	SEE SB
POLE RAKE	SEE SB	SEE SB	-	SEE SB	SEE SB
MESSANGER WIRE HEIGHT	19'-6"	19'-6"	-	19'-6"	19'-6"
CONTACT WIRE HEIGHT	15'-0"	15'-0"	-	15'-0"	15'-0"
CANTILEVER TYPE	CA-A3	CA-B1	-	CA-A1	CA-B1
HANGER SET	HS-180	HS-180	HS-190	HS-205	HS-185
JUMPER TYPE	TYPE C, TYPE F3		TYPE C	TYPE C, TYPE F3	
MISCELLANEOUS	MP-01, FSA-01		FSA-01	FSA-01	
MISCELLANEOUS					



- NOTES:**
- FOR ABBREVIATIONS, LEGEND, AND GENERAL NOTES SEE DWGS PG001, PG002, AND PG003.
  - FOR MIDPOINT ARRANGEMENT DETAILS SEE DWG PD105.
  - FOR TYPICAL OCS STRUCTURE AT CAPITOL AERIAL GUIDEWAY SEE DWG PD102.
  - FOR ANCHORAGE DETAIL FS2 (MOD) AND FG-1A (MOD) SEE STRUCTURAL DRAWINGS.

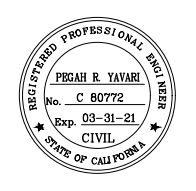


OCS LAYOUT SCHEDULE SOUTHBOUND TRACK

STRUCTURE NO.	13.28C	13.32C	ANCHOR	13.35C	13.39C
STATIONING	1010+42	1012+22	1012+42	1014+12	1016+17
CL OF POLE TO CL OF SB TRACK	9.083	9.083	9.083	9.083	9.083
FOUNDATION TYPE	FS2 (MOD)	FS2 (MOD)	FG-1A (MOD)	FS2 (MOD)	FS2 (MOD)
GUY ANCHOR TYPE	-	-	DGA-1	-	-
POLE TYPE - LENGTH	C3-28	D3-28	-	C3-28	C3-28
POLE RAKE	0"-0"	0"-0"	-	0"-0"	0"-0"
MESSANGER WIRE HEIGHT	19'-6"	19'-6"	-	19'-6"	19'-6"
CONTACT WIRE HEIGHT	15'-0"	15'-0"	-	15'-0"	15'-0"
CANTILEVER TYPE	CA-A3	CA-B1	-	CA-A1	CA-B1
HANGER SET	HS-180	HS-180	HS-190	HS-205	HS-185
JUMPER TYPE	TYPE C, TYPE F3		TYPE C	TYPE C, TYPE F3	
MISCELLANEOUS	MP-01, (2) BH-01, FBA-02, FSA-01, FKN-01		DG-1	(2) BH-01, FBA-02, FSA-01, FKN-01	
MISCELLANEOUS	PG-1		PG-1	PG-1	

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NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



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CADD FILE NAME: 801PC006.dwg

**FA** Santa Clara Valley  
Transportation  
Authority

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CAAD FILE DATE: 5/15/2020  
SUBMITTAL DATE: 06/29/20  
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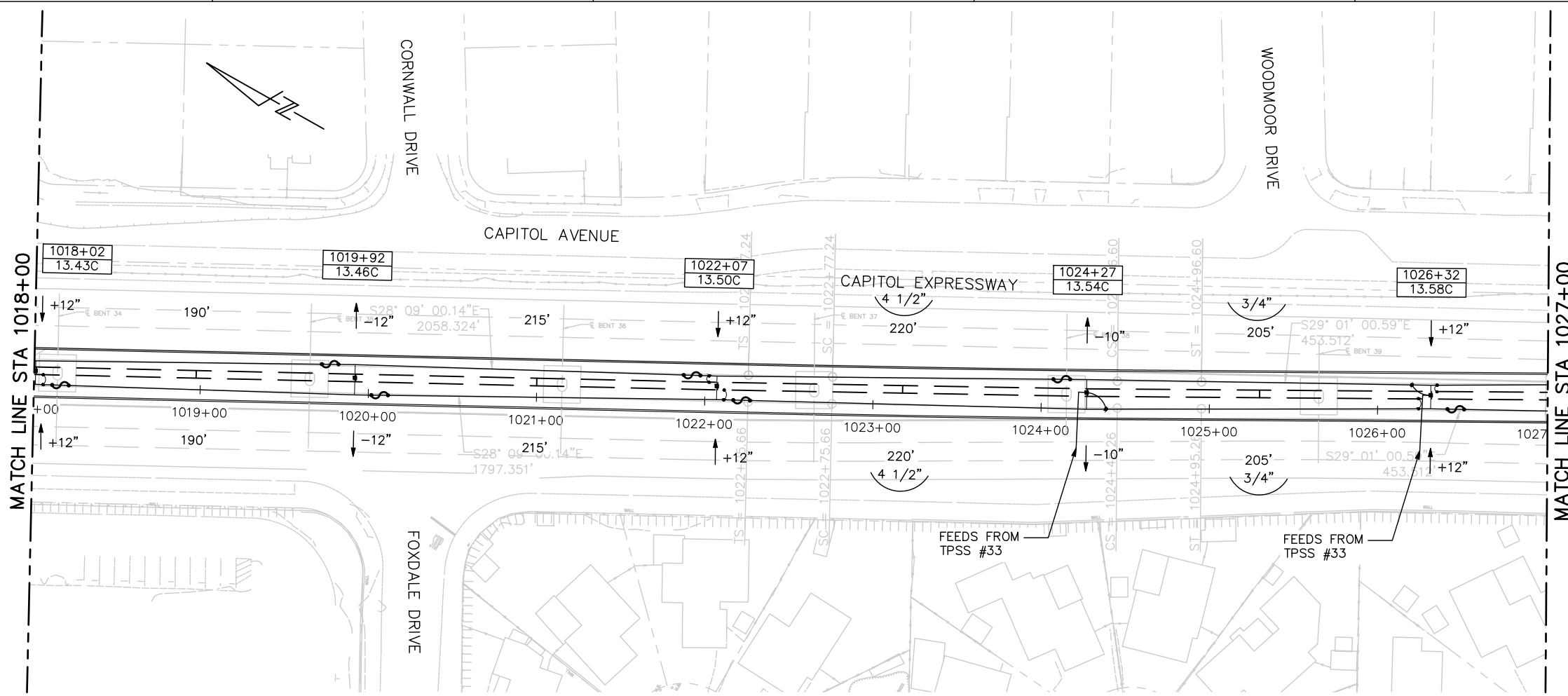
EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
OVERHEAD CONTACT SYSTEM  
LAYOUT SCHEDULE  
1009+00 TO 1018+00

PCA NO.: 000  
CONTRACT NO.: C801  
FILE LOCATION: PROJECTWISE

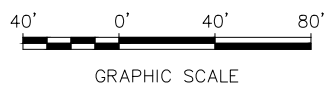
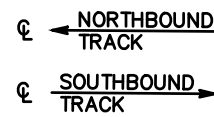
SHEET OF: PC006  
REVISION: C

OCS LAYOUT SCHEDULE NORTHBOUND TRACK

STRUCTURE NO.	13.43C	13.46C	13.50C	13.54C	13.58C
STATIONING	SEE SB	SEE SB	SEE SB	SEE SB	SEE SB
CL OF POLE TO CL OF NB TRACK	6.917	6.917	6.917	6.917	6.917
FOUNDATION TYPE	SEE SB	SEE SB	SEE SB	SEE SB	SEE SB
GUY ANCHOR TYPE	-	-	-	-	-
POLE TYPE - LENGTH	SEE SB	SEE SB	SEE SB	SEE SB	SEE SB
POLE RAKE	SEE SB	SEE SB	SEE SB	SEE SB	SEE SB
MESSANGER WIRE HEIGHT	19'-6"	19'-6"	19'-6"	19'-6"	19'-6"
CONTACT WIRE HEIGHT	15'-0"	15'-0"	15'-0"	15'-0"	15'-0"
CANTILEVER TYPE	CA-A1	CA-B1	CA-A1	CA-B1	CA-A1
HANGER SET	-	HS-190	HS-215	HS-220	HS-205
JUMPER TYPE	TYPE C, TYPE F3	TYPE C	TYPE C, TYPE F3	TYPE C	TYPE F1, TYPE F3
MISCELLANEOUS	FSA-01	FSA-01	FSA-01	FSA-01	SU-01, FSA-01



- NOTES:**
- FOR ABBREVIATIONS, LEGEND, AND GENERAL NOTES SEE DWGS PG001, PG002, AND PG003.
  - FOR TYPICAL OCS STRUCTURE AT CAPITOL AERIAL GUIDEWAY SEE DWG PD102.
  - FOR ANCHORAGE DETAIL FS2 (MOD) AND FF2 (MOD) SEE STRUCTURAL DRAWINGS.

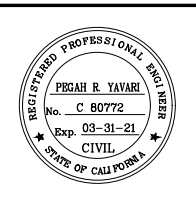


OCS LAYOUT SCHEDULE SOUTHBOUND TRACK

STRUCTURE NO.	13.43C	13.46C	13.50C	13.54C	13.58C
STATIONING	1018+02	1019+92	1022+07	1024+27	1026+32
CL OF POLE TO CL OF SB TRACK	9.083	9.083	9.083	9.083	9.083
FOUNDATION TYPE	FS2 (MOD)	FS2 (MOD)	FS2 (MOD)	FF2 (MOD)	FF2 (MOD)
GUY ANCHOR TYPE	-	-	-	-	-
POLE TYPE - LENGTH	C3-28	C3-28	C3-28	C3F-28	C3F-28
POLE RAKE	0"-0"	0"-0"	0"-0"	0"-0"	0"-0"
MESSANGER WIRE HEIGHT	19'-6"	19'-6"	19'-6"	19'-6"	19'-6"
CONTACT WIRE HEIGHT	15'-0"	15'-0"	15'-0"	15'-0"	15'-0"
CANTILEVER TYPE	CA-A1	CA-B1	CA-A1	CA-B1	CA-A1
HANGER SET	-	HS-190	HS-215	HS-220	HS-205
JUMPER TYPE	TYPE C, TYPE F3	TYPE C	TYPE C, TYPE F3	TYPE F1	TYPE C, TYPE F3
MISCELLANEOUS	(2) BH-01, FBA-02, FKN-01	(2) BH-01, FBA-02, FKN-01	(2) BH-01, FBA-02, FKN-01	(2) BH-01, SU-01, FBA-02, FKN-01	(2) BH-01, FBA-02, FKN-01
MISCELLANEOUS	FSA-01, PG-1	FSA-01, PG-1	FSA-01, PG-1	FSA-01, PG-1	FSA-01, PG-1

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NO.	DATE	REVISIONS
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DRAWN: P. WHITE  
CADD FILE NAME: 801PC007.dwg

**Santa Clara Valley Transportation Authority**

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ENGINEERS / SURVEYORS / PLANNERS

CAISO FILE DATE: 5/15/2020  
SCALE: 1"=40'  
SUBMITTAL DATE: 06/29/20  
BOARD APPROVAL DATE:

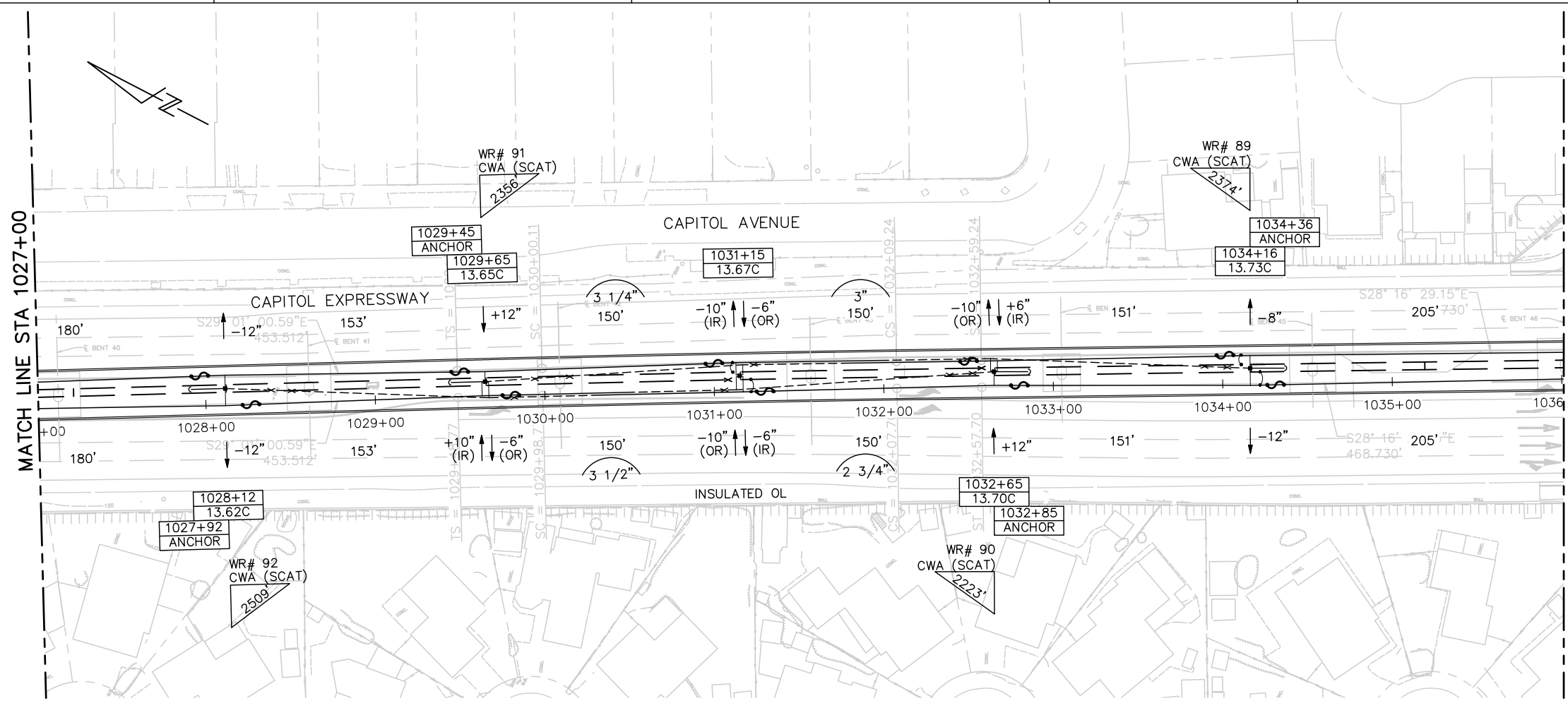
EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
OVERHEAD CONTACT SYSTEM  
LAYOUT SCHEDULE  
1018+00 TO 1027+00

PCA NO.: 000  
CONTRACT NO.: C801  
FILE LOCATION: PROJECTWISE

SHEET OF: PC007  
REVISION: C

OCS LAYOUT SCHEDULE NORTHBOUND TRACK

STRUCTURE NO.	ANCHOR	13.62C	ANCHOR	13.65C	13.67C	13.70C	ANCHOR	13.73C	ANCHOR
STATIONING	SEE SB	SEE SB	SEE SB	SEE SB	SEE SB	SEE SB	SEE SB	SEE SB	SEE SB
☐ OF POLE TO ☐ OF NB TRACK	6.917	6.917	6.917	6.917	6.917	6.917	6.917	6.917	6.917
FOUNDATION TYPE	SEE SB	SEE SB	FG-1A (MOD)	SEE SB	SEE SB	SEE SB	SEE SB	SEE SB	FG-1A (MOD)
GUY ANCHOR TYPE	SEE SB	-	DGA-1	-	-	-	SEE SB	-	DGA-1
POLE TYPE - LENGTH	-	SEE SB	-	SEE SB	SEE SB	SEE SB	-	SEE SB	-
POLE RAKE	-	SEE SB	-	SEE SB	SEE SB	SEE SB	-	SEE SB	-
MESSANGER WIRE HEIGHT	-	19'-6"	-	ANCHOR HEIGHT 19'-6"	19'-0" (IR) / 20'-9" (OR)	19'-0" (OR) / 20'-9" (IR)	-	19'-6"	ANCHOR HEIGHT -
CONTACT WIRE HEIGHT	-	15'-0"	-	18'-0" (CWA) 15'-0"	15'-0" (IR) / 15'-9" (OR)	15'-9" (OR) / 15'-0" (IR)	-	15'-0"	18'-0" (CWA) -
CANTILEVER TYPE	-	CA-B1	-	CA-A1	CA-B1 (IR) / CA-C1 (OR)	CA-C1 (OR) / CA-A1 (IR)	-	CA-B1	-
HANGER SET	HS-180	-	HS-155	-	-	HO-2B	-	-	HS-205
JUMPER TYPE	-	TYPE C	-	TYPE C	TYPE C (IR), TYPE F3	TYPE C (IR)	-	TYPE C, TYPE F3	-
MISCELLANEOUS	-	FSA-01	DG-1	CW-01, FSA-01	IS-C1 (OR), IS-M1 (OR)	IS-C1 (OR), IS-M1 (OR), IS-F1	-	CW-01, FSA-01	DG-1
MISCELLANEOUS	-	-	-	OM-3R, OM-3L	FSA-01	FSA-01, OM-3R, OM-3L	-	-	-



**NOTES:**

- FOR ABBREVIATIONS, LEGEND, AND GENERAL NOTES SEE DWGS PG001, PG002, AND PG003.
- FOR INSULATED OVERLAP ARRANGEMENT SEE DWG PD104.
- FOR TYPICAL OCS STRUCTURE AT CAPITOL AERIAL GUIDEWAY SEE DWG PD102.
- FOR ANCHORAGE DETAIL FS2 (MOD) AND FG-1A (MOD) SEE STRUCTURAL DRAWINGS.

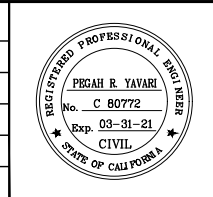
**GRAPHIC SCALE**  
40' 0' 40' 80'

OCS LAYOUT SCHEDULE SOUTHBOUND TRACK

STRUCTURE NO.	ANCHOR	13.62C	ANCHOR	13.65C	13.67C	13.70C	ANCHOR	13.73C	ANCHOR
STATIONING	1027+92	1028+12	1029+45	1029+65	1031+15	1032+65	1032+85	1034+16	1034+36
☐ OF POLE TO ☐ OF SB TRACK	9.083	9.083	9.083	9.083	9.083	9.083	9.083	9.083	9.083
FOUNDATION TYPE	FG-1A (MOD)	FS2 (MOD)	SEE NB	FS2 (MOD)	FS2 (MOD)	FS2 (MOD)	FS2 (MOD)	FG-1A (MOD)	FS2 (MOD)
GUY ANCHOR TYPE	DGA-1	-	SEE NB	-	-	-	-	DGA-1	-
POLE TYPE - LENGTH	-	T2-28	-	T2-28	C3-28	T2-28	-	T2-28	-
POLE RAKE	-	0.5"-90°	-	0"-0°	0.5"-90°	0.5"-90°	-	0.5"-270°	-
MESSANGER WIRE HEIGHT	-	ANCHOR HEIGHT 19'-6"	-	20'-9" (IR) / 19'-0" (OR)	20'-9" (OR) / 19'-0" (IR)	19'-6"	ANCHOR HEIGHT -	19'-6"	-
CONTACT WIRE HEIGHT	-	18'-0" (CWA) 15'-0"	-	15'-0" (IR) / 15'-9" (OR)	15'-9" (OR) / 15'-0" (IR)	15'-0"	18'-0" (CWA) -	15'-0"	-
CANTILEVER TYPE	-	CA-B1	-	CA-A1 (IR) / CA-C1 (OR)	CA-C1 (OR) / CA-B1 (IR)	CA-A2	-	CA-B1	-
HANGER SET	HS-180	-	-	HO-2A	-	-	HS-150	-	HS-205
JUMPER TYPE	-	TYPE C	-	TYPE C (IR)	TYPE C (IR), TYPE F3	TYPE C	-	TYPE C, TYPE F3	-
MISCELLANEOUS	DG-1	CW-01, (2) BH-01, FBA-02	-	BT-03, IS-C1 (OR), IS-M1 (OR)	BT-04, IS-C1 (OR), IS-M1 (OR)	CW-01, BT-03, FBA-02	DG-1	(2) BH-01, FBA-02, KN-F1	-
MISCELLANEOUS	-	FSA-01, PG-1	-	FBA-02, FSA-01, PG-1	FBA-02, FSA-01, IS-F1, PG-1	FSA-01, PG-1	-	FSA-01, PG-1	-

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NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



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DESIGNED: G. KOLA  
CHECKED: P. YAVARI  
DRAWN: P. WHITE  
CADD FILE NAME: 801PC008.dwg

**Santa Clara Valley Transportation Authority**

**BKF 100+ YEARS**  
ENGINEERS / SURVEYORS / PLANNERS

APPROVED: [Signature]  
CADD FILE DATE: 5/15/2020  
SCALE: 1"=40'  
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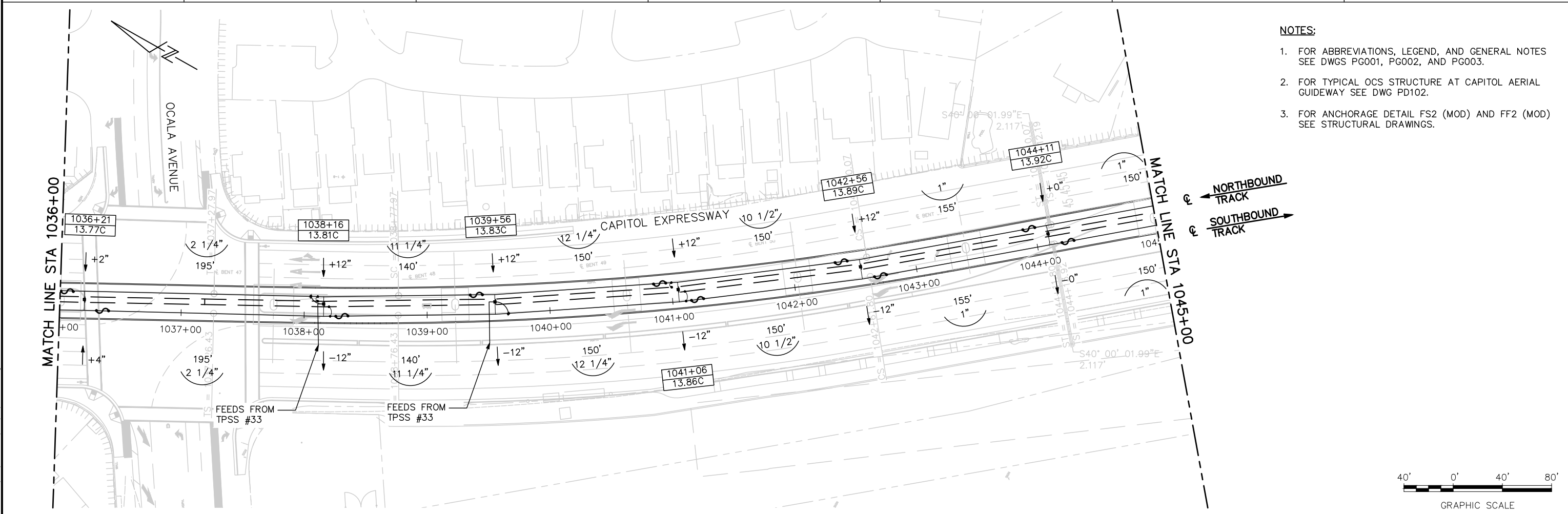
EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
OVERHEAD CONTACT SYSTEM  
LAYOUT SCHEDULE  
1027+00 TO 1036+00

PCA NO.: 000  
CONTRACT NO.: C801  
FILE LOCATION: PROJECTWISE

SHEET OF: PC008  
REVISION: C

OCS LAYOUT SCHEDULE NORTHBOUND TRACK

STRUCTURE NO.	13.77C	13.81C	13.83C	13.86C	13.89C	13.92C
STATIONING	SEE SB	SEE SB	SEE SB	SEE SB	SEE SB	SEE SB
CL OF POLE TO CL OF NB TRACK	6.917	6.917	6.917	6.917	6.917	6.917
FOUNDATION TYPE	SEE SB	SEE SB	SEE SB	SEE SB	SEE SB	SEE SB
GUY ANCHOR TYPE	-	-	-	-	-	-
POLE TYPE - LENGTH	SEE SB	SEE SB	SEE SB	SEE SB	SEE SB	SEE SB
POLE RAKE	SEE SB	SEE SB	SEE SB	SEE SB	SEE SB	SEE SB
MESSANGER WIRE HEIGHT	19'-6"	19'-6"	19'-6"	19'-6"	19'-6"	19'-6"
CONTACT WIRE HEIGHT	15'-0"	15'-0"	15'-0"	15'-0"	15'-0"	15'-0"
CANTILEVER TYPE	CA-A1	CA-A2	CA-A2	CA-A2	CA-A2	CA-A1
HANGER SET	-	HS-195	HS-140	HS-150	HS-150	HS-155
JUMPER TYPE	TYPE C	TYPE F1, TYPE F3	TYPE C	TYPE C, TYPE F3	TYPE C	TYPE C
MISCELLANEOUS	FSA-01	SU-01, FSA-01	FSA-01	FSA-01	FSA-01	FSA-01
MISCELLANEOUS		OM-3R, OM-3L	OM-3R, OM-3L	OM-3R, OM-3L	OM-3R, OM-3L	OM-3R, OM-3L

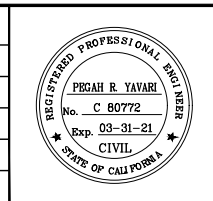


- NOTES:**
- FOR ABBREVIATIONS, LEGEND, AND GENERAL NOTES SEE DWGS PG001, PG002, AND PG003.
  - FOR TYPICAL OCS STRUCTURE AT CAPITOL AERIAL GUIDEWAY SEE DWG PD102.
  - FOR ANCHORAGE DETAIL FS2 (MOD) AND FF2 (MOD) SEE STRUCTURAL DRAWINGS.

OCS LAYOUT SCHEDULE SOUTHBOUND TRACK

STRUCTURE NO.	13.77C	13.81C	13.83C	13.86C	13.89C	13.92C
STATIONING	1036+21	1038+16	1039+56	1041+06	1042+56	1044+11
CL OF POLE TO CL OF SB TRACK	9.083	9.083	9.083	9.083	9.083	9.083
FOUNDATION TYPE	FS2 (MOD)	FF2 (MOD)	FF2 (MOD)	FS2 (MOD)	FS2 (MOD)	FS2 (MOD)
GUY ANCHOR TYPE	-	-	-	-	-	-
POLE TYPE - LENGTH	C3-28	C3F-28	C3F-28	C3-28	C3-28	C3-28
POLE RAKE	0"-0"	1.0"-270"	1.0"-270"	1.0"-270"	0.5"-270"	0"-0"
MESSANGER WIRE HEIGHT	19'-6"	19'-6"	19'-6"	19'-6"	19'-6"	19'-6"
CONTACT WIRE HEIGHT	15'-0"	15'-0"	15'-0"	15'-0"	15'-0"	15'-0"
CANTILEVER TYPE	CA-A1	CA-B1	CA-B1	CA-B1	CA-B1	CA-B1
HANGER SET	-	HS-195	HS-140	HS-150	HS-150	HS-155
JUMPER TYPE	TYPE C	TYPE C, TYPE F3	TYPE F1	TYPE C, TYPE F3	TYPE C	TYPE C
MISCELLANEOUS	(2) BH-01, FBA-02, KN-F1	(2) BH-01, FBA-02, FSA-01	(2) BH-01, SU-01, FBA-02	(2) BH-01, FBA-02, FSA-01	(2) BH-01, FBA-02, FSA-01	(2) BH-01, FBA-02, FSA-01
MISCELLANEOUS	FSA-01, PG-1	PG-1	FSA-01, PG-1	PG-1	PG-1	PG-1

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



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DRAWN: P. WHITE  
CADD FILE NAME: 801PC009.dwg

**Santa Clara Valley Transportation Authority**

**BKF 100+ YEARS**  
ENGINEERS / SURVEYORS / PLANNERS

CAAD FILE DATE: 5/15/2020  
SCALE: 1"=40'  
SUBMITTAL DATE: 06/29/20  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
OVERHEAD CONTACT SYSTEM  
LAYOUT SCHEDULE  
1036+00 TO 1045+00

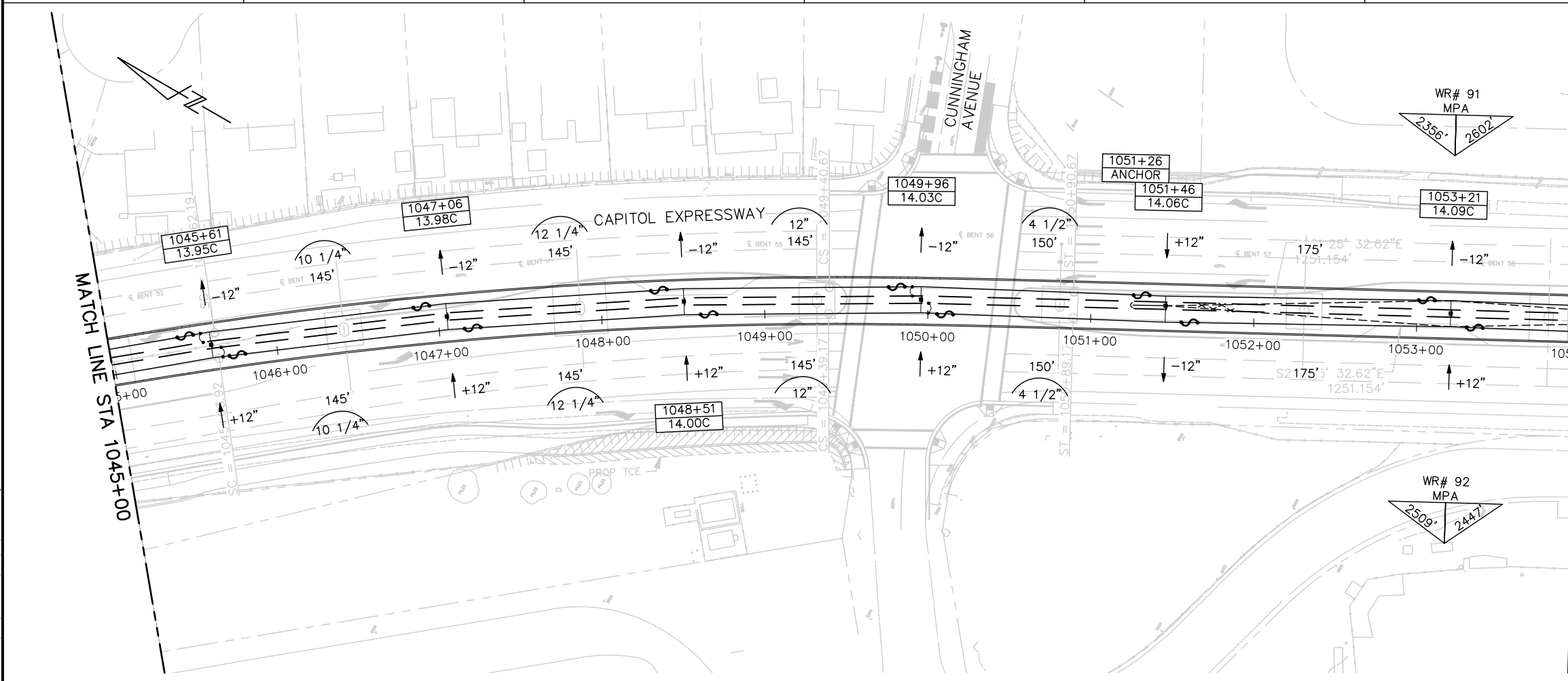
PCA NO.: 000  
CONTRACT NO.: C801  
FILE LOCATION: PROJECTWISE

SHEET OF: PC009  
REVISION: C

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OCS LAYOUT SCHEDULE NORTHBOUND TRACK

STRUCTURE NO.	13.95C	13.98C	14.00C	14.03C	ANCHOR	14.06C	14.09C
STATIONING	SEE SB	SEE SB	SEE SB	SEE SB	SEE SB	SEE SB	SEE SB
☐ OF POLE TO ☐ OF NB TRACK	6.917	6.917	6.917	6.917	6.917	6.917	6.917
FOUNDATION TYPE	SEE SB	SEE SB	SEE SB	SEE SB	SEE SB	SEE SB	SEE SB
GUY ANCHOR TYPE	-	-	-	-	SEE SB	-	-
POLE TYPE - LENGTH	SEE SB	SEE SB	SEE SB	SEE SB	-	SEE SB	SEE SB
POLE RAKE	SEE SB	SEE SB	SEE SB	SEE SB	-	SEE SB	SEE SB
MESSANGER WIRE HEIGHT	19'-6"	19'-6"	19'-6"	19'-6"	-	19'-6"	19'-6"
CONTACT WIRE HEIGHT	15'-0"	15'-0"	15'-0"	15'-0"	-	15'-0"	15'-0"
CANTILEVER TYPE	CA-B1	CA-B1	CA-B1	CA-B1	CA-B1	CA-A1	CA-B1
HANGER SET	-	HS-145	HS-145	HS-145	HS-150	HS-175	-
JUMPER TYPE	TYPE C, TYPE F3	TYPE C	TYPE C	TYPE C, TYPE F3	-	TYPE C	TYPE C
MISCELLANEOUS	FSA-01	FSA-01	FSA-01	FSA-01	-	FSA-01	MP-01, FSA-01
MISCELLANEOUS	OM-3R, OM-3L	OM-3R, OM-3L	OM-3R, OM-3L	OM-3R, OM-3L	-	-	-



**NOTES:**

- FOR ABBREVIATIONS, LEGEND, AND GENERAL NOTES SEE DWGS PG001, PG002, AND PG003.
- FOR MIDPOINT ARRANGEMENT DETAILS SEE DWG PD105.
- FOR TYPICAL OCS STRUCTURE AT CAPITOL AERIAL GUIDEWAY SEE DWG PD102.
- FOR ANCHORAGE DETAIL FS2 (MOD) AND FG-1A (MOD) SEE STRUCTURAL DRAWINGS.

WR# 91 MPA 2356' 2602'

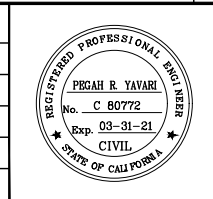
WR# 92 MPA 2509' 2447'

GRAPHIC SCALE: 40' 0' 40' 80'

OCS LAYOUT SCHEDULE SOUTHBOUND TRACK

STRUCTURE NO.	13.95C	13.98C	14.00C	14.03C	ANCHOR	14.06C	14.09C
STATIONING	1045+61	1047+06	1048+51	1049+96	1051+26	1051+46	1053+21
☐ OF POLE TO ☐ OF SB TRACK	9.083	9.083	9.083	9.083	9.083	9.083	9.083
FOUNDATION TYPE	FS2 (MOD)	FS2 (MOD)	FS2 (MOD)	FS2 (MOD)	FG-1A (MOD)	FS2 (MOD)	FS2 (MOD)
GUY ANCHOR TYPE	-	-	-	-	DGA-1	-	-
POLE TYPE - LENGTH	C3-28	C3-28	C3-28	C3-28	-	D3-28	C3-28
POLE RAKE	0.5"-90°	1.0"-90°	1.0"-90°	1.0"-90°	-	0"-0°	0.5"-90°
MESSANGER WIRE HEIGHT	19'-6"	19'-6"	19'-6"	19'-6"	-	19'-6"	19'-6"
CONTACT WIRE HEIGHT	15'-0"	15'-0"	15'-0"	15'-0"	-	15'-0"	15'-0"
CANTILEVER TYPE	CA-A2	CA-A2	CA-A2	CA-A2	CA-A2	CA-B1	CA-A3
HANGER SET	-	HS-145	HS-145	HS-145	HS-150	HS-175	-
JUMPER TYPE	TYPE C, TYPE F3	TYPE C	TYPE C	TYPE C, TYPE F3	-	TYPE C	TYPE C
MISCELLANEOUS	(2) BH-01, FBA-02, FSA-01 PG-1	(2) BH-01, FBA-02, FSA-01 PG-1	(2) BH-01, FBA-02, FSA-01 PG-1	(2) BH-01, FBA-02, FSA-01 PG-1	DG-1	(2) BH-01, FBA-02, FSA-01 PG-1	MP-01, (2) BH-01, FBA-02 FSA-01, PG-1

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



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DESIGNED: G. KOLA  
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DRAWN: P. WHITE  
CADD FILE NAME: 801PC010.dwg

**Santa Clara Valley Transportation Authority**

**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CAISO FILE DATE: 5/15/2020  
SCALE: 1"=40'  
SUBMITTAL DATE: 06/29/20  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
OVERHEAD CONTACT SYSTEM  
LAYOUT SCHEDULE  
1045+00 TO 1054+00

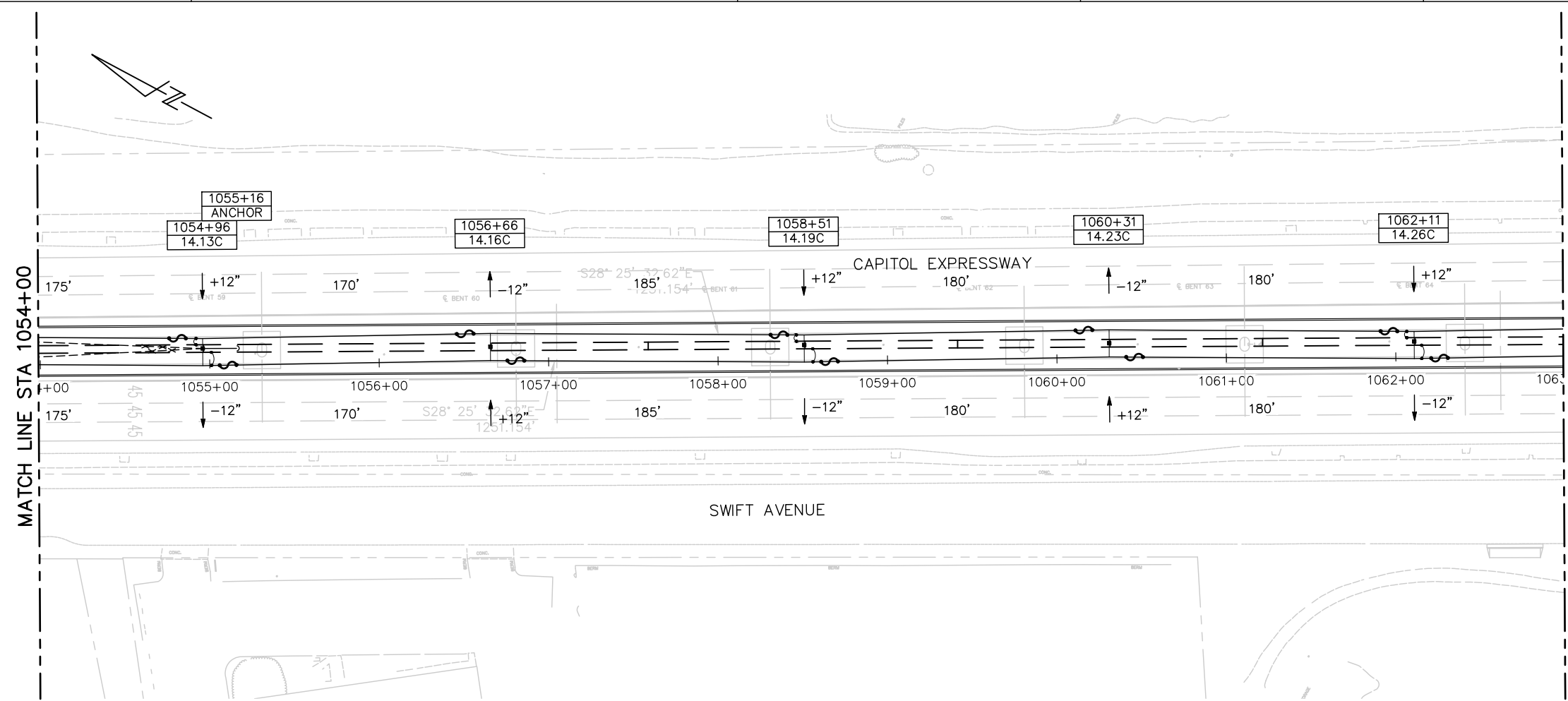
PCA NO.: 000  
CONTRACT NO.: C801  
FILE LOCATION: PROJECTWISE

SHEET OF: PC010  
REVISION: C

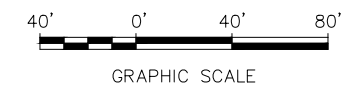
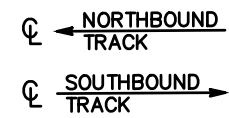
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OCS LAYOUT SCHEDULE NORTHBOUND TRACK

STRUCTURE NO.	14.13C	ANCHOR	14.16C	14.19C	14.23C	14.26C
STATIONING	SEE SB	SEE SB	SEE SB	SEE SB	SEE SB	SEE SB
CL OF POLE TO CL OF NB TRACK	6.917	6.917	6.917	6.917	6.917	6.917
FOUNDATION TYPE	SEE SB	SEE SB	SEE SB	SEE SB	SEE SB	SEE SB
GUY ANCHOR TYPE	-	SEE SB	-	-	-	-
POLE TYPE - LENGTH	SEE SB	-	SEE SB	SEE SB	SEE SB	SEE SB
POLE RAKE	SEE SB	-	SEE SB	SEE SB	SEE SB	SEE SB
MESSANGER WIRE HEIGHT	19'-6"	-	19'-6"	19'-6"	19'-6"	19'-6"
CONTACT WIRE HEIGHT	15'-0"	-	15'-0"	15'-0"	15'-0"	15'-0"
CANTILEVER TYPE	CA-A1	-	CA-B1	CA-A1	CA-B1	CA-A1
HANGER SET	HS-175	HS-170	HS-185	HS-180	HS-180	-
JUMPER TYPE	TYPE C, TYPE F3	-	TYPE C	TYPE C, TYPE F3	TYPE C	TYPE C, TYPE F3
MISCELLANEOUS	FSA-01	-	FSA-01	FSA-01	FSA-01	FSA-01



- NOTES:**
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  - FOR TYPICAL OCS STRUCTURE AT CAPITOL AERIAL GUIDEWAY SEE DWG PD102.
  - FOR ANCHORAGE DETAIL FS2 (MOD) AND FG-1A (MOD) SEE STRUCTURAL DRAWINGS.

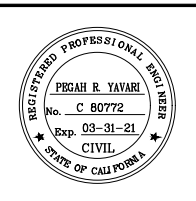


OCS LAYOUT SCHEDULE SOUTHBOUND TRACK

STRUCTURE NO.	14.13C	ANCHOR	14.16C	14.19C	14.23C	14.26C
STATIONING	1054+96	1055+16	1056+66	1058+51	1060+31	1062+11
CL OF POLE TO CL OF SB TRACK	9.083	9.083	9.083	9.083	9.083	9.083
FOUNDATION TYPE	FS2 (MOD)	FG-1A (MOD)	FS2 (MOD)	FS2 (MOD)	FS2 (MOD)	FS2 (MOD)
GUY ANCHOR TYPE	-	DGA-1	-	-	-	-
POLE TYPE - LENGTH	D3-28	-	C3-28	C3-28	C3-28	C3-28
POLE RAKE	0.5"-270°	-	0.5"-90°	0.5"-270°	0.5"-90°	0.5"-270°
MESSANGER WIRE HEIGHT	19'-6"	-	19'-6"	19'-6"	19'-6"	19'-6"
CONTACT WIRE HEIGHT	15'-0"	-	15'-0"	15'-0"	15'-0"	15'-0"
CANTILEVER TYPE	CA-B1	-	CA-A1	CA-B1	CA-A1	CA-B1
HANGER SET	HS-175	HS-170	HS-185	HS-180	HS-180	-
JUMPER TYPE	TYPE C, TYPE F3	-	TYPE C	TYPE C, TYPE F3	TYPE C	TYPE C, TYPE F3
MISCELLANEOUS	(2) BH-01, FBA-02, FSA-01	DG-1	(2) BH-01, FBA-02, FSA-01 KN-F1	(2) BH-01, FBA-02, FSA-01, KN-F1	(2) BH-01, FBA-02, FSA-01, KN-F1	(2) BH-01, FBA-02, FSA-01, KN-F1
MISCELLANEOUS	PG-1	-	PG-1	PG-1	PG-1	PG-1

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NO.	DATE	REVISIONS
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B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



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DESIGNED: G. KOLA  
CHECKED: P. YAVARI  
DRAWN: P. WHITE  
CADD FILE NAME: 801PC011.dwg

**Santa Clara Valley Transportation Authority**

**BKF 100+ YEARS**  
ENGINEERS / SURVEYORS / PLANNERS

APPROVED: [Signature]  
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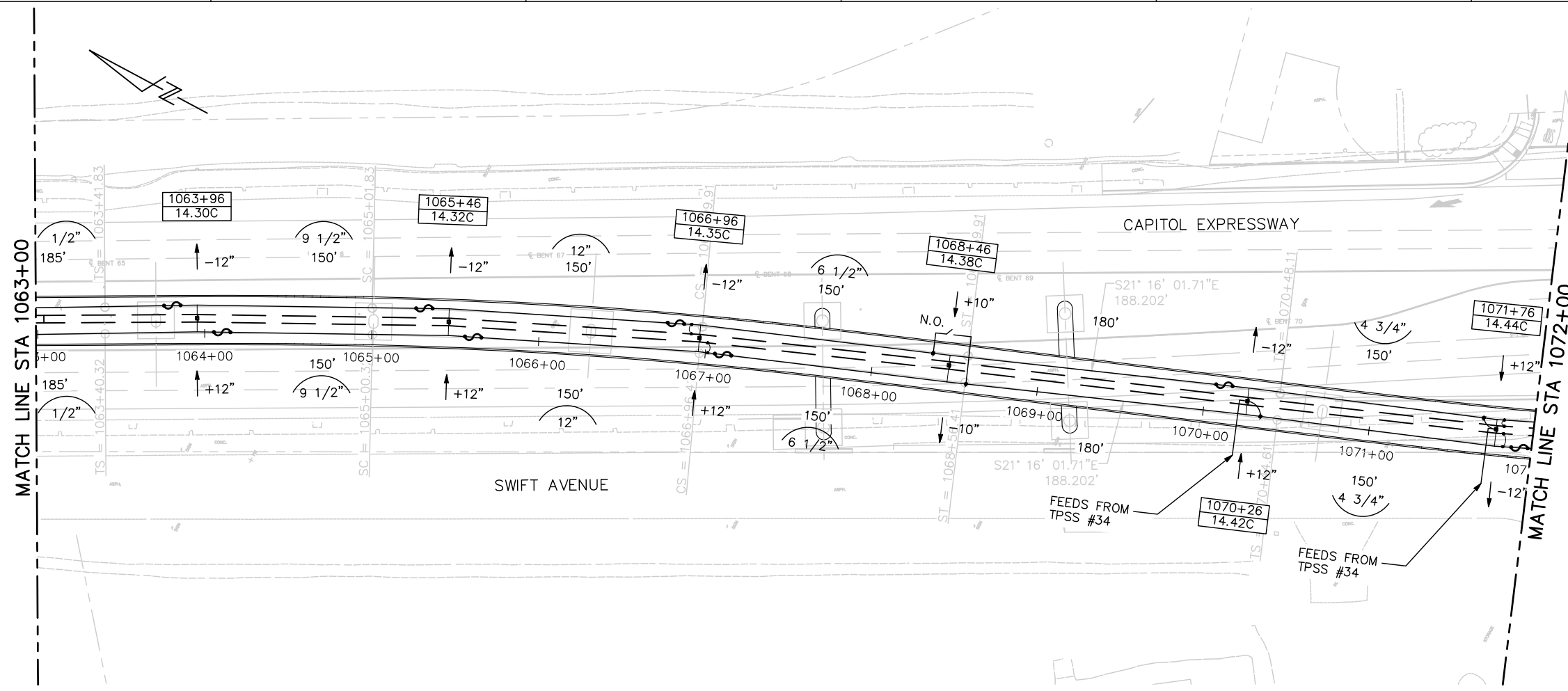
EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
OVERHEAD CONTACT SYSTEM  
LAYOUT SCHEDULE  
1054+00 TO 1063+00

PCA NO: 000 CONTRACT NO: C801 FILE LOCATION: PROJECTWISE

SHEET OF: PC011  
REVISION: C

OCS LAYOUT SCHEDULE NORTHBOUND TRACK

STRUCTURE NO.	14.30C	14.32C	14.35C	14.38C	14.42C	14.44C
STATIONING	SEE SB	SEE SB	SEE SB	SEE SB	SEE SB	SEE SB
☉ OF POLE TO ☉ OF NB TRACK	6.917	6.917	6.917	6.917	6.917	6.917
FOUNDATION TYPE	SEE SB	SEE SB	SEE SB	SEE SB	SEE SB	SEE SB
GUY ANCHOR TYPE	-	-	-	-	-	-
POLE TYPE - LENGTH	SEE SB	SEE SB	SEE SB	SEE SB	SEE SB	SEE SB
POLE RAKE	SEE SB	SEE SB	SEE SB	SEE SB	SEE SB	SEE SB
MESSANGER WIRE HEIGHT	19'-6"	19'-6"	19'-6"	19'-6"	19'-6"	19'-6"
CONTACT WIRE HEIGHT	15'-0"	15'-0"	15'-0"	15'-0"	15'-0"	15'-0"
CANTILEVER TYPE	CA-B1	CA-B1	CA-B1	CA-A1	CA-B1	CA-A2
HANGER SET	HS-185	HS-150	HS-150	HS-150	HS-180	HS-150
JUMPER TYPE	TYPE C	TYPE C	TYPE C, TYPE F3	SEE SB	TYPE C	TYPE F1, TYPE F3
MISCELLANEOUS	FSA-01	FSA-01	FSA-01	FSA-01	FSA-01	SU-01, FSA-01
MISCELLANEOUS	OM-3R, OM-3L	OM-3R, OM-3L	OM-3R, OM-3L	OM-3R, OM-3L		



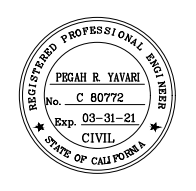
- NOTES:**
- FOR ABBREVIATIONS, LEGEND, AND GENERAL NOTES SEE DWGS PG001, PG002, AND PG003.
  - FOR TYPICAL OCS STRUCTURE AT CAPITOL AERIAL GUIDEWAY SEE DWG PD102.
  - FOR ANCHORAGE DETAIL FS2 (MOD) AND FF2 (MOD) SEE STRUCTURAL DRAWINGS.
  - BY-PASS ASSEMBLY TYPE BP3 TO CONNECT BETWEEN THE CATENARY ON NORTHBOUND AND SOUTHBOUND.

OCS LAYOUT SCHEDULE SOUTHBOUND TRACK

STRUCTURE NO.	14.30C	14.32C	14.35C	14.38C	14.42C	14.44C
STATIONING	1063+96	1065+46	1066+96	1068+46	1070+26	1071+76
☉ OF POLE TO ☉ OF SB TRACK	9.083	9.083	9.083	9.083	9.083	9.083
FOUNDATION TYPE	FS2 (MOD)	FS2 (MOD)	FS2 (MOD)	FS2 (MOD)	FF2 (MOD)	FF2 (MOD)
GUY ANCHOR TYPE	-	-	-	-	-	-
POLE TYPE - LENGTH	C3-28	C3-28	C3-28	C3-28	C3F-28	C3F-28
POLE RAKE	0.5"-90°	1.0"-90°	1.0"-90°	0.5"-270°	0.5"-90°	1.5"-270°
MESSANGER WIRE HEIGHT	19'-6"	19'-6"	19'-6"	19'-6"	19'-6"	19'-6"
CONTACT WIRE HEIGHT	15'-0"	15'-0"	15'-0"	15'-0"	15'-0"	15'-0"
CANTILEVER TYPE	CA-A2	CA-A2	CA-A2	CA-B1	CA-A1	CA-B1
HANGER SET	HS-185	HS-150	HS-150	HS-150	HS-180	HS-150
JUMPER TYPE	TYPE C	TYPE C	TYPE C, TYPE F3	TYPE BP3 (NOTE 4)	TYPE F1	TYPE C, TYPE F3
MISCELLANEOUS	(2) BH-01, FBA-02, FSA-01	(2) BH-01, FBA-02, FSA-01	(2) BH-01, FBA-02, FSA-01	(2) BH-01, FBA-02, FSA-01, BDS-01	(2) BH-01, SU-01, FBA-02, FSA-01	(2) BH-01, FBA-02, FSA-01
MISCELLANEOUS	PG-1	PG-1	PG-1	KN-F1, PG-1	PG-1	PG-1

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NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



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DESIGNED: G. KOLA  
CHECKED: P. YAVARI  
DRAWN: P. WHITE  
CADD FILE NAME: 801PC012.dwg

**FA** Santa Clara Valley  
Transportation  
Authority

**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

APPROVED: [Signature]  
CADD FILE DATE: 5/15/2020  
SUBMITTAL DATE: 06/29/20  
SCALE: 1"=40'  
BOARD APPROVAL DATE:

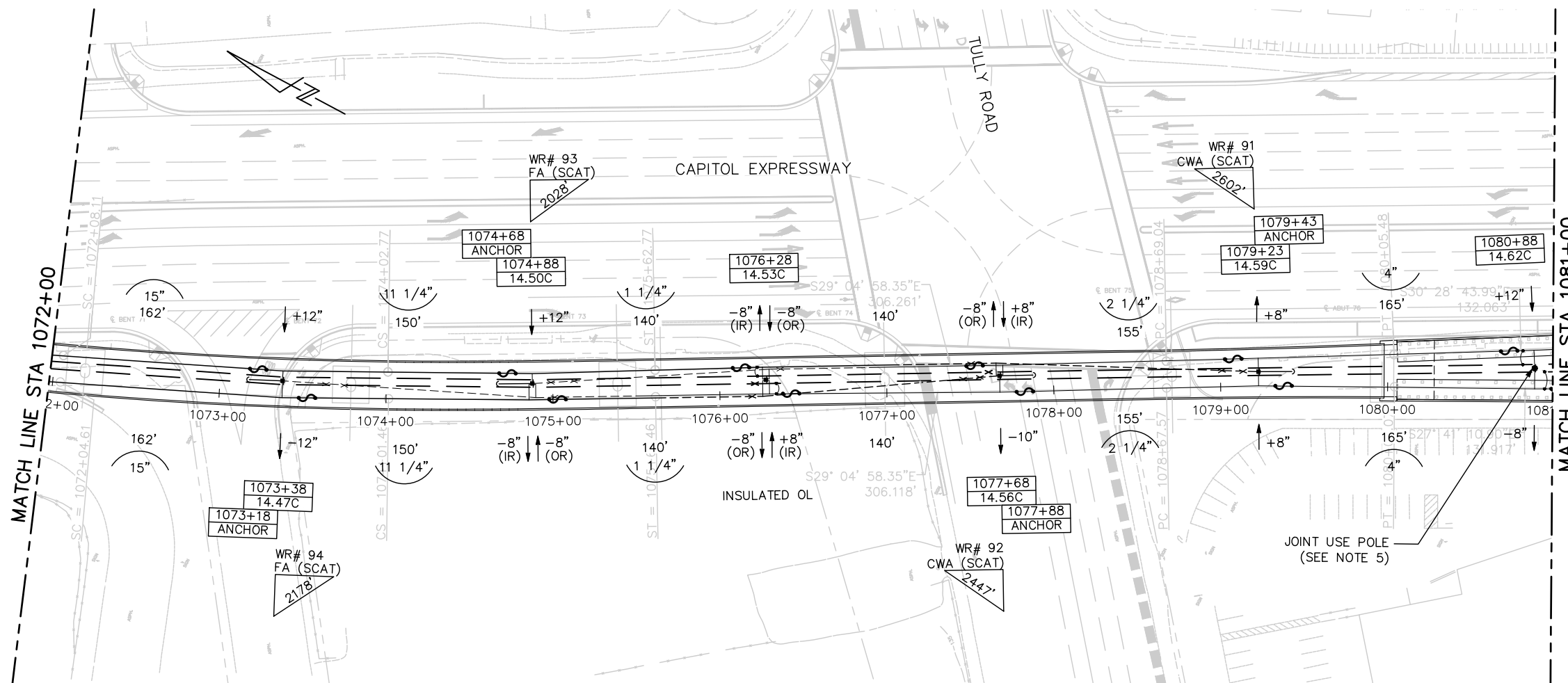
EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
OVERHEAD CONTACT SYSTEM  
LAYOUT SCHEDULE  
1063+00 TO 1072+00

PCA NO: 000 CONTRACT NO: C801 FILE LOCATION: PROJECTWISE

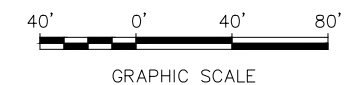
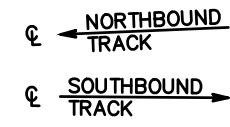
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REVISION: C

OCS LAYOUT SCHEDULE NORTHBOUND TRACK

STRUCTURE NO.	ANCHOR	14.47C	ANCHOR	14.50C	14.53C	14.56C	ANCHOR	14.59C	ANCHOR	14.62C	
STATIONING	SEE SB	SEE SB	SEE SB	SEE SB	SEE SB	SEE SB	SEE SB	SEE SB	SEE SB	SEE SB	
☐ OF POLE TO ☐ OF NB TRACK	6.917	6.917	6.917	6.917	6.917	6.917	6.917	7.459	7.932	11.703	
FOUNDATION TYPE	SEE SB	SEE SB	FG-1A (MOD)	SEE SB	SEE SB	SEE SB	SEE SB	SEE SB	FG-1A (MOD)	SEE SB	
GUY ANCHOR TYPE	SEE SB	-	DGA-1	-	-	-	SEE SB	-	DGA-1	-	
POLE TYPE - LENGTH	-	SEE SB	-	SEE SB	SEE SB	SEE SB	-	SEE SB	-	SEE SB	
POLE RAKE	-	SEE SB	-	SEE SB	SEE SB	SEE SB	-	SEE SB	-	SEE SB	
MESSANGER WIRE HEIGHT	-	19'-6"	-	18'-8" (FA) / 19'-6"	19'-0" (IR) / 20'-9" (OR)	19'-4" (OR) / 21'-1" (IR)	-	20'-7"	ANCHOR HEIGHT	21'-6"	
CONTACT WIRE HEIGHT	-	15'-0"	-	16'-8" (FA) / 15'-0"	15'-0" (IR) / 15'-9" (OR)	16'-1" (OR) / 15'-4" (IR)	-	16'-1"	19'-1"	17'-0"	
CANTILEVER TYPE	-	CA-A2	-	CA-A2	CA-B1 (IR) / CA-C1 (OR)	CA-C1 (OR) / CA-A1 (IR)	-	CA-A1	-	CA-A1	
HANGER SET	HS-160	-	-	-	SEE OCS PROFILES (PD260 SERIES)					-	-
JUMPER TYPE	-	TYPE C	-	TYPE C	TYPE C (IR), TYPE F3 (IR)	TYPE C (IR)	-	TYPE C, TYPE F3	-	TYPE C, TYPE F3	
MISCELLANEOUS	-	FSA-01	DG-1	FT-01, FSA-01	IS-C1 (OR), IS-M1 (OR)	IS-C1 (OR), IS-M1 (OR), IS-F1	-	CW-01, FSA-01	DG-1	FSA-01	
MISCELLANEOUS	-	-	-	-	FSA-01	FSA-01	-	-	-	-	



- NOTES:**
- FOR ABBREVIATIONS, LEGEND, AND GENERAL NOTES SEE DWGS PG001, PG002, AND PG003.
  - FOR INSULATED OVERLAP ARRANGEMENT DETAILS SEE DWG PD104.
  - FOR TYPICAL OCS STRUCTURE AT CAPITOL AERIAL GUIDEWAY SEE DWG PD102.
  - FOR ANCHORAGE DETAIL FS2 (MOD) AND FG-1A (MOD) SEE STRUCTURAL DRAWINGS.
  - REFER TO COMMUNICATIONS DRAWINGS FOR ADDITIONAL DETAILS.

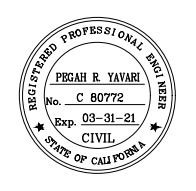


OCS LAYOUT SCHEDULE SOUTHBOUND TRACK

STRUCTURE NO.	ANCHOR	14.47C	ANCHOR	14.50C	14.53C	14.56C	ANCHOR	14.59C	ANCHOR	14.62C	
STATIONING	1073+18	1073+38	1074+68	1074+88	1076+28	1077+68	1077+88	1079+23	1079+43	1080+88	
☐ OF POLE TO ☐ OF SB TRACK	9.083	9.083	9.083	9.083	9.083	9.083	9.083	9.083	9.083	11.717	
FOUNDATION TYPE	FG-1A (MOD)	FS2 (MOD)	SEE NB	FS2 (MOD)	FS2 (MOD)	FS2 (MOD)	FG-1A (MOD)	FS2 (MOD)	SEE NB	FS2	
GUY ANCHOR TYPE	DGA-1	-	SEE NB	-	-	-	DGA-1	-	SEE NB	-	
POLE TYPE - LENGTH	-	D3-28	-	D3-28	C3-28	T2-30	-	T2-30	-	C3-30	
POLE RAKE	-	0.5"-90°	-	1.0"-270°	0"-0°	0"-0°	-	0"-0°	-	0.5"-270°	
MESSANGER WIRE HEIGHT	-	18'-8" (FA) / 19'-6"	-	19'-0" (IR) / 20'-9" (OR)	19'-0" (OR) / 20'-9" (IR)	19'-10" / ANCHOR HEIGHT	-	20'-7"	-	21'-10"	
CONTACT WIRE HEIGHT	-	16'-8" (FA) / 15'-0"	-	15'-0" (IR) / 15'-9" (OR)	15'-9" (OR) / 15'-0" (IR)	15'-4" / 18'-4"	-	16'-1"	-	17'-0"	
CANTILEVER TYPE	-	CA-B1	-	CA-B1 (IR) / CA-C1 (OR)	CA-C1 (OR) / CA-A1 (IR)	CA-B1	-	CA-A2	-	CA-B1	
HANGER SET	HS-160	-	-	-	SEE OCS PROFILES (PD260 SERIES)					-	-
JUMPER TYPE	-	TYPE C	-	TYPE C (IR)	TYPE C (IR), TYPE F3 (IR)	TYPE C	-	TYPE C, TYPE F3	-	TYPE C, TYPE F3	
MISCELLANEOUS	DG-1	FT-01, (2) BH-01, FBA-02	-	BT-03, IS-C1 (OR), IS-M1 (OR)	BT-04, IS-C1 (OR), IS-M1 (OR)	CW-01, BT-03, FBA-02	DG-1	(2) BH-01, FBA-02, FSA-01	-	(2) BH-01, PG-01	
MISCELLANEOUS	-	FSA-01, PG-1	-	FBA-02, FSA-01, PG-1	FBA-02, FSA-01, IS-F1, PG-1	FSA-01, PG-1	-	KN-F1, PG-1	-	FBA-02, FSA-01	

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NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



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DESIGNED: G. KOLA  
CHECKED: P. YAVARI  
DRAWN: P. WHITE  
CADD FILE NAME: 801PC013.dwg

**Santa Clara Valley Transportation Authority**

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ENGINEERS / SURVEYORS / PLANNERS

SCALE: 1"=40'  
SUBMITTAL DATE: 5/15/2020  
BOARD APPROVAL DATE: 06/29/20

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
OVERHEAD CONTACT SYSTEM  
LAYOUT SCHEDULE  
1072+00 TO 1081+00

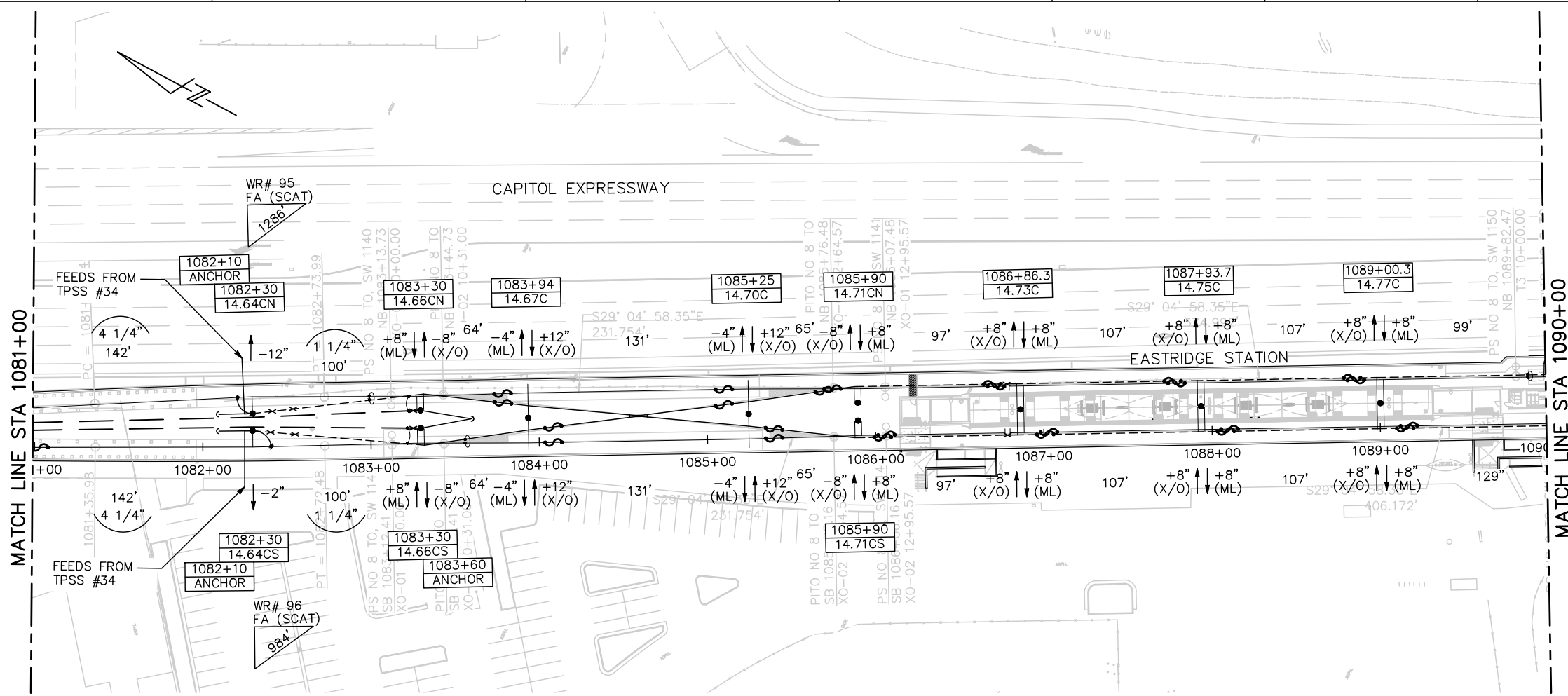
PCA NO: 000 CONTRACT NO: C801 FILE LOCATION: PROJECTWISE

DRAWING NO: PC013  
REVISION: C

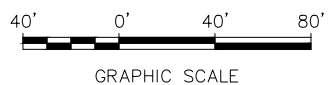


OCS LAYOUT SCHEDULE NORTHBOUND TRACK

STRUCTURE NO.	ANCHOR	14.64CN	14.66CN	ANCHOR	14.67C	14.70C	14.71CN	14.73C	14.75C	14.77C
STATIONING	1082+10 (SB)	1082+30 (SB)	1083+30 (SB)	SEE SB	SEE SB	SEE SB	1085+90 (SB)	SEE SB	SEE SB	SEE SB
Q OF POLE TO Q OF NB TRACK	9.000	9.000	9.000	14.542	14.542	14.542	9.000	14.542	14.542	14.542
FOUNDATION TYPE	FG-1A	FF2	FS2	SEE SB	SEE SB	SEE SB	FS2	SEE SB	SEE SB	SEE SB
GUY ANCHOR TYPE	DGA-1	-	-	DGA-1	-	-	-	-	-	-
POLE TYPE - LENGTH	-	D3F-30	D3-30	(NOTE 4)	SEE SB	SEE SB	D3-24	SEE SB	SEE SB	SEE SB
POLE RAKE	-	1.0"-270°	0.5"-90°	-	SEE SB	SEE SB	0.5"-270°	SEE SB	SEE SB	SEE SB
MESSANGER WIRE HEIGHT	-	21'-9" (FA) / 22'-3"	22'-6" (ML) / 21'-7" (X/O)	-	22'-6" (ML) / 22'-6" (X/O)	22'-6" (ML) / 22'-6" (X/O)	22'-6" (ML) / 21'-7" (X/O)	23'-9" (ML) / 22'-0" (X/O)	23'-9" (ML) / 22'-0" (X/O)	23'-9" (ML) / 22'-0" (X/O)
CONTACT WIRE HEIGHT	-	19'-9" (FA) / 17'-9"	18'-0" (ML) / 18'-1" (X/O)	-	18'-0" (ML) / 18'-1" (X/O)	18'-0" (ML) / 18'-1" (X/O)	18'-0" (ML) / 18'-1" (X/O)	18'-0" (ML) / 18'-9" (X/O)	18'-0" (ML) / 18'-9" (X/O)	18'-0" (ML) / 18'-9" (X/O)
CANTILEVER TYPE	-	CA-B1	CA-A2 (ML) / CA-B1H (X/O)	-	CA-T1	CA-T1	CA-A1 (ML) / CA-B1 (X/O)	CA-A1 (ML) / CA-C1 (X/O)	CA-A1 (ML) / CA-C1 (X/O)	CA-A1 (ML) / CA-C1 (X/O)
HANGER SET	-	-	HM-01B (ML) / HT-01B (X/O)	-	HM-02B (ML) / HT-02B (X/O)	HM-03B (ML) / HT-03B (X/O)	HM-04B (ML) / HT-04B (X/O)	HM-05B (ML) / HT-05B (X/O)	HM-06B (ML) / HT-06B (X/O)	HM-07B (ML)
JUMPER TYPE	-	TYPE F1, TYPE F3	TYPE B	-	TYPE C (ML) / TYPE C (X/O)	TYPE C (ML) / TYPE C (X/O)	TYPE C (ML) / TYPE C (X/O)	TYPE C (ML) / TYPE C (OX)	TYPE C (ML) / TYPE C (OX)	TYPE C (ML) / TYPE C (OX)
MISCELLANEOUS	DG-1	FT-01, (2) BH-01, SU-01	BT-02, PG-1	-	-	-	BT-02	IS-C1, IS-M1, SI-01 (ML)	-	-
MISCELLANEOUS	-	PG-1, FBA-01, FSA-01	PFT-01 (27'-0")	-	-	-	PG-1	-	-	-



- NOTES:**
- FOR ABBREVIATIONS, LEGEND, AND GENERAL NOTES SEE DWGS PG001, PG002, AND PG003.
  - FOR CROSSOVER ARRANGEMENT DETAILS SEE DWG PD254.
  - FOR TYPICAL OCS STRUCTURE AT GRADE SEE DWG PD101.
  - DOWN GUY ASSEMBLIES SHALL BE CONNECTED TO THE SAME HOLE (CLOSEST TO STRUCTURES) ON THE ANCHOR PLATE OF FOUNDATION TYPE FG-1B.

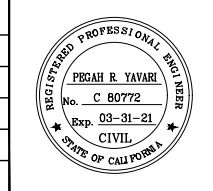


OCS LAYOUT SCHEDULE SOUTHBOUND TRACK

STRUCTURE NO.	ANCHOR	14.64CS	14.66CS	ANCHOR	14.67C	14.70C	14.71CS	14.73C	14.75C	14.77C
STATIONING	1082+10	1082+30	1083+30	1083+60	1083+94	1085+25	1085+90	1086+86.3	1087+93.7	1089+00.3
Q OF POLE TO Q OF SB TRACK	9.500	9.500	9.500	14.542	14.542	14.542	9.500	14.542	14.542	14.542
FOUNDATION TYPE	FG-1A	FF2	FS2	FG-1B	FS2	FS2	FS2	FS2	FS2	FS2
GUY ANCHOR TYPE	DGA-1	-	-	DGA-1	-	-	-	-	-	-
POLE TYPE - LENGTH	-	D3F-30	D3-30	(NOTE 4)	C3-30	C3-30	D3-24	C3-24-P	C3-24-P	C3-24-P
POLE RAKE	-	1.0"-90°	0.5"-270°	-	0°-0°	0°-0°	0.5"-90°	0°-0°	0°-0°	0°-0°
MESSANGER WIRE HEIGHT	-	21'-9" (FA) / 22'-3"	22'-6" (ML) / 21'-7" (X/O)	-	22'-6" (ML) / 22'-6" (X/O)	22'-6" (ML) / 22'-6" (X/O)	22'-6" (ML) / 21'-7" (X/O)	23'-9" (ML) / 22'-0" (X/O)	23'-9" (ML) / 22'-0" (X/O)	23'-9" (ML) / 22'-0" (X/O)
CONTACT WIRE HEIGHT	-	19'-9" (FA) / 17'-9"	18'-0" (ML) / 18'-1" (X/O)	-	18'-0" (ML) / 18'-1" (X/O)	18'-0" (ML) / 18'-1" (X/O)	18'-0" (ML) / 18'-1" (X/O)	18'-0" (ML) / 18'-9" (X/O)	18'-0" (ML) / 18'-9" (X/O)	18'-0" (ML) / 18'-9" (X/O)
CANTILEVER TYPE	-	CA-B1	CA-A1 (ML) / CA-B1H (X/O)	-	CA-T1	CA-T1	CA-A1 (ML) / CA-B1 (X/O)	CA-A1 (ML) / CA-C1 (XO)	CA-A1 (ML) / CA-C1 (XO)	CA-A1 (ML) / CA-C1 (XO)
HANGER SET	-	-	HM-01A (ML) / HT-01A (X/O)	-	HM-02A (ML) / HT-02A (XO)	HM-03A (ML) / HT-03A (XO)	HM-04A (ML) / HT-04A (X/O)	HM-05A (ML) / HT-05A (X/O)	HM-06A (ML) / HT-06A (X/O)	HM-07A (ML)
JUMPER TYPE	-	TYPE F1, TYPE F3	TYPE B	-	TYPE C (ML) / TYPE C (X/O)	TYPE C (ML) / TYPE C (X/O)	TYPE C (ML) / TYPE C (X/O)	TYPE C (ML) / TYPE C (X/O)	TYPE C (ML) / TYPE C (X/O)	TYPE C (ML) / TYPE C (X/O)
MISCELLANEOUS	DG-1	FT-01, (2) BH-01, SU-01	BT-02, PG-1	DG-1	KN-C1, KN-C2, KN-M1, KN-M2	(4) BH-01	BT-02	IS-C1, IS-M1, BT-04	BT-04	BT-04
MISCELLANEOUS	-	PG-1, FBA-01, FSA-01	PFT-01 (27'-0")	-	(4) BH-01, PG-1	PG-1	PG-1	SI-01 (ML), PG-1	PG-1	PG-1

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C	06/20	95% SUBMITTAL SET
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**Santa Clara Valley Transportation Authority**

**BKF 100+ YEARS**  
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CAISO FILE DATE: 5/15/2020  
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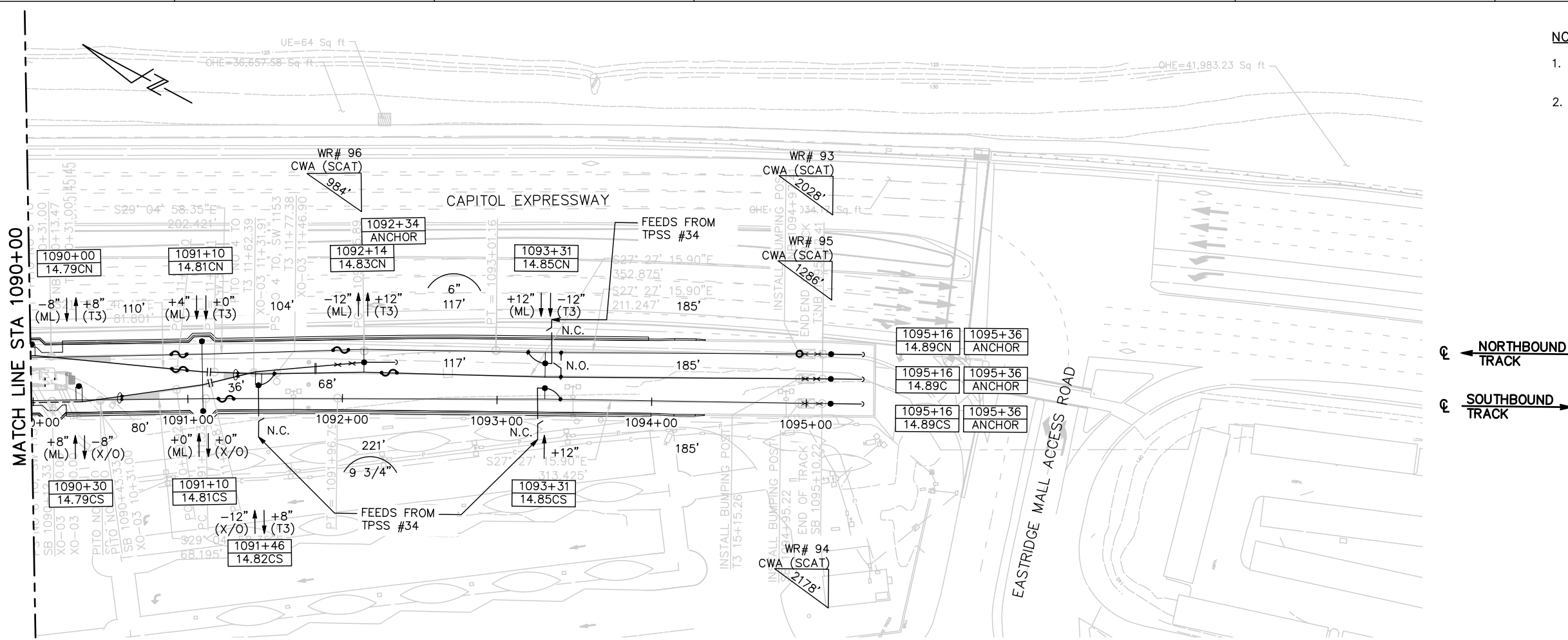
EASTRIDGE TO BART REGIONAL CONNECTOR  
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LAYOUT SCHEDULE  
1081+00 TO 1090+00

PCA NO: 000 CONTRACT NO: C801 FILE LOCATION: PROJECTWISE

DRAWING NO: PC014  
REVISION: C

OCS LAYOUT SCHEDULE NORTHBOUND TRACK

STRUCTURE NO.	14.79CN	14.81CN	14.83CN	ANCHOR	14.85CN	14.89CN	ANCHOR
STATIONING	1090+00 (SB)	1091+10 (SB)	1092+14 (SB)	1092+34 (SB)	1093+31 (SB)	1095+16 (SB)	1095+36 (SB)
☐ OF POLE TO ☐ OF NB TRACK	8.000	8.000	7.392, 7.392 (T3)	7.644, 7.644 (T3)	8.000, 8.000 (T3)	0.000	0.000
FOUNDATION TYPE	FS2	FS3	FS2	FG-1A	FF2	FS2	FG-1A
GUY ANCHOR TYPE	-	-	-	DGA-1	-	-	DGA-01
POLE TYPE - LENGTH	D3-24	E3-30	T2-24	-	C3F-24	T2-24	-
POLE RAKE	2.0"-90°	3.5"-90°	1.0"-90°	-	0.5"-270°	0"-0°	-
MESSANGER WIRE HEIGHT	21'-7" (ML) / 22'-6" (T3)	22'-6" (ML) / 22'-6" (T3)	22'-6" (ML) / 22'-6" (T3)	ANCHOR HEIGHT	22'-6" (ML) / 22'-6" (T3)	ANCHOR HEIGHT	-
CONTACT WIRE HEIGHT	18'-0" (ML) / 18'-1" (T3)	18'-0" (ML) / 18'-0" (T3)	18'-0" (ML) / 18'-0" (T3)	21'-0"	18'-0" (ML) / 18'-0" (T3)	20'-0"	-
CANTILEVER TYPE	CA-B1 (ML) / CA-A2 (T3)	SEE SB	CA-B1 (ML) / CA-A2 (T3)	-	CA-A1 (ML) / CA-B1 (T3)	-	-
HANGER SET	HT-07B (X/O)   HM-08B (ML) / HT-08B (T3)	HS-105 (ML) / HT-09B (T3)	HS-120 (ML) / HS-120 (T3)	HTS-185	-	-	-
JUMPER TYPE	TYPE B	TYPE C (ML) / TYPE C (T3)	TYPE C (ML) / TYPE C (T3)	-	TYPE F2 (ML) / TYPE BP2 (T3)	-	-
MISCELLANEOUS	BT-02, PG-1	SI-01 (T3), PG-1	CW-01, (2) BH-01, PG-1	DG-1	DS-01, BDS-01, (2) SU-01	CW-01, PG-1	DG-1
SPAN WIRE ATTACHMENT HEIGHT	-	28.7/23.8/19.0	-	-	(2) BH-01, PG-1	-	-



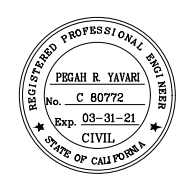
- NOTES:**
- FOR ABBREVIATIONS, LEGEND, AND GENERAL NOTES SEE DWGS PG001, PG002, AND PG003.
  - FOR TYPICAL OCS STRUCTURE AT GRADE SEE DWG PD101.

OCS LAYOUT SCHEDULE SOUTHBOUND TRACK

STRUCTURE NO.	14.79CS	14.81CS	14.82CS	14.85CS	14.89CS	ANCHOR	14.89C	ANCHOR
STATIONING	1090+30	1091+10	1091+46	1093+31	1095+16	1095+36	1095+16	1095+36
☐ OF POLE TO ☐ OF SB TRACK	9.500	8.000	8.218, 8.218 (T3)	8.000	0.000	0.000	16.000	16.000
FOUNDATION TYPE	FS2	FS3	FF2	FF2	FS2	FG-1A	FS2	FG-1A
GUY ANCHOR TYPE	-	-	-	-	-	DGA-1	-	DGA-1
POLE TYPE - LENGTH	D3-24	E3-30	D3F-24	C3F-24	T2-24	T2-24	T2-24	T2-24
POLE RAKE	0.5"-270°	4.0"-270°	0.5"-90°	1.0"-90°	0"-0°	0"-0°	0"-0°	-
MESSANGER WIRE HEIGHT	22'-6" (ML) / 21'-7" (X/O)	22'-6" (ML) / 22'-6" (X/O)	21'-7" (X/O) / 22'-6" (T3)	22'-6"	ANCHOR HEIGHT	ANCHOR HEIGHT	ANCHOR HEIGHT	-
CONTACT WIRE HEIGHT	18'-0" (ML) / 18'-1" (X/O)	18'-0" (ML) / 18'-1" (X/O)	18'-1" (X/O) / 18'-0" (T3)	18'-0"	20'-0"	20'-0"	20'-0"	-
CANTILEVER TYPE	CA-A1 (ML) / CA-B1 (X/O)	HD-01	CA-B1 (X/O) / CA-A2 (T3)	CA-A1	-	-	-	-
HANGER SET	HT-07A (X/O)   HM-08A (ML) / HT-08A (X/O)	HS-220 (ML) / HT-09A (X/O) / HT-09B & HS-70 (T3)	HTS-185 (ML) / HTS-185 (T3)	-	-	-	-	-
JUMPER TYPE	TYPE B	TYPE C (ML)	TYPE B / TYPE F2 (T3)	TYPE F2	-	-	-	-
MISCELLANEOUS	BT-02, PG-1	SI-01 (X/O), PG-1	DS-01, SU-01, BT-02, PG-1	DS-01, SU-01, (2) BH-01, PG-1	CW-01, PG-1	DG-1	CW-01, PG-1	DG-1
SPAN WIRE ATTACHMENT HEIGHT	-	28.0'/23.8'/19.0'	-	-	-	-	-	-

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NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



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DRAWN: P. WHITE  
CADD FILE NAME: 801PC015.dwg

**Santa Clara Valley Transportation Authority**

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CAISO FILE DATE: 5/15/2020  
SCALE: 1"=40'  
SUBMITTAL DATE: 06/29/20  
BOARD APPROVAL DATE:

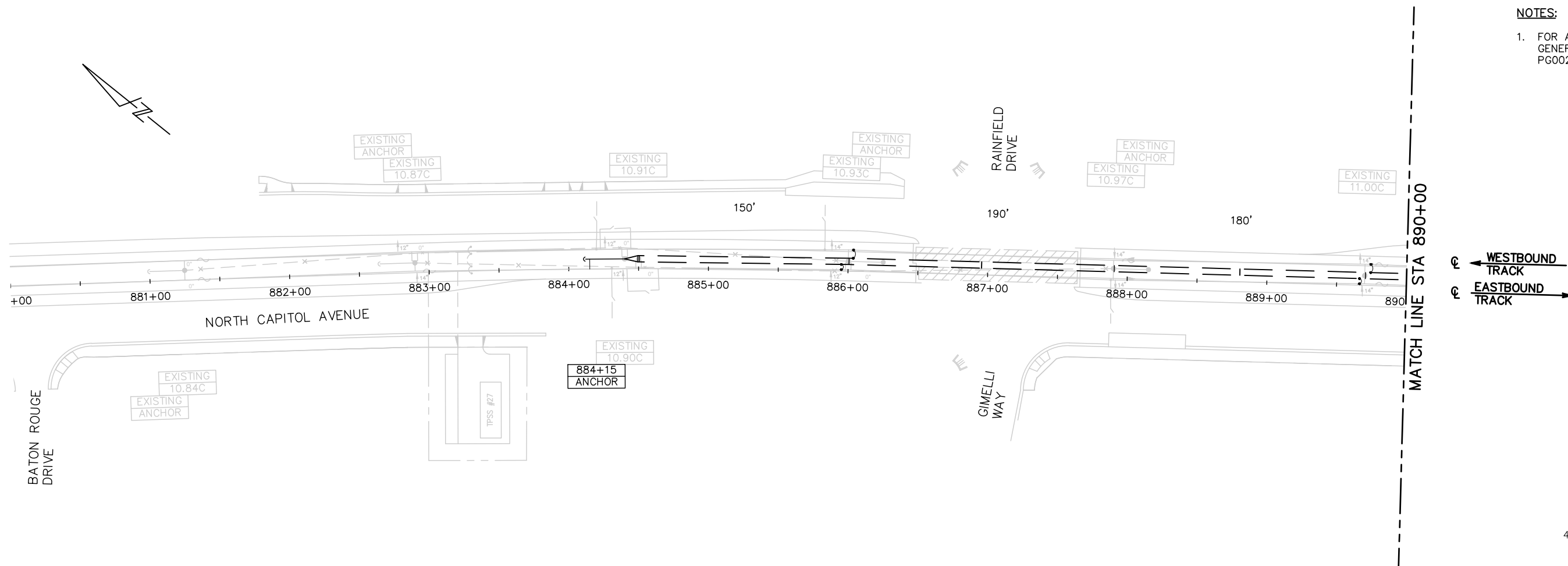
EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
OVERHEAD CONTACT SYSTEM  
LAYOUT SCHEDULE  
1090+00 TO 1096+00

PCA NO.: 000  
CONTRACT NO.: C801  
FILE LOCATION: PROJECTWISE

SHEET OF: PC015  
REVISION: C

OCS PARALLEL FEEDER 27-28 LAYOUT SCHEDULE NORTHBOUND TRACK

STRUCTURE NO.	ANCHOR	10.84C	ANCHOR	10.87C	ANCHOR	10.90C	10.91C	10.93C	ANCHOR	10.97C	ANCHOR	11.00C
STATIONING	EXISTING	EXISTING	EXISTING	EXISTING	SEE EB	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING
CL OF POLE TO CL OF WB TRACK	EXISTING	EXISTING	EXISTING	EXISTING	7.000	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING
FOUNDATION TYPE	EXISTING	EXISTING	EXISTING	EXISTING	SEE EB	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING
GUY ANCHOR TYPE	EXISTING	-	EXISTING	-	SEE EB	-	-	-	EXISTING	-	EXISTING	-
POLE TYPE - LENGTH	-	EXISTING	-	EXISTING	-	SEE EB	SEE EB	SEE EB	-	SEE EB	-	SEE EB
POLE RAKE	-	EXISTING	-	EXISTING	-	EXISTING	EXISTING	EXISTING	-	EXISTING	-	EXISTING
MESSANGER WIRE HEIGHT	-	EXISTING	-	EXISTING	-	EXISTING	EXISTING	EXISTING	-	EXISTING	-	EXISTING
CONTACT WIRE HEIGHT	-	EXISTING	-	EXISTING	-	EXISTING	EXISTING	EXISTING	-	EXISTING	-	EXISTING
CANTILEVER TYPE	-	EXISTING	-	EXISTING	-	EXISTING	EXISTING	EXISTING	-	EXISTING	-	EXISTING
HANGER SET	-	EXISTING	-	EXISTING	-	EXISTING	EXISTING	EXISTING	-	EXISTING	-	EXISTING
JUMPER TYPE	-	EXISTING	-	EXISTING	-	EXISTING	EXISTING	TYPE F3	-	EXISTING	-	TYPE F3
MISCELLANEOUS	EXISTING	EXISTING	EXISTING	EXISTING	SEE EB	HG-01	PFT-02 (26'-6")	FSA-01	EXISTING	FSA-01	EXISTING	FSA-01



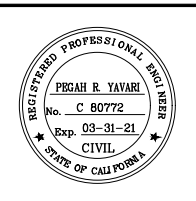
**NOTES:**  
 1. FOR ABBREVIATIONS, LEGEND AND GENERAL NOTES SEE DWGS PG001, PG002 AND PG003.

OCS PARALLEL FEEDER 27-28 LAYOUT SCHEDULE SOUTHBOUND TRACK

STRUCTURE NO.	ANCHOR	10.84C	ANCHOR	10.87C	ANCHOR	10.90C	10.91C	10.93C	ANCHOR	10.97C	ANCHOR	11.00C
STATIONING	EXISTING	EXISTING	EXISTING	EXISTING	884+12	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING
CL OF POLE TO CL OF EB TRACK	EXISTING	EXISTING	EXISTING	EXISTING	7.000	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING
FOUNDATION TYPE	EXISTING	EXISTING	EXISTING	EXISTING	FG-1B	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING
GUY ANCHOR TYPE	EXISTING	-	EXISTING	-	DGA-2	-	-	-	EXISTING	-	EXISTING	-
POLE TYPE - LENGTH	-	EXISTING	-	EXISTING	-	PE-01A-4	PE-01A-4	PE-01A-6	-	PE-01A-6	-	PE-01B-7
POLE RAKE	-	EXISTING	-	EXISTING	-	EXISTING	EXISTING	EXISTING	-	EXISTING	-	EXISTING
MESSANGER WIRE HEIGHT	-	EXISTING	-	EXISTING	-	EXISTING	EXISTING	EXISTING	-	EXISTING	-	EXISTING
CONTACT WIRE HEIGHT	-	EXISTING	-	EXISTING	-	EXISTING	EXISTING	EXISTING	-	EXISTING	-	EXISTING
CANTILEVER TYPE	-	EXISTING	-	EXISTING	-	EXISTING	EXISTING	EXISTING	-	EXISTING	-	EXISTING
HANGER SET	-	EXISTING	-	EXISTING	-	EXISTING	EXISTING	EXISTING	-	EXISTING	-	EXISTING
JUMPER TYPE	-	EXISTING	-	EXISTING	-	EXISTING	EXISTING	TYPE F3	-	EXISTING	-	TYPE F3
MISCELLANEOUS	EXISTING	EXISTING	EXISTING	EXISTING	DG-1	HG-01, (2) BH-01A	FTA-01, (2) BH-01A	FBA-02, FSA-01, KN-F1	EXISTING	FBA-02, FSA-01, KN-F1	EXISTING	FBA-02, FSA-01, KN-F1
MISCELLANEOUS							PFT-02 (26'-6")	(2) BH-01A		(2) BH-01A		

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NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	11/19	35% SUBMITTAL SET



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 CHECKED: P. YAVARI  
 DRAWN: G. KOLA  
 CADD FILE NAME: 801PC101.dwg

**Santa Clara Valley Transportation Authority**

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CAAD FILE DATE: 5/15/2020  
 SUBMITTAL DATE: 06/29/20  
 SCALE: 1"=40'  
 BOARD APPROVAL DATE:

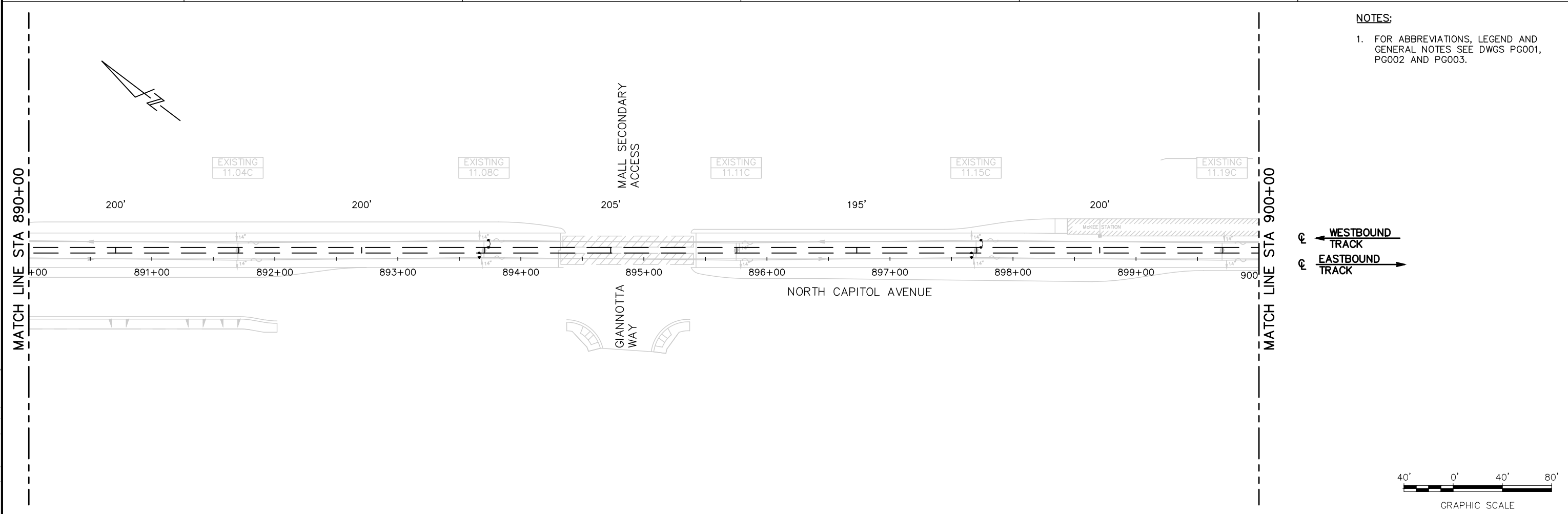
EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 OCS PARALLEL FEEDERS 27-28  
 LAYOUT SCHEDULE  
 880+00 TO 890+00

PCA NO.: 000  
 CONTRACT NO.: C801  
 FILE LOCATION: PROJECTWISE

SHEET OF: PC101  
 REVISION: B

OCS PARALLEL FEEDER 27-28 LAYOUT SCHEDULE NORTHBOUND TRACK

STRUCTURE NO.	11.04C	11.08C	11.11C	11.15C	11.19C
STATIONING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING
☐ OF POLE TO ☐ OF WB TRACK	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING
FOUNDATION TYPE	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING
GUY ANCHOR TYPE	-	-	-	-	-
POLE TYPE - LENGTH	SEE EB	SEE EB	SEE EB	SEE EB	SEE EB
POLE RAKE	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING
MESSENGER WIRE HEIGHT	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING
CONTACT WIRE HEIGHT	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING
CANTILEVER TYPE	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING
HANGER SET	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING
JUMPER TYPE	EXISTING	TYPE F3	EXISTING	TYPE F3	EXISTING
MISCELLANEOUS	FSA-01	FSA-01	FSA-01	FSA-01	FSA-01



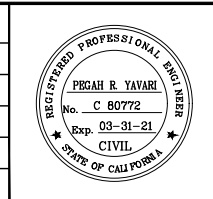
**NOTES:**  
 1. FOR ABBREVIATIONS, LEGEND AND GENERAL NOTES SEE DWGS PG001, PG002 AND PG003.

OCS PARALLEL FEEDER 27-28 LAYOUT SCHEDULE SOUTHBOUND TRACK

STRUCTURE NO.	11.04C	11.08C	11.11C	11.15C	11.19C
STATIONING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING
☐ OF POLE TO ☐ OF EB TRACK	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING
FOUNDATION TYPE	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING
GUY ANCHOR TYPE	-	-	-	-	-
POLE TYPE - LENGTH	PE-01B-7	PE-01B-7	PE-01B-7	PE-01B-7	PE-01B-7
POLE RAKE	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING
MESSENGER WIRE HEIGHT	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING
CONTACT WIRE HEIGHT	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING
CANTILEVER TYPE	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING
HANGER SET	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING
JUMPER TYPE	EXISTING	TYPE F3	EXISTING	TYPE F3	EXISTING
MISCELLANEOUS	FBA-02, FSA-01, KN-F1	FBA-02, FSA-01, KN-F1	FBA-02, FSA-01, KN-F1	FBA-02, FSA-01, KN-F1	FBA-02, FSA-01, KN-F1

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NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	11/19	35% SUBMITTAL SET



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 CADD FILE NAME: 801PC102.dwg

**Santa Clara Valley Transportation Authority**

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 CADD FILE DATE: 5/15/2020  
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 BOARD APPROVAL DATE:

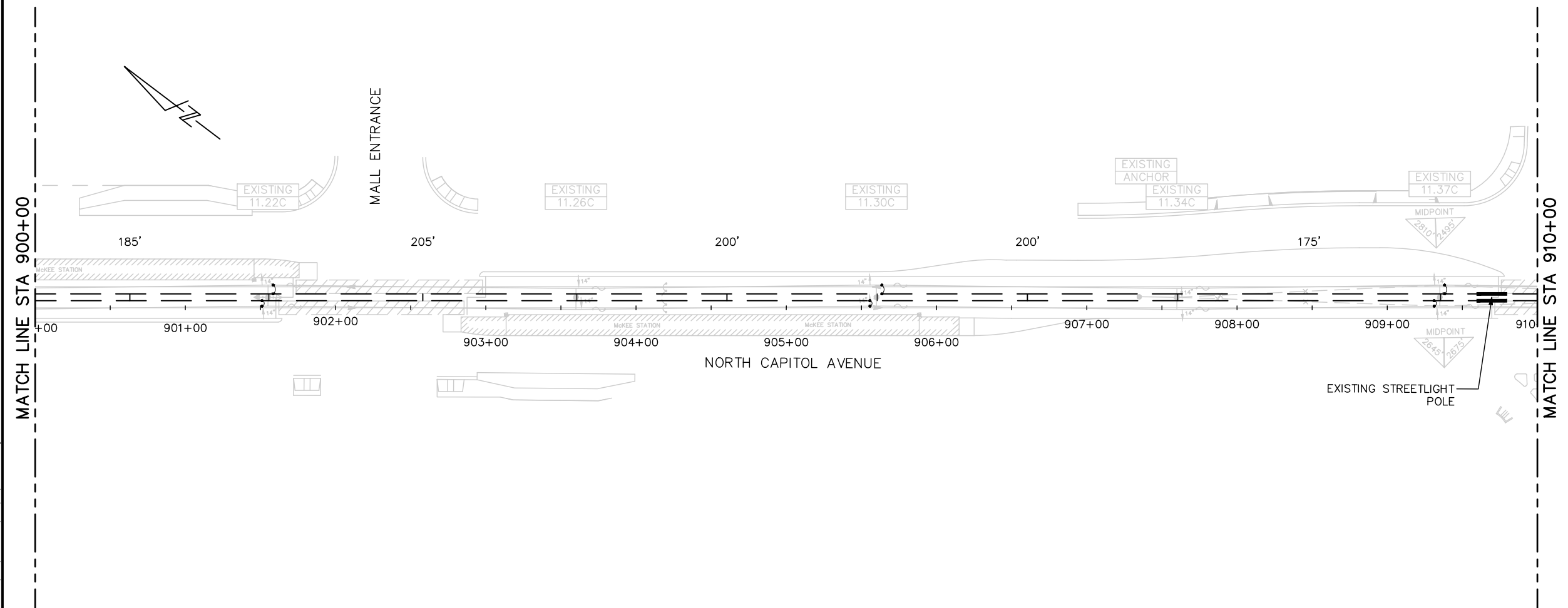
EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 OCS PARALLEL FEEDERS 27-28  
 LAYOUT SCHEDULE  
 890+00 TO 900+00

PCA NO.: 000  
 CONTRACT NO.: C801  
 FILE LOCATION: PROJECTWISE

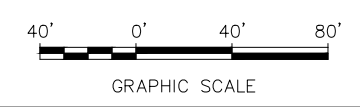
SHEET OF: PC102  
 REVISION: B

OCS PARALLEL FEEDER 27-28 LAYOUT SCHEDULE NORTHBOUND TRACK

STRUCTURE NO.	11.22C	11.26C	11.30C	ANCHOR	11.34C	11.37C
STATIONING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING
☉ OF POLE TO ☉ OF WB TRACK	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING
FOUNDATION TYPE	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING
GUY ANCHOR TYPE	-	-	-	EXISTING	-	-
POLE TYPE - LENGTH	SEE EB	SEE EB	SEE EB	-	SEE EB	SEE EB
POLE RAKE	EXISTING	EXISTING	EXISTING	-	EXISTING	EXISTING
MESSENGER WIRE HEIGHT	EXISTING	EXISTING	EXISTING	-	EXISTING	EXISTING
CONTACT WIRE HEIGHT	EXISTING	EXISTING	EXISTING	-	EXISTING	EXISTING
CANTILEVER TYPE	EXISTING	EXISTING	EXISTING	-	EXISTING	EXISTING
HANGER SET	EXISTING	EXISTING	EXISTING	-	EXISTING	EXISTING
JUMPER TYPE	TYPE F3	EXISTING	TYPE F3	-	EXISTING	TYPE F3
MISCELLANEOUS	FSA-01	FSA-01	FSA-01	EXISTING	FSA-01	FSA-01



**NOTES:**  
 1. FOR ABBREVIATIONS, LEGEND AND GENERAL NOTES SEE DWGS PG001, PG002 AND PG003.

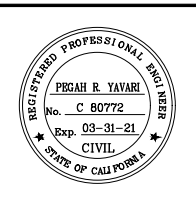


OCS PARALLEL FEEDER 27-28 LAYOUT SCHEDULE SOUTHBOUND TRACK

STRUCTURE NO.	11.22C	11.26C	11.30C	ANCHOR	11.34C	11.37C
STATIONING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING
☉ OF POLE TO ☉ OF EB TRACK	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING
FOUNDATION TYPE	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING
GUY ANCHOR TYPE	-	-	-	EXISTING	-	-
POLE TYPE - LENGTH	PE-01B-7	PE-01B-7	PE-01B-7	-	PE-02-6	PE-01C-7
POLE RAKE	EXISTING	EXISTING	EXISTING	-	EXISTING	EXISTING
MESSENGER WIRE HEIGHT	EXISTING	EXISTING	EXISTING	-	EXISTING	EXISTING
CONTACT WIRE HEIGHT	EXISTING	EXISTING	EXISTING	-	EXISTING	EXISTING
CANTILEVER TYPE	EXISTING	EXISTING	EXISTING	-	EXISTING	EXISTING
HANGER SET	EXISTING	EXISTING	EXISTING	-	EXISTING	EXISTING
JUMPER TYPE	TYPE F3	EXISTING	TYPE F3	-	EXISTING	TYPE F3
MISCELLANEOUS	FBA-02, FSA-01, KN-F1	FBA-02, FSA-01, KN-F1	FBA-02, FSA-01, KN-F1	EXISTING	FBA-02, FSA-01	FBA-02, FSA-01, KN-F1, WAI-01

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 CADD FILE NAME: 801PC103.dwg

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 SUBMITTAL DATE: 06/29/20  
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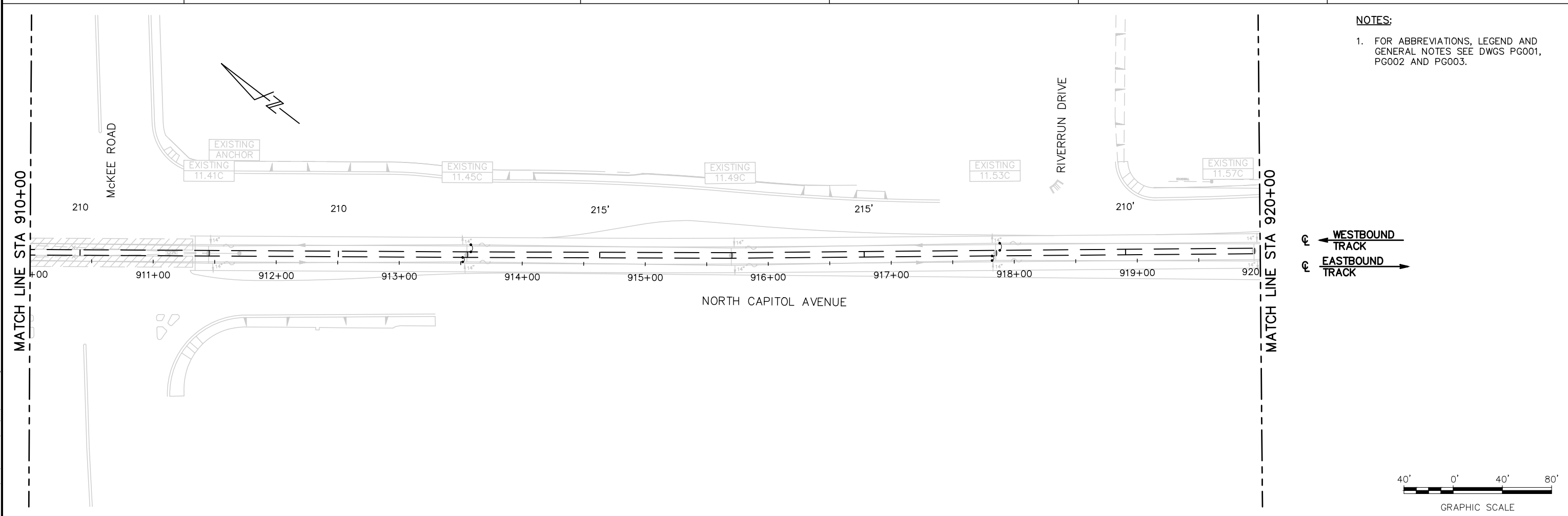
EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 OCS PARALLEL FEEDERS 27-28  
 LAYOUT SCHEDULE  
 900+00 TO 910+00

PCA NO.: 000  
 CONTRACT NO.: C801  
 FILE LOCATION: PROJECTWISE

SHEET OF: PC103  
 REVISION: B

OCS PARALLEL FEEDER 27-28 LAYOUT SCHEDULE NORTHBOUND TRACK

STRUCTURE NO.	11.41C	ANCHOR	11.45C	11.49C	11.53C	11.57C
STATIONING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING
☐ OF POLE TO ☐ OF WB TRACK	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING
FOUNDATION TYPE	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING
GUY ANCHOR TYPE	-	EXISTING	-	-	-	-
POLE TYPE - LENGTH	SEE EB	-	SEE EB	SEE EB	SEE EB	SEE EB
POLE RAKE	EXISTING	-	EXISTING	EXISTING	EXISTING	EXISTING
MESSENGER WIRE HEIGHT	EXISTING	-	EXISTING	EXISTING	EXISTING	EXISTING
CONTACT WIRE HEIGHT	EXISTING	-	EXISTING	EXISTING	EXISTING	EXISTING
CANTILEVER TYPE	EXISTING	-	EXISTING	EXISTING	EXISTING	EXISTING
HANGER SET	EXISTING	-	EXISTING	EXISTING	EXISTING	EXISTING
JUMPER TYPE	EXISTING	-	TYPE F3	EXISTING	TYPE F3	EXISTING
MISCELLANEOUS	FSA-01	EXISTING	FSA-01	FSA-01	FSA-01	FSA-01

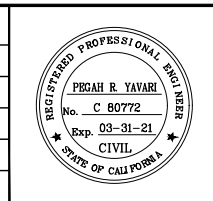


OCS PARALLEL FEEDER 27-28 LAYOUT SCHEDULE SOUTHBOUND TRACK

STRUCTURE NO.	11.41C	ANCHOR	11.45C	11.49C	11.53C	11.57C
STATIONING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING
☐ OF POLE TO ☐ OF EB TRACK	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING
FOUNDATION TYPE	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING
GUY ANCHOR TYPE	-	EXISTING	-	-	-	-
POLE TYPE - LENGTH	EXISTING	-	PE-01B-7	PE-01B-7	PE-01B-7	PE-01B-7
POLE RAKE	EXISTING	-	EXISTING	EXISTING	EXISTING	EXISTING
MESSENGER WIRE HEIGHT	EXISTING	-	EXISTING	EXISTING	EXISTING	EXISTING
CONTACT WIRE HEIGHT	EXISTING	-	EXISTING	EXISTING	EXISTING	EXISTING
CANTILEVER TYPE	EXISTING	-	EXISTING	EXISTING	EXISTING	EXISTING
HANGER SET	EXISTING	-	EXISTING	EXISTING	EXISTING	EXISTING
JUMPER TYPE	EXISTING	-	TYPE F3	EXISTING	TYPE F3	EXISTING
MISCELLANEOUS	FBA-02, FSA-01, KN-F1	EXISTING	FBA-02, FSA-01, KN-F1	FBA-02, FSA-01, KN-F1	FBA-02, FSA-01, KN-F1	FBA-02, FSA-01, KN-F1

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NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	11/19	35% SUBMITTAL SET



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 DRAWN: G. KOLA  
 CADD FILE NAME: 801PC104.dwg

**Santa Clara Valley Transportation Authority**

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 SCALE: 1"=40'  
 SUBMITTAL DATE: 06/29/20  
 BOARD APPROVAL DATE:

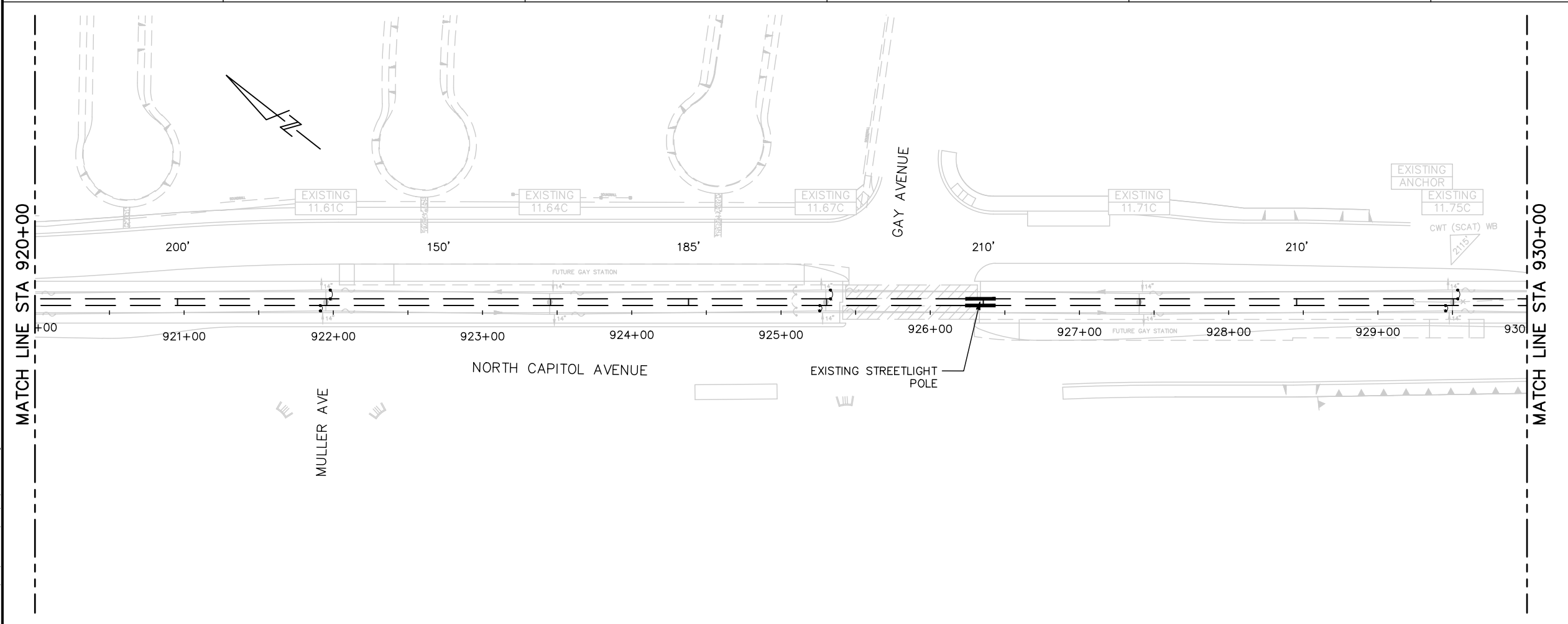
EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 OCS PARALLEL FEEDERS 27-28  
 LAYOUT SCHEDULE  
 910+00 TO 920+00

PCA NO.: 000  
 CONTRACT NO.: C801  
 FILE LOCATION: PROJECTWISE

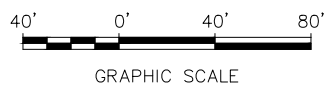
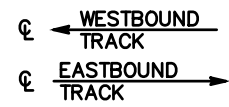
SHEET OF: PC104  
 REVISION: B

OCS PARALLEL FEEDER 27-28 LAYOUT SCHEDULE NORTHBOUND TRACK

STRUCTURE NO.	11.61C	11.64C	11.67C	11.71C	ANCHOR	11.75C
STATIONING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING
☐ OF POLE TO ☐ OF WB TRACK	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING
FOUNDATION TYPE	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING
GUY ANCHOR TYPE	-	-	-	-	EXISTING	-
POLE TYPE - LENGTH	SEE EB	SEE EB	SEE EB	SEE EB	-	SEE EB
POLE RAKE	EXISTING	EXISTING	EXISTING	EXISTING	-	EXISTING
MESSENGER WIRE HEIGHT	EXISTING	EXISTING	EXISTING	EXISTING	-	EXISTING
CONTACT WIRE HEIGHT	EXISTING	EXISTING	EXISTING	EXISTING	-	EXISTING
CANTILEVER TYPE	EXISTING	EXISTING	EXISTING	EXISTING	-	EXISTING
HANGER SET	EXISTING	EXISTING	EXISTING	EXISTING	-	EXISTING
JUMPER TYPE	TYPE F3	EXISTING	TYPE F3	EXISTING	-	TYPE F3
MISCELLANEOUS	FSA-01	FSA-01	FSA-01	FSA-01	EXISTING	FSA-01



**NOTES:**  
 1. FOR ABBREVIATIONS, LEGEND AND GENERAL NOTES SEE DWGS PG001, PG002 AND PG003.

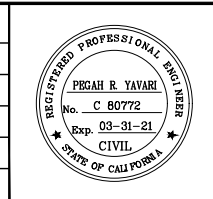


OCS PARALLEL FEEDER 27-28 LAYOUT SCHEDULE SOUTHBOUND TRACK

STRUCTURE NO.	11.61C	11.64C	11.67C	11.71C	ANCHOR	11.75C
STATIONING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING
☐ OF POLE TO ☐ OF EB TRACK	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING
FOUNDATION TYPE	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING
GUY ANCHOR TYPE	-	-	-	-	EXISTING	-
POLE TYPE - LENGTH	PE-01B-7	PE-01B-7	PE-01B-7	PE-01B-7	-	PE-03-8
POLE RAKE	EXISTING	EXISTING	EXISTING	EXISTING	-	EXISTING
MESSENGER WIRE HEIGHT	EXISTING	EXISTING	EXISTING	EXISTING	-	EXISTING
CONTACT WIRE HEIGHT	EXISTING	EXISTING	EXISTING	EXISTING	-	EXISTING
CANTILEVER TYPE	EXISTING	EXISTING	EXISTING	EXISTING	-	EXISTING
HANGER SET	EXISTING	EXISTING	EXISTING	EXISTING	-	EXISTING
JUMPER TYPE	TYPE F3	EXISTING	TYPE F3	EXISTING	-	TYPE F3
MISCELLANEOUS	FBA-02, FSA-01	FBA-02, FSA-01, KN-F1	FBA-02, FSA-01, KN-F1, WAI-01	FBA-02, FSA-01, KN-F1	EXISTING	FBA-02, FSA-01, KN-F1

g:\projects\2020\2-45pm\New\01\mch2\008\68891\_vdo\_capitol\_expressway\1r\_extensions\TECHPROD\OCS\TECHPROD\CAD\PC\801PC105.dwg  
 Jun 22, 2020 - 2:45pm

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	11/19	35% SUBMITTAL SET



**HNTB** HNTB Corporation  
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DESIGNED: G. KOLA  
 CHECKED: P. YAVARI  
 DRAWN: G. KOLA  
 CADD FILE NAME: 801PC105.dwg

**Santa Clara Valley Transportation Authority**

**BKF** 100+ YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

CAAD FILE DATE: 5/15/2020  
 SUBMITTAL DATE: 06/29/20  
 SCALE: 1"=40'  
 BOARD APPROVAL DATE:

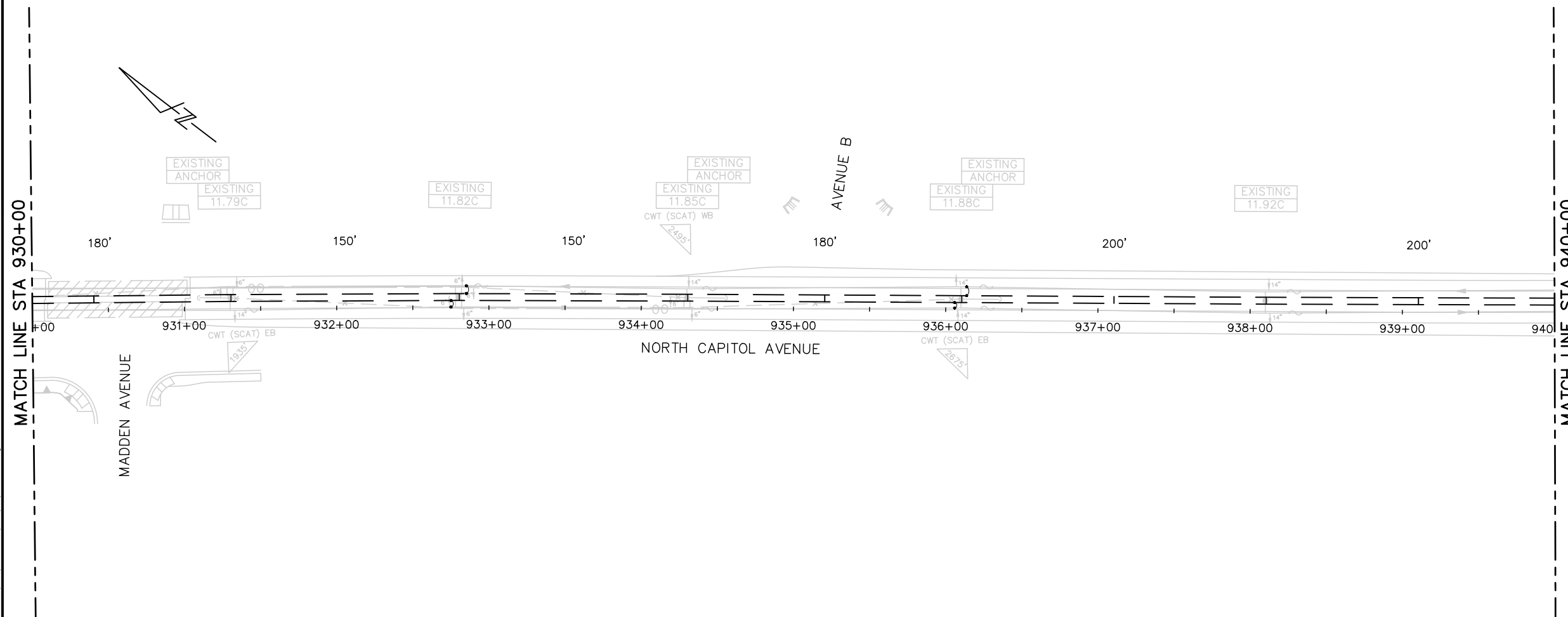
EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 OCS PARALLEL FEEDERS 27-28  
 LAYOUT SCHEDULE  
 920+00 TO 930+00

PCA NO.: 000  
 CONTRACT NO.: C801  
 FILE LOCATION: PROJECTWISE

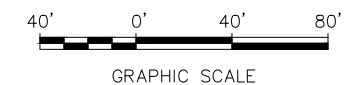
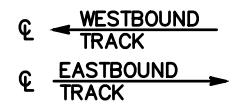
SHEET OF: PC105  
 REVISION: B

OCS PARALLEL FEEDER 27-28 LAYOUT SCHEDULE NORTHBOUND TRACK

STRUCTURE NO.	ANCHOR	11.79C	11.82C	11.85C	ANCHOR	11.88C	ANCHOR	11.92C
STATIONING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING
CL OF POLE TO CL OF WB TRACK	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING
FOUNDATION TYPE	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING
GUY ANCHOR TYPE	EXISTING	-	-	-	EXISTING	-	EXISTING	-
POLE TYPE - LENGTH	-	SEE EB	SEE EB	SEE EB	-	SEE EB	-	SEE EB
POLE RAKE	-	EXISTING	EXISTING	EXISTING	-	EXISTING	-	EXISTING
MESSENGER WIRE HEIGHT	-	EXISTING	EXISTING	EXISTING	-	EXISTING	-	EXISTING
CONTACT WIRE HEIGHT	-	EXISTING	EXISTING	EXISTING	-	EXISTING	-	EXISTING
CANTILEVER TYPE	-	EXISTING	EXISTING	EXISTING	-	EXISTING	-	EXISTING
HANGER SET	-	EXISTING	EXISTING	EXISTING	-	EXISTING	-	EXISTING
JUMPER TYPE	-	EXISTING	TYPE F3	EXISTING	-	TYPE F3	-	EXISTING
MISCELLANEOUS	EXISTING	FSA-01	FSA-01	FSA-01	EXISTING	FSA-01	EXISTING	FSA-01



**NOTES:**  
 1. FOR ABBREVIATIONS, LEGEND AND GENERAL NOTES SEE DWGS PG001, PG002 AND PG003.

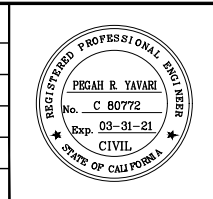


OCS PARALLEL FEEDER 27-28 LAYOUT SCHEDULE SOUTHBOUND TRACK

STRUCTURE NO.	ANCHOR	11.79C	11.82C	11.85C	ANCHOR	11.88C	ANCHOR	11.92C
STATIONING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING
CL OF POLE TO CL OF EB TRACK	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING
FOUNDATION TYPE	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING
GUY ANCHOR TYPE	EXISTING	-	-	-	EXISTING	-	EXISTING	-
POLE TYPE - LENGTH	-	PE-03-8	PE-01C-7	PE-03-8	-	PE-03-8	-	PE-01B-7
POLE RAKE	-	EXISTING	EXISTING	EXISTING	-	EXISTING	-	EXISTING
MESSENGER WIRE HEIGHT	-	EXISTING	EXISTING	EXISTING	-	EXISTING	-	EXISTING
CONTACT WIRE HEIGHT	-	EXISTING	EXISTING	EXISTING	-	EXISTING	-	EXISTING
CANTILEVER TYPE	-	EXISTING	EXISTING	EXISTING	-	EXISTING	-	EXISTING
HANGER SET	-	EXISTING	EXISTING	EXISTING	-	EXISTING	-	EXISTING
JUMPER TYPE	-	EXISTING	TYPE F3	EXISTING	-	TYPE F3	-	EXISTING
MISCELLANEOUS	EXISTING	FBA-02, FSA-01	FBA-02, FSA-01	FBA-02, FSA-01, KN-F1	EXISTING	FBA-02, FSA-01, KN-F1	EXISTING	FBA-02, FSA-01, KN-F1

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NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	11/19	35% SUBMITTAL SET



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 CHECKED: P. YAVARI  
 DRAWN: G. KOLA  
 CADD FILE NAME: 801PC106.dwg

**Santa Clara Valley Transportation Authority**

**BKF 100+ YEARS**  
 ENGINEERS / SURVEYORS / PLANNERS

APPROVED: [Signature]  
 CADD FILE DATE: 5/15/2020  
 SUBMITTAL DATE: 06/29/20  
 SCALE: 1"=40'  
 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 OCS PARALLEL FEEDERS 27-28  
 LAYOUT SCHEDULE  
 930+00 TO 940+00

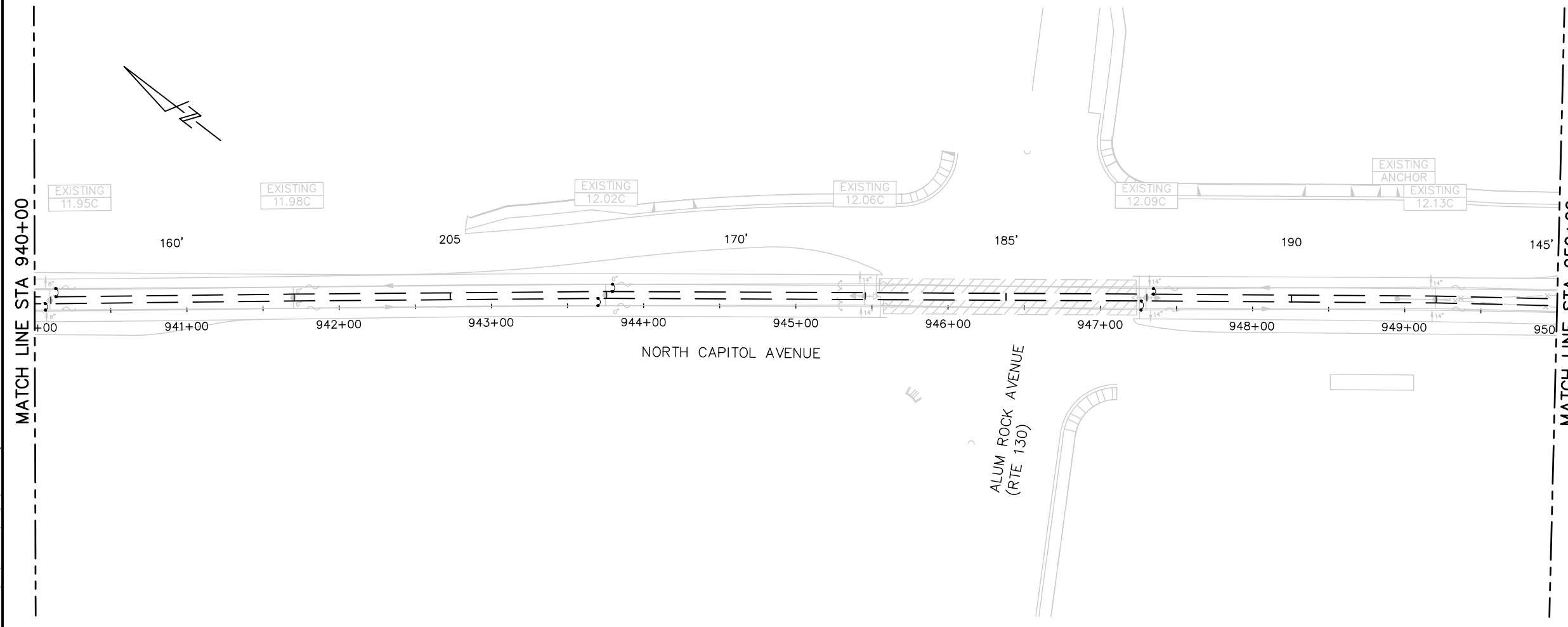
PCA NO.: 000  
 CONTRACT NO.: C801  
 FILE LOCATION: PROJECTWISE

SHEET OF: PC106  
 REVISION: B

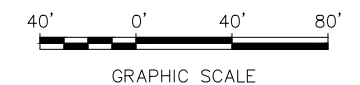
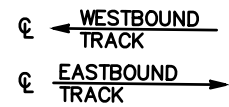


OCS PARALLEL FEEDER 27-28 LAYOUT SCHEDULE NORTHBOUND TRACK

STRUCTURE NO.	11.95C	11.98C	12.02C	12.06C	12.09C	ANCHOR	12.13C
STATIONING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING
CL OF POLE TO CL OF WB TRACK	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING
FOUNDATION TYPE	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING
GUY ANCHOR TYPE	-	-	-	-	-	EXISTING	-
POLE TYPE - LENGTH	SEE SB	SEE SB	SEE SB	SEE SB	SEE SB	-	SEE SB
POLE RAKE	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	-	EXISTING
MESSENGER WIRE HEIGHT	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	-	EXISTING
CONTACT WIRE HEIGHT	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	-	EXISTING
CANTILEVER TYPE	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	-	EXISTING
HANGER SET	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	-	EXISTING
JUMPER TYPE	TYPE F3	EXISTING	TYPE F3	EXISTING	TYPE F3	-	EXISTING
MISCELLANEOUS	FSA-01	FSA-01	FSA-01	FSA-01	FSA-01	EXISTING	FSA-01, PSA-01



NOTES:  
1. FOR ABBREVIATIONS, LEGEND AND GENERAL NOTES SEE DWGS PG001, PG002 AND PG003.

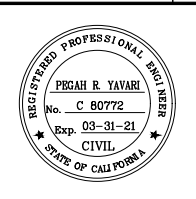


OCS PARALLEL FEEDER 27-28 LAYOUT SCHEDULE SOUTHBOUND TRACK

STRUCTURE NO.	11.95C	11.98C	12.02C	12.06C	12.09C	ANCHOR	12.13C
STATIONING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING
CL OF POLE TO CL OF SB TRACK	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING
FOUNDATION TYPE	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING
GUY ANCHOR TYPE	-	-	-	-	-	EXISTING	-
POLE TYPE - LENGTH	PE-01B-7	PE-01B-7	PE-01B-7	PE-01B-7	PE-01B-7	-	PE-02-6
POLE RAKE	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	-	EXISTING
MESSENGER WIRE HEIGHT	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	-	EXISTING
CONTACT WIRE HEIGHT	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	-	EXISTING
CANTILEVER TYPE	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	-	EXISTING
HANGER SET	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	-	EXISTING
JUMPER TYPE	TYPE F3	EXISTING	TYPE F3	EXISTING	TYPE F3	-	EXISTING
MISCELLANEOUS	FBA-02, FSA-01	FBA-02, FSA-01, KN-F1	FBA-02, FSA-01	FBA-02, FSA-01, KN-F1	FBA-02, FSA-01, KN-F1	EXISTING	FBA-02, FSA-01
MISCELLANEOUS							PSA-01

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NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	11/19	35% SUBMITTAL SET



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DESIGNED: G. KOLA  
 CHECKED: P. YAVARI  
 DRAWN: G. KOLA  
 CADD FILE NAME: 801PC107.dwg

**Santa Clara Valley Transportation Authority**

**BKF** 100+ YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 5/15/2020  
 SUBMITTAL DATE: 06/29/20  
 SCALE: 1"=40'  
 BOARD APPROVAL DATE:

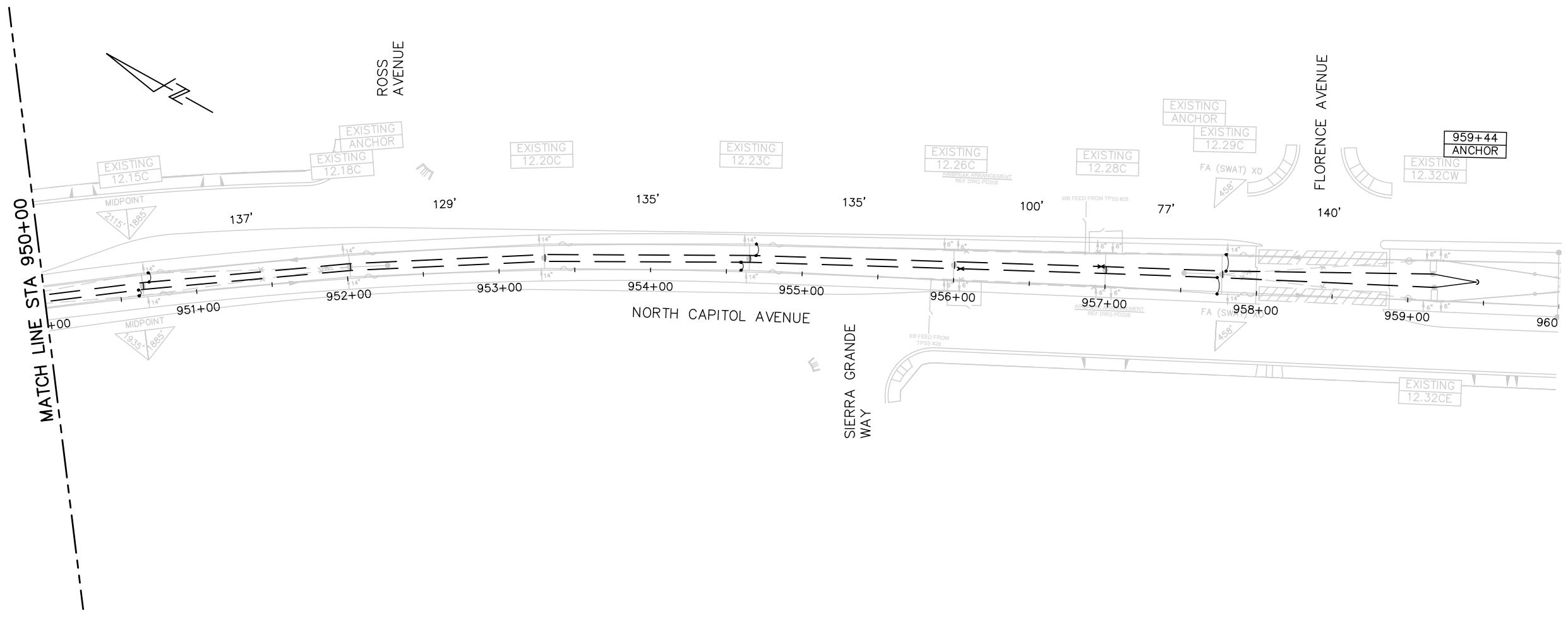
EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 OCS PARALLEL FEEDERS 27-28  
 LAYOUT SCHEDULE  
 940+00 TO 950+00

SHEET OF: PC107  
 REVISION: B

PCA NO.: 000  
 CONTRACT NO.: C801  
 FILE LOCATION: PROJECTWISE

OCS PARALLEL FEEDER 27-28 LAYOUT SCHEDULE NORTHBOUND TRACK

STRUCTURE NO.	12.15C	12.18C	ANCHOR	12.20C	12.23C	12.26C	12.28C	ANCHOR	12.29C	12.32CW	ANCHOR
STATIONING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	SEE EB
CL OF POLE TO CL OF WB TRACK	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	13.693
FOUNDATION TYPE	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	SEE EB
GUY ANCHOR TYPE	-	-	EXISTING	-	-	-	-	EXISTING	-	-	DGA-1
POLE TYPE - LENGTH	SEE EB	SEE EB	-	SEE EB	SEE EB	SEE EB	SEE EB	-	SEE EB	PE-01C-5	-
POLE RAKE	EXISTING	EXISTING	-	EXISTING	EXISTING	EXISTING	EXISTING	-	EXISTING	EXISTING	-
MESSANGER WIRE HEIGHT	EXISTING	EXISTING	-	EXISTING	EXISTING	EXISTING	EXISTING	-	EXISTING	EXISTING	-
CONTACT WIRE HEIGHT	EXISTING	EXISTING	-	EXISTING	EXISTING	EXISTING	EXISTING	-	EXISTING	EXISTING	-
CANTILEVER TYPE	EXISTING	EXISTING	-	EXISTING	EXISTING	EXISTING	EXISTING	-	EXISTING	EXISTING	-
HANGER SET	EXISTING	EXISTING	-	EXISTING	EXISTING	EXISTING	EXISTING	-	EXISTING	EXISTING	-
JUMPER TYPE	TYPE F3	EXISTING	-	EXISTING	TYPE F3	EXISTING	EXISTING	-	TYPE F3	EXISTING	-
MISCELLANEOUS	FSA-01	FSA-01, PSA-01	EXISTING	FSA-01	FSA-01	FSA-01	FSA-01, IS-F1	EXISTING	FSA-01	PFT-01 (26'-6")	SEE EB



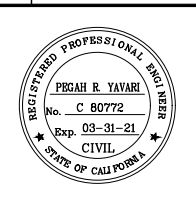
NOTES:  
 1. FOR ABBREVIATIONS, LEGEND AND GENERAL NOTES SEE DWGS PG001, PG002 AND PG003.

OCS PARALLEL FEEDER 27-28 LAYOUT SCHEDULE SOUTHBOUND TRACK

STRUCTURE NO.	12.15C	12.18C	ANCHOR	12.20C	12.23C	12.26C	12.28C	ANCHOR	12.29C	12.32CE	ANCHOR
STATIONING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	959+44
CL OF POLE TO CL OF EB TRACK	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	13.693
FOUNDATION TYPE	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	EXISTING	FG-1B
GUY ANCHOR TYPE	-	-	EXISTING	-	-	-	-	EXISTING	-	-	DGA-1
POLE TYPE - LENGTH	PE-01C-7	PE-02-6	-	PE-01B-7	PE-01B-7	PE-01A-6	PE-01A-6	-	PE-01D-7	PE-01C-5	-
POLE RAKE	EXISTING	EXISTING	-	EXISTING	EXISTING	EXISTING	EXISTING	-	EXISTING	EXISTING	-
MESSANGER WIRE HEIGHT	EXISTING	EXISTING	-	EXISTING	EXISTING	EXISTING	EXISTING	-	EXISTING	EXISTING	-
CONTACT WIRE HEIGHT	EXISTING	EXISTING	-	EXISTING	EXISTING	EXISTING	EXISTING	-	EXISTING	EXISTING	-
CANTILEVER TYPE	EXISTING	EXISTING	-	EXISTING	EXISTING	EXISTING	EXISTING	-	EXISTING	EXISTING	-
HANGER SET	EXISTING	EXISTING	-	EXISTING	EXISTING	EXISTING	EXISTING	-	EXISTING	EXISTING	-
JUMPER TYPE	TYPE F3	EXISTING	-	EXISTING	TYPE F3	EXISTING	EXISTING	-	TYPE F3	EXISTING	-
MISCELLANEOUS	FBA-02, FSA-01	FBA-02, FSA-01	EXISTING	FBA-02, FSA-01	FBA-02, FSA-01	FBA-02, FSA-01, IS-F1	FBA-02, FSA-01	EXISTING	FBA-02, FSA-01	PFT-01 (26'-6")	DG-1
MISCELLANEOUS		PSA-01				(2) BH-01A	(2) BH-01A		BH-01A		

Jun 22, 2020 - 2:46pm \\net\0\kennedy2\008\68891\_via\_capitol\_expressway\14\_extensions\TECHPROD\OCS\TECHPROD\CAD\PC\801PC108.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	11/19	35% SUBMITTAL SET



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 CHECKED: P. YAVARI  
 DRAWN: G. KOLA  
 CADD FILE NAME: 801PC108.dwg

**SA** Santa Clara Valley  
 Transportation  
 Authority

**BKF** 100+ YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

CAAD FILE DATE: 5/15/2020  
 SUBMITTAL DATE: 06/29/20  
 SCALE: 1"=40'  
 BOARD APPROVAL DATE:

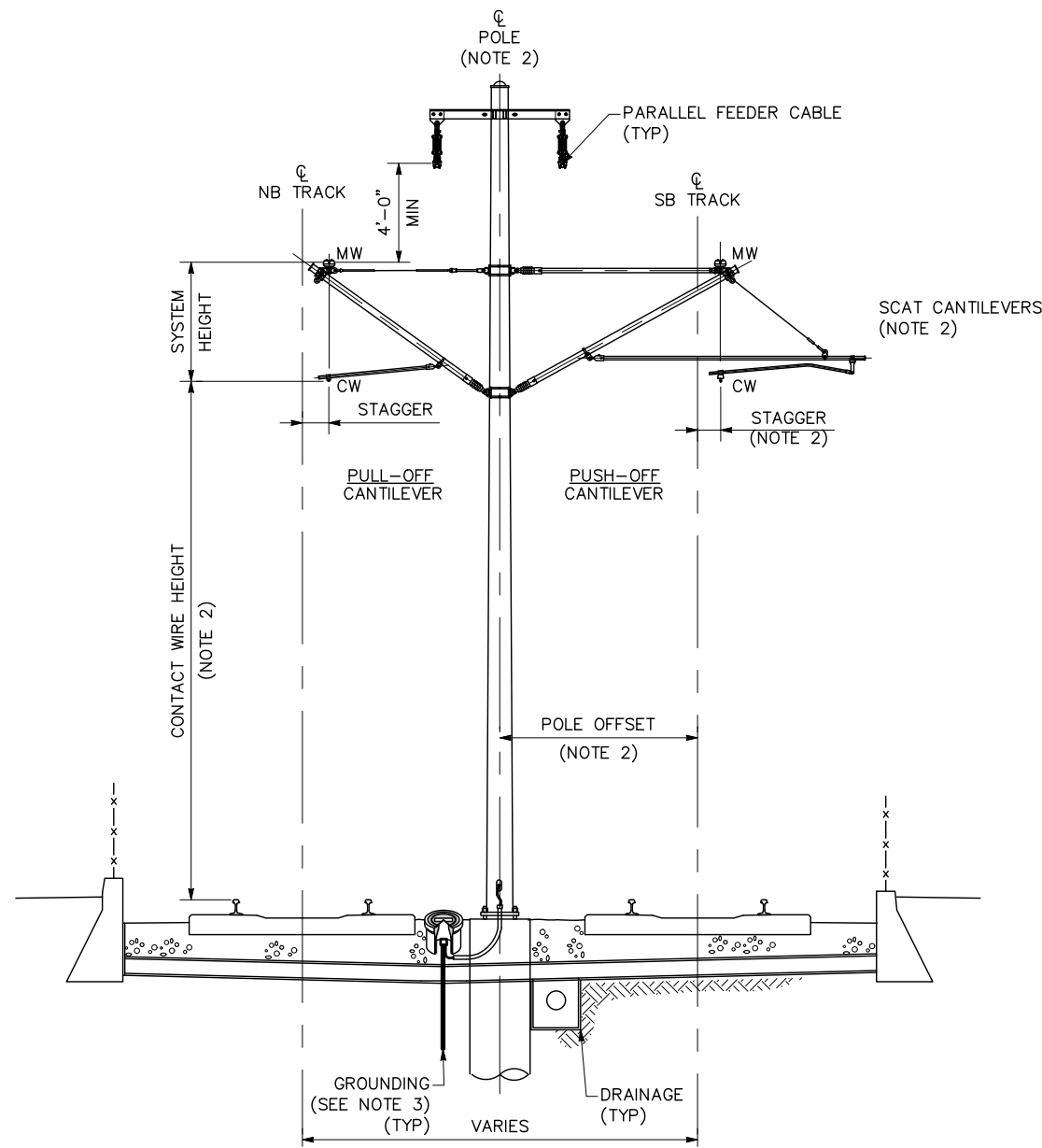
EASTRIDGE TO BART REGIONAL CONNECTOR  
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 OCS PARALLEL FEEDERS 27-28  
 LAYOUT SCHEDULE  
 950+00 TO 960+00

PCA NO. 000  
 CONTRACT NO. C801  
 FILE LOCATION PROJECTWISE

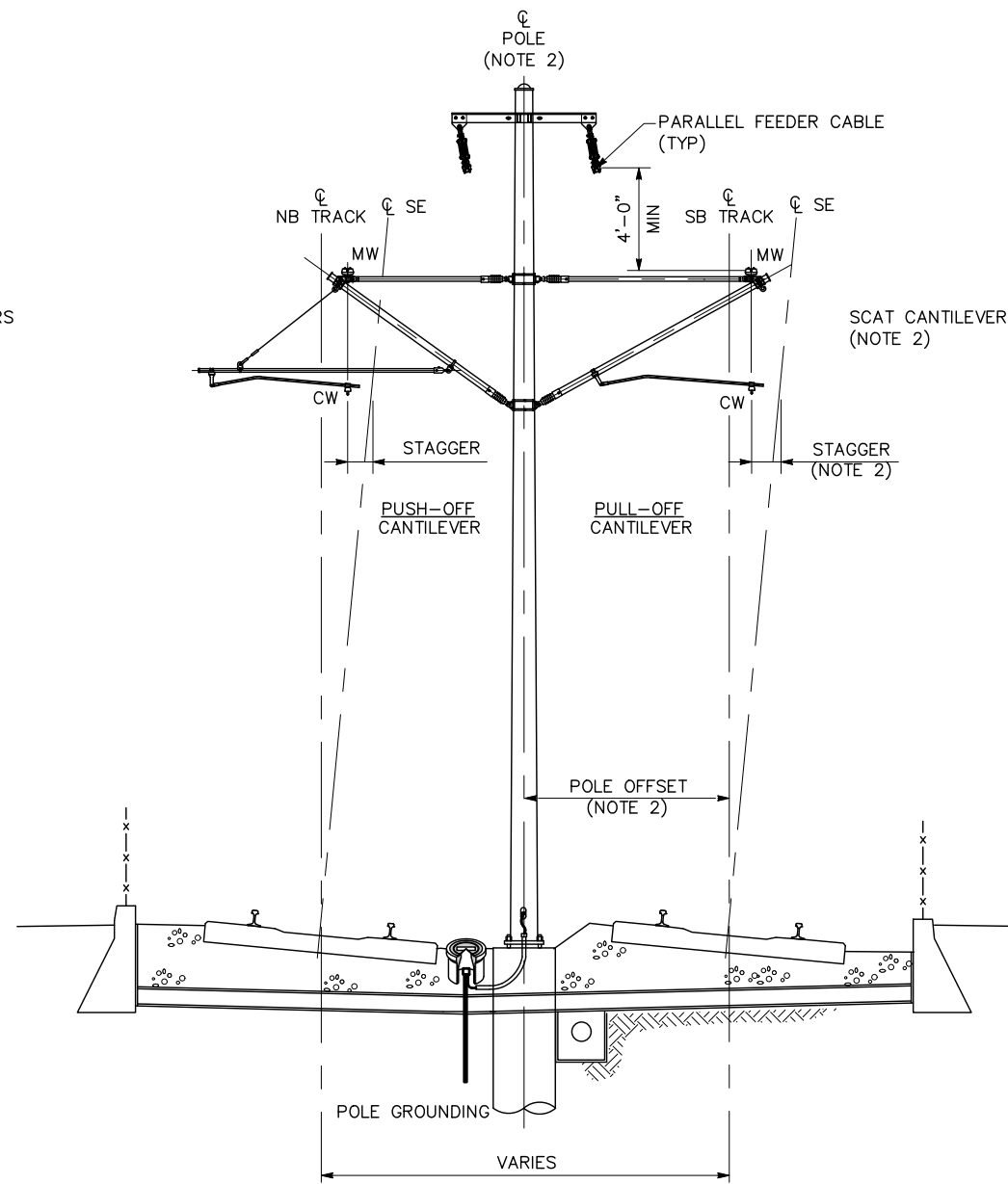
SHEET OF PC108  
 REVISION B

**NOTES:**

1. FOR ABBREVIATIONS, LEGEND AND GENERAL NOTES SEE DWGS PG001, PG002 AND PG003.
2. FOR TES POLE TYPES, CANTILEVER TYPES, POLE OFFSETS, CONTACT WIRE HEIGHT AND STAGGER REFER TO OCS LAYOUT SCHEDULE DRAWINGS.
3. POLE GROUNDING SHALL BE IN DIRECTION OF INCREASING STATION.



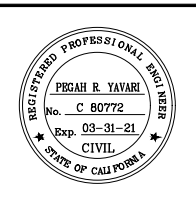
**TYPICAL TES STRUCTURE  
FOR TANGENT TRACK**



**TYPICAL TES STRUCTURE  
FOR CURVED/SUPERELEVATED TRACK**

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NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



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**Santa Clara Valley  
Transportation  
Authority**

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ENGINEERS / SURVEYORS / PLANNERS

CAAD FILE DATE: 5/15/2020  
SCALE: NTS  
SUBMITTAL DATE: 06/29/20  
BOARD APPROVAL DATE:

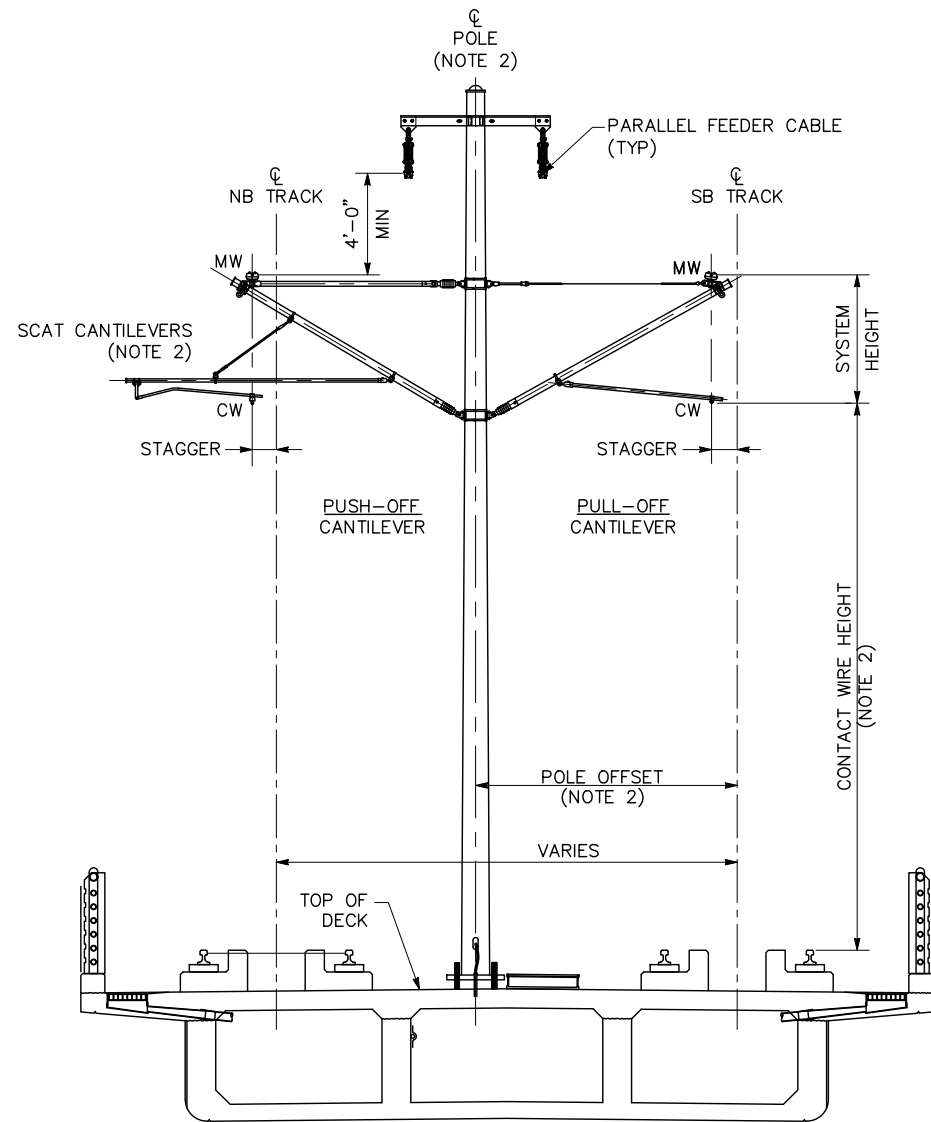
EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
OVERHEAD CONTACT SYSTEM  
TYPICAL STRUCTURES  
AT GRADE

PCA NO.: 000  
CONTRACT NO.: C801  
FILE LOCATION: PROJECTWISE

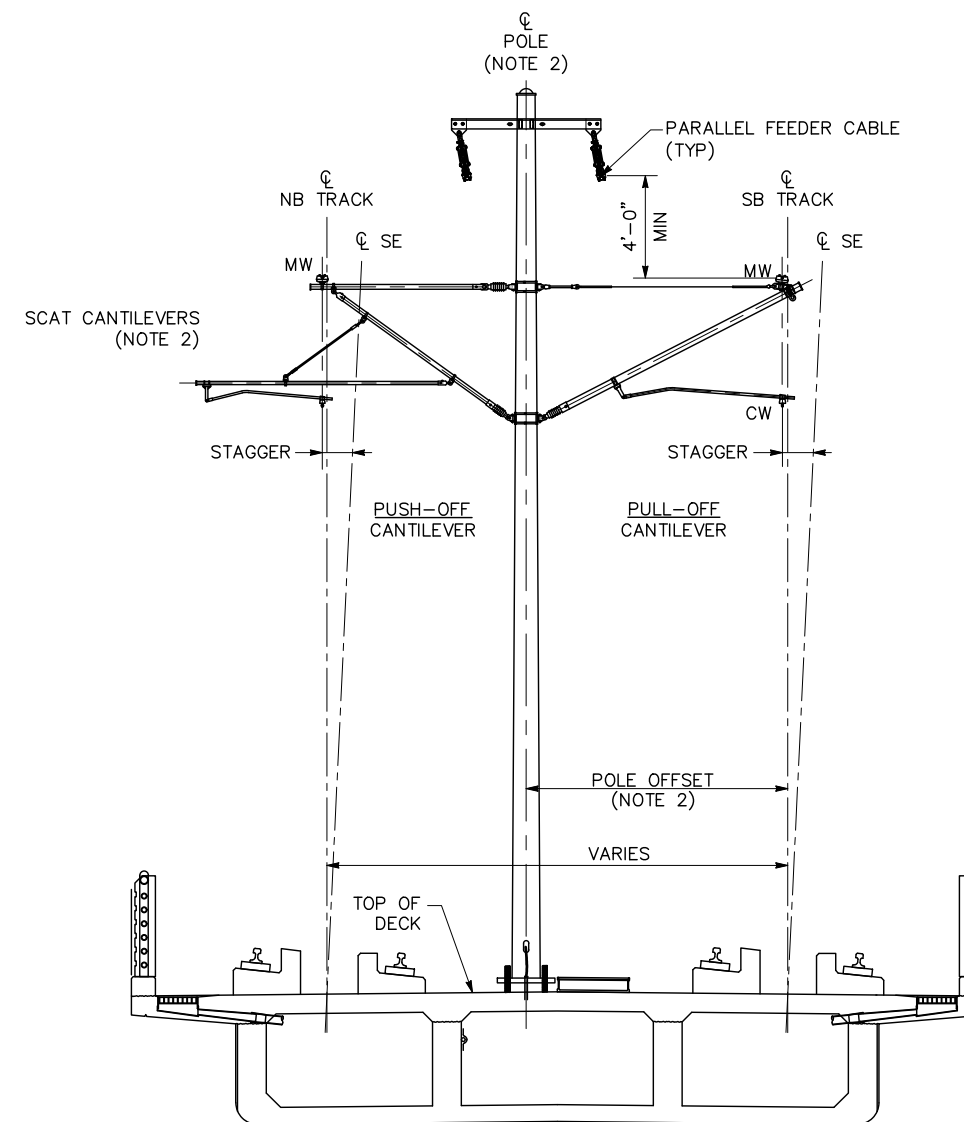
SHEET OF: PD101  
REVISION: C

**NOTES:**

1. FOR ABBREVIATIONS, LEGEND AND GENERAL NOTES SEE DWGS PG001, PG002 AND PG003.
2. FOR TES POLE TYPES, CANTILEVER TYPES, POLE OFFSETS, CONTACT WIRE HEIGHT AND STAGGER REFER TO OCS LAYOUT SCHEDULE DRAWINGS.



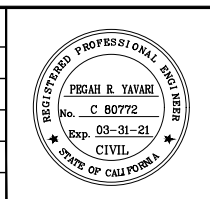
**TYPICAL TES STRUCTURE  
FOR TANGENT TRACK**



**TYPICAL TES STRUCTURE  
FOR CURVED/SUPERELEVATED TRACK**

photo Jun 22, 2020 - 2:46pm \\newc0\pwork\2\JOBS\68691 via capital expressway\1t\_extension\TECHPROJ\OCS\TECHPROJ\CAD\PD\801PD102.dwg

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET

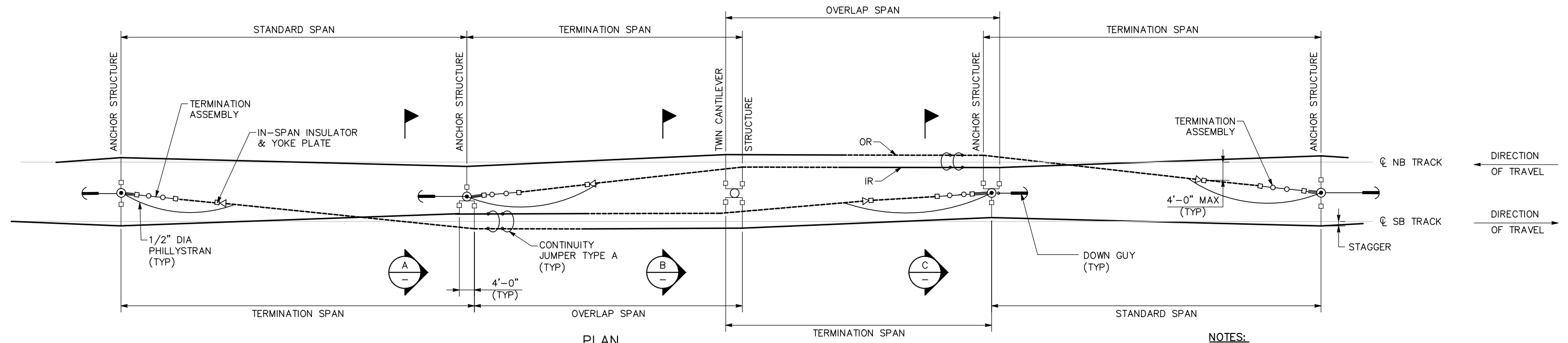


SUBMITTED <b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
DESIGNED G. KOLA	CHECKED P. YAVARI
DRAWN D. KEO	CADD FILE NAME 801PD102.dwg



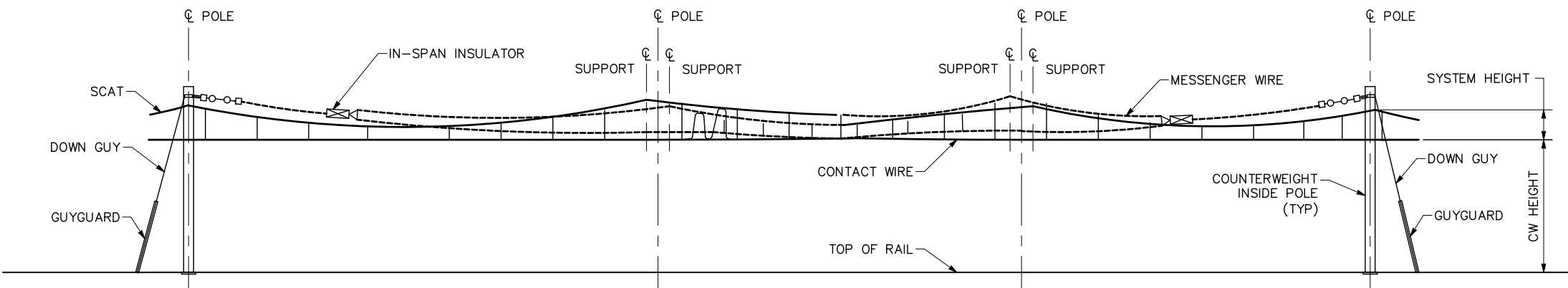
APPROVED <b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE 5/15/2020	SCALE NTS
SUBMITTAL DATE 06/29/20	BOARD APPROVAL DATE

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT OVERHEAD CONTACT SYSTEM TYPICAL STRUCTURES AT CAPITOL AERIAL GUIDEWAY			SHEET OF DRAWING NO. PD102 REVISION C
PCA NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE	

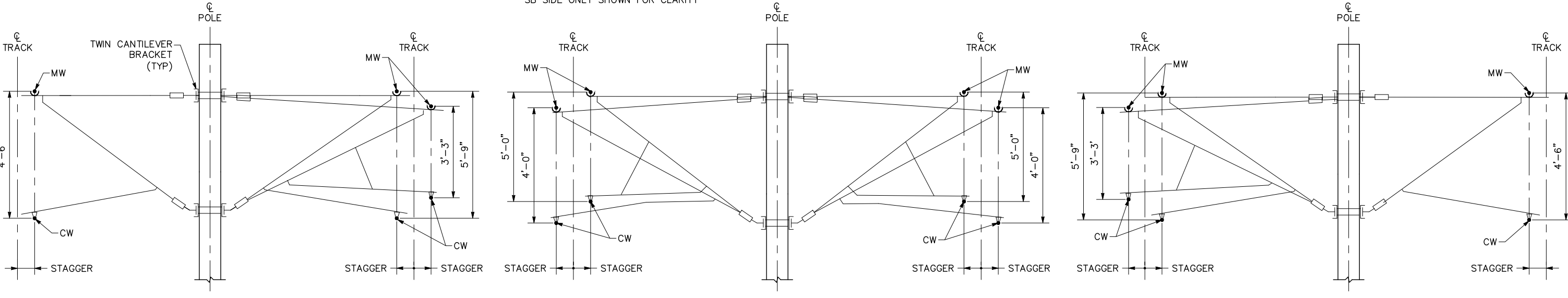


PLAN  
UNINSULATED OVERLAP ARRANGEMENT

- NOTES:**
1. FOR ABBREVIATIONS, LEGEND, AND GENERAL NOTES SEE DWGS PG001, PG002, AND PG003.
  2. FOR CONTACT WIRE HEIGHTS AT EACH LOCATION REFER TO OCS LAYOUT SCHEDULE DRAWINGS.
  3. FOR SITE SPECIFIC STAGGERS SEE OCS LAYOUT SCHEDULE DRAWINGS.
  4. FOR CONDUCTOR HEIGHTS AT EACH OVERLAP SEE OCS LAYOUT SCHEDULE DRAWINGS.
  5. FOR CANTILEVER ARM ASSEMBLIES SEE DWGS PD203 THROUGH PD206.
  6. FOR CANTILEVER TYPE ALLOCATIONS SEE OCS LAYOUT SCHEDULE DRAWINGS.
  7. TERMINATION ASSEMBLY MAY BE EITHER COUNTERWEIGHT ASSEMBLY OR FIXED END ASSEMBLY. SEE OCS LAYOUT SCHEDULE DRAWINGS FOR TERMINATION TYPE.



ELEVATION  
SB SIDE ONLY SHOWN FOR CLARITY



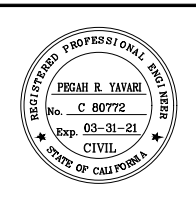
A SECTION

B SECTION

C SECTION

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C	06/20	95% SUBMITTAL SET
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CHECKED: P. YAVARI  
DRAWN: D. KEO  
CADD FILE NAME: 801PD103.dwg

**Santa Clara Valley Transportation Authority**

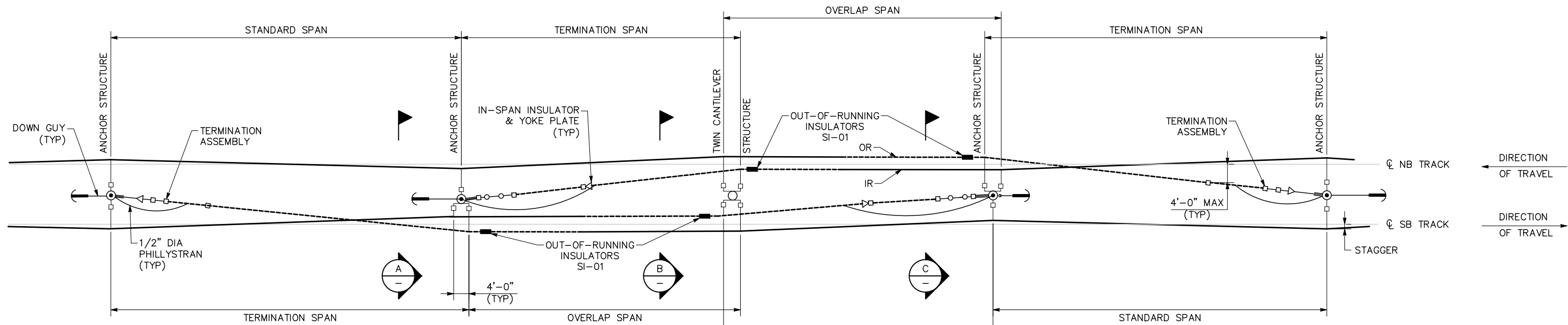
**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

APPROVED: [Signature]  
CADD FILE DATE: 5/15/2020  
SUBMITTAL DATE: 06/29/20  
SCALE: NTS  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
OVERHEAD CONTACT SYSTEM  
UNINSULATED OVERLAP ARRANGEMENT

PCB NO.: 000  
CONTRACT NO.: C801  
FILE LOCATION: PROJECTWISE

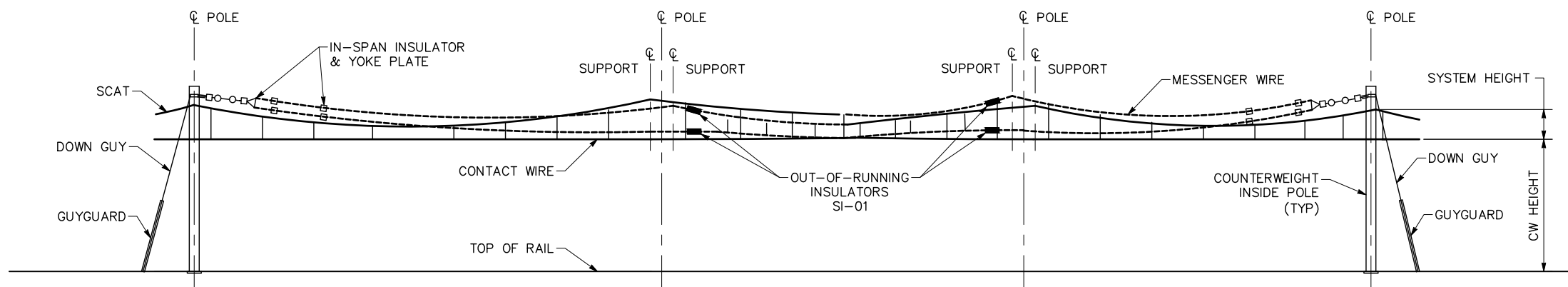
SHEET OF: PD103  
REVISION: C



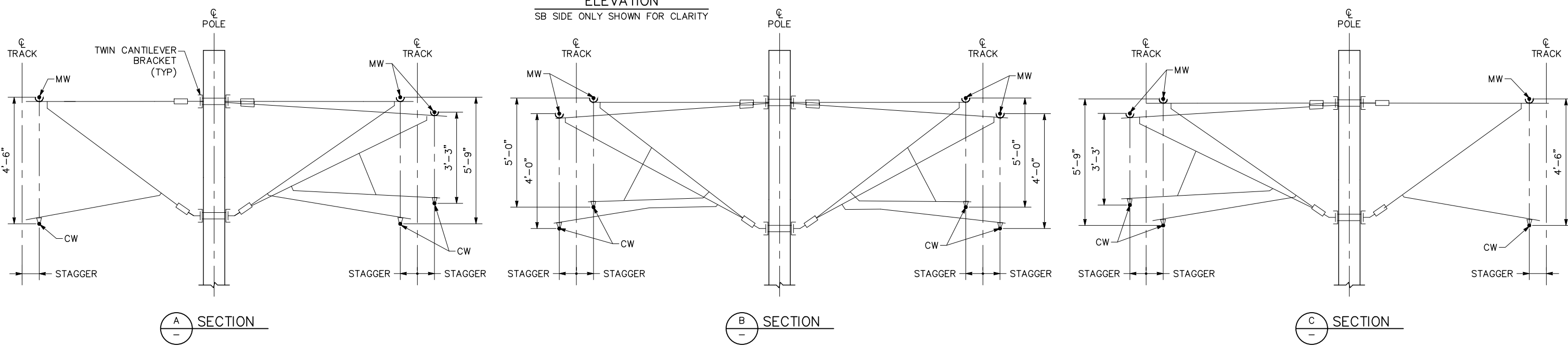
PLAN  
INSULATED OVERLAP ARRANGEMENT

NOTES:

1. FOR ABBREVIATIONS, LEGEND, AND GENERAL NOTES SEE DWGS PG001, PG002, AND PG003.
2. FOR CONTACT WIRE HEIGHTS AT EACH LOCATION REFER TO OCS LAYOUT SCHEDULE DRAWINGS.
3. FOR SITE SPECIFIC STAGGERS SEE OCS LAYOUT SCHEDULE DRAWINGS.
4. FOR CONDUCTOR HEIGHTS AT EACH OVERLAP SEE OCS LAYOUT SCHEDULE DRAWINGS.
5. FOR CANTILEVER ARM ASSEMBLIES SEE DWGS PD203 THROUGH PD206.
6. FOR CANTILEVER TYPE ALLOCATIONS SEE OCS LAYOUT SCHEDULE DRAWINGS.
7. TERMINATION ASSEMBLY MAY BE EITHER COUNTERWEIGHT ASSEMBLY OR FIXED END ASSEMBLY. SEE OCS LAYOUT SCHEDULE DRAWINGS FOR TERMINATION TYPE.



ELEVATION  
SB SIDE ONLY SHOWN FOR CLARITY



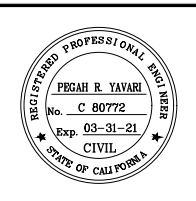
A SECTION

B SECTION

C SECTION

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NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
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DESIGNED: G. KOLA  
 CHECKED: P. YAVARI  
 DRAWN: D. KEO  
 CADD FILE NAME: 801PD104.dwg

**Santa Clara Valley Transportation Authority**

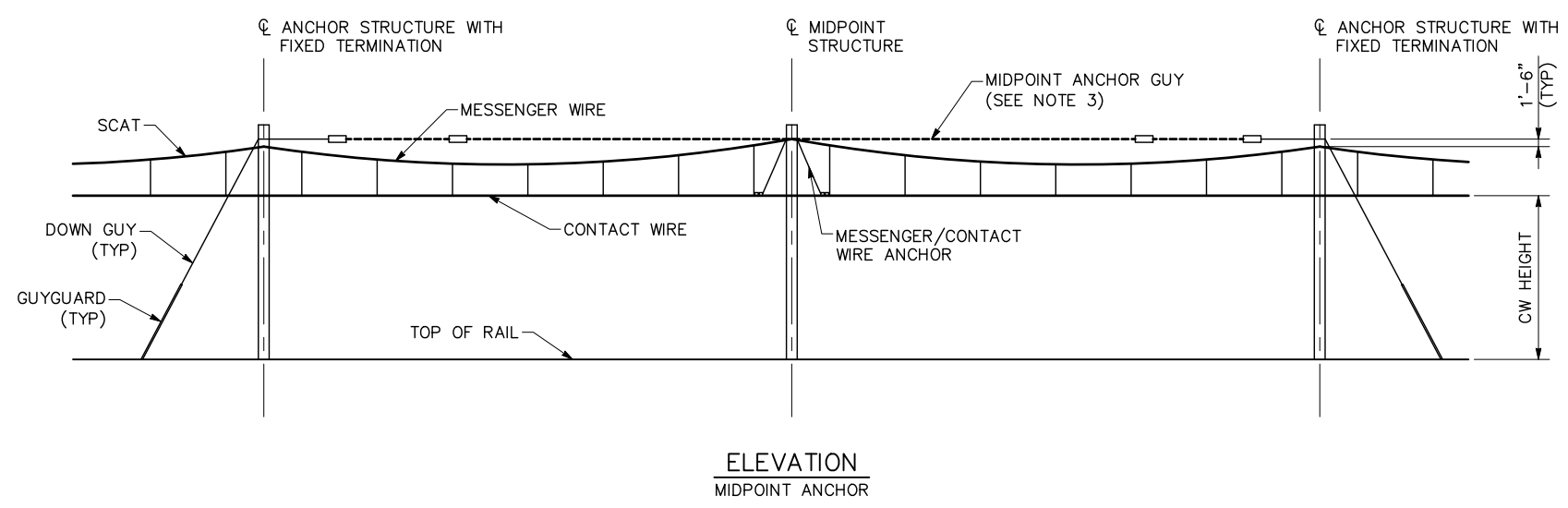
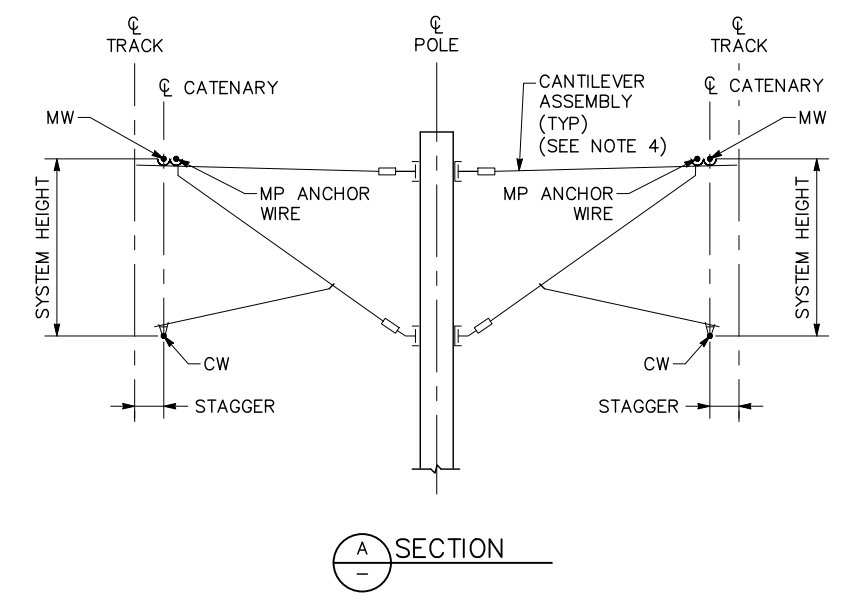
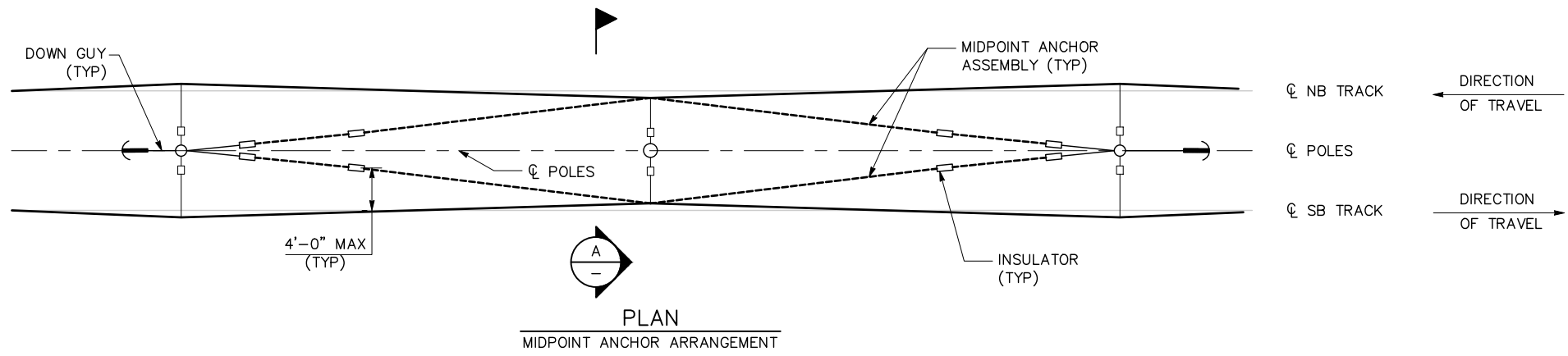
**BKF** 100+ YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 5/15/2020  
 SUBMITTAL DATE: 06/29/20  
 SCALE: NTS  
 BOARD APPROVAL DATE:

**EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 OVERHEAD CONTACT SYSTEM  
 INSULATED OVERLAP ARRANGEMENT**

SHEET OF: PD104  
 REVISION: C

PCA NO.: 000  
 CONTRACT NO.: C801  
 FILE LOCATION: PROJECTWISE

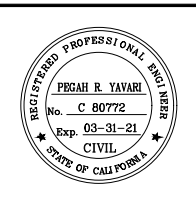


**NOTES:**

1. FOR ABBREVIATIONS, LEGEND, AND GENERAL NOTES SEE DWGS PG001, PG002, AND PG003.
2. FOR CANTILEVER ALLOCATIONS SEE OCS LAYOUT SCHEDULE DRAWINGS.
3. REFER TO DWG PD223 FOR MIDPOINT ANCHOR ASSEMBLY MP-01.
4. REFER TO DWGS PD203 TO PD206 FOR CANTILEVER ASSEMBLY TYPES.

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C	06/20	95% SUBMITTAL SET
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 CADD FILE NAME: 801PD105.dwg

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**BKF** 100+ YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

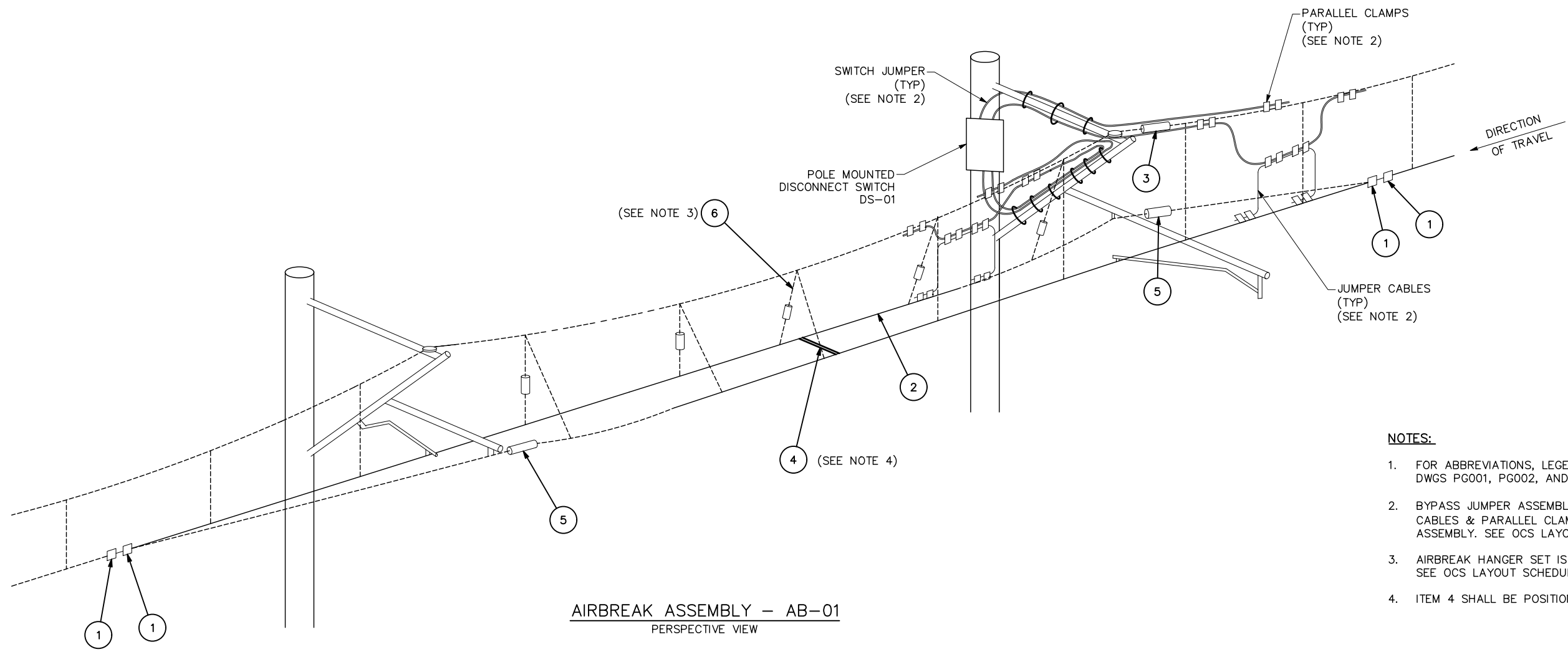
APPROVED: 5/15/2020  
 SCALE: NTS  
 SUBMITTAL DATE: 06/29/20  
 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 OVERHEAD CONTACT SYSTEM  
 MIDPOINT ANCHOR ARRANGEMENT

PCA NO.: 000  
 CONTRACT NO.: C801  
 FILE LOCATION: PROJECTWISE

SHEET OF	
DRAWING NO.	PD105
REVISION	C

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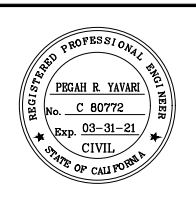
**AIRBREAK ASSEMBLY – AB-01**  
PERSPECTIVE VIEW

**NOTES:**

1. FOR ABBREVIATIONS, LEGEND, AND GENERAL NOTES SEE DWGS PG001, PG002, AND PG003.
2. BYPASS JUMPER ASSEMBLY, BP1 (INCLUDING JUMPER CABLES & PARALLEL CLAMPS) IS NOT PART OF AIRBREAK ASSEMBLY. SEE OCS LAYOUT SCHEDULE FOR ALLOCATION.
3. AIRBREAK HANGER SET IS NOT PART OF THIS ASSEMBLY. SEE OCS LAYOUT SCHEDULE FOR ALLOCATION.
4. ITEM 4 SHALL BE POSITIONED AT THE CENTER OF SPAN.

BILL OF MATERIAL		QUANTITY
ITEM	DESCRIPTION	AB-01
1	TWIN CONTACT WIRE CLAMP	4
2	350KCMIL CONTACT WIRE (EXTENSION)	AS REQ'D
3	IN-SPAN INSULATION ASSEMBLY (IS-M1)	1
4	INSULATED KNUCKLE ASSEMBLY (KN-C1)	1
5	IN-SPAN INSULATION ASSEMBLY (IS-C1)	2
6	AIRBREAK HANGER ASSEMBLY (HA-02)	AS REQ'D

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**Santa Clara Valley Transportation Authority**

**BKF** 100+ YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

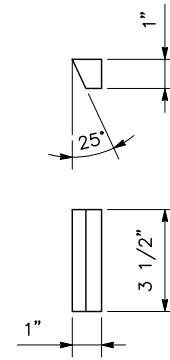
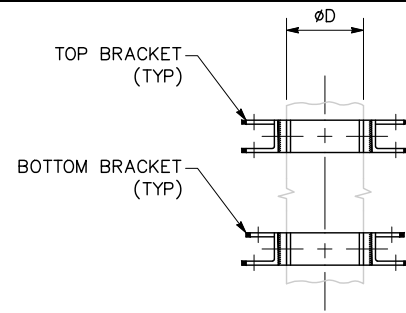
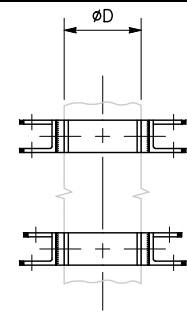
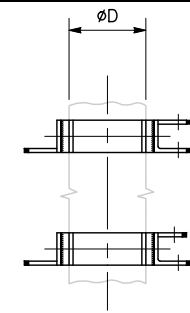
APPROVED: 5/15/2020  
 SCALE: NTS  
 SUBMITTAL DATE: 06/29/20  
 BOARD APPROVAL DATE:

**EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT OVERHEAD CONTACT SYSTEM SPLIT TENSION AIRBREAK ASSEMBLY**

PCA NO.: 000 CONTRACT NO.: C801 FILE LOCATION: PROJECTWISE

SHEET OF  
 DRAWING NO. PD201  
 REVISION C

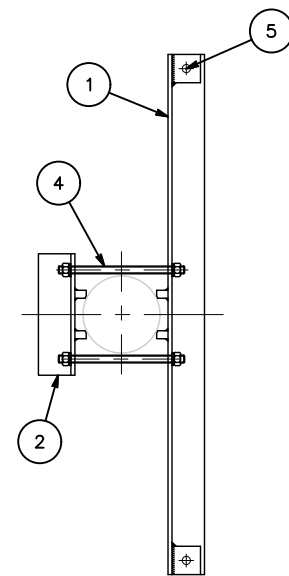




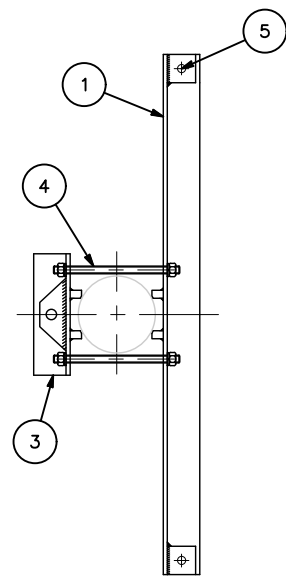
1  
-  
DETAIL

**NOTES:**

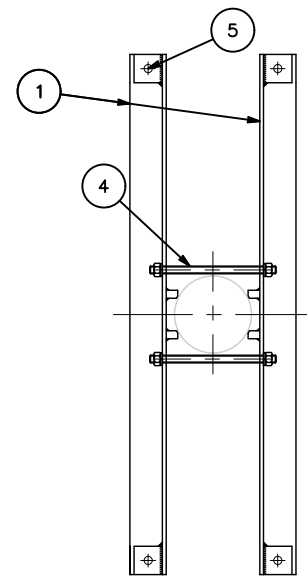
- FOR ABBREVIATIONS, LEGEND, AND GENERAL NOTES SEE DWGS PG001, PG002, AND PG003.
- ALL THREADED STEEL RODS SHALL BE ASTM A-325, WITH 2-HEX NUTS AND STANDARD WASHERS AND SHALL BE HOT DIP GALVANIZED.
- $X = \phi D$  (POLE DIAMETER) + 1". CONTRACTOR TO VERIFY POLE DIAMETER AT ATTACHMENT HEIGHT.
- ALL TYPE BT-## ASSEMBLIES SHALL CONSIST OF TOP AND BOTTOM BRACKETS.
- TYPICALLY CANTILEVER ARMS ARE USED WITH EITHER ONE BT-## ASSEMBLY OR TWO BH-01 ASSEMBLIES.



BT-02

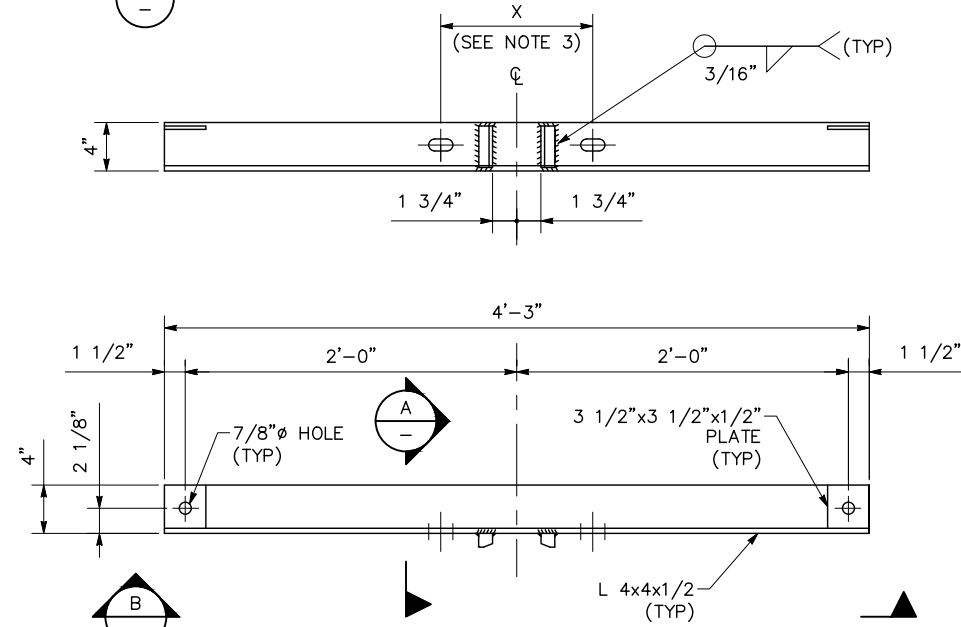


BT-03

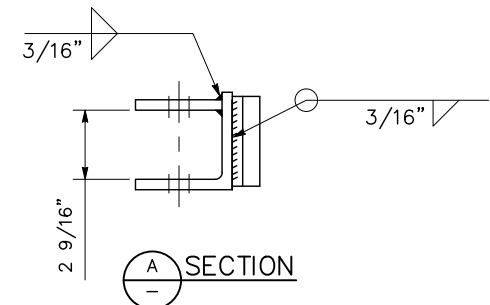


BT-04

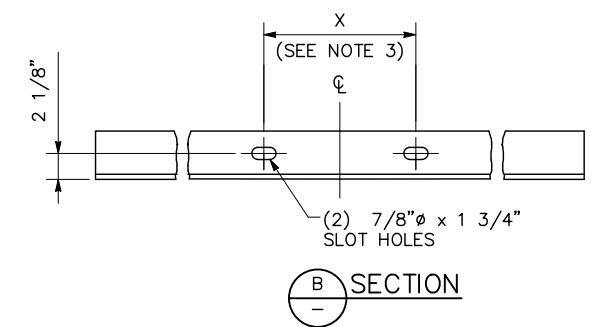
**ASSEMBLY TYPES**



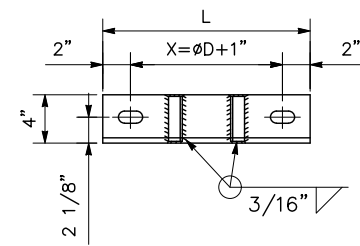
ITEM 1



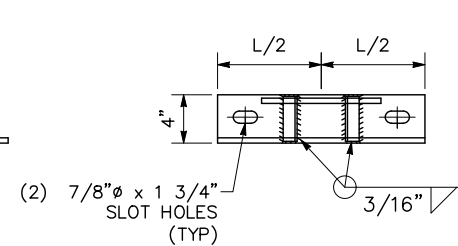
A  
-  
SECTION



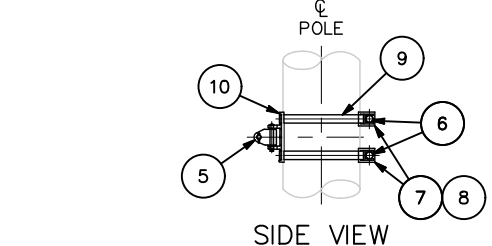
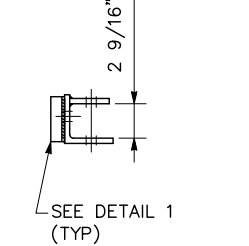
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SECTION



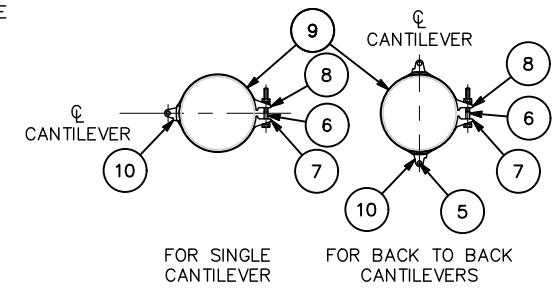
ITEM 2



ITEM 3



SIDE VIEW

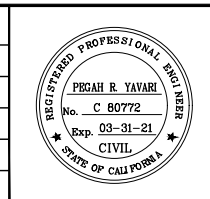


FOR SINGLE CANTILEVER FOR BACK TO BACK CANTILEVERS  
TOP VIEW  
POLE BAND TYPE BH-01

ITEM	DESCRIPTION	QUANTITY			
		BH-01	BT-02	BT-03	BT-04
1	ANGLE SPREADER, LONG, STANDARD	-	2	2	4
2	ANGLE SPREADER, SHORT, PLAIN	-	2	-	-
3	ANGLE SPREADER, SHORT, DRILLED	-	-	2	-
4	3/4" $\phi$ BOLT, 2 DUAL SLOTTED LOCKNUTS WITH WASHERS	-	4	4	4
5	SWIVEL HINGE WITH VERTICAL CLEVIS AND COTTER PIN	1	4	6	8
6	BOLT, DUAL SLOTTED LOCKNUT WITH WASHER	2	-	-	-
7	HALF CLAMP, BOLT-HEAD SIDE	2	-	-	-
8	HALF CLAMP, NUT SIDE	2	-	-	-
9	STAINLESS STEEL STRAP (LENGTH AS REQ'D)	2	-	-	-
10	HINGE BRACKET	2	-	-	-

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DESIGNED: G. KOLA  
 CHECKED: P. YAVARI  
 DRAWN: D. KEO  
 CADD FILE NAME: 801PD202.DWG

**Santa Clara Valley**  
**Transportation**  
**Authority**

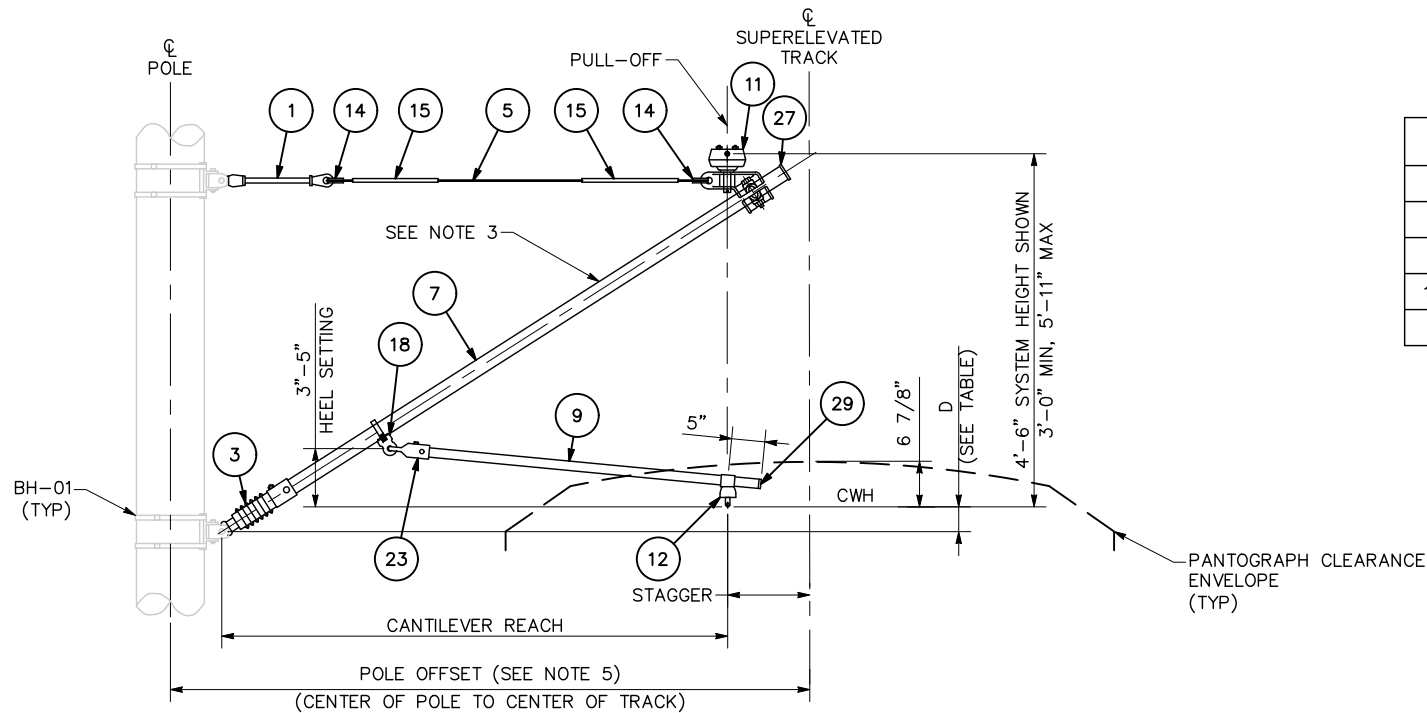
**BKF** 100+ YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 5/15/2020  
 SCALE: NTS  
 SUBMITTAL DATE: 06/29/20  
 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 OVERHEAD CONTACT SYSTEM  
 BRACKET ASSEMBLIES

SHEET OF PD202 REVISION B

PCA NO: 000 CONTRACT NO: C801 FILE LOCATION: PROJECTWISE



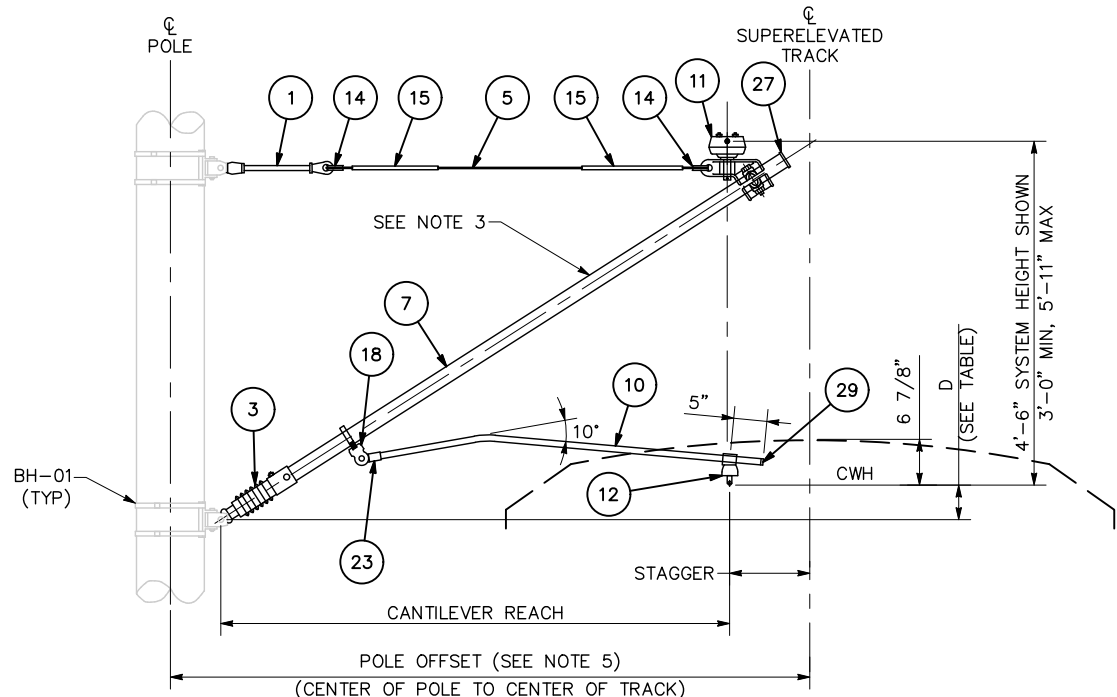
**AUTO-TENSIONED SIMPLE CATENARY  
TYPE CA-A1 (PULL/PUSH-OFF APPLICATION)**  
(SEE LOADING TABLE)

'D' DIMENSION	
POLE OFFSET	'D'
6'-7" - 9'-0"	6"
9'-0" - 11'-6"	18"
11'-6" - 16'-6"	36"
16'-6" +	48"

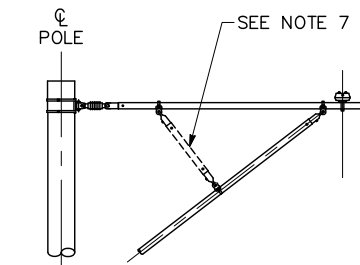
**NOTES:**

- FOR ABBREVIATIONS, LEGEND, AND GENERAL NOTES SEE DWGS PG001, PG002, AND PG003.
- CANTILEVERS SHALL CLEAR PANTOGRAPH ENVELOPE PER DWG PG005.
- THIS DRAWING IS A GENERAL ARRANGEMENT FOR CANTILEVER ASSEMBLIES AND INDICATE THE MINIMUM PIPE SIZES, SYSTEM HEIGHTS AND ATTACHMENT HEIGHTS RELATIVE TO THE CONTACT WIRE HEIGHT. CONTRACTOR SHALL USE THIS DRAWING AS A GUIDE TO DESIGN SITE SPECIFIC ASSEMBLIES INCLUDING ALL COMPONENTS. ALL CONTRACTOR SUPPLIED DESIGNS SHALL CONFORM TO FIT AND FUNCTION OF THE PLANS AS SHOWN.
- 1" PIPE (ITEM NO. 9 OR 10) SHALL BE ABLE TO REACH A POLE OFFSET OF UP TO 17' WHILE STILL SATISFYING THE 3" TO 5" HEEL SETTING REQUIREMENT.
- WIRE HEIGHTS, STAGGERS AND POLE OFFSETS ARE INDICATED ON OCS LAYOUT SCHEDULES. STAGGERS ARE RELATIVE TO THE SUPERELEVATED TRACK CENTERLINE AT CONTACT WIRE LEVEL.
- EACH CANTILEVER ASSEMBLY SHALL BE USED IN CONJUNCTION WITH TWO BH-01 ASSEMBLIES OR A BT-## ASSEMBLY.
- ADD SUPPORT BRACE WHERE POLE OFFSET EXCEEDS 11'-6".

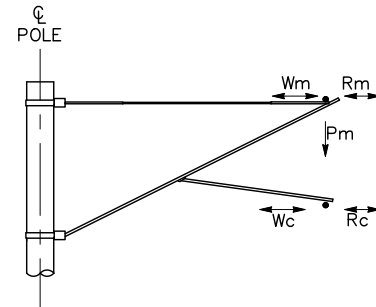
LOADING TABLE							
CANTILEVER TYPE	APPLICATION		MAX FORCE COMPONENTS (LBS)				
			Pm	Rc	Rm	Wc	Wm
CA-A1	PULL-OFF	LIGHT LOAD	545	70	115	160	225
CA-A2	PULL-OFF	MEDIUM LOAD	350	500	800	105	143



**AUTO-TENSIONED SIMPLE CATENARY  
TYPE CA-A2 (PULL-OFF APPLICATION)**  
(SEE LOADING TABLE)



**ALTERNATIVE MESSENGER  
SUPPORT DETAIL**  
(FOR ALL CANTILEVERS)

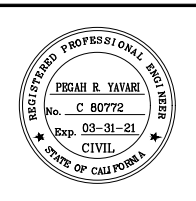


**LOADING DIAGRAM**

BILL OF MATERIAL			QUANTITY	
ITEM	DESCRIPTION	CA-A1	CA-A2	
1	FIBERGLASS STRAIN INSULATOR EYE/THIMBLE ENDS	1	1	
3	INSULATOR EYE/PIPE ENDS FOR 2" PIPE	1	1	
5	5/16" GLAV STEEL GUY STRAND (LENGTH AS REQ'D)	1	1	
7	HOT DIP GALV 2" PIPE SCH 80 (LENGTH AS REQ'D)	1	1	
9	HOT DIP GALV 1" PIPE SCH 40 (LENGTH AS REQ'D)	1	-	
10	HOT DIP GALV 1" PIPE SCH 40 WITH 10° BEND (LENGTH AS REQ'D)	-	1	
11	INSULATED MESSENGER WIRE SUPPORT CLAMP	1	1	
12	INSULATED CONTACT WIRE SWIVEL CLAMP FOR 1" PIPE	1	1	
14	THIMBLE FOR 5/16" WIRE	2	2	
15	5/16" FORMED DEADEND HIGH STRENGTH	2	2	
18	CLEVIS CLAMP WITH U-BOLT FOR 2" PIPE	1	1	
23	EYE END FITTING FOR 1" PIPE	1	1	
27	END CAP FOR 2" PIPE	1	1	
29	END CAP FOR 1" PIPE	1	1	

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NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



**HNTB** HNTB Corporation  
Engineers Architects Planners  
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DESIGNED: G. KOLA  
CHECKED: P. YAVARI  
DRAWN: D. KEO  
CADD FILE NAME: 801PD203.dwg

**Santa Clara Valley  
Transportation  
Authority**

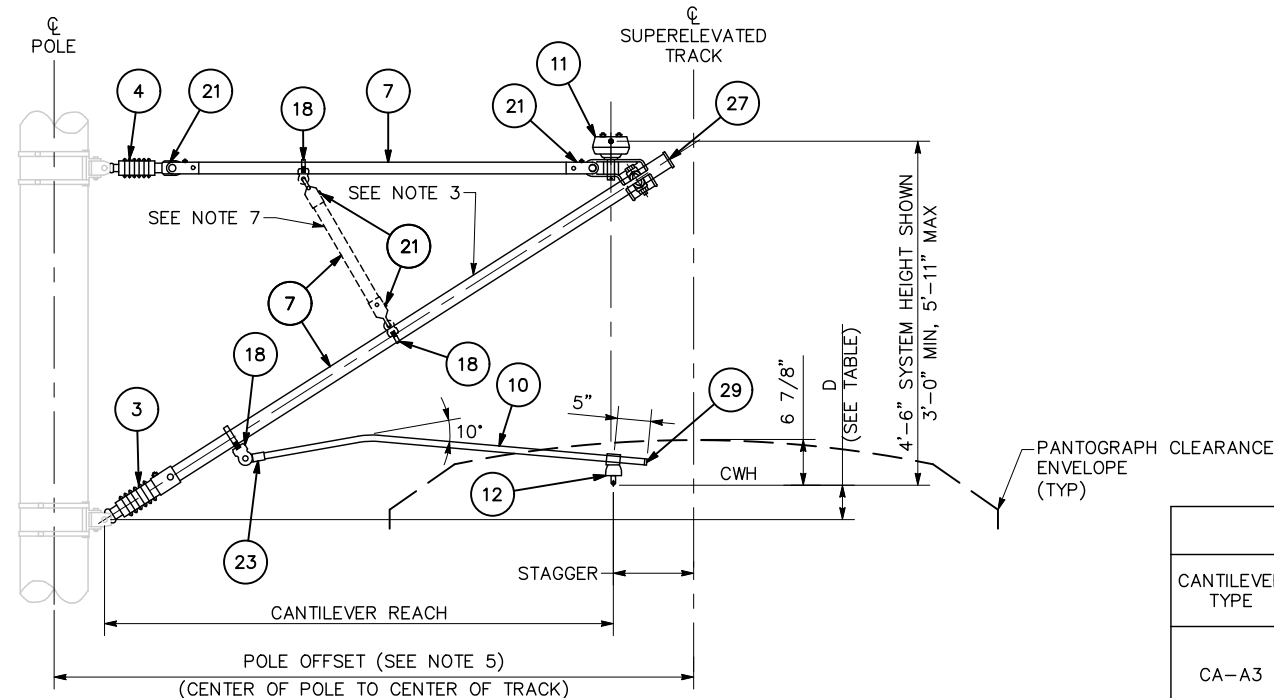
**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CAAD FILE DATE: 5/15/2020  
SCALE: NTS  
SUBMITTAL DATE: 06/29/20  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
OVERHEAD CONTACT SYSTEM  
CANTILEVER ARM ASSEMBLIES  
CA-A1, CA-A2

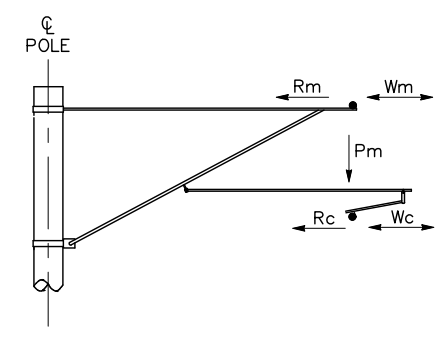
PCOA NO.: 000  
CONTRACT NO.: C801  
FILE LOCATION: PROJECTWISE

SHEET OF: PD203  
REVISION: B



**AUTO-TENSIONED SIMPLE CATENARY  
TYPE CA-A3 (PULL-OFF APPLICATION)**  
(SEE LOADING TABLE)

'D' DIMENSION	
POLE OFFSET	'D'
6'-7" - 9'-0"	6"
9'-0" - 11'-6"	18"
11'-6" - 16'-6"	36"
16'-6" +	48"

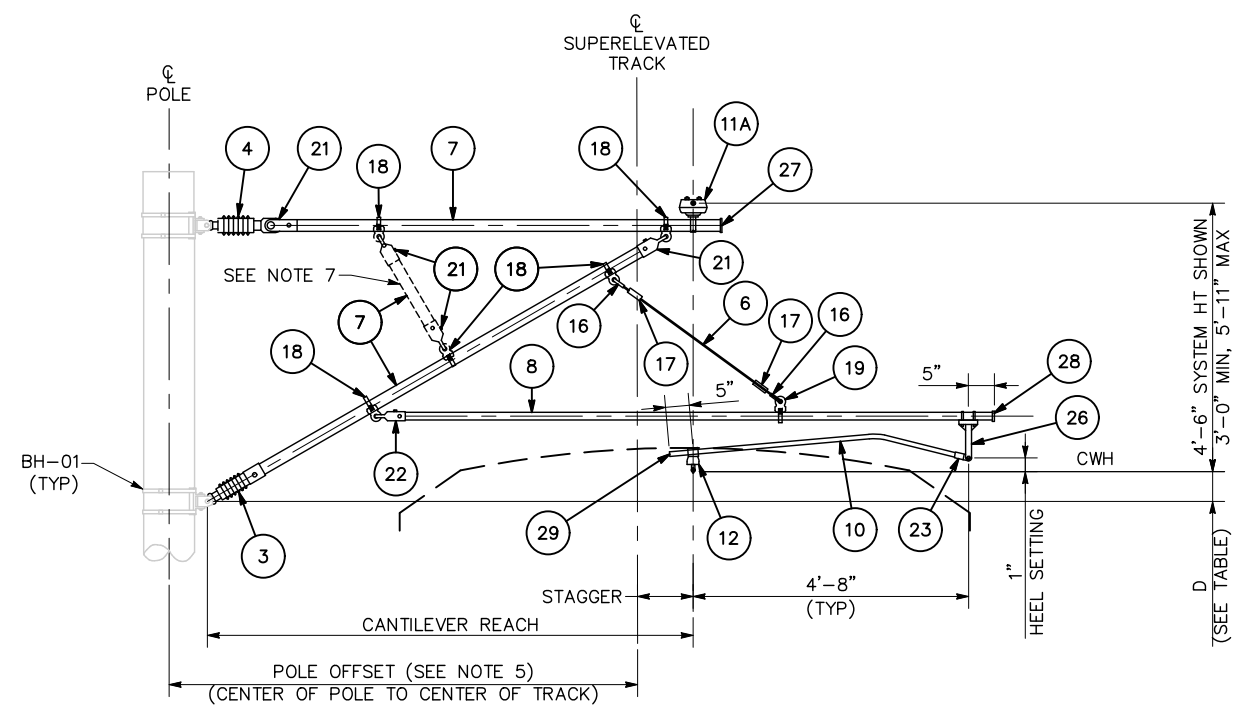


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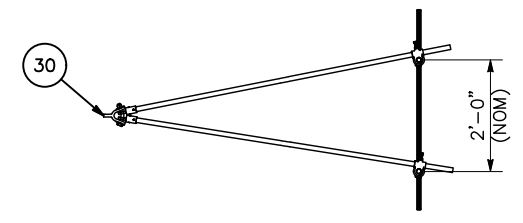
LOADING TABLE							
CANTILEVER TYPE	APPLICATION		MAX FORCE COMPONENTS (LBS)				
			Pm	Rc	Rm	Wc	Wm
CA-A3	PULL-OFF	MEDIUM LOAD	545	500	800	160	225
	MIDPOINT		545	500	1280	160	225
CA-B1	PUSH-OFF	MEDIUM LOAD	545	500	800	160	225
	MIDPOINT		545	500	1280	160	225
CA-B1H	PUSH-OFF	HEAVY LOAD	545	1000	1600	160	225

**NOTES:**

- FOR ABBREVIATIONS, LEGEND, AND GENERAL NOTES SEE DWGS PG001, PG002, AND PG003.
- CANTILEVERS SHALL CLEAR PANTOGRAPH ENVELOPE PER DWG PG005.
- THIS DRAWING IS A GENERAL ARRANGEMENT FOR CANTILEVER ASSEMBLIES AND INDICATE THE MINIMUM PIPE SIZES, SYSTEM HEIGHTS AND ATTACHMENT HEIGHTS RELATIVE TO THE CONTACT WIRE HEIGHT. CONTRACTOR SHALL USE THIS DRAWING AS A GUIDE TO DESIGN SITE SPECIFIC ASSEMBLIES INCLUDING ALL COMPONENTS. ALL CONTRACTOR SUPPLIED DESIGNS SHALL CONFORM TO FIT AND FUNCTION OF THE PLANS AS SHOWN.
- 1" PIPE (ITEM NO. 10) SHALL BE ABLE TO REACH A POLE OFFSET OF UP TO 17' WHILE STILL SATISFYING THE 1" HEEL SETTING REQUIREMENT.
- WIRE HEIGHTS, STAGGERS AND POLE OFFSETS ARE INDICATED ON OCS LAYOUT SCHEDULES. STAGGERS ARE RELATIVE TO THE SUPERELEVATED TRACK CENTERLINE AT CONTACT WIRE LEVEL.
- EACH CANTILEVER ASSEMBLY SHALL BE USED IN CONJUNCTION WITH TWO BH-01 ASSEMBLIES OR A BT-## ASSEMBLY.
- ADD SUPPORT BRACE WHERE POLE OFFSET EXCEEDS 11'-6".



**AUTO-TENSIONED SIMPLE CATENARY  
TYPE CA-B1 (PUSH-OFF APPLICATION)**  
(SEE LOADING TABLE)

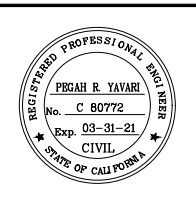


**DOUBLE STEADY ARMS**  
CA-B1H (RC > 500 LBS)

BILL OF MATERIAL		QUANTITY		
ITEM	DESCRIPTION	CA-A3	CA-B1	CA-B1H
3	INSULATOR EYE/PIPE ENDS FOR 2" PIPE	1	1	1
4	INSULATOR EYE/CLEVIS ENDS FOR 2" PIPE	1	1	1
6	3/16" STAINLESS STEEL WIRE (LENGTH AS REQ'D)	-	1	1
7	HOT DIP GALV 2" PIPE SCH 80 (LENGTH AS REQ'D)	2	2	2
8	HOT DIP GALV 1 1/4" PIPE SCH 40 (LENGTH AS REQ'D)	-	1	1
10	HOT DIP GALV 1" PIPE SCH 40 WITH 10° BEND (LENGTH AS REQ'D)	1	1	2
11	INSULATED MESSENGER WIRE SUPPORT CLAMP	1	-	-
11A	ISULATED MESSENGER WIRE SUPPORT CLAMP	-	1	1
12	INSULATED CONTACT WIRE SWIVEL CLAMP FOR 1" PIPE	1	1	1
16	THIMBLE FOR 3/16" WIRE	-	2	2
17	COPPER CRIMP FOR 3/16" SS WIRE	-	2	2
18	CLEVIS CLAMP WITH U-BOLT FOR 2" PIPE	1	3	3
19	CLEVIS CLAMP WITH U-BOLT FOR 1 1/4" PIPE	-	1	1
21	EYE END FITTING FOR 2" PIPE	2	2	2
22	EYE END FITTING FOR 1 1/4" PIPE	-	1	1
23	EYE END FITTING FOR 1" PIPE	1	1	2
26	DROP BRACKET WITH (2) U-BOLTS FOR 1 1/4" PIPE	-	1	1
27	END CAP FOR 2" PIPE	1	1	1
28	END CAP FOR 1 1/4" PIPE	-	1	1
29	END CAP FOR 1" PIPE	1	1	2
30	EYE, Y-CLEVIS, FOR DOUBLE STEADY ARM APPLICATIONS	-	-	1

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NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



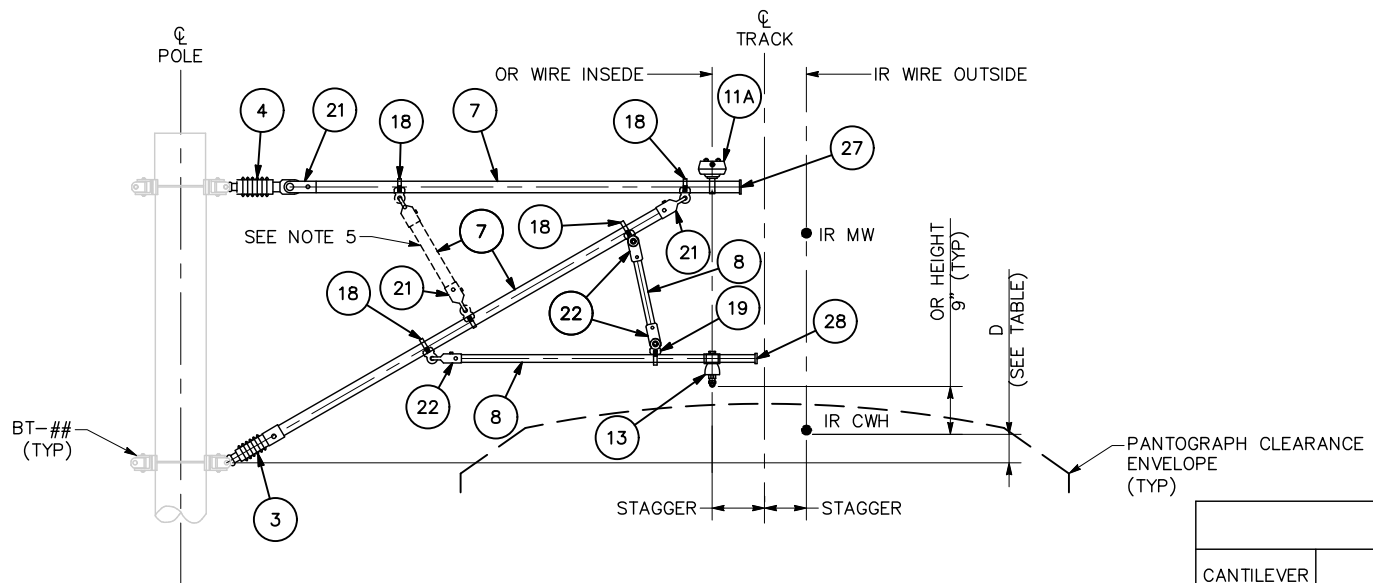
<b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
DESIGNED G. KOLA	CHECKED P. YAVARI
DRAWN D. KEO	CADD FILE NAME 801PD204.dwg



<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE 5/15/2020	SCALE NTS
SUBMITTAL DATE 06/29/20	BOARD APPROVAL DATE

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT OVERHEAD CONTACT SYSTEM CANTILEVER ARM ASSEMBLIES CA-A3, CA-B1, CA-B1H		
PCA NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE

SHEET OF	DRAWING NO. PD204
REVISION B	

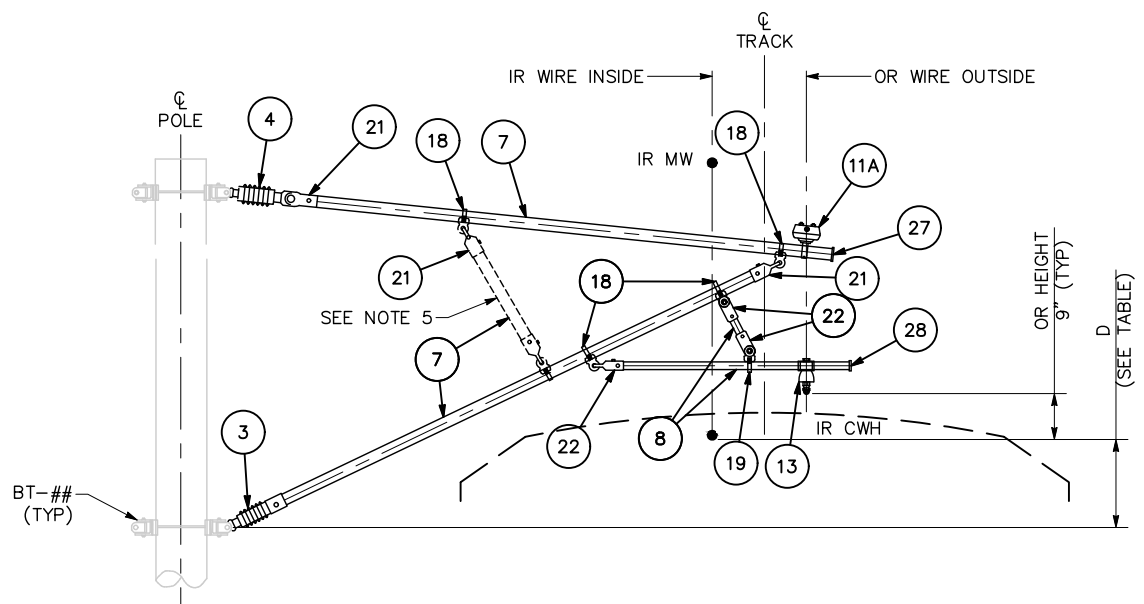


OUT OF RUNNING CATENARY CLOSER TO POLE  
CANTILEVER TYPE - CA-C1  
(SEE LOADING TABLE)

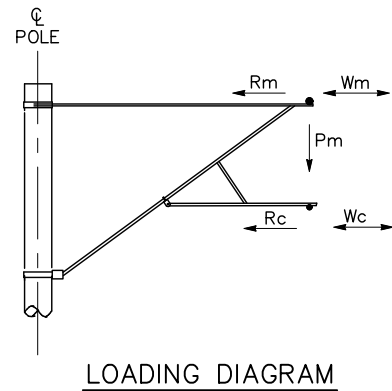
'D' DIMENSION	
POLE OFFSET	'D'
6'-7" - 9'-0"	6"
9'-0" - 11'-6"	18"
11'-6" - 16'-6"	36"
16'-6" +	48"

LOADING TABLE						
CANTILEVER TYPE	APPLICATION	MAX FORCE COMPONENTS (LBS)				
		Pm	Rc	Rm	Wc	Wm
CA-C1	MEDIUM LOAD	545	500	750	160	225

- NOTES:**
- FOR ABBREVIATIONS, LEGEND AND GENERAL NOTES SEE DWGS PG001, PG002, AND PG003.
  - CANTILEVERS SHALL CLEAR PANTOGRAPH ENVELOPE PER DWG PG005.
  - THIS DRAWING IS A GENERAL ARRANGEMENT FOR CANTILEVER ASSEMBLIES AND INDICATE THE MINIMUM PIPE SIZES, SYSTEM HEIGHTS AND ATTACHMENT HEIGHTS RELATIVE TO THE CONTACT WIRE HEIGHT. CONTRACTOR SHALL USE THIS DRAWING AS A GUIDE TO DESIGN SITE SPECIFIC ASSEMBLIES INCLUDING ALL COMPONENTS. ALL CONTRACTOR SUPPLIED DESIGNS SHALL CONFORM TO FIT AND FUNCTION OF THE PLANS AS SHOWN.
  - WIRE HEIGHTS, STAGGERS AND POLE OFFSETS ARE INDICATED ON OCS LAYOUT SCHEDULES. STAGGERS ARE RELATIVE TO THE SUPERELEVATED TRACK CENTERLINE AT CONTACT WIRE LEVEL.
  - ADD SUPPORT BRACE WHERE POLE OFFSET EXCEEDS 11'-6".



OUT OF RUNNING CATENARY FURTHER AWAY FROM POLE  
CANTILEVER TYPE - CA-C1  
(SEE LOADING TABLE)

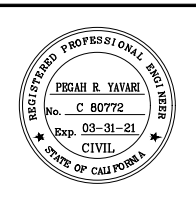


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BILL OF MATERIAL		QUANTITY
ITEM	DESCRIPTION	CA-C1
3	INSULATOR EYE/PIPE ENDS FOR 2" PIPE	1
4	INSULATOR EYE/CLEVIS ENDS FOR 2" PIPE	1
7	HOT DIP GALV 2" PIPE SCH 80 (LENGTH AS REQ'D)	2
8	HOT DIP GALV 1 1/4" PIPE SCH 40 (LENGTH AS REQ'D)	2
11A	ISULATED MESSENGER WIRE SUPPORT CLAMP	1
13	INSULATED CONTACT WIRE SWIVEL CLAMP FOR 1 1/4" PIPE	1
18	CLEVIS CLAMP WITH U-BOLT FOR 2" PIPE	3
19	CLEVIS CLAMP WITH U-BOLT FOR 1 1/4" PIPE	1
21	EYE END FITTING FOR 2" PIPE	2
22	EYE END FITTING FOR 1 1/4" PIPE	3
27	END CAP FOR 2" PIPE	1
28	END CAP FOR 1 1/4" PIPE	1

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NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



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DESIGNED: G. KOLA  
CHECKED: P. YAVARI  
DRAWN: D. KEO  
CADD FILE NAME: 801PD205.dwg

**Santa Clara Valley Transportation Authority**

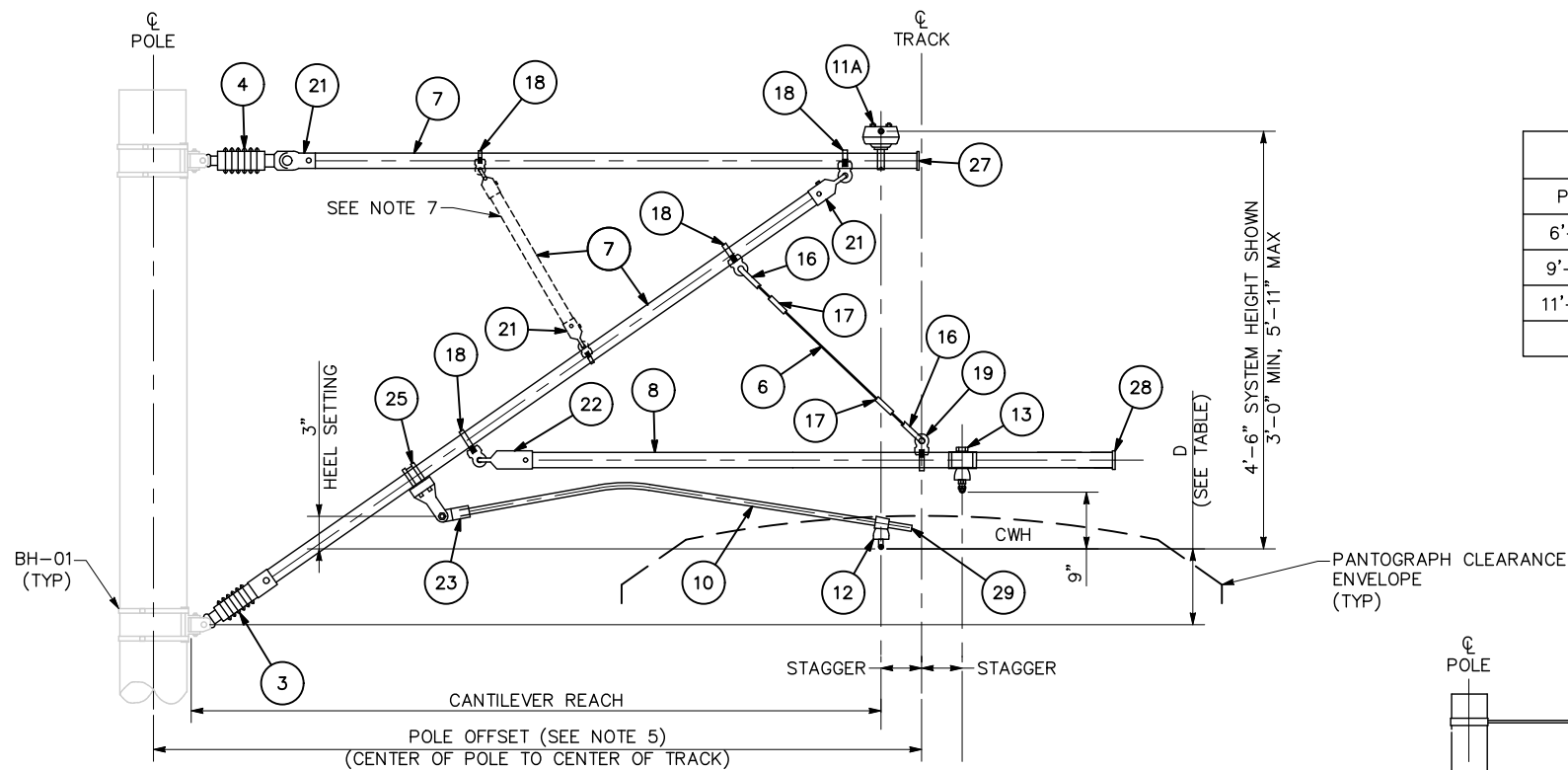
**BKF 100+ YEARS**  
ENGINEERS / SURVEYORS / PLANNERS

CAAD FILE DATE: 5/15/2020  
SCALE: NTS  
SUBMITTAL DATE: 06/29/20  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
OVERHEAD CONTACT SYSTEM  
CANTILEVER ARM ASSEMBLY  
CA-C1

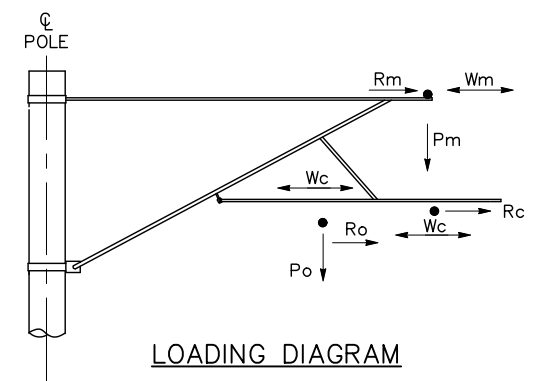
PCA NO.: 000  
CONTRACT NO.: C801  
FILE LOCATION: PROJECTWISE

SHEET OF: PD205  
REVISION: B



'D' DIMENSION	
POLE OFFSET	'd'
6'-7" - 9'-0"	6"
9'-0" - 11'-6"	18"
11'-6" - 16'-6"	36"
16'-6" +	48"

**AUTO-TENSIONED SIMPLE CATENARY  
TYPE CA-D1 (AIRBREAK PULL-OFF APPLICATION)**  
(SEE LOADING TABLE)



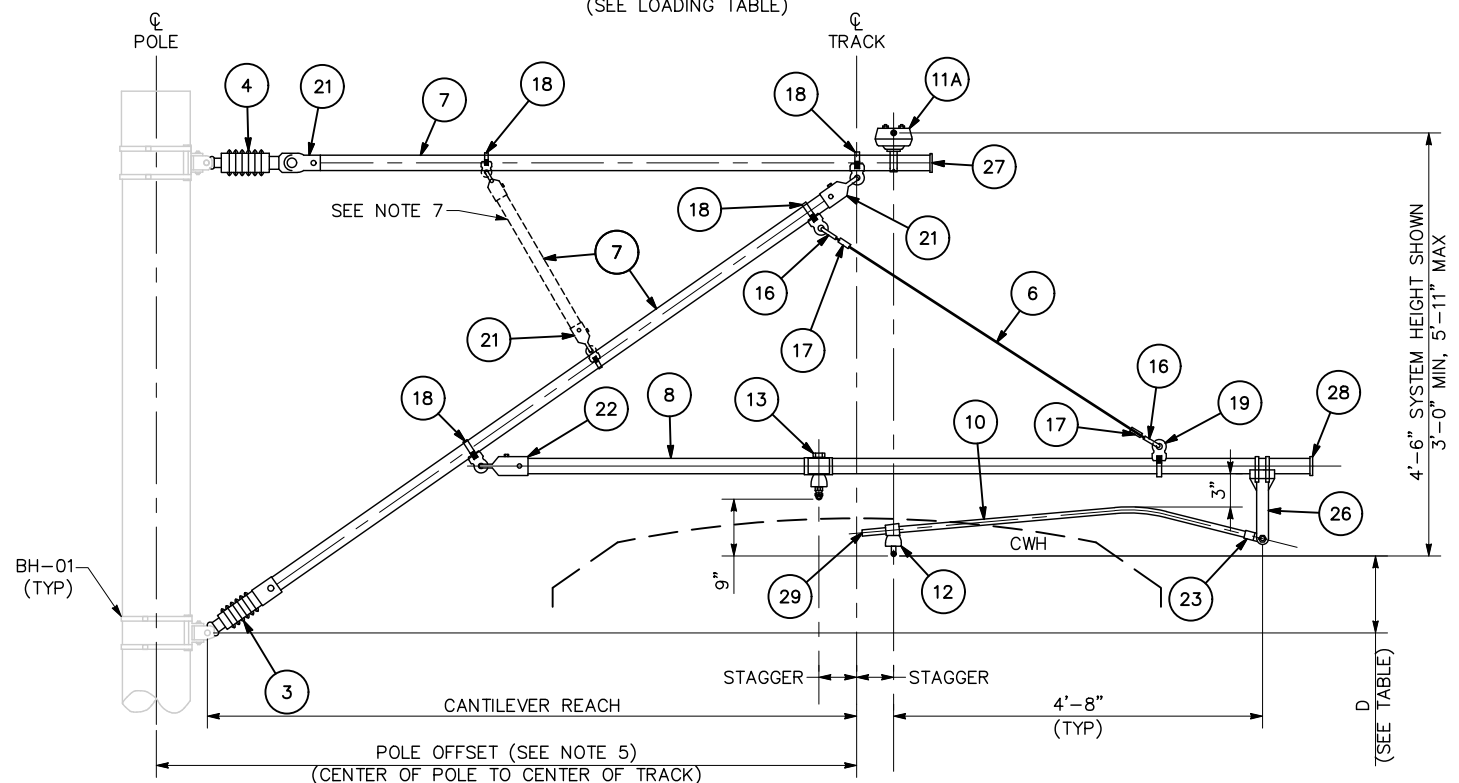
**LOADING DIAGRAM**

**NOTES:**

- FOR ABBREVIATIONS, LEGEND, AND GENERAL NOTES SEE DWGS PG001, PG002, AND PG003.
- CANTILEVERS SHALL CLEAR PANTOGRAPH ENVELOPE PER DWG PG005.
- THIS DRAWING IS A GENERAL ARRANGEMENT FOR CANTILEVER ASSEMBLIES AND INDICATE THE MINIMUM PIPE SIZES, SYSTEM HEIGHTS AND ATTACHMENT HEIGHTS RELATIVE TO THE CONTACT WIRE HEIGHT. CONTRACTOR SHALL USE THIS DRAWING AS A GUIDE TO DESIGN SITE SPECIFIC ASSEMBLIES INCLUDING ALL COMPONENTS. ALL CONTRACTOR SUPPLIED DESIGNS SHALL CONFORM TO FIT AND FUNCTION OF THE PLANS AS SHOWN.
- 1" PIPE (ITEM NO. 10) SHALL BE ABLE TO REACH A POLE OFFSET OF UP TO 17' WHILE STILL SATISFYING THE 3" TO 5" HEEL SETTING REQUIREMENT.
- WIRE HEIGHTS, STAGGERS AND POLE OFFSETS ARE INDICATED ON OCS LAYOUT SCHEDULES. STAGGERS ARE RELATIVE TO THE SUPERELEVATED TRACK CENTERLINE AT CONTACT WIRE LEVEL.
- EACH CANTILEVER ASSEMBLY SHALL BE USED IN CONJUNCTION WITH TWO BH-01 ASSEMBLIES OR A BT-## ASSEMBLY.
- ADD SUPPORT BRACE WHERE POLE OFFSET EXCEEDS 11'-6".

CANTILEVER TYPE		APPLICATION	MAX FORCE COMPONENTS (LBS)						
			Pm	Rc	Rm	Wc	Wm	Po	Ro
CA-D1	PULL-OFF	MEDIUM LOAD	450	300	500	140	180	50	300
CA-D2	PUSH-OFF	MEDIUM LOAD	450	300	500	140	180	50	300

**LOADING TABLE**



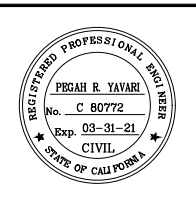
**AUTO-TENSIONED SIMPLE CATENARY  
TYPE CA-D2 (AIRBREAK PUSH-OFF APPLICATION)**  
(SEE LOADING TABLE)

ITEM		DESCRIPTION	QUANTITY	
			CA-D1	CA-D2
3	INSULATOR EYE/PIPE ENDS FOR 2" PIPE	1	1	
4	INSULATOR EYE/CLEVIS ENDS FOR 2" PIPE	1	1	
6	3/16" STAINLESS STEEL WIRE (LENGTH AS REQ'D)	1	1	
7	HOT DIP GALV 2" PIPE SCH 80 (LENGTH AS REQ'D)	2	2	
8	HOT DIP GALV 1 1/4" PIPE SCH 40 (LENGTH AS REQ'D)	1	1	
10	HOT DIP GALV 1" PIPE SCH 40 WITH 10" BEND (LENGTH AS REQ'D)	1	1	
11A	ISULATED MESSENGER WIRE SUPPORT CLAMP	1	1	
12	INSULATED CONTACT WIRE SWIVEL CLAMP FOR 1" PIPE	1	1	
13	INSULATED CONTACT WIRE SWIVEL CLAMP FOR 1 1/4" PIPE	1	1	
16	THIMBLE FOR 3/16" SS WIRE	2	2	
17	COPPER CRIMP FOR 3/16" SS WIRE	2	2	
18	CLEVIS CLAMP WITH U-BOLT FOR 2" PIPE	3	3	
19	CLEVIS CLAMP WITH U-BOLT FOR 1 1/4" PIPE	1	1	
21	EYE END FITTING FOR 2" PIPE	2	2	
22	EYE END FITTING FOR 1 1/4" PIPE	1	1	
23	EYE END FITTING FOR 1" PIPE	1	1	
25	DROP BRACKET WITH (2) U-BOLTS FOR 2" PIPE	1	-	
26	DROP BRACKET WITH (2) U-BOLTS FOR 1 1/4" PIPE	-	1	
27	END CAP FOR 2" PIPE	1	1	
28	END CAP FOR 1 1/4" PIPE	1	1	
29	END CAP FOR 1" PIPE	1	1	

**BILL OF MATERIAL**

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NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



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DRAWN: D. KEO  
CADD FILE NAME: 801PD206.dwg

**Santa Clara Valley  
Transportation  
Authority**

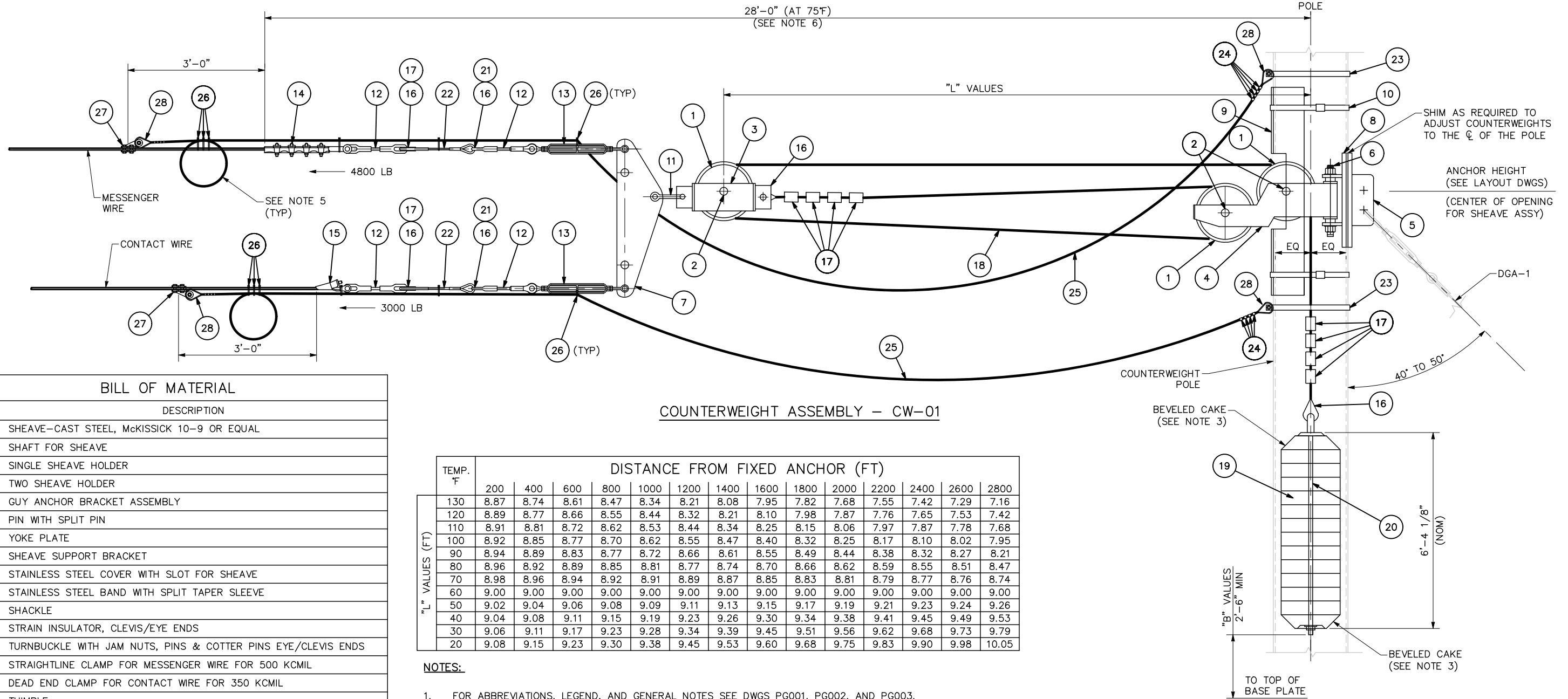
**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CAO FILE DATE: 5/15/2020  
SCALE: NTS  
SUBMITTAL DATE: 06/29/20  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
OVERHEAD CONTACT SYSTEM  
CANTILEVER ARM ASSEMBLIES  
CA-D1, CA-D2

PCA NO: 000  
CONTRACT NO: C801  
FILE LOCATION: PROJECTWISE

SHEET OF: PD206  
REVISION: B



COUNTERWEIGHT ASSEMBLY - CW-01

BILL OF MATERIAL

ITEM	DESCRIPTION
1	SHEAVE-CAST STEEL, McKISSICK 10-9 OR EQUAL
2	SHAFT FOR SHEAVE
3	SINGLE SHEAVE HOLDER
4	TWO SHEAVE HOLDER
5	GUY ANCHOR BRACKET ASSEMBLY
6	PIN WITH SPLIT PIN
7	YOKE PLATE
8	SHEAVE SUPPORT BRACKET
9	STAINLESS STEEL COVER WITH SLOT FOR SHEAVE
10	STAINLESS STEEL BAND WITH SPLIT TAPER SLEEVE
11	SHACKLE
12	STRAIN INSULATOR, CLEVIS/EYE ENDS
13	TURNBUCKLE WITH JAM NUTS, PINS & COTTER PINS EYE/CLEVIS ENDS
14	STRAIGHTLINE CLAMP FOR MESSENGER WIRE FOR 500 KCMIL
15	DEAD END CLAMP FOR CONTACT WIRE FOR 350 KCMIL
16	THIMBLE
17	GUY CLIP
18	1/2"Ø STAINLESS STEEL WIRE ROPE, NON-SPINNING
19	COUNTERWEIGHT CAKES (LEAD)
20	SUPPORT ROD-1"Ø
21	1/2" SPIRAL GUY GRIP
22	1/2"Ø GALVANIZED STEEL WIRE ROPE
23	POLE BAND
24	CRIMP CLIP FOR 1/2"Ø PHILLYSTRAN
25	1/2"Ø PHILLYSTRAN
26	PLASTIC CLIP
27	STRAIN CLAMP WITH CLEVIS
28	THIMBLE-CLOSED FOR 1/2"Ø PHILLYSTRAN

TEMP. °F	DISTANCE FROM FIXED ANCHOR (FT)													
	200	400	600	800	1000	1200	1400	1600	1800	2000	2200	2400	2600	2800
130	8.87	8.74	8.61	8.47	8.34	8.21	8.08	7.95	7.82	7.68	7.55	7.42	7.29	7.16
120	8.89	8.77	8.66	8.55	8.44	8.32	8.21	8.10	7.98	7.87	7.76	7.65	7.53	7.42
110	8.91	8.81	8.72	8.62	8.53	8.44	8.34	8.25	8.15	8.06	7.97	7.87	7.78	7.68
100	8.92	8.85	8.77	8.70	8.62	8.55	8.47	8.40	8.32	8.25	8.17	8.10	8.02	7.95
90	8.94	8.89	8.83	8.77	8.72	8.66	8.61	8.55	8.49	8.44	8.38	8.32	8.27	8.21
80	8.96	8.92	8.89	8.85	8.81	8.77	8.74	8.70	8.66	8.62	8.59	8.55	8.51	8.47
70	8.98	8.96	8.94	8.92	8.91	8.89	8.87	8.85	8.83	8.81	8.79	8.77	8.76	8.74
60	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00	9.00
50	9.02	9.04	9.06	9.08	9.09	9.11	9.13	9.15	9.17	9.19	9.21	9.23	9.24	9.26
40	9.04	9.08	9.11	9.15	9.19	9.23	9.26	9.30	9.34	9.38	9.41	9.45	9.49	9.53
30	9.06	9.11	9.17	9.23	9.28	9.34	9.39	9.45	9.51	9.56	9.62	9.68	9.73	9.79
20	9.08	9.15	9.23	9.30	9.38	9.45	9.53	9.60	9.68	9.75	9.83	9.90	9.98	10.05

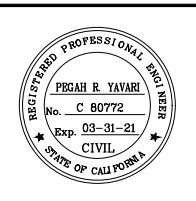
NOTES:

- FOR ABBREVIATIONS, LEGEND, AND GENERAL NOTES SEE DWGS PG001, PG002, AND PG003.
- FOR POLE DETAILS SEE POLE ASSEMBLIES T2 (PD227).
- USE 45° BEVEL FOR TOP AND BOTTOM CAKES ONLY.
- TOTAL WEIGHT OF COUNTERWEIGHT CAKE SHALL BE APPROXIMATELY 2,600 LBS ± 55 LBS FOR SCAT SYSTEM.
- BUNDLE 5' OF 1/2" PHILLYSTRAN IN THREE 6 1/2" CIRCLES USING PLASTIC CLIPS.
- THIS IS A NOMINAL DIMENSION AND SHOULD BE VERIFIED IN THE FIELD. THE OVERALL LENGTH OF PHILLYSTRAN IS BASED ON THIS DIMENSION TO BE ~38' (28' + 3' + 5' + 2'). ENSURE ENOUGH SLACK IS INSTALLED IN PHILLYSTRAN FOR MAXIMUM DISTANCE FROM YOKE PLATE TO POLE.
- PLASTIC CLIPS SHALL NOT BE INSTALLED ON INSULATORS.
- FOR RECOMMENDED OCS INSTALLATION PROCEDURES REFER TO DWG PD404.

TEMP. °F	DISTANCE FROM FIXED ANCHOR (FT)													
	200	400	600	800	1000	1200	1400	1600	1800	2000	2200	2400	2600	2800
130	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
120	2.56	2.61	2.67	2.73	2.78	2.84	2.89	2.95	3.01	3.06	3.12	3.18	3.23	3.29
110	2.61	2.73	2.84	2.95	3.06	3.18	3.29	3.40	3.52	3.63	3.74	3.85	3.97	4.08
100	2.67	2.84	3.01	3.18	3.35	3.52	3.68	3.85	4.02	4.19	4.36	4.53	4.70	4.87
90	2.73	2.95	3.18	3.40	3.63	3.85	4.08	4.30	4.53	4.76	4.98	5.21	5.43	5.66
80	2.78	3.06	3.35	3.63	3.91	4.19	4.47	4.76	5.04	5.32	5.60	5.88	6.17	6.45
70	2.84	3.18	3.52	3.85	4.19	4.53	4.87	5.21	5.55	5.88	6.22	6.56	6.90	7.24
60	2.89	3.29	3.68	4.08	4.47	4.87	5.26	5.66	6.05	6.45	6.84	7.24	7.63	8.03
50	2.95	3.40	3.85	4.30	4.76	5.21	5.66	6.11	6.56	7.01	7.46	7.91	8.37	8.82
40	3.01	3.52	4.02	4.53	5.04	5.55	6.05	6.56	7.07	7.58	8.08	8.59	9.10	9.61
30	3.06	3.63	4.19	4.76	5.32	5.88	6.45	7.01	7.58	8.14	8.70	9.27	9.83	10.40
20	3.12	3.74	4.36	4.98	5.60	6.22	6.84	7.46	8.08	8.70	9.32	9.94	10.57	11.19

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DRAWN: D. KEO  
CADD FILE NAME: 801PD207.dwg

**Santa Clara Valley Transportation Authority**

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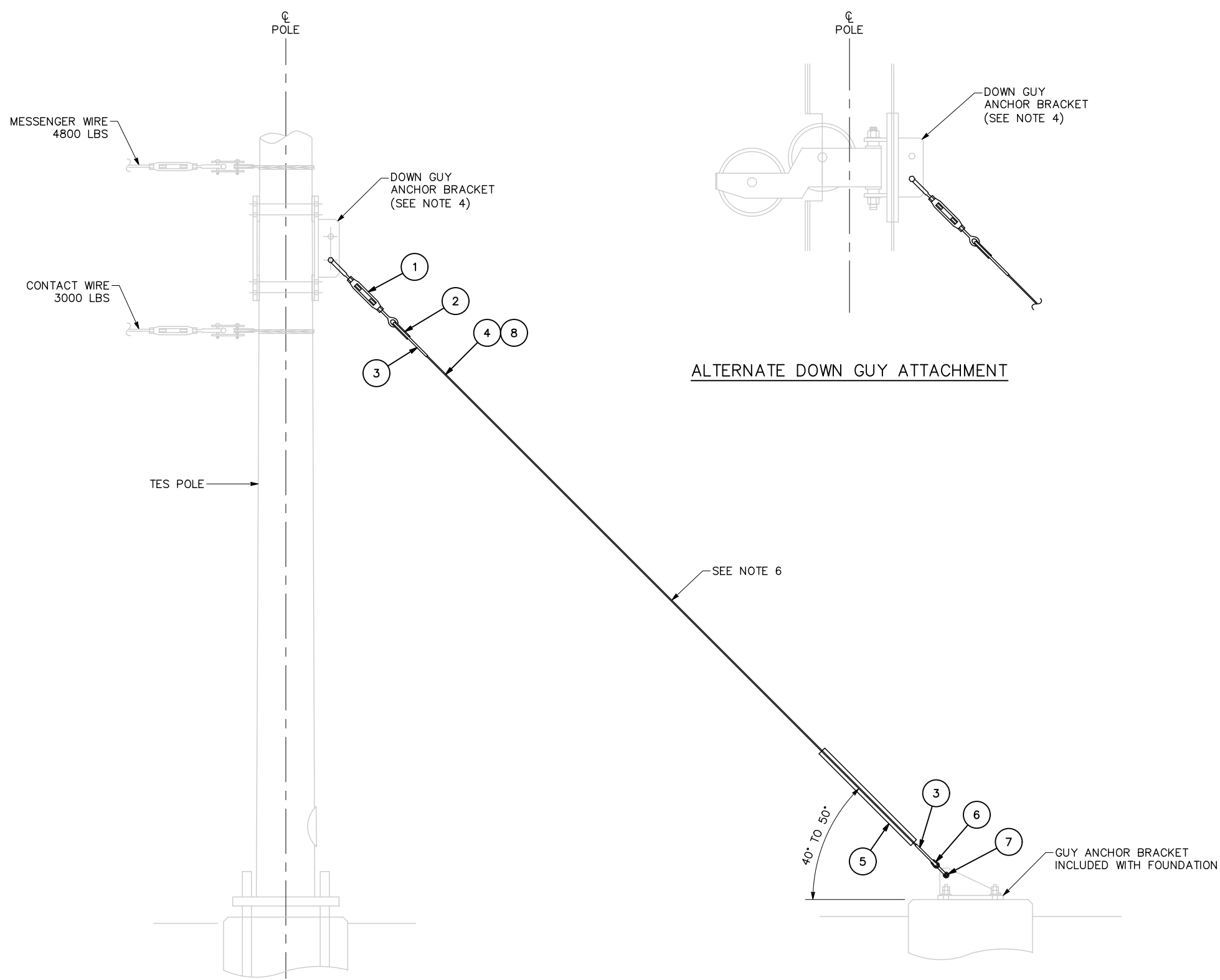
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SCALE: NTS  
SUBMITTAL DATE: 06/29/20  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
OVERHEAD CONTACT SYSTEM  
COUNTERWEIGHT ASSEMBLY  
CW-01

PCA NO: 000  
CONTRACT NO: C801  
FILE LOCATION: PROJECTWISE

SHEET OF PD207  
REVISION B

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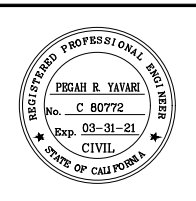


**DOWN GUY ANCHOR ASSEMBLY – DGA-1, DGA-2**

- NOTES:**
1. FOR ABBREVIATIONS, LEGEND, AND GENERAL NOTES SEE DWGS PG001, PG002, AND PG003.
  2. FOR TERMINATION MOUNTING HEIGHTS, REFER TO OCS LAYOUT SCHEDULE DRAWINGS.
  3. FOR POLE ASSEMBLY SEE OCS LAYOUT SCHEDULE DRAWINGS.
  4. DOWN GUY ANCHOR BRACKET IS PART OF COUNTERWEIGHT ASSEMBLY OR FIXED TERMINATION ASSEMBLY.
  5. FOR DOWN GUY GROUNDING DETAILS SEE DWG PD228.
  6. FOR DOWN GUY ANCHOR FOUNDATION DETAILS SEE DWG PD305.

BILL OF MATERIAL		QUANTITY	
ITEM	DESCRIPTION	DGA-1	DGA-2
1	TURNBUCKLE, EYE/CLEVIS ENDS	1	1
2	CLEVIS THIMBLE FOR GUY WIRE	1	1
3	FORMED DEADEND FOR GUY WIRE	2	2
4	5/8" Ø STEEL GUY STRAND, HIGH-STRENGTH (NOTE 6)	AS REQ'D	-
5	8'-0" LONG ROUND YELLOW PLASTIC GUY GUARD	1	1
6	THIMBLE FOR GUY ANCHOR LOOP	1	1
7	SHACKLE	1	1
8	3/4" Ø STEEL GUY STRAND, HIGH-STRENGTH (NOTE 6)	-	AS REQ'D

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CADD FILE NAME: 801PD208.dwg

**Santa Clara Valley Transportation Authority**

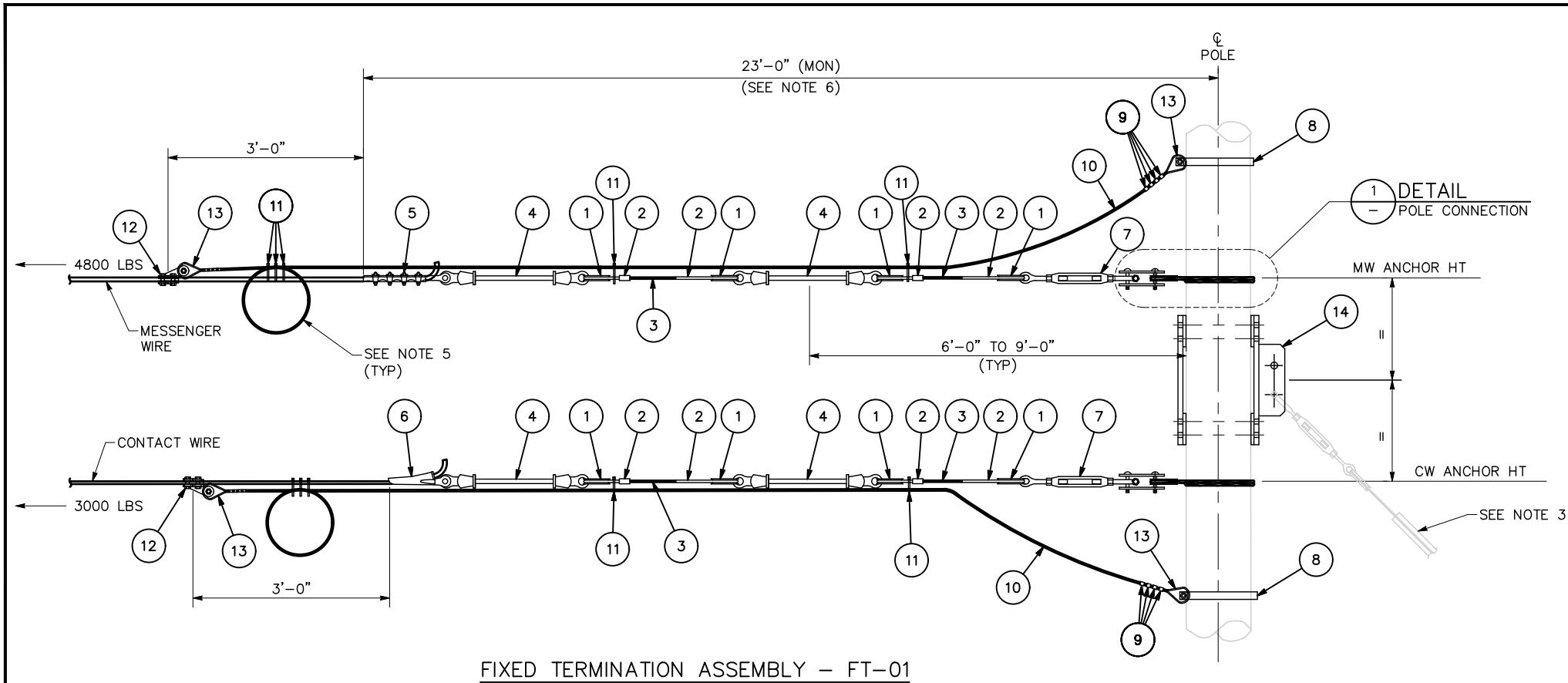
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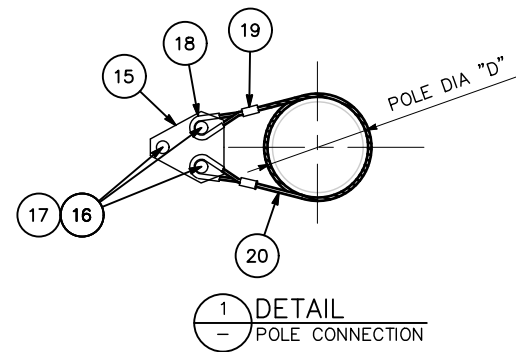
EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
OVERHEAD CONTACT SYSTEM  
DOWN GUY ASSEMBLY  
DGA-1, DGA-2

PCA NO.: 000  
CONTRACT NO.: C801  
FILE LOCATION: PROJECTWISE

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REVISION: B



FIXED TERMINATION ASSEMBLY - FT-01



NOTES:

1. FOR ABBREVIATIONS, LEGEND, AND GENERAL NOTES SEE DWGS PG001, PG002, AND PG003.
2. FOR ASSEMBLY ALLOCATION REFER TO OCS LAYOUT SCHEDULE DRAWINGS.
3. DOWN GUY ASSEMBLY SEPARATELY CALLED OFF, SEE DWG PD208.
4. 1/2" Ø GALVANIZED WIRE (ITEM 4) TO BE CUT TO LENGTH BY CONTRACTOR.
5. BUNDLE 5' OF 1/2" PHILLYSTRAN IN THREE 6 1/2" CIRCLES USING PLASTIC CLIPS.
6. THIS IS A NOMINAL DIMENSION AND SHOULD BE VERIFIED IN THE FIELD. THE OVERALL LENGTH OF PHILLYSTRAN IS BASED ON THIS DIMENSION TO BE ~31' (23'+3'+5'+0').
7. PLASTIC CLIPS SHALL NOT BE INSTALLED ON INSULATORS.

BILL OF MATERIAL		QUANTITY
ITEM	DESCRIPTION	FT-01
1	THIMBLE FOR WIRE	8
2	FORMED DEADEND FOR GUY WIRE	8
3	1/2" 19 STRAND GALV STEEL GUY WIRE	AS REQ'D
4	FIBER GLASS STRAIN INSULATOR EYE/EYE ENDS	4
5	DEADEND CLAMP FOR MESSENGER WIRE	1
6	DEADEND CLAMP FOR CONTACT WIRE	1
7	TURNBUCKLE EYE/CLEVIS ENDS	2
8	POLE BAND	2
9	CRIMP CLIP FOR 1/2"Ø PHILLYSTRAN	16
10	1/2"Ø PHILLYSTRAN	AS REQ'D
11	PLASTIC CLIP	AS REQ'D
12	STRAIN CLAMP WITH CLEVIS	2
13	THIMBLE-CLOSED FOR 1/2"Ø PHILLYSTRAN	4
14	GUY ANCHOR BRACKET ASSEMBLY	1
15	DOUBLE CLEVIS PLATE (DETAIL 5 ON DWG PD223)	2
16	ROUND HEAD PIN	6
17	SPLIT PIN, SS	6
18	THIMBLE FOR WIRE	4
19	COPPER CRIMP CONNECTOR	4
20	POLE BAND-STEEL GUY STRAND, EXTRA FLX	2

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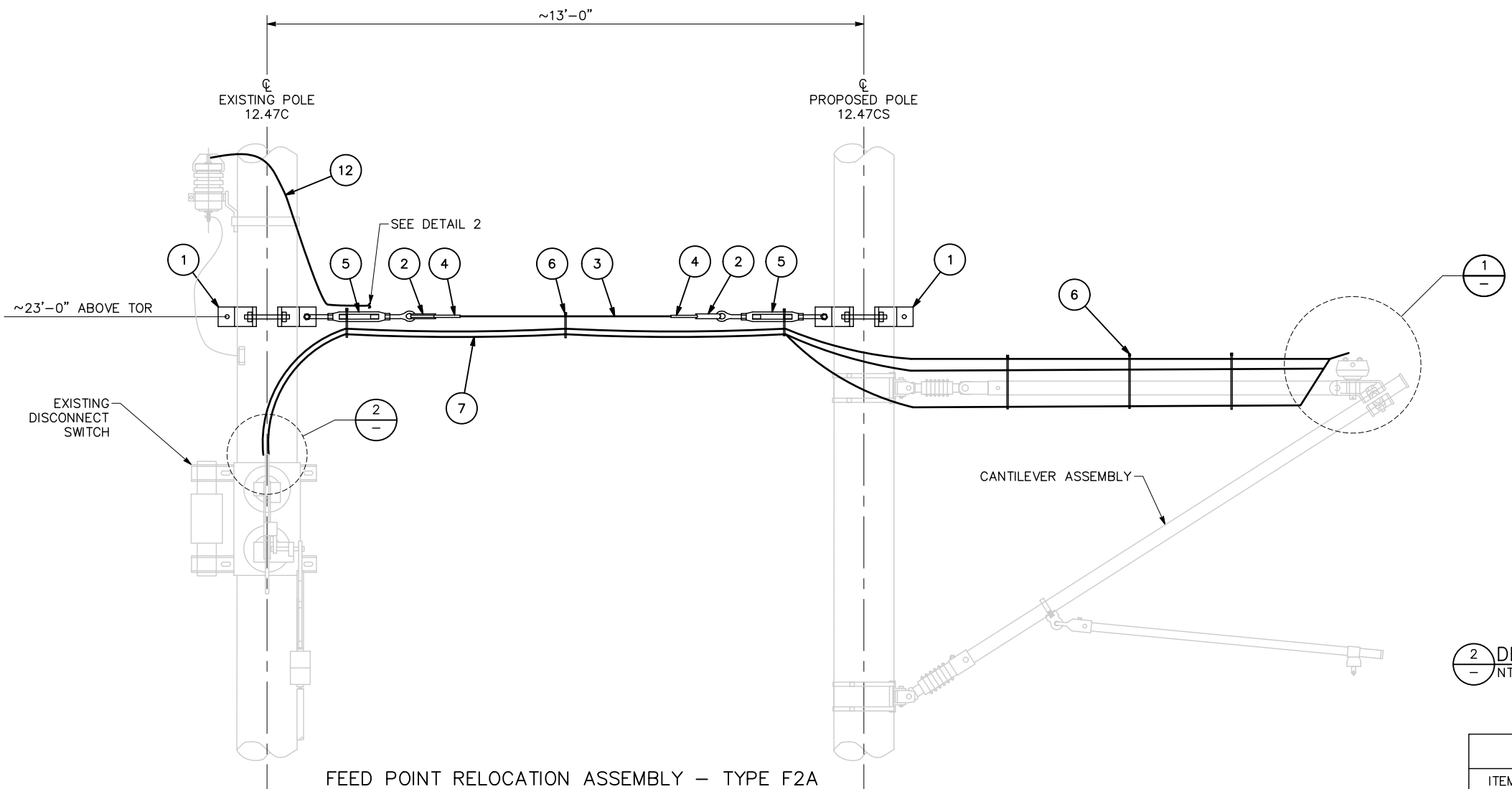
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EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 OVERHEAD CONTACT SYSTEM  
 FIXED END ASSEMBLY  
 FT-01

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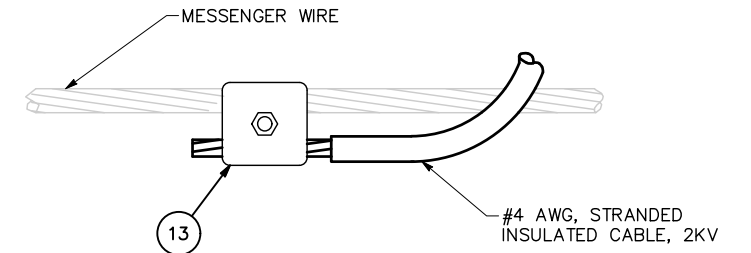
PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE



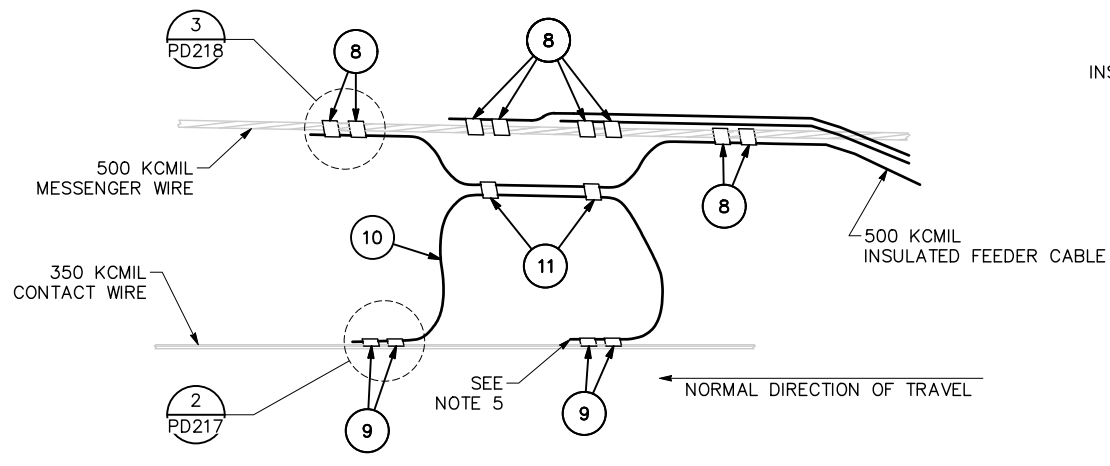


FEED POINT RELOCATION ASSEMBLY - TYPE F2A  
NTS

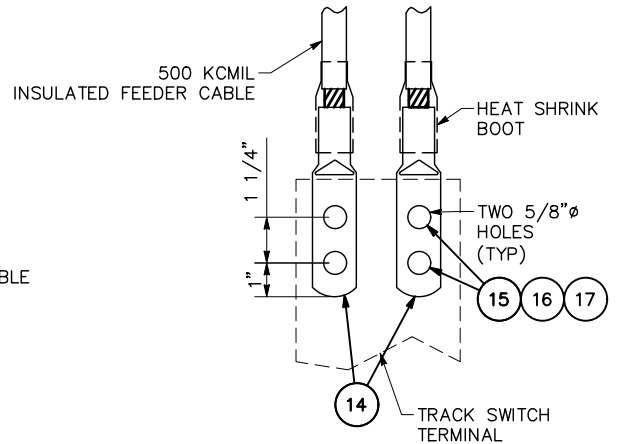
- NOTES:**
- FOR ABBREVIATIONS, LEGEND, AND GENERAL NOTES SEE DWGS PG001, PG002, AND PG003.
  - FOR ASSEMBLY ALLOCATION REFER TO OCS LAYOUT SCHEDULE DRAWING PC001.
  - 1/2" Ø GALVANIZED WIRE (ITEM 3) TO BE CUT TO LENGTH BY CONTRACTOR.
  - HEAD GUY ASSEMBLY SHALL BE HAND TAUT, AND SHALL NOT CAUSE THE POLES TO DEFLECT AT NOMINAL TEMPERATURE OF 60°F.
  - ALL TAIL WIRES SHALL BE SECURED TO PREVENT FRAYING WITH NO. 19 SOFT COPPER SOLID WIRE, 6 TURNS AND TWISTED END.



13 - MESSANGER WIRE/SURGE ARRESTER CABLE CONNECTION  
NTS



1 - DETAIL  
NTS

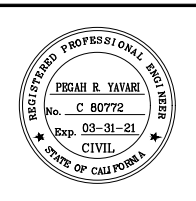


2 - DETAIL  
NTS

BILL OF MATERIAL		QUANTITY
ITEM	DESCRIPTION	TYPE F2A
1	POLE BAND TERMINATION	2
2	THIMBLE FOR WIRE	2
3	1/2" 19 STRAND GALV. STEEL GUY WIRE	AS REQ'D
4	FORMED DEADEND FOR GUY WIRE	2
5	TURNBUCKLE EYE/CLEVIS ENDS	2
6	MESSANGER LASHING STRAP, SS	AS REQ'D
7	500 KCML FEEDER CABLE (LENGTH AS REQ'D)	3
8	MESSANGER WIRE/FEEDER PARALLEL CLAMP	8
9	CONTACT WIRE/JUMPER PARALLEL CLAMP	4
10	JUMPER WIRE 350 KCML (LENGTH AS REQUIRED)	1
11	FEEDER/JUMPER PARALLEL CLAMP	2
12	#4 AWG, STRANDED INSULATED CABLE, 2KV (LENGTH AS REQ'D)	1
13	MESSANGER/SURGE ARRESTER CABLE PARALLEL CLAMP	1
14	COPPER LUG	3
15	HEXAGON BOLT, CU-BI-SI	6
16	STAINLESS STEEL WASHER	6
17	HEXAGON NUT, CU-NI-SI	6

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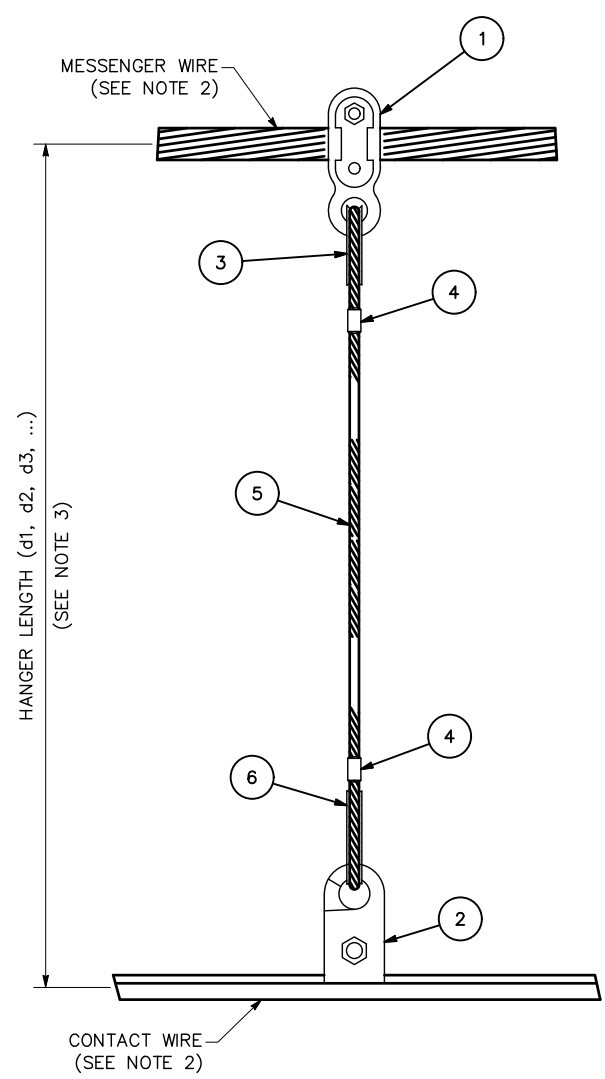
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 SUBMITTAL DATE: 06/29/20  
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EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 OVERHEAD CONTACT SYSTEM  
 FEED POINT RELOCATION  
 AT EXISTING STR. 12.47C

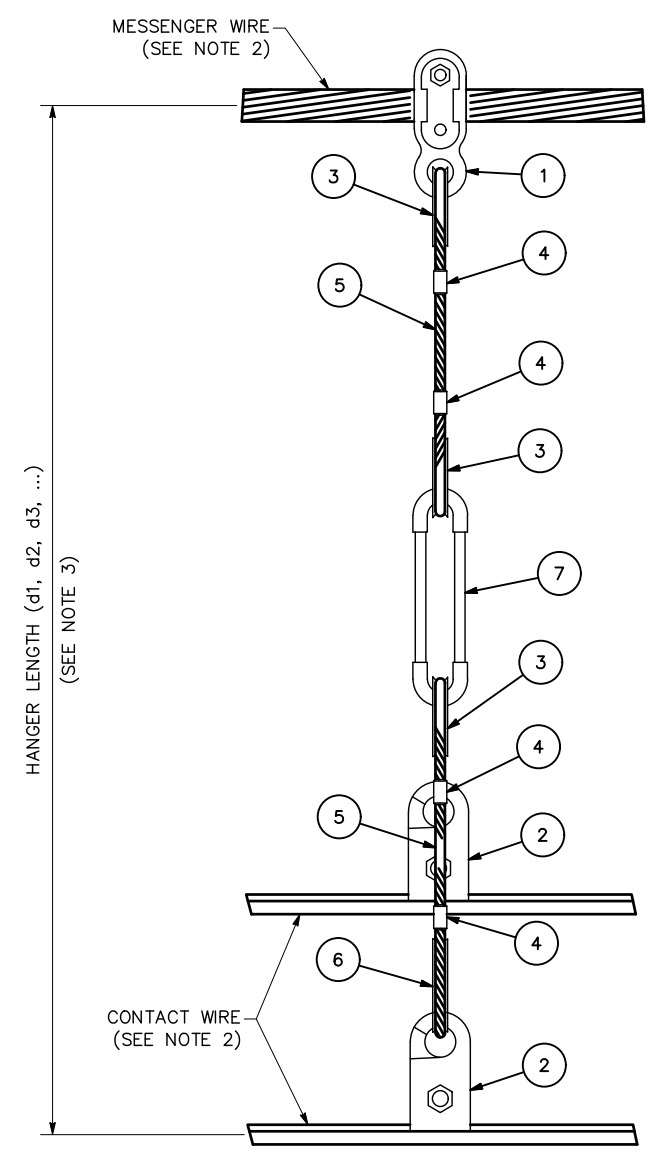
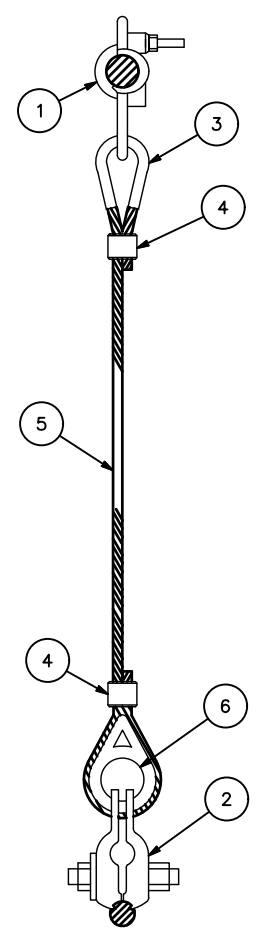
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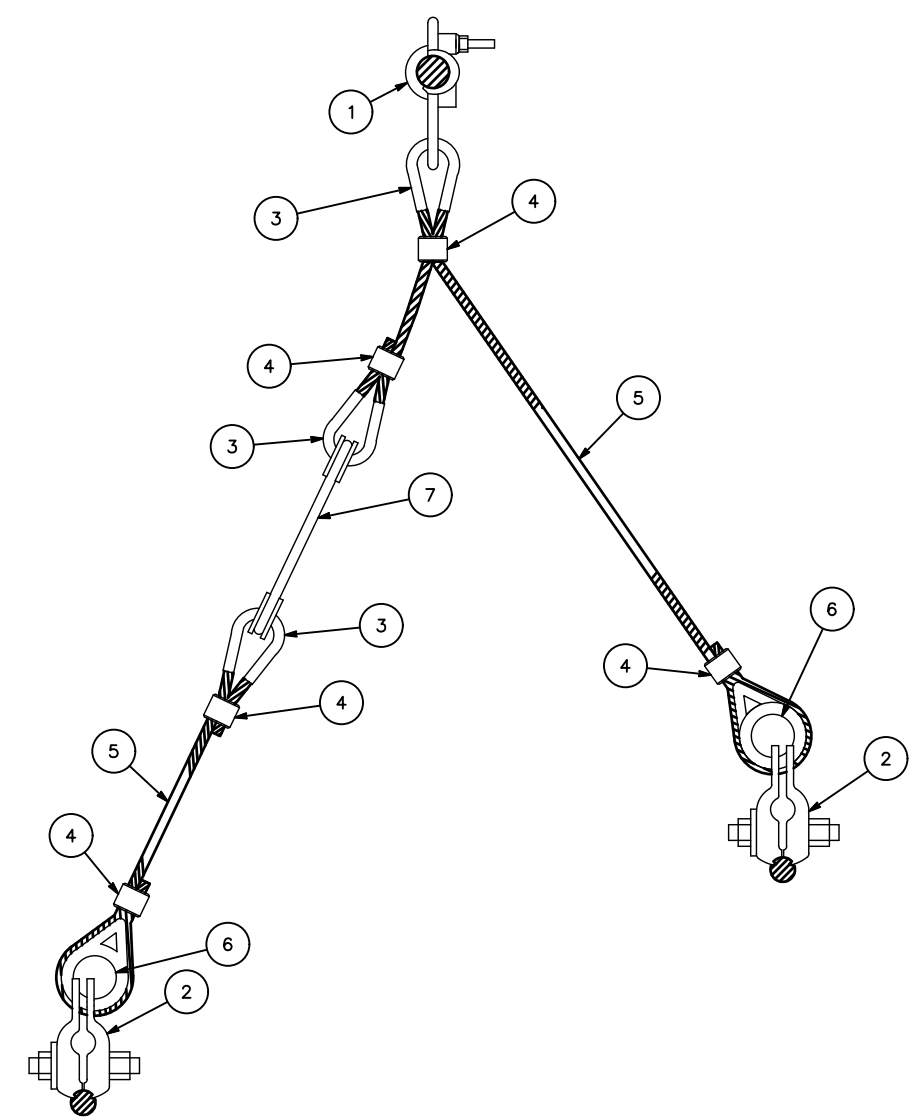
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NON-INSULATED HANGER ASSEMBLY – HA-01



INSULATED HANGER ASSEMBLY – HA-02  
(ONLY USED AT AIRBREAKS)

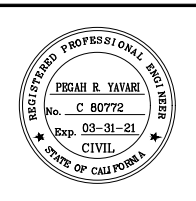


**NOTES:**

1. FOR ABBREVIATIONS, LEGEND, AND GENERAL NOTES SEE DWGS PG001, PG002, AND PG003.
2. MESSENGER WIRE TENSION IS 4800 LBS AND CONTACT WIRE TENSION IS 3000 LBS.
3. FOR DEFINITION OF d1, d2, d3, ..., AND FOR QUANTITIES AND LENGTHS OF HANGERS IN HANGER SET, SEE DWGS PD212 – PD216.

BILL OF MATERIAL		QUANTITY	
ITEM	DESCRIPTION	HA-01	HA-02
1	HANGER CLAMP FOR MESSENGER WIRE, 500 KCML	1	1
2	CLIP FOR CONTACT WIRE, 350 KCML	1	2
3	STAINLESS STEEL THIMBLE FOR WIRE	1	3
4	COPPER CRIMP CONNECTOR	2	5
5	STAINLESS STEEL 7 x 19 AIRCRAFT WIRE, 1/4" Ø (LENGTH AS REQ'D)	1	2
6	INSULATED THIMBLE FOR WIRE	1	2
7	LOOP INSULATOR	-	1

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EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 OVERHEAD CONTACT SYSTEM  
 HANGER ASSEMBLIES  
 HA-01 & HA-02

PCA NO.: 000 CONTRACT NO.: C801 FILE LOCATION: PROJECTWISE

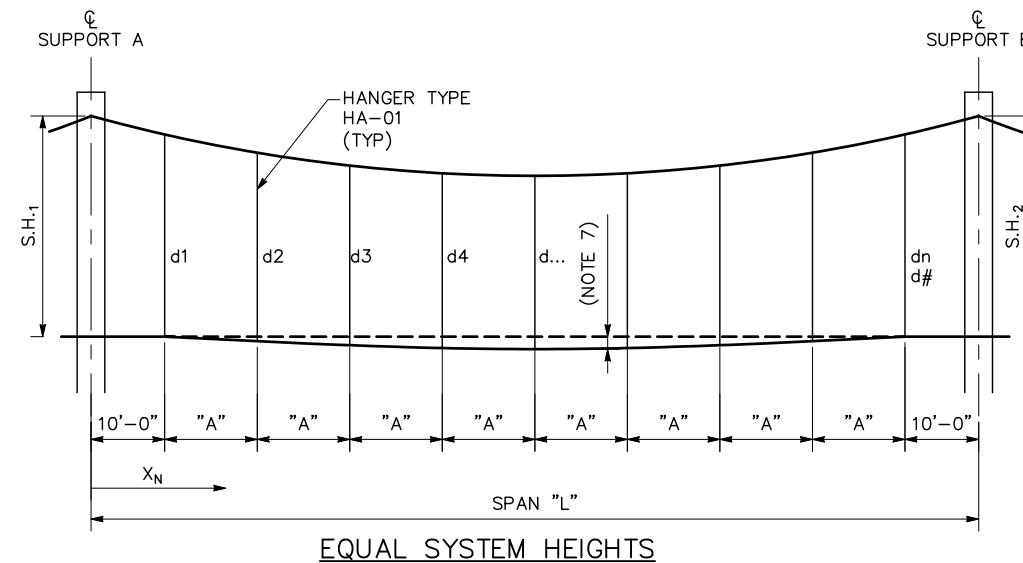
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 REVISION B

HANGER SET ASSEMBLY	SPAN	SYSTEM HEIGHT AT SUPPORTS		QUANTITY OF HANGERS	HANGER SPACING	HANGER LENGTHS (NOTE 4) EQUAL SYSTEM HEIGHT (NOTE 5)								
		S.H. <sub>1</sub>	S.H. <sub>2</sub>			(NOTE 3)	"A"	d1	d2	d3	d4	d5	d6	d7
HS-50	50'	4'-6"	4'-6"	2	30'-0"	4'-4 3/4"	4'-4 3/4"							
HS-55	55'	4'-6"	4'-6"	3	17'-6"	4'-4 1/2"	4'-4 1/4"	4'-4 1/2"						
HS-60	60'	4'-6"	4'-6"	3	20'-0"	4'-4 1/4"	4'-3 3/4"	4'-4 1/4"						
HS-65	65'	4'-6"	4'-6"	3	22'-6"	4'-4 1/4"	4'-3 1/4"	4'-4 1/4"						
HS-70	70'	4'-6"	4'-6"	3	25'-0"	4'-4"	4'-2 3/4"	4'-4"						
HS-75	75'	4'-6"	4'-6"	3	27'-6"	4'-3 3/4"	4'-2 1/4"	4'-3 3/4"						
HS-80	80'	4'-6"	4'-6"	3	30'-0"	4'-3 3/4"	4'-1 3/4"	4'-3 3/4"						
HS-85	85'	4'-6"	4'-6"	4	21'-8"	4'-3 1/2"	4'-1 1/4"	4'-1 1/4"	4'-3 1/2"					
HS-90	90'	4'-6"	4'-6"	4	23'-4"	4'-3 1/4"	4'-0 3/4"	4'-0 3/4"	4'-3 1/4"					
HS-95	95'	4'-6"	4'-6"	4	25'-0"	4'-3 1/4"	4'-0"	4'-0"	4'-3 1/4"					
HS-100	100'	4'-6"	4'-6"	4	26'-8"	4'-3"	3'-11 1/4"	3'-11 1/4"	4'-3"					
HS-105	105'	4'-6"	4'-6"	4	28'-4"	4'-2 3/4"	3'-10 3/4"	3'-10 3/4"	4'-2 3/4"					
HS-110	110'	4'-6"	4'-6"	4	30'-0"	4'-2 3/4"	3'-10"	3'-10"	4'-2 3/4"					
HS-115	115'	4'-6"	4'-6"	5	23'-9"	4'-2 1/2"	3'-10"	3'-8 1/2"	3'-10"	4'-2 1/2"				
HS-120	120'	4'-6"	4'-6"	5	25'-0"	4'-2 1/4"	3'-9 1/4"	3'-7 1/2"	3'-9 1/4"	4'-2 1/4"				
HS-125	125'	4'-6"	4'-6"	5	26'-3"	4'-2 1/4"	3'-8 1/2"	3'-6 1/2"	3'-8 1/2"	4'-2 1/4"				
HS-130	130'	4'-6"	4'-6"	5	27'-6"	4'-2"	3'-7 3/4"	3'-5 1/2"	3'-7 3/4"	4'-2"				
HS-135	135'	4'-6"	4'-6"	5	28'-9"	4'-1 3/4"	3'-6 3/4"	3'-4 1/2"	3'-6 3/4"	4'-1 3/4"				
HS-140	140'	4'-6"	4'-6"	5	30'-0"	4'-1 3/4"	3'-6"	3'-3 1/2"	3'-6"	4'-1 3/4"				
HS-145	145'	4'-6"	4'-6"	6	25'-0"	4'-1 1/2"	3'-6 1/4"	3'-2 3/4"	3'-2 3/4"	3'-6 1/4"	4'-1 1/2"			
HS-150	150'	4'-6"	4'-6"	6	26'-0"	4'-1 1/4"	3'-5 1/2"	3'-1 3/4"	3'-1 3/4"	3'-5 1/2"	4'-1 1/4"			

**HANGER LENGTH ADJUSTMENT INSTRUCTIONS  
WHEN SYSTEM HEIGHTS ARE NOT 4'-6"**

SEE DIAGRAM FOR UNEQUAL SYSTEM HEIGHTS

- IF THE SYSTEM HEIGHTS AT EACH END OF A SPAN ARE EQUAL, BUT DIFFERENT TO 4'-6", ADJUST THE HANGER LENGTHS BY THE DIFFERENCE (S.H. - 4'-6")
- FOR UNEQUAL SYSTEM HEIGHTS S.H.<sub>1</sub> AND S.H.<sub>2</sub>, THE REVISED HANGER LENGTHS d# WILL BE:  
 $d\# = S.H._1 + d_n - 4'-6" - (S.H._1 - S.H._2) * (X_N / L)$   
 WHERE X<sub>N</sub> IS THE DISTANCE OF HANGER d<sub>n</sub> FROM SUPPORT A AND L IS THE SPAN LENGTH.

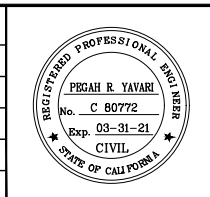


**NOTES:**

- FOR ABBREVIATIONS, LEGEND, AND GENERAL NOTES SEE DWGS PG001, PG002, AND PG003.
- FOR MATERIAL LIST FOR A SINGLE HANGER ASSEMBLY SEE DWG PD211 FOR ASSEMBLY HA-01.
- QUANTITY DEFINES THE NUMBER OF HANGER ASSEMBLIES HA-01 IN A SINGLE SPAN.
- THE HANGER LENGTHS SPECIFIED IN THE TABLE ARE CALCULATED BASED ON TENSIONS OF 4800 LBS FOR MESSENGER WIRE, 3000 LBS FOR CONTACT WIRE, AND A SYSTEM UNIT WEIGHT OF 2.652 LBS/FT (1.544 LB/FT [MW], 1.063 LB/FT [CW], 0.045 LB/FT [HA-01]).
- FOR NON-STANDARD HANGER SETS SEE DWGS PD214 & PD216.
- HANGER SET SHALL BE CHECKED AND CALCULATED BY THE CONTRACTOR AFTER THE FINAL WEIGHTS OF COMPONENTS HAVE BEEN DETERMINED BY THE SUPPLIER.
- MAXIMUM CONTACT WIRE PRESAG SHALL BE L/1000.

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 DRAWN: D. KEO  
 CADD FILE NAME: 801PD212.dwg

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EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 OVERHEAD CONTACT SYSTEM  
 HANGER LENGTH TABLES  
 HS-50 THRU HS-150

PCA NO.: 000 CONTRACT NO.: C801 FILE LOCATION: PROJECTWISE

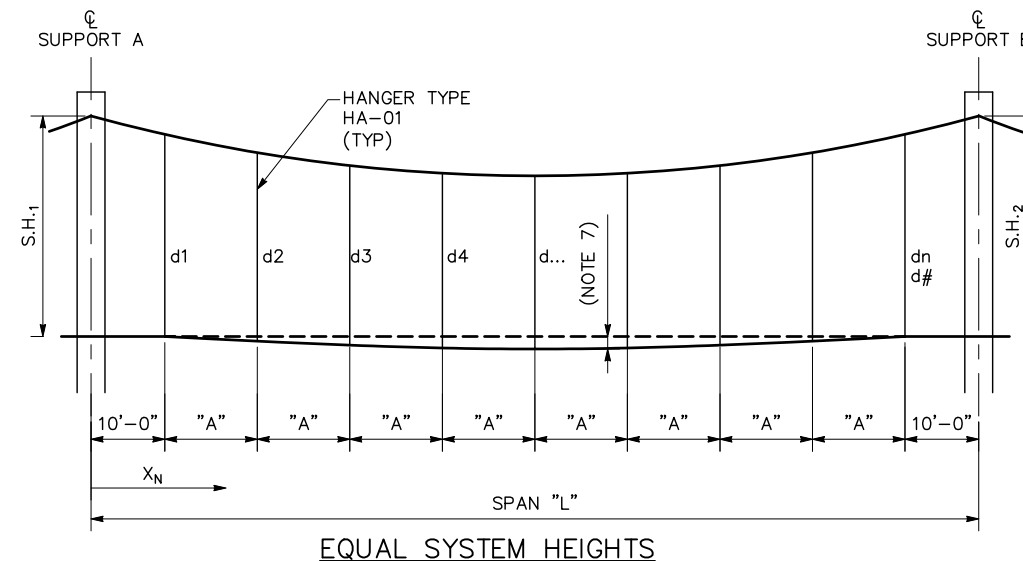
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DRAWING NO. PD212
REVISION B

HANGER SET ASSEMBLY	SPAN	SYSTEM HEIGHT AT SUPPORTS		QUANTITY OF HANGERS	HANGER SPACING	HANGER LENGTHS (NOTE 4) EQUAL SYSTEM HEIGHT (NOTE 5)								
		S.H. <sub>1</sub>	S.H. <sub>2</sub>			(NOTE 3)	"A"	d1	d2	d3	d4	d5	d6	d7
HS-155	155'	4'-6"	4'-6"	6	27'-0"	4'-1 1/4"	3'-4 3/4"	3'-0 1/2"	3'-0 1/2"	3'-4 3/4"	4'-1 1/4"			
HS-160	160'	4'-6"	4'-6"	6	28'-0"	4'-1"	3'-3 3/4"	2'-11 1/4"	2'-11 1/4"	3'-3 3/4"	4'-1"			
HS-165	165'	4'-6"	4'-6"	6	29'-0"	4'-0 3/4"	3'-3"	2'-10"	2'-10"	3'-3"	4'-0 3/4"			
HS-170	170'	4'-6"	4'-6"	6	30'-0"	4'-0 3/4"	3'-2"	2'-8 3/4"	2'-8 3/4"	3'-2"	4'-0 3/4"			
HS-175	175'	4'-6"	4'-6"	7	25'-10"	4'-0 1/2"	3'-2 3/4"	2'-8 3/4"	2'-6 3/4"	2'-8 3/4"	3'-2 3/4"	4'-0 1/2"		
HS-180	180'	4'-6"	4'-6"	7	26'-8"	4'-0 1/4"	3'-1 3/4"	2'-7 1/2"	2'-5 1/4"	2'-7 1/2"	3'-1 3/4"	4'-0 1/4"		
HS-185	185'	4'-6"	4'-6"	7	27'-6"	4'-0 1/4"	3'-1"	2'-6"	2'-3 3/4"	2'-6"	3'-1"	4'-0 1/4"		
HS-190	190'	4'-6"	4'-6"	7	28'-4"	4'-0"	3'-0"	2'-4 3/4"	2'-2 1/4"	2'-4 3/4"	3'-0"	4'-0"		
HS-195	195'	4'-6"	4'-6"	7	29'-2"	3'-11 3/4"	2'-11"	2'-3 1/2"	2'-0 3/4"	2'-3 1/2"	2'-11"	3'-11 3/4"		
HS-200	200'	4'-6"	4'-6"	7	30'-0"	3'-11 3/4"	2'-10"	2'-2"	1'-11 1/4"	2'-2"	2'-10"	3'-11 3/4"		
HS-205	205'	4'-6"	4'-6"	8	26'-5 1/4"	3'-11 1/2"	2'-10 3/4"	2'-2 1/2"	1'-10 1/4"	1'-10 1/4"	2'-2 1/2"	2'-10 3/4"	3'-11 1/2"	
HS-210	210'	4'-6"	4'-6"	8	27'-1 3/4"	3'-11 1/4"	2'-10"	2'-1"	1'-8 1/2"	1'-8 1/2"	2'-1"	2'-10"	3'-11 1/4"	
HS-215	215'	4'-6"	4'-6"	8	27'-10 1/4"	3'-11 1/4"	2'-9"	1'-11 1/2"	1'-6 3/4"	1'-6 3/4"	1'-11 1/2"	2'-9"	3'-11 1/4"	
HS-220	220'	4'-6"	4'-6"	8	28'-6 3/4"	3'-11"	2'-8"	1'-10 1/4"	1'-5 1/4"	1'-5 1/4"	1'-10 1/4"	2'-8"	3'-11"	
HS-225	225'	4'-6"	4'-6"	8	29'-3 1/2"	3'-10 3/4"	2'-7 1/4"	1'-8 3/4"	1'-3 1/2"	1'-3 1/2"	1'-8 3/4"	2'-7 1/4"	3'-10 3/4"	
HS-230	230'	4'-6"	4'-6"	8	30'-0"	3'-10 3/4"	2'-6 1/4"	1'-7 1/4"	1'-1 1/2"	1'-1 1/2"	1'-7 1/4"	2'-6 1/4"	3'-10 3/4"	
HS-235	235'	4'-6"	4'-6"	9	26'-10 1/2"	3'-10 1/2"	2'-7"	1'-8"	1'-1 1/4"	0'-11"	1'-1 1/4"	1'-8"	2'-7"	3'-10 1/2"
HS-240	240'	4'-6"	4'-6"	9	27'-6"	3'-10 1/2"	2'-6"	1'-6 1/2"	0'-11 1/2"	0'-9 1/4"	0'-11 1/2"	1'-6 1/2"	2'-6"	3'-10 1/2"

**HANGER LENGTH ADJUSTMENT INSTRUCTIONS  
WHEN SYSTEM HEIGHTS ARE NOT 4'-6"**

SEE DIAGRAM FOR UNEQUAL SYSTEM HEIGHTS

- IF THE SYSTEM HEIGHTS AT EACH END OF A SPAN ARE EQUAL, BUT DIFFERENT TO 4'-6", ADJUST THE HANGER LENGTHS BY THE DIFFERENCE (S.H. - 4'-6")
- FOR UNEQUAL SYSTEM HEIGHTS S.H.<sub>1</sub> AND S.H.<sub>2</sub>, THE REVISED HANGER LENGTHS d# WILL BE:  
 $d\# = S.H._1 + d_n - 4'-6" - (S.H._1 - S.H._2) * (X_N / L)$   
 WHERE X<sub>N</sub> IS THE DISTANCE OF HANGER d<sub>n</sub> FROM SUPPORT A AND L IS THE SPAN LENGTH.

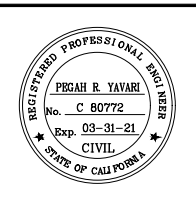


**NOTES:**

- FOR ABBREVIATIONS, LEGEND, AND GENERAL NOTES SEE DWGS PG001, PG002, AND PG003.
- FOR MATERIAL LIST FOR A SINGLE HANGER ASSEMBLY SEE DWG PD211 FOR ASSEMBLY HA-01.
- QUANTITY DEFINES THE NUMBER OF HANGER ASSEMBLIES HA-01 IN A SINGLE SPAN.
- THE HANGER LENGTHS SPECIFIED IN THE TABLE ARE CALCULATED BASED ON TENSIONS OF 4800 LBS FOR MESSENGER WIRE, 3000 LBS FOR CONTACT WIRE, AND A SYSTEM UNIT WEIGHT OF 2.652 LBS/FT (1.544 LB/FT [MW], 1.063 LB/FT [CW], 0.045 LB/FT [HA-01]).
- FOR NON-STANDARD HANGER SETS SEE DWGS PD214 & PD216.
- HANGER SET SHALL BE CHECKED AND CALCULATED BY THE CONTRACTOR AFTER THE FINAL WEIGHTS OF COMPONENTS HAVE BEEN DETERMINED BY THE SUPPLIER.
- MAXIMUM CONTACT WIRE PRESAG SHALL BE L/1000.

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NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



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 DRAWN: D. KEO  
 CADD FILE NAME: 801PD213.dwg

**Santa Clara Valley  
 Transportation  
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**BKF** 100+ YEARS  
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CAAD FILE DATE: 5/15/2020  
 SUBMITTAL DATE: 06/29/20  
 SCALE: NTS  
 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 OVERHEAD CONTACT SYSTEM  
 HANGER LENGTH TABLES  
 HS-155 THRU HS-240

PCA NO.: 000  
 CONTRACT NO.: C801  
 FILE LOCATION: PROJECTWISE

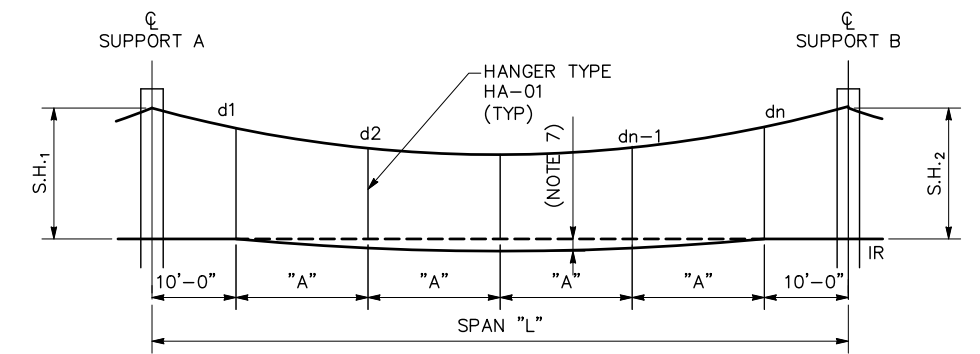
SHEET	OF
DRAWING NO.	PD213
REVISION	B

STRUCTURE	HANGER SET ASSEMBLY		SPAN	SYSTEM HEIGHT AT SUPPORTS		QUANTITY OF HANGERS	HANGER SPACING	HANGER LENGTHS CROSSOVER – SOUTHBOUND						
	#	SET #		REFERENCE	"L"			S.H. <sub>1</sub>	S.H. <sub>2</sub>	(NOTE 3)	"A"	d1	d2	d3
14.66CS	HM-01A	MAINLINE	64'	4'-6"	4'-6"	3	22'-0"	4'-4 1/4"	4'-3 1/4"	4'-4 1/4"	3'-5 1/4"			
14.67C	HT-01A	CROSSOVER		3'-6"	4'-5"			3'-6"	3'-8 3/4"	4'-1 1/2"	4'-3 1/4"			
14.70C	HM-02A	MAINLINE	131'	4'-6"	4'-6"	5	27'-9"	4'-2"	3'-7 1/2"	3'-5 1/4"	3'-7 1/2"	4'-2"		
	HT-02A	CROSSOVER		4'-5"	4'-5"			4'-1"	3'-6 1/2"	3'-4 1/4"	3'-6 1/2"	4'-1"		
14.71CS	HM-03A	MAINLINE	65'	4'-6"	4'-6"	3	22'-6"	4'-4 1/4"	4'-3 1/4"	4'-4 1/4"	4'-8 3/4"			
	HT-03A	CROSSOVER		4'-5"	3'-6"			4'-1 1/2"	3'-8 3/4"	3'-5 3/4"	2'-11 3/4"			
14.73C	HM-04A	MAINLINE	97'	4'-6"	5'-9"	4	25'-8"	4'-4 3/4"	4'-5 1/4"	4'-9 1/4"	5'-4 1/2"			
	HT-04A	CROSSOVER		3'-6"	3'-3"			3'-3 1/2"	2'-10"	2'-6"	2'-11 1/2"			
14.75C	HM-05A	MAINLINE	107'	5'-9"	5'-9"	4	29'-0"	5'-5 3/4"	5'-1 1/4"	5'-1 1/4"	5'-5 3/4"			
	HT-05A	CROSSOVER		3'-3"	3'-3"			2'-11 3/4"	2'-6 1/4"	2'-6 1/4"	2'-11 3/4"			
14.77C	HM-06A	MAINLINE	107'	5'-9"	5'-9"	4	29'-0"	5'-5 3/4"	5'-1 1/4"	5'-1 1/4"	5'-5 3/4"			
	HT-06A	CROSSOVER		3'-3"	3'-3"			2'-11 3/4"	2'-6 1/4"	2'-6 1/4"	2'-11 3/4"			
14.79CS	HM-07A	MAINLINE	129'	5'-9"	4'-6"	5	27'-3"	5'-4"	4'-6 1/2"	4'-1 1/4"	4'-0 1/4"	4'-3 1/4"		
	HT-07A	CROSSOVER		3'-3"	3'-6"			2'-10 3/4"	2'-2 1/4"	1'-10 3/4"	2'-5 1/4"	3'-2 1/4"		
14.81CS	HM-08A	MAINLINE	80'	4'-6"	4'-6"	3	30'-0"	4'-3 3/4"	4'-1 3/4"	4'-3 3/4"				
	HT-08A	CROSSOVER		3'-6"	4'-5"			3'-5"	3'-7 1/4"	4'-1 1/4"				
14.82CS	-	MAINLINE	36'	-	-	2	16'-0"	-	-					
	HT-09A	CROSSOVER		4'-5"	3'-6"			4'-1"	3'-8 1/4"					

STRUCTURE	HANGER SET ASSEMBLY		SPAN	SYSTEM HEIGHT AT SUPPORTS		QUANTITY OF HANGERS	HANGER SPACING	HANGER LENGTHS CROSSOVER – NORTHBOUND						
	#	SET #		REFERENCE	"L"			S.H. <sub>1</sub>	S.H. <sub>2</sub>	(NOTE 3)	"A"	d1	d2	d3
14.66CN	HM-01B	MAINLINE	64'	4'-6"	4'-6"	3	22'-0"	4'-4 1/4"	4'-3 1/4"	4'-4 1/4"				
14.67C	HT-01B	CROSSOVER		3'-6"	4'-5"			3'-6"	3'-8 3/4"	4'-1 1/2"	4'-3 1/4"			
14.70C	HM-02B	MAINLINE	131'	4'-6"	4'-6"	5	27'-9"	4'-2"	3'-7 1/2"	3'-5 1/4"	3'-7 1/2"	4'-2"		
	HT-02B	CROSSOVER		4'-5"	4'-5"			4'-1"	3'-6 1/2"	3'-4 1/4"	3'-6 1/2"	4'-1"		
14.71CN	HM-03B	MAINLINE	65'	4'-6"	4'-6"	3	22'-6"	4'-4 1/4"	4'-3 1/4"	4'-4 1/4"				
	HT-03B	CROSSOVER		4'-5"	3'-6"			4'-1 1/2"	3'-8 3/4"	3'-5 3/4"				
14.73C	HM-04B	MAINLINE	97'	4'-6"	5'-9"	4	25'-0"	4'-4 3/4"	4'-5 1/4"	4'-9 1/4"	5'-4 1/2"			
	HT-04B	CROSSOVER		3'-6"	3'-3"			3'-3 1/2"	2'-10"	2'-6"	2'-11 1/2"			
14.75C	HM-05B	MAINLINE	107'	5'-9"	5'-9"	4	29'-8"	5'-5 3/4"	5'-1 1/4"	5'-1 1/4"	5'-5 3/4"			
	HT-05B	CROSSOVER		3'-3"	3'-3"			2'-11 3/4"	2'-6 1/4"	2'-6 1/4"	2'-11 3/4"			
14.77C	HM-06B	MAINLINE	107'	5'-9"	5'-9"	4	29'-0"	5'-5 3/4"	5'-1 1/4"	5'-1 1/4"	5'-5 3/4"			
	HT-06B	CROSSOVER		3'-3"	3'-3"			2'-11 3/4"	2'-6 1/4"	2'-6 1/4"	2'-11 3/4"			
14.79CN	HM-07B	MAINLINE	99'	5'-9"	3'-7"	4	26'-4"	5'-3 1/2"	4'-5"	3'-10"	3'-6 3/4"			
	HT-07B	CROSSOVER		3'-3"	4'-5"			3'-0 3/4"	2'-10 3/4"	3'-5 1/2"	4'-1 1/4"			
14.81CN	HM-08B	MAINLINE	110'	3'-7"	4'-6"	4	30'-0"	3'-4 3/4"	3'-3"	3'-6"	4'-1 3/4"			
	HT-08B	CROSSOVER		4'-5"	4'-6"			4'-1 3/4"	3'-10"	3'-10"	4'-2 3/4"			
14.82CS	-	MAINLINE	36'	-	-	2	16'-0"	-	-					
	HT-09B	CROSSOVER		4'-6"	4'-6"			4'-5 1/4"	4'-5 1/4"					

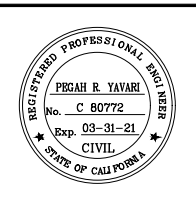
**NOTES:**

- FOR ABBREVIATIONS, LEGEND, AND GENERAL NOTES SEE DWGS PG001, PG002, AND PG003.
- FOR MATERIAL LIST FOR A SINGLE HANGER ASSEMBLY SEE DWG PD211 FOR ASSEMBLIES HA-01.
- QUANTITY DEFINES THE NUMBER OF HANGER ASSEMBLIES HA-01 IN A SINGLE SPAN.
- THE HANGER LENGTHS SPECIFIED IN THE TABLE ARE CALCULATED BASED ON TENSIONS OF 4800 LBS FOR MESSENGER WIRE, 3000 LBS FOR CONTACT WIRE, AND A SYSTEM UNIT WEIGHT OF 2.652 LBS/FT (1.544 LB/FT [MW], 1.063 LB/FT [CW], 0.045 LB/FT [HA-01]).
- FOR CROSSOVER ARRANGEMENT AT EASTRIDGE STATION SEE DWG PD254.
- HANGER SET SHALL BE CHECKED AND CALCULATED BY THE CONTRACTOR AFTER THE FINAL WEIGHTS OF COMPONENTS HAVE BEEN DETERMINED BY THE SUPPLIER.
- MAXIMUM CONTACT WIRE PRESAG SHALL BE L/1000.



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NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



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CADD FILE NAME: 801PD214.dwg

**Santa Clara Valley Transportation Authority**

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SUBMITTAL DATE: 06/29/20  
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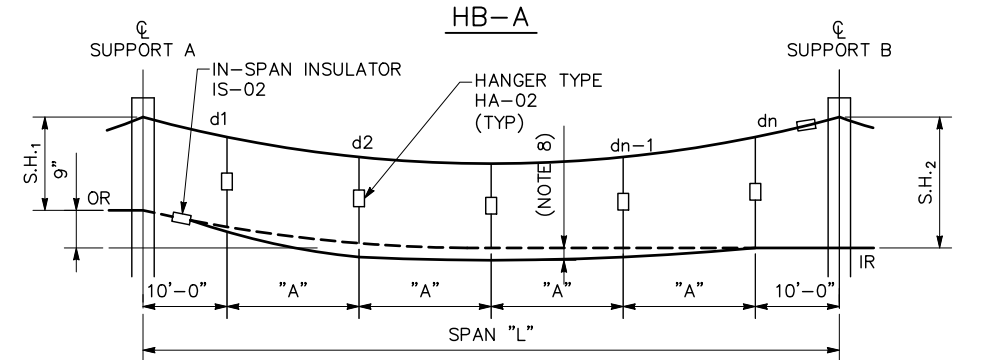
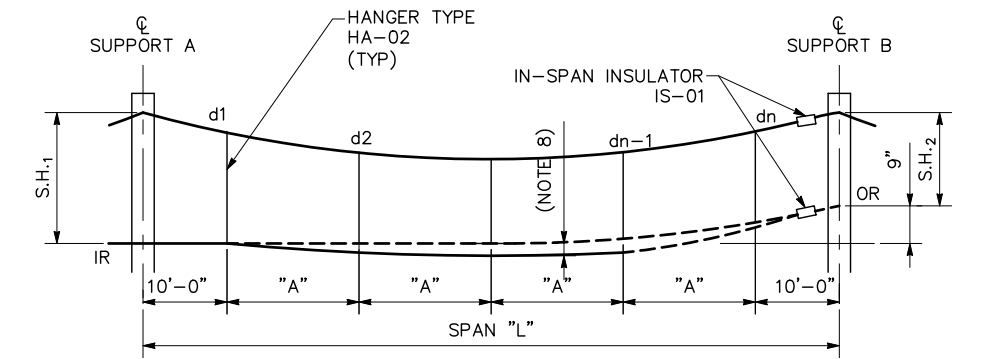
EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
OVERHEAD CONTACT SYSTEM  
HANGER LENGTH TABLES  
NON STANDARD HM- & HT- HANGER SETS

PCA NO: 000 CONTRACT NO: S801 FILE LOCATION: PROJECTWISE

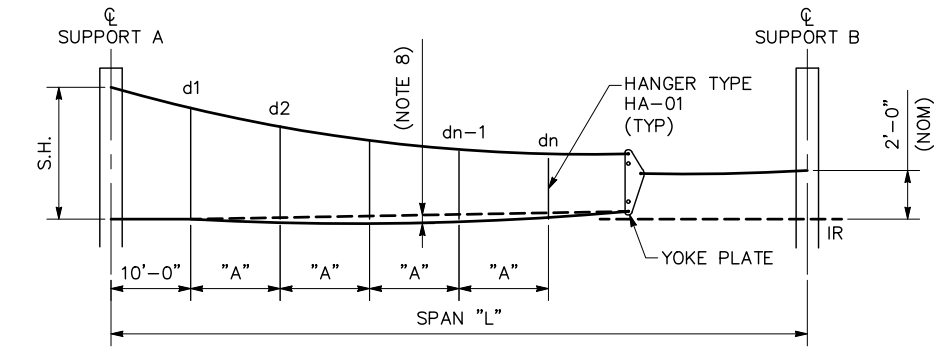
SHEET OF: PD214  
REVISION: B

HANGER SET ASSEMBLY		SPAN "L"	SYSTEM HEIGHT AT SUPPORTS		QUANTITY OF HANGERS (NOTE 3)	HANGER SPACING "A"	HANGER LENGTHS AIRBREAK					
SET #	REFERENCE		S.H. <sub>1</sub>	S.H. <sub>2</sub>			d1	d2	d3	d4	d5	d6
HB-147	HB-A	147'	3'-9"	4'-6"	6	25'-4 3/4"	3'-11 1/2"	3'-0 1/2"	2'-7"	2'-7"	2'-10 1/2"	3'-4 3/4"
	HB-B		4'-6"	3'-9"			3'-4 3/4"	2'-10 1/2"	2'-7"	2'-7"	3'-0 1/2"	3'-11 1/2"

HANGER SET ASSEMBLY		SPAN "L"	SYSTEM HEIGHT AT SUPPORTS		QUANTITY OF HANGERS (NOTE 3)	HANGER SPACING "A"	HANGER LENGTHS TERMINATION SPAN					
SET #			S.H.				d1	d2	d3	d4	d5	d6
HTS-180		180'	4'-6"		6	26'-8"	3'-11 3/4"	2'-11 3/4"	2'-4"	1'-11 3/4"	1'-11 3/4"	2'-0 1/2"
HTS-185		185'	4'-6"		6	27'-6"	3'-11 1/2"	2'-11"	2'-2 1/2"	1'-10 1/2"	1'-10 1/4"	1'-11 1/2"
HTS-190		190'	4'-6"		6	28'-4"	3'-11 1/4"	2'-10"	2'-1 1/4"	1'-9"	1'-9"	1'-10 1/2"



AIRBREAK CATENARY SPAN



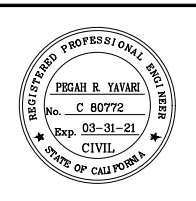
TERMINATION SPAN - HTS-#

**NOTES:**

- FOR ABBREVIATIONS, LEGEND AND GENERAL NOTES SEE DWGS PG001, PG002, AND PG003.
- FOR MATERIAL LIST FOR A SINGLE HANGER ASSEMBLY SEE DWG PD211 FOR ASSEMBLIES HA-01.
- QUANTITY DEFINES THE NUMBER OF HANGER ASSEMBLIES HA-01 IN A SINGLE SPAN.
- THE HANGER LENGTHS SPECIFIED IN THE TABLE ARE CALCULATED BASED ON TENSIONS OF 4800 LBS FOR MESSENGER WIRE, 3000 LBS FOR CONTACT WIRE, AND A SYSTEM UNIT WEIGHT OF 2.652 LBS/FT (1.544 LB/FT [MW], 1.063 LB/FT [CW], 0.045 LB/FT [HA-01]).
- SYSTEM WEIGHT FOR AIRBREAK ASSEMBLY IS 3.760 LBS/FT (1544 LB/FT [MW], 2x1.063 LB/FT [CW], 0.090 LB/FT [HA-02]).
- SEE OCS LAYOUT SCHEDULE FOR SITE SPECIFIC APPLICATION OF IN-SPAN INSULATORS (IS-01 AND IS-02) AT OUT-OF-RUNNING END. SEE DWG PD230 FOR IN-SPAN INSULATORS MATERIAL LIST.
- HANGER SET SHALL BE CHECKED AND CALCULATED BY THE CONTRACTOR AFTER THE FINAL WEIGHTS OF COMPONENTS HAVE BEEN DETERMINED BY THE SUPPLIER.
- MAXIMUM CONTACT WIRE PRESAG SHALL BE L/1000.

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NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



SUBMITTED

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CADD FILE NAME: 801PD215.dwg

**Santa Clara Valley Transportation Authority**

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CADD FILE DATE: 5/15/2020  
SCALE: NTS  
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BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
OVERHEAD CONTACT SYSTEM  
HANGER LENGTH TABLES  
NON STANDARD HB- & HTS- HANGER SETS

PCA NO.: 000  
CONTRACT NO.: C801  
FILE LOCATION: PROJECTWISE

SHEET OF	
DRAWING NO.	PD215
REVISION	B

HANGER SET ASSEMBLY		SPAN "L"	SYSTEM HEIGHT AT SUPPORTS				QUANTITY OF HANGERS (NOTE 3)	HANGER SPACING "A"	HANGER LENGTHS OVERLAPS					
SET #	REFERENCE		A	B	C	D			d1	d2	d3	d4	d5	d6
HO-1A	HO-AA	158'	4'-6"	5'-9"			6	27'-7 1/4"	4'-2"	3'-8 1/2"	3'-7"	3'-9 3/4"	4'-4 1/4"	5'-3"
	HO-TA	150'		5'-9"	5'-0"		6	26'-0"	5'-4 1/2"	4'-10 1/4"	4'-7 1/2"	4'-8 1/4"	4'-9"	4'-10 3/4"
	HO-AB	152'			5'-0"	-	6	26'-4 3/4"	4'-5"	3'-5"	2'-9 1/4"	2'-6"	2'-3 3/4"	2'-1"
	HO-BA	162'	-	3'-3"			5	28'-4 3/4"	1'-11"	1'-9 1/4"	1'-8"	2'-0"	2'-9 1/4"	
	HO-TB	150'		3'-3"	4'-0"		6	26'-0"	3'-1 3/4"	3'-0"	2'-11 1/4"	2'-10 1/2"	3'-1 1/4"	3'-7 1/2"
	HO-BB	148'			4'-0"	4'-6"	6	25'-7 1/4"	3'-7 3/4"	3'-2"	2'-11 1/2"	3'-0 1/2"	3'-5"	4'-1"
HO-1B	HO-AA	152'	4'-6"	5'-9"			6	26'-4 3/4"	4'-2 1/4"	3'-9 1/2"	3'-8 1/2"	3'-11"	4'-5 1/4"	5'-3 1/4"
	HO-TA	150'		5'-9"	5'-0"		6	26'-0"	5'-4 1/2"	4'-10 1/4"	4'-7 1/2"	4'-8 1/2"	4'-9 1/4"	4'-10 1/4"
	HO-AB	133'			5'-0"	-	5	28'-3"	4'-5 3/4"	3'-6"	2'-11 1/2"	2'-6 1/4"	2'-1 3/4"	
	HO-BA	148'	-	3'-3"			5	25'-7 1/4"	2'-0 1/2"	1'-11 3/4"	1'-11 3/4"	2'-2 3/4"	2'-10"	
	HO-TB	150'		3'-3"	4'-0"		6	26'-0"	3'-1 1/4"	3'-0 1/4"	2'-11 1/2"	2'-10 1/2"	3'-1 1/4"	3'-7 1/2"
	HO-BB	137'			4'-0"	4'-6"	5	29'-3"	3'-8"	3'-3"	3'-2"	3'-5 1/2"	4'-1 1/4"	
HO-2A	HO-AA	151'	4'-6"	5'-9"			6	26'-2 1/2"	4'-2 1/4"	3'-9 3/4"	3'-8 3/4"	3'-11 1/4"	4'-5 1/2"	5'-3 1/4"
	HO-TA	150'		5'-9"	5'-0"		6	26'-0"	5'-4 1/2"	4'-10 1/4"	4'-7 1/2"	4'-8 1/4"	4'-9 1/2"	4'-10 3/4"
	HO-AB	152'			5'-0"	-	5	26'-4 3/4"	4'-5 1/4"	3'-5 3/4"	2'-10 3/4"	2'-6 1/4"	2'-3"	
	HO-BA	155'	-	3'-3"			5	27'-0"	2'-0 1/4"	1'-10 3/4"	1'-9 3/4"	2'-1 1/4"	2'-9 3/4"	
	HO-TB	150'		3'-3"	4'-0"		6	26'-0"	3'-1 3/4"	3'-0 1/2"	2'-11 1/4"	2'-10 1/2"	3'-1 1/4"	3'-7 1/2"
	HO-BB	148'			4'-0"	4'-6"	6	25'-7 1/4"	3'-7 3/4"	3'-2"	2'-11 1/2"	3'-0 1/2"	3'-5"	4'-1"
HO-2B	HO-AA	148'	4'-6"	4'-0"			6	25'-7 1/4"	4'-1"	3'-5"	3'-0 1/2"	2'-11 1/2"	3'-2"	3'-7 3/4"
	HO-TA	150'		4'-0"	3'-3"		6	26'-0"	3'-7 1/2"	3'-1 1/4"	2'-10 1/2"	2'-11 1/4"	3'-0 1/2"	3'-1 3/4"
	HO-AB	153'			3'-3"	-	5	26'-7 1/4"	2'-9 3/4"	2'-1 3/4"	1'-10 1/4"	1'-11"	2'-0 1/4"	
	HO-BA	152'	-	5'-0"			5	26'-4 3/4"	2'-2"	2'-5 1/4"	2'-11 1/4"	3'-6"	4'-5 1/2"	
	HO-TB	150'		5'-0"	5'-9"		6	26'-0"	4'-10 3/4"	4'-9 1/2"	4'-8 1/4"	4'-7 1/2"	4'-10 1/4"	5'-4 1/2"
	HO-BB	149'			5'-9"	4'-6"	6	25'-9 1/2"	5'-3 1/4"	4'-5 3/4"	3'-11 3/4"	3'-9"	3'-10"	4'-2 1/2"

**NOTES:**

- FOR ABBREVIATIONS, LEGEND AND GENERAL NOTES SEE DWGS PG001, PG002, AND PG003.
- FOR MATERIAL LIST FOR A SINGLE HANGER ASSEMBLY SEE DWG PD211 FOR ASSEMBLIES HA-01.
- QUANTITY DEFINES THE NUMBER OF HANGER ASSEMBLIES HA-01 IN A SINGLE SPAN.
- THE HANGER LENGTHS SPECIFIED IN THE TABLE ARE CALCULATED BASED ON TENSIONS OF 4800 LBS FOR MESSENGER WIRE, 3000 LBS FOR CONTACT WIRE, AND A SYSTEM UNIT WEIGHT OF 2.652 LBS/FT (1.544 LB/FT [MW], 1.063 LB/FT [CW], 0.045 LB/FT [HA-01]).
- SEE OCS LAYOUT SCHEDULE FOR SITE SPECIFIC APPLICATION OF IN-SPAN INSULATORS (SI-01) AT OUT-OF-RUNNING END. ASSEMBLY SI-01 TO BE USED FOR INSULATED OVERLAPS ONLY, UNLESS OTHERWISE NOTED.
- HANGER SET SHALL BE CHECKED AND CALCULATED BY THE CONTRACTOR AFTER THE FINAL WEIGHTS OF COMPONENTS HAVE BEEN DETERMINED BY THE SUPPLIER.
- MAXIMUM CONTACT WIRE PRESAG SHALL BE L/1000.

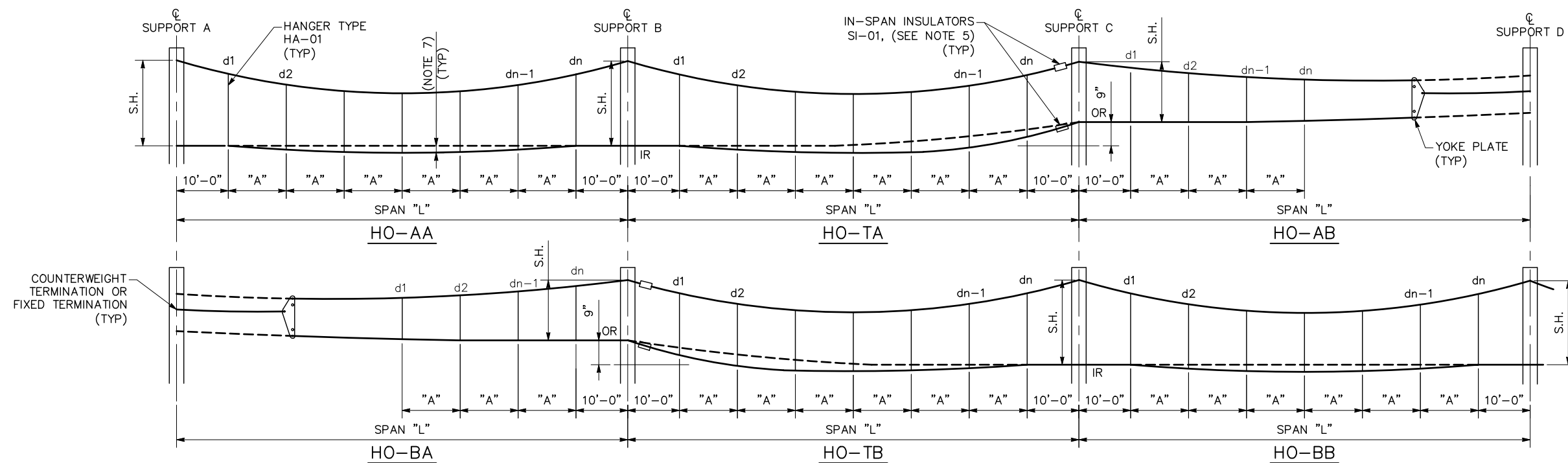
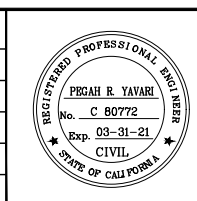


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NO.	DATE	REVISIONS
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DRAWN: D. KEO  
CADD FILE NAME: 801PD216.dwg

**Santa Clara Valley Transportation Authority**

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ENGINEERS / SURVEYORS / PLANNERS

CAAD FILE DATE: 5/15/2020  
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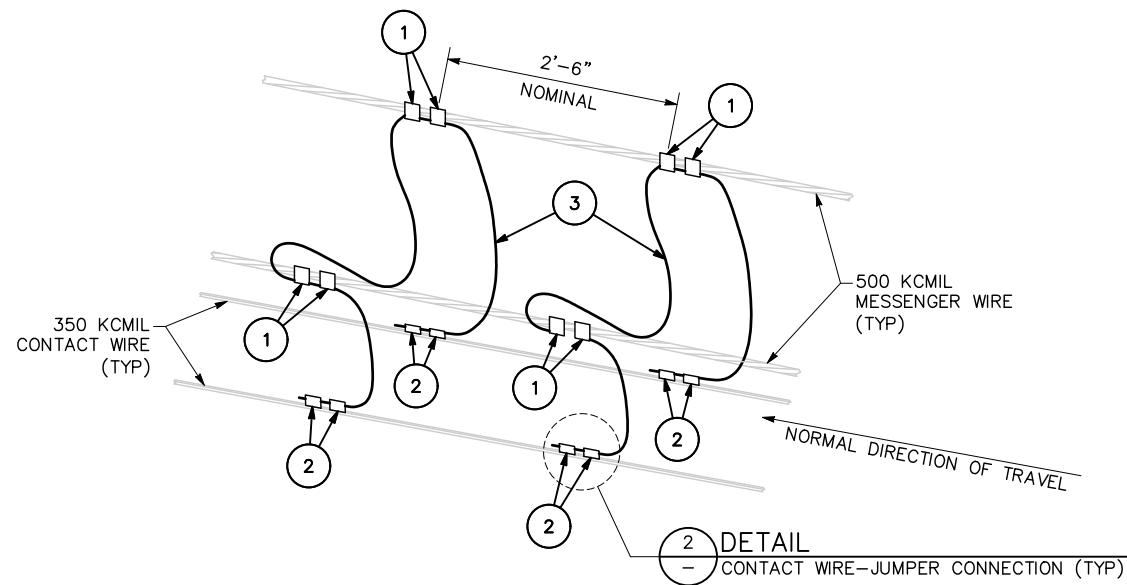
EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
OVERHEAD CONTACT SYSTEM  
HANGER LENGTH TABLES  
OVERLAP SPANS HO- HANGER SETS

PCA NO.: 000  
CONTRACT NO.: C801  
FILE LOCATION: PROJECTWISE

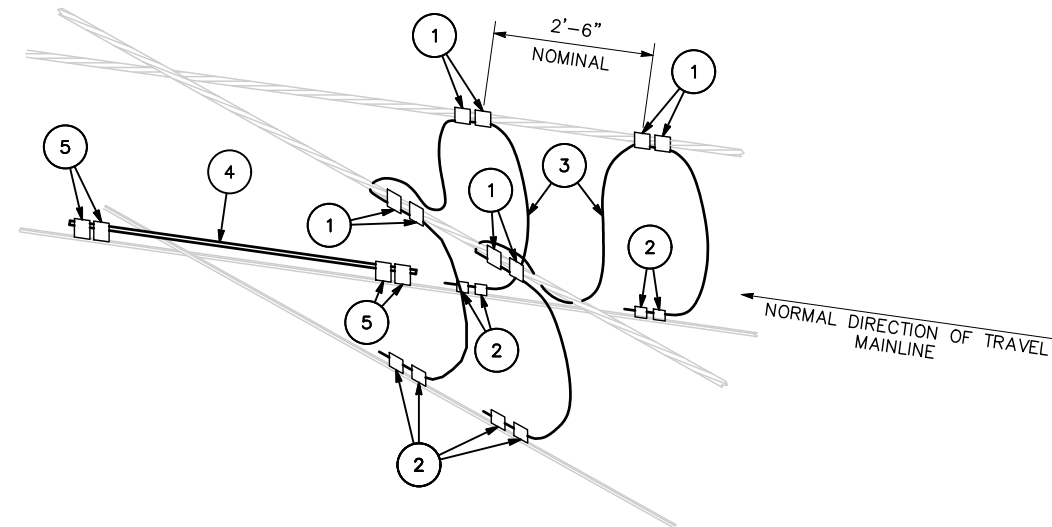
SHEET OF: PD216  
REVISION: B

**NOTES:**

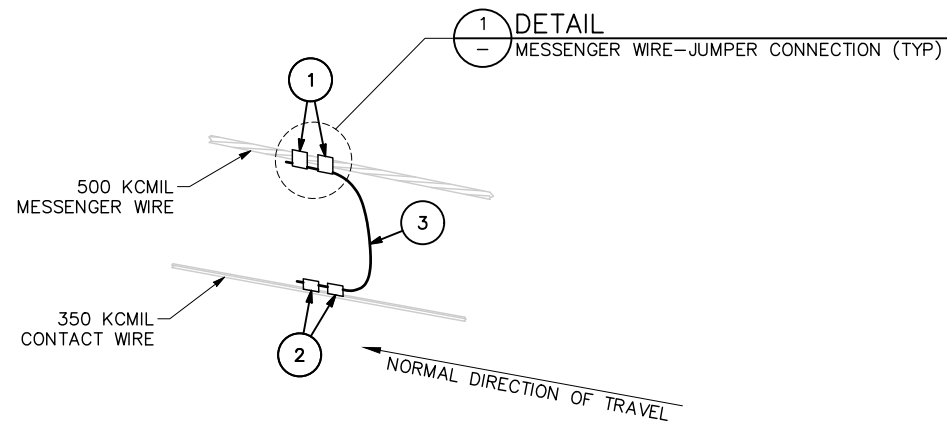
1. FOR ABBREVIATIONS, LEGEND, AND GENERAL NOTES SEE DWGS PG001, PG002, AND PG003.
2. ALL TAIL WIRES SHALL BE SECURED TO PREVENT FRAYING WITH NO. 19 SOFT COPPER SOLID WIRE, 6 TURNS AND TWISTED END.
3. MINIMUM JUMPER CABLE BEND RADIUS SHALL BE 12 TIMES THE CABLE DIAMETER.



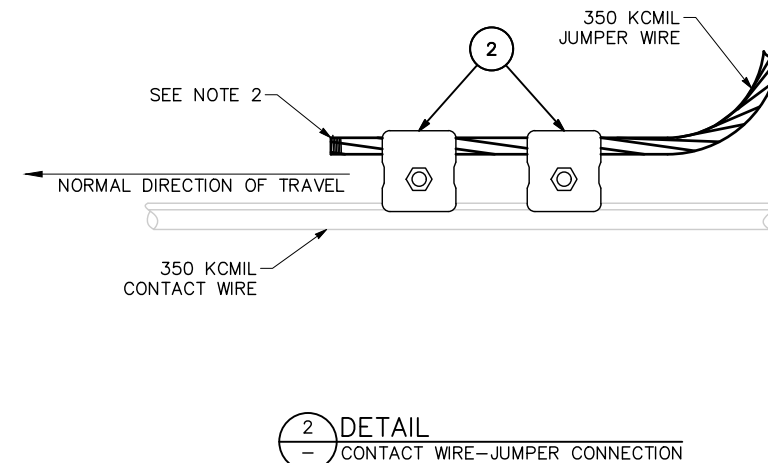
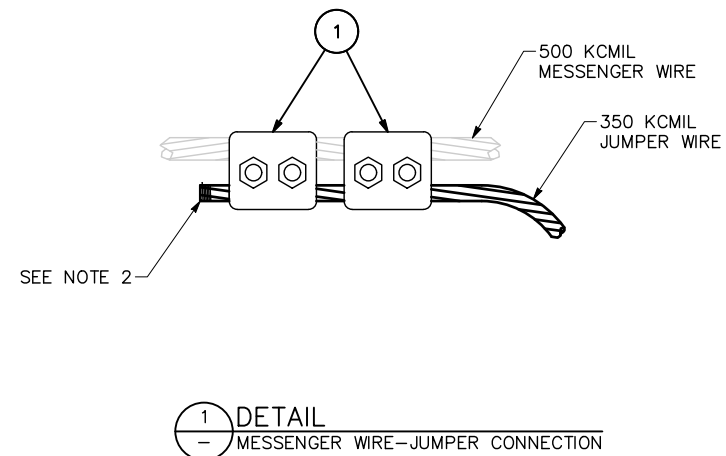
**CONTINUITY JUMPER – TYPE A**  
INTERCONNECTION AT UNINSULATED OVERLAP



**CONTINUITY JUMPER – TYPE B**  
INTERCONNECTION AT TURNOUT/CROSSOVER



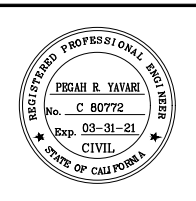
**EQUALIZING JUMPER – TYPE C**  
SIMPLE INTERCONNECTION



BILL OF MATERIAL		QUANTITY		
ITEM	DESCRIPTION	TYPE A	TYPE B	TYPE C
1	MESSENGER WIRE/JUMPER PARALLEL CLAMP	8	8	2
2	CONTACT WIRE/JUMPER PARALLEL CLAMP	8	8	2
3	JUMPER WIRE 350 KCMIL (LENGTH AS REQUIRED)	2	2	1
4	BRONZE ROD 1/2"	–	1	–
5	DUPLEX CLAMP CW TO 1/2" ROD	–	4	–

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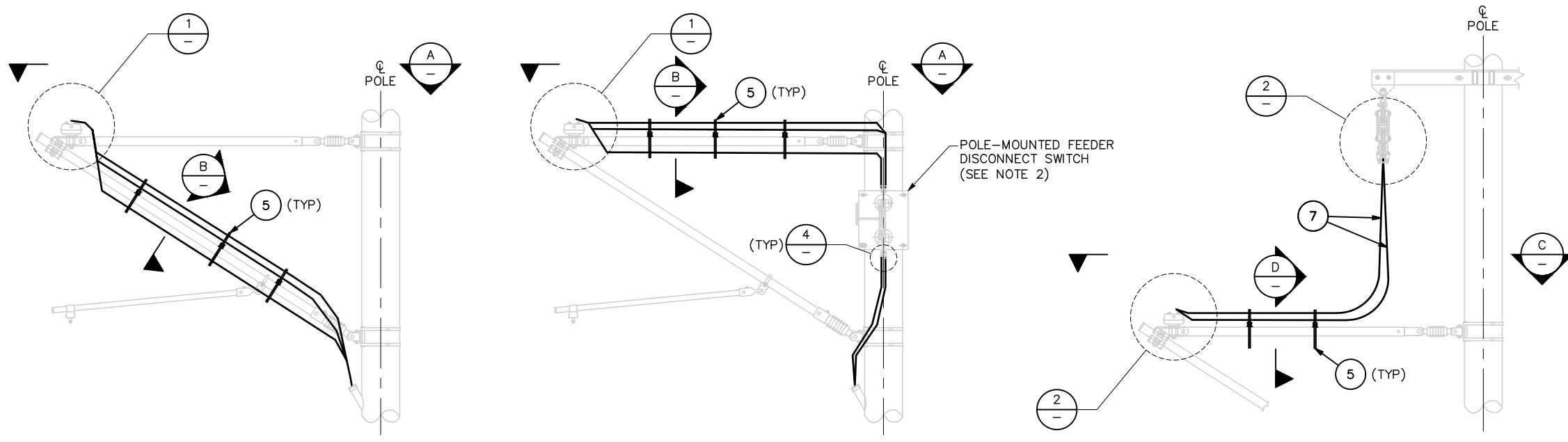
CADD FILE DATE: 5/15/2020 SCALE: NTS  
 SUBMITTAL DATE: 06/29/20 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 OVERHEAD CONTACT SYSTEM  
 JUMPER ASSEMBLIES  
 TYPE A, B & C

SHEET OF PD217 REVISION B

PCA NO: 000 CONTRACT NO: C801 FILE LOCATION: PROJECTWISE



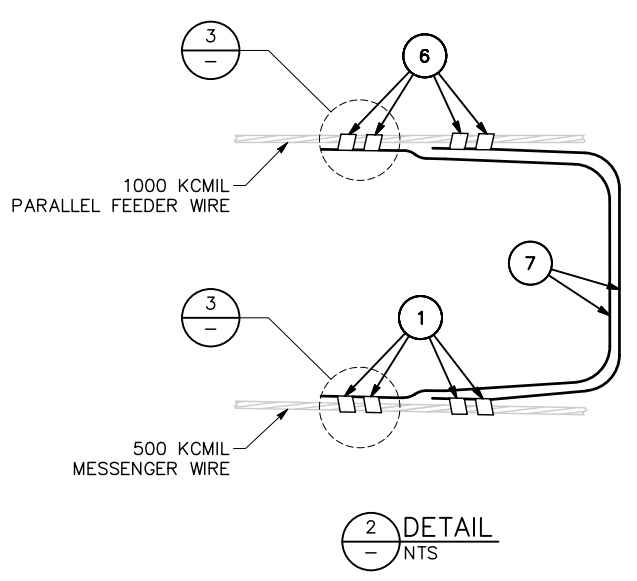
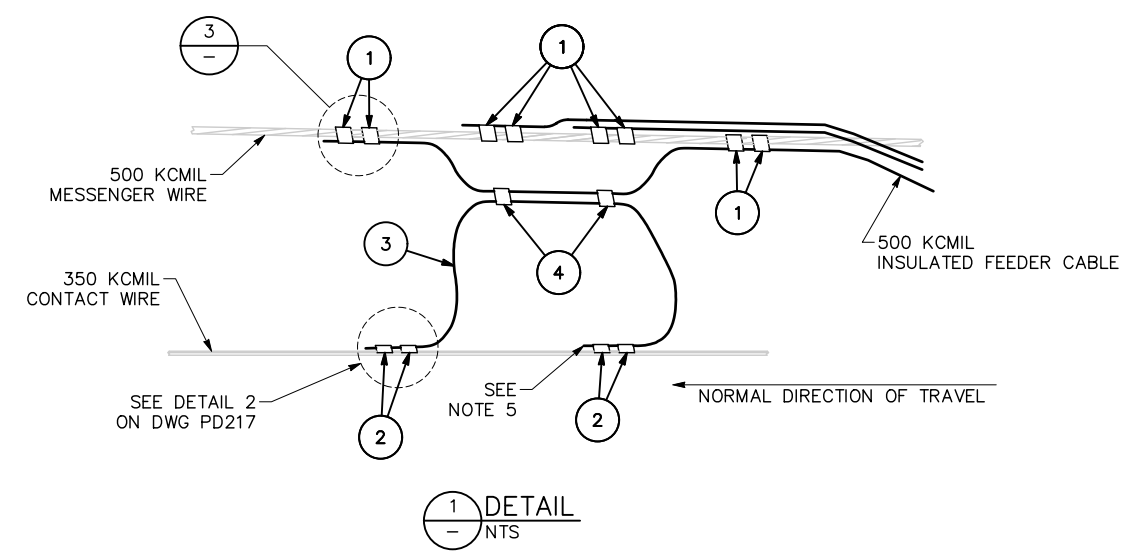
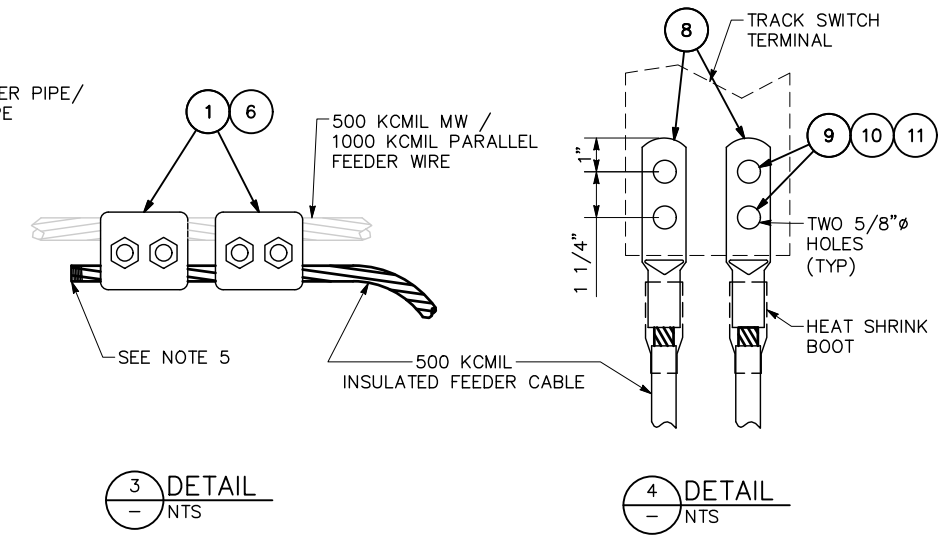
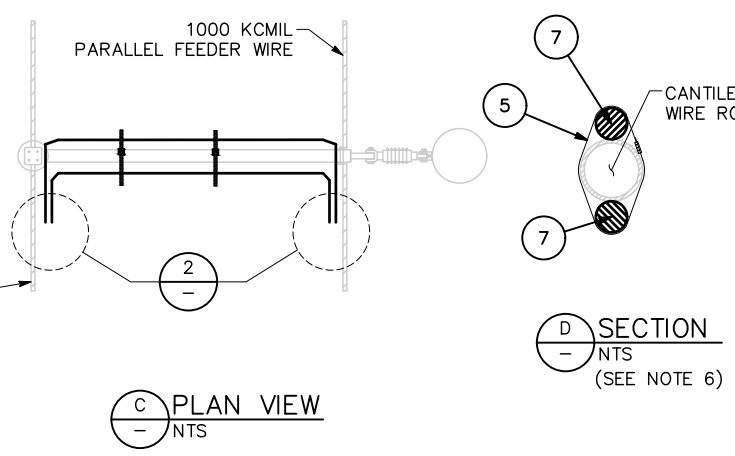
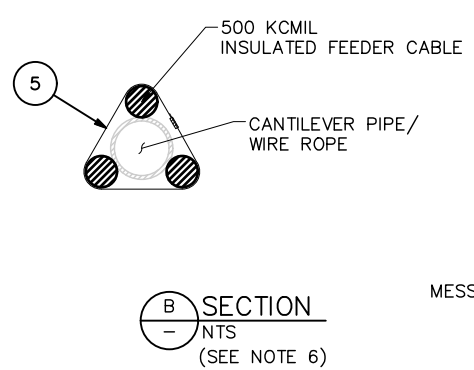
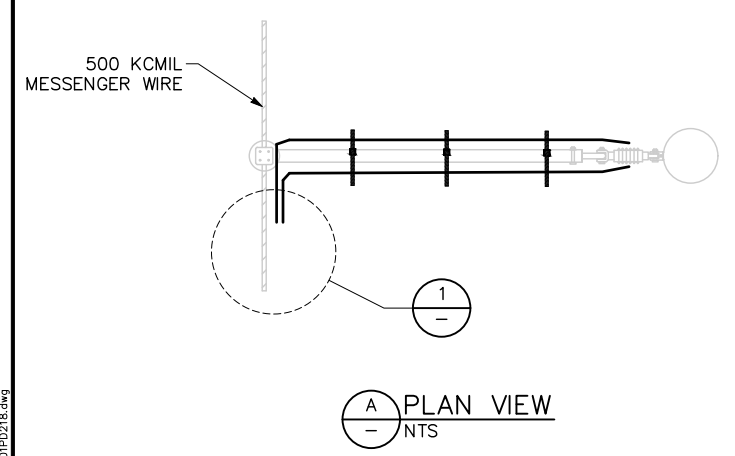


- NOTES:**
- FOR ABBREVIATIONS, LEGEND, AND GENERAL NOTES SEE DWGS PG001, PG002, AND PG003.
  - DISCONNECT SWITCH AND OPERATING GEAR SEPARATELY CALLED OFF, FOR DISCONNECT SWITCH ARRANGEMENT SEE DWG PD220.
  - IN-SPAN SECTION INSULATION SEPARATELY CALLED OFF, SEE OCS LAYOUT SCHEDULE.
  - SURGE ARRESTER ASSEMBLY INCLUDING SURGE ARRESTER JUMPER AND GROUNDING IS SEPARATELY CALLED OFF, FOR SURGE ARRESTER ASSEMBLY SEE DWG PD221.
  - ALL TAIL WIRES SHALL BE SECURED TO PREVENT FRAYING WITH NO. 19 SOFT COPPER SOLID WIRE, 6 TURNS AND TWISTED END.
  - STAINLESS STEEL TIES QUANTITY SHALL BE AS NEEDED. TIES SHALL BE PLACED NO FURTHER THAN 3'-0" APART.
  - MINIMUM JUMPER CABLE BEND RADIUS SHALL BE 12 TIMES THE CABLE DIAMETER.
  - PARALLEL FEEDER TAP ASSEMBLY, TYPE F3, TO BE INSTALLED AT 500 FT MAXIMUM INTERVALS.

**FEED POINT ASSEMBLY – TYPE F1**

**FEED POINT ASSEMBLY – TYPE F2**

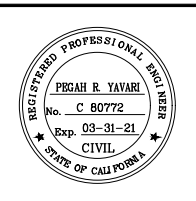
**PARALLEL FEEDER TAP ASSEMBLY – TYPE F3**



BILL OF MATERIAL		QUANTITY		
ITEM	DESCRIPTION	TYPE F1	TYPE F2	TYPE F3
1	MESSENGER WIRE/FEEDER PARALLEL CLAMP	8	8	4
2	CONTACT WIRE/JUMPER PARALLEL CLAMP	4	4	-
3	JUMPER WIRE 350 KCML (LENGTH AS REQUIRED)	1	1	-
4	FEEDER/JUMPER PARALLEL CLAMP	2	2	-
5	SS CABLE TIE WITH INSULATION (SEE NOTE 6)	AS REQ'D		
6	PARALLEL FEEDER/FEEDER PARALLEL CLAMP	-	-	4
7	500 KCML INSULATED FEEDER CABLE (LENGTH AS REQUIRED)	-	-	2
8	COPPER LUG	-	6	-
9	HEXAGON BOLT, CU-BI-SI	-	12	-
10	STAINLESS STEEL WASHER	-	12	-
11	HEXAGON NUT, CU-NI-SI	-	12	-

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NO.	DATE	REVISIONS
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 DRAWN: D. KEO  
 CADD FILE NAME: 801PD218.dwg

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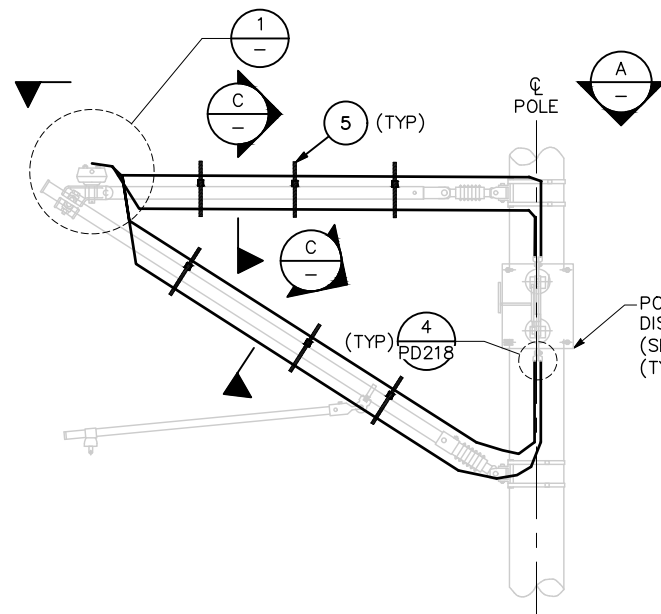
**BKF** 100+ YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 5/15/2020  
 SCALE: NTS  
 SUBMITTAL DATE: 06/29/20  
 BOARD APPROVAL DATE:

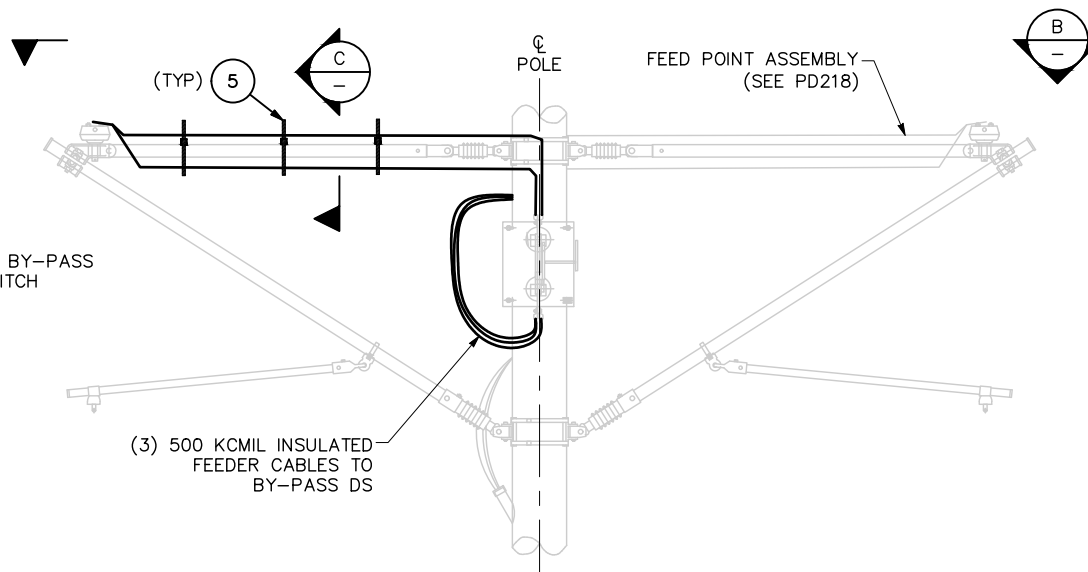
**EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT OVERHEAD CONTACT SYSTEM FEED POINT ASSEMBLIES TYPE F1, F2, & F3**

SHEET OF PD218 REVISION B

PCA NO: 000 CONTRACT NO: C801 FILE LOCATION: PROJECTWISE



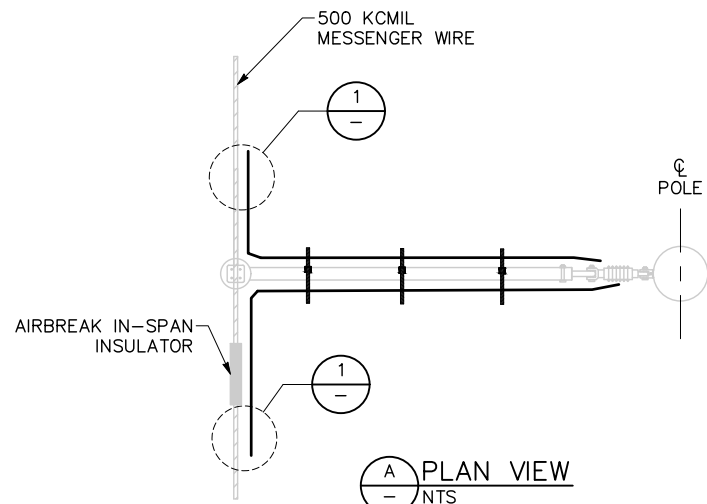
BY-PASS ASSEMBLY - TYPE BP1



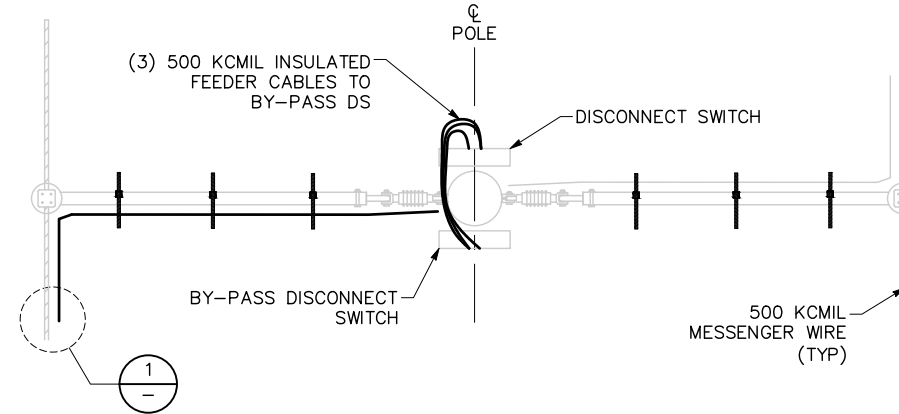
BY-PASS ASSEMBLY - TYPE BP2

**NOTES:**

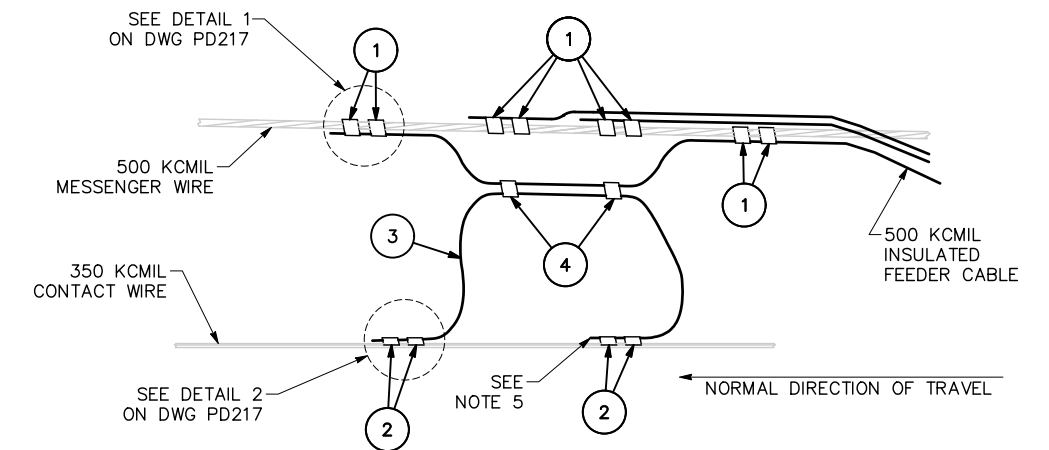
- FOR ABBREVIATIONS, LEGEND AND GENERAL NOTES SEE DWGS PG001, PG002, AND PG003.
- BY-PASS DISCONNECT SWITCH AND OPERATING GEAR SEPARATELY CALLED OFF, FOR BY-PASS DISCONNECT SWITCH ARRANGEMENT SEE DWG PD220.
- IN-SPAN SECTION INSULATION SEPARATELY CALLED OFF, SEE OCS LAYOUT SCHEDULE.
- REFER TO DWG PD103 FOR UNINSULATED OVERLAP ARRANGEMENT DETAILS, AND DWG PD201 FOR AIRBREAK ARRANGEMENT DETAILS.
- JUMPER TAILS ON CONTACT WIRE SHALL POINT IN THE DIRECTION OF TRAVEL.
- STAINLESS STEEL TIES QUANTITY SHALL BE AS NEEDED. TIES SHALL BE PLACED NO FURTHER THAN 3'-0" APART.
- SECURE ENDS OF JUMPER CABLE TO PREVENT FRAYING. WRAP WIRE ENDS WITH NO. 19 SOFT COPPER WIRE, 6 TURNS & TWIST END.
- FOR ITEMS 8 THROUGH 11 SEE DETAIL 4 ON DWG PD218.



(A) PLAN VIEW  
NTS

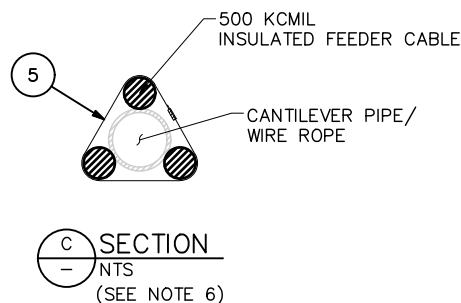


(B) PLAN VIEW  
NTS



(1) DETAIL - MESSENGER BY-PASS ARRANGEMENT  
NTS

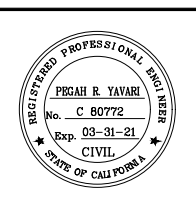
ITEM	DESCRIPTION	QUANTITY	
		TYPE BP1	TYPE BP2
1	MESSENGER WIRE/FEEDER PARALLEL CLAMP	12	12
2	CONTACT WIRE/JUMPER PARALLEL CLAMP	8	8
3	JUMPER WIRE 350 KCMIL (LENGTH AS REQUIRED)	2	2
4	FEEDER/JUMPER PARALLEL CLAMP	4	4
5	SS CABLE TIE WITH INSULATION (SEE NOTE 6)	AS REQ'D	AS REQ'D
8	COPPER LUG (SEE NOTE 8)	6	9
9	HEXAGON BOLT, CU-BI-SI (SEE NOTE 8)	12	18
10	STAINLESS STEEL WASHER (SEE NOTE 8)	12	18
11	HEXAGON NUT, CU-NI-SI (SEE NOTE 8)	12	18



(C) SECTION  
NTS  
(SEE NOTE 6)

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DRAWN D. KEO	CADD FILE NAME 801PD219.dwg

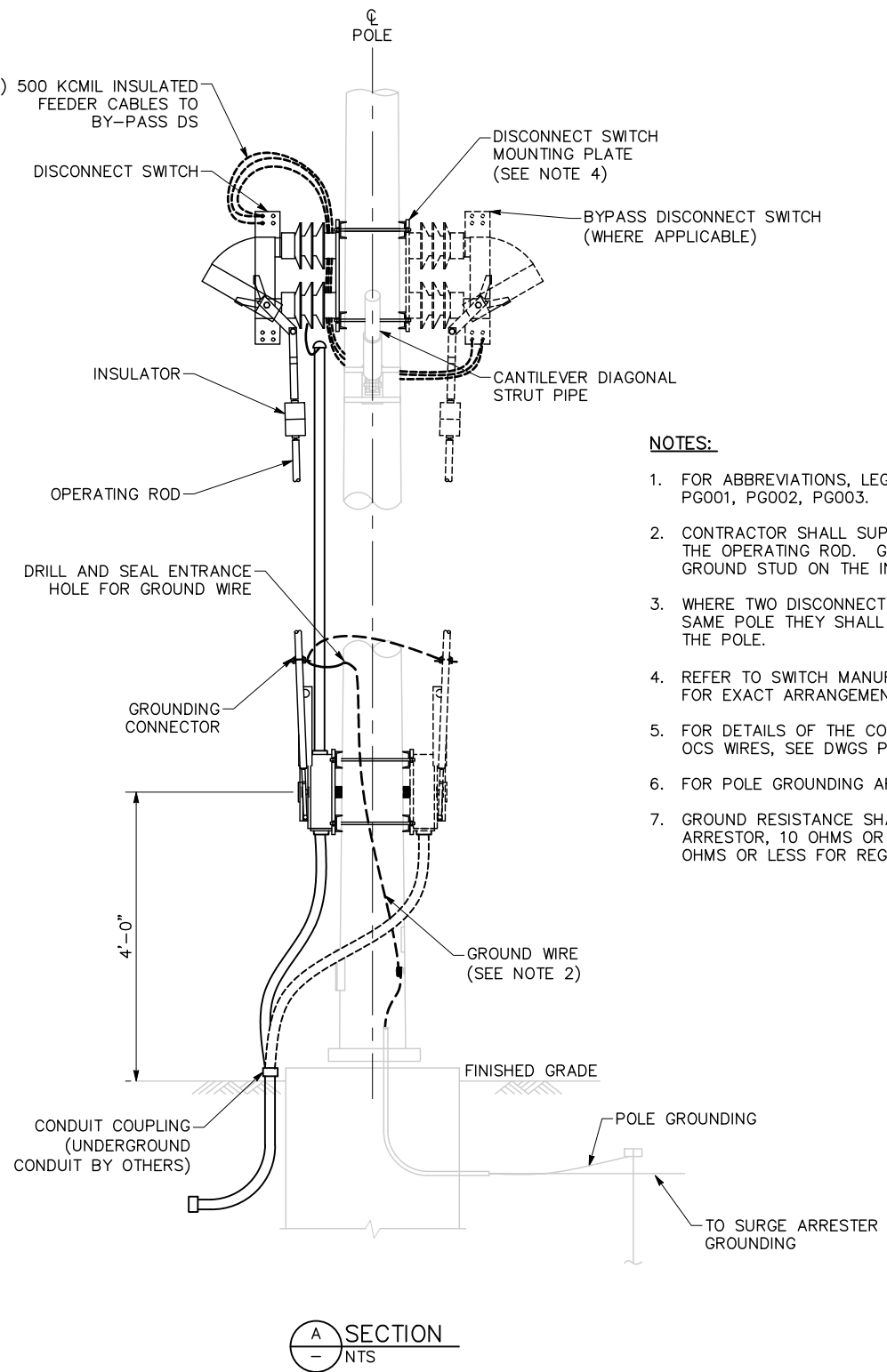
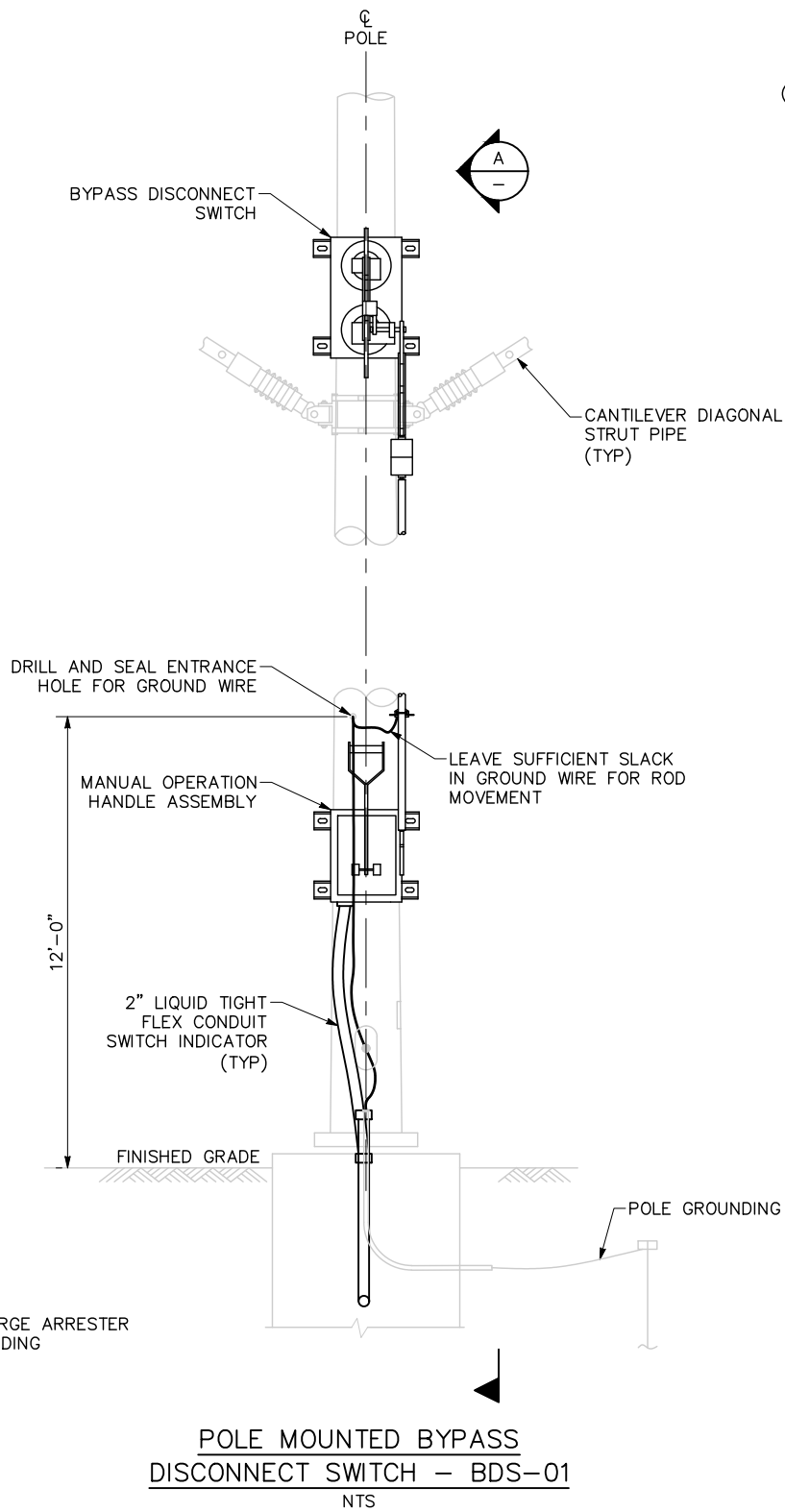
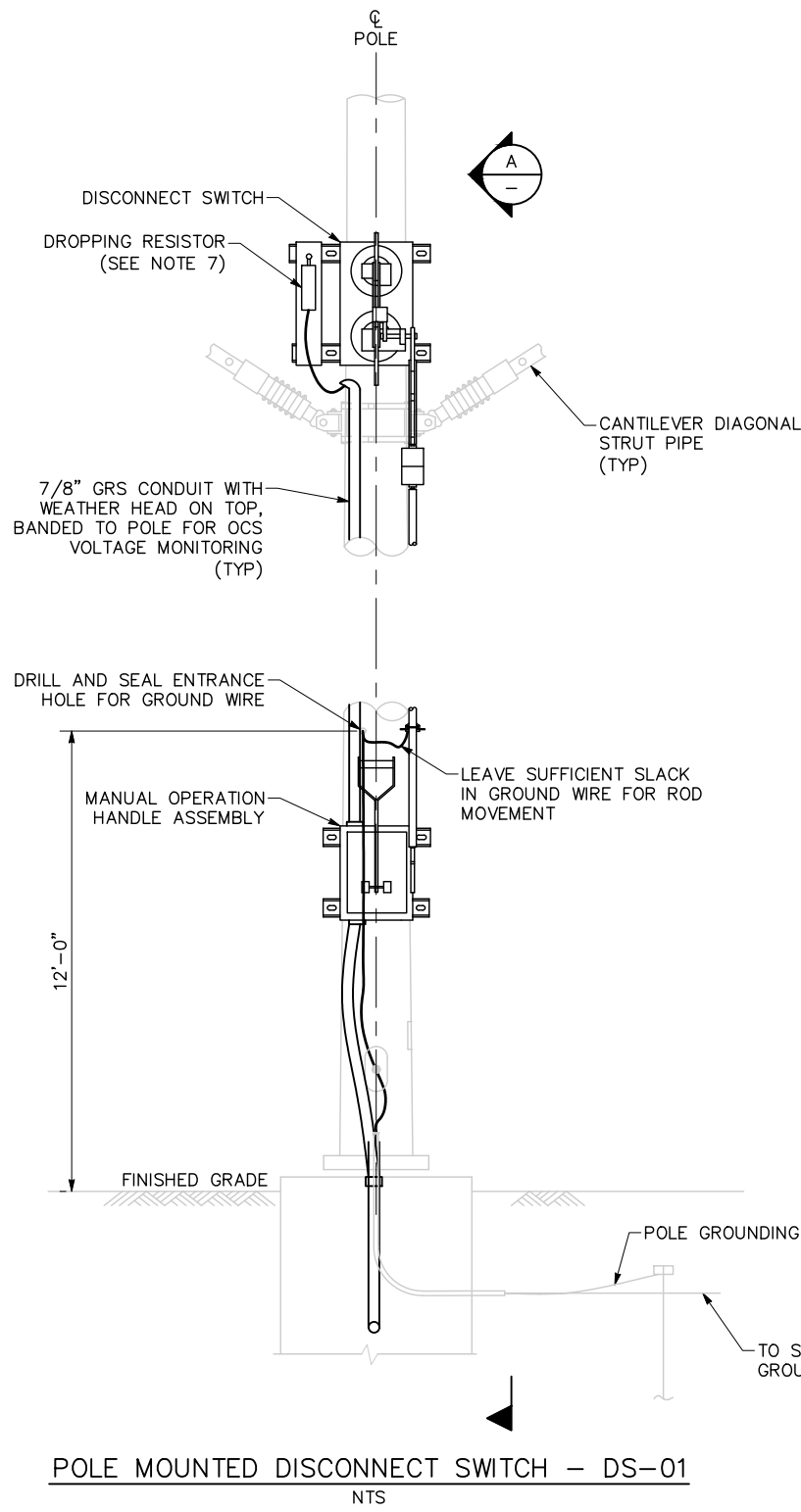


<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE 5/15/2020	SCALE NTS
SUBMITTAL DATE 06/29/20	BOARD APPROVAL DATE

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT OVERHEAD CONTACT SYSTEM BY-PASS JUMPER ASSEMBLIES TYPE BP1 & BP2		
PCA NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE

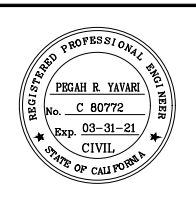
SHEET OF	DRAWING NO. PD219
REVISION B	

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- NOTES:**
- FOR ABBREVIATIONS, LEGEND, AND GENERAL NOTES SEE DWG PG001, PG002, PG003.
  - CONTRACTOR SHALL SUPPLY GROUND WIRE FOR CONNECTION TO THE OPERATING ROD. GROUND WIRE SHALL BE CONNECTED TO GROUND STUD ON THE INSIDE OF TES POLE.
  - WHERE TWO DISCONNECT SWITCHES ARE ALLOCATED ON THE SAME POLE THEY SHALL BE MOUNTED ON OPPOSITE SIDES OF THE POLE.
  - REFER TO SWITCH MANUFACTURER'S APPROVED SHOP DRAWING FOR EXACT ARRANGEMENT AND DETAILS.
  - FOR DETAILS OF THE CONNECTION OF SWITCH CABLES TO THE OCS WIRES, SEE DWGS PD218 AND PD219.
  - FOR POLE GROUNDING ARRANGEMENT SEE DWG PD228.
  - GROUND RESISTANCE SHALL BE 5 OHMS OR LESS FOR SURGE ARRESTOR, 10 OHMS OR LESS FOR DROPPING RESISTOR, 25 OHMS OR LESS FOR REGULAR TES POLES.

NO.	DATE	REVISIONS
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DRAWN: D. KEO  
CADD FILE NAME: 801PD220.dwg

**Santa Clara Valley Transportation Authority**

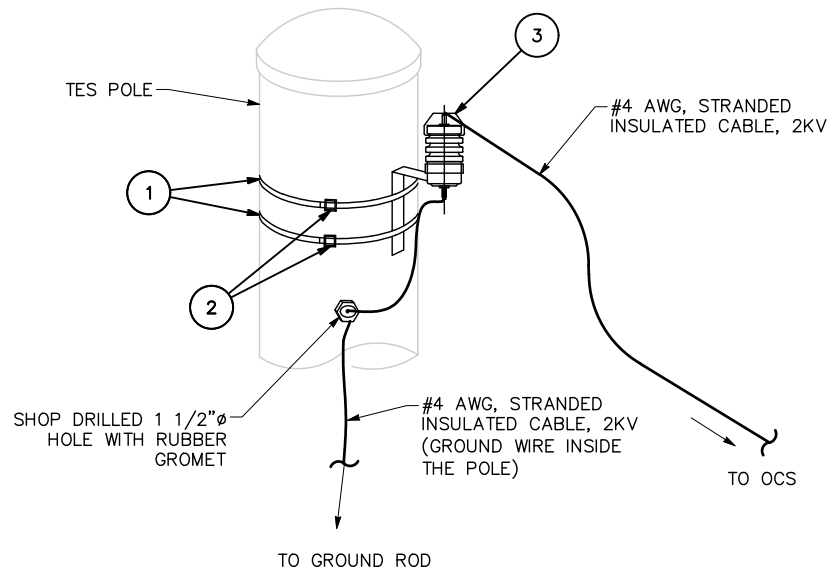
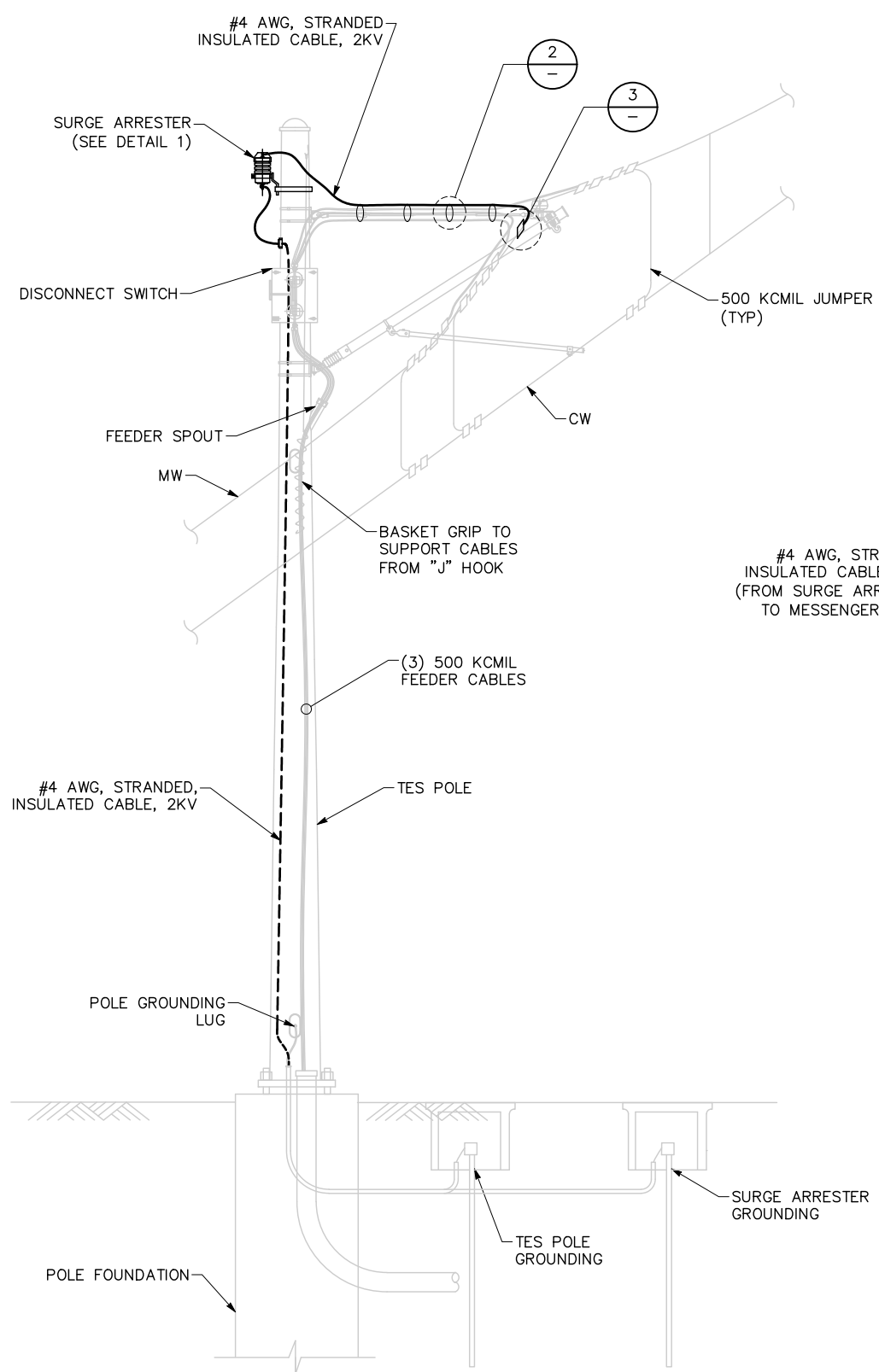
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CAAD FILE DATE: 5/15/2020  
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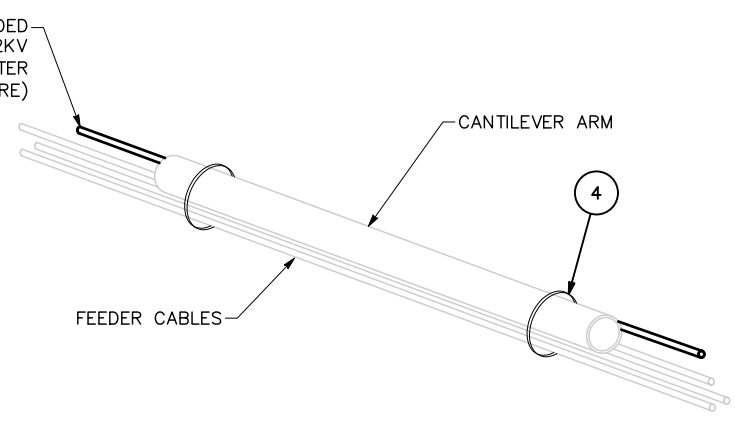
EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
OVERHEAD CONTACT SYSTEM  
POLE MOUNTED DISC. SWITCH  
DS-01 & BDS-01

PCA NO.: 000  
CONTRACT NO.: C801  
FILE LOCATION: PROJECTWISE

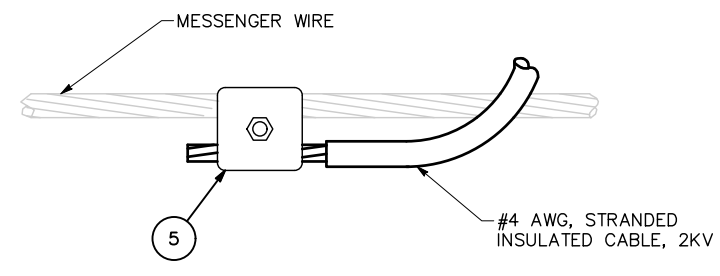
SHEET OF: PD220  
REVISION: B



1 - DETAIL - SURGE ARRESTER ASSEMBLY  
NTS



2 - DETAIL - SUPPORT FOR SURGE ARRESTER CABLE  
NTS



3 - DETAIL - MESSENGER WIRE/SURGE ARRESTER CABLE CONNECTION  
NTS

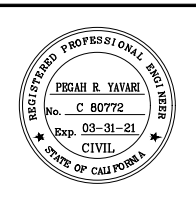
SURGE ARRESTER ARRANGEMENT - SU-01  
NTS

- NOTES:**
1. FOR ABBREVIATIONS, LEGEND, AND GENERAL NOTES SEE DWG PG001, PG002, PG003.
  2. FOR POLE GROUNDING ARRANGEMENT SEE DWG PD228, FOR SURGE ARRESTER GROUNDING ARRANGEMENT SEE DWG PD229.
  3. FOR FEEDER ARRANGEMENT SEE DWG PD218.
  4. GROUND RESISTANCE FOR SURGE ARRESTOR SHALL BE 5 OHMS OR LESS.

BILL OF MATERIAL		QUANTITY
ITEM	DESCRIPTION	SU-01
1	STAINLESS STEEL BAND	2
2	SPLIT TAPER SLEEVE	2
3	SURGE ARRESTER	1
4	STAINLESS STEEL INSULATED CABLE TIE	AS NEEDED
5	MESSENGER/SURGE ARRESTER CABLE PARALLEL CLAMP	1

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NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
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 Engineers Architects Planners  
 1732 North First Street, Suite 400  
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DESIGNED: G. KOLA CHECKED: P. YAVARI  
 DRAWN: D. KEO CADD FILE NAME: 801PD221.dwg

**Santa Clara Valley Transportation Authority**

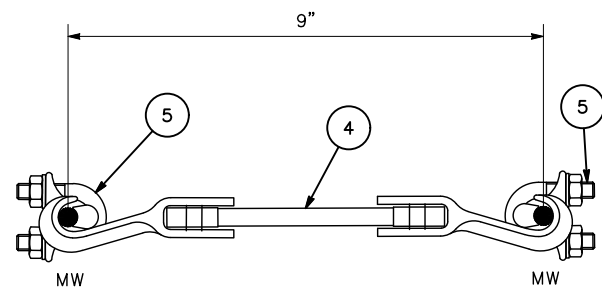
**BKF** 100+ YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

APPROVED: 5/15/2020 SCALE: NTS  
 SUBMITTAL DATE: 06/29/20 BOARD APPROVAL DATE:

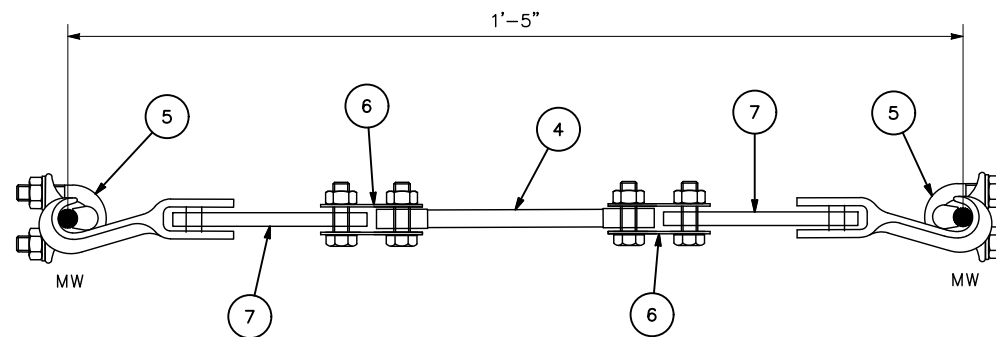
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 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 OVERHEAD CONTACT SYSTEM  
 SURGE ARRESTER ASSEMBLY  
 SU-01

SHEET OF PD221 REVISION B

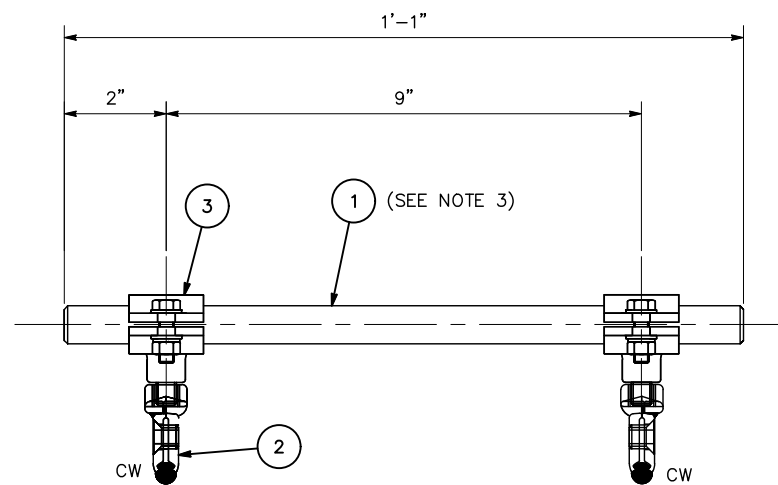
PCA NO: 000 CONTRACT NO: C801 FILE LOCATION: PROJECTWISE



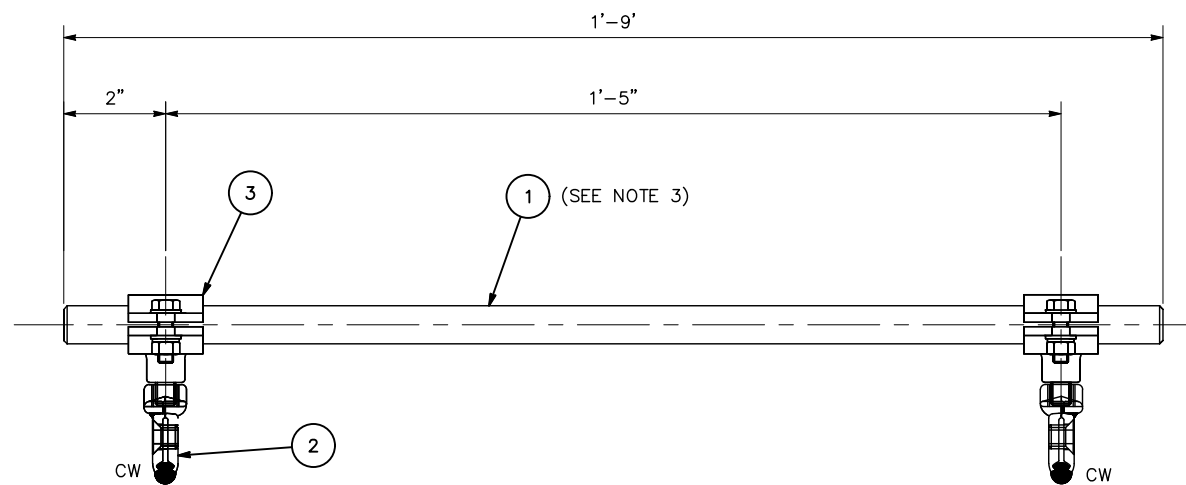
MESSENGER WIRE KNUCKLE ASSEMBLY - KN-M1



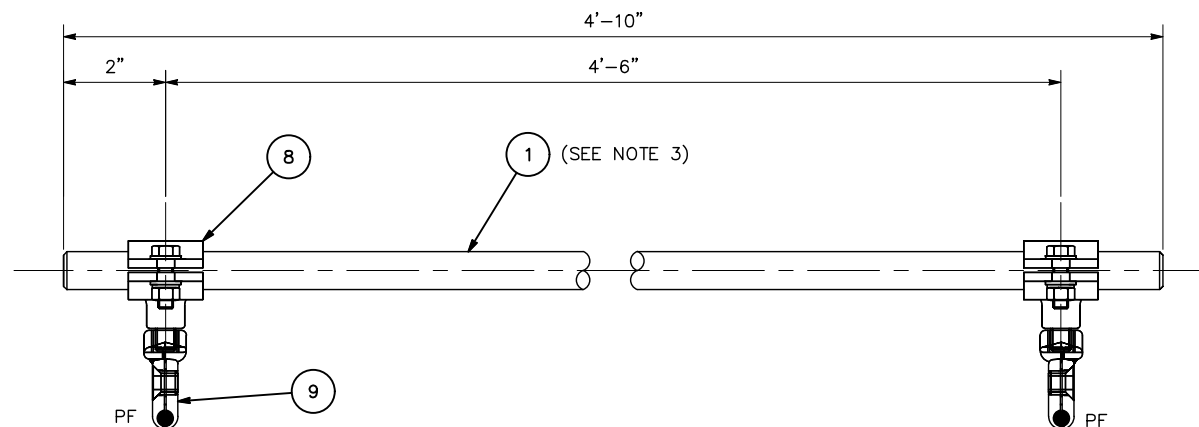
MESSENGER WIRE KNUCKLE ASSEMBLY - KN-M2



CONTACT WIRE KNUCKLE ASSEMBLY - KN-C1



CONTACT WIRE KNUCKLE ASSEMBLY - KN-02



PARALLEL FEEDER KNUCKLE ASSEMBLY - KN-F1

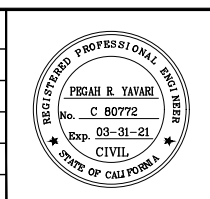
**NOTES:**

1. FOR ABBREVIATIONS, LEGEND AND GENERAL NOTES SEE DWGS PG001, PG002, AND PG003.
2. ALTERNATIVE HARDWARE COMPONENTS MAY BE PROVIDED WITH VTA APPROVAL.
3. INSULATED ROD SHALL BE RESISTANT TO ULTRA VIOLET LIGHT.

BILL OF MATERIAL		QUANTITY			
ITEM	DESCRIPTION	KN-C1/KNC2	KN-M1	KN-M2	KN-F1
1	INSULATED ROD (SEE NOTE 3)	1	-	-	1
2	CONTACT WIRE SWIVEL CLAMP	2	-	-	-
3	PIPE CLAMP FOR CONTACT WIRE SWIVEL	2	-	-	-
4	LOOP INSULATOR	-	1	1	-
5	MESSENGER WIRE SUSPENSION CLAMP	-	2	2	-
6	CLEVIS - CLEVIS LINK	-	-	2	-
7	EYE - EYE LINK	-	-	2	-
8	PIPE CLAMP FOR PARALLEL FEEDER SWIVEL	-	-	-	2
9	PARALLEL FEEDER SWIVEL CLAMP	-	-	-	2

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NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
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 DRAWN: D. KEO CADD FILE NAME: 801PD222.dwg

**Santa Clara Valley Transportation Authority**

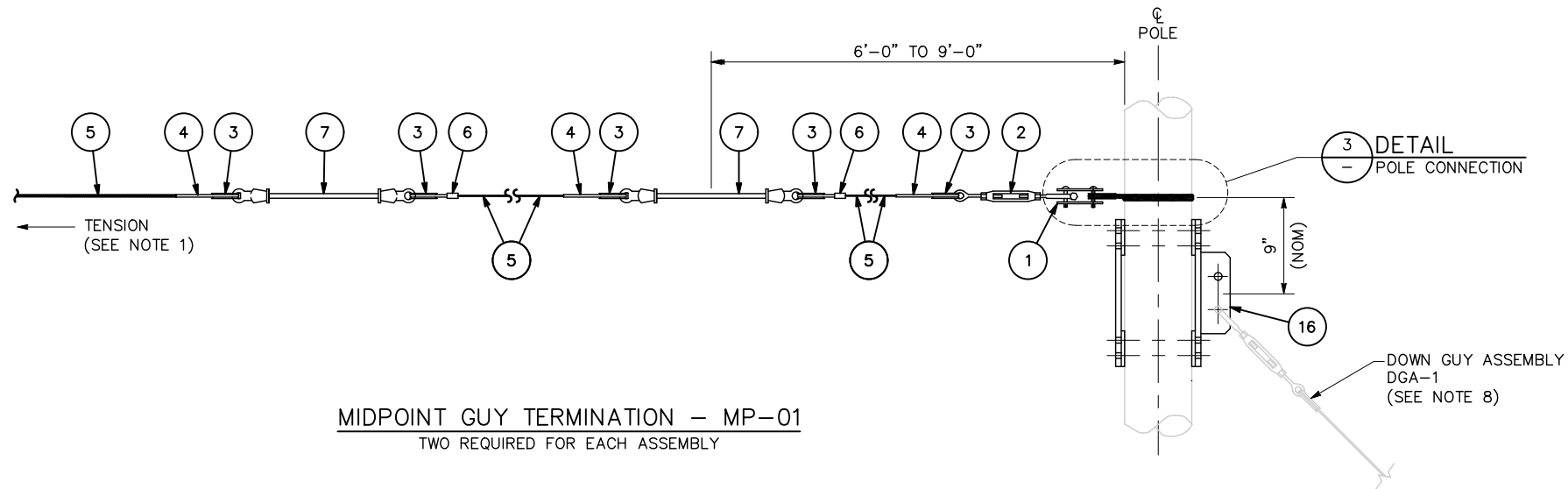
**BKF** 100+ YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 5/15/2020 SCALE: NTS  
 SUBMITTAL DATE: 06/29/20 BOARD APPROVAL DATE:

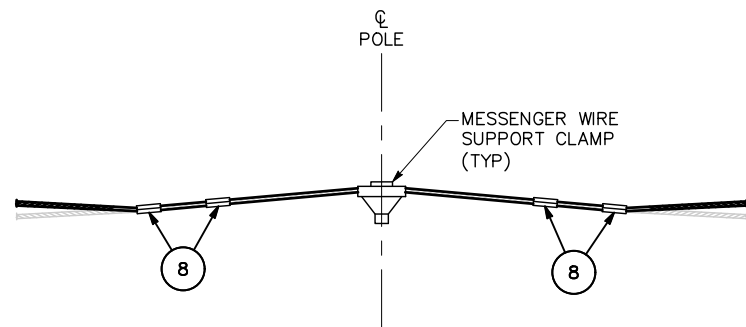
EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 OVERHEAD CONTACT SYSTEM  
 KNUCKLE ASSEMBLIES  
 KN-01, KN-02 & KN-03

SHEET OF PD222 REVISION B

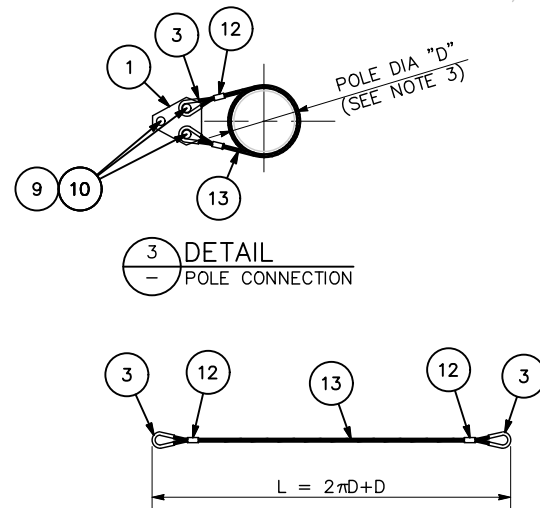
PCA NO.: 000 CONTRACT NO.: C801 FILE LOCATION: PROJECTWISE



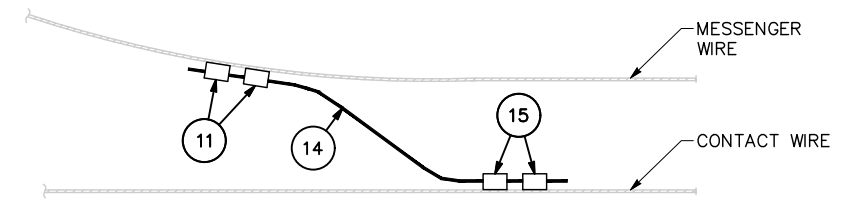
MIDPOINT GUY TERMINATION – MP-01  
TWO REQUIRED FOR EACH ASSEMBLY



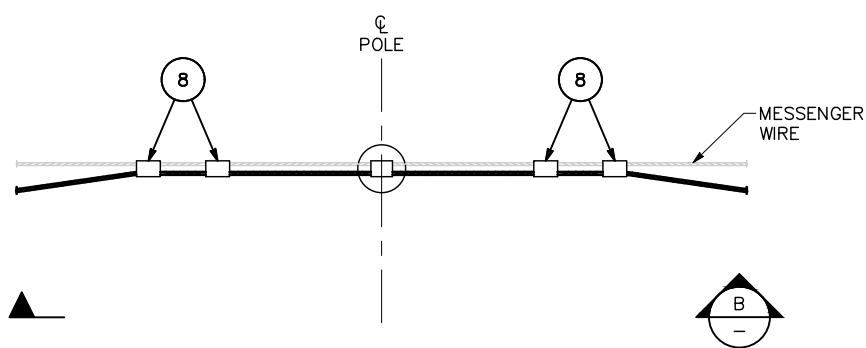
ELEVATION



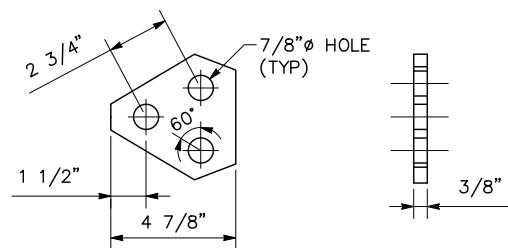
DETAIL GUY STRAND



DETAIL MESSENGER/CONTACT WIRE ANCHOR



DETAIL MESSENGER/MIDPOINT WIRE ANCHOR



DETAIL CLEVIS PLATE

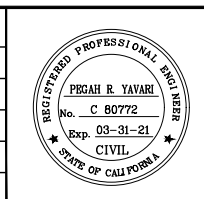
NOTES:

1. NOMINAL TENSION IN MIDPOINT ANCHOR WIRE TO BE 1550 LBS AT 60°F.
2. FOR MIDPOINT ANCHOR ARRANGEMENT SEE DWG PD105.
3. FOR POLE DIAMETER "D" DETERMINATION SEE DWG OCS LAYOUT SCHEDULE DRAWINGS.
4. FIRST LEVEL OF INSULATION IN MIDPOINT ANCHOR WIRE TO BE MAXIMUM 4'-0" FROM PROJECTED CENTERLINE OF TRACK.
5. MIDPOINT ANCHOR WIRE TERMINATION HEIGHT TO BE 1'-6" ABOVE MESSENGER HEIGHT OF ADJACENT CATENARY.
6. 1/2" Ø GALVANIZED WIRE (ITEM 5) TO BE CUT TO LENGTH BY CONTRACTOR.
7. WHERE TWO SEPARATE MIDPOINT ANCHOR TERMINATION ARE REQUIRED ON THE SAME POLE, ONLY ONE ANCHOR BRACKET (ITEM 16) PER POLE IS REQUIRED.
8. DOWN GUY ASSEMBLY SEPARATELY CALLED OUT, SEE DWG PD208.

BILL OF MATERIAL		QUANTITY
ITEM	DESCRIPTION	MP-01
1	DOUBLE CLEVIS PLATE	2
2	TURNBUCKLE, EYE/CLEVIS ENDS	2
3	THIMBLE FOR WIRE	14
4	FORMED DEADEND FOR WIRE	6
5	1/2" 19 STRAND GALV STEEL MPA WIRE, (LENGTH AS REQ'D)	5
6	COPPER CRIMP CONNECTOR	4
7	FIBERGLASS STRAIN INSULATOR, EYE/THIMBLE ENDS	4
8	MESSENGER/MIDPOINT ANCHOR WIRE PARALLEL CLAMP	4
9	ROUND HEAD PIN	6
10	SPLIT PIN, STAINLESS STEEL	6
11	MESSENGER/ANCHOR WIRE PARALLEL CLAMP	4
12	COPPER CRIMP CONNECTOR	4
13	STEEL GUY STRAND, EXTRA FLX (SEE NOTE 3)	2
14	ANCHOR WIRE, 500 KCMIL (MESSENGER WIRE)	2
15	CONTACT/ANCHOR WIRE PARALLEL CLAMP	4
16	FIXED ANCHOR BRACKET (NOTE 7)	2

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NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



SUBMITTED		<b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
DESIGNED	G. KOLA	CHECKED	P. YAVARI
DRAWN	D. KEO	CADD FILE NAME	801PD223.dwg



APPROVED		<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	5/15/2020	SCALE	NTS
SUBMITTAL DATE	06/29/20	BOARD APPROVAL DATE	

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT OVERHEAD CONTACT SYSTEM MIDPOINT ANCHOR ASSEMBLY MP-01		
PLCA NO.	CONTRACT NO.	FILE LOCATION
000	C801	PROJECTWISE

SHEET	OF
DRAWING NO.	PD223
REVISION	B

POLE DATA TABLE									
TYPE	OD (INCH)	WALL THICKNESS (INCH)	BASE PLATE (INCH)					ANCHOR BOLT DIA (INCH)	MAXIMUM ALLOWABLE WORKING MOMENT (FT-KIP) (SEE NOTE 5)
			A	B	C	H	T		
C3	13	1/4	23	15 1/2	22	2 1/4	2	80.0	
D3	13	7/16	23	15 1/2	22	2 1/4	2	135.0	
E3	15	1/2	23	15 1/2	22	2 3/4	2 1/2	245.0	

**NOTES:**

1. FINISH: GALVANIZED AS PER ASTM A123.
2. ITEMS WITH THREADS SHALL BE RETHREADED AFTER GALVANIZING.
3. ALL POLES SHALL BE TAPERED STEEL MINIMUM YIELD STRENGTH OF 55 KSI. TAPER SHALL BE 0.14IN/FT, MEASURED AS A CHANGE IN DIAMETER.
4. POLE RAKE AT ERECTION, TO COMPENSATE FOR STATIC LATERAL LOAD DEFLECTION, AT 60° F.
5. THE MAXIMUM ALLOWABLE WORKING MOMENT CAPACITY GIVEN IN THE POLE DATA TABLE, SHALL NOT BE EXCEEDED UNDER ALL VERTICAL, LATERAL, AND COMBINED LOADS. THESE VALUES ARE BASED FOR A 25 FOOT POLE WITH THE LOAD BEING APPLIED 18" BELOW TOP OF POLE.
6. BASE COVER TO BE PROVIDED AT ALL STATION PLATFORMS AND SIDEWALKS. BOTTOM OF BASE COVER TO BE FLUSH WITH TOP OF STATION PLATFORM/SIDEWALK.
7. THE WELDING CONNECTION SHALL BE ADEQUATE TO MEET THE MAXIMUM ALLOWABLE WORKING MOMENT PROVIDED IN THE POLE DATA TABLE.

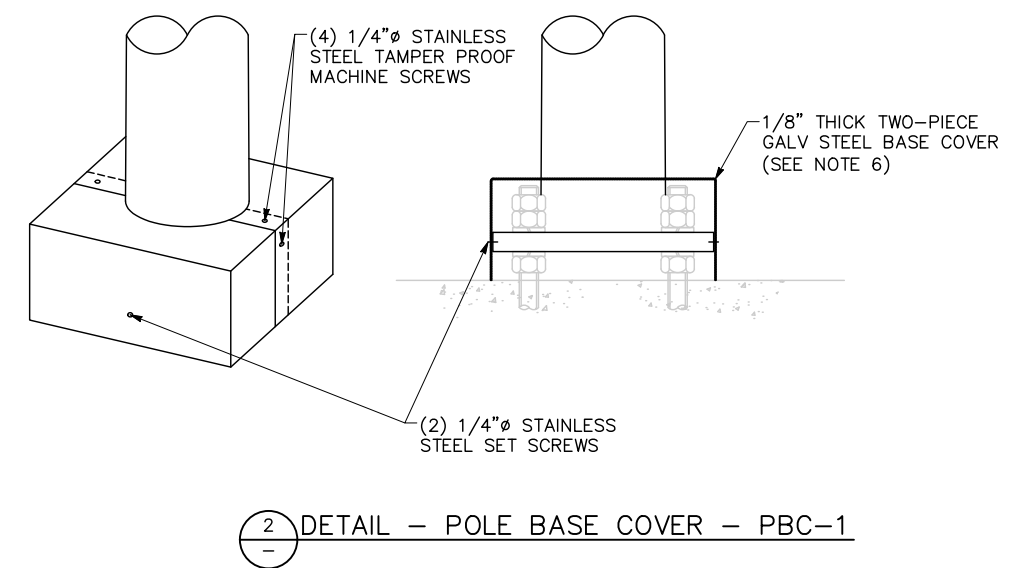
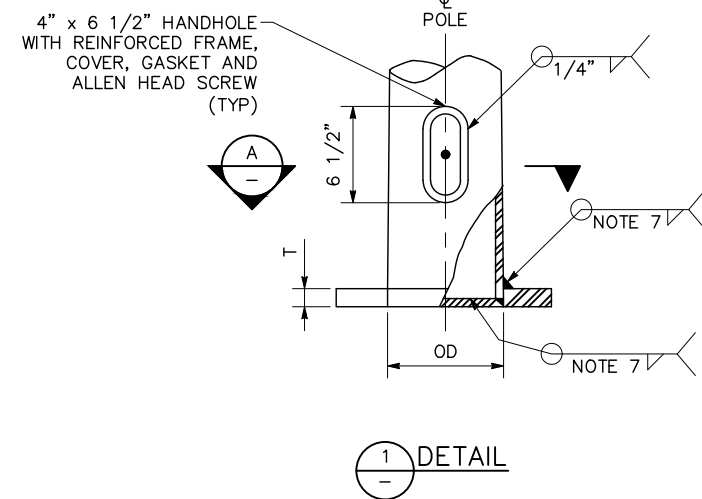
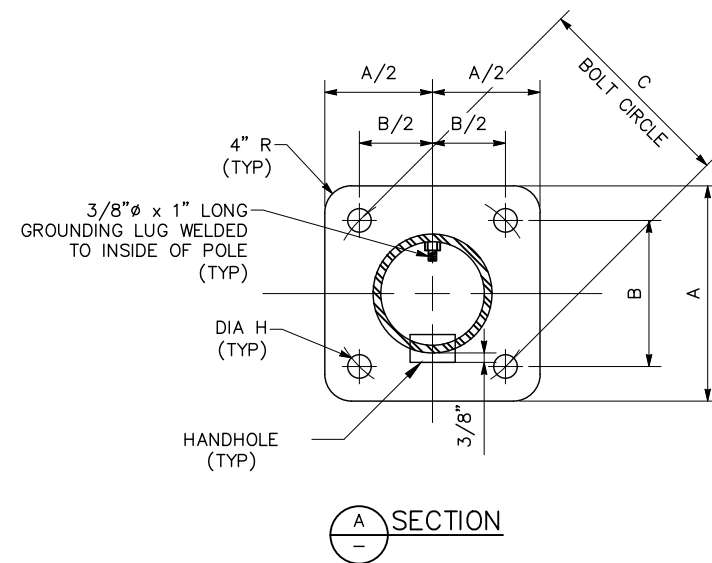
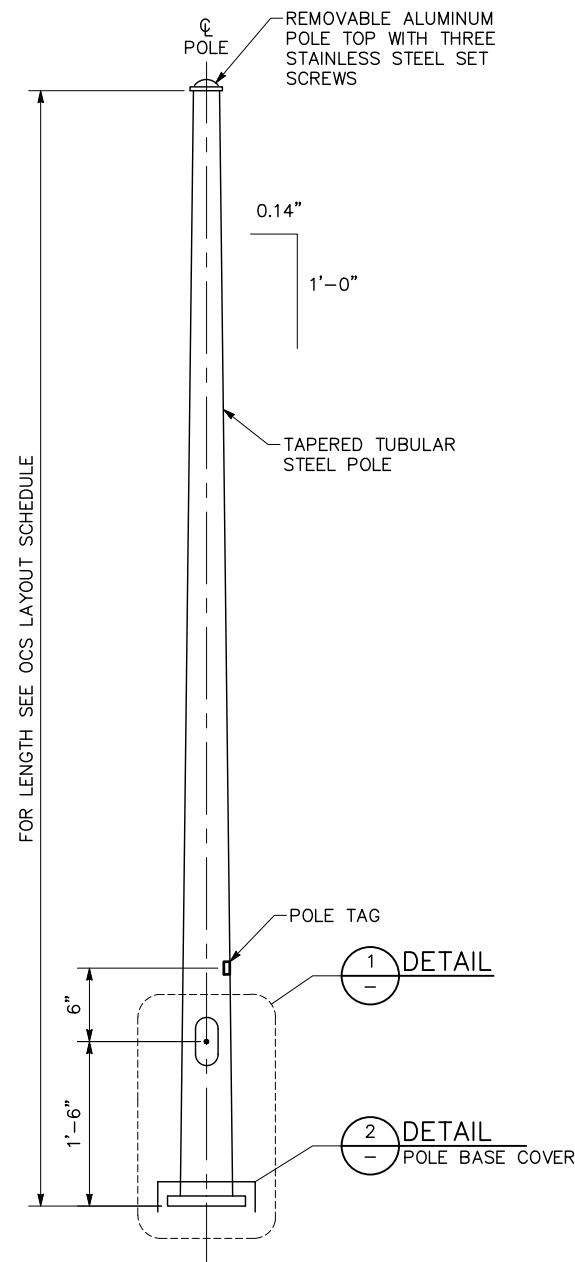
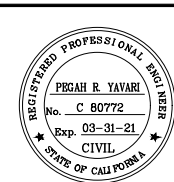


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NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



SUBMITTED	
<b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
DESIGNED	CHECKED
G. KOLA	P. YAVARI
DRAWN	CADD FILE NAME
D. KEO	801PD224.dwg



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CADD FILE DATE	SCALE
5/15/2020	NTS
SUBMITTAL DATE	BOARD APPROVAL DATE
06/29/20	

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT OVERHEAD CONTACT SYSTEM TYPICAL POLE ASSEMBLY C3, D3, E3			SHEET OF DRAWING NO. PD224 REVISION B
PCA NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE	

POLE DATA TABLE									
TYPE	OD (INCH)	WALL THICKNESS (INCH)	BASE PLATE (INCH)					ANCHOR BOLT DIA (INCH)	MAXIMUM ALLOWABLE WORKING MOMENT (FT-KIP) (SEE NOTE 5)
			A	B	C	H	T		
C3F	13	1/4	23	15 1/2	22	2 1/4	2	2	80.0
D3F	13	7/16	23	15 1/2	22	2 1/4	2	2	135.0
E3F	15	1/2	23	15 1/2	22	2 3/4	2 1/2	2 1/2	245.0

**NOTES:**

1. FINISH: GALVANIZED AS PER ASTM A123.
2. ITEMS WITH THREADS SHALL BE RETHREADED AFTER GALVANIZING.
3. ALL POLES SHALL BE TAPERED STEEL MINIMUM YIELD STRENGTH OF 55 KSI. TAPER SHALL BE 0.14IN/FT, MEASURED AS A CHANGE IN DIAMETER.
4. POLE RAKE AT ERECTION, TO COMPENSATE FOR STATIC LATERAL LOAD DEFLECTION, AT 60° F.
5. THE MAXIMUM ALLOWABLE WORKING MOMENT CAPACITY GIVEN IN THE POLE DATA TABLE, SHALL NOT BE EXCEEDED UNDER ALL VERTICAL, LATERAL, AND COMBINED LOADS. THESE VALUES ARE BASED FOR A 25 FOOT POLE WITH THE LOAD BEING APPLIED 18" BELOW TOP OF POLE.
6. BASE COVER TO BE PROVIDED AT ALL STATION PLATFORMS AND SIDEWALKS. BOTTOM OF BASE COVER TO BE FLUSH WITH TOP OF STATION PLATFORM/SIDEWALK.
7. ALL CABLES INSIDE THE POLE SHALL BE SUPPORTED FROM THE J HOOK.
8. CONTRACTOR TO CONFIRM ALL FEEDER SPOUT LOCATIONS PRIOR TO FABRICATION.
9. FEEDER SPOUT SHALL BE PLACED FACING PERPENDICULAR TO THE CENTERLINE OF THE FEEDING TRACK.
10. SEE DRAWING PD301 FOR FEEDER SPOUT HEIGHT "FSH" SCHEDULE.
11. ALL FEEDER SPOUTS SHALL BE PROVIDED WITH SPOUT GROUND BUSHING.
12. THE WELDING CONNECTION SHALL BE ADEQUATE TO MEET THE MAXIMUM ALLOWABLE WORKING MOMENT PROVIDED IN THE POLE DATA TABLE.

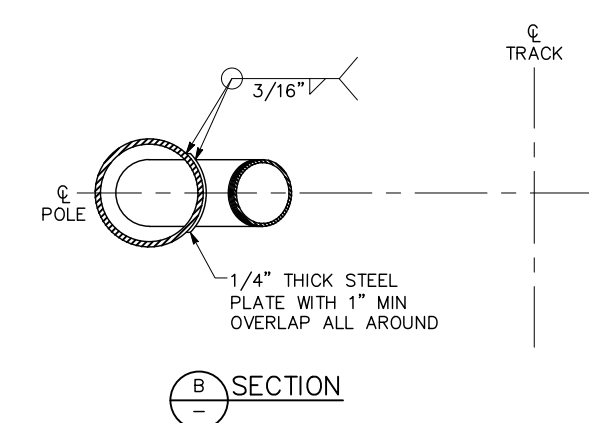
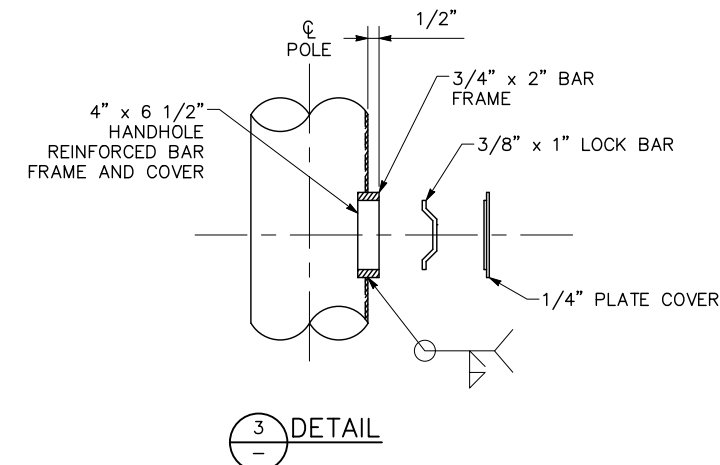
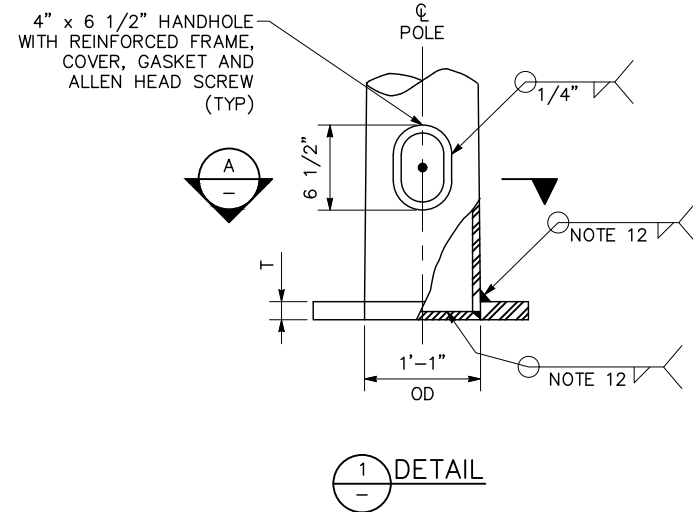
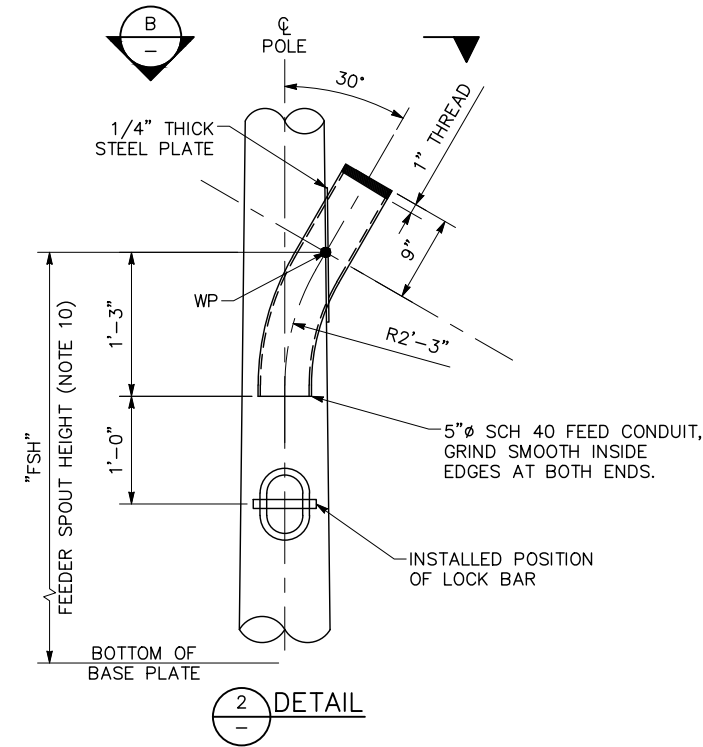
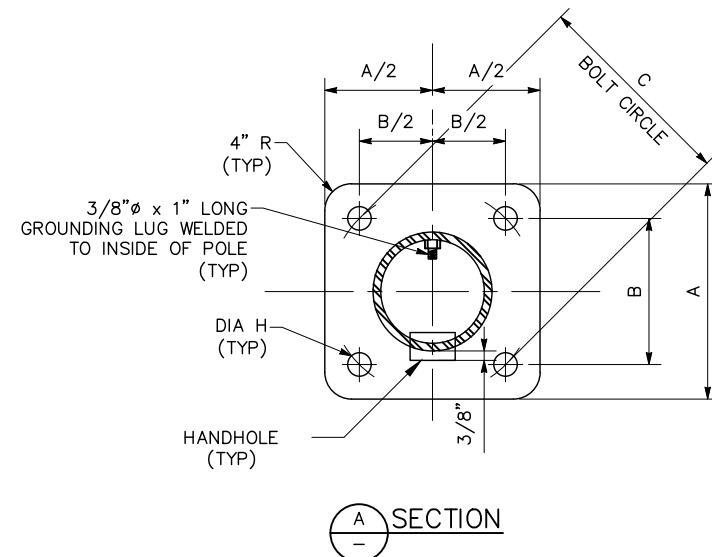
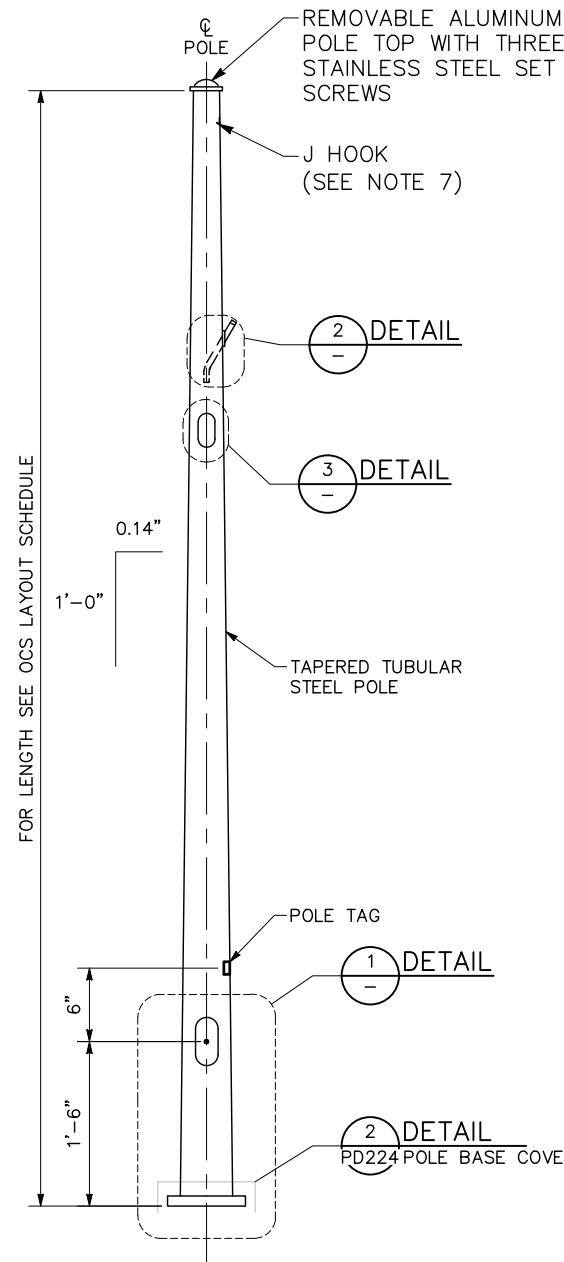
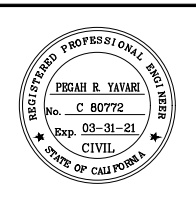


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 DRAWN: G. KOLA  
 CADD FILE NAME: 801PD225.dwg

**Santa Clara Valley Transportation Authority**

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 ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 5/15/2020  
 SCALE: NTS  
 SUBMITTAL DATE: 06/29/20  
 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 OVERHEAD CONTACT SYSTEM  
 FEEDER POLE ASSEMBLY  
 C3F, D3F, E3F

SHEET OF PD225 REVISION B

PCA NO: 000 CONTRACT NO: C801 FILE LOCATION: PROJECTWISE



POLE DATA TABLE

TYPE	OD (INCH)	WALL THICKNESS (INCH)	BASE PLATE (INCH)					ANCHOR BOLT DIA (INCH)	MAXIMUM ALLOWABLE WORKING MOMENT (FT-KIP) (SEE NOTE 6)
			A	B	C	H	T		
T2	16	1/4	24	15 1/2	22	2 1/4	2	78.6	

NOTES:

1. FINISH: GALVANIZED AS PER ASTM A123.
2. ITEMS WITH THREADS SHALL BE RETHREADED AFTER GALVANIZING.
3. ALL POLES SHALL BE STEEL MINIMUM YIELD STRENGTH OF 55 KSI.
4. POLE RAKE AT ERECTION, TO COMPENSATE FOR STATIC LATERAL LOAD DEFLECTION, AT 60° F.
5. THE MAXIMUM ALLOWABLE WORKING MOMENT CAPACITY GIVEN IN THE POLE DATA TABLE, SHALL NOT BE EXCEEDED UNDER ALL VERTICAL, LATERAL, AND COMBINED LOADS. THESE VALUES ARE BASED FOR A 25 FOOT POLE WITH THE LOAD BEING APPLIED 18" BELOW TOP OF POLE.
6. CONTRACTOR SHALL COORDINATE WITH THE PULLEY ASSEMBLY MANUFACTURER TO DETERMINE THE PROPER SIZE OF THE OPENING.
7. BASE COVER TO BE PROVIDED AT ALL STATION PLATFORMS AND SIDEWALKS. BOTTOM OF BASE COVER TO BE FLUSH WITH TOP OF STATION PLATFORM/SIDEWALK.
8. SEE DRAWING PD301 FOR COUNTERWEIGHT ANCHOR HEIGHT SCHEDULE.
9. THE WELDING CONNECTION SHALL BE ADEQUATE TO MEET THE MAXIMUM ALLOWABLE WORKING MOMENT PROVIDED IN THE POLE DATA TABLE.

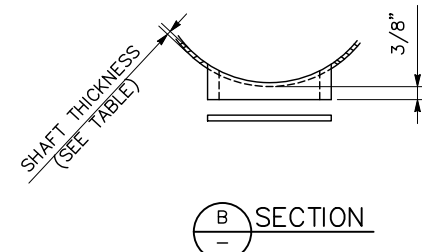
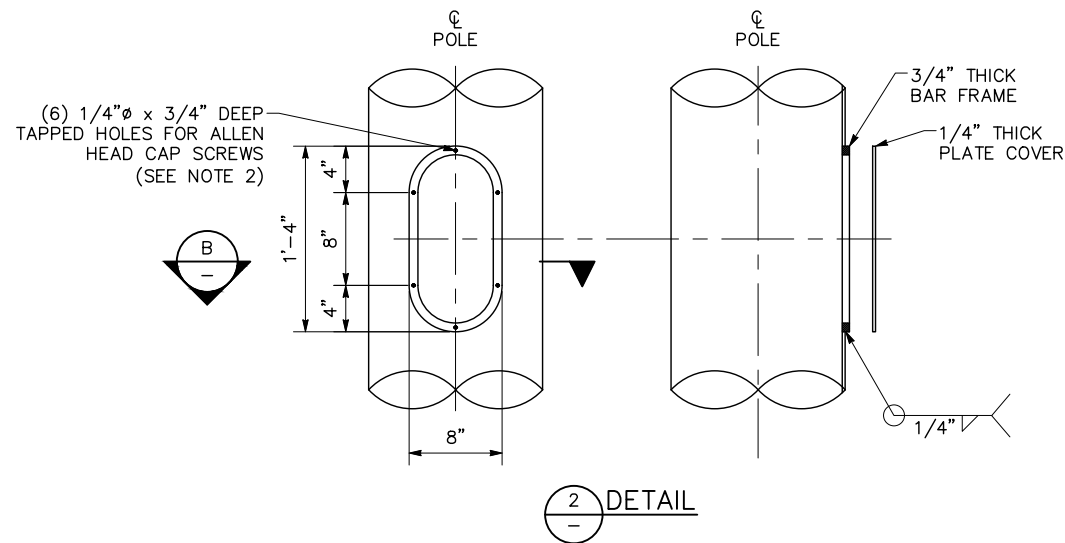
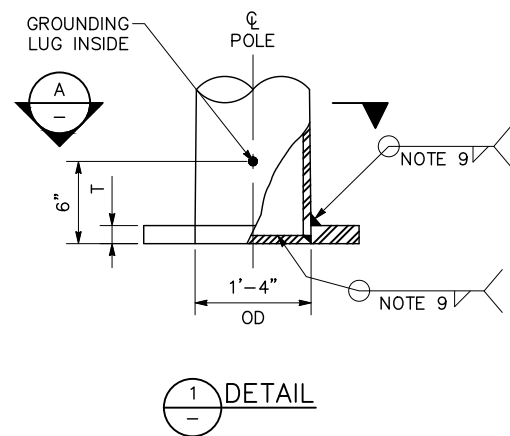
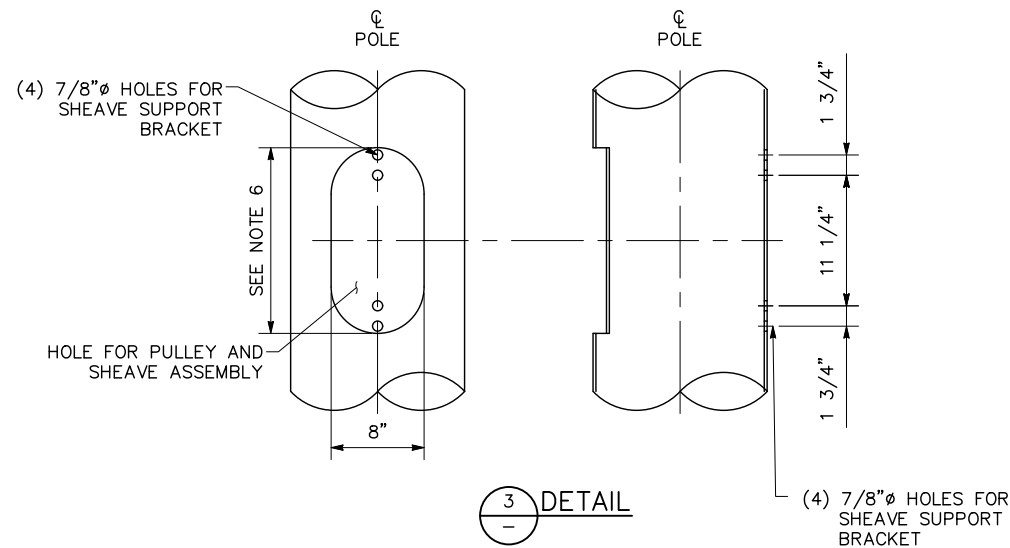
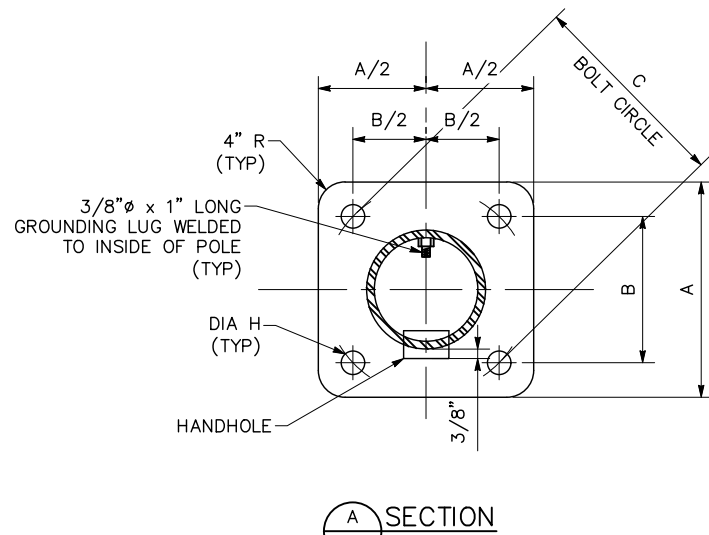
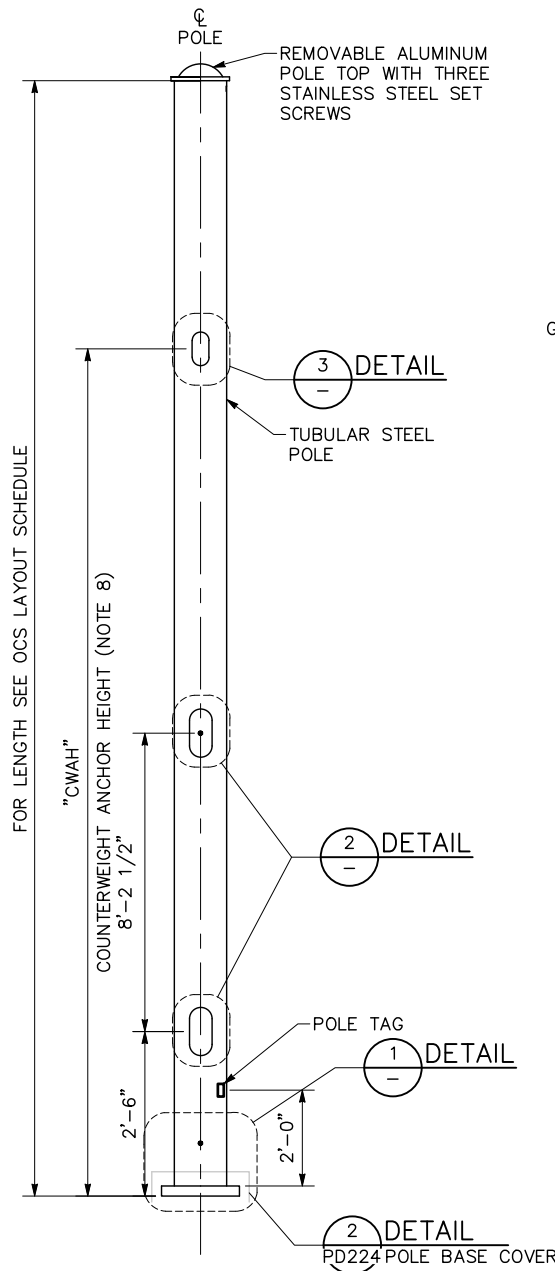
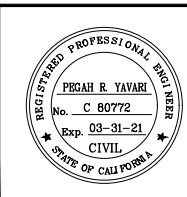


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NO.	DATE	REVISIONS
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DESIGNED: G. KOLA  
CHECKED: P. YAVARI  
DRAWN: G. KOLA  
CADD FILE NAME: 801PD227.dwg

**Santa Clara Valley Transportation Authority**

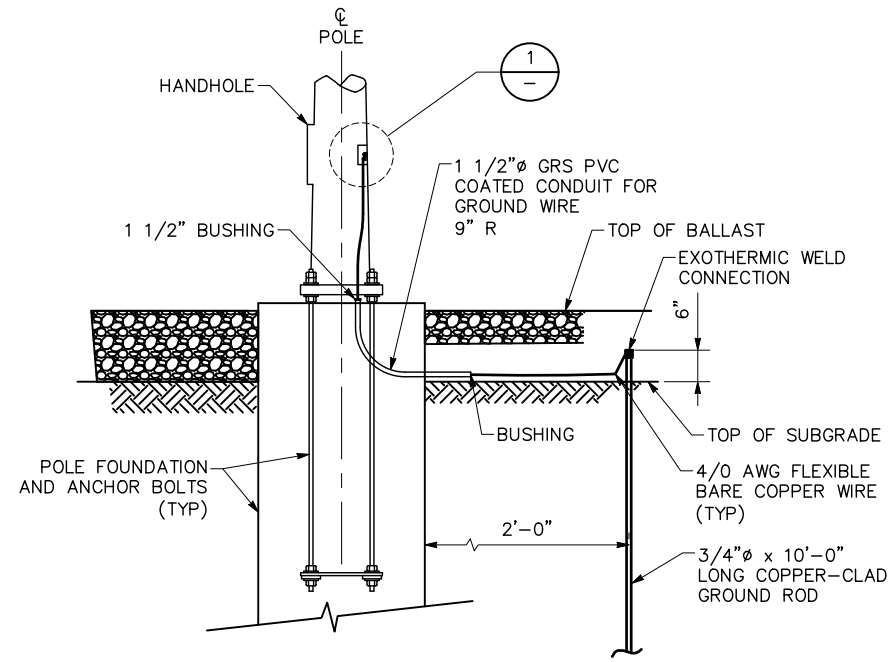
**BKF 100+ YEARS**  
ENGINEERS / SURVEYORS / PLANNERS

CAAD FILE DATE: 5/15/2020  
SCALE: NTS  
SUBMITTAL DATE: 06/29/20  
BOARD APPROVAL DATE:

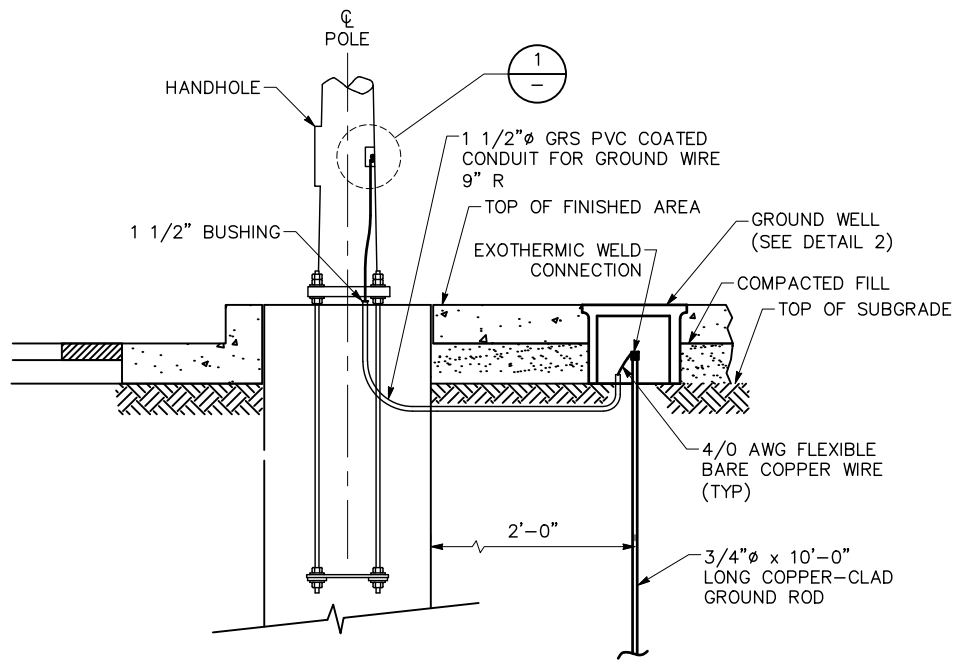
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CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
OVERHEAD CONTACT SYSTEM  
COUNTERWEIGHT POLE ASSEMBLY  
T2

PCA NO.: 000  
CONTRACT NO.: C801  
FILE LOCATION: PROJECTWISE

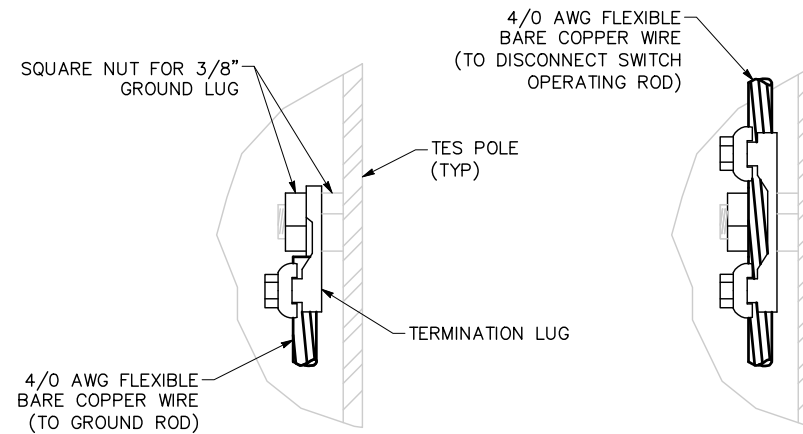
SHEET OF: PD227  
REVISION: B



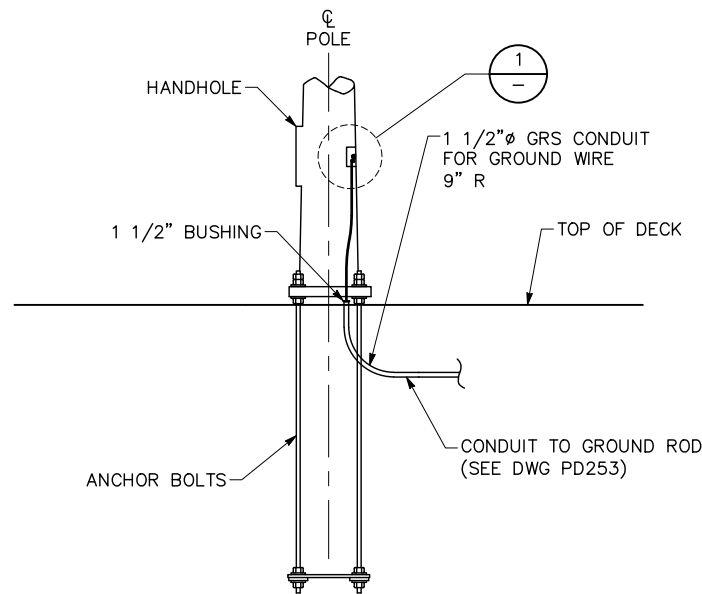
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NTS



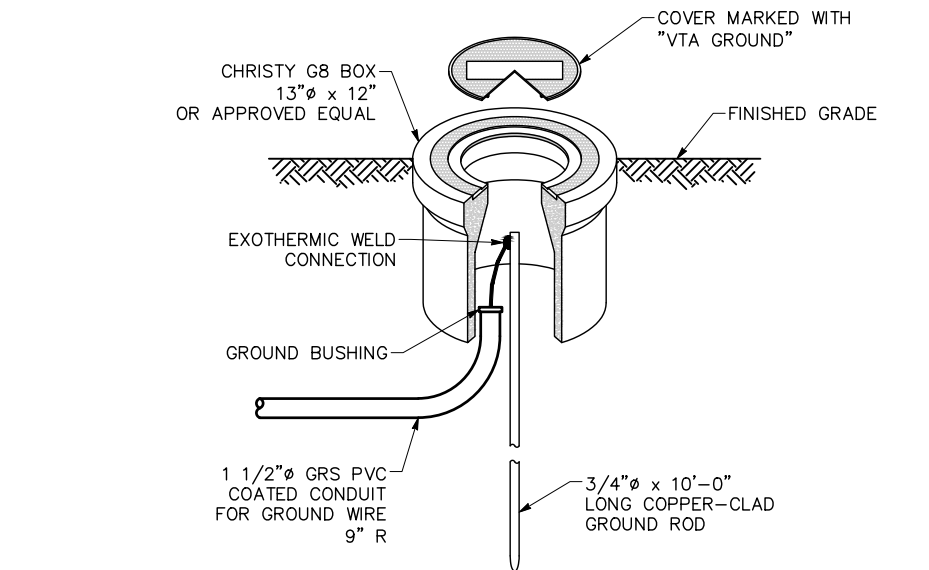
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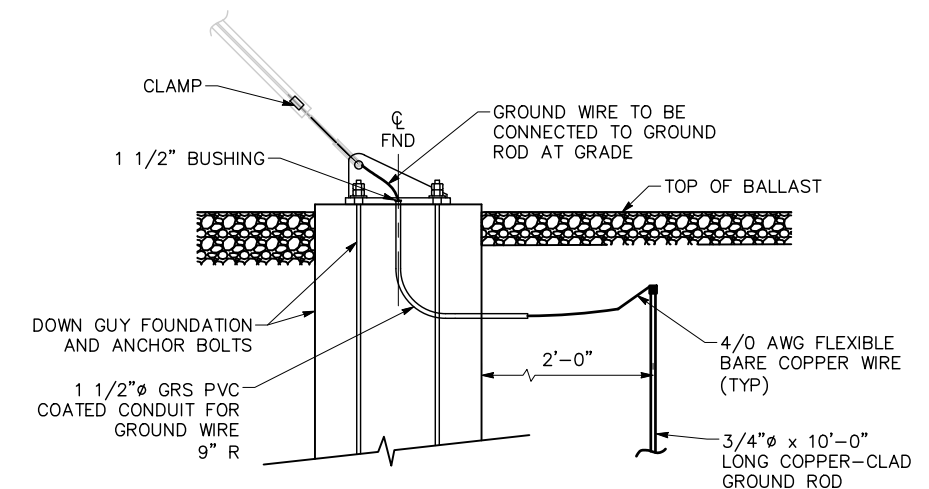
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-  
NTS  
DETAIL - GROUND WIRE ATTACHMENT - PG-1



POLE GROUNDING ON AERIAL GUIDEWAY  
NTS



2  
-  
NTS  
DETAIL - GROUND WELL



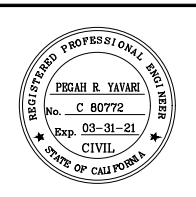
DOWN GUY GROUNDING - DG-1  
NTS

NOTES:

1. FOR ABBREVIATIONS, LEGEND AND GENERAL NOTES SEE DWGS PG001, PG002, AND PG003.
2. FOR POLE FOUNDATION DETAILS, SEE FOUNDATION ASSEMBLY DRAWINGS PD301 - PD305.
3. GROUND RESISTANCE SHALL BE 25 OHMS OR LESS.
4. GROUNDING CABLES FOR TES POLES AND DOWN GUYS ON THE AERIAL GUIDEWAY ARE INSTALLED BY OTHERS. A PIGTAIL WILL BE AVAILABLE FOR THE OCS CONTRACTOR TO TERMINATE. OCS CONTRACTOR ONLY NEEDS TO CONNECT CABLE RISERS TO POLE GROUND TERMINATION.
5. AN ALTERNATIVE ASSEMBLY CONFIGURATION MAY BE USED IF THE ELECTRICAL AND MECHANICAL FUNCTION ARE EQUIVALENT AND APPROVED BY VTA.
6. GROUND RESISTANCE SHALL BE 5 OHMS OR LESS FOR SURGE ARRESTOR, 10 OHMS OR LESS FOR DROPPING RESISTOR, 25 OHMS OR LESS FOR REGULAR TES POLES.

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B	06/20	95% SUBMITTAL SET
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SUBMITTED

**HNTB** HNTB Corporation  
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CHECKED: P. YAVARI  
DRAWN: D. KEO  
CADD FILE NAME: 801PD228.dwg

**VA** Santa Clara Valley  
Transportation  
Authority

APPROVED

**BKF** 100+ YEARS  
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CADD FILE DATE: 5/15/2020  
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SUBMITTAL DATE: 06/29/20  
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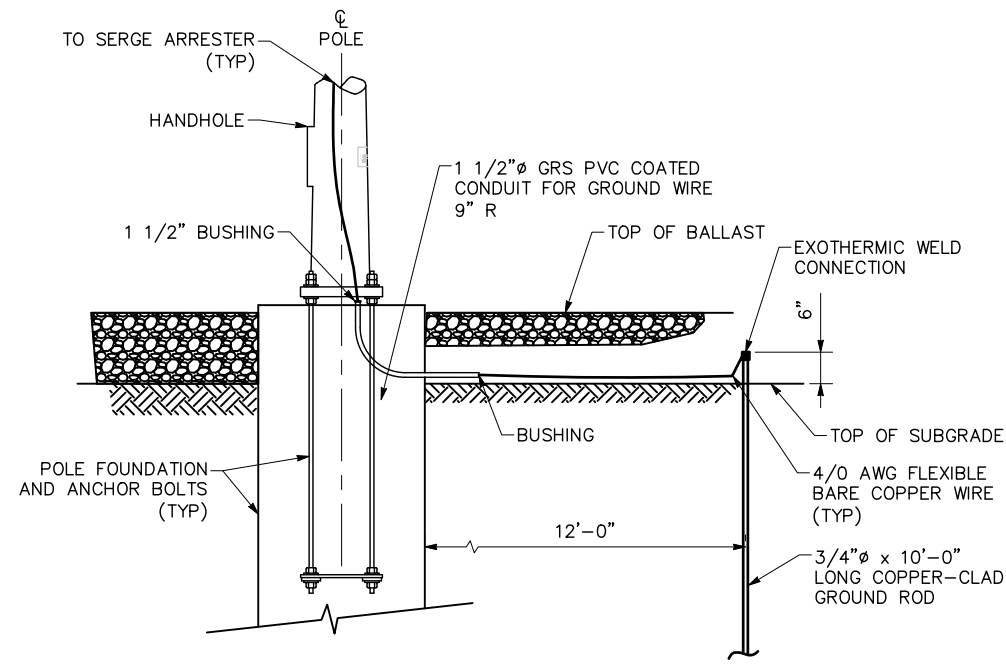
EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
OVERHEAD CONTACT SYSTEM  
GROUNDING ASSEMBLIES  
PG-1, DG-1

PCA NO.: 000  
CONTRACT NO.: C801  
FILE LOCATION: PROJECTWISE

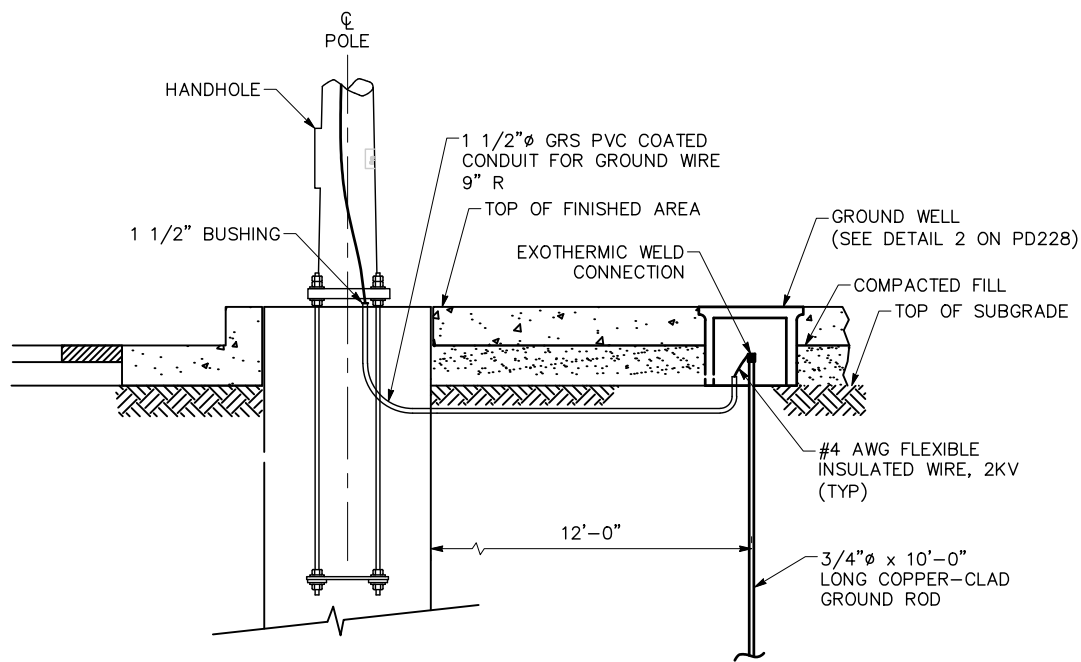
SHEET OF: PD228  
REVISION: B

**NOTES:**

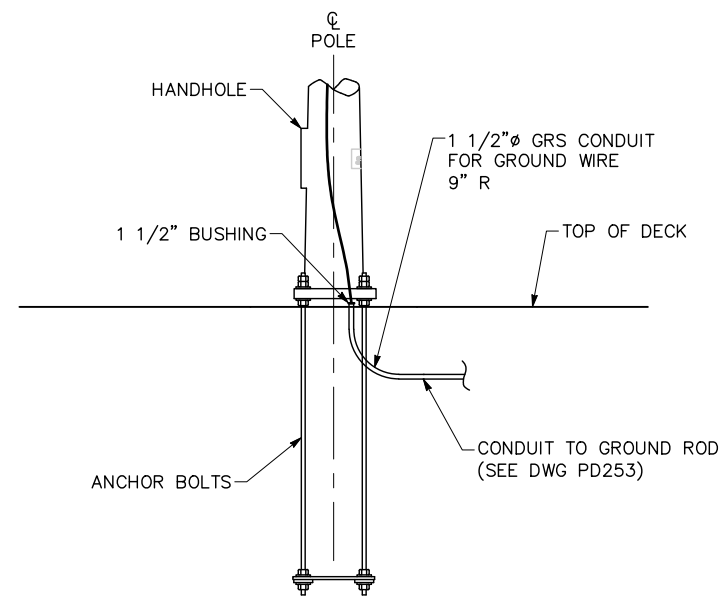
1. FOR ABBREVIATIONS, LEGEND AND GENERAL NOTES SEE DWGS PG001, PG002, AND PG003.
2. FOR POLE FOUNDATION DETAILS, SEE FOUNDATION ASSEMBLY DRAWINGS PD301 – PD305.
3. FOR TES POLE GROUNDING DETAILS SEE DWG PD228.
4. GROUND RESISTANCE FOR SURGE ARRESTER SHALL BE 5 OHMS OR LESS.
5. GROUNDING CABLES FOR SURGE ARRESTERS ON THE AERIAL GUIDEWAY ARE INSTALLED BY OTHERS. A PIGTAIL WILL BE AVAILABLE FOR THE OCS CONTRACTOR TO TERMINATE. OCS CONTRACTOR ONLY NEEDS TO CONNECT CABLE RISERS TO SURGE ARRESTER TERMINATION.
6. AN ALTERNATIVE ASSEMBLY CONFIGURATION MAY BE USED IF THE ELECTRICAL AND MECHANICAL FUNCTION ARE EQUIVALENT AND APPROVED BY VTA.
7. SURGE ARRESTER GROUNDING IS INCLUDED IN THE SU-01 ASSEMBLY.
8. GROUND RESISTANCE SHALL BE 5 OHMS OR LESS FOR SURGE ARRESTER, 10 OHMS OF LESS FOR DROPPING RESISTOR.



**SURGE ARRESTER GROUNDING IN BALLAST**  
NTS



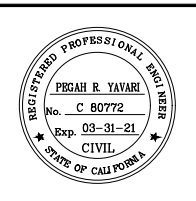
**SURGE ARRESTER GROUNDING AT FINISHED AREA**  
NTS



**SURGE ARRESTER GROUNDING ON AERIAL STRUCTURES**  
NTS

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CADD FILE NAME: 801PD229.dwg

**Santa Clara Valley Transportation Authority**

**BKF** 100+ YEARS  
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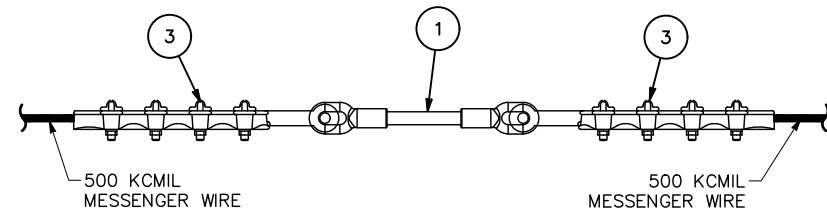
EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
OVERHEAD CONTACT SYSTEM  
SURGE ARRESTER GROUNDING DETAILS

PCA NO.: 000  
CONTRACT NO.: C801  
FILE LOCATION: PROJECTWISE

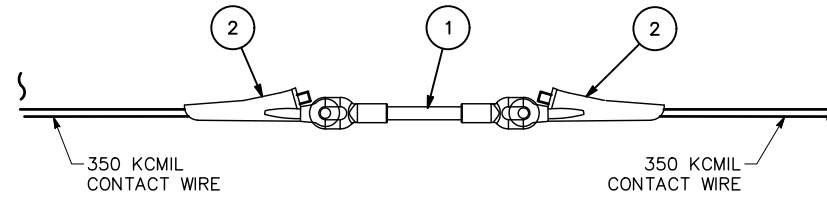
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REVISION: B

**NOTES:**

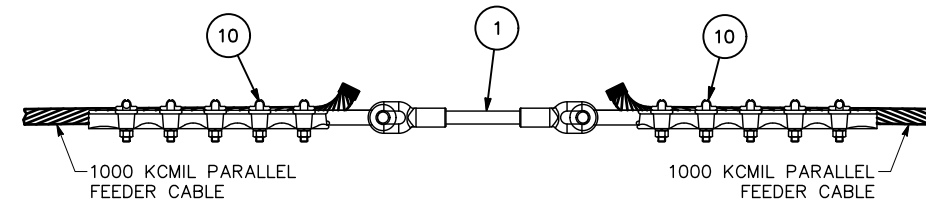
1. FOR ABBREVIATIONS, LEGEND, AND GENERAL NOTES SEE DWGS PG001, PG002, AND PG003.
2. ALTERNATIVE ASSEMBLY CONFIGURATIONS MAY BE USED IF ELECTRICAL AND MECHANICAL REQUIREMENTS ARE EQUIVALENT AND APPROVED BY VTA.
3. BRIDGING TYPE SECTION INSULATORS SHALL ACCOMMODATE THE CONFIGURATION OF SLIDING CARBON STRIPS OF ALL TYPES OF VTA PANTOGRAPHS.
4. CONTACT WIRE AND MESSENGER SPLICES ARE TO BE AVOIDED, UNLESS NOTED OTHERWISE.



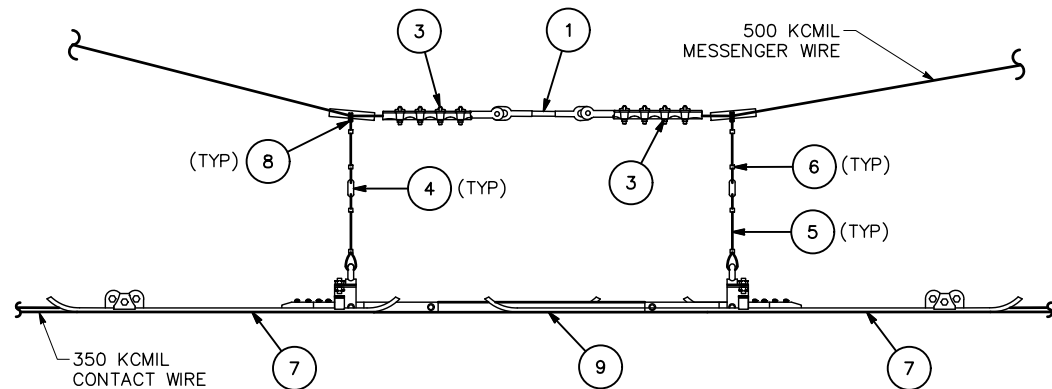
**IN-SPAN INSULATOR - IS-M1**  
(MESSENGER WIRE)



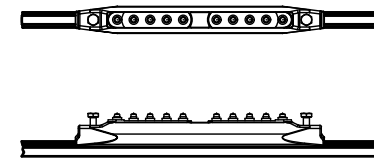
**IN-SPAN INSULATOR - IS-C1**  
(CONTACT WIRE)



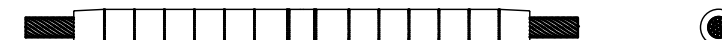
**IN-SPAN INSULATOR - IS-F1**  
(PARALLEL FEEDER CABLES)



**SECTION INSULATOR - SI-01**  
BRIDGING TYPE SECTION INSULATOR



**CONTACT WIRE SPLICE**  
(SEE NOTE 4)

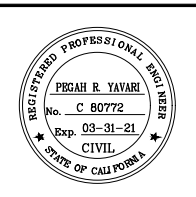


**MESSENGER WIRE SPLICE**  
(SEE NOTE 4)

ITEM	DESCRIPTION	QUANTITY			
		IS-C1	IS-M1	IS-F1	SI-01
1	STRAIN INSULATOR WITH 8" INSULATION	1	1	1	1
2	CONTACT WIRE STRAIN CLAMP	2	-	-	-
3	MESSENGER WIRE STRAIN CLAMP	-	2	-	2
4	LOOP INSULATOR	-	-	-	2
5	1/4 Ø NON-SPINNING SS WIRE, LENGTH AS REQ'D.	-	-	-	2
6	WIRE CRIMP CONNECTOR	-	-	-	8
7	SECTION INSULATOR RUNNER	-	-	-	4
8	WIRE SUPPORT CLAMP W/ INSULATED EYE & SADDLE	-	-	-	2
9	SECTION INSULATOR (BRIDGING TYPE)	-	-	-	1
10	PARALLEL FEEDER WIRE STRAIN CLAMP	-	-	2	-

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 DRAWN: D. KEO  
 CADD FILE NAME: 801PD230.dwg

**Santa Clara Valley Transportation Authority**

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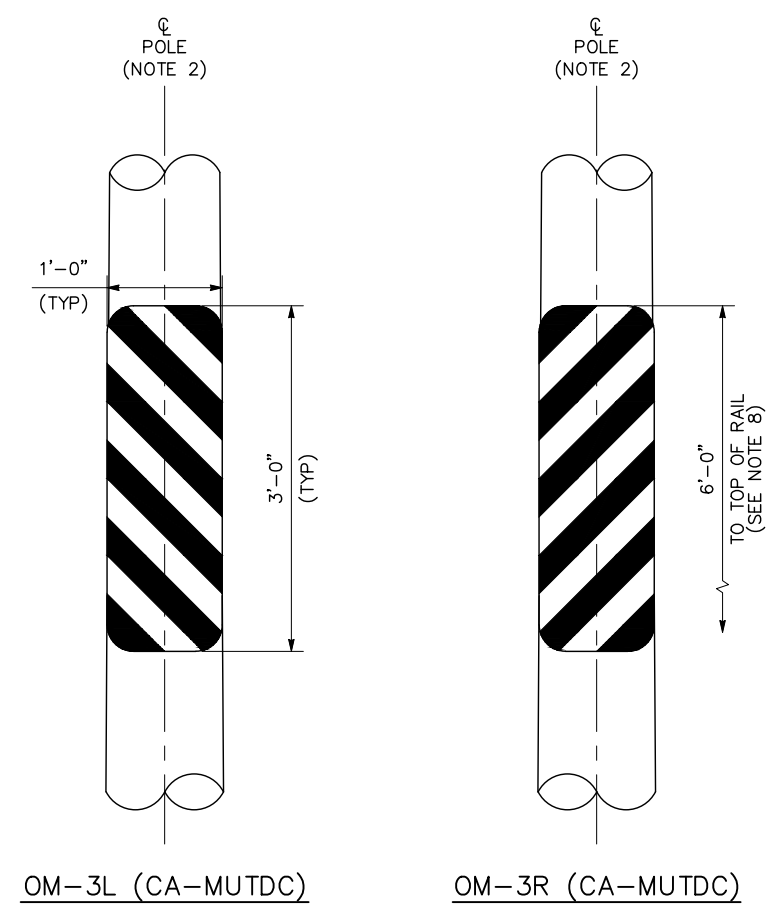
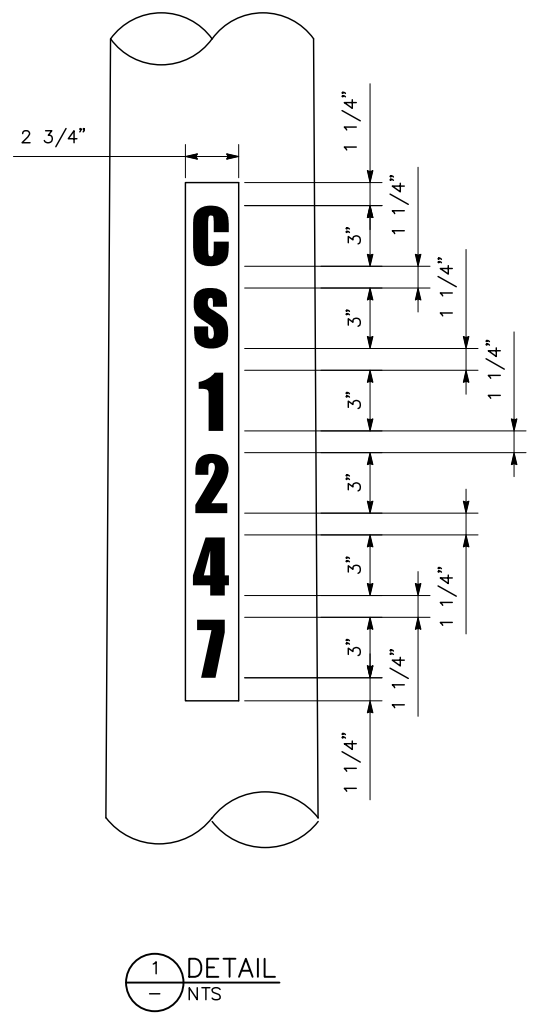
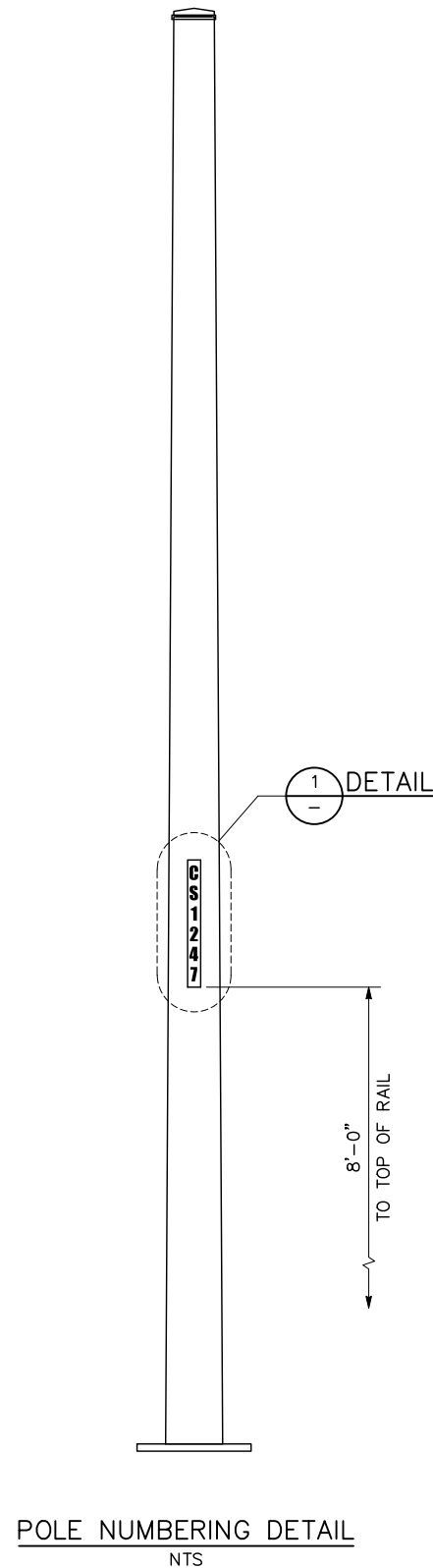
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 SUBMITTAL DATE: 06/29/20  
 SCALE: NTS  
 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 OVERHEAD CONTACT SYSTEM  
 IN-SPAN ASSEMBLIES  
 IS-01, IS-02, IS-03, AND SI-01

SHEET OF PD230 REVISION B

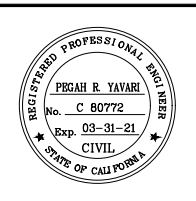
PCA NO.: 000  
 CONTRACT NO.: C801  
 FILE LOCATION: PROJECTWISE

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- NOTES:**
- SIGN TO HAVE YELLOW LETTERS ON BLACK BACKGROUND. LETTER SIZE TO BE 3 INCHES HIGH AND FONT TO BE HELVETICA COMPACT.
  - POLE NUMBER SIGN FINISH MATERIAL TO BE ARLON REFLECTA-CAL SERIES 2400. COLOR YELLOW TO BE REFLECTA-CAL SERIES 2400 NUMBER 06 YELLOW. THE STROKE SHALL BE 0.625 INCHES.
  - THE TEXT CONFIGURATION SHALL BE VERTICAL, TOP TO BOTTOM, WITH LETTERS PRECEDING NUMBERS, EXCLUDE ANY DECIMAL POINTS. FOR EXAMPLE, NUMBERING OF TES POLE 12.47CS, SHALL READ "CS1247" FROM TOP TO BOTTOM.
  - NUMBERS SHALL BE SET AT A HEIGHT OF 8 FEET AS SHOWN ON THE DETAIL ON THIS SHEET.
  - BEFORE INSTALLING NUMBER SIGN, THE POLE SHALL BE THOROUGHLY CLEANED WITH A CLEANING AGENT RECOMMENDED BY THE POLE NUMBER SIGN MANUFACTURER. UPON CLEANING AND DRYING, INSTALL THE NUMBERS PARALLEL TO THE VERTICAL AXIS OF THE POLE IN A MANNER RECOMMENDED BY THE MANUFACTURER.
  - RESTRICTED CLEARANCE SIGN ASSEMBLY TO BE PROVIDED WITH MOUNTING HARDWARE MADE OF STAINLESS STEEL.
  - RESTRICTED CLEARANCE SIGN TO MEET THE CALIFORNIA MUTCD, LATEST EDITION, REQUIREMENTS.
  - WHERE OTHER EQUIPMENT ARE MOUNTED ON TES POLE THAT PREVENT THE RESTRICTED CLEARANCE SIGN TO BE MOUNTED AT THE SPECIFIED HEIGHT, THE SIGN SHALL BE MOUNTED ABOVE THE EQUIPMENT, WITHOUT BLOCKING THE POLE NUMBERING SIGN.

NO.	DATE	REVISIONS
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CADD FILE NAME: 801PD231.dwg

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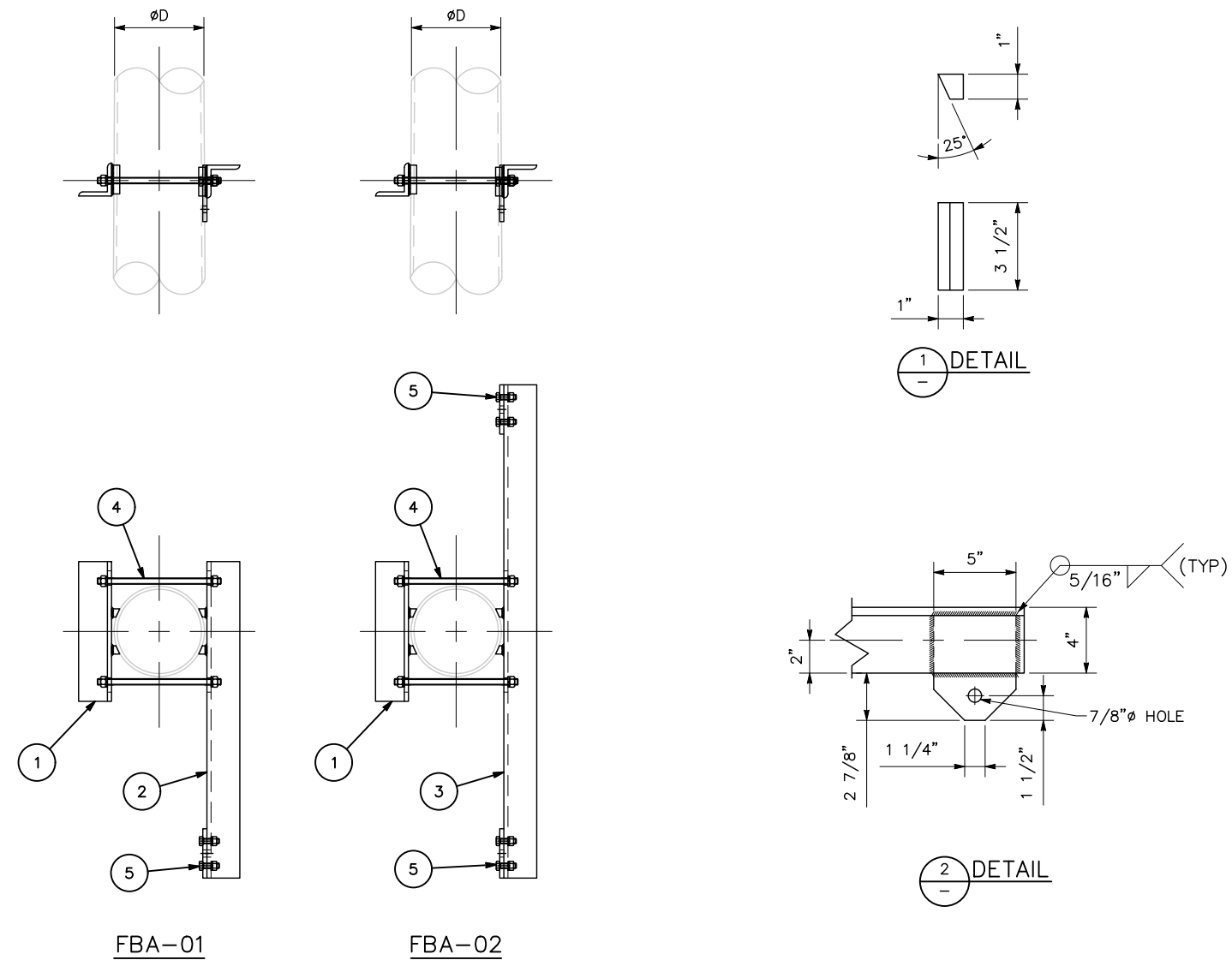
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CADD FILE DATE: 5/15/2020  
SCALE: NTS  
SUBMITTAL DATE: 06/29/20  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
OVERHEAD CONTACT SYSTEM  
POLE NUMBERING &  
RESTRICTED CLEARANCE SIGN

PCA NO.: 000  
CONTRACT NO.: C801  
FILE LOCATION: PROJECTWISE

SHEET OF: PD231  
REVISION: B

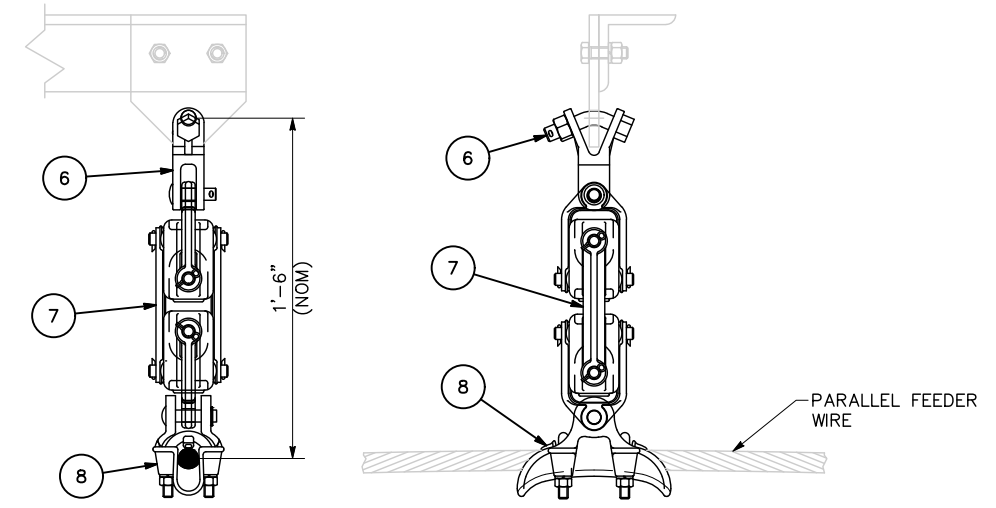
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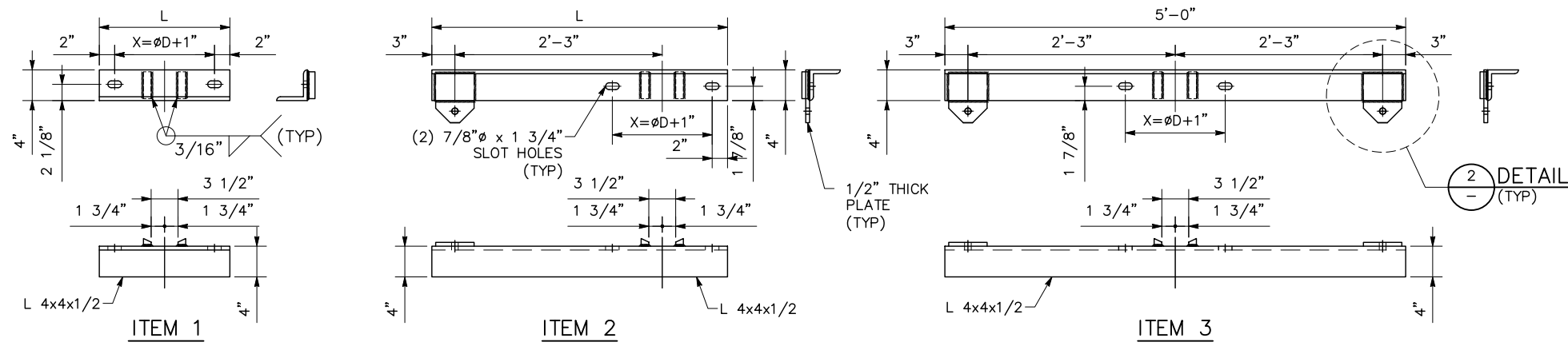
FBA-01 FBA-02

FEEDER BRACKET ARMS

- NOTES:**
1. FOR ABBREVIATIONS, LEGEND AND GENERAL NOTES SEE DWGS PG001, PG002 AND PG003.
  2. ALL THREADED STEEL RODS SHALL BE ASTM A325, WITH 2 HEX NUTS AND STANDARD WASHERS AND SHALL BE HOT DIP GALVANIZED.
  3.  $X = \text{ØD (POLE DIAMETER)} + 1"$ . CONTRACTOR TO VERIFY POLE DIAMETER AT ATTACHMENT HEIGHT.



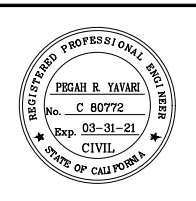
FEEDER SUSPENSION ASSEMBLY – FSA-01  
NTS



ITEM 1 ITEM 2 ITEM 3

BILL OF MATERIAL		QUANTITY		
ITEM	DESCRIPTION	FBA-01	FBA-02	FSA-01
1	ANGLE SPREADER, SHORT, PLAIN	1	1	-
2	ANGLE SPREADER, SHORT, STANDARD	1	-	-
3	ANGLE SPREADER, LONG, STANDARD	-	1	-
4	3/4" Ø THREADED ROD, 2 DUAL SLOTTED LOCKNUTS WITH WASHERS	2	2	-
5	5/8" Ø BOLT WITH NUT AND LOCKWASHER	2	4	-
6	LINK, Y-DOUBLE CLEVIS	-	-	1
7	DOUBLE JB INSULATORS WITH LINKAGE HARDWARE	-	-	1
8	ANGLE CLAMP, SUSPENSION, FOR ALUMINUM CABLE	-	-	1

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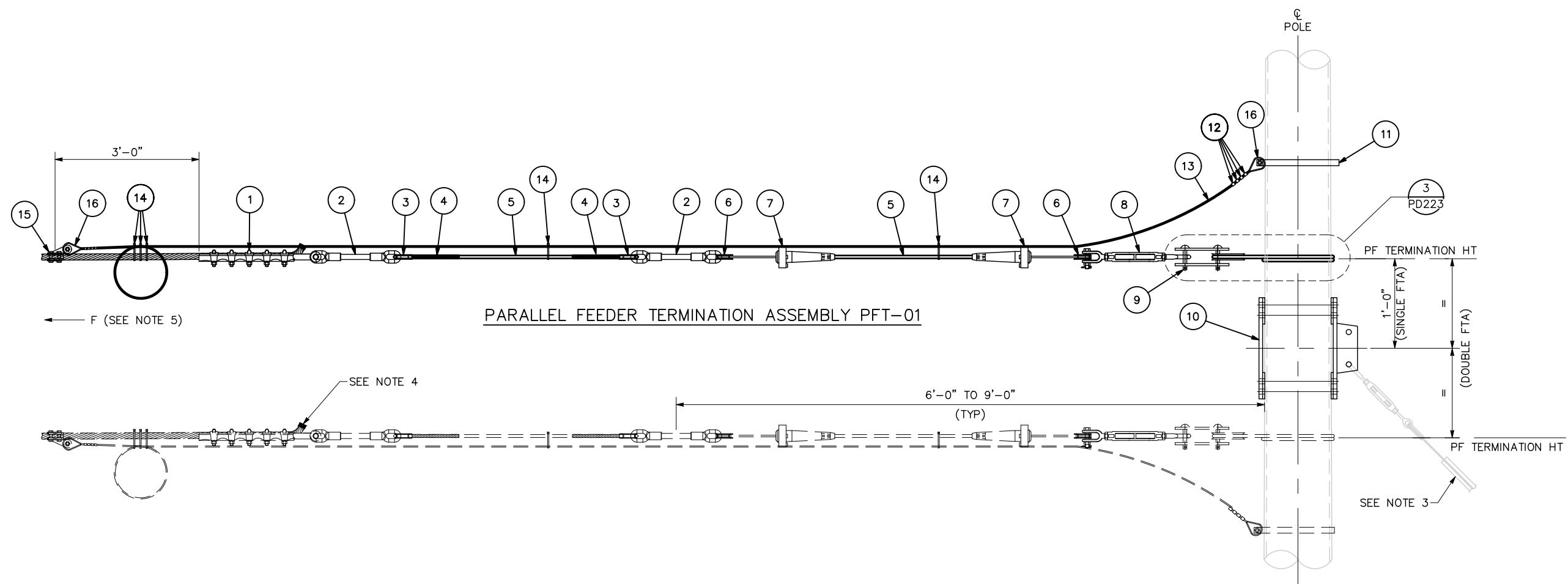
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CADD FILE DATE: 6/22/2020  
 SUBMITTAL DATE: 06/29/20  
 SCALE: NTS  
 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 OVERHEAD CONTACT SYSTEM  
 PARALLEL FEEDER ASSEMBLIES  
 FBA-01, FBA-02, FSA-01

PCA NO: 000 CONTRACT NO: C801 FILE LOCATION: PROJECTWISE

SHEET OF
DRAWING NO. PD232
REVISION A



PARALLEL FEEDER TERMINATION ASSEMBLY PFT-01

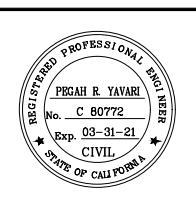
BILL OF MATERIAL		QUANTITY
ITEM	DESCRIPTION	FTA-01
1	STRAIGHTLINE CLAMP FOR 1000 KCMIL AAC/TW	1
2	STRAIN INSULATOR, EYE/EYE	2
3	THIMBLE FOR 1/2"Ø GLAV STEEL WIRE ROPE	2
4	FORMED DEADEND FOR GUY WIRE	2
5	1/2"Ø, 19 STRAND GALV STEEL GUY WIRE	AS REQ'D
6	THIMBLE FOR STRAND VICE	2
7	STRAND VICE FOR 1/2"Ø GLAV STEEL GUY WIRE	2
8	TURNBUCKLE, EYE/CLEVIS	1
9	POLE CONNECTION	1
10	GUY ANCHOR BRACKET ASSEMBLY (SEE NOTE 6)	1
11	POLE BAND	2
12	CRIMP CLIP FOR 1/2"Ø PHILLYSTRAN	8
13	1/2"Ø PHILLYSTRAN	AS REQ'D
14	PLASTIC CLIP	AS REQ'D
15	STRAIN CLAMP WITH CLEVIS	1
16	THIMBLE-CLOSED FOR 1/2"Ø PHILLYSTRAN	2

**NOTES:**

- FOR ABBREVIATIONS, LEGEND AND GENERAL NOTES SEE DWGS PG001, PG002 AND PG003.
- FOR TES POLE TYPES, PARALLEL FEEDER TERMINATION HEIGHTS, AND ASSEMBLY ALLOCATION REFER TO OCS LAYOUT SCHEDULE DRAWINGS.
- DOWN GUY ASSEMBLY SEPARATELY CALLED OFF, SEE DWG PD208.
- ALL TAIL WIRES SHALL BE SECURED TO PREVENT FRAYING WITH NO. 19 SOFT ALUMINUM WIRE, 6 TURNS AND TWISTED END.
- TERMINATION TENSION FOR PARALLEL FEEDER CABLES VARIES. SEE DWG PG004 FOR DESIGN TENSIONS.
- ONLY 1 GUY ANCHOR BRACKET ASSEMBLY TO BE PROVIDED AT EACH TERMINATION LOCATION.
- 1/2"Ø GALVANIZED WIRE (ITEM 5) TO BE CUT TO LENGTH BY CONTRACTOR.
- BUNDLE 5' OF 1/2" PHILLYSTRAN IN THREE 6 1/2" CIRCLES USING PLASTIC CLIPS.
- PLASTIC CLIPS SHALL NOT BE INSTALLED ON INSULATORS.

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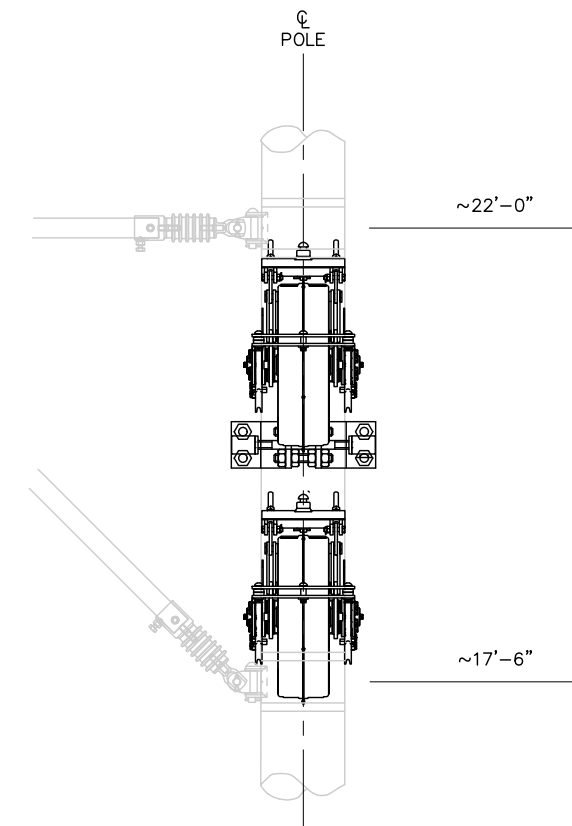
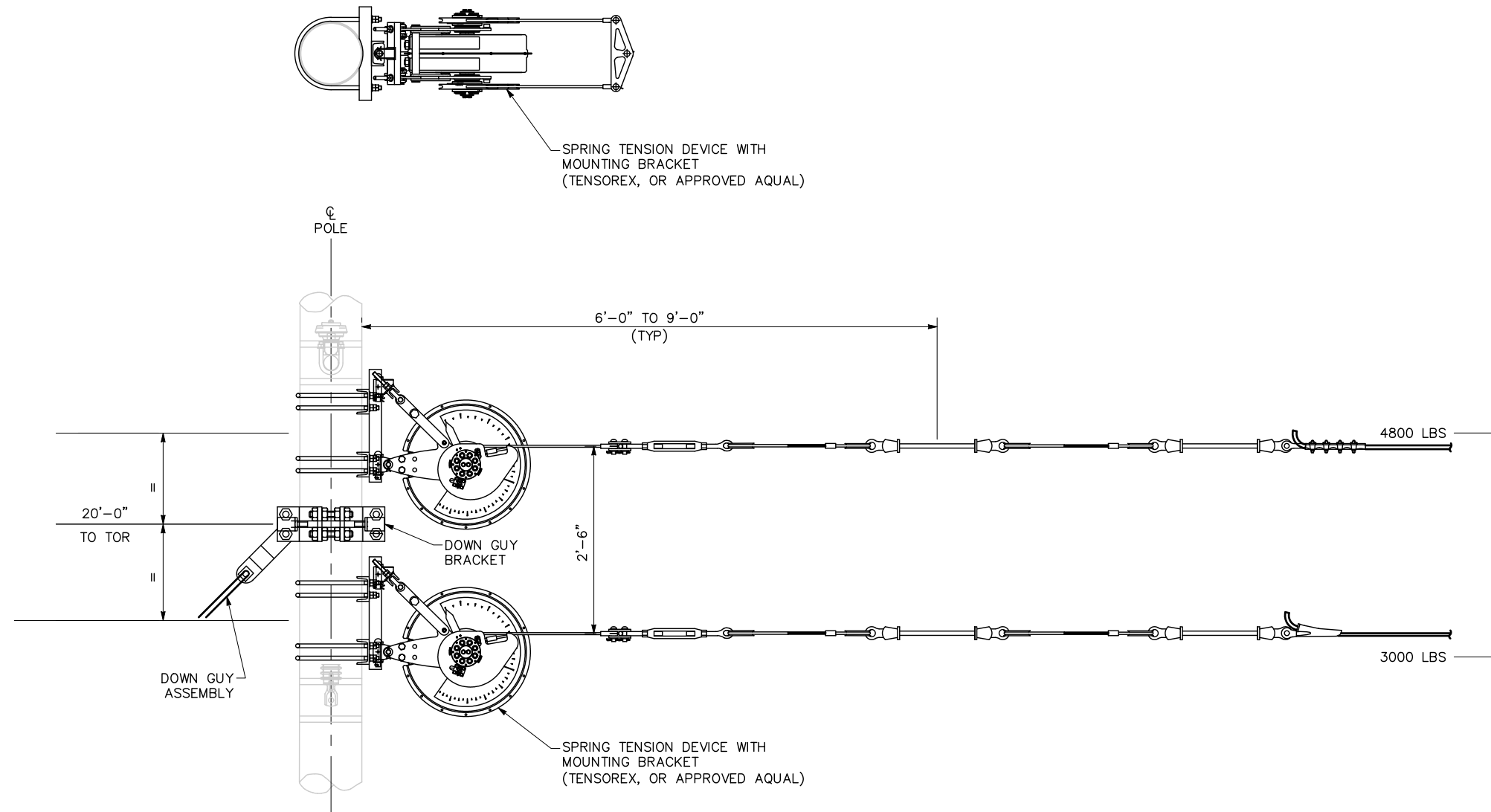
EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 OVERHEAD CONTACT SYSTEM  
 PARALLEL FEEDER TERMINATION ASSEMBLY PFT-01

SHEET OF PD233 REVISION A

PCA NO.: 000 CONTRACT NO.: C801 FILE LOCATION: PROJECTWISE

**NOTES:**

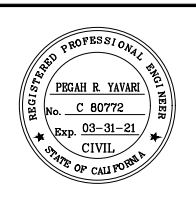
1. FOR ABBREVIATIONS, LEGEND, AND GENERAL NOTES SEE DWGS PG001, PG002, AND PG003.
2. FOR TERMINATION ASSEMBLY MAKE UP SEE DWG PD209.
3. FOR DOWN GUY ASSEMBLY DETAILS SEE DWG PD208.



**TEMPORARY SPRING TENSION ASSEMBLY**  
NTS

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CADD FILE DATE 5/15/2020	SCALE NTS
SUBMITTAL DATE 06/29/20	BOARD APPROVAL DATE

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT OVERHEAD CONTACT SYSTEM TEMPORARY SPRING TENSION ASSEMBLY			SHEET OF DRAWING NO. PD251 REVISION B
PCA NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE	

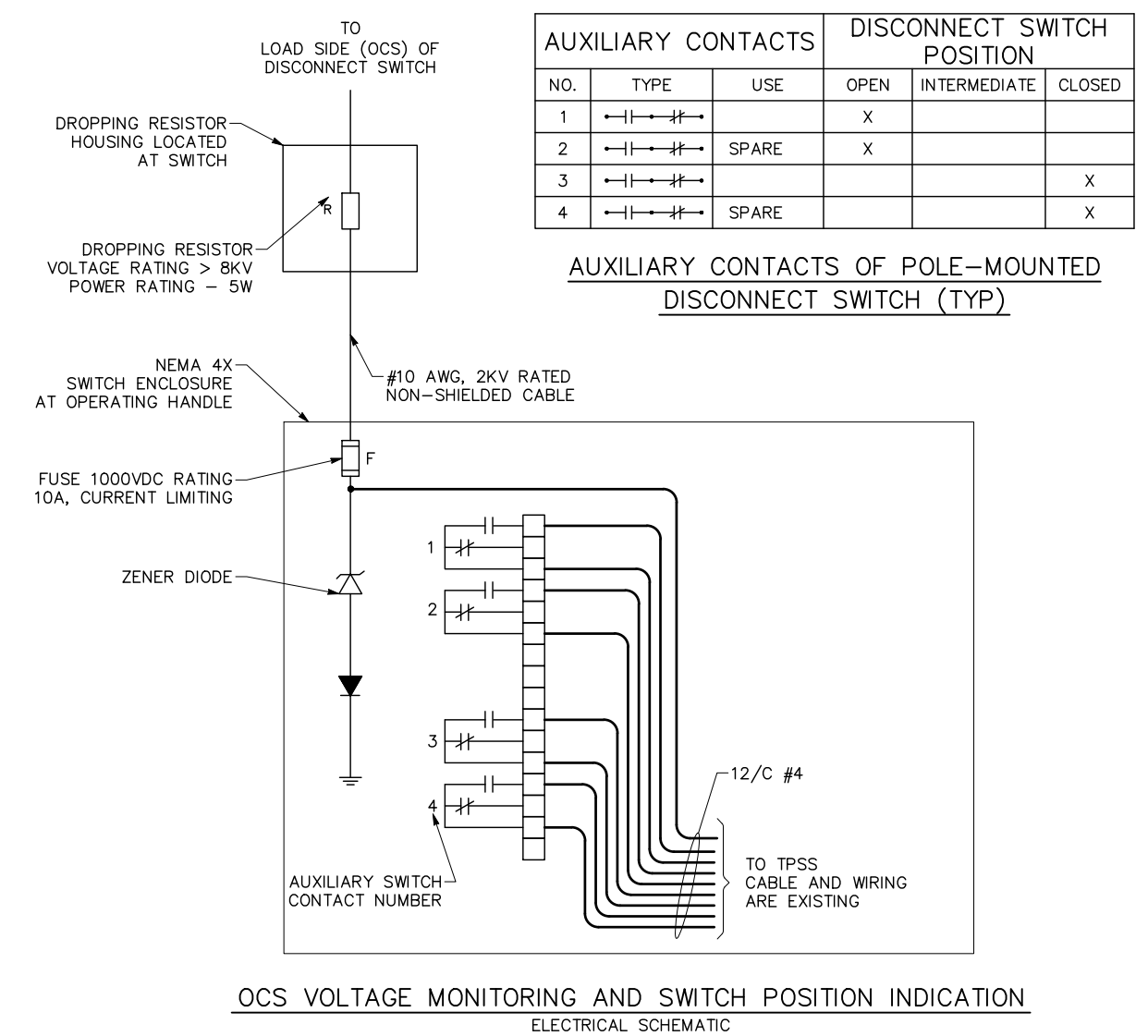
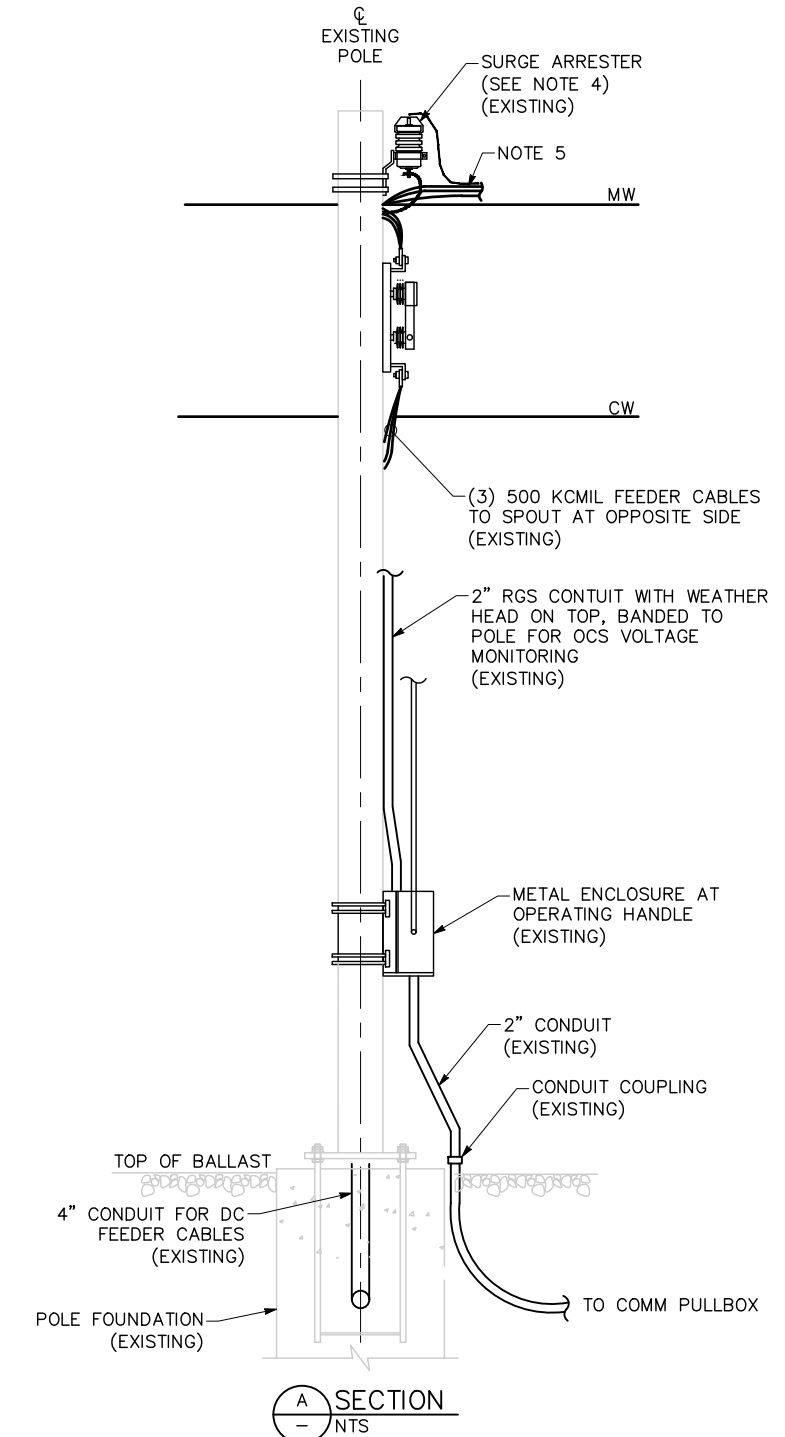
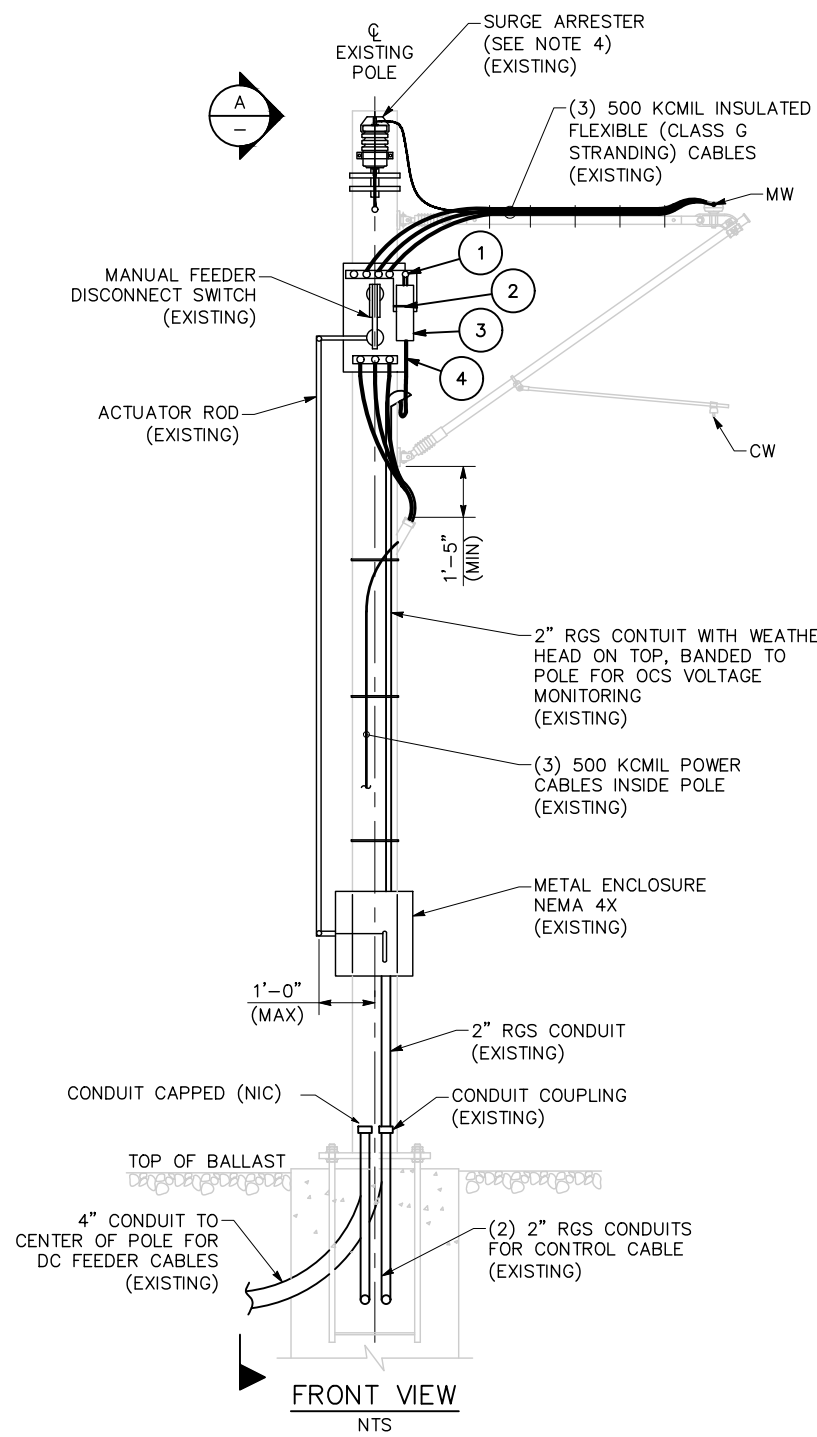


**NOTES ON EXISTING DROPPING RESISTOR:**

1. LUG STYLE CONNECTION FOR RESISTOR HOUSING.
2. U-BOLT CLAMP TO SECURE COPPER PIPE TO L-SHAPED EXTENSION BAR.
3. COPPER PIPE HOUSING DROPPING RESISTOR.
4. CONTROL CABLE 1-#10, 2 KV, NON-SHIELED, EPR INSULATION WITH CSPE JACKET

**NOTES:**

1. FOR ABBREVIATIONS, LEGEND, AND GENERAL NOTES SEE DWGS PG001, PG002, AND PG003.
2. FEEDER DISCONNECT SWITCHES ARE EXISTING ON OCS POLES 12.47C AND 12.48C. CONTRACTOR SHALL REMOVE THE EXISTING CABLE JUMPERS DURING THE STRUCTURAL AND CIVIL CONSTRUCTION. CABLES WILL BE RECONNECTED UPON COMPLETION OF OCS CONSTRUCTION.
3. FOR SURGE ARRESTER ASSEMBLY AND GROUNDING SEE DWGS PD221 AND PD229.
4. THE FEEDER POLE IS EXISTING ALONG WITH THE SURGE ARRESTER, WHICH SHALL BE CONNECTED TO THE UPPER TERMINAL OF THE DISCONNECT SWITCH.
5. FOR CONNECTION OF THE FEEDERS CABLES TO THE OCS WIRES, SEE DRAWINGS PD210 AND PD218. CONTRACTOR SHALL SUPPLY NEW FEEDER ASSEMBLIES CONNECTING THE DISCONNECT SWITCH TO THE OCS.



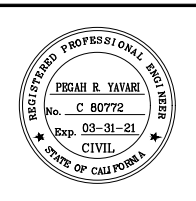
AUXILIARY CONTACTS		DISCONNECT SWITCH POSITION			
NO.	TYPE	USE	OPEN	INTERMEDIATE	CLOSED
1	NO-C		X		
2	NO-C	SPARE	X		
3	NO-C				X
4	NO-C	SPARE			X

**AUXILIARY CONTACTS OF POLE-MOUNTED DISCONNECT SWITCH (TYP)**

**OCS VOLTAGE MONITORING AND SWITCH POSITION INDICATION ELECTRICAL SCHEMATIC**

Jun 22, 2020 - 2:49pm \\newc0\mmech2\JOBS\68691\_via\_capitol\_expressway\it\_extension\TECHPROD\OCS\TECHPROD\CAD\PD\_801PD252.dwg

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B	06/20	95% SUBMITTAL SET
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DESIGNED: G. KOLA  
 CHECKED: P. YAVARI  
 DRAWN: D. KEO  
 CADD FILE NAME: 801PD252.dwg

**Santa Clara Valley Transportation Authority**

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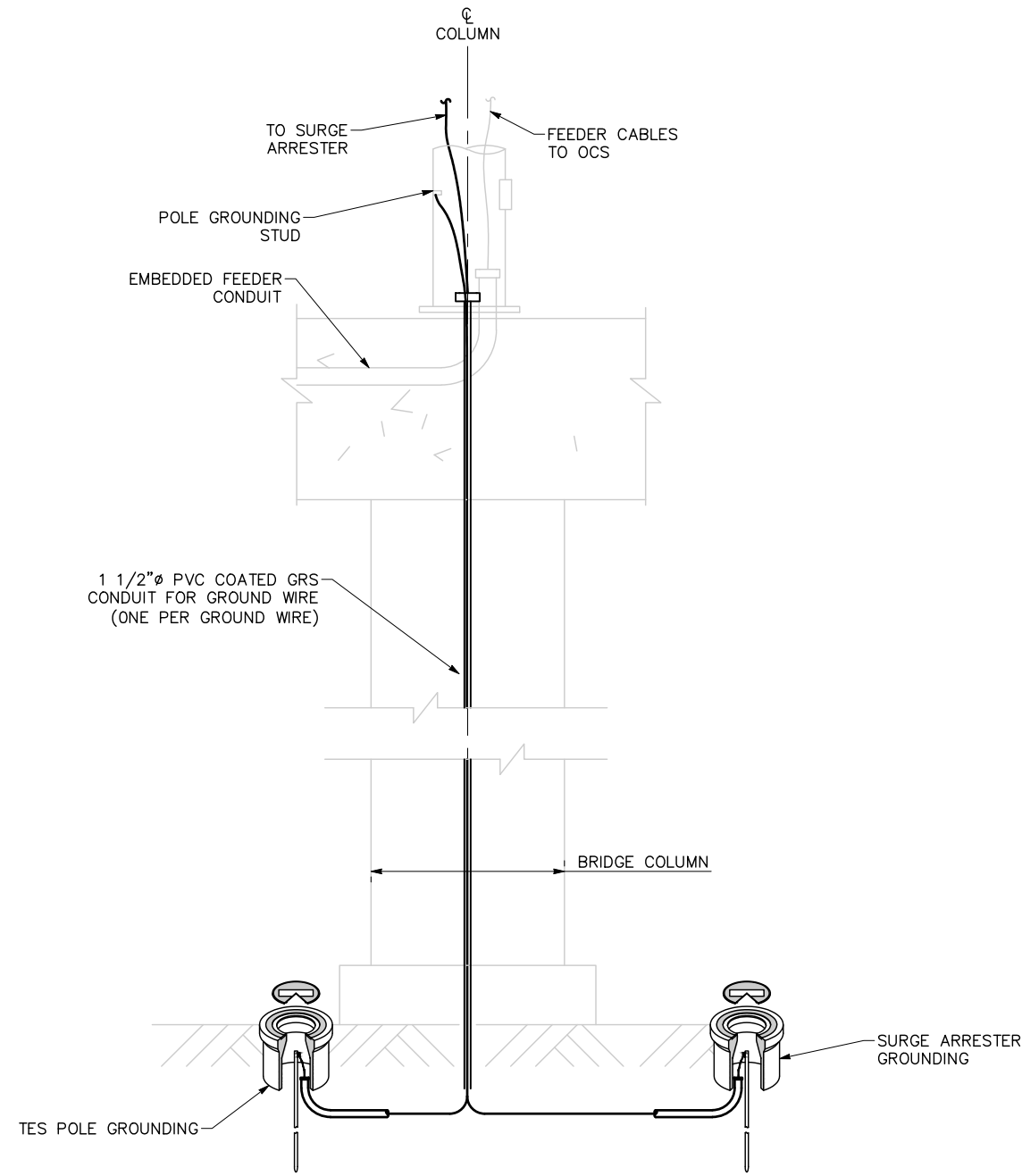
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 SCALE: NTS  
 SUBMITTAL DATE: 06/29/20  
 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 OVERHEAD CONTACT SYSTEM  
 EXISTING FEEDER DISC SWITCH  
 POLE 12.47C & 12.48C

SHEET OF PD252 REVISION B

PCA NO: 000 CONTRACT NO: C801 FILE LOCATION: PROJECTWISE

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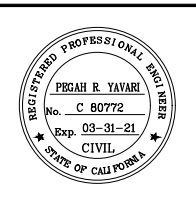


TYPICAL GROUNDING  
AT AERIAL GUIDEWAY  
NTS

**NOTES:**

1. FOR ABBREVIATIONS, LEGEND, AND GENERAL NOTES SEE DWG PG001, PG002, AND PG003.
2. FOR SURGE ARRESTER ASSEMBLY (SU-01) DETAILS SEE DWG PD221.
3. FOR TES POLE AND SURGE ARRESTER GROUND DETAILS SEE DWG PD228 AND PD229, RESPECTIVELY.
4. SURGE ARRESTER GROUND RESISTANCE TO BE LESS THAN 5 OHMS. POLE GROUND RESISTANCE TO BE LESS THAN 25 OHMS. ADDITIONAL GROUND RODS SHALL BE INSTALLED AS NEEDED TO OBTAIN THESE RESISTANCES (3 MAX)
5. GROUND RODS TO BE 2'-0" MIN AWAY FROM FOUNDATION AND 9'-0" MIN AWAY FROM EACH OTHER.
6. FOR SURGE ARRESTER LOCATIONS SEE OCS LAYOUT SCHEDULE.
7. SURGE ARRESTER GROUNDING IS INCLUDED IN THE SU-01 ASSEMBLY.
8. FOR ADDITIONAL DETAILS ON GROUNDING AT AERIAL GUIDEWAY REFER TO ELECTRICAL DRAWINGS ED412 AND ED413.

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A	03/19	65% SUBMITTAL SET



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 DRAWN: D. KEO CADD FILE NAME: 801PD253.dwg

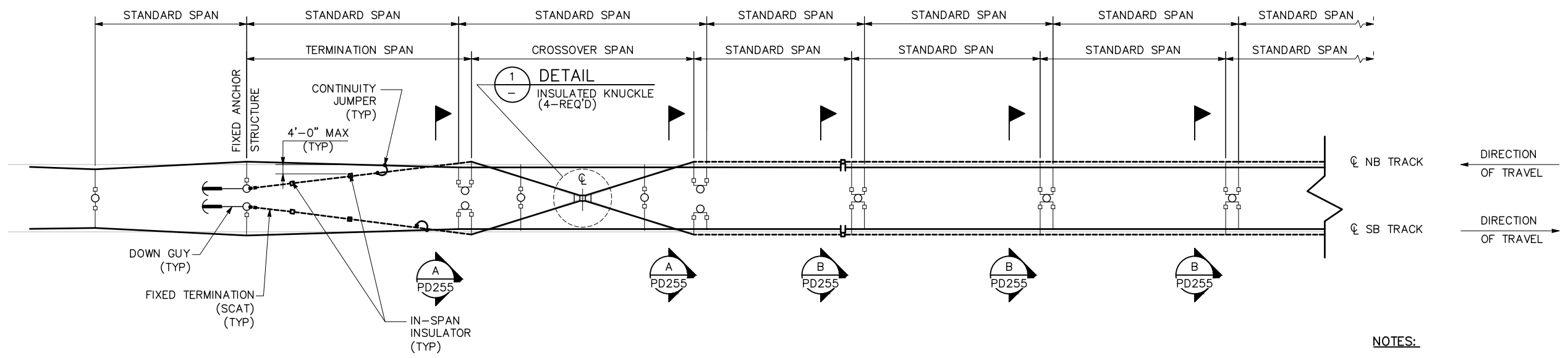
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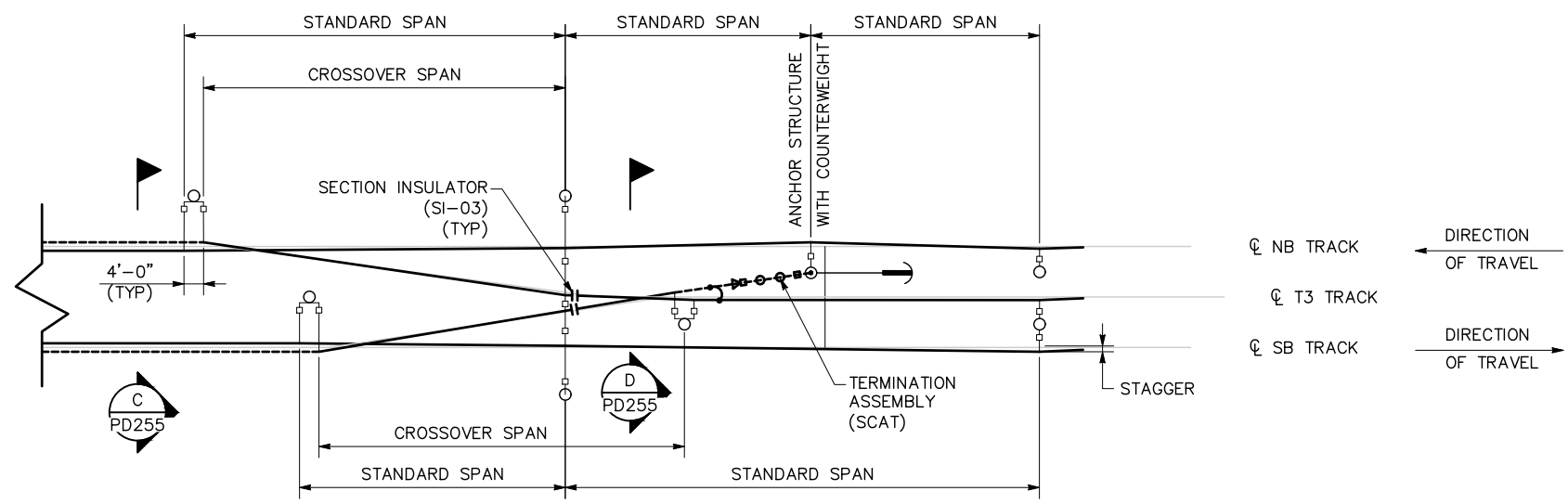
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 SUBMITTAL DATE: 06/29/20 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 OVERHEAD CONTACT SYSTEM  
 GROUNDING DETAILS  
 AT CAPITOL AERIAL GUIDEWAY

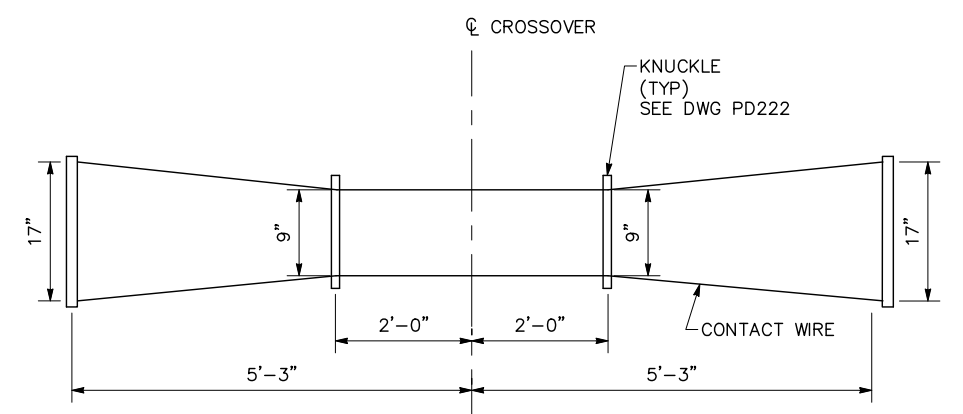
SHEET OF PD253 REVISION B  
 PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE



- NOTES:**
1. FOR ABBREVIATIONS, LEGEND, AND GENERAL NOTES SEE DWGS PG001, PG002, AND PG003
  2. FOR STAGGERS SEE OCS LAYOUT SCHEDULE DRAWINGS.
  3. FOR CANTILEVER ASSEMBLIES SEE DWGS PD203 THRU PD206.
  4. FOR CANTILEVER TYPE ALLOCATIONS SEE OCS LAYOUT SCHEDULE DRAWINGS.
  5. BOTTOM CANTILEVER POLE BRACKET IS NOMINALLY BELOW CONTACT WIRE HEIGHT. SEE CANTILEVER ASSEMBLIES FOR LONG REACH OFFSET DIMENSIONS.
  6. PARALLEL FEEDER CABLES AND ASSOCIATED ASSEMBLIES NOT SHOW FOR CLARITY.



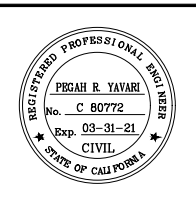
**PLAN**  
DOUBLE CROSSOVER ARRANGEMENT



**1** **DETAIL**  
MESSENGER WIRE SHALL HAVE SIMILAR ARRANGEMENT

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NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



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CADD FILE NAME: 801PD254.dwg

**Santa Clara Valley Transportation Authority**

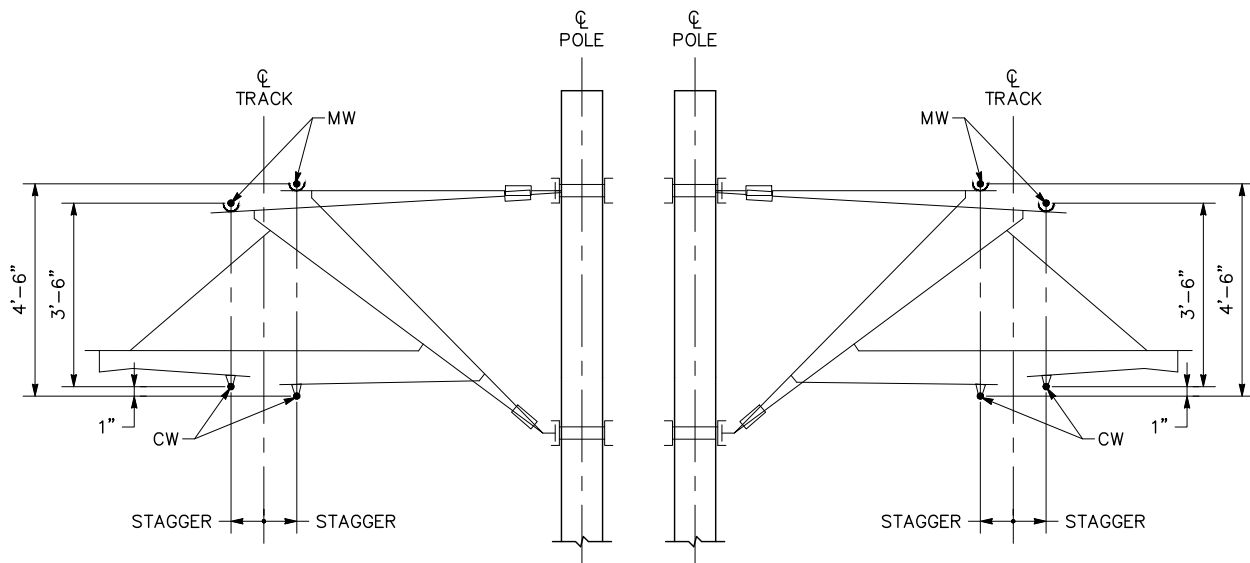
**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CAAD FILE DATE: 5/15/2020  
SCALE: NTS  
SUBMITTAL DATE: 06/29/20  
BOARD APPROVAL DATE:

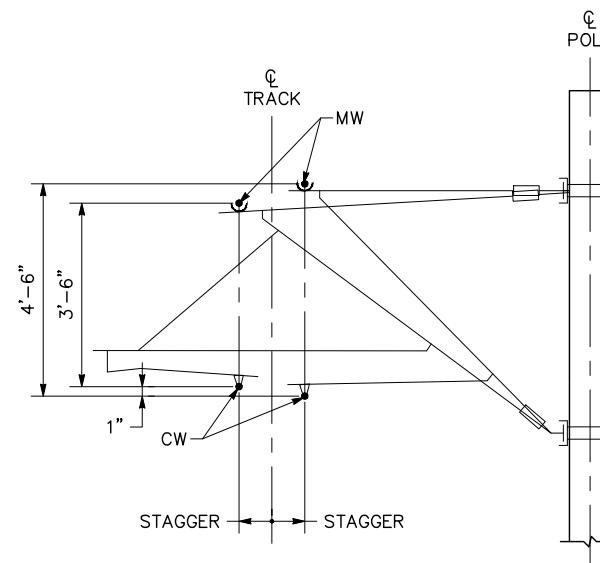
EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
OVERHEAD CONTACT SYSTEM  
CROSSOVER ARRANGEMENT  
SHEET 1 OF 2

PCA NO.: 000  
CONTRACT NO.: C801  
FILE LOCATION: PROJECTWISE

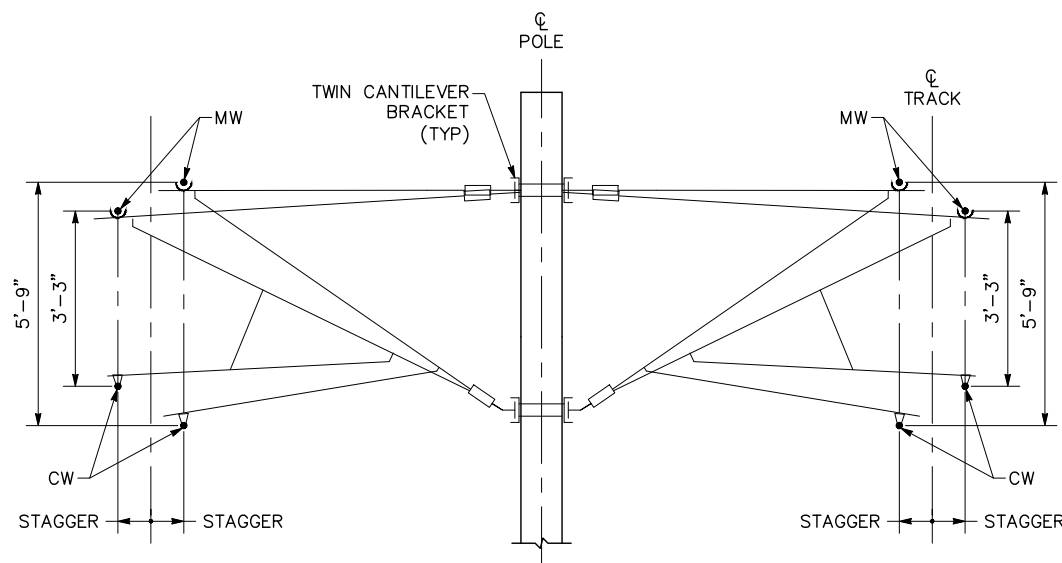
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REVISION: C



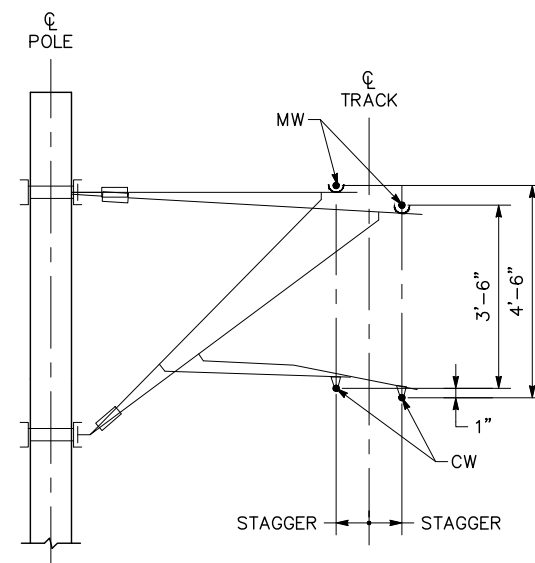
**A SECTION**  
PD254 (NOTE 2, 3 & 4)



**D SECTION**  
PD254 (NOTE 2, 3 & 4)



**B SECTION**  
PD254 (NOTE 2, 3 & 4)



**C SECTION**  
PD254 (NOTE 2, 3 & 4)

**NOTES:**

1. FOR ABBREVIATIONS, LEGEND, AND GENERAL NOTES SEE DWGS PG001, PG002, AND PG003
2. FOR STAGGERS SEE OCS LAYOUT SCHEDULES DRAWINGS.
3. FOR CANTILEVER ASSEMBLIES SEE DWGS PD203 THRU PD206.
4. FOR CANTILEVER TYPE ALLOCATIONS SEE OCS LAYOUT SCHEDULE DRAWINGS.
5. BOTTOM CANTILEVER POLE BRACKET IS NOMINALLY BELOW CONTACT WIRE HEIGHT. SEE CANTILEVER ASSEMBLIES FOR LONG REACH OFFSET DIMENSIONS.

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 CADD FILE NAME: 801PD255.dwg



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APPROVED: [Signature]  
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 SUBMITTAL DATE: 06/29/20  
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 BOARD APPROVAL DATE:

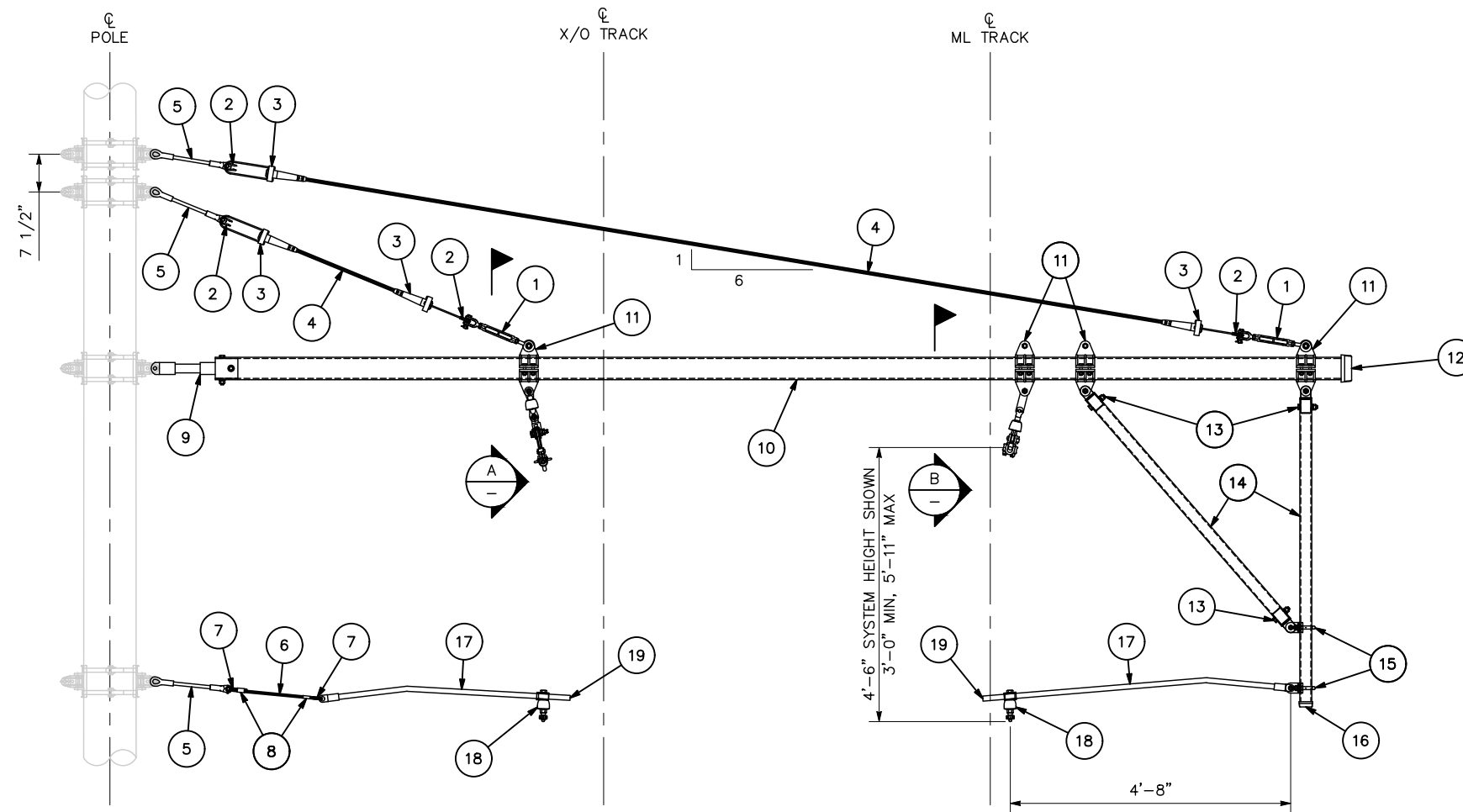
EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 OVERHEAD CONTACT SYSTEM  
 CROSSOVER ARRANGEMENT  
 SHEET 2 OF 2

PCA NO.: 000  
 CONTRACT NO.: C801  
 FILE LOCATION: PROJECTWISE

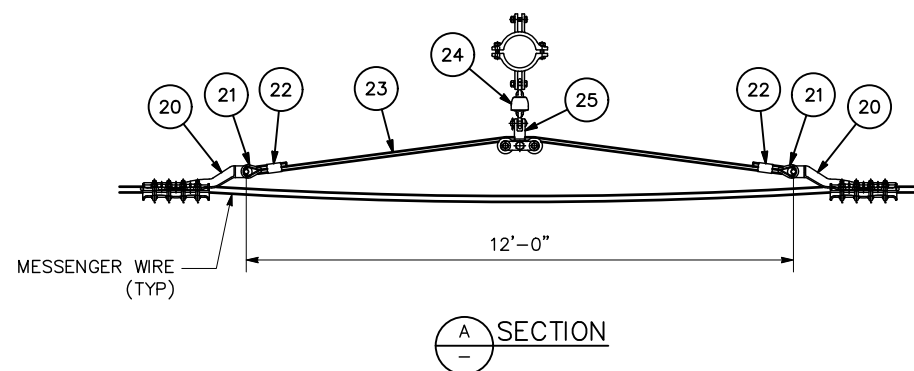
SHEET OF	PD255
DRAWING NO.	B
REVISION	

**NOTES:**

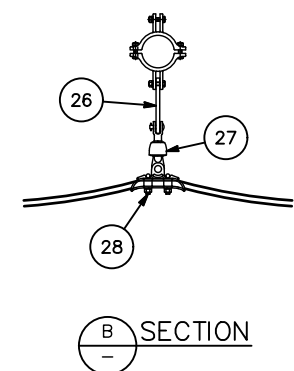
1. FOR ABBREVIATIONS, LEGEND, AND GENERAL NOTES SEE DWGS PG001, PG002, AND PG003.
2. CONTRACTOR SHALL ADJUST POLE BRACKET ATTACHMENT HEIGHTS TO MAINTAIN CONTACT WIRE HEIGHT OF 18'-0" OR AS SPECIFIED.
3. CONTRACTOR TO ENSURE THAT THE PANTOGRAPH CLEARANCE ENVELOPE AND PUC GO 95 REQUIREMENTS ARE MET AT ALL TIMES.



**AUTO-TENSIONED SIMPLE CATENARY  
TYPE CA-T1 (TWIN TRACK CANTILEVER)**



**SECTION A-A**

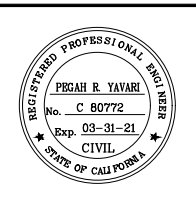


**SECTION B-B**

BILL OF MATERIAL		QUANTITY
ITEM	DESCRIPTION	CA-T1
1	TURNBUCKLE, EYE/CLEVIS ENDS	2
2	THIMBLE FOR STRANDVICE	4
3	STRANDVICE FOR 5/16" STEEL GUY STAND	4
4	5/16" GLAV STEEL GUY STRAND, E.H.S.	AS REQ'D
5	INSULATOR, 5/8", EYE/EYE	3
6	1/4" STAINLESS STEEL WIRE ROPE	AS REQ'D
7	THIMBLE FOR 1/4" SS WIRE ROPE	2
8	COMPRESSION SLEEVE FOR 1/4" SS WIRE ROPE	2
9	STRUT INSULATOR, 4" SCH 40	1
10	4" PIPE, SCHEDULE 40	AS REQ'D
11	PIPE CLAMP, 4"	4
12	PIPE CAP, 4"	1
13	PIPE EYE, 2", SCH 40	3
14	2" PIPE, SCHEDULE 40	AS REQ'D
15	CLEVIS CLAMP, 2"	2
16	PIPE CAP, 2"	1
17	HOT DIP GLAV 1" PIPE SCH 40 WITH 10° BEND (LENGTH AS REQ'D)	2
18	INSULATED CONTACT WIRE SWIVEL CLAMP FOR 1" PIPE	2
19	END CAP FOR 1" PIPE	2
20	CLAMP, STRAIN 500 KCML	2
21	THIMBLE FOR 1/2" SS WIRE ROPE	2
22	COMPRESSION SLEEVE FOR 1/2" SS WIRE ROPE	2
23	1/2" STAINLESS STEEL WIRE ROPE	AS REQ'D
24	STRAIN INSULATOR EYE/EYE	1
25	PULLEY, SUSPENSION 2 ROLLER	1
26	STRAP, 1 1/2"x1/2"x4"	1
27	STRAIN INSULATOR CLEVIS/EYE	1
28	CLAMP SUSPENSION	1

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NO.	DATE	REVISIONS
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 DRAWN: G. KOLA  
 CADD FILE NAME: 801PD256.dwg

**Santa Clara Valley  
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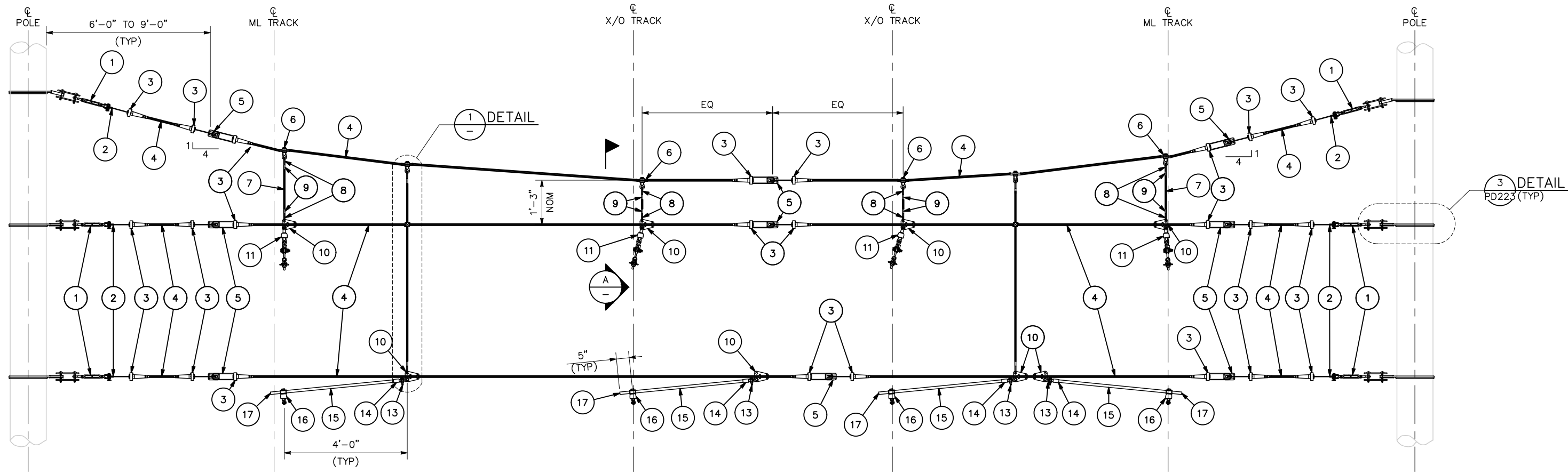
**BKF** 100+ YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 5/15/2020  
 SCALE: NTS  
 SUBMITTAL DATE: 06/29/20  
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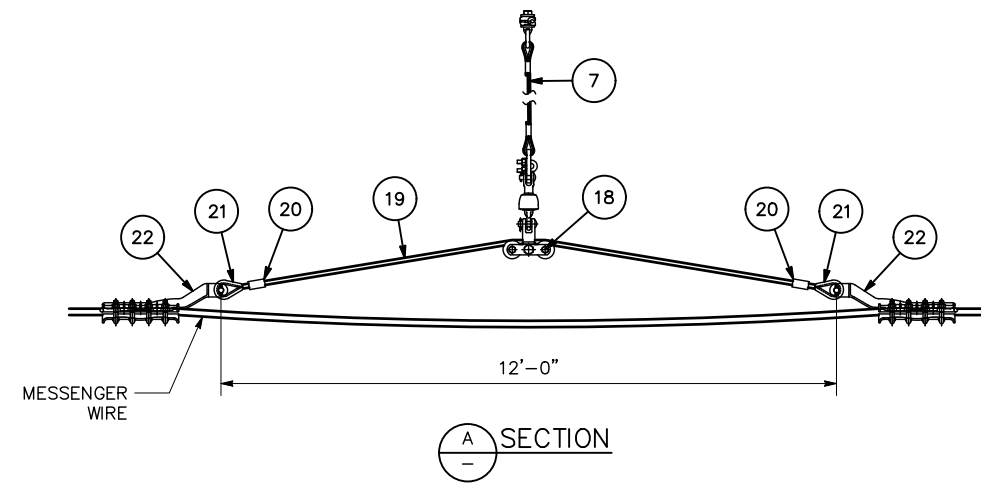
EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 OVERHEAD CONTACT SYSTEM  
 CANTILEVER ARM ASSEMBLY  
 CA-T1

SHEET OF PD256 REVISION B

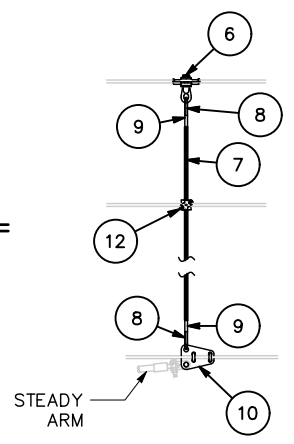
PCA NO.: 000 CONTRACT NO.: C801 FILE LOCATION: PROJECTWISE



HEADSPAN ASSEMBLY - HD-01



ALTERNATIVE CW CONNECTION  
(SEE NOTE 6)



ALTERNATIVE CONNECTION  
FOR DETAIL 1

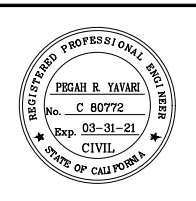
NOTES:

- FOR ABBREVIATIONS, LEGEND, AND GENERAL NOTES SEE DWGS PG001, PG002, AND PG003.
- CONTRACTOR SHALL ADJUST POLE BRACKET ATTACHMENT HEIGHTS TO MAINTAIN CONTACT WIRE HEIGHT OF 18'-0" OR AS SPECIFIED.
- CONTRACTOR TO ENSURE THAT THE PANTOGRAPH CLEARANCE ENVELOPE AND PUC GO 95 REQUIREMENTS ARE MET AT ALL TIMES.
- ADD DETAIL 1 TO HEADSPAN ASSEMBLY AS NEED TO MAINTAIN CONTACT WIRE HEIGHT OF 18'-0".
- FOR SYSTEM HEIGHTS SEE OCS LAYOUT SCHEDULE.
- TO ENSURE PANTOGRAPH CLEARANCE CONTACT WIRE REGISTRATION MAY REQUIRE (2) ITEM 16.

BILL OF MATERIAL		QUANTITY
ITEM	DESCRIPTION	HD-01
1	TURNBUCKLE, EYE/CLEVIS ENDS	6
2	THIMBLE FOR STRANDVICE	6
3	STRANDVICE FOR 5/16" STEEL GUY STAND	24
4	5/16" GALV STEEL GUY STRAND, E.H.S.	AS REQ'D
5	TYPE -JB STRAIN INSULATOR	9
6	SPAN WIRE SUPPORT, SINGLE EYE	6
7	1/4" STAINLESS STEEL WIRE ROPE	AS REQ'D
8	THIMBLE FOR 1/4" SS WIRE ROPE	12
9	COMPRESSION SLEEVE FOR 1/4" SS WIRE ROPE	12
10	CLAMP STRAIN	8
11	INSULATOR, STRAIN, CLEVIS/EYE	4
12	CROSS-CONNECTOR	2
13	CONNECTOR, CLEVIS/CLEVIS, 90°	4
14	EYE END FITTING FOR 1" PIPE	4
15	HOT DIP GALV 1" PIPE SCH 40 (LENGTH AS REQ'D)	4
16	INSULATED CONTACT WIRE SWIVEL CLAMP FOR 1" PIPE	4
17	END CAP FOR 1" PIPE	4
18	PULLEY, SUSPENSION 2 ROLLER	4
19	1/2" STAINLESS STEEL WIRE ROPE	AS REQ'D
20	COMPRESSION SLEEVE FOR 1/2" SS WIRE ROPE	8
21	THIMBLE FOR 1/2" SS WIRE ROPE	8
22	CLAMP, STRAIN 500 KCML	8

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 CADD FILE NAME: 801PD257.dwg

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EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 OVERHEAD CONTACT SYSTEM  
 HEADSPAN ASSEMBLY  
 HD-01

SHEET OF PD257 REVISION B

PCA NO: 000 CONTRACT NO: C801 FILE LOCATION: PROJECTWISE

**NOTES:**

1. FOR ABBREVIATIONS, LEGEND AND GENERAL NOTES SEE DWGS PG001, PG002, AND PG003.
2. DISCONNECT SWITCH AND OPERATING GEAR SEPARATELY CALLED OFF, FOR DISCONNECT SWITCH ARRANGEMENT SEE DWG PD220.
3. JUMPER TAILS ON CONTACT WIRE SHALL POINT IN THE DIRECTION OF TRAVEL.
4. SECURE ENDS OF JUMPER CABLE TO PREVENT FRAYING. WRAP WIRE ENDS WITH NO. 19 SOFT SOLID COPPER WIRE, 6 TURNS & TWIST END.

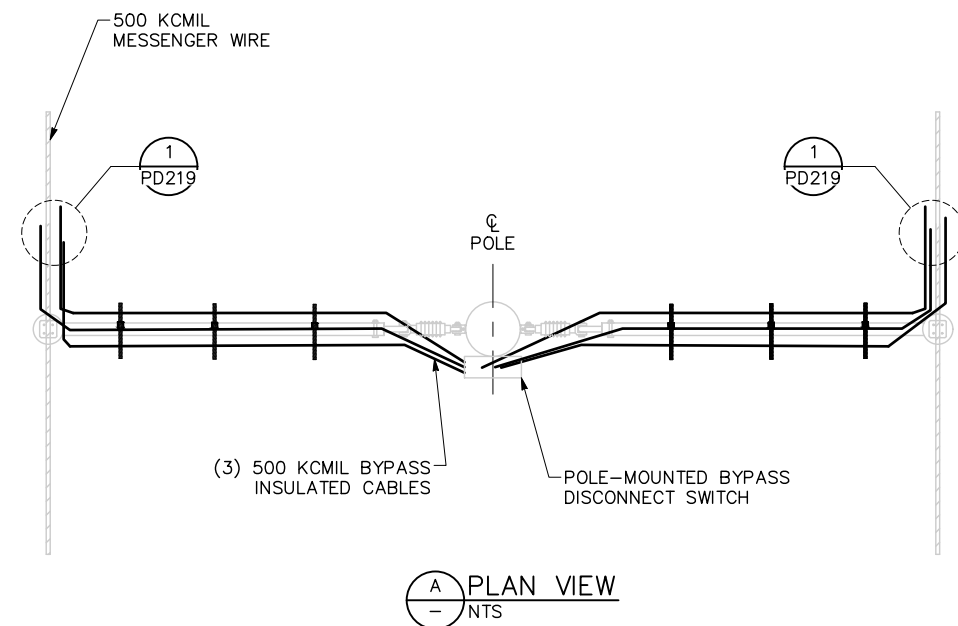
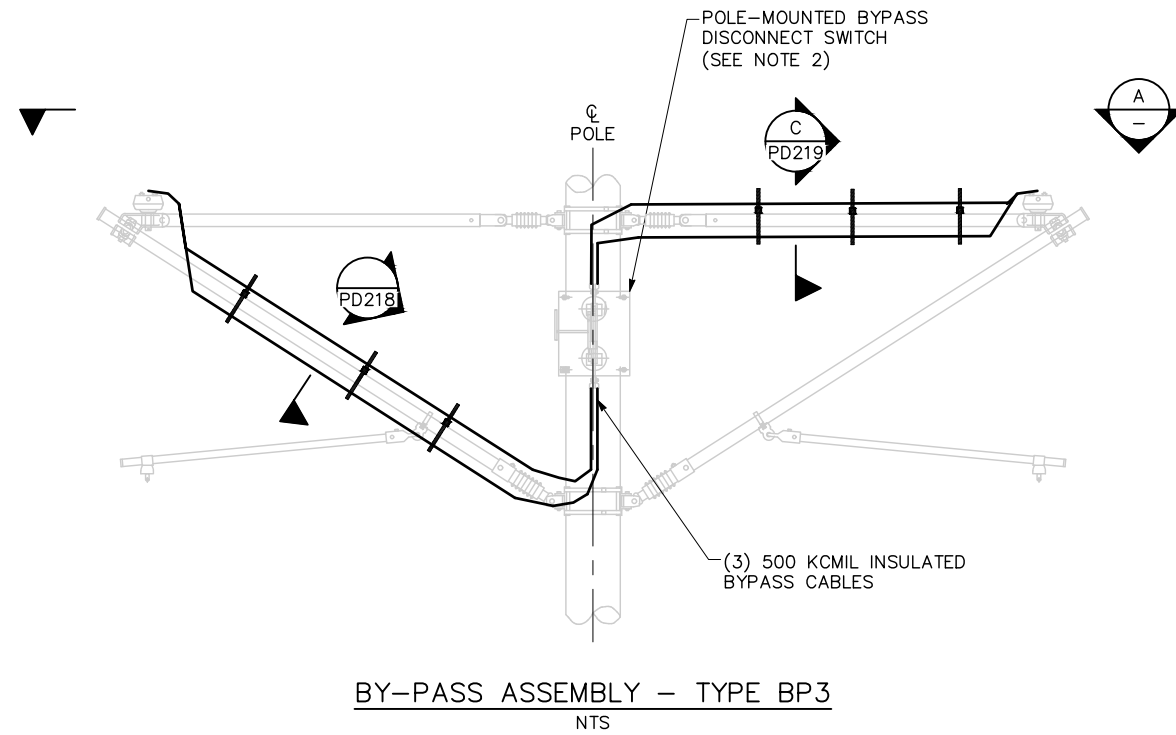
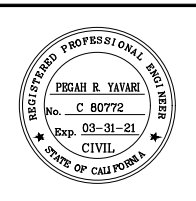


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DRAWN: G. KOLA  
CADD FILE NAME: 801PD258.dwg

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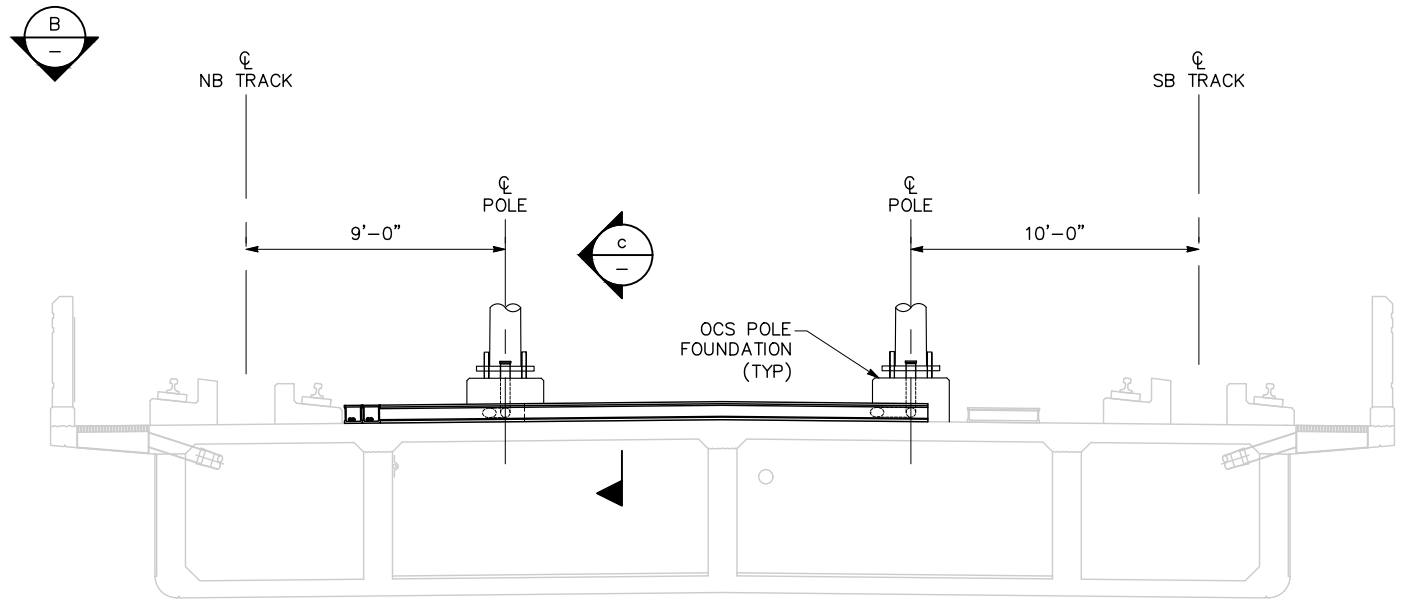
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CADD FILE DATE: 5/15/2020  
SCALE: NTS  
SUBMITTAL DATE: 06/29/20  
BOARD APPROVAL DATE:

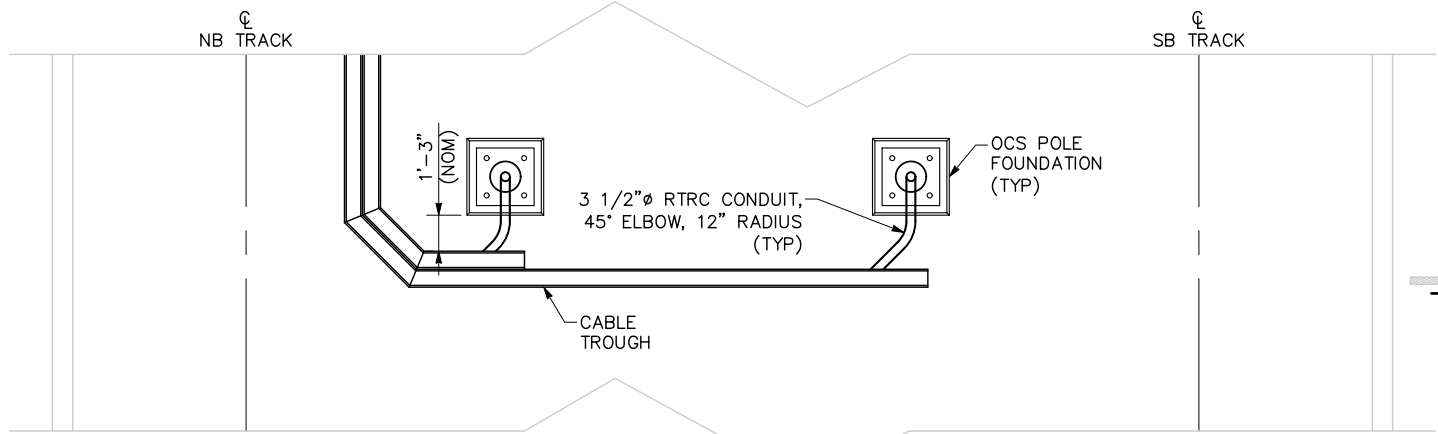
EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
OVERHEAD CONTACT SYSTEM  
BY-PASS JUMPER ASSEMBLIES  
TYPE BP3

PCA NO.: 000  
CONTRACT NO.: C801  
FILE LOCATION: PROJECTWISE

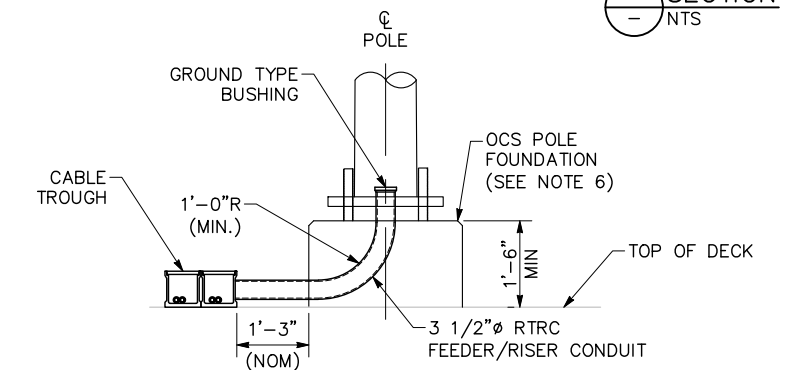
SHEET OF: PD258  
REVISION: A



**A SECTION**  
PC004 LOOKING UPSTATION

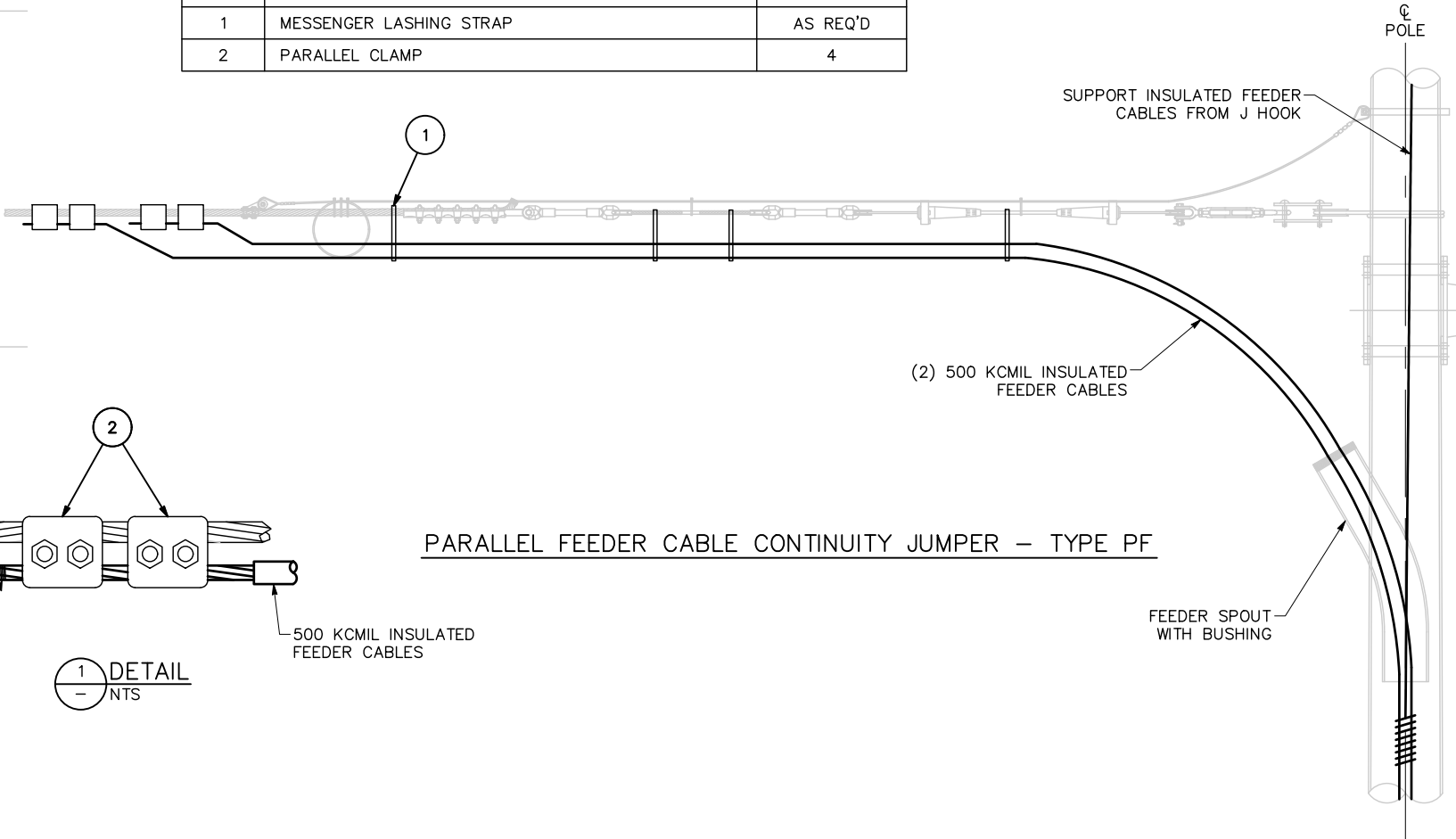


**B SECTION**  
NTS



**C SECTION**  
NTS

BILL OF MATERIAL		QUANTITY
ITEM	DESCRIPTION	TYPE PF
1	MESSENGER LASHING STRAP	AS REQ'D
2	PARALLEL CLAMP	4



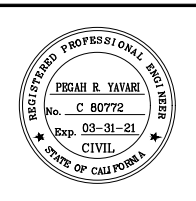
**1 DETAIL**  
NTS

PARALLEL FEEDER CABLE CONTINUITY JUMPER - TYPE PF

- NOTES:**
- FOR ABBREVIATIONS, LEGEND AND GENERAL NOTES SEE DWGS PG001, PG002 AND PG003.
  - FOR TES POLE TYPES, FEEDER TERMINATION HEIGHTS, AND ASSEMBLY ALLOCATION REFER TO OCS LAYOUT SCHEDULE DRAWINGS.
  - ALL TAIL WIRES SHALL BE SECURED TO PREVENT FRAYING WITH NO. 19 SOFT COPPER SOLID WIRE, 6 TURNS AND TWISTED END.
  - STEEL TIES SHALL NOT BE INSTALLED ON INSULATORS.
  - CABLE TROUGH TO BE SUCH THAT NORTHBOUND AND SOUTHBOUND FEEDER CABLES ARE ISOLATED FROM EACH OTHER.
  - FOR OCS FOUNDATION TYPE AND DETAILS SEE DWG PD301.

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DRAWN: G. KOLA  
CADD FILE NAME: 801PD259.dwg

**Santa Clara Valley Transportation Authority**

**BKF 100+ YEARS**  
ENGINEERS / SURVEYORS / PLANNERS

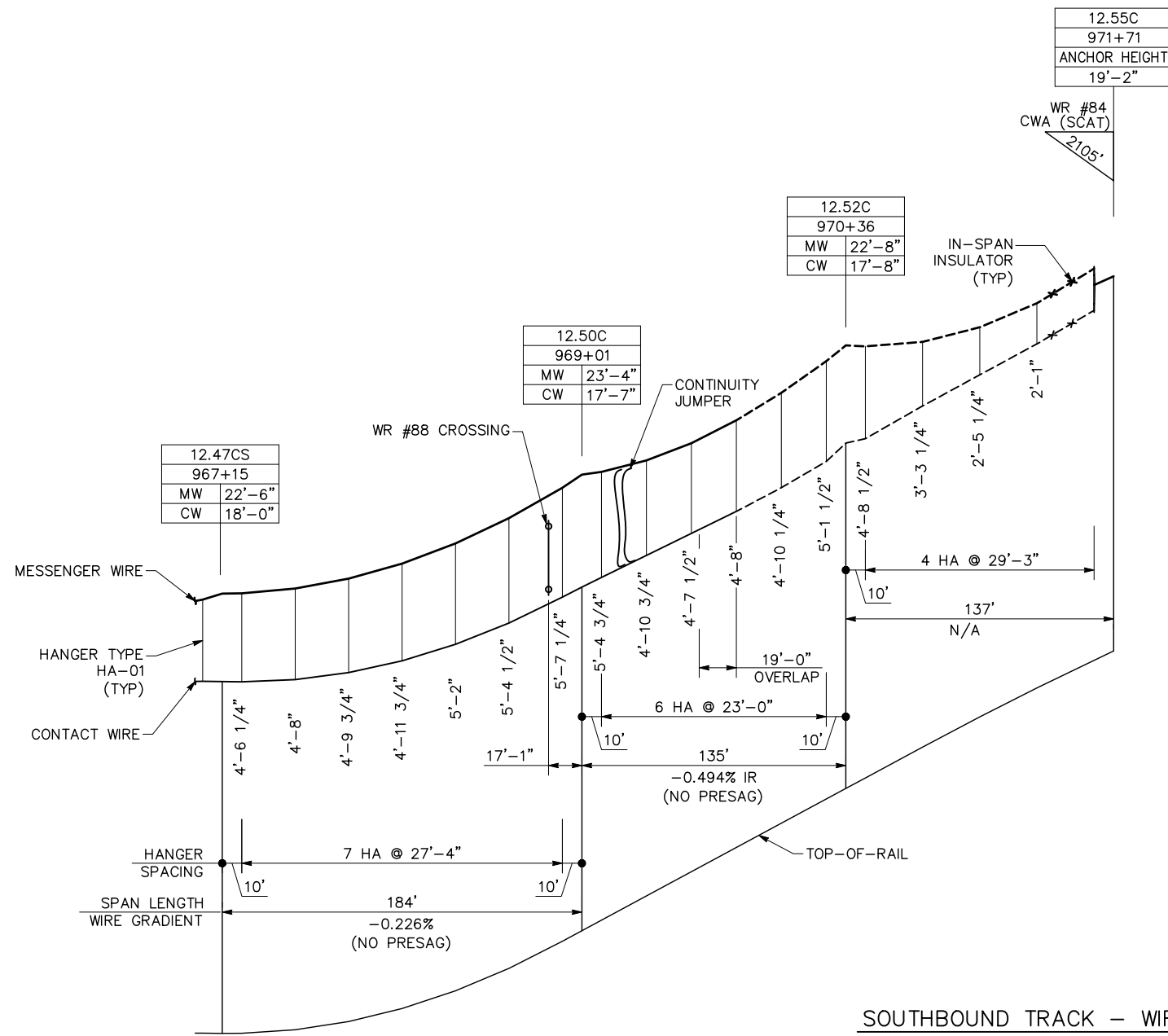
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CADD FILE DATE: 5/15/2020  
SCALE: NTS  
SUBMITTAL DATE: 06/29/20  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
OVERHEAD CONTACT SYSTEM  
PARALLEL FEEDER ARRANGEMENT  
AT STORY STATION

PCA NO.: 000  
CONTRACT NO.: C801  
FILE LOCATION: PROJECTWISE

SHEET OF: PD259  
REVISION: A





SOUTHBOUND TRACK – WIRE RUN NO. 84  
CATENARY PROFILE

- NOTES:**
- SPAN LENGTHS ARE INDICATIVE OF ACTUAL WIRE LENGTHS AND NOT THE DIFFERENCE IN STATIONING.
  - SEE OCS LAYOUT SCHEDULE FOR ASSEMBLY ALLOCATIONS.
  - EACH IN-RUNNING CATENARY SPAN WAS DESIGNED WITH A PRESAG EQUAL TO L/1000, UNLESS OTHERWISE NOTED.
  - NORMAL CONDUCTOR PROPERTIES ARE AS FOLLOWS:
- | ITEM           | WEIGHT               | TENSION  |
|----------------|----------------------|----------|
| CONTACT WIRE   | 1.063 LBS/FT         | 3000 LBS |
| MESSENGER WIRE | 1.544 LBS/FT         | 4800 LBS |
| HANGER         | 0.045 LBS/FT OF SPAN |          |

- LEGEND:**
- IN-RUNNING CATENARY
  - OUT-OF-RUNNING CATENARY

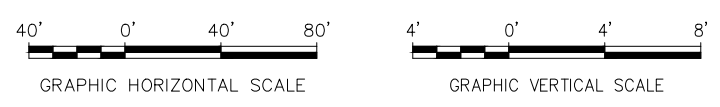
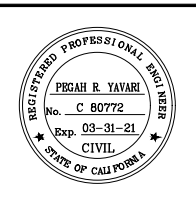


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NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



**HNTB** HNTB Corporation  
Engineers Architects Planners  
1732 North First Street, Suite 400  
San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942

DESIGNED: C. WERNER CHECKED: P. YAVARI  
DRAWN: C. WERNER CADD FILE NAME: 801PD261.dwg

**Santa Clara Valley Transportation Authority**

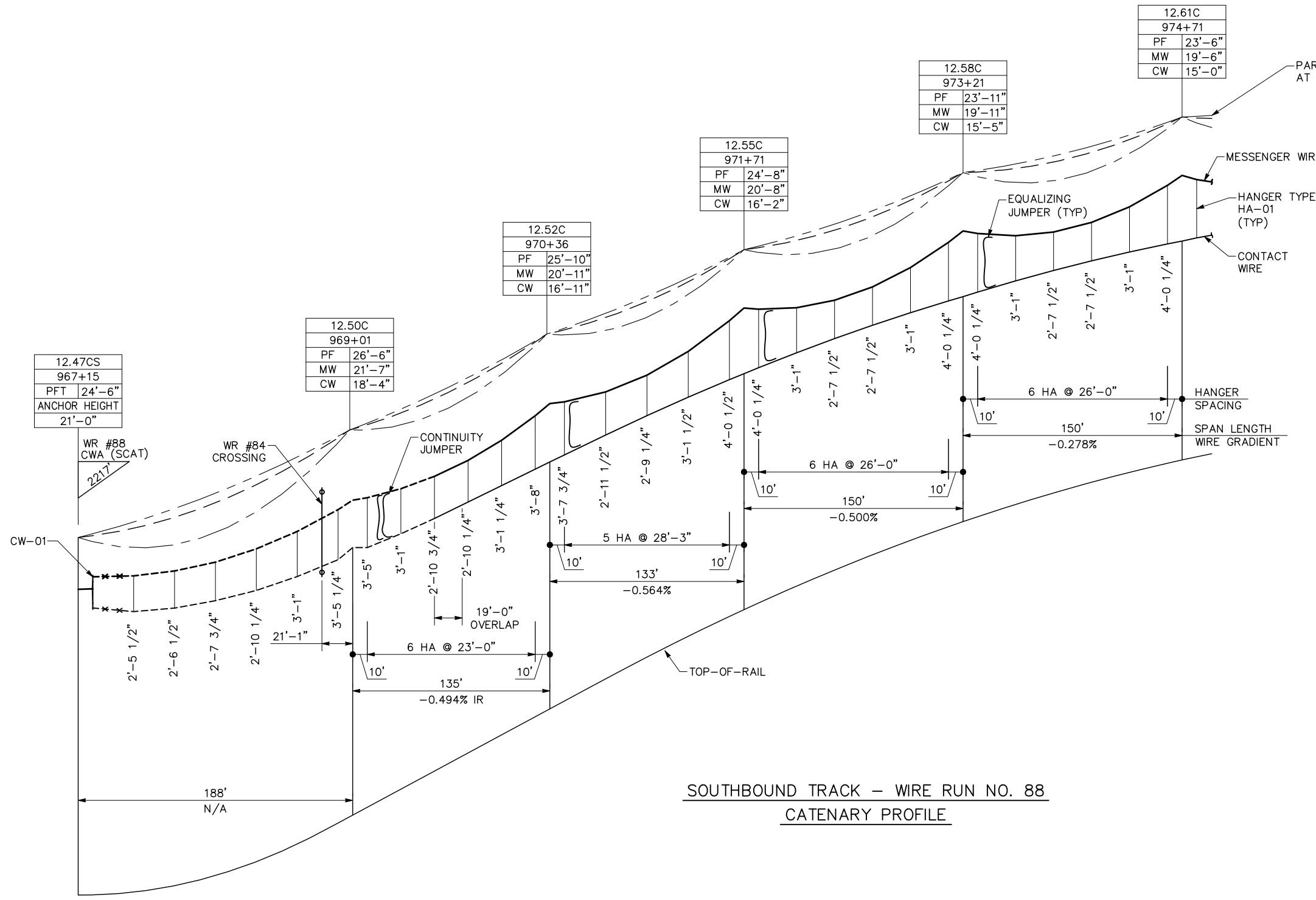
**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CAAD FILE DATE: 5/15/2020 SCALE: AS NOTED  
SUBMITTAL DATE: 06/29/20 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
OVERHEAD CONTACT SYSTEM  
OCS PROFILE  
WIRE RUN NO. 84

PCA NO.: 000 CONTRACT NO.: C801 FILE LOCATION: PROJECTWISE

SHEET OF DRAWING NO. PD261 REVISION B



**SOUTHBOUND TRACK – WIRE RUN NO. 88  
CATENARY PROFILE**

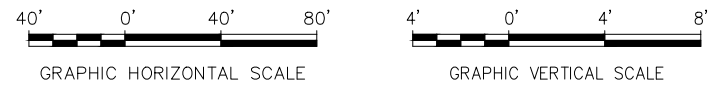
**NOTES:**

- SPAN LENGTHS ARE INDICATIVE OF ACTUAL WIRE LENGTHS AND NOT NECESSARILY THE DIFFERENCE IN STATIONING.
- SEE OCS LAYOUT SCHEDULE FOR ASSEMBLY ALLOCATIONS.
- EACH IN-RUNNING CATENARY SPAN WAS DESIGNED WITH A PRESAG EQUAL TO L/1000, UNLESS OTHERWISE NOTED.
- NORMAL CONDUCTOR PROPERTIES ARE AS FOLLOWS:

ITEM	WEIGHT	TENSION
CONTACT WIRE	1.063 LBS/FT	3000 LBS
MESSENGER WIRE	1.544 LBS/FT	4800 LBS
HANGER	0.045 LBS/FT OF SPAN	

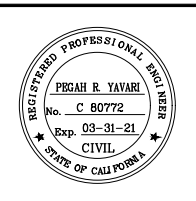
**LEGEND:**

- IN-RUNNING CATENARY
- OUT-OF-RUNNING CATENARY
- -- PARALLEL FEEDER CABLE AT 20F
- -- PARALLEL FEEDER CABLE AT 60F
- -- PARALLEL FEEDER CABLE AT 130F



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NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



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Fax (408) 451-6942

DESIGNED: C. WERNER  
CHECKED: P. YAVARI  
DRAWN: C. WERNER  
CADD FILE NAME: 801PD262.dwg

**Santa Clara Valley  
Transportation  
Authority**

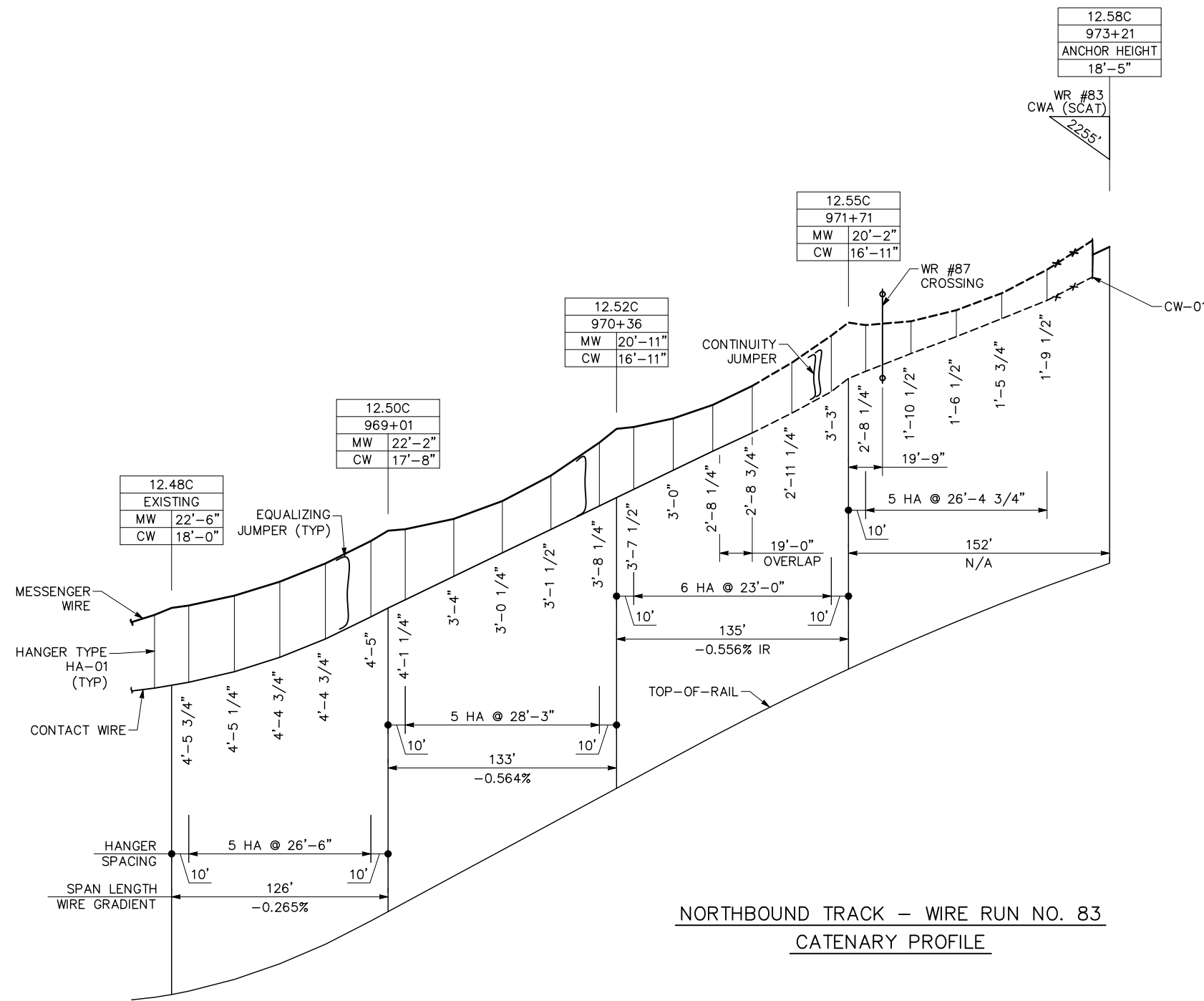
**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CAAD FILE DATE: 5/15/2020  
SCALE: AS NOTED  
SUBMITTAL DATE: 06/29/20  
BOARD APPROVAL DATE:

**EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
OVERHEAD CONTACT SYSTEM  
OCS PROFILE  
WIRE RUN NO. 88**

PCA NO.: 000  
CONTRACT NO.: C801  
FILE LOCATION: PROJECTWISE

SHEET OF: PD262  
REVISION: B



**NORTHBOUND TRACK - WIRE RUN NO. 83  
CATENARY PROFILE**

**NOTES:**

- SPAN LENGTHS ARE INDICATIVE OF ACTUAL WIRE LENGTHS AND NOT THE DIFFERENCE IN STATIONING.
- SEE OCS LAYOUT SCHEDULE FOR ASSEMBLY ALLOCATIONS.
- EACH IN-RUNNING CATENARY SPAN WAS DESIGNED WITH A PRESAG EQUAL TO L/1000, UNLESS OTHERWISE NOTED.
- NORMAL CONDUCTOR PROPERTIES ARE AS FOLLOWS:

ITEM	WEIGHT	TENSION
CONTACT WIRE	1.063 LBS/FT	3000 LBS
MESSENGER WIRE	1.544 LBS/FT	4800 LBS
HANGER	0.045 LBS/FT OF SPAN	

**LEGEND:**

- IN-RUNNING CATENARY
- OUT-OF-RUNNING CATENARY

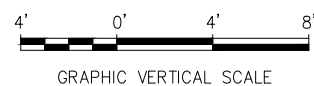
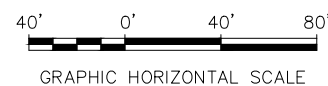
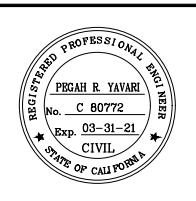


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NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



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DESIGNED: C. WERNER  
CHECKED: P. YAVARI  
DRAWN: C. WERNER  
CADD FILE NAME: 801PD263.dwg

**Santa Clara Valley  
Transportation  
Authority**

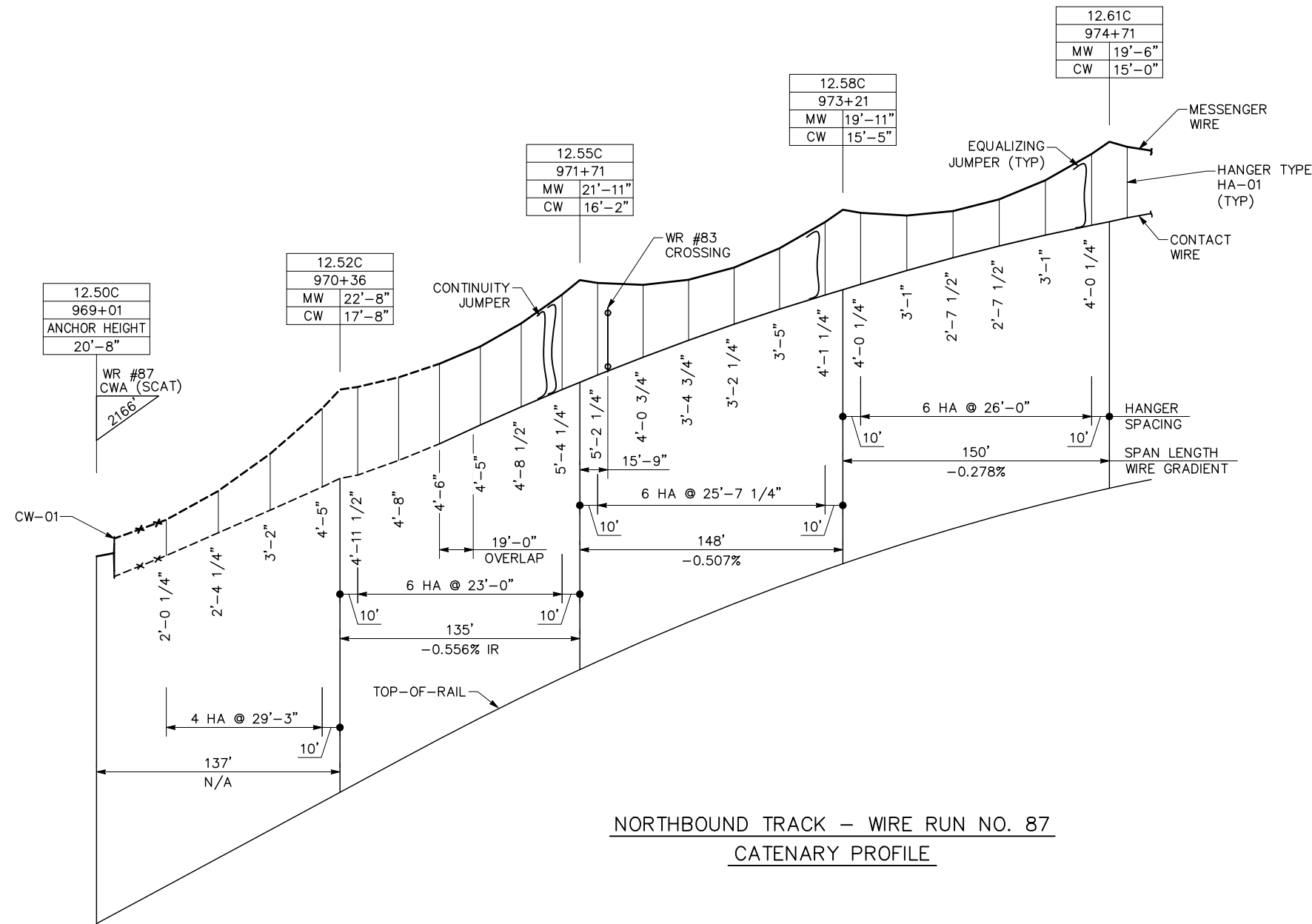
**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 5/15/2020  
SCALE: AS NOTED  
SUBMITTAL DATE: 06/29/20  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
OVERHEAD CONTACT SYSTEM  
OCS PROFILE  
WIRE RUN NO. 83

PCA NO.: 000  
CONTRACT NO.: C801  
FILE LOCATION: PROJECTWISE

SHEET OF: PD263  
REVISION: B



NORTHBOUND TRACK – WIRE RUN NO. 87  
CATENARY PROFILE

NOTES:

- SPAN LENGTHS ARE INDICATIVE OF ACTUAL WIRE LENGTHS AND NOT THE DIFFERENCE IN STATIONING.
- SEE OCS LAYOUT SCHEDULE FOR ASSEMBLY ALLOCATIONS.
- EACH IN-RUNNING CATENARY SPAN WAS DESIGNED WITH A PRESAG EQUAL TO L/1000, UNLESS OTHERWISE NOTED.
- NORMAL CONDUCTOR PROPERTIES ARE AS FOLLOWS:

ITEM	WEIGHT	TENSION
CONTACT WIRE	1.063 LBS/FT	3000 LBS
MESSENGER WIRE	1.544 LBS/FT	4800 LBS
HANGER	0.045 LBS/FT OF SPAN	

LEGEND:

- IN-RUNNING CATENARY
- OUT-OF-RUNNING CATENARY

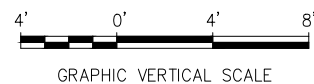
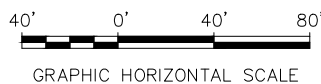
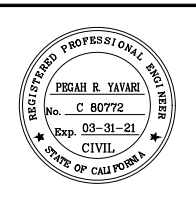


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NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



SUBMITTED

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1732 North First Street, Suite 400  
San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942

DESIGNED: C. WERNER CHECKED: P. YAVARI  
DRAWN: C. WERNER CADD FILE NAME: 801PD264.dwg

**Santa Clara Valley Transportation Authority**

APPROVED

**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 5/15/2020 SCALE: AS NOTED  
SUBMITTAL DATE: 06/29/20 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
OVERHEAD CONTACT SYSTEM  
OCS PROFILE  
WIRE RUN NO. 87

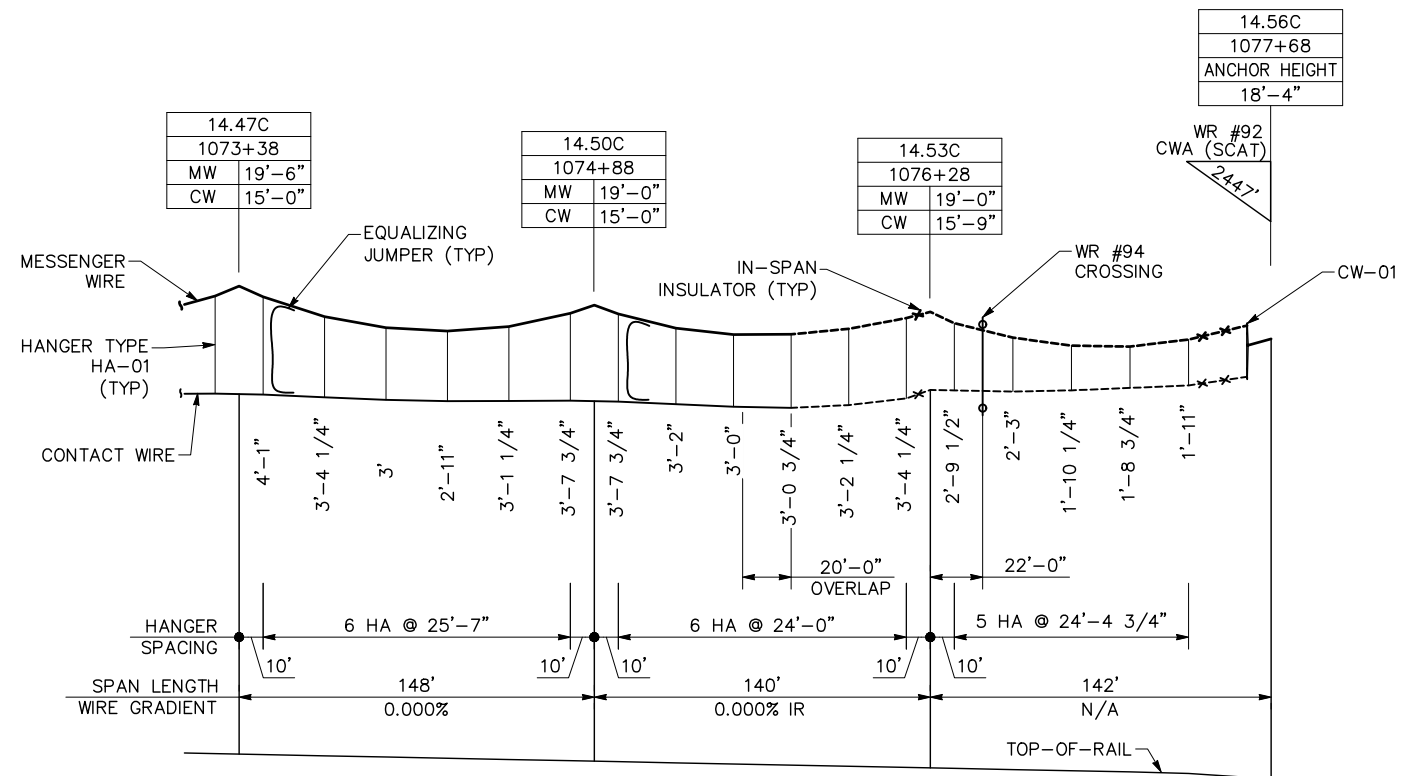
PCA NO.: 000 CONTRACT NO.: C801 FILE LOCATION: PROJECTWISE

SHEET OF DRAWING NO. PD264 REVISION B

**NOTES:**

- SPAN LENGTHS ARE INDICATIVE OF ACTUAL WIRE LENGTHS AND NOT THE DIFFERENCE IN STATIONING.
- SEE OCS LAYOUT SCHEDULE FOR ASSEMBLY ALLOCATIONS.
- EACH IN-RUNNING CATENARY SPAN WAS DESIGNED WITH A PRESAG EQUAL TO  $L/1000$ , UNLESS OTHERWISE NOTED.
- NORMAL CONDUCTOR PROPERTIES ARE AS FOLLOWS:

ITEM	WEIGHT	TENSION
CONTACT WIRE	1.063 LBS/FT	3000 LBS
MESSENGER WIRE	1.544 LBS/FT	4800 LBS
HANGER	0.045 LBS/FT OF SPAN	



**SOUTHBOUND TRACK – WIRE RUN NO. 92  
CATENARY PROFILE**

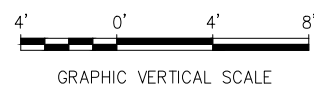
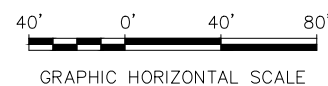
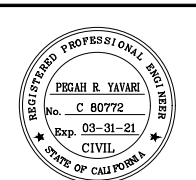


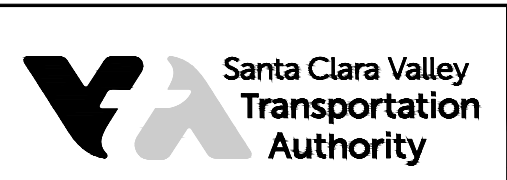
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NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



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DESIGNED: C. WERNER CHECKED: P. YAVARI  
DRAWN: C. WERNER CADD FILE NAME: 801PD265.dwg



**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CAAD FILE DATE: 5/15/2020 SCALE: AS NOTED  
SUBMITTAL DATE: 06/29/20 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
OVERHEAD CONTACT SYSTEM  
OCS PROFILE  
WIRE RUN NO. 92

PCA NO.: 000 CONTRACT NO.: C801 FILE LOCATION: PROJECTWISE

SHEET OF: PD265 REVISION: B

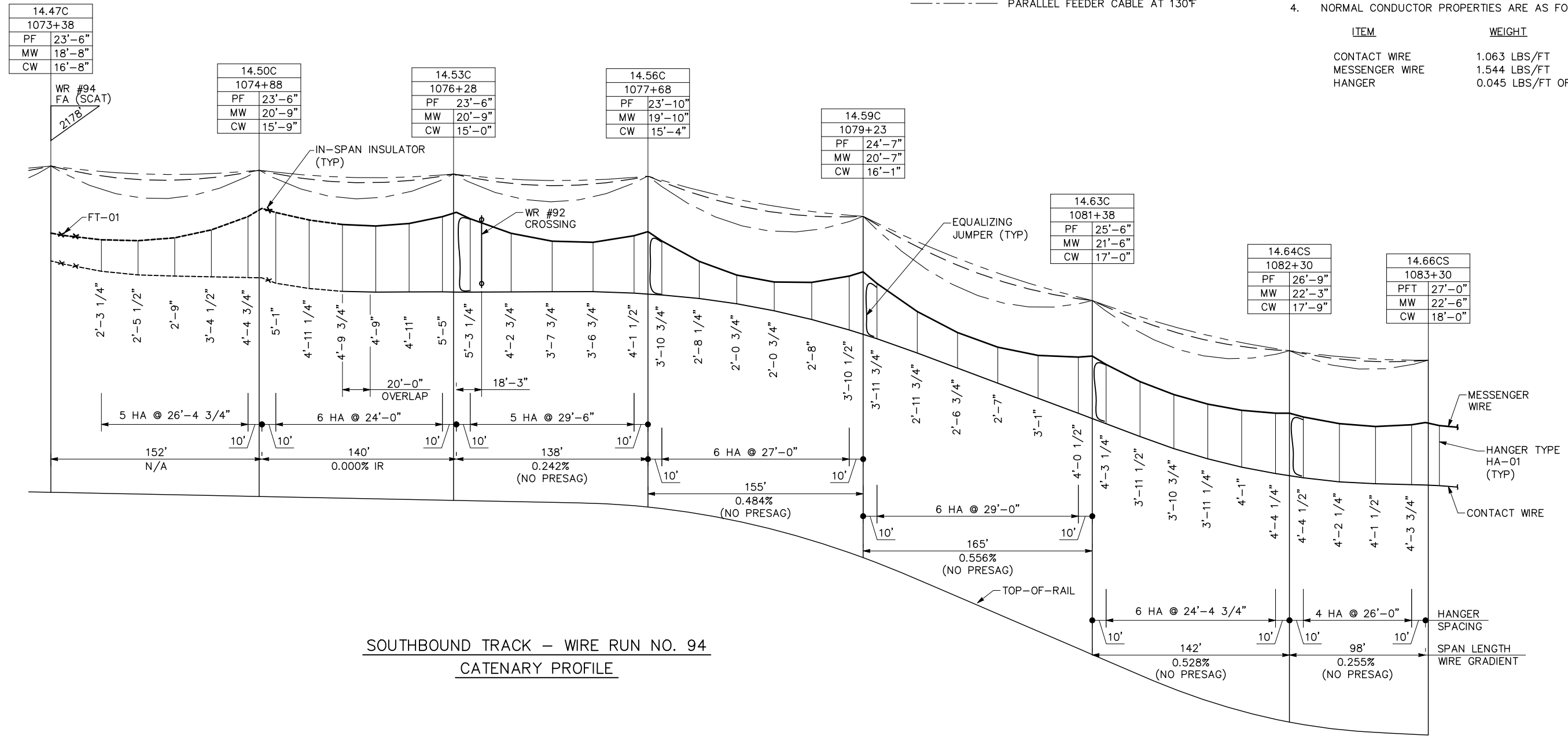
**LEGEND:**

- IN-RUNNING CATENARY
- OUT-OF-RUNNING CATENARY
- - - - - PARALLEL FEEDER CABLE AT 20°F
- - - - - PARALLEL FEEDER CABLE AT 60°F
- - - - - PARALLEL FEEDER CABLE AT 130°F

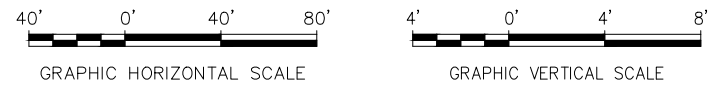
**NOTES:**

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3. EACH IN-RUNNING CATENARY SPAN WAS DESIGNED WITH A PRESAG EQUAL TO L/1000, UNLESS OTHERWISE NOTED.
4. NORMAL CONDUCTOR PROPERTIES ARE AS FOLLOWS:

ITEM	WEIGHT	TENSION
CONTACT WIRE	1.063 LBS/FT	3000 LBS
MESSANGER WIRE	1.544 LBS/FT	4800 LBS
HANGER	0.045 LBS/FT OF SPAN	

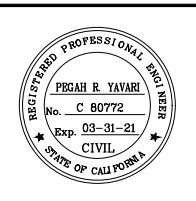


**SOUTHBOUND TRACK - WIRE RUN NO. 94  
CATENARY PROFILE**



Jun 22, 2020 - 2:50pm \\newc0\pwork2\JOBS\68691\_via\_capitol\_expressway\rt\_extension\TECHPROD\OCS\TECHPROD\CAD\PD\_801PD266.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



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DESIGNED: C. WERNER  
CHECKED: P. YAVARI  
DRAWN: C. WERNER  
CADD FILE NAME: 801PD266.dwg

**Santa Clara Valley  
Transportation  
Authority**

**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CAAD FILE DATE: 5/15/2020  
SCALE: AS NOTED  
SUBMITTAL DATE: 06/29/20  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
OVERHEAD CONTACT SYSTEM  
OCS PROFILE  
WIRE RUN NO. 94

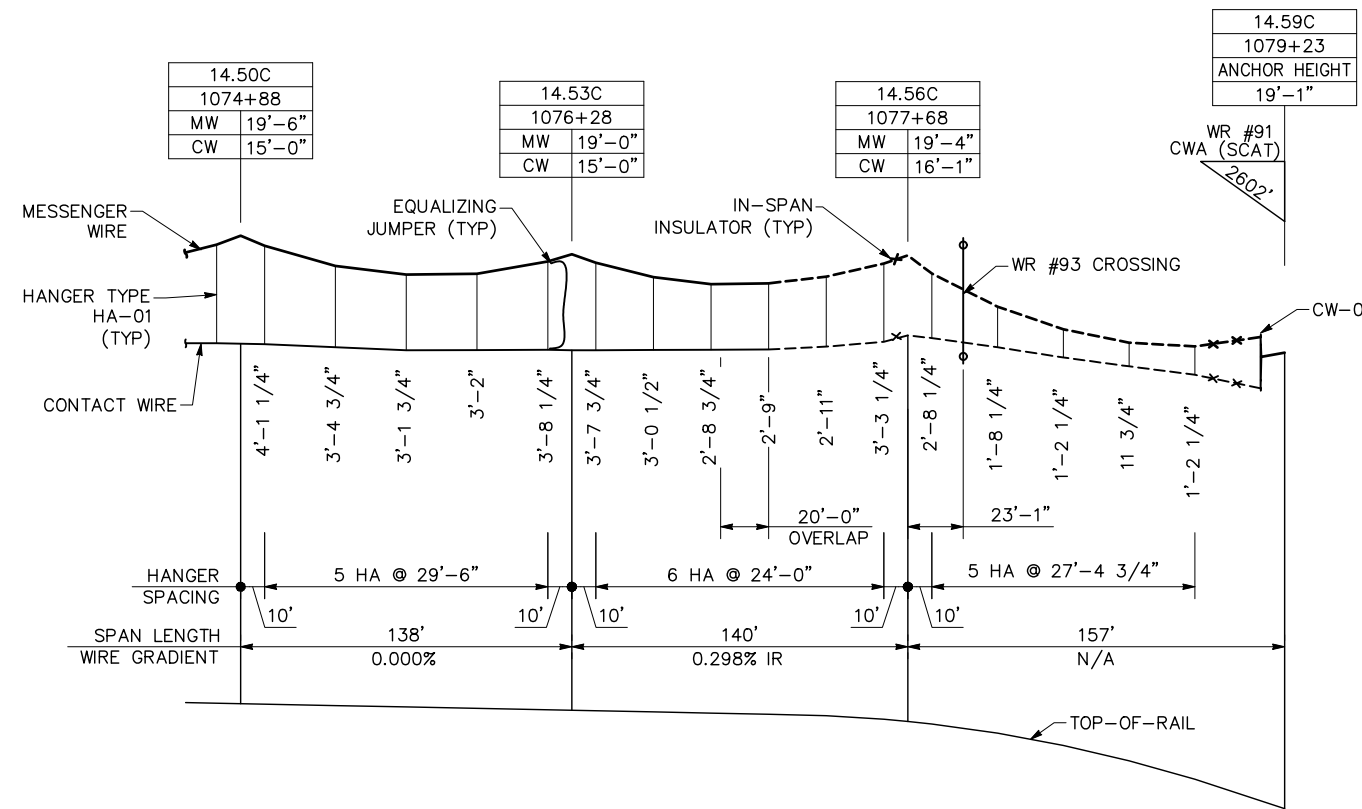
PCA NO.: 000  
CONTRACT NO.: C801  
FILE LOCATION: PROJECTWISE

SHEET OF	
DRAWING NO.	PD266
REVISION	B

**NOTES:**

- SPAN LENGTHS ARE INDICATIVE OF ACTUAL WIRE LENGTHS AND NOT THE DIFFERENCE IN STATIONING.
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ITEM	WEIGHT	TENSION
CONTACT WIRE	1.063 LBS/FT	3000 LBS
MESSENGER WIRE	1.544 LBS/FT	4800 LBS
HANGER	0.045 LBS/FT OF SPAN	



**LEGEND:**

- IN-RUNNING CATENARY
- OUT-OF-RUNNING CATENARY

**NORTHBOUND TRACK – WIRE RUN NO. 91  
CATENARY PROFILE**

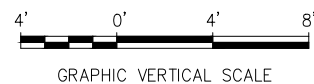
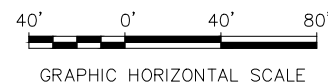
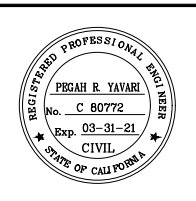


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NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



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1732 North First Street, Suite 400  
San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942

DESIGNED: C. WERNER  
CHECKED: P. YAVARI  
DRAWN: C. WERNER  
CADD FILE NAME: 801PD267.dwg

**Santa Clara Valley  
Transportation  
Authority**

**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 5/15/2020  
SCALE: AS NOTED  
SUBMITTAL DATE: 06/29/20  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
OVERHEAD CONTACT SYSTEM  
OCS PROFILES  
WIRE RUN NO. 91

PCA NO.: 000 CONTRACT NO.: C801 FILE LOCATION: PROJECTWISE

SHEET OF: PD267 REVISION: B

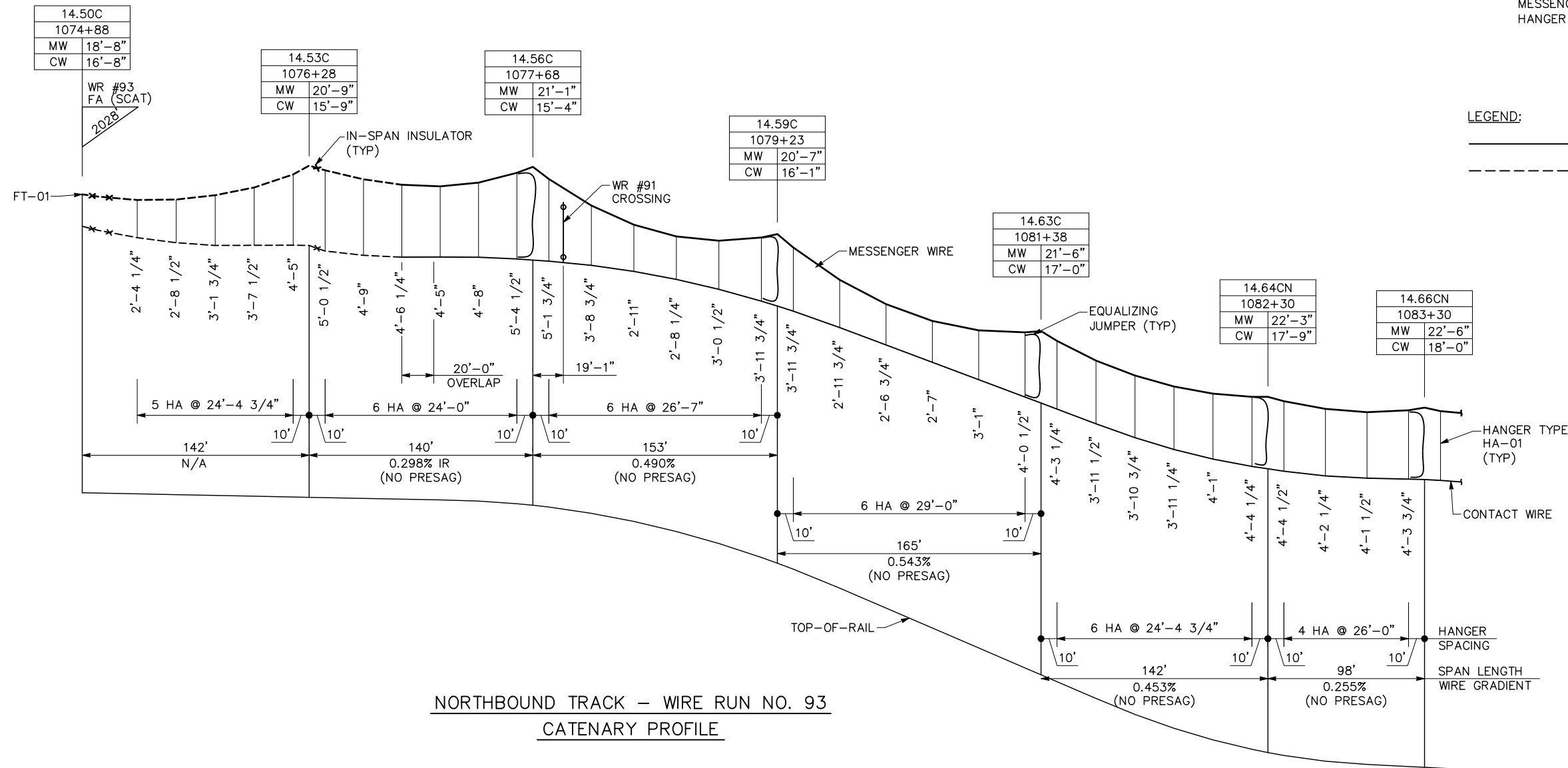
**NOTES:**

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- NORMAL CONDUCTOR PROPERTIES ARE AS FOLLOWS:

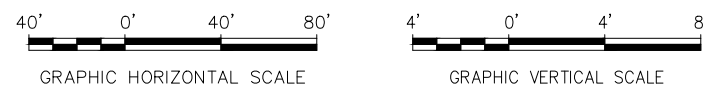
ITEM	WEIGHT	TENSION
CONTACT WIRE	1.063 LBS/FT	3000 LBS
MESSENGER WIRE	1.544 LBS/FT	4800 LBS
HANGER	0.045 LBS/FT OF SPAN	

**LEGEND:**

- IN-RUNNING CATENARY
- OUT-OF-RUNNING CATENARY

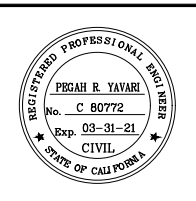


**NORTHBOUND TRACK – WIRE RUN NO. 93  
CATENARY PROFILE**



Jun 22, 2020 - 2:50pm \\new01\mrmach2\JOBS\68691\_via\_capitol\_expressway\14\_extension\TECHPROJ\OCS\TECHPROJ\CAD\PD\_801PD268.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



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Engineers Architects Planners  
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Tel (408) 451-7300  
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DESIGNED: C. WERNER  
CHECKED: P. YAVARI  
DRAWN: C. WERNER  
CADD FILE NAME: 801PD268.dwg

**Santa Clara Valley  
Transportation  
Authority**

**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

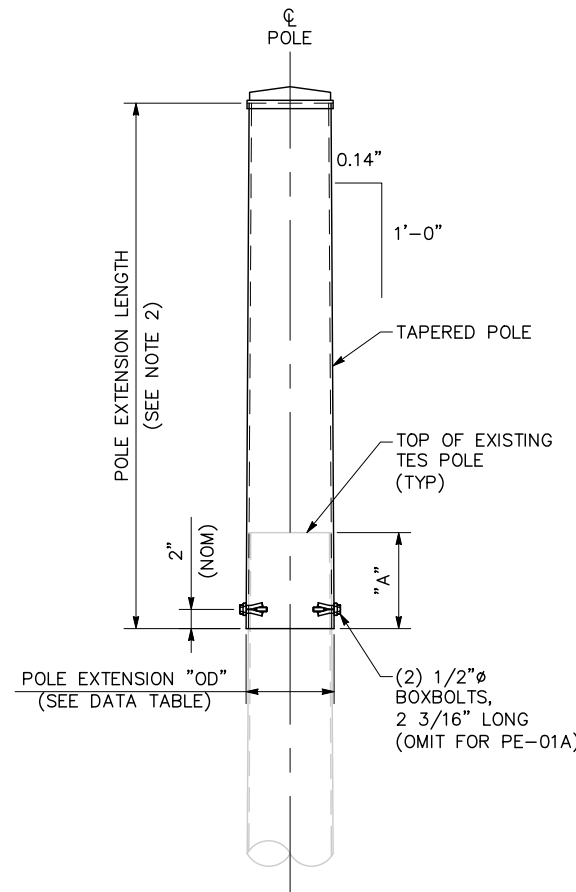
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CADD FILE DATE: 5/15/2020  
SCALE: AS NOTED  
SUBMITTAL DATE: 06/29/20  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
OVERHEAD CONTACT SYSTEM  
OCS PROFILES  
WIRE RUN NO. 93

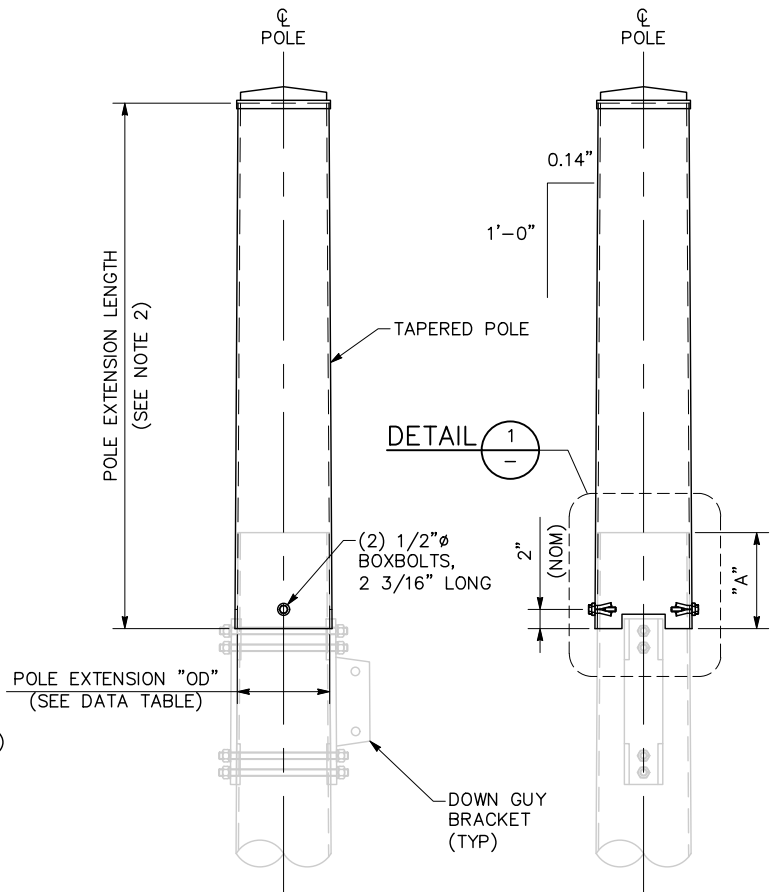
PCA NO.: 000  
CONTRACT NO.: C801  
FILE LOCATION: PROJECTWISE

SHEET OF: PD268  
REVISION: B

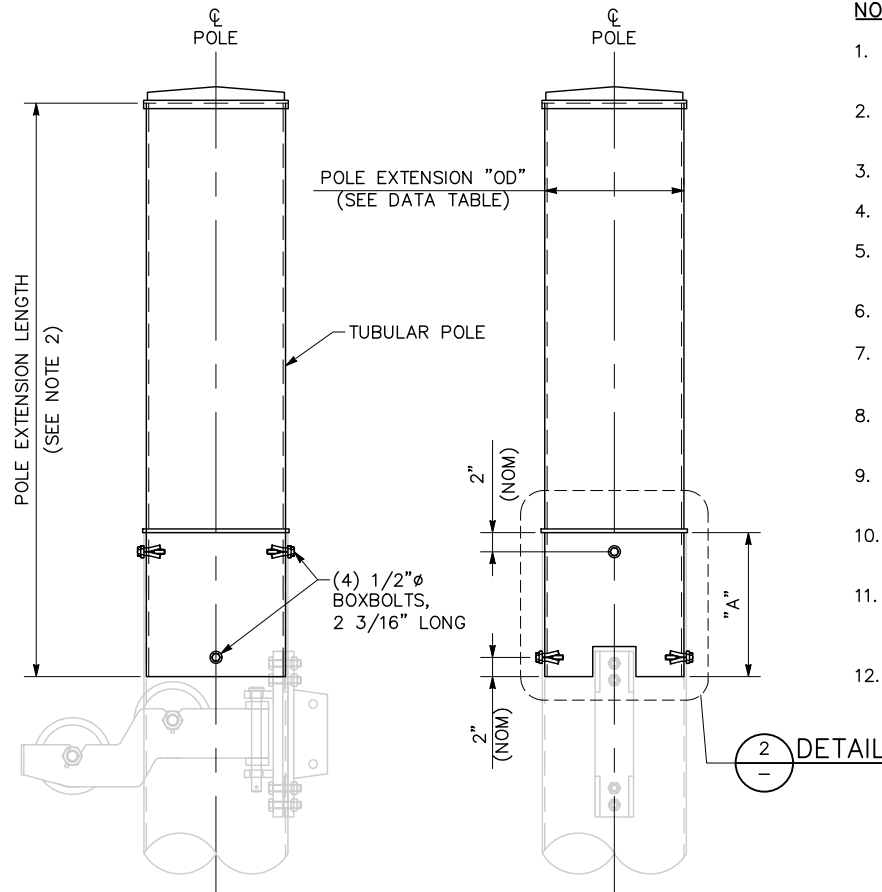




POLE EXTENSION ASSEMBLY  
PE-01A/PE-01B/PE-01C/PE-01D  
NTS

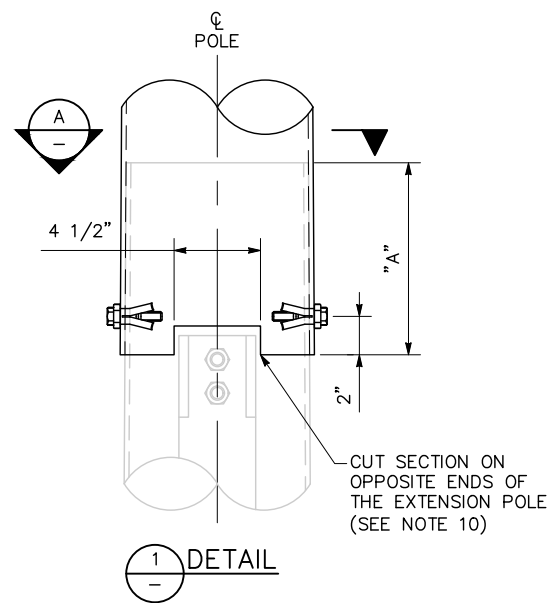


POLE EXTENSION ASSEMBLY - PE-02  
NTS

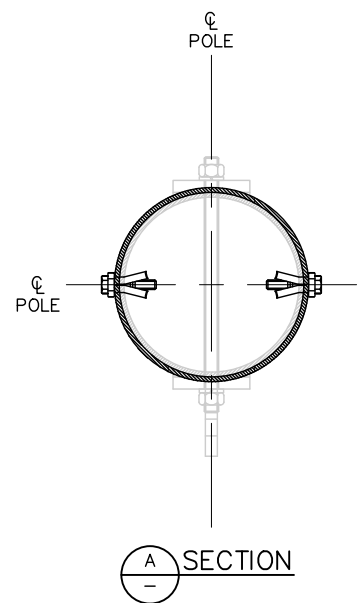


POLE EXTENSION ASSEMBLY - PE-03  
NTS

- NOTES:**
- FOR ABBREVIATIONS, LEGEND AND GENERAL NOTES SEE DWGS PG001, PG002 AND PG003.
  - FOR POLE EXTENSION ASSEMBLY ALLOCATION AND LENGTHS SEE OCS PARALLEL FEEDERS 27-28 LAYOUT SCHEDULE AND DWG PD302.
  - FINISH: GALVANIZED AS PER ASTM A123.
  - ITEMS WITH THREADS SHALL BE RETHREADED AFTER GALVANIZING.
  - ALL POLES, TAPERED AND TUBULAR, SHALL HAVE A MINIMUM YIELD STRENGTH OF 55 KSI.
  - FOR DOWN GUY BRACKET DETAIL SEE VTA STANDARD DWG STE-011.
  - BOXBOLTS SHALL BE TORQUED PER MANUFACTURER'S RECOMMENDATIONS.
  - HOLES FOR BOXBOLTS SHALL BE DIMENSIONED PER MANUFACTURER'S RECOMMENDATIONS.
  - CONTRACTOR TO CONFIRM ALL DIAMETERS AND LENGTHS FOR POLE EXTENSION ASSEMBLY PRIOR TO FABRICATION.
  - DEPTH OF CUT SECTION, WHERE REQUIRED, TO BE FIELD VERIFIED PRIOR TO FABRICATION.
  - FOR POLE EXTENSIONS PE-01A, PE-01B, AND PE-02, THE HOLES FOR BOXBOLTS SHALL BE DRILLED AND GALVANIZED DURING FABRICATION.
  - WHERE NO BOXBOLTS ARE UTILIZED, THE SLIP JOINT OVERLAP LENGTH FOR TAPERED POLE SHALL BE AT LEAST 1.65 TIMES "OD".

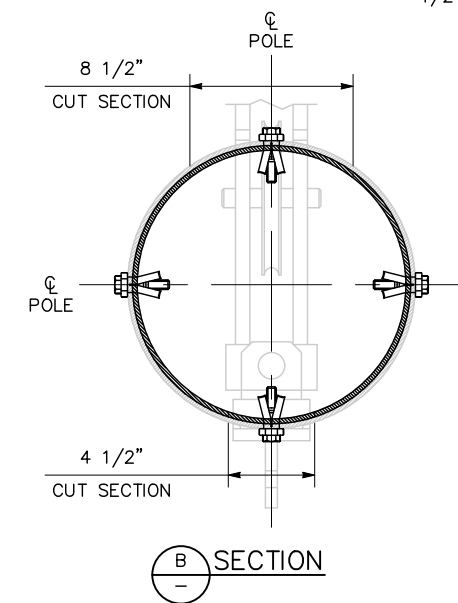


1 DETAIL

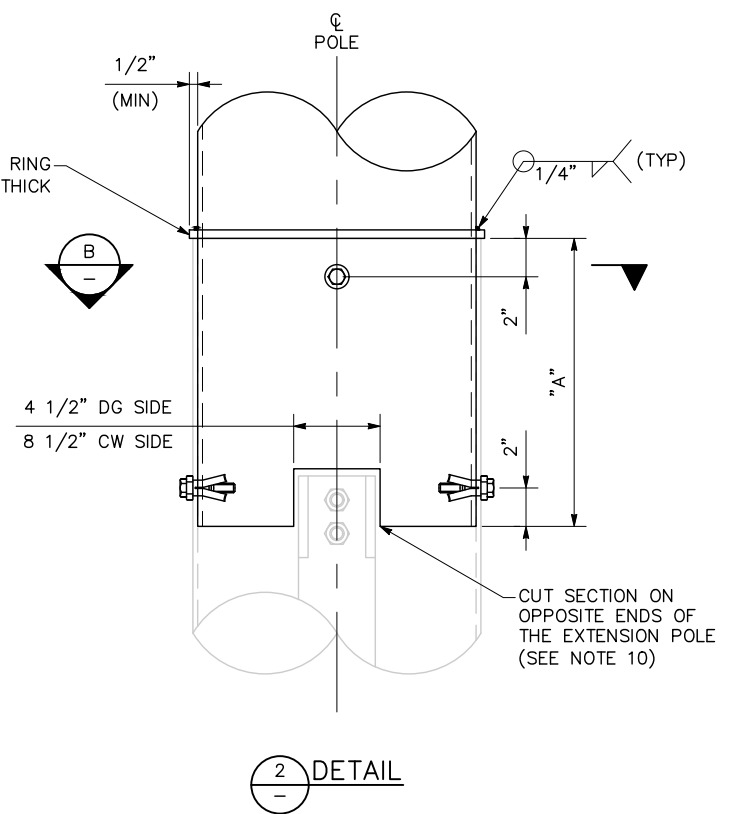


A SECTION

POLE EXTENSION DATA TABLE				
EXISTING POLE TYPE AND LENGTH (FT)	POLE EXTENSION TYPE	OD (INCH)	A (INCH) (SEE NOTE 12)	SHAFT THICKNESS (INCH)
C-25, C(F)-25	PE-01A-##	8.68	15.00	1/4
B-24	PE-01B-##	8.63	10.00	3/16
C-24	PE-01C-##	8.76	10.00	1/4
C1-24	PE-01D-##	10.26	10.00	1/4
C1-25	PE-02-##	10.12	10.00	1/4
T2-24	PE-03-##	14.375	15.00	1/4



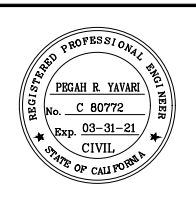
B SECTION



2 DETAIL

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NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	01/20	35% SUBMITTAL SET



SUBMITTED

**HNTB** HNTB Corporation  
Engineers Architects Planners  
1732 North First Street, Suite 400  
San Jose, CA 95112  
Tel (408) 451-7300  
Fax (408) 451-6942

DESIGNED: G. KOLA  
CHECKED: P. YAVARI  
DRAWN: G. KOLA  
CADD FILE NAME: 801PD271.dwg

**Santa Clara Valley Transportation Authority**

APPROVED

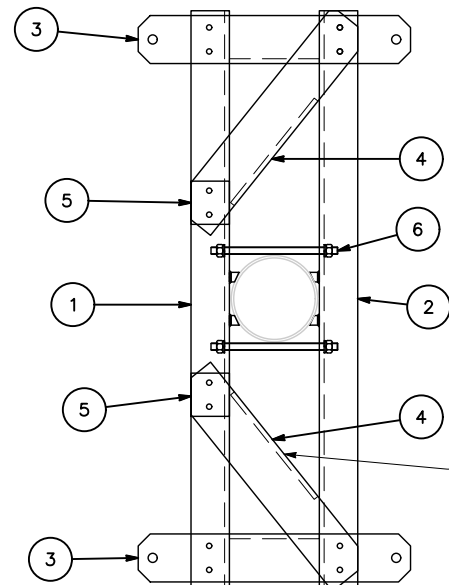
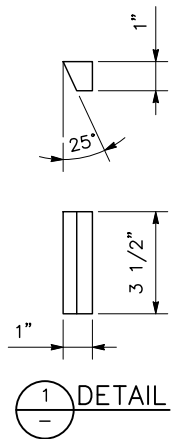
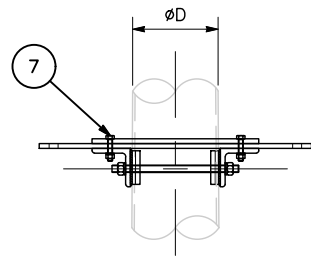
**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 5/15/2020  
SCALE: NTS  
SUBMITTAL DATE: 06/29/20  
BOARD APPROVAL DATE:

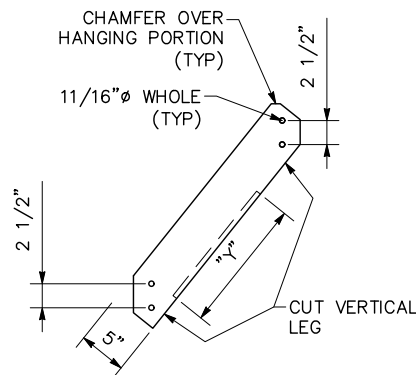
EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
OVERHEAD CONTACT SYSTEM  
POLE EXTENSION ASSEMBLIES  
PE-01, PE-02, AND PE-03

PCA NO: 000  
CONTRACT NO: C801  
FILE LOCATION: PROJECTWISE

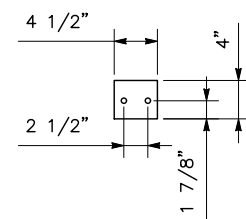
SHEET OF: PD271  
REVISION: B



L 5x3x1/2  
CUT VERTICAL LEG (3")  
AT BOTH ENDS AS REQ'D  
(TYP)



ITEM 4



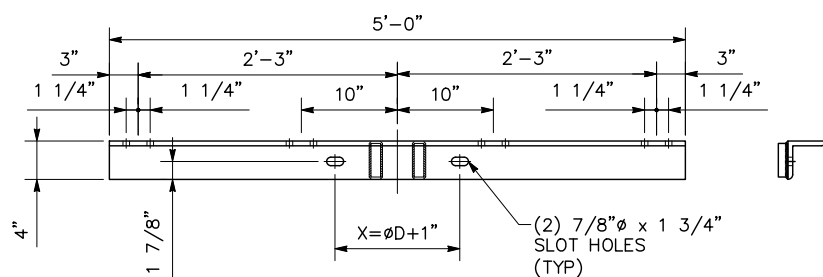
ITEM 5

**NOTES:**

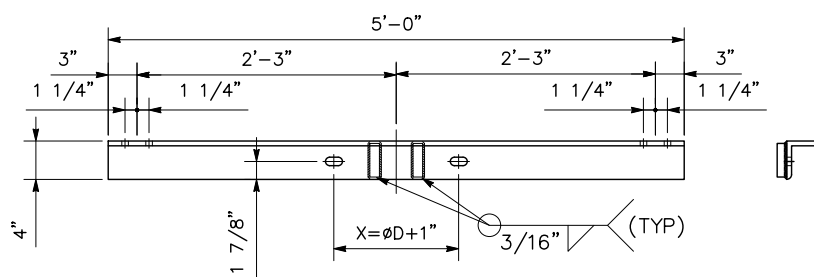
1. FOR ABBREVIATIONS, LEGEND AND GENERAL NOTES SEE DWGS PG001, PG002 AND PG003.
2. ALL THREADED STEEL RODS AND BOLTS SHALL BE ASTM A325, WITH 2 HEX NUTS AND STANDARD WASHERS AND SHALL BE HOT DIP GALVANIZED.
3.  $X = \text{ØD (POLE DIAMETER) + 1"}$ . CONTRACTOR TO VERIFY POLE DIAMETER AT ATTACHMENT HEIGHT.
4. DIMENSION "Y" TO BE DETERMINED ONCE POLE DIAMETER AT ATTACHMENT HEIGHT IS VERIFIED.
5. ITEM 4, ANGLE BRACE, TO BE DIMENSIONED TO FIT ASSEMBLY. CONSIDERATION SHOULD BE TAKEN DURING FABRICATION AS BOTH ANGLE BRACES WILL NOT BE IDENTICAL BUT RATHER MIRRORED TO EACH OTHER.

BILL OF MATERIAL		QUANTITY
ITEM	DESCRIPTION	FTA-01
1	ANGLE SPREADER, L4x4x1/2	1
2	ANGLE SPREADER, L4x4x1/2	1
3	ANGLE TERMINATION, L5x3x1/2	2
4	ANGLE BRACE, L5x3x1/2 (SEE NOTE 5)	2
5	1/2" THICK STEEL FILLER PLATE	2
6	3/4" Ø THREADED ROD WITH 2 DUAL SLOTTED LOCKNUTS	2
7	5/8" Ø BOLT WITH DUAL SLOTTED LOCKNUT	12

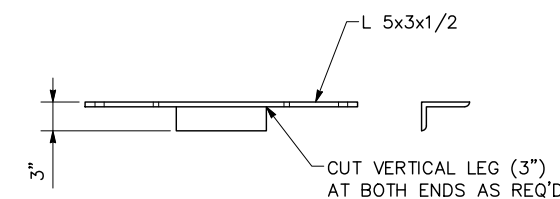
**PARALLEL FEEDER TERMINATION BRACKET ARM – FTA-01**



ITEM 1



ITEM 2



ITEM 3

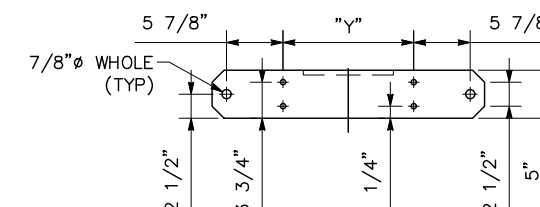
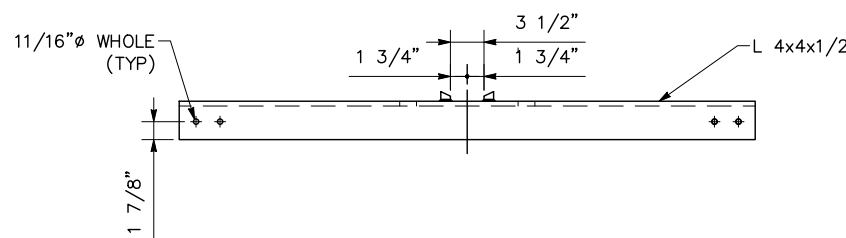
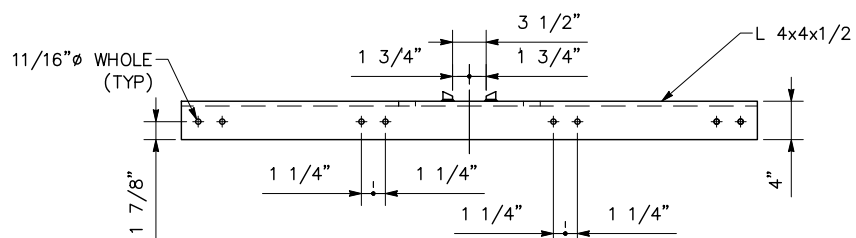
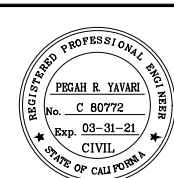


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NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	01/20	35% SUBMITTAL SET

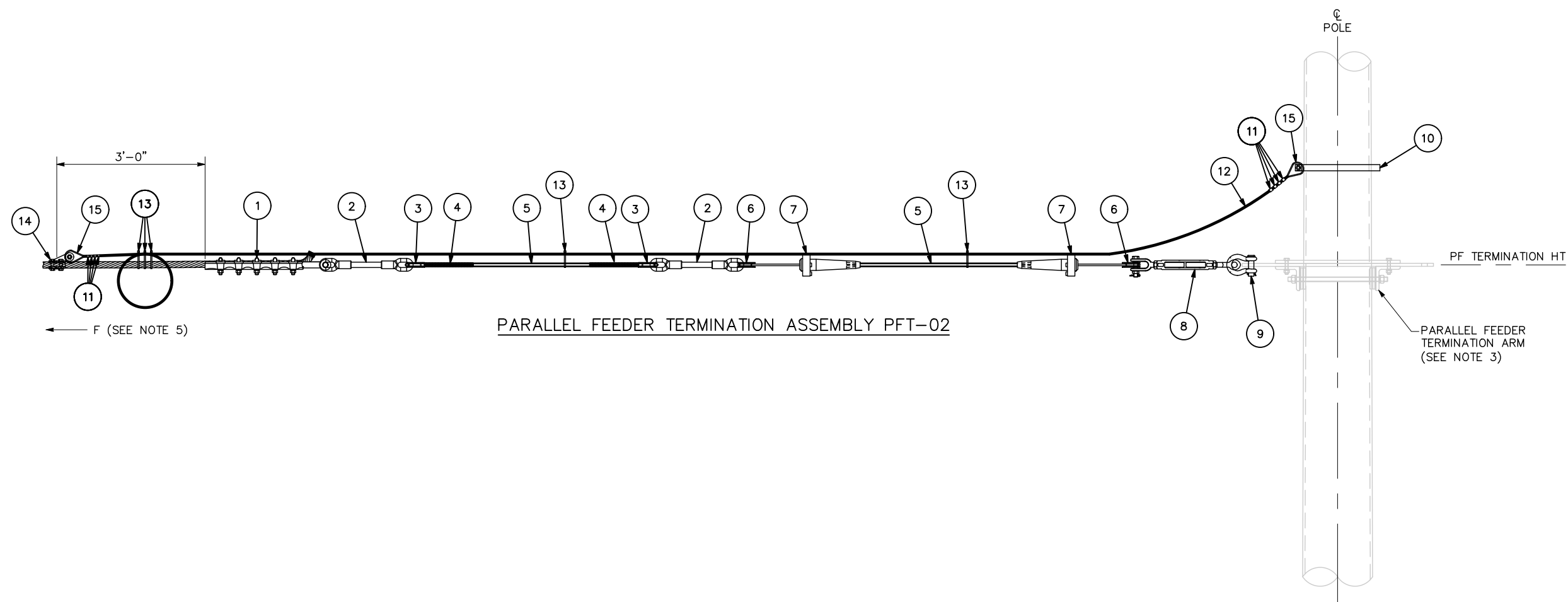


SUBMITTED		<b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
DESIGNED	G. KOLA	CHECKED	P. YAVARI
DRAWN	G. KOLA	CADD FILE NAME	801PD272.dwg



APPROVED		<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	5/15/2020	SCALE	NTS
SUBMITTAL DATE	06/29/20	BOARD APPROVAL DATE	

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT OVERHEAD CONTACT SYSTEM TERMINATION BRACKET ARM FTA-01			SHEET OF DRAWING NO. PD272 REVISION B
PCA NO.	CONTRACT NO.	FILE LOCATION	
000	C801	PROJECTWISE	



PARALLEL FEEDER TERMINATION ASSEMBLY PFT-02

BILL OF MATERIAL		QUANTITY
ITEM	DESCRIPTION	PFT-02
1	STRAIGHTLINE CLAMP FOR 1000 KCMIL AAC/TW	1
2	STRAIN INSULATOR, EYE/EYE	2
3	THIMBLE FOR 1/2"Ø GLAV STEEL WIRE ROPE	2
4	FORMED DEADEND FOR GUY WIRE	2
5	1/2"Ø, 19 STRAND GALV STEEL GUY WIRE	AS REQ'D
6	THIMBLE FOR STRAND VICE	2
7	STRAND VICE FOR 1/2"Ø GLAV STEEL GUY WIRE	2
8	TURNBUCKLE, EYE/CLEVIS	1
9	SHACKLE	1
10	POLE BAND	1
11	CRIMP CLIP FOR 1/2"Ø PHILLYSTRAN	8
12	1/2"Ø PHILLYSTRAN	AS REQ'D
13	PLASTIC CLIP	AS REQ'D
14	STRAIN CLAMP WITH CLEVIS	1
15	THIMBLE-CLOSED FOR 1/2"Ø PHILLYSTRAN	2

**NOTES:**

- FOR ABBREVIATIONS, LEGEND AND GENERAL NOTES SEE DWGS PG001, PG002 AND PG003.
- FOR TES POLE EXTENSION TYPES, PARALLEL FEEDER TERMINATION HEIGHTS, AND ASSEMBLY ALLOCATION REFER TO OCS LAYOUT SCHEDULE DRAWINGS.
- PARALLEL FEEDER TERMINATION ARM SEPARATELY CALLED OFF, SEE DWG PD272.
- ALL TAIL WIRES SHALL BE SECURED TO PREVENT FRAYING WITH NO. 19 SOFT ALUMINUM SOLID WIRE, 6 TURNS AND TWISTED END.
- TERMINATION TENSION FOR PARALLEL FEEDER CABLES VARIES. SEE DWG PG004 FOR DESIGN TENSIONS.
- 1/2"Ø GALVANIZED WIRE (ITEM 5) TO BE CUT TO LENGTH BY CONTRACTOR.
- BUNDLE 5' OF 1/2" PHILLYSTRAN IN THREE 6 1/2" CIRCLES USING PLASTIC CLIPS.
- PLASTIC CLIPS SHALL NOT BE INSTALLED ON INSULLATORS.

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NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	01/20	35% SUBMITTAL SET

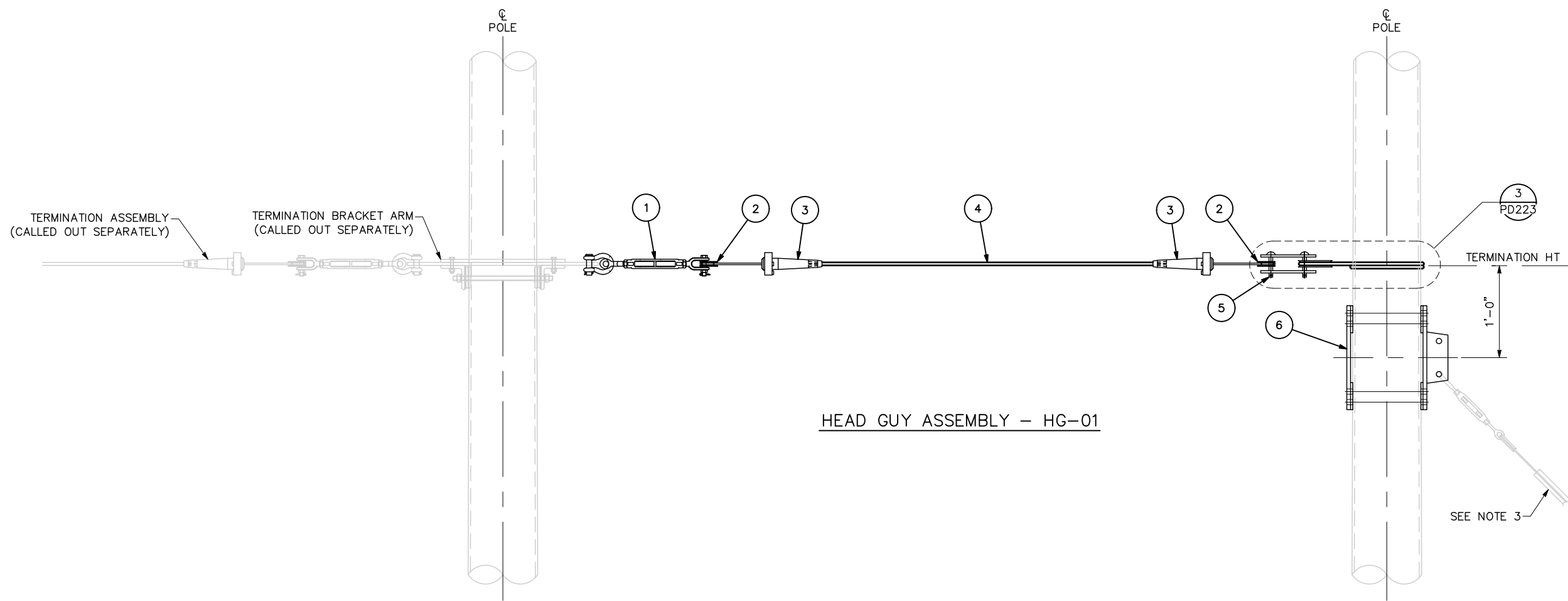


<b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
DESIGNED G. KOLA	CHECKED P. YAVARI
DRAWN G. KOLA	CADD FILE NAME 801PD273.dwg



<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE 5/15/2020	SCALE NTS
SUBMITTAL DATE 06/29/20	BOARD APPROVAL DATE

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT OVERHEAD CONTACT SYSTEM PARALLEL FEEDER TERMINATION ASSEMBLY PFT-02			SHEET OF DRAWING NO. PD273 REVISION B
PCA NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE	



HEAD GUY ASSEMBLY - HG-01

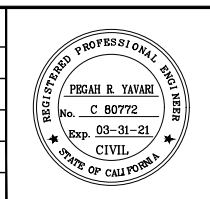
BILL OF MATERIAL		QUANTITY
ITEM	DESCRIPTION	HG-01
1	SHACKLE	1
2	THIMBLE FOR STRAND VICE	2
3	STRAND VICE FOR 1/2"Ø GALV STEEL GUY WIRE	2
4	1/2"Ø, 19 STRAND GALV STEEL GUY WIRE	AS REQ'D
5	POLE CONNECTION	1
6	GUY ANCHOR BRACKET ASSEMBLY (SEE NOTE 4)	1

**NOTES:**

1. FOR ABBREVIATIONS, LEGEND AND GENERAL NOTES SEE DWGS PG001, PG002 AND PG003.
2. FOR TES POLE TYPES, PARALLEL FEEDER TERMINATION HEIGHTS, AND ASSEMBLY ALLOCATION REFER TO OCS LAYOUT SCHEDULE DRAWINGS.
3. DOWN GUY ASSEMBLY SEPARATELY CALLED OFF, SEE DWG PD208.
4. ONLY 1 GUY ANCHOR BRACKET ASSEMBLY TO BE PROVIDED AT TERMINATION LOCATION WHERE TWO HEAD GUY ASSEMBLIES ARE CALLED FOR.
5. 1/2"Ø GALVANIZED WIRE (ITEM 5) TO BE CUT TO LENGTH BY CONTRACTOR.

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NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	01/20	35% SUBMITTAL SET



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 Engineers Architects Planners  
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DESIGNED: G. KOLA CHECKED: P. YAVARI  
 DRAWN: G. KOLA CADD FILE NAME: 801PD274.dwg

**Santa Clara Valley Transportation Authority**

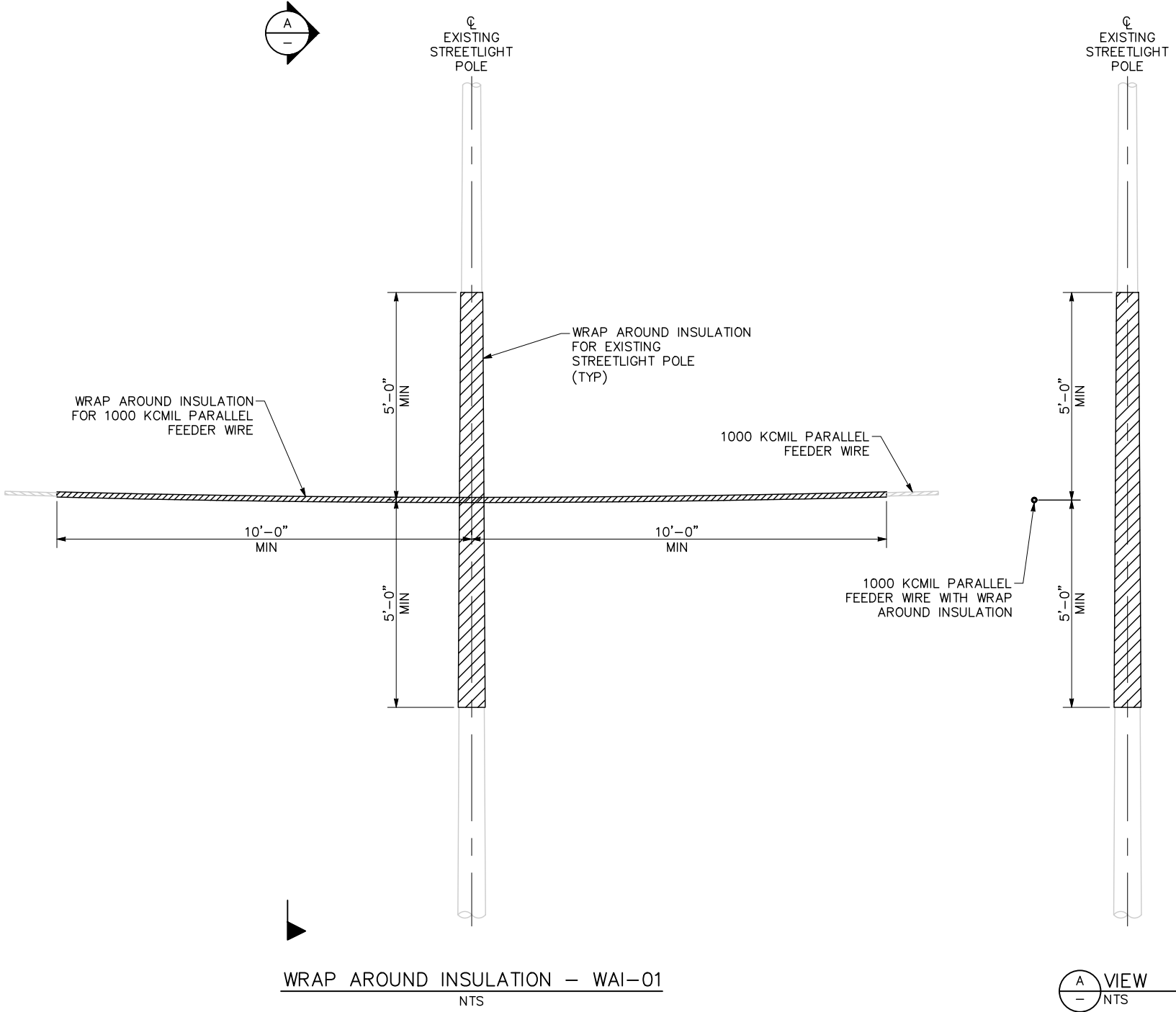
**BKF** 100+ YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

APPROVED: [Signature]  
 CADD FILE DATE: 5/15/2020 SCALE: NTS  
 SUBMITTAL DATE: 06/29/20 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 OVERHEAD CONTACT SYSTEM  
 HEAD GUY ASSEMBLY  
 HG-01

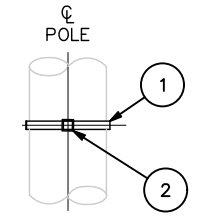
SHEET OF PD274 REVISION B

PCA NO.: 000 CONTRACT NO.: C801 FILE LOCATION: PROJECTWISE

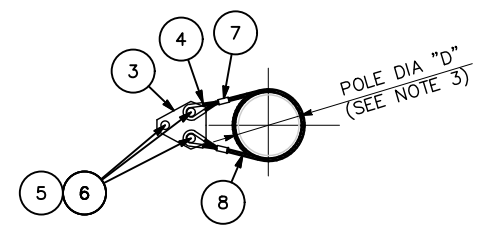


**WRAP AROUND INSULATION – WAI-01**  
NTS

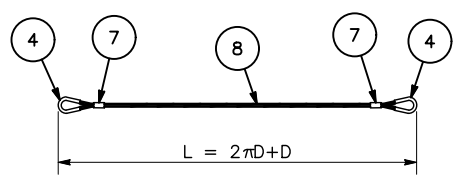
**A VIEW**  
NTS



**POLE BAND TYPE BH-01A**  
NTS



**POLE SLING ASSEMBLY – PSA-01**  
NTS



**1 DETAIL**  
- GUY STRAND

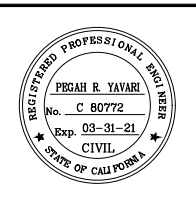
BILL OF MATERIAL		QUANTITY	
ITEM	DESCRIPTION	BH-01A	PSA-01
1	STAINLESS STEEL BAND	1	-
2	SPLIT TAPER SLEEVE	1	-
3	DOUBLE CLEVIS PLATE	-	1
4	THIMBLE FOR WIRE	-	2
5	ROUND HEAD PIN	-	3
6	SPLIT PIN, STAINLESS STEEL	-	3
7	COPPER CRIMP CONNECTOR	-	2
8	STEEL GUY STRAND, EXTRA FLX	-	1

**NOTES:**

- FOR ABBREVIATIONS, LEGEND AND GENERAL NOTES SEE DWGS PG001, PG002 AND PG003.
- FOR APPLICATION OF WRAP AROUND INSULATION ASSEMBLY REFER TO OCS PARALLEL FEEDERS 27-28 LAYOUT SCHEDULE.
- CONFIGURATION OF WRAP AROUND INSULATION ASSEMBLY SHOWN ON THIS DRAWING REPRESENT THE POSITION OF THE PARALLEL FEEDER CABLES AT THE NOMINAL TEMPERATURE OF 60°F.

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NO.	DATE	REVISIONS
A	06/20	95% SUBMITTAL SET



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Engineers Architects Planners  
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DESIGNED: G. KOLA  
CHECKED: P. YAVARI  
DRAWN: G. KOLA  
CADD FILE NAME: 801PD275.dwg

**Santa Clara Valley Transportation Authority**

**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 5/15/2020  
SCALE: NTS  
SUBMITTAL DATE: 06/29/20  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
OVERHEAD CONTACT SYSTEM  
MISCELLANEOUS ASSEMBLIES  
WAI-01, BH-01A, PSA-01

PCA NO.: 000  
CONTRACT NO.: C801  
FILE LOCATION: PROJECTWISE

SHEET OF	
DRAWING NO.	PD275
REVISION	A

TES STRUCTURE SCHEDULE

Table with columns: STRUCTURE NO., STATION (SB TRACK), OFFSET FROM SB TRACK (FT), POLE TYPE AND HEIGHT (FT), POLE RAKE (IN) (NOTE 1), POLE REFERENCE, FOUNDATION TYPE, FND LENGTH (FT) (NOTE 2), FOUNDATION REFERENCE. Rows include structures 12.47CS through 13.95C.

SEE NOTE 4

TES STRUCTURE SCHEDULE

Table with columns: STRUCTURE NO., STATION (SB TRACK), OFFSET FROM SB TRACK (FT), POLE TYPE AND HEIGHT (FT), POLE RAKE (IN) (NOTE 1), POLE REFERENCE, FOUNDATION TYPE, FND LENGTH (FT) (NOTE 2), FOUNDATION REFERENCE. Rows include structures 13.98C through 14.89CN.

SEE NOTE 4

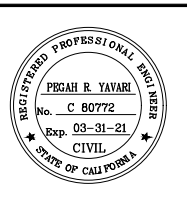
NOTES:

- 1. POLE RAKE IS GIVEN IN INCHES AT THE POLE TOP. FOR RAKE DIRECTION DETAILS SEE PG-003. CONTRACTOR SHALL CALCULATE/VERIFY THE RAKE FOR EACH POLE AFTER POLE TESTS CONFIRM DEFLECTION RATE. RAKE POLE SO LOADED POLE IS STRAIGHT VERTICAL UNDER STATIC LOAD AT 60F.
2. INDICATES TOTAL LENGTH OF CIDH FOUNDATION.
3. ANY DISCREPANCY BETWEEN THIS SCHEDULE AND THE OCS LAYOUT SCHEDULE SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION IMMEDIATELY.
4. FOR FOUNDATION DETAILS FS2 (MOD), FS2 (MOD2), FF2 (MOD), FF2 (MOD 2), AND FG-1A (MOD) SEE STRUCTURAL DRAWINGS.
5. POLE OFFSETS ARE DENOTED AS LEFT (LT) OR RIGHT (RT) OF THE SOUTHBOUND TRACK CENTERLINE LOOKING IN THE DIRECTION OF INCREASING STATIONING.
6. DOWN GUY ASSEMBLIES SHALL BE CONNECTED TO THE SAME HOLE (CLOSEST TO THE STRUCTURES) ON FOUNDATION TYPE FG-1B.
7. POLES DENOTED WITH X#-##-P, REPRESENT STATION AND/OR SIDEWALK POLES AND SHALL BE PAINTED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS.
8. CONTRACTOR TO CONFIRM FEEDER SPOUT AND COUNTERWEIGHT SCHEDULE PRIOR TO POLE FABRICATION.
9. FOR POLE DETAILS REFER TO DWGS PD224 TO PD227.

FEEDER SPOUT AND COUNTERWEIGHT SCHEDULE. Table with columns: STRUCTURE NO., HEIGHT "FSH", HEIGHT "CWAH". Rows include structures 12.47CS through 14.89CN.

Jun 22, 2020 2:51pm \\varepsilon0\lennards2\JOBS\6891 via capital expressway\l extension\TECH\PROO\COS\TECH\PROO\CAD\PD\_801PD301.dwg

Table with columns: NO., DATE, REVISIONS. Rows show revisions B (06/20) 95% SUBMITTAL SET and A (03/19) 65% SUBMITTAL SET.



HNTB HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112. Includes logo and contact information.

Santa Clara Valley Transportation Authority logo and name.

BKF 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS. Includes logo, dates (5/15/2020, 06/29/20), and scale (NTS).

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT OVERHEAD CONTACT SYSTEM STRUCTURE AND FOUNDATION SCHEDULE. Includes project name, sheet number (PD301), revision (B), and location (PROJECTWISE).

TES STRUCTURE SCHEDULE (TPSS 27-28)

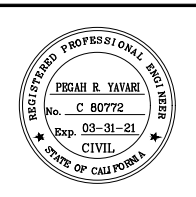
STRUCTURE NO.	STATION (SB TRACK)	OFFSET FROM SB TRACK & (FT)	POLE TYPE AND HEIGHT (FT)	POLE RAKE (IN)	POLE REFERENCE	FOUNDATION TYPE	FND LENGTH (FT) (NOTE 1)	FOUNDATION REFERENCE
ANCHOR	884+12	7.000 LT	-	-	-	FG-1B	13.75	PD305
10.90C <sup>6</sup>	EXISTING	EXISTING	PE-01A-4	-	PD271	-	-	-
10.91C <sup>6</sup>	EXISTING	EXISTING	PE-01A-4	-	PD271	-	-	-
10.93C <sup>6</sup>	EXISTING	EXISTING	PE-01A-6	-	PD271	-	-	-
ANCHOR	EXISTING	EXISTING	-	-	-	-	-	-
10.97C <sup>6</sup>	EXISTING	EXISTING	PE-01A-6	-	PD271	-	-	-
ANCHOR	EXISTING	EXISTING	-	-	-	-	-	-
11.00C	EXISTING	EXISTING	PE-01B-7	-	PD271	-	-	-
11.04C	EXISTING	EXISTING	PE-01B-7	-	PD271	-	-	-
11.08C	EXISTING	EXISTING	PE-01B-7	-	PD271	-	-	-
11.11C	EXISTING	EXISTING	PE-01B-7	-	PD271	-	-	-
11.15C	EXISTING	EXISTING	PE-01B-7	-	PD271	-	-	-
11.19C	EXISTING	EXISTING	PE-01B-7	-	PD271	-	-	-
11.22C	EXISTING	EXISTING	PE-01B-7	-	PD271	-	-	-
11.26C	EXISTING	EXISTING	PE-01B-7	-	PD271	-	-	-
11.30C	EXISTING	EXISTING	PE-01B-7	-	PD271	-	-	-
ANCHOR	EXISTING	EXISTING	-	-	-	-	-	-
11.34C <sup>7</sup>	EXISTING	EXISTING	PE-02-6	-	PD271	-	-	-
11.37C	EXISTING	EXISTING	PE-01C-7	-	PD271	-	-	-
11.41C	EXISTING	EXISTING	-	-	-	-	-	-
ANCHOR	EXISTING	EXISTING	-	-	-	-	-	-
11.45C	EXISTING	EXISTING	PE-01B-7	-	PD271	-	-	-
11.49C	EXISTING	EXISTING	PE-01B-7	-	PD271	-	-	-
11.53C	EXISTING	EXISTING	PE-01B-7	-	PD271	-	-	-
11.57C	EXISTING	EXISTING	PE-01B-7	-	PD271	-	-	-
11.61C	EXISTING	EXISTING	PE-01B-7	-	PD271	-	-	-
11.64C	EXISTING	EXISTING	PE-01B-7	-	PD271	-	-	-
11.67C	EXISTING	EXISTING	PE-01B-7	-	PD271	-	-	-
11.71C	EXISTING	EXISTING	PE-01B-7	-	PD271	-	-	-
ANCHOR	EXISTING	EXISTING	-	-	-	-	-	-
11.75C	EXISTING	EXISTING	PE-03-8	-	PD271	-	-	-
ANCHOR	EXISTING	EXISTING	-	-	-	-	-	-
11.79C	EXISTING	EXISTING	PE-03-8	-	PD271	-	-	-
11.82C	EXISTING	EXISTING	PE-01C-7	-	PD271	-	-	-
11.85C	EXISTING	EXISTING	PE-03-8	-	PD271	-	-	-
ANCHOR	EXISTING	EXISTING	-	-	-	-	-	-
11.88C	EXISTING	EXISTING	PE-03-8	-	PD271	-	-	-
ANCHOR	EXISTING	EXISTING	-	-	-	-	-	-
11.92C	EXISTING	EXISTING	PE-01B-7	-	PD271	-	-	-
11.95C	EXISTING	EXISTING	PE-01B-7	-	PD271	-	-	-
11.98C	EXISTING	EXISTING	PE-01B-7	-	PD271	-	-	-
12.02C	EXISTING	EXISTING	PE-01B-7	-	PD271	-	-	-
12.06C	EXISTING	EXISTING	PE-01B-7	-	PD271	-	-	-
12.09C	EXISTING	EXISTING	PE-01B-7	-	PD271	-	-	-
ANCHOR	EXISTING	EXISTING	-	-	-	-	-	-
12.13C <sup>7</sup>	EXISTING	EXISTING	PE-02-6	-	PD271	-	-	-
12.15C	EXISTING	EXISTING	PE-01C-7	-	PD271	-	-	-
12.18C <sup>7</sup>	EXISTING	EXISTING	PE-02-6	-	PD271	-	-	-
ANCHOR	EXISTING	EXISTING	-	-	-	-	-	-
12.20C	EXISTING	EXISTING	PE-01B-7	-	PD271	-	-	-
12.23C	EXISTING	EXISTING	PE-01B-7	-	PD271	-	-	-
12.26C <sup>6</sup>	EXISTING	EXISTING	PE-01A-6	-	PD271	-	-	-
12.28C <sup>6</sup>	EXISTING	EXISTING	PE-01A-6	-	PD271	-	-	-
ANCHOR	EXISTING	EXISTING	-	-	-	-	-	-
12.29C <sup>6</sup>	EXISTING	EXISTING	PE-01D-7	-	PD271	-	-	-
12.32CE	EXISTING	EXISTING	PE-01C-5	-	PD271	-	-	-
12.32CW	EXISTING	EXISTING	PE-01C-5	-	PD271	-	-	-
ANCHOR	959+44	13.693 LT	-	-	-	FG-1B <sup>5</sup>	13.75	PD305

NOTES:

- INDICATES TOTAL LENGTH OF CIDH FOUNDATION.
- ANY DISCREPANCY BETWEEN THIS SCHEDULE AND THE OCS PARALLEL FEEDERS 27-28 LAYOUT SCHEDULE SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION IMMEDIATELY.
- DOWN GUY OFFSETS ARE DENOTED AS LEFT (LT) OR RIGHT (RT) OF THE SOUTHBOUND TRACK CENTERLINE LOOKING IN THE DIRECTION OF INCREASING STATIONING.
- FOR POLE EXTENSION DETAILS REFER TO DWG PD271.
- DOWN GUY ASSEMBLIES SHALL BE CONNECTED TO THE SAME HOLE (CLOSEST TO THE STRUCTURES) ON FOUNDATION TYPE FG-1B.
- INSTALLATION OF POLE EXTENSION ASSEMBLY REQUIRES TEMPORARY REMOVAL OF EXISTING SURGE ARRESTERS AND REINSTALLING AFTER INSTALLATION OF POLE EXTENSION ASSEMBLY.
- INSTALLATION OF POLE EXTENSION ASSEMBLY REQUIRES ADJUSTMENTS TO THE EXISTING MPA TERMINATION.
- INSTALLATION OF POLE EXTENSION ASSEMBLY REQUIRES ADJUSTMENTS TO THE PHILLYSTRAN (ANCILLARY) KEVLAR ROPE.

photo Jun 22, 2020 - 2:51pm \\new00\omerc2\JOBS\68891 via capital exp\assess\1t extension\TECH\PROD\OCS\TECH\PROD\CAD\PD\_801PD302.dwg

NO.	DATE	REVISIONS
A	06/20	95% SUBMITTAL SET



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Fax (408) 451-6942

DESIGNED: G. KOLA  
CHECKED: P. YAVARI  
DRAWN: G. KOLA  
CADD FILE NAME: 801PD302.dwg

**Santa Clara Valley Transportation Authority**

APPROVED

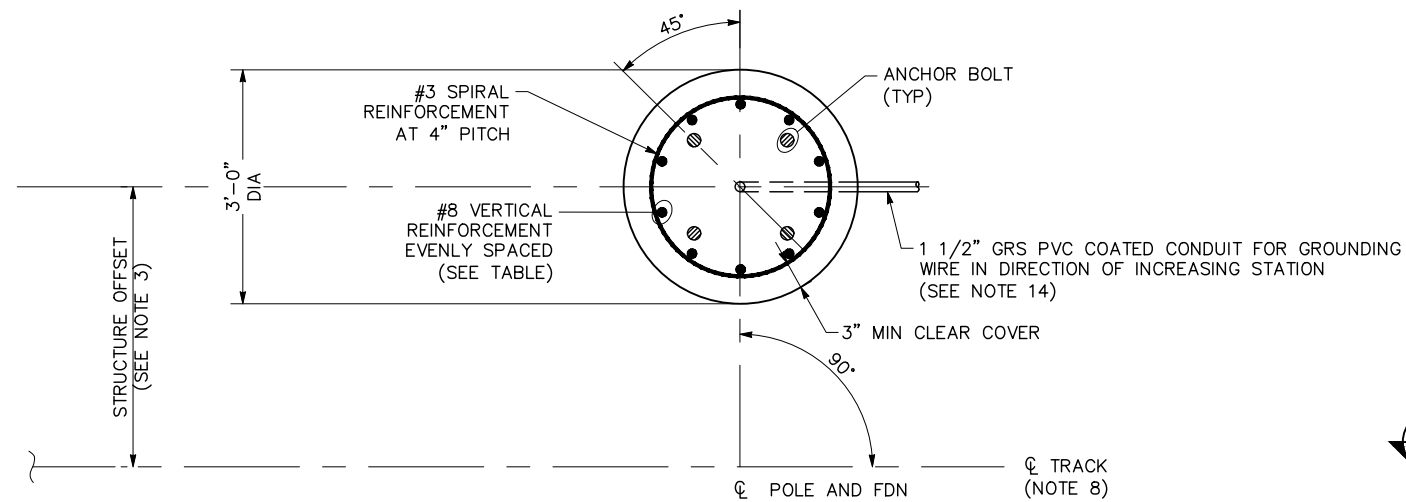
**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 5/22/2020  
SCALE: NTS  
SUBMITTAL DATE: 06/29/20  
BOARD APPROVAL DATE:

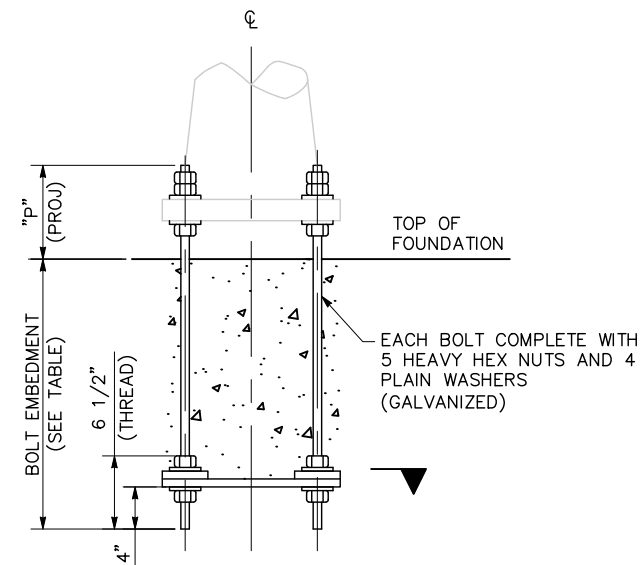
EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
OCS PARALLEL FEEDERS 27-28  
STRUCTURE AND FOUNDATION SCHEDULE

PCA NO.: 000  
CONTRACT NO.: C801  
FILE LOCATION: PROJECTWISE

SHEET OF: PD302  
REVISION: A

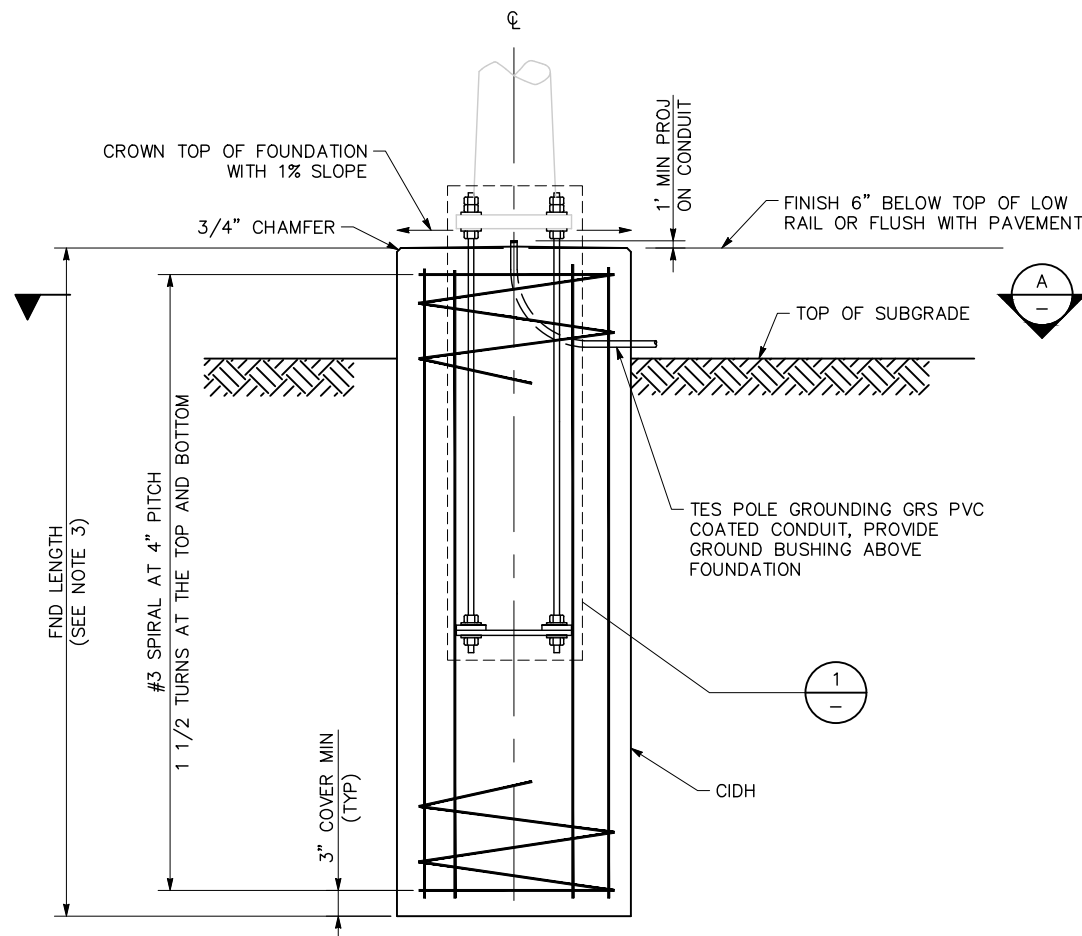


**A** SECTION  
(NTS)

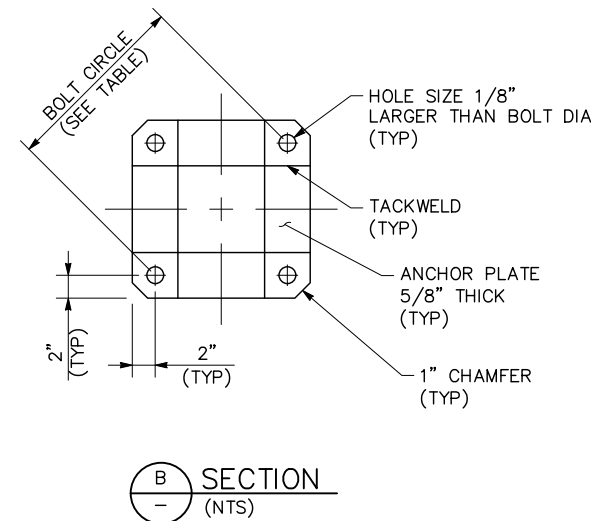


ELEVATION

**1** DETAIL  
ANCHOR BOLTS



ELEVATION FOUNDATION TYPE FS#  
SCALE: NTS



**B** SECTION  
(NTS)

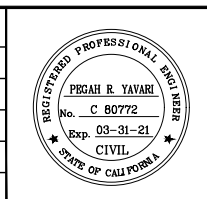
**NOTES:**

- FOR ABBREVIATIONS, LEGEND, AND GENERAL NOTES SEE DWGS PG001, PG002, AND PG003.
- POLE GROUNDING CONDUIT ANGLE REFERENCE LINE IS PARALLEL TO TRACK IN THE DIRECTION OF INCREASING TRACK STATIONING.
- FOR FOUNDATION OFFSET, LOCATION, AND FOUNDATION LENGTH SEE DWG PD301.
- ANCHOR BOLTS SHALL BE ASTM F1554 GR55 WITH HEAVY HEXAGONAL NUTS AS PER ASTM A563 AND FLAT WASHERS AS PER ASTM F436.
- ALL BOLTS, PLATES, NUTS, AND WASHERS SHALL BE HOT-DIP GALVANIZED AS PER ASTM A153.
- FOR POLE GROUNDING, PROVIDE CONDUITS, CAPS AND PROTECTION.
- CAP AND PROTECT THE CONDUITS DURING AND AFTER CONSTRUCTION.
- FOR CURVED TRACK, THE REFERENCE LINE SHOWN PERPENDICULAR TO TRACK CENTERING SHALL BE RADIAL TO THE CURVE.
- PROTECT ANCHOR BOLTS ABOVE TOP OF FOUNDATION FROM DAMAGE AND RESIDUAL CONCRETE DURING AND AFTER FOUNDATION CONSTRUCTION.
- CONDUIT SHALL BE PROVIDED WITH TES POLE FOUNDATIONS FOR GROUND WIRE.
- FOR TES STRUCTURE GROUND DETAIL SEE DWG PD228.
- MINIMUM CONCRETE COMPRESSIVE STRENGTH SHALL BE 4000 PSI. REBAR SHALL BE ASTM A615 GRADE 60.
- PROVIDE 20 HEAVY HEX NUTS AND 16 WASHERS FOR EACH FOUNDATION, AND 2 SPARE NUTS AND 2 SPARE WASHERS PER FOUNDATION.
- AT TERMINATION TES STRUCTURES LOCATIONS, GROUNDING CONDUIT SHALL BE LOCATED TOWARDS DOWN GUY FOUNDATION.

FOUNDATION TYPE	VERTICAL REBAR		BOLT CIR DIA	BOLT DIA	THREAD/BOLT PROJ "P"	BOLT EMBEDMENT
	SIZE	TOTAL				
FS2	#8	10	22"	2"	11"	61"
FS3	#8	10	22"	2 1/2"	12"	60"

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NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



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DESIGNED: G. KOLA CHECKED: P. YAVARI  
 DRAWN: D. KEO CADD FILE NAME: 801PD303.dwg

**Santa Clara Valley Transportation Authority**

**BKF** 100+ YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

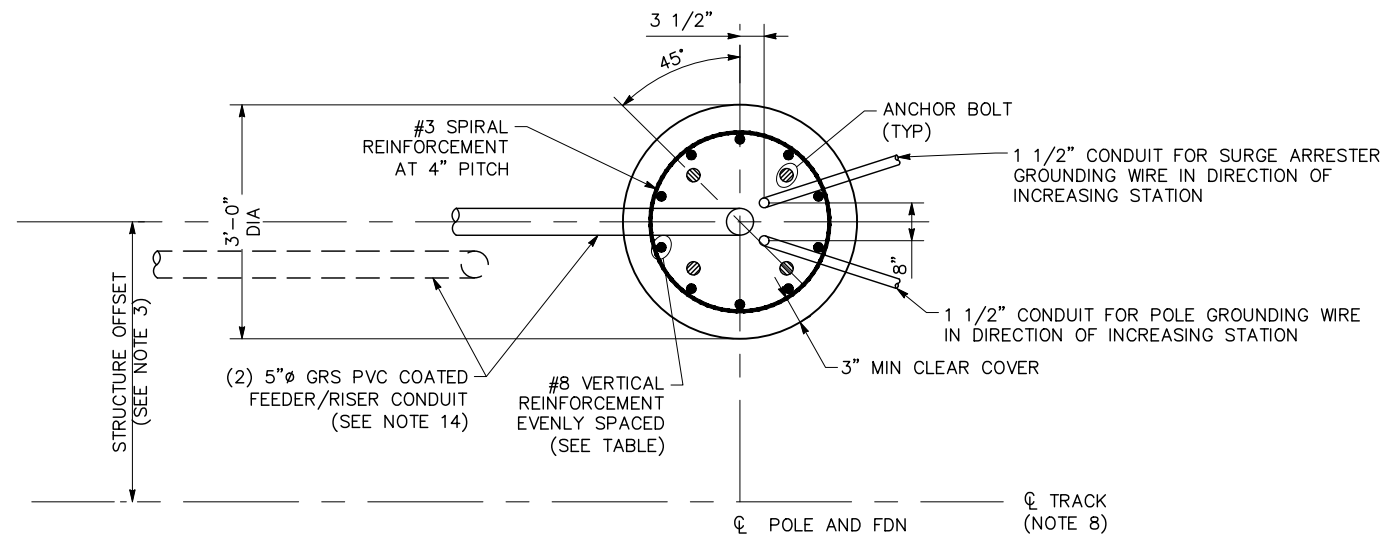
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 SUBMITTAL DATE: 06/29/20 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 OVERHEAD CONTACT SYSTEM  
 STANDARD POLE FOUNDATION DETAIL  
 FS2, FS3

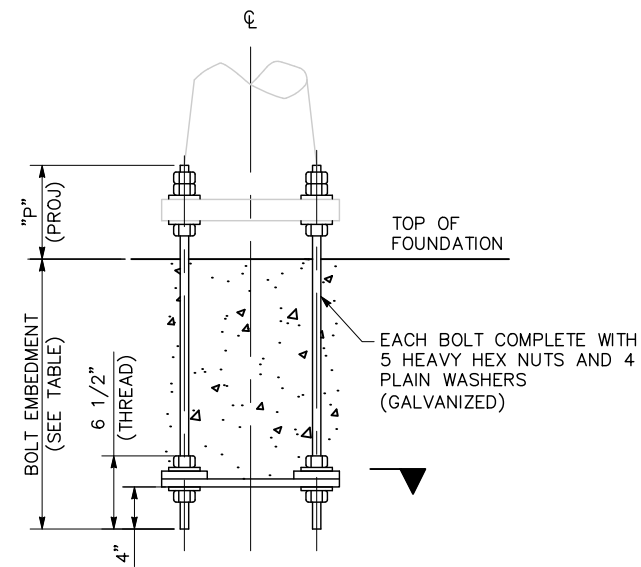
SHEET OF PD303 REVISION C

PCA NO: 000 CONTRACT NO: C801 FILE LOCATION: PROJECTWISE



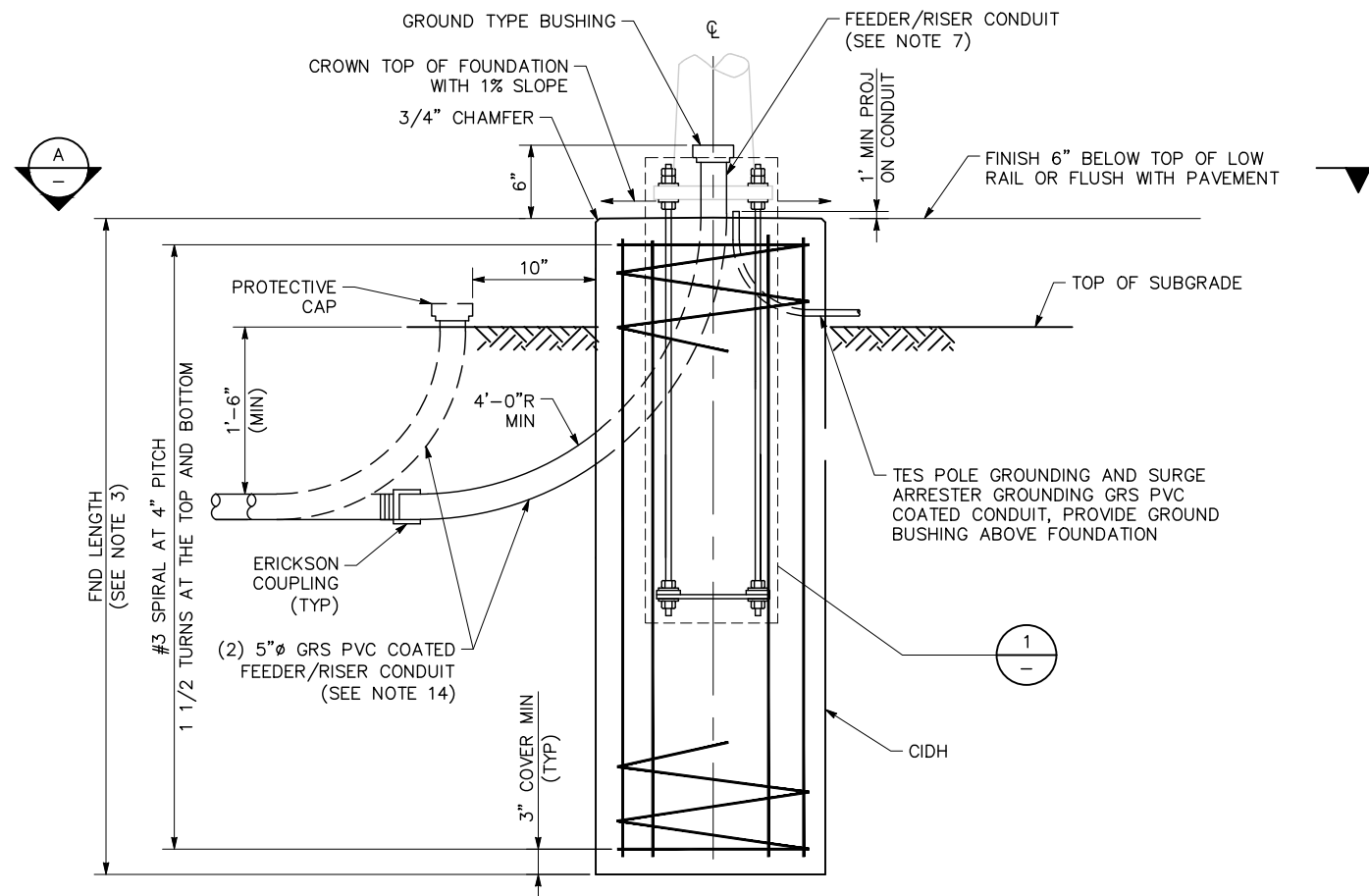


**SECTION A**  
SECTION FF#



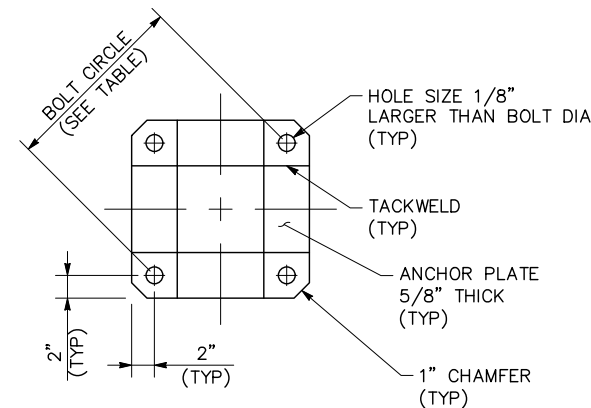
**ELEVATION**

**1**  
DETAIL ANCHOR BOLTS



**ELEVATION FOUNDATION TYPE FF#**

SCALE: NTS



**B**  
SECTION (NTS)

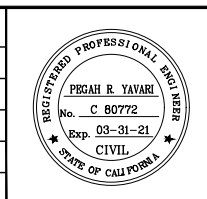
CAST-IN-DRILLED-HOLE FOUNDATION TABLE						
FOUNDATION TYPE	VERTICAL REBAR		BOLT CIR DIA	BOLT DIA	THREAD/BOLT PROJ "P"	BOLT EMBEDMENT
	SIZE	TOTAL				
FF2	#8	10	22"	2"	11"	61"
FF3	#8	10	22"	2 1/2"	12"	60"

**NOTES:**

- FOR ABBREVIATIONS, LEGEND, AND GENERAL NOTES SEE DWGS PG001, PG002, AND PG003.
- POLE GROUNDING CONDUIT ANGLE REFERENCE LINE IS PARALLEL TO TRACK IN THE DIRECTION OF INCREASING TRACK STATIONING.
- FOR FOUNDATION OFFSET, LOCATION, AND FOUNDATION LENGTH SEE DWG PD301.
- ANCHOR BOLTS SHALL BE ASTM F1554 GR55 WITH HEAVY HEXAGONAL NUTS AS PER ASTM A563 AND FLAT WASHERS AS PER ASTM F436.
- ALL BOLTS, PLATES, NUTS, AND WASHERS SHALL BE HOT-DIP GALVANIZED AS PER ASTM A153.
- FOR POLE GROUNDING, PROVIDE CONDUITS, CAPS AND PROTECTION.
- CAP AND PROTECT THE CONDUITS DURING AND AFTER CONSTRUCTION.
- FOR CURVED TRACK, THE REFERENCE LINE SHOWN PERPENDICULAR TO TRACK CENTERING SHALL BE RADIAL TO THE CURVE.
- PROTECT ANCHOR BOLTS ABOVE TOP OF FOUNDATION FROM DAMAGE AND RESIDUAL CONCRETE DURING AND AFTER FOUNDATION CONSTRUCTION.
- CONDUIT SHALL BE PROVIDED WITH TES POLE FOUNDATIONS FOR GROUND WIRE.
- FOR GROUNDING DETAILS SEE DWGS PD228 AND PD229.
- MINIMUM CONCRETE COMPRESSIVE STRENGTH SHALL BE 4000 PSI. REBAR SHALL BE ASTM A615 GRADE 60.
- PROVIDE 20 HEAVY HEX NUTS AND 16 WASHERS FOR EACH FOUNDATION, AND 2 SPARE NUTS AND 2 SPARE WASHERS PER FOUNDATION.
- FOR FEEDER CONDUIT ORIENTATION, SEE COMBINED SYSTEM DUCTBANK DWGS.

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NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



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DRAWN: G. KOLA  
CADD FILE NAME: 801PD304.dwg

**Santa Clara Valley Transportation Authority**

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**BKF** 100+ YEARS  
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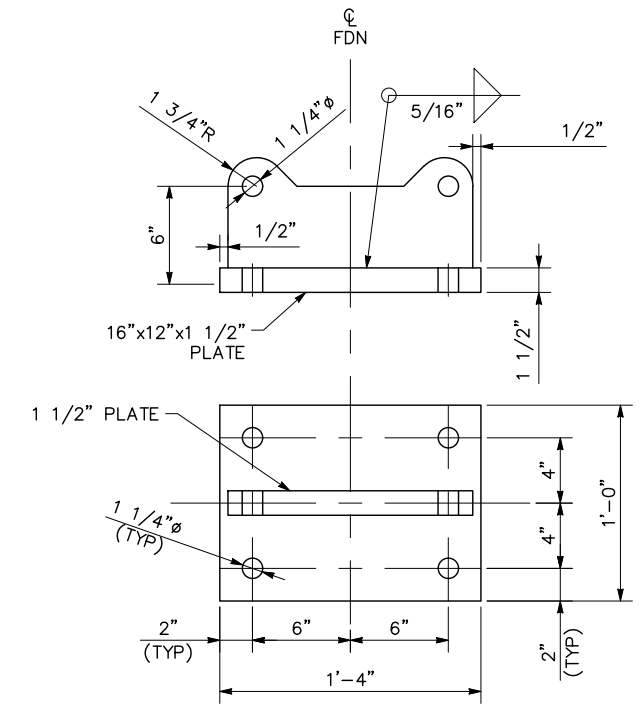
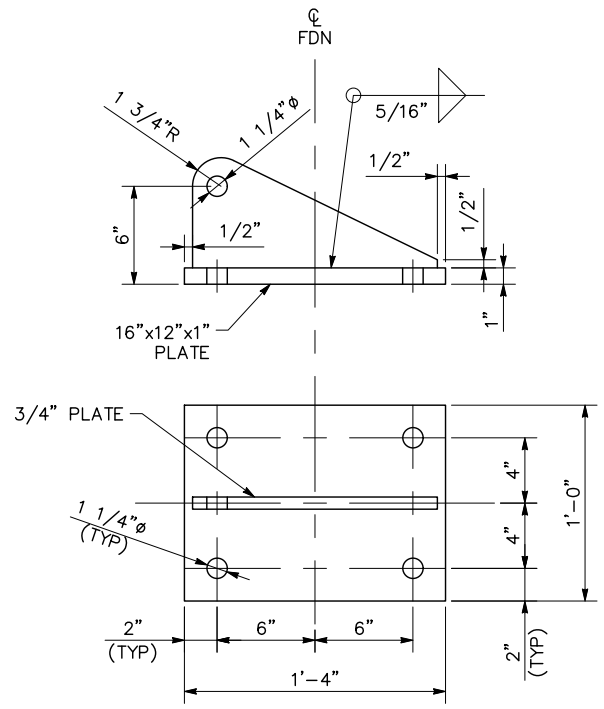
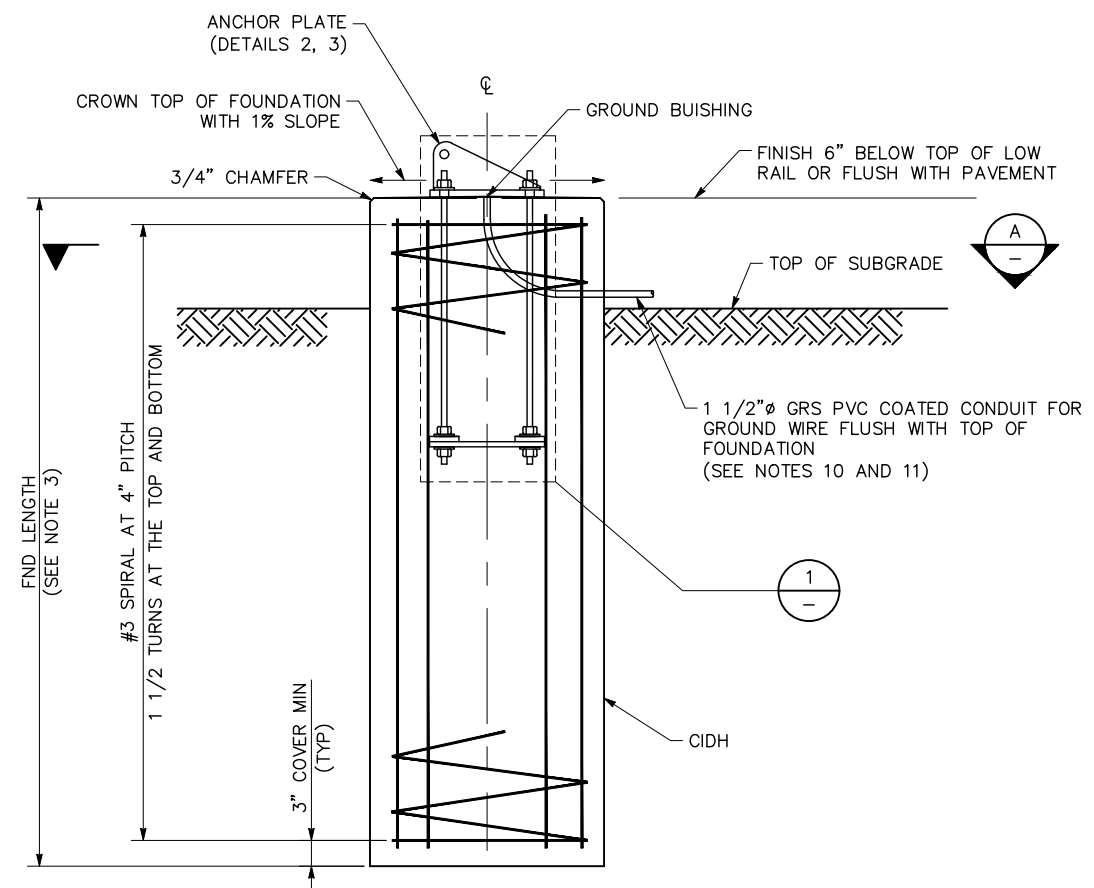
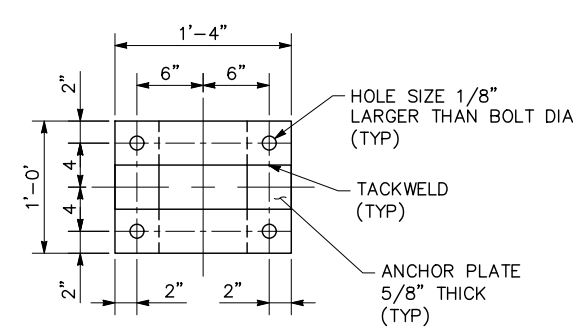
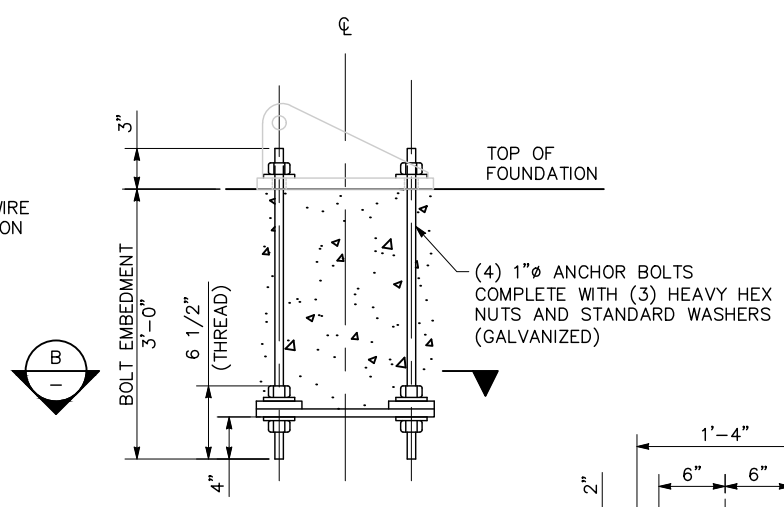
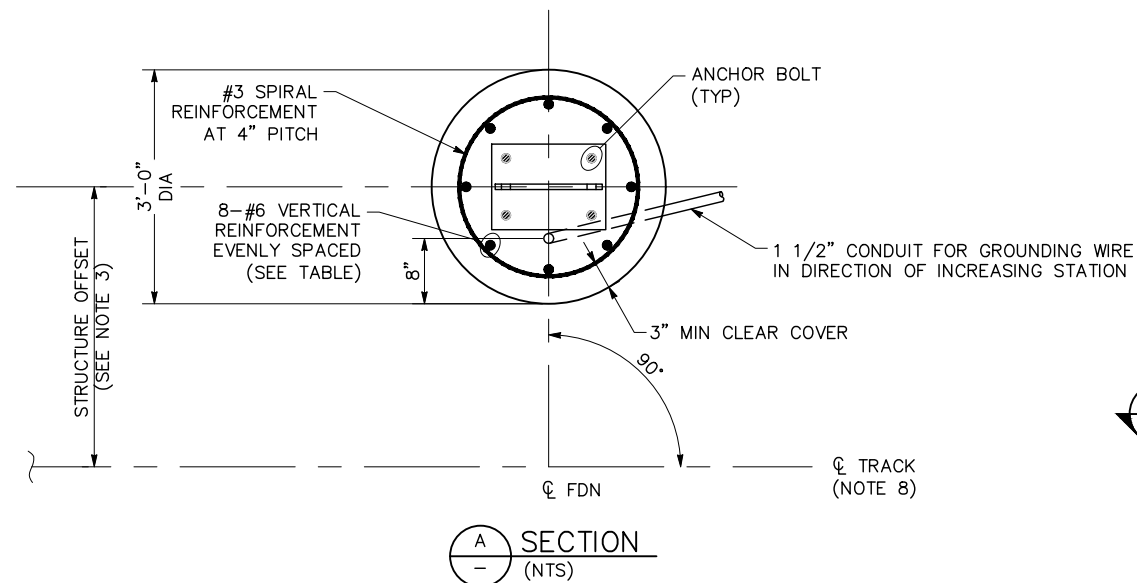
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SUBMITTAL DATE: 06/29/20

SCALE: NTS  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
OVERHEAD CONTACT SYSTEM  
FEEDER POLE FOUNDATION DETAIL  
FF2, FF3

PCA NO.: 000  
CONTRACT NO.: C801  
FILE LOCATION: PROJECTWISE

SHEET OF  
DRAWING NO.: PD304  
REVISION: B



**NOTES:**

- FOR ABBREVIATIONS, LEGEND, AND GENERAL NOTES SEE DWGS PG001, PG002, AND PG003.
- POLE GROUNDING CONDUIT ANGLE REFERENCE LINE IS PARALLEL TO TRACK IN THE DIRECTION OF INCREASING TRACK STATIONING.
- FOR FOUNDATION OFFSET, LOCATION, AND FOUNDATION LENGTH SEE DWG PD301.
- ANCHOR BOLTS SHALL BE ASTM F1554 GR55 WITH HEAVY HEXAGONAL NUTS AS PER ASTM A563 AND FLAT WASHERS AS PER ASTM F436.
- ALL BOLTS, PLATES, NUTS, AND WASHERS SHALL BE HOT-DIP GALVANIZED AS PER ASTM A153.
- FOR POLE GROUNDING, PROVIDE CONDUITS, CAPS AND PROTECTION. PROVIDE A YELLOW RIBBON TO MARK THE END OF CONDUIT BENEATH THE BALLAST.
- CAP AND PROTECT THE CONDUITS DURING AND AFTER CONSTRUCTION.
- FOR CURVED TRACK, THE REFERENCE LINE SHOWN PERPENDICULAR TO TRACK CENTERING SHALL BE RADIAL TO THE CURVE.
- PROTECT ANCHOR BOLTS ABOVE TOP OF FOUNDATION FROM DAMAGE AND RESIDUAL CONCRETE DURING AND AFTER FOUNDATION CONSTRUCTION.
- CONDUIT SHALL BE PROVIDED WITH DOWN GUY FOUNDATIONS FOR GROUND WIRE.
- FOR GUY ANCHOR GROUNDING DETAIL SEE DWG PD228.
- MINIMUM CONCRETE COMPRESSIVE STRENGTH SHALL BE 4000 PSI. REBAR SHALL BE ASTM A615 GRADE 60.
- PROVIDE 12 HEAVY HEX NUTS AND 12 WASHERS FOR EACH FOUNDATION, AND 2 SPARE NUTS AND 2 SPARE WASHERS PER FOUNDATION.

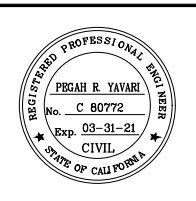
ELEVATION FOUNDATION TYPES FG-1A/FG-1B  
SCALE: NTS

DETAIL 2  
ANCHOR PLATE - FG-1A

DETAIL 3  
ANCHOR PLATE - FG-1B

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NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



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CADD FILE NAME: 801PD305.dwg

**Santa Clara Valley Transportation Authority**

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CAISO FILE DATE: 5/15/2020  
SCALE: NTS  
SUBMITTAL DATE: 06/29/20  
BOARD APPROVAL DATE:

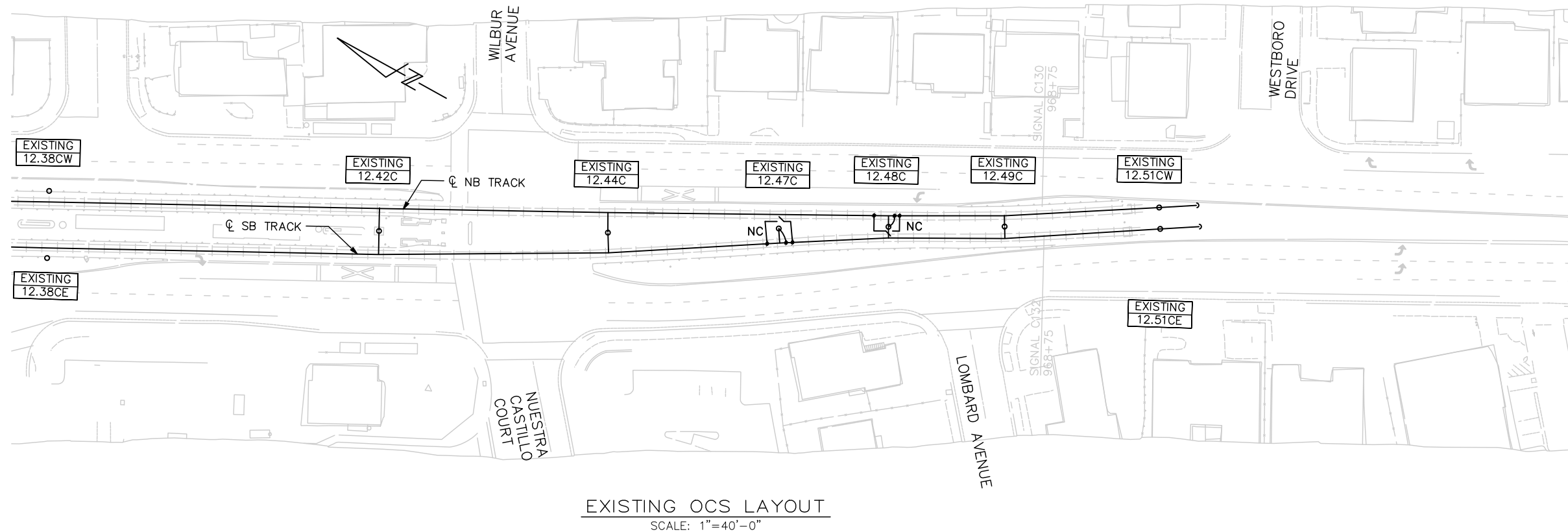
EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
OVERHEAD CONTACT SYSTEM  
DOWN GUY FOUNDATION DETAIL  
FG-1A, FG-1B

PCA NO: 000  
CONTRACT NO: C801  
FILE LOCATION: PROJECTWISE

SHEET OF: PD305  
REVISION: B

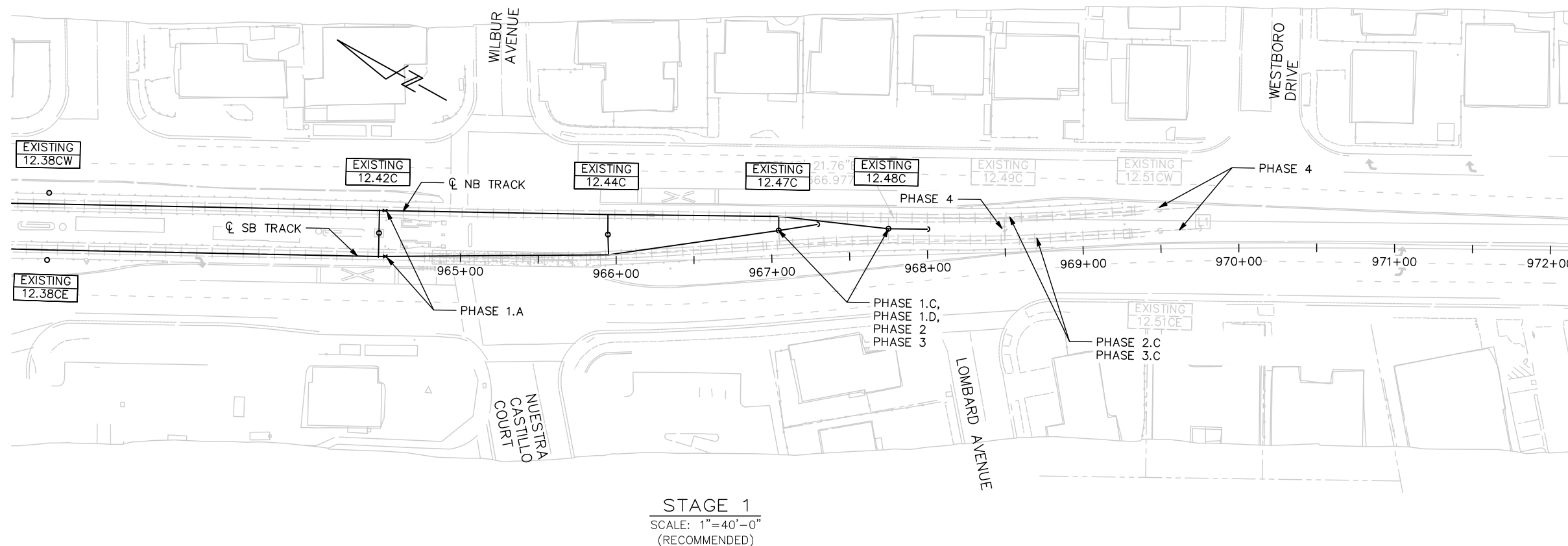
**STAGING PLAN NOTES (GENERAL):**

1. STAGING PLANS ARE INCLUDED TO PROVIDE THE CONTRACTOR WITH A RECOMMENDED APPROACH TO HELP UNDERSTAND DESIGN INTENT AND FOR MATERIAL PLANNING. FINAL STAGING TO BE DETERMINED BY THE CONTRACTOR BASED ON ACTUAL MEANS AND METHODS.
2. ANY CONTRACTOR PROPOSED REVISIONS TO STAGING APPROACH SHALL BE SUBMITTED TO VTA'S ENGINEER FOR REVIEW AND APPROVAL.
3. CONTRACTOR STAGING SHALL BE PERFORMED TO PROVIDE MINIMAL DISRUPTION TO VTA SERVICE.



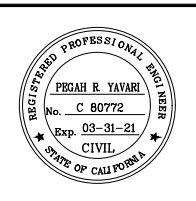
**STAGE 1: RECOMMENDED STAGING APPROACH**

- PHASE 1: GENERAL WORK.**
- A. INSTALL TEMPORARY IN-SPAN INSULATORS FOR BOTH MESSENGER WIRE AND CONTACT WIRE AT EXISTING TES POLE 12.42C.
  - B. UPON COMPLETION OF INSTALLATION OF TEMPORARY SECTION INSULATORS, THE DISCONNECT SWITCH FOR THE AIRBREAK NORTH OF ALUM ROCK STATION SHALL BE ON THE "NORMALLY CLOSED" POSITION.
  - C. REMOVE FEEDER CABLES FROM DISCONNECT SWITCH TO OCS ON TES POLES 12.47C AND 12.48C.
  - D. INSTALL TEMPORARY AND DOWN GUYS AT TES POLES 12.47C AND 12.48C.
- PHASE 2: NORTHBOUND WORK.**
- A. INSTALL TEMPORARY CANTILEVER ARM FOR NB TRACK AT TES POLE 12.47C AND TEMPORARY COUNTERWEIGHT ASSEMBLY AT TES POLES 12.48C.
  - B. CUT NORTHBOUND CATERINARY WIRES AND TERMINATE ON TEMPORARY COUNTERWEIGHT ASSEMBLY AT TES POLE 12.48C. MAKE CATERINARY HANGER ADJUSTMENTS AS REQUIRED.
  - C. REMOVE ABANDONED CATERINARY WIRES FROM APPROXIMATE STATION 967+80 TO EXISTING POLE 12.51CW.
- PHASE 3: SOUTHBOUND WORK.**
- A. INSTALL TEMPORARY COUNTERWEIGHT ASSEMBLY AT TES POLES 12.47C.
  - B. CUT SOUTHBOUND CATERINARY WIRES AND TERMINATE ON TEMPORARY COUNTERWEIGHT ASSEMBLY AT TES POLE 12.47C. MAKE CATERINARY HANGER ADJUSTMENTS AS REQUIRED.
  - C. REMOVE CUT-AWAY CATERINARY WIRES FROM APPROXIMATE STATION 967+10 TO EXISTING POLE 12.51CE.
  - D. REMOVE EXISTING CANTILEVER ARM AT TES POLE 12.47C.
- PHASE 4: REMOVE EXISTING TES POLE 12.49C, 12.51CW, AND 12.51CE AND THEIR ASSOCIATED HARDWARE. DEMOLISH FOUNDATIONS TO A MINIMUM OF 3 FEET BELOW BALLAST. RETURN ALL POLE MOUNTED EQUIPMENT AND POLES TO VTA.**



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NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



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DRAWN: G. KOLA  
CADD FILE NAME: 801PD401.dwg

**Santa Clara Valley Transportation Authority**

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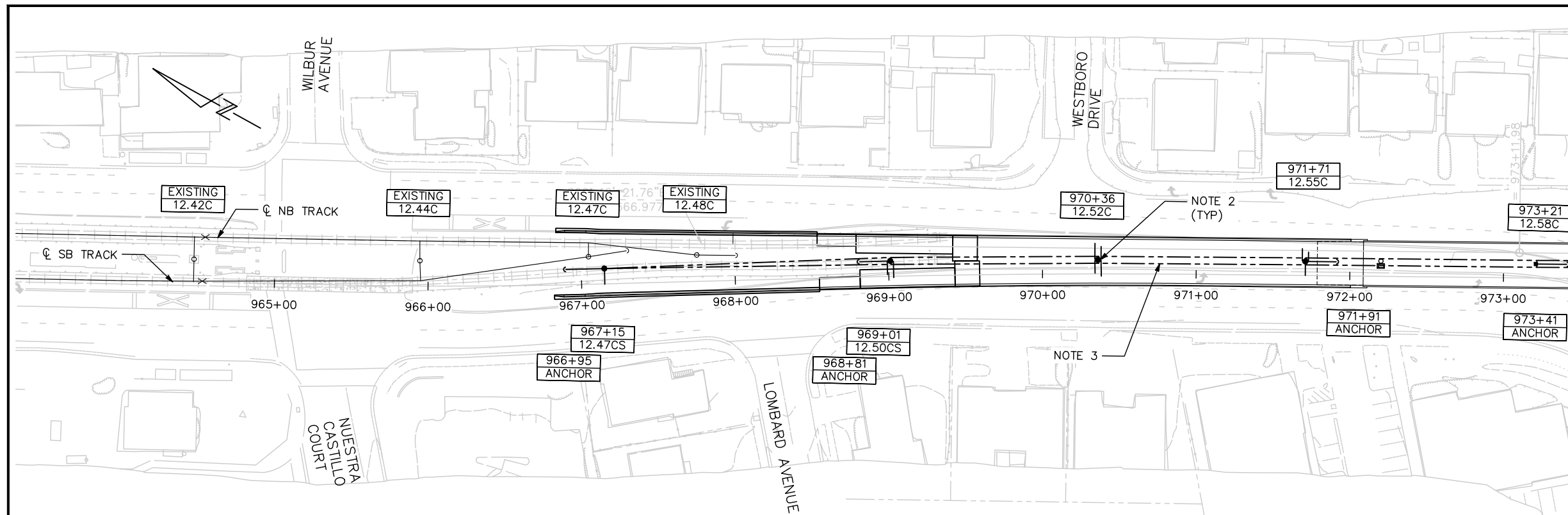
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SUBMITTAL DATE: 06/29/20

SCALE: NTS  
BOARD APPROVAL DATE:

**EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
OVERHEAD CONTACT SYSTEM  
STAGING PLANS  
SHEET 1 OF 3**

PCA NO.: 000  
CONTRACT NO.: S801  
FILE LOCATION: PROJECTWISE

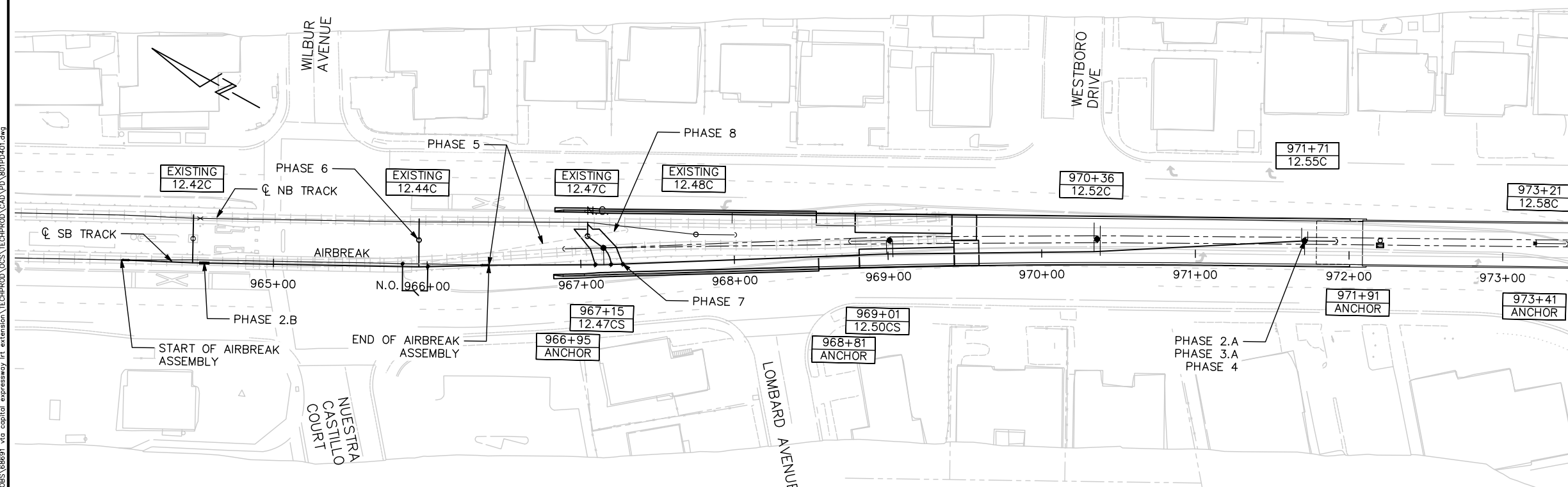
SHEET OF: PD401  
REVISION: B



**STAGE 2: RECOMMENDED STAGING APPROACH**

1. OCS WORK TO BE COORDINATED WITH TRACK AND STRUCTURE WORK.
2. INSTALL NEW TES POLE FOUNDATIONS, POLES, AND THEIR RESPECTIVE ASSEMBLIES AS SHOWN UPON COMPLETION OF RETAINING WALL AND ELEVATED STRUCTURE.
3. INSTALL PARALLEL FEEDER CABLES.

**STAGE 2**  
SCALE: 1"=40'-0"  
(RECOMMENDED)



**STAGE 3: RECOMMENDED STAGING APPROACH**

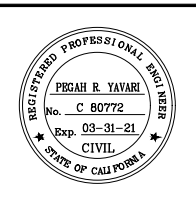
- PHASE 1:** INSTALL NEW CANTILEVER ARMS AT TES POLES 12.42C AND 12.44C TO ACCOMMODATE NEW AIRBREAK ASSEMBLY. ATTACH EXISTING CATENARY LINES, SOUTHBOUND AND NORTHBOUND, TO NEW CANTILEVER ARMS.
- PHASE 2:**
- A. ATTACH NEW MESSENGER WIRE (TEMPORARY FIXED TERMINATION) ON TES POLE 12.55C, AND RUN TO TEMPORARY SECTION INSULATOR AT TES POLE 12.42C. PULL UP TIGHT TO SAME TENSION AS EXISTING MESSENGER WIRE.
  - B. SPLICE NEW MESSENGER WIRE TO EXISTING MESSENGER WIRE AND CUT AWAY EXISTING TAIL TO TES POLE 12.47C.
- PHASE 3:**
- A. ATTACH NEW CONTACT WIRE (TEMPORARY FIXED TERMINATION) ON TES POLE 12.55C, AND RUN TO "START OF AIRBREAK ASSEMBLY" AND CONNECT TO EXISTING CONTACT WIRE WITH TWIN CONTACT WIRE CLAMPS.
  - B. EXISTING CONTACT WIRE DEADENDED TO TES POLE 12.47C WILL GO SLACK. LEAVE IT IN PLACE.
- PHASE 4:** CONNECT NEW MESSENGER AND CONTACT WIRE TO COUNTERWEIGHT YOKE PLATE AT TES POLE 12.55C AND TENSION TO PULL THE WEIGHTS UP TO THE CORRECT TEMPERATURE POSITION.
- PHASE 5:** TAKE SLACK EXISTING CONTACT WIRE AND PULL PARALLEL WITH NEW CONTACT WIRE. ADJUST TENSION FOR BOTH CONTACT WIRES TO 1500 LBS (AT 60°F) AND CONNECT TO NEW CONTACT WIRE AT "END OF AIRBREAK ASSEMBLY" WITH TWIN CONTACT WIRE CLAMPS. REMOVE REMAINING WIRES TO TES POLE 12.47C.
- PHASE 6:** INSTALL CATENARY HANGERS, MESSENGER AND CONTACT WIRE, IN-SPAN INSULATION ASSEMBLIES AND ADJUST. INSTALL BY-PASS DISCONNECT SWITCH AT TES POLE 12.44C FOR SOUTHBOUND CATENARY LINE.
- PHASE 7:** INSTALL THE FEEDER ARRANGEMENT TO THE NEW AND FINAL CATENARY ALIGNMENT FOR SOUTHBOUND.
- PHASE 8:** REMOVE TEMPORARY DOWN GUY AT TES POLE 12.47C. DEMOLISH FOUNDATION TO A MINIMUM OF 3 FEET BELOW BALLAST.

**STAGE 3**  
SCALE: 1"=40'-0"  
(RECOMMENDED)



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NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



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DESIGNED: G. KOLA CHECKED: P. YAVARI  
DRAWN: G. KOLA CADD FILE NAME: 801PD401.dwg

**Santa Clara Valley Transportation Authority**

**BKF** 100+ YEARS  
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CAAD FILE DATE: 10/10/2017 SCALE: NTS  
SUBMITTAL DATE: 06/29/20 BOARD APPROVAL DATE:

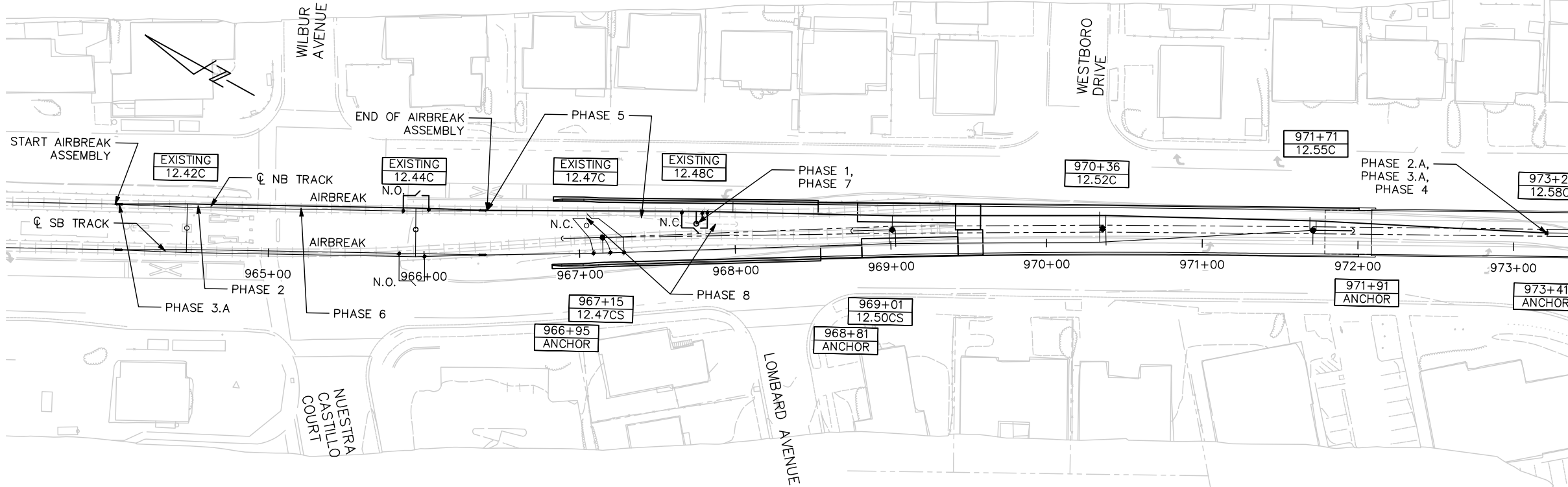
**EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT OVERHEAD CONTACT SYSTEM STAGING PLANS SHEET 2 OF 3**

PCB NO: 000 CONTRACT NO: S801 FILE LOCATION: PROJECTWISE

SHEET OF: PD402  
DRAWING NO: PD402  
REVISION: B

**STAGE 4: RECOMMENDED STAGING APPROACH**

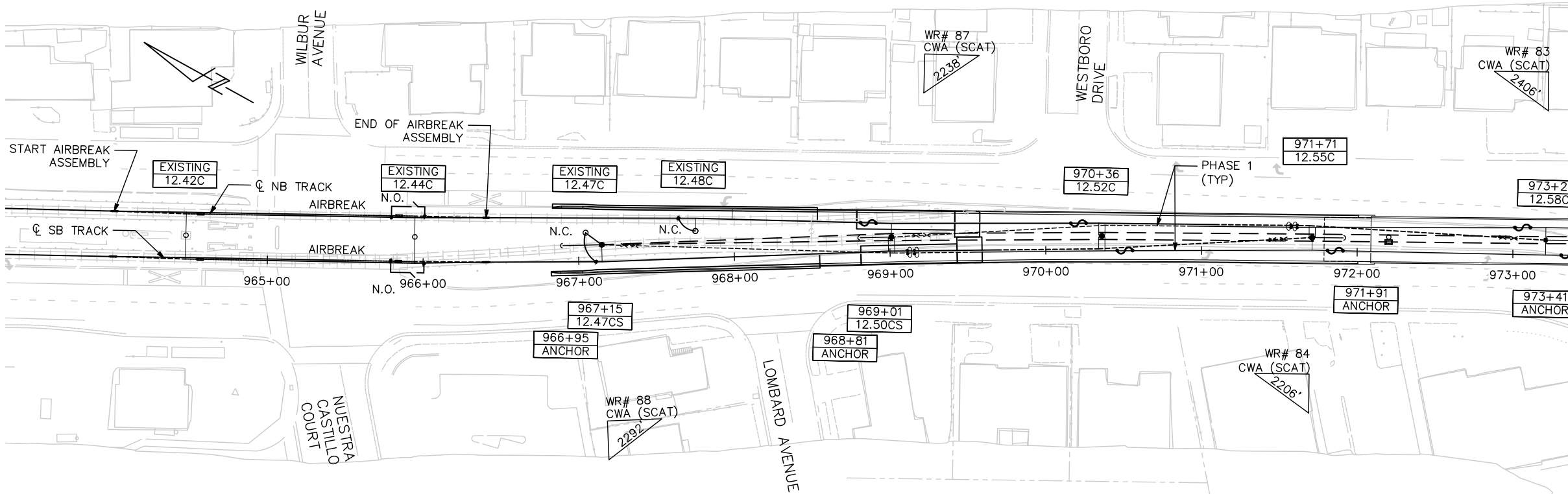
- PHASE 1: INSTALL NEW CANTILEVER ARM AT TES POLE 12.48C FOR NORTHBOUND CATENARY ALIGNMENT.
- PHASE 2:
  - A. ATTACH NEW MESSENGER WIRE (TEMPORARY FIXED TERMINATION) ON TES POLE 12.58C, AND RUN TO IN-SPAN INSULATOR AT 12.42C. PULL UP TIGHT TO SAME TENSION AS EXISTING MESSENGER WIRE.
  - B. SPLICE NEW MESSENGER WIRE TO EXISTING MESSENGER WIRE AND CUT AWAY EXISTING TAIL TO TES POLE 12.48C.
- PHASE 3:
  - A. ATTACH NEW CONTACT WIRE (TEMPORARY FIXED TERMINATION) ON TES POLE 12.58C, AND RUN TO "START OF AIRBREAK ASSEMBLY" AND CONNECT TO EXISTING CONTACT WIRE WITH TWIN CONTACT WIRE CLAMPS.
  - B. EXISTING CONTACT WIRE DEADENDED TO TES POLE 12.48C WILL GO SLACK. LEAVE IT IN PLACE.
- PHASE 4: CONNECT NEW MESSENGER AND CONTACT WIRE TO COUNTERWEIGHT YOKE PLATE AT TES POLE 12.58C AND TENSION TO PULL THE WEIGHTS UP TO THE CORRECT TEMPERATURE POSITION.
- PHASE 5: TAKE SLACK EXISTING CONTACT WIRE AND PULL PARALLEL WITH NEW CONTACT WIRE. ADJUST TENSION FOR BOTH CONTACT WIRES TO 1500 LBS (AT 60°F) AND CONNECT TO NEW CONTACT WIRE AT "END OF AIRBREAK ASSEMBLY" WITH TWIN CONTACT WIRE CLAMPS. REMOVE REMAINING WIRES TO TES POLE 12.48C.
- PHASE 6: INSTALL CATENARY HANGERS, MESSENGER AND CONTACT WIRE IN-SPAN INSULATION ASSEMBLIES AND ADJUST. INSTALL BY-PASS DISCONNECT SWITCH AT TES POLE 12.44C FOR SOUTHBOUND CATENARY LINE.
- PHASE 7: INSTALL THE FEEDER ARRANGEMENT TO THE NEW AND FINAL CATENARY ALIGNMENT FOR NORTHBOUND AT TES POLE 12.48C.
- PHASE 8: REMOVE TEMPORARY DOWN GUY AT TES POLE 12.48C. REMOVE TEMPORARY CANTILEVER ARM AT TES POLE 12.47C. DEMOLISH DOWN GUY FOUNDATION TO A MINIMUM OF 3 FEET BELOW BALLAST.



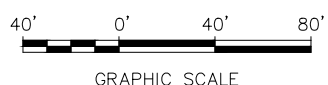
**STAGE 4**  
SCALE: 1"=40'-0"  
(RECOMMENDED)

**STAGE 5: RECOMMENDED STAGING APPROACH**

- PHASE 1: CONTINUE WITH THE INSTALLATION OF THE NEW CATENARY SYSTEM AS SHOWN ON THE OCS LAYOUT SCHEDULE.
- PHASE 2: NEW CATENARY LINES, SOUTH OF THE AIRBREAK ASSEMBLIES ARE TO BE DEAD, GROUNDED, AND SEPARATED ELECTRICALLY FROM THE EXISTING SYSTEM UNTIL TESTED AND ACCEPTED.
- PHASE 4: GROUND NEW WIRES WHERE TRANSMISSION LINE CROSSES TO PREVENT INDUCED VOLTAGE. REMOVE GROUNDS BEFORE TESTING AND ENERGIZATION.

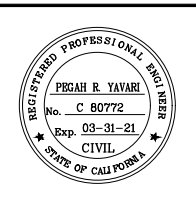


**STAGE 5**  
SCALE: 1"=40'-0"  
(RECOMMENDED)



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 CADD FILE NAME: 801PD401.dwg

**Santa Clara Valley Transportation Authority**

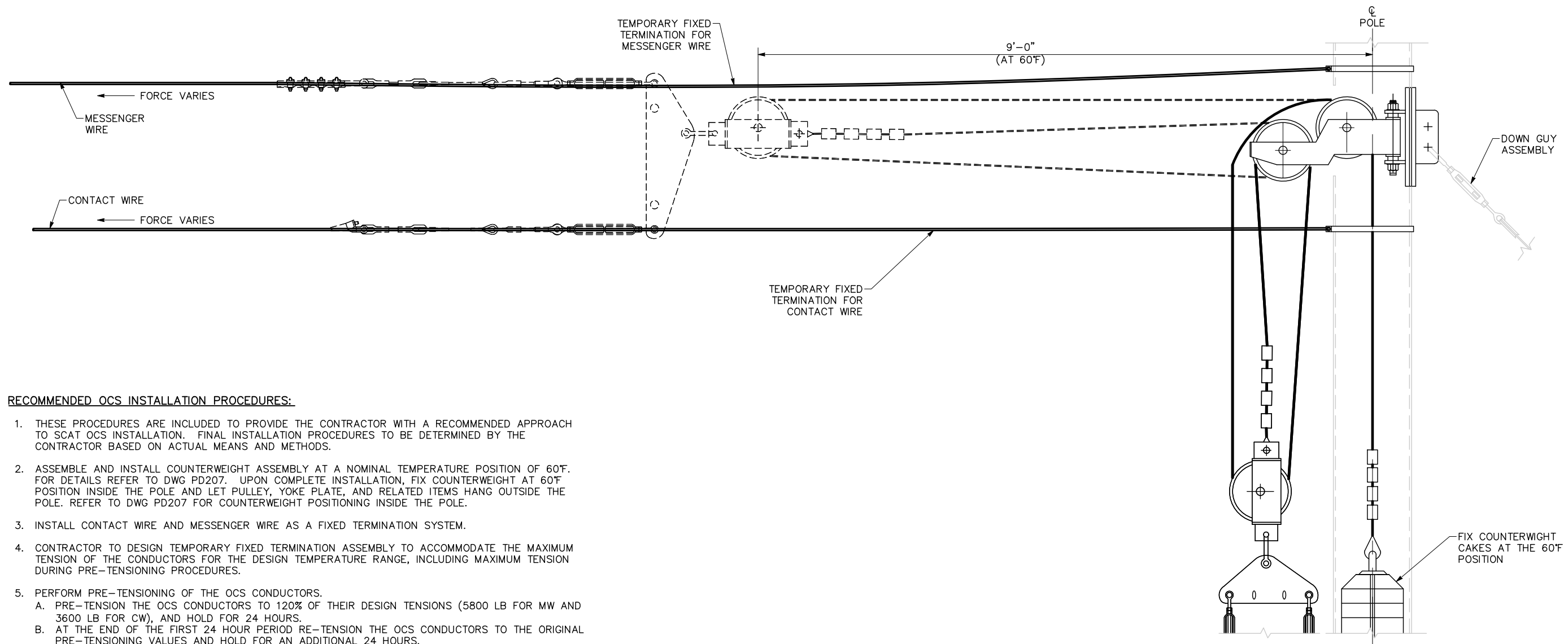
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CADD FILE DATE: 10/10/2017  
 SUBMITTAL DATE: 06/29/20  
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 BOARD APPROVAL DATE:

**EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 OVERHEAD CONTACT SYSTEM  
 STAGING PLANS  
 SHEET 3 OF 3**

SHEET OF: PD403  
 REVISION: B

PCA NO.: 000  
 CONTRACT NO.: S801  
 FILE LOCATION: PROJECTWISE

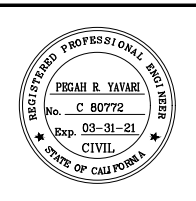


**RECOMMENDED OCS INSTALLATION PROCEDURES:**

1. THESE PROCEDURES ARE INCLUDED TO PROVIDE THE CONTRACTOR WITH A RECOMMENDED APPROACH TO SCAT OCS INSTALLATION. FINAL INSTALLATION PROCEDURES TO BE DETERMINED BY THE CONTRACTOR BASED ON ACTUAL MEANS AND METHODS.
2. ASSEMBLE AND INSTALL COUNTERWEIGHT ASSEMBLY AT A NOMINAL TEMPERATURE POSITION OF 60°F. FOR DETAILS REFER TO DWG PD207. UPON COMPLETE INSTALLATION, FIX COUNTERWEIGHT AT 60°F POSITION INSIDE THE POLE AND LET PULLEY, YOKE PLATE, AND RELATED ITEMS HANG OUTSIDE THE POLE. REFER TO DWG PD207 FOR COUNTERWEIGHT POSITIONING INSIDE THE POLE.
3. INSTALL CONTACT WIRE AND MESSENGER WIRE AS A FIXED TERMINATION SYSTEM.
4. CONTRACTOR TO DESIGN TEMPORARY FIXED TERMINATION ASSEMBLY TO ACCOMMODATE THE MAXIMUM TENSION OF THE CONDUCTORS FOR THE DESIGN TEMPERATURE RANGE, INCLUDING MAXIMUM TENSION DURING PRE-TENSIONING PROCEDURES.
5. PERFORM PRE-TENSIONING OF THE OCS CONDUCTORS.
  - A. PRE-TENSION THE OCS CONDUCTORS TO 120% OF THEIR DESIGN TENSIONS (5800 LB FOR MW AND 3600 LB FOR CW), AND HOLD FOR 24 HOURS.
  - B. AT THE END OF THE FIRST 24 HOUR PERIOD RE-TENSION THE OCS CONDUCTORS TO THE ORIGINAL PRE-TENSIONING VALUES AND HOLD FOR AN ADDITIONAL 24 HOURS.
  - C. DYNAMOMETER OR SIMILAR DEVICES SHALL BE USED FOR MEASURING CONDUCTOR TENSION.
6. TENSION OCS CONDUCTORS TO MATCH FIXED TERMINATION TEMPERATURES IN THE UNLOADED CONDITIONS. REFER TO DWG PG108.
7. INSTALL ALL HANGER ASSEMBLIES, IN-SPAN ASSEMBLIES, AND REGISTRATION ASSEMBLIES.
8. REGISTRATION ASSEMBLIES SHALL BE INSTALLED TO BE PERPENDICULAR TO TRACK.
9. CONNECT THE COUNTERWEIGHT ASSEMBLY TO OCS CONDUCTORS.
10. REMOVE THE FIXED TERMINATION, THE COUNTERWEIGHTS SHOULD AUTO-ADJUSTED TO THE APPROPRIATE POSITION AS FIXED TERMINATION TENSION COMES TO EQUILIBRIUM WITH COUNTERWEIGHT ASSEMBLY. VERIFY LOCATION OF COUNTERWEIGHT CAKES AND PULLEY ARE IN ACCORDANCE WITH THE VALUES SHOWN ON DWG PD207.
11. CONTRACTOR SHALL VERIFY THE LOCATION OF ALL THE REGISTRATIONS PER THE TABLES SHOWN ON DWG PG207.
12. MAKE THE NECESSARY ADJUSTMENTS, WHERE REQUIRED, TO ENSURE A VERTICAL YOKE PLATE AS A FINAL PRODUCT.
13. CUT AND REMOVE EXCESS CONTACT WIRE AND MESSENGER WIRE UPON ACCEPTED FINAL PRODUCT.

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**Santa Clara Valley Transportation Authority**

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APPROVED: [Signature]  
CADD FILE DATE: 5/15/2020  
SCALE: NTS  
SUBMITTAL DATE: 06/29/20  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
OVERHEAD CONTACT SYSTEM  
STAGGING PLANS  
SCAT OCS INSTALLATION RECOMMENDATION

PCA NO.: 000  
CONTRACT NO.: C801  
FILE LOCATION: PROJECTWISE

SHEET OF	DRAWING NO.
	PD404
REVISION	A

ABBREVIATIONS

ABS - AUTOMATIC BLOCK SIGNAL  
 AFO - AUDIO FREQUENCY OVERLAY  
 AMP - AMPERE  
 AVE - AVENUE  
 CL - CENTER LINE  
 CSD - COMBINED SYSTEM DUCTBANK  
 EOL - END OF LINE  
 EP - STATION ELECTRICAL PANEL  
 FO, FOC - FIBER OPTIC CABLE  
 GFI - GROUND FAULT INTERRUPTER  
 HCS/R - HANNING COMMUNICATIONS SYSTEM ROUTING EQUIPMENT  
 HZ - HERTZ  
 IJ - INSULATED JOINT  
 JB - JUNCTION BOX  
 KHZ - KILOHERTZ  
 LCP - LOCAL CONTROL PANEL  
 MCE - MAINTAINERS CALL LIGHT  
 NIC - NOT IN CONTRACT  
 OCP - OCCUPIED  
 PDX - PEDESTRIAN GRADE CROSSING  
 PSO - PHASE SHIFT OVERLAY  
 PS - POINT OF SWITCH

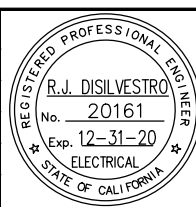
RD - ROAD  
 RR - RAIL ROAD  
 RCVR, RX - AFO TRACK RECEIVER  
 SC - SIGNAL CASE  
 SIG - WAYSIDE SIGNAL  
 SH - SIGNAL HOUSE, SHIELDED CABLE (CABLE PLAN)  
 SR - SIGNAL ROOM  
 ST - STREET (EDGE)  
 STA - STATIONING  
 SW - SWITCH  
 TBD - TO BE DETERMINED  
 TK - TRACK CIRCUIT  
 TPSS, SS - TRACTION POWER SUBSTATION  
 TRC - TUNED RECEIVER COUPLER  
 TOR - TOP OF RAIL  
 TRK - TRACK  
 TW - TWISTED PAIR  
 TWC - TRAIN TO WAYSIDE COMMUNICATION  
 VTA - SANTA CLARA VALLEY TRANSPORTATION AUTHORITY  
 XB - NEGATIVE RETURN CROSS BOND  
 XMTR, TX - TRANSMITTER

CIRCUIT NOMENCLATURE

AHR - SWITCH NORMAL HOME RELAY  
 ASR - APPROACH STICK RELAY  
 ASTER - APPROACH STICK TIMER RELAY  
 AVQR - ADVANCED VETAG ROUTE REQUEST RELAY  
 B12 - POSITIVE 12 VOLT DC ENERGY  
 B110 - POSITIVE 110 VOLT DC ENERGY  
 BHR - SWITCH REVERSE HOME RELAY  
 CANR - LOCAL CONTROL/CENTRAL CONTROL COMBINATION SIGNAL CANCEL REQUEST RELAY  
 C CNTL - CENTRAL CONTROL MODE RELAY  
 COM CHK - COMMUNICATION CHECK (SCADA KEEP ALIVE)  
 COR - CALL ON RELAY  
 CDXX/DXX - ROUTE DXX/DXX REQUEST  
 DXX/DXX - ROUTE NOMENCLATURE, SIGNAL DXX TO SIGNAL DXX  
 DR - DISTANCE RELAY  
 F - TRAFFIC  
 FL - FLASHING  
 FZR - TRAFFIC CONTROL RELAY  
 HDPR - HOME DISTANCE REPEATER RELAY  
 HITTER - HOME TIME DELAY RELAY  
 HR - HOME RELAY  
 LR - SWITCH LOCK RELAY  
 MODEM - MODULATION, DEMODULATION  
 MODE - LOCAL CONTROL/CENTRAL CONTROL MODE COMBINATION RELAY  
 N - NORMAL  
 N12 - NEGATIVE 12 VOLT DC ENERGY  
 N110 - NEGATIVE 110 VOLT DC ENERGY  
 NWCR - NORMAL SWITCH CORRESPONDENCE RELAY  
 NWR - NORMAL SWITCH CONTROL RELAY  
 NWSR - NORMAL SWITCH REQUEST STICK RELAY  
 OR - SWITCH OVERLOAD RELAY  
 OSTR - OVERSWITCH/INTERLOCKING COMBINATION TRACK RELAY  
 P - REPEATER  
 PB - PUSH BUTTON  
 POR - POWER OFF RELAY  
 QSR - ROUTE REQUEST STICK RELAY  
 R - REVERSE, OR RELAY  
 REMOTE REQ - REMOTE (CENTRAL CONTROL) MODE REQUEST RELAY  
 RCR - ROUTE CHECK RELAY  
 RWCR - REVERSE SWITCH CORRESPONDENCE RELAY  
 RWR - REVERSE SWITCH CONTROL RELAY  
 RWSR - REVERSE SWITCH REQUEST STICK RELAY  
 STOP - SIGNAL CANCEL RELAY  
 TER - TIMER RELAY  
 TR - TRACK RELAY  
 TPSR - COMBINATION TRACK REPEATER RELAY  
 VCR - TWC ROUTE REQUEST CANCEL RELAY  
 VDC - VOLTS DIRECT CURRENT  
 VQR - TWC ROUTE REQUEST RELAY  
 VPLC - VITAL PROGRAMMABLE LOGIC CONTROLLER

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A	06/18	35% SUBMITTAL SET



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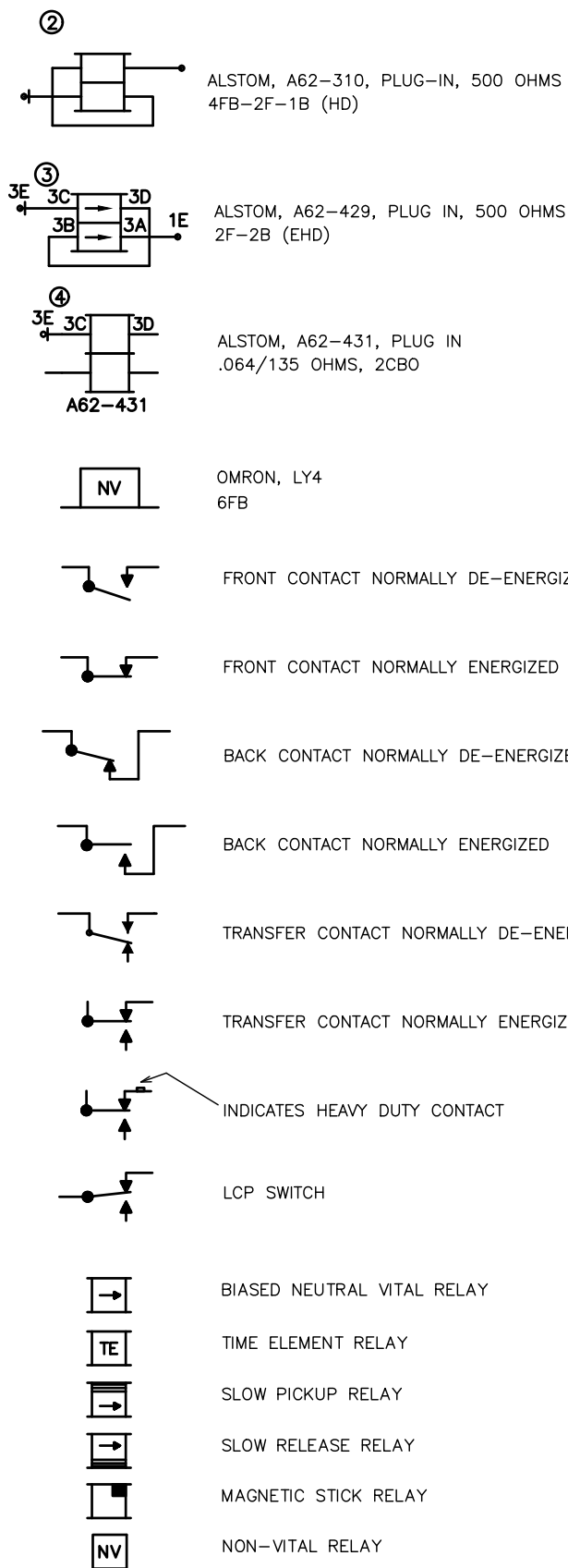
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EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 LRT SIGNALS  
 ABBREVIATIONS

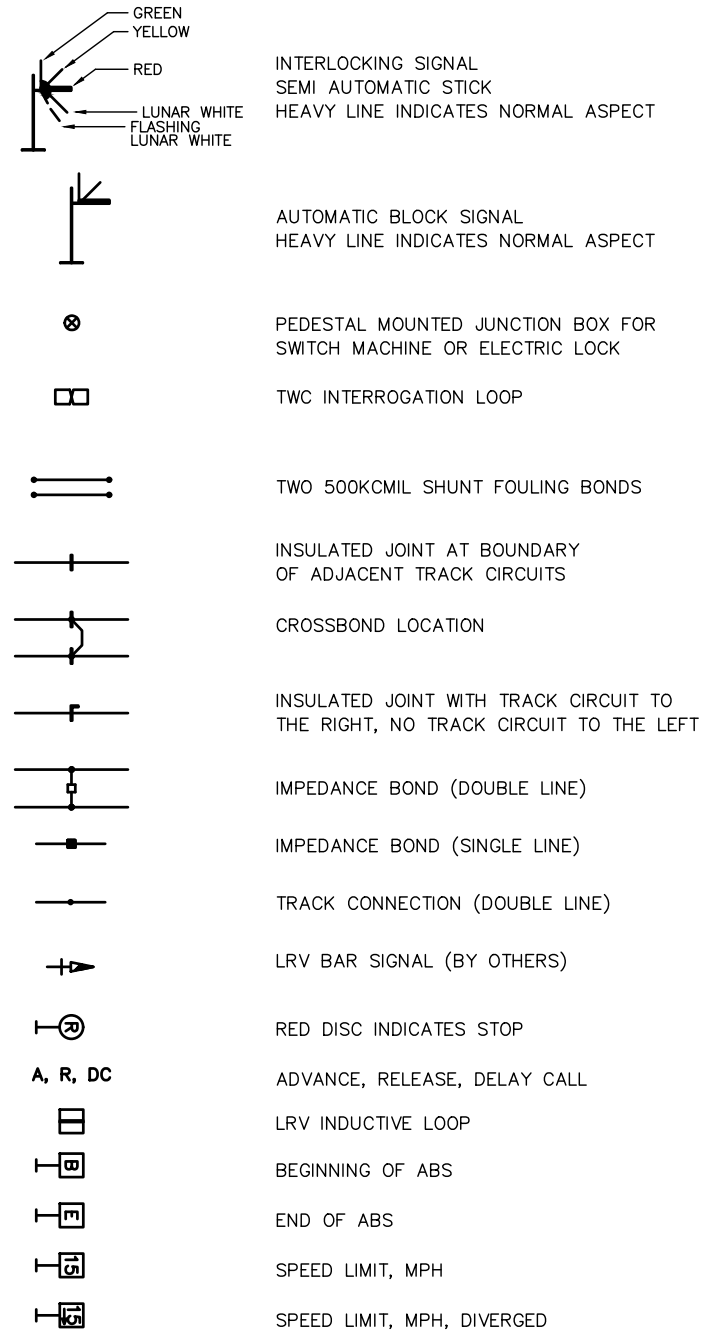
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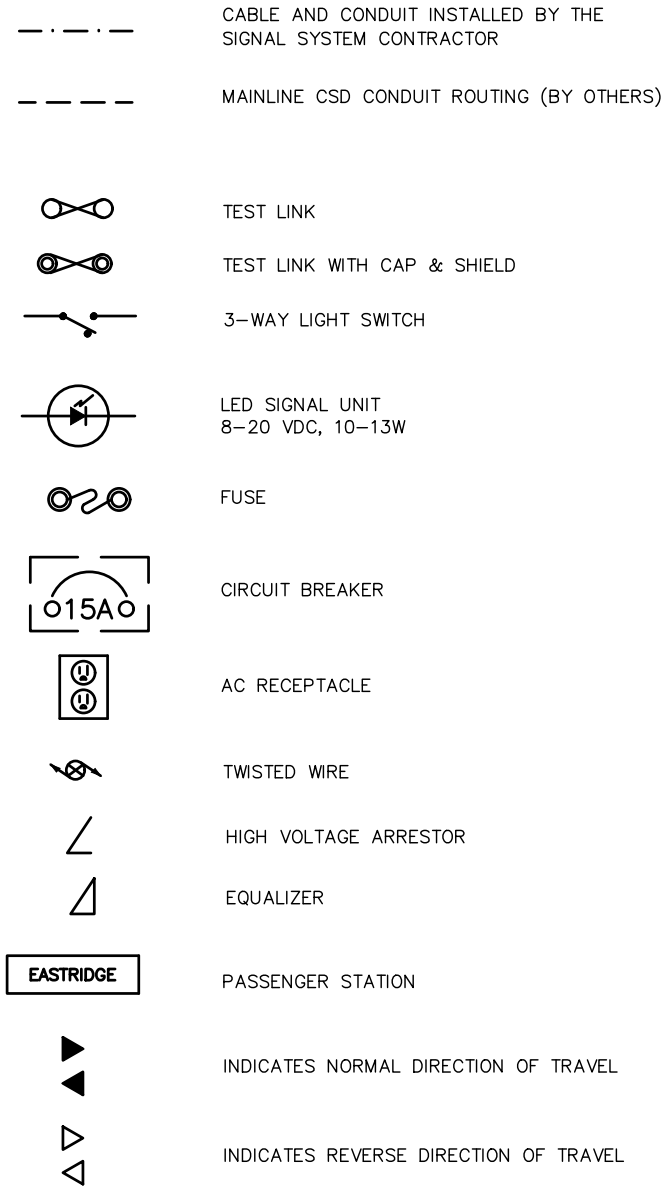
CIRCUIT PLAN SYMBOLS



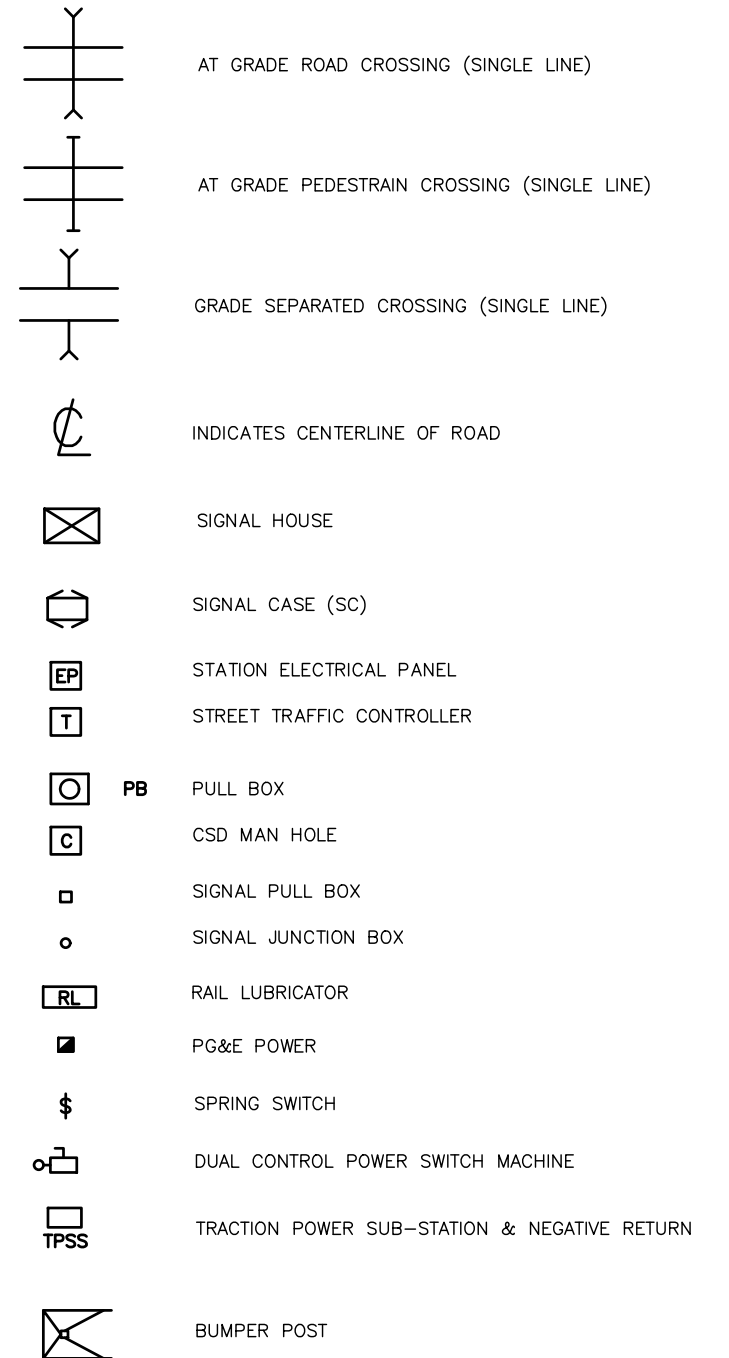
SYMBOLS



SYMBOLS

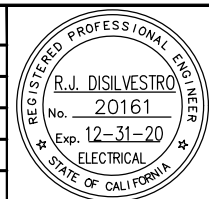


SYMBOLS



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A	06/18	35% SUBMITTAL SET



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DRAWN	CADD FILE NAME
M.BAKHIN	801JG102.dwg



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SUBMITTAL DATE	BOARD APPROVAL DATE
06/29/20	

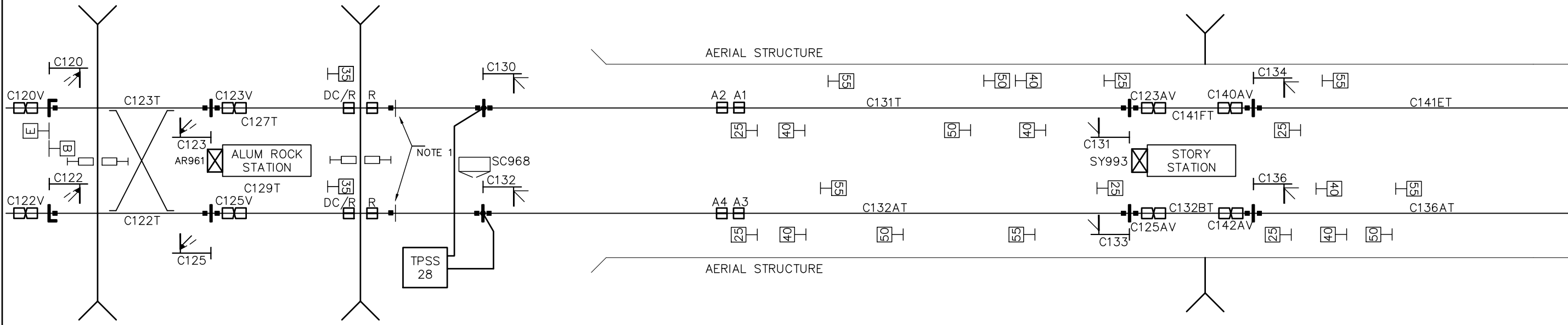
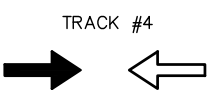
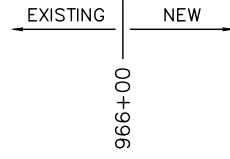
EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT			SHEET OF
LRT SIGNALS SYMBOLS			DRAWING NO. JG102
			REVISION C
PCA NO.	CONTRACT NO.	FILE LOCATION	
000	C801	PROJECTWISE	



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BEGINNING STATIONING - 954+31

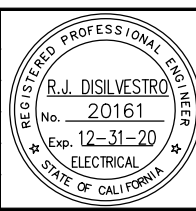
- |           |                            |
|-----------|----------------------------|
| 975+51    | SIG. C120 AND C122         |
| 958+65    | FLORENCE AVE.              |
| 961+30    | ALUM ROCK BUNGALOW         |
| 961+60    | SIG. C123 AND C125         |
| 964+80    | SP. SIGNS                  |
| 965+37    | WILBUR AVE.                |
| 966+29    | EXISTING IJ'S              |
| 967+00    | TPSS 28                    |
| 968+65    | SC968                      |
| 968+75    | SIG. C130 AND C132         |
| 966+00    | EXISTING IJ'S              |
| 975+84    | LRV LOOPS (WILBUR)         |
| 976+64    | SP. SIGNS (NB)             |
| 978+72    | SP. SIGNS (NB)             |
| 979+62    | SP. SIGN (SB ON SB TRK)    |
| 979+95    | SP. SIGN (SB ON NB TRK)    |
| 980+63    | SP. SIGN (NB ON SB TRK)    |
| 986+32    | SP. SIGN (NB ON NB TRK)    |
| 987+41    | SP. SIGN (SB ON NB TRK)    |
| 989+29    | SP. SIGN (SB ON NB TRK)    |
| 990+56    | SP. SIGN (NB ON SB TRK)    |
| 990+67    | SP. SIGN (NB ON NB TRK)    |
| 992+07    | SP. SIGNS (SB ON SB TRK)   |
| 992+25    | SP. SIGNS (SB ON NB TRK)   |
| 992+93    | SY993                      |
| 993+17.62 | SIG. C131                  |
| 993+17.89 | SIG. C133                  |
| 993+43    | TWC LOOP C123AV AND C125AV |
| 994+99    | STORY ROAD                 |
| 995+92    | TWC LOOP C140AV AND C142AV |
| 996+16.36 | SIG. C134                  |
| 996+17.06 | SIG. C136                  |
| 996+75    | SP. SIGNS (NB ON SB TRK)   |
| 997+27    | SP. SIGNS (NB ON NB TRK)   |
| 998+77    | SP. SIGN (SB ON SB TRK)    |
| 998+82    | SP. SIGN (SB ON NB TRK)    |
| 999+77    | SP. SIGN (NB ON SB TRK)    |
| 1001+66   | SP. SIGN (NB ON SB TRK)    |
| 1002+47   | SP. SIGN (SB ON SB TRK)    |



- NOTES:**
1. RETIRE EXISTING IMPEDANCE BONDS AND I.J.'S AT 966+29 AND RETURN TO VTA. INSTALL NEW IJ'S, IMPEDANCE BONDS AND SIGNALS C130 AND C132 AT 968+75. RELOCATE NEGATIVE RETURNS TO IMPEDANCE BONDS.
  2. NEW SIGNAL EQUIPMENT AT ALUM ROCK AND WILBUR AVENUE:
    - SIGNALS C130 AND C132,
    - SIGNAL CASE SC968.
  3. LRV INDUCTIVE LOOPS A1,A2,A3,A4 SHALL BE WIRED DIRECTLY TO THE LOCAL TRAFFIC CONTROLLER
  4. FOR SPEED SIGN POST ON AERIAL GUIDEWAY SEE SD-327 IN CAPITOL AERIAL GUIDEWAY DRAWINGS..

MATCH LINE SEE DWG. JS102

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



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Engineers Architects Planners  
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San Jose, CA 95112  
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CHECKED: V.FAINGOLD  
DRAWN: M.BAKHIN  
CADD FILE NAME: 801JS101.dwg



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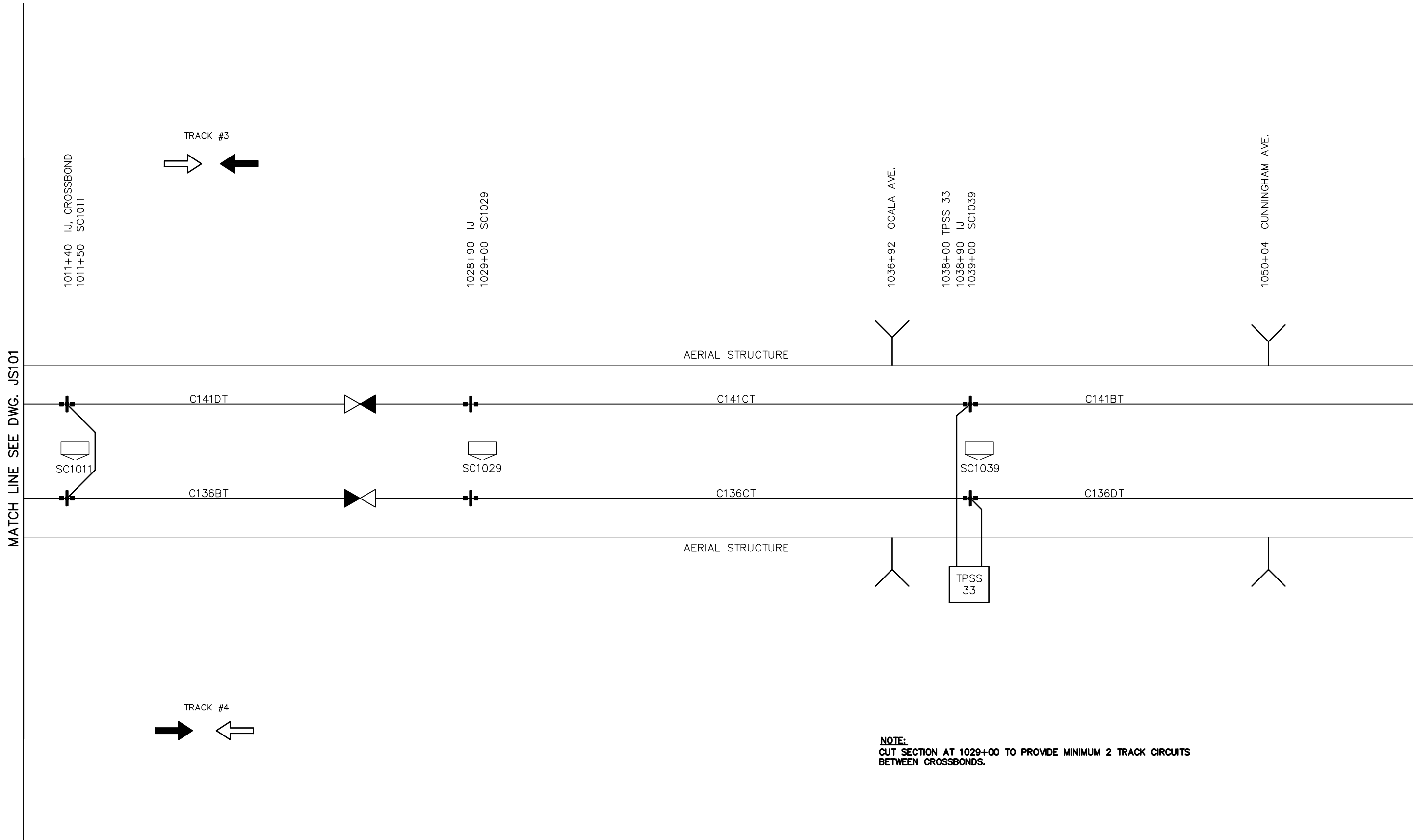
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SUBMITTAL DATE: 06/29/20  
SCALE: NTS  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNALS  
SINGLE LINE PLAN  
(SHEET 1 OF 3)

PCOA NO. 000  
CONTRACT NO. C801  
FILE LOCATION PROJECTWISE

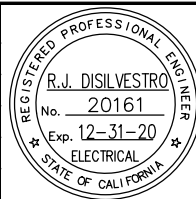
SHEET OF  
DRAWING NO. JS101  
REVISION C

Jun 22, 2020 - 11:25am C:\cadd\p\work\west\0139440\001JS102.dwg



**NOTE:**  
CUT SECTION AT 1029+00 TO PROVIDE MINIMUM 2 TRACK CIRCUITS BETWEEN CROSSBONDS.

NO.	DATE	REVISIONS
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(SHEET 2 OF 3)

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

SHEET OF JS102  
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MATCH LINE SEE DWG. JS102

TRACK #3  
  
 1060+31 SP. SIGN (NB on NB TRK)  
 1060+72 SP. SIGN (NB on SB TRK)  
 1063+40 SP. SIGNS

1074+88 SP. SIGNS (SB on SB TRK)  
 1075+12 SP. SIGNS (SB on NB TRK)  
 1075+99 SP. SIGN (NB on SB TRK)  
 1076+28 SP. SIGN (NB on NB TRK)  
 1077+20 SP. SIGNS (SB)

1077+83 TULLY ROAD  
 1082+00 TPSS 34  
 1082+38 TWC LOOP C140V AND C142V  
 1082+63 SIG. C140 AND C142, SP. SIGNS

1083+13 PS 1140 AND 1142  
 1086+07 PS 1141 AND 1143

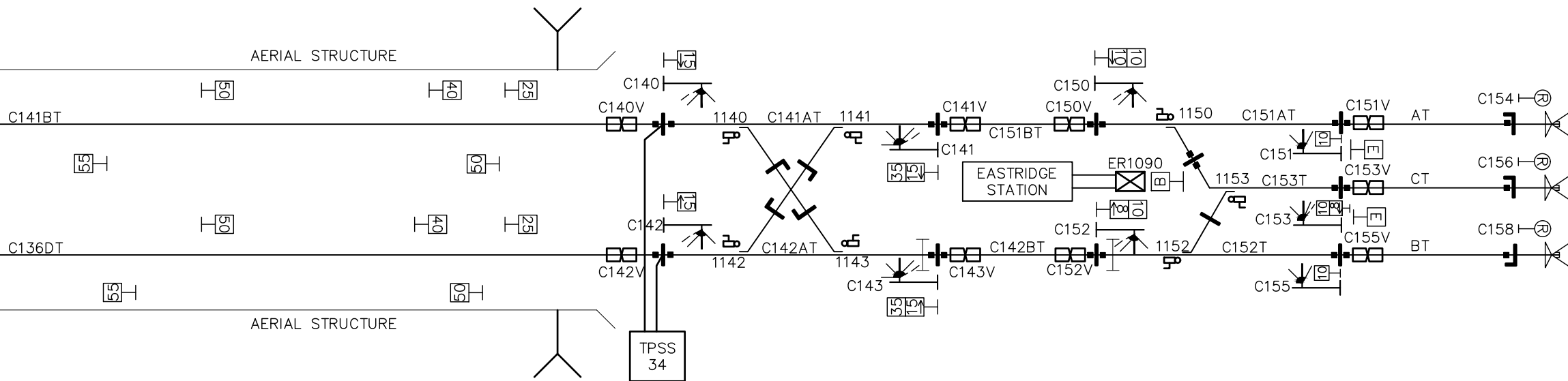
1086+51 SIG. C141 AND C143, SP.SIGNS  
 1086+76 TWC LOOP C141V AND C143V

1089+11 TWC LOOP C150V AND C152V  
 1089+36 SIG. C150 AND C152, SP.SIGNS  
 1089+83 PS 1150  
 1089+90 ER1090  
 1090+13 PS 1152  
 1091+57 PS 1153

1091+80 SIG. C151, C153 AND C155, SP.SIGNS  
 1092+05 TWC LOOP C151V, C153V, C155V

STA. 1094+87 RED DISCS C154, C156, C158  
 STA. 1094+97 BUMPING POSTS

TRACK #4



**NOTE:**  
 1. MOUNT "END OF AUTOMATIC BLOCK" AND "BEGINNING OF AUTOMATIC BLOCK" SIGNS ON RED DISK POLES.

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A	06/18	35% SUBMITTAL SET



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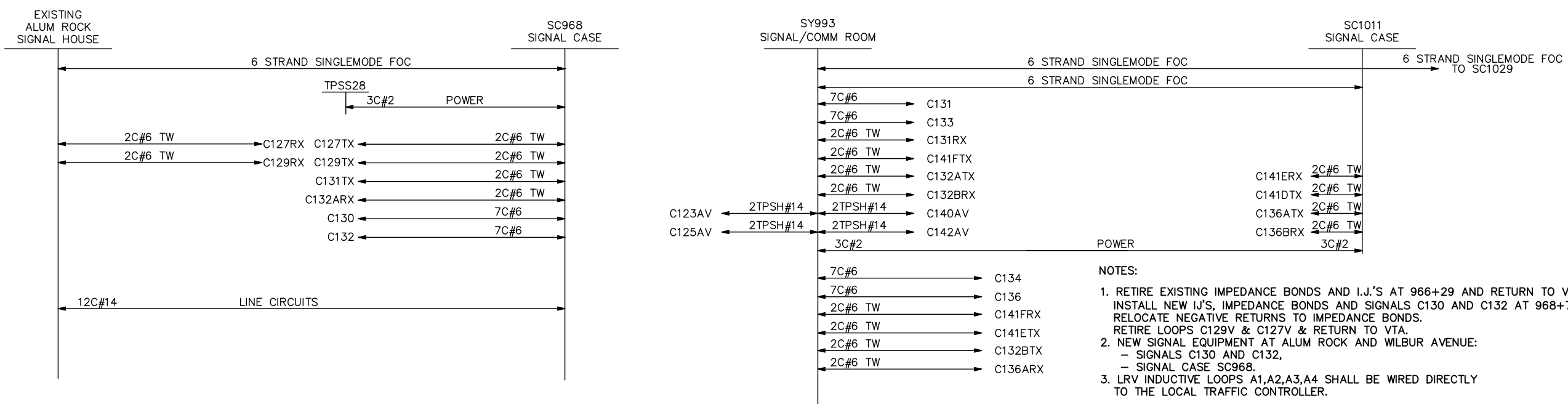
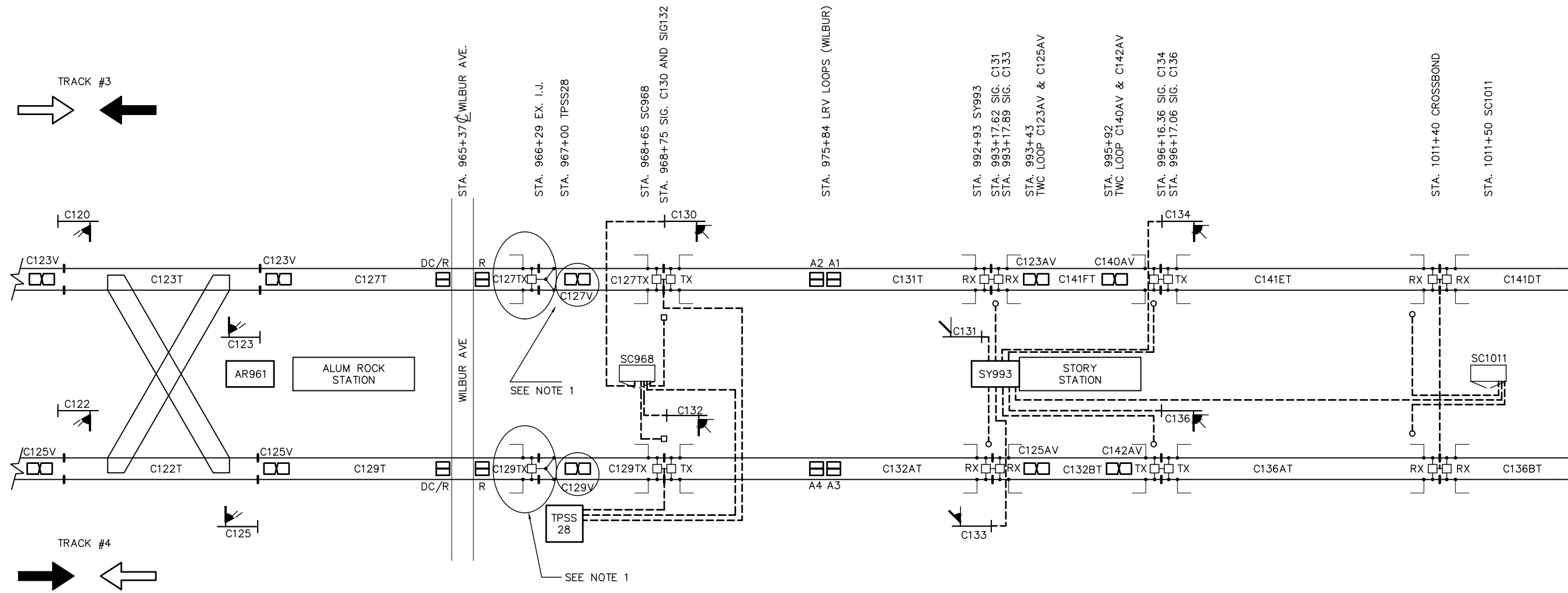
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 LRT SIGNALS  
 SINGLE LINE PLAN  
 (SHEET 3 OF 3)

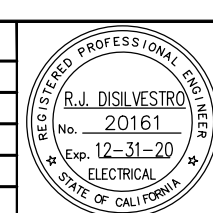
PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

SHEET OF JS103  
 REVISION C



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ENGINEERS / SURVEYORS / PLANNERS

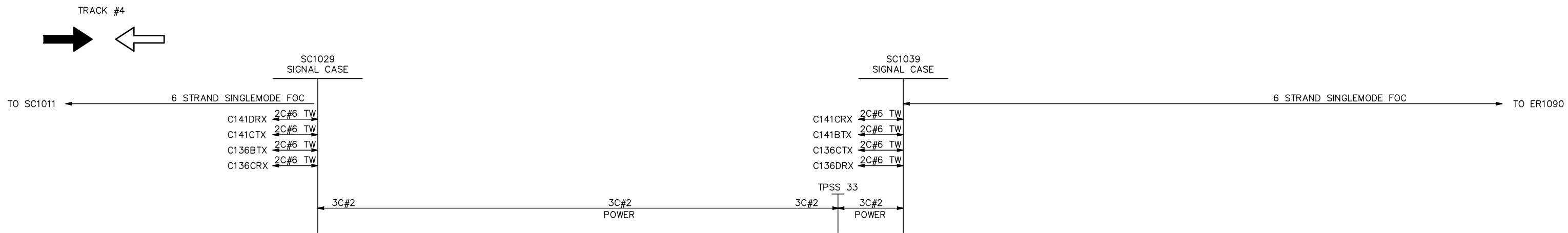
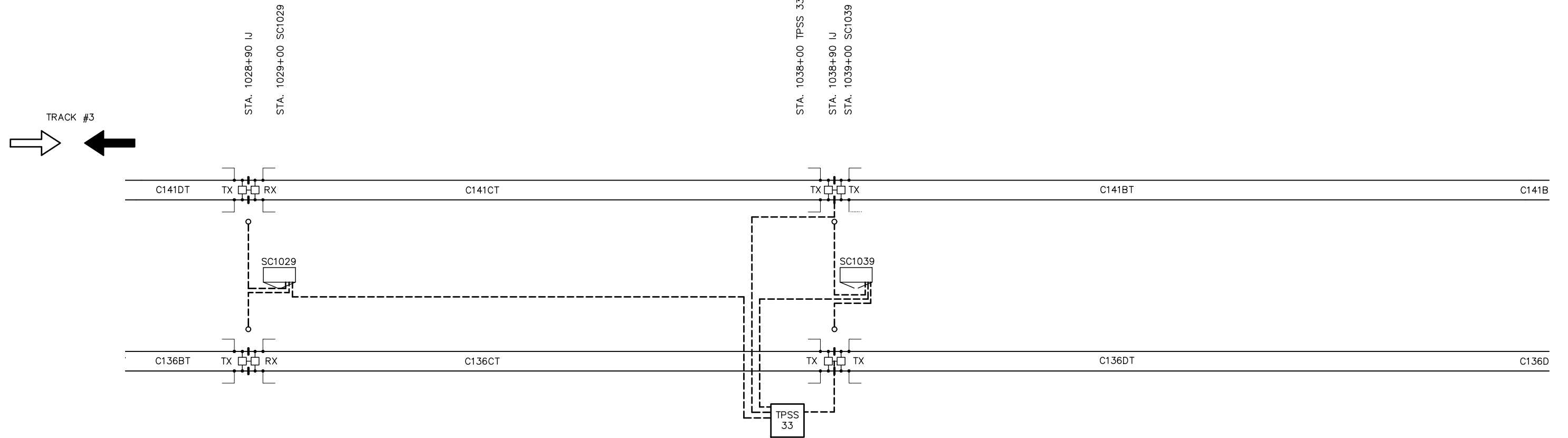
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SUBMITTAL DATE: 06/29/20

SCALE: NTS  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNALS  
DOUBLE LINE PLAN  
(SHEET 1 OF 3)

PCA NO. 000  
CONTRACT NO. C801  
FILE LOCATION PROJECTWISE

SHEET OF  
DRAWING NO. JD101  
REVISION C



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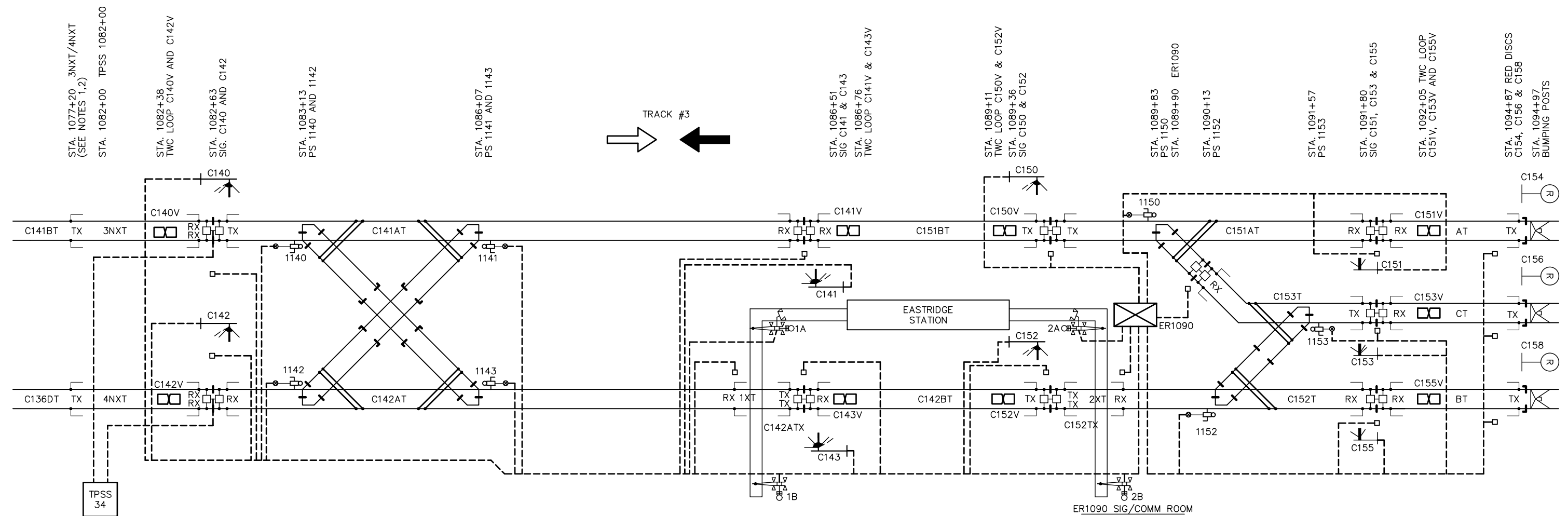
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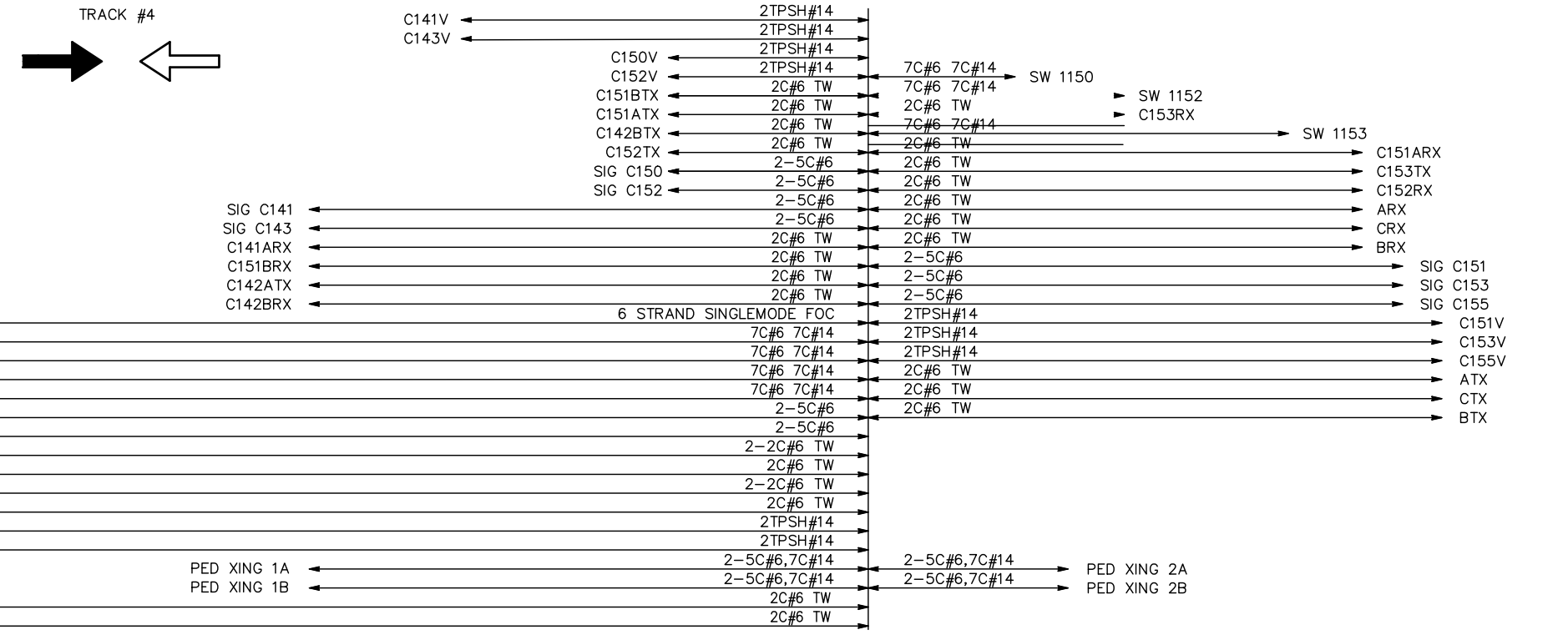
EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 LRT SIGNALS  
 DOUBLE LINE PLAN  
 (SHEET 2 OF 3)

SHEET OF: JD102  
 REVISION: C

PCA NO.: 000  
 CONTRACT NO.: C801  
 FILE LOCATION: PROJECTWISE

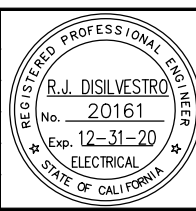


- NOTES:
- ROUTE C140 TO C143:  
SIGNAL C140 CLEARS WITH NO DELAY WITH 3NXTP VACANT, WITH 3NXTP OCCUPIED  
DELAY SIGNAL C140 CLEARING BY 10 SECONDS TO ALLOW PED XING #1 TO ACTIVATE.
  - ROUTE C142 TO C143:  
SIGNAL C142 CLEARS WITH NO DELAY WITH 3NXTP VACANT, WITH 4NXTP OCCUPIED  
DELAY SIGNAL C142 CLEARING BY 10 SECONDS TO ALLOW PED XING #1 TO ACTIVATE.



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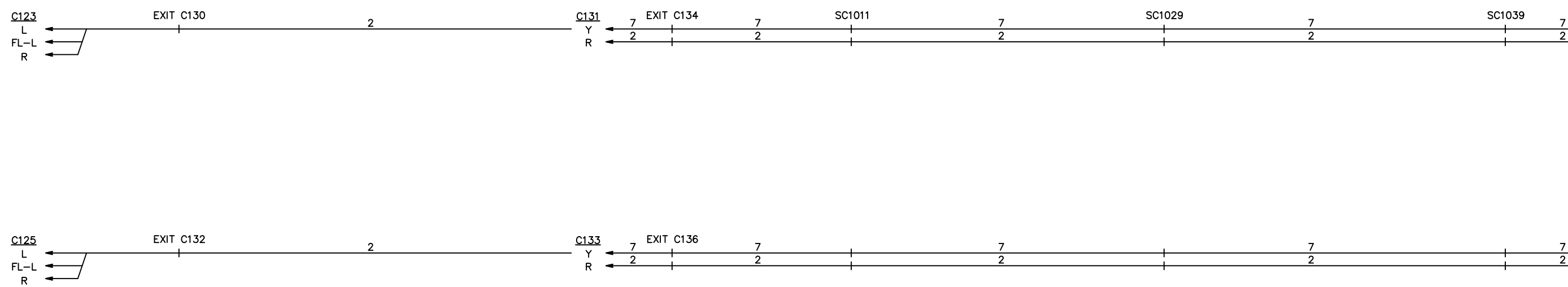
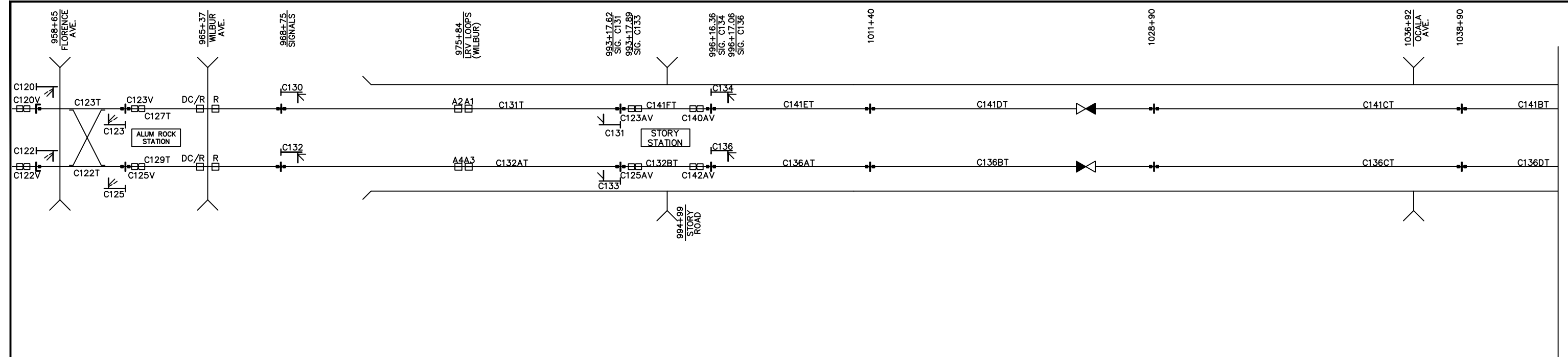
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CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNALS  
DOUBLE LINE PLAN  
(SHEET 3 OF 3)

PCB NO. 000  
CONTRACT NO. C801  
FILE LOCATION: PROJECTWISE

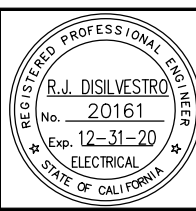
SHEET OF: JD103  
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MATCH LINE - SEE DWG. JR102

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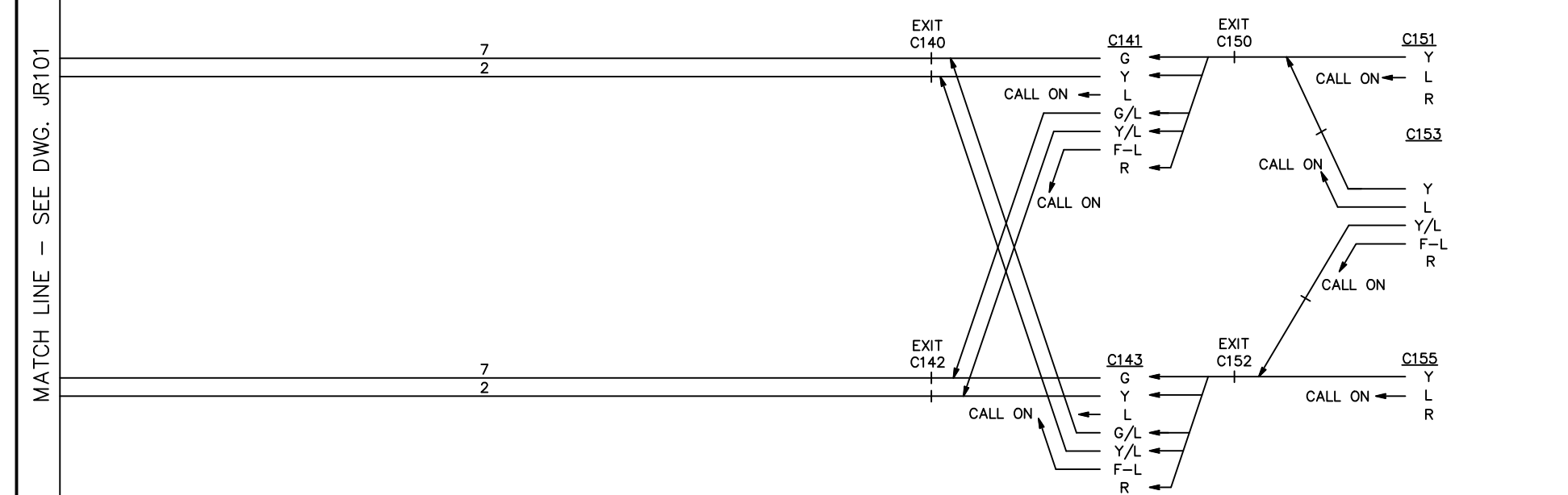
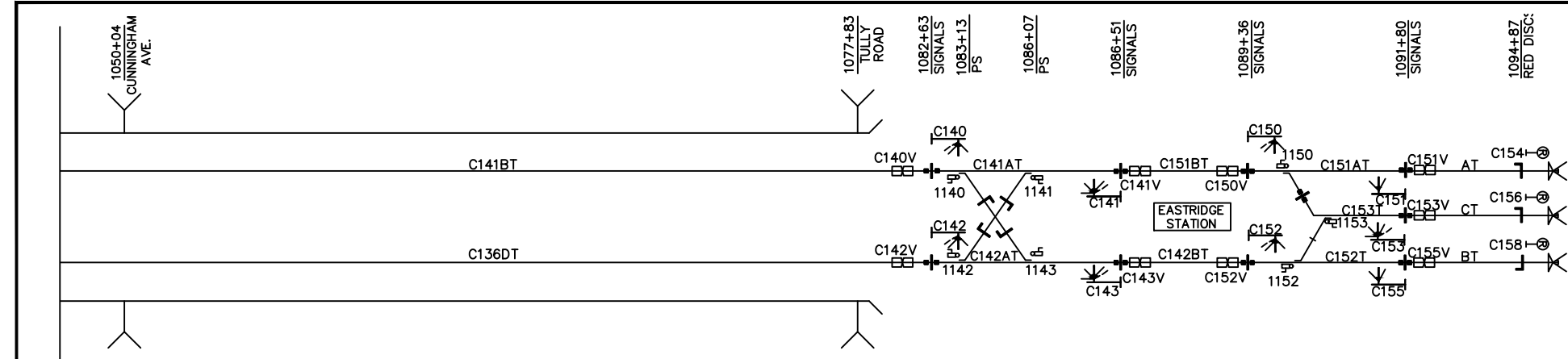
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EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 LRT SIGNALS  
 ROUTE & ASPECT PLAN  
 NORTHBOUND (SHEET 1 OF 2)

SHEET OF: JR101  
 REVISION: C

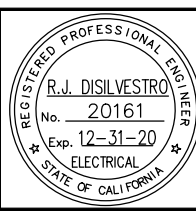
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 CONTRACT NO.: C801  
 FILE LOCATION: PROJECTWISE



MATCH LINE - SEE DWG. JR101

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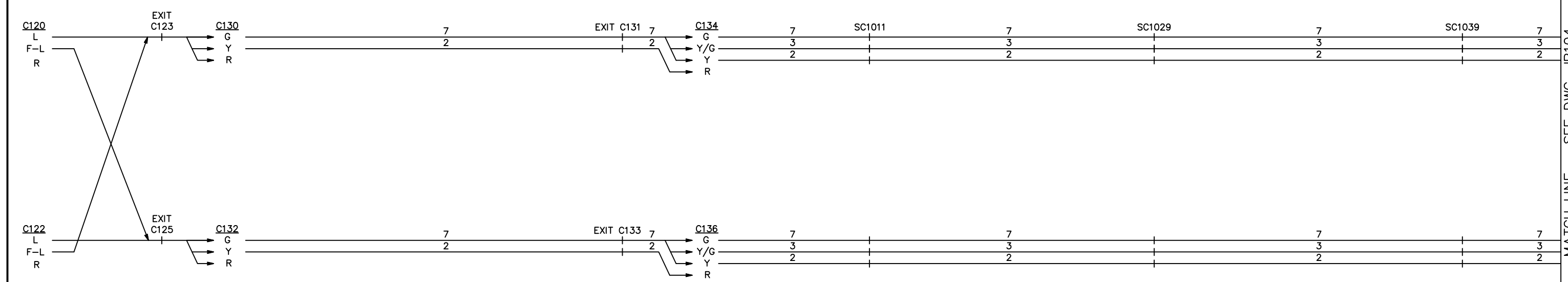
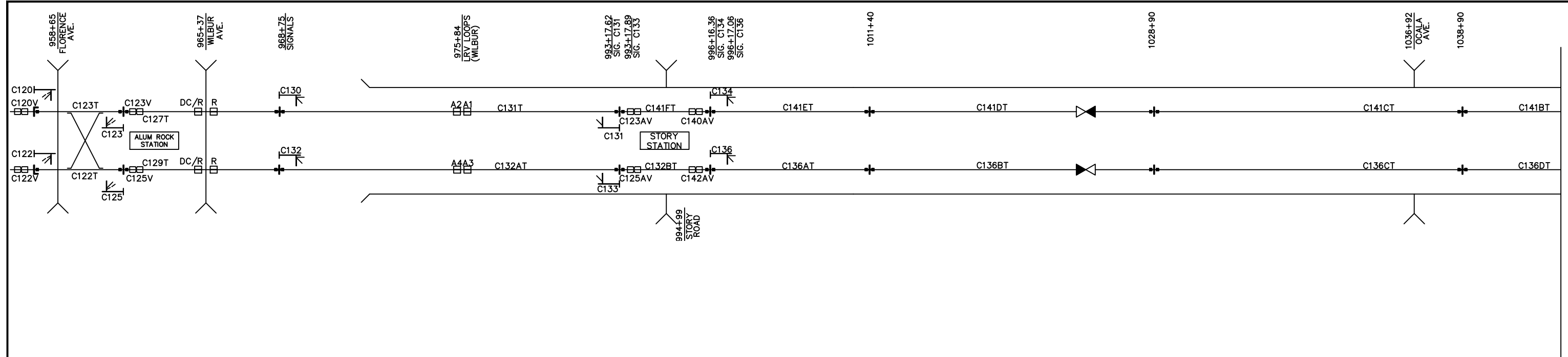


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CADD FILE DATE	03/15/19	SCALE	NTS
SUBMITTAL DATE	06/29/20	BOARD APPROVAL DATE	

EASTRIDGE TO BART REGIONAL CONNECTOR			SHEET
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT			OF
ROUTE & ASPECT PLAN			DRAWING NO.
NORTHBOUND (SHEET 2 OF 2)			JR102
			REVISION
			C
PCA NO.	CONTRACT NO.	FILE LOCATION	
000	C801	PROJECTWISE	

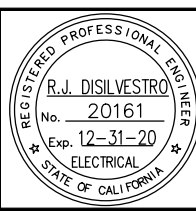




MATCH LINE - SEE DWG. JR104

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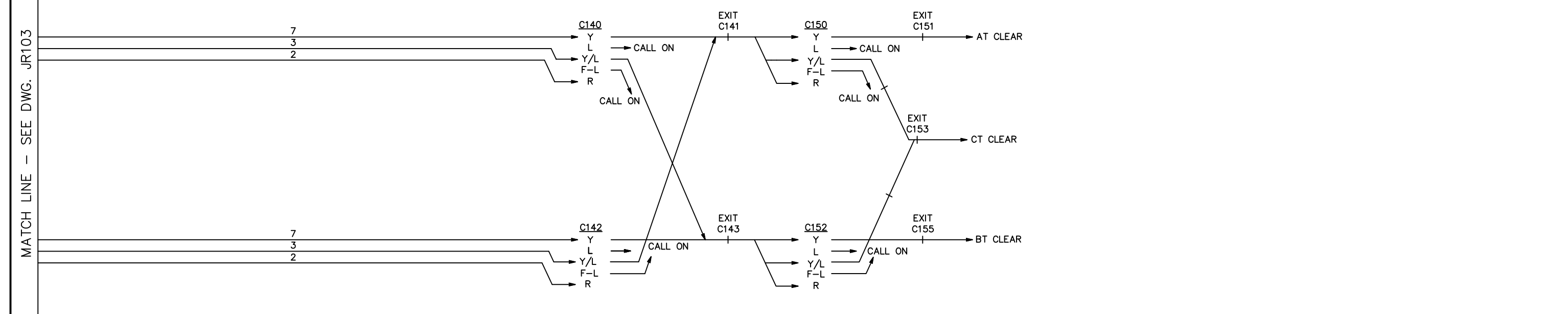
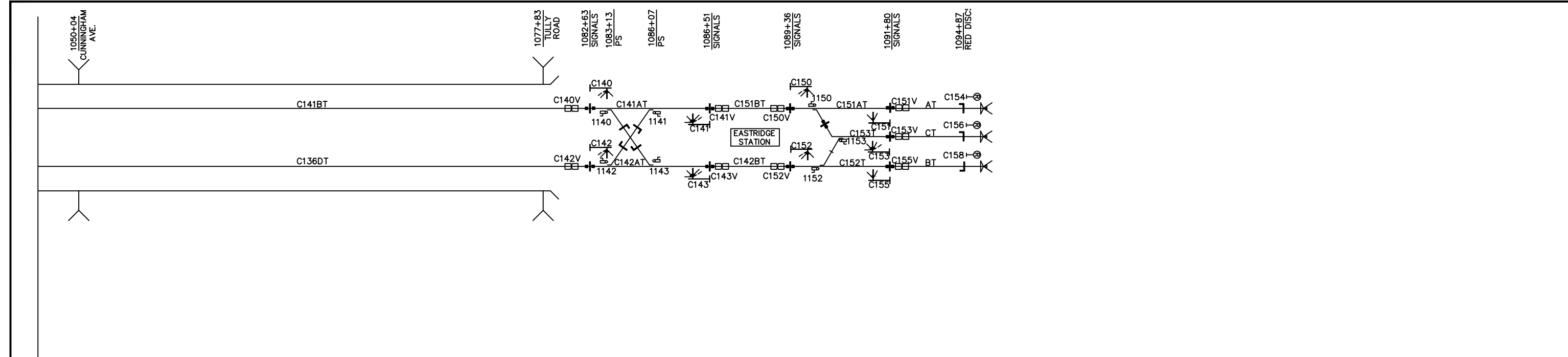
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CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNALS  
ROUTE & ASPECT PLAN  
SOUTHBOUND (SHEET 1 OF 2)

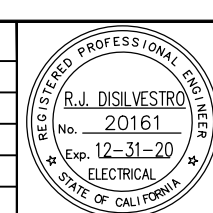
PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

SHEET OF DRAWING NO. JR103 REVISION C



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 gfoakes

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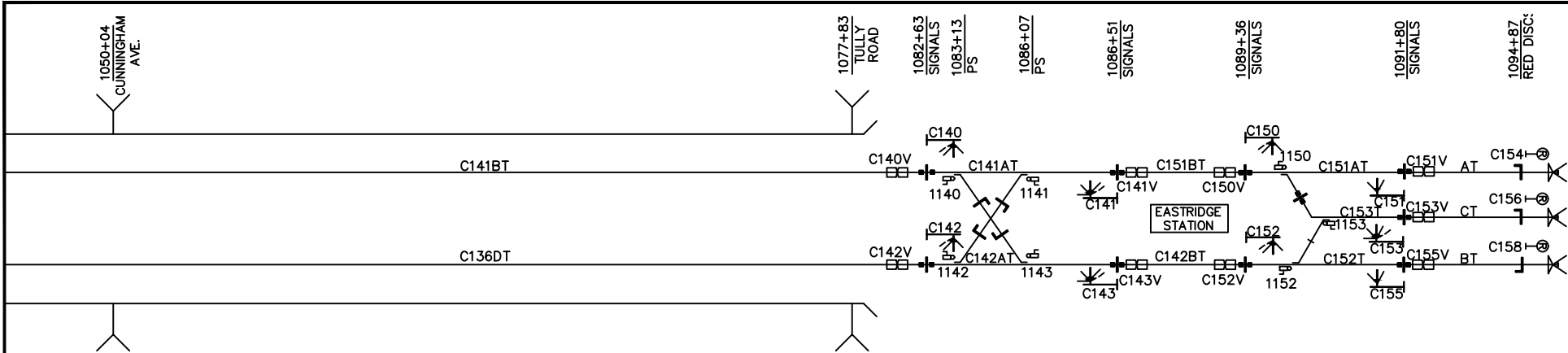
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 SOUTHBOUND (SHEET 2 OF 2)

SHEET OF: JR104  
 REVISION: C

PCA NO.: 000 CONTRACT NO.: C801 FILE LOCATION: PROJECTWISE



- NOTES:**
- \* = APPROACH TRACK TO ENTERING SIGNAL MUST BE OCCUPIED TO ENABLE CALL-ON
  - TWC DESTINATION CODES
    - A = NORTHBOUND TWC CODES:
      - 10 TO SANTA TERESA
      - 44 TO YARD (NOT IN SERVICE)
      - 64 TO MOUNTAIN VIEW
    - B = SOUTHBOUND TWC CODES:
      - 80 FROM SANTA TERESA
      - 81 TO EASTRIDGE STORAGE TRACK #3
      - 82 TO EASTRIDGE STORAGE TRACK #4
      - 83 TO EASTRIDGE POCKET TRACK
      - 84 FROM YARD TO EASTRIDGE
      - 87 FROM MOUNTAIN VIEW
  - C = 03 REVERSE RUNNING
  - D = 05 CALL-ON
3. UNDER DENOTE COLUMN  
S = STRAIGHT  
D = DIVERGE

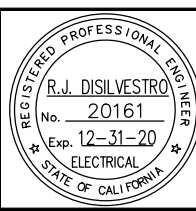
ORIGINAL ASPECT (* - BURNED OUT LIGHT)	LIGHTOUT ASPECT
G*	Y
Y*/G	L
Y/G*	Y
Y*/G*	R
Y*	L
Y*/L	F-L
G*/L	Y/L
Y/L*, G/L*	R
Y*/L*, G*/L*	R
L*	R
R*	DARK

EASTRIDGE INTERLOCKING - ROUTE AND ASPECT CHART

ROUTE	SIGNALS			ROUTE NAME	SWITCH LOCKED	FIELD AUTO ROUTE REQUEST		CALL-ON CONDITION	CONFLICT ROUTE
	NO.	DENOTE	ASPECT			ADV. TWC	LOCAL TWC		
1	C140	S	Y	C140/C141	1140-N, 1141-N, 1142-N, 1143-N	140AV(B,C)	C140V(B,C)	N/A	C141/C140, C141/C142, C143/C140, C142/C141, C151/C150, C153/C150
2	C140	S	L	C140/C141	1140-N, 1141-N, 1142-N, 1143-N	N/A	C140V(D)	C141AT-OST, C151BT-OCP	C141/C140, C141/C142, C143/C140, C142/C141, C151/C150, C153/C150
3	C140	D	Y/L	C140/C143	1140-R, 1143-R, 1141-N, 1142-N	140AV(B,C)	C140V(B,C)	N/A	C141/C140, C141/C142, C143/C140, C143/C142, C142/C141, C142/C143, C153/C152, C155/C152
4	C140	D	F-L	C140/C143	1140-R, 1143-R, 1141-N, 1142-N	N/A	C140V(D)	C141AT/142AT-OST, C142BT-OCP	C141/C140, C141/C142, C143/C140, C143/C142, C142/C141, C142/C143, C153/C152, C155/C152
5	C141	S	G, Y	C141/C140	1140-N, 1141-N, 1142-N, 1143-N	N/A	C141V(A)	N/A	C140/C141, C140/C143, C143/C140, C142/C141
6	C141	S	L	C141/C140	1140-N, 1141-N, 1142-N, 1143-N	N/A	C141V(D)	C141AT-OST, C141BT/C141CT/C141DT/C141ET/C141FT-OCP	C140/C141, C140/C143, C143/C140, C142/C141
7	C141	D	G/L, Y/L	C141/C142	1141-R, 1142-R, 1140-N, 1143-N	N/A	C141V(A,C)	N/A	C140/C141, C140/C143, C143/C140, C143/C142, C142/C141, C142/C143
8	C141	D	F-L	C141/C142	1141-R, 1142-R, 1140-N, 1143-N	N/A	C141V(D)	C141AT/C142AT-OST, C136DT/C136CT/C136BT/C136AT/132BT-OCP	C140/C141, C140/C143, C143/C140, C143/C142, C142/C141, C142/C143
9	C142	S	Y	C142/C143	1140-N, 1141-N, 1142-N, 1143-N	C142AV(B)	C142V(B)	N/A	C143/C142, C143/C140, C141/C142, C140/C143, C153/C152, C155/C152
10	C142	S	L	C142/C143	1140-N, 1141-N, 1142-N, 1143-N	N/A	C142V(D)	C142AT-OST, C142BT-OCP	C143/C142, C143/C140, C141/C142, C140/C143, C153/C152, C155/C152
11	C142	D	Y/L	C142/C141	1142-R, 1141-R, 1140-N, 1143-N	C142AV(B)	C142V(B)	N/A	C141/C142, C141/C140, C143/C142, C143/C140, C140/C143, C140/C141, C153/C150, C151/C150
12	C142	D	F-L	C142/C141	1142-R, 1141-R, 1140-N, 1143-N	N/A	C142V(D)	C142AT/C141AT-OST, C151BT-OCP	C141/C142, C141/C140, C143/C142, C143/C140, C140/C143, C140/C141, C153/C150, C151/C150
13	C143	S	G, Y	C143/C142	1140-N, 1141-N, 1142-N, 1143-N	N/A	C143V(A)	N/A	C142/C143, C142/C141, C140/C143, C141/C142
14	C143	S	L	C143/C142	1140-N, 1141-N, 1142-N, 1143-N	N/A	C143V(D)	C142AT-OST, C136DT/C136CT/C136BT/C136AT/132BT-OCP	C142/C143, C142/C141, C140/C143, C141/C142
15	C143	D	G/L, Y/L	C143/C140	1143-R, 1140-R, 1141-N, 1142-N	N/A	C143V(A,C)	N/A	C142/C143, C142/C141, C140/C143, C140/C141, C141/C140, C141/C142
16	C143	D	F-L	C143/C140	1143-R, 1140-R, 1141-N, 1142-N	N/A	C143V(D)	C142AT,C141AT-OST, C141BT/C141CT/C141DT/C141ET/C141FT-OCP	C142/C143, C142/C141, C140/C143, C140/C141, C141/C140, C141/C142
17	C150	S	Y	C150/C151	1150-N, 1152-R, 1153-R	N/A	C150V(B)	N/A	C151/C150, C153/C150
18	C150	D	Y/L	C150/C153	1150-R, 1153-N, 1152-N	N/A	C150V(B)	N/A	C151/C150, C153/C150, C152/C153
19	C150	S	L	C150/C151	1150-N, 1152-R, 1153-R	N/A	C150V(D)	C151AT-OST, AT-OCP	C151/C150, C153/C150
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21	C152	S	Y	C152/C155	1150-N, 1152-N, 1153-N	N/A	C152V(B)	N/A	C155/C152, C153/C152
22	C152	D	Y/L	C152/C153	1152-R, 1153-R, 1150-N	N/A	C152V(B)	N/A	C155/C152, C153/C152, C150/C153
23	C152	S	L	C152/C155	1152-N, 1153-N	N/A	C152V(D)	C152T-OST, BT-OCP	C155/C152, C153/C152
24	C152	D	F-L	C152/C153	1152-R, 1153-R, 1150-N	N/A	C152V(D)	C152T,C153T-OST, CT-OCP	C155/C152, C153/C152, C150/C153
25	C151	S	Y	C151/C150	1150-N	N/A	C151V(A)	N/A	C150/C151, C150/C153, C153/C150, C140/C141, C142/C141
26	C151	S	L	C151/C150	1150-N	N/A	C151V(D)	C151AT-OST, C151BT-OCP	C150/C151, C150/C153, C153/C150, C140/C141, C142/C141
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32	C155	S	L	C155/C152	1152-N, 1153-N	N/A	C155V(D)	C152T-OST, C142BT-OCP	C152/C155, C152/C153, C153/C152, C140/C143, C142/C143

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DRAWN: M.BAKHIN  
CADD FILE NAME: 801JR105.dwg

**Santa Clara Valley Transportation Authority**

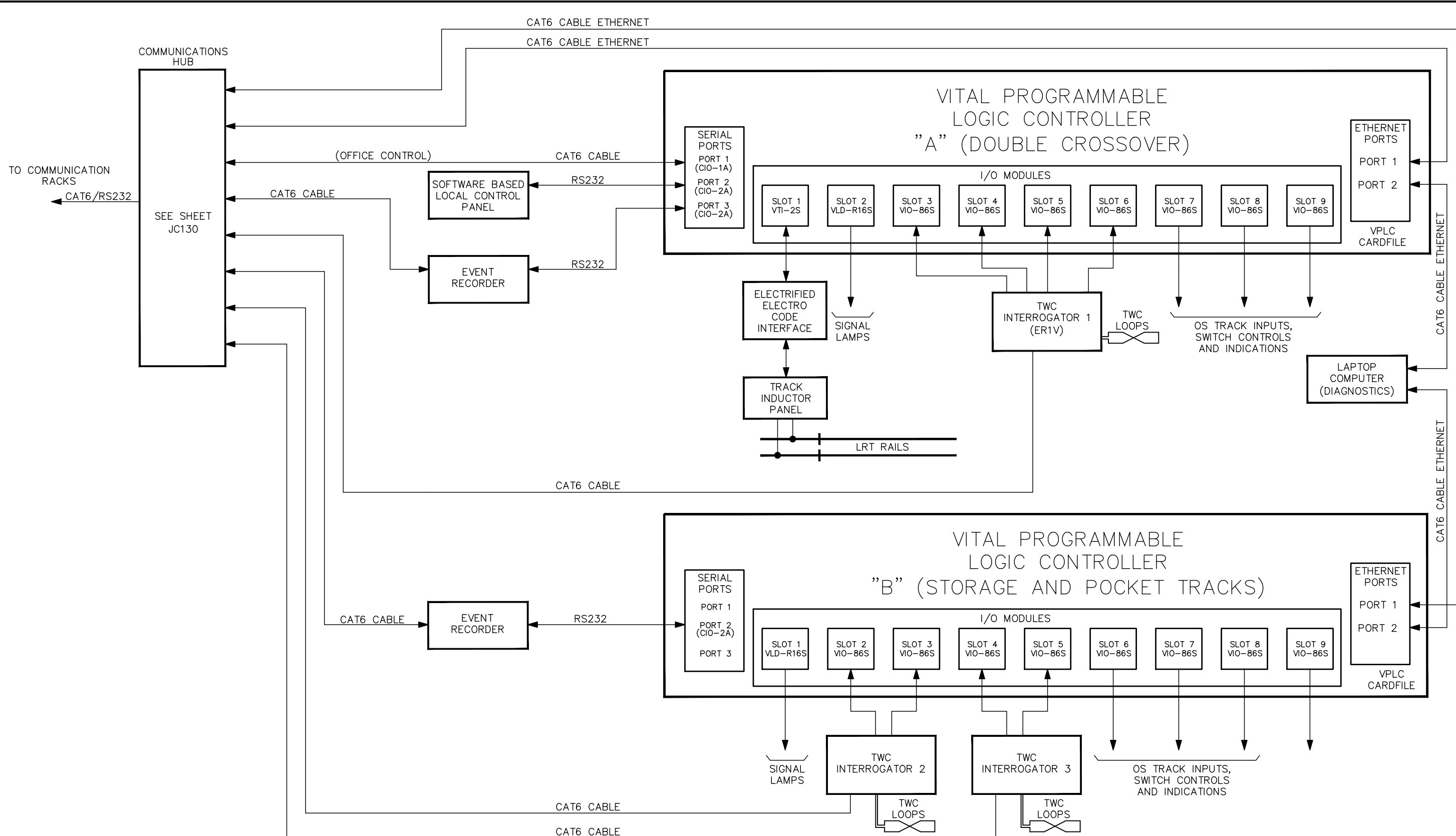
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ENGINEERS / SURVEYORS / PLANNERS

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BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNALS  
ROUTE & ASPECT PLAN  
EASTRIDGE INTERLOCKING

PCA NO. 000  
CONTRACT NO. C801  
FILE LOCATION PROJECTWISE

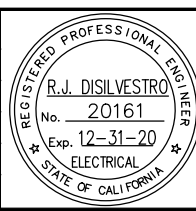
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DRAWING NO.	JR105
REVISION	C



VTI-2S - VITAL TRACK INTERFACE  
 VIO-86S - VITAL INPUT/OUTPUT MODULE  
 VLD-R16S - VITAL LAMP DRIVER MODULE

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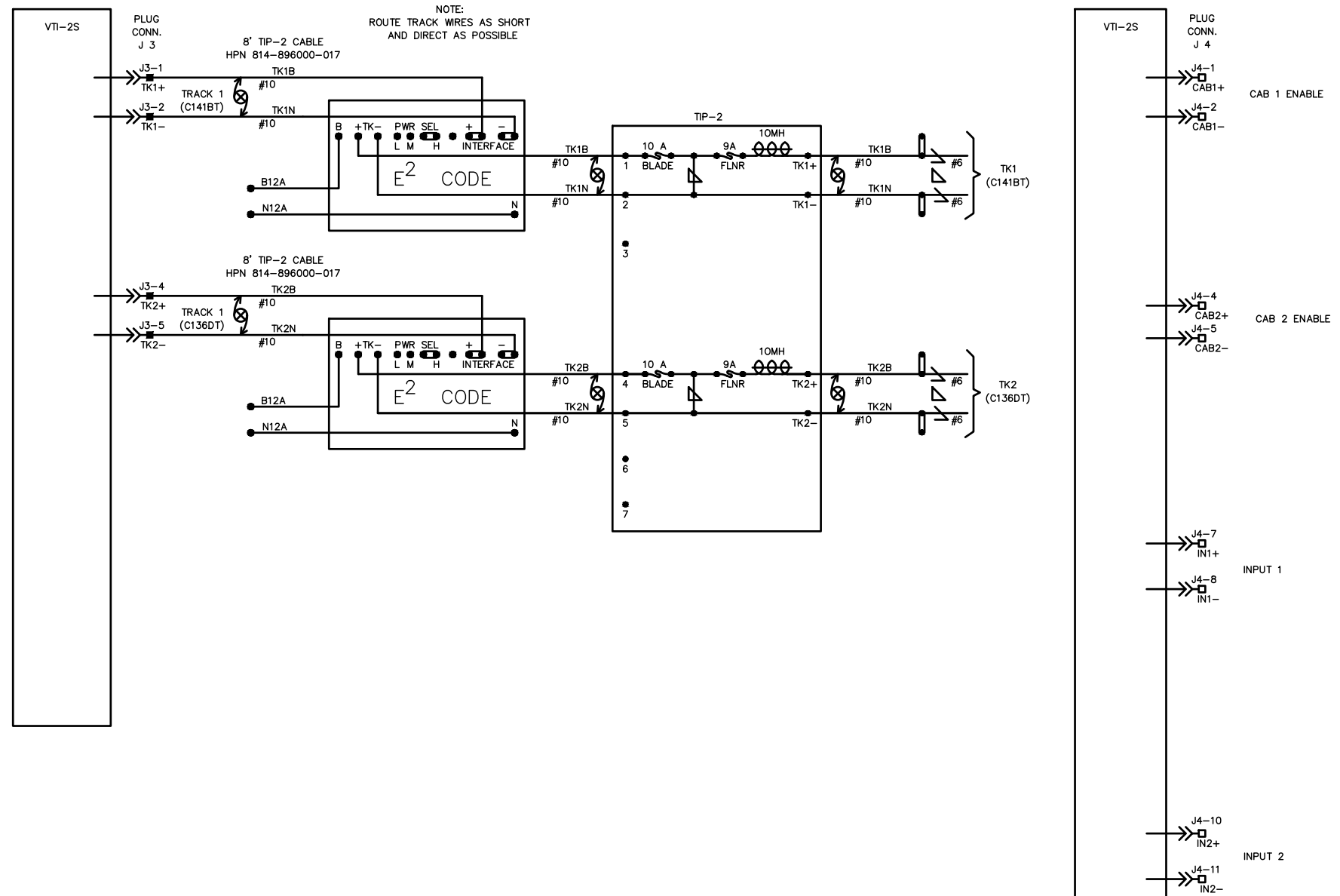
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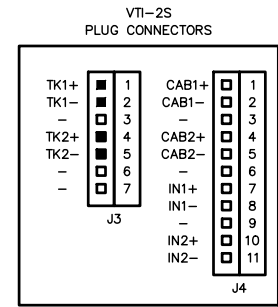
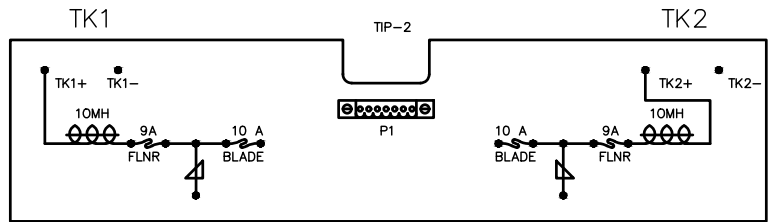
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 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 LRT SIGNAL SYSTEMS  
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 SYSTEM BLOCK DIAGRAM**

PCA NO.: 000  
 CONTRACT NO.: C801  
 FILE LOCATION: PROJECTWISE

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DRAWING NO.	JC101
REVISION	C



NOTE:  
ROUTE TRACK WIRES AS SHORT  
AND DIRECT AS POSSIBLE



■ = WIRE PRESENT  
- = NOT USED

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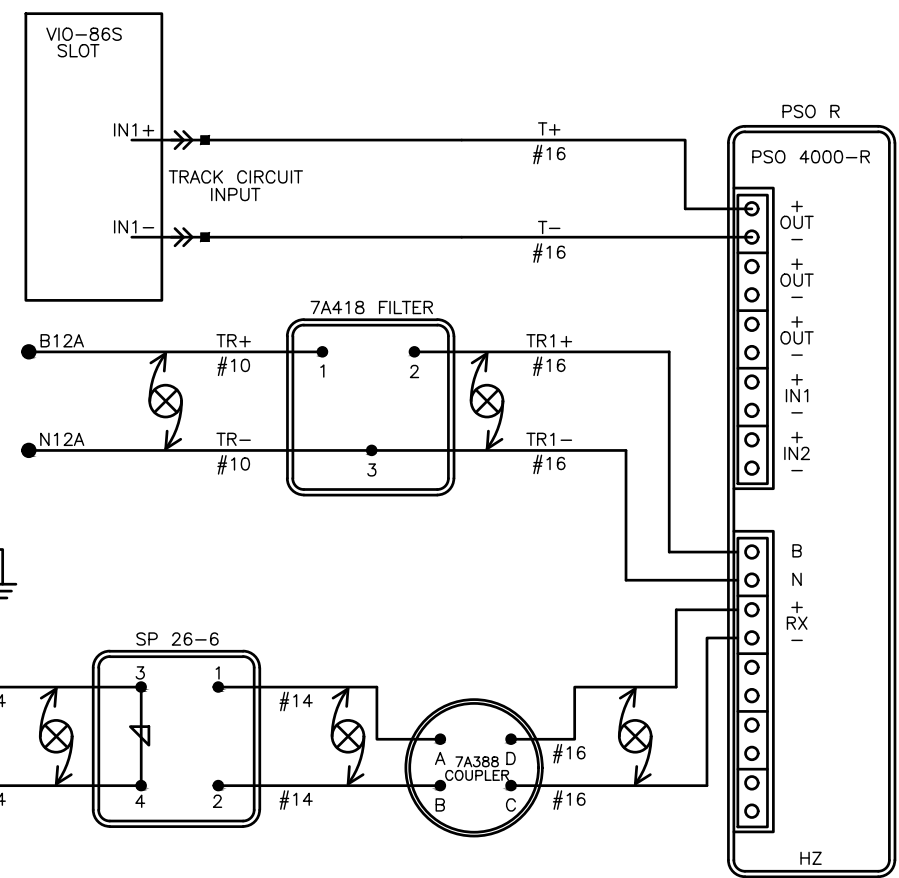
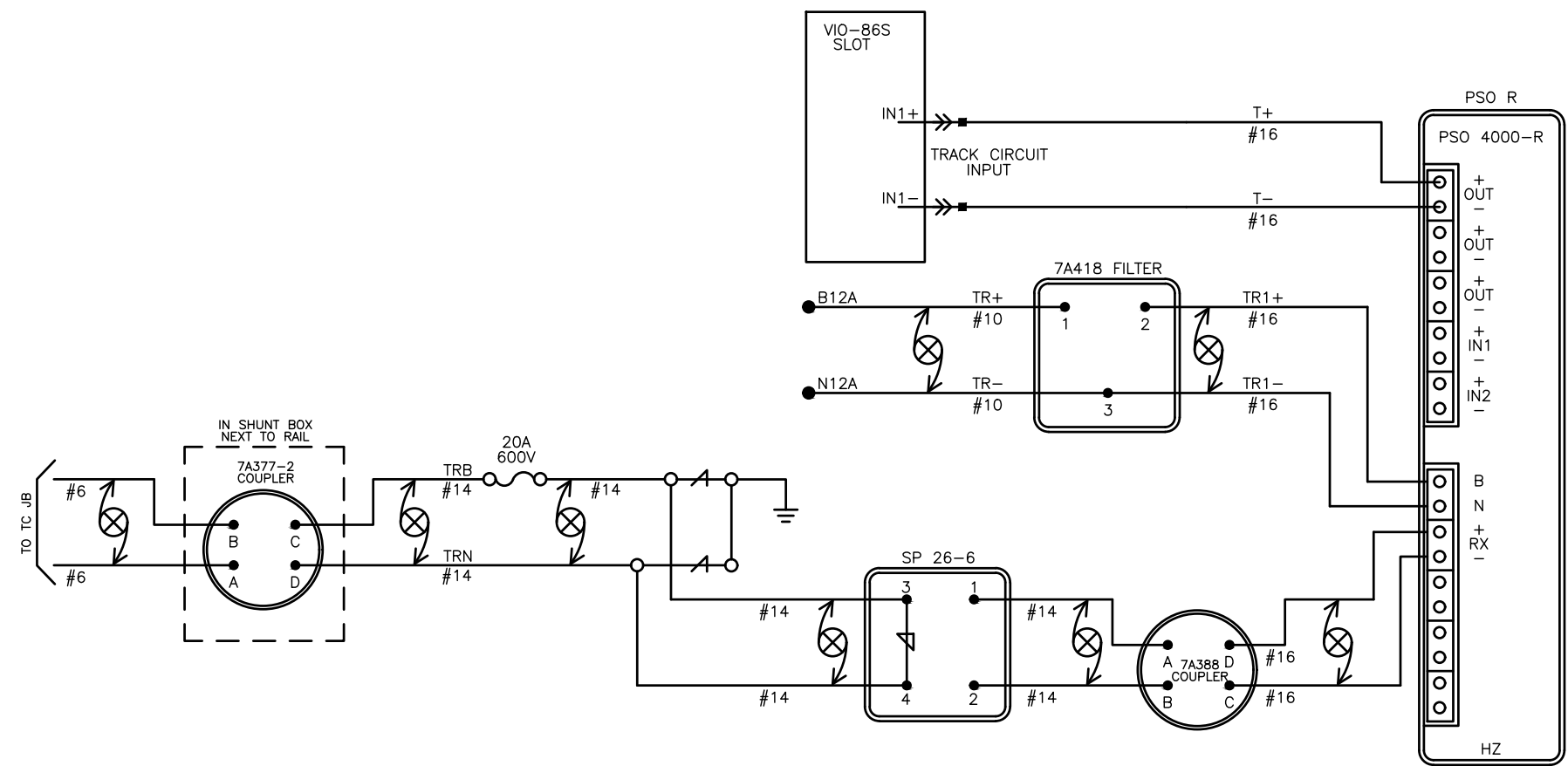
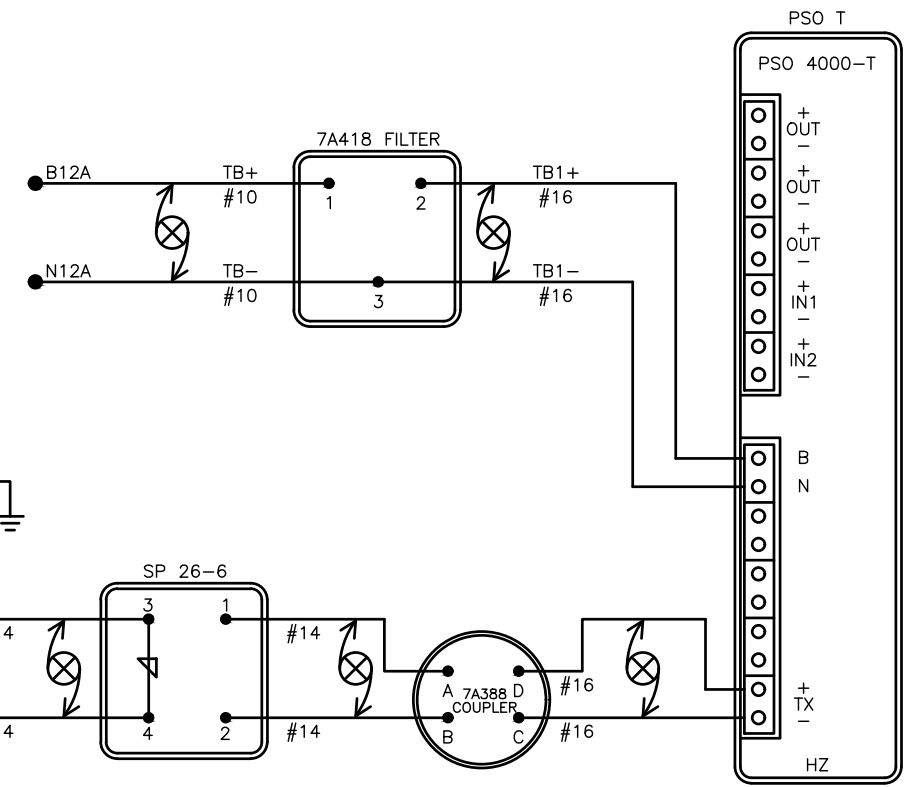
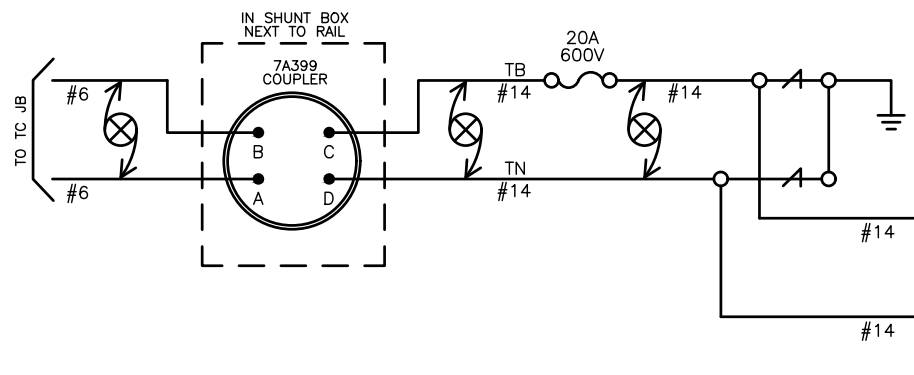
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BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
EASTRIDGE INTERLOCKING  
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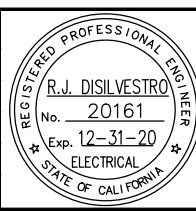
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CONTRACT NO. C801  
FILE LOCATION PROJECTWISE

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REVISION B

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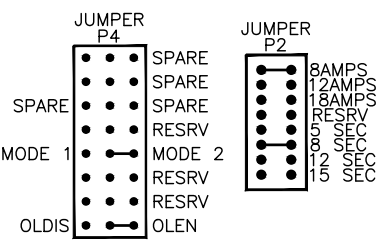
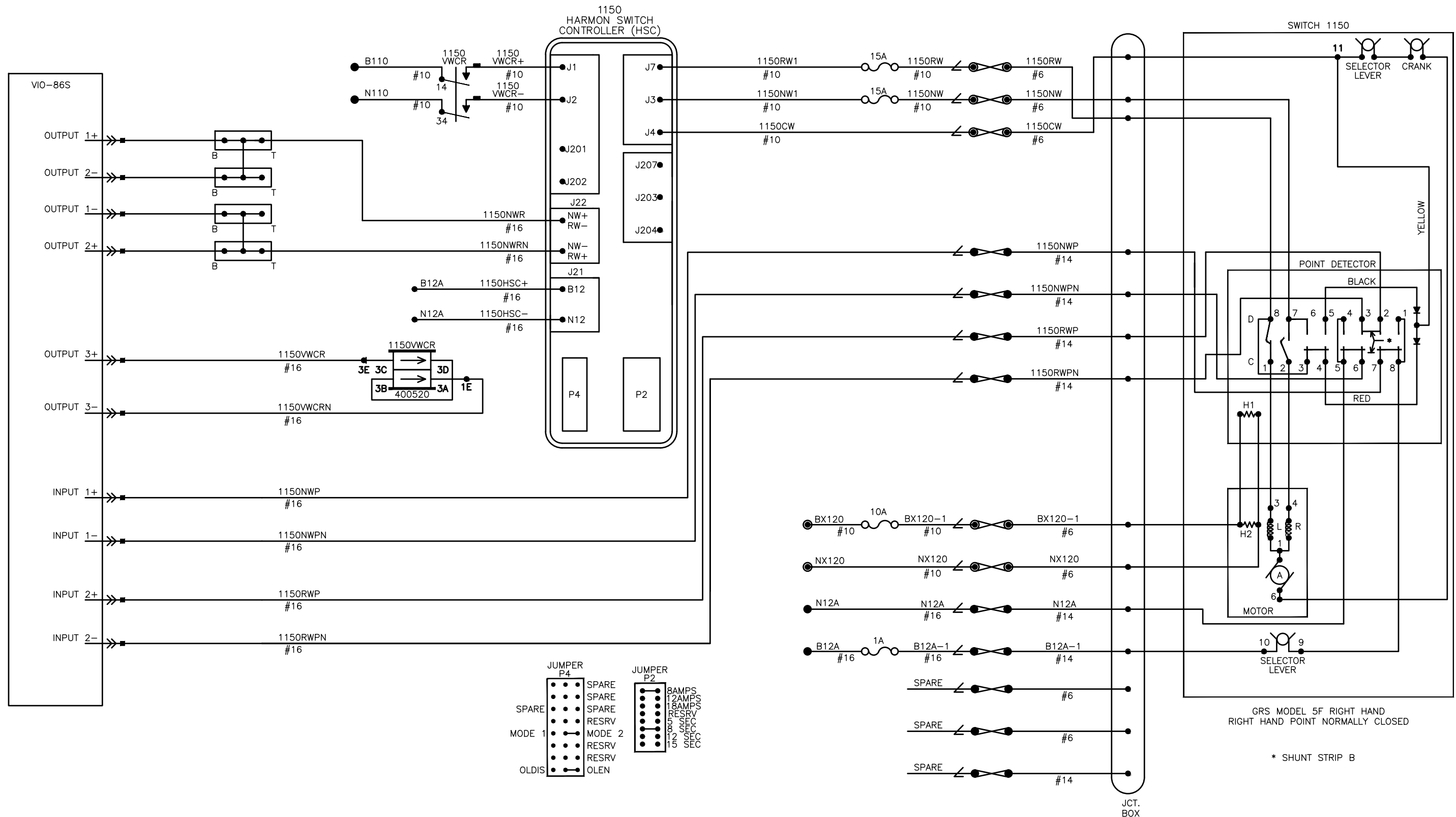
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EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
EASTRIDGE INTERLOCKING  
TYPICAL POS TRACK CIRCUITS

PCA NO. 000  
CONTRACT NO. C801  
FILE LOCATION PROJECTWISE

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DRAWING NO. JC103  
REVISION C

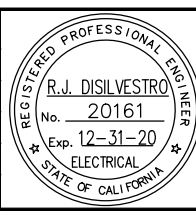
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GRS MODEL 5F RIGHT HAND  
RIGHT HAND POINT NORMALLY CLOSED

\* SHUNT STRIP B

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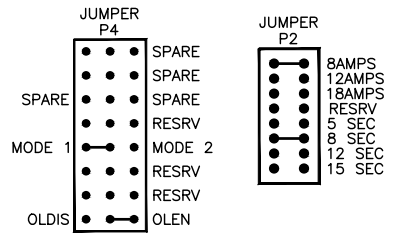
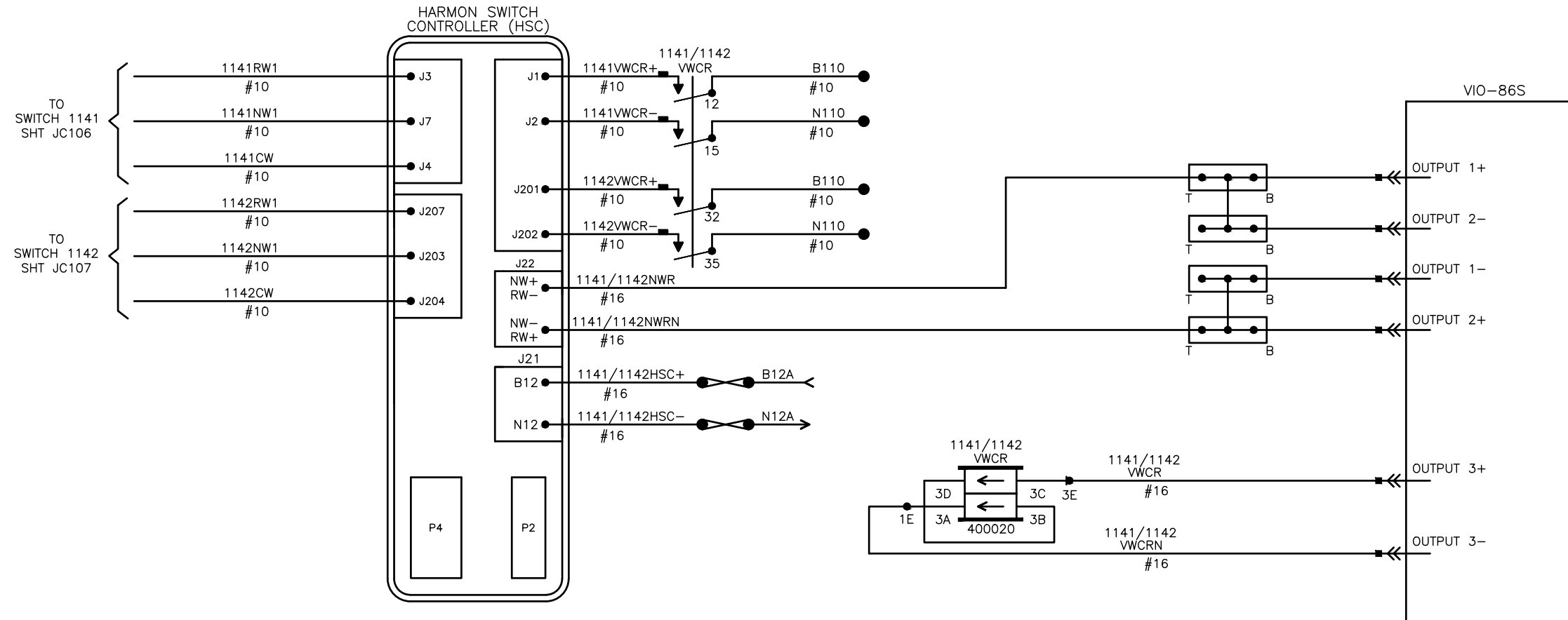
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SUBMITTAL DATE 06/29/20	BOARD APPROVAL DATE

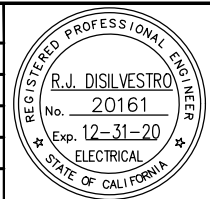
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PCA NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE

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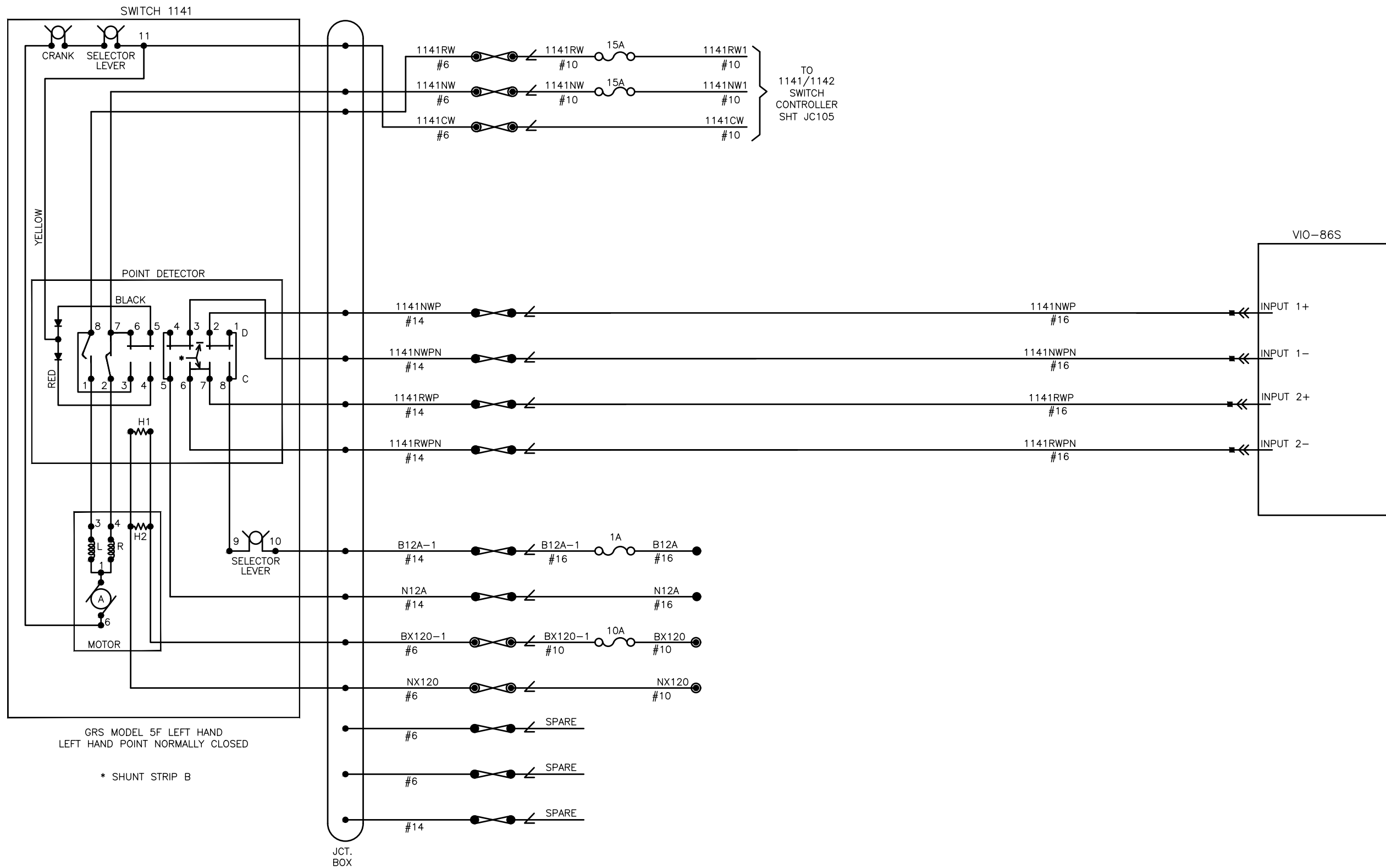


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CADD FILE DATE 03/11/19	SCALE NTS
SUBMITTAL DATE 06/29/20	BOARD APPROVAL DATE

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS EASTRIDGE INTERLOCKING TYPICAL SWITCH CIRCUITS. CROSSOVER. 1 OF 3		
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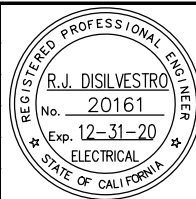
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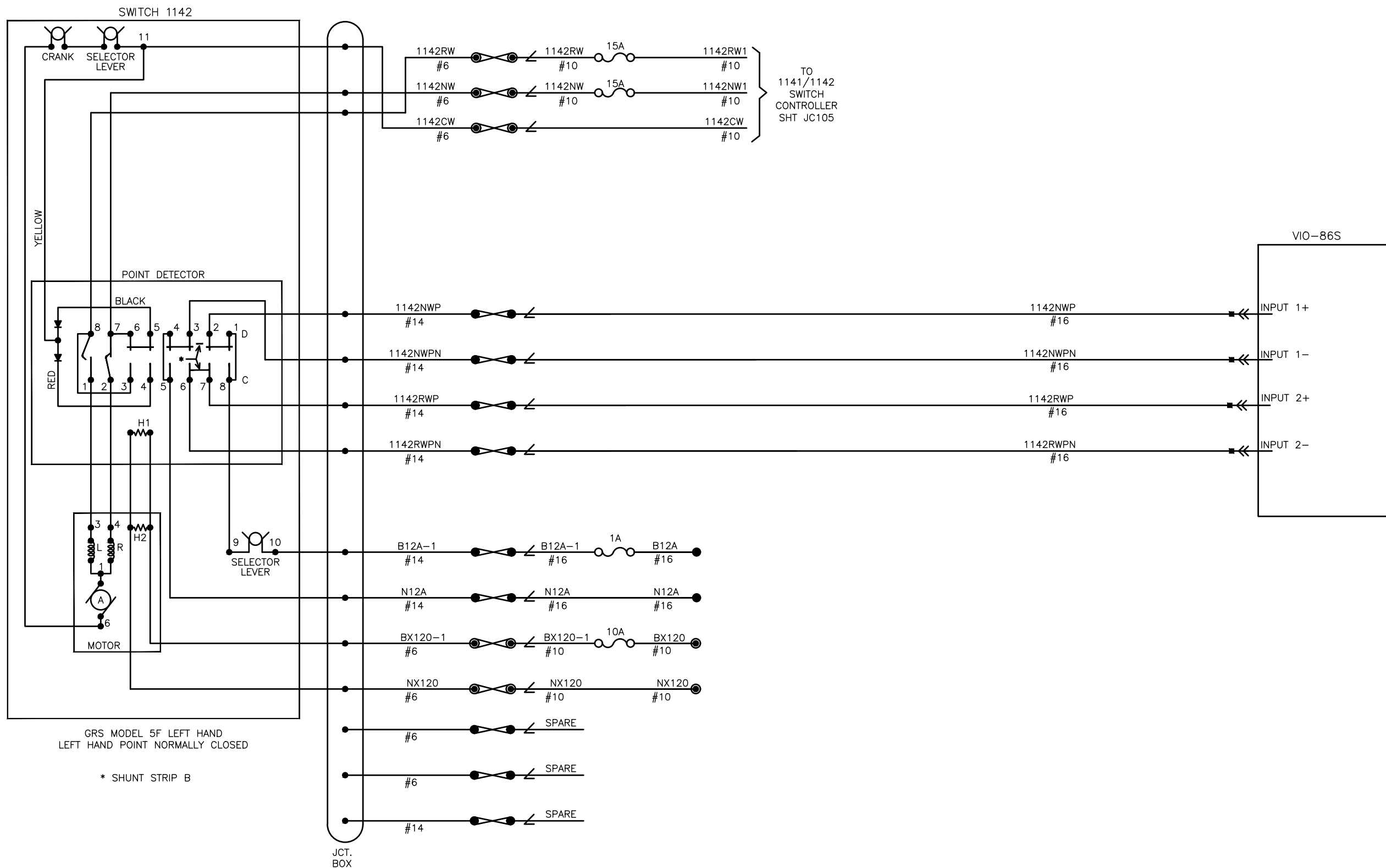
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BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
EASTRIDGE INTERLOCKING  
TYPICAL SWITCH CIRCUITS. CROSSOVER. 2 OF 3

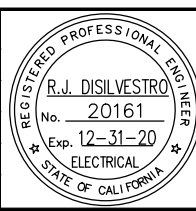
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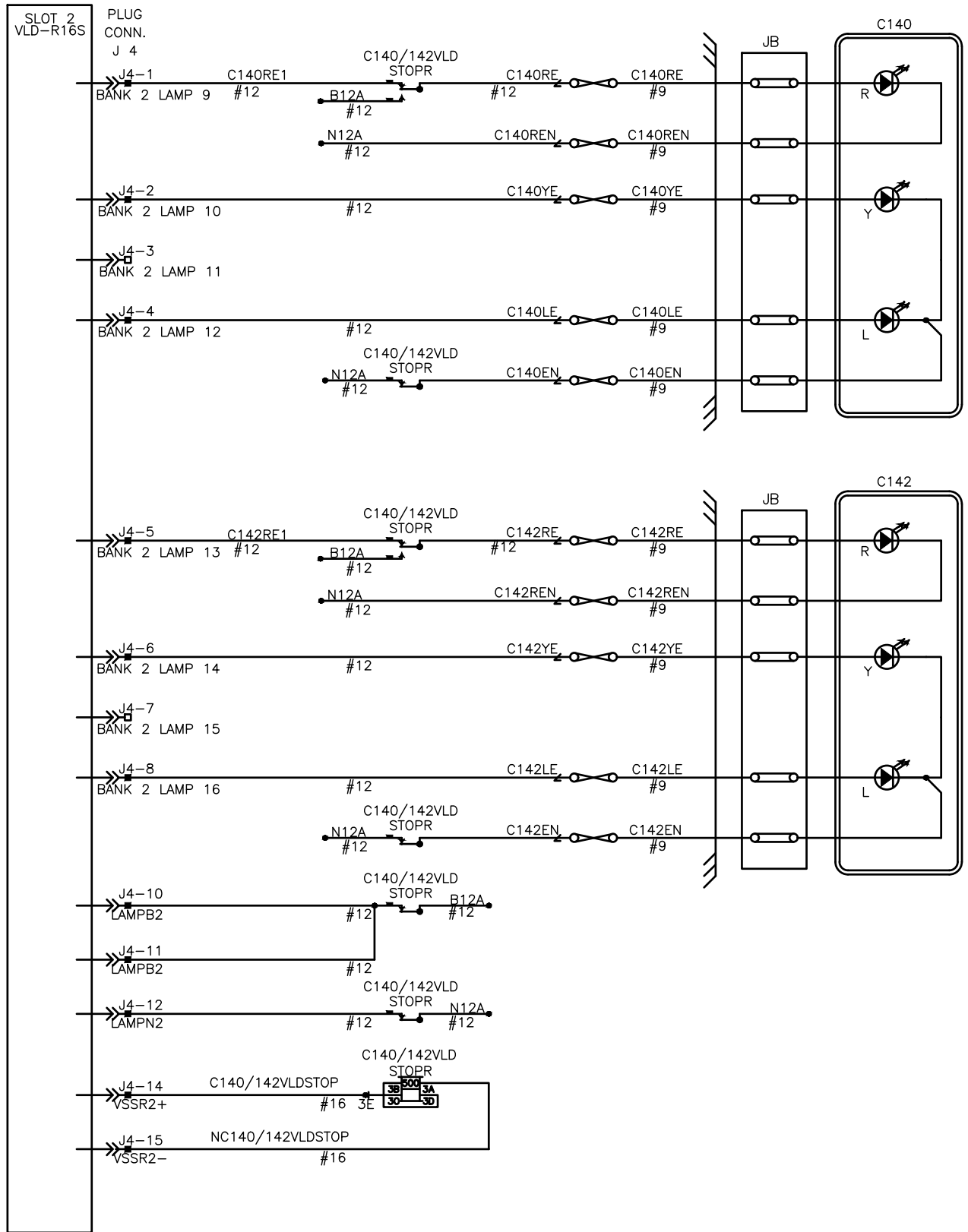
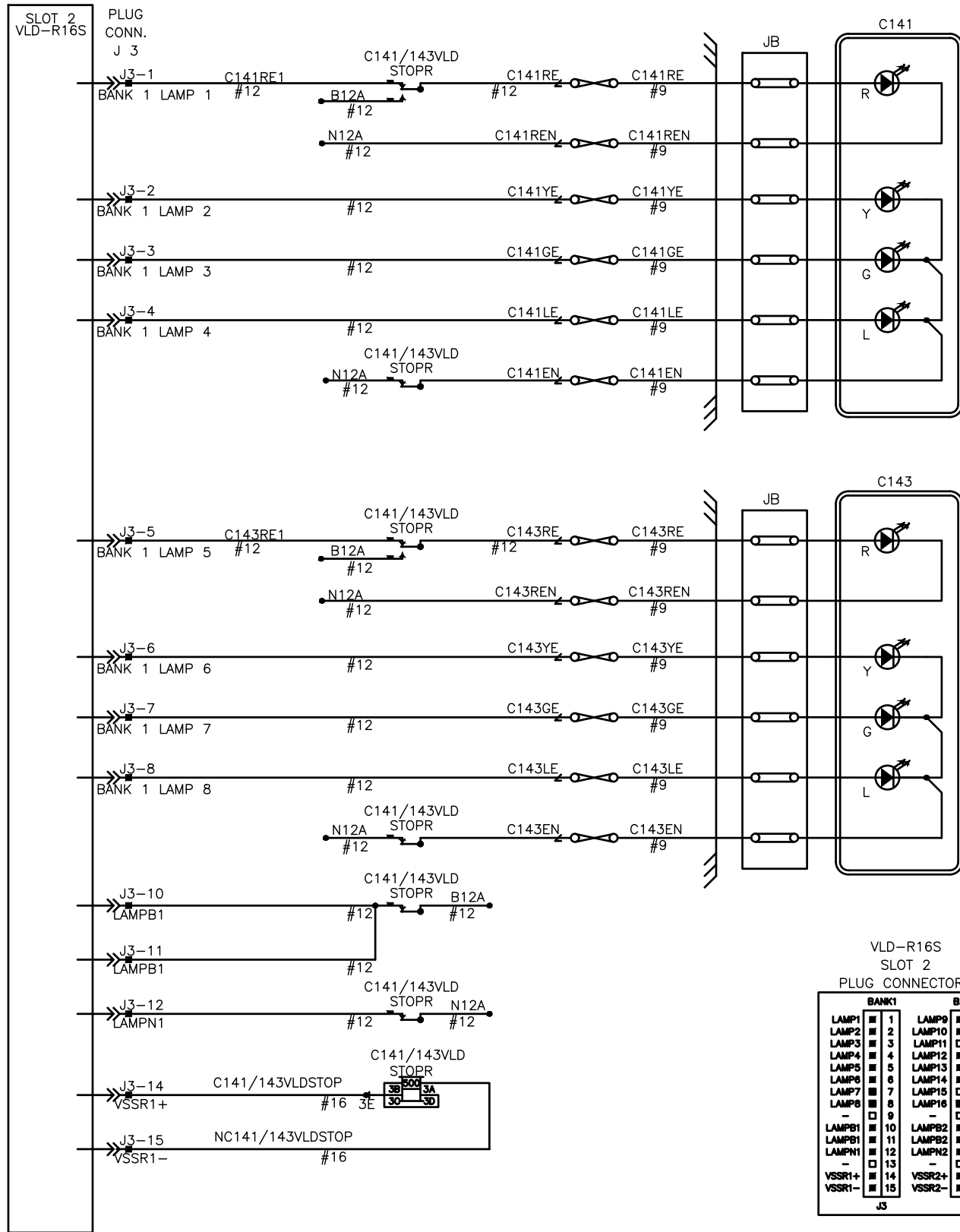
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ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/11/19  
SUBMITTAL DATE: 06/29/20  
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BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
EASTRIDGE INTERLOCKING  
TYPICAL SWITCH CIRCUITS. CROSSOVER. 3 OF 3

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

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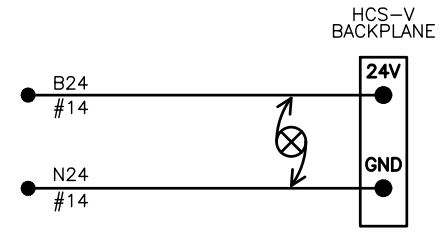
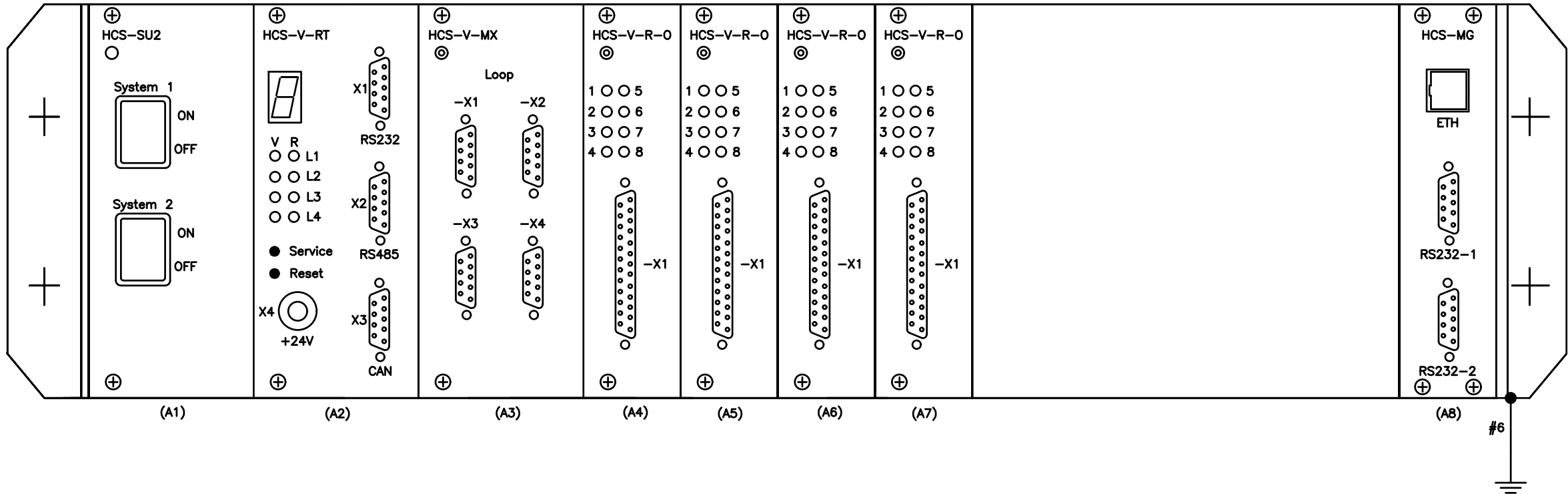
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EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
EASTRIDGE INTERLOCKING  
TYPICAL SIGNAL LIGHTING CIRCUITS

PCA NO. 000  
CONTRACT NO. C801  
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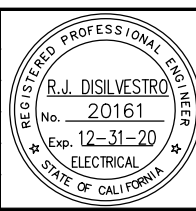
SHEET OF	JC108
REVISION	B

H & K HCS-V WAYSIDE EQUIPMENT - (ER1V)



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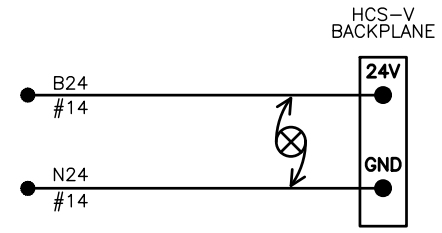
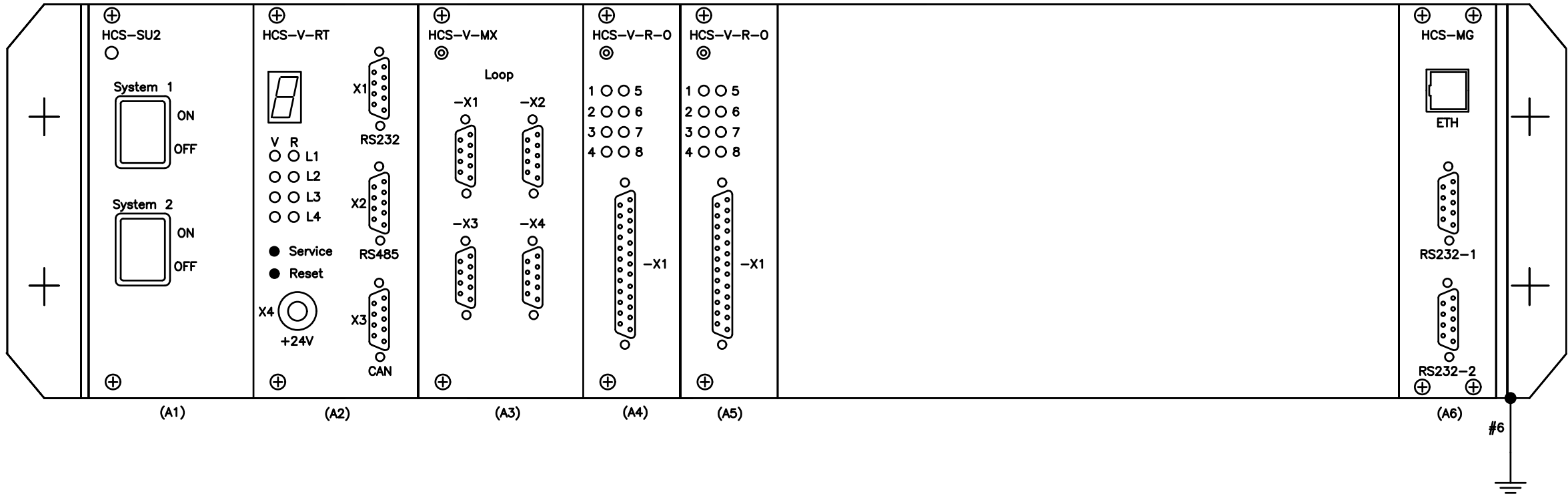
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 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 LRT SIGNAL SYSTEMS  
 EASTRIDGE INTERLOCKING  
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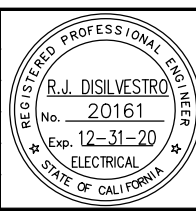
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 REVISION B

H & K HCS-V WAYSIDE EQUIPMENT - (ER2V)



Jun 22, 2020 - 11:27am C:\cadd\lib\yow\yofowkes\west\d0139440\001\01-140\_Eastridge.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



**HNTB** HNTB Corporation  
Engineers Architects Planners  
1732 North First Street, Suite 400 San Jose, CA 95112  
Tel (408) 451-7300 Fax (408) 451-6942

DESIGNED: M.BAKHIN  
CHECKED: V.FAINGOLD  
DRAWN: M.BAKHIN  
CADD FILE NAME: 801JC110.dwg



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ENGINEERS / SURVEYORS / PLANNERS

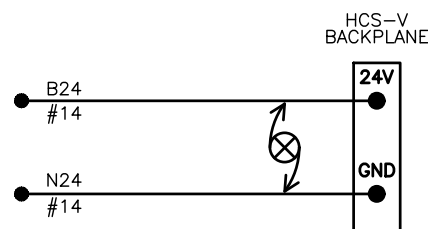
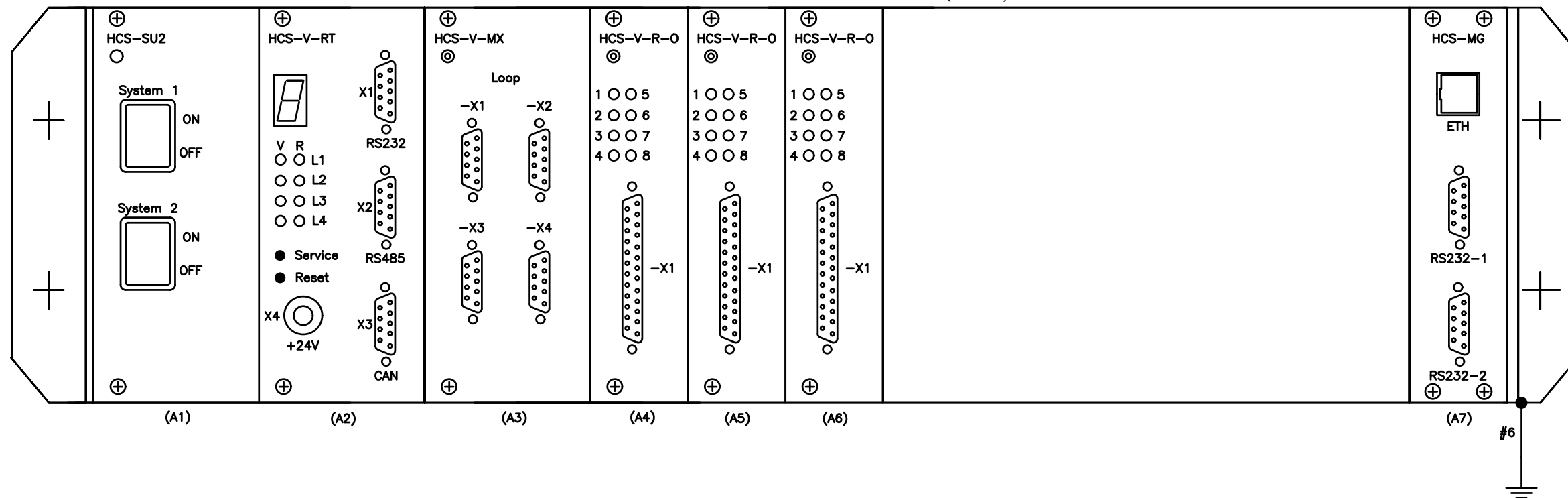
CADD FILE DATE: 03/11/19  
SUBMITTAL DATE: 06/29/20  
SCALE: NTS  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
EASTRIDGE INTERLOCKING  
TWC INTERROGATOR (ER2V)

PCA NO.: 000 CONTRACT NO.: C801 FILE LOCATION: PROJECTWISE

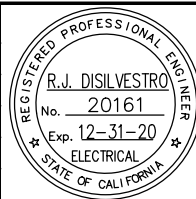
SHEET OF: JC110  
REVISION: B

H & K HCS-V WAYSIDE EQUIPMENT - (ER3V)



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CADD FILE NAME: 801JC111.dwg

**Santa Clara Valley Transportation Authority**

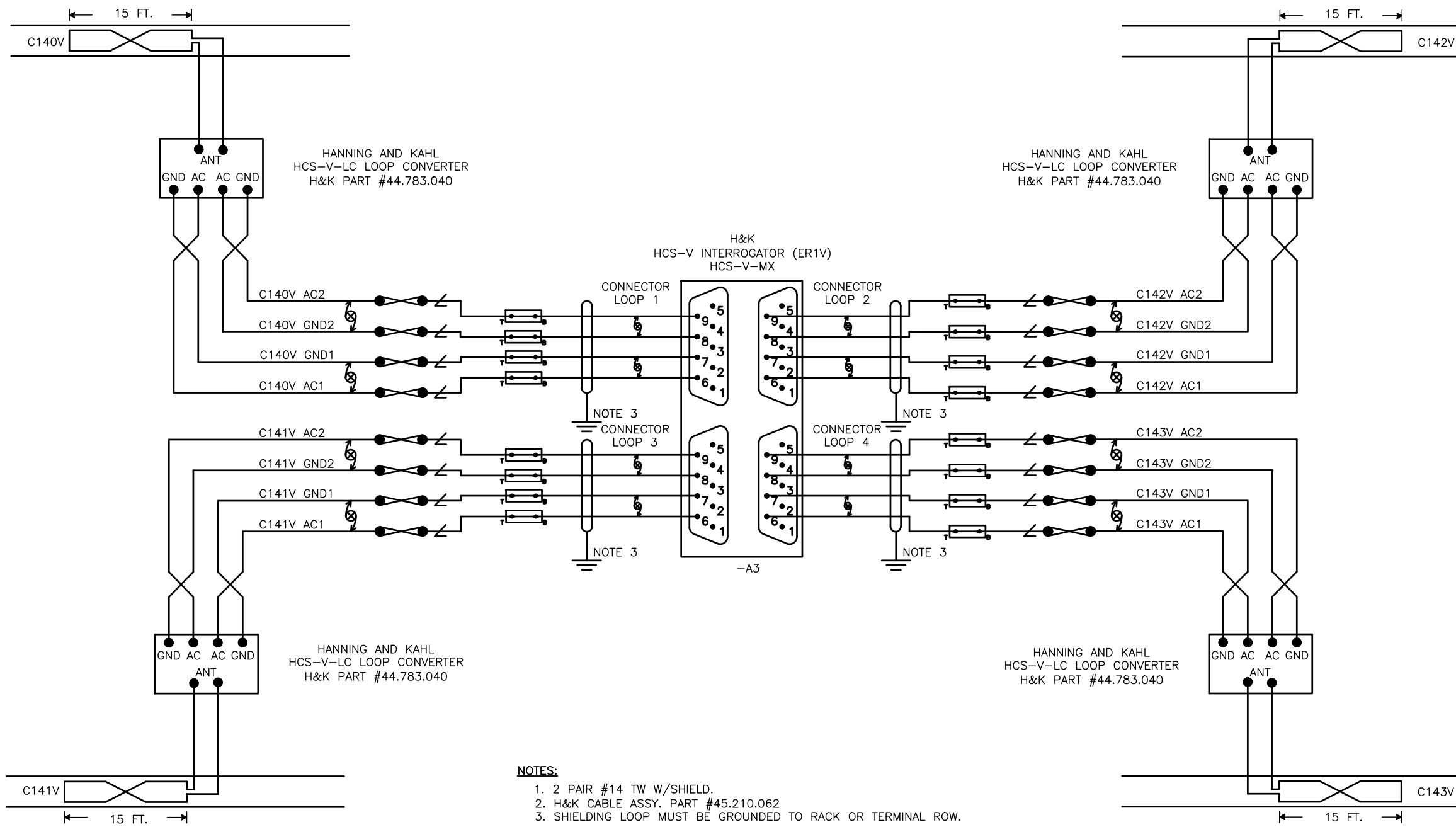
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ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/11/19  
SUBMITTAL DATE: 06/29/20  
SCALE: NTS  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
EASTRIDGE INTERLOCKING  
TWC INTERROGATOR (ER3V)

PCA NO.: 000 CONTRACT NO.: C801 FILE LOCATION: PROJECTWISE

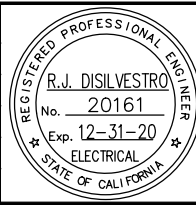
SHEET OF: JC111  
REVISION: B



- NOTES:**
1. 2 PAIR #14 TW W/SHIELD.
  2. H&K CABLE ASSY. PART #45.210.062
  3. SHIELDING LOOP MUST BE GROUNDED TO RACK OR TERMINAL ROW.

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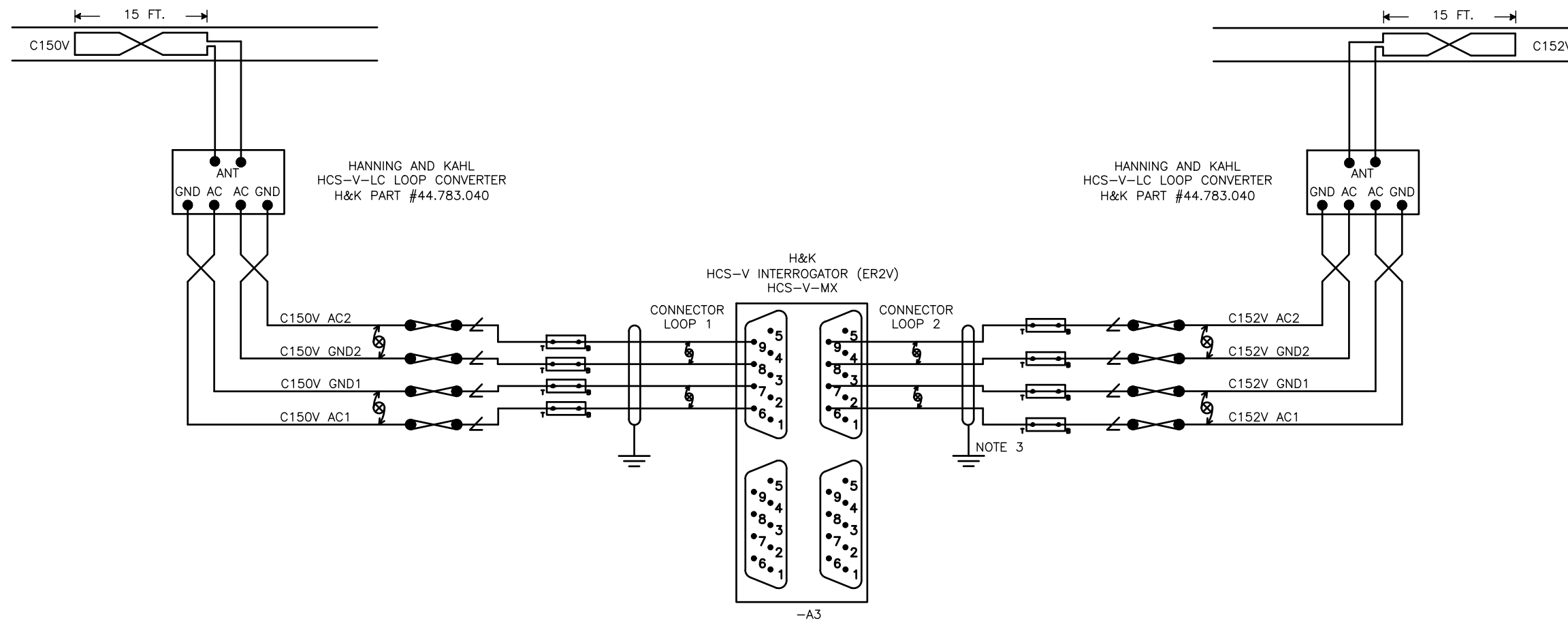


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CADD FILE DATE 03/11/19	SCALE NTS
SUBMITTAL DATE 06/29/20	BOARD APPROVAL DATE

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS EASTRIDGE INTERLOCKING TWC LOOPS (C140V,C141V,C142V,C143)			SHEET OF DRAWING NO. JC112 REVISION B
PCA NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE	

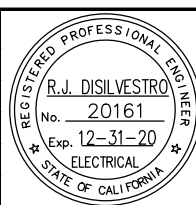


1. 2 PAIR #14 TW W/SHIELD.
2. H&K CABLE ASSY. PART #45.210.062
3. SHIELDING LOOP MUST BE GROUNDED TO RACK OR TERMINAL ROW.

-A3

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NO.	DATE	REVISIONS
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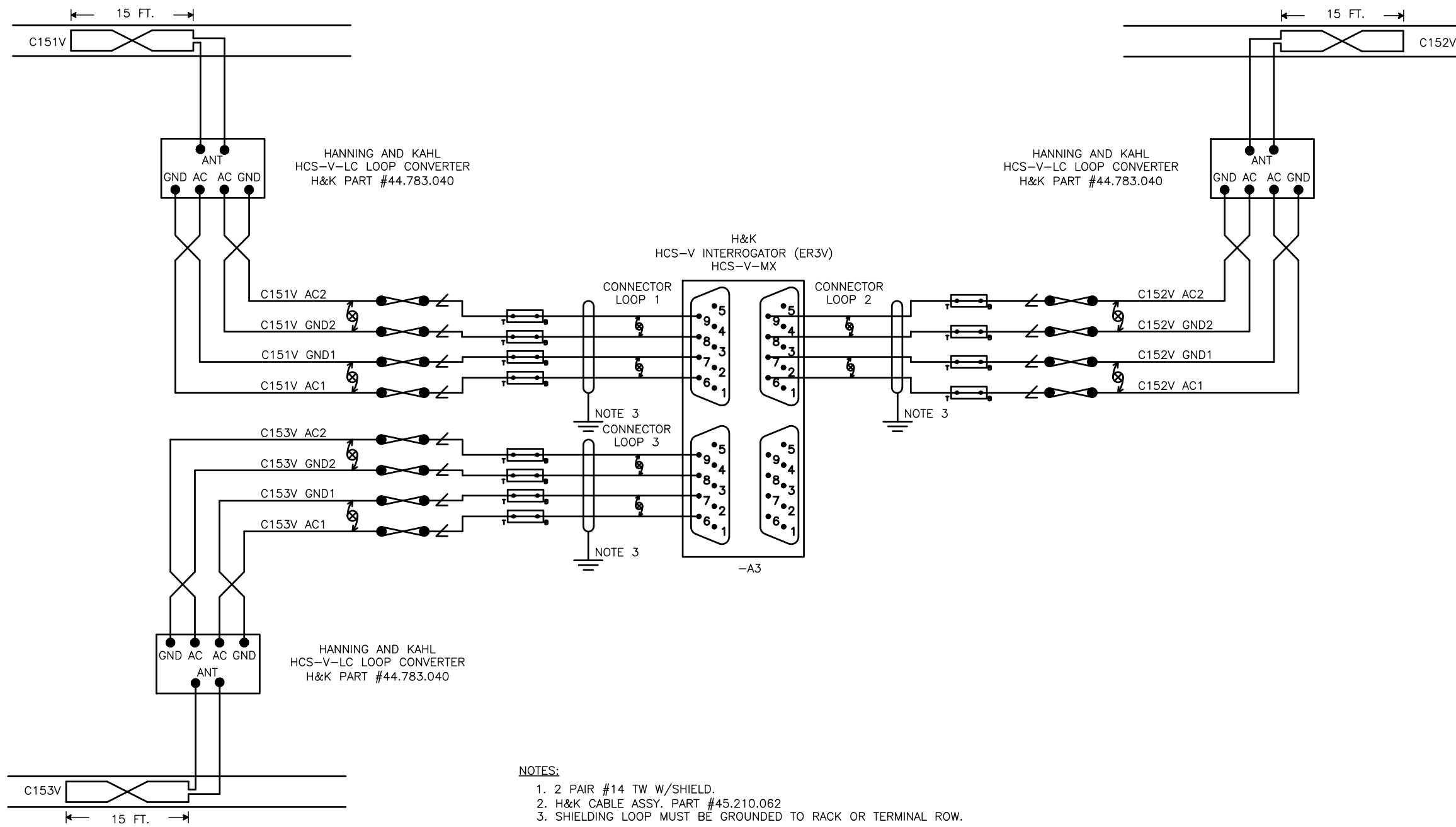
<b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
DESIGNED	CHECKED
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DRAWN	CADD FILE NAME
M.BAKHIN	801JC113.dwg



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CADD FILE DATE	SCALE
03/11/19	NTS
SUBMITTAL DATE	BOARD APPROVAL DATE
06/29/20	

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS EASTRIDGE INTERLOCKING TWC LOOPS (C150V,C152V)			SHEET OF DRAWING NO. JC113 REVISION B
PCA NO.	CONTRACT NO.	FILE LOCATION	
000	C801	PROJECTWISE	

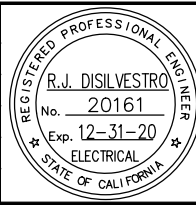




- NOTES:
1. 2 PAIR #14 TW W/SHIELD.
  2. H&K CABLE ASSY. PART #45.210.062
  3. SHIELDING LOOP MUST BE GROUNDED TO RACK OR TERMINAL ROW.

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DRAWN	CADD FILE NAME
M.BAKHIN	801JC114.dwg



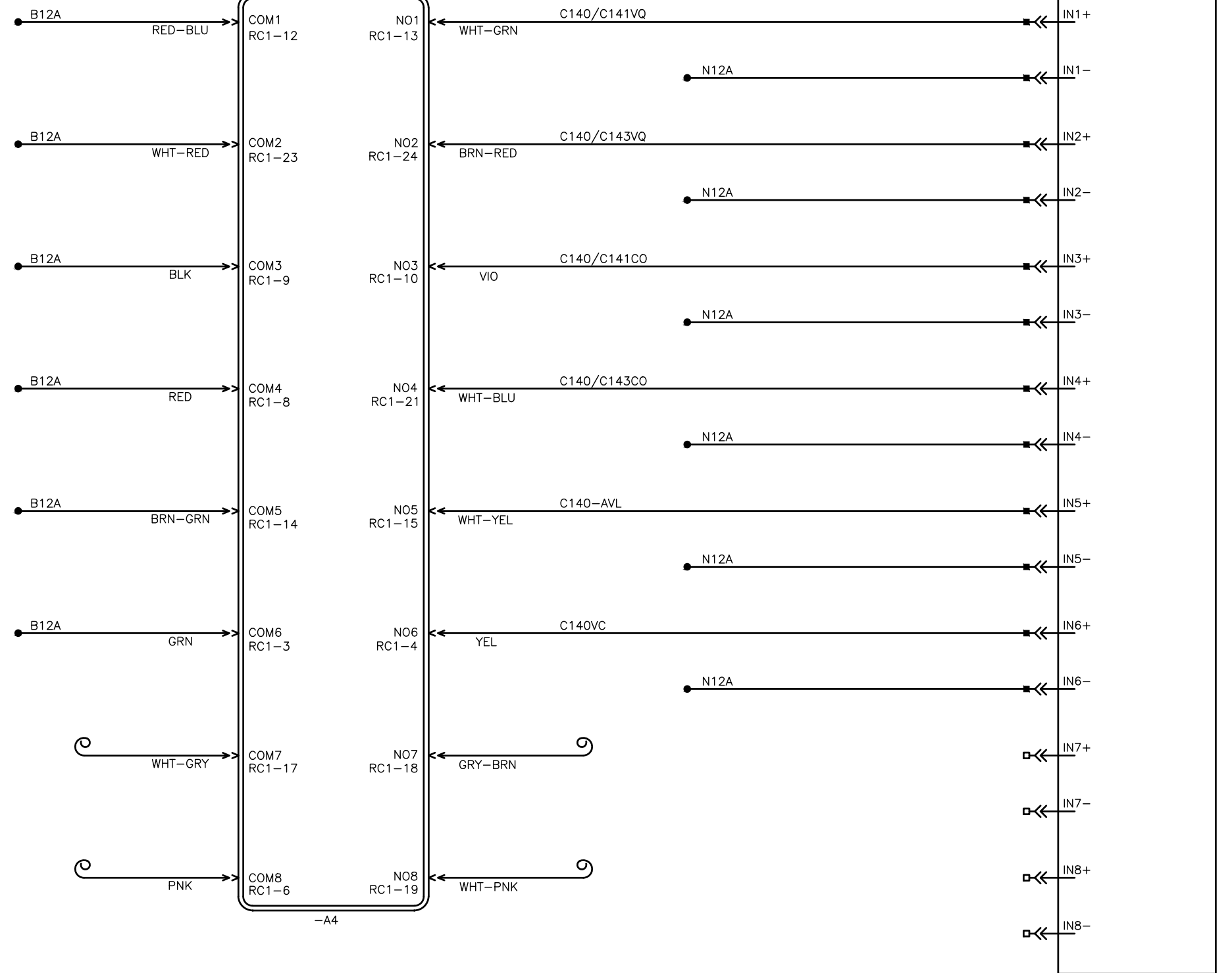
APPROVED	
<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	SCALE
03/11/19	NTS
SUBMITTAL DATE	BOARD APPROVAL DATE
06/29/20	

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS EASTRIDGE INTERLOCKING TWC LOOPS (C151V,C152V,C153V)			SHEET OF DRAWING NO. JC114 REVISION B
PCA NO.	CONTRACT NO.	FILE LOCATION	
000	C801	PROJECTWISE	

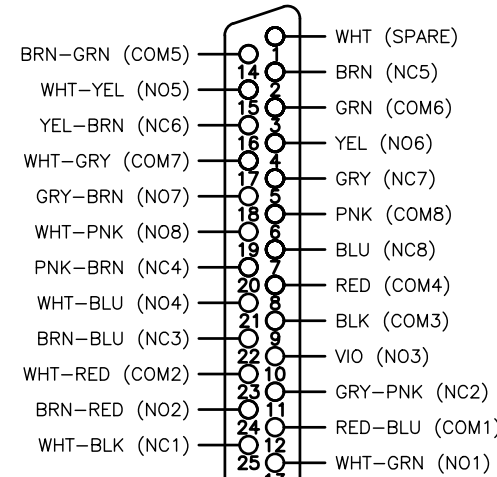
**NOTES:**

1. TAG AND TAPE SPARE CONDUCTORS FROM HCS-V-R-O CARD FOR UNUSED "NC", "NO" AND "COM" CONTACTS.
2. CABLE ASSY. HCS-V RELAY CARD, PART #45.210.050

HCS-V-R-O  
RELAY OUTPUT BOARD  
ER1V-1



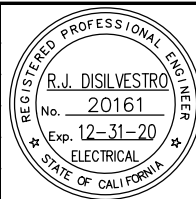
DB-25 MALE  
CONNECTOR ON RELAY CARD  
-PIN ASSIGNMENT-



NOTE 2

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DRAWN: M.BAKHIN  
CADD FILE NAME: 801JC115.dwg

**Santa Clara Valley Transportation Authority**

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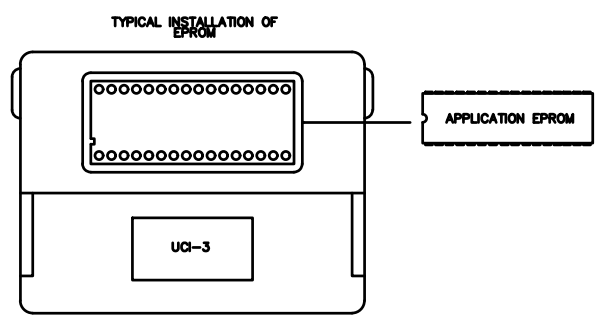
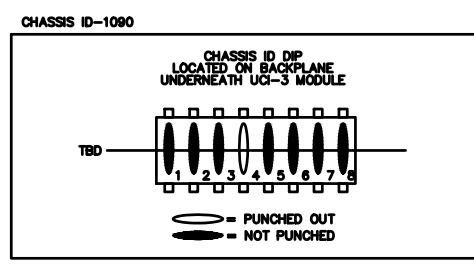
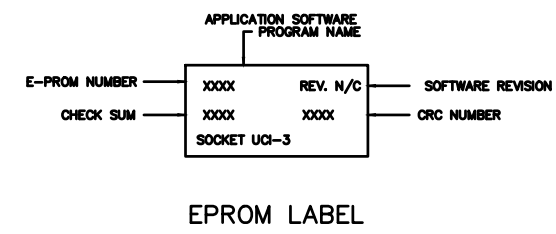
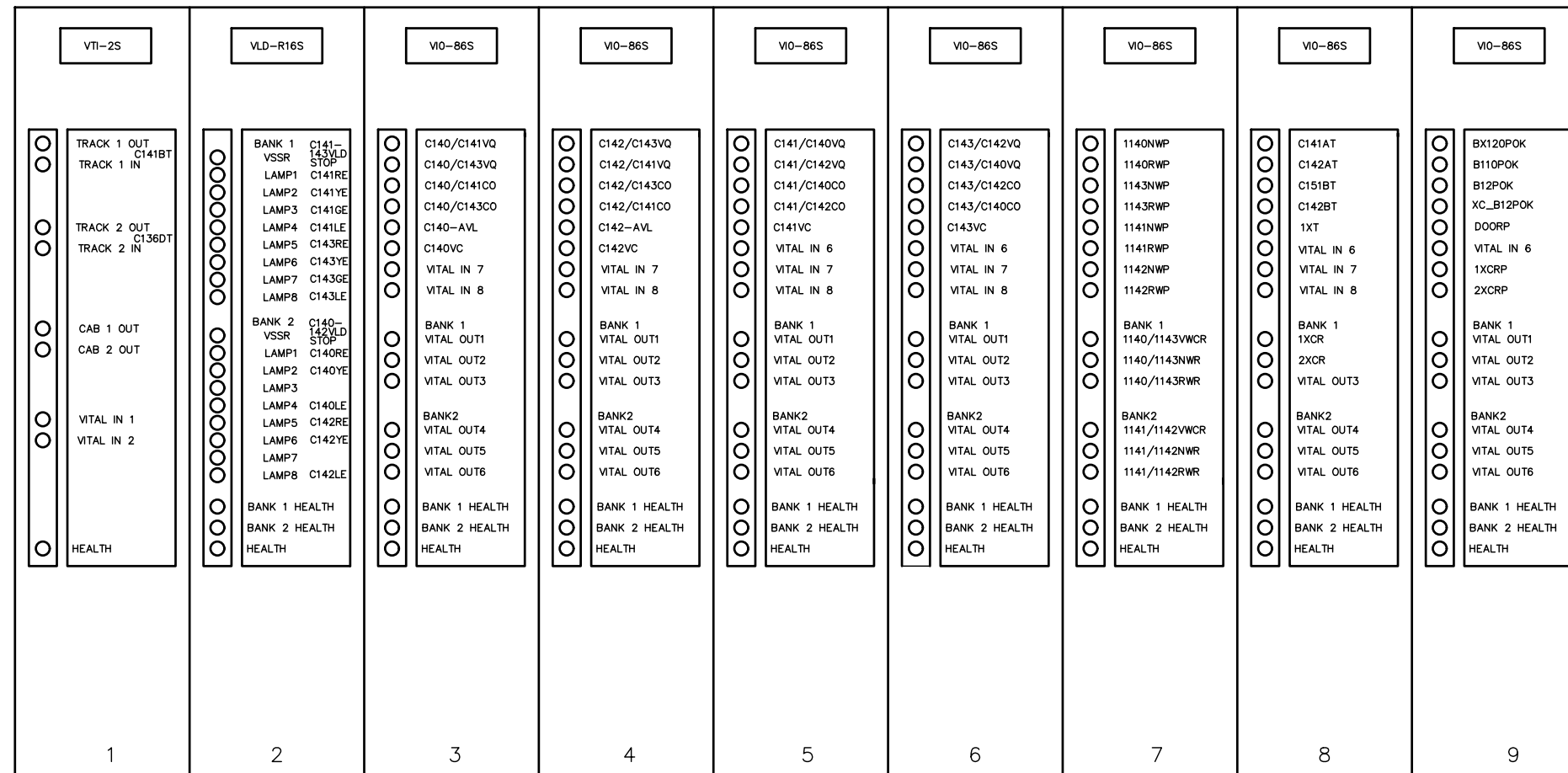
**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/11/19  
SUBMITTAL DATE: 06/29/20  
SCALE: NTS  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
EASTRIDGE INTERLOCKING  
TYPICAL TWC LOOP OUTPUTS

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

SHEET OF  
DRAWING NO. JC115  
REVISION B

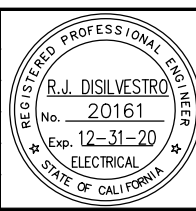


**MODULE LEGEND**

CDU-1 = CONTROL DISPLAY UNIT  
 CPS-3 = CENTRAL POWER SUPPLY  
 VPM-3 = VITAL PERIPHERAL MASTER  
 GFD-1 = GROUND FAULT DETECTOR  
 CIO-1A = COMMUNICATION INPUT/OUTPUT  
 CIO-2A = COMMUNICATION INPUT/OUTPUT  
 CIO-MDA = COMMUNICATION INPUT/OUTPUT  
 UCI-3 = CHASSIS INFORMATION  
 VTI-2S = VITAL TRACK INTERFACE  
 VLD-R16S = VITAL LAMP DRIVER  
 VIO-86S = VITAL INPUTS/OUTPUTS

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**Transportation Authority**

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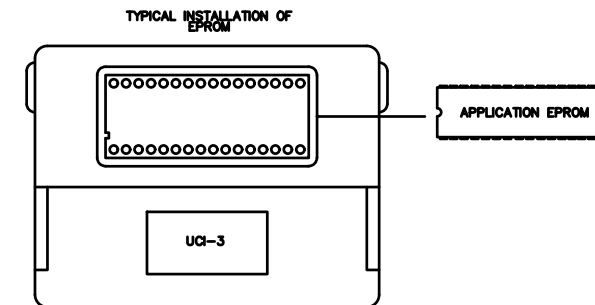
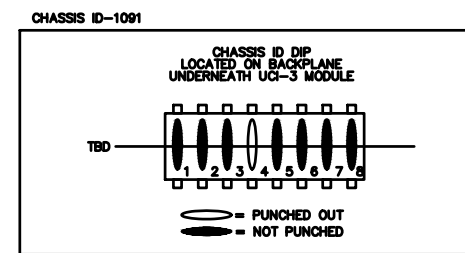
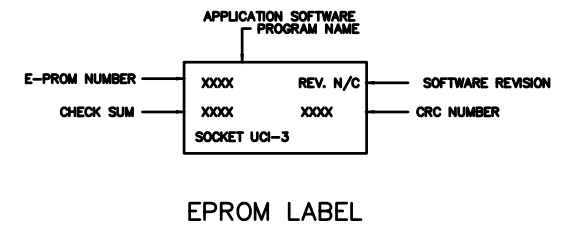
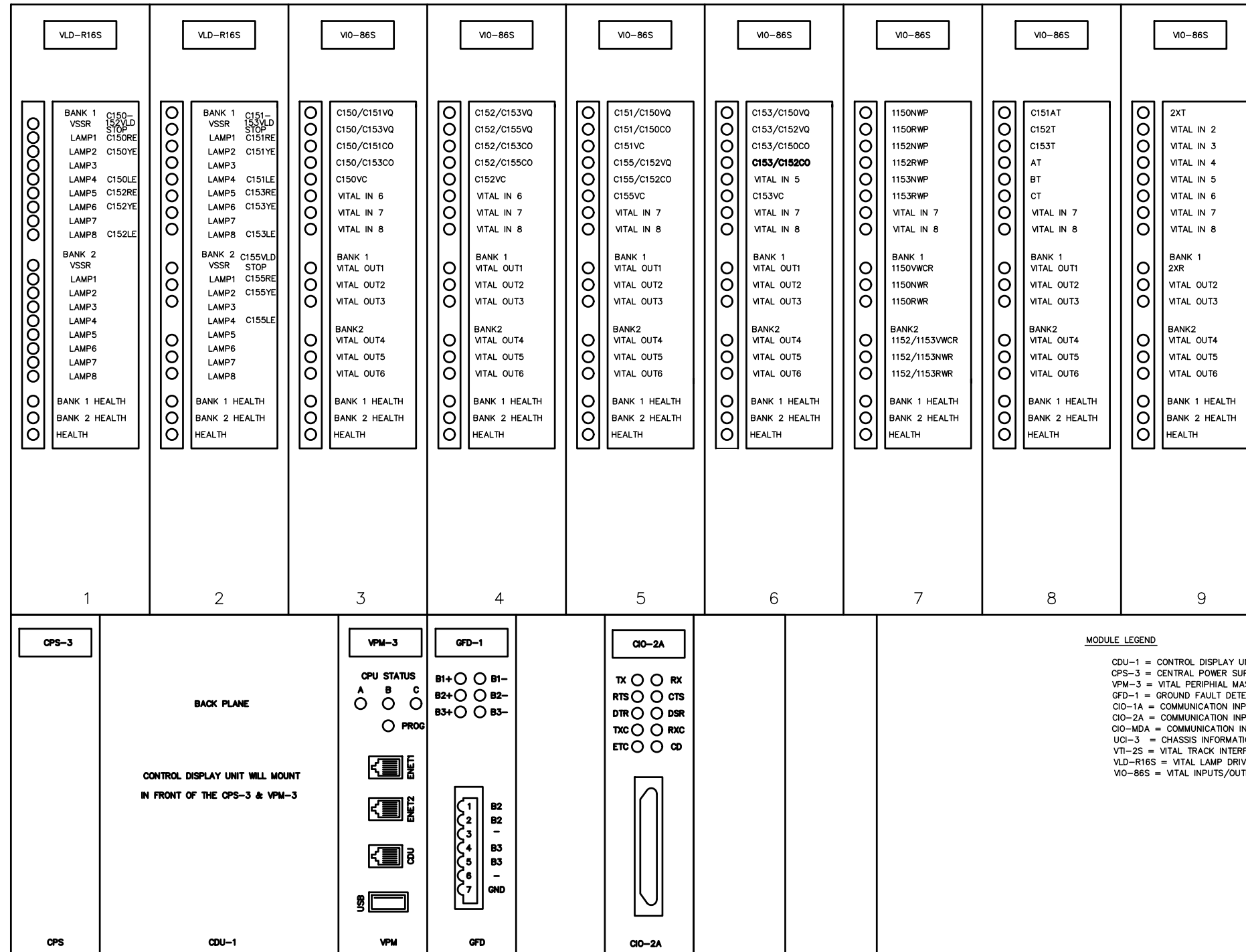
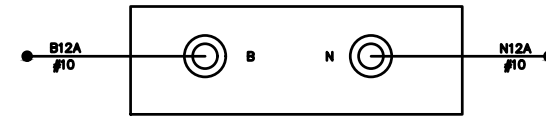
**BKF** 100+ YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/11/19  
 SUBMITTAL DATE: 06/29/20  
 SCALE: NTS  
 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 LRT SIGNAL SYSTEMS  
 EASTRIDGE INTERLOCKING  
 MICROPROCESSOR "A" MODULE CONFIGURATION

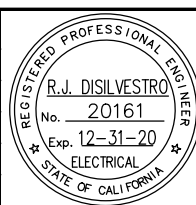
PCB NO. 000  
 CONTRACT NO. C801  
 FILE LOCATION: PROJECTWISE

SHEET OF  
 DRAWING NO. JC116  
 REVISION B



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CADD FILE NAME: 801JC117.dwg

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CADD FILE DATE: 03/11/19  
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EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
EASTRIDGE INTERLOCKING  
MICROPROCESSOR "B" MODULE CONFIGURATION

PCA NO. 000  
CONTRACT NO. C801  
FILE LOCATION: PROJECTWISE

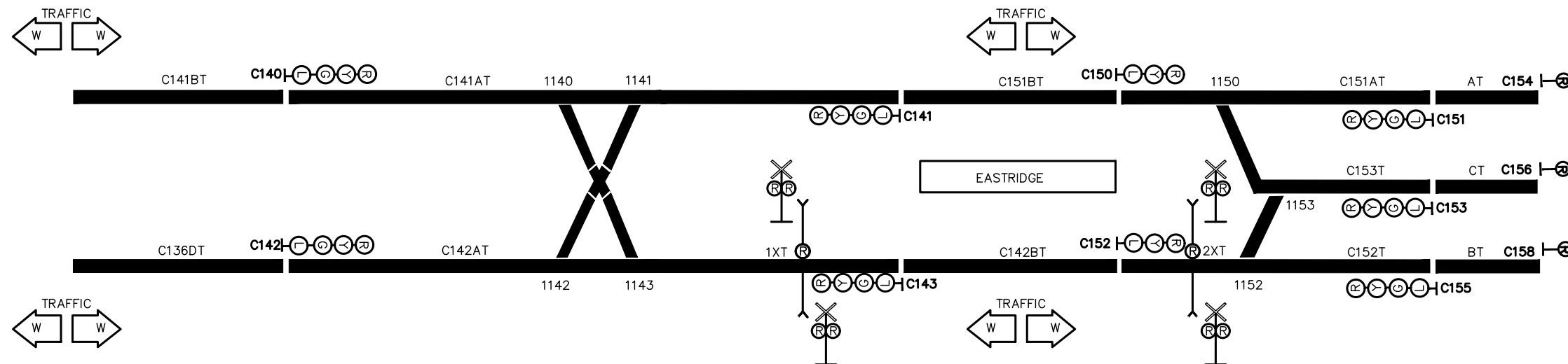
SHEET OF  
DRAWING NO. JC117  
REVISION B

# EASTRIDGE

<<-ALUM ROCK

DC POWER (R) LOW VOLTAGE  
 AC POWER (R) FAILURE  
 B110 POWER (R) LOW VOLTAGE  
 A ELOGIX (R) HEALTH  
 B ELOGIX (R) HEALTH  
 VITAL REMOTE LINK (R) HEALTH

CONTROL MODE  
 REMOTE (W) LOCAL (W)



SIGNAL C140  
 CLEAR NOR (W) STOP (W) CLEAR REV (W)  
 CALL ON (R) CALL ON (W) IN TIME (R)

SW 1140 NOR (G) LOCK (R) REV (Y)  
 SW 1141 NOR (G) LOCK (R) REV (Y)  
 SW 1140/1143 NOR (W) REV (W)  
 SW 1141/1142 NOR (W) REV (W)

SW 1143 NOR (G) LOCK (R) REV (Y)  
 SW 1142 NOR (G) LOCK (R) REV (Y)

SIGNAL C142  
 CLEAR NOR (W) STOP (W) CLEAR REV (W)  
 CALL ON (R) CALL ON (W) IN TIME (R)

SIGNAL C141  
 CLEAR NOR (W) STOP (W) CLEAR REV (W)  
 CALL ON (R) CALL ON (W) IN TIME (R)

SIGNAL C143  
 CLEAR NOR (W) STOP (W) CLEAR REV (W)  
 CALL ON (R) CALL ON (W) IN TIME (R)

SIGNAL C150  
 CLEAR NOR (W) STOP (W) CLEAR REV (W)  
 CALL ON (R) CALL ON (W) IN TIME (R)

SIGNAL C152  
 CLEAR NOR (W) STOP (W) CLEAR REV (W)  
 CALL ON (R) CALL ON (W) IN TIME (R)

SW 1150 NOR (G) LOCK (R) REV (Y)  
 SW 1150 NOR (W) REV (W)

SW 1153 NOR (G) LOCK (R) REV (Y)

SW 1152/1153 NOR (W) REV (W)  
 SW 1152 NOR (G) LOCK (R) REV (Y)

SIGNAL C151  
 CLEAR NOR (W) STOP (W)  
 CALL ON (R) CALL ON (W) IN TIME (R)

SIGNAL C153  
 CLEAR NOR (W) STOP (W) CLEAR REV (W)  
 CALL ON (R) CALL ON (W) IN TIME (R)

SIGNAL C155  
 CLEAR NOR (W) STOP (W)  
 CALL ON (R) CALL ON (W) IN TIME (R)

## COMPUTER TYPE LOCAL CONTROL PANEL

COLOR ASSIGNMENT FOR TRACK ELEMENTS:  
 "WHITE" - TRACK IS CLEAR;  
 "RED" - TRACK IS OCCUPIED;  
 "GREEN" - SIGNAL IS CLEARED THROUGH THE TRACK ELEMENT.

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DESIGNED: M.BAKHIN CHECKED: V.FAINGOLD  
 DRAWN: M.BAKHIN CADD FILE NAME: 801JC118.dwg

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CADD FILE DATE: 03/11/19 SCALE: NTS  
 SUBMITTAL DATE: 06/29/20 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 LRT SIGNAL SYSTEMS  
 EASTRIDGE INTERLOCKING  
 LOCAL CONTROL PANEL

PCOA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

SHEET OF  
 DRAWING NO. JC118  
 REVISION B

EASTRIDGE-A, OFFICE CONTROL AND INDICATION CHART, SERIAL PORT 1

CONTROLS

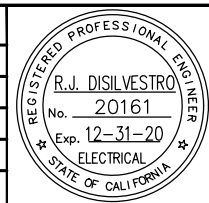
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WORD 2	C_140_141RQS	C_140_143RQS	C_140COQS	C_140CANR	C_142_143RQS	C_142_141RQS	C_142COQS	C_142CANR
WORD 3	C_141_140RQS	C_141_142RQS	C_141COQS	C_141CANR	C_143_142RQS	C_143_140RQS	C_143COQS	C_143CANR
WORD 4	C_150_151RQS	C_150_153RQS	C_150COQS	C_150CANR	C_152_155RQS	C_152_153RQS	C_152COQS	C_152CANR
WORD 5	C_151_C150RQS	C_151COQS	C_151CANR	C_155_152RQS	C_155COQS	C_155CANR	C_153_150RQS	C_153_152RQS
WORD 6	C_153COQS	C_153CANR	SP	SP	SP	SP	SP	SP
WORD 7	C_CCTLRQS	C_CCTLCAN	C_COMMCKS	SP	SP	SP	SP	SP

INDICATIONS

WORD 1	C_C141ATK	C_C142ATK	C_C142BTK	C_C151ATK	C_C151BTK	C_C152TK	C_C153TK	SP
WORD 2	C_ATK	C_BTK	C_CTK	C_C141BTK	C_C136DTK	SP	SP	SP
WORD 3	C_1140NWK	C_1140RWK	C_1141NWK	C_1141RWK	C_1142NWK	C_1142RWK	C_1143NWK	C_1143RWK
WORD 4	C_1150NWK	C_1150RWK	C_1152NWK	C_1152RWK	C_1153NWK	C_1153RWK	SP	SP
WORD 5	SP	C_C140YK	C_C140LK	C_C140FLK	C_C140RK	C_C140COK	C_C140LOK	C_C140TEK
WORD 6	SP	C_C142YK	C_C142LK	C_C142FLK	C_C142RK	C_C142COK	C_C142LOK	C_C142TEK
WORD 7	C_C141GK	C_C141YK	C_C141LK	C_C141FLK	C_C141RK	C_C141COK	C_C141LOK	C_C141TEK
WORD 8	C_C143GK	C_C143YK	C_C143LK	C_C143FLK	C_C143RK	C_C143COK	C_C143LOK	C_C143TEK
WORD 9	SP	C_C150YK	C_C150LK	C_C150FLK	C_C150RK	C_C150COK	C_C150LOK	C_C150TEK
WORD 10	SP	C_C152YK	C_C152LK	C_C152FLK	C_C152RK	C_C152COK	C_C152LOK	C_C152TEK
WORD 11	SP	C_C151YK	C_C151LK	SP	C_C151RK	C_C151COK	C_C151LOK	C_C151TEK
WORD 12	SP	C_C153YK	C_C153LK	C_C153FLK	C_C153RK	C_C153COK	C_C153LOK	C_C153TEK
WORD 13	SP	C_C155YK	C_C155LK	SP	C_C155RK	C_C155COK	C_C155LOK	C_C155TEK
WORD 14	C_140_141RQK	C_140_143RQK	C_142_143RQK	C_142_141RQK	C_141_140RQK	C_141_142RQK	C_143_142RQK	C_143_140RQK
WORD 15	C_150_151RQK	C_150_153RQK	C_152_155RQK	C_152_153RQK	C_151_150RQK	C_153_150RQK	C_153_152RQK	C_155/152RQK
WORD 16	C_ACPOK	C_B110POK	C_B12POK	C_XB12POK	C_ACPOK1039	C_B12POK1039	C_DOORK	SP
WORD 17	C_LINK	C_CCK	C_FAK	C_LCK	C_ELOGXK	SP	SP	SP
WORD 18	C_1XTK	C_2XTK	C_1PXRK	C_2PXRK	SP	SP	SP	SP
WORD 19	C_3NFK	C_3SFK	C_4NFK	C_4SFK	SP	SP	SP	SP
WORD 20	SP	SP	SP	SP	SP	SP	SP	SP

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EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
EASTRIDGE INTERLOCKING  
CONTROL AND INDICATION CHART "A"

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

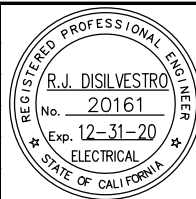
SHEET OF	JC119
REVISION	B

EASTRIDGE-A, LCP CONTROL AND INDICATION CHART, SERIAL PORT 2

CONTROLS								
	BIT 1	BIT 2	BIT 3	BIT 4	BIT 5	BIT 6	BIT 7	BIT 8
WORD 1	P_1140_43NWZ	P_1140_43RWZ	P_1141_42NWZ	P_1141_42RWZ	P_1150NWZ	P_1150RWZ	P_1152_53NWS	P_1152_53RWS
WORD 2	P_140_141RQS	P_140_143RQS	P_140COQS	P_140CANR	P_142_143RQS	P_142_141RQS	P_142COQS	P_142CANR
WORD 3	P_141_140RQS	P_141_142RQS	P_141COQS	P_C141CANR	P_143_142RQS	P_143_140RQS	P_143COQS	P_143CANR
WORD 4	P_150_151RQS	P_150_153RQS	P_150COQS	P_150CANR	P_152_155RQS	P_152_153RQS	P_152COQS	P_152CANR
WORD 5	P_151_150RQS	P_151COQS	P_151CANR	P_155_152RQS	P_155COQS	P_155CANR	SP	SP
WORD 6	P_153_150RQS	P_153_152RQS	P_153COQS	P_153CANR	SP	SP	SP	SP
WORD 7	P_LOCAL	P_REMOTE	SP	SP	SP	SP	SP	SP
INDICATIONS								
WORD 1	P_C141ATK	P_C142ATK	P_C142BTK	P_C151ATK	P_C151BTK	C152TK	P_C153TK	SP
WORD 2	P_ATK	P_BTK	P_CTK	P_C141BTK	P_C136DTK	SP	SP	SP
WORD 3	P_1140NWK	P_1140RWK	P_1141NWK	P_1141RWK	P_1142NWK	P_1142RWK	P_1143NWK	P_1143RWK
WORD 4	P_1150NWK	P_1150RWK	P_1152NWK	P_1152RWK	P_1153NWK	P_1153RWK	SP	SP
WORD 5	P_1140LK	P_1141LK	P_1142LK	P_1143LK	P_1150LK	P_1152LK	P_1153LK	SP
WORD 6	SP	P_C140YK	P_C140LK	P_C140FLK	P_C140RK	P_C140FRK_FL	P_C140COK	P_C140TEK
WORD 7	P_C141GK	P_C141YK	P_C141LK	P_C141FLK	P_C141RK	P_C141FRK_FL	P_C141COK	P_C141TEK
WORD 8	SP	P_C142YK	P_C142LK	P_C142FLK	P_C142RK	P_C142FRK_FL	P_C142COK	P_C142TEK
WORD 9	P_C143GK	P_C143YK	P_C143LK	P_C143FLK	P_C143RK	P_C143FRK_FL	P_C143COK	C143TEK
WORD 10	P_C150YK	P_C150LK	P_C150FLK	P_C150RK	P_C150FRK_FL	P_C150COK	P_C150TEK	SP
WORD 11	SP	P_C151YK	P_C151LK	P_C151RK	P_C151FRK_FL	P_C151COK	P_C151TEK	SP
WORD 12	P_C152YK	P_C152LK	P_C152FLK	P_C152RK	P_C152FRK_FL	P_C152COK	P_C152TEK	SP
WORD 13	SP	P_C153YK	P_C153LK	P_C153FLK	P_C153RK	P_C153FRK_FL	P_C153COK	P_C153TEK
WORD 14	SP	P_C155YK	P_C155LK	P_C155RK	P_C155FRK_FL	P_C155COK	P_C155TEK	SP
WORD 15	P_LOK	P_ACPOK	P_B110POK	P_B12POK	P_XB12POK	SP	SP	SP
WORD 16	P_CCK	P_LCK	P_AELOGXK	P_BELOGXK	SP	P_LINK	SP	SP
WORD 17	P_1XTK	P_2XTK	P_1PXFLK_FL	P_2PXFLK_FL	SP	SP	SP	SP
WORD 18	P_3NFK	P_3SFK	P_4NFK	P_4SFK	SP	SP	SP	SP
WORD 19	SP	SP	SP	SP	SP	SP	SP	SP

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**Santa Clara Valley Transportation Authority**

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EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
EASTRIDGE INTERLOCKING  
CONTROL AND INDICATION CHART "A"

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

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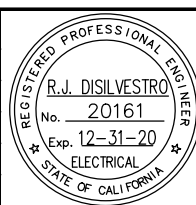
EASTRIDGE ELOGIXS "A" I/O CHART

VT12S: IO SLOT 1

TRACK 1				TRACK 2			
RX STATUSES		TX STATUSES		RX STATUSES		TX STATUSES	
QUICK SHUNT CODE 1		CODE 1	3NT01	QUICK SHUNT CODE 1		CODE 1	4NT01
CODE 1	3NTI1	CODE 2	3NT02	CODE 1	4NTI1	CODE 2	4NT02
CODE 2	3NTI2	CODE 3	3NT03	CODE 2	4NTI2	CODE 3	4NT03
CODE 3		CODE 4		CODE 3		CODE 4	
CODE 4		CODE 5		CODE 4		CODE 5	
CODE 5		CODE 6	3NT06	CODE 5		CODE 6	4NT06
CODE 6	3NTI6	CODE 7	3NT07	CODE 6	4NTI6	CODE 7	4NT07
CODE 7	3NTI7	CODE 8		CODE 7	4NTI7	CODE 8	
CODE 8		CODE M		CODE 8		CODE M	
CODE M	3NTIM			CODE M	4NTIM		

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EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
EASTRIDGE INTERLOCKING  
ELECTROLOGIXS I/O SLOT 1 "A"

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

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EASTRIDGE ELOGIXS "A" I/O CHART											
VLD-R16S: IO SLOT 2											
MODULE HEALTH	VLD2-OK										
VITAL SIGNAL STOP 1	C141_143STOP	LAMP STEADY ON 5	C143RE								
VITAL SIGNAL STOP 2	C140_142STOP	LAMP FLASH 5									
LAMP GRANT BANK 1		LAMP ALT FLASH 5									
LAMP GRANT BANK 2		LAMP OK STATUS 5	C143RLO								
LAMP BANK 1 HEALTH		LAMP STEADY ON 6	C143YE								
LAMP BANK 2 HEALTH		LAMP FLASH 6									
LAMP BANK 1 NORMAL		LAMP ALT FLASH 6									
LAMP BANK 2 NORMAL		LAMP OK STATUS 6	C143YLO								
LAMP STEADY ON 1	C141RE	LAMP STEADY ON 7	C143GE								
LAMP FLASH 1		LAMP FLASH 7									
LAMP ALT FLASH 1		LAMP ALT FLASH 7									
LAMP OK STATUS 1	C141RLO	LAMP OK STATUS 7	C143GLO								
LAMP STEADY ON 2	C141YE	LAMP STEADY ON 8	C143LE								
LAMP FLASH 2		LAMP FLASH 8	C143FLE								
LAMP ALT FLASH 2		LAMP ALT FLASH 8									
LAMP OK STATUS 2	C141YLO	LAMP OK STATUS 8	C143LLO								
LAMP STEADY ON 3	C141GE	LAMP STEADY ON 9	C140RE								
LAMP FLASH 3		LAMP FLASH 9									
LAMP ALT FLASH 3		LAMP ALT FLASH 9									
LAMP OK STATUS 3	C141GLO	LAMP OK STATUS 9	C140RLO								
LAMP STEADY ON 4	C141LE	LAMP STEADY ON 10	C140YE								
LAMP FLASH 4	C141FLE	LAMP FLASH 10									
LAMP ALT FLASH 4		LAMP ALT FLASH 10									
LAMP OK STATUS 4	C141LLO	LAMP OK STATUS 10	C140YLO								

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SUBMITTAL DATE 06/29/20	BOARD APPROVAL DATE

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
EASTRIDGE INTERLOCKING  
ELECTROLOGIXS I/O SLOT 2 "A"

PCA NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE
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	JC122
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EASTRIDGE ELOGIXS "A" I/O CHARTS

VI086S: IO SLOT 3		VI086S: IO SLOT 4		VI086S: IO SLOT 5		VI086S: IO SLOT 6	
MODULE HEALTH	VI03-OK	MODULE HEALTH	VI04-OK	MODULE HEALTH	VI05-OK	MODULE HEALTH	VI06-OK
BANK 1 HEALTH		BANK 1 HEALTH		BANK 1 HEALTH		BANK 1 HEALTH	
BANK 2 HEALTH		BANK 2 HEALTH		BANK 2 HEALTH		BANK 2 HEALTH	
VITAL INPUT 1	140_141VQ	VITAL INPUT 1	142_143VQ	VITAL INPUT 1	141_140VQ	VITAL INPUT 1	143_142VQ
VITAL INPUT 2	140_143VQ	VITAL INPUT 2	142_141VQ	VITAL INPUT 2	141_142VQ	VITAL INPUT 2	143_140VQ
VITAL INPUT 3	140_141CO	VITAL INPUT 3	142_143CO	VITAL INPUT 3	141_140CO	VITAL INPUT 3	143_142CO
VITAL INPUT 4	140_143CO	VITAL INPUT 4	142_141CO	VITAL INPUT 4	141_142CO	VITAL INPUT 4	143_140CO
VITAL INPUT 5	140_AVL	VITAL INPUT 5	142_AVL	VITAL INPUT 5	141VC	VITAL INPUT 5	143VC
VITAL INPUT 6	140VC	VITAL INPUT 6	142VC	VITAL INPUT 6		VITAL INPUT 6	
VITAL INPUT 7		VITAL INPUT 7		VITAL INPUT 7		VITAL INPUT 7	
VITAL INPUT 8		VITAL INPUT 8		VITAL INPUT 8		VITAL INPUT 8	
VITAL OUTPUT 1		VITAL OUTPUT 1		VITAL OUTPUT 1		VITAL OUTPUT 1	
VITAL OUTPUT 2		VITAL OUTPUT 2		VITAL OUTPUT 2		VITAL OUTPUT 2	
VITAL OUTPUT 3		VITAL OUTPUT 3		VITAL OUTPUT 3		VITAL OUTPUT 3	
VITAL OUTPUT 4		VITAL OUTPUT 4		VITAL OUTPUT 4		VITAL OUTPUT 4	
VITAL OUTPUT 5		VITAL OUTPUT 5		VITAL OUTPUT 5		VITAL OUTPUT 5	
VITAL OUTPUT 6		VITAL OUTPUT 6		VITAL OUTPUT 6		VITAL OUTPUT 6	

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EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
EASTRIDGE INTERLOCKING  
ELECTROLOGIXS I/O SLOTS 3-6 "A"

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

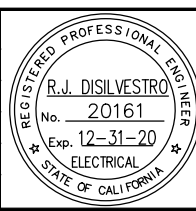
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DRAWING NO.	JC123
REVISION	A

EASTRIDGE ELOGIXS "A" I/O CHARTS

VI086S: IO SLOT 7		VI086S: IO SLOT 8		VI086S: IO SLOT 9	
MODULE HEALTH	VI07-OK	MODULE HEALTH	VI08-OK	MODULE HEALTH	VI09-OK
BANK 1 HEALTH		BANK 1 HEALTH		BANK 1 HEALTH	
BANK 2 HEALTH		BANK 2 HEALTH		BANK 2 HEALTH	
VITAL INPUT 1	1140NWP	VITAL INPUT 1	C141AT	VITAL INPUT 1	ACPOK
VITAL INPUT 2	1140RWP	VITAL INPUT 2	C142AT	VITAL INPUT 2	B110POK
VITAL INPUT 3	1143NWP	VITAL INPUT 3	C151BT	VITAL INPUT 3	B12POK
VITAL INPUT 4	1143RWP	VITAL INPUT 4	C142BT	VITAL INPUT 4	X_B12POK
VITAL INPUT 5	1141NWP	VITAL INPUT 5	1XT	VITAL INPUT 5	DOORP
VITAL INPUT 6	1141RWP	VITAL INPUT 6		VITAL INPUT 6	
VITAL INPUT 7	1142NWP	VITAL INPUT 7	3NXT	VITAL INPUT 7	1XCRP
VITAL INPUT 8	1142RWP	VITAL INPUT 8	4NXT	VITAL INPUT 8	2XCRP
VITAL OUTPUT 1	1140_43VWCR	VITAL OUTPUT 1	1XCR	VITAL OUTPUT 1	
VITAL OUTPUT 2	1140_43NWR	VITAL OUTPUT 2		VITAL OUTPUT 2	
VITAL OUTPUT 3	1140_43RWR	VITAL OUTPUT 3		VITAL OUTPUT 3	
VITAL OUTPUT 4	1141_42VWCR	VITAL OUTPUT 4		VITAL OUTPUT 4	
VITAL OUTPUT 5	1141_42NWR	VITAL OUTPUT 5		VITAL OUTPUT 5	
VITAL OUTPUT 6	1141_42RWR	VITAL OUTPUT 6		VITAL OUTPUT 6	

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EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
EASTRIDGE INTERLOCKING  
ELECTROLOGIXS I/O SLOTS 7-9 "A"

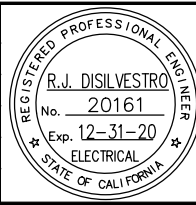
PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

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REVISION	A

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EASTRIDGE ELOGIXS "B" I/O CHART									
VLD-R16S: IO SLOT 1									
MODULE HEALTH	VLD1-OK								
VITAL SIGNAL STOP 1	C150_152STOP			LAMP STEADY ON 5	C152RE			LAMP STEADY ON 11	
VITAL SIGNAL STOP 2				LAMP FLASH 5				LAMP FLASH 11	
LAMP GRANT BANK 1				LAMP ALT FLASH 5				LAMP ALT FLASH 11	
LAMP GRANT BANK 2				LAMP OK STATUS 5	C152RLO			LAMP OK STATUS 11	
LAMP BANK 1 HEALTH				LAMP STEADY ON 6	C152YE			LAMP STEADY ON 12	
LAMP BANK 2 HEALTH				LAMP FLASH 6				LAMP FLASH 12	
LAMP BANK 1 NORMAL				LAMP ALT FLASH 6				LAMP ALT FLASH 12	
LAMP BANK 2 NORMAL				LAMP OK STATUS 6	C152YLO			LAMP OK STATUS 12	
LAMP STEADY ON 1	C150RE			LAMP STEADY ON 7				LAMP STEADY ON 13	
LAMP FLASH 1				LAMP FLASH 7				LAMP FLASH 13	
LAMP ALT FLASH 1				LAMP ALT FLASH 7				LAMP ALT FLASH 13	
LAMP OK STATUS 1	C150RLO			LAMP OK STATUS 7				LAMP OK STATUS 13	
LAMP STEADY ON 2	C150YE			LAMP STEADY ON 8	C152LE			LAMP STEADY ON 14	
LAMP FLASH 2				LAMP FLASH 8	C152FLE			LAMP FLASH 14	
LAMP ALT FLASH 2				LAMP ALT FLASH 8				LAMP ALT FLASH 14	
LAMP OK STATUS 2	C150YLO			LAMP OK STATUS 8	C152LLO			LAMP OK STATUS 14	
LAMP STEADY ON 3				LAMP STEADY ON 9				LAMP STEADY ON 15	
LAMP FLASH 3				LAMP FLASH 9				LAMP FLASH 15	
LAMP ALT FLASH 3				LAMP ALT FLASH 9				LAMP ALT FLASH 15	
LAMP OK STATUS 3				LAMP OK STATUS 9				LAMP OK STATUS 15	
LAMP STEADY ON 4	C150LE			LAMP STEADY ON 10				LAMP STEADY ON 16	
LAMP FLASH 4	C150FLE			LAMP FLASH 10				LAMP FLASH 16	
LAMP ALT FLASH 4				LAMP ALT FLASH 10				LAMP ALT FLASH 16	
LAMP OK STATUS 4	C150LLO			LAMP OK STATUS 10				LAMP OK STATUS 16	

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EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS EASTRIDGE INTERLOCKING ELECTROLOGIXS I/O SLOT 1 "B"			SHEET OF
			DRAWING NO. JC125
			REVISION A
PCA NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE	

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EASTRIDGE ELOGIXS "B" I/O CHART											
VLD-R16S: IO SLOT 2											
MODULE HEALTH	VLD2-OK										
VITAL SIGNAL STOP 1	C151_153STOP			LAMP STEADY ON 5	C153RE			LAMP STEADY ON 11			
VITAL SIGNAL STOP 2	C155STOP			LAMP FLASH 5				LAMP FLASH 11			
LAMP GRANT BANK 1				LAMP ALT FLASH 5				LAMP ALT FLASH 11			
LAMP GRANT BANK 2				LAMP OK STATUS 5	C153RLO			LAMP OK STATUS 11			
LAMP BANK 1 HEALTH				LAMP STEADY ON 6	C153YE			LAMP STEADY ON 12	C155LE		
LAMP BANK 2 HEALTH				LAMP FLASH 6				LAMP FLASH 12			
LAMP BANK 1 NORMAL				LAMP ALT FLASH 6				LAMP ALT FLASH 12			
LAMP BANK 2 NORMAL				LAMP OK STATUS 6	C153YLO			LAMP OK STATUS 12	C155LLO		
LAMP STEADY ON 1	C151RE			LAMP STEADY ON 7				LAMP STEADY ON 13			
LAMP FLASH 1				LAMP FLASH 7				LAMP FLASH 13			
LAMP ALT FLASH 1				LAMP ALT FLASH 7				LAMP ALT FLASH 13			
LAMP OK STATUS 1	C151RLO			LAMP OK STATUS 7				LAMP OK STATUS 13			
LAMP STEADY ON 2	C151YE			LAMP STEADY ON 8	C153LE			LAMP STEADY ON 14			
LAMP FLASH 2				LAMP FLASH 8	C153FLE			LAMP FLASH 14			
LAMP ALT FLASH 2				LAMP ALT FLASH 8				LAMP ALT FLASH 14			
LAMP OK STATUS 2	C151YLO			LAMP OK STATUS 8	C153LLO			LAMP OK STATUS 14			
LAMP STEADY ON 3				LAMP STEADY ON 9	C155RE			LAMP STEADY ON 15			
LAMP FLASH 3				LAMP FLASH 9				LAMP FLASH 15			
LAMP ALT FLASH 3				LAMP ALT FLASH 9				LAMP ALT FLASH 15			
LAMP OK STATUS 3				LAMP OK STATUS 9	C155RLO			LAMP OK STATUS 15			
LAMP STEADY ON 4	C151LE			LAMP STEADY ON 10	C155YE			LAMP STEADY ON 16			
LAMP FLASH 4				LAMP FLASH 10				LAMP FLASH 16			
LAMP ALT FLASH 4				LAMP ALT FLASH 10				LAMP ALT FLASH 16			
LAMP OK STATUS 4	C151LLO			LAMP OK STATUS 10	C155YLO			LAMP OK STATUS 16			

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 SUBMITTAL DATE: 06/29/20  
 SCALE: NTS  
 BOARD APPROVAL DATE: \_\_\_\_\_

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 LRT SIGNAL SYSTEMS  
 EASTRIDGE INTERLOCKING  
 ELECTROLOGIXS I/O SLOT 2 "B"

PCB NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

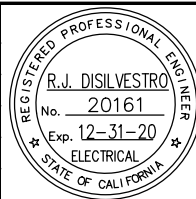
SHEET OF \_\_\_\_\_  
 DRAWING NO. JC126  
 REVISION A

EASTRIDGE ELOGIXS "B" I/O CHARTS

VI086S: IO SLOT 3		VI086S: IO SLOT 4		VI086S: IO SLOT 5		VI086S: IO SLOT 6	
MODULE HEALTH	VI03-OK	MODULE HEALTH	VI04-OK	MODULE HEALTH	VI05-OK	MODULE HEALTH	VI06-OK
BANK 1 HEALTH		BANK 1 HEALTH		BANK 1 HEALTH		BANK 1 HEALTH	
BANK 2 HEALTH		BANK 2 HEALTH		BANK 2 HEALTH		BANK 2 HEALTH	
VITAL INPUT 1	150_151VQ	VITAL INPUT 1	152_153VQ	VITAL INPUT 1	151_150VQ	VITAL INPUT 1	153_150VQ
VITAL INPUT 2	150_153VQ	VITAL INPUT 2	152_155VQ	VITAL INPUT 2	151_150CO	VITAL INPUT 2	153_152VQ
VITAL INPUT 3	150_151CO	VITAL INPUT 3	152_153CO	VITAL INPUT 3	151VC	VITAL INPUT 3	153_150CO
VITAL INPUT 4	150_153CO	VITAL INPUT 4	152_155CO	VITAL INPUT 4	155_152VQ	VITAL INPUT 4	153_152CO
VITAL INPUT 5	150VC	VITAL INPUT 5	152VC	VITAL INPUT 5	155_152CO	VITAL INPUT 5	
VITAL INPUT 6		VITAL INPUT 6		VITAL INPUT 6	155VC	VITAL INPUT 6	153VC
VITAL INPUT 7		VITAL INPUT 7		VITAL INPUT 7		VITAL INPUT 7	
VITAL INPUT 8		VITAL INPUT 8		VITAL INPUT 8		VITAL INPUT 8	
VITAL OUTPUT 1		VITAL OUTPUT 1		VITAL OUTPUT 1		VITAL OUTPUT 1	
VITAL OUTPUT 2		VITAL OUTPUT 2		VITAL OUTPUT 2		VITAL OUTPUT 2	
VITAL OUTPUT 3		VITAL OUTPUT 3		VITAL OUTPUT 3		VITAL OUTPUT 3	
VITAL OUTPUT 4		VITAL OUTPUT 4		VITAL OUTPUT 4		VITAL OUTPUT 4	
VITAL OUTPUT 5		VITAL OUTPUT 5		VITAL OUTPUT 5		VITAL OUTPUT 5	
VITAL OUTPUT 6		VITAL OUTPUT 6		VITAL OUTPUT 6		VITAL OUTPUT 6	

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**HNTB** HNTB Corporation  
Engineers Architects Planners  
1732 North First Street, Suite 400 San Jose, CA 95112  
Tel (408) 451-7300 Fax (408) 451-6942

DESIGNED: J. VIRAG  
CHECKED: J. VIRAG  
DRAWN: J. VIRAG  
CADD FILE NAME: 801JC127.dwg



**BKF** 100+ YEARS  
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EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
EASTRIDGE INTERLOCKING  
ELECTROLOGIXS I/O SLOTS 3-6 "B"

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

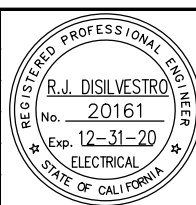
SHEET OF
DRAWING NO. JC127
REVISION A

EASTRIDGE ELOGIXS "B" I/O CHARTS

VIO86S: IO SLOT 7		VIO86S: IO SLOT 8		VIO86S: IO SLOT 9	
MODULE HEALTH	VIO7-OK	MODULE HEALTH	VIO8-OK	MODULE HEALTH	VIO9-OK
BANK 1 HEALTH		BANK 1 HEALTH		BANK 1 HEALTH	
BANK 2 HEALTH		BANK 2 HEALTH		BANK 2 HEALTH	
VITAL INPUT 1	1150NWP	VITAL INPUT 1	C151AT	VITAL INPUT 1	2XT
VITAL INPUT 2	1150RWP	VITAL INPUT 2	C152T	VITAL INPUT 2	
VITAL INPUT 3	1152NWP	VITAL INPUT 3	C153T	VITAL INPUT 3	
VITAL INPUT 4	1152RWP	VITAL INPUT 4	AT	VITAL INPUT 4	
VITAL INPUT 5	1153NWP	VITAL INPUT 5	BT	VITAL INPUT 5	
VITAL INPUT 6	1153RWP	VITAL INPUT 6	CT	VITAL INPUT 6	
VITAL INPUT 7		VITAL INPUT 7		VITAL INPUT 7	
VITAL INPUT 8		VITAL INPUT 8		VITAL INPUT 8	
VITAL OUTPUT 1	1150VWCR	VITAL OUTPUT 1		VITAL OUTPUT 1	2XCR
VITAL OUTPUT 2	1150NWR	VITAL OUTPUT 2		VITAL OUTPUT 2	
VITAL OUTPUT 3	1150RWR	VITAL OUTPUT 3		VITAL OUTPUT 3	
VITAL OUTPUT 4	1152_53VWCR	VITAL OUTPUT 4		VITAL OUTPUT 4	
VITAL OUTPUT 5	1152_53NWR	VITAL OUTPUT 5		VITAL OUTPUT 5	
VITAL OUTPUT 6	1152_53RWR	VITAL OUTPUT 6		VITAL OUTPUT 6	

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DESIGNED J. VIRAG	CHECKED
DRAWN J. VIRAG	CADD FILE NAME 801JC128.dwg

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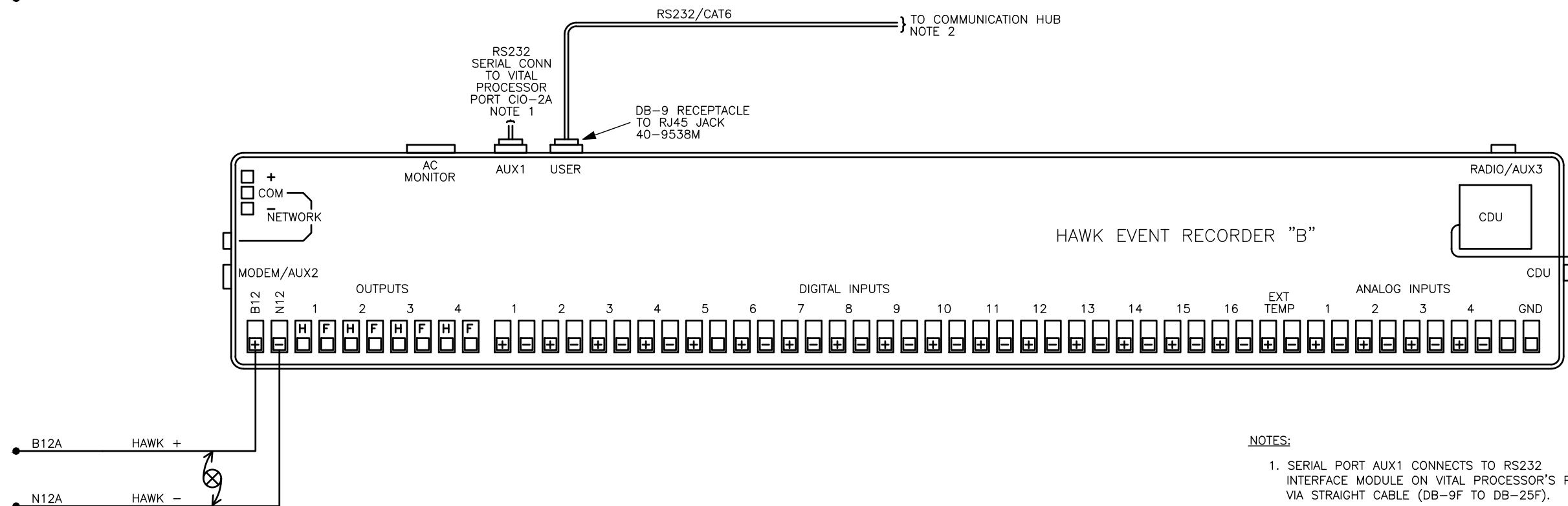
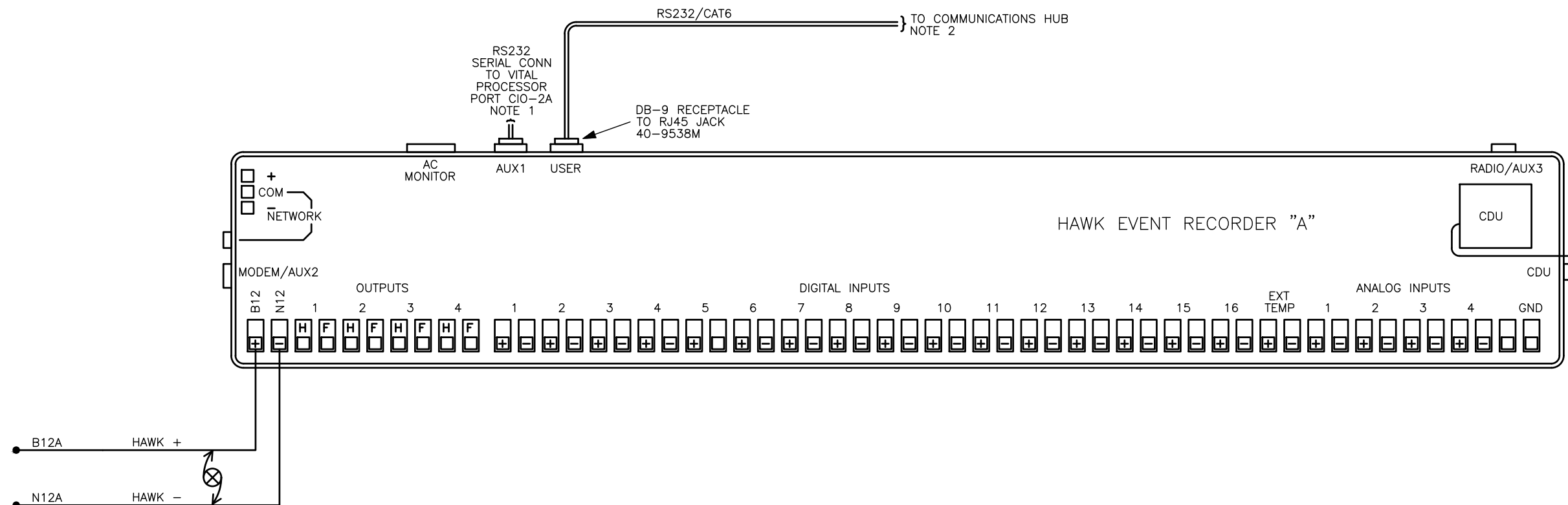
APPROVED

CADD FILE DATE 03/11/19	SCALE NTS
SUBMITTAL DATE 06/29/20	BOARD APPROVAL DATE

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
EASTRIDGE INTERLOCKING  
ELECTROLOGIXS I/O SLOTS 7-9 "B"

PCA NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE
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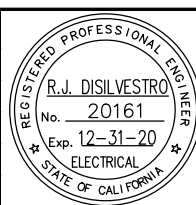
SHEET OF	
DRAWING NO.	JC128
REVISION	A



- NOTES:**
- SERIAL PORT AUX1 CONNECTS TO RS232 INTERFACE MODULE ON VITAL PROCESSOR'S PORT CIO-2A VIA STRAIGHT CABLE (DB-9F TO DB-25F).
  - USER PORT CONNECTS TO COMMUNICATIONS HUB (RX-1500 OR EQUAL APPROVED) VIA STRAIGHT ETHERNET CABLE.

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 CHECKED: V.FAINGOLD  
 DRAWN: M.BAKHIN  
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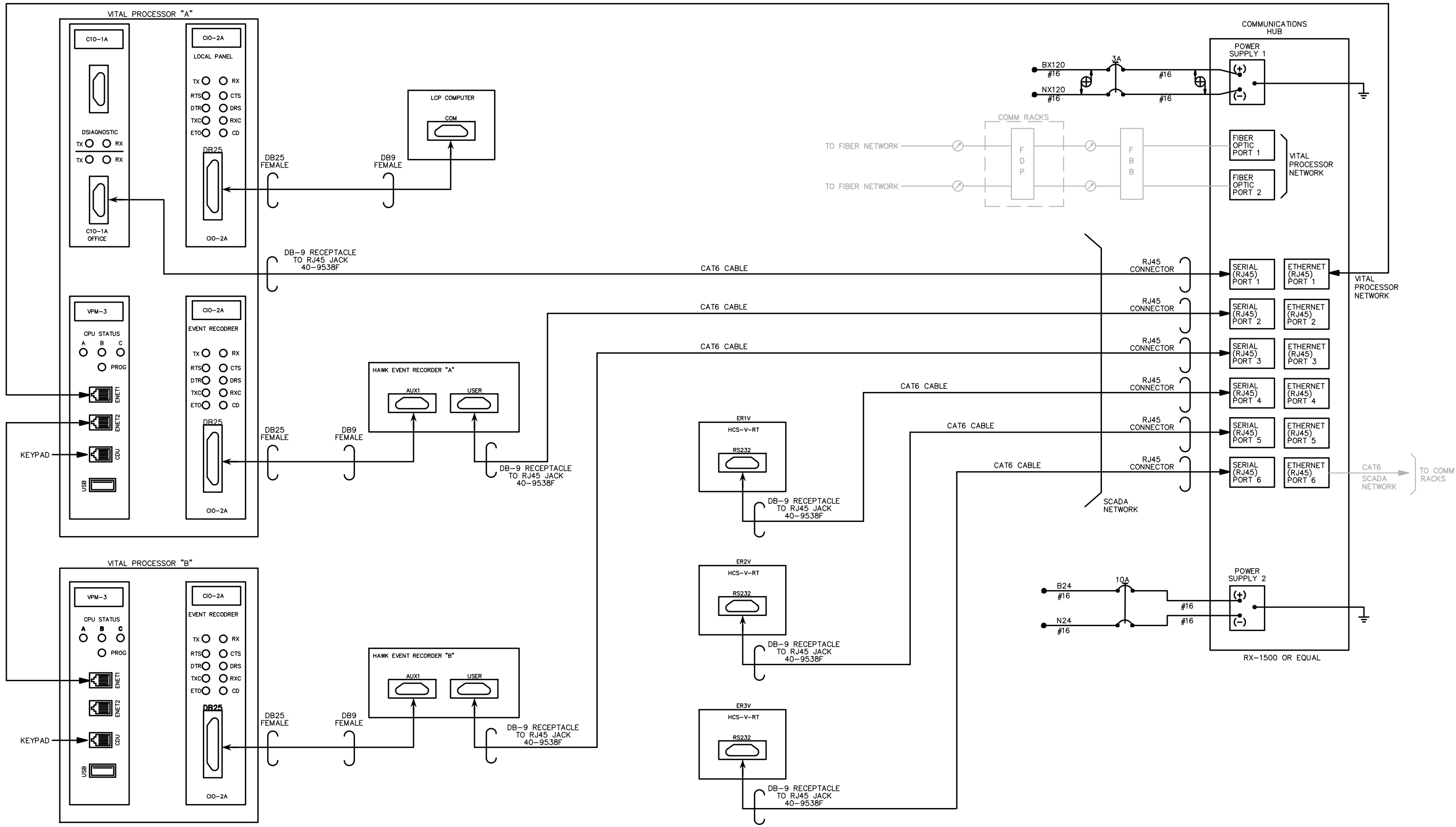
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 SCALE: NTS  
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EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 LRT SIGNAL SYSTEMS  
 EASTRIDGE INTERLOCKING  
 EVENT RECORDER

SHEET OF: JC129  
 REVISION: B

PCA NO.: 000  
 CONTRACT NO.: C801  
 FILE LOCATION: PROJECTWISE





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 gfoakes

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**Transportation Authority**

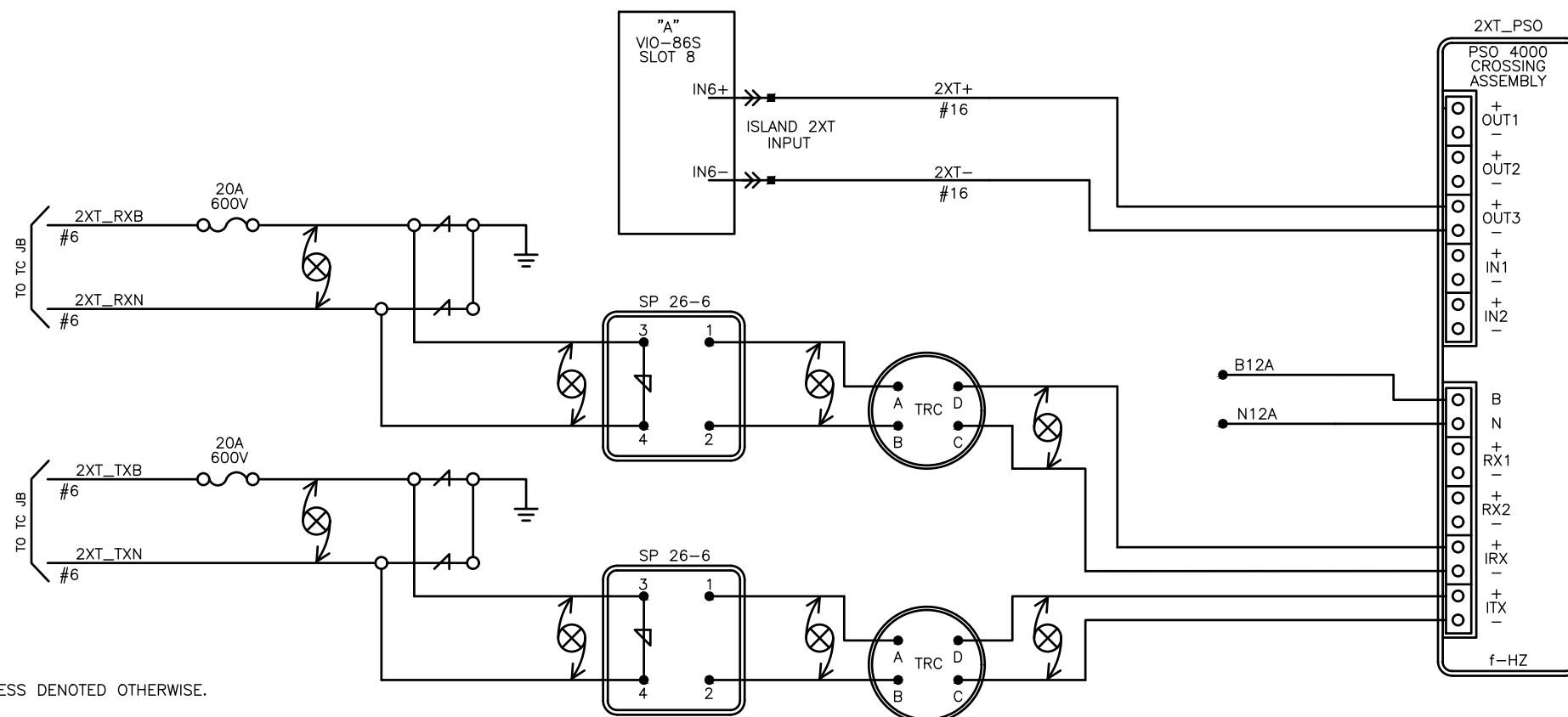
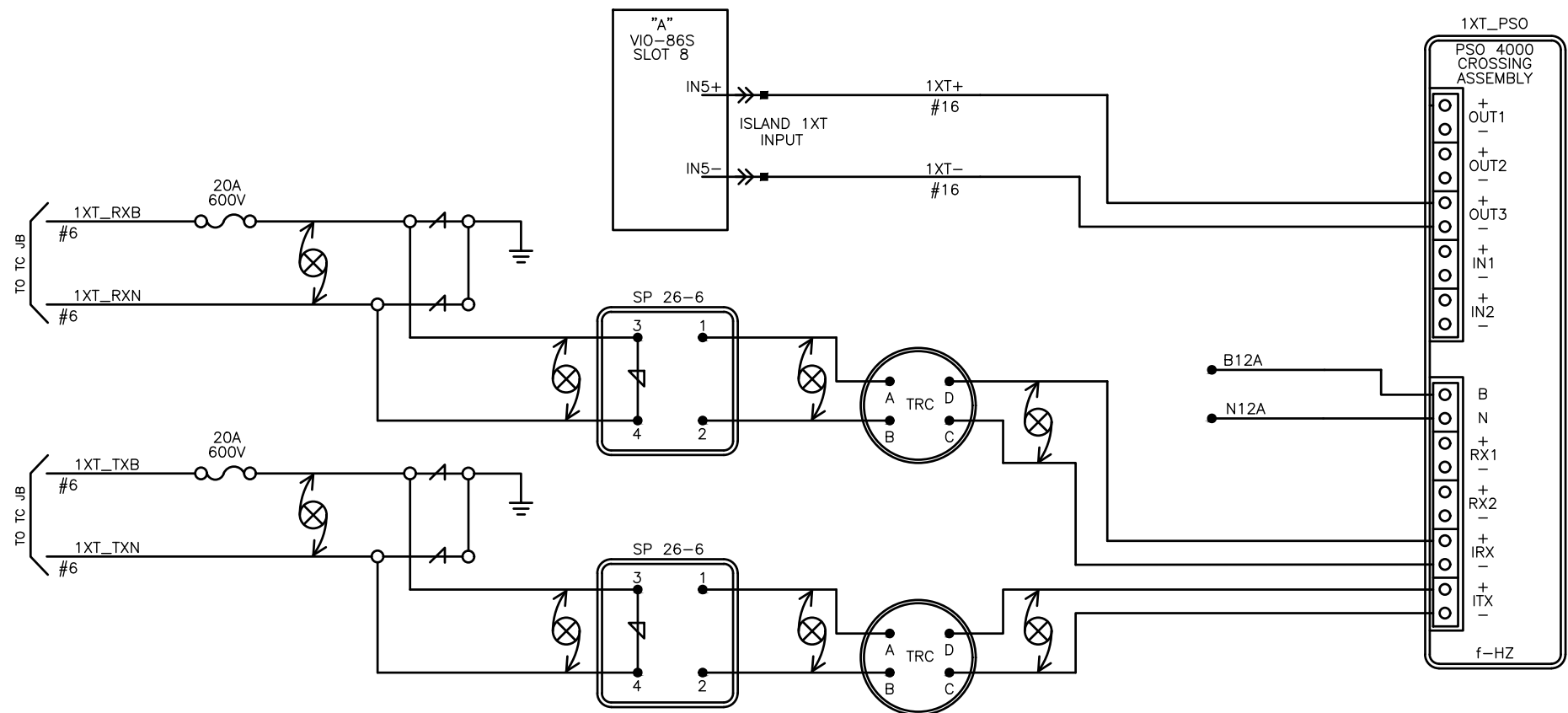
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EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 LRT SIGNAL SYSTEMS  
 EASTRIDGE INTERLOCKING  
 COMMUNICATION SYSTEM DIAGRAM

SHEET OF: JC130  
 REVISION: B

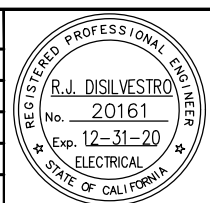
PCA NO.: 000  
 CONTRACT NO.: C801  
 FILE LOCATION: PROJECTWISE



NOTE:  
1. WIRED TO BE #10 UNLESS DENOTED OTHERWISE.

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NO.	DATE	REVISIONS
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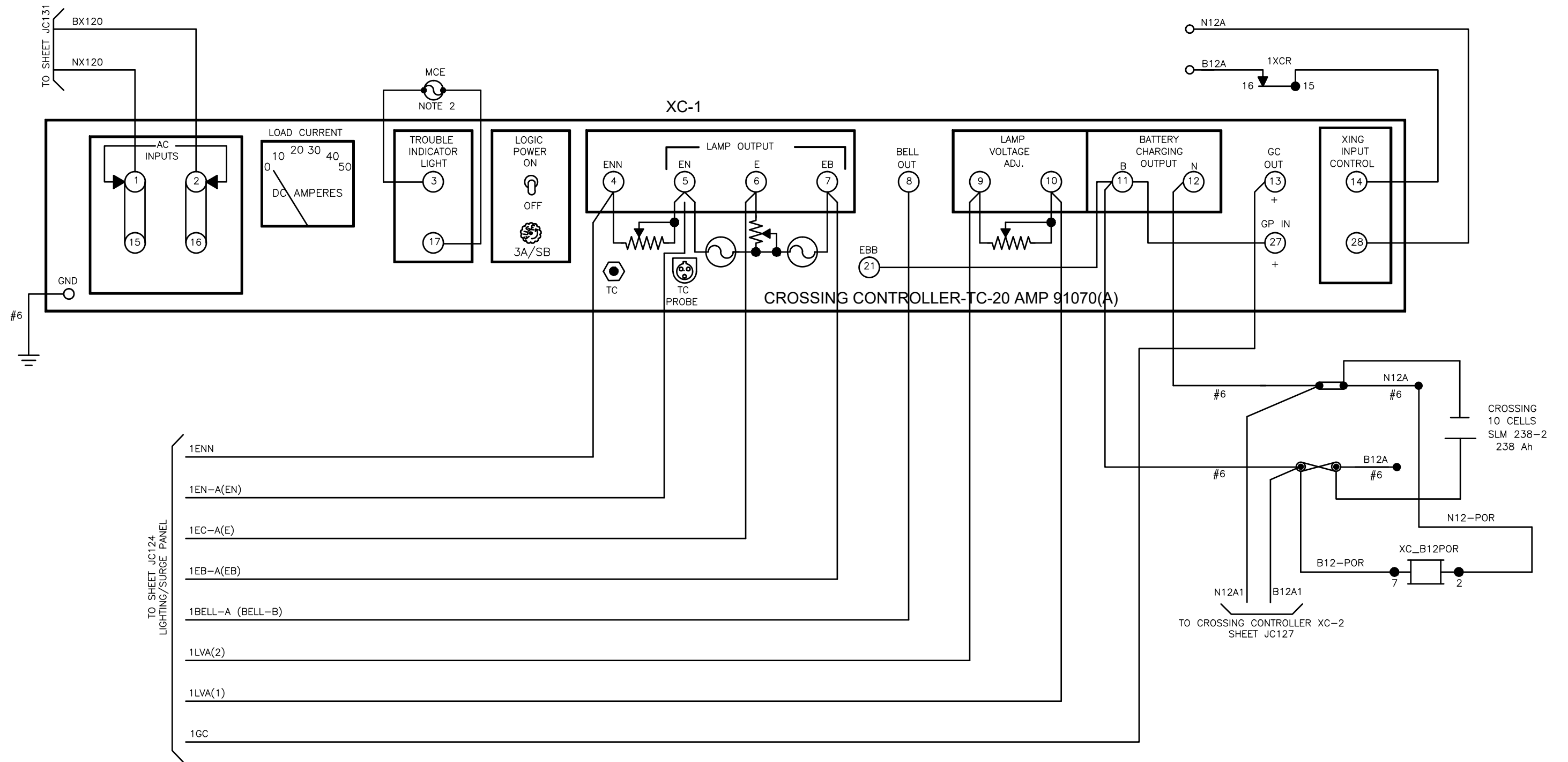


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DRAWN	M.BAKHIN	CADD FILE NAME	801JC131.dwg



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CADD FILE DATE	03/11/19	SCALE	NTS
SUBMITTAL DATE	06/29/20	BOARD APPROVAL DATE	

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS EASTRIDGE INTERLOCKING CROSSING TRACK CIRCUITS			SHEET OF
			DRAWING NO. JC131
			REVISION B
PCA NO.	CONTRACT NO.	FILE LOCATION	
000	C801	PROJECTWISE	



TO SHEET JC124  
LIGHTING/SURGE PANEL

- 1ENN
- 1EN-A(EN)
- 1EC-A(E)
- 1EB-A(EB)
- 1BELL-A (BELL-B)
- 1LVA(2)
- 1LVA(1)
- 1GC

**NOTE:**  
 1. WIRED TO BE #10 UNLESS DENOTED OTHERWISE.  
 2. MCE TO BE MOUNTED ON SIDE OF HOUSE FACING ROAD.

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 DRAWN: M.BAKHIN CADD FILE NAME: 801JC132.dwg

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CADD FILE DATE: 03/11/19 SCALE: NTS  
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EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
EASTRIDGE INTERLOCKING  
CROSSING CONTROLLER (PED XING 1A & 1B)

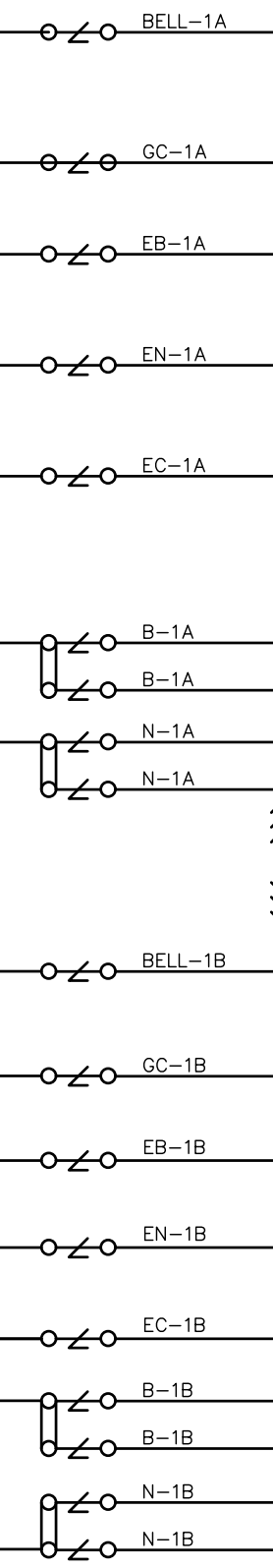
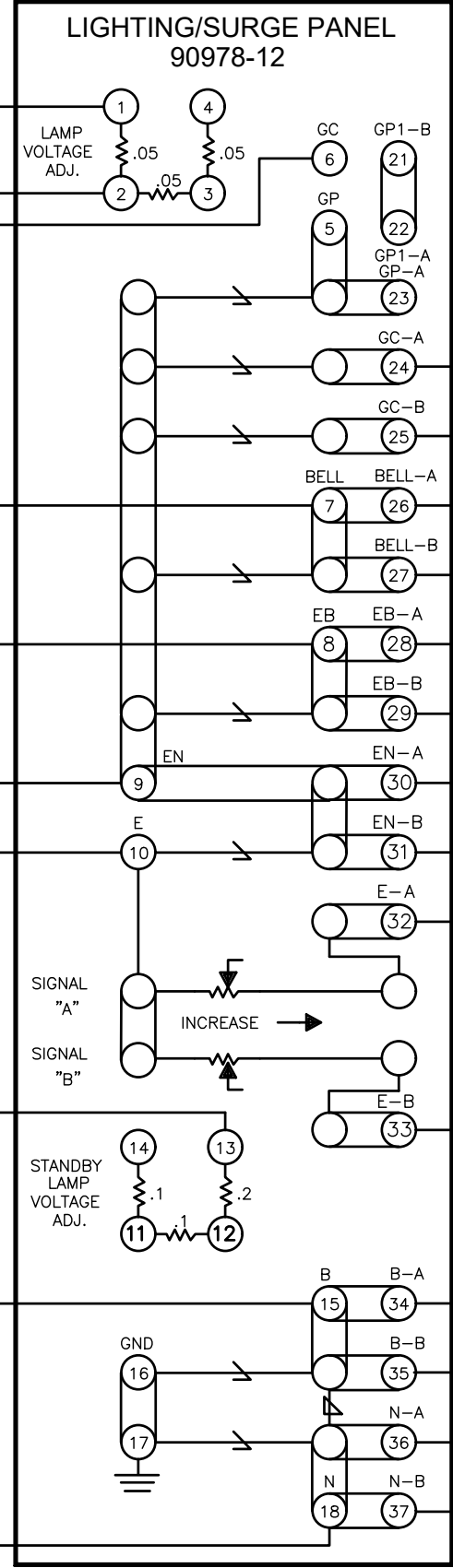
PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

SHEET OF DRAWING NO. JC132 REVISION B

TO CROSSING CONTROLLER XC-1  
SHEET JC123

TO PED XING "1A"  
SHEET JC-125

TO PED XING "1B"  
SHEET JC-126



**NOTE:**  
1. WIRED TO BE #6 UNLESS DENOTED OTHERWISE.

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NO.	DATE	REVISIONS
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DESIGNED: M.BAKHIN  
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DRAWN: M.BAKHIN  
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**Santa Clara Valley Transportation Authority**

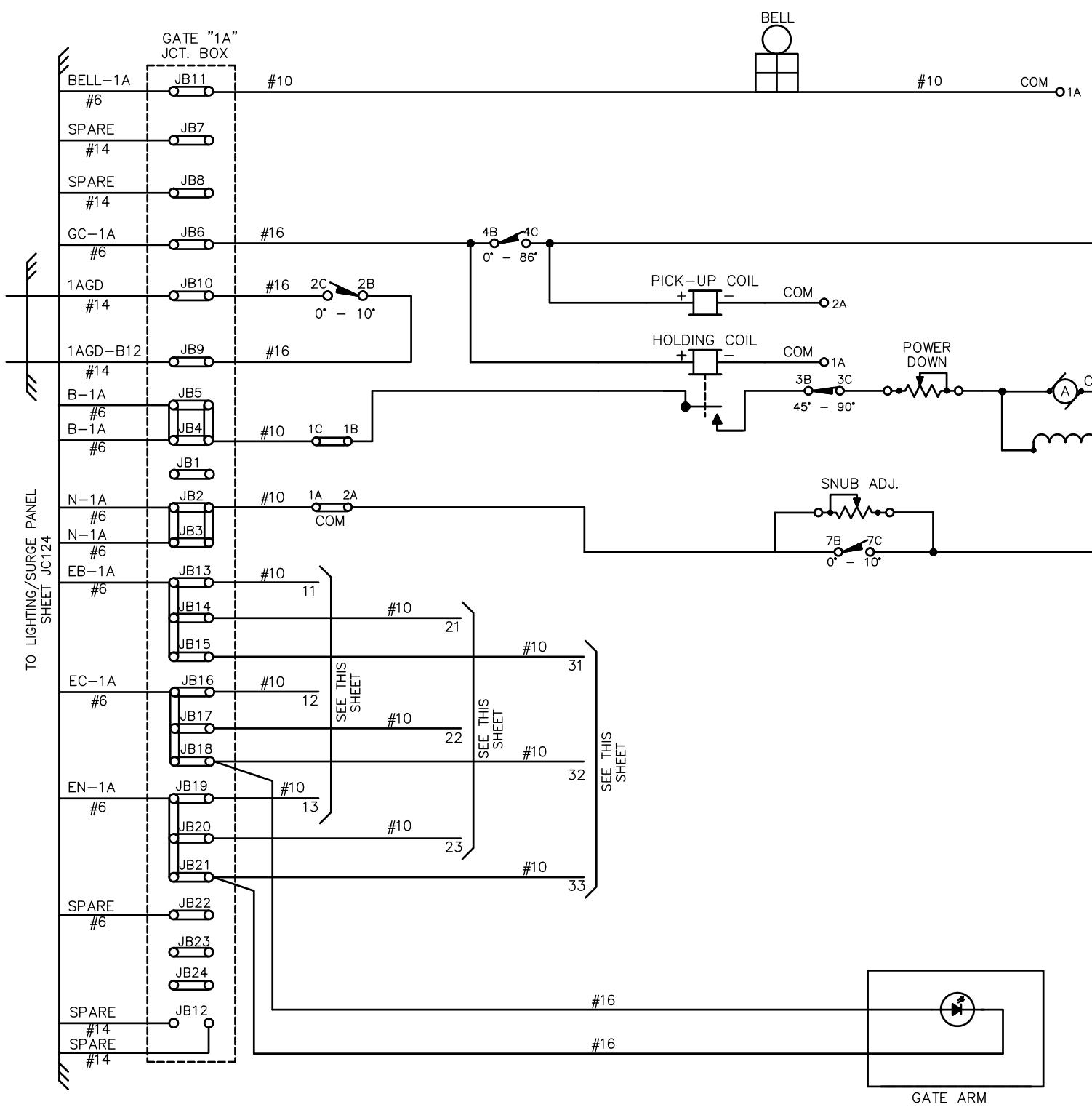
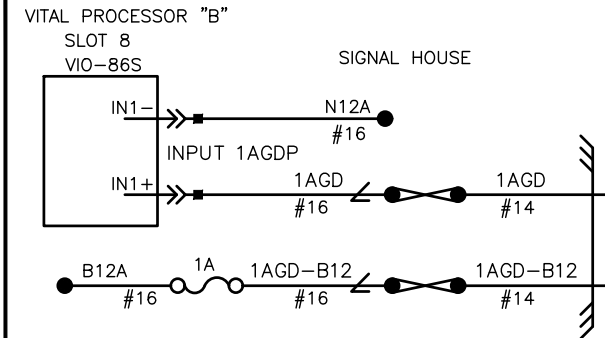
**BKF 100+ YEARS**  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/11/19  
SUBMITTAL DATE: 06/29/20  
SCALE: NTS  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
EASTRIDGE INTERLOCKING  
LIGHTING SURGE PANEL (PED XING 1A & 1B)

PCB NO. 000  
CONTRACT NO. C801  
FILE LOCATION: PROJECTWISE

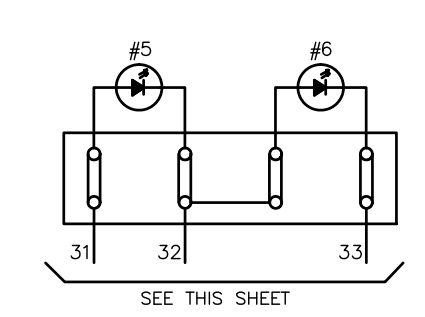
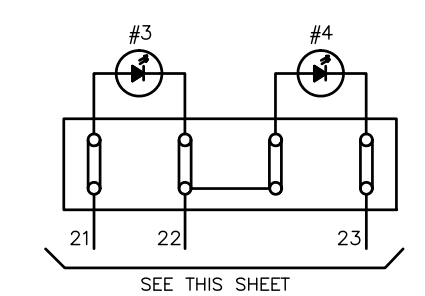
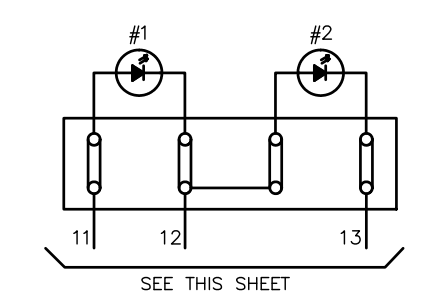
SHEET OF: JC133  
REVISION: B



CONTACT	CLOSED	FUNCTION
2	0 - 10 DEG.	GATE DOWN
3	45 - 90 DEG.	POWER DOWN
4	0 - 86 DEG.	POWER UP
5	82 - 90 DEG.	GATE CLEAR
6	10 - 90 DEG.	BELL
7	0 - 10 DEG.	SNUB

(UNUSED)  
(UNUSED)

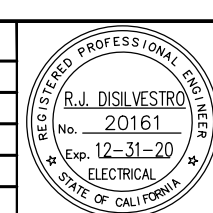
WCH 3593-E



- NOTES:
- CAM CONTACTS SHOWN WITH GATE ARM AT 90°.
  - WIRES TO BE #16 UNLESS DENOTED OTHERWISE.

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DESIGNED: M.BAKHIN  
CHECKED: V.FAINGOLD  
DRAWN: M.BAKHIN  
CADD FILE NAME: 801JC134.dwg

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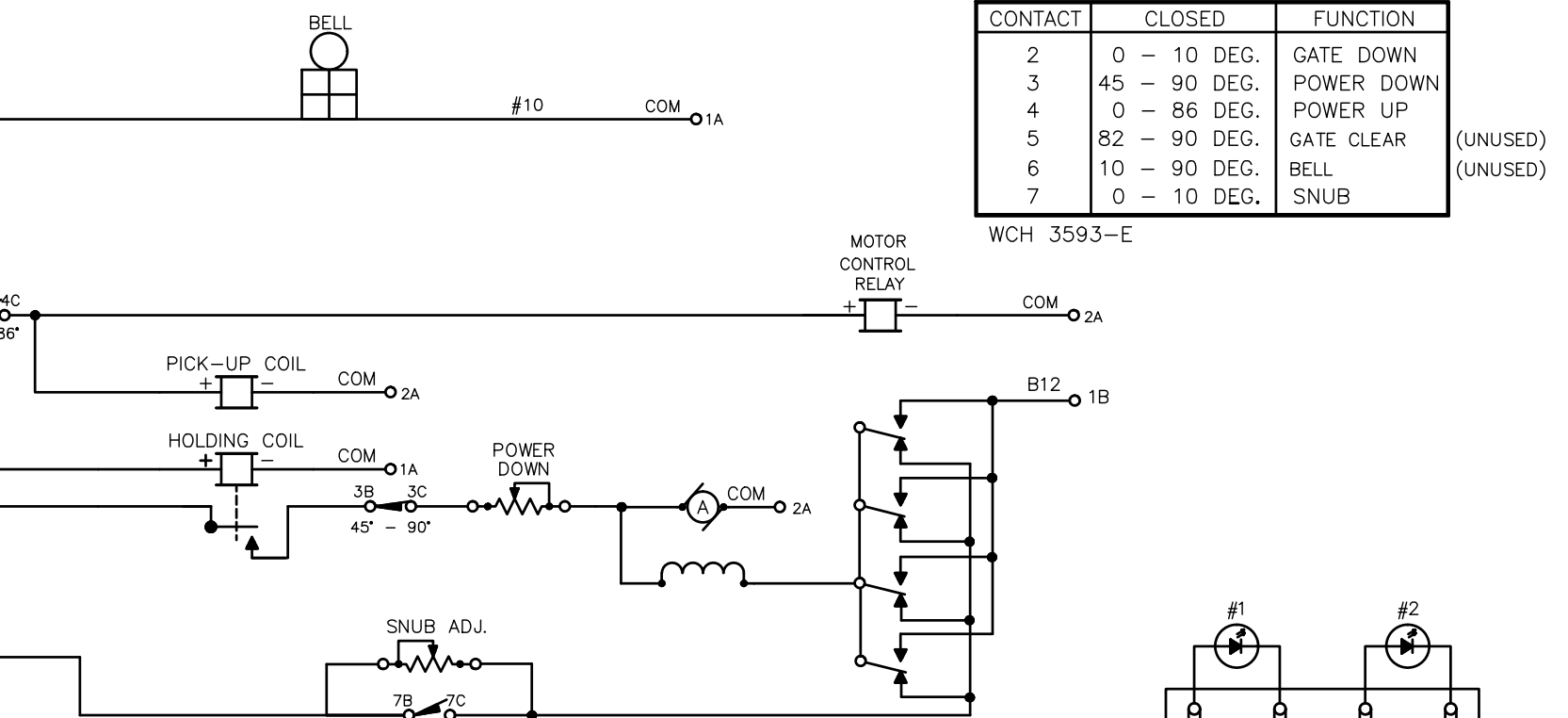
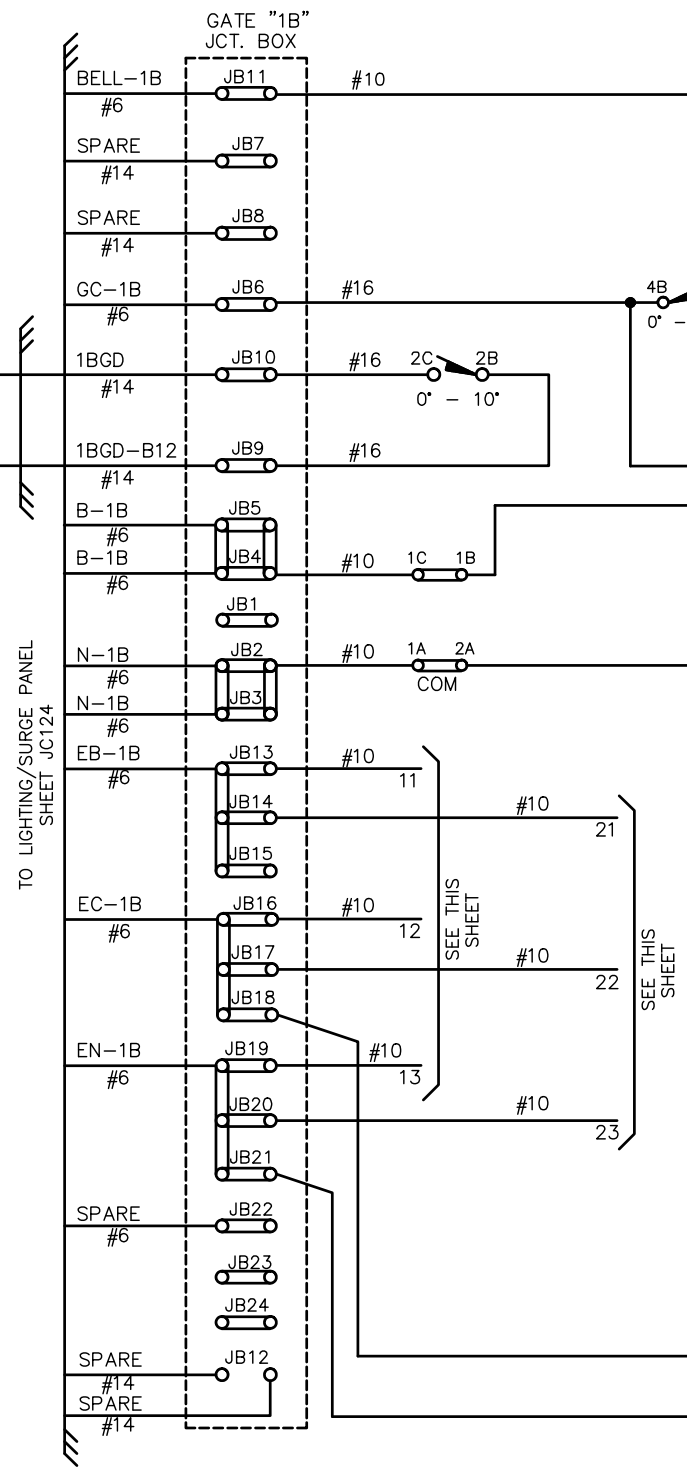
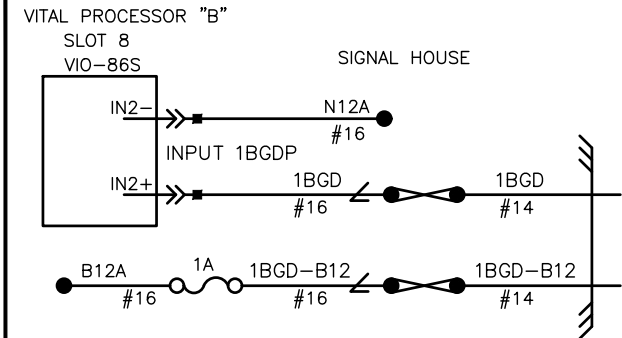
**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/11/19  
SUBMITTAL DATE: 06/29/20  
SCALE: NTS  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
EASTRIDGE INTERLOCKING  
GATE, LIGHTS & BELL CIRCUITS (PED XING 1A)

PCB NO. 000  
CONTRACT NO. C801  
FILE LOCATION PROJECTWISE

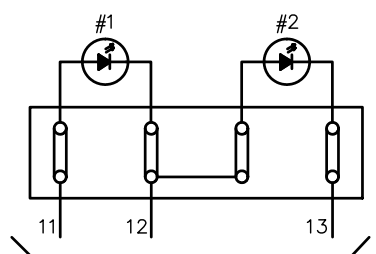
SHEET OF  
DRAWING NO. JC134  
REVISION B



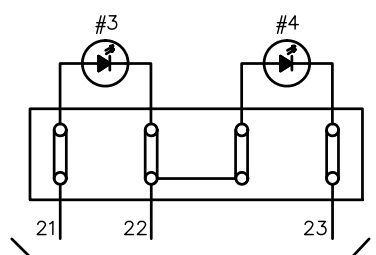
CONTACT	CLOSED	FUNCTION
2	0 - 10 DEG.	GATE DOWN
3	45 - 90 DEG.	POWER DOWN
4	0 - 86 DEG.	POWER UP
5	82 - 90 DEG.	GATE CLEAR
6	10 - 90 DEG.	BELL
7	0 - 10 DEG.	SNUB

(UNUSED)  
(UNUSED)

WCH 3593-E



SEE THIS SHEET



SEE THIS SHEET

- NOTES:
1. CAM CONTACTS SHOWN WITH GATE ARM AT 90°.
  2. WIRES TO BE #16 UNLESS DENOTED OTHERWISE.

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DESIGNED: M.BAKHIN  
 CHECKED: V.FAINGOLD  
 DRAWN: M.BAKHIN  
 CADD FILE NAME: 801JC135.dwg

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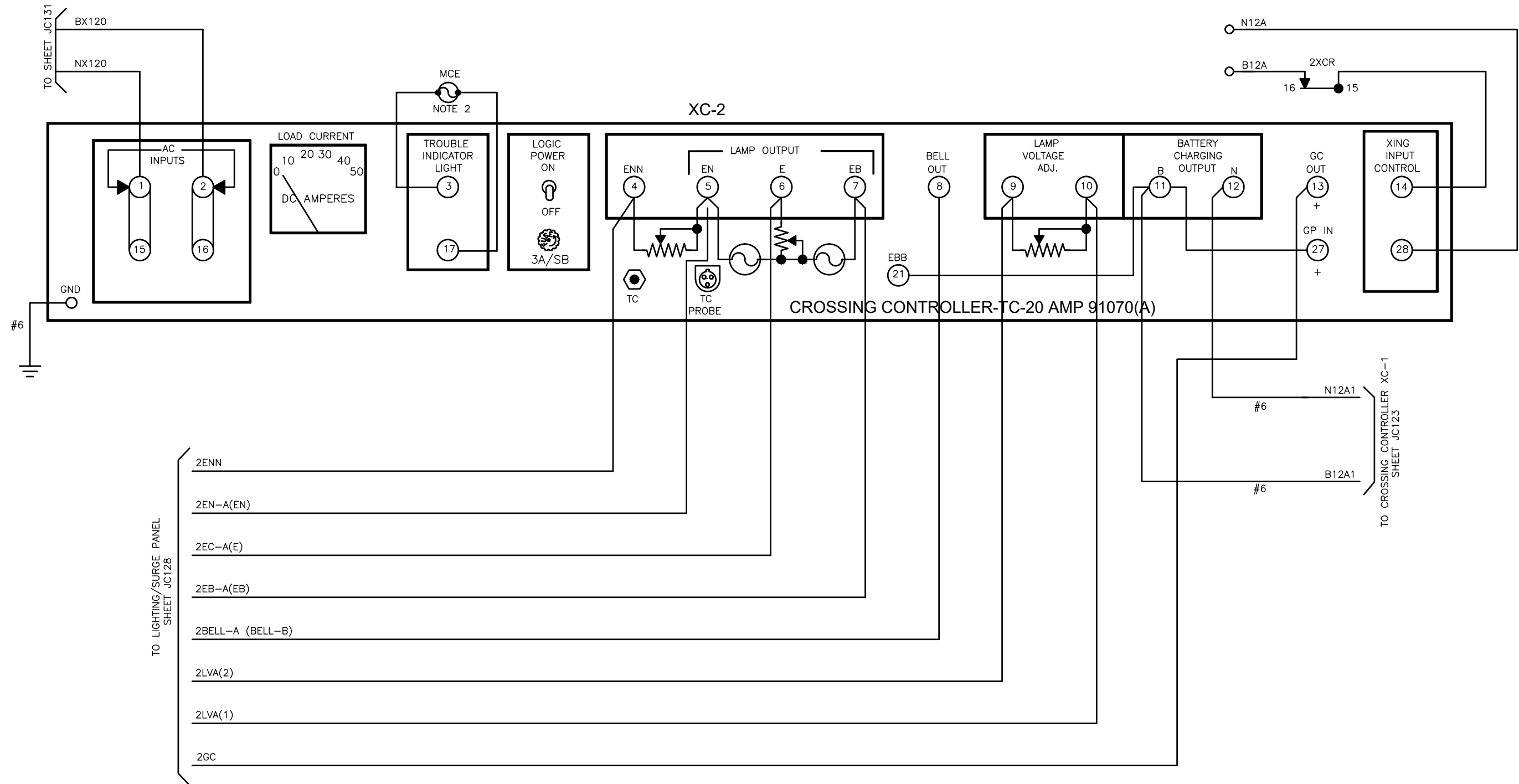
**BKF 100+ YEARS**  
 ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/11/19  
 SUBMITTAL DATE: 06/29/20  
 SCALE: NTS  
 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 LRT SIGNAL SYSTEMS  
 EASTRIDGE INTERLOCKING  
 GATE, LIGHTS & BELL CIRCUITS (PED XING 1B)

SHEET OF: JC135  
 DRAWING NO.: JC135  
 REVISION: B

PCA NO.: 000  
 CONTRACT NO.: C801  
 FILE LOCATION: PROJECTWISE



**NOTE:**  
 1. WIRED TO BE #10 UNLESS DENOTED OTHERWISE.  
 2. MCE TO BE MOUNTED ON SIDE OF HOUSE FACING ROAD.

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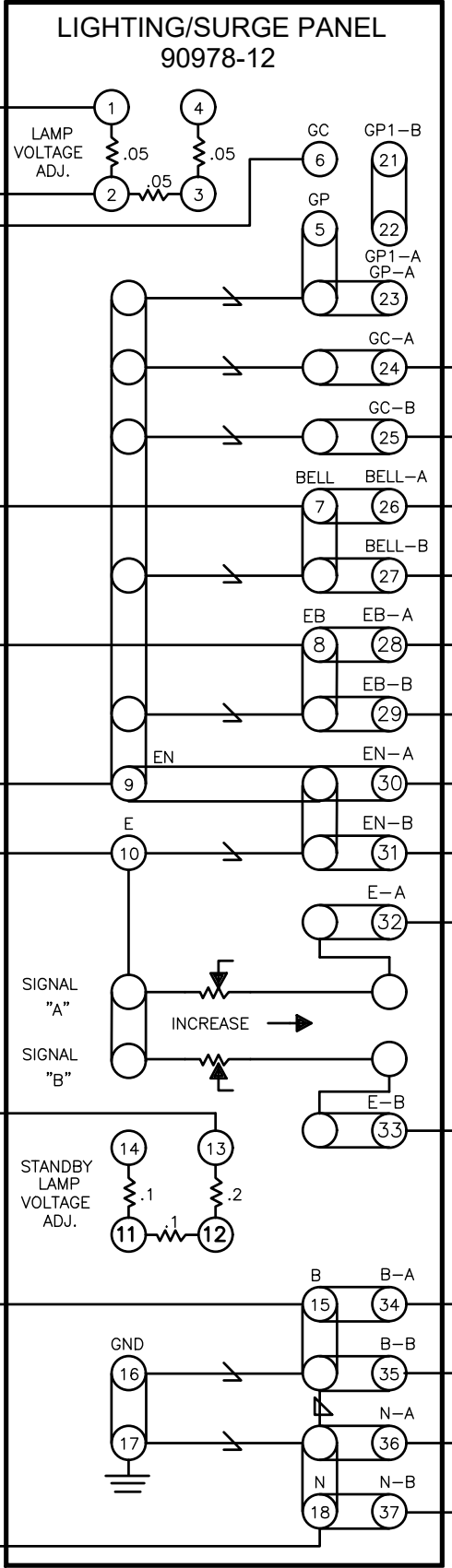
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EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 LRT SIGNAL SYSTEMS  
 EASTRIDGE INTERLOCKING  
 CROSSING CONTROLLER (PED XING 2A & 2B)

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

SHEET OF DRAWING NO. JC136 REVISION B

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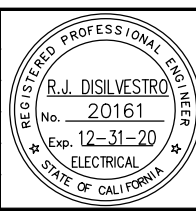
TO CROSSING CONTROLLER XC-2  
SHEET JC127

TO PED XING "2A"  
SHEET JC-129

TO PED XING "2B"  
SHEET JC-130

**NOTE:**  
1. WIRED TO BE #6 UNLESS DENOTED OTHERWISE.

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



SUBMITTED

**HNTB** HNTB Corporation  
Engineers Architects Planners  
1732 North First Street, Suite 400  
San Jose, CA 95112  
Tel (408) 451-7300  
Fax (408) 451-6942

DESIGNED: M.BAKHIN  
CHECKED: V.FAINGOLD  
DRAWN: M.BAKHIN  
CADD FILE NAME: 801JC137.dwg

Santa Clara Valley  
**Transportation Authority**

APPROVED

**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/11/19  
SUBMITTAL DATE: 06/29/20  
SCALE: NTS  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
EASTRIDGE INTERLOCKING  
LIGHTING SURGE PANEL (PED XING 2A & 2B)

PCB NO. 000  
CONTRACT NO. C801  
FILE LOCATION: PROJECTWISE

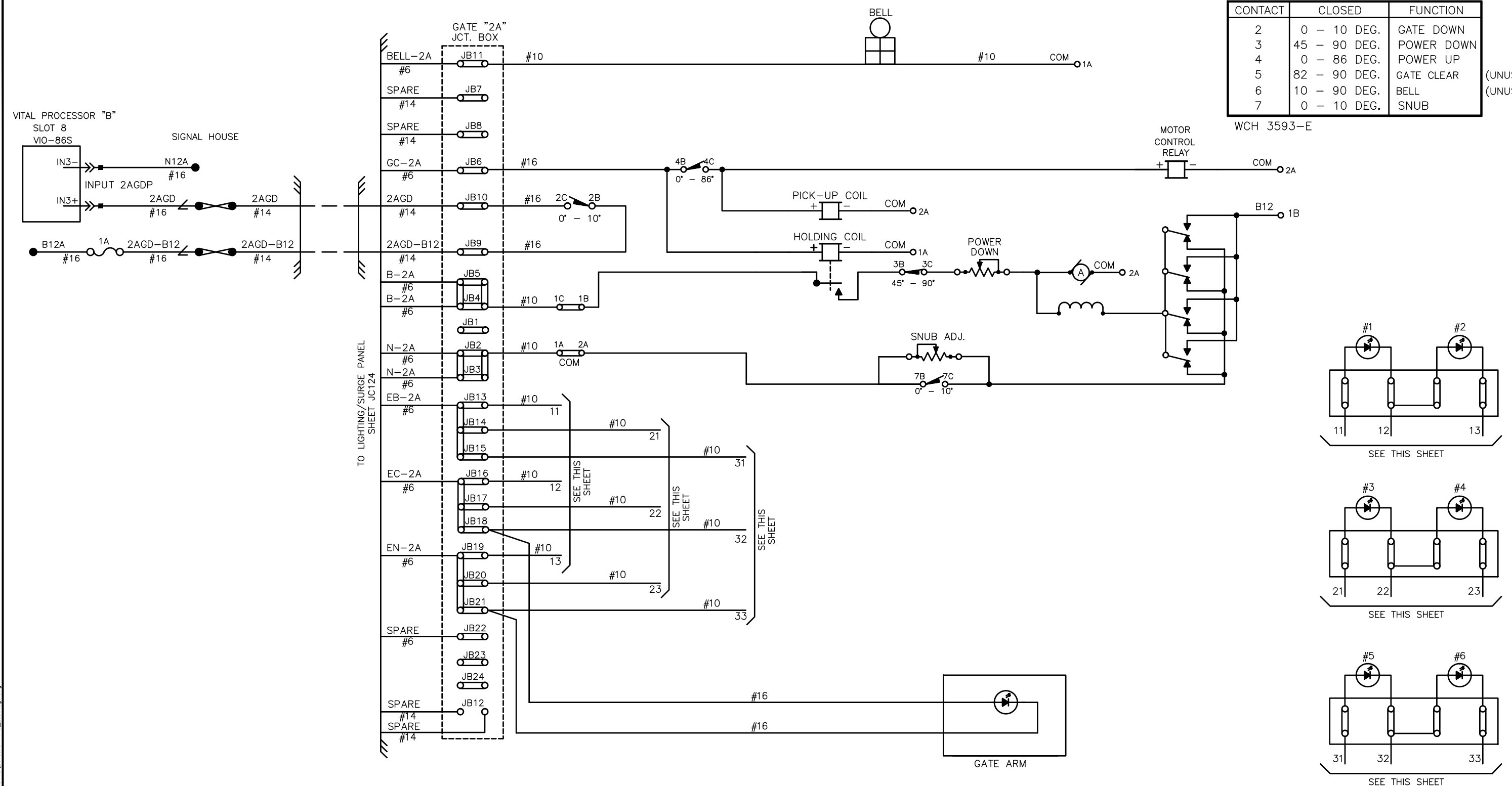
SHEET OF: JC137  
REVISION: B



CONTACT	CLOSED	FUNCTION
2	0 - 10 DEG.	GATE DOWN
3	45 - 90 DEG.	POWER DOWN
4	0 - 86 DEG.	POWER UP
5	82 - 90 DEG.	GATE CLEAR
6	10 - 90 DEG.	BELL
7	0 - 10 DEG.	SNUB

(UNUSED)  
(UNUSED)

WCH 3593-E



- NOTES:
1. CAM CONTACTS SHOWN WITH GATE ARM AT 90°.
  2. WIRES TO BE #16 UNLESS DENOTED OTHERWISE.

Jun 22, 2020 - 11:26am C:\cadd\p\y\g\owkes\west\d0139440\001\JC138-140\_Eastridge.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



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Engineers Architects Planners  
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DESIGNED: M.BAKHIN  
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DRAWN: M.BAKHIN  
CADD FILE NAME: 801JC138.dwg

Santa Clara Valley  
**Transportation Authority**

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CADD FILE DATE: 03/11/19  
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SCALE: NTS  
BOARD APPROVAL DATE:

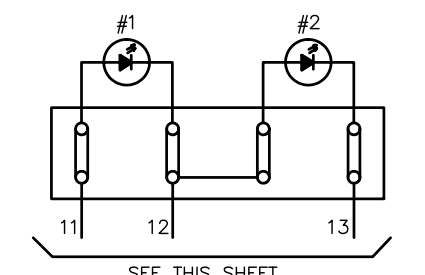
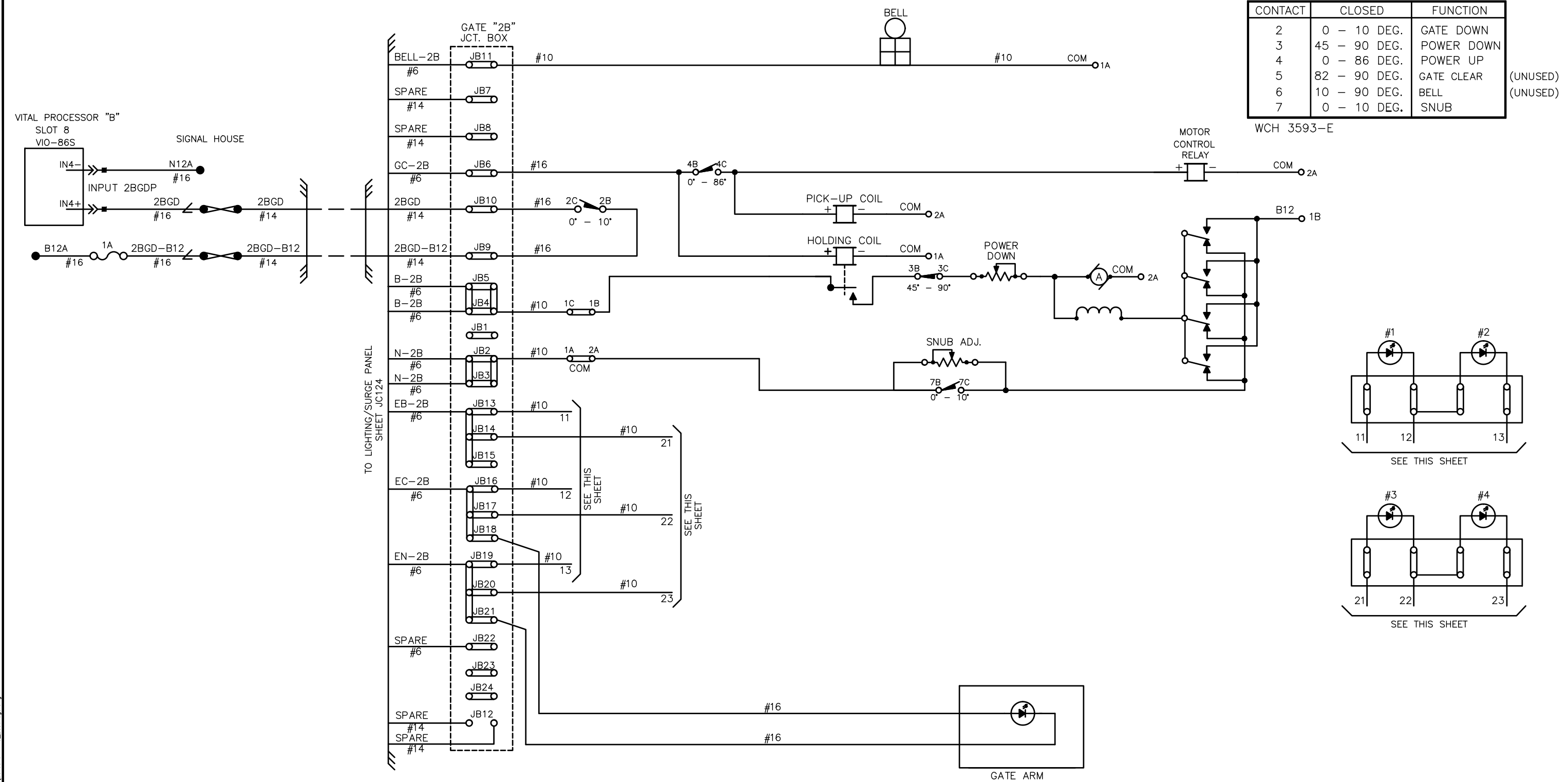
EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
EASTRIDGE INTERLOCKING  
GATE, LIGHTS & BELL CIRCUITS (PED XING 2A)

PCB NO. 000  
CONTRACT NO. C801  
FILE LOCATION PROJECTWISE

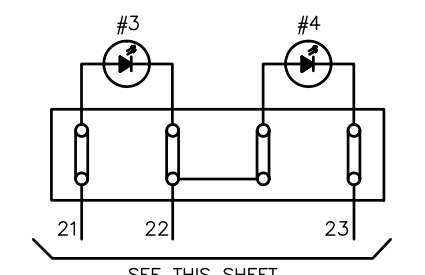
SHEET OF  
DRAWING NO. JC138  
REVISION B

CONTACT	CLOSED	FUNCTION
2	0 - 10 DEG.	GATE DOWN
3	45 - 90 DEG.	POWER DOWN
4	0 - 86 DEG.	POWER UP
5	82 - 90 DEG.	GATE CLEAR
6	10 - 90 DEG.	BELL
7	0 - 10 DEG.	SNUB

WCH 3593-E



SEE THIS SHEET

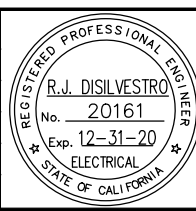


SEE THIS SHEET

- NOTES:
1. CAM CONTACTS SHOWN WITH GATE ARM AT 90°.
  2. WIRES TO BE #16 UNLESS DENOTED OTHERWISE.

Jun 22, 2020 - 11:26am C:\cadd\p\work\west\0139440\01JC139.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



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DESIGNED: M.BAKHIN  
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CADD FILE NAME: 801JC139.dwg

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**Transportation Authority**

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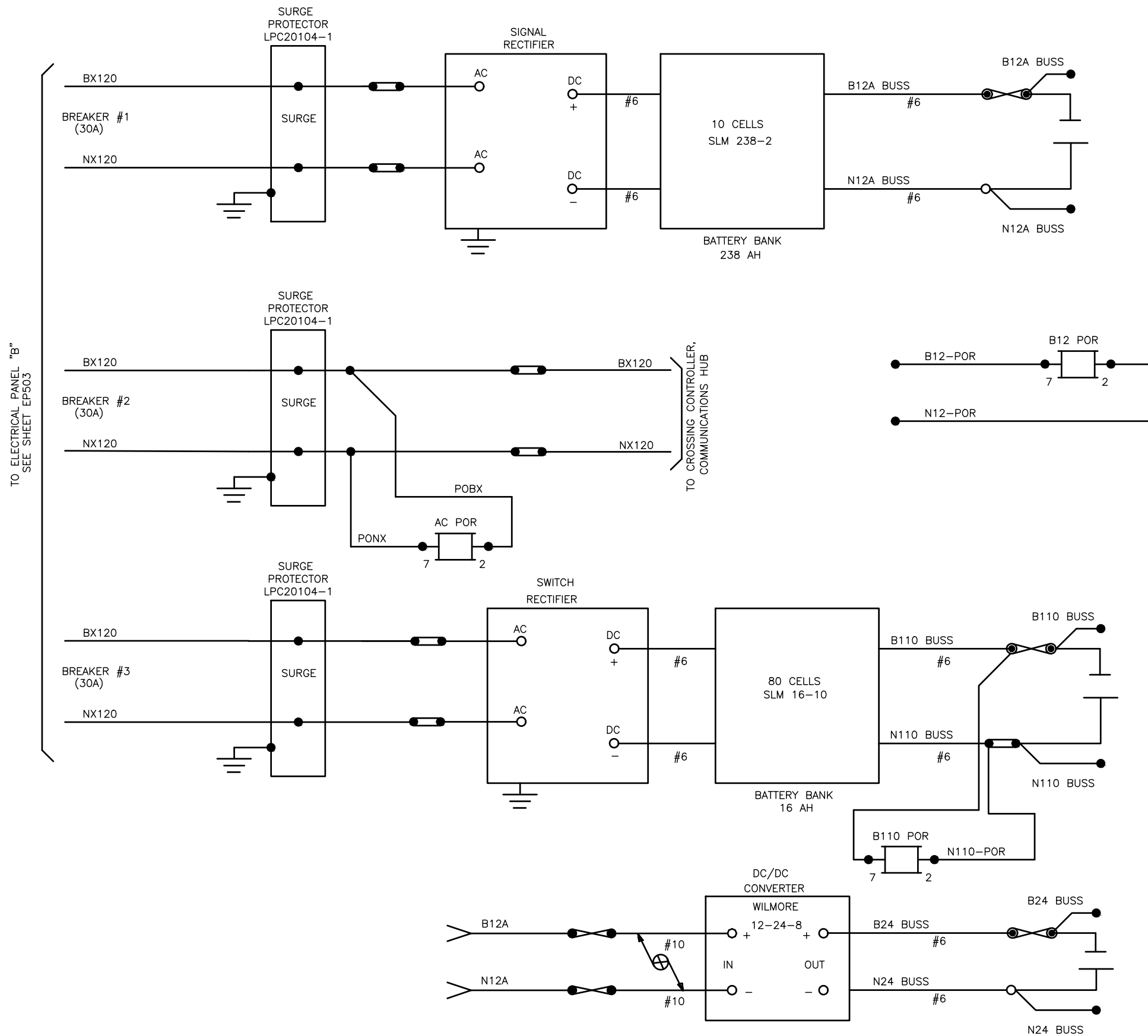
**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/11/19  
SUBMITTAL DATE: 06/29/20  
SCALE: NTS  
BOARD APPROVAL DATE:

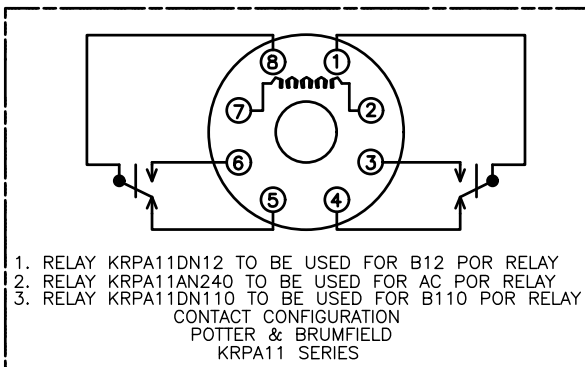
EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
EASTRIDGE INTERLOCKING  
GATE, LIGHTS & BELL CIRCUITS (PED XING 2B)

PCB NO. 000  
CONTRACT NO. C801  
FILE LOCATION: PROJECTWISE

SHEET OF  
DRAWING NO. JC139  
REVISION B



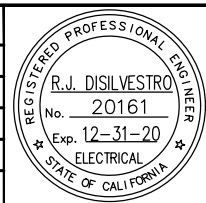
**NOTE:**  
 1. WIRE TO BE #10 UNLESS DENOTED OTHERWISE.



1. RELAY KRPA11DN12 TO BE USED FOR B12 POR RELAY  
 2. RELAY KRPA11AN240 TO BE USED FOR AC POR RELAY  
 3. RELAY KRPA11DN110 TO BE USED FOR B110 POR RELAY  
 CONTACT CONFIGURATION  
 POTTER & BRUMFIELD  
 KRPA11 SERIES

Jun 22, 2020 - 11:26am C:\cadd\p\y\g\owkes\west\01JC140\01JC140-140\_Eastridge.dwg

NO.	DATE	REVISIONS
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B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET

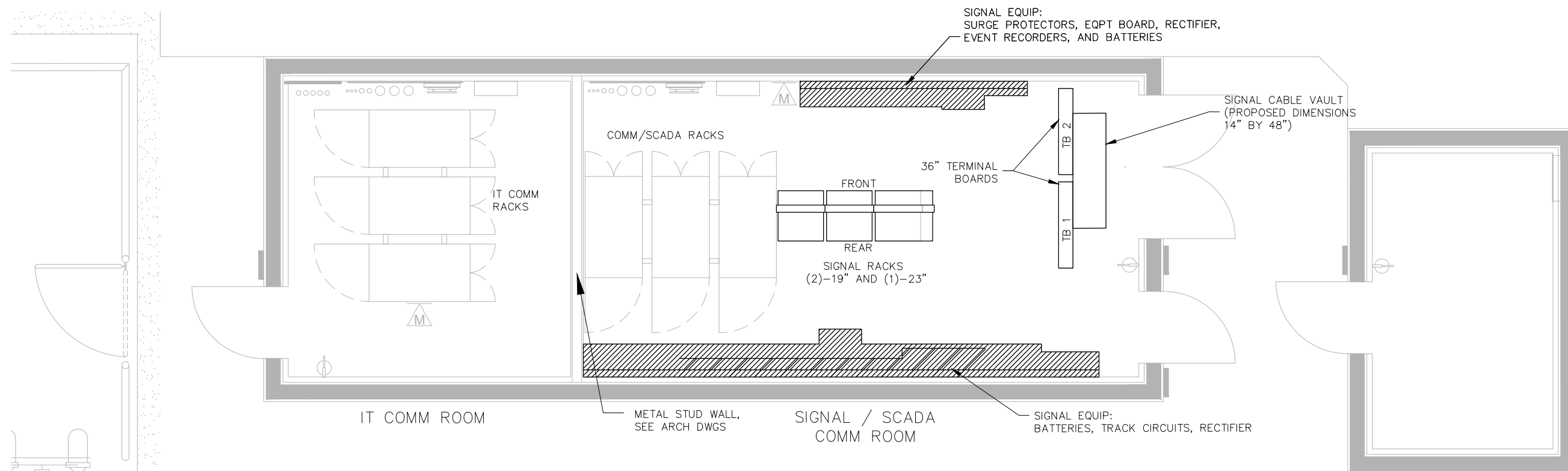


SUBMITTED		<b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
DESIGNED	M.BAKHIN	CHECKED	V.FAINGOLD
DRAWN	M.BAKHIN	CADD FILE NAME	801JC140.dwg

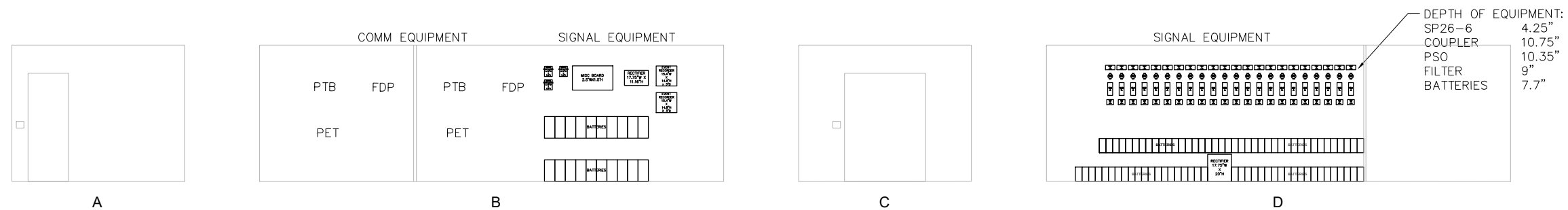


APPROVED		<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	03/11/19	SCALE	NTS
SUBMITTAL DATE	06/29/20	BOARD APPROVAL DATE	

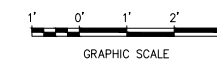
EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS EASTRIDGE INTERLOCKING POWER DISTRIBUTION			SHEET OF DRAWING NO. JC140 REVISION C
PCA NO.	CONTRACT NO.	FILE LOCATION	
000	C801	PROJECTWISE	



SIGNALS / SCADA / IT COMM ROOM EQUIPMENT LAYOUT  
1/2" = 1'

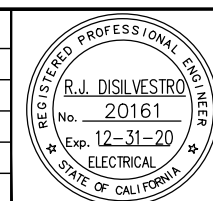


EQUIPMENT ROOM WALL ELEVATION  
1/4" = 1'



Jun 22, 2020 11:28am C:\cadd\paw\g\awes\west\0139440\801JC141-142\_Eastridge.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
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SUBMITTED		<b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
DESIGNED	A. RODGERS	CHECKED	V. FAINGOLD
DRAWN	A. RODGERS	CADD FILE NAME	801JC141.dwg

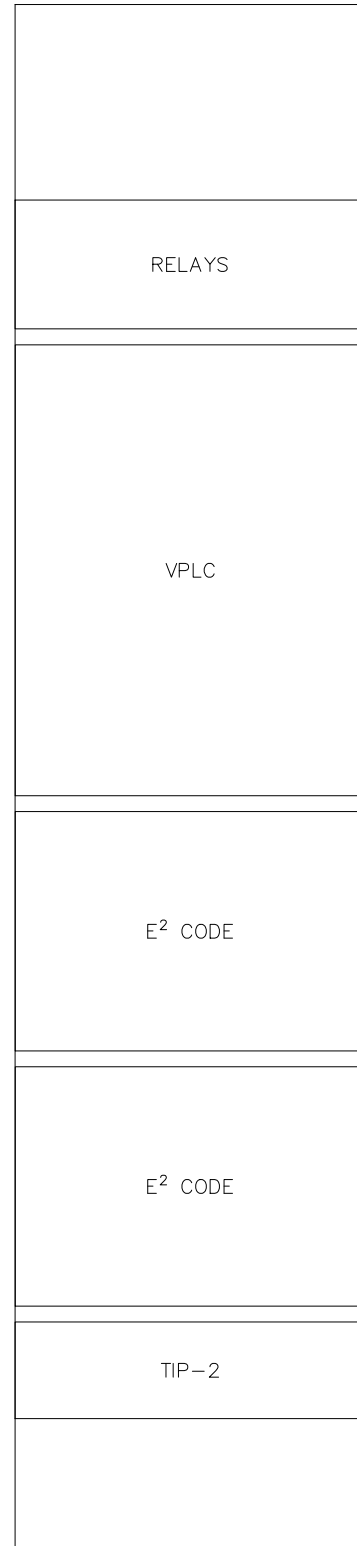


APPROVED		<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	03/11/19	SCALE	NTS
SUBMITTAL DATE		BOARD APPROVAL DATE	

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS EASTRIDGE INTERLOCKING EQUIPMENT ROOM LAYOUT		
PCA NO.	CONTRACT NO.	FILE LOCATION
	C801	PROJECTWISE

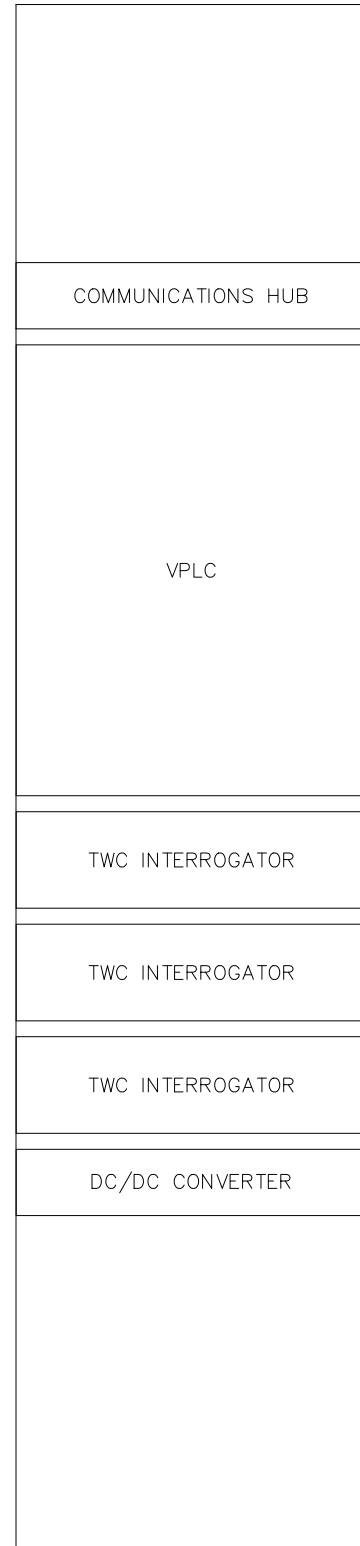
SHEET	OF
DRAWING NO.	JC141
REVISION	B

RACK 1



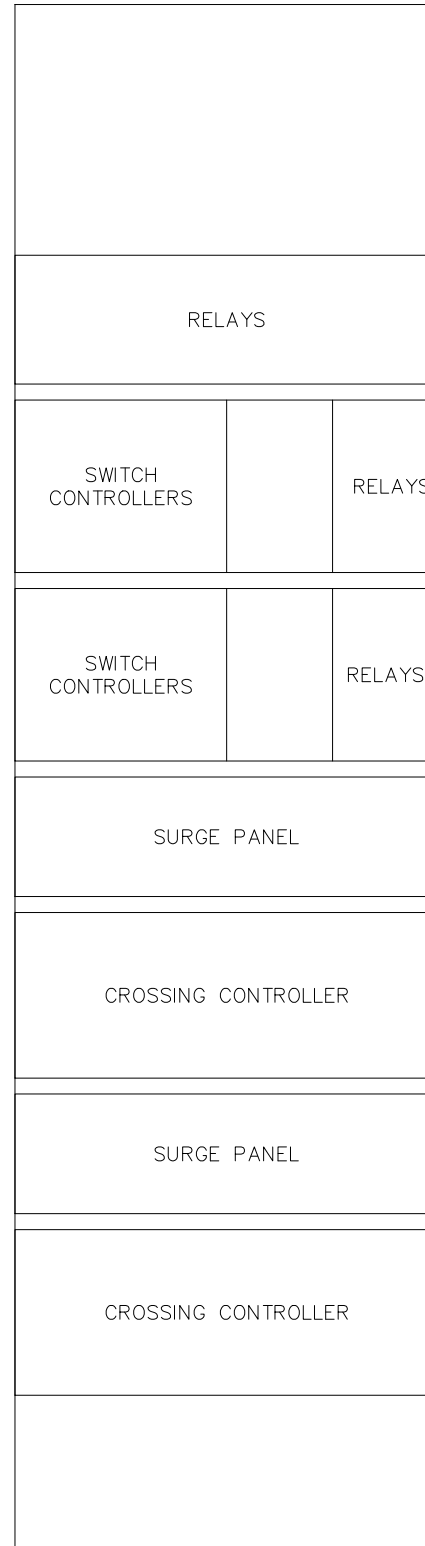
19" X 84"

RACK 2



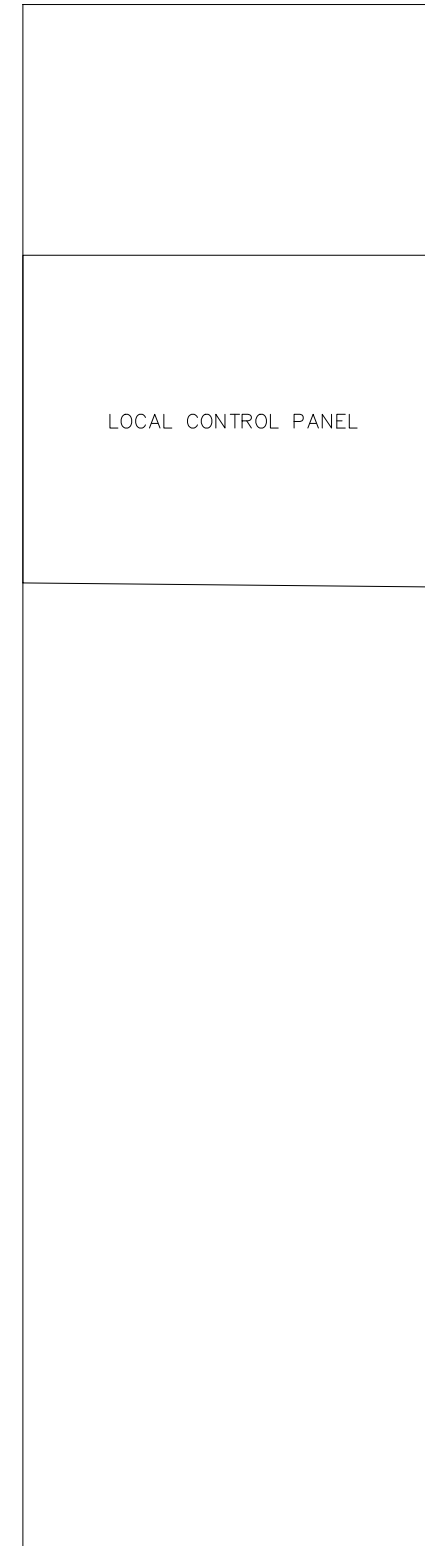
19" X 84"

RACK 3



23" X 84"

RACK 3 (REAR)



23" X 84"

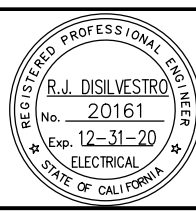
RACK 4 (FUTURE)



19" X 84"

Jun 22, 2020 11:29am C:\cadd\pwworking\gromes\west\0139440\801JC142\142\_Eastridge.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



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Engineers Architects Planners  
1732 North First Street, Suite 400 Tel (408) 451-7300  
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DESIGNED: A. RODGERS CHECKED: V. FAINGOLD  
DRAWN: A. RODGERS CADD FILE NAME: 801JC142.dwg

Santa Clara Valley  
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Authority

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CADD FILE DATE: 03/11/19 SCALE: NTS  
SUBMITTAL DATE: BOARD APPROVAL DATE

PCA NO.	CONTRACT NO.	FILE LOCATION
	C801	PROJECTWISE

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
EASTRIDGE INTERLOCKING  
RACK LAYOUTS

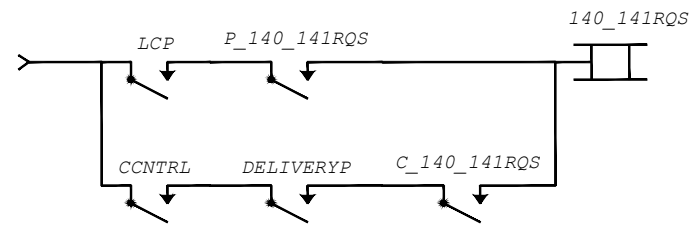
SHEET OF	
DRAWING NO.	JC142
REVISION	B

EASTRIDGE INTERLOCKING  
ELECTROLOGIXS "A"  
NON-VITAL LOGIC  
EQUATION INDEX

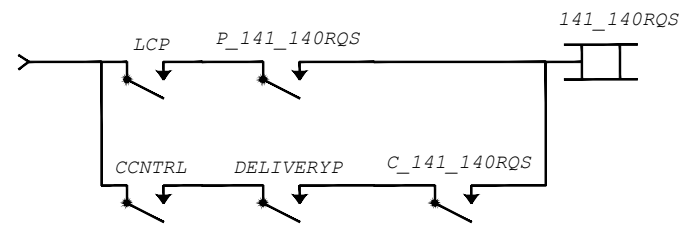
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140CANR	2	C_140_141RQK	5	C_C141LK	8	C_C153TEK	11	P_ACPOK	14
140COQS	2	C_140_143RQK	6	C_C141LOK	8	C_C153TK	11	P_AELOGXK	14
141_140RQS	2	C_141_140RQK	6	C_C141RK	8	C_C153YK	11	P_ATK	14
141_142RQS	2	C_141_142RQK	6	C_C141TEK	9	C_C155COK	11	P_B12POK	14
141CANR	2	C_142_141RQK	6	C_C141YK	9	C_C155LK	11	P_B110POK	14
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142CANR	2	C_150_151RQK	6	C_C142FLK	9	C_C155YK	12	P_C140COK	14
142COQS	2	C_150_153RQK	6	C_C142LK	9	C_CCK	12	P_C140FLK	15
143_140RQS	3	C_151_150RQK	6	C_C142LOK	9	C_CTK	12	P_C140FRK_FL	15
143_142RQS	3	C_152_153RQK	6	C_C142RK	9	C_DOORK	12	P_C140LK	15
143CANR	3	C_152_155RQK	6	C_C142TEK	9	C_FAK	12	P_C140RK	15
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150CANR	3	C_1140NWK	6	C_C143GK	9	CCNTRL	12	P_C141BTK	15
150COQS	3	C_1140RWK	6	C_C143LK	9	DELIVERYP	12	P_C141COK	15
151_150RQS	3	C_1141NWK	6	C_C143LOK	9	DELIVERYTER	12	P_C141FLK	15
151CANR	3	C_1141RWK	7	C_C143RK	10	LCP	12	P_C141FRK_FL	15
151COQS	3	C_1142NWK	7	C_C143TEK	10	MODE	12	P_C141GK	15
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1140_43NWZ	4	C_ATK	7	C_C151LK	10	P_1141LK	13	P_C142TEK	16
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1141_42NWZ	5	C_B12POK1039	7	C_C151RK	10	P_1141RWK	13	P_C143COK	16
1141_42RWZ	5	C_B110POK	7	C_C151TEK	10	P_1141TEK	13	P_C143FLK	16
1150NWZ	5	C_BTK	7	C_C151YK	10	P_1142NWK	13	P_C143FRK_FL	16
1150RWZ	5	C_C136DTK	8	C_C152COK	11	P_1142RWK	13	P_C143GK	16
1152_53NWZ	5	C_C140COK	8	C_C152FLK	11	P_1143LK	13	P_C143LK	16
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C_1PXRK	5	C_C140LK	8	C_C152LOK	11	P_1143RWK	14	P_C143TEK	16
C_1XTK	5	C_C140LOK	8	C_C152RK	11	P_1150LK	14	P_C143YK	16
C_2PXRK	5	C_C140RK	8	C_C152TEK	11	P_1150NWK	14	P_C150COK	16
C_2XTK	5	C_C140TEK	8	C_C152TK	11	P_1150RWK	14	P_C150FLK	16
C_3NFK	5	C_C140YK	8	C_C152YK	11	P_1152LK	14	P_C150FRK_FL	16
C_3SFK	5	C_C141ATK	8	C_C153COK	11	P_1152NWK	14	P_C150LK	16
		C_C141BTK	8	C_C153FLK	11	P_1152RWK	14	P_C150RK	16
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Jun 22, 2020 11:28am C:\cadd\lib\paw\gfoakes\west\0139440\01.L101-118\_Eastridge\_A\_NV.dwg

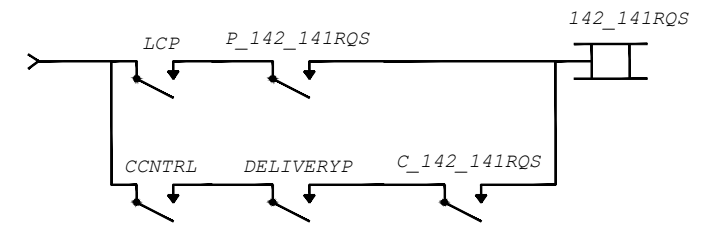
<table border="1"> <tr><td>C</td><td>06/20</td><td>95% SUBMITTAL SET</td></tr> <tr><td>B</td><td>03/19</td><td>65% SUBMITTAL SET</td></tr> <tr><td>A</td><td>06/18</td><td>35% SUBMITTAL SET</td></tr> <tr><td>NO.</td><td>DATE</td><td>REVISIONS</td></tr> </table>			C	06/20	95% SUBMITTAL SET	B	03/19	65% SUBMITTAL SET	A	06/18	35% SUBMITTAL SET	NO.	DATE	REVISIONS		<p><b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942</p>		<p><b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS</p>	<p>EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS EASTRIDGE INTERLOCKING NON-VITAL LOGIC, ELECTROLOGIXS "A" (1 OF 18)</p>	<p>SHEET OF DRAWING NO. JL101 REVISION B</p>						
C	06/20	95% SUBMITTAL SET																								
B	03/19	65% SUBMITTAL SET																								
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NO.	DATE	REVISIONS																								
<table border="1"> <tr><td>DESIGNED</td><td>M.BAKHIN</td><td>CHECKED</td><td>V.FAINGOLD</td></tr> <tr><td>DRAWN</td><td>M.BAKHIN</td><td>CADD FILE NAME</td><td>801JL101.dwg</td></tr> </table>			DESIGNED	M.BAKHIN	CHECKED	V.FAINGOLD	DRAWN	M.BAKHIN	CADD FILE NAME	801JL101.dwg	<table border="1"> <tr><td>CADD FILE DATE</td><td>03/11/19</td><td>SCALE</td><td>NTS</td></tr> <tr><td>SUBMITTAL DATE</td><td>06/29/20</td><td>BOARD APPROVAL DATE</td><td></td></tr> </table>	CADD FILE DATE	03/11/19	SCALE	NTS	SUBMITTAL DATE	06/29/20	BOARD APPROVAL DATE		<table border="1"> <tr><td>PCA NO.</td><td>000</td><td>CONTRACT NO.</td><td>C801</td><td>FILE LOCATION</td><td>PROJECTWISE</td></tr> </table>	PCA NO.	000	CONTRACT NO.	C801	FILE LOCATION	PROJECTWISE
DESIGNED	M.BAKHIN	CHECKED	V.FAINGOLD																							
DRAWN	M.BAKHIN	CADD FILE NAME	801JL101.dwg																							
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SUBMITTAL DATE	06/29/20	BOARD APPROVAL DATE																								
PCA NO.	000	CONTRACT NO.	C801	FILE LOCATION	PROJECTWISE																					



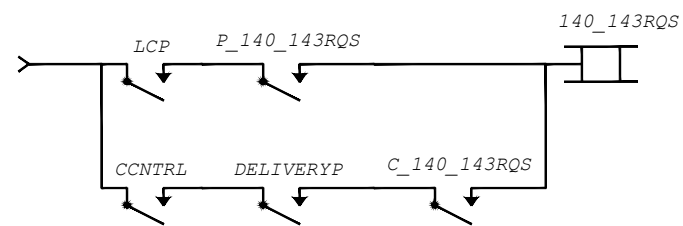
Signal C140 - Signal C141 Route Request from LCP or Central Control



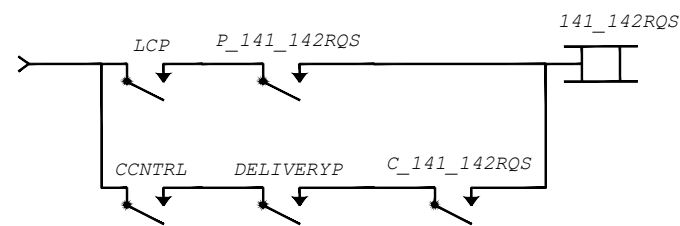
Signal C141 - Signal C140 Route Request from LCP or Central Control



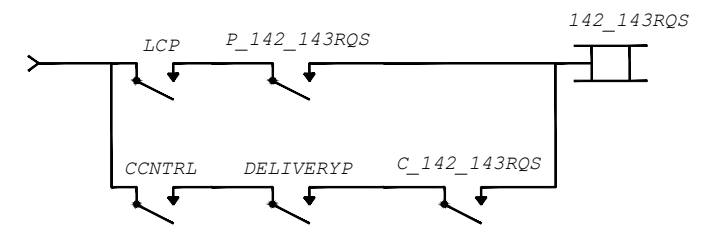
Signal C142 - Signal C141 Route Request from LCP or Central Control



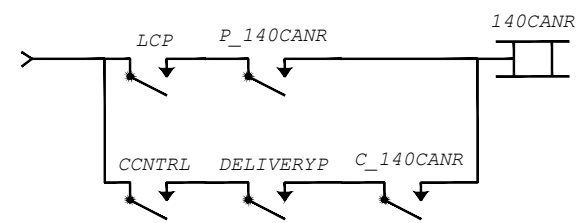
Signal C140 - Signal C143 Route Request from LCP or Central Control



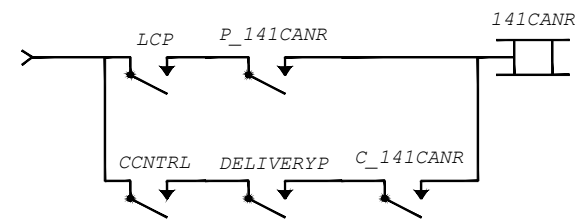
Signal C141 - Signal C142 Route Request from LCP or Central Control



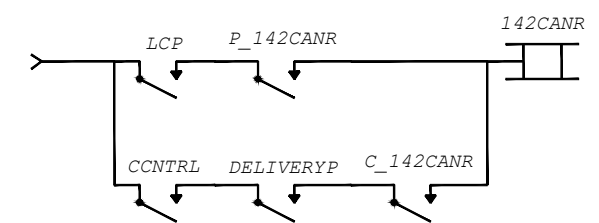
Signal C142 - Signal C143 Route Request from LCP or Central Control



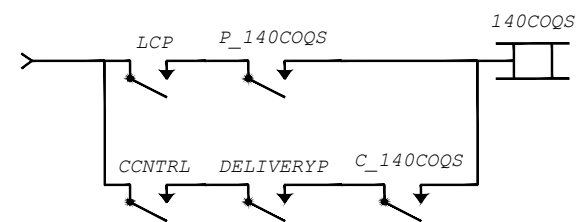
Signal C140 Route Request Cancel From LCP Or Central Control



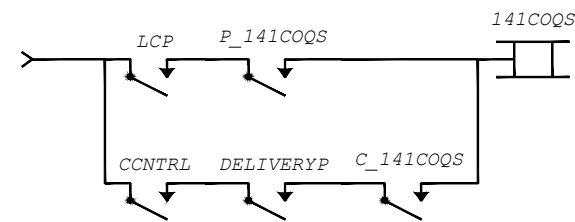
Signal C141 Route Request Cancel From LCP Or Central Control



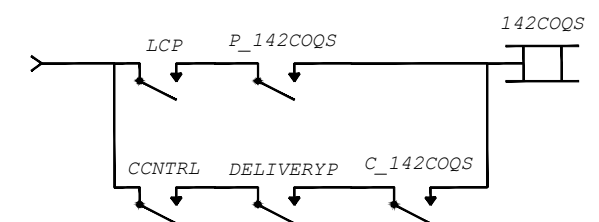
Signal C142 Route Request Cancel From LCP Or Central Control



Signal C140 Call-On Request From LCP Or Central Control



Signal C141 Call-On Request From LCP Or Central Control



Signal C142 Call-On Request From LCP Or Central Control

Jun 22, 2020 - 11:28am C:\cadd\lib\paw\gforbes\west\d0139440\001.L101-118\_Eastridge\_A\_NV.dwg

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



**HNTB** HNTB Corporation  
 1732 North First Street, Suite 400 San Jose, CA 95112  
 Tel (408) 451-7300 Fax (408) 451-6942

DESIGNED: M.BAKHIN  
 CHECKED: V.FAINGOLD  
 DRAWN: M.BAKHIN  
 CADD FILE NAME: 801JL102.dwg

**Santa Clara Valley Transportation Authority**

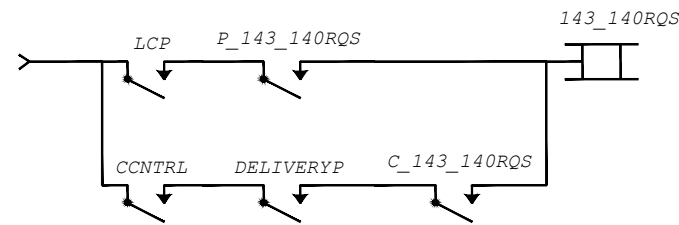
**BKF** 100+ YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

APPROVED: [Signature]  
 CADD FILE DATE: 03/11/19  
 SUBMITTAL DATE: 06/29/20  
 SCALE: NTS  
 BOARD APPROVAL DATE:

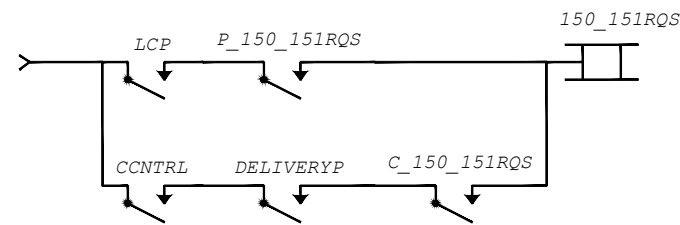
EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 LRT SIGNAL SYSTEMS  
 EASTRIDGE INTERLOCKING  
 NON-VITAL LOGIC, ELECTROLOGIXS "A" (2 OF 18)

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

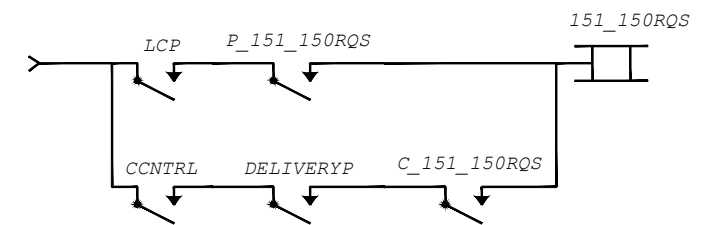
SHEET OF [ ]  
 DRAWING NO. JL102  
 REVISION A



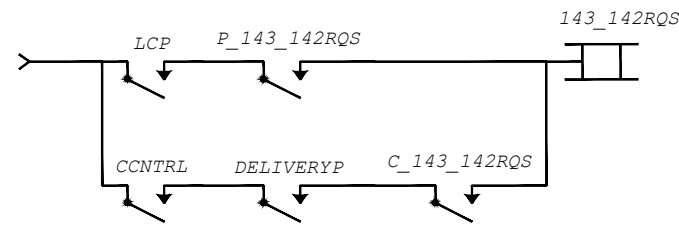
Signal C143 - Signal C140 Route Request from LCP or Central Control



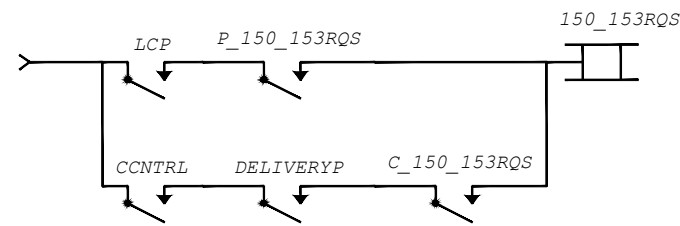
Signal C150 - Signal C151 Route Request from LCP or Central Control



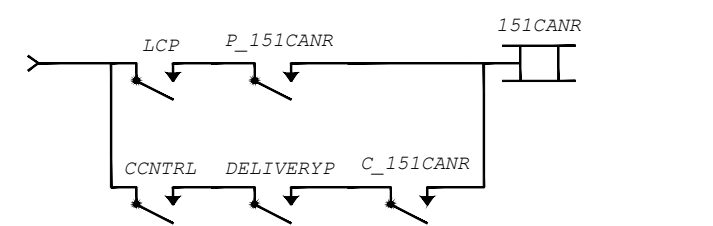
Signal C151 - Signal C150 Route Request from LCP or Central Control



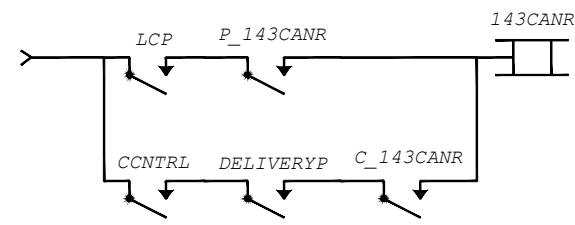
Signal C143 - Signal C142 Route Request from LCP or Central Control



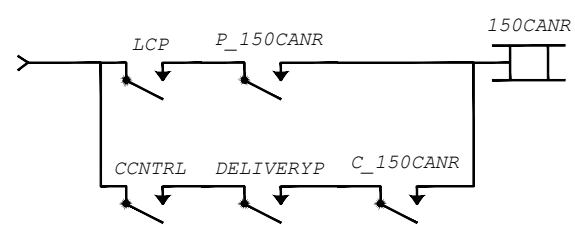
Signal C150 - Signal C153 Route Request from LCP or Central Control



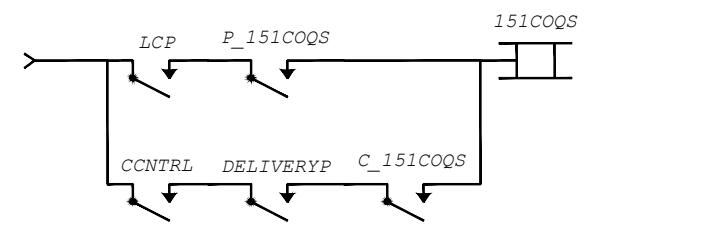
Signal C151 Route Request Cancel From LCP Or Central Control



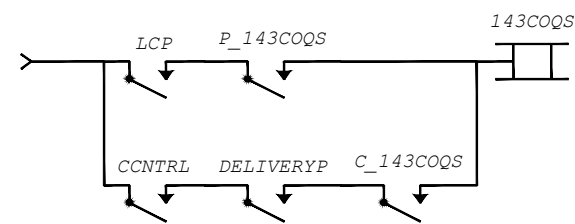
Signal C143 Route Request Cancel From LCP Or Central Control



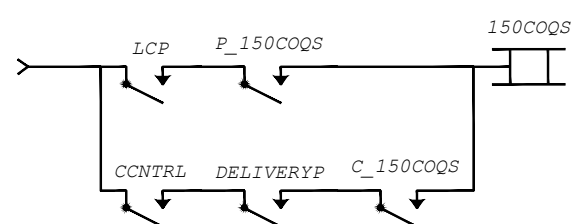
Signal C150 Route Request Cancel From LCP Or Central Control



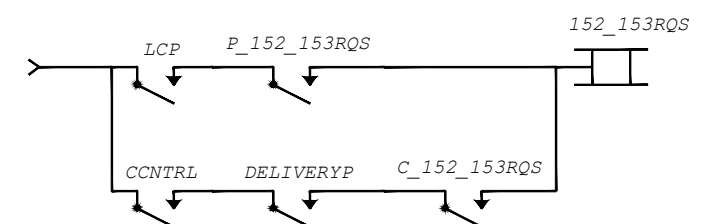
Signal C151 Call-On Request From LCP Or Central Control



Signal C143 Call-On Request From LCP Or Central Control



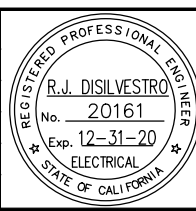
Signal C150 Call-On Request From LCP Or Central Control



Signal C152 - Signal C153 Route Request from LCP or Central Control

Jun 22, 2020 - 11:29am C:\cadd\p\y\g\owkes\west\0139440\01.L101-118\_Eastridge\_A\_NV.dwg

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



SUBMITTED

**HNTB** HNTB Corporation  
Engineers Architects Planners  
1732 North First Street, Suite 400 San Jose, CA 95112  
Tel (408) 451-7300 Fax (408) 451-6942

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DRAWN: M.BAKHIN  
CADD FILE NAME: 801JL103.dwg

**Santa Clara Valley Transportation Authority**

APPROVED

**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

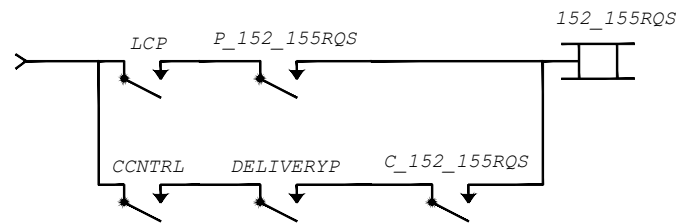
CADD FILE DATE: 03/11/19  
SCALE: NTS  
SUBMITTAL DATE: 06/29/20  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
EASTRIDGE INTERLOCKING  
NON-VITAL LOGIC, ELECTROLOGIXS "A" (3 OF 18)

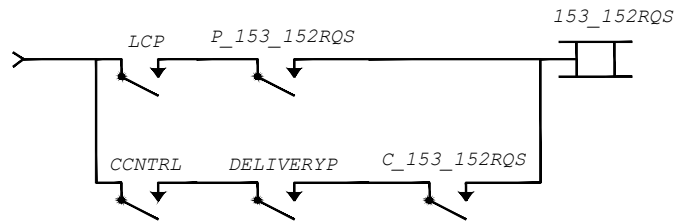
PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

SHEET OF  
DRAWING NO. JL103  
REVISION B

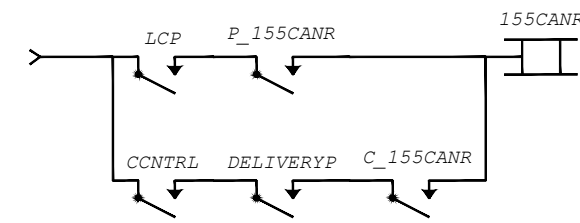




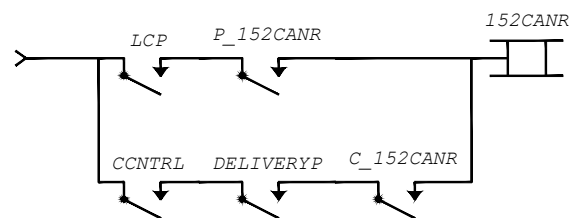
Signal C152 - Signal C155 Route Request from LCP or Central Control



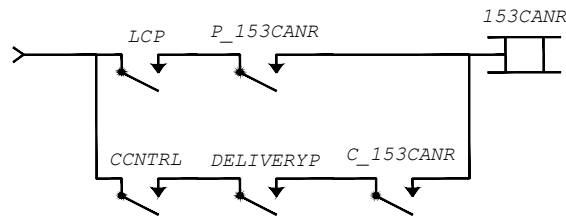
Signal C153 - Signal C152 Route Request from LCP or Central Control



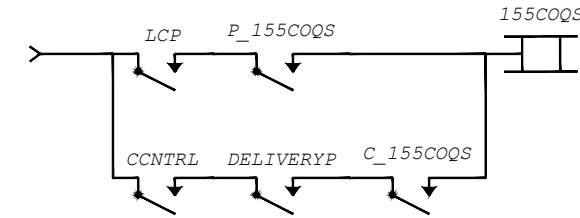
Signal C155 Route Request Cancel From LCP Or Central Control



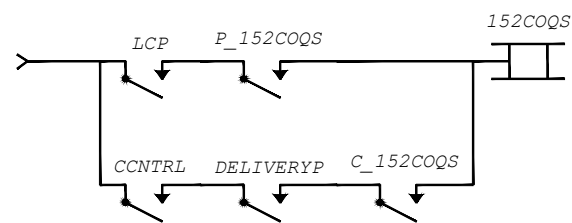
Signal C152 Route Request Cancel From LCP Or Central Control



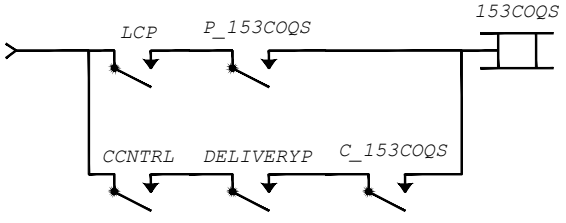
Signal C153 Route Request Cancel From LCP Or Central Control



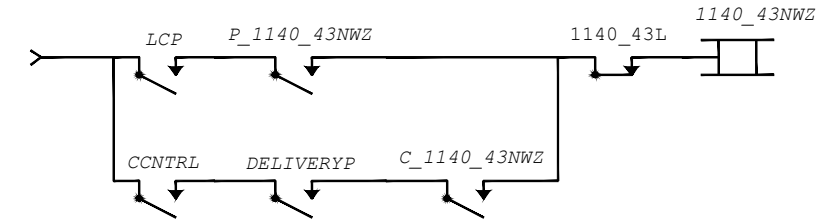
Signal C155 Call-On Request From LCP Or Central Control



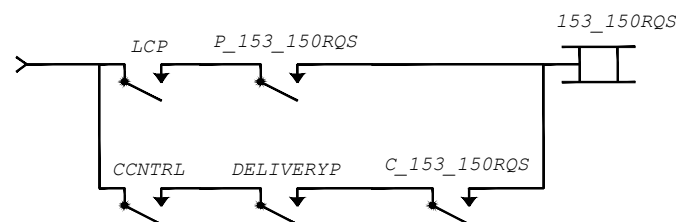
Signal C152 Call-On Request From LCP Or Central Control



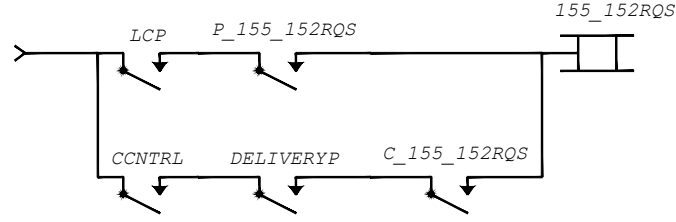
Signal C153 Call-On Request From LCP Or Central Control



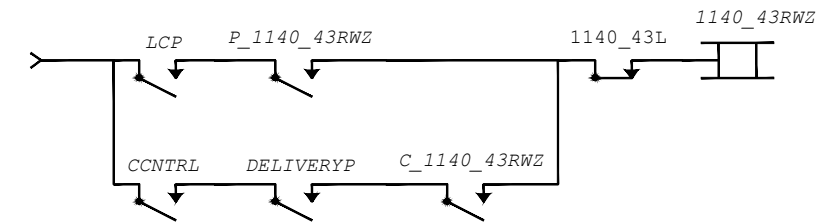
Crossover 1140-1143 Normal Switch Request From LCP or Central Control



Signal C153 - Signal C150 Route Request from LCP or Central Control



Signal C155 - Signal C152 Route Request from LCP or Central Control



Crossover 1140-1143 Reverse Switch Request From LCP or Central Control

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NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
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A	06/18	35% SUBMITTAL SET



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DRAWN: M.BAKHIN  
CADD FILE NAME: 801JL104.dwg

**Santa Clara Valley Transportation Authority**

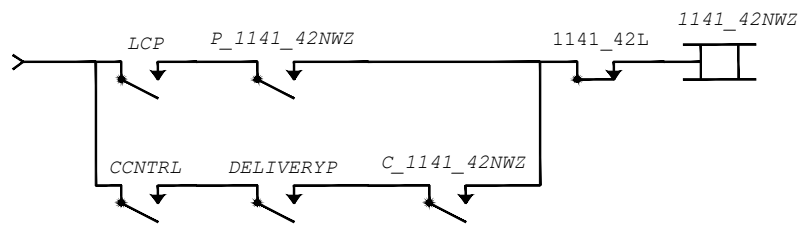
**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/11/19  
SUBMITTAL DATE: 06/29/20  
SCALE: NTS  
BOARD APPROVAL DATE:

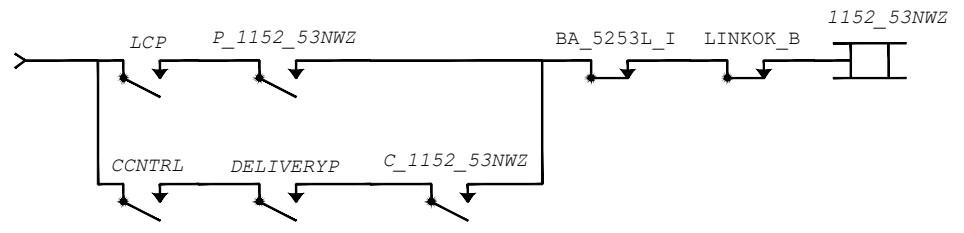
EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
EASTRIDGE INTERLOCKING  
NON-VITAL LOGIC, ELECTROLOGIXS "A" (4 OF 18)

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

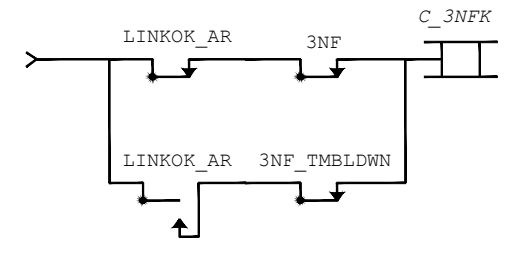
SHEET OF  
DRAWING NO. JL104  
REVISION B



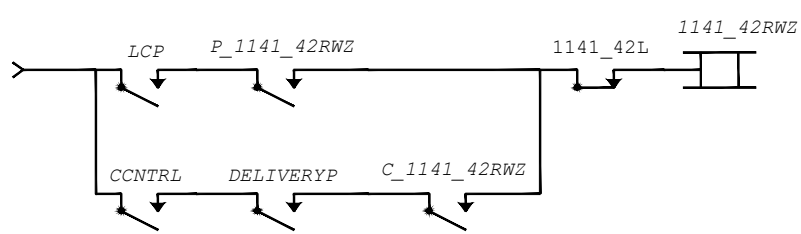
Crossover 1141-1142 Normal Switch Request From LCP or Central Control



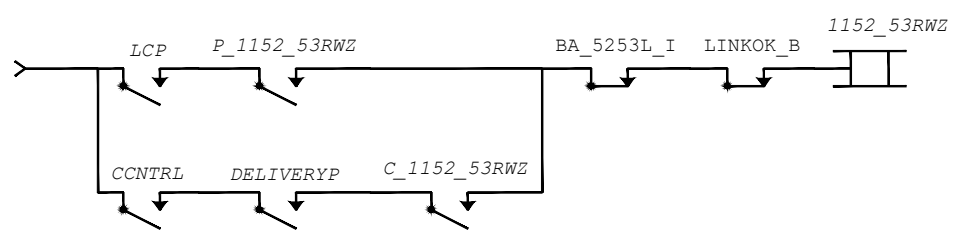
Crossover 1152-1153 Normal Switch Request From LCP or Central Control



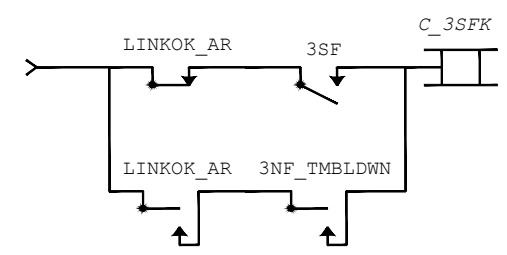
Central Office Track 3 Northbound Traffic Indication, Alum Rock to Eastridge



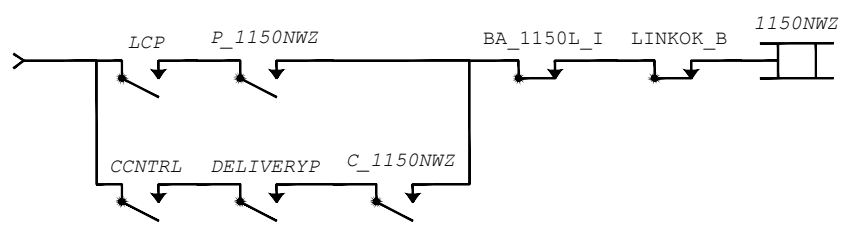
Crossover 1141-1142 Reverse Switch Request From LCP or Central Control



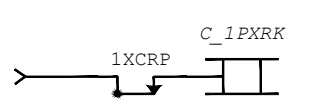
Crossover 1152-1153 Reverse Switch Request From LCP or Central Control



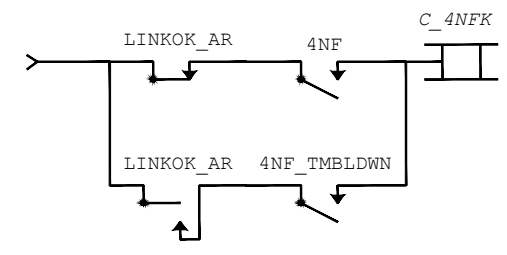
Central Office Track 3 Southbound Traffic Indication, Alum Rock to Eastridge



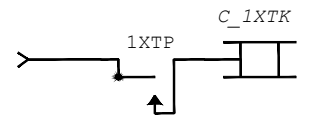
Switch 1150 Normal Switch Request From LCP or Central Control



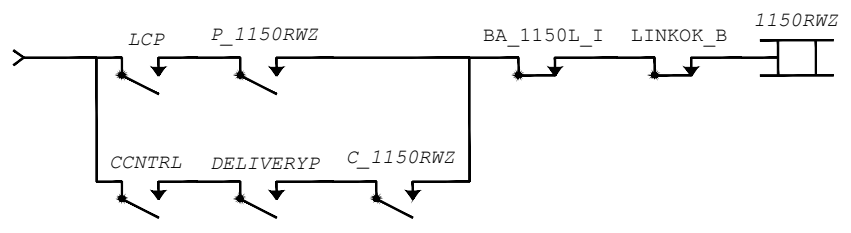
Ped Xing#1 XR Central Office Indication



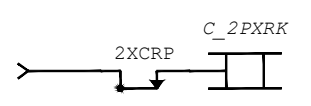
Central Office Track 4 Northbound Traffic Indication, Alum Rock to Eastridge



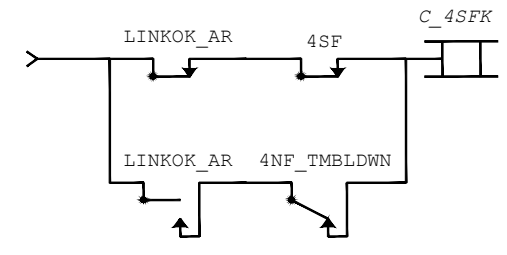
1XT Track Circuit Central Office Indication



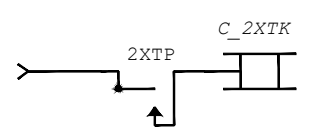
Crossover 150 Reverse Switch Request From LCP or Central Control



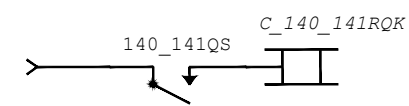
Ped Xing#2 XR Central Office Indication



Central Office Track 4 Southbound Traffic Indication, Alum Rock to Eastridge



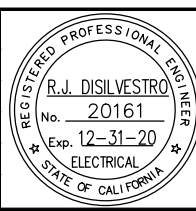
2XT Track Circuit Central Office Indication



Signal C140 - Signal C141 Route Request Indication To Central Office

Jun 22, 2020 - 11:28am C:\cadd\hntb\paw\gfoakes\west\0139440\001\1101-118\_Eastridge\_A\_NV.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



SUBMITTED

**HNTB** HNTB Corporation  
Engineers Architects Planners  
1732 North First Street, Suite 400 San Jose, CA 95112  
Tel (408) 451-7300 Fax (408) 451-6942

DESIGNED: M.BAKHIN CHECKED: V.FAINGOLD  
DRAWN: M.BAKHIN CADD FILE NAME: 801JL105.dwg

**Santa Clara Valley Transportation Authority**

APPROVED

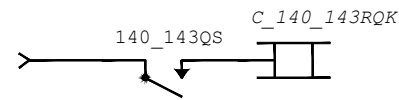
**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/11/19 SCALE: NTS  
SUBMITTAL DATE: 06/29/20 BOARD APPROVAL DATE:

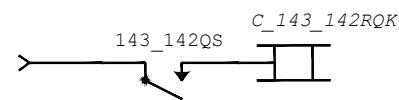
EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
EASTRIDGE INTERLOCKING  
NON-VITAL LOGIC, ELECTROLOGIXS "A" (5 OF 18)

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

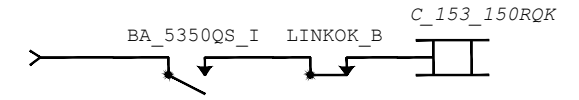
SHEET OF	
DRAWING NO.	JL105
REVISION	A



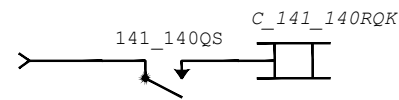
Signal C140 - Signal C143 Route Request Indication To Central Office



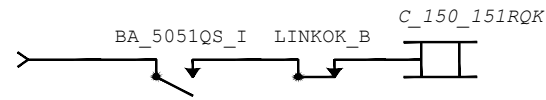
Signal C143 - Signal C142 Route Request Indication To Central Office



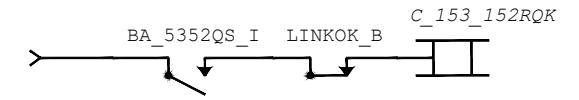
Signal C153 - Signal C150 Route Request Indication To Central Office



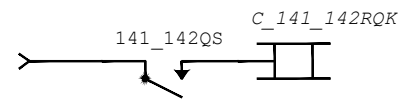
Signal C141 - Signal C140 Route Request Indication To Central Office



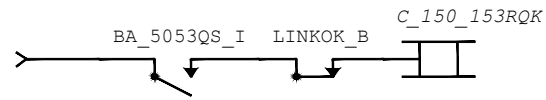
Signal C150 - Signal C151 Route Request Indication To Central Office



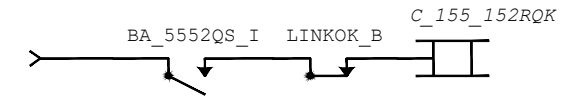
Signal C153 - Signal C152 Route Request Indication To Central Office



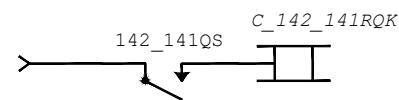
Signal C141 - Signal C142 Route Request Indication To Central Office



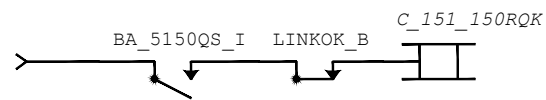
Signal C150 - Signal C153 Route Request Indication To Central Office



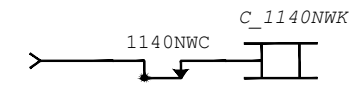
Signal C155 - Signal C152 Route Request Indication To Central Office



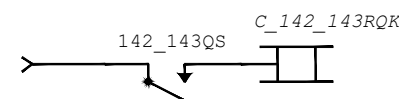
Signal C142 - Signal C141 Route Request Indication To Central Office



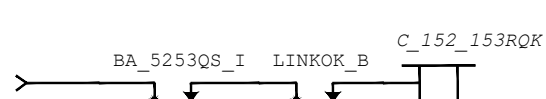
Signal C151 - Signal C150 Route Request Indication To Central Office



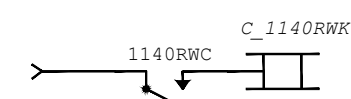
Switch 1140 Normal Switch Central Office Indication



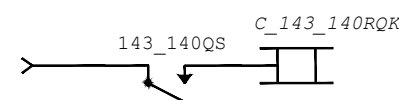
Signal C142 - Signal C143 Route Request Indication To Central Office



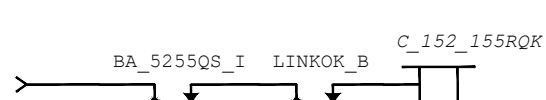
Signal C152 - Signal C153 Route Request Indication To Central Office



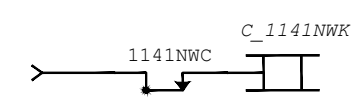
Switch 1140 Reverse Switch Central Office Indication



Signal C143 - Signal C140 Route Request Indication To Central Office



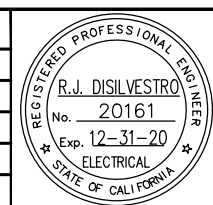
Signal C152 - Signal C155 Route Request Indication To Central Office



Switch 1141 Normal Switch Central Office Indication

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NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



**HNTB** HNTB Corporation  
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DESIGNED: M.BAKHIN  
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CADD FILE NAME: 801JL106.dwg



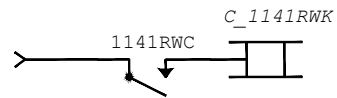
APPROVED: **BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/11/19  
SUBMITTAL DATE: 06/29/20  
SCALE: NTS  
BOARD APPROVAL DATE:

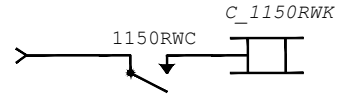
EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
EASTRIDGE INTERLOCKING  
NON-VITAL LOGIC, ELECTROLOGIXS "A" (6 OF 18)

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

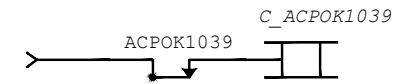
SHEET OF  
DRAWING NO. JL106  
REVISION A



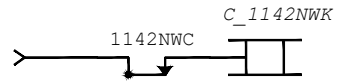
Switch 1141 Reverse Switch Central Office Indication



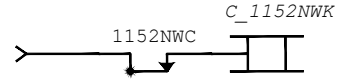
Switch 1150 Reverse Switch Central Office Indication



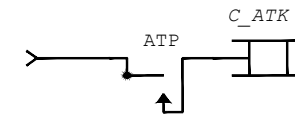
Signal Case SC1039 AC Low Voltage Central Office Indication



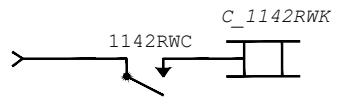
Switch 1142 Normal Switch Central Office Indication



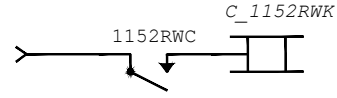
Switch 1152 Normal Switch Central Office Indication



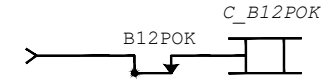
AT Track Circuit Central Office Indication



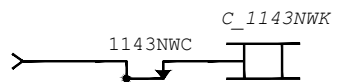
Switch 1142 Reverse Switch Central Office Indication



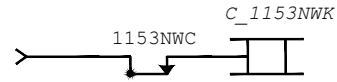
Switch 1152 Reverse Switch Central Office Indication



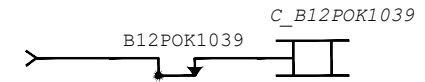
B12 Low Voltage Central Office Indication



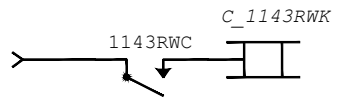
Switch 1143 Normal Switch Central Office Indication



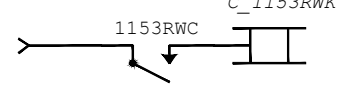
Switch 1153 Normal Switch Central Office Indication



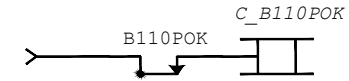
Signal Case SC1039 B12 Low Voltage Central Office Indication



Switch 1143 Reverse Switch Central Office Indication



Switch 1153 Reverse Switch Central Office Indication



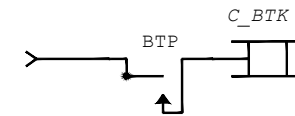
B110 Low Voltage Central Office Indication



Switch 1150 Normal Switch Central Office Indication



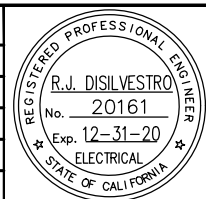
AC Low Voltage Central Office Indication



BT Track Circuit Central Office Indication

Jun 22, 2020 - 11:29am C:\cadd\p\y\g\owkes\west\0139440\01.L101-118\_Eastridge\_A\_NV.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



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CADD FILE NAME: 801JL107.dwg



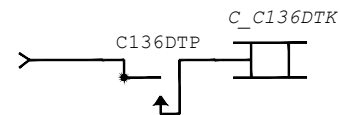
APPROVED: **BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/11/19  
SUBMITTAL DATE: 06/29/20  
SCALE: NTS  
BOARD APPROVAL DATE:

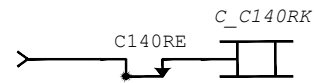
EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
EASTRIDGE INTERLOCKING  
NON-VITAL LOGIC, ELECTROLOGIXS "A" (7 OF 18)

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

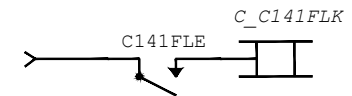
SHEET OF  
DRAWING NO. JL107  
REVISION A



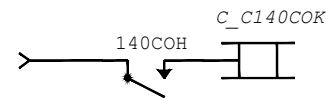
C136DT Track Circuit Central Office Indication



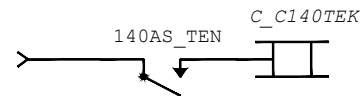
Signal C140 Red Central Office Indication



Signal C141 Flashing Lunar Central Office Indication



Signal C140 Call-On Central Office Indication



Signal C140 In-Time Central Office Indication



Signal C141 Green Central Office Indication



Signal C140 Flashing Lunar Central Office Indication



Signal C140 Yellow Central Office Indication



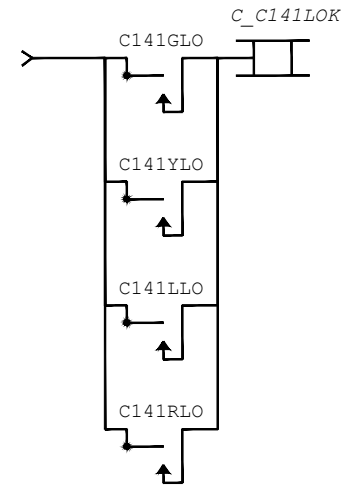
Signal C141 Lunar Central Office Indication



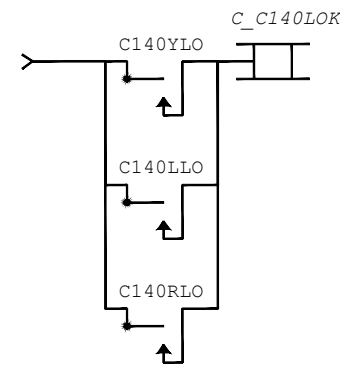
Signal C140 Lunar Central Office Indication



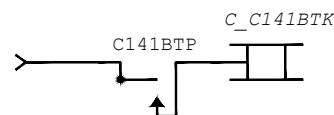
C141AT Track Circuit Central Office Indication



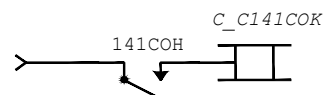
Signal C141 Light-Out Central Office Indication



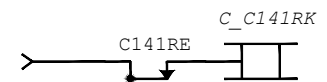
Signal C140 Light-Out Central Office Indication



C141BTP Track Circuit Central Office Indication



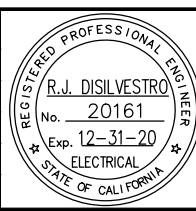
Signal C141 Call-On Central Office Indication



Signal C141 Red Central Office Indication

Jun 22, 2020 - 11:29am C:\cadd\p\work\west\0139440\01.L101-118\_Eastridge\_A\_NV.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



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CADD FILE NAME: 801JL108.dwg

**Santa Clara Valley Transportation Authority**

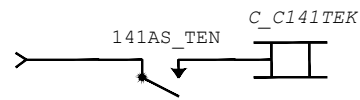
**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

APPROVED: [Signature]  
CADD FILE DATE: 03/11/19  
SUBMITTAL DATE: 06/29/20  
SCALE: NTS  
BOARD APPROVAL DATE:

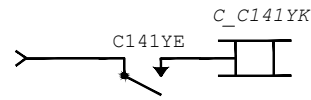
EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
EASTRIDGE INTERLOCKING  
NON-VITAL LOGIC, ELECTROLOGIXS "A" (8 OF 18)

PCB NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

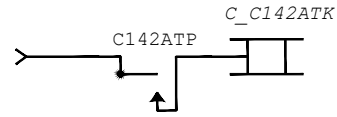
SHEET OF [ ]  
DRAWING NO. JL108  
REVISION A



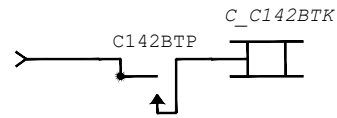
Signal C141 In-Time Central Office Indication



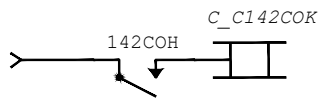
Signal C141 Yellow Central Office Indication



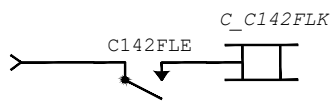
C142AT Track Circuit Central Office Indication



C142BT Track Circuit Central Office Indication



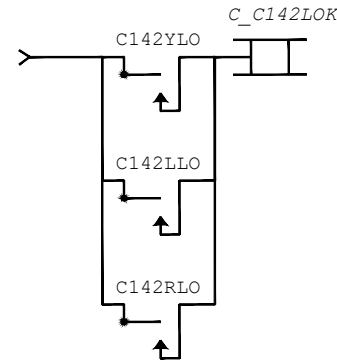
Signal C142 Call-On Central Office Indication



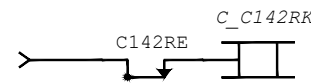
Signal C142 Flashing Lunar Central Office Indication



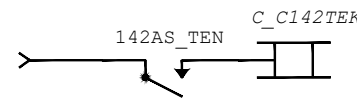
Signal C142 Lunar Central Office Indication



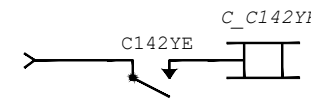
Signal C142 Light-Out Central Office Indication



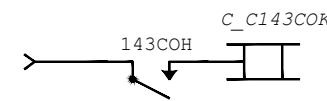
Signal C142 Red Central Office Indication



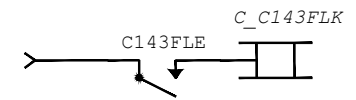
Signal C142 In-Time Central Office Indication



Signal C142 Yellow Central Office Indication



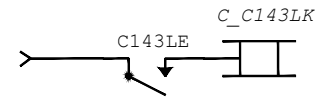
Signal C143 Call-On Central Office Indication



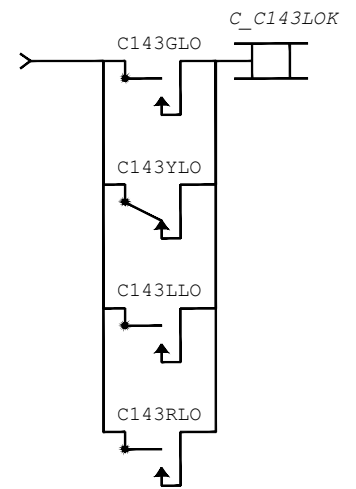
Signal C143 Flashing Lunar Central Office Indication



Signal C143 Green Central Office Indication



Signal C143 Lunar Central Office Indication



Signal C143 Light-Out Central Office Indication

Jun 22, 2020 - 11:29am C:\cadd\p\y\g\owkes\west\0139440\001\101-118\_Eastridge\_A\_NV.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



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 DRAWN: M.BAKHIN  
 CADD FILE NAME: 801JL109.dwg

**Santa Clara Valley Transportation Authority**

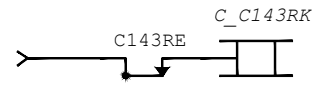
**BKF** 100+ YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

APPROVED: [Signature]  
 CADD FILE DATE: 03/11/19  
 SUBMITTAL DATE: 06/29/20  
 SCALE: NTS  
 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 LRT SIGNAL SYSTEMS  
 EASTRIDGE INTERLOCKING  
 NON-VITAL LOGIC, ELECTROLOGIXS "A" (9 OF 18)

SHEET OF: JL109  
 REVISION: A

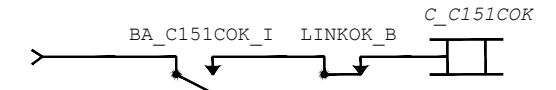
PCA NO.: 000 CONTRACT NO.: C801 FILE LOCATION: PROJECTWISE



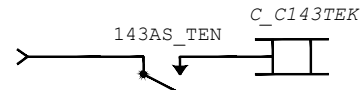
Signal C143 Red Central Office Indication



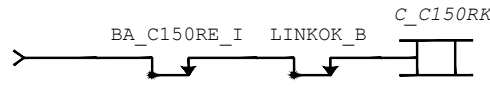
Signal C150 Light-Out Central Office Indication



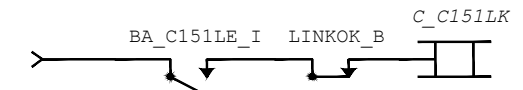
Signal C151 Call-On Central Office Indication



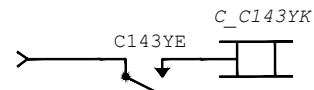
Signal C143 In-Time Central Office Indication



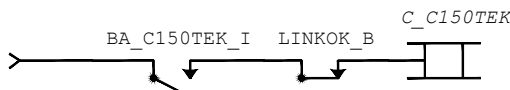
Signal C150 Red Central Office Indication



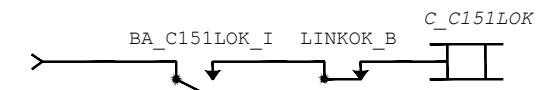
Signal C151 Lunar Central Office Indication



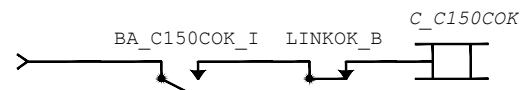
Signal C143 Yellow Central Office Indication



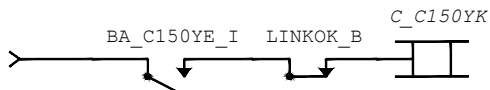
Signal C150 In-Time Central Office Indication



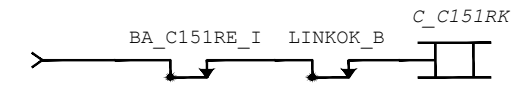
Signal C151 Light-Out Central Office Indication



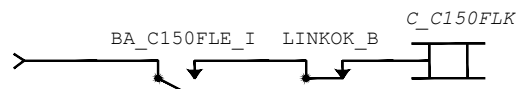
Signal C150 Call-On Central Office Indication



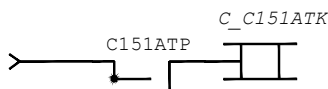
Signal C150 Yellow Central Office Indication



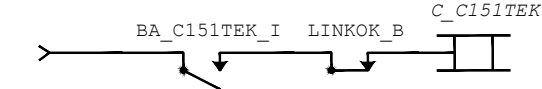
Signal C151 Red Central Office Indication



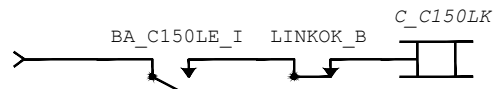
Signal C150 Flashing Lunar Central Office Indication



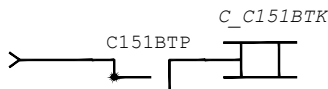
C151AT Track Circuit Central Office Indication



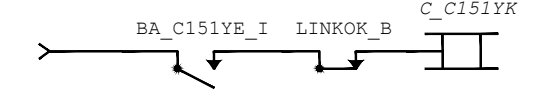
Signal C151 In-Time Central Office Indication



Signal C150 Lunar Central Office Indication



C151BT Track Circuit Central Office Indication



Signal C151 Yellow Central Office Indication

Jun 22, 2020 11:28am C:\cadd\p\work\west\0139440\001\110-118\_Eastridge\_A\_NV.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



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 CADD FILE NAME: 801JL110.dwg



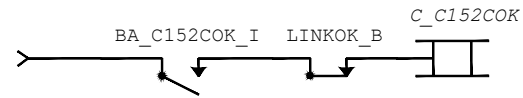
APPROVED: **BKF** 100+ YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/11/19  
 SUBMITTAL DATE: 06/29/20  
 SCALE: NTS  
 BOARD APPROVAL DATE:

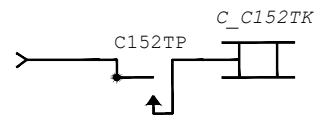
EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 LRT SIGNAL SYSTEMS  
 EASTRIDGE INTERLOCKING  
 NON-VITAL LOGIC, ELECTROLOGIX "A" (10 OF 18)

PCB NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

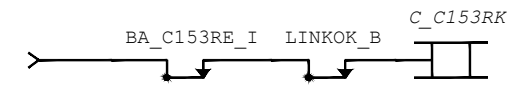
SHEET OF DRAWING NO. JL110 REVISION A



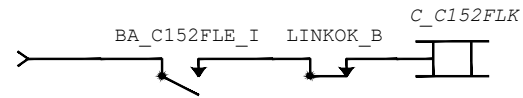
Signal C152 Call-On Central Office Indication



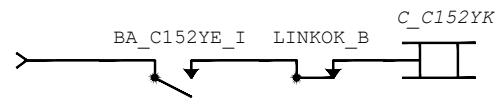
C152T Track Circuit Central Office Indication



Signal C153 Red Central Office Indication



Signal C152 Flashing Lunar Central Office Indication



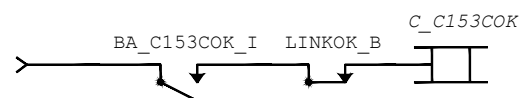
Signal C152 Yellow Central Office Indication



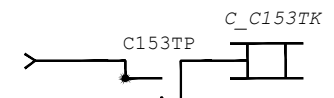
Signal C153 In-Time Central Office Indication



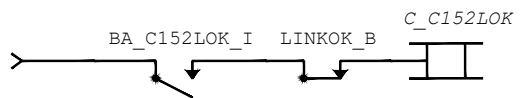
Signal C152 Lunar Central Office Indication



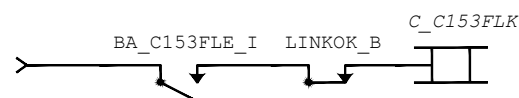
Signal C153 Call-On Central Office Indication



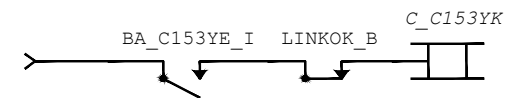
C153T Track Circuit Central Office Indication



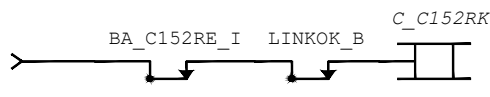
Signal C152 Light-Out Central Office Indication



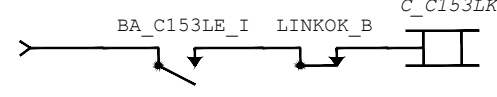
Signal C153 Flashing Lunar Central Office Indication



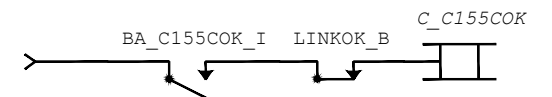
Signal C153 Yellow Central Office Indication



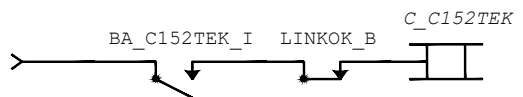
Signal C152 Red Central Office Indication



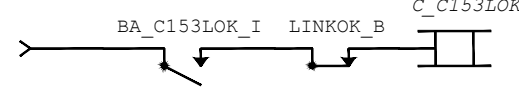
Signal C153 Lunar Central Office Indication



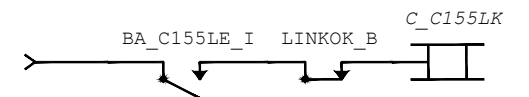
Signal C155 Call-On Central Office Indication



Signal C152 In-Time Central Office Indication



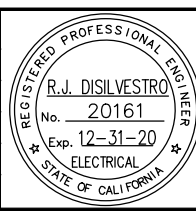
Signal C153 Light-Out Central Office Indication



Signal C155 Lunar Central Office Indication

Jun 22, 2020 - 11:29am C:\cadd\p\work\west\0139440\01.L101-118\_Eastridge\_A\_NV.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



SUBMITTED	
<b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
DESIGNED	CHECKED
M.BAKHIN	V.FAINGOLD
DRAWN	CADD FILE NAME
M.BAKHIN	801JL111.dwg



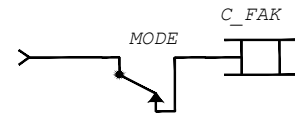
APPROVED	
<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	SCALE
03/11/19	NTS
SUBMITTAL DATE	BOARD APPROVAL DATE
06/29/20	

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS EASTRIDGE INTERLOCKING NON-VITAL LOGIC, ELECTROLOGIX "A" (11 OF 18)			SHEET OF
			DRAWING NO. JL111
			REVISION A
PCA NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE	

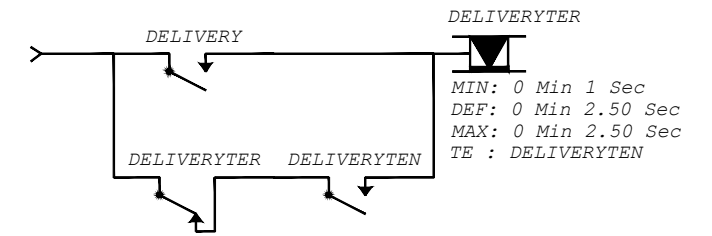




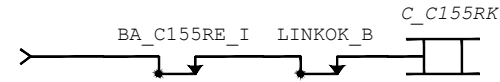
Signal C155 Light-Out Central Office Indication



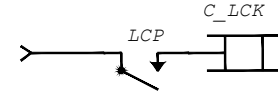
Field Automatic Central Office Indication



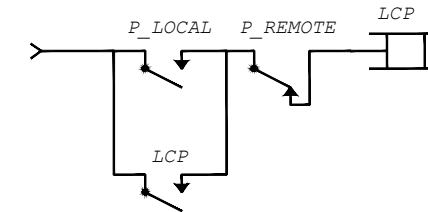
DELIVERY BIT TIMER



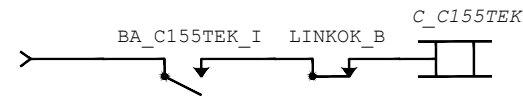
Signal C155 Red Central Office Indication



Local Control Central Office Indication



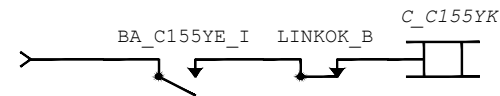
LCP Mode



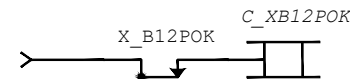
Signal C155 In-Time Central Office Indication



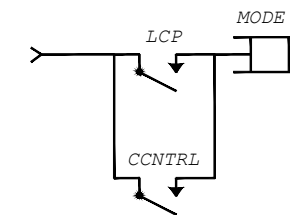
Link Health Status Central Office Indication  
 Note: LINKOK\_B - Link Health Status to "B" Electrologixs  
 LINKOK\_AR - Link Health Status to Alum Rock Electrologixs  
 LINKOK\_STORY - Link Health Status to Story Station Electrologixs



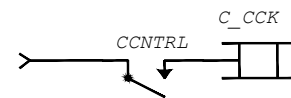
Signal C155 Yellow Central Office Indication



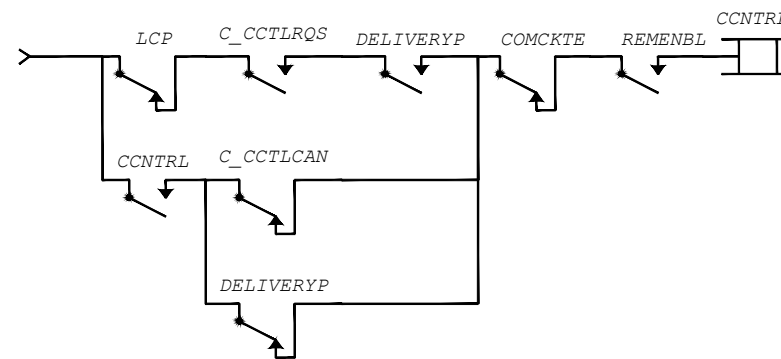
B12 Ped Crossings Low Voltage Central Office Indication



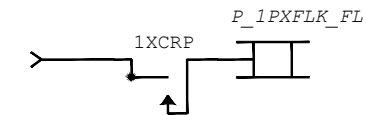
MODE Circuit, LCP Or Central Control



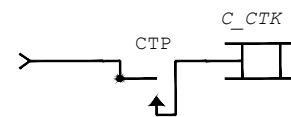
Central Control Central Office Indication



Central Control Mode



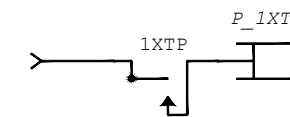
LCP Ped Xing #1, Flashers Indication  
 Note: FLASHING shall be provided by LCP software application, Right and Left Flashers Should Alternate



CT Track Circuit Central Office Indication



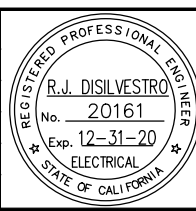
Delivery Bit Repeater



LCP 1XT Track Circuit Indication

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NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
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**HNTB** HNTB Corporation  
 Engineers Architects Planners  
 1732 North First Street, Suite 400 San Jose, CA 95112  
 Tel (408) 451-7300 Fax (408) 451-6942

DESIGNED: M.BAKHIN  
 CHECKED: V.FAINGOLD  
 DRAWN: M.BAKHIN  
 CADD FILE NAME: 801JL112.dwg

**Santa Clara Valley Transportation Authority**

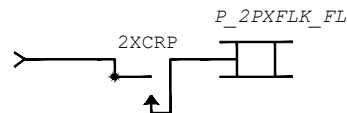
**BKF 100+ YEARS**  
 ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/11/19  
 SUBMITTAL DATE: 06/29/20  
 SCALE: NTS  
 BOARD APPROVAL DATE:

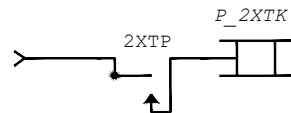
EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 LRT SIGNAL SYSTEMS  
 EASTRIDGE INTERLOCKING  
 NON-VITAL LOGIC, ELECTROLOGIXS "A" (12 OF 18)

SHEET OF: JL112  
 DRAWING NO.: JL112  
 REVISION: A

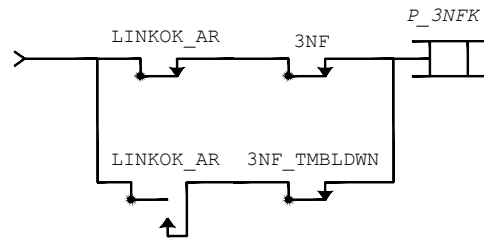
PCA NO.: 000  
 CONTRACT NO.: C801  
 FILE LOCATION: PROJECTWISE



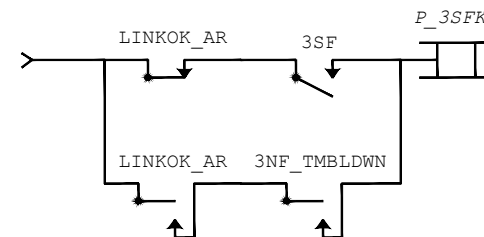
LCP Ped Xing #2, Flashers Indication  
 Note: FLASHING shall be provided by LCP software application, Right and Left Flashers Should Alternate



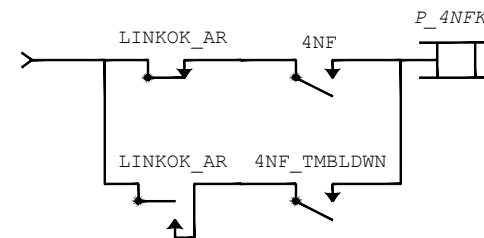
LCP 2XT Track Circuit Indication



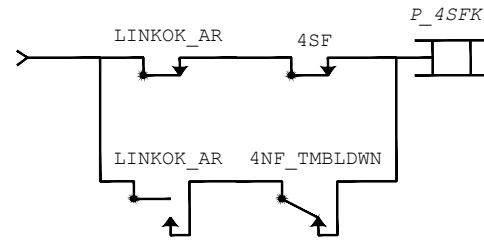
LCP Track 3 Northbound Traffic Indication, Alum Rock to Eastridge



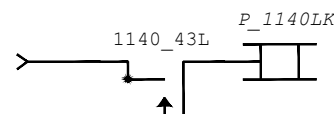
LCP Track 3 Southbound Traffic Indication, Alum Rock to Eastridge



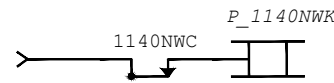
LCP Track 4 Northbound Traffic Indication, Alum Rock to Eastridge



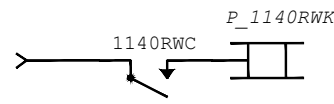
LCP Track 4 Southbound Traffic Indication, Alum Rock to Eastridge



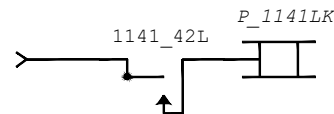
LCP Switch 1141 Lock Indication



LCP Switch 1140 Normal Indication  
 Note: LCP Software Application Shall Provide FLASHING mode if both P\_1140NWK and P\_1140RWK are de-energized



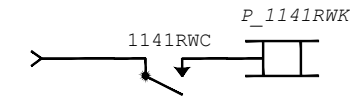
LCP Switch 1140 Reverse Indication  
 Note: LCP Software Application Shall Provide FLASHING mode if both P\_1140NWK and P\_1140RWK are de-energized



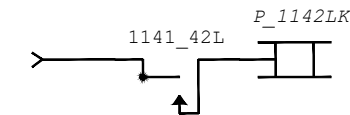
LCP Switch 1141 Lock Indication



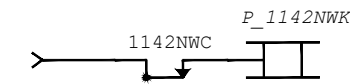
LCP Switch 1141 Normal Indication  
 Note: LCP Software Application Shall Provide FLASHING mode if both P\_1141NWK and P\_1141RWK are de-energized



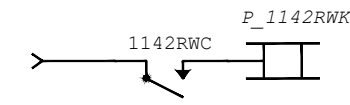
LCP Switch 1141 Reverse Indication  
 Note: LCP Software Application Shall Provide FLASHING mode if both P\_1141NWK and P\_1141RWK are de-energized



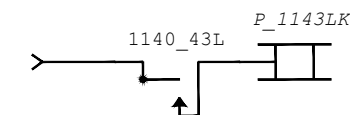
LCP Switch 1142 Lock Indication



LCP Switch 1142 Normal Indication  
 Note: LCP Software Application Shall Provide FLASHING mode if both P\_1142NWK and P\_1142RWK are de-energized



LCP Switch 1142 Reverse Indication  
 Note: LCP Software Application Shall Provide FLASHING mode if both P\_1142NWK and P\_1142RWK are de-energized



LCP Switch 1141 Lock Indication

Jun 22, 2020 - 11:50am C:\cadd\hwy\gfoakes\west\0139440\01.L101-118\_Eastridge\_A\_NV.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



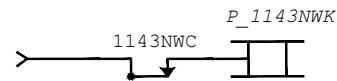
**HNTB** HNTB Corporation  
 1732 North First Street, Suite 400 San Jose, CA 95112  
 Tel (408) 451-7300 Fax (408) 451-6942  
 DESIGNED: M.BAKHIN CHECKED: V.FAINGOLD  
 DRAWN: M.BAKHIN CADD FILE NAME: 801JL113.dwg

**Santa Clara Valley Transportation Authority**

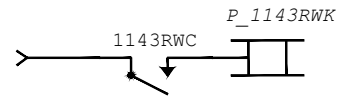
**BKF 100+ YEARS**  
 ENGINEERS / SURVEYORS / PLANNERS  
 CADD FILE DATE: 03/11/19 SCALE: NTS  
 SUBMITTAL DATE: 06/29/20 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 LRT SIGNAL SYSTEMS  
 EASTRIDGE INTERLOCKING  
 NON-VITAL LOGIC, ELECTROLOGIX "A" (13 OF 18)

SHEET OF	
DRAWING NO.	JL113
REVISION	A



LCP Switch 1143 Normal Indication  
 Note: LCP Software Application Shall Provide FLASHING mode if both P\_1143NWK and P\_1143RWK are de-energized



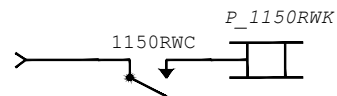
LCP Switch 1143 Reverse Indication  
 Note: LCP Software Application Shall Provide FLASHING mode if both P\_1143NWK and P\_1143RWK are de-energized



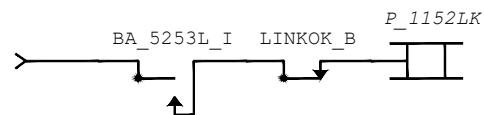
LCP Switch 1141 Lock Indication



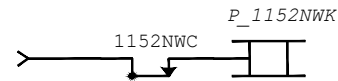
LCP Switch 1150 Normal Indication  
 Note: LCP Software Application Shall Provide FLASHING mode if both P\_1150NWK and P\_1150RWK are de-energized



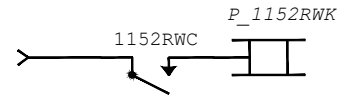
LCP Switch 1150 Reverse Indication  
 Note: LCP Software Application Shall Provide FLASHING mode if both P\_1150NWK and P\_1150RWK are de-energized



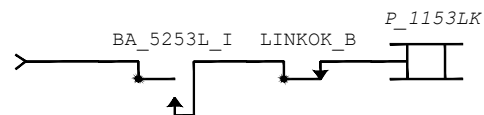
LCP Switch 1141 Lock Indication



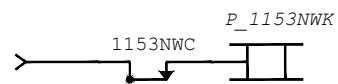
LCP Switch 1152 Normal Indication  
 Note: LCP Software Application Shall Provide FLASHING mode if both P\_1152NWK and P\_1152RWK are de-energized



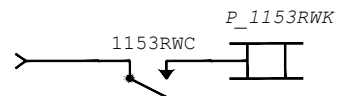
LCP Switch 1152 Reverse Indication  
 Note: LCP Software Application Shall Provide FLASHING mode if both P\_1152NWK and P\_1152RWK are de-energized



LCP Switch 1141 Lock Indication



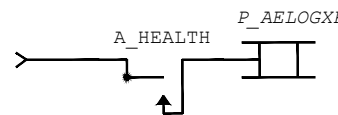
LCP Switch 1153 Normal Indication  
 Note: LCP Software Application Shall Provide FLASHING mode if both P\_1153NWK and P\_1153RWK are de-energized



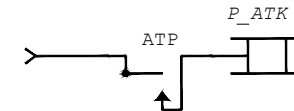
LCP Switch 1153 Reverse Indication  
 Note: LCP Software Application Shall Provide FLASHING mode if both P\_1153NWK and P\_1153RWK are de-energized



AC Low Voltage LCP Indication



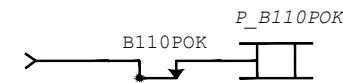
ElectroLogIXS "A" HEALTH LCP Indication



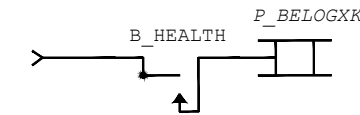
LCP AT Track Circuit Indication



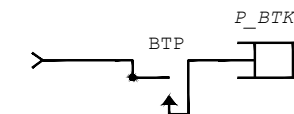
B12 Low Voltage LCP Indication



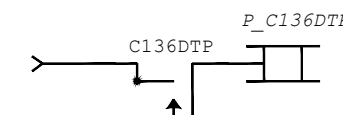
B110 Low Voltage LCP Indication



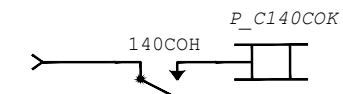
ElectroLogIXS "B" HEALTH LCP Indication



LCP BT Track Circuit Indication



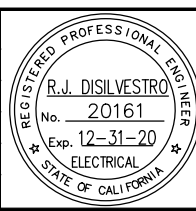
LCP C136DT Track Circuit Indication



LCP Signal C140 Call-On Indication

Jun 22, 2020 - 11:30am C:\cadd\hwy\gfoakes\west\0139440\01\1101-118\_Eastridge\_A\_NV.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



SUBMITTED

**HNTB** HNTB Corporation  
 Engineers Architects Planners  
 1732 North First Street, Suite 400 San Jose, CA 95112  
 Tel (408) 451-7300 Fax (408) 451-6942

DESIGNED: M.BAKHIN  
 CHECKED: V.FAINGOLD  
 DRAWN: M.BAKHIN  
 CADD FILE NAME: 801JL114.dwg

**Santa Clara Valley Transportation Authority**

APPROVED

**BKF** 100+ YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/11/19  
 SUBMITTAL DATE: 06/29/20  
 SCALE: NTS  
 BOARD APPROVAL DATE:

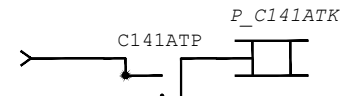
EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 LRT SIGNAL SYSTEMS  
 EASTRIDGE INTERLOCKING  
 NON-VITAL LOGIC, ELECTROLOGIXS "A" (14 OF 18)

PCB NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

SHEET OF  
 DRAWING NO. JL114  
 REVISION A



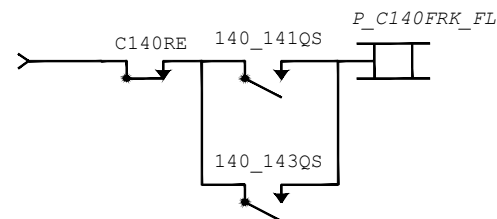
LCP Signal C140 Flashing Lunar Indication



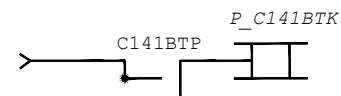
LCP C141AT Track Circuit Indication



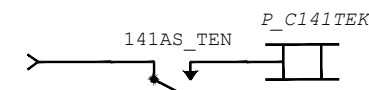
LCP Signal C141 Red Indication



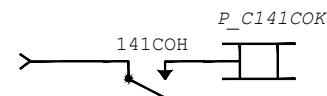
LCP Signal C140 Flashing Red Indication  
Note: FLASHING shall be provided by LCP software application



LCP C141BT Track Circuit Indication



LCP Signal C141 In-Time Indication



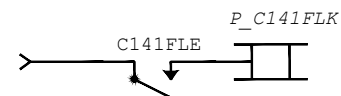
LCP Signal C141 Call-On Indication



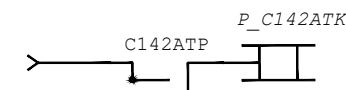
LCP Signal C141 Yellow Indication



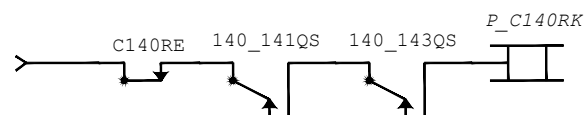
LCP Signal C140 Lunar Indication



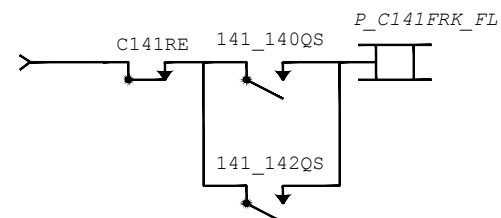
LCP Signal C141 Flashing Lunar Indication



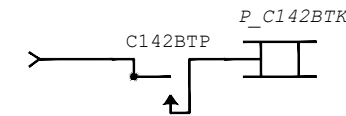
LCP C142AT Track Circuit Indication



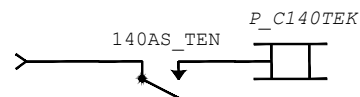
LCP Signal C140 Red Indication



LCP Signal C141 Flashing Red Indication  
Note: FLASHING shall be provided by LCP software application



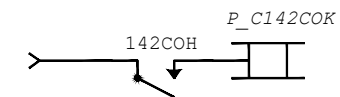
LCP C142B Track Circuit Indication



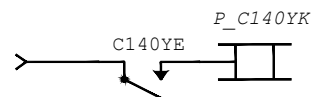
LCP Signal C140 In-Time Indication



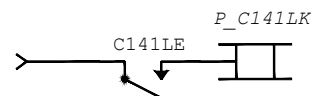
LCP Signal C141 Green Indication



LCP Signal C142 Call-On Indication



LCP Signal C140 Yellow Indication



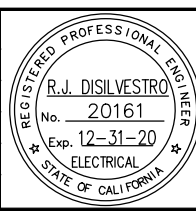
LCP Signal C141 Lunar Indication



LCP Signal C142 Flashing Lunar Indication

Jun 22, 2020 11:50am C:\cadd\p\work\west\0139440\01.L101-118\_Eastridge\_A\_NV.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET

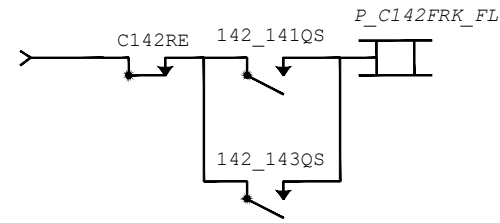


**HNTB** HNTB Corporation  
 1732 North First Street, Suite 400 San Jose, CA 95112  
 Tel (408) 451-7300 Fax (408) 451-6942  
 DESIGNED: M.BAKHIN CHECKED: V.FAINGOLD  
 DRAWN: M.BAKHIN CADD FILE NAME: 801JL115.dwg

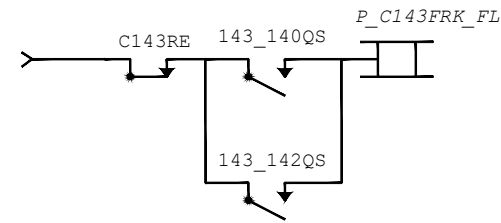
**Santa Clara Valley Transportation Authority**

**BKF 100+ YEARS**  
 ENGINEERS / SURVEYORS / PLANNERS  
 APPROVED: [Signature]  
 CADD FILE DATE: 03/11/19 SCALE: NTS  
 SUBMITTAL DATE: 06/29/20 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 LRT SIGNAL SYSTEMS  
 EASTRIDGE INTERLOCKING  
 NON-VITAL LOGIC, ELECTROLOGIX "A" (15 OF 18)  
 SHEET OF JL115  
 REVISION A  
 PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE



LCP Signal C142 Flashing Red Indication  
Note: FLASHING shall be provided by LCP software application



LCP Signal C143 Flashing Red Indication  
Note: FLASHING shall be provided by LCP software application



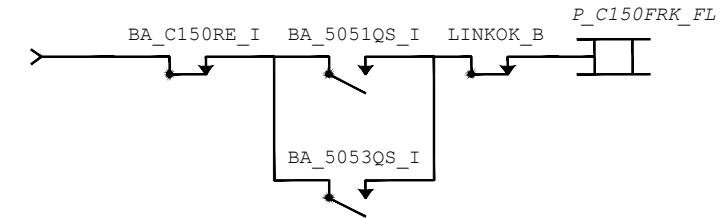
LCP Signal C150 Flashing Lunar Indication



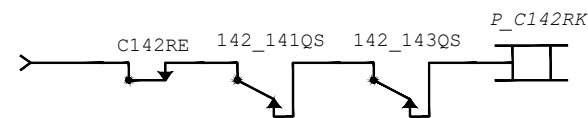
LCP Signal C142 Lunar Indication



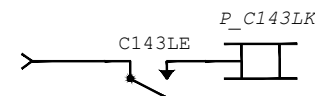
LCP Signal C143 Green Indication



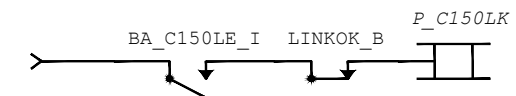
LCP Signal C150 Flashing Red Indication  
Note: FLASHING shall be provided by LCP software application



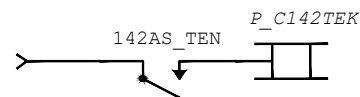
LCP Signal C142 Red Indication



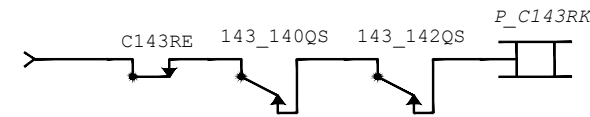
LCP Signal C143 Lunar Indication



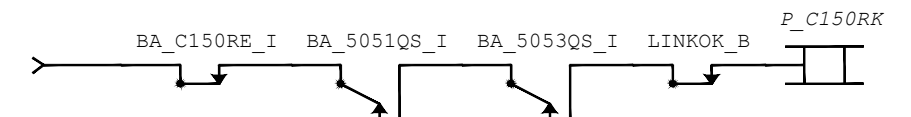
LCP Signal C150 Lunar Indication



LCP Signal C142 In-Time Indication



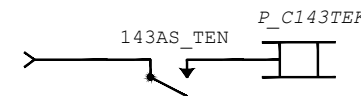
LCP Signal C143 Red Indication



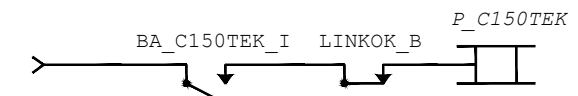
LCP Signal C150 Red Indication



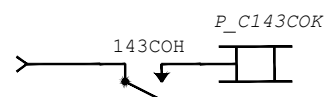
LCP Signal C142 Yellow Indication



LCP Signal C143 In-Time Indication



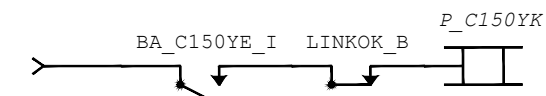
LCP Signal C150 In-Time Indication



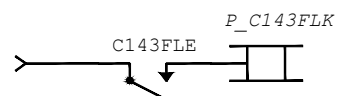
LCP Signal C143 Call-On Indication



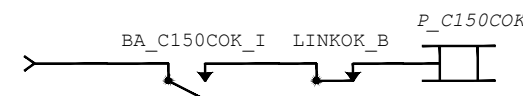
LCP Signal C143 Yellow Indication



LCP Signal C150 Yellow Indication



LCP Signal C143 Flashing Lunar Indication



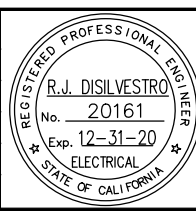
LCP Signal C150 Call-On Indication



LCP C151AT Track Circuit Indication

Jun 22, 2020 - 11:30am G:\cadd\p\y\g\owkes\west\0139440\01.L10-118\_Eastridge\_A\_NV.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



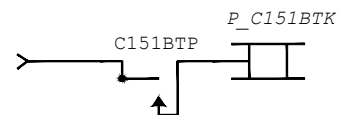
SUBMITTED	
<b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
DESIGNED	CHECKED
M.BAKHIN	V.FAINGOLD
DRAWN	CADD FILE NAME
M.BAKHIN	801JL116.dwg



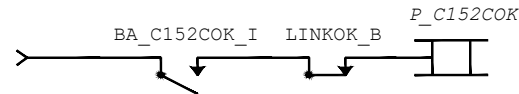
APPROVED	
<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	SCALE
03/11/19	NTS
SUBMITTAL DATE	BOARD APPROVAL DATE
06/29/20	

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS EASTRIDGE INTERLOCKING NON-VITAL LOGIC, ELECTROLOGIX "A" (16 OF 18)		
PCA NO.	CONTRACT NO.	FILE LOCATION
000	C801	PROJECTWISE

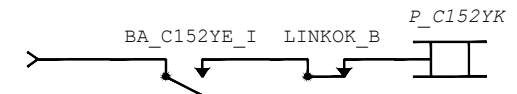
SHEET OF
DRAWING NO.
JL116
REVISION
A



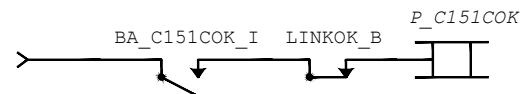
LCP C151BT Track Circuit Indication



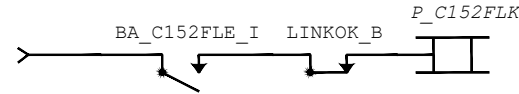
LCP Signal C152 Call-On Indication



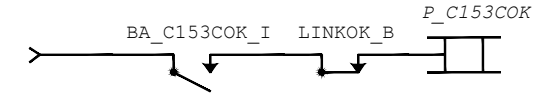
LCP Signal C152 Yellow Indication



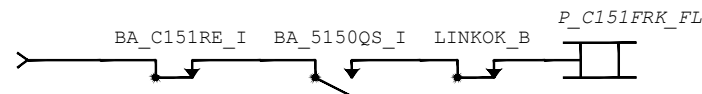
LCP Signal C151 Call-On Indication



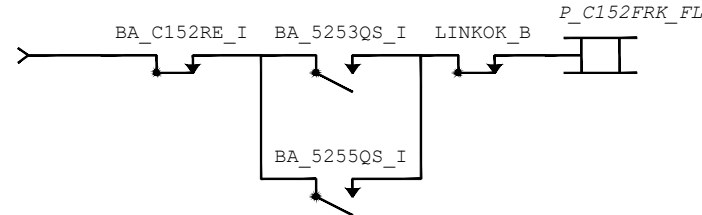
LCP Signal C152 Flashing Lunar Indication



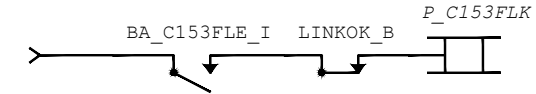
LCP Signal C153 Call-On Indication



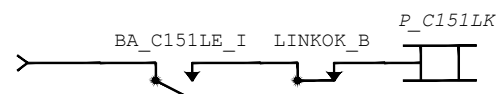
LCP Signal C151 Flashing Red Indication  
Note: FLASHING shall be provided by LCP software application



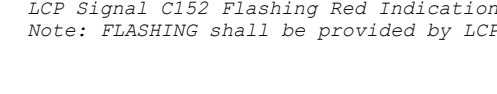
LCP Signal C152 Flashing Red Indication  
Note: FLASHING shall be provided by LCP software application



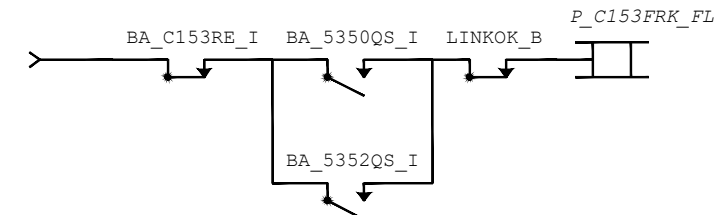
LCP Signal C153 Flashing Lunar Indication



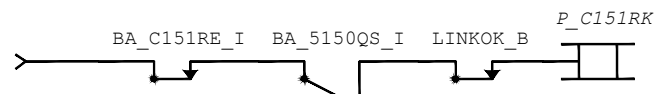
LCP Signal C151 Lunar Indication



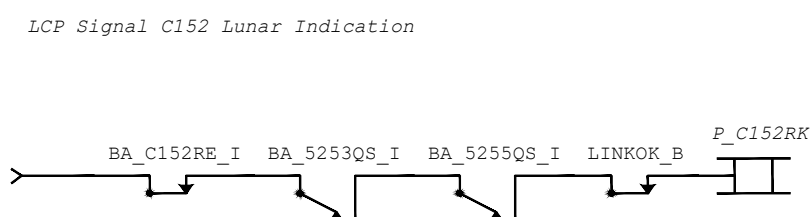
LCP Signal C152 Lunar Indication



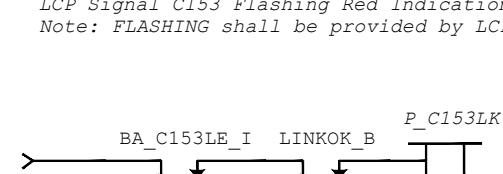
LCP Signal C153 Flashing Red Indication  
Note: FLASHING shall be provided by LCP software application



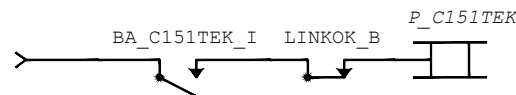
LCP Signal C151 Red Indication



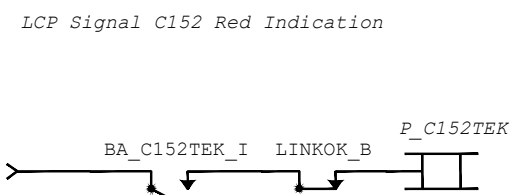
LCP Signal C152 Red Indication



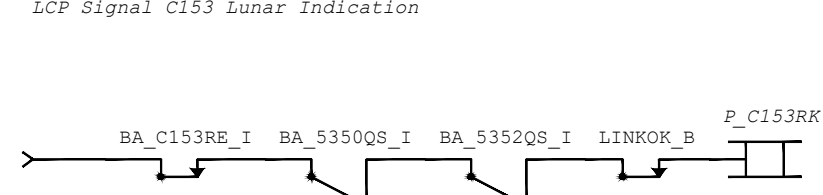
LCP Signal C153 Lunar Indication



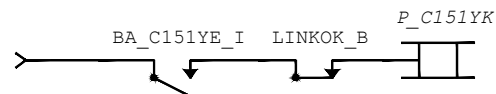
LCP Signal C151 In-Time Indication



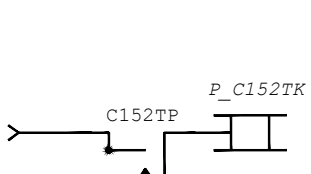
LCP Signal C152 In-Time Indication



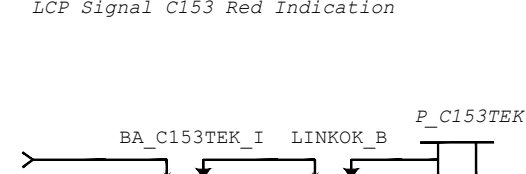
LCP Signal C153 Red Indication



LCP Signal C151 Yellow Indication



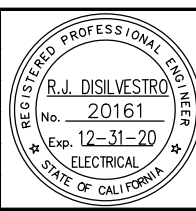
LCP C152T Track Circuit Indication



LCP Signal C153 In-Time Indication

Jun 22, 2020 - 11:20am C:\cadd\hwy\gfoakes\west\0139440\01\1101-118\_Eastridge\_A\_NV.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



**HNTB** HNTB Corporation  
Engineers Architects Planners  
1732 North First Street, Suite 400 San Jose, CA 95112  
Tel (408) 451-7300 Fax (408) 451-6942

DESIGNED: M.BAKHIN  
CHECKED: V.FAINGOLD  
DRAWN: M.BAKHIN  
CADD FILE NAME: 801JL117.dwg

**Santa Clara Valley Transportation Authority**

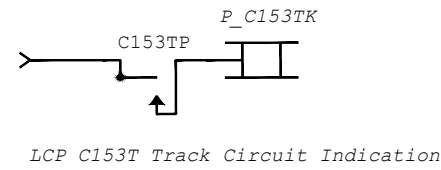
**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

APPROVED: [Signature]  
CADD FILE DATE: 03/11/19  
SUBMITTAL DATE: 06/29/20  
SCALE: NTS  
BOARD APPROVAL DATE:

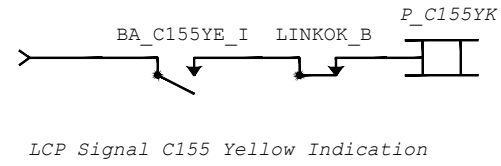
EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
EASTRIDGE INTERLOCKING  
NON-VITAL LOGIC, ELECTROLOGIX "A" (17 OF 18)

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

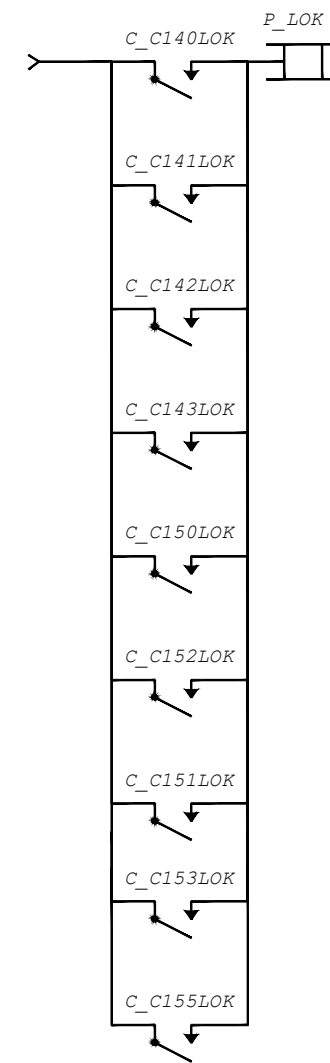
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DRAWING NO. JL117  
REVISION A



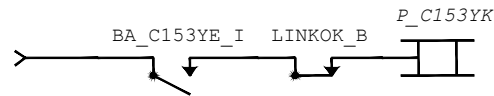
LCP C153T Track Circuit Indication



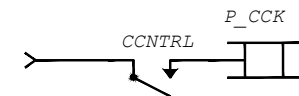
LCP Signal C155 Yellow Indication



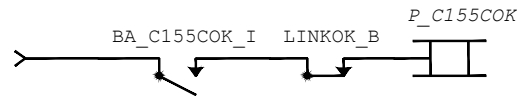
LCP Light Out Alarm Indication



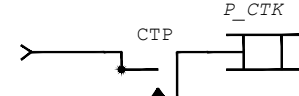
LCP Signal C153 Yellow Indication



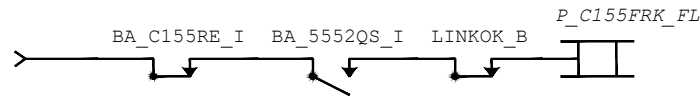
Central Office Control LCP Indication



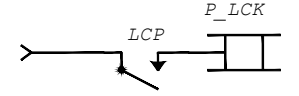
LCP Signal C155 Call-On Indication



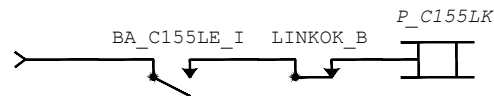
LCP CT Track Circuit Indication



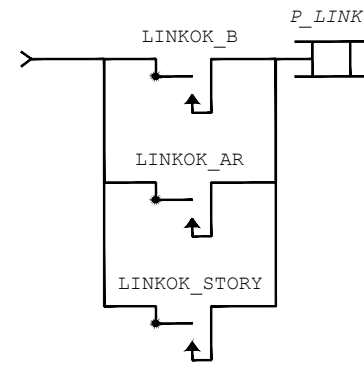
LCP Signal C155 Flashing Red Indication  
Note: FLASHING shall be provided by LCP software application



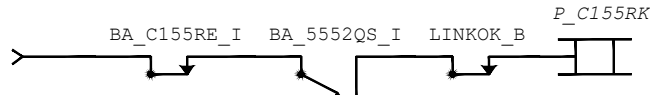
Local Control LCP Indication



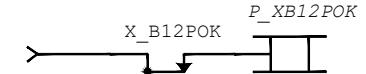
LCP Signal C155 Lunar Indication



LCP Indication Link Health Status to Alum Rock Electrologix



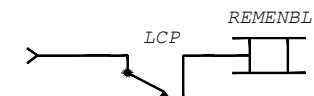
LCP Signal C155 Red Indication



B12 Ped Crossings Low Voltage LCP Indication



LCP Signal C155 In-Time Indication



Remote Control Mode Enable by LCP

Jun 22, 2020 11:50am C:\cadd\p\work\west\0139440\01.L101-118\_Eastridge\_A\_NV.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



SUBMITTED	
<b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
DESIGNED	CHECKED
M.BAKHIN	V.FAINGOLD
DRAWN	CADD FILE NAME
M.BAKHIN	801JL118.dwg



APPROVED	
<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	SCALE
03/11/19	NTS
SUBMITTAL DATE	BOARD APPROVAL DATE
06/29/20	

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS EASTRIDGE INTERLOCKING NON-VITAL LOGIC, ELECTROLOGIX "A" (18 OF 18)		
PCA NO.	CONTRACT NO.	FILE LOCATION
000	C801	PROJECTWISE

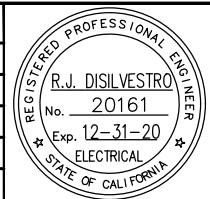
SHEET	OF
DRAWING NO.	JL118
REVISION	A

EASTRIDGE INTERLOCKING  
ELECTROLOGIXS "A"  
VITAL LOGIC  
EQUATION INDEX

Equation	Sheet	Equation	Sheet	Equation	Sheet	Equation	Sheet
1XCR	2	140AS	6	142BSFS	11	1143RWC	17
1XT_TE	2	140AS_TE	6	142BSS	11	1150NWC	17
1XTP	2	140BH	6	142COH	12	1150RWC	17
2XTP	2	140COH	6	142H	12	1152_53NWC	17
3NF	2	140H	6	142H_XTE	12	1152_53RWC	17
3NF_TMBLDWN	2	140H_XTE	6	142HYR	12	1152NWC	17
3NFS	2	140HYR	6	142STOP	12	1152RWC	17
3NMRTE	2	140STOP	6	143_140COQS	12	1153NWC	17
3NT_FZ	2	141_140COQS	6	143_140QS	12	1153RWC	17
3NT_HP	2	141_140QS	7	143_140QSH	12	A_HEALTH	17
3NT01	2	141_140QSH	7	143_140RC	13	AB_140AS_O	17
3NT02	2	141_140RC	7	143_142COQS	13	AB_142AS_O	17
3NT03	2	141_142COQS	7	143_142QS	13	AB_142BSS_O	17
3NT06	2	141_142QS	7	143_142QSH	13	AB_150CANR_O	17
3NT06TE	2	141_142QSH	7	143_142RC	13	AB_150COQS_O	17
3NT07	2	141_142RC	7	143AH	13	AB_151BSS_O	17
3NTP	2	141AH	8	143AP	13	AB_151CANR_O	17
3NXT_TE	3	141ANS	8	143AS	14	AB_151COQS_O	17
3NXTP	3	141ANS1	8	143AS_TE	14	AB_152CANR_O	17
3SF	3	141AP	8	143BH	14	AB_152COQS_O	18
4NF	3	141AS	8	143COH	14	AB_153CANR_O	18
4NF_TMBLDWN	3	141AS_TE	8	143H	14	AB_153COQS_O	18
4NFS	3	141ASS	8	143H_TE	15	AB_155CANR_O	18
4NMRTE	3	141ASS1	8	143H_XTE	15	AB_155COQS_O	18
4NT_FZ	3	141BH	8	143HYR	15	AB_1150NWZ_O	18
4NT_HP	3	141COH	9	143STOP	15	AB_1150RWZ_O	18
4NT01	3	141H	9	151BSFS	15	AB_4043NWC_O	18
4NT02	3	141H_TE	9	151BSS	15	AB_4043RWC_O	18
4NT03	3	141HYR	9	1140_43L	15	AB_4142NWC_O	18
4NT06	3	141STOP	9	1140_43NWC	15	AB_4142RWC_O	18
4NT06TE	3	142_141_AVL	9	1140_43NWR	15	AB_5051RQS_O	18
4NT07	3	142_141COQS	9	1140_43NWS	15	AB_5053RQS_O	18
4NTP	3	142_141QS	9	1140_43RWC	15	AB_5150RQS_O	18
4NXT_TE	3	142_141QSH	10	1140_43RWR	15	AB_5253NWZ_O	18
4NXTP	3	142_141RC	10	1140_43RWS	16	AB_5253RQS_O	18
4SF	4	142_143_AVL	10	1140_43VWCR	16	AB_5253RWZ_O	18
140_141_AVL	4	142_143COQS	10	1140NWC	16	AB_5255RQS_O	18
140_141COQS	4	142_143QS	10	1140RWC	16	AB_5350RQS_O	18
140_141QS	4	142_143QSH	10	1141_42L	16	AB_5352RQS_O	18
140_141QSH	4	142_143RC	10	1141_42NWC	16	AB_5552RQS_O	18
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140_143_AVL	4	142AH	11	1141_42NWS	16	AB_C141ATP_O	18
140_143COQS	5	142ANS	11	1141_42RWC	16	AB_C141BTP_O	18
140_143QS	5	142ANS1	11	1141_42RWR	16	AB_C142ATP_O	19
140_143QSH	5	142AP	11	1141_42RWS	16	AB_C142BTP_O	19
140_143RC	5	142AS	11	1141_42VWCR	16	AB_C151BTP_O	19
140_AVL_QS	5	142AS_TE	11	1141NWC	17	AB_LINKOK_O	19
140AH	5	142ASS	11	1141RWC	17	AB_MODE_O	19
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		142BH	11	1142RWC	17	ATP	19
				1143NWC	17		
						B12POK1039	19
						B_HEALTH	19
						BTP	19
						C136DT	19
						C136DT_TE	19
						C136DTP	19
						C140_142STOP	19
						C140FLE	19
						C140LE	19
						C140RE	19
						C140YE	19
						C141_143STOP	20
						C141AT_TE	20
						C141ATP	20
						C141BT	20
						C141BT_TE	20
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						COMCKTE	22
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						LINKOK_AR	23
						LINKOK_AR_TE	23
						LINKOK_B	23
						LINKOK_STORY	23
						SYS	23
						SYS_TE	23
						REMOTE I/O CHART	23

Jun 22, 2020 - 11:50am C:\cadd\p\y\g\owkes\west\0139440\01LL119-142\_Eastridge\_A\_V.dwg

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



SUBMITTED

**HNTB** HNTB Corporation  
Engineers Architects Planners  
1732 North First Street, Suite 400 San Jose, CA 95112  
Tel (408) 451-7300 Fax (408) 451-6942

DESIGNED: M.BAKHIN  
CHECKED: V.FAINGOLD  
DRAWN: M.BAKHIN  
CADD FILE NAME: 801JL119.dwg



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**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

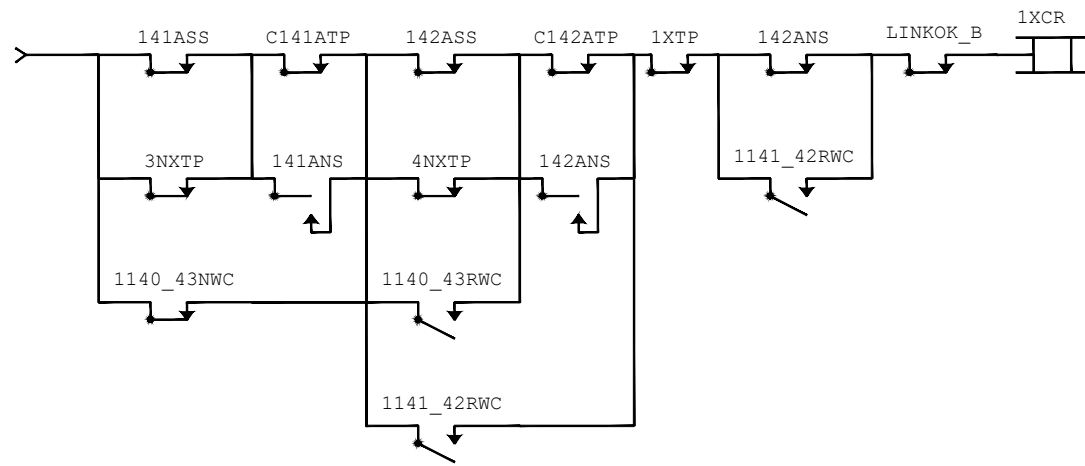
CADD FILE DATE: 03/11/19  
SCALE: NTS  
SUBMITTAL DATE: 06/29/20  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
EASTRIDGE INTERLOCKING  
VITAL LOGIC, ELECTROLOGIXS "A" (1 OF 24)

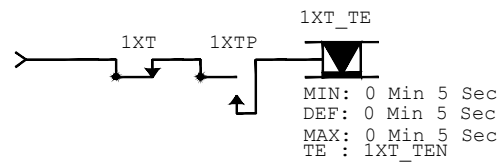
PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

SHEET OF  
DRAWING NO. JL119  
REVISION B

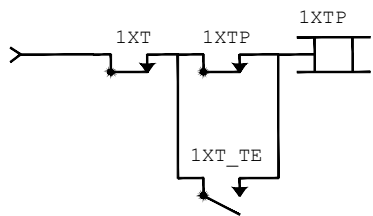




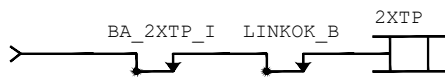
Ped Xing #1 Activation Circuits



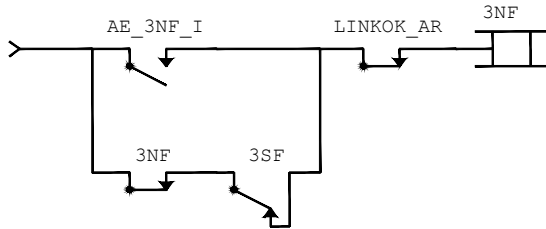
1XT Loss of shunt timer



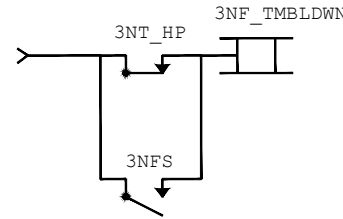
1XT Track repeater with loss of shunt time



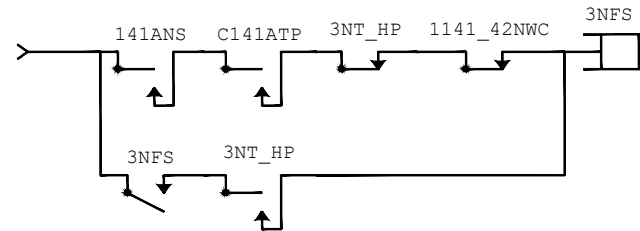
2XT Track repeater with loss of shunt time, Repeater From Vital Processor "B"



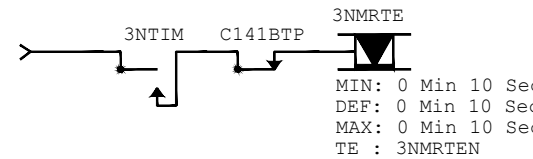
Track 3 Northbound Traffic Between Alum Rock and Eastridge



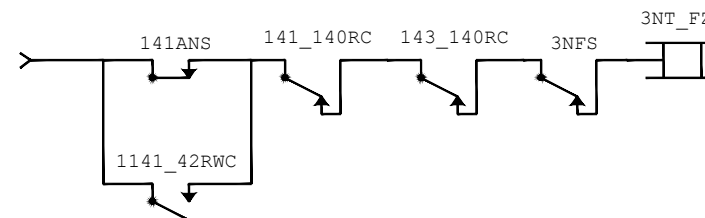
Track 3 Northbound - Tumble Down Indication  
Tumble Down - Backup Traffic Operation,  
Activates When Link Between Alum Rock and Eastridge is Failed



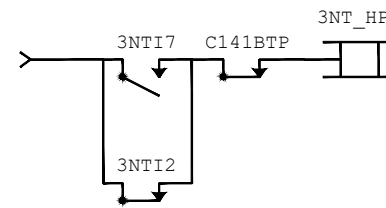
Track 3 Northbound Following Stick Circuit



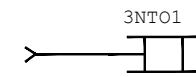
3NT Maintenance Loss of Code Timer



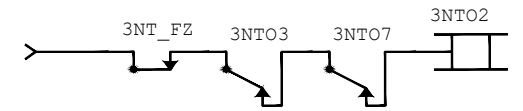
3NT Traffic Request (Tumble Down)



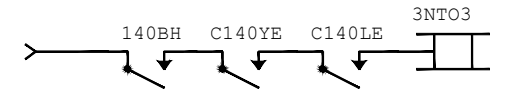
3NT H Repeater (Vital Signal Clearing Codes)



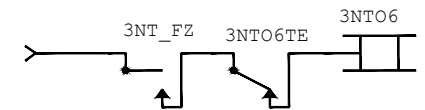
3NT Code 1 Out



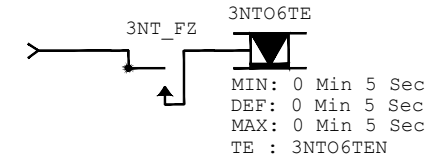
3NT Code 2 Out



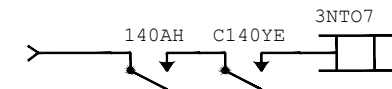
3NT Code 3 Out



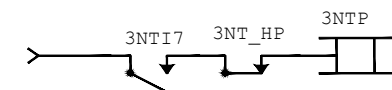
3NT Code 6 Out



3NT Code 6 Timer



3NT Code 7 Out



3NTP - 3NT Code I7 Repeater,  
All Tracks Clear b/w Alum Rock and Eastridge

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NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET

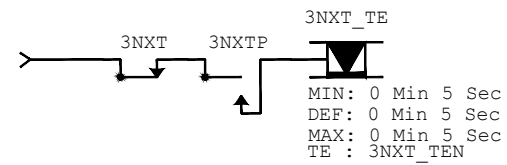


<b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
DESIGNED	CHECKED
M.BAKHIN	V.FAINGOLD
DRAWN	CADD FILE NAME
M.BAKHIN	801JL120.dwg

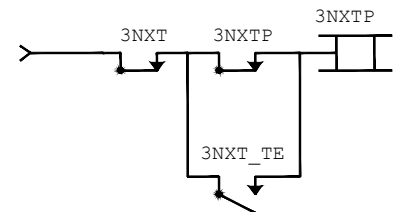


APPROVED <b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	SCALE
03/11/19	NTS
SUBMITTAL DATE	BOARD APPROVAL DATE
06/29/20	

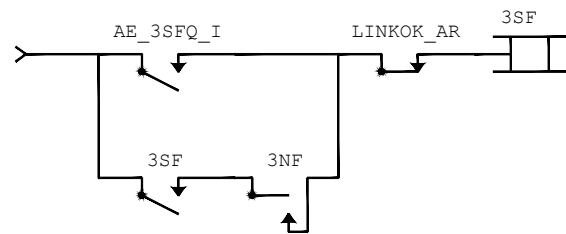
EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS EASTRIDGE INTERLOCKING VITAL LOGIC, ELECTROLOGIXS "A" (2 OF 24)			SHEET OF DRAWING NO. JL120 REVISION A
PCA NO.	CONTRACT NO.	FILE LOCATION	
000	C801	PROJECTWISE	



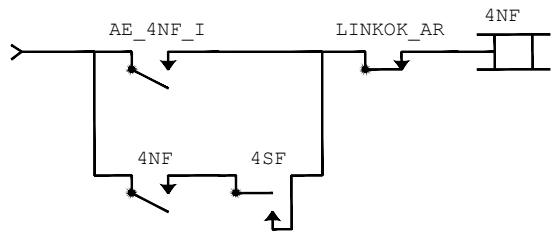
3NXT Loss of shunt timer



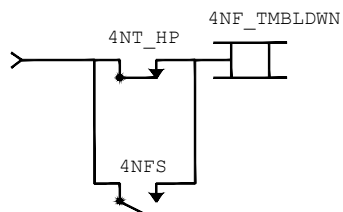
3NXT Track repeater with loss of shunt time



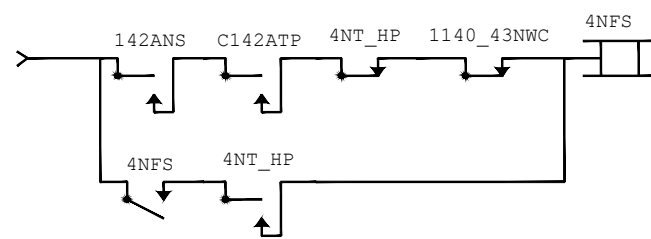
Track 3 Southbound Traffic Between Alum Rock and Eastridge



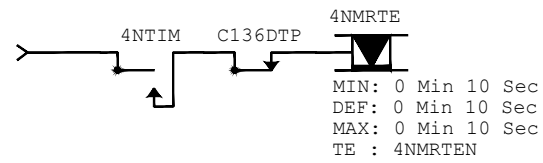
Track 4 Northbound Traffic Between Alum Rock and Eastridge



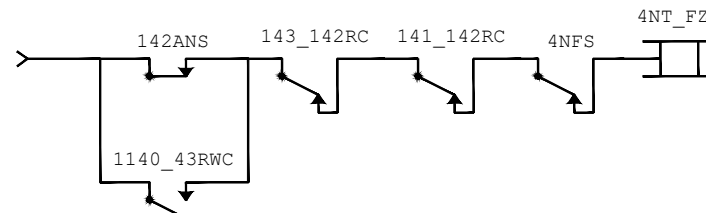
Track 4 Northbound - Tumble Down Indication  
Tumble Down - Backup Traffic Operation,  
Activates When Link Between Alum Rock and Eastridge is Failed



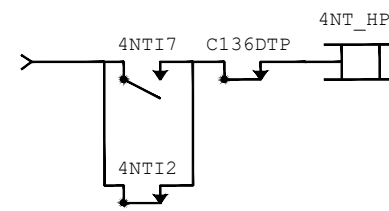
Track 4 Northbound Following Stick Circuit



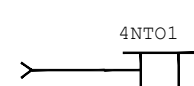
4NT Maintenance Loss of Code Timer



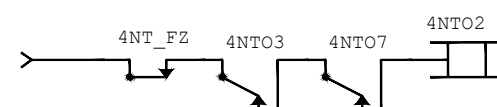
4NT Traffic Request (Tumble Down)



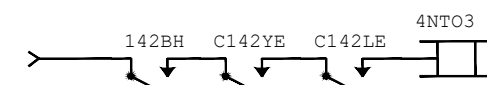
4NT H Repeater (Vital Signal Clearing Codes)



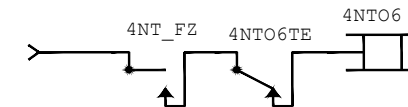
4NT Code 1 Out



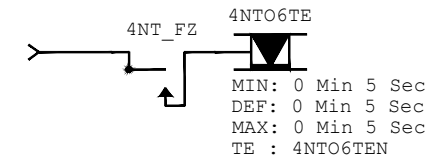
4NT Code 2 Out



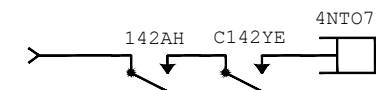
4NT Code 3 Out



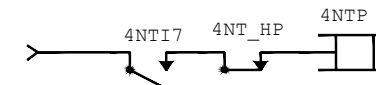
4NT Code 6 Out



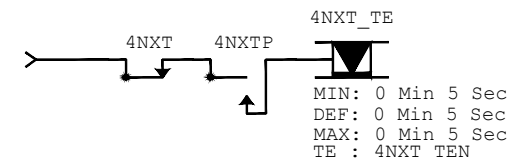
4NT Code 6 Timer



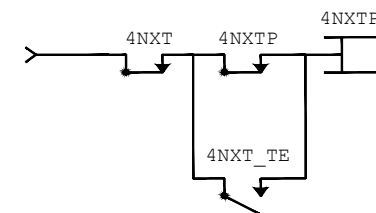
4NT Code 7 Out



4NTP - 4NT Code I7 Repeater,  
All Tracks Clear b/w Alum Rock and Eastridge



4NXT Loss of shunt timer



4NXT Track repeater with loss of shunt time

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NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



SUBMITTED

**HNTB** HNTB Corporation  
Engineers Architects Planners  
1732 North First Street, Suite 400 San Jose, CA 95112  
Tel (408) 451-7300 Fax (408) 451-6942

DESIGNED: M.BAKHIN  
CHECKED: V.FAINGOLD  
DRAWN: M.BAKHIN  
CADD FILE NAME: 801JL121.dwg

Santa Clara Valley  
**Transportation Authority**

APPROVED

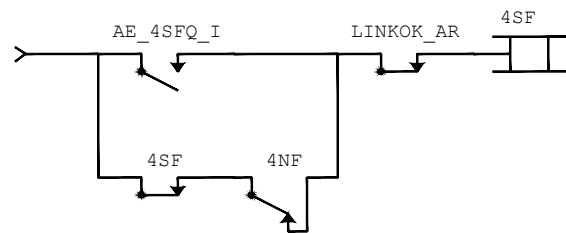
**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/11/19  
SUBMITTAL DATE: 06/29/20  
SCALE: NTS  
BOARD APPROVAL DATE:

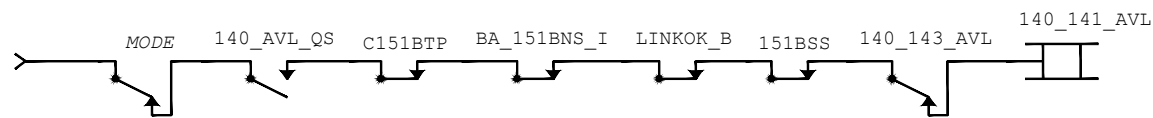
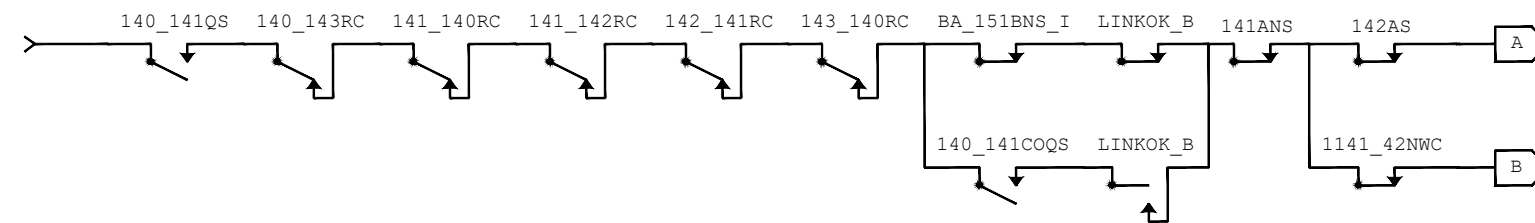
EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
EASTRIDGE INTERLOCKING  
VITAL LOGIC, ELECTROLOGIXS "A" (3 OF 24)

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

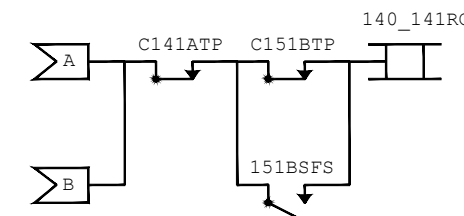
SHEET OF  
DRAWING NO. JL121  
REVISION B



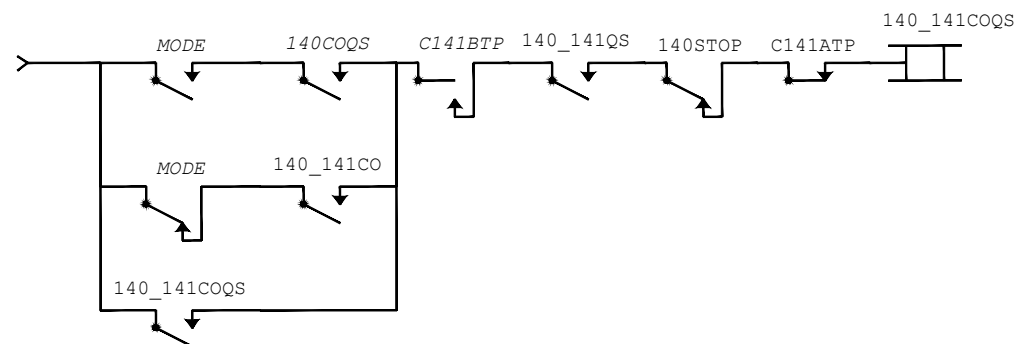
Track 4 Southbound Traffic Between Alum Rock and Eastridge



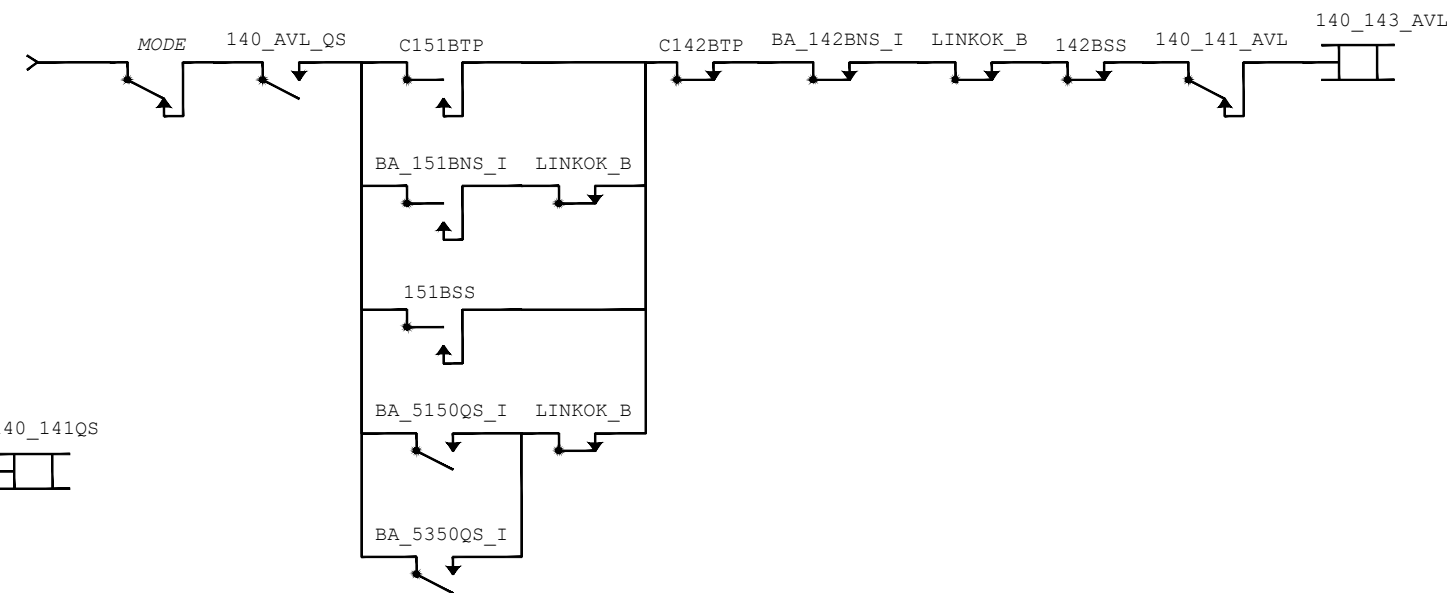
Signal C140 - Signal C141 Preferred Available Request



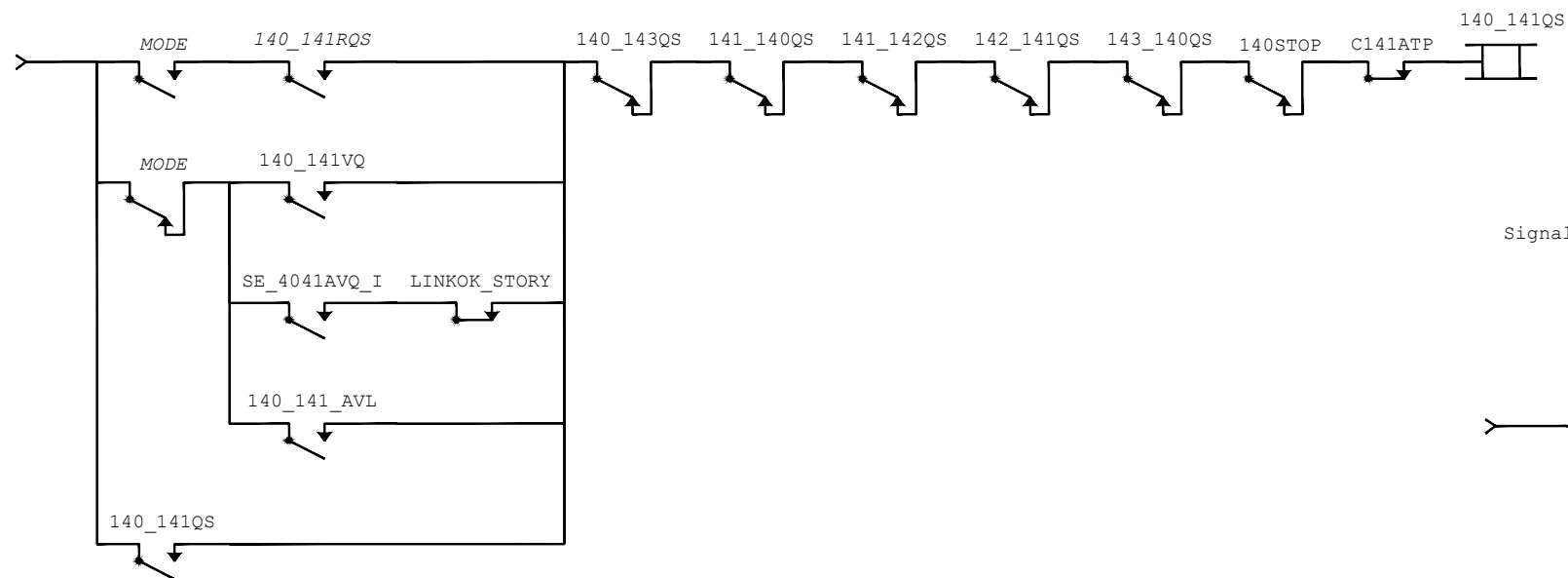
Signal C140 To Signal C141 Route Check



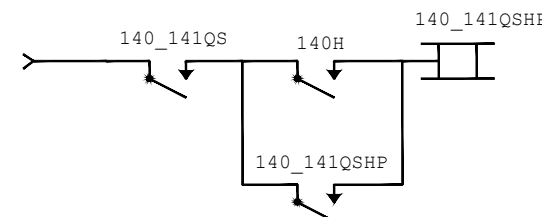
Signal C140 To Signal C141 Call-On Route Request



Signal C140 - Signal C143 Preferred Available Request



Signal C140 To Signal C141 Route Request



Signal C140 - C141 Request/H Stick Circuit. Prevents AS From Picking If Request Is Entered

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NO.	DATE	REVISIONS
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A	06/18	35% SUBMITTAL SET



SUBMITTED

**HNTB** HNTB Corporation  
Engineers Architects Planners  
1732 North First Street, Suite 400 San Jose, CA 95112  
Tel (408) 451-7300 Fax (408) 451-6942

DESIGNED: M.BAKHIN CHECKED: V.FAINGOLD  
DRAWN: M.BAKHIN CADD FILE NAME: 801JL122.dwg

**Santa Clara Valley Transportation Authority**

APPROVED

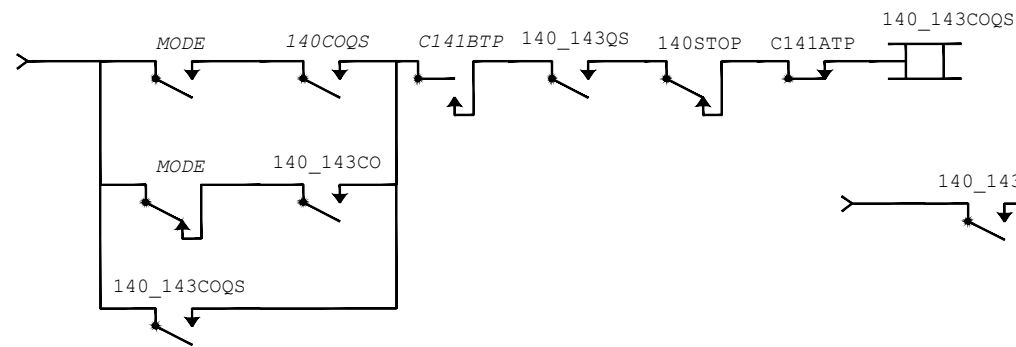
**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/11/19 SCALE: NTS  
SUBMITTAL DATE: 06/29/20 BOARD APPROVAL DATE:

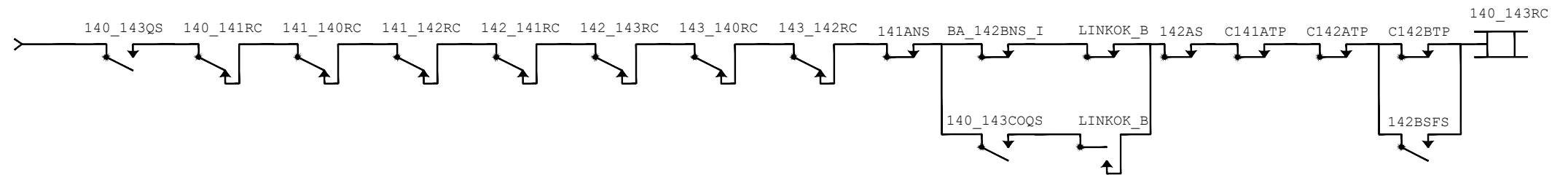
EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
EASTRIDGE INTERLOCKING  
VITAL LOGIC, ELECTROLOGIXS "A" (4 OF 24)

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

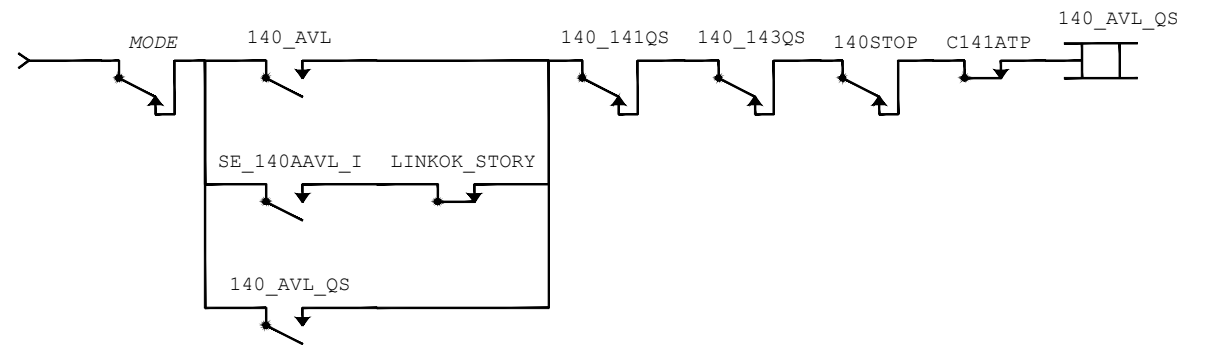
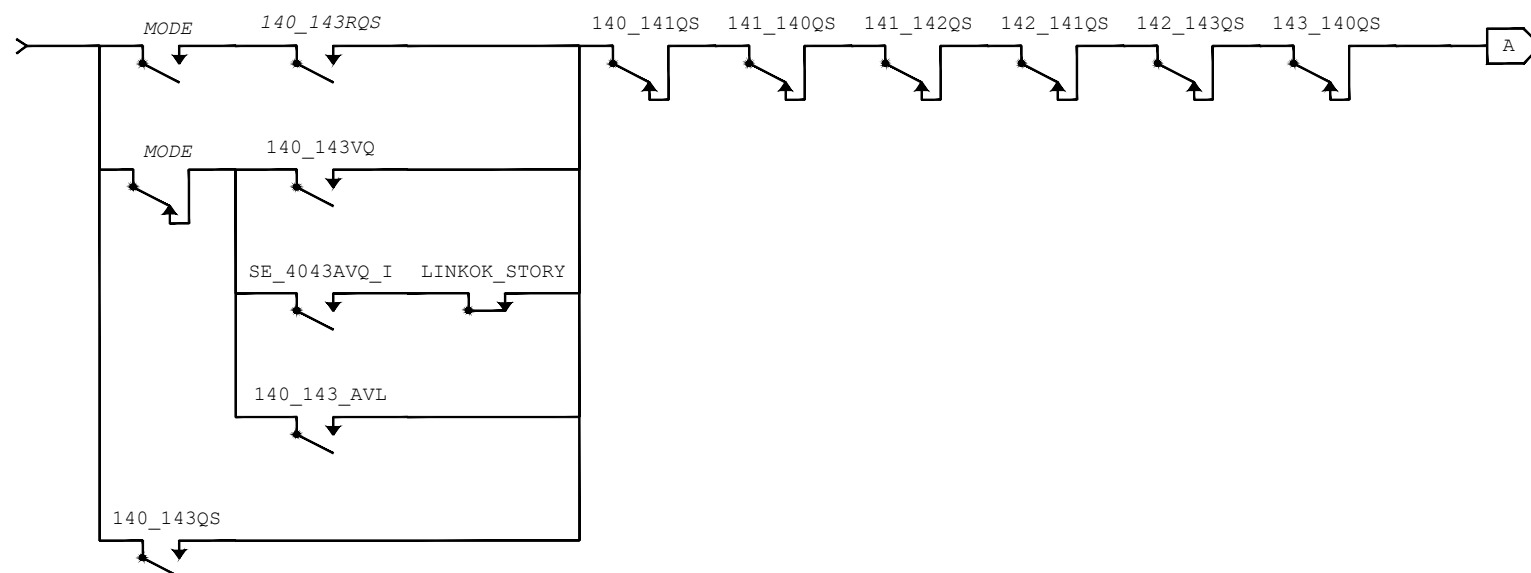
SHEET OF  
DRAWING NO. JL122  
REVISION B



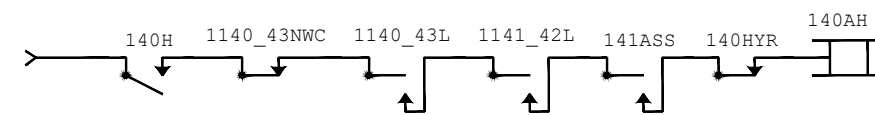
Signal C140 To Signal C143 Call-On Route Request



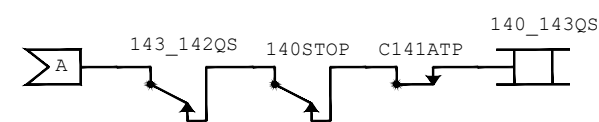
Signal C140 To Signal C143 Route Check



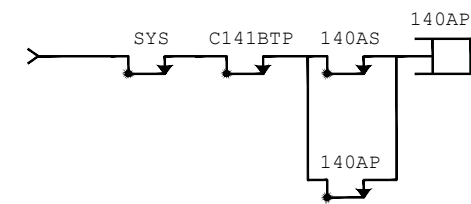
Signal C140 Preferred Available Request



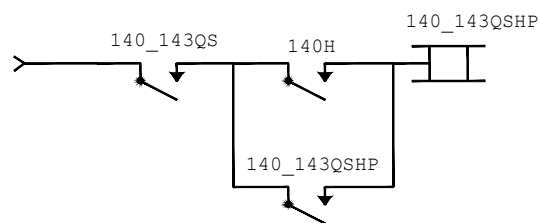
Signal C140 "A" Home Circuit, C140-C141



Signal C140 To Signal C143 Route Request



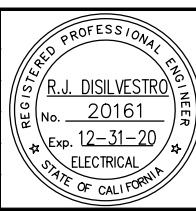
Signal C140 Approach Locking Circuit



Signal C140 - C143 Request/H Stick Circuit. Prevents AS From Picking If Request Is Entered

Jun 22, 2020 - 11:30am C:\cadd\hntb\work\10139440\01\119-142\_Eastridge\_A\_V.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET

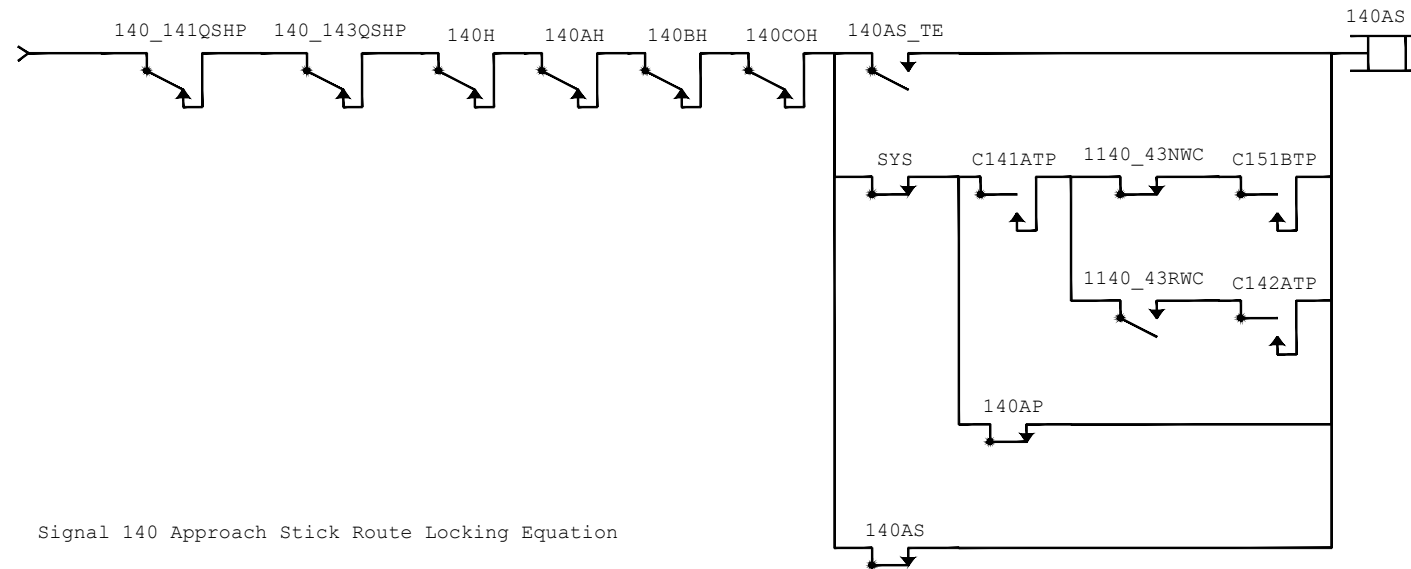


<b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
DESIGNED	CHECKED
M.BAKHIN	V.FAINGOLD
DRAWN	CADD FILE NAME
M.BAKHIN	801JL123.dwg

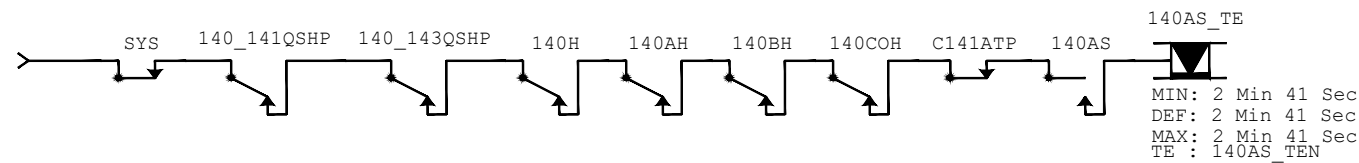


<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	SCALE
03/11/19	NTS
SUBMITTAL DATE	BOARD APPROVAL DATE
06/29/20	

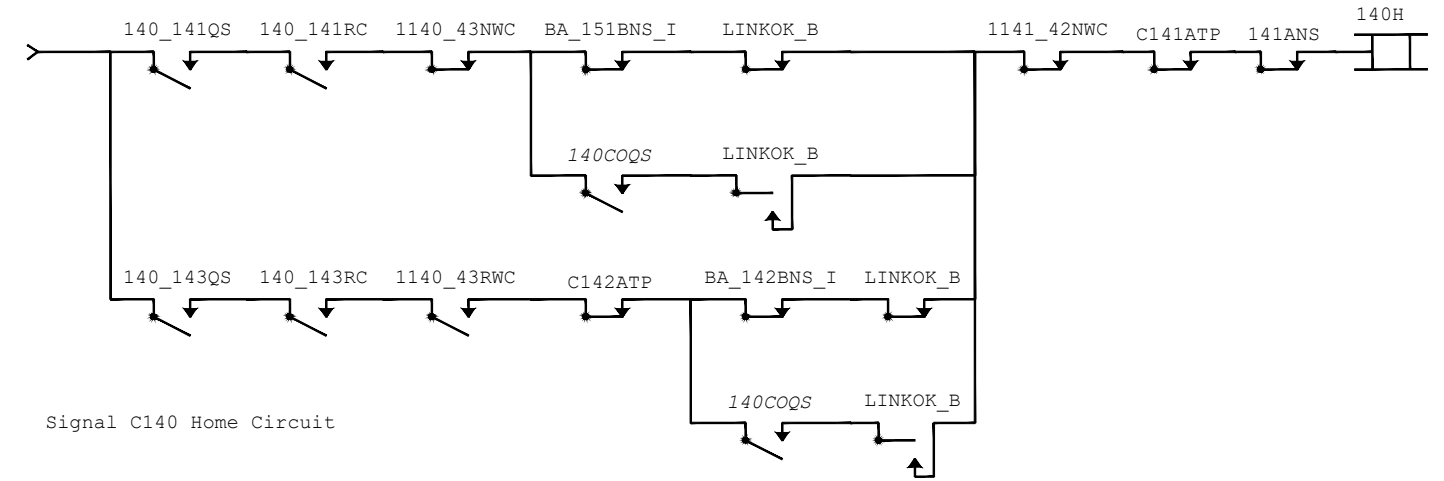
EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS EASTRIDGE INTERLOCKING VITAL LOGIC, ELECTROLOGIX "A" (5 OF 24)			SHEET OF DRAWING NO. JL123 REVISION A
PCA NO.	CONTRACT NO.	FILE LOCATION	
000	C801	PROJECTWISE	



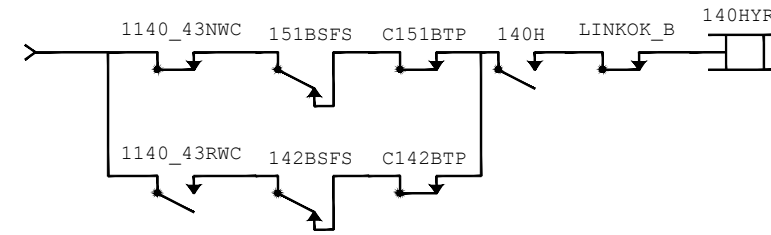
Signal 140 Approach Stick Route Locking Equation



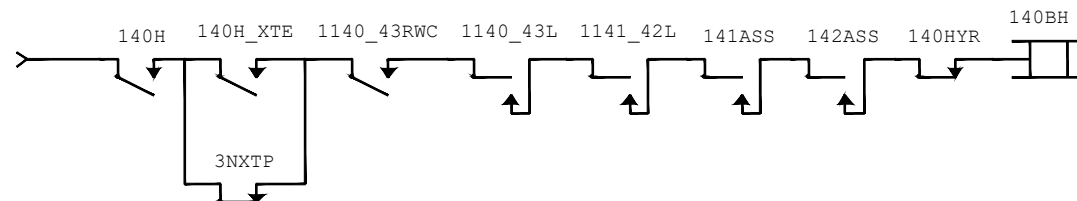
Signal B140 Route Locking Timer



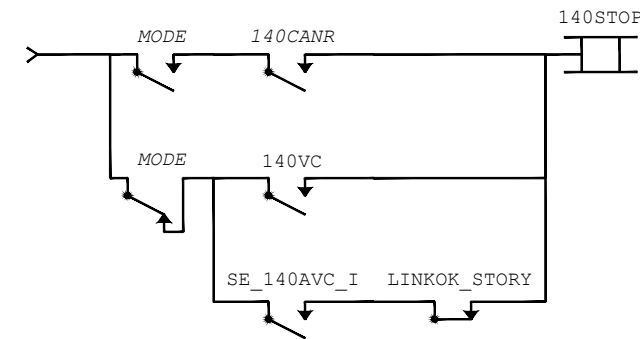
Signal C140 Home Circuit



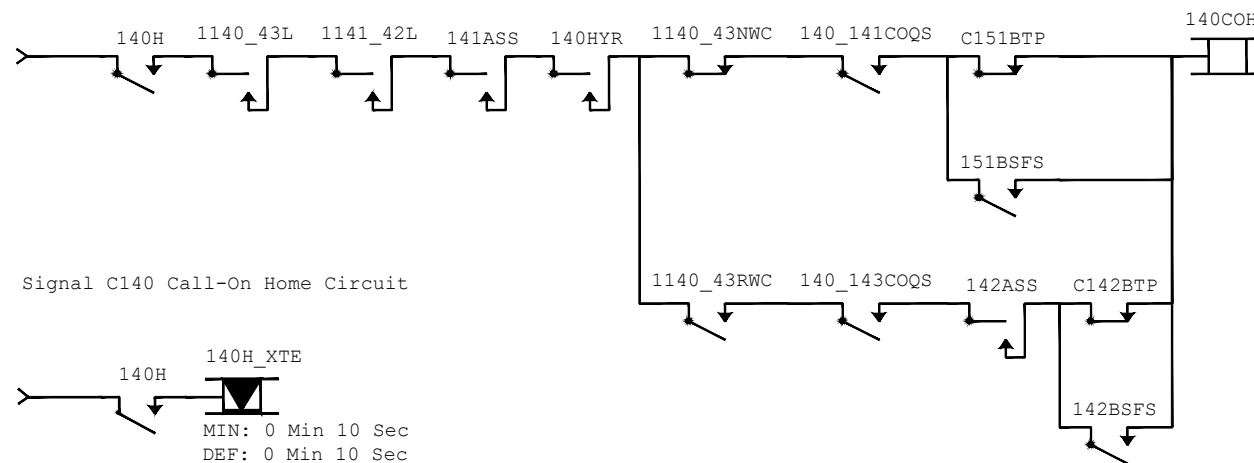
Signal C140 HYR Circuit For Call-On Moves



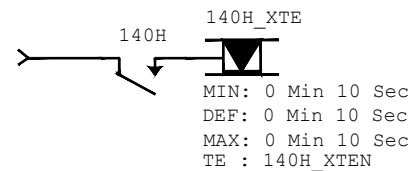
Signal C140 "B" Home Circuit, C140-C143



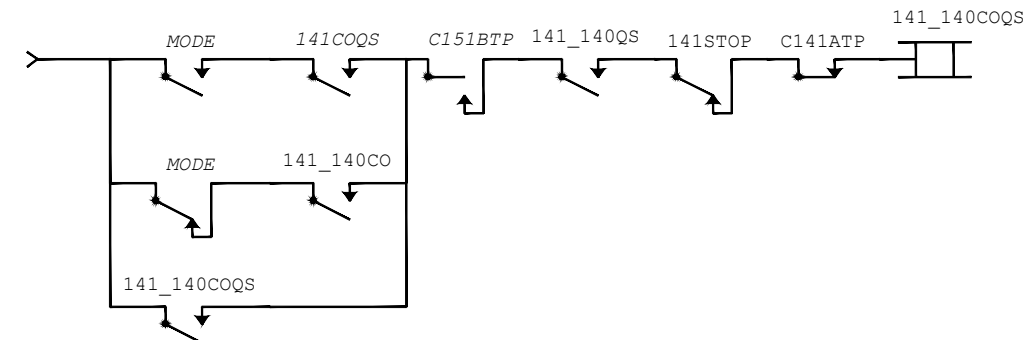
Signal C140 Signal Cancel



Signal C140 Call-On Home Circuit



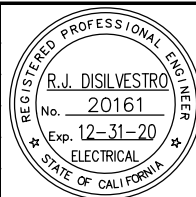
Signal C140 Home Delay Timer,  
If 3NXTP is Occupied Signal C140 Clearing Should be Delayed By 10 Seconds  
to Allow Ped Xing #1 to Activate



Signal C141 To Signal C140 Call-On Route Request

Jun 22, 2020 - 11:30am C:\cadd\hwy\gfoakes\west\0139440\001\119-142\_Eastridge\_A\_V.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



SUBMITTED

**HNTB** HNTB Corporation  
Engineers Architects Planners  
1732 North First Street, Suite 400 San Jose, CA 95112  
Tel (408) 451-7300 Fax (408) 451-6942

DESIGNED: M.BAKHIN  
CHECKED: V.FAINGOLD  
DRAWN: M.BAKHIN  
CADD FILE NAME: 801JL124.dwg

Santa Clara Valley  
**Transportation Authority**

APPROVED

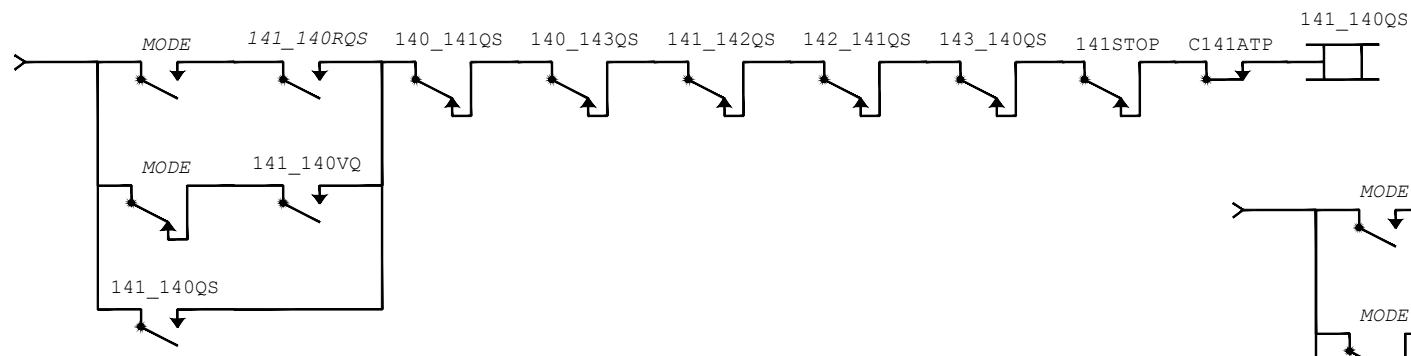
**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/11/19  
SUBMITTAL DATE: 06/29/20  
SCALE: NTS  
BOARD APPROVAL DATE:

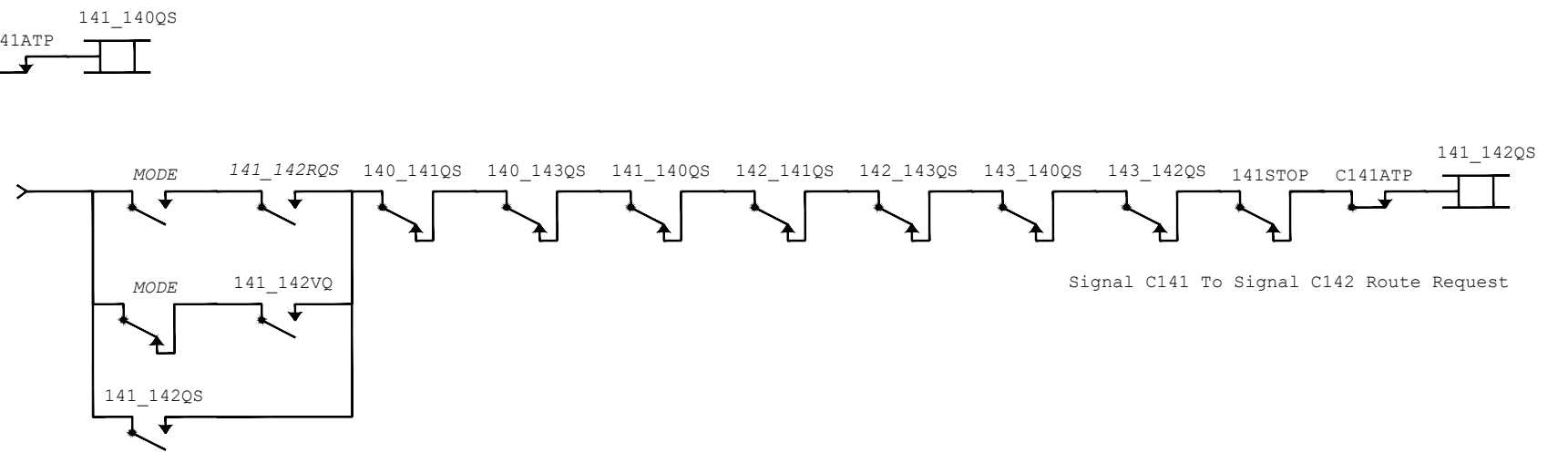
EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
EASTRIDGE INTERLOCKING  
VITAL LOGIC, ELECTROLOGIX "A" (6 OF 24)

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

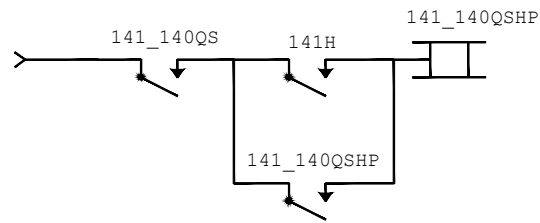
SHEET OF  
DRAWING NO. JL124  
REVISION A



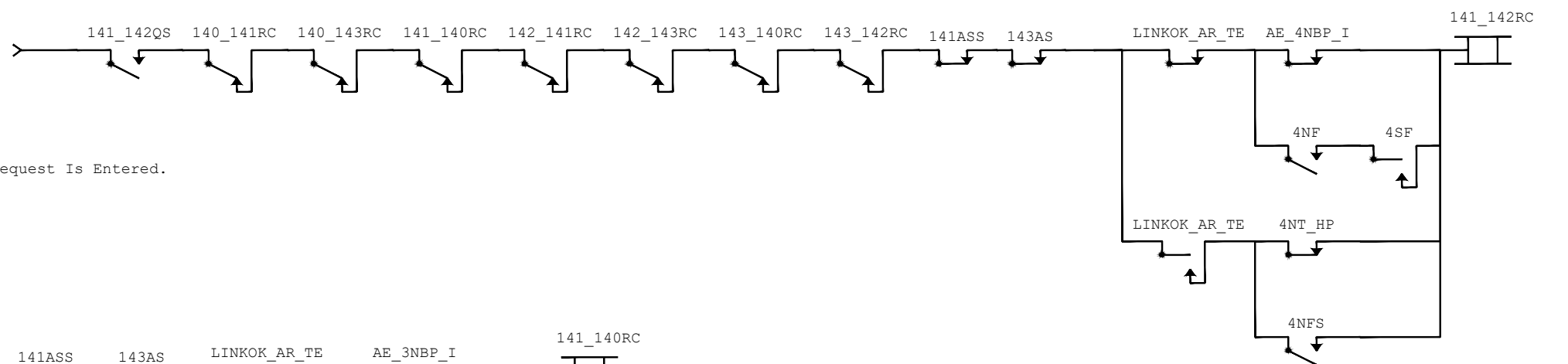
Signal C141 To Signal C140 Route Request



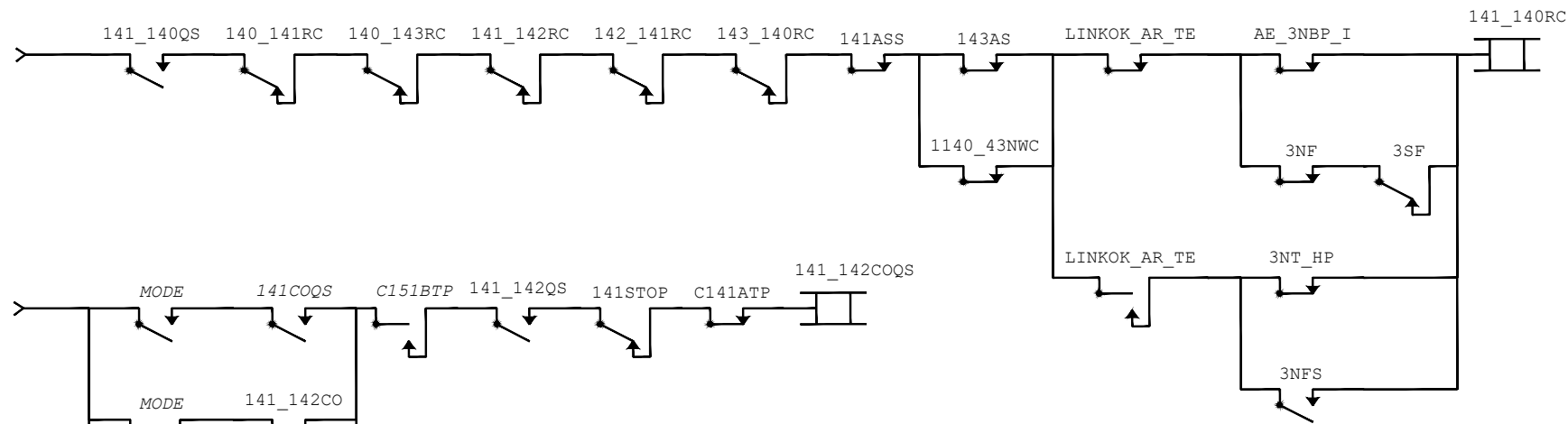
Signal C141 To Signal C142 Route Request



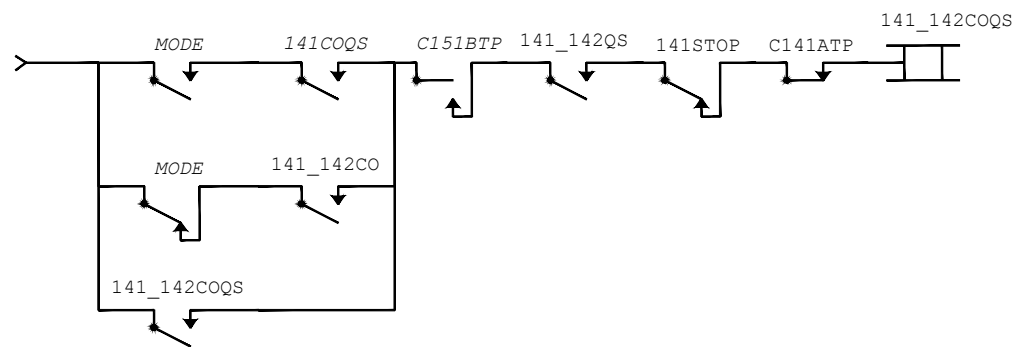
Signal C141 - C140 Request/H Stick Circuit. Prevents AS From Picking If Request Is Entered.



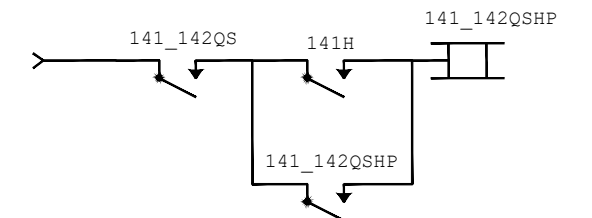
Signal C141 To Signal C142 Route Check



Signal C141 To Signal C140 Route Check



Signal C141 To Signal C142 Call-On Route Request



Signal C141 - C142 Request/H Stick Circuit. Prevents AS From Picking If Request Is Entered

Jun 22, 2020 - 11:50am C:\cadd\hntb\yoflowkes\west\0139440\01L119-142\_Eastridge\_A\_V.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET

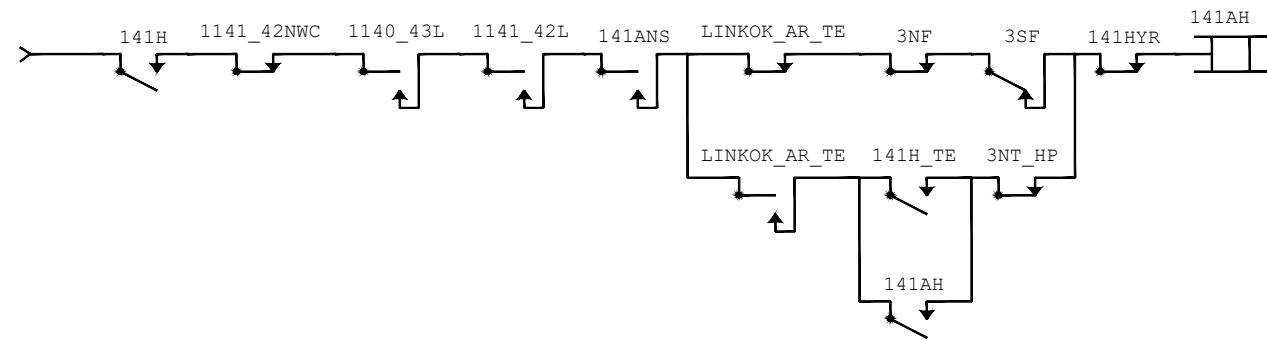


SUBMITTED	
<b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
DESIGNED	CHECKED
M.BAKHIN	V.FAINGOLD
DRAWN	CADD FILE NAME
M.BAKHIN	801JL125.dwg

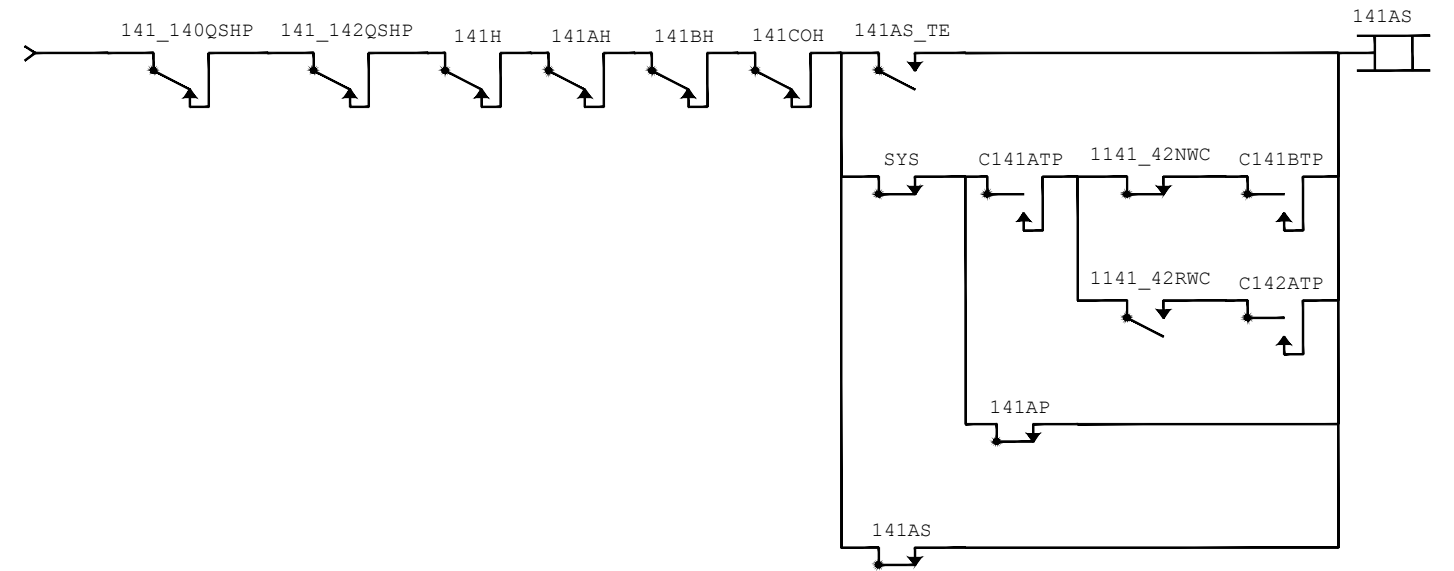


APPROVED	
<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	SCALE
03/11/19	NTS
SUBMITTAL DATE	BOARD APPROVAL DATE
06/29/20	

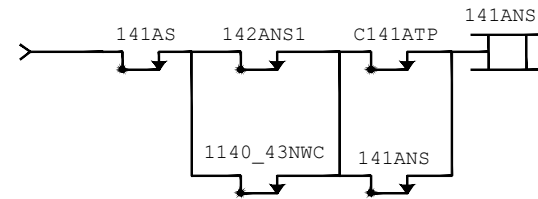
EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS EASTRIDGE INTERLOCKING VITAL LOGIC, ELECTROLOGIX "A" (7 OF 24)		
PCA NO.	CONTRACT NO.	FILE LOCATION
000	C801	PROJECTWISE
SHEET OF		REVISION
		JL125
		A



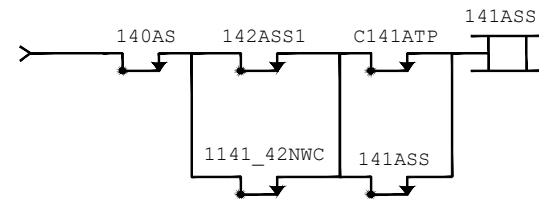
Signal C141 "A" Home Circuit, C141-C140



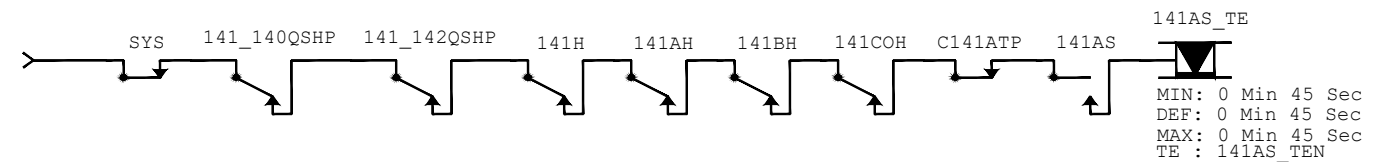
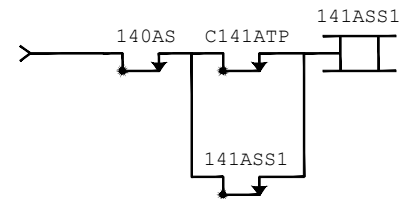
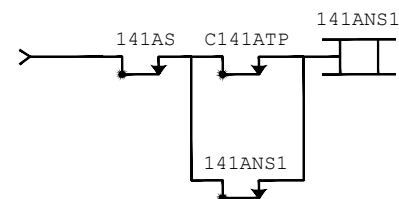
Signal 141 Approach Stick Route Locking Equation



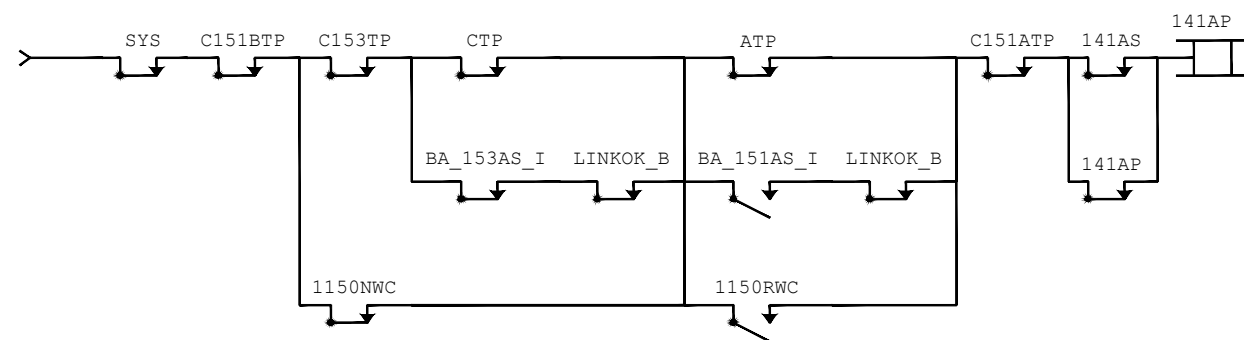
141AT Northbound Route Stick



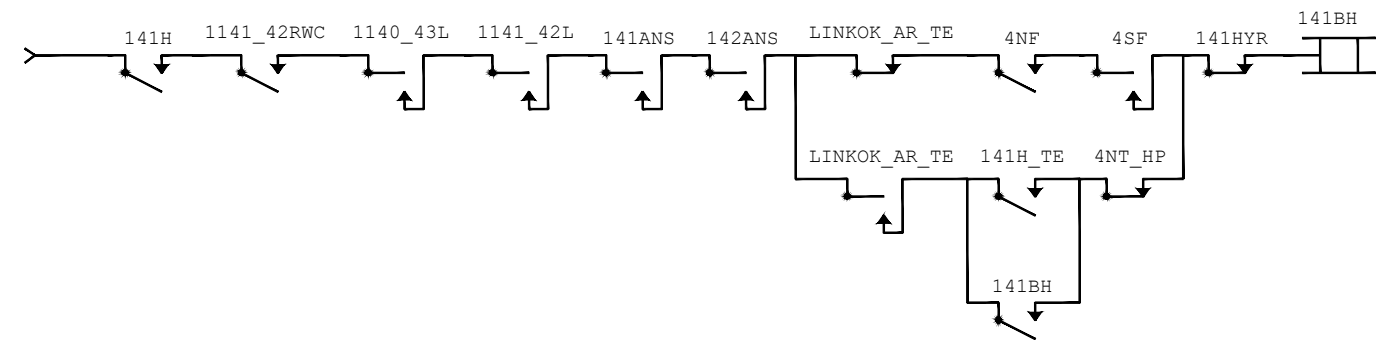
141AT Southbound Route Stick



Signal C142 Route Locking Timer



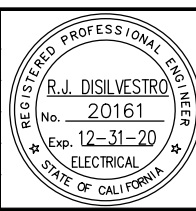
Signal C141 Approach Locking Circuit



Signal C141 "B" Home Circuit, C141-C142

Jun 22, 2020 - 11:50am C:\cadd\p\work\west\0139440\01.L119-142\_Fantridge\_A\_V.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



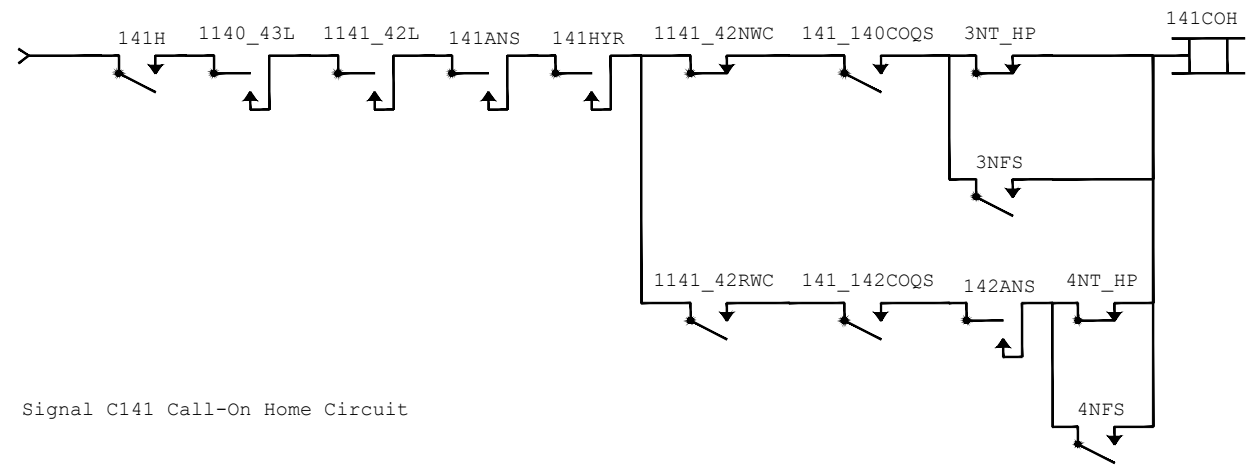
SUBMITTED		<b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
DESIGNED	M.BAKHIN	CHECKED	V.FAINGOLD
DRAWN	M.BAKHIN	CADD FILE NAME	801JL126.dwg



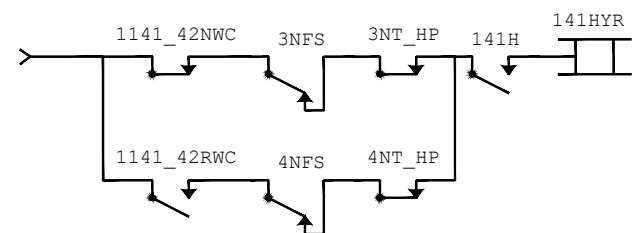
APPROVED		<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	03/11/19	SCALE	NTS
SUBMITTAL DATE	06/29/20	BOARD APPROVAL DATE	

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS EASTRIDGE INTERLOCKING VITAL LOGIC, ELECTROLOGIXS "A" (8 OF 24)			
PCA NO.	000	CONTRACT NO.	C801
FILE LOCATION	PROJECTWISE		

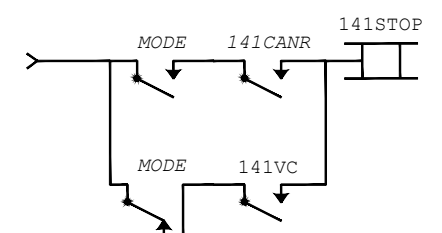
SHEET OF	
DRAWING NO.	JL126
REVISION	A



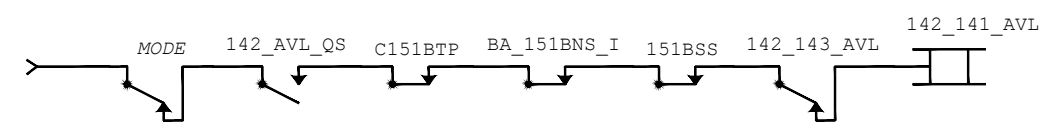
Signal C141 Call-On Home Circuit



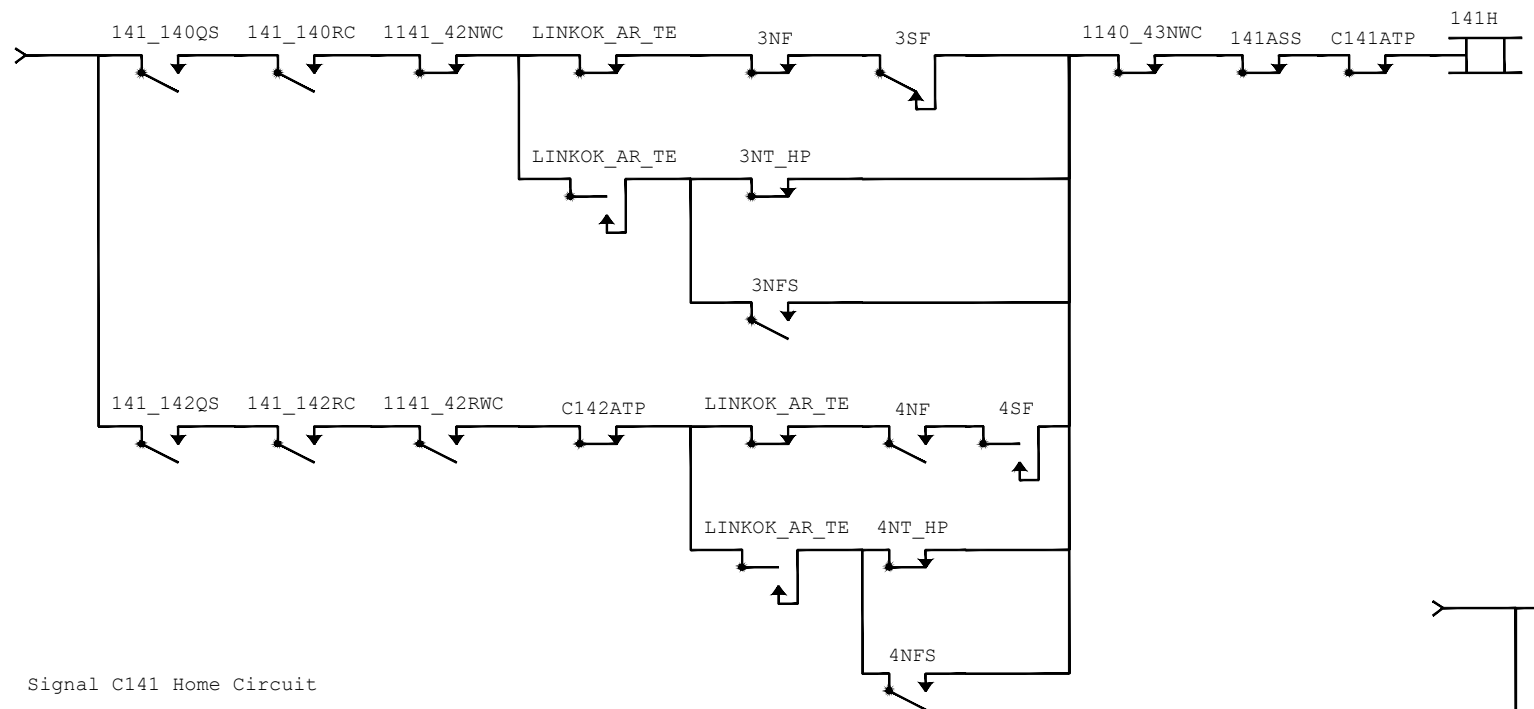
Signal C141 HYR Circuit For Call-On Moves



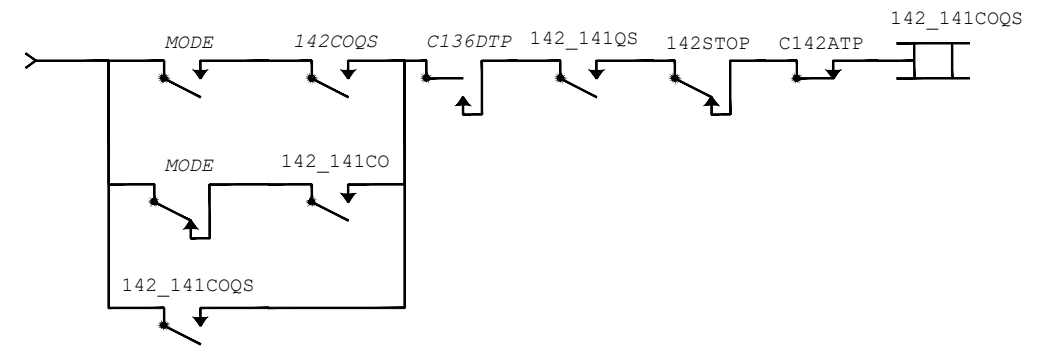
Signal C141 Signal Cancel



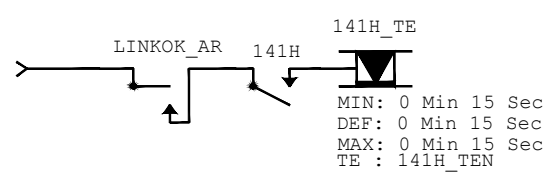
Signal C140 - Signal C142 Preferred Available Request



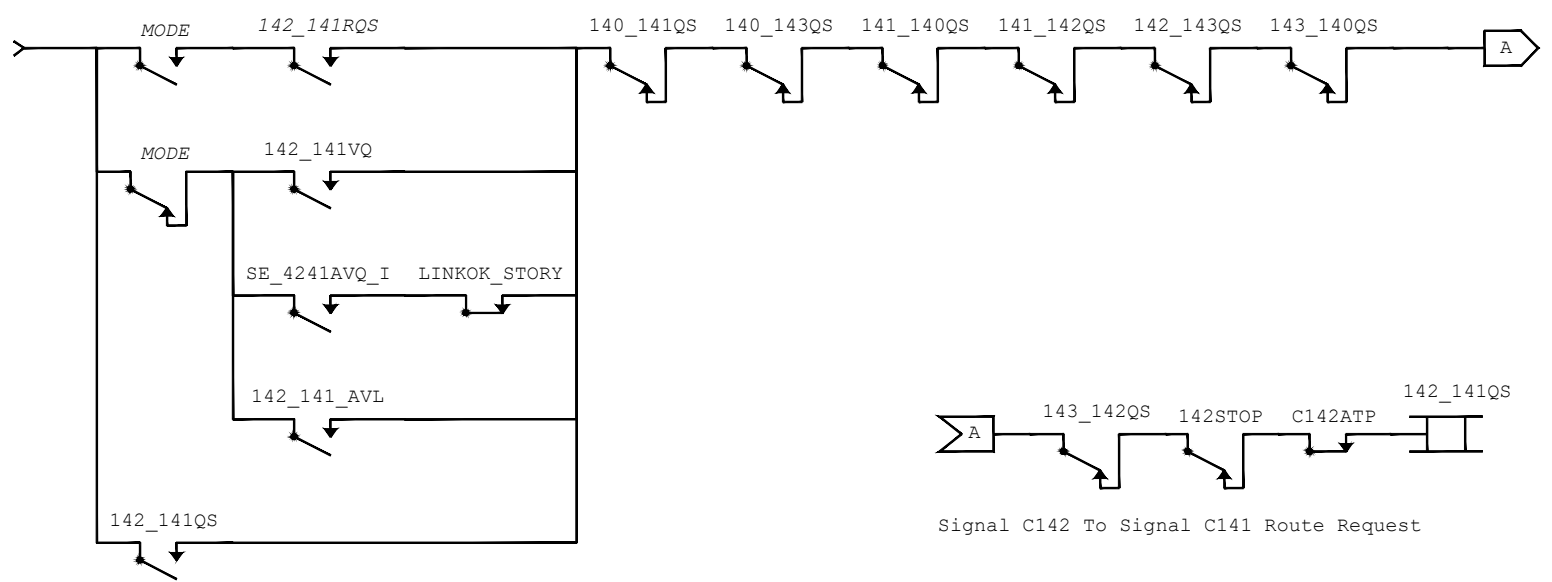
Signal C141 Home Circuit



Signal C142 To Signal C141 Call-On Route Request



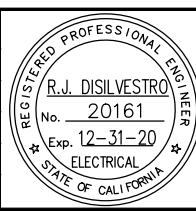
Signal C141 Home Circuit, Timer to Delay Clearing If Tumble Down Is Enabled



Signal C142 To Signal C141 Route Request

Jun 22, 2020 - 11:30am C:\cadd\p\work\west\0139440\01JL119-142\_Eastridge\_A\_V.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



SUBMITTED		<b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
DESIGNED	M.BAKHIN	CHECKED	V.FAINGOLD
DRAWN	M.BAKHIN	CADD FILE NAME	801JL127.dwg

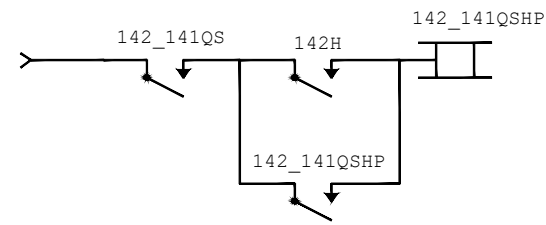


APPROVED		<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	03/11/19	SCALE	NTS
SUBMITTAL DATE	06/29/20	BOARD APPROVAL DATE	

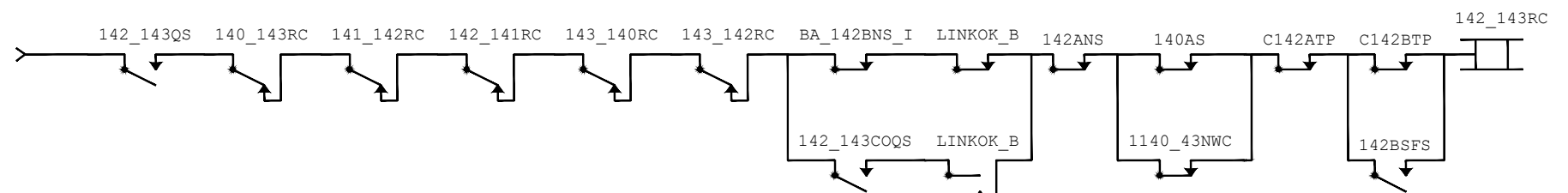
EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS EASTRIDGE INTERLOCKING VITAL LOGIC, ELECTROLOGIX "A" (9 OF 24)			
PCA NO.	000	CONTRACT NO.	C801
FILE LOCATION	PROJECTWISE		

SHEET OF	
DRAWING NO.	JL127
REVISION	A

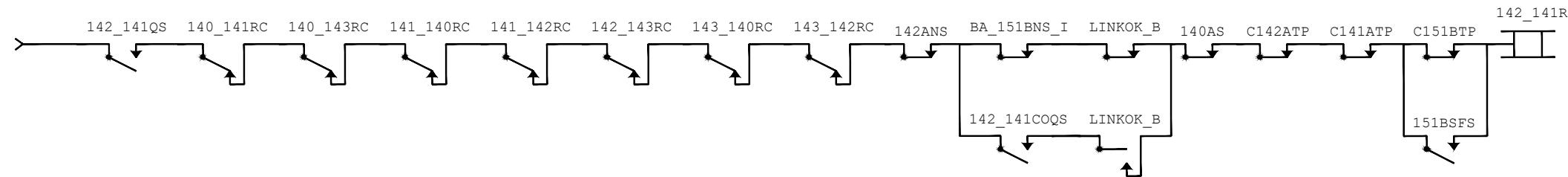




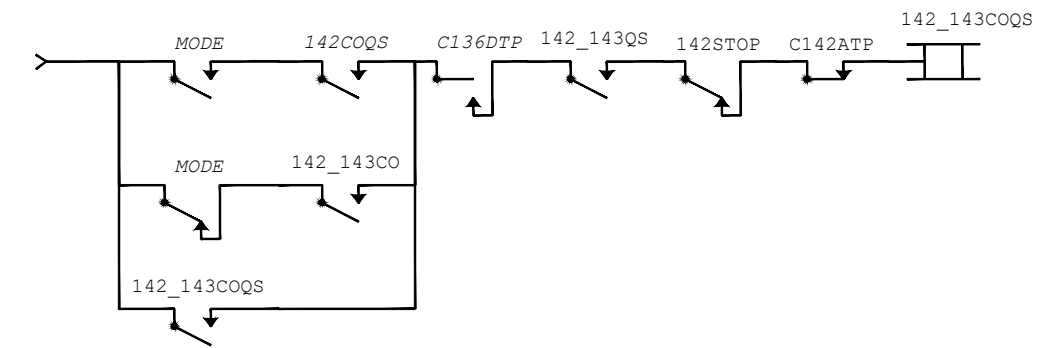
Signal C142 - C141 Request/H Stick Circuit. Prevents AS From Picking If Request Is Entered



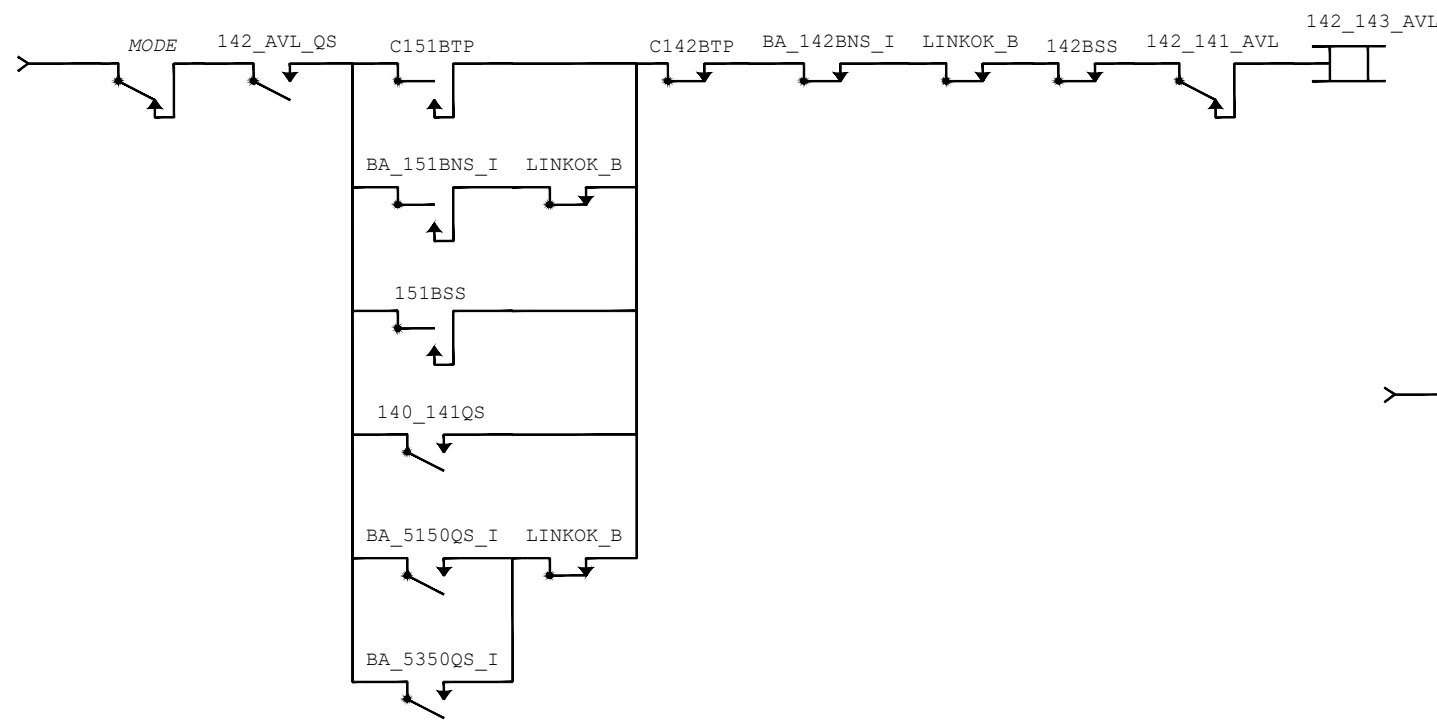
Signal C142 To Signal C143 Route Check



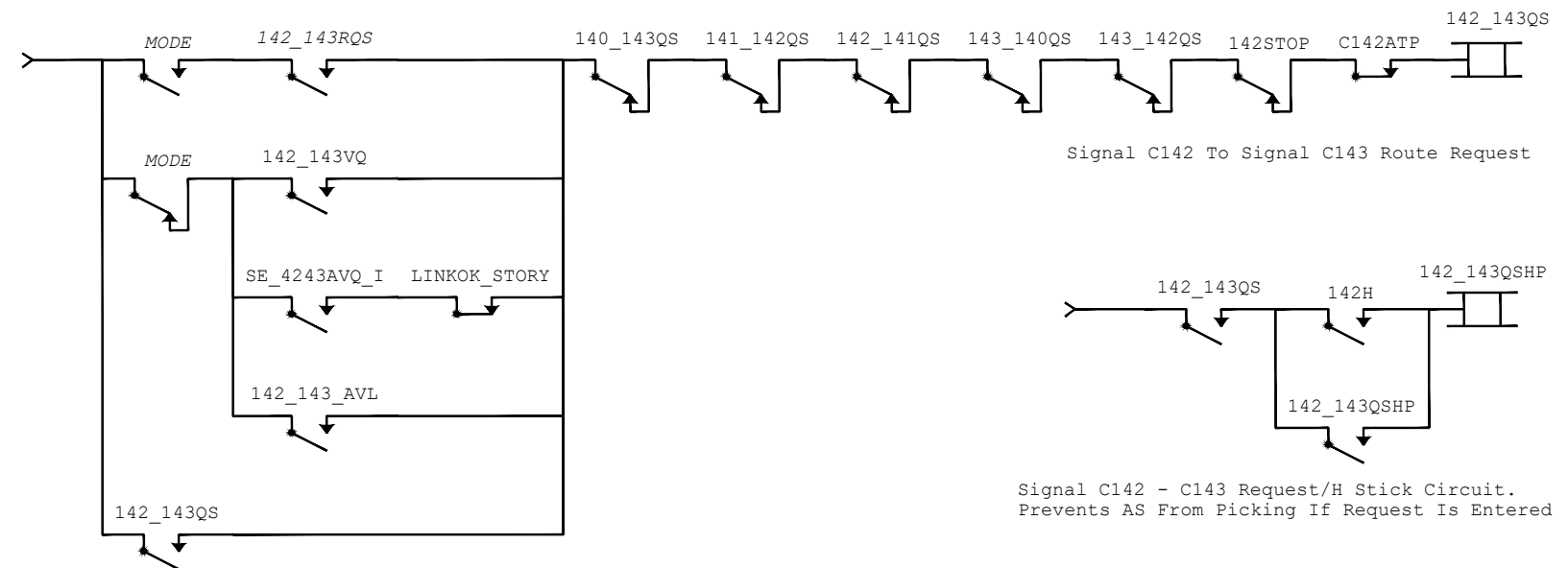
Signal C142 To Signal C141 Route Check



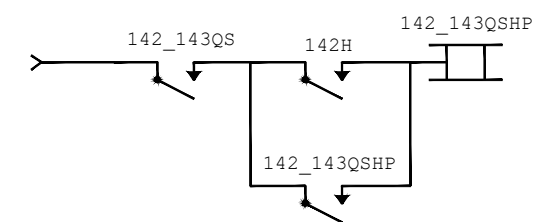
Signal C142 To Signal C143 Call-On Route Request



Signal C142 - Signal C143 Preferred Available Request



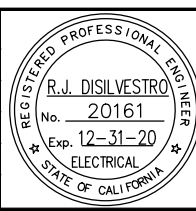
Signal C142 To Signal C143 Route Request



Signal C142 - C143 Request/H Stick Circuit. Prevents AS From Picking If Request Is Entered

Jun 22, 2020 - 11:50am C:\cadd\p\vw\gfoakes\west\0139440\001\119-142\_Eastridge\_A\_V.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET

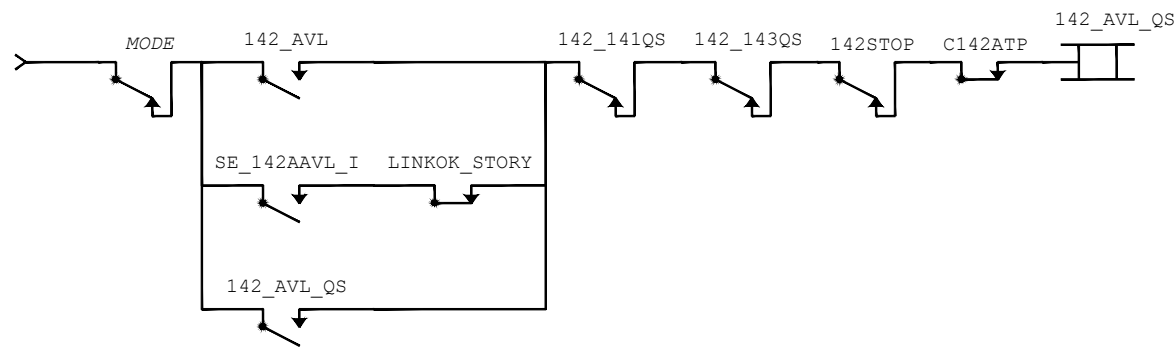


SUBMITTED		<b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
DESIGNED	M.BAKHIN	CHECKED	V.FAINGOLD
DRAWN	M.BAKHIN	CADD FILE NAME	801JL128.dwg

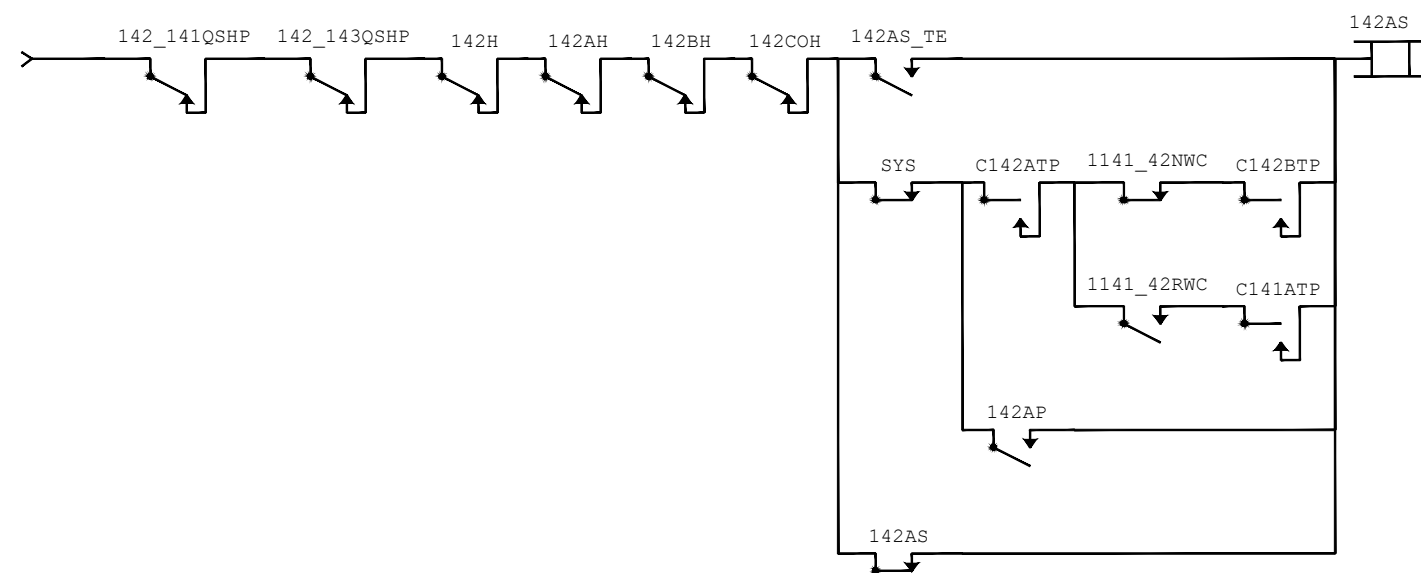


APPROVED		<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	03/11/19	SCALE	NTS
SUBMITTAL DATE	06/29/20	BOARD APPROVAL DATE	

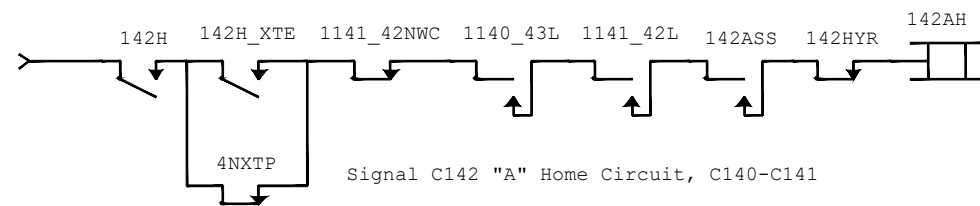
EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS EASTRIDGE INTERLOCKING VITAL LOGIC, ELECTROLOGIX "A" (10 OF 24)			SHEET OF DRAWING NO. JL128 REVISION A
PCA NO.	000	CONTRACT NO.	C801
FILE LOCATION	PROJECTWISE		



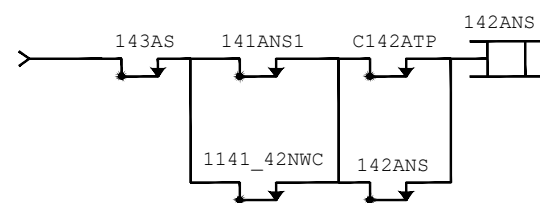
Signal C142 Preferred Available Request



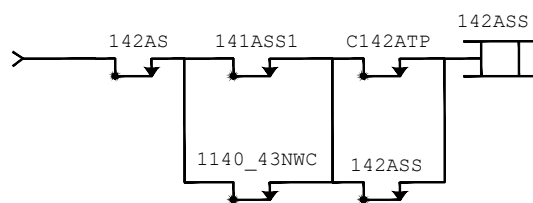
Signal 142 Approach Stick Route Locking Equation



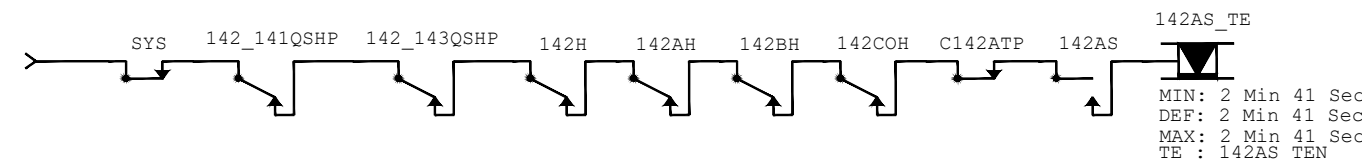
Signal C142 "A" Home Circuit, C140-C141



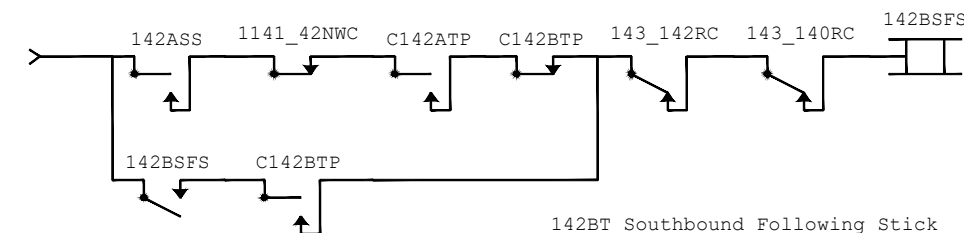
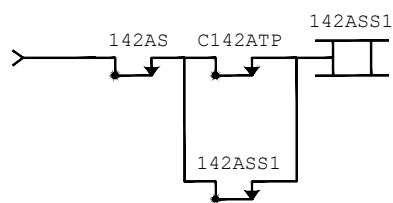
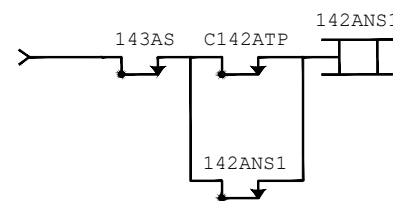
142AT Northbound Route Stick



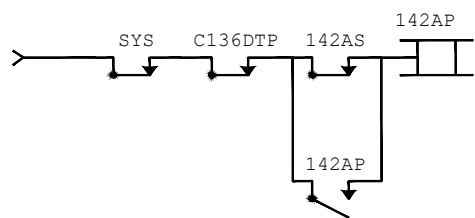
142AT Southbound Route Stick



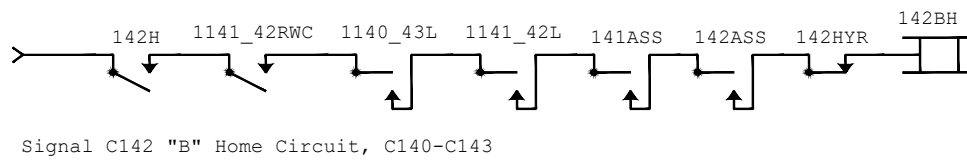
Signal C142 Route Locking Timer



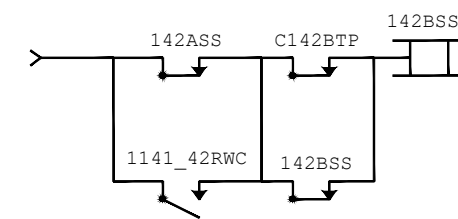
142BT Southbound Following Stick



Signal C142 Approach Locking Circuit



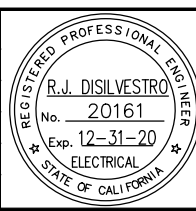
Signal C142 "B" Home Circuit, C140-C143



142BT Southbound Route Stick

Jun 22, 2020 - 11:50am C:\cadd\h\p\y\g\g\g\west\0139440\001L119-142\_Eastridge\_A\_V.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET

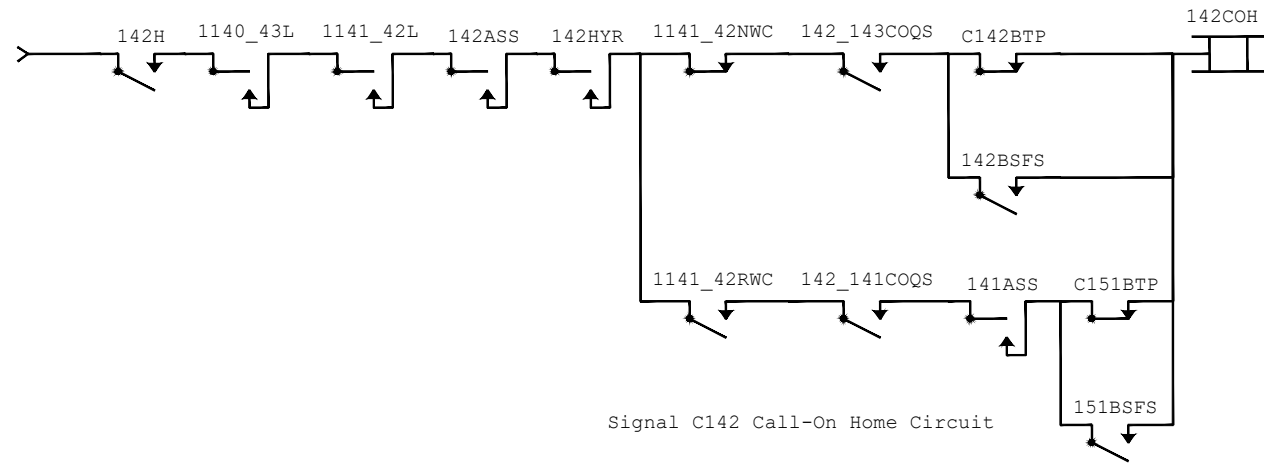


SUBMITTED	
<b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
DESIGNED	CHECKED
M.BAKHIN	V.FAINGOLD
DRAWN	CADD FILE NAME
M.BAKHIN	801JL129.dwg

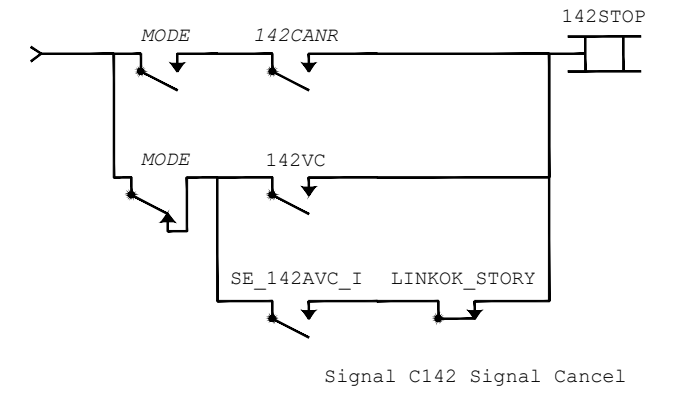


APPROVED	
<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	SCALE
03/11/19	NTS
SUBMITTAL DATE	BOARD APPROVAL DATE
06/29/20	

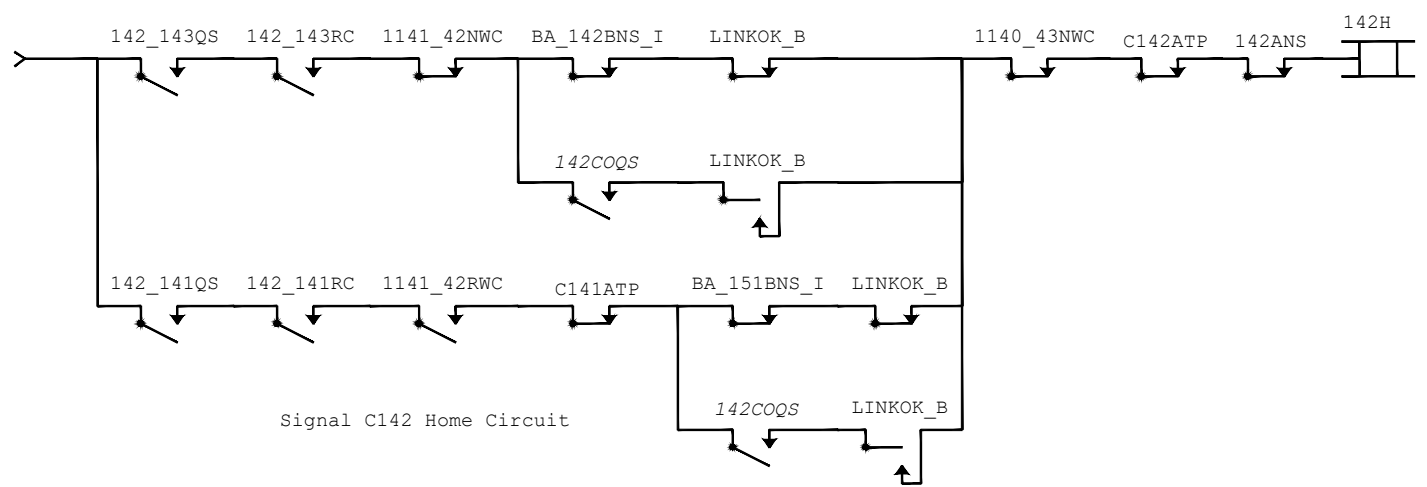
EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS EASTRIDGE INTERLOCKING VITAL LOGIC, ELECTROLOGIXS "A" (11 OF 24)		
PCA NO.	CONTRACT NO.	FILE LOCATION
000	C801	PROJECTWISE
SHEET OF		REVISION
		JL129
		A



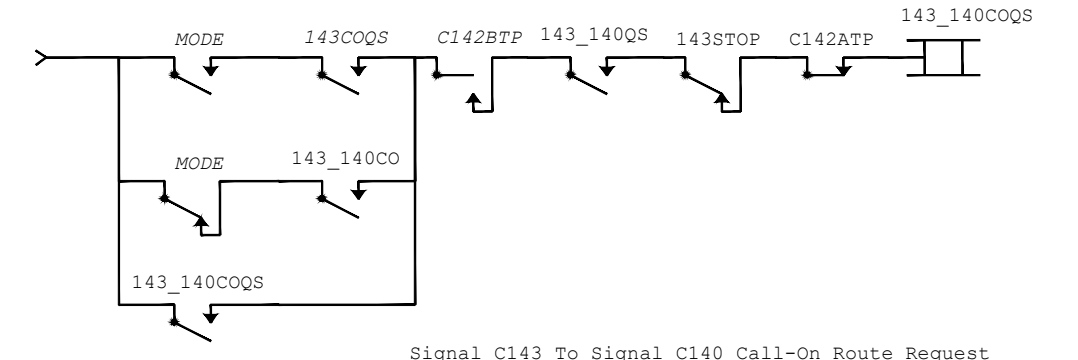
Signal C142 Call-On Home Circuit



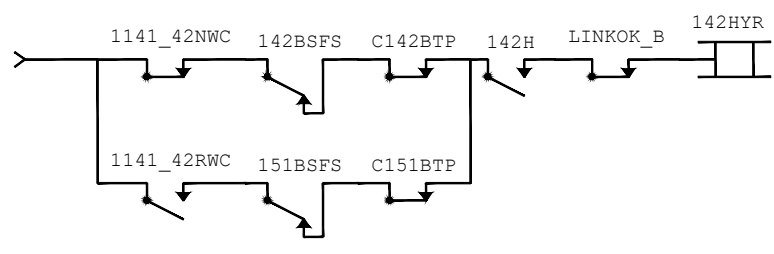
Signal C142 Signal Cancel



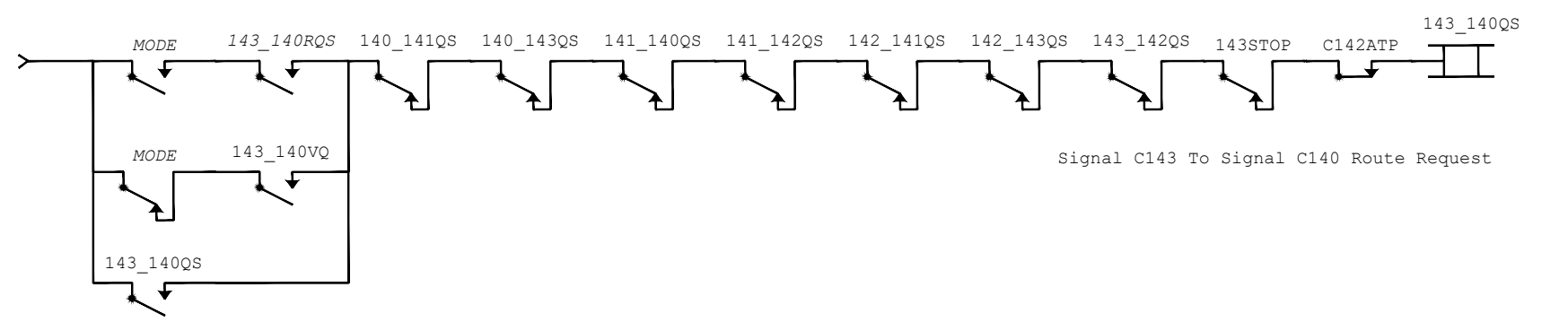
Signal C142 Home Circuit



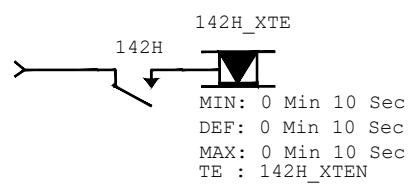
Signal C143 To Signal C140 Call-On Route Request



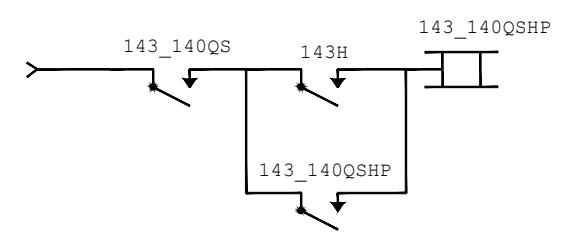
Signal C142 HYR Circuit For Call-On Moves



Signal C143 To Signal C140 Route Request



Signal C142 Home Delay Timer,  
If 4NXTP is Occupied Signal C142 Clearing Should be Delayed By 10 Seconds to Allow Ped Xing #1 to Activate



Signal C143 - C140 Request/H Stick Circuit.  
Prevents AS From Picking If Request Is Entered

Jun 22, 2020 - 11:50am C:\cadd\p\work\west\0139440\01\119-142\_Eastridge\_A\_V.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET

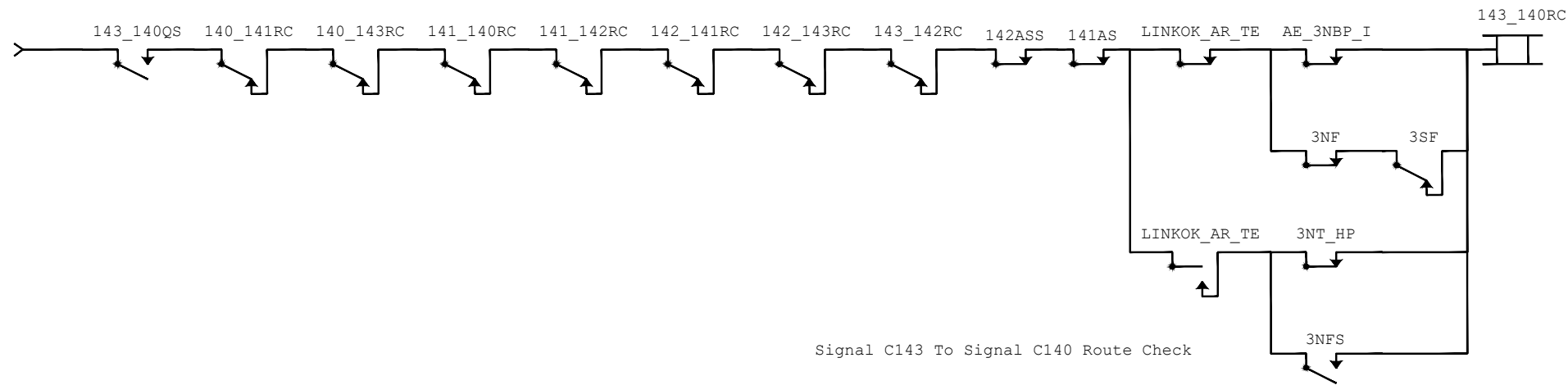


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DRAWN	M.BAKHIN	CADD FILE NAME	801JL130.dwg

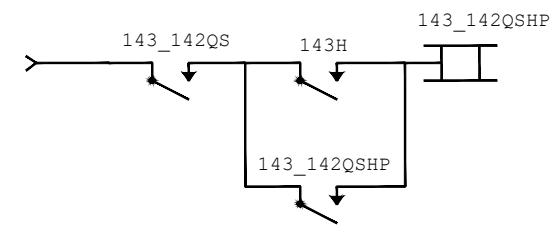


APPROVED		<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	03/11/19	SCALE	NTS
SUBMITTAL DATE	06/29/20	BOARD APPROVAL DATE	

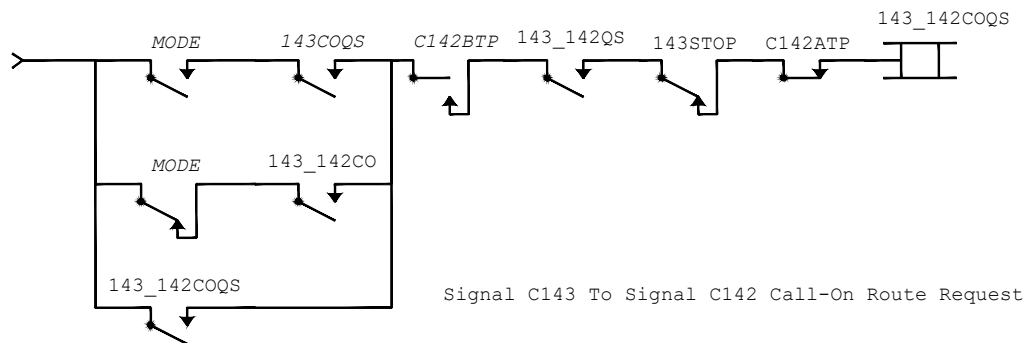
EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS EASTRIDGE INTERLOCKING VITAL LOGIC, ELECTROLOGIXS "A" (12 OF 24)			SHEET OF DRAWING NO. JL130 REVISION A
PCA NO.	000	CONTRACT NO.	C801
FILE LOCATION	PROJECTWISE		



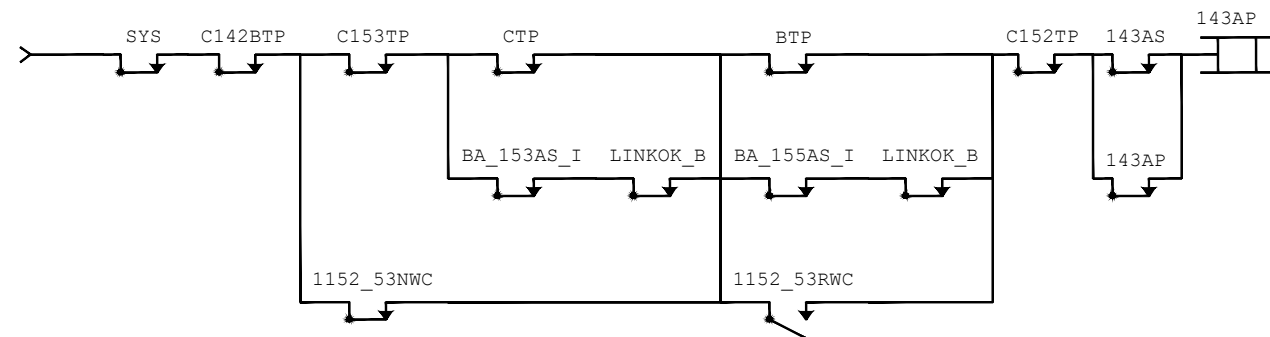
Signal C143 To Signal C140 Route Check



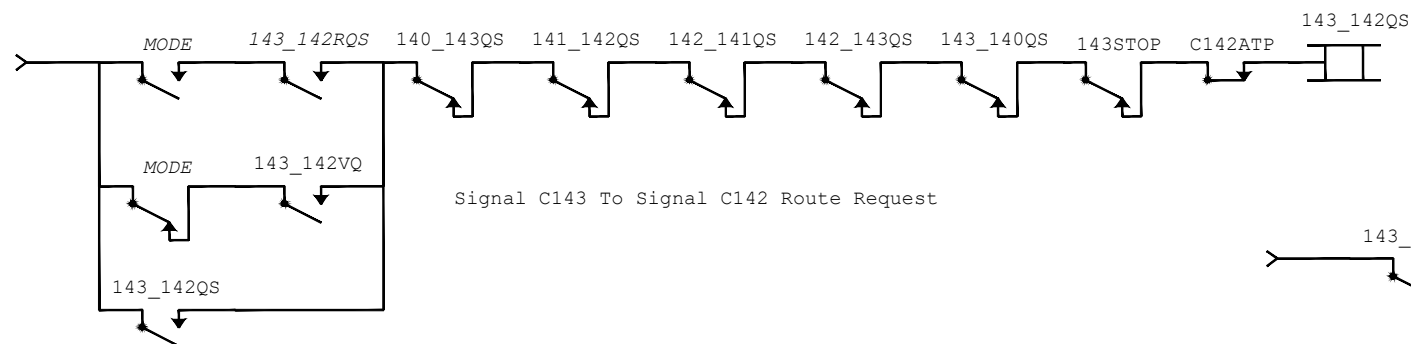
Signal C143 - C142 Request/H Stick Circuit. Prevents AS From Picking If Request Is Entered



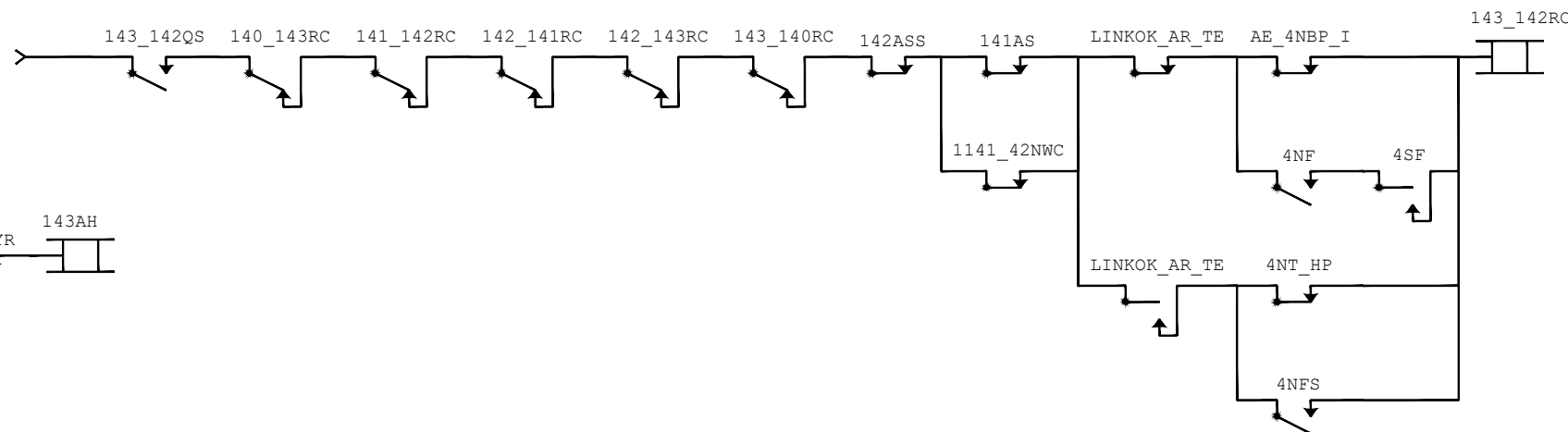
Signal C143 To Signal C142 Call-On Route Request



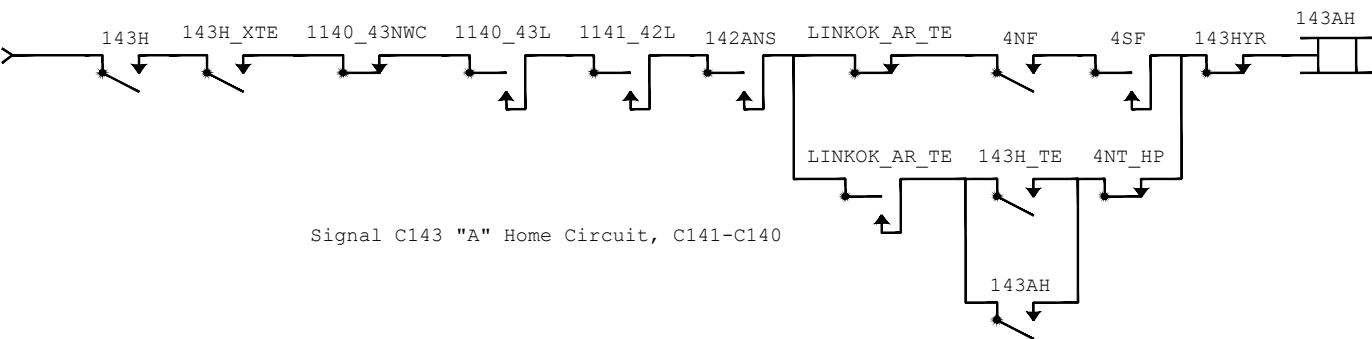
Signal C143 Approach Locking Circuit



Signal C143 To Signal C142 Route Request



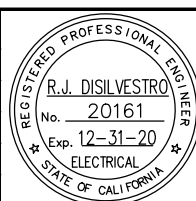
Signal C143 To Signal C142 Route Check



Signal C143 "A" Home Circuit, C141-C140

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NO.	DATE	REVISIONS
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A	03/19	65% SUBMITTAL SET

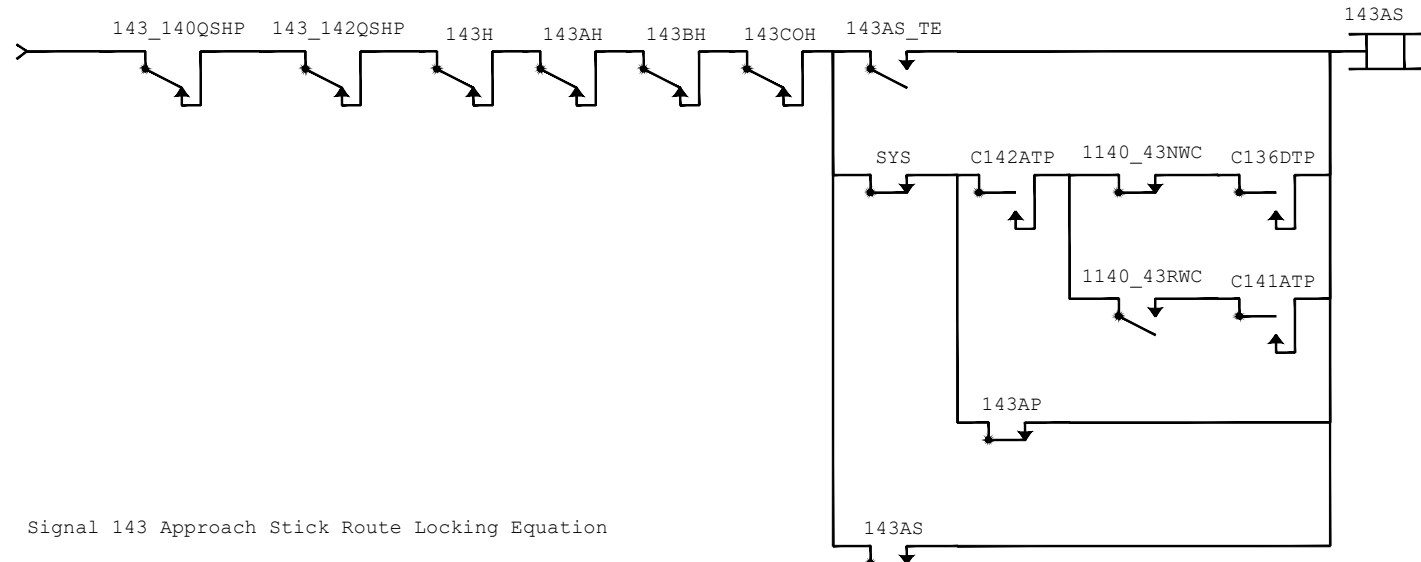


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<b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
DESIGNED	CHECKED
M.BAKHIN	V.FAINGOLD
DRAWN	CADD FILE NAME
M.BAKHIN	801JL131.dwg

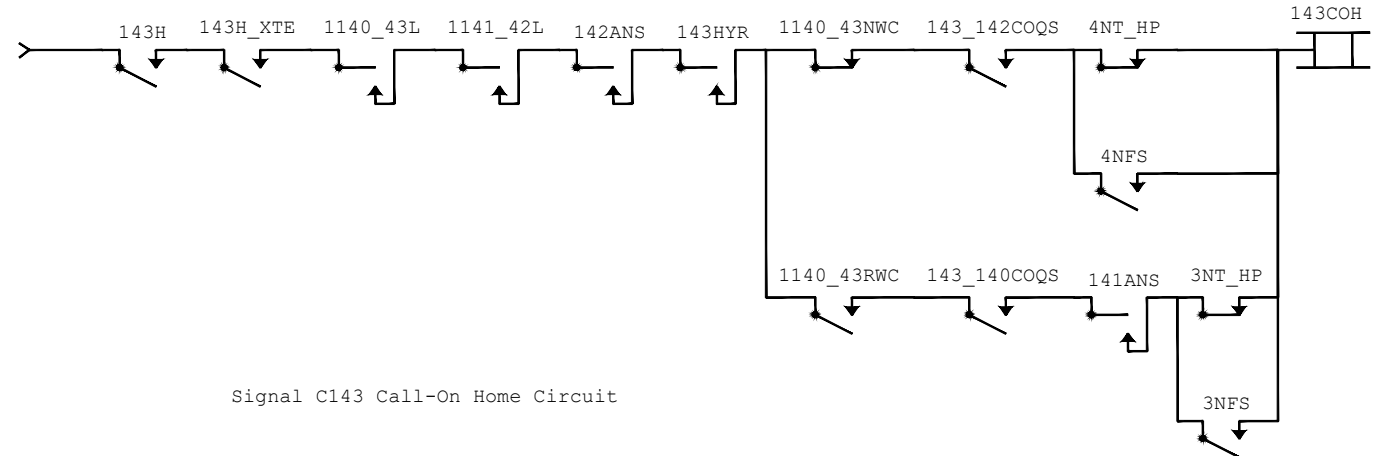


APPROVED	
<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	SCALE
03/11/19	NTS
SUBMITTAL DATE	BOARD APPROVAL DATE
06/29/20	

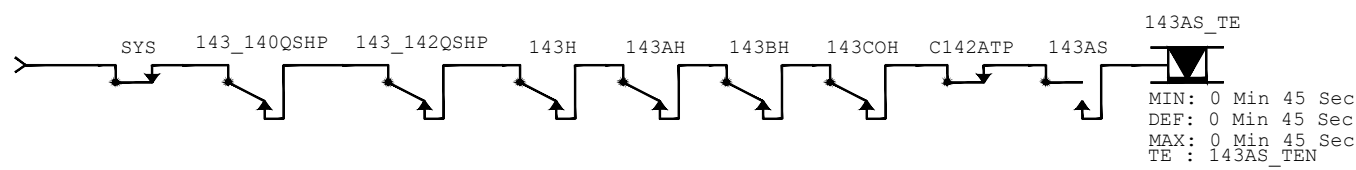
EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS EASTRIDGE INTERLOCKING VITAL LOGIC, ELECTROLOGIXS "A" (13 OF 24)		
PCA NO.	CONTRACT NO.	FILE LOCATION
000	C801	PROJECTWISE
SHEET OF	DRAWING NO.	REVISION
	JL131	A



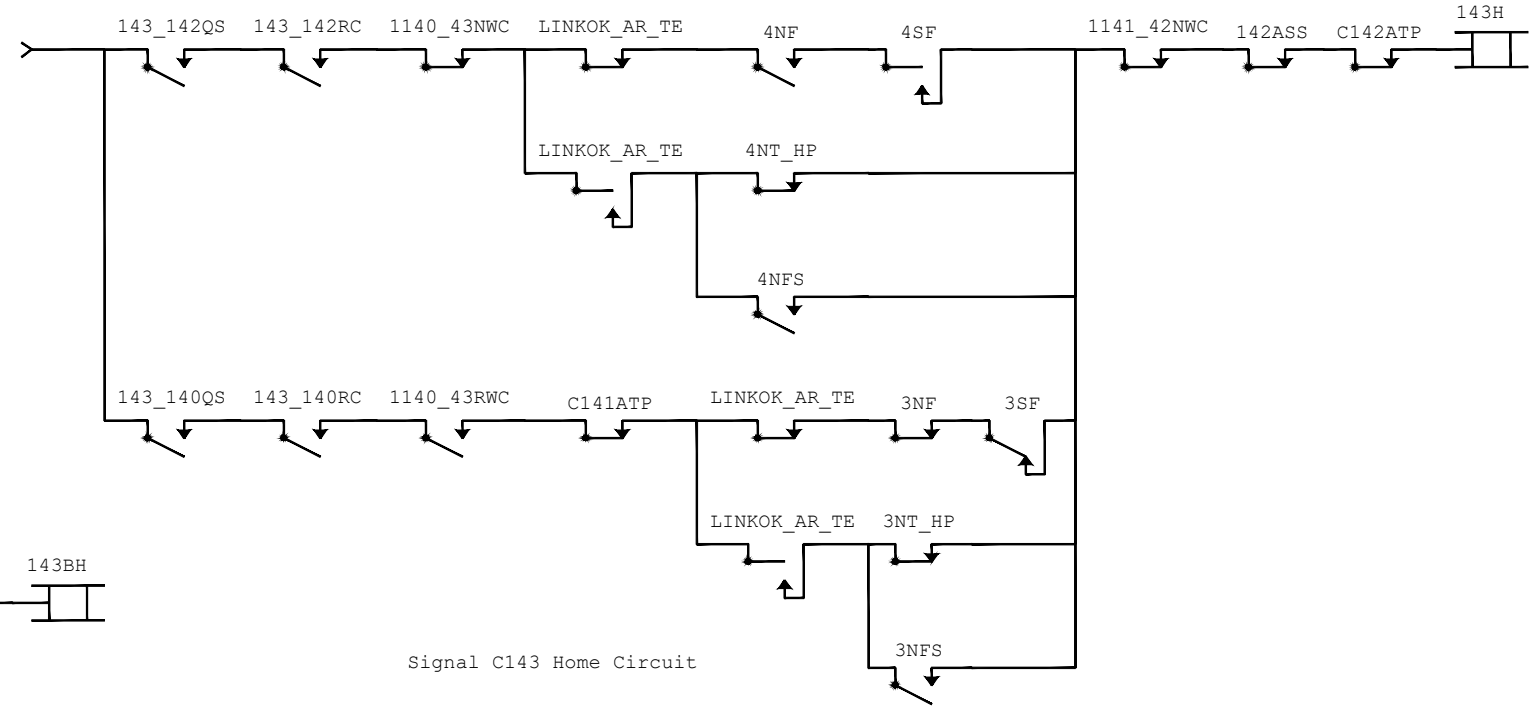
Signal 143 Approach Stick Route Locking Equation



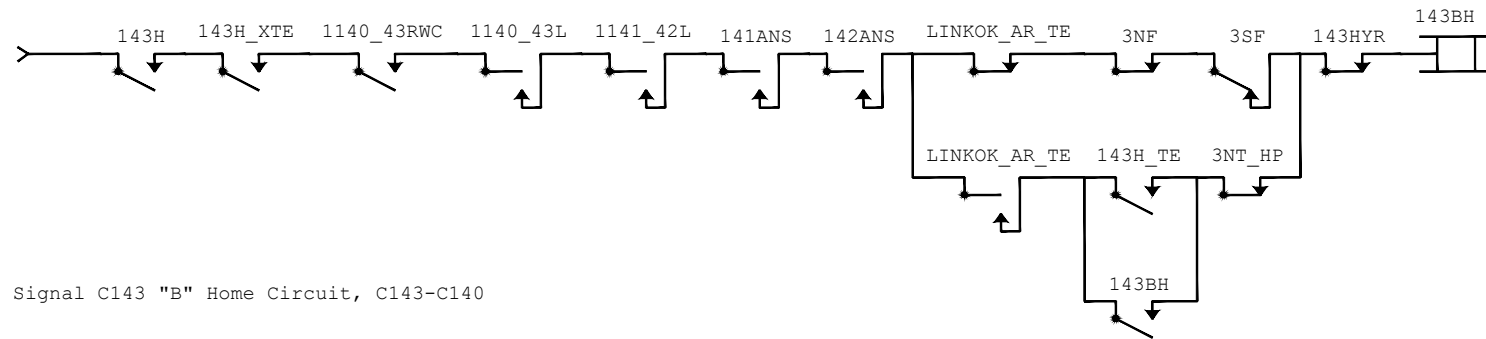
Signal C143 Call-On Home Circuit



Signal C143 Route Locking Timer



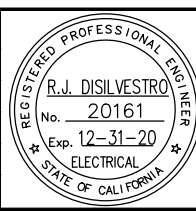
Signal C143 Home Circuit



Signal C143 "B" Home Circuit, C143-C140

Jun 22, 2020 - 11:50am C:\cadd\p\work\west\0139440\01.L119-142\_Fanridge\_A.dwg

NO.	DATE	REVISIONS
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A	03/19	65% SUBMITTAL SET



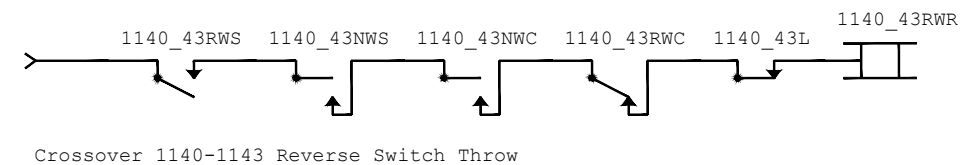
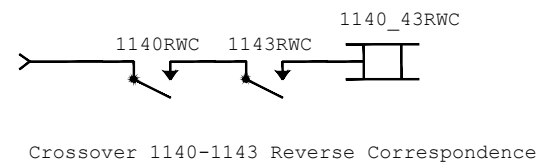
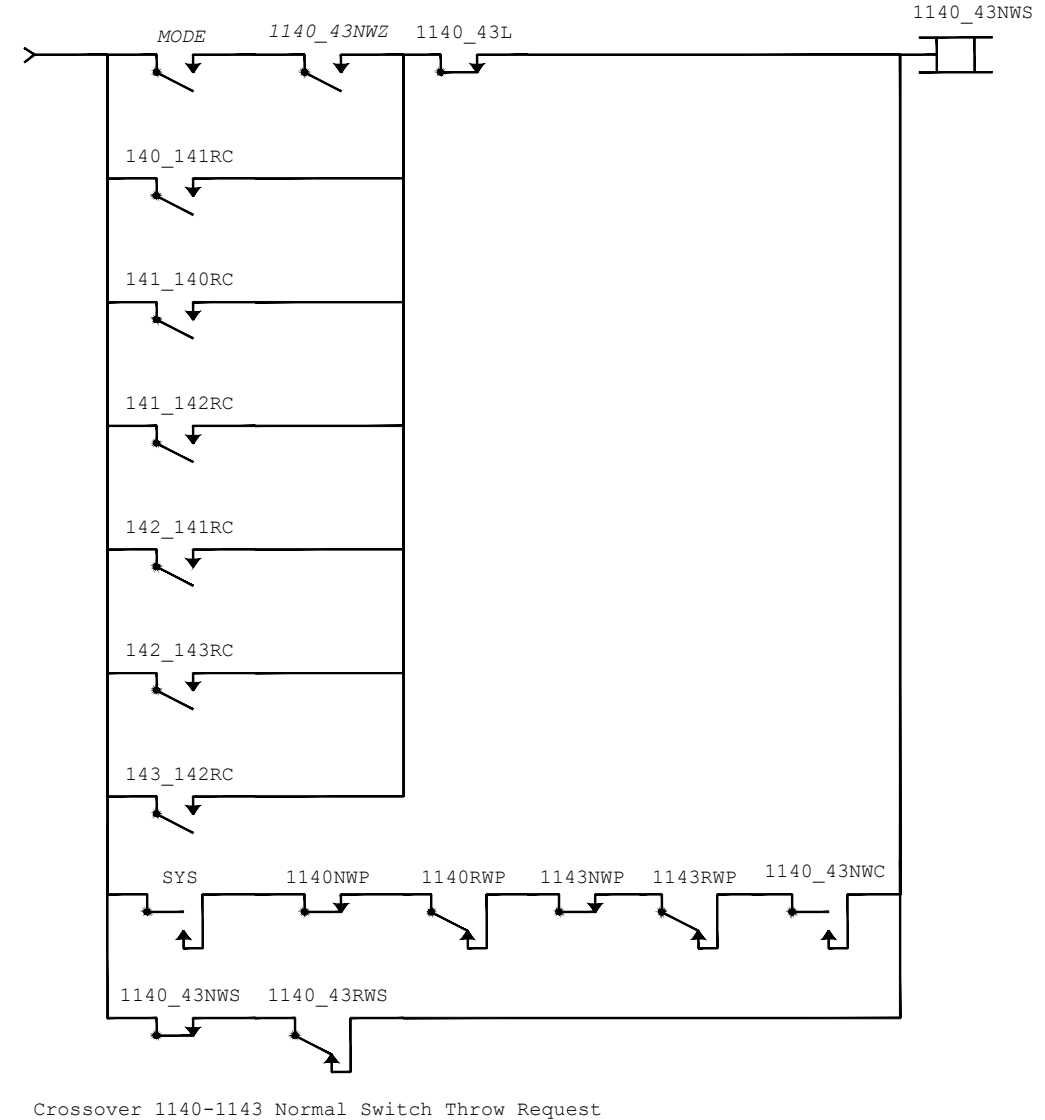
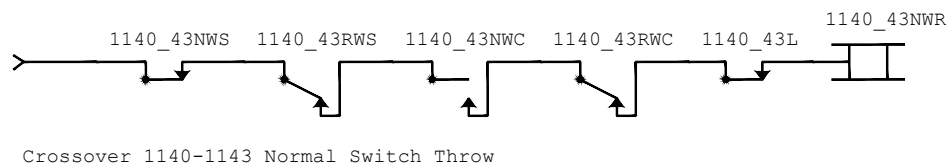
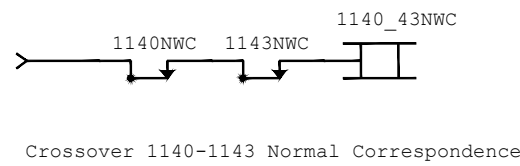
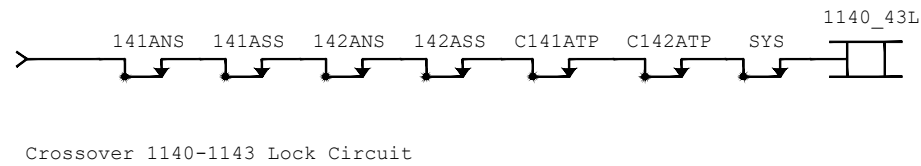
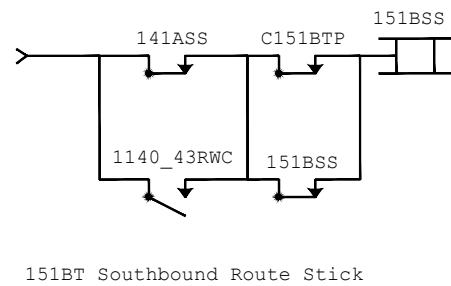
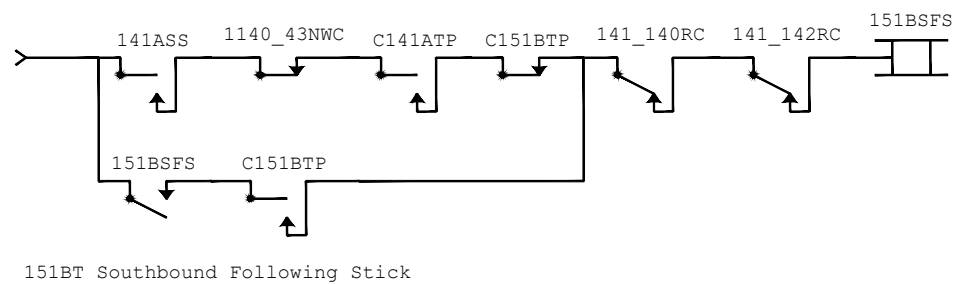
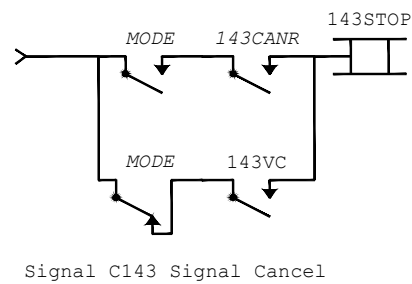
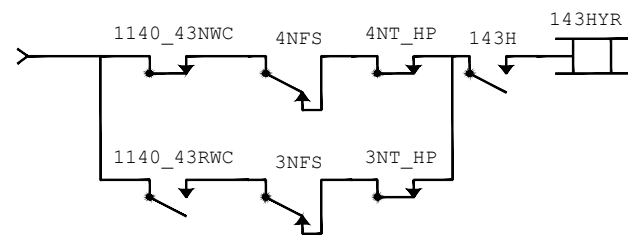
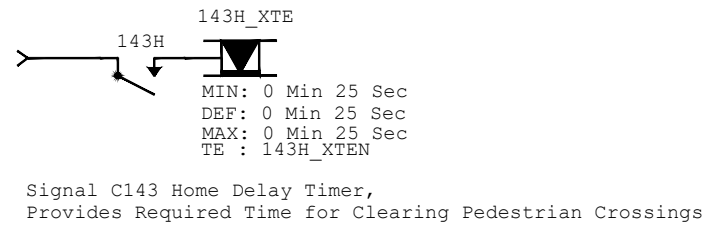
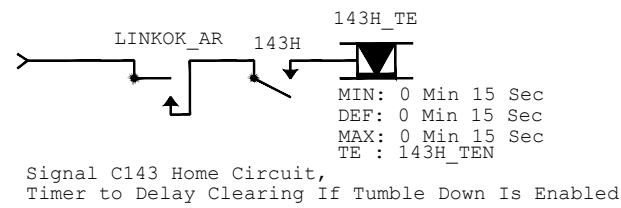
SUBMITTED	
<b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
DESIGNED	CHECKED
M.BAKHIN	V.FAINGOLD
DRAWN	CADD FILE NAME
M.BAKHIN	801JL132.dwg



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CADD FILE DATE	SCALE
03/11/19	NTS
SUBMITTAL DATE	BOARD APPROVAL DATE
06/29/20	

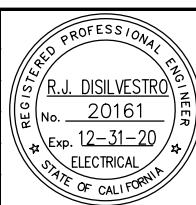
EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS EASTRIDGE INTERLOCKING VITAL LOGIC, ELECTROLOGIXS "A" (14 OF 24)		
PCA NO.	CONTRACT NO.	FILE LOCATION
000	C801	PROJECTWISE

SHEET OF
DRAWING NO.
JL132
REVISION
A



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NO.	DATE	REVISIONS
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A	03/19	65% SUBMITTAL SET

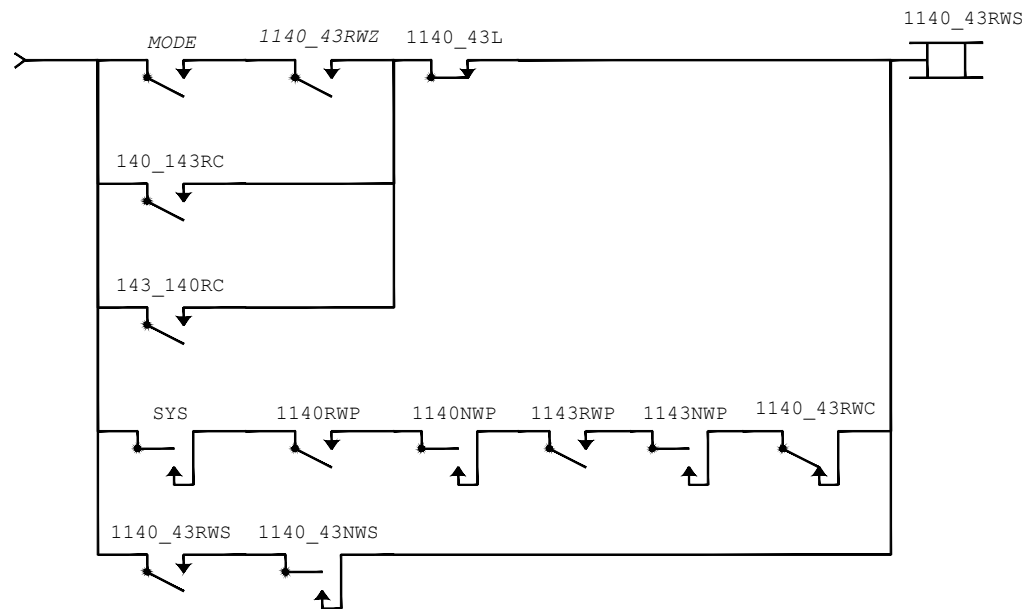


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DESIGNED	M.BAKHIN	CHECKED	V.FAINGOLD
DRAWN	M.BAKHIN	CADD FILE NAME	801JL133.dwg

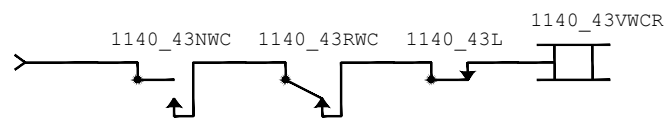


APPROVED		<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	03/11/19	SCALE	NTS
SUBMITTAL DATE	06/29/20	BOARD APPROVAL DATE	

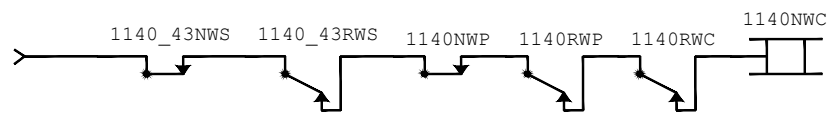
EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS EASTRIDGE INTERLOCKING VITAL LOGIC, ELECTROLOGIXS "A" (15 OF 24)			SHEET OF DRAWING NO. JL133 REVISION A
PCA NO.	000	CONTRACT NO.	C801
FILE LOCATION	PROJECTWISE		



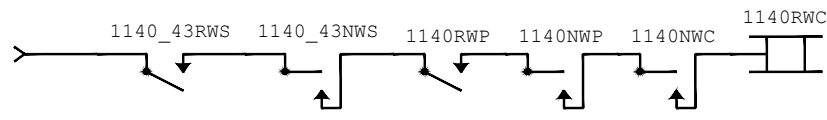
Crossover 1140-1143 Reverse Switch Throw Request



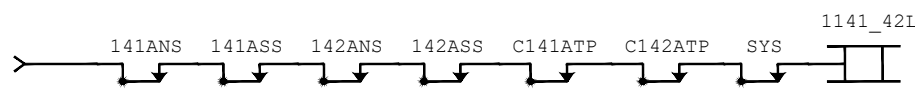
Crossover 1140-1143 VWCR Relay Control



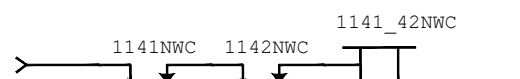
Switch 1140 Normal Correspondence



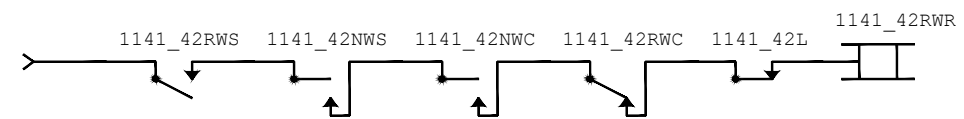
Switch 1140 Reverse Correspondence



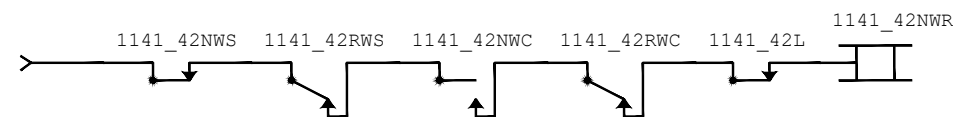
Crossover 1141-1142 Lock Circuit



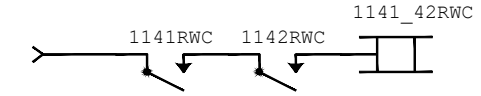
Crossover 1141-1142 Normal Correspondence



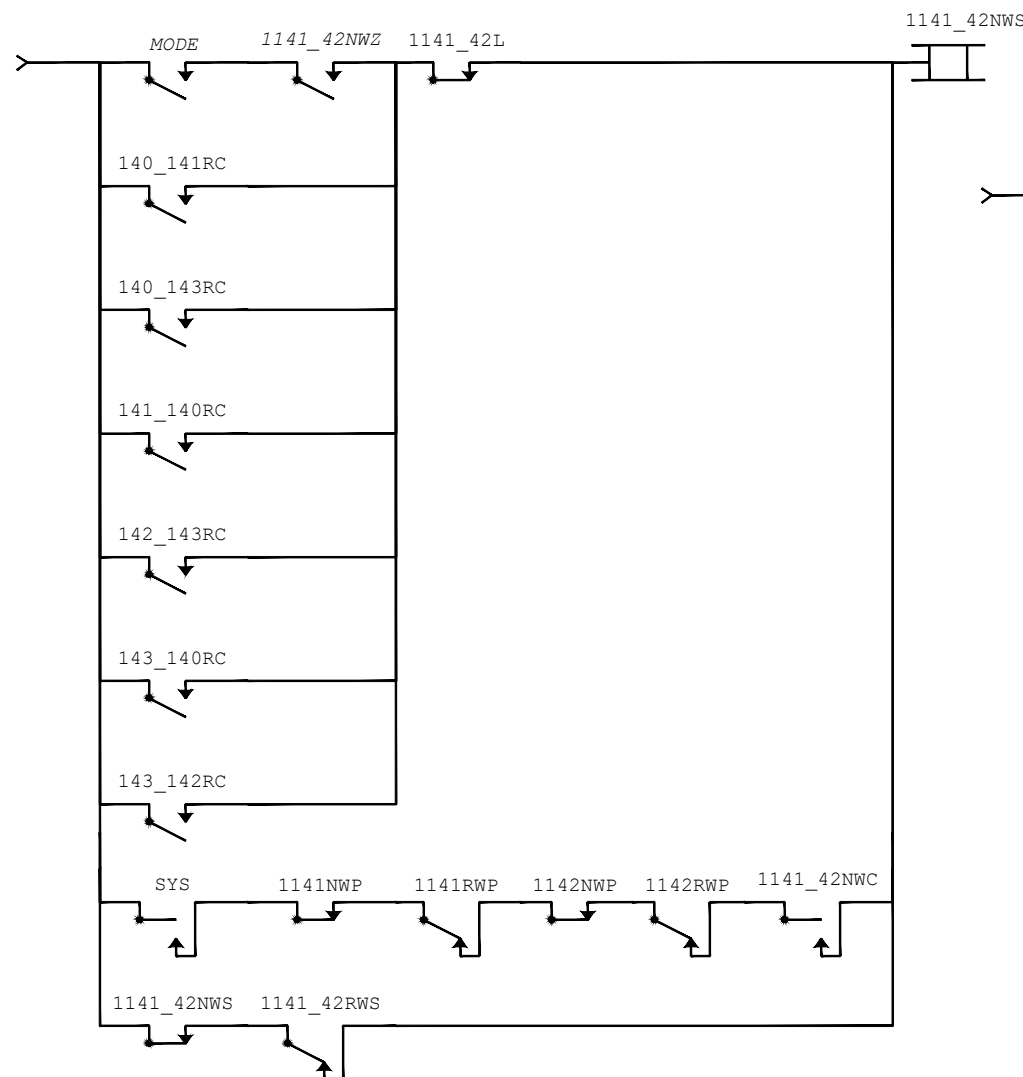
Crossover 1141-1142 Reverse Switch Throw



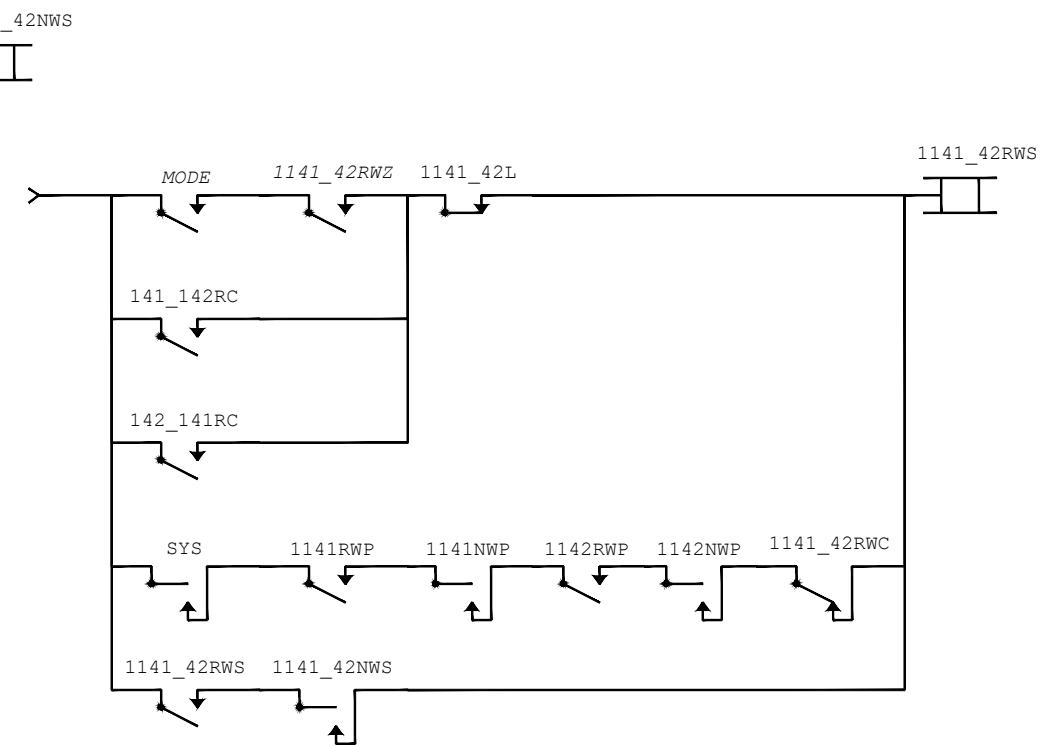
Crossover 1141-1142 Normal Switch Throw



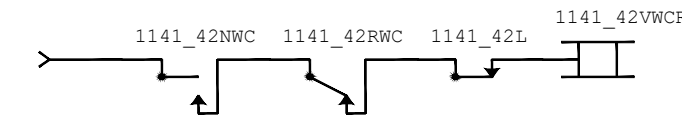
Crossover 1141-1142 Reverse Correspondence



Crossover 1141-1142 Normal Switch Throw Request



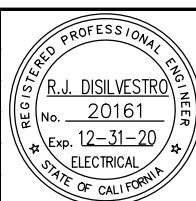
Crossover 1141-1142 Reverse Switch Throw Request



Crossover 1140-1143 VWCR Relay Control

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NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET

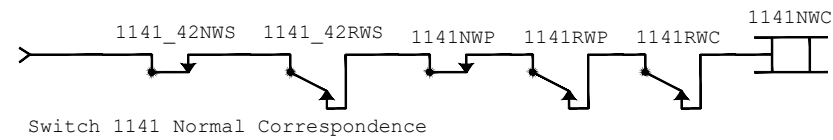


SUBMITTED		<b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
DESIGNED	M.BAKHIN	CHECKED	V.FAINGOLD
DRAWN	M.BAKHIN	CADD FILE NAME	801JL134.dwg

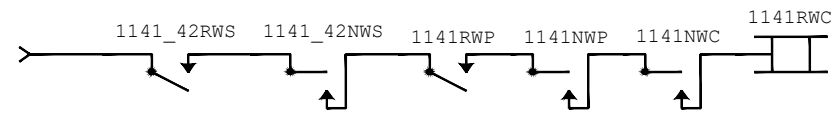


APPROVED		<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	03/11/19	SCALE	NTS
SUBMITTAL DATE	06/29/20	BOARD APPROVAL DATE	

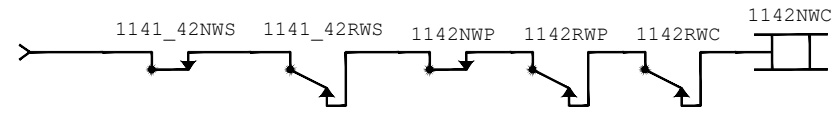
EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS EASTRIDGE INTERLOCKING VITAL LOGIC, ELECTROLOGIX "A" (16 OF 24)			SHEET OF DRAWING NO. JL134 REVISION A
PCA NO.	000	CONTRACT NO.	C801
FILE LOCATION	PROJECTWISE		



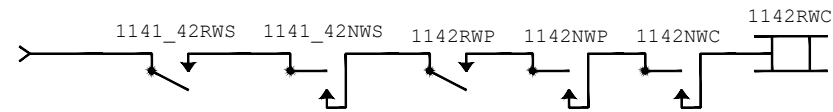
Switch 1141 Normal Correspondence



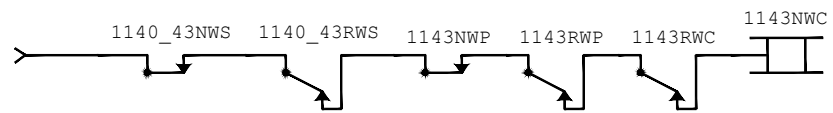
Switch 1141 Reverse Correspondence



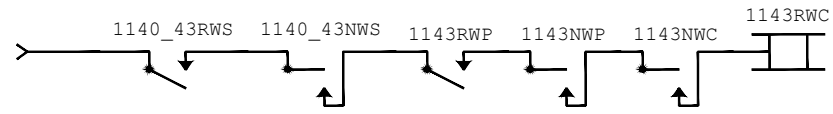
Switch 1142 Normal Correspondence



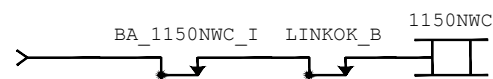
Switch 1142 Reverse Correspondence



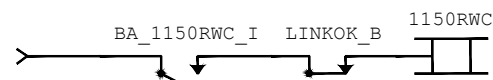
Switch 1143 Normal Correspondence



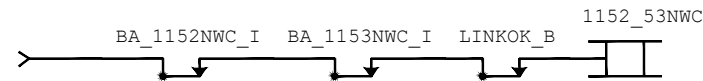
Switch 1143 Reverse Correspondence



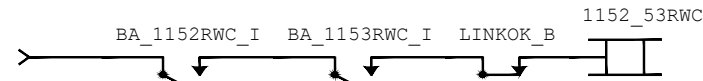
Switch 1150 Normal Correspondence, Repeater From Vital Processor "B"



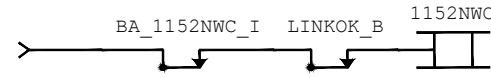
Switch 1150 Reverse Correspondence, Repeater From Vital Processor "B"



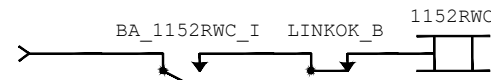
Crossover 1152-1153 Normal Correspondence



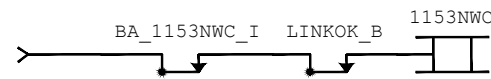
Crossover 1152-1153 Reverse Correspondence



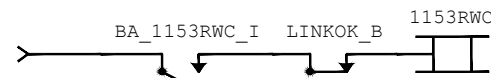
Switch 1152 Normal Correspondence, Repeater From Vital Processor "B"



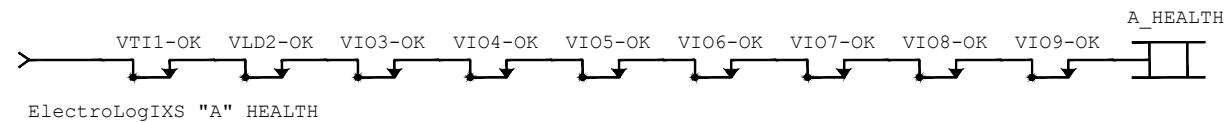
Switch 1152 Reverse Correspondence, Repeater From Vital Processor "B"



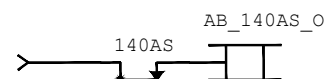
Switch 1153 Normal Correspondence, Repeater From Vital Processor "B"



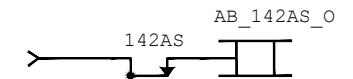
Switch 1153 Reverse Correspondence, Repeater From Vital Processor "B"



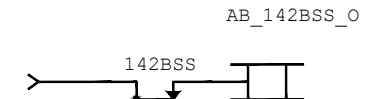
ElectroLogIXS "A" HEALTH



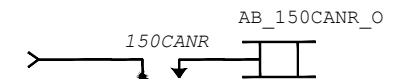
Signal 140 Approach Stick Route Locking Equation, Sent to Vital Processor "B"



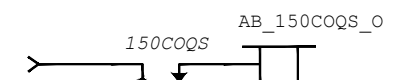
Signal 142 Approach Stick Route Locking Equation, Sent to Vital Processor "B"



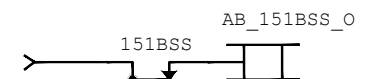
Signal 142BT Southbound Route Stick, Sent to Vital Processor "B"



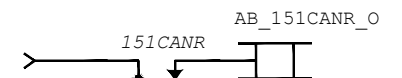
Signal C150 Route Request Cancel From LCP Or Central Control, Sent to Vital Processor "B"



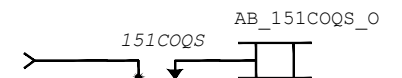
Signal C150 Call-On Request From LCP Or Central Control, Sent to Vital Processor "B"



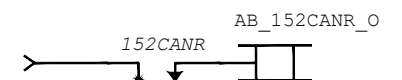
Signal 151BT Southbound Route Stick, Sent to Vital Processor "B"



Signal C151 Route Request Cancel From LCP Or Central Control, Sent to Vital Processor "B"



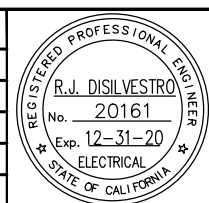
Signal C151 Call-On Request From LCP Or Central Control, Sent to Vital Processor "B"



Signal C152 Route Request Cancel From LCP Or Central Control, Sent to Vital Processor "B"

Jun 22, 2020 - 11:31am C:\cadd\B\_Vw\jfookas\west\0139440\01JL135-142\_Eastridge\_A\_V.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



SUBMITTED

**HNTB** HNTB Corporation  
Engineers Architects Planners  
1732 North First Street, Suite 400 San Jose, CA 95112  
Tel (408) 451-7300 Fax (408) 451-6942

DESIGNED: M.BAKHIN CHECKED: V.FAINGOLD  
DRAWN: M.BAKHIN CADD FILE NAME: 801JL135.dwg



APPROVED

**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

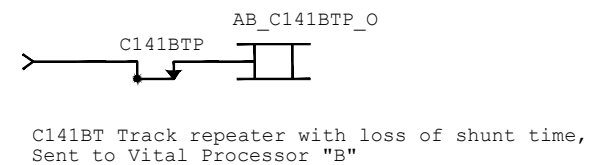
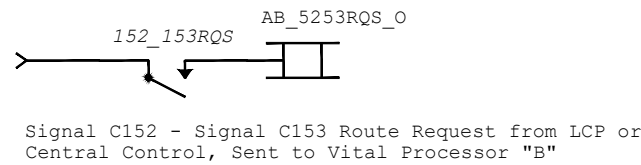
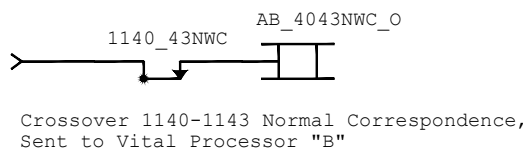
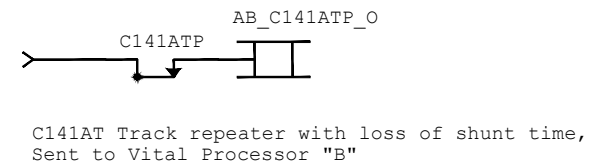
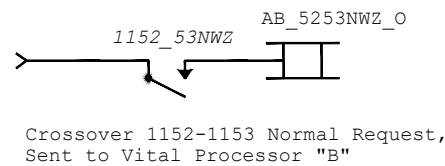
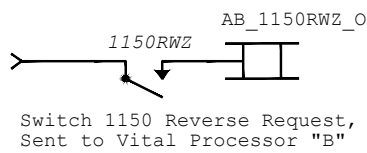
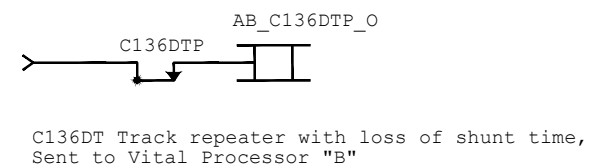
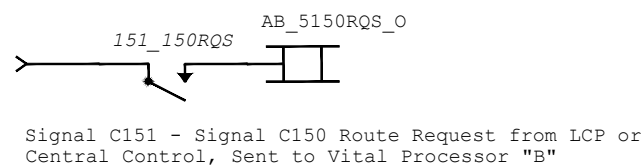
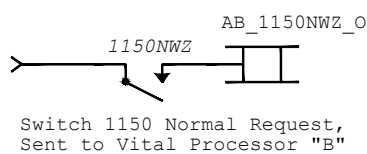
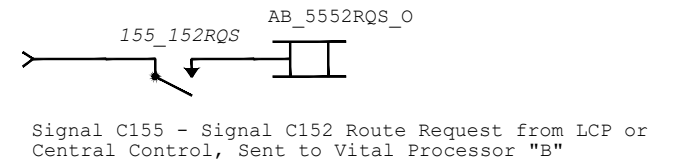
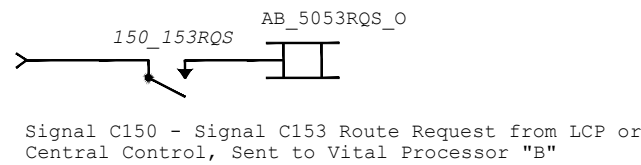
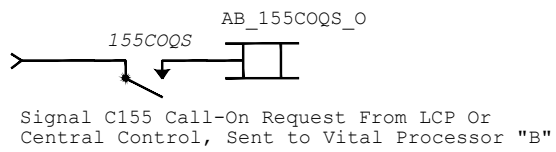
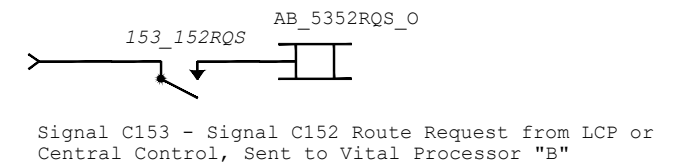
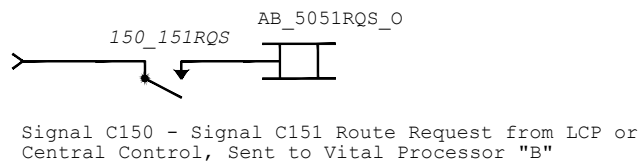
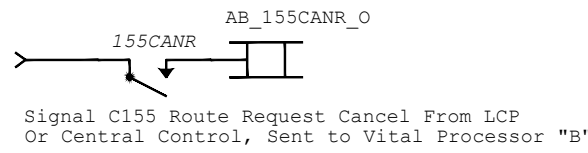
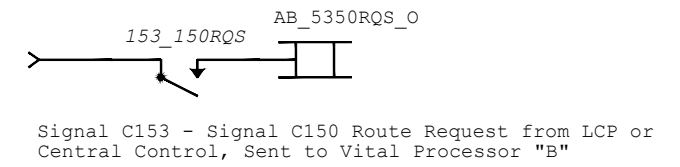
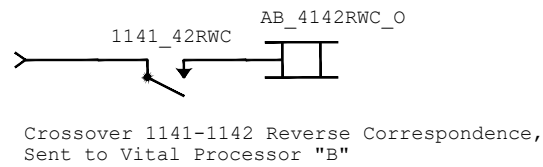
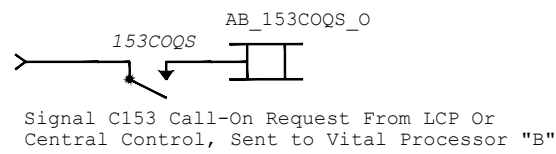
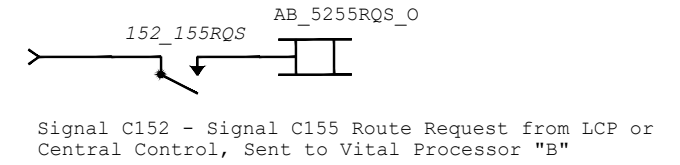
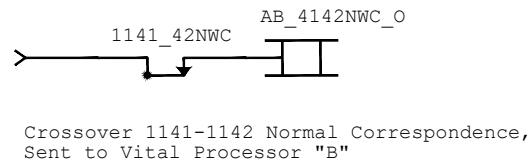
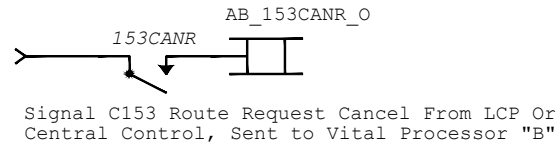
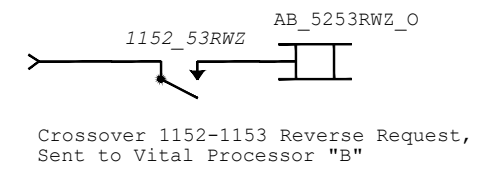
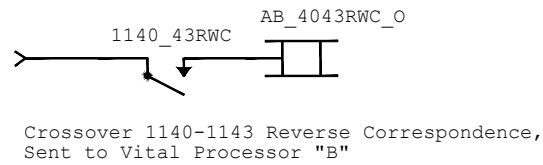
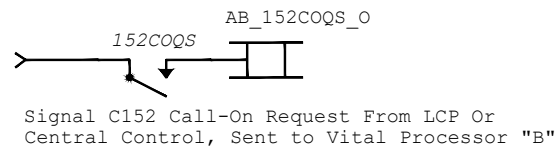
CADD FILE DATE: 03/11/19 SCALE: NTS  
SUBMITTAL DATE: 06/29/20 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
EASTRIDGE INTERLOCKING  
VITAL LOGIC, ELECTROLOGIXS "A" (17 OF 24)

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

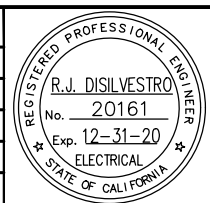
SHEET OF DRAWING NO. JL135 REVISION A





Jun 22, 2020 - 11:31am C:\cadd\B\_Vaw\jfoakes\west\00139440\001JL136-142\_Eastridge\_A\_V.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



**HNTB** HNTB Corporation  
 Engineers Architects Planners  
 1732 North First Street, Suite 400 San Jose, CA 95112  
 Tel (408) 451-7300 Fax (408) 451-6942

DESIGNED: M.BAKHIN  
 CHECKED: V.FAINGOLD  
 DRAWN: M.BAKHIN  
 CADD FILE NAME: 801JL136.dwg



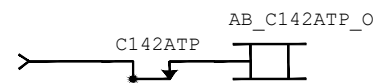
**BKF** 100+ YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/11/19  
 SUBMITTAL DATE: 06/29/20  
 SCALE: NTS  
 BOARD APPROVAL DATE:

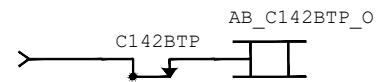
EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 LRT SIGNAL SYSTEMS  
 EASTRIDGE INTERLOCKING  
 VITAL LOGIC, ELECTROLOGIXS "A" (18 OF 24)

PCA NO.: 000  
 CONTRACT NO.: C801  
 FILE LOCATION: PROJECTWISE

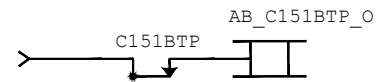
SHEET OF	
DRAWING NO.	JL136
REVISION	A



C142AT Track repeater with loss of shunt time, Sent to Vital Processor "B"



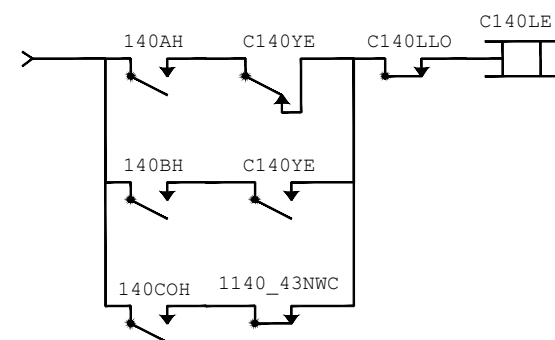
C142BT Track repeater with loss of shunt time, Sent to Vital Processor "B"



C151BT Track repeater with loss of shunt time, Sent to Vital Processor "B"



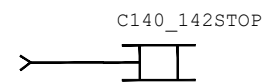
Link Health Status Repeater, Sent to Vital Processor "B"



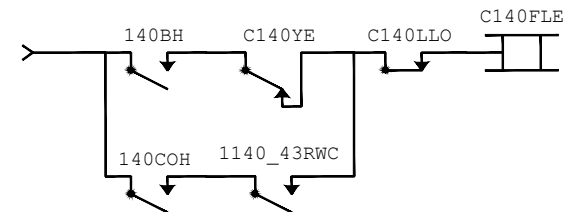
Signal C140 Lunar



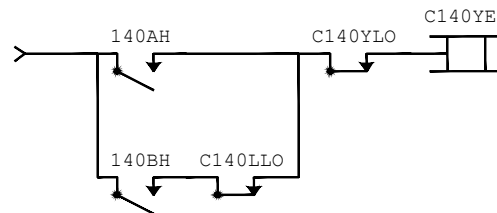
Signal C140 Red



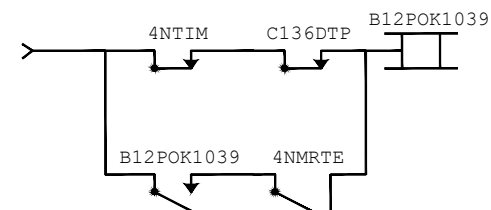
Signals C140, C142 STOP



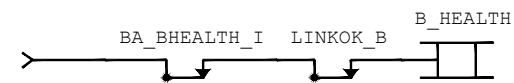
Signal C140 Flashing Lunar



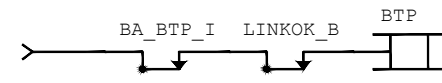
Signal C140 Yellow



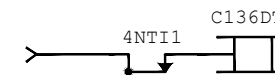
Signal Case SC1039 B12 Low Voltage Central Office Indication



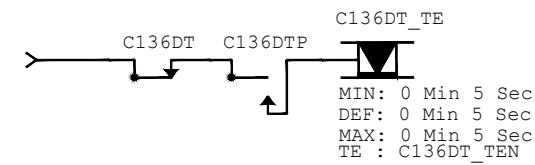
ElectroLogIXS "B" HEALTH, Repeater From Vital Processor "B"



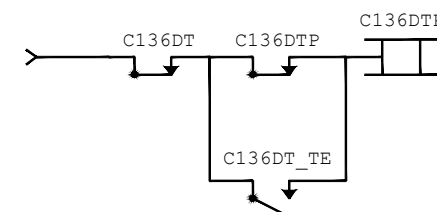
BT Track Repeater with Loss of Shunt Time, Repeater From Vital Processor "B"



C136DT Track (4NTI1 Code Repeater)



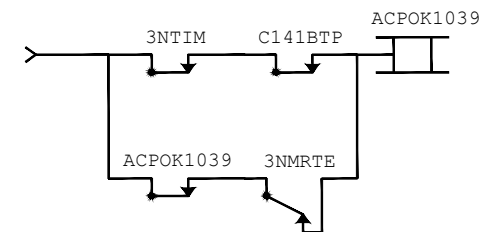
136DT Loss of shunt timer



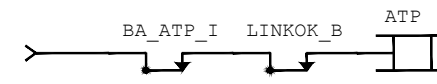
C136DT Track repeater with loss of shunt time



MODE Circuit, LCP Or Central Control, Sent to Vital Processor "B"



Signal Case SC1039 AC Low Voltage Indication



AT Track Repeater with Loss of Shunt Time, Repeater From Vital Processor "B"

Jun 22, 2020 - 11:31am C:\cadd\B\_Vow\yofowkes\west\0139440\01JL137-142\_Eastridge\_A\_V.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET

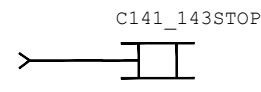


SUBMITTED		<b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
DESIGNED	M.BAKHIN	CHECKED	V.FAINGOLD
DRAWN	M.BAKHIN	CADD FILE NAME	801JL137.dwg

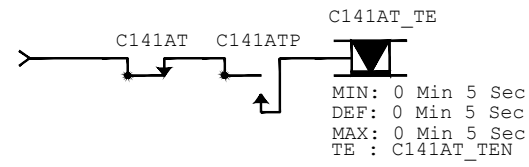


APPROVED		<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	03/11/19	SCALE	NTS
SUBMITTAL DATE	06/29/20	BOARD APPROVAL DATE	

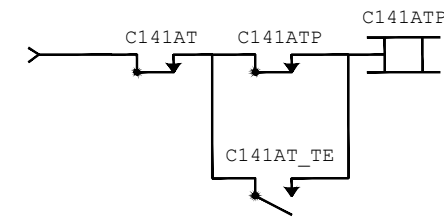
EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS EASTRIDGE INTERLOCKING VITAL LOGIC, ELECTROLOGIXS "A" (19 OF 24)			SHEET OF DRAWING NO. JL137 REVISION A
PCA NO.	CONTRACT NO.	FILE LOCATION	
000	C801	PROJECTWISE	



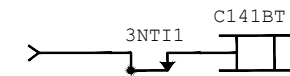
Signals C141, C143 STOP



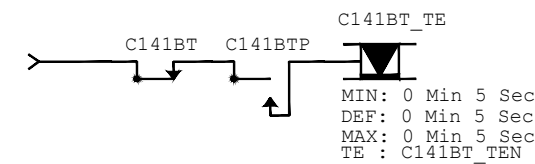
141AT Loss of shunt timer



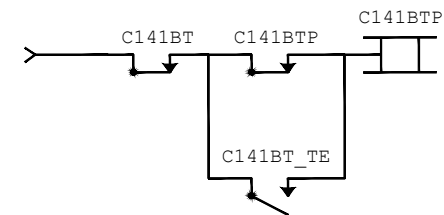
C141AT Track repeater with loss of shunt time



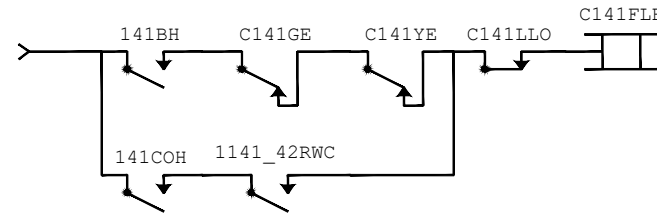
C141BT Track (3NTI1 Code Repeater)



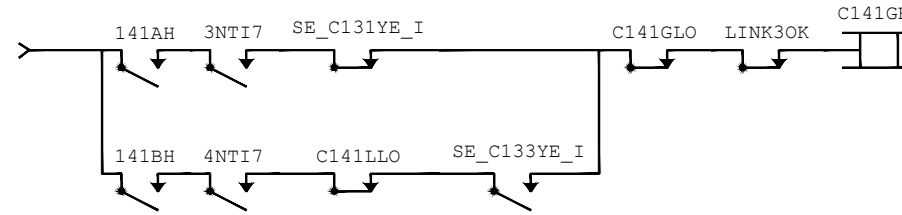
141BT Loss of shunt timer



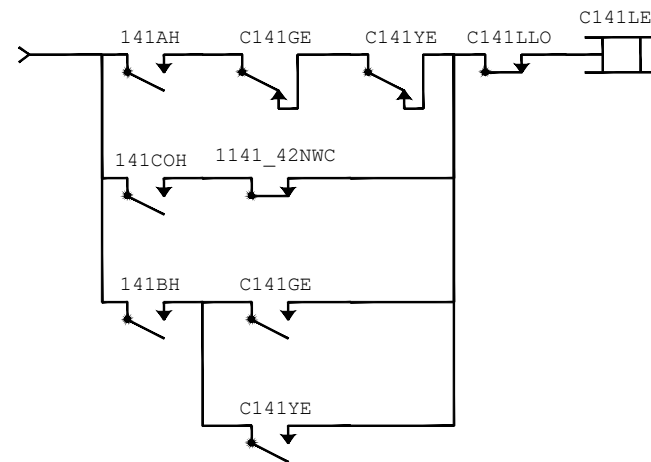
C141BT Track repeater with loss of shunt time



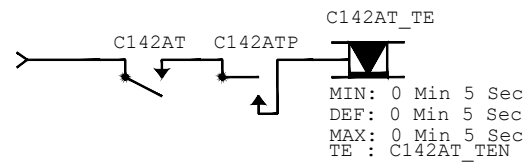
Signal C141 Flashing Lunar



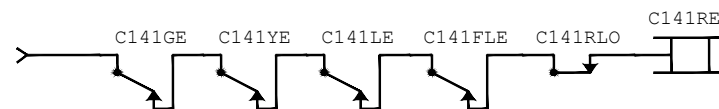
Signal C141 Green



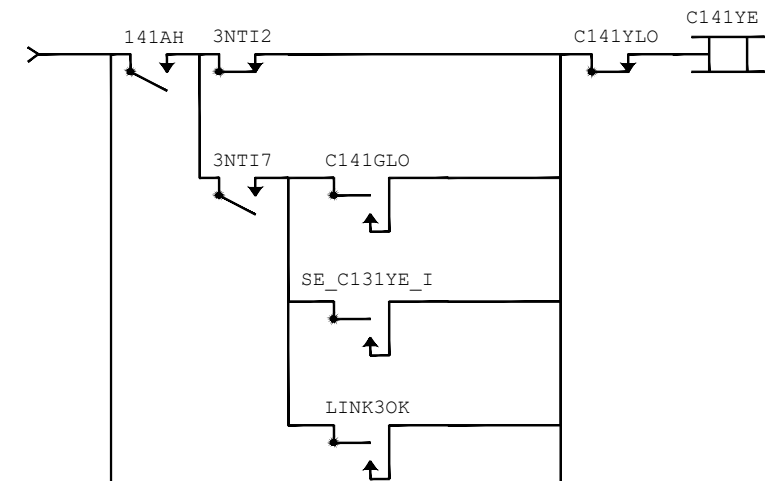
Signal C141 Lunar



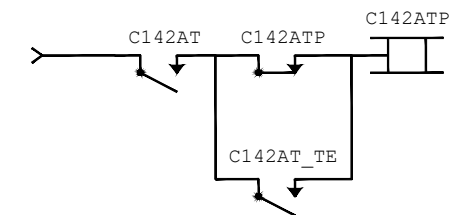
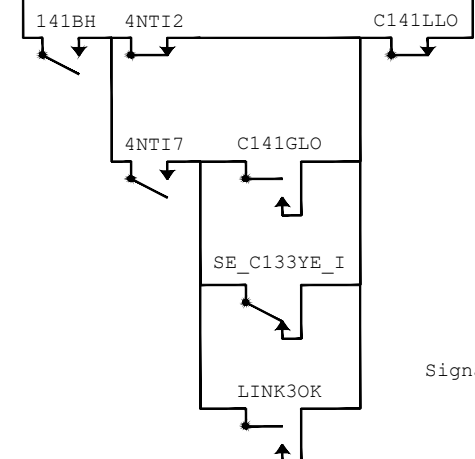
142AT Loss of shunt timer



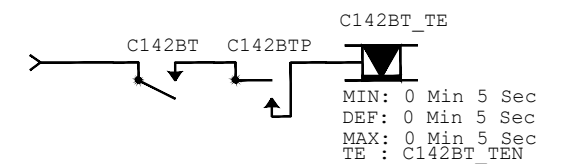
Signal C141 Red



Signal C141 Yellow



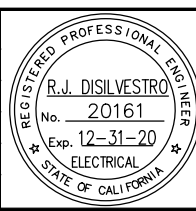
C142AT Track repeater with loss of shunt time



142BT Loss of shunt timer

Jun 22, 2020 - 11:31am C:\cadd\B\_Vaw\yofonkes\west\0139440\01JL138-142\_Eastridge\_A\_V.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



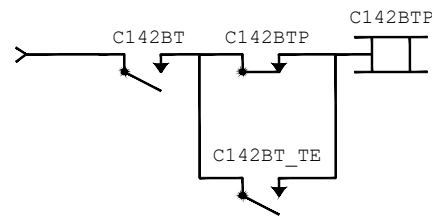
<b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
DESIGNED	CHECKED
M.BAKHIN	V.FAINGOLD
DRAWN	CADD FILE NAME
M.BAKHIN	801JL138.dwg



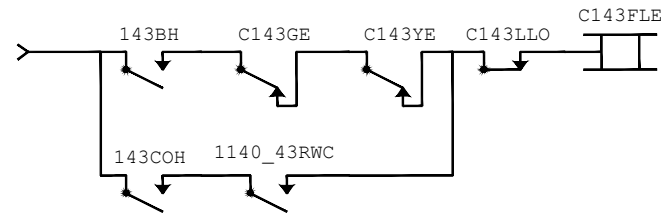
APPROVED <b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	SCALE
03/11/19	NTS
SUBMITTAL DATE	BOARD APPROVAL DATE
06/29/20	

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS EASTRIDGE INTERLOCKING VITAL LOGIC, ELECTROLOGIXS "A" (20 OF 24)		
PCA NO.	CONTRACT NO.	FILE LOCATION
000	C801	PROJECTWISE

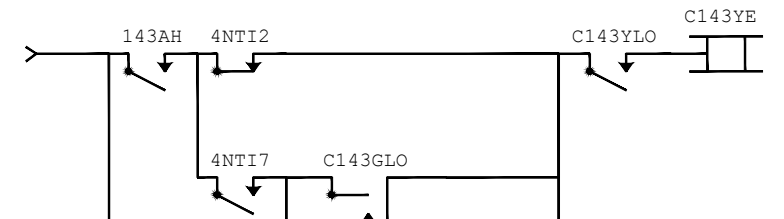
SHEET OF
DRAWING NO.
JL138
REVISION
A



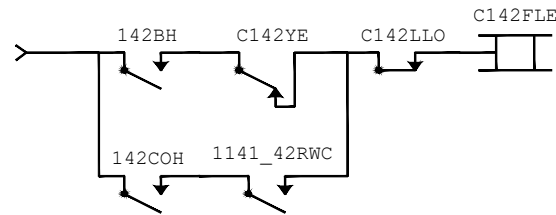
C142BT Track repeater with loss of shunt time



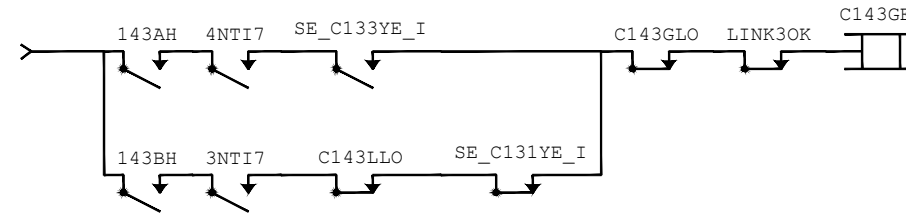
Signal C143 Flashing Lunar



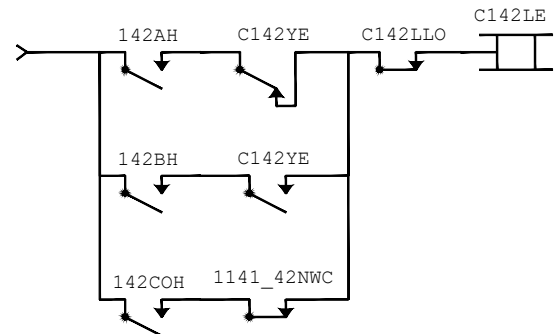
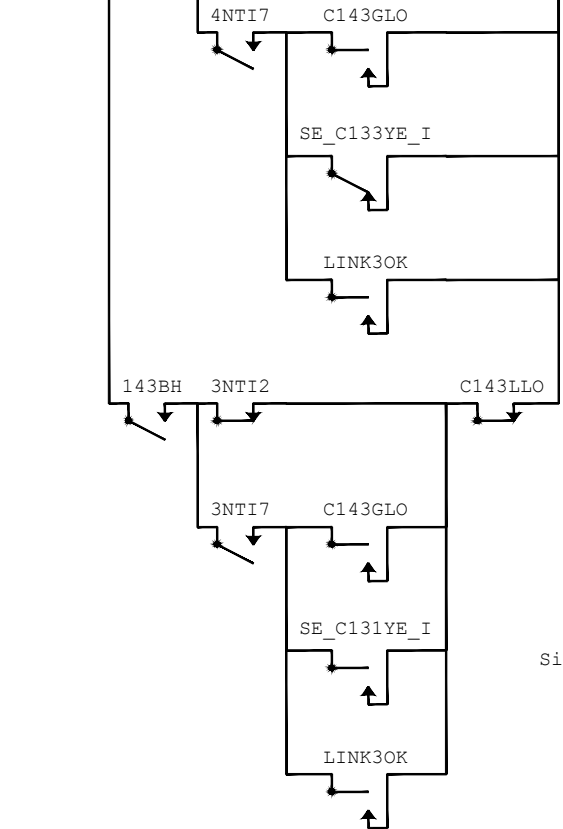
Signal C143 Yellow



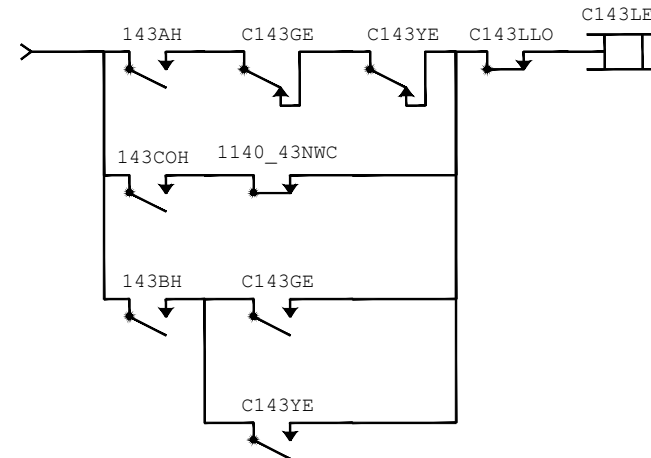
Signal C142 Flashing Lunar



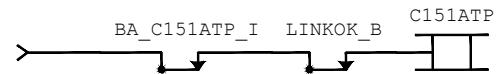
Signal C143 Green



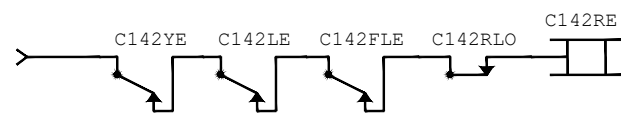
Signal C142 Lunar



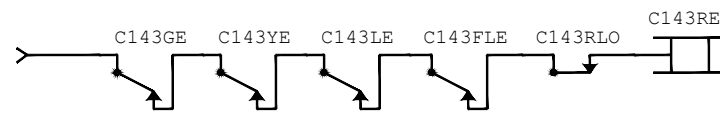
Signal C143 Lunar



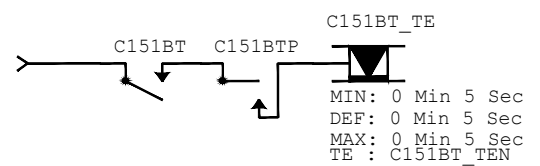
C151AT Track Repeater with Loss of Shunt Time, Repeater From Vital Processor "B"



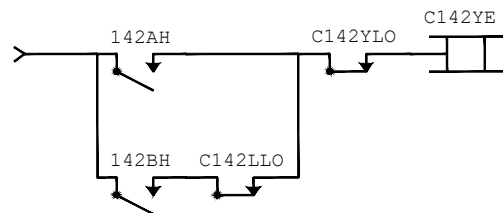
Signal C142 Red



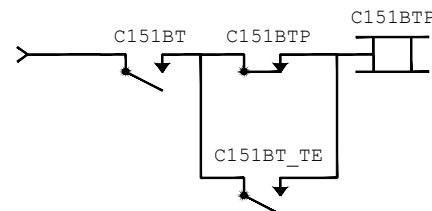
Signal C143 Red



151BT Loss of shunt timer



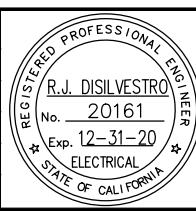
Signal C142 Yellow



C151BT Track repeater with loss of shunt time

Jun 22, 2020 - 11:31am C:\cadd\B\_Vow\jfoakes\west\0139440\01.L119-142\_Eastridge\_A\_V.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



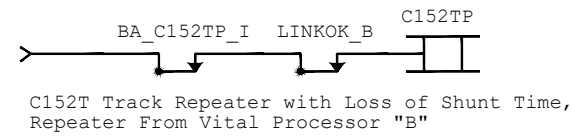
DESIGNED M.BAKHIN		CHECKED V.FAINGOLD	
DRAWN M.BAKHIN		CADD FILE NAME 801JL139.dwg	



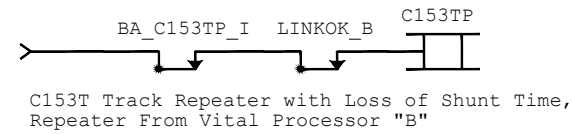
APPROVED <b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE 03/11/19	SCALE NTS
SUBMITTAL DATE 06/29/20	BOARD APPROVAL DATE

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS EASTRIDGE INTERLOCKING VITAL LOGIC, ELECTROLOGIXS "A" (21 OF 24)		
PCA NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE

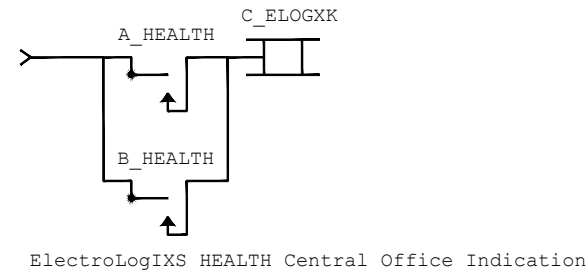
SHEET OF	DRAWING NO. JL139
REVISION	A



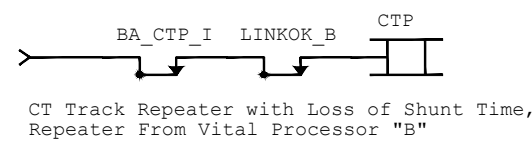
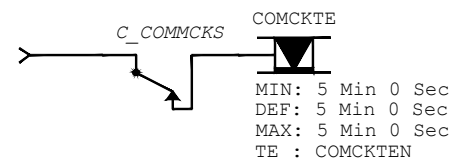
C152T Track Repeater with Loss of Shunt Time, Repeater From Vital Processor "B"



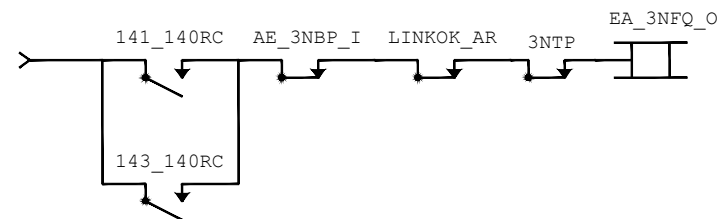
C153T Track Repeater with Loss of Shunt Time, Repeater From Vital Processor "B"



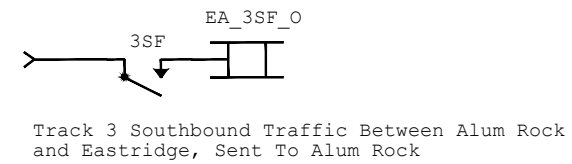
ElectroLogIXS HEALTH Central Office Indication



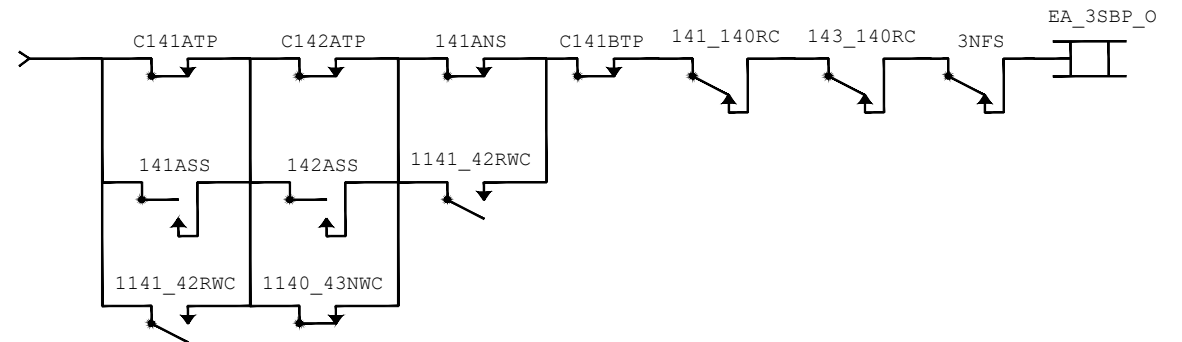
CT Track Repeater with Loss of Shunt Time, Repeater From Vital Processor "B"



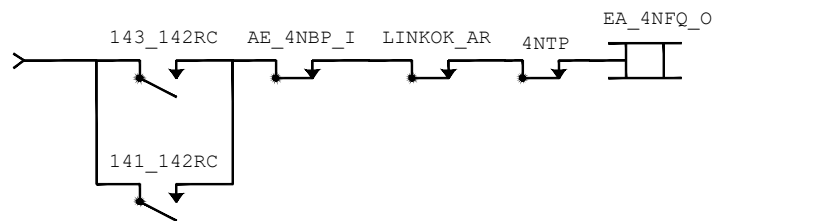
Track 3 Northbound Traffic Request To Alum Rock, Sent to Alum Rock



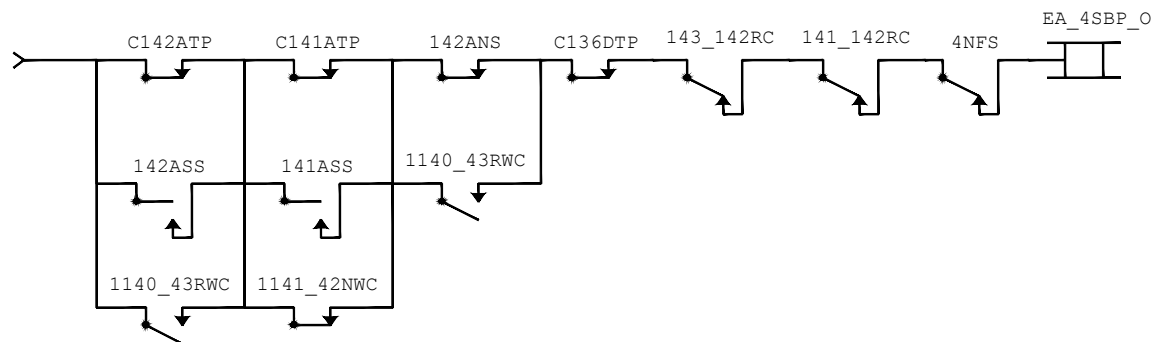
Track 3 Southbound Traffic Between Alum Rock and Eastridge, Sent To Alum Rock



Track 3 Southbound Block Repeater, Sent To Alum Rock



Track 4 Northbound Traffic Request To Alum Rock, Sent to Alum Rock



Track 4 Southbound Block Repeater, Sent To Alum Rock

Jun 22, 2020 - 11:31am C:\cadd\B\_Vow\jfoakes\west\0139440\001\119-142\_Eastridge\_A\_V.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



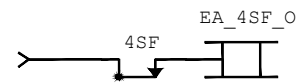
SUBMITTED		<b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
DESIGNED	M.BAKHIN	CHECKED	V.FAINGOLD
DRAWN	M.BAKHIN	CADD FILE NAME	801JL140.dwg



APPROVED		<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	03/11/19	SCALE	NTS
SUBMITTAL DATE	06/29/20	BOARD APPROVAL DATE	

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS EASTRIDGE INTERLOCKING VITAL LOGIC, ELECTROLOGIXS "A" (22 OF 24)			
PCA NO.	000	CONTRACT NO.	C801
FILE LOCATION	PROJECTWISE		

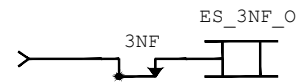
SHEET	OF
DRAWING NO.	JL140
REVISION	A



Track 4 Southbound Traffic Between Alum Rock and Eastridge, Sent To Alum Rock



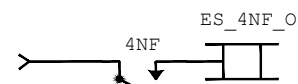
Link Health Status Repeater, Sent to Alum Rock



Track 3 Northbound Traffic Between Alum Rock and Eastridge, Sent to Story



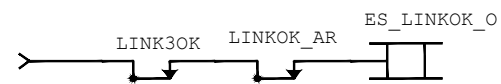
Track 3 Southbound Traffic Between Alum Rock and Eastridge, Sent to Story



Track 4 Northbound Traffic Between Alum Rock and Eastridge, Sent to Story



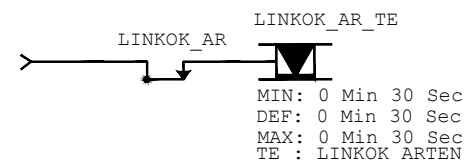
Track 4 Southbound Traffic Between Alum Rock and Eastridge, Sent to Story



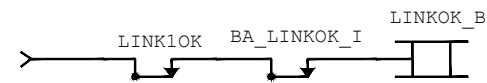
Link Health Status Repeater, Sent to Story



Link Health Status, Alum Rock Vital Processor to Eastridge Vital Processor "A"



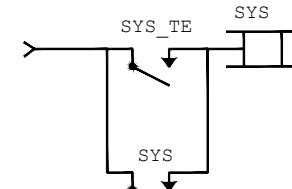
Link Health Status Timer, Alum Rock Vital Processor to Eastridge Vital Processor "A"



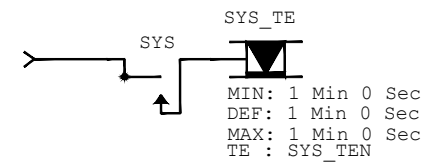
Link Health Status, Vital Processor "A" to Vital Processor "B"



Link Health Status, Eastridge Vital Processor to Story Vital Processor



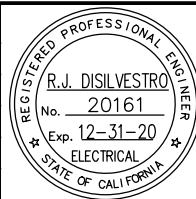
System Power Up Equation



System Power Up 60 Sec Timer

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NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



SUBMITTED		<b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
DESIGNED	M.BAKHIN	CHECKED	V.FAINGOLD
DRAWN	M.BAKHIN	CADD FILE NAME	801JL141.dwg



APPROVED		<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	03/11/19	SCALE	NTS
SUBMITTAL DATE	06/29/20	BOARD APPROVAL DATE	

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS EASTRIDGE INTERLOCKING VITAL LOGIC, ELECTROLOGIX "A" (23 OF 24)			SHEET OF
			DRAWING NO. JL141
			REVISION A
PCA NO.	CONTRACT NO.	FILE LOCATION	
000	C801	PROJECTWISE	

REMOTE INPUTS  
SENT FROM ELECTROLOGIXS "B"

BA_C151ATP_I
BA_C152TP_I
BA_C153TP_I
BA_ATP_I
BA_BTP_I
BA_CTP_I
BA_1150NWC_I
BA_1150RWC_I
BA_1152NWC_I
BA_1152RWC_I
BA_1153NWC_I
BA_1153RWC_I
BA_1150L_I
BA_5253L_I
BA_142BNS_I
BA_151BNS_I
BA_151AS_I
BA_153AS_I
BA_155AS_I
BA_2XTP_I
BA_BHEALTH_I
BA_C150YE_I
BA_C150LE_I
BA_C150FLE_I
BA_C150RE_I
BA_C150COK_I
BA_C150LOK_I
BA_C150TEK_I
BA_C152YE_I
BA_C152LE_I
BA_C152FLE_I
BA_C152RE_I
BA_C152COK_I
BA_C152LOK_I
BA_C152TEK_I
BA_C151YE_I
BA_C151LE_I
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BA_C151COK_I
BA_C151LOK_I
BA_C151TEK_I
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BA_C153RE_I
BA_C153COK_I
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BA_C153TEK_I
BA_C155YE_I
BA_C155LE_I
BA_C155RE_I
BA_C155COK_I
BA_C155LOK_I
BA_C155TEK_I
BA_5051QS_I
BA_5053QS_I
BA_5150QS_I
BA_5253QS_I
BA_5255QS_I
BA_5350QS_I
BA_5352QS_I
BA_5552QS_I
BA_LINKOK_I

REMOTE INPUTS  
SENT FROM ALUM ROCK

AE_3NBP_I
AE_4NBP_I
AE_3SFQ_I
AE_4SFQ_I
AE_3NF_I
AE_4NF_I
AE_LINKOK_I

REMOTE INPUTS  
SENT FROM STORY

SE_140AAVL_I
SE_140AVC_I
SE_142AAVL_I
SE_142AVC_I
SE_4041AVQ_I
SE_4043AVQ_I
SE_4241AVQ_I
SE_4243AVQ_I
SE_C131YE_I
SE_C133YE_I
SE_LINKOK_I

REMOTE OUTPUTS  
SENT TO ELECTROLOGIXS "B"

AB_1150NWZ_O
AB_1150RWZ_O
AB_5253NWZ_O
AB_5253RWZ_O
AB_150CANR_O
AB_151CANR_O
AB_152CANR_O
AB_155CANR_O
AB_153CANR_O
AB_150COQS_O
AB_151COQS_O
AB_152COQS_O
AB_153COQS_O
AB_155COQS_O
AB_5051RQS_O
AB_5053RQS_O
AB_5150RQS_O
AB_5253RQS_O
AB_5255RQS_O
AB_5350RQS_O
AB_5352RQS_O
AB_5552RQS_O
AB_4043NWC_O
AB_4043RWC_O
AB_4142NWC_O
AB_4142RWC_O
AB_MODE_O
AB_C136DTP_O
AB_C141BTP_O
AB_C142BTP_O
AB_C151BTP_O
AB_C141ATP_O
AB_C142ATP_O
AB_140AS_O
AB_142AS_O
AB_142BSS_O
AB_151BSS_O
AB_LINKOK_O

REMOTE OUTPUTS  
SENT TO ALUM ROCK

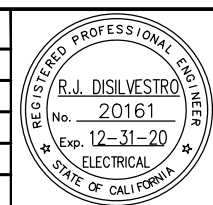
EA_3SBP_O
EA_3SF_O
EA_4SBP_O
EA_4SF_O
EA_3NFQ_O
EA_4NFQ_O
EA_LINKOK_O

REMOTE OUTPUTS  
SENT TO STORY

ES_3SF_O
ES_3NF_O
ES_4SF_O
ES_4NF_O
ES_LINKOK_O

Jun 22, 2020 11:31am C:\cadd\B\_Vow\jfookas\west\0139440\001\119-142\_Eastridge\_A\_V.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



SUBMITTED

**HNTB** HNTB Corporation  
Engineers Architects Planners  
1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942

DESIGNED M.BAKHIN	CHECKED V.FAINGOLD
DRAWN M.BAKHIN	CADD FILE NAME 801JL142.dwg

APPROVED

**Santa Clara Valley Transportation Authority**

APPROVED

**BKF 100+ YEARS**  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE 03/11/19	SCALE NTS
SUBMITTAL DATE 06/29/20	BOARD APPROVAL DATE

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
EASTRIDGE INTERLOCKING  
VITAL LOGIC, ELECTROLOGIXS "A" (24 OF 24)

PCA NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE
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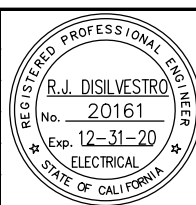
SHEET OF	
DRAWING NO.	JL142
REVISION	A

EASTRIDGE INTERLOCKING  
ELECTROLOGIXS "B"  
VITAL LOGIC  
EQUATION INDEX

Equation	Sheet						
2XCR	2	152AS	7	1150VWCR	12	BA_C151LE_O	15
2XT_TE	2	152AS_TE	7	1152_53L	12	BA_C151LOK_O	15
2XTP	2	152BH	7	1152_53NWC	12	BA_C151RE_O	15
142BNFS	2	152COH	7	1152_53NWR	12	BA_C151TEK_O	15
142BNS	2	152H	7	1152_53NWS	13	BA_C151YE_O	15
150_151COQS	2	152H_XTE	7	1152_53RWC	13	BA_C152COK_O	15
150_151QS	2	152HYR	8	1152_53RWR	13	BA_C152FLE_O	15
150_151QSHP	2	152NS	8	1152_53RWS	13	BA_C152LE_O	15
150_151RC	2	152SS	8	1152_53VWCR	13	BA_C152LOK_O	15
150_153COQS	3	152STOP	8	1152NWC	13	BA_C152RE_O	15
150_153QS	3	153_150COQS	8	1152RWC	13	BA_C152TEK_O	15
150_153QSHP	3	153_150QS	8	1153NWC	13	BA_C152TP_O	15
150_153RC	3	153_150QSHP	8	1153RWC	13	BA_C152YE_O	15
150AH	3	153_150RC	8	AT_TE	14	BA_C153COK_O	15
150AP	3	153_152COQS	8	ATP	14	BA_C153FLE_O	15
150AS	3	153_152QS	9	B_HEALTH	14	BA_C153LE_O	16
150AS_TE	3	153_152QSHP	9	BA_2XTP_O	14	BA_C153LOK_O	16
150BH	4	153_152RC	9	BA_142BNS_O	14	BA_C153RE_O	16
150COH	4	153AH	9	BA_151AS_O	14	BA_C153TEK_O	16
150H	4	153AP	9	BA_151BNS_O	14	BA_C153TP_O	16
150HYR	4	153AS	9	BA_153AS_O	14	BA_C153YE_O	16
150STOP	4	153AS_TE	9	BA_155AS_O	14	BA_C155COK_O	16
151_150COQS	4	153BH	10	BA_1150L_O	14	BA_C155LE_O	16
151_150QS	4	153COH	10	BA_1150NWC_O	14	BA_C155LOK_O	16
151_150QSHP	4	153H	10	BA_1150RWC_O	14	BA_C155RE_O	16
151_150RC	5	153H_XTE	10	BA_1152NWC_O	14	BA_C155TEK_O	16
151AH	5	153HYR	10	BA_1152RWC_O	14	BA_C155YE_O	16
151ANS	5	153NS	10	BA_1153NWC_O	14	BA_CTP_O	16
151AP	5	153SS	10	BA_1153RWC_O	14	BA_LINKOK_O	16
151AS	5	153STOP	10	BA_5051QS_O	14	BT_TE	16
151AS_TE	5	155_152COQS	10	BA_5053QS_O	14	BTP	16
151ASS	5	155_152QS	11	BA_5150QS_O	14	C150_152STOP	16
151BNFS	5	155_152QSHP	11	BA_5253L_O	14	C150FLE	16
151BNS	5	155_152RC	11	BA_5253QS_O	14	C150LE	16
151COH	5	155AH	11	BA_5255QS_O	14	C150RE	16
151H	6	155AP	11	BA_5350QS_O	14	C150YE	16
151HYR	6	155AS	11	BA_5352QS_O	15	C151_153STOP	16
151STOP	6	155AS_TE	11	BA_5552QS_O	15	C151AT_TE	16
152_153COQS	6	155COH	11	BA_ATP_O	15	C151ATP	16
152_153QS	6	155H	11	BA_BHEALTH_O	15	C151LE	16
152_153QSHP	6	155H_XTE	12	BA_BTP_O	15	C151RE	17
152_153RC	6	155HYR	12	BA_C150COK_O	15	C151YE	17
152_155COQS	6	155STOP	12	BA_C150FLE_O	15	C152FLE	17
152_155QS	6	1150L	12	BA_C150LE_O	15	C152LE	17
152_155QSHP	6	1150NWC	12	BA_C150LOK_O	15	C152RE	17
152_155RC	7	1150NWR	12	BA_C150RE_O	15	C152T_TE	17
152AH	7	1150NWS	12	BA_C150TEK_O	15	C152TP	17
152AP	7	1150RWC	12	BA_C150YE_O	15	C152YE	17
		1150RWR	12	BA_C151ATP_O	15	C153FLE	17
		1150RWS	12	BA_C151COK_O	15	C153LE	17

Jun 22, 2020 - 11:31am C:\cadd\B\_Vaw\jfoakes\west\0139440\001L143-160\_Eastridge\_B\_Vaw.dwg

C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET
NO.	DATE	REVISIONS



SUBMITTED

**HNTB** HNTB Corporation  
Engineers Architects Planners  
1732 North First Street, Suite 400 San Jose, CA 95112  
Tel (408) 451-7300 Fax (408) 451-6942

DESIGNED	M.BAKHIN	CHECKED	V.FAINGOLD
DRAWN	M.BAKHIN	CADD FILE NAME	801JL143.dwg

**Santa Clara Valley Transportation Authority**

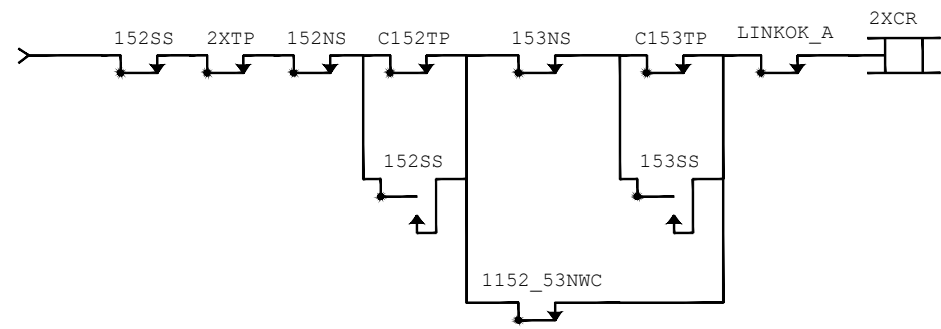
APPROVED

**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

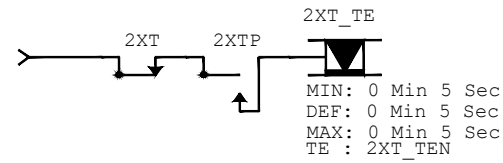
CADD FILE DATE	03/11/19	SCALE	NTS
SUBMITTAL DATE	06/29/20	BOARD APPROVAL DATE	

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS EASTRIDGE INTERLOCKING VITAL LOGIC, ELECTROLOGIXS "B" (1 OF 18)			SHEET OF DRAWING NO. JL143 REVISION B
PCA NO.	CONTRACT NO.	FILE LOCATION	
000	C801	PROJECTWISE	

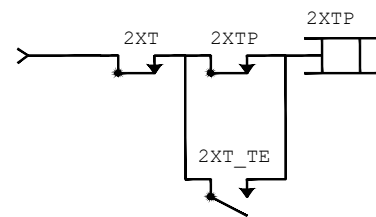




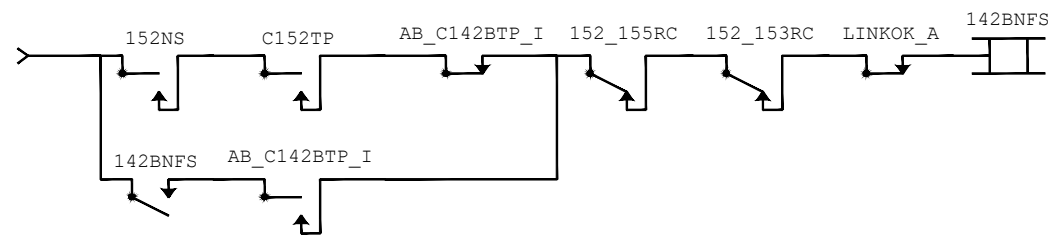
Ped Xing #2 Activation Circuits



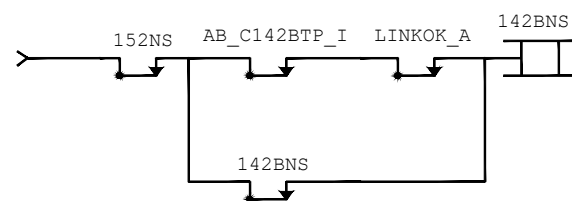
2XT Loss of shunt timer



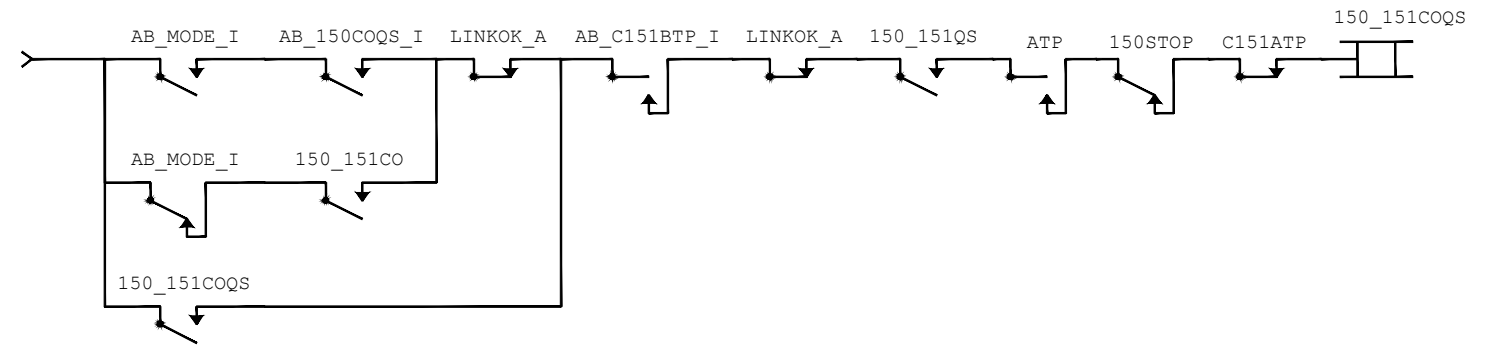
2XT Track repeater with loss of shunt time



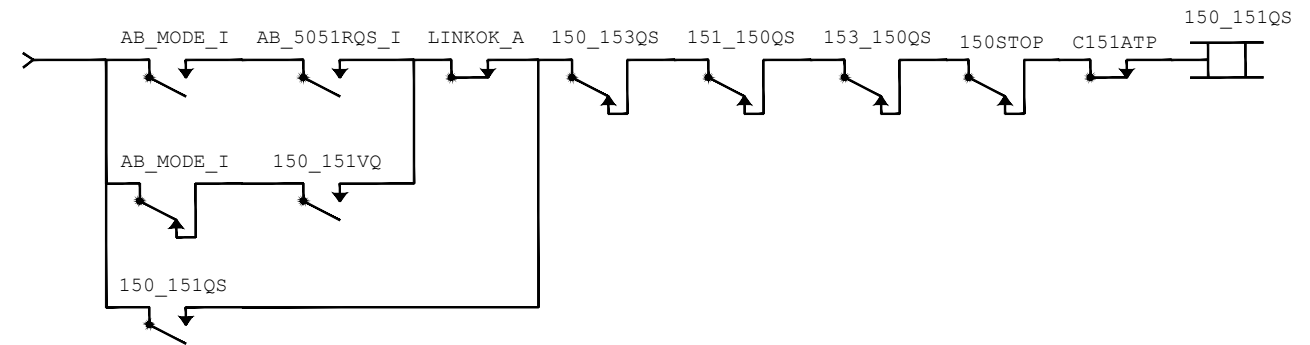
142BT Northbound Following Stick



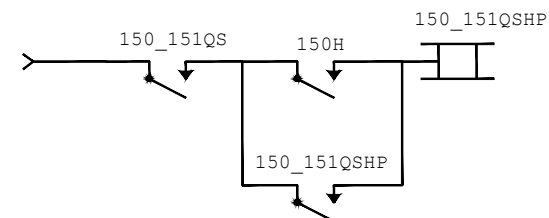
142BT Northbound Route Stick



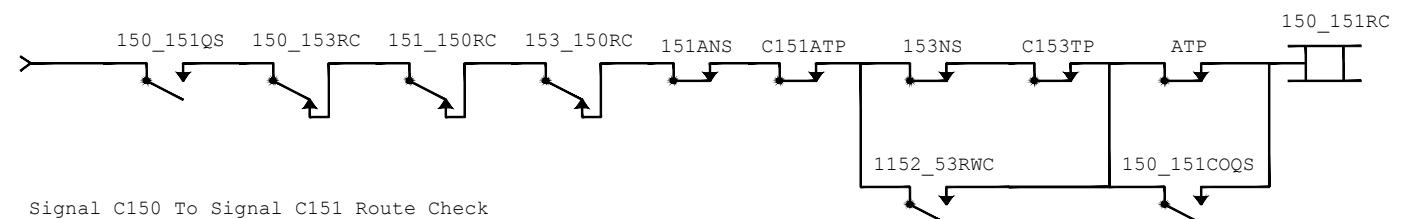
Signal C150 To Signal C151 Call-On Route Request



Signal C150 To Signal C151 Route Request



Signal C150 - C151 Request/H Stick Circuit. Prevents AS From Picking If Request Is Entered



Signal C150 To Signal C151 Route Check

Jun 22, 2020 - 11:31am C:\cadd\B\_Vaw\jofonkas\west\00139440\001L143-160\_Eastridge\_B\_V.dwg

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



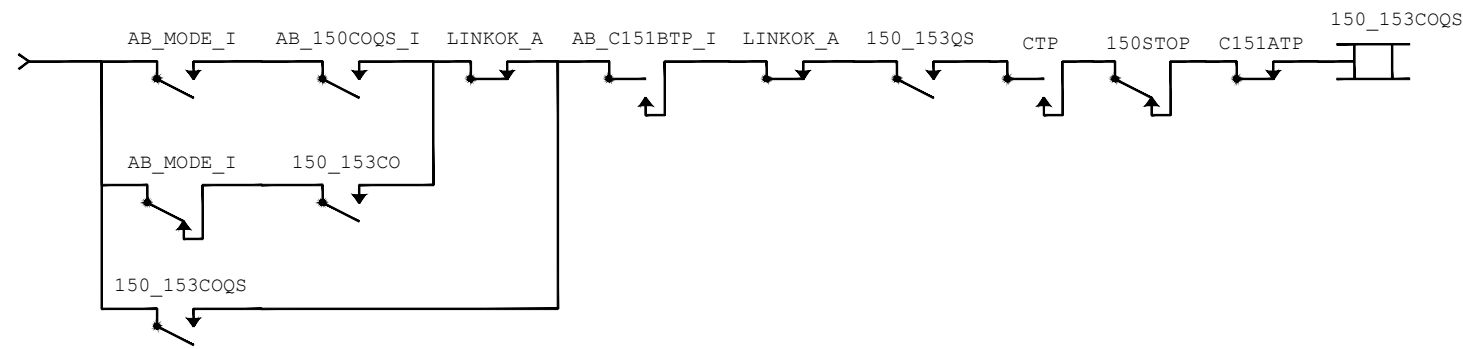
SUBMITTED	
<b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
DESIGNED	CHECKED
M.BAKHIN	V.FAINGOLD
DRAWN	CADD FILE NAME
M.BAKHIN	801JL144.dwg



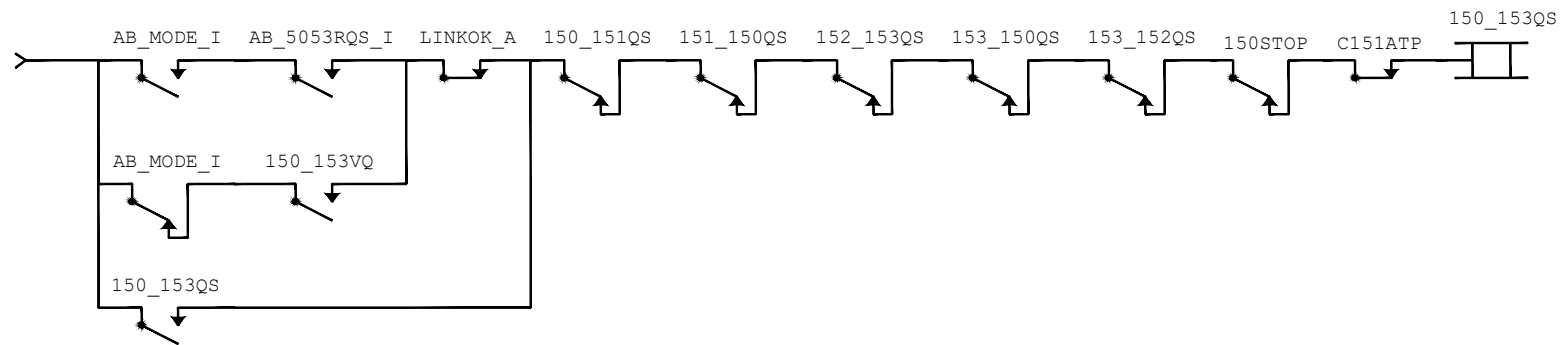
APPROVED	
<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	SCALE
03/11/19	NTS
SUBMITTAL DATE	BOARD APPROVAL DATE
06/29/20	

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS EASTRIDGE INTERLOCKING VITAL LOGIC, ELECTROLOGIXS "B" (2 OF 18)		
PCA NO.	CONTRACT NO.	FILE LOCATION
000	C801	PROJECTWISE

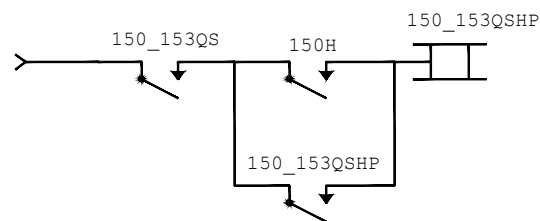
SHEET OF
DRAWING NO.
JL144
REVISION
A



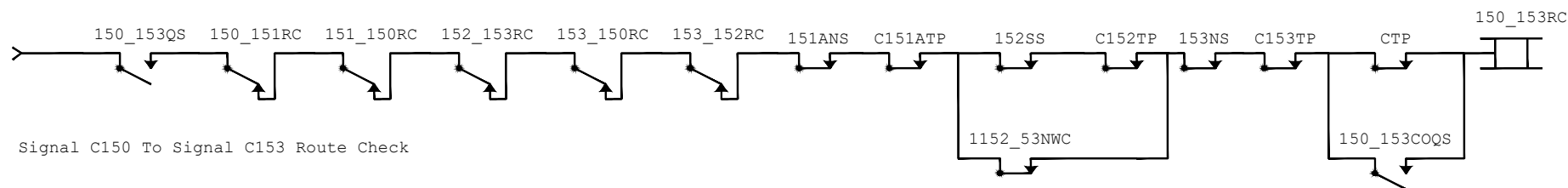
Signal C150 To Signal C153 Call-On Route Request



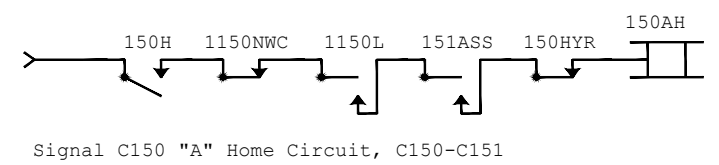
Signal C150 To Signal C153 Route Request



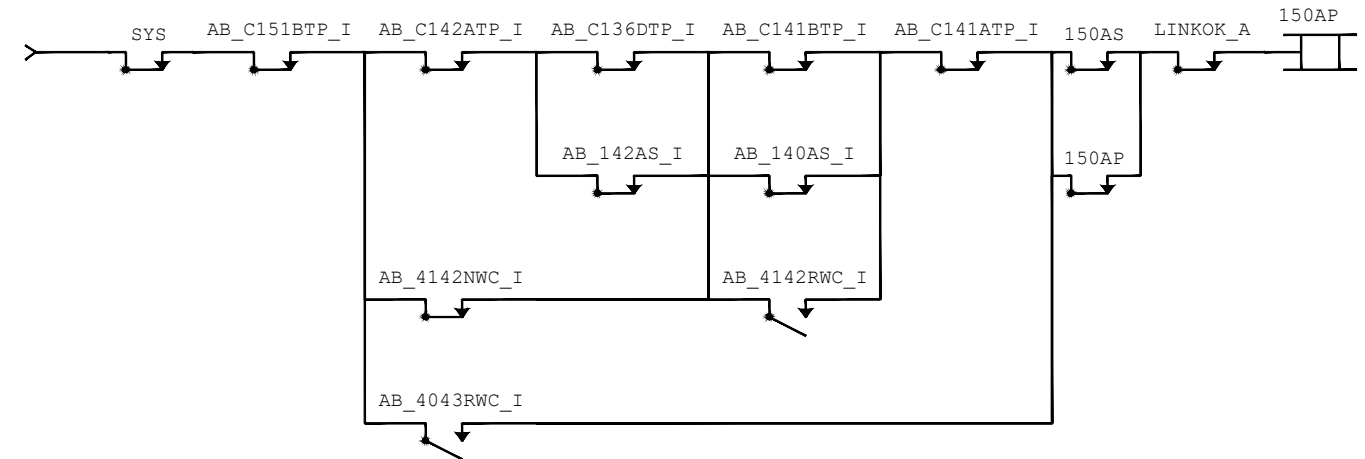
Signal C150 - C153 Request/H Stick Circuit. Prevents AS From Picking If Request Is Entered



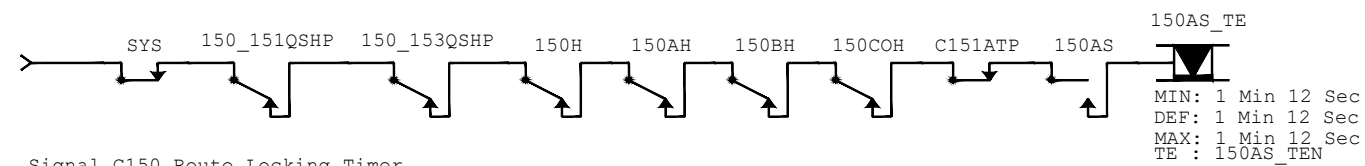
Signal C150 To Signal C153 Route Check



Signal C150 "A" Home Circuit, C150-C151

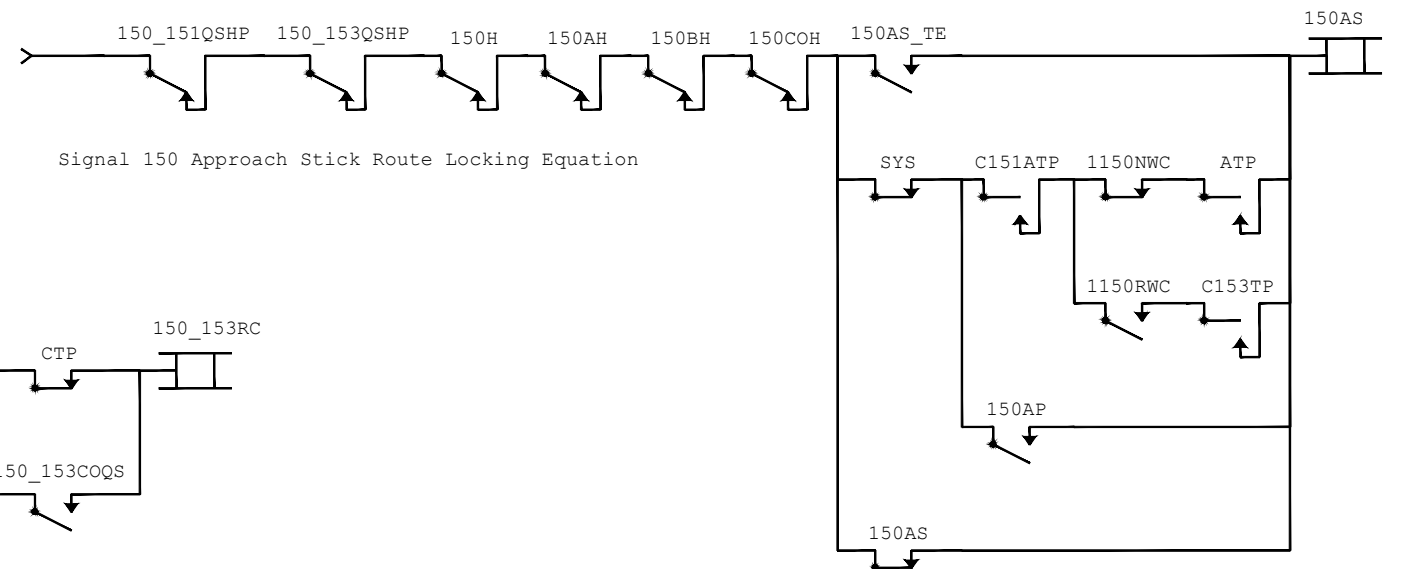


Signal C150 Approach Locking Circuit



Signal C150 Route Locking Timer

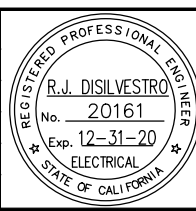
MIN: 1 Min 12 Sec  
DEF: 1 Min 12 Sec  
MAX: 1 Min 12 Sec  
TE : 150AS\_TEN



Signal 150 Approach Stick Route Locking Equation

Jun 22, 2020 - 11:31am C:\cadd\B\_Vaw\jfoakes\west\0139440\01L143-160\_Entridge\_B\_V.dwg

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



SUBMITTED

**HNTB** HNTB Corporation  
Engineers Architects Planners  
1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942

DESIGNED: M.BAKHIN CHECKED: V.FAINGOLD  
DRAWN: M.BAKHIN CADD FILE NAME: 801JL145.dwg

**Santa Clara Valley Transportation Authority**

APPROVED

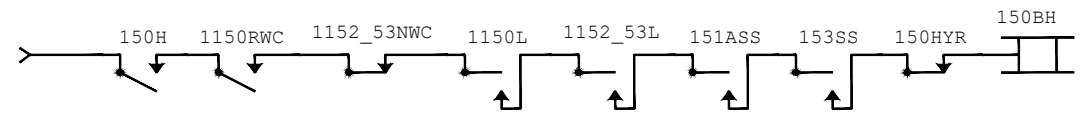
**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/11/19 SCALE: NTS  
SUBMITTAL DATE: 06/29/20 BOARD APPROVAL DATE:

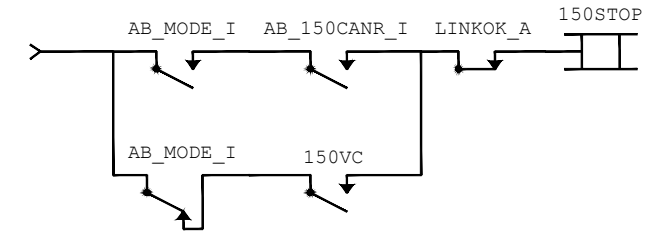
EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
EASTRIDGE INTERLOCKING  
VITAL LOGIC, ELECTROLOGIXS "B" (3 OF 18)

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

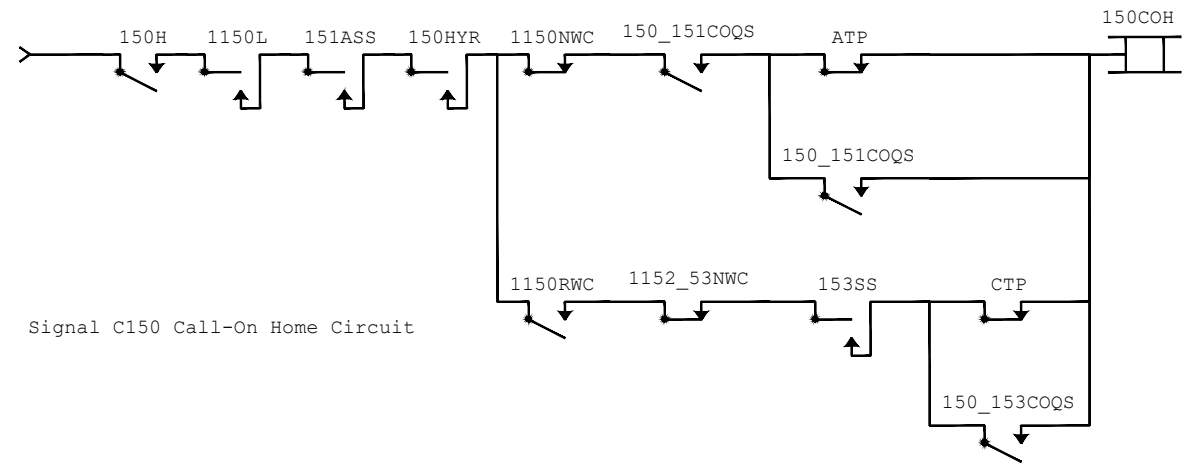
SHEET OF  
DRAWING NO. JL145  
REVISION B



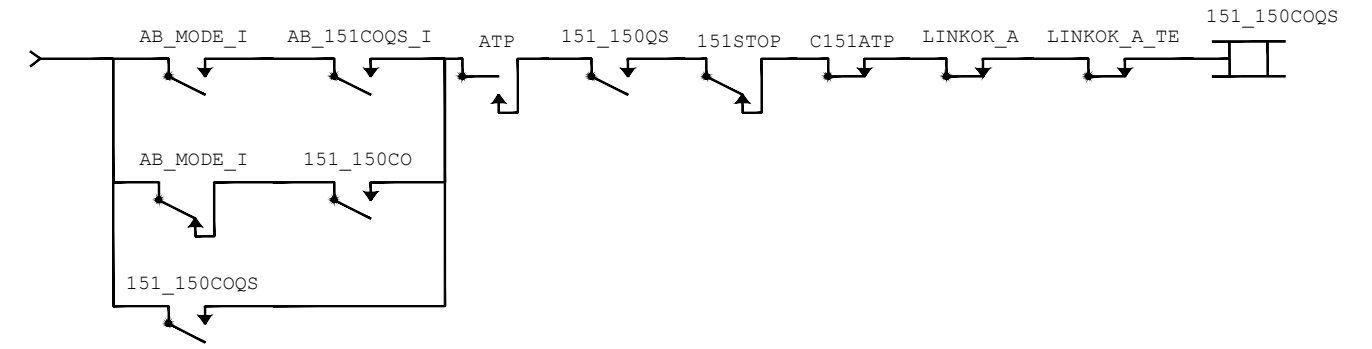
Signal C150 "B" Home Circuit, C150-C153



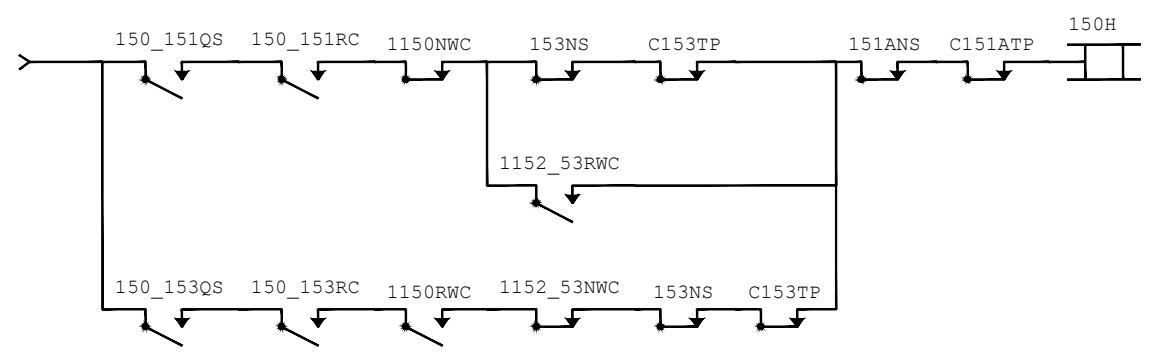
Signal C150 Signal Cancel



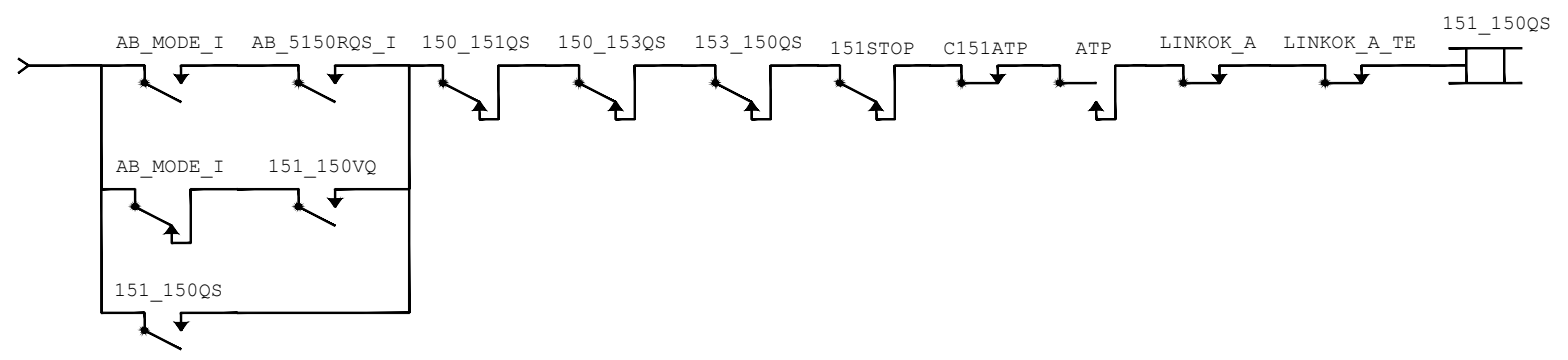
Signal C150 Call-On Home Circuit



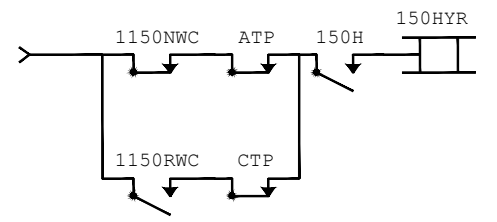
Signal C151 To Signal C150 Call-On Route Request



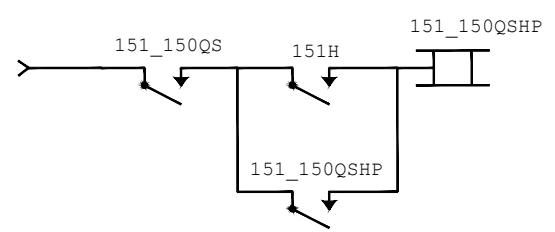
Signal C150 Home Circuit



Signal C151 To Signal C150 Route Request



Signal C150 HYR Circuit For Call-On Moves



Signal C151 - C150 Request/H Stick Circuit. Prevents AS From Picking If Request Is Entered

Jun 22, 2020 - 11:31am C:\cadd\B\_Vaw\yfonkas\west\0139440\001L143-160\_Entridge\_B\_Vaw.dwg

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



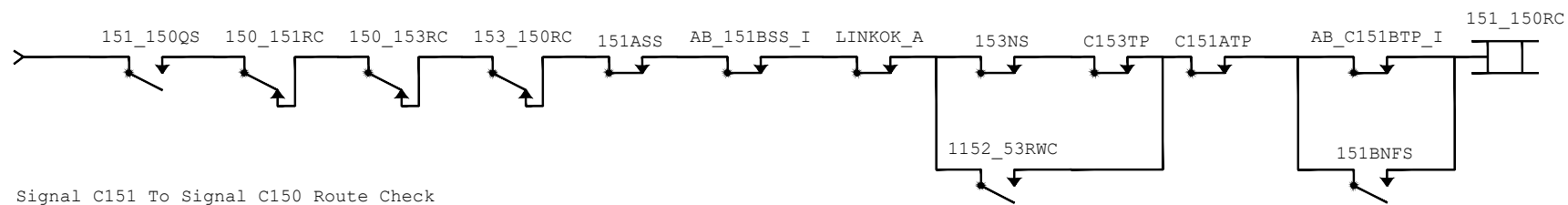
<b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
DESIGNED	CHECKED
M.BAKHIN	V.FAINGOLD
DRAWN	CADD FILE NAME
M.BAKHIN	801JL146.dwg



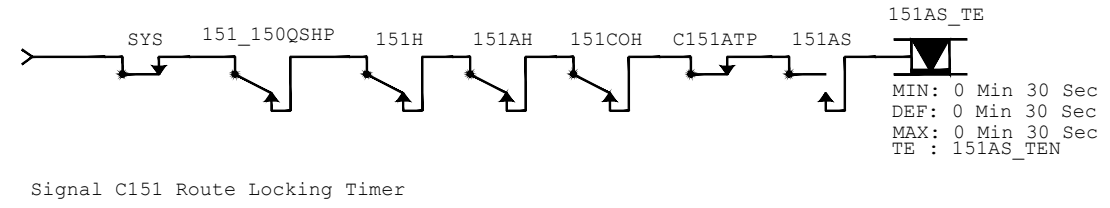
APPROVED <b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	SCALE
03/11/19	NTS
SUBMITTAL DATE	BOARD APPROVAL DATE
06/29/20	

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS EASTRIDGE INTERLOCKING VITAL LOGIC, ELECTROLOGIX "B" (4 OF 18)		
PCA NO.	CONTRACT NO.	FILE LOCATION
000	C801	PROJECTWISE

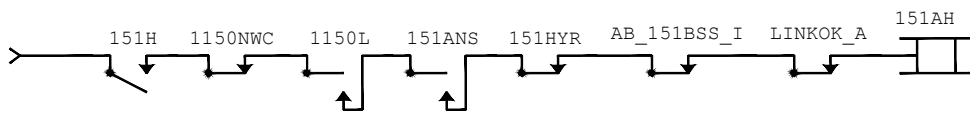
SHEET OF
DRAWING NO.
JL146
REVISION
B



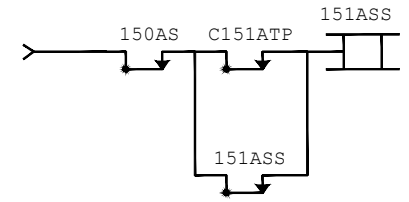
Signal C151 To Signal C150 Route Check



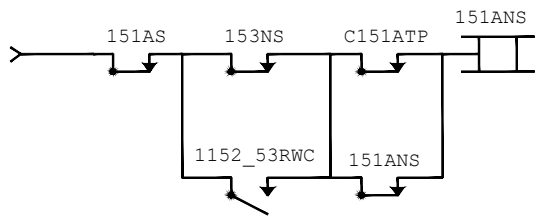
Signal C151 Route Locking Timer



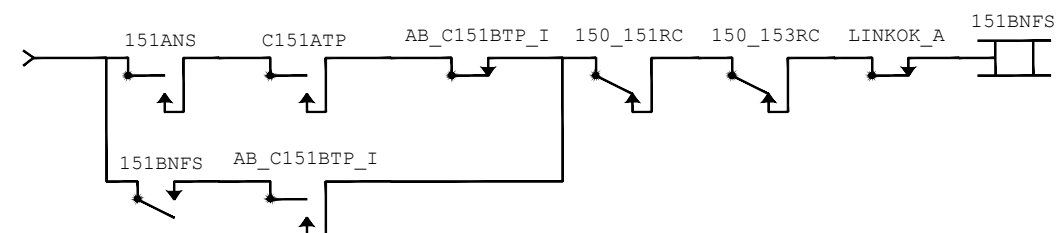
Signal C151 "A" Home Circuit, C151-C150



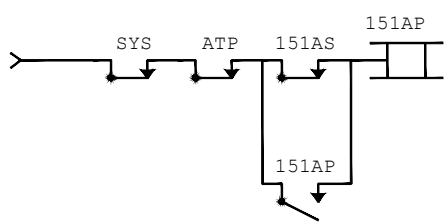
151AT Southbound Route Stick



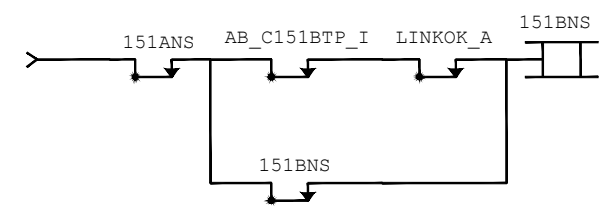
151AT Northbound Route Stick



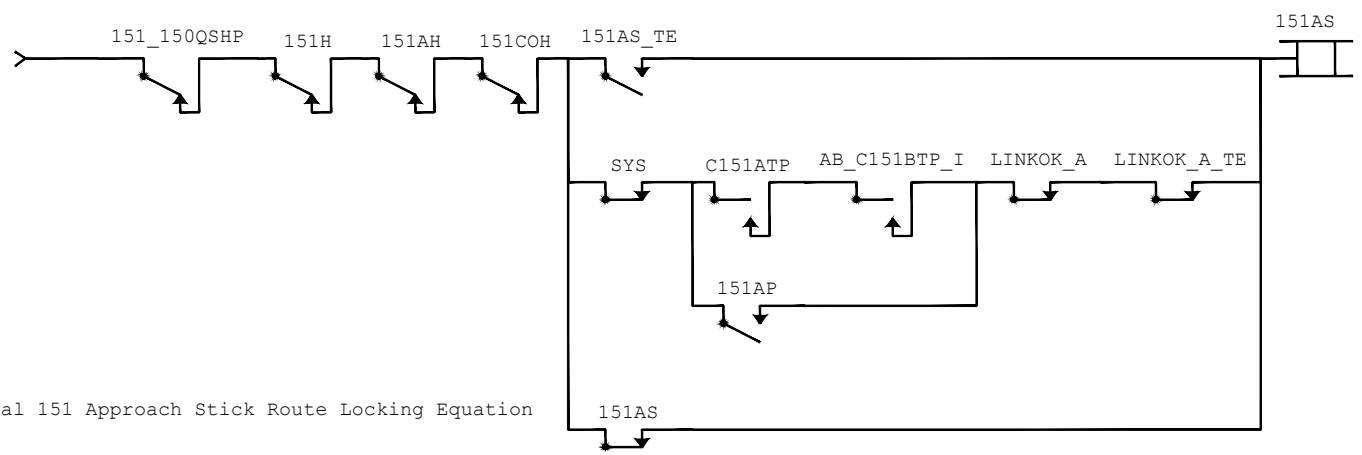
151BT Northbound Following Stick



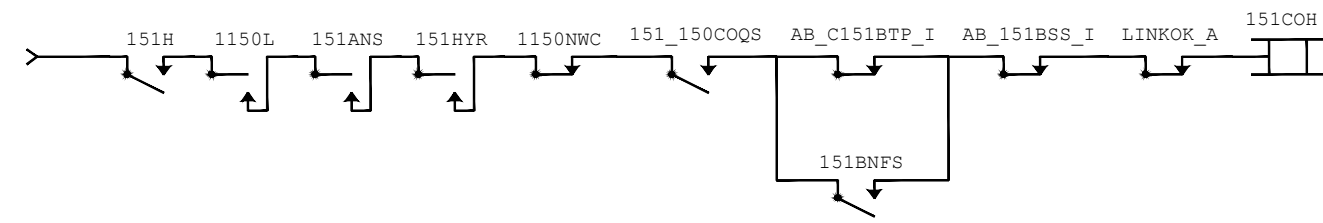
Signal C151 Approach Locking Circuit



151BT Northbound Route Stick



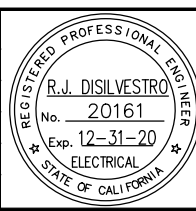
Signal 151 Approach Stick Route Locking Equation



Signal C151 Call-On Home Circuit

Jun 22, 2020 - 11:31am C:\cadd\B\_Vaw\gfookas\west\0139440\001L143-160\_Entridge\_B\_V.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET

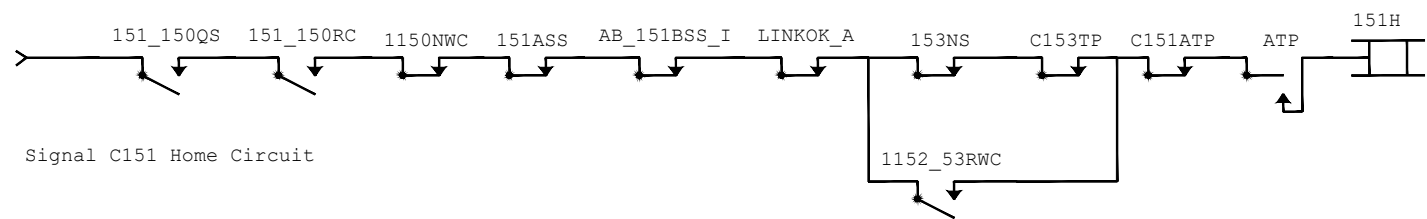


<b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
DESIGNED M.BAKHIN	CHECKED V.FAINGOLD
DRAWN M.BAKHIN	CADD FILE NAME 801JL147.dwg

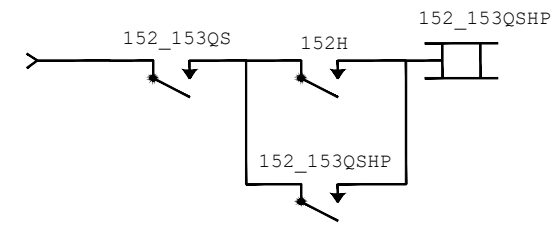


APPROVED <b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE 03/11/19	SCALE NTS
SUBMITTAL DATE 06/29/20	BOARD APPROVAL DATE

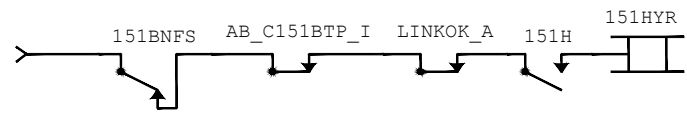
EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS EASTRIDGE INTERLOCKING VITAL LOGIC, ELECTROLOGIXS "B" (5 OF 18)			SHEET OF DRAWING NO. JL147 REVISION A
PCA NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE	



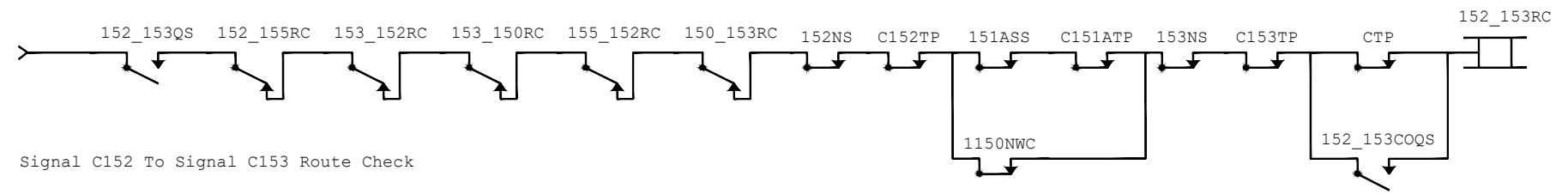
Signal C151 Home Circuit



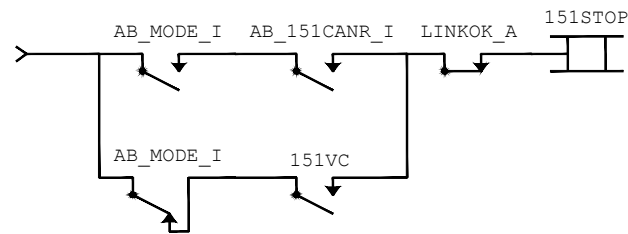
Signal C152 - C153 Request/H Stick Circuit. Prevents AS From Picking If Request Is Entered



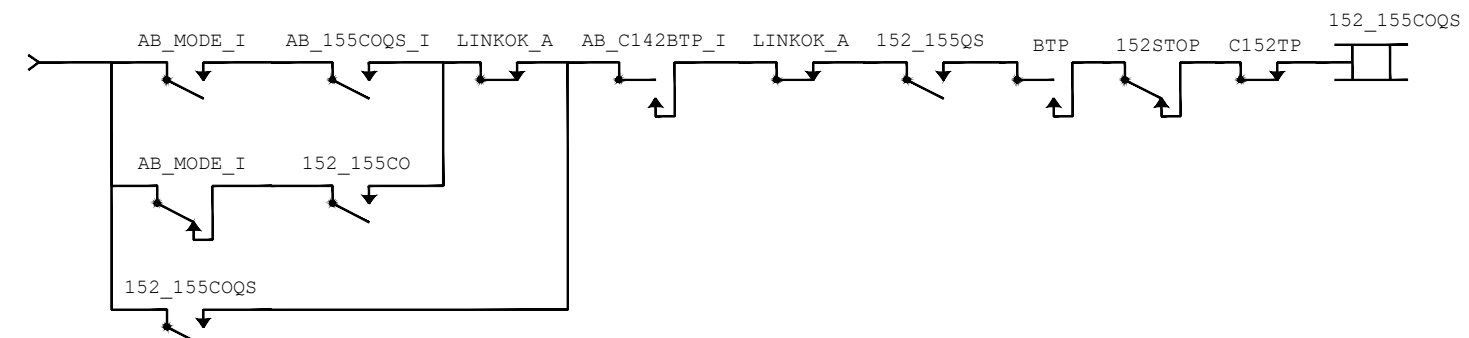
Signal C151 HYR Circuit For Call-On Moves



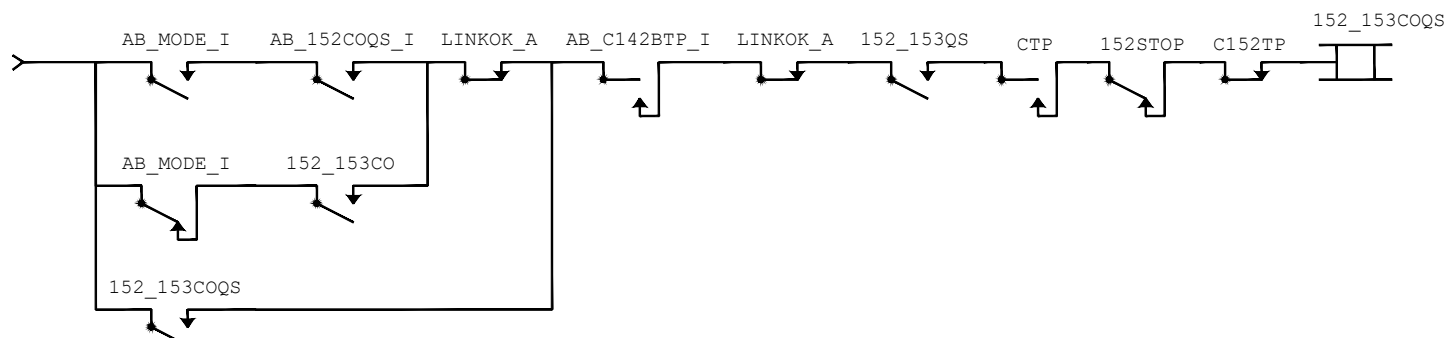
Signal C152 To Signal C153 Route Check



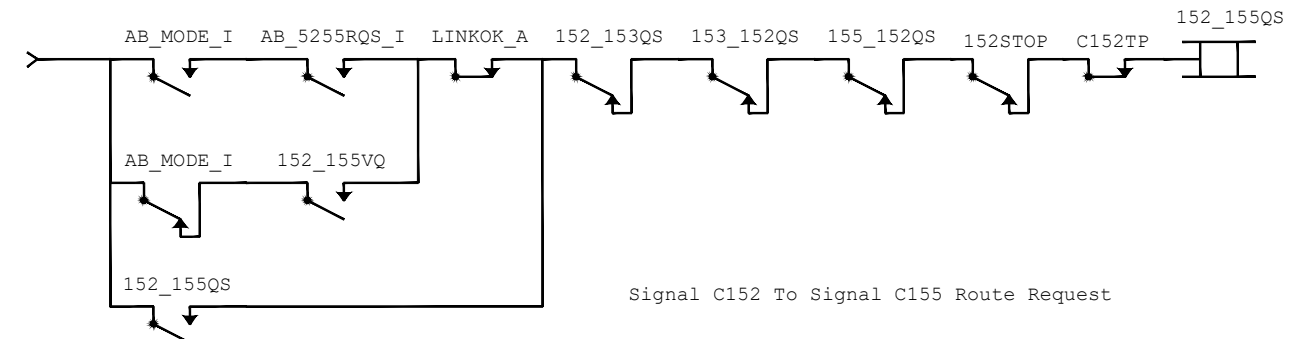
Signal C151 Signal Cancel



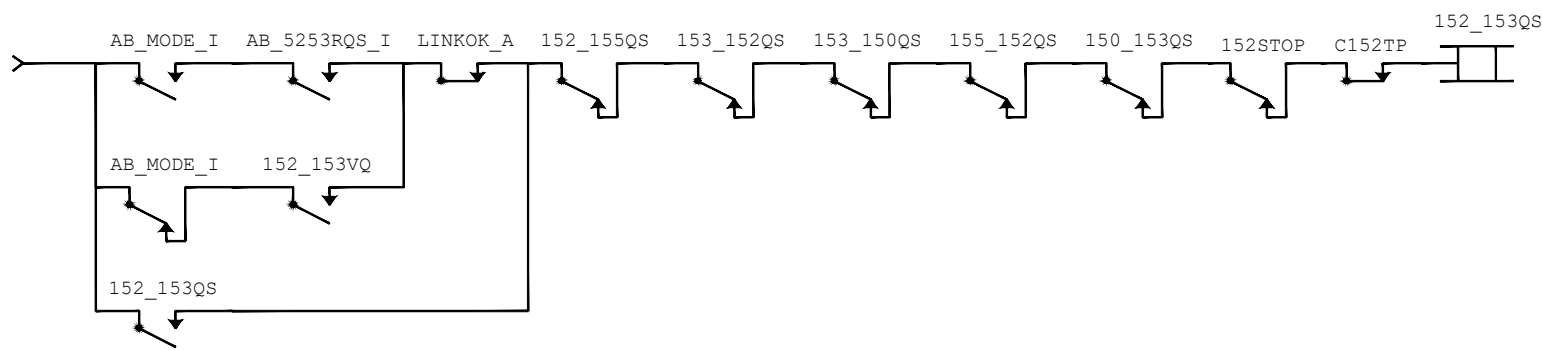
Signal C152 To Signal C155 Call-On Route Request



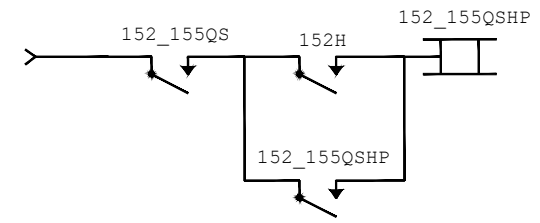
Signal C152 To Signal C153 Call-On Route Request



Signal C152 To Signal C155 Route Request



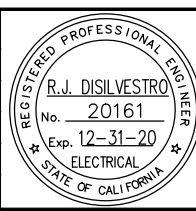
Signal C152 To Signal C153 Route Request



Signal C152 - C155 Request/H Stick Circuit. Prevents AS From Picking If Request Is Entered

Jun 22, 2020 - 11:31am C:\cadd\B\_Vaw\jofowkes\west\00139440\001L143-160\_Entridge\_B\_V.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



SUBMITTED

**HNTB** HNTB Corporation  
Engineers Architects Planners  
1732 North First Street, Suite 400 San Jose, CA 95112  
Tel (408) 451-7300 Fax (408) 451-6942

DESIGNED: M.BAKHIN  
CHECKED: V.FAINGOLD  
DRAWN: M.BAKHIN  
CADD FILE NAME: 801JL148.dwg

**Santa Clara Valley Transportation Authority**

APPROVED

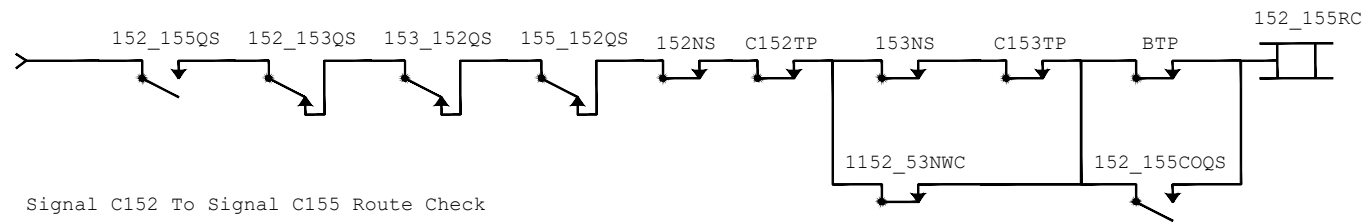
**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/11/19  
SCALE: NTS  
SUBMITTAL DATE: 06/29/20  
BOARD APPROVAL DATE:

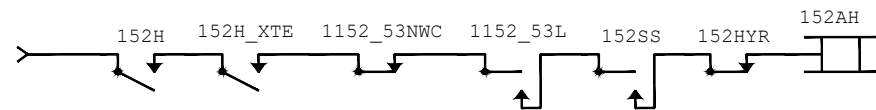
EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
EASTRIDGE INTERLOCKING  
VITAL LOGIC, ELECTROLOGIX "B" (6 OF 18)

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

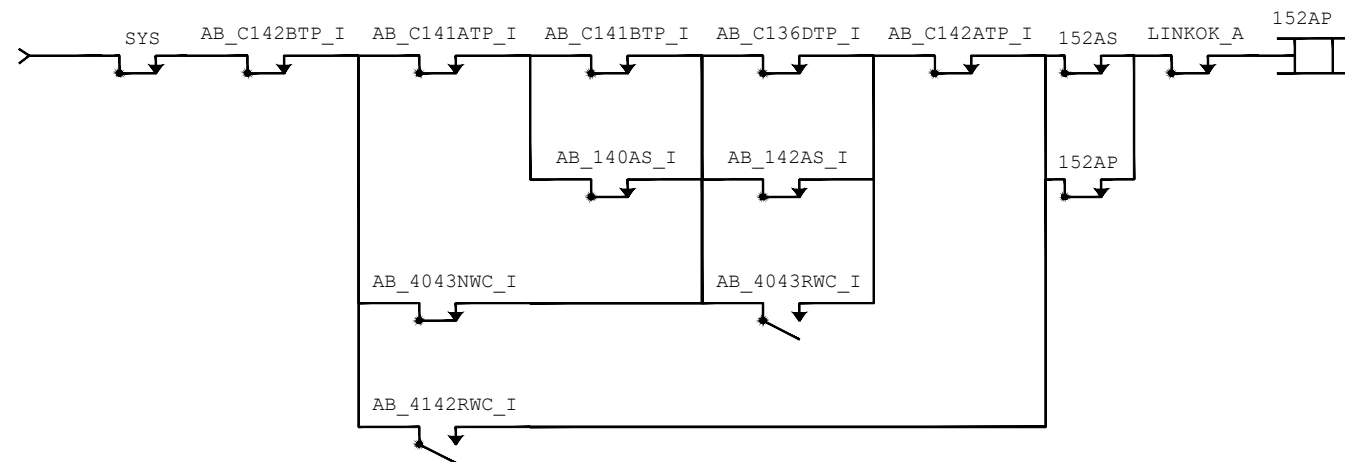
SHEET OF  
DRAWING NO. JL148  
REVISION A



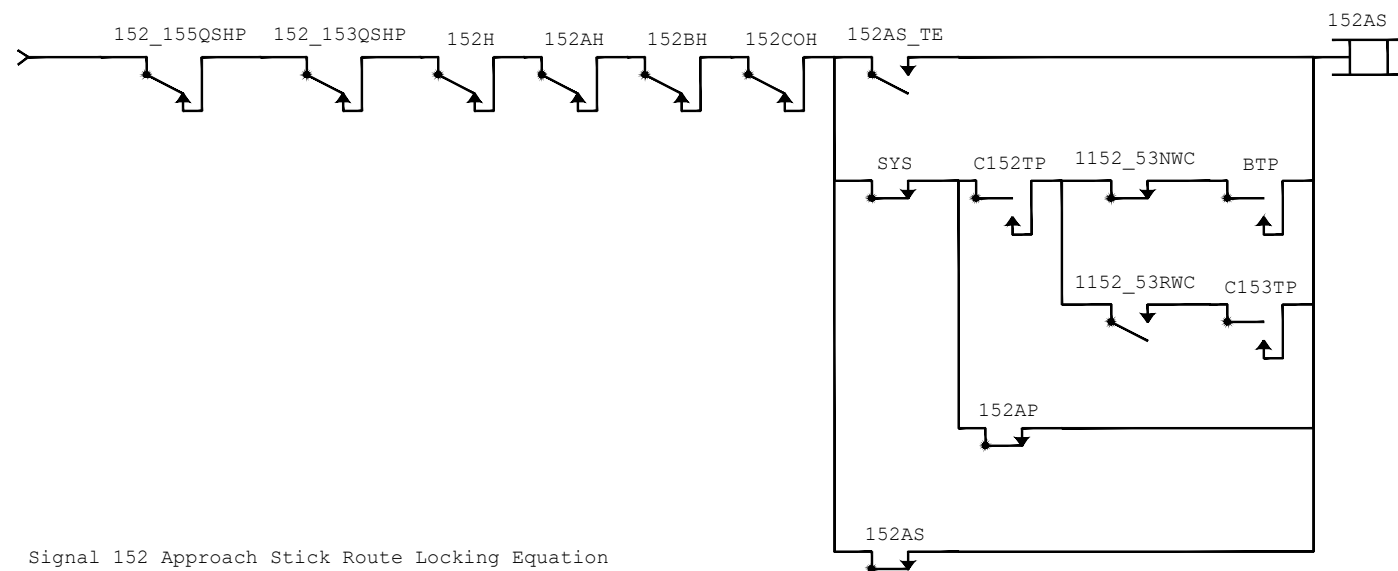
Signal C152 To Signal C155 Route Check



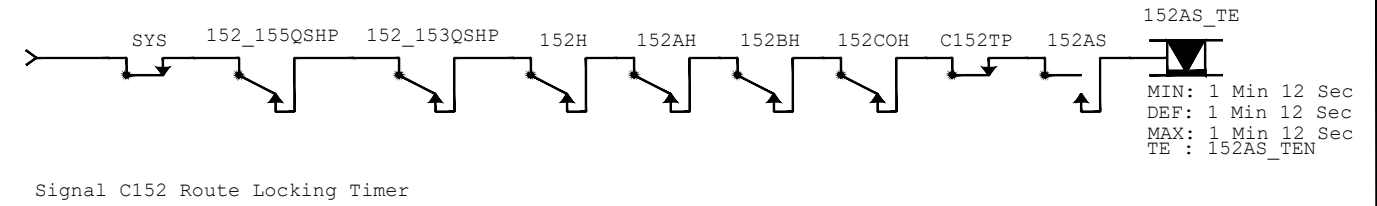
Signal C152 "A" Home Circuit, C152-C155



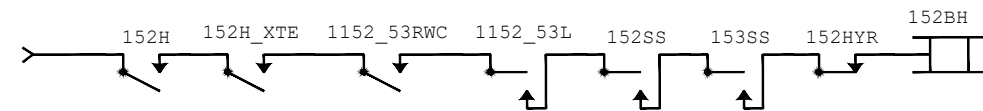
Signal C152 Approach Locking Circuit



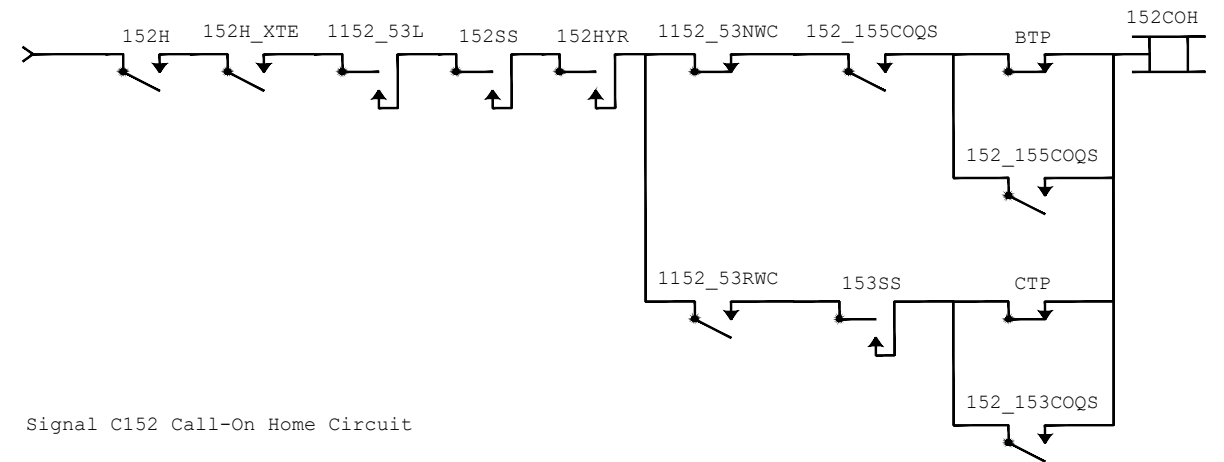
Signal 152 Approach Stick Route Locking Equation



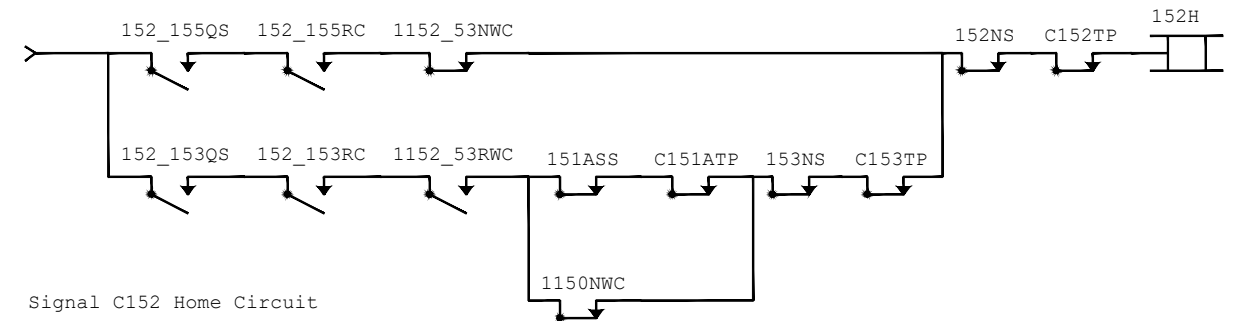
Signal C152 Route Locking Timer



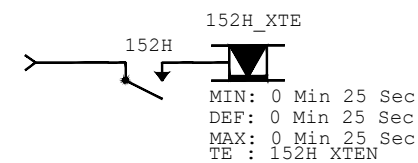
Signal C152 "B" Home Circuit, C152-C153



Signal C152 Call-On Home Circuit



Signal C152 Home Circuit



Signal C152 Home Delay Timer

Jun 22, 2020 - 11:31am C:\cadd\B\_Vaw\jfoakes\west\0139440\001\143-160\_Contrfig\_B\_Vaw.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



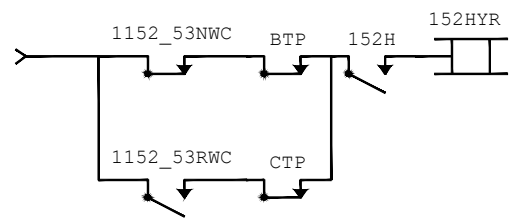
<b>HNTB</b> HNTB Corporation 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
DESIGNED M.BAKHIN	CHECKED V.FAINGOLD
DRAWN M.BAKHIN	CADD FILE NAME 801JL149.dwg



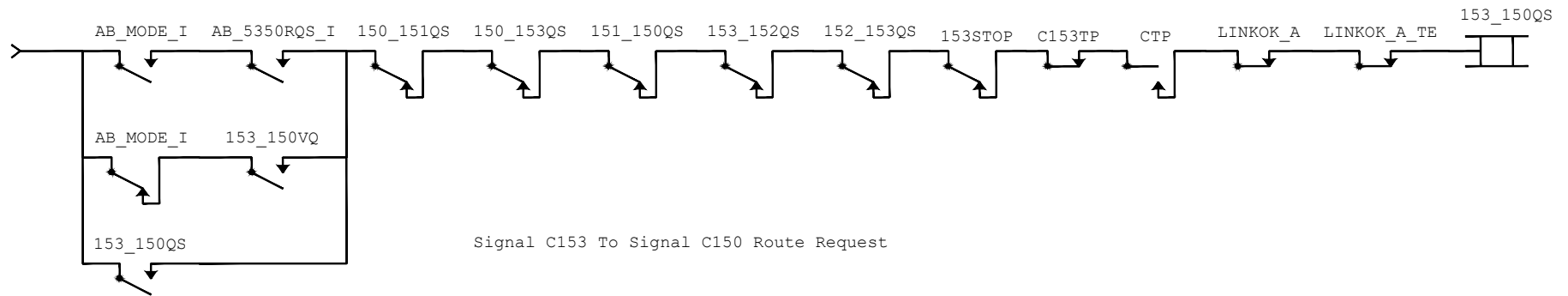
<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE 03/11/19	SCALE NTS
SUBMITTAL DATE 06/29/20	BOARD APPROVAL DATE

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS EASTRIDGE INTERLOCKING VITAL LOGIC, ELECTROLOGIX "B" (7 OF 18)		
PCA NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE

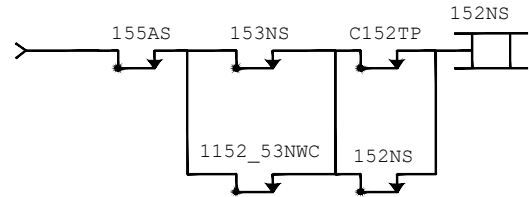
SHEET OF	JL149
DRAWING NO.	A



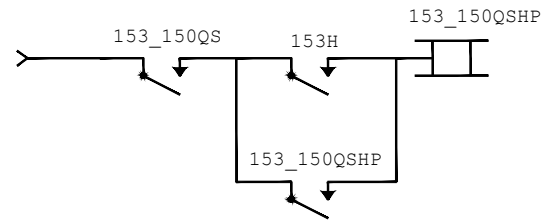
Signal C152 HYR Circuit For Call-On Moves



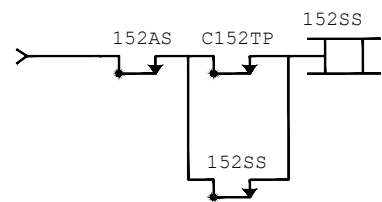
Signal C153 To Signal C150 Route Request



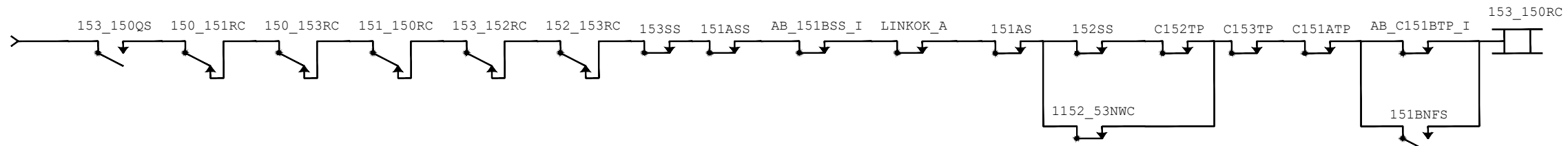
152T Northbound Route Stick



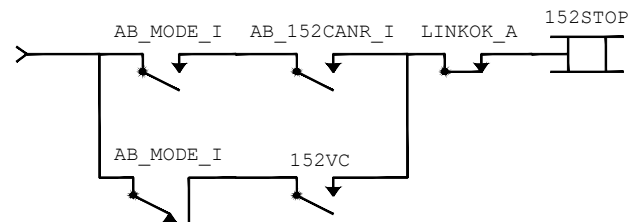
Signal C153 - C150 Request/H Stick Circuit. Prevents AS From Picking If Request Is Entered



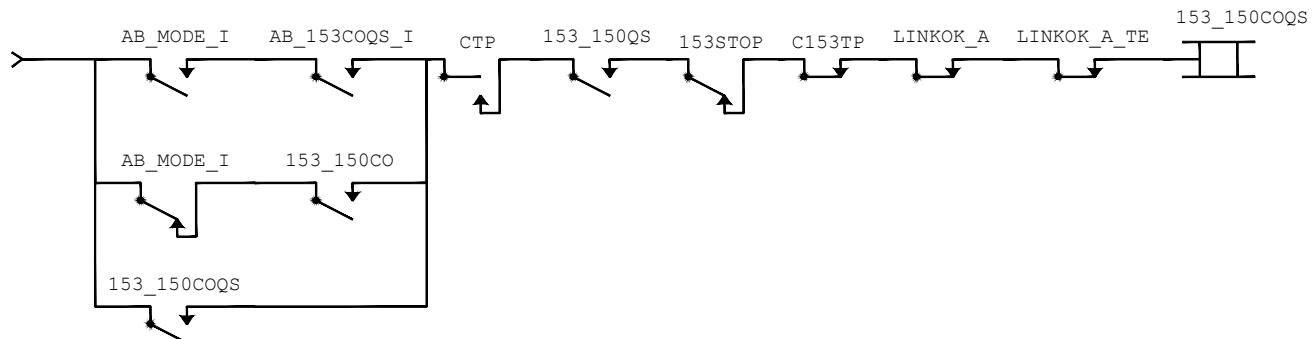
152T Southbound Route Stick



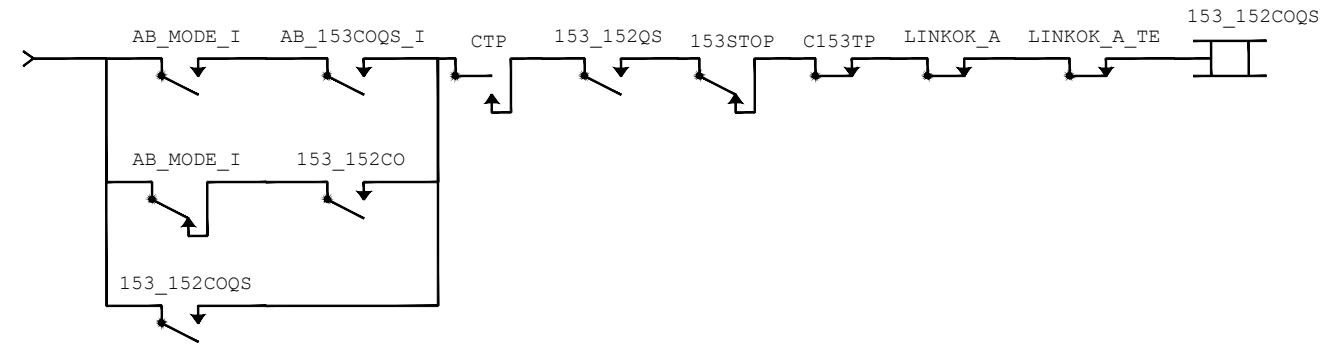
Signal C153 To Signal C150 Route Check



Signal C152 Signal Cancel



Signal C153 To Signal C150 Call-On Route Request



Signal C153 To Signal C152 Call-On Route Request

Jun 22, 2020 - 11:31am C:\cadd\B\_Vaw\yfonkas\west\0139440\01L143-160\_Entridge\_B\_Vaw.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



SUBMITTED

**HNTB** HNTB Corporation  
Engineers Architects Planners  
1732 North First Street, Suite 400 San Jose, CA 95112  
Tel (408) 451-7300 Fax (408) 451-6942

DESIGNED: M.BAKHIN  
CHECKED: V.FAINGOLD  
DRAWN: M.BAKHIN  
CADD FILE NAME: 801JL150.dwg



APPROVED

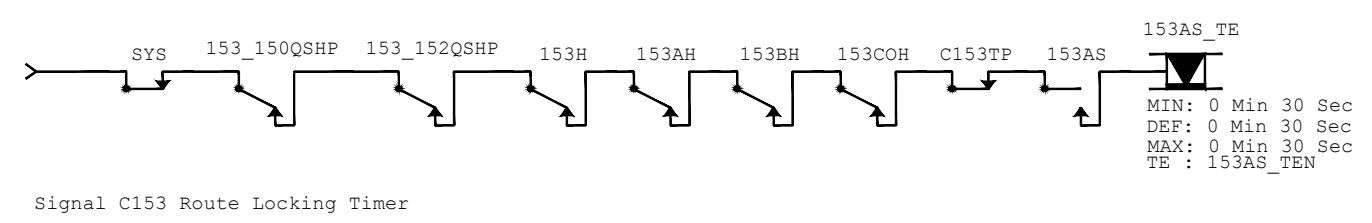
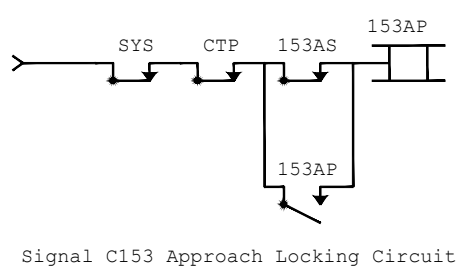
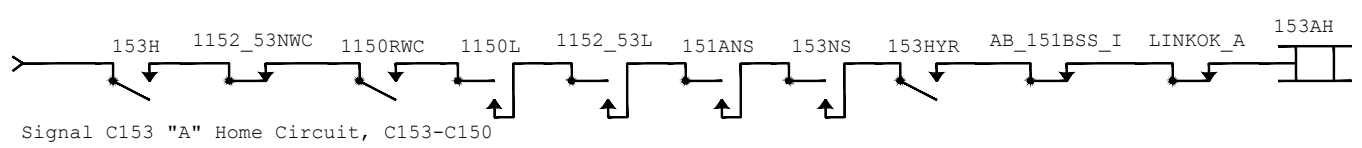
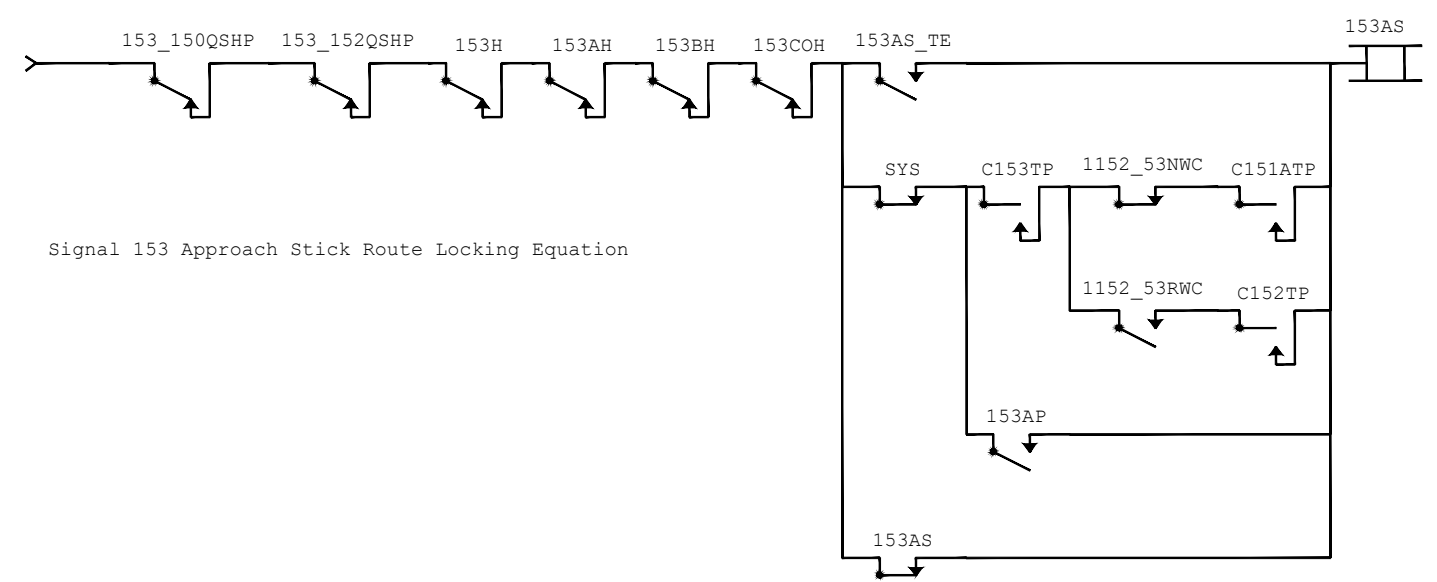
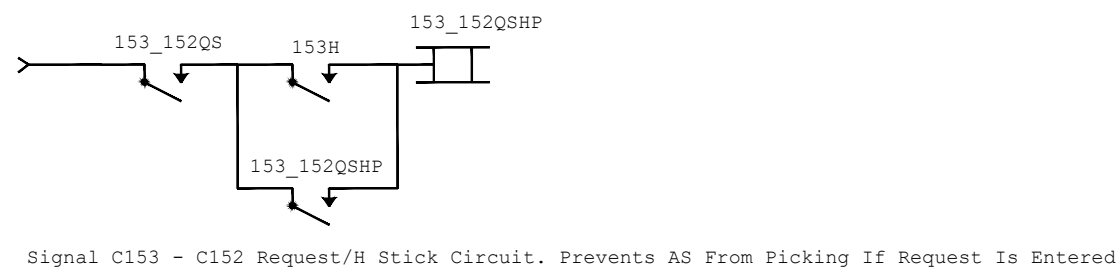
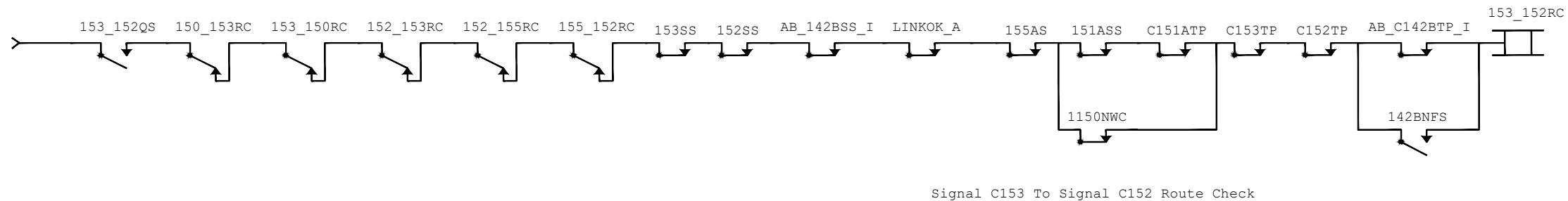
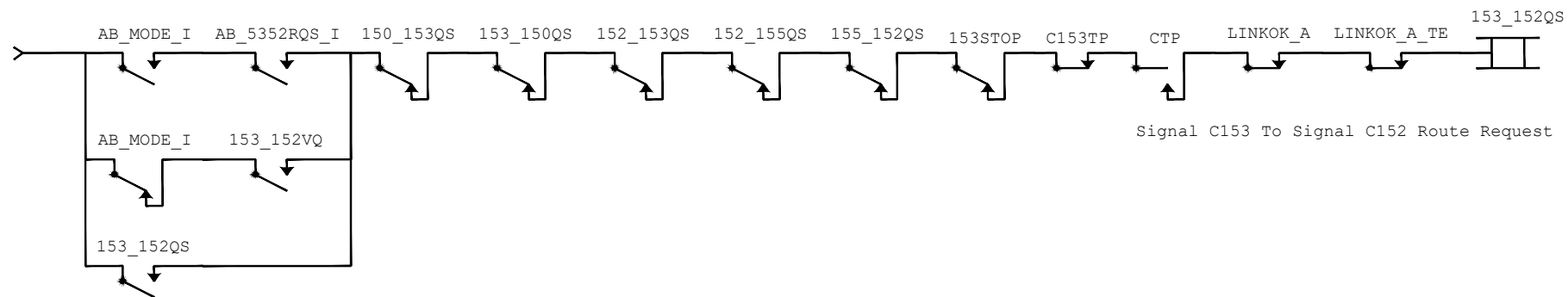
**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/11/19  
SCALE: NTS  
SUBMITTAL DATE: 06/29/20  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
EASTRIDGE INTERLOCKING  
VITAL LOGIC, ELECTROLOGIXS "B" (8 OF 18)

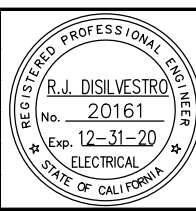
PCB NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

SHEET OF JL150 REVISION A



Jun 22, 2020 - 11:31am C:\cadd\B\_Vaw\yofowkes\west\0139440\001\143-160\_Eastridge\_B\_Vaw.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



SUBMITTED

**HNTB** HNTB Corporation  
Engineers Architects Planners  
1732 North First Street, Suite 400 San Jose, CA 95112  
Tel (408) 451-7300 Fax (408) 451-6942

DESIGNED: M.BAKHIN CHECKED: V.FAINGOLD  
DRAWN: M.BAKHIN CADD FILE NAME: 801JL151.dwg

**Santa Clara Valley Transportation Authority**

APPROVED

**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

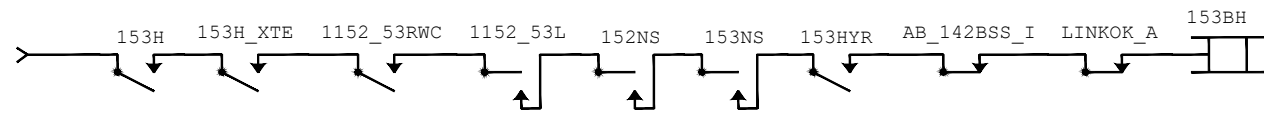
CADD FILE DATE: 03/11/19 SCALE: NTS  
SUBMITTAL DATE: 06/29/20 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
EASTRIDGE INTERLOCKING  
VITAL LOGIC, ELECTROLOGIXS "B" (9 OF 18)

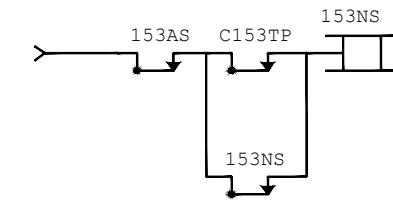
PCB NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

SHEET OF  
DRAWING NO. JL151  
REVISION A

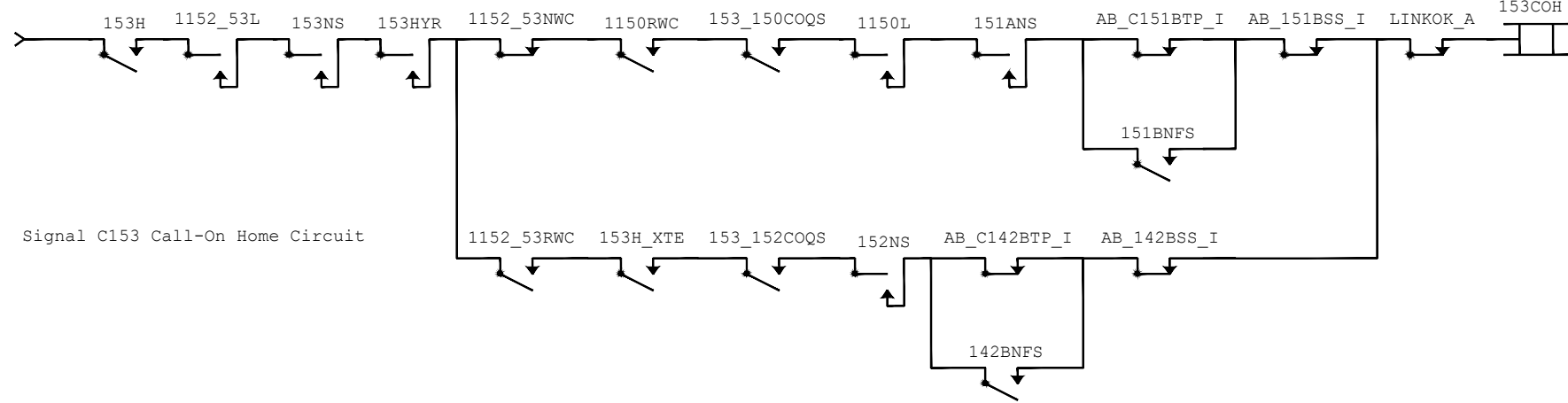




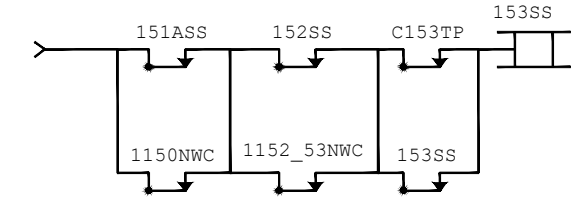
Signal C153 "B" Home Circuit, C153-C152



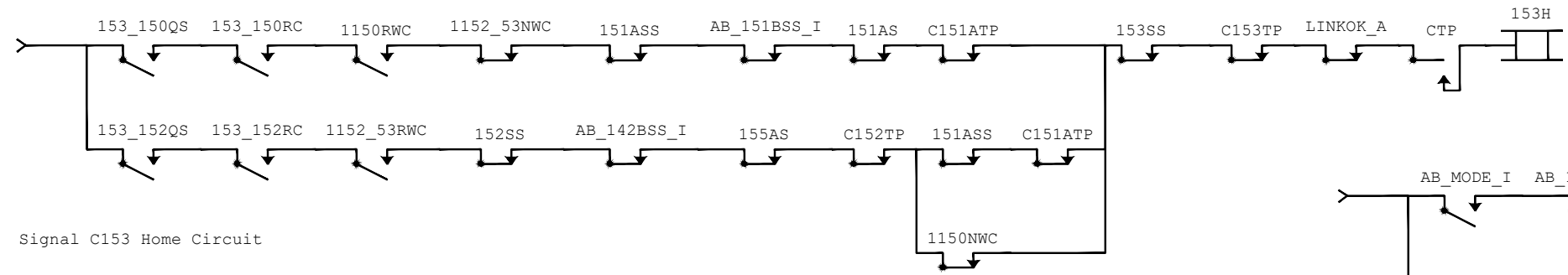
153T Northbound Route Stick



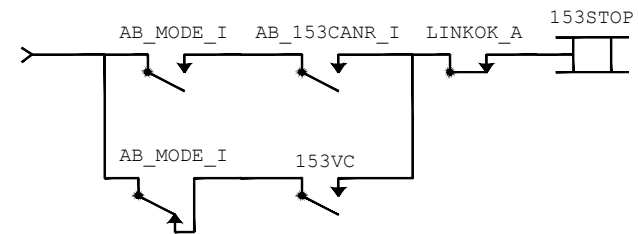
Signal C153 Call-On Home Circuit



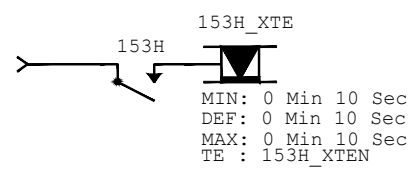
153T Southbound Route Stick



Signal C153 Home Circuit

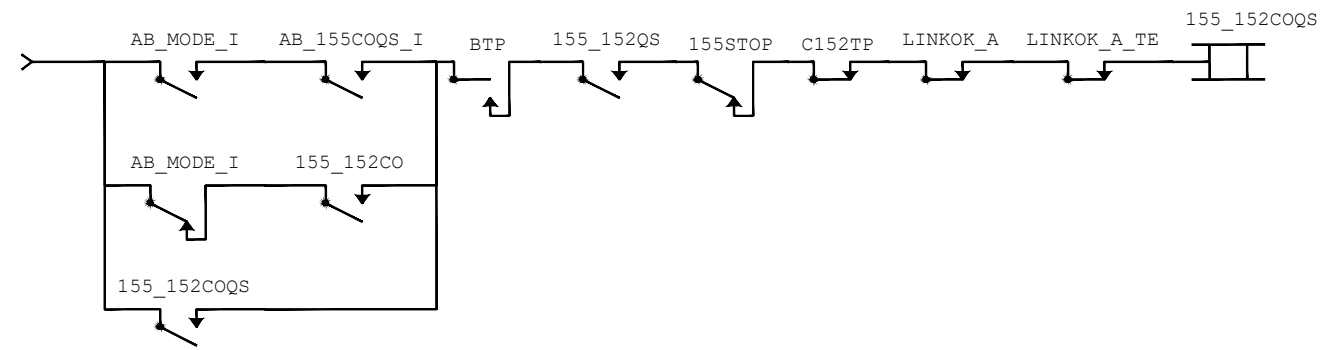


Signal C153 Signal Cancel

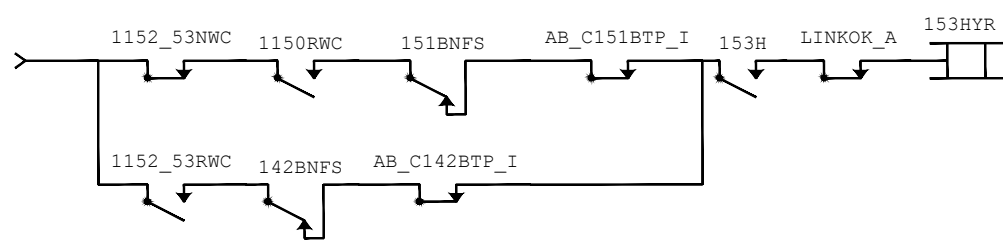


Signal C153 Home Delay Timer

MIN: 0 Min 10 Sec  
 DEF: 0 Min 10 Sec  
 MAX: 0 Min 10 Sec  
 TE : 153H\_XTEN



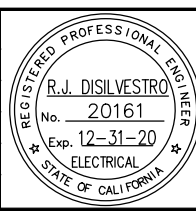
Signal C155 To Signal C152 Call-On Route Request



Signal C153 HYR Circuit For Call-On Moves

Jun 22, 2020 - 11:31am C:\cadd\B\_Vaw\yofowkes\west\0139440\001\143-160\_Eastridge\_B\_Vaw.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



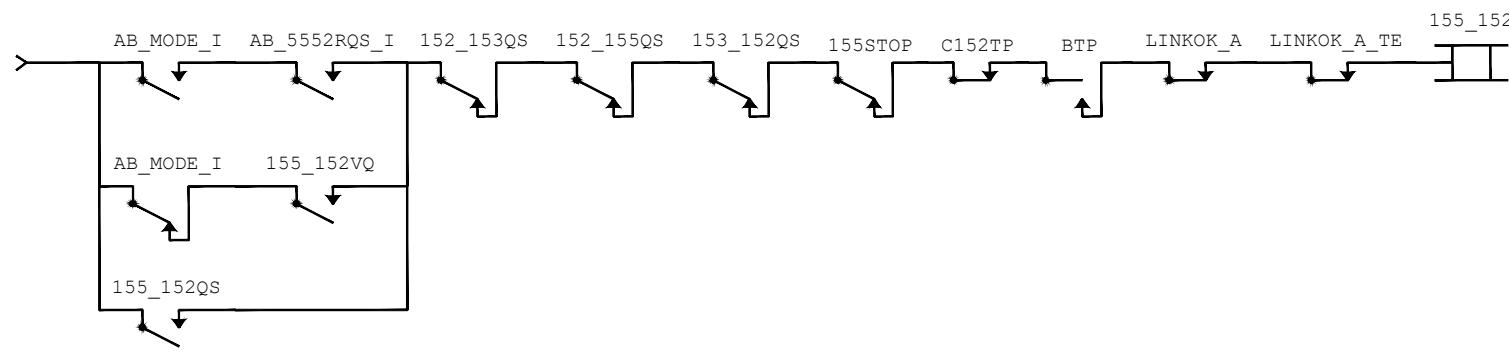
SUBMITTED		<b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
DESIGNED	M.BAKHIN	CHECKED	V.FAINGOLD
DRAWN	M.BAKHIN	CADD FILE NAME	801JL152.dwg



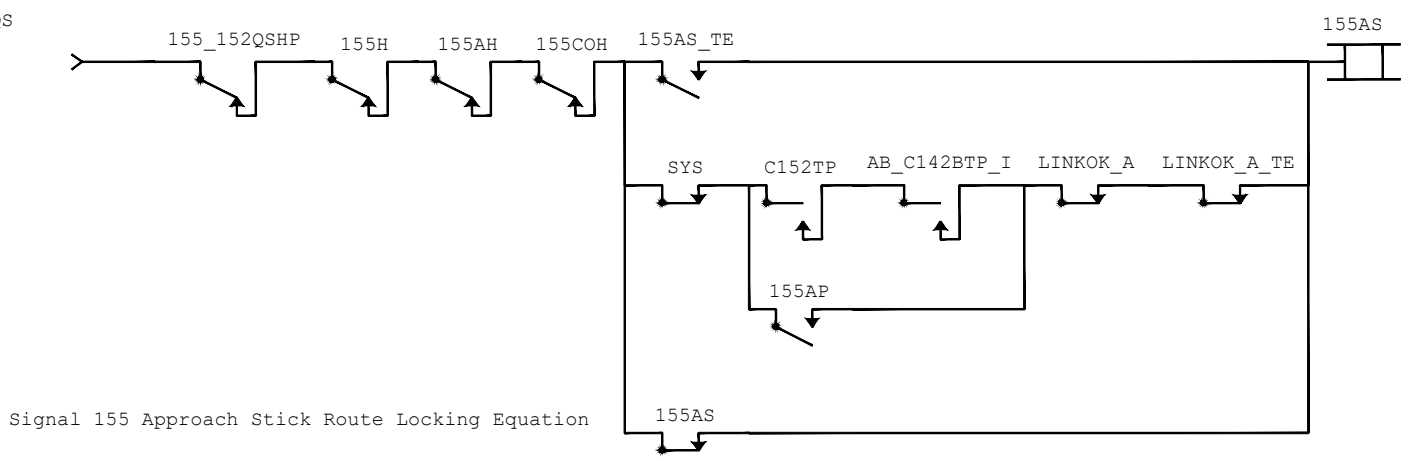
APPROVED		<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	03/11/19	SCALE	NTS
SUBMITTAL DATE	06/29/20	BOARD APPROVAL DATE	

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS EASTRIDGE INTERLOCKING VITAL LOGIC, ELECTROLOGIX "B" (10 OF 18)			
PCA NO.	000	CONTRACT NO.	C801
FILE LOCATION	PROJECTWISE		

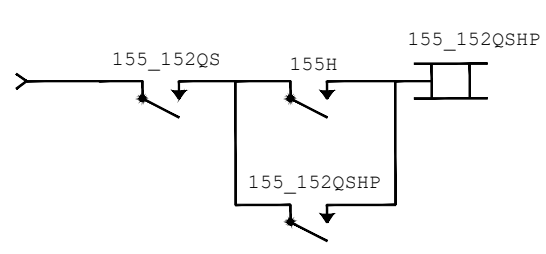
SHEET OF	
DRAWING NO.	JL152
REVISION	A



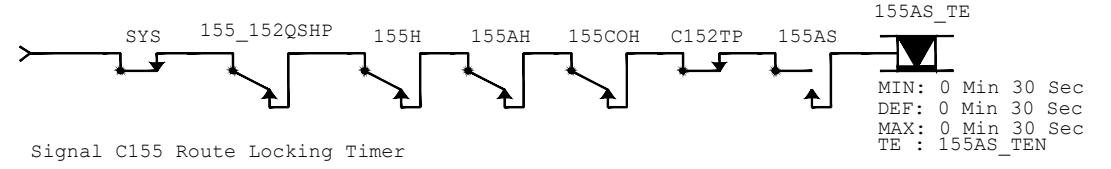
Signal C155 To Signal C152 Route Request



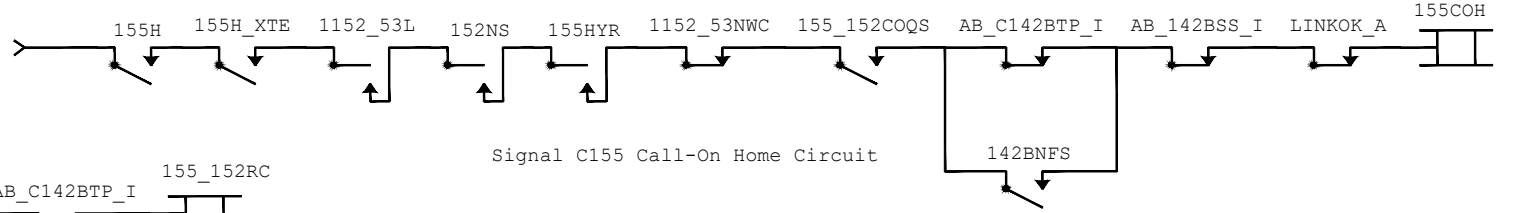
Signal 155 Approach Stick Route Locking Equation



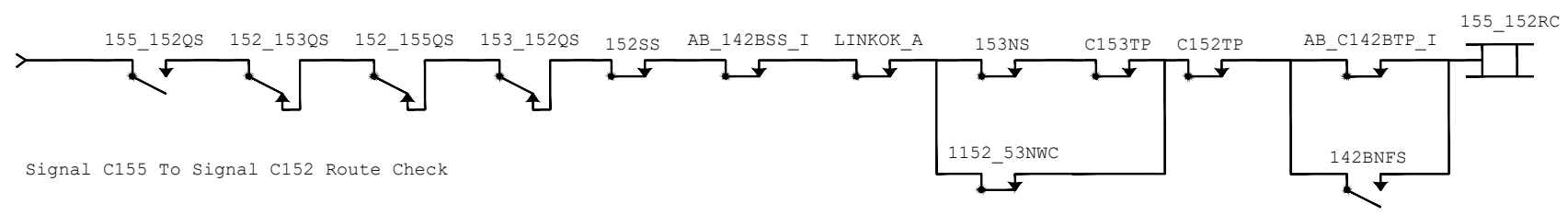
Signal C155 - C152 Request/H Stick Circuit. Prevents AS From Picking If Request Is Entered



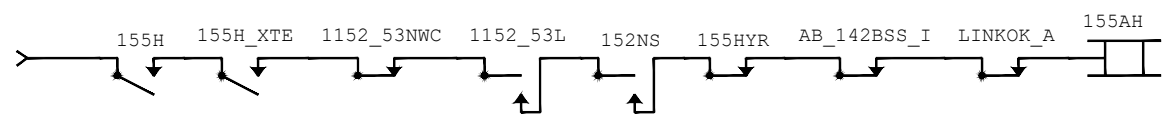
Signal C155 Route Locking Timer



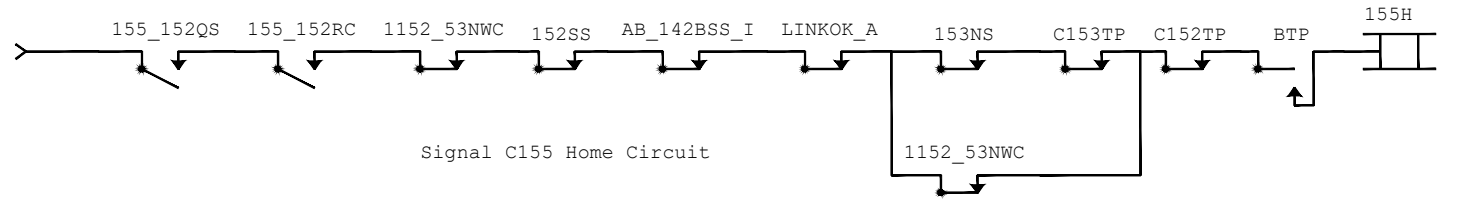
Signal C155 Call-On Home Circuit



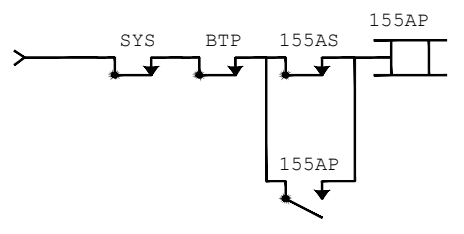
Signal C155 To Signal C152 Route Check



Signal C155 "A" Home Circuit, C155-C152



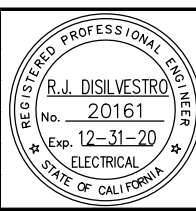
Signal C155 Home Circuit



Signal C155 Approach Locking Circuit

Jun 22, 2020 - 11:31am C:\cadd\B\_Vaw\yofowkes\west\0139440\01JL153-160\_Entridge\_B\_V.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET

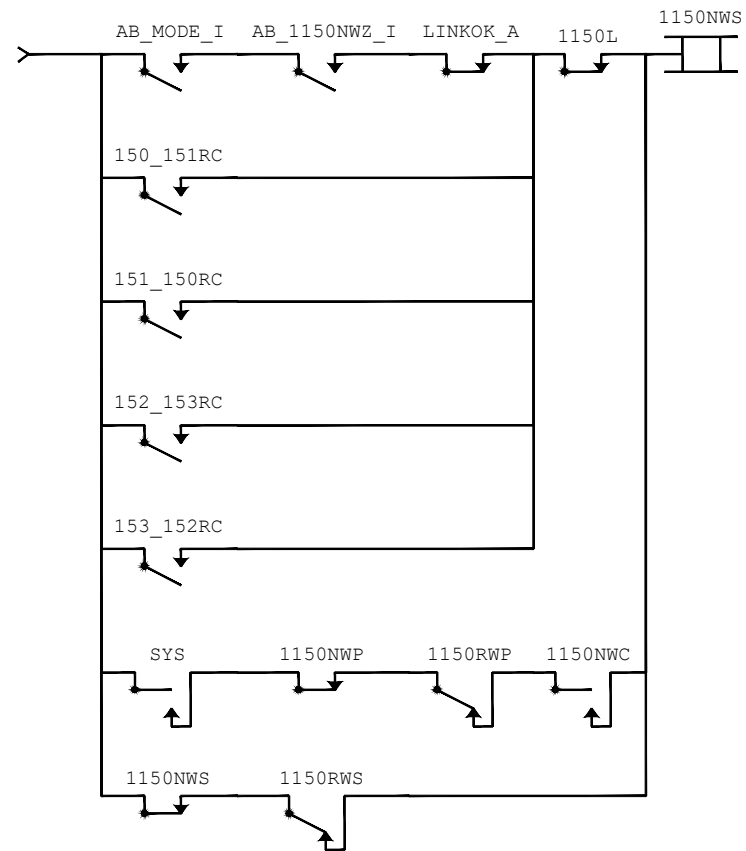
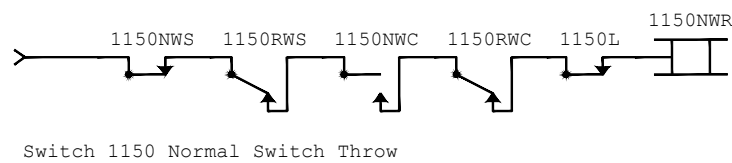
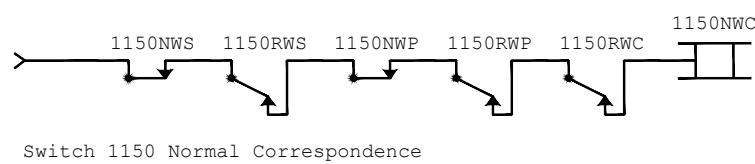
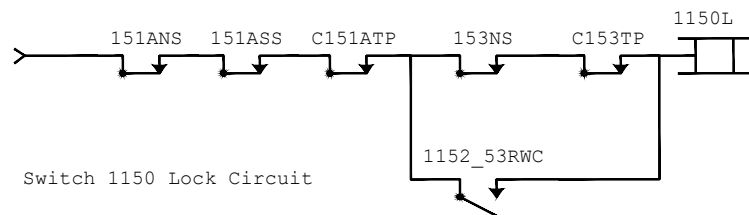
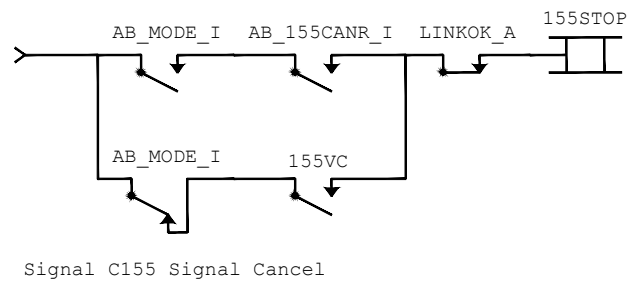
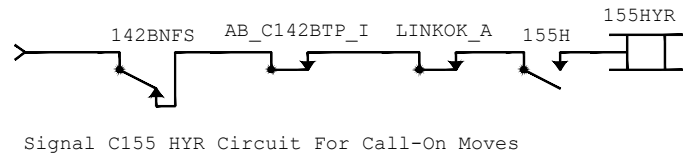
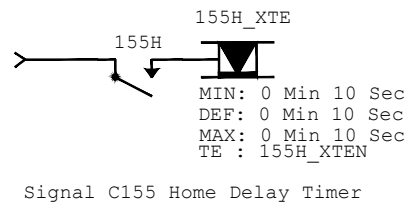


<b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
DESIGNED	CHECKED
M.BAKHIN	V.FAINGOLD
DRAWN	CADD FILE NAME
M.BAKHIN	801JL153.dwg

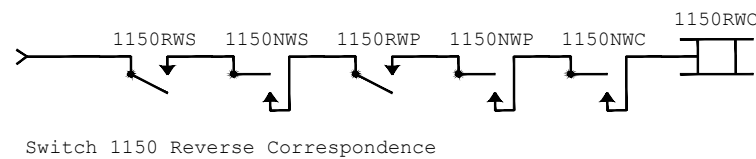


APPROVED <b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	SCALE
03/11/19	NTS
SUBMITTAL DATE	BOARD APPROVAL DATE
06/29/20	

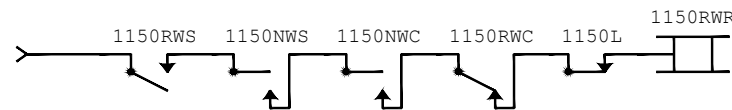
EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS EASTRIDGE INTERLOCKING VITAL LOGIC, ELECTROLOGIX "B" (11 OF 18)			SHEET OF DRAWING NO. JL153 REVISION A
PCA NO.	CONTRACT NO.	FILE LOCATION	
000	C801	PROJECTWISE	



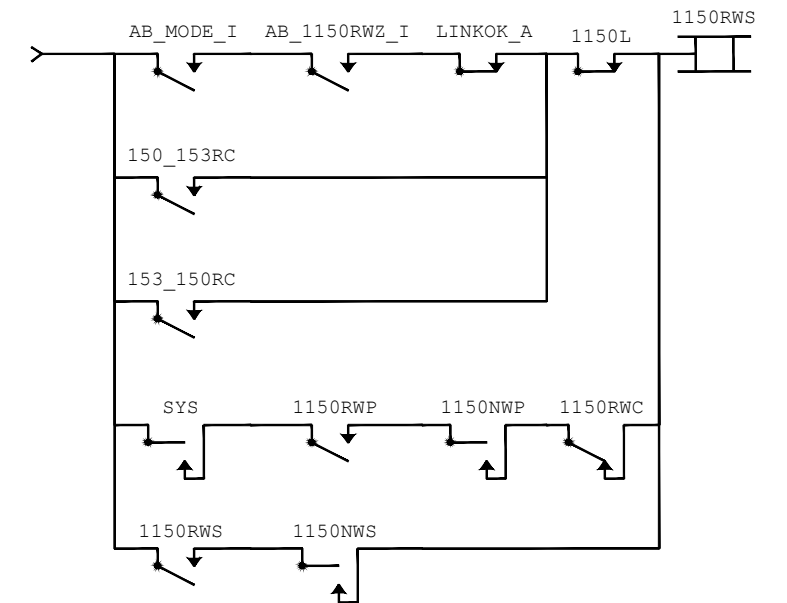
Switch 1150 Normal Switch Throw Request



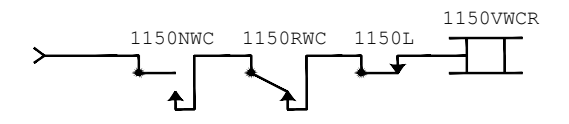
Switch 1150 Reverse Correspondence



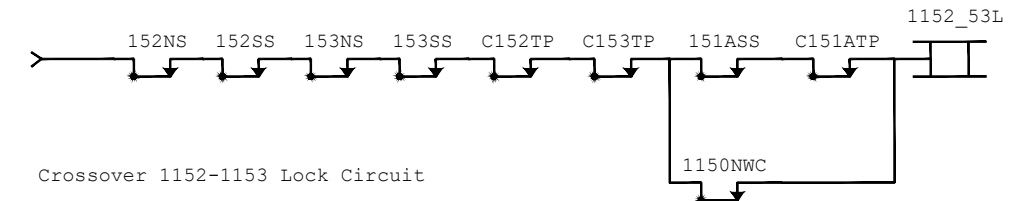
Switch 1150 Reverse Switch Throw



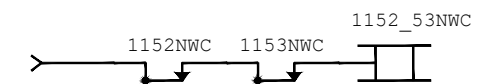
Switch 1150 Reverse Switch Throw Request



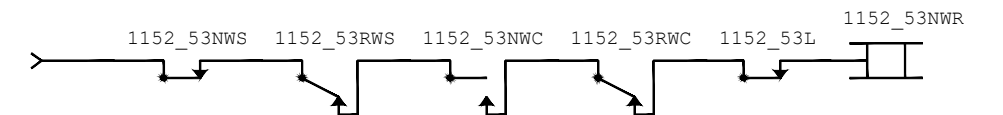
Crossover 1150 VWCR Relay Control



Crossover 1152-1153 Lock Circuit



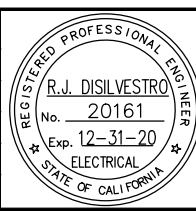
Crossover 1152-1153 Normal Correspondence



Crossover 1152-1153 Normal Switch Throw

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NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET

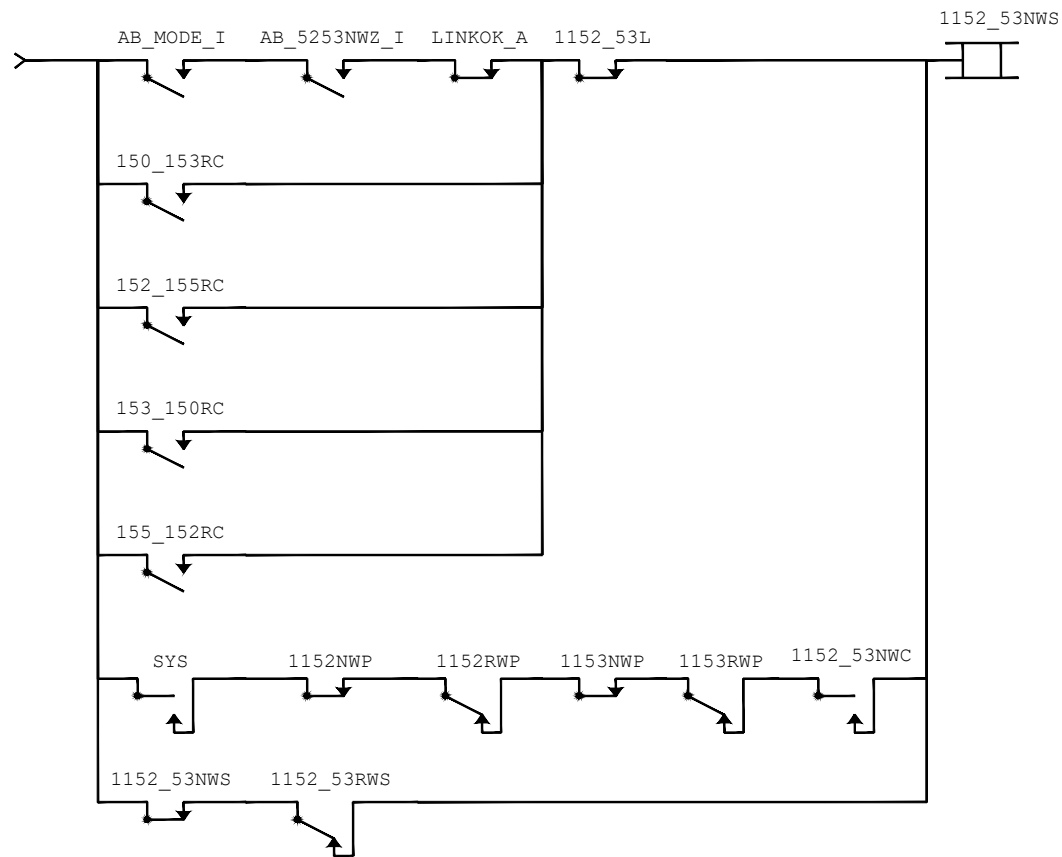


SUBMITTED		<b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
DESIGNED	M.BAKHIN	CHECKED	V.FAINGOLD
DRAWN	M.BAKHIN	CADD FILE NAME	801JL154.dwg

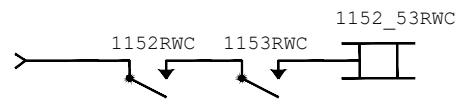


APPROVED		<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	03/11/19	SCALE	NTS
SUBMITTAL DATE	06/29/20	BOARD APPROVAL DATE	

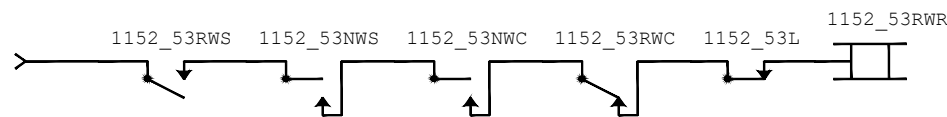
EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS EASTRIDGE INTERLOCKING VITAL LOGIC, ELECTROLOGIX "B" (12 OF 18)			SHEET OF DRAWING NO. JL154 REVISION A
PCA NO.	000	CONTRACT NO.	C801
FILE LOCATION	PROJECTWISE		



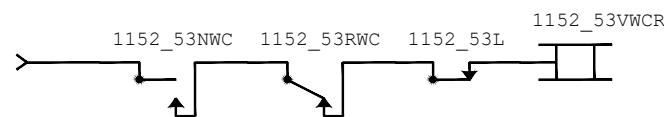
Crossover 1152-1153 Normal Switch Throw Request



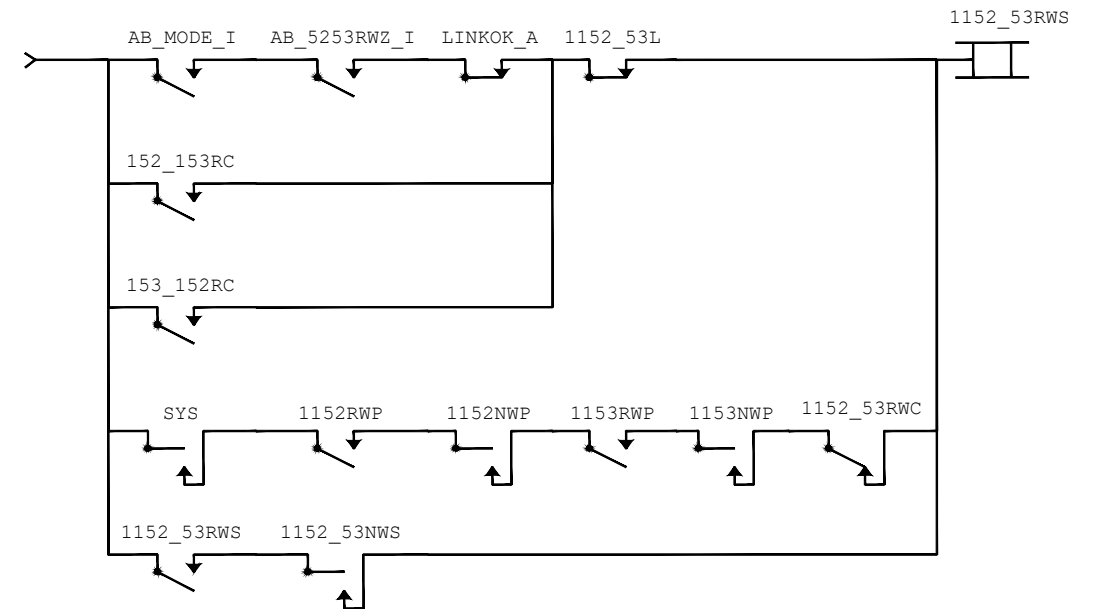
Crossover 1152-1153 Reverse Correspondence



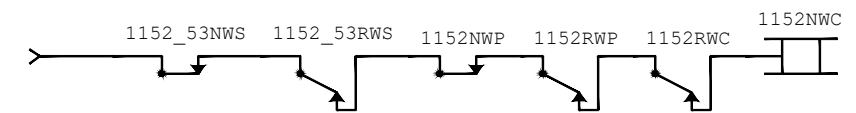
Crossover 1152-1153 Reverse Switch Throw



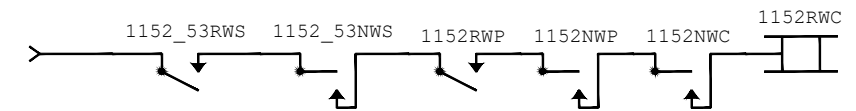
Crossover 1152-1153 VWCR Relay Control



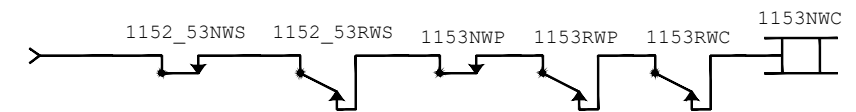
Crossover 1152-1153 Reverse Switch Throw Request



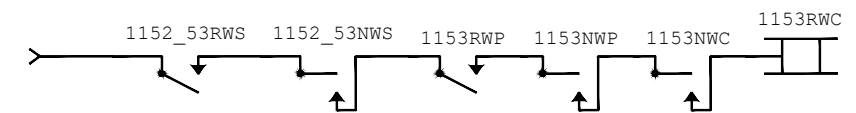
Switch 1152 Normal Correspondence



Switch 1152 Reverse Correspondence



Switch 1153 Normal Correspondence



Switch 1153 Reverse Correspondence

Jun 22, 2020 - 11:31am C:\cadd\B\_Vaw\pfiles\west\0139440\01L143-160\_Entridge\_B\_Vaw.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET

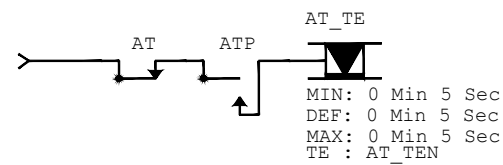


SUBMITTED		<b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
DESIGNED	M.BAKHIN	CHECKED	V.FAINGOLD
DRAWN	M.BAKHIN	CADD FILE NAME	801JL155.dwg

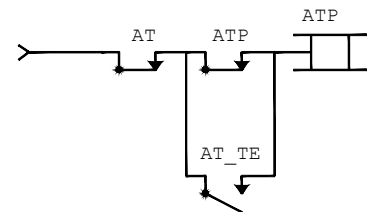


APPROVED		<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	03/11/19	SCALE	NTS
SUBMITTAL DATE	06/29/20	BOARD APPROVAL DATE	

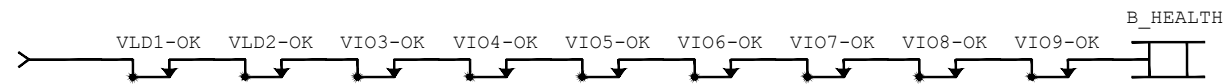
EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS EASTRIDGE INTERLOCKING VITAL LOGIC, ELECTROLOGIX "B" (13 OF 18)			SHEET OF DRAWING NO. JL155 REVISION A
PCA NO.	000	CONTRACT NO.	C801
FILE LOCATION	PROJECTWISE		



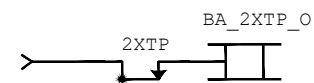
AT Loss of shunt timer



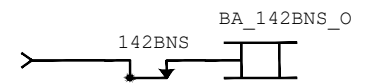
AT Track repeater with loss of shunt time



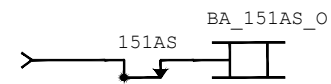
ElectroLogIXS "B" HEALTH



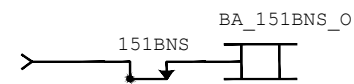
2XT Track repeater with loss of shunt time, Sent to Vital Processor "A"



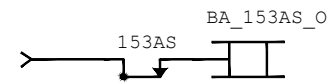
142BT Northbound Route Stick, Sent to Vital Processor "A"



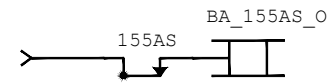
Signal 151 Approach Stick Route Locking Equation, Sent to Vital Processor "A"



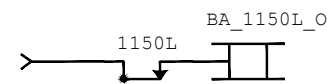
151BT Northbound Route Stick, Sent to Vital Processor "A"



Signal 153 Approach Stick Route Locking Equation, Sent to Vital Processor "A"



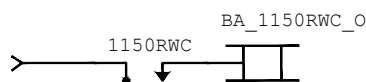
Signal 155 Approach Stick Route Locking Equation, Sent to Vital Processor "A"



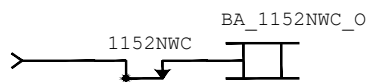
Switch 1150 Lock Circuit, Sent to Vital Processor "A"



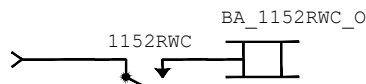
Switch 1150 Normal Correspondence, Sent to Vital Processor "A"



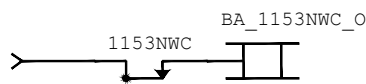
Switch 1150 Reverse Correspondence, Sent to Vital Processor "A"



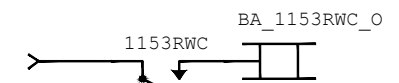
Switch 1152 Normal Correspondence, Sent to Vital Processor "A"



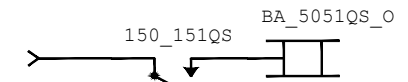
Switch 1152 Reverse Correspondence, Sent to Vital Processor "A"



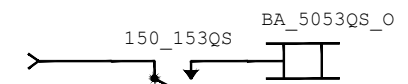
Switch 1153 Normal Correspondence, Sent to Vital Processor "A"



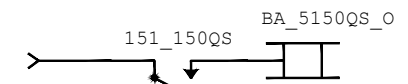
Switch 1153 Reverse Correspondence, Sent to Vital Processor "A"



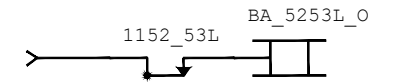
Signal C150 To Signal C151 Route Request, Sent to Vital Processor "A"



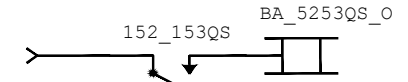
Signal C150 To Signal C153 Route Request, Sent to Vital Processor "A"



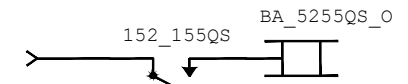
Signal C151 To Signal C150 Route Request, Sent to Vital Processor "A"



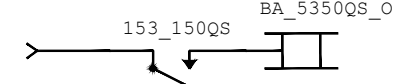
Crossover 1152-1153 Lock Circuit, Sent to Vital Processor "A"



Signal C152 To Signal C153 Route Request, Sent to Vital Processor "A"



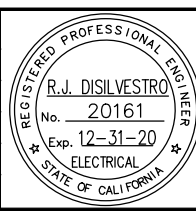
Signal C152 To Signal C155 Route Request, Sent to Vital Processor "A"



Signal C153 To Signal C150 Route Request, Sent to Vital Processor "A"

Jun 22, 2020 - 11:32am C:\cadd\hwy\gfoakes\west\0139440\01L143-160\_Eastridge\_B\_V.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



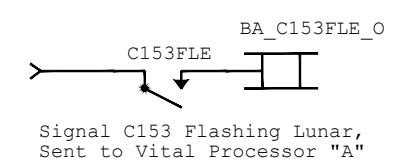
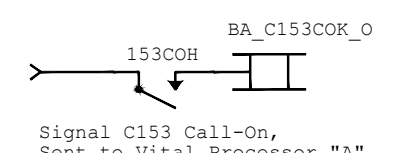
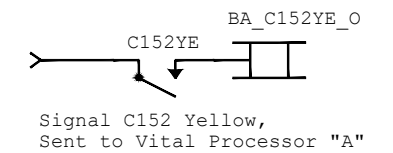
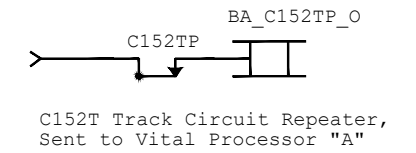
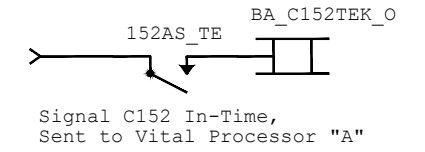
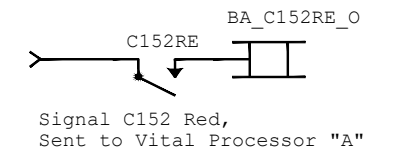
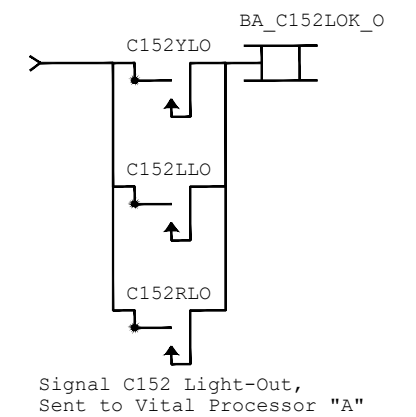
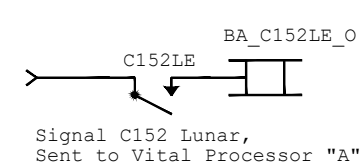
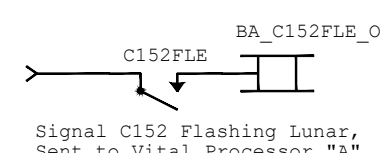
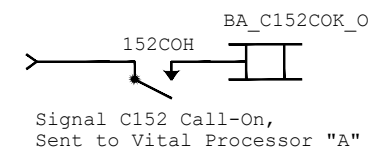
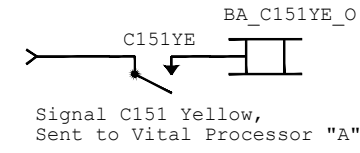
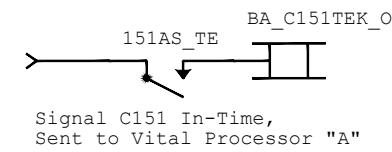
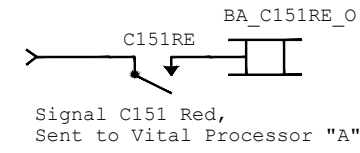
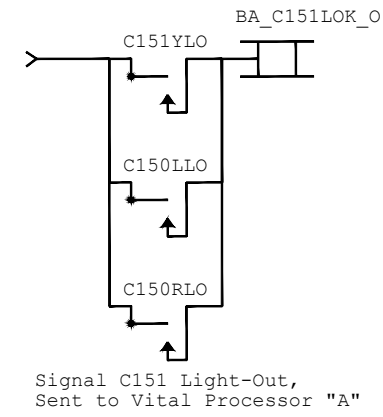
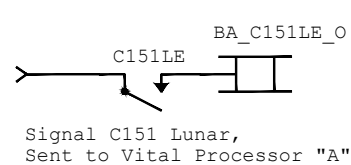
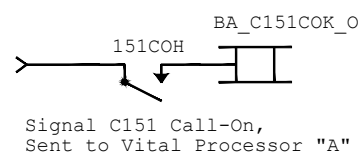
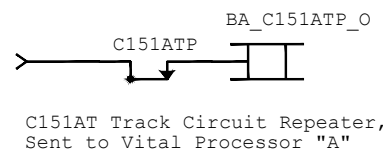
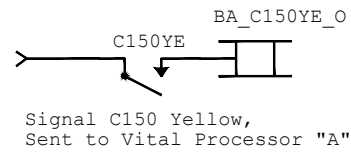
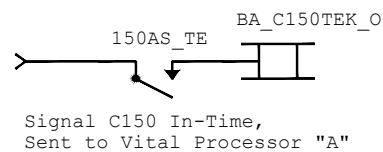
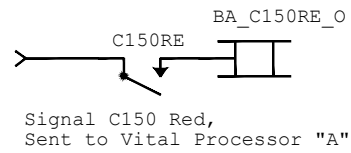
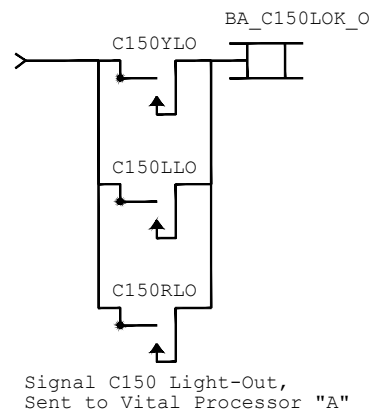
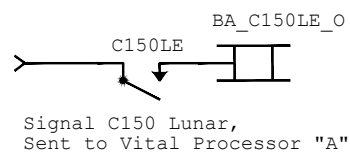
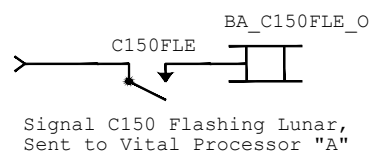
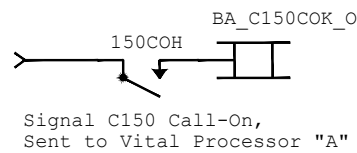
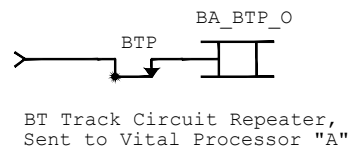
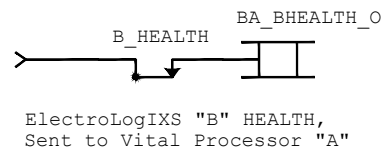
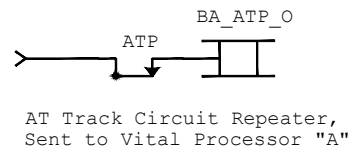
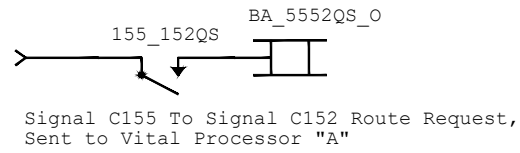
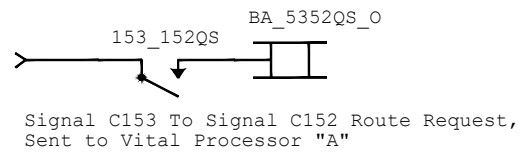
SUBMITTED		<b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
DESIGNED	M.BAKHIN	CHECKED	V.FAINGOLD
DRAWN	M.BAKHIN	CADD FILE NAME	801JL156.dwg



APPROVED		<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	03/11/19	SCALE	NTS
SUBMITTAL DATE	06/29/20	BOARD APPROVAL DATE	

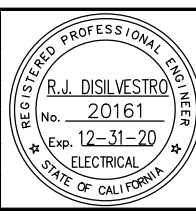
EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS EASTRIDGE INTERLOCKING VITAL LOGIC, ELECTROLOGIXS "B" (14 OF 18)		
PCA NO.	CONTRACT NO.	FILE LOCATION
000	C801	PROJECTWISE

SHEET OF	
DRAWING NO.	JL156
REVISION	A



Jun 22, 2020 - 11:32am C:\cadd\hwy\gfoakes\west\0139440\01L143-160\_Eastridge\_B\_V.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET

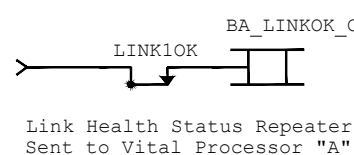
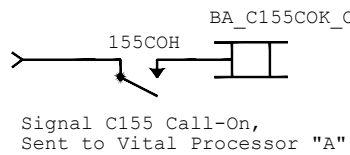
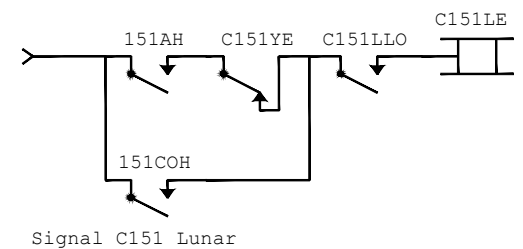
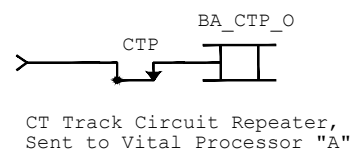
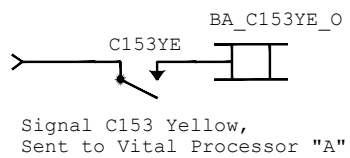
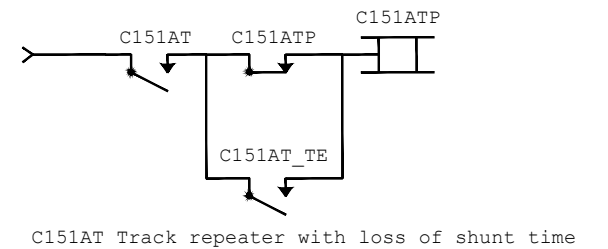
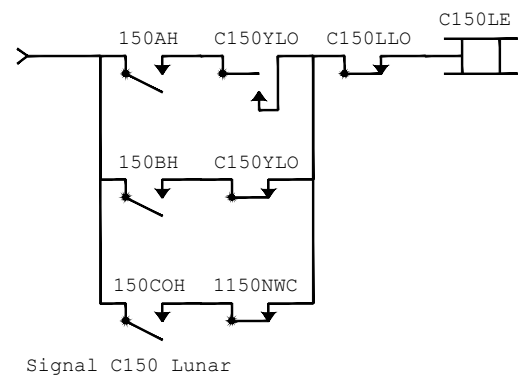
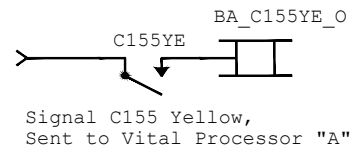
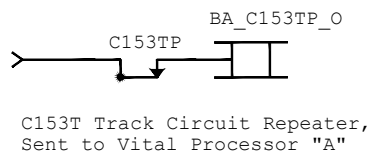
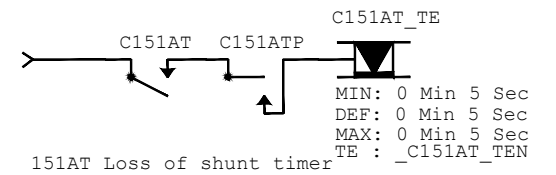
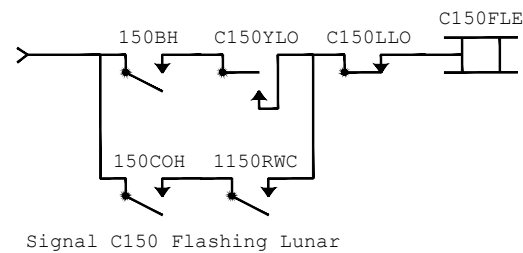
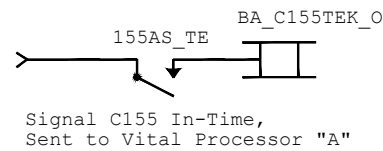
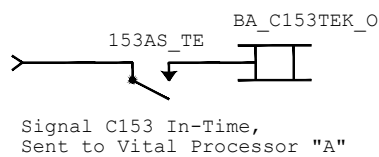
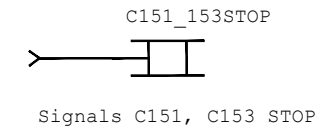
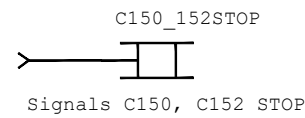
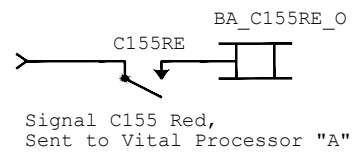
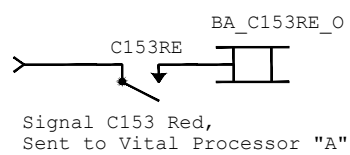
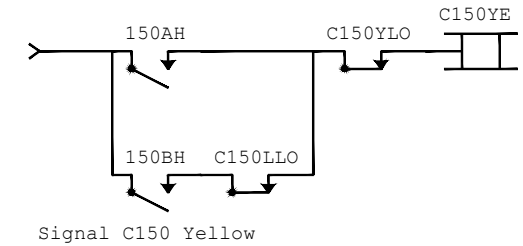
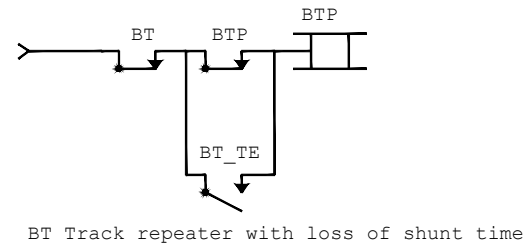
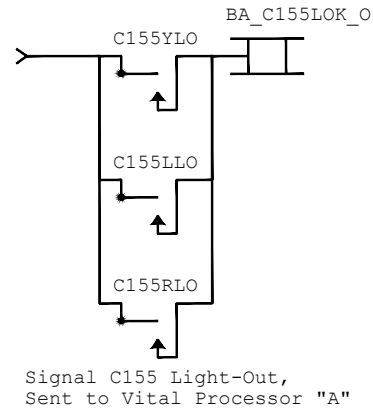
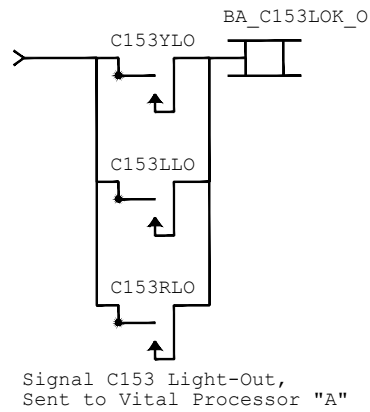
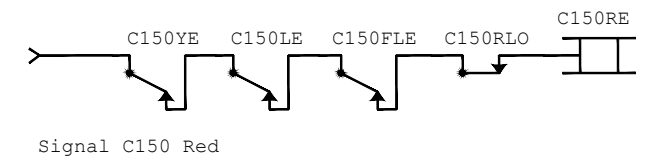
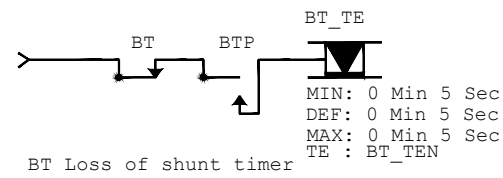
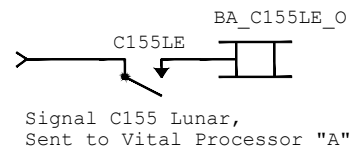
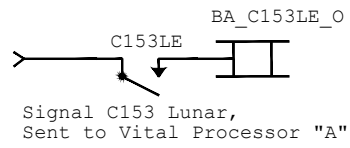


SUBMITTED	
<b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
DESIGNED	CHECKED
M.BAKHIN	V.FAINGOLD
DRAWN	CADD FILE NAME
M.BAKHIN	801JL157.dwg



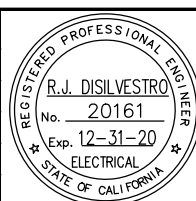
APPROVED	
<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	SCALE
03/11/19	NTS
SUBMITTAL DATE	BOARD APPROVAL DATE
06/29/20	

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS EASTRIDGE INTERLOCKING VITAL LOGIC, ELECTROLOGIXS "B" (15 OF 18)		
PCA NO.	CONTRACT NO.	FILE LOCATION
000	C801	PROJECTWISE
SHEET OF		REVISION
JL157		A



Jun 22, 2020 - 11:32am C:\cadd\p\work\west\0139440\01L158-160\_Eastridge\_B\_V.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET

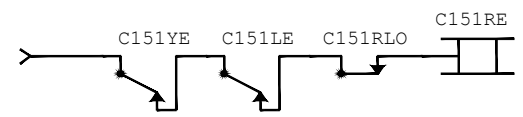


SUBMITTED	
<b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
DESIGNED	CHECKED
M.BAKHIN	V.FAINGOLD
DRAWN	CADD FILE NAME
M.BAKHIN	801JL158.dwg

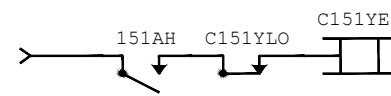


APPROVED	
<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	SCALE
03/11/19	NTS
SUBMITTAL DATE	BOARD APPROVAL DATE
06/29/20	

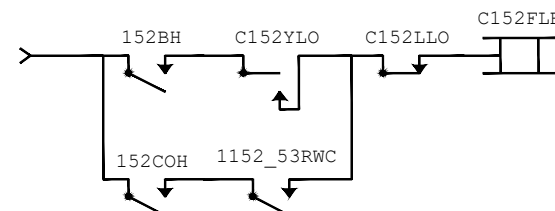
EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS EASTRIDGE INTERLOCKING VITAL LOGIC, ELECTROLOGIX "B" (16 OF 18)		
PCA NO.	CONTRACT NO.	FILE LOCATION
000	C801	PROJECTWISE
SHEET OF	DRAWING NO.	REVISION
	JL158	A



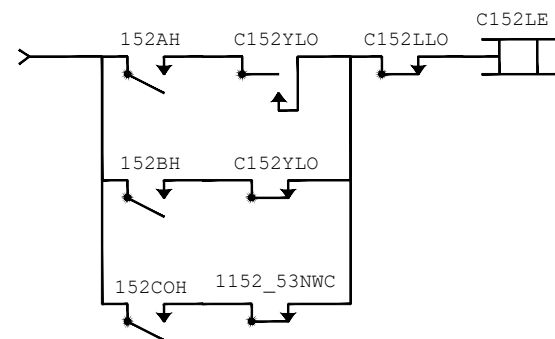
Signal C151 Red



Signal C151 Yellow



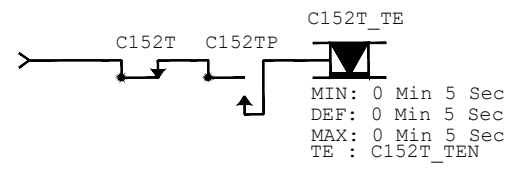
Signal C152 Flashing Lunar



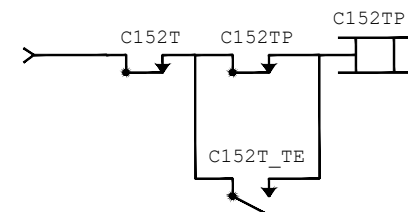
Signal C152 Lunar



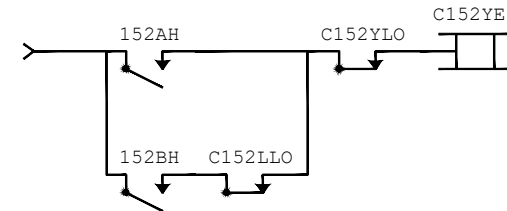
Signal C152 Red



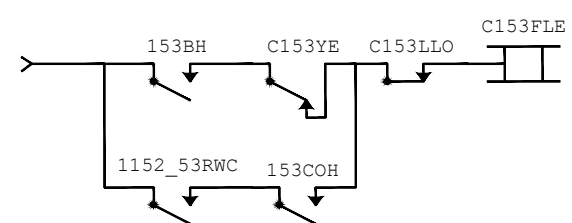
152T Loss of shunt timer



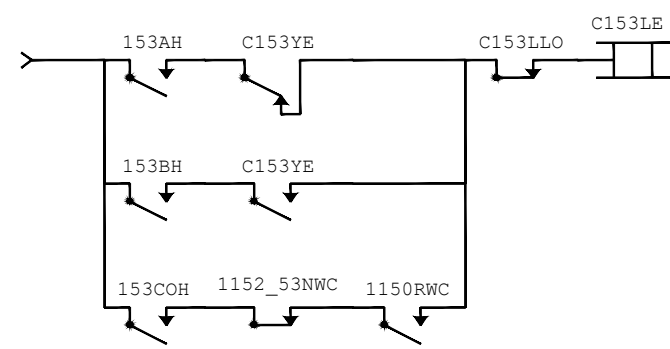
C152T Track repeater with loss of shunt time



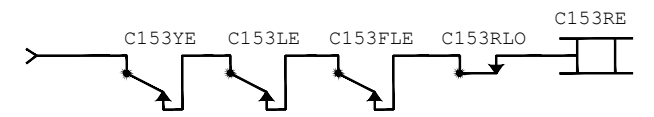
Signal C152 Yellow



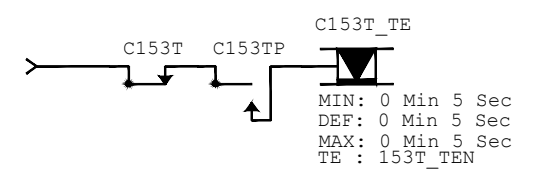
Signal C153 Flashing Lunar



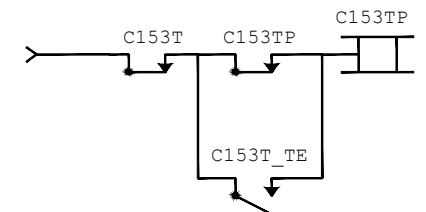
Signal C153 Lunar



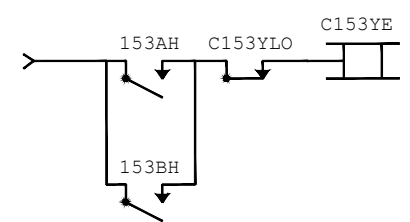
Signal C153 Red



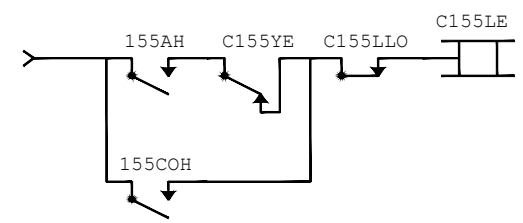
153T Loss of shunt timer



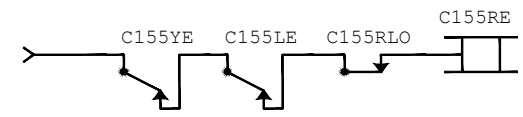
C153T Track repeater with loss of shunt time



Signal C153 Yellow



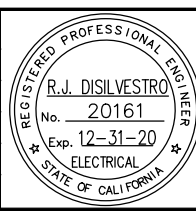
Signal C155 Lunar



Signal C155 Red

Jun 22, 2020 - 11:32am C:\cadd\hwy\gfwowes\west\0139440\01L143-160\_Eastridge\_B\_V.dwg

NO.	DATE	REVISIONS
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A	03/19	65% SUBMITTAL SET



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 Engineers Architects Planners  
 1732 North First Street, Suite 400 San Jose, CA 95112  
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DESIGNED: M.BAKHIN  
 CHECKED: V.FAINGOLD  
 DRAWN: M.BAKHIN  
 CADD FILE NAME: 801JL159.dwg

**Santa Clara Valley Transportation Authority**

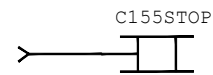
**BKF 100+ YEARS**  
 ENGINEERS / SURVEYORS / PLANNERS

APPROVED: 03/11/19  
 SCALE: NTS  
 SUBMITTAL DATE: 06/29/20  
 BOARD APPROVAL DATE:

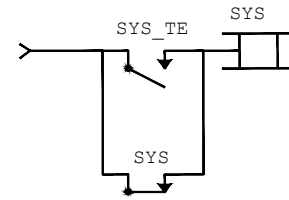
EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 LRT SIGNAL SYSTEMS  
 EASTRIDGE INTERLOCKING  
 VITAL LOGIC, ELECTROLOGIX "B" (17 OF 18)

SHEET OF JL159 REVISION A  
 PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

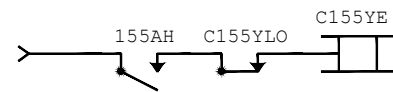




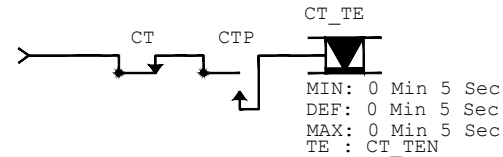
Signals C155 STOP



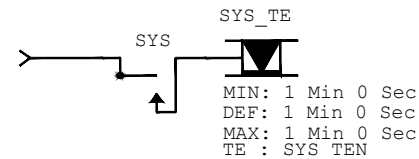
System Power Up Equation



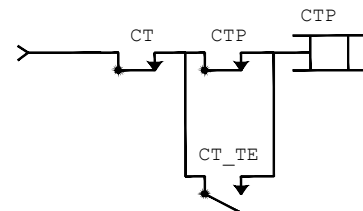
Signal C155 Yellow



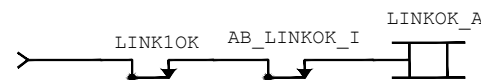
CT Loss of shunt timer



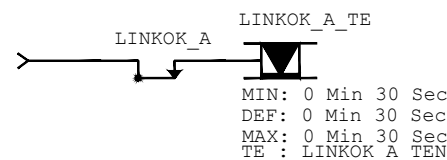
System Power Up 60 Sec Timer



CT Track repeater with loss of shunt time



Link Health Status, Vital Processor "A" to Vital Processor "B"



Link Health Status Timer, Vital Processor "A" to Vital Processor "B"

REMOTE INPUTS  
SENT FROM ELECTROLOGIX "A"

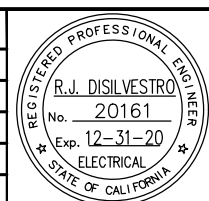
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- AB\_1150RWZ\_I
- AB\_5253NWZ\_I
- AB\_5253RWZ\_I
- AB\_150CANR\_I
- AB\_151CANR\_I
- AB\_152CANR\_I
- AB\_155CANR\_I
- AB\_153CANR\_I
- AB\_150COQS\_I
- AB\_151COQS\_I
- AB\_152COQS\_I
- AB\_153COQS\_I
- AB\_155COQS\_I
- AB\_5051RQS\_I
- AB\_5053RQS\_I
- AB\_5150RQS\_I
- AB\_5255RQS\_I
- AB\_5350RQS\_I
- AB\_5352RQS\_I
- AB\_5552RQS\_I
- AB\_4043NWC\_I
- AB\_4043RWC\_I
- AB\_4142NWC\_I
- AB\_4142RWC\_I
- AB\_MODE\_I
- AB\_C136DTP\_I
- AB\_C141BTP\_I
- AB\_C142BTP\_I
- AB\_C151BTP\_I
- AB\_C141ATP\_I
- AB\_C142ATP\_I
- AB\_140AS\_I
- AB\_142AS\_I
- AB\_142BSS\_I
- AB\_151BSS\_I
- AB\_LINKOK\_I

REMOTE OUTPUTS  
SENT TO ELECTROLOGIX "A"

- BA\_C151ATP\_O
- BA\_C152TP\_O
- BA\_C153TP\_O
- BA\_ATP\_O
- BA\_BTP\_O
- BA\_CTP\_O
- BA\_1150NWC\_O
- BA\_1150RWC\_O
- BA\_1152NWC\_O
- BA\_1152RWC\_O
- BA\_1153NWC\_O
- BA\_1153RWC\_O
- BA\_1150L\_O
- BA\_5253L\_O
- BA\_142BNS\_O
- BA\_151BNS\_O
- BA\_151AS\_O
- BA\_153AS\_O
- BA\_155AS\_O
- BA\_2XTP\_O
- BA\_BHEALTH\_O
- BA\_C150YE\_O
- BA\_C150LE\_O
- BA\_C150FLE\_O
- BA\_C150RE\_O
- BA\_C150COK\_O
- BA\_C150LOK\_O
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- BA\_5150QS\_O
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- BA\_LINKOK\_O

Jun 22, 2020 11:22am C:\cadd\ib\paw\gfoakes\west\0139440\01L143-160\_Eastridge\_B\_V.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
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DESIGNED: M.BAKHIN CHECKED: V.FAINGOLD  
DRAWN: M.BAKHIN CADD FILE NAME: 801JL160.dwg

Santa Clara Valley  
**Transportation Authority**

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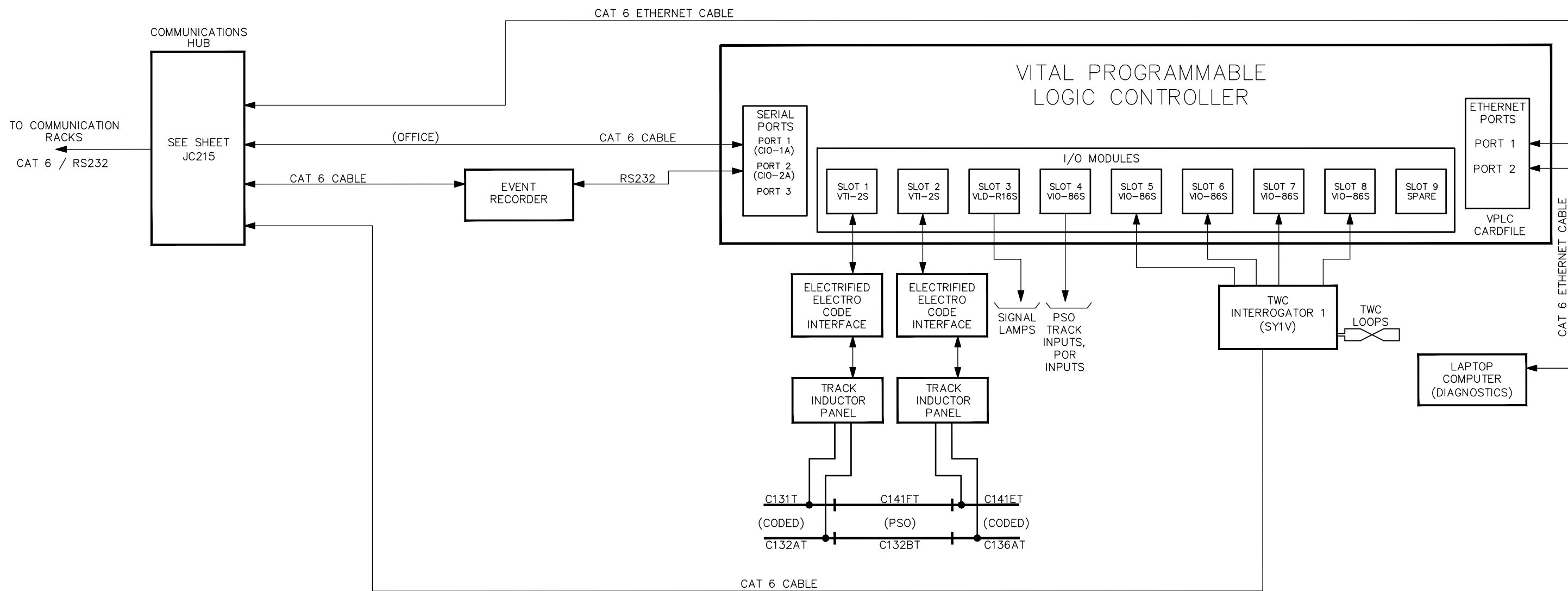
**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/11/19 SCALE: NTS  
SUBMITTAL DATE: 06/29/20 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
EASTRIDGE INTERLOCKING  
VITAL LOGIC, ELECTROLOGIX "B" (18 OF 18)

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

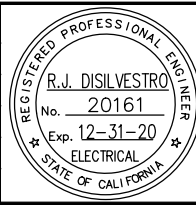
SHEET OF	JL160
DRAWING NO.	
REVISION	A



VTI-2S - VITAL TRACK INTERFACE  
 VIO-86S - VITAL INPUT/OUTPUT MODULE  
 VLD-R16S - VITAL LAMP DRIVER MODULE

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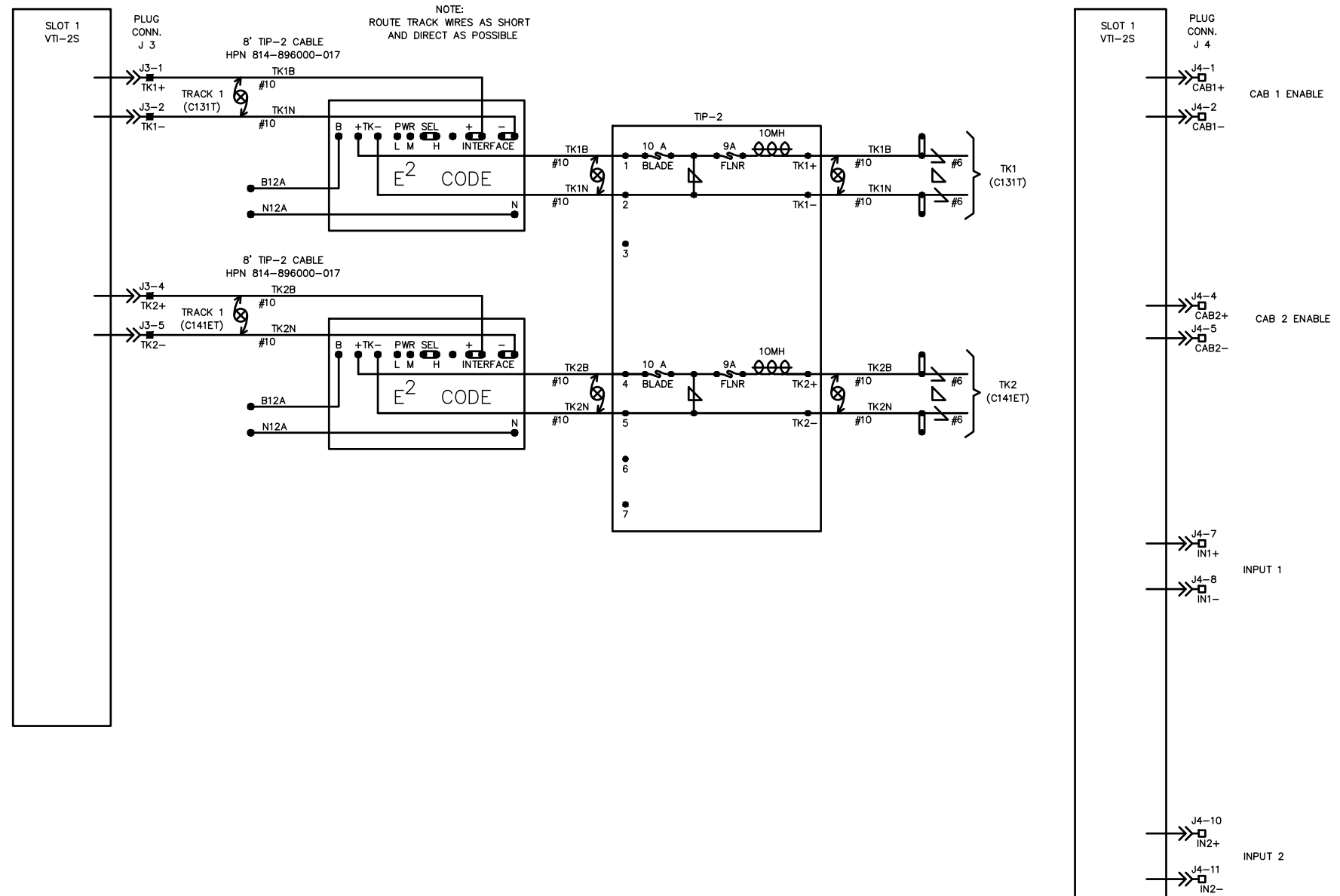
**BKF** 100+ YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/11/19 SCALE: NTS  
 SUBMITTAL DATE: 06/29/20 BOARD APPROVAL DATE:

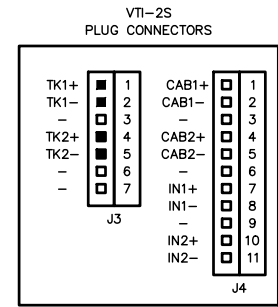
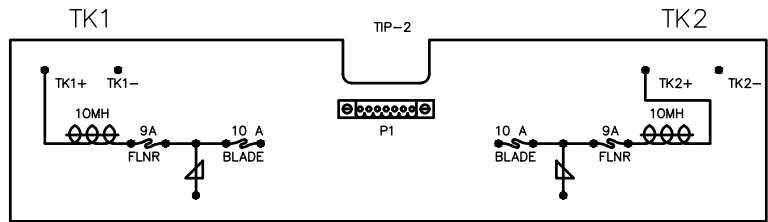
EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 LRT SIGNAL SYSTEMS  
 STORY STATION  
 SYSTEM BLOCK DIAGRAM

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

SHEET OF DRAWING NO. JC201 REVISION B



NOTE:  
ROUTE TRACK WIRES AS SHORT  
AND DIRECT AS POSSIBLE



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CHECKED: V.FAINGOLD  
DRAWN: M.BAKHIN  
CADD FILE NAME: 801JC202.dwg

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**Transportation Authority**

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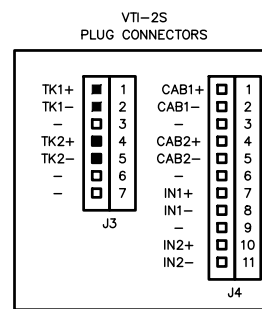
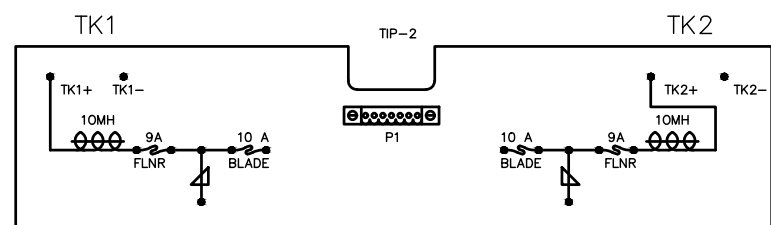
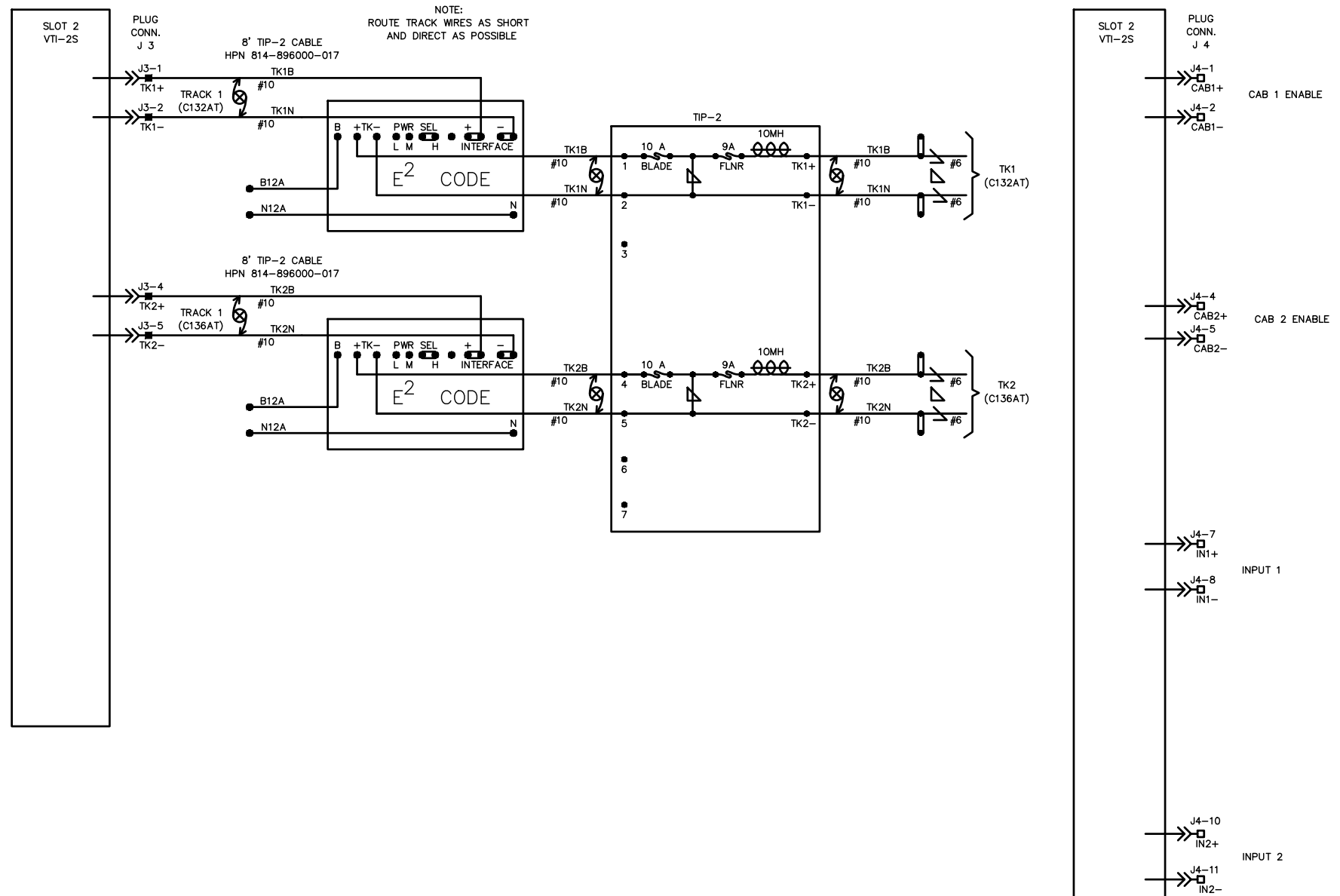
**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/11/19  
SUBMITTAL DATE: 06/29/20  
SCALE: NTS  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
STORY STATION  
CODED TRACK CIRCUITS (1 OF 2)

PCA NO. 000  
CONTRACT NO. C801  
FILE LOCATION PROJECTWISE

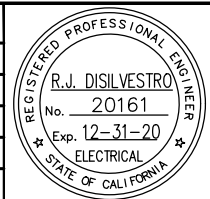
SHEET OF  
DRAWING NO. JC202  
REVISION B



■ = WIRE PRESENT  
- = NOT USED

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DRAWN: M.BAKHIN  
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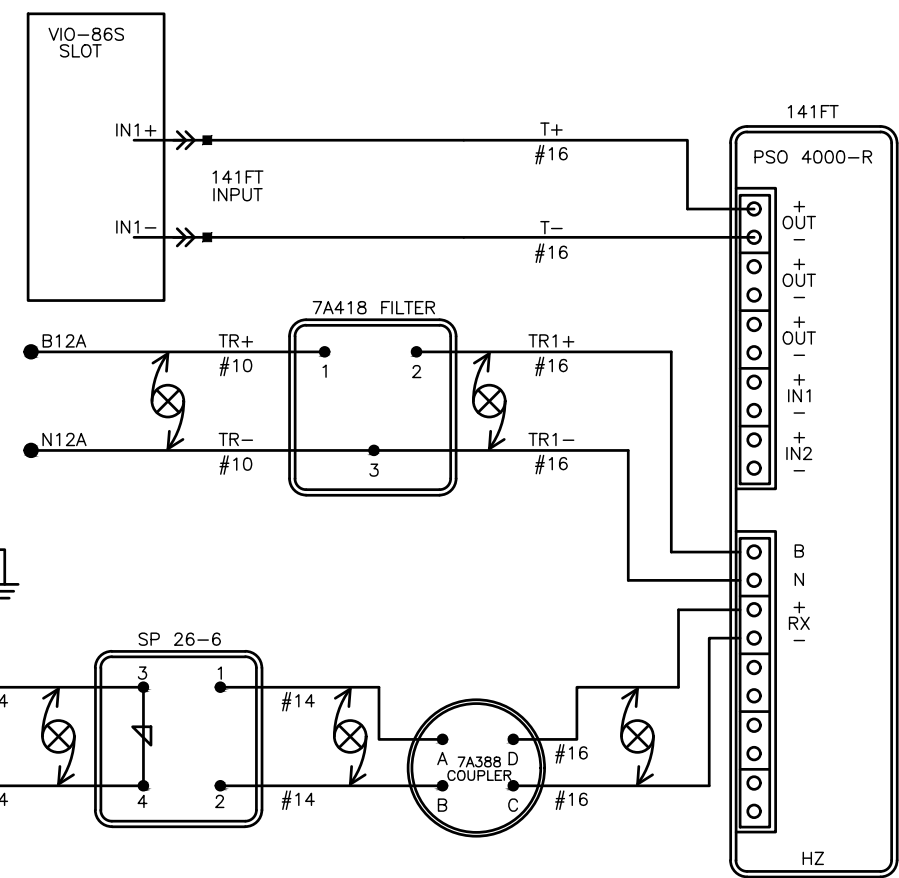
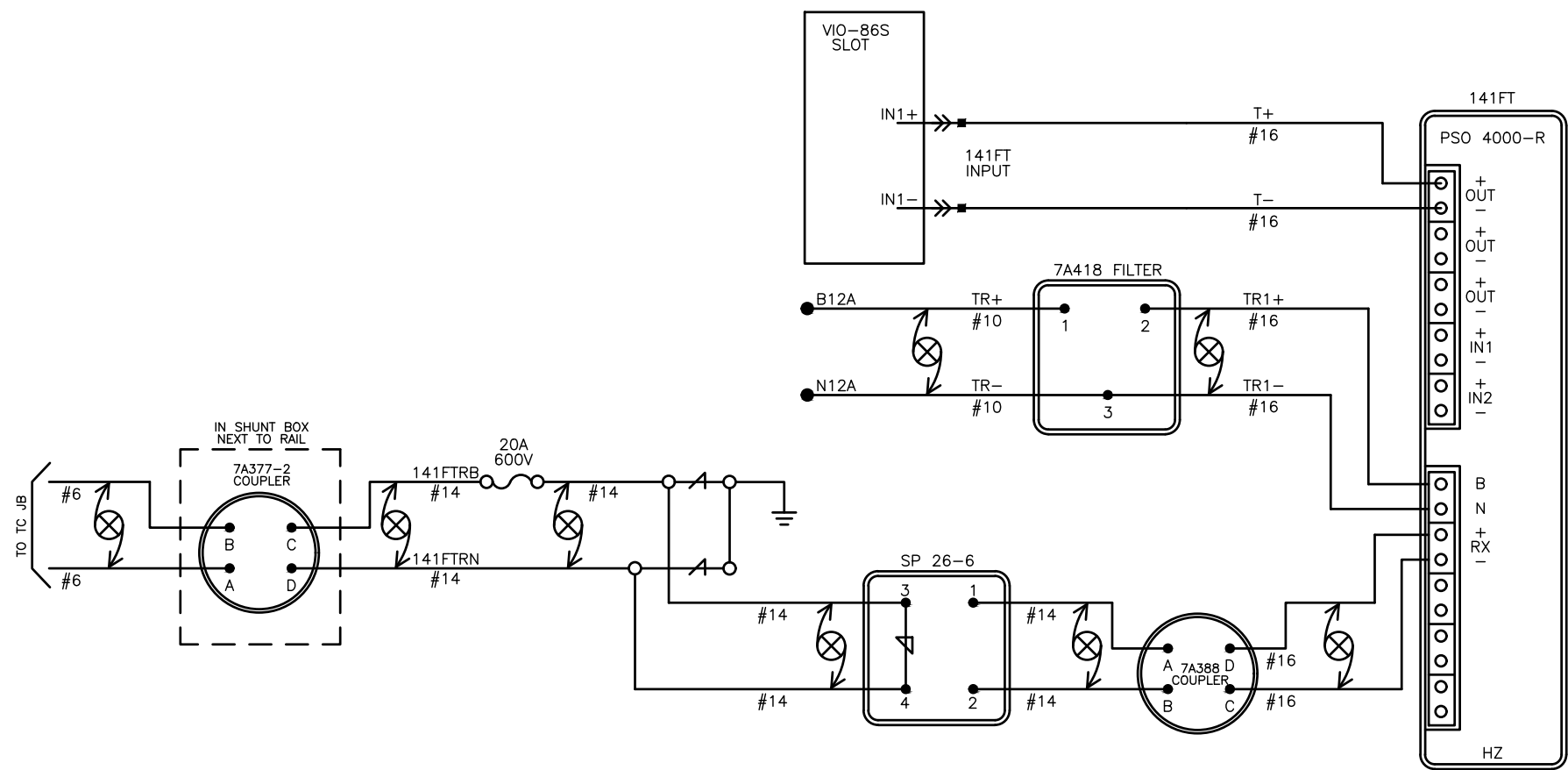
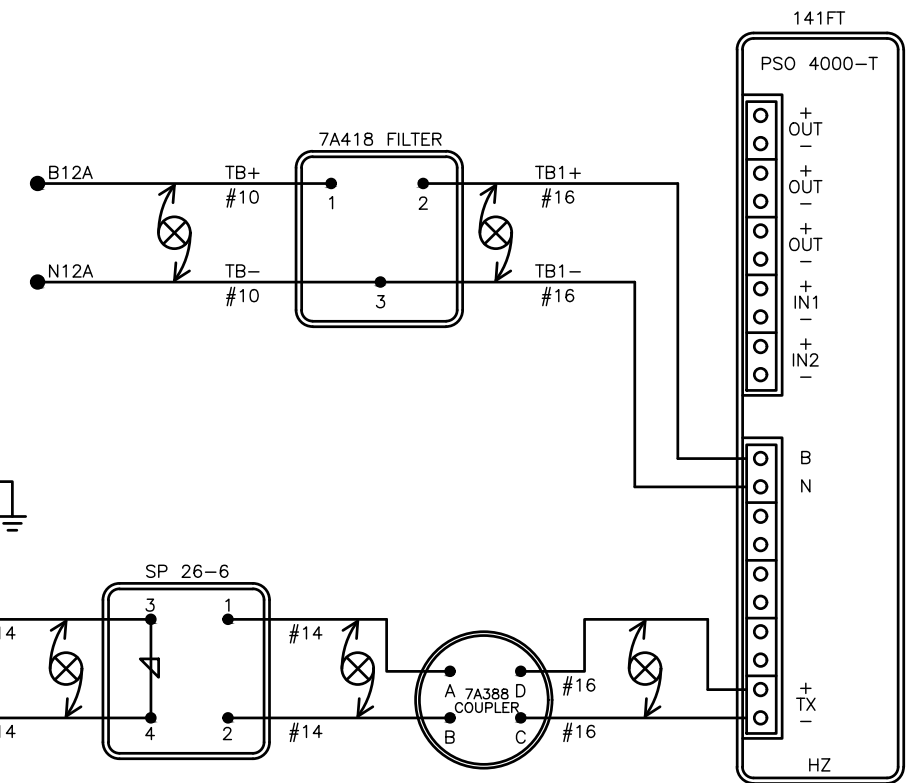
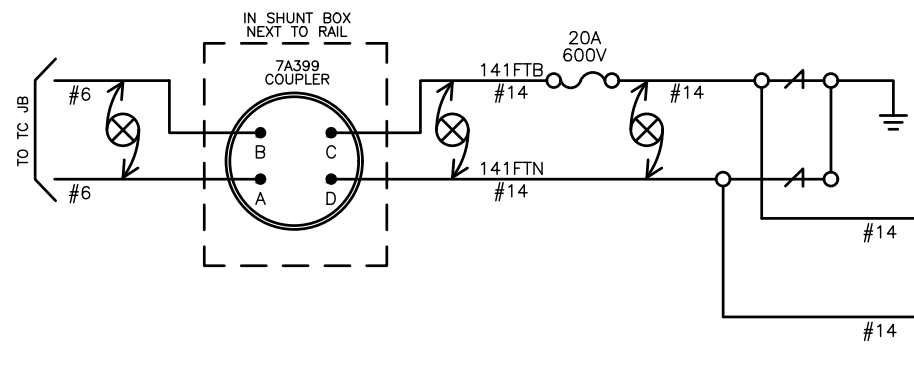
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SUBMITTAL DATE: 06/29/20  
SCALE: NTS  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
STORY STATION  
CODED TRACK CIRCUITS (2 OF 2)

PCA NO. 000  
CONTRACT NO. C801  
FILE LOCATION PROJECTWISE

SHEET OF  
DRAWING NO. JC203  
REVISION B

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 DRAWN: M.BAKHIN  
 CADD FILE NAME: 801JC204.dwg

**Santa Clara Valley Transportation Authority**

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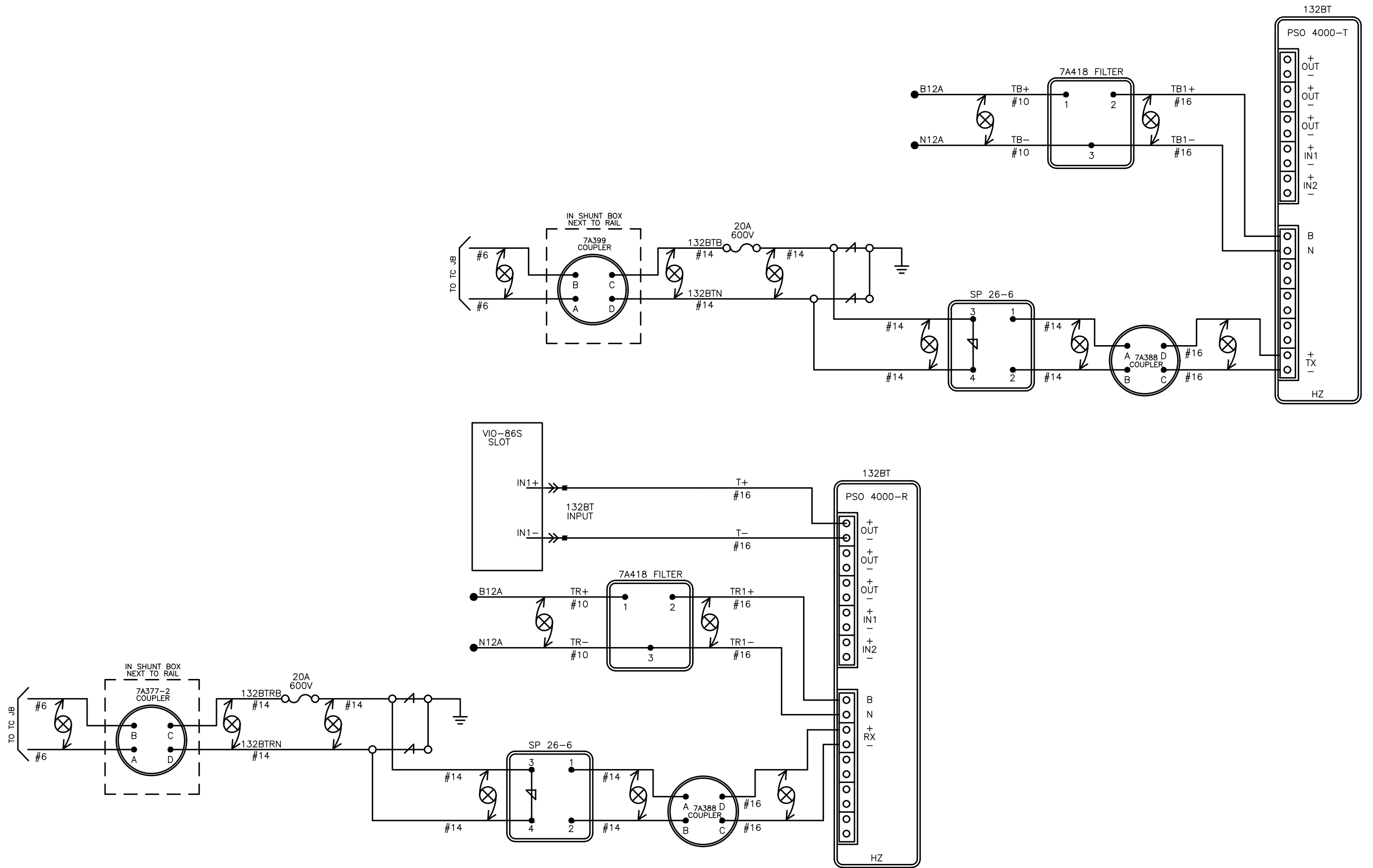
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 SCALE: NTS  
 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 LRT SIGNAL SYSTEMS  
 STORY STATION  
 POS TRACK CIRCUITS (1 OF 2)

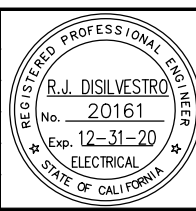
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PCA NO.: 000  
 CONTRACT NO.: C801  
 FILE LOCATION: PROJECTWISE

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NO.	DATE	REVISIONS
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DESIGNED	M.BAKHIN	CHECKED	V.FAINGOLD
DRAWN	M.BAKHIN	CADD FILE NAME	801JC205.dwg



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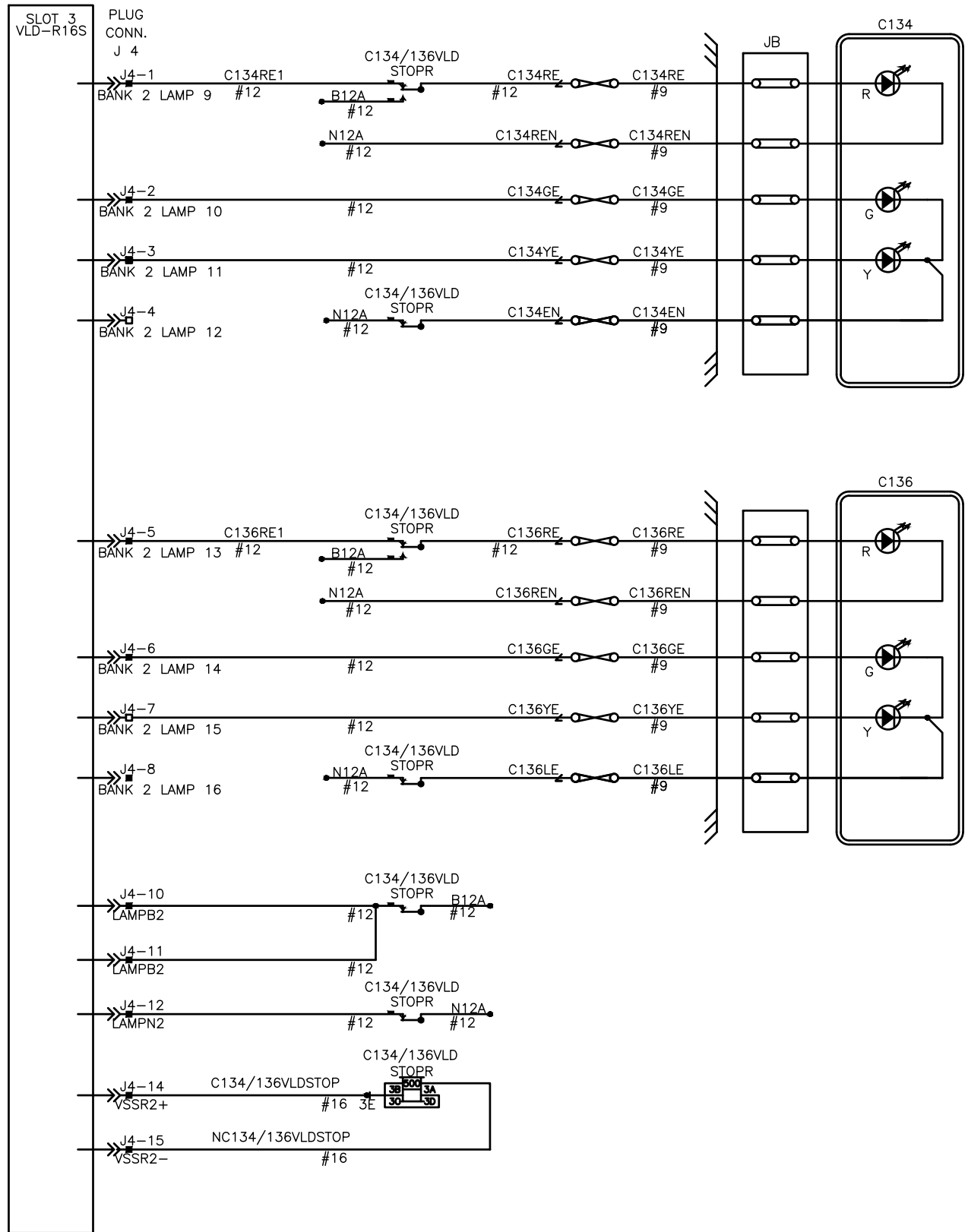
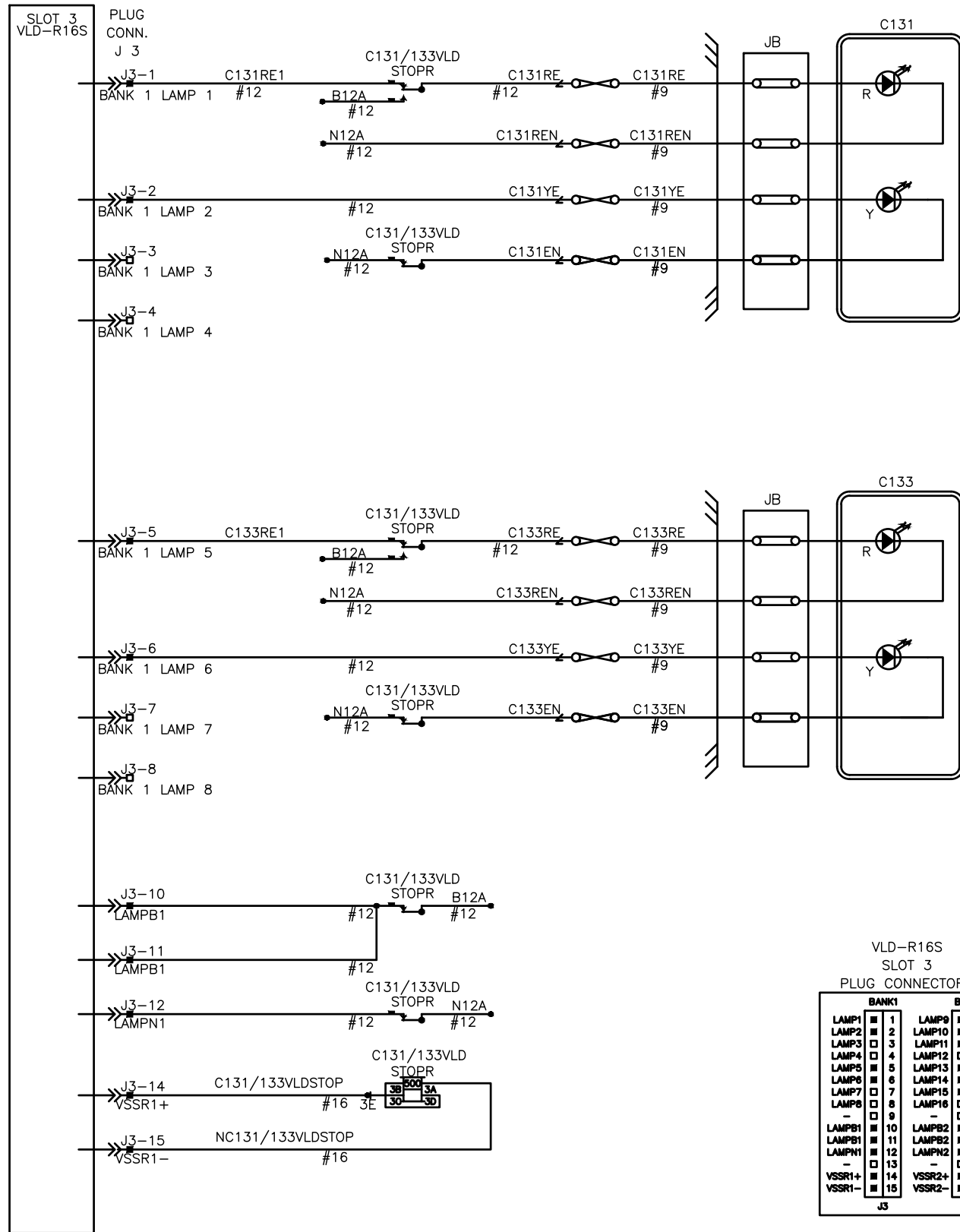
**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE	03/11/19	SCALE	NTS
SUBMITTAL DATE	06/29/20	BOARD APPROVAL DATE	

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
STORY STATION  
POS TRACK CIRCUITS (2 OF 2)

PCA NO.	000	CONTRACT NO.	C801	FILE LOCATION	PROJECTWISE
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SHEET OF  
DRAWING NO. JC205  
REVISION B



VLD-R16S  
SLOT 3  
PLUG CONNECTORS

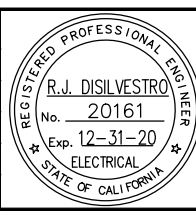
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LAMP1	1	LAMP9	1
LAMP2	2	LAMP10	2
LAMP3	3	LAMP11	3
LAMP4	4	LAMP12	4
LAMP5	5	LAMP13	5
LAMP6	6	LAMP14	6
LAMP7	7	LAMP15	7
LAMP8	8	LAMP16	8
-	9	-	9
LAMPB1	10	LAMPB2	10
LAMPB1	11	LAMPB2	11
LAMPN1	12	LAMPN2	12
-	13	-	13
VSSR1+	14	VSSR2+	14
VSSR1-	15	VSSR2-	15

J3      J4

■ - WIRE PRESENT  
-- - NOT USED

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A	03/19	65% SUBMITTAL SET



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DRAWN: M.BAKHIN      CADD FILE NAME: 801JC206.dwg



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**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

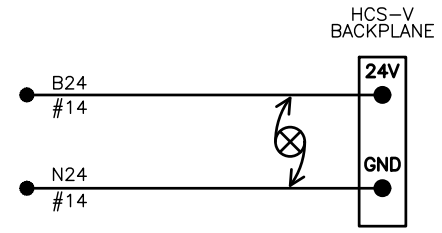
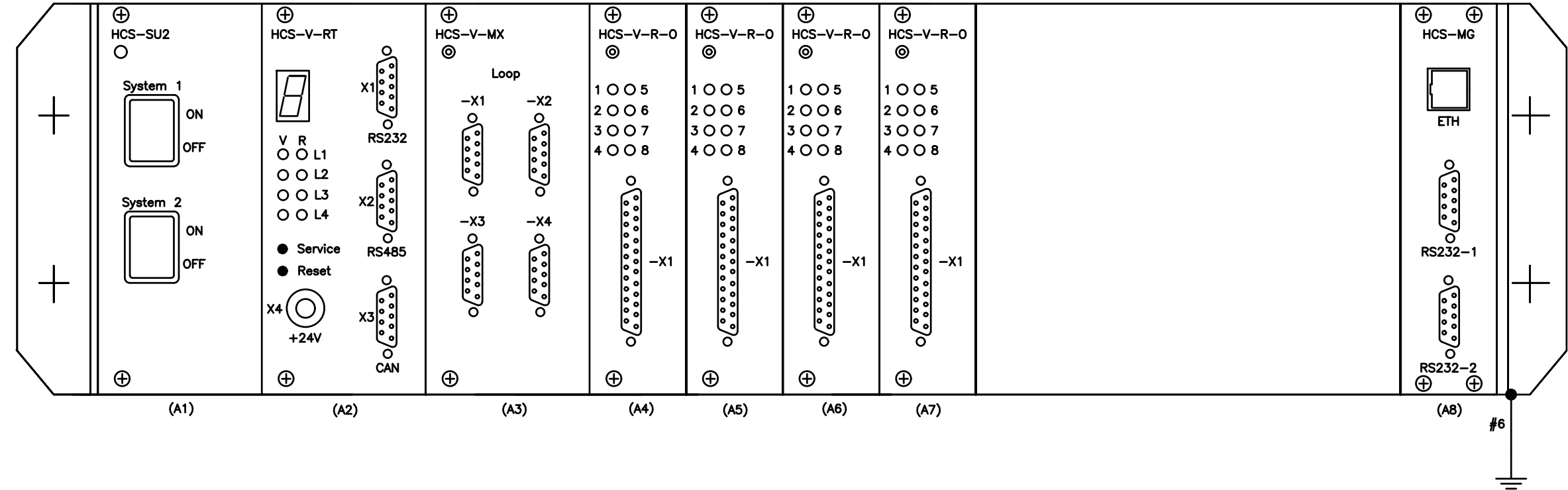
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SUBMITTAL DATE: 06/29/20      BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
STORY STATION  
SIGNAL LIGHTING CIRCUITS

PCA NO. 000      CONTRACT NO. C801      FILE LOCATION PROJECTWISE

SHEET OF	JC206
DRAWING NO.	JC206
REVISION	B

H & K HCS-V WAYSIDE EQUIPMENT - (SY1V)



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NO.	DATE	REVISIONS
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DESIGNED: M.BAKHIN  
CHECKED: V.FAINGOLD  
DRAWN: M.BAKHIN  
CADD FILE NAME: 801JC207.dwg



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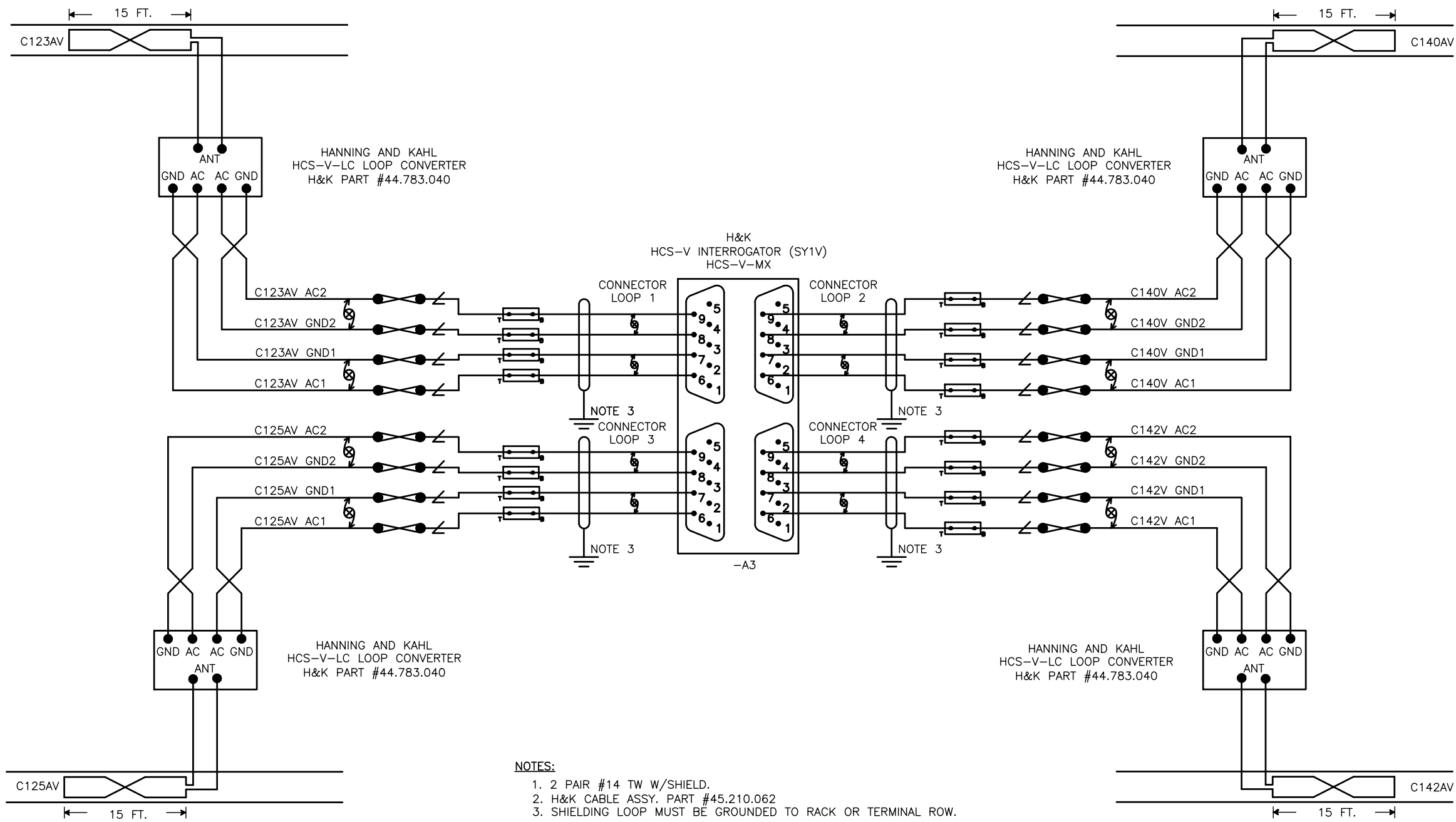
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SUBMITTAL DATE: 06/29/20  
SCALE: NTS  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
STORY STATION  
TWC INTERROGATOR (SY1V)

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

SHEET OF DRAWING NO. JC207 REVISION B





- NOTES:**
1. 2 PAIR #14 TW W/SHIELD.
  2. H&K CABLE ASSY. PART #45.210.062
  3. SHIELDING LOOP MUST BE GROUNDED TO RACK OR TERMINAL ROW.

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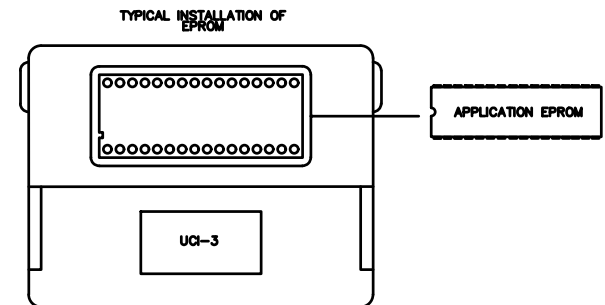
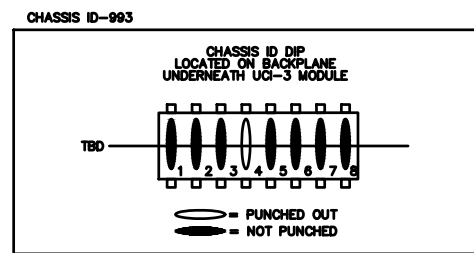
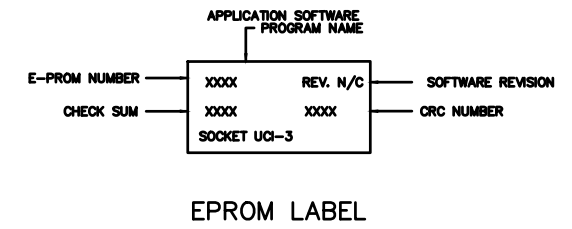
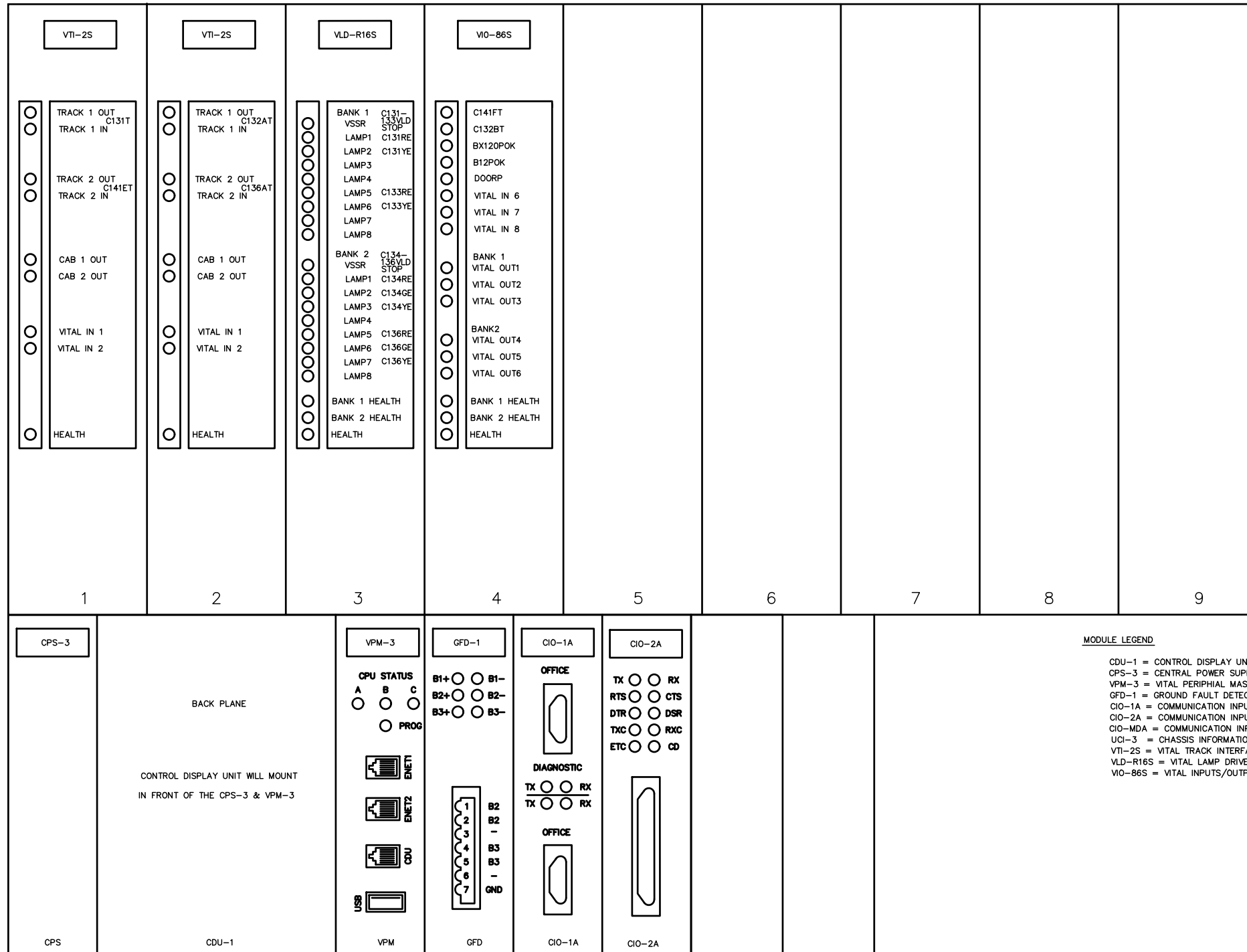
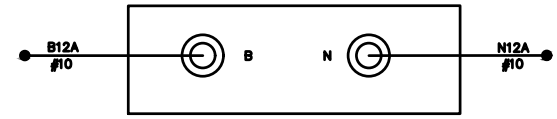
<b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
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EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS STORY STATION TWC LOOPS (C123AV,C125AV,C140AV,C142AV)		
PCA NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE

SHEET OF	JC208
REVISION	B

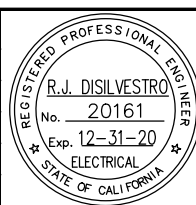


**MODULE LEGEND**

- CDU-1 = CONTROL DISPLAY UNIT
- CPS-3 = CENTRAL POWER SUPPLY
- VPM-3 = VITAL PERIPHERAL MASTER
- GFD-1 = GROUND FAULT DETECTOR
- CIO-1A = COMMUNICATION INPUT/OUTPUT
- CIO-2A = COMMUNICATION INPUT/OUTPUT
- CIO-MDA = COMMUNICATION INPUT/OUTPUT
- UCI-3 = CHASSIS INFORMATION
- VTI-2S = VITAL TRACK INTERFACE
- VLD-R16S = VITAL LAMP DRIVER
- VIO-86S = VITAL INPUTS/OUTPUTS

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EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
STORY STATION  
MICROPROCESSOR MODULE CONFIGURATION

PCB NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

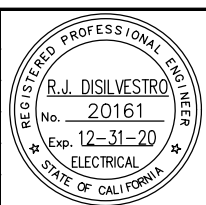
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STORY, OFFICE CONTROL AND INDICATION CHART, SERIAL PORT 1

INDICATIONS								
	BIT 1	BIT 2	BIT 3	BIT 4	BIT 5	BIT 6	BIT 7	BIT 8
WORD 1	C_C131TK	C_C141FTK	C_C141ETK	C_C141DTK	C_C141CTK	C_C132ATK	C_C132BTK	C_C136ATK
WORD 2	C_C136BTK	C_C136CTK	SP	C_C130GK	C_C130YK	C_C130RK	C_C130LOK	SP
WORD 3	C_C132GK	C_C132YK	C_C132RK	C_C132LOK	SP	C_C131YK	C_C131RK	C_C131LOK
WORD 4	SP	C_C133YK	C_C133RK	C_C133LOK	SP	C_C134GK	C_C134YK	C_C134RK
WORD 5	C_C134LOK	SP	C_C136GK	C_C136YK	C_C136RK	C_C136LOK	SP	SP
WORD 6	C_ACPOK_STR	C_B12POK_STR	C_ACPOK968	C_B12POK968	C_ACPOK1011	C_B12POK1011	C_ACPOK1029	C_B12POK1029
WORD 7	SP	C_LINK	C_DOORK	C_ELOGXK	SP	SP	SP	SP

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EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
STORY STATION  
CONTROL AND INDICATION CHART

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

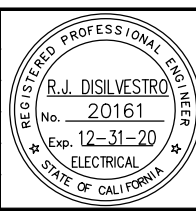
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STORY ELOGIXS I/O CHART							
VTI2S: IO SLOT 1							
TRACK 1				TRACK 2			
RX STATUSES		TX STATUSES		RX STATUSES		TX STATUSES	
QUICK SHUNT CODE 1		CODE 1	3NT01	QUICK SHUNT CODE 1		CODE 1	3ST01
CODE 1	3NTI1	CODE 2	3NT02	CODE 1	3STI1	CODE 2	3ST02
CODE 2	3NTI2	CODE 3		CODE 2	3STI2	CODE 3	
CODE 3		CODE 4		CODE 3	3STI3	CODE 4	
CODE 4		CODE 5		CODE 4		CODE 5	
CODE 5		CODE 6	3NT06	CODE 5		CODE 6	3ST06
CODE 6	3NTI6	CODE 7	3NT07	CODE 6	3STI6	CODE 7	3ST07
CODE 7		CODE 8		CODE 7	3STI7	CODE 8	
CODE 8		CODE M		CODE 8		CODE M	
CODE M				CODE M	3STIM		

VTI2S: IO SLOT 2							
TRACK 1				TRACK 2			
RX STATUSES		TX STATUSES		RX STATUSES		TX STATUSES	
QUICK SHUNT CODE 1		CODE 1	4NT01	QUICK SHUNT CODE 1		CODE 1	4ST01
CODE 1	4NTI1	CODE 2	4NT02	CODE 1	4STI1	CODE 2	4ST02
CODE 2	4NTI2	CODE 3		CODE 2	4STI2	CODE 3	
CODE 3		CODE 4		CODE 3	4STI3	CODE 4	
CODE 4		CODE 5		CODE 4		CODE 5	
CODE 5		CODE 6	4NT06	CODE 5		CODE 6	4ST06
CODE 6	4NTI6	CODE 7	4NT07	CODE 6	4STI6	CODE 7	4ST07
CODE 7		CODE 8		CODE 7	4STI7	CODE 8	
CODE 8		CODE M		CODE 8		CODE M	
CODE M				CODE M	4STIM		

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EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
STORY STATION  
ELECTROLOGIXS I/O SLOTS 1-2

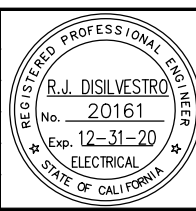
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REVISION A

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STORY ELOGIXS I/O CHART			
VLD-R16S: IO SLOT 3			
MODULE HEALTH	VLD3_OK		
VITAL SIGNAL STOP 1	C131_134STOP	LAMP STEADY ON 5	C134RE
VITAL SIGNAL STOP 2	C133_136STOP	LAMP FLASH 5	
LAMP GRANT BANK 1		LAMP ALT FLASH 5	
LAMP GRANT BANK 2		LAMP OK STATUS 5	C134RLO
LAMP BANK 1 HEALTH		LAMP STEADY ON 6	C134YE
LAMP BANK 2 HEALTH		LAMP FLASH 6	
LAMP BANK 1 NORMAL		LAMP ALT FLASH 6	
LAMP BANK 2 NORMAL		LAMP OK STATUS 6	C134YLO
LAMP STEADY ON 1	C131RE	LAMP STEADY ON 7	C134GE
LAMP FLASH 1		LAMP FLASH 7	
LAMP ALT FLASH 1		LAMP ALT FLASH 7	
LAMP OK STATUS 1	C131RLO	LAMP OK STATUS 7	C134GLO
LAMP STEADY ON 2	C131YE	LAMP STEADY ON 8	
LAMP FLASH 2		LAMP FLASH 8	
LAMP ALT FLASH 2		LAMP ALT FLASH 8	
LAMP OK STATUS 2	C131YLO	LAMP OK STATUS 8	
LAMP STEADY ON 3		LAMP STEADY ON 9	C133RE
LAMP FLASH 3		LAMP FLASH 9	
LAMP ALT FLASH 3		LAMP ALT FLASH 9	
LAMP OK STATUS 3		LAMP OK STATUS 9	C133RLO
LAMP STEADY ON 4		LAMP STEADY ON 10	C133YE
LAMP FLASH 4		LAMP FLASH 10	
LAMP ALT FLASH 4		LAMP ALT FLASH 10	
LAMP OK STATUS 4		LAMP OK STATUS 10	C133YLO
		LAMP STEADY ON 11	
		LAMP FLASH 11	
		LAMP ALT FLASH 11	
		LAMP OK STATUS 11	
		LAMP STEADY ON 12	
		LAMP FLASH 12	
		LAMP ALT FLASH 12	
		LAMP OK STATUS 12	
		LAMP STEADY ON 13	C136RE
		LAMP FLASH 13	
		LAMP ALT FLASH 13	
		LAMP OK STATUS 13	C136RLO
		LAMP STEADY ON 14	C136YE
		LAMP FLASH 14	
		LAMP ALT FLASH 14	
		LAMP OK STATUS 14	C136YLO
		LAMP STEADY ON 15	C136GE
		LAMP FLASH 15	
		LAMP ALT FLASH 15	
		LAMP OK STATUS 15	C136GLO
		LAMP STEADY ON 16	
		LAMP FLASH 16	
		LAMP ALT FLASH 16	
		LAMP OK STATUS 16	

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EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
STORY STATION  
ELECTROLOGIXS I/O SLOT 3

PCA NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE
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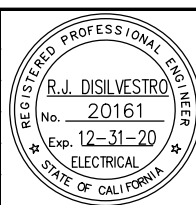
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	JC212
	REVISION
	A

STORY ELOGIXS I/O CHARTS

VIO86S: IO SLOT 4		VIO86S: IO SLOT 5		VIO86S: IO SLOT 6	
MODULE HEALTH	VIO4-OK	MODULE HEALTH	VIO5-OK	MODULE HEALTH	VIO6-OK
BANK 1 HEALTH		BANK 1 HEALTH		BANK 1 HEALTH	
BANK 2 HEALTH		BANK 2 HEALTH		BANK 2 HEALTH	
VITAL INPUT 1	C141FT	VITAL INPUT 1	140AAVL	VITAL INPUT 1	123AAVQ
VITAL INPUT 2	C132BT	VITAL INPUT 2	140AVC	VITAL INPUT 2	123ABVQ
VITAL INPUT 3	ACPOK	VITAL INPUT 3	142AAVL	VITAL INPUT 3	123AVC
VITAL INPUT 4	B12POK	VITAL INPUT 4	142AVC	VITAL INPUT 4	125AAVQ
VITAL INPUT 5	DOORP	VITAL INPUT 5	140_141AVQ	VITAL INPUT 5	125ABVQ
VITAL INPUT 6		VITAL INPUT 6	140_143AVQ	VITAL INPUT 6	125AVC
VITAL INPUT 7		VITAL INPUT 7	142_141AVQ	VITAL INPUT 7	
VITAL INPUT 8		VITAL INPUT 8	142_143AVQ	VITAL INPUT 8	
VITAL OUTPUT 1		VITAL OUTPUT 1		VITAL OUTPUT 1	
VITAL OUTPUT 2		VITAL OUTPUT 2		VITAL OUTPUT 2	
VITAL OUTPUT 3		VITAL OUTPUT 3		VITAL OUTPUT 3	
VITAL OUTPUT 4		VITAL OUTPUT 4		VITAL OUTPUT 4	
VITAL OUTPUT 5		VITAL OUTPUT 5		VITAL OUTPUT 5	
VITAL OUTPUT 6		VITAL OUTPUT 6		VITAL OUTPUT 6	

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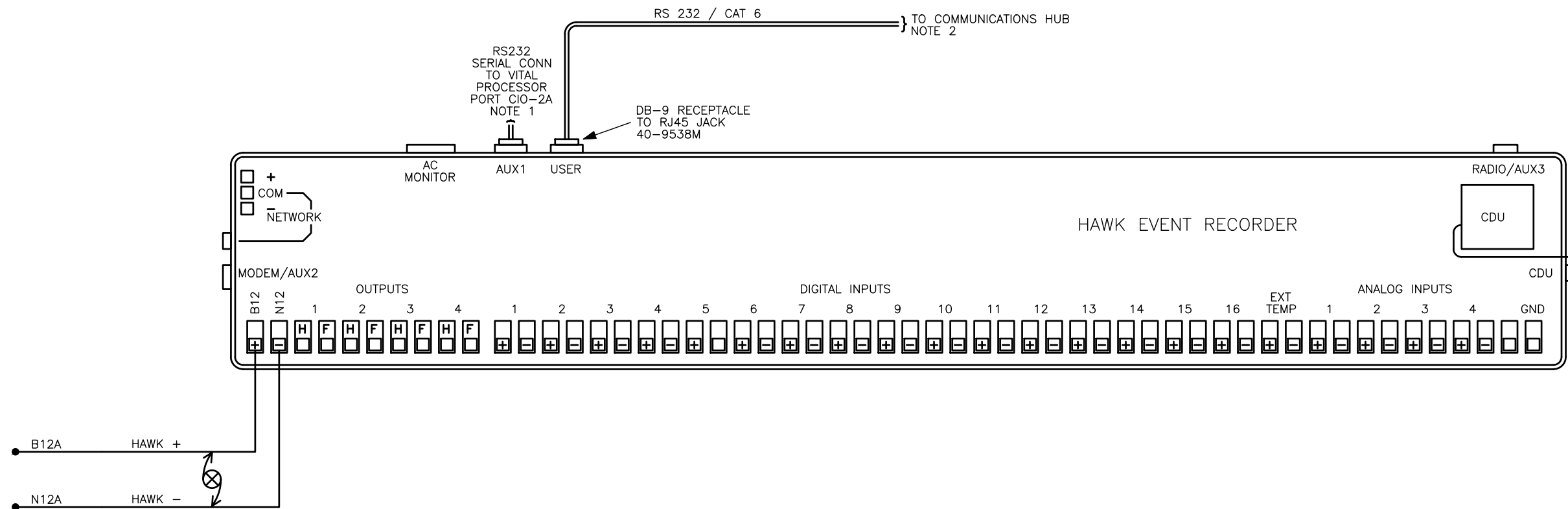
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EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
STORY STATION  
ELECTROLOGIXS I/O SLOTS 4-6

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

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DRAWING NO.	JC213
REVISION	A



**NOTES:**

- SERIAL PORT AUX1 CONNECTS TO RS232 INTERFACE MODULE ON VITAL PROCESSOR'S PORT CIO-2A VIA STRAIGHT CABLE (DB-9F TO DB-25F).
- USER PORT CONNECTS TO COMMUNICATIONS HUB (RX-1500 OR EQUAL APPROVED) VIA STRAIGHT ETHERNET CABLE.

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**Santa Clara Valley Transportation Authority**

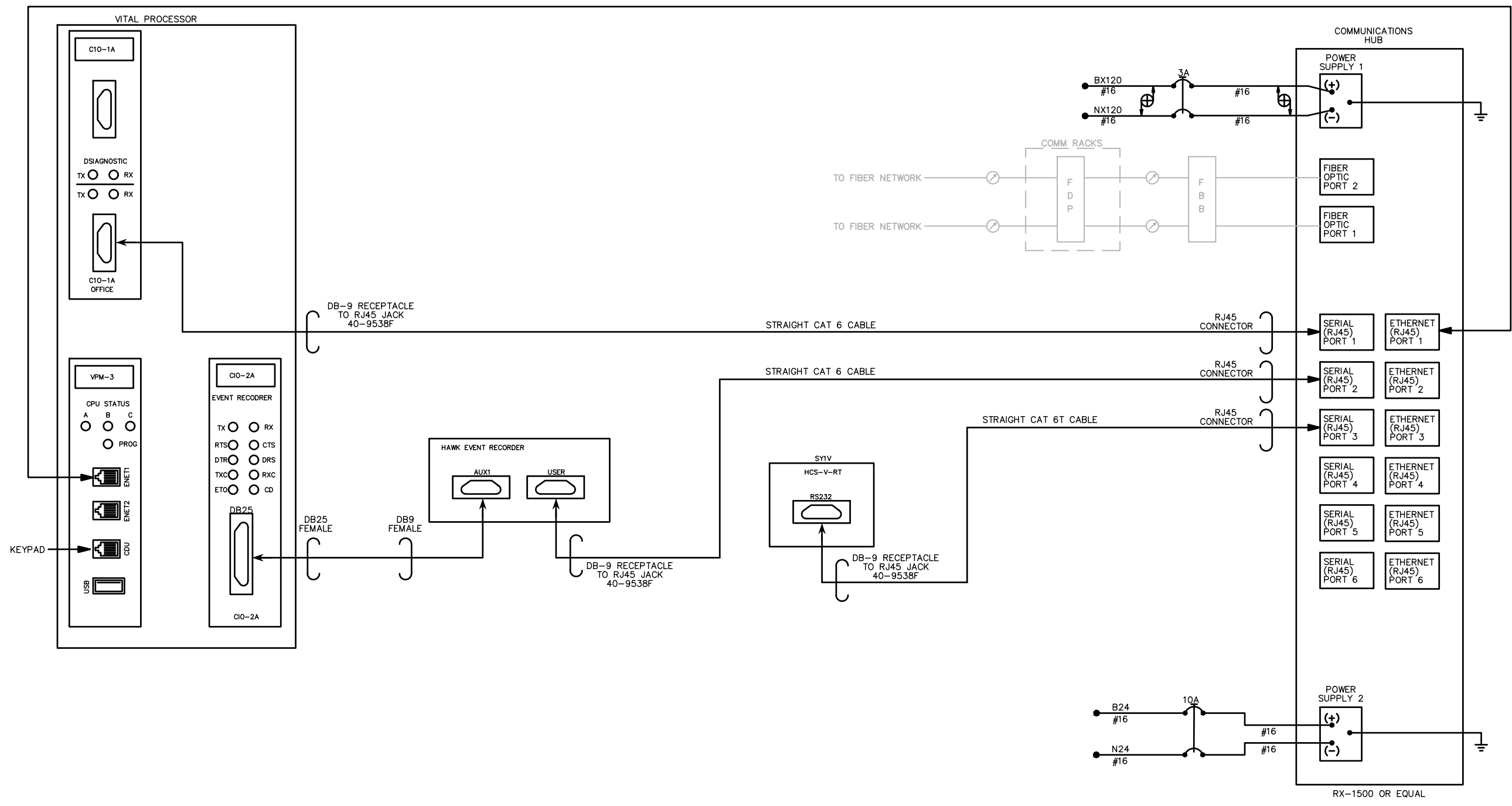
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CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
STORY STATION  
HAWK RECORDER

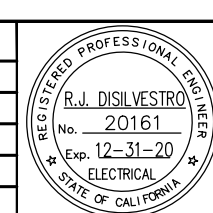
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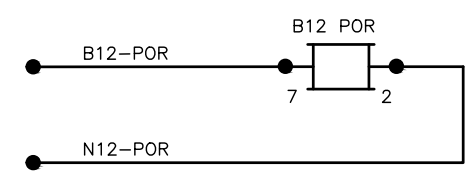
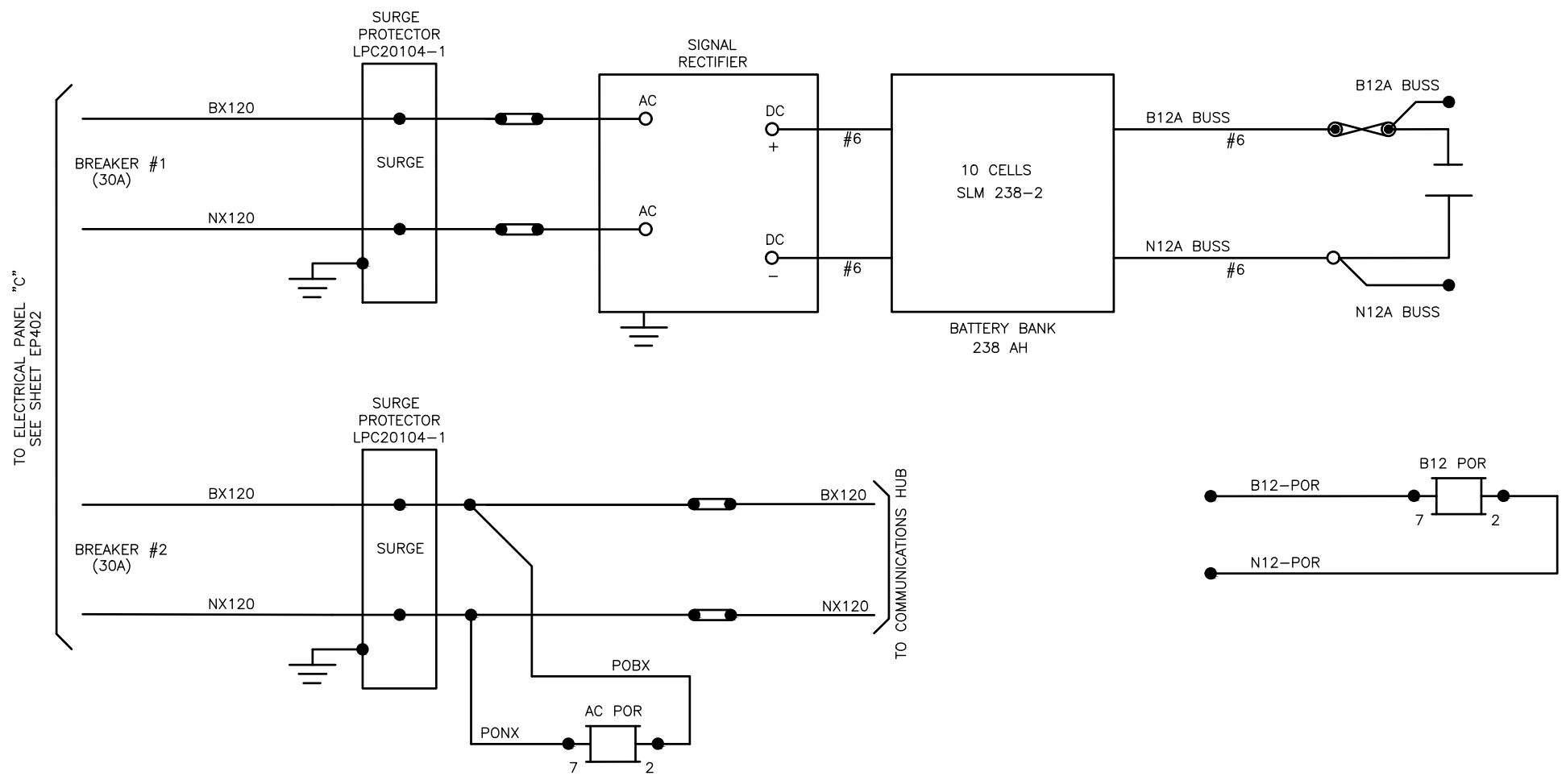
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 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 LRT SIGNAL SYSTEMS  
 STORY STATION  
 COMMUNICATION SYSTEM DIAGRAM

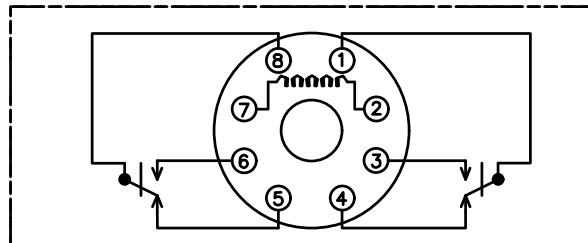
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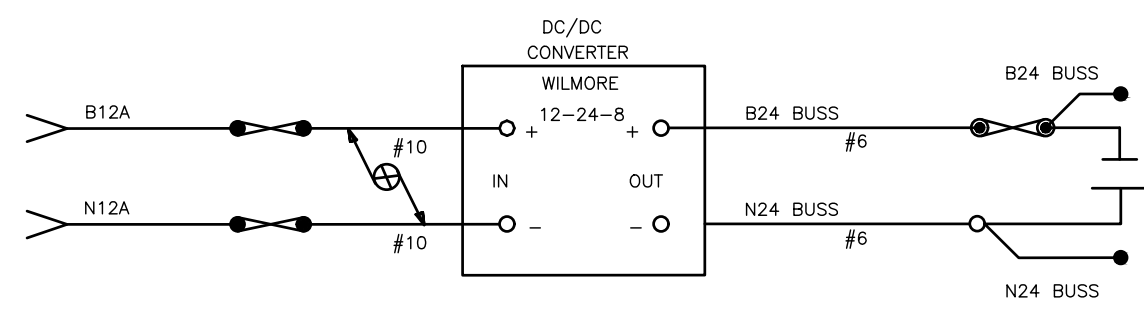




NOTE:  
1. WIRE TO BE #10 UNLESS DENOTED OTHERWISE.



1. RELAY KRPA11DN12 TO BE USED FOR B12 POR RELAY  
2. RELAY KRPA11AN240 TO BE USED FOR AC POR RELAY  
3. RELAY KRPA11DN110 TO BE USED FOR B110 POR RELAY  
CONTACT CONFIGURATION  
POTTER & BRUMFIELD  
KRPA11 SERIES



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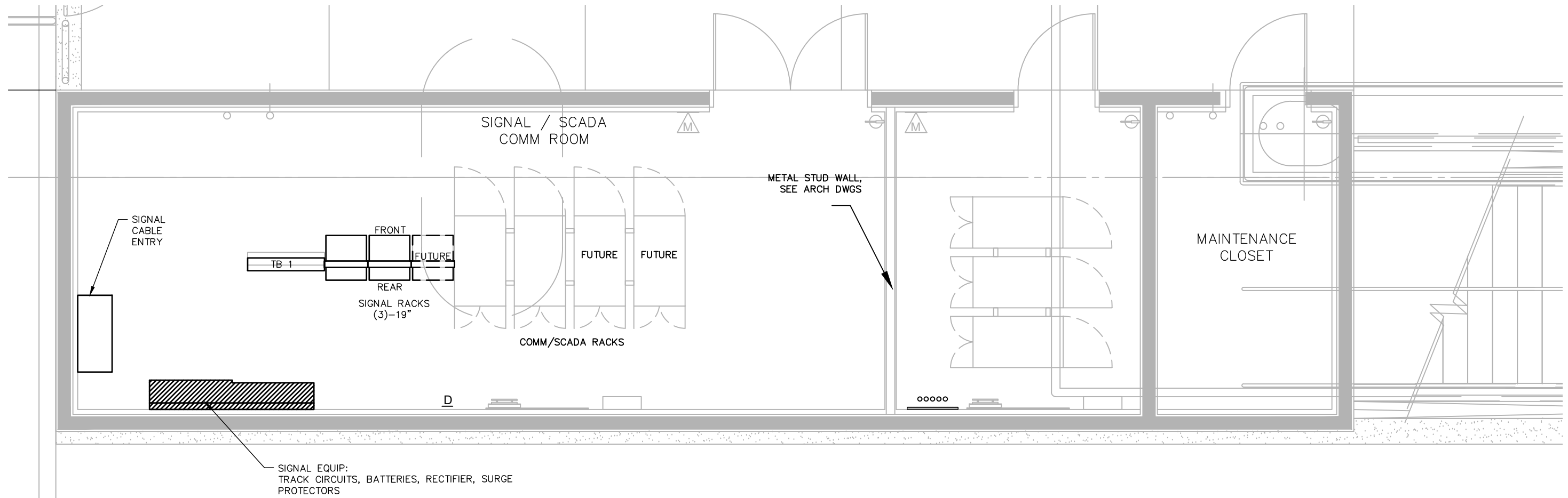


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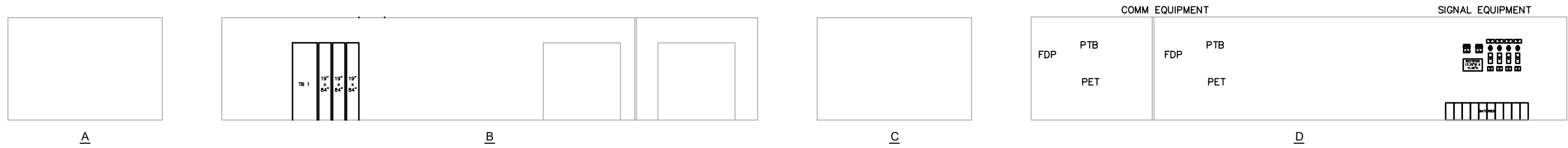


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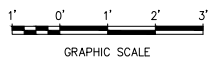
EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS STORY STATION POWER DISTRIBUTION			SHEET OF DRAWING NO. JC216 REVISION B
PCA NO.	CONTRACT NO.	FILE LOCATION	
000	C801	PROJECTWISE	



**SIGNALS / SCADA / IT COMM ROOM EQUIPMENT LAYOUT**  
 $1/2" = 1'$

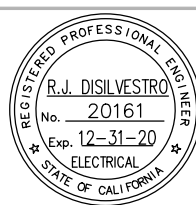


**EQUIPMENT ROOM WALL ELEVATION**  
 $1/4" = 1'$



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 DRAWN: A. RODGERS  
 CADD FILE NAME: 801JC217.dwg



APPROVED: **BKF** 100+ YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

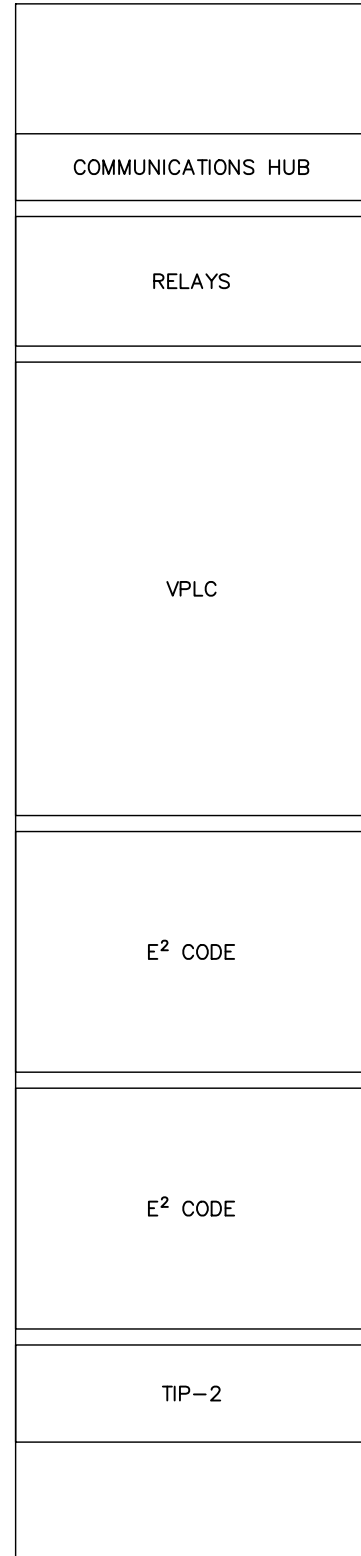
CADD FILE DATE: 03/15/19  
 SUBMITTAL DATE: 06/29/20  
 SCALE: NTS  
 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 LRT SIGNAL SYSTEMS  
 STORY STATION  
 EQUIPMENT ROOM LAYOUT

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

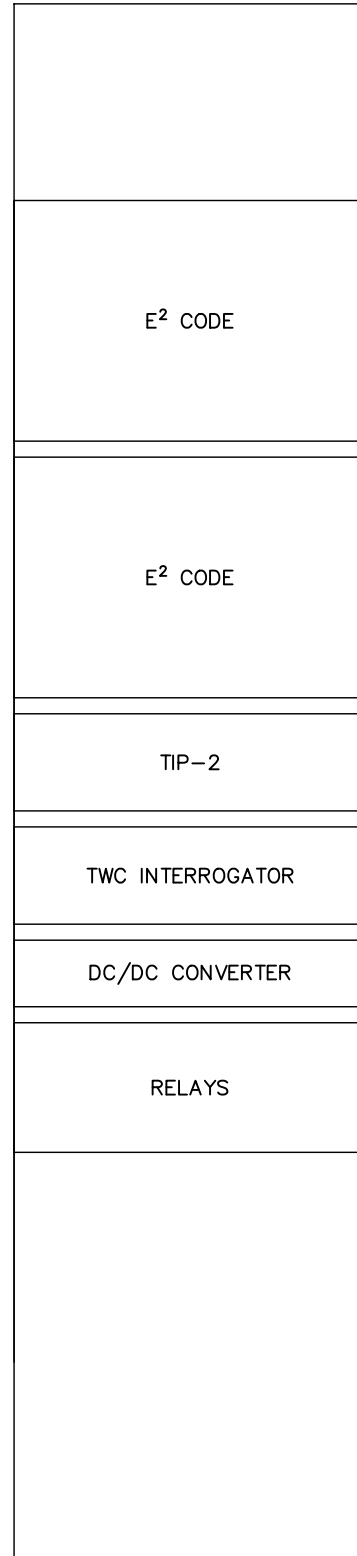
SHEET OF	JC217
REVISION	B

RACK 1



19" X 84"

RACK 2



19" X 84"

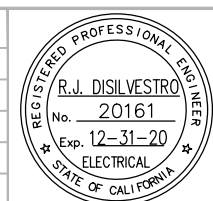
RACK 3 (FUTURE)



19" X 84"

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NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



**HNTB** HNTB Corporation  
 Engineers Architects Planners  
 1732 North First Street, Suite 400 San Jose, CA 95112  
 Tel (408) 451-7300 Fax (408) 451-6942

DESIGNED: A. RODGERS  
 CHECKED: V. FAINGOLD  
 DRAWN: A. RODGERS  
 CADD FILE NAME: 801JC218.dwg



**BKF** 100+ YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

APPROVED

CADD FILE DATE: 03/15/19  
 SUBMITTAL DATE: 06/29/20

SCALE: NTS  
 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT

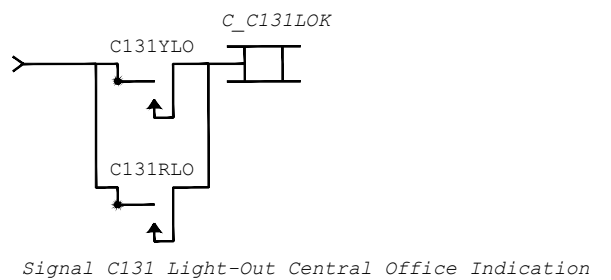
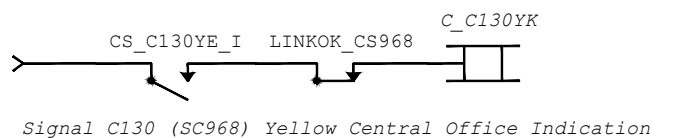
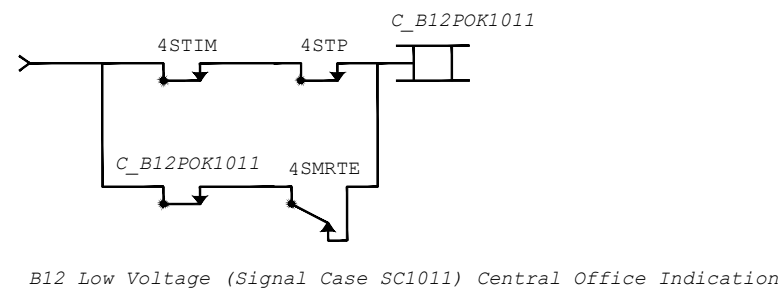
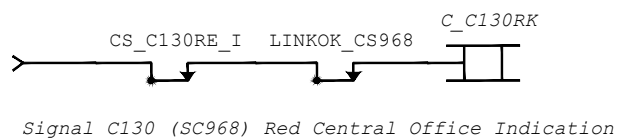
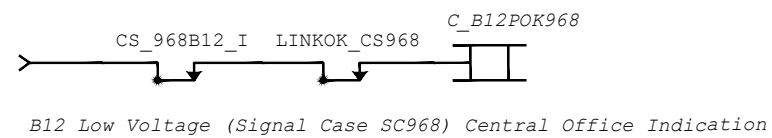
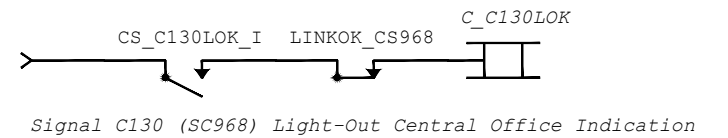
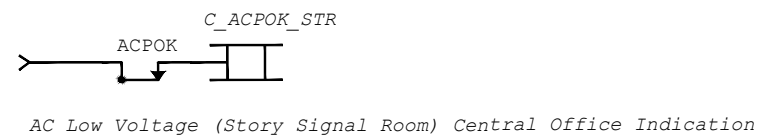
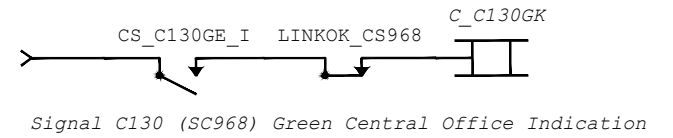
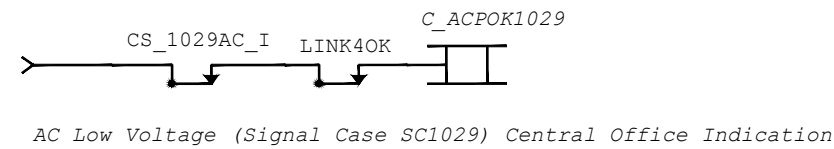
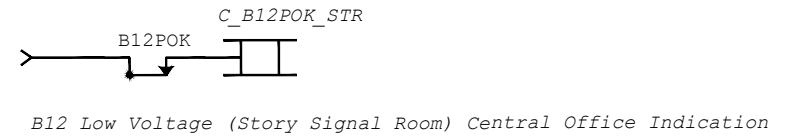
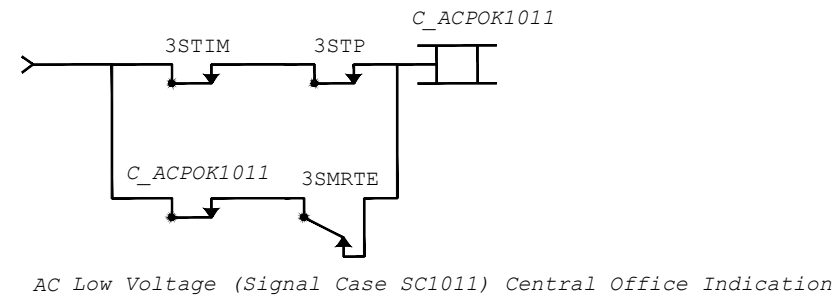
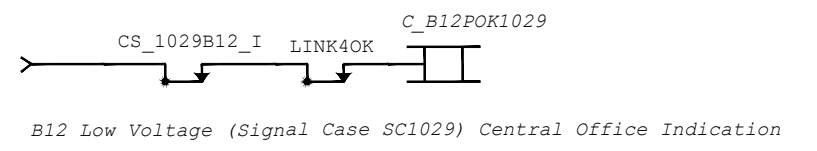
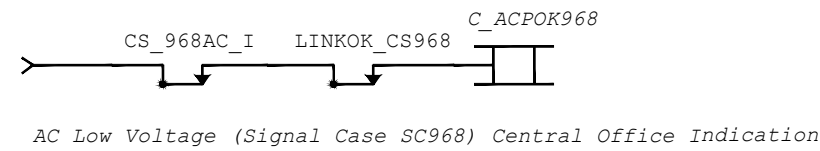
LRT SIGNAL SYSTEMS  
 STORY STATION  
 RACK LAYOUTS

PCA NO.: 000  
 CONTRACT NO.: C801  
 FILE LOCATION: PROJECTWISE

SHEET OF	JC218
REVISION	B

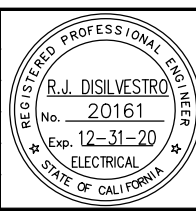
STORY STATION  
NON-VITAL LOGIC  
EQUATION INDEX

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C_C141ETK	3
C_C141FTK	3
C_DOORK	3
C_ELOGXK	3
C_LINK	3



Jun 22, 2020 - 11:53am C:\cadd\h\p\y\g\owkes\west\0139440\01JL201-203\_Story\_NV.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



**HNTB** HNTB Corporation  
 1732 North First Street, Suite 400 San Jose, CA 95112  
 Tel (408) 451-7300 Fax (408) 451-6942

DESIGNED: M.BAKHIN  
 CHECKED: V.FAINGOLD  
 DRAWN: M.BAKHIN  
 CADD FILE NAME: 801JL201.dwg

**Santa Clara Valley Transportation Authority**

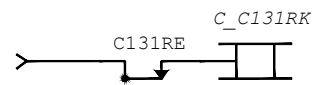
**BKF 100+ YEARS**  
 ENGINEERS / SURVEYORS / PLANNERS

APPROVED: [Signature]  
 CADD FILE DATE: 03/11/19  
 SUBMITTAL DATE: 06/29/20  
 SCALE: NTS  
 BOARD APPROVAL DATE:

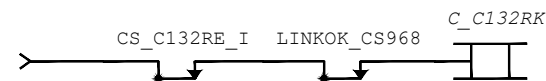
EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 LRT SIGNAL SYSTEMS  
 STORY STATION  
 NON-VITAL LOGIC (1 OF 3)

SHEET OF: JL201  
 REVISION: A

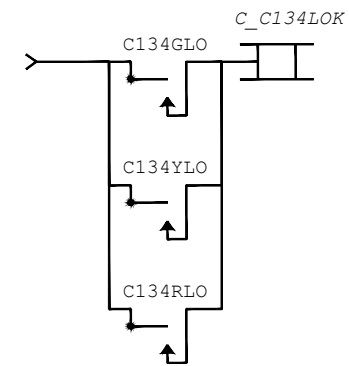
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 CONTRACT NO.: C801  
 FILE LOCATION: PROJECTWISE



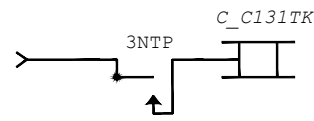
Signal C131 Red Central Office Indication



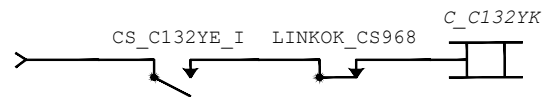
Signal C132 (SC968) Red Central Office Indication



Signal C134 Light-Out Central Office Indication



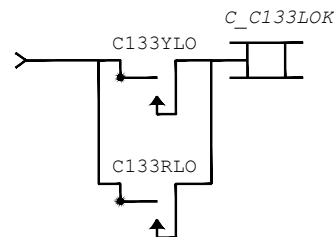
C131T Track Circuit Central Office Indication



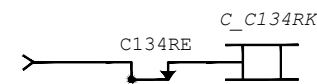
Signal C132 (SC968) Yellow Central Office Indication



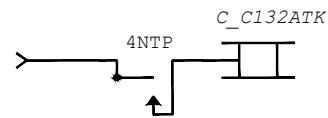
Signal C131 Yellow Central Office Indication



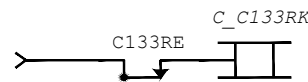
Signal C133 Light-Out Central Office Indication



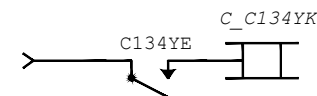
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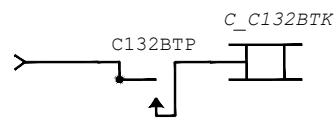
C132AT Track Circuit Central Office Indication



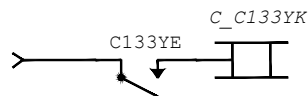
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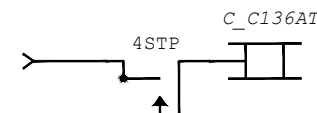
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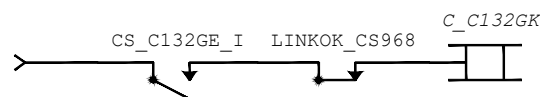
C132BT Track Circuit Central Office Indication



Signal C133 Yellow Central Office Indication



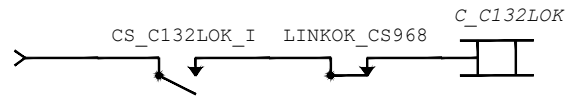
C136AT Track Circuit Central Office Indication



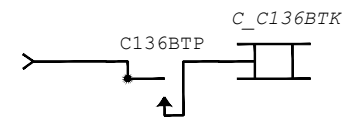
Signal C132 (SC968) Green Central Office Indication



Signal C134 Green Central Office Indication



Signal C132 (SC968) Light-Out Central Office Indication



C136BT Track Circuit Central Office Indication

Jun 22, 2020 - 11:53am C:\cadd\p\work\west\0139440\01JL201-203\_Story\_NV.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



**HNTB** HNTB Corporation  
 Engineers Architects Planners  
 1732 North First Street, Suite 400 San Jose, CA 95112  
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DESIGNED: M.BAKHIN  
 CHECKED: V.FAINGOLD  
 DRAWN: M.BAKHIN  
 CADD FILE NAME: 801JL202.dwg

**Santa Clara Valley Transportation Authority**

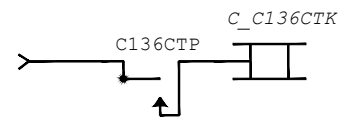
**BKF 100+ YEARS**  
 ENGINEERS / SURVEYORS / PLANNERS

APPROVED: 03/11/19  
 SCALE: NTS  
 SUBMITTAL DATE: 06/29/20  
 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 LRT SIGNAL SYSTEMS  
 STORY STATION  
 NON-VITAL LOGIC (2 OF 3)

SHEET OF: JL202  
 REVISION: A

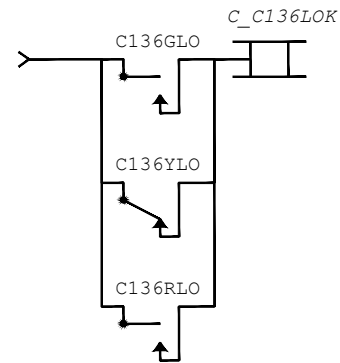
PCA NO.: 000  
 CONTRACT NO.: C801  
 FILE LOCATION: PROJECTWISE



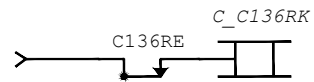
C136CT Track Circuit Central Office Indication



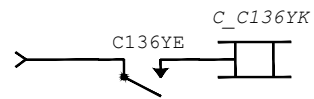
Signal C136 Green Central Office Indication



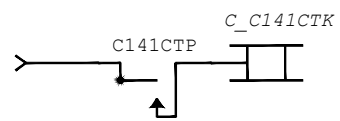
Signal C136 Light-Out Central Office Indication



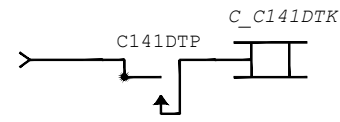
Signal C136 Red Central Office Indication



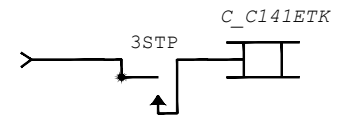
Signal C136 Yellow Central Office Indication



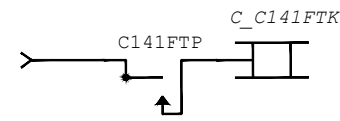
C141CT Track Circuit Central Office Indication



C141DT Track Circuit Central Office Indication



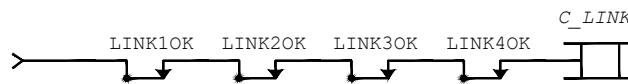
C141ET Track Circuit Central Office Indication



C141FT Track Circuit Central Office Indication



Door Intrusion Central Office Indication

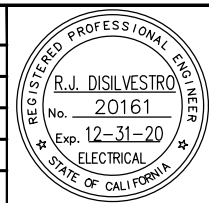


Link Health Status Central Office Indication

Note: LINK1OK - Executive Bit, Link Health Status to Alum Rock Electrologixs  
 LINK2OK - Executive Bit, Link Health Status to Eastridge Electrologixs  
 LINK3OK - Executive Bit, Link Health Status to SC968 Electrologixs  
 LINK4OK - Executive Bit, Link Health Status to SC1029 Electrologixs

Jun 22, 2020 11:53am C:\cadd\p\work\west\0139440\01.L201-203\_Story\_NV.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



SUBMITTED	
<b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
DESIGNED	CHECKED
M.BAKHIN	V.FAINGOLD
DRAWN	CADD FILE NAME
M.BAKHIN	801JL203.dwg



APPROVED	
<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	SCALE
03/11/19	NTS
SUBMITTAL DATE	BOARD APPROVAL DATE
06/29/20	

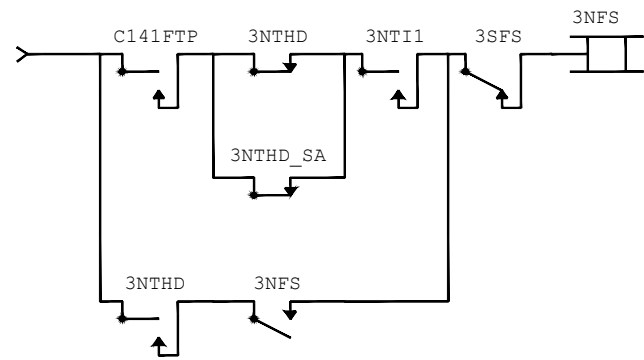
EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT STORY STATION NON-VITAL LOGIC (3 OF 3)		
PCA NO.	CONTRACT NO.	FILE LOCATION
000	C801	PROJECTWISE
SHEET OF	DRAWING NO.	REVISION
	JL203	A

STORY STATION  
VITAL LOGIC  
EQUATION INDEX

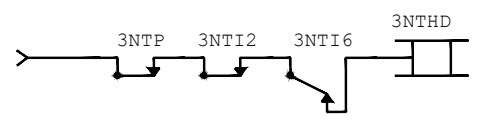
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3NTHD_SA2	2	123ABVQ_TE	5	SC_C136YE_O	9
3NTHD_TE	2	123AVC_TE	5	SC_LINKOK_O	9
3NTHD_TE2	2	125AAVQ_TE	5	SE_140AAVL_O	10
3NTLOS	2	125ABVQ_TE	5	SE_140AVC_O	10
3NTO1	2	125AVC_TE	5	SE_142AAVL_O	10
3NTO2	2	140AAVL_TE	5	SE_142AVC_O	10
3NTO6	2	140AVC_TE	5	SE_4041AVQ_O	10
3NTO7	2	142AAVL_TE	5	SE_4043AVQ_O	10
3NTP	2	142AVC_TE	6	SE_4241AVQ_O	10
3SFS	2	4041AVQ_TE	6	SE_4243AVQ_O	10
3SMRTE	2	4043AVQ_TE	6	SE_C131YE_O	10
3STHD	2	4241AVQ_TE	6	SE_C133YE_O	10
3STHD_SA	2	4243AVQ_TE	6	SE_LINKOK_O	10
3STHD_SA2	3	C131_134STOP	6	REMOTE I/O CHART	11
3STHD_TE	3	C131RE	6		
3STHD_TE2	3	C131YE	6		
3STLOS	3	C132BT_TE	6		
3STO1	3	C132BTP	6		
3STO2	3	C133_136STOP	7		
3STO6	3	C133RE	7		
3STO7	3	C133YE	7		
3STP	3	C134GE	7		
4NFS	3	C134RE	7		
4NTHD	3	C134YE	7		
4NTHD_SA	3	C136BTP	7		
4NTHD_SA2	3	C136CTP	7		
4NTHD_TE	3	C136GE	7		
4NTHD_TE2	3	C136RE	7		
4NTLOS	3	C136YE	8		
4NTO1	3	C141CTP	8		
4NTO2	3	C141DTP	8		
4NTO6	4	C141FT_TE	8		
4NTO7	4	C141FTP	8		
4NTP	4	HEALTH	8		
4SFS	4	LINKOK_CS968	8		
4SMRTE	4	LINKOK_ES	8		
4STHD	4	SA_123AAVQ_O	8		
4STHD_SA	4	SA_123ABVQ_O	8		
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4STO2	4	SC_3NF_O	8		
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Jun 22, 2020 11:53am C:\cadd\ib\vw\gfonkes\west\00139440\001L204-21\Story\_V.dwg

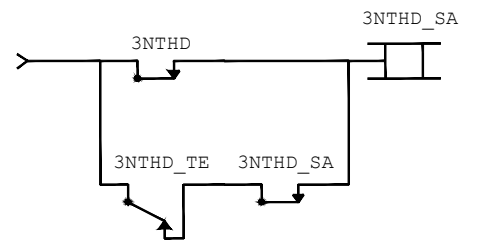
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	NO.	DATE	REVISIONS																
	C	06/20	95% SUBMITTAL SET																
	B	03/19	65% SUBMITTAL SET																
A	06/18	35% SUBMITTAL SET																	
DESIGNED: <b>M.BAKHIN</b> CHECKED: <b>V.FAINGOLD</b>																			
DRAWN: <b>M.BAKHIN</b> CADD FILE NAME: <b>801JL204.dwg</b>																			
APPROVED: [Signature]																			
		CADD FILE DATE: <b>03/11/19</b> SCALE: <b>NTS</b>		SUBMITTAL DATE: <b>06/29/20</b> BOARD APPROVAL DATE:															
		PCA NO. <b>000</b> CONTRACT NO. <b>C801</b> FILE LOCATION <b>PROJECTWISE</b>																	



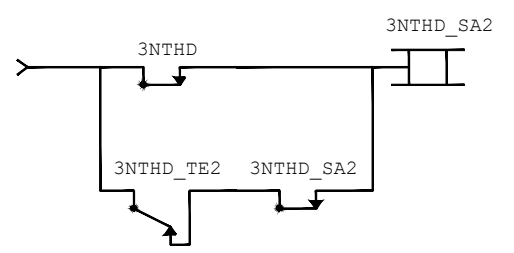
NB FOLLOW STICK



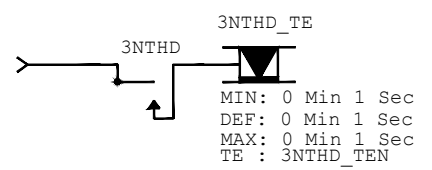
3NT H



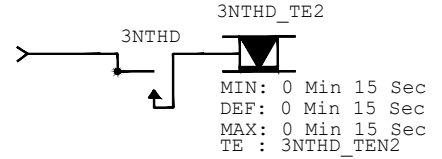
SLOW ACTING 3NTHD REPEATER (1 SECOND SLOW RELEASE)



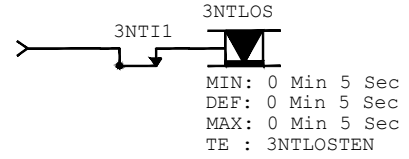
SLOW ACTING 3NTHD REPEATER (15 SECONDS SLOW RELEASE)



MIN: 0 Min 1 Sec  
DEF: 0 Min 1 Sec  
MAX: 0 Min 1 Sec  
TE : 3NTHD\_TEN

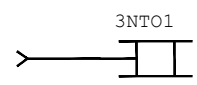


MIN: 0 Min 15 Sec  
DEF: 0 Min 15 Sec  
MAX: 0 Min 15 Sec  
TE : 3NTHD\_TEN2

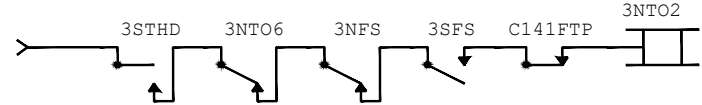


MIN: 0 Min 5 Sec  
DEF: 0 Min 5 Sec  
MAX: 0 Min 5 Sec  
TE : 3NTLOSTEN

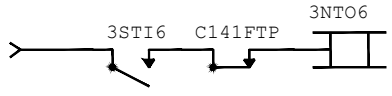
3NT LOS TIMER



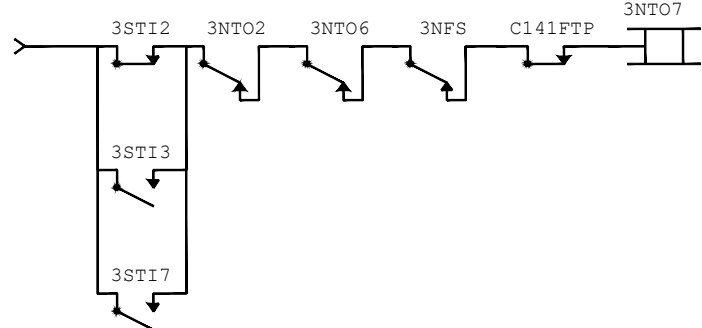
3NT CODE 1 OUT



3NT CODE 2 OUT



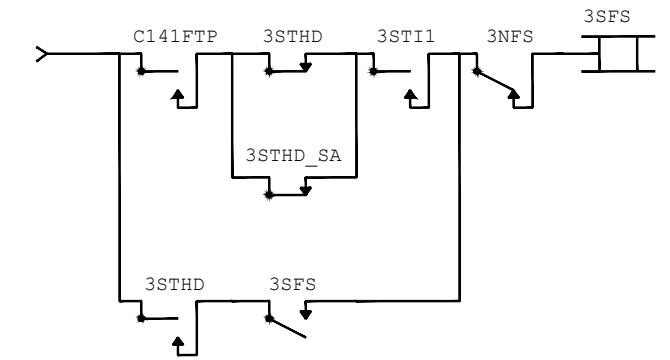
3NT CODE 6 OUT



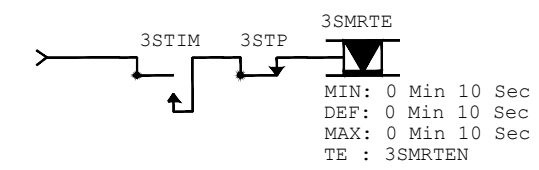
3NT CODE 7 OUT



3NT LOS REPEATER (C131T)

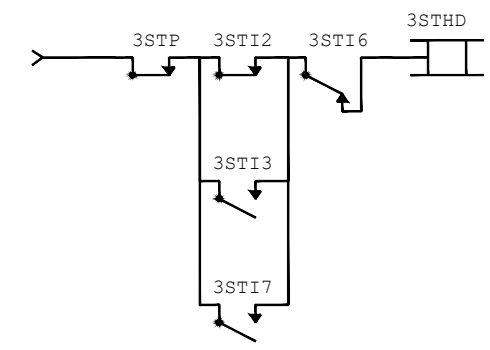


SB FOLLOW STICK

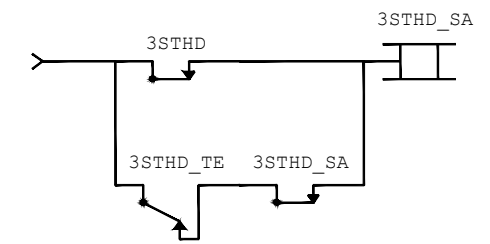


MIN: 0 Min 10 Sec  
DEF: 0 Min 10 Sec  
MAX: 0 Min 10 Sec  
TE : 3SMRTEN

3ST Maintenance Loss of Code Timer (AC Power Off Indication from SC1011)



3ST H



SLOW ACTING 3STHD REPEATER (1 SECOND SLOW RELEASE)

Jun 22, 2020 - 11:53am C:\cadd\p\work\west\0139440\01L204-214\_story\_v.dwg

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



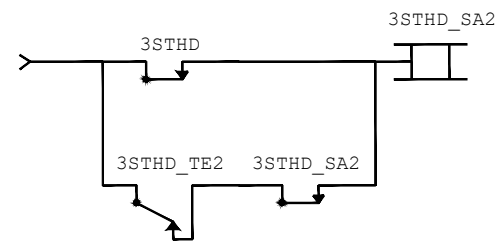
SUBMITTED		<b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
DESIGNED	M.BAKHIN	CHECKED	V.FAINGOLD
DRAWN	M.BAKHIN	CADD FILE NAME	801JL205.dwg



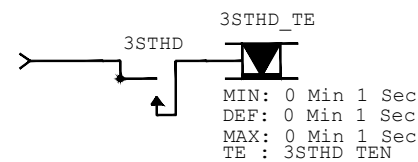
APPROVED		<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	03/11/19	SCALE	NTS
SUBMITTAL DATE	06/29/20	BOARD APPROVAL DATE	

EASTRIDGE TO BART REGIONAL CONNECTOR			SHEET OF
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT			
LRT SIGNAL SYSTEMS			DRAWING NO. JL102
STORY STATION			REVISION A
VITAL LOGIC (2 OF 11)			
PCA NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE	

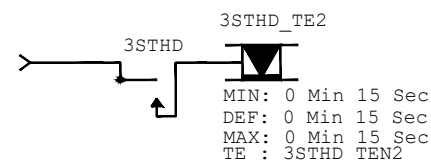




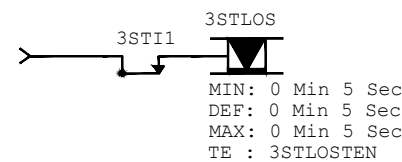
SLOW ACTING 3STHD REPEATER (15 SECONDS SLOW RELEASE)



MIN: 0 Min 1 Sec  
DEF: 0 Min 1 Sec  
MAX: 0 Min 1 Sec  
TE : 3STHD\_TEN

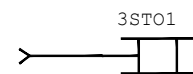


MIN: 0 Min 15 Sec  
DEF: 0 Min 15 Sec  
MAX: 0 Min 15 Sec  
TE : 3STHD\_TEN2

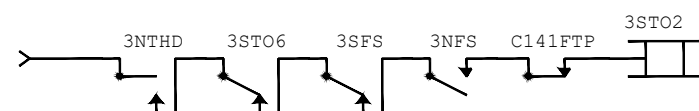


MIN: 0 Min 5 Sec  
DEF: 0 Min 5 Sec  
MAX: 0 Min 5 Sec  
TE : 3STLOSTEN

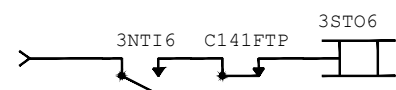
3ST LOS TIMER



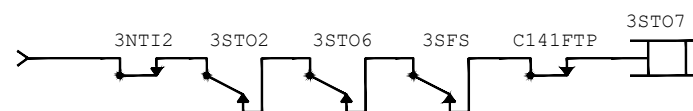
3ST CODE 1 OUT



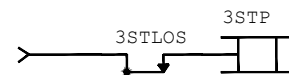
3ST CODE 2 OUT



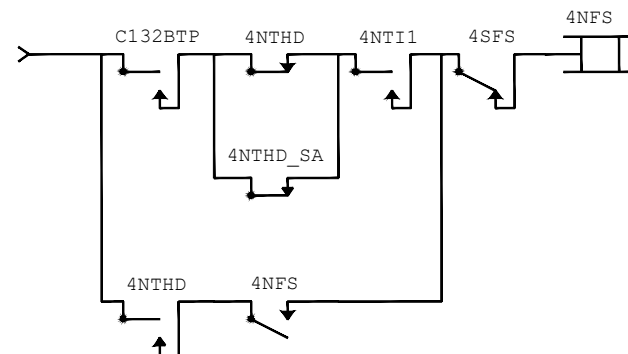
3ST CODE 6 OUT



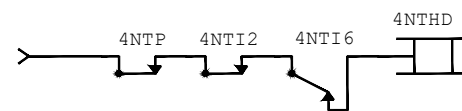
3ST CODE 7 OUT



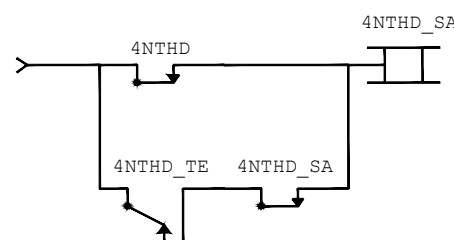
3ST LOS REPEATER (C141ET)



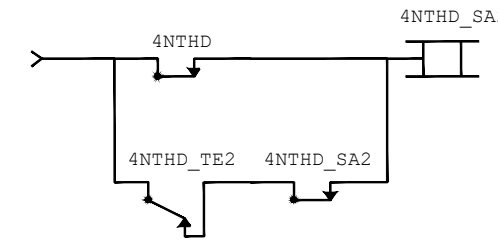
NB FOLLOW STICK



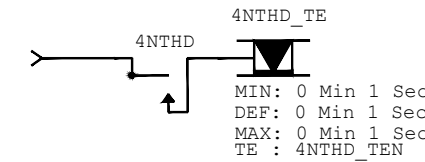
4NT H



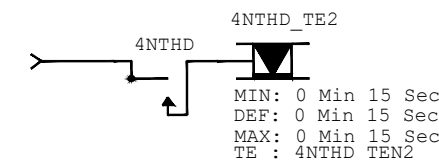
SLOW ACTING 4NTHD REPEATER (1 SECOND SLOW RELEASE)



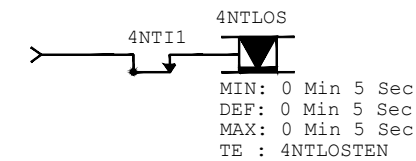
SLOW ACTING 4NTHD REPEATER (15 SECONDS SLOW RELEASE)



MIN: 0 Min 1 Sec  
DEF: 0 Min 1 Sec  
MAX: 0 Min 1 Sec  
TE : 4NTHD\_TEN

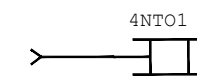


MIN: 0 Min 15 Sec  
DEF: 0 Min 15 Sec  
MAX: 0 Min 15 Sec  
TE : 4NTHD\_TEN2

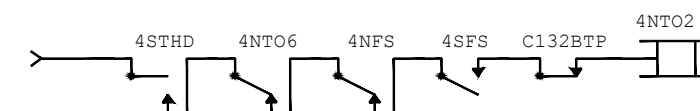


MIN: 0 Min 5 Sec  
DEF: 0 Min 5 Sec  
MAX: 0 Min 5 Sec  
TE : 4NTLOSTEN

4NT LOS TIMER



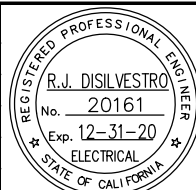
4NT CODE 1 OUT



4NT CODE 2 OUT

Jun 22, 2020 - 11:53am C:\cadd\p\work\west\0139440\01.L204-214\_Story\_v.dwg

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



SUBMITTED

**HNTB** HNTB Corporation  
Engineers Architects Planners  
1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942

DESIGNED	M.BAKHIN	CHECKED	V.FAINGOLD
DRAWN	M.BAKHIN	CADD FILE NAME	801JL206.dwg



APPROVED

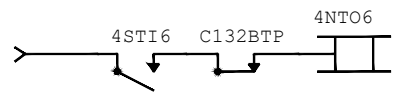
**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE	03/11/19	SCALE	NTS
SUBMITTAL DATE	06/29/20	BOARD APPROVAL DATE	

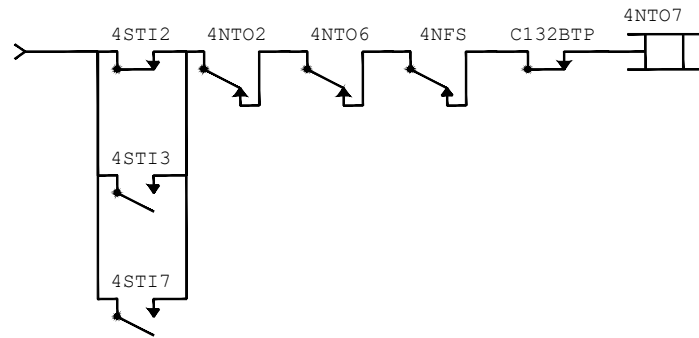
EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
STORY STATION  
VITAL LOGIC (3 OF 11)

PCA NO.	000	CONTRACT NO.	C801	FILE LOCATION	PROJECTWISE
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SHEET OF DRAWING NO. JL206 REVISION B



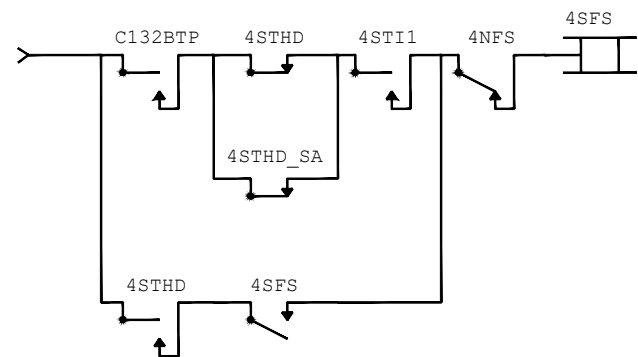
4NT CODE 6 OUT



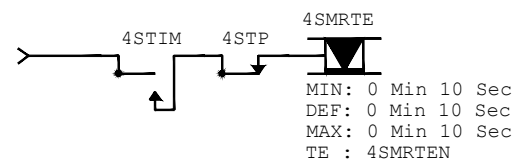
4NT CODE 7 OUT



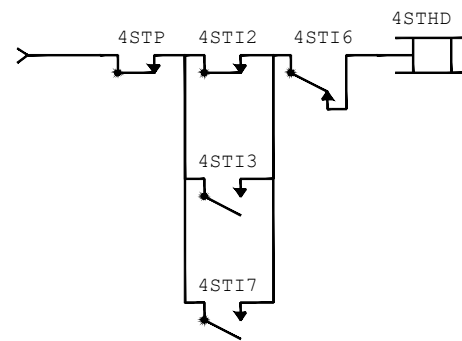
4NT LOS REPEATER (C132AT)



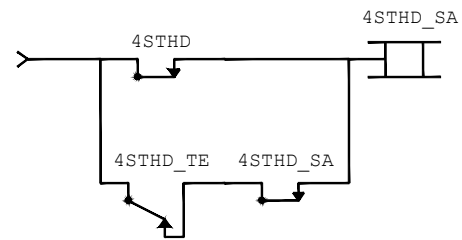
SB FOLLOW STICK



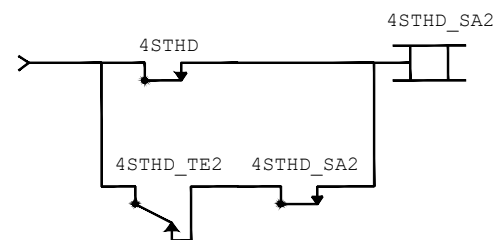
4ST Maintenance Loss of Code Timer (B12 Power Off Indication from SC1011)



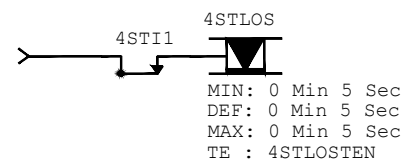
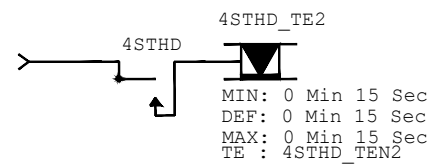
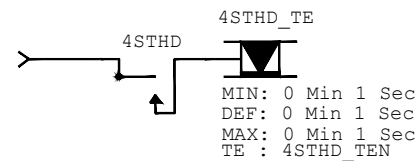
4ST H



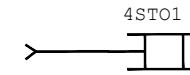
SLOW ACTING 4STHD REPEATER (1 SECOND SLOW RELEASE)



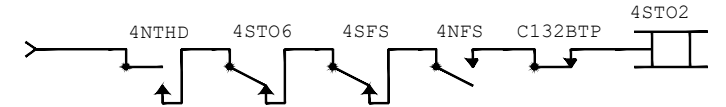
SLOW ACTING 4STHD REPEATER (15 SECONDS SLOW RELEASE)



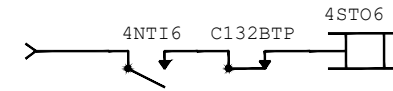
4ST LOS TIMER



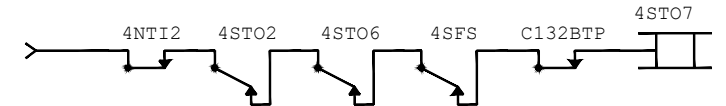
4ST CODE 1 OUT



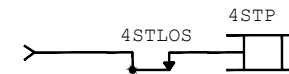
4ST CODE 2 OUT



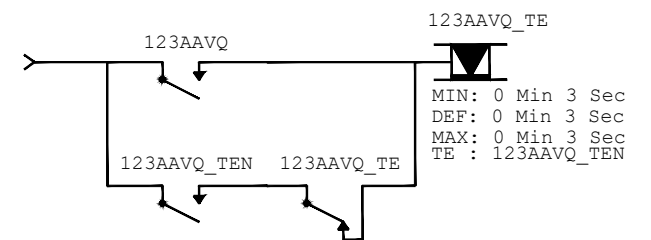
4ST CODE 6 OUT



4ST CODE 7 OUT



4ST LOS REPEATER (C136AT)



Advance Signal Request, Signal C123 "A" Route - to Signal C120 (Normal Running), Request Hold Timer

Jun 22, 2020 11:53am C:\cadd\hntb\work\west\0139440\01JL204-214\_Story.dwg

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



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**HNTB** HNTB Corporation  
Engineers Architects Planners  
1732 North First Street, Suite 400 San Jose, CA 95112  
Tel (408) 451-7300 Fax (408) 451-6942

DESIGNED: M.BAKHIN  
CHECKED: V.FAINGOLD  
DRAWN: M.BAKHIN  
CADD FILE NAME: 801JL207.dwg

Santa Clara Valley  
**Transportation Authority**

APPROVED

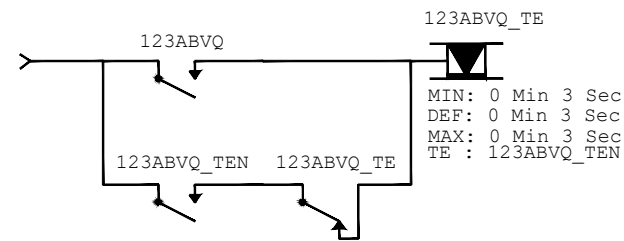
**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/11/19  
SUBMITTAL DATE: 06/29/20  
SCALE: NTS  
BOARD APPROVAL DATE:

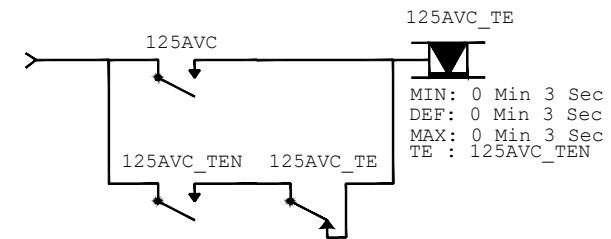
EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
STORY STATION  
VITAL LOGIC (4 OF 11)

PCA NO.: 000  
CONTRACT NO.: C801  
FILE LOCATION: PROJECTWISE

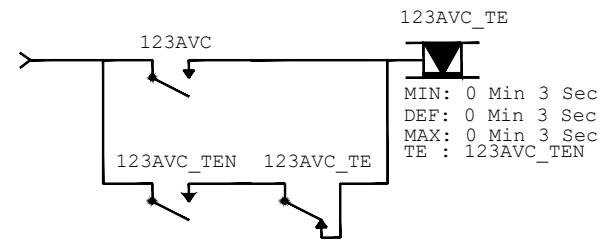
SHEET OF: JL207  
REVISION: B



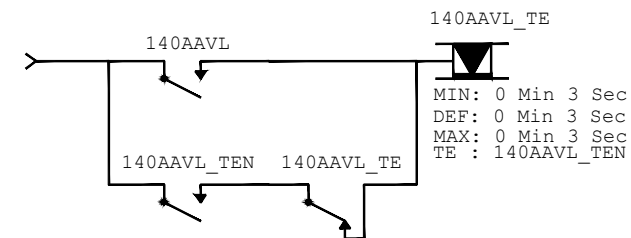
Advance Signal Request, Signal C123 "B" Route - to Signal C122 (Reverse Running), Request Hold Timer



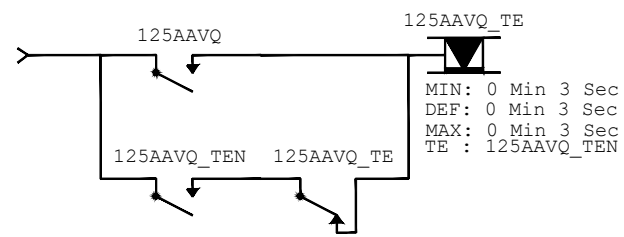
Signal C125 Advance Cancel From Story, Request Hold Timer



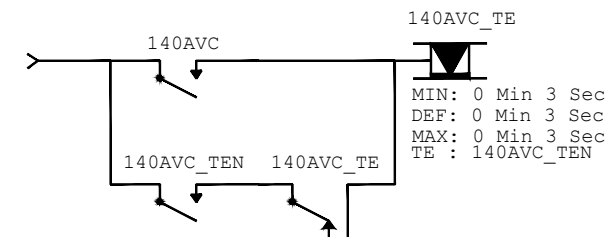
Signal C123 Advance Cancel From Story, Request Hold Timer



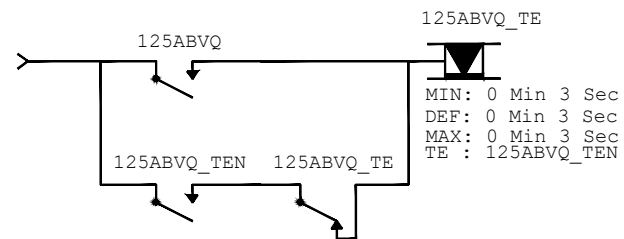
Advance Signal Request, Signal C140 Preferred Available Request, Request Hold Timer



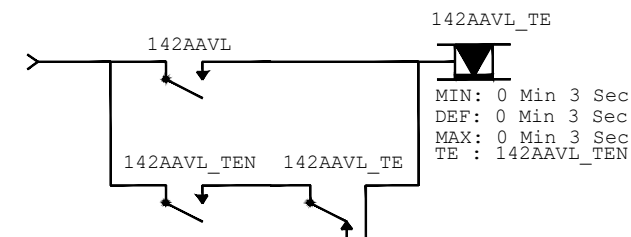
Advance Signal Request, Signal C125 "A" Route - to Signal C120 (Normal Running), Request Hold Timer



Signal C140 Advance Cancel From Story, Request Hold Timer



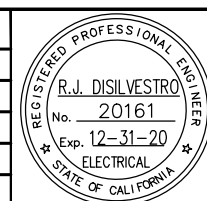
Advance Signal Request, Signal C125 "B" Route - to Signal C122 (Reverse Running), Request Hold Timer



Advance Signal Request, Signal C142 Preferred Available Request, Request Hold Timer

Jun 22, 2020 - 11:53am C:\cadd\hntb\work\west\0139440\001.L204-214\_Story\_V.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET

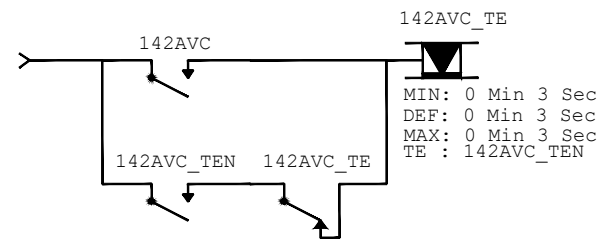


SUBMITTED	
<b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
DESIGNED	CHECKED
M.BAKHIN	V.FAINGOLD
DRAWN	CADD FILE NAME
M.BAKHIN	801JL208.dwg



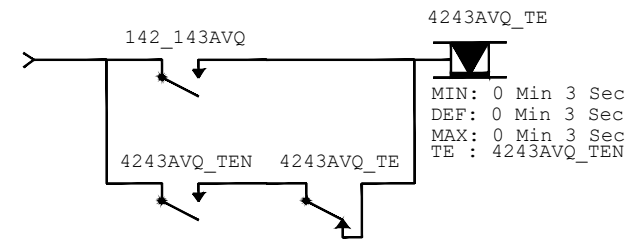
APPROVED	
<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	SCALE
03/11/19	NTS
SUBMITTAL DATE	BOARD APPROVAL DATE
06/29/20	

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS STORY STATION VITAL LOGIC (5 OF 11)		
PCA NO.	CONTRACT NO.	FILE LOCATION
000	C801	PROJECTWISE
SHEET OF	DRAWING NO.	REVISION
	JL208	A



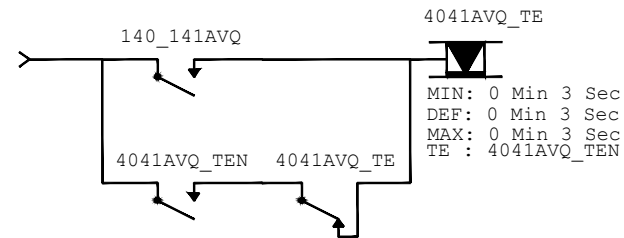
142AVC\_TE  
 MIN: 0 Min 3 Sec  
 DEF: 0 Min 3 Sec  
 MAX: 0 Min 3 Sec  
 TE : 142AVC\_TEN

Signal C142 Advance Cancel From Story, Request Hold Timer



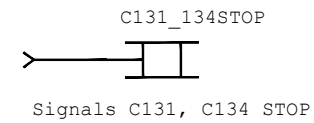
4243AVQ\_TE  
 MIN: 0 Min 3 Sec  
 DEF: 0 Min 3 Sec  
 MAX: 0 Min 3 Sec  
 TE : 4243AVQ\_TEN

Advance Signal Request, Signal C142 To Signal C143 Route Request, Request Hold Timer

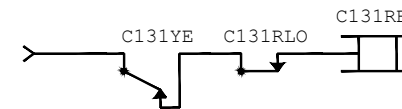


4041AVQ\_TE  
 MIN: 0 Min 3 Sec  
 DEF: 0 Min 3 Sec  
 MAX: 0 Min 3 Sec  
 TE : 4041AVQ\_TEN

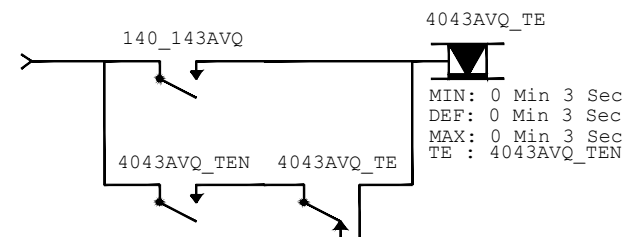
Advance Signal Request, Signal C140 To Signal C141 Route Request, Request Hold Timer



Signals C131, C134 STOP

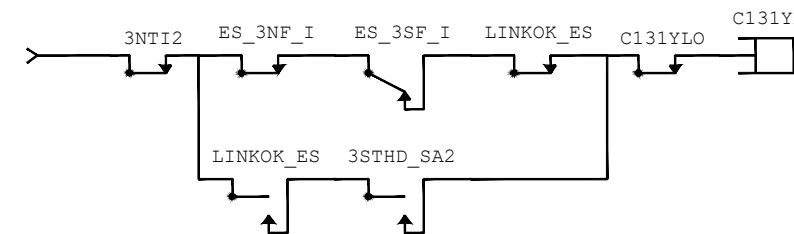


Signal C131 Red

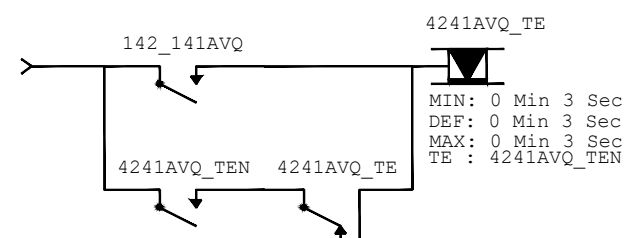


4043AVQ\_TE  
 MIN: 0 Min 3 Sec  
 DEF: 0 Min 3 Sec  
 MAX: 0 Min 3 Sec  
 TE : 4043AVQ\_TEN

Advance Signal Request, Signal C140 To Signal C143 Route Request, Request Hold Timer

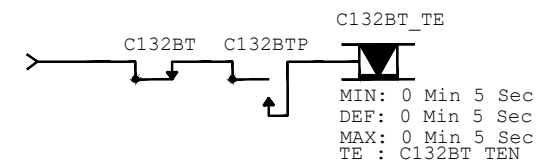


Signal C131 Yellow

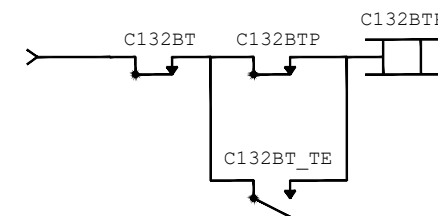


4241AVQ\_TE  
 MIN: 0 Min 3 Sec  
 DEF: 0 Min 3 Sec  
 MAX: 0 Min 3 Sec  
 TE : 4241AVQ\_TEN

Advance Signal Request, Signal C142 To Signal C141 Route Request, Request Hold Timer



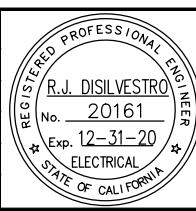
C132BT Loss of shunt timer



C132BT Track repeater with loss of shunt time

Jun 22, 2020 - 11:53am C:\cadd\lib\paw\gforwkes\west\0139440\01.L204-214\_Story\_v.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET

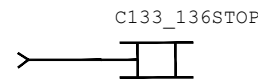


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DESIGNED	M.BAKHIN	CHECKED	V.FAINGOLD
DRAWN	M.BAKHIN	CADD FILE NAME	801JL209.dwg

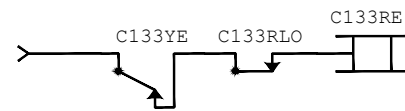


APPROVED		<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	03/11/19	SCALE	NTS
SUBMITTAL DATE	06/29/20	BOARD APPROVAL DATE	

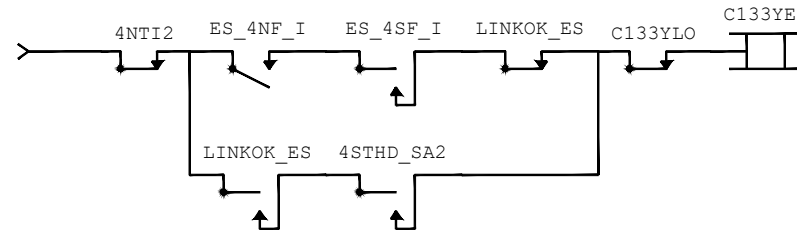
EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS STORY STATION VITAL LOGIC (6 OF 11)			SHEET OF
			DRAWING NO. JL209
			REVISION A
PCA NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE	



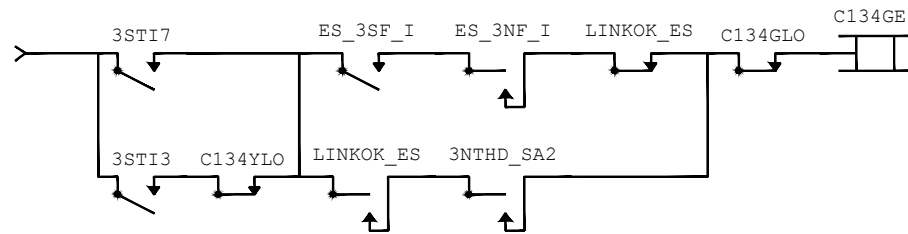
Signals C133, C136 STOP



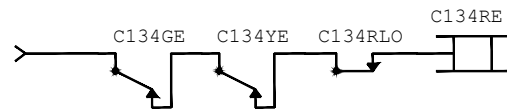
Signal C131 Red



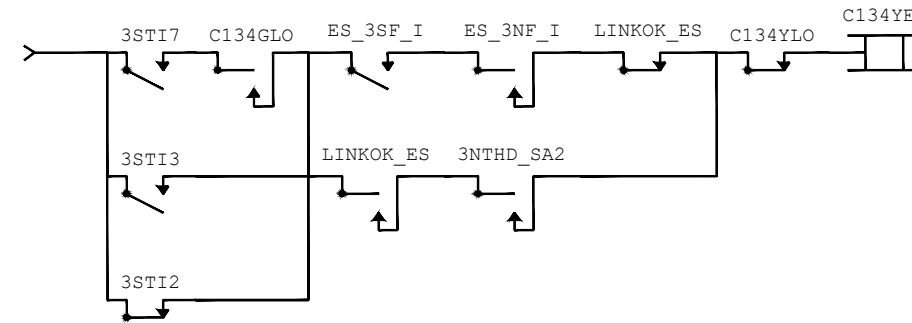
Signal C133 Yellow



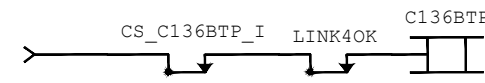
Signal C134 Green



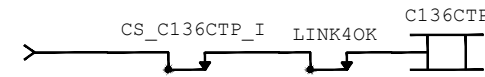
Signal C134 Red



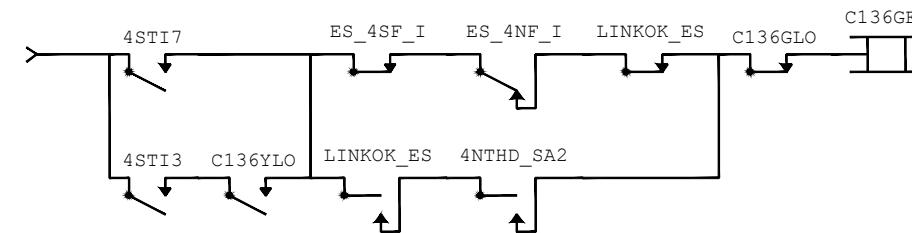
Signal C134 Yellow



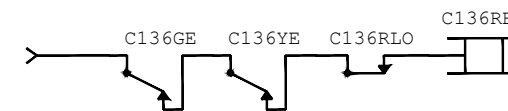
C136BT Track Repeater with Loss of Shunt Time, Repeater From Signal Case CS1029



C136CT Track Repeater with Loss of Shunt Time, Repeater From Signal Case CS1029



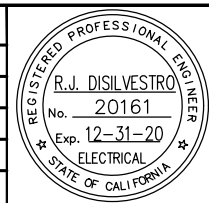
Signal C134 Green



Signal C136 Red

Jun 22, 2020 11:53am C:\cadd\lib\paw\gforwkes\west\0139440\001.L204-214\_Story\_V.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET

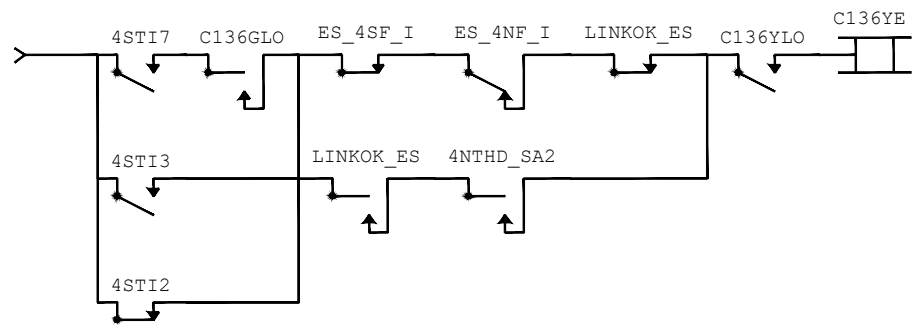


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DESIGNED	CHECKED
M.BAKHIN	V.FAINGOLD
DRAWN	CADD FILE NAME
M.BAKHIN	801JL210.dwg

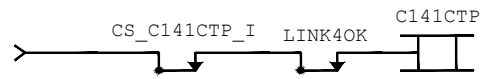


APPROVED	
<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	SCALE
03/11/19	NTS
SUBMITTAL DATE	BOARD APPROVAL DATE
06/29/20	

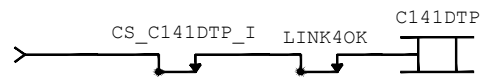
EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS STORY STATION VITAL LOGIC (7 OF 11)		
PCA NO.	CONTRACT NO.	FILE LOCATION
000	C801	PROJECTWISE
SHEET OF	DRAWING NO.	REVISION
	JL210	A



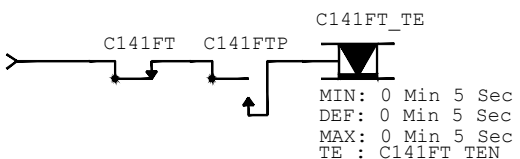
Signal C136 Yellow



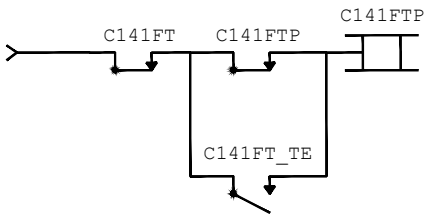
C141CT Track Repeater with Loss of Shunt Time, Repeater From Signal Case CS1029



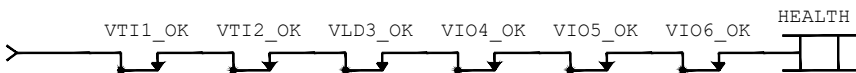
C141DT Track Repeater with Loss of Shunt Time, Repeater From Signal Case CS1029



C141FT Loss of shunt timer



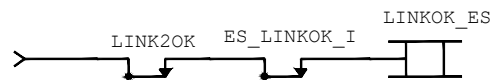
C141FT Track repeater with loss of shunt time



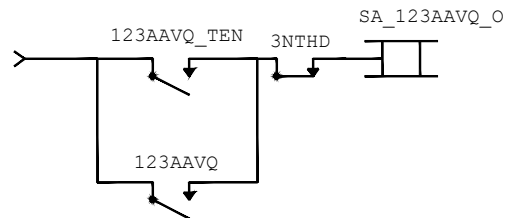
ElectroLogIXS HEALTH



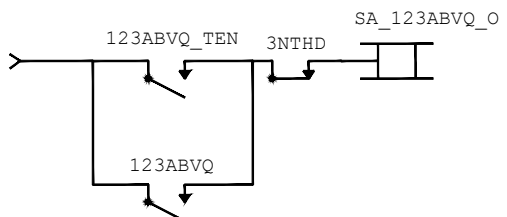
Link Health Status, Signal Case SC968 Vital Processor to Story Vital Processor



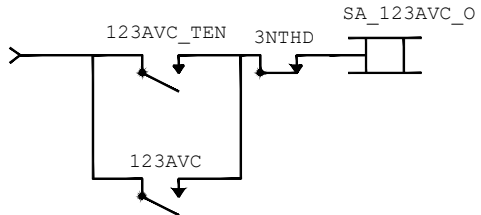
Link Health Status, Story Vital Processor to Eastridge Vital Processor "A"



Advance Signal Request, Signal C123 "A" Route - to Signal C120 (Normal Running), Sent to Alum Rock



Advance Signal Request, Signal C123 "B" Route - to Signal C122 (Reverse Running), Sent to Alum Rock



Signal C123 Advance Cancel From Story, Sent to Alum Rock

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NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET

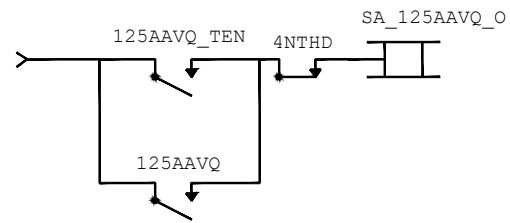


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DESIGNED	CHECKED
M.BAKHIN	V.FAINGOLD
DRAWN	CADD FILE NAME
M.BAKHIN	801JL211.dwg

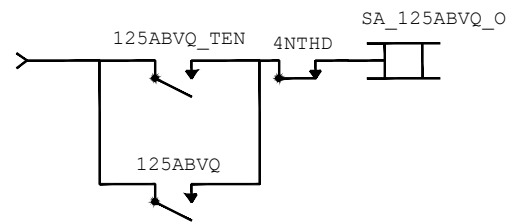


APPROVED	
<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	SCALE
03/11/19	NTS
SUBMITTAL DATE	BOARD APPROVAL DATE
06/29/20	

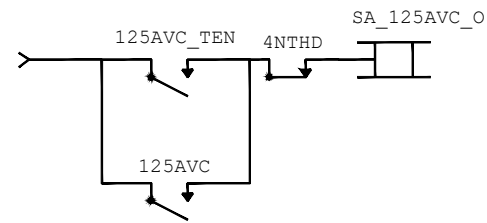
EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS STORY STATION VITAL LOGIC (8 OF 11)			SHEET OF
			DRAWING NO. JL211
			REVISION A
PCA NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE	



Advance Signal Request, Signal C125 "A" Route - to Signal C120 (Normal Running), Sent to Alum Rock



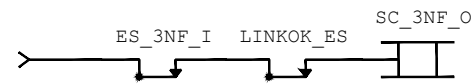
Advance Signal Request, Signal C125 "B" Route - to Signal C122 (Reverse Running), Sent to Alum Rock



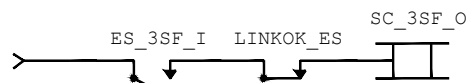
Signal C125 Advance Cancel From Story, Sent to Alum Rock



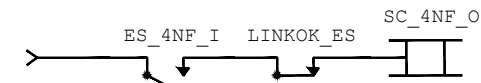
Link Health Status Repeater, Sent to Alum Rock



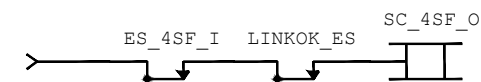
Track 3 Northbound Traffic Between Alum Rock and Eastridge, Sent to Signal Case SC968



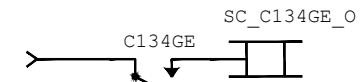
Track 3 Southbound Traffic Between Alum Rock and Eastridge, Sent to Signal Case SC968



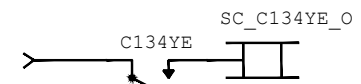
Track 4 Northbound Traffic Between Alum Rock and Eastridge, Sent to Signal Case SC968



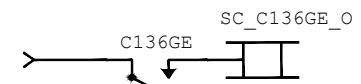
Track 4 Southbound Traffic Between Alum Rock and Eastridge, Sent to Signal Case SC968



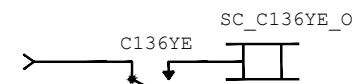
Signal C134 Green, Sent to Signal Case SC968



Signal C134 Yellow, Sent to Signal Case SC968



Signal C136 Green, Sent to Signal Case SC968



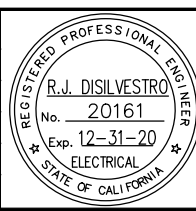
Signal C136 Yellow, Sent to Signal Case SC968



Link Health Status Repeater, Sent to Signal Case SC968

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NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET

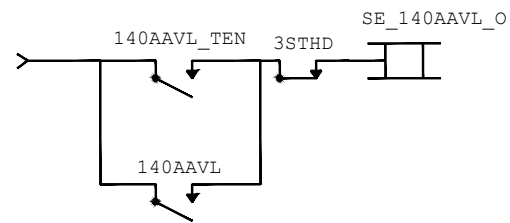


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DESIGNED	M.BAKHIN	CHECKED	V.FAINGOLD
DRAWN	M.BAKHIN	CADD FILE NAME	801JL212.dwg

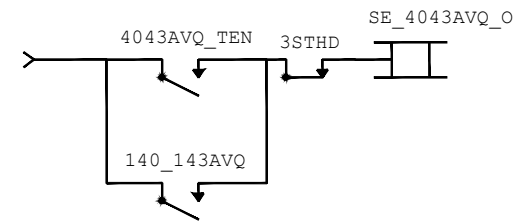


APPROVED		<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	03/11/19	SCALE	NTS
SUBMITTAL DATE	06/29/20	BOARD APPROVAL DATE	

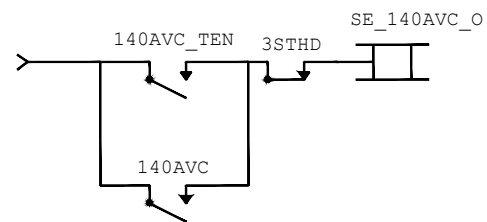
EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS STORY STATION VITAL LOGIC (9 OF 11)			SHEET OF DRAWING NO. JL212 REVISION A
PCA NO.	CONTRACT NO.	FILE LOCATION	
000	C801	PROJECTWISE	



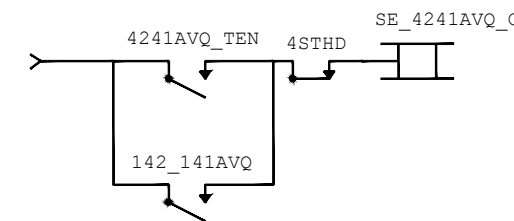
Advance Signal Request, Signal C140 Preferred Available Request, Sent to Eastridge



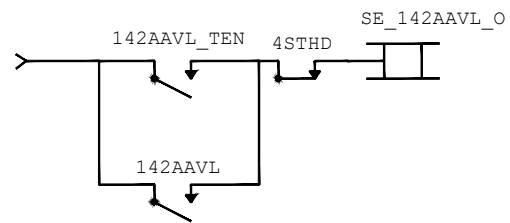
Advance Signal Request, Signal C140 To Signal C143 Route Request, Sent to Eastridge



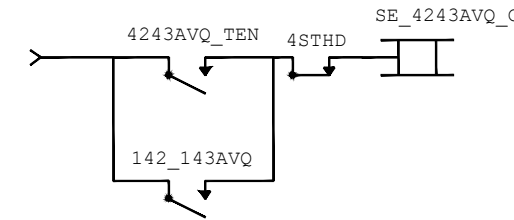
Signal C140 Advance Cancel From Story, Sent to Eastridge



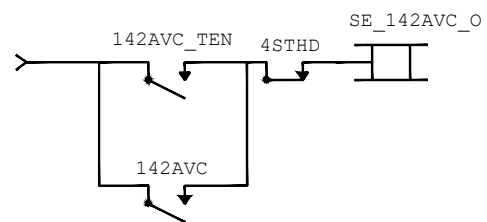
Advance Signal Request, Signal C142 To Signal C141 Route Request, Sent to Eastridge



Advance Signal Request, Signal C142 Preferred Available Request, Sent to Eastridge



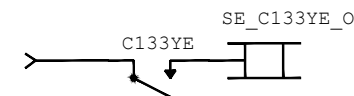
Advance Signal Request, Signal C142 To Signal C143 Route Request, Sent to Eastridge



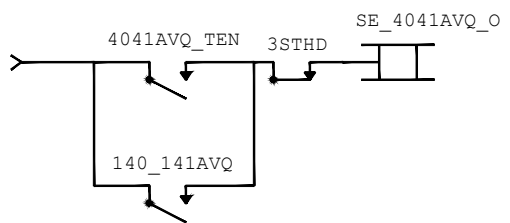
Signal C140 Advance Cancel From Story, Sent to Eastridge



Signal C131 Yellow, Sent to Sent to Eastridge



Signal C133 Yellow, Sent to Sent to Eastridge



Advance Signal Request, Signal C140 To Signal C141 Route Request, Sent to Eastridge



Link Health Status Repeater, Sent to Eastridge

Jun 22, 2020 - 11:53am C:\cadd\lib\paw\gforwkes\west\00139440\001L204-214\_Story\_V.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
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M.BAKHIN	V.FAINGOLD
DRAWN	CADD FILE NAME
M.BAKHIN	801JL213.dwg



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CADD FILE DATE	SCALE
03/11/19	NTS
SUBMITTAL DATE	BOARD APPROVAL DATE
06/29/20	

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS STORY STATION VITAL LOGIC (10 OF 11)			SHEET OF
			DRAWING NO. JL213
			REVISION A
PCA NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE	



REMOTE INPUTS  
SENT FROM EASTRIDGE ELECTROLOGIXS "A"

ES_3SF_I
ES_3NF_I
ES_4SF_I
ES_4NF_I
ES_LINKOK_I

REMOTE INPUTS  
SENT FROM SIGNAL CASE SC968

CS_C130GE_I
CS_C130YE_I
CS_C130RE_I
CS_C132GE_I
CS_C132YE_I
CS_C132RE_I
CS_C130LOK_I
CS_C132LOK_I
CS_968AC_I
CS_968B12_I
CS_LINKOK_I

REMOTE INPUTS  
SENT FROM SIGNAL CASE SC1029

CS_1029AC_I
CS_1029B12_I
CS_C141CTP_I
CS_C136CTP_I
CS_C141DTP_I
CS_C136BTP_I

REMOTE OUTPUTS  
SENT TO ALUM ROCK

SA_123AAVQ_O
SA_123ABVQ_O
SA_123AVC_O
SA_125AAVQ_O
SA_125ABVQ_O
SA_125AVC_O
SA_LINKOK_O

REMOTE OUTPUTS  
SENT TO EASTRIDGE ELECTROLOGIXS "A"

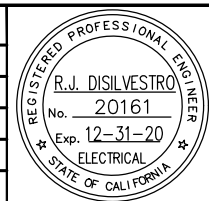
SE_4043AVQ_O
SE_4241AVQ_O
SE_4243AVQ_O
SE_C131YE_O
SE_C133YE_O
SE_LINKOK_O

REMOTE OUTPUTS  
SENT TO SIGNAL CASE SC968

SC_C134GE_O
SC_C134YE_O
SC_C136GE_O
SC_C136YE_O
SC_LINKOK_O

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NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



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Engineers Architects Planners  
1732 North First Street, Suite 400 San Jose, CA 95112  
Tel (408) 451-7300 Fax (408) 451-6942

DESIGNED M.BAKHIN	CHECKED V.FAINGOLD
DRAWN M.BAKHIN	CADD FILE NAME 801JL214.dwg



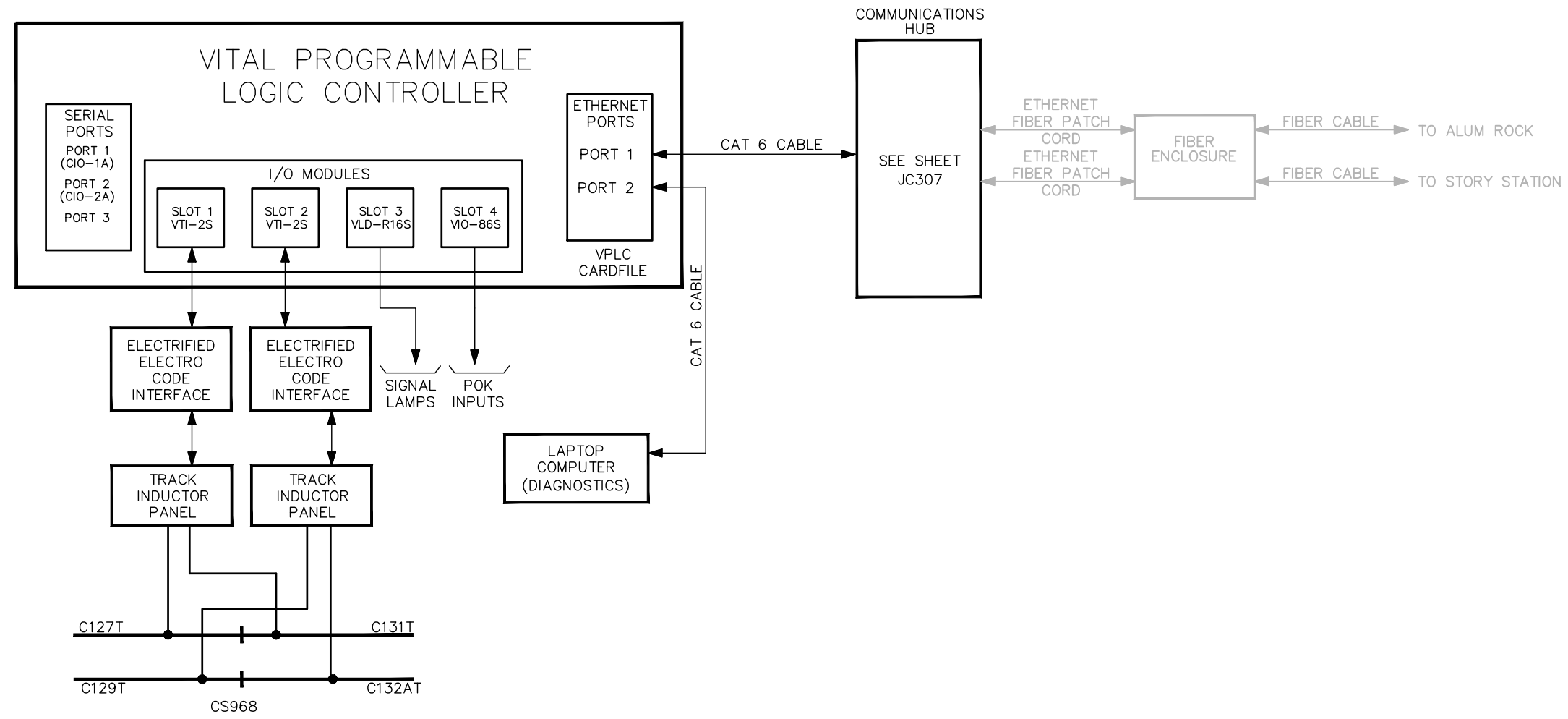
**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE 03/11/19	SCALE NTS
SUBMITTAL DATE 06/29/20	BOARD APPROVAL DATE

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
STORY STATION  
VITAL LOGIC (11 OF 11)

PCA NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE
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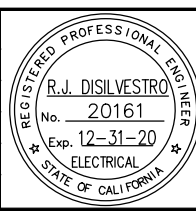
SHEET OF	DRAWING NO. JL214
REVISION	A



VTI-2S - VITAL TRACK INTERFACE  
 VIO-86S - VITAL INPUT/OUTPUT MODULE  
 VLD-R16S - VITAL LAMP DRIVER MODULE

Jun 22, 2020 - 11:54am C:\cadd\p\y\g\owkes\west\0139440\001JC301-307\_Cut Section 968+75.dwg

NO.	DATE	REVISIONS
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 Engineers Architects Planners  
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DESIGNED: M.BAKHIN CHECKED: V.FAINGOLD  
 DRAWN: M.BAKHIN CADD FILE NAME: 801JC301.dwg

**Santa Clara Valley Transportation Authority**

APPROVED

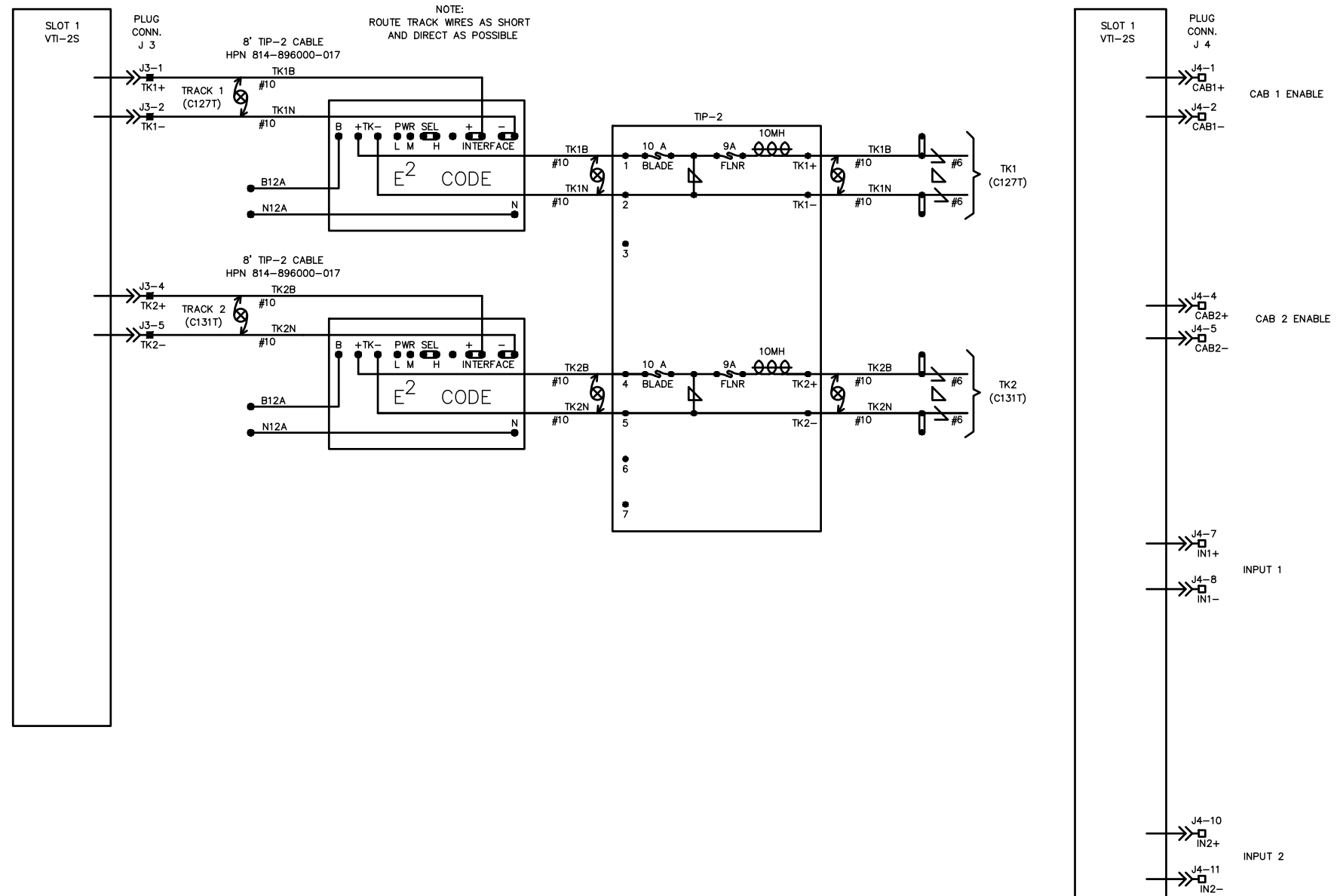
**BKF** 100+ YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/11/19 SCALE: NTS  
 SUBMITTAL DATE: 06/29/20 BOARD APPROVAL DATE:

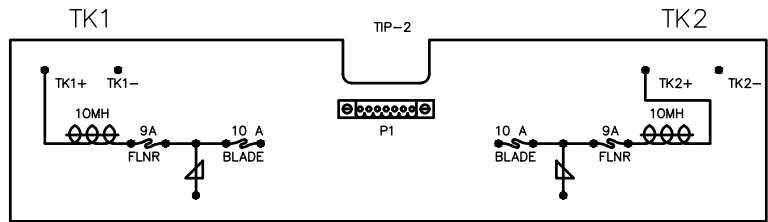
EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 LRT SIGNAL SYSTEMS  
 CUT SECTION 968+75. SIGNAL CASE SC968  
 SYSTEM BLOCK DIAGRAM

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

SHEET OF DRAWING NO. JC301 REVISION B



NOTE:  
ROUTE TRACK WIRES AS SHORT  
AND DIRECT AS POSSIBLE



VTI-2S  
PLUG CONNECTORS

TK1+	1	CAB1+	1
TK1-	2	CAB1-	2
-	3	-	3
TK2+	4	CAB2+	4
TK2-	5	CAB2-	5
-	6	-	6
-	7	IN1+	7
-	-	IN1-	8
-	-	IN2+	9
-	-	IN2-	10
-	-	-	11

■ = WIRE PRESENT  
- = NOT USED

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NO.	DATE	REVISIONS
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A	03/19	65% SUBMITTAL SET



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Engineers Architects Planners  
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DESIGNED: M.BAKHIN  
CHECKED: V.FAINGOLD  
DRAWN: M.BAKHIN  
CADD FILE NAME: 801JC302.dwg

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**Transportation Authority**

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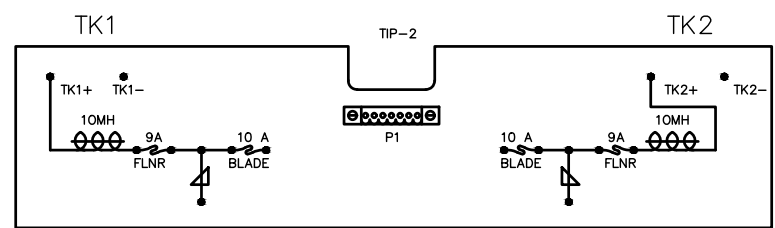
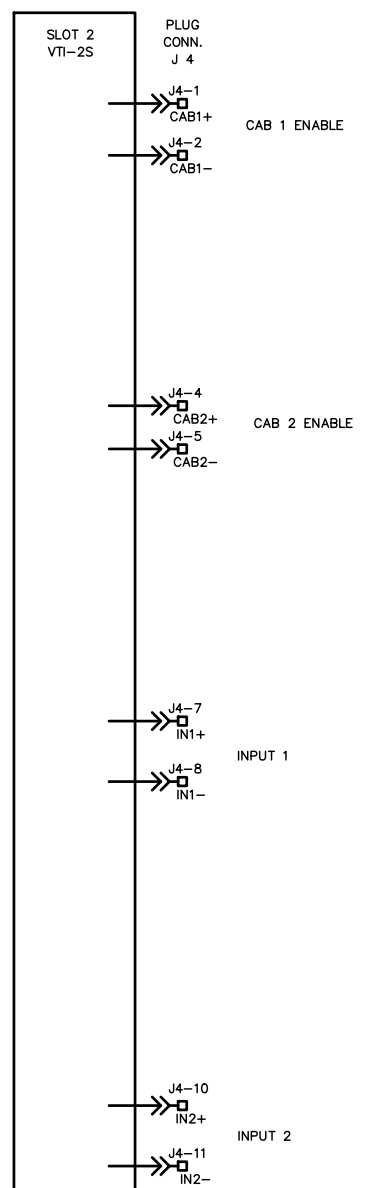
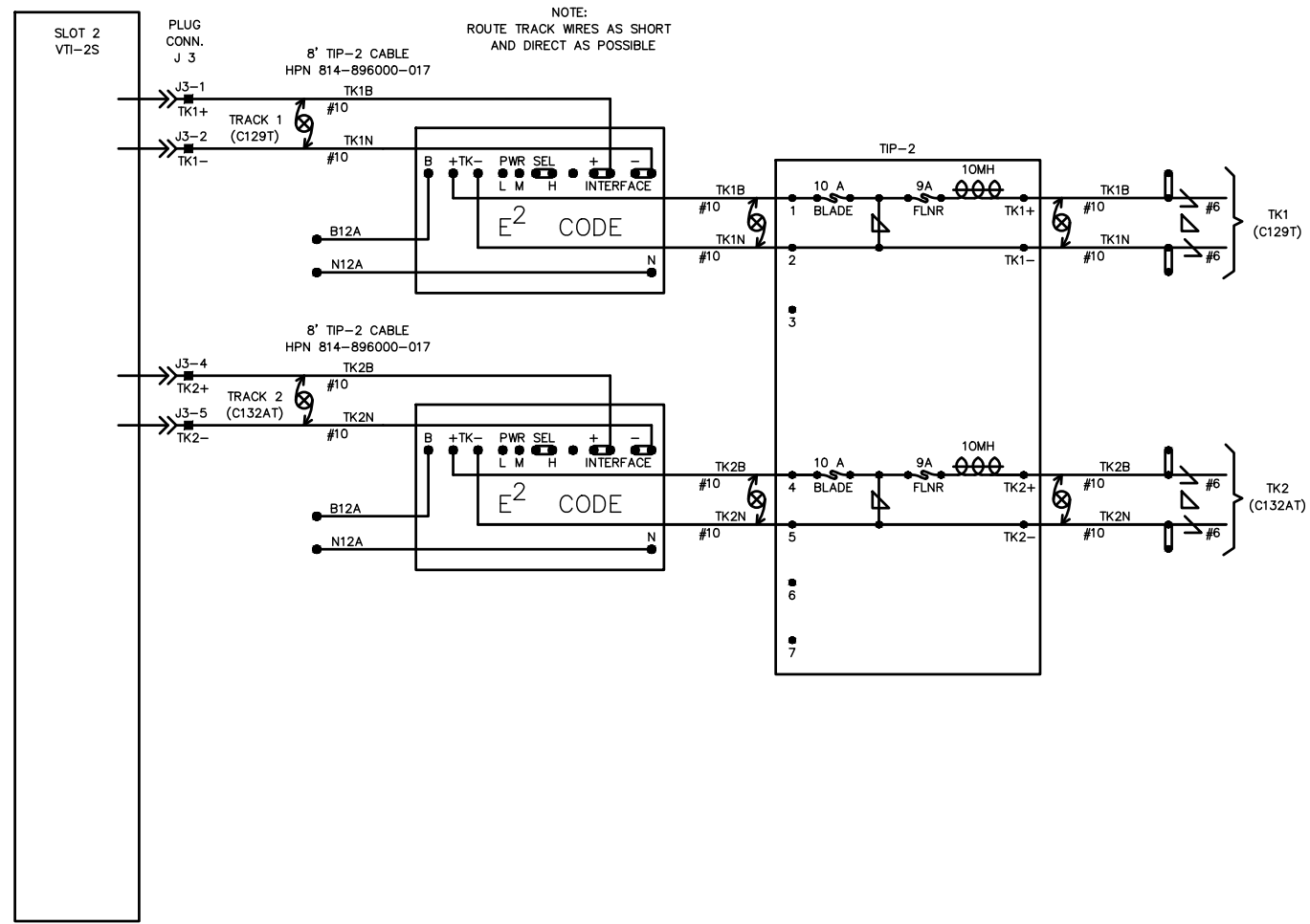
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CADD FILE DATE: 03/11/19  
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BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
CUT SECTION 968+75. SIGNAL CASE SC968  
CODED TRACK CIRCUITS (1 OF 2)

PCA NO. 000  
CONTRACT NO. C801  
FILE LOCATION PROJECTWISE

SHEET OF  
DRAWING NO. JC302  
REVISION B



VTI-2S  
PLUG CONNECTORS

TK1+	1	CAB1+	1
TK1-	2	CAB1-	2
-	3	-	3
TK2+	4	CAB2+	4
TK2-	5	CAB2-	5
-	6	-	6
-	7	IN1+	7
-	-	IN1-	8
-	-	-	9
-	-	IN2+	10
-	-	IN2-	11

J3

J4

■ = WIRE PRESENT  
- = NOT USED

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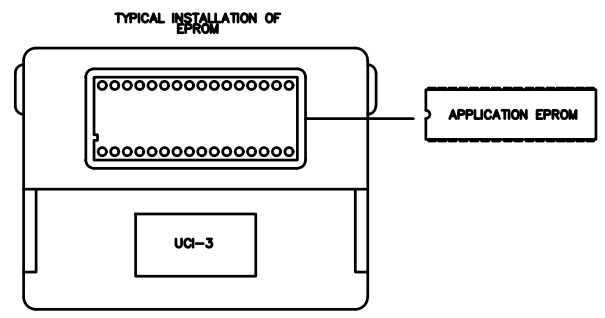
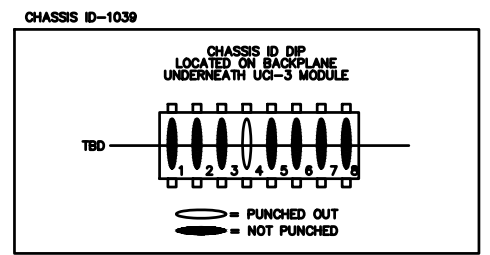
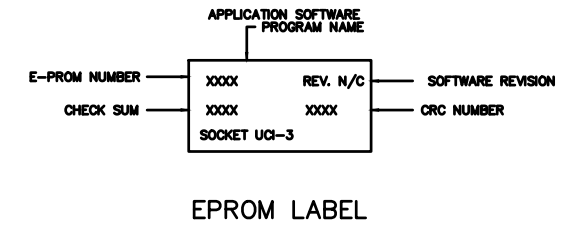
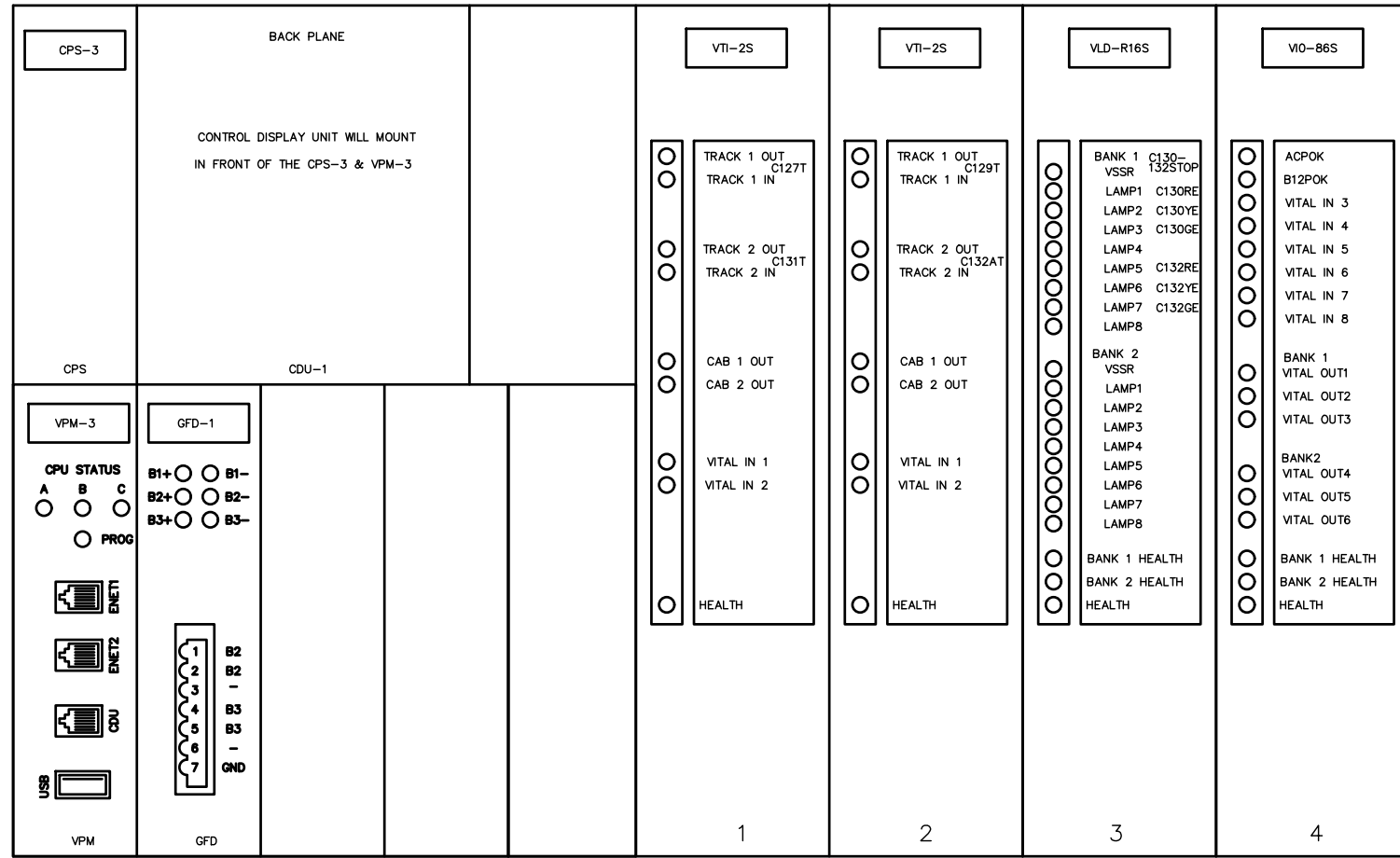
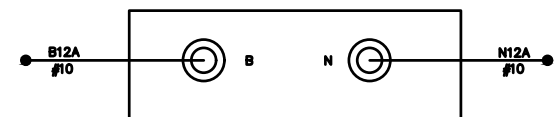
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ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/11/19  
SUBMITTAL DATE: 06/29/20  
SCALE: NTS  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
CUT SECTION 968+75. SIGNAL CASE SC968  
CODED TRACK CIRCUITS (2 OF 2)

PCA NO. 000  
CONTRACT NO. C801  
FILE LOCATION PROJECTWISE

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DRAWING NO. JC303  
REVISION B

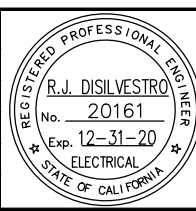


**MODULE LEGEND**

CDU-1 = CONTROL DISPLAY UNIT  
 CPS-3 = CENTRAL POWER SUPPLY  
 VPM-3 = VITAL PERIPHERAL MASTER  
 GFD-1 = GROUND FAULT DETECTOR  
 CIO-1A = COMMUNICATION INPUT/OUTPUT  
 CIO-2A = COMMUNICATION INPUT/OUTPUT  
 CIO-MDA = COMMUNICATION INPUT/OUTPUT  
 UCI-3 = CHASSIS INFORMATION  
 VTI-2S = VITAL TRACK INTERFACE  
 VLD-R16S = VITAL LAMP DRIVER  
 VI0-86S = VITAL INPUTS/OUTPUTS

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**Transportation Authority**

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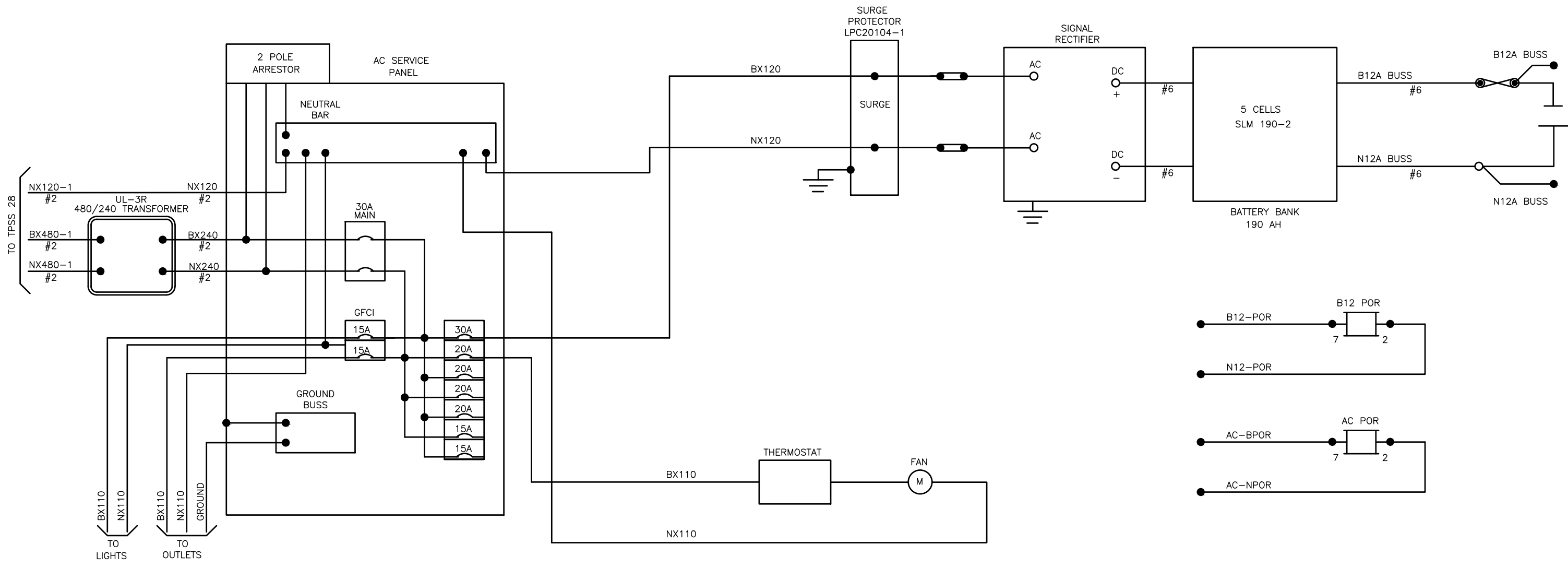
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 ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/11/19  
 SUBMITTAL DATE: 06/29/20  
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 BOARD APPROVAL DATE:

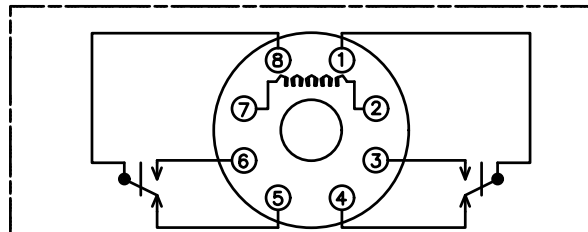
EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 LRT SIGNAL SYSTEMS  
 CUT SECTION 968+75. SIGNAL CASE SC968  
 MICROPROCESSOR MODULE CONFIGURATION

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

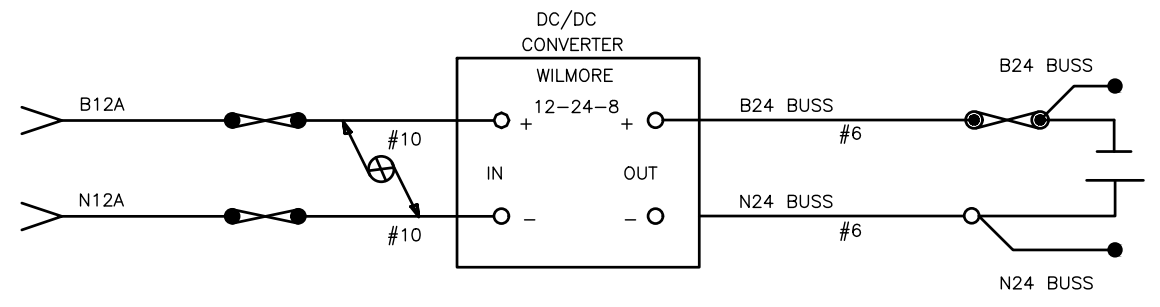
SHEET OF DRAWING NO. JC304 REVISION B



NOTE:  
1. WIRE TO BE #10 UNLESS DENOTED OTHERWISE.



1. RELAY KRPA11DN12 TO BE USED FOR B12 POR RELAY
  2. RELAY KRPA11AN240 TO BE USED FOR AC POR RELAY
  3. RELAY KRPA11DN110 TO BE USED FOR B110 POR RELAY
- CONTACT CONFIGURATION  
POTTER & BRUMFIELD  
KRPA11 SERIES



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NO.	DATE	REVISIONS
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A	03/19	65% SUBMITTAL SET

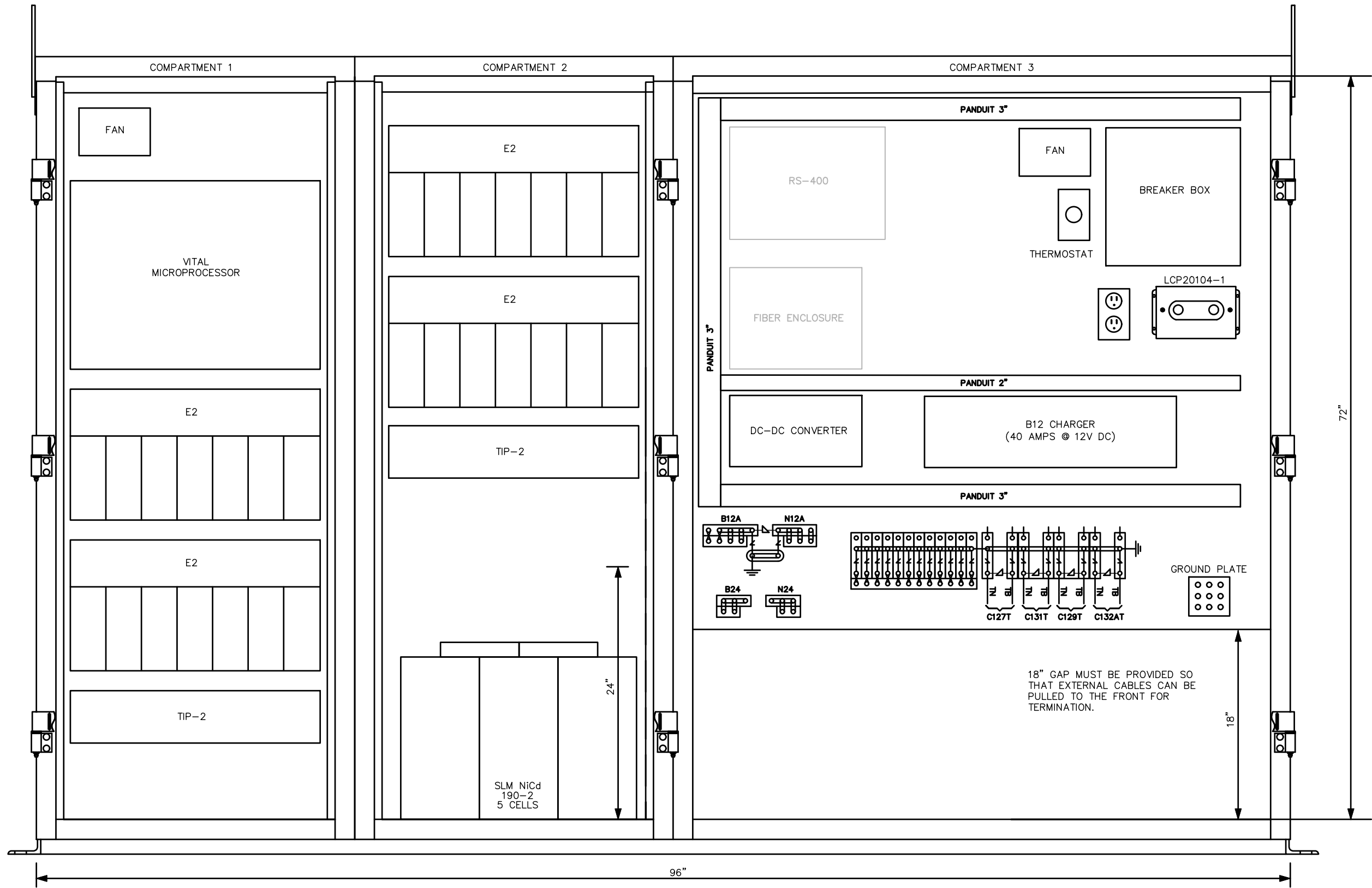


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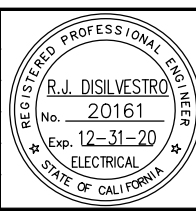
<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE 03/11/19	SCALE NTS
SUBMITTAL DATE 06/29/20	BOARD APPROVAL DATE

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS CUT SECTION 968+75. SIGNAL CASE SC968 POWER DISTRIBUTION			SHEET OF DRAWING NO. JC305 REVISION B
PCA NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE	



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DESIGNED: M.BAKHIN  
 CHECKED: V.FAINGOLD  
 DRAWN: M.BAKHIN  
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**Santa Clara Valley Transportation Authority**

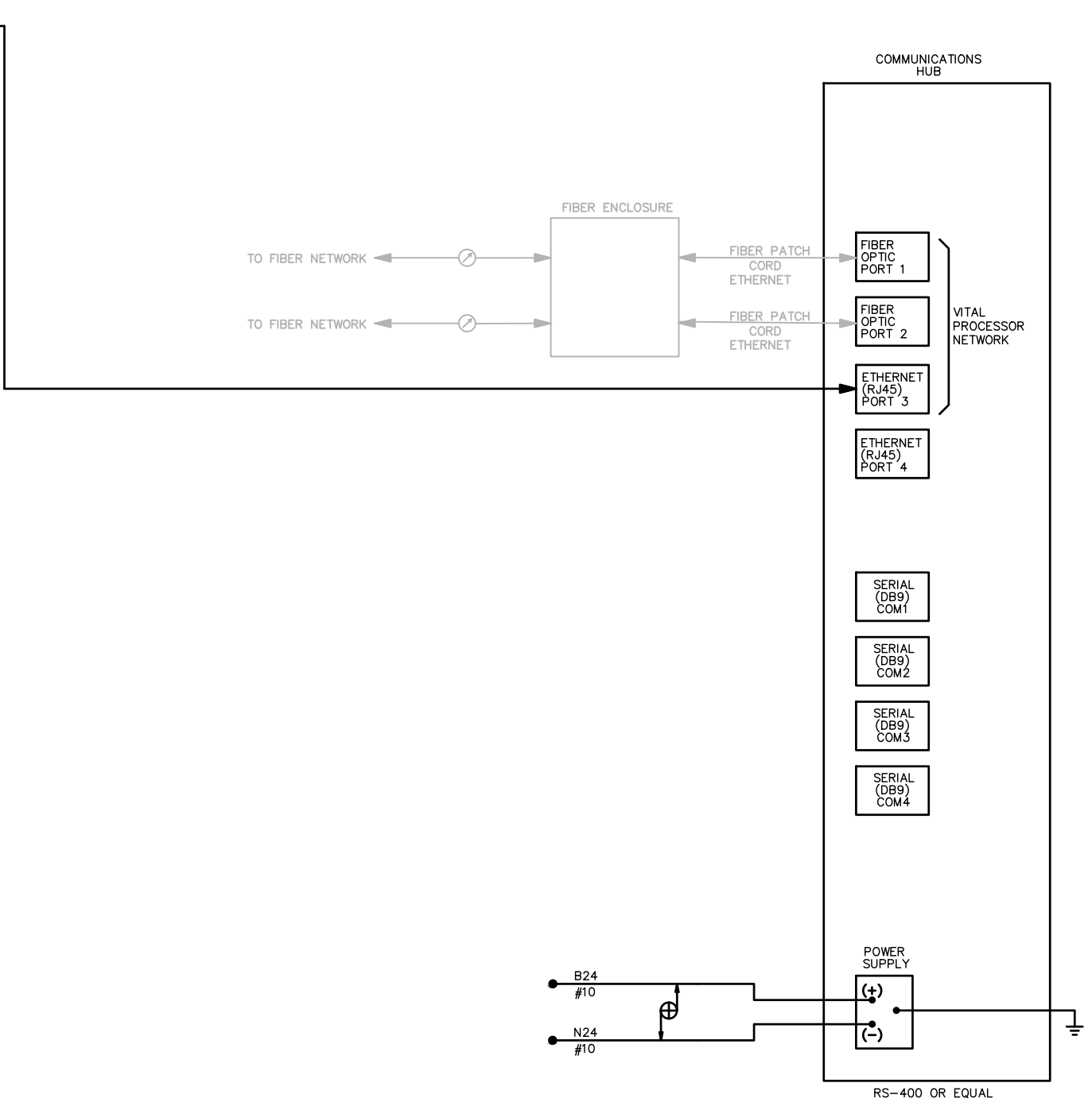
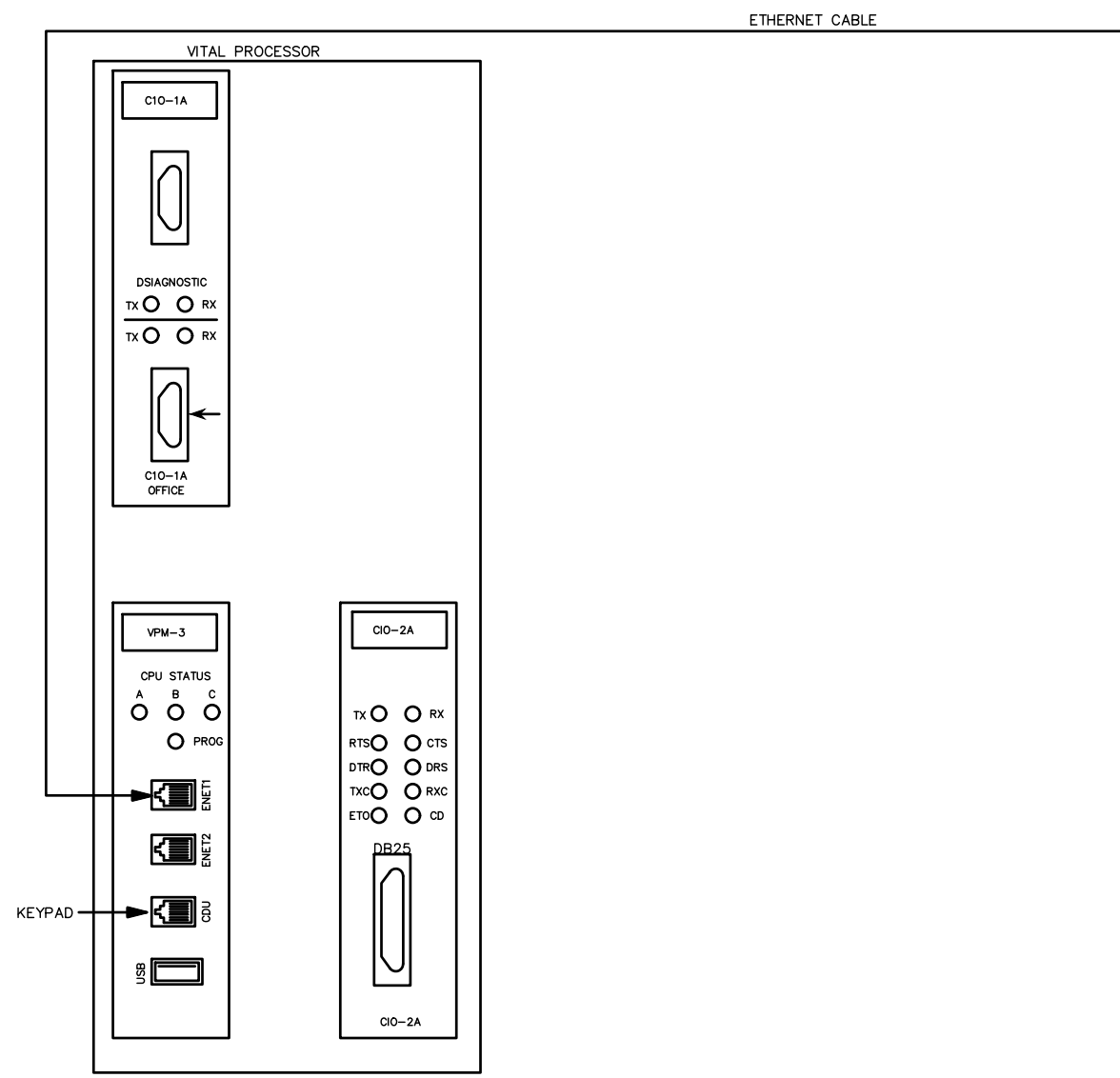
APPROVED  
**BKF** 100+ YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/11/19  
 SUBMITTAL DATE: 06/29/20  
 SCALE: NTS  
 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 LRT SIGNAL SYSTEMS  
 CUT SECTION 968+75. SIGNAL CASE SC968  
 SIGNAL CASE - EQUIPMENT LAYOUT

SHEET OF: JC306  
 REVISION: B

PCA NO.: 000  
 CONTRACT NO.: C801  
 FILE LOCATION: PROJECTWISE



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**Santa Clara Valley Transportation Authority**

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EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 LRT SIGNAL SYSTEMS  
 CUT SECTION 968+75. SIGNAL CASE SC968  
 COMMUNICATION SYSTEM DIAGRAM

SHEET OF: JC307  
 REVISION: A

PCA NO.: 000 CONTRACT NO.: C801 FILE LOCATION: PROJECTWISE

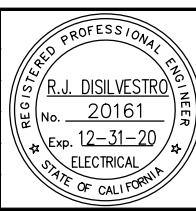


CS 968 ELOGIXS I/O CHART							
VTI2S: IO SLOT 1							
TRACK 1				TRACK 2			
RX STATUSES		TX STATUSES		RX STATUSES		TX STATUSES	
QUICK SHUNT CODE 1		CODE 1	3NT01	QUICK SHUNT CODE 1		CODE 1	3ST01
CODE 1	3NTI1	CODE 2	3NT02	CODE 1	3STI1	CODE 2	3ST02
CODE 2	3NTI2	CODE 3	3NT03	CODE 2	3STI2	CODE 3	
CODE 3		CODE 4		CODE 3		CODE 4	
CODE 4		CODE 5		CODE 4		CODE 5	
CODE 5		CODE 6	3NT06	CODE 5		CODE 6	3ST06
CODE 6	3NTI6	CODE 7	3NT07	CODE 6	3STI6	CODE 7	
CODE 7		CODE 8		CODE 7	3STI7	CODE 8	
CODE 8		CODE M		CODE 8		CODE M	
CODE M				CODE M			

VTI2S: IO SLOT 2							
TRACK 1				TRACK 2			
RX STATUSES		TX STATUSES		RX STATUSES		TX STATUSES	
QUICK SHUNT CODE 1		CODE 1	4NT01	QUICK SHUNT CODE 1		CODE 1	4ST01
CODE 1	4NTI1	CODE 2	4NT02	CODE 1	4STI1	CODE 2	4ST02
CODE 2	4NTI2	CODE 3	4NT03	CODE 2	4STI2	CODE 3	
CODE 3		CODE 4		CODE 3		CODE 4	
CODE 4		CODE 5		CODE 4		CODE 5	
CODE 5		CODE 6	4NT06	CODE 5		CODE 6	4ST06
CODE 6	4NTI6	CODE 7	4NT07	CODE 6	4STI6	CODE 7	
CODE 7		CODE 8		CODE 7	4STI7	CODE 8	
CODE 8		CODE M		CODE 8		CODE M	
CODE M				CODE M			

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EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
CUT SECTION 968+75. SIGNAL CASE SC968  
ELECTROLOGIXS I/O SLOTS 1-2

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

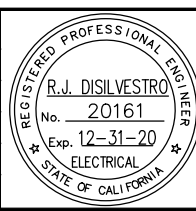
SHEET OF DRAWING NO. JC308 REVISION A

CS 968 ELOGIXS I/O CHART

VLD-R16S: IO SLOT 3		VIO86S: IO SLOT 4	
MODULE HEALTH		MODULE HEALTH	
VITAL SIGNAL STOP 1	C130_132STOP	BANK 1 HEALTH	
VITAL SIGNAL STOP 2		BANK 2 HEALTH	
LAMP GRANT BANK 1		VITAL INPUT 1	ACPOK
LAMP GRANT BANK 2		VITAL INPUT 2	B12POK
LAMP BANK 1 HEALTH		VITAL INPUT 3	
LAMP BANK 2 HEALTH		VITAL INPUT 4	
LAMP BANK 1 NORMAL		VITAL INPUT 5	
LAMP BANK 2 NORMAL		VITAL INPUT 6	
LAMP STEADY ON 1	C130RE	VITAL INPUT 7	
LAMP FLASH 1		VITAL INPUT 8	
LAMP ALT FLASH 1		VITAL OUTPUT 1	
LAMP OK STATUS 1	C130RLO	VITAL OUTPUT 2	
LAMP STEADY ON 2	C130YE	VITAL OUTPUT 3	
LAMP FLASH 2		VITAL OUTPUT 4	
LAMP ALT FLASH 2		VITAL OUTPUT 5	
LAMP OK STATUS 2	C130YLO	VITAL OUTPUT 6	
LAMP STEADY ON 3	C130GE		
LAMP FLASH 3			
LAMP ALT FLASH 3			
LAMP OK STATUS 3	C130GLO		
LAMP STEADY ON 4			
LAMP FLASH 4			
LAMP ALT FLASH 4			
LAMP OK STATUS 4			

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B	06/20	95% SUBMITTAL SET
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APPROVED: [Signature]  
CADD FILE DATE: 03/11/19  
SUBMITTAL DATE: 06/29/20  
SCALE: NTS  
BOARD APPROVAL DATE:

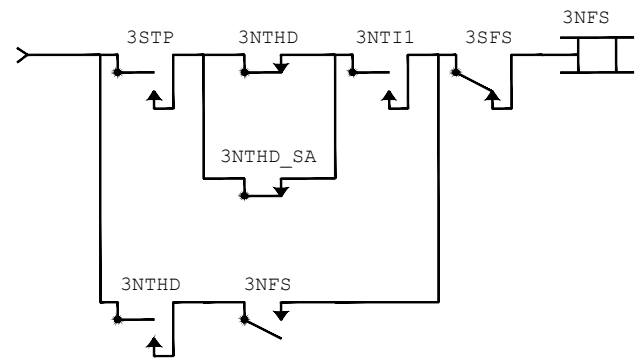
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CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
CUT SECTION 968+75. SIGNAL CASE SC968  
ELECTROLOGIXS I/O SLOTS 3-4

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

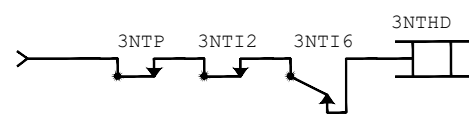
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REVISION A

SIGNAL CASE SC968  
VITAL LOGIC  
EQUATION INDEX

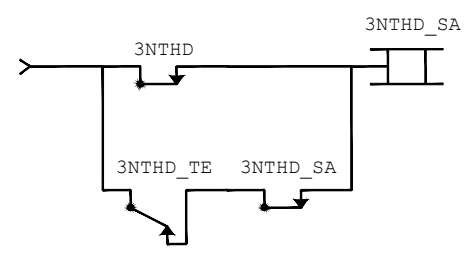
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3NTHD_TE2	1	CS_C130GE_O	4
3NTLOS	1	CS_C130LOK_O	4
3NTO1	1	CS_C130RE_O	4
3NTO2	1	CS_C130YE_O	4
3NTO3	1	CS_C132GE_O	4
3NTO6	1	CS_C132LOK_O	4
3NTO7	1	CS_C132RE_O	4
3NTP	1	CS_C132YE_O	4
3SFS	2	CS_LINKOK_O	4
3STHD	2	LINKOK_STORY	4
3STHD_SA	2	REMOTE I/O CHART	4
3STHD_TE	2		
3STLOS	2		
3STO1	2		
3STO2	2		
3STO6	2		
3STP	2		
4NFS	2		
4NTHD	2		
4NTHD_SA	2		
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4NTHD_TE2	2		
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4NTO3	3		
4NTO6	3		
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4NTP	3		
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4STHD_TE	3		
4STLOS	3		
4STO1	3		
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C130GE	3		
C130RE	3		
C130YE	3		



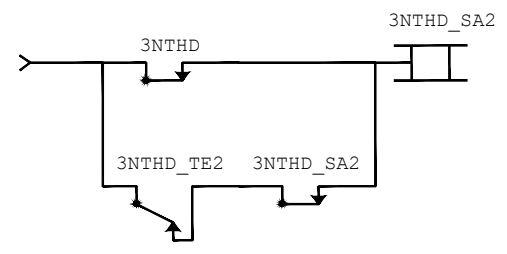
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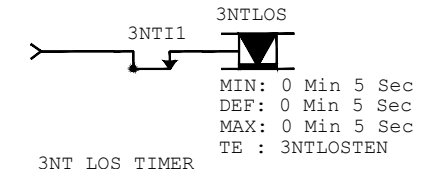
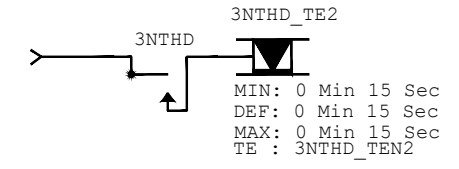
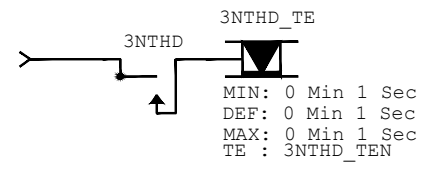
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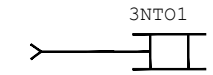
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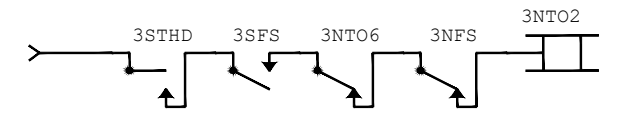
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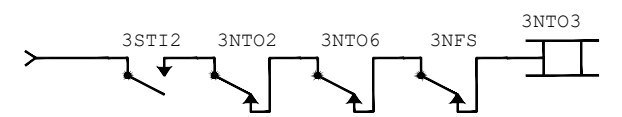
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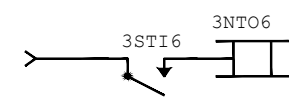
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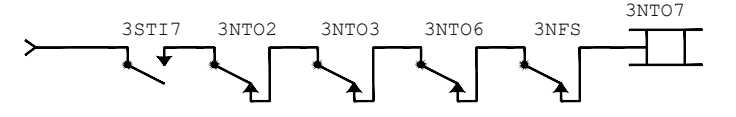
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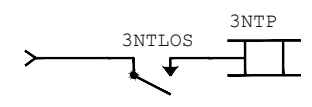
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3NT CODE 6 OUT



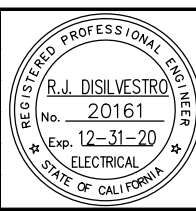
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B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



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1732 North First Street, Suite 400 San Jose, CA 95112  
Tel (408) 451-7300 Fax (408) 451-6942

DESIGNED: M.BAKHIN  
CHECKED: V.FAINGOLD  
DRAWN: M.BAKHIN  
CADD FILE NAME: 801JL301.dwg



APPROVED

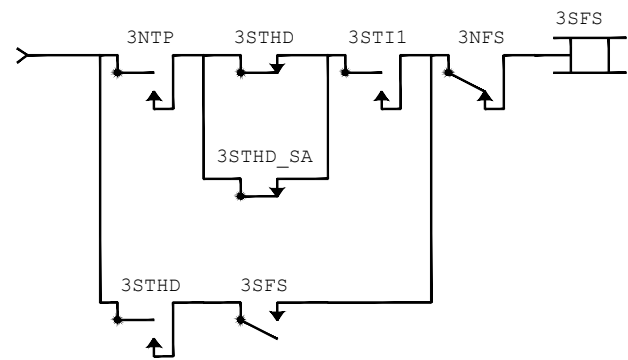
**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/11/19  
SUBMITTAL DATE: 06/29/20  
SCALE: NTS  
BOARD APPROVAL DATE:

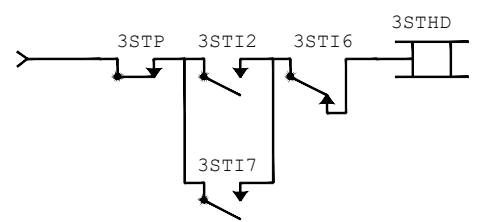
EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
CUT SECTION 968+75. SIGNAL CASE SC968  
VITAL LOGIC (1 OF 4)

PCA NO.: 000 CONTRACT NO.: C801 FILE LOCATION: PROJECTWISE

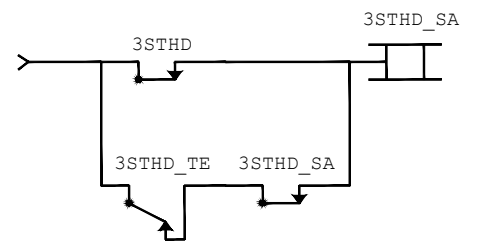
SHEET OF: JL301  
REVISION: B



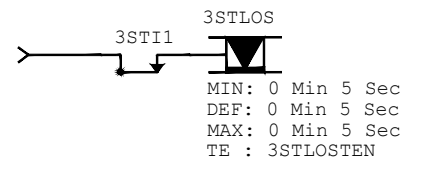
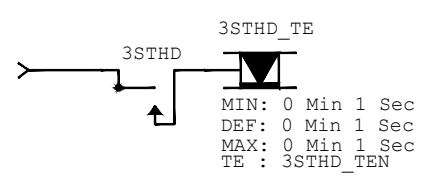
SB FOLLOW STICK



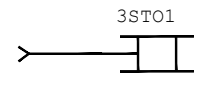
3ST H



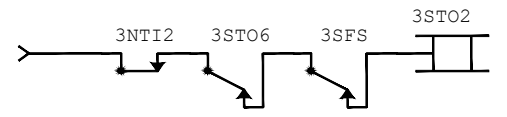
SLOW ACTING 3STHD REPEATER (1 SECOND SLOW RELEASE)



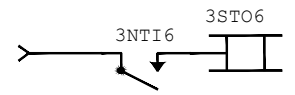
3ST LOS TIMER



3ST CODE 1 OUT



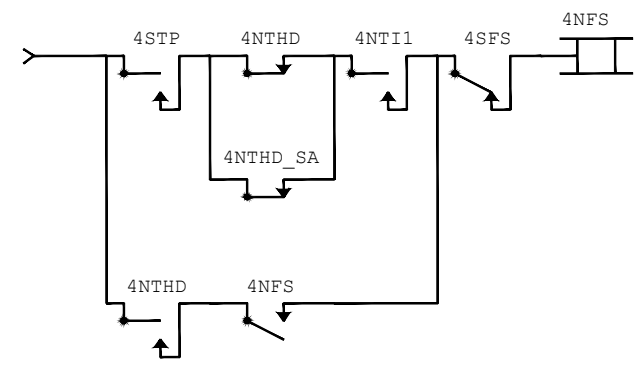
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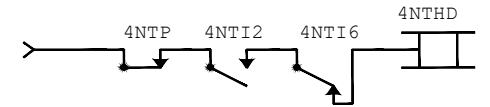
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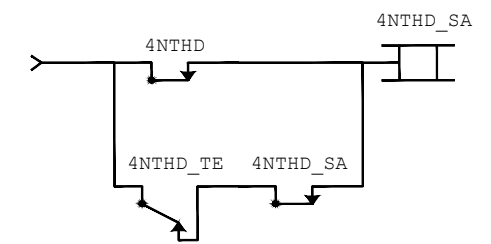
3ST LOS REPEATER (C131T)



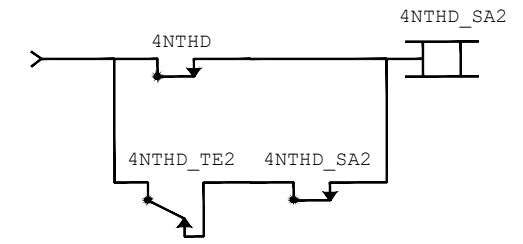
NB FOLLOW STICK



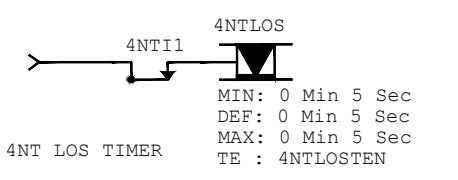
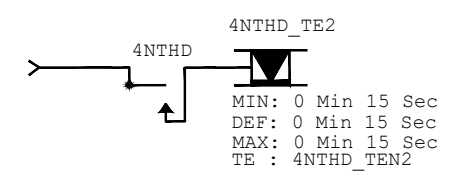
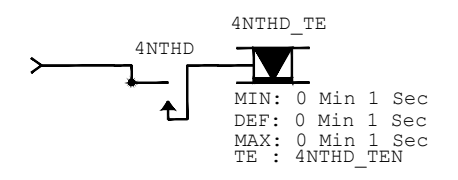
4NT H



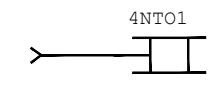
SLOW ACTING 4NTHD REPEATER (1 SECOND SLOW RELEASE)



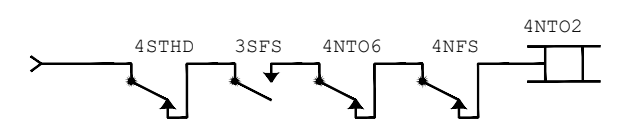
SLOW ACTING 4NTHD REPEATER (15 SECONDS SLOW RELEASE)



4NT LOS TIMER



3NT CODE 1 OUT



4NT CODE 2 OUT

Jun 22, 2020 11:54am C:\cadd\p\y\g\owkes\west\0139440\01L301-304\_SC968\_V.dwg

NO.	DATE	REVISIONS
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B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET

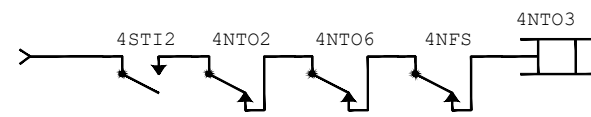


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DESIGNED	M.BAKHIN	CHECKED	V.FAINGOLD
DRAWN	M.BAKHIN	CADD FILE NAME	801JL302.dwg



APPROVED		<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	03/11/19	SCALE	NTS
SUBMITTAL DATE	06/29/20	BOARD APPROVAL DATE	

EASTRIDGE TO BART REGIONAL CONNECTOR			SHEET
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT			OF
LRT SIGNAL SYSTEMS			DRAWING NO.
CUT SECTION 968+75. SIGNAL CASE SC968			JL302
VITAL LOGIC (2 OF 4)			REVISION
			A
PCA NO.	CONTRACT NO.	FILE LOCATION	
000	C801	PROJECTWISE	



4NT CODE 3 OUT



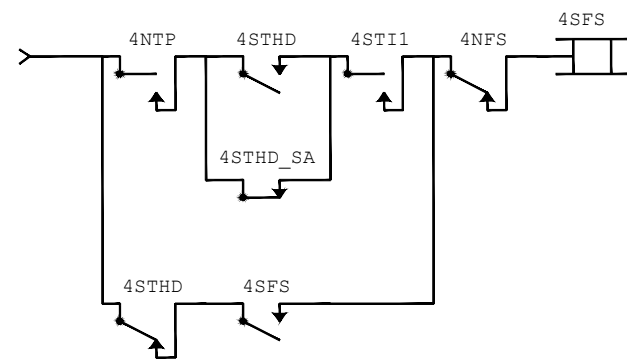
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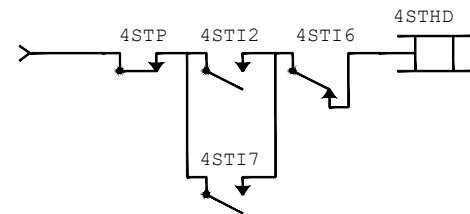
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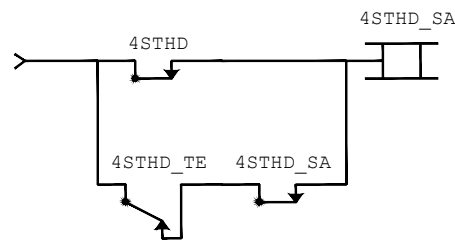
4NT LOS REPEATER (C129T)



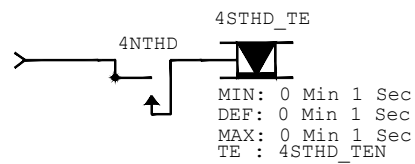
SB FOLLOW STICK



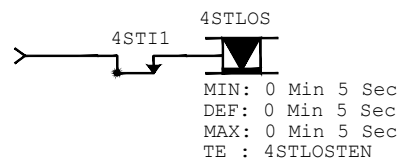
4ST H



SLOW ACTING 4STHD REPEATER (1 SECOND SLOW RELEASE)

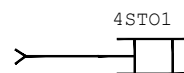


MIN: 0 Min 1 Sec  
DEF: 0 Min 1 Sec  
MAX: 0 Min 1 Sec  
TE : 4STHD\_TEN

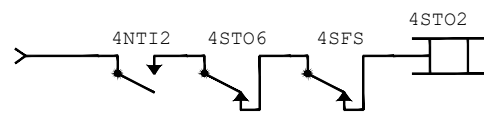


MIN: 0 Min 5 Sec  
DEF: 0 Min 5 Sec  
MAX: 0 Min 5 Sec  
TE : 4STLOSTEN

4ST LOS TIMER



4ST CODE 1 OUT



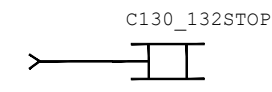
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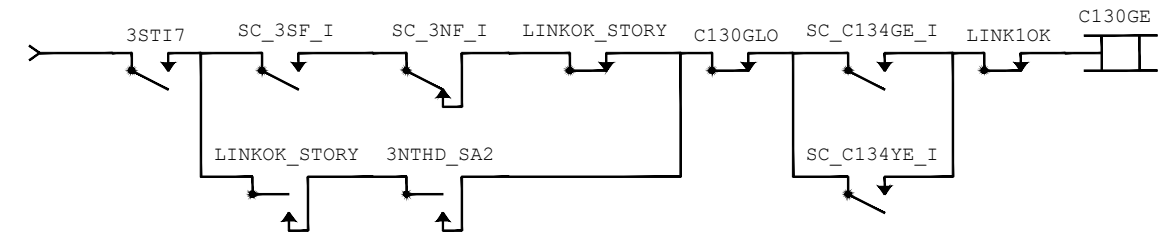
3ST CODE 6 OUT



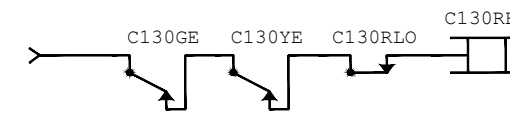
4ST LOS REPEATER (C132AT)



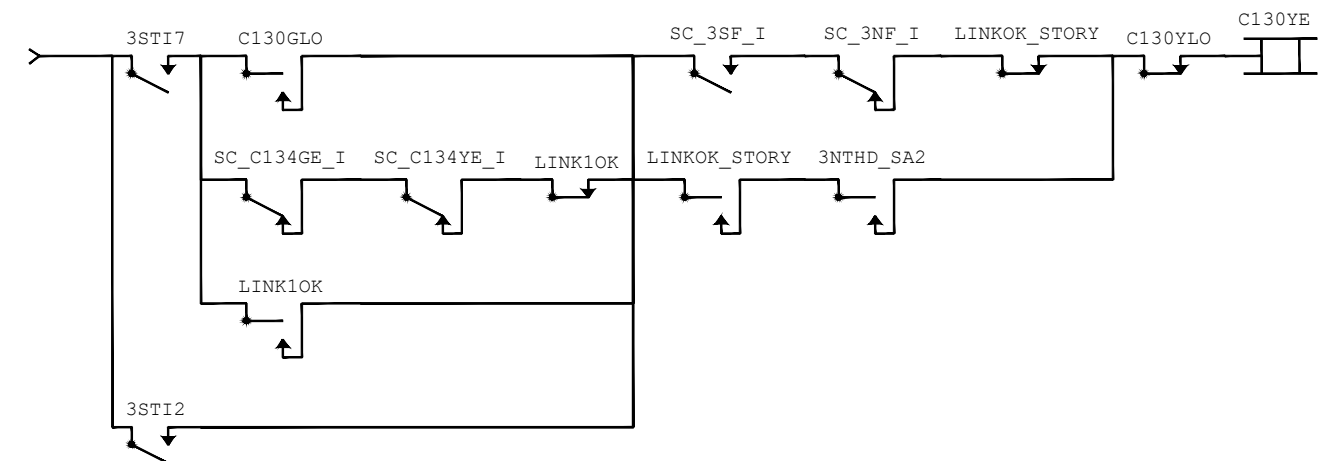
Signals C130, C132 STOP



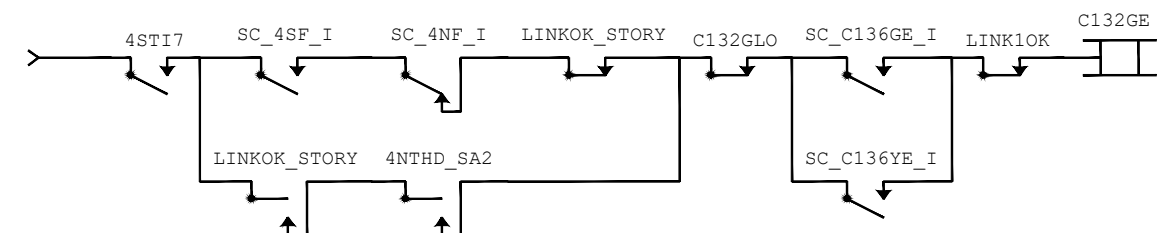
Signal C130 Green



Signal C130 Red



Signal C130 Yellow



Signal C132 Green

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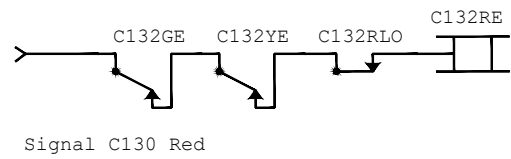


DESIGNED M.BAKHIN		CHECKED V.FAINGOLD	
DRAWN M.BAKHIN		CADD FILE NAME 801JL303.dwg	

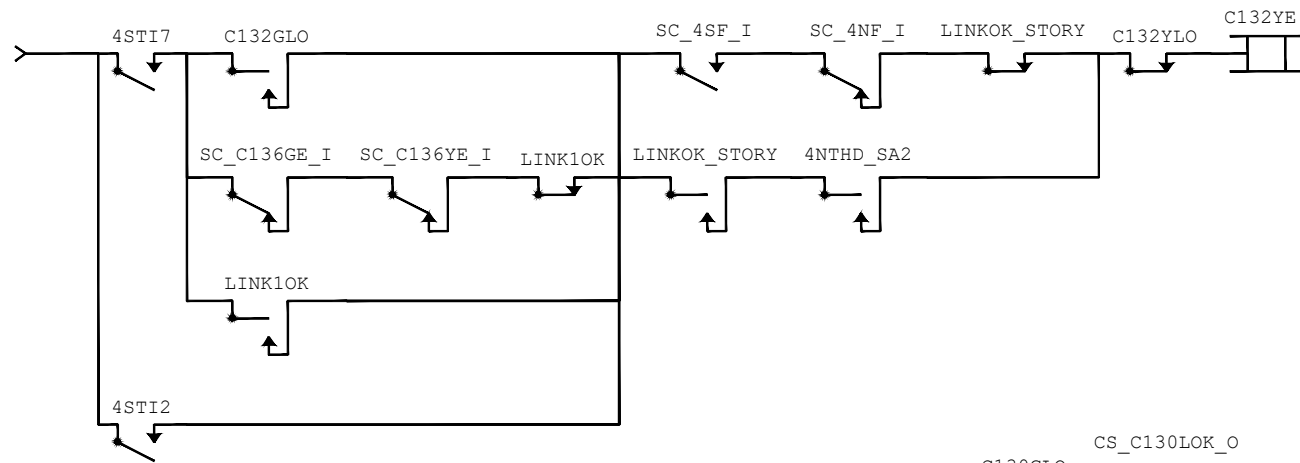


APPROVED <b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE 03/11/19	SCALE NTS
SUBMITTAL DATE 06/29/20	BOARD APPROVAL DATE

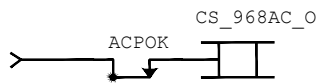
EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS CUT SECTION 968+75. SIGNAL CASE SC968 VITAL LOGIC (3 OF 4)			SHEET OF DRAWING NO. JL303 REVISION B
PCA NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE	



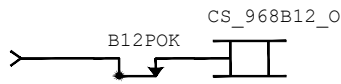
Signal C130 Red



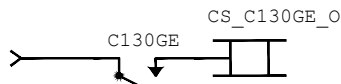
Signal C132 Yellow



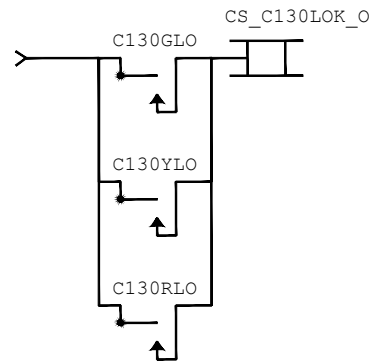
AC Low Voltage Indication, Sent to Story



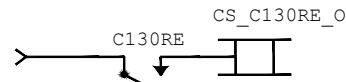
B12 Low Voltage Indication, Sent to Story



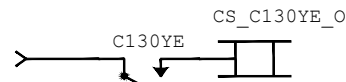
Signal C130 Green, Sent to Story



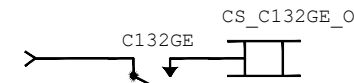
Signal C130 Light-Out, Sent to Story



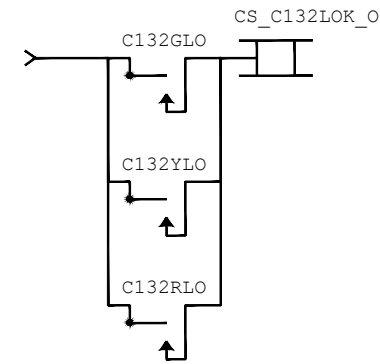
Signal C130 Red, Sent to Story



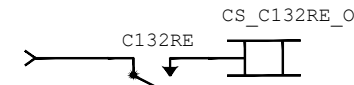
Signal C130 Yellow, Sent to Story



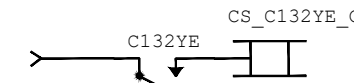
Signal C132 Green, Sent to Story



Signal C132 Light-Out, Sent to Story



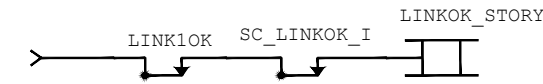
Signal C132 Red, Sent to Story



Signal C132 Yellow, Sent to Story



Signal C141 Green, Sent to Story



Link Health Status, Cut-Section 968 Vital Processor to Story Vital Processor

REMOTE INPUTS  
SENT FROM STORY

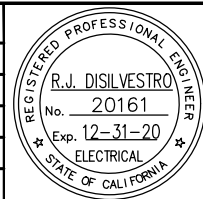
- SC\_3SF\_I
- SC\_3NF\_I
- SC\_4SF\_I
- SC\_4NF\_I
- SC\_C134GE\_I
- SC\_C134YE\_I
- SC\_C136GE\_I
- SC\_C136YE\_I
- SC\_LINKKOK\_I

REMOTE OUTPUTS  
SENT TO STORY

- CS\_C130GE\_O
- CS\_C130YE\_O
- CS\_C130RE\_O
- CS\_C132GE\_O
- CS\_C132YE\_O
- CS\_C132RE\_O
- CS\_C130LOK\_O
- CS\_C132LOK\_O
- CS\_968AC\_O
- CS\_968B12\_O
- CS\_LINKKOK\_O

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C	06/20	95% SUBMITTAL SET
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A	06/18	35% SUBMITTAL SET



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CHECKED: V.FAINGOLD  
DRAWN: M.BAKHIN  
CADD FILE NAME: 801JL304.dwg



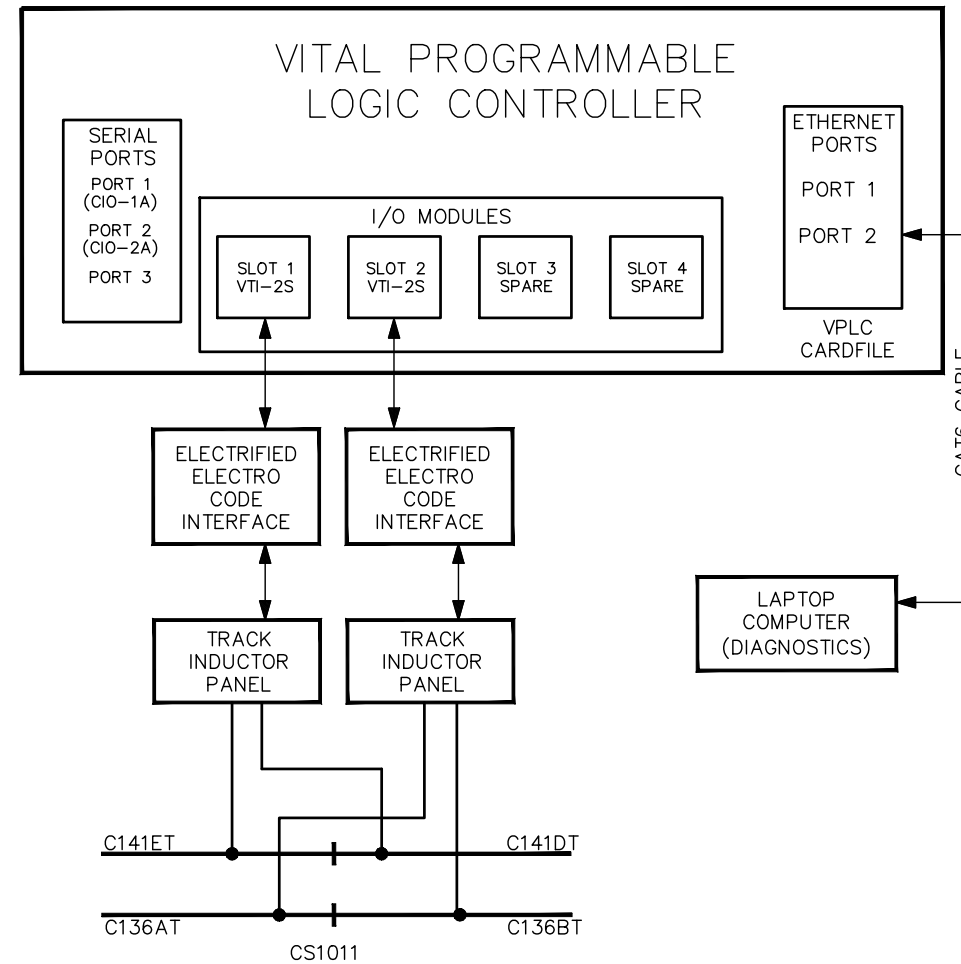
APPROVED: **BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/11/19  
SUBMITTAL DATE: 06/29/20  
SCALE: NTS  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
CUT SECTION 968+75. SIGNAL CASE SC968  
VITAL LOGIC (4 OF 4)

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

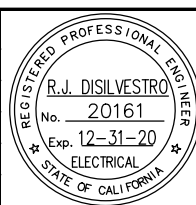
SHEET OF  
DRAWING NO. JL304  
REVISION B



VTI-2S - VITAL TRACK INTERFACE  
 VIO-86S - VITAL INPUT/OUTPUT MODULE  
 VLD-R16S - VITAL LAMP DRIVER MODULE

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NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



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DESIGNED: M.BAKHIN CHECKED: V.FAINGOLD  
 DRAWN: M.BAKHIN CADD FILE NAME: 801JC325.dwg



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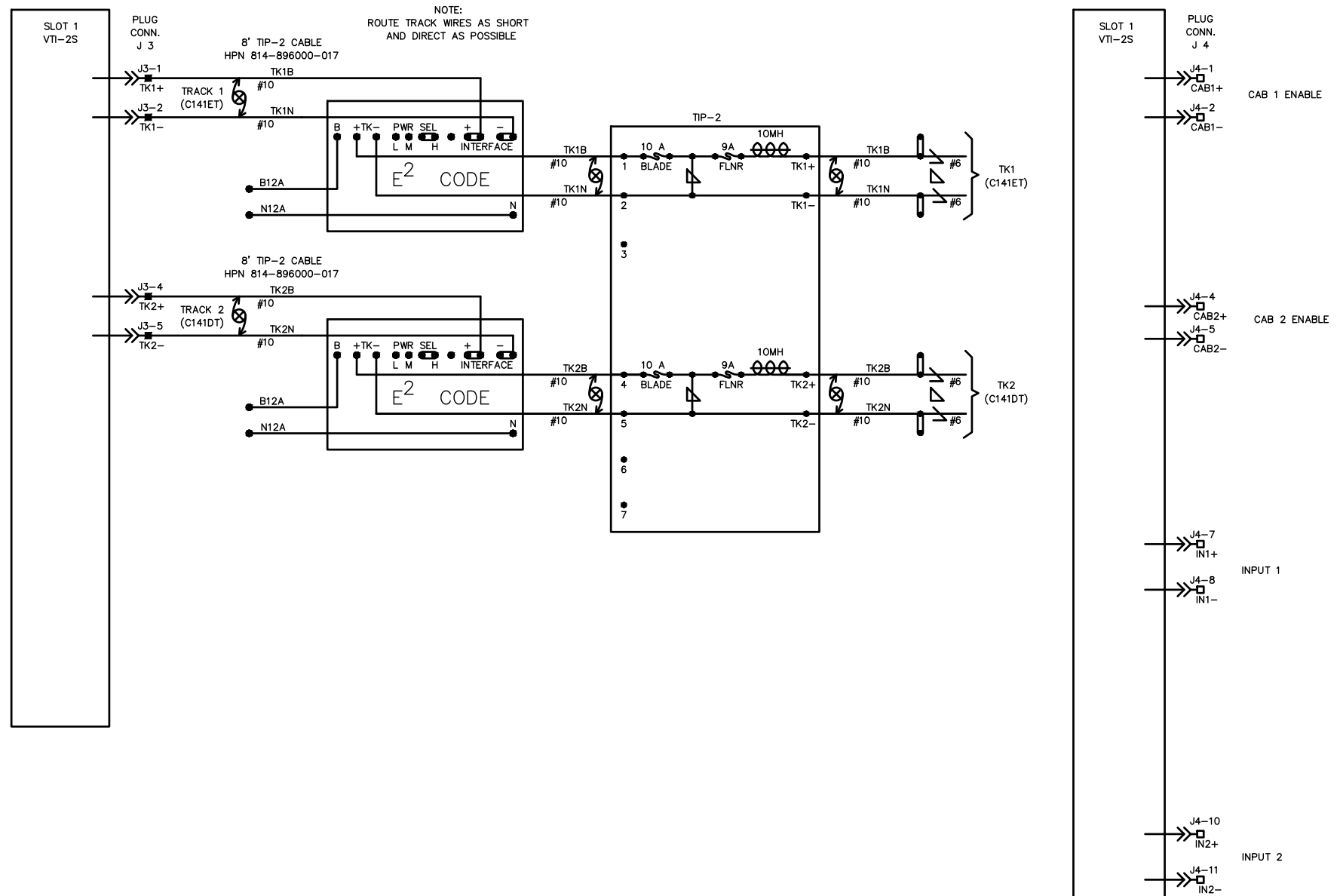
**BKF** 100+ YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/11/19 SCALE: NTS  
 SUBMITTAL DATE: 06/29/20 BOARD APPROVAL DATE:

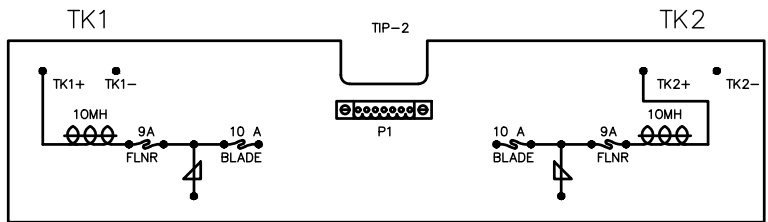
EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 LRT SIGNAL SYSTEMS  
 CUT SECTION 1011+40. SIGNAL CASE SC1011  
 SYSTEM BLOCK DIAGRAM

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

SHEET OF DRAWING NO. JC325 REVISION A



NOTE:  
ROUTE TRACK WIRES AS SHORT  
AND DIRECT AS POSSIBLE



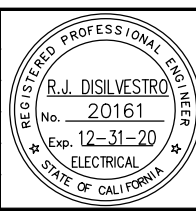
VTI-2S  
PLUG CONNECTORS

TK1+	1	CAB1+	1
TK1-	2	CAB1-	2
-	3	-	3
TK2+	4	CAB2+	4
TK2-	5	CAB2-	5
-	6	-	6
-	7	IN1+	7
		IN1-	8
		-	9
		IN2+	10
		IN2-	11

■ = WIRE PRESENT  
- = NOT USED

Jun 22, 2020 11:54am C:\cadd\p\work\west\0139440\01LC325-330\_Cut Section 1011+40.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



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San Jose, CA 95112  
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DESIGNED: M.BAKHIN  
CHECKED: V.FAINGOLD  
DRAWN: M.BAKHIN  
CADD FILE NAME: 801JC326.dwg

Santa Clara Valley  
**Transportation Authority**

APPROVED

**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

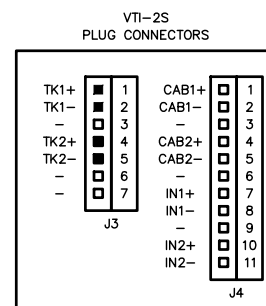
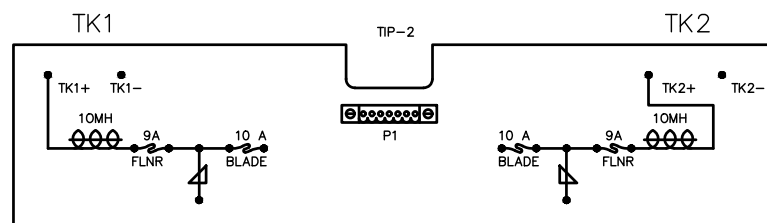
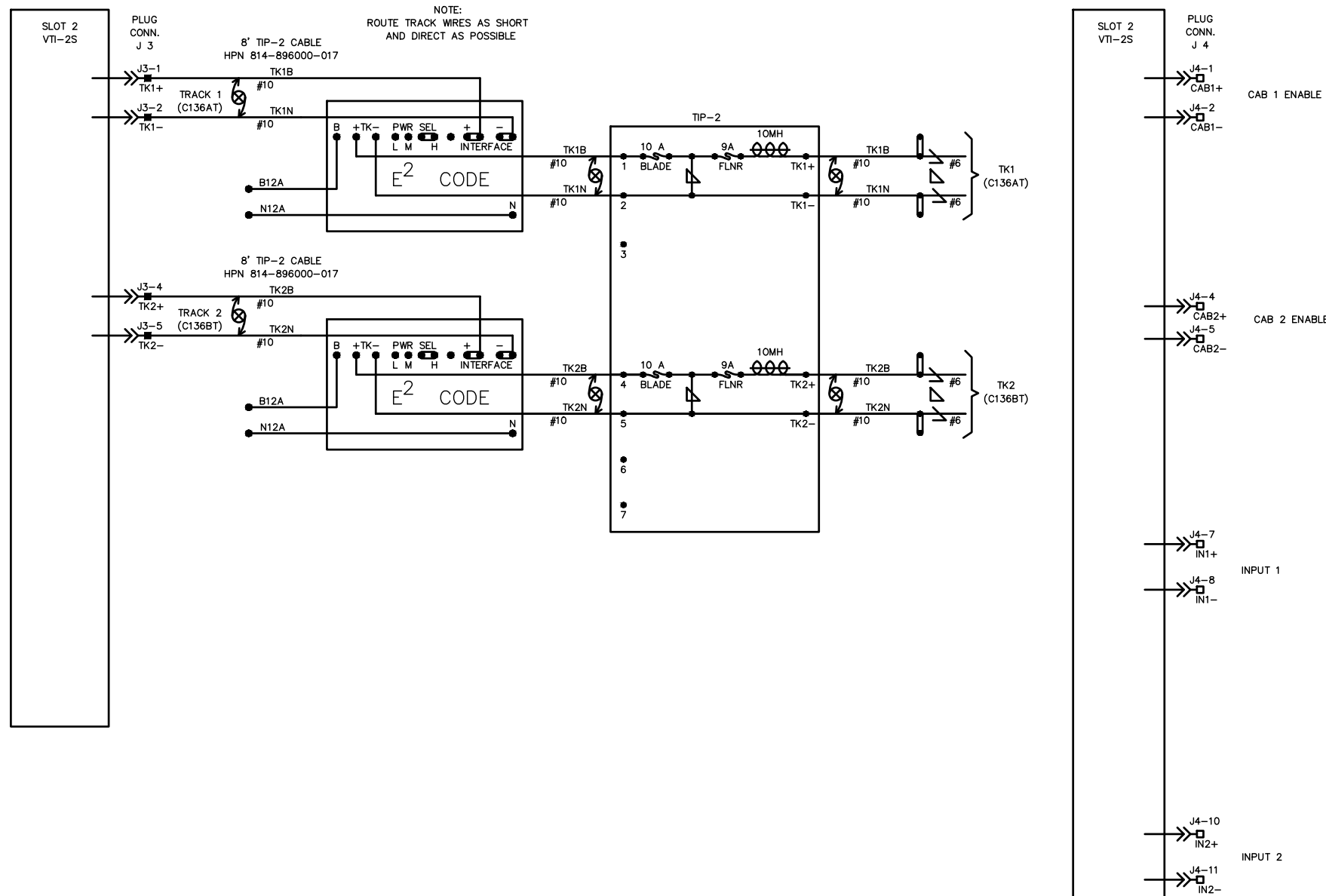
CADD FILE DATE: 03/11/19  
SUBMITTAL DATE: 06/29/20  
SCALE: NTS  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
CUT SECTION 1011+40. SIGNAL CASE SC1011  
CODED TRACK CIRCUITS (1 OF 2)

PCA NO. 000  
CONTRACT NO. C801  
FILE LOCATION PROJECTWISE

SHEET OF  
DRAWING NO. JC326  
REVISION A

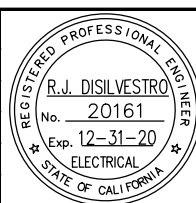




■ = WIRE PRESENT  
- = NOT USED

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NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



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1732 North First Street, Suite 400  
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DESIGNED: M.BAKHIN  
CHECKED: V.FAINGOLD  
DRAWN: M.BAKHIN  
CADD FILE NAME: 801JC327.dwg



APPROVED

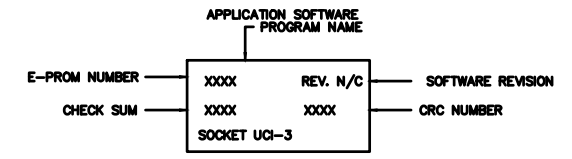
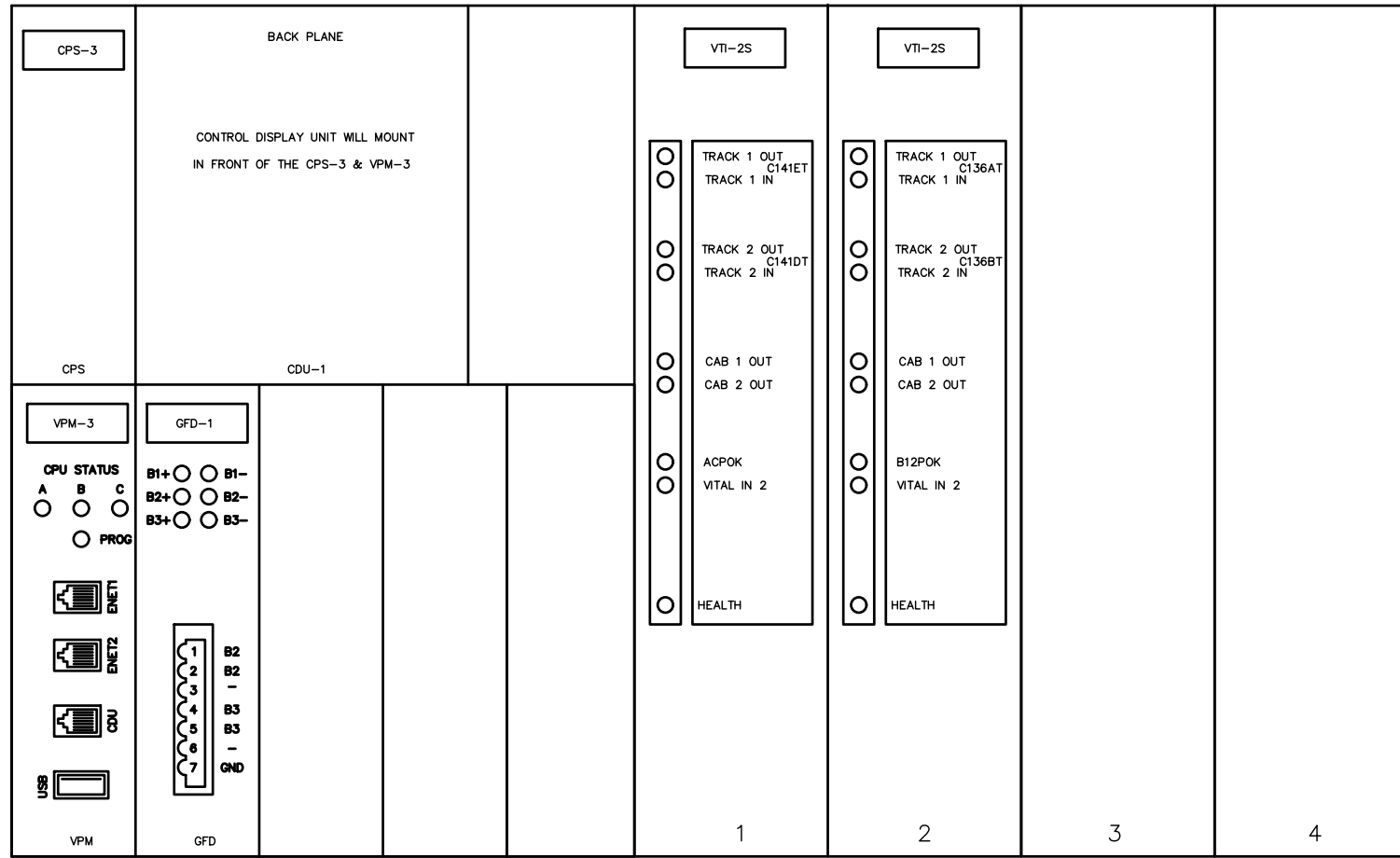
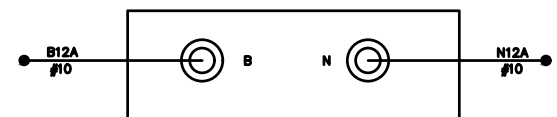
**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/11/19  
SCALE: NTS  
SUBMITTAL DATE: 06/29/20  
BOARD APPROVAL DATE:

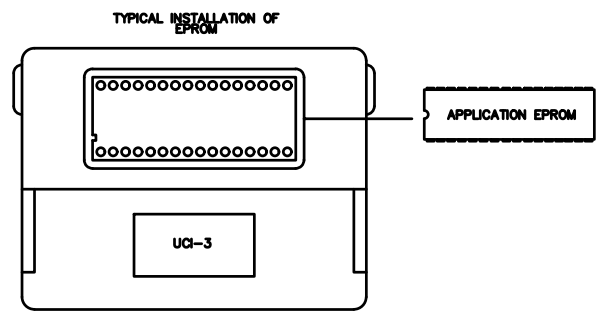
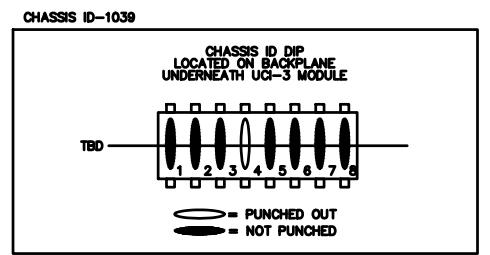
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CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
CUT SECTION 1011+40. SIGNAL CASE SC1011  
CODED TRACK CIRCUITS (2 OF 2)

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

SHEET OF DRAWING NO. JC327 REVISION A



EPROM LABEL



**MODULE LEGEND**  
 CDU-1 = CONTROL DISPLAY UNIT  
 CPS-3 = CENTRAL POWER SUPPLY  
 VPM-3 = VITAL PERIPHERAL MASTER  
 GFD-1 = GROUND FAULT DETECTOR  
 CIO-1A = COMMUNICATION INPUT/OUTPUT  
 CIO-2A = COMMUNICATION INPUT/OUTPUT  
 CIO-MDA = COMMUNICATION INPUT/OUTPUT  
 UCI-3 = CHASSIS INFORMATION  
 VTI-2S = VITAL TRACK INTERFACE  
 VLD-R16S = VITAL LAMP DRIVER  
 VI0-86S = VITAL INPUTS/OUTPUTS

Jun 22, 2020 - 11:54am C:\cadd\ib\paw\gforwks\west\d0139440\001\0325-330\_Cut\_Section\_1011+40.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



**HNTB** HNTB Corporation  
 1732 North First Street, Suite 400 San Jose, CA 95112  
 Tel (408) 451-7300 Fax (408) 451-6942

DESIGNED: M.BAKHIN  
 CHECKED: V.FAINGOLD  
 DRAWN: M.BAKHIN  
 CADD FILE NAME: 801JC328.dwg

**Santa Clara Valley Transportation Authority**

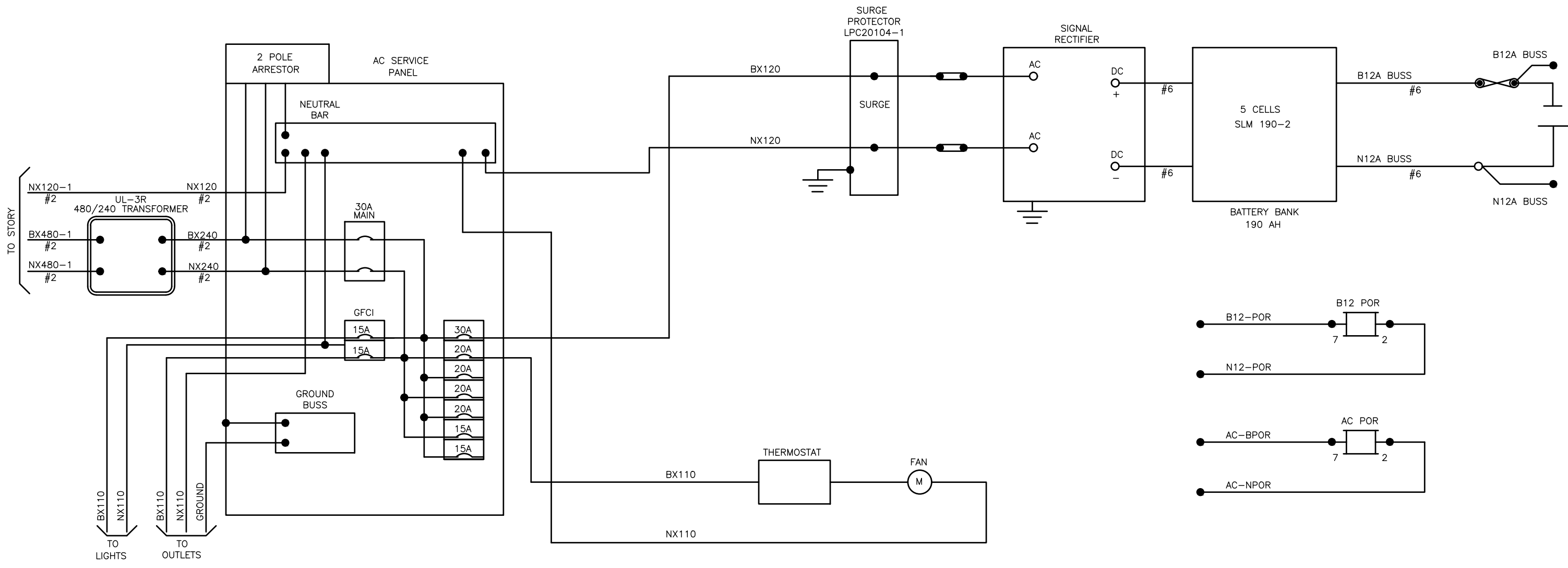
**BKF** 100+ YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/11/19  
 SUBMITTAL DATE: 06/29/20  
 SCALE: NTS  
 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 LRT SIGNAL SYSTEMS  
 CUT SECTION 1011+40. SIGNAL CASE SC1011  
 MICROPROCESSOR MODULE CONFIGURATION

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

SHEET OF DRAWING NO. JC328 REVISION A

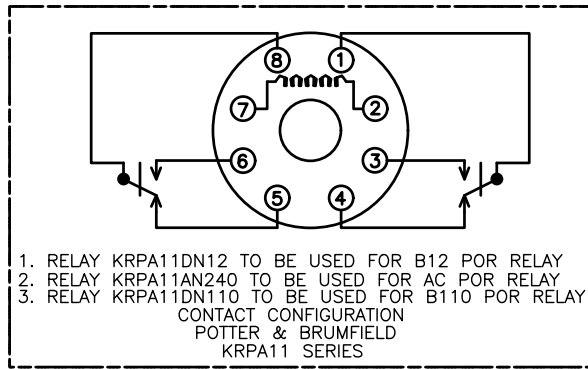


**NOTE:**

- POWER FOR SIGNAL CASE SC968 WILL BE PROVIDED FROM TPSS28.
- POWER FOR SIGNAL CASE SC1011 WILL BE PROVIDED FROM STORY STATION (ELECTRICAL PANEL "B", SEE SHEET EP701).
- POWER FOR SIGNAL CASES SC1029 AND SC1039 WILL BE PROVIDED FROM TPSS33.

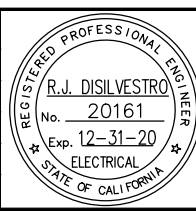
**NOTE:**

- WIRE TO BE #10 UNLESS DENOTED OTHERWISE.



Jun 22, 2020 - 11:35am C:\cadd\ib\paw\gfoakes\west\0139440\001\0325-330\_Cut\_Section\_1011+40.dwg

NO.	DATE	REVISIONS
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A	03/19	65% SUBMITTAL SET



SUBMITTED

**HNTB** HNTB Corporation  
Engineers Architects Planners  
1732 North First Street, Suite 400 San Jose, CA 95112  
Tel (408) 451-7300 Fax (408) 451-6942

DESIGNED: M.BAKHIN  
CHECKED: V.FAINGOLD  
DRAWN: M.BAKHIN  
CADD FILE NAME: 801JC329.dwg

Santa Clara Valley  
**Transportation Authority**

APPROVED

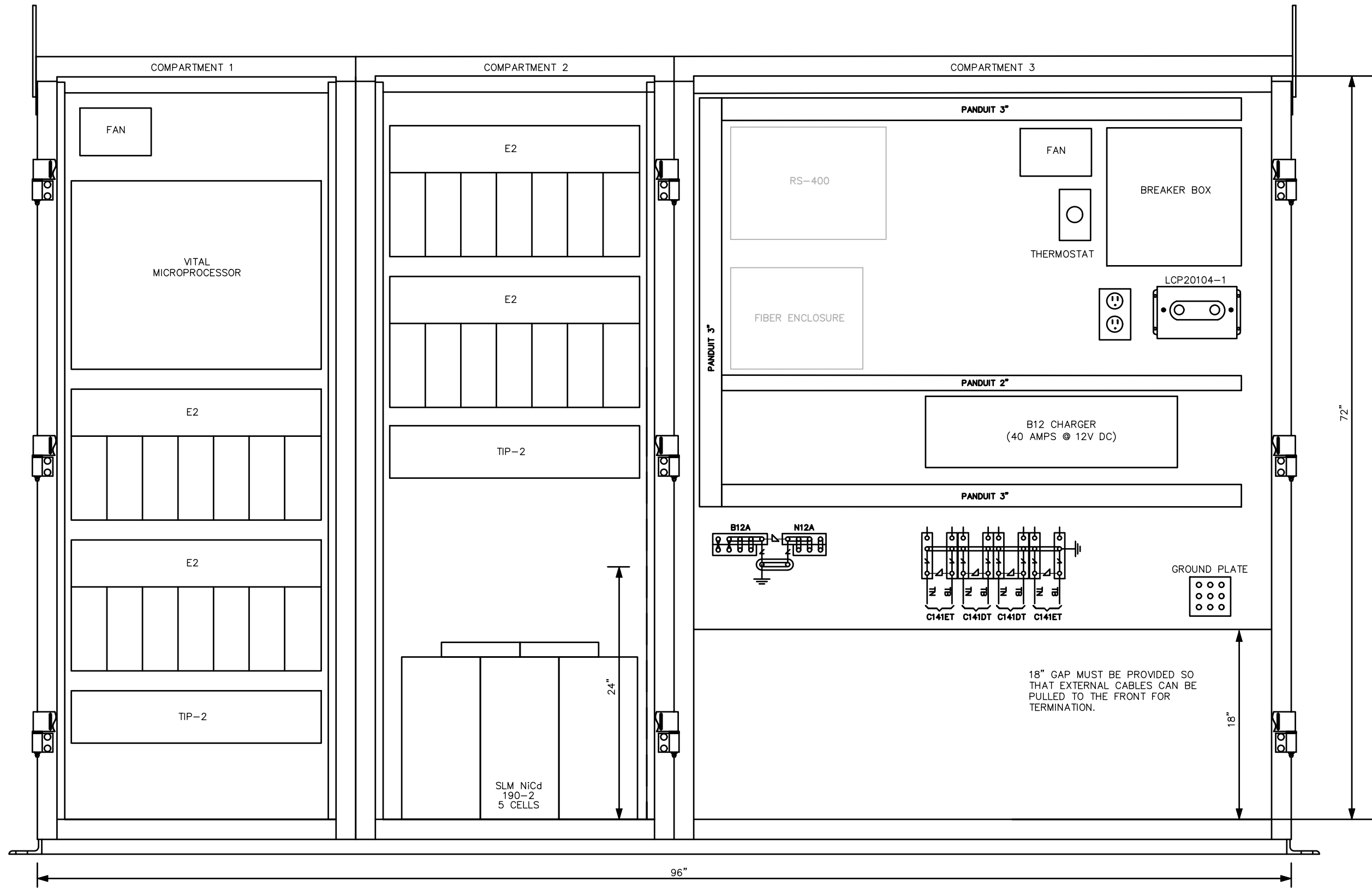
**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/11/19  
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SCALE: NTS  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
CUT SECTION 1011+40. SIGNAL CASE SC1011  
POWER DISTRIBUTION

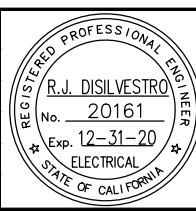
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SHEET OF  
DRAWING NO. JC329  
REVISION A



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 gfoakes

NO.	DATE	REVISIONS
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DESIGNED	CHECKED
M.BAKHIN	V.FAINGOLD
DRAWN	CADD FILE NAME
M.BAKHIN	801JC330.dwg



APPROVED <b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	SCALE
03/11/19	NTS
SUBMITTAL DATE	BOARD APPROVAL DATE
06/29/20	

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS CUT SECTION 1011+40. SIGNAL CASE SC1011 SIGNAL CASE - EQUIPMENT LAYOUT		
PCA NO.	CONTRACT NO.	FILE LOCATION
000	C801	PROJECTWISE

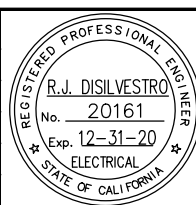
SHEET OF
DRAWING NO.
JC330
REVISION
A

CS 1011 ELOGIXS I/O CHART							
VTI2S: IO SLOT 1							
TRACK 1				TRACK 2			
RX STATUSES		TX STATUSES		RX STATUSES		TX STATUSES	
QUICK SHUNT CODE 1		CODE 1	3NT01	QUICK SHUNT CODE 1		CODE 1	3ST01
CODE 1	3NTI1	CODE 2	3NT02	CODE 1	3STI1	CODE 2	3ST02
CODE 2	3NTI2	CODE 3	3NT03	CODE 2	3STI2	CODE 3	
CODE 3		CODE 4		CODE 3	3STI3	CODE 4	
CODE 4		CODE 5		CODE 4		CODE 5	
CODE 5		CODE 6	3NT06	CODE 5		CODE 6	3ST06
CODE 6	3NTI6	CODE 7	3NT07	CODE 6	3STI6	CODE 7	3ST07
CODE 7	3NTI7	CODE 8		CODE 7	3STI7	CODE 8	
CODE 8		CODE M	3NTOM	CODE 8		CODE M	
CODE M	3NTIM			CODE M			

VTI2S: IO SLOT 2							
TRACK 1				TRACK 2			
RX STATUSES		TX STATUSES		RX STATUSES		TX STATUSES	
QUICK SHUNT CODE 1		CODE 1	4NT01	QUICK SHUNT CODE 1		CODE 1	4ST01
CODE 1	4NTI1	CODE 2	4NT02	CODE 1	4STI1	CODE 2	4ST02
CODE 2	4NTI2	CODE 3	4NT03	CODE 2	4STI2	CODE 3	
CODE 3		CODE 4		CODE 3	4STI3	CODE 4	
CODE 4		CODE 5		CODE 4		CODE 5	
CODE 5		CODE 6	4NT06	CODE 5		CODE 6	4ST06
CODE 6	4NTI6	CODE 7	4NT07	CODE 6	4STI6	CODE 7	4ST07
CODE 7	4NTI7	CODE 8		CODE 7	4STI7	CODE 8	
CODE 8		CODE M	4NTOM	CODE 8		CODE M	
CODE M	4NTIM			CODE M			

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NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
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Engineers Architects Planners  
1732 North First Street, Suite 400 San Jose, CA 95112  
Tel (408) 451-7300 Fax (408) 451-6942

DESIGNED: J. VIRAG  
CHECKED: J. VIRAG  
DRAWN: J. VIRAG  
CADD FILE NAME: 801JC331.dwg



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ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/11/19  
SCALE: NTS  
SUBMITTAL DATE: 06/29/20  
BOARD APPROVAL DATE:

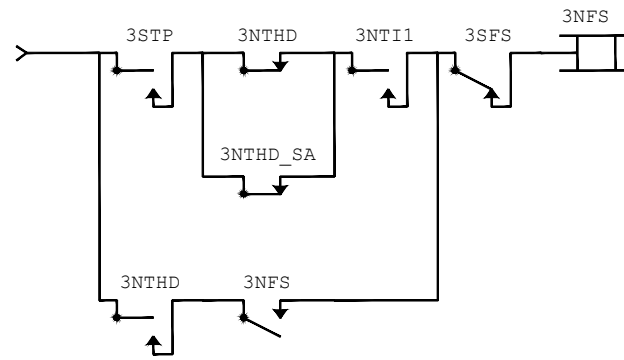
EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
CUT SECTION 1011+40. SIGNAL CASE SC1011  
ELECTROLOGIXS I/O SLOTS 1-2

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

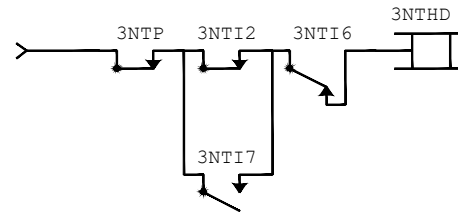
SHEET OF DRAWING NO. JC331 REVISION A

SIGNAL CASE SC1011  
VITAL LOGIC  
EQUATION INDEX

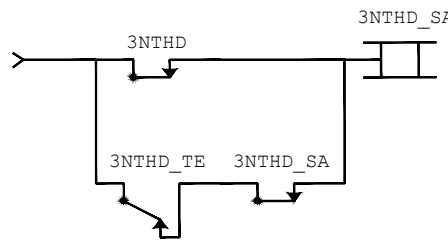
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3NTHD_TE	1
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3NTO3	1
3NTO6	1
3NTO7	1
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3STLOS	2
3STO1	2
3STO2	2
3STO6	2
3STO7	2
3STP	2
4NFS	2
4NTHD	2
4NTHD_SA	2
4NTHD_TE	2
4NTLOS	2
4NTO1	2
4NTO2	2
4NTO3	2
4NTO6	3
4NTO7	3
4NTOM	3
4NTP	3
4SFS	3
4STHD	3
4STHD_SA	3
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4STP	3



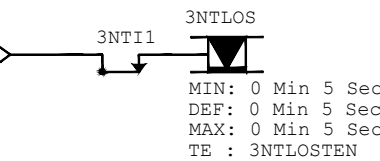
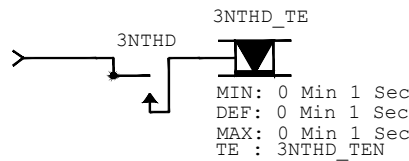
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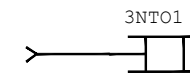
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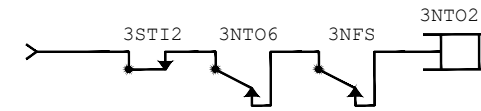
SLOW ACTING 3NTHD REPEATER (1 SECOND SLOW RELEASE)



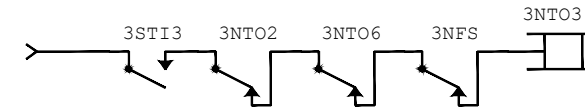
3NT LOS TIMER



3NT CODE 1 OUT



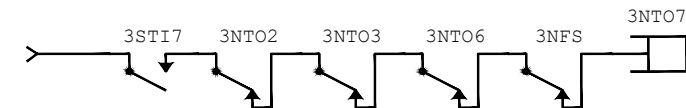
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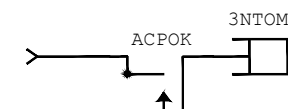
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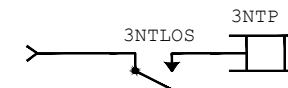
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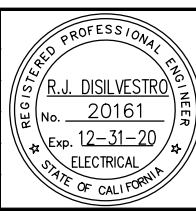
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3NT LOS REPEATER (C141ET)

Jun 22, 2020 - 11:55am C:\cadd\lib\paw\gforwkes\west\d0139440\001.L325-327-SC1011\_V.dwg

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



SUBMITTED

**HNTB** HNTB Corporation  
Engineers Architects Planners  
1732 North First Street, Suite 400 San Jose, CA 95112  
Tel (408) 451-7300 Fax (408) 451-6942

DESIGNED: M.BAKHIN  
CHECKED: V.FAINGOLD  
DRAWN: M.BAKHIN  
CADD FILE NAME: 801JL325.dwg

Santa Clara Valley  
Transportation  
Authority

APPROVED

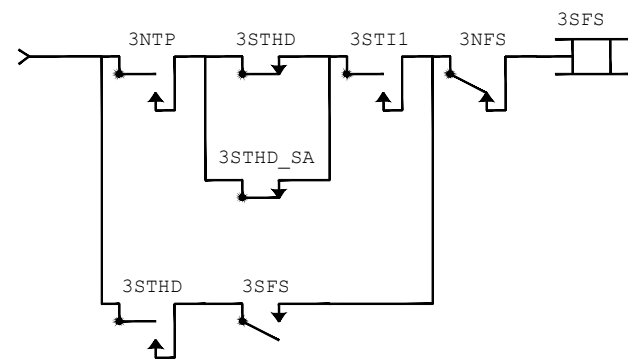
**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/11/19  
SUBMITTAL DATE: 06/29/20  
SCALE: NTS  
BOARD APPROVAL DATE:

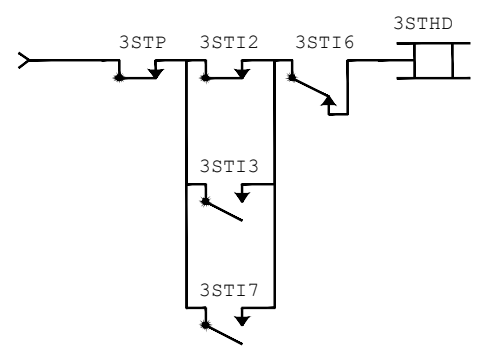
EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
CUT SECTION 1011+40. SIGNAL CASE SC1011  
VITAL LOGIC (1 OF 3)

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

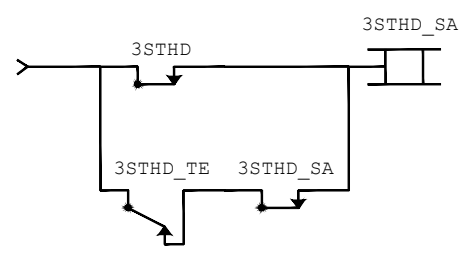
SHEET OF  
DRAWING NO. JL325  
REVISION B



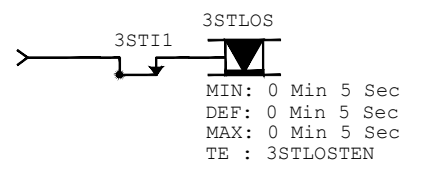
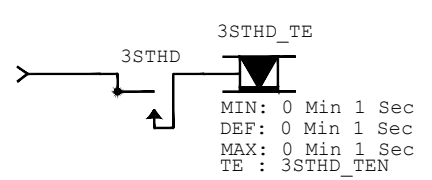
SB FOLLOW STICK



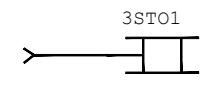
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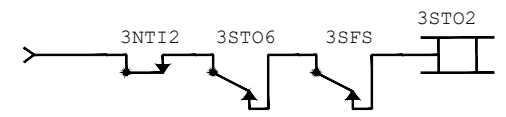
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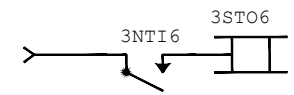
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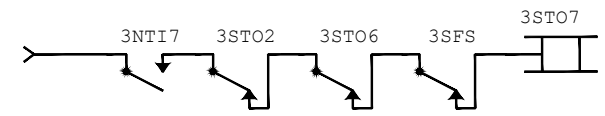
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3ST CODE 2 OUT



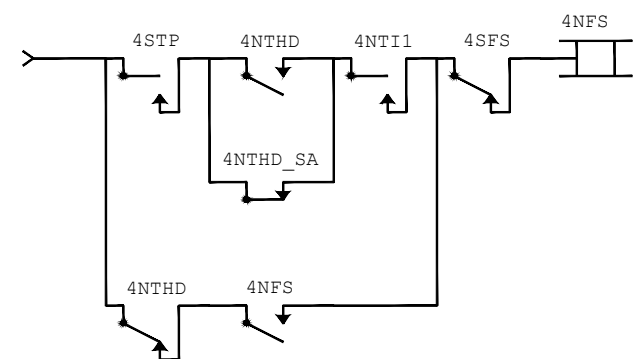
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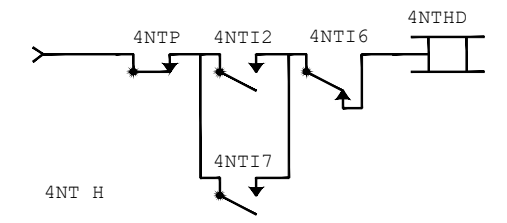
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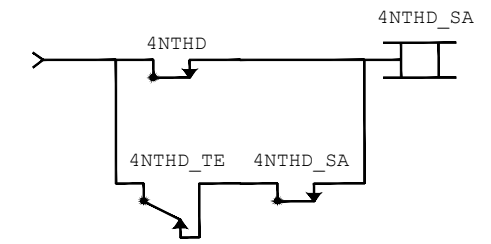
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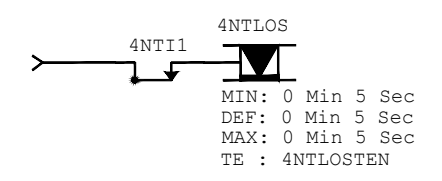
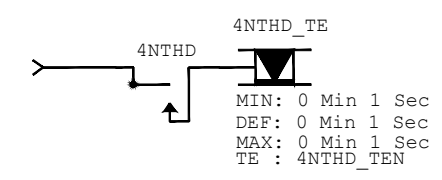
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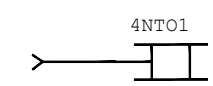
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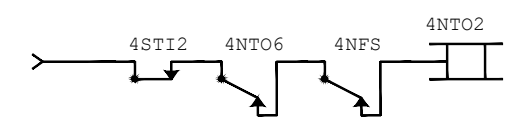
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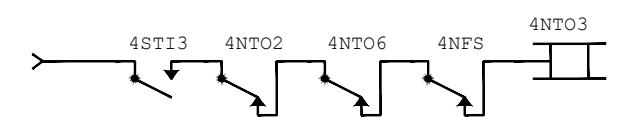
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3NT CODE 1 OUT



4NT CODE 2 OUT



4NT CODE 3 OUT

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NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
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A	06/18	35% SUBMITTAL SET



SUBMITTED		<b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
DESIGNED	M.BAKHIN	CHECKED	V.FAINGOLD
DRAWN	M.BAKHIN	CADD FILE NAME	801JL326.dwg

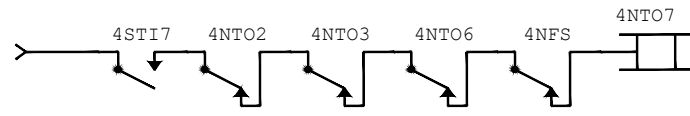


APPROVED		<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
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SUBMITTAL DATE	06/29/20	BOARD APPROVAL DATE	

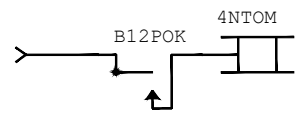
EASTRIDGE TO BART REGIONAL CONNECTOR			SHEET
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT			OF
LRT SIGNAL SYSTEMS			DRAWING NO.
CUT SECTION 1011+40. SIGNAL CASE SC1011			JL326
VITAL LOGIC (2 OF 3)			REVISION
			A
PCA NO.	CONTRACT NO.	FILE LOCATION	
000	C801	PROJECTWISE	



4NT CODE 6 OUT



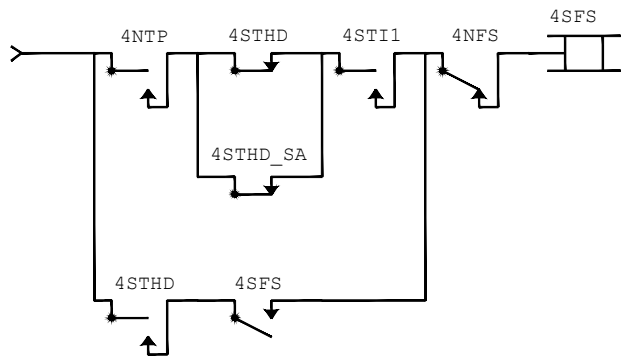
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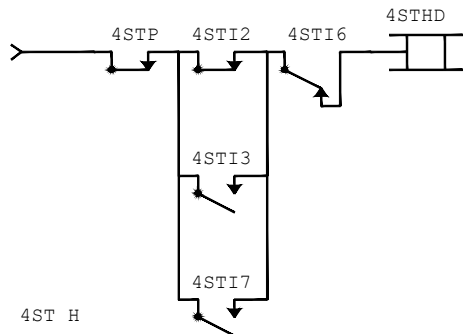
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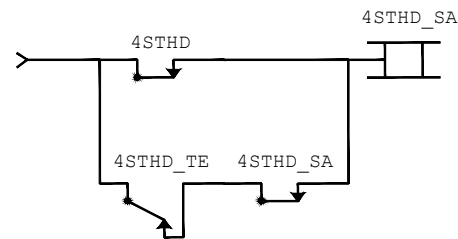
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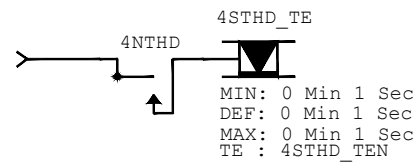
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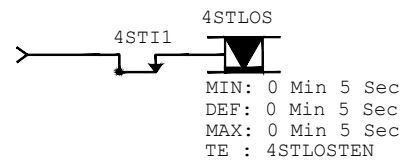
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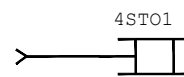
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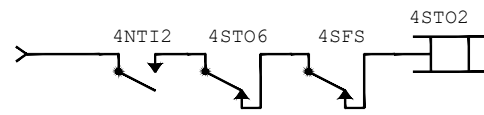
4ST LOS TIMER



4ST LOS REPEATER (C136BT)



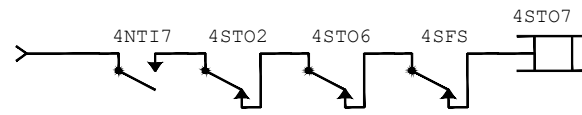
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4ST CODE 2 OUT



3ST CODE 6 OUT



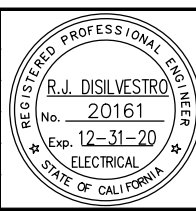
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4ST LOS REPEATER (C136BT)

Jun 22, 2020 - 11:55am C:\cadd\p\work\west\0139440\01.L325-327-SC101L\_V.dwg

NO.	DATE	REVISIONS
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A	06/18	35% SUBMITTAL SET



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 Engineers Architects Planners  
 1732 North First Street, Suite 400 San Jose, CA 95112  
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 CHECKED: V.FAINGOLD  
 DRAWN: M.BAKHIN  
 CADD FILE NAME: 801JL327.dwg



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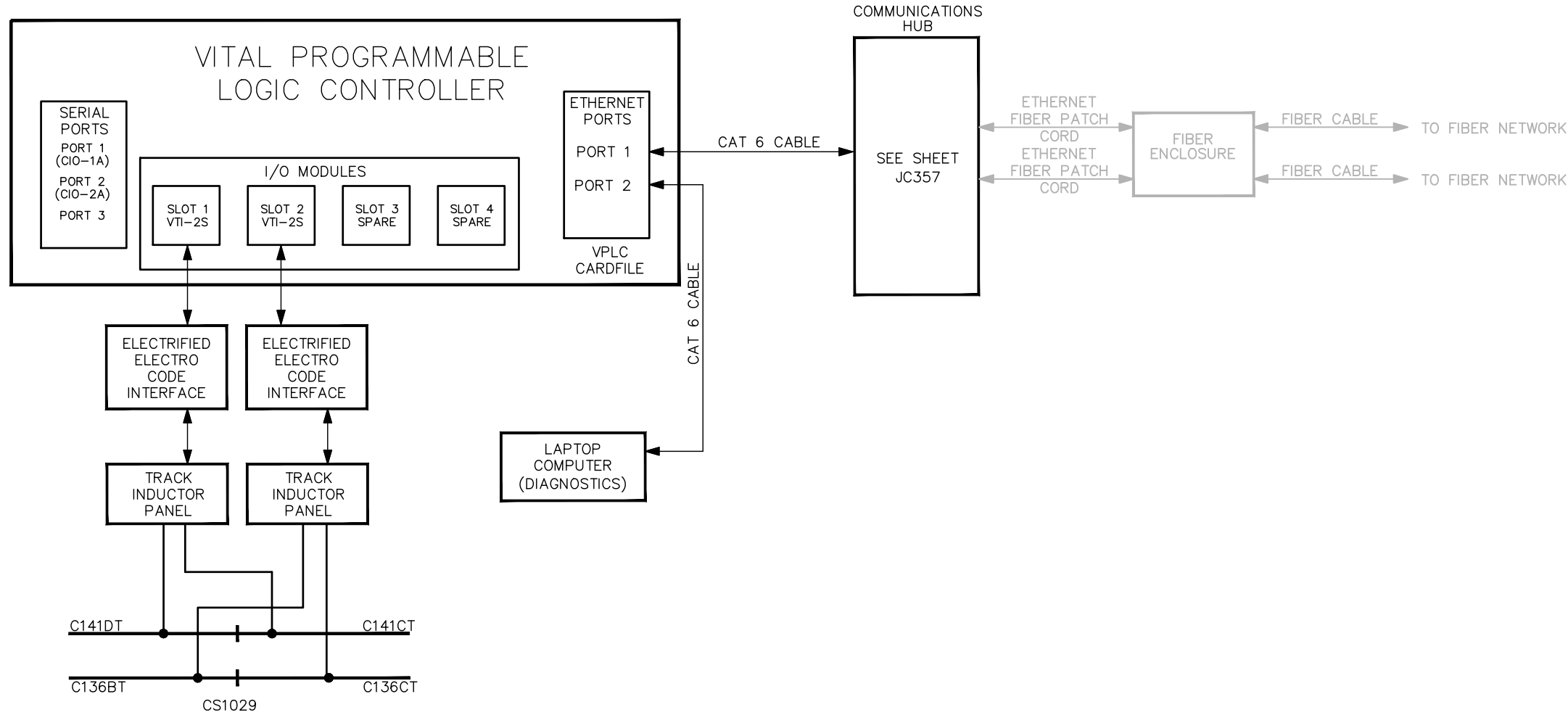
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 SUBMITTAL DATE: 06/29/20  
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 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 LRT SIGNAL SYSTEMS  
 CUT SECTION 1011+40. SIGNAL CASE SC1011  
 VITAL LOGIC (3 OF 3)

SHEET OF [ ]  
 DRAWING NO. JL327  
 REVISION B

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

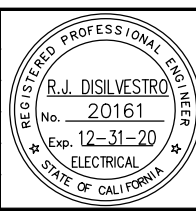




VTI-2S – VITAL TRACK INTERFACE  
 VIO-86S – VITAL INPUT/OUTPUT MODULE  
 VLD-R16S – VITAL LAMP DRIVER MODULE

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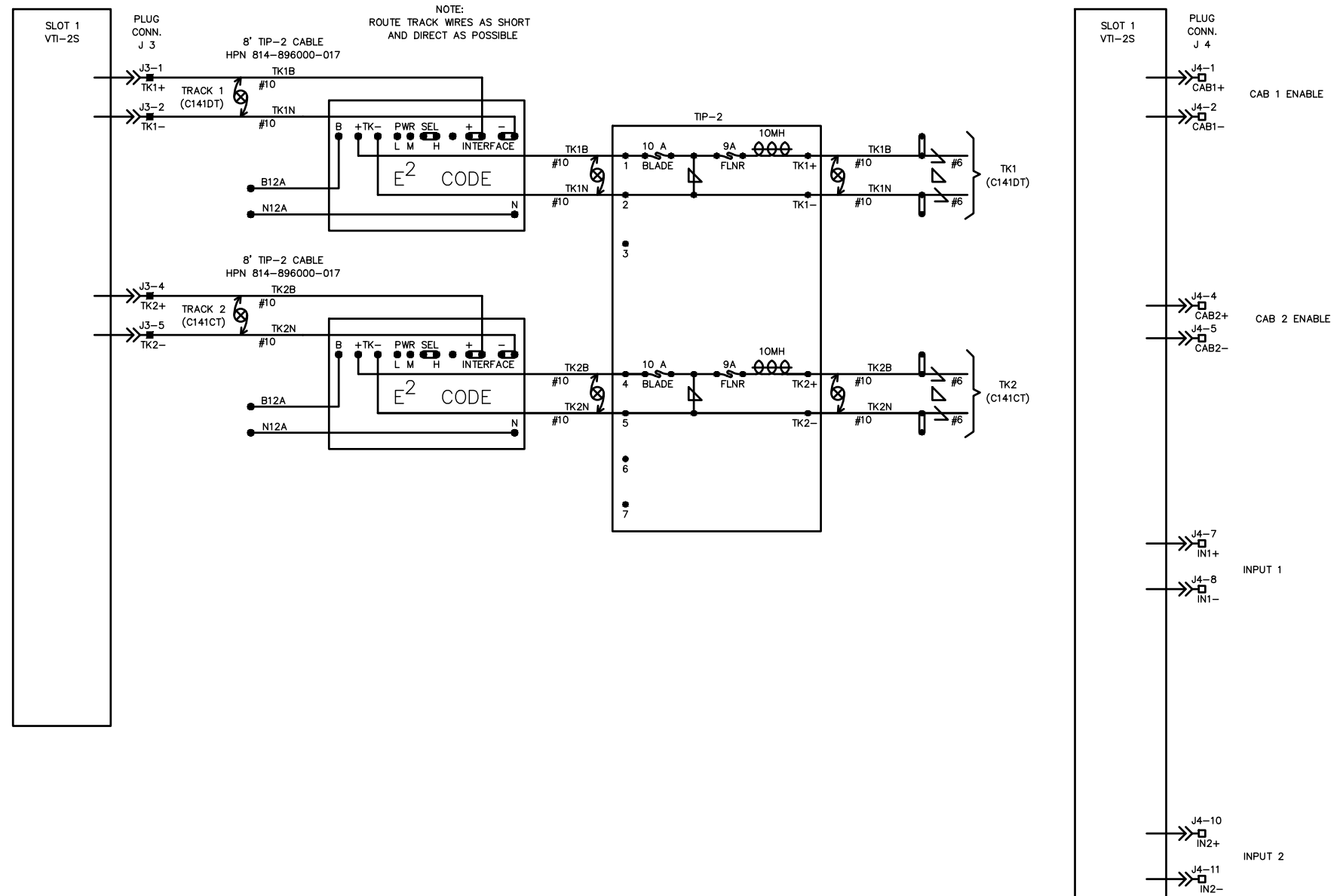


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DRAWN	CADD FILE NAME
M.BAKHIN	801JC351.dwg

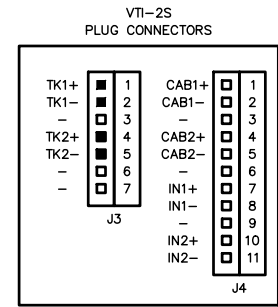
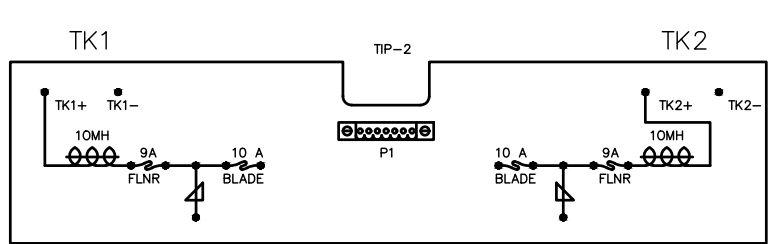


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<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	SCALE
03/11/19	NTS
SUBMITTAL DATE	BOARD APPROVAL DATE
06/29/20	

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS CUT SECTION 1028+90. SIGNAL CASE SC1029 SYSTEM BLOCK DIAGRAM			SHEET OF
			DRAWING NO. JC351
			REVISION A
PCA NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE	



NOTE:  
ROUTE TRACK WIRES AS SHORT  
AND DIRECT AS POSSIBLE



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DRAWN: M.BAKHIN  
CADD FILE NAME: 801JC352.dwg

Santa Clara Valley  
**Transportation Authority**

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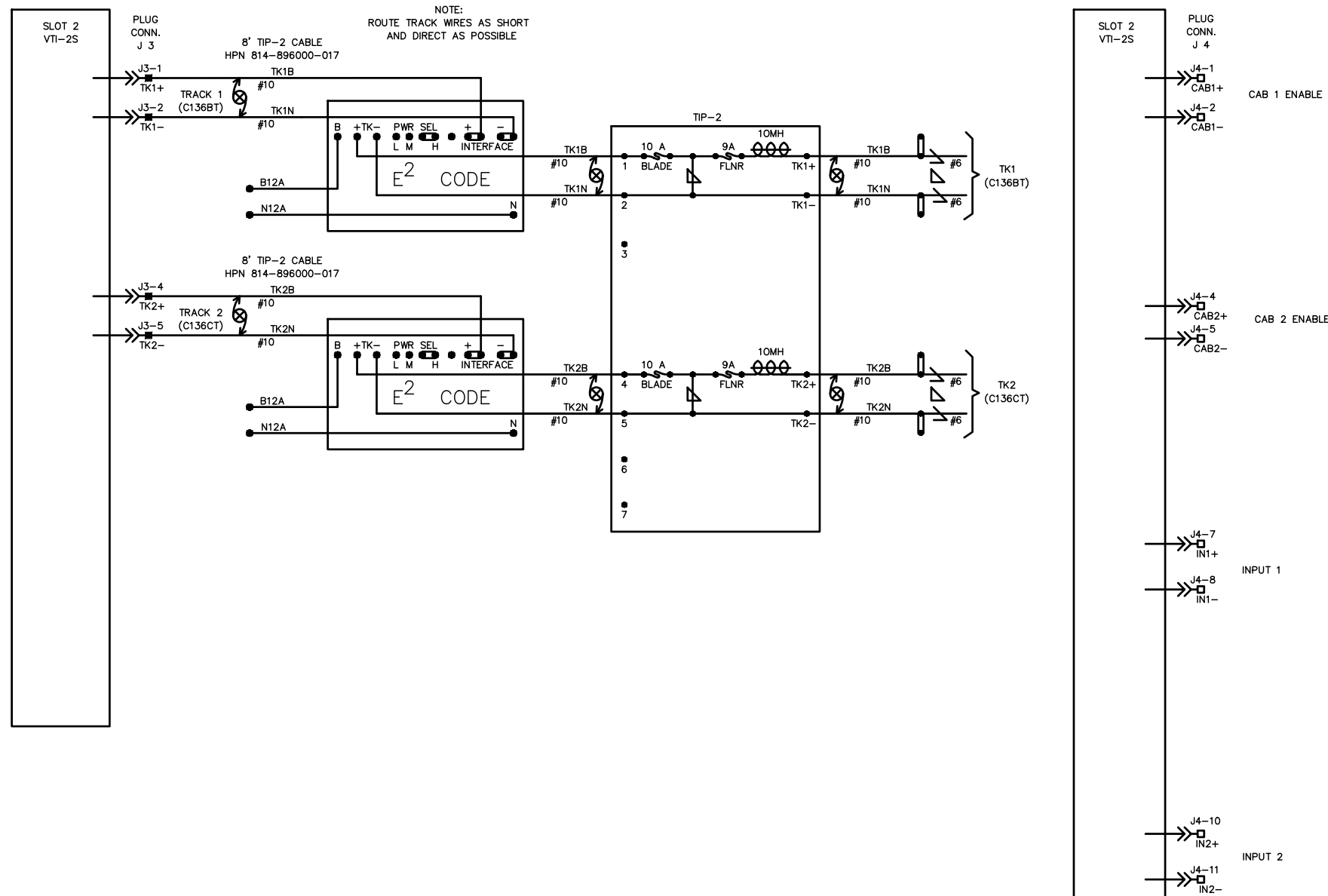
**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/11/19  
SUBMITTAL DATE: 06/29/20  
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BOARD APPROVAL DATE:

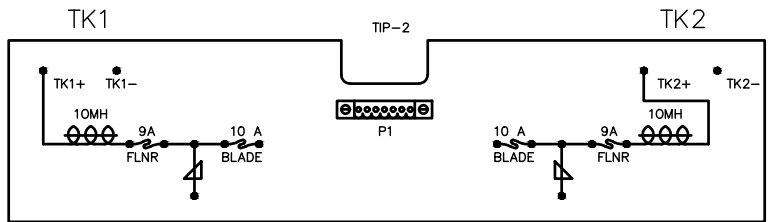
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CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
CUT SECTION 1028+90. SIGNAL CASE SC1029  
CODED TRACK CIRCUITS (1 OF 2)

PCA NO. 000  
CONTRACT NO. C801  
FILE LOCATION PROJECTWISE

SHEET OF  
DRAWING NO. JC352  
REVISION A



NOTE:  
ROUTE TRACK WIRES AS SHORT  
AND DIRECT AS POSSIBLE



VTI-2S  
PLUG CONNECTORS

TK1+	1	CAB1+	1
TK1-	2	CAB1-	2
-	3	-	3
TK2+	4	CAB2+	4
TK2-	5	CAB2-	5
-	6	-	6
-	7	IN1+	7
-	-	IN1-	8
-	-	-	9
-	-	IN2+	10
-	-	IN2-	11

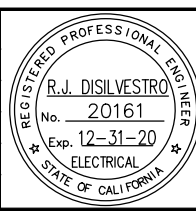
J3

J4

■ = WIRE PRESENT  
- = NOT USED

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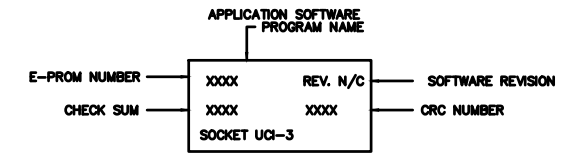
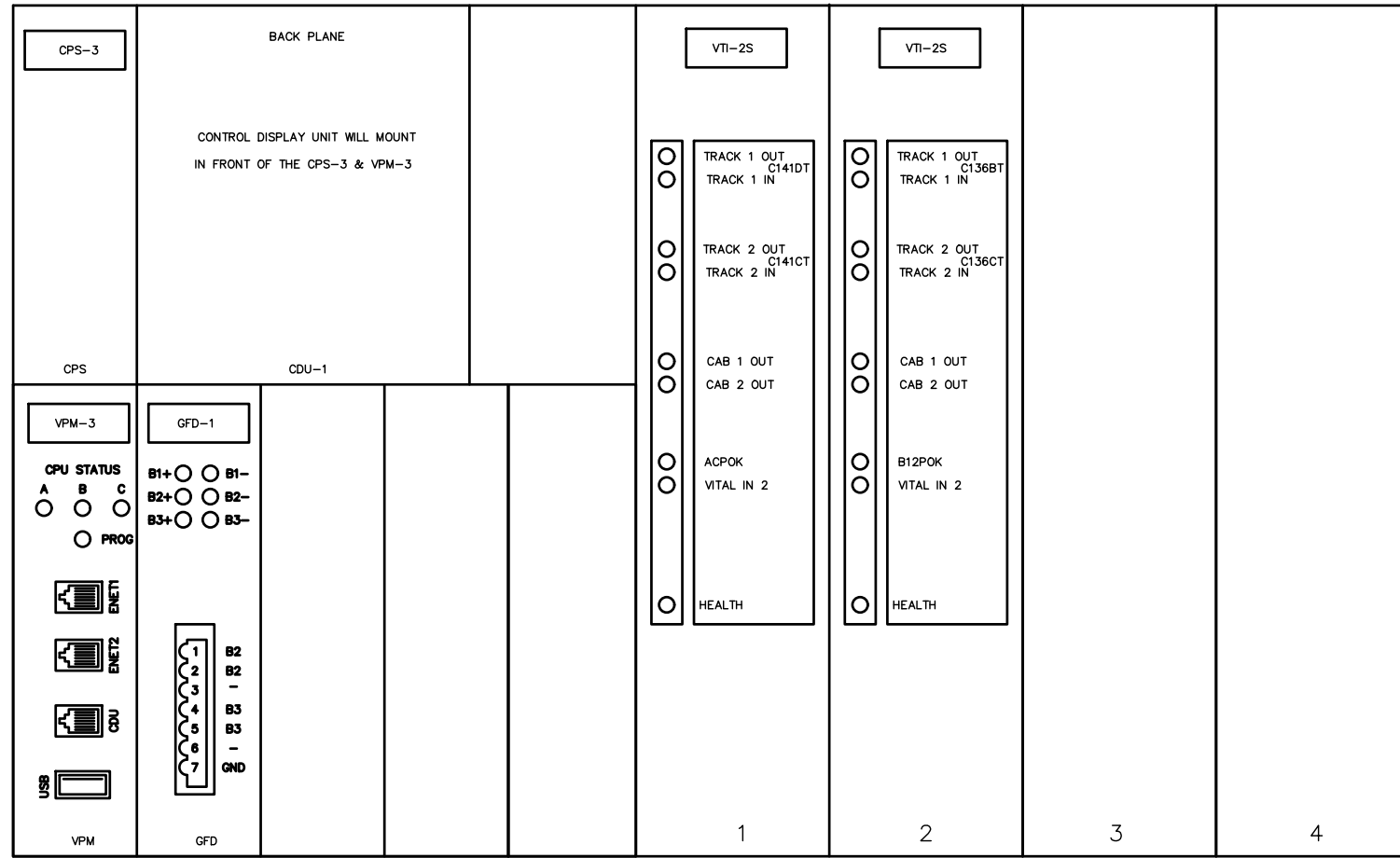
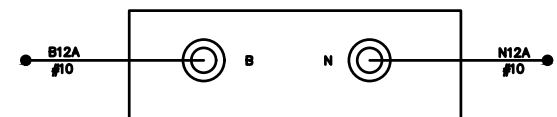
**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/11/19  
SUBMITTAL DATE: 06/29/20  
SCALE: NTS  
BOARD APPROVAL DATE:

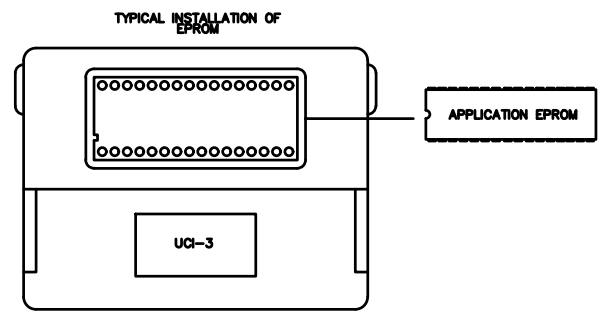
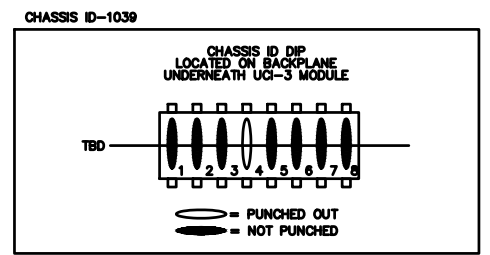
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CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
CUT SECTION 1028+90. SIGNAL CASE SC1029  
CODED TRACK CIRCUITS (2 OF 2)

PCA NO. 000  
CONTRACT NO. C801  
FILE LOCATION PROJECTWISE

SHEET OF  
DRAWING NO. JC353  
REVISION A



EPROM LABEL

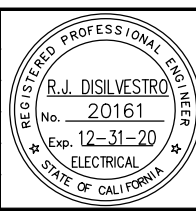


MODULE LEGEND

- CDU-1 = CONTROL DISPLAY UNIT
- CPS-3 = CENTRAL POWER SUPPLY
- VPM-3 = VITAL PERIPHERAL MASTER
- GFD-1 = GROUND FAULT DETECTOR
- CIO-1A = COMMUNICATION INPUT/OUTPUT
- CIO-2A = COMMUNICATION INPUT/OUTPUT
- CIO-MDA = COMMUNICATION INPUT/OUTPUT
- UCI-3 = CHASSIS INFORMATION
- VTI-2S = VITAL TRACK INTERFACE
- VLD-R16S = VITAL LAMP DRIVER
- VO-86S = VITAL INPUTS/OUTPUTS

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DESIGNED: M.BAKHIN  
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DRAWN: M.BAKHIN  
CADD FILE NAME: 801JC354.dwg

**Santa Clara Valley Transportation Authority**

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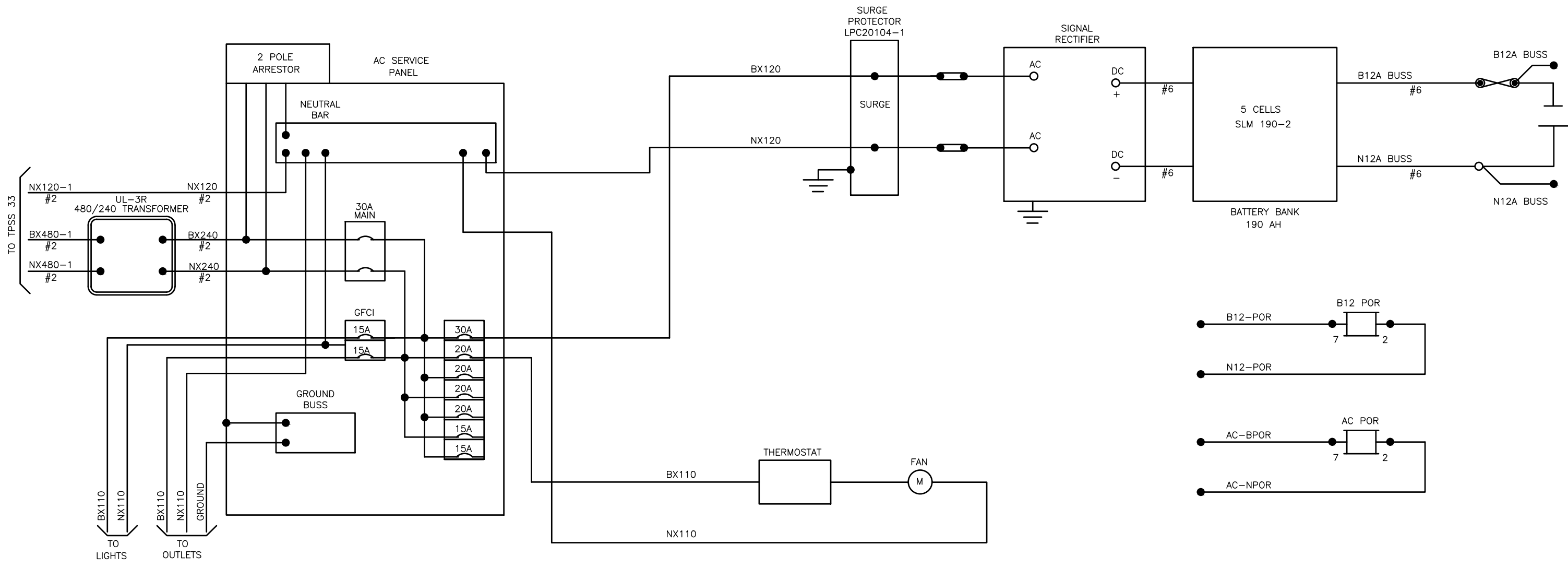
**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/11/19  
SUBMITTAL DATE: 06/29/20  
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BOARD APPROVAL DATE:

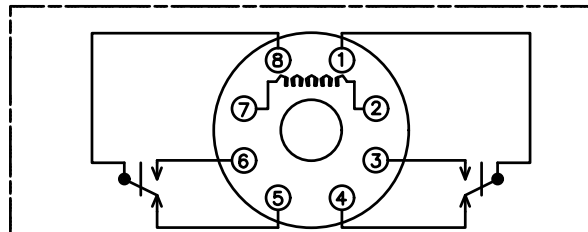
EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
CUT SECTION 1028+90. SIGNAL CASE SC1029  
MICROPROCESSOR MODULE CONFIGURATION

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

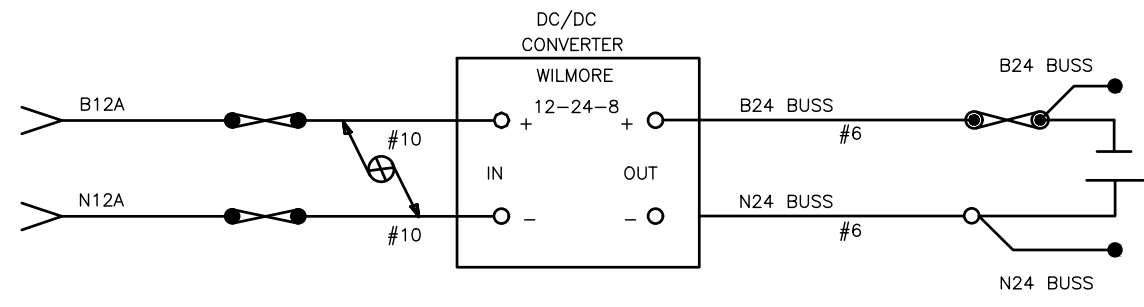
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**NOTE:**  
 1. WIRE TO BE #10 UNLESS DENOTED OTHERWISE.

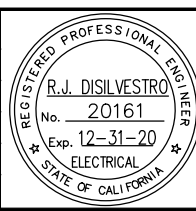


1. RELAY KRPA11DN12 TO BE USED FOR B12 POR RELAY
  2. RELAY KRPA11AN240 TO BE USED FOR AC POR RELAY
  3. RELAY KRPA11DN110 TO BE USED FOR B110 POR RELAY
- CONTACT CONFIGURATION  
 POTTER & BRUMFIELD  
 KRPA11 SERIES



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NO.	DATE	REVISIONS
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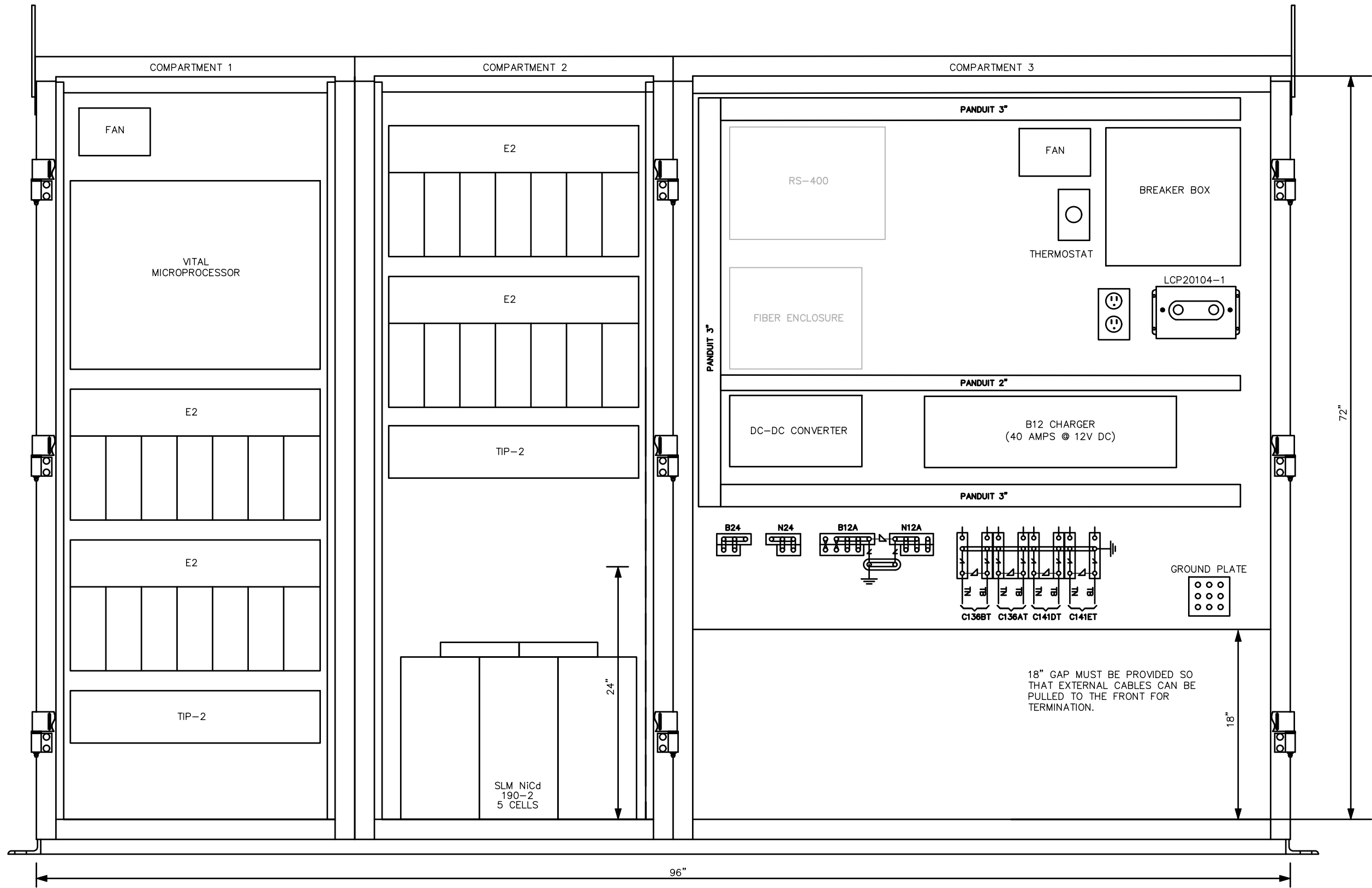
SUBMITTED	
<b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
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M.BAKHIN	V.FAINGOLD
DRAWN	CADD FILE NAME
M.BAKHIN	801JC355.dwg



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CADD FILE DATE	SCALE
03/11/19	NTS
SUBMITTAL DATE	BOARD APPROVAL DATE
06/29/20	

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS CUT SECTION 1028+90. SIGNAL CASE SC1029 POWER DISTRIBUTION		
PCA NO.	CONTRACT NO.	FILE LOCATION
000	C801	PROJECTWISE

SHEET	OF
DRAWING NO.	JC355
REVISION	A



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 DRAWN: M.BAKHIN  
 CADD FILE NAME: 801JC356.dwg



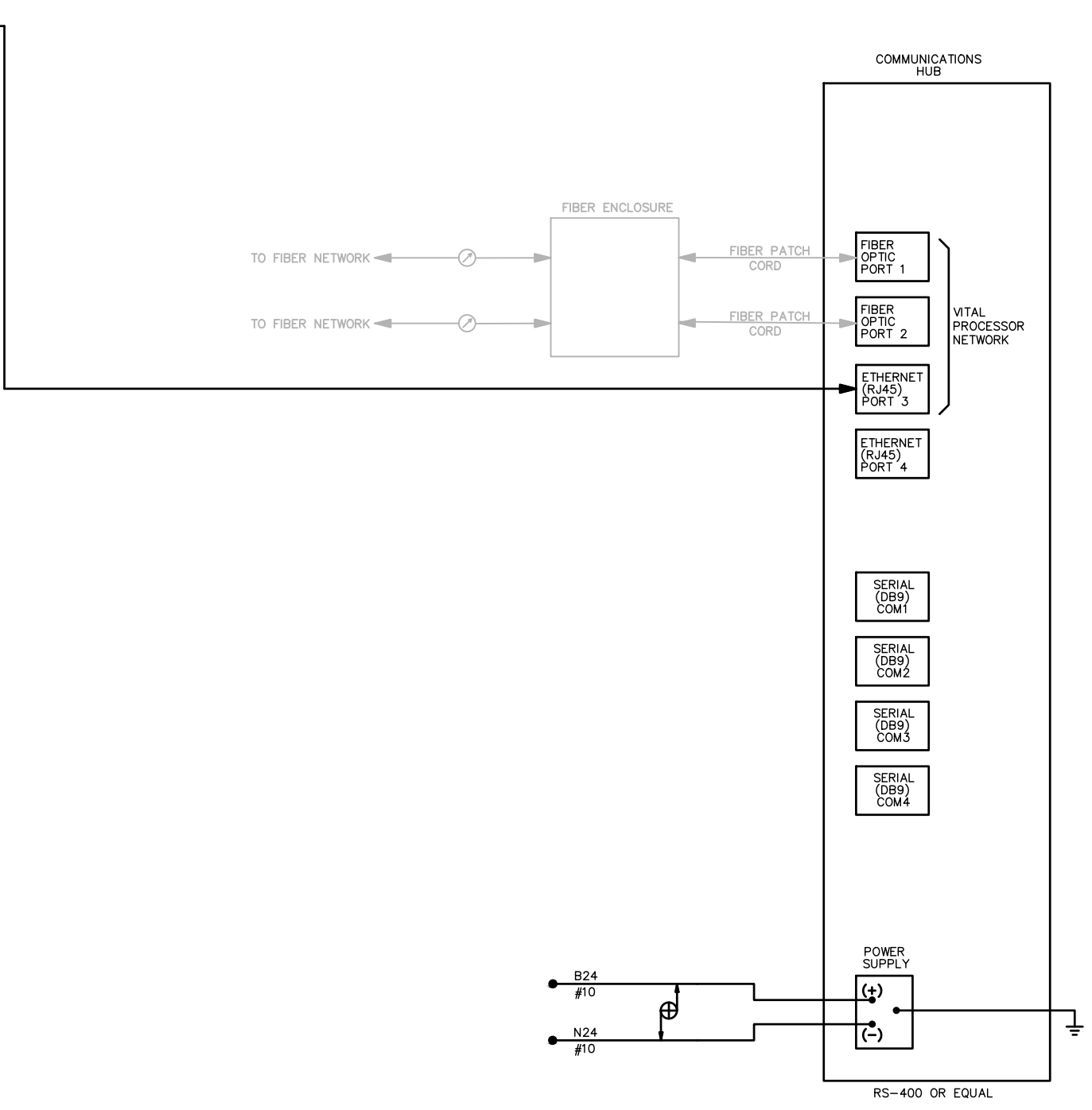
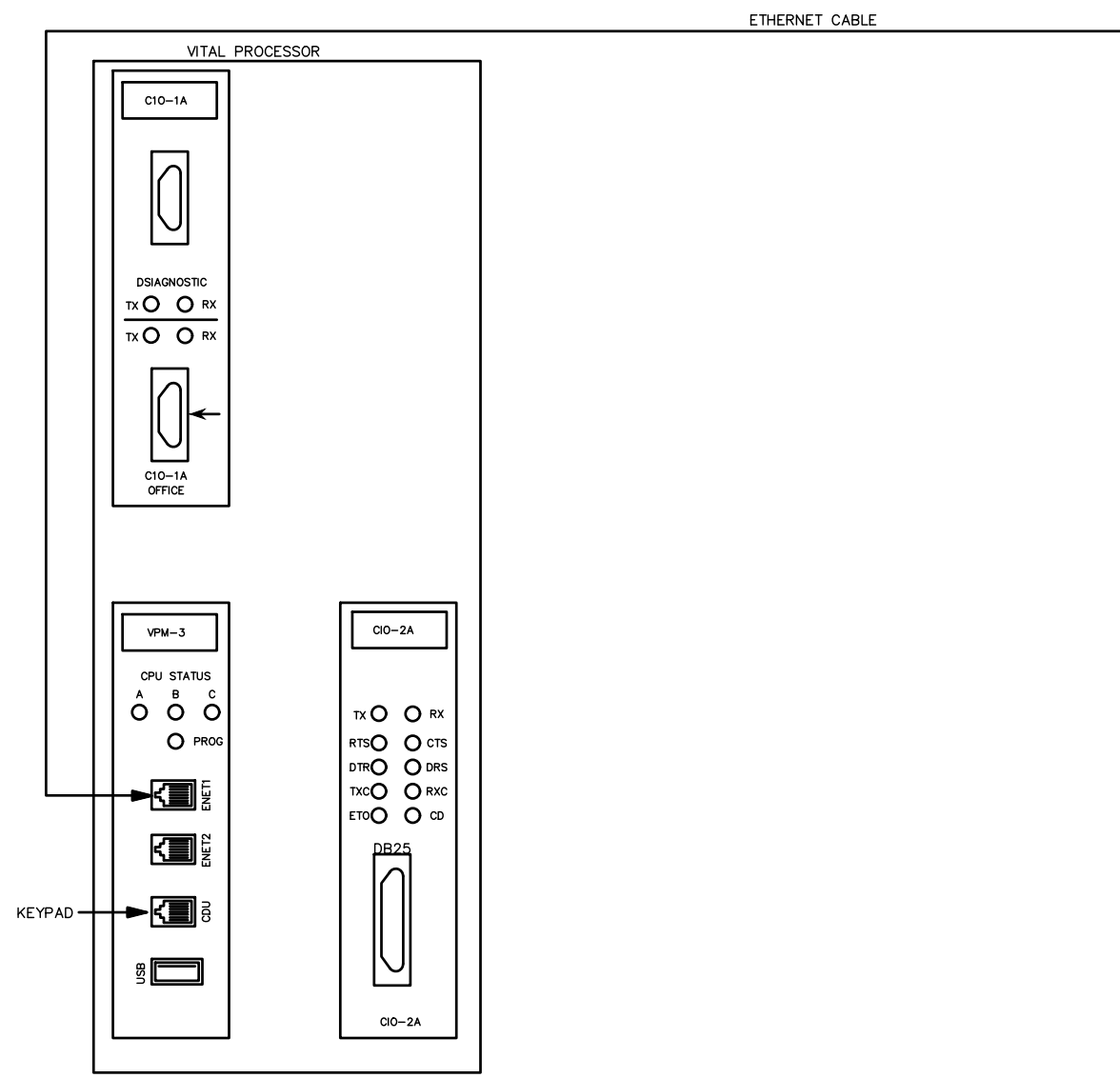
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CADD FILE DATE: 03/11/19  
 SUBMITTAL DATE: 06/29/20  
 SCALE: NTS  
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EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 LRT SIGNAL SYSTEMS  
 CUT SECTION 1028+90. SIGNAL CASE SC1029  
 SIGNAL CASE - EQUIPMENT LAYOUT

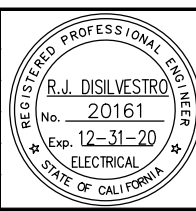
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PCA NO.: 000  
 CONTRACT NO.: C801  
 FILE LOCATION: PROJECTWISE



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EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 LRT SIGNAL SYSTEMS  
 CUT SECTION 1028+90. SIGNAL CASE SC1029  
 COMMUNICATION SYSTEM DIAGRAM

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

SHEET OF DRAWING NO. JC357 REVISION A

CS 1029 ELOGIXS I/O CHART

VTI2S: IO SLOT 1

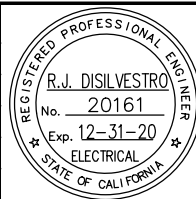
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RX STATUSES		TX STATUSES		RX STATUSES		TX STATUSES	
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CODE 1	3NTI1	CODE 2	3NT02	CODE 1	3STI1	CODE 2	3ST02
CODE 2	3NTI2	CODE 3	3NT03	CODE 2	3STI2	CODE 3	
CODE 3		CODE 4		CODE 3	3STI3	CODE 4	
CODE 4		CODE 5		CODE 4		CODE 5	
CODE 5		CODE 6	3NT06	CODE 5		CODE 6	3ST06
CODE 6	3NTI6	CODE 7	3NT07	CODE 6	3STI6	CODE 7	3ST07
CODE 7	3NTI7	CODE 8		CODE 7	3STI7	CODE 8	
CODE 8		CODE M		CODE 8		CODE M	
CODE M				CODE M			

VTI2S: IO SLOT 2

TRACK 1				TRACK 2			
RX STATUSES		TX STATUSES		RX STATUSES		TX STATUSES	
QUICK SHUNT CODE 1		CODE 1	4NT01	QUICK SHUNT CODE 1		CODE 1	4ST01
CODE 1	4NTI1	CODE 2	4NT02	CODE 1	4STI1	CODE 2	4ST02
CODE 2	4NTI2	CODE 3	4NT03	CODE 2	4STI2	CODE 3	
CODE 3		CODE 4		CODE 3	4STI3	CODE 4	
CODE 4		CODE 5		CODE 4		CODE 5	
CODE 5		CODE 6	4NT06	CODE 5		CODE 6	4ST06
CODE 6	4NTI6	CODE 7	4NT07	CODE 6	4STI6	CODE 7	4ST07
CODE 7	4NTI7	CODE 8		CODE 7	4STI7	CODE 8	
CODE 8		CODE M		CODE 8		CODE M	
CODE M				CODE M			

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DRAWN: J. VIRAG  
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EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
CUT SECTION 1028+90. SIGNAL CASE SC1029  
ELECTROLOGIXS I/O SLOTS 1-2

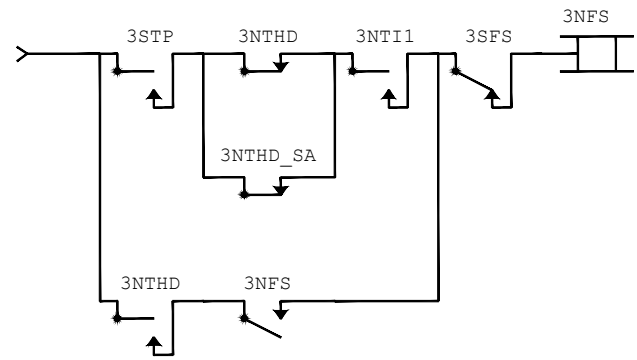
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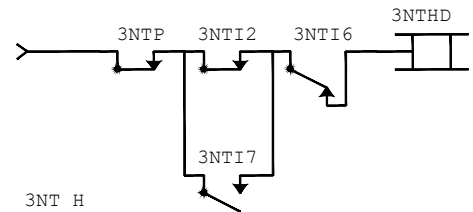


SIGNAL CASE SC1029  
VITAL LOGIC  
EQUATION INDEX

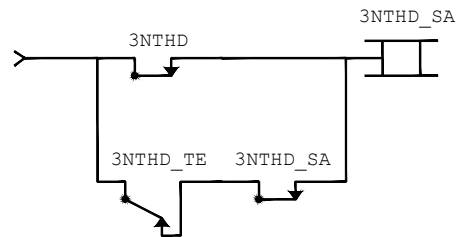
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3SFS	1
3STHD	2
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3STLOS	2
3STO1	2
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3STO6	2
3STO7	2
3STP	2
4NFS	2
4NTHD	2
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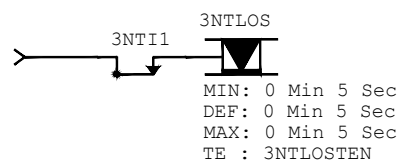
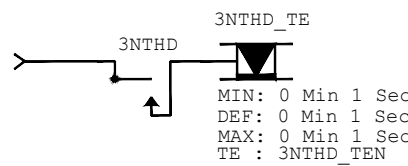
NB FOLLOW STICK



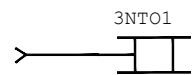
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SLOW ACTING 3NTHD REPEATER (1 SECOND SLOW RELEASE)



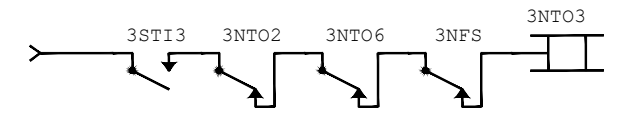
3NT LOS TIMER



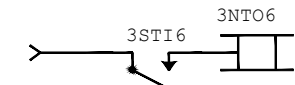
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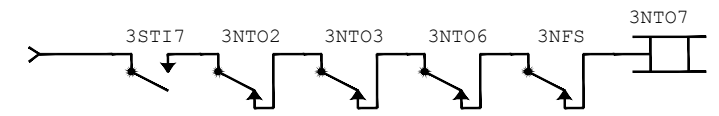
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3NT CODE 3 OUT



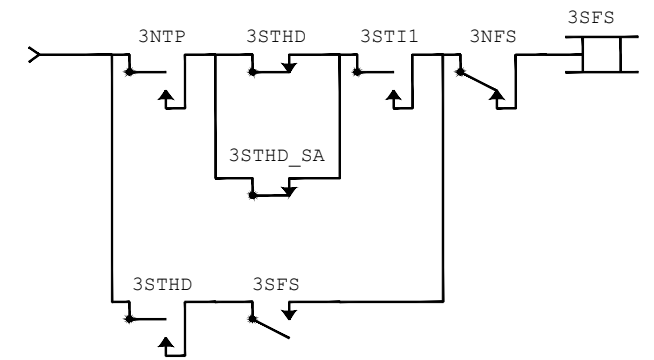
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3NT CODE 7 OUT



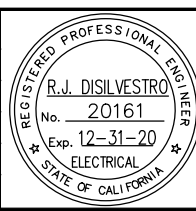
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SB FOLLOW STICK

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A	06/18	35% SUBMITTAL SET



DESIGNED: M.BAKHIN  
CHECKED: V.FAINGOLD  
DRAWN: M.BAKHIN  
CADD FILE NAME: 801JL351.dwg

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Engineers Architects Planners  
1732 North First Street, Suite 400  
San Jose, CA 95112  
Tel (408) 451-7300  
Fax (408) 451-6942

**Santa Clara Valley Transportation Authority**

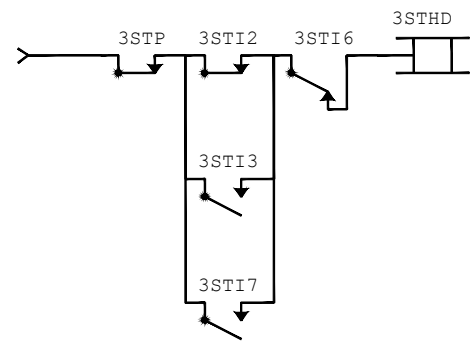
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ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/11/19  
SUBMITTAL DATE: 06/29/20  
SCALE: NTS  
BOARD APPROVAL DATE:

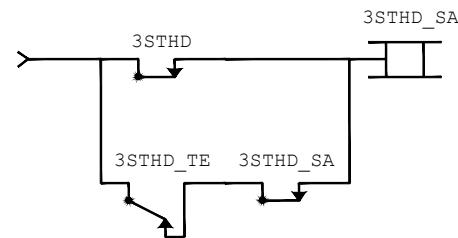
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CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
CUT SECTION 1028+90. SIGNAL CASE SC1029  
VITAL LOGIC (1 OF 3)

PCA NO. 000  
CONTRACT NO. C801  
FILE LOCATION: PROJECTWISE

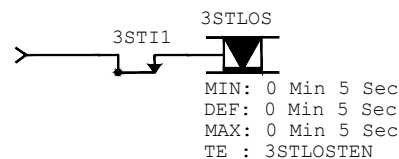
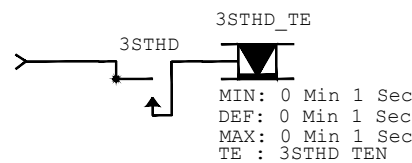
SHEET OF  
DRAWING NO. JL351  
REVISION B



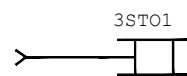
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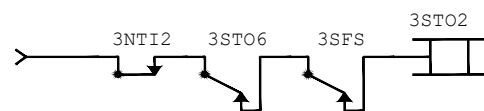
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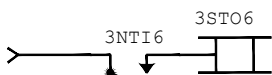
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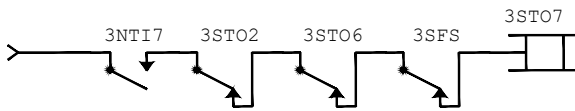
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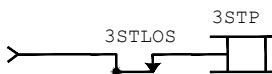
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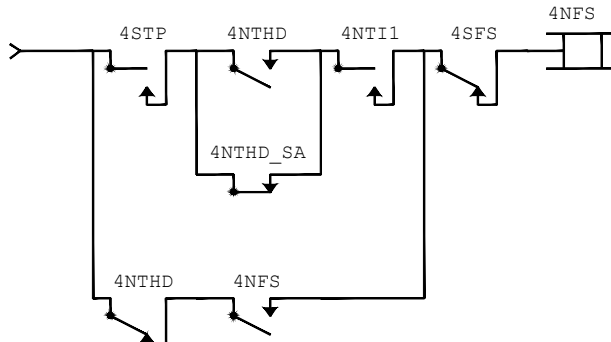
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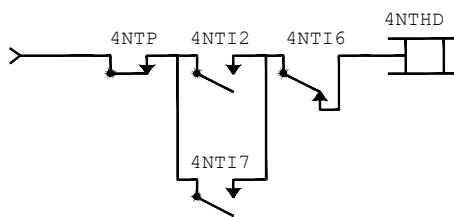
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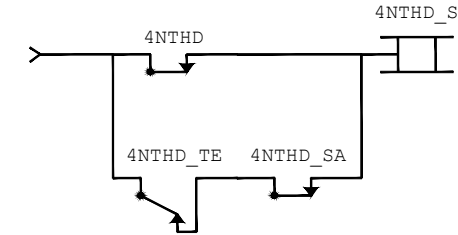
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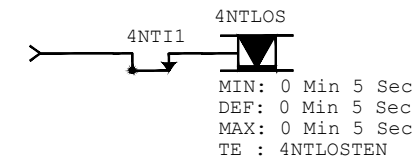
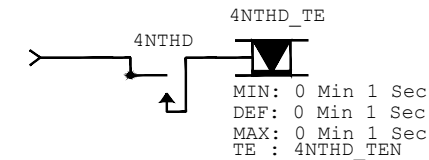
NB FOLLOW STICK



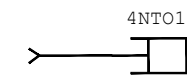
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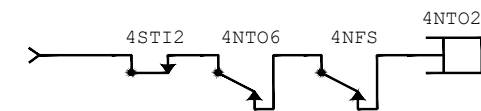
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4NT LOS TIMER



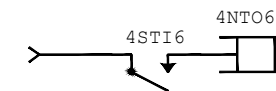
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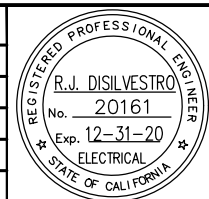
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4NT CODE 6 OUT

Jun 22, 2020 - 11:55am C:\cadd\p\work\west\0139440\001\351-353\_SCI029\_V.dwg

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B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET

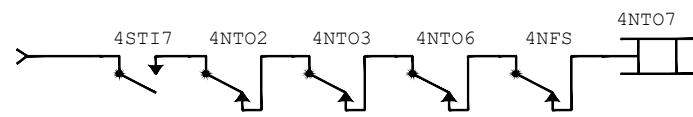


SUBMITTED		<b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
DESIGNED	M.BAKHIN	CHECKED	V.FAINGOLD
DRAWN	M.BAKHIN	CADD FILE NAME	801JL352.dwg



APPROVED		<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	03/11/19	SCALE	NTS
SUBMITTAL DATE	06/29/20	BOARD APPROVAL DATE	

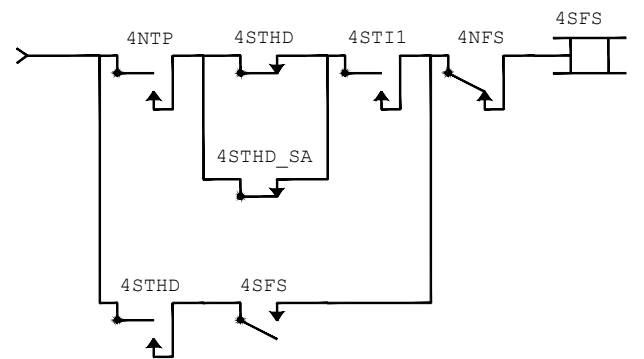
EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS CUT SECTION 1028+90. SIGNAL CASE SC1029 VITAL LOGIC (2 OF 3)			SHEET OF
			DRAWING NO. JL352
			REVISION A
PCA NO.	CONTRACT NO.	FILE LOCATION	
000	C801	PROJECTWISE	



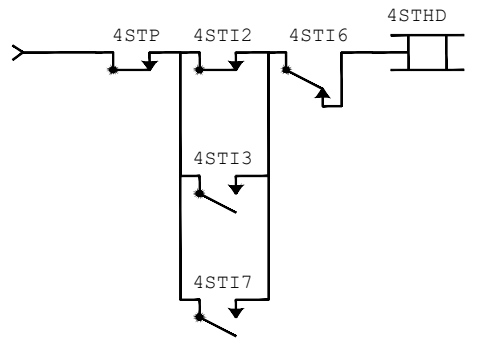
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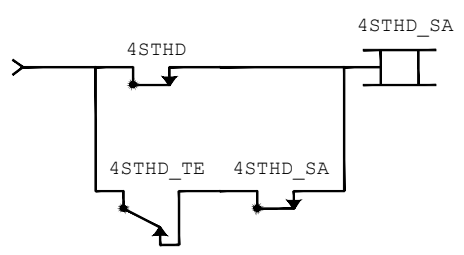
4NT LOS REPEATER (C136BT)



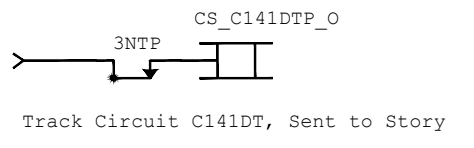
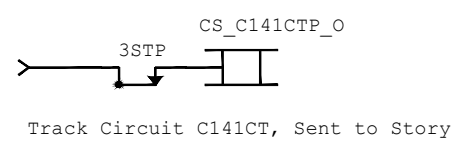
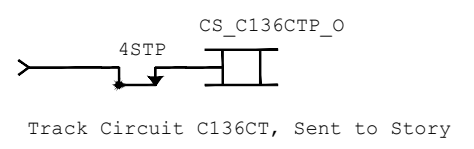
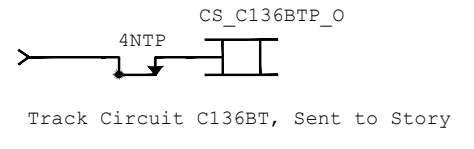
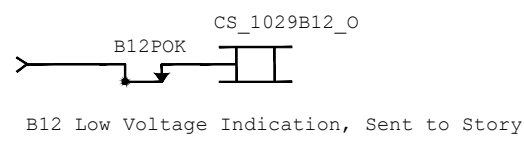
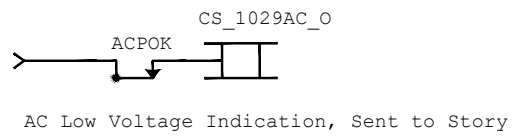
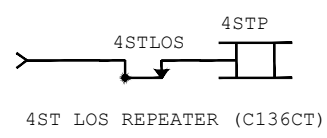
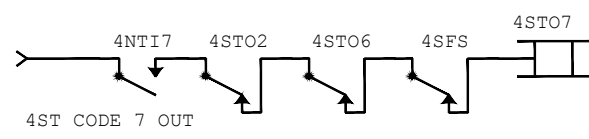
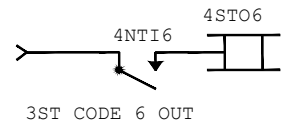
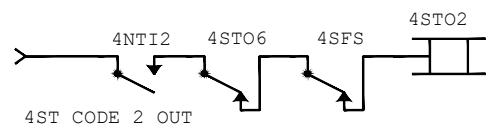
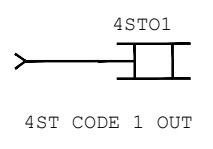
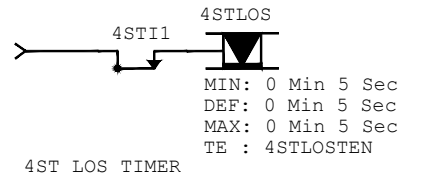
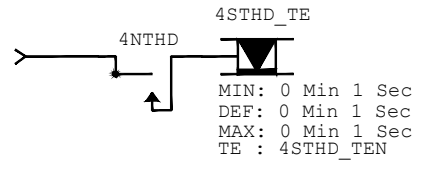
SB FOLLOW STICK



4ST H



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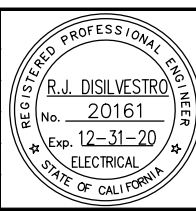


REMOTE OUTPUTS  
SENT TO STORY

- CS\_1029AC\_O
- CS\_1029B12\_O
- CS\_C141CTP\_O
- CS\_C136CTP\_O
- CS\_C141DTP\_O
- CS\_C136BTP\_O

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NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



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1732 North First Street, Suite 400 San Jose, CA 95112  
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DESIGNED: M.BAKHIN  
CHECKED: V.FAINGOLD  
DRAWN: M.BAKHIN  
CADD FILE NAME: 801JL353.dwg

Santa Clara Valley  
**Transportation Authority**

APPROVED

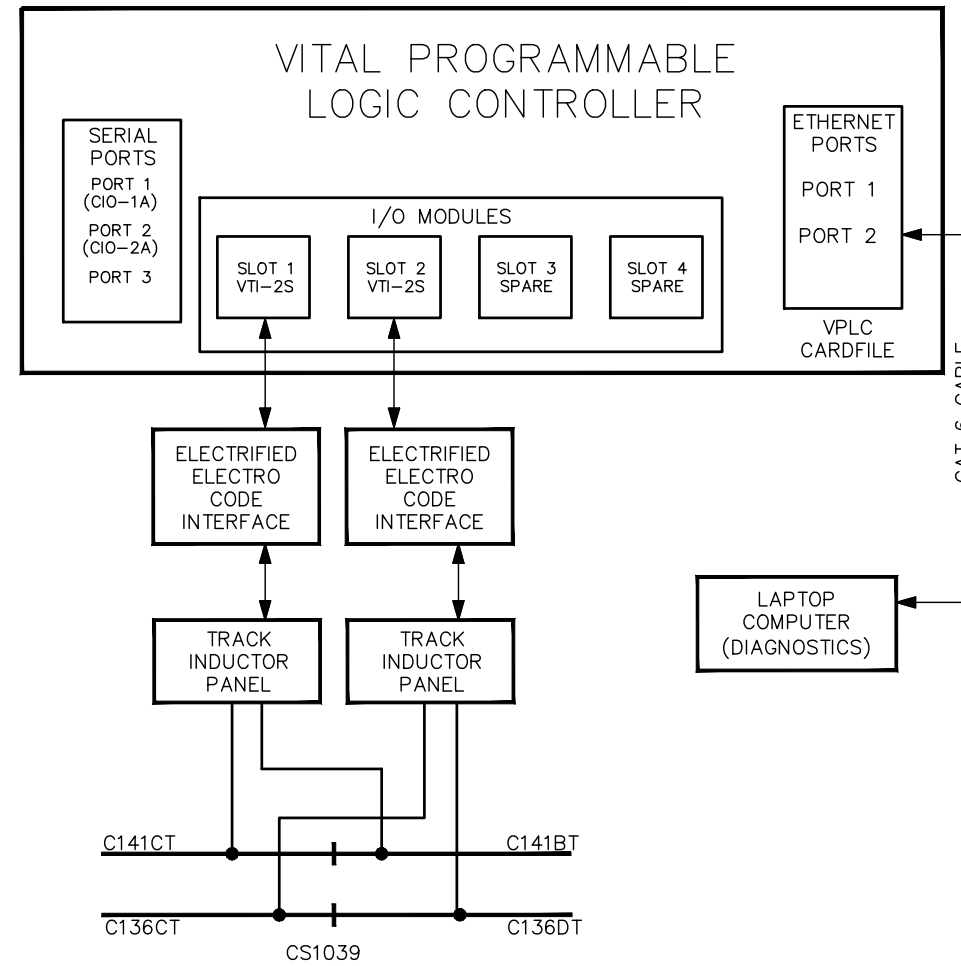
**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/11/19  
SUBMITTAL DATE: 06/29/20  
SCALE: NTS  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
CUT SECTION 1028+90. SIGNAL CASE SC1029  
VITAL LOGIC (3 OF 3)

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

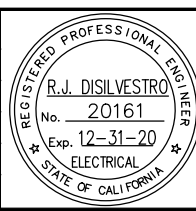
SHEET OF DRAWING NO. JL353 REVISION B



VTI-2S – VITAL TRACK INTERFACE  
 VIO-86S – VITAL INPUT/OUTPUT MODULE  
 VLD-R16S – VITAL LAMP DRIVER MODULE

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NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



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DESIGNED: M.BAKHIN CHECKED: V.FAINGOLD  
 DRAWN: M.BAKHIN CADD FILE NAME: 801JC375.dwg

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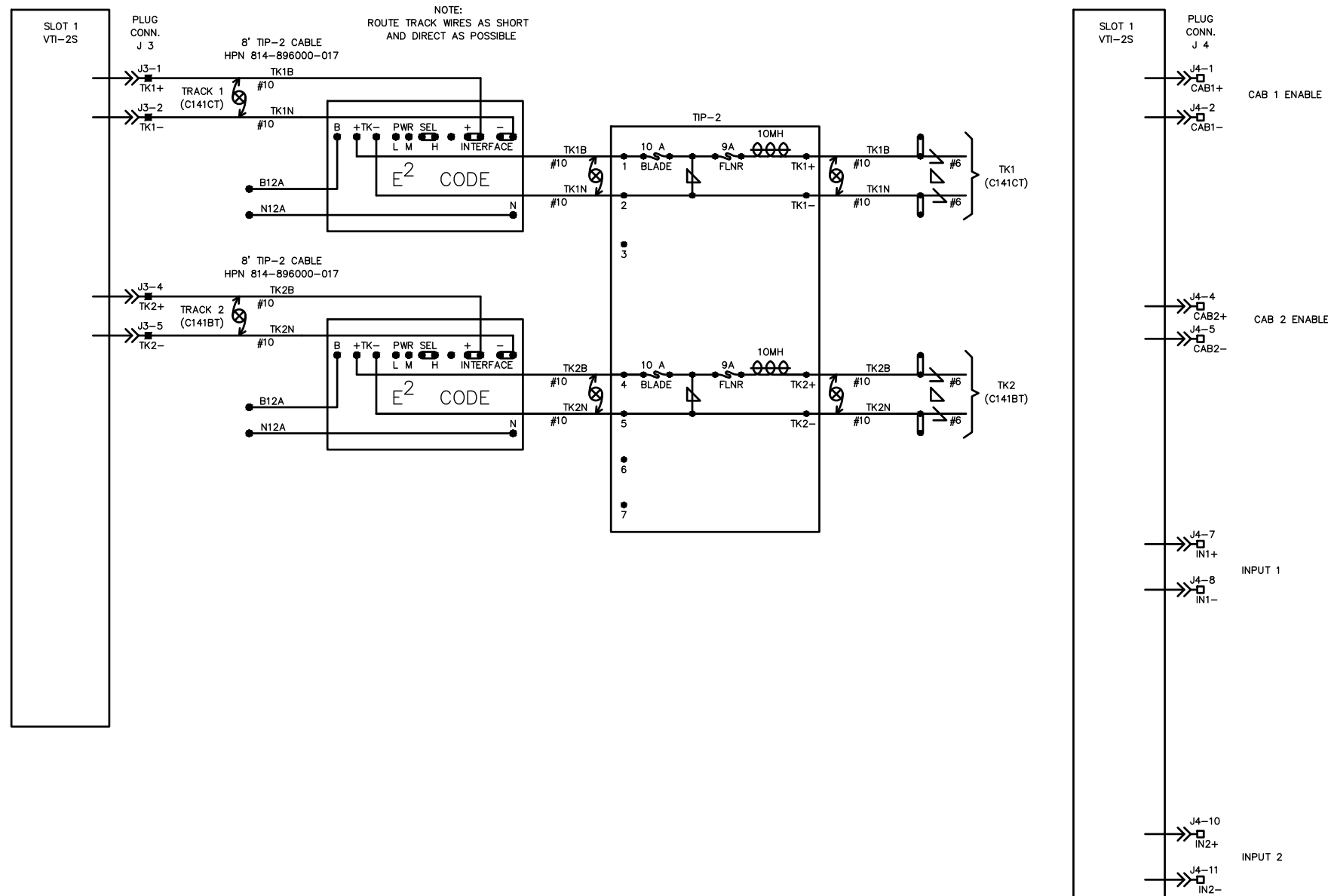
**BKF** 100+ YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/11/19 SCALE: NTS  
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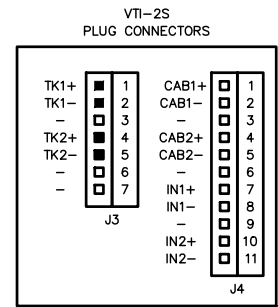
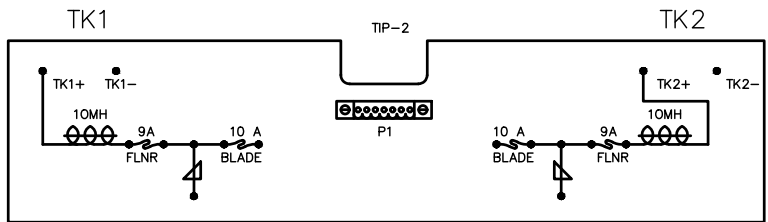
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 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 LRT SIGNAL SYSTEMS  
 CUT SECTION 1038+90. SIGNAL CASE SC1039  
 SYSTEM BLOCK DIAGRAM

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

SHEET OF DRAWING NO. JC375 REVISION A



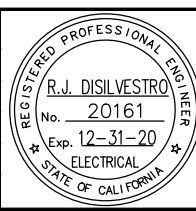
NOTE:  
ROUTE TRACK WIRES AS SHORT  
AND DIRECT AS POSSIBLE



■ = WIRE PRESENT  
-- = NOT USED

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NO.	DATE	REVISIONS
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A	03/19	65% SUBMITTAL SET



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DESIGNED: M.BAKHIN  
CHECKED: V.FAINGOLD  
DRAWN: M.BAKHIN  
CADD FILE NAME: 801JC376.dwg

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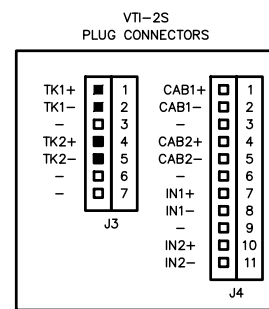
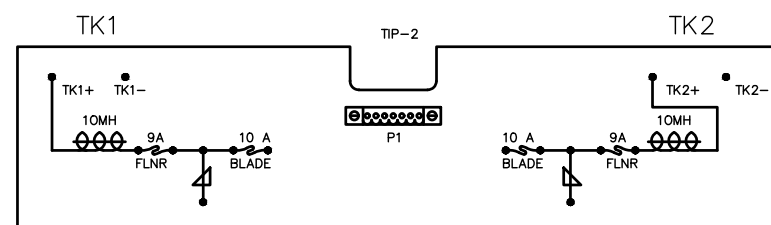
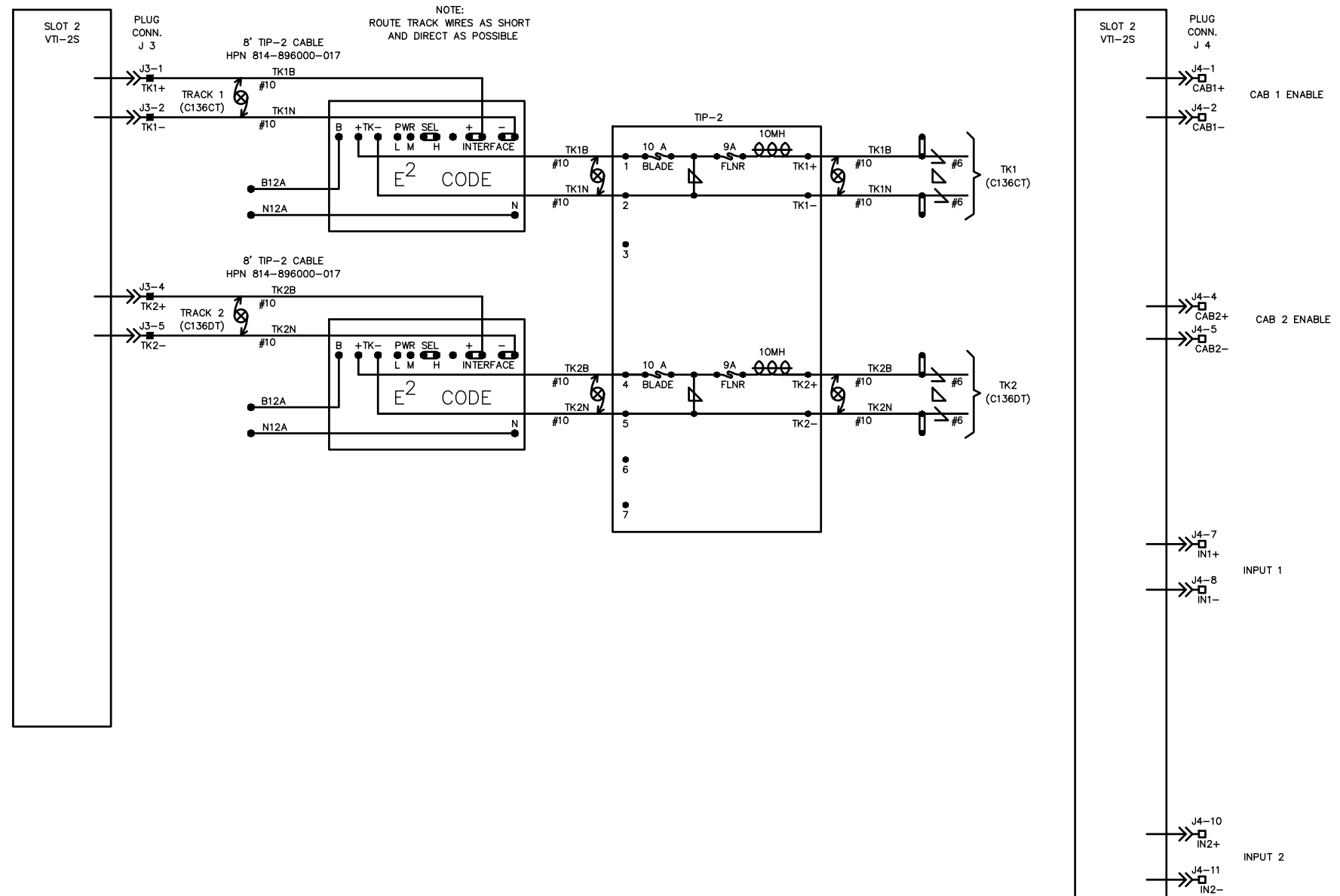
**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/11/19  
SUBMITTAL DATE: 06/29/20  
SCALE: NTS  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
CUT SECTION 1038+90. SIGNAL CASE SC1039  
CODED TRACK CIRCUITS (1 OF 2)

PCA NO. 000  
CONTRACT NO. C801  
FILE LOCATION PROJECTWISE

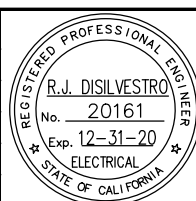
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DRAWING NO. JC376  
REVISION A



■ = WIRE PRESENT  
- = NOT USED

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NO.	DATE	REVISIONS
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A	03/19	65% SUBMITTAL SET



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San Jose, CA 95112  
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DESIGNED: M.BAKHIN  
CHECKED: V.FAINGOLD  
DRAWN: M.BAKHIN  
CADD FILE NAME: 801JC377.dwg

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**Transportation Authority**

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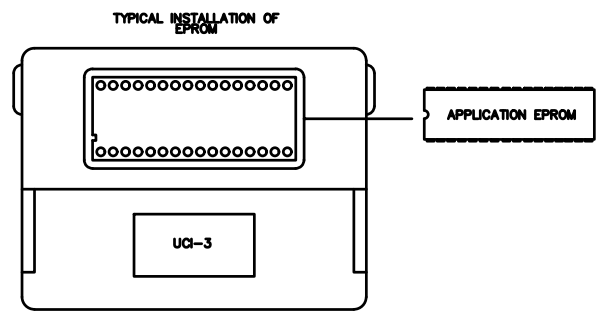
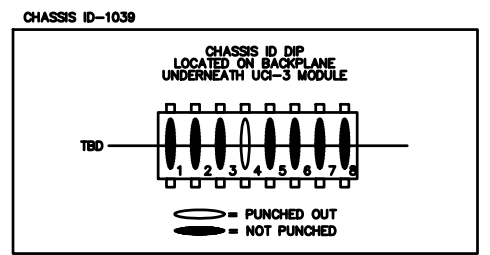
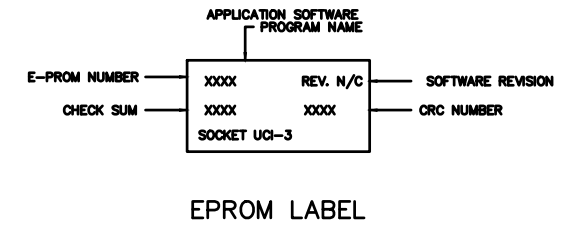
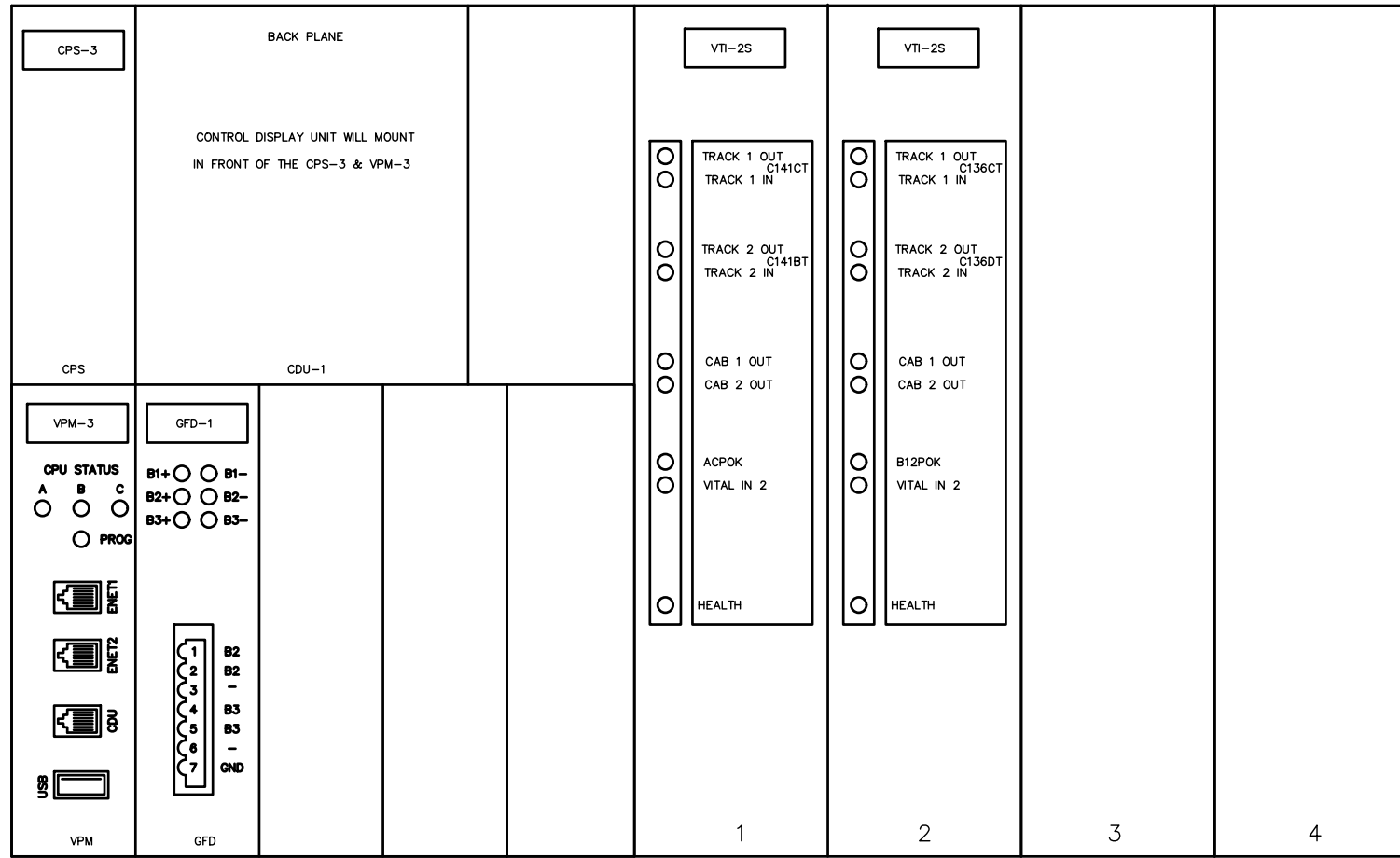
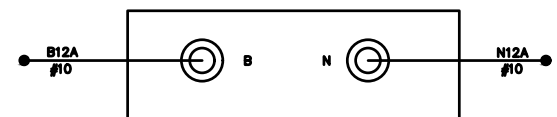
**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/11/19  
SUBMITTAL DATE: 06/29/20  
SCALE: NTS  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
CUT SECTION 1038+90. SIGNAL CASE SC1039  
CODED TRACK CIRCUITS (2 OF 2)

PCA NO. 000  
CONTRACT NO. C801  
FILE LOCATION PROJECTWISE

SHEET OF  
DRAWING NO. JC377  
REVISION A

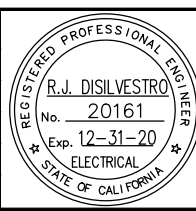


**MODULE LEGEND**

- CDU-1 = CONTROL DISPLAY UNIT
- CPS-3 = CENTRAL POWER SUPPLY
- VPM-3 = VITAL PERIPHERAL MASTER
- GFD-1 = GROUND FAULT DETECTOR
- CIO-1A = COMMUNICATION INPUT/OUTPUT
- CIO-2A = COMMUNICATION INPUT/OUTPUT
- CIO-MDA = COMMUNICATION INPUT/OUTPUT
- UCI-3 = CHASSIS INFORMATION
- VTI-2S = VITAL TRACK INTERFACE
- VLD-R16S = VITAL LAMP DRIVER
- VI0-86S = VITAL INPUTS/OUTPUTS

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NO.	DATE	REVISIONS
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A	03/19	65% SUBMITTAL SET



**HNTB** HNTB Corporation  
 1732 North First Street, Suite 400 San Jose, CA 95112  
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DESIGNED: M.BAKHIN  
 CHECKED: V.FAINGOLD  
 DRAWN: M.BAKHIN  
 CADD FILE NAME: 801JC378.dwg

**Santa Clara Valley Transportation Authority**

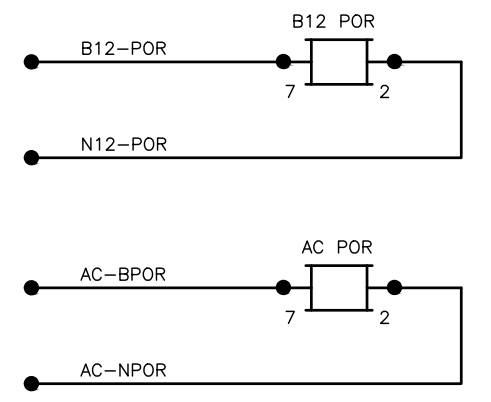
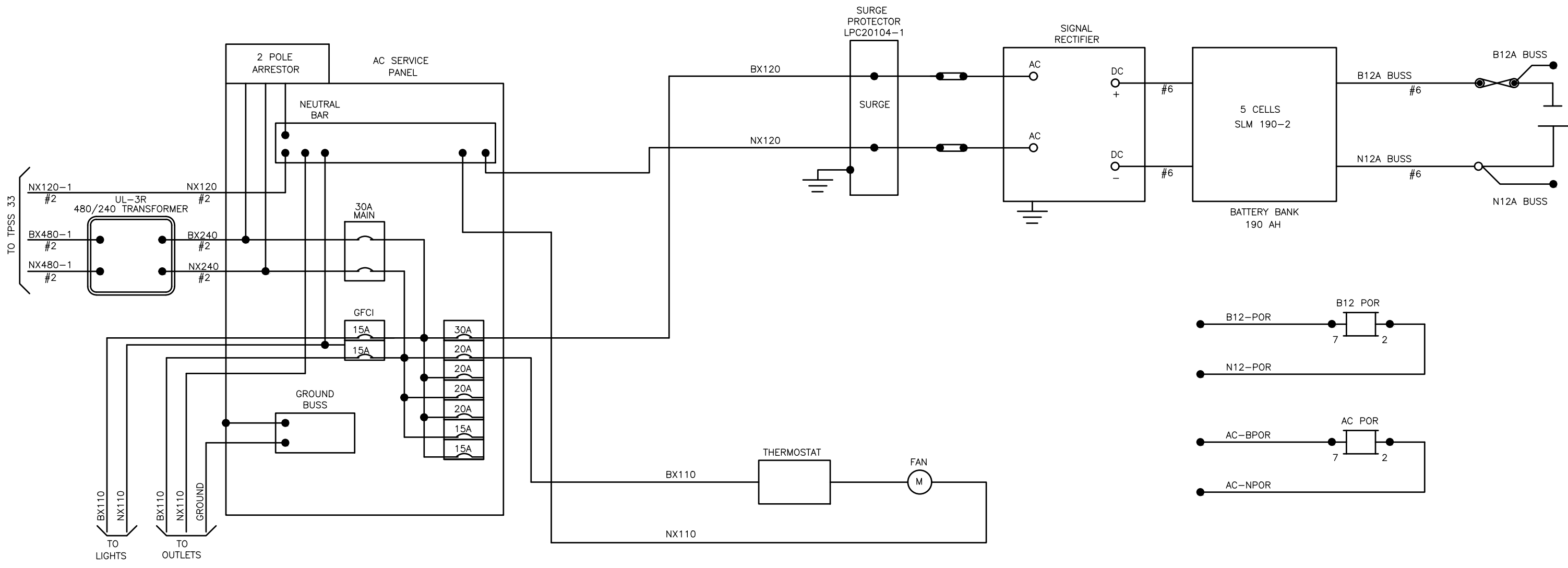
**BKF** 100+ YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

APPROVED: 03/11/19  
 SCALE: NTS  
 SUBMITTAL DATE: 06/29/20  
 BOARD APPROVAL DATE:

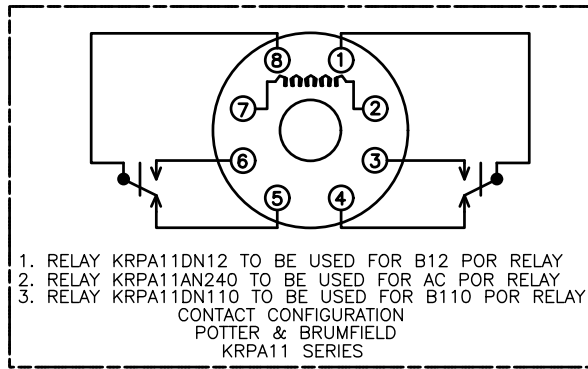
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 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 LRT SIGNAL SYSTEMS  
 CUT SECTION 1038+90. SIGNAL CASE SC1039  
 MICROPROCESSOR MODULE CONFIGURATION

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

SHEET OF DRAWING NO. JC378 REVISION A



**NOTE:**  
 1. WIRE TO BE #10 UNLESS DENOTED OTHERWISE.



Jun 22, 2020 11:36am C:\cadd\p\y\g\fo\w\k\west\0139440\01LC375-380\_Cut\_Section\_1038+90.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



**HNTB** HNTB Corporation  
 Engineers Architects Planners  
 1732 North First Street, Suite 400 San Jose, CA 95112  
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DESIGNED: M.BAKHIN  
 CHECKED: V.FAINGOLD  
 DRAWN: M.BAKHIN  
 CADD FILE NAME: 801JC379.dwg

**Santa Clara Valley Transportation Authority**

**BKF** 100+ YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

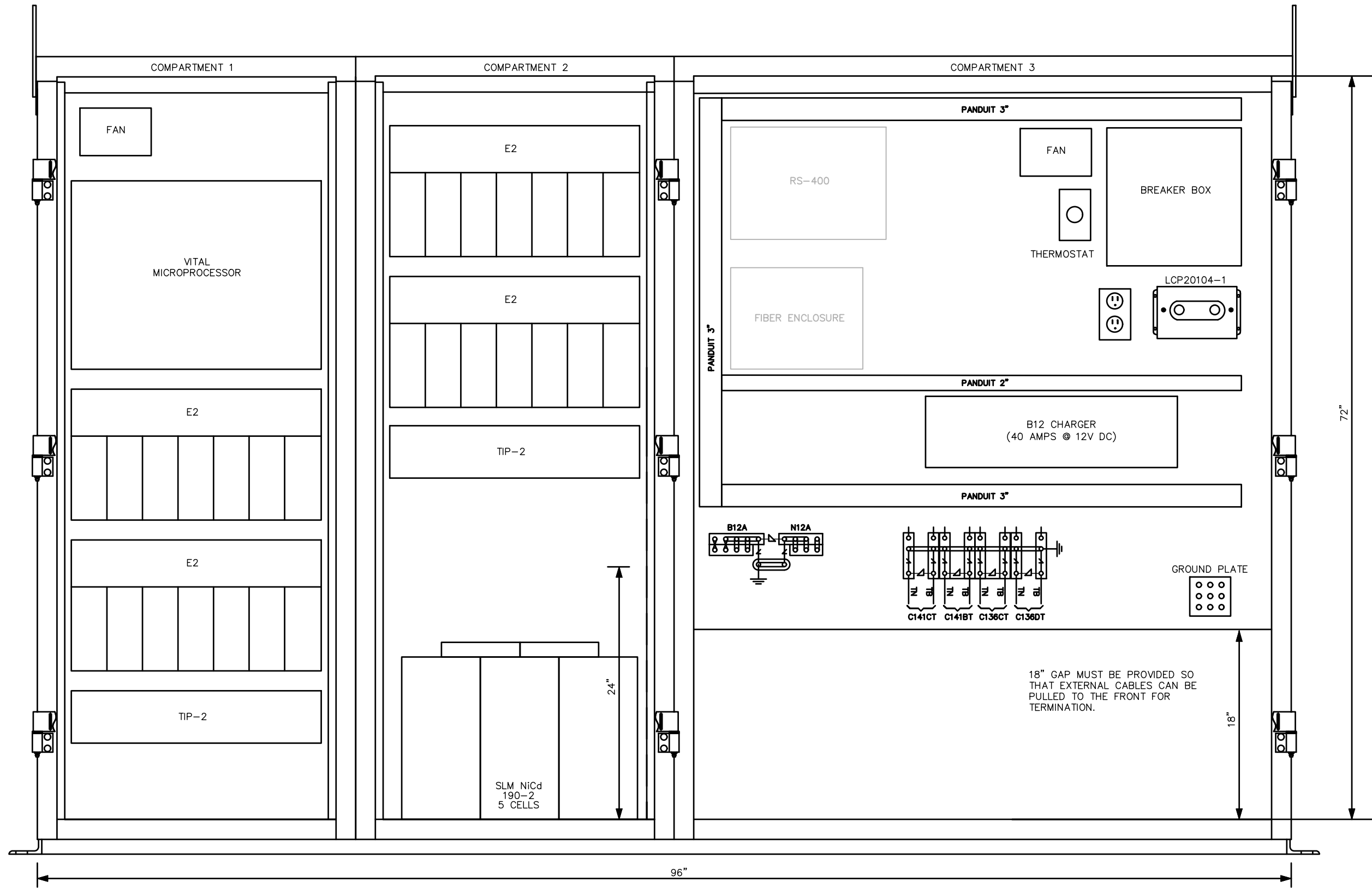
APPROVED: 03/11/19  
 SCALE: NTS  
 SUBMITTAL DATE: 06/29/20  
 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 LRT SIGNAL SYSTEMS  
 CUT SECTION 1038+90. SIGNAL CASE SC1039  
 POWER DISTRIBUTION

PCB NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

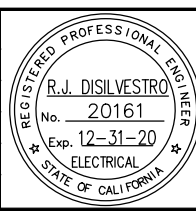
SHEET OF DRAWING NO. JC379 REVISION A





Jun 22, 2020 - 11:36am C:\cadd\ib\paw\gfoakes\west\d0139440\001\c375-380\_Cut\_Section\_1038+90.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



**HNTB** HNTB Corporation  
 Engineers Architects Planners  
 1732 North First Street, Suite 400 San Jose, CA 95112  
 Tel (408) 451-7300 Fax (408) 451-6942

DESIGNED: M.BAKHIN  
 CHECKED: V.FAINGOLD  
 DRAWN: M.BAKHIN  
 CADD FILE NAME: 801JC380.dwg



**BKF** 100+ YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

APPROVED: [Signature]  
 CADD FILE DATE: 03/11/19  
 SUBMITTAL DATE: 06/29/20  
 SCALE: NTS  
 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 LRT SIGNAL SYSTEMS  
 CUT SECTION 1038+90. SIGNAL CASE SC1039  
 SIGNAL CASE - EQUIPMENT LAYOUT

SHEET OF: JC380  
 REVISION: A

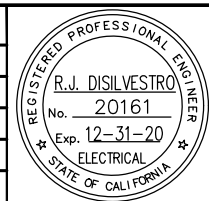
PCA NO.: 000 CONTRACT NO.: C801 FILE LOCATION: PROJECTWISE

CS 1039 ELOGIXS I/O CHART							
VTI2S: IO SLOT 1							
TRACK 1				TRACK 2			
RX STATUSES		TX STATUSES		RX STATUSES		TX STATUSES	
QUICK SHUNT CODE 1		CODE 1	3NT01	QUICK SHUNT CODE 1		CODE 1	3ST01
CODE 1	3NTI1	CODE 2	3NT02	CODE 1	3STI1	CODE 2	3ST02
CODE 2	3NTI2	CODE 3	3NT03	CODE 2	3STI2	CODE 3	
CODE 3		CODE 4		CODE 3	3STI3	CODE 4	
CODE 4		CODE 5		CODE 4		CODE 5	
CODE 5		CODE 6	3NT06	CODE 5		CODE 6	3ST06
CODE 6	3NTI6	CODE 7	3NT07	CODE 6	3STI6	CODE 7	3ST07
CODE 7	3NTI7	CODE 8		CODE 7	3STI7	CODE 8	
CODE 8		CODE M		CODE 8		CODE M	3STOM
CODE M				CODE M			

VTI2S: IO SLOT 2							
TRACK 1				TRACK 2			
RX STATUSES		TX STATUSES		RX STATUSES		TX STATUSES	
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CODE 2	4NTI2	CODE 3	4NT03	CODE 2	4STI2	CODE 3	
CODE 3		CODE 4		CODE 3	4STI3	CODE 4	
CODE 4		CODE 5		CODE 4		CODE 5	
CODE 5		CODE 6	4NT06	CODE 5		CODE 6	4ST06
CODE 6	4NTI6	CODE 7	4NT07	CODE 6	4STI6	CODE 7	4ST07
CODE 7	4NTI7	CODE 8		CODE 7	4STI7	CODE 8	
CODE 8		CODE M		CODE 8		CODE M	4STOM
CODE M				CODE M			

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1732 North First Street, Suite 400 San Jose, CA 95112  
Tel (408) 451-7300 Fax (408) 451-6942

DESIGNED: J. VIRAG  
CHECKED: J. VIRAG  
DRAWN: J. VIRAG  
CADD FILE NAME: 801JC381.dwg



**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/11/19  
SCALE: NTS  
SUBMITTAL DATE: 06/29/20  
BOARD APPROVAL DATE:

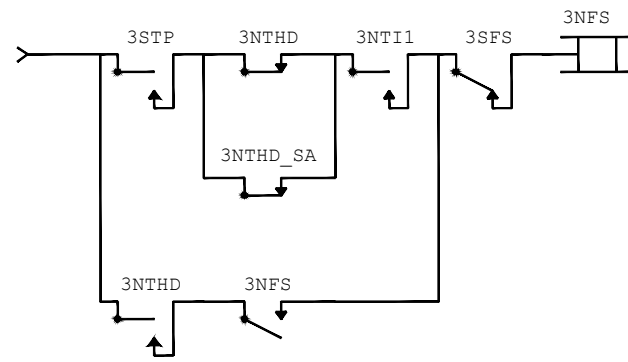
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CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
CUT SECTION 1038+90. SIGNAL CASE SC1039  
ELECTROLOGIXS I/O SLOTS 1-2

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

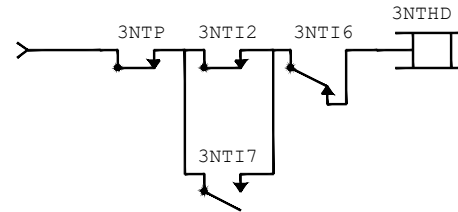
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REVISION A

SIGNAL CASE SC1039  
VITAL LOGIC  
EQUATION INDEX

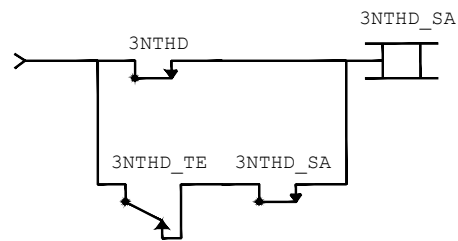
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3NTO2	1
3NTO3	1
3NTO6	1
3NTO7	1
3NTP	1
3SFS	1
3STHD	2
3STHD_SA	2
3STHD_TE	2
3STLOS	2
3STO1	2
3STO2	2
3STO6	2
3STO7	2
3STOM	2
3STP	2
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4NTO3	2
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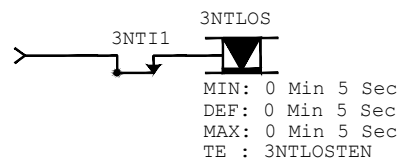
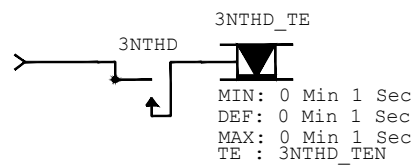
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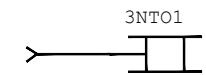
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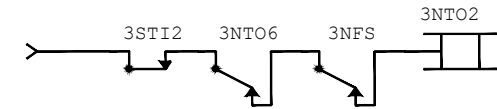
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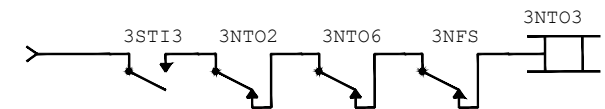
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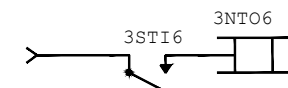
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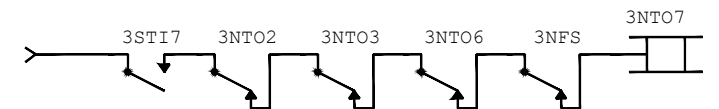
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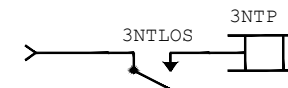
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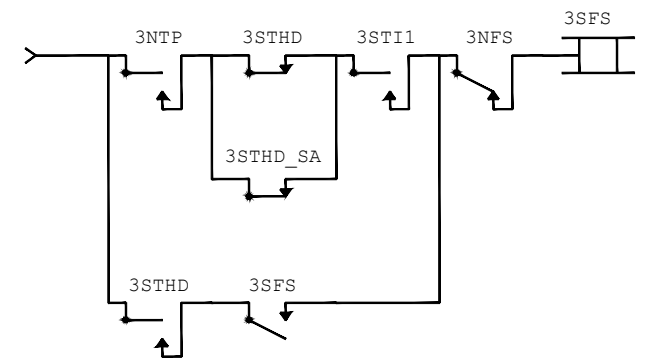
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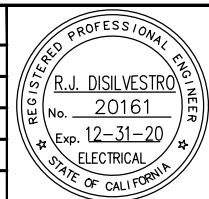
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SB FOLLOW STICK

Jun 22, 2020 11:26am C:\cadd\hwy\gfoakes\west\0139440\01JL375-377-SC1039\_V.dwg

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



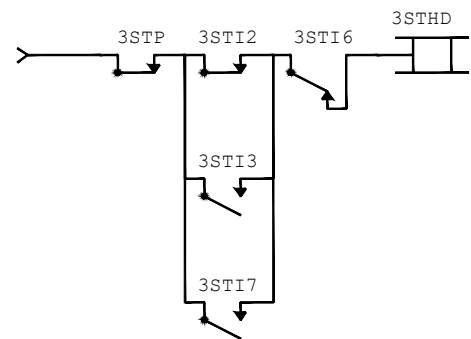
SUBMITTED	
<b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
DESIGNED	CHECKED
M.BAKHIN	V.FAINGOLD
DRAWN	CADD FILE NAME
M.BAKHIN	801JL375.dwg



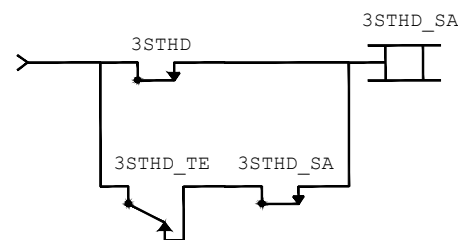
APPROVED	
<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	SCALE
03/11/19	NTS
SUBMITTAL DATE	BOARD APPROVAL DATE
06/29/20	

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS CUT SECTION 1038+90. SIGNAL CASE SC1039 VITAL LOGIC (1 OF 3)		
PCA NO.	CONTRACT NO.	FILE LOCATION
000	C801	PROJECTWISE

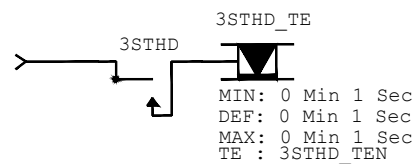
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DRAWING NO.	JL375
REVISION	B



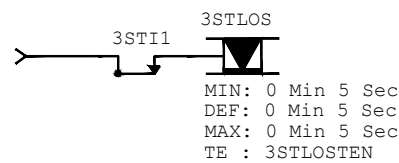
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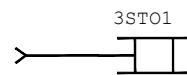


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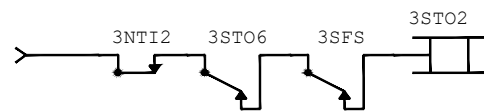


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3ST LOS TIMER



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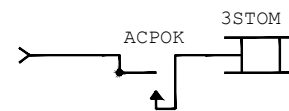
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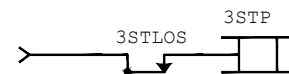
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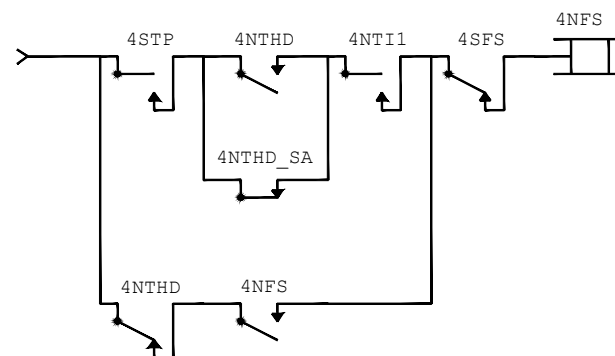
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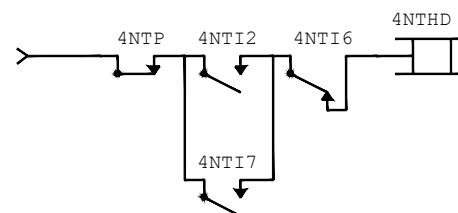
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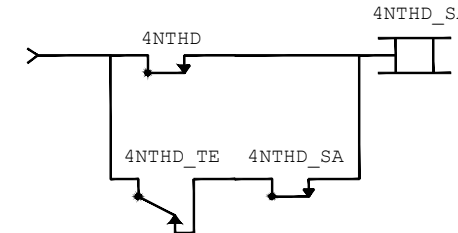
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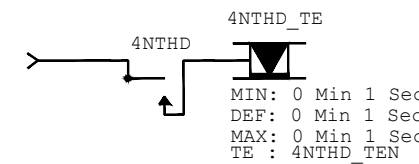
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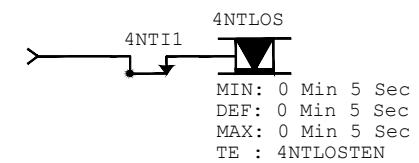
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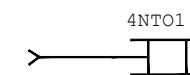


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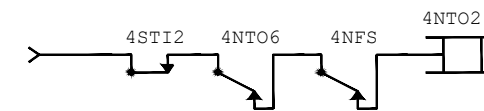


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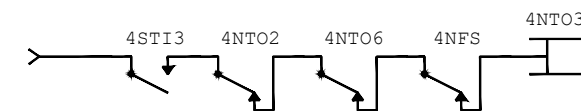
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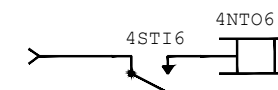
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4NT CODE 2 OUT



4NT CODE 3 OUT



4NT CODE 6 OUT

Jun 22, 2020 - 11:36am C:\cadd\p\work\west\0139440\01L375-377\_SC1039\_V.dwg

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET

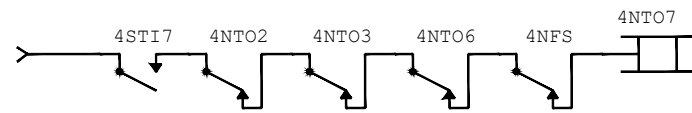


SUBMITTED		<b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
DESIGNED	M.BAKHIN	CHECKED	V.FAINGOLD
DRAWN	M.BAKHIN	CADD FILE NAME	801JL376.dwg



APPROVED		<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	03/11/19	SCALE	NTS
SUBMITTAL DATE	06/29/20	BOARD APPROVAL DATE	

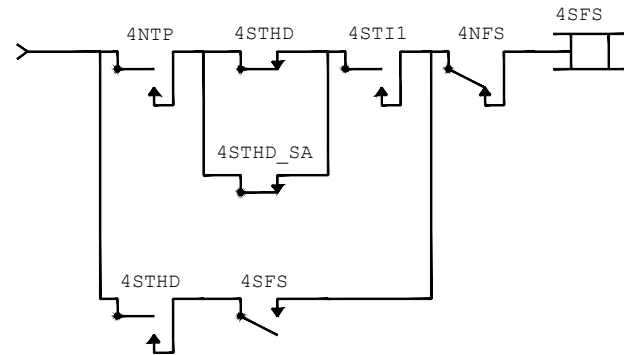
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CAPITOL EXPRESSWAY LIGHT RAIL PROJECT			OF
LRT SIGNAL SYSTEMS			DRAWING NO.
CUT SECTION 1038+90. SIGNAL CASE SC1039			JL376
VITAL LOGIC (2 OF 3)			REVISION
			A
PCA NO.	CONTRACT NO.	FILE LOCATION	
000	C801	PROJECTWISE	



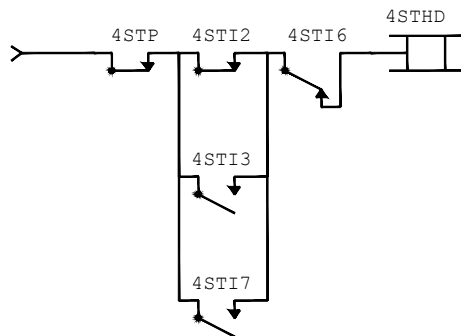
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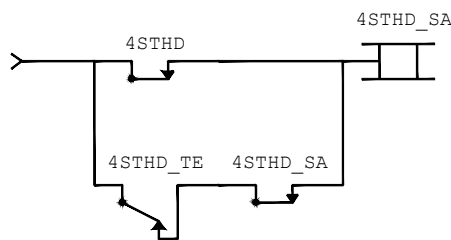
4NT LOS REPEATER (C136CT)



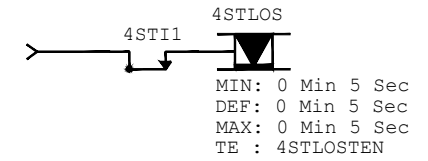
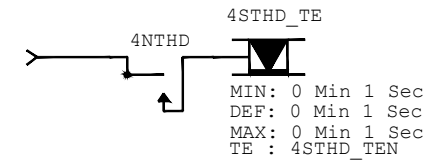
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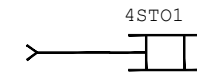
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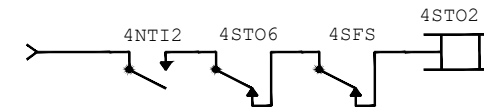
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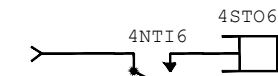
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4ST CODE 2 OUT



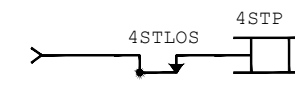
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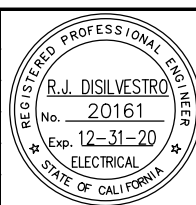
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4ST LOS REPEATER (C136DT)

Jun 22, 2020 - 11:36am C:\cadd\lib\paw\gfonkes\west\0139440\001\375-377-SC1039\_V.dwg

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B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



SUBMITTED

**HNTB** HNTB Corporation  
Engineers Architects Planners  
1732 North First Street, Suite 400 San Jose, CA 95112  
Tel (408) 451-7300 Fax (408) 451-6942

DESIGNED: M.BAKHIN  
CHECKED: V.FAINGOLD  
DRAWN: M.BAKHIN  
CADD FILE NAME: 801JL377.dwg



APPROVED

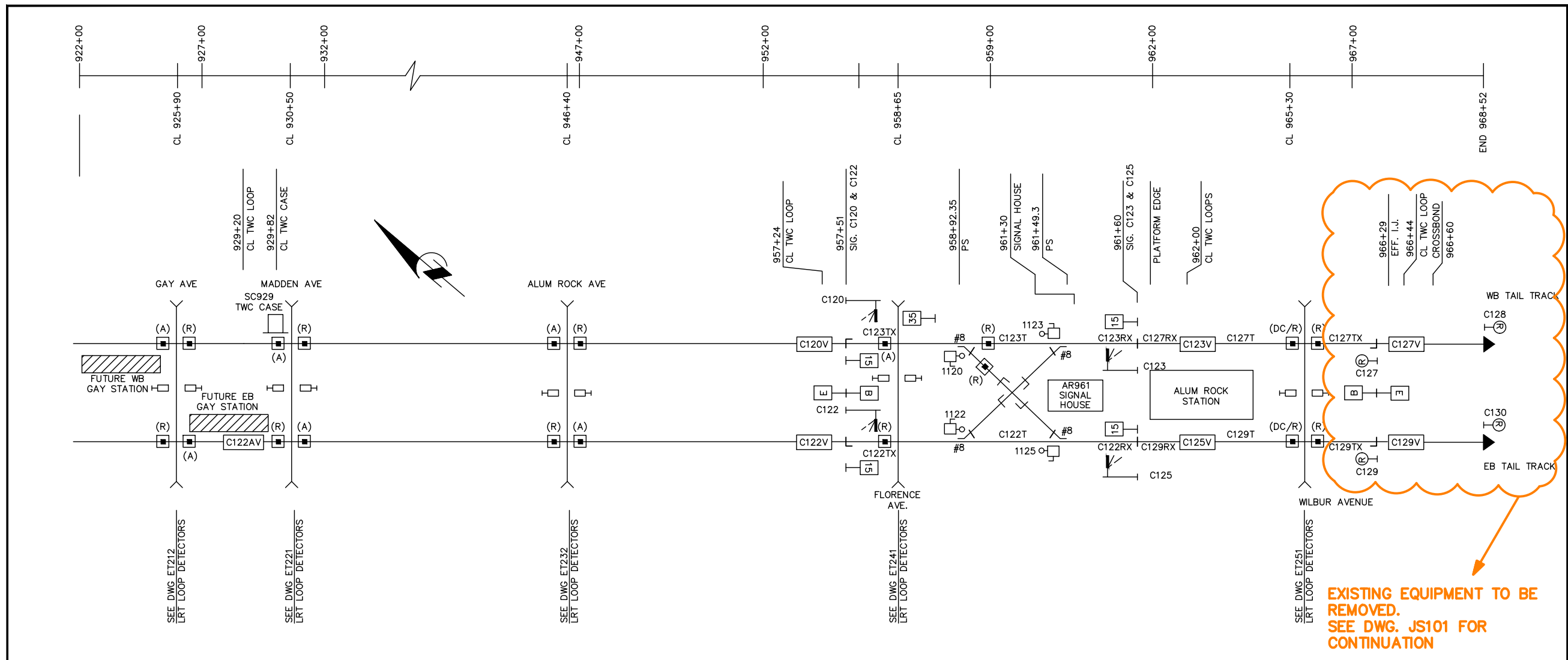
**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/11/19  
SUBMITTAL DATE: 06/29/20  
SCALE: NTS  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
CUT SECTION 1038+90. SIGNAL CASE SC1039  
VITAL LOGIC (3 OF 3)

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

SHEET OF DRAWING NO. JL377 REVISION B



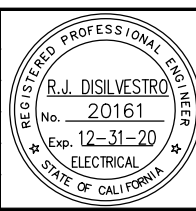
**EXISTING EQUIPMENT TO BE REMOVED.  
SEE DWG. JS101 FOR CONTINUATION**

- NOTES**
- ALL STATIONING IS APPROXIMATE. EXACT STATIONING TO BE VERIFIED WITH VTA.

07-06-05 AR96105.DWG

		<b>SANTA CLARA Valley Transportation Authority</b>		<b>AR CONCEPTS</b> ADVANCED RAILWAY CONCEPTS LTD.		<b>CAPITOL LIGHT RAIL PROJECT</b>		SHEET 5 OF 86	
						ALUM ROCK STATION SINGLE LINE SCHEMATIC		DRAWING NO. AR961	
								REVISION 1	
						BOARD APPROVAL DATE		CONTRACT NO. C225 VOL 3 OF 3	
								FILE NO.	

NO.	DATE	REVISIONS
1	05/04	AS BUILT & TESTED



**HNTB** HNTB Corporation  
1732 North First Street, Suite 400 San Jose, CA 95112  
Tel (408) 451-7300 Fax (408) 451-6942

DESIGNED: M.BAKHIN  
CHECKED: V.FAINGOLD  
DRAWN: M.BAKHIN  
CADD FILE NAME: 801JC401.dwg

**Santa Clara Valley Transportation Authority**

**BKF 100+ YEARS**  
ENGINEERS / SURVEYORS / PLANNERS

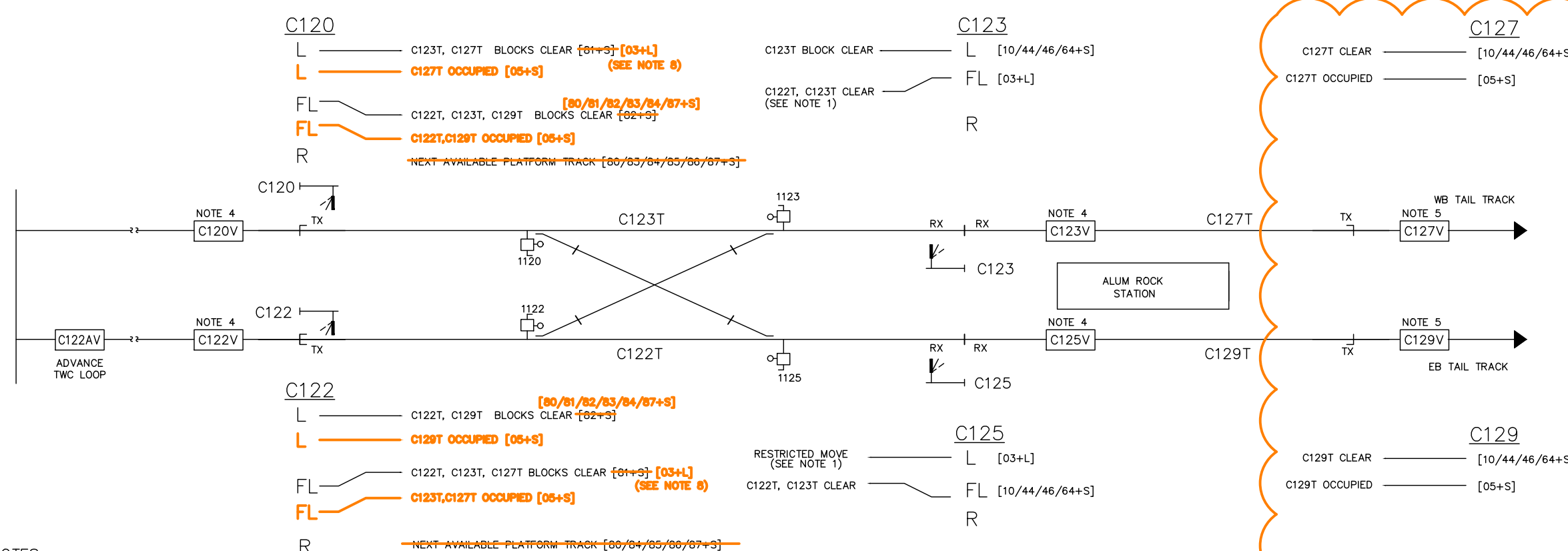
CADD FILE DATE: 03/11/19  
SUBMITTAL DATE: 06/29/20  
SCALE: NTS  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
ALUM ROCK INTERLOCKING  
SINGLE LINE SCHEMATIC

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

SHEET OF	
DRAWING NO.	JC401
REVISION	B

Jun 22, 2020 - 11:36am C:\cadd\jvw\jvw\work\west\0139440\01JC401-404\_Alum\_Rock.dwg



**NOTES**

- C125 STRAIGHT MOVE IS A REVERSE TRAFFIC MOVE AND SHOULD BE CONSIDERED A "RESTRICTED" MOVE. C123 CROSSOVER MOVE IS A REVERSE TRAFFIC MOVE AND SHOULD BE CONSIDERED A "RESTRICTED" MOVE. BOTH MOVES TO BE GOVERNED BY S.O.P.
- WEST OF SIGNALS C120 AND C122 IS NON-SIGNALIZED TERRITORY. MANUAL SIGNAL RULES APPLY.
- AT EACH SIGNAL THERE IS A TWC LOOP.
- ROUTE REQUEST FOR SIGNALS C120, C122, C123 & C125 SHALL PROVIDE INPUT TO FLORENCE AVE. TRAFFIC CONTROLLER TO BEGIN PROPER AUTOMOBILE TRAFFIC SIGNAL PHASE.
- FOR WB MOVES NEW DETECTION LOOPS A1,A2,A3,A4 (SEE DWG. JS101)**  
 ROUTE REQUEST FOR WB MOVES FROM TAIL TRACKS TO PLATFORM TRACKS SHALL PROVIDE INPUT TO WILBUR AVENUE TRAFFIC CONTROLLER TO BEGIN PROPER AUTOMOBILE TRAFFIC SIGNAL PHASE.
- EB TO EASTRIDGE**  
 FOR MOVES INTO TAIL TRACKS FROM PLATFORM OPERATOR SHALL STOP NEAR CROSSING AND PROCEED WITH "BAR" SIGNAL INDICATION. LRT DETECTOR LOOPS AT END OF PLATFORM TRACK AREA SHALL BE DELAYED CALL/RELEASE.
- ADVANCED TWC LOOP C122AV WITH ANY APPROPRIATE TWC CODE [80/81/82/83/84/87] SHALL AUTOMATICALLY REQUEST THE ROUTE ONLY TO THE SOUTH PLATFORM TRACK. LOCAL TWC LOOPS C120V, C122V WITH ANY APPROPRIATE TWC CODE [80/81/82/83/84/87] AND USING "START" BUTTON SHALL ALSO REQUEST THE ROUTE ONLY TO THE SOUTH PLATFORM TRACK.**
- TWC LOOPS C120V AND C122V SHALL BE ABLE TO REQUEST A ROUTE TO THE NORTH TRACK USING ROUTE CODE 03 (REVERSE RUNNING) AND PRESSING THE "LEFT" BUTTON.**

ROUTE & ASPECT CHART				
ENTRANCE	EXIT	SIGNAL ASPECT	SWITCH POSITION	NOTES
C122	C123	FLASHING LUNAR	1122/1123R 1120/1125N	C122T, C123T, C127T BLOCKS CLEAR SEE NOTE 4
C122	C125	LUNAR	1122/1123N 1120/1125N	C122T, C129T BLOCKS CLEAR SEE NOTE 4
C120	C123	LUNAR	1122/1123N 1120/1125N	C123T, C127T BLOCKS CLEAR SEE NOTE 4
C120	C125	FLASHING LUNAR	1122/1123N 1120/1125R	C122T, C123T, C129T BLOCKS CLEAR SEE NOTE 4
C123	C120	LUNAR	1122/1123N 1120/1125N	C123T BLOCKS CLEAR SEE NOTES 2 & 4
C123	C122	FLASHING LUNAR	1122/1123R 1120/1125N	C122T, C123T BLOCKS CLEAR SEE NOTES 1, 2, & 4
C125	C120	FLASHING LUNAR	1122/1123N 1120/1125R	C122T, C123T BLOCKS CLEAR SEE NOTES 2 & 4
C125	C122	LUNAR	1122/1123N 1120/1125N	C122T BLOCK CLEAR SEE NOTES 1, 2 & 4

**TWC DESTINATION NUMBER ASSIGNMENT**

- 81 — "A" ROUTE
- 82 — "B" ROUTE
- 80/83/84/85/86/87 — SEE NOTE 7
- 10/44/46/64 — ROUTE FROM TAIL TRACK EASTRIDGE
- 05 — CALL-ON ROUTE FROM TAIL TRACK

**ASPECTS**

- L LUNAR
- FL FLASHING LUNAR
- R RED

**[ ] TWC (HCS/R) CODE FUNCTIONS**

- NN DESTINATION NUMBER (AS IN 81)
- S START
- C CANCEL
- L LEFT
- R RIGHT

**ROUTES**

- "A" — PREFERRED
- "B" — NOT PREFERRED
- "C" — NEXT AVAILABLE

**TO BE REMOVED  
 SEE DWG. JR101, JR103  
 FOR CONTINUATION**

NO.	DATE	REVISIONS
1	05/04	AS BUILT & TESTED



DESIGNED J. CONTI	CADD FILE NAME AR96106	SUBMITTED/APPROVED
DRAWN J. CONTI	CADD FILE DATE 09-15-01	
CHECKED J. LESAGE	PLOT DATE 09-15-01	
SCALE NONE	PCA NO.	



**CAPITOL LIGHT RAIL PROJECT**

ALUM ROCK STATION  
 ROUTE AND ASPECTS

SHEET 6 OF 86
DRAWING NO. AR961
REVISION 1

BOARD APPROVAL DATE: CONTRACT NO. C225 VOL 3 OF 3 FILE NO.

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B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



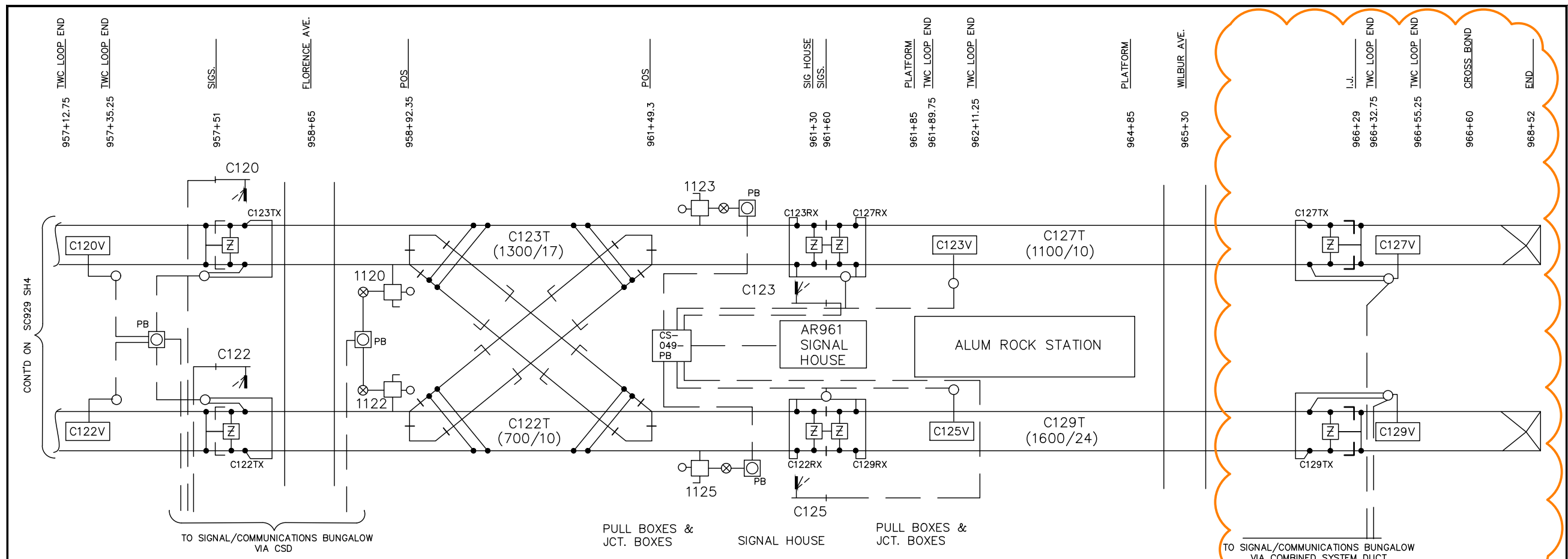
SUBMITTED <b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
DESIGNED M.BAKHIN	CHECKED V.FAINGOLD
DRAWN M.BAKHIN	CADD FILE NAME 801JC402.dwg



APPROVED <b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE 03/11/19	SCALE NTS
SUBMITTAL DATE 06/29/20	BOARD APPROVAL DATE

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS ALUM ROCK INTERLOCKING ROUTE AND ASPECTS		
PCA NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE

SHEET OF	JC402
REVISION	B



SW 1123	7C#6, 7C#14	2-2C#6 TW	C123T/C127T
SW 1125	7C#6, 7C#14	2C#14 TW_SHLD	C123V
SW 1120	7C#6, 7C#14	5C#9	C123
SW 1122	7C#6, 7C#14	2-2C#6 TW	C122T/C129T
C122V	2C#14 TW_SHLD	2C#14 TW_SHLD	C125V
C122T	2C#6 TW	5C#9	C125
C122	5C#9	2C#6 TW	C127T
C120V	2C#14 TW_SHLD	2C#14 TW_SHLD	C127V
C123T	2C#6 TW	2C#6 TW	C129T
C120	5C#9	2C#14 TW_SHLD	C129V
TWC CASE @ GAY STATION	12C#14	3C#2	TO ELECTRICAL CABINET
FLORENCE AVE TRAFFIC CONTROLLER	5C#14	5C#14	WILBUR AVE. TRAFFIC CONTROLLER

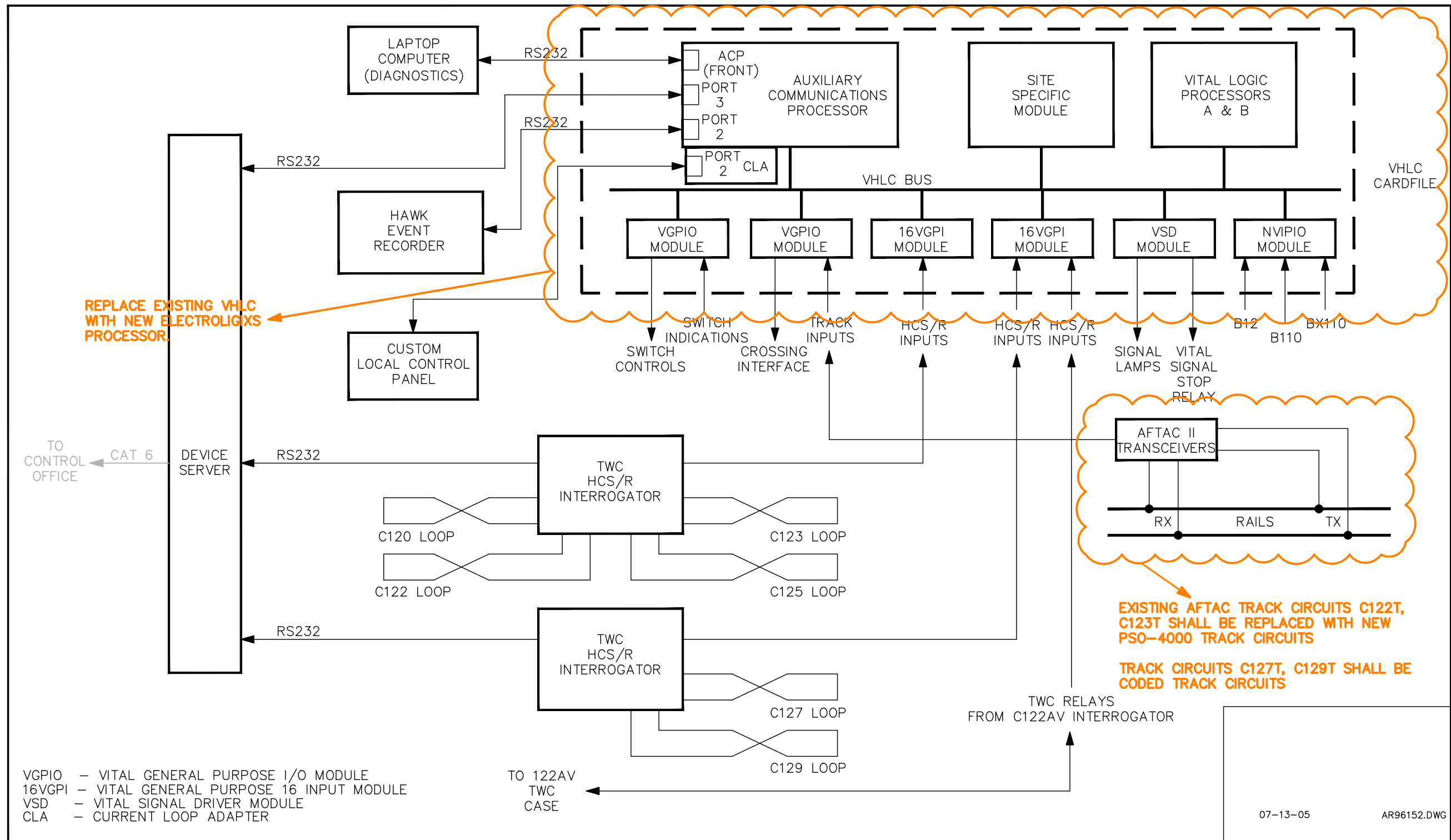
**EXISTING EQUIPMENT TO BE REMOVED.  
SEE DWG. JD101 FOR CONTINUATION**

				<b>CAPITOL LIGHT RAIL PROJECT</b>		SHEET 7 OF 86 DRAWING NO. AR961 REVISION 1
DESIGNED: J. CONTI DRAWN: J. CONTI CHECKED: J. LESAGE SCALE: NONE		CADD FILE NAME: AR96107 CADD FILE DATE: 09-15-01 PLOT DATE: 09-15-01 PCA NO.:		BOARD APPROVAL DATE:		CONTRACT NO. C225 VOL 3 OF 3 FILE NO.

NO. DATE REVISIONS 1 05/04 AS BUILT & TESTED										EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS ALUM ROCK INTERLOCKING DOUBLE LINE SCHEMATIC		SHEET OF DRAWING NO. JC403 REVISION B
NO. DATE REVISIONS B 06/20 95% SUBMITTAL SET A 03/19 65% SUBMITTAL SET		DESIGNED: M.BAKHIN CHECKED: V.FAINGOLD DRAWN: M.BAKHIN CADD FILE NAME: 801JC403.dwg		APPROVED:		CADD FILE DATE: 03/11/19 SUBMITTAL DATE: 06/29/20		SCALE: NTS BOARD APPROVAL DATE:		PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE		

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VGPIO - VITAL GENERAL PURPOSE I/O MODULE  
 16VGPI - VITAL GENERAL PURPOSE 16 INPUT MODULE  
 VSD - VITAL SIGNAL DRIVER MODULE  
 CLA - CURRENT LOOP ADAPTER

TO 122AV  
 TWC  
 CASE

EXISTING AFTAC TRACK CIRCUITS C122T, C123T SHALL BE REPLACED WITH NEW PSO-4000 TRACK CIRCUITS  
 TRACK CIRCUITS C127T, C129T SHALL BE CODED TRACK CIRCUITS

NO.	DATE	REVISIONS
1	05/04	AS BUILT & TESTED

**SANTA CLARA**  
**Valley Transportation Authority**

DESIGNED J. CONTI	CADD FILE NAME AR96152	SUBMITTED/APPROVED
DRAWN J. CONTI	CADD FILE DATE 09-15-01	
CHECKED J. LESAGE	PLOT DATE 09-15-01	
SCALE NONE	PCA NO.	

**AR CONCEPTS**  
**ADVANCED RAILWAY CONCEPTS LTD.**

**CAPITOL LIGHT RAIL PROJECT**

ALUM ROCK STATION  
 SYSTEM CONFIGURATION  
 BLOCK DIAGRAM

BOARD APPROVAL DATE	CONTRACT NO. C225 VOL 3 OF 3	FILE NO.
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SHEET 52 OF 88
DRAWING NO. AR961
REVISION 1

07-13-05      AR96152.DWG

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REGISTERED PROFESSIONAL ENGINEER  
**R.J. DISILVESTRO**  
 No. 20161  
 Exp. 12-31-20  
 ELECTRICAL  
 STATE OF CALIFORNIA

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**Santa Clara Valley  
 Transportation  
 Authority**

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SUBMITTAL DATE 06/29/20	BOARD APPROVAL DATE

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 LRT SIGNAL SYSTEMS  
 ALUM ROCK INTERLOCKING  
 SYSTEM CONFIGURATION BLOCK DIAGRAM

PCA NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE
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SHEET  
OF  
DRAWING NO.  
JC404  
REVISION  
B

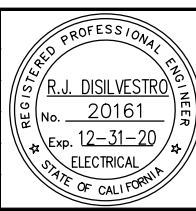
ALUM ROCK (PHASE-1) ELOGIXS I/O CHART

VT12S: IO SLOT 1

TRACK 1				TRACK 2			
RX STATUSES		TX STATUSES		RX STATUSES		TX STATUSES	
QUICK SHUNT CODE 1		CODE 1		QUICK SHUNT CODE 1		CODE 1	
CODE 1		CODE 2		CODE 1		CODE 2	
CODE 2		CODE 3		CODE 2		CODE 3	
CODE 3		CODE 4		CODE 3		CODE 4	
CODE 4		CODE 5		CODE 4		CODE 5	
CODE 5		CODE 6		CODE 5		CODE 6	
CODE 6		CODE 7		CODE 6		CODE 7	
CODE 7		CODE 8		CODE 7		CODE 8	
CODE 8		CODE M		CODE 8		CODE M	
CODE M				CODE M			

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BOARD APPROVAL DATE: [ ]

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
ALUM ROCK INTERLOCKING  
ELECTROLOGIXS I/O SLOT 1 PH 1

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

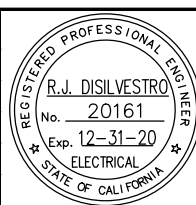
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DRAWING NO. JC405  
REVISION A

CONTROLS								
	BIT 1	BIT 2	BIT 3	BIT 4	BIT 5	BIT 6	BIT 7	BIT 8
WORD 1	C120ARQS	C120BRQS	C120CANR	C122ARQS	C122BRQS	C122CANR	C127RQS	C127CANR
WORD 2	C123ARQS	C123BRQS	C123CANR	C125ARQS	C125BRQS	C125CANR	C129RQS	C129CANR
WORD 3	CCTLRQS	CCTLCANR	COMMCKS	SP	SP	SP	SP	SP

INDICATIONS								
WORD 1	1120NWK	1120RWK	1122NWK	1122RWK	1123NWK	1123RWK	1125NWK	1125RWK
WORD 2	C120SRQ	C120DRQ	C120CAN	C122SRQ	C122DRQ	C122CAN	C127RQ	C127CAN
WORD 3	C123SRQ	C123DRQ	C123CAN	C125SRQ	C125DRQ	C125CAN	C129RQ	C129CAN
WORD 4	C122TK	C123TK	C127TK	C129TK	LK	SP	SP	SP
WORD 5	C120LGK	C120FLGK	C120RGK	C122LGK	C122FLGK	C122RGK	C123LGK	C123FLGK
WORD 6	C123RGK	C125LGK	C125FLGK	C125RGK	C127GK	C127COGK	C127RGK	C129GK
WORD 7	C129COGK	C129RGK	C120TEK	C122TEK	C123TEK	C125TEK	C127TEK	C129TEK
WORD 8	C120LOK	C122LOK	C123LOK	C125LOK	SP	12VPOK	B110POK	BX120POK
WORD 9	CCK	FAK	LCK	HVLCSTAT	SP	SP	SP	SP

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Santa Clara Valley  
Transportation  
Authority

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EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
ALUM ROCK INTERLOCKING  
CONTROL AND INDICATION CHART-PH 1

PCA NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE
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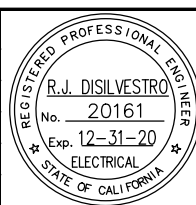
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REVISION A

CONTROLS								
	BIT 1	BIT 2	BIT 3	BIT 4	BIT 5	BIT 6	BIT 7	BIT 8
LCI 1-8	PLEDTEST	SP	SP	SP	SP	SP	PLOCAL	PREMOTE
LCI 9-16	DIPSW1	DIPSW2	DIPSW3	DIPSW4	DIPSW5	DIPSW6	DIPSW7	LCHEALTH
LCI 17-24	P20_25NW	P20_25RW	P22_23NW	P22_23RW	SP	SP	SP	SP
LCI 25-32	PLAMPON	SP	SP	SP	SP	SP	SP	SP
LCI 33-40	PC120AGZ	PC120BGZ	PC120_ST	PC122BGZ	PC122AGZ	PC122_ST	PC123AGZ	PC123BGZ
LCI 41-48	PC123_ST	PC125BGZ	PC125AGZ	PC125_ST	PC127GZ	PC127_ST	PC129GZ	PC129_ST

INDICATIONS								
LCO 1-8	SP	SP	SP	SP	SP	SP	SP	SP
LCO 9-16	SP	SP	SP	SP	SP	SP	SP	SP
LCO 17-24	P1120NWK	P1120RWK	P1122NWK	P1122RWK	P1123NWK	P1123RWK	P1125NWK	P1125RWK
LCO 25-32	PC120GK	PC120RK	PC122GK	PC122RK	PC123GK	PC123RK	PC125GK	PC125RK
LCO 33-40	PC127GK	PC127RK	PC129GK	PC129RK	PC120ASK	PC122ASK	PC123ASK	PC125ASK
LCO 41-48	PC127ASK	PC129ASK	PC122TK	PC123TK	PC127TK	PC129TK	SP	SP
LCO 49-56	PCLK	PLOK	PTESTK	PVSTAT	SP	SP	SP	SP
LCO 57-64	SP	SP	SP	SP	SP	SP	SP	SP
LCO 65-72	SP	SP	SP	SP	SP	SP	SP	SP

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EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
ALUM ROCK INTERLOCKING  
CONTROL AND INDICATION CHART-PH 1

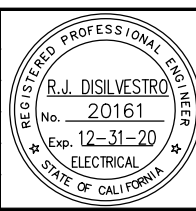
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ALUM ROCK (PHASE-1) ELOGIXS I/O CHART											
VLD-R16S: IO SLOT 2											
MODULE HEALTH	VLD2-OK										
VITAL SIGNAL STOP 1	1SIGSTOP			LAMP STEADY ON 5	C122LE			LAMP STEADY ON 11	C125LE		
VITAL SIGNAL STOP 2	2SIGSTOP			LAMP FLASH 5	C122FLE			LAMP FLASH 11	C125FLE		
LAMP GRANT BANK 1				LAMP ALT FLASH 5				LAMP ALT FLASH 11			
LAMP GRANT BANK 2				LAMP OK STATUS 5	C122LLO			LAMP OK STATUS 11	C125LLO		
LAMP BANK 1 HEALTH				LAMP STEADY ON 6				LAMP STEADY ON 12			
LAMP BANK 2 HEALTH				LAMP FLASH 6				LAMP FLASH 12			
LAMP BANK 1 NORMAL				LAMP ALT FLASH 6				LAMP ALT FLASH 12			
LAMP BANK 2 NORMAL				LAMP OK STATUS 6				LAMP OK STATUS 12			
LAMP STEADY ON 1	C120RE			LAMP STEADY ON 7	C123RE			LAMP STEADY ON 13			
LAMP FLASH 1				LAMP FLASH 7				LAMP FLASH 13			
LAMP ALT FLASH 1				LAMP ALT FLASH 7				LAMP ALT FLASH 13			
LAMP OK STATUS 1	C120RLO			LAMP OK STATUS 7	C123RLO			LAMP OK STATUS 13			
LAMP STEADY ON 2	C120LE			LAMP STEADY ON 8	C123LE			LAMP STEADY ON 14			
LAMP FLASH 2	C120FLE			LAMP FLASH 8	C123FLE			LAMP FLASH 14			
LAMP ALT FLASH 2				LAMP ALT FLASH 8				LAMP ALT FLASH 14			
LAMP OK STATUS 2	C120LLO			LAMP OK STATUS 8	C123LLO			LAMP OK STATUS 14			
LAMP STEADY ON 3				LAMP STEADY ON 9				LAMP STEADY ON 15			
LAMP FLASH 3				LAMP FLASH 9				LAMP FLASH 15			
LAMP ALT FLASH 3				LAMP ALT FLASH 9				LAMP ALT FLASH 15			
LAMP OK STATUS 3				LAMP OK STATUS 9				LAMP OK STATUS 15			
LAMP STEADY ON 4	C122RE			LAMP STEADY ON 10	C125RE			LAMP STEADY ON 16			
LAMP FLASH 4				LAMP FLASH 10				LAMP FLASH 16			
LAMP ALT FLASH 4				LAMP ALT FLASH 10				LAMP ALT FLASH 16			
LAMP OK STATUS 4	C122RLO			LAMP OK STATUS 10	C125RLO			LAMP OK STATUS 16			

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SUBMITTAL DATE 06/29/20	BOARD APPROVAL DATE

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
ALUM ROCK INTERLOCKING  
ELECTROLOGIXS SLOT 2 -PH 1

PCA NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE
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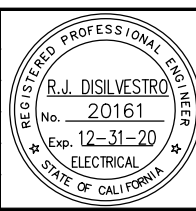
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ALUM ROCK (PHASE-1) ELOGIXS I/O CHART

VI086S: IO SLOT 3		VI086S: IO SLOT 4		VI086S: IO SLOT 5		VI086S: IO SLOT 6	
MODULE HEALTH	VI03-OK	MODULE HEALTH	VI04-OK	MODULE HEALTH	VI05-OK	MODULE HEALTH	VI06-OK
BANK 1 HEALTH		BANK 1 HEALTH		BANK 1 HEALTH		BANK 1 HEALTH	
BANK 2 HEALTH		BANK 2 HEALTH		BANK 2 HEALTH		BANK 2 HEALTH	
VITAL INPUT 1	1120NWP	VITAL INPUT 1	1123NWP	VITAL INPUT 1	C120AVQ	VITAL INPUT 1	C122AVQ
VITAL INPUT 2	1120RWP	VITAL INPUT 2	1123RWP	VITAL INPUT 2	C120BVQ	VITAL INPUT 2	C122BVQ
VITAL INPUT 3	1122NWP	VITAL INPUT 3	1125NWP	VITAL INPUT 3	C120CVQ	VITAL INPUT 3	C122CVQ
VITAL INPUT 4	1122RWP	VITAL INPUT 4	1125RWP	VITAL INPUT 4	C120VC	VITAL INPUT 4	C122VC
VITAL INPUT 5		VITAL INPUT 5	C122T	VITAL INPUT 5		VITAL INPUT 5	
VITAL INPUT 6		VITAL INPUT 6	C123T	VITAL INPUT 6		VITAL INPUT 6	
VITAL INPUT 7		VITAL INPUT 7	C127T	VITAL INPUT 7		VITAL INPUT 7	
VITAL INPUT 8		VITAL INPUT 8	C129T	VITAL INPUT 8		VITAL INPUT 8	
VITAL OUTPUT 1	1120NW	VITAL OUTPUT 1	1123NW	VITAL OUTPUT 1		VITAL OUTPUT 1	
VITAL OUTPUT 2	1120RW	VITAL OUTPUT 2	1123RW	VITAL OUTPUT 2		VITAL OUTPUT 2	
VITAL OUTPUT 3	1122NW	VITAL OUTPUT 3	1125NW	VITAL OUTPUT 3		VITAL OUTPUT 3	
VITAL OUTPUT 4	1122RW	VITAL OUTPUT 4	1125RW	VITAL OUTPUT 4		VITAL OUTPUT 4	
VITAL OUTPUT 5		VITAL OUTPUT 5		VITAL OUTPUT 5		VITAL OUTPUT 5	
VITAL OUTPUT 6		VITAL OUTPUT 6		VITAL OUTPUT 6		VITAL OUTPUT 6	

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EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
ALUM ROCK INTERLOCKING  
ELECTROLOGIXS I/O SLOTS 4-6 -PH 1

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

SHEET OF	
DRAWING NO.	JC409
REVISION	A

ALUM ROCK (PHASE-1) ELOGIXS I/O CHART

VIO86S: IO SLOT 7		VIO86S: IO SLOT 8		VIO86S: IO SLOT 9	
MODULE HEALTH	VI07-OK	MODULE HEALTH	VI08-OK	MODULE HEALTH	VI09-OK
BANK 1 HEALTH		BANK 1 HEALTH		BANK 1 HEALTH	
BANK 2 HEALTH		BANK 2 HEALTH		BANK 2 HEALTH	
VITAL INPUT 1	C123AVQ	VITAL INPUT 1	C12VPO	VITAL INPUT 1	C127VQ
VITAL INPUT 2	C123BVQ	VITAL INPUT 2	CB110PO	VITAL INPUT 2	C127COVQ
VITAL INPUT 3	C123VC	VITAL INPUT 3	CBX120PO	VITAL INPUT 3	C127VC
VITAL INPUT 4	C125AVQ	VITAL INPUT 4		VITAL INPUT 4	C129VQ
VITAL INPUT 5	C125BVQ	VITAL INPUT 5	C122AAVQ	VITAL INPUT 5	C129COVQ
VITAL INPUT 6	C125VC	VITAL INPUT 6	C122ABVQ	VITAL INPUT 6	C129VC
VITAL INPUT 7		VITAL INPUT 7	C122ACVQ	VITAL INPUT 7	
VITAL INPUT 8		VITAL INPUT 8	C122AVC	VITAL INPUT 8	
VITAL OUTPUT 1		VITAL OUTPUT 1	FLWBTS	VITAL OUTPUT 1	
VITAL OUTPUT 2		VITAL OUTPUT 2	FLEBTS	VITAL OUTPUT 2	
VITAL OUTPUT 3		VITAL OUTPUT 3	WLWBTS	VITAL OUTPUT 3	
VITAL OUTPUT 4		VITAL OUTPUT 4		VITAL OUTPUT 4	
VITAL OUTPUT 5		VITAL OUTPUT 5		VITAL OUTPUT 5	
VITAL OUTPUT 6		VITAL OUTPUT 6		VITAL OUTPUT 6	

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DRAWN: J. VIRAG

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EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
ALUM ROCK INTERLOCKING  
ELECTROLOGIXS I/O SLOTS 7-9 -PH 1

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ALUM ROCK, OFFICE CONTROL AND INDICATION CHART, SERIAL PORT 1 (PHASE-2)

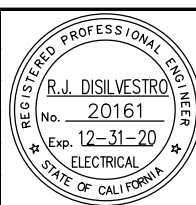
CONTROLS								
	BIT 1	BIT 2	BIT 3	BIT 4	BIT 5	BIT 6	BIT 7	BIT 8
WORD 1	C120ARQS	C120BRQS	C120CANR	C122ARQS	C122BRQS	C122CANR	SP	SP
WORD 2	C123ARQS	C123BRQS	C123CANR	C125ARQS	C125BRQS	C125CANR	SP	SP
WORD 3	CCTLRQS	CCTLCANR	COMMCKS	C120CORQS	C122CORQS	SP	SP	SP

INDICATIONS

	1120NWK	1120RWK	1122NWK	1122RWK	1123NWK	1123RWK	1125NWK	1125RWK
WORD 1	1120NWK	1120RWK	1122NWK	1122RWK	1123NWK	1123RWK	1125NWK	1125RWK
WORD 2	C120SRQ	C120DRQ	C120CAN	C122SRQ	C122DRQ	C122CAN	SP	SP
WORD 3	C123SRQ	C123DRQ	C123CAN	C125SRQ	C125DRQ	C125CAN	SP	SP
WORD 4	C122TK	C123TK	C127TK	C129TK	LK	C120COK	C122COK	SP
WORD 5	C120LGK	C120FLGK	C120RGK	C122LGK	C122FLGK	C122RGK	C123LGK	C123FLGK
WORD 6	C123RGK	C125LGK	C125FLGK	C125RGK	SP	SP	SP	SP
WORD 7	SP	SP	C120TEK	C122TEK	C123TEK	C125TEK	SP	SP
WORD 8	C120LOK	C122LOK	C123LOK	C125LOK	LINK	12VPOK	B110POK	BX120POK
WORD 9	CCK	FAK	LCK	HVLCSTAT	C3EFK	C3WFK	C4EFK	C4WFK

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EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
ALUM ROCK INTERLOCKING  
CONTROL AND INDICATION CHART-PH 2

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

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CONTROLS								
	BIT 1	BIT 2	BIT 3	BIT 4	BIT 5	BIT 6	BIT 7	BIT 8
LCI 1-8	PLEDTEST	SP	SP	SP	SP	SP	PLOCAL	PREMOTE
LCI 9-16	DIPSW1	DIPSW2	DIPSW3	DIPSW4	DIPSW5	DIPSW6	DIPSW7	LCHEALTH
LCI 17-24	P20_25NW	P20_25RW	P22_23NW	P22_23RW	SP	SP	SP	SP
LCI 25-32	PLAMPON	SP	PC120COGZ	PC122COGZ	SP	SP	SP	SP
LCI 33-40	PC120AGZ	PC120BGZ	PC120_ST	PC122BGZ	PC122AGZ	PC122_ST	PC123AGZ	PC123BGZ
LCI 41-48	PC123_ST	PC125BGZ	PC125AGZ	PC125_ST	SP	SP	SP	SP

INDICATIONS								
LCO 1-8	SP	SP	SP	SP	SP	SP	SP	SP
LCO 9-16	SP	SP	SP	SP	SP	SP	SP	SP
LCO 17-24	P1120NWK	P1120RWK	P1122NWK	P1122RWK	P1123NWK	P1123RWK	P1125NWK	P1125RWK
LCO 25-32	PC120GK	PC120RK	PC122GK	PC122RK	PC123GK	PC123RK	PC125GK	PC125RK
LCO 33-40	SP	SP	SP	SP	PC120ASK	PC122ASK	PC123ASK	PC125ASK
LCO 41-48	SP	SP	PC122TK	PC123TK	PC127TK	PC129TK	SP	SP
LCO 49-56	PCLK	PLOK	PTESTK	PVSTAT	SP	PC120COK	PC122COK	SP
LCO 57-64	PC3EFK	PC3WFK	PC4EFK	PCWWFK	SP	SP	SP	SP
LCO 65-72	SP	SP	SP	SP	SP	SP	SP	SP

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EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
ALUM ROCK INTERLOCKING  
CONTROL AND INDICATION CHART-PH 2

PCA NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE
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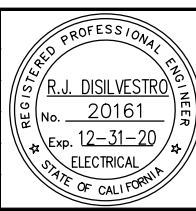
ALUM ROCK (PHASE-1) ELOGIXS I/O CHART

VT12S: IO SLOT 1

TRACK 1				TRACK 2			
RX STATUSES		TX STATUSES		RX STATUSES		TX STATUSES	
QUICK SHUNT CODE 1		CODE 1	3ET01	QUICK SHUNT CODE 1		CODE 1	4ET01
CODE 1	3ETI1	CODE 2	3ET02	CODE 1	4ETI1	CODE 2	4ET02
CODE 2	3ETI2	CODE 3		CODE 2	4ETI2	CODE 3	
CODE 3	3ETI3	CODE 4		CODE 3	4ETI3	CODE 4	
CODE 4		CODE 5		CODE 4		CODE 5	
CODE 5		CODE 6	3ET06	CODE 5		CODE 6	4ET06
CODE 6	3ETI6	CODE 7		CODE 6	4ETI6	CODE 7	
CODE 7	3ETI7	CODE 8		CODE 7	4ETI7	CODE 8	
CODE 8		CODE M		CODE 8		CODE M	
CODE M				CODE M			

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EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
ALUM ROCK INTERLOCKING  
ELECTROLOGIXS I/O SLOT 1 -PH 2

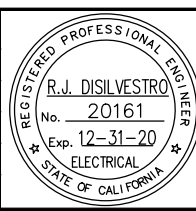
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ALUM ROCK (PHASE-2) ELOGIXS I/O CHART											
VLD-R16S: IO SLOT 2											
MODULE HEALTH	VLD2-OK										
VITAL SIGNAL STOP 1	1SIGSTOP			LAMP STEADY ON 5	C122LE			LAMP STEADY ON 11	C125LE		
VITAL SIGNAL STOP 2	2SIGSTOP			LAMP FLASH 5	C122FLE			LAMP FLASH 11	C125FLE		
LAMP GRANT BANK 1				LAMP ALT FLASH 5				LAMP ALT FLASH 11			
LAMP GRANT BANK 2				LAMP OK STATUS 5	C122LLO			LAMP OK STATUS 11	C125LLO		
LAMP BANK 1 HEALTH				LAMP STEADY ON 6				LAMP STEADY ON 12			
LAMP BANK 2 HEALTH				LAMP FLASH 6				LAMP FLASH 12			
LAMP BANK 1 NORMAL				LAMP ALT FLASH 6				LAMP ALT FLASH 12			
LAMP BANK 2 NORMAL				LAMP OK STATUS 6				LAMP OK STATUS 12			
LAMP STEADY ON 1	C120RE			LAMP STEADY ON 7	C123RE			LAMP STEADY ON 13			
LAMP FLASH 1				LAMP FLASH 7				LAMP FLASH 13			
LAMP ALT FLASH 1				LAMP ALT FLASH 7				LAMP ALT FLASH 13			
LAMP OK STATUS 1	C120RLO			LAMP OK STATUS 7	C123RLO			LAMP OK STATUS 13			
LAMP STEADY ON 2	C120LE			LAMP STEADY ON 8	C123LE			LAMP STEADY ON 14			
LAMP FLASH 2	C120FLE			LAMP FLASH 8	C123FLE			LAMP FLASH 14			
LAMP ALT FLASH 2				LAMP ALT FLASH 8				LAMP ALT FLASH 14			
LAMP OK STATUS 2	C120LLO			LAMP OK STATUS 8	C123LLO			LAMP OK STATUS 14			
LAMP STEADY ON 3				LAMP STEADY ON 9				LAMP STEADY ON 15			
LAMP FLASH 3				LAMP FLASH 9				LAMP FLASH 15			
LAMP ALT FLASH 3				LAMP ALT FLASH 9				LAMP ALT FLASH 15			
LAMP OK STATUS 3				LAMP OK STATUS 9				LAMP OK STATUS 15			
LAMP STEADY ON 4	C122RE			LAMP STEADY ON 10	C125RE			LAMP STEADY ON 16			
LAMP FLASH 4				LAMP FLASH 10				LAMP FLASH 16			
LAMP ALT FLASH 4				LAMP ALT FLASH 10				LAMP ALT FLASH 16			
LAMP OK STATUS 4	C122RLO			LAMP OK STATUS 10	C125RLO			LAMP OK STATUS 16			

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EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
ALUM ROCK INTERLOCKING  
ELECTROLOGIXS I/O SLOT 2 -PH 2

PCA NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE
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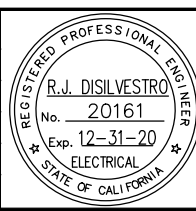
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ALUM ROCK (PHASE-2) ELOGIXS I/O CHART

VI086S: IO SLOT 3		VI086S: IO SLOT 4		VI086S: IO SLOT 5		VI086S: IO SLOT 6	
MODULE HEALTH	VI03-OK	MODULE HEALTH	VI04-OK	MODULE HEALTH	VI05-OK	MODULE HEALTH	VI06-OK
BANK 1 HEALTH		BANK 1 HEALTH		BANK 1 HEALTH		BANK 1 HEALTH	
BANK 2 HEALTH		BANK 2 HEALTH		BANK 2 HEALTH		BANK 2 HEALTH	
VITAL INPUT 1	1120NWP	VITAL INPUT 1	1123NWP	VITAL INPUT 1	C120AVQ	VITAL INPUT 1	C122AVQ
VITAL INPUT 2	1120RWP	VITAL INPUT 2	1123RWP	VITAL INPUT 2	C120BVQ	VITAL INPUT 2	C122BVQ
VITAL INPUT 3	1122NWP	VITAL INPUT 3	1125NWP	VITAL INPUT 3		VITAL INPUT 3	
VITAL INPUT 4	1122RWP	VITAL INPUT 4	1125RWP	VITAL INPUT 4	C120VC	VITAL INPUT 4	C122VC
VITAL INPUT 5		VITAL INPUT 5	C122T	VITAL INPUT 5	C120ACOVQ	VITAL INPUT 5	C122ACOVQ
VITAL INPUT 6		VITAL INPUT 6	C123T	VITAL INPUT 6	C120BCOVQ	VITAL INPUT 6	C120BCOVQ
VITAL INPUT 7		VITAL INPUT 7		VITAL INPUT 7		VITAL INPUT 7	
VITAL INPUT 8		VITAL INPUT 8		VITAL INPUT 8		VITAL INPUT 8	
VITAL OUTPUT 1	1120NW	VITAL OUTPUT 1	1123NW	VITAL OUTPUT 1		VITAL OUTPUT 1	
VITAL OUTPUT 2	1120RW	VITAL OUTPUT 2	1123RW	VITAL OUTPUT 2		VITAL OUTPUT 2	
VITAL OUTPUT 3	1122NW	VITAL OUTPUT 3	1125NW	VITAL OUTPUT 3		VITAL OUTPUT 3	
VITAL OUTPUT 4	1122RW	VITAL OUTPUT 4	1125RW	VITAL OUTPUT 4		VITAL OUTPUT 4	
VITAL OUTPUT 5		VITAL OUTPUT 5		VITAL OUTPUT 5		VITAL OUTPUT 5	
VITAL OUTPUT 6		VITAL OUTPUT 6		VITAL OUTPUT 6		VITAL OUTPUT 6	

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EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
ALUM ROCK INTERLOCKING  
ELECTROLOGIXS I/O SLOTS 3-6 -PH 2

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ALUM ROCK (PHASE-2) ELOGIXS I/O CHART

VI086S: IO SLOT 7		VI086S: IO SLOT 8		VI086S: IO SLOT 9	
MODULE HEALTH	VI07-OK	MODULE HEALTH	VI08-OK	MODULE HEALTH	VI09-OK
BANK 1 HEALTH		BANK 1 HEALTH		BANK 1 HEALTH	
BANK 2 HEALTH		BANK 2 HEALTH		BANK 2 HEALTH	
VITAL INPUT 1	C123AVQ	VITAL INPUT 1	C12VPO	VITAL INPUT 1	
VITAL INPUT 2	C123BVQ	VITAL INPUT 2	CB110PO	VITAL INPUT 2	
VITAL INPUT 3	C123VC	VITAL INPUT 3	CBX120PO	VITAL INPUT 3	
VITAL INPUT 4	C125AVQ	VITAL INPUT 4		VITAL INPUT 4	
VITAL INPUT 5	C125BVQ	VITAL INPUT 5	C122AAVQ	VITAL INPUT 5	
VITAL INPUT 6	C125VC	VITAL INPUT 6	C122ABVQ	VITAL INPUT 6	
VITAL INPUT 7		VITAL INPUT 7		VITAL INPUT 7	
VITAL INPUT 8		VITAL INPUT 8	C122AVC	VITAL INPUT 8	
VITAL OUTPUT 1		VITAL OUTPUT 1	FLWBTS	VITAL OUTPUT 1	
VITAL OUTPUT 2		VITAL OUTPUT 2	FLEBTS	VITAL OUTPUT 2	
VITAL OUTPUT 3		VITAL OUTPUT 3		VITAL OUTPUT 3	
VITAL OUTPUT 4		VITAL OUTPUT 4		VITAL OUTPUT 4	
VITAL OUTPUT 5		VITAL OUTPUT 5		VITAL OUTPUT 5	
VITAL OUTPUT 6		VITAL OUTPUT 6		VITAL OUTPUT 6	

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EASTRIDGE TO BART REGIONAL CONNECTOR  
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 LRT SIGNAL SYSTEMS  
 ALUM ROCK INTERLOCKING  
 ELECTROLOGIXS I/O SLOTS 7-9 -PH 2

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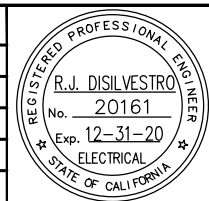
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ALUM ROCK INTERLOCKING  
NON-VITAL LOGIC  
EQUATION INDEX

Equation	Sheet		
12VP0K	2	C125DRQ	4
1120NWK	2	C125FLGK	4
1120RWK	2	C125LGK	4
1122NWK	2	C125LOK	4
1122RWK	2	C125RGK	4
1123NWK	2	C125SRQ	4
1123RWK	2	C125TEK	4
1125NWK	2	C127TK	4
1125RWK	2	C129TK	4
B110POK	2	CC120ARQ	4
BX120POK	2	CC120BRQ	4
C3EFK	2	CC120CAN	5
C3WFK	2	CC120CORQ	5
C4EFK	2	CC122ARQ	5
C4WFK	2	CC122BRQ	5
C20_25NW	2	CC122CAN	5
C20_25RW	2	CC122CORQ	5
C22_23NW	3	CC123ARQ	5
C22_23RW	3	CC123BRQ	5
C120CAN	3	CC123CAN	5
C120COK	3	CC125ARQ	5
C120DRQ	3	CC125BRQ	5
C120FLGK	3	CC125CAN	5
C120LGK	3	CCK	5
C120LOK	3	CCNTL	6
C120RGK	3	COMCHKTE	6
C120SRQ	3	DELIVERYP	6
C120TEK	3	DELIVERYTER	6
C122CAN	3	FAK	6
C122COK	3	FLASH	6
C122DRQ	3	FLOFFTE	6
C122FLGK	3	FLONTE	6
C122LGK	3	HVLCSTAT	6
C122LOK	3	LCK	6
C122RGK	3	LCOMMCKS	6
C122SRQ	3	LCP	6
C122TEK	3	LINK	6
C122TK	3	LITE	6
C123CAN	4	LK	6
C123DRQ	4	MODE	6
C123FLGK	4	P1120NWK	7
C123LGK	4	P1120RWK	7
C123LOK	4	P1122NWK	7
C123RGK	4	P1122RWK	7
C123SRQ	4	P1123NWK	7
C123TEK	4	P1123RWK	7
C123TK	4	P1125NWK	7
C125CAN	4	P1125RWK	7
		PC3EFK	7
		PC3WFK	7
		PC4EFK	7
		PC4WFK	7
		PC120ASK	8
		PC120COK	8
		PC120GK	8
		PC120RK	8
		PC122ASK	8
		PC122COK	8
		PC122GK	8
		PC122RK	8
		PC122TK	8
		PC123ASK	8
		PC123GK	8
		PC123RK	8
		PC123TK	8
		PC125ASK	8
		PC125GK	9
		PC125RK	9
		PC127TK	9
		PC129TK	9
		PCLK	9
		PLOK	9
		PTESTK	9
		PVSTAT	9

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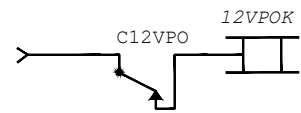
DESIGNED M.BAKHIN	CHECKED V.FAINGOLD
DRAWN M.BAKHIN	CADD FILE NAME 801JL401.dwg



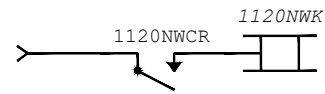
**BKF** 100+ YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE 03/11/19	SCALE NTS
SUBMITTAL DATE 06/29/20	BOARD APPROVAL DATE

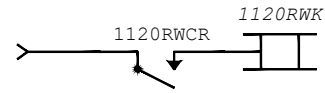
EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS ALUM ROCK INTERLOCKING NON-VITAL LOGIC (1 OF 9)			SHEET OF
			DRAWING NO. JL401
			REVISION B
PCA NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE	



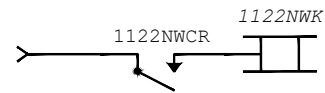
B12 Low Voltage Central Office Indication



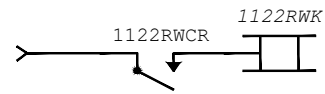
Switch 1120 Normal Switch Central Office Indication



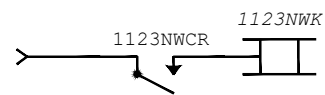
Switch 1120 Reverse Switch Central Office Indication



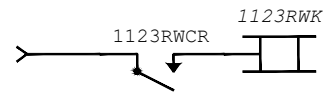
Switch 1122 Normal Switch Central Office Indication



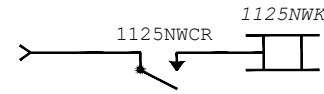
Switch 1120 Reverse Switch Central Office Indication



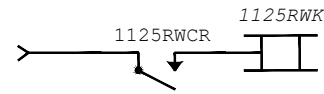
Switch 1123 Normal Switch Central Office Indication



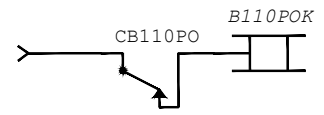
Switch 1123 Reverse Switch Central Office Indication



Switch 1125 Normal Switch Central Office Indication



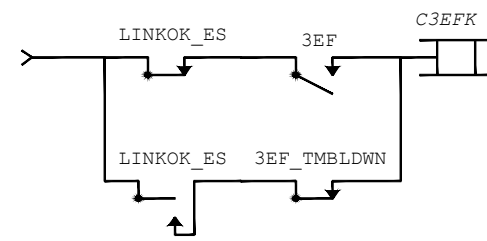
Switch 1125 Reverse Switch Central Office Indication



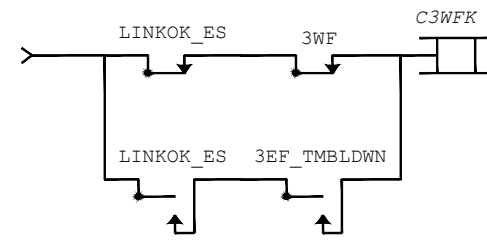
B110 Low Voltage Central Office Indication



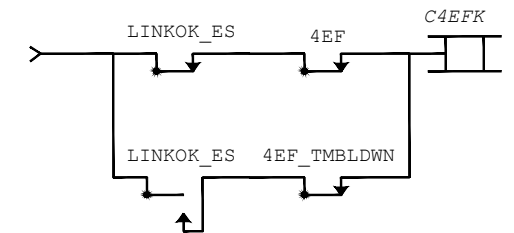
AC Low Voltage Central Office Indication



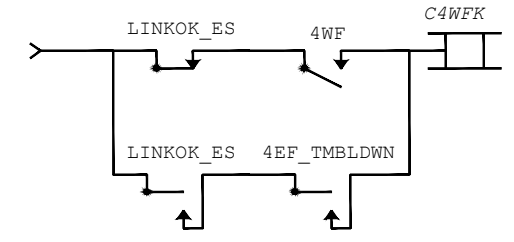
Central Office Track 3 Eastbound Traffic Indication, Alum Rock to Eastridge



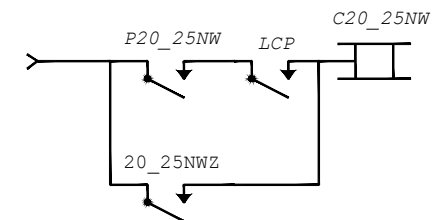
Central Office Track 3 Westbound Traffic Indication, Alum Rock to Eastridge



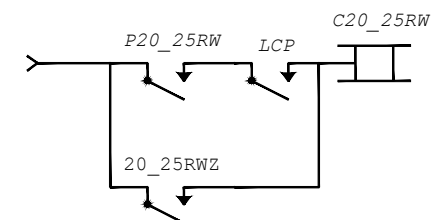
Central Office Track 4 Eastbound Traffic Indication, Alum Rock to Eastridge



Central Office Track 4 Westbound Traffic Indication, Alum Rock to Eastridge



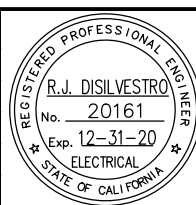
Crossover 1120-1125 Normal Switch Request



Crossover 1120-1125 Reverse Switch Request

Jun 22, 2020 - 11:37am C:\cadd\p\work\west\0139440\01L401-408\_Alum Rock\_NV.dwg

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET

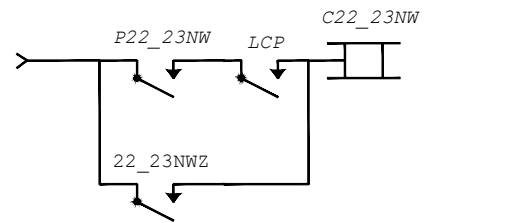


<b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
DESIGNED	CHECKED
M.BAKHIN	V.FAINGOLD
DRAWN	CADD FILE NAME
M.BAKHIN	801JL402.dwg

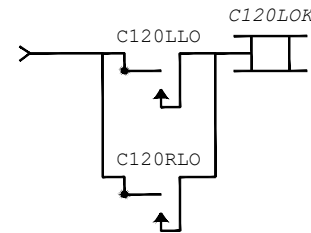


APPROVED <b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	SCALE
03/11/19	NTS
SUBMITTAL DATE	BOARD APPROVAL DATE
06/29/20	

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS ALUM ROCK INTERLOCKING NON-VITAL LOGIC (2 OF 9)			SHEET OF DRAWING NO. JL402 REVISION A
PCA NO.	CONTRACT NO.	FILE LOCATION	
000	C801	PROJECTWISE	



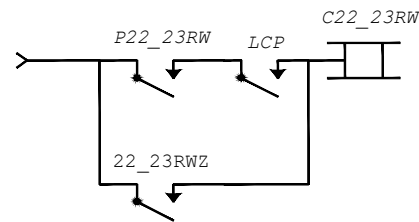
Crossover 1122-1123 Normal Switch Request



Signal C120 Light-Out Central Office Indication



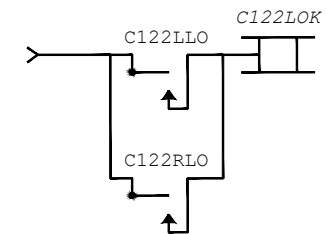
Signal C122 Lunar Central Office Indication



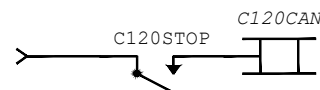
Crossover 1122-1123 Reverse Switch Request



Signal C120 Red Central Office Indication



Signal C122 Light-Out Central Office Indication



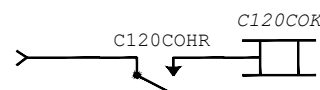
Signal C120 Route Request Cancel Central Office Indication



Signal C120 to Signal C123 (Straight) Route Request Indication To Central Office



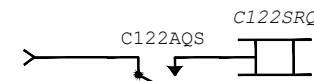
Signal C122 Red Central Office Indication



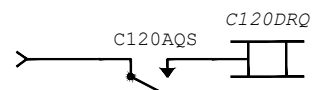
Signal C120 Call-On Central Office Indication



Signal C120 In-Time Central Office Indication



Signal C122 to Signal C125 (Straight) Route Request Indication To Central Office



Signal C120 to Signal C125 (Diverge) Route Request Indication To Central Office



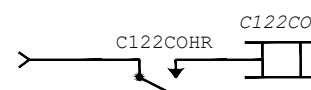
Signal C122 Route Request Cancel Central Office Indication



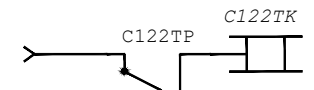
Signal C122 In-Time Central Office Indication



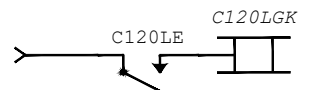
Signal C120 Flashing Lunar Central Office Indication



Signal C122 Call-On Central Office Indication



C122T Track Circuit Central Office Indication



Signal C120 Lunar Central Office Indication



Signal C122 Flashing Lunar Central Office Indication

Jun 22, 2020 - 11:37am C:\cadd\ib\paw\gfonkes\west\0139440\01JL401-408\_Alum Rock\_NV.dwg

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



SUBMITTED

**HNTB** HNTB Corporation  
Engineers Architects Planners  
1732 North First Street, Suite 400 San Jose, CA 95112  
Tel (408) 451-7300 Fax (408) 451-6942

DESIGNED: M.BAKHIN  
CHECKED: V.FAINGOLD  
DRAWN: M.BAKHIN  
CADD FILE NAME: 801JL403.dwg

Santa Clara Valley  
**Transportation Authority**

APPROVED

**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

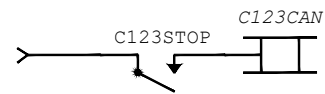
CADD FILE DATE: 03/11/19  
SCALE: NTS  
SUBMITTAL DATE: 06/29/20  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
ALUM ROCK INTERLOCKING  
NON-VITAL LOGIC (3 OF 9)

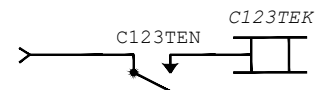
PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

SHEET OF  
DRAWING NO. JL403  
REVISION B





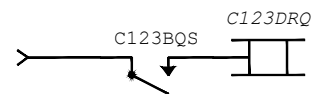
Signal C123 Route Request Cancel Central Office Indication



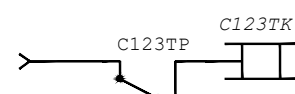
Signal C123 In-Time Central Office Indication



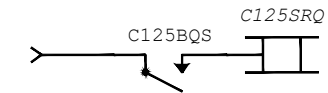
Signal C125 Red Central Office Indication



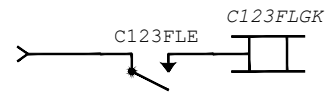
Signal C123 to Signal C122 (Diverge) Route Request Indication To Central Office



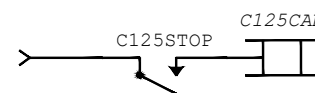
C123T Track Circuit Central Office Indication



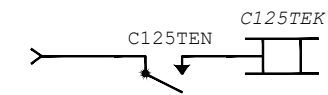
Signal C125 to Signal C122 (Straight) Route Request Indication To Central Office



Signal C123 Flashing Lunar Central Office Indication



Signal C125 Route Request Cancel Central Office Indication



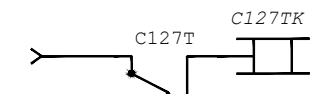
Signal C125 In-Time Central Office Indication



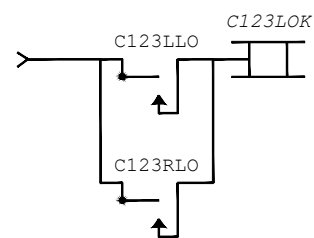
Signal C123 Lunar Central Office Indication



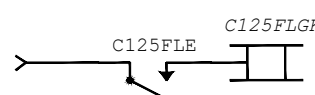
Signal C125 to Signal C120 (Diverge) Route Request Indication To Central Office



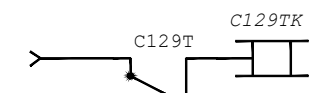
C127T Track Circuit Central Office Indication



Signal C123 Light-Out Central Office Indication



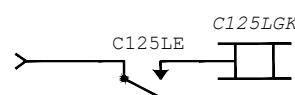
Signal C125 Flashing Lunar Central Office Indication



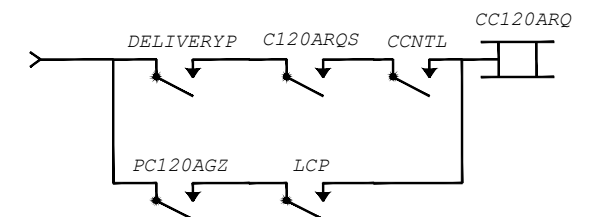
C129T Track Circuit Central Office Indication



Signal C123 Red Central Office Indication



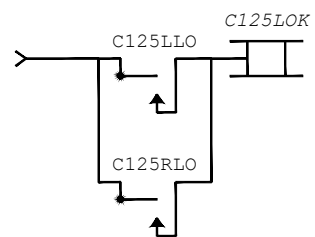
Signal C125 Lunar Central Office Indication



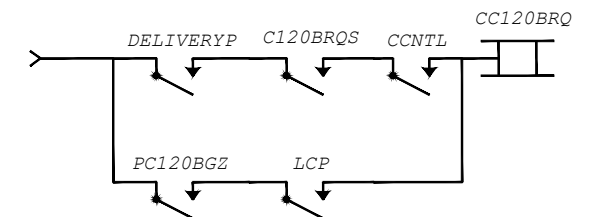
Signal C120 "A" Route Request - to Signal C125 (Normal Running to Eastridge)



Signal C123 to Signal C120 (Straight) Route Request Indication To Central Office



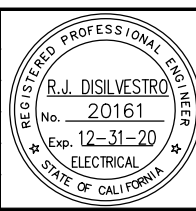
Signal C125 Light-Out Central Office Indication



Signal C120 "B" Route Request - to Signal C123 (Reverse Running to Eastridge)

Jun 22, 2020 - 11:37am C:\cadd\p\y\g\owkes\west\0139440\01JL401-408 Alum Rock.dwg

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



SUBMITTED

**HNTB** HNTB Corporation  
Engineers Architects Planners  
1732 North First Street, Suite 400 San Jose, CA 95112  
Tel (408) 451-7300 Fax (408) 451-6942

DESIGNED: M.BAKHIN  
CHECKED: V.FAINGOLD  
DRAWN: M.BAKHIN  
CADD FILE NAME: 801JL404.dwg



APPROVED

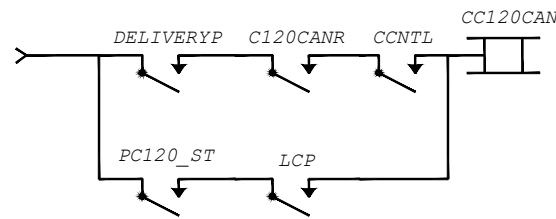
**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/11/19  
SUBMITTAL DATE: 06/29/20  
SCALE: NTS  
BOARD APPROVAL DATE:

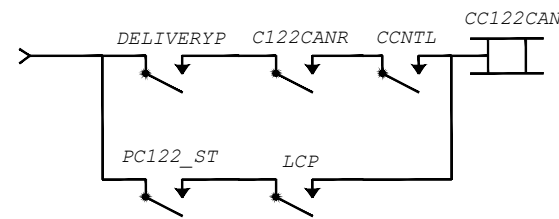
EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
ALUM ROCK INTERLOCKING  
NON-VITAL LOGIC (4 OF 9)

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

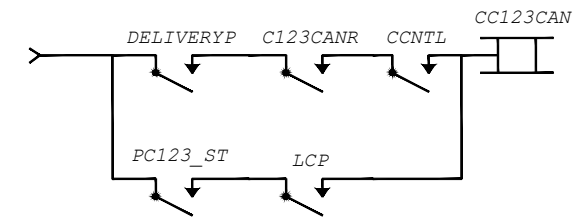
SHEET OF  
DRAWING NO. JL404  
REVISION B



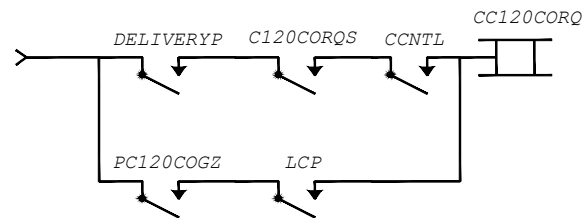
Signal C120 Cancel



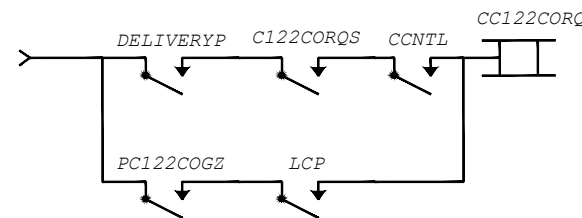
Signal C122 Cancel



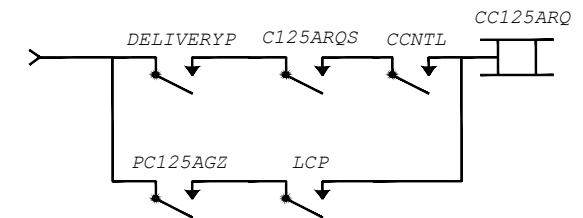
Signal C123 Cancel



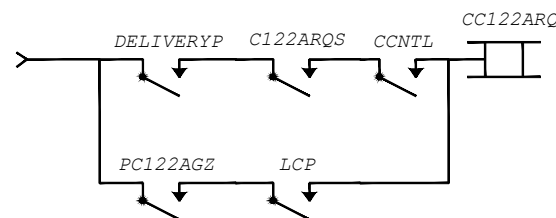
Signal C120 Call-On Request



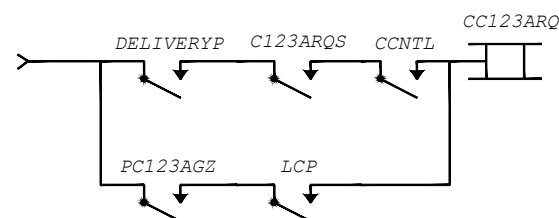
Signal C122 Call-On Request



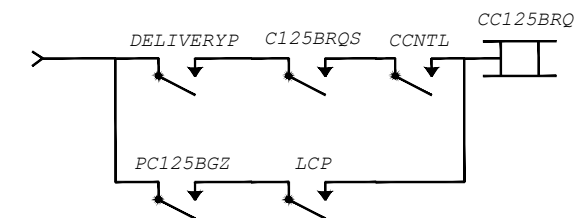
Signal C125 "A" Route Request - to Signal C120 (Normal Running)



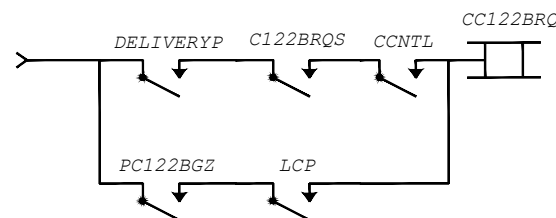
Signal C122 "A" Route Request - to Signal C122 (Normal Running to Eastridge)



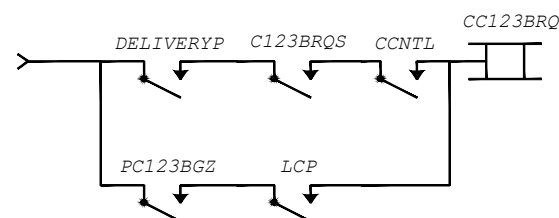
Signal C123 "A" Route Request - to Signal C120 (Normal Running)



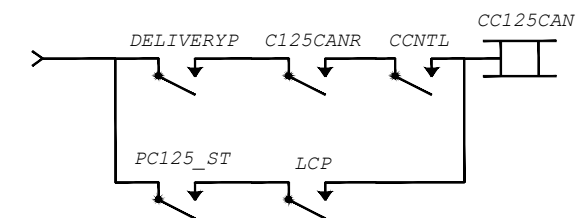
Signal C125 "B" Route Request - to Signal C122 (Reverse Running)



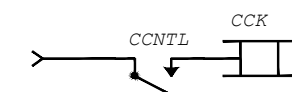
Signal C122 "B" Route Request - to Signal C123 (Reverse Running to Eastridge)



Signal C123 "B" Route Request - to Signal C122 (Reverse Running)



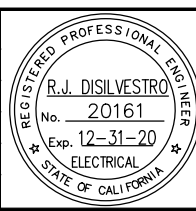
Signal C125 Cancel



Central Control Central Office Indication

Jun 22, 2020 - 11:27am C:\cadd\hntb\paw\gforbes\west\00139440\001L401-408 Alum Rock.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



**HNTB** HNTB Corporation  
 Engineers Architects Planners  
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DESIGNED: M.BAKHIN  
 CHECKED: V.FAINGOLD  
 DRAWN: M.BAKHIN  
 CADD FILE NAME: 801JL405.dwg



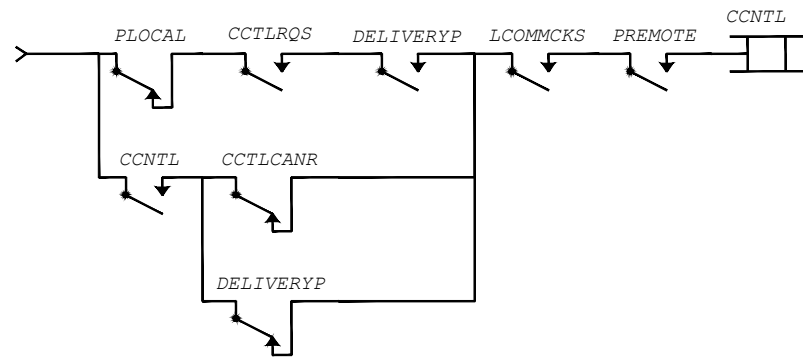
**BKF** 100+ YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

APPROVED: 03/11/19  
 SCALE: NTS  
 SUBMITTAL DATE: 06/29/20  
 BOARD APPROVAL DATE:

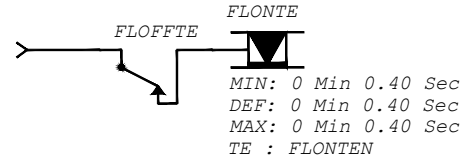
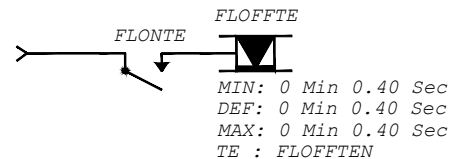
EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 LRT SIGNAL SYSTEMS  
 ALUM ROCK INTERLOCKING  
 NON-VITAL LOGIC (5 OF 9)

SHEET OF: JL405  
 REVISION: A

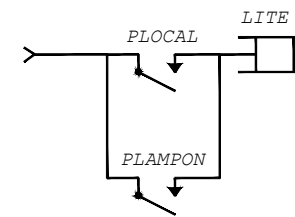
PCA NO.: 000  
 CONTRACT NO.: C801  
 FILE LOCATION: PROJECTWISE



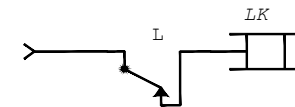
Central Control Mode



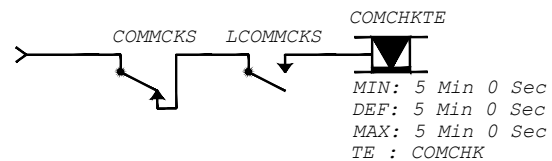
ElectroLogIXS HEALTH Central Office Indication



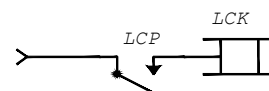
LCP Lamp Enable



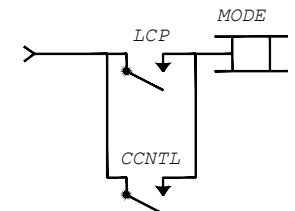
LCP Switch Lock Indication



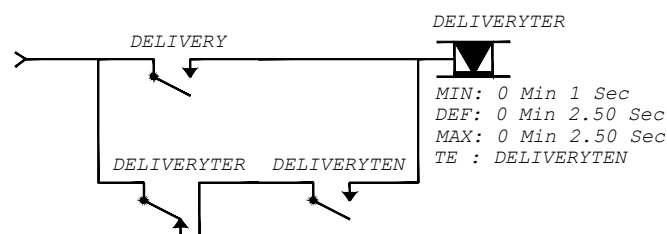
Delivery Bit Repeater



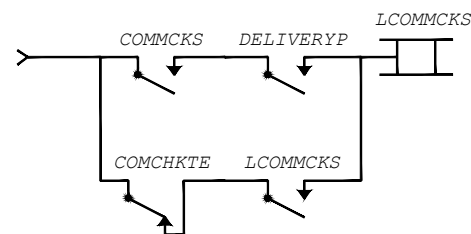
Local Control Central Office Indication



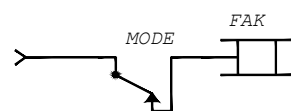
MODE Circuit, LCP Or Central Control



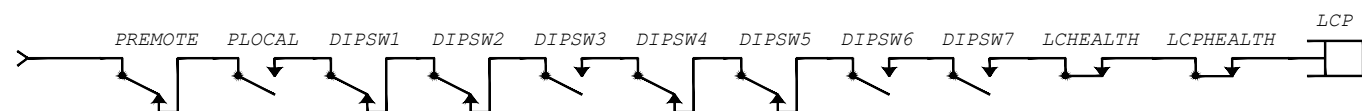
DELIVERY BIT TIMER



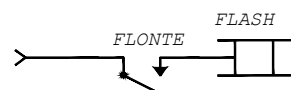
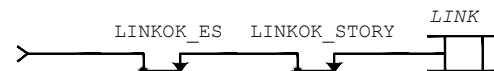
LCP Mode



Field Automatic Central Office Indication



Link Health Status Central Office Indication



Jun 22, 2020 - 11:37am C:\cadd\ib\y\g\owkes\west\0139440\01L401-408\_Alum Rock\_NV.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



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**HNTB** HNTB Corporation  
Engineers Architects Planners  
1732 North First Street, Suite 400 San Jose, CA 95112  
Tel (408) 451-7300 Fax (408) 451-6942

DESIGNED: M.BAKHIN  
CHECKED: V.FAINGOLD  
DRAWN: M.BAKHIN  
CADD FILE NAME: 801JL406.dwg

Santa Clara Valley  
**Transportation Authority**

APPROVED

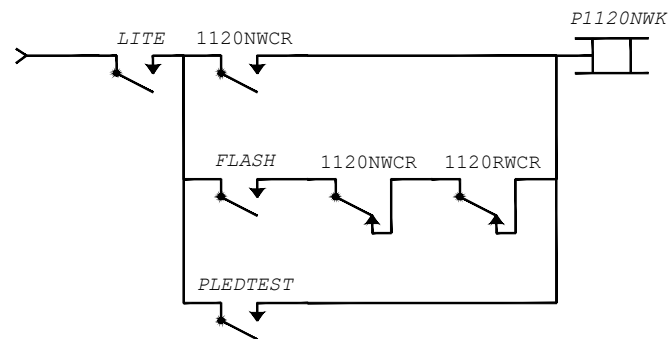
**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/11/19  
SUBMITTAL DATE: 06/29/20  
SCALE: NTS  
BOARD APPROVAL DATE:

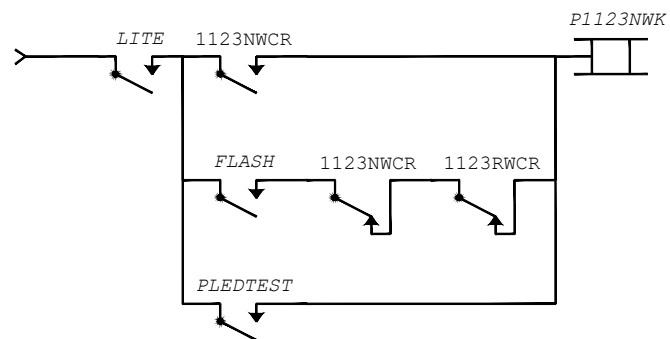
EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
ALUM ROCK INTERLOCKING  
NON-VITAL LOGIC (6 OF 9)

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

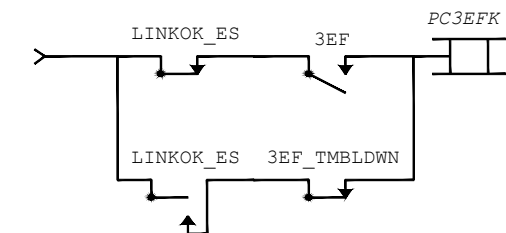
SHEET OF  
DRAWING NO. JL406  
REVISION A



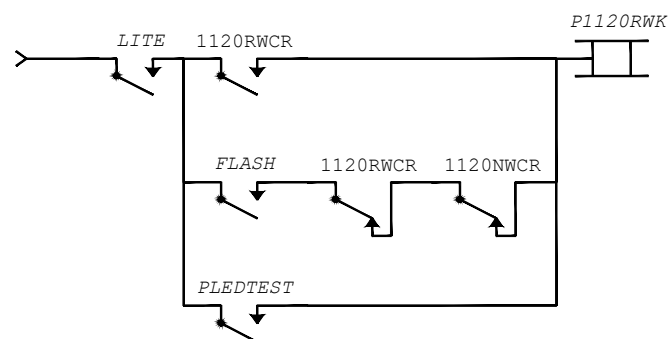
LCP Switch 1120 Normal Indication



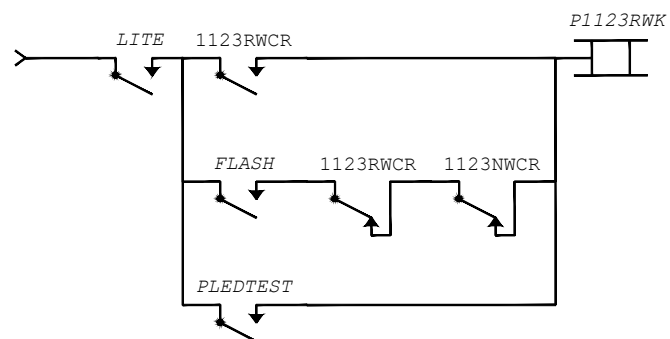
LCP Switch 1123 Normal Indication



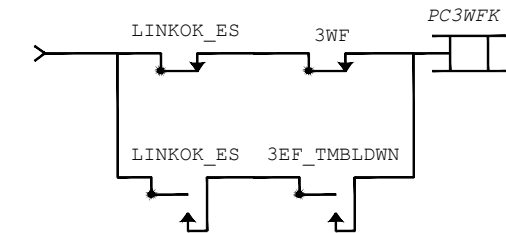
LCP Track 3 Eastbound Traffic Indication, Alum Rock to Eastridge



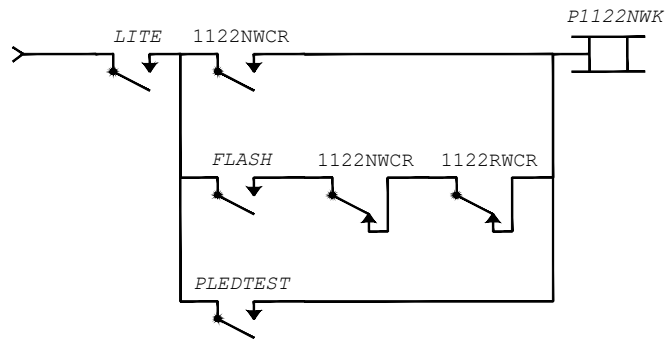
LCP Switch 1120 Reverse Indication



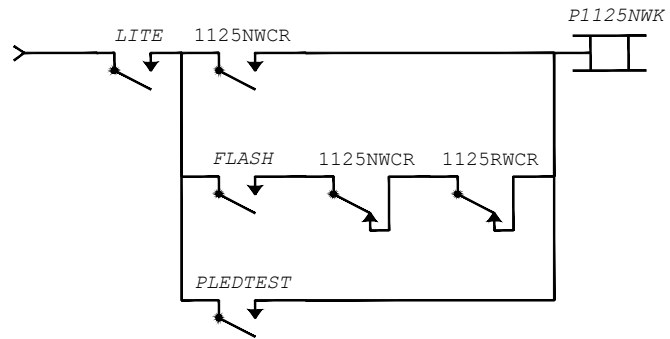
LCP Switch 1123 Reverse Indication



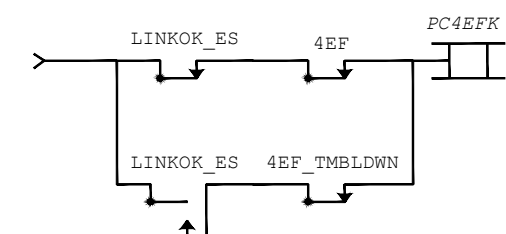
LCP Track 3 Westbound Traffic Indication, Alum Rock to Eastridge



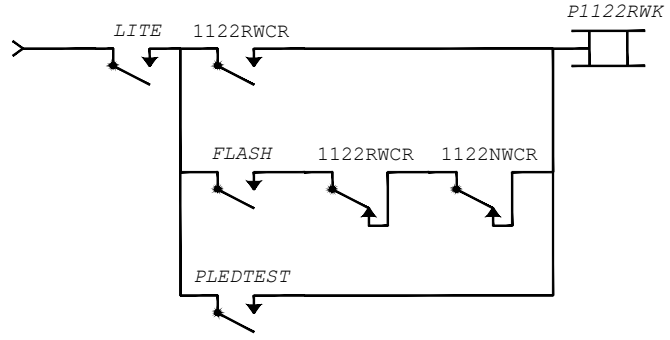
LCP Switch 1122 Normal Indication



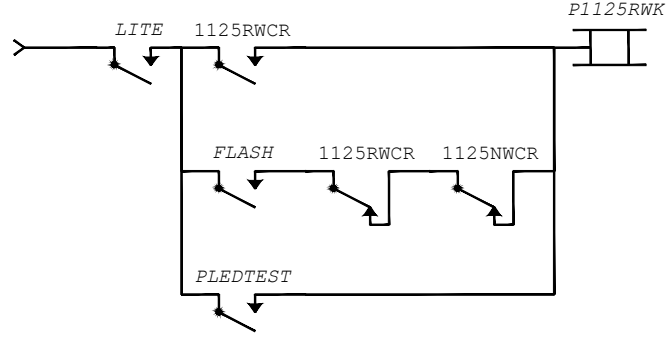
LCP Switch 1125 Normal Indication



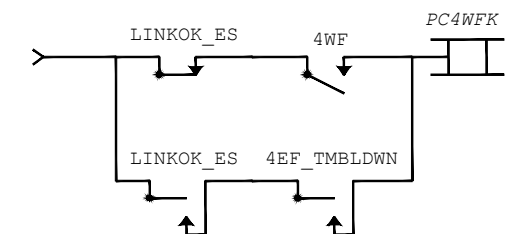
LCP Track 4 Eastbound Traffic Indication, Alum Rock to Eastridge



LCP Switch 1122 Reverse Indication



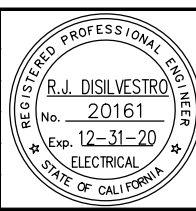
LCP Switch 1125 Reverse Indication



LCP Track 4 Westbound Traffic Indication, Alum Rock to Eastridge

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NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



**HNTB** HNTB Corporation  
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DESIGNED: M.BAKHIN  
CHECKED: V.FAINGOLD  
DRAWN: M.BAKHIN  
CADD FILE NAME: 801JL407.dwg



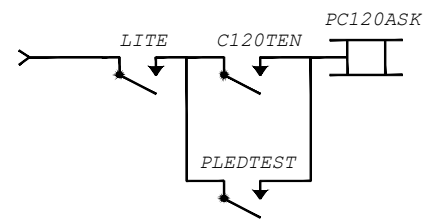
APPROVED: **BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/11/19  
SUBMITTAL DATE: 06/29/20  
SCALE: NTS  
BOARD APPROVAL DATE:

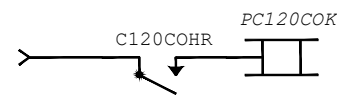
EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
ALUM ROCK INTERLOCKING  
NON-VITAL LOGIC (7 OF 9)

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

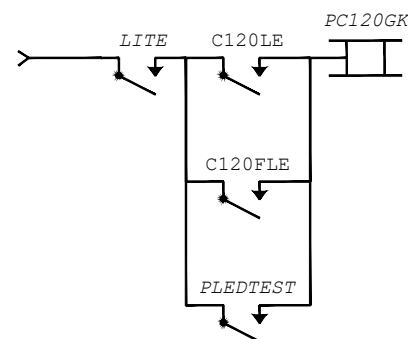
SHEET OF  
DRAWING NO. JL407  
REVISION A



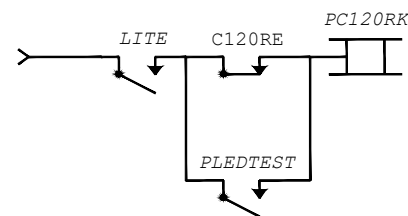
LCP Signal C120 In-Time Indication



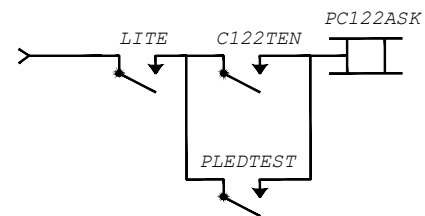
LCP Signal C120 Call-On Indication



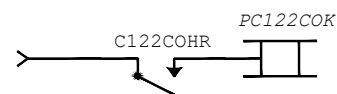
Signal C120 Cleared LCP Indication



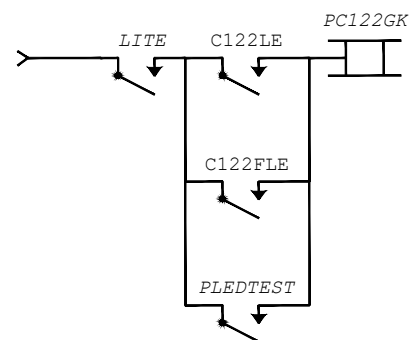
LCP Signal C120 Red Indication



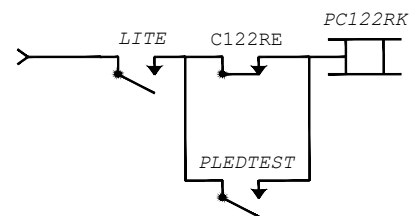
LCP Signal C122 In-Time Indication



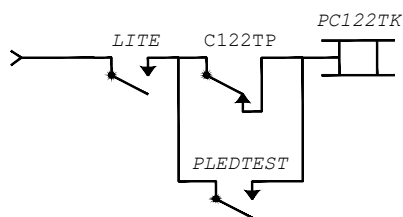
LCP Signal C122 Call-On Indication



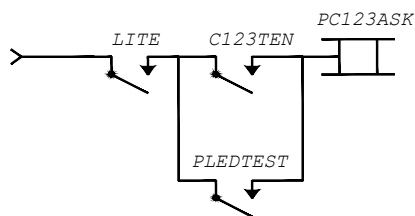
Signal C122 Cleared LCP Indication



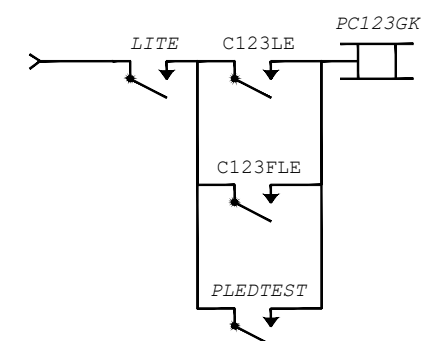
LCP Signal C122 Red Indication



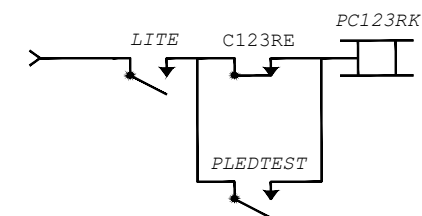
LCP C122T Track Circuit Indication



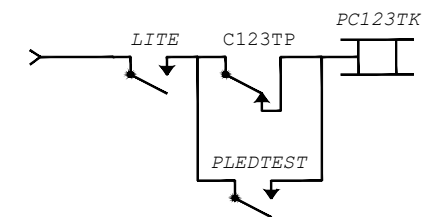
LCP Signal C123 In-Time Indication



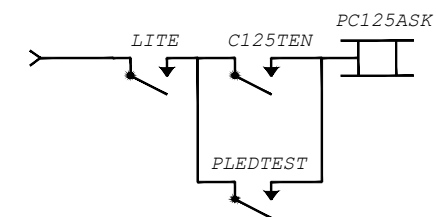
Signal C123 Cleared LCP Indication



LCP Signal C123 Red Indication



LCP C123T Track Circuit Indication



LCP Signal C125 In-Time Indication

Jun 22, 2020 - 11:27am C:\cadd\lib\paw\gforwkes\west\00139440\001L401-408\_Alum Rock\_NV.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET

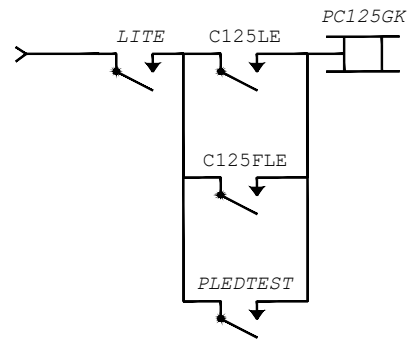


<b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
DESIGNED	CHECKED
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DRAWN	CADD FILE NAME
M.BAKHIN	801JL408.dwg

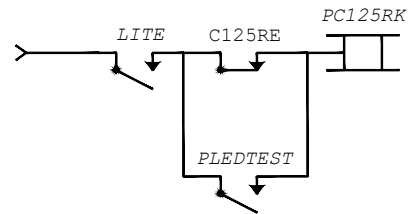


APPROVED <b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	SCALE
03/11/19	NTS
SUBMITTAL DATE	BOARD APPROVAL DATE
06/29/20	

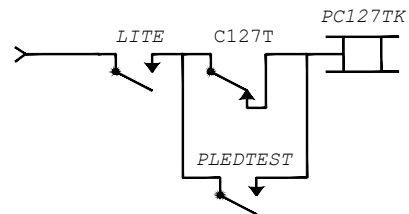
EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS ALUM ROCK INTERLOCKING NON-VITAL LOGIC (8 OF 9)			SHEET OF DRAWING NO. JL408 REVISION A
PCA NO.	CONTRACT NO.	FILE LOCATION	
000	C801	PROJECTWISE	



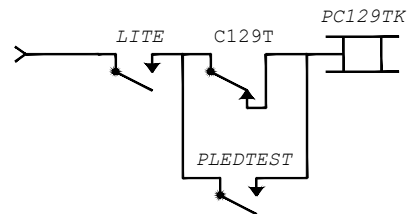
Signal C125 Cleared LCP Indication



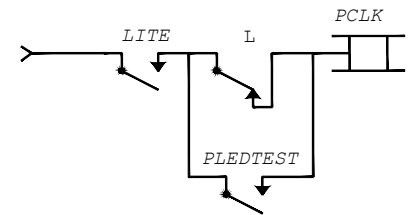
LCP Signal C125 Red Indication



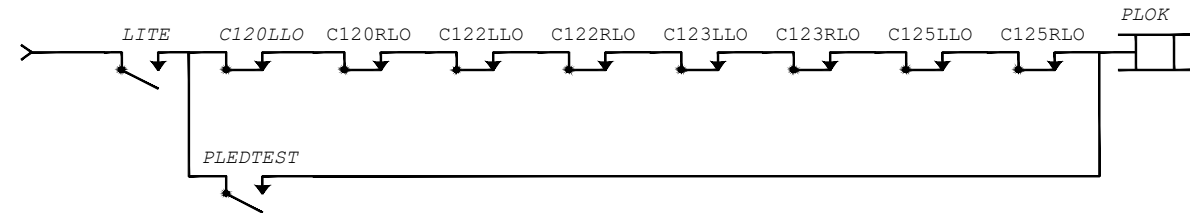
LCP C127T Track Circuit Indication



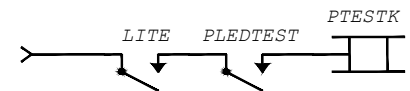
LCP C129T Track Circuit Indication



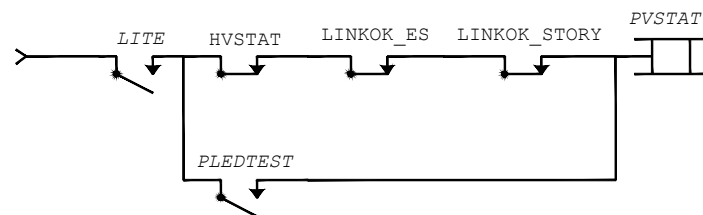
LCP Switch Lock Indication



LCP Light Out Alarm Indication

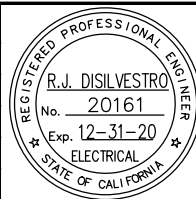


ElectroLogIXS HEALTH LCP Indication



Jun 22, 2020 - 11:37am C:\cadd\p\y\g\owkes\west\0139440\001L401-408\_Alum\_Rock\_NV.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



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M.BAKHIN	V.FAINGOLD
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M.BAKHIN	801JL409.dwg



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CADD FILE DATE	SCALE
03/11/19	NTS
SUBMITTAL DATE	BOARD APPROVAL DATE
06/29/20	

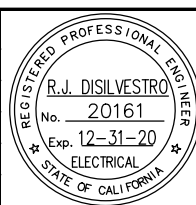
EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS ALUM ROCK INTERLOCKING NON-VITAL LOGIC (9 OF 9)		
PCA NO.	CONTRACT NO.	FILE LOCATION
000	C801	PROJECTWISE
SHEET OF	DRAWING NO.	REVISION
	JL409	A

ALUM ROC INTERLOCKING  
VITAL LOGIC  
EQUATION INDEX

Equation	Sheet	Equation	Sheet	Equation	Sheet	Equation	Sheet
1SIGSTOP	2	123ES	5	C122ACOQS	10	C125BRIR	15
2SIGSTOP	2	123ES1	5	C122AHR	10	C125BVQP	15
3EF	2	123WS	5	C122AQS	10	C125FLE	15
3EF_TMBLDWN	2	123WS1	5	C122ARIR	10	C125HR	16
3EFS	2	1120NW	5	C122ASR	10	C125LE	16
3ET_FZ	2	1120NWCR	5	C122AVQP	10	C125RCR	16
3ET_HP	2	1120RW	5	C122BCOQS	11	C125RE	16
3ETO1	2	1120RWCR	5	C122BHR	11	C125STOP	16
3ETO2	2	1122NW	5	C122BQS	11	C125TE	16
3ETO6	2	1122NWCR	5	C122BRIR	11	C127T	16
3ETO6TE	2	1122RW	5	C122BVQP	11	C127TP	16
3ETP	2	1122RWCR	5	C122COHR	11	C127TTE	16
3WF	2	1123NW	5	C122FLE	11	C129T	16
4EF	2	1123NWCR	6	C122H_TE	11	C129TP	16
4EF_TMBLDWN	2	1123RW	6	C122HR	12	C129TTE	17
4EFS	2	1123RWCR	6	C122HYR	12	FLEBTS	17
4ET_FZ	3	1125NW	6	C122LE	12	FLWBTS	17
4ET_HP	3	1125NWCR	6	C122RCR	12	HVSTAT	17
4ETO1	3	1125RW	6	C122RCRA	12	L	17
4ETO2	3	1125RWCR	6	C122RCRB	12	LINKOK_ES	17
4ETO6	3	AE_3EFQ_O	6	C122RE	13	LINKOK_ES TE	17
4ETO6TE	3	AE_3WBP_O	6	C122STOP	13	LINKOK_STORY	17
4ETP	3	AE_3WF_O	6	C122TE	13	Z	17
4WF	3	AE_4EFQ_O	6	C122TP	13	ZTE	17
20_25AN	3	AE_4WBP_O	7	C122TTE	13	REMOTE I/O CHART	17
20_25NWC	3	AE_4WF_O	7	C123AHR	13		
20_25NWR	3	AE_LINKOK_O	7	C123AQS	13		
20_25NWS	3	C120ACOQS	7	C123ARIR	13		
20_25NWZ	3	C120AHR	7	C123ASR	13		
20_25RS	4	C120AQS	7	C123AVQP	13		
20_25RWC	4	C120ARIR	7	C123BHR	13		
20_25RWR	4	C120ASR	7	C123BQS	14		
20_25RWS	4	C120AVQP	7	C123BRIR	14		
20_25RWZ	4	C120BCOQS	8	C123BVQP	14		
22_23AN	4	C120BHR	8	C123FLE	14		
22_23NWC	4	C120BQS	8	C123HR	14		
22_23NWR	4	C120BRIR	8	C123LE	14		
22_23NWS	4	C120BVQP	8	C123RCR	14		
22_23NWZ	4	C120COHR	8	C123RE	14		
22_23RS	4	C120FLE	8	C123STOP	14		
22_23RWC	4	C120H_TE	8	C123TE	15		
22_23RWR	4	C120HR	9	C123TP	15		
22_23RWS	5	C120HYR	9	C123TTE	15		
22_23RWZ	5	C120LE	9	C125AHR	15		
122ES	5	C120RCR	9	C125AQS	15		
122ES1	5	C120RCRA	9	C125ARIR	15		
122WS	5	C120RCRB	9	C125ASR	15		
122WS1	5	C120RE	10	C125AVQP	15		
		C120STOP	10	C125BHR	15		
		C120TE	10	C125BQS	15		

Jun 22, 2020 11:58am C:\cadd\lib\paw\gfoakes\west\d0139440\001L410-426\_Alum\_Roc\_V.dwg

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



SUBMITTED

**HNTB** HNTB Corporation  
Engineers Architects Planners  
1732 North First Street, Suite 400 San Jose, CA 95112  
Tel (408) 451-7300 Fax (408) 451-6942

DESIGNED M.BAKHIN	CHECKED V.FAINGOLD
DRAWN M.BAKHIN	CADD FILE NAME 801JL410.dwg

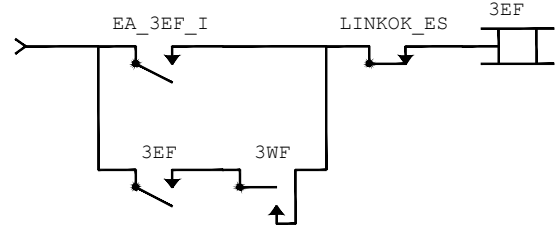
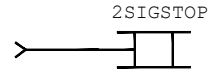
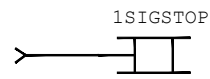


APPROVED

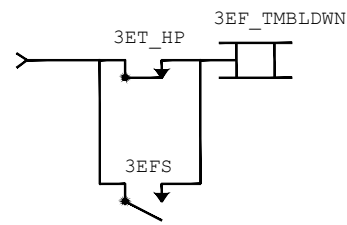
**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE 03/11/19	SCALE NTS
SUBMITTAL DATE 06/29/20	BOARD APPROVAL DATE

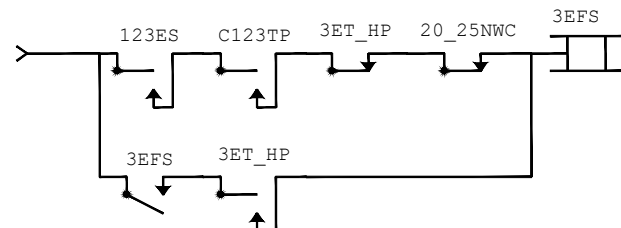
EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT			SHEET OF
LRT SIGNAL SYSTEMS ALUM ROCK INTERLOCKING VITAL LOGIC (1 OF 17)			DRAWING NO. JL410
			REVISION B
PCA NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE	



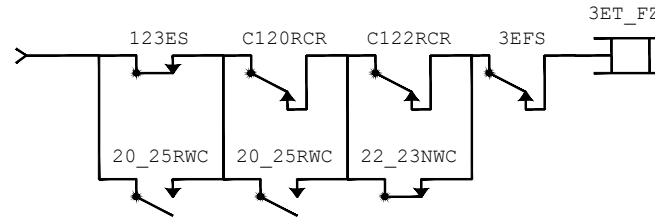
Track 3 Eastbound Traffic Between Alum Rock and Eastridge



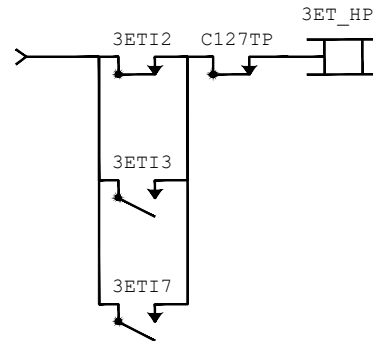
Track 3 Eastbound - Tumble Down Indication  
Tumble Down - Backup Traffic Operation,  
Activates When Link Between Alum Rock and Eastridge is Failed



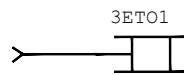
Track 3 Eastbound Following Stick Circuit



3ET Traffic Request (Tumble Down)



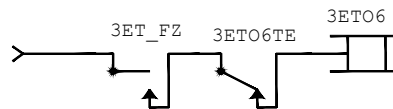
3ET H Repeater (Vital Signal Clearing Codes)



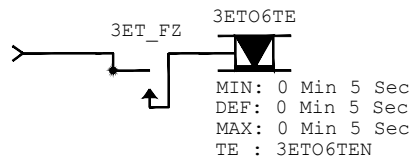
3ET Code 1 Out



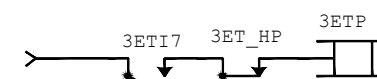
3ET Code 2 Out



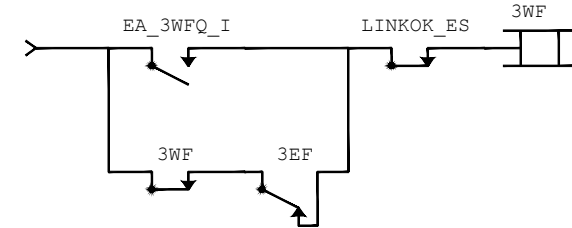
3ET Code 6 Out



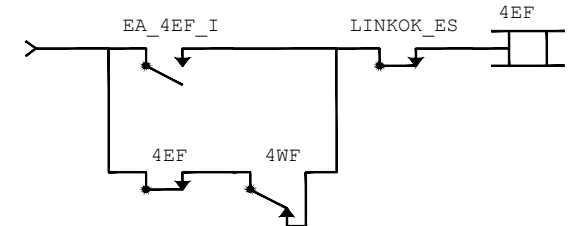
3ET Code 6 Timer



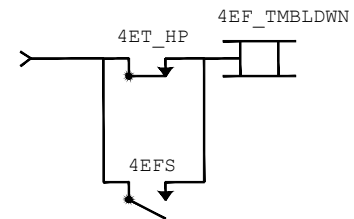
3ETP - 3ET Code I7 Repeater, All Tracks Are Clear  
b/w Alum Rock and Eastridge



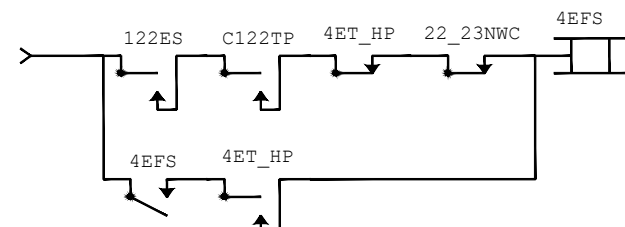
Track 3 Westbound Traffic Between Alum Rock and Eastridge



Track 4 Eastbound Traffic Between Alum Rock and Eastridge



Track 4 Eastbound - Tumble Down Indication  
Tumble Down - Backup Traffic Operation,  
Activates When Link Between Alum Rock and Eastridge is Failed



Track 4 Eastbound Following Stick Circuit

Jun 22, 2020 11:58am C:\cadd\p\y\g\owkes\west\0139440\01LL410-426\_Alum Rock\_V.dwg

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



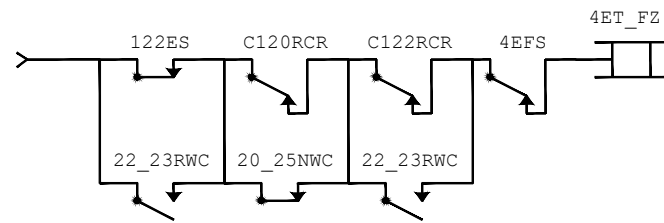
**HNTB** HNTB Corporation  
 1732 North First Street, Suite 400 San Jose, CA 95112  
 Tel (408) 451-7300 Fax (408) 451-6942  
 DESIGNED: M.BAKHIN CHECKED: V.FAINGOLD  
 DRAWN: M.BAKHIN CADD FILE NAME: 801JL411.dwg

**Santa Clara Valley Transportation Authority**

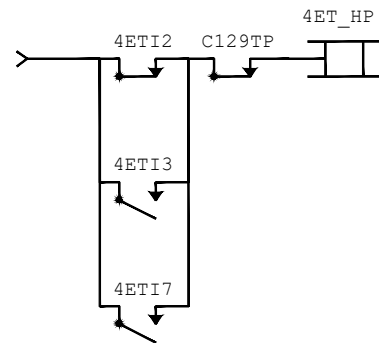
**BKF 100+ YEARS**  
 ENGINEERS / SURVEYORS / PLANNERS  
 CADD FILE DATE: 03/11/19 SCALE: NTS  
 SUBMITTAL DATE: 06/29/20 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 LRT SIGNAL SYSTEMS  
 ALUM ROCK INTERLOCKING  
 VITAL LOGIC (2 OF 17)  
 SHEET OF JL411 REVISION A  
 PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

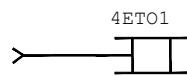




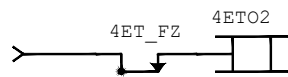
4ET Traffic Request (Tumble Down)



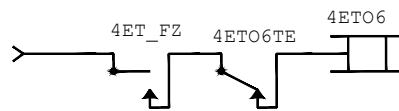
4ET H Repeater (Vital Signal Clearing Codes)



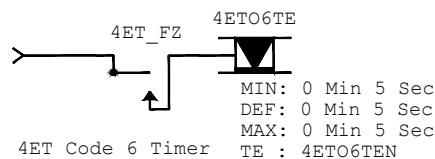
4ET Code 1 Out



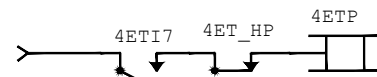
4ET Code 2 Out



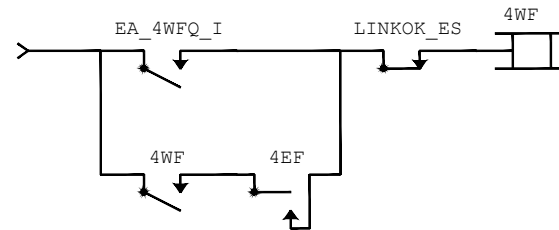
4ET Code 6 Out



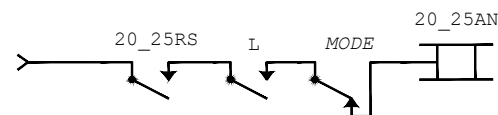
4ET Code 6 Timer



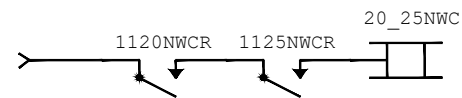
4ETP - 4ET Code I7 Repeater, All Tracks Are Clear b/w Alum Rock and Eastridge



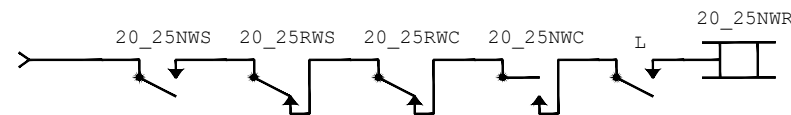
Track 4 Westbound Traffic Between Alum Rock and Eastridge



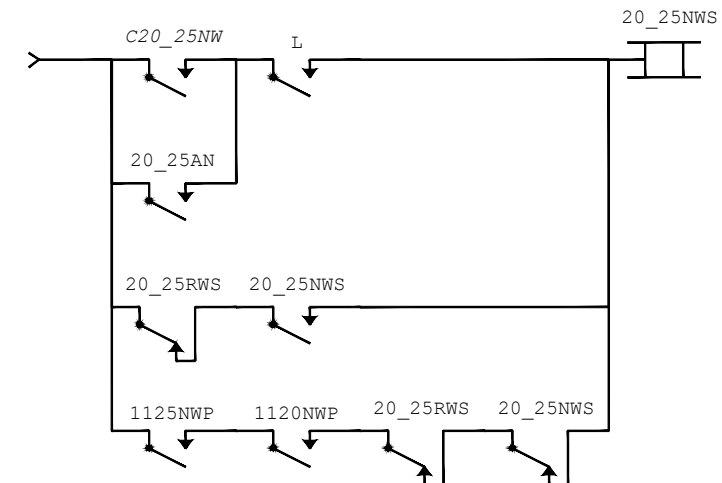
Switch 1120/1125 Circuits



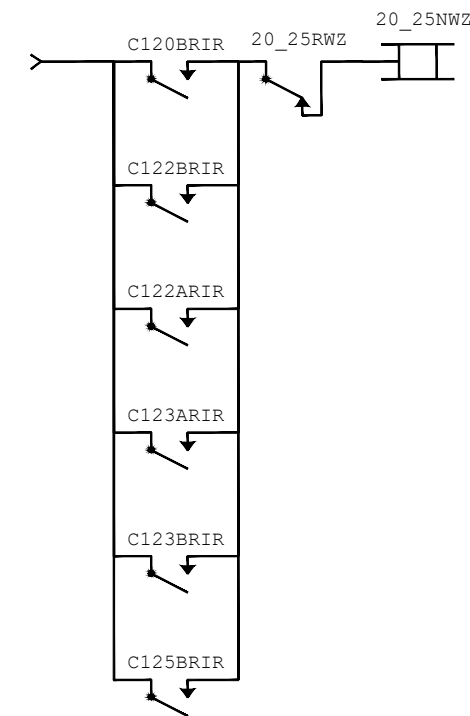
Switch 1120/1125 Normal Correspondence



Switch 1120/1125 Normal Switch Throw



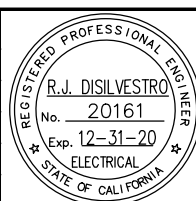
Switch 1120/1125 Normal Switch Throw Request



Switch 1120/1125 Normal Switch Throw Request

Jun 22, 2020 - 11:58am C:\cadd\p\y\g\owkes\west\0139440\01L410-426\_Alum Rock\_V.dwg

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



SUBMITTED

**HNTB** HNTB Corporation  
Engineers Architects Planners  
1732 North First Street, Suite 400 San Jose, CA 95112  
Tel (408) 451-7300 Fax (408) 451-6942

DESIGNED: M.BAKHIN CHECKED: V.FAINGOLD  
DRAWN: M.BAKHIN CADD FILE NAME: 801JL412.dwg

Santa Clara Valley  
**Transportation Authority**

APPROVED

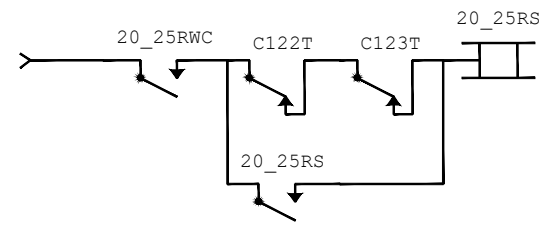
**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/11/19 SCALE: NTS  
SUBMITTAL DATE: 06/29/20 BOARD APPROVAL DATE:

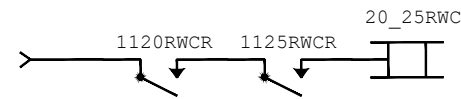
EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
ALUM ROCK INTERLOCKING  
VITAL LOGIC (3 OF 17)

PCAN NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

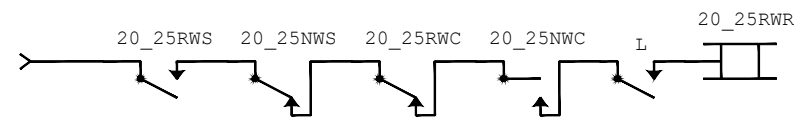
SHEET OF DRAWING NO. JL412 REVISION B



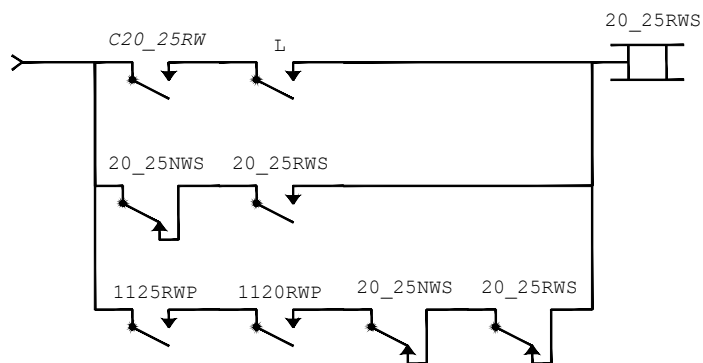
Switch 1120/1125 Circuits



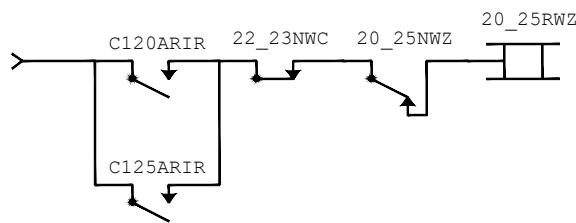
Switch 1120/1125 Reverse Correspondence



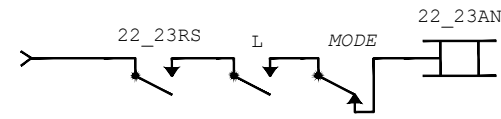
Switch 1120/1125 Reverse Switch Throw



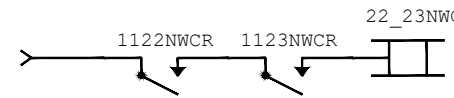
Switch 1120/1125 Reverse Switch Throw Request



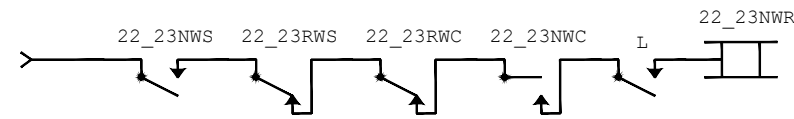
Switch 1120/1125 Reverse Switch Throw Request



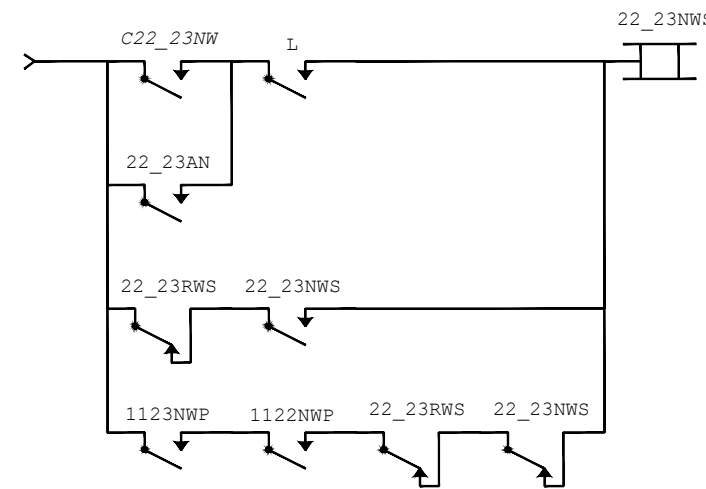
Switch 1122/1123 Circuits



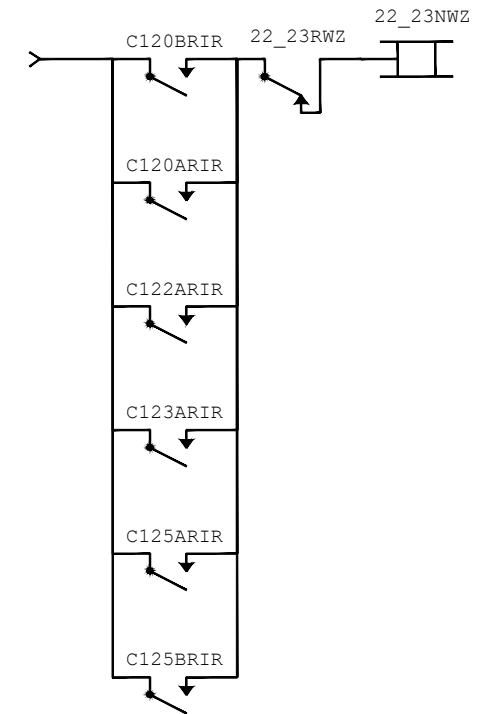
Switch 1122/1123 Normal Correspondence



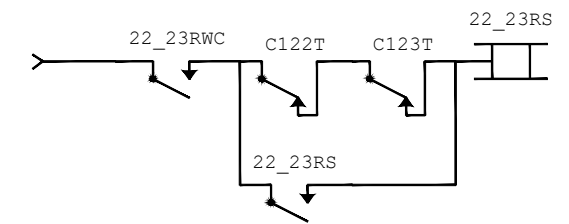
Switch 1122/1123 Normal Switch Throw



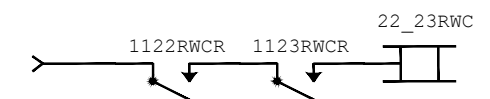
Switch 1122/1123 Normal Switch Throw Request



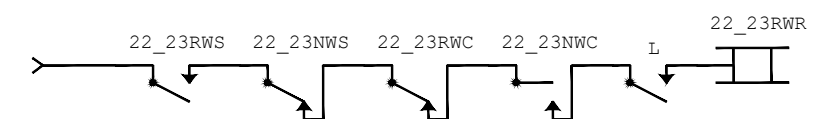
Switch 1122/1123 Normal Switch Throw Request



Switch 1122/1123 Circuits



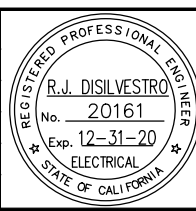
Switch 1122/1123 Reverse Correspondence



Switch 1122/1123 Reverse Switch Throw

Jun 22, 2020 11:58am C:\cadd\p\y\g\owkes\west\0139440\01L410-426\_Alum Rock\_V.dwg

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



SUBMITTED

**HNTB** HNTB Corporation  
Engineers Architects Planners  
1732 North First Street, Suite 400 San Jose, CA 95112  
Tel (408) 451-7300 Fax (408) 451-6942

DESIGNED: M.BAKHIN  
CHECKED: V.FAINGOLD  
DRAWN: M.BAKHIN  
CADD FILE NAME: 801JL413.dwg

**Santa Clara Valley Transportation Authority**

APPROVED

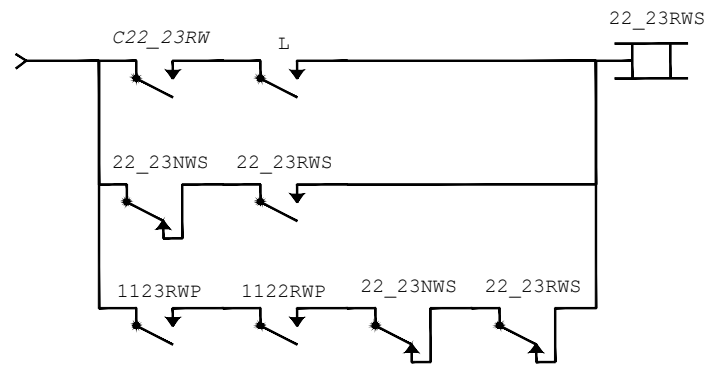
**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/11/19  
SUBMITTAL DATE: 06/29/20  
SCALE: NTS  
BOARD APPROVAL DATE:

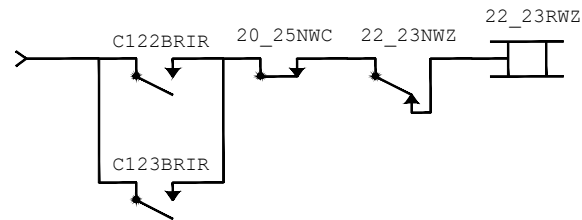
EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
ALUM ROCK INTERLOCKING  
VITAL LOGIC (4 OF 17)

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

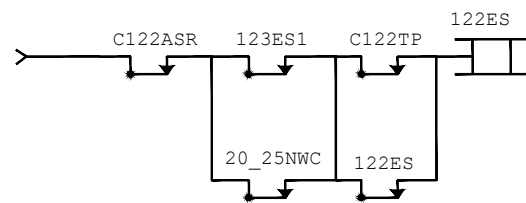
SHEET OF  
DRAWING NO. JL413  
REVISION B



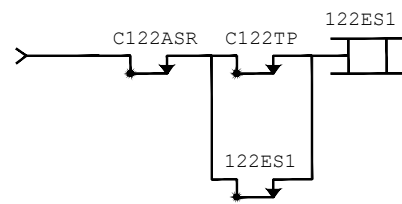
Switch 1122/1123 Reverse Switch Throw Request



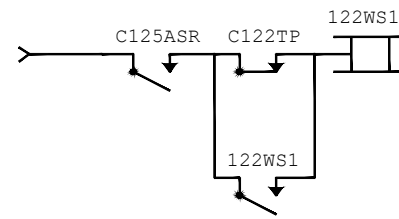
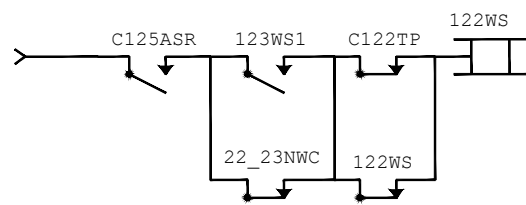
Switch 1122/1123 Reverse Switch Throw Request



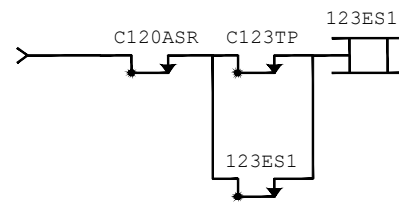
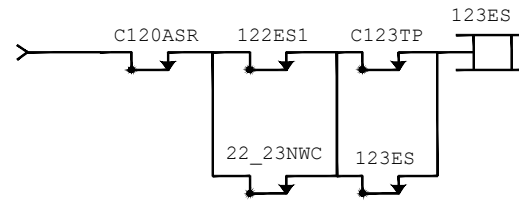
C122T Eastbound Route Stick



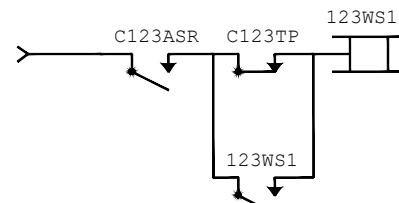
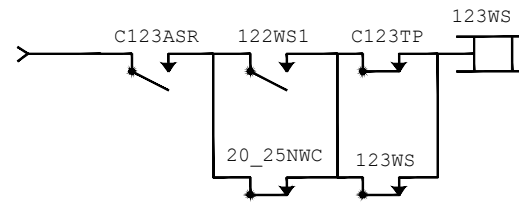
122T Westbound Route Stick



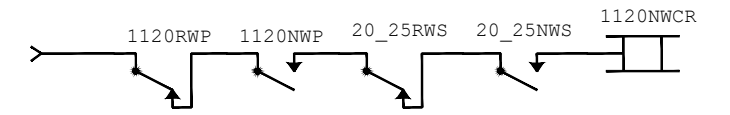
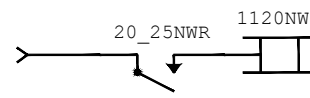
C123T Eastbound Route Stick



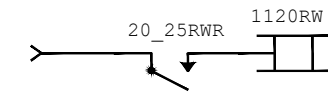
123T Westbound Route Stick



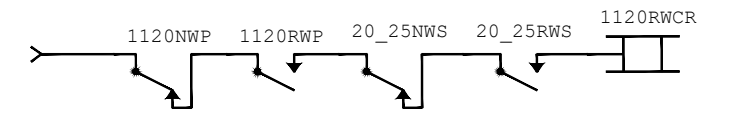
Power Switch Normal Switch Throw



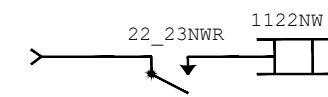
Switch 1120 Normal Correspondence



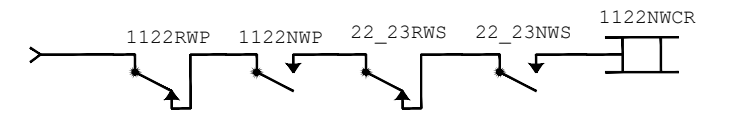
Switch 1120 Reverse Switch Throw



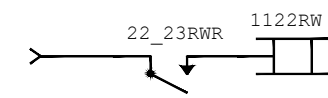
Switch 1120 Reverse Correspondence



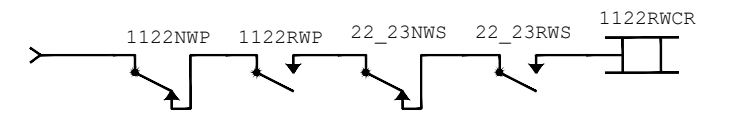
Switch 1122 Normal Switch Throw



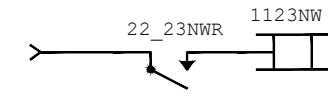
Switch 1122 Normal Correspondence



Switch 1122 Reverse Switch Throw



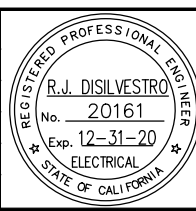
Switch 1122 Reverse Correspondence



Switch 1123 Normal Switch Throw

Jun 22, 2020 - 11:58am C:\cadd\hwy\gforbes\west\0139440\01JL410-426\_Alum Rock\_V.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET

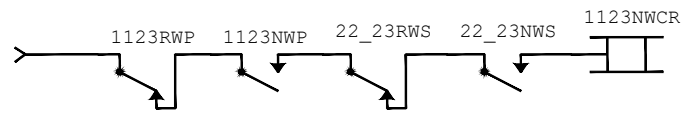


<b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
DESIGNED	CHECKED
M.BAKHIN	V.FAINGOLD
DRAWN	CADD FILE NAME
M.BAKHIN	801JL414.dwg

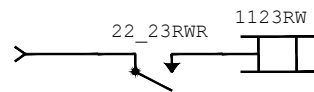


APPROVED <b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	SCALE
03/11/19	NTS
SUBMITTAL DATE	BOARD APPROVAL DATE
06/29/20	

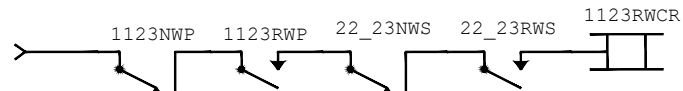
EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS ALUM ROCK INTERLOCKING VITAL LOGIC (5 OF 17)			SHEET OF DRAWING NO. JL414 REVISION A
PCA NO.	CONTRACT NO.	FILE LOCATION	
000	C801	PROJECTWISE	



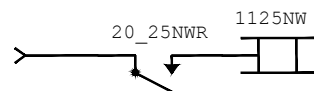
Switch 1123 Normal Correspondence



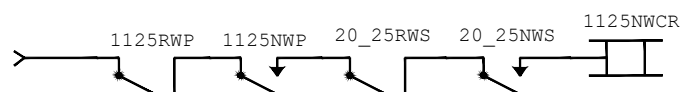
Switch 1123 Reverse Switch Throw



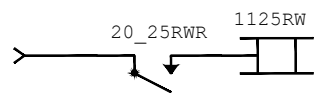
Switch 1123 Reverse Correspondence



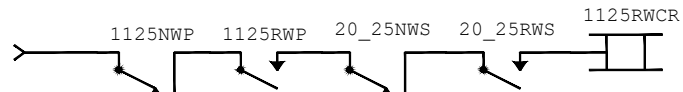
Switch 1125 Normal Switch Throw



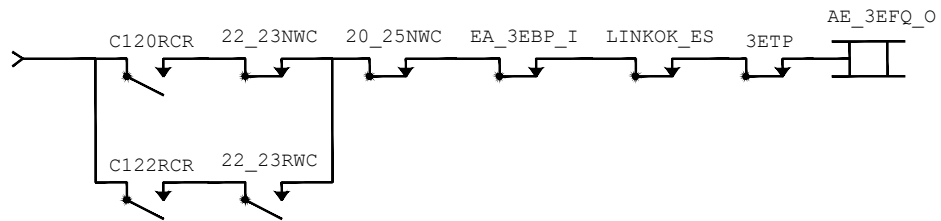
Switch 1125 Normal Correspondence



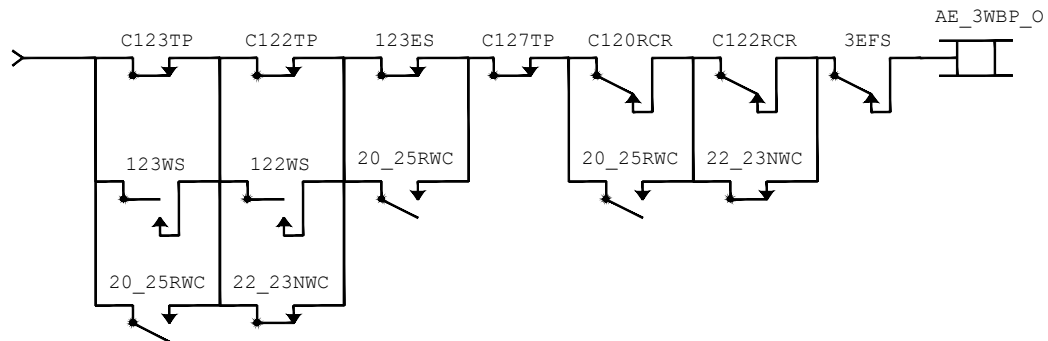
Switch 1125 Reverse Switch Throw



Switch 1125 Reverse Correspondence



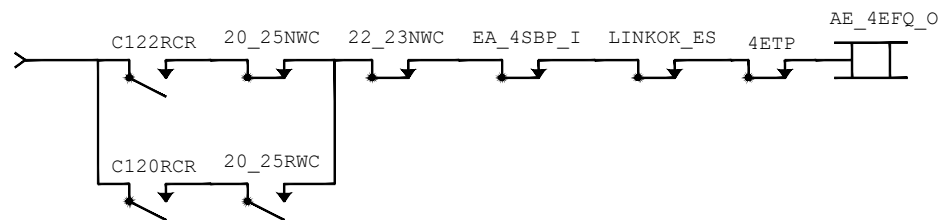
Track 3 Eastbound Traffic Request To Eastridge, Sent to Eastridge



Track 3 Westbound Block Repeater To Eastridge



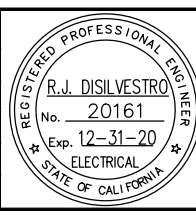
Track 3 westbound Traffic Between Alum Rock and Eastridge, Sent to Eastridge



Track 4 Southbound Traffic Request To Eastridge, Sent to Eastridge

Jun 22, 2020 - 11:58am C:\cadd\p\work\west\0139440\01L10-426\_Alum Rock\_V.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET

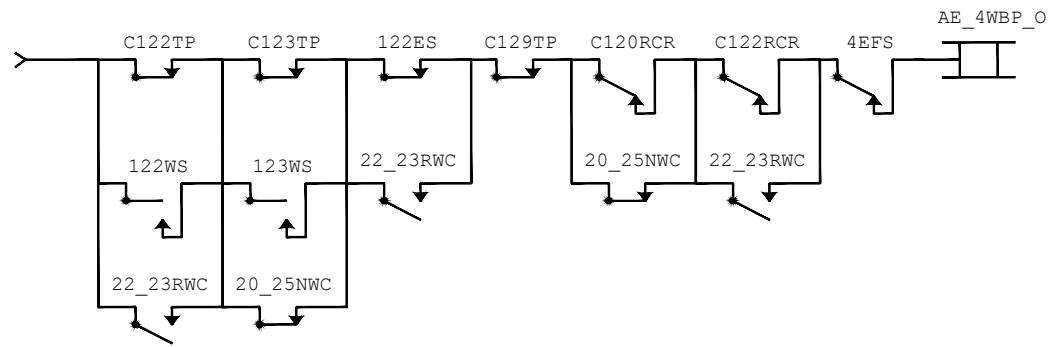


<b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
DESIGNED	CHECKED
M.BAKHIN	V.FAINGOLD
DRAWN	CADD FILE NAME
M.BAKHIN	801JL415.dwg

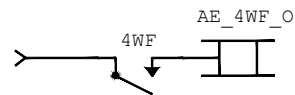


APPROVED <b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	SCALE
03/11/19	NTS
SUBMITTAL DATE	BOARD APPROVAL DATE
06/29/20	

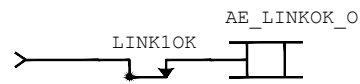
EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS ALUM ROCK INTERLOCKING VITAL LOGIC (6 OF 17)			SHEET OF DRAWING NO. JL415 REVISION A
PCA NO.	CONTRACT NO.	FILE LOCATION	
000	C801	PROJECTWISE	



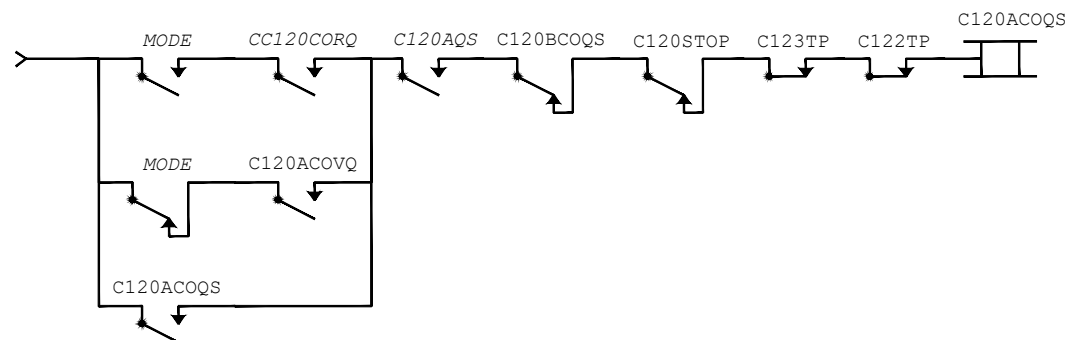
Track 4 Westbound Block Repeater To Eastridge



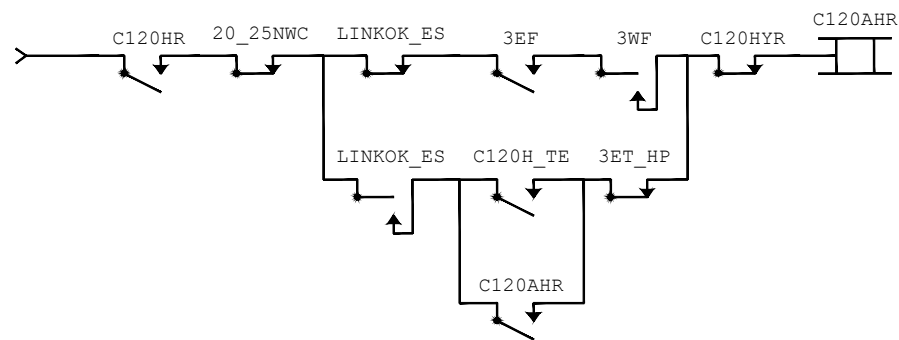
Track 4 Westbound Traffic Between Alum Rock and Eastridge, Sent to Eastridge



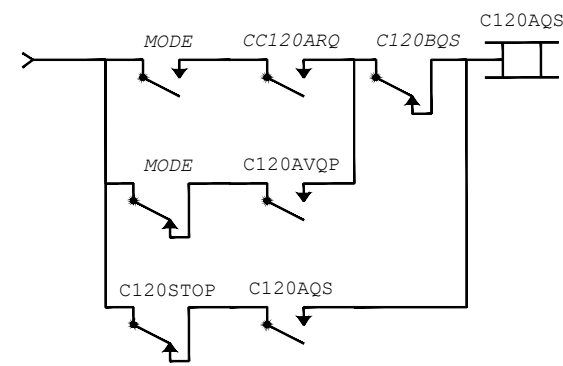
Link Health Status Repeater, Sent to Eastridge



Signal C120 Call-On "A" Route Request - to Signal C125 (Normal Running to Eastridge)



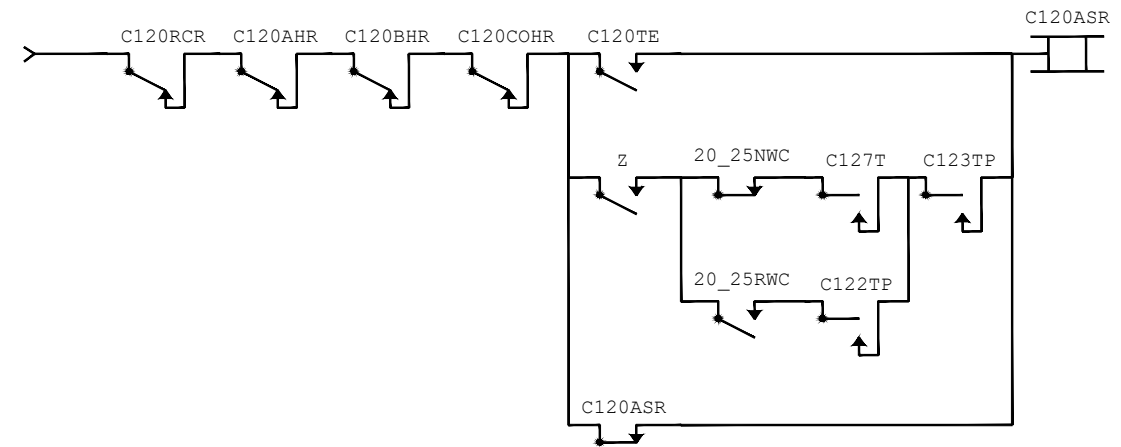
Signal C120 Home Circuit Straight, C120-C123



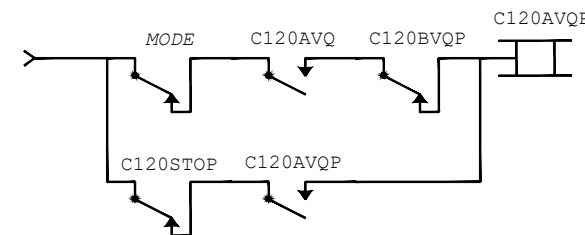
Signal C120 "A" Route Request - to Signal C125 (Normal Running to Eastridge)



Route Initiation Circuit, Signal C120 "A" Route - to Signal C125 (Normal Running to Eastridge)



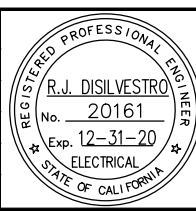
Signal C120 Approach Stick Route Locking



TWC Route Request, Signal C120 "A" Route - to Signal C125 (Normal Running to Eastridge)

Jun 22, 2020 - 11:58am C:\cadd\ib\paw\gfonkes\west\0139440\01L410-426\_Alum Rock\_V.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET

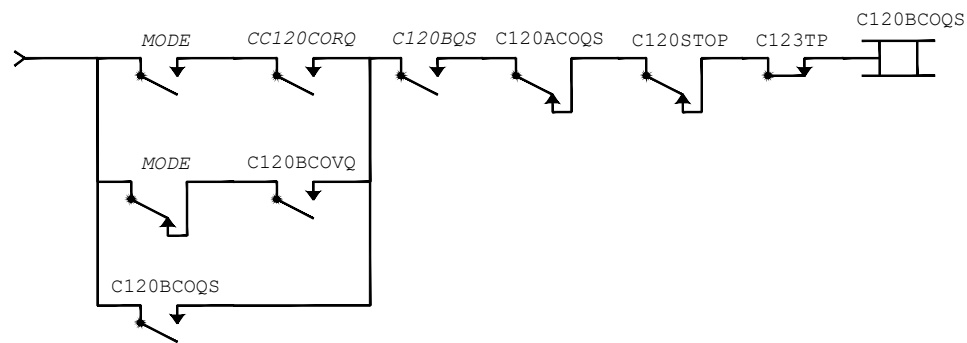


<b>HNTB</b> HNTB Corporation 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
DESIGNED	CHECKED
M.BAKHIN	V.FAINGOLD
DRAWN	CADD FILE NAME
M.BAKHIN	801JL416.dwg

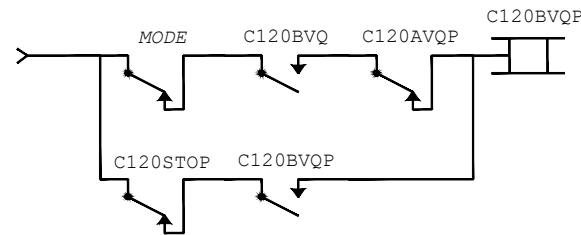


APPROVED <b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	SCALE
03/11/19	NTS
SUBMITTAL DATE	BOARD APPROVAL DATE
06/29/20	

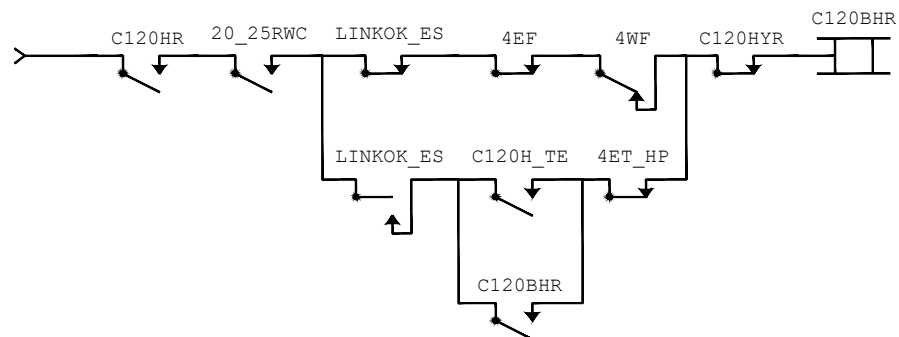
EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS ALUM ROCK INTERLOCKING VITAL LOGIC (7 OF 17)			SHEET OF DRAWING NO. JL416 REVISION A
PCA NO.	CONTRACT NO.	FILE LOCATION	
000	C801	PROJECTWISE	



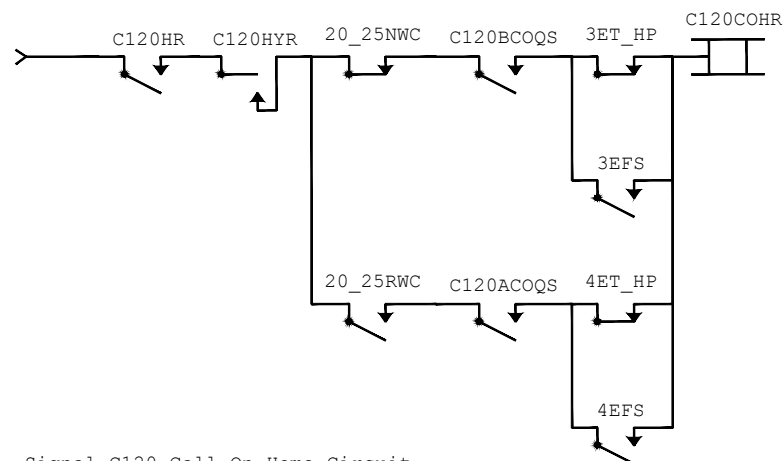
Signal C120 Call-On "B" Route Request - to Signal C123 (Reverse Running to Eastridge)



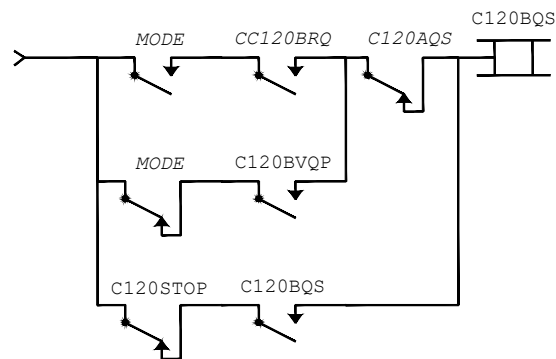
TWC Route Request, Signal C120 "B" Route - to Signal C123 (Reverse Running to Eastridge)



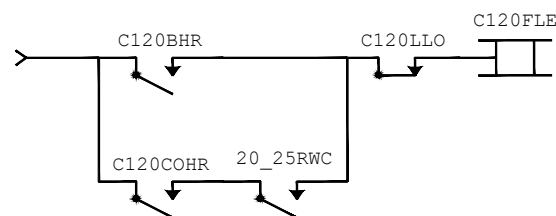
Signal C120 Home Circuit Diverge, C120-C125



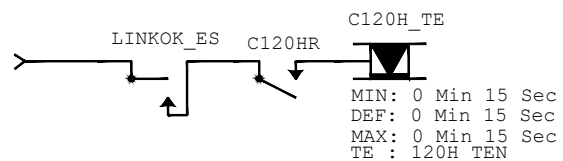
Signal C120 Call-On Home Circuit



Signal C120 "B" Route Request - to Signal C123 (Reverse Running to Eastridge)



Signal C120 Flashing Lunar Aspect



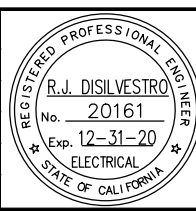
Signal C120 Home Circuit, Timer to Delay Clearing If Tumble Down Is Enabled



Route Initiation Circuit, Signal C120 "B" Route - to Signal C123 (Reverse Running to Eastridge)

Jun 22, 2020 - 11:36am C:\cadd\p\work\west\0139440\01L410-426\_Alum Rock\_V.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET

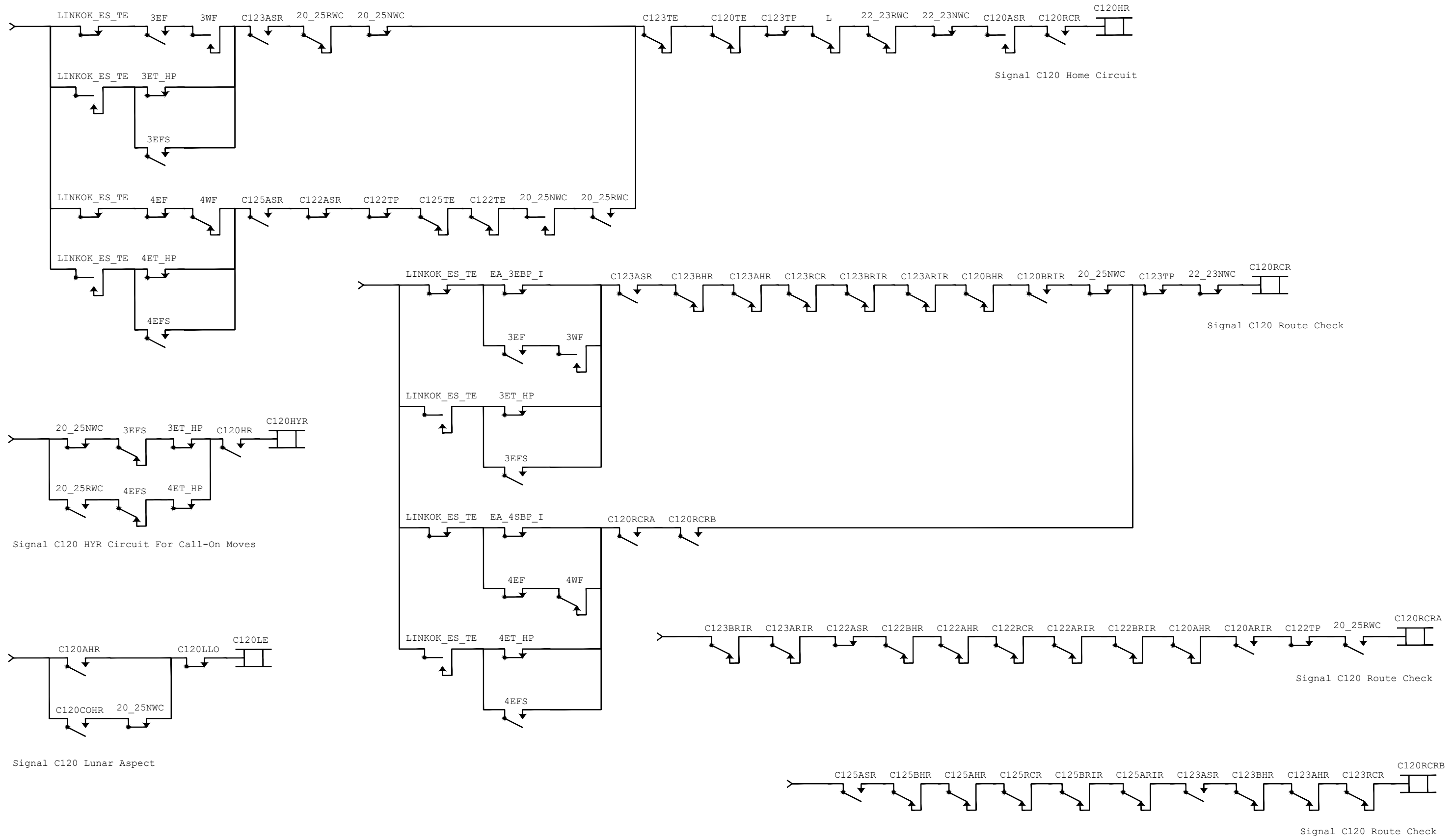


SUBMITTED		<b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
DESIGNED	M.BAKHIN	CHECKED	V.FAINGOLD
DRAWN	M.BAKHIN	CADD FILE NAME	801JL417.dwg



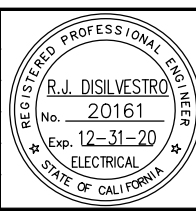
APPROVED		<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	03/11/19	SCALE	NTS
SUBMITTAL DATE	06/29/20	BOARD APPROVAL DATE	

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS ALUM ROCK INTERLOCKING VITAL LOGIC (8 OF 17)			SHEET OF
			DRAWING NO. JL417
			REVISION A
PCA NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE	



Jun 22, 2020 - 11:58am C:\cadd\p\work\west\0139440\01L410-426\_Alum Rock\_V.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



SUBMITTED

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Engineers Architects Planners  
1732 North First Street, Suite 400 San Jose, CA 95112  
Tel (408) 451-7300 Fax (408) 451-6942

DESIGNED: M.BAKHIN  
CHECKED: V.FAINGOLD  
DRAWN: M.BAKHIN  
CADD FILE NAME: 801JL418.dwg

Santa Clara Valley  
**Transportation Authority**

APPROVED

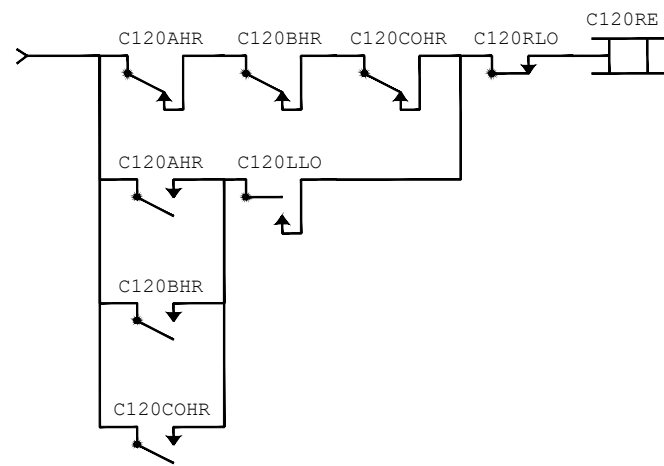
**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/11/19  
SUBMITTAL DATE: 06/29/20  
SCALE: NTS  
BOARD APPROVAL DATE:

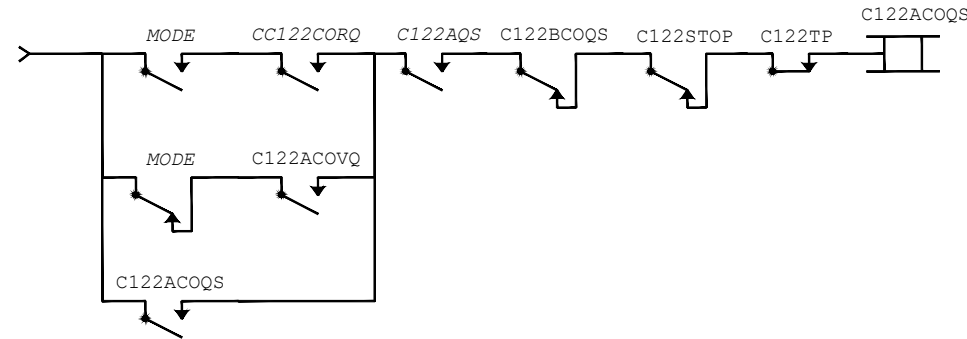
EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
ALUM ROCK INTERLOCKING  
VITAL LOGIC (9 OF 17)

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

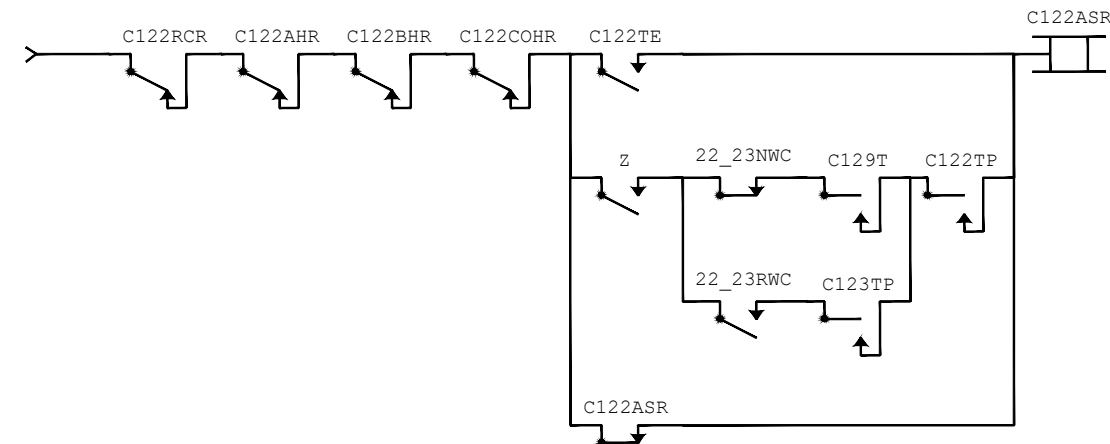
SHEET OF  
DRAWING NO. JL418  
REVISION A



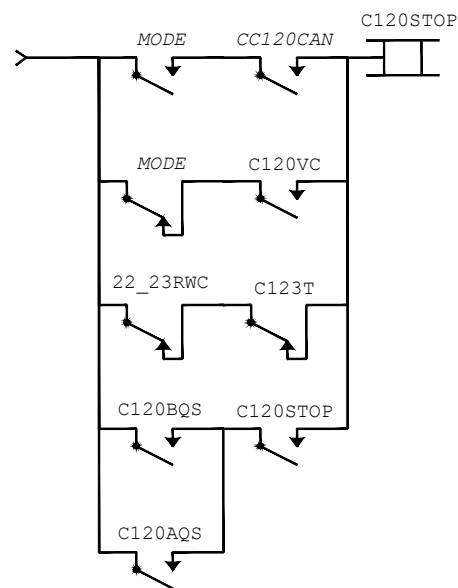
Signal C120 Red Aspect



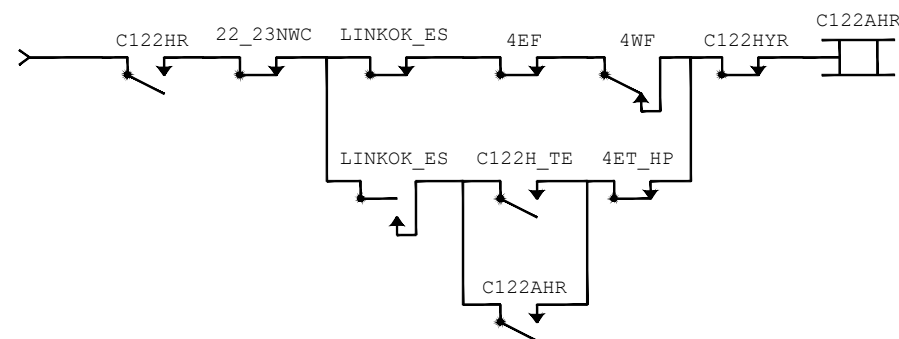
Signal C122 Call-On "A" Route Request - to Signal C125 (Normal Running to Eastridge)



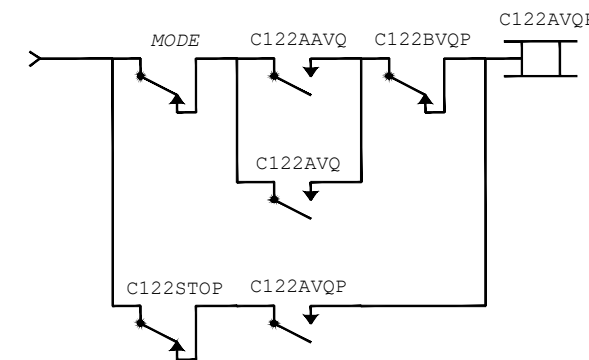
Signal C122 Approach Stick Route Locking



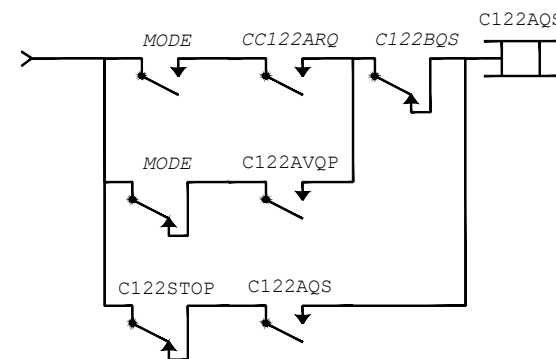
Signal C120 Cancel



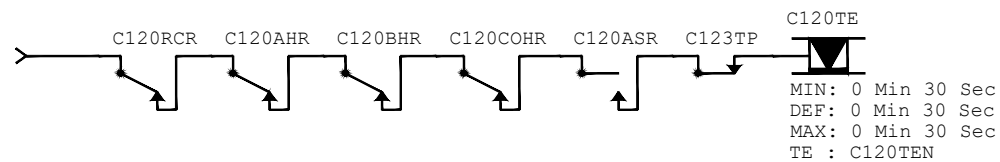
Signal C122 Home Circuit Straight, C122-C125



TWC Route Request, Signal C122 "A" Route - to Signal C125 (Normal Running to Eastridge)



Signal C122 "A" Route Request - to Signal C122 (Normal Running to Eastridge)



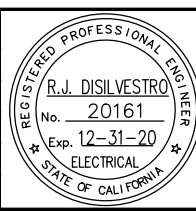
Signal C120 Route Locking Timer



Route Initiation Circuit, Signal C122 "A" Route - to Signal C125 (Normal Running to Eastridge)

Jun 22, 2020 - 11:58am C:\cadd\p\work\west\0139440\01L10-426\_Alum Rock\_V.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



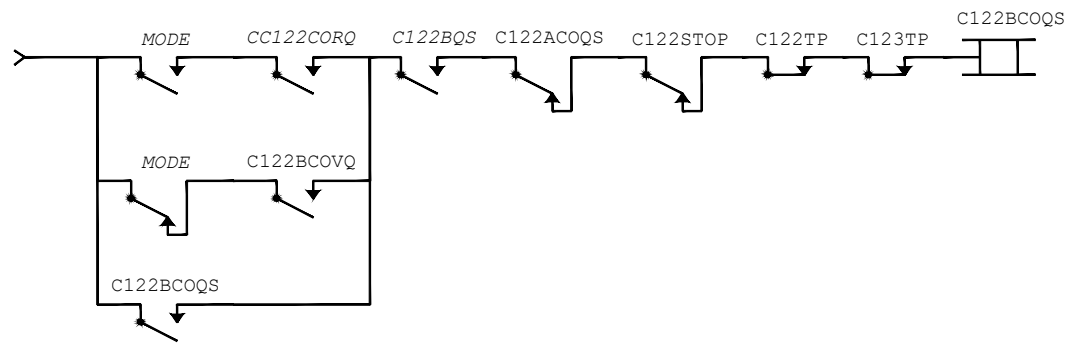
<b>HNTB</b> HNTB Corporation 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
DESIGNED M.BAKHIN	CHECKED V.FAINGOLD
DRAWN M.BAKHIN	CADD FILE NAME 801JL419.dwg



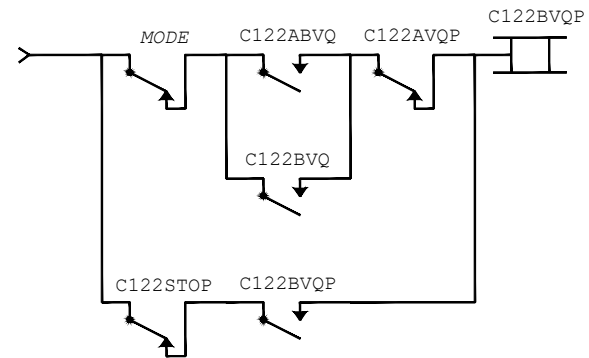
APPROVED <b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE 03/11/19	SCALE NTS
SUBMITTAL DATE 06/29/20	BOARD APPROVAL DATE

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS ALUM ROCK INTERLOCKING VITAL LOGIC (10 OF 17)			SHEET OF DRAWING NO. JL419 REVISION A
PCA NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE	

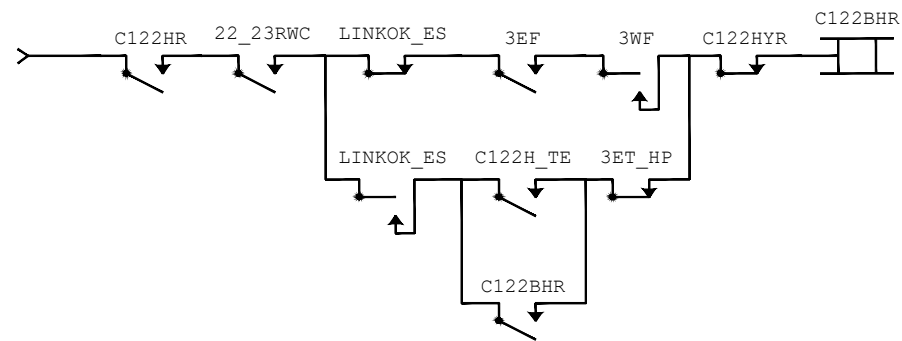




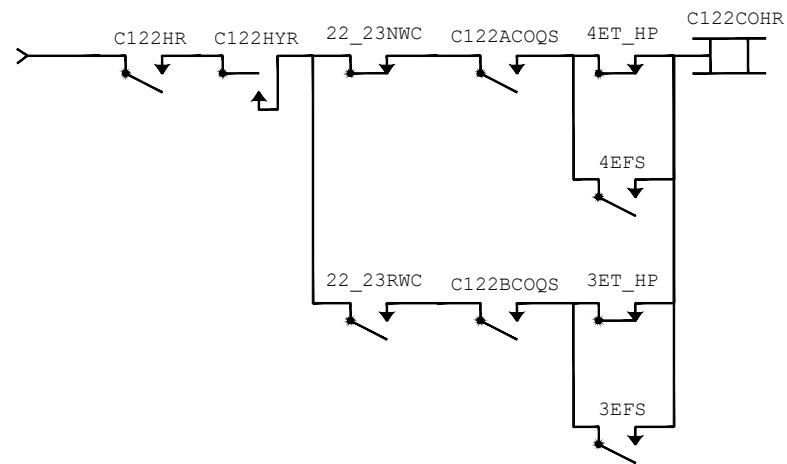
Signal C122 Call-On "B" Route Request - to Signal C123 (Reverse Running to Eastridge)



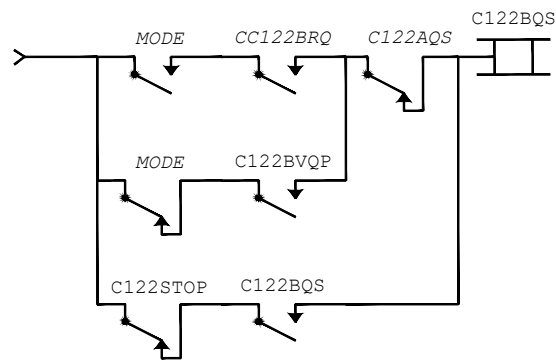
TWC Route Request, Signal C122 "B" Route - to Signal C123 (Reverse Running to Eastridge)



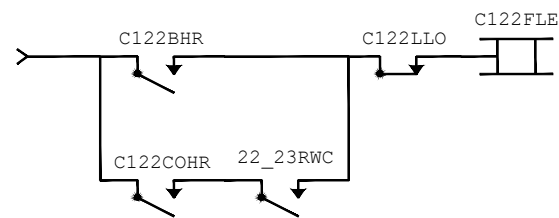
Signal C122 Home Circuit Diverge, C122-C123



Signal C122 Call-On Home Circuit



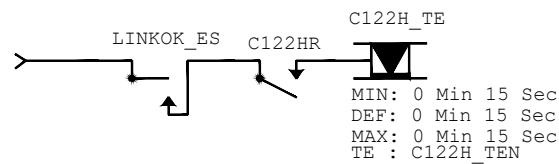
Signal C122 "B" Route Request - to Signal C123 (Reverse Running to Eastridge)



Signal C122 Flashing Lunar Aspect



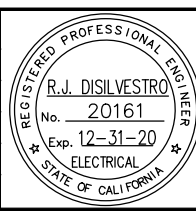
Route Initiation Circuit, Signal C122 "B" Route - to Signal C123 (Reverse Running to Eastridge)



Signal C122 Home Circuit, Timer to Delay Clearing If Tumble Down Is Enabled

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NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET

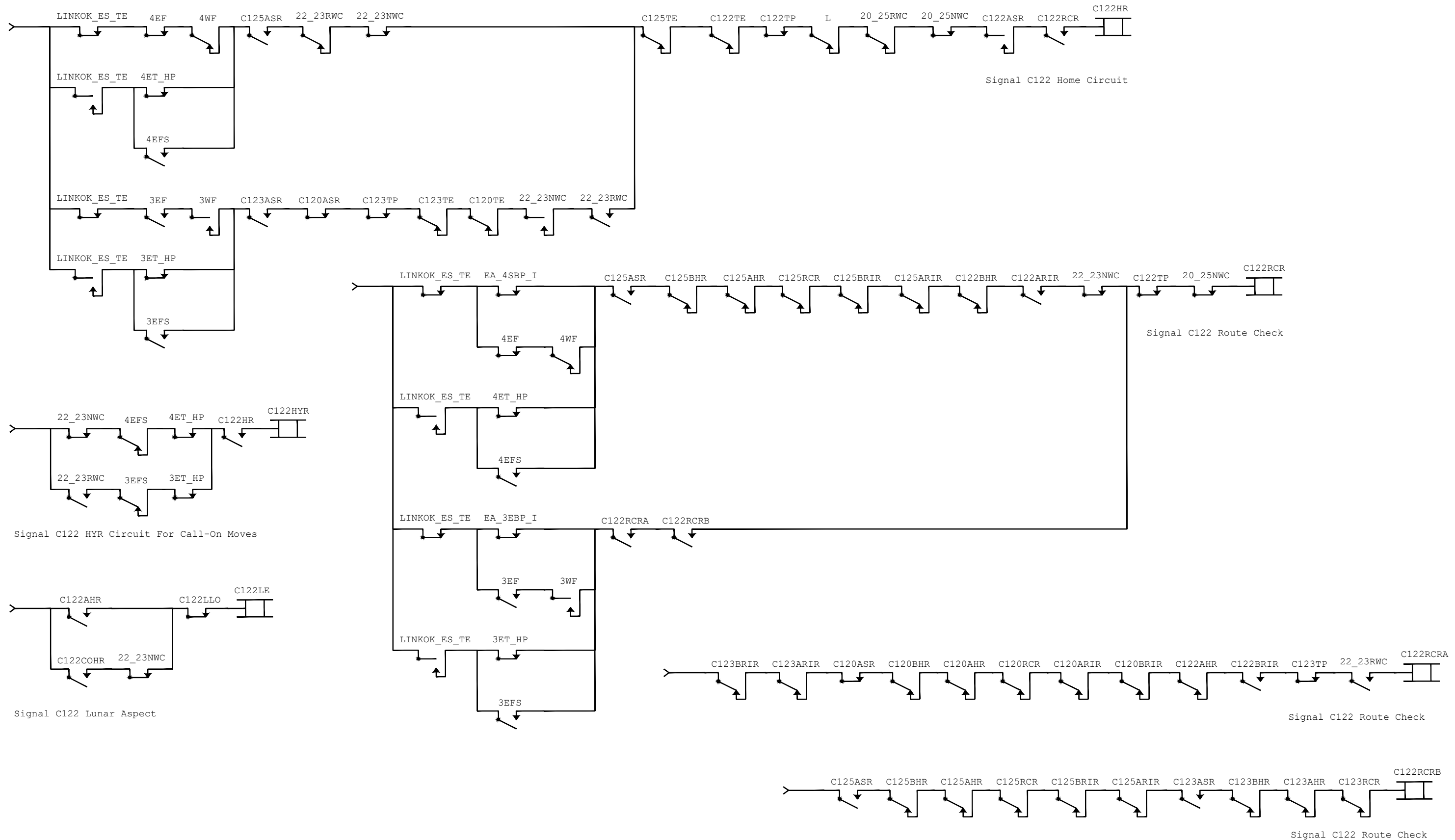


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DESIGNED	CHECKED
M.BAKHIN	V.FAINGOLD
DRAWN	CADD FILE NAME
M.BAKHIN	801JL420.dwg



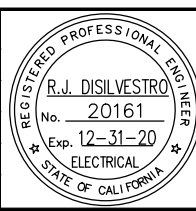
APPROVED <b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	SCALE
03/11/19	NTS
SUBMITTAL DATE	BOARD APPROVAL DATE
06/29/20	

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS ALUM ROCK INTERLOCKING VITAL LOGIC (11 OF 17)			SHEET OF DRAWING NO. JL420 REVISION A
PCA NO.	CONTRACT NO.	FILE LOCATION	
000	C801	PROJECTWISE	



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NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET

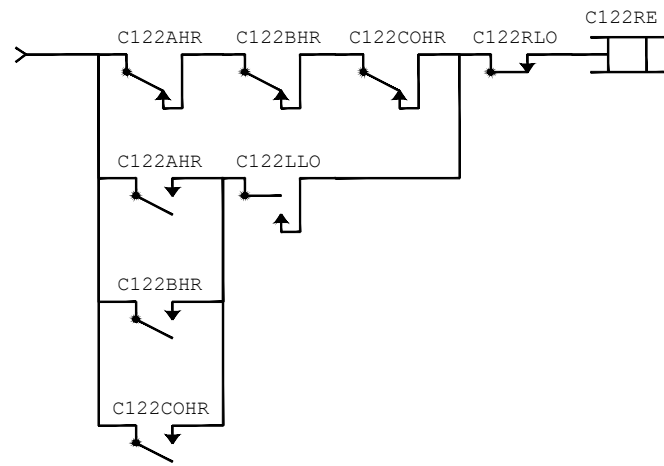


SUBMITTED <b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
DESIGNED	CHECKED
M.BAKHIN	V.FAINGOLD
DRAWN	CADD FILE NAME
M.BAKHIN	801JL421.dwg

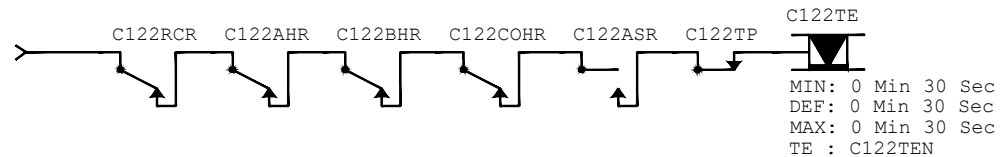


APPROVED <b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	SCALE
03/11/19	NTS
SUBMITTAL DATE	BOARD APPROVAL DATE
06/29/20	

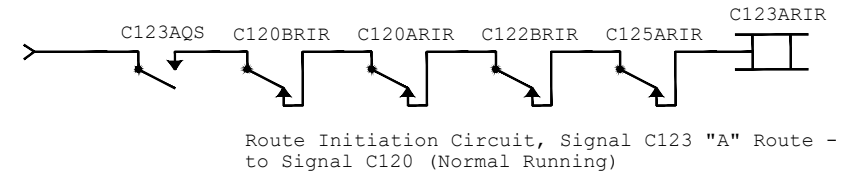
EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS ALUM ROCK INTERLOCKING VITAL LOGIC (12 OF 17)			SHEET OF DRAWING NO. JL421 REVISION A
PCA NO.	CONTRACT NO.	FILE LOCATION	
000	C801	PROJECTWISE	



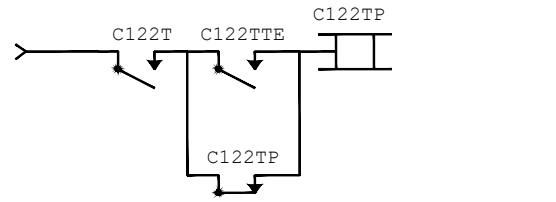
Signal C122 Red Aspect



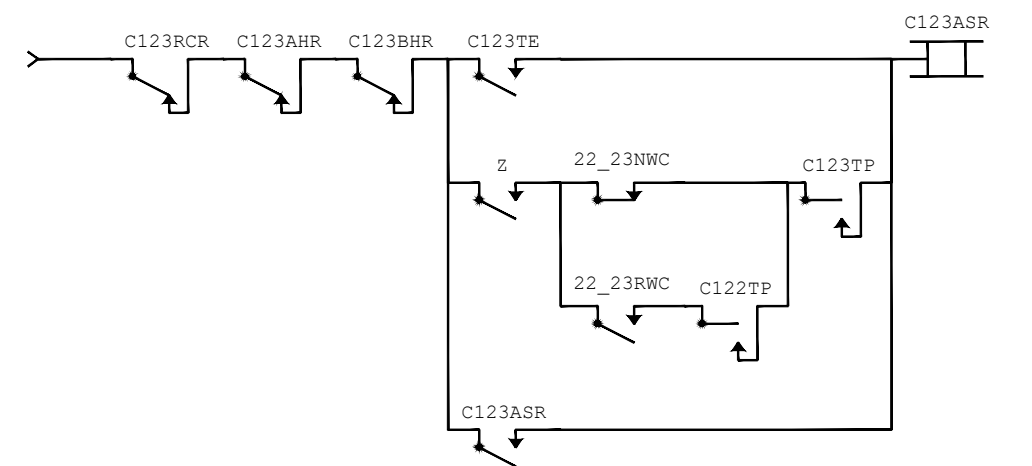
Signal C122 Route Locking Timer



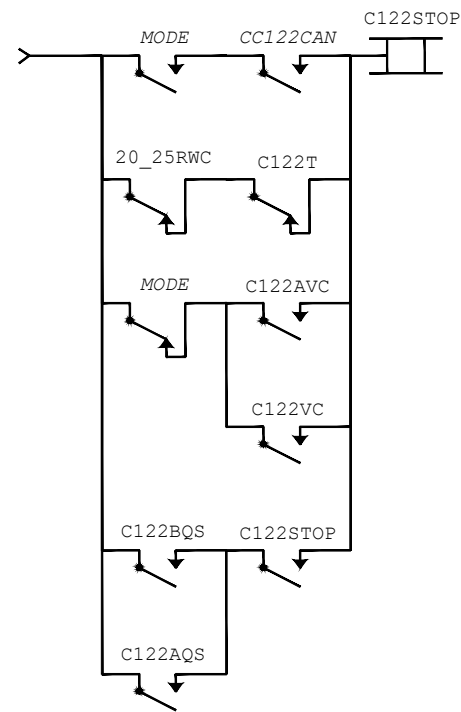
Route Initiation Circuit, Signal C123 "A" Route - to Signal C120 (Normal Running)



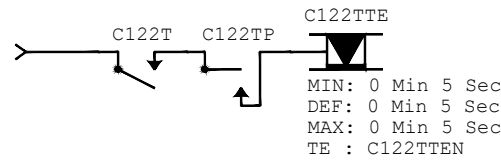
C122T Track Repeater with Loss of Shunt Time



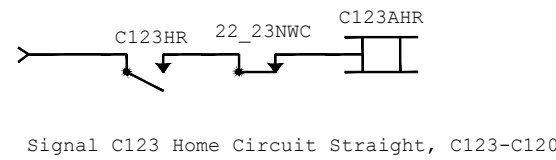
Signal C123 Approach Stick Route Locking



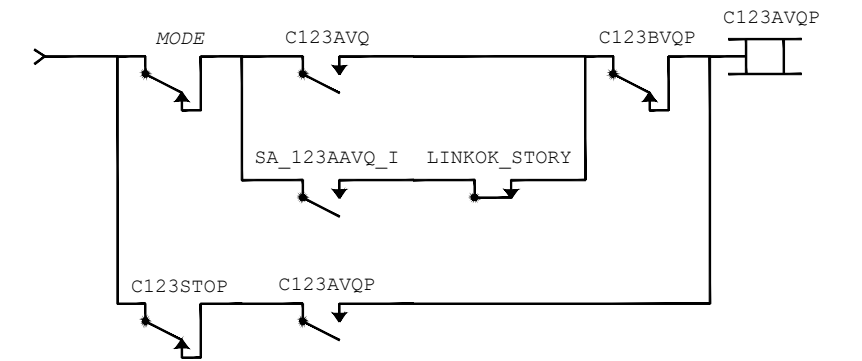
Signal C122 Cancel



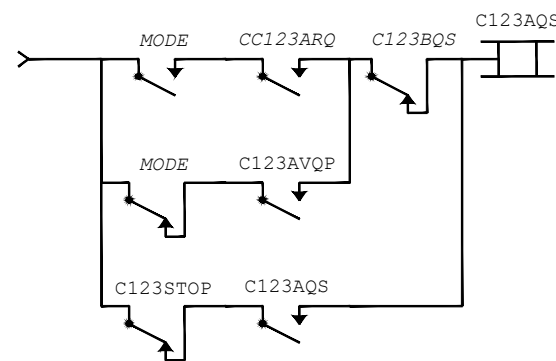
122T Loss of shunt timer



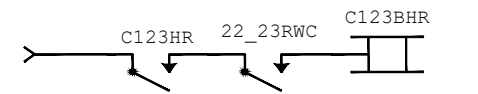
Signal C123 Home Circuit Straight, C123-C120



TWC Route Request, Signal C123 "A" Route - to Signal C120 (Normal Running)



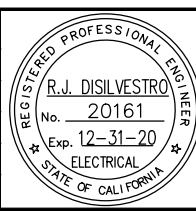
Signal C123 "A" Route Request - to Signal C120 (Normal Running)



Signal C123 Home Circuit Diverge, C123-C122

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NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET

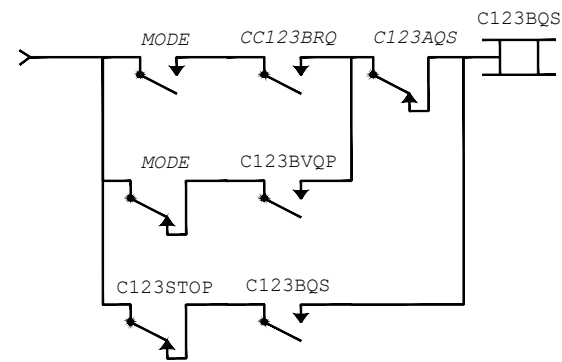


SUBMITTED		<b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
DESIGNED	M.BAKHIN	CHECKED	V.FAINGOLD
DRAWN	M.BAKHIN	CADD FILE NAME	801JL422.dwg

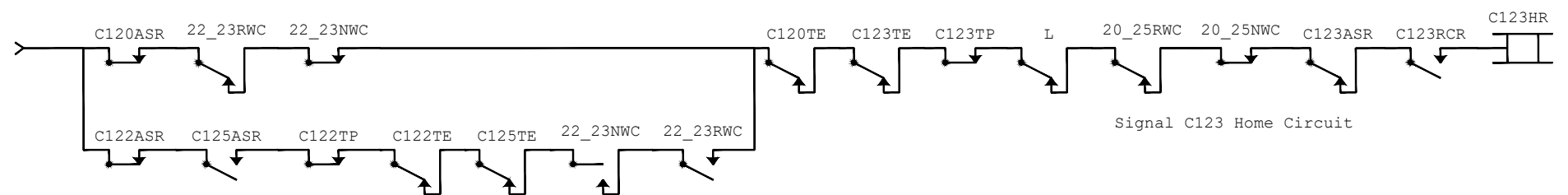


APPROVED		<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	03/11/19	SCALE	NTS
SUBMITTAL DATE	06/29/20	BOARD APPROVAL DATE	

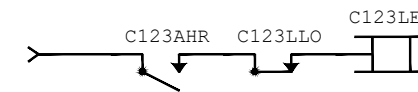
EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS ALUM ROCK INTERLOCKING VITAL LOGIC (13 OF 17)			SHEET OF DRAWING NO. JL422 REVISION A
PCA NO.	000	CONTRACT NO.	C801
FILE LOCATION	PROJECTWISE		



Signal C123 "B" Route Request - to Signal C122 (Reverse Running)



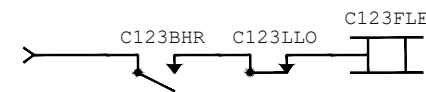
Signal C123 Home Circuit



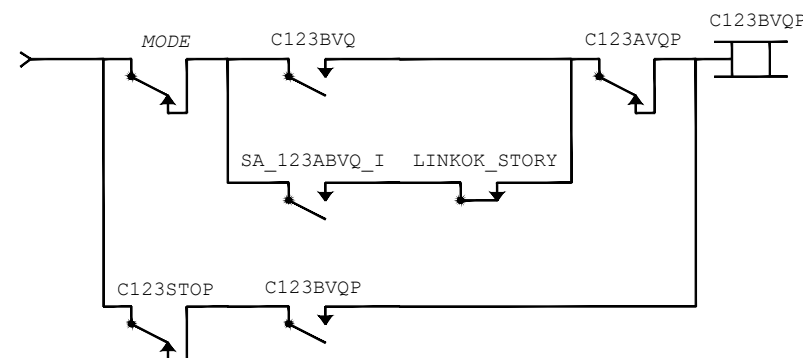
Signal C123 Lunar Aspect



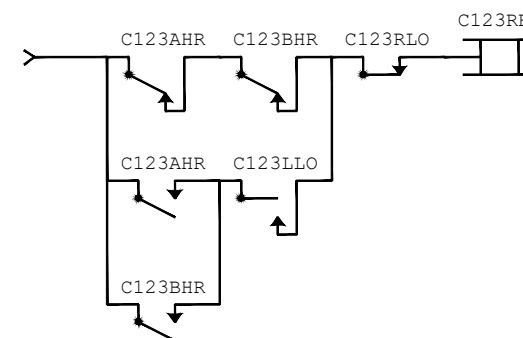
Route Initiation Circuit, Signal C123 "B" Route - to Signal C120 (Reverse Running)



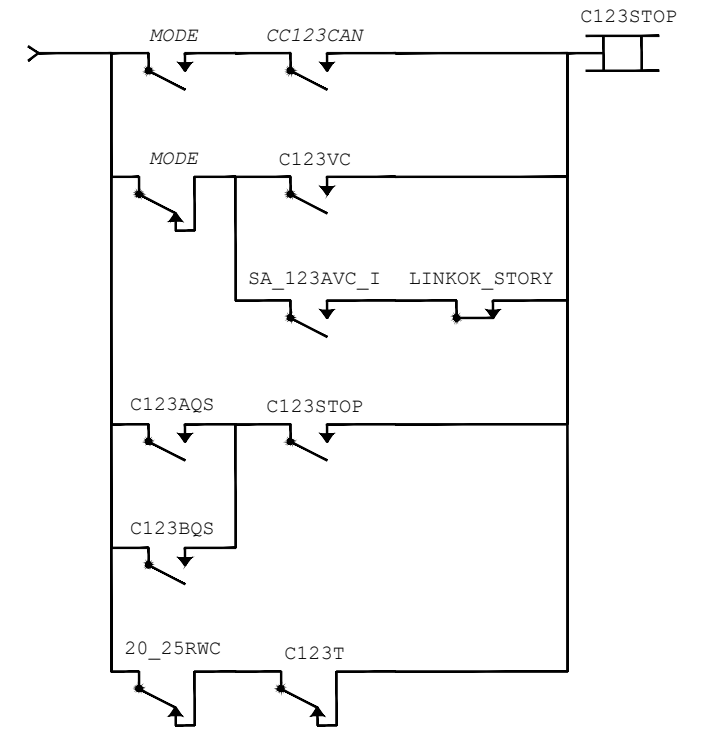
Signal C123 Flashing Lunar Aspect



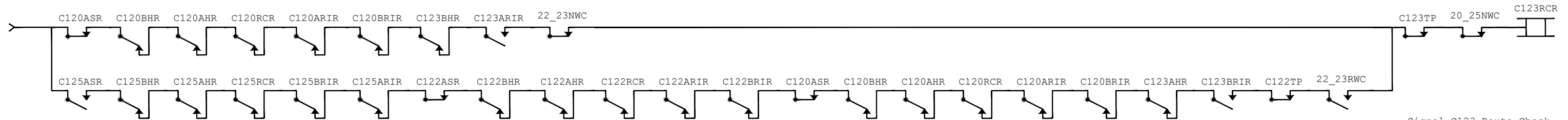
TWC Route Request, Signal C123 "B" Route - to Signal C122 (Reverse Running)



Signal C122 Red Aspect



Signal C123 Cancel



Signal C123 Route Check

Jun 22, 2020 - 11:58am C:\cadd\ib\vw\g\owkes\west\0139440\01.L10-426\_Alum Rock\_V.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



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**HNTB** HNTB Corporation  
Engineers Architects Planners  
1732 North First Street, Suite 400 San Jose, CA 95112  
Tel (408) 451-7300 Fax (408) 451-6942

DESIGNED: M.BAKHIN  
CHECKED: V.FAINGOLD  
DRAWN: M.BAKHIN  
CADD FILE NAME: 801JL423.dwg

**Santa Clara Valley Transportation Authority**

APPROVED

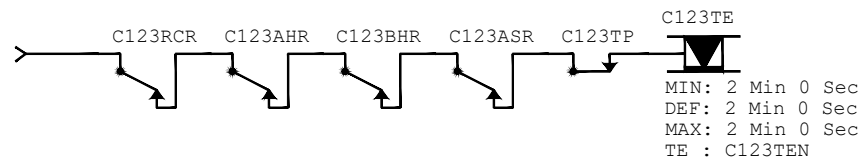
**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/11/19  
SCALE: NTS  
SUBMITTAL DATE: 06/29/20  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
ALUM ROCK INTERLOCKING  
VITAL LOGIC (14 OF 17)

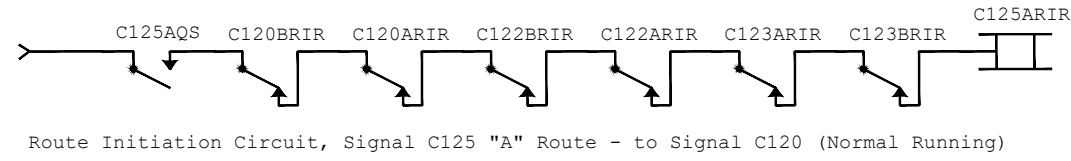
PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

SHEET OF  
DRAWING NO. JL423  
REVISION A

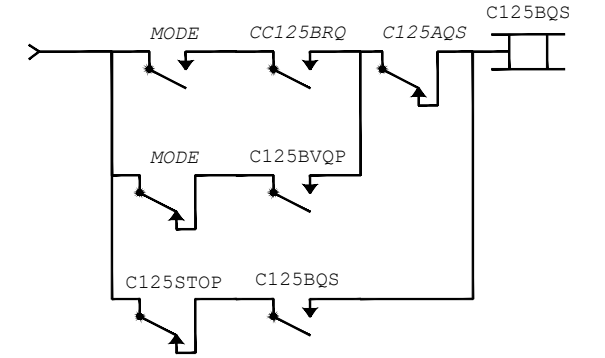


Signal C123 Route Locking Timer

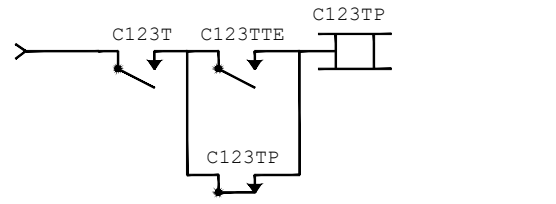
MIN: 2 Min 0 Sec  
 DEF: 2 Min 0 Sec  
 MAX: 2 Min 0 Sec  
 TE : C123TEN



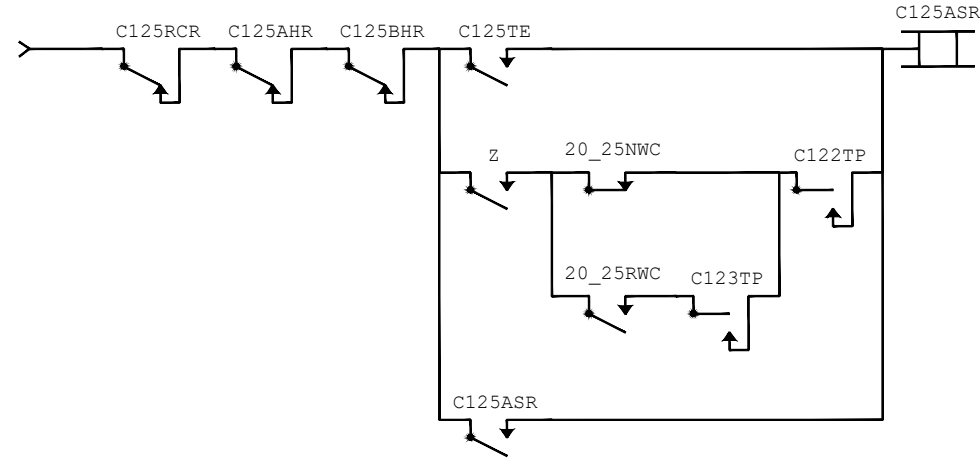
Route Initiation Circuit, Signal C125 "A" Route - to Signal C120 (Normal Running)



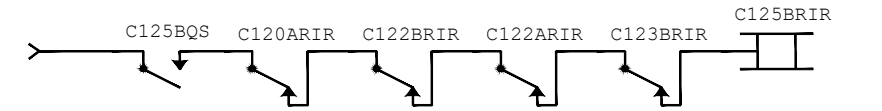
Signal C125 "B" Route Request - to Signal C122 (Reverse Running)



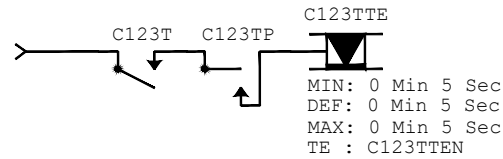
C123T Track Repeater with Loss of Shunt Time



Signal C125 Approach Stick Route Locking

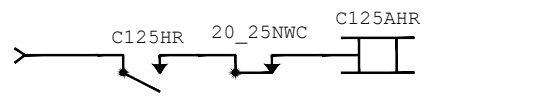


Route Initiation Circuit, Signal C125 "B" Route - to Signal C120 (Reverse Running)

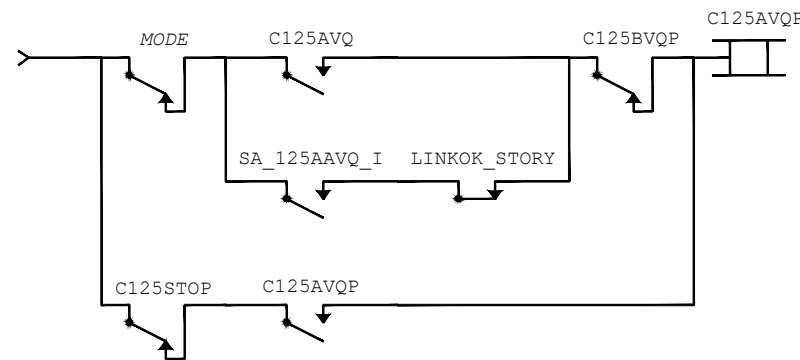


123T Loss of shunt timer

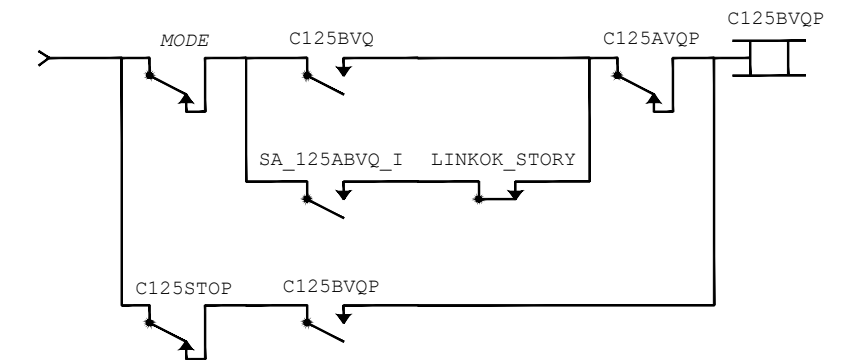
MIN: 0 Min 5 Sec  
 DEF: 0 Min 5 Sec  
 MAX: 0 Min 5 Sec  
 TE : C123TEN



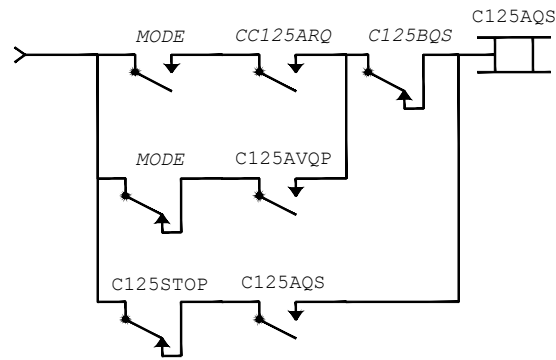
Signal C125 Home Circuit Straight, C125-C122



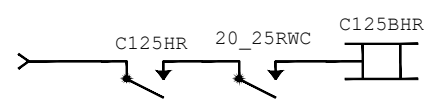
TWC Route Request, Signal C125 "A" Route - to Signal C120 (Normal Running)



TWC Route Request, Signal C125 "B" Route - to Signal C122 (Reverse Running)



Signal C125 "A" Route Request - to Signal C120 (Normal Running)



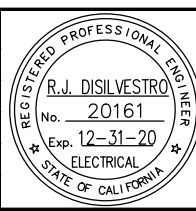
Signal C125 Home Circuit Diverge, C125-C120



Signal C123 Flashing Lunar Aspect

Jun 22, 2020 - 11:36am C:\cadd\p\work\west\0139440\01L410-426\_Alum Rock\_V.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET

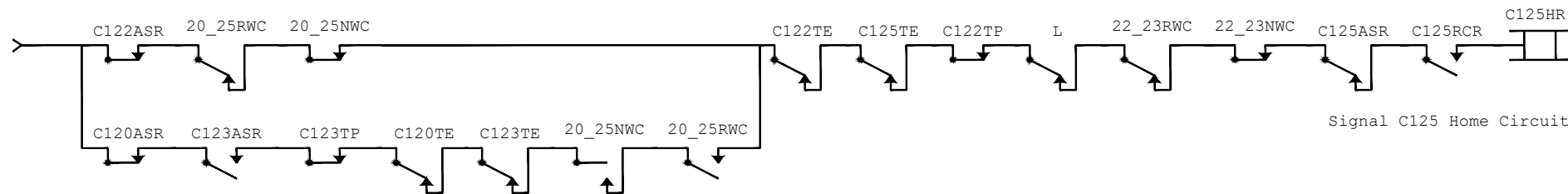


SUBMITTED		<b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
DESIGNED	M.BAKHIN	CHECKED	V.FAINGOLD
DRAWN	M.BAKHIN	CADD FILE NAME	801JL424.dwg

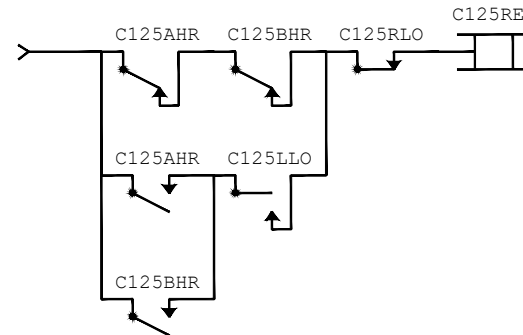


APPROVED		<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	03/11/19	SCALE	NTS
SUBMITTAL DATE	06/29/20	BOARD APPROVAL DATE	

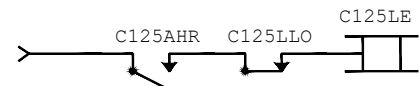
EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS ALUM ROCK INTERLOCKING VITAL LOGIC (15 OF 17)			SHEET OF DRAWING NO. JL424 REVISION A
PCA NO.	CONTRACT NO.	FILE LOCATION	
000	C801	PROJECTWISE	



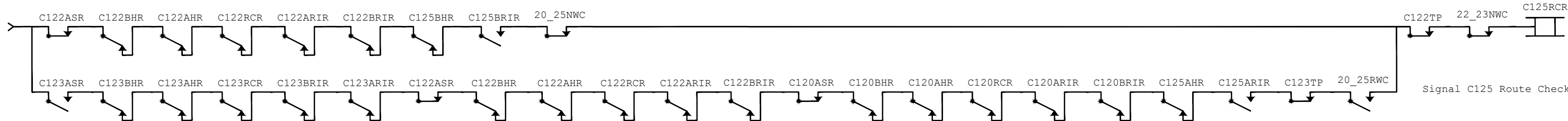
Signal C125 Home Circuit



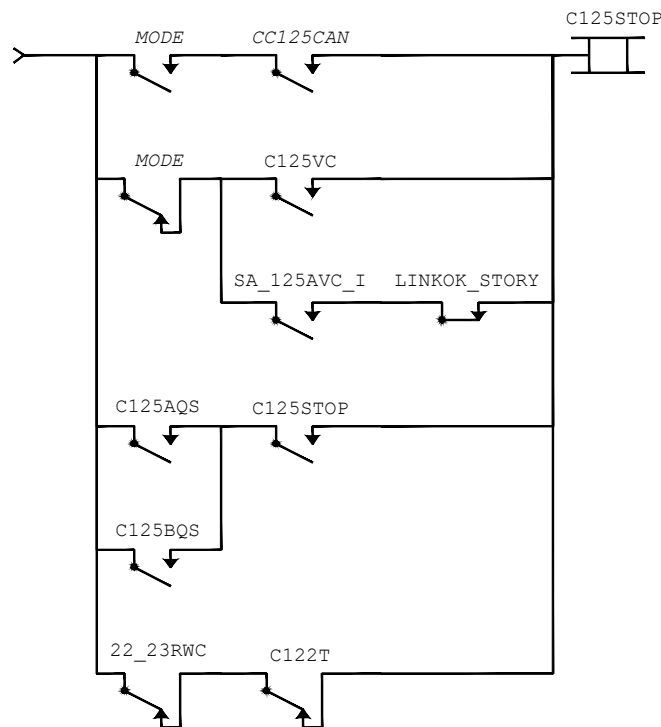
Signal C125 Red Aspect



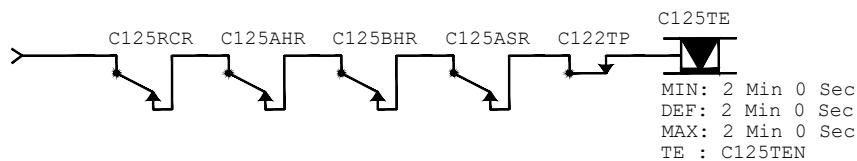
Signal C125 Lunar Aspect



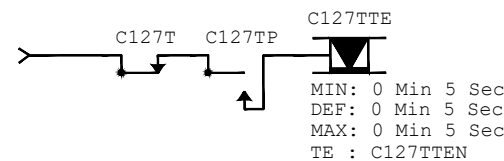
Signal C125 Route Check



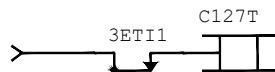
Signal C125 Cancel



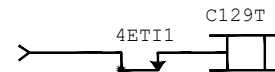
Signal C125 Route Locking Timer



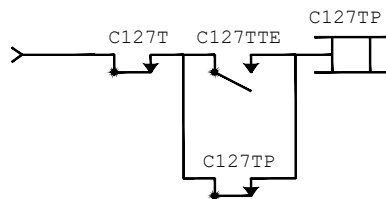
C127T Loss of shunt timer



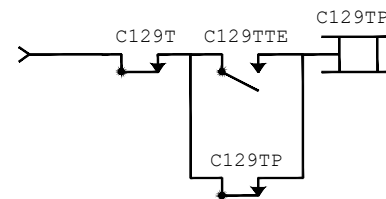
C127T Track (3STI1 Code Repeater)



C129T Track (4STI1 Code Repeater)



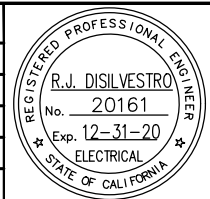
C127T Track repeater with loss of shunt time



C129T Track repeater with loss of shunt time

Jun 22, 2020 - 11:58am C:\cadd\p\y\g\owkes\west\0139440\01L410-426\_Alum Rock\_V.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET

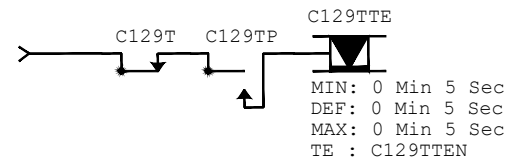


SUBMITTED		<b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
DESIGNED	M.BAKHIN	CHECKED	V.FAINGOLD
DRAWN	M.BAKHIN	CADD FILE NAME	801JL425.dwg

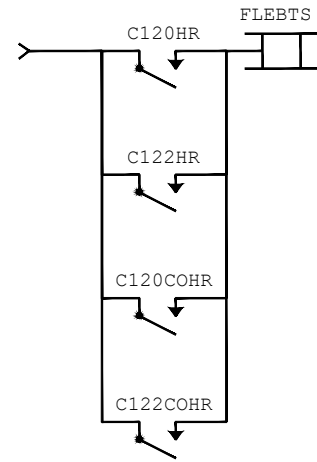


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CADD FILE DATE	03/11/19	SCALE	NTS
SUBMITTAL DATE	06/29/20	BOARD APPROVAL DATE	

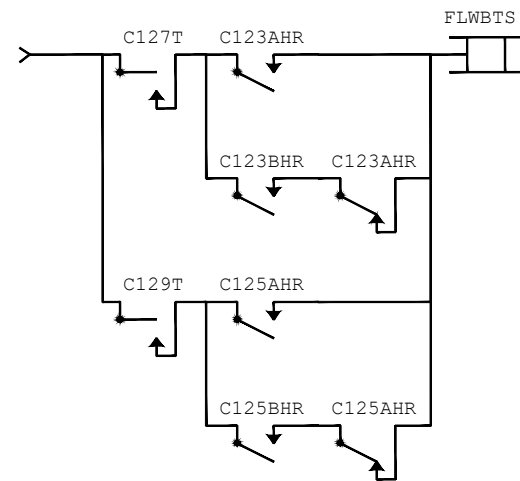
EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS ALUM ROCK INTERLOCKING VITAL LOGIC (16 OF 17)			SHEET OF DRAWING NO. JL425 REVISION A
PCA NO.	000	CONTRACT NO.	C801
FILE LOCATION		PROJECTWISE	



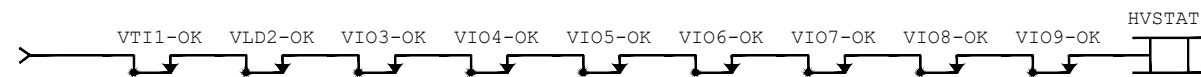
C129T Loss of shunt timer



Output to Florence ave. Traffic Signal Phase



Output to Florence ave. Traffic Signal Phase



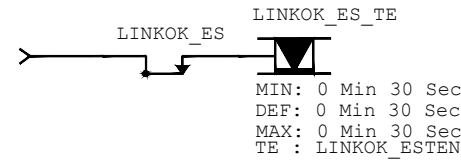
ElectroLogIXS HEALTH



Lock Circuit



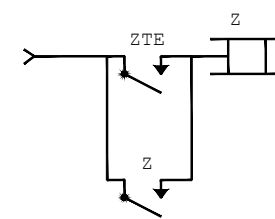
Link Health Status, Alum Rock Vital Processor to Eastridge Vital Processor "A"



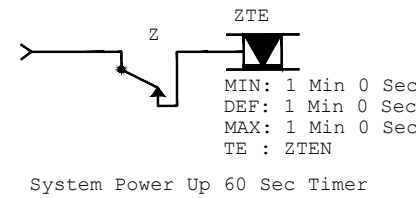
Link Health Status Timer, Alum Rock Vital Processor to Eastridge Vital Processor "A"



Link Health Status, Alum Rock Vital Processor to Story Vital Processor



System Power Up Equation



System Power Up 60 Sec Timer

REMOTE INPUTS  
SENT FROM ELECTROLOGIXS "A"

EA_3EBP_I
EA_3EF_I
EA_4SBP_I
EA_4EF_I
EA_3WFQ_I
EA_4WFQ_I
EA_LINKOK_I

REMOTE OUTPUTS  
SENT TO ELECTROLOGIXS "A"

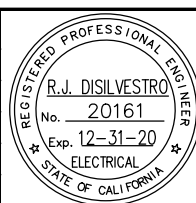
AE_3WBP_O
AE_4WBP_O
AE_3EFQ_O
AE_4EFQ_O
AE_3WF_O
AE_4WF_O
AE_LINKOK_O

REMOTE INPUTS  
SENT FROM STORY

SA_123AAVQ_I
SA_123ABVQ_I
SA_123AVC_I
SA_125AAVQ_I
SA_125ABVQ_I
SA_125AVC_I
SA_LINKOK_I

Jun 22, 2020 11:58am C:\cadd\ib\paw\gfoakes\west\0139440\01L410-426\_Alum Rock\_V.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET

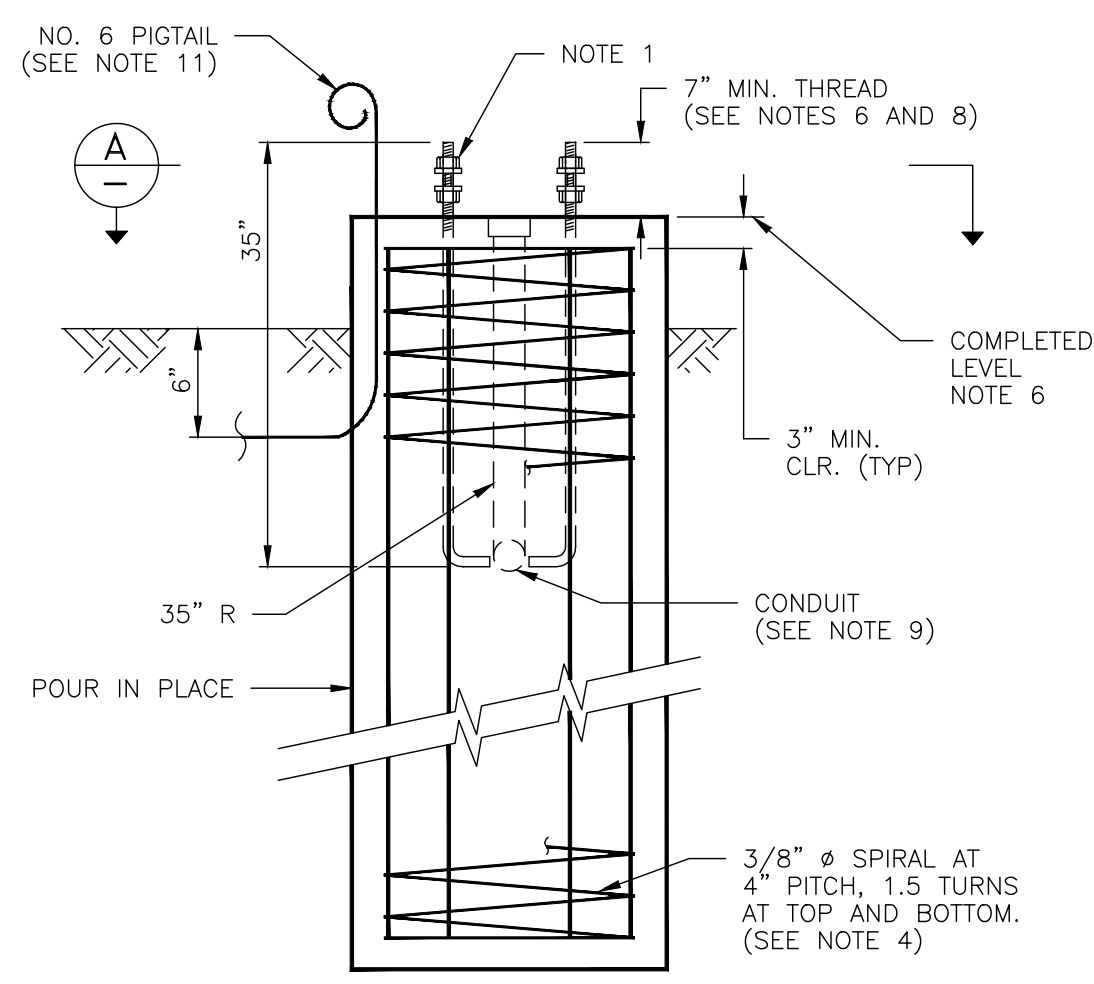
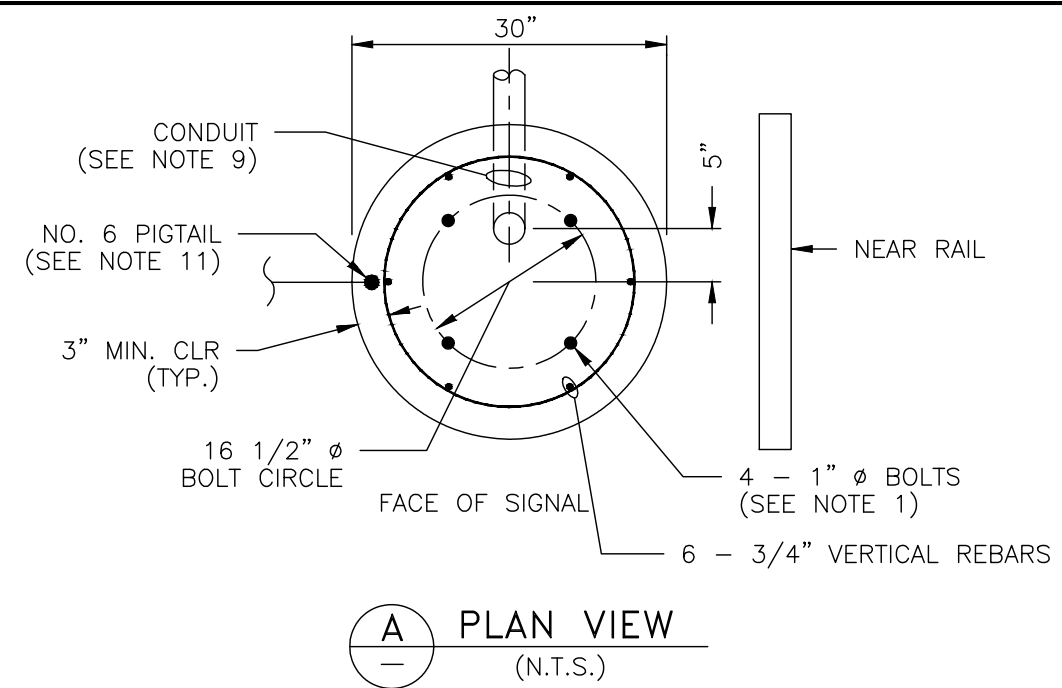
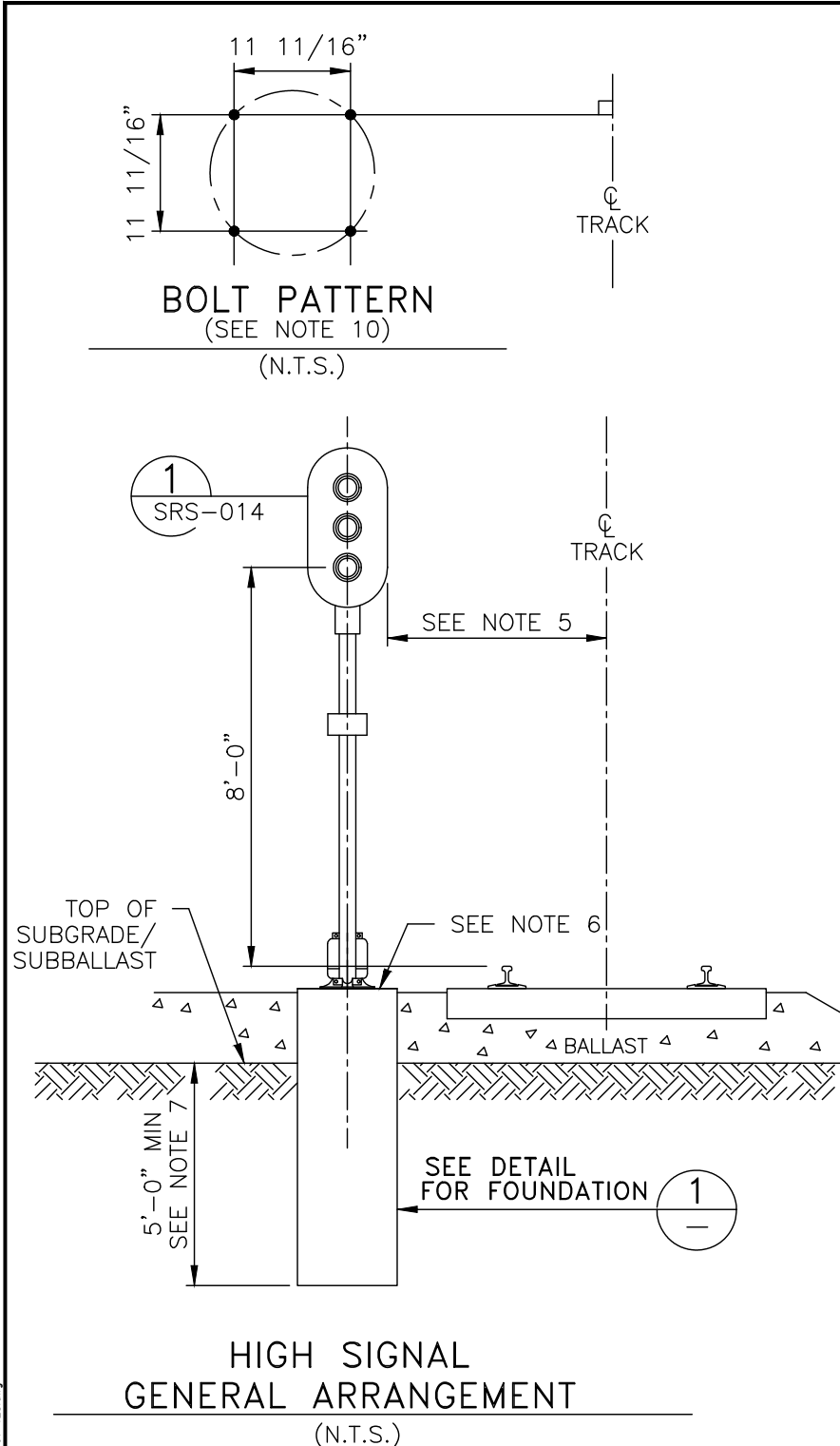


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<b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
DESIGNED	CHECKED
M.BAKHIN	V.FAINGOLD
DRAWN	CADD FILE NAME
M.BAKHIN	801JL426.dwg



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<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	SCALE
03/11/19	NTS
SUBMITTAL DATE	BOARD APPROVAL DATE
06/29/20	

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS ALUM ROCK INTERLOCKING VITAL LOGIC (17 OF 17)		
PCA NO.	CONTRACT NO.	FILE LOCATION
000	C801	PROJECTWISE
SHEET OF	DRAWING NO.	REVISION
	JL426	A



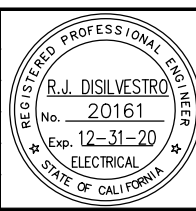
**NOTES:**

- 1- PROVIDE TWO HEX NUTS AND TWO FLAT WASHERS FOR EACH ANCHOR BOLT. INSTALL ABOVE AND BELOW BASE FOR LEVELING DURING INSTALLATION. ANCHOR BOLTS AND NUTS SHALL CONFORM TO ASTM A307 GRADE A, AND FLAT WASHERS TO ASTM F436M. EXPOSED STEEL SHALL BE GALVANIZED OR CADMIUM PLATED.
- 2- CONCRETE SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF 30 MPa (4351 PSI) AT 28 DAYS.
- 3- REINFORCING BARS SHALL CONFORM TO ASTM A615/A615M GRADE 400, TIES SHALL BE GRADE 300.
- 4- SPIRAL SHALL BE CONTINUOUS FROM TOP TO BOTTOM, AND PITCH INCREASED FOR CONDUIT CLEARANCE ONLY IF REQUIRED.
- 5- ON EXCLUSIVE RIGHT-OF-WAY, MINIMUM CLEARANCE SHALL BE 66" FROM TRACK CENTERLINE ON TANGENT TRACK. REFER TO VTA'S LRT DESIGN CRITERIA, CHAPTER 4, FOR CURVED AND SUPERELEVATED TRACK APPLICATIONS. FOR APPLICATIONS WHERE TRACK IS SHARED WITH A RAILROAD, THIS CLEARANCE SHALL BE 102" ON TANGENT TRACK AND INCREASE BY 1" DEGREE OF CURVATURE ON CURVED TRACK.
- 6- TOP OF FOUNDATION SHALL BE LEVEL WITH NEAREST TOP OF TIE UNLESS SPECIAL CONDITIONS PREVAIL. FURNISH GROUT TO BOTTOM OF BASE.
- 7- FOUNDATION DEPTH SHALL BE 5'-0" MINIMUM.
- 8- ANCHOR BOLTS ABOVE TOP OF FOUNDATION SHALL BE PROTECTED FROM DAMAGE AND RESIDUAL CONCRETE DURING FOUNDATION INSTALLATION.
- 9- CONDUIT RISER SHALL BE 3" DIA. MIN. SCHEDULE 80 PVC CONDUIT. CONDUIT END CAP SHALL BE FLUSH WITH TOP OF COMPLETED FOUNDATION, AND LOCATED AS SHOWN.
- 10- ANCHOR BOLTS SHALL BE CONSTRAINED (BY USE OF A FORM) TO PROPER POSITION DURING CONCRETE PLACEMENT. PROPOSED FORM TO BE SUBMITTED TO VTA FOR APPROVAL.
- 11- REFER TO STANDARD DETAIL DRAWING SRS-014 FOR GROUNDING DETAILS. FOR INSTALLATIONS IN LOCATIONS OUTSIDE OF THE BALLAST AREA, THE FOUNDATION CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLATION OF THE GROUNDING APPARATUS AS SHOWN ON SRS-014.
- 12- MODIFICATIONS TO THIS STANDARD DETAIL SHALL BE SUBMITTED AND APPROVED BY VTA PRIOR TO INCORPORATION INTO CONTRACT DOCUMENTS.

THIS DRAWING IS VTA STANDARD DETAIL SRS-001 (EDITION 2017).  
SEE DRAWING SR310 FOR HIGH SIGNAL FOUNDATION DETAILS ON AERIAL STRUCTURE

Jun 25, 2020 - 10:20am C:\caddib\p\work\west\0139440\01JP101-12B.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



**HNTB** HNTB Corporation  
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DESIGNED: M.BAKHIN CHECKED: V.FAINGOLD  
DRAWN: M.BAKHIN CADD FILE NAME: 801JP101.dwg



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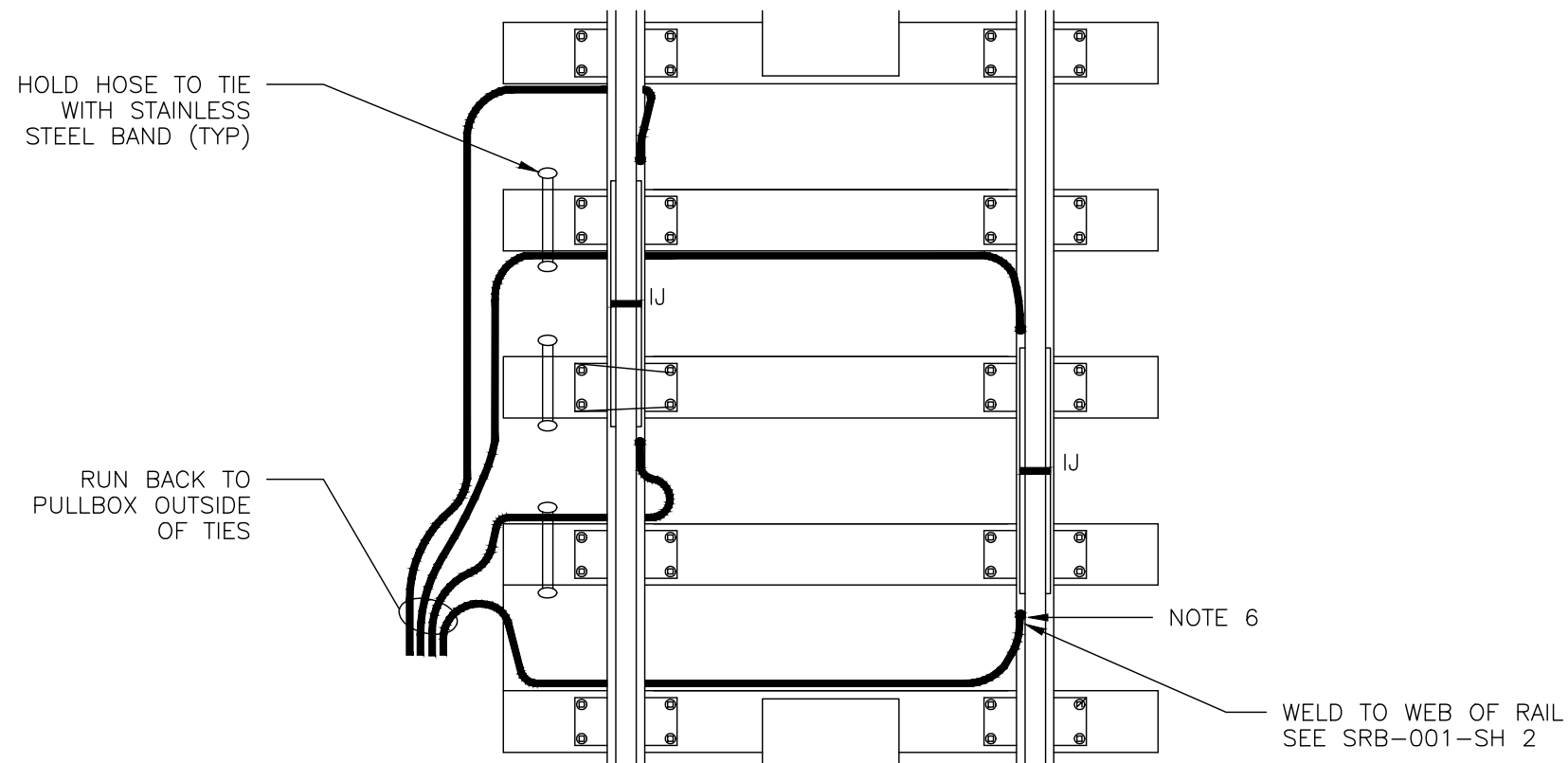
CADD FILE DATE: 03/11/19 SCALE: NTS  
SUBMITTAL DATE: 06/29/20 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
HIGH SIGNAL FOUNDATION

PCB NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

SHEET OF DRAWING NO. JP101 REVISION B

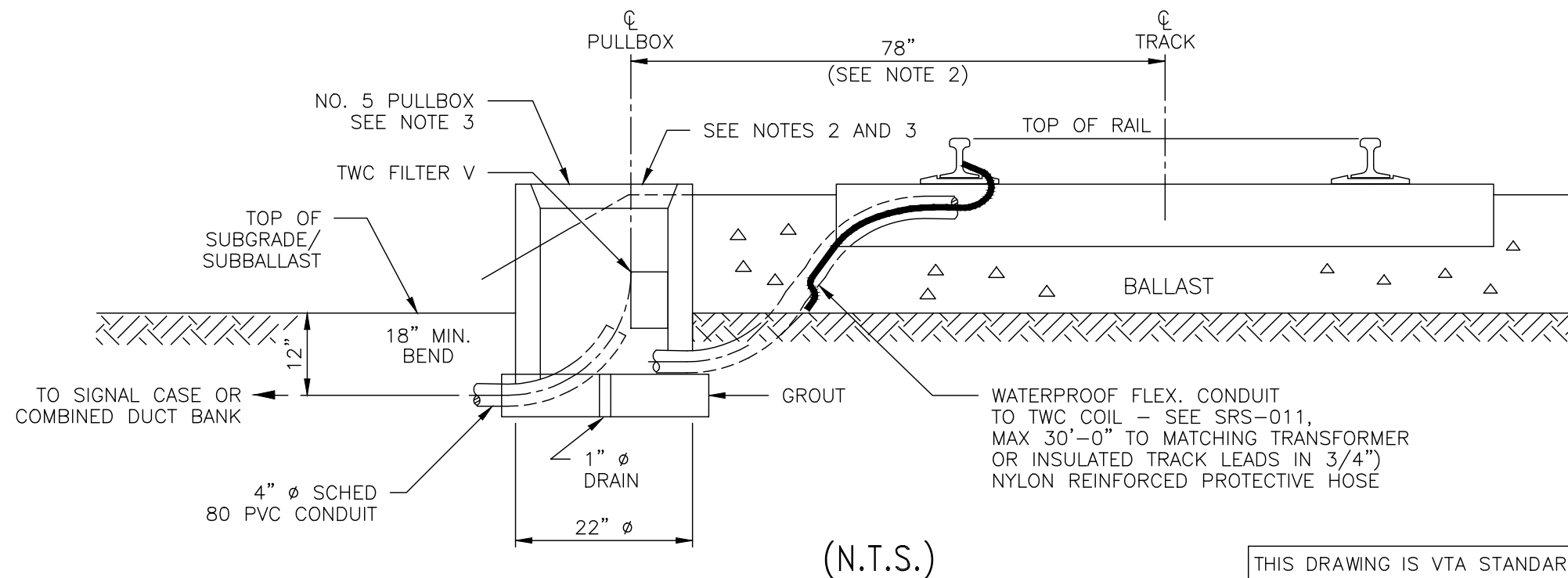




**TRACK CIRCUIT**  
(N.T.S.)

**NOTES:**

- 1- CONCRETE SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF 30 MPa (4351 PSI) AT 28 DAYS.
- 2- TOP OF PULLBOX SHALL BE LEVEL WITH TOP OF TIE, ± 1". IF SITE SPECIFIC LOCATIONS REQUIRE CENTERLINE OF TRACK TO CENTERLINE OF PULLBOX TO BE GREATER THAN 78", THEN TOP OF PULLBOX SHALL BE DESIGNED AT 1" MINIMUM HIGHER THAN SURROUNDING BALLAST.
- 3- PULLBOX SHALL BE NO.5 PER 1997 SSP NO ES-8, UNLESS OTHERWISE NOTED.
- 4- CRIMP TRACK LEADS TO TRACK CABLE IN PULLBOX AND INSULATE WITH SHRINK TUBING.
- 5- REFER TO SRB-005 FOR IMPEDANCE BONDS.
- 6- WELD AS CLOSE TO END OF JOINT BAR AS IS PRACTICAL.

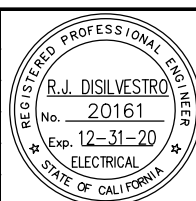


(N.T.S.)

THIS DRAWING IS VTA STANDARD DETAIL SRS-004 (EDITION 2017).  
SEE DRAWING JP127 FOR TRACK CIRCUIT CONNECTIONS ON AERIAL STRUCTURE

Jun 25, 2020 - 10:20am C:\caddib\paw\gforbes\west\00139440\001JP101-126.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET

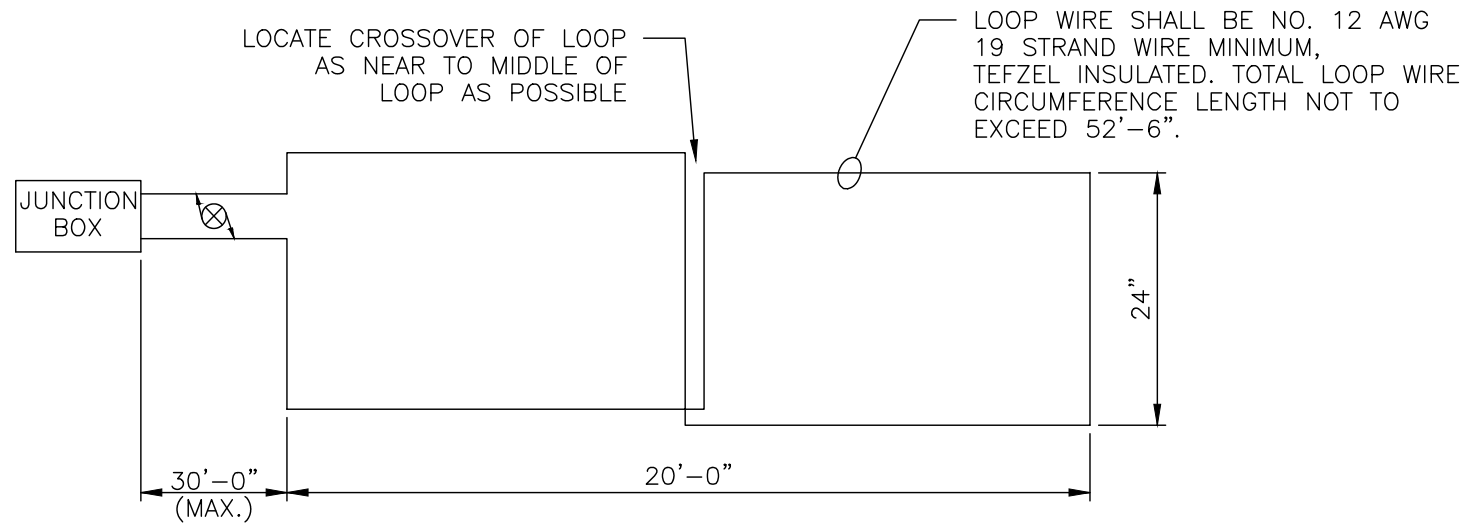


<b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
DESIGNED M.BAKHIN	CHECKED V.FAINGOLD
DRAWN M.BAKHIN	CADD FILE NAME 801JP102.dwg

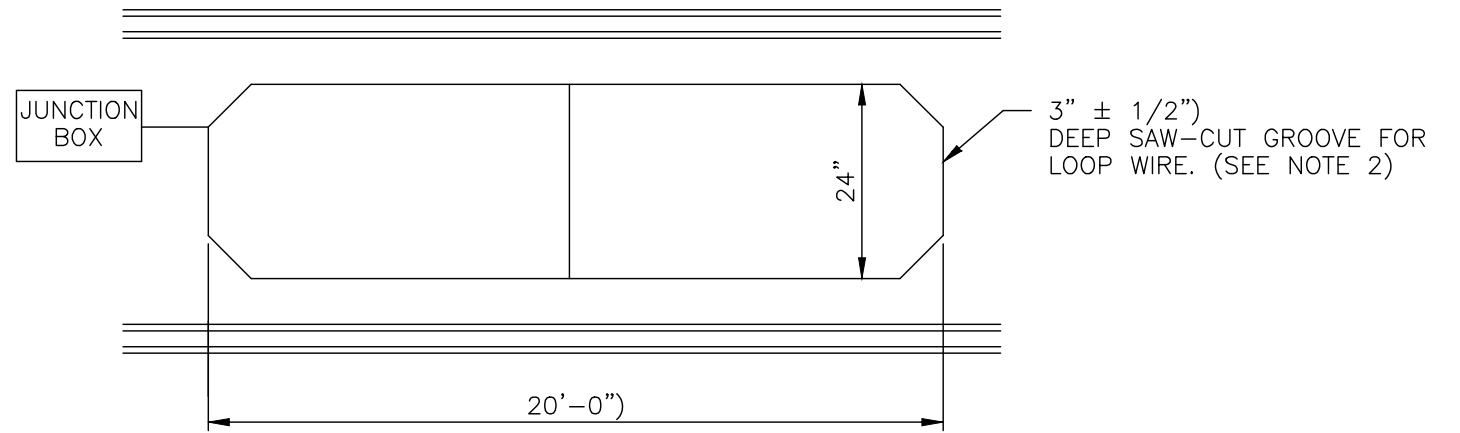


APPROVED <b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE 03/11/19	SCALE NTS
SUBMITTAL DATE 06/29/20	BOARD APPROVAL DATE

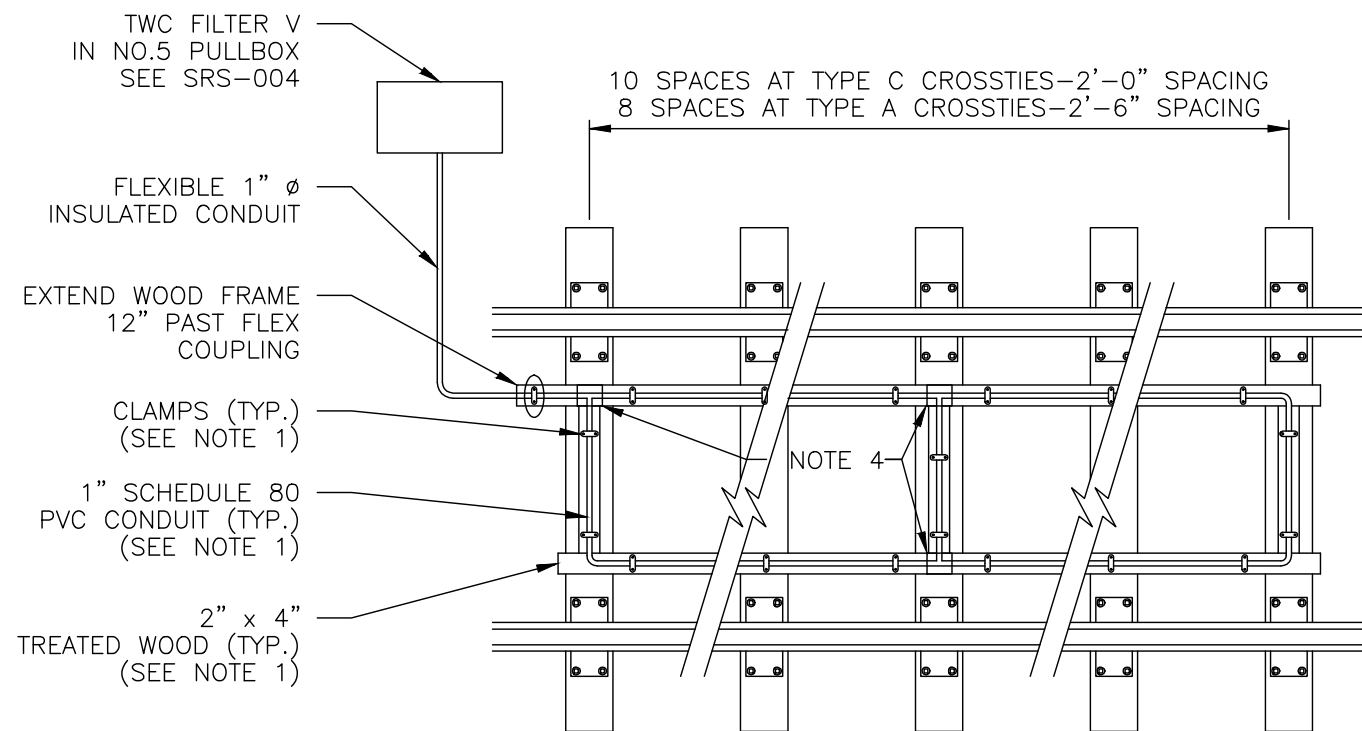
EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS TRACK CIRCUITS AND TWC CONNECTIONS			SHEET OF DRAWING NO. JP102 REVISION B
PCA NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE	



**SCHEMATIC**  
(NTS)



**TYPICAL EMBEDDED TRACK TWC LOOP LAYOUT**  
(NTS)



**TYPICAL BALLASTED TRACK TWC LOOP LAYOUT**  
(NTS)

**NOTES:**

- 1- CABLE FROM INTERROGATOR TO FILTER BOX TO BE 2C#12 AWG SHIELDED CABLE, NOT EXCEEDING 1200' IN LENGTH.
- 2- IN BALLASTED TRACK TWC LOOP, TREATED WOOD, AND PVC CONDUITS SHALL BE PAINTED CONSTRUCTION YELLOW, AFTER INSTALLATION.
- 3- EMBEDDED TRACK TWC LOOP GROOVE SHALL BE FILLED WITH APPROVED SEALANT. ON ASPHALTIC CONCRETE PAVEMENT, AN ASPHALTIC EMULSION SEALANT CONFORMING TO STATE OF CALIFORNIA SPECIFICATIONS 8040-41A-15 SHALL BE USED. ON PORTLAND CEMENT CONCRETE PAVEMENT, A HOT-MELT RUBBERIZED ASPHALT SEALANT, CONFORMING TO 1997 SSS SECTION 86-5.01A(5), SHALL BE USED. TOTAL LOOP WIRE CIRCUMFERENCE LENGTH NOT TO EXCEED 52'-6\".
- 4- CONTRACTOR SHALL SUBMIT FOR APPROVAL THE PROPOSED METHOD OF FASTENING THE FRAME OF THE LOOP TO THE TIES. FOR CONCRETE TIE INSTALLATIONS, DRILLING OF TIES WILL NOT BE PERMITTED - MOUNT USING ERICO SBA257 CONCRETE TIE CLIPS OR STAINLESS STEEL BANDING AROUND TWC WOOD FRAME.
- 5- JUNCTION BOXES AS REQUIRED TO INSTALL LOOP WIRES.
- 6- ADJUST LOOP IN FIELD SO THAT LOOP CROSS-MEMBERS REST ON TOP OF TIES AS SHOWN.
- 7- COORDINATE LOOP PLACEMENT WITH THE VTA PRIOR TO INSTALLATION.

THIS DRAWING IS VTA STANDARD DETAIL SRS-011 (EDITION 2017)

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Engineers Architects Planners  
1732 North First Street, Suite 400 San Jose, CA 95112  
Tel (408) 451-7300 Fax (408) 451-6942

DESIGNED: M.BAKHIN  
CHECKED: V.FAINGOLD  
DRAWN: M.BAKHIN  
CADD FILE NAME: 801JP103.dwg

Santa Clara Valley  
**Transportation Authority**

APPROVED

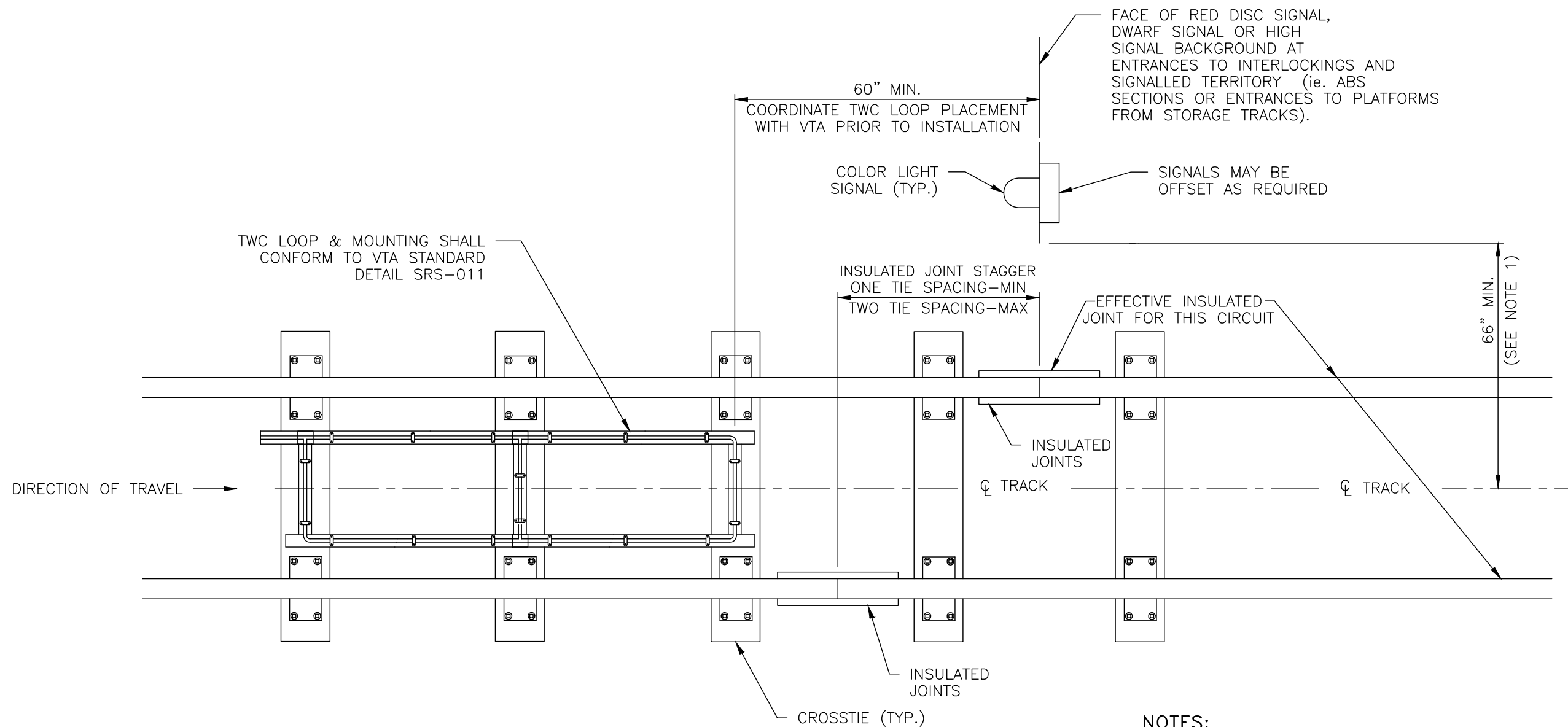
**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/11/19  
SUBMITTAL DATE: 06/29/20  
SCALE: NTS  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
TWC LOOP

PCOA NO. 000  
CONTRACT NO. C801  
FILE LOCATION: PROJECTWISE

SHEET OF  
DRAWING NO. JP103  
REVISION B



**TYPICAL LAYOUT**  
(N.T.S.)

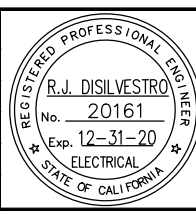
**NOTES:**

- 1- ON EXCLUSIVE RIGHT-OF-WAY, MINIMUM CLEARANCE SHALL BE 66" FROM TRACK CENTERLINE ON TANGENT TRACK. REFER TO VTA'S LRT DESIGN CRITERIA, CHAPTER 4, FOR CURVED AND SUPERELEVATED TRACK APPLICATIONS. FOR APPLICATIONS WHERE TRACK IS SHARED WITH A RAILROAD, THIS CLEARANCE SHALL BE 102" ON TANGENT TRACK AND INCREASE BY 1" PER DEGREE OF CURVATURE ON CURVED TRACK.

THIS DRAWING IS VTA STANDARD DETAIL SRS-012 (EDITION 2017)

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CADD FILE NAME: 801JP104.dwg

**Santa Clara Valley Transportation Authority**

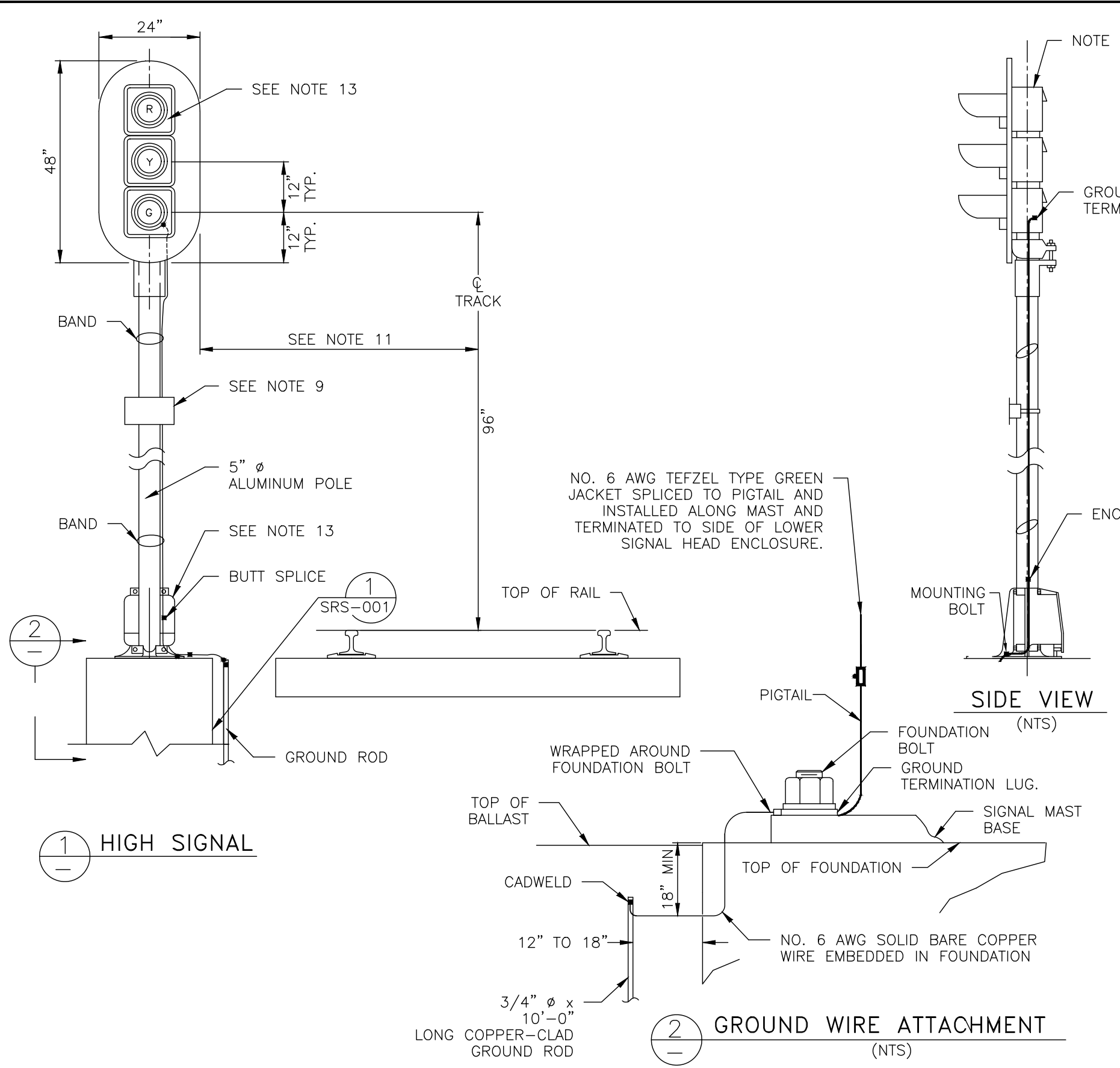
**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/11/19  
SUBMITTAL DATE: 06/29/20  
SCALE: NTS  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
SIGNAL/TWC/INS. JOINT INTERFACE

PCB NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

SHEET OF DRAWING NO. JP104 REVISION B



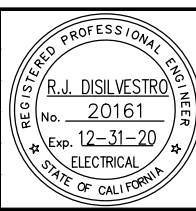
**NOTES:**

- 1- COLOR LIGHT SIGNALS SHALL CONFORM TO A.R.E.M.A. SPECIFICATIONS 7.1.1.
- 2- BOLTS, NUTS AND WASHERS USED WITHIN THE ENCLOSURE SHALL BE ZINC PLATED OR STAINLESS STEEL.
- 3- MOUNTING HARDWARE, EXCEPT LOCK WASHERS, EXPOSED TO THE ELEMENTS SHALL BE HOT-DIP GALVANIZED OR STAINLESS STEEL.
- 4- SIGNAL LAYOUTS SHALL HAVE ONE COAT RUST-PREVENTIVE PRIMER AND FINISH COAT OF DULL BLACK PAINT ON HOODS AND BACKGROUND. OTHER PARTS OF SIGNAL THAT REQUIRE PAINT WILL BE PAINTED AN ALUMINUM COLOR.
- 5- PAINTING SHALL CONFORM TO A.R.E.M.A. SPECIFICATIONS 1.5.10 AND 7.5.1.L
- 6- CAST ALUMINUM SIGNAL HOUSING SHALL BE IN ACCORDANCE WITH A.R.E.M.A. 7.11.6 (C) & 7.1.1.10 (A,B,C) (OLD PART 146.6C & ID A,B,C).
- 7- SHEET ALUMINUM BACKGROUND AND HOOD SHALL BE IN ACCORDANCE WITH A.R.E.M.A. SPECIFICATIONS 7.5.1.
- 8- SIGNAL LAMPS SHALL BE LED TYPE, 8-16 VDC, CAPABLE OF PROVIDING HOT AND COLD FILAMENT CHECKS FOR SOLID STATE SIGNAL EQUIPMENT. LEDS SHALL CONFORM TO A.R.E.M.A. SPECIFICATIONS 7.1.5.
- 9- NUMBER PLATES SHALL BE IN ACCORDANCE WITH A.R.E.M.A. SIGNAL SPECIFICATION 14.6.1 REQUIREMENTS FOR WHITE LETTERING ON A BLACK NON-REFLECTIVE BACKGROUND (6" SLIDE-IN TYPE LETTERS). NUMBER PLATE BRACKET SHALL HAVE END SCREWS INSTALLED TO PREVENT THEFT/VANDALISM OF NUMBERS.
- 10- WIRING SHALL BE MINIMUM NO. 16 AWG INSULATED STRANDED COPPER WIRE IN ACCORDANCE WITH A.R.E.M.A. SPECIFICATIONS 10.3.14.
- 11- ON EXCLUSIVE RIGHT-OF-WAY, MINIMUM CLEARANCE SHALL BE 66" FROM TRACK CENTERLINE ON TANGENT TRACK. REFER TO VTA'S LRT DESIGN CRITERIA, CHAPTER 4, FOR CURVED AND SUPERELEVATED TRACK APPLICATIONS. FOR APPLICATIONS WHERE TRACK IS SHARED WITH A RAILROAD, THIS CLEARANCE SHALL BE 102" ON TANGENT TRACK AND INCREASE BY 1" PER DEGREE OF CURVATURE ON CURVED TRACK.
- 12- ANCHOR BOLTS, NUTS AND WASHERS SHALL BE SUPPLIED WITH FOUNDATION. SEE SRS-001.
- 13- SPLIT JUNCTION BOX BASE SHALL BE COMPLETE WITH MIN. 12 DOUBLE-POST A.R.E.M.A. TERMINAL POSTS FOR CABLE TERMINATION.
- 14- BALLAST SHALL BE REMOVED AND REPLACED FOR INSTALLATION OF THE GROUND WIRE AND ROD.
- 15- IN NON-BALLASTED LOCATIONS, GROUNDING APPARATUS SHALL BE INSTALLED BY THE FOUNDATION CONTRACTOR.
- 16- EACH LIGHT SHALL BE INDEPENDENTLY SERVICEABLE AND NOT DEPENDENT UPON OPENING OF ANOTHER DOOR.
- 17- GROUND RODS SHALL BE INSTALLED BELOW FOUNDATION AND PIGTAIL SHALL BE CADWELDED TO ROD, THEN ROUTED THROUGH FOUNDATION AND CONNECTED PER DETAIL.

THIS DRAWING IS VTA STANDARD DETAIL SRS-014 (EDITION 2017)

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A	03/19	65% SUBMITTAL SET

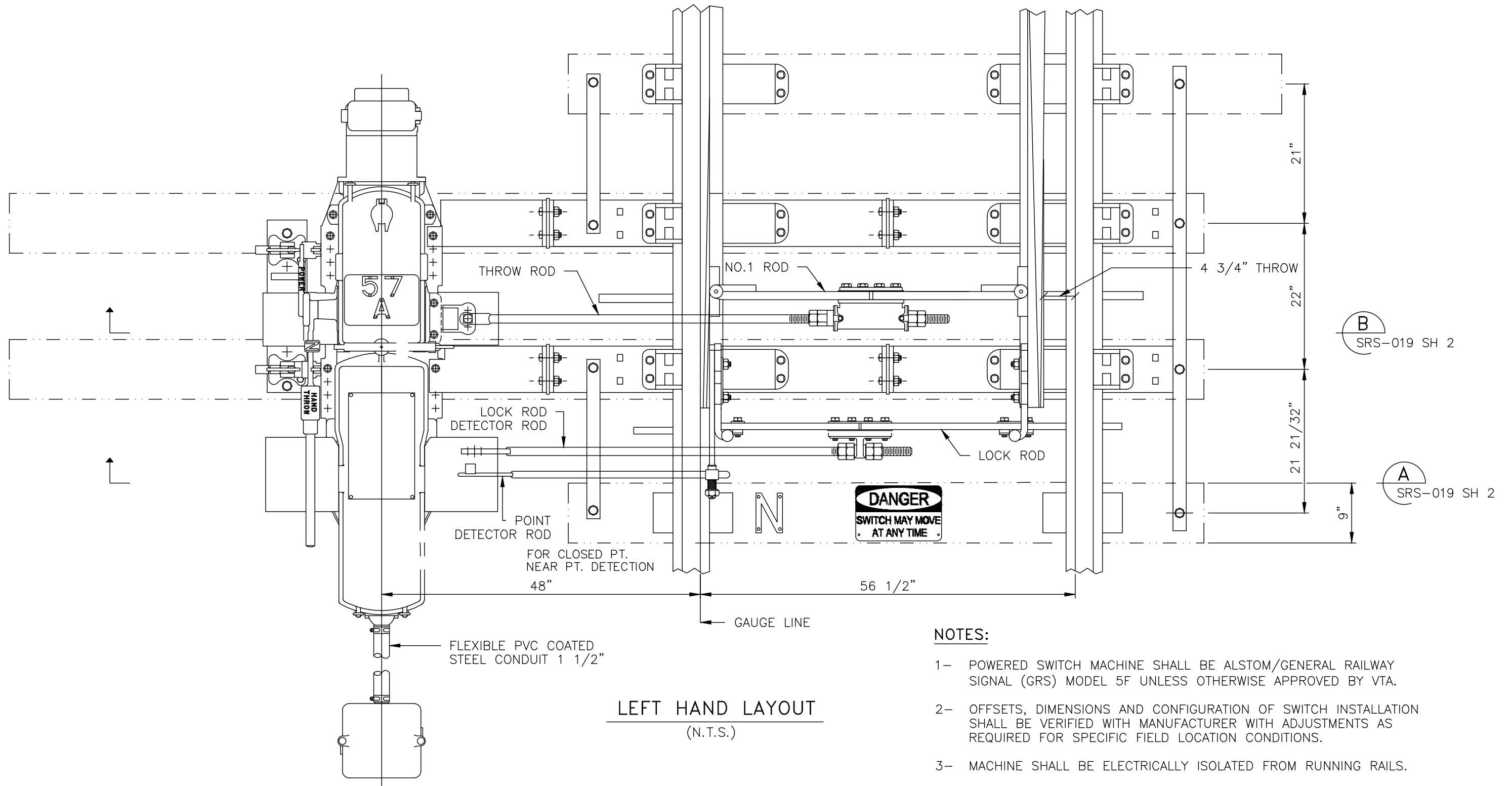


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DESIGNED	CHECKED
M.BAKHIN	V.FAINGOLD
DRAWN	CADD FILE NAME
M.BAKHIN	801JP105.dwg



<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
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SUBMITTAL DATE	BOARD APPROVAL DATE
06/29/20	

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS HIGH SIGNAL DETAILS			SHEET OF DRAWING NO. JP105 REVISION B
PCA NO.	CONTRACT NO.	FILE LOCATION	
000	C801	PROJECTWISE	



**LEFT HAND LAYOUT**  
(N.T.S.)

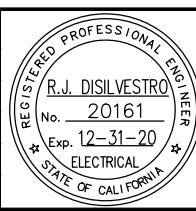
**NOTES:**

- 1- POWERED SWITCH MACHINE SHALL BE ALSTOM/GENERAL RAILWAY SIGNAL (GRS) MODEL 5F UNLESS OTHERWISE APPROVED BY VTA.
- 2- OFFSETS, DIMENSIONS AND CONFIGURATION OF SWITCH INSTALLATION SHALL BE VERIFIED WITH MANUFACTURER WITH ADJUSTMENTS AS REQUIRED FOR SPECIFIC FIELD LOCATION CONDITIONS.
- 3- MACHINE SHALL BE ELECTRICALLY ISOLATED FROM RUNNING RAILS.
- 4- THROW ROD, LOCK ROD, AND POINT DETECTOR ROD SHALL CONFORM TO A.R.E.M.A. SPECIFICATIONS, PART 12.1.

THIS DRAWING IS VTA STANDARD DETAIL SRS-019 (EDITION 2017)

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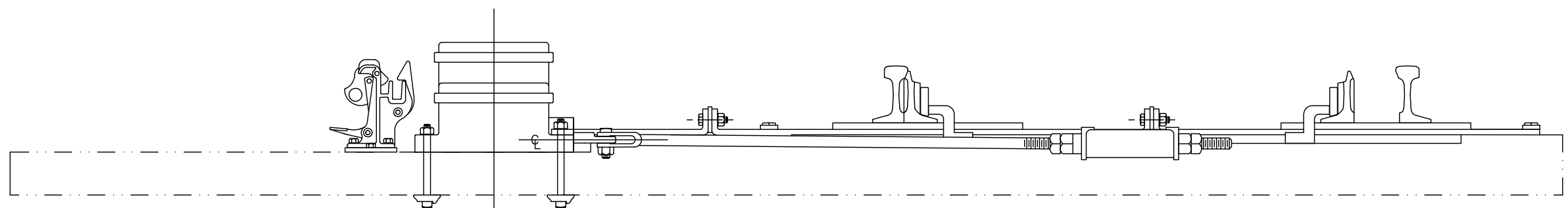


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DESIGNED M.BAKHIN	CHECKED V.FAINGOLD
DRAWN M.BAKHIN	CADD FILE NAME 801JP106.dwg

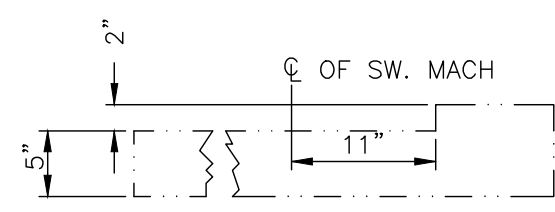


APPROVED <b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE 03/11/19	SCALE NTS
SUBMITTAL DATE 06/29/20	BOARD APPROVAL DATE

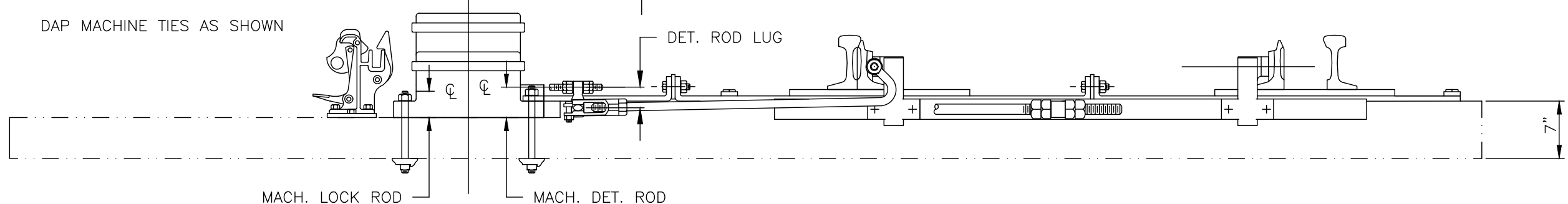
EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS SWITCH LAYOUT TIE INSTALLATION. 1 OF 4			SHEET OF DRAWING NO. JP106 REVISION B
PCA NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE	



SECTION BB —  
SRS-019 SH 1



DAP MACHINE TIES AS SHOWN



SECTION AA —  
SRS-019 SH 1

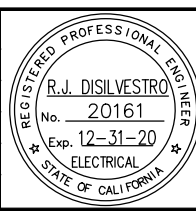
**NOTES:**

1- SEE SRS-019 SH 1 FOR GENERAL NOTES.

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M.BAKHIN	801JP107.dwg



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06/29/20	

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS SWITCH LAYOUT TIE INSTALLATION. 2 OF 4		
PCA NO.	CONTRACT NO.	FILE LOCATION
000	C801	PROJECTWISE
SHEET OF	DRAWING NO.	REVISION
	JP107	B

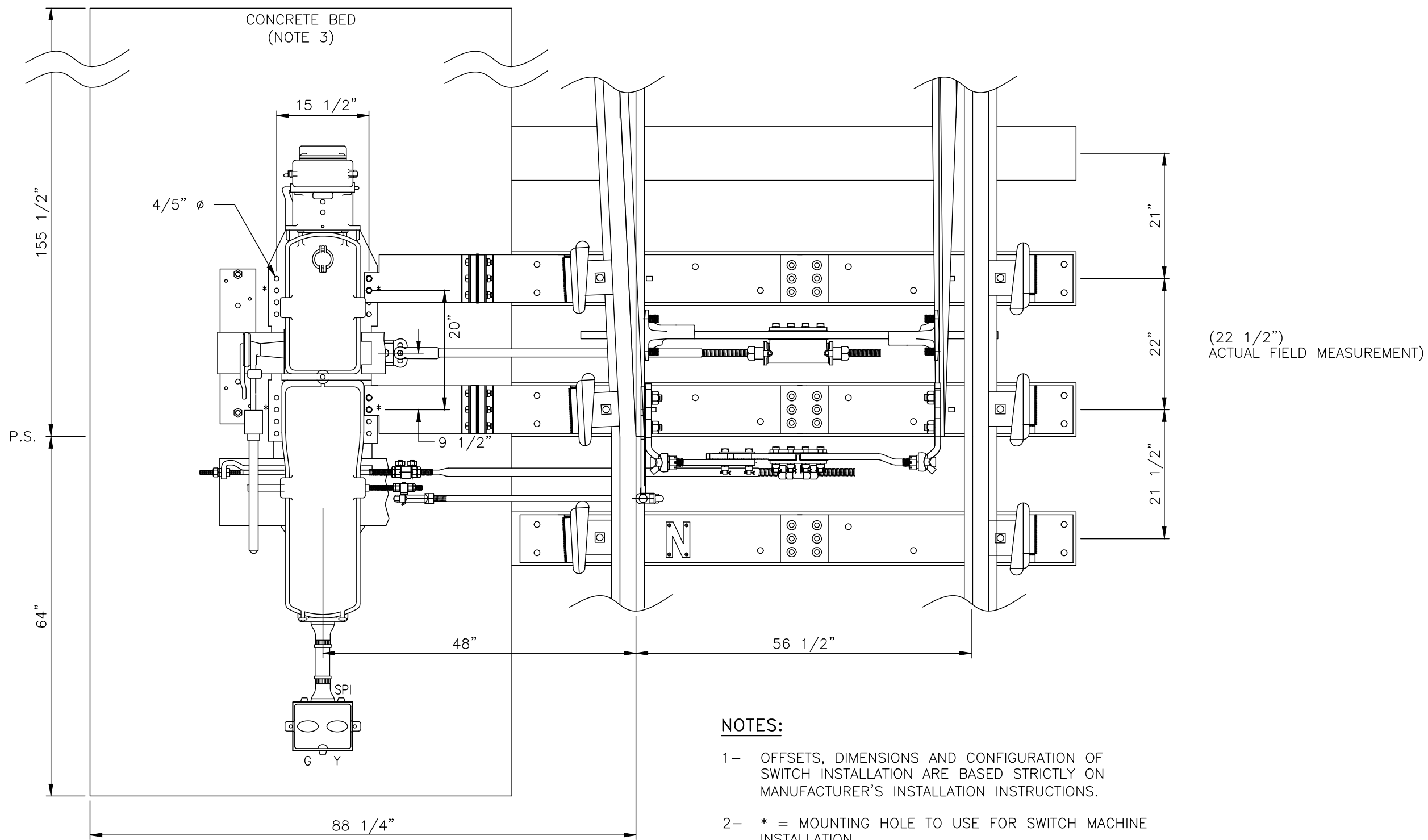
APPROXIMATE HOLE PATTERN FOR SWITCH MACHINE ANCHOR BOLTS

4/5"  $\phi$   
(4 PLACES)

508mm  
(20")

393.7  
(15 1/2")

101.6 (4")  $\phi$   
PVC CONDUIT



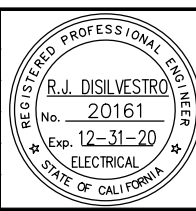
**NOTES:**

- 1- OFFSETS, DIMENSIONS AND CONFIGURATION OF SWITCH INSTALLATION ARE BASED STRICTLY ON MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- 2- \* = MOUNTING HOLE TO USE FOR SWITCH MACHINE INSTALLATION.
- 3- CONCRETE BED DIMENSIONS APPLY TO SWITCH INSTALLED THROUGH AREA. CONCRETE BED FOR SWITCH INSTALLED IN AN OPEN AREA.

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DRAWN: M.BAKHIN CADD FILE NAME: 801JP108.dwg



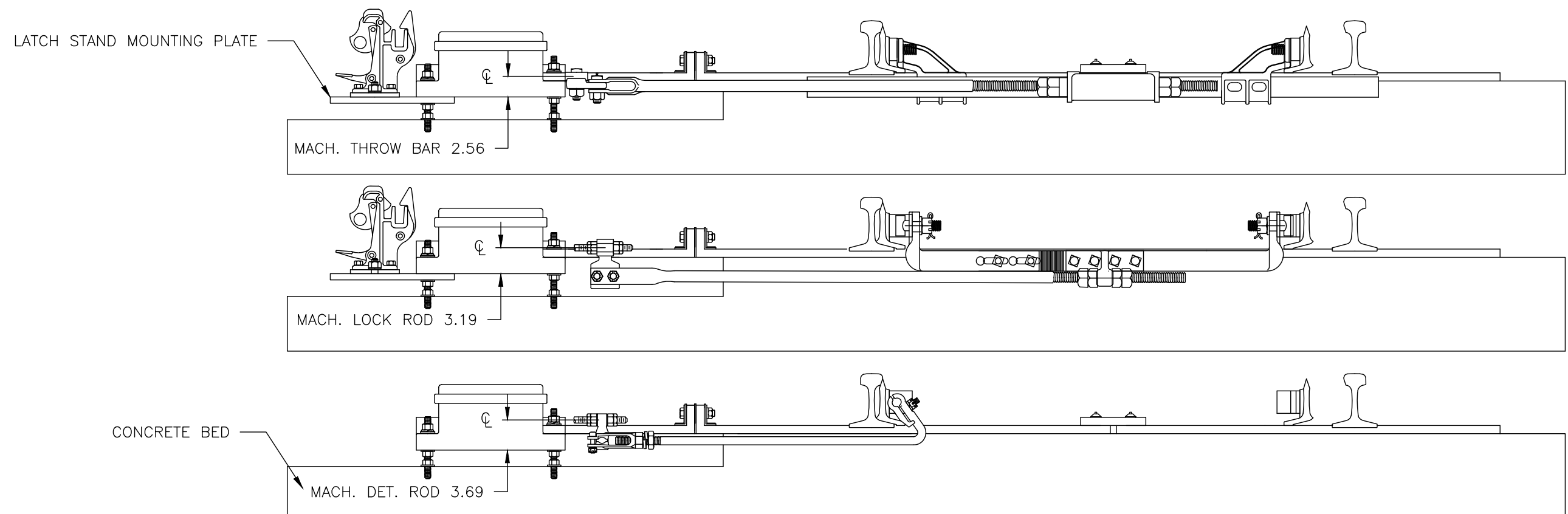
**BKF** 100+ YEARS  
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SUBMITTAL DATE: 06/29/20 BOARD APPROVAL DATE:

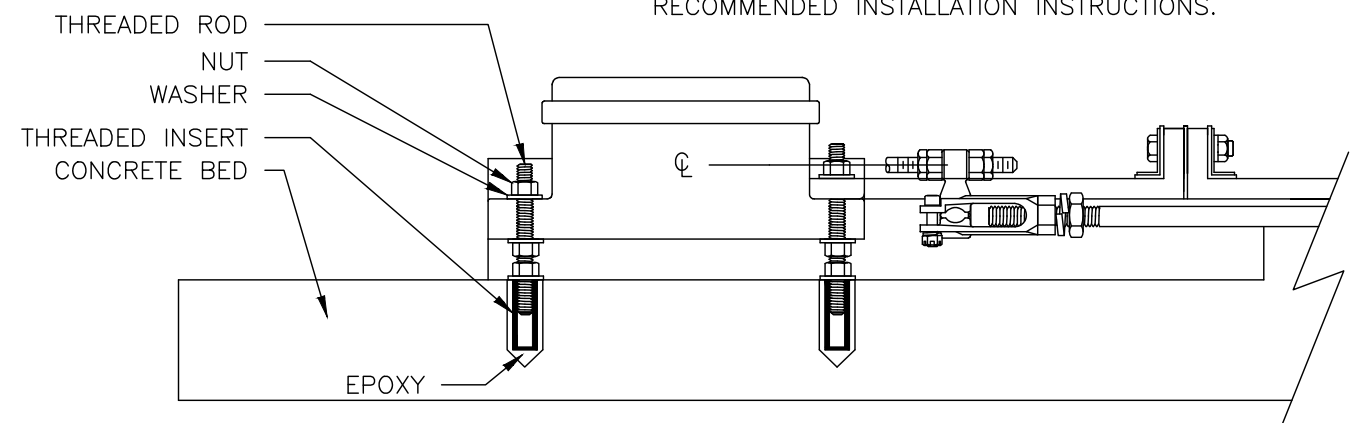
EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
SWITCH LAYOUT.  
DIRECT FIXATION INSTALLATION. 3 OF 4

PCB NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

SHEET OF [Blank]  
DRAWING NO. JP108  
REVISION B



OFFSETS, DIMENSIONS AND CONFIGURATION OF SWITCH INSTALLATION ARE BASED STRICTLY ON MANUFACTURERS RECOMMENDED INSTALLATION INSTRUCTIONS.



**NOTES:**

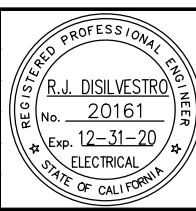
- 1- ASSEMBLE SWITCH COMPONENTS PER SWITCH MACHINE MANUFACTURER'S INSTALLATION INSTRUCTIONS.
- 2- MAINTAINING PROPER SWITCH ALIGNMENT, USE THE MOUNTING HOLES ON THE SWITCH MACHINE AS A GUIDE TO MARK HOLE LOCATIONS ON THE CONCRETE BED.
- 3- SET ASIDE SWITCH MACHINE AND DRILL MOUNTING HOLES AT THE LOCATIONS MARKED ON THE CONCRETE BED. HOLES SHALL BE DRILLED AND PREPARED PER INSERT MANUFACTURER'S INSTRUCTIONS.
- 4- INSTALL THREADED INSERTS AND EPOXY PER INSERT MANUFACTURER'S INSTRUCTIONS.
- 5- SECURE THE SWITCH MACHINE TO THE THREADED INSERTS WITH THREADED RODS, NUTS AND WASHERS. AT LEAST 2 1/4" OF THREADED ROD SHALL MATE WITH INSERT THREADS. VERTICALLY ALIGN THE SWITCH MACHINE BY ADJUSTING THE POSITION OF THE NUTS ON THE THREADED ROD. VERIFY ALIGNMENT AND OPERATION OF THE SWITCH PER SWITCH MACHINE MANUFACTURER'S INSTALLATION INSTRUCTIONS.

PARTS LIST		
ITEM	DESCRIPTION	AMOUNT
1	THREADED ROD, 3/4" - 10 UNC-2A, ASTM A193 GRADE B7 (LENGTH DETERMINED BY INSTALLATION CONTRACTOR)	4
2	LOCK WASHER, 3/4", HVY (JMI HWL2007-100)	12
3	INSERT, STAINLESS STEEL (HILTI HIS-R 3/4 (316SS))	4
4	EPOXY, ADHESIVE (HILTI HIT RE 500)	AR
5	NUT, 3/4" - 10 HEAVY HEX (JMI HN20043-100)	12
6	LATCH STAND MOUNTING PLATE (JMI XXXX)	1

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DRAWN: M.BAKHIN  
CADD FILE NAME: 801JP109.dwg

Santa Clara Valley  
**Transportation Authority**

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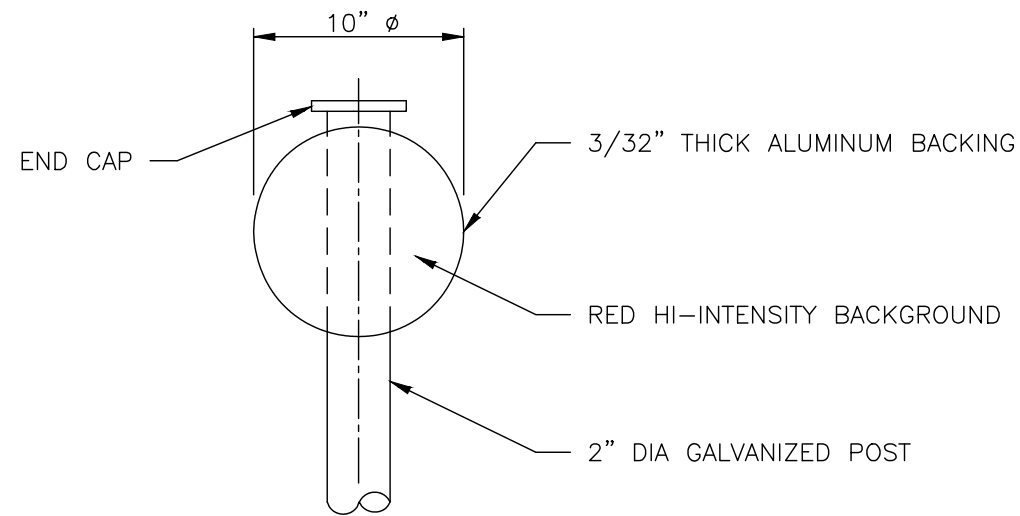
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SCALE: NTS  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
SWITCH LAYOUT  
DIRECT FIXATION INSTALLATION. 4 OF 4

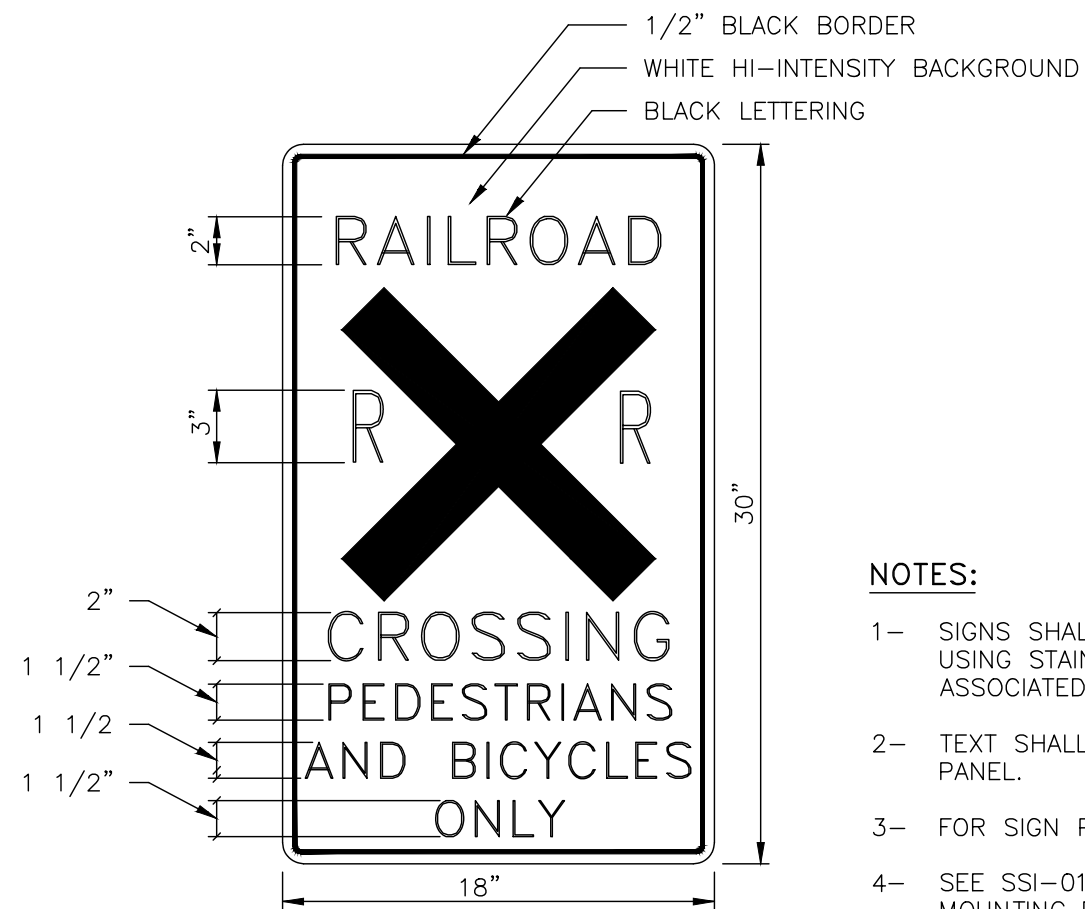
PCOA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

SHEET OF DRAWING NO. JP109 REVISION B



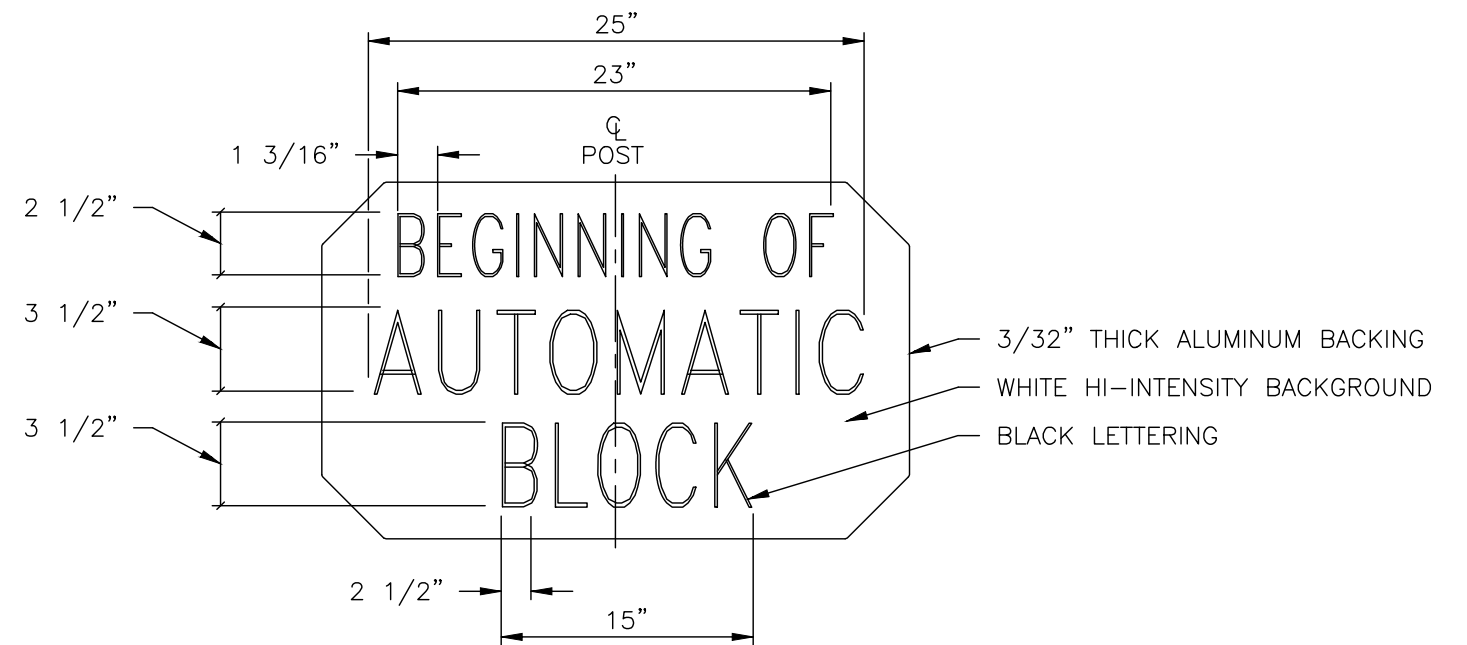


**RED DISK REFLECTOR**  
(N.T.S.)

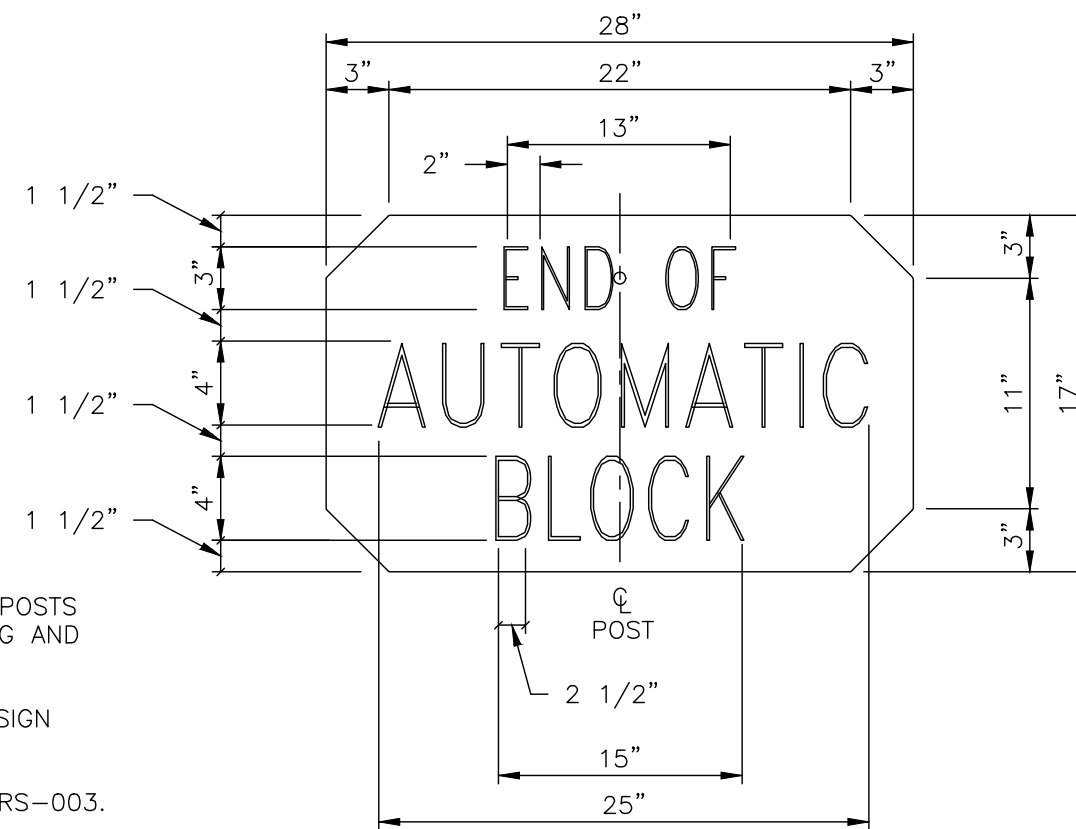


**NOTES:**

- 1- SIGNS SHALL BE ATTACHED TO POSTS USING STAINLESS STEEL BANDING AND ASSOCIATED HARDWARE.
- 2- TEXT SHALL BE CENTERED ON SIGN PANEL.
- 3- FOR SIGN POST DETAILS-SEE SRS-003.
- 4- SEE SSI-018 FOR BALLAST MOUNTING DETAILS.
- 5- SEE SD-327 FOR DECK MOUNTING DETAILS.



DIMENSIONS SAME AS "END OF" SIGN BELOW



MATERIAL AND COLORING SAME AS "BEGINNING OF" SIGN ABOVE

THIS DRAWING IS VTA STANDARD DETAIL SRS-022 (EDITION 2017)

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DRAWN: M.BAKHIN  
CADD FILE NAME: 801JP110.dwg

**Santa Clara Valley Transportation Authority**

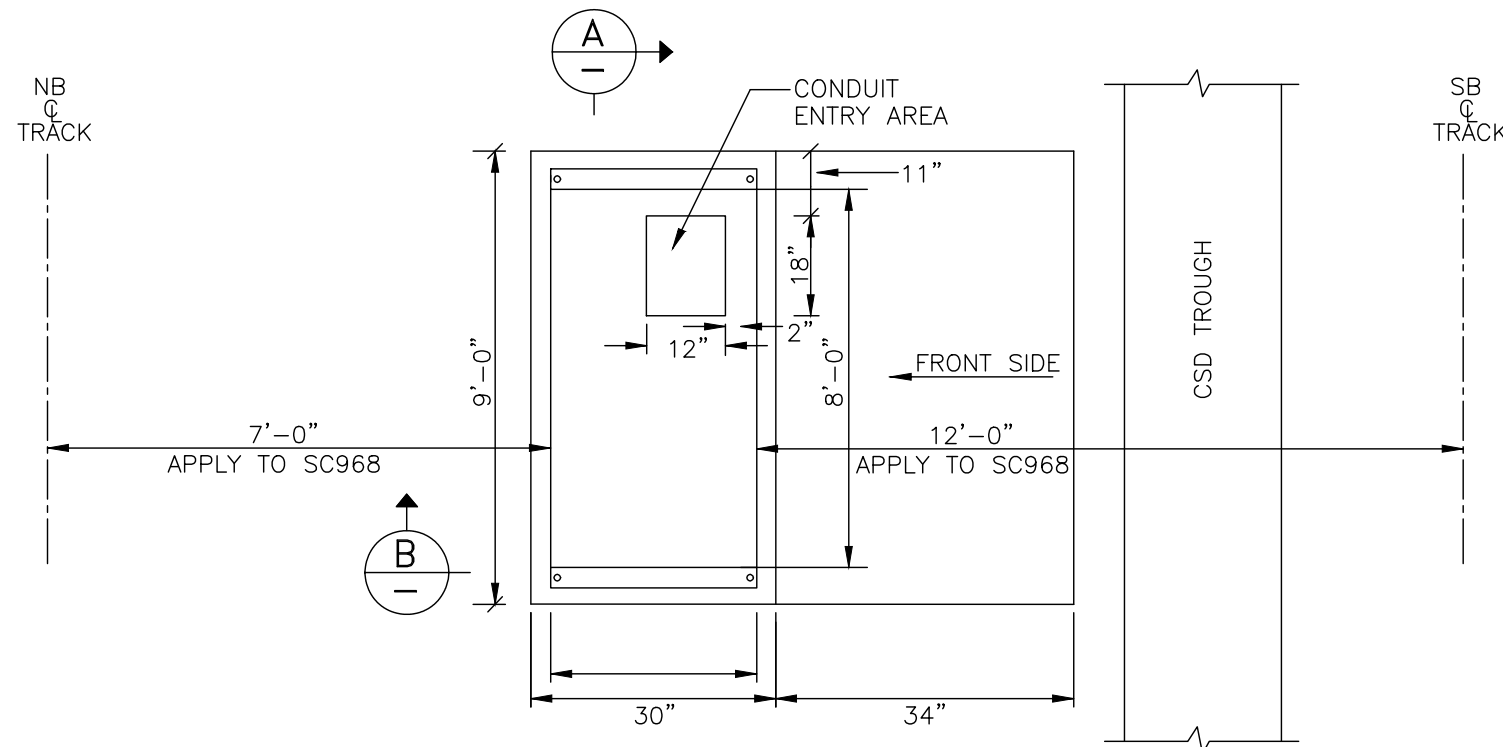
**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/11/19  
SUBMITTAL DATE: 06/29/20  
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BOARD APPROVAL DATE:

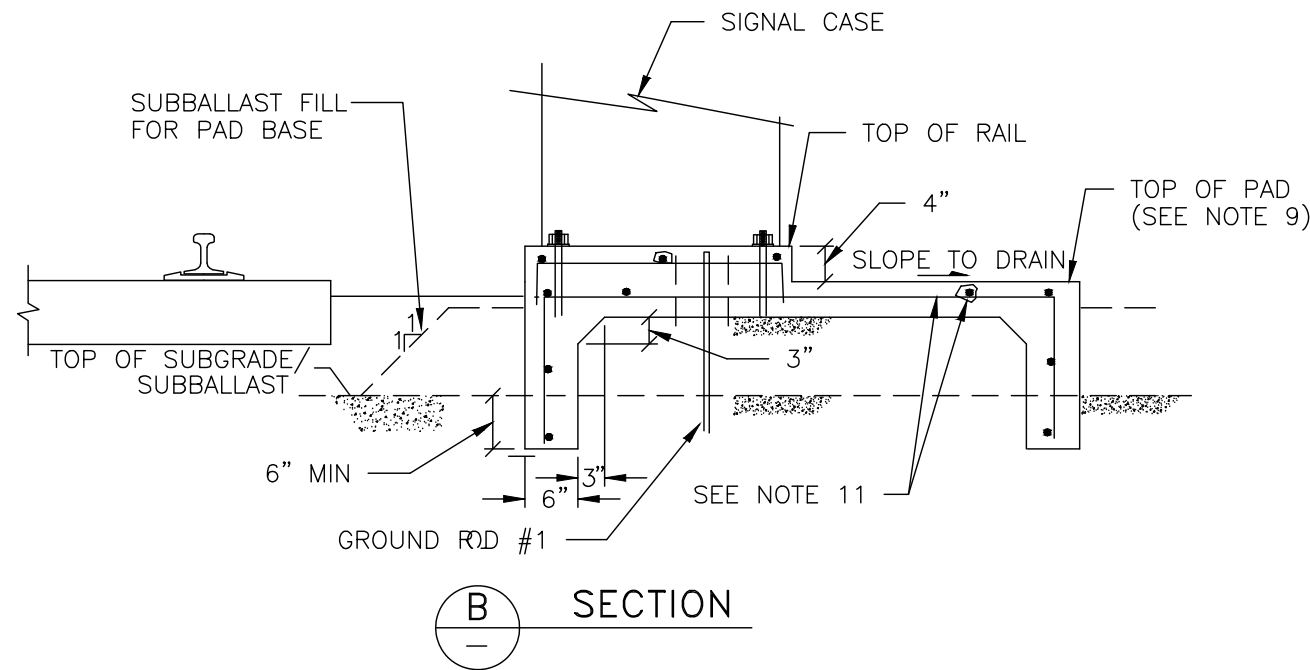
EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
STANDARD SIGNS

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

SHEET OF DRAWING NO. JP110 REVISION B



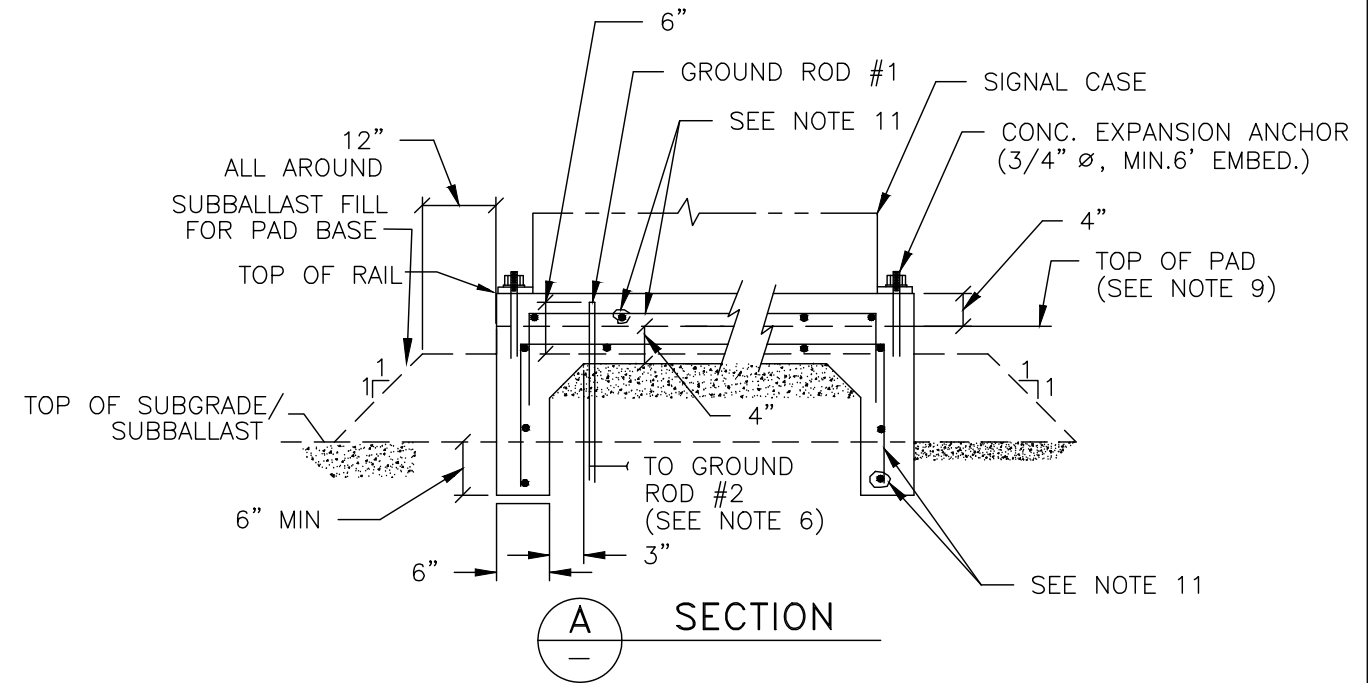
**SIGNAL CASE FOUNDATION LAYOUT**  
(NTS)



**B SECTION**

**NOTES:**

- 1- PROVIDE ONE HEX NUT AND ONE FLATWASHER FOR EACH CONCRETE EXPANSION BOLT. BOLTS SHALL CONFORM TO ASTM A307 GRADE A, AND FLAT WASHERS TO ASTM F436M. ALL SHALL BE GALVANIZED OR CADMIUM PLATED.
- 2- CONCRETE FOR PIER AND PAD SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF 4351 PSI AT 28 DAYS.
- 3- BOLTS ABOVE TOP OF FOUNDATION SHALL BE PROTECTED FROM DAMAGE AND RESIDUAL CONCRETE DURING PAD INSTALLATION.
- 4- TOLERANCES FOR LEVEL ELEVATION BETWEEN PIERS = 1/2" ±.
- 5- CONDUITS SHALL EXTEND 6" ABOVE TOP OF PIERS. EACH CONDUIT SHALL BE CAPPED.
- 6- EACH SIGNAL CASE SHALL HAVE TWO GROUND RODS, 3/4" DIA. x 10'-0" LONG, CONNECTED TOGETHER WITH NO. 2 AWG STRANDED BARE COPPER WIRE THERMOWELDED TO EACH ROD. ROD #2 WHICH IS NOT SHOWN ON THIS DRAWING, SHALL BE INSTALLED A MINIMUM OF 10'-0" FROM ROD #1. RESISTANCE OF GROUND RODS SHALL BE MEASURED AFTER BOTH GROUND RODS HAVE BEEN INSTALLED AND CONNECTED. GROUND READINGS SHALL NOT EXCEED 10 ohm. IF GROUND READINGS EXCEED 10 ohm, ADDITIONAL GROUND RODS SHALL BE INSTALLED UNTIL 10 ohm OR LESS IS OBTAINED. RESISTANCE READINGS SHALL BE SUBMITTED TO VTA FOR REVIEW.
- 7- ON EXCLUSIVE RIGHT-OF-WAY, MINIMUM CLEARANCE SHALL BE 66" ROM TRACK CENTERLINE ON TANGENT TRACK. REFER TO VTA'S LRT DESIGN CRITERIA, CHAPTER 4, FOR CURVED AND SUPERELEVATED TRACK APPLICATIONS. FOR APPLICATIONS WHERE TRACK IS SHARED WITH A RAILROAD, THIS CLEARANCE SHALL BE 102" ON TANGENT TRACK AND INCREASE BY 1" PER DEGREE OF CURVATURE ON CURVED TRACK. USE 108" WHERE POSSIBLE. DESIGNER SHALL ENSURE THAT DOOR HANDLES, CASE ROOFS, ETC. DO NOT INTRUDE INTO THIS CLEARANCE ENVELOPE.
- 8- PROVIDE DOOR STOPS TO PREVENT INTRUSION INTO TRAIN CLEARANCE ENVELOPE. WHEN POSSIBLE, INCREASE CLEARANCE MINIMUMS IN NOTE 7 BY WIDTH OF OPEN DOORS NEXT TO TRACK.
- 9- TOP OF PAD ELEVATION SHALL BE DESIGNED RELATIVE TO SITE SPECIFIC BALLAST ELEVATIONS. BALLAST ELEVATION SHALL BE 1" MIN. LOWER THAN PAD ELEVATION ALL AROUND.
- 10- WHEN SITE CONDITIONS DO NOT ALLOW THIS TYPE OF INSTALLATION, REFER TO SRS-008, SRS-009 OR SRS-010 FOR THE SIGNAL CASE FOUNDATION DETAILS APPROPRIATE TO THE ACTUAL SIGNAL CASE FURNISHED.
- 11- 1/2" DIA. REBAR AT 12", ALL AROUND.
- 12- DESIGN SHOWN ON THIS DRAWING APPLIES TO SIGNAL CASE SC968 (SC968+65). SEE DRAWINGS JP126 AND SD316 FOR SIGNAL CASE FOUNDATION DETAILS LOCATED ON AERIAL STRUCTURE.



**A SECTION**

THIS DRAWING IS MODIFICATION TO VTA STANDARD DETAIL SRS-023

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DESIGNED: M.BAKHIN  
CHECKED: V.FAINGOLD  
DRAWN: M.BAKHIN  
CADD FILE NAME: 801JP111.dwg

**Santa Clara Valley Transportation Authority**

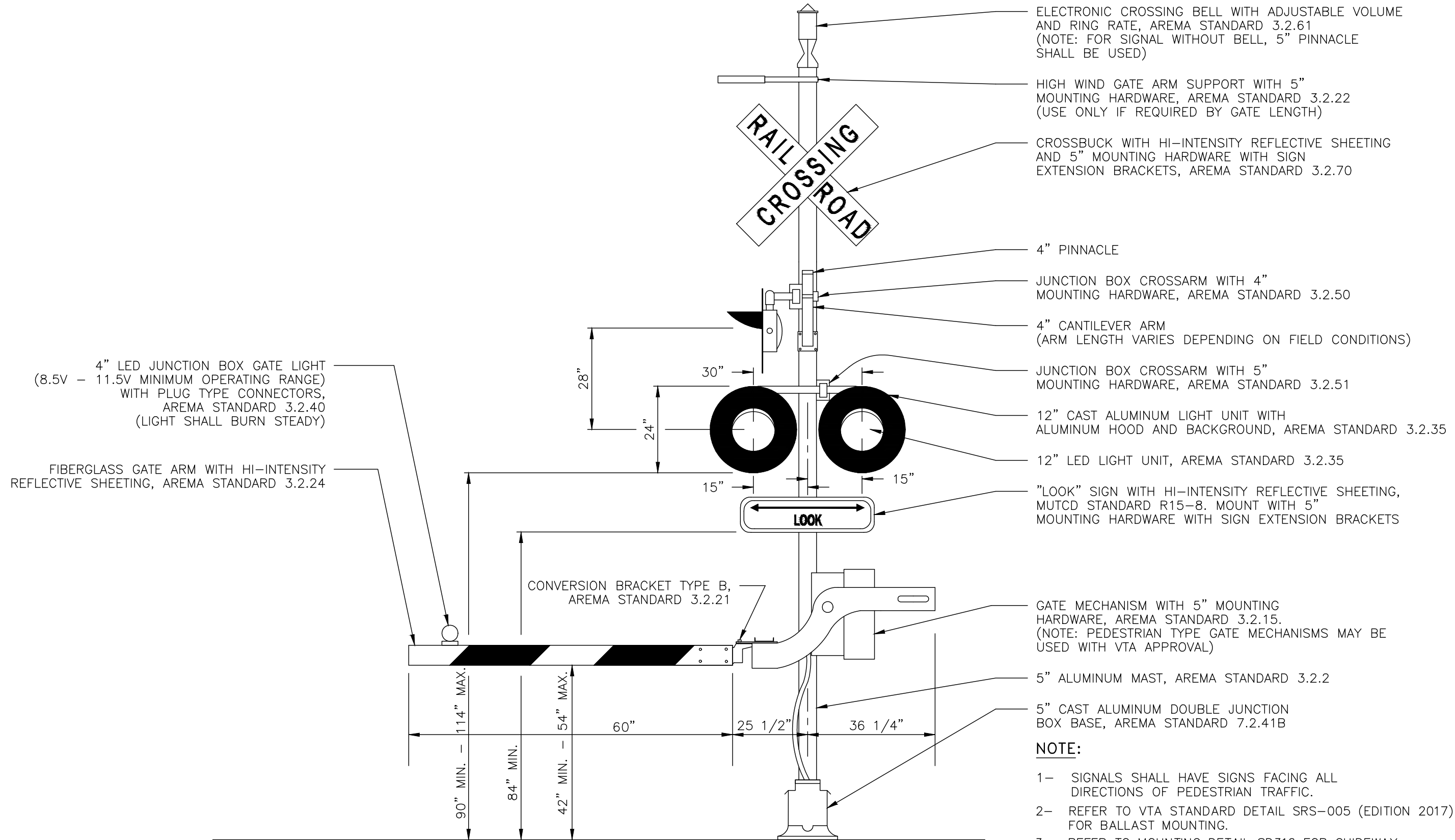
**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/11/19  
SCALE: NTS  
SUBMITTAL DATE: 06/29/20  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
SIGNAL CASE FOUNDATION DETAILS  
BALLASTED TRACK

PCB NO. 000  
CONTRACT NO. C801  
FILE LOCATION: PROJECTWISE

SHEET OF: JP111  
REVISION: B



ELECTRONIC CROSSING BELL WITH ADJUSTABLE VOLUME AND RING RATE, AREMA STANDARD 3.2.61 (NOTE: FOR SIGNAL WITHOUT BELL, 5" PINNACLE SHALL BE USED)

HIGH WIND GATE ARM SUPPORT WITH 5" MOUNTING HARDWARE, AREMA STANDARD 3.2.22 (USE ONLY IF REQUIRED BY GATE LENGTH)

CROSSBUCK WITH HI-INTENSITY REFLECTIVE SHEETING AND 5" MOUNTING HARDWARE WITH SIGN EXTENSION BRACKETS, AREMA STANDARD 3.2.70

4" PINNACLE

JUNCTION BOX CROSSARM WITH 4" MOUNTING HARDWARE, AREMA STANDARD 3.2.50

4" CANTILEVER ARM (ARM LENGTH VARIES DEPENDING ON FIELD CONDITIONS)

JUNCTION BOX CROSSARM WITH 5" MOUNTING HARDWARE, AREMA STANDARD 3.2.51

12" CAST ALUMINUM LIGHT UNIT WITH ALUMINUM HOOD AND BACKGROUND, AREMA STANDARD 3.2.35

12" LED LIGHT UNIT, AREMA STANDARD 3.2.35

"LOOK" SIGN WITH HI-INTENSITY REFLECTIVE SHEETING, MUTCD STANDARD R15-8. MOUNT WITH 5" MOUNTING HARDWARE WITH SIGN EXTENSION BRACKETS

GATE MECHANISM WITH 5" MOUNTING HARDWARE, AREMA STANDARD 3.2.15. (NOTE: PEDESTRIAN TYPE GATE MECHANISMS MAY BE USED WITH VTA APPROVAL)

5" ALUMINUM MAST, AREMA STANDARD 3.2.2

5" CAST ALUMINUM DOUBLE JUNCTION BOX BASE, AREMA STANDARD 7.2.41B

**NOTE:**

- 1- SIGNALS SHALL HAVE SIGNS FACING ALL DIRECTIONS OF PEDESTRIAN TRAFFIC.
- 2- REFER TO VTA STANDARD DETAIL SRS-005 (EDITION 2017) FOR BALLAST MOUNTING.
- 3- REFER TO MOUNTING DETAIL SD316 FOR GUIDEWAY MOUNTING.

THIS DRAWING IS VTA STANDARD DETAIL SRS-025 (EDITION 2017)

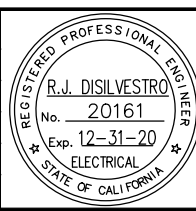
4" LED JUNCTION BOX GATE LIGHT (8.5V - 11.5V MINIMUM OPERATING RANGE) WITH PLUG TYPE CONNECTORS, AREMA STANDARD 3.2.40 (LIGHT SHALL BURN STEADY)

FIBERGLASS GATE ARM WITH HI-INTENSITY REFLECTIVE SHEETING, AREMA STANDARD 3.2.24

CONVERSION BRACKET TYPE B, AREMA STANDARD 3.2.21

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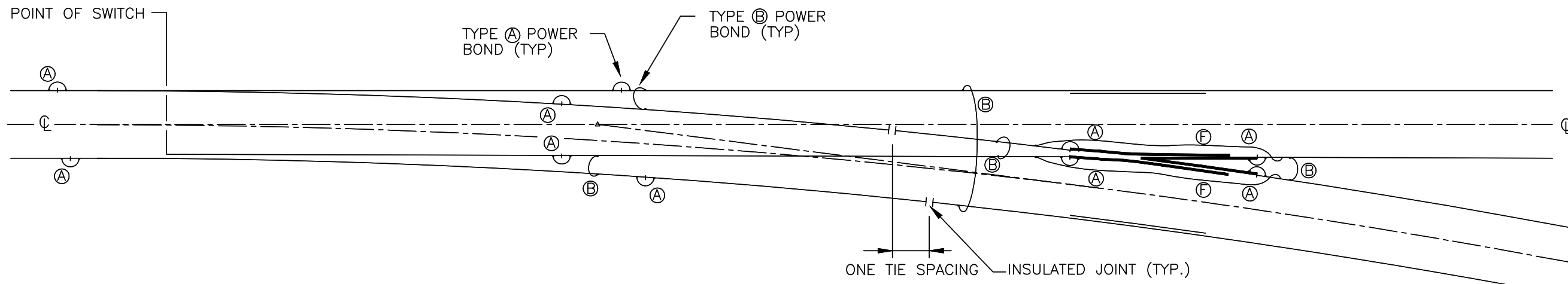


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DRAWN	CADD FILE NAME
M.BAKHIN	801JP112.dwg



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06/29/20	

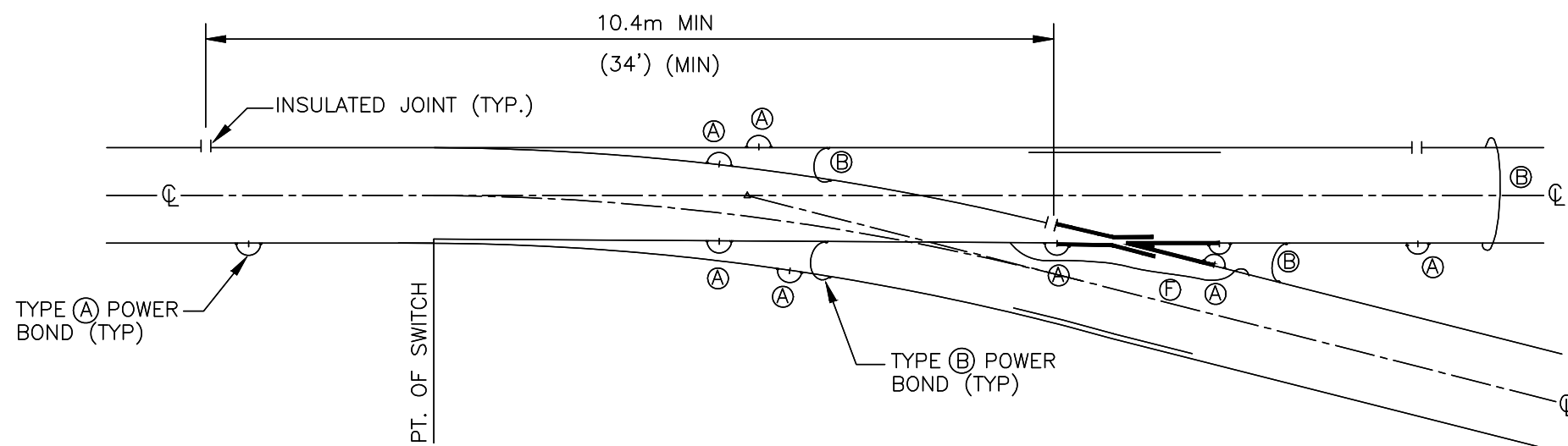
EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS PED XING GATE WITH SIDE LIGHTS			SHEET OF DRAWING NO. JP112 REVISION B
PCA NO.	CONTRACT NO.	FILE LOCATION	
000	C801	PROJECTWISE	



**NO. 8 OR NO. 10 TURNOUT  
DOUBLE RAIL TRACK CIRCUIT**  
(N.T.S.)

**NOTES:**

- 1- ALL NON-INSULATED RAIL JOINTS SHALL NORMALLY BE THERMITE WELDED.
- 2- TYPE (A) POWER BONDS SHALL BE REQUIRED AT ALL RAIL JOINTS. TYPE (A) POWER BONDS SHALL CONFORM TO THE FOLLOWING:
  - a- CONSIST OF TWO 250 kcmil BARE COPPER CONDUCTORS.
  - b- BE WELDED TO THE FIELD SIDE OF RAIL HEAD PER STANDARD DETAIL DRAWING NO. SRB-001.
- 3- TYPE (B) POWER BONDS SHALL CONFORM TO THE FOLLOWING:
  - a- CONSIST OF TWO 500 kcmil INSULATED COPPER CONDUCTORS.
  - b- BE WELDED TO THE FIELD SIDE OF RAIL WEB PER LRT STANDARD DETAIL DRAWING NO. SRB-001.
  - c- BE CLIPPED TO TIES WITH INSULATED GALVANIZED METAL CLAMPS.
  - d- FOR FOULING JUMPERS, BE WELDED AS CLOSE TO INSULATED JOINT AS POSSIBLE.
- 4- TYPE (F) POWER BONDS SHALL BE THE SAME AS TYPE (B) EXCEPT SHALL CONSIST OF ONE 500 kcmil INSULATED COPPER CONDUCTOR. TYPE (F) BONDS SHALL BE CLAMPED IN THE WEB OF THE FROG RAILS.

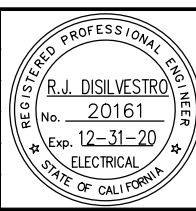


**NO. 4 TURNOUT  
SINGLE RAIL TRACK CIRCUIT**  
(N.T.S.)

THIS DRAWING IS VTA STANDARD DETAIL SRB-004 (EDITION 2017)

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DRAWN: M.BAKHIN  
CADD FILE NAME: 801JP113.dwg

**Santa Clara Valley  
Transportation  
Authority**

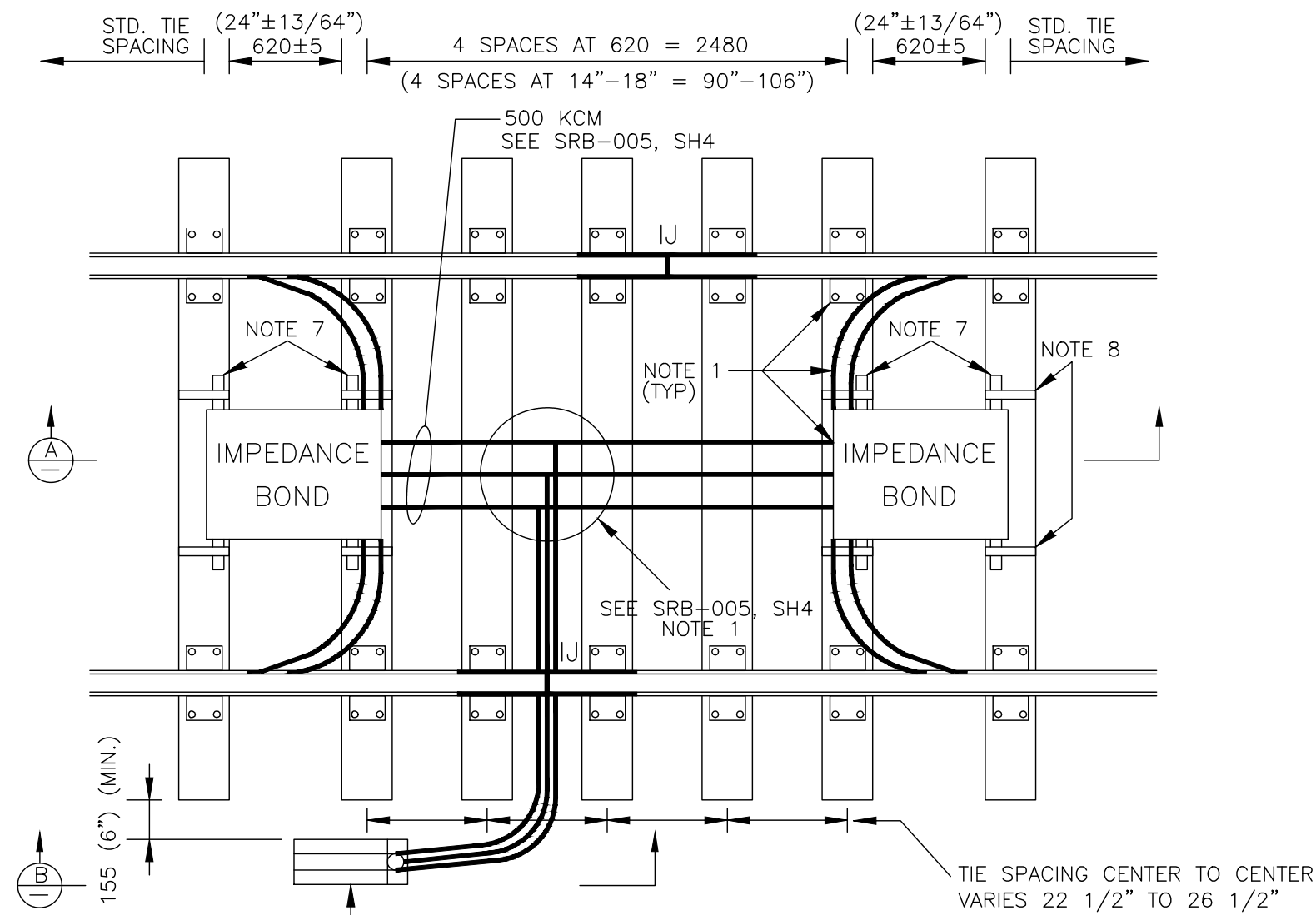
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APPROVED: 03/11/19  
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BOARD APPROVAL DATE:

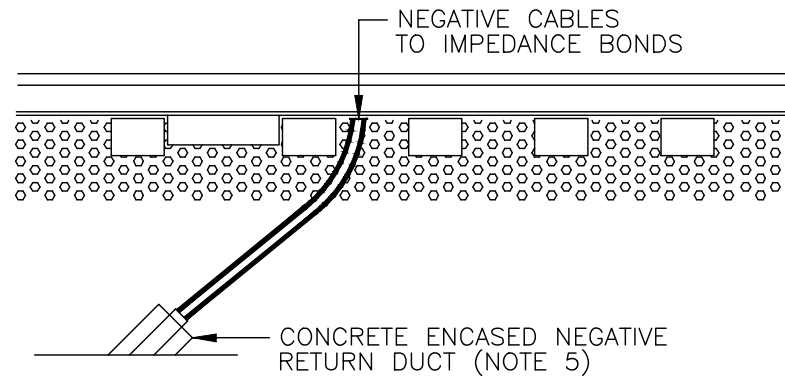
EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
RAIL BONDING LAYOUT  
SIGNALIZED TURNOUTS

PCA NO. 000  
CONTRACT NO. C801  
FILE LOCATION: PROJECTWISE

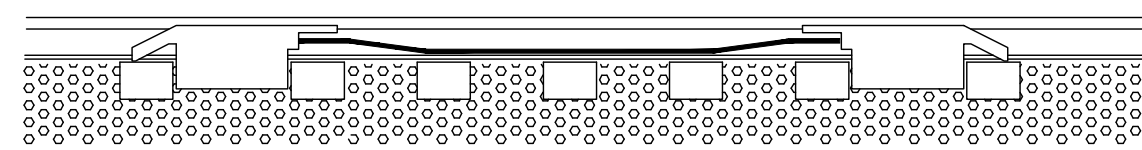
SHEET OF: JP113  
REVISION: B



TYPICAL PLAN  
(N.T.S.)



SECTION-BALLASTED  
OR DIRECT FIXATION TRACK  
(N.T.S.)



SECTION  
(N.T.S.)

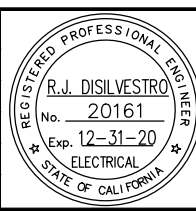
NOTES:

1. ALL CONNECTION OF CABLES TO RAILS, TO OTHER CABLES AND TO IMPEDANCE BOND CONNECTING LUGS TO BE BY MEANS OF EXOTHERMIC WELDING.
2. CABLE SHALL BE DRESSED NEATLY AND FIRMLY ATTACHED TO TIES, WITH INSULATED GALVANIZED METAL CLAMPS, BUT NOT TAUT AND SHALL BE CLEAR OF RAIL ATTACHMENT DEVICES WHEN PASSING BENEATH RAIL.
3. CABLES SHALL BE BONDED TO RAIL WEB PER LRT STANDARD DETAIL DRAWING NO. SRB-001, SH 2.
4. DO NOT INSTALL INSULATED JOINTS OR IMPEDANCE BONDS IN TRACK SECTIONS WITH GUARD RAIL OR RESTRAINED RAIL.
5. STUB-UPS TO HAVE BELL ENDS, PIPE CAPS AND PULL ROPES.
6. FOR NEGATIVE RETURN AT EMBEDDED TRACK, SEE IMP-B003.
7. UNI-STRUT 1" X 1 3/4" X 24" HAS IMPEDANCE BOND BOLTED TO UNI-STRUT.
8. STEEL BANDING 3/4" STRAP SECURES UNI-STRUT TO TIE.

THIS DRAWING IS VTA STANDARD DETAIL SRB-005 (EDITION 2017)

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CADD FILE NAME: 801JP114.dwg

Santa Clara Valley  
**Transportation Authority**

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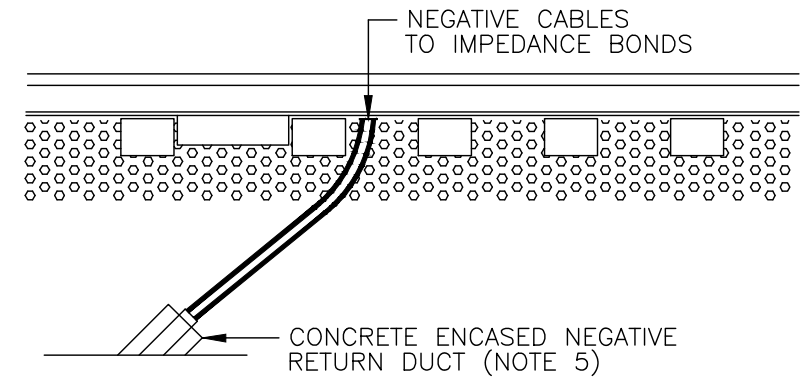
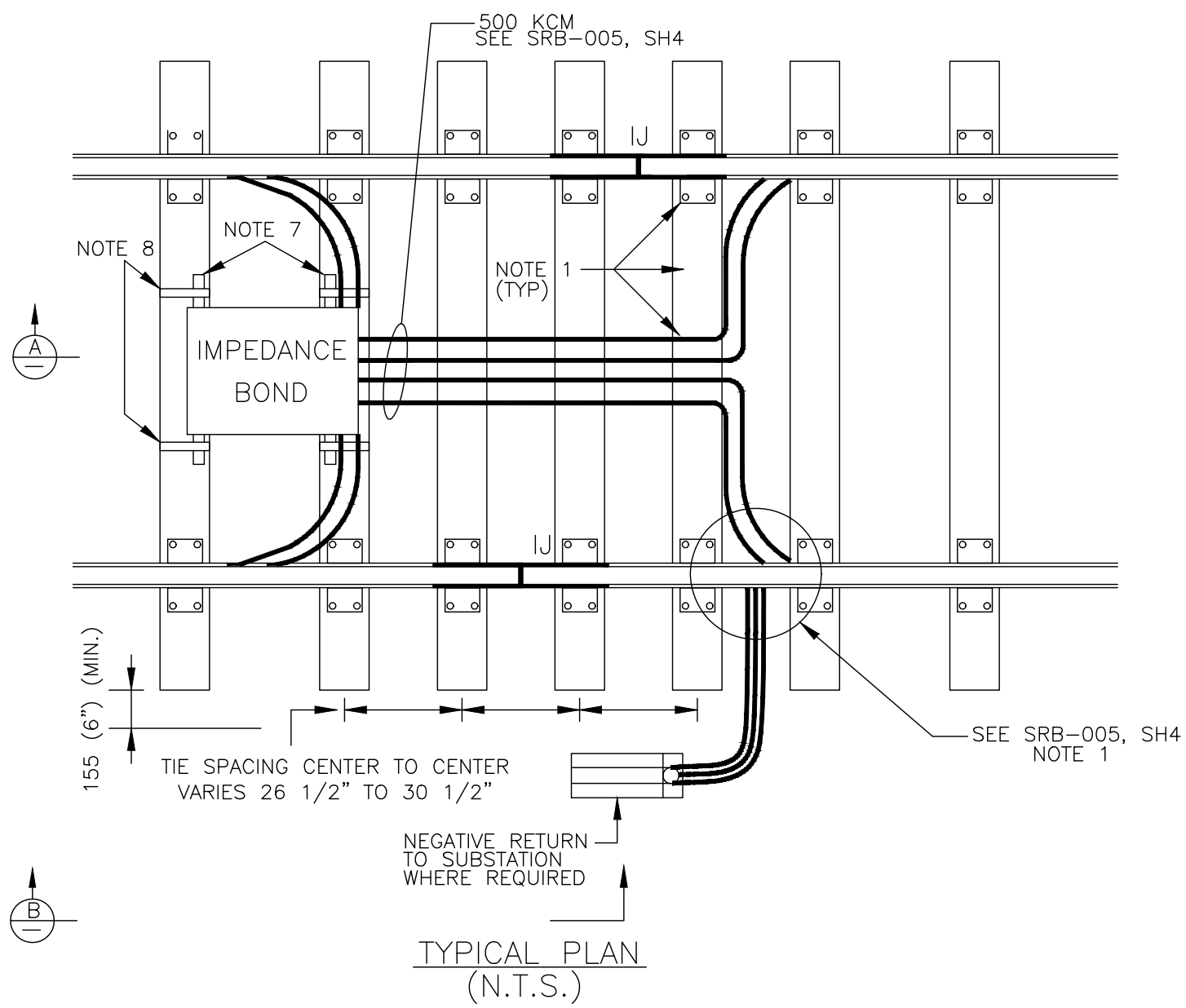
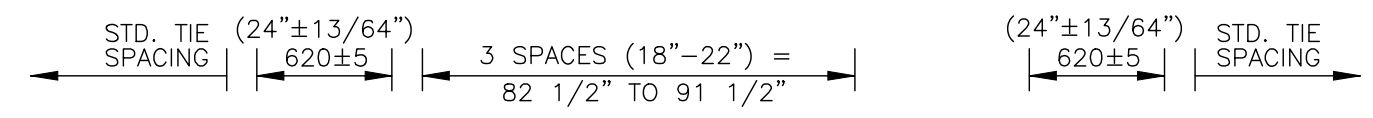
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EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
IMPEDANCE BOND INSTALLATION  
BALLASTED TRACK. 1 OF 4

PCA NO. 000  
CONTRACT NO. C801  
FILE LOCATION PROJECTWISE

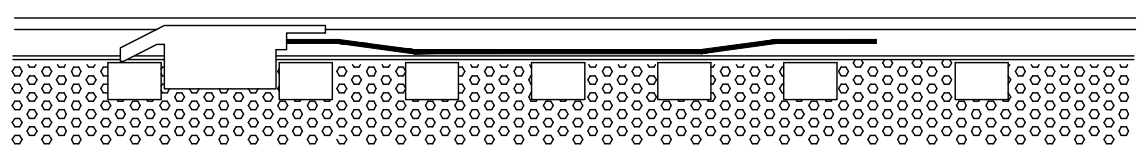
SHEET OF  
DRAWING NO. JP114  
REVISION B



SECTION-BALLASTED  
OR DIRECT FIXATION TRACK  
(N.T.S.)

NOTES:

1. ALL CONNECTION OF CABLES TO RAILS, TO OTHER CABLES AND TO IMPEDANCE BOND CONNECTING LUGS TO BE BY MEANS OF EXOTHERMIC WELDING.
2. CABLE SHALL BE DRESSED NEATLY AND FIRMLY ATTACHED TO TIES, WITH INSULATED GALVANIZED METAL CLAMPS, BUT NOT TAUT AND SHALL BE CLEAR OF RAIL ATTACHMENT DEVICES WHEN PASSING BENEATH RAIL.
3. CABLES SHALL BE BONDED TO RAIL WEB PER LRT STANDARD DETAIL DRAWING NO. SRB-001, SH 2.
4. DO NOT INSTALL INSULATED JOINTS OR IMPEDANCE BONDS IN TRACK SECTIONS WITH GUARD RAIL OR RESTRAINED RAIL.
5. STUB-UPS TO HAVE BELL ENDS, PIPE CAPS AND PULL ROPES.
6. FOR NEGATIVE RETURN AT EMBEDDED TRACK, SEE IMP-B003.
7. UNI-STRUT 1" X 1 3/4" X 24" HAS IMPEDANCE BOND BOLTED TO UNI-STRUT.
8. STEEL BANDING 3/4" STRAP SECURES UNI-STRUT TO TIE.

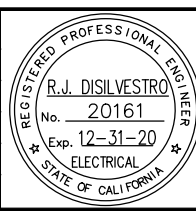


SECTION  
(N.T.S.)

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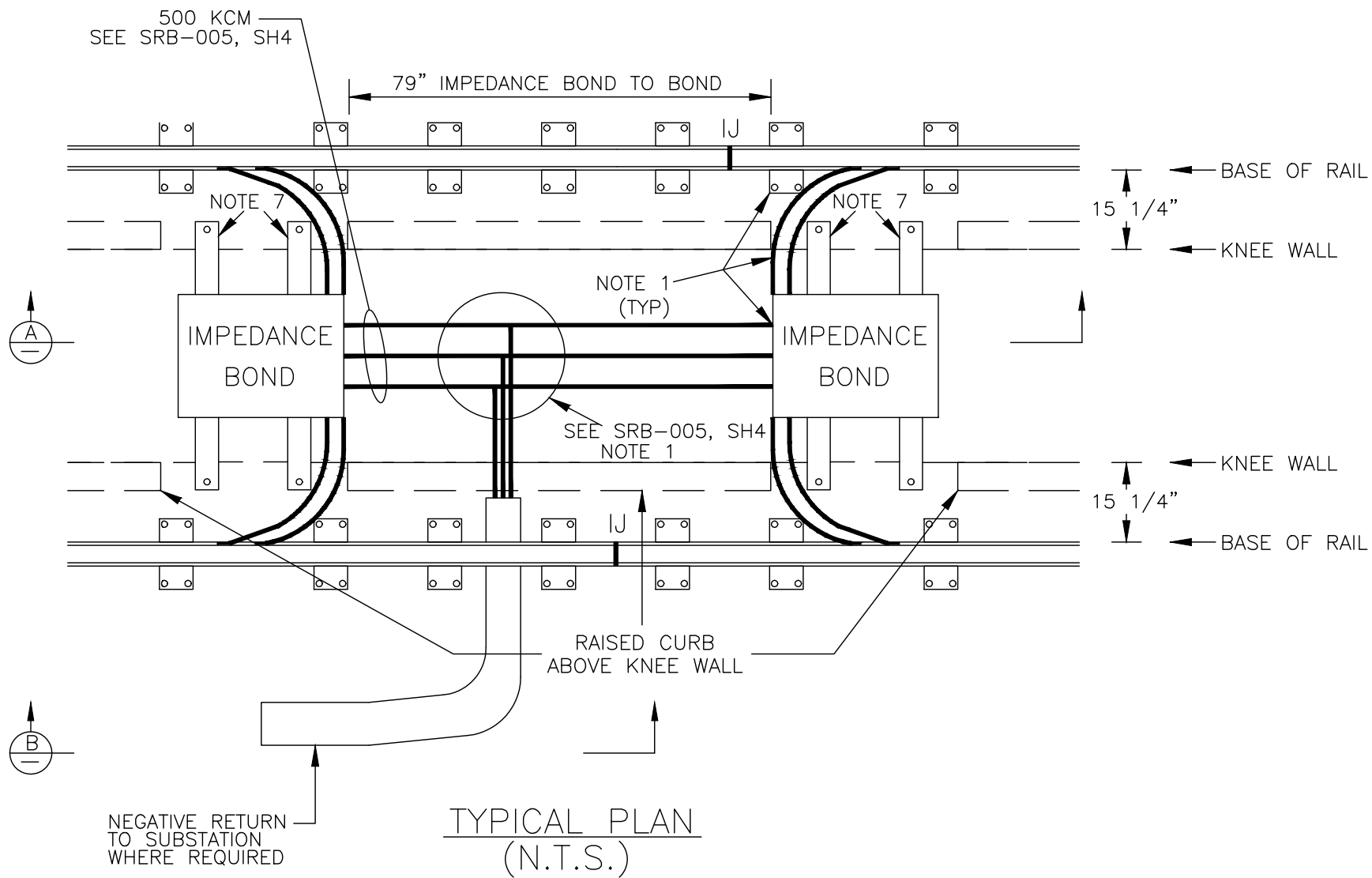


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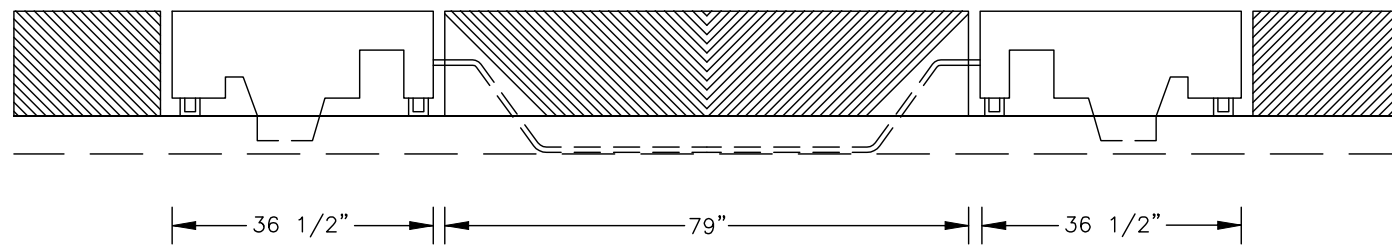


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CADD FILE DATE 03/11/19	SCALE NTS
SUBMITTAL DATE 06/29/20	BOARD APPROVAL DATE

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS IMPEDANCE BOND INSTALLATION BALLASTED TRACK. 2 OF 4			SHEET OF DRAWING NO. JP115 REVISION B
PCA NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE	



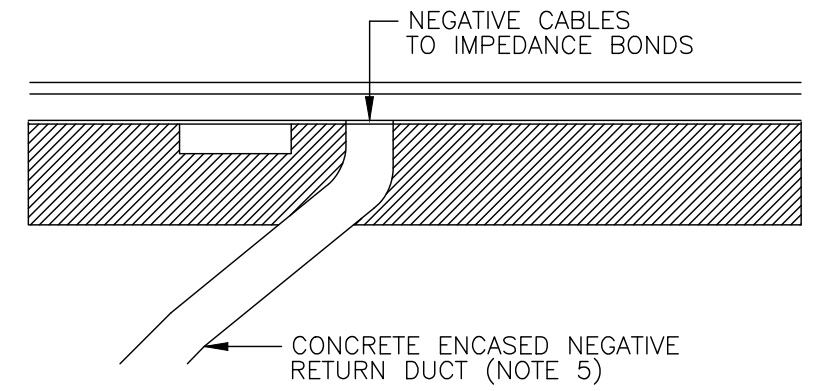
TYPICAL PLAN  
(N.T.S.)



SECTION A  
(N.T.S.)

NOTES:

1. ALL CONNECTION OF CABLES TO RAILS, TO OTHER CABLES AND TO IMPEDANCE BOND CONNECTING LUGS TO BE BY MEANS OF EXOTHERMIC WELDING.
2. CABLE SHALL BE DRESSED NEATLY AND FIRMLY ATTACHED TO SURFACE, WITH INSULATED GALVANIZED METAL CLAMPS, AND BOLTS EPOXIED TO THE CONCRETE INVERT.
3. CABLES SHALL BE BONDED TO RAIL WEB PER LRT STANDARD DETAIL DRAWING NO. SRB-001, SH 2.
4. DO NOT INSTALL INSULATED JOINTS OR IMPEDANCE BONDS IN TRACK SECTIONS WITH GUARD RAIL OR RESTRAINED RAIL.
5. STUB-UPS TO HAVE BELL ENDS, PIPE CAPS AND PULL ROPES.
6. FOR NEGATIVE RETURN AT EMBEDDED TRACK, SEE IMP-B003.
7. UNI-STRUT 1" X 1 3/4" BOLTED ON EACH END TO THE KNEE WALL WITH THE IMPEDANCE BONDS BOLTED TO THE UNI-STRUT. UNI-STRUTS ARE 32" LONG.

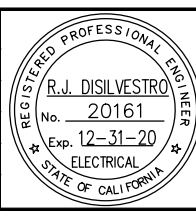


SECTION B  
(N.T.S.)

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CADD FILE NAME: 801JP116.dwg

Santa Clara Valley  
Transportation  
Authority

APPROVED

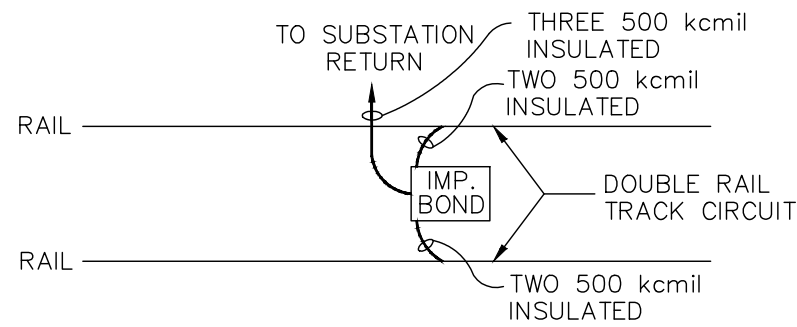
**BKF** 100+ YEARS  
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BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
IMPEDANCE BOND INSTALLATION  
DIRECT FIXATION TRACK. 3 OF 4

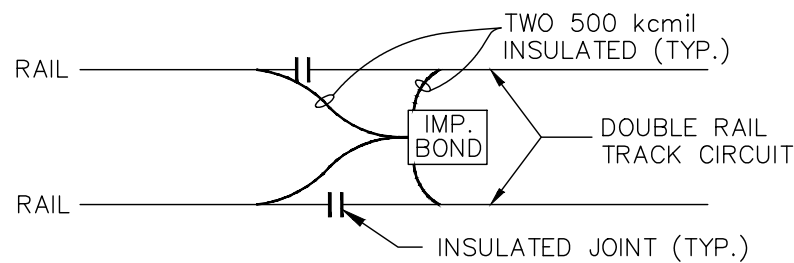
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CONTRACT NO. C801  
FILE LOCATION PROJECTWISE

SHEET OF  
DRAWING NO. JP116  
REVISION B



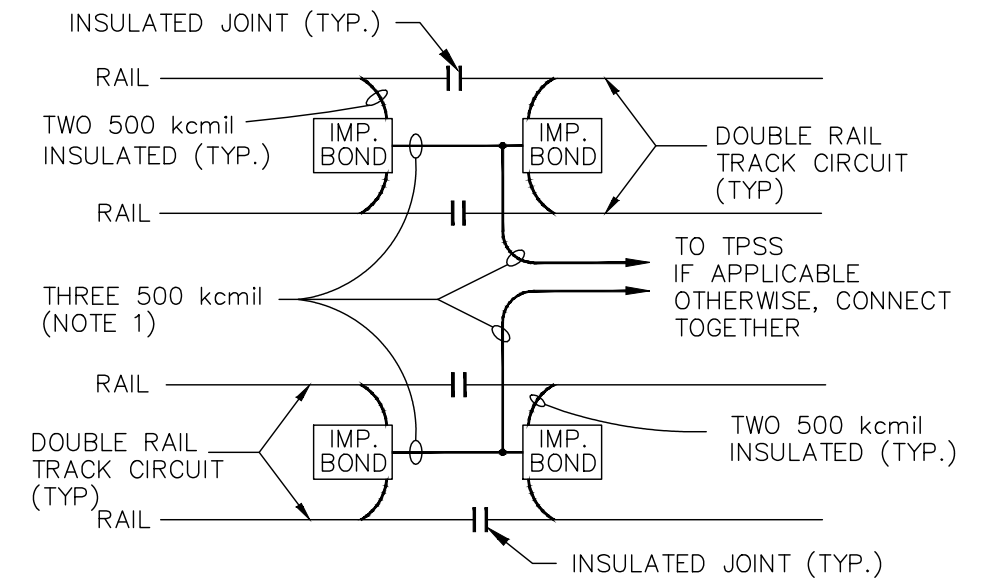
CENTER-FED DOUBLE-RAIL TRACK CIRCUIT WITH NEGATIVE RETURN AND ABUTTING DOUBLE-RAIL AF TRACK CIRCUITS AT NON-SIGNAL LOCATIONS

(N.T.S.)



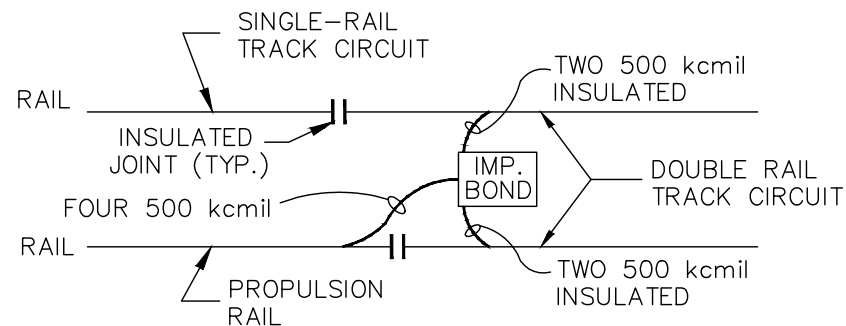
AT END OF SIGNAL TRACK CIRCUIT ABUTTING NON-SIGNALLED TERRITORY

(N.T.S.)

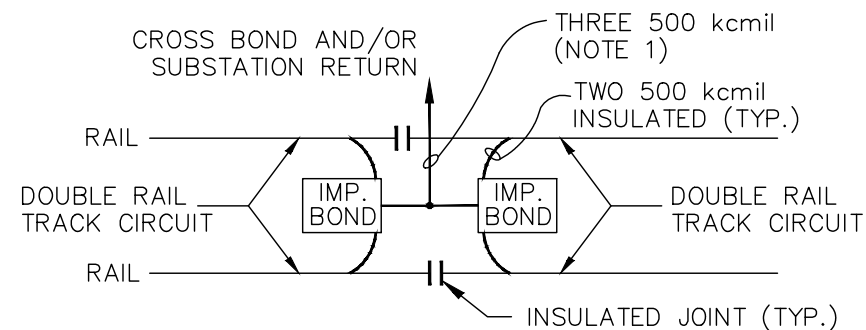


IN DOUBLE TRACK TERRITORY - DOUBLE RAIL TRACK CIRCUITS WITH CROSSBONDING & NEGATIVE RETURNS

(N.T.S.)



AT DOUBLE-RAIL TRACK CIRCUIT ABUTTING SINGLE-RAIL TRACK CIRCUIT



ABUTTING DOUBLE-RAIL TRACK CIRCUITS

(N.T.S.)

NOTES:

- 1- CADWELD TPSS RETURNS OR CROSS BONDS TO CABLES BETWEEN IMPEDANCE BOND CENTER TAPS CONNECT AS SHOWN ON SRB-005,SH1.

THIS DRAWING IS VTA STANDARD DETAIL SRB-005 (EDITION 2017)

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CADD FILE NAME: 801JP117.dwg



APPROVED: **BKF** 100+ YEARS  
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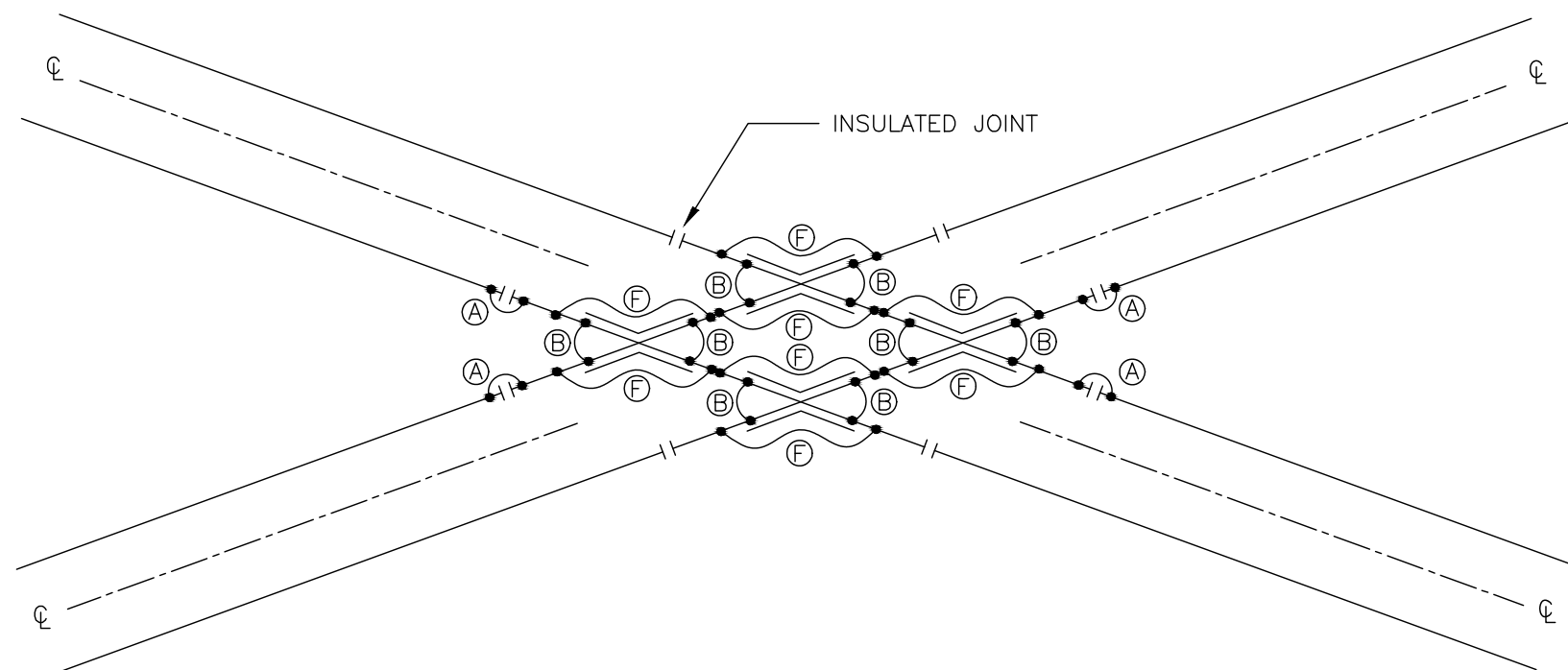
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BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
IMPEDANCE BOND INSTALLATION  
LAYOUT/CONNECTIONS. 4 OF 4

PCB NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

SHEET OF DRAWING NO. JP117 REVISION B





**SIGNALIZED CROSSING**  
(N.T.S.)

**NOTES:**

- 1- ALL NON-INSULATED RAIL JOINTS SHALL NORMALLY BE THERMITE WELDED.
- 2- TYPE (A) POWER BONDS SHALL BE REQUIRED ONLY IF RAIL JOINTS ARE NOT WELDED. IF TYPE (A) POWER BONDS ARE REQUIRED, THEY SHALL CONFORM TO THE FOLLOWING:
  - a - CONSIST OF TWO 250 kcmil BARE COPPER CONDUCTORS.
  - b - BE WELDED TO THE FIELD SIDE OF RAIL HEAD PER STANDARD DETAIL DRAWING NO. SRB-001.
- 3- TYPE (B) POWER BONDS SHALL CONFORM TO THE FOLLOWING:
  - a - CONSIST OF TWO 500 kcmil INSULATED COPPER CONDUCTORS.
  - b - BE WELDED TO THE FIELD SIDE OF RAIL WEB PER LRT STANDARD DETAIL DRAWING NO. SRB-001.
  - c - BE CLIPPED TO TIES WITH INSULATED GALVANIZED METAL CLAMPS.
- 4- TYPE (F) POWER BONDS SHALL BE THE SAME AS TYPE (B) EXCEPT SHALL CONSIST OF ONE 500 kcmil INSULATED COPPER CONDUCTOR.
- 5- TYPE (A) POWER BONDS SHALL BE PROVIDED AT ALL GLUED STANDARD RAIL JOINTS. LOCATIONS AND QUANTITIES OF GLUED STANDARD RAIL JOINTS MAY VARY.
- 6- INSULATED JOINTS CLOSEST TO CROSSING SHALL BE USED FOR TRACK CIRCUIT ISOLATION.
- 7- TYPE (A) POWER BONDS SHALL BE PROVIDED AT ALL UNUSED INSULATED RAIL JOINTS.

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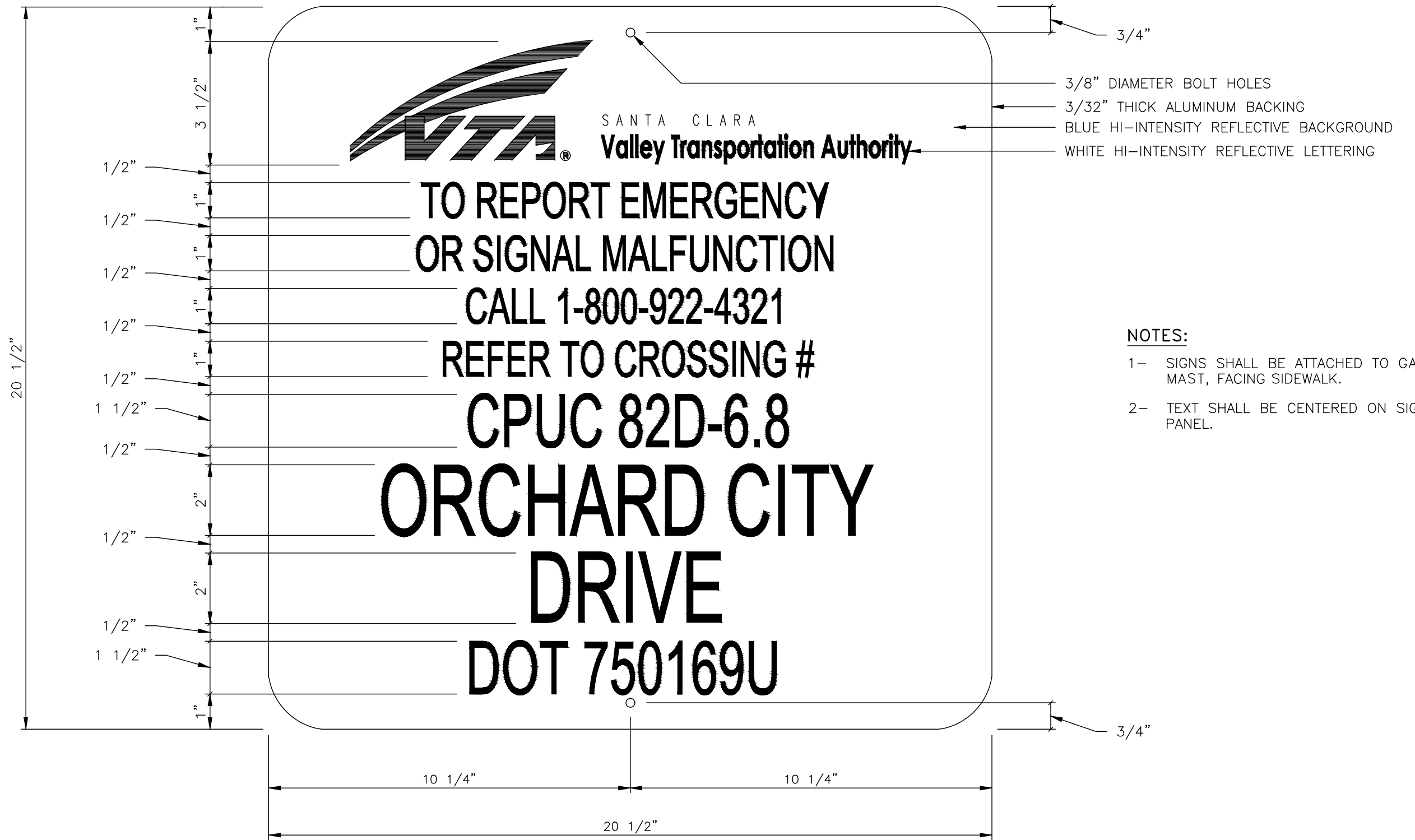
**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

APPROVED: [Signature]  
CADD FILE DATE: 03/11/19 SCALE: NTS  
SUBMITTAL DATE: 06/29/20 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
RAIL BONDING LAYOUT  
SIGNALIZED CROSSINGS

PCB NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

SHEET OF [ ] DRAWING NO. JP118 REVISION B



- NOTES:**
- 1- SIGNS SHALL BE ATTACHED TO GATE MAST, FACING SIDEWALK.
  - 2- TEXT SHALL BE CENTERED ON SIGN PANEL.

GATE MAST ID SIGN

THIS DRAWING IS MODIFICATION VTA STANDARD DETAIL SSI-004 (EDITION 2017)

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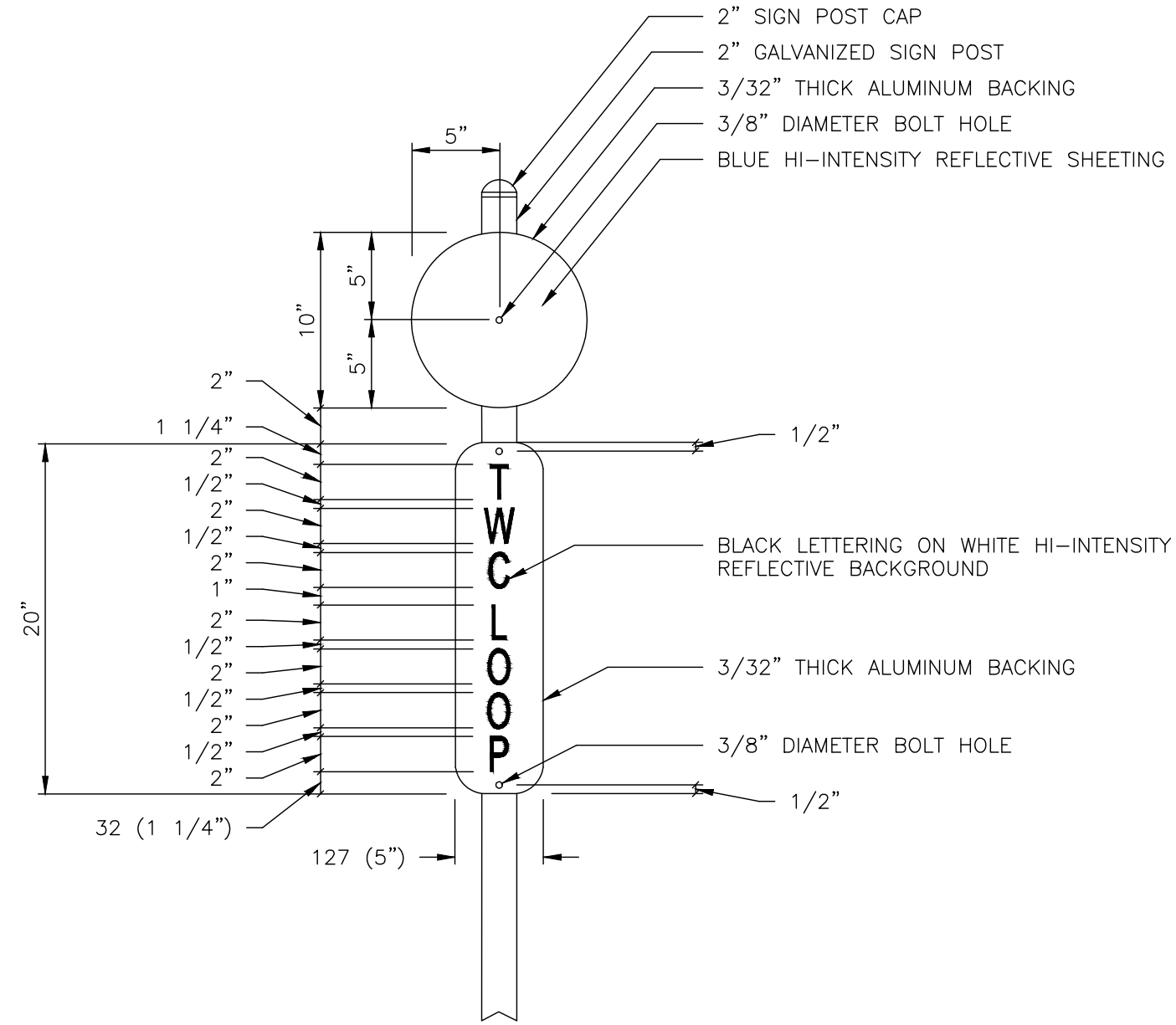


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CADD FILE DATE 03/11/19 SCALE NTS  
 SUBMITTAL DATE 06/29/20 BOARD APPROVAL DATE

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS GATE MAST ID SIGN			SHEET OF DRAWING NO. JP119 REVISION B
PCA NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE	

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- 2" SIGN POST CAP
- 2" GALVANIZED SIGN POST
- 3/32" THICK ALUMINUM BACKING
- 3/8" DIAMETER BOLT HOLE
- BLUE HI-INTENSITY REFLECTIVE SHEETING

- BLACK LETTERING ON WHITE HI-INTENSITY REFLECTIVE BACKGROUND
- 3/32" THICK ALUMINUM BACKING
- 3/8" DIAMETER BOLT HOLE

- NOTES:**
- 1- SEE SSI-018 FOR BALLAST MOUNTING DETAILS.
  - 2- SEE SD-327 FOR DECK MOUNTING DETAILS.

TWC MARKER SIGN

THIS DRAWING IS VTA STANDARD DETAIL SSI-011 (EDITION 2017)

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**Santa Clara Valley Transportation Authority**

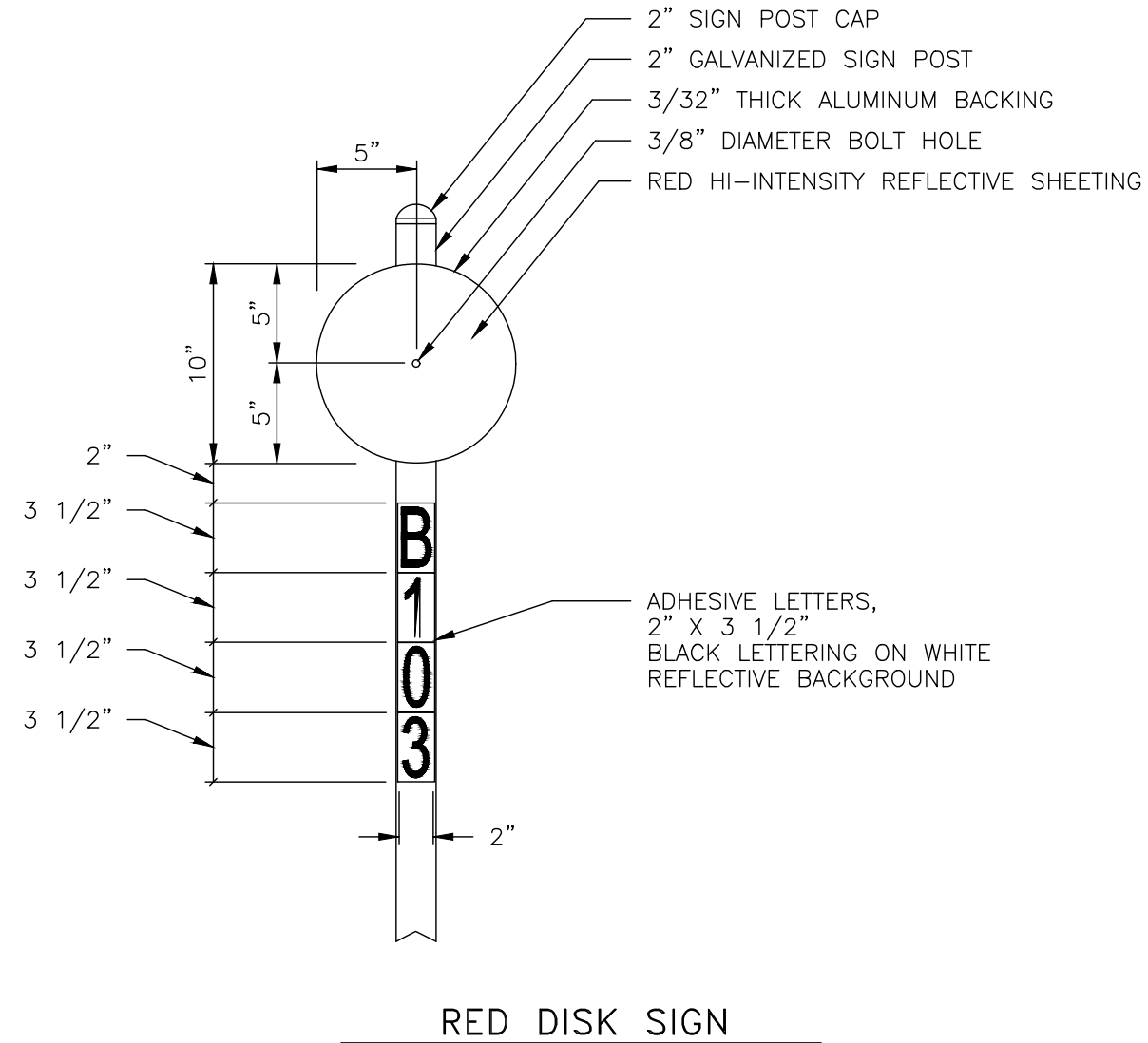
**BKF 100+ YEARS**  
 ENGINEERS / SURVEYORS / PLANNERS

APPROVED: 03/11/19 SCALE: NTS  
 SUBMITTAL DATE: 06/29/20 BOARD APPROVAL DATE:

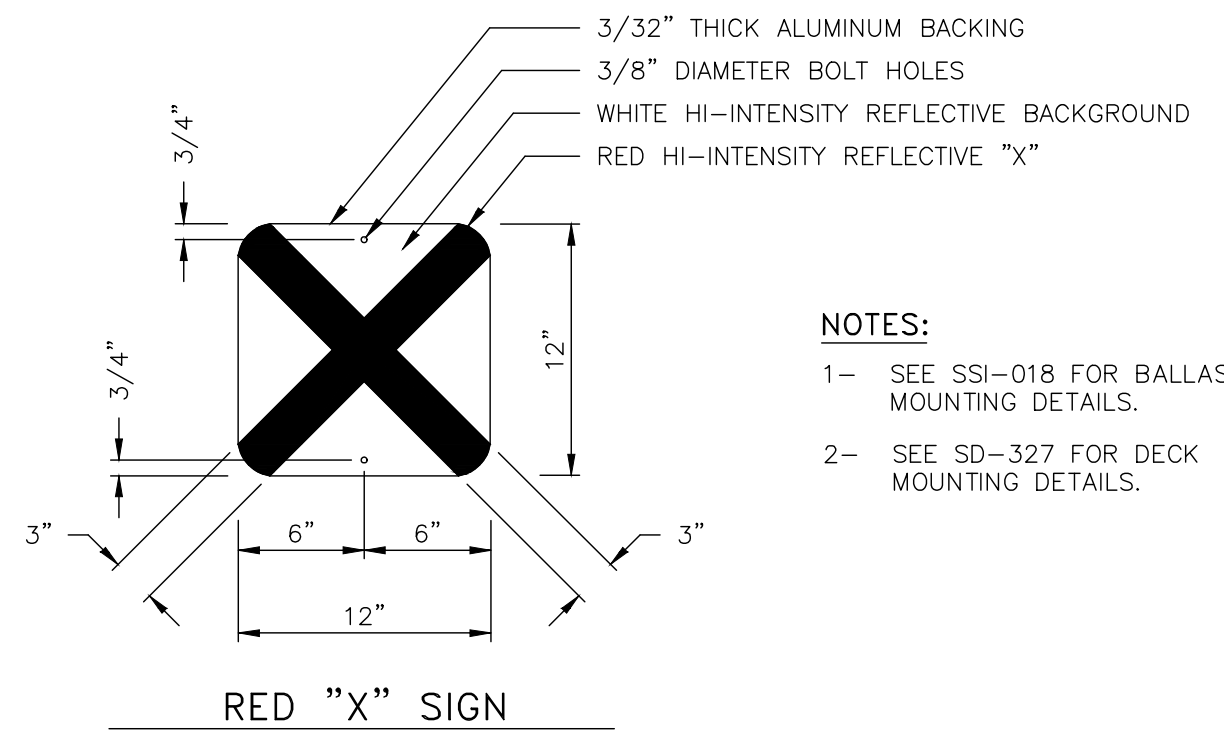
EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 LRT SIGNAL SYSTEMS  
 TWC MARKER SIGN

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

SHEET OF DRAWING NO. JP120 REVISION B



RED DISK SIGN



RED "X" SIGN

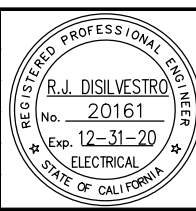
**NOTES:**

- 1- SEE SSI-018 FOR BALLAST MOUNTING DETAILS.
- 2- SEE SD-327 FOR DECK MOUNTING DETAILS.

THIS DRAWING IS VTA STANDARD DETAIL SSI-016 (EDITION 2017)

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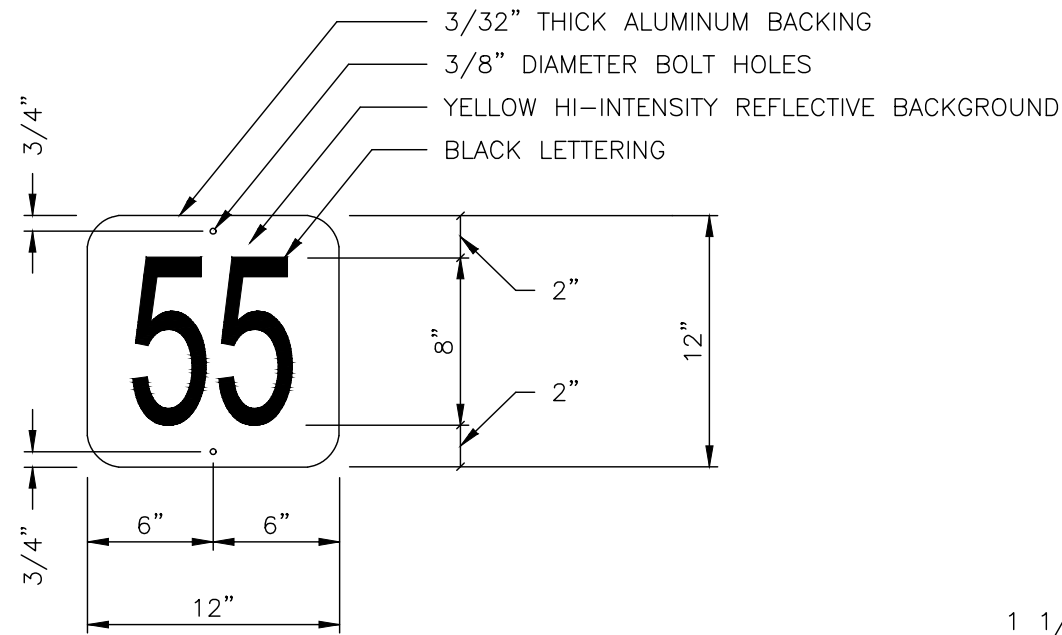
**BKF** 100+ YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

APPROVED: 03/11/19 SCALE: NTS  
 SUBMITTAL DATE: 06/29/20 BOARD APPROVAL DATE:

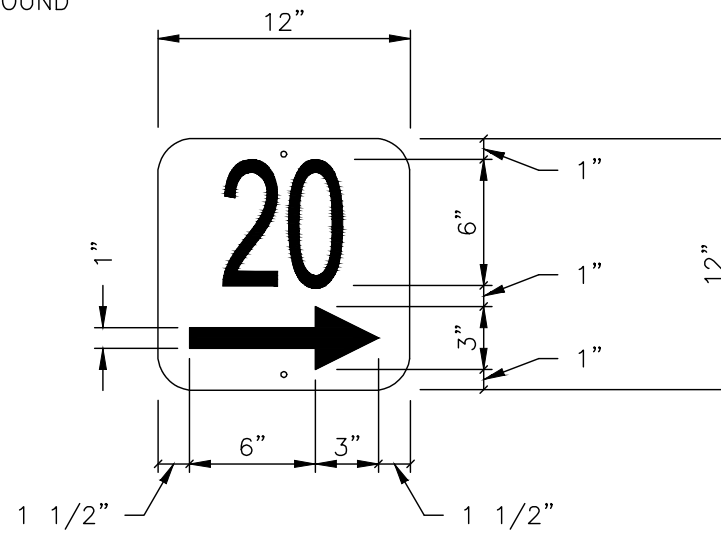
EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 LRT SIGNAL SYSTEMS  
 RED DISK AND PED "X" SIGNS

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

SHEET OF DRAWING NO. JP121 REVISION B

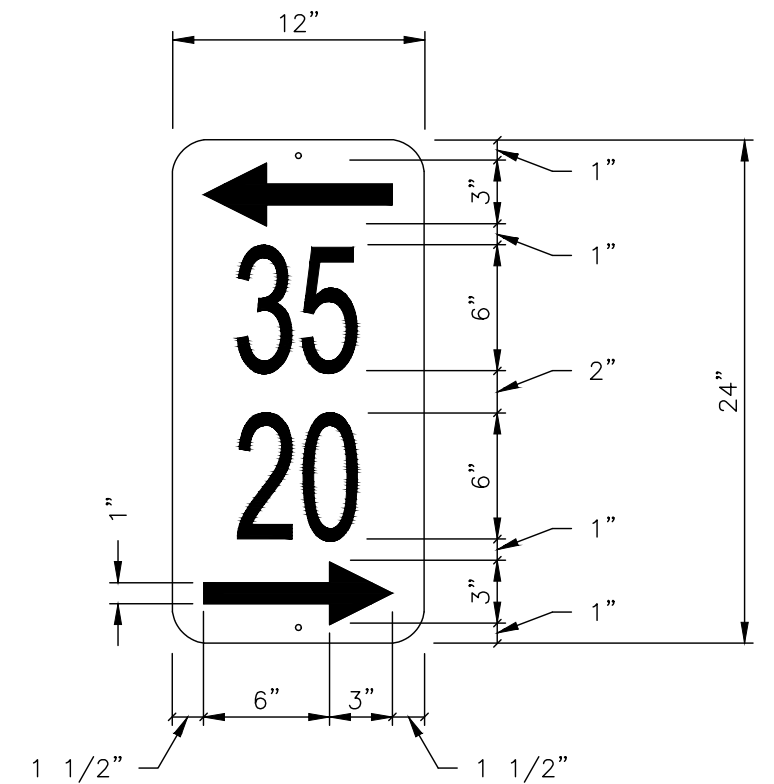


SINGLE SPEED SIGN



SINGLE DIRECTIONAL SPEED SIGN

MATERIAL, COLORING, AND BOLT HOLE DRILLING  
 SAME AS SINGLE SPEED SIGN



DUAL DIRECTIONAL SPEED SIGN

MATERIAL, COLORING, AND BOLT HOLE DRILLING  
 SAME AS SINGLE SPEED SIGN

NOTES:

- 1- TEXT SHALL BE CENTERED ON SIGN PANEL.
- 2- SEE DRAWINGS SSI-018 AND SSI-022 FOR TYPICAL INSTALLATIONS.

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 DRAWN: M.BAKHIN CADD FILE NAME: 801JP122.dwg



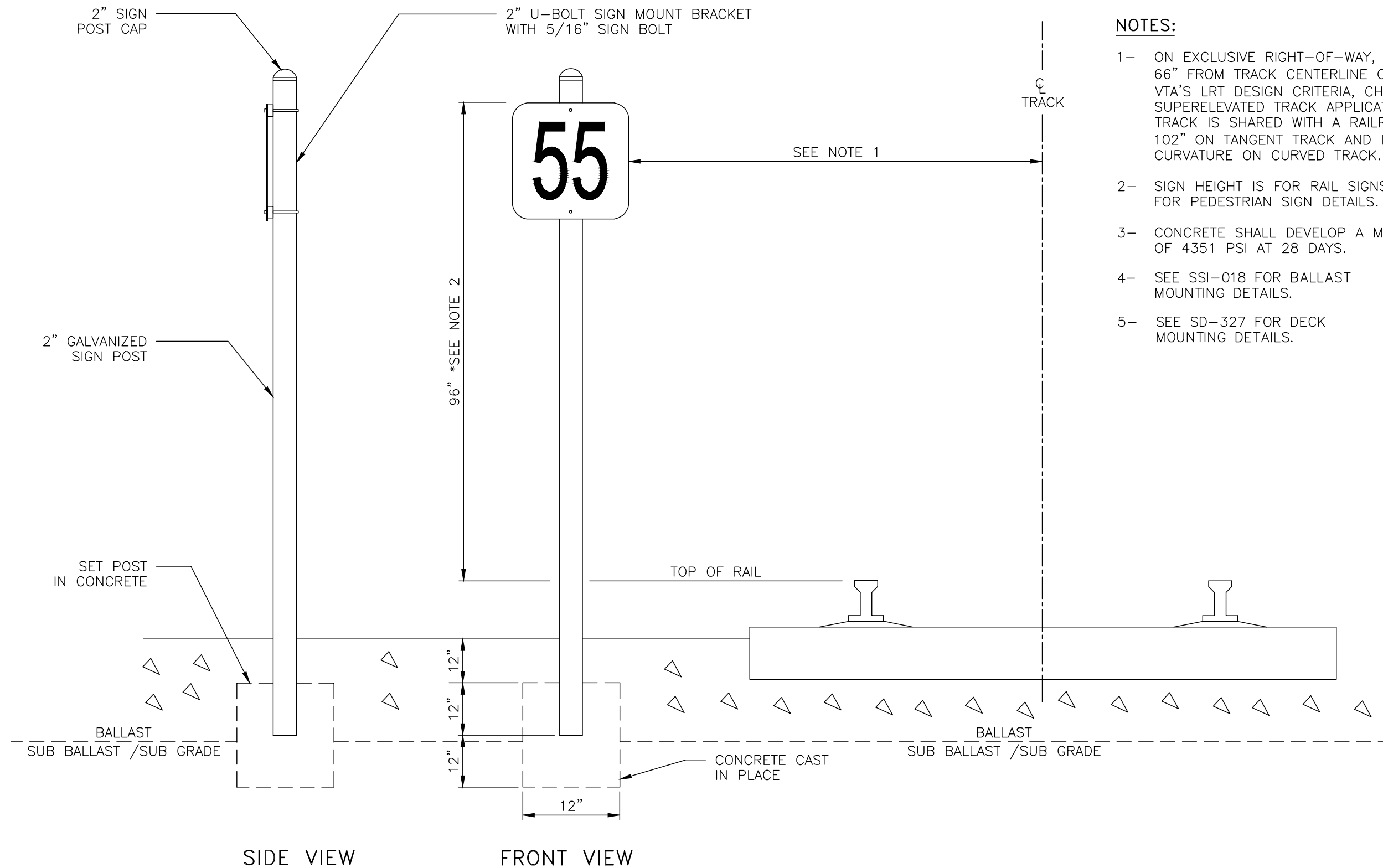
**BKF** 100+ YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

APPROVED: 03/11/19 SCALE: NTS  
 SUBMITTAL DATE: 06/29/20 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 LRT SIGNAL SYSTEMS  
 STANDARD SPEED SIGNS

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

SHEET OF DRAWING NO. JP122 REVISION B



**NOTES:**

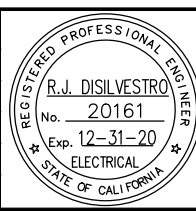
- 1- ON EXCLUSIVE RIGHT-OF-WAY, MINIMUM CLEARANCE SHALL BE 66" FROM TRACK CENTERLINE ON TANGENT TRACK. REFER TO VTA'S LRT DESIGN CRITERIA, CHAPTER 4, FOR CURVED AND SUPERELEVATED TRACK APPLICATIONS. FOR APPLICATIONS WHERE TRACK IS SHARED WITH A RAILROAD, THIS CLEARANCE SHALL BE 102" ON TANGENT TRACK AND INCREASE BY 1" PER DEGREE OF CURVATURE ON CURVED TRACK.
- 2- SIGN HEIGHT IS FOR RAIL SIGNS ONLY. SEE DRAWING SS1-014 FOR PEDESTRIAN SIGN DETAILS.
- 3- CONCRETE SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF 4351 PSI AT 28 DAYS.
- 4- SEE SSI-018 FOR BALLAST MOUNTING DETAILS.
- 5- SEE SD-327 FOR DECK MOUNTING DETAILS.

SIGN POST TYPICAL INSTALLATION (NTS)

THIS DRAWING IS VTA STANDARD DETAIL SSI-018 (EDITION 2017)

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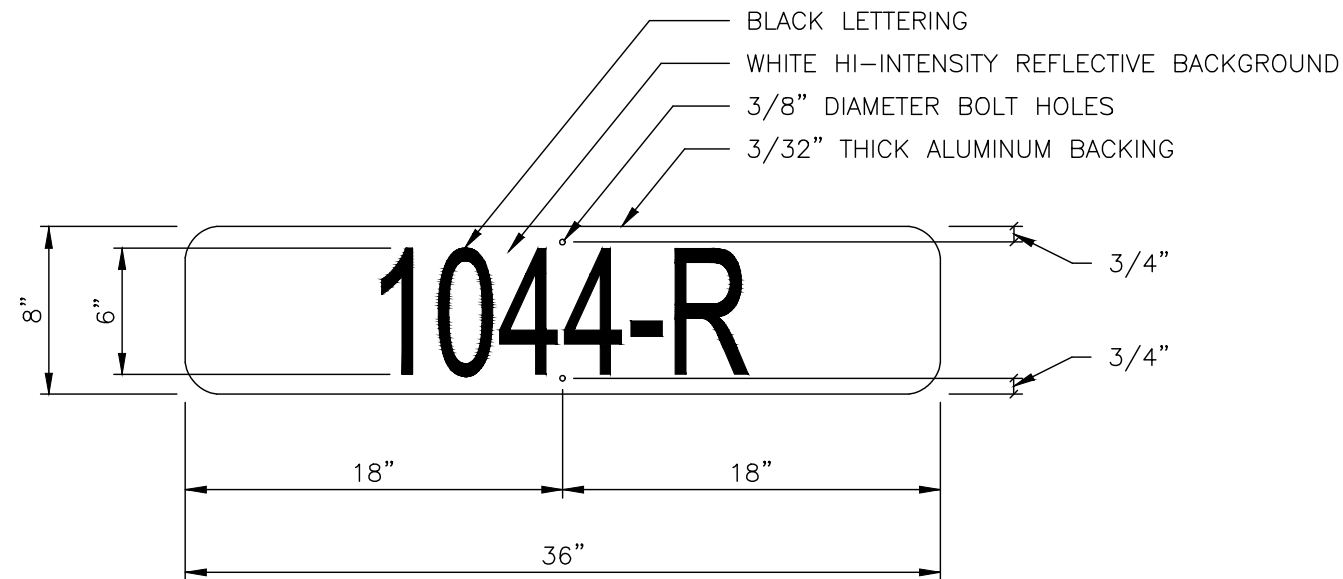


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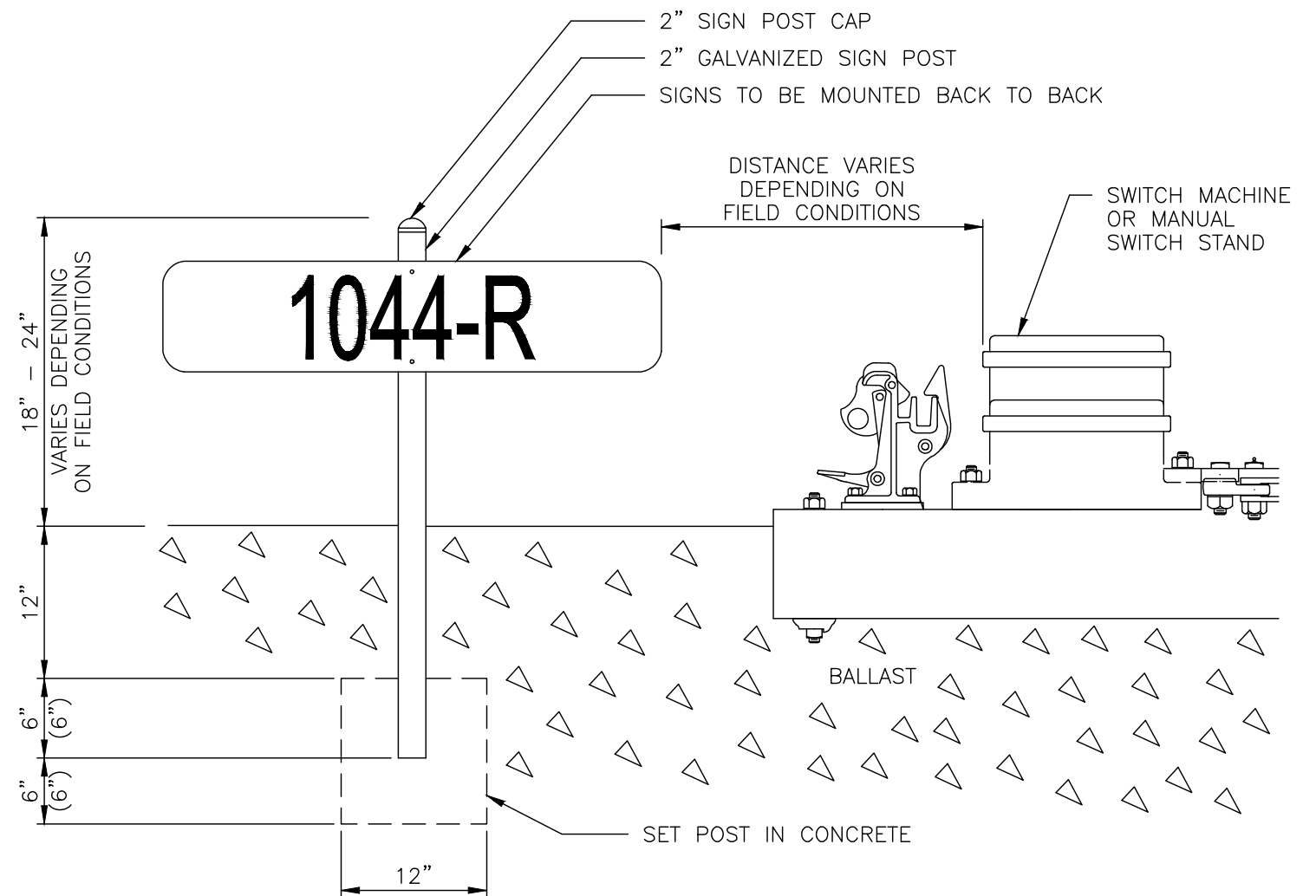


<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	SCALE
03/11/19	NTS
SUBMITTAL DATE	BOARD APPROVAL DATE
06/29/20	

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS SIGN POST INSTALLATION			SHEET OF DRAWING NO. JP123 REVISION B
PCA NO.	CONTRACT NO.	FILE LOCATION	
000	C801	PROJECTWISE	



SWITCH IDENTIFICATION SIGN



TYPICAL INSTALLATION (NTS)

**NOTES:**

- 1- TEXT SHALL BE CENTERED ON SIGN PANEL.
- 2- SIGNS SHALL BE ATTACHED TO POSTS BACK-TO-BACK, USING STAINLESS STEEL THROUGH-BOLTS AND ASSOCIATED HARDWARE.
- 3- FOR EMBEDDED SWITCHES, SIGN IS TO BE EPOXIED ON CONCRETE
- 4- SEE SSI-018 FOR BALLAST MOUNTING DETAILS.
- 5- SEE SD-327 FOR DECK MOUNTING DETAILS.

THIS DRAWING IS VTA STANDARD DETAIL SSI-019 (EDITION 2017)

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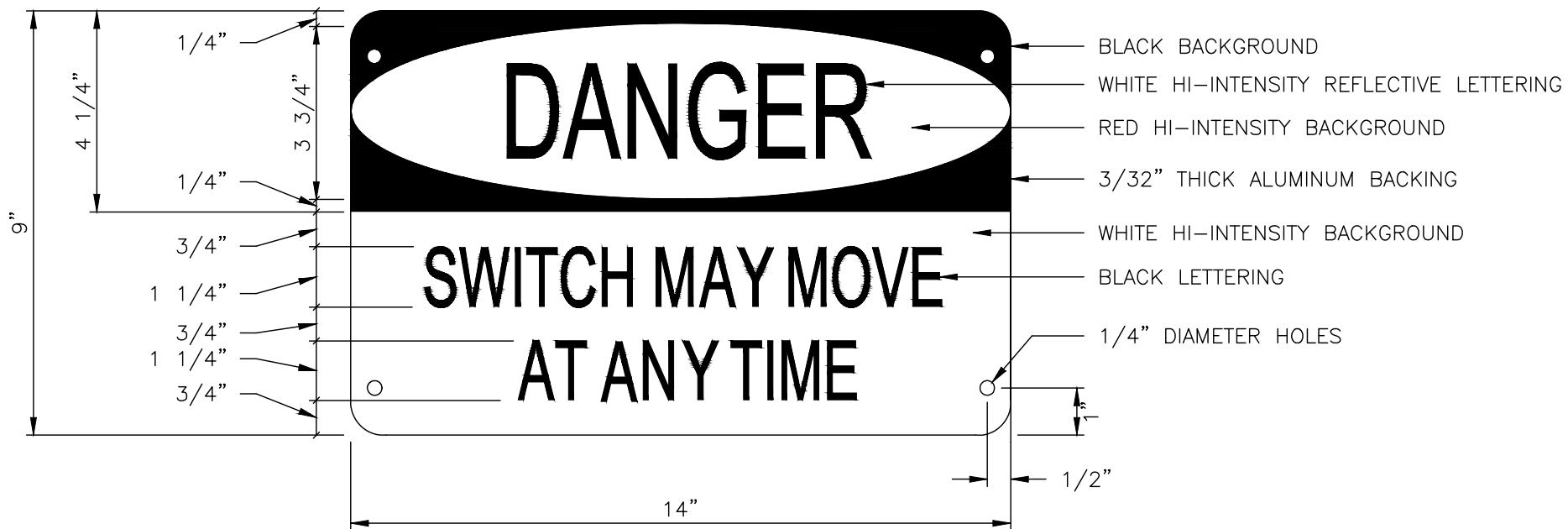


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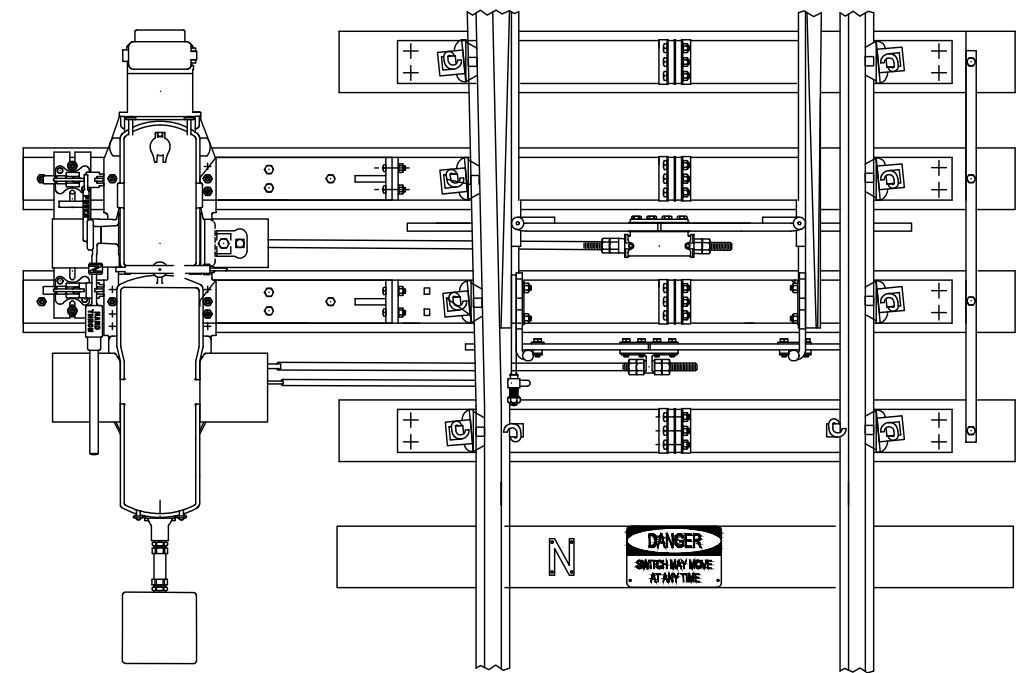


<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE 03/11/19	SCALE NTS
SUBMITTAL DATE 06/29/20	BOARD APPROVAL DATE

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS SWITCH IDENTIFICATION SIGN			SHEET OF DRAWING NO. JP124 REVISION B
PCA NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE	



"SWITCH MAY THROW" SIGN



TYPICAL INSTALLATION (NTS)

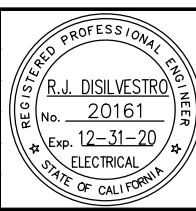
NOTES:

- 1- TEXT SHALL BE CENTERED ON SIGN PANEL.
- 2- SIGNS SHALL BE ATTACHED TO CONCRETE TIES USING EPOXY.
- 3- SIGNS SHALL BE ATTACHED TO WOOD TIES USING LAG SCREWS.

THIS DRAWING IS VTA STANDARD DETAIL SSI-020 (EDITION 2017)

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Santa Clara Valley  
Transportation  
Authority

APPROVED

**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/11/19 SCALE: NTS  
SUBMITTAL DATE: 06/29/20 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
LRT SIGNAL SYSTEMS  
"SWITCH MAY THROW" SIGN

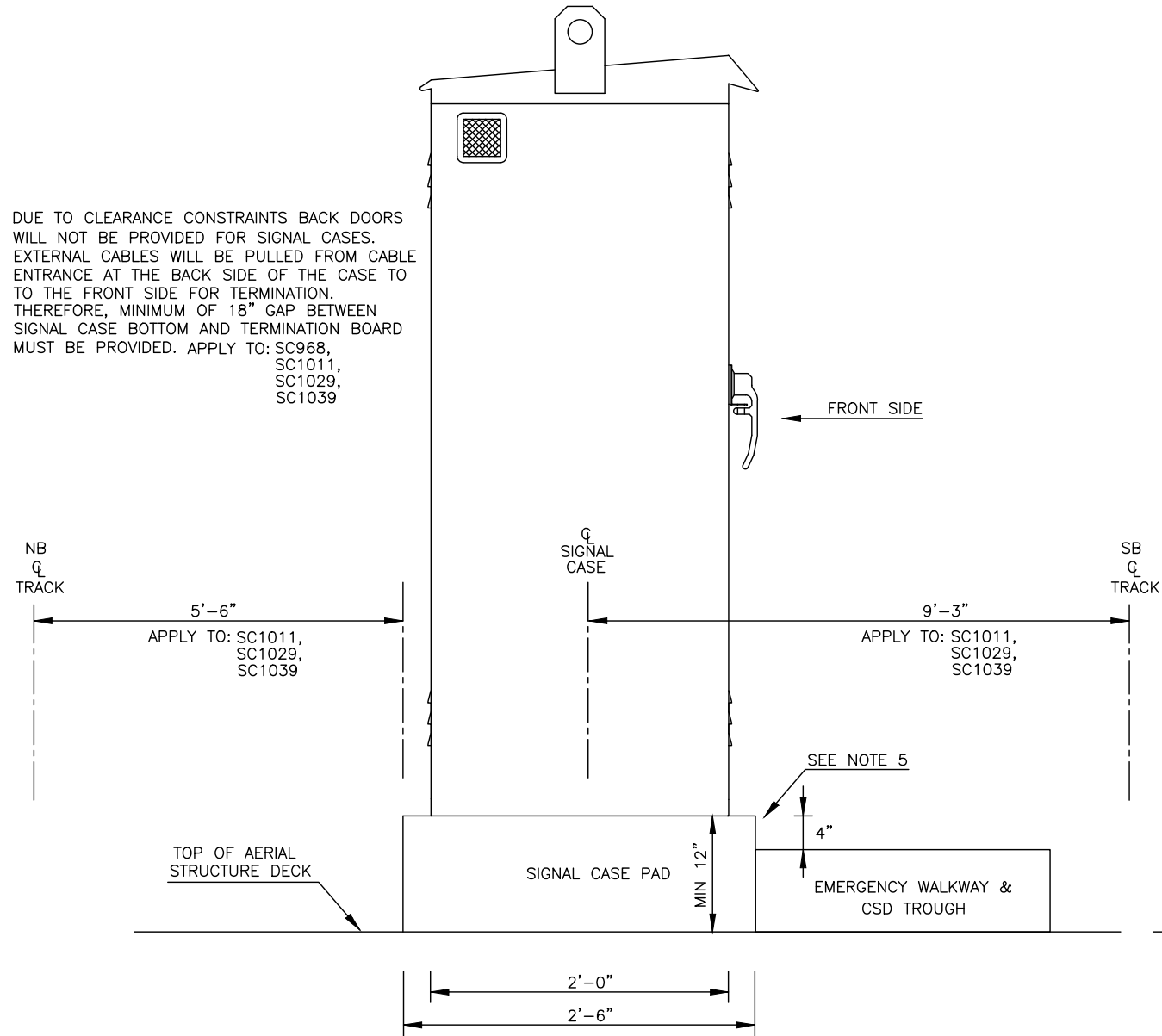
PCOA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

SHEET OF DRAWING NO. JP125 REVISION B

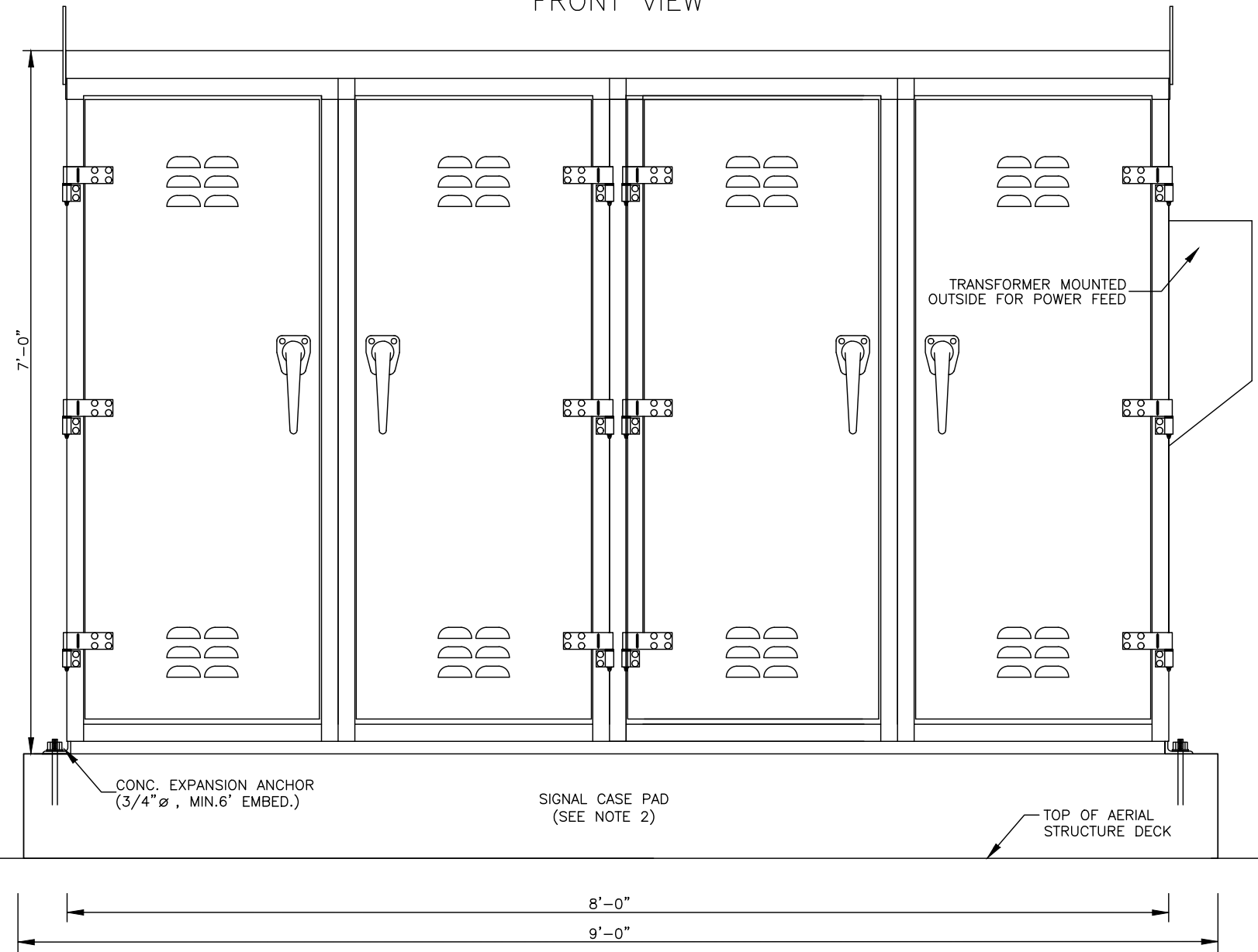


SIDE VIEW

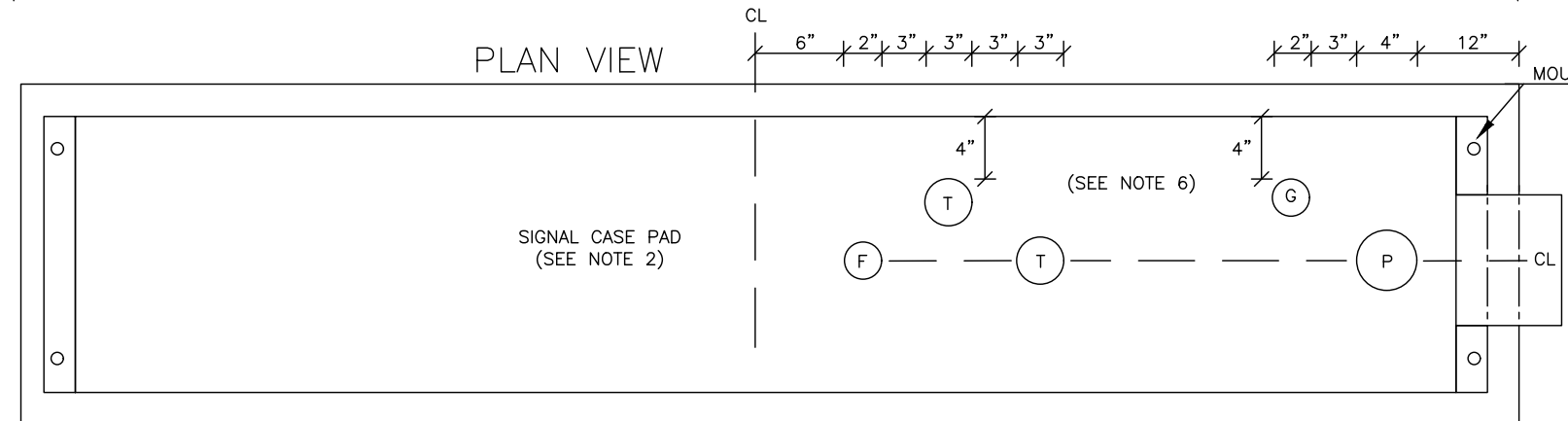
DUE TO CLEARANCE CONSTRAINTS BACK DOORS WILL NOT BE PROVIDED FOR SIGNAL CASES. EXTERNAL CABLES WILL BE PULLED FROM CABLE ENTRANCE AT THE BACK SIDE OF THE CASE TO THE FRONT SIDE FOR TERMINATION. THEREFORE, MINIMUM OF 18" GAP BETWEEN SIGNAL CASE BOTTOM AND TERMINATION BOARD MUST BE PROVIDED. APPLY TO: SC968, SC1011, SC1029, SC1039



FRONT VIEW



PLAN VIEW

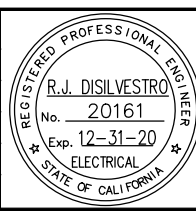


- NOTES:
- SIGNAL CASES WILL BE PROVIDED AS PART OF THIS SCOPE OF WORK FOR THE FOLLOWING LOCATIONS: SC968 (STA.968+65), SC1011 (STA.1011+50), SC1029 (STA.1029+00), SC1039 (STA.1039+00). EACH SIGNAL CASE WILL BE BUILT TO THE SPECIFICATIONS PROVIDED HEREON.
  - SIGNAL CASE PAD DETAILS SHOWN ON THIS DRAWING APPLY TO SIGNAL CASES LOCATED ON AERIAL STRUCTURE: SC1011 (STA.1011+50), SC1029 (STA.1029+00), SC1039 (STA.1039+00). SEE ALSO DRAWING SD507 FOR SIGNAL CASE FOUNDATION DETAILS ON AERIAL STRUCTURE.
  - FOR SIGNAL CASE SC968 APPLY FOUNDATION DETAILS SHOWN ON JP111 (FOR BALLASTED TRACK).
  - SEE DOUBLE LINE PLANS (DRAWINGS JD101, JD102) FOR SIGNAL CASE ORIENTATION.
  - MINIMUM HEIGHT OF SIGNAL CASE PAD SHALL BE 12" AND TOP OF PAD SHALL BE MINIMUM 4" ABOVE ADJACENT CSD TROUGH.
  - CONDUITS:  
 T - TRACK CIRCUITS (3");  
 P - POWER (4");  
 F - FIBER CABLE (2");  
 G - GROUND (2").

FRONT SIDE THIS DRAWING IS NOT VTA STANDARD DETAIL

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**Santa Clara Valley Transportation Authority**

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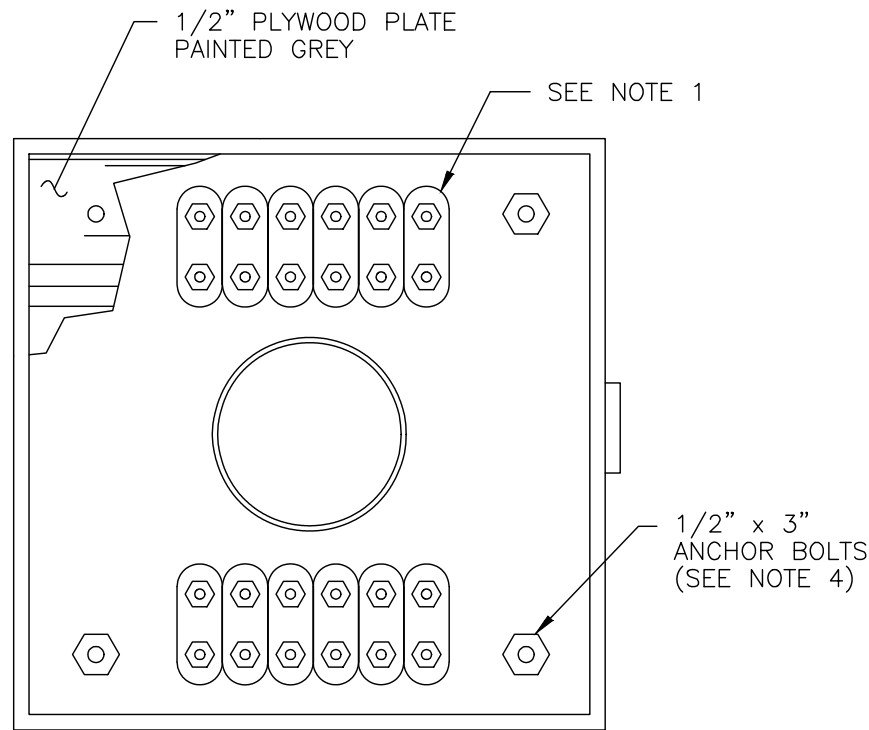
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 ENGINEERS / SURVEYORS / PLANNERS

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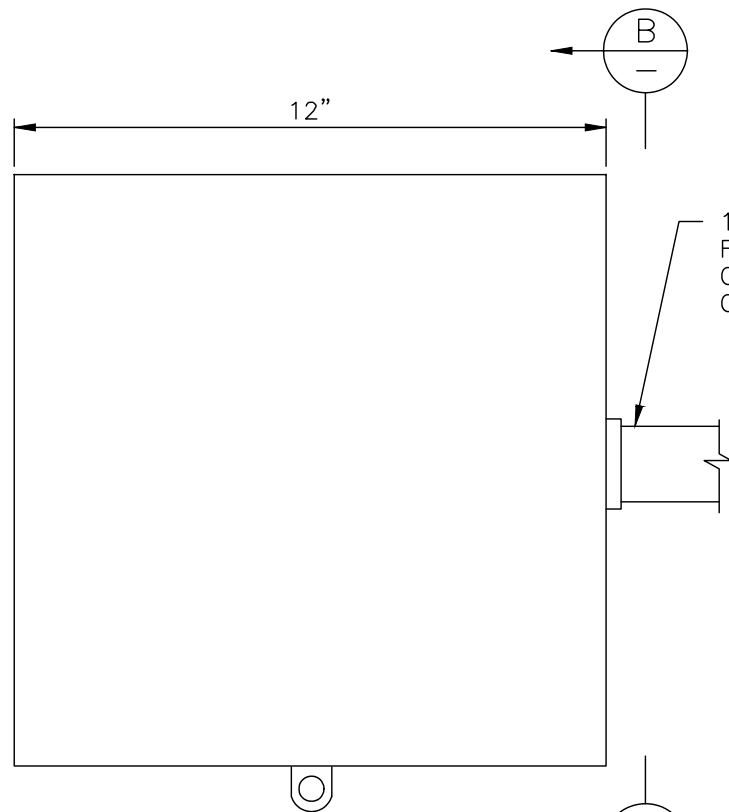
EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 LRT SIGNAL SYSTEMS  
 SIGNAL CASE DETAILS

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

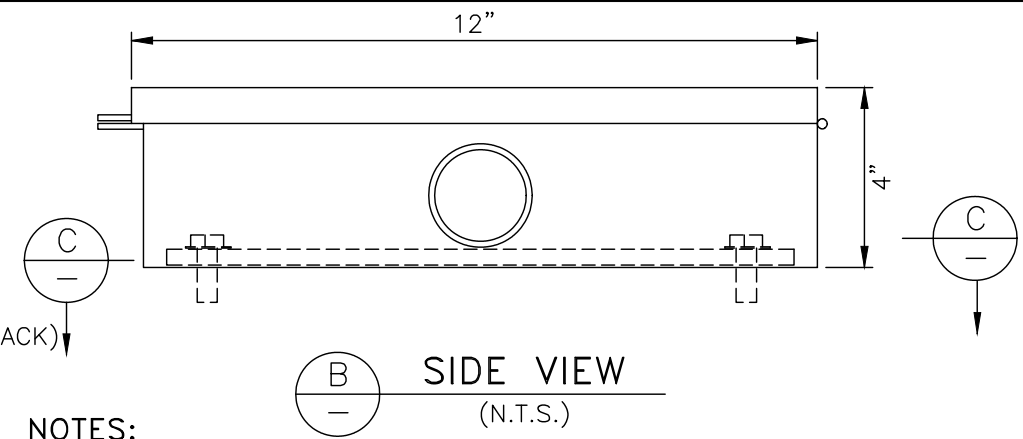
SHEET OF DRAWING NO. JP126 REVISION B



**C** TERMINAL DETAILS  
(N.T.S.)



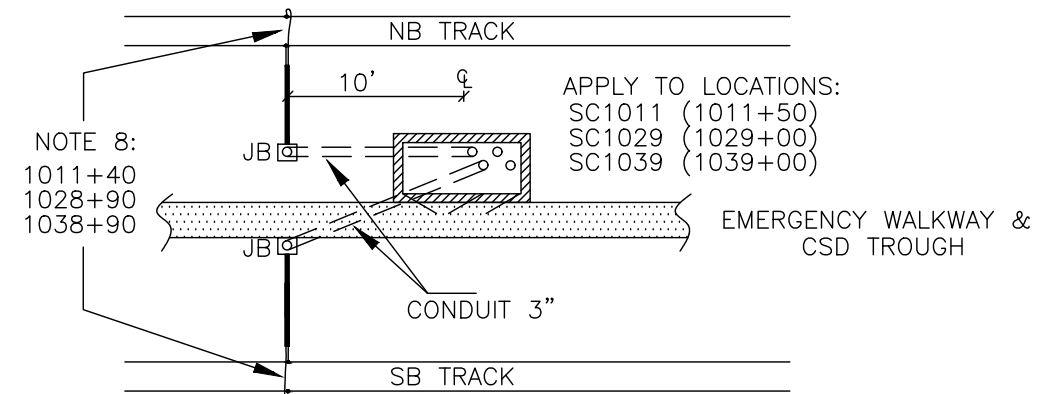
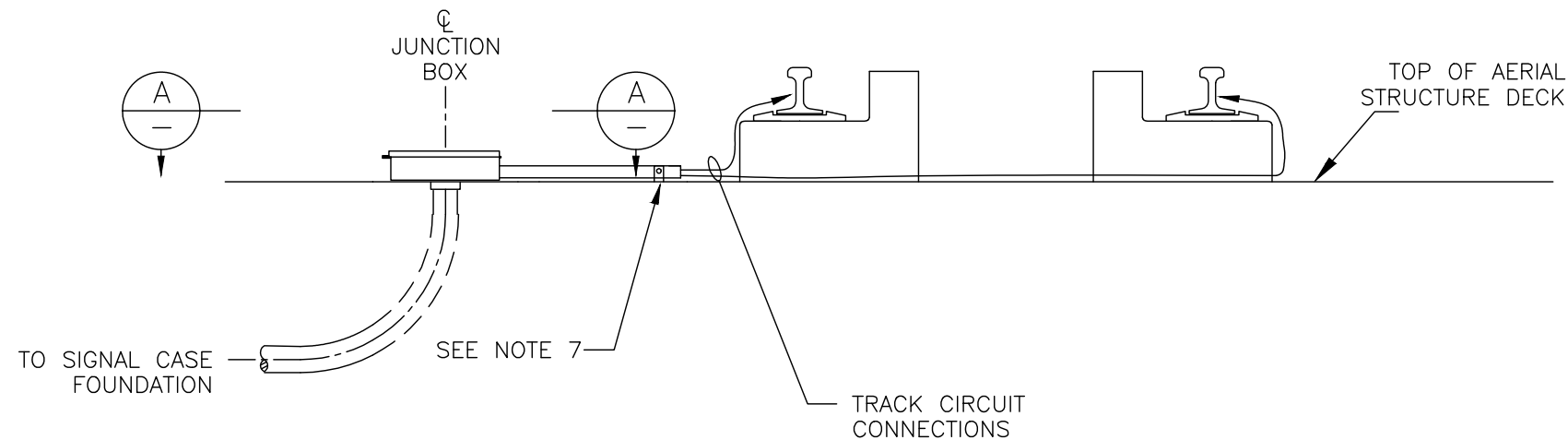
**A** JUNCTION BOX  
(N.T.S.)



**B** SIDE VIEW  
(N.T.S.)

**NOTES:**

- 1- JUNCTION BOX TERMINALS SHALL BE DOUBLE-POST ASSOCIATION OF AMERICAN RAILROADS STANDARD, COMPLETE WITH SAFETRAN TEST LINKS (PART #024620-1X) OR EQUAL.
- 2- LID OF BOX SHALL BE GASKETED SO AS TO PROVIDE A WEATHERPROOF SEAL.
- 3- LOCKABLE HASP SHALL BE COMPATIBLE WITH VTA'S STANDARD LOCK.
- 4- BOX SHALL BE SECURELY FASTENED TO FOUNDATION BY ANCHOR BOLTS, DRILLED-IN-PLACE.
- 5- BOX SHALL BE CONSTRUCTED OF 3/32" THICK GALVANIZED SHEET STEEL WITH GREY ENAMEL FINISH.
- 6- HARDWARE SHALL BE HOT-DIP GALVANIZED OR STAINLESS STEEL.
- 7- CONTRACTOR SHALL SUBMIT FOR VTA APPROVAL PROPOSED METHOD OF FASTENING CONDUIT AND TRACK CIRCUIT CONNECTIONS.
- 8- THE KNEE WALL AND PLINTH MUST BE INTERRUPTED TO ALLOW FOR TRACK CIRCUIT CONNECTION TO PASS BELOW THE RAILS.



**D** TRACK CIRCUIT JUNCTION BOX INTERFACE  
(PLAN VIEW)

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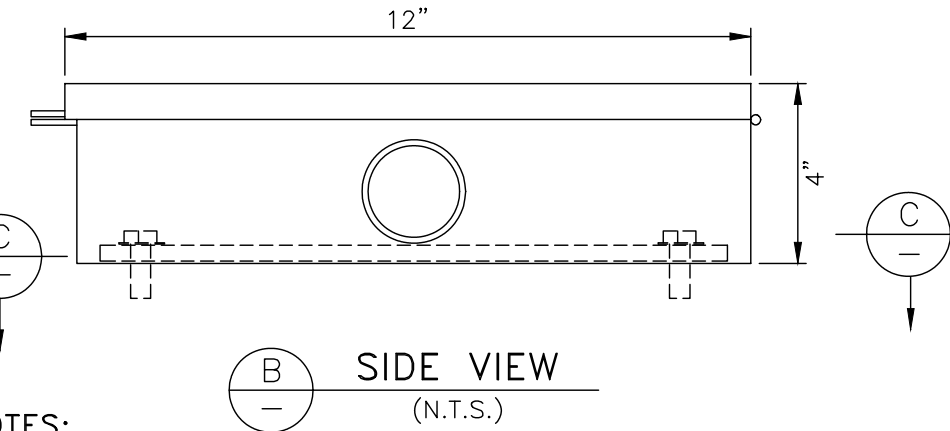
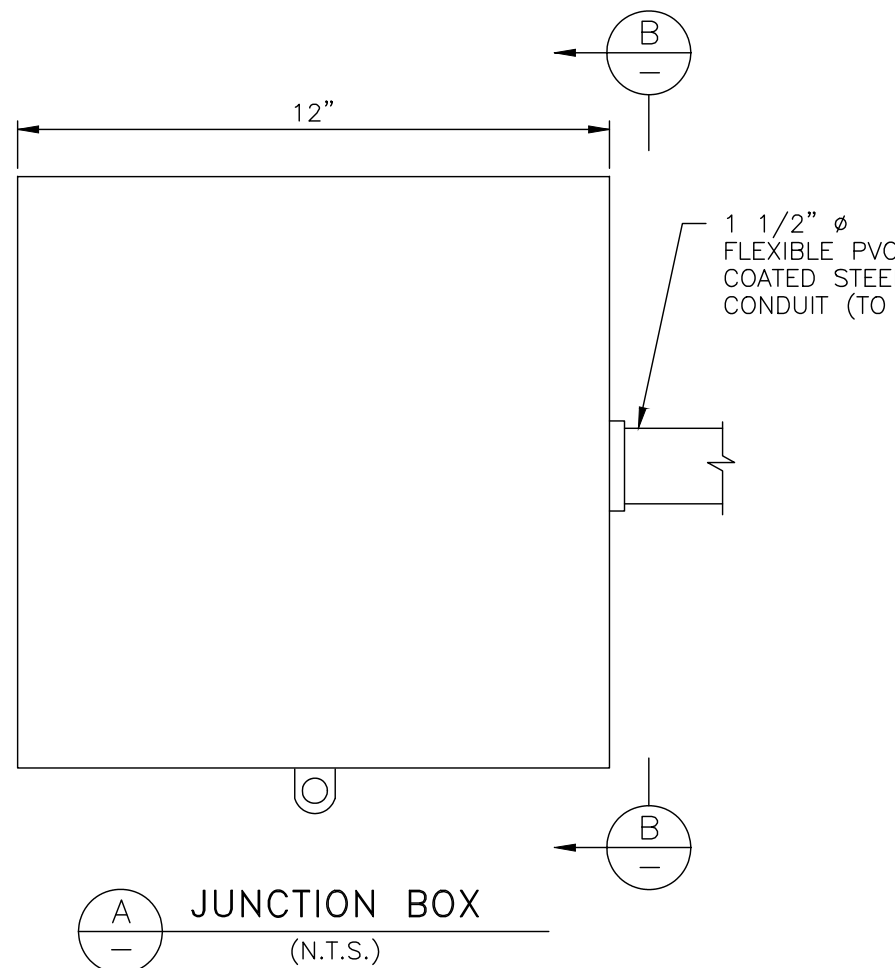
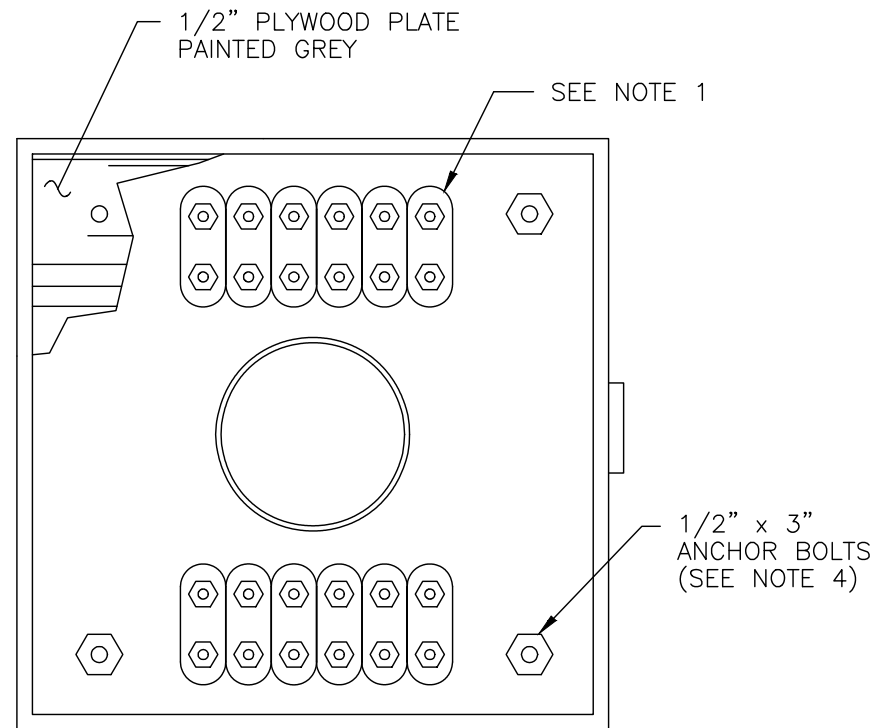


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M.BAKHIN	801JP127.dwg



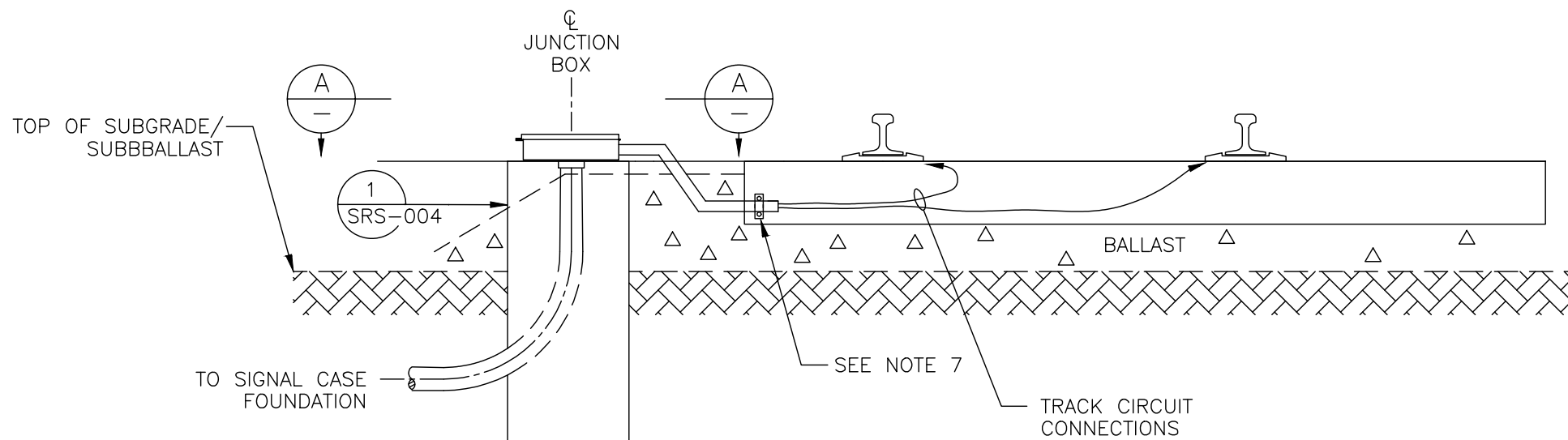
<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	SCALE
03/11/19	NTS
SUBMITTAL DATE	BOARD APPROVAL DATE
06/29/20	

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS TRACK CIRCUIT JUNCTION BOX DIRECT FIXATION TRACK (AERIAL STRUCTURE)			SHEET OF DRAWING NO. JP127 REVISION B
PCA NO.	CONTRACT NO.	FILE LOCATION	
000	C801	PROJECTWISE	



**NOTES:**

- 1- JUNCTION BOX TERMINALS SHALL BE DOUBLE-POST ASSOCIATION OF AMERICAN RAILROADS STANDARD, COMPLETE WITH SAFETRAN TEST LINKS (PART #024620-1X) OR EQUAL.
- 2- LID OF BOX SHALL BE GASKETED SO AS TO PROVIDE A WEATHERPROOF SEAL.
- 3- LOCKABLE HASP SHALL BE COMPATIBLE WITH VTA'S STANDARD LOCK.
- 4- BOX SHALL BE SECURELY FASTENED TO FOUNDATION BY ANCHOR BOLTS, DRILLED-IN-PLACE.
- 5- BOX SHALL BE CONSTRUCTED OF 3/32" THICK GALVANIZED SHEET STEEL WITH GREY ENAMEL FINISH.
- 6- HARDWARE SHALL BE HOT-DIP GALVANIZED OR STAINLESS STEEL.
- 7- CONTRACTOR SHALL SUBMIT FOR VTA APPROVAL PROPOSED METHOD OF FASTENING CONDUIT AND TRACK CIRCUIT CONNECTIONS.
- 8- THE KNEE WALL AND PLINTH MUST BE INTERRUPTED TO ALLOW FOR TRACK CIRCUIT CONNECTION TO PASS BELOW THE RAILS.



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NO.	DATE	REVISIONS
A	06/20	95% SUBMITTAL SET



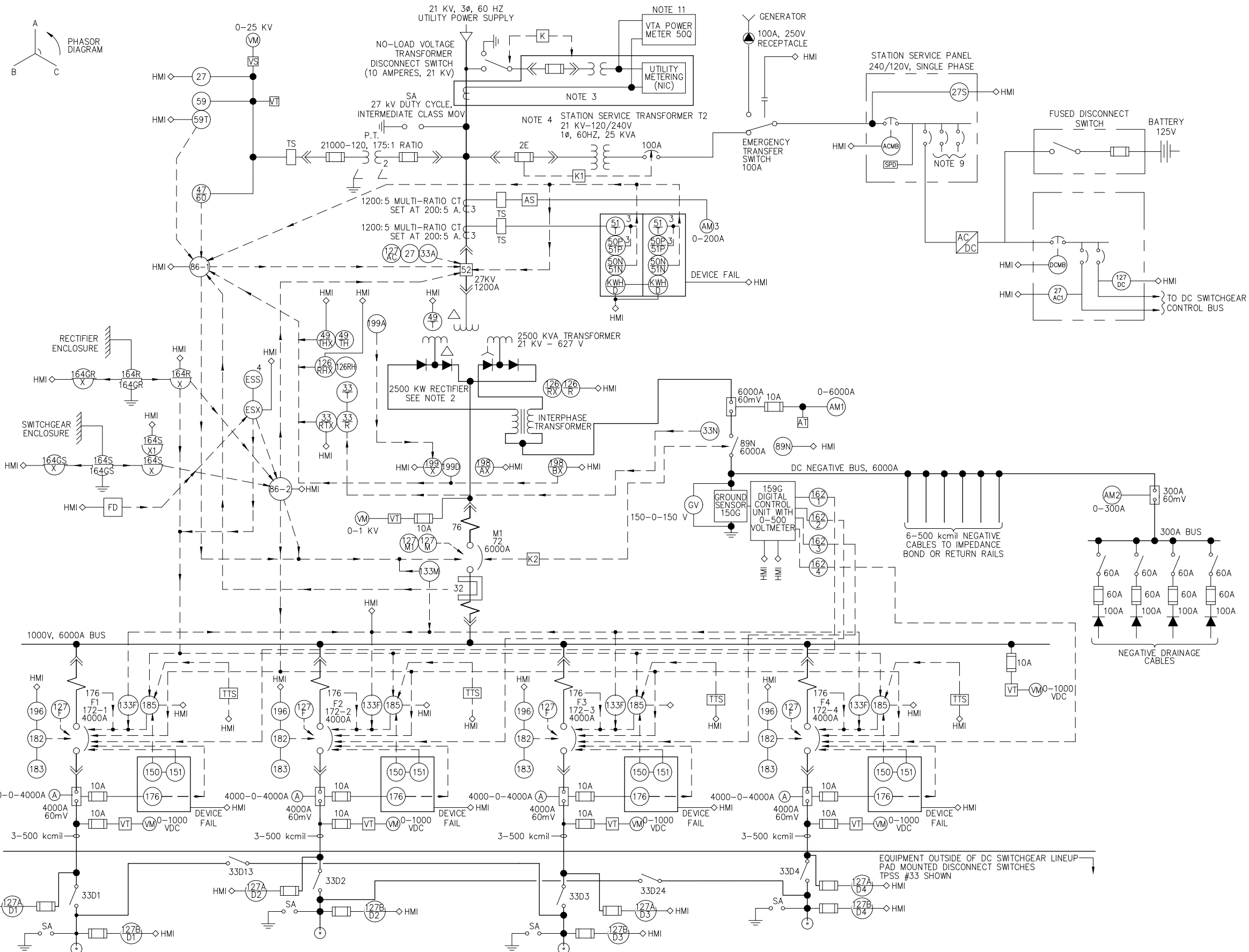
SUBMITTED	
<b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
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EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT LRT SIGNAL SYSTEMS TRACK CIRCUIT JUNCTION BOX BALLAST TRACK APPLICATION		
PCA NO.	CONTRACT NO.	FILE LOCATION
000	C801	PROJECTWISE
SHEET OF	DRAWING NO.	REVISION
	JP128	A

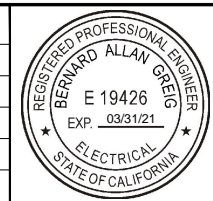




- NOTES:**
1. ALL DISCONNECT SWITCHES ARE MOUNTED ON THE POSITIVE MANHOLE.
  2. TRANSFORMER/RECTIFIER: 2500 KW, 12 PULSE:  
 MAXIMUM NO LOAD VOLTAGE: 870 VDC  
 MAXIMUM VOLTAGE WITH REGENERATION: 900 VDC NOMINAL  
 FULL-LOAD VOLTAGE: 800 VDC REGULATION: 5% LINEAR BETWEEN 100% AND 450%
  3. UTILITY METERING CT's AND PT's WILL BE FURNISHED AND INSTALLED BY PG&E. METERING CELL DESIGN SHALL BE COORDINATED WITH PG&E AND MEET THEIR REQUIREMENTS.
  4. PRIMARY WINDINGS FOR INSTRUMENT AND STATION SERVICE TRANSFORMERS SHALL BE SUITABLE FOR THE SERVICE VOLTAGE.
  5. AC PROTECTION RELAY TO BE ACCEPTED BY PG&E.
  6. UTILITY TERMINATION CUBICLE SHALL CONFORM TO THE REQUIREMENTS OF PG&E, INCLUDING UL CERTIFICATION AND ALTERNATE SOURCE COORDINATION AS REQUIRED BY PG&E. VERIFY UTILITY VOLTAGE BEFORE SUBMITTING EQUIPMENT SUBMITTAL.
  7. MICROPROCESSOR CONTROLLED RELAYS AND PAC SHALL BE USED FOR PROTECTION AND CONTROLS, AND SHALL MEET UTILITY EQUIPMENT REQUIREMENTS. SEE SPECIFICATIONS.
  8. NEGATIVE GROUNDING UNIT TO BE INSTALLED IN NEGATIVE CUBICLE.
  9. PROVIDE UNDERVOLTAGE DETECTION (DEVICE 127D) FOR EACH INDIVIDUAL BREAKER IN THE AC AND DC PANELS. ALL UNDERVOLTAGE DETECTION DEVICES SHALL REPORT STATUS TO THE HMI.
  10. SEE SHEET TP103 FOR DEVICE FUNCTION TABLE.
  11. VTA REVENUE POWER MONITOR SHALL BE INSTALLED IN REDUNDANT SOCKET PER SPECIFICATION 34 21 19.

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A	06/18	35% SUBMITTAL SET



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**Santa Clara Valley  
 Transportation  
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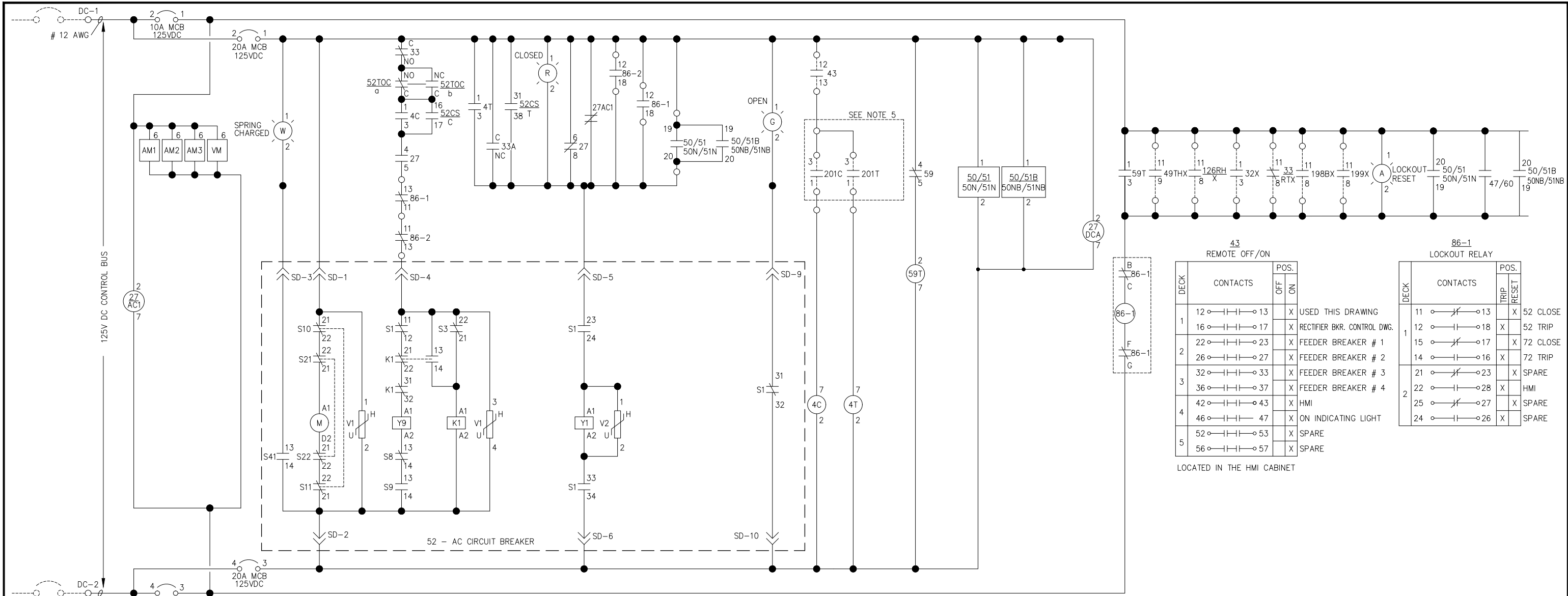
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 SCALE: NTS  
 SUBMITTAL DATE: 06/29/20  
 BOARD APPROVAL DATE:

**EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 TRACTION POWER  
 TPSS #33 - SINGLE LINE METER  
 AND RELAY DIAGRAM**

SHEET OF: TP111  
 REVISION: C

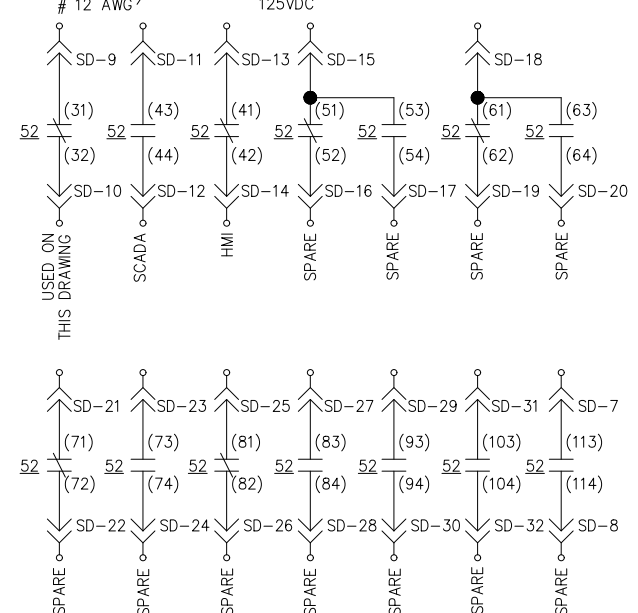
PCA NO.: 000  
 CONTRACT NO.: C801  
 FILE LOCATION: PROJECTWISE





43 REMOTE OFF/ON			86-1 LOCKOUT RELAY		
DECK	CONTACTS	POS.	DECK	CONTACTS	POS.
		OFF			TRIP
		ON			RESET
1	12 -     -     -> 13	X	1	11 -     -     -> 13	X 52 CLOSE
	16 -     -     -> 17	X	1	12 -     -     -> 18	X 52 TRIP
2	22 -     -     -> 23	X	2	15 -     -     -> 17	X 72 CLOSE
	26 -     -     -> 27	X	2	14 -     -     -> 16	X 72 TRIP
3	32 -     -     -> 33	X	2	21 -     -     -> 23	X SPARE
	36 -     -     -> 37	X	2	22 -     -     -> 28	X HMI
4	42 -     -     -> 43	X	2	25 -     -     -> 27	X SPARE
	46 -     -     -> 47	X	2	24 -     -     -> 26	X SPARE
5	52 -     -     -> 53	X			
	56 -     -     -> 57	X			

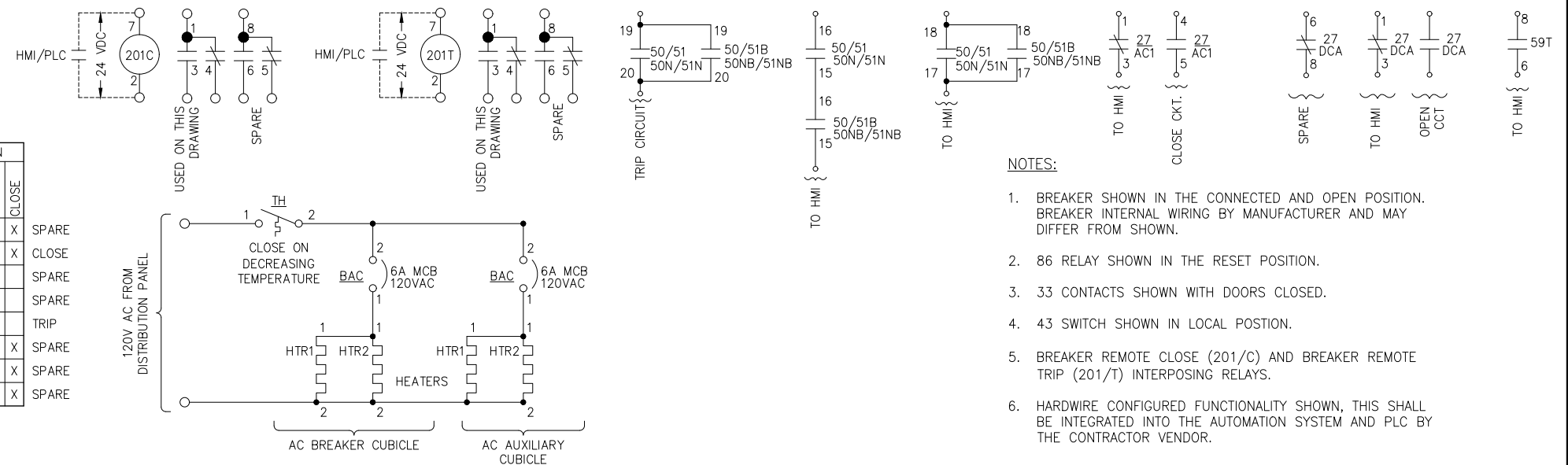
LOCATED IN THE HMI CABINET



52CS  
CKT. BKR. CONTROL SWITCH

DECK	CONTACTS	POSITION				
		PULL/TL	TRIP	not	not	CLOSE
1	12 -     -     -> 13					X SPARE
	16 -     -     -> 17					X CLOSE
2	21 -     -     -> 22		X	X		SPARE
	25 -     -     -> 26			X	X	SPARE
3	31 -     -     -> 38	X	X			TRIP
4	41 -     -     -> 48	X	X			SPARE
	52 -     -     -> 53				X	SPARE
5	56 -     -     -> 57				X	SPARE

SPRING RETURN TO "OFF"



- NOTES:
- BREAKER SHOWN IN THE CONNECTED AND OPEN POSITION. BREAKER INTERNAL WIRING BY MANUFACTURER AND MAY DIFFER FROM SHOWN.
  - 86 RELAY SHOWN IN THE RESET POSITION.
  - 33 CONTACTS SHOWN WITH DOORS CLOSED.
  - 43 SWITCH SHOWN IN LOCAL POSITION.
  - BREAKER REMOTE CLOSE (201/C) AND BREAKER REMOTE TRIP (201/T) INTERPOSING RELAYS.
  - HARDWARE CONFIGURED FUNCTIONALITY SHOWN, THIS SHALL BE INTEGRATED INTO THE AUTOMATION SYSTEM AND PLC BY THE CONTRACTOR VENDOR.

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A	06/18	35% SUBMITTAL SET

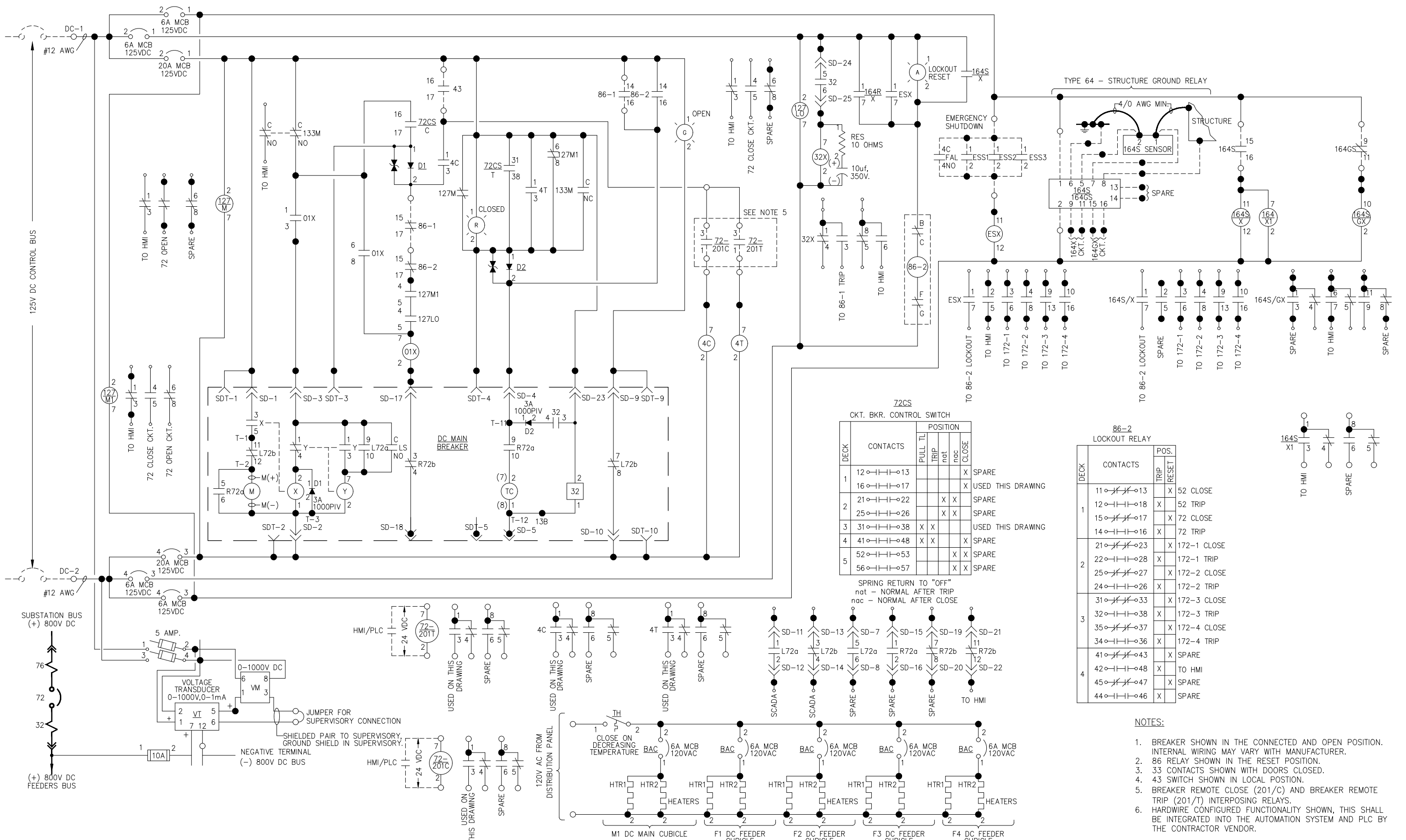


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SUBMITTAL DATE 06/29/20	

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT TRACTION POWER AC BREAKER SCHEMATIC DIAGRAM		
PLA. NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE
DRAWING NO. TP113		SHEET OF C



**72CS**  
CKT. BKR. CONTROL SWITCH

DECK	CONTACTS	POSITION				
		PULL	TRIP	not	CLOSE	
1	12-11-13				X	SPARE
	16-11-17				X	USED THIS DRAWING
	25-11-26		X	X		SPARE
3	31-11-38	X	X			USED THIS DRAWING
	41-11-48	X	X		X	SPARE
4	52-11-53			X	X	SPARE
	56-11-57			X	X	SPARE

SPRING RETURN TO "OFF"  
 not - NORMAL AFTER TRIP  
 nac - NORMAL AFTER CLOSE

**86-2**  
LOCKOUT RELAY

DECK	CONTACTS	POS.		
		TRIP	RESET	
1	11-11-13	X		52 CLOSE
	12-11-18		X	52 TRIP
	15-11-17		X	72 CLOSE
	14-11-16		X	72 TRIP
2	21-11-23	X		172-1 CLOSE
	22-11-28	X		172-1 TRIP
	25-11-27	X		172-2 CLOSE
	24-11-26	X		172-2 TRIP
3	31-11-33	X		172-3 CLOSE
	32-11-38	X		172-3 TRIP
	35-11-37	X		172-4 CLOSE
	34-11-36	X		172-4 TRIP
4	41-11-43	X		TO HMI
	42-11-48	X		SPARE
	45-11-47	X		SPARE
	44-11-46	X		SPARE

- NOTES:**
- BREAKER SHOWN IN THE CONNECTED AND OPEN POSITION. INTERNAL WIRING MAY VARY WITH MANUFACTURER.
  - 86 RELAY SHOWN IN THE RESET POSITION.
  - 33 CONTACTS SHOWN WITH DOORS CLOSED.
  - 43 SWITCH SHOWN IN LOCAL POSITION.
  - BREAKER REMOTE CLOSE (201/C) AND BREAKER REMOTE TRIP (201/T) INTERPOSING RELAYS.
  - HARDWARE CONFIGURED FUNCTIONALITY SHOWN, THIS SHALL BE INTEGRATED INTO THE AUTOMATION SYSTEM AND PLC BY THE CONTRACTOR VENDOR.

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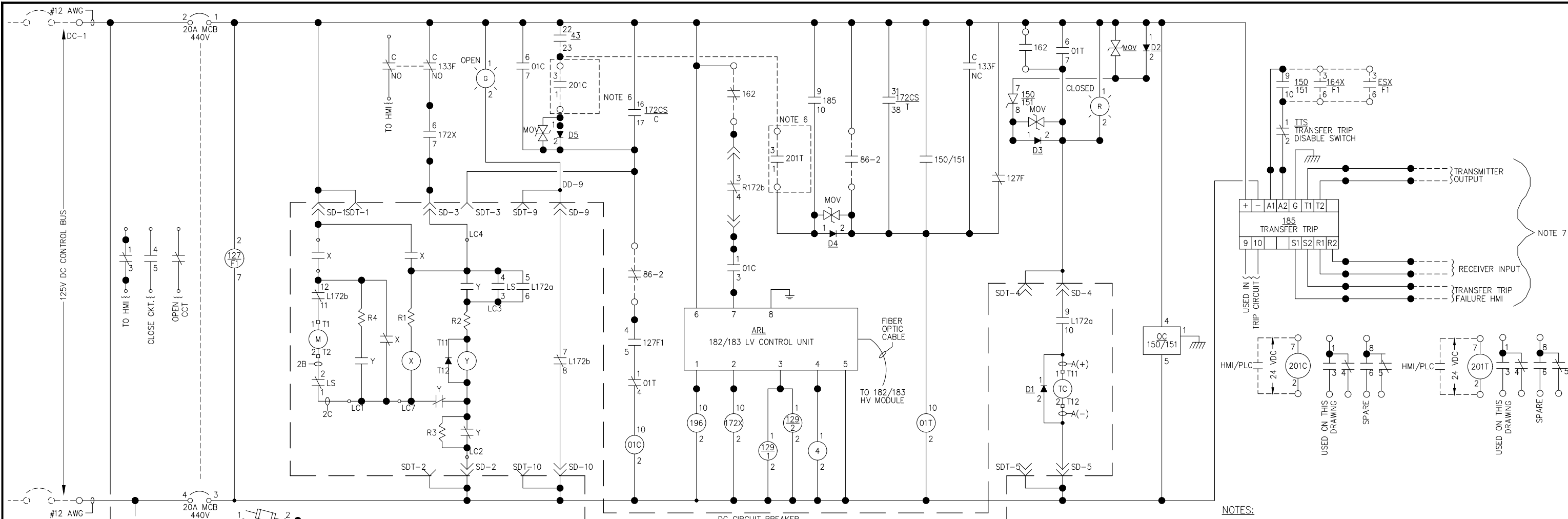
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 CADD FILE DATE: 06/22/20  
 SUBMITTAL DATE: 06/29/20  
 SCALE: NTS  
 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 TRACTION POWER  
 DC MAIN BREAKER  
 SCHEMATIC DIAGRAM

PLA NO: 000 CONTRACT NO: C801 FILE LOCATION: PROJECTWISE

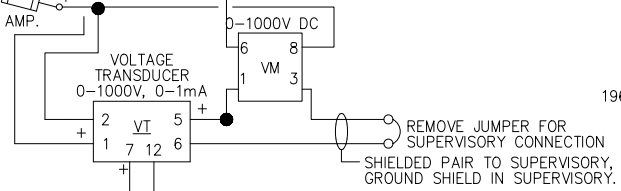
SHEET OF: TP114 REVISION: C





- NOTES:
- BREAKER SHOWN IN THE CONNECTED AND OPEN POSITION.
  - 33F CONTACTS SHOWN WITH DOORS CLOSED.
  - 43 SWITCH SHOWN IN OFF POSITION.
  - TTS IS SHOWN IN THE ENABLE POSITION.
  - BREAKER REMOTE CLOSE (201/C) AND BREAKER REMOTE TRIP (201/T) INTERPOSING RELAYS—SEE SCADA WIRING DIAGRAM FOR INCOMING POINTS CLARIFICATION.
  - FOR TRANSFER TRIP SCHEME REFER TO DWG. NO TP117. COMMUNICATIONS BETWEEN SUBSTATIONS SHALL BE VIA FIBER OPTIC CABLES.
  - HARDWARE CONFIGURED FUNCTIONALITY SHOWN, THIS SHALL BE INTEGRATED INTO THE AUTOMATION SYSTEM AND PLC BY THE CONTRACTOR VENDOR.

NOTE ON FEEDERS:  
THIS CONTROL DRAWING IS TYPICAL FOR (4) FEEDERS; HOWEVER THE INDICATION ON THE HMI SCREEN FOR THE RESPECTIVE HMI POINT WILL BE CONNECTED TO THE RESPECTIVE FEEDERS.



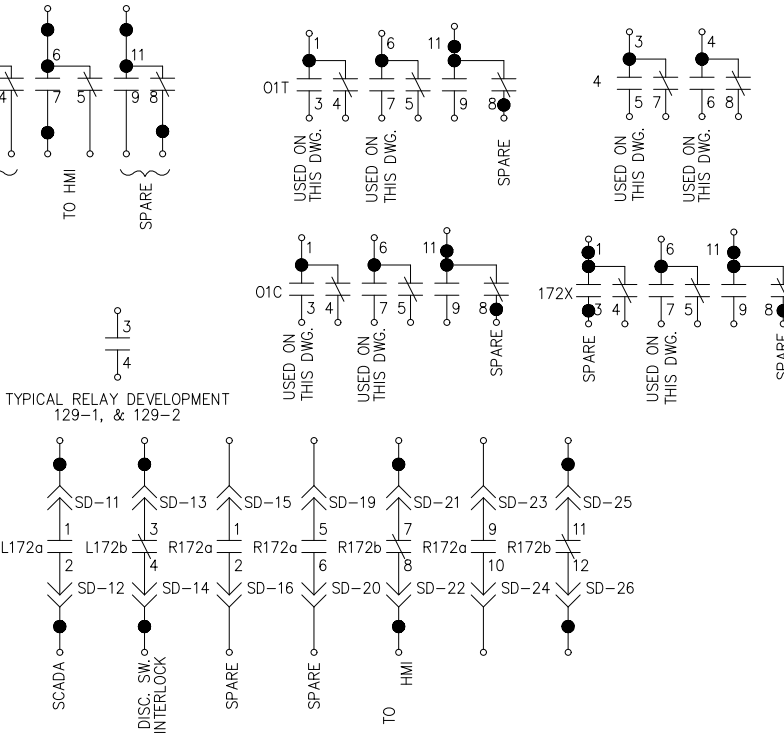
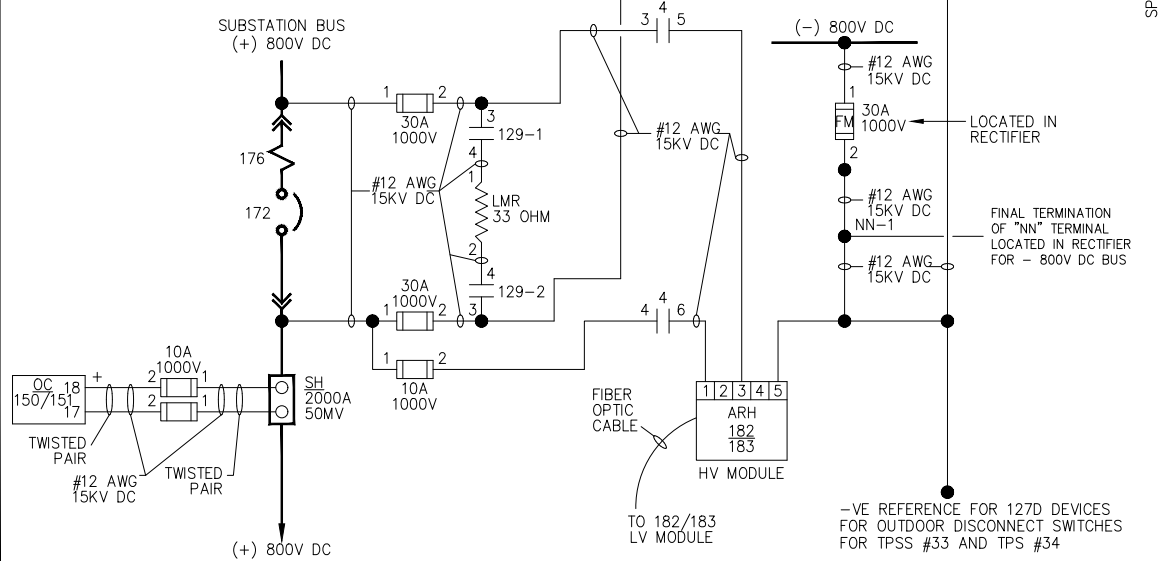
TTS TRANSFER TRIP DISABLE SWITCH

CONTACTS	POS.		
	ENABLE	DISABLE	
1-1-1-2	X		USED THIS DRAWING
1-1-1-2	X		SPARE
3-1-1-4		X	SPARE
3-1-1-4		X	SPARE

172CS CKT. BKR. CONTROL SWITCH

DECK	CONTACTS	POSITION				
		PULL TL	TRIP	not	LOC	
1	12-1-1-1-13				X	SPARE
	16-1-1-1-17				X	USED THIS DRAWING
2	21-1-1-1-22		X	X		SPARE
	25-1-1-1-26		X	X		SPARE
3	31-1-1-1-38	X	X			USED THIS DRAWING
4	41-1-1-1-48	X	X		X	SPARE
5	52-1-1-1-53				X	SPARE
	56-1-1-1-57				X	SPARE

SPRING RETURN TO "OFF"



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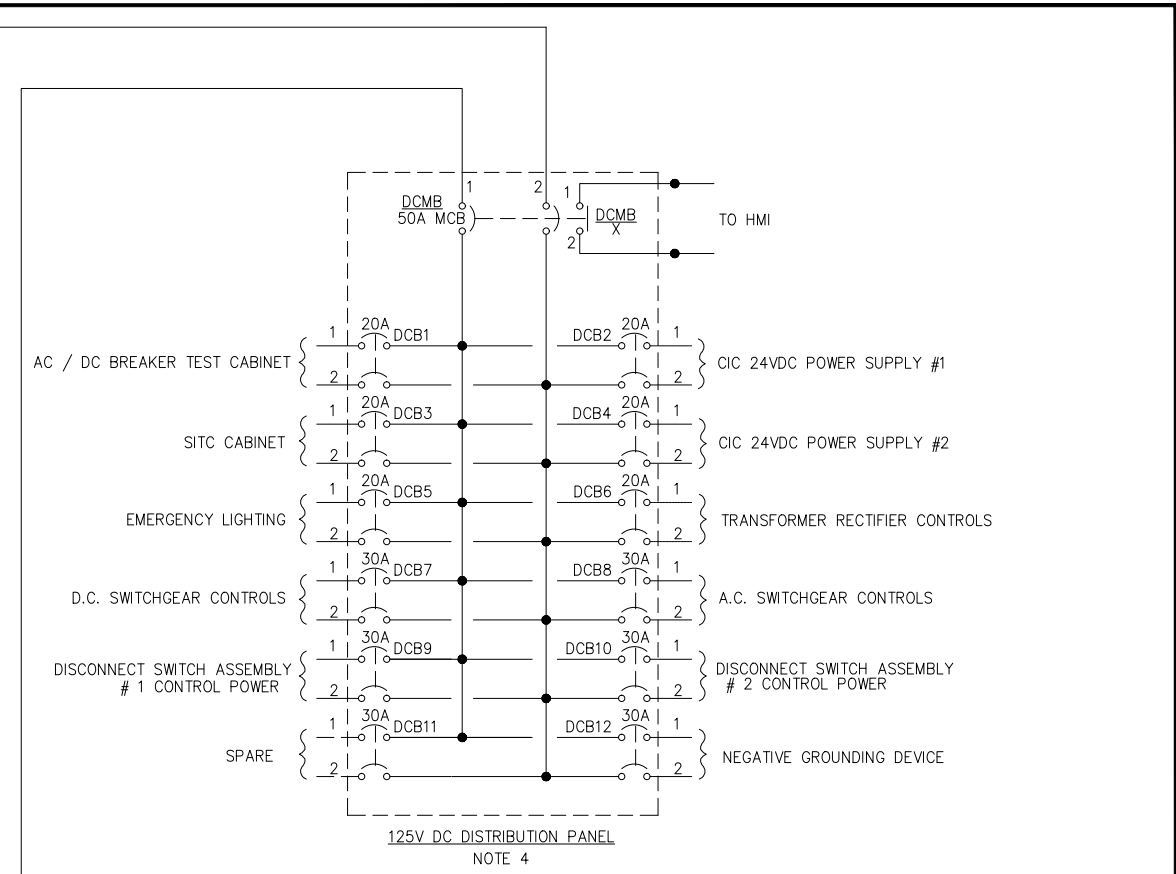
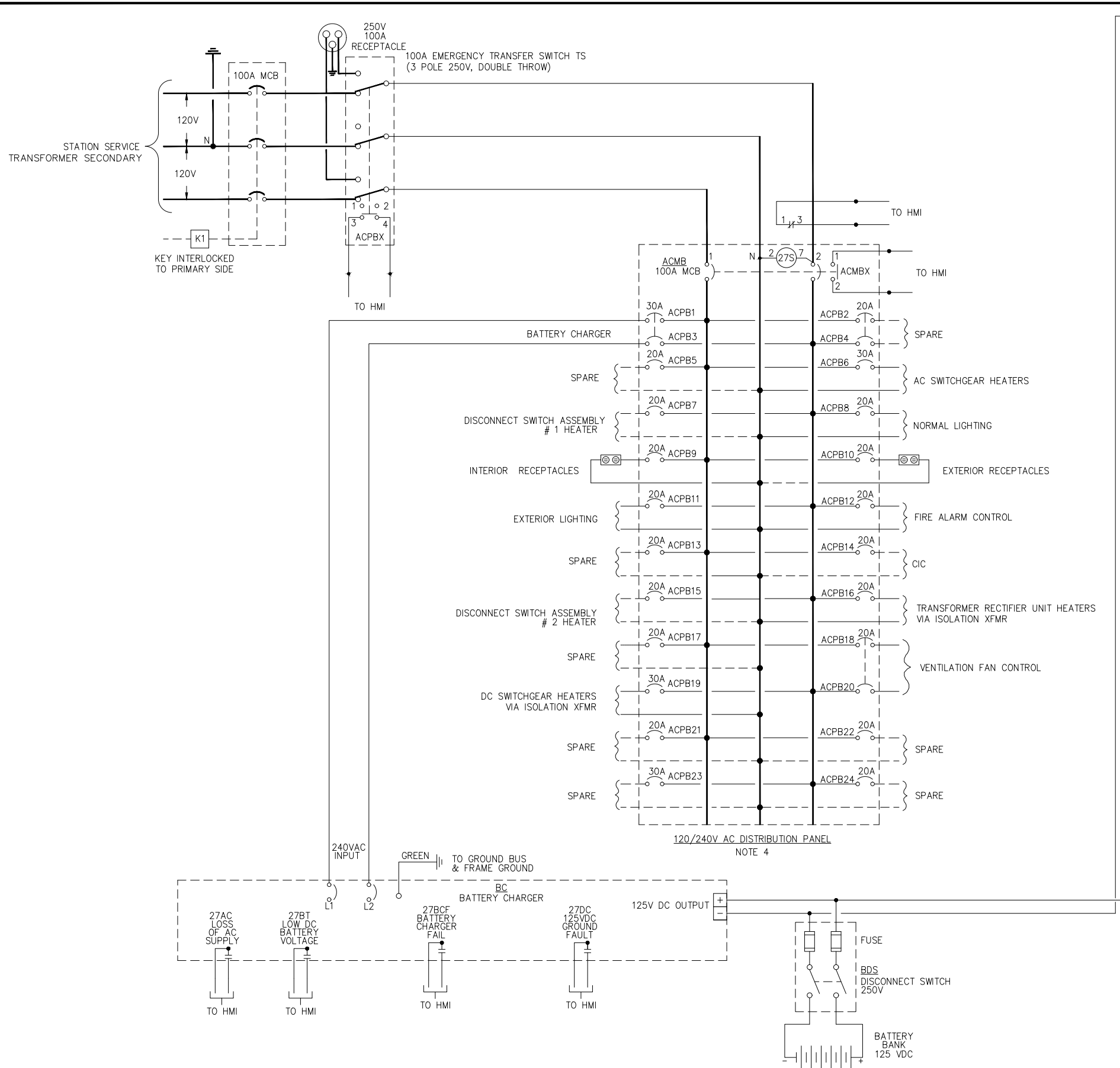


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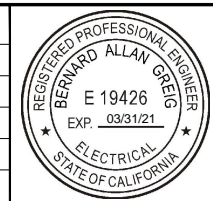
EASTRIDGE TO BART REGIONAL CONNECTOR			SHEET
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT			
TRACTION POWER			OF
DC FEEDER BREAKER			DRAWING NO.
SCHEMATIC DIAGRAM			TP115
			REVISION
			C
PLA NO.	CONTRACT NO.	FILE LOCATION	
000	C801	PROJECTWISE	



- NOTES:**
1. THE AC AND DC DISTRIBUTION PANEL CIRCUITS SHALL BE ARRANGED PER THE SUPPLIER'S RECOMMENDATION AND MAY DIFFER FROM WHAT IS SHOWN ON THIS DRAWING.
  2. DISTRIBUTION PANEL WIRING:  
 DC - ALL FEEDER CIRCUITS - #6 AWG  
 AC - 20 AMP FEEDER CIRCUITS - #10 AWG  
 AC - 30 AMP FEEDER CIRCUITS - #10 AWG
  3. FUSED DISCONNECT SHALL BE SIZED BY THE CONTRACTOR.
  4. BREAKER RATINGS SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL DETERMINE THE FINAL RATINGS.
  5. MINIMUM NUMBER OF BREAKERS ARE SHOWN ON THIS DRAWING FOR EACH PANEL.
  6. FOR THE AC DISTRIBUTION PANEL: AUXILIARY CONTACTS OF THE MAIN AND EACH BRANCH CIRCUIT BREAKER SHALL BE FACTORY WIRED TO A TERMINAL STRIP FOR CONNECTION TO THE LOCAL AND SCADA INDICATIONS WHEN BREAKERS ARE TRIPPED OR OPENED.
  7. FOR THE DC DISTRIBUTION PANEL: AUXILIARY CONTACTS OF THE MAIN AND EACH BRANCH CIRCUIT BREAKER SHALL BE FACTORY WIRED TO A TERMINAL STRIP FOR CONNECTION TO THE ANNUNCIATOR AND SUPERVISORY CIRCUITS. TRIPPED OR OPEN CIRCUIT BREAKERS SHALL BE ANNUNCIATED FOR LOCAL AND SCADA INDICATIONS.

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 BOARD APPROVAL DATE:

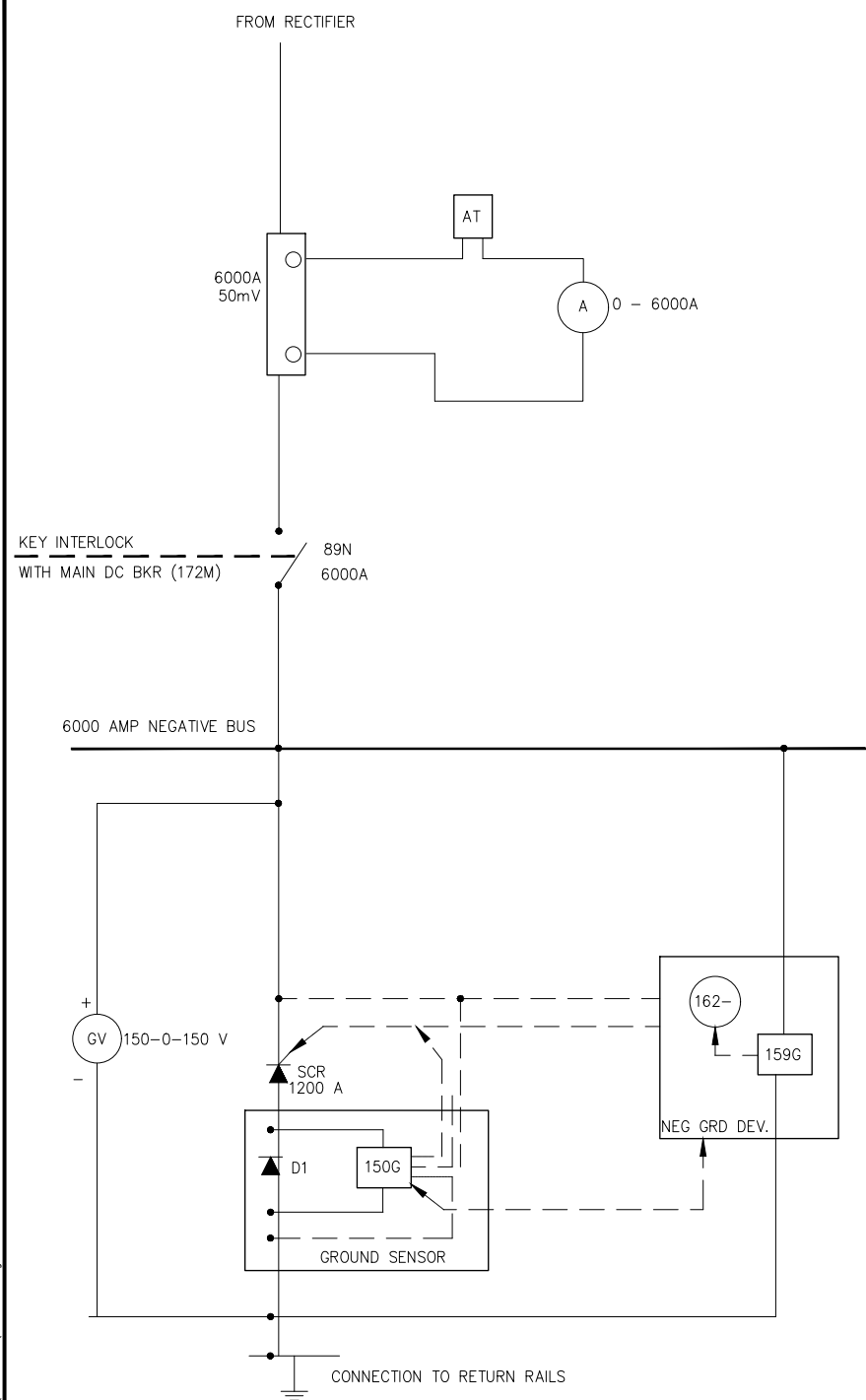
**EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 TRACTION POWER  
 AC AND DC DISTRIBUTION PANELS**

SHEET OF TP116 REVISION C

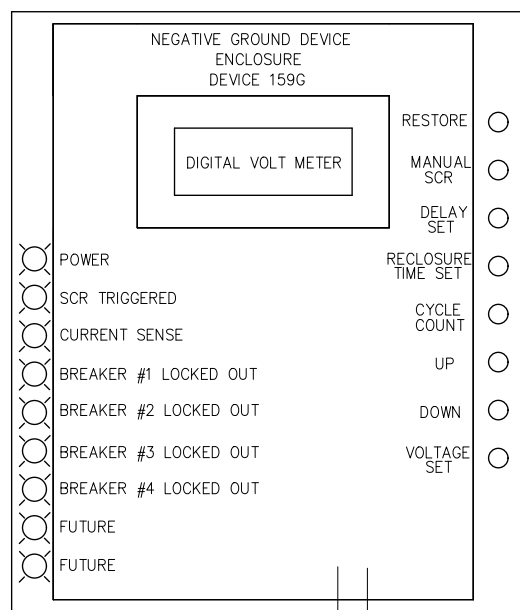
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**NOTES:**

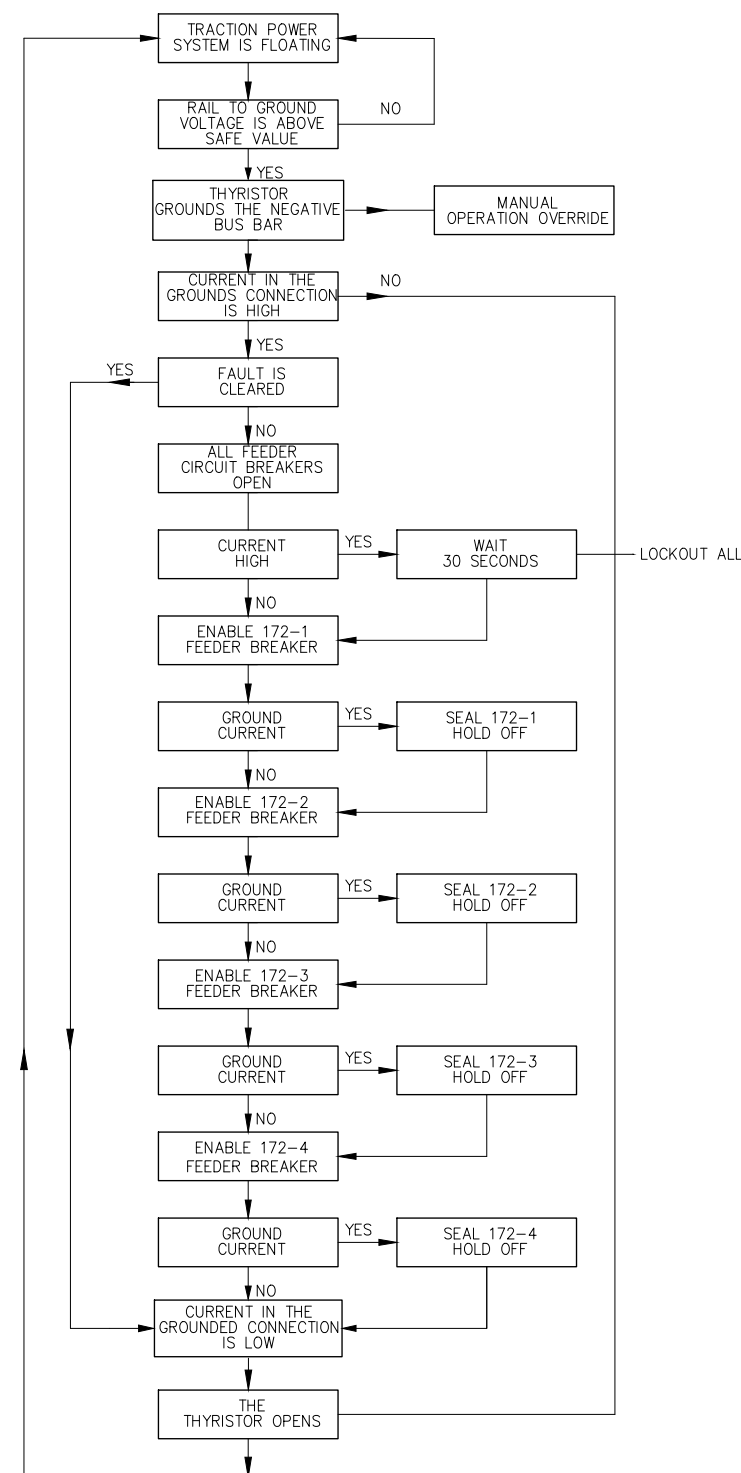
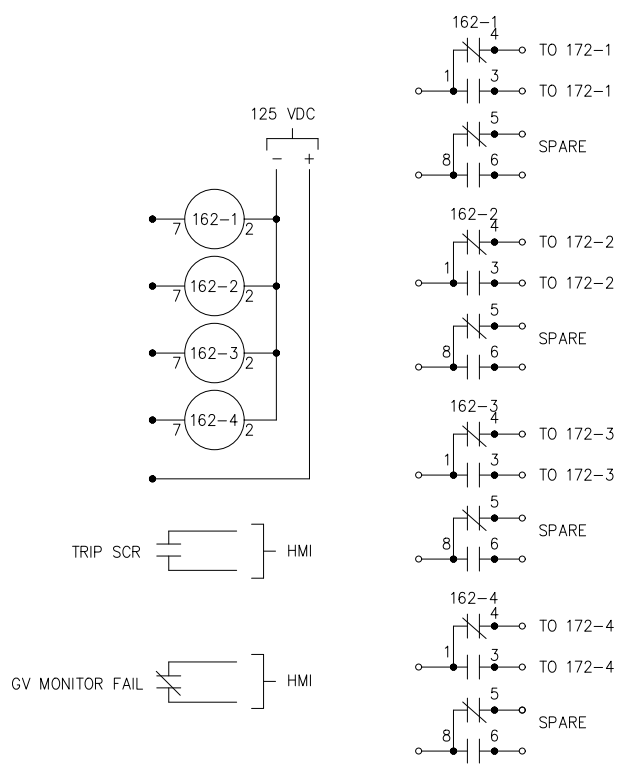
1. NEGATIVE GROUNDING SYSTEM SHALL OPERATE ACCORDING TO LOGIC DIAGRAM PROVIDED.
2. DEVICES SCR AND D1 SHALL BE CAPABLE OF WITHSTANDING THE MAXIMUM EXPECTED DC SHORT CIRCUIT CURRENT WITHOUT DAMAGE
3. DEVICE 57 SCR TO CONDUCT WHEN NEGATIVE BUS VOLTAGE DETECTED BY DEVICE 159G EXCEEDS PRESET LEVEL. A TIME DELAY IS TO BE PROVIDED TO MITIGATE FALSE TRIGGERING DUE TO TRANSIENTS.
4. WHEN OVERCURRENT IS DETECTED BY DEVICE 150G ALL DC FEEDER BREAKERS SHALL TRIP.
5. DEVICE 159G IS A MICRO-PROCESSOR BASED UNIT (MCU) THAT OPERATES IN CONJUNCTION WITH DEVICE 150G AND IN ACCORDANCE WITH THE LOGIC DIAGRAM PROVIDED. LIGHTS SHALL BE PROVIDED ON THE 159G MCU TO INDICATE THE CONDITIONS SHOWN. ADJUSTABLE PARAMETERS SHALL BE FROM PUSHBUTTONS LOCATED INSIDE THE MCU.



NEGATIVE GROUNDING UNIT  
SIMPLIFIED SINGLE LINE DIAGRAM



NEGATIVE GROUNDING UNIT  
MICRO-CONTROLLER UNIT (MCU)



NEGATIVE GROUNDING UNIT  
LOGIC DIAGRAM

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**Santa Clara Valley**  
**Transportation**  
**Authority**

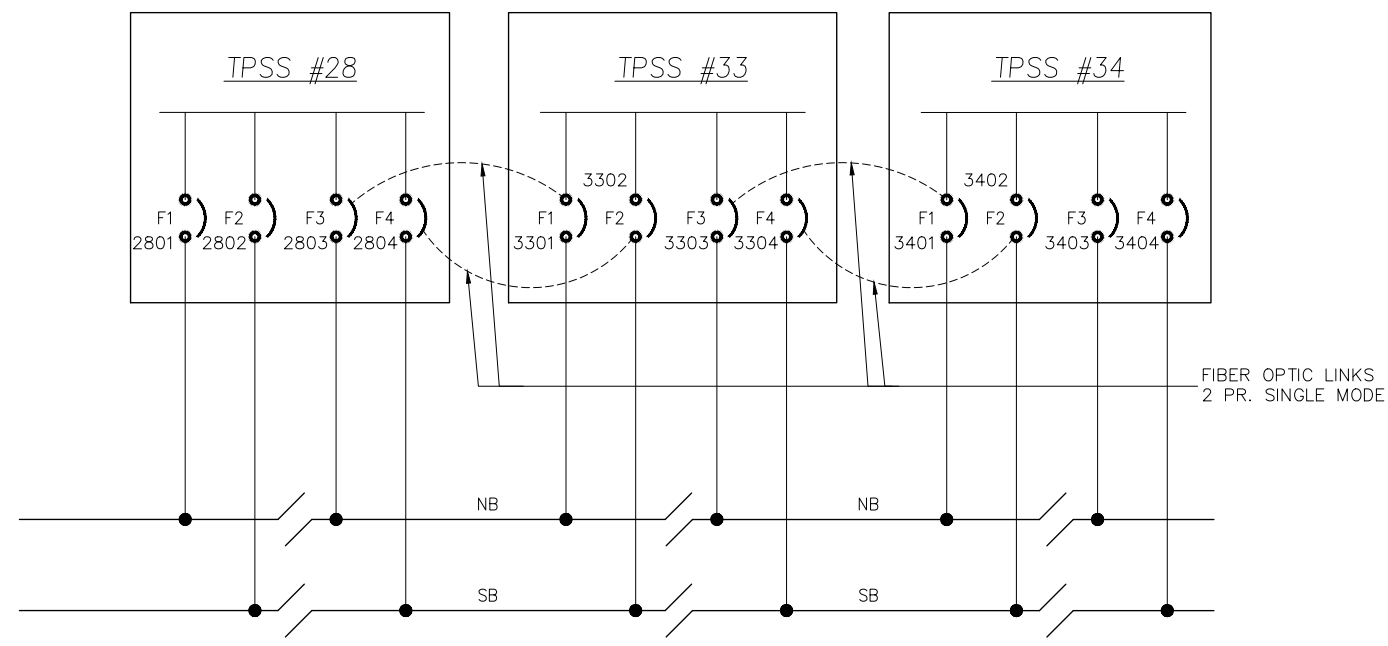
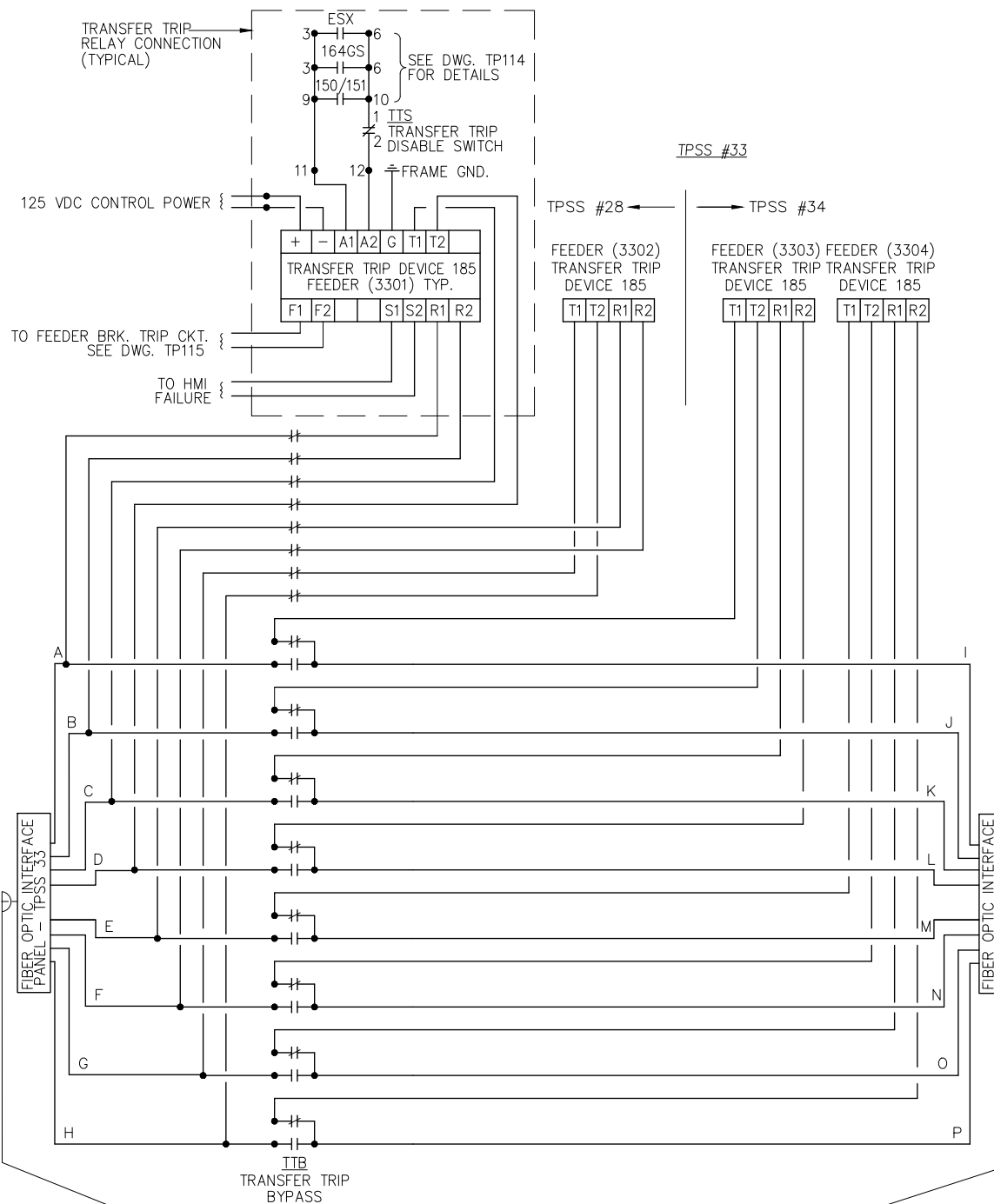
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EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 TRACTION POWER  
 NEGATIVE GROUNDING UNIT DIAGRAM

SHEET OF: TP117  
 DRAWING NO. TP117  
 REVISION C

PCA NO. 000  
 CONTRACT NO. C801  
 FILE LOCATION: PROJECTWISE

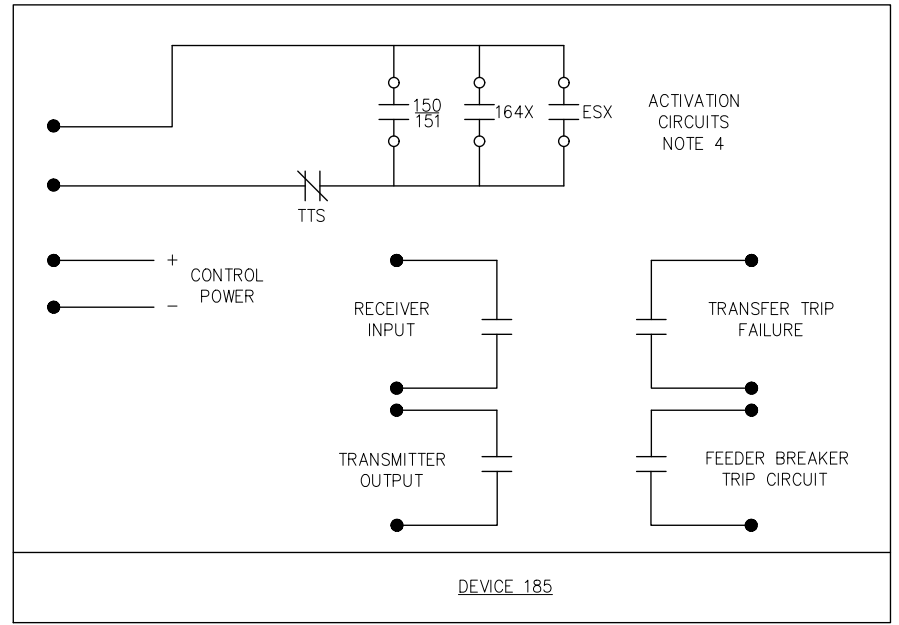


SCHEMATIC

- TPSS #28 TRANSFER TRIP CABINET TERMINAL BLOCK "TT" SEE NOTE 1
- A - TT-25 FROM BKR 2803
  - B - TT-26
  - C - TT-27 TO BKR 2803
  - D - TT-28
  - E - TT-29 FROM BKR 2804
  - F - TT-30
  - G - TT-31 TO BKR 2805
  - H - TT-32
- TO TPSS #28 EXISTING TRANSFER TRIP CABINET SEE NOTE 1

- TO BKR 3401
- J
- K FROM BKR 3401
- L
- M TO BKR 3402
- N
- O
- P FROM BKR 3402

TO TPSS #34 TRANSFER TRIP CABINET



FIBER OPTIC LINK BETWEEN STATIONS  
2 PR. SINGLE MODE FIBER

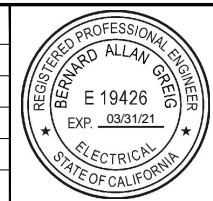
CONTROL CIRCUIT  
TPSS #33 (TYPICAL)

NOTES:

1. AT TPSS #28 PROVIDE FIBER OPTIC INTERFACE TO EXISTING IMPULSE INC. TRANSFER TRIP DEVICE, INCLUDING INTERFACE PANEL. SEE TP119 FOR TPSS #28 TERMINAL BLOCK CONNECTIONS.
2. TRANSFER TRIP SYSTEM SHALL INTERFACE WITH TWO PAIR SINGLE MODE FIBER OPTIC CABLES.
3. CONTRACTOR TO PROVIDE ALL TRANSFER TRIP CIRCUITS, CONTROL LOGIC, FIBER OPTIC ROUTERS, MODEMS AND TT BYPASS, INCLUDING CONNECTION TO FIBER OPTIC CABLE, FOR COMPLETE OPERATION.
4. REFER TO DWG. NO. TP115 FOR ACTIVATION CONTACTS.
5. TRANSFER TRIP RECLOSE INITIATED FOR:  
RATE OF RISE OR INST. TRIP (150), OR INST. SERIES TRIP (176).
6. TRANSFER TRIP WITH LOCKOUT INITIATED FOR:  
DC ENCLOSURE ALIVE (164GS), OR EMERGENCY SHUTDOWN (ESX).

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**Santa Clara Valley Transportation Authority**

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EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
TRACTION POWER  
TRANSFER TRIP CIRCUIT

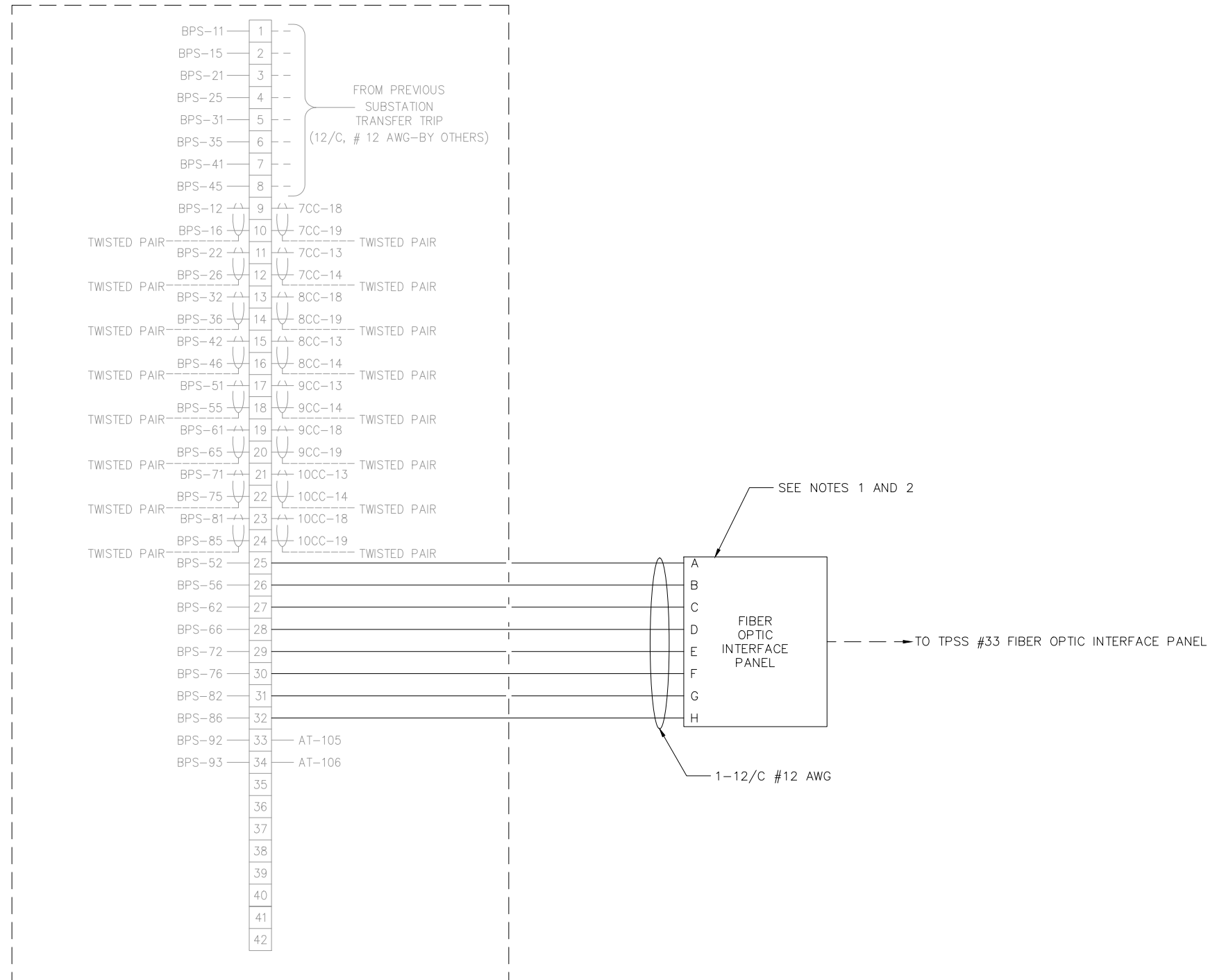
PCA NO.: 000  
CONTRACT NO.: C801  
FILE LOCATION: PROJECTWISE

SHEET OF: TP118  
REVISION: C

NOTES:

1. SEE TP118 FOR TPSS #33 TRANSFER TRIP CIRCUIT.
2. AT TPSS #28 PROVIDE A FIBER OPTIC INTERFACE PANEL TO THE EXISTING IMPULSE INC. TRANSFER TRIP DEVICE.
3. DRAWING IS BASED ON CONTRACT A115, DWG NO. 158W1B, REV F.

EXISTING TPSS #28  
TRANSFER TRIP CABINET  
REAR PANEL  
TERMINAL BLOCK TT



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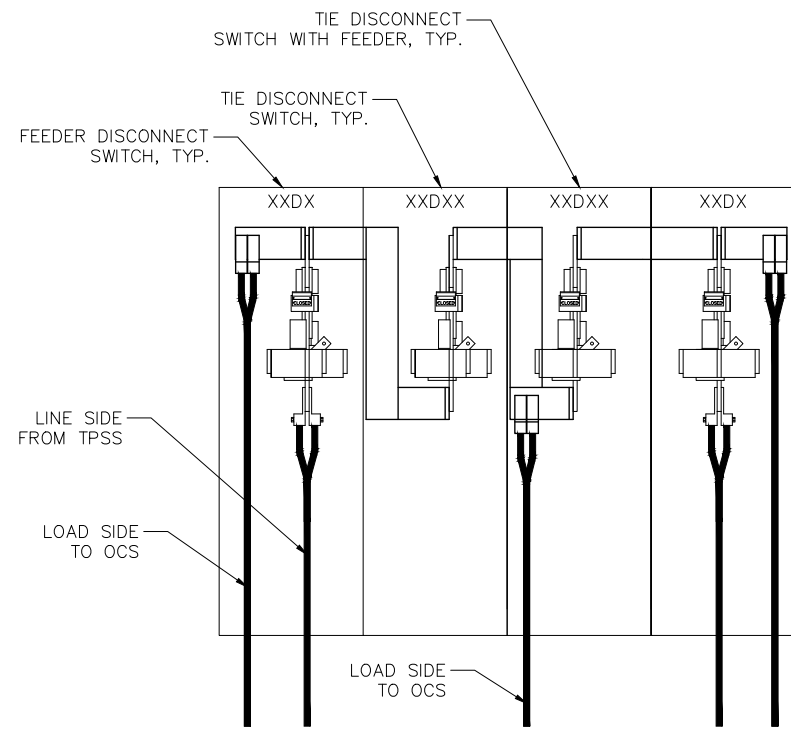
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<b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
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DRAWN	CADD FILE NAME
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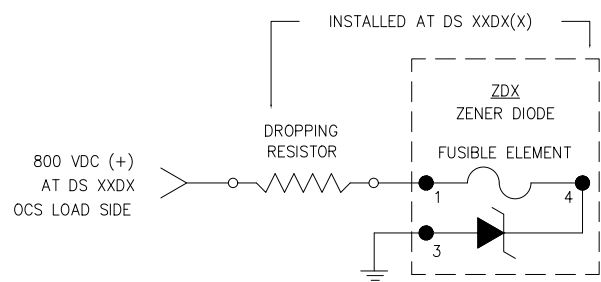
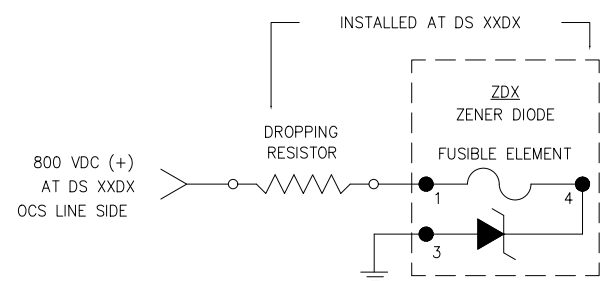
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CADD FILE DATE	SCALE
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SUBMITTAL DATE	BOARD APPROVAL DATE
06/29/20	

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT TRACTION POWER EXISTING TPSS #28 TRANSFER TRIP TERMINAL BLOCK CONNECTIONS		
PCA NO.	CONTRACT NO.	FILE LOCATION
000	C801	PROJECTWISE

SHEET	OF
DRAWING NO.	TP119
REVISION	A



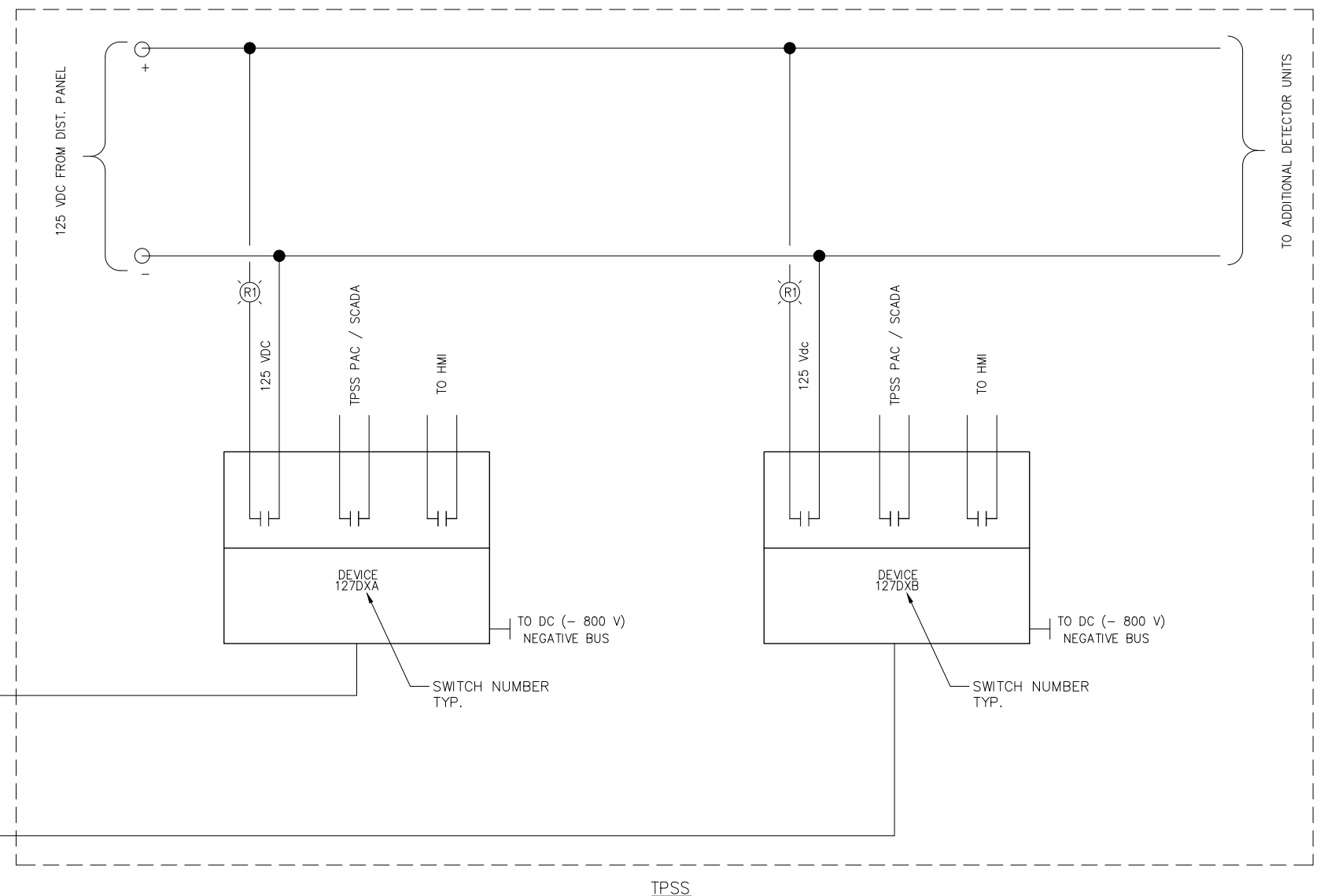
TYPICAL FEEDER DISCONNECT SWITCH TYPES  
(TPSS #34 DISCONNECT SWITCHES SHOWN)



TYPICAL FEEDER DISCONNECT SWITCH RELAY SCHEME  
SEE TABLE FOR TOTAL RELAYS PER TPSS

LEGEND:  
 XXDX(X)  
 SWITCH NUMBER (TIE SWITCH ONLY)  
 SWITCH NUMBER  
 DISCONNECT SWITCH  
 TPSS NUMBER

DISCONNECT SWITCH CABINET ← → TRACTION POWER SUBSTATION (TPSS)



NOTES:

1. MOUNT ELECTRONIC RELAYS IN THE SITC. LABEL WITH OCS SECTION NUMBER AS SHOWN ON THE OCS SECTIONALIZING DRAWINGS.
2. DISCONNECT SWITCHES ARE MOUNTED ON THE TPSS POSITIVE MANHOLE. HV DROPPING RESISTORS AND ZENOR DIODE CIRCUIT ARE MOUNTED IN DISCONNECT SWITCH COMPARTMENTS.
3. PROVIDE OCS VOLTAGE MONITORING FOR EACH LINE SIDE AND LOAD SIDE CABLES TO/FROM THE DISCONNECT SWITCHES AS SHOWN.
4. ELECTRONIC RELAY SHALL BE EITHER A VOLTAGE OR CURRENT SENSING TYPE WITH PARAMETERS TO BE DETERMINED BY THE CONTRACTOR.
5. OCS MONITORING RELAY QUANTITIES ARE IN ACCORDANCE WITH THE FOLLOWING TABLE:

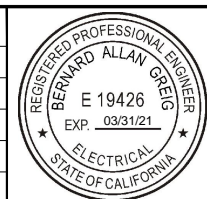
SUBSTATION NUMBER	LINE SIDE RELAY QUANTITIES	LOAD SIDE RELAY QUANTITIES
TPSS #33	4 RELAYS	4 RELAYS
TPSS #34	4 RELAYS	7 RELAYS

6. EXACT OHMIC VALUE OF DROPPING RESISTOR SHALL BE DETERMINED BY THE CONTRACTOR AND SHALL BE COMPATIBLE WITH THE ELECTRONIC DEVICE (127DX)
7. CONTRACTOR TO COORDINATE RELAY DESIGNATIONS WITH VTA.

TYPICAL OCS VOLTAGE MONITORING SCHEMATIC

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EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 TRACTION POWER  
 OCS VOLTAGE MONITORING SCHEMATIC  
 DIAGRAM

PCA NO.: 000  
 CONTRACT NO.: C801  
 FILE LOCATION: PROJECTWISE

SHEET	OF
DRAWING NO.	TP120
REVISION	C

REMOTE CONTROL OFF 43	LOSS OF STATION SERVICE POWER 27S	AC SWITCHGEAR LOSS OF CONTROL VOLTAGE 27AC1, 27DCA	AC PANEL BOARD BREAKER TRIP ACMBX	DC PANEL BOARD BREAKER TRIP DCMBX	UTILITY SUPPLY UNDERVOLTAGE 27	AC AUXILIARY POWER ALTERNATE SUPPLY ACPBX	TRANSFORMER WINDING OVERTEMP ALARM 49T
AC CIRCUIT BREAKER TRIP 52b (SEE NOTE 1)	AC OVERCURRENT TRIP 50/51 50N/51N	AC OVERCURRENT RELAY FAIL	AC/DC SURGE SUPPRESSORS 199X	TRANS / RECT LOSS OF CONTROL VOLTAGE 127R	UTILITY SUPPLY OVERTVOLTAGE TRIP 59T	AC LOCKOUT RELAY 86-1	TRANSFORMER WINDING OVERTEMP TRIP 49THX
RECTIFIER OVERTEMP ALARM 126RX	RECTIFIER OVERTEMP TRIP 126RHX	DIODE FAILURE ALARM 198AX	DIODE FAILURE TRIP 198BX	AC BREAKER DOOR OPEN 33A	DC ENCLOSURE ALIVE TRIP 164S	DC ENCLOSURE GROUND ALARM 164GS	DC LOCKOUT RELAY 86-2
FEEDER BREAKER #1 TRIP (SEE NOTE 1)	FEEDER BREAKER #2 TRIP (SEE NOTE 1)	FEEDER BREAKER #3 TRIP (SEE NOTE 1)	FEEDER BREAKER #4 TRIP (SEE NOTE 1)	BATTERY CHARGER AC FAILURE ALARM BCF	BATTERY UNDERVOLTAGE ALARM 27BT	DC SWITCHGEAR LOSS OF CONTROL VOLTAGE 127M1, 127F1-127F4, 127M, 127LO	125VDC SYSTEM GROUND FAULT 27DC
FEEDER BREAKER #1 TRANSFER TRIP FAILURE 185-1 SEE NOTE 1	FEEDER BREAKER #2 TRANSFER TRIP FAILURE 185-2 SEE NOTE 1	FEEDER BREAKER #3 TRANSFER TRIP FAILURE 185-3 SEE NOTE 1	FEEDER BREAKER #4 TRANSFER TRIP FAILURE 185-4 SEE NOTE 1	EMERGENCY SHUTDOWN ESX	SUBSTATION AIR TEMPERATURE HIGH HT	NEGATIVE GROUNDING UNIT FAILURE MCU	NEGATIVE GROUNDING UNIT OVERTCURRENT OPERATION MCU
FEEDER BREAKER #1 TRANSFER TRIP DISABLED TTS-1 SEE NOTE 1	FEEDER BREAKER #2 TRANSFER TRIP DISABLED TTS-2 SEE NOTE 1	FEEDER BREAKER #3 TRANSFER TRIP DISABLED TTS-3 SEE NOTE 1	FEEDER BREAKER #4 TRANSFER TRIP DISABLED TTS-4 SEE NOTE 1	TRANS / RECT DOOR OPEN 33T, 33R	NEGATIVE DISCONNECT SWITCH OPEN OR DOOR OPEN 33N, 89N	FIRE EQUIPMENT FAILURE	FIRE ALARM / DETECTION
FEEDER BREAKER #1 LOAD MEASURING LOCKOUT 196-1 SEE NOTE 1	FEEDER BREAKER #2 LOAD MEASURING LOCKOUT 196-2 SEE NOTE 1	FEEDER BREAKER #3 LOAD MEASURING LOCKOUT 196-3 SEE NOTE 1	FEEDER BREAKER #4 LOAD MEASURING LOCKOUT 196-4 SEE NOTE 1	TRANSFER TRIP BYPASSED TTB	DC BREAKER DOOR OPEN 133M, 133F	DC MAIN BREAKER OPEN	AC MAIN BREAKER OPEN
FEEDER BREAKER #1 PROTECTIVE UNIT AND CONTROLLER FAILURE	FEEDER BREAKER #2 PROTECTIVE UNIT AND CONTROLLER FAILURE	FEEDER BREAKER #3 PROTECTIVE UNIT AND CONTROLLER FAILURE	FEEDER BREAKER #4 PROTECTIVE UNIT AND CONTROLLER FAILURE	DC MAIN BREAKER TRIP 72b	ACM/DCM FAILURE	INTRUSION ALARM	REVERSE CURRENT FLOW 32
FEEDER BREAKER #1 OPEN	FEEDER BREAKER #2 OPEN	FEEDER BREAKER #3 OPEN	FEEDER BREAKER #4 OPEN	DC RECTIFIER ENCLOSURE ALIVE TRIP 164R	DC RECTIFIER ENCLOSURE GROUND ALARM 164GR	SPARE	SPARE
OCS FEEDER #1 LINE SIDE DE-ENERGIZED 127A/D1 (33D1 TPSS #33) (34D1 TPSS #34)	OCS FEEDER #2 LINE SIDE DE-ENERGIZED 127A/D2 (33D2 TPSS #33) (34D2 TPSS #34)	OCS FEEDER #3 LINE SIDE DE-ENERGIZED 127A/D3 (33D3 TPSS #33) (34D3 TPSS #34)	OCS FEEDER #4 LINE SIDE DE-ENERGIZED 127A/D4 (33D4 TPSS #33) (34D4 TPSS #34)	OCS FEEDER #5 LOAD SIDE DE-ENERGIZED 127B/D5 (34D11 TPSS #34) (TPSS #34 ONLY)	OCS FEEDER #6 LOAD SIDE DE-ENERGIZED 127B/D6 (34D24 TPSS #34) (TPSS #34 ONLY)	OCS FEEDER #7 LOAD SIDE DE-ENERGIZED 127B/D7 (34D3T3 TPSS #34) (TPSS #34 ONLY)	SPARE
OCS FEEDER #1 LOAD SIDE DE-ENERGIZED 127B/D1 (33D1 TPSS #33) (34D1 TPSS #34)	OCS FEEDER #2 LOAD SIDE DE-ENERGIZED 127B/D2 (33D2 TPSS #33) (34D2 TPSS #34)	OCS FEEDER #3 LOAD SIDE DE-ENERGIZED 127B/D3 (33D3 TPSS #33) (34D3 TPSS #34)	OCS FEEDER #4 LOAD SIDE DE-ENERGIZED 127B/D4 (33D4 TPSS #33) (34D4 TPSS #34)	ACKNOWLEDGE	TEST	RESET	

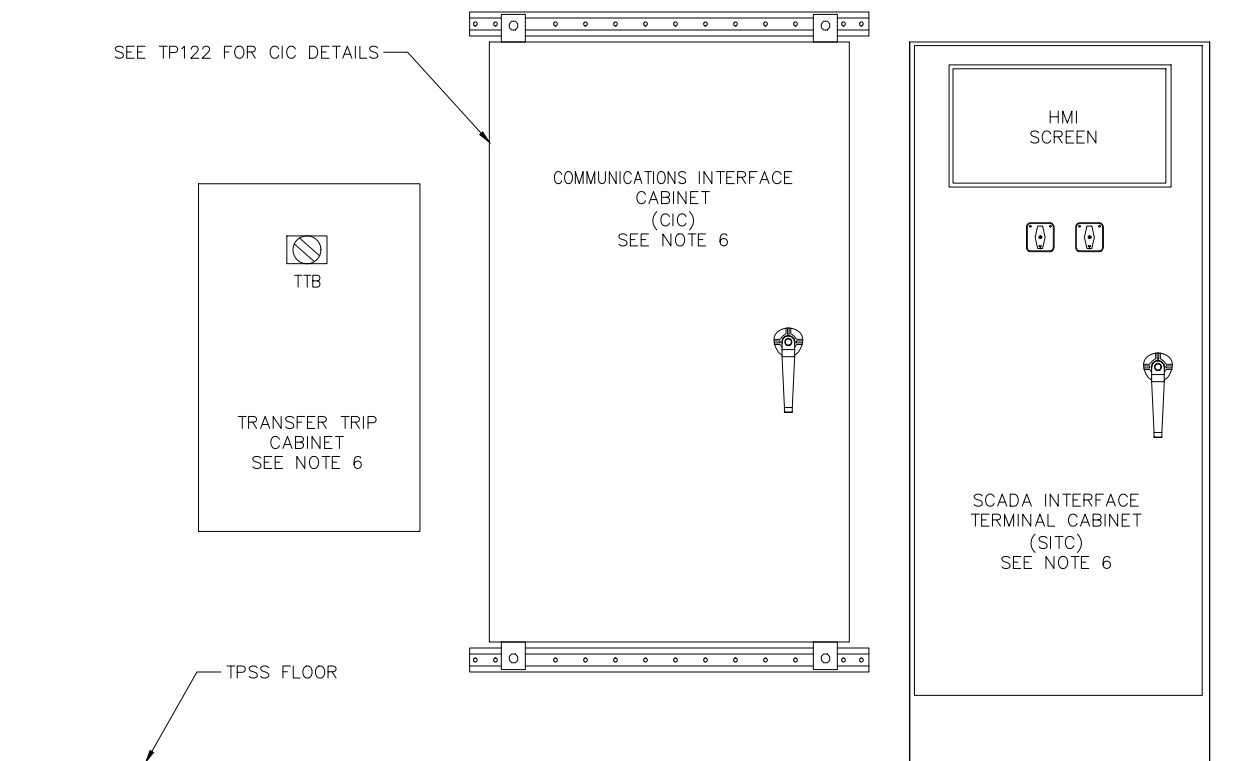
TPSS ANNUNCIATOR - HMI DISPLAY

OCS SECTION NUMBER

SUBSTATION #	127D1	127D2	127D3	127D4	127D5	127D6	127D7
28 (NOTE 5)	EXISTING	EXISTING	SB2833	NB2833	EB2833A	WB2833A	N/A
33	SB2833	NB2833	SB3334	NB3334	SPARE	SPARE	SPARE
34	SB3334	NB3334	SB3435	NB3435	NB3334A	SB3334A	SB3334B

NOTES:

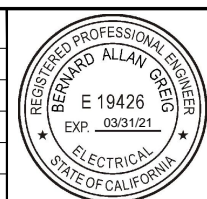
- BREAKER DESIGNATION SHALL BE AS FOLLOWS:  
33 01  
└─ BREAKER NO.  
└─ TPSS NUMBER  
  
MODIFY LEGEND AS REQUIRED FOR EACH BREAKER
- NBXXXX AND SBXXXX ARE THE SECTIONS NUMBERS AS SHOWN IN THE TABLE.
- INTRUSION DEVICES WIRED IN SERIES.
- HUMAN MACHINE INTERFACE (HMI) TOUCH SCREEN SHALL BE PROVIDED. REFER TO SPECIFICATIONS.
- COORDINATE FINAL TRANSFER TRIP CABINET LOCATION WITH THE AGENCY. LOCATE THE BYPASS DEVICE ON FACE OF THE CABINET.
- ALL CONDUITS BETWEEN CABINETS WITHIN THE TPSS BUILDING SHALL BE PROVIDED AND COORDINATED BY THE CONTRACTOR.



HMI / SCADA / COMMUNICATIONS INTERFACE

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Santa Clara Valley  
**Transportation Authority**

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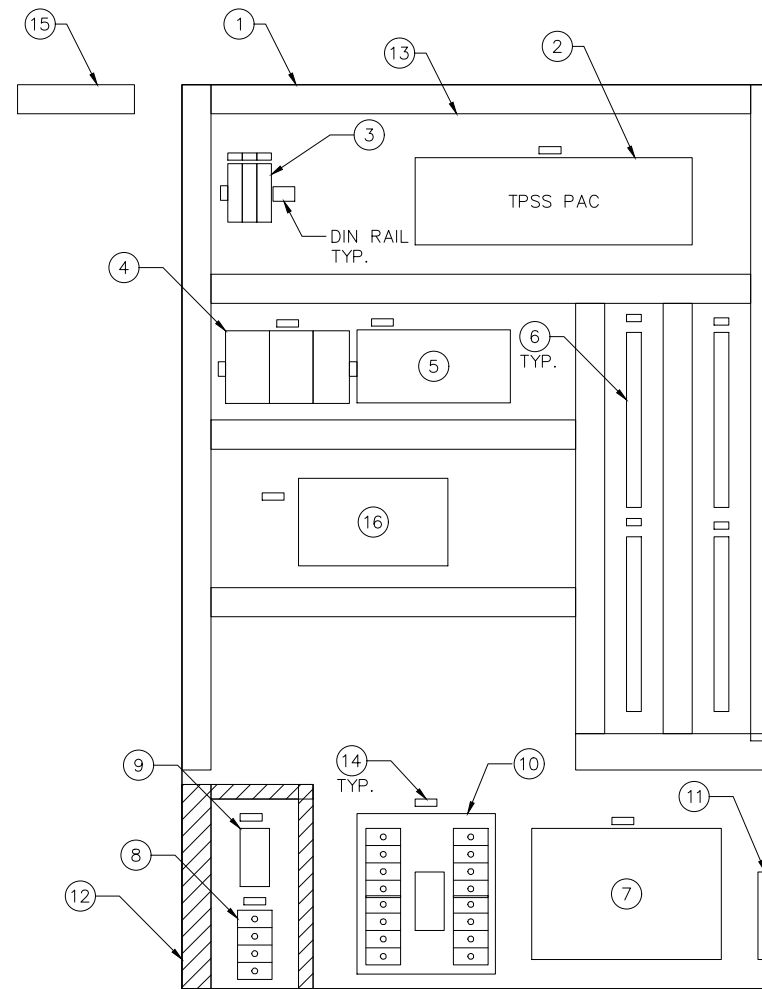
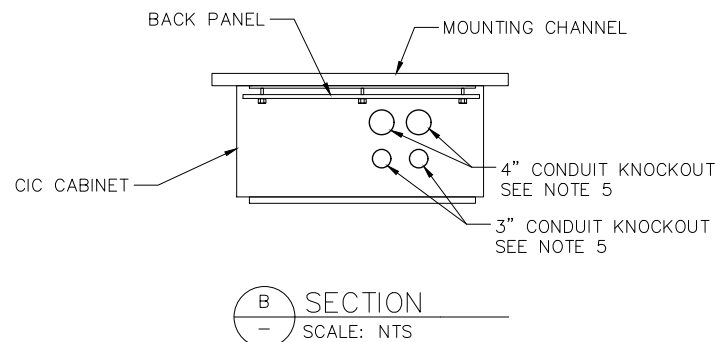
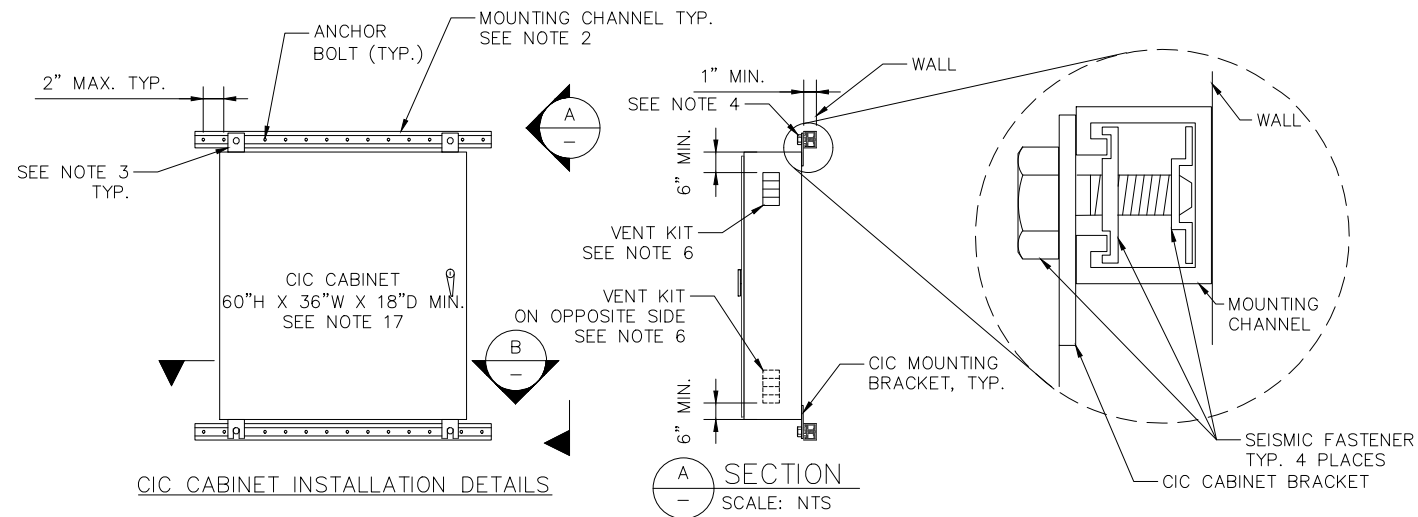
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EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
TRACTION POWER  
COMMUNICATIONS INTERFACE  
AND HMI

PCA NO.: 000  
CONTRACT NO.: C801  
FILE LOCATION: PROJECTWISE

SHEET OF	TP121
DRAWING NO.	TP121
REVISION	C



LEGEND FOR CIC BACKPANEL ELEVATION (SEE NOTE 18)

- ① BACK PANEL
- ② ALLEN BRADLEY AUTOMATION CONTROLLER OR EQUIVALENT SEE NOTE 19
- ③ DC CIRCUIT FUSES
- ④ DC TO DC CONVERTER
- ⑤ SCADA EDGE LAN SWITCH (INTERNAL) SEE NOTE 19
- ⑥ TERMINAL BLOCKS
- ⑦ FIBER OPTIC PATCH PANEL AND ACCESSORIES SEE NOTE 1
- ⑧ 120 VAC TERMINAL BLOCKS
- ⑨ 120 VAC, NEMA 15-R DUPLEX RECEPTACLES
- ⑩ MULTI-PAIR PROTECTION BLOCK
- ⑪ GROUNDING BUSBAR
- ⑫ AC WIREWAY
- ⑬ DC WIREWAY
- ⑭ PANEL COMPONENT HARDWARE
- ⑮ ENCLOSURE NAMEPLATE
- ⑯ SCADA EDGE LAN SWITCH - EXTERNAL SEE NOTE 1

COMMUNICATIONS INTERFACE CABINET (CIC) BACK PANEL ELEVATION

NOTES (CONTINUED):

- 17. THE DIMENSIONS FOR THE CABINET SHOWN ARE MINIMUMS. THE CONTRACTOR SHALL COORDINATE THE SIZE OF THE CABINET TO ACCOMMODATE THE ACTUAL EQUIPMENT PURCHASED AND INSTALLED. THE CONTRACTOR SHALL COORDINATE THE SIZE OF THE CIC CABINET WITH COMMUNICATIONS PRIOR TO SELECTING THE CABINET.
- 18. THE LAYOUT OF EQUIPMENT SHOWN IS APPROXIMATE AND DIAGRAMMATIC ONLY. THE CONTRACTOR SHALL MODIFY THE LAYOUT AS NEEDED WITH APPROVAL BY VTA, TO ACCOMMODATE EQUIPMENT PROVIDED BY COMMUNICATIONS. COORDINATE EXACT PLACEMENT WITH THE COMMUNICATIONS CONTRACTOR.
- 19. EQUIPMENT IS SUPPLIED BY THE COMMUNICATIONS CONTRACT, INSTALLED AND TESTED BY THE CONTRACTOR.

NOTES:

- 1. SEE COMMUNICATIONS PLANS FOR COMMUNICATIONS EQUIPMENT. EQUIPMENT SHALL BE FURNISHED BY THE COMMUNICATIONS VENDOR. EQUIPMENT SHALL BE INSTALLED AND TESTED BY THE TRACTION POWER SUBSTATION VENDOR. CONTRACTOR RESPONSIBLE FOR COORDINATION BETWEEN VENDORS.
- 2. PROVIDE STAINLESS STEEL 12 GAUGE MOUNTING CHANNEL. CHANNEL HEIGHT SHALL BE 1-1/2" MAXIMUM AND SHALL HAVE PRE-PUNCHED HOLES SPACED AT NO MORE THAN 2". CHANNEL MOUNTING ACCESSORIES SHALL BE PROVIDED AS REQUIRED TO SECURE THE CHANNEL TO THE WALL. CONTRACTOR SHALL PROVIDE COMPATIBLE BOLTS, SCREWS, AND OTHER TYPES OF FASTENERS TO SECURELY SUPPORT THE CIC CABINET.
- 3. CIC MOUNTING BRACKET SHALL BE PROVIDED BY THE CIC CABINET MANUFACTURER.
- 4. PROVIDE SEISMIC FASTENERS SIZED APPROPRIATELY TO SUPPORT AT LEAST TWO TIMES THE WEIGHT OF THE CABINETS. FASTENERS ASSEMBLY SHALL BE COMPATIBLE WITH THE MOUNTING CHANNEL PROVIDED. SEE ENLARGEMENT ON THIS SHEET FOR DETAILS.
- 5. THE CONTRACTOR SHALL COORDINATE ALL KNOCKOUTS AND CONDUITS REQUIRED TO INTERFACE WITH OTHER EQUIPMENT AS NEEDED. FINAL LOCATION OF THE TPSS FLOOR OPENINGS SHALL BE COORDINATED WITH THE KNOCKOUTS AS REQUIRED FOR THE CIC.
- 6. PROVIDE VENT KITS CONSISTING OF A FILTER AND A LOUVER PLATE. LOUVER PLATE SHALL BE STAINLESS STEEL.
- 7. ONE FULL SIZE BACK PANEL FOR EACH TPSS SHALL BE INSTALLED IN WALL MOUNT NEMA TYPE 12 ENCLOSURE SHALL BE PROVIDED PER SPECIFICATIONS.
- 8. COMPONENTS ARRANGEMENT SHOWN IS TYPICAL. CONTRACTOR SHALL ARRANGE THE COMPONENTS IN A LOGICAL MANNER TO PROVIDE APPROPRIATE WORK SPACES AROUND EACH COMPONENT FOR MAINTENANCE AND FIELD TERMINATIONS. ALL COMPONENTS SHALL BE INSTALLED PER THE MANUFACTURER RECOMMENDATIONS.
- 9. AC AND DC WIRES SHALL BE SEPERATED. SEPARATE WIREWAYS SHALL BE PROVIDED FOR AC AND DC CIRCUITS.
- 10. PROVIDE ADHESIVE LAMINATED ENGRAVED NAMEPLATES WITH BLACK BACKGROUND AND WHITE LETTERING. NAMEPLATE SHALL BE PLACED ON OR ADJACENT TO THE COMPONENT. NAMEPLATES SHALL NOT BE HIDDEN OR COVERED BY WIRES.
- 11. ENCLOSURE NAMEPLATE SHALL BE AN ADHESIVE LAMINATED ENGRAVED NAMEPLATE WITH A BLACK BACKGROUND AND WHITE LETTERING. IT SHALL BE INSTALLED ON THE FRONT DOOR OF THE ENCLOSURE, CENTERED BETWEEN EDGES, AND APPROXIMATELY 6" FROM THE TOP OF THE DOOR.
- 12. THE CONTRACTOR SHALL SUBMIT A NAMEPLATE SCHEDULE FOR EACH TPSS CABINET.
- 13. FBB AND PUNCH BLOCK MUST BE INSTALLED AT THE LOWER END OF THE PANEL FOR TERMINATIONS.
- 14. REFER TO SPECIFICATIONS FOR ANY ADDITIONAL REQUIREMENTS.
- 15. SEE TP201 FOR TPSS #33 AND TP202 FOR TPSS #34 CIC CABINET LOCATIONS.
- 16. ALL COMPONENTS SHALL BE GROUNDED THROUGH THE GROUND BUS BAR WITH #12 AWG MINIMUM GROUNDING CONDUCTORS.

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**VTA** Santa Clara Valley  
Transportation  
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EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
TRACTION POWER  
COMMUNICATIONS INTERFACE CABINET  
(CIC)

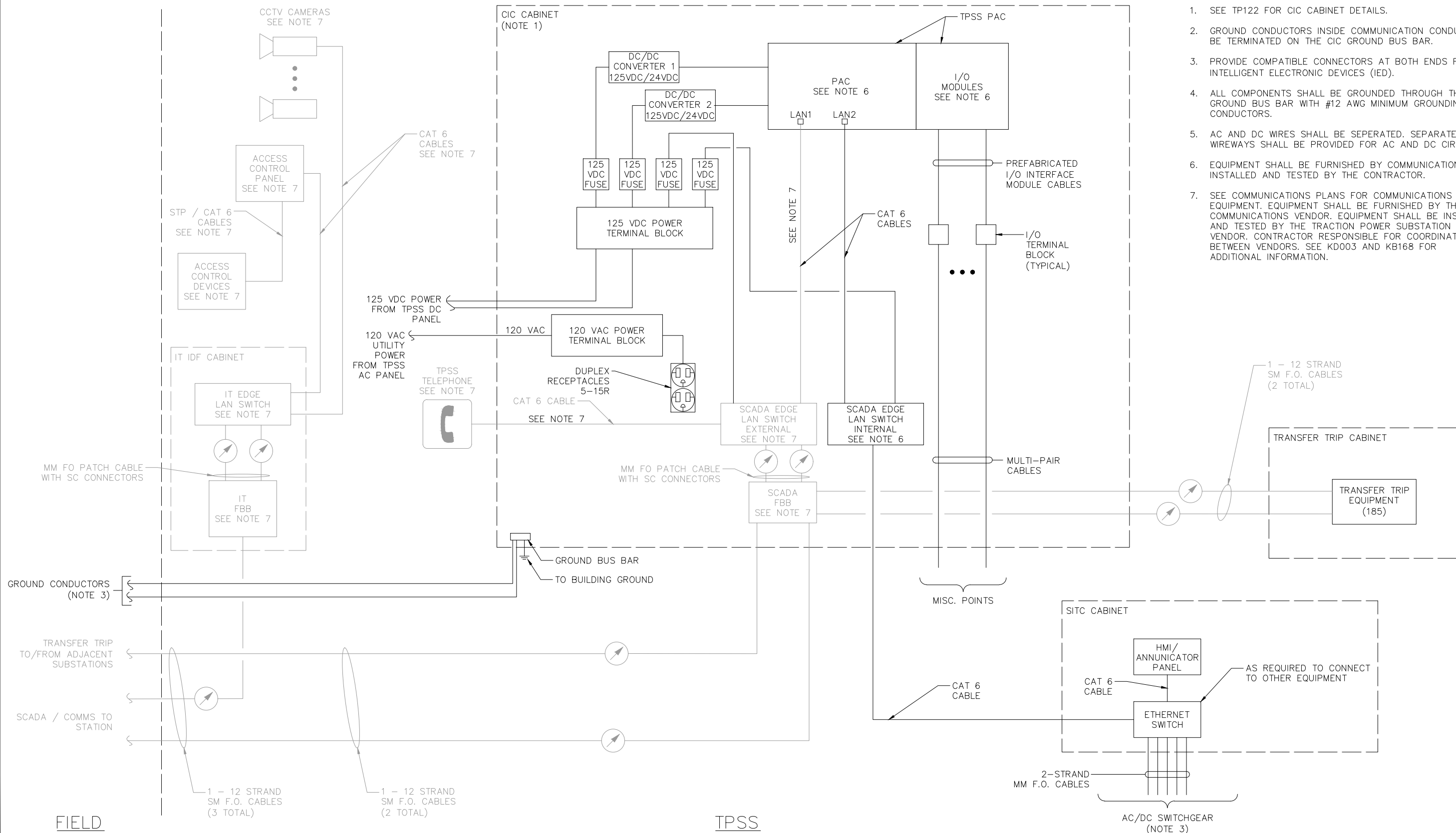
PCA NO.: 000  
CONTRACT NO.: C801  
FILE LOCATION: PROJECTWISE

SHEET OF: TP122  
REVISION: A



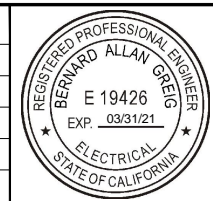
**NOTES:**

1. SEE TP122 FOR CIC CABINET DETAILS.
2. GROUND CONDUCTORS INSIDE COMMUNICATION CONDUITS TO BE TERMINATED ON THE CIC GROUND BUS BAR.
3. PROVIDE COMPATIBLE CONNECTORS AT BOTH ENDS FOR ALL INTELLIGENT ELECTRONIC DEVICES (IED).
4. ALL COMPONENTS SHALL BE GROUNDED THROUGH THE GROUND BUS BAR WITH #12 AWG MINIMUM GROUNDING CONDUCTORS.
5. AC AND DC WIRES SHALL BE SEPERATED. SEPARATE WIREWAYS SHALL BE PROVIDED FOR AC AND DC CIRCUITS.
6. EQUIPMENT SHALL BE FURNISHED BY COMMUNICATIONS, INSTALLED AND TESTED BY THE CONTRACTOR.
7. SEE COMMUNICATIONS PLANS FOR COMMUNICATIONS EQUIPMENT. EQUIPMENT SHALL BE FURNISHED BY THE COMMUNICATIONS VENDOR. EQUIPMENT SHALL BE INSTALLED AND TESTED BY THE TRACTION POWER SUBSTATION VENDOR. CONTRACTOR RESPONSIBLE FOR COORDINATION BETWEEN VENDORS. SEE KD003 AND KB168 FOR ADDITIONAL INFORMATION.



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**Santa Clara Valley Transportation Authority**

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**EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
TRACTION POWER  
COMMUNICATIONS  
SCADA - BLOCK DIAGRAM**

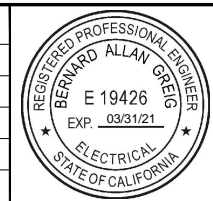
PCA NO.: 000  
CONTRACT NO.: C801  
FILE LOCATION: PROJECTWISE

SHEET OF: TP123  
DRAWING NO.: TP123  
REVISION: A

SHEET TO BE DEVELOPED AT NEXT SUBMITTAL LEVEL

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EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
TRACTION POWER  
TYPICAL SCADA POINTS LIST

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

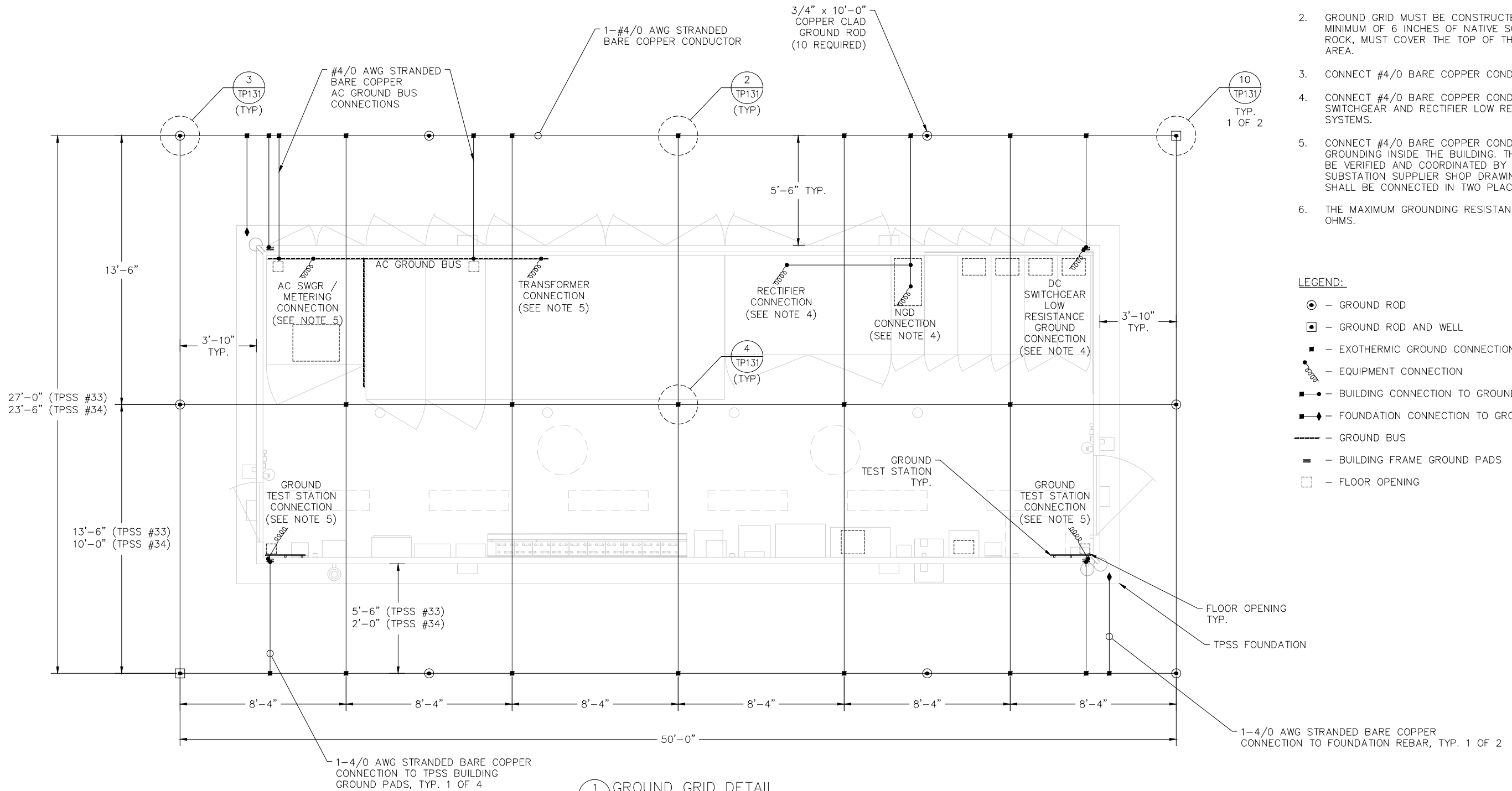
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REVISION	A

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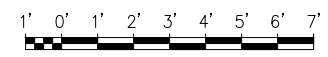
- GROUND GRID CONDUCTORS SHALL BE BURIED A MINIMUM OF 2'-6" BELOW GRADE.
- GROUND GRID MUST BE CONSTRUCTED ON NATIVE SOIL ONLY. A MINIMUM OF 6 INCHES OF NATIVE SOIL, FREE FROM DEBRIS AND ROCK, MUST COVER THE TOP OF THE ENTIRE GROUND GRID AREA.
- CONNECT #4/0 BARE COPPER CONDUCTOR TO THE BUILDING.
- CONNECT #4/0 BARE COPPER CONDUCTORS TO THE DC SWITCHGEAR AND RECTIFIER LOW RESISTANCE GROUNDING SYSTEMS.
- CONNECT #4/0 BARE COPPER CONDUCTOR TO SUBSTATION GROUNDING INSIDE THE BUILDING. THE EXACT LOCATION SHALL BE VERIFIED AND COORDINATED BY CONTRACTOR WITH THE SUBSTATION SUPPLIER SHOP DRAWINGS. AC GROUND BUS SHALL BE CONNECTED IN TWO PLACES.
- THE MAXIMUM GROUNDING RESISTANCE SHALL NOT EXCEED 5 OHMS.

LEGEND:

- ⊙ - GROUND ROD
- ⊠ - GROUND ROD AND WELL
- - EXOTHERMIC GROUND CONNECTION
- ⚡ - EQUIPMENT CONNECTION
- - BUILDING CONNECTION TO GROUND GRID
- ◆— - FOUNDATION CONNECTION TO GROUND GRID
- - GROUND BUS
- ≡ - BUILDING FRAME GROUND PADS
- - FLOOR OPENING



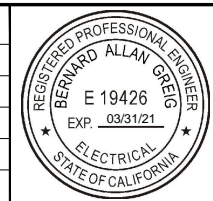
1 GROUND GRID DETAIL  
SCALE: 3/8" = 1'-0"



GRAPHIC SCALE

J:\ward - 3.57pm - C:\CADD\lib\ward\west\mises\431\801TP130.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



**HNTB** HNTB Corporation  
 Engineers Architects Planners  
 1732 North First Street, Suite 400  
 San Jose, CA 95112  
 Tel (408) 451-7300  
 Fax (408) 451-6942

DESIGNED: J. WARD  
 CHECKED: P. LLOYD  
 DRAWN: J. WARD  
 CADD FILE NAME: 801TP130.dwg

**Santa Clara Valley**  
**Transportation**  
**Authority**

**BKF** 100+ YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 06/22/20  
 SUBMITTAL DATE: 06/29/20  
 SCALE: 3/8" = 1'-0"  
 BOARD APPROVAL DATE:

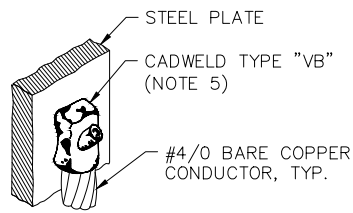
EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 TRACTION POWER  
 SUBSTATION GROUND GRID  
 DETAILS

SHEET OF TP130  
 DRAWING NO. TP130  
 REVISION B

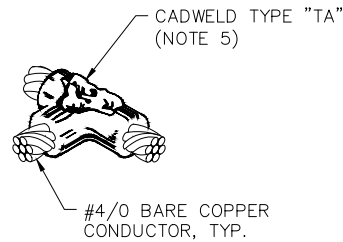
PCA NO. 000  
 CONTRACT NO. C801  
 FILE LOCATION PROJECTWISE

NOTES:

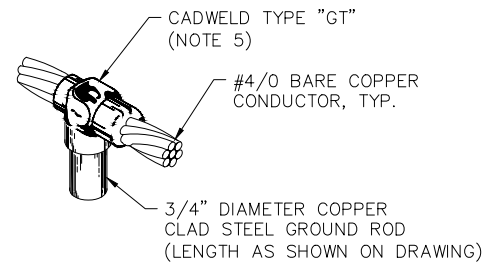
- GROUND CONDUCTOR "TEE" CONNECTIONS SHALL BE USED AT ALL GROUND GRID INTERSECTIONS AROUND THE PERIMETER OF THE GROUND GRID.
- GROUND CONDUCTOR "CROSS" CONNECTIONS SHALL BE USED AT ALL GROUND GRID INTERSECTIONS WITHIN THE PERIMETER OF THE GROUND GRID.
- CADWELD TYPE CONNECTIONS LISTED FOR REFERENCE ONLY AND DOES NOT PRECLUDE ANY OTHER MANUFACTURER.
- DRILL AND TAP FOR 2-HOLE NEMA LUGS.
- COMPRESSION TYPE GROUND CONNECTIONS ARE ACCEPTABLE WHERE NOT IN CONTRACT WITH GROUND/EARTH. BURNDY OR APPROVED EQUAL.
- PRE-DRILL COPPER BUS FOR NEMA 2 HOLE LUGS.



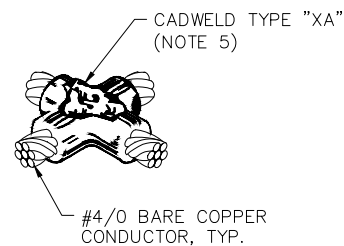
1 STEEL PLATE CONNECTION  
SCALE: NTS



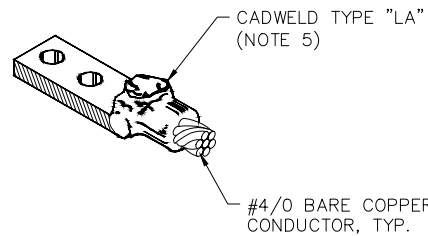
2 GROUND CONDUCTOR TEE CONNECTION  
SCALE: NTS



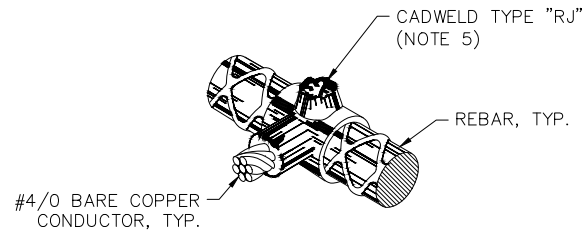
3 GROUND ROD CONNECTION  
SCALE: NTS



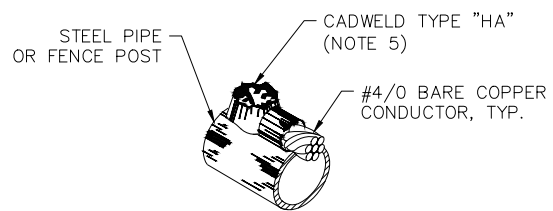
4 GROUND CONDUCTOR CROSS CONNECTION  
SCALE: NTS



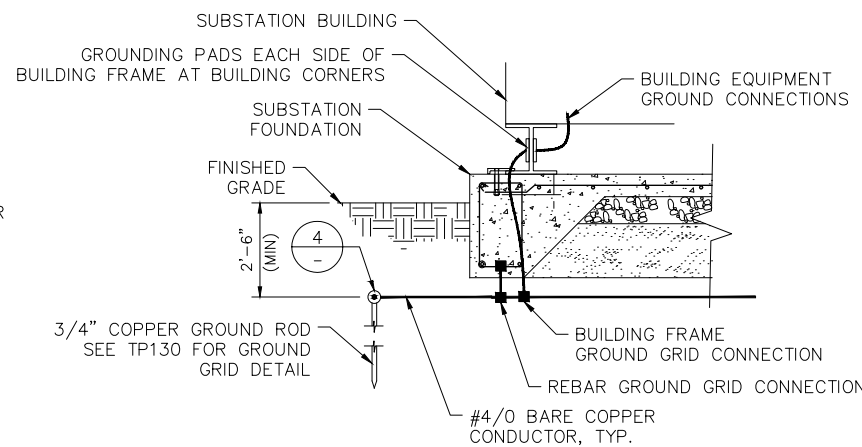
5 GROUND CONDUCTOR TO 2-HOLE TERMINAL CONNECTION  
SCALE: NTS



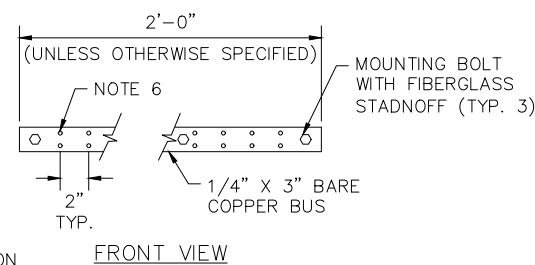
6 GROUND CONDUCTOR TO REBAR CONNECTION  
SCALE: NTS



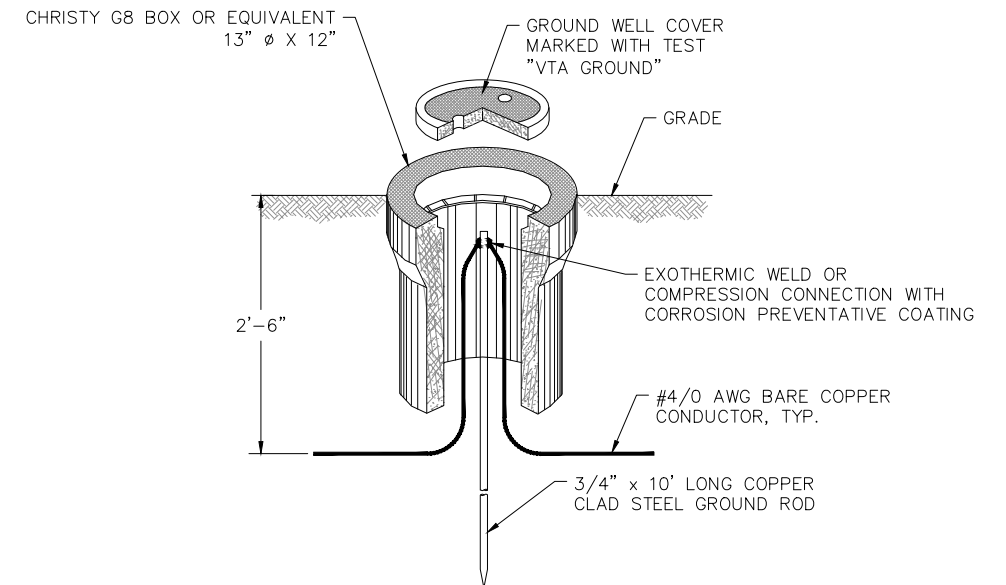
7 GROUND CONDUCTOR TO STEEL PIPE CONNECTION  
SCALE: NTS



8 GROUNDING MAT DETAIL  
SCALE: NTS



9 TYPICAL GROUND BUS AND GROUND TEST STATION  
SCALE: NTS



10 GROUND WELL DETAIL  
SCALE: NTS

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NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



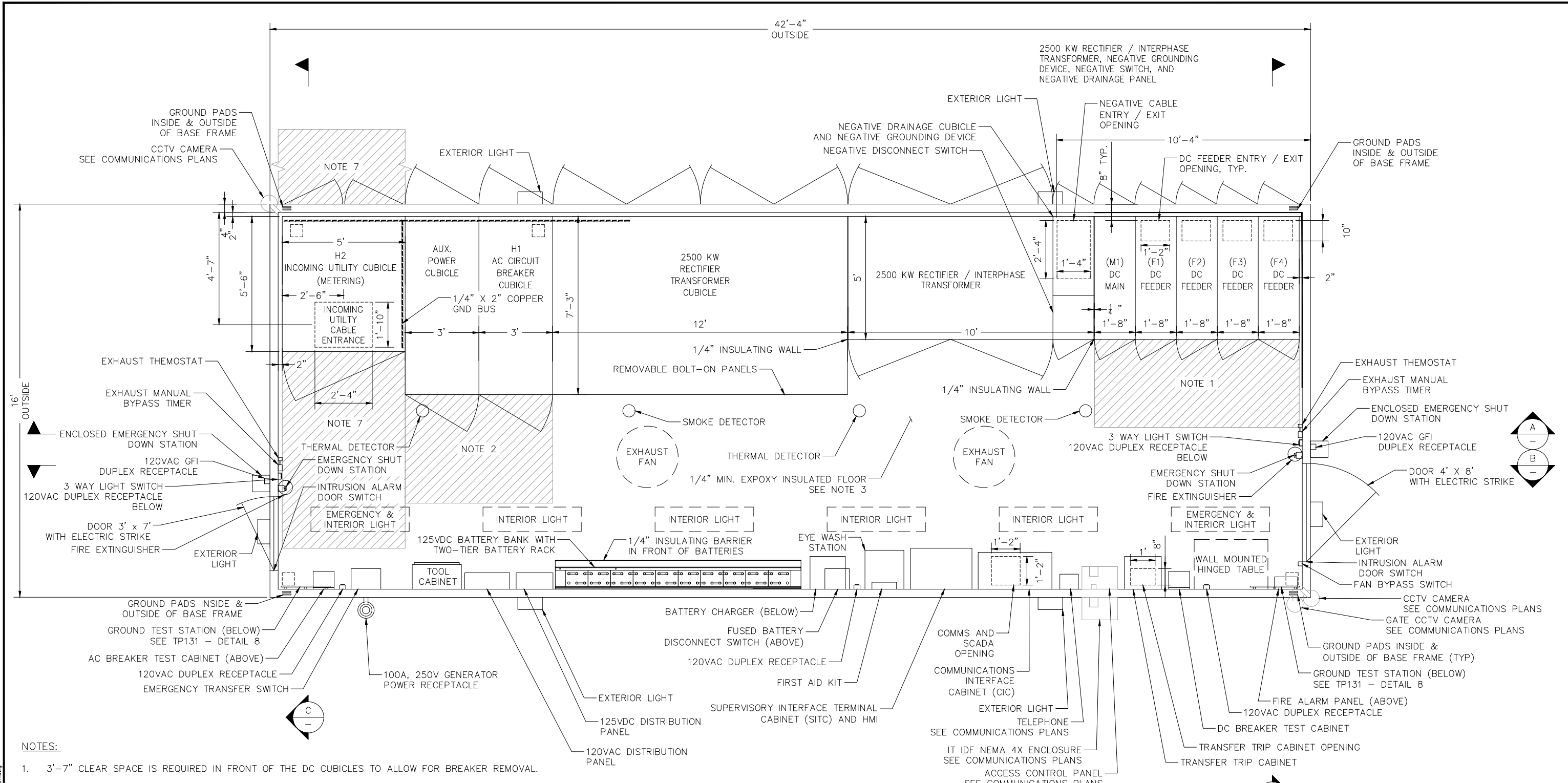
SUBMITTED	
<b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
DESIGNED	CHECKED
J. WARD	P. LLOYD
DRAWN	CADD FILE NAME
J. WARD	801TP131.dwg



APPROVED	
CADD FILE DATE	SCALE
06/22/20	NTS
SUBMITTAL DATE	BOARD APPROVAL DATE
06/29/20	

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT TRACTION POWER SUBSTATION GROUNDING DETAILS		
PCA NO.	CONTRACT NO.	FILE LOCATION
000	C801	PROJECTWISE

SHEET	OF
DRAWING NO.	TP131
REVISION	B

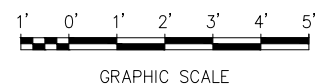


**2500 KW TRACTION POWER SUBSTATION**  
**TPSS #33**

- NOTES:**
- 3'-7" CLEAR SPACE IS REQUIRED IN FRONT OF THE DC CUBICLES TO ALLOW FOR BREAKER REMOVAL.
  - 4'-5" CLEAR SPACE IS REQUIRED IN FRONT OF THE AC CUBICLES TO ALLOW FOR BREAKER REMOVAL.
  - 1/4" (MIN.) EPOXY FLOOR INSULATION TO BE PROVIDED FOR THE ENTIRE SUBSTATION.
  - ALL DOORS TO BE EQUIPPED WITH PAD LOCK PROVISIONS AND DOOR STOPS.
  - EXTERIOR DOORS SHALL HAVE STAINLESS STEEL HINGES. INTERIOR DOORS SHALL HAVE HRLC STEEL HINGES.
  - ALL UNITS OF SWITCHGEAR CAN BE REMOVED BY WAY OF REMOVABLE WALL PANELS AND POSTS.
  - 8' CLEAR SPACE IS REQUIRED IN FRONT AND BACK OF THE UTILITY METERING CUBICLE (INSIDE AND OUTSIDE).
  - THIS DRAWING IS APPLICABLE TO TPSS #33 ONLY. SEE TP300 FOR SITE LAYOUT.

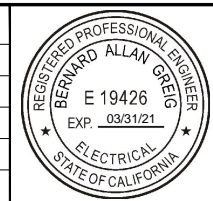
**LEGEND:**

- FLOOR CUTOUTS TO BE COORDINATED BY THE CONTRACTOR WITH THE EQUIPMENT SUPPLIER AND GROUND CONNECTION REQUIREMENTS.
- EQUIPMENT CLEARANCE



Jun 22, 2020 - 3:58pm C:\CAD\lib\hntb\shared\west\mises\31\_801TP201.dwg  
 J. Ward

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



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 CHECKED: P. LLOYD  
 DRAWN: J. WARD  
 CADD FILE NAME: 801TP201.dwg

**Santa Clara Valley Transportation Authority**

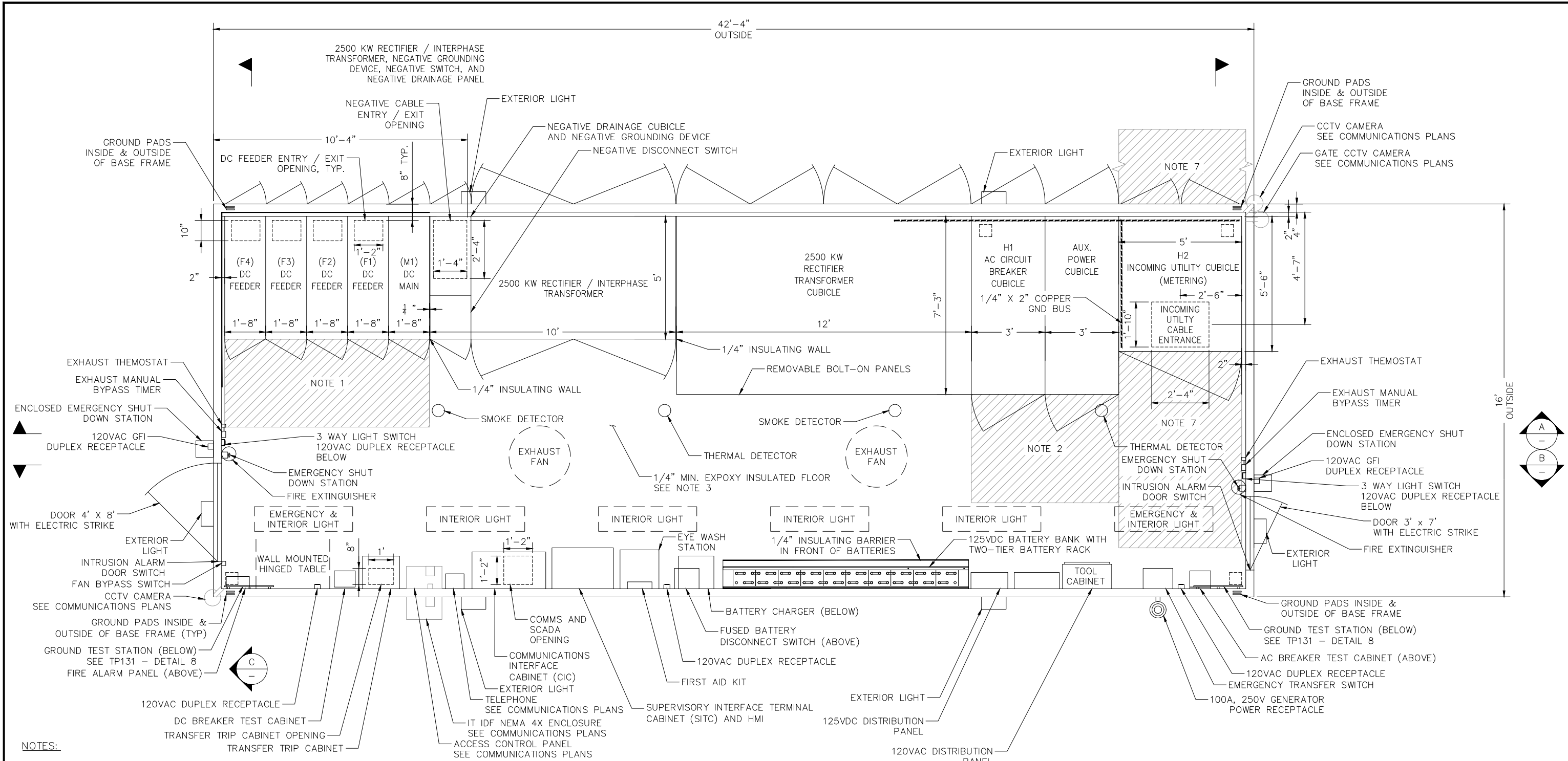
**BKF** 100+ YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 06/22/20  
 SUBMITTAL DATE: 06/29/20  
 SCALE: 1/2" = 1'-0"  
 BOARD APPROVAL DATE:

**EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 TRACTION POWER  
 TPSS #33 EQUIPMENT ARRANGEMENT  
 PLAN VIEW**

PCA NO.: 000  
 CONTRACT NO.: C801  
 FILE LOCATION: PROJECTWISE

SHEET OF: TP201  
 REVISION: C

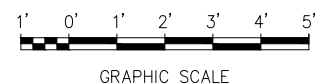


**2500 KW TRACTION POWER SUBSTATION**  
**TPSS #34**

- NOTES:**
- 3'-7" CLEAR SPACE IS REQUIRED IN FRONT OF THE DC CUBICLES TO ALLOW FOR BREAKER REMOVAL.
  - 4'-5" CLEAR SPACE IS REQUIRED IN FRONT OF THE AC CUBICLES TO ALLOW FOR BREAKER REMOVAL.
  - 1/4" (MIN.) EPOXY FLOOR INSULATION TO BE PROVIDED FOR THE ENTIRE SUBSTATION.
  - ALL DOORS TO BE EQUIPPED WITH PAD LOCK PROVISIONS AND DOOR STOPS.
  - EXTERIOR DOORS SHALL HAVE STAINLESS STEEL HINGES. INTERIOR DOORS SHALL HAVE HRLC STEEL HINGES.
  - ALL UNITS OF SWITCHGEAR CAN BE REMOVED BY WAY OF REMOVABLE WALL PANELS AND POSTS.
  - 8' CLEAR SPACE IS REQUIRED IN FRONT AND BACK OF THE UTILITY METERING CUBICLE (INSIDE AND OUTSIDE).
  - THIS DRAWING IS APPLICABLE TO TPSS #34 ONLY. SEE TP301 FOR SITE LAYOUT.

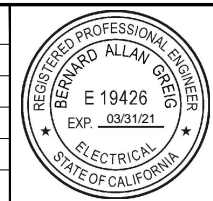
**LEGEND:**

- FLOOR CUTOUTS TO BE COORDINATED BY THE CONTRACTOR WITH THE EQUIPMENT SUPPLIER AND GROUND CONNECTION REQUIREMENTS.
- EQUIPMENT CLEARANCE



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NO.	DATE	REVISIONS
A	06/20	95% SUBMITTAL SET



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 CHECKED: P. LLOYD  
 DRAWN: J. WARD  
 CADD FILE NAME: 801TP202.dwg

**Santa Clara Valley Transportation Authority**

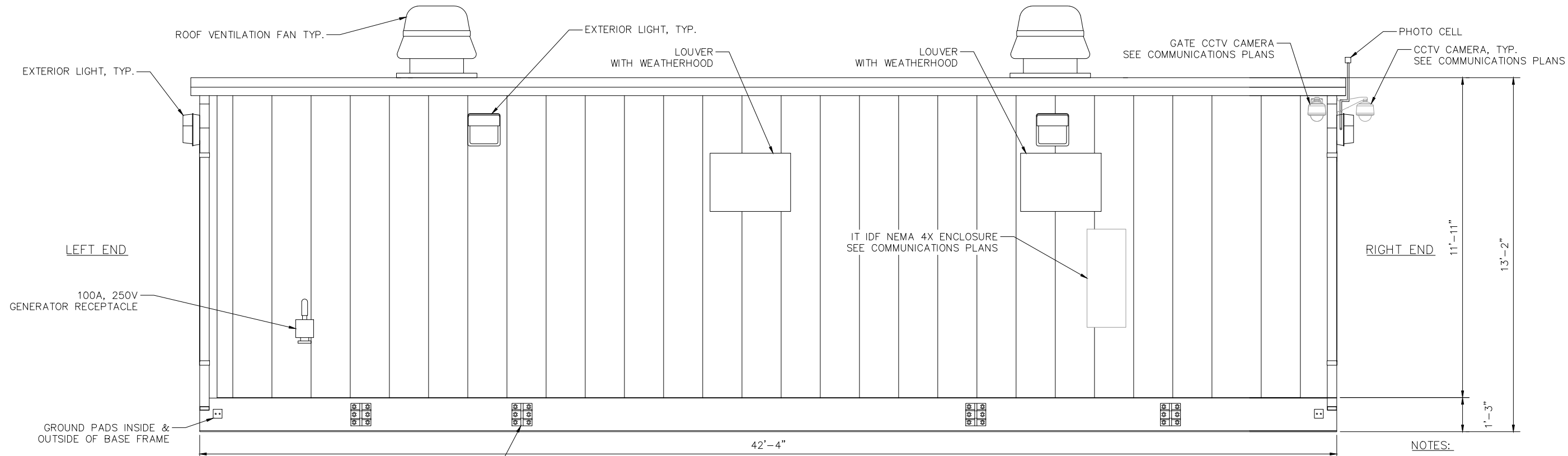
**BKF** 100+ YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 06/22/20  
 SUBMITTAL DATE: 06/29/20  
 SCALE: 1/2" = 1'-0"  
 BOARD APPROVAL DATE:

**EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 TRACTION POWER  
 TPSS #34 EQUIPMENT ARRANGEMENT  
 PLAN VIEW**

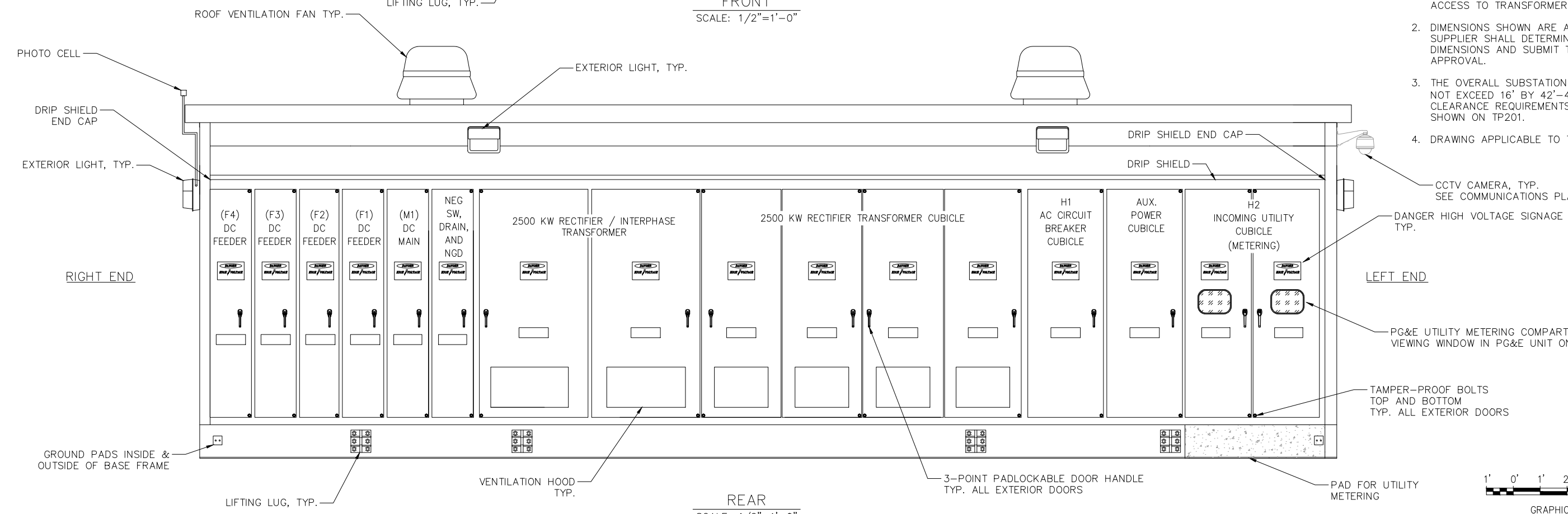
PCA NO: 000  
 CONTRACT NO: C801  
 FILE LOCATION: PROJECTWISE

SHEET OF: TP202  
 DRAWING NO: TP202  
 REVISION: A

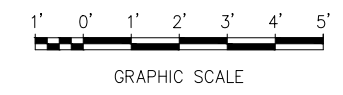


FRONT  
SCALE: 1/2"=1'-0"

- NOTES:
1. REMOVEABLE PANELS REQUIRED FOR ACCESS TO TRANSFORMER AND RECTIFIER.
  2. DIMENSIONS SHOWN ARE APPROXIMATE. SUPPLIER SHALL DETERMINE FINAL DIMENSIONS AND SUBMIT TO VTA FOR APPROVAL.
  3. THE OVERALL SUBSTATION EXTERIOR SHALL NOT EXCEED 16' BY 42'-4". INTERIOR CLEARANCE REQUIREMENTS SHALL BE AS SHOWN ON TP201.
  4. DRAWING APPLICABLE TO TPSS #33 ONLY.

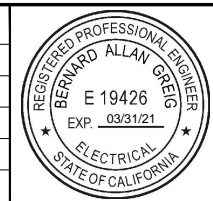


REAR  
SCALE: 1/2"=1'-0"



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NO.	DATE	REVISIONS
A	06/20	95% SUBMITTAL SET



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DESIGNED	CHECKED
J. WARD	P. LLOYD
DRAWN	CADD FILE NAME
J. WARD	801TP210.dwg



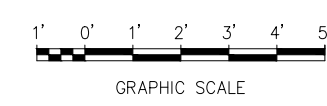
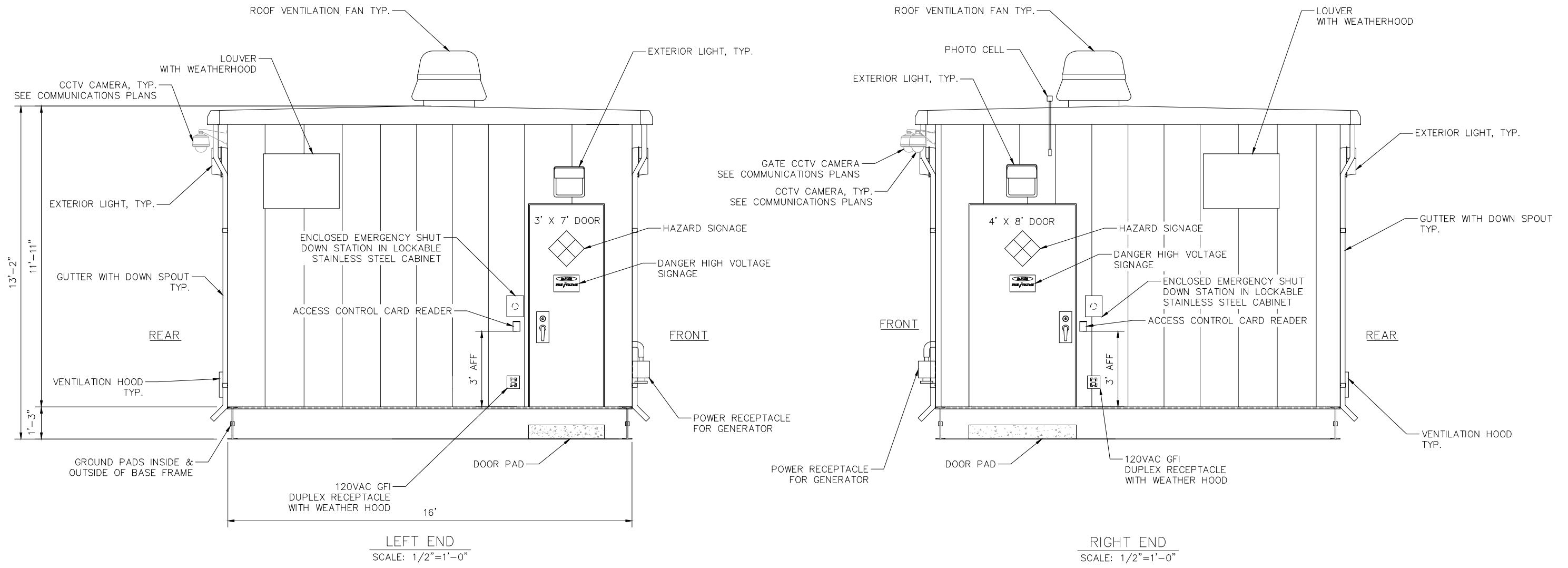
APPROVED	
<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	SCALE
06/22/20	1/2" = 1'-0"
SUBMITTAL DATE	BOARD APPROVAL DATE
06/29/20	

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT TRACTION POWER TPSS #33 EXTERIOR ELEVATION VIEWS SHEET 1 OF 2		
PC# NO.	CONTRACT NO.	FILE LOCATION
000	C801	PROJECTWISE

SHEET	OF
DRAWING NO.	TP210
REVISION	A

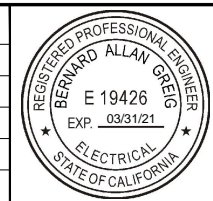
**NOTES:**

1. REMOVEABLE PANELS REQUIRED FOR ACCESS TO TRANSFORMER AND RECTIFIER.
2. DIMENSIONS SHOWN ARE APPROXIMATE. SUPPLIER SHALL DETERMINE FINAL DIMENSIONS AND SUBMIT TO VTA FOR APPROVAL.
3. THE OVERALL SUBSTATION EXTERIOR SHALL NOT EXCEED 16' BY 42'-4". INTERIOR CLEARANCE REQUIREMENTS SHALL BE AS SHOWN ON TP201.
4. DRAWING APPLICABLE TO TPSS #33 ONLY.



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NO.	DATE	REVISIONS
A	06/20	95% SUBMITTAL SET



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DESIGNED	CHECKED
J. WARD	P. LLOYD
DRAWN	CADD FILE NAME
J. WARD	801TP211.dwg

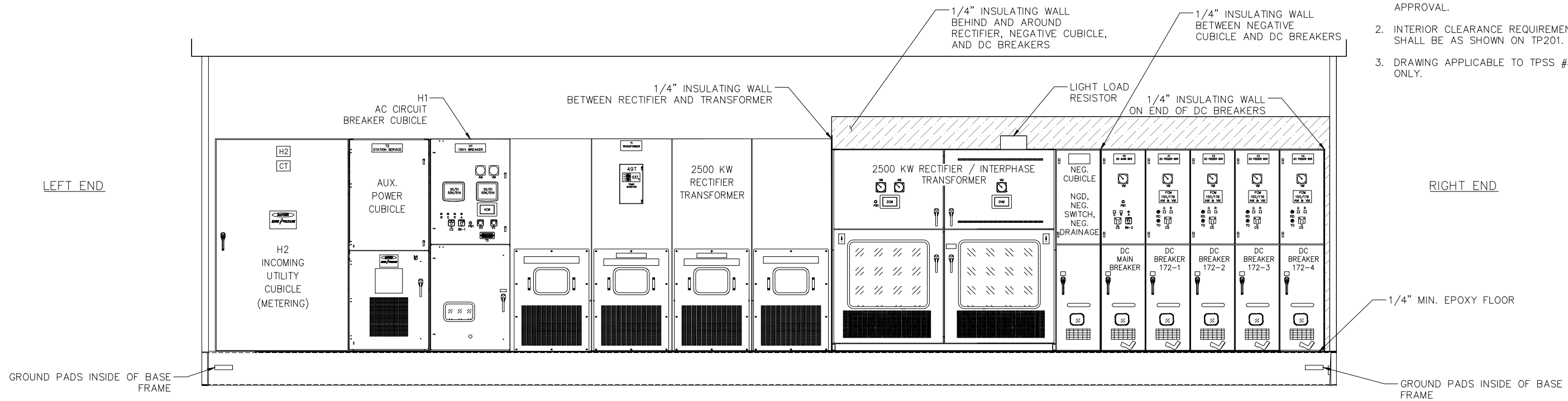


APPROVED	
<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	SCALE
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SUBMITTAL DATE	BOARD APPROVAL DATE
06/29/20	

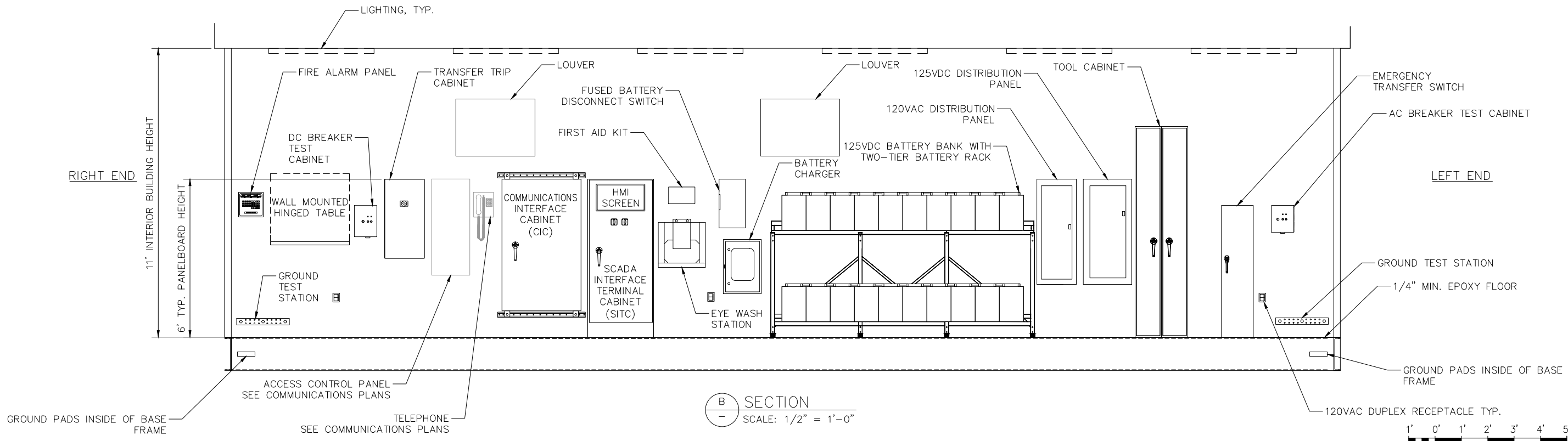
EASTRIDGE TO BART REGIONAL CONNECTOR			SHEET
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT			OF
TRACTION POWER			DRAWING NO.
TPSS #33 EXTERIOR ELEVATION VIEWS			TP211
SHEET 2 OF 2			REVISION
			A
PCA NO.	CONTRACT NO.	FILE LOCATION	
000	C801	PROJECTWISE	



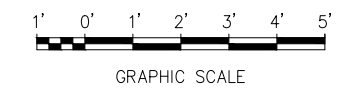
- NOTES:
1. DIMENSIONS SHOWN ARE APPROXIMATE. SUPPLIER SHALL DETERMINE FINAL DIMENSIONS AND SUBMIT TO VTA FOR APPROVAL.
  2. INTERIOR CLEARANCE REQUIREMENTS SHALL BE AS SHOWN ON TP201.
  3. DRAWING APPLICABLE TO TPSS #33 ONLY.



(A) SECTION  
SCALE: 1/2" = 1'-0"



(B) SECTION  
SCALE: 1/2" = 1'-0"



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NO.	DATE	REVISIONS
A	06/20	95% SUBMITTAL SET

REGISTERED PROFESSIONAL ENGINEER  
**BENJAMIN ALLAN GREG**  
 E 19426  
 EXP. 03/31/21  
 ELECTRICAL  
 STATE OF CALIFORNIA

SUBMITTED  
**HNTB** HNTB Corporation  
 Engineers Architects Planners  
 1732 North First Street, Suite 400  
 San Jose, CA 95112  
 Tel (408) 451-7300  
 Fax (408) 451-6942

DESIGNED: J. WARD  
 CHECKED: P. LLOYD  
 DRAWN: J. WARD  
 CADD FILE NAME: 801TP212.dwg

**Santa Clara Valley Transportation Authority**

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**BKF** 100+ YEARS  
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CADD FILE DATE: 06/22/20  
 SUBMITTAL DATE: 06/29/20  
 SCALE: 1/2" = 1'-0"  
 BOARD APPROVAL DATE:

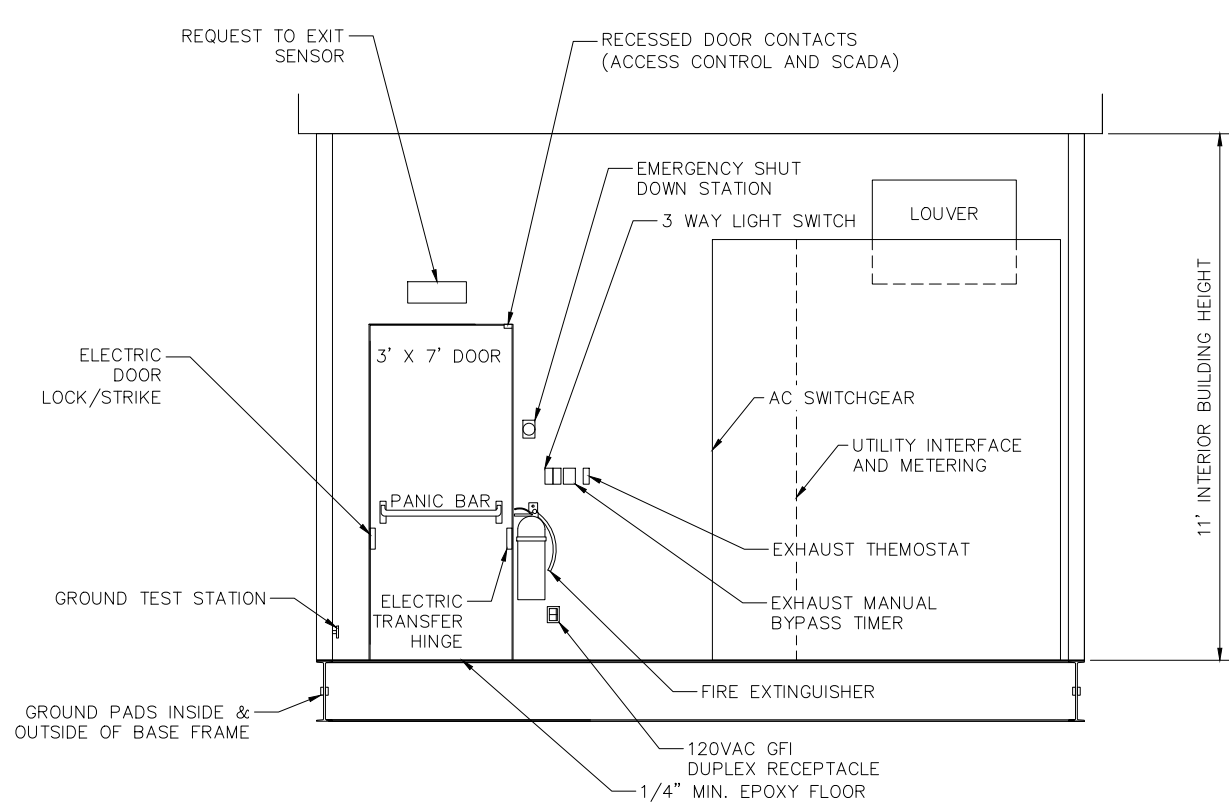
EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 TRACTION POWER  
 TPSS #33 INTERIOR SECTION VIEWS  
 SHEET 1 OF 2

PLA. NO.: 000  
 CONTRACT NO.: C801  
 FILE LOCATION: PROJECTWISE

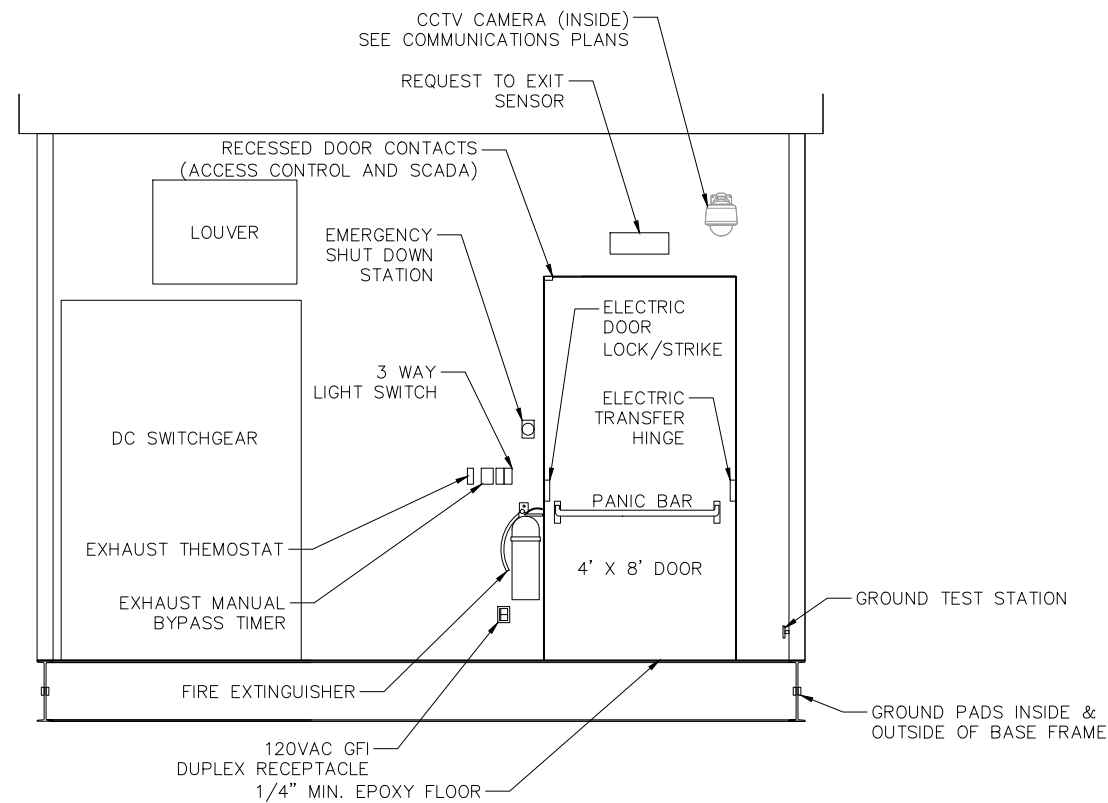
SHEET OF: TP212  
 DRAWING NO.: TP212  
 REVISION: A

**NOTES:**

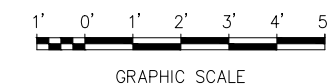
1. DIMENSIONS SHOWN ARE APPROXIMATE. SUPPLIER SHALL DETERMINE FINAL DIMENSIONS AND SUBMIT TO VTA FOR APPROVAL.
2. INTERIOR CLEARANCE REQUIREMENTS SHALL BE AS SHOWN ON TP201.
3. DRAWING APPLICABLE TO TPSS #33 ONLY.



**C SECTION**  
SCALE: 1/2" = 1'-0"

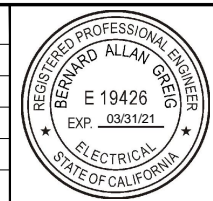


**D SECTION**  
SCALE: 1/2" = 1'-0"



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NO.	DATE	REVISIONS
A	06/20	95% SUBMITTAL SET



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Fax (408) 451-6942

DESIGNED: J. WARD  
CHECKED: P. LLOYD  
DRAWN: J. WARD  
CADD FILE NAME: 801TP213.dwg



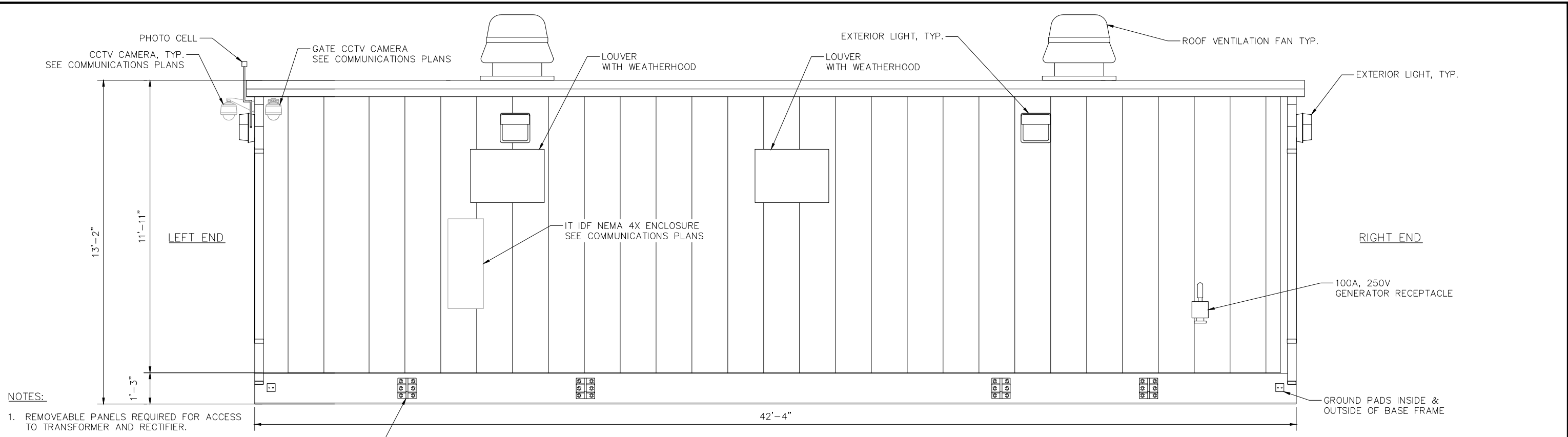
**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 06/22/20  
SUBMITTAL DATE: 06/29/20  
SCALE: 1/2" = 1'-0"  
BOARD APPROVAL DATE:

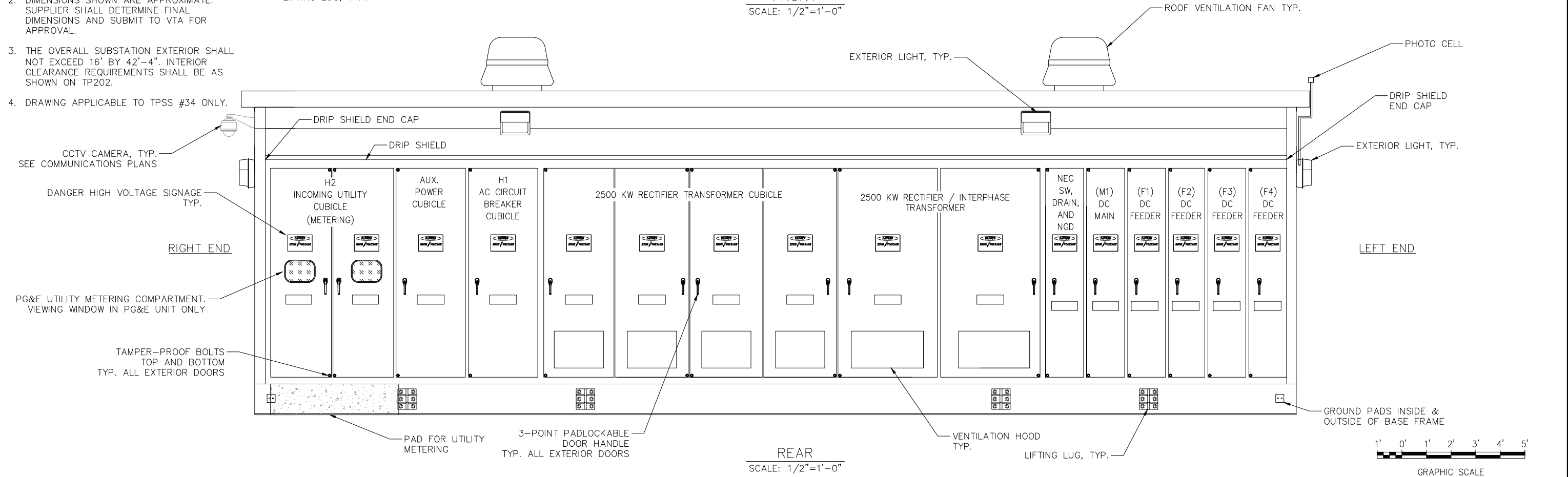
EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
TRACTION POWER  
TPSS #33 INTERIOR SECTION VIEWS  
SHEET 2 OF 2

PCA NO.: 000  
CONTRACT NO.: C801  
FILE LOCATION: PROJECTWISE

SHEET OF: TP213  
REVISION: A



- NOTES:
1. REMOVEABLE PANELS REQUIRED FOR ACCESS TO TRANSFORMER AND RECTIFIER.
  2. DIMENSIONS SHOWN ARE APPROXIMATE. SUPPLIER SHALL DETERMINE FINAL DIMENSIONS AND SUBMIT TO VTA FOR APPROVAL.
  3. THE OVERALL SUBSTATION EXTERIOR SHALL NOT EXCEED 16' BY 42'-4". INTERIOR CLEARANCE REQUIREMENTS SHALL BE AS SHOWN ON TP202.
  4. DRAWING APPLICABLE TO TPSS #34 ONLY.



NO.	DATE	REVISIONS
A	06/20	95% SUBMITTAL SET



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DESIGNED: J. WARD  
 CHECKED: P. LLOYD  
 DRAWN: J. WARD  
 CADD FILE NAME: 801TP214.dwg

**Santa Clara Valley Transportation Authority**

**BKF** 100+ YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 06/22/20  
 SUBMITTAL DATE: 06/29/20  
 SCALE: 1/2" = 1'-0"  
 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 TRACTION POWER  
 TPSS #34 EXTERIOR ELEVATION VIEWS  
 SHEET 1 OF 2

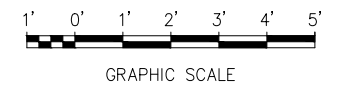
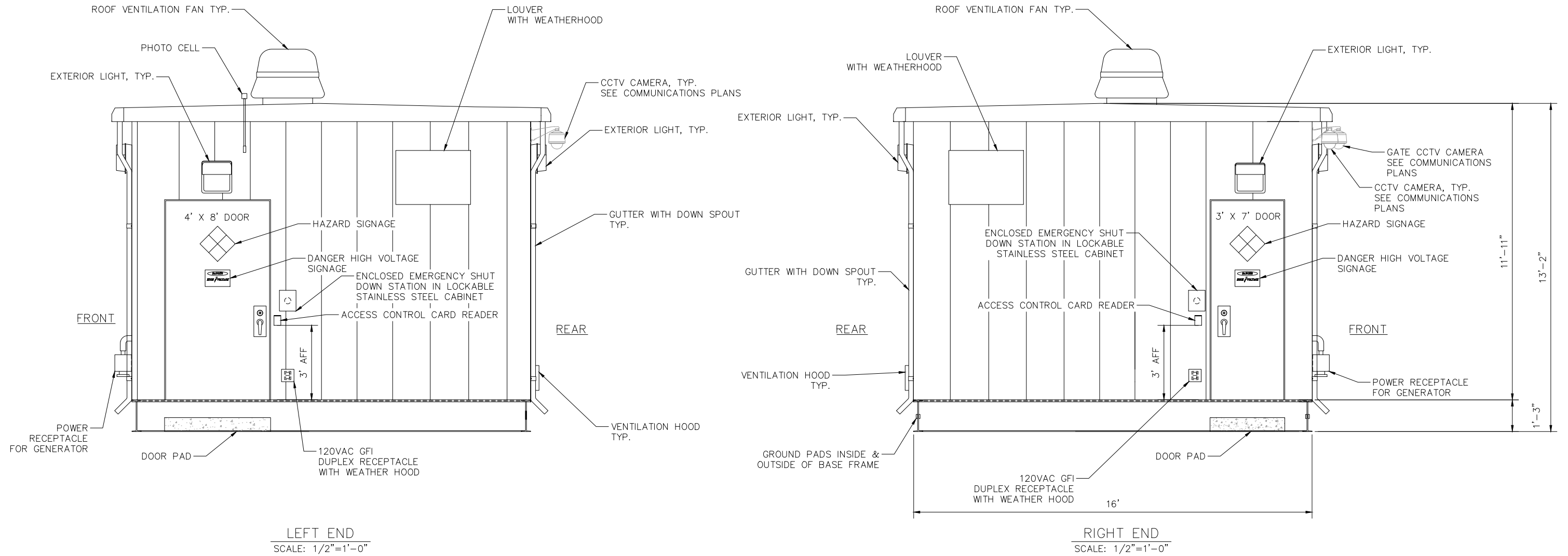
SHEET OF: TP214  
 DRAWING NO. TP214  
 REVISION A

PCA NO. 000  
 CONTRACT NO. C801  
 FILE LOCATION: PROJECTWISE

Jun 22, 2020 - 3:58pm C:\CADD\Sub\proj\mward\west\mward\801TP214.dwg

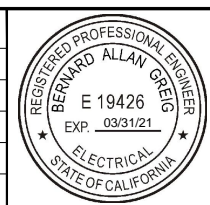
NOTES:

1. REMOVEABLE PANELS REQUIRED FOR ACCESS TO TRANSFORMER AND RECTIFIER.
2. DIMENSIONS SHOWN ARE APPROXIMATE. SUPPLIER SHALL DETERMINE FINAL DIMENSIONS AND SUBMIT TO VTA FOR APPROVAL.
3. THE OVERALL SUBSTATION EXTERIOR SHALL NOT EXCEED 16' BY 42'-4". INTERIOR CLEARANCE REQUIREMENTS SHALL BE AS SHOWN ON TP202.
4. DRAWING APPLICABLE TO TPSS #34 ONLY.



Jun 22, 2020 - 3:58pm C:\CADD\lib\ward\west\mms8431\_801TP215.dwg

NO.	DATE	REVISIONS
A	06/20	95% SUBMITTAL SET



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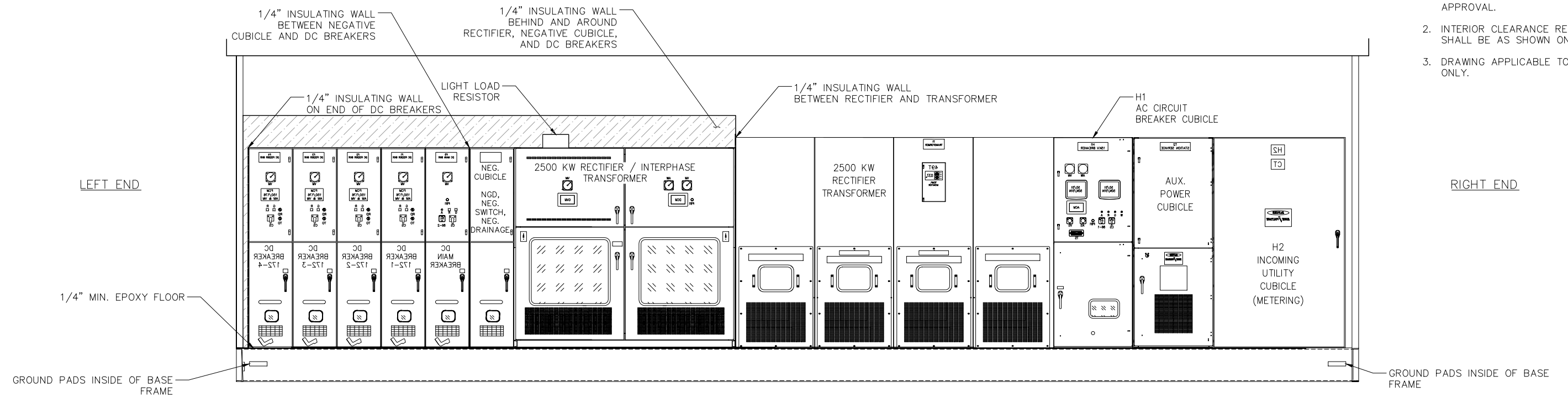


<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE 06/22/20	SCALE 1/2" = 1'-0"
SUBMITTAL DATE 06/29/20	BOARD APPROVAL DATE

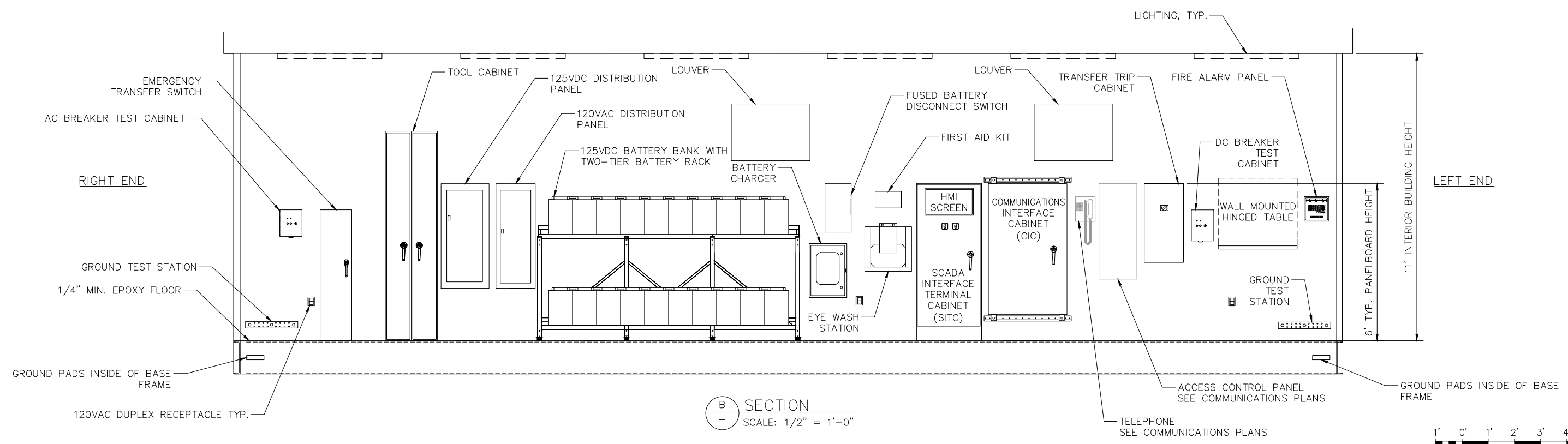
EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT TRACTION POWER TPSS #34 EXTERIOR ELEVATION VIEWS SHEET 2 OF 2		
PCA NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE

SHEET OF	TP215
DRAWING NO.	TP215
REVISION	A

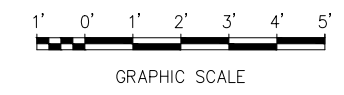
- NOTES:
1. DIMENSIONS SHOWN ARE APPROXIMATE. SUPPLIER SHALL DETERMINE FINAL DIMENSIONS AND SUBMIT TO VTA FOR APPROVAL.
  2. INTERIOR CLEARANCE REQUIREMENTS SHALL BE AS SHOWN ON TP202.
  3. DRAWING APPLICABLE TO TPSS #34 ONLY.



**A** SECTION  
SCALE: 1/2" = 1'-0"

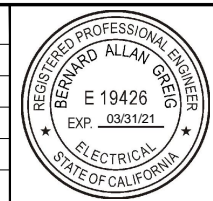


**B** SECTION  
SCALE: 1/2" = 1'-0"



Jun 22, 2020 - 3:59pm C:\CADD\Sub\p\ward\west\mss8431\801TP216.dwg

NO.	DATE	REVISIONS
A	06/20	95% SUBMITTAL SET



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CADD FILE NAME: 801TP216.dwg

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APPROVED

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CADD FILE DATE: 06/22/20  
SUBMITTAL DATE: 06/29/20  
SCALE: 1/2" = 1'-0"  
BOARD APPROVAL DATE:

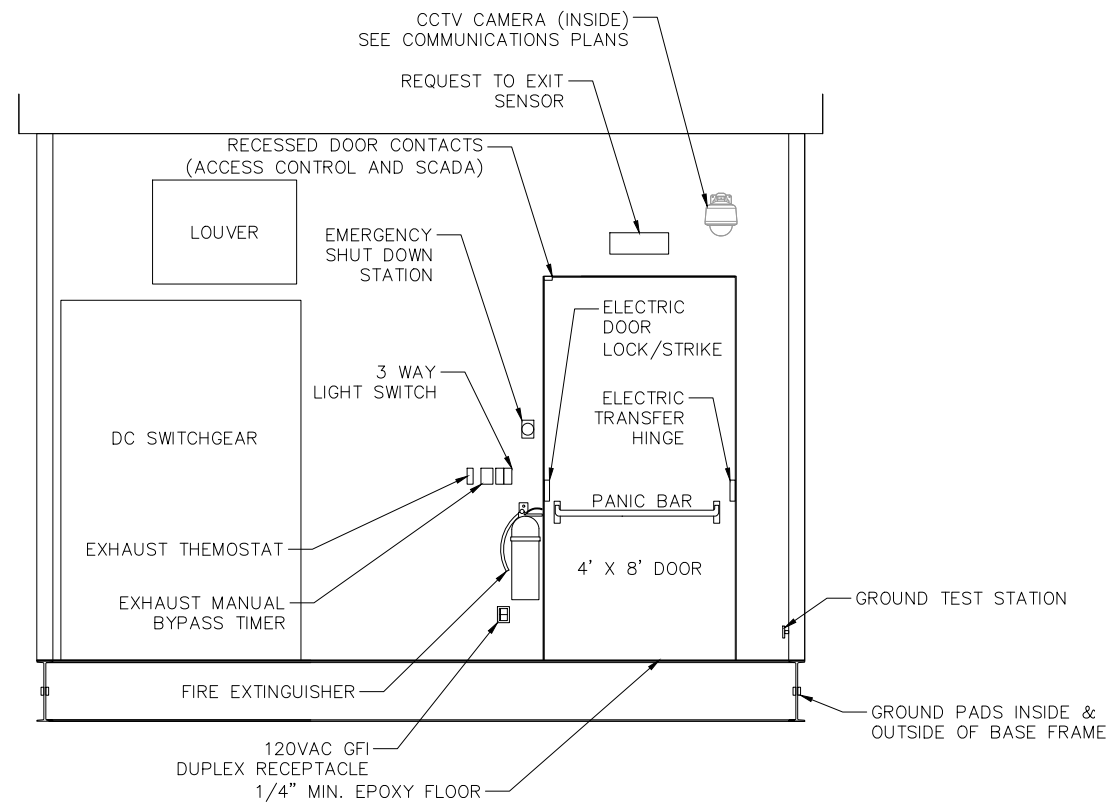
EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
TRACTION POWER  
TPSS #34 INTERIOR SECTION VIEWS  
SHEET 1 OF 2

PCA NO.: 000  
CONTRACT NO.: C801  
FILE LOCATION: PROJECTWISE

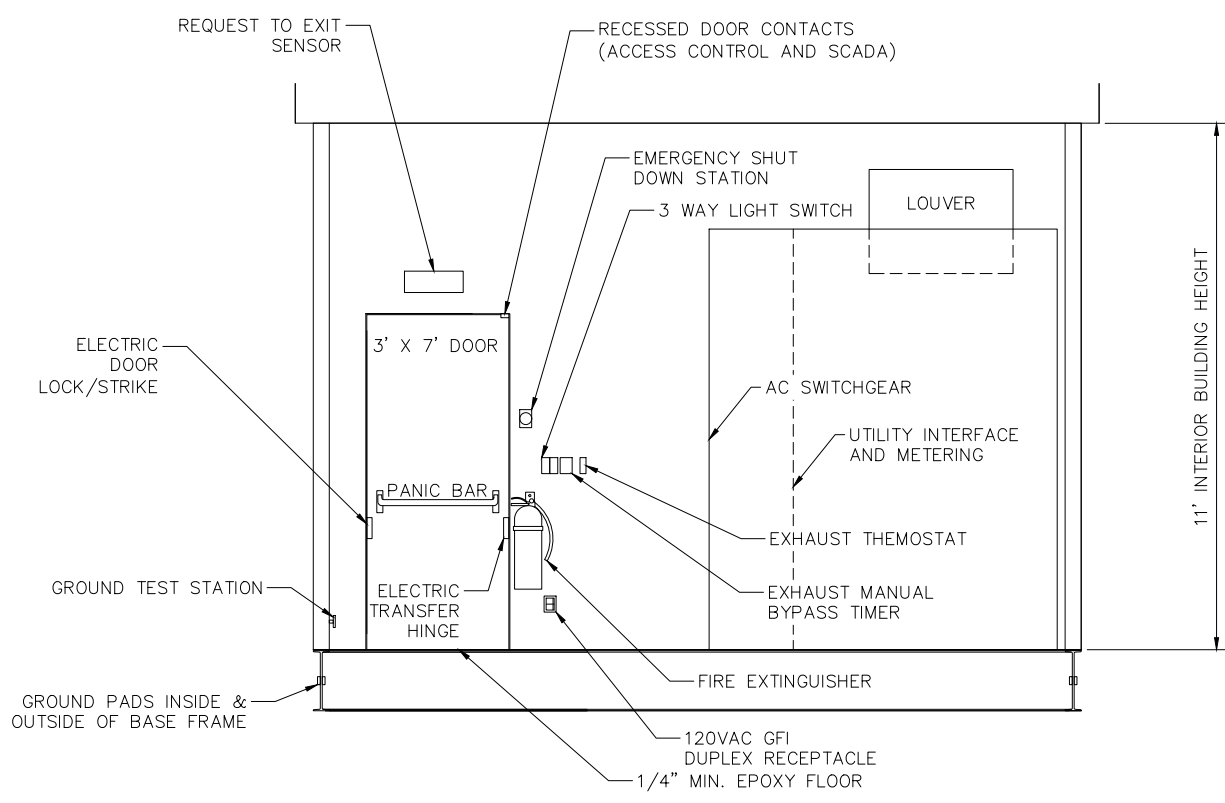
SHEET OF: TP216  
REVISION: A

**NOTES:**

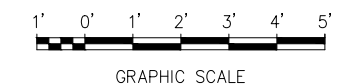
1. DIMENSIONS SHOWN ARE APPROXIMATE. SUPPLIER SHALL DETERMINE FINAL DIMENSIONS AND SUBMIT TO VTA FOR APPROVAL.
2. INTERIOR CLEARANCE REQUIREMENTS SHALL BE AS SHOWN ON TP202.
3. DRAWING APPLICABLE TO TPSS #34 ONLY.



**C SECTION**  
SCALE: 1/2" = 1'-0"

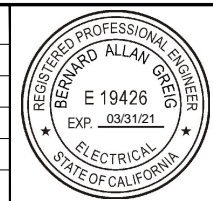


**D SECTION**  
SCALE: 1/2" = 1'-0"



Jun 22, 2020 - 3:59pm C:\CADD\lib\ward\west\mises\31\_801TP217.dwg

NO.	DATE	REVISIONS
A	06/20	95% SUBMITTAL SET

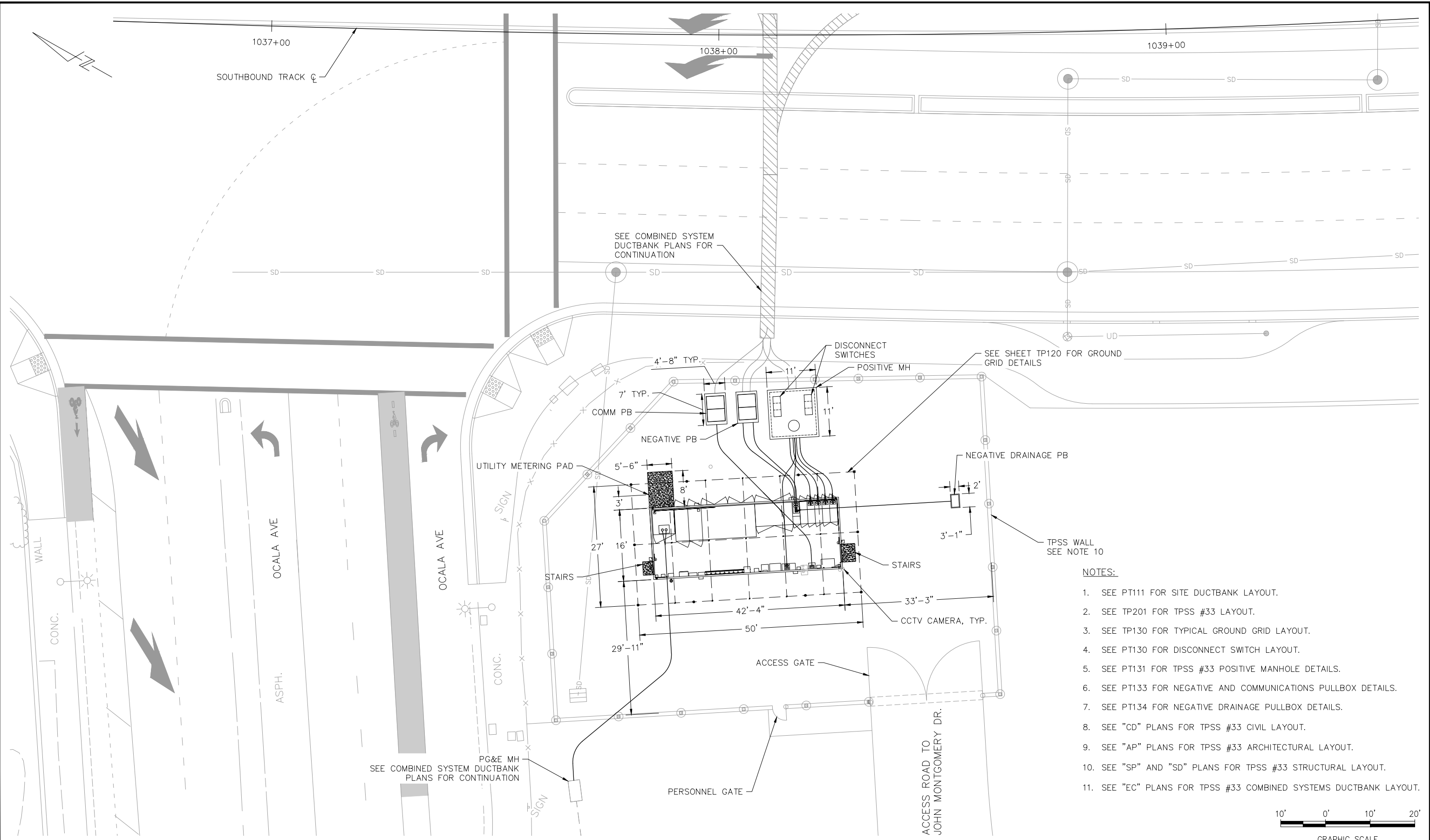


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CADD FILE DATE 06/22/20	SCALE 1/2" = 1'-0"
SUBMITTAL DATE 06/29/20	BOARD APPROVAL DATE

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT TRACTION POWER TPSS #34 INTERIOR SECTION VIEWS SHEET 2 OF 2			SHEET OF DRAWING NO. TP217 REVISION A
PCA NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE	

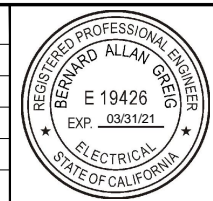


- NOTES:**
1. SEE PT111 FOR SITE DUCTBANK LAYOUT.
  2. SEE TP201 FOR TPSS #33 LAYOUT.
  3. SEE TP130 FOR TYPICAL GROUND GRID LAYOUT.
  4. SEE PT130 FOR DISCONNECT SWITCH LAYOUT.
  5. SEE PT131 FOR TPSS #33 POSITIVE MANHOLE DETAILS.
  6. SEE PT133 FOR NEGATIVE AND COMMUNICATIONS PULLBOX DETAILS.
  7. SEE PT134 FOR NEGATIVE DRAINAGE PULLBOX DETAILS.
  8. SEE "CD" PLANS FOR TPSS #33 CIVIL LAYOUT.
  9. SEE "AP" PLANS FOR TPSS #33 ARCHITECTURAL LAYOUT.
  10. SEE "SP" AND "SD" PLANS FOR TPSS #33 STRUCTURAL LAYOUT.
  11. SEE "EC" PLANS FOR TPSS #33 COMBINED SYSTEMS DUCTBANK LAYOUT.



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NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



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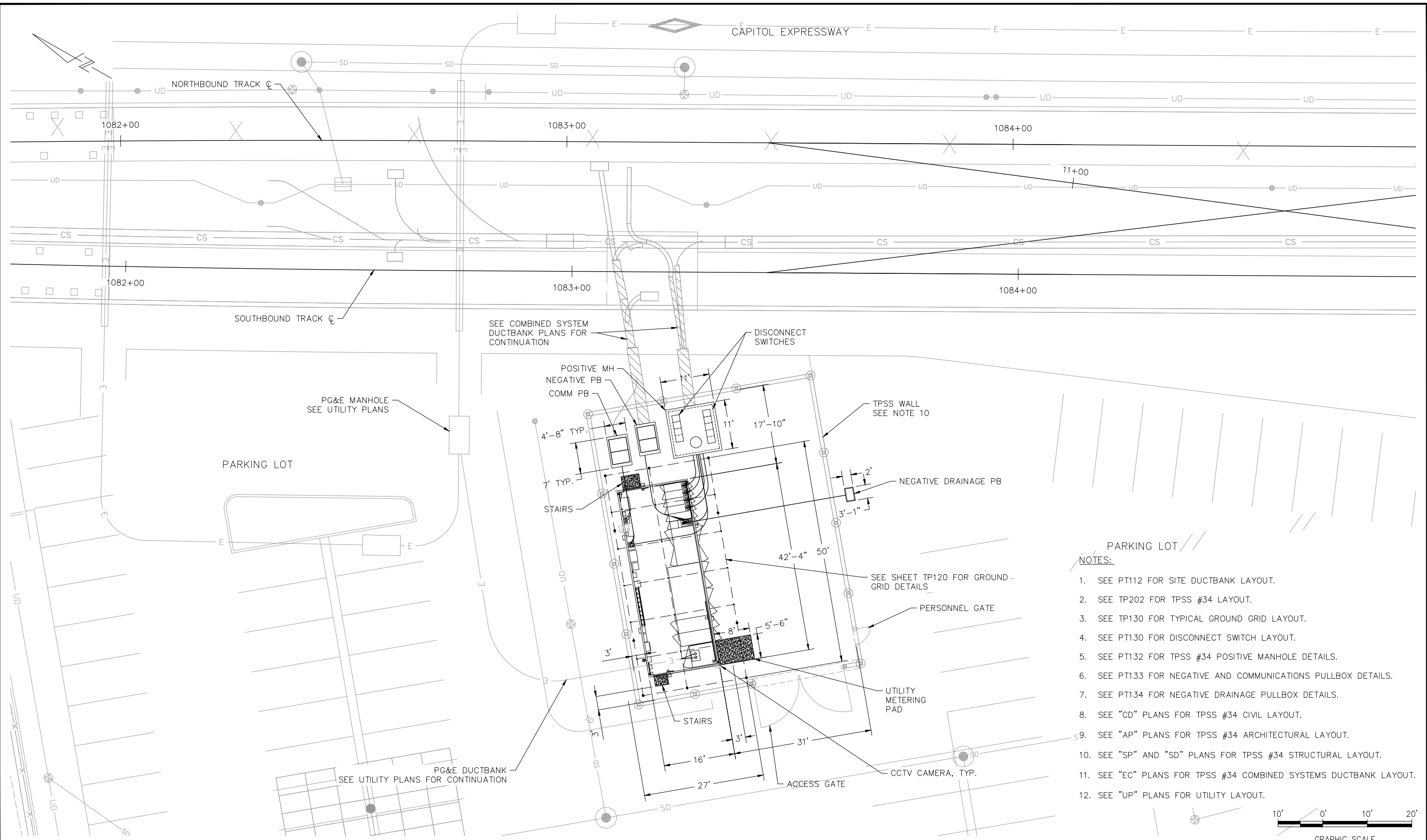
**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 06/22/20  
SUBMITTAL DATE: 06/29/20  
SCALE: 1" = 10'-0"  
BOARD APPROVAL DATE:

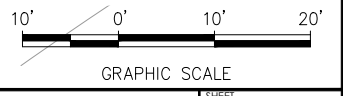
**EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
TRACTION POWER  
TPSS #33  
SUBSTATION EQUIPMENT PLAN**

PLA NO.: 000 CONTRACT NO.: C801 FILE LOCATION: PROJECTWISE

SHEET OF: TP300  
REVISION: C

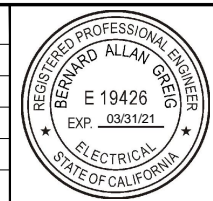


- NOTES:**
1. SEE PT112 FOR SITE DUCTBANK LAYOUT.
  2. SEE TP202 FOR TPSS #34 LAYOUT.
  3. SEE TP130 FOR TYPICAL GROUND GRID LAYOUT.
  4. SEE PT130 FOR DISCONNECT SWITCH LAYOUT.
  5. SEE PT132 FOR TPSS #34 POSITIVE MANHOLE DETAILS.
  6. SEE PT133 FOR NEGATIVE AND COMMUNICATIONS PULLBOX DETAILS.
  7. SEE PT134 FOR NEGATIVE DRAINAGE PULLBOX DETAILS.
  8. SEE "CD" PLANS FOR TPSS #34 CIVIL LAYOUT.
  9. SEE "AP" PLANS FOR TPSS #34 ARCHITECTURAL LAYOUT.
  10. SEE "SP" AND "SD" PLANS FOR TPSS #34 STRUCTURAL LAYOUT.
  11. SEE "EC" PLANS FOR TPSS #34 COMBINED SYSTEMS DUCTBANK LAYOUT.
  12. SEE "UP" PLANS FOR UTILITY LAYOUT.



Jun 22, 2020 - 3:59pm C:\CADD\Sub\p\p\ward\west\m\m\85431\_801TP301.dwg

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
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A	06/18	35% SUBMITTAL SET



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 DRAWN: J. WARD  
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**Santa Clara Valley Transportation Authority**

**BKF** 100+ YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

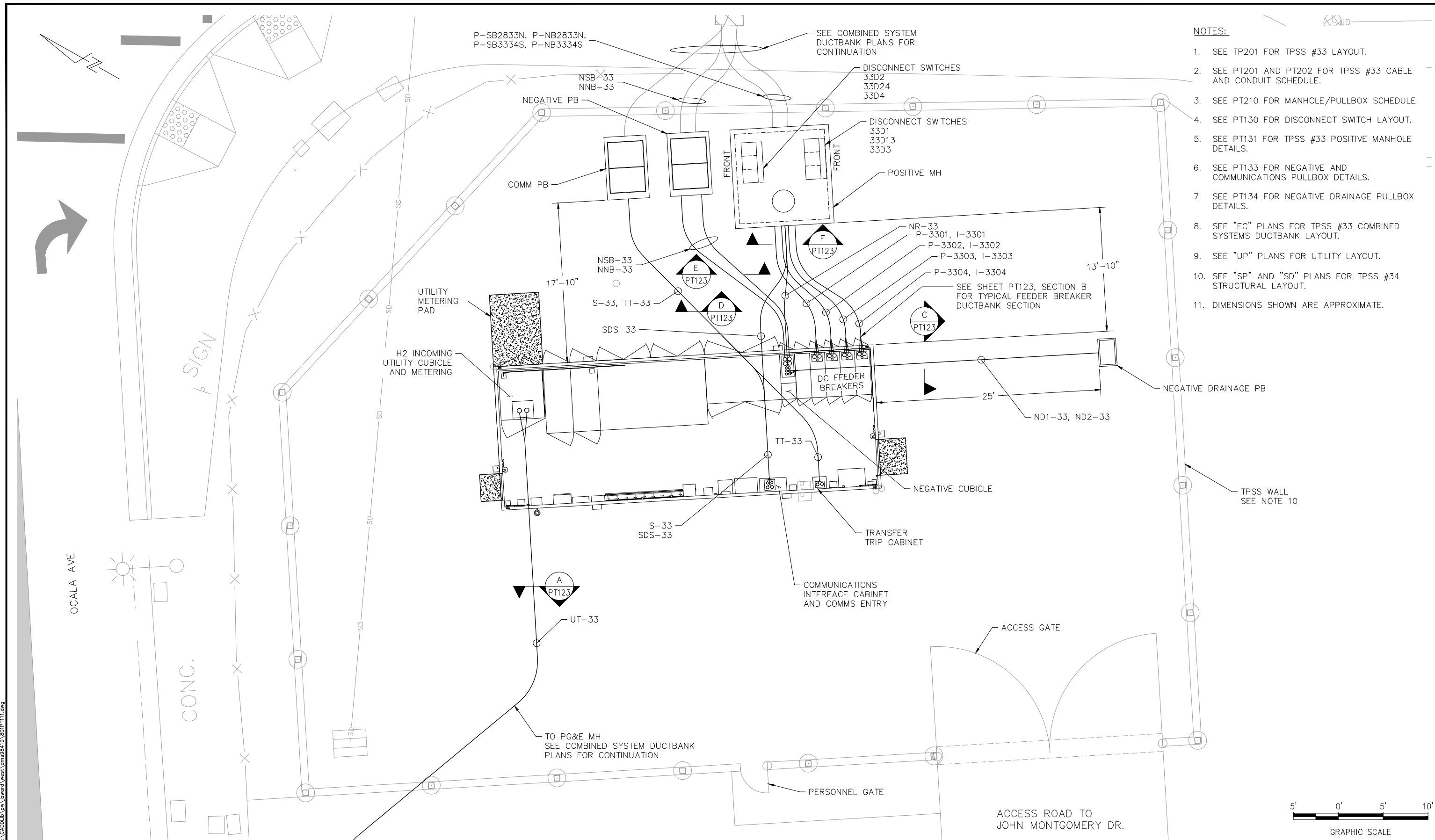
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 SUBMITTAL DATE: 06/29/20  
 SCALE: 1" = 10'-0"  
 BOARD APPROVAL DATE:

**EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 TRACTION POWER  
 TPSS #34  
 SUBSTATION EQUIPMENT PLAN**

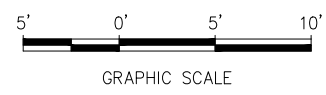
SHEET OF: TP301  
 REVISION: C

PCA NO.: 000  
 CONTRACT NO.: C801  
 FILE LOCATION: PROJECTWISE



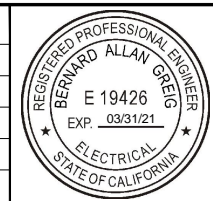


- NOTES:**
- SEE TP201 FOR TPSS #33 LAYOUT.
  - SEE PT201 AND PT202 FOR TPSS #33 CABLE AND CONDUIT SCHEDULE.
  - SEE PT210 FOR MANHOLE/PULLBOX SCHEDULE.
  - SEE PT130 FOR DISCONNECT SWITCH LAYOUT.
  - SEE PT131 FOR TPSS #33 POSITIVE MANHOLE DETAILS.
  - SEE PT133 FOR NEGATIVE AND COMMUNICATIONS PULLBOX DETAILS.
  - SEE PT134 FOR NEGATIVE DRAINAGE PULLBOX DETAILS.
  - SEE "EC" PLANS FOR TPSS #33 COMBINED SYSTEMS DUCTBANK LAYOUT.
  - SEE "UP" PLANS FOR UTILITY LAYOUT.
  - SEE "SP" AND "SD" PLANS FOR TPSS #34 STRUCTURAL LAYOUT.
  - DIMENSIONS SHOWN ARE APPROXIMATE.



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NO.	DATE	REVISIONS
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B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



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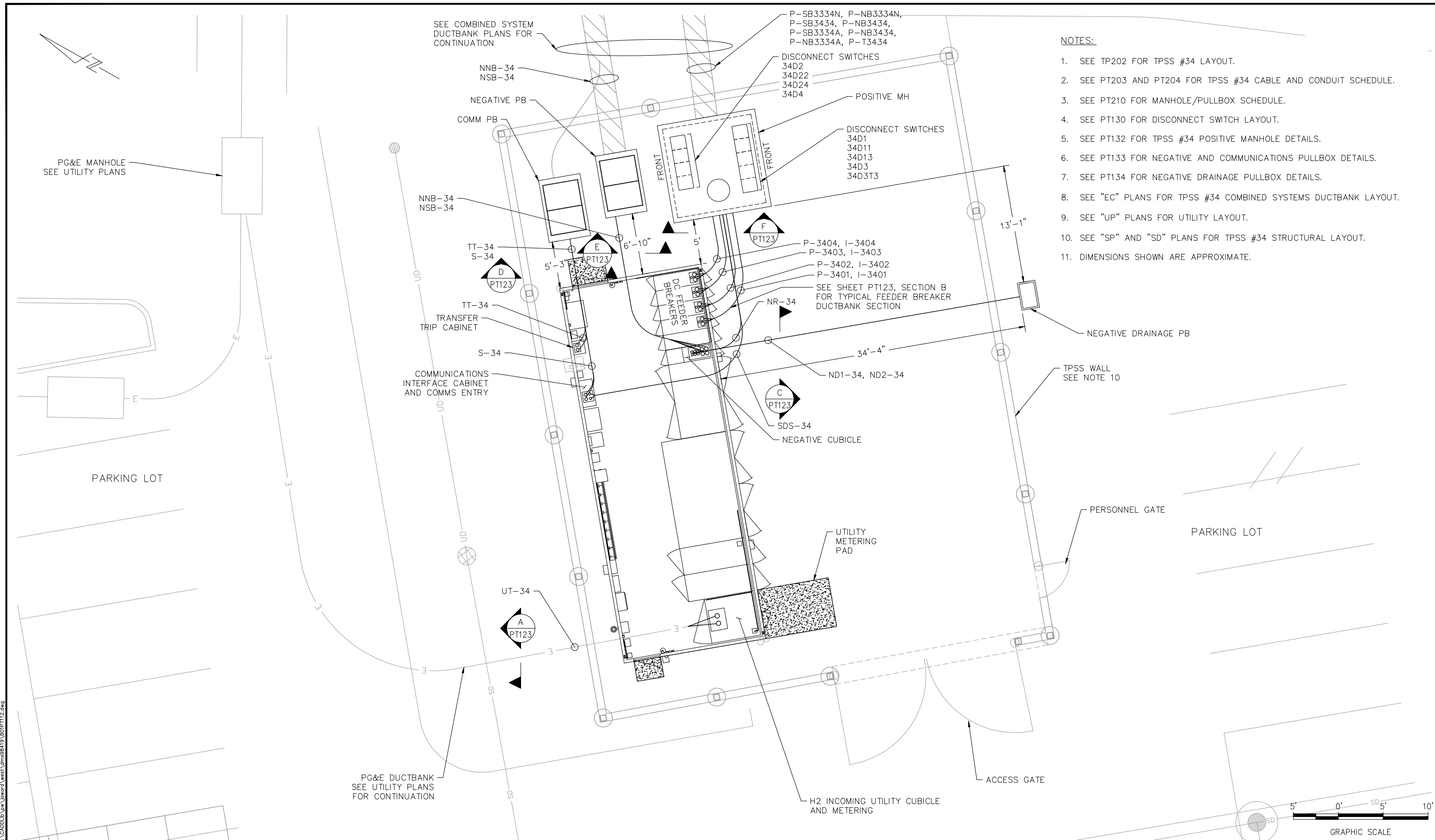
**BKF** 100+ YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 06/22/20  
 SUBMITTAL DATE: 06/29/20  
 SCALE: 1" = 5'-0"  
 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 TRACTION POWER  
 TPSS #33  
 SUBSTATION DUCTBANK PLAN

PLA NO: 000 CONTRACT NO: C801 FILE LOCATION: PROJECTWISE

SHEET OF: PT111  
 REVISION: C



- NOTES:
1. SEE TP202 FOR TPSS #34 LAYOUT.
  2. SEE PT203 AND PT204 FOR TPSS #34 CABLE AND CONDUIT SCHEDULE.
  3. SEE PT210 FOR MANHOLE/PULLBOX SCHEDULE.
  4. SEE PT130 FOR DISCONNECT SWITCH LAYOUT.
  5. SEE PT132 FOR TPSS #34 POSITIVE MANHOLE DETAILS.
  6. SEE PT133 FOR NEGATIVE AND COMMUNICATIONS PULLBOX DETAILS.
  7. SEE PT134 FOR NEGATIVE DRAINAGE PULLBOX DETAILS.
  8. SEE "EC" PLANS FOR TPSS #34 COMBINED SYSTEMS DUCTBANK LAYOUT.
  9. SEE "UP" PLANS FOR UTILITY LAYOUT.
  10. SEE "SP" AND "SD" PLANS FOR TPSS #34 STRUCTURAL LAYOUT.
  11. DIMENSIONS SHOWN ARE APPROXIMATE.

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NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



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 DRAWN: J. WARD  
 CADD FILE NAME: 801PT112.dwg

**Santa Clara Valley Transportation Authority**

**BKF** 100+ YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 06/22/20  
 SUBMITTAL DATE: 06/29/20  
 SCALE: 1" = 5'-0"  
 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 TRACTION POWER  
 TPSS #34  
 SUBSTATION EQUIPMENT PLAN

SHEET OF: PT112  
 REVISION: C

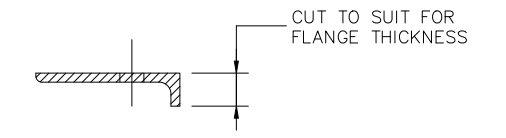
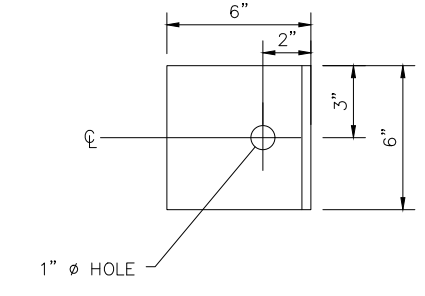
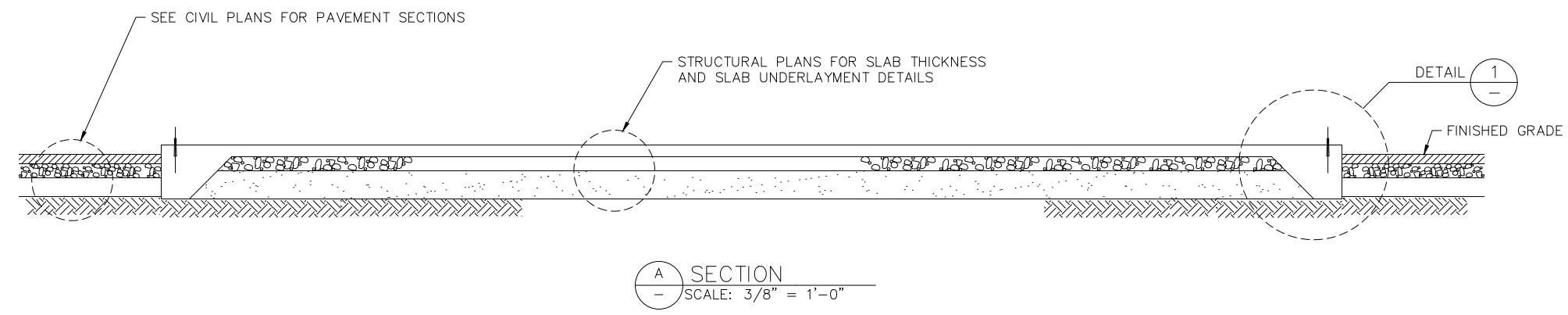
PCA NO.: 000 CONTRACT NO.: C801 FILE LOCATION: PROJECTWISE



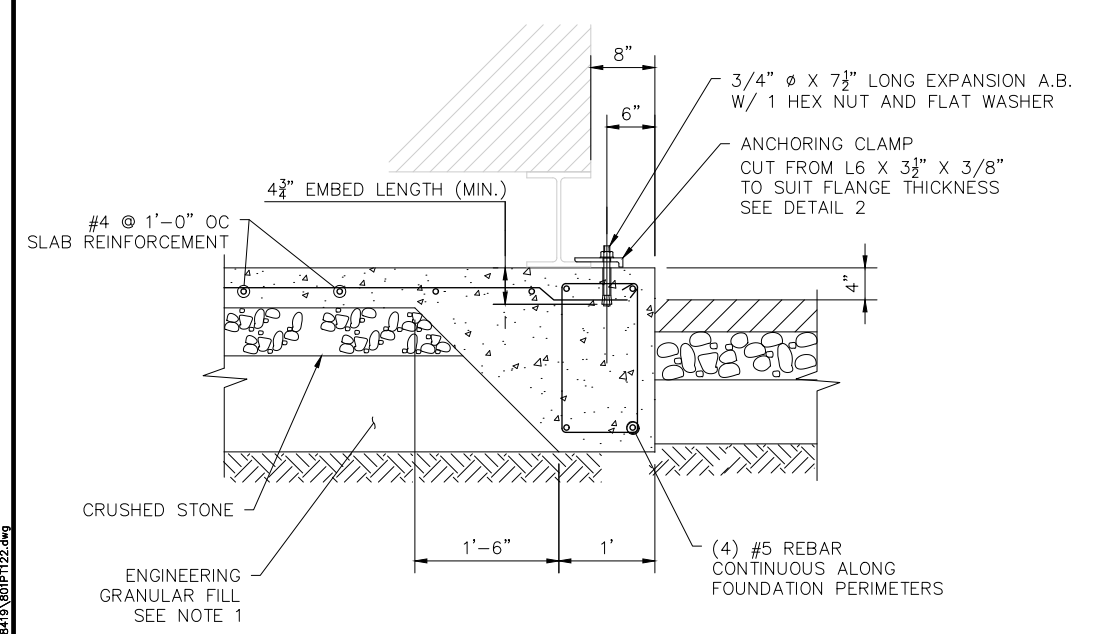


**NOTES:**

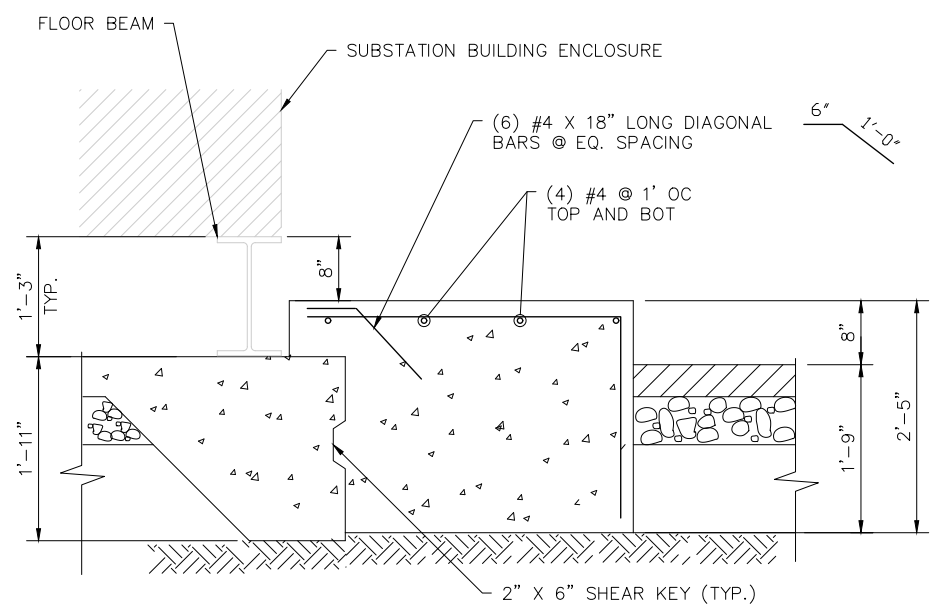
1. BASE FILL SHALL BE COMPACTED TO A MIN. RELATIVE DENSITY OF 95% BASED ON THE MAX. DRY DENSITY PER ASTM D1557. THE FILL SHALL BE PLACED IN LIFTS NOT EXCEEDING 6".
2. SEE "SP" AND "SD" PLANS FOR FOUNDATION LAYOUT AND DETAILS.



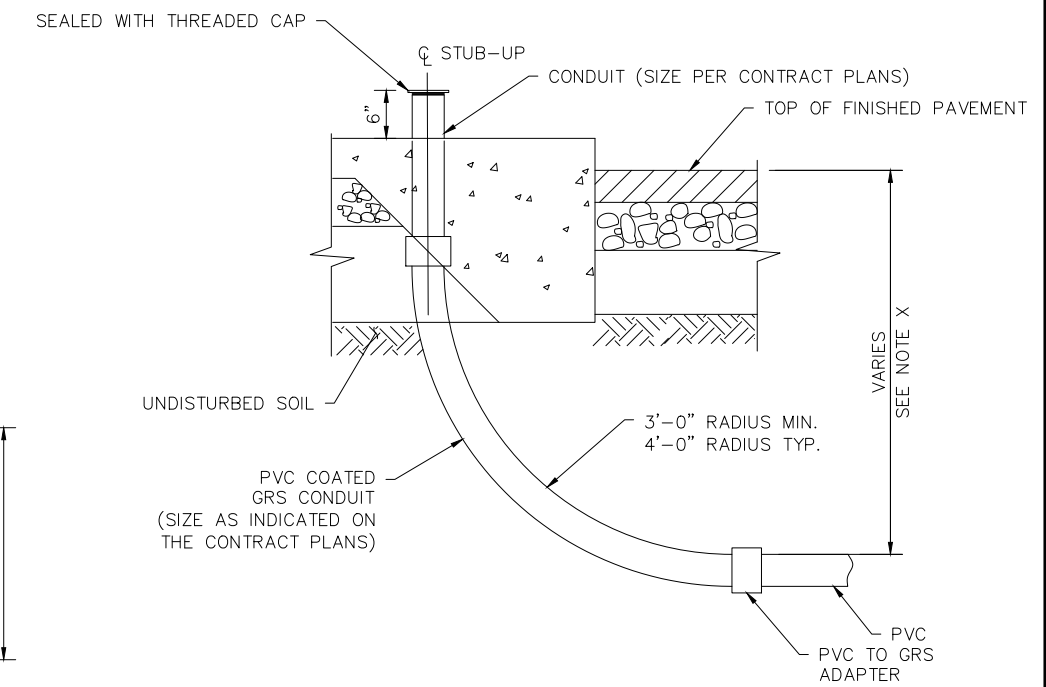
**2 DETAIL**  
SCALE: 3" = 1'-0"



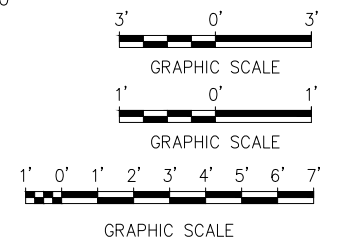
**1 TYPICAL DETAIL**  
SCALE: 1" = 1'-0"



**B SECTION B - EQUIPMENT OR DOOR PAD**  
SCALE: 1" = 1'-0"

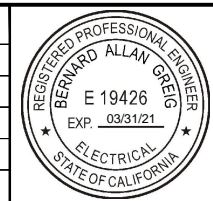


**3 TYPICAL STUB-UP DETAIL**  
SCALE: 1" = 1'-0"



Jun 22, 2020 - 4:00pm C:\CADD\Sub\pwr\mrcat\west\mrcat\8413\_801PT122.dwg

NO.	DATE	REVISIONS
A	06/20	95% SUBMITTAL SET

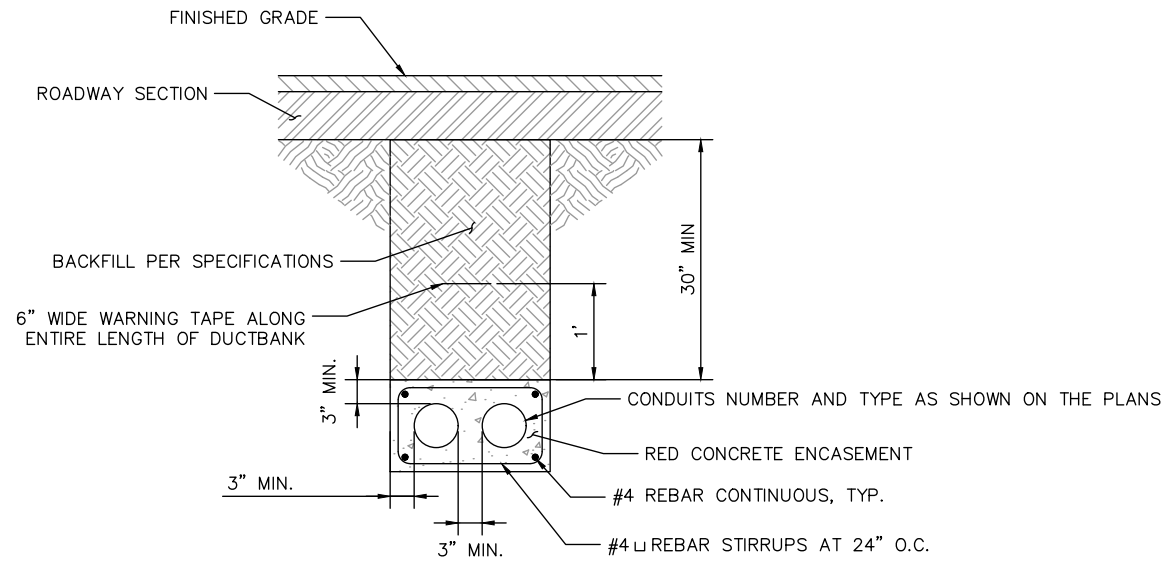


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DESIGNED J. WARD	CHECKED P. LLOYD
DRAWN J. WARD	CADD FILE NAME 801PT122.dwg

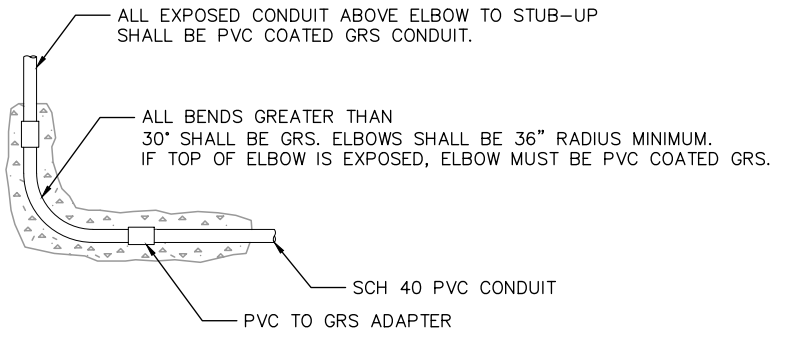


<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE 06/22/20	SCALE AS NOTED
SUBMITTAL DATE 06/29/20	BOARD APPROVAL DATE

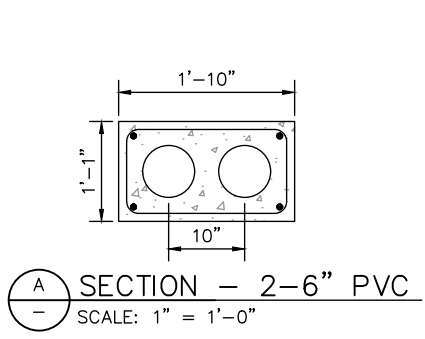
EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT TRACTION POWER DUCTBANK STUB-UP DETAILS AND FOUNDATION SECTIONS			SHEET OF DRAWING NO. PT122 REVISION A
PCA NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE	



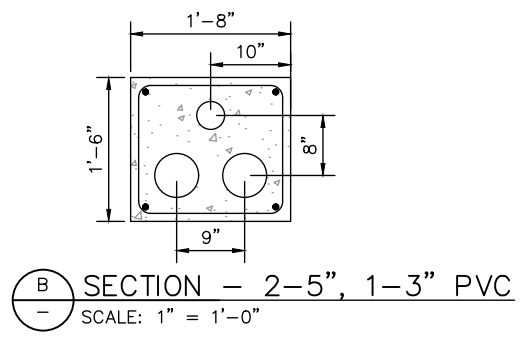
1 TYPICAL TPSS DUCTBANK SECTION  
SCALE: NTS



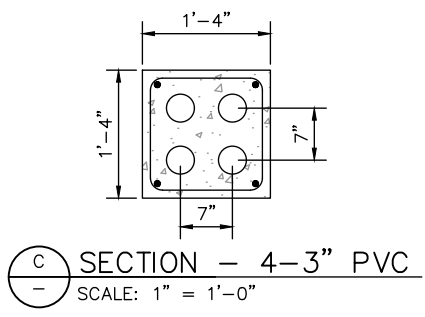
2 TYPICAL CONDUIT STUB-UP DETAIL  
SCALE: NTS



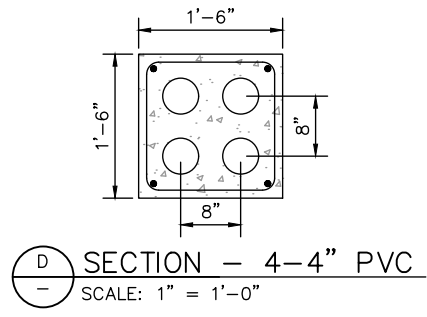
A SECTION - 2-6" PVC  
SCALE: 1" = 1'-0"



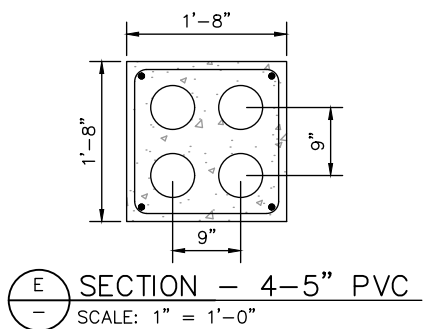
B SECTION - 2-5", 1-3" PVC  
SCALE: 1" = 1'-0"



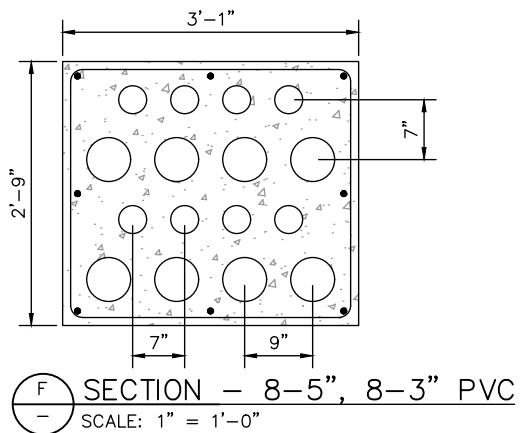
C SECTION - 4-3" PVC  
SCALE: 1" = 1'-0"



D SECTION - 4-4" PVC  
SCALE: 1" = 1'-0"



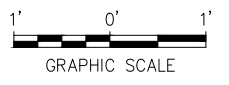
E SECTION - 4-5" PVC  
SCALE: 1" = 1'-0"



F SECTION - 8-5", 8-3" PVC  
SCALE: 1" = 1'-0"

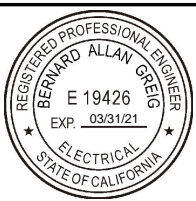
NOTES:

- SEE PT111 FOR TPSS #33 DUCTBANK LAYOUT.
- SEE PT112 FOR TPSS #34 DUCTBANK LAYOUT.
- SEE PT201 AND PT202 FOR TPSS #33 CABLE AND CONDUIT SCHEDULE.
- SEE PT203 AND PT204 FOR TPSS #34 CABLE AND CONDUIT SCHEDULE.



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NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



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DESIGNED: J. WARD  
CHECKED: P. LLOYD  
DRAWN: J. WARD  
CADD FILE NAME: 801PT123.dwg



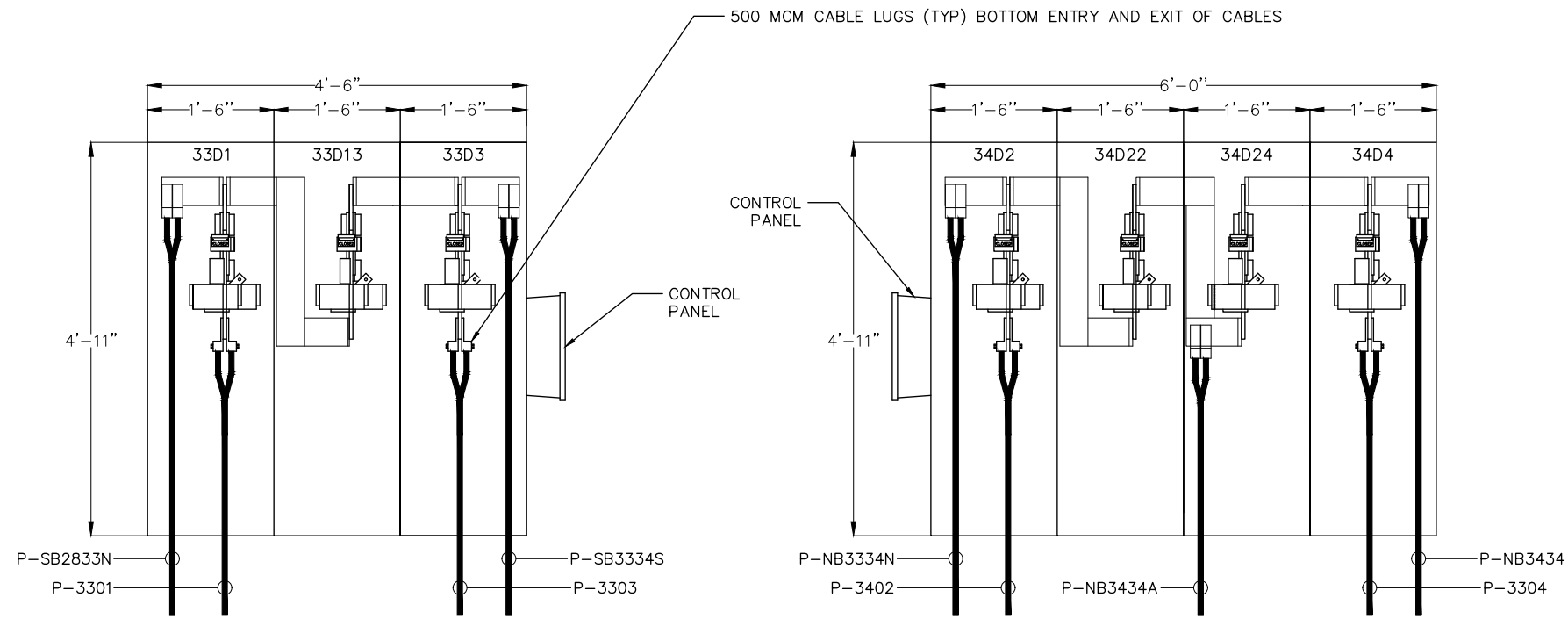
**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 06/22/20  
SCALE: AS NOTED  
SUBMITTAL DATE: 06/29/20  
BOARD APPROVAL DATE:

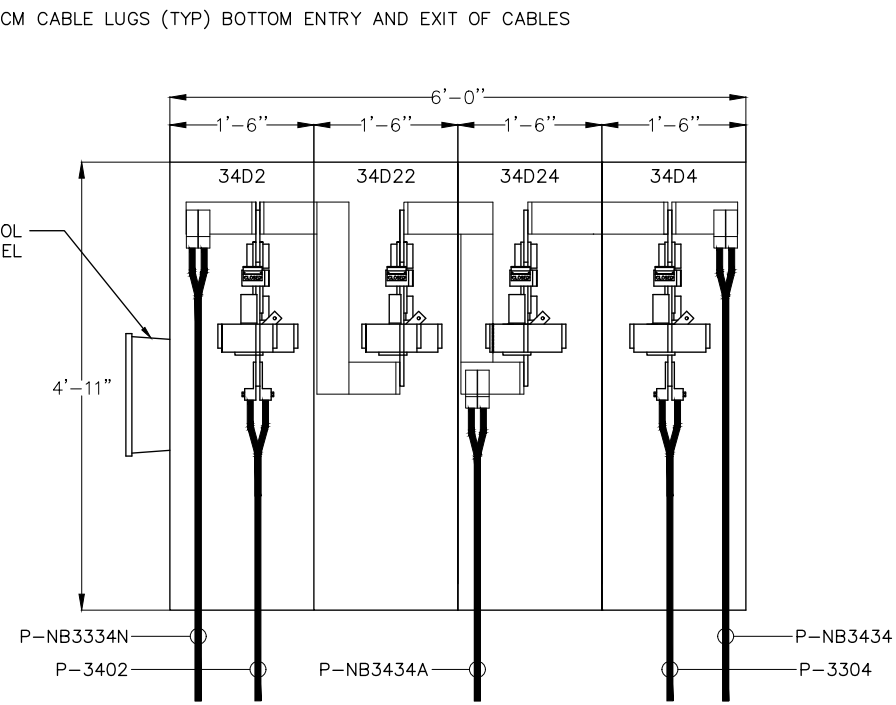
EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
TRACTION POWER  
TPSS #33 AND #34  
TYPICAL DUCTBANK SECTIONS

PCA NO.: 000  
CONTRACT NO.: C801  
FILE LOCATION: PROJECTWISE

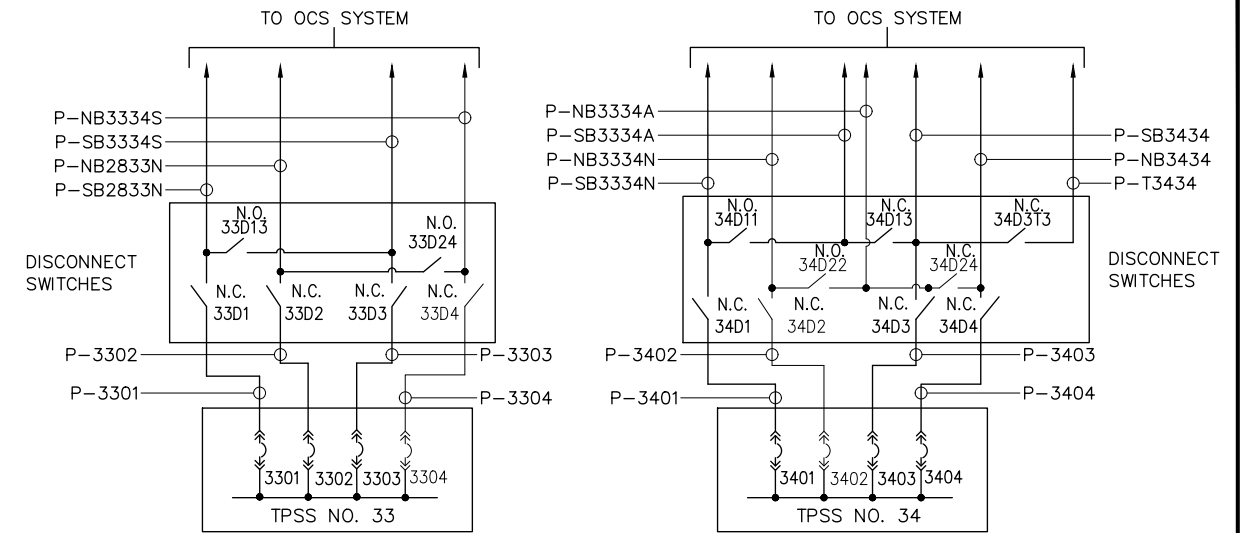
SHEET OF: PT123  
REVISION: C



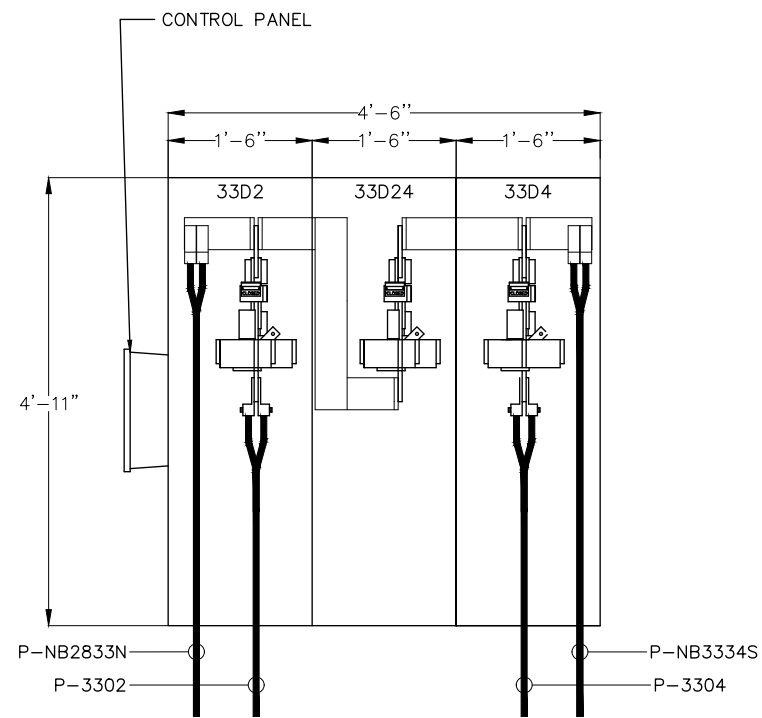
TPSS #33 - 3 CELL DISCONNECT SWITCH SWITCH LAYOUT AND CABLE ARRANGEMENT



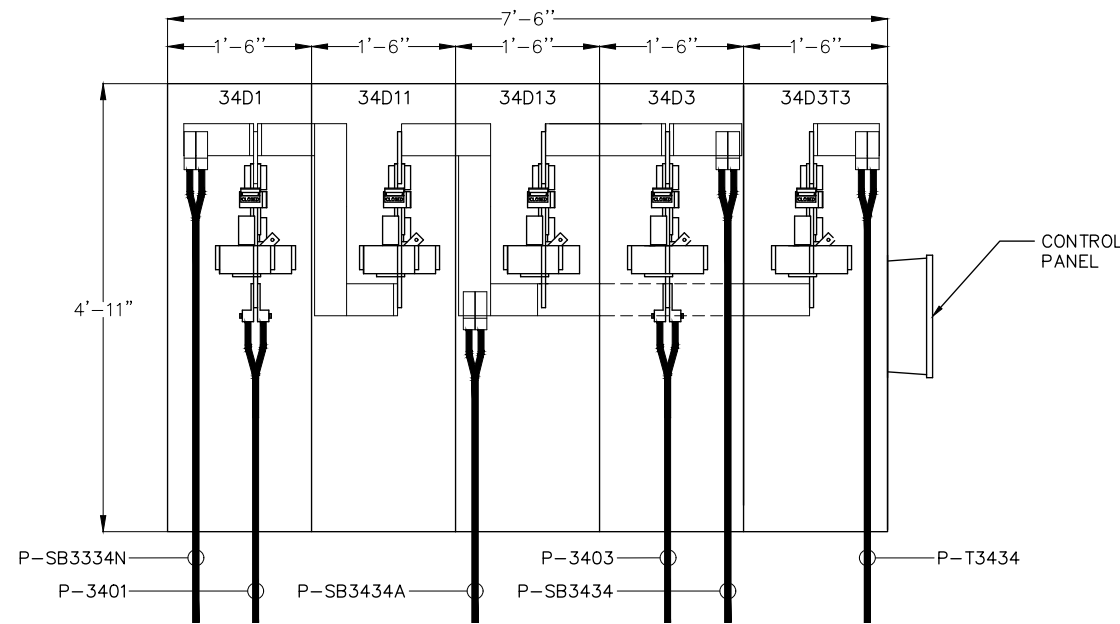
TPSS #34 - 4 CELL DISCONNECT SWITCH SWITCH LAYOUT AND CABLE ARRANGEMENT



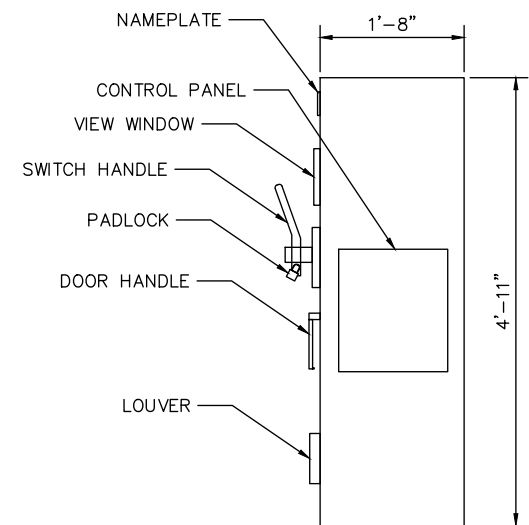
DISCONNECT SWITCH SCHEMATICS



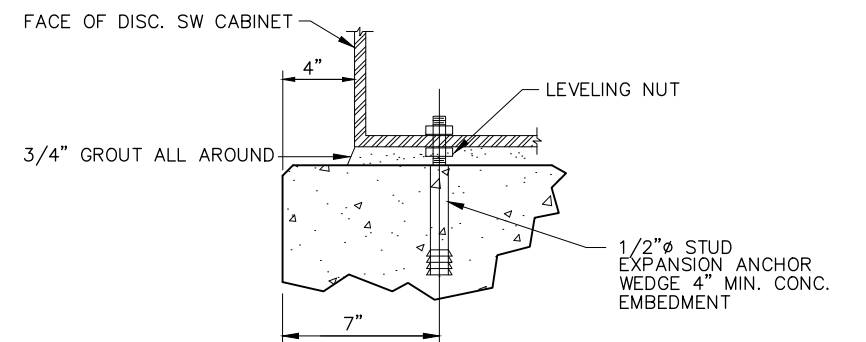
TPSS #33 - 3 CELL DISCONNECT SWITCH (OPPOSITE) SWITCH LAYOUT AND CABLE ARRANGEMENT



TPSS #34 - 5 CELL DISCONNECT SWITCH SWITCH LAYOUT AND CABLE ARRANGEMENT



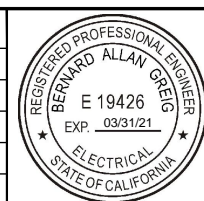
TYPICAL DISCONNECT SWITCH - SIDE VIEW



TYPICAL ANCHOR BOLT DETAIL AND CONCRETE EDGE DIST.

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NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET

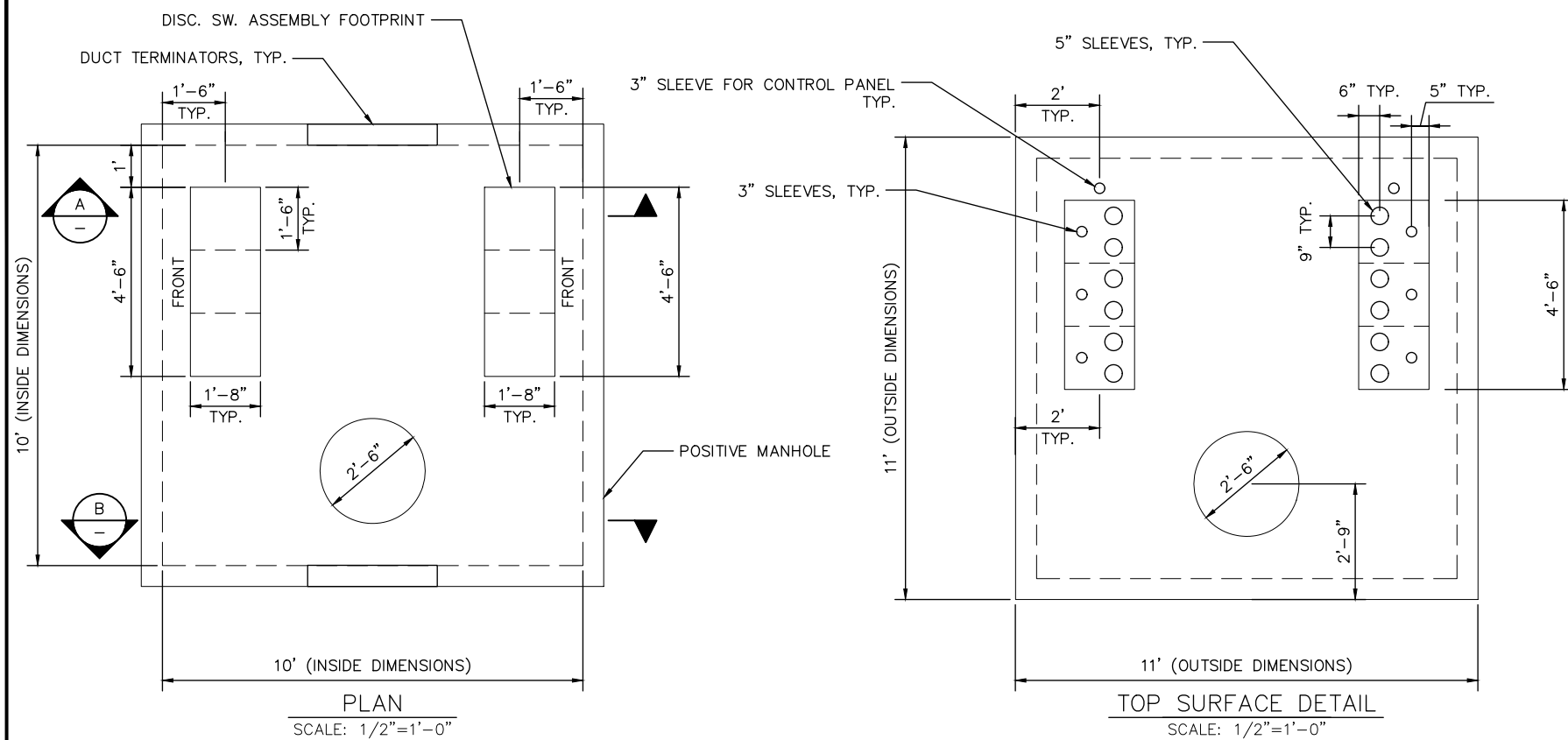


SUBMITTED	
<b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
DESIGNED	CHECKED
J. WARD	P. LLOYD
DRAWN	CADD FILE NAME
J. WARD	801PT130.dwg

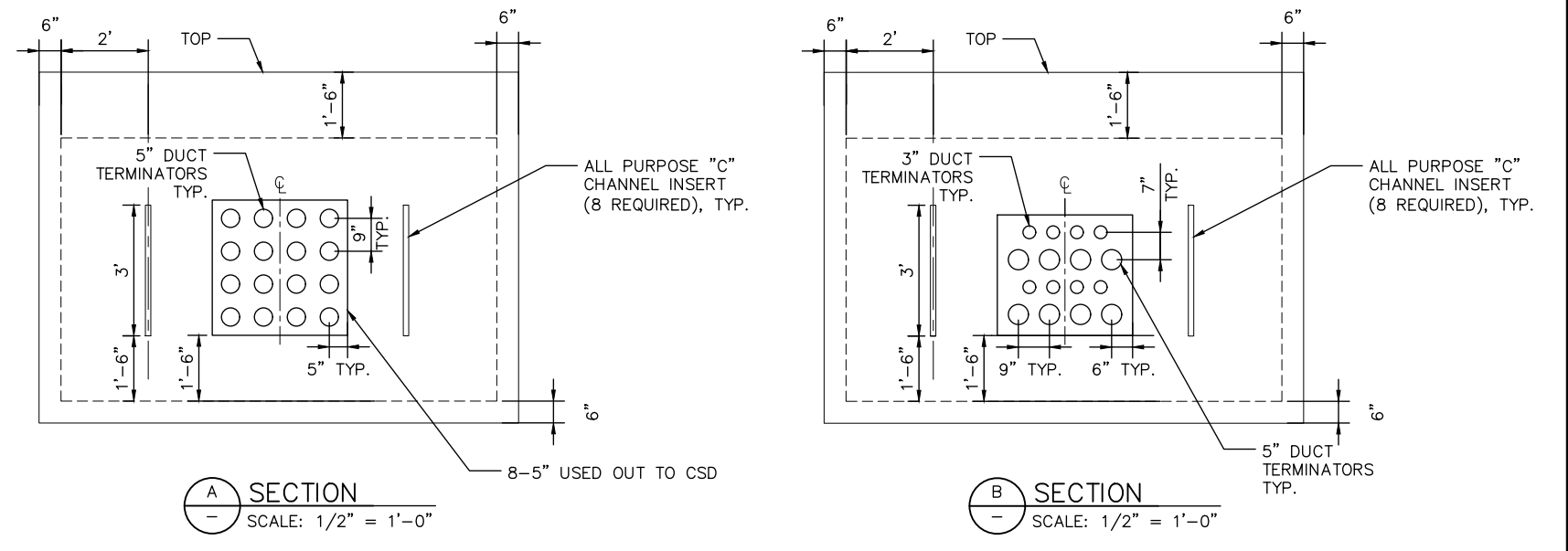
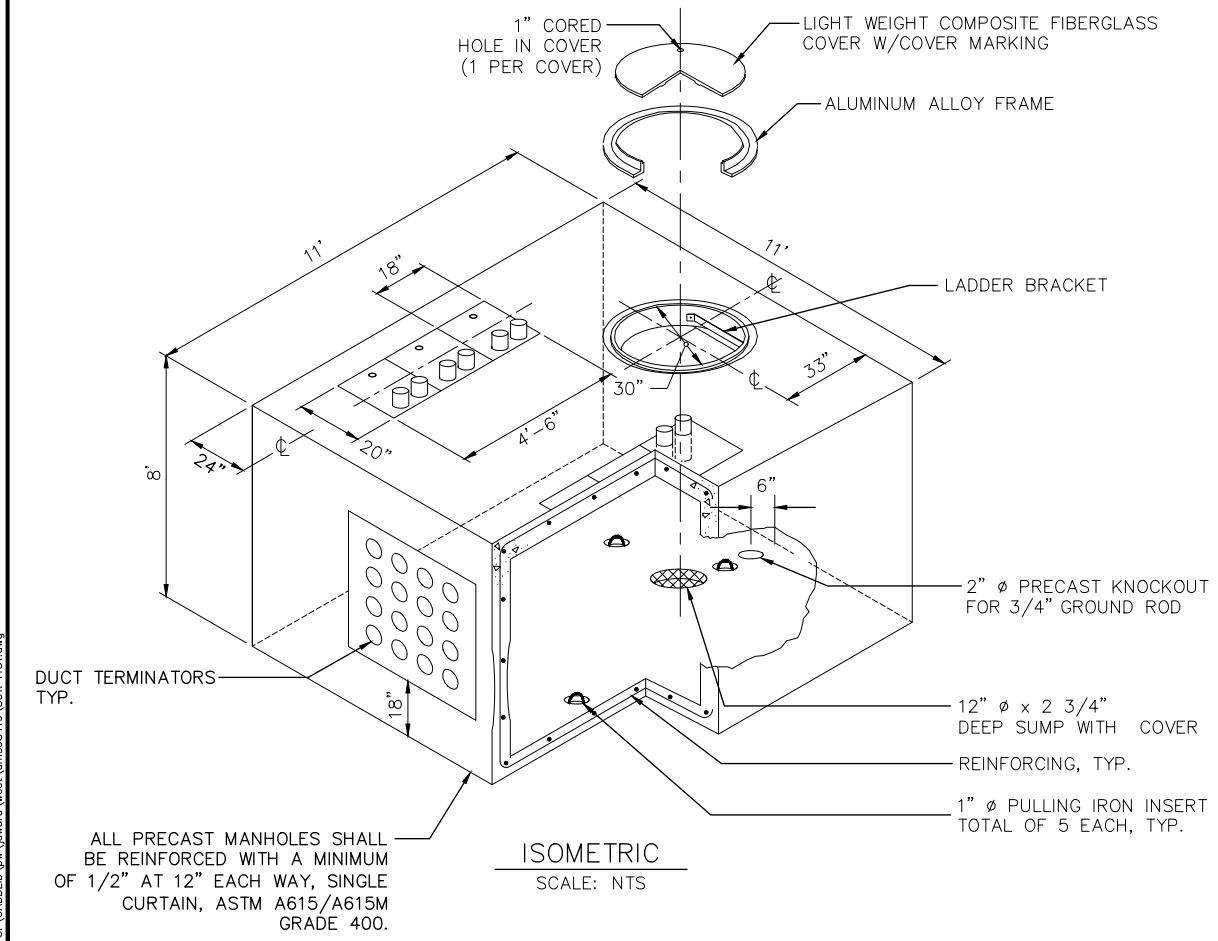


APPROVED	
CADD FILE DATE	SCALE
06/22/20	NTS
SUBMITTAL DATE	BOARD APPROVAL DATE
06/29/20	

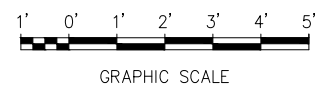
EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT TRACTION POWER DISCONNECT SWITCH AND CABLE ARRANGEMENT			SHEET OF DRAWING NO. PT130 REVISION C
PCA NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE	



- NOTES:**
- MANHOLE COVER SHALL BE 1" ABOVE MANHOLE TOP. MANHOLES SHALL BE AASHTO H20-44 TRAFFIC RATED.
  - CONTRACTOR SHALL SUBMIT MANHOLE SHOP DRAWINGS FOR THE ENGINEER'S APPROVAL.
  - TWO SIDES OF THE MANHOLE SHALL BE PROVIDED WITH DUCT TERMINATORS SUITABLE FOR CONDUIT SIZES INDICATED AND HARDWARE AS SHOWN IN SECTIONS A AND B. THE SIDE CLOSEST TO THE TPSS SHALL BE SECTION B.
  - MANHOLE FLOOR TO SLOPE TOWARD SUMP. CENTERLINE OF SUMP TO BE IN LINE WITH VERTICAL CENTERLINE OF THE MANHOLE COVER.
  - "C" CHANNEL INSERTS SHALL BE UNISTRUT P3257A OR APPROVED EQUAL.
  - CONTRACTOR SHALL PROVIDE LADDER BRACKET AND A GALVANIZED STEEL LADDER, EXTENDING FROM MANHOLE OPENING TO FLOOR. LADDER BRACKET SHALL BE INSTALLED PARALLEL AND CLOSEST TO THE NEAREST WALL. GALVANIZED STEEL LADDER SHALL BE 12" WIDE WITH RUNS TO MEET A 300 LBS WEIGHT REQUIREMENT.
  - MANHOLE COVERS SHALL MEET AASHTO H20 LOAD REQUIREMENTS. THE COVERS SHALL BE ERGONOMICALLY SAFE, AND SHALL MEET FEDERAL HEALTH AND SAFETY RECOMMENDATIONS. THE FRAME SHALL BE ALUMINUM ALLOY, AND SHALL INCORPORATE A PHYSICAL WATERCHECK. A STAINLESS STEEL HANDLE SHALL BE PROVIDED FOR EASY OPERATION OF THE COVER.
  - 3/4" X 10'-0" COPPER GROUND ROD SHALL BE INSTALLED WHERE SHOWN. MANHOLE REBAR, CABLE RACKS, LADDER BRACKET, AND COVER FRAME SHALL BE GROUNDED WITH #4 AWG CU.
  - 1/2" CHAMFER ALL EXPOSED MANHOLE EDGES.
  - FOR ALL POSITIVE AND NEGATIVE MANHOLES, INSTALL ONE CABLE RACK PER INSERT. CABLE RACK LENGTH SHALL BE SUITABLE FOR THE APPLICATION. SEE PT133 FOR CABLE RACK DETAILS.
  - ALL CONDUITS SHALL ENTER MANHOLE WALLS AT 90° TO WALL.
  - ALL CONDUIT SLEEVES SHALL PROTRUDE 6" ABOVE MANHOLE TOP SURFACE. PROTECT CONDUIT STUB-UPS FROM DAMAGE DURING POSITIONING OF THE DISCONNECT SWITCHES.
  - CONTRACTOR TO VERIFY DISCONNECT SWITCH ASSEMBLY FOOTPRINT AND CONDUIT PENETRATIONS WITH THE DISCONNECT SWITCH SUPPLIER.
  - FOR SWITCH LAYOUT AND CABLE ARRANGEMENT FOR DISCONNECT SWITCHES, REFER TO PT130.
  - THIS DRAWING IS APPLICABLE TO TPSS #33 ONLY.
  - SEE DRAWING PT133 FOR TYPICAL INSTALLATION DETAILS.
  - TOP OF MANHOLE SHALL BE FLUSH WITH FINISHED GRADE.

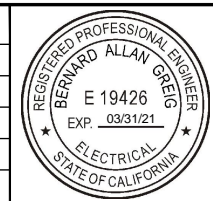


**TPSS #33 - POSITIVE MANHOLE AND DISCONNECT SWITCH LAYOUT**



Jun 22, 2020 - 4:00pm C:\CADLib\proj\ward\west\mises413\_801PT131.dwg

NO.	DATE	REVISIONS
A	06/20	95% SUBMITTAL SET



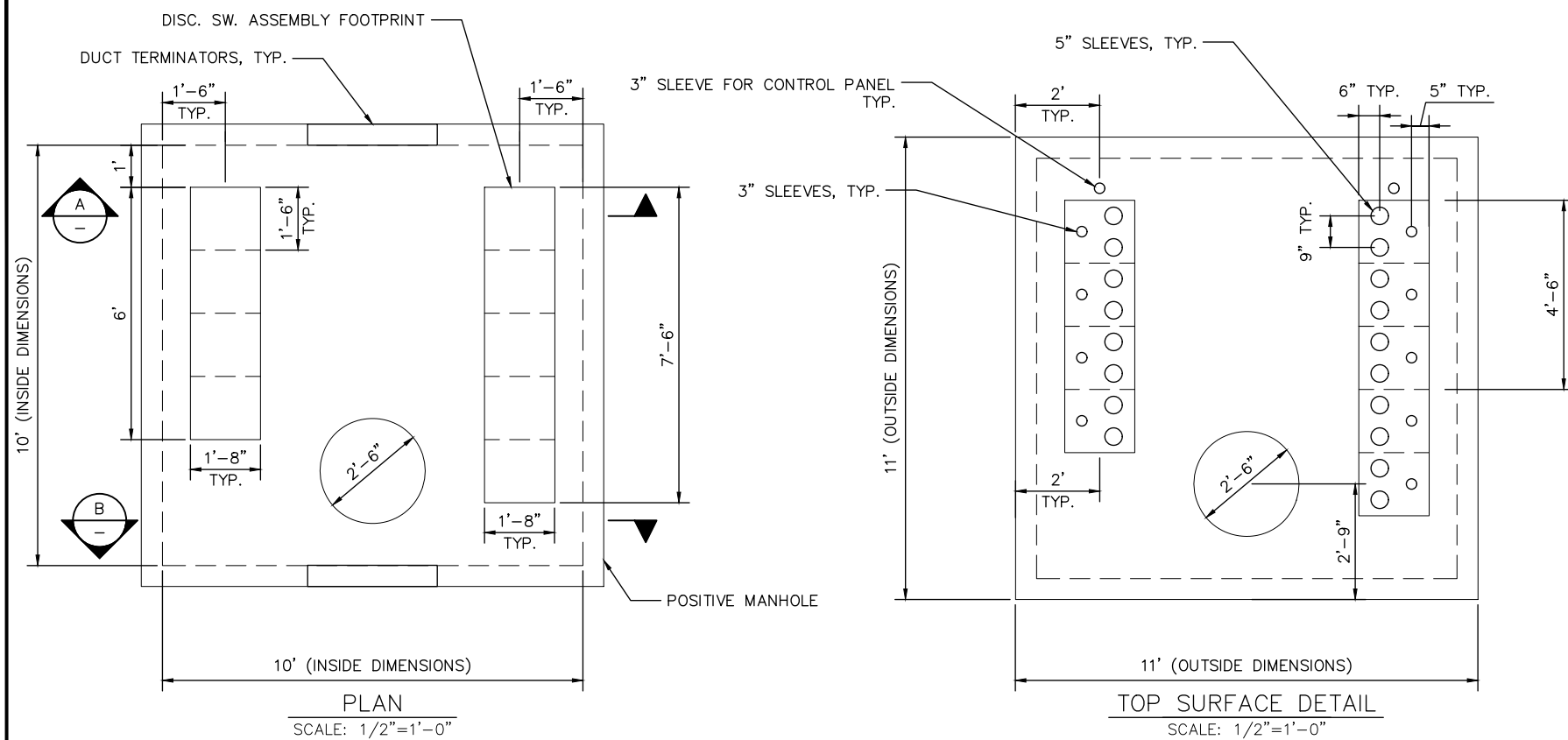
<b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
DESIGNED J. WARD	CHECKED P. LLOYD
DRAWN J. WARD	CADD FILE NAME 801PT131.dwg



<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE 06/22/20	SCALE AS NOTED
SUBMITTAL DATE 06/29/20	BOARD APPROVAL DATE

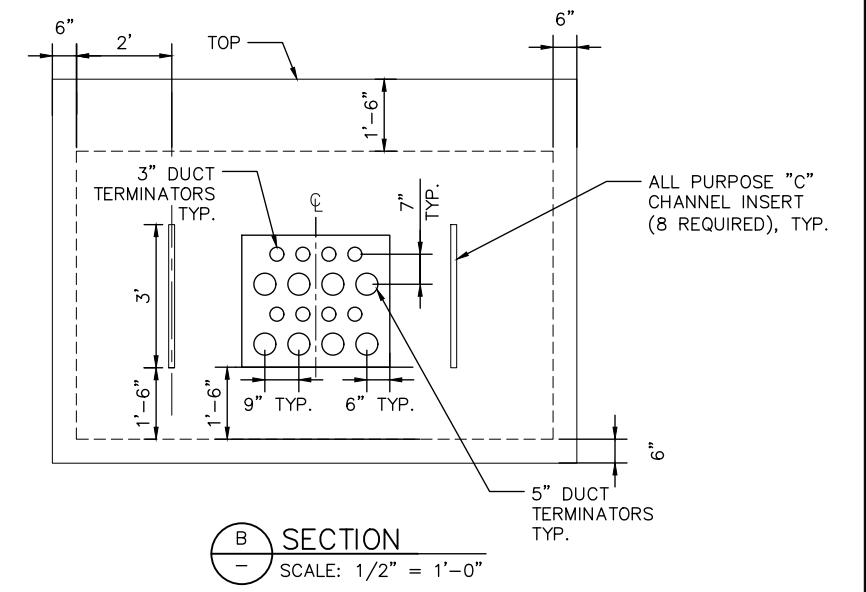
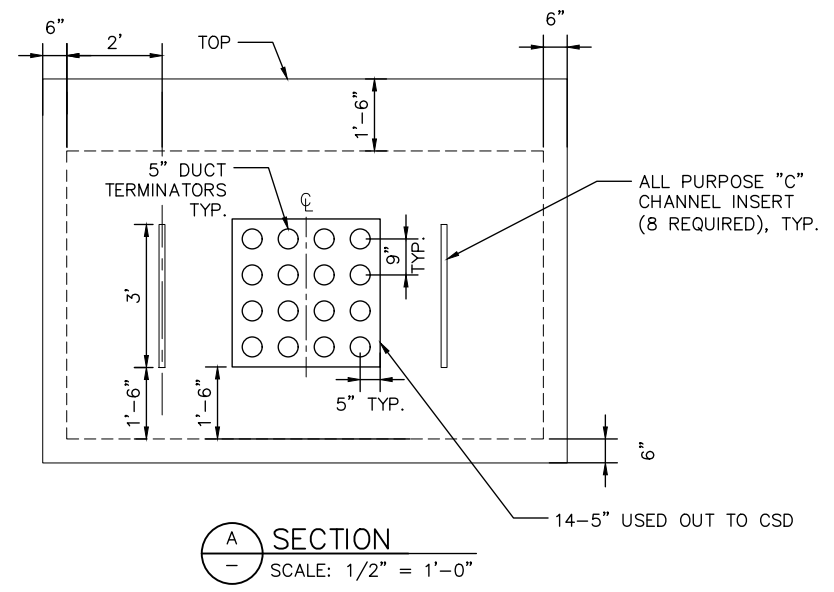
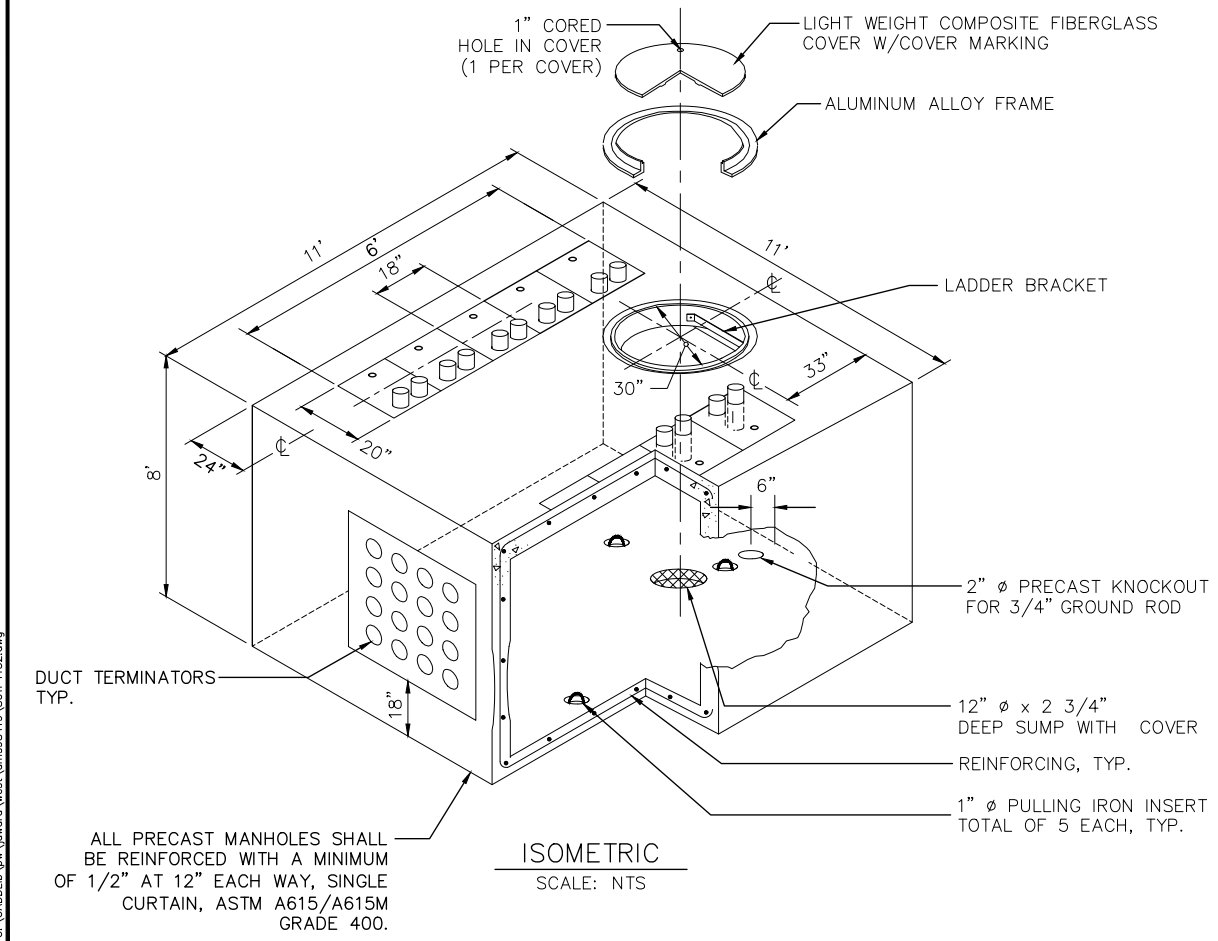
EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT TRACTION POWER TPSS #33 - POSITIVE MANHOLE DETAILS AND DISCONNECT SWITCH LAYOUT			SHEET OF DRAWING NO. PT131 REVISION A
PCA NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE	



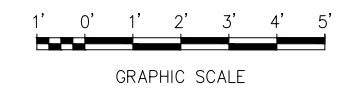


**NOTES:**

1. MANHOLE COVER SHALL BE 1" ABOVE MANHOLE TOP. MANHOLES SHALL BE AASHTO H20-44 TRAFFIC RATED.
2. CONTRACTOR SHALL SUBMIT MANHOLE SHOP DRAWINGS FOR THE ENGINEER'S APPROVAL.
3. TWO SIDES OF THE MANHOLE SHALL BE PROVIDED WITH DUCT TERMINATORS SUITABLE FOR CONDUIT SIZES INDICATED AND HARDWARE AS SHOWN IN SECTIONS A AND B. THE SIDE CLOSEST TO THE TPSS SHALL BE SECTION B.
4. MANHOLE FLOOR TO SLOPE TOWARD SUMP. CENTERLINE OF SUMP TO BE IN LINE WITH VERTICAL CENTERLINE OF THE MANHOLE COVER.
5. "C" CHANNEL INSERTS SHALL BE UNISTRUT P3257A OR APPROVED EQUAL.
6. CONTRACTOR SHALL PROVIDE LADDER BRACKET AND A GALVANIZED STEEL LADDER, EXTENDING FROM MANHOLE OPENING TO FLOOR. LADDER BRACKET SHALL BE INSTALLED PARALLEL AND CLOSEST TO THE NEAREST WALL. GALVANIZED STEEL LADDER SHALL BE 12" WIDE WITH RUNS TO MEET A 300 LBS WEIGHT REQUIREMENT.
7. MANHOLE COVERS SHALL MEET AASHTO H20 LOAD REQUIREMENTS. THE COVERS SHALL BE ERGONOMICALLY SAFE, AND SHALL MEET FEDERAL HEALTH AND SAFETY RECOMMENDATIONS. THE FRAME SHALL BE ALUMINUM ALLOY, AND SHALL INCORPORATE A PHYSICAL WATERCHECK. A STAINLESS STEEL HANDLE SHALL BE PROVIDED FOR EASY OPERATION OF THE COVER.
8. 3/4" X 10'-0" COPPER GROUND ROD SHALL BE INSTALLED WHERE SHOWN. MANHOLE REBAR, CABLE RACKS, LADDER BRACKET, AND COVER FRAME SHALL BE GROUNDED WITH #4 AWG CU.
9. 1/2" CHAMFER ALL EXPOSED MANHOLE EDGES.
10. FOR ALL POSITIVE AND NEGATIVE MANHOLES, INSTALL ONE CABLE RACK PER INSERT. CABLE RACK LENGTH SHALL BE SUITABLE FOR THE APPLICATION. SEE PT133 FOR CABLE RACK DETAILS.
11. ALL CONDUITS SHALL ENTER MANHOLE WALLS AT 90° TO WALL.
12. ALL CONDUIT SLEEVES SHALL PROTRUDE 6" ABOVE MANHOLE TOP SURFACE. PROTECT CONDUIT STUB-UPS FROM DAMAGE DURING POSITIONING OF THE DISCONNECT SWITCHES.
13. CONTRACTOR TO VERIFY DISCONNECT SWITCH ASSEMBLY FOOTPRINT AND CONDUIT PENETRATIONS WITH THE DISCONNECT SWITCH SUPPLIER.
14. FOR SWITCH LAYOUT AND CABLE ARRANGEMENT FOR DISCONNECT SWITCHES, REFER TO PT130
15. THIS DRAWING IS APPLICABLE TO TPSS #34 ONLY.
16. SEE DRAWING PT133 FOR TYPICAL INSTALLATION DETAILS.
17. TOP OF MANHOLE SHALL BE FLUSH WITH FINISHED GRADE.

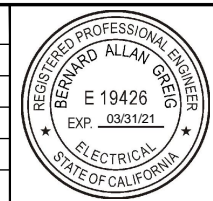


**TPSS #34 - POSITIVE MANHOLE AND DISCONNECT SWITCH LAYOUT**



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NO.	DATE	REVISIONS
A	06/20	95% SUBMITTAL SET



**HNTB** HNTB Corporation  
 Engineers Architects Planners  
 1732 North First Street, Suite 400  
 San Jose, CA 95112  
 Tel (408) 451-7300  
 Fax (408) 451-6942

DESIGNED: J. WARD  
 CHECKED: P. LLOYD  
 DRAWN: J. WARD  
 CADD FILE NAME: 801PT132.dwg

**Santa Clara Valley Transportation Authority**

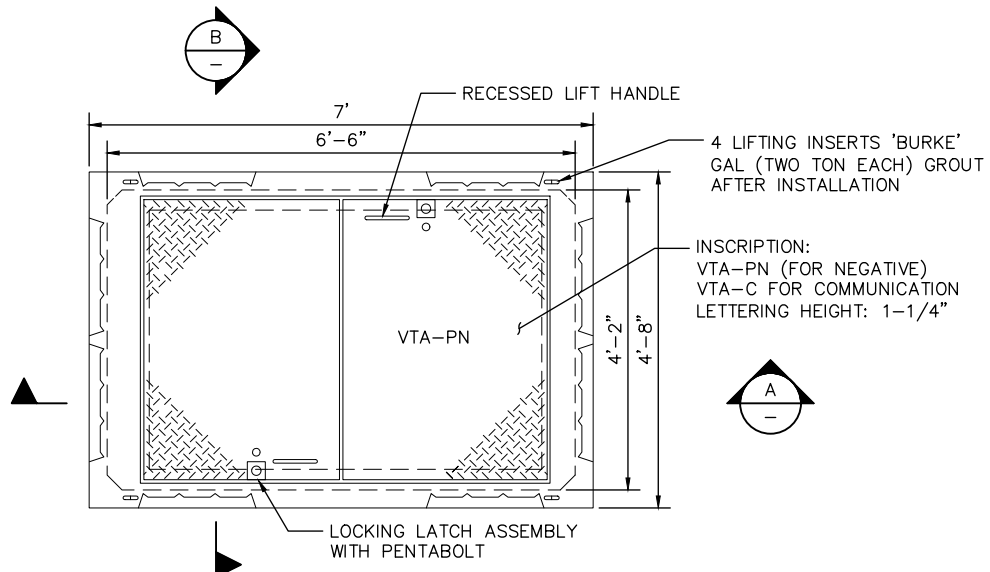
**BKF** 100+ YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 06/22/20  
 SUBMITTAL DATE: 06/29/20  
 SCALE: AS NOTED  
 BOARD APPROVAL DATE:

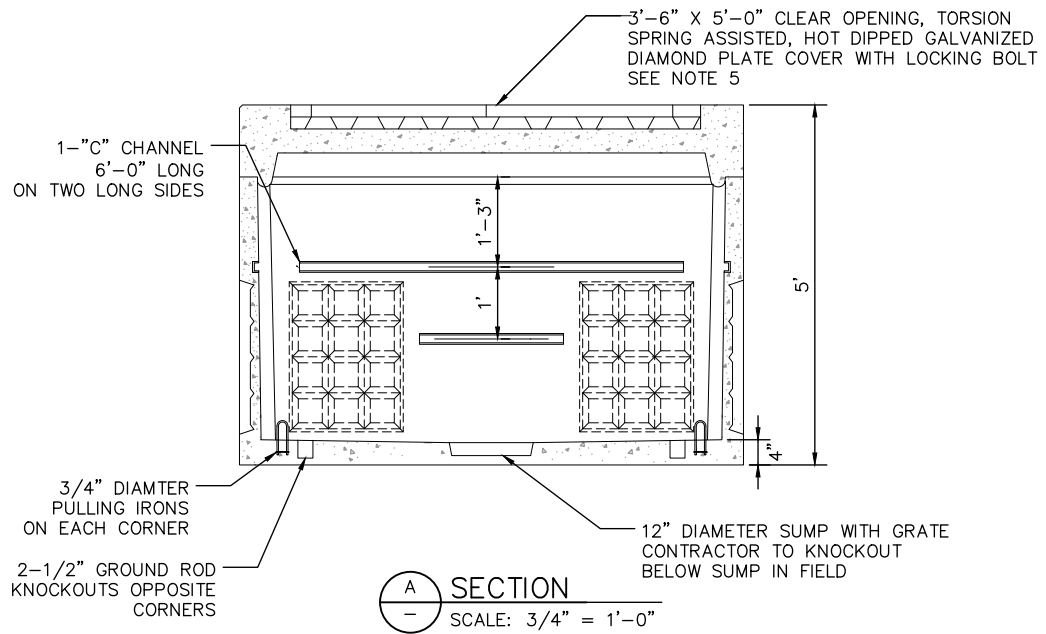
EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 TRACTION POWER  
 TPSS #34 - POSITIVE MANHOLE DETAILS  
 AND DISCONNECT SWITCH LAYOUT

SHEET OF: PT132  
 DRAWING NO.: PT132  
 REVISION: A

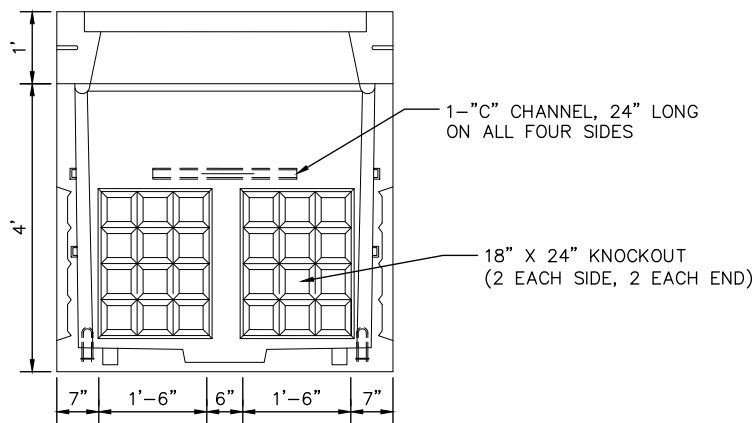
PCA NO.: 000  
 CONTRACT NO.: C801  
 FILE LOCATION: PROJECTWISE



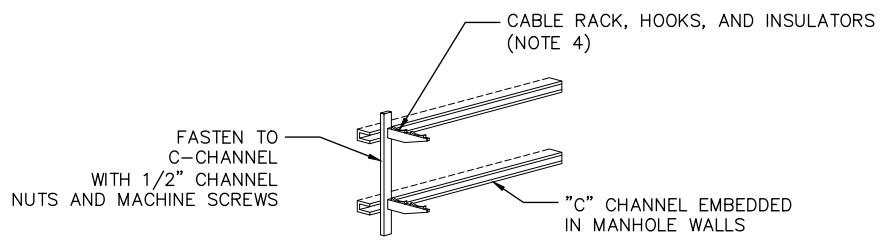
PLAN  
SCALE: 3/4" = 1'-0"



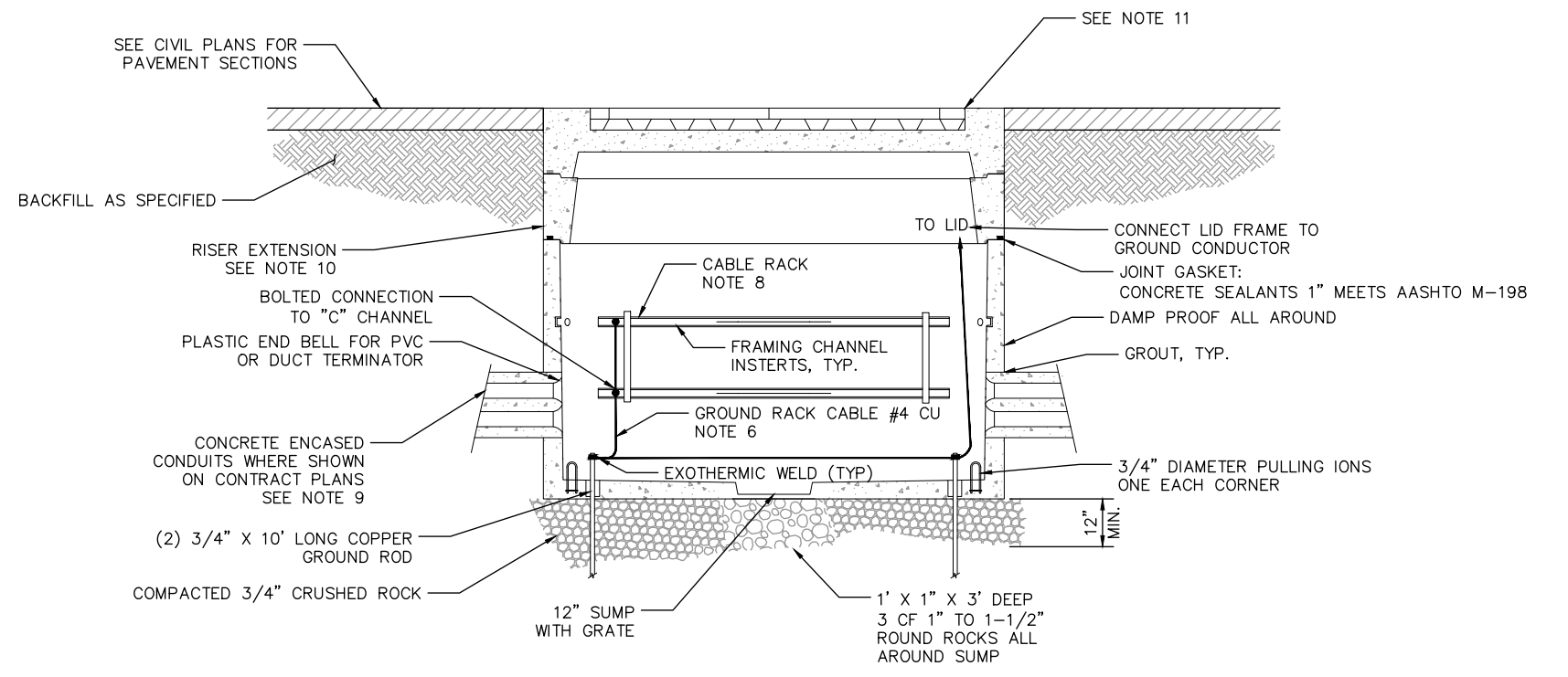
SECTION A  
SCALE: 3/4" = 1'-0"



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



TYPICAL CABLE SUPPORT FOR PULLBOX  
SCALE: NTS



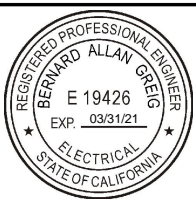
TYPICAL PRECAST PULLBOX INSTALLATION  
SCALE: 3/4" = 1'-0"

- NOTES:
1. MANHOLES AND PULLBOXES SHALL BE AASHTO H20-44 TRAFFIC RATED.
  2. CONTRACTOR SHALL SUBMIT MANHOLE SHOP DRAWINGS FOR THE ENGINEER'S APPROVAL.
  3. MANHOLE FLOOR TO SLOPE TOWARD SUMP. CENTERLINE OF SUMP TO BE IN LINE WITH VERTICAL CENTERLINE OF THE MANHOLE COVER.
  4. "C" CHANNEL INSERTS SHALL BE UNISTRUT P3257A OR APPROVED EQUAL.
  5. MANHOLE AND PULLBOX COVERS SHALL MEET AASHTO H20 LOAD REQUIREMENTS.
  6. 3/4" X 10'-0" COPPER GROUND ROD SHALL BE INSTALLED WHERE SHOWN. MANHOLE REBAR, CABLE RACKS, AND COVER FRAME SHALL BE GROUNDED WITH #4 AWG CU.
  7. 1/2" CHAMFER ALL EXPOSED MANHOLE EDGES.
  8. FOR ALL POSITIVE AND NEGATIVE MANHOLES, INSTALL ONE CABLE RACK PER INSERT. CABLE RACK LENGTH SHALL BE SUITABLE FOR THE APPLICATION.
  9. ALL CONDUITS SHALL ENTER MANHOLE/PULLBOX WALLS AT 90° TO WALL.
  10. USE RISER EXTENSIONS AS REQUIRED TO MEET FINAL ELEVATION.
  11. INSTALL PULLBOX LID FLUSH WITH ASPHALT OR CONCRETE.



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NO.	DATE	REVISIONS
A	06/20	95% SUBMITTAL SET



**HNTB** HNTB Corporation  
Engineers Architects Planners  
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San Jose, CA 95112  
Tel (408) 451-7300  
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DESIGNED: J. WARD  
CHECKED: P. LLOYD  
DRAWN: J. WARD  
CADD FILE NAME: 801PT133.dwg

**Santa Clara Valley Transportation Authority**

**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 06/22/20  
SUBMITTAL DATE: 06/29/20  
SCALE: AS NOTED  
BOARD APPROVAL DATE:

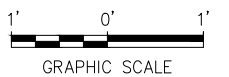
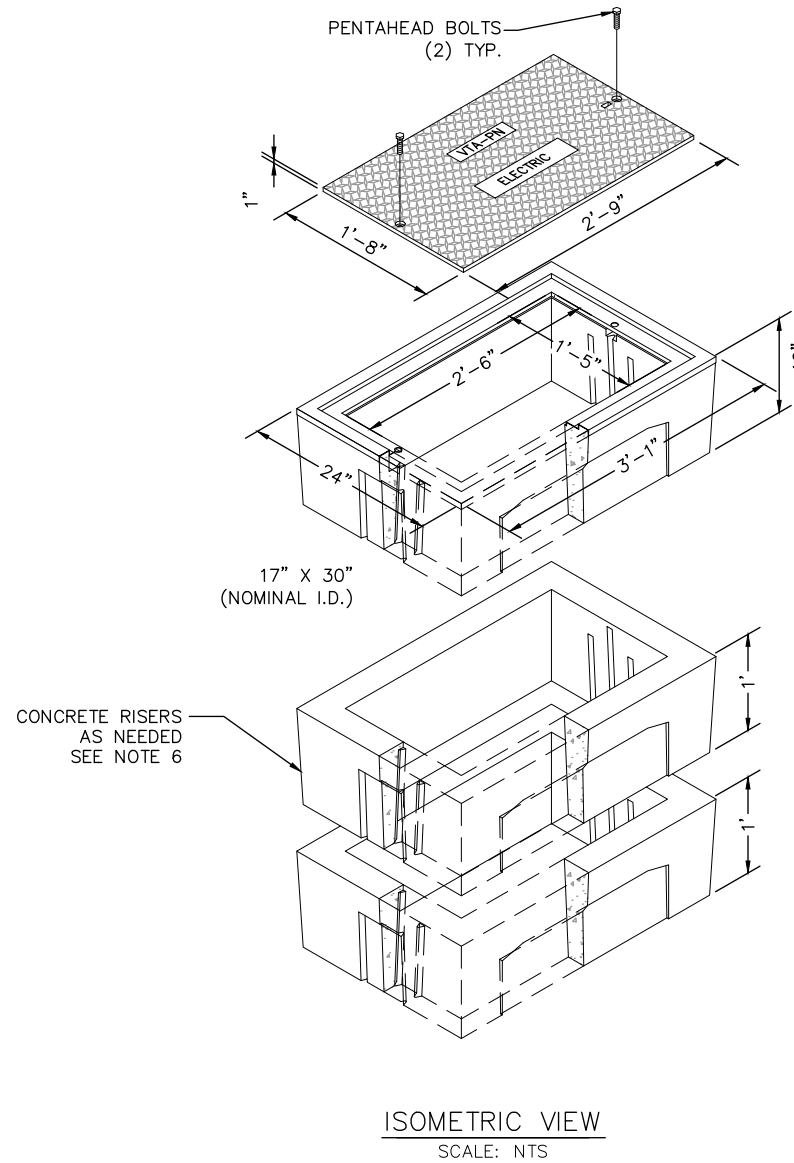
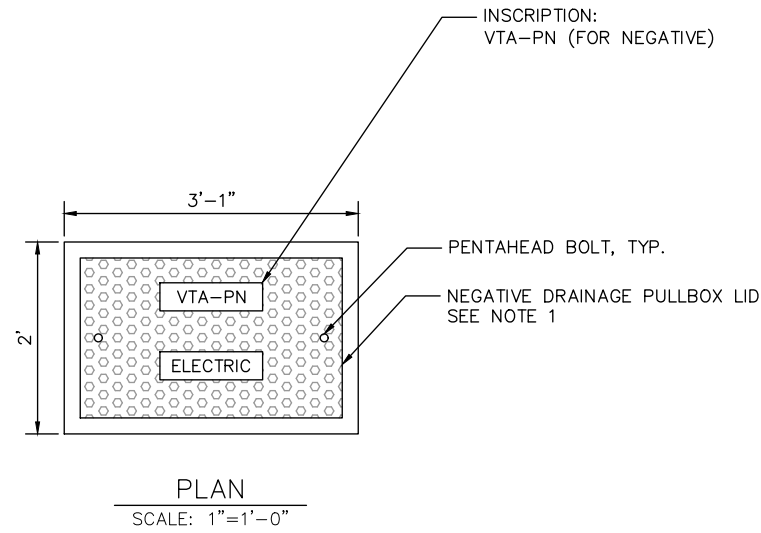
EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
TRACTION POWER  
NEGATIVE AND COMMUNICATIONS  
PULLBOX DETAILS

PLA NO: 000  
CONTRACT NO: C801  
FILE LOCATION: PROJECTWISE

SHEET OF  
DRAWING NO: PT133  
REVISION: A

**NOTES:**

1. PULLBOXES SHALL BE AASHTO H20-44 TRAFFIC RATED.
2. CONTRACTOR SHALL SUBMIT MANHOLE SHOP DRAWINGS FOR THE ENGINEER'S APPROVAL.
3. PULLBOX COVERS SHALL MEET AASHTO H20 LOAD REQUIREMENTS.
4. 1/2" CHAMFER ALL EXPOSED EDGES.
5. ALL CONDUITS SHALL ENTER MANHOLE/PULLBOX WALLS AT 90° TO WALL.
6. USE RISER EXTENSIONS AS REQUIRED TO MEET FINAL ELEVATION.
7. INSTALL PULLBOX LID FLUSH WITH ASPHALT OR CONCRETE.



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NO.	DATE	REVISIONS
A	06/20	95% SUBMITTAL SET



<b>HNTB</b> HNTB Corporation Engineers Architects Planners 1732 North First Street, Suite 400 San Jose, CA 95112 Tel (408) 451-7300 Fax (408) 451-6942	
DESIGNED J. WARD	CHECKED P. LLOYD
DRAWN J. WARD	CADD FILE NAME 801PT134.dwg



<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE 06/22/20	SCALE AS NOTED
SUBMITTAL DATE 06/29/20	BOARD APPROVAL DATE

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT TRACTION POWER NEGATIVE DRAINAGE PULLBOX DETAILS			SHEET OF DRAWING NO. PT134 REVISION A
PCA NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE	

CABLE DESIGNATION	CABLE TYPE	CONDUCTOR MATERIAL	CABLE SIZE	CABLE INSULATION	CONDUIT QTY	CONDUIT SIZE (IN)	CONDUIT TYPE	FROM	TO	APPROX ROUTE LENGTH (FT)	FUNCTION	COMMENTS
P-3301	3-1/C	CU	500 KCML	2000V	2	5"	PVC	TPSS#33 DC FEEDER BKR F1	POSITIVE MH	25	POSITIVE FEED	1 USED, 1 SPARE CONDUIT
					---	---	---	POSITIVE MH	DISCONNECT SW 33D1	10	POSITIVE FEED	IN MH
I-3301	1-4/C	CU	#14 AWG	2000V	1	3"	PVC	TPSS#33 DC FEEDER BKR F1	POSITIVE MH	25	INTERLOCK DISC SWITCH/FEEDER BREAKER	
					---	---	---	POSITIVE MH	DISCONNECT SW 33D1	10	INTERLOCK DISC SWITCH/FEEDER BREAKER	IN MH
P-SB2833N	3-1/C	CU	500 KCML	2000V	---	---	---	DISCONNECT SW 33D1	POSITIVE MH	10	POSITIVE FEEDER SB2833 FEEDING NORTH	IN MH
					2	5"	PVC	POSITIVE MH	POSITIVE FEEDER VAULT	75	POSITIVE FEEDER SB2833 FEEDING NORTH	CABLE IN CSD CONDUIT DESIGNATED "1", SPARE CSD CONDUIT DESIGNATED "2"
					2	5"	PVC	POSITIVE FEEDER VAULT	OCS FEEDER POLE STA 1024+27	1400	POSITIVE FEEDER SB2833 FEEDING NORTH	CABLE IN CSD CONDUIT DESIGNATED "1", SPARE CSD CONDUIT DESIGNATED "2"
					---	---	---	OCS FEEDER POLE STA 1024+27	OCS CONNECTION	20	POSITIVE FEEDER SB2833 FEEDING NORTH	IN FEEDER POLE
P-3302	3-1/C	CU	500 KCML	2000V	2	5"	PVC	TPSS#33 DC FEEDER BKR F2	POSITIVE MH	25	POSITIVE FEED	1 USED, 1 SPARE CONDUIT
					---	---	---	POSITIVE MH	DISCONNECT SW 33D2	10	POSITIVE FEED	IN MH
I-3302	1-4/C	CU	#14 AWG	2000V	1	3"	PVC	TPSS#33 DC FEEDER BKR F2	POSITIVE MH	25	INTERLOCK DISC SWITCH/FEEDER BREAKER	
					---	---	---	POSITIVE MH	DISCONNECT SW 33D2	10	INTERLOCK DISC SWITCH/FEEDER BREAKER	IN MH
P-NB2833N	3-1/C	CU	500 KCML	2000V	---	---	---	DISCONNECT SW 33D2	POSITIVE MH	10	POSITIVE FEEDER NB2833 FEEDING NORTH	IN MH
					2	5"	PVC	POSITIVE MH	POSITIVE FEEDER VAULT	75	POSITIVE FEEDER NB2833 FEEDING NORTH	CABLE IN CSD CONDUIT DESIGNATED "1", SPARE CSD CONDUIT DESIGNATED "2"
					2	5"	PVC	POSITIVE FEEDER VAULT	OCS FEEDER POLE STA 1026+32	1200	POSITIVE FEEDER NB2833 FEEDING NORTH	CABLE IN CSD CONDUIT DESIGNATED "1", SPARE CSD CONDUIT DESIGNATED "2"
					---	---	---	OCS FEEDER POLE STA 1026+32	OCS CONNECTION	20	POSITIVE FEEDER NB2833 FEEDING NORTH	IN FEEDER POLE
P-3303	3-1/C	CU	500 KCML	2000V	2	5"	PVC	TPSS#33 DC FEEDER BKR F3	POSITIVE MH	25	POSITIVE FEED	1 USED, 1 SPARE CONDUIT
					---	---	---	POSITIVE MH	DISCONNECT SW 33D3	10	POSITIVE FEED	IN MH
I-3303	1-4/C	CU	#14 AWG	2000V	1	3"	PVC	TPSS#33 DC FEEDER BKR F3	POSITIVE MH	25	INTERLOCK DISC SWITCH/FEEDER BREAKER	
					---	---	---	POSITIVE MH	DISCONNECT SW 33D3	10	INTERLOCK DISC SWITCH/FEEDER BREAKER	IN MH
P-SB3334S	3-1/C	CU	500 KCML	2000V	---	---	---	DISCONNECT SW 33D3	POSITIVE MH	10	POSITIVE FEEDER SB3334 FEEDING SOUTH	IN MH
					2	5"	PVC	POSITIVE MH	POSITIVE FEEDER VAULT	75	POSITIVE FEEDER SB3334 FEEDING SOUTH	CABLE IN CSD CONDUIT DESIGNATED "1", SPARE CSD CONDUIT DESIGNATED "2"
					2	5"	PVC	POSITIVE FEEDER VAULT	OCS FEEDER POLE STA 1039+56	175	POSITIVE FEEDER SB3334 FEEDING SOUTH	CABLE IN CSD CONDUIT DESIGNATED "1", SPARE CSD CONDUIT DESIGNATED "2"
					---	---	---	OCS FEEDER POLE STA 1039+56	OCS CONNECTION	20	POSITIVE FEEDER SB3334 FEEDING SOUTH	IN FEEDER POLE
P-3304	3-1/C	CU	500 KCML	2000V	2	5"	PVC	TPSS#33 DC FEEDER BKR F4	POSITIVE MH	25	POSITIVE FEED	1 USED, 1 SPARE CONDUIT
					---	---	---	POSITIVE MH	DISCONNECT SW 33D4	10	POSITIVE FEED	IN MH
I-3304	1-4/C	CU	#14 AWG	2000V	1	3"	PVC	TPSS#33 DC FEEDER BKR F4	POSITIVE MH	25	INTERLOCK DISC SWITCH/FEEDER BREAKER	
					---	---	---	POSITIVE MH	DISCONNECT SW 33D4	10	INTERLOCK DISC SWITCH/FEEDER BREAKER	IN MH

**NOTES:**

- CONTRACTOR SHALL OBTAIN FROM VTA THE LATEST CSD DRAWINGS IN ORDER TO DETERMINE CABLE PULLING INFORMATION SUCH AS ROUTING GEOMETRY AND PRECISE LOCATIONS OF PULLBOXES AND CONDUIT STUBUPS. CONTRACTOR SHALL BE RESPONSIBLE ALSO FOR DETERMINING THE CABLE REEL LENGTHS AND CUT LENGTHS, AND SHALL CONFIRM THESE BY FIELD INSPECTION OF THE UNDERGROUND RACEWAY SYSTEM PRIOR TO ORDERING THE CABLE.
- CABLE AND CONDUIT LENGTHS SHOWN ON THIS DRAWING ARE APPROXIMATE.
- EXISTING NEGATIVE RETURN CABLES FOR TPSS #28 SB TRACK SHALL BE CUT IN PB 10+58.2 PRIOR TO CIVIL DEMO. SUFFICIENT LENGTH SHALL REMAIN FOR SPLICING WITHIN THE PULLBOX. TEMPORARY CABLES SHALL BE INSTALLED FROM PB 10+58.2 TO SB TRACK 10+45.2 (TERMINATION BY S808). AFTER INSTALLATION OF NB TRACK, NEW CABLES SHALL BE INSTALLED IN THE NEW CSD FROM PB 10+58.2 TO SB TRACK 11+20 AND SPLICED TO THE EXISTING CABLES IN PB 10+58.2. REMOVE TEMPORARY CABLES AT 10+45.2.
- REFER TO CSD PLANS FOR CONDUIT ROUTING OUTSIDE OF THE TPSS.

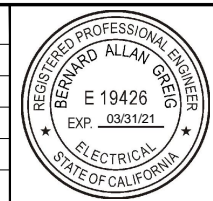
SEE NOTE 4

SEE NOTE 4

SEE NOTE 4

Jun 22, 2020 - 4:00pm C:\CAD\lib\p\ward\west\mises419\801PT201.dwg

NO.	DATE	REVISIONS
A	06/20	95% SUBMITTAL SET



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DRAWN: J. WARD  
CADD FILE NAME: 801PT201.dwg

**Santa Clara Valley Transportation Authority**

**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 06/22/20  
SCALE: NTS  
SUBMITTAL DATE: 06/29/20  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
SUBSTATION TPSS #33  
CABLE AND CONDUIT SCHEDULE  
SHEET 1 OF 2

PCA NO.: 000  
CONTRACT NO.: C801  
FILE LOCATION: PROJECTWISE

SHEET OF: PT201  
REVISION: A

CABLE DESIGNATION	CABLE TYPE	CONDUCTOR MATERIAL	CABLE SIZE	CABLE INSULATION	CONDUIT QTY	CONDUIT SIZE (IN)	CONDUIT TYPE	FROM	TO	APPROX ROUTE LENGTH (FT)	FUNCTION	COMMENTS
P-NB3334S	3-1/C	CU	500 KCML	2000V	---	---	---	DISCONNECT SW 33D4	POSITIVE MH	10	POSITIVE FEEDER NB3334 FEEDING SOUTH	IN MH
					2	5"	PVC	POSITIVE MH	POSITIVE FEEDER VAULT	75	POSITIVE FEEDER NB3334 FEEDING SOUTH	CABLE IN CSD CONDUIT DESIGNATED "1", SPARE CSD CONDUIT DESIGNATED "2"
					2	5"	PVC	POSITIVE FEEDER VAULT	OCS FEEDER POLE STA 1038+16	50	POSITIVE FEEDER NB3334 FEEDING SOUTH	CABLE IN CSD CONDUIT DESIGNATED "1", SPARE CSD CONDUIT DESIGNATED "2"
					---	---	---	OCS FEEDER POLE STA 1038+16	OCS CONNECTION	20	POSITIVE FEEDER NB3334 FEEDING SOUTH	IN FEEDER POLE
NSB-33	3-1/C	CU	500 KCML	2000V	2	5"	PVC	TPSS#33 DC NEGATIVE BUS	NEGATIVE PB	30	NEGATIVE RETURN SB TRACK	1 USED, 1 SPARE CONDUIT
					2	5"	PVC	NEGATIVE PB	NEGATIVE RETURN VAULT	75	NEGATIVE RETURN SB TRACK	CABLE IN CSD CONDUIT DESIGNATED "3", SPARE CSD CONDUIT DESIGNATED "4"
					2	5"	PVC	NEGATIVE RETURN VAULT	IMPEDANCE BOND STA 1038+90	75	NEGATIVE RETURN SB TRACK	CABLE IN CSD CONDUIT DESIGNATED "3", SPARE CSD CONDUIT DESIGNATED "4"
NNB-33	3-1/C	CU	500 KCML	2000V	2	5"	PVC	TPSS#33 DC NEGATIVE BUS	NEGATIVE PB	30	NEGATIVE RETURN NB TRACK	1 USED, 1 SPARE CONDUIT
					2	5"	PVC	NEGATIVE PB	NEGATIVE RETURN VAULT	75	NEGATIVE RETURN NB TRACK	CABLE IN CSD CONDUIT DESIGNATED "3", SPARE CSD CONDUIT DESIGNATED "4"
					2	5"	PVC	NEGATIVE RETURN VAULT	IMPEDANCE BOND STA 1038+90	75	NEGATIVE RETURN NB TRACK	CABLE IN CSD CONDUIT DESIGNATED "3", SPARE CSD CONDUIT DESIGNATED "4"
ND1-33	1-1/C	CU	500 KCML	2000V	2	3"	PVC	TPSS#33 NEGATIVE DRAIN PANEL	NEGATIVE DRAIN PB	50	NEGATIVE DRAINAGE	1 USED, 1 SPARE CONDUIT
ND2-33	1-1/C	CU	500 KCML	2000V	2	3"	PVC	TPSS#33 NEGATIVE DRAIN PANEL	NEGATIVE DRAIN PB	50	NEGATIVE DRAINAGE	1 USED, 1 SPARE CONDUIT
NR-33	2-1/C	CU	#6 AWG	2000V	2	3"	PVC	TPSS#33 DC NEGATIVE BUS	POSITIVE MH	25	NEGATIVE REFERENCE FOR VOLTAGE SENSING	ONE CONDUCTOR TO DS1/DS3, ONE CONDUCTOR TO DS2/DS4. (1 USED, 1 SPARE CONDUIT)
					---	---	---	POSITIVE MH	DISC SWITCHES	10	NEGATIVE REFERENCE FOR VOLTAGE SENSING	ONE CONDUCTOR TO DS1/DS3, ONE CONDUCTOR TO DS2/DS4
SDS-33	2-19/C	CU	#14 AWG	2000V	2	3"	PVC	SCADA INTERFACE CABNET	POSITIVE MH	40	SCADA INDICATION DISC SWITCHES	ONE CABLE TO DS1/DS3, ONE CABLE TO DS2/DS4. (1 USED, 1 SPARE CONDUIT)
					---	---	---	POSITIVE MH	DISC SWITCHES	10	SCADA INDICATION DISC SWITCHES	ONE CABLE TO DS1/DS3, ONE CABLE TO DS2/DS4.
S-33	*	*	*	*	2	4"	PVC	SCADA INTERFACE CABNET	COMM PB	45	SCADA CONTROL	* SEE COMM COMMS DRAWINGS FOR CIRCUIT REQUIREMENTS. (1 USED, 1 SPARE CONDUIT).
TT-33	*	*	*	*	2	4"	PVC	TRANSFER TRIP CABNET	COMM PB	50	TRANSFER TRIP ADJACENT TPSS	* SEE COMM COMMS DRAWINGS FOR CIRCUIT REQUIREMENTS. (1 USED, 1 SPARE CONDUIT).
UT-33	TBD	TBD	TBD	TBD	2	6"	PVC	TPSS#33 INCOMING UTILITY CUBICLE	PG&E MH	80	PG&E HIGH VOLTAGE SERVICE	CABLE BY PG&E. (1 USED, 1 SPARE CONDUIT).

NOTES:

- CONTRACTOR SHALL OBTAIN FROM VTA THE LATEST CSD DRAWINGS IN ORDER TO DETERMINE CABLE PULLING INFORMATION SUCH AS ROUTING GEOMETRY AND PRECISE LOCATIONS OF PULLBOXES AND CONDUIT STUBUPS. CONTRACTOR SHALL BE RESPONSIBLE ALSO FOR DETERMINING THE CABLE REEL LENGTHS AND CUT LENGTHS, AND SHALL CONFIRM THESE BY FIELD INSPECTION OF THE UNDERGROUND RACEWAY SYSTEM PRIOR TO ORDERING THE CABLE.
- CABLE AND CONDUIT LENGTHS SHOWN ON THIS DRAWING ARE APPROXIMATE.
- EXISTING NEGATIVE RETURN CABLES FOR TPSS #28 SB TRACK SHALL BE CUT IN PB 10+58.2 PRIOR TO CIVIL DEMO. SUFFICIENT LENGTH SHALL REMAIN FOR SPLICING WITHIN THE PULLBOX. TEMPORARY CABLES SHALL BE INSTALLED FROM PB 10+58.2 TO SB TRACK 10+45.2 (TERMINATION BY S808). AFTER INSTALLATION OF NB TRACK, NEW CABLES SHALL BE INSTALLED IN THE NEW CSD FROM PB 10+58.2 TO SB TRACK 11+20 AND SPLICED TO THE EXISTING CABLES IN PB 10+58.2. REMOVE TEMPORARY CABLES AT 10+45.2.
- REFER TO CSD PLANS FOR CONDUIT ROUTING OUTSIDE OF THE TPSS.

SEE NOTE 4

SEE NOTE 4

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 CADD FILE NAME: 801PT202.dwg



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CADD FILE DATE: 06/22/20  
 SUBMITTAL DATE: 06/29/20  
 SCALE: NTS  
 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 SUBSTATION TPSS #33  
 CABLE AND CONDUIT SCHEDULE  
 SHEET 2 OF 2

SHEET OF: PT202  
 REVISION: A

PCA NO.: 000  
 CONTRACT NO.: C801  
 FILE LOCATION: PROJECTWISE

CABLE DESIGNATION	CABLE TYPE	CONDUCTOR MATERIAL	CABLE SIZE	CABLE INSULATION	CONDUIT QTY	CONDUIT SIZE (IN)	CONDUIT TYPE	FROM	TO	APPROX ROUTE LENGTH (FT)	FUNCTION	COMMENTS
P-3401	3-1/C	CU	500 KCML	2000V	2	5"	PVC	TPSS#34 DC FEEDER BKR F1	POSITIVE MH	25	POSITIVE FEED	1 USED, 1 SPARE CONDUIT
					---	---	---	POSITIVE MH	DISCONNECT SW 34D1	10	POSITIVE FEED	IN MH
I-3401	1-4/C	CU	#14 AWG	2000V	1	3"	PVC	TPSS#34 DC FEEDER BKR F1	POSITIVE MH	25	INTERLOCK DISC SWITCH/FEEDER BREAKER	
					---	---	---	POSITIVE MH	DISCONNECT SW 34D1	10	INTERLOCK DISC SWITCH/FEEDER BREAKER	IN MH
P-SB3334N	3-1/C	CU	500 KCML	2000V	---	---	---	DISCONNECT SW 34D1	POSITIVE MH	10	POSITIVE FEEDER SB3334 FEEDING NORTH	IN MH
					2	5"	PVC	POSITIVE MH	OCS FEEDER POLE STA 1070+25	1325	POSITIVE FEEDER SB3334 FEEDING NORTH	CABLE IN CSD CONDUIT DESIGNATED "1", SPARE CSD CONDUIT DESIGNATED "2"
					---	---	---	OCS FEEDER POLE STA 1024+27	OCS CONNECTION	20	POSITIVE FEEDER SB3334 FEEDING NORTH	IN FEEDER POLE
P-3402	3-1/C	CU	500 KCML	2000V	2	5"	PVC	TPSS#34 DC FEEDER BKR F2	POSITIVE MH	25	POSITIVE FEED	1 USED, 1 SPARE CONDUIT
					---	---	---	POSITIVE MH	DISCONNECT SW 34D2	10	POSITIVE FEED	IN MH
I-3402	1-4/C	CU	#14 AWG	2000V	1	3"	PVC	TPSS#34 DC FEEDER BKR F2	POSITIVE MH	25	INTERLOCK DISC SWITCH/FEEDER BREAKER	
					---	---	---	POSITIVE MH	DISCONNECT SW 34D2	10	INTERLOCK DISC SWITCH/FEEDER BREAKER	IN MH
P-NB3334N	3-1/C	CU	500 KCML	2000V	---	---	---	DISCONNECT SW 34D2	POSITIVE MH	10	POSITIVE FEEDER NB3334 FEEDING NORTH	IN MH
					2	5"	PVC	POSITIVE MH	OCS FEEDER POLE STA 1071+76	1175	POSITIVE FEEDER NB3334 FEEDING NORTH	CABLE IN CSD CONDUIT DESIGNATED "1", SPARE CSD CONDUIT DESIGNATED "2"
					---	---	---	OCS FEEDER POLE STA 1026+32	OCS CONNECTION	20	POSITIVE FEEDER NB3334 FEEDING NORTH	IN FEEDER POLE
P-3403	3-1/C	CU	500 KCML	2000V	2	5"	PVC	TPSS#34 DC FEEDER BKR F3	POSITIVE MH	20	POSITIVE FEED	1 USED, 1 SPARE CONDUIT
					---	---	---	POSITIVE MH	DISCONNECT SW 34D3	10	POSITIVE FEED	IN MH
I-3403	1-4/C	CU	#14 AWG	2000V	1	3"	PVC	TPSS#34 DC FEEDER BKR F3	POSITIVE MH	20	INTERLOCK DISC SWITCH/FEEDER BREAKER	
					---	---	---	POSITIVE MH	DISCONNECT SW 34D3	10	INTERLOCK DISC SWITCH/FEEDER BREAKER	IN MH
P-SB3434	3-1/C	CU	500 KCML	2000V	---	---	---	DISCONNECT SW 34D3	POSITIVE MH	10	POSITIVE FEEDER SB3334 FEEDING SOUTH	IN MH
					2	5"	PVC	POSITIVE MH	OCS FEEDER POLE STA 1093+31	1075	POSITIVE FEEDER SB3334 FEEDING SOUTH	CABLE IN CSD CONDUIT DESIGNATED "1", SPARE CSD CONDUIT DESIGNATED "2"
					---	---	---	OCS FEEDER POLE STA 1039+56	OCS CONNECTION	20	POSITIVE FEEDER SB3334 FEEDING SOUTH	IN FEEDER POLE
P-3404	3-1/C	CU	500 KCML	2000V	2	5"	PVC	TPSS#34 DC FEEDER BKR F4	POSITIVE MH	20	POSITIVE FEED	1 USED, 1 SPARE CONDUIT
					---	---	---	POSITIVE MH	DISCONNECT SW 34D4	10	POSITIVE FEED	IN MH
I-3404	1-4/C	CU	#14 AWG	2000V	1	3"	PVC	TPSS#34 DC FEEDER BKR F4	POSITIVE MH	20	INTERLOCK DISC SWITCH/FEEDER BREAKER	
					---	---	---	POSITIVE MH	DISCONNECT SW 34D4	10	INTERLOCK DISC SWITCH/FEEDER BREAKER	IN MH

NOTES:

- CONTRACTOR SHALL OBTAIN FROM VTA THE LATEST CSD DRAWINGS IN ORDER TO DETERMINE CABLE PULLING INFORMATION SUCH AS ROUTING GEOMETRY AND PRECISE LOCATIONS OF PULLBOXES AND CONDUIT STUBUPS. CONTRACTOR SHALL BE RESPONSIBLE ALSO FOR DETERMINING THE CABLE REEL LENGTHS AND CUT LENGTHS, AND SHALL CONFIRM THESE BY FIELD INSPECTION OF THE UNDERGROUND RACEWAY SYSTEM PRIOR TO ORDERING THE CABLE.
- CABLE AND CONDUIT LENGTHS SHOWN ON THIS DRAWING ARE APPROXIMATE.
- REFER TO CSD PLANS FOR CONDUIT ROUTING OUTSIDE OF THE TPSS.

SEE NOTE 3

SEE NOTE 3

SEE NOTE 3

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SUBMITTED	
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APPROVED	
CADD FILE DATE	SCALE
06/22/20	NTS
SUBMITTAL DATE	BOARD APPROVAL DATE
06/29/20	

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT SUBSTATION TPSS #34 CABLE AND CONDUIT SCHEDULE SHEET 1 OF 2		
PCA NO.	CONTRACT NO.	FILE LOCATION
000	C801	PROJECTWISE

SHEET OF
DRAWING NO.
PT203
REVISION
A

CABLE DESIGNATION	CABLE TYPE	CONDUCTOR MATERIAL	CABLE SIZE	CABLE INSULATION	CONDUIT QTY	CONDUIT SIZE (IN)	CONDUIT TYPE	FROM	TO	APPROX ROUTE LENGTH (FT)	FUNCTION	COMMENTS
P-NB3434	3-1/C	CU	500 KCML	2000V	---	---	---	DISCONNECT SW 34D4	POSITIVE MH	10	POSITIVE FEEDER NB3334 FEEDING NORTH	IN MH
					2	5"	PVC	POSITIVE MH	OCS FEEDER POLE STA 1093+31	1075	POSITIVE FEEDER NB3334 FEEDING NORTH	CABLE IN CSD CONDUIT DESIGNATED "1", SPARE CSD CONDUIT DESIGNATED "2"
					---	---	---	OCS FEEDER POLE STA 1038+16	OCS CONNECTION	20	POSITIVE FEEDER NB3334 FEEDING NORTH	IN FEEDER POLE
P-SB3434A	3-1/C	CU	500 KCML	2000V	---	---	---	DISCONNECT SW 34D11	POSITIVE MH	10	POSITIVE FEEDER SB3334 FEEDING SOUTH	IN MH
					2	5"	PVC	POSITIVE MH	OCS FEEDER POLE STA 1082+30	125	POSITIVE FEEDER SB3334 FEEDING SOUTH	CABLE IN CSD CONDUIT DESIGNATED "1", SPARE CSD CONDUIT DESIGNATED "2"
					---	---	---	OCS FEEDER POLE STA 1038+16	OCS CONNECTION	20	POSITIVE FEEDER SB3334 FEEDING SOUTH	IN FEEDER POLE
P-NB3434A	3-1/C	CU	500 KCML	2000V	---	---	---	DISCONNECT SW 34D22	POSITIVE MH	10	POSITIVE FEEDER NB3334 FEEDING SOUTH	IN MH
					2	5"	PVC	POSITIVE MH	OCS FEEDER POLE STA 1082+30	125	POSITIVE FEEDER NB3334 FEEDING SOUTH	CABLE IN CSD CONDUIT DESIGNATED "1", SPARE CSD CONDUIT DESIGNATED "2"
					---	---	---	OCS FEEDER POLE STA 1038+16	OCS CONNECTION	20	POSITIVE FEEDER NB3334 FEEDING SOUTH	IN FEEDER POLE
P-T3434	3-1/C	CU	500 KCML	2000V	---	---	---	DISCONNECT SW 34D3T3	POSITIVE MH	10	POSITIVE FEEDER NB3334 FEEDING SOUTH	IN MH
					2	5"	PVC	POSITIVE MH	OCS FEEDER POLE STA 1091+46	900	POSITIVE FEEDER NB3334 FEEDING SOUTH	CABLE IN CSD CONDUIT DESIGNATED "1", SPARE CSD CONDUIT DESIGNATED "2"
					---	---	---	OCS FEEDER POLE STA 1038+16	OCS CONNECTION	20	POSITIVE FEEDER NB3334 FEEDING SOUTH	IN FEEDER POLE
NSB-34	3-1/C	CU	500 KCML	2000V	2	5"	PVC	TPSS#34 DC NEGATIVE BUS	NEGATIVE PB	30	NEGATIVE RETURN SB TRACK	1 USED, 1 SPARE CONDUIT
					2	5"	PVC	NEGATIVE PB	IMPEDANCE BOND STA 1082+63	75	NEGATIVE RETURN SB TRACK	CABLE IN CSD CONDUIT DESIGNATED "3", SPARE CSD CONDUIT DESIGNATED "4"
NNB-34	3-1/C	CU	500 KCML	2000V	2	5"	PVC	TPSS#34 DC NEGATIVE BUS	NEGATIVE PB	30	NEGATIVE RETURN NB TRACK	1 USED, 1 SPARE CONDUIT
					2	5"	PVC	NEGATIVE PB	IMPEDANCE BOND STA 1082+63	75	NEGATIVE RETURN NB TRACK	CABLE IN CSD CONDUIT DESIGNATED "3", SPARE CSD CONDUIT DESIGNATED "4"
ND1-34	1-1/C	CU	500 KCML	2000V	2	3"	PVC	TPSS#34 NEGATIVE DRAIN PANEL	NEGATIVE DRAIN PB	40	NEGATIVE DRAINAGE	1 USED, 1 SPARE CONDUIT
ND2-34	1-1/C	CU	500 KCML	2000V	2	3"	PVC	TPSS#34 NEGATIVE DRAIN PANEL	NEGATIVE DRAIN PB	40	NEGATIVE DRAINAGE	1 USED, 1 SPARE CONDUIT
NR-34	2-1/C	CU	#6 AWG	2000V	2	3"	PVC	TPSS#34 DC NEGATIVE BUS	POSITIVE MH	25	NEGATIVE REFERENCE FOR VOLTAGE SENSING	ONE CONDUCTOR TO DS1/DS3, ONE CONDUCTOR TO DS2/DS4. (1 USED, 1 SPARE CONDUIT)
					---	---	---	POSITIVE MH	DISC SWITCHES	10	NEGATIVE REFERENCE FOR VOLTAGE SENSING	ONE CONDUCTOR TO DS1/DS3, ONE CONDUCTOR TO DS2/DS4
SDS-34	2-19/C	CU	#14 AWG	2000V	2	3"	PVC	SCADA INTERFACE CABINET	POSITIVE MH	25	SCADA INDICATION DISC SWITCHES	ONE CABLE TO DS1/DS3, ONE CABLE TO DS2/DS4. (1 USED, 1 SPARE CONDUIT)
					---	---	---	POSITIVE MH	DISC SWITCHES	10	SCADA INDICATION DISC SWITCHES	ONE CABLE TO DS1/DS3, ONE CABLE TO DS2/DS4.
S-34	*	*	*	*	2	4"	PVC	SCADA INTERFACE CABINET	COMM PB	25	SCADA CONTROL	* SEE COMM COMMS DRAWINGS FOR CIRCUIT REQUIREMENTS. (1 USED, 1 SPARE CONDUIT).
TT-34	*	*	*	*	2	4"	PVC	TRANSFER TRIP CABINET	COMM PB	15	TRANSFER TRIP ADJACENT TPSS	* SEE COMM COMMS DRAWINGS FOR CIRCUIT REQUIREMENTS. (1 USED, 1 SPARE CONDUIT).
UT-34	TBD	TBD	TBD	TBD	2	6"	PVC	TPSS#34 INCOMING UTILITY CUBICLE	PG&E MH	150	PG&E HIGH VOLTAGE SERVICE	CABLE BY PG&E. (1 USED, 1 SPARE CONDUIT).

**NOTES:**

- CONTRACTOR SHALL OBTAIN FROM VTA THE LATEST CSD DRAWINGS IN ORDER TO DETERMINE CABLE PULLING INFORMATION SUCH AS ROUTING GEOMETRY AND PRECISE LOCATIONS OF PULLBOXES AND CONDUIT STUBUPS. CONTRACTOR SHALL BE RESPONSIBLE ALSO FOR DETERMINING THE CABLE REEL LENGTHS AND CUT LENGTHS, AND SHALL CONFIRM THESE BY FIELD INSPECTION OF THE UNDERGROUND RACEWAY SYSTEM PRIOR TO ORDERING THE CABLE.
- CABLE AND CONDUIT LENGTHS SHOWN ON THIS DRAWING ARE APPROXIMATE.
- REFER TO CSD PLANS FOR CONDUIT ROUTING OUTSIDE OF THE TPSS.

SEE NOTE 3

SEE NOTE 3

SEE NOTE 3

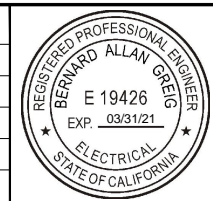
SEE NOTE 3

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**Santa Clara Valley Transportation Authority**

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CADD FILE DATE: 06/22/20  
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**EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 SUBSTATION TPSS #34  
 CABLE AND CONDUIT SCHEDULE  
 SHEET 2 OF 2**

SHEET OF: PT204  
 REVISION: A

PCA NO.: 000  
 CONTRACT NO.: C801  
 FILE LOCATION: PROJECTWISE

NOTES:

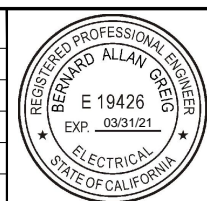
1. SEE TP300 FOR TPSS #33 SITE LAYOUT.
2. SEE PT111 FOR TPSS #33 DUCTBANK LAYOUT.
3. SEE PT130 FOR DISCONNECT SWITCH LAYOUT.
4. SEE PT131 FOR TPSS #33 POSITIVE MANHOLE DETAILS.
5. SEE PT132 FOR TPSS #34 POSITIVE MANHOLE DETAILS.
6. SEE PT133 FOR NEGATIVE AND COMMUNICATIONS PULLBOX DETAILS.
7. SEE PT134 FOR NEGATIVE DRAINAGE PULLBOX DETAILS.

TPSS #33 MANHOLE AND PULLBOX SCHEDULE					
MANHOLE / PULLBOX DESIGNATION	EXTERIOR DIMENSIONS	INTERIOR DIMENSIONS	EASTING	NORTHING	REFERENCE SHEETS
POSITIVE MANHOLE	11' X 11' X 8'	10' X 10' X 6'	TBD	TBD	PT111, PT130, PT131
NEGATIVE PULLBOX	4'-8" X 7' X 5'	4'-2" X 6'-6" X 4'	TBD	TBD	PT111, PT133
NEGATIVE DRAINAGE PULLBOX	3'-1" X 2' X TBD (BY CONTRACTOR)	2'-6" X 1'-5" X TBD (BY CONTRACTOR)	TBD	TBD	PT111, PT134
COMMUNICATIONS PULLBOX	4'-8" X 7' X 5'	4'-2" X 6'-6" X 4'	TBD	TBD	PT111, PT133

TPSS #34 MANHOLE AND PULLBOX SCHEDULE					
MANHOLE / PULLBOX DESIGNATION	EXTERIOR DIMENSIONS	INTERIOR DIMENSIONS	EASTING	NORTHING	REFERENCE SHEETS
POSITIVE MANHOLE	11' X 11' X 8'	10' X 10' X 6'	TBD	TBD	PT112, PT131, PT132
NEGATIVE PULLBOX	4'-8" X 7' X 5'	4'-2" X 6'-6" X 4'	TBD	TBD	PT112, PT133
NEGATIVE DRAINAGE PULLBOX	3'-1" X 2' X TBD (BY CONTRACTOR)	2'-6" X 1'-5" X TBD (BY CONTRACTOR)	TBD	TBD	PT112, PT134
COMMUNICATIONS PULLBOX	4'-8" X 7' X 5'	4'-2" X 6'-6" X 4'	TBD	TBD	PT112, PT133

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CADD FILE NAME: 801PT210.dwg



**BKF** 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

APPROVED

CADD FILE DATE: 06/22/20  
SUBMITTAL DATE: 06/29/20  
SCALE: NTS  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
TPSS #33 AND TPSS #34  
MANHOLE AND PULLBOX SCHEDULE

PCA NO.: 000  
CONTRACT NO.: C801  
FILE LOCATION: PROJECTWISE

SHEET	OF
DRAWING NO.	PT210
REVISION	A

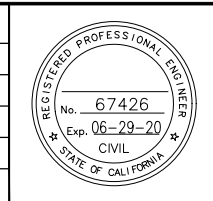




Joseph Cowlishaw Jun 23, 2020 - 10:10am C:\cadd\h\04\h\nt\ntb\_jeremy\basofas\west\smas8389\808GN018.dwg

LEGEND	
<b>ADC</b> ACCESS CONTROL – DOOR CONTACT	<b>XC</b> CROSSING CASE
<b>ACP</b> ACCESS CONTROL – CONTROL PANEL	<b>XH</b> CROSSING HOUSE
<b>ACR</b> ACCESS CONTROL – CARD READER	<b>DPP</b> DIGITAL PATCH PANEL
<b>EL</b> ACCESS CONTROL – ELECTRIC DOOR STRIKE	DISCONNECT SWITCH OPEN
<b>REX</b> ACCESS CONTROL – REQUEST TO EXIT	DISCONNECT SWITCH CLOSED
<b>BL</b> BLUE LIGHT STATION	DISCONNECT SWITCH CLOSED
BREAKER CLOSED	<b>DC</b> DOOR CONTACT
BREAKER OPEN	DRY CONTACT, NORMALLY CLOSED
<b>CCTV</b> CCTV CAMERA	DRY CONTACT, NORMALLY OPEN
CCTV CAMERA – FIXED 180°	ELEVATOR (QUANTITY IN PARENTHESIS)
CCTV CAMERA – FIXED 360°	<b>ETS</b> EMERGENCY TRIP STATION (TPSS)
CCTV CAMERA – FIXED, IP	<b>EVR</b> EVENT RECORDER
CCTV CAMERA – FIXED, IP, MOUNTED TO DEDICATED COMMUNICATIONS POLE	<b>CID</b> FARE COLLECTION – CARD INTERFACE DEVICE
CCTV CAMERA – FIXED WITH INFRARED ILLUMINATOR	<b>TVM</b> FARE COLLECTION – TICKET VENDING MACHINE (WITH AVM)
CCTV CAMERA – PAN, TILT, ZOOM (PTZ), IP	<b>FDP</b> FIBER DISTRIBUTION PANEL
CCTV CAMERA – PTZ, IP, MOUNTED TO DEDICATED COMMUNICATIONS POLE	FIBER – EXISTING MULTI-MODE
CCTV CAMERA – PTZ, IP, THERMAL/VISUAL DUAL SENSOR	FIBER – EXISTING SINGLE-MODE
CCTV CAMERA – IDS SENSOR	FIBER – NEW MULTI-MODE
<b>IR</b> CCTV INFRARED ILLUMINATOR	FIBER – NEW SINGLE-MODE
<b>CCTV</b> CLOSED CIRCUIT TELEVISION	FIBER OPTIC SC ENDS TERMINATED AT SC COUPLER PATCH PANEL
<b>CC</b> COMMUNICATIONS CASE	FIBER OPTIC SPLICE
<b>CR</b> COMMUNICATIONS ROOM	FIBER SLACK ENCLOSURE
<b>8</b> CONDUIT IDENTIFIER	<b>FSE</b> FIBER SLACK ENCLOSURE
CONDUIT WITHIN DUCTBANK	GROUND
CONDUIT TURNED DOWN	<b>IDF</b> INTERMEDIATE DISTRIBUTION FRAME
CONDUIT TURNED UP	<b>IDS 'X'</b> INTRUSION DETECTION SYSTEM CABINET NO. 'X'
	<b>J</b> JUNCTION BOX
	<b>LINETYPE – BY OTHER DISCIPLINES</b>
	<b>LINETYPE – EXISTING</b>
	<b>LINETYPE – EXISTING COPPER WIRE/CAT 6</b>
	<b>LINETYPE – EXISTING FIBER OPTIC CABLE</b>
	<b>LINETYPE – EXISTING TO BE REMOVED</b>
	<b>LINETYPE – NEW</b>
	<b>LINETYPE – NEW COPPER WIRE/CAT 6</b>
	<b>LINETYPE – NEW FIBER OPTIC CABLE</b>
	<b>LINETYPE – NEW FIBER OPTIC CABLE</b>
	<b>MH</b> MANHOLE
	<b>MC</b> MEDIA CONVERTER
	MICROPHONE
	<b>AN</b> MICROPHONE – AMBIENT NOISE
	<b>DEVICE</b> ... <b>DEVICE</b> (00) MULTIPLE DEVICES WITH (QUANTITY)
	MULTIPLE UNITS
	<b>NVR</b> NETWORK VIDEO RECORDER
	PA AMPLIFIER
	PA SPEAKER BI-DIRECTIONAL (QUANTITY IN PARENTHESIS)
	PA SPEAKER UNI-DIRECTIONAL (QUANTITY IN PARENTHESIS)
	<b>PIM</b> PIM – PASSENGER INFORMATION MONITOR
	PIM – DOUBLE SIDED
	PIM – SINGLE SIDED (ARROW INDICATES DIRECTION FACING)
	PORT – 1000BASE-T
	PORT – GBIC/SFP
	POWER RECEPTACLE
	<b>PLC</b> OR <b>PAC</b> PROGRAMMABLE AUTOMATION CONTROLLER (SCADA)
	<b>PET</b> PROTECTED ENTRANCE TERMINAL BLOCK
	<b>PTB</b> PROTECTED TERMINAL BLOCK
	<b>PB</b> PULLBOX
	SC CONNECTOR SLEEVE (IN FDP)
	SECURITY POLE (NEW)
	SEPARABLE CONNECTOR
	<b>SC</b> SIGNAL CASE
	<b>SH</b> SIGNAL HOUSE
	<b>SP</b> SIGNAL SYSTEM VITAL SIGNAL PROCESSOR
	SM JUMPER (SC CONNECTORS)
	<b>SW</b> SWITCH
	TELEPHONE – BLUE LIGHT STATION
	<b>ETEL</b> OR  TELEPHONE – ETEL WITH TOWER STANCHION AND BLUE LIGHT STROBE (ARROW INDICATES DIRECTION FACING)
	TELEPHONE – ETEL IN ELEVATOR
	<b>MT</b> OR  TELEPHONE – MAINTENANCE
	TELEPHONE – MAINTENANCE (LINE REPRESENTS WALL OR MOUNTING SURFACE)
	TELEPHONE – MAINTENANCE (2-LINE)
	TELEPHONE – STROBE (BLUE LIGHT)
	<b>VOIP</b> TELEPHONE – VOICE OVER IP (SCADA)
	<b>TC</b> TRAFFIC CONTROLLER
	<b>(#) TWC</b> TRAIN-TO-WAYSIDE INTERROGATOR (QUANTITY IN PARENTHESIS)
	TRANSFORMER
	ELEVATION CALLOUT
	IDENTIFYING LETTER OR NUMBER (TYP)
	TITLE OF DETAIL _____ DETAIL CALLOUT
	FOR SAME DRAWING USE (-) OR SHOW DRAWING NO. (XX---) (TYP)
	TITLE OF SECTION _____ SECTION CALLOUT

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



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 DRAWN BY: J. Cowlishaw  
 CADD FILE NAME: 808GN018.dwg

**Santa Clara Valley Transportation Authority**

**BKF 100+ YEARS**  
 ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 01/25/2019  
 SCALE: N.T.S.  
 SUBMITTAL DATE: 06/29/20  
 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 COMMUNICATIONS  
 GENERAL SYMBOLS

PLA NO: 000 CONTRACT NO: S808 FILE LOCATION: PROJECTWISE

SHEET OF: GN018  
 DRAWING NO. GN018  
 REVISION: C

**GENERAL NOTES**

**GENERAL NOTES**

1. THE COMPONENTS REQUIRED IN THIS CONTRACT SHALL COMPLEMENT THE EXISTING SCADA SYSTEM TO FUNCTION AS A TOTAL SYSTEM. IN THIS REGARD, A COMPONENT WHETHER IDENTIFIED OR NOT IN THESE SECTIONS, DRAWINGS, OR SPECIFICATIONS IS THE RESPONSIBILITY OF THIS CONTRACT TO ENSURE THAT THE SYSTEM IS OPERABLE AND COMPLETE.
2. THE CONTRACTOR SHALL DESIGN, FURNISH AND INSTALL NETWORK EQUIPMENT AND COMPONENTS TO CONNECT THE SCADA AND IT ETHERNET NETWORKS AT THE NEW CAPITOL CORRIDOR STATIONS TO THE EXISTING NETWORKS AT YOUNGER OPERATIONS AND MAINTENANCE FACILITY, AND RIVER OAKS FACILITIES. THE NETWORK SHALL BE BASED ON THE TCP/IP SUITE OF PROTOCOLS.
3. ALL NETWORK EQUIPMENT SHALL BE COMMERCIALY AVAILABLE THROUGH MULTIPLE SELLERS OR DISTRIBUTORS. THE MANUFACTURERS SHALL HAVE IMPLEMENTED A STANDARD QUALITY ASSURANCE PROGRAM SUCH AS ISO 9001 CERTIFICATION.
4. CABLE GUIDES SHALL BE PROVIDED AND SHALL SPECIFICALLY BE MANUFACTURED FOR THE PURPOSE OF ROUTING CABLES, WIRES AND PATCH CORDS HORIZONTALLY AND VERTICALLY ON 19-INCH EQUIPMENT RACKS. CABLE GUIDES SHALL CONSIST OF RING OR BRACKET-LIKE DEVICES MOUNTED ON RACK PANELS FOR HORIZONTAL USE AND MOUNTED FOR VERTICAL USE. CABLE GUIDES SHALL MOUNT TO RACKS BY SCREWS AND/OR NUTS AND LOCK-WASHERS.
5. EACH NODE ON THE NETWORK SHALL BE ASSIGNED BOTH A PHYSICAL AND A LOGICAL (E.G., IP) ADDRESS. AN IP ADDRESSING SCHEME SHALL BE SUBMITTED BY THE CONTRACTOR AND APPROVED BY THE OWNER. THE IP ADDRESS DOMAINS SHALL BE PROVIDED BY THE OWNER.
6. THE CONTRACTOR SHALL PERFORM ALL MANUFACTURER RECOMMENDED EQUIPMENT AND CABLE TESTING. ALL EQUIPMENT CONFIGURATION, MANAGEMENT AND DIAGNOSTIC FUNCTIONS SHALL BE EXERCISED AND DEMONSTRATED AS OPERATIONAL.
7. ALL MATERIAL AND APPARATUS SPECIFIED SHALL BE INSTALLED IN ACCORDANCE WITH THE DETAIL OF RESPECTIVE TECHNICAL SECTIONS OF THESE SPECIFICATIONS AND IN ACCORDANCE WITH THE CONTRACT DRAWINGS.
8. DRAWINGS ARE DIAGRAMMATIC AND INDICATE GENERAL ARRANGEMENT OF SYSTEMS AND WORK. THE CONTRACTOR SHALL FOLLOW DRAWINGS IN LAYING OUT THE WORK AND CHECK DRAWINGS OF OTHER TRADES TO VERIFY ADDITIONAL REQUIREMENTS AND COORDINATION.

**GENERAL WORK**

1. THE CONTRACTOR SHALL FURNISH COMPLETE AND FUNCTIONAL SYSTEMS CONSISTENT WITH THE REQUIREMENTS IN THE CONTRACT DOCUMENTS. CONTRACTOR SHALL BEAR TOTAL RESPONSIBILITY FOR SYSTEM ELEMENTS THAT ARE DESIGNED, FURNISHED, INSTALLED, TESTED, AND CUTOVER UNDER THIS CONTRACT. THE CONTRACTOR SHALL ACCEPT TOTAL RESPONSIBILITY FOR DEVELOPMENT, DESIGN, FABRICATION, EQUIPMENT SELECTION AND CONFIGURATION, MATERIAL, PARTS AND DETAILS, WIRING, CABLING AND TERMINATIONS, SOFTWARE, DOCUMENTATION, TESTING, AND ALL OTHER RELATED HARDWARE AND SERVICES.
2. THE CONTRACTOR SHALL BEAR TOTAL RESPONSIBILITY FOR THE CORRECTION OF ANY DAMAGE, MALFUNCTION, OR DEGRADATION IN PERFORMANCE OF EQUIPMENT, IF THE DIFFICULTY IS CAUSED BY CONTRACTOR SYSTEM DESIGN, INTERFACING EQUIPMENT, SOFTWARE, CONNECTION DETAILS, SITE CONTRACTOR WORK, OR SUCH OTHER AFFECTING FACTORS UNDER THE CONTRACTOR'S CONTROL.
3. WORK SPECIFIED CONSISTS OF FURNISHING ALL LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS REQUIRED FOR A COMPLETE INSTALLATION; CHECKOUT AND STARTUP OF ALL SYSTEMS SHOWN AND SPECIFIED IN ORDER TO PROVIDE A COMPLETE AND OPERATIONAL COMMUNICATION SYSTEM, WHETHER ITEMIZED OR NOT.
4. THE CONTRACTOR SHALL ERECT ALL ELECTRICAL EQUIPMENT NOT DEFINITELY STATED TO BE ERECTED BY OTHERS. THE CONTRACTOR SHALL FURNISH AND INSTALL CONDUIT, WIRE AND CABLE AND MAKE CONNECTIONS REQUIRED TO PLACE ALL EQUIPMENT IN COMPLETE OPERATION.
5. THE GENERAL EXTENT OF THE COMMUNICATIONS WORK INCLUDES FURNISHING AND INSTALLING OF THE FOLLOWING ITEMS: ALL POWER DISTRIBUTION SYSTEMS, RECEPTACLE OUTLETS, SWITCHING, HAND HOLES, AND CIRCUIT INSTALLATION AS INDICATED ON THE PLANS. WHERE THE WORK OF SEVERAL CRAFTS IS INVOLVED, THE CONTRACTOR SHALL COORDINATE ALL RELATED WORK TO PROVIDE EACH SYSTEM IN COMPLETE AND PROPER OPERATING ORDER. THE CONTRACTOR SHALL COOPERATE WITH ALL OTHERS INVOLVED IN THE PROJECT WITH DUE REGARD TO THEIR WORK TO PROMOTE RAPID COMPLETION OF THE ENTIRE PROJECT. THE CONTRACTOR SHALL THOROUGHLY EXAMINE THE SITE TO BECOME FAMILIAR WITH THE EXISTING CONDITIONS AND MAKE ALLOWANCES AS REQUIRED.
6. LIGHT (GRAY) SOLID AND DASHED LINES, SYMBOLS, AND/OR TEXT ARE USED TO INDICATE FACILITIES AND EQUIPMENT PROVIDED UNDER OTHER EBRC DISCIPLINES.
7. CONTRACTOR SHALL COORDINATE WITH VTA TO DETERMINE LOCATION AND MOUNTING FOR WORK AREA OULETS.

**CONDUITS, PULLBOXES, HANDHOLES, MOUNTING HARDWARE, RACKS, CABINETS, TVM, CID, PIM SIGNS**

1. THE CONTRACTOR SHALL MAKE THE CONDUIT BEND RADIUS TO CENTERLINE OF ALL UNDERGROUND CONDUITS NOT LESS THAN 10 TIMES NOMINAL DIAMETER OF CONDUIT. THIS REQUIREMENT APPLIES ALSO TO ALL CONDUIT SYSTEMS ENTERING BUILDINGS, FROM OUTSIDE BUILDING TO TERMINATION INSIDE BUILDING (E.G. PULLBOX, CABINET, STUB-UP, ETC). BENDING RADIUS FOR CONDUITS RUN WITHIN THE BUILDING SHALL BE PER TITLE 24 CALIFORNIA CODE OF REGULATIONS.
2. INSTALLATION SHALL BE PERFORMED IN ACCORDANCE WITH THE APPROVED INSTALLATION PLAN.
3. CONTRACTOR SHALL SUBMIT TEMPLATES OF THE BASE OF EACH RACK OR CABINET TO VERIFY PLACEMENT AND FITTING ON-SITE, PRIOR TO LOCATING AND PLACING CABINET.
4. CONTRACTOR SHALL DEVELOP ALL INSTALLATION PROCEDURES IN ACCORDANCE WITH THE STANDARDS DEFINED.
5. CONTRACTOR SHALL SET CABINETS ON FOUNDATIONS AT LEAST 12 INCHES ABOVE NATURAL GRADE, PER CONTRACT DRAWINGS. CONTRACTOR SHALL INSPECT ALL FOUNDATIONS AND REPORT ANY DEFICIENCIES.
6. CONTRACTOR SHALL INSTALL ALL ADDITIONAL EQUIPMENT REQUIRED. THIS INCLUDES ALL GROUNDING EQUIPMENT, POWER SUPPLIES AND POWER CABLES.
7. CONTRACTOR SHALL SEAL THE BASE OF CABINETS TO PREVENT ENTRY OF MOISTURE AND DUST. THE SEALING COMPOUND SHALL HAVE AN EXPECTED LIFETIME OF AT LEAST 20 YEARS.
8. CONTRACTOR SHALL INSPECT EACH INSTALLED CABINET FOR LEVEL, PLUMB AND GROUNDING.
9. INSTALL ALL COMPONENTS TO PROVIDE AESTHETICALLY PLEASING RESULTS. COORDINATE THE ACTUAL LOCATIONS OF ALL VISIBLE COMPONENTS IN ADVANCE WITH THE OWNER REPRESENTATIVE.
10. UNLESS STAINLESS STEEL, FINISH INSIDE AND OUTSIDE OF EQUIPMENT RACKS, ENCLOSURES, AND CABINETS WITH POLYURETHANE ENAMEL OVER PRIMER. PROVIDE A FINISH FREE OF SURFACE BLEMISHES SUCH AS RUNS, SCRATCHES, OR DENTS. COLORS SHALL BE SELECTED BY OWNER.
11. PROVIDE WIRING/CABLE FOR ALL SYSTEM DEVICES. PROVIDE SUFFICIENT LENGTH TO ACCOMMODATE THE FULL EXTENSION OF SHELVES AND FULL OPENING OF HINGED DOORS AND RACKS, AND PROVIDE LENGTH FOR AT LEAST THREE RETERMINATIONS OF ALL WIRING/CABLE.
12. FOR SWING OUT RACKS, PROVIDE WIRE ROUTING AND STRAIN RELIEF TO PREVENT PINCHING OF WIRING. SUPPORT WIRING SO THAT STRESS FROM WIRE MOVEMENT FROM SWING OUT RACK IS DISTRIBUTED OVER AT LEAST A 12-INCH LENGTH OF WIRE/CABLE MOUNTED VERTICALLY NEAR THE HINGE POINT.
13. ENSURE THAT MOVABLE FEATURES, SUCH AS DOORS AND DRAWERS, MOVE SMOOTHLY AND FREELY.
14. ADJUST CATCHES AND LATCHES TO BE SECURE, PRECISE, AND HAVE LOW FORCE REQUIREMENTS.
15. INSTALL BLANK PANELS AS REQUIRED TO ELIMINATE ANY UNFILLED PORTIONS OF THE EQUIPMENT RACKS.
16. DO NOT MOUNT FIBER SPLICE TRAYS OR FIBER PATCH PANELS/DISTRIBUTION PANELS ON SWING OUT RACK, BUT MOUNT TO STATIONARY RACKS OR SUB-PANELS OR WALL MOUNT AS MAY BE APPROVED BY VTA.
17. ALL POWER, COMMUNICATIONS, AND SIGNALING CABLING SHALL BE PROTECTED IN CONDUITS OR TRAYS AS SPECIFIED AND AS SHOWN ON THE CONTRACT DRAWINGS. ALL NECESSARY FITTINGS, BOXES, SUPPORTS, HANGERS, AND RELATED HARDWARE SHALL BE PROVIDED IN ORDER TO ASSEMBLE COMPLETE CONDUIT AND CABLE TRAY SYSTEMS. ENSURE ALL CONDUITS, INCLUDING UTILIZED AND SPARE CONDUITS, SHALL HAVE NYLON PULL ROPES INSTALLED AND TIED OFF.
18. DESIGN AND INSTALLATION SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS OF: TIA/EIA-569 COMMERCIAL BUILDING STANDARD FOR TELECOMMUNICATIONS PATHWAYS AND SPACES, BICSI, NFPA & NEC CODES.
19. FURNISH AND INSTALL ALL ELECTRICAL MATERIALS, EQUIPMENT, AND ACCESSORIES IN LOCATIONS AS INDICATED ON CONTRACT DRAWINGS. THEY SHALL BE RIGID AND SECURE, PLUMB AND LEVEL, AND IN ALIGNMENT WITH RELATED AND ADJOINING WORK TO PROVIDE A COMPLETE AND OPERABLE SYSTEM. ELECTRICAL MATERIALS SHALL NOT BE WELDED FOR ATTACHMENT OR SUPPORT.
20. THE CONTRACTOR SHALL MAINTAIN CONTINUITY OF EQUIPMENT GROUND ACROSS FLEXIBLE CONDUIT CONNECTIONS BY INSTALLING BONDING WIRE INSIDE CONDUIT AND CONNECTING EACH END OF WIRE TO OUTLET OR JUNCTION BOXES BY SEPARATE BOLT, OR USE LIQUID TIGHT FLEXIBLE METAL CONDUIT APPROVED FOR THIS PURPOSE.

21. FOR PVC CONDUITS, THE CONTRACTOR SHALL MAINTAIN CONTINUITY OF CONDUIT SYSTEM GROUND BY INSTALLING COPPER GROUNDING WIRE INSIDE PVC CONDUIT, PER TITLE 24 CCR; (OUTLET AND JUNCTION BOX, ETC.) AND AT EACH TERMINATION.
22. COVERS OF JUNCTION AND PULL BOXES SHALL BE ACCESSIBLE.
23. FURNISH AND INSTALL PULL BOXES AS INDICATED AND WHEREVER NECESSARY TO FACILITATE PULLING OF WIRE AND COORDINATED LOCATIONS WITH OTHER TRADES.
24. LEAVE WIRE SUFFICIENTLY LONG TO PERMIT MAKING FINAL CONNECTIONS AND ALLOW FOR THREE RETERMINATIONS.
25. ALL NEW WIRING INSTALLED SHALL COMPLY WITH THESE DRAWINGS, THE ATTACHED SPECIFICATIONS, AND NEC.
26. EXPOSED EXTERIOR CONDUITS SHALL BE GALVANIZED RIGID STEEL (GRS) WHERE INSTALLATION IS LESS THAN 10' ABOVE FINISHED GRADE. EMT WITH RAIN-TIGHT COMPRESSION COUPLINGS AND CONNECTORS MAY BE USED IF EXPOSED ABOVE 10', ALL GRS CONDUITS INSTALLED UNDERGROUND SHALL BE PVC COATED.
27. THE CONTRACTOR SHALL POWER THE PIMS, TVMS, AND CIDS DIRECTLY FROM THE STATION POWER SUPPLY. ALL OTHER COMMUNICATIONS EQUIPMENT SHALL BE POWERED FROM A UPS POWER SOURCE.
28. NOT USED.
29. ROUTE ELEVATOR WIRING THROUGH IDF ENCLOSURES.

**ELECTRICAL**

1. ALL COMPONENTS FURNISHED SHALL BE RATED FOR A MINIMUM OF 50 PERCENT ABOVE THE ACTUAL OPERATING AMPERAGE LOAD.
2. UL LISTING: ALL EQUIPMENT FURNISHED SHALL BE UL LISTED.
3. GROUNDING: ALL GROUNDING SHALL BE IN ACCORDANCE WITH EIA, NFPA, NATIONAL ELECTRIC CODE, LOCAL STANDARDS, AND APPLICABLE SPECIFICATIONS.

**UPS SYSTEMS**

1. BATTERIES: THE BATTERY SHALL BE A MULTI-CELL BANK COMPOSED OF SEALED MAINTENANCE FREE CELLS. THE BATTERY BANK SHALL BE RATED TO PROVIDE POWER TO THE INVERTER SUCH THAT 150 PERCENT OF THE PEAK CURRENT DRAW OF THE PROTECTED EQUIPMENT CAN BE PROVIDED UPON COMPLETE FAILURE OF THE AC INPUT FOR A PERIOD OF NO LESS THAN 4 HOURS; BUT AS REQUIRED BY THE NEC & NFPA, THE BATTERY LIFE SHALL BE AT LEAST 200 CHARGE/DISCHARGE CYCLES AND 10 YEARS. EACH STATION SHALL BE PROVIDED WITH A UPS SYSTEM MOUNTED IN THE COMMUNICATIONS RACK.
2. THE CONTRACTOR SHALL DEMONSTRATE OPERATION OF THE UNINTERRUPTIBLE POWER SUPPLY BY DISCONNECTING UTILITY INPUT POWER FOR THE SPECIFIED PERIOD OF TIME.
3. THE UPS SYSTEM SHALL BE RACK MOUNTED AND SHALL NOT BE A FLOOR-SUPPORTED MODEL. THE UPS SYSTEM SHALL UTILIZE RACK DESIGN BY UPS MANUFACTURER SPECIFICALLY FOR RACK INSTALLATION.
4. THE CONTRACTOR SHALL PROVIDE BASIC RACK POWER DISTRIBUTION UNITS (PDU), AS SHOWN ON THE CONTRACT DRAWINGS, TO ALLOW DISTRIBUTION OF POWER OUTLETS TO RACK-MOUNT EQUIPMENT.
5. INSTALL THE COMPLETE POWER SUPPLIES AND DISTRIBUTION SYSTEM, COMPLETE WITH HARDWARE AND CONNECTING MATERIAL, PER THE APPROVED DESIGN AND CONTRACT DRAWINGS. THE COMPLETE SYSTEM SHALL INCLUDE POWER PANELS, UPS, BATTERIES, WIRING, CONDUIT, COUPLINGS, FASTENERS, POWER PANELS, CIRCUIT BREAKERS AND PERMANENT IDENTIFICATION.

**TICKET VENDING MACHINE SYSTEMS**

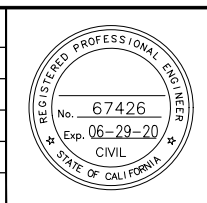
1. THE TVMS, TVM PEDESTALS, CID, CID PEDESTALS TO BE SUPPLIED AND INSTALLED BY THE CONTRACTOR.

**PUBLIC ADDRESS**

1. EACH PAIR OF SPEAKERS ON POLES, OR WITHIN SHELTERS, SHALL HAVE A SEPARATE WIRING HOME RUN TO LDF.

Joseph Cowlshaw Jun 23, 2020 - 10:10am C:\cadd\h\04\h\nt\ib\_jeremy\basofas\west\mms\85389\808GN021.dwg

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



SUBMITTED	
<b>Lamoreaux Associates</b> 2686 N 775 W T 435.586.0174 Cedar City, UT 84721 F 435.865.1848 www.laeng.com	
DESIGNED	CHECKED
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DRAWN	CADD FILE NAME
J. Cowlshaw	808GN021.dwg

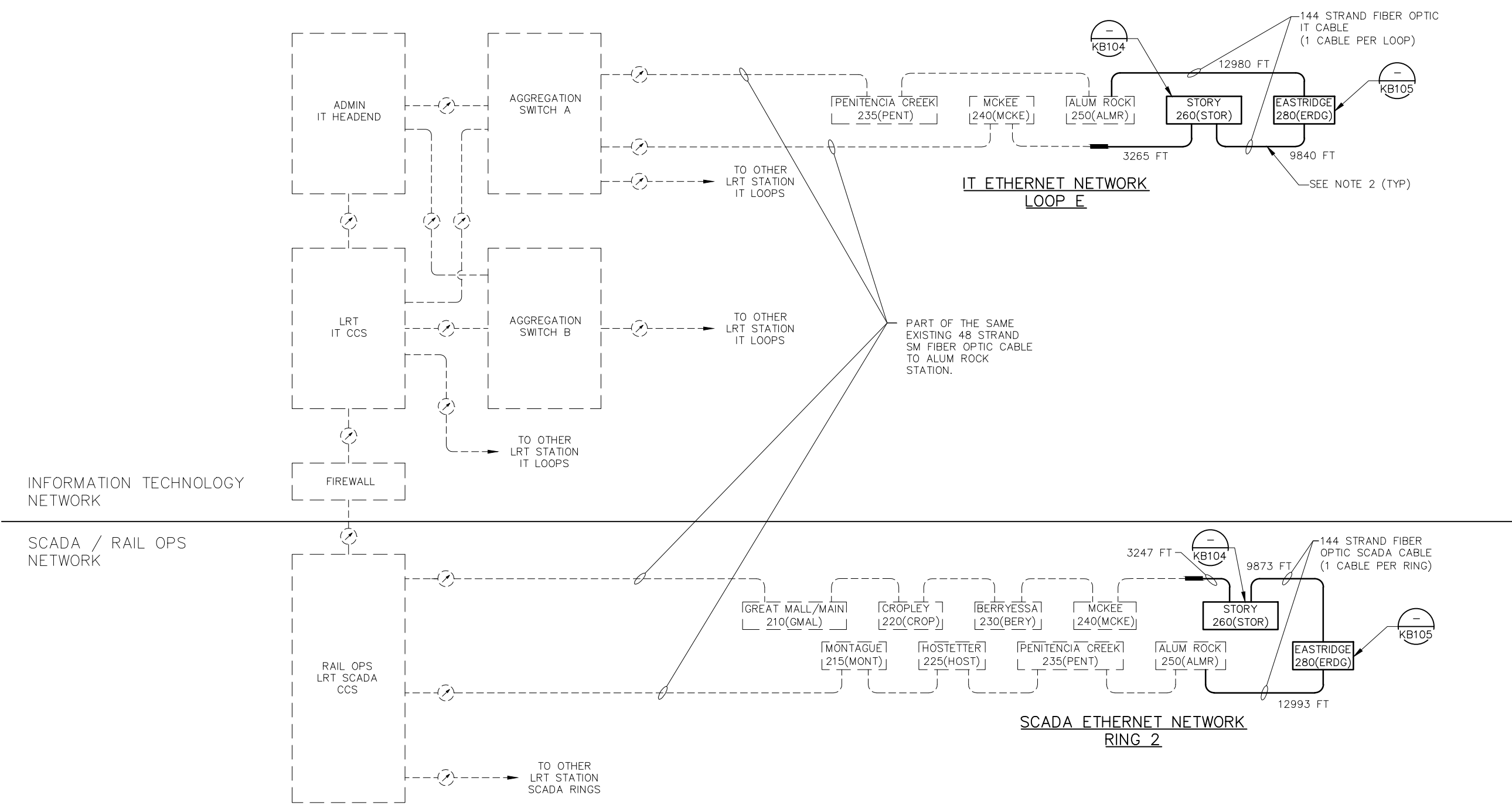


APPROVED	
CADD FILE DATE	SCALE
01/25/2019	N.T.S.
SUBMITTAL DATE	BOARD APPROVAL DATE
06/29/20	

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT COMMUNICATIONS GENERAL NOTES SHEET 1 OF 2		
PCA NO.	CONTRACT NO.	FILE LOCATION
000	S808	PROJECTWISE

SHEET	OF
DRAWING NO.	GN021
REVISION	C

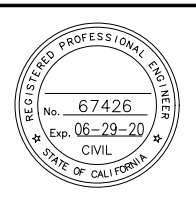




- NOTES:**
- NOT USED.
  - DISTANCES ARE HORIZONTAL AND APPROXIMATE. CONTRACTOR TO VERIFY ACTUAL CABLE LENGTHS TO BE INSTALLED.

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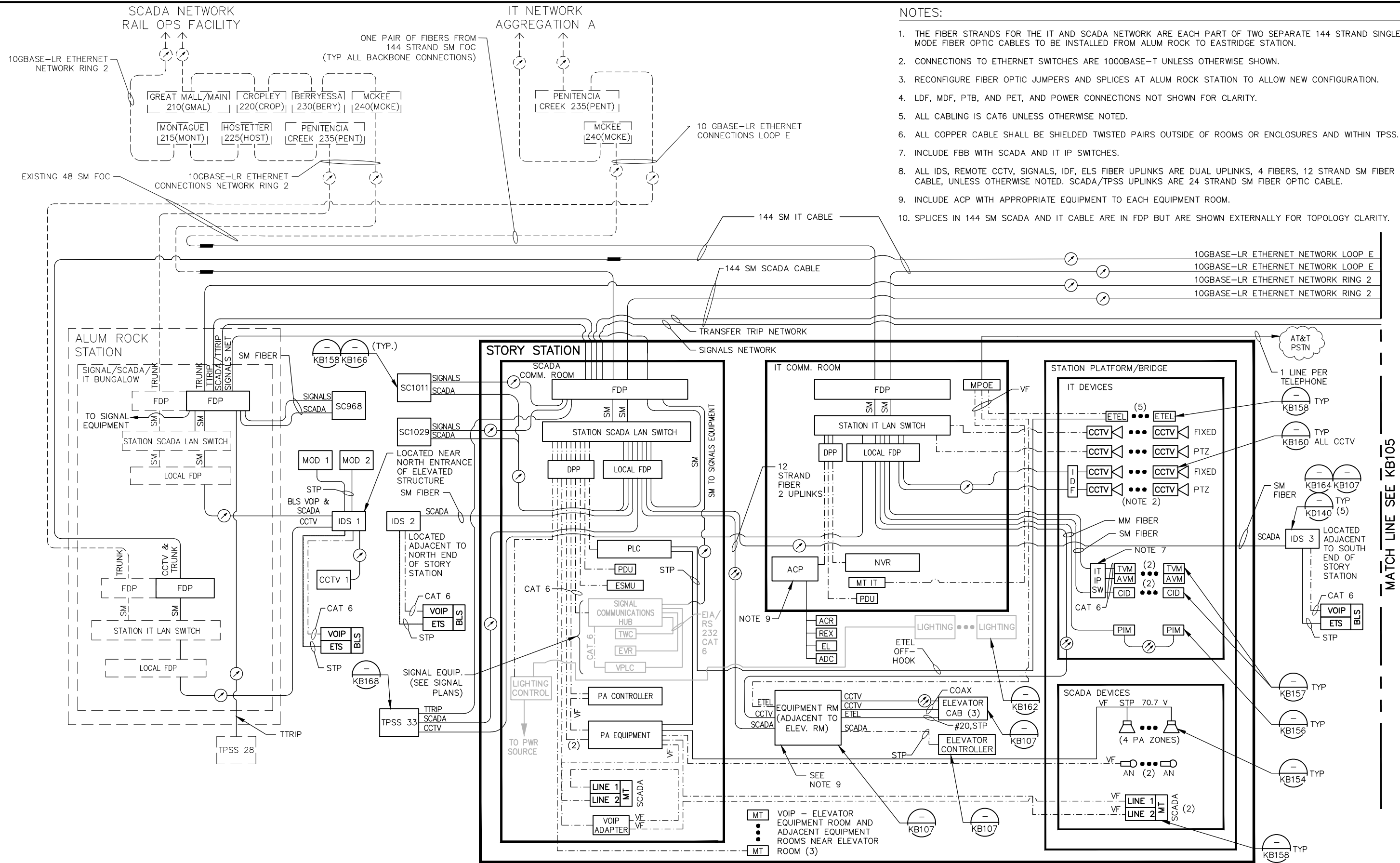


SUBMITTED	
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<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	SCALE
01/23/19	N.T.S.
SUBMITTAL DATE	BOARD APPROVAL DATE
06/29/20	

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT COMMUNICATIONS SYSTEM BLOCK DIAGRAM OVERALL SYSTEM		
PCA NO.	CONTRACT NO.	FILE LOCATION
000	S808	PROJECTWISE
SHEET OF		DRAWING NO.
		KB101
REVISION		C

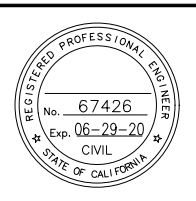


- NOTES:
1. THE FIBER STRANDS FOR THE IT AND SCADA NETWORK ARE EACH PART OF TWO SEPARATE 144 STRAND SINGLE MODE FIBER OPTIC CABLES TO BE INSTALLED FROM ALUM ROCK TO EASTRIDGE STATION.
  2. CONNECTIONS TO ETHERNET SWITCHES ARE 1000BASE-T UNLESS OTHERWISE SHOWN.
  3. RECONFIGURE FIBER OPTIC JUMPERS AND SPLICES AT ALUM ROCK STATION TO ALLOW NEW CONFIGURATION.
  4. LDF, MDF, PTB, AND PET, AND POWER CONNECTIONS NOT SHOWN FOR CLARITY.
  5. ALL CABLING IS CAT6 UNLESS OTHERWISE NOTED.
  6. ALL COPPER CABLE SHALL BE SHIELDED TWISTED PAIRS OUTSIDE OF ROOMS OR ENCLOSURES AND WITHIN TPSS.
  7. INCLUDE FBB WITH SCADA AND IT IP SWITCHES.
  8. ALL IDS, REMOTE CCTV, SIGNALS, IDF, ELS FIBER UPLINKS ARE DUAL UPLINKS, 4 FIBERS, 12 STRAND SM FIBER CABLE, UNLESS OTHERWISE NOTED. SCADA/TPSS UPLINKS ARE 24 STRAND SM FIBER OPTIC CABLE.
  9. INCLUDE ACP WITH APPROPRIATE EQUIPMENT TO EACH EQUIPMENT ROOM.
  10. SPLICES IN 144 SM SCADA AND IT CABLE ARE IN FDP BUT ARE SHOWN EXTERNALLY FOR TOPOLOGY CLARITY.

MATCH LINE SEE KB105

Joseph Cowlishaw Jun 23, 2020 - 10:11am C:\oads\B\p\mntb\jeremy.becofra\west\mns8397\808KB104.dwg

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A	06/18	35% SUBMITTAL SET



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 DRAWN: J. Cowlishaw CADD FILE NAME: 808KB104.dwg



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CAISO FILE DATE: 01/25/19 SCALE: N.T.S.  
 SUBMITTAL DATE: 06/29/20 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 COMMUNICATIONS  
 SYSTEM BLOCK DIAGRAM  
 STATIONS SINGLE LINE, SHEET 1 OF 2

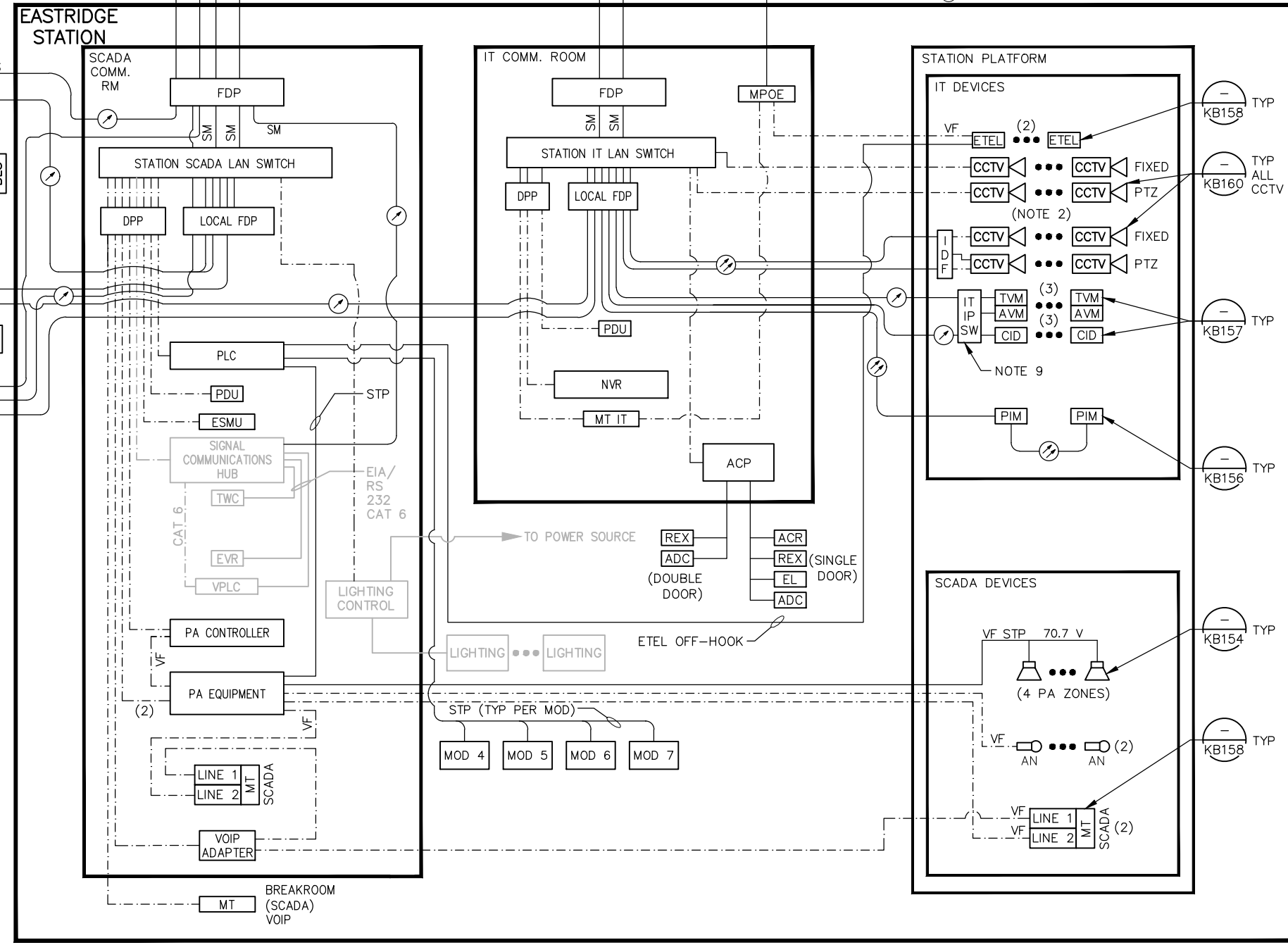
PCA NO: 000 CONTRACT NO: S808 FILE LOCATION: PROJECTWISE

SHEET OF: KB104 REVISION: C

10GBASE-LR ETHERNET NETWORK LOOP E  
 10GBASE-LR ETHERNET NETWORK LOOP E  
 10GBASE-LR ETHERNET NETWORK RING 2  
 10GBASE-LR ETHERNET NETWORK RING 2  
 TRANSFER TRIP NETWORK  
 SIGNALS NETWORK

1 LINE PER TELEPHONE  
 AT&T PSTN

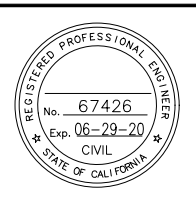
MATCH LINE SEE KB104



- NOTES:
1. THE FIBER STRANDS FOR THE IT AND SCADA NETWORK ARE EACH PART OF TWO SEPARATE 144 STRAND SINGLE MODE FIBER OPTIC CABLES TO BE INSTALLED FROM ALUM ROCK TO EASTRIDGE STATION.
  2. CCTV CAMERA QUANTITIES VARY BY STATION. SEE STATION LAYOUT FOR QUANTITY AND LOCATIONS.
  3. PTZ CAMERAS REQUIRE SEPARATE LV POWER FEED UNLESS POE APPROVED BY VTA.
  4. CONNECTIONS TO ETHERNET SWITCHES ARE 1000BASE-T UNLESS OTHERWISE SHOWN.
  5. RECONFIGURE FIBER OPTIC JUMPERS AND SPLICES AT ALUM ROCK STATION TO ALLOW NEW CONFIGURATION.
  6. LDF, MDF, PTB, AND PET, AND POWER CONNECTIONS NOT SHOWN FOR CLARITY.
  7. ALL CABLING IS CAT6 UNLESS OTHERWISE NOTED.
  8. ALL COPPER CABLE SHALL BE SHIELDED TWISTED PAIRS OUTSIDE OF ROOMS OR ENCLOSURES AND WITHIN TPSS.
  9. INCLUDE FBB WITH IT IP SWITCH.
  10. ALL IDS, REMOTE CCTV, TPSS, SC, IDF, AND ELS FIBER UPLINKS ARE DUAL UPLINKS, 4 FIBERS, 12 STRAND FIBER OPTIC CABLE.
  11. ALL TVM IT AND IP SWITCH FIBER UPLINKS SHALL BE DUAL UPLINKS, 4 FIBERS, 6 STRAND FIBER OPTIC CABLE.

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EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 COMMUNICATIONS  
 SYSTEM BLOCK DIAGRAM  
 STATIONS SINGLE LINE, SHEET 2 OF 2

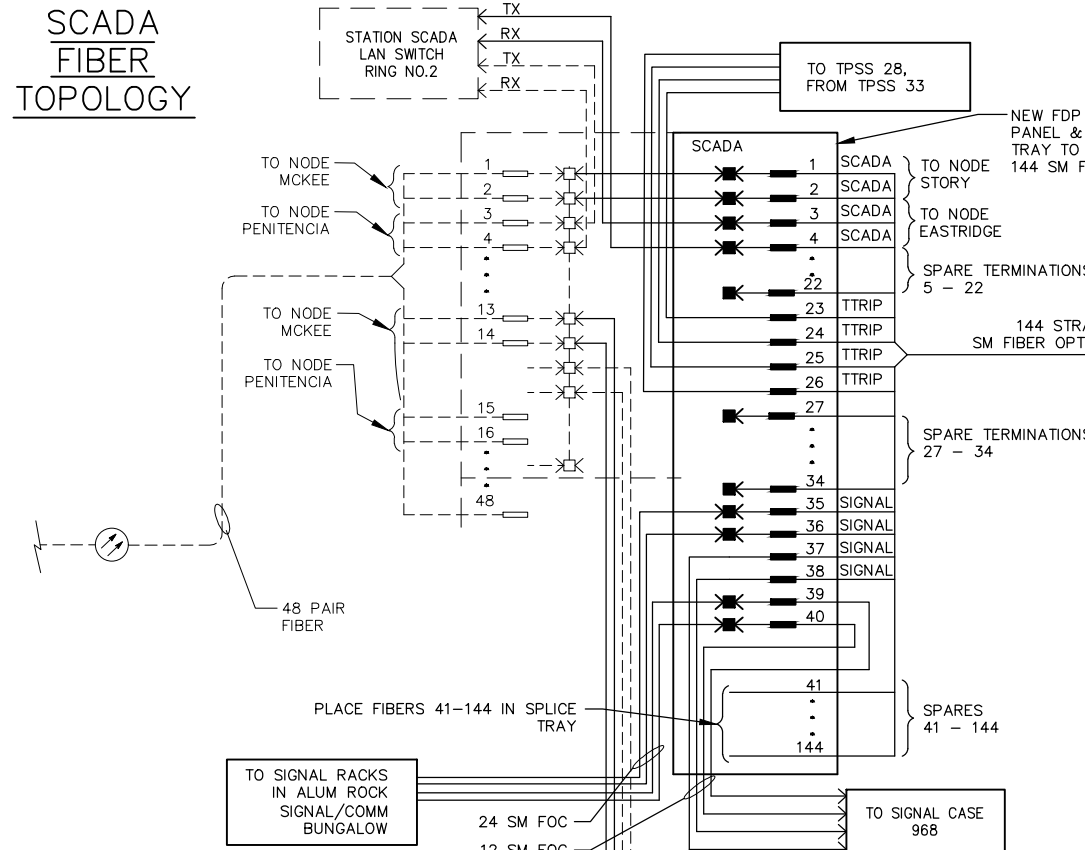
PCA NO.: 000 CONTRACT NO.: S808 FILE LOCATION: PROJECTWISE

SHEET OF: KB105  
 DRAWING NO.: KB105  
 REVISION: C

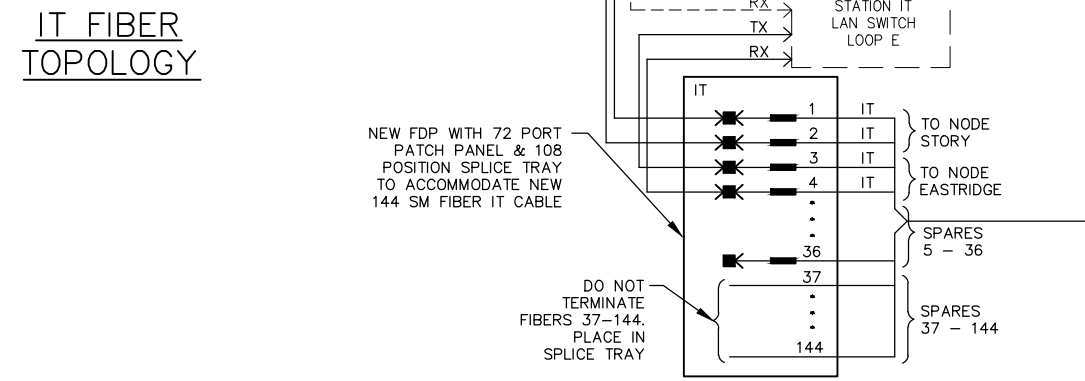
NOTES:

1. FIBERS 1, 2, 3, AND 4 OF THE NEW SCADA SINGLE-MODE, 144 STRAND FIBER OPTIC CABLE "A" INSTALLED IN THE CAPITOL LRT EXTENSION, SHALL BE USED TO PROVIDE A SCADA RING TOPOLOGY AS SHOWN.
2. FIBERS 1, 2, 3, AND 4 OF THE NEW IT SINGLE-MODE, 144 STRAND FIBER OPTIC CABLE "B" INSTALLED IN THE CAPITOL LRT EXTENSION, SHALL BE USED TO PROVIDE A IT ETHERNET LOOP TOPOLOGY AS SHOWN.
3. FIBERS 23 & 24 OF CABLE "A" SHALL BE USED TO PROVIDE TPSS TRANSFER TRIP FUNCTIONALITY.
4. FIBERS 31, 32, 33, & 34 OF CABLE "A" PROVIDE A RING TOPOLOGY FOR SIGNALS SYSTEM.
5. SEE KB166 FOR SIGNALS/VITAL/NONVITAL NETWORK LOGICAL TOPOLOGY.
6. SEE KB168 FOR TPSS TRANSFER TRIP NETWORK TOPOLOGY.

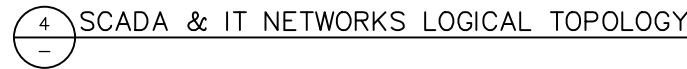
SCADA FIBER TOPOLOGY



IT FIBER TOPOLOGY



4 SCADA & IT NETWORKS LOGICAL TOPOLOGY



1 ALUM ROCK STATION DETAIL



2 STORY ROAD STATION DETAIL

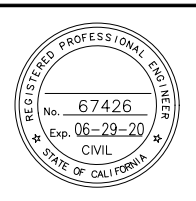


3 EASTRIDGE STATION DETAIL



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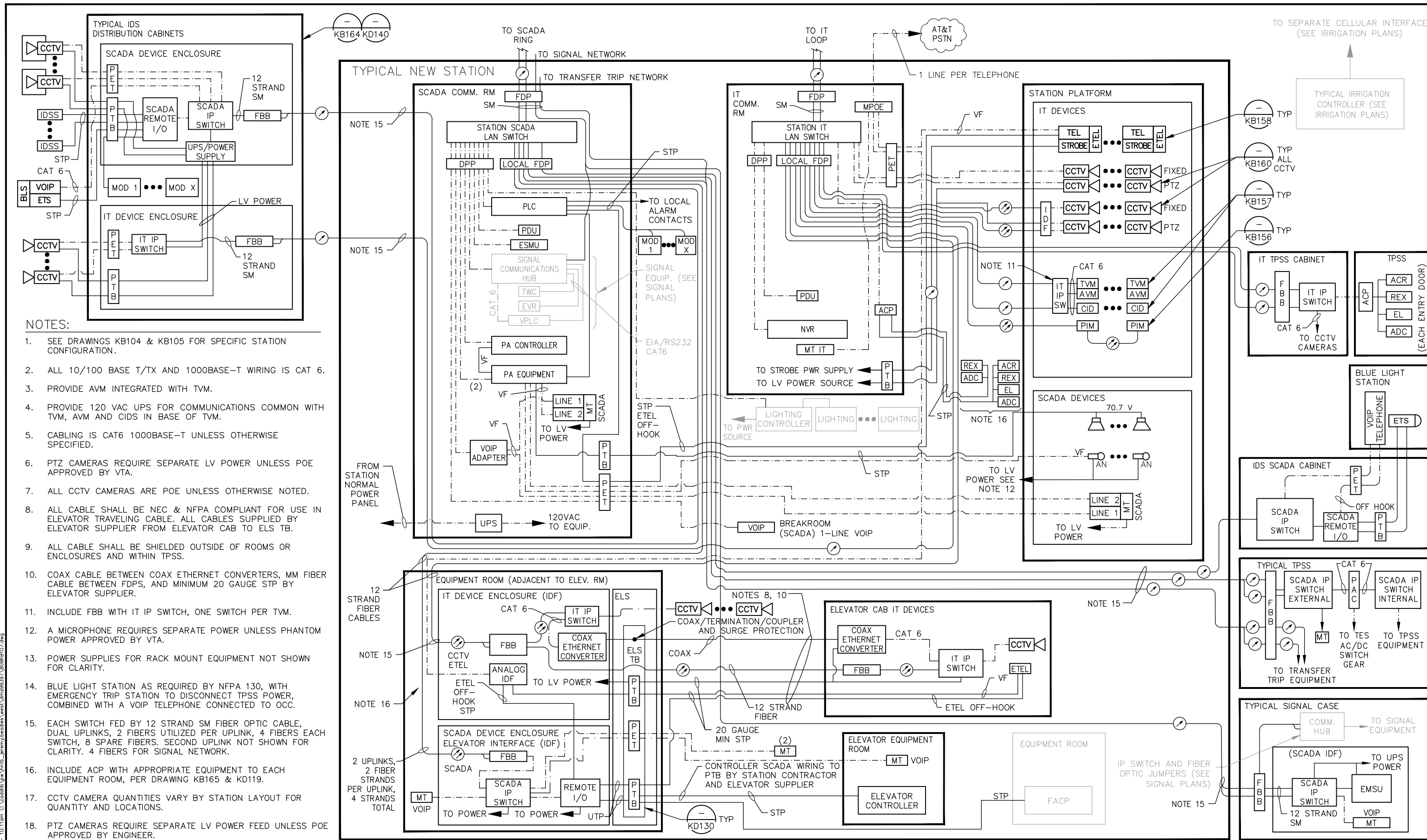
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**EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT COMMUNICATIONS CTS BLOCK DIAGRAM CTS TOPOLOGY**

PCB NO. 000 CONTRACT NO. S808 FILE LOCATION PROJECTWISE

SHEET OF DRAWING NO. KB106 REVISION C

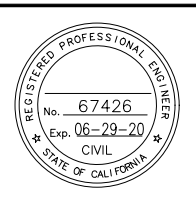




- NOTES:**
- SEE DRAWINGS KB104 & KB105 FOR SPECIFIC STATION CONFIGURATION.
  - ALL 10/100 BASE T/TX AND 1000BASE-T WIRING IS CAT 6.
  - PROVIDE AVM INTEGRATED WITH TVM.
  - PROVIDE 120 VAC UPS FOR COMMUNICATIONS COMMON WITH TVM, AVM AND CIDS IN BASE OF TVM.
  - CABLING IS CAT6 1000BASE-T UNLESS OTHERWISE SPECIFIED.
  - PTZ CAMERAS REQUIRE SEPARATE LV POWER UNLESS POE APPROVED BY VTA.
  - ALL CCTV CAMERAS ARE POE UNLESS OTHERWISE NOTED.
  - ALL CABLE SHALL BE NEC & NFPA COMPLIANT FOR USE IN ELEVATOR TRAVELING CABLE. ALL CABLES SUPPLIED BY ELEVATOR SUPPLIER FROM ELEVATOR CAB TO ELS TB.
  - ALL CABLE SHALL BE SHIELDED OUTSIDE OF ROOMS OR ENCLOSURES AND WITHIN TPSS.
  - COAX CABLE BETWEEN COAX ETHERNET CONVERTERS, MM FIBER CABLE BETWEEN FDPs, AND MINIMUM 20 GAUGE STP BY ELEVATOR SUPPLIER.
  - INCLUDE FBB WITH IT IP SWITCH, ONE SWITCH PER TVM.
  - A MICROPHONE REQUIRES SEPARATE POWER UNLESS PHANTOM POWER APPROVED BY VTA.
  - POWER SUPPLIES FOR RACK MOUNT EQUIPMENT NOT SHOWN FOR CLARITY.
  - BLUE LIGHT STATION AS REQUIRED BY NFPA 130, WITH EMERGENCY TRIP STATION TO DISCONNECT TPSS POWER, COMBINED WITH A VOIP TELEPHONE CONNECTED TO OCC.
  - EACH SWITCH FED BY 12 STRAND SM FIBER OPTIC CABLE, DUAL UPLINKS, 2 FIBERS UTILIZED PER UPLINK, 4 FIBERS EACH SWITCH, 8 SPARE FIBERS. SECOND UPLINK NOT SHOWN FOR CLARITY. 4 FIBERS FOR SIGNAL NETWORK.
  - INCLUDE ACP WITH APPROPRIATE EQUIPMENT TO EACH EQUIPMENT ROOM, PER DRAWING KB165 & KD119.
  - CCTV CAMERA QUANTITIES VARY BY STATION LAYOUT FOR QUANTITY AND LOCATIONS.
  - PTZ CAMERAS REQUIRE SEPARATE LV POWER FEED UNLESS POE APPROVED BY ENGINEER.

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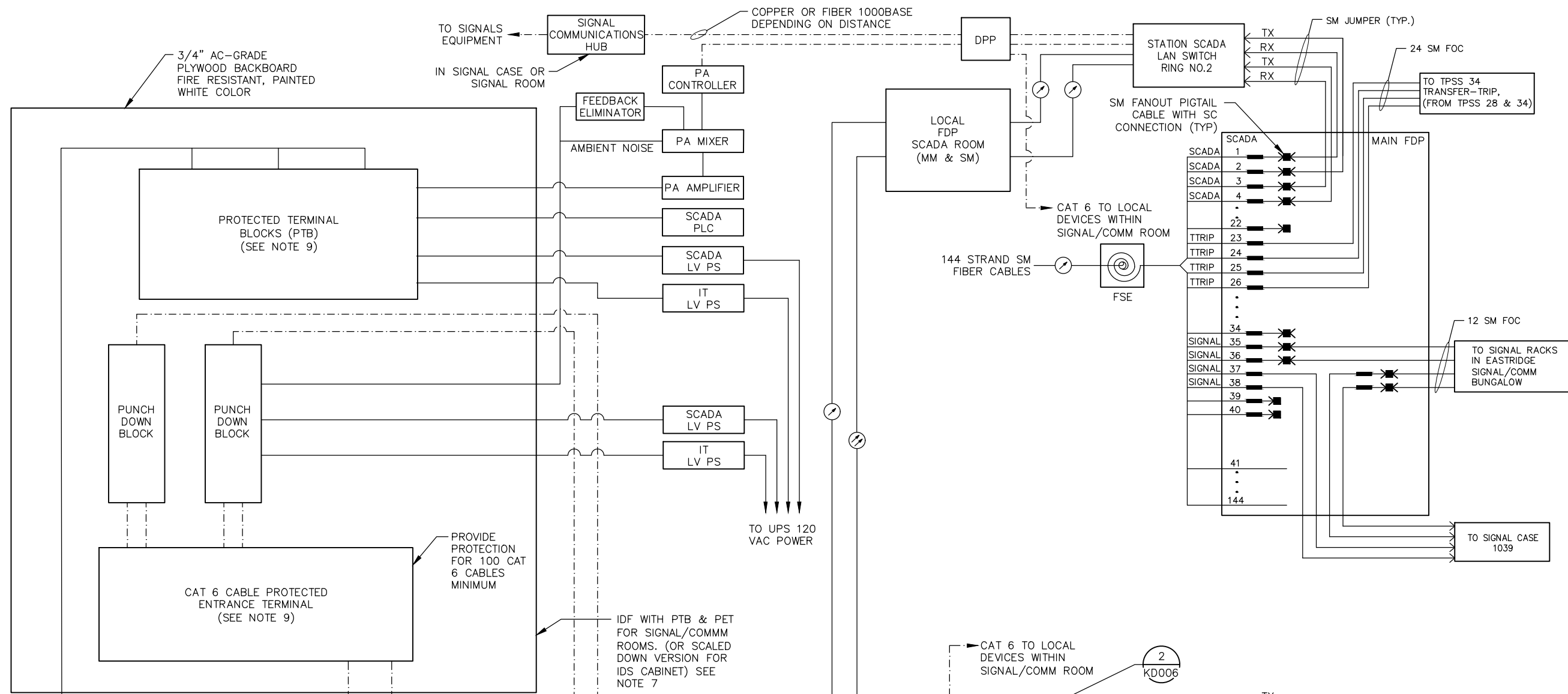
DESIGNED Bryan Lamoreaux		CHECKED B. Lamoreaux	
DRAWN J. Cowlishaw		CADD FILE NAME 808KB107.dwg	



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CADD FILE DATE 01/25/2019	SCALE N.T.S.
SUBMITTAL DATE 06/29/20	BOARD APPROVAL DATE

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT COMMUNICATIONS BLOCK DIAGRAM TYPICAL COMMUNICATIONS NODE		
PCA NO. 000	CONTRACT NO. S808	FILE LOCATION PROJECTWISE
SHEET OF DRAWING NO. KB107		REVISION C



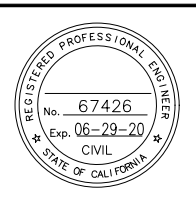


**NOTES:**

1. ALL SINGLE LINES TO EQUIPMENT REPRESENT MULTIPLE CONNECTIONS TO MULTIPLE PIECES OF EQUIPMENT.
2. OSP STP CABLE TO STATION AND WAYSIDE IT & SCADA DEVICES WHICH REQUIRE LARGER GAUGE WIRE (LARGER THAN CAT 6), SUCH AS PA SPEAKERS, SCADA POINTS, IDS SENSORS (OUTSIDE OF SIGNAL/COMM ROOM OR IDS CABINET), AND LV POWER.
3. OSP SHIELDED CAT 6 CABLE TO STATION AND WAYSIDE SCADA DEVICES FOR MT, AMBIENT NOISE MIC, SCADA POINTS, IDS SENSORS, LV POWER AND SIMILAR USES (OUTSIDE OF SIGNAL/COMM ROOM OR IDS CABINET).
4. OSP SHIELDED CAT 6 CABLE TO STATION AND WAYSIDE IT DEVICES FOR CCTV, ETEL AND SIMILAR USES (OUTSIDE OF SIGNAL/COMM ROOM).
5. OSP SM OR MM FIBER CABLE AS REQUIRED TO SCADA IDS, TPSS (MT & PLC), TVM/AVM/CID (IF CONNECTED TO SCADA SWITCH) AND SIMILAR USES (OUTSIDE OF SIGNAL/COMM ROOM).
6. OSP SM OR MM FIBER CABLE AS REQUIRED TO PIM, TVM/AVM/CID, IT IDS AND SIMILAR USES (OUTSIDE OF SIGNAL/COMM ROOM).
7. THE PTB & PET MAY BE MOUNTED ON THE BOTTOM OF BOTH SIDES OF THE COMMUNICATIONS AND IT RACKS OR WALL MOUNTED ON 3/4" PLYWOOD AS SHOWN ON THIS DRAWING.
8. SCADA AND IT LV PS MAY BE CONNECTED TO PET OR PTB, DEPENDING ON WIRE SIZE.
9. PROVIDE EQUIPMENT FOR 50% SPARE CAPACITY MINIMUM.

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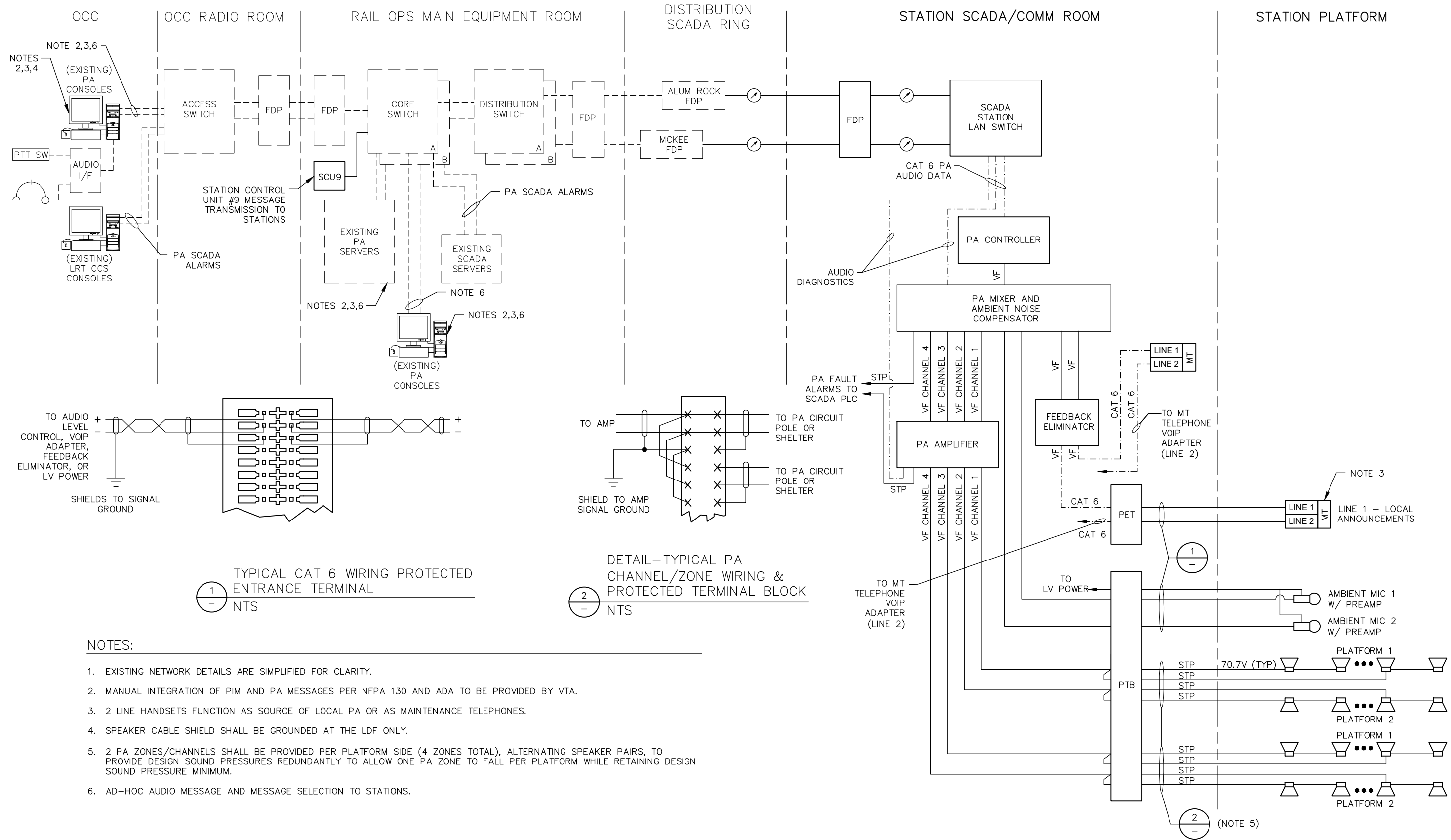
**BKF 100+ YEARS**  
 ENGINEERS / SURVEYORS / PLANNERS

CAAD FILE DATE: 01/25/19 SCALE: N.T.S.  
 SUBMITTAL DATE: 06/29/20 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 COMMUNICATIONS  
 CTS CABLE DIAGRAM  
 EASTRIDGE COMMUNICATIONS NODE

PCA NO.: 000 CONTRACT NO.: S808 FILE LOCATION: PROJECTWISE

SHEET OF	
DRAWING NO.	KB113
REVISION	C

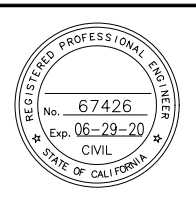


**NOTES:**

1. EXISTING NETWORK DETAILS ARE SIMPLIFIED FOR CLARITY.
2. MANUAL INTEGRATION OF PIM AND PA MESSAGES PER NFPA 130 AND ADA TO BE PROVIDED BY VTA.
3. 2 LINE HANDSETS FUNCTION AS SOURCE OF LOCAL PA OR AS MAINTENANCE TELEPHONES.
4. SPEAKER CABLE SHIELD SHALL BE GROUNDED AT THE LDF ONLY.
5. 2 PA ZONES/CHANNELS SHALL BE PROVIDED PER PLATFORM SIDE (4 ZONES TOTAL), ALTERNATING SPEAKER PAIRS, TO PROVIDE DESIGN SOUND PRESSURES REDUNDANTLY TO ALLOW ONE PA ZONE TO FALL PER PLATFORM WHILE RETAINING DESIGN SOUND PRESSURE MINIMUM.
6. AD-HOC AUDIO MESSAGE AND MESSAGE SELECTION TO STATIONS.

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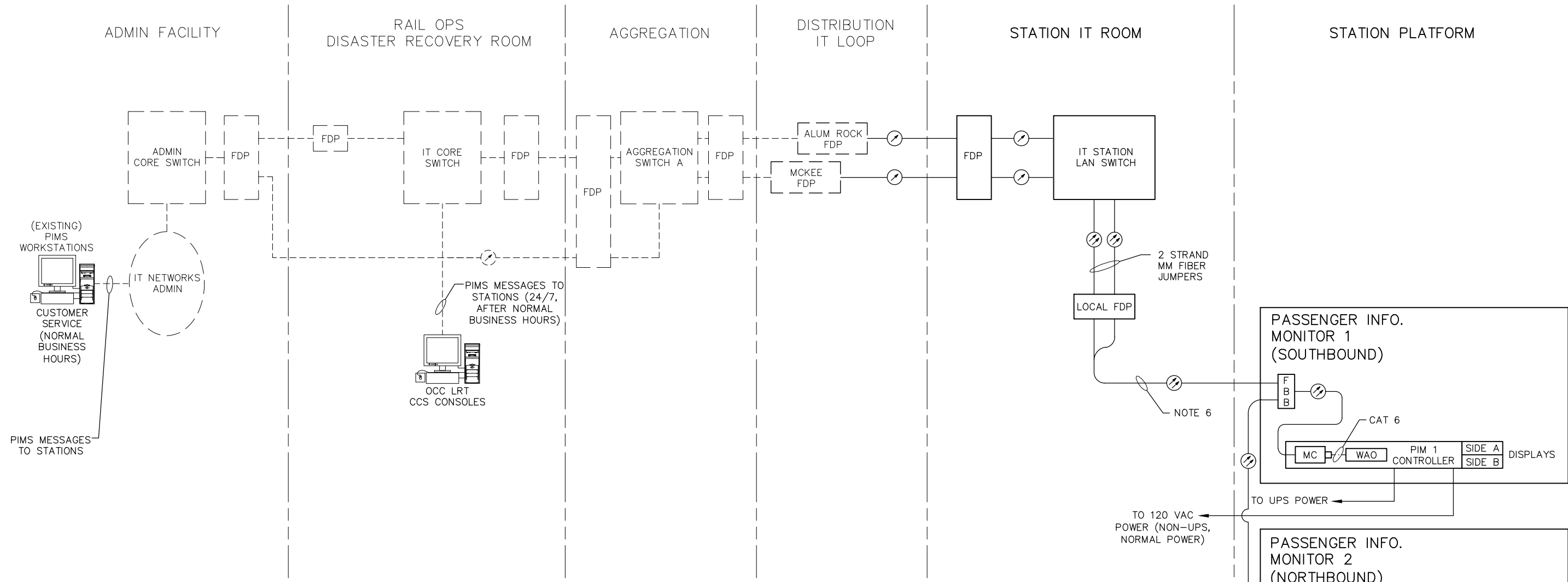
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EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 COMMUNICATIONS  
 BLOCK DIAGRAM, TYPICAL  
 PUBLIC ADDRESS SUBSYSTEM

PLA NO: 000 CONTRACT NO: S808 FILE LOCATION: PROJECTWISE

SHEET OF: DRAWING NO. KB154 REVISION C

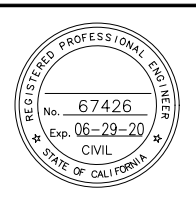


**NOTES:**

- EXISTING NETWORK DETAILS ARE SIMPLIFIED FOR CLARITY.
- ADD SOFTWARE LICENSES, MODIFY/CONFIGURE APPLICATION SOFTWARE TO INTEGRATE NEW PIM SIGNS WITH NEW STATIONS, FOR EXISTING PIMS WORKSTATIONS.
- CONTRACTOR SHALL PROVIDE ALL SPLICES AND CONNECTORS FOR THE FIBER OPTIC CABLE CONNECTIONS SHOWN.
- TERMINATE ALL 6 FIBERS OF EACH MM FIBER OPTIC CABLE AT THE FDP IN THE IT ROOM AND AT THE FBB IN EACH PIM.
- PROVIDE 120VAC, 20 AMP CIRCUIT TO EACH PIM.
- EACH PAIR OF PIM FED BY 12 STRAND SM FIBER OPTIC, 2 FIBERS UTILIZED PER PIM, 4 FIBERS TOTAL, 8 SPARE FIBERS.

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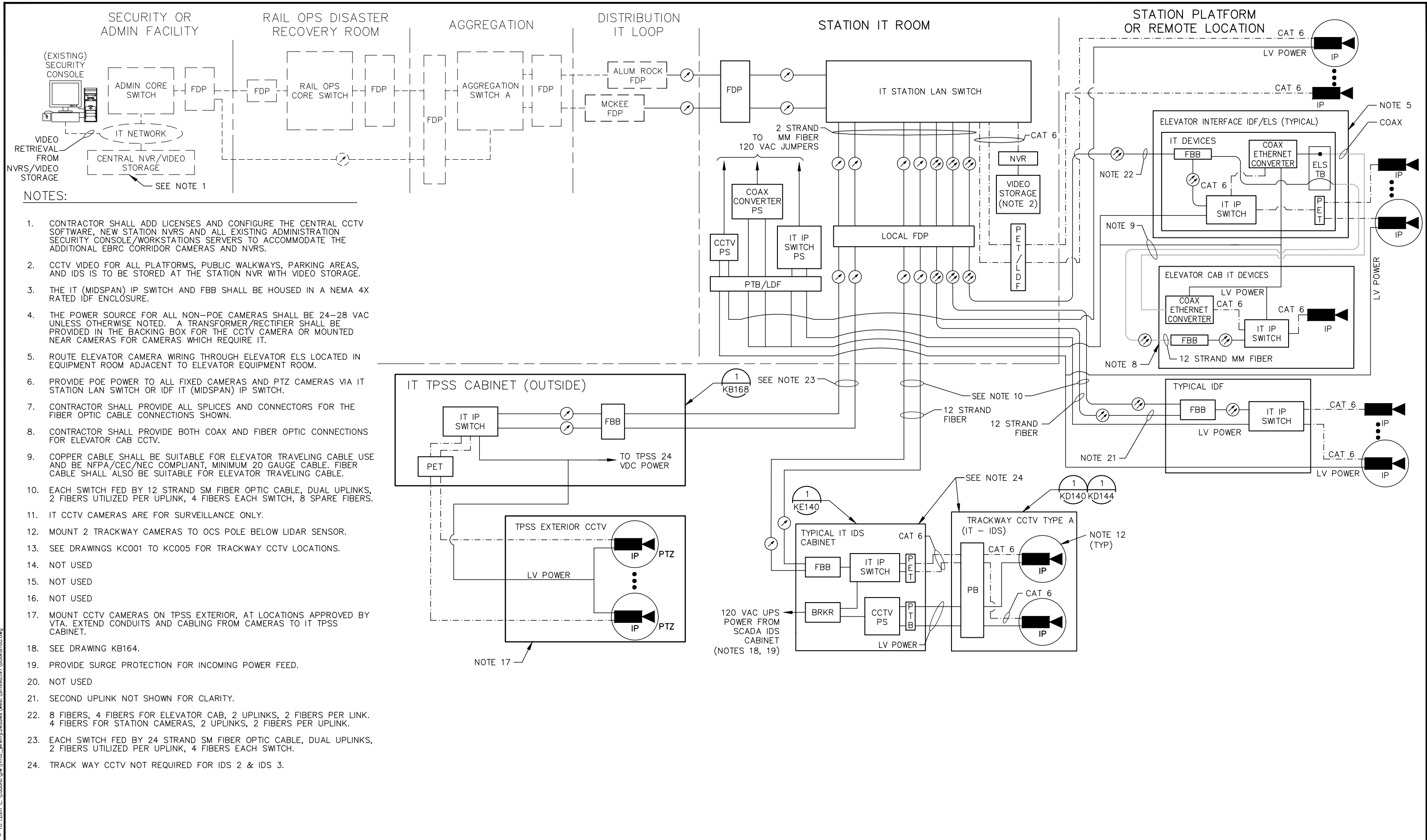
EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 COMMUNICATIONS  
 BLOCK DIAGRAM, TYPICAL  
 PASSENGER INFO. MONITOR SUBSYSTEM

PCA NO.: 000 CONTRACT NO.: S808 FILE LOCATION: PROJECTWISE

SHEET OF: KB156  
 REVISION: C





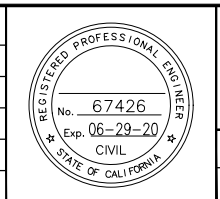


**NOTES:**

1. CONTRACTOR SHALL ADD LICENSES AND CONFIGURE THE CENTRAL CCTV SOFTWARE, NEW STATION NVRS AND ALL EXISTING ADMINISTRATION SECURITY CONSOLE/WORKSTATIONS SERVERS TO ACCOMMODATE THE ADDITIONAL EBRC CORRIDOR CAMERAS AND NVRS.
2. CCTV VIDEO FOR ALL PLATFORMS, PUBLIC WALKWAYS, PARKING AREAS, AND IDS IS TO BE STORED AT THE STATION NVR WITH VIDEO STORAGE.
3. THE IT (MIDSPAN) IP SWITCH AND FBB SHALL BE HOUSED IN A NEMA 4X RATED IDF ENCLOSURE.
4. THE POWER SOURCE FOR ALL NON-POE CAMERAS SHALL BE 24-28 VAC UNLESS OTHERWISE NOTED. A TRANSFORMER/RECTIFIER SHALL BE PROVIDED IN THE BACKING BOX FOR THE CCTV CAMERA OR MOUNTED NEAR CAMERAS FOR CAMERAS WHICH REQUIRE IT.
5. ROUTE ELEVATOR CAMERA WIRING THROUGH ELEVATOR ELS LOCATED IN EQUIPMENT ROOM ADJACENT TO ELEVATOR EQUIPMENT ROOM.
6. PROVIDE POE POWER TO ALL FIXED CAMERAS AND PTZ CAMERAS VIA IT STATION LAN SWITCH OR IDF IT (MIDSPAN) IP SWITCH.
7. CONTRACTOR SHALL PROVIDE ALL SPLICES AND CONNECTORS FOR THE FIBER OPTIC CABLE CONNECTIONS SHOWN.
8. CONTRACTOR SHALL PROVIDE BOTH COAX AND FIBER OPTIC CONNECTIONS FOR ELEVATOR CAB CCTV.
9. COPPER CABLE SHALL BE SUITABLE FOR ELEVATOR TRAVELING CABLE USE AND BE NFPA/CEC/NEC COMPLIANT, MINIMUM 20 GAUGE CABLE. FIBER CABLE SHALL ALSO BE SUITABLE FOR ELEVATOR TRAVELING CABLE.
10. EACH SWITCH FED BY 12 STRAND SM FIBER OPTIC CABLE, DUAL UPLINKS, 2 FIBERS UTILIZED PER UPLINK, 4 FIBERS EACH SWITCH, 8 SPARE FIBERS.
11. IT CCTV CAMERAS ARE FOR SURVEILLANCE ONLY.
12. MOUNT 2 TRACKWAY CAMERAS TO OCS POLE BELOW LIDAR SENSOR.
13. SEE DRAWINGS KC001 TO KC005 FOR TRACKWAY CCTV LOCATIONS.
14. NOT USED
15. NOT USED
16. NOT USED
17. MOUNT CCTV CAMERAS ON TPSS EXTERIOR, AT LOCATIONS APPROVED BY VTA. EXTEND CONDUITS AND CABLING FROM CAMERAS TO IT TPSS CABINET.
18. SEE DRAWING KB164.
19. PROVIDE SURGE PROTECTION FOR INCOMING POWER FEED.
20. NOT USED
21. SECOND UPLINK NOT SHOWN FOR CLARITY.
22. 8 FIBERS, 4 FIBERS FOR ELEVATOR CAB, 2 UPLINKS, 2 FIBERS PER LINK. 4 FIBERS FOR STATION CAMERAS, 2 UPLINKS, 2 FIBERS PER UPLINK.
23. EACH SWITCH FED BY 24 STRAND SM FIBER OPTIC CABLE, DUAL UPLINKS, 2 FIBERS UTILIZED PER UPLINK, 4 FIBERS EACH SWITCH.
24. TRACK WAY CCTV NOT REQUIRED FOR IDS 2 & IDS 3.

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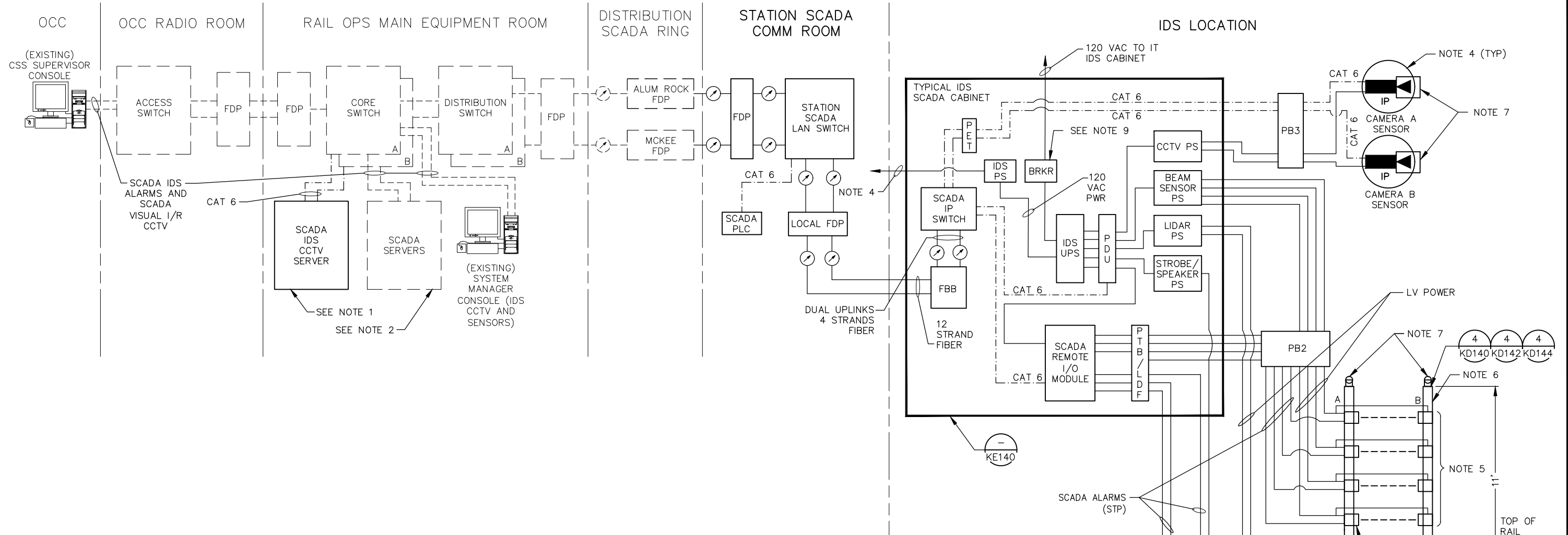
**EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 COMMUNICATIONS  
 BLOCK DIAGRAM, TYPICAL  
 CLOSED CIRCUIT TELEVISION SUBSYSTEM**

PCA NO: 000 CONTRACT NO: S808 FILE LOCATION: PROJECTWISE

SHEET OF: DRAWING NO. KB160 REVISION: C



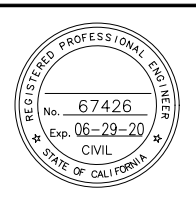




- NOTES:**
1. PROVIDE DIGITAL ALARM OUTPUTS FROM SCADA IDS CCTV SERVER TO SCADA SERVERS FOR VIDEO ANALYTIC ALARMS FROM INFRARED/VISUAL SCADA CCTV CAMERAS.
  2. PROVIDE LOGIC AS APPROVED BY VTA TO COMBINE ALARMS FROM CCTV VIDEO ANALYTICS AND SCADA IDS SENSORS, AS PART OF CALCULATED SCADA ALARM POINTS FOR IDS.
  3. SCADA INFRARED/VISUAL DUAL SENSOR CCTV CAMERAS ARE FOR IDS VIDEO ANALYTICS ALARMING.
  4. TO 240 VAC OR 480 VAC POWER SOURCE, DEPENDING ON DISTANCE, FROM SCADA IDS CABINET. PROVIDE SURGE PROTECTION FOR INCOMING POWER FEED TO IT IDS CABINET.
  5. BEAM FOR ANIMAL OR CRAWLING HUMAN (3"). BEAM FOR WALKING HUMAN OR CAR (1'-9") & (3'-10"). BEAM FOR TRAIN (9'). ALL BEAM DIMENSIONS ARE ABOVE TOP OF RAIL.
  6. 4" X 4" X 1/4" GALVANIZED SQUARE STEEL TUBE, MAX 11' TALL MAST ATTACHED TO GUIDEWAY SOUND BARRIER (TYP).
  7. PTZ CCTV THERMAL/VISUAL DUAL SENSOR CAMERAS MOUNTED TO 11' BEAM MAST.
  8. ALL IDS WIRING IS STP UNLESS OTHERWISE NOTED.
  9. PROVIDE CIRCUIT BREAKERS FOR EACH INDIVIDUAL UPS OUTPUT CIRCUIT.

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DESIGNED: Bryan Lamoreaux CHECKED: B. Lamoreaux  
 DRAWN: J. Cowlishaw CADD FILE NAME: 808KB164.dwg



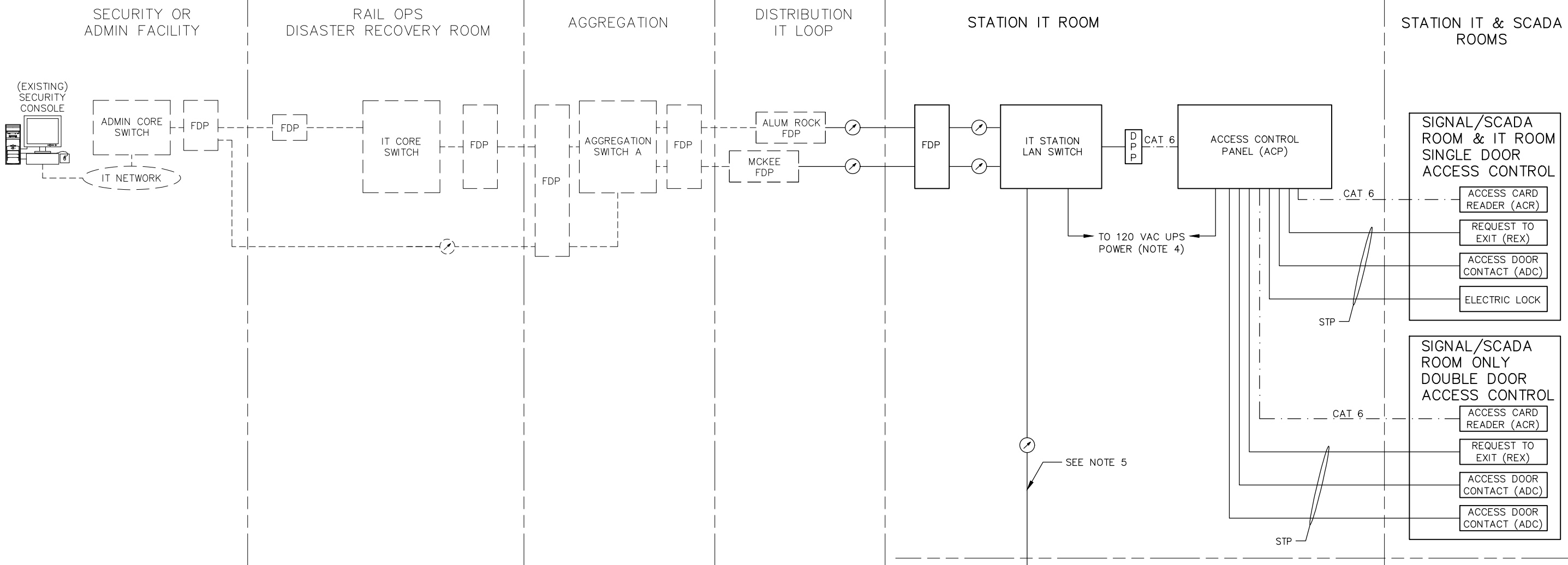
**BKF** 100+ YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 01/23/19 SCALE: N.T.S.  
 SUBMITTAL DATE: 06/29/20 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 COMMUNICATIONS  
 BLOCK DIAGRAM, TYPICAL  
 INTRUSION DETECTION SUBSYSTEM

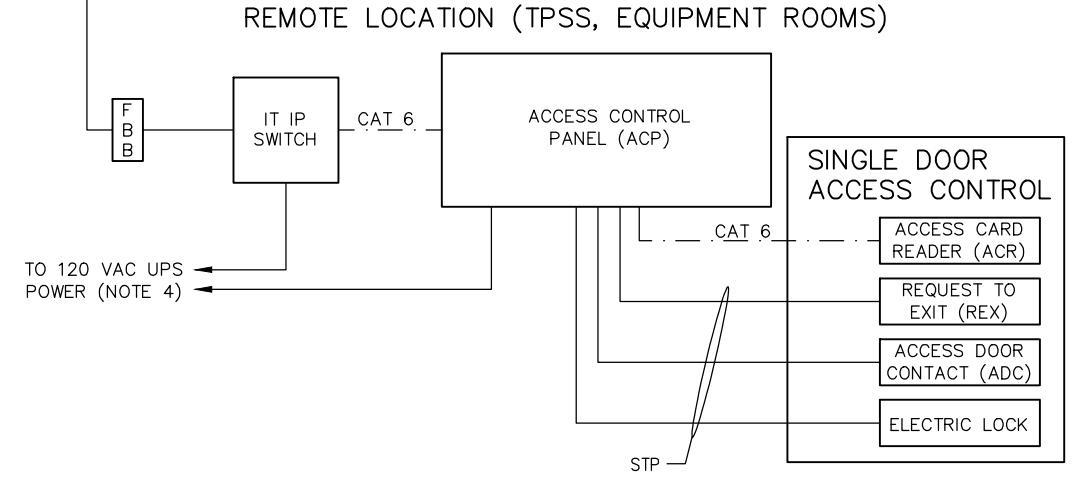
PCA NO.: 000 CONTRACT NO.: S808 FILE LOCATION: PROJECTWISE

SHEET OF: KB164 REVISION: C



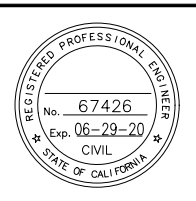
**NOTES:**

1. EXISTING NETWORK DETAILS ARE SIMPLIFIED FOR CLARITY.
2. ADD SOFTWARE LICENSES, MODIFY/CONFIGURE APPLICATION SOFTWARE TO INTEGRATE NEW ACCESS CONTROL PANELS WITH NEW STATIONS, FOR EXISTING VTA WORKSTATIONS.
3. CONTRACTOR SHALL PROVIDE ALL SPLICES AND CONNECTORS FOR THE FIBER OPTIC CABLE CONNECTIONS SHOWN.
4. PROVIDE 120VAC, 20 AMP UPS CIRCUIT TO EACH ACP.
5. EACH SWITCH FED BY 12 STRAND SM FIBER OPTIC, DUAL UPLINKS, 2 FIBERS UTILIZED PER UPLINK, 4 FIBERS EACH SWITCH, 8 SPARE FIBERS.



Joseph Cowlshaw - Jun 23, 2020 - 10:12am C:\cadd\lib\p\y\ntb\_jeremy\cadd\es\west\sm\8397\_808KB165.dwg

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



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DESIGNED: Bryan Lamoreaux CHECKED: B. Lamoreaux  
 DRAWN: J. Cowlshaw CADD FILE NAME: 808KB165.dwg



**BKF** 100+ YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 02/26/20 SCALE: N.T.S.  
 SUBMITTAL DATE: 04/20/20 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT

COMMUNICATIONS  
 BLOCK DIAGRAM, TYPICAL  
 ACCESS CONTROL SUBSYSTEM

PCA NO.: 000 CONTRACT NO.: S808 FILE LOCATION: PROJECTWISE

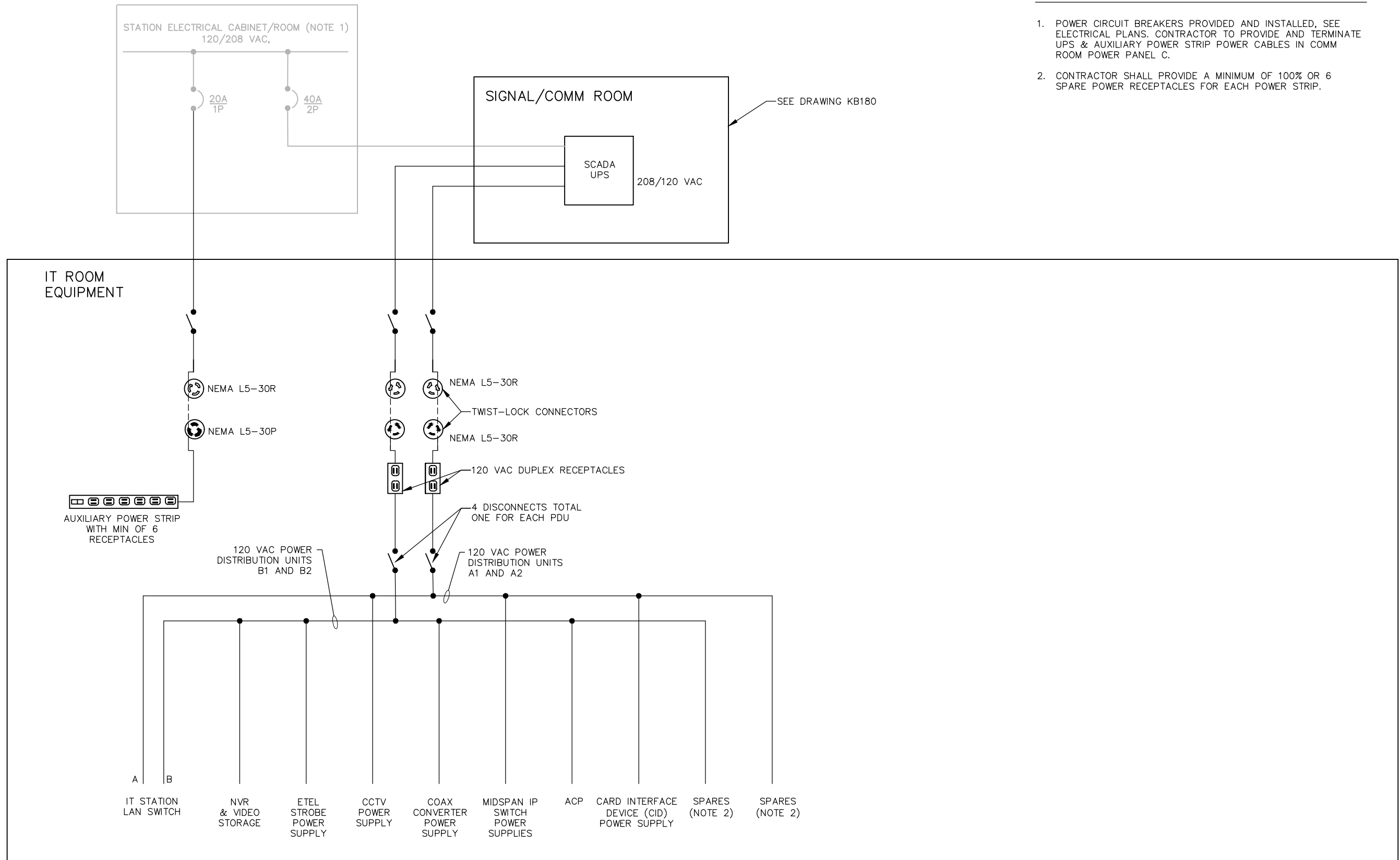
SHEET OF: KB165 REVISION: C





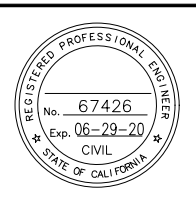
NOTES:

1. POWER CIRCUIT BREAKERS PROVIDED AND INSTALLED, SEE ELECTRICAL PLANS. CONTRACTOR TO PROVIDE AND TERMINATE UPS & AUXILIARY POWER STRIP POWER CABLES IN COMM ROOM POWER PANEL C.
2. CONTRACTOR SHALL PROVIDE A MINIMUM OF 100% OR 6 SPARE POWER RECEPTACLES FOR EACH POWER STRIP.



Joseph Conditore Jun 23, 2020 - 10:12am C:\cadd\lib\p\y\ntb\_jeremy.becadefes\west\cadd\8397\_808KB179.dwg

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



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DESIGNED: Bryan Lamoreaux  
 CHECKED: B. Lamoreaux  
 DRAWN: A. Perry  
 CADD FILE NAME: 808KB179.dwg



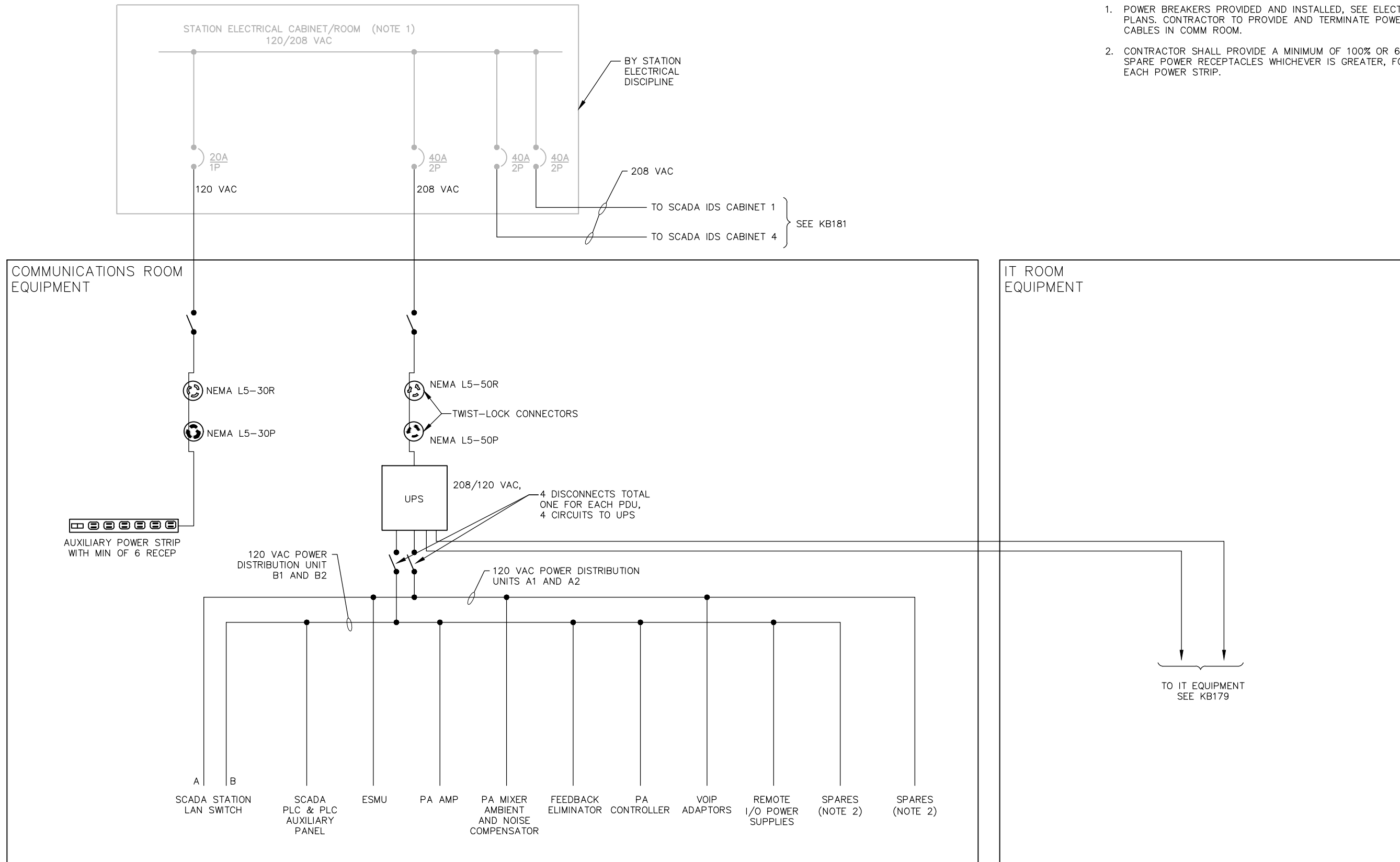
**BKF** 100+ YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

APPROVED: [Signature]  
 CADD FILE DATE: 01/23/19  
 SUBMITTAL DATE: 06/29/20  
 SCALE: N.T.S.  
 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT			SHEET OF
COMMUNICATIONS POWER SINGLE LINE DIAGRAM IT ROOM TYPICAL			DRAWING NO. KB179
			REVISION C
PCA NO. 000	CONTRACT NO. S808	FILE LOCATION PROJECTWISE	

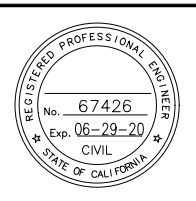
NOTES:

1. POWER BREAKERS PROVIDED AND INSTALLED, SEE ELECTRICAL PLANS. CONTRACTOR TO PROVIDE AND TERMINATE POWER CABLES IN COMM ROOM.
2. CONTRACTOR SHALL PROVIDE A MINIMUM OF 100% OR 6 SPARE POWER RECEPTACLES WHICHEVER IS GREATER, FOR EACH POWER STRIP.



Joseph Cowlshaw Jun 23, 2020 - 10:12am C:\cadd\lib\p\mntb\_jeremy\cadd\es\west\mms8397\_808KB180.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



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 DRAWN: J. Cowlshaw CADD FILE NAME: 808KB180.dwg



**BKF** 100+ YEARS  
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APPROVED: [Signature]  
 CADD FILE DATE: 01/25/19 SCALE: N.T.S.  
 SUBMITTAL DATE: 06/29/20 BOARD APPROVAL DATE:

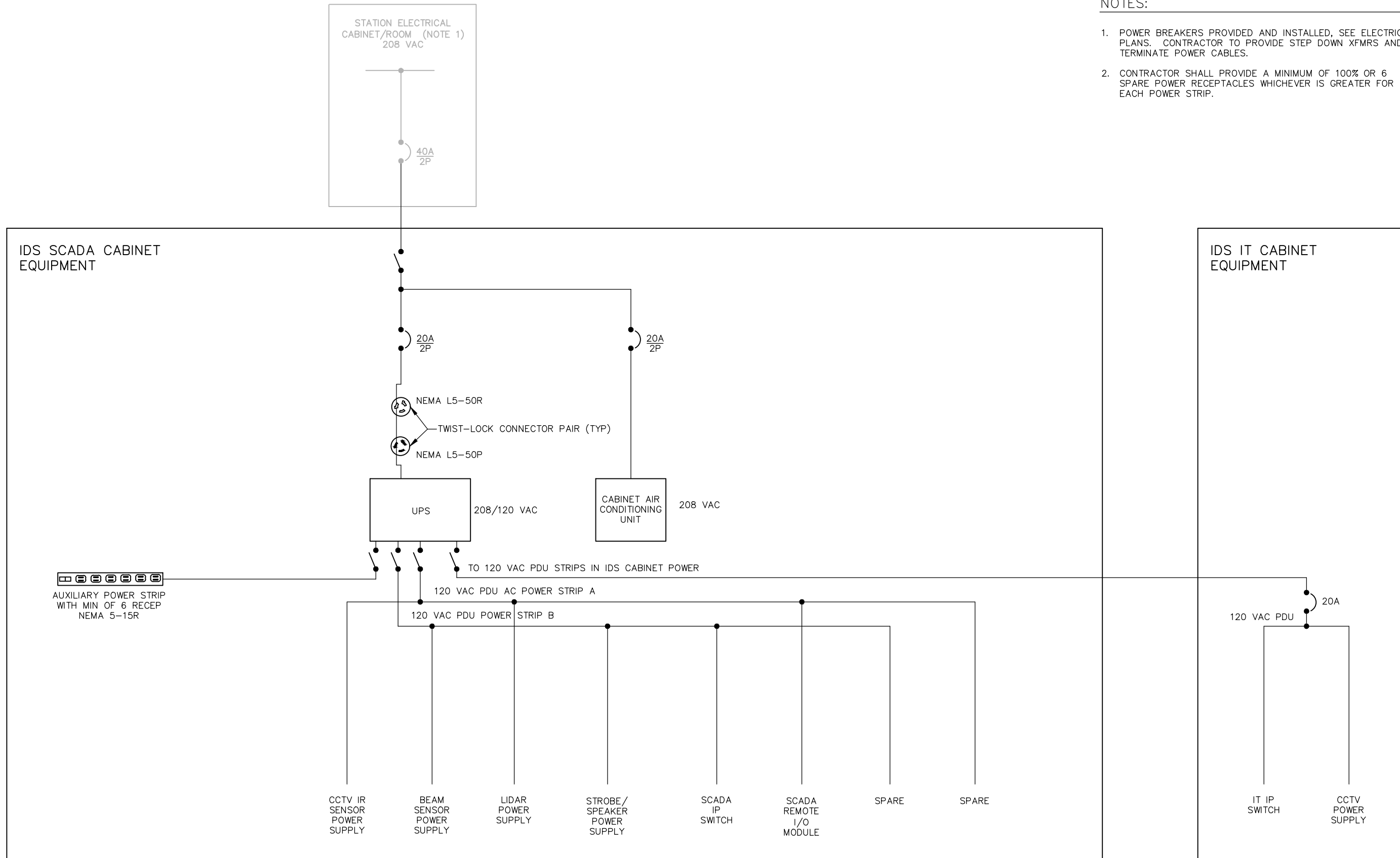
EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 COMMUNICATIONS  
 POWER SINGLE LINE DIAGRAM  
 COMM ROOM TYPICAL

PCA NO.: 000 CONTRACT NO.: S808 FILE LOCATION: PROJECTWISE

SHEET OF: KB180 REVISION: B

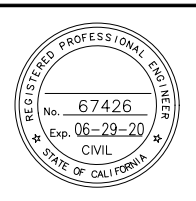
NOTES:

1. POWER BREAKERS PROVIDED AND INSTALLED, SEE ELECTRICAL PLANS. CONTRACTOR TO PROVIDE STEP DOWN XFMR'S AND TERMINATE POWER CABLES.
2. CONTRACTOR SHALL PROVIDE A MINIMUM OF 100% OR 6 SPARE POWER RECEPTACLES WHICHEVER IS GREATER FOR EACH POWER STRIP.



Joseph Cowlshaw Jun 23, 2020 - 10:15am C:\cadd\lib\ora\yntb\_jeremy\cadd\set\west\smo98397\_808KB181.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



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DESIGNED: Bryan Lamoreaux CHECKED: B. Lamoreaux  
 DRAWN: J. Cowlshaw CADD FILE NAME: 808KB181.dwg

**Santa Clara Valley Transportation Authority**

**BKF 100+ YEARS**  
 ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 01/25/19 SCALE: N.T.S.  
 SUBMITTAL DATE: 06/29/20 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 COMMUNICATIONS  
 POWER SINGLE LINE DIAGRAM  
 IDS CABINET, TYPICAL

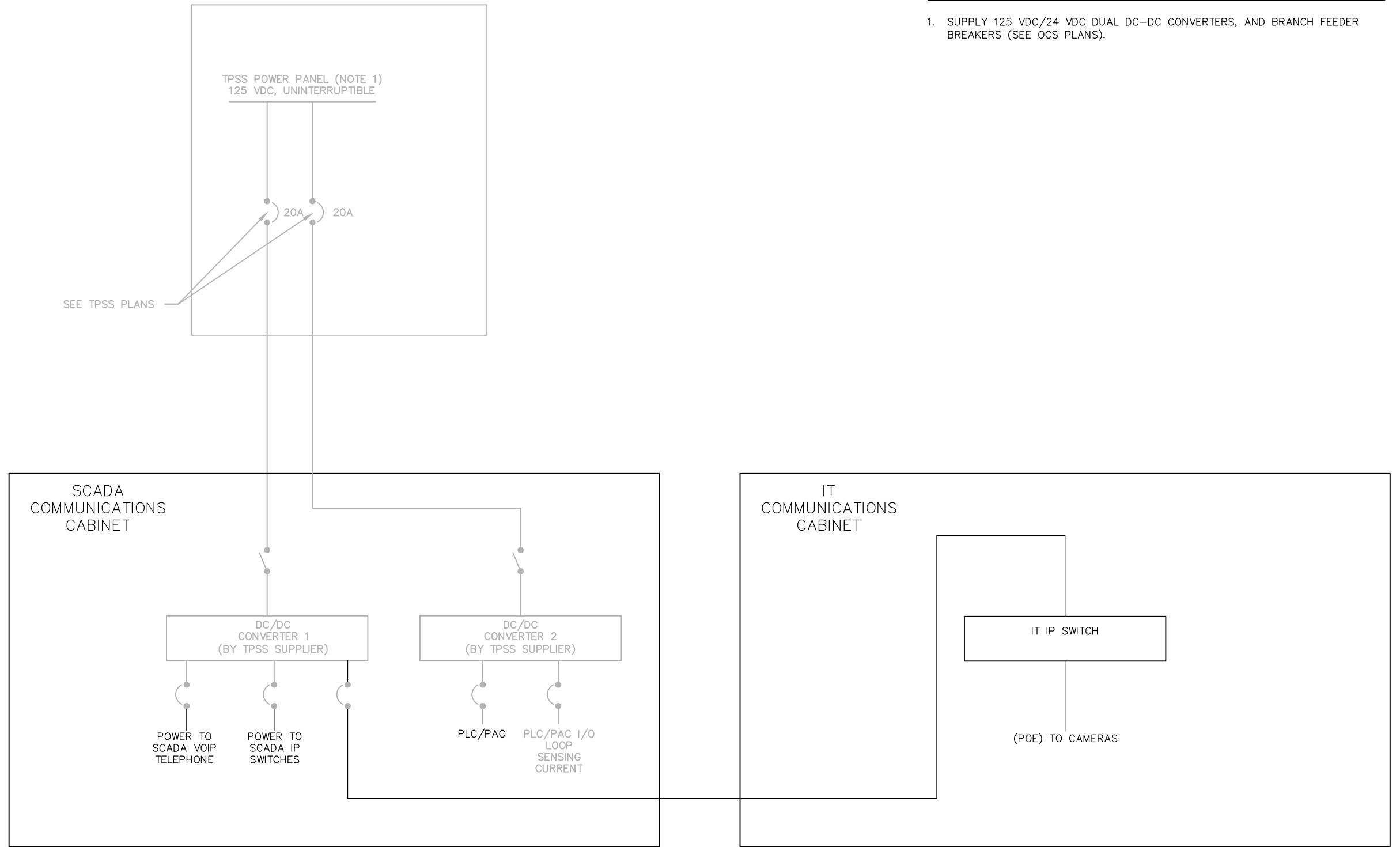
PCA NO.: 000 CONTRACT NO.: S808 FILE LOCATION: PROJECTWISE

SHEET OF	
DRAWING NO.	KB181
REVISION	B



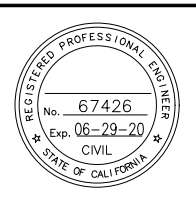
NOTES:

- SUPPLY 125 VDC/24 VDC DUAL DC-DC CONVERTERS, AND BRANCH FEEDER BREAKERS (SEE OCS PLANS).



Joseph Conditore Jun 23, 2020 - 10:13am C:\cadd\lib\p\y\ntb\jeremy.becadfas\west\cadd\8397\_808KB182.dwg

NO.	DATE	REVISIONS
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A	03/19	65% SUBMITTAL SET



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<b>Lamoreaux Associates</b> 2686 N 775 W T 435.586.0174 Cedar City, UT 84721 F 435.865.1848 www.laeng.com	
DESIGNED	CHECKED
Bryan Lamoreaux	B. Lamoreaux
DRAWN	CADD FILE NAME
A. Perry	808KB182.dwg

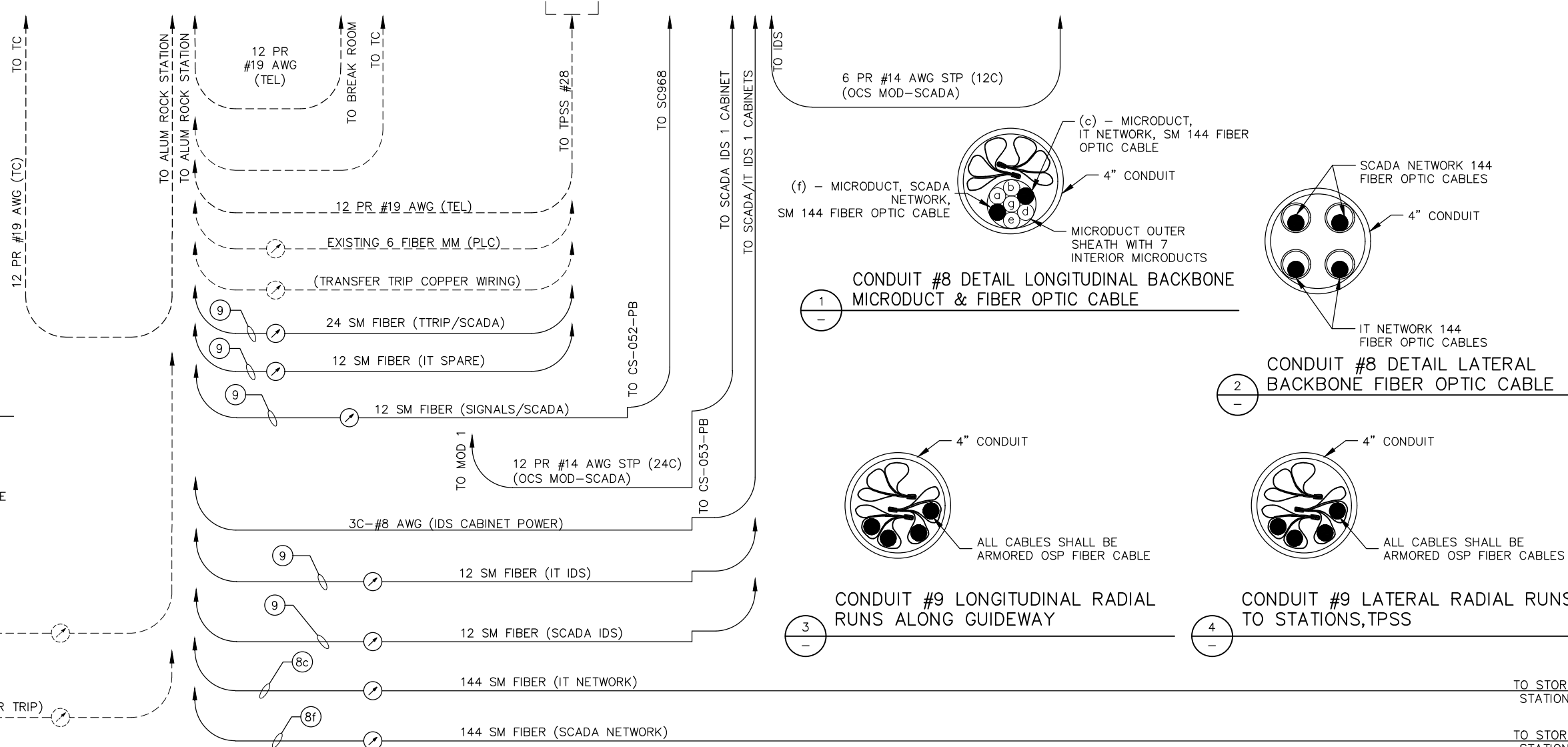
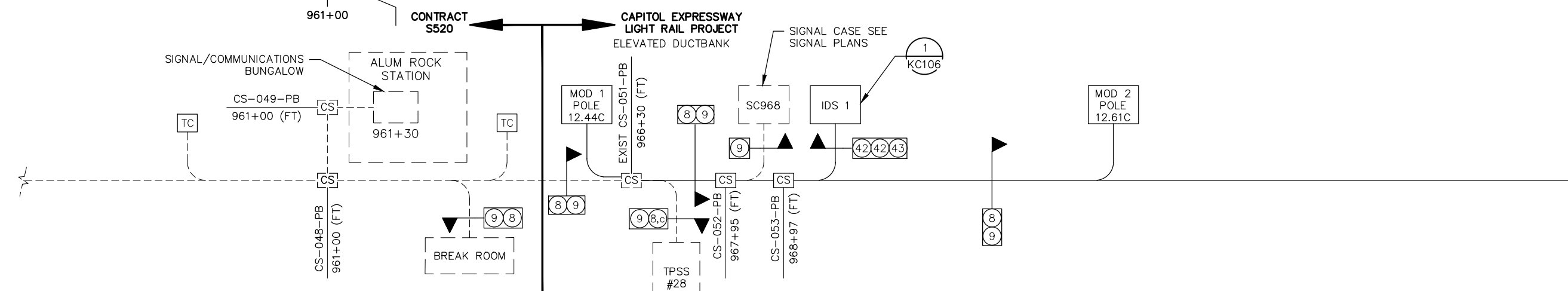


APPROVED	
CADD FILE DATE	SCALE
01/25/19	N.T.S.
SUBMITTAL DATE	BOARD APPROVAL DATE
06/29/20	

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT POWER SINGLE LINE DIAGRAM TRACTION POWER SUBSTATION TYPICAL		
PCA NO.	CONTRACT NO.	FILE LOCATION
000	S808	PROJECTWISE

SHEET	OF
DRAWING NO.	KB182
REVISION	B

CONTROL LINE 958+00 960+00 962+00 964+00 966+00 968+00 970+00 972+00 974+00 976+00 978+00 980+00 982+00

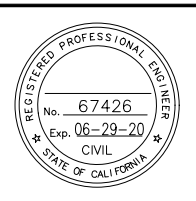


- NOTES:
- CONDUITS 8 AND 9 ARE FOR CONVENTIONAL CSD WITH CONDUIT, CONCRETE ENCASEMENT.
  - FOR AERIAL GUIDEWAY PATHWAYS 8 AND 9 SHALL BE EQUIVELANT SPACE IN THE GUIDEWAY TROUGH.

MATCH LINE KC002

Joseph Cowlshaw Jun 23, 2020 - 10:13am C:\cadd\8\proj\hntb\jeremy.beadles\west\smo\808\KC001.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



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DESIGNED: Bryan Lamoreaux CHECKED: B. Lamoreaux  
DRAWN: J. Cowlshaw CADD FILE NAME: 808KC001.dwg

**Santa Clara Valley Transportation Authority**

**BKF 100+ YEARS**  
ENGINEERS / SURVEYORS / PLANNERS

SCALE: N.T.S.  
SUBMITTAL DATE: 01/26/19 BOARD APPROVAL DATE: 06/29/20

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
COMMUNICATIONS  
COMBINED SYSTEM DUCTBANK  
CABLE PLAN 1 OF 5

PCA NO.: 000 CONTRACT NO.: S808 FILE LOCATION: -PROJECTWISE

SHEET OF	KC001
DRAWING NO.	KC001
REVISION	B

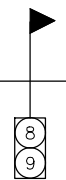
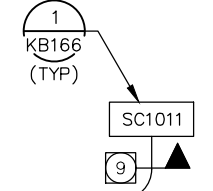
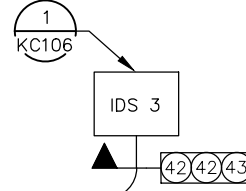
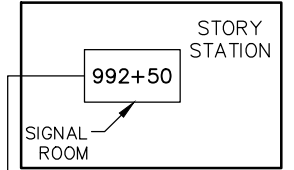
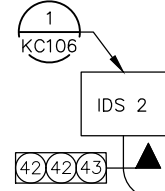
Joseph Cowlshaw Jun 23, 2020 - 10:15am C:\cadd\lib\an\y\ntb\_jeremy\beadfas\west\cma98398\_808K\002.dwg

984+00 986+00 988+00 990+00 992+00 994+00 996+00 998+00 1000+00 1002+00 1004+00 1006+00 1008+00 1010+00 1012+00

991+82 991+95 992+50

997+52

1011+50



CS  
CS-054-PB  
991+95

TO IDS 2

TO IDS 3

TO SC1011

3C #10 AWG (IDS CABINET POWER)

12 SM FIBER (IDS SCADA)

12 SM FIBER (SCADA IDS)

12 SM FIBER (SIGNALS/SCADA)

12 SM FIBER (SIGNALS/SCADA)

TO SC1029

12 SM FIBER (IT CCTV/ACP)

TO TPSS #33

24 SM FIBER (TTRIP/SCADA)

TO TPSS #33

TO ALUM ROCK 144 SM FIBER (IT NETWORK)

144 SM FIBER (IT NETWORK)

TO EASTRIDGE STATION

TO ALUM ROCK 144 SM FIBER (SCADA NETWORK)

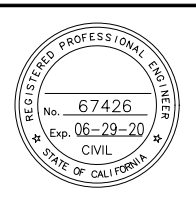
144 SM FIBER (SCADA NETWORK)

TO EASTRIDGE STATION

MATCH LINE KC001

MATCH LINE KC003

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



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 DRAWN: J. Cowlshaw CADD FILE NAME: 808KC002.dwg

**Santa Clara Valley Transportation Authority**

**BKF 100+ YEARS**  
 ENGINEERS / SURVEYORS / PLANNERS

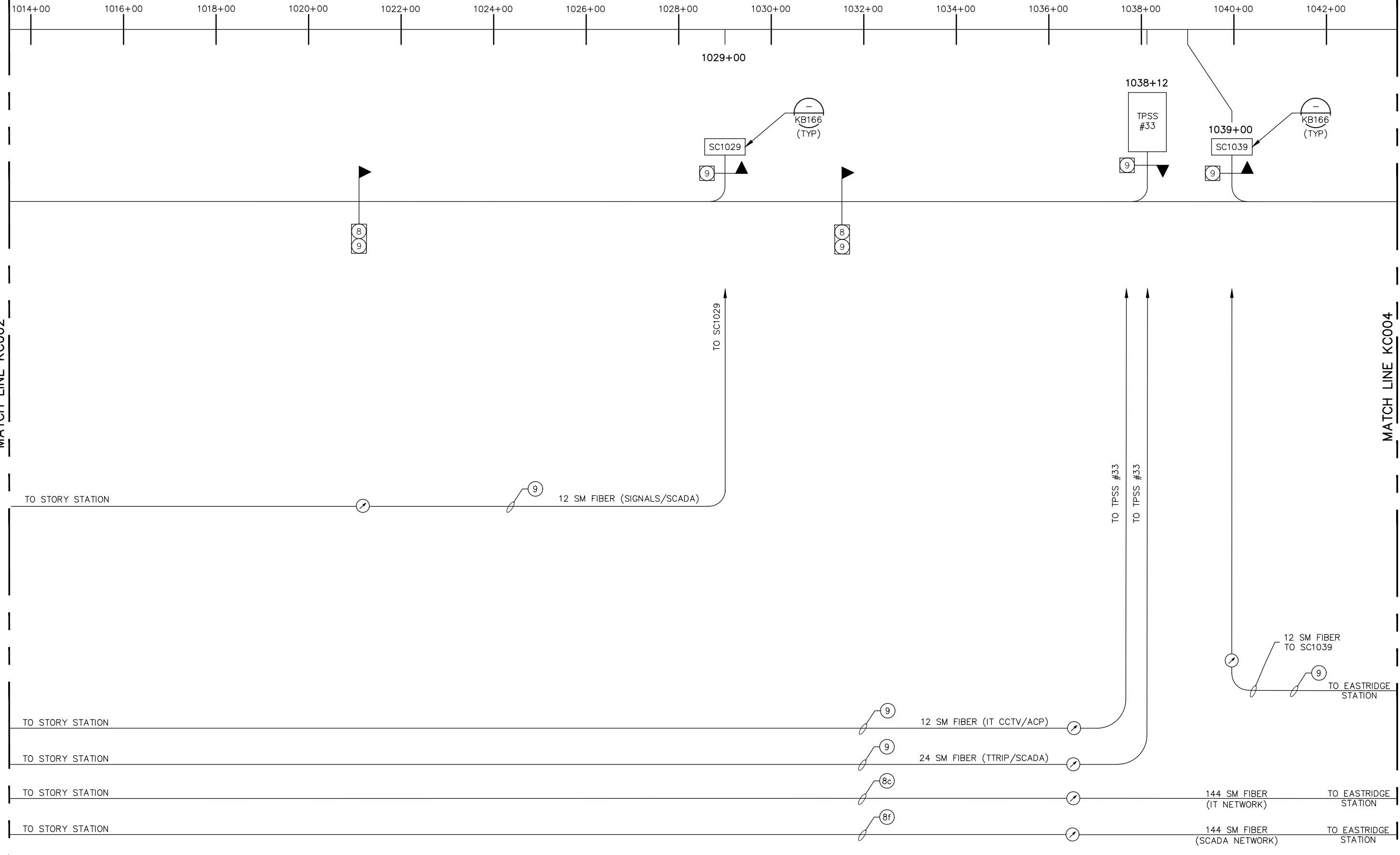
CADD FILE DATE: 01/23/19 SCALE: N.T.S.  
 SUBMITTAL DATE: 06/29/20 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 COMMUNICATIONS  
 COMBINED SYSTEM DUCTBANK  
 CABLE PLAN 2 OF 5

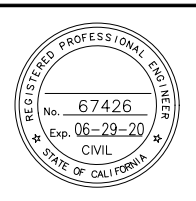
PCA NO.: 000 CONTRACT NO.: S808 FILE LOCATION: -PROJECTWISE

SHEET OF	
DRAWING NO.	KC002
REVISION	B

Joseph Cowlishaw Jun 23, 2020 - 10:15am C:\cadd\hls\on\hntb\_jeremy.becadef\west\sm808KC003.dwg



NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



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 DRAWN: J. Cowlishaw CADD FILE NAME: 808KC003.dwg

**Santa Clara Valley Transportation Authority**

**BKF 100+ YEARS**  
 ENGINEERS / SURVEYORS / PLANNERS

APPROVED: [Signature]  
 CADD FILE DATE: 01/23/19 SCALE: N.T.S.  
 SUBMITTAL DATE: 06/29/20 BOARD APPROVAL DATE:

**EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 COMMUNICATIONS  
 COMBINED SYSTEM DUCTBANK  
 CABLE PLAN 3 OF 5**

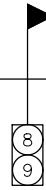
PCA NO.: 000 CONTRACT NO.: S808 FILE LOCATION: -PROJECTWISE

SHEET OF: KC003  
 REVISION: B

1044+00 1046+00 1048+00 1050+00 1052+00 1054+00 1056+00 1058+00 1060+00 1062+00 1064+00 1066+00 1068+00 1070+00 1072+00

1068+46

MOD 3  
POLE  
14.82CS



6 PR #14 AWG STP (12C)  
(OCS MOD-SCADA) TO IDS 4

MATCH LINE KC003

MATCH LINE KC005

TO SC1039

12 SM FIBER TO EASTRIDGE  
(SIGNALS & SCADA) STATION

TO STORY STATION

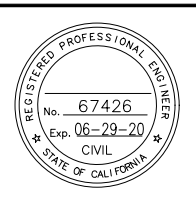
144 SM FIBER TO EASTRIDGE  
(IT NETWORK) STATION

TO STORY STATION

144 SM FIBER TO EASTRIDGE  
(SCADA NETWORK) STATION

Joseph Cowlishaw Jun 23, 2020 - 10:15am C:\cadd\lib\p\y\ntb\jeremy\cadd\west\cadd\89398\808KC004.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



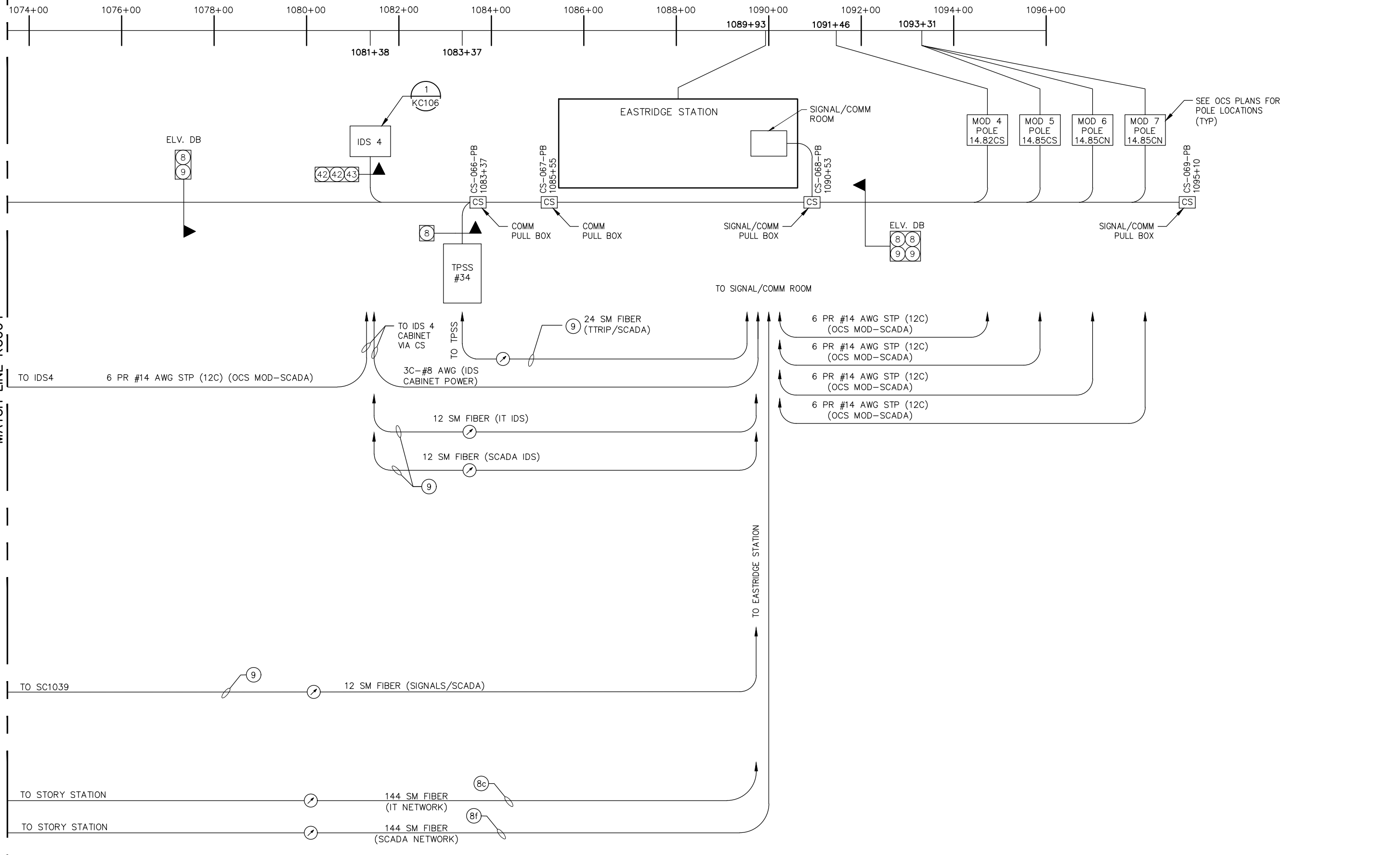
SUBMITTED <b>Lamoreaux Associates</b> 2686 N 775 W T 435.586.0174 Cedar City, UT 84721 F 435.865.1848 www.laeng.com	
DESIGNED Bryan Lamoreaux	CHECKED B. Lamoreaux
DRAWN J. Cowlishaw	CADD FILE NAME 808KC004.dwg



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CADD FILE DATE 01/23/19	SCALE N.T.S.
SUBMITTAL DATE 06/29/20	BOARD APPROVAL DATE

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT COMMUNICATIONS COMBINED SYSTEM DUCTBANK CABLE PLAN 4 OF 5		
PCA NO. 000	CONTRACT NO. S808	FILE LOCATION -PROJECTWISE

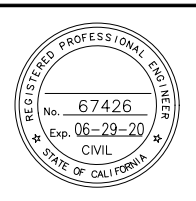
SHEET OF	DRAWING NO. KC004
REVISION	B



MATCH LINE KC004

Joseph Cowlshaw Jun 23, 2020 - 10:15am C:\cadd\lib\p\y\ntb\jeremy\beadles\west\m\m\8398\B08KC005.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



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DRAWN: J. Cowlshaw CADD FILE NAME: 808KC005.dwg

Santa Clara Valley  
Transportation  
Authority

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BKF 100+ YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 01/23/19 SCALE: N.T.S.  
SUBMITTAL DATE: 06/29/20 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
COMMUNICATIONS  
COMBINED SYSTEM DUCTBANK  
CABLE PLAN 5 OF 5

PCA NO.: 000 CONTRACT NO.: S808 FILE LOCATION: -PROJECTWISE

SHEET OF	KC005
DRAWING NO.	KC005
REVISION	B



CABLE SCHEDULE - COMMUNICATIONS (KE101 DRAWING)												
CONDUIT NO.	FROM	TO	VIA PULL BOX CONDUIT	ZONE	WIRE CW CF		WIRE TYPE EW, LW				ESTIMATED LENGTH (FT)	REMARKS
					UTP FIBER	QT	STRANDED COPPER					
							TYPE	QTY 1	SIZE 1	QTY 2		
IT COMM RM	IDF 1	PB-01, PB-02					FIBER				232	
IT COMM RM	P-01	PB-01, PB-02, PB-03					FIBER				301	
IT COMM RM	IDF 2	PB-01, PB-02, PB-03					FIBER				291	
IT COMM RM	P-02	PB-01, PB-02, PB-03					FIBER				299	
IT COMM RM	IDF 3	PB-01, PB-02, PB-03					FIBER				359	
IT COMM RM	TVM-1	PB-01, PB-02, PB-03, PB-04					FIBER				416	
TVM-1	TVM-2	PB-01, PB-02, PB-03, PB-04					FIBER				23	
IT COMM RM	S-20	PB-01, PB-02, PB-03, PB-04		3			COPPER		10		435	
IT COMM RM	S-19	PB-01, PB-02, PB-03, PB-04		1			COPPER		10		432	
IT COMM RM	S-18	PB-01, PB-02, PB-03, PB-04		4			COPPER		10		376	
IT COMM RM	S-17	PB-01, PB-02, PB-03, PB-04		2			COPPER		10		374	
IT COMM RM	S-16	PB-01, PB-02, PB-03		3			COPPER		10		338	
IT COMM RM	S-15	PB-01, PB-02, PB-03		1			COPPER		10		352	
IT COMM RM	S-14	PB-01, PB-02, PB-03		4			COPPER		10		307	
IT COMM RM	S-13	PB-01, PB-02, PB-03		2			COPPER		10		320	
IT COMM RM	AN-01	PB-01, PB-02, PB-03					COPPER		12		286	
IT COMM RM	AN-02	PB-01, PB-02, PB-03					COPPER		12		285	
IT COMM RM	S-12	PB-01, PB-02, PB-03		4			COPPER		12		273	
IT COMM RM	S-10	PB-01, PB-02, PB-03		3			COPPER		12		271	
IT COMM RM	S-11	PB-01, PB-02, PB-03		2			COPPER		12		284	
IT COMM RM	S-09	PB-01, PB-02, PB-03		1			COPPER		12		282	
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IT COMM RM	S-06	PB-01, PB-02		3			COPPER		12		204	
IT COMM RM	S-05	PB-01, PB-02		1			COPPER		12		217	
IT COMM RM	S-04	PB-01, PB-02		4			COPPER		12		166	
IT COMM RM	S-03	PB-01, PB-02		2			COPPER		12		163	
IT COMM RM	S-02	PB-01, PB-02		3			COPPER		14		100	
IT COMM RM	S-01	PB-01, PB-02		1			COPPER		14		99	
IT COMM RM	MT-01	PB-01, PB-02					COPPER		14		40	
IDF-01	CP-01	PB-01, PB-02					CAT 6		10		237	
IDF-01	CP-10	PB-01, PB-02					CAT 6		10		253	
IDF-01	CP-11	PB-02					CAT 6		10		186	
IDF-01	CF-01	PB-02					CAT 6				120	
IDF-01	CF-02						CAT 6				64	
IDF-01	CF-03						CAT 6				31	
IDF-01	CF-04						CAT 6				25	
IDF-01	CF-05						CAT 6				29	
IDF-01	CF-06						CAT 6				54	
IDF-01	CF-07						CAT 6				54	
IDF-02	CP-02						CAT 6		18		45	
IDF-02	CP-05						CAT 6		18		52	
IDF-02	CP-04						CAT 6		18		55	
IDF-02	CP-07						CAT 6		18		55	
IDF-02	CP-03						CAT 6		18		51	
IDF-02	CP-06						CAT 6		18		45	
IDF-03	CF-08						CAT 6				68	
IDF-03	CF-09						CAT 6				54	
IDF-03	CF-10						CAT 6				31	
IDF-03	CF-11						CAT 6				26	
IDF-03	CF-12						CAT 6				23	
IDF-03	CF-13	PB-04					CAT 6				66	
IDF-03	CF-14	PB-04, PB-05					CAT 6				164	
IDF-03	CP-09	PB-04, PB-05					CAT 6		10		216	
IDF-03	CF-15	PB-04, PB-05					CAT 6				212	
IDF-03	CP-08	PB-04, PB-05					CAT 6		14		168	
IDF-03	ET-01	PB-04					CAT 6				99	
CID	TVM						CAT 6				21	

CABLE SCHEDULE - COMMUNICATIONS (KE102 DRAWING)												
CONDUIT NO.	FROM	TO	VIA PULL BOX CONDUIT	ZONE	WIRE CW CF		WIRE TYPE EW, LW				ESTIMATED LENGTH (FT)	REMARKS
					UTP FIBER	QT	STRANDED COPPER					
							TYPE	QTY 1	SIZE 1	QTY 2		
IDF-04	CF-50	PB-01, PB-02					CAT 6				208	
IDF-04	ET-50	PB-01, PB-02					CAT 6				205	
IDF-04	CF-51	PB-01, PB-02					CAT 6				191	
IDF-04	CF-52	PB-01, PB-02					CAT 6				190	
IDF-04	CP-50	PB-02					CAT 6			16	69	
IDF-04	ET-51						CAT 6				69	
IDF-04	CF-53	PB-02					CAT 6				55	
IDF-04	CF-54						CAT 6				21	
IDF-04	ET-52						CAT 6				22	
IDF-04	CF-55						CAT 6				31	
IDF-04	CF-56						CAT 6				45	
IDF-04	CP-51	PB-02					CAT 6			16	84	
IDF-04	CF-57	PB-02, PB-03					CAT 6				135	
IDF-04	CF-58	PB-02, PB-03					CAT 6				138	
IDF-04	ET-53	PB-02, PB-03					CAT 6				155	
IDF-04	CF-59	PB-02, PB-03					CAT 6				163	
IT COMM RM	ELS-1	PB-01, PB-02, PB-03, PB-04, PB-05					FIBER				687	
IT COMM RM	ELS-2	PB-01, PB-02, PB-03, PB-04, PB-05					FIBER				687	
IT COMM RM	ELS-3	PB-01, PB-02, PB-03, PB-04, PB-05					FIBER				537	
IT COMM RM	IDF-04	PB-01, PB-02, PB-03, PB-04, PB-05					FIBER				537	

CABLE SCHEDULE - COMMUNICATIONS (KE103 DRAWING)												
CONDUIT NO.	FROM	TO	VIA PULL BOX CONDUIT	ZONE	WIRE CW CF		WIRE TYPE EW, LW				ESTIMATED LENGTH (FT)	REMARKS
					UTP FIBER	QT	STRANDED COPPER					
							TYPE	QTY 1	SIZE 1	QTY 2		
IDF/ELS-01	CF-89						CAT 6				38	
IDF/ELS-01	CF-88						CAT 6				60	
IDF/ELS-01	CP-81						CAT 6			16	68	
IDF/ELS-01	MT-TOP						CAT 6				32	
IDF/ELS-01	IDF/ELS-02	PB-02					FIBER				247	
IDF/ELS-02	CF-82						CAT 6				90	
IDF/ELS-02	MT-MID						CAT 6				36	
IDF/ELS-02	CF-84						CAT 6				79	
IDF/ELS-02	CF-83						CAT 6				32	
IDF/ELS-02	IDF/ELS-03						FIBER				527	
IDF/ELS-02	IDF/ELS-04						FIBER				118	
IDF/ELS-04	CP-80						FIBER			16	61	
IDF/ELS-04	CF-85						FIBER				66	
IDF/ELS-04	CF-87						FIBER				78	
IDF/ELS-04	CF-86						FIBER				66	
IDF/ELS-04	MT-BOT						FIBER				28	
IDF/ELS-03	CF-80						FIBER				29	
IDF/ELS-03	CF-81						FIBER				41	

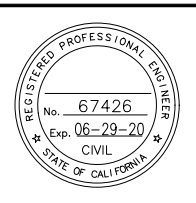
NOTES:

- CONTRACTOR SHALL VERIFY CONDUIT/WIRE SIZES, TYPE & LENGTH FOR EQUIPMENT CHOSEN FOR THIS PROJECT, PRIOR TO INSTALLATION.
- CABLE SCHEDULE DOES NOT NECESSARILY SHOW ALL CABLE REQUIRED. CONTRACTOR IS RESPONSIBLE FOR ALL CABLES, TERMINATIONS ETC. SHOWN ON DRAWINGS, REQUIRED IN SPECIFICATION, OR REQUIRED TO PROVIDE A FULLY FUNCTIONAL WORKING SYSTEM.
- FIBER & PA CABLES SHALL BE INSTALLED IN SEPARATE CONDUITS THAN THOSE USED FOR CAT6 CABLES, WHENEVER POSSIBLE.
- SEE ELECTRICAL DRAWINGS FOR POWER WIRE REQUIREMENTS.
- APPROXIMATE LENGTHS SHOWN ARE FOR EACH SEPARATE WIRE WITHIN THE CABLE/BUNDLE NUMBER & INCLUDE ADJUSTMENT FOR ELEVATION CHANGES, RISERS, SWEEPS, WIRE TERMINATION TO EQUIPMENT, AND WIRE SLACK/COILING IN BOXES.

HOLD INCOMPLETE

Joseph Conlisker Jun 23, 2020 - 10:13am C:\cadd\ib\proj\mntb\_jeremy\cadd\west\mntb\8398\_808KC101.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



SUBMITTED  
**Lamoreaux Associates**  
 2686 N 775 W T 435.586.0174  
 Cedar City, UT 84721 F 435.865.1848  
 www.laeng.com

DESIGNED: Bryan Lamoreaux  
 CHECKED: B. Lamoreaux  
 DRAWN: J. Cowlishaw  
 CADD FILE NAME: 808KC101.dwg

Santa Clara Valley  
 Transportation  
 Authority

APPROVED  
  
 BKF 100+ YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 01/25/19  
 SCALE: N.T.S.  
 SUBMITTAL DATE: 06/29/20  
 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 COMMUNICATIONS  
 CABLE SCHEDULE  
 STORY ROAD STATION

PCA NO.: 000  
 CONTRACT NO.: S808  
 FILE LOCATION: -PROJECTWISE

SHEET
OF
DRAWING NO. KC101
REVISION B



CABLE SCHEDULE - COMMUNICATIONS (KE105 DRAWING)

CONDUIT NO.	FROM	TO	VIA PULL BOX CONDUIT	ZONE	WIRE CW, CF		WIRE TYPE EW, LW				ESTIMATED LENGTH (FT)	REMARKS
					UTP FIBER	QT	STRANDED COPPER					
							TYPE	QTY 1	SIZE 1	QTY 2		
	IT COMM RM	IDF-1	PB-05, PB-04, PB-03, PB-02				FIBER				336	
	IT COMM RM	IDF-2	PB-05, PB-04, PB-03	2			FIBER				273	
	IT COMM RM	IDF-3	PB-05, PB-04				FIBER				205	
	IT COMM RM	IDF-4	PB-05				FIBER				154	
	IDF1	CF-01	PB-01				CAT 6				143	
	IDF1	CP-10	PB-01				CAT 6		14		143	
	IDF1	CF-02					CAT 6				92	
	IDF1	CF-03					CAT 6				86	
	IDF1	CF-04					CAT 6				24	
	IDF1	CF-05					CAT 6				24	
	IDF1	CF-06		3			CAT 6				55	
	IDF1	CF-07		1			CAT 6				58	
	IDF1	CF-08		4			CAT 6				54	
	IDF2	CP-01		3			CAT 6		18		58	
	IDF2	CP-02		1			CAT 6		18		47	
	IDF2	CP-03		4			CAT 6		18		54	
	IDF2	CP-04		2			CAT 6		18		49	
	IDF2	CP-05					CAT 6		18		59	
	IDF2	CP-06					CAT 6		18		53	
	IDF3	CF-09					CAT 6				53	
	IDF3	CF-10					CAT 6				54	
	IDF3	CF-11					CAT 6				30	
	IDF3	CF-12					CAT 6				23	
	IDF3	CF-13					CAT 6				28	
	IDF3	CF-14					CAT 6				93	
	IDF3	CF-15					CAT 6				86	
	IDF4	CF-16					CAT 6				22	
	IDF4	CF-17					CAT 6				20	
	IT-LAN	CF-18					CAT 6				107	
	IT-LAN	CF-19					CAT 6				39	
	IT COMM RM	TVM 1		4			FIBER				17	
	IT COMM RM	CID 1		3			FIBER				17	
	IT COMM RM	TVM 2	PB-04, PB-05	2			FIBER				132	
	TVM 2	CID 2		1			CAT 6				20	
	TVM 2	TVM 3	PB-04, PB-05	4			FIBER				20	
	TVM 3	CID 3		2			FIBER				20	
	SCADA COMM RM	AN-01	PB-03, PB-04, PB-05	3			COPPER				265	
	SCADA COMM RM	AN-02	PB-03, PB-04, PB-05	1			COPPER				252	
	SCADA COMM RM	S-01	PB-02, PB-03, PB-04, PB-05	4			COPPER		10		386	
	SCADA COMM RM	S-02	PB-02, PB-03, PB-04, PB-05	2			COPPER		10		385	
	SCADA COMM RM	S-03	PB-02, PB-03, PB-04, PB-05	3			COPPER		10		332	
	SCADA COMM RM	S-04	PB-02, PB-03, PB-04, PB-05	1			COPPER		10		317	
	SCADA COMM RM	S-05	PB-03, PB-04, PB-05				COPPER		12		298	
	SCADA COMM RM	S-06	PB-03, PB-04, PB-05				COPPER		12		297	
	SCADA COMM RM	S-07	PB-03, PB-04, PB-05				COPPER		12		267	
	SCADA COMM RM	S-08	PB-03, PB-04, PB-05				COPPER		12		255	
	SCADA COMM RM	S-09	PB-03, PB-04, PB-05				COPPER		12		262	
	SCADA COMM RM	S-10	PB-03, PB-04, PB-05				COPPER		12		258	
	SCADA COMM RM	S-11	PB-03, PB-04, PB-05				COPPER		12		223	
	SCADA COMM RM	S-12	PB-03, PB-04, PB-05				COPPER		12		210	
	SCADA COMM RM	S-13	PB-04, PB-05				COPPER		12		193	
	SCADA COMM RM	S-14	PB-04, PB-05				COPPER		12		178	
	SCADA COMM RM	S-15	PB-04, PB-05				COPPER		14		125	
	SCADA COMM RM	S-16	PB-04, PB-05				COPPER		14		123	

HOLD INCOMPLETE

GUIDEWAY BACKBONE CABLE SCHEDULE

CONDUIT NO.	FROM	TO	VIA PULL BOX/CONDUIT	WIRE CW, CF		WIRE TYPE EW, LW				ESTIMATED LENGTHS (FT)	REMARKS
				UTP, FIBER	QT.	STRANDED COPPER					
						TYPE	QTY 1	SIZE 1	QTY 2		
9	ST-ALM	ST-STR	CS-049, CS-048, CS-051, CS-052, CS-053, CS-054	2 FIBER						3154	144 SM FIBER (IT & SCADA NETWORK)
9	ST-STR	ST-ETR	CS-054, COMM BOX	2 FIBER						9781	144 SM FIBER (IT & SCADA NETWORK)

ALUM ROCK TO WAYSIDE CABLE SCHEDULE

CONDUIT NO.	FROM	TO	VIA PULL BOX/CONDUIT	WIRE CW, CF		WIRE TYPE EW, LW				ESTIMATED LENGTHS (FT)	REMARKS
				UTP, FIBER	QT.	STRANDED COPPER					
						TYPE	QTY 1	SIZE 1	QTY 2		
9	ST-ALM	TPSS-28	CS-049, CS-048, CS-051	2 FIBER						792	24 FIBER SM (TTRIP/SCADA), 12 FIBER SM (IT SPARE)
9	ST-ALM	SC968	CS-049, CS-048, CS-051, CS-052	1 FIBER						750	12 FIBER SM (SIGNALS/SCADA)
42, 42, 43	ST-ALM	IDS-1	CS-049, CS-048, CS-051, CS-052, CS-053	2 FIBER	AWG	3	#8			792	12 FIBER SM, 208 VAC IDS POWER

STORY TO WAYSIDE CABLE SCHEDULE

CONDUIT NO.	FROM	TO	VIA PULL BOX/CONDUIT	WIRE CW, CF		WIRE TYPE EW, LW				ESTIMATED LENGTHS (FT)	REMARKS
				UTP, FIBER	QT.	STRANDED COPPER					
						TYPE	QTY 1	SIZE 1	QTY 2		
42, 42, 43	ST-STR	IDS-2	CS-054	1 FIBER	AWG	3	#10			96	12 FIBER SM, 208 VAC IDS POWER
42, 42, 43	ST-STR	IDS-3	CS-054	1 FIBER	AWG	3	#10			525	12 FIBER SM, 208 VAC IDS POWER
9	ST-STR	SC1011	CS-054	1 FIBER						1917	12 FIBER SM
9	ST-STR	SC1029	CS-054	1 FIBER						3667	12 FIBER SM
9	ST-STR	TPSS-33	CS-054	2 FIBER						4706	24 FIBER SM (TTRIP/SCADA), 12 FIBER (IT CCTV/ACP)

EASTRIDGE TO WAYSIDE CABLE SCHEDULE

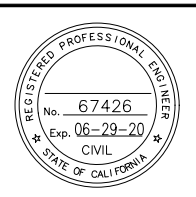
CONDUIT NO.	FROM	TO	VIA PULL BOX/CONDUIT	WIRE CW, CF		WIRE TYPE EW, LW				ESTIMATED LENGTHS (FT)	REMARKS
				UTP, FIBER	QT.	STRANDED COPPER					
						TYPE	QTY 1	SIZE 1	QTY 2		
42, 42, 43	ST-ETR	IDS-4	COMM PULL BOX	2 FIBER	AWG	3	#8			934	12 FIBER SM, 208 VAC IDS POWER
8	ST-ETR	TPSS-34	COMM PULL BOX	2 FIBER						650	24 FIBER SM (TTRIP/SCADA), 12 FIBER SM (IT SPARE)
9	ST-ETR	SC1039	COMM PULL BOX	1 FIBER						5139	12 FIBER SM
9	ST-ETR	MOD-4	COMM PULL BOX		AWG	6 PR	#14			187	STP (12C) OCS MOD-SCADA
9	ST-ETR	MOD-5	COMM PULL BOX		AWG	6 PR	#14			372	STP (12C) OCS MOD-SCADA
9	ST-ETR	MOD-6	COMM PULL BOX		AWG	6 PR	#14			372	STP (12C) OCS MOD-SCADA
9	ST-ETR	MOD-7	COMM PULL BOX		AWG	6 PR	#14			372	STP (12C) OCS MOD-SCADA

NOTES:

- CONTRACTOR SHALL VERIFY CONDUIT/WIRE SIZES, TYPE & LENGTH FOR EQUIPMENT CHOSEN FOR THIS PROJECT, PRIOR TO INSTALLATION.
- CABLE SCHEDULE DOES NOT NECESSARILY SHOW ALL CABLE REQUIRED. CONTRACTOR IS RESPONSIBLE FOR ALL CABLES, TERMINATIONS ETC. SHOWN ON DRAWINGS, REQUIRED IN SPECIFICATION, OR REQUIRED TO PROVIDE A FULLY FUNCTIONAL WORKING SYSTEM.
- FIBER & PA CABLES SHALL BE INSTALLED IN SEPARATE CONDUITS THAN THOSE USED FOR CAT6 CABLES, WHENEVER POSSIBLE.
- SEE ELECTRICAL DRAWINGS FOR POWER WIRE REQUIREMENTS.
- APPROXIMATE LENGTHS SHOWN ARE FOR EACH SEPARATE WIRE WITHIN THE CABLE/BUNDLE NUMBER & INCLUDE ADJUSTMENT FOR ELEVATION CHANGES, RISERS, SWEEPS, WIRE TERMINATION TO EQUIPMENT, AND WIRE SLACK/COILING IN BOXES.

Joseph Cowlshaw Jun 23, 2020 - 10:14am C:\cadd\hls\jcw\hls\_jeremy\cadd\hls\west\jcw\808KC103.dwg

B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET
NO.	DATE	REVISIONS



SUBMITTED

**Lamoreaux Associates**  
 2686 N 775 W T 435.586.0174  
 Cedar City, UT 84721 F 435.865.1848  
 www.laeng.com

DESIGNED: Bryan Lamoreaux  
 CHECKED: B. Lamoreaux  
 DRAWN: J. Cowlshaw  
 CADD FILE NAME: 808KC103.dwg

Santa Clara Valley  
Transportation  
Authority

APPROVED

CAAD FILE DATE: 01/25/19  
 SUBMITTAL DATE: 06/29/20  
 SCALE: N.T.S.  
 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 COMMUNICATIONS  
 CABLE SCHEDULE  
 EASTRIDGE STATION & STA. TO WAYSIDE

PCA NO.: 000 CONTRACT NO.: S808 FILE LOCATION: PROJECTWISE

SHEET OF: KC103 REVISION: B

**IDS 1 CABLE SCHEDULE**

SCADA/IT	FROM	TO	VIA PULL BOX/CONDUIT	WIRE CW, CF		WIRE TYPE EW, LW				ESTIM. LENGTHS (FT)	REMARKS
				UTP, FIBER		STRANDED COPPER					
				QTY	TYPE	QTY 1	SIZE 1	QTY 2	SIZE 2		
IT	IDS1	CT-01	43, PB4, 44	1	CAT 6	2	#18			71	CCTV PTZ (DATA/LV PWR)
IT	IDS1	CT-02	43, PB4, 44	1	CAT 6	2	#18			71	CCTV PTZ (DATA/LV PWR)
SCADA	IDSS1	L-01	PB1, 44			2	#14	6	#18	69	LIDAR SENSOR STP DATA/PWR
SCADA	IDSS1	L-02	PB1, 44			2	#14	6	#18	69	LIDAR SENSOR STP DATA/PWR
SCADA	IDSS1	I-01	PB3, 44	1	CAT 6	2	#18			59	CCTV SENSOR/LV PWR
SCADA	IDSS1	I-02	PB3, 44	1	CAT 6	2	#18			59	CCTV SENSOR/LV PWR
SCADA	IDSS1	B-01 TO B-04	PB2, 44			4 PR	#18	4 PR	#16	59	BEAM SENSOR POLE AND IDS SENSOR
SCADA	IDSS1	B-05 TO B-08	PB2, 44			4 PR	#18	4 PR	#16	59	BEAM SENSOR POLE AND IDS SENSOR
SCADA	IDSS1	S-01	42			2 PR	#18	2 PR	#14	67	STROBE/SPEAKER
SCADA	IDSS1	BL-01			CAT 6	2 PR	#18	2PR	#18	5	BLUELIGHT STATION
	IDSS1	IDS1	43			3	#14			5	120 VAC POWER TO IT CABINET
SCADA	IDSS1	MOD-1			AWG	12 PR	#14			360	STP (24C) OCS MOD
SCADA	IDSS1	MOD-2			AWG	6 PR	#14			610	STP (12C) OCS MOD

**IDS 2 CABLE SCHEDULE**

SCADA/IT	FROM	TO	VIA PULL BOX/CONDUIT	WIRE CW, CF		WIRE TYPE EW, LW				ESTIM. LENGTHS (FT)	REMARKS
				UTP, FIBER		STRANDED COPPER					
				QTY	TYPE	QTY 1	SIZE 1	QTY 2	SIZE 2		
SCADA	IDSS2	L-01	PB1, 44			2	#14	6	#18	69	LIDAR SENSOR STP DATA/PWR
SCADA	IDSS2	L-02	PB1, 44			2	#14	6	#18	69	LIDAR SENSOR STP DATA/PWR
SCADA	IDSS2	I-01	PB3, 44	1	CAT 6	2	#18			58	CCTV SENSOR/LV PWR
SCADA	IDSS2	I-02	PB3, 44	1	CAT 6	2	#18			58	CCTV SENSOR/LV PWR
SCADA	IDSS2	B-01 TO B-04	PB2, 44			4 PR	#18	4 PR	#16	58	BEAM SENSOR POLE AND IDS SENSOR
SCADA	IDSS2	B-05 TO B-08	PB2, 44			4 PR	#18	4 PR	#16	58	BEAM SENSOR POLE AND IDS SENSOR
SCADA	IDSS2	S-01	42			2 PR	#18	2 PR	#14	67	STROBE/SPEAKER
SCADA	IDSS2	BL-01			CAT 6	2 PR	#18	2PR	#18	5	BLUELIGHT STATION

**IDS 3 CABLE SCHEDULE**

SCADA/IT	FROM	TO	VIA PULL BOX/CONDUIT	WIRE CW, CF		WIRE TYPE EW, LW				ESTIM. LENGTHS (FT)	REMARKS
				UTP, FIBER		STRANDED COPPER					
				QTY	TYPE	QTY 1	SIZE 1	QTY 2	SIZE 2		
SCADA	IDSS3	L-01	PB1, 44			2	#14	6	#18	69	LIDAR SENSOR STP DATA/PWR
SCADA	IDSS3	L-02	PB1, 44			2	#14	6	#18	69	LIDAR SENSOR STP DATA/PWR
SCADA	IDSS3	I-01	PB3, 44	1	CAT 6	2	#18			77	CCTV SENSOR/LV PWR
SCADA	IDSS3	I-02	PB3, 44	1	CAT 6	2	#18			77	CCTV SENSOR/LV PWR
SCADA	IDSS3	B-01 TO B-04	PB2, 44			4 PR	#18	4 PR	#16	77	BEAM SENSOR POLE AND IDS SENSOR
SCADA	IDSS3	B-05 TO B-08	PB2, 44			4 PR	#18	4 PR	#16	77	BEAM SENSOR POLE AND IDS SENSOR
SCADA	IDSS3	S-01	42			2 PR	#18	2 PR	#14	67	STROBE/SPEAKER
SCADA	IDSS3	BL-01			CAT 6	2 PR	#18	2PR	#18	5	BLUELIGHT STATION

**IDS 4 CABLE SCHEDULE**

SCADA/IT	FROM	TO	VIA PULL BOX/CONDUIT	WIRE CW, CF		WIRE TYPE EW, LW				ESTIM. LENGTHS (FT)	REMARKS
				UTP, FIBER		STRANDED COPPER					
				QTY	TYPE	QTY 1	SIZE 1	QTY 2	SIZE 2		
IT	IDS4	CT-01	43, PB5, 44	1	FIBER	2	#18			71	CCTV PTZ (DATA/PWR)
IT	IDSS4	CT-02	42, PB5, 44			3	#10	2	#18	71	CCTV PTZ (DATA/PWR)
SCADA	IDSS4	L-01	PB1, 44			2	#14	6	#18	69	LIDAR SENSOR STP DATA/PWR
SCADA	IDSS4	L-02	PB1, 44			2	#14	6	#18	69	LIDAR SENSOR STP DATA/PWR
SCADA	IDSS4	I-01	PB3, 44	1	CAT 6	2	#18			92	CCTV SENSOR/LV PWR
SCADA	IDSS4	I-02	PB3, 44	1	CAT 6	2	#18			92	CCTV SENSOR/LV PWR
SCADA	IDSS4	B-01 TO B-04	PB2, 44			4 PR	#18	4 PR	#16	92	BEAM SENSOR POLE AND IDS SENSOR
SCADA	IDSS4	B-05 TO B-08	PB2, 44			4 PR	#18	4 PR	#16	92	BEAM SENSOR POLE AND IDS SENSOR
SCADA	IDSS4	S-01	42			2 PR	#18	2 PR	#14	67	STROBE/SPEAKER
SCADA	IDSS4	BL-01			CAT 6	2 PR	#18	2PR	#18	5	BLUELIGHT STATION
	IDSS4	IDS4	43			3	#14			5	120 VAC POWER TO IT CABINET
SCADA	IDSS4	MOD-3			AWG	6 PR	#14			1304	STP (12C) OCS MOD

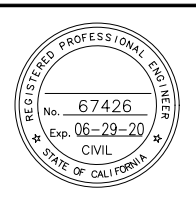
NOTES:

- CONTRACTOR SHALL VERIFY WIRE SIZES, TYPE & LENGTH FOR EQUIPMENT CHOSEN FOR THIS PROJECT, PRIOR TO INSTALLATION.
- CABLE SCHEDULE DOES NOT NECESSARILY SHOW ALL CABLE REQUIRED. CONTRACTOR IS RESPONSIBLE FOR ALL CABLES, TERMINATIONS ETC. SHOWN ON DRAWINGS, REQUIRED IN SPECIFICATION, OR REQUIRED TO PROVIDE A FULLY FUNCTIONAL WORKING SYSTEM.
- PA CABLES SHALL BE INSTALLED IN SEPARATE CONDUITS THAN THOSE USED FOR CAT6 CABLES.
- APPROXIMATE LENGTHS SHOWN ARE FOR EACH SEPARATE WIRE WITHIN THE CABLE/BUNDLE NUMBER & INCLUDE ADJUSTMENT FOR ELEVATION CHANGES, RISERS, SWEEPS, WIRE TERMINATION TO EQUIPMENT, AND WIRE SLACK/COILING IN BOXES. CONTRACTOR IS RESPONSIBLE FOR DETERMINING AND INSTALLING ACTUAL LENGTH REQUIRED AND ARE FOR REFERENCE.

1 IDS FIELD EQUIPMENT  
- SEE SHEET KC103 FOR STATION TO IDS CABINET CABLING

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Cedar City, UT 84721 F 435.865.1848  
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DESIGNED: Bryan Lamoreaux CHECKED: B. Lamoreaux  
DRAWN: J. Cowlshaw CADD FILE NAME: 808KC105.dwg

**Santa Clara Valley Transportation Authority**

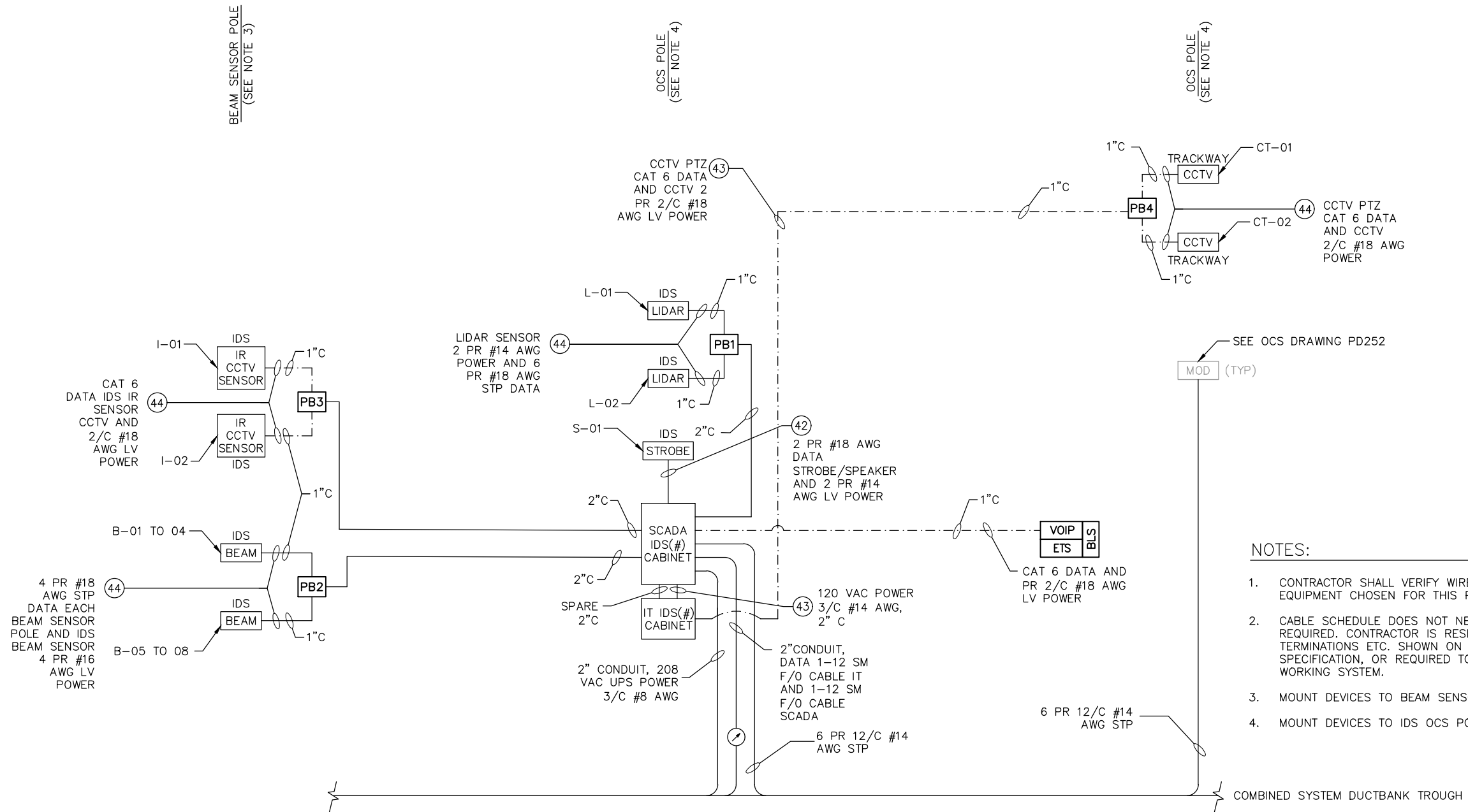
**BKF 100+ YEARS**  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 01/25/19 SCALE: N.T.S.  
SUBMITTAL DATE: 06/29/20 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
COMMUNICATIONS  
CABLE SCHEDULE  
IDS LOCATIONS 1-4

PCA NO.: 000 CONTRACT NO.: S808 FILE LOCATION: -PROJECTWISE

SHEET OF: KC105 REVISION: B

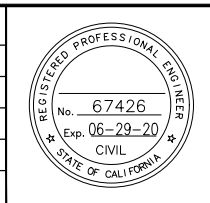


- NOTES:**
1. CONTRACTOR SHALL VERIFY WIRE SIZES, TYPE & LENGTH FOR EQUIPMENT CHOSEN FOR THIS PROJECT, PRIOR TO INSTALLATION.
  2. CABLE SCHEDULE DOES NOT NECESSARILY SHOW ALL CABLE REQUIRED. CONTRACTOR IS RESPONSIBLE FOR ALL CABLES, TERMINATIONS ETC. SHOWN ON DRAWINGS, REQUIRED IN SPECIFICATION, OR REQUIRED TO PROVIDE A FULLY FUNCTIONAL WORKING SYSTEM.
  3. MOUNT DEVICES TO BEAM SENSOR POLE.
  4. MOUNT DEVICES TO IDS OCS POLE.

1 TYPICAL DETAIL OF IDS CONDUIT  
- NTS

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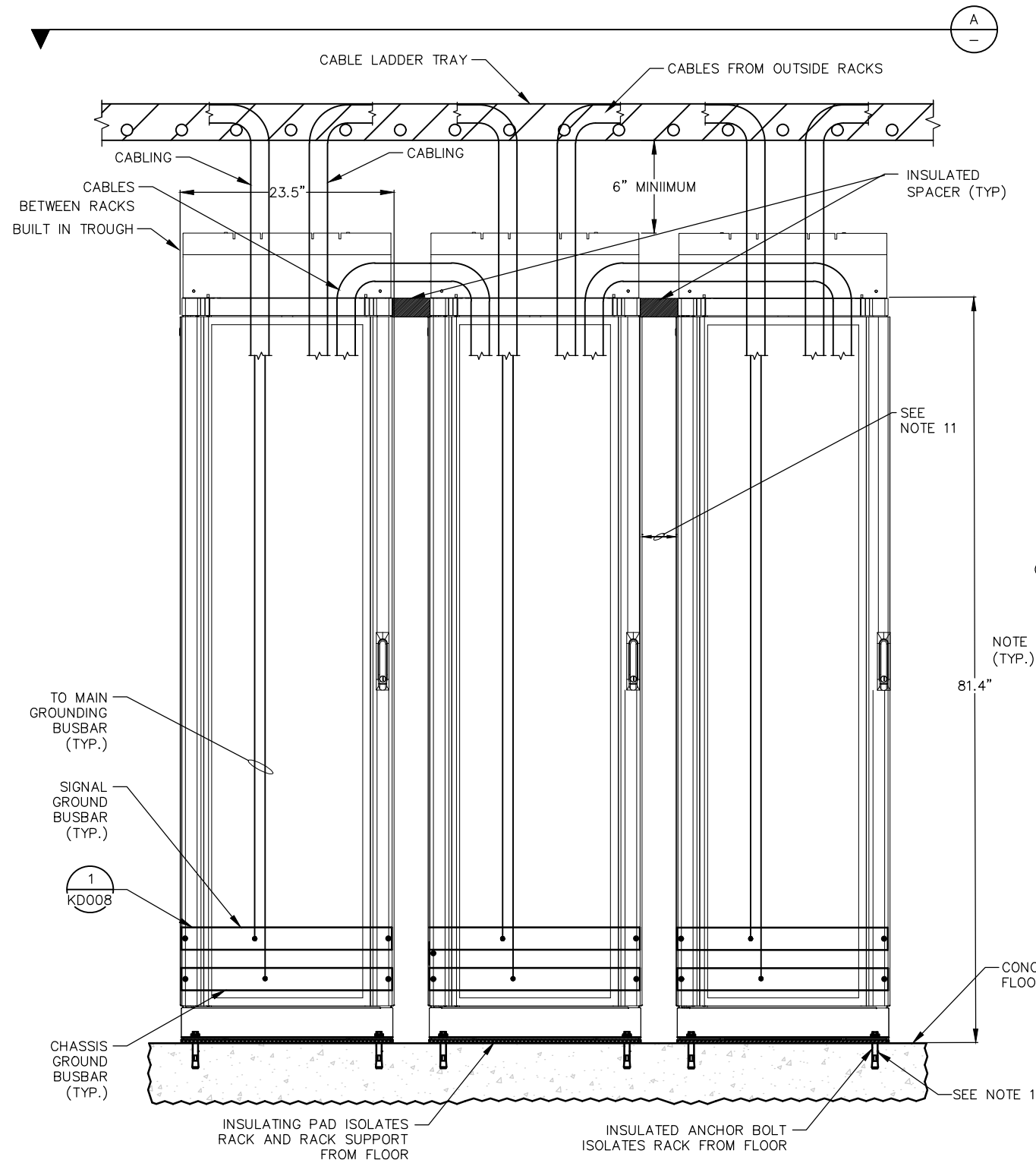


<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
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SUBMITTAL DATE 06/29/20	BOARD APPROVAL DATE

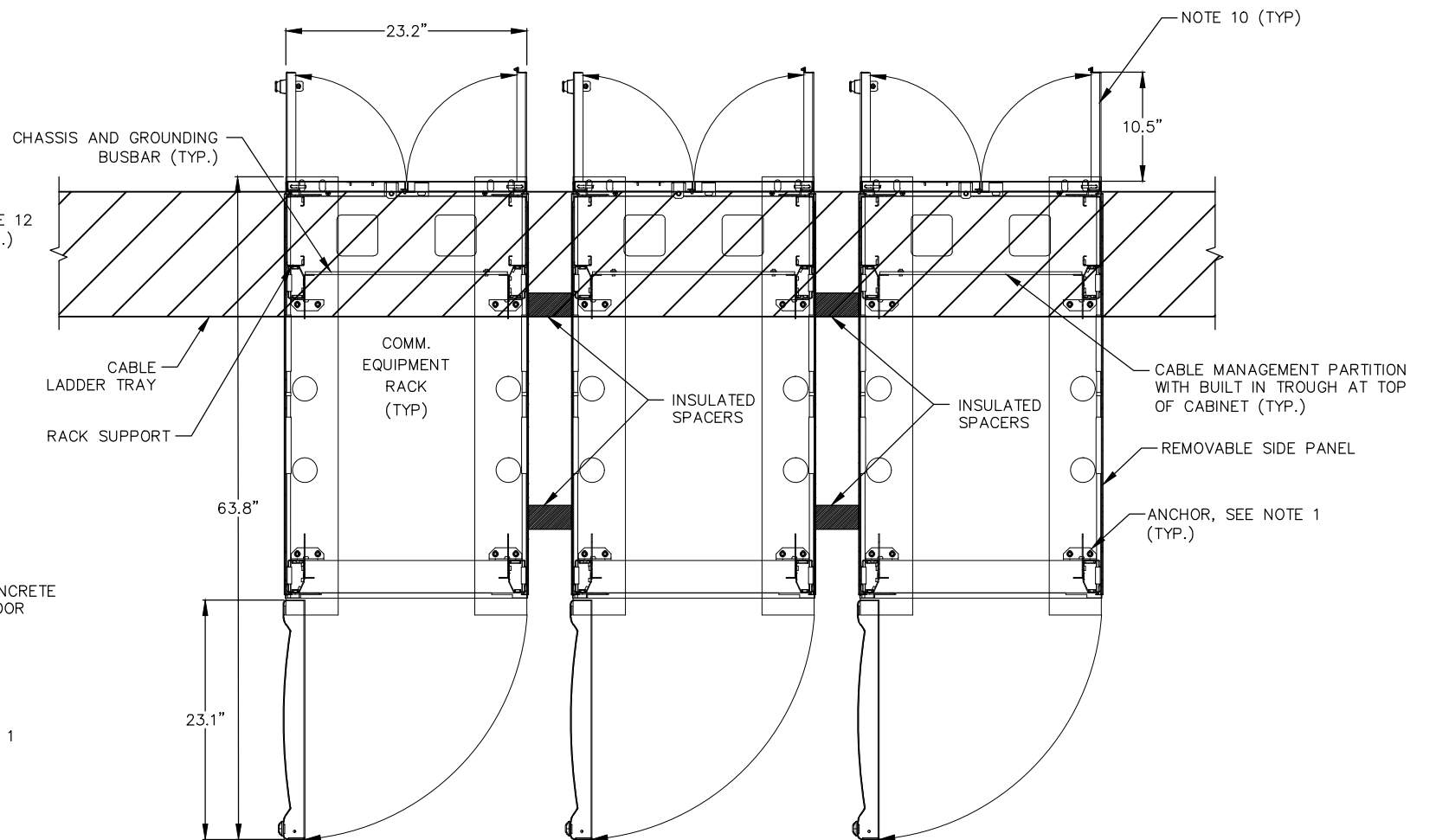
EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT COMMUNICATIONS CABLING DETAILS IDS LOCATIONS 1-4			SHEET OF DRAWING NO. KC106 REVISION B
PCA NO. 000	CONTRACT NO. S808	FILE LOCATION -PROJECTWISE	

NOTES:

- CONTRACTOR SHALL PROVIDE AND INSTALL 1/2" DROP-IN STUD ANCHOR COMPLETE WITH NUT, LOCK WASHER AND INSULATING BUSHING, WITH MINIMUM 4" EMBEDMENT, AND SHALL MEET SEISMIC ZONE 4. ANCHOR SHALL HAVE A MINIMUM RATING OF 3200 LB. TENSILE STRENGTH AND 5420 LB. SHEAR STRENGTH. INSULATING BUSHING SHALL BE PROVIDED TO ENSURE RACK ISOLATION FROM CONCRETE FLOOR.
- RECOMMENDED ANCHOR INSTALLATION TOOLS: HAMMER DRILL WITH 11/16" DRILL BIT & 3/4" FLARE NUT OR BOX WRENCH (CAPABLE OF 60 FT LB).
- ANCHOR INSTALLATION NOTES:
  - POSITION ANCHORS AT OUTER ENDS OF FRAME BASE SLOTS. IF REBAR STRUCK, HOLE & RE-DRILL AT OTHER END OF SLOT.
  - DROP-IN ANCHORS REQUIRE 11/16" Ø, 4" DEEP CLEAN HOLE.
  - PRESET ANCHORS USING SETTING TOOLS.
  - DOLLIES MAY BE USED TO POSITION RACKS.
  - AFTER EQUIPMENT IN PLACE, TORQUE DROP-IN ANCHOR NUTS UNTIL 60 FT LB TORQUE NUT SHEARS OFF.
- GROUND EQUIPMENT AS PER DRAWING KD005 GROUNDING DETAILS.
- ALL GROUNDING WIRES SHALL BE GREEN INSULATED STRANDED COPPER CONDUCTORS.
- THE RACKS SHALL BE BRACED TO MEET SEISMIC CONDITIONS UNDER THE MOST RECENT CALIFORNIA BUILDING CODE.
- THE RACKS SHALL BE POPULATED AS SHOWN BY THE DEVICE QUANTITY TABLE AND POSITIONED AS SHOWN.
- RACKS SHALL BE SIZED FOR EIA 19" RACK MOUNTED EQUIPMENT.
- PROVIDE CABLE MANAGERS AS REQUIRED.
- THE ENCLOSED RACK SHOWN IS TO ILLUSTRATE THE TYPE OF RACK/ENCLOSURE & FEATURES REQUIRED, NOT TO IDENTIFY A SPECIFIC MANUFACTURER OR RACK/ENCLOSURE.
- PROVIDE 4 POST RACKS WITH REMOVABLE EXTERIOR PANELS. PROVIDE ADEQUATE SPACE TO REMOVE RACK EXTERIOR SIDE PANELS.
- DIMENSIONS ARE APPROXIMATE.



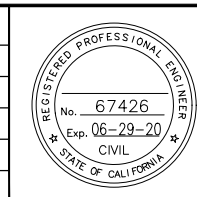
1 EQUIPMENT ROOM CABINET FRONT  
NTS



A EQUIPMENT ROOM CABINET PLAN  
NTS

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DESIGNED	Bryan Lamoreaux	CHECKED	B. Lamoreaux
DRAWN	J. Cowlishaw	CADD FILE NAME	808KD001.dwg



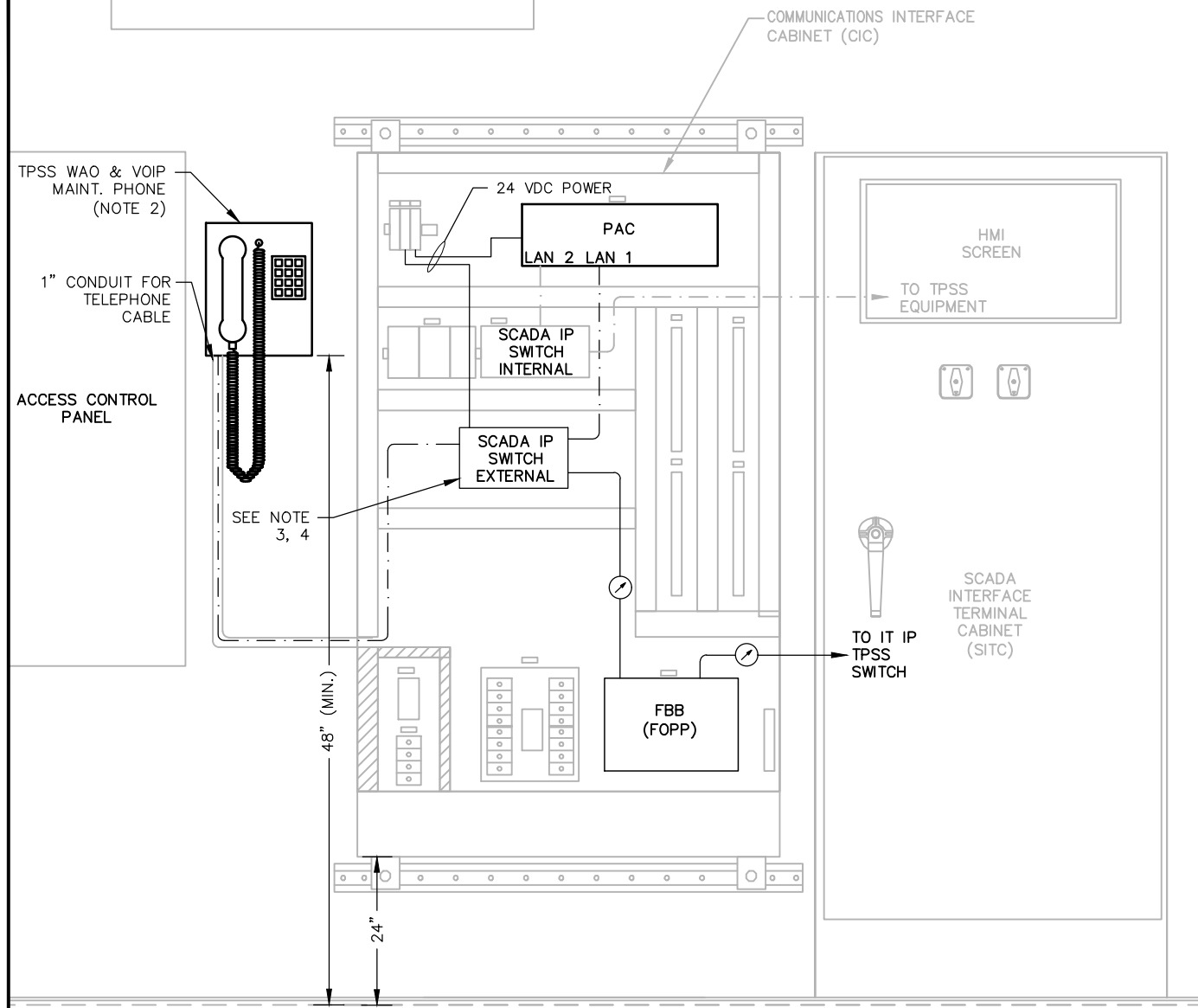
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CADD FILE DATE	01/26/19	SCALE	N.T.S.
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EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT COMMUNICATIONS INSTALLATION DETAILS STATION EQUIPMENT ROOM RACK		
PCA NO.	CONTRACT NO.	FILE LOCATION
000	S808	PROJECTWISE

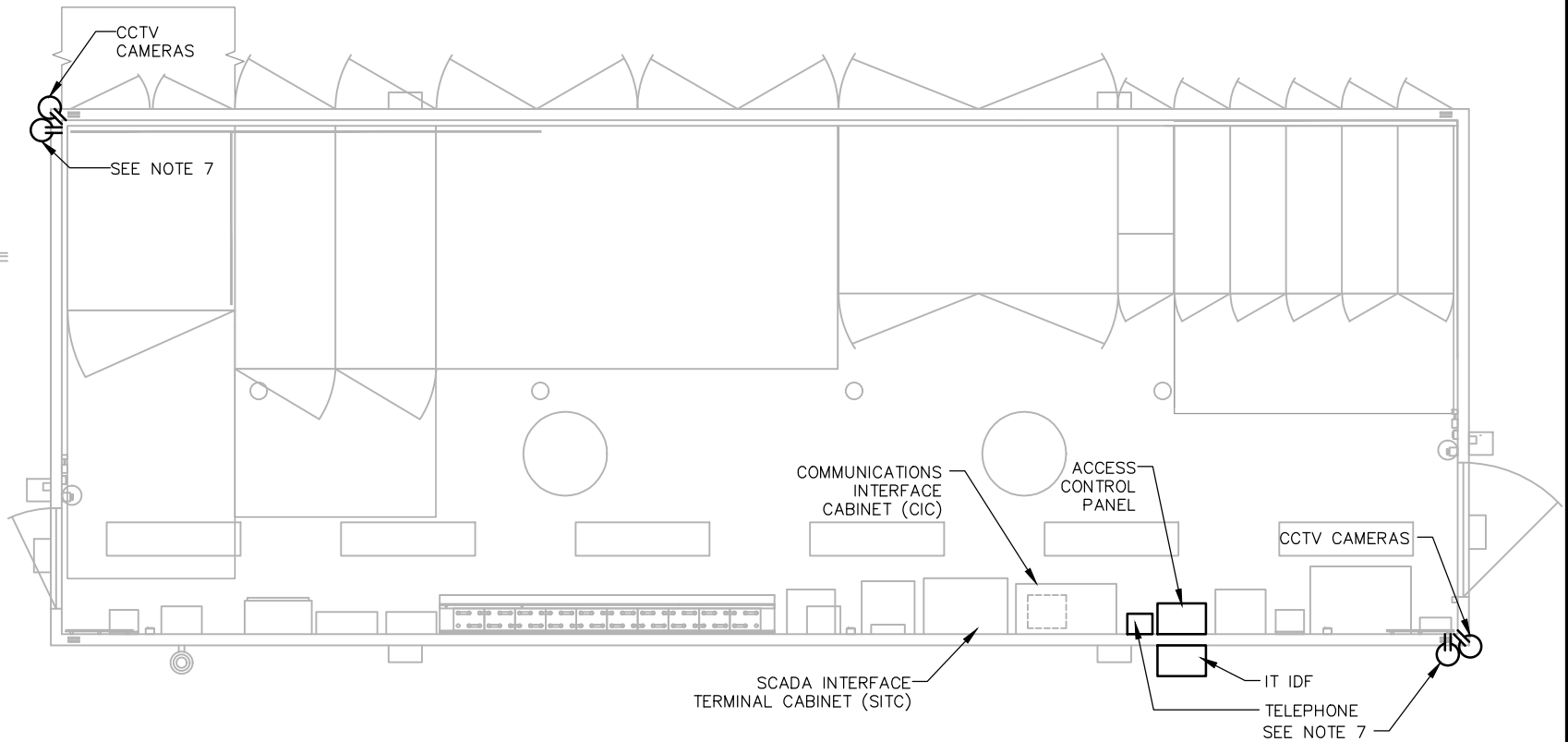
SHEET	OF
DRAWING NO.	KD001
REVISION	B

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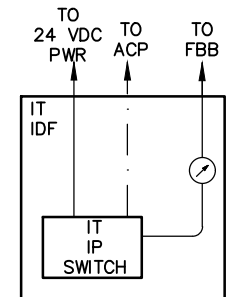
1. TES TO SUPPLY TWO 20A BREAKER, 125 VAC UNINTERRUPTIBLE POWER SUPPLY ONE FOR SCADA SWITCH AND TELEPHONE EQUIPMENT, AND ONE FOR IT SWITCH & CCTV POWER.
2. MAINTENANCE TELEPHONE CORD LENGTH IS 15 FEET.
3. NEMA TYPE 3R PAINTED STEEL WALL-MOUNT IDF ENCLOSURE, WITH MANUFACTURER SUPPLIED 12 GAUGE STEEL WHITE BACKPANEL.
4. CONTRACTOR SHALL SUPPLY AND INSTALL RACK-MOUNTABLE SPLICE AND CONNECTOR HOUSING (FBB). ALL FIBERS SHALL BE TERMINATED ON SC TYPE CONNECTORS. CONTRACTOR SHALL PROVIDE AND INSTALL CAT6 FROM SCADA EQUIPMENT TO MT AND SCADA PLC WAO.
5. PLC, TB, INTERFACE CABINET IS BY TPSS SUPPLIER.
6. IT IDF CABINET MOUNTED ON OUTSIDE OF TPSS.
7. GATE CAMERA, ONLY INSTALLED IF ENTRY GATE TO TPSS SITE IS ON THIS SIDE OF THE TPSS UNIT SUBSTATION.



1 TYPICAL SCADA/TPSS INTERFACE-ELEVATION  
NTS



2 TYPICAL SUBSTATION EQUIPMENT LAYOUT  
NTS



3 TYPICAL IT IDF AT TPSS-ELEVATION  
NTS

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A	06/18	35% SUBMITTAL SET



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<b>Lamoreaux Associates</b>	
2686 N 775 W T 435.586.0174 Cedar City, UT 84721 F 435.865.1848 www.laeng.com	
DESIGNED	CHECKED
Bryan Lamoreaux	B. Lamoreaux
DRAWN	CADD FILE NAME
J. Cowlishaw	808KD003.dwg

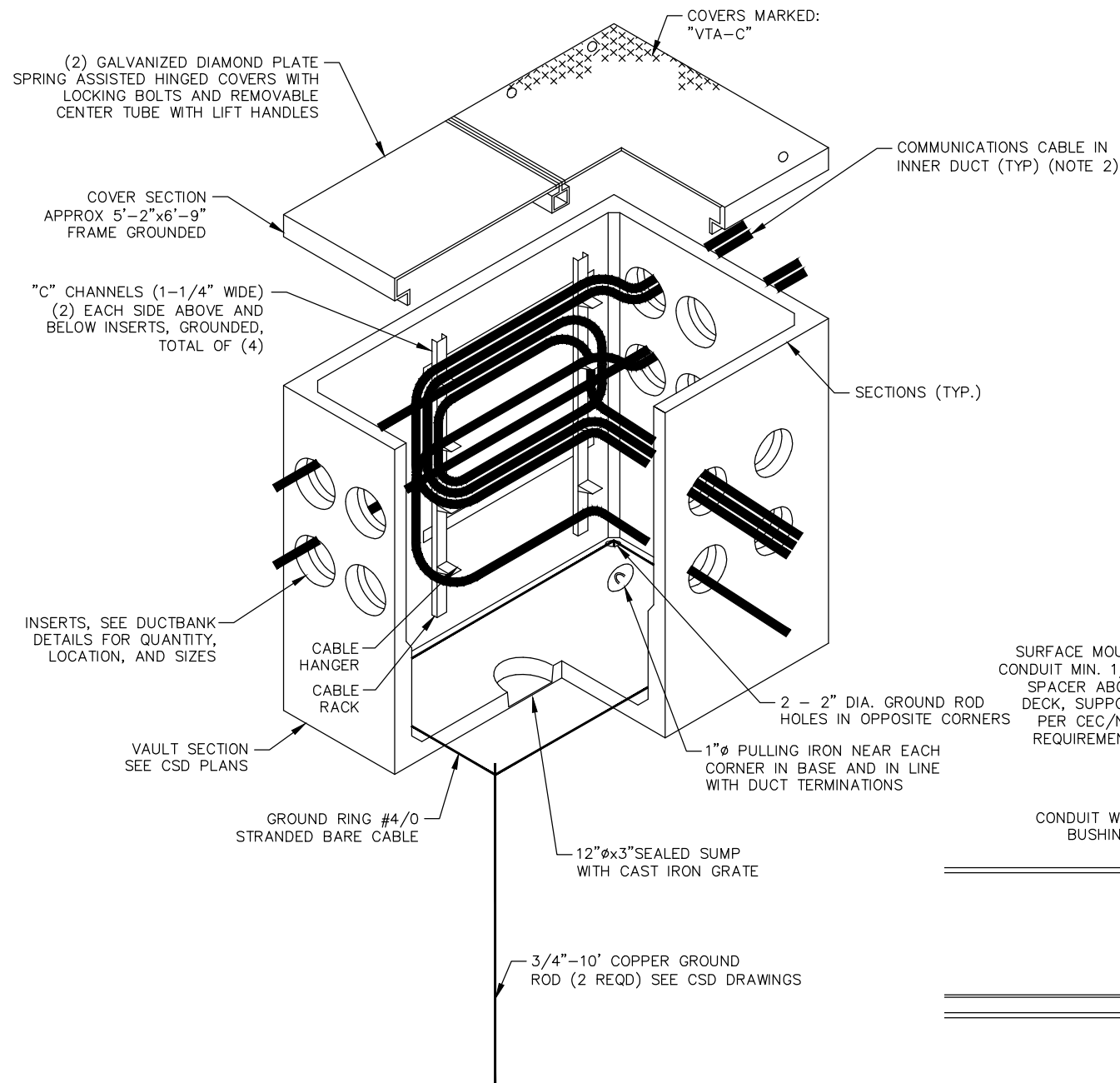


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CADD FILE DATE	SCALE
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SUBMITTAL DATE	BOARD APPROVAL DATE
06/29/20	

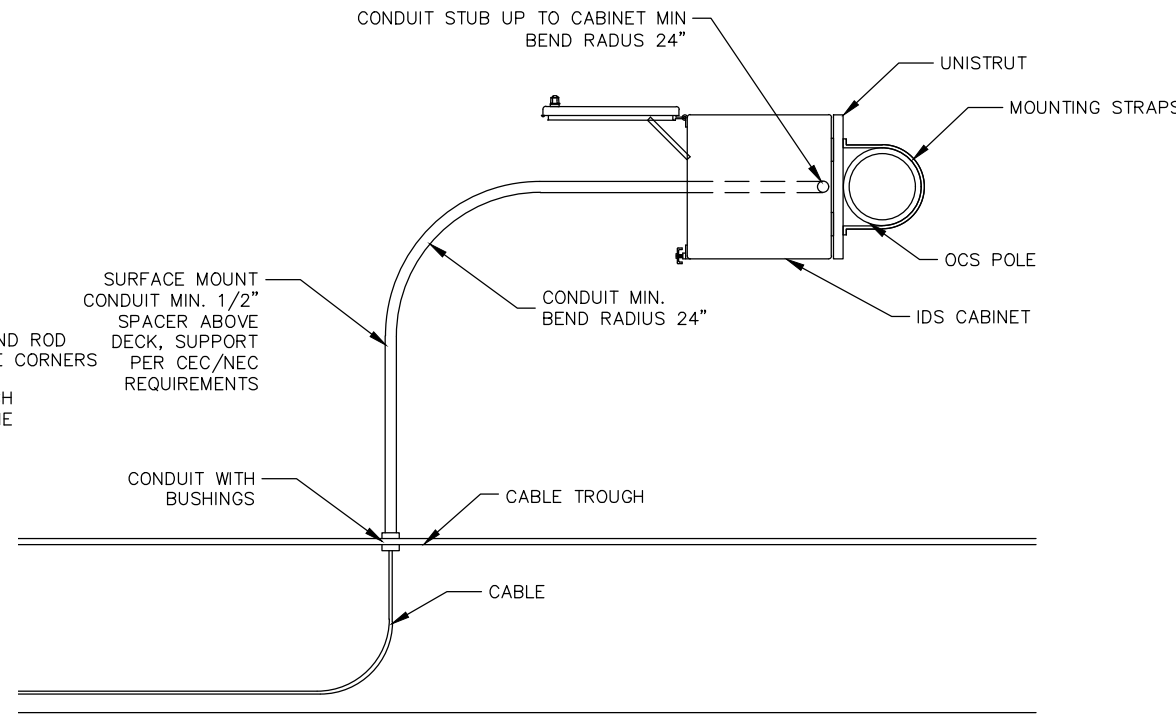
EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT		
COMMUNICATIONS INSTALLATION DETAILS TPSS COMMUNICATIONS		
PCA NO.	CONTRACT NO.	FILE LOCATION
000	S808	PROJECTWISE
SHEET	OF	DRAWING NO.
		KD003
		REVISION
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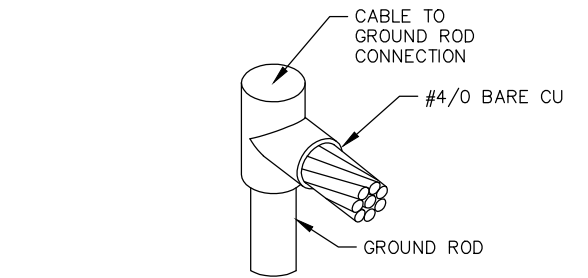
1. MAINTAIN MINIMUM BEND RADIUS RECOMMENDED BY CABLE MANUFACTURER WHEN ROUTING FIBER WITHIN MANHOLE.
2. VAULTS AND ACCESS COVERS AND GROUNDING PROVIDED BY OTHER EBRC DISCIPLINES. CONTRACTOR SHALL PROVIDE CABLE, RACKS, HANGERS, AND FASTENERS FOR THE CAPITOL EXPRESSWAY EXTENSION.
3. FIBER OPTIC CABLE IS DIAGRAMMATIC AND NOT TO SCALE, NOT ALL FIBER OPTIC CABLES SHOWN FOR CLARITY. CABLE CAN BE MOUNTED IN EITHER VERTICAL OR HORIZONTAL LOOPS. MINIMUM LOOP RADIUS IS 24", PROVIDE STORAGE OF 50 FEET OF EACH FIBER OPTIC CABLE, IN MINIMUM OF 3 CABLE LOOPS IN VAULT.
4. ALL GROUND CONNECTIONS SHALL BE CAD WELDED.
5. ALL CABLES SHALL BE SECURED IN AN ORGANIZED FASHION, INCLUDING SLACK LOOPS, AND LABELED WITH 4 PERMANENT TAGS.



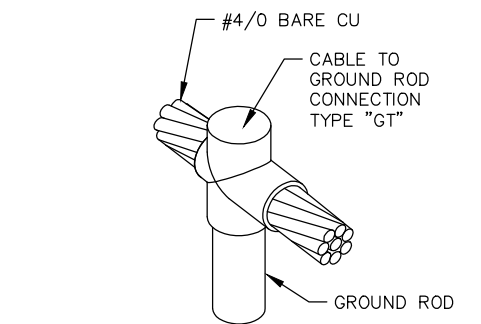
4 BALLASTED TRACK COMMUNICATIONS VAULT



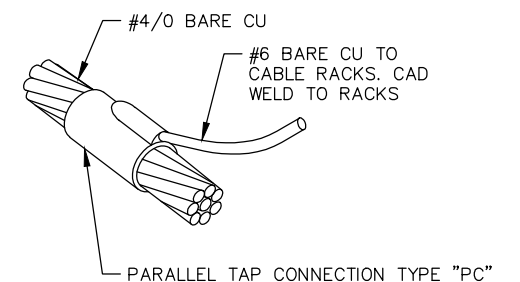
5 CABLE TRAY TYPICAL CONDUIT/CABLE ROUTING TO WAYSIDE IDS CABINET



1 #4/0 TO GROUND ROD CONNECTION



2 #4/0 TO GROUND ROD CONNECTION



3 #4/0 TO #6 CONNECTION

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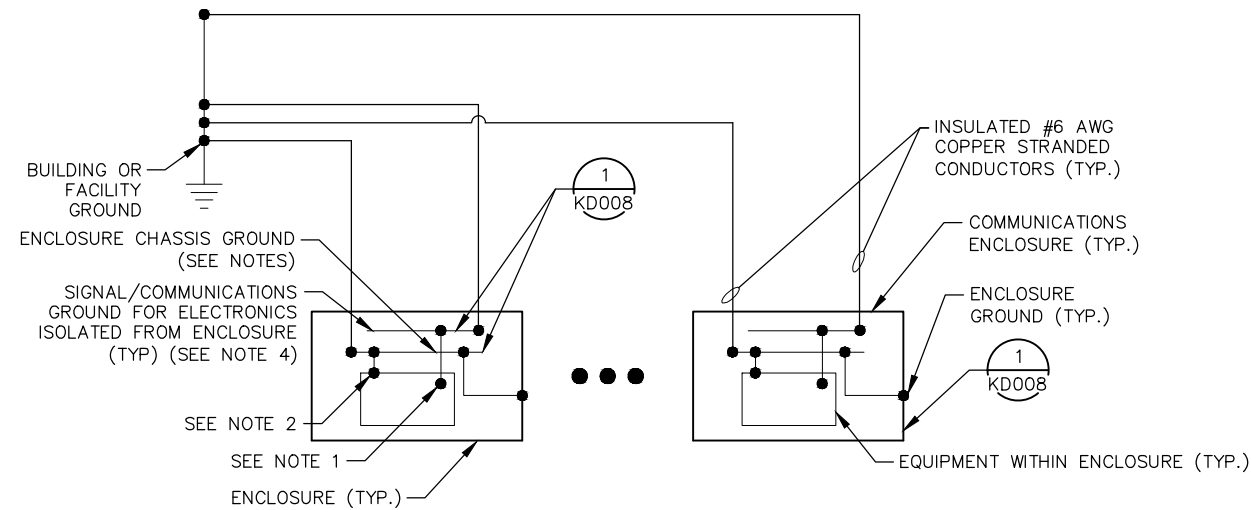
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J. Cowlishaw 808KD004.dwg



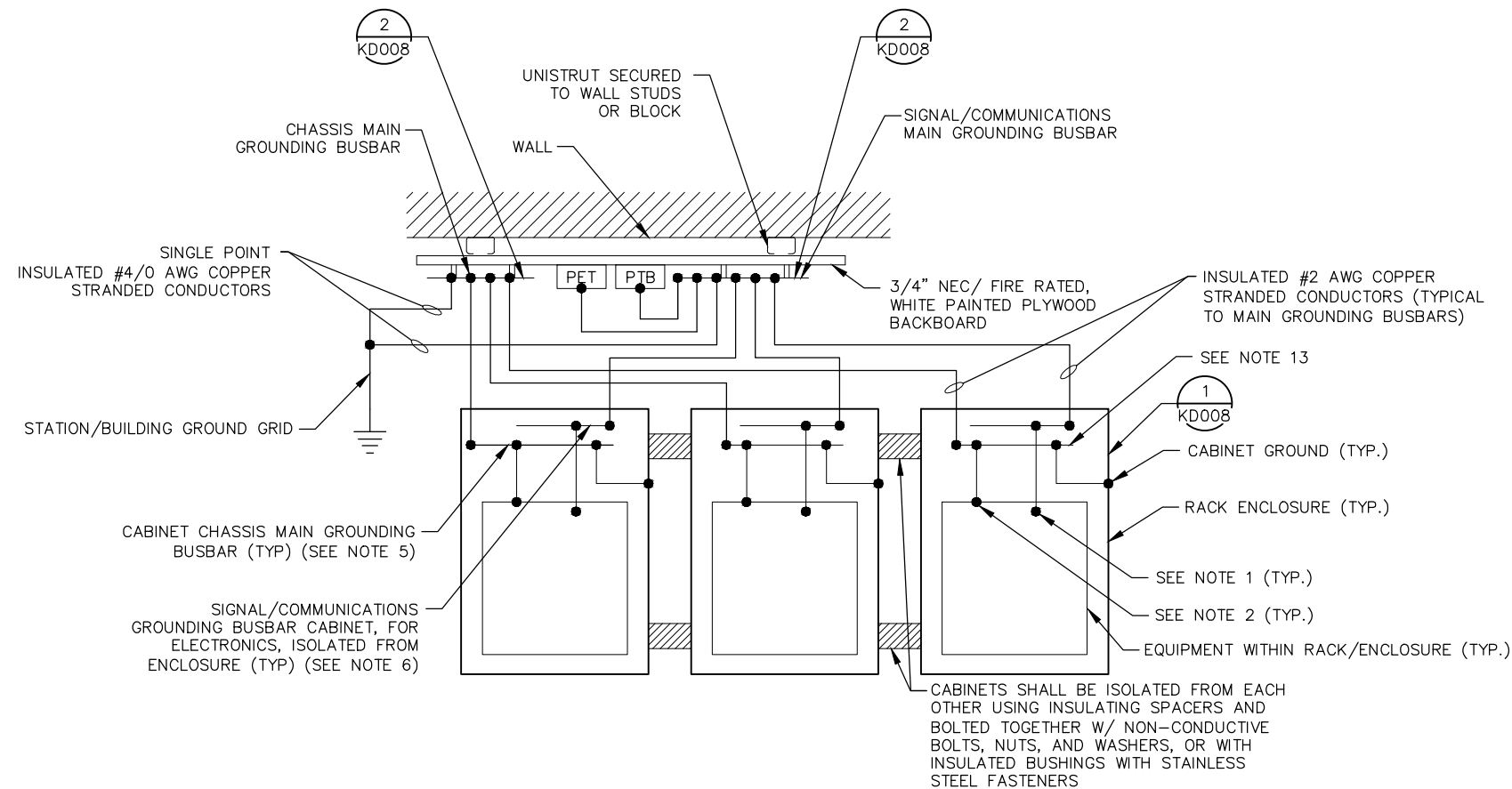
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CADD FILE DATE	SCALE	BOARD APPROVAL DATE	
01/23/19	N.T.S.	06/29/20	
SUBMITTAL DATE			

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT COMMUNICATIONS INSTALLATIONS DETAILS CSD CABLE RACKING / ROUTING			SHEET OF
PCA NO. 000			DRAWING NO. KD004
CONTRACT NO. S808			REVISION C
FILE LOCATION PROJECTWISE			



TYPICAL REMOTE COMMUNICATIONS EQUIPMENT GROUNDING  
(IDS, IDF, ETEL, ELS, TPSS, OCS) – SEE NOTE 15

1  
-  
NTS



TYPICAL SIGNAL/COMMUNICATIONS ROOM  
& IT ROOM RACK CABINET GROUNDING

2  
-  
NTS

NOTES:

1. TYPICAL CONNECTIONS TO THE SIGNAL/COMMUNICATIONS GROUNDING BUSBAR INCLUDE: ELECTRONIC EQUIPMENT COMMUNICATIONS GROUND POINTS AND CABLE SHIELDS (IF SHIELD NOT ALREADY TERMINATED TO PTB/PET).
2. TYPICAL CONNECTIONS TO THE CHASSIS GROUNDING BUSBAR INCLUDE: ELECTRONIC EQUIPMENT CHASSIS GROUND POINTS AND THE GROUND STRAP BOLTED TO THE CABINET CHASSIS.
3. RESISTANCE FROM EQUIPMENT TO EARTH GROUND SHALL BE LESS THAN 3 OHMS.
4. CONTRACTOR SHALL PROVIDE ROUTING AND PROTECTION FOR GROUND CONDUCTORS (INCLUDE PROVIDING A PENETRATION THROUGH FLOOR AS APPROVED BY THE ENGINEER). THERE SHALL BE NO SPLICES IN GROUND CONDUCTORS.
5. PROVIDE PLASTIC LABEL WHICH READS "CHASSIS MAIN GROUNDING BUSBAR".
6. PROVIDE PLASTIC LABEL WHICH READS "SIGNAL/COMMUNICATIONS GROUNDING BUSBAR".
7. ALL CABINET BUSBARS SHALL BE PRE DRILLED COPPER, 2" HIGH BY 1/4" DEEP, AND OF SUFFICIENT LENGTH TO BE MOUNTED ON THE CABINET RACK FRAME.
8. ALL GROUND CONDUCTORS SHALL BE GREEN, INSULATED, STRANDED.
9. MAIN GROUNDING BUSBARS SHALL BE PRE-DRILLED DOUBLE LUG, COPPER, 4" HIGH BY 1/4" DEEP, MINIMUM 24" LENGTH, WITH 100% SPARE CAPACITY.
10. ALL GROUND CONNECTIONS TO BUSBARS SHALL BE DOUBLE LUG COPPER CONNECTORS.
11. ALL POWER CIRCUITS FEEDING CABINETS OR ENCLOSURES SHALL INCLUDE SEPARATE MINIMUM #6 AWG STRANDED, INSULATED (GREEN COLOR) COPPER BONDING CONDUCTORS BETWEEN POWER PANEL AND CABINET/ENCLOSURE.
12. A MINIMUM 6 AWG STRANDED, INSULATED (GREEN COLOR) COPPER BONDING CONDUCTOR SHALL BE INSTALLED IN EACH MAJOR TELECOMMUNICATIONS PATHWAY.
13. BUSBARS ARE SHOWN DIAGRAMMATICALLY HORIZONTALLY SEPARATED IN THIS DRAWING FOR CLARITY OF CONNECTION. BUSBARS ARE ACTUALLY MOUNTED WITH ONE DIRECTLY ABOVE THE OTHER.
14. PET AND PTB ARE SHOWN DIAGRAMMATICALLY FOR CLARITY. FOR ACTUAL MOUNTING ARRANGEMENT SEE DRAWING KD006.
15. NOT LIMITED TO THESE EQUIPMENT CABINETS.

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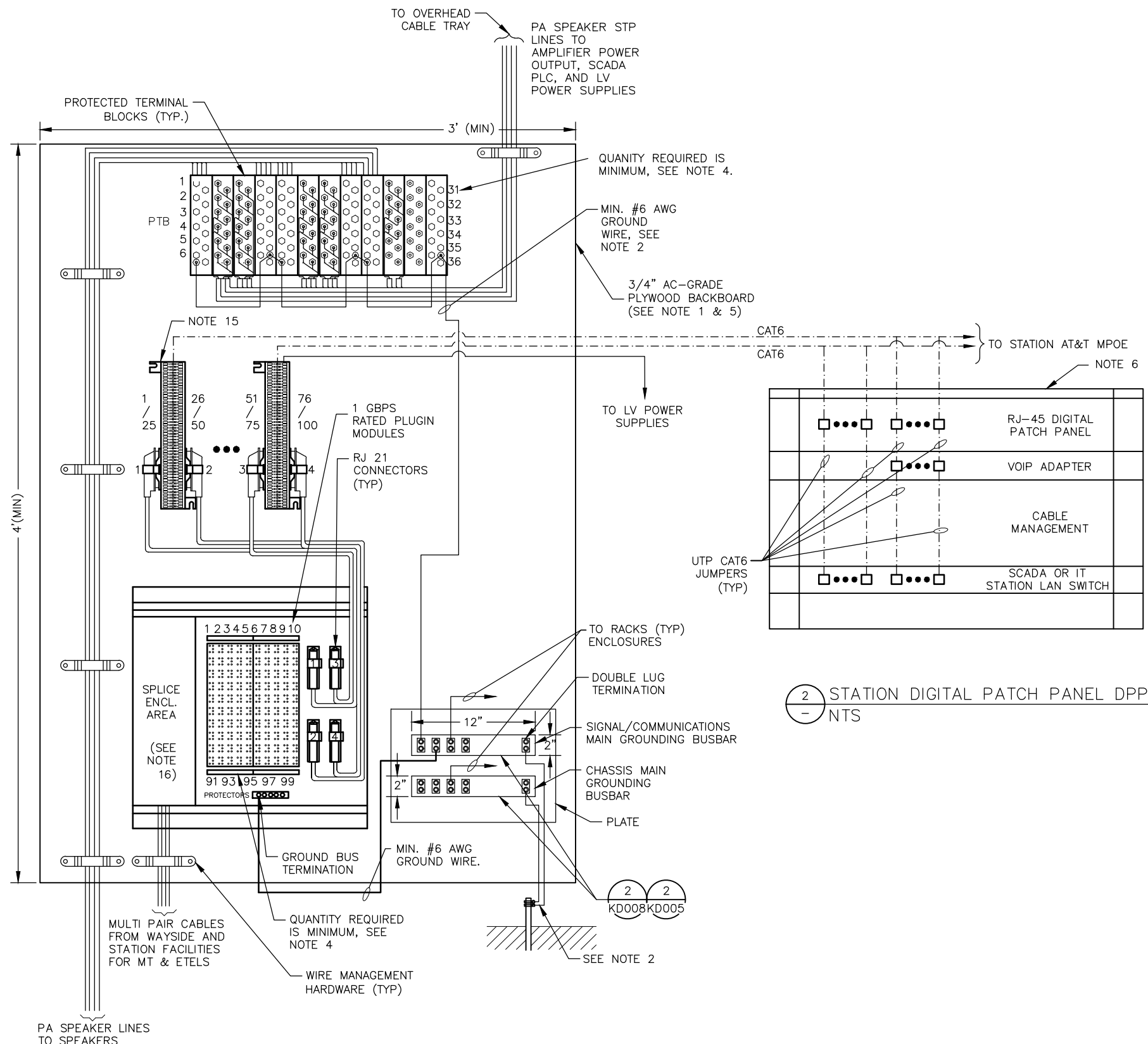


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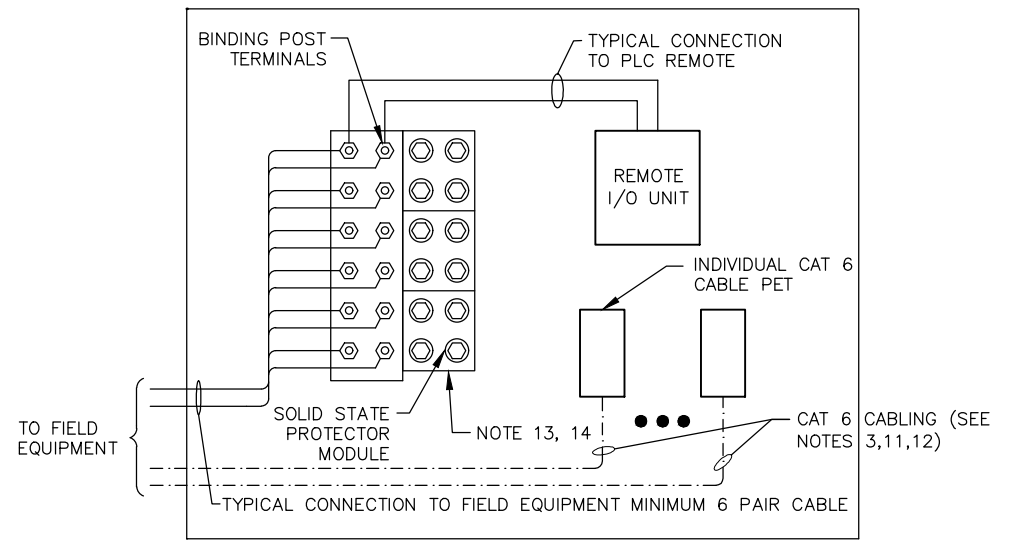
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SUBMITTAL DATE	BOARD APPROVAL DATE
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EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT		
COMMUNICATIONS INSTALLATION DETAILS		
STATION COMMS GROUNDING		
PCA NO.	CONTRACT NO.	FILE LOCATION
000	S808	PROJECTWISE
SHEET OF		DRAWING NO.
		KD005
		REVISION
		C



1 LOCAL DISTRIBUTION FRAME BACKBOARD, IT ROOM AND SIGNAL/COMM ROOM  
- NTS

2 STATION DIGITAL PATCH PANEL DPP  
- NTS



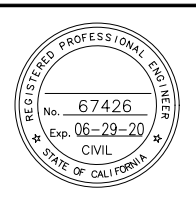
3 SYSTEM REMOTE ENCLOSURE (IDF, ELS, OTHER ENCLOSURES)  
- NTS

NOTES:

- CONTRACTOR SHALL MOUNT LDF EQUIPMENT AS SHOWN, ON A MINIMUM 3' W X 4' H 3/4" D AC-GRADE FIRE RESISTANT PLYWOOD BACKBOARD, PAINTED WHITE, NFPA/NEC RATED.
- SINGLE POINT CONNECTION TO STATION GROUND FOR EACH BUSBAR. SEE DRAWING KD005 FOR DETAILS.
- PET BLOCKS SHALL BE RATED FOR NETWORK FREQUENCY AS REQUIRED, PROVIDE SEPARATE PET FOR DIGITAL AND ANALOG, LV POWER CIRCUITS AS REQUIRED.
- PROVIDE PET & PTB BLOCKS AS NECESSARY WITH 100% SPARE UNUSED CAPACITY.
- PROVIDE ONE BACKBOARD/PET/PTB BLOCKS WITHIN IT ROOM (SEPARATE FENCED ROOM PARTITION) AND SEPARATE BACKBOARD/PET/PTB BLOCKS WITHIN COMM ROOM.
- PROVIDE DIGITAL PATCH PANELS BETWEEN ALL PET BLOCKS AND ETHERNET SWITCH EQUIPMENT.
- PROVIDE SMALLER PET/PTB BLOCKS AS REQUIRED AND AS SHOWN ON PLANS FOR REMOTE ENCLOSURES.
- ALL OSP CAT 6 SHALL BE SHIELDED, ALL OSP CABLE SHALL BE SHIELDED UNLESS OTHERWISE NOTED.
- RACK MOUNT PET AND PTB BLOCK MAY BE SUBSTITUTED IF CONFIGURATION ACCEPTABLE TO VTA/OWNER.
- OSP CABLE TO STATION AND WAYSIDE IT & SCADA DEVICES WHICH REQUIRE LARGER GAUGE WIRE (LARGER THAN CAT 6), SUCH AS PA SPEAKERS, SCADA POINTS, IDS SENSORS,
- OSP CAT 6 CABLE TO STATION AND WAYSIDE SCADA DEVICES FOR MT, AMBIENT NOISE MIC, SCADA POINTS, IDS SENSORS, LV POWER AND SIMILAR USES (OUTSIDE OF SIGNAL/COMM ROOM).
- OSP CAT 6 CABLE TO STATION AND WAYSIDE IT DEVICES FOR CCTV, ETEL AND SIMILAR USES (OUTSIDE OF SIGNAL/COMM ROOM).
- SOLDERLESS BOX LUG TERMINAL BLOCKS, 600V RATED.
- ALL 6 PAIRS SHALL BE TERMINATED ON BINDING POSTS.
- 100 CABLE MINIMUM PUNCH DOWN BLOCKS, PROVIDE 100% SPARES.
- 100 CABLE MINIMUM PET, PROVIDE 100% SPARES, PROVIDE 1 GBPS TRANSFER RATE COMPATIBLE FOR ALL CAT 6 CABLING.

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SUBMITTAL DATE	06/29/20	BOARD APPROVAL DATE	

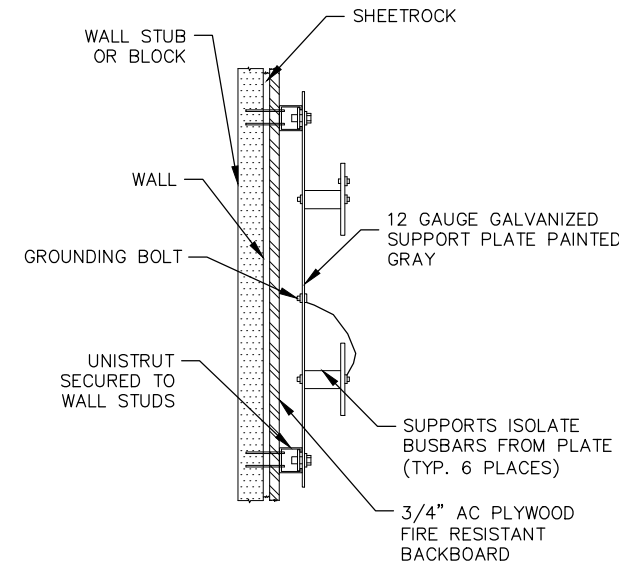
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PCA NO.	CONTRACT NO.	FILE LOCATION
000	S808	PROJECTWISE

SHEET	OF
DRAWING NO.	KD006
REVISION	C

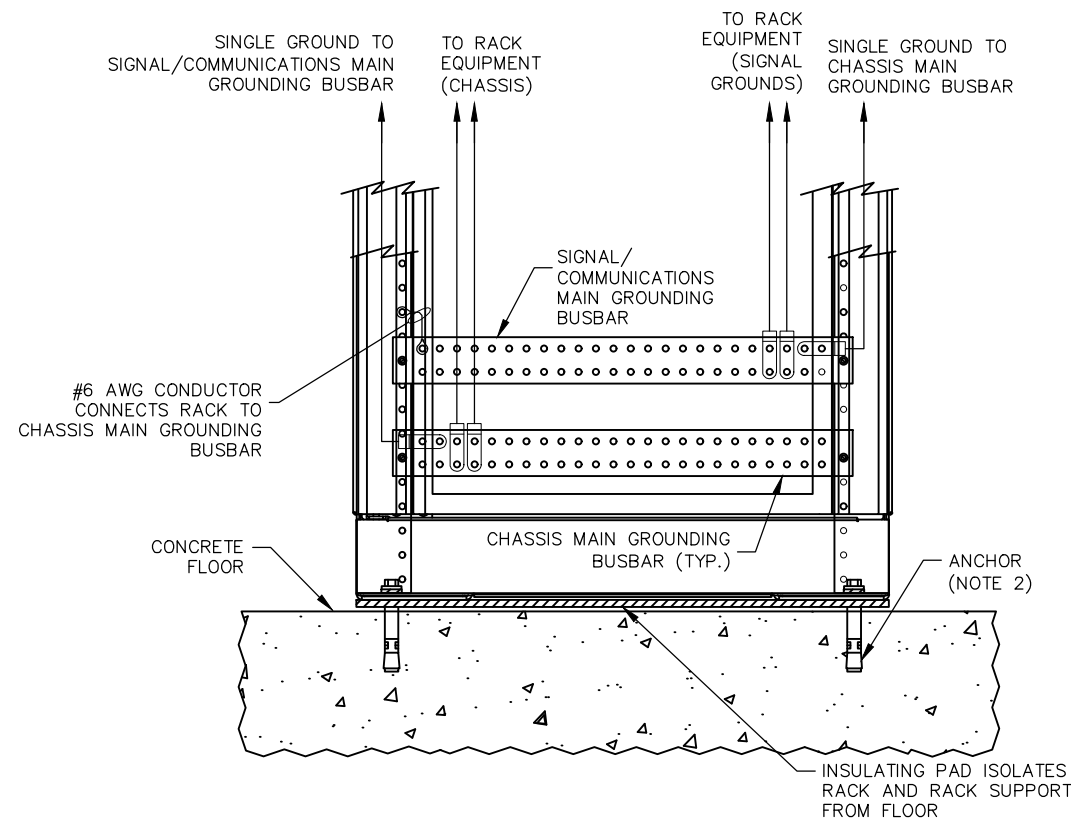


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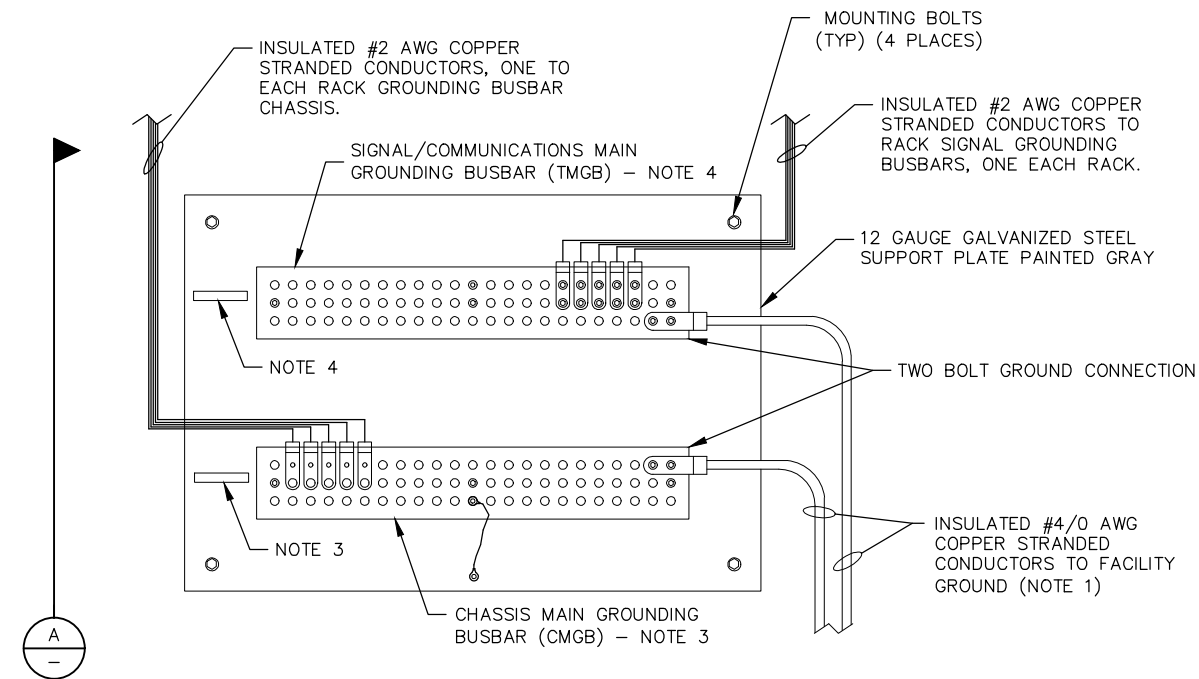
1. MAIN GROUNDING BUSBAR GROUND CONDUCTORS SHALL BE CONNECTED TO THE BUILDING METAL FRAME, FACILITY GROUND GRID OR THE BUILDING CABLE ENTRANCE GROUND PLATE. CONTRACTOR SHALL PROVIDE ROUTING AND PROTECTION FOR GROUND CONDUCTORS. THERE SHALL BE NO SPLICES IN GROUND CONDUCTORS.
2. REFER TO THE CONTRACT DRAWING KD001 FOR RACK INSTALLATION DETAILS.
3. PLASTIC LABEL READS "CHASSIS MAIN GROUNDING BUSBAR".
4. PLASTIC LABEL READS "SIGNAL/COMMUNICATIONS MAIN GROUNDING BUSBAR".
5. RESISTANCE FROM EQUIPMENT TO EARTH GROUND SHALL BE LESS THAN 3 OHMS.
6. ALL RACK BUSBARS SHALL BE PREDRILLED, ELECTRO-TIN PLATED COPPER, 2" HIGH BY 1/4" DEEP, AND OF SUFFICIENT LENGTH TO BE MOUNTED ON RACK.
7. ALL MAIN GROUNDING BUSBARS SHALL BE PRE-DRILLED, ELECTRO-TIN PLATED COPPER, 4" HIGH BY 1/4" DEEP, AND A MINIMUM OF 24" LONG.
8. ALL GROUNDING WIRES SHALL BE INSULATED STRANDED COPPER CONDUCTORS.
9. CONNECTIONS TO GROUND BUS CAN CONNECT TO TOP OR BOTTOM OF GROUND BUS.



SECTION - MAIN BUSBARS DETAIL  
NTS



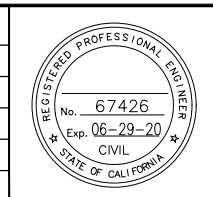
SIGNAL/COMM ROOM & IT ROOM RACK OR ENCLOSURE GROUNDING BUSBAR - ELEVATION  
NTS



SIGNAL/COMM ROOM & IT ROOM MAIN GROUNDING BUSBARS - ELEVATION  
NTS

Joseph Cowlishaw Jun 23, 2020 - 10:15am C:\cadd\lib\jcw\ymlb\_jeremy\ba\ba\ba\west\jcm\8399\_808K0008.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



SUBMITTED	
<b>Lamoreaux Associates</b> 2686 N 775 W T 435.586.0174 Cedar City, UT 84721 F 435.865.1848 www.laeng.com	
DESIGNED	CHECKED
Bryan Lamoreaux	B. Lamoreaux
DRAWN	CADD FILE NAME
J. Cowlishaw	808KD008.dwg

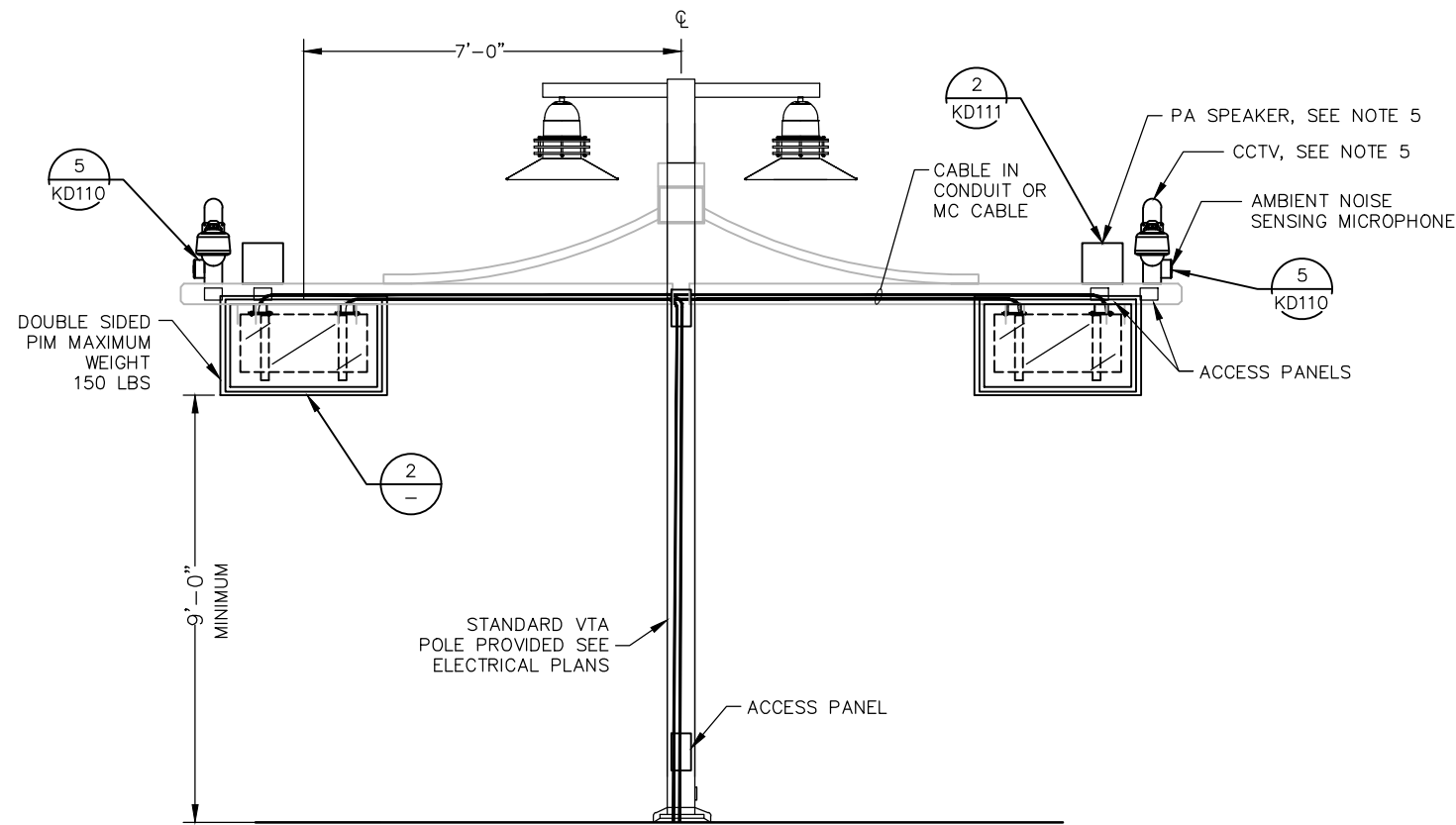


APPROVED	
<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	SCALE
01/26/19	N.T.S.
SUBMITTAL DATE	BOARD APPROVAL DATE
06/29/20	

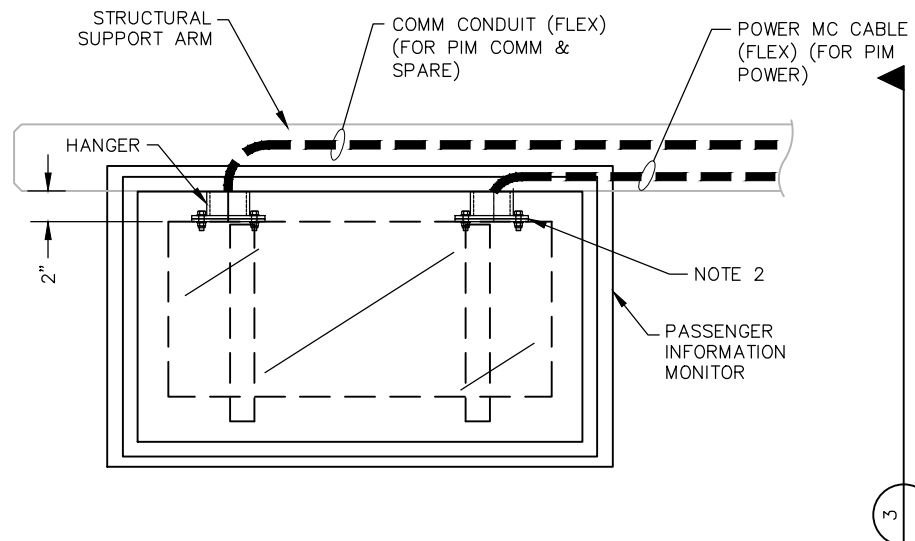
EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT COMMUNICATIONS INSTALLATION DETAILS CENTRAL EQUIPMENT ROOM GROUNDING			SHEET OF
			DRAWING NO. KD008
			REVISION B
PCA NO. 000	CONTRACT NO. S808	FILE LOCATION PROJECTWISE	

NOTES:

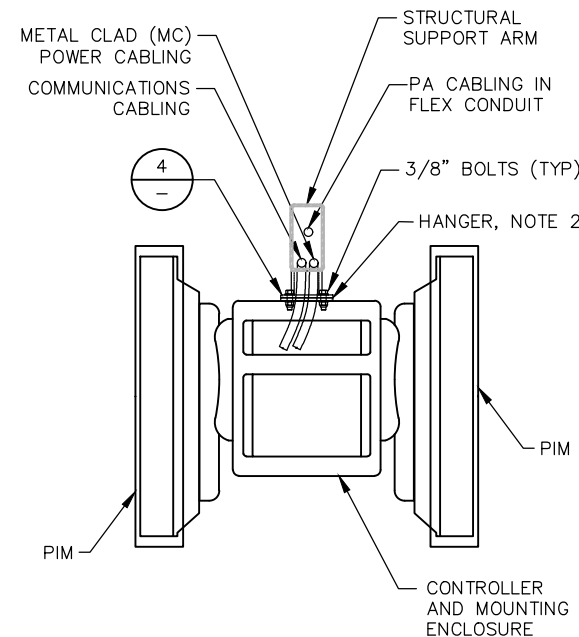
- CONTRACTOR SHALL MOUNT PIMS TO LIGHT OR OTHER POLES. POLES AND HANGERS WILL BE PROVIDED BY THE STATION CONTRACTOR.
- CONTRACTOR SHALL INSTALL WATER RESISTANT NEOPRENE GASKET BETWEEN HANGER AND PIM TO PREVENT ENTRANCE OF WATER INTO PIM.
- CONTRACTOR SHALL INSTALL PIM WITH SUNSHADE.
- ENSURE PIMS DO NOT INFRINGE ON THE DYNAMIC ENVELOPE OF THE LRVS. PIMS TO BE AT LEAST 9'-0" (274.32cm) ABOVE PLATFORM AND AT LEAST 1'-8-1/2" (52.1cm) IN FROM THE EDGE OF THE PLATFORM.
- STANDARD VTA POLE TO BE MODIFIED TO INCLUDE PA SPEAKER ENCLOSURE AND CCTV PIPE POST FOR CCTV MOUNTING.
- SEPARATION MUST BE MAINTAINED BETWEEN DATA/CAT 6, LV POWER, PA WIRING, AND LIGHTING POWER WIRING, THROUGH USE OF MC CABLE OR FLEXIBLE CONDUIT.



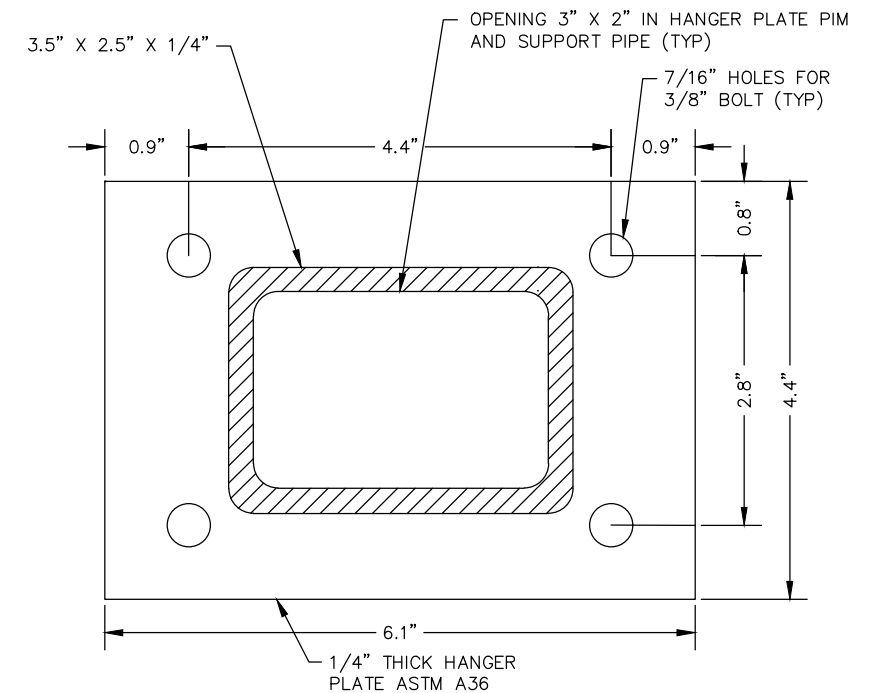
1 LIGHT POLE/PLATFORM PIM  
1/2":1'



2 PIM FRONT DETAIL  
1-1/2":1'



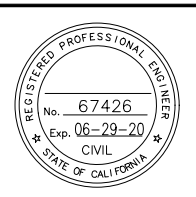
3 PIM SIDE DETAIL  
1-1/2":1'



4 HANGER DETAIL  
1:1

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NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET

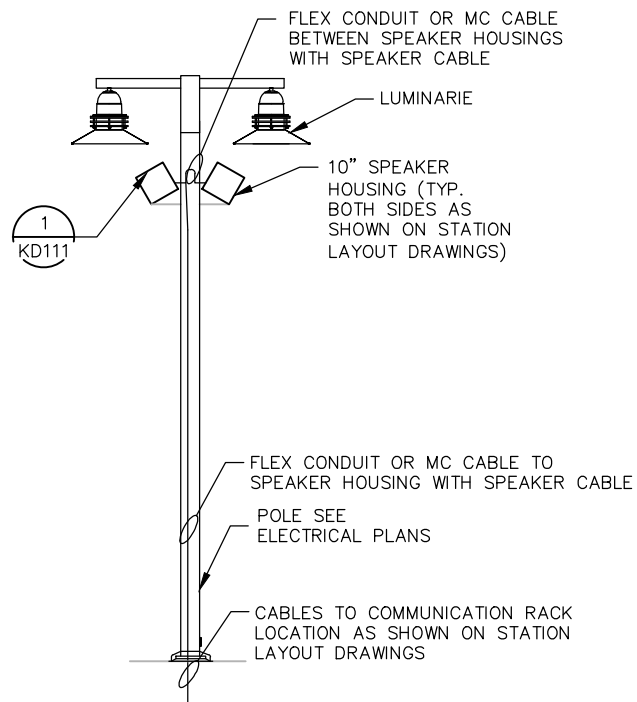


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DESIGNED	Bryan Lamoreaux	CHECKED	B. Lamoreaux
DRAWN	J. Cowlishaw	CADD FILE NAME	808KD107.dwg

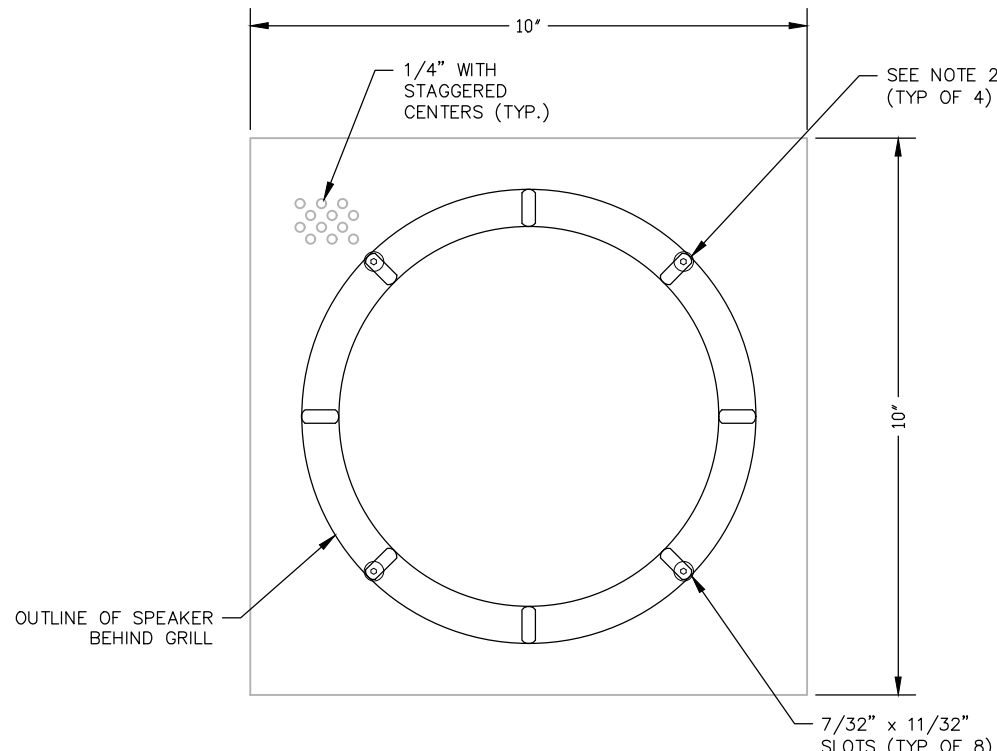


APPROVED		<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	01/23/19	SCALE	AS SHOWN
SUBMITTAL DATE	06/29/20	BOARD APPROVAL DATE	

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT COMMUNICATIONS INSTALLATION DETAILS PASSENGER INFO. MONITOR MOUNTING			SHEET OF DRAWING NO. KD107 REVISION C
PCA NO.	CONTRACT NO.	FILE LOCATION	
000	S808	PROJECTWISE	



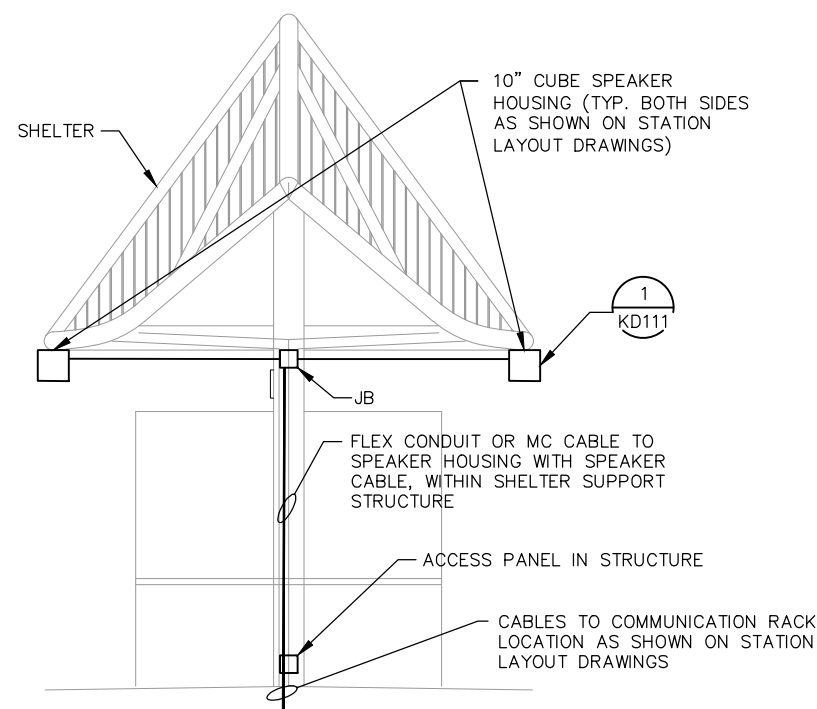
1 LIGHT MOUNTED SPEAKERS  
- NTS



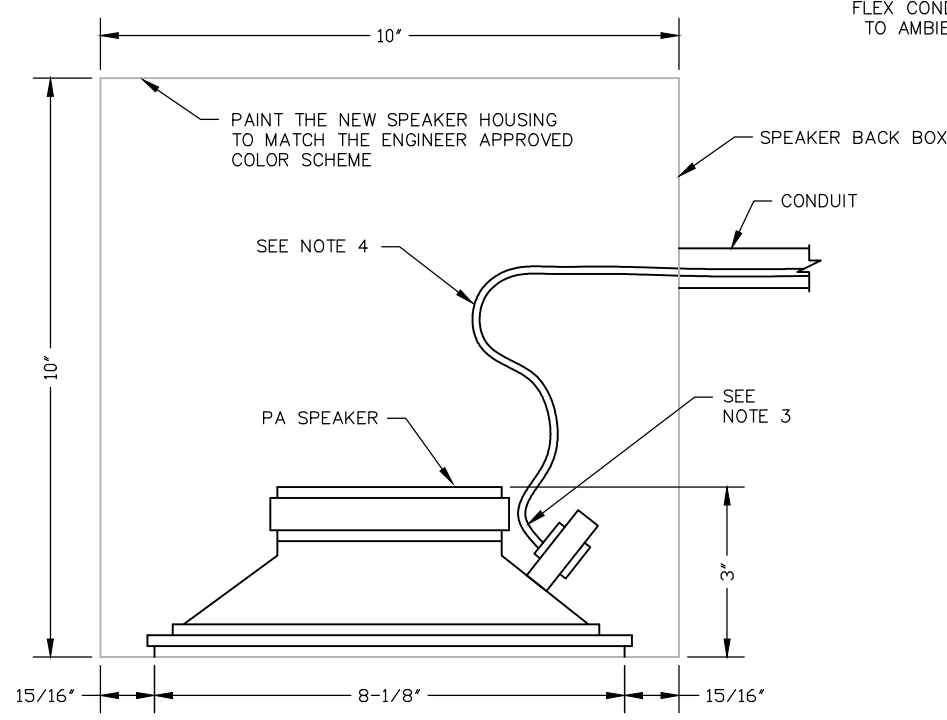
3 SPEAKER/GRILL MOUNTING DETAILS  
- NTS

NOTES:

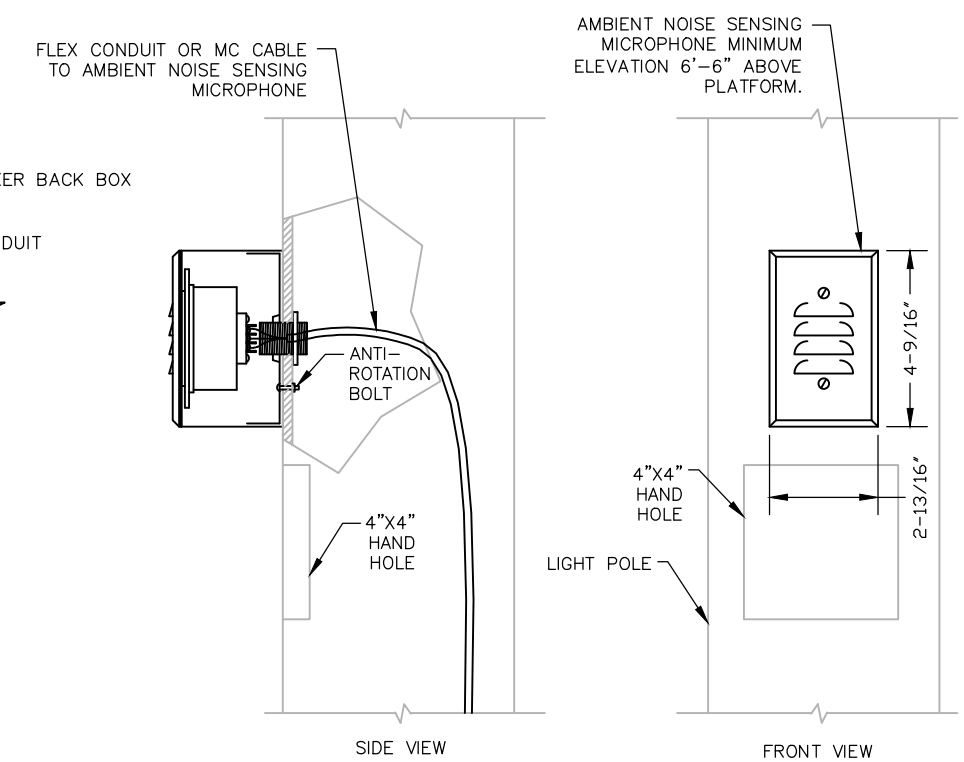
1. PLATFORM STRUCTURES, SHELTERS, POLES, LUMINARIES, SPEAKER BACK BOXES AND SPEAKER GRILLS PROVIDED AND INSTALLED BY OTHERS.
2. MOUNT SPEAKER TO GRILL THROUGH PRE-EXISTING HOLES WITH FOUR (4) EACH 3-32 X 3/4" STAINLESS STEEL TAMPER-RESISTANT SCREWS AND 8-32 NUTS/LOCK WASHERS.
3. USE WIRE STRIPPING GAUGE. DO NOT OVERSTRIP. CABLE SHIELD TERMINATED AT EQUIPMENT END ONLY. TRIM OFF SHIELD AT SPEAKERS.
4. LEAVE 1-2" SERVICE LOOP WITHIN BACK OF SPEAKER BOX.
5. SEE DRAWING KD107 FOR PA SPEAKER CONFIGURATION AND MOUNTING ON PIM LIGHTING POLES.



2 SHELTER MOUNTED SPEAKERS  
- NTS



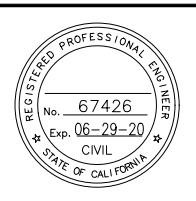
4 SPEAKER MOUNTING ARRANGEMENT  
- NTS



5 AMBIENT NOISE SENSING MICROPHONE  
- NTS

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NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
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A	06/18	35% SUBMITTAL SET



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DRAWN	J. Cowlishaw	CADD FILE NAME	808KD110.dwg



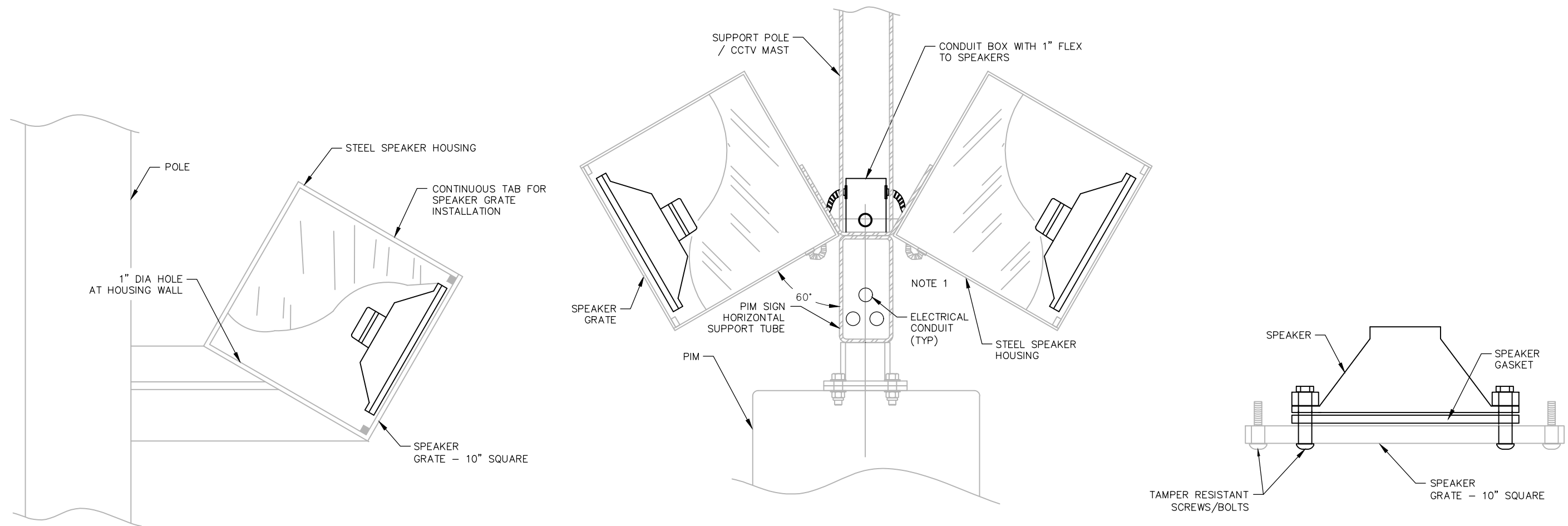
APPROVED		<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	01/28/19	SCALE	N.T.S.
SUBMITTAL DATE	06/29/20	BOARD APPROVAL DATE	

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT COMMUNICATIONS INSTALLATION DETAILS PUBLIC ADDRESS SPEAKER MOUNTING		
PCA NO.	CONTRACT NO.	FILE LOCATION
000	S808	PROJECTWISE

SHEET	OF
DRAWING NO.	KD110
REVISION	C

NOTES:

- CONTRACTOR SHALL INSTALL SPEAKERS IN SPEAKER HOUSINGS. SPEAKER HOUSING WITH SPEAKER GRATE WILL BE FURNISHED BY THE STATION CONTRACTOR.
- CONTRACTOR SHALL INSTALL SPEAKER WITH GASKET ON STATION SUPPLIED SPEAKER GRATE. CONTRACTOR SHALL MODIFY GRATE AS NEEDED TO BOLT/SCREW SPEAKER WITH GASKET TO SPEAKER GRATING. BOLTS/SCREWS SHALL BE TAMPER RESISTANT.



1 LIGHT POLE OR SHELTER SPEAKER HOUSING  
- NTS

2 PIM & LIGHT POLE SPEAKER HOUSING  
- NTS

3 SPEAKER TO SPEAKER GRATE DETAIL  
- NTS

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NO.	DATE	REVISIONS
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DESIGNED Bryan Lamoreaux	CHECKED B. Lamoreaux
DRAWN J. Cowlshaw	CADD FILE NAME 808KD111.dwg

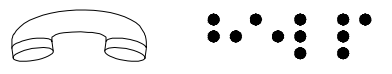


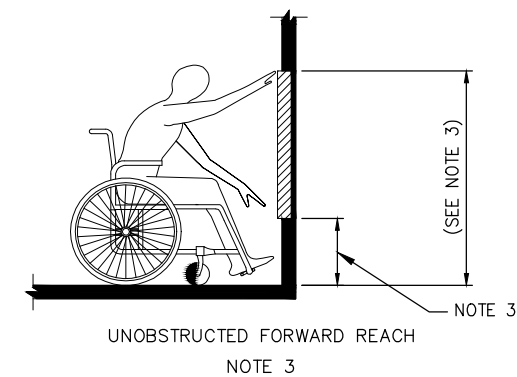
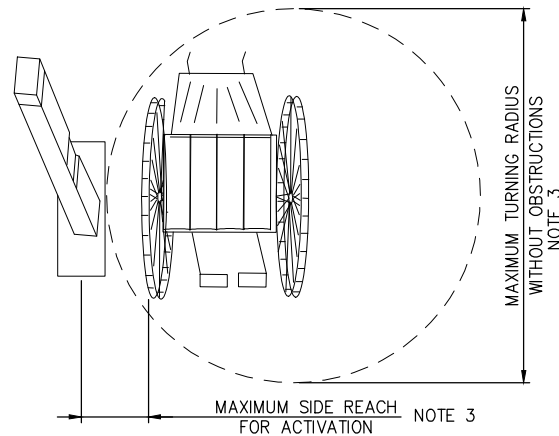
APPROVED <b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE 01/26/19	SCALE N.T.S.
SUBMITTAL DATE 06/29/20	BOARD APPROVAL DATE

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT COMMUNICATIONS INSTALLATION DETAILS PUBLIC ADDRESS SPEAKERS		
PCA NO. 000	CONTRACT NO. S808	FILE LOCATION PROJECTWISE

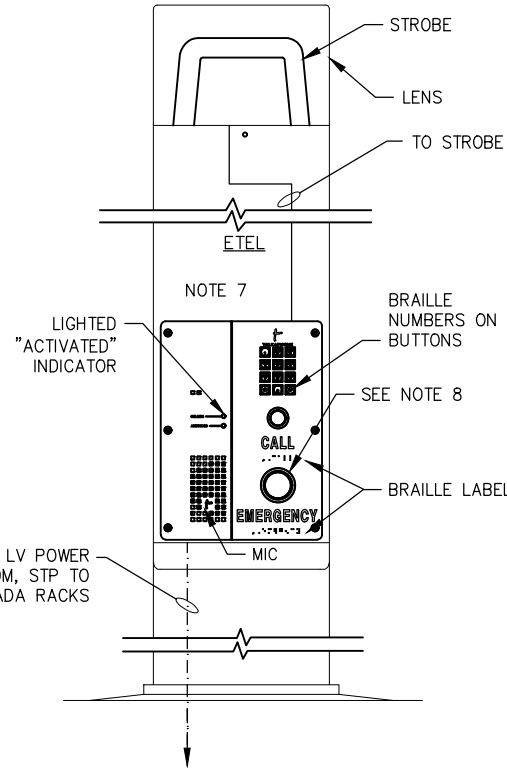
SHEET OF	DRAWING NO. KD111
REVISION	B

NOTES:

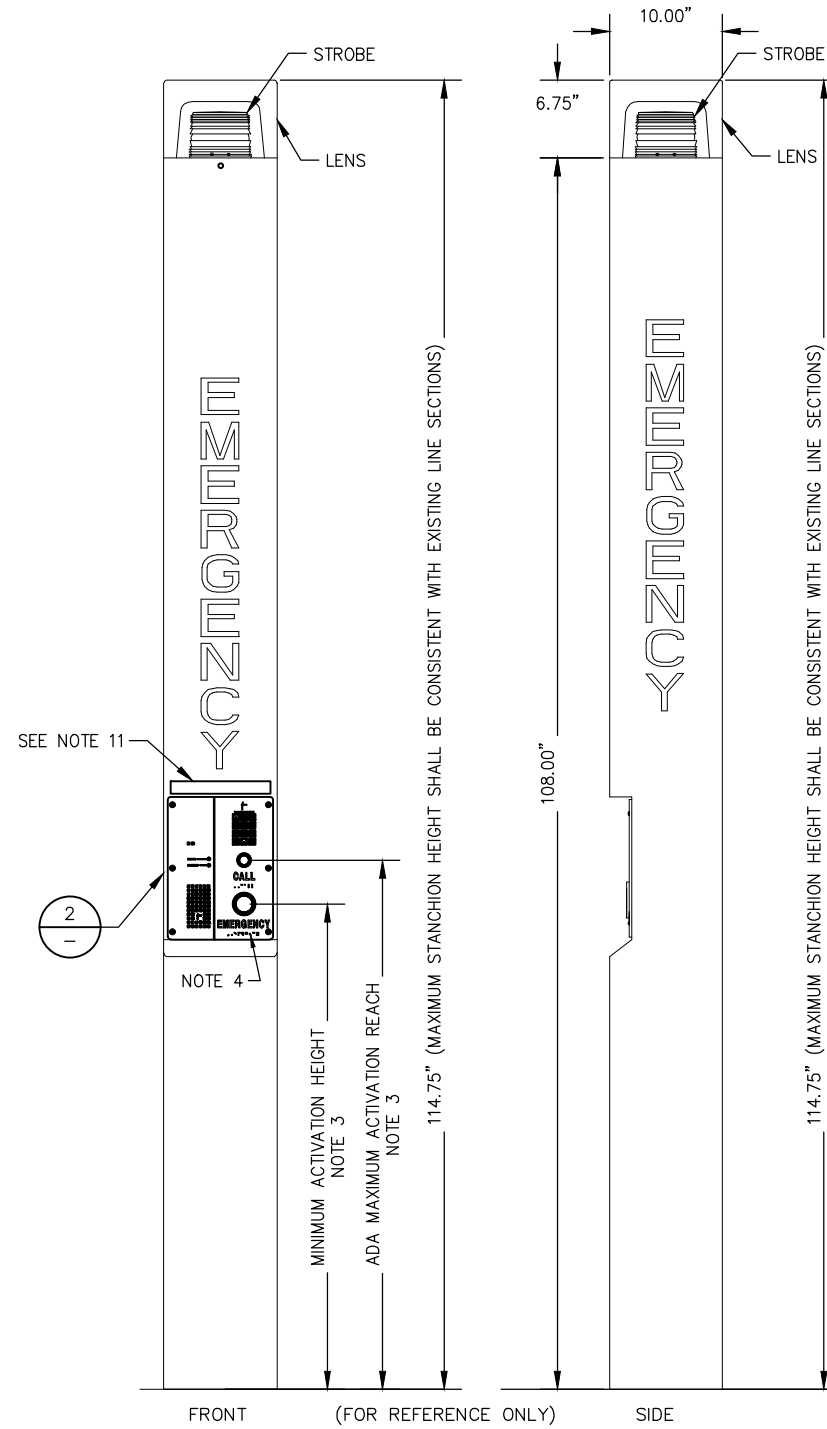
1. ALL PEDESTALS ARE TO BE GROUNDED TO STATION PROVIDED GROUND SYSTEM.
  2. ALL ETELS STANCHIONS ARE TO HAVE ANTI-GRAFFITI COUNTER MEASURES ADDED SUCH AS SURFACE COATINGS PRIOR TO INSTALLATION OF TELEPHONE COMPONENTS.
  3. ALL ETELS ARE TO BE ADA ACCESSIBLE PER CURRENT ADA HEIGHT STANDARDS, WHICH ARE CURRENT AT TIME OF ETEL STANCHION PROCUREMENT.
  4. ETEL SIGNAGE BRAILLE MESSAGE TO BE PLACED IMMEDIATELY ABOVE ETEL ACTIVATION BUTTON.
- 
5. THE BLUE LIGHT STANCHION SHALL BE GAI-TRONICS MODEL NO. 234 SBA OR APPROVED EQUAL WITH INTEGRAL ETEL, WITH SCADA INTERFACE (POINTS FOR FUTURE USE ONLY), STROBE/LENS AND DC POWER SUPPLY FOR STROBE.
  6. ALL ETELS SHALL BE FURNISHED AND INSTALLED TO CURRENT ADA STANDARDS WHICH ARE CURRENT AT THE TIME OF ETEL PROCUREMENT.
  7. STATION PLATFORM EMERGENCY PHONES SHALL NOT HAVE HANDSETS.
  8. ETEL SHALL PROVIDE RELAY OUTPUT TO SWITCH DC POWER ON TO STROBE WHEN EMERGENCY PUSH BUTTON IS DEPRESSED, AND TO SCADA FOR ALARM.
  9. STROBE SHALL REMAIN ON AND BE FLASHING FOR THE DURATION OF THE EMERGENCY CALL.
  10. ALL PLATFORM MOUNTED ETELS SHALL BE PROVIDED WITH BLUE LIGHTS AND STANCHIONS. FOR WALL MOUNTED ETEL (IF UTILIZED), PROVIDE BLUE LIGHT STROBE ABOVE ETEL ON WALL. FOR ELEVATORS STROBE AND STANCHION ARE NOT REQUIRED.
  11. SIGN INDICATING 911 AVAILABILITY FOR THIS TELEPHONE, SIZE AND WORDING SHALL BE APPROVED BY VTA.



1 ETEL GUIDLINES & STANDARDS  
- NTS



2 ETEL PEDESTAL DETAIL  
- NTS



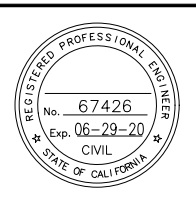
3 ETEL PEDESTAL ELEVATION(FRONT)  
- NTS



4 ETEL - ELEVATOR  
- NTS

Joseph Cowlishaw Jun 23, 2020 - 10:15am C:\cadd\lib\jcw\ymlb\_jeremy.becad\west\jcm98399\_808KD114.dwg

NO.	DATE	REVISIONS
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B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET

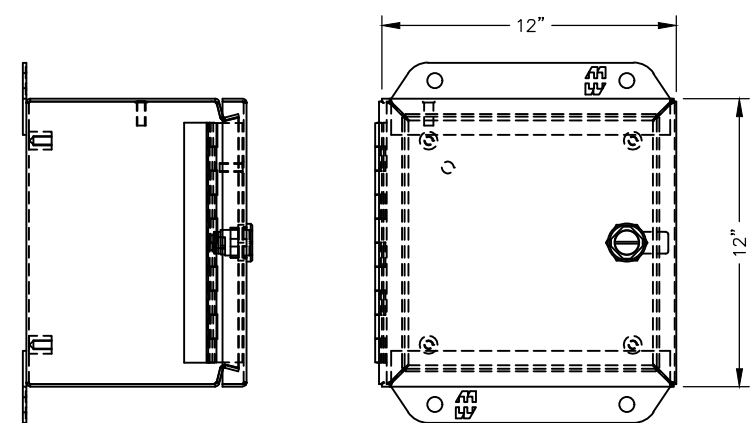


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<b>Lamoreaux Associates</b> 2686 N 775 W T 435.586.0174 Cedar City, UT 84721 F 435.865.1848 www.laeng.com	
DESIGNED	CHECKED
Bryan Lamoreaux	B. Lamoreaux
DRAWN	CADD FILE NAME
J. Cowlishaw	808KD114.dwg



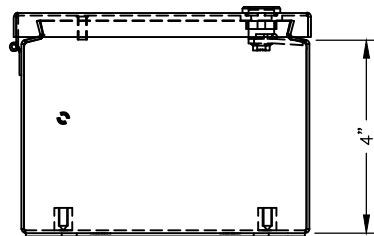
APPROVED	
<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	SCALE
01/26/19	N.T.S.
SUBMITTAL DATE	BOARD APPROVAL DATE
06/29/20	

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT COMMUNICATIONS INSTALLATION DETAILS TELEPHONE MOUNTING - EMERGENCY		
PCA NO.	CONTRACT NO.	FILE LOCATION
000	S808	PROJECTWISE
SHEET	OF	DRAWING NO.
		KD114
		REVISION
		C



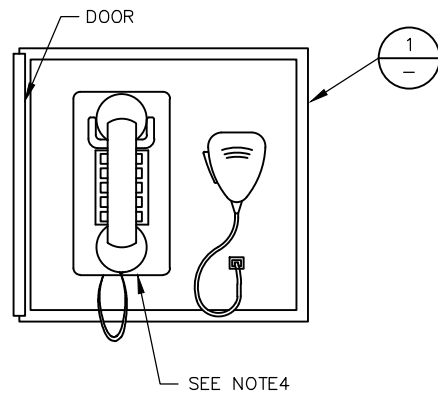
LEFT SIDE VIEW

FRONT VIEW

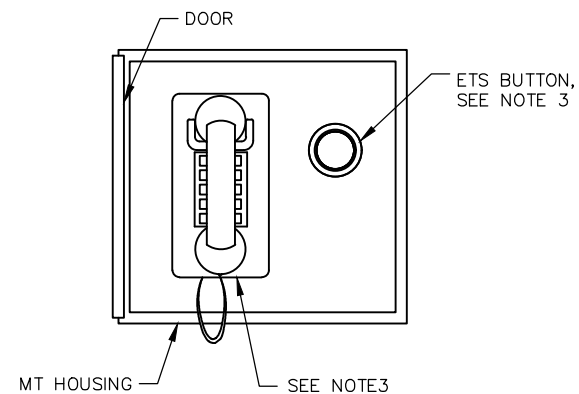


BOTTOM VIEW

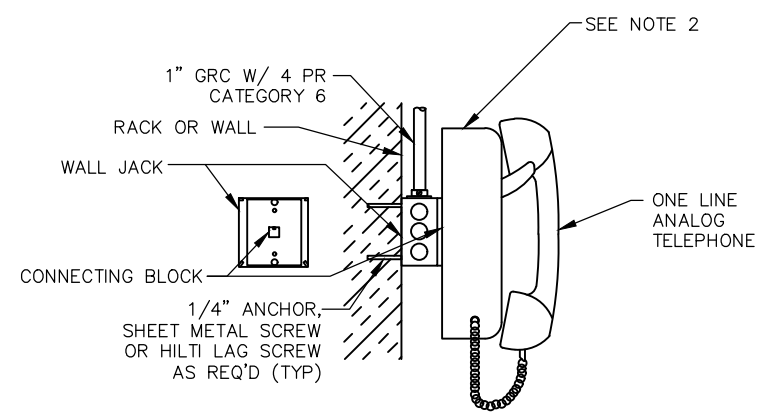
1 - MT/LOCAL TELEPHONE AND MIC ENCLOSURE BLS  
- NTS



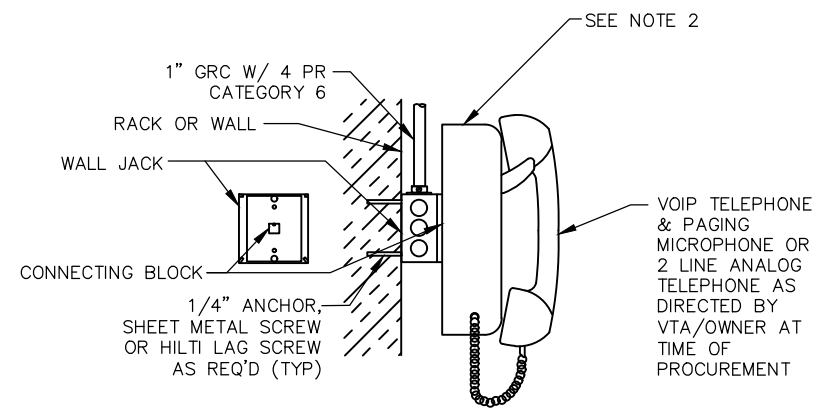
2 - TYPICAL SCADA MAINTENANCE TELEPHONE DETAIL  
- NTS



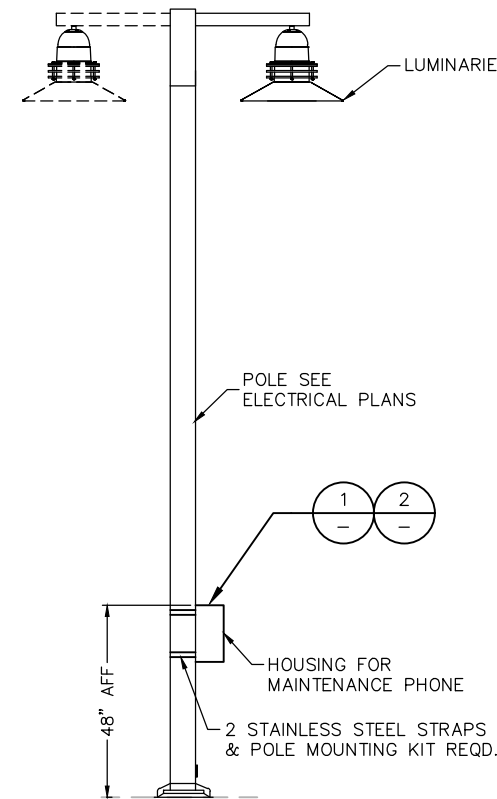
3 - TYPICAL SCADA BLUE LIGHT STATION  
- NTS



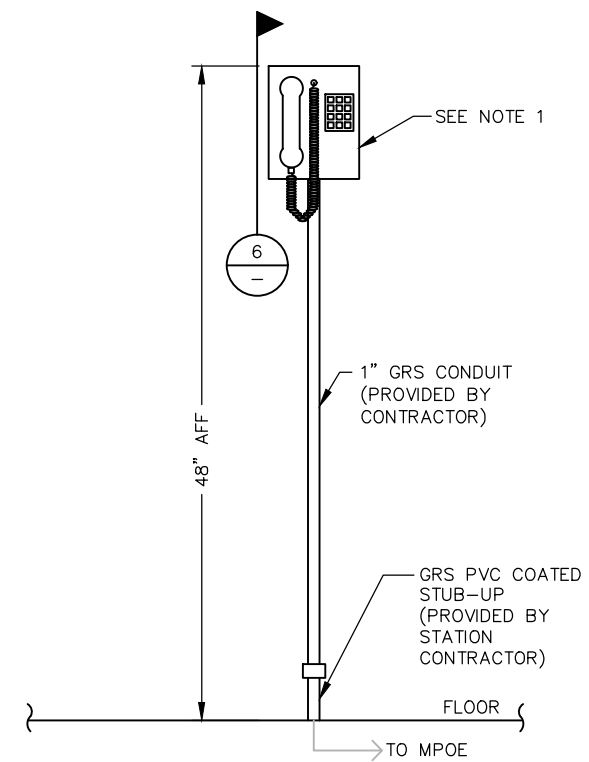
7 - TYPICAL IT WALL OR RACK MOUNTED MAINTENANCE TELEPHONE  
- NTS



6 - TYPICAL SCADA WALL OR RACK MOUNTED MAINTENANCE TELEPHONE  
- NTS



5 - LIGHT POLE MAINTENANCE TELEPHONE  
- NTS



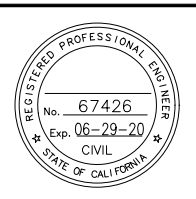
4 - VOIP MAINTENANCE PHONE OPERATOR BREAK ROOM  
- NTS

NOTES:

1. INSTALL AS SHOWN ON WALL FOR ALL OPERATOR BREAK ROOMS. INSTALL AS SHOWN ON END OF EQUIPMENT RACK LINEUP FOR ALL COMM ROOMS AND SIGNAL HOUSES.
2. MOUNT PAGING MIC WITH RJ45 PORT ON BACK PLANE CONNECTED TO 4X4 METAL BACKING BOX.
3. BLUE LIGHT STATION SHALL CONSIST OF VOIP TELEPHONE HANDSET BUT WITH ETS BUTTON REPLACING MICROPHONE. THE BLUE LIGHT STATION IS MOUNTED ON THE OCS POLE AT THE IDS LOCATIONS. PROVIDE LABEL FOR BUTTON.
4. VOIP TELEPHONE & PAGING MICROPHONE OR 2 LINE CORDLESS ANALOG TELEPHONE AS DIRECTED BY VTA/OWNER AT TIME OF PROCUREMENT.

Joseph Cowlishaw Jun 23, 2020 - 10:15am C:\cadd\lib\lan\yinh\jeremy.becardet\west\smo89399\_808KD115.dwg

NO.	DATE	REVISIONS
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B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET

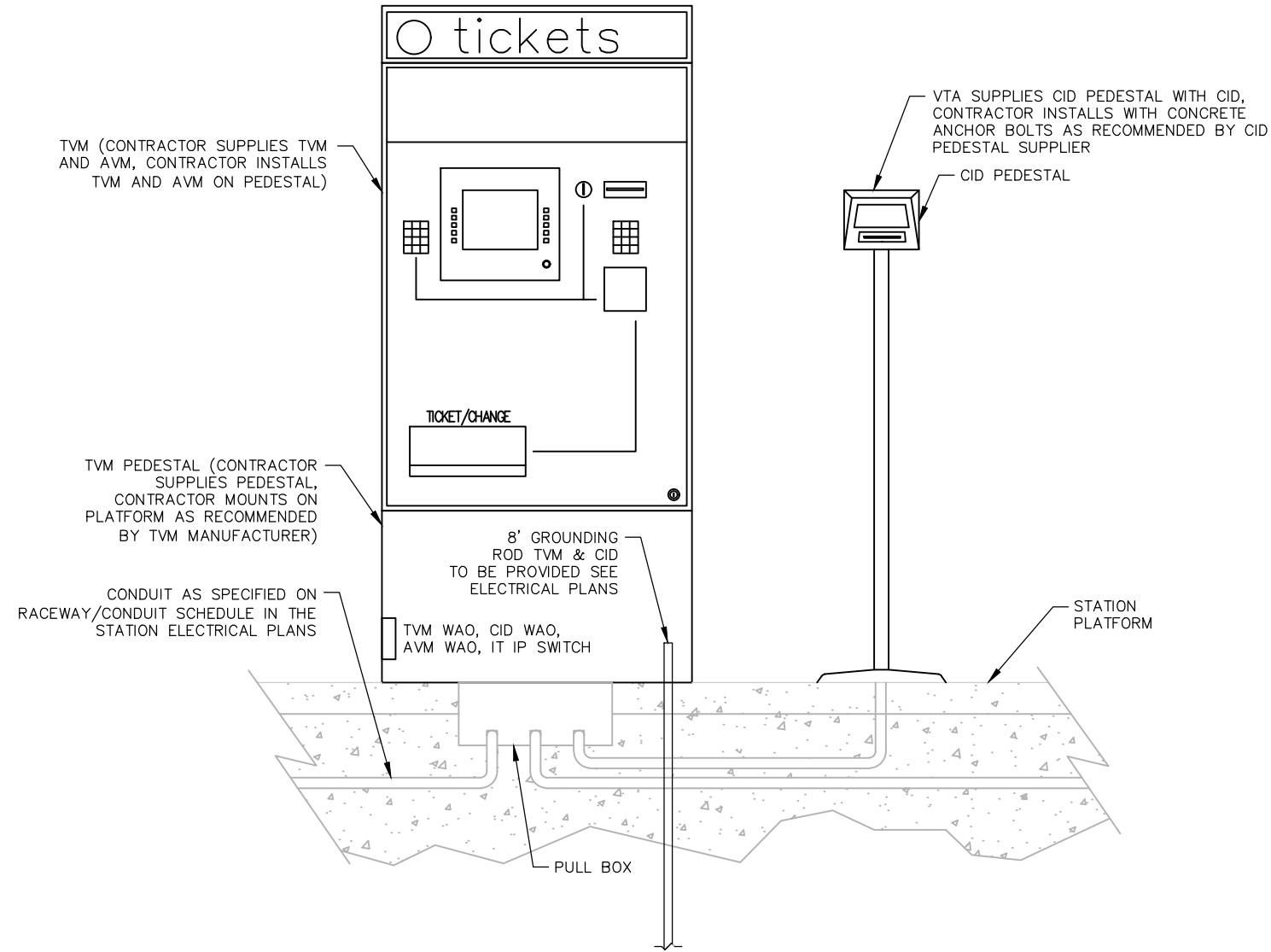


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<b>Lamoreaux Associates</b>	
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DESIGNED	CHECKED
Bryan Lamoreaux	B. Lamoreaux
DRAWN	CADD FILE NAME
J. Cowlishaw	808KD115.dwg

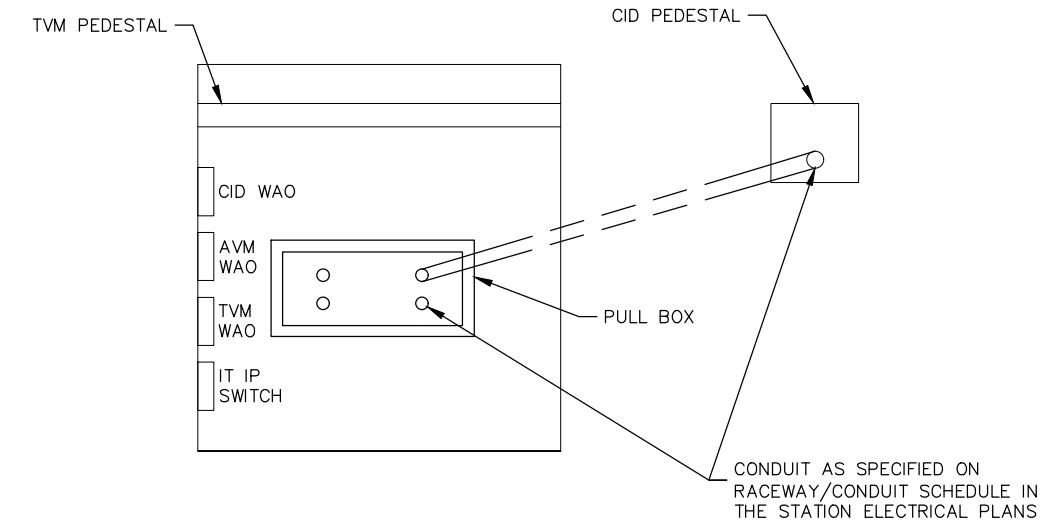


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01/26/19	N.T.S.
SUBMITTAL DATE	BOARD APPROVAL DATE
06/29/20	

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT COMMUNICATIONS INSTALLATION DETAILS MAINTENANCE TELEPHONE MOUNTING		
PCA NO.	CONTRACT NO.	FILE LOCATION
000	S808	PROJECTWISE
SHEET OF		DRAWING NO.
		KD115
		REVISION
		C



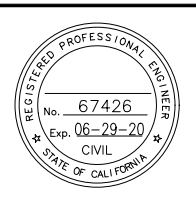
1 SIDE VIEW  
- NTS



2 PLAN VIEW  
- NTS

Joseph Cowlishaw Jun 23, 2020 - 10:15am C:\cadd\1b\y\ntb\_jeremy.becadefes\west\cadd\808KD116.dwg

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



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DESIGNED	CHECKED
Bryan Lamoreaux	B. Lamoreaux
DRAWN	CADD FILE NAME
J. Cowlishaw	808KD116.dwg



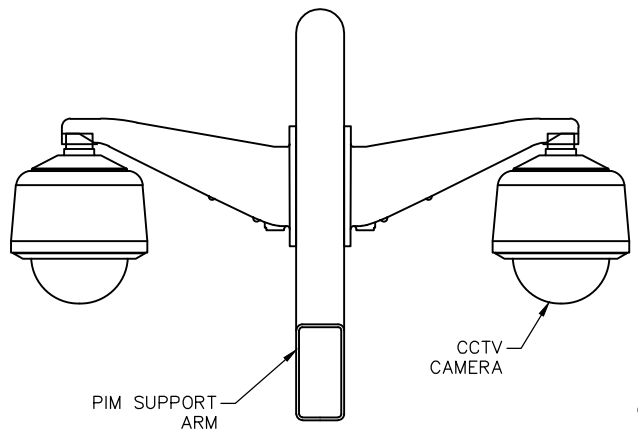
APPROVED	
<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	SCALE
01/26/19	N.T.S.
SUBMITTAL DATE	BOARD APPROVAL DATE
06/29/20	

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT COMMUNICATIONS INSTALLATION DETAILS TVM AND CID MOUNTING		
PCA NO.	CONTRACT NO.	FILE LOCATION
000	S808	PROJECTWISE

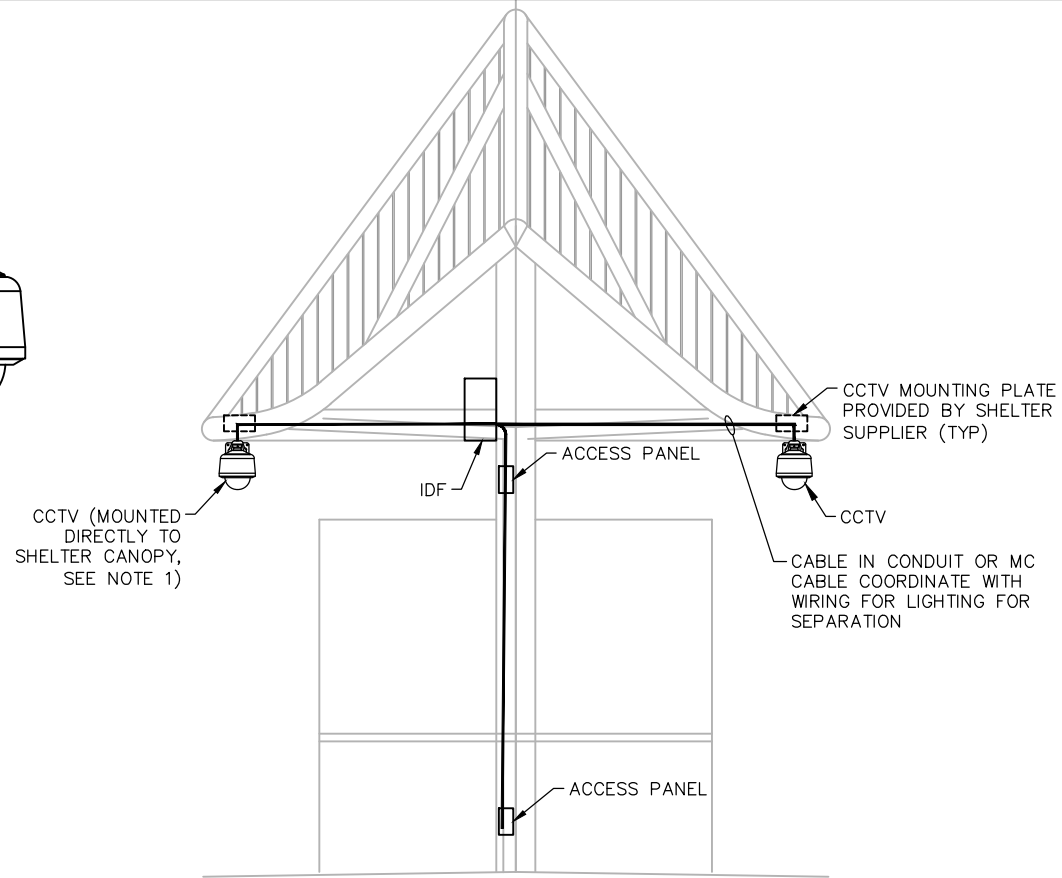
SHEET OF
DRAWING NO. KD116
REVISION C

NOTES:

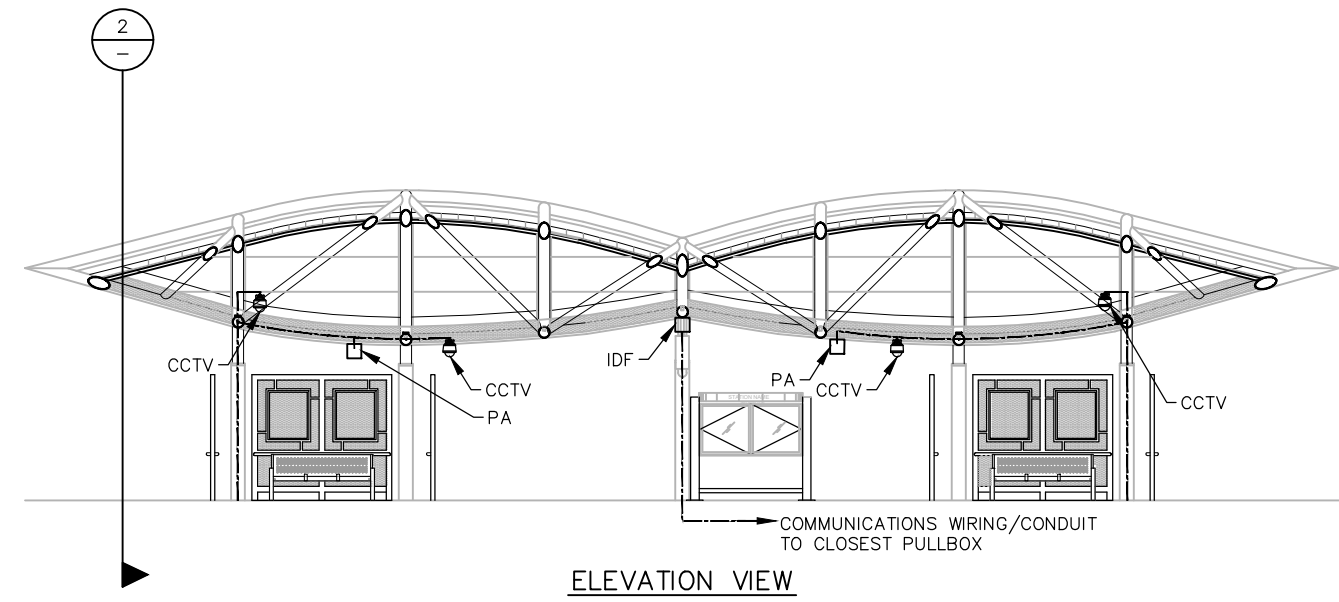
1. MOUNT WITH HORIZONTAL POLE BRACKET.
2. CCTV CAMERAS SHALL BE A MINIMUM OF 10' BELOW OCS CONTACT WIRES.
3. ALL DEVICES TO BE MOUNTED TO SHELTER W/ ACCESS PANEL NEXT TO EACH DEVICE.



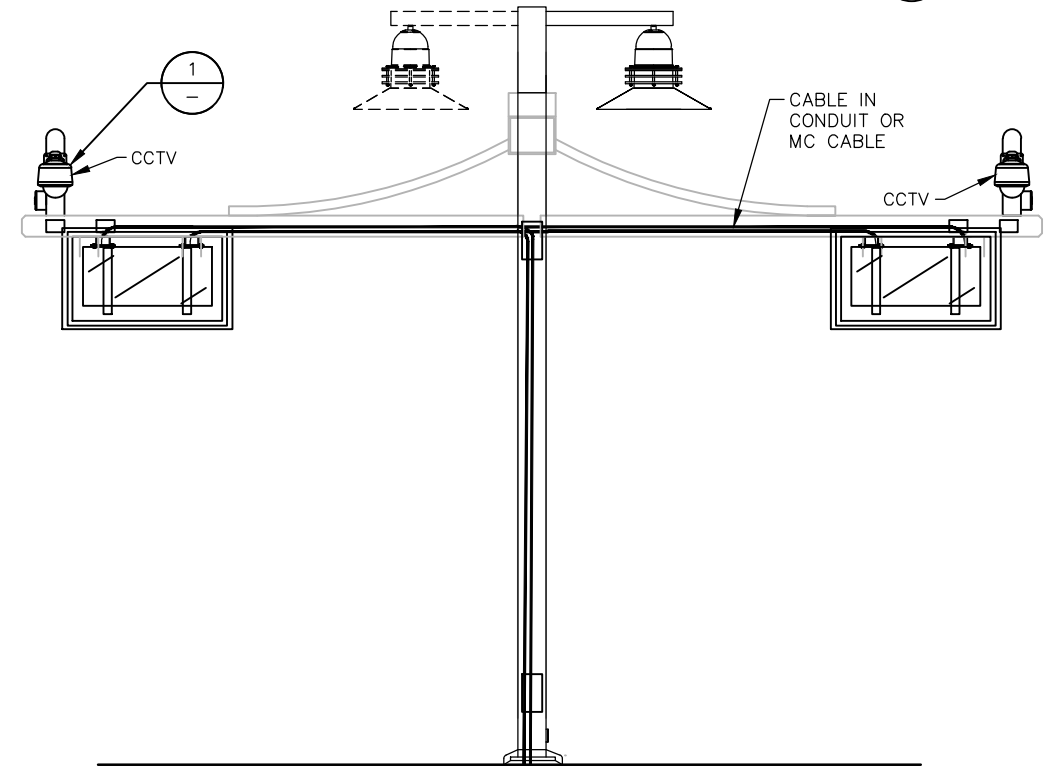
1 POLE EXTENSION CCTV MOUNTING  
- NTS



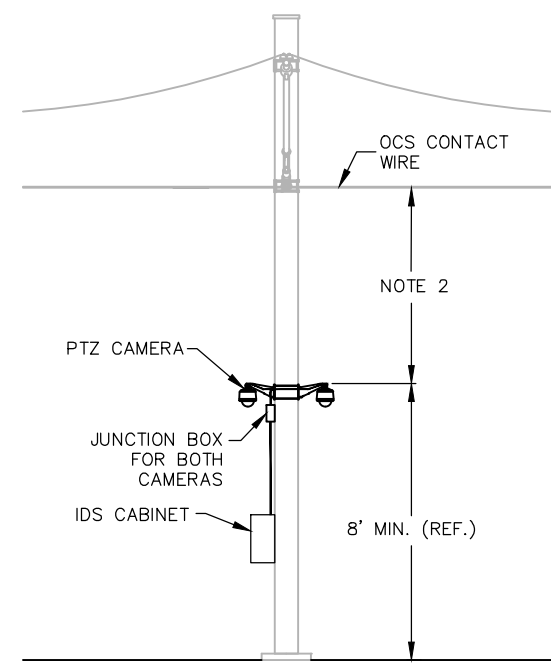
2 SHELTER PLATFORM CCTV  
- NTS



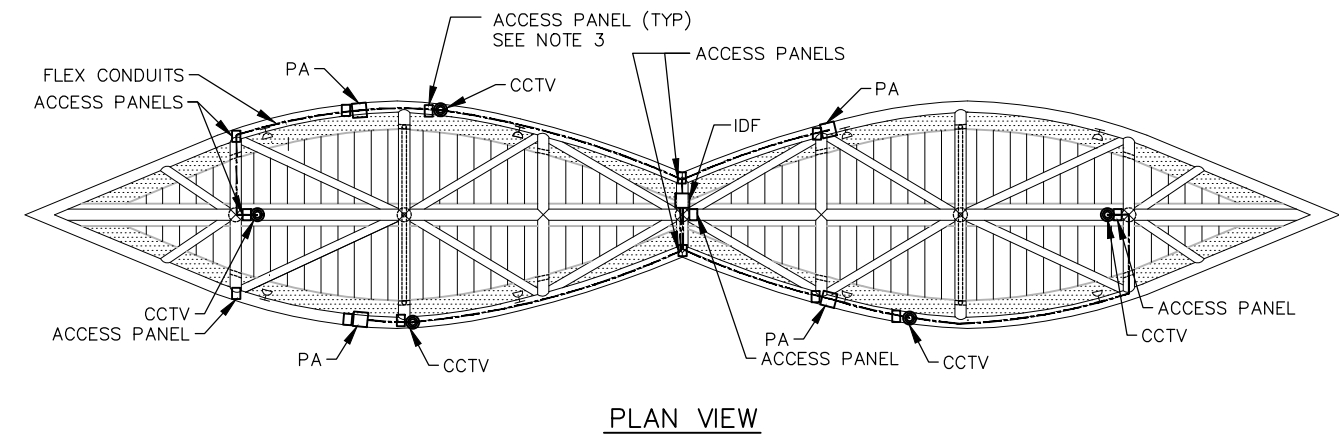
ELEVATION VIEW



3 LIGHT POLE CCTV MOUNTING  
- NTS



4 GUIDEWAY OCS POLE CCTV MOUNTING IDS (1&4)  
- NTS



PLAN VIEW

5 TYPICAL SHELTER PLATFORM CCTV & PUBLIC ADDRESS  
- NTS

Joseph Cowlishaw Jun 23, 2020 - 10:58am C:\codrill\jcw\yhb\jeremy.becadef\west\sm98399\_808KD118.dwg

NO.	DATE	REVISIONS
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A	06/18	35% SUBMITTAL SET



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DESIGNED: Bryan Lamoreaux CHECKED: B. Lamoreaux  
 DRAWN: J. Cowlishaw CADD FILE NAME: 808KD118.dwg



**BKF** 100+ YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 01/23/19 SCALE: N.T.S.  
 SUBMITTAL DATE: 06/29/20 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 COMMUNICATIONS  
 INSTALLATION DETAILS  
 CCTV MOUNTING

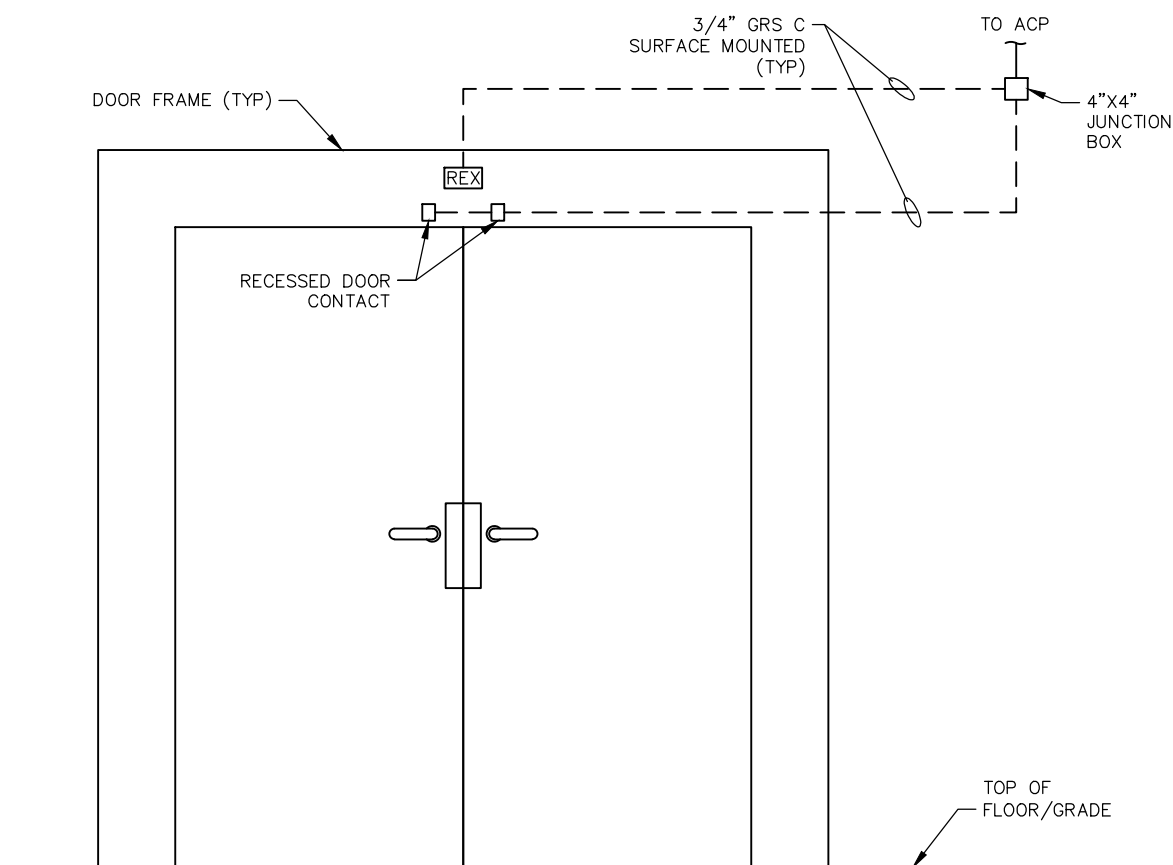
PCA NO.: 000 CONTRACT NO.: S808 FILE LOCATION: PROJECTWISE

SHEET OF	
DRAWING NO.	KD118
REVISION	C

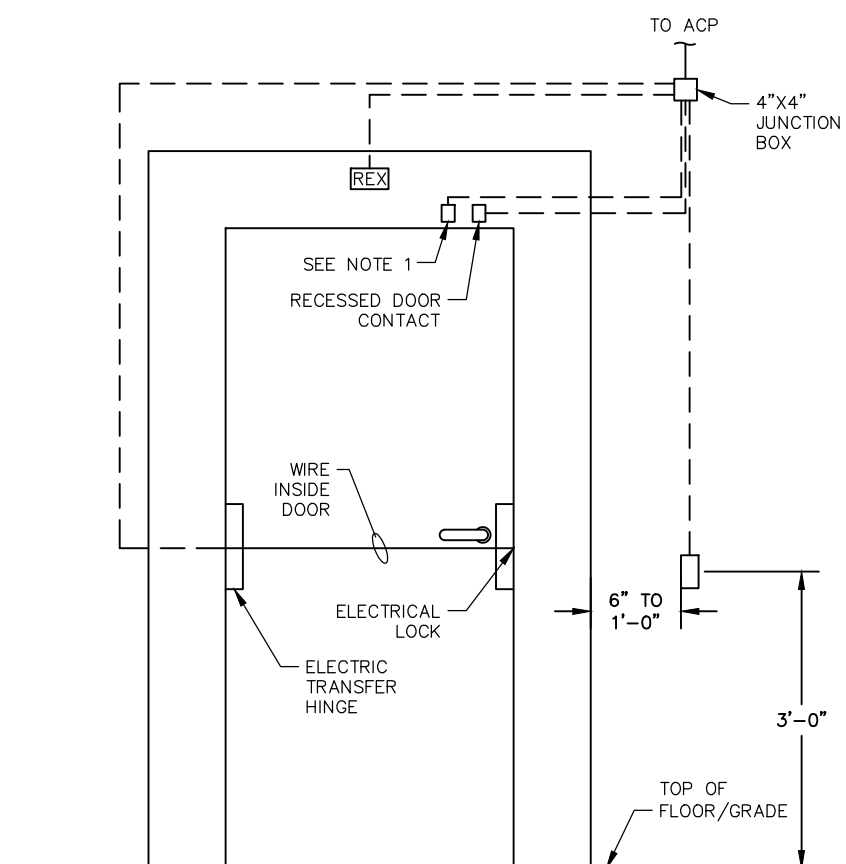


NOTES:

1. REDUNDANT EXTERNAL DOOR CONTACT, FOR TPSS DOOR LOCATIONS ONLY. WHEN INTERIOR OF TPSS 2 DOOR LOCATIONS PER TPSS CONNECTED DIRECTLY TO TPSS PAC AT SUBSTATIONS 33 & 34. FOR INTEGRATION WITH SCADA SYSTEM.



1 DOUBLE DOOR ACCESS CONTROL DETAIL  
(VIEW FROM INSIDE ROOM)



2 SINGLE DOOR ACCESS CONTROL  
(VIEW FROM INSIDE ROOM)

Joseph Cowlshaw Jun 23, 2020 - 10:17am C:\cadd\lib\jcw\hntb\_jeremy\beadfa\west\jms\8398\_808KD119.dwg

NO.	DATE	REVISIONS
A	06/20	95% SUBMITTAL SET



SUBMITTED		<b>Lamoreaux Associates</b> 2686 N 775 W T 435.586.0174 Cedar City, UT 84721 F 435.865.1848 www.laeng.com	
DESIGNED	Bryan Lamoreaux	CHECKED	B. Lamoreaux
DRAWN	J. Cowlshaw	CADD FILE NAME	808KD119.dwg



APPROVED			
CADD FILE DATE	05/20/19	SCALE	N.T.S.
SUBMITTAL DATE	06/29/20	BOARD APPROVAL DATE	

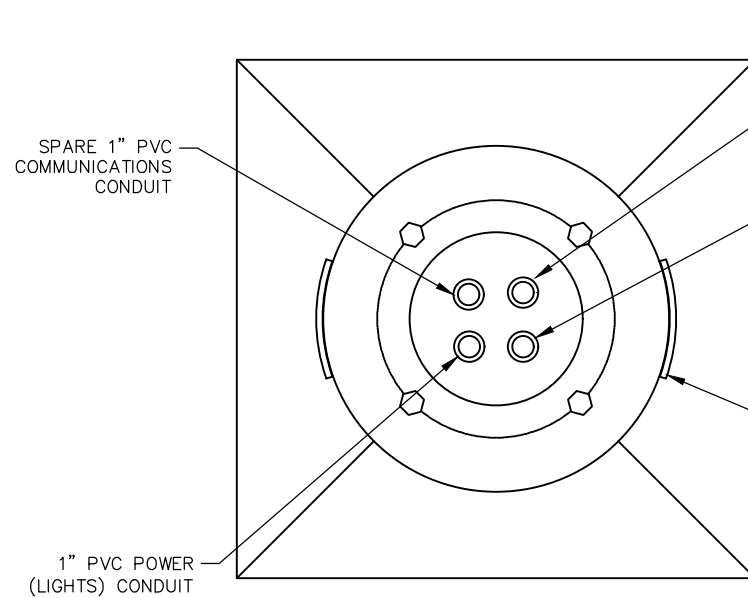
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PCA NO.	CONTRACT NO.	FILE LOCATION
000	S808	PROJECTWISE

SHEET	OF
DRAWING NO.	KD119
REVISION	A

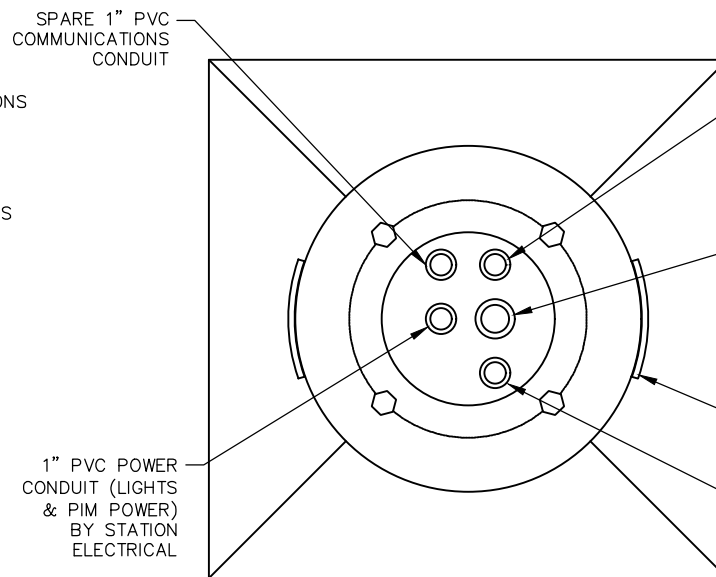


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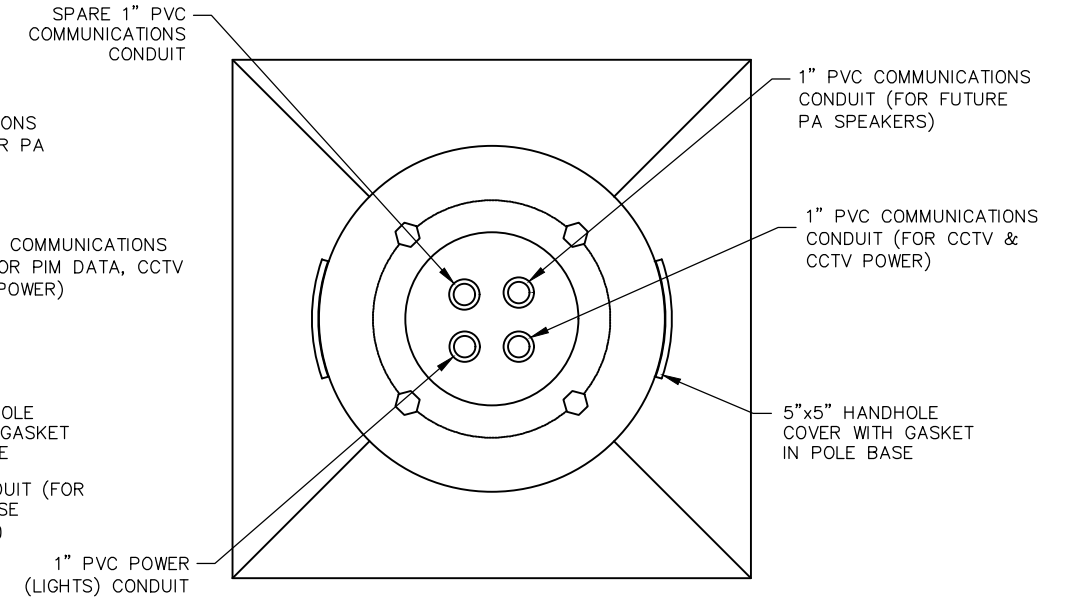
1. LIGHT POLES, POLE FOUNDATIONS AND CONDUITS FROM SIGNAL/COMM ROOMS FURNISHED AND INSTALLED BY STATION CONTRACTOR.



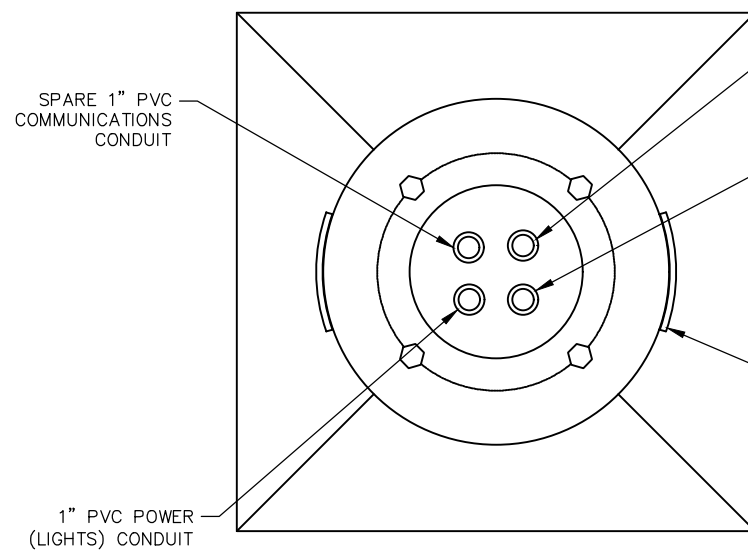
1 LIGHT POLE BASE W/PA (TYPE A OR G)  
- NTS



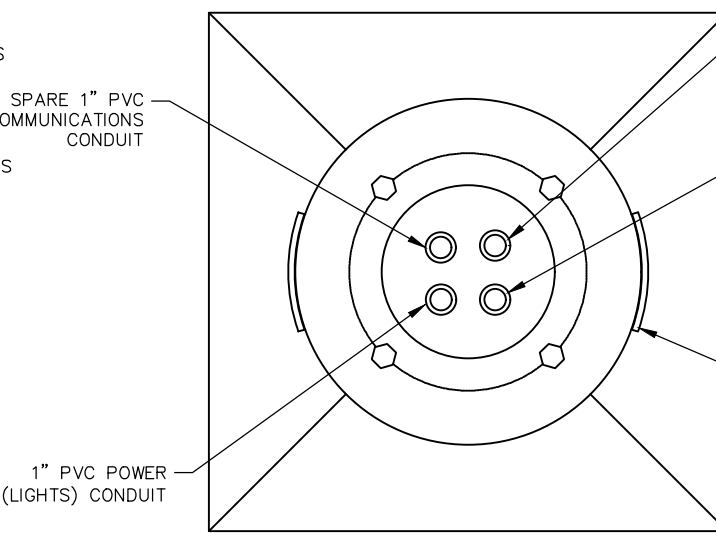
3 LIGHT POLE BASE W/PA/CCTV/PIM/MIC (TYPE C)  
- NTS



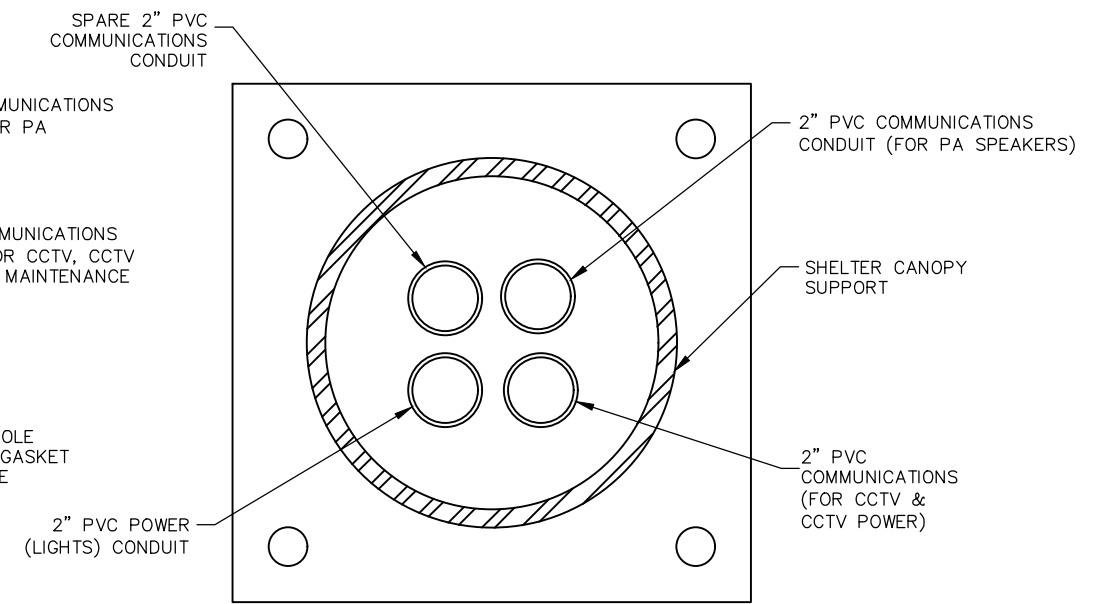
5 LIGHT POLE BASE W/CCTV (TYPE E)  
- NTS



2 LIGHT POLE BASE W/PA/CCTV (TYPE B)  
- NTS



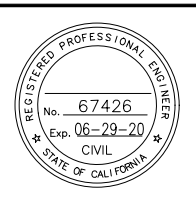
4 LIGHT POLE BASE W/PA/CCTV/MT (TYPE D)  
- NTS



6 SHELTER POLE BASE W/PA/CCTV (TYPE F)  
- NTS

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NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



SUBMITTED	
<b>Lamoreaux Associates</b>	
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DESIGNED	CHECKED
Bryan Lamoreaux	B. Lamoreaux
DRAWN	CADD FILE NAME
J. Cowlishaw	808KD122.dwg



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CADD FILE DATE	SCALE
01/23/19	N.T.S.
SUBMITTAL DATE	BOARD APPROVAL DATE
06/29/20	

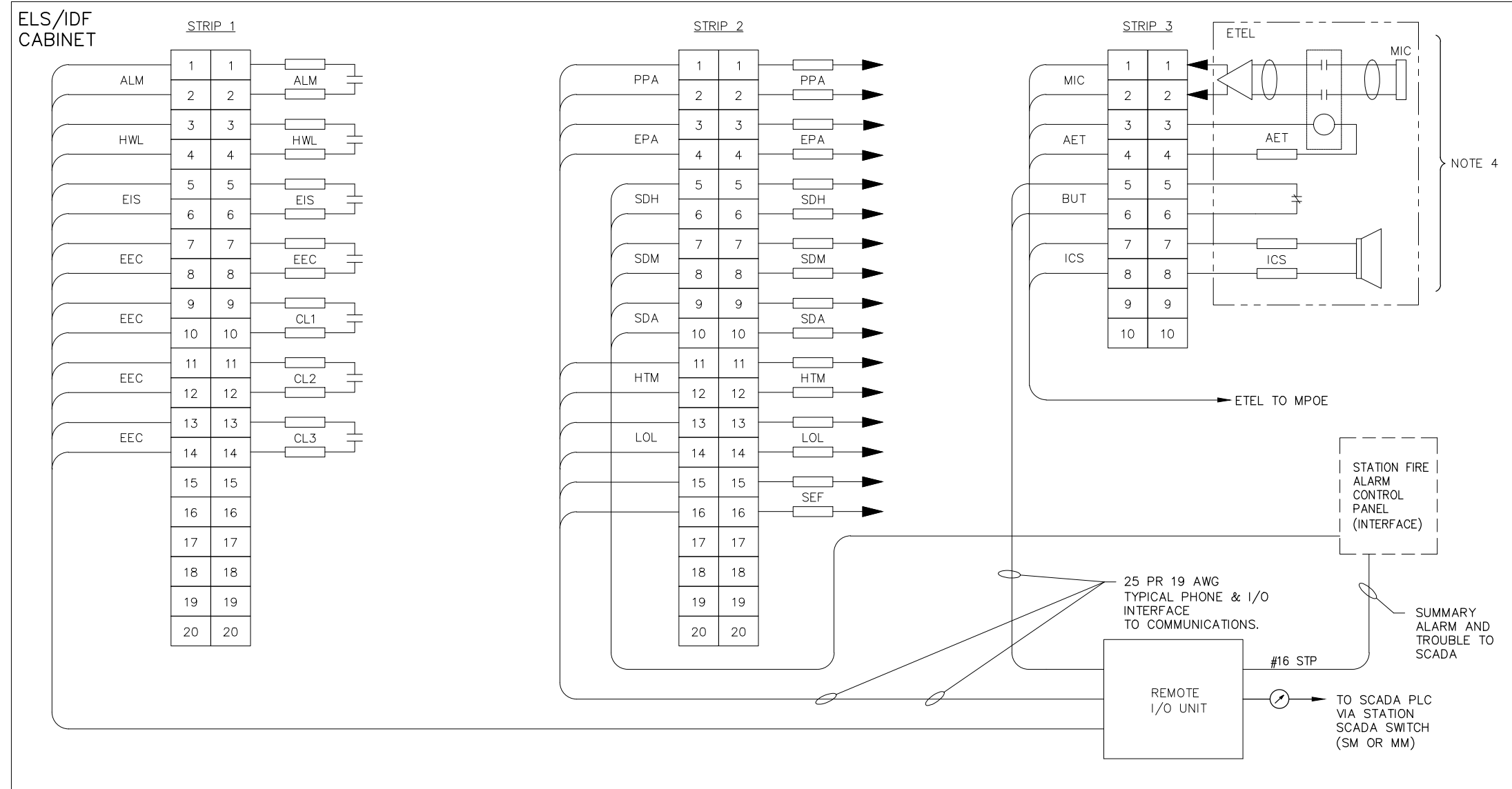
EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT COMMUNICATIONS INSTALLATION DETAILS LIGHT POLE BASE VARIATIONS		
PCA NO.	CONTRACT NO.	FILE LOCATION
000	S808	PROJECTWISE

SHEET	OF
DRAWING NO.	KD122
REVISION	C

NOTES:

- ELEVATOR EMERGENCY TELEPHONE/INTERCOM INTERFACE BETWEEN THE COMMUNICATIONS CONTRACTOR AND THE ELEVATOR CONTRACTOR WILL BE IN THE ELEVATOR/SCADA CABINET (ELS/IDF) LOCATED IN THE ROOM ADJACENT TO THE ELEVATOR EQUIPMENT ROOM COMMUNICATIONS. CONTRACTOR SHALL FURNISH, INSTALL, TERMINATE AND TEST CABLE BETWEEN THE DESIGNATED TERMINAL STRIP IN THE ELS/IDF AND COMM ROOM LDF, AS SPECIFIED ON RELATED CONTRACT DRAWINGS.
- CABLE (INCLUDING TRAVELING CABLE) BETWEEN THE ELS TERMINAL STRIPS AND THE ELEVATOR CAB EQUIPMENT PHONE/INTERCOM SHALL BE FURNISHED AND INSTALLED BY THE ELEVATOR CONTRACTOR. ALL CONDUIT BETWEEN THE COMM ROOM AND ELEVATOR/ELEVATOR EQUIPMENT ROOM WILL BE PROVIDED IN THE STATION CONTRACT.
- ELS TERMINAL ABBREVIATIONS:  
 AET: AUDIO ENABLE TRANSMIT  
 ALM: ALARM  
 BUT: PUSHBUTTON AUXILIARY CONTACT  
 CL1: CAR AT LEVEL 1  
 CL2: CAR AT LEVEL 2  
 CL3: CAR AT LEVEL 3  
 EEC: EMERGENCY ELEVATOR CONTROL SWITCH ON  
 EIS: ELEVATOR IN SERVICE  
 EPA: EMERGENCY POWER AVAILABLE  
 HTM: HIGH TEMPERATURE IN MACHINE ROOM  
 HWL: HIGH WATER LEVEL AT SUMP  
 ICS: INTER-COMMUNICATIONS SPEAKER  
 LOL: LOW OIL LEVEL  
 MIC: MICROPHONE  
 PPA: PRIMARY POWER FAIL  
 SDA: SMOKE DETECTOR ALERT  
 SDH: SMOKE DETECTOR (HOISTWAY)  
 SDM: SMOKE DETECTOR (MACHINE ROOM)  
 SEF: SEISMIC SENSOR
- ADAPT INTERFACE FOR ETEL SELECTED.

EQUIPMENT ROOM ADJACENT TO ELEVATOR EQUIPMENT ROOM



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NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET

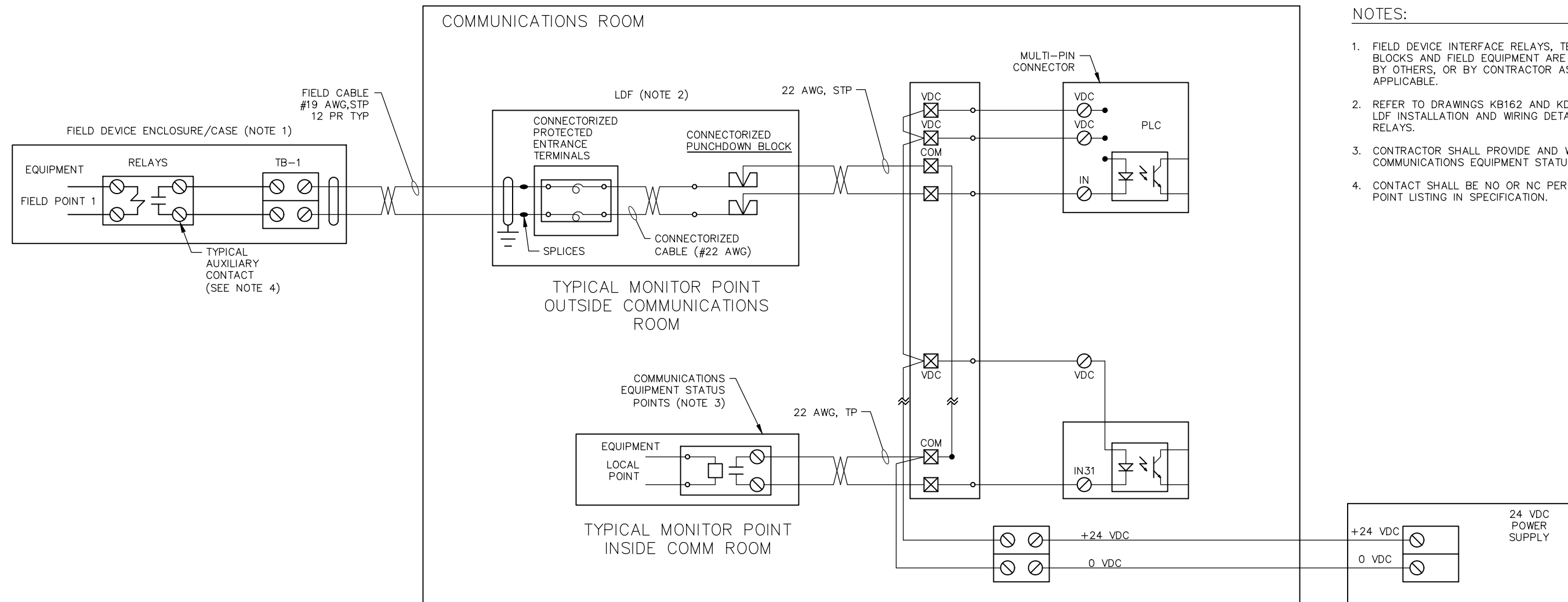


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DESIGNED Bryan Lamoreaux	CHECKED B. Lamoreaux
DRAWN J. Cowlshaw	CADD FILE NAME 808KD130.dwg



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CADD FILE DATE 01/23/19	SCALE N.T.S.
SUBMITTAL DATE 06/29/20	BOARD APPROVAL DATE

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT COMMUNICATIONS INSTALLATION DETAILS ELEVATOR SCADA		
PCA NO. 000	CONTRACT NO. S808	FILE LOCATION PROJECTWISE
SHEET OF DRAWING NO. KD130 REVISION B		

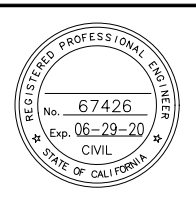


- NOTES:
1. FIELD DEVICE INTERFACE RELAYS, TERMINAL BLOCKS AND FIELD EQUIPMENT ARE PROVIDED BY OTHERS, OR BY CONTRACTOR AS APPLICABLE.
  2. REFER TO DRAWINGS KB162 AND KD006 FOR LDF INSTALLATION AND WIRING DETAILS AND RELAYS.
  3. CONTRACTOR SHALL PROVIDE AND WIRE LOCAL COMMUNICATIONS EQUIPMENT STATUS POINTS.
  4. CONTACT SHALL BE NO OR NC PER TYPICAL POINT LISTING IN SPECIFICATION.

1  
-  
TYPICAL SCADA ALARM/MONITORING POINT WIRING  
NTS

Joseph Conditore Jun 23, 2020 - 10:17am C:\cadd\lib\on\y\ntb\_jeremy.becadefet\west\sm98399\_808KD131.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



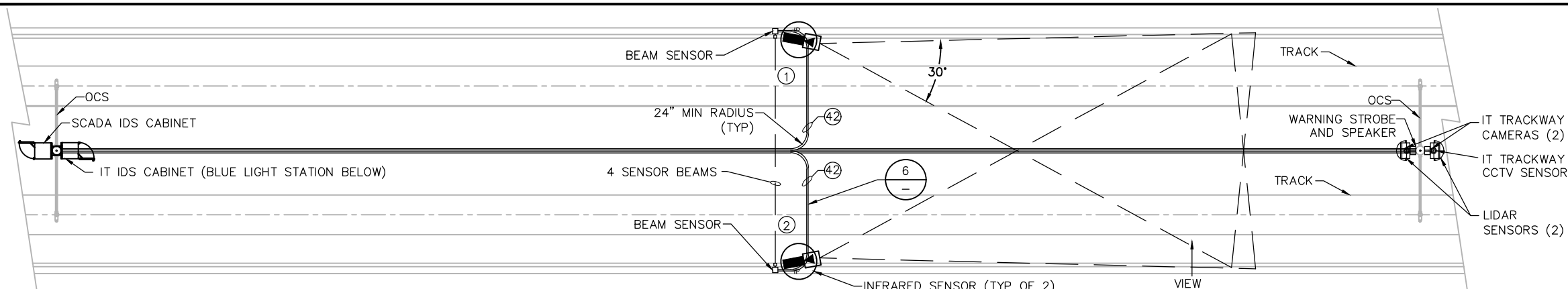
SUBMITTED		<b>Lamoreaux Associates</b> 2686 N 775 W T 435.586.0174 Cedar City, UT 84721 F 435.865.1848 www.laeng.com	
DESIGNED	B. Lamoreaux	CHECKED	Ben Lamoreaux
DRAWN	A. Perry	CADD FILE NAME	808KD131.dwg



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CADD FILE DATE	01/23/19	SCALE	N.T.S.
SUBMITTAL DATE	06/29/20	BOARD APPROVAL DATE	

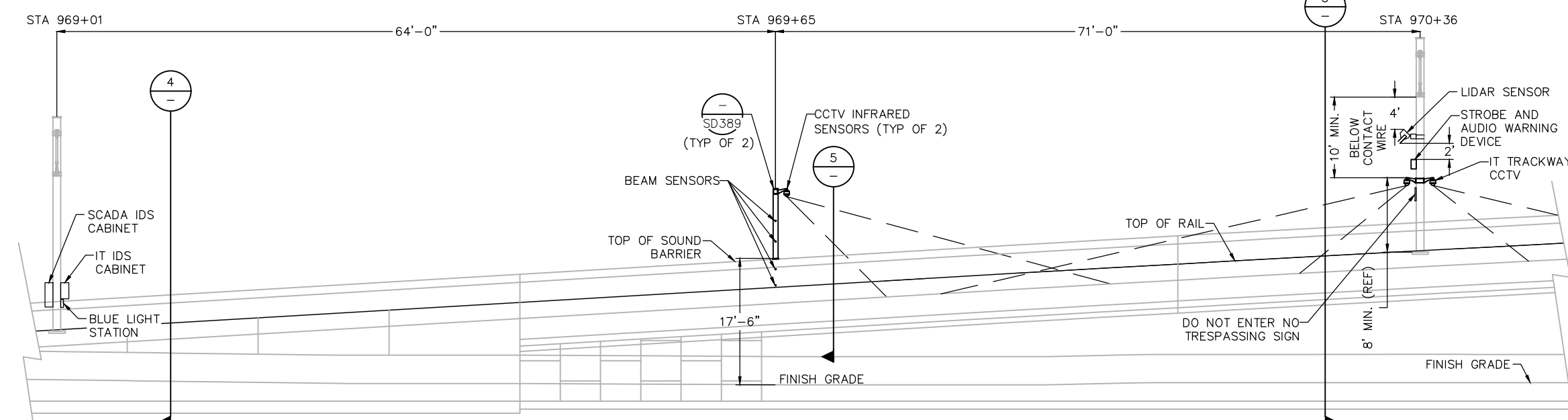
EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT COMMUNICATIONS INSTALLATION DETAILS SCADA RELAY DETAIL		
PCA NO.	CONTRACT NO.	FILE LOCATION
000	S808	PROJECTWISE

SHEET	OF
DRAWING NO.	KD131
REVISION	B

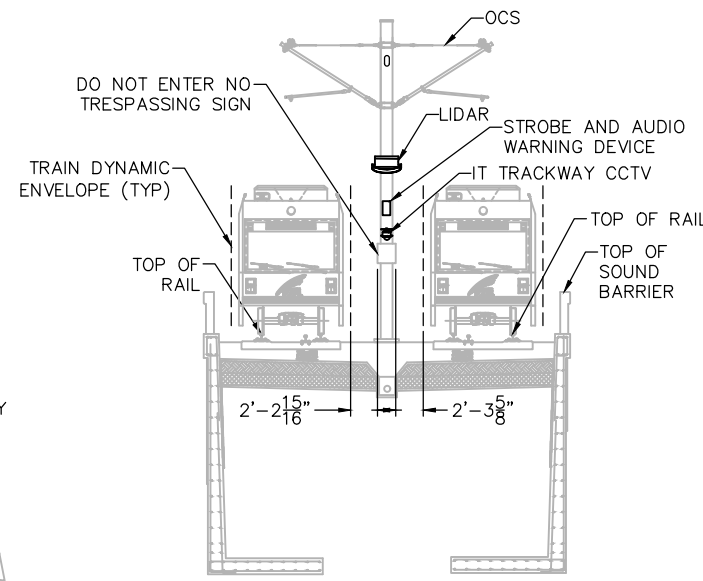


1 ELEVATED TRACK APPROACH IDS PLAN VIEW  
1/8" = 1'

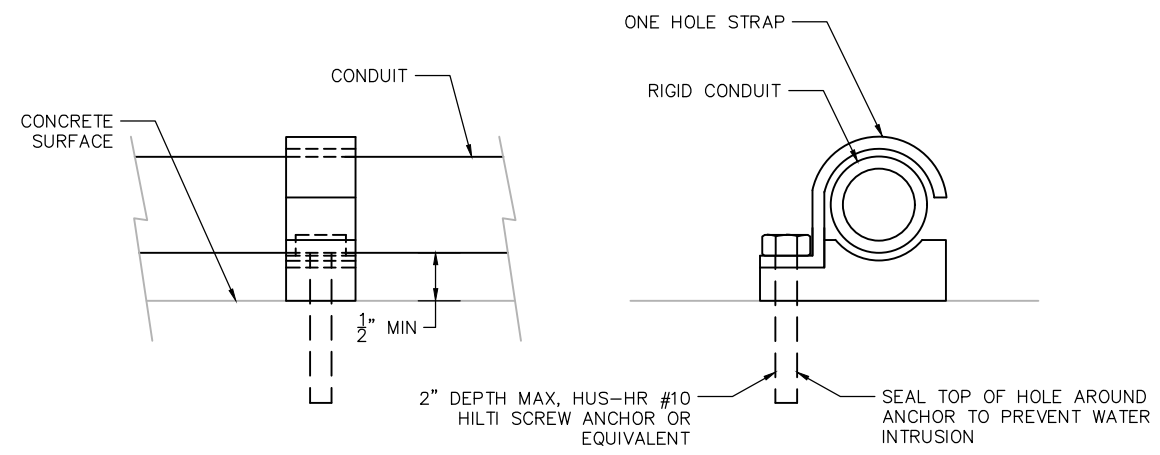
- NOTES:
- LEVEL 1 - 3" ABOVE TOP OF RAIL (DETECTS SMALL ANIMALS, HUMANS, AND TRAINS).
  - LEVEL 2 - 1'-10" AND LEVEL 3 - 3'-10" ABOVE TOP OF RAIL (DETECTS LARGE ANIMALS, HUMANS, AND TRAINS).
  - LEVEL 4 - 9'-0" ABOVE TOP OF RAIL (DETECT TRAINS ONLY).
  - SCADA IDS CABINET (FRONT SIDE), IT IDS CABINET AND BLUE LIGHT STATION (BACK SIDE OF POLE). DIMENSIONS WITH IDS CABINET DOORS OPEN.



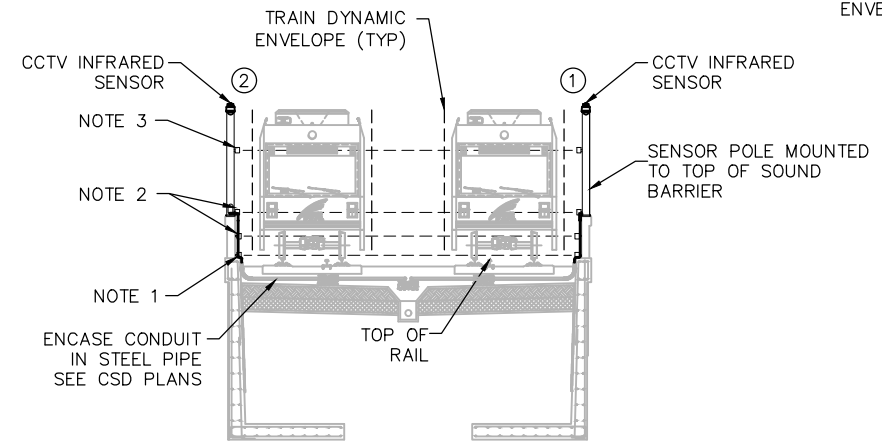
2 TRACK ELEVATION AND DETECTOR PLACEMENT  
1/8" = 1'



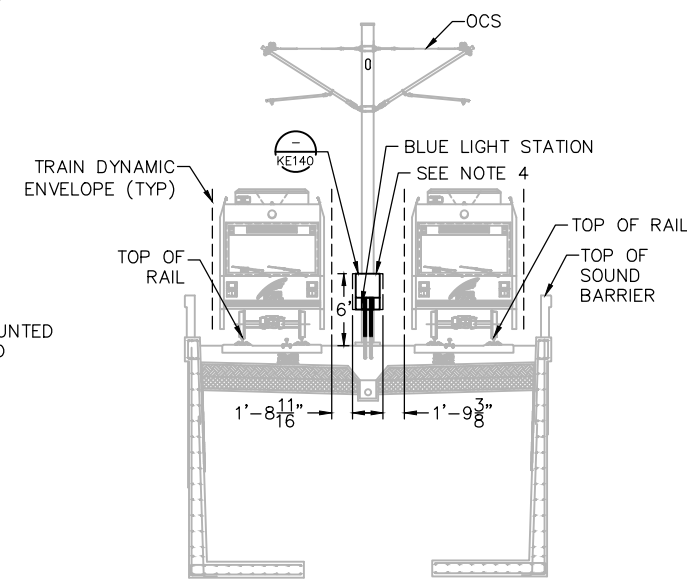
3 ELEVATED TRACK APPROACH CCTV/LIDAR CROSS SECTIONAL VIEW  
1/8" = 1'



6 TYPICAL SURFACE MOUNT CONDUIT  
6" = 1'



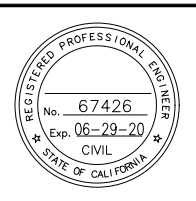
5 BEAM SENSOR DETAIL  
1/8" = 1'



4 ELEVATED TRACK APPROACH IDS CABINET CROSS SECTIONAL VIEW  
1/8" = 1'

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NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



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DESIGNED: Bryan Lamoreaux CHECKED: B. Lamoreaux  
 DRAWN: J. Cowlishaw CADD FILE NAME: 808KD140.dwg

**Santa Clara Valley Transportation Authority**

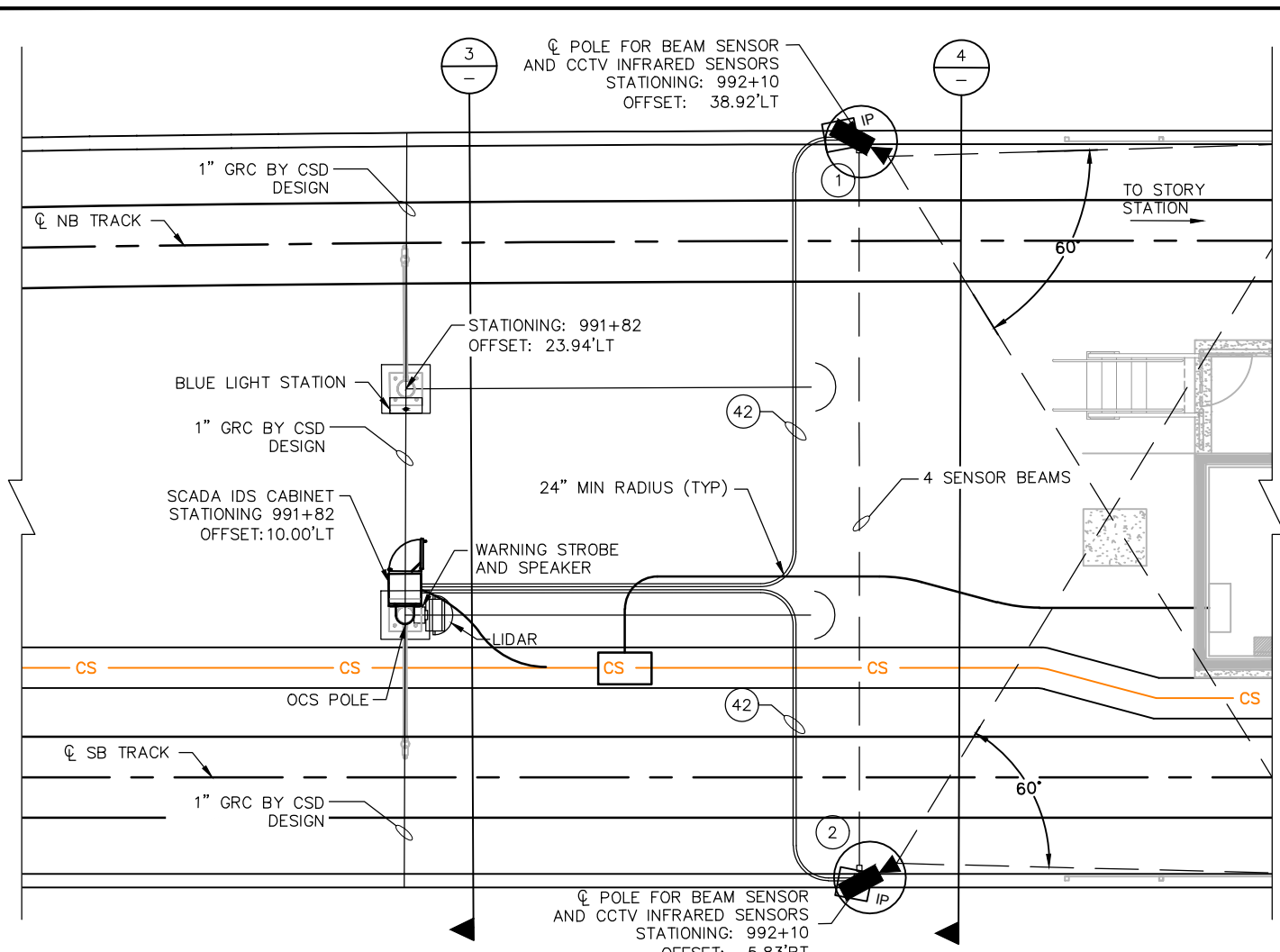
**BKF 100+ YEARS**  
 ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 01/23/19 SCALE: N.T.S.  
 SUBMITTAL DATE: 06/29/20 BOARD APPROVAL DATE:

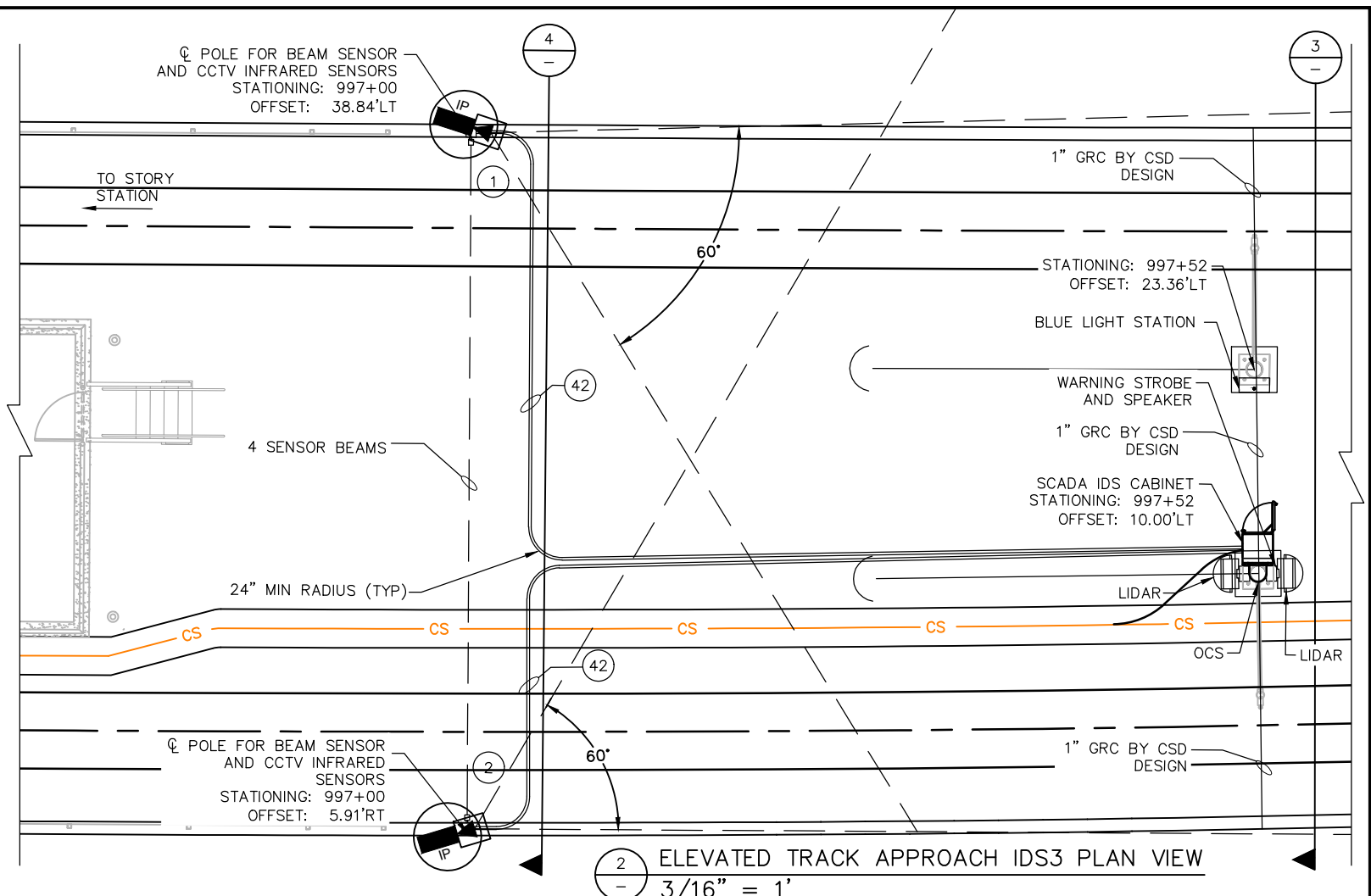
EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 COMMUNICATIONS  
 INTRUSION DETECTION SYSTEM  
 NORTH APPROACH INSTALLATION DETAILS

PCA NO.: 000 CONTRACT NO.: S808 FILE LOCATION: PROJECTWISE

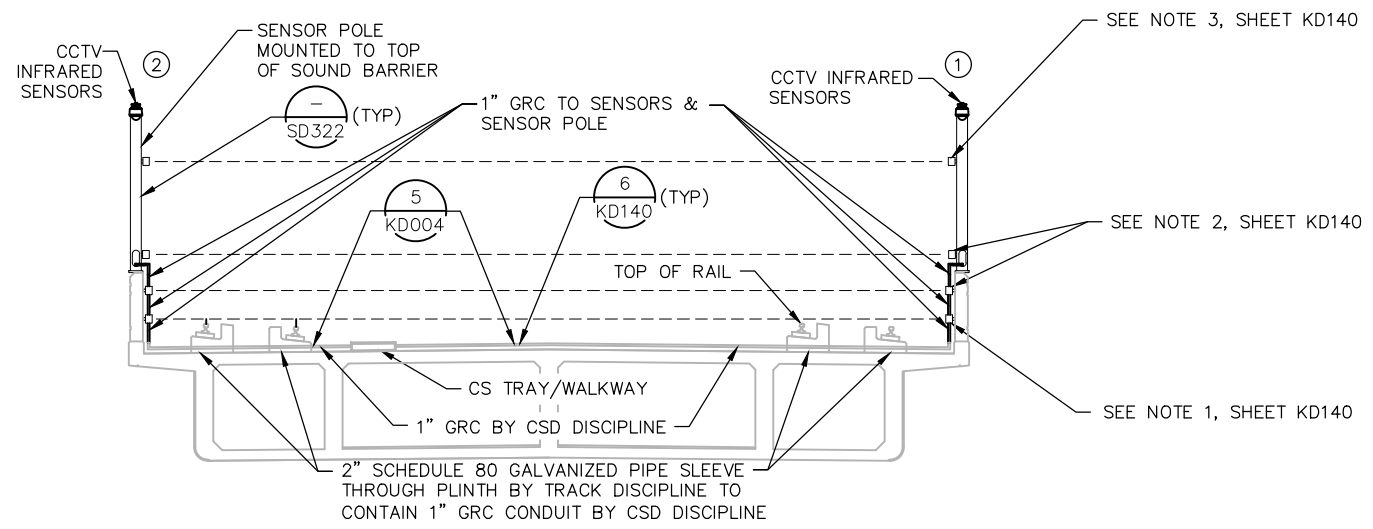
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 DRAWING NO.: B  
 REVISION:



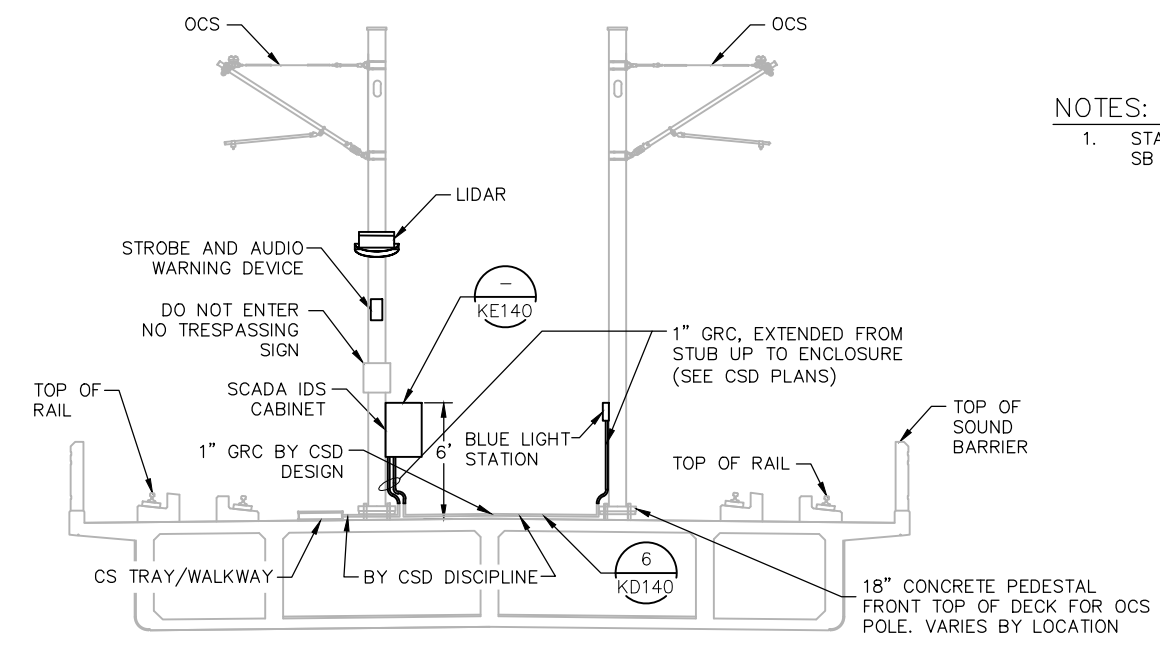
1 ELEVATED TRACK APPROACH IDS2 PLAN VIEW  
3/16" = 1'



2 ELEVATED TRACK APPROACH IDS3 PLAN VIEW  
3/16" = 1'



4 ELEVATED TRACK APPROACH BEAM SENSOR DETAIL  
3/16" = 1'

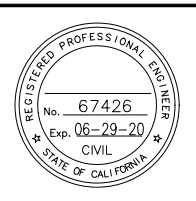


3 ELEVATED TRACK APPROACH IDS CABINET CROSS SECTIONAL VIEW  
3/16" = 1'

NOTES:  
1. STATIONING AND OFFSETS ARE BASED OFF SB TRACK ALIGNMENT FROM TRACK PLANS.

Joseph Conditore Jun 23, 2020 - 10:15am C:\cadd\sb\plan\yhb\jeremy\cadd\ids\west\ids\808kd142.dwg

NO.	DATE	REVISIONS
A	06/20	95% SUBMITTAL SET

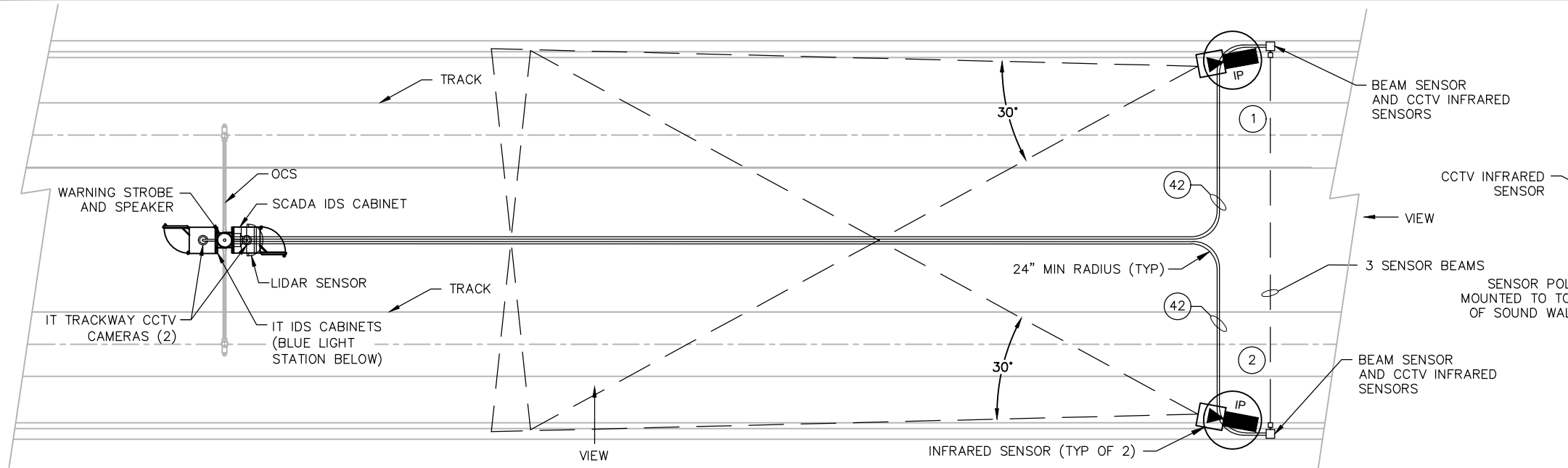


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DESIGNED		CHECKED	
DRAWN		CADD FILE NAME	
J. Cowlishaw		808KD142.dwg	

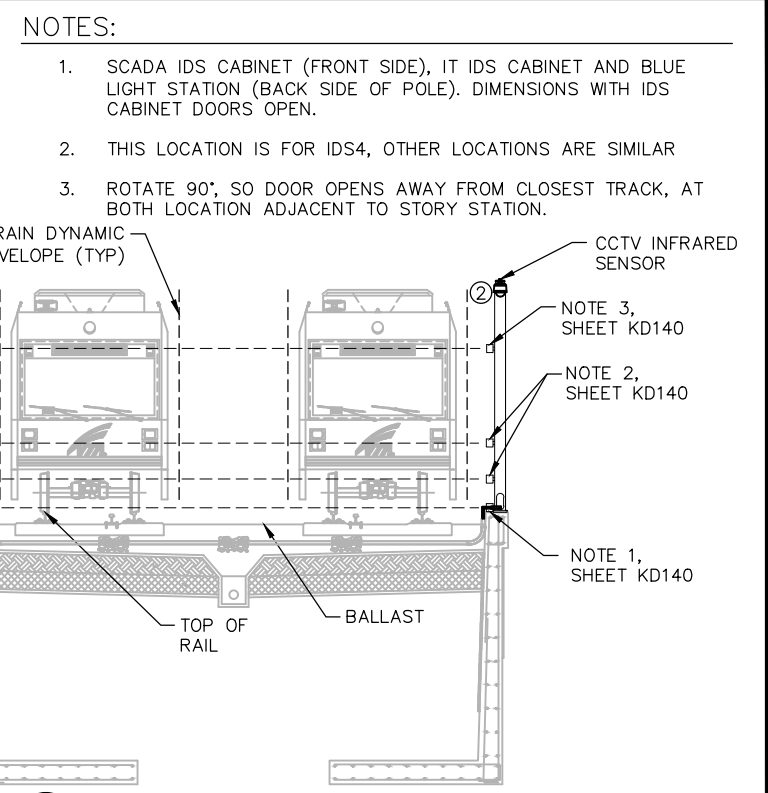


APPROVED		<b>BKF</b> 100+ YEARS	
ENGINEERS / SURVEYORS / PLANNERS		SCALE	
CADD FILE DATE		BOARD APPROVAL DATE	
01/23/19		N.T.S.	
SUBMITTAL DATE		BOARD APPROVAL DATE	
06/29/20			

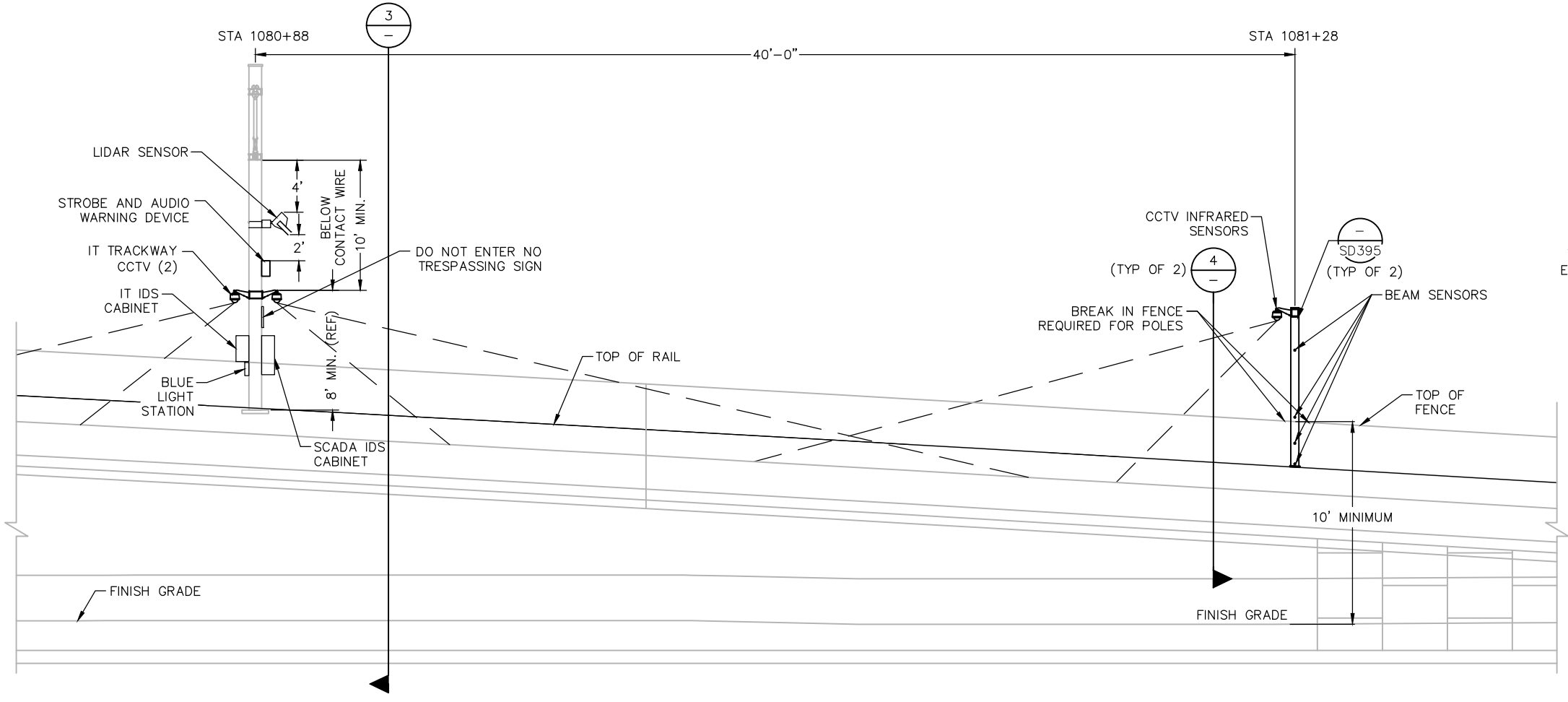
EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT COMMUNICATIONS INTRUSION DETECTION SYSTEM STORY STATION INSTALLATION DETAILS			SHEET OF DRAWING NO. KD142 REVISION A
PCA NO.	CONTRACT NO.	FILE LOCATION	
000	S808	PROJECTWISE	



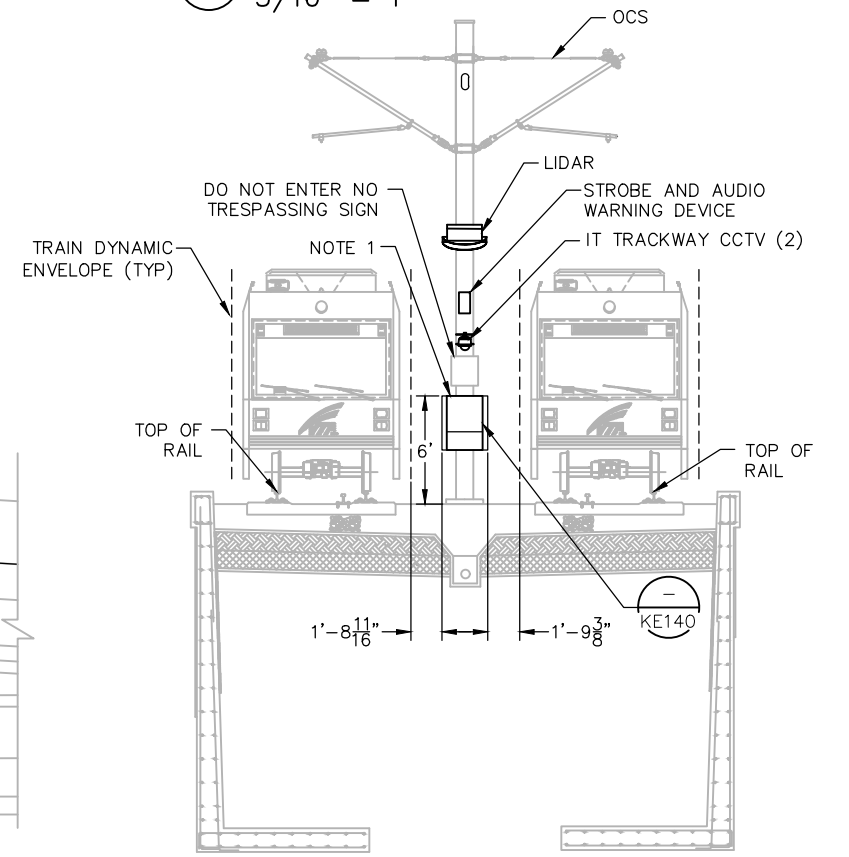
1 ELEVATED TRACK APPROACH IDS PLAN VIEW  
3/16" = 1'



4 BEAM SENSOR DETAIL  
3/16" = 1'



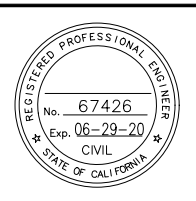
2 TRACK ELEVATION AND DETECTOR PLACEMENT  
3/16" = 1'



3 ELEVATED TRACK APPROACH IDS CABINET CROSS SECTIONAL VIEW  
3/16" = 1'

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NO.	DATE	REVISIONS
A	06/20	95% SUBMITTAL SET



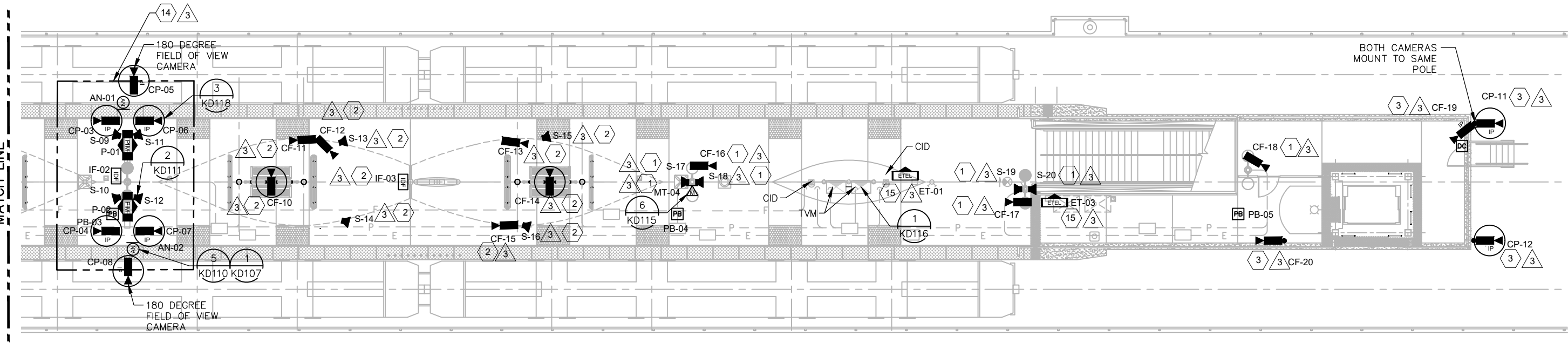
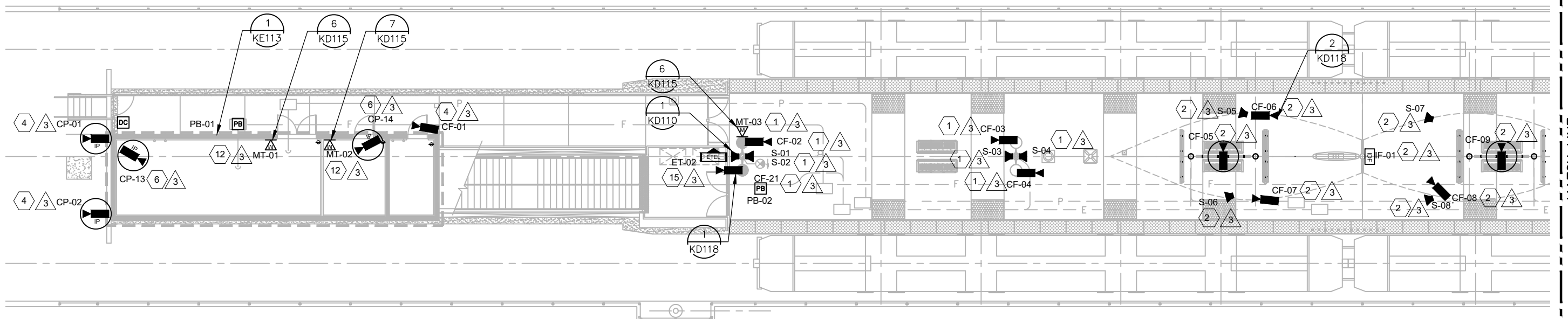
SUBMITTED		<b>Lamoreaux Associates</b> 2686 N 775 W T 435.586.0174 Cedar City, UT 84721 F 435.865.1848 www.laeng.com	
DESIGNED	Bryan Lamoreaux	CHECKED	B. Lamoreaux
DRAWN	J. Cowlishaw	CADD FILE NAME	808KD144.dwg



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CADD FILE DATE	01/23/19	SCALE	N.T.S.
SUBMITTAL DATE	06/29/20	BOARD APPROVAL DATE	

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT COMMUNICATIONS			SHEET OF
INTRUSION DETECTION SYSTEM SOUTH APPROACH INSTALLATION DETAILS			DRAWING NO. KD144
			REVISION A
PCA NO.	CONTRACT NO.	FILE LOCATION	
000	S808	PROJECTWISE	





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HALF SIZE  
COPY



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C	06/20	95% SUBMITTAL SET
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A	06/18	35% SUBMITTAL SET



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DESIGNED BY: Bryan Lamoreaux  
 CHECKED BY: B. Lamoreaux  
 DRAWN BY: J. Cowlishaw  
 CADD FILE NAME: 808KE101.dwg



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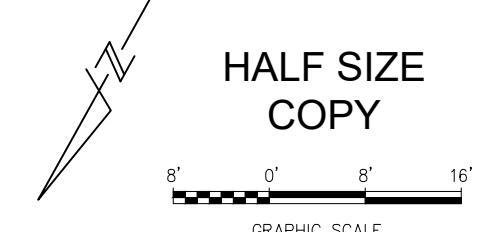
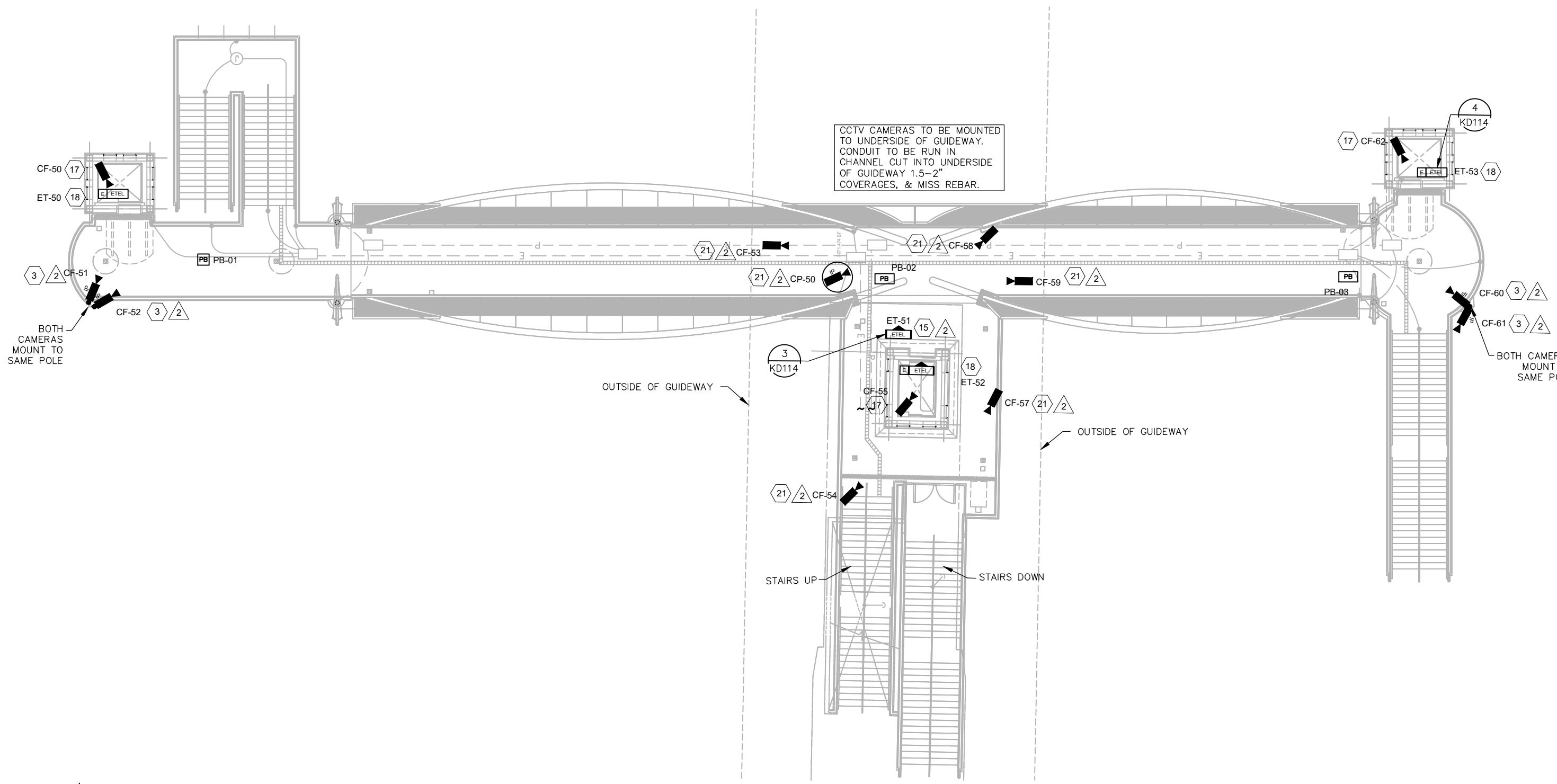
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 SUBMITTAL DATE: 06/29/20  
 SCALE: 1/8" = 1'  
 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 COMMUNICATIONS  
 EQUIPMENT LAYOUT  
 FLOOR PLAN, STORY STATION, SHEET 1 OF 3

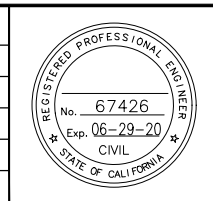
PCA NO.: 000  
 CONTRACT NO.: S808  
 FILE LOCATION: PROJECTWISE

SHEET OF	KE101
DRAWING NO.	KE101
REVISION	C

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NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
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A	06/18	35% SUBMITTAL SET



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DESIGNED: Bryan Lamoreaux CHECKED: B. Lamoreaux  
 DRAWN: J. Cowlshaw CADD FILE NAME: 808KE102.dwg

**Santa Clara Valley Transportation Authority**

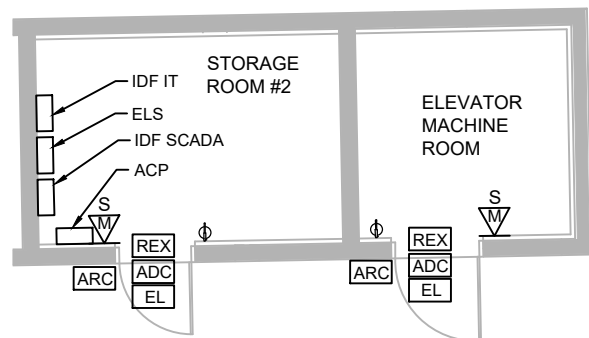
**BKF** 100+ YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 01/23/19 SCALE: 1/8" = 1'  
 SUBMITTAL DATE: 06/29/20 BOARD APPROVAL DATE:

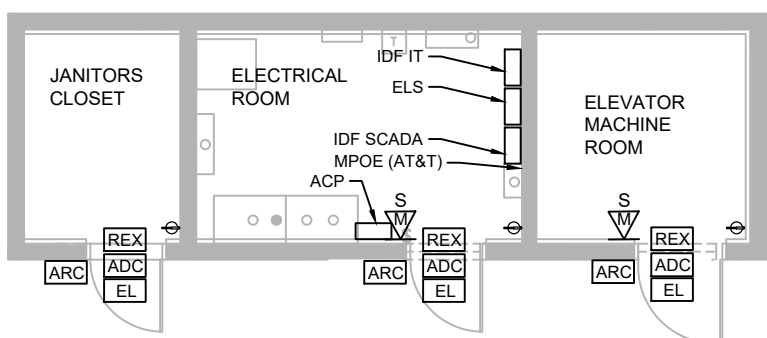
EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 COMMUNICATIONS  
 EQUIPMENT LAYOUT  
 FLOOR PLAN, STORY STATION, SHEET 2 OF 3

PCA NO.: 000 CONTRACT NO.: S808 FILE LOCATION: PROJECTWISE

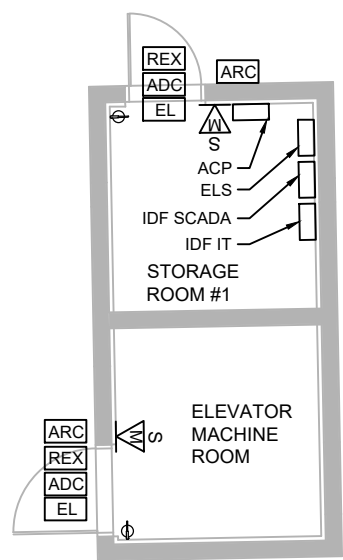
SHEET OF: KE102 REVISION: C



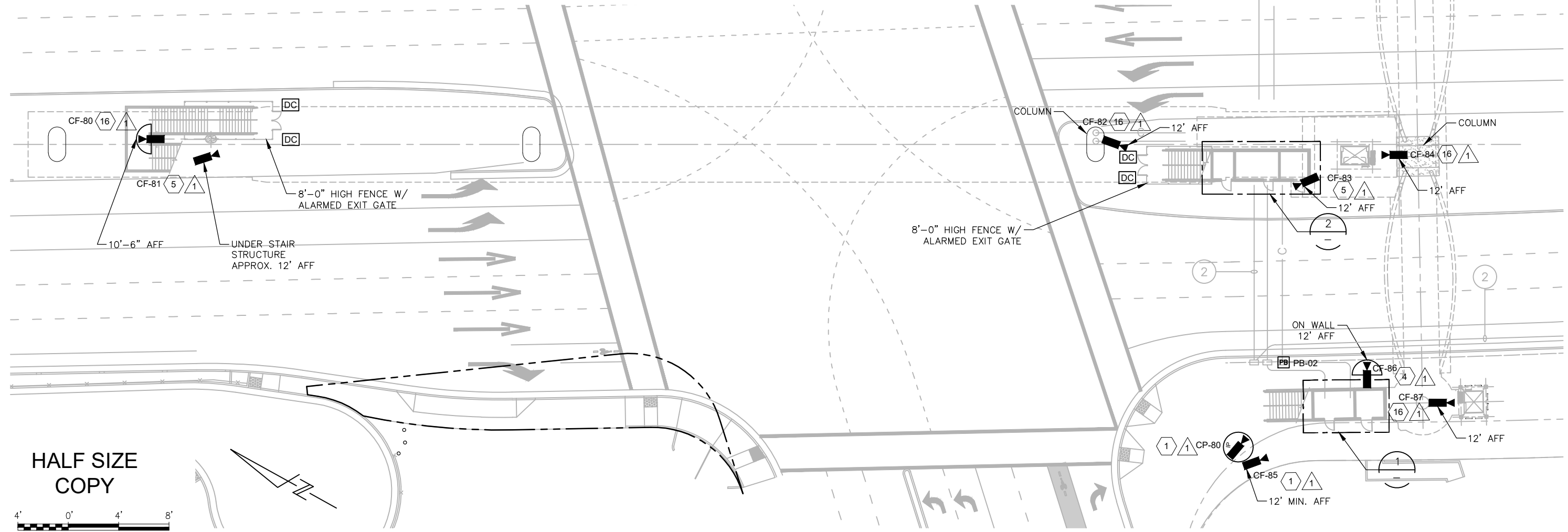
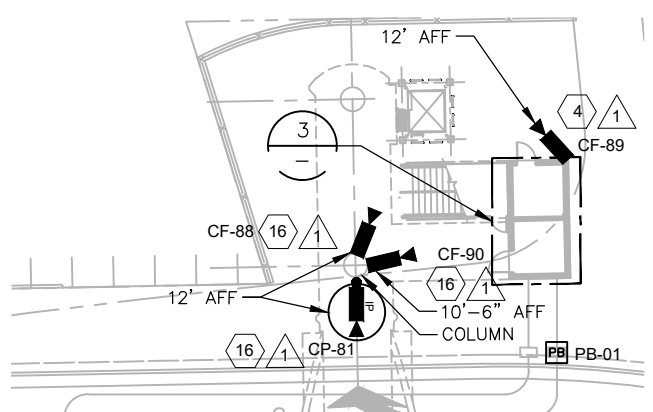
1 ENLARGED WEST SIDE ROOMS  
NTS



2 ENLARGED CENTER ROOMS  
NTS



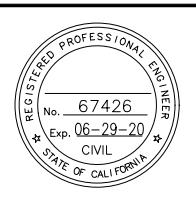
3 ENLARGED EAST SIDE ROOMS  
NTS



HALF SIZE COPY  
GRAPHIC SCALE  
4' 0' 4' 8'

Joseph Cowlshaw Jun 23, 2020 - 10:15am C:\cadd\lib\jcw\ymlb\_jeremy.becadefes\west\sm98400\_808KE103.dwg

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



**Lamoreaux Associates**  
2686 N 775 W T 435.586.0174  
Cedar City, UT 84721 F 435.865.1848  
www.laeng.com

DESIGNED BY: Bryan Lamoreaux  
CHECKED BY: B. Lamoreaux  
DRAWN BY: J. Cowlshaw  
CADD FILE NAME: 808KE101.dwg

**Santa Clara Valley Transportation Authority**

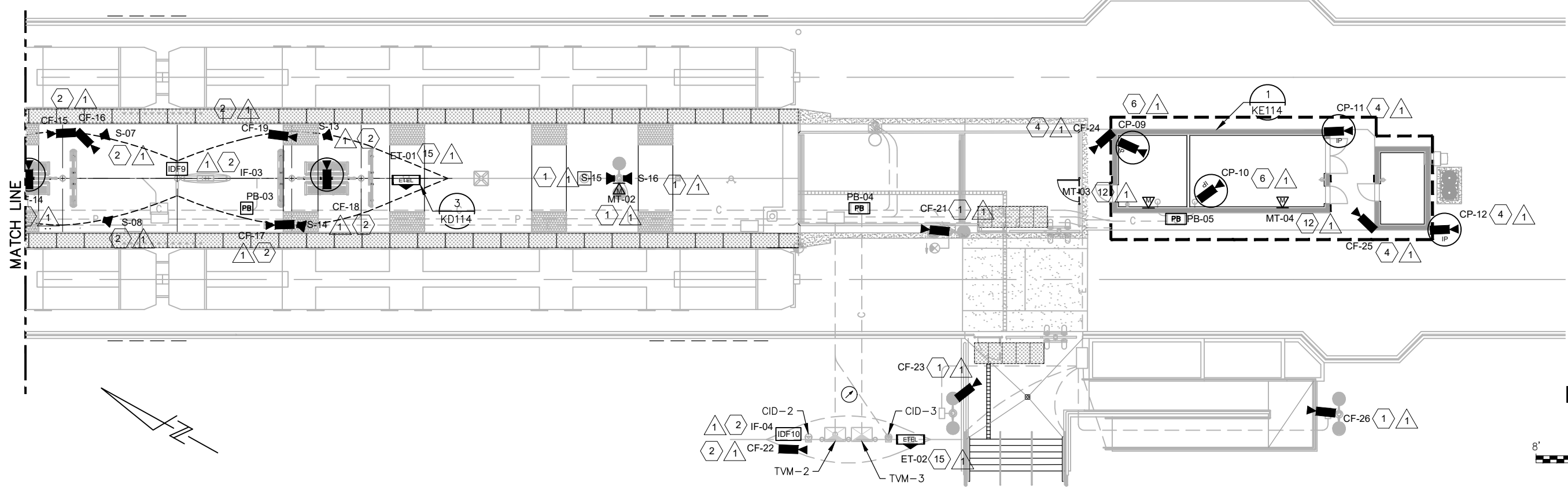
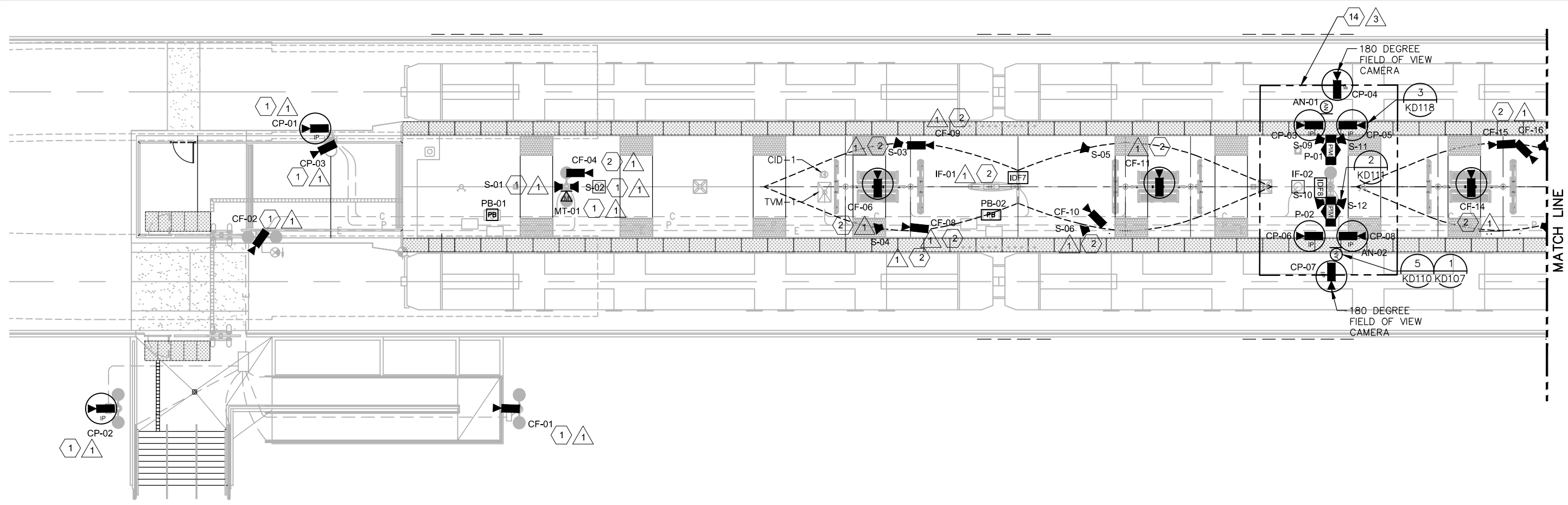
**BKF 100+ YEARS**  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 02/15/19  
SCALE: 1/4" = 1'  
SUBMITTAL DATE: 06/29/20  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
COMMUNICATIONS  
EQUIPMENT LAYOUT  
FLOOR PLAN, STORY STATION, SHEET 3 OF 3

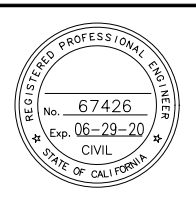
PCA NO.: 000 CONTRACT NO.: S808 FILE LOCATION: PROJECTWISE

SHEET OF: KE103  
REVISION: C



Joseph Cowlishaw Jun 23, 2020 - 10:20am C:\cadd\19\mntb\_jerry\basofas\west\csm8400\808KE105.dwg

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



**Lamoreaux Associates**  
 2686 N 775 W T 435.586.0174  
 Cedar City, UT 84721 F 435.865.1848  
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DESIGNED: Bryan Lamoreaux CHECKED: B. Lamoreaux  
 DRAWN: J. Cowlishaw CADD FILE NAME: 808KE105.dwg



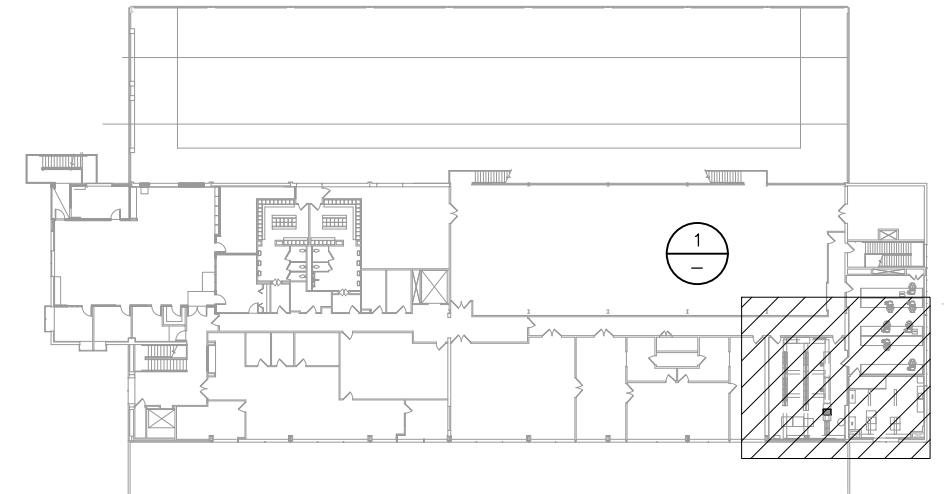
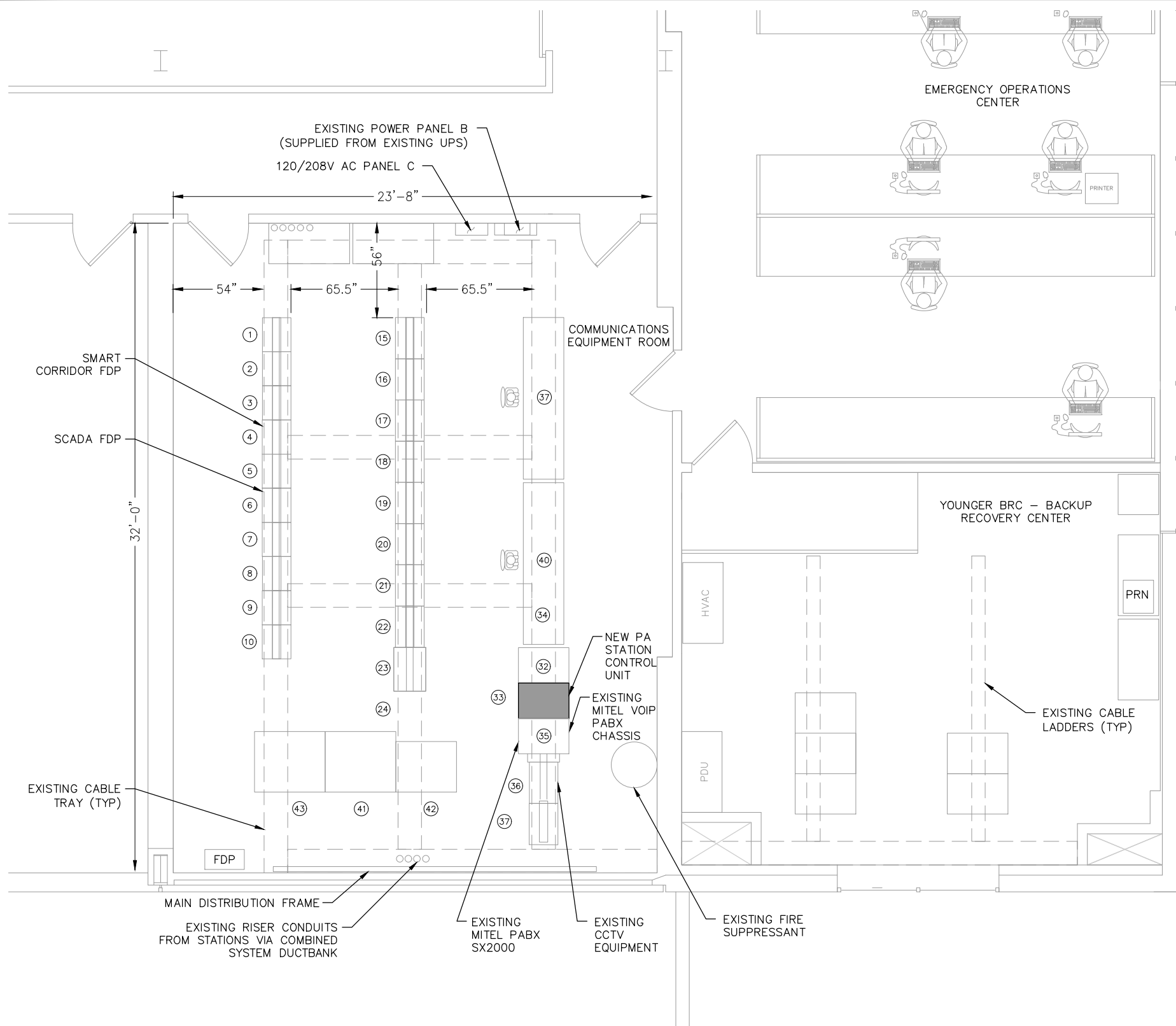
**BKF** 100+ YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

CAAD FILE DATE: 01/23/19 SCALE: 1/8"=1'  
 SUBMITTAL DATE: 06/29/20 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 COMMUNICATIONS  
 EQUIPMENT LAYOUT  
 FLOOR PLAN, EASTRIDGE STATION

PCA NO.: 000 CONTRACT NO.: S808 FILE LOCATION: PROJECTWISE

SHEET OF: KE105 REVISION: C



BUILDING MAP

EQUIPMENT RACK TABLE	
RACK NO.	RACK DESCRIPTION
①	TVM EQUIPMENT RACK
②	CHANNEL BANKS
③	DACS/FDP
④	RING 1
⑤	CHANNEL BANKS
⑥	RINGS 3, 4, AND 5
⑦	PATCH PANEL / FDP
⑧	DIST SWITCH / CORE SWITCH A
⑨	DIST SWITCH / CORE SWITCH B
⑩	PLC AND YARD RACK
⑪ - ⑭	NOT USED
⑮	DIGITAL CROSS CONNECT
⑯	NOT USED
⑰	NOT USED
⑱	DSX-1
⑲	MDF
⑳	MDF
㉑	CHANNEL BANKS
㉒	CHANNEL BANKS
㉓	-48 VDC POWER SUPPLY
㉔	EMPTY SPACE
㉕ - ㉗	NOT USED
㉘	CCS SERVER RACK
㉙	PA/VMB CONTROLLER RACK (GEISYS)
㉚	NOT USED
㉛ - ㉜	PABX/VIDEO RACK
㉝	EXTRA WORKBENCH
㉞	SYSTEM MANAGER WORKSTATION
㉟	UPS BATTERIES
㊱	UPS
㊲	UPS BATTERIES EXPAND

① RAIL OPERATIONS & MAINTENANCE FACILITY

Joseph Cowlishaw Jun 23, 2020 - 10:20am C:\cadd\h\p\h\ntb\_jerry\basofas\west\m\m\8400\808KE111.dwg

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



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DESIGNED: Bryan Lamoreaux CHECKED: B. Lamoreaux  
 DRAWN: J. Cowlishaw CADD FILE NAME: 808KE111.dwg

**Santa Clara Valley Transportation Authority**

**BKF 100+ YEARS**  
 ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 01/23/19 SCALE: N.T.S.  
 SUBMITTAL DATE: 06/29/20 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT

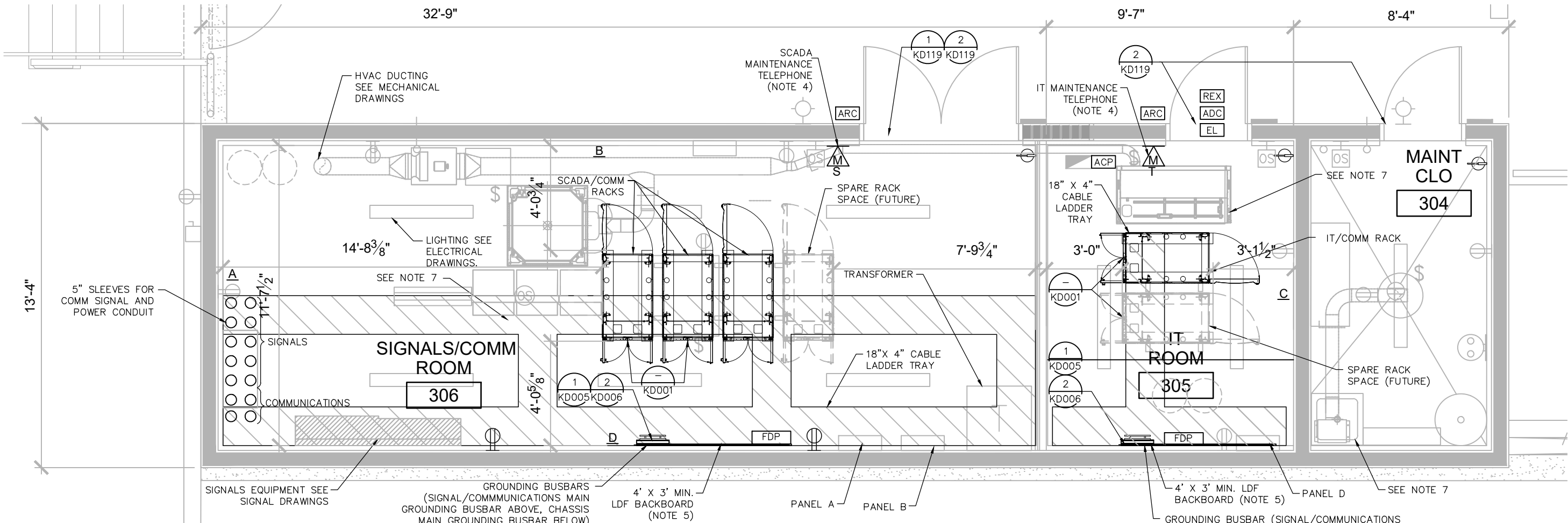
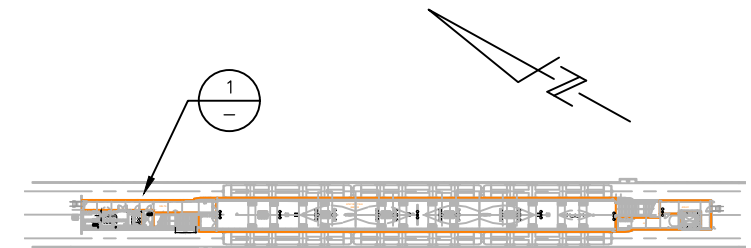
COMMUNICATIONS  
 EQUIPMENT LAYOUT  
 FLOOR PLAN, RAIL OPS EQUIPMENT ROOM

PCA NO.: 000 CONTRACT NO.: S808 FILE LOCATION: PROJECTWISE

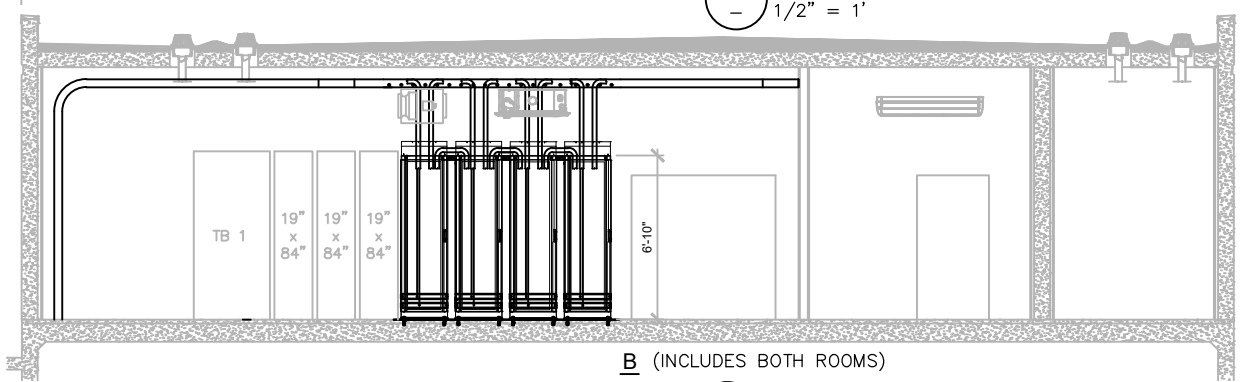
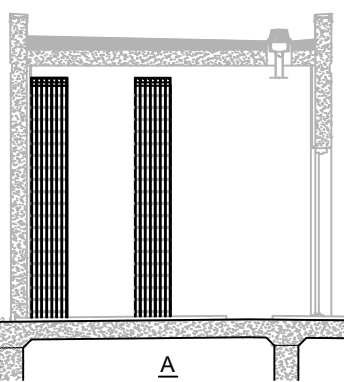
SHEET OF: KE111 REVISION: C

NOTES:

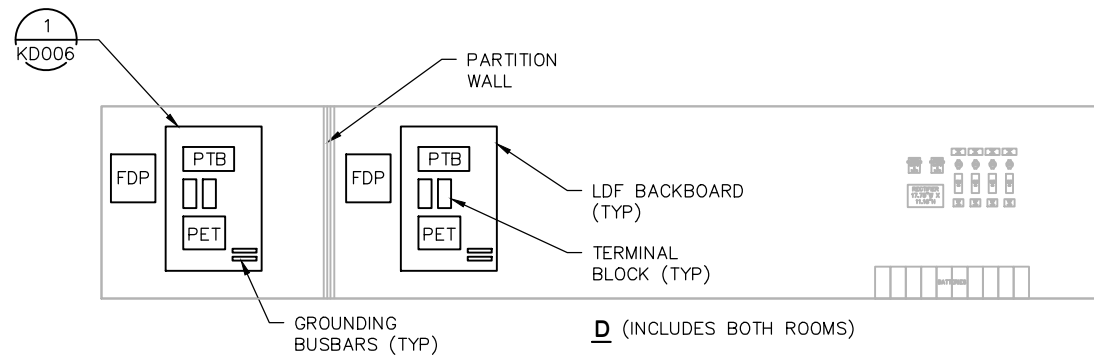
1. PROVIDE OVERHEAD CABLE TRAY/LADDER. TRAY/LADDER WILL BE SUSPENDED ABOVE ALL COMM RACKS AND THE COMM LDF. TRAY/LADDER TO BE INSTALLED A MINIMUM OF 6" ABOVE COMM RACK TROUGHS.
2. STATION CONTRACTOR TO SUPPLY 120 VAC POWER FOR COMM RACKS. CONTRACTOR SHALL INSTALL, TERMINATE AND TEST POWER CABLES AND CONDUIT/TRAYS FROM POWER PANELS TO RACKS.
3. MAINTENANCE TELEPHONE, ASSOCIATED CONDUIT AND CABLING SHALL BE SUPPLIED AND INSTALLED BY CONTRACTOR AS SHOWN ON KD115.
4. CONTRACTOR TO PROVIDE COMM LOCAL DISTRIBUTION FRAME BACKBOARD AND LDF AS DETAILED ON KD006.
5. CONTRACTOR TO PROVIDE AND INSTALL THREE 84" TALL 19" EIA-310-D RACKS, TWO IN THE COMM ROOM AND TWO IN THE IT ROOM. EACH RACK SHALL BE ELECTRICALLY ISOLATED FROM THE FLOOR AND OTHER RACKS. RACKS SHALL BE SECURED TO THE FLOOR AND SUITABLE FOR A ZONE 4 SEISMIC AREA.
6. CONTRACTOR TO SUPPLY EACH COMM RACK WITH 2 ELECTRICALLY ISOLATED COPPER BUSS BARS LOCATED AT THE BOTTOM OF THE RACK. ONE BUSSBAR TO BE LABELED "CHASSIS MAIN GROUNDING BUSBAR" AND THE OTHER "SIGNAL/COMMUNICATIONS MAIN GROUNDING BUSBAR". GROUNDING SHALL BE AS SHOWN ON KD005, KD006, & KD008.
7. ROOF MOUNT HVAC UNIT (DO NOT MAKE ROOF PENETRATIONS OVER RACKS OR CABLE TRAY).



1 SIGNALS / SCADA / IT COMM ROOM EQUIPMENT LAYOUT  
1/2" = 1'



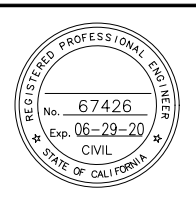
2 SIGNALS/COMM ROOM & IT ROOM WALL ELEVATIONS  
1/4" = 1'



GRAPHIC SCALE  
1' 0' 1' 2' 3'

Joseph Cowlishaw Jun 23, 2020 - 10:22am C:\codatb\oa\yntb\_jerry\basofas\west\sm8400\_808KE113.dwg

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



**Lamoreaux Associates**  
 2686 N 775 W T 435 586 0174  
 Cedar City, UT 84721 F 435 865 1848  
 www.laeng.com

DESIGNED BY: Bryan Lamoreaux  
 CHECKED BY: B. Lamoreaux  
 DRAWN BY: J. Cowlishaw  
 CADD FILE NAME: 808KE113.dwg

**Santa Clara Valley Transportation Authority**

**BKF 100+ YEARS**  
 ENGINEERS / SURVEYORS / PLANNERS

CAAD FILE DATE: 01/31/19  
 SUBMITTAL DATE: 06/29/20  
 SCALE: AS SHOWN  
 BOARD APPROVAL DATE:

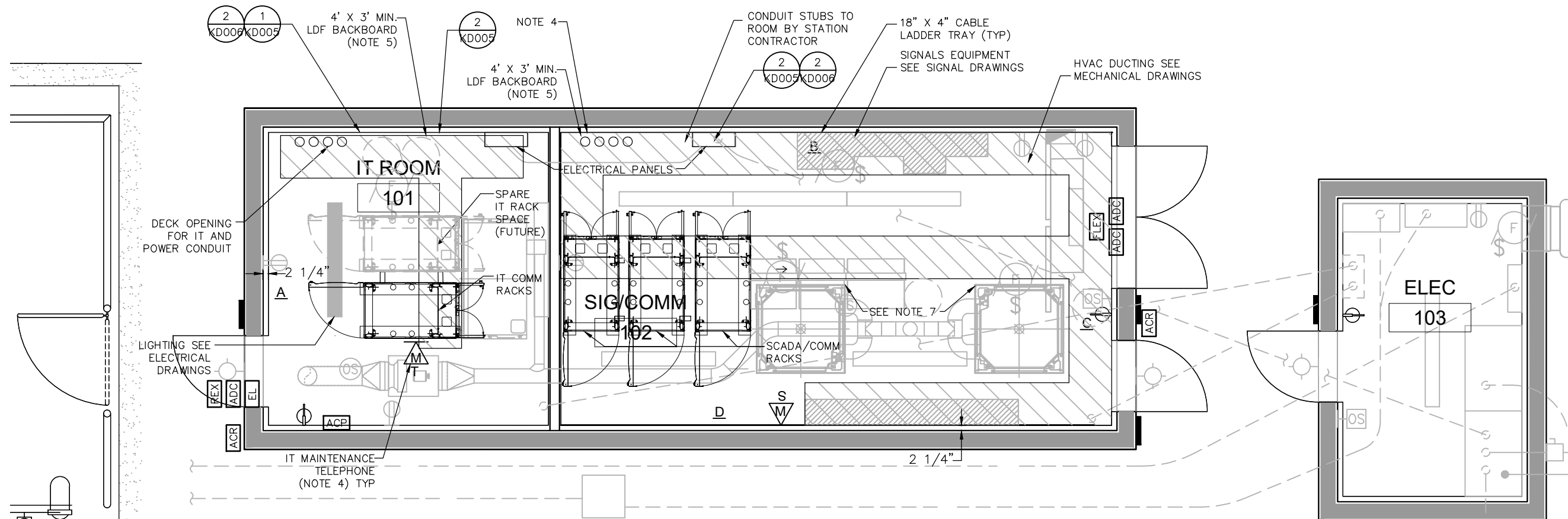
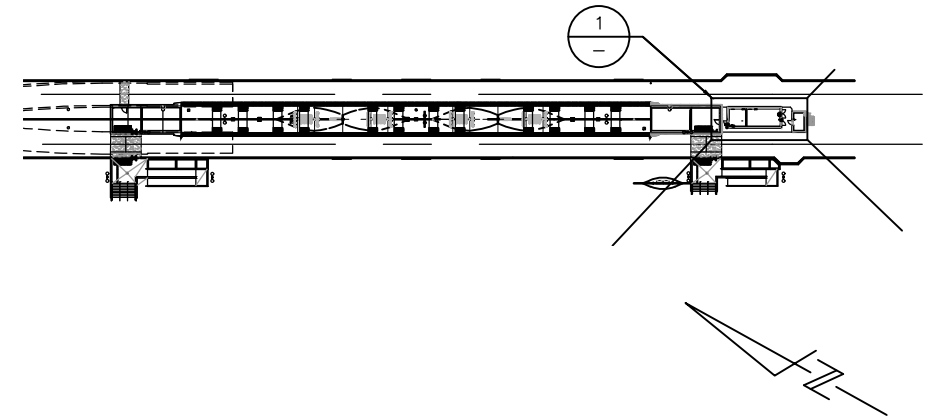
EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 COMMUNICATIONS  
 EQUIPMENT LAYOUT  
 FLOOR PLAN, STORY SIGNALS/COMM ROOM

PCA NO.: 000 CONTRACT NO.: S808 FILE LOCATION: PROJECTWISE

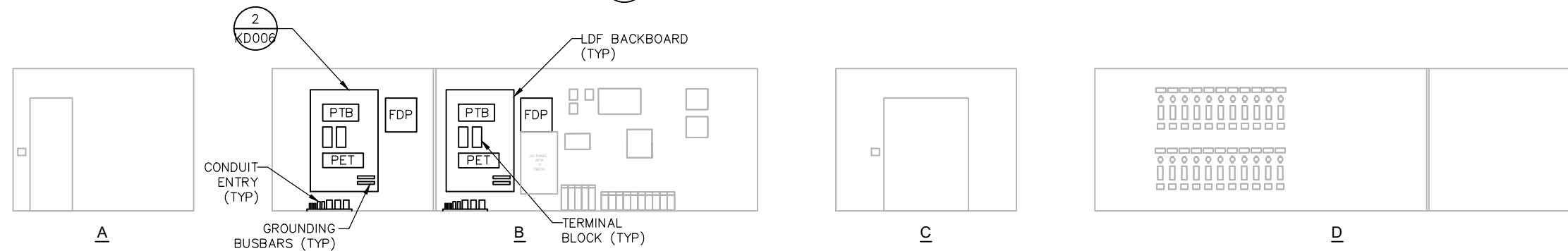
SHEET OF: KE113  
 DRAWING NO.: KE113  
 REVISION: C

NOTES:

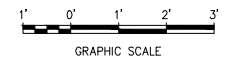
1. PROVIDE OVERHEAD CABLE TRAY/LADDER. TRAY/LADDER WILL BE SUSPENDED ABOVE ALL COMM RACKS AND THE COMM LDF. TRAY/LADDER TO BE INSTALLED A MINIMUM OF 6" ABOVE COMM RACK TROUGHS.
2. STATION CONTRACTOR TO SUPPLY 120 VAC POWER FOR COMM RACKS. CONTRACTOR SHALL INSTALL, TERMINATE AND TEST POWER CABLES AND CONDUIT/TRAYS FROM POWER PANELS TO RACKS.
3. MAINTENANCE TELEPHONE, ASSOCIATED CONDUIT AND CABLING SHALL BE SUPPLIED AND INSTALLED BY CONTRACTOR AS SHOWN ON KD115.
4. CONTRACTOR TO PROVIDE COMM LOCAL DISTRIBUTION FRAME BACKBOARD AND LDF AS DETAILED ON KD006.
5. CONTRACTOR TO PROVIDE AND INSTALL FOUR 84" TALL 19" EIA-310-D RACKS: TWO IN THE COMM ROOM AND TWO IN THE IT ROOM. EACH RACK SHALL BE ELECTRICALLY ISOLATED FROM THE FLOOR AND OTHER RACKS. RACKS SHALL BE SECURED TO THE FLOOR AND SUITABLE FOR A ZONE 4 SEISMIC AREA.
6. CONTRACTOR TO SUPPLY EACH COMM RACK WITH 2 ELECTRICALLY ISOLATED COPPER BUSBARS LOCATED AT THE BOTTOM OF THE RACK. ONE BUSBAR TO BE LABELED "CHASSIS MAIN GROUNDING BUSBAR" AND THE OTHER "SIGNAL/COMMUNICATIONS MAIN GROUNDING BUSBAR". GROUNDING SHALL BE AS SHOWN ON KD005, KD006, & KD008.
7. ROOF MOUNT HVAC UNIT (DO NOT MAKE ROOF PENETRATIONS OVER RACKS OR CABLE TRAY).



1 SIGNALS / SCADA / IT COMM ROOM EQUIPMENT LAYOUT  
- 1/2" = 1'

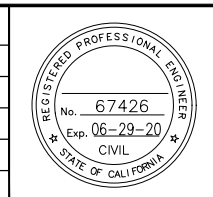


2 EQUIPMENT ROOM WALL ELEVATION  
- 1/4" = 1'



Joseph Cowlishaw Jun 23, 2020 - 10:25am C:\cadd\h\p\h\ntb\_jerry\basofas\west\m\8400\808KE114.dwg

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



**Lamoreaux Associates**  
2686 N 775 W T 435.586.0174  
Cedar City, UT 84721 F 435.865.1848  
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DESIGNED: Bryan Lamoreaux CHECKED: B. Lamoreaux  
DRAWN: J. Cowlishaw CADD FILE NAME: 808KE114.dwg

**Santa Clara Valley Transportation Authority**

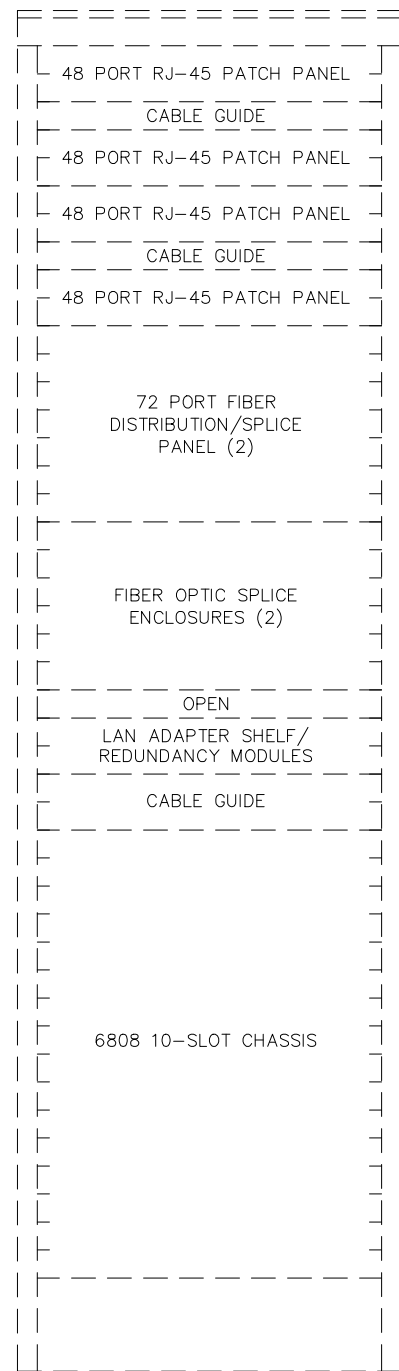
**BKF 100+ YEARS**  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 01/31/19 SCALE: AS SHOWN  
SUBMITTAL DATE: 06/29/20 BOARD APPROVAL DATE:

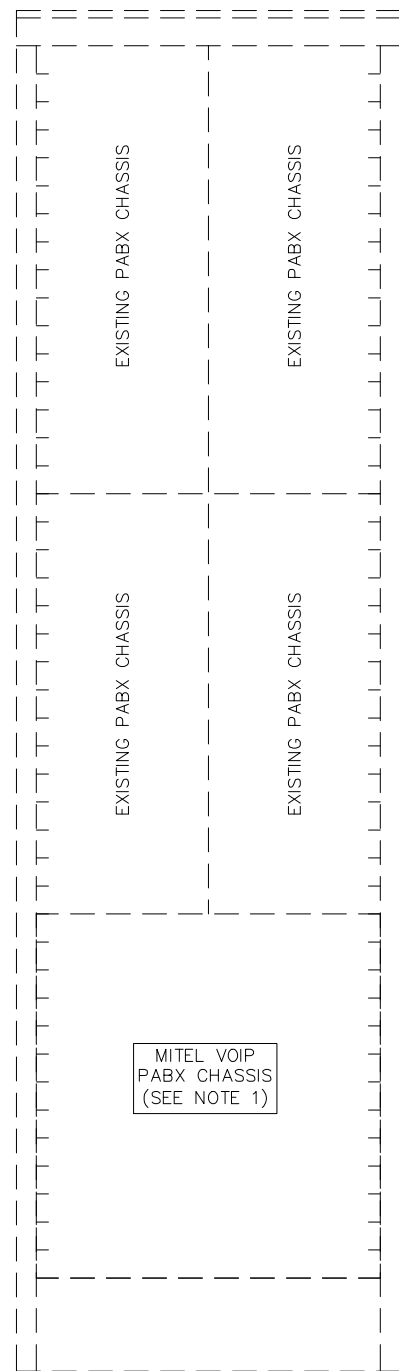
EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
COMMUNICATIONS  
EQUIPMENT LAYOUT  
FLOOR PLAN, EASTRIDGE COMM ROOM

PCA NO.: 000 CONTRACT NO.: S808 FILE LOCATION: PROJECTWISE

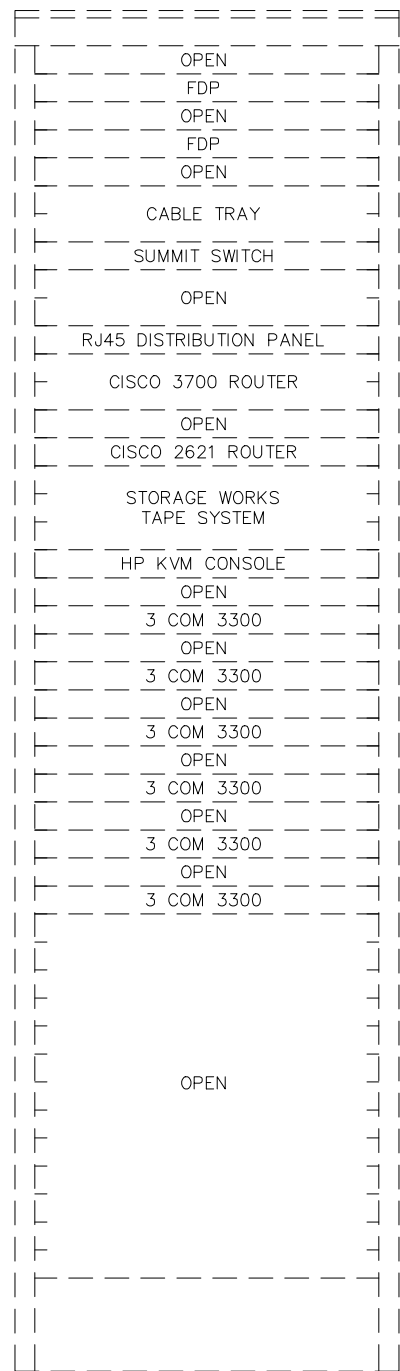
SHEET OF: KE114 REVISION: C



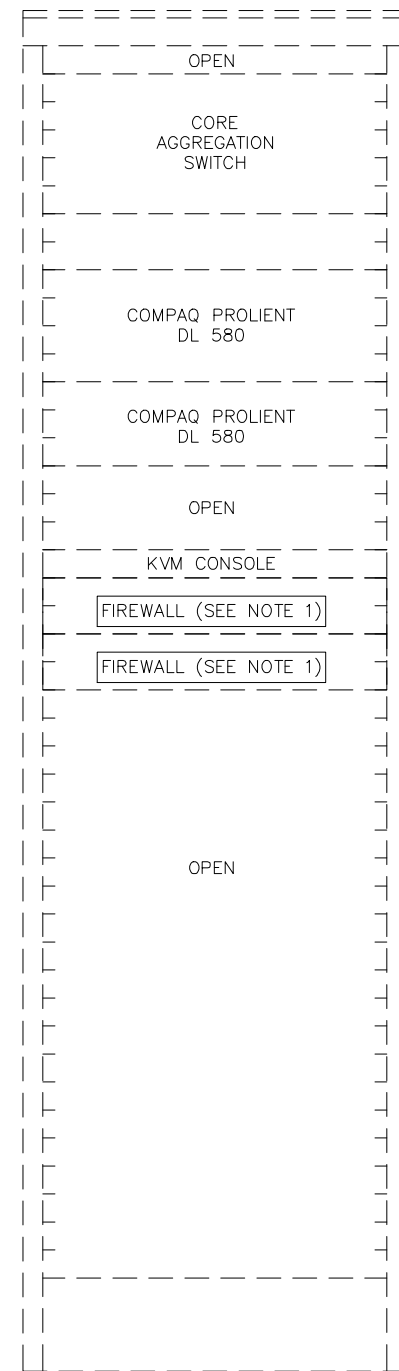
CCS RACK 7



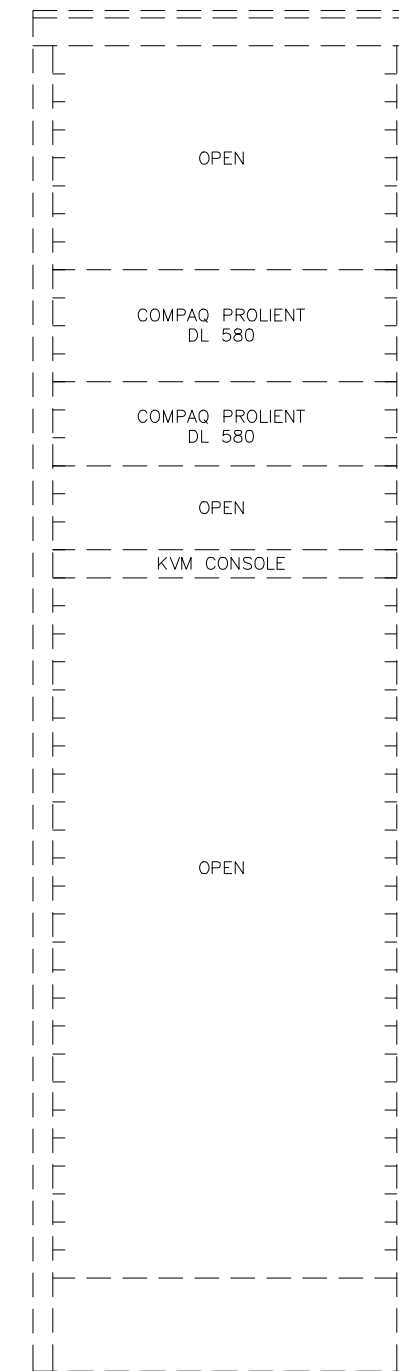
CCS RACK 35



IT RACK 1



IT RACK 2



IT RACK 3

NOTES:

- 1. TBD

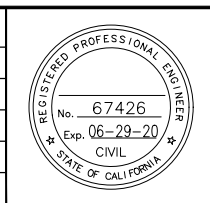
RAIL/OPS CENTRAL EQUIPMENT ROOM

RAIL/OPS DISASTER RECOVERY  
DATA CENTER COMMUNICATION RACK LAYOUT

HOLD INCOMPLETE

Joseph Cowlishaw Jun 23, 2020 - 10:25am C:\cadd\h\ra\h\ntb\_jerry\basofas\west\dm98400\808KE120.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



SUBMITTED	
<b>Lamoreaux Associates</b> 2686 N 775 W T 435.586.0174 Cedar City, UT 84721 F 435.865.1848 www.laeng.com	
DESIGNED	CHECKED
Bryan Lamoreaux	B. Lamoreaux
DRAWN	CADD FILE NAME
J. Cowlishaw	808KE120.dwg

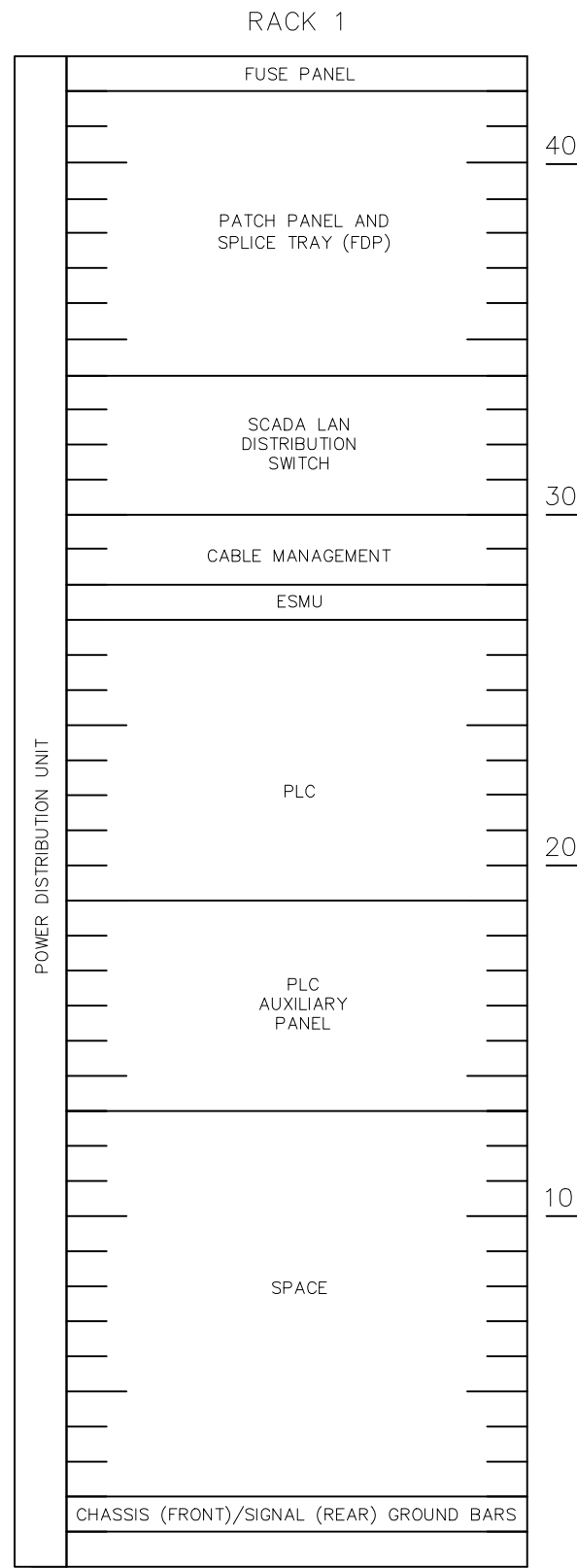


APPROVED	
 <b>ENGINEERS / SURVEYORS / PLANNERS</b>	
CADD FILE DATE	SCALE
01/23/19	N.T.S.
SUBMITTAL DATE	BOARD APPROVAL DATE
06/29/20	

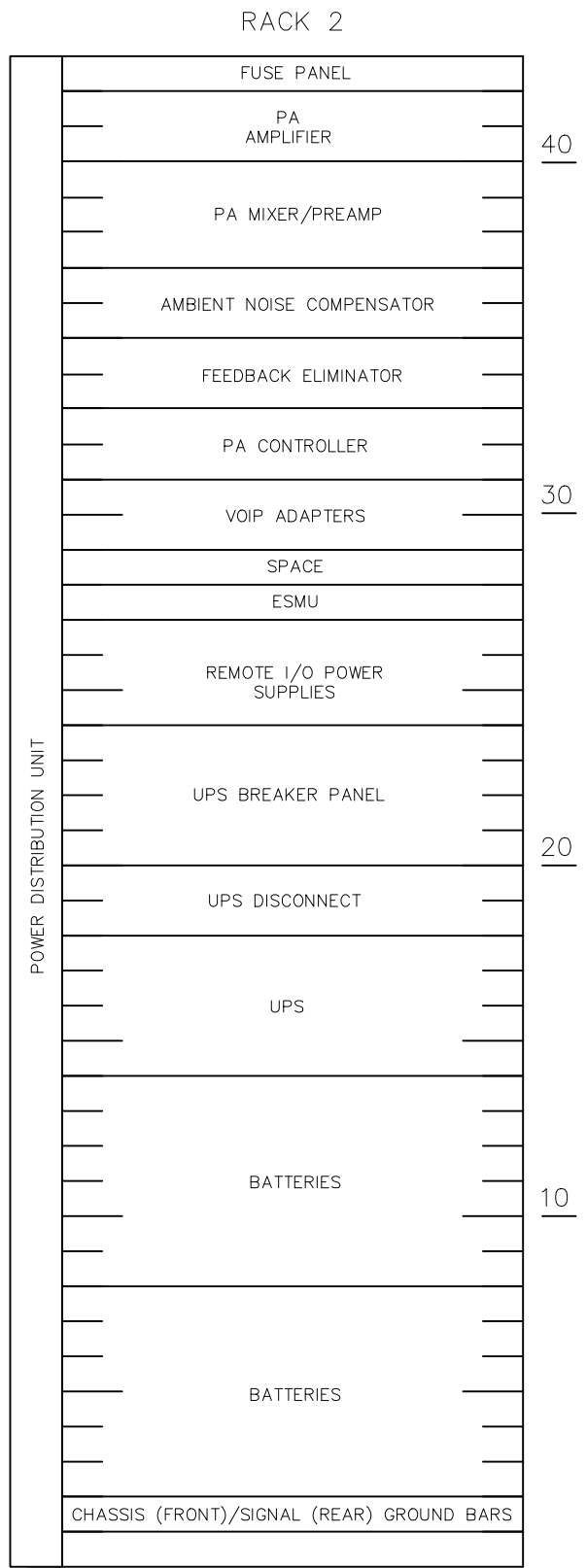
EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT		
COMMUNICATIONS RACK FACE ELEV RAIL OPS COMM EQUIPMENT ROOM		
PCA NO.	CONTRACT NO.	FILE LOCATION
000	S808	PROJECTWISE
SHEET	OF	DRAWING NO.
		KE120
		REVISION
		B



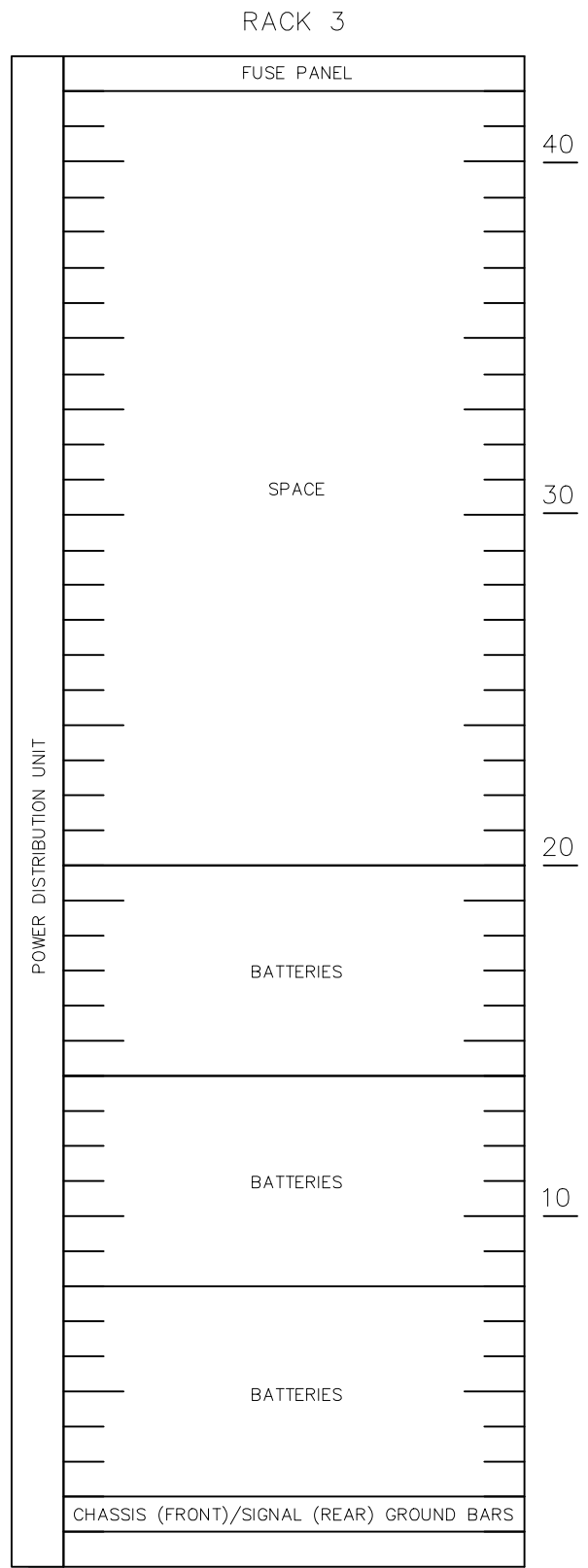
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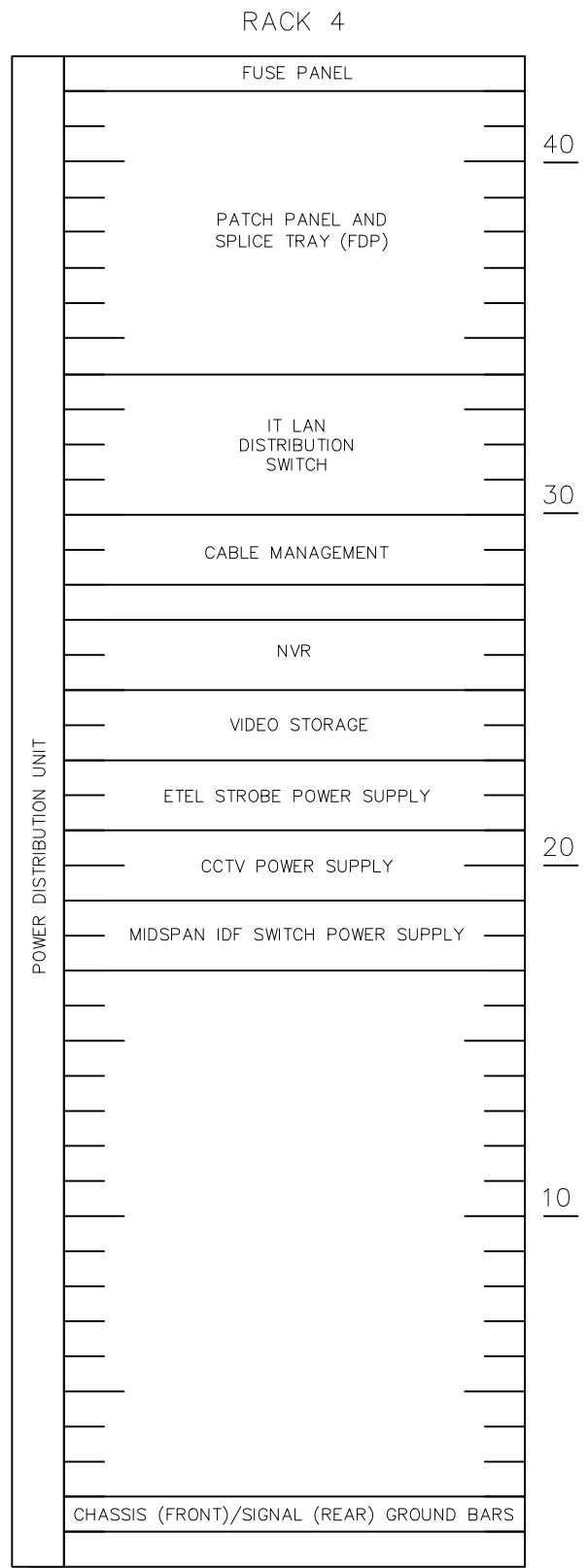
SCADA RACK 1



SCADA RACK 2



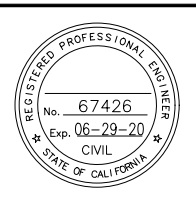
SCADA RACK 3



IT RACK 1

- NOTES:
1. RACKS SHALL BE 19" STANDARD EIA-301-D, 7' HIGH, CERTIFIED FOR SEISMIC ZONE 4 INSTALLATION.
  2. LOCAL DISTRIBUTION FRAME TO BE LOCATED ON WALL MOUNTED BACKBOARD.
  3. CONTRACTOR SHALL SUBMIT FINAL LAYOUT FOR VTA APPROVAL.
  4. MOUNT PET & PTB TO PLYWOOD BACKBOARD ON WALL PER KB111, KB113, KE113, KE114, AND KD006.

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



**Lamoreaux Associates**  
 2686 N 775 W T 435.586.0174  
 Cedar City, UT 84721 F 435.865.1848  
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DESIGNED: Bryan Lamoreaux  
 CHECKED: B. Lamoreaux  
 DRAWN: J. Cowlishaw  
 CADD FILE NAME: 808KE125.dwg



**BKF** 100+ YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

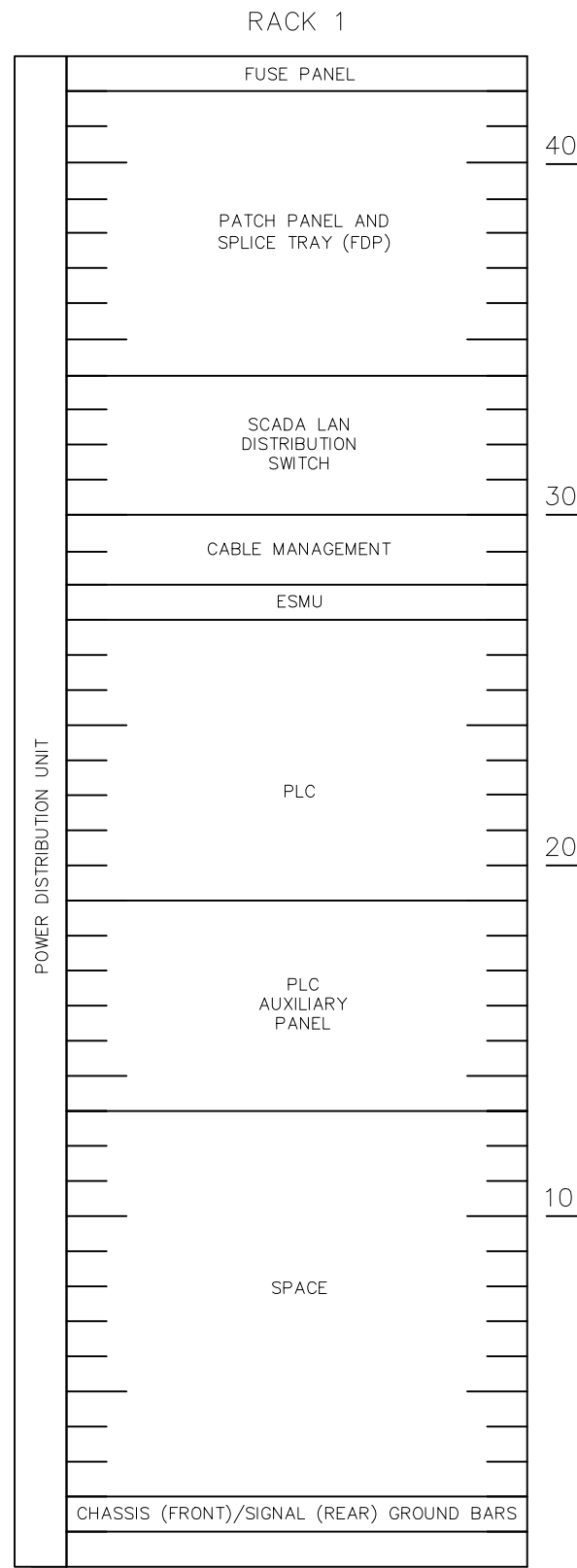
APPROVED: 01/23/19  
 SCALE: N.T.S.  
 SUBMITTAL DATE: 06/29/20  
 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 COMMUNICATIONS  
 RACK FACE ELEV  
 STORY STATION COMM ROOM

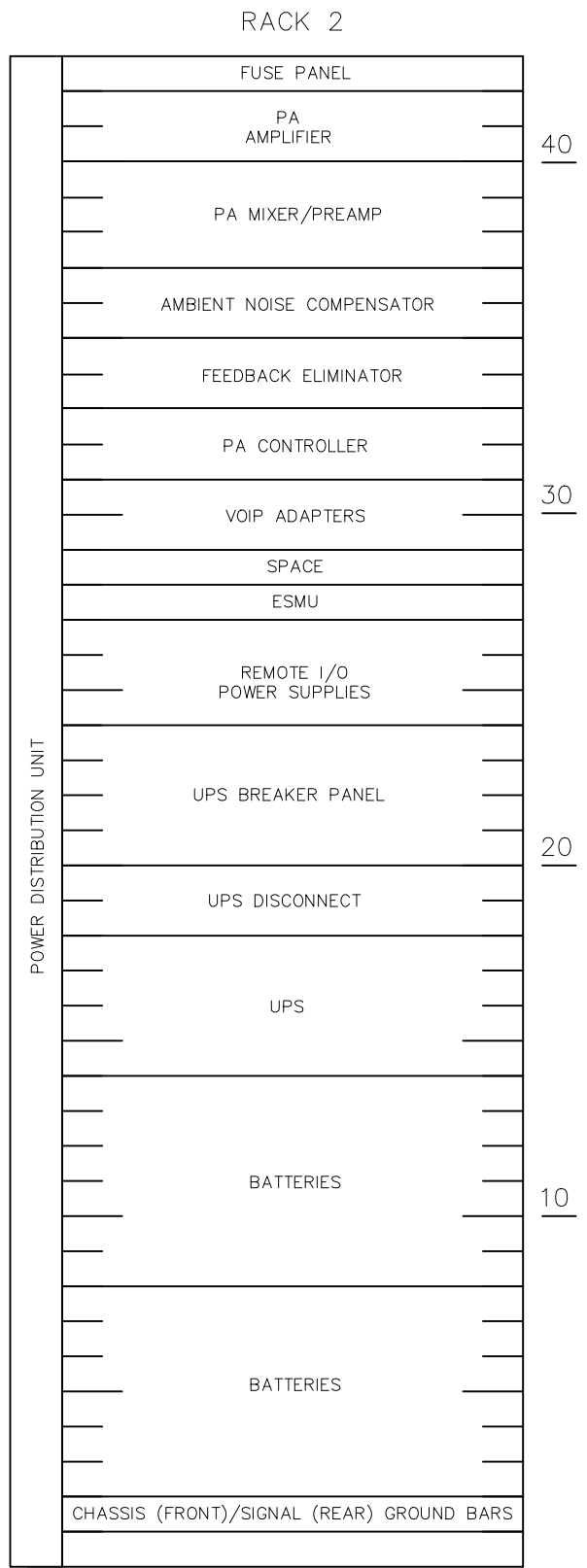
PCA NO.: 000 CONTRACT NO.: S808 FILE LOCATION: PROJECTWISE

SHEET OF: KE125 REVISION: B

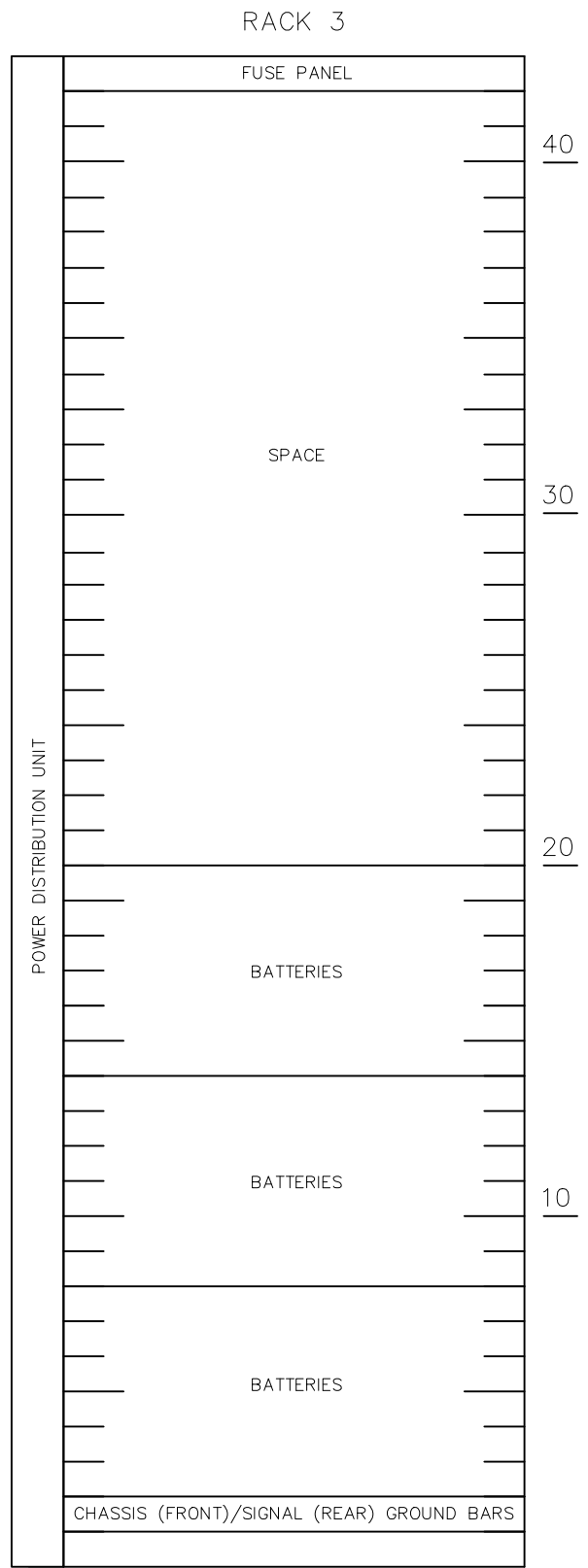
Joseph Cowlshaw Jun 23, 2020 - 10:25am C:\cadd\h\p\h\ntb\_jerry\basofes\west\cans98400\808KE127.dwg



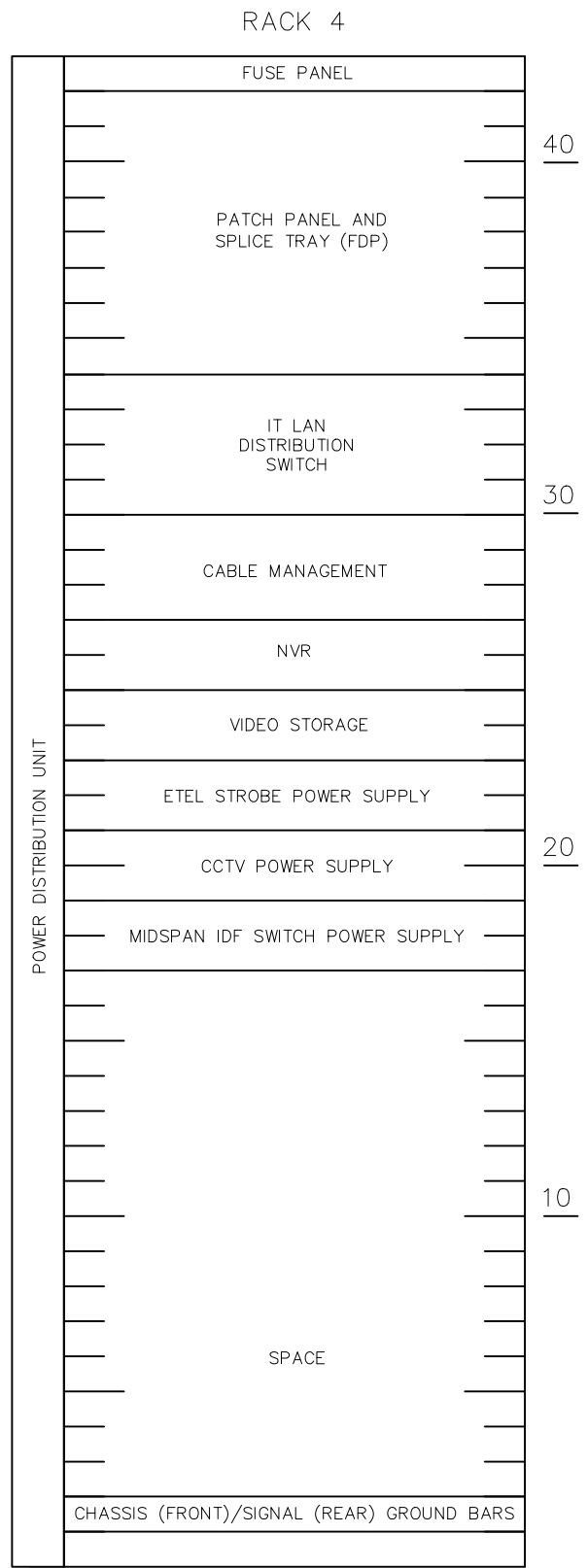
SCADA RACK 1



SCADA RACK 2



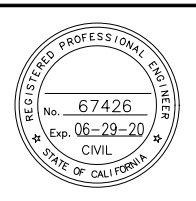
SCADA RACK 3



IT RACK 1

- NOTES:
1. RACKS SHALL BE 19" STANDARD EIA-301-D, 7' HIGH, CERTIFIED FOR SEISMIC ZONE 4 INSTALLATION.
  2. LOCAL DISTRIBUTION FRAME TO BE LOCATED ON WALL MOUNTED BACKBOARD.
  3. CONTRACTOR SHALL SUBMIT FINAL LAYOUT FOR VTA APPROVAL.
  4. MOUNT PET & PTB TO PLYWOOD BACKBOARD ON WALL PER KB111, KB113, KE113, KE114, AND KD006.

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



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 Cedar City, UT 84721 F 435.865.1848  
 www.laeng.com

DESIGNED: Bryan Lamoreaux  
 CHECKED: B. Lamoreaux  
 DRAWN: J. Cowlshaw  
 CADD FILE NAME: 808KE127.dwg



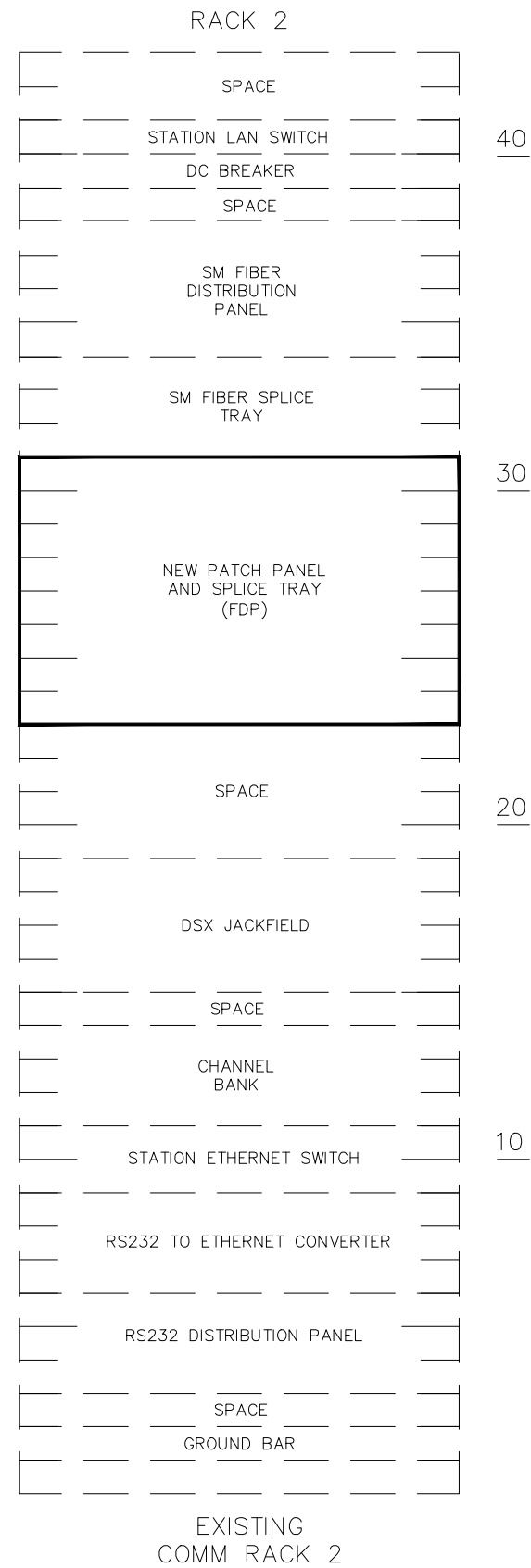
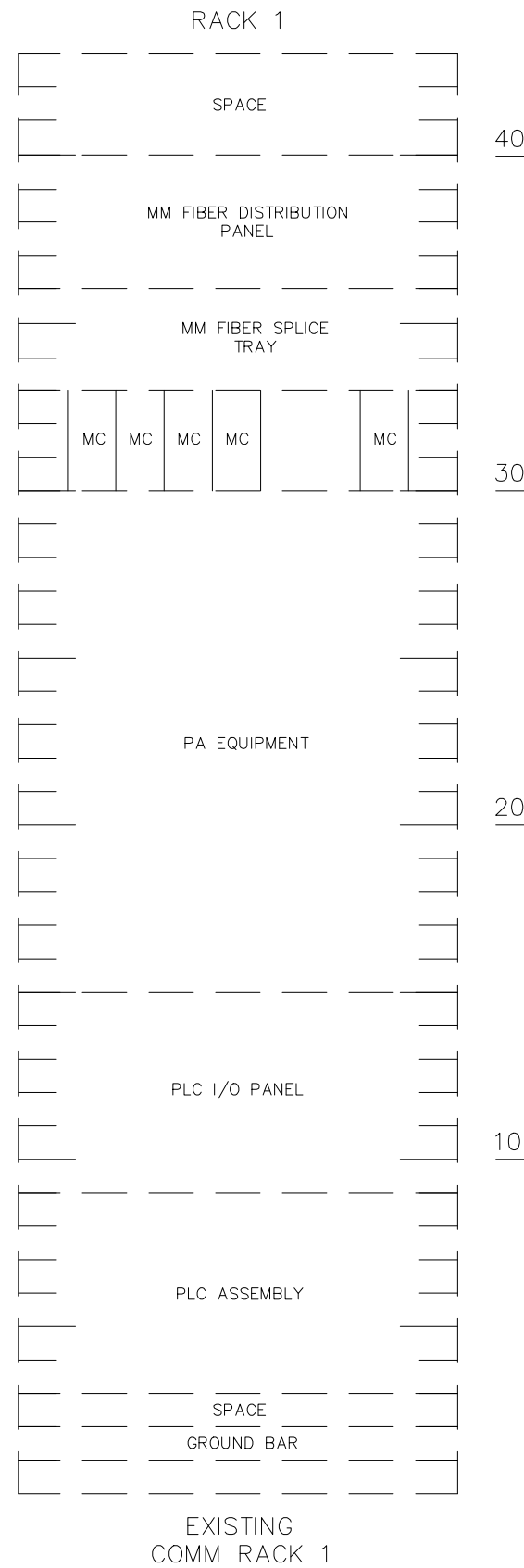
**BKF** 100+ YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

APPROVED: [Signature]  
 CADD FILE DATE: 01/26/19  
 SUBMITTAL DATE: 06/29/20  
 SCALE: N.T.S.  
 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 COMMUNICATIONS  
 RACK FACE ELEV  
 EASTRIDGE STATION COMM ROOM

PCA NO.: 000 CONTRACT NO.: S808 FILE LOCATION: PROJECTWISE

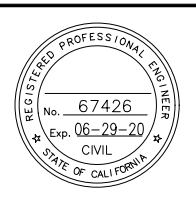
SHEET OF: KE127 REVISION: B



- NOTES:
1. RACKS SHALL BE 19" STANDARD EIA-301-D, 7' HIGH, CERTIFIED FOR SEISMIC ZONE 4 INSTALLATION.
  2. LOCAL DISTRIBUTION FRAME TO BE LOCATED ON WALL MOUNTED BACKBOARD.
  3. SHALL SUBMIT FINAL LAYOUT FOR VTA APPROVAL.

Joseph Cowlshaw Jun 23, 2020 - 10:25am C:\codatb\p\mntb\_jerry\basofas\west\mms8400\808KE128.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



SUBMITTED

**Lamoreaux Associates**

2686 N 775 W T 435.586.0174  
Cedar City, UT 84721 F 435.865.1848  
www.laeng.com

DESIGNED: Bryan Lamoreaux CHECKED: B. Lamoreaux  
DRAWN: J. Cowlshaw CADD FILE NAME: 808KE101.dwg

Santa Clara Valley  
Transportation  
Authority

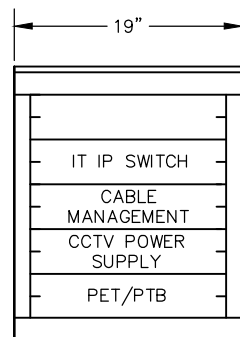
APPROVED

CADD FILE DATE: 01/26/19 SCALE: 3/4" = 1'  
SUBMITTAL DATE: 06/29/20 BOARD APPROVAL DATE:

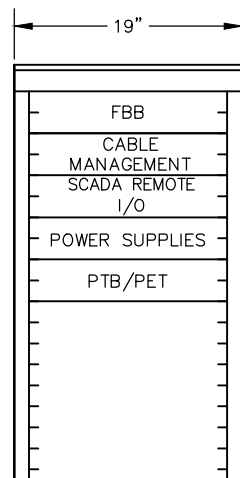
EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
COMMUNICATIONS  
RACK FACE ELEVATION  
ALUM ROCK & MCKEE STAT. CTS INTRF.

PCA NO.: 000 CONTRACT NO.: S808 FILE LOCATION: PROJECTWISE

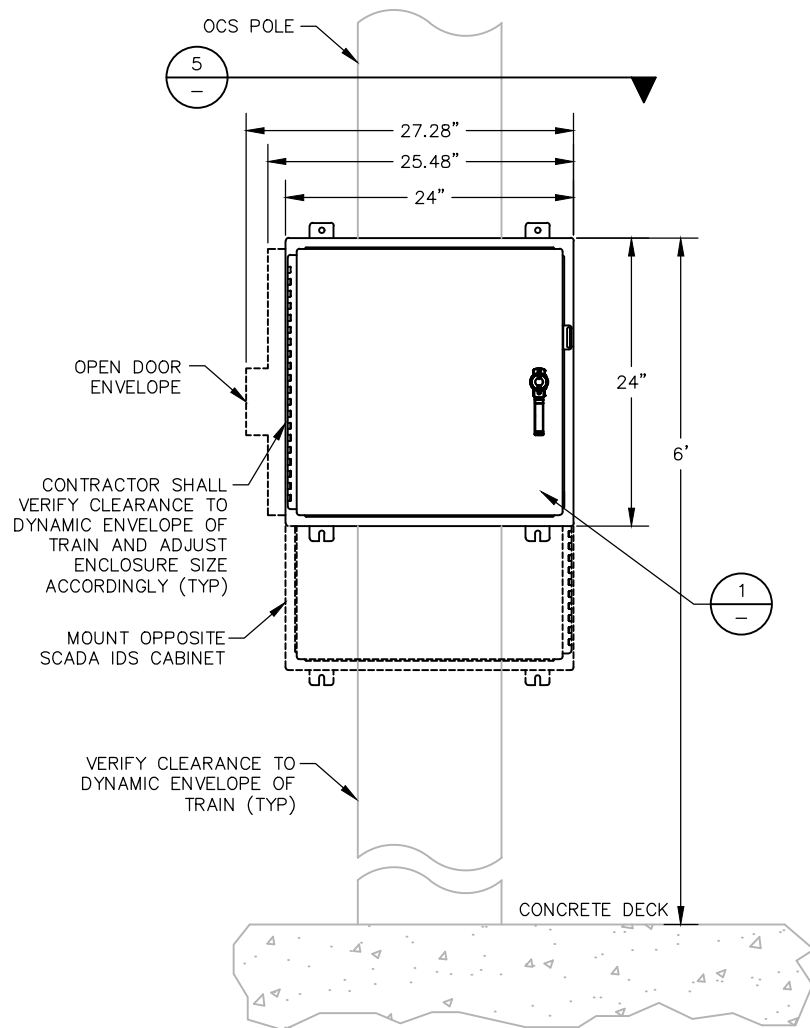
SHEET OF	KE128
DRAWING NO.	KE128
REVISION	B



1 IT IDS CABINET RACK  
- NTS

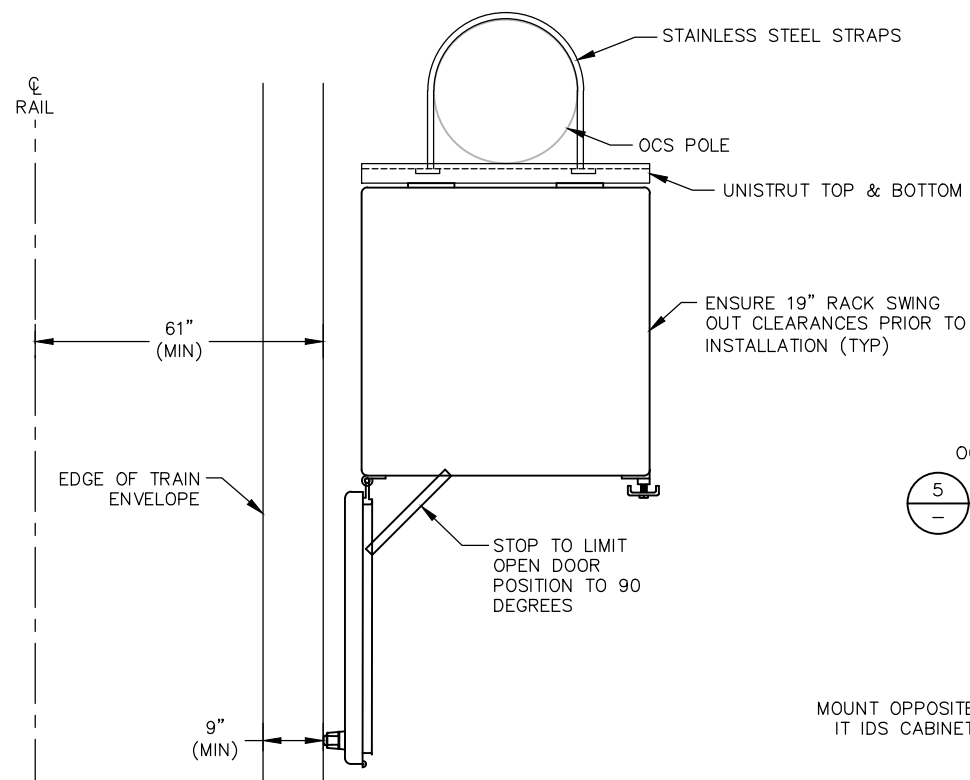


2 SCADA IDS CABINET RACK  
- 1-1/2" = 1.0'



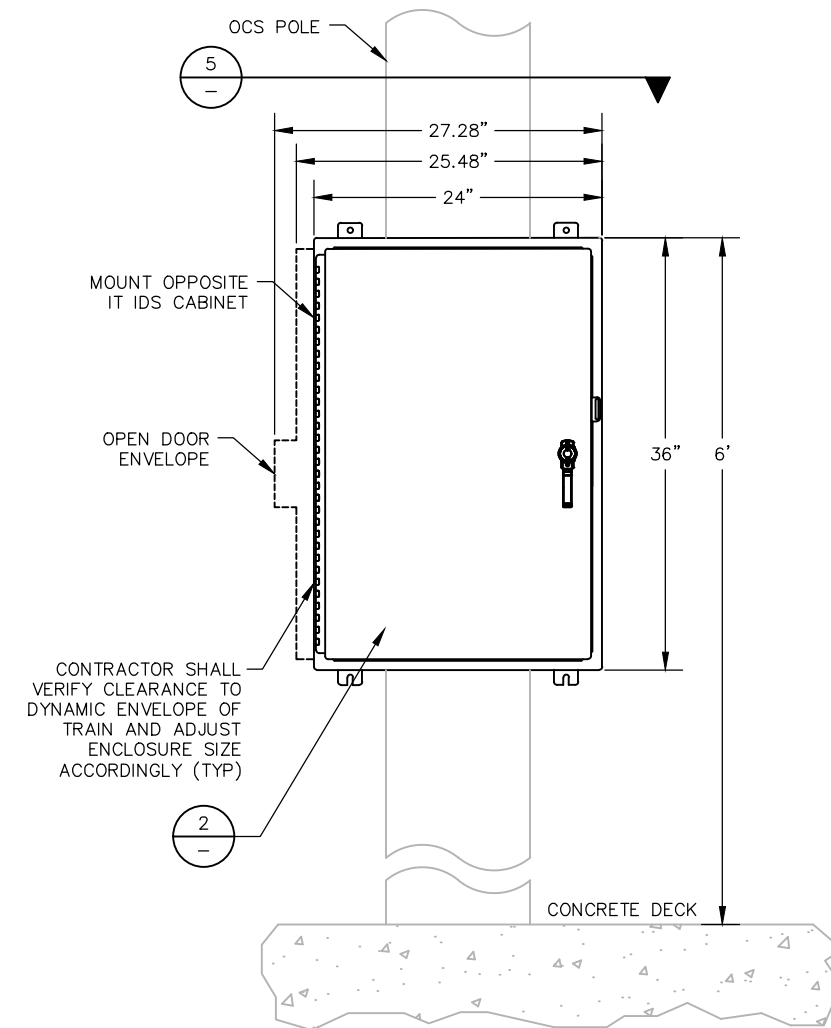
REAR OF OCS POLE

4 IT IDS CABINET DETAIL  
- 1-1/2" = 1.0'



SCADA OR IT IDS CABINET TOP VIEW

5 IDS CABINET DETAIL  
- NTS



FRONT OF OCS POLE

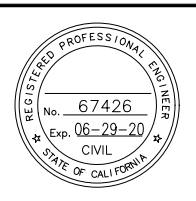
3 SCADA IDS CABINET DETAIL  
- 1-1/2" = 1.0'

NOTES:

1. PTB AND PET EQUIPMENT MAY BE RACK MOUNTED OR ON THE BACK PLANE OF THE CABINET.
2. RACKS SHALL BE SWING OUT TYPE ON HINGES. ADJUST DIMENSIONS ACCORDINGLY AS REQUIRED. CABINETS, WITH DOORS OPEN, SHALL NOT INTRUDE CLOSER THAN 18" FROM DYNAMIC ENVELOPE OF TRAIN.
3. DEPTH OF CABINETS SHALL BE SUFFICIENT FOR RACK MOUNTED EQUIPMENT.

Joseph Cowlishaw Jun 23, 2020 - 10:25am C:\cadd\h\on\hntb\_jerry\basofas\west\csm8400\808KE140.dwg

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



SUBMITTED		<b>Lamoreaux Associates</b> 2686 N 775 W T 435.586.0174 Cedar City, UT 84721 F 435.865.1848 www.laeng.com	
DESIGNED	Bryan Lamoreaux	CHECKED	B. Lamoreaux
DRAWN	J. Cowlishaw	CADD FILE NAME	808KE140.dwg



APPROVED		<b>BKF</b> 100+ YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	01/23/19	SCALE	N.T.S.
SUBMITTAL DATE	06/29/20	BOARD APPROVAL DATE	

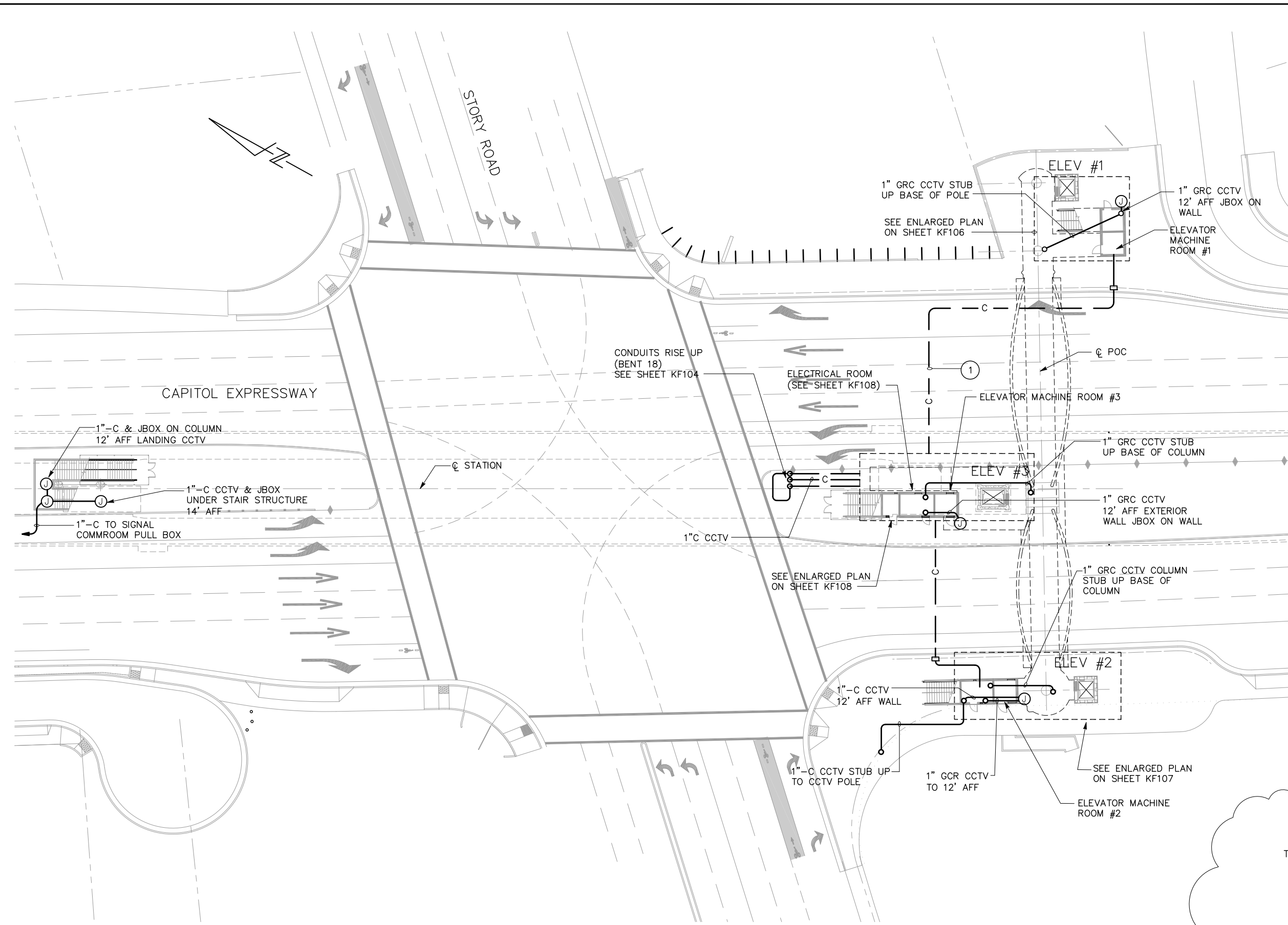
EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT			SHEET OF
COMMUNICATIONS RACK FACE ELEV IDS CABINET, TYPICAL			DRAWING NO. KE140
PCA NO. 000 CONTRACT NO. S808 FILE LOCATION PROJECTWISE			REVISION C

**SHEET NOTE:**

- ① INSTALL 2-2" C (COM CABLES)

**NOTES:**

- SEE ELECTRICAL PLANS FOR ADDITIONAL CONDUIT IN THIS AREA.
- ALL CONDUIT BELOW GRADE IS PVC.
- ALL CONDUIT 90° SWEEPS TO BASE OF COLUMNS AND RISERS TO REACH 6" ABOVE GRADE SHALL BE PVC COATED GRC
- ALL EXPOSED CONDUIT HIGHER THAN 6" AFF SHALL BE GRC.



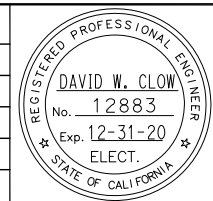
**INCOMPLETE**

TYP ALL COMM CONDUIT  
"KF" SHEETS

GRAPHIC SCALE

c:\p1\2020-06-23-15:51\m... EBRC\03\_COMM\801KF101.dwg

NO.	DATE	REVISIONS
A	06/20	95% SUBMITTAL SET



**AE** Alliance Engineering Consultants, Inc.  
 4701 Patrick Henry Drive, Bldg. 10 phone (408) 970-9888  
 Santa Clara, CA 95054 fax (408) 970-9316  
 PROJECT NO. 205-18-01 www.aec-engineers.com

DESIGNED: D. Clow CHECKED: K. Ngai  
 DRAWN: C. Basuki CADD FILE NAME: 801KF101

**SVTA** Santa Clara Valley Transportation Authority

**BKF100+** YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 09/09/17 SCALE: 1"=20'-0"  
 SUBMITTAL DATE: 06/29/20 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 STORY STATION  
 COMM SITE PLAN

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

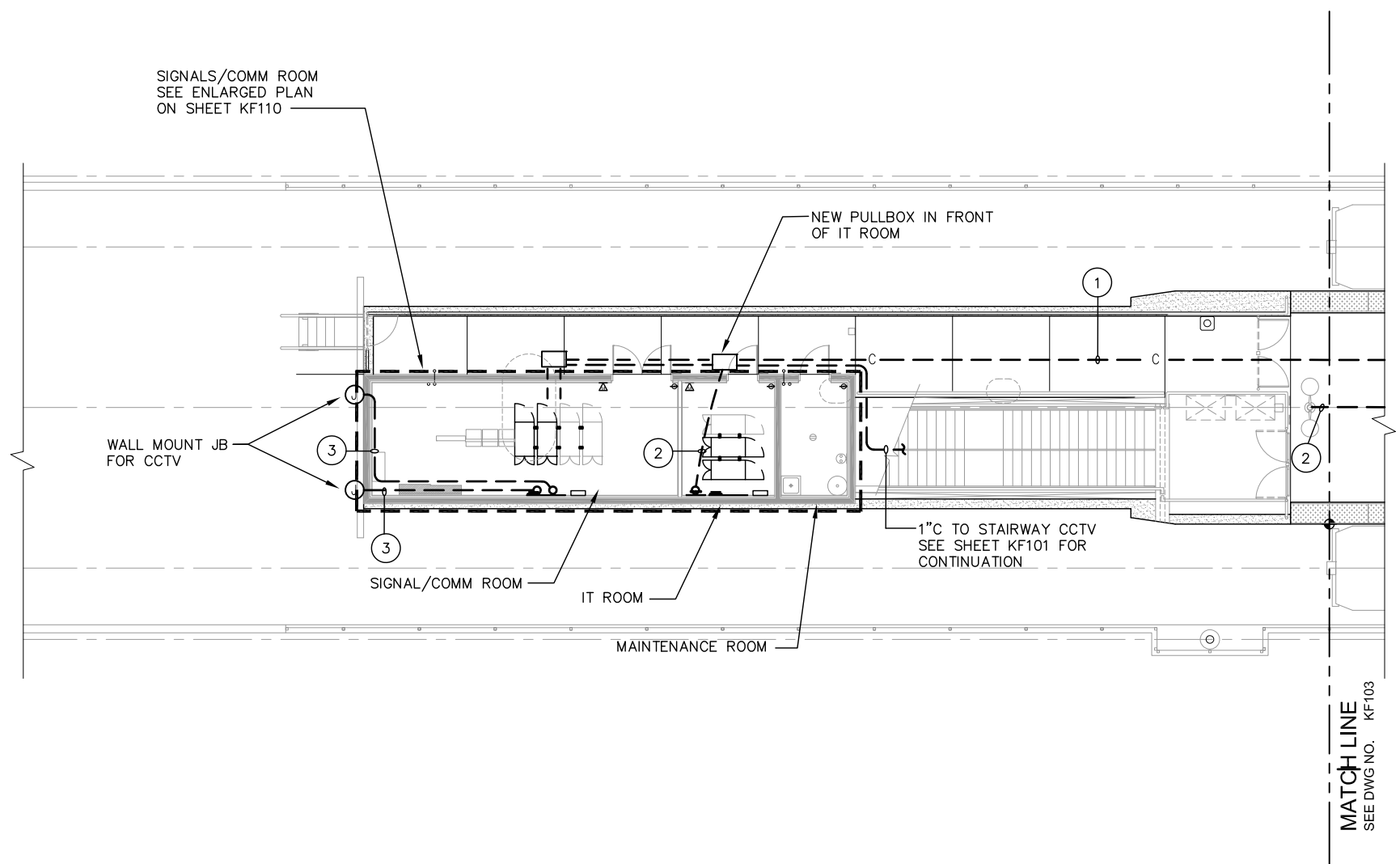
SHEET 1 OF 1  
 DRAWING NO. KF101  
 REVISION A

**SHEET NOTES:**

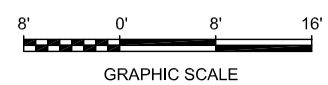
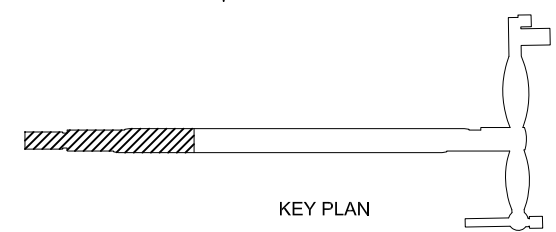
- ① INSTALL 4-4" C (COMM CABLES)
- ② INSTALL 4-1" C (COMM CABLES)
- ③ INSTALL 1" C

**NOTES:**

- 1. SEE ELECTRICAL PLANS FOR ADDITIONAL CONDUIT IN THIS AREA.
- 2. ALL CONDUIT BELOW GRADE IS PVC.
- 3. ALL CONDUIT 90° SWEEPS TO BASE OF COLUMNS AND RISERS TO REACH 6" ABOVE GRADE SHALL BE PVC COATED GRC
- 4. ALL EXPOSED CONDUIT HIGHER THAN 6" AFF SHALL BE GRC.

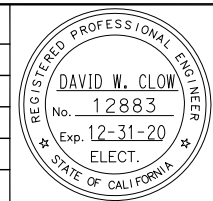


① PLATFORM COMM PLAN 1  
 KF102 SCALE 1/8"=1'-0"



c:\p1\2020-06-23\2020-06-23 3:53pm M:\205-18-01 EBRC\03\_COMMA\801KF102.dwg

NO.	DATE	REVISIONS
A	06/20	95% SUBMITTAL SET



**Submitted**

**AEC** Alliance Engineering Consultants, Inc.  
 4701 Patrick Henry Drive, Bldg. 10 phone (408) 970-9888  
 Santa Clara, CA 95054 fax (408) 970-9316  
 PROJECT NO. 205-18-01 www.aec-engineers.com

**Designed** D. Clow **Checked** K. Ngai  
**Drawn** C. Basuki **CADD FILE NAME** 801KF102

**Santa Clara Valley Transportation Authority**

**Approved**

**BKF100+** YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

**CADD FILE DATE** 09/09/17 **SCALE** NTS  
**SUBMITTAL DATE** 06/29/20 **BOARD APPROVAL DATE**

**EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 STORY STATION  
 PLATFORMCOMM PLAN 1**

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

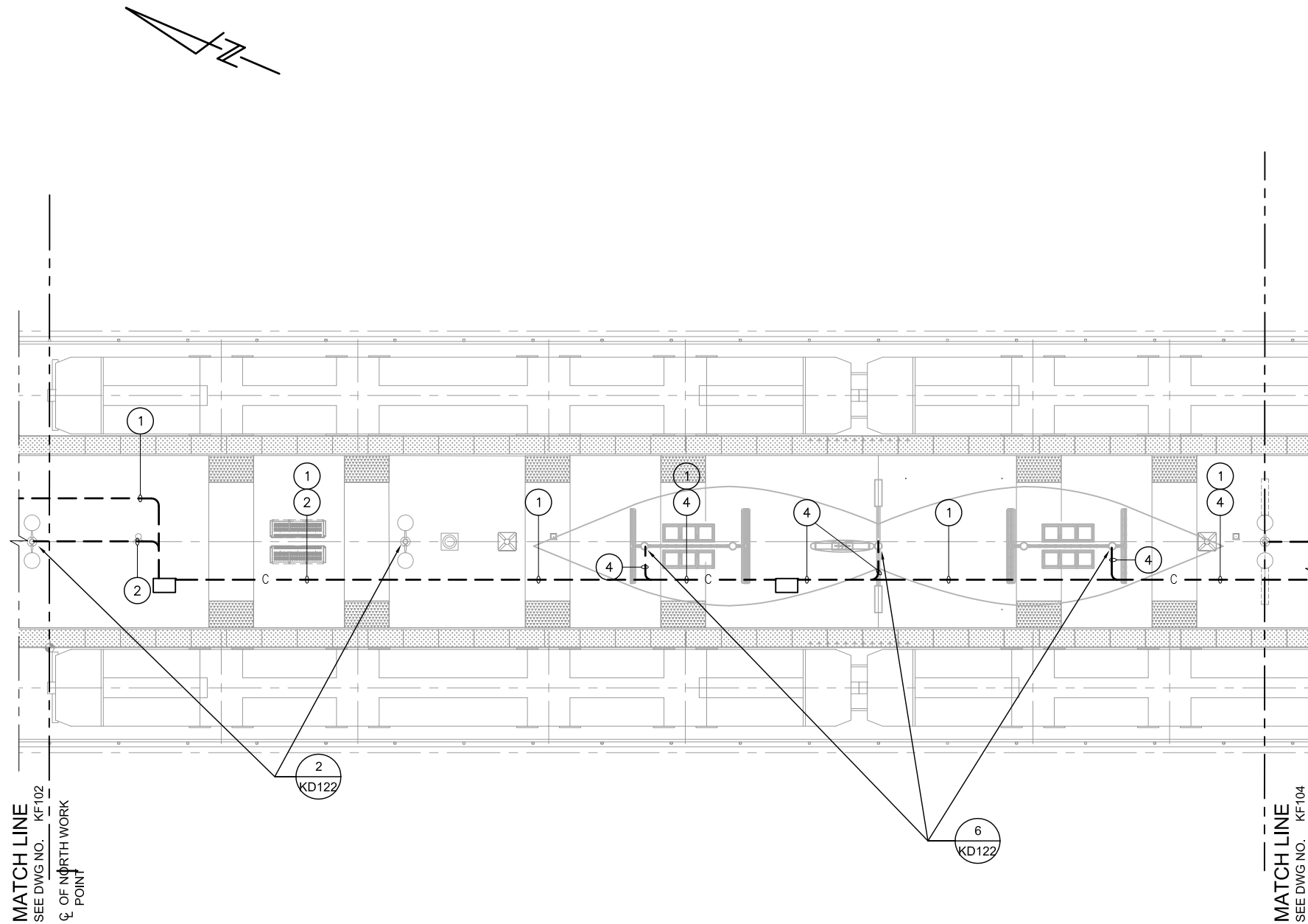
SHEET 1 OF 1  
 DRAWING NO. KF102  
 REVISION A

**SHEET NOTES:**

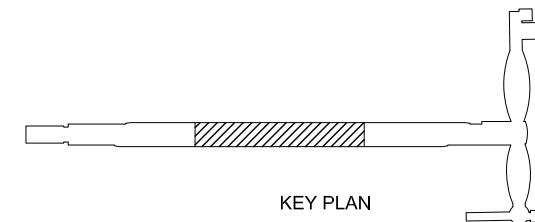
- ① INSTALL 4-4"C (COMM CABLES)
- ② INSTALL 4-1"C (COMM CABLES)
- ③ INSTALL 2-1"C (COMM CABLES)
- ④ INSTALL 4-2"C (COMM CABLES)

**NOTES:**

- 1. SEE ELECTRICAL PLANS FOR ADDITIONAL CONDUIT IN THIS AREA.
- 2. ALL CONDUIT BELOW GRADE IS PVC.
- 3. ALL CONDUIT 90° SWEEPS TO BASE OF COLUMNS AND RISERS TO REACH 6" ABOVE GRADE SHALL BE PVC COATED GRC
- 4. ALL EXPOSED CONDUIT HIGHER THAN 6" AFF SHALL BE GRC.



1 PLATFORM COMM LPLAN 2  
KF103 SCALE 1/8"=1'-0"

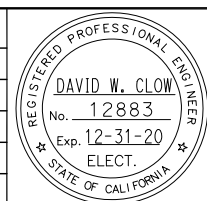


KEY PLAN



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NO.	DATE	REVISIONS
A	06/20	95% SUBMITTAL SET



SUBMITTED	
<p>4701 Patrick Henry Drive, Bldg. 10 phone (408) 970-9888 Santa Clara, CA 95054 fax (408) 970-9316 PROJECT NO. 205-18-01 www.aec-engineers.com</p>	
DESIGNED	CHECKED
D. Clow	K. Ngai
DRAWN	CADD FILE NAME
C. Basuki	801KF103



APPROVED	
CADD FILE DATE	SCALE
09/09/17	1/8"=1'-0"
SUBMITTAL DATE	BOARD APPROVAL DATE
06/29/20	

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT STORY STATION PLATFORM COMM PLAN 2		
PCA NO.	CONTRACT NO.	FILE LOCATION
000	C801	PROJECTWISE

SHEET	1
OF	
DRAWING NO.	KF103
REVISION	A

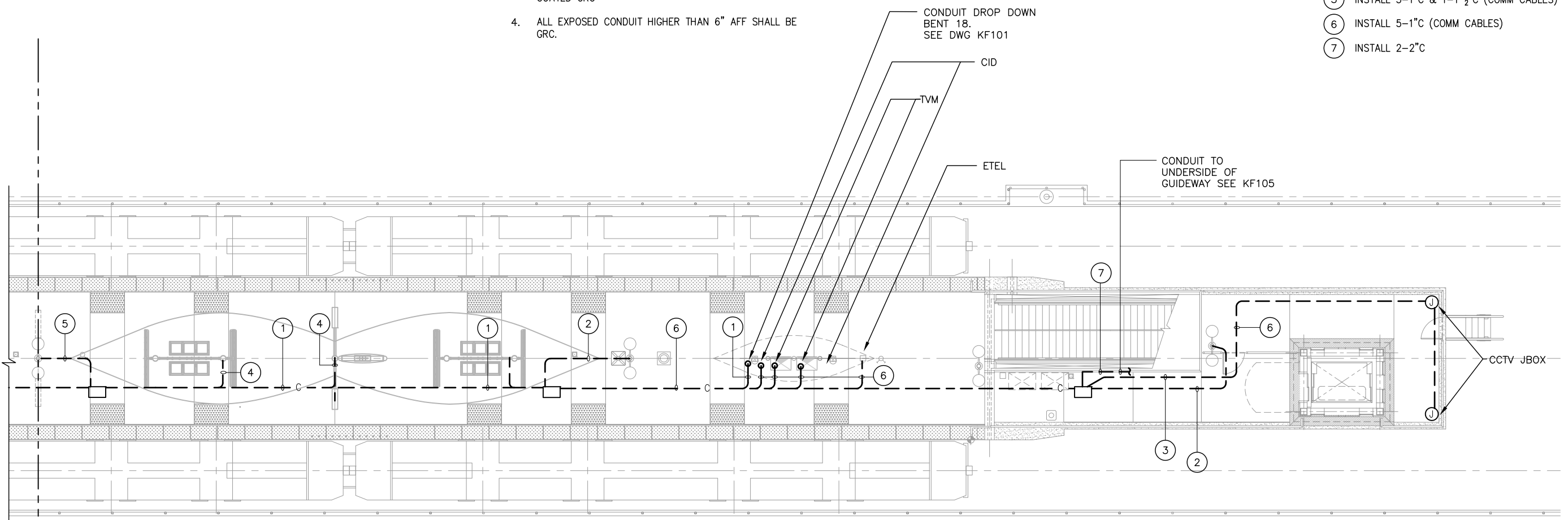


**NOTES:**

1. SEE ELECTRICAL PLANS FOR ADDITIONAL CONDUIT IN THIS AREA.
2. ALL CONDUIT BELOW GRADE IS PVC.
3. ALL CONDUIT 90° SWEEPS TO BASE OF COLUMNS AND RISERS TO REACH 6" ABOVE GRADE SHALL BE PVC COATED GRC
4. ALL EXPOSED CONDUIT HIGHER THAN 6" AFF SHALL BE GRC.

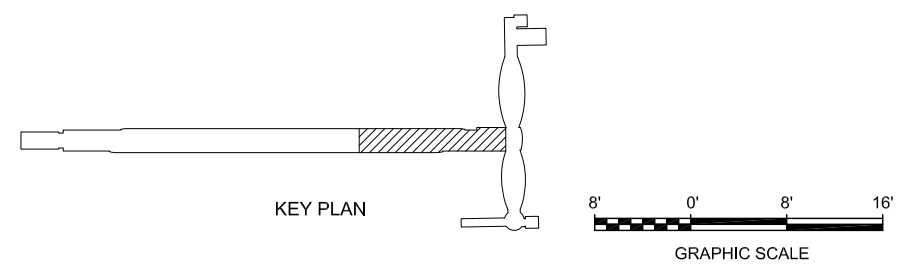
**SHEET NOTES:**

- ① INSTALL 4-4"C (COMM CABLES)
- ② INSTALL 4-1"C (COMM CABLES)
- ③ INSTALL 2-1"C (COMM CABLES)
- ④ INSTALL 4-2"C (COMM CABLES)
- ⑤ INSTALL 3-1"C & 1-1 1/2"C (COMM CABLES)
- ⑥ INSTALL 5-1"C (COMM CABLES)
- ⑦ INSTALL 2-2"C



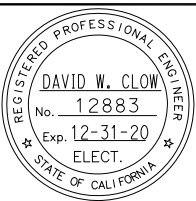
MATCH LINE  
SEE DWG NO. KF103

① PLATFORM COMM PLAN 3  
KF104 SCALE 1/8"=1'-0"



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NO.	DATE	REVISIONS
A	06/20	95% SUBMITTAL SET



**AE** Alliance Engineering Consultants, Inc.  
 4701 Patrick Henry Drive, Bldg. 10 Santa Clara, CA 95054  
 phone (408) 970-9888 fax (408) 970-9316  
 PROJECT NO. 205-18-01 www.aec-engineers.com

DESIGNED: D. Clow  
 CHECKED: K. Ngai  
 DRAWN: C. Basuki  
 CADD FILE NAME: 801KF104

**SA** Santa Clara Valley Transportation Authority

**BKF 100+** YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 09/09/17  
 SUBMITTAL DATE: 06/29/20  
 SCALE: 1/8"=1'-0"  
 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 STORY STATION  
 PLATFORM CMM PLAN 3

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

SHEET	1
OF	
DRAWING NO.	KF104
REVISION	A

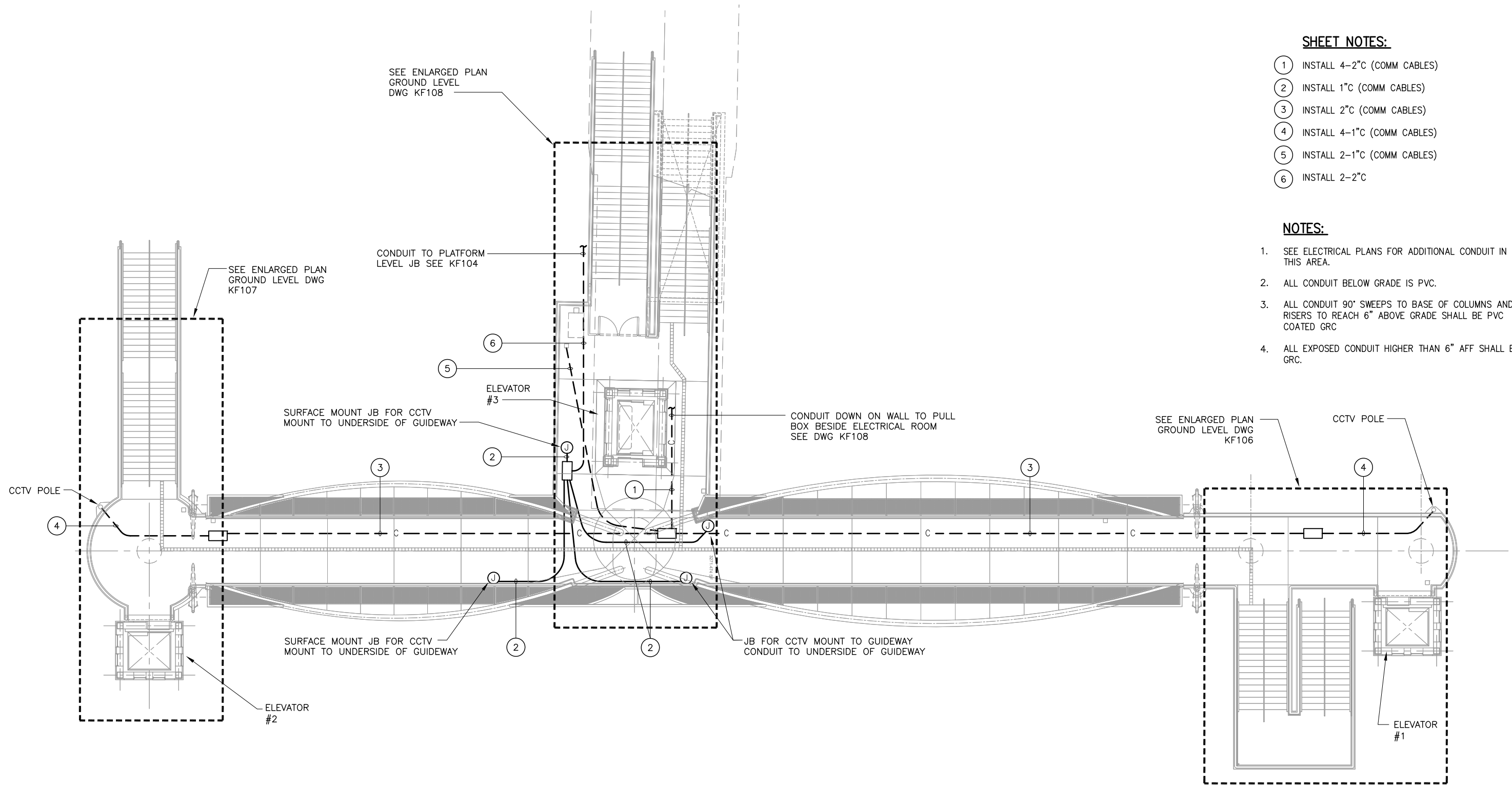


**SHEET NOTES:**

- ① INSTALL 4-2"C (COMM CABLES)
- ② INSTALL 1"C (COMM CABLES)
- ③ INSTALL 2"C (COMM CABLES)
- ④ INSTALL 4-1"C (COMM CABLES)
- ⑤ INSTALL 2-1"C (COMM CABLES)
- ⑥ INSTALL 2-2"C

**NOTES:**

- 1. SEE ELECTRICAL PLANS FOR ADDITIONAL CONDUIT IN THIS AREA.
- 2. ALL CONDUIT BELOW GRADE IS PVC.
- 3. ALL CONDUIT 90° SWEEPS TO BASE OF COLUMNS AND RISERS TO REACH 6" ABOVE GRADE SHALL BE PVC COATED GRC
- 4. ALL EXPOSED CONDUIT HIGHER THAN 6" AFF SHALL BE GRC.

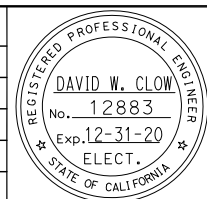


1 PEDESTRIAN OVERCROSSING COMM PLAN  
 KF105 SCALE 1/8"=1'-0"



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NO.	DATE	REVISIONS
A	06/20	95% SUBMITTAL SET



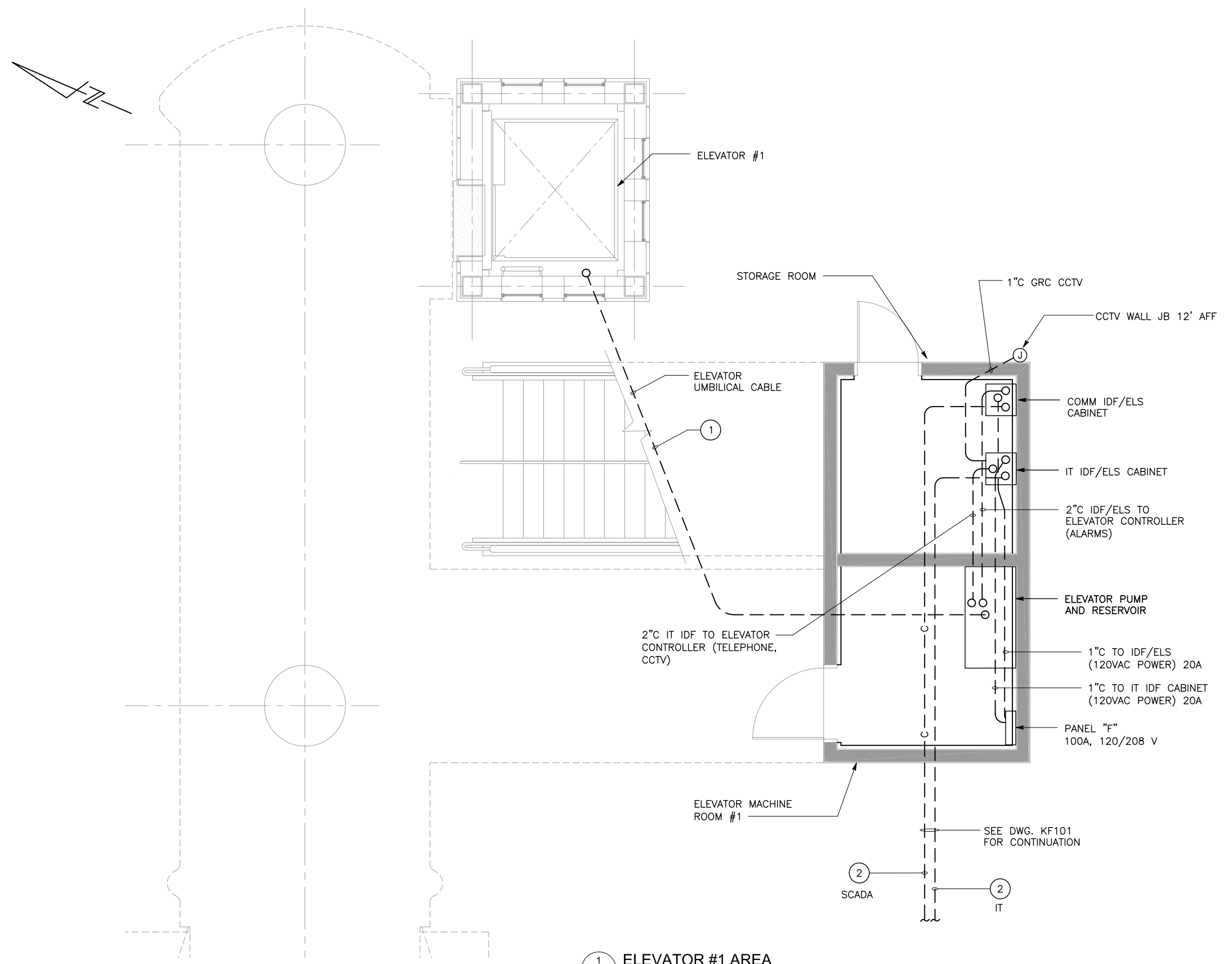
SUBMITTED <b>AEC</b> Alliance Engineering Consultants, Inc. 4701 Patrick Henry Drive, Bldg. 10 phone (408) 970-9888 Santa Clara, CA 95054 fax (408) 970-9316 PROJECT NO. 205-18-01 www.aec-engineers.com	
DESIGNED D. Clow	CHECKED K. Ngai
DRAWN C. Basuki	CADD FILE NAME 801KF105



APPROVED <b>BKF100+</b> YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE 09/09/17	SCALE 1/8"=1'-0"
SUBMITTAL DATE 06/29/20	BOARD APPROVAL DATE

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT STORY STATION PEDESTRIAN OVERCROSSING COMM PLAN		
PCA NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE

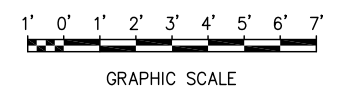
SHEET OF	1
DRAWING NO.	KF105
REVISION	B



- SHEET NOTES:**
1. INSTALL 2-2"C, ELEVATOR UMBILICAL CABLE.
  2. INSTALL 2"C (COMM CABLES)

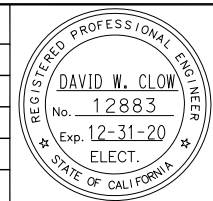
- NOTES:**
1. SEE ELECTRICAL PLANS FOR ADDITIONAL CONDUIT IN THIS AREA.
  2. ALL CONDUIT BELOW GRADE IS PVC.
  3. ALL CONDUIT 90° SWEEPS TO BASE OF COLUMNS AND RISERS TO REACH 6" ABOVE GRADE SHALL BE PVC COATED GRC
  4. ALL EXPOSED CONDUIT HIGHER THAN 6" AFF SHALL BE GRC.

1 ELEVATOR #1 AREA  
KF106 SCALE 3/8"=1'-0"



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NO.	DATE	REVISIONS
A	06/20	95% SUBMITTAL SET



**Alliance Engineering Consultants, Inc.**  
4701 Patrick Henry Drive, Bldg. 10 Santa Clara, CA 95054  
phone (408) 970-9888 fax (408) 970-9316 www.aec-engineers.com

DESIGNED: D. Clow  
CHECKED: K. Ngai  
DRAWN: C. Basuki  
CADD FILE NAME: 801KF106



**BKF 100+ YEARS**  
ENGINEERS / SURVEYORS / PLANNERS

APPROVED: [Signature]  
CADD FILE DATE: 09/09/17  
SUBMITTAL DATE: 06/29/20  
SCALE: 3/8"=1'-0"  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
STORY STATION  
ELEVATOR #1 AREA  
COMM PLAN

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

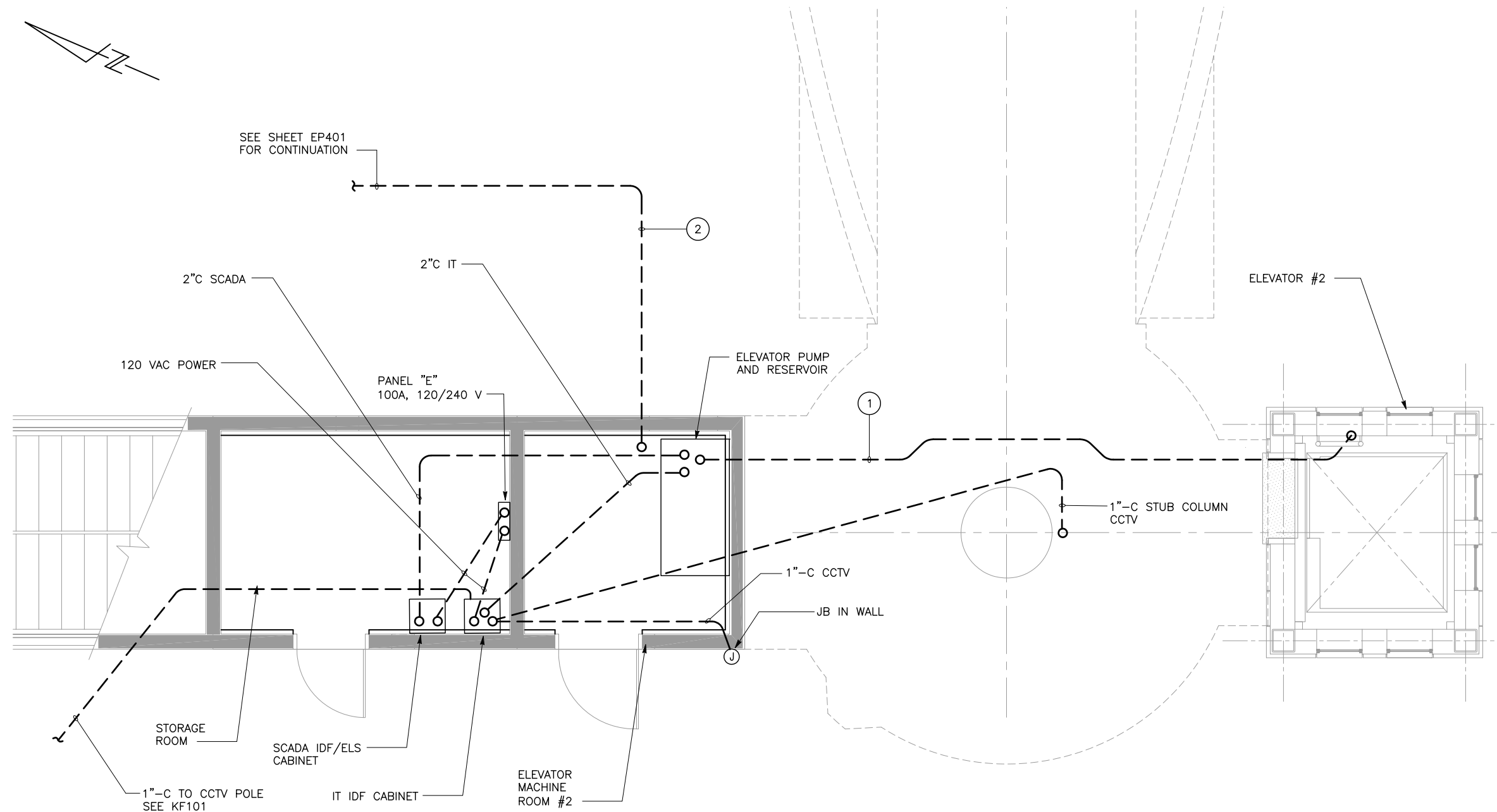
SHEET 1 OF 1  
DRAWING NO. KF106  
REVISION A

**SHEET NOTES:**

- ① INSTALL 2-2"C, ELEVATOR UMBILICAL CABLE.
- ② INSTALL 2"C (COMM CABLES)

**NOTES:**

- 1. SEE ELECTRICAL PLANS FOR ADDITIONAL CONDUIT IN THIS AREA.
- 2. ALL CONDUIT BELOW GRADE IS PVC.
- 3. ALL CONDUIT 90° SWEEPS TO BASE OF COLUMNS AND RISERS TO REACH 6" ABOVE GRADE SHALL BE PVC COATED GRC
- 4. ALL EXPOSED CONDUIT HIGHER THAN 6" AFF SHALL BE GRC.

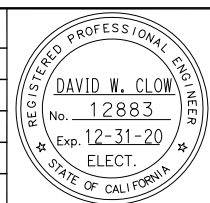


① ELEVATOR #2 AREA  
KF107 SCALE 3/8"=1'-0"



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NO.	DATE	REVISIONS
A	06/20	95% SUBMITTAL SET



**AE** Alliance Engineering Consultants, Inc.  
 4701 Patrick Henry Drive, Bldg. 10 phone (408) 970-9888  
 Santa Clara, CA 95054 fax (408) 970-9316  
 PROJECT NO. 205-18-01 www.aec-engineers.com

DESIGNED: D. Clow  
 CHECKED: K. Ngai  
 DRAWN: C. Basuki  
 CADD FILE NAME: 801KF107

**VA** Santa Clara Valley Transportation Authority

**BKF 100+** YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 09/09/17  
 SUBMITTAL DATE: 06/29/20  
 SCALE: 3/8"=1'-0"  
 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 STORY STATION  
 ELEVATOR #2 AREA  
 COMM PLAN

SHEET 1 OF 1  
 DRAWING NO. KF107  
 REVISION A

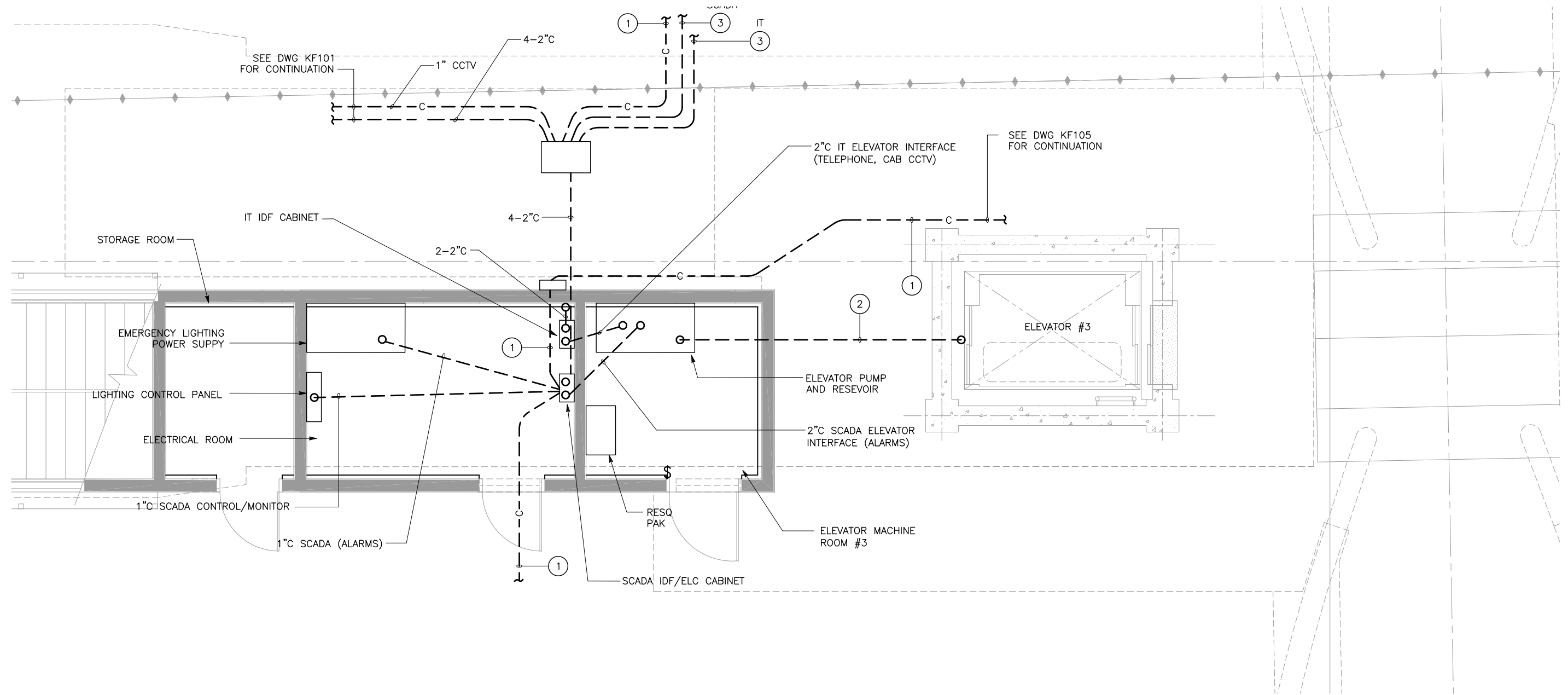
PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

**NOTES:**

1. SEE ELECTRICAL PLANS FOR ADDITIONAL CONDUIT IN THIS AREA.
2. ALL CONDUIT BELOW GRADE IS PVC.
3. ALL CONDUIT 90° SWEEPS TO BASE OF COLUMNS AND RISERS TO REACH 6" ABOVE GRADE SHALL BE PVC COATED GRC.
4. ALL EXPOSED CONDUIT HIGHER THAN 6" AFF SHALL BE GRC.

**SHEET NOTES:**

- ① INSTALL 2-2" C (COMM CABLES)
- ② INSTALL 2-2" C (ELEVATOR UMBILICAL CABLE)
- ③ INSTALL 1 1/4" C, 3/4" (ELEVATOR 277/480 V) 1#8 (G)

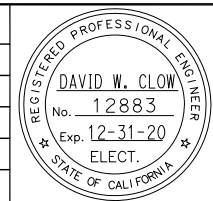


1 ENLARGED PLAN - ELEVATOR #3 AREA  
 KF108 SCALE 3/8"=1'-0"



Jun 23, 2020 - 4:08pm M:\205-18-01 EBRC\03\_COMM\801KF108.dwg

NO.	DATE	REVISIONS
A	06/20	95% SUBMITTAL SET



**AE** Alliance Engineering Consultants, Inc.  
 4701 Patrick Henry Drive, Bldg. 10 Santa Clara, CA 95054  
 phone (408) 970-9888 fax (408) 970-9316  
 PROJECT NO. 205-18-01 www.aec-engineers.com

DESIGNED: D. Clow  
 CHECKED: K. Ngai  
 DRAWN: C. Basuki  
 CADD FILE NAME: 801KF108

**SVTA** Santa Clara Valley Transportation Authority

**BKF 100+** YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 09/09/17  
 SUBMITTAL DATE: 06/29/20  
 SCALE: 3/8"=1'-0"  
 BOARD APPROVAL DATE:

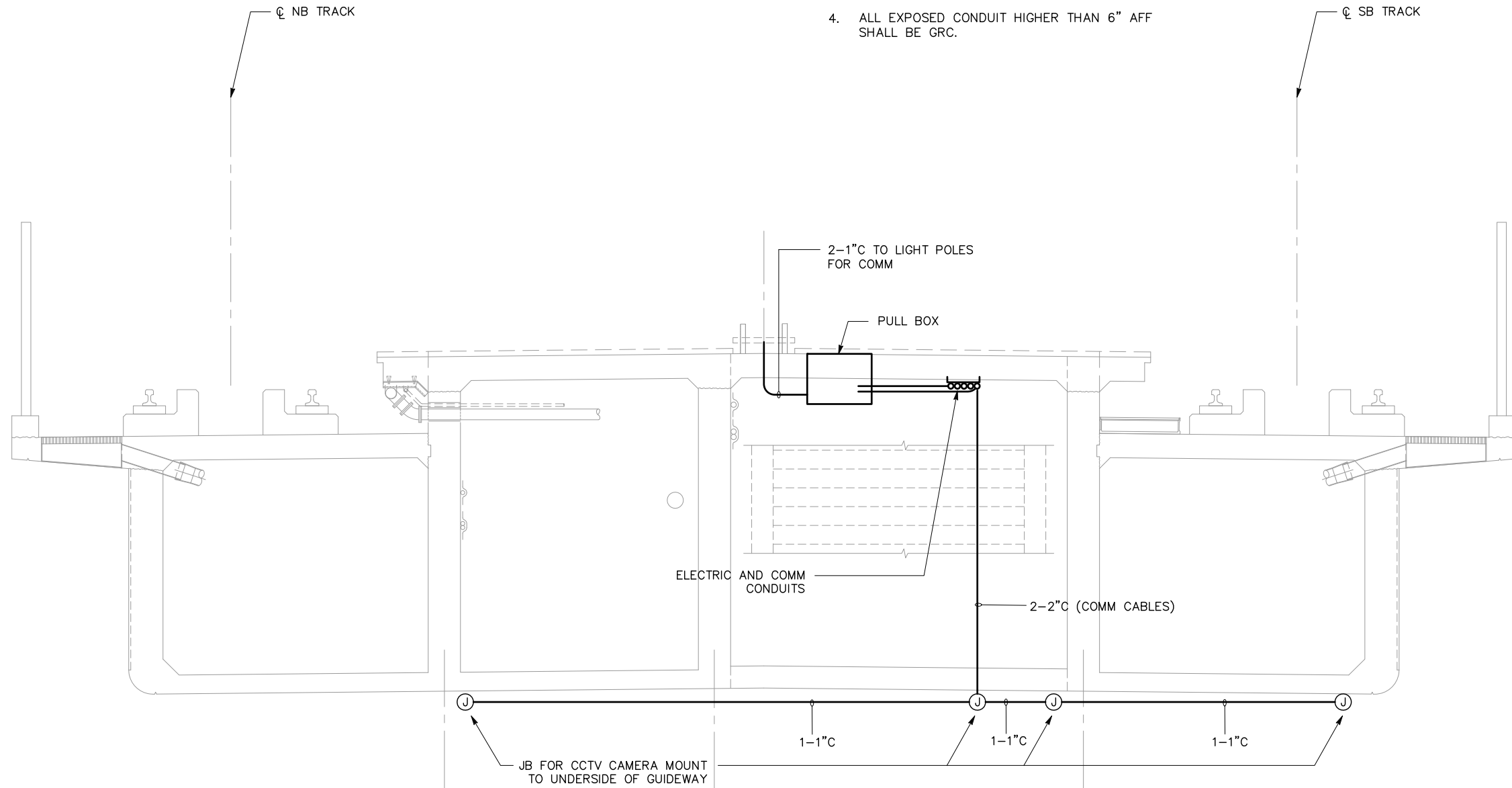
EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 STORY STATION  
 ELEVATOR #3 AREA  
 COMM PLAN

SHEET 1 OF 1  
 DRAWING NO. KF108  
 REVISION B

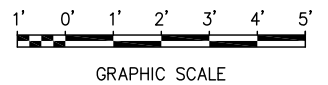
PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

**NOTES:**

1. SEE ELECTRICAL PLANS FOR ADDITIONAL CONDUIT IN THIS AREA.
2. ALL CONDUIT BELOW GRADE IS PVC.
3. ALL CONDUIT 90° SWEEPS TO BASE OF COLUMNS AND RISERS TO REACH 6" ABOVE GRADE SHALL BE PVC COATED GRC.
4. ALL EXPOSED CONDUIT HIGHER THAN 6" AFF SHALL BE GRC.

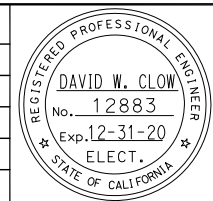


1 STORY STATION PLATFORM  
 KF109 SCALE 1/2"=1'-0"



c:\p1\2020 - 4-10pm M:\205-18-01 EBRC\05\_COMM\801KF109.dwg

NO.	DATE	REVISIONS
A	06/20	95% SUBMITTAL SET



SUBMITTED <b>AEC</b> Alliance Engineering Consultants, Inc. 4701 Patrick Henry Drive, Bldg. 10 phone (408) 970-9888 Santa Clara, CA 95054 fax (408) 970-9316 PROJECT NO. 205-18-01 www.aec-engineers.com	
DESIGNED D. Clow	CHECKED K. Ngai
DRAWN C. Basuki	CADD FILE NAME 801KF109



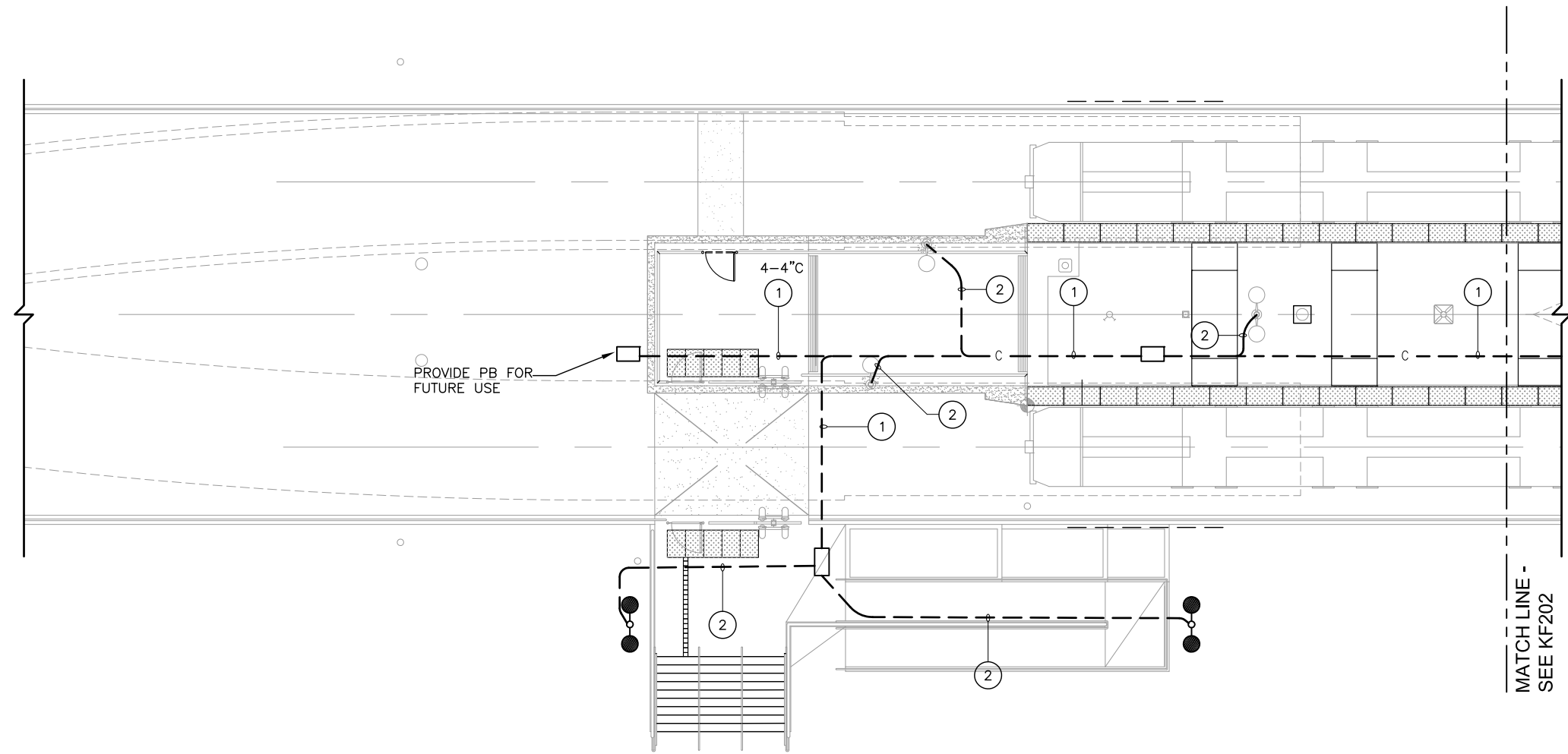
APPROVED <b>BKF 100+</b> YEARS ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE 09/09/17	SCALE 1/2"=1'-0"
SUBMITTAL DATE 06/29/20	BOARD APPROVAL DATE

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT STORY STATION COMM DETAILS		
PCA NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE

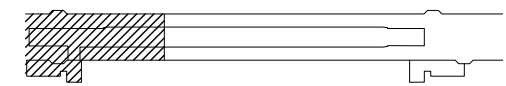
SHEET OF	1
DRAWING NO.	KF109
REVISION	A

**SHEET NOTES:**

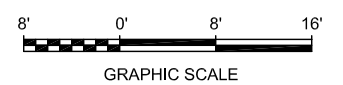
- ① INSTALL 4-4°C (COMM CABLES)
- ② INSTALL 4-1°C (COMM CABLES)



① PLATFORM COMM PLAN 1  
SCALE 1/8"=1'-0"



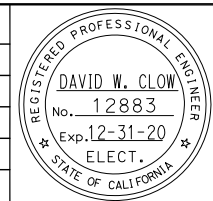
KEY PLAN



GRAPHIC SCALE

c:\p1\2020-06-23\2020-06-23-412pm\_M:\205-18-01\_EBRC\05\_COMM\801KF201.dwg

NO.	DATE	REVISIONS
A	06/20	95% SUBMITTAL SET



**AE** Alliance Engineering Consultants, Inc.  
 4701 Patrick Henry Drive, Bldg. 10 phone (408) 970-9888  
 Santa Clara, CA 95054 fax (408) 970-9316  
 PROJECT NO. 205-18-01 www.aec-engineers.com

DESIGNED: D. Clow      CHECKED: K. Ngai  
 DRAWN: C. Basuki      CADD FILE NAME: 801KF201

**Santa Clara Valley Transportation Authority**

**BKF 100+**  
 YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

APPROVED: [Signature]  
 CADD FILE DATE: 09/09/17      SCALE: 1/8"=1'-0"  
 SUBMITTAL DATE: 06/29/20      BOARD APPROVAL DATE:

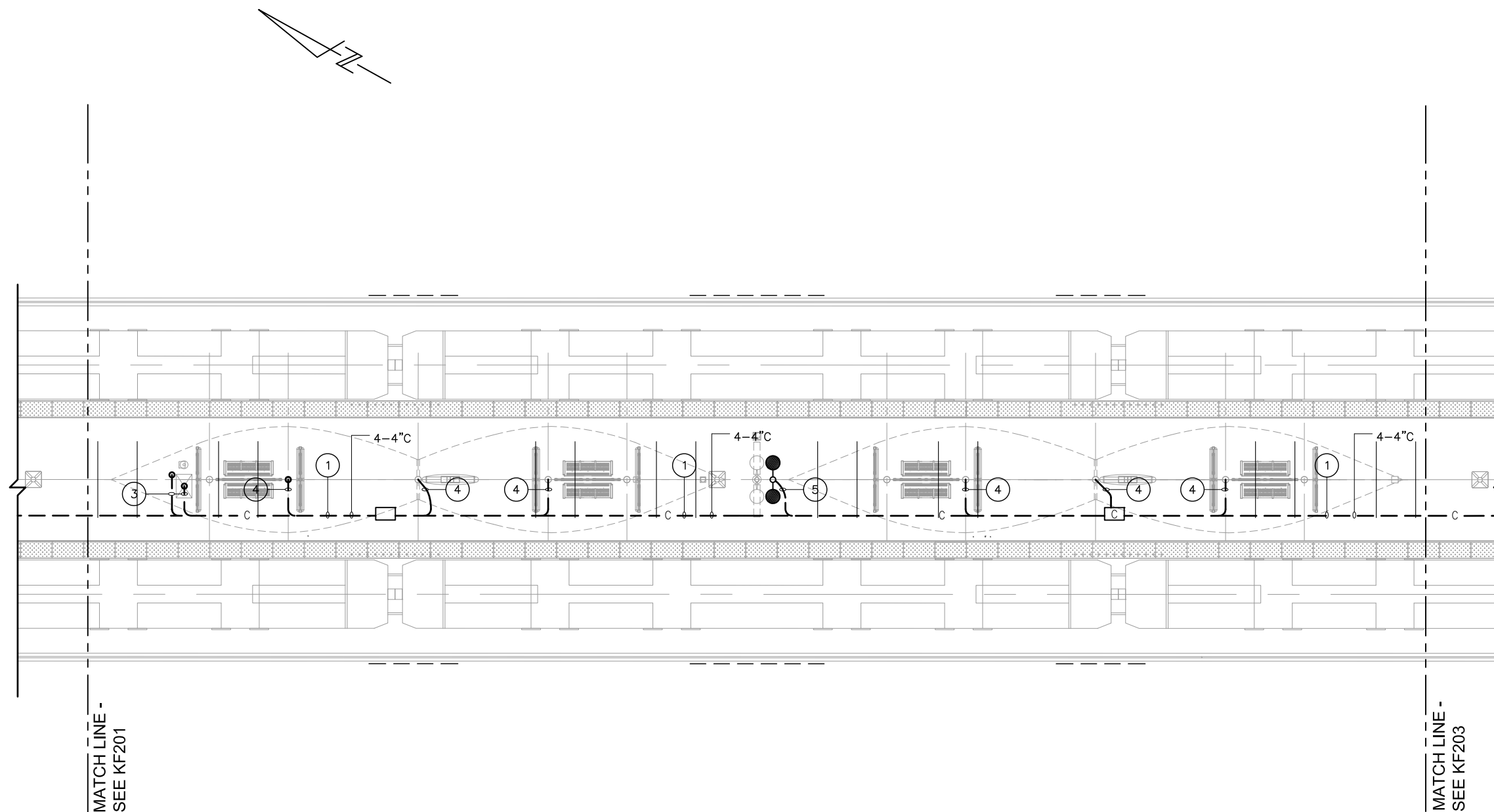
EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 EASTRIDGE STATION  
 PLATFORM COMM PLAN 1

SHEET 1 OF 1  
 DRAWING NO. KF201  
 REVISION B

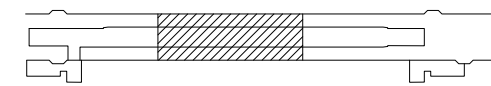
PCA NO. 000      CONTRACT NO. C801      FILE LOCATION PROJECTWISE

**SHEET NOTES:**

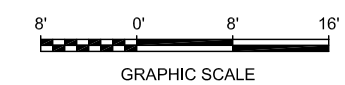
- ① INSTALL 4-4"C (COMM CABLES)
- ② NOT USED
- ③ INSTALL 1-2"C (COMM CABLES)
- ④ INSTALL 4-2"C (COMM CABLES)
- ⑤ INSTALL 3-1"C & 1-1 1/2"C (COMM CABLES)



1 PLATFORM COMM PLAN 2  
 KF202 SCALE 1/8"=1'-0"

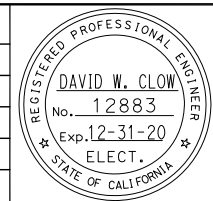


KEY PLAN



c:\p1\2020-06-23\_14:46:00 - 4:14pm M:\205-18-01 EBRC\05\_COMM\801KF202.dwg

NO.	DATE	REVISIONS
A	06/20	95% SUBMITTAL SET



**AE** Alliance Engineering Consultants, Inc.  
 4701 Patrick Henry Drive, Bldg. 10 phone (408) 970-9888  
 Santa Clara, CA 95054 fax (408) 970-9316  
 PROJECT NO. 205-18-01 www.aec-engineers.com

DESIGNED: D. Clow CHECKED: K. Ngai  
 DRAWN: C. Basuki CADD FILE NAME: 801KF202

**SVTA** Santa Clara Valley Transportation Authority

**BKF 100+** YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 09/09/17 SCALE: 1/8"=1'-0"  
 SUBMITTAL DATE: 06/29/20 BOARD APPROVAL DATE:

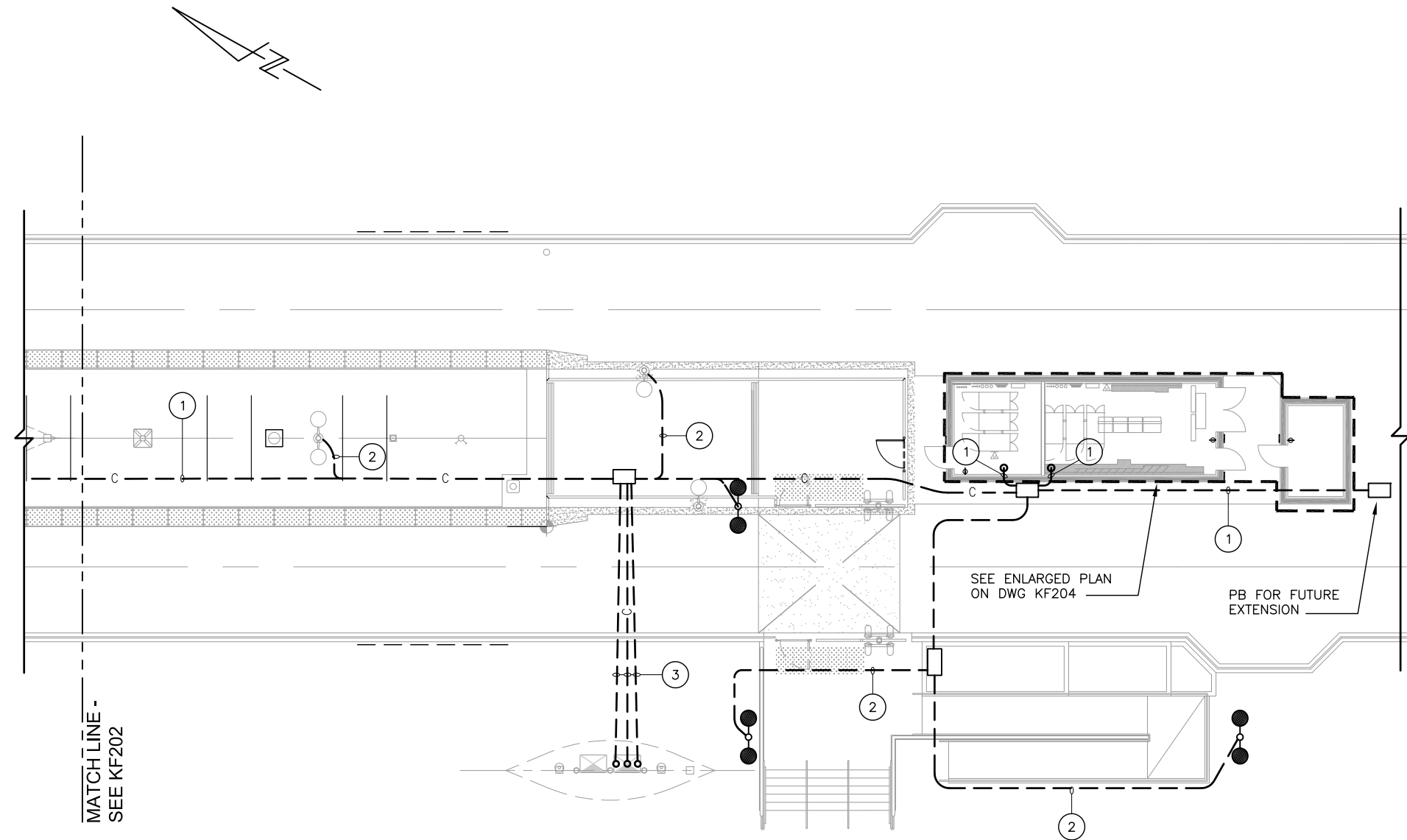
EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 EASTRIDGE STATION  
 PLATFORM COMM PLAN 2

SHEET 1 OF 1  
 DRAWING NO. KF202  
 REVISION B

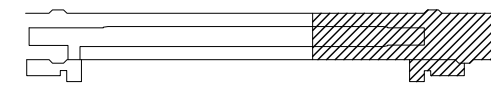
PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

**SHEET NOTES:**

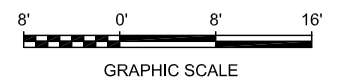
- ① INSTALL 4-4"C (COMM CABLES)
- ② INSTALL 4-1"C (COMM CABLES)
- ③ INSTALL 2-1"C (COMM CABLES)



① PLATFORM COMM PLAN 3  
KF203 SCALE 1/8"=1'-0"

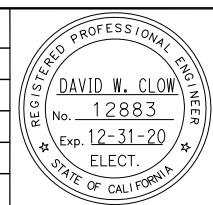


KEY PLAN



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NO.	DATE	REVISIONS
A	06/20	95% SUBMITTAL SET



SUBMITTED	
 4701 Patrick Henry Drive, Bldg. 10 phone (408) 970-9888 Santa Clara, CA 95054 fax (408) 970-9316 PROJECT NO. 205-18-01 www.aec-engineers.com	
DESIGNED	CHECKED
D. Clow	K. Ngai
DRAWN	CADD FILE NAME
C. Basuki	801KF203



APPROVED	
 ENGINEERS / SURVEYORS / PLANNERS	
CADD FILE DATE	SCALE
09/09/17	1/8"=1'-0"
SUBMITTAL DATE	BOARD APPROVAL DATE
06/29/20	

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT EASTRIDGE STATION PLATFORM COMM PLAN 3			SHEET OF DRAWING NO. KF203 REVISION B
PCA NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE	



CONDUIT SCHEDULE		
NO.	FUNCTION	* DUCT SIZE (INCH)
1	TRACTION POWER POSITIVE	5
2	TRACTION POWER POSITIVE - SPARE	5
3	TRACTION POWER NEGATIVE	5
4	TRACTION POWER NEGATIVE - SPARE	5
5	PRIMARY FEEDER	5
6	PRIMARY FEEDER - SPARE	5
7	SUBSTATION CONTROLS/COMMUNICATIONS	4
8	COMMUNICATIONS	4
9	COMMUNICATIONS - SPARE	4
10	LRT SIGNAL - CSD (TK/V)	4
11	LRT SIGNAL - CSD (SM)	4
12	NOT USED	-
13	NOT USED	-
14	LRT SIGNAL - POWER	4
15	LRT SIGNAL - CSD	4
16	LRT SIGNAL - CSD (SPARE)	4
17	STATION PLATFORM POWER	3
18	SPARE	4
19	SPARE	4
20	TRAFFIC SIGNAL INTERFACE	3
21	LRT SIGNAL - LOCAL (TK/V)	4
22	LRT SIGNAL - LOCAL (TK/GCP)	4
23	LRT SIGNAL - LOCAL (SM)	4
24	LRT SIGNAL - LOCAL (X-GATE/FLASHER)	4
25	LRT SIGNAL - LOCAL (SIG.)	3
26	DISCONNECT SWITCH - CSD	4
27	DISCONNECT SWITCH - COMM.	4
27a	DISCONNECT SWITCH - COMM.	2
27b	SPARE	2
28	COMMUNICATION - CCTV	2
28a	POWER - CCTV	2
29	COMMUNICATION LINE LEASED	4
30	STATION PLATFORM - COMM.	2
40	TELEPHONE BETWEEN PLATFORM	4
41	DRAINAGE CABLE	4
42	IDS POWER	2
43	IDS COMM	3
44	IDS SENSOR	2
SP	SPARE	4

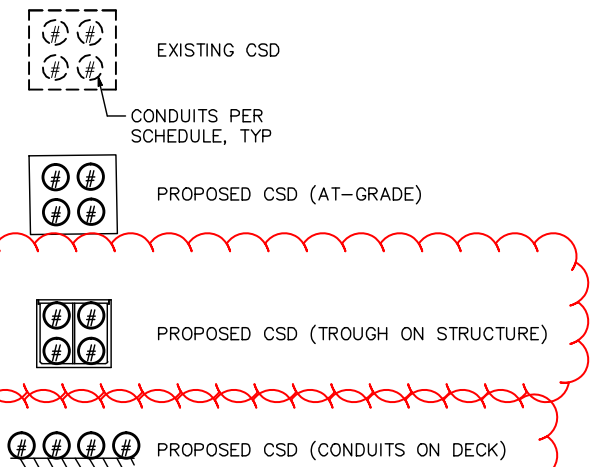
\* UNLESS OTHERWISE NOTED

**GENERAL NOTES:**

- ALL CONDUIT TO BE SCHEDULE 40 PVC UNLESS OTHERWISE NOTED OR SPECIFIED.
- ALL CONDUIT STUB-UPS ABOVE GROUND TO BE PVC COATED GR.
- THE ELEVATION OF DUCTS, BETWEEN PULL BOXES, WHERE THE GRADE DOES NOT PROVIDE A NATURAL SLOPE INTO THE PULL BOXES, SHALL BE HIGHEST IN THE CENTER AND HAVE A CONTINUOUS SLOPE DOWNWARD TOWARD THE PULL BOXES WITH A SLOPE OF NOT LESS THAN 0.6%, AND 1.2% WITHIN 50 FEET OF THE PULLBOXES, WHENEVER POSSIBLE.
- ALL PULL BOXES SHALL BE LOCATED WITH LONG SIDE PARALLEL TO THE TRACKS, UNLESS OTHERWISE NOTED.
- THE CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF ALL UNDERGROUND UTILITIES. THE CONTRACTOR SHALL CONTACT USA (800-227-2600) AT LEAST 48 HOURS BEFORE BEGINNING WORK. WHERE MARKINGS ARE NEAR PROPOSED NEW WORK, THE CONTRACTOR SHALL LOCATE UNDERGROUND UTILITIES BY POTHOILING PRIOR TO EXCAVATING. DISCOVERY OF ANY CONFLICTS WITH EXISTING UTILITIES SHALL BE PROMPTLY BROUGHT TO VTA'S ATTENTION FOR DIRECTION AND APPROVAL.
- EXISTING IMPROVEMENTS, INCLUDING SUBSTRUCTURES, THAT ARE DAMAGED BY THE CONTRACTOR, WHICH ARE NOT DESIGNATED BY THE PLANS OR SPECIFICATIONS TO BE DISTURBED, SHALL BE RESTORED OR REPAIRED TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
- REINFORCED CONCRETE ENCASUREMENT IS REQUIRED WHENEVER THE CSD CROSSES UNDER TRACKS, IS UNDER STATION FOUNDATION FOOTING, HEADER WALLS AND RETAINING WALLS. EXTEND REINFORCEMENT 6 FEET BEYOND THE OUTER RAIL AND 4 FEET FROM THE END OF ANY STRUCTURE.
- FOR ROUTING OF CORROSION MONITORING CONDUITS, SEE CC DRAWINGS.

Need to coordinate conduit detailing across structural hinges.

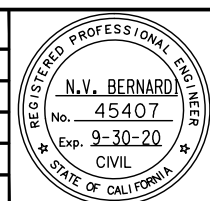
**LEGEND**



Need to coordinate surface mounted conduit details with Signals/Communications

Jun 24, 2020 - 4:25pm C:\cadd\ib\p\cherranada\west\mas8381\801EC000.dwg

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



SUBMITTED

**BKF 100+**  
YEARS  
ENGINEERS / SURVEYORS / PLANNERS

DESIGNED: B. Silkwood  
CHECKED: M. Cosentino

DRAWN: A. Hernandez  
CADD FILE NAME: 801EC000.dwg

Santa Clara Valley  
Transportation  
Authority

APPROVED

**BKF 100+**  
YEARS  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/06/20  
SCALE: NTS

SUBMITTAL DATE: 06/29/20  
BOARD APPROVAL DATE:

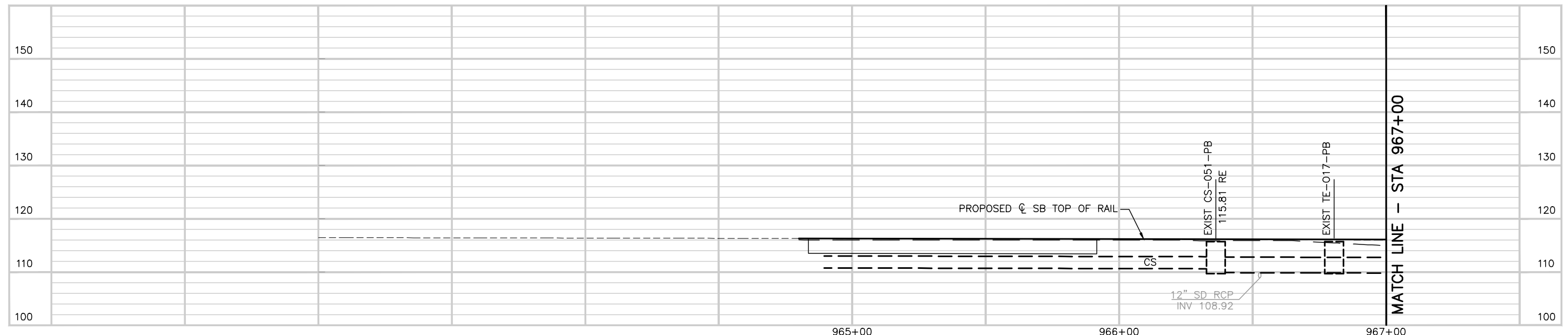
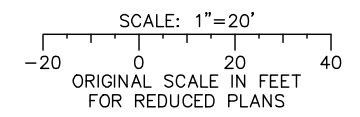
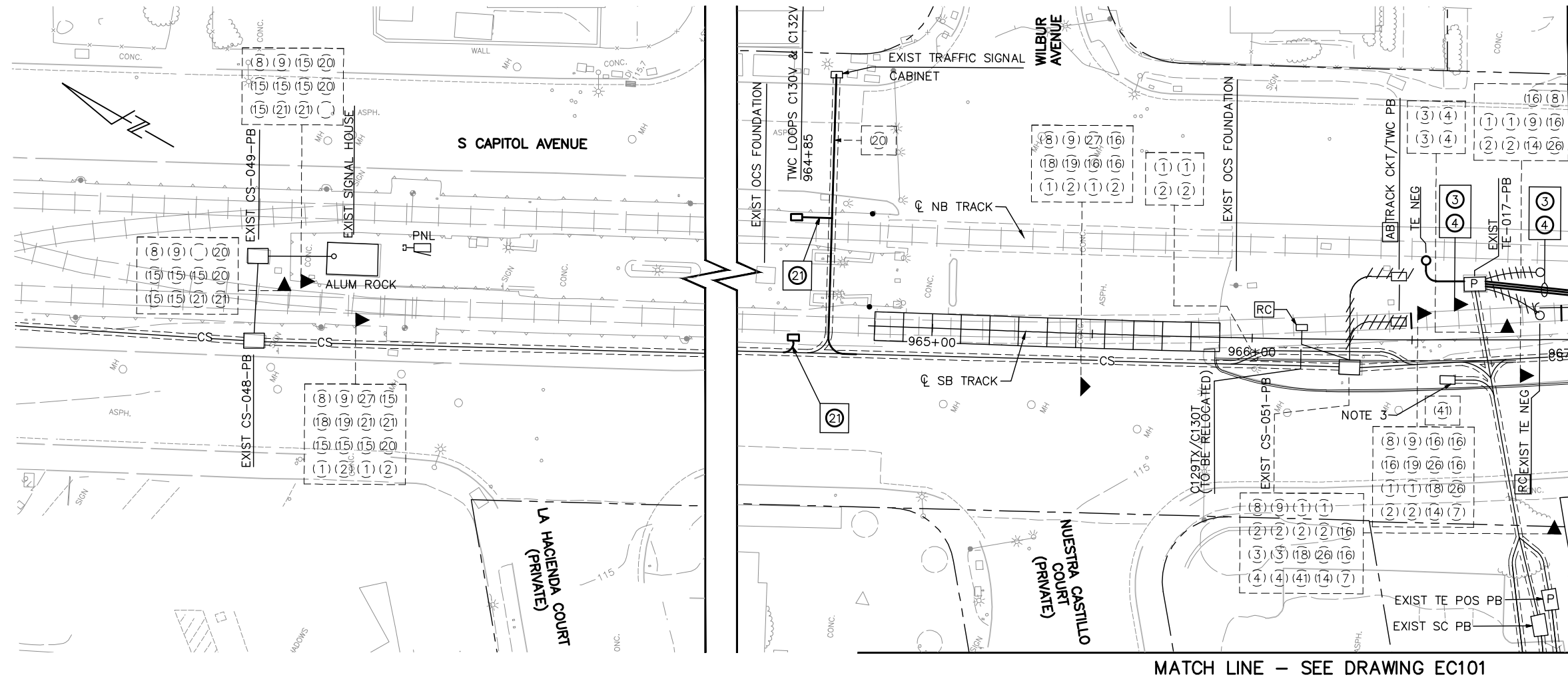
EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
ELECTRICAL  
COMBINED SYSTEM DUCT  
LEGEND AND NOTES

PCA NO.: 000  
CONTRACT NO.: C801  
FILE LOCATION: PROJECTWISE

SHEET OF: EC000  
DRAWING NO.: EC000  
REVISION: C

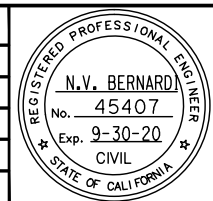
**NOTES:**

1. FOR ABBREVIATIONS AND LEGEND, SEE GN DRAWINGS.
2. STATION/OFFSET ARE REFERENCED TO SB TRACK UNLESS OTHERWISE NOTED.
3. EXISTING TYPE N9 PULLBOX FOR CONDUIT #41.



Jun 24, 2020 - 4:25pm C:\cadd\ba\cherran\west\cadd\801EC001.dwg

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



**BKF 100+ YEARS**  
**ENGINEERS / SURVEYORS / PLANNERS**  
 DESIGNED: B. Silkwood  
 CHECKED: M. Cosentino  
 DRAWN: A. Hernandez  
 CADD FILE NAME: 801EC001.dwg



**BKF 100+ YEARS**  
**ENGINEERS / SURVEYORS / PLANNERS**  
 CADD FILE DATE: 03/06/20  
 SUBMITTAL DATE: 06/29/20  
 SCALE: 1"=20' H; 1"=10' V  
 BOARD APPROVAL DATE:

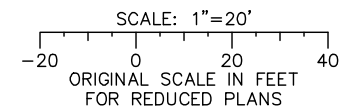
**EASTRIDGE TO BART REGIONAL CONNECTOR**  
**CAPITOL EXPRESSWAY LIGHT RAIL PROJECT**  
**ELECTRICAL**  
**COMBINED SYSTEM DUCT**  
**STA 964+80 TO 967+00**  
 PCA NO.: 000  
 CONTRACT NO.: C801  
 FILE LOCATION: PROJECTWISE

SHEET OF	EC001
DRAWING NO.	EC001
REVISION	C

**NOTES:**

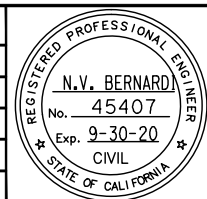
1. FOR ABBREVIATIONS AND LEGEND, SEE GN DRAWINGS.
2. STATION/OFFSET ARE REFERENCED TO SB TRACK UNLESS OTHERWISE NOTED.

MATCH LINE – SEE DRAWING EC001



h:\proj\24\_2020 - 4-25pm C:\cadd\h\p\aherrandez\west\omas8381\801EC101.dwg

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



SUBMITTED	
DESIGNED	CHECKED
B. Silkwood	M. Cosentino
DRAWN	CADD FILE NAME
A. Hernandez	801EC101.dwg

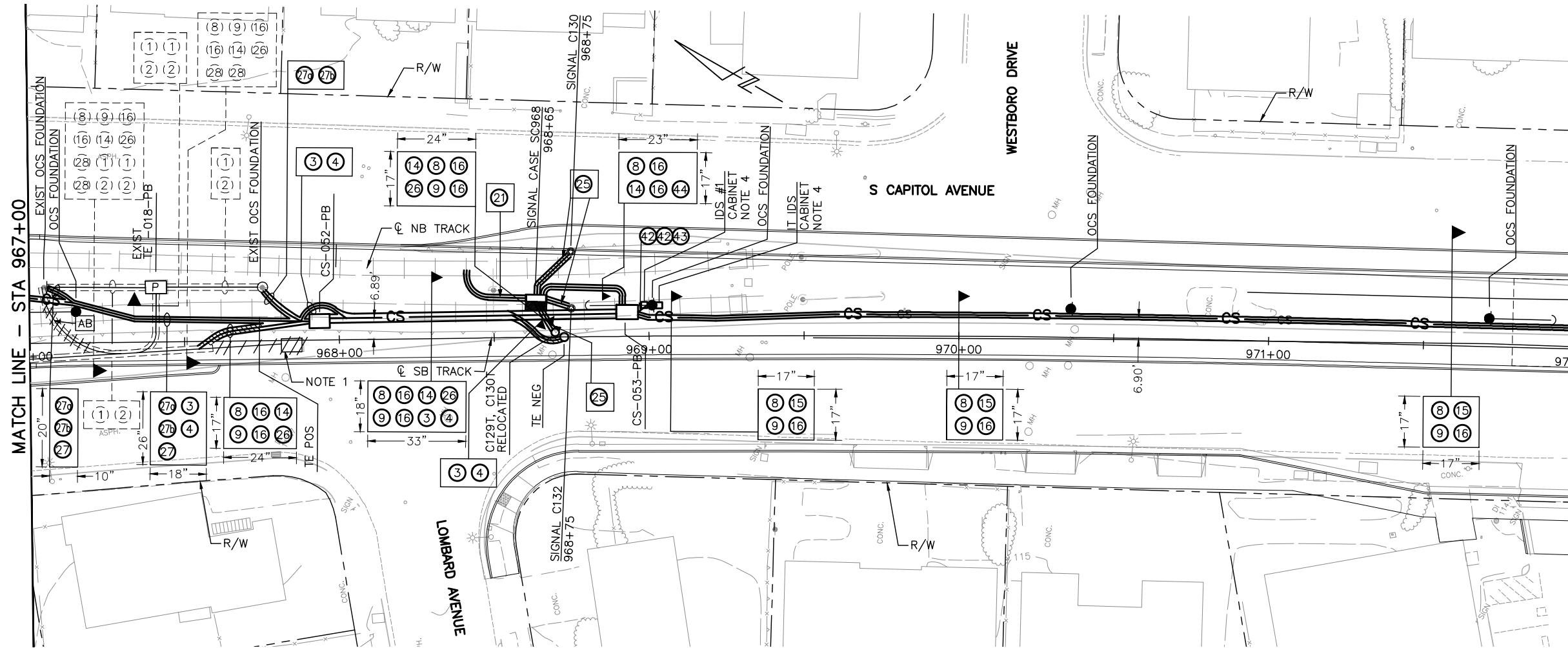


APPROVED	
CADD FILE DATE	SCALE
03/06/20	1" = 20'
SUBMITTAL DATE	BOARD APPROVAL DATE
06/29/20	

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT ELECTRICAL COMBINED SYSTEM DUCT STA 964+80 TO 967+00			SHEET OF DRAWING NO. EC101 REVISION C
PCA NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE	

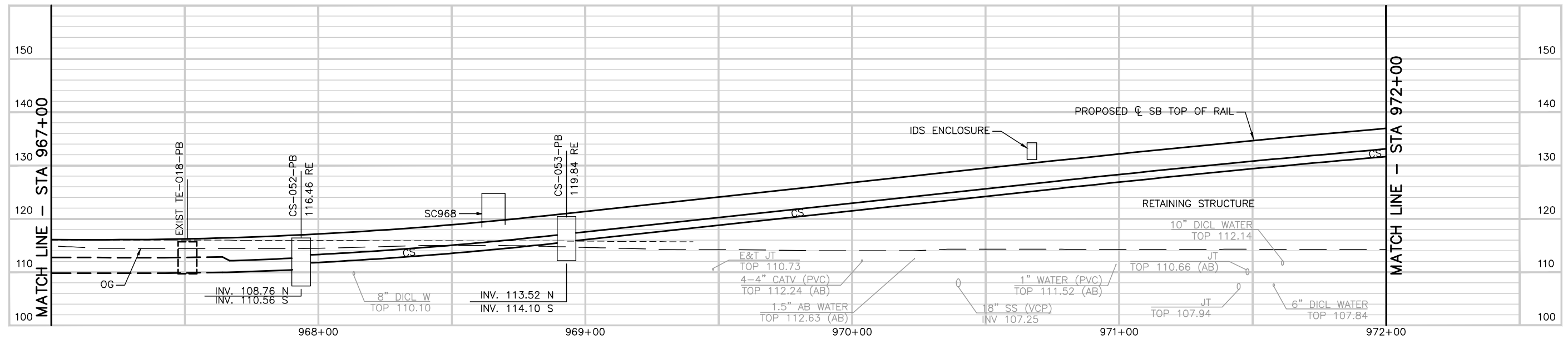
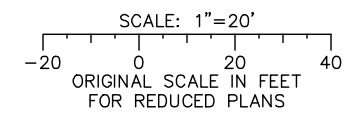
**NOTES:**

1. REMOVE EXISTING COM PULLBOX CS-052-PB.
2. FOR ABBREVIATIONS AND LEGEND, SEE GN DRAWINGS.
3. STATION/OFFSET ARE REFERENCED TO SB TRACK UNLESS OTHERWISE NOTED.
4. SEE IDS WIRING DIAGRAM ON DRAWING KC106.



MATCH LINE - STA 972+00

MATCH LINE - STA 967+00

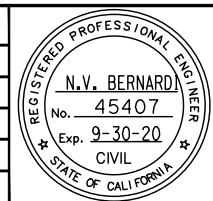


MATCH LINE - STA 972+00

MATCH LINE - STA 967+00

Jun 24, 2020 - 4:26pm C:\cadd\ba\cherranodes\west\mas8381\801EC002.dwg

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



**BKF 100+ YEARS**  
**ENGINEERS / SURVEYORS / PLANNERS**  
 DESIGNED: B. Silkwood  
 CHECKED: M. Cosentino  
 DRAWN: A. Hernandez  
 CADD FILE NAME: 801EC002.dwg

**Santa Clara Valley Transportation Authority**

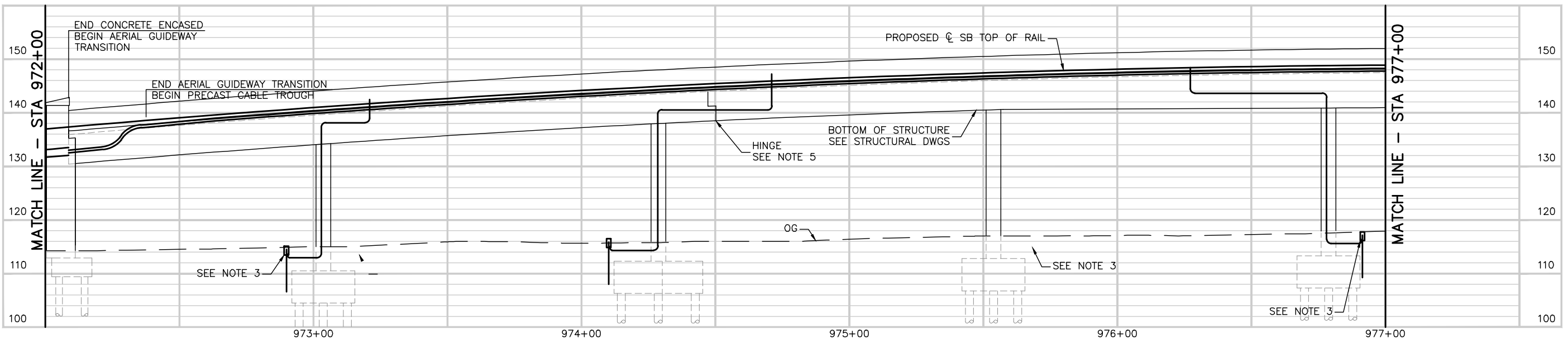
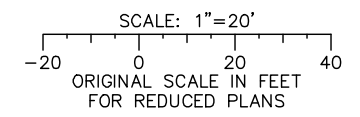
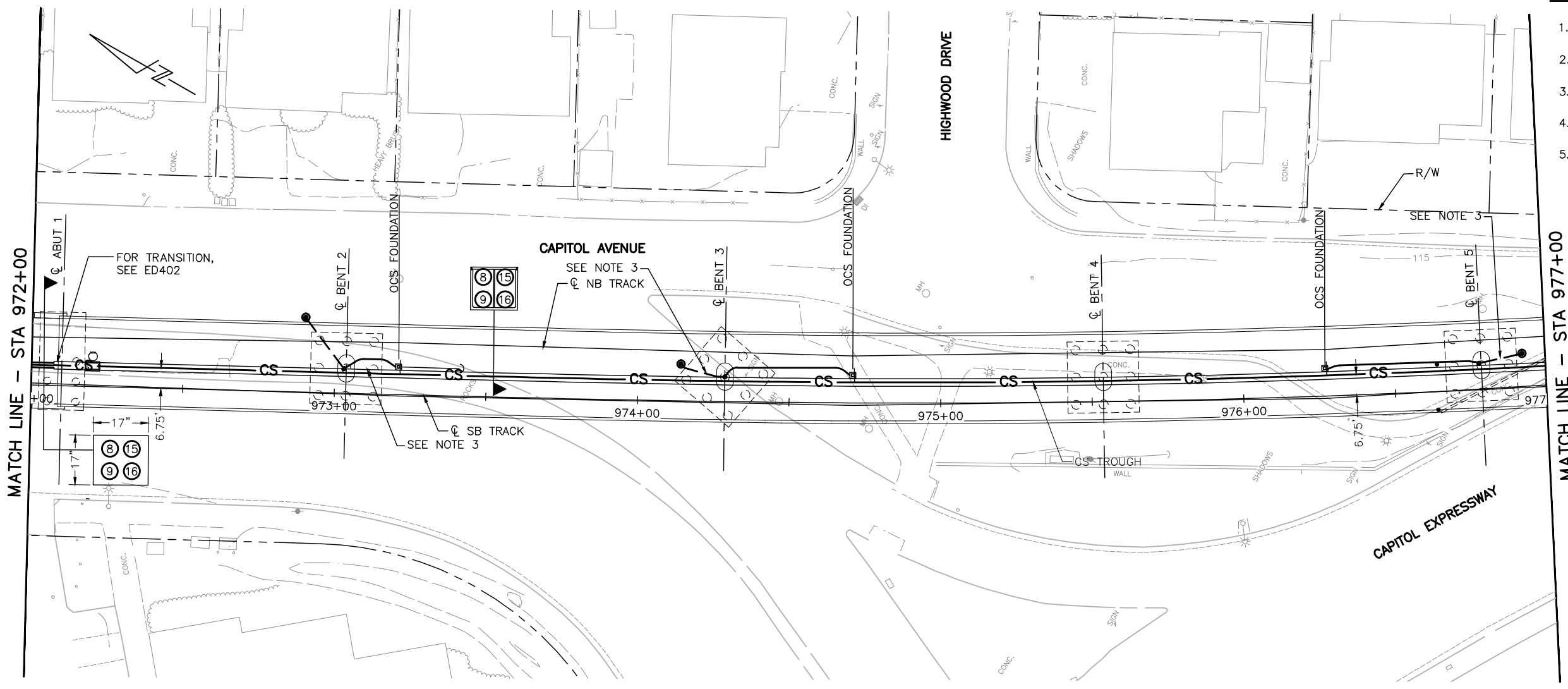
**BKF 100+ YEARS**  
**ENGINEERS / SURVEYORS / PLANNERS**  
 CASD FILE DATE: 03/06/20  
 SUBMITTAL DATE: 06/29/20  
 SCALE: 1"=20' H; 1"=10' V  
 BOARD APPROVAL DATE:

**EASTRIDGE TO BART REGIONAL CONNECTOR**  
**CAPITOL EXPRESSWAY LIGHT RAIL PROJECT**  
**ELECTRICAL**  
**COMBINED SYSTEM DUCT**  
**STA 967+00 TO 972+00**

SHEET OF	EC002
DRAWING NO.	EC002
REVISION	C
PCA NO.	000
CONTRACT NO.	C801
FILE LOCATION	PROJECTWISE

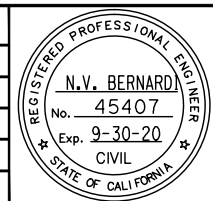
**NOTES:**

1. FOR ABBREVIATIONS AND LEGEND, SEE GN DRAWINGS.
2. STATION/OFFSET ARE REFERENCED TO SB TRACK UNLESS OTHERWISE NOTED.
3. FOR TES GROUNDING, SEE DRAWING ED412.
4. FOR TES SURGE ARRESTER GROUNDING, SEE DRAWING ED413.
5. FOR CS TROUGH EXPANSION JOINT, SEE DRAWING ED411.



Jun 24, 2020 - 4:26pm C:\cadd\ba\cherrandez\west\cmas8381\801EC003.dwg

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



**BKF 100+**  
 YEARS  
**ENGINEERS / SURVEYORS / PLANNERS**

DESIGNED: B. Silkwood  
 CHECKED: M. Cosentino  
 DRAWN: A. Hernandez  
 CADD FILE NAME: 801EC003.dwg

**Santa Clara Valley**  
**Transportation**  
**Authority**

**BKF 100+**  
 YEARS  
**ENGINEERS / SURVEYORS / PLANNERS**

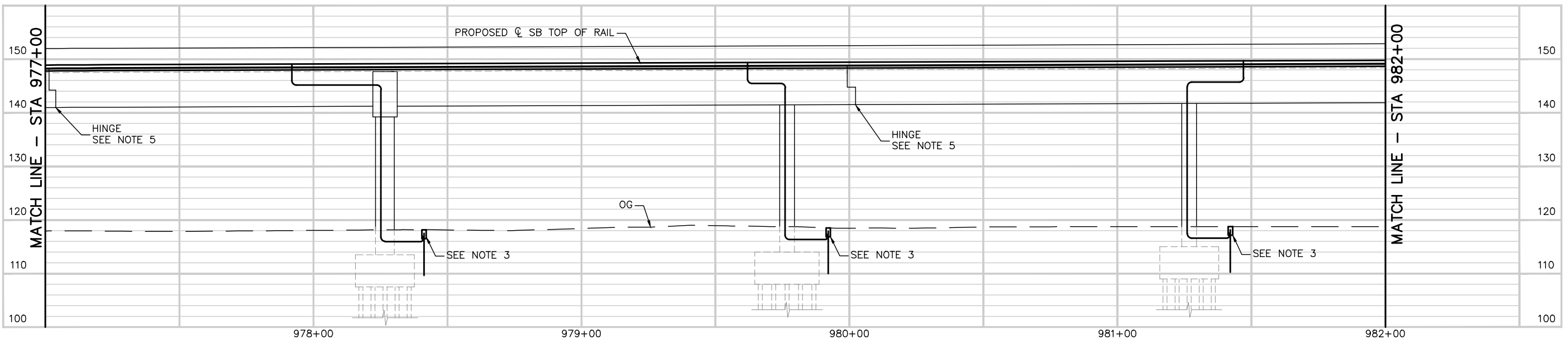
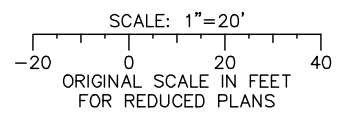
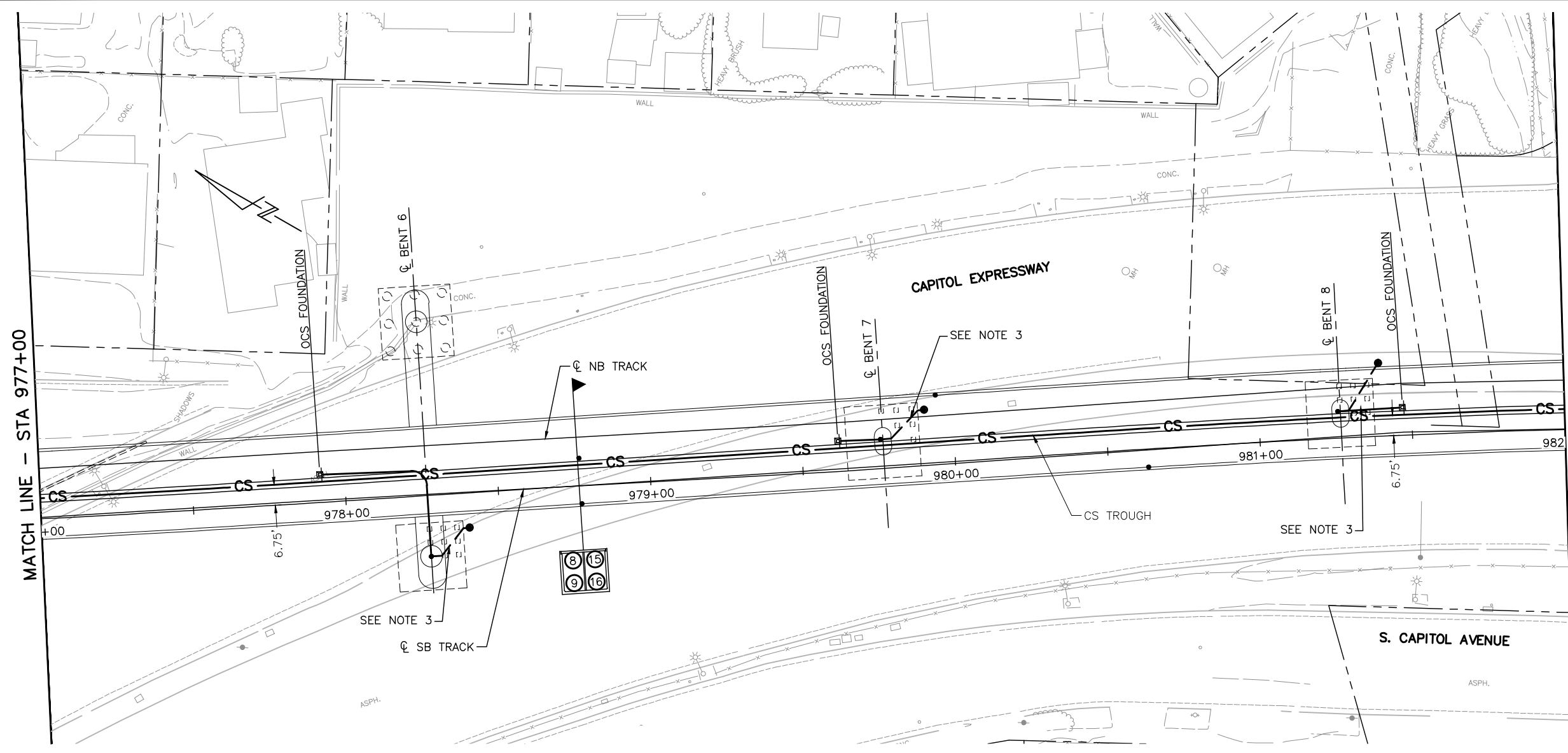
CADD FILE DATE: 03/06/20  
 SUBMITTAL DATE: 06/29/20  
 SCALE: 1"=20' H; 1"=10' V  
 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 ELECTRICAL  
 COMBINED SYSTEM DUCT  
 STA 972+00 TO 977+00

PCA NO.: 000  
 CONTRACT NO.: C801  
 FILE LOCATION: PROJECTWISE

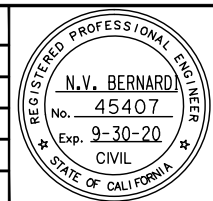
SHEET OF	EC003
DRAWING NO.	EC003
REVISION	C

- NOTES:**
1. FOR ABBREVIATIONS AND LEGEND, SEE GN DRAWINGS.
  2. STATION/OFFSET ARE REFERENCED TO SB TRACK UNLESS OTHERWISE NOTED.
  3. FOR TES GROUNDING, SEE DRAWING ED412.
  4. FOR TES SURGE ARRESTER GROUNDING, SEE DRAWING ED413.
  5. FOR CS TROUGH EXPANSION JOINT, SEE DRAWING ED411.



Jun 24, 2020 - 4:27pm C:\cadd\ba\cherranodes\west\mas8381\801EC004.dwg

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



**BKF 100+**  
YEARS  
ENGINEERS / SURVEYORS / PLANNERS

DESIGNED: B. Silkwood  
CHECKED: M. Cosentino  
DRAWN: A. Hernandez  
CADD FILE NAME: 801EC004.dwg



**BKF 100+**  
YEARS  
ENGINEERS / SURVEYORS / PLANNERS

APPROVED  
CADD FILE DATE: 03/06/20  
SUBMITTAL DATE: 06/29/20  
SCALE: 1"=20' H ; 1"=10' V  
BOARD APPROVAL DATE:

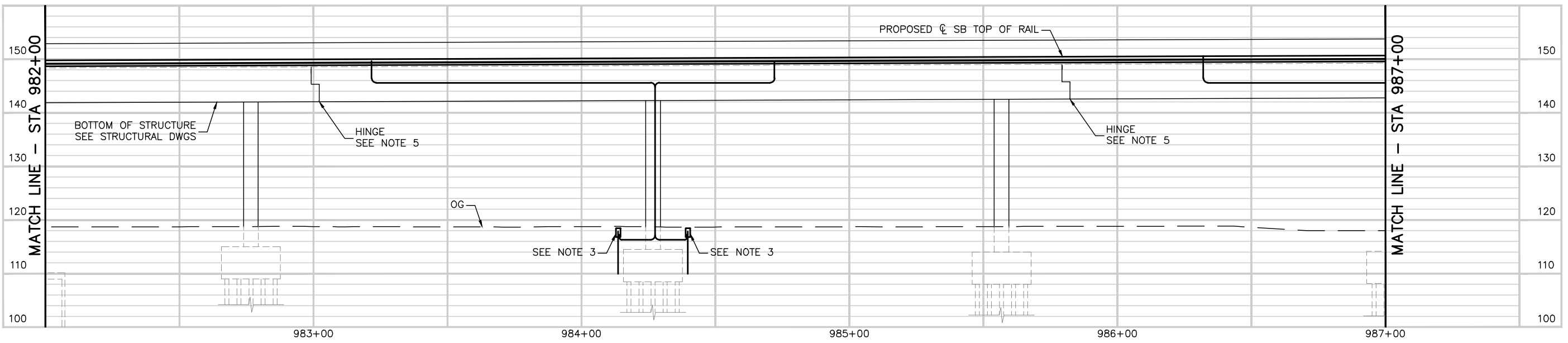
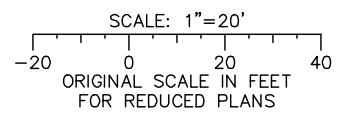
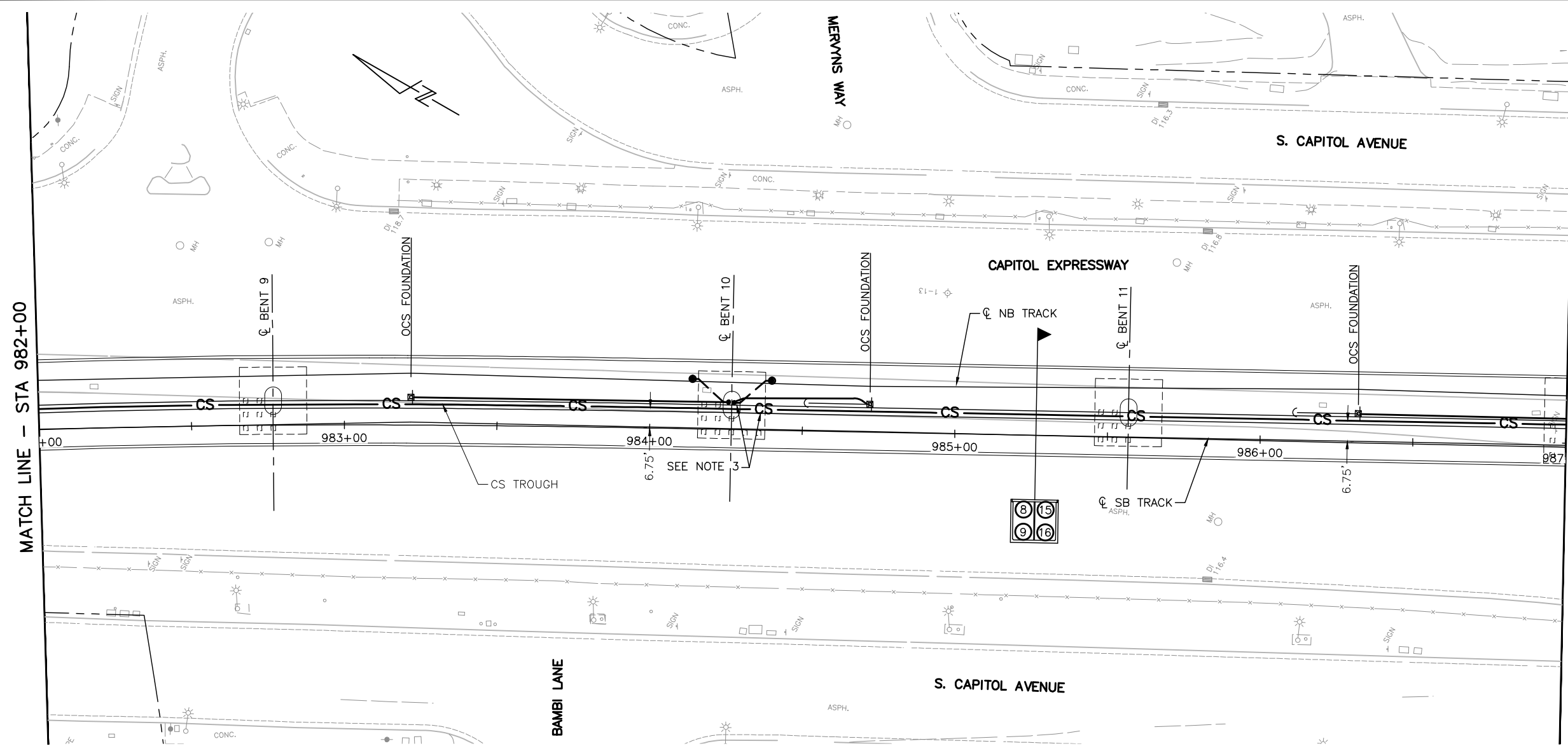
EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
ELECTRICAL  
COMBINED SYSTEM DUCT  
STA 977+00 TO 982+00

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

SHEET OF	EC004
DRAWING NO.	EC004
REVISION	C

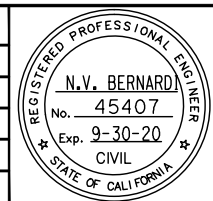
**NOTES:**

1. FOR ABBREVIATIONS AND LEGEND, SEE GN DRAWINGS.
2. STATION/OFFSET ARE REFERENCED TO SB TRACK UNLESS OTHERWISE NOTED.
3. FOR TES GROUNDING, SEE DRAWING ED412.
4. FOR TES SURGE ARRESTER GROUNDING, SEE DRAWING ED413.
5. FOR CS TROUGH EXPANSION JOINT, SEE DRAWING ED411.



Jun 24, 2020 - 4:27pm C:\cadd\ba\cherranodes\west\mms8381\801EC005.dwg

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



**BKF 100+ YEARS**  
ENGINEERS / SURVEYORS / PLANNERS

DESIGNED: B. Silkwood  
CHECKED: M. Cosentino  
DRAWN: A. Hernandez  
CADD FILE NAME: 801EC005.dwg



**BKF 100+ YEARS**  
ENGINEERS / SURVEYORS / PLANNERS

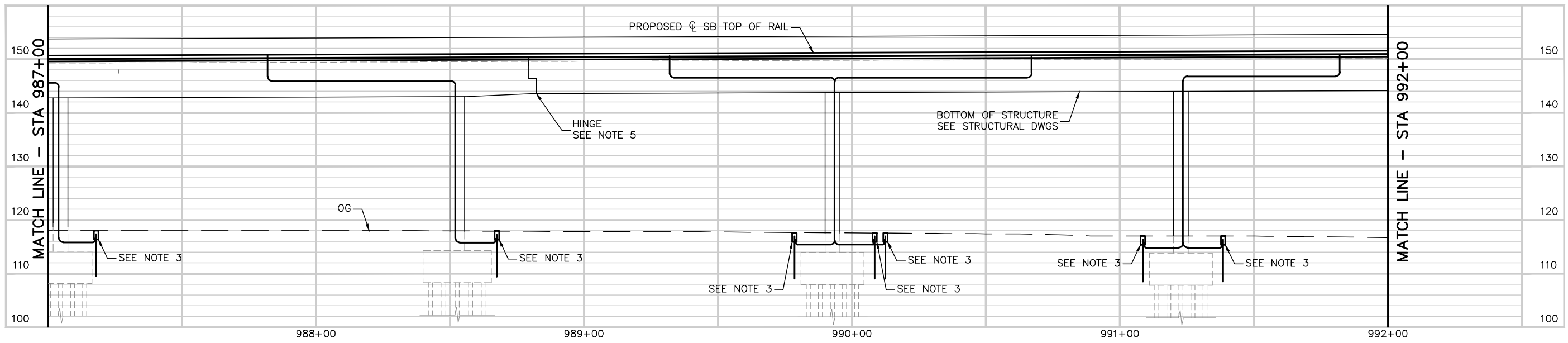
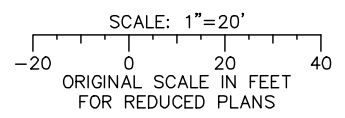
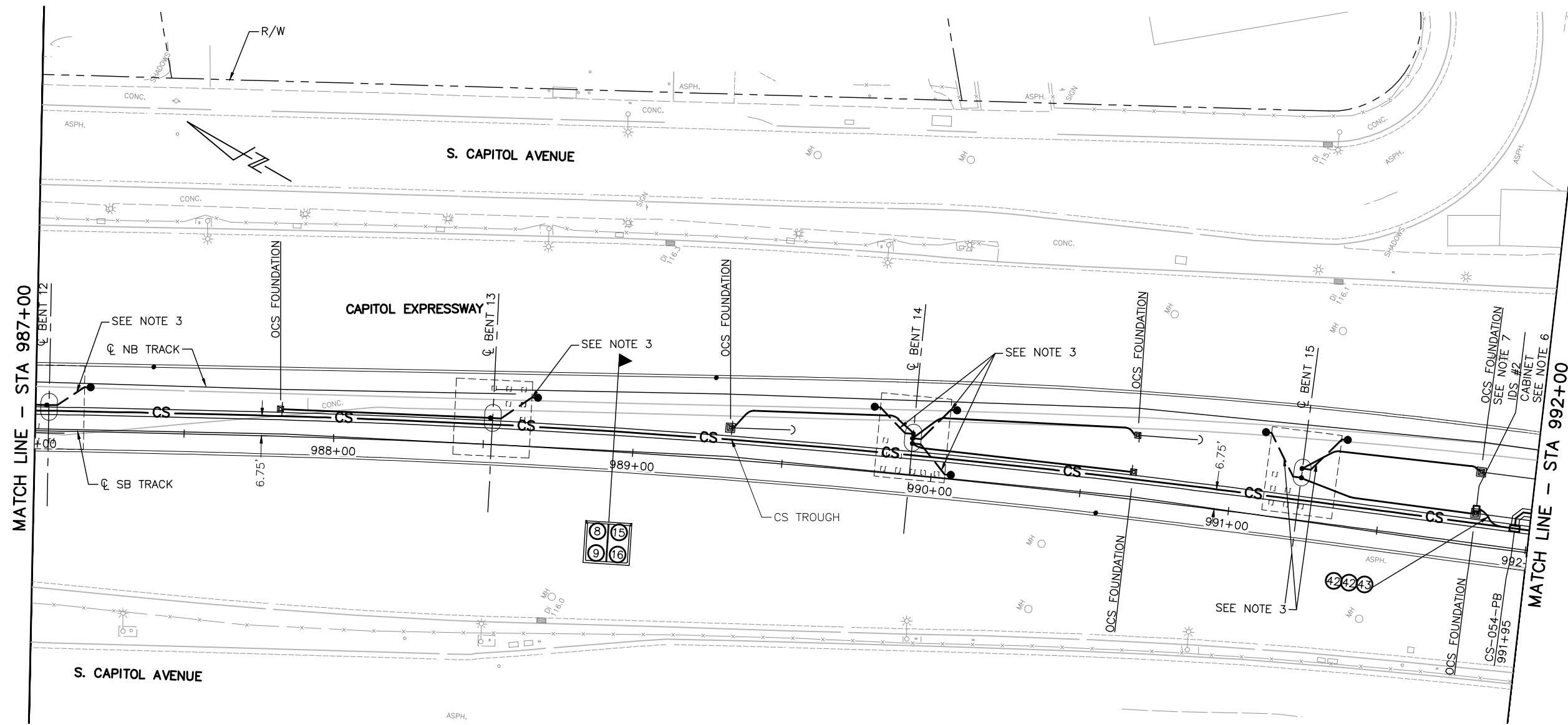
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SUBMITTAL DATE: 06/29/20  
SCALE: 1"=20' H; 1"=10' V  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
ELECTRICAL  
COMBINED SYSTEM DUCT  
STA 982+00 TO 987+00

PCA NO.: 000  
CONTRACT NO.: C801  
FILE LOCATION: PROJECTWISE

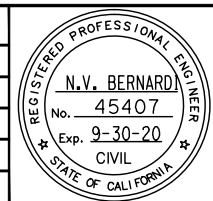
SHEET OF	EC005
DRAWING NO.	EC005
REVISION	C

- NOTES:**
1. FOR ABBREVIATIONS AND LEGEND, SEE GN DRAWINGS.
  2. STATION/OFFSET ARE REFERENCED TO SB TRACK UNLESS OTHERWISE NOTED.
  3. FOR TES GROUNDING, SEE DRAWING ED412.
  4. FOR TES SURGE ARRESTER GROUNDING, SEE DRAWING ED413.
  5. FOR CS TROUGH EXPANSION JOINT, SEE DRAWING ED411.
  6. SEE IDS WIRING DIAGRAM ON DRAWING KC106.
  7. FOR OCS TROUGH STORY STATION, SEE DRAWING PC004.



Jun 24, 2020 - 4:27pm C:\cadd\ba\cherran\west\mas8381\801EC006.dwg

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



**BKF 100+ YEARS**  
 ENGINEERS / SURVEYORS / PLANNERS

DESIGNED: B. Silkwood  
 CHECKED: M. Cosentino  
 DRAWN: A. Hernandez  
 CADD FILE NAME: 801EC006.dwg

**Santa Clara Valley Transportation Authority**

**BKF 100+ YEARS**  
 ENGINEERS / SURVEYORS / PLANNERS

CASD FILE DATE: 03/06/20  
 SUBMITTAL DATE: 06/29/20  
 SCALE: 1"=20' H; 1"=10' V  
 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 ELECTRICAL  
 COMBINED SYSTEM DUCT  
 STA 987+00 TO 992+00

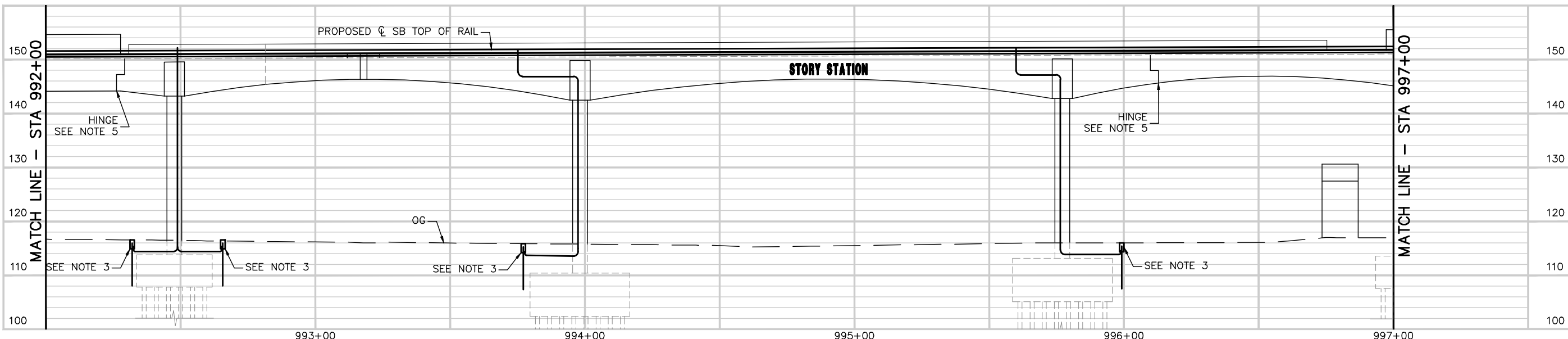
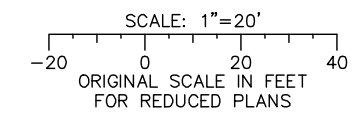
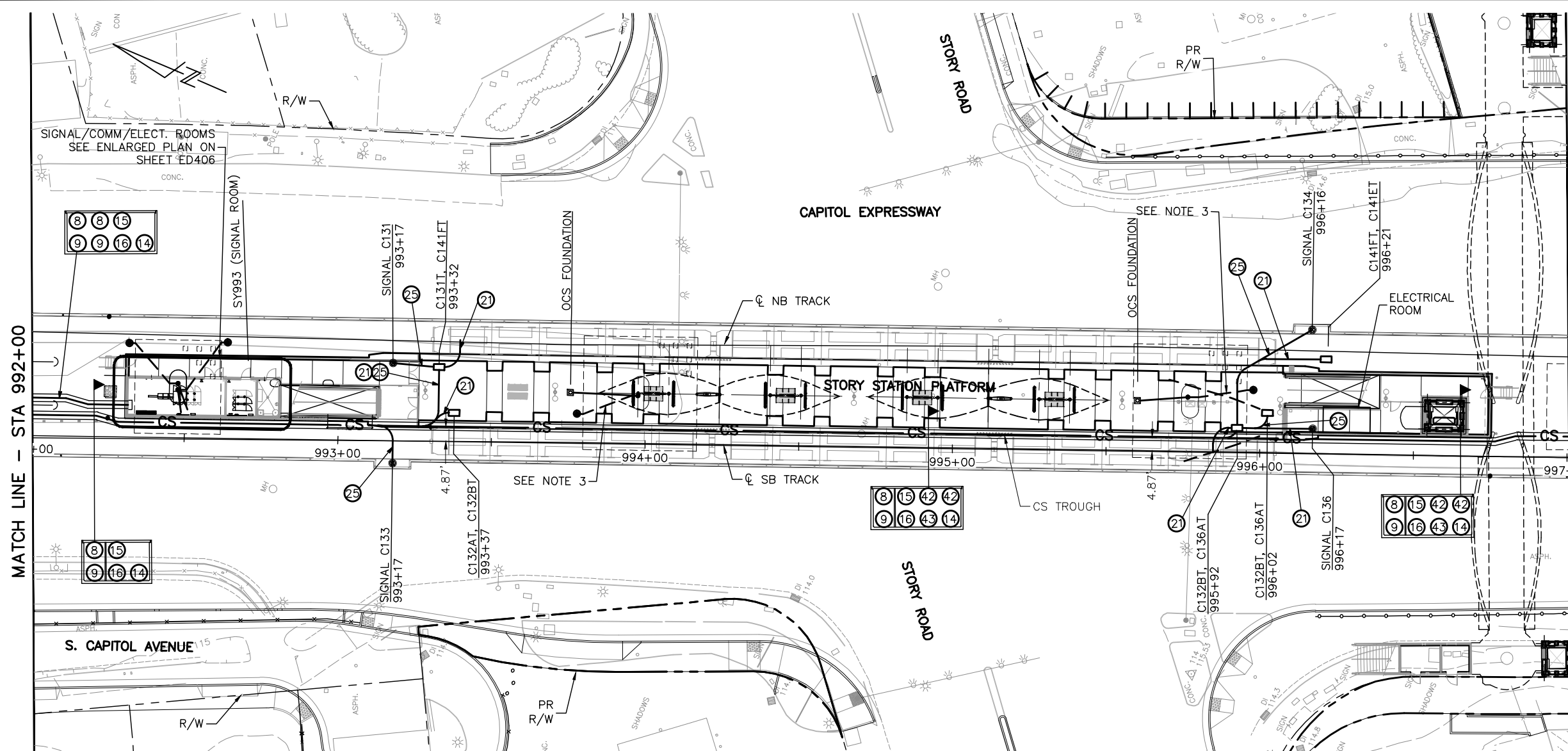
PCA NO.: 000  
 CONTRACT NO.: C801  
 FILE LOCATION: PROJECTWISE

SHEET OF	EC006
DRAWING NO.	EC006
REVISION	C



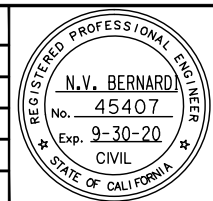
**NOTES:**

1. FOR ABBREVIATIONS AND LEGEND, SEE GN DRAWINGS.
2. STATION/OFFSET ARE REFERENCED TO SB TRACK UNLESS OTHERWISE NOTED.
3. FOR TES GROUNDING, SEE DRAWING ED412.
4. FOR TES SURGE ARRESTER GROUNDING, SEE DRAWING ED413.
5. FOR CS TROUGH EXPANSION JOINT, SEE DRAWING ED411.



Jun 24, 2020 - 4:28pm C:\cadd\ba\cherraneda\west\cmas83381\801EC007.dwg

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



**BKF 100+ YEARS**  
**ENGINEERS / SURVEYORS / PLANNERS**

DESIGNED: B. Silkwood  
 CHECKED: M. Cosentino  
 DRAWN: A. Hernandez  
 CADD FILE NAME: 801EC007.dwg



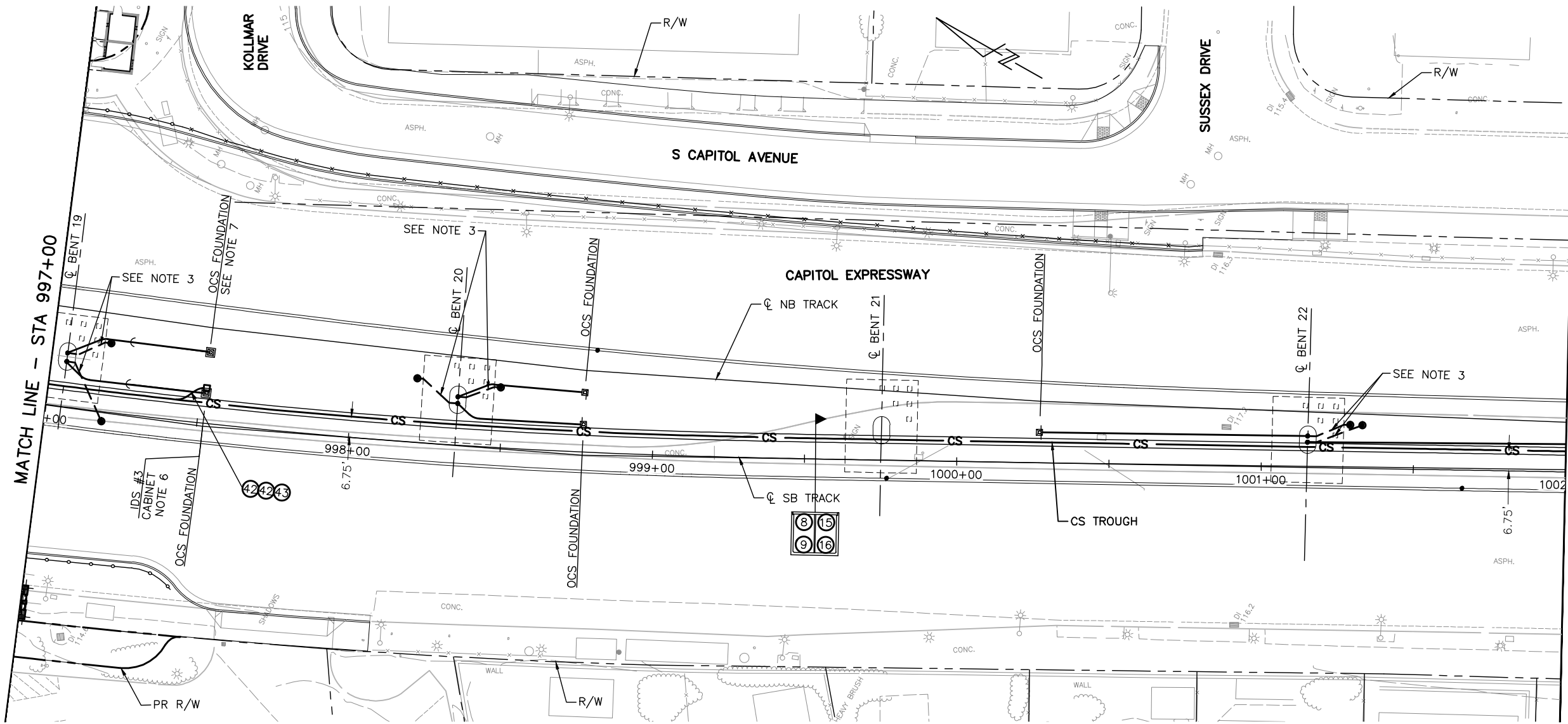
**BKF 100+ YEARS**  
**ENGINEERS / SURVEYORS / PLANNERS**

CADD FILE DATE: 03/06/20  
 SUBMITTAL DATE: 06/29/20  
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 BOARD APPROVAL DATE:

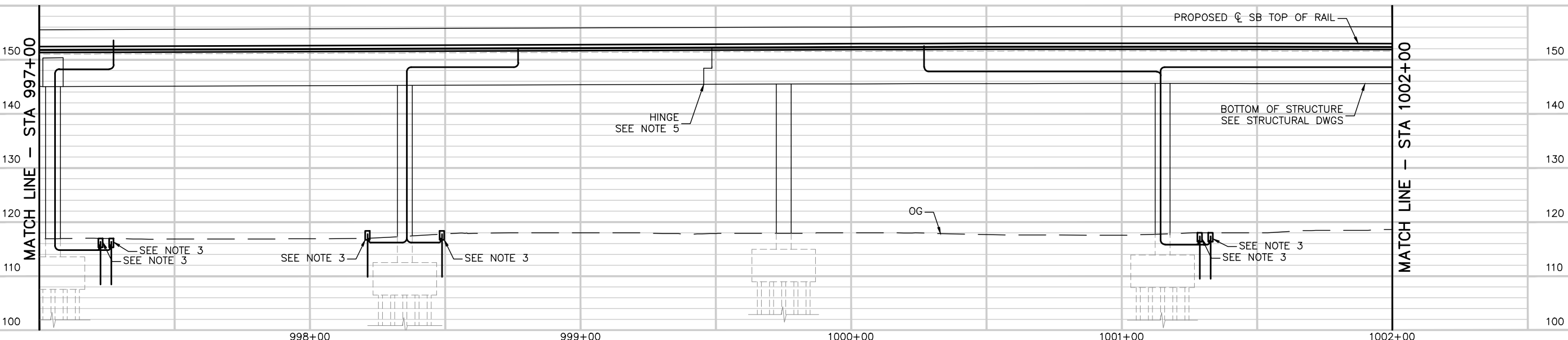
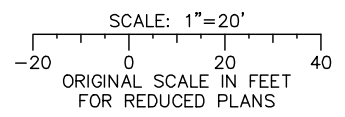
EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 ELECTRICAL  
 COMBINED SYSTEM DUCT  
 STA 992+00 TO 997+00

PCA NO.: 000  
 CONTRACT NO.: C801  
 FILE LOCATION: PROJECTWISE

SHEET OF	EC007
DRAWING NO.	EC007
REVISION	C

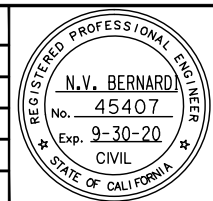


- NOTES:**
1. FOR ABBREVIATIONS AND LEGEND, SEE GN DRAWINGS.
  2. STATION/OFFSET ARE REFERENCED TO SB TRACK UNLESS OTHERWISE NOTED.
  3. FOR TES GROUNDING, SEE DRAWING ED412.
  4. FOR TES SURGE ARRESTER GROUNDING, SEE DRAWING ED413.
  5. FOR CS TROUGH EXPANSION JOINT, SEE DRAWING ED411.
  6. SEE IDS WIRING DIAGRAM ON DRAWING KC106.
  7. FOR OCS TROUGH STORY STATION, SEE DRAWING PC004.



Jun 24, 2020 - 4:28pm C:\cadd\ba\cherranonda\west\mas8381\801EC008.dwg

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



**BKF 100+ YEARS**  
ENGINEERS / SURVEYORS / PLANNERS

DESIGNED: B. Silkwood  
CHECKED: M. Cosentino  
DRAWN: A. Hernandez  
CADD FILE NAME: 801EC008.dwg



**BKF 100+ YEARS**  
ENGINEERS / SURVEYORS / PLANNERS

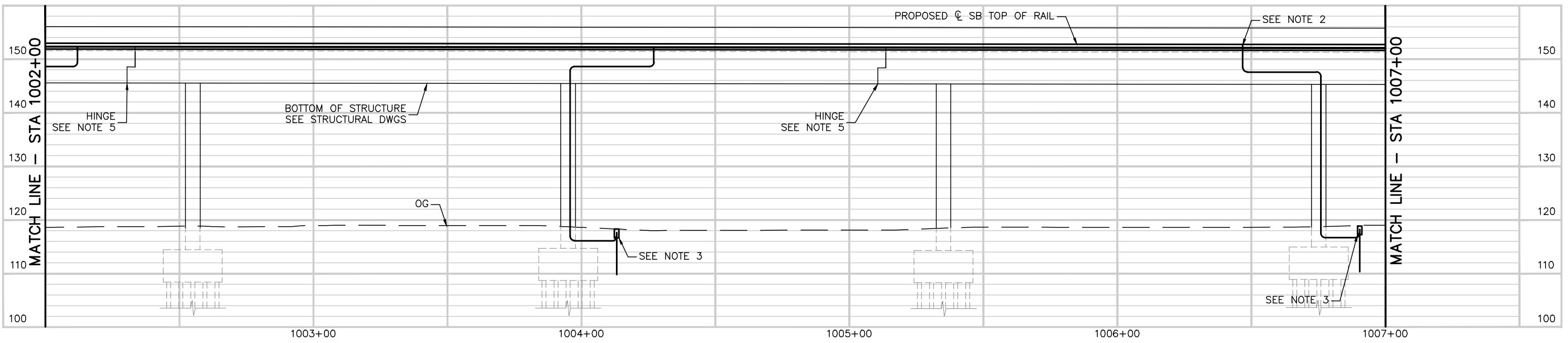
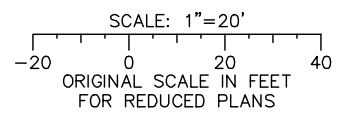
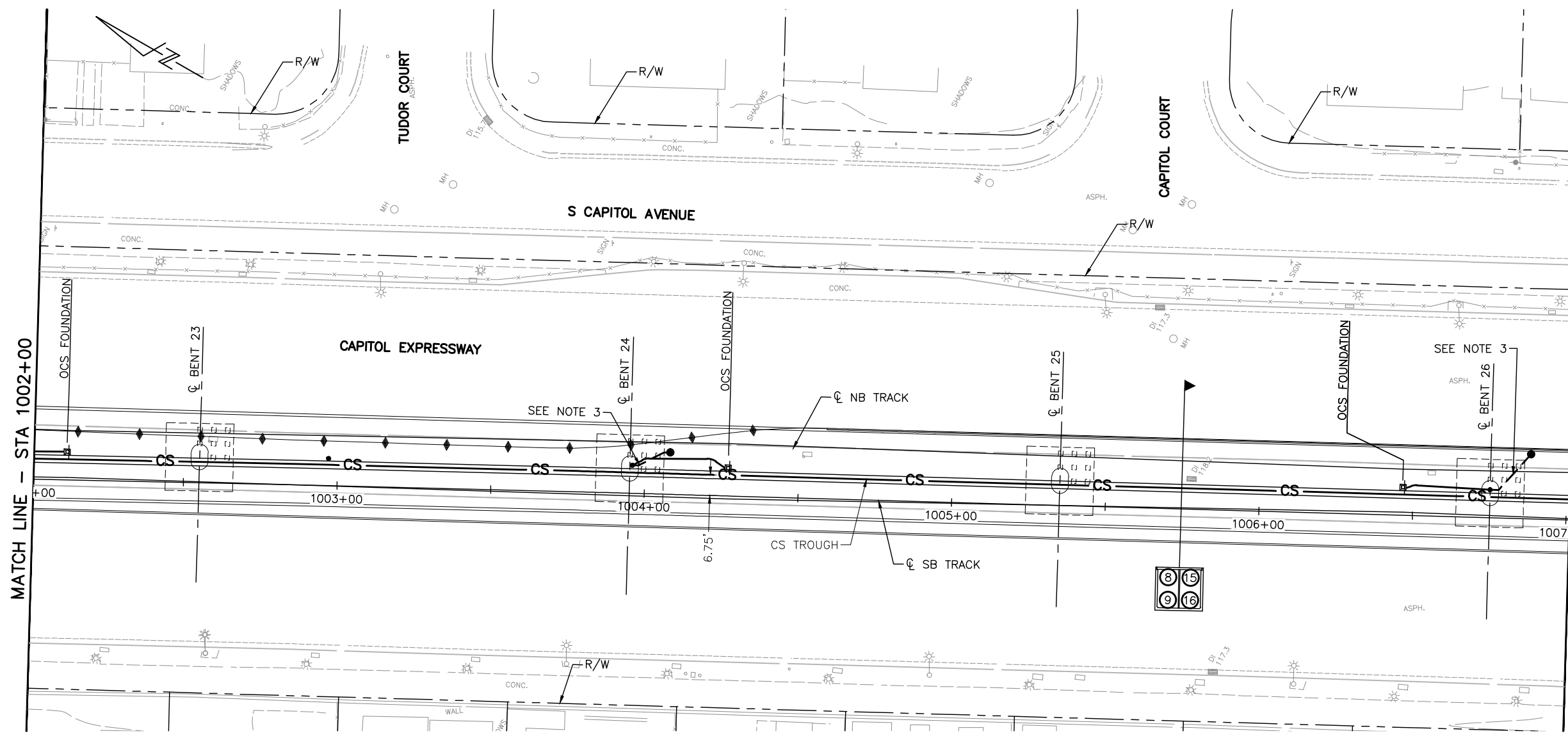
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SUBMITTAL DATE: 06/29/20  
SCALE: 1"=20' H; 1"=10' V  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
ELECTRICAL  
COMBINED SYSTEM DUCT  
STA 997+00 TO 1002+00

PCA NO.: 000  
CONTRACT NO.: C801  
FILE LOCATION: PROJECTWISE

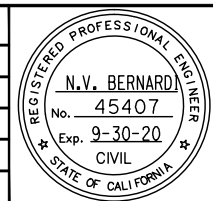
SHEET OF: EC008  
REVISION: C

- NOTES:**
1. FOR ABBREVIATIONS AND LEGEND, SEE GN DRAWINGS.
  2. STATION/OFFSET ARE REFERENCED TO SB TRACK UNLESS OTHERWISE NOTED.
  3. FOR TES GROUNDING, SEE DRAWING ED412.
  4. FOR TES SURGE ARRESTER GROUNDING, SEE DRAWING ED413.
  5. FOR CS TROUGH EXPANSION JOINT, SEE DRAWING ED411.



Jun 24, 2020 - 4:29pm C:\cadd\ba\cherrandez\west\mas8381\801EC009.dwg

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



**BKF100+**  
 YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

DESIGNED: B. Silkwood  
 CHECKED: M. Cosentino  
 DRAWN: A. Hernandez  
 CADD FILE NAME: 801EC009.dwg



**BKF100+**  
 YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/06/20  
 SUBMITTAL DATE: 06/29/20  
 SCALE: 1"=20' H; 1"=10' V  
 BOARD APPROVAL DATE:

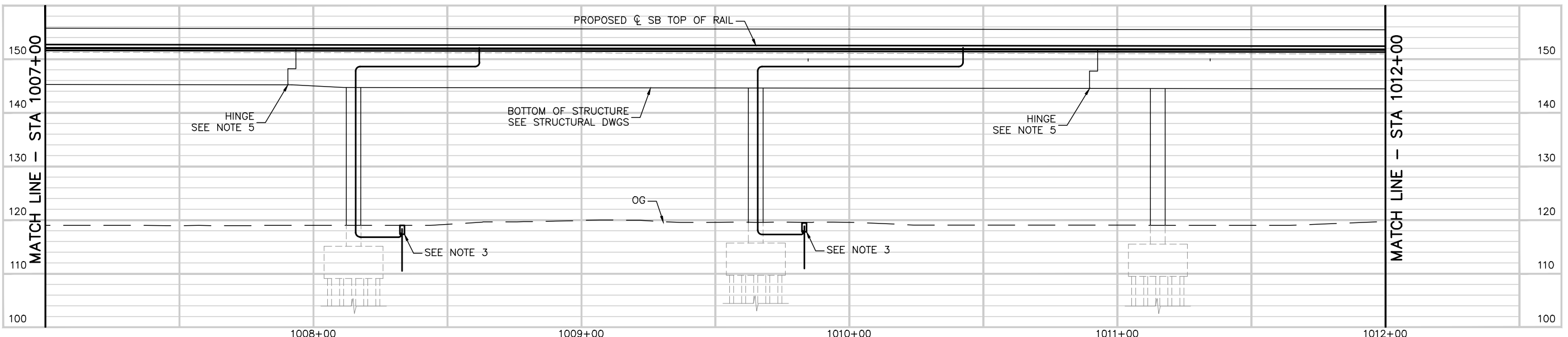
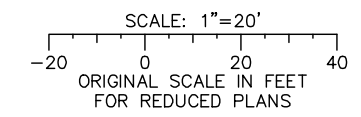
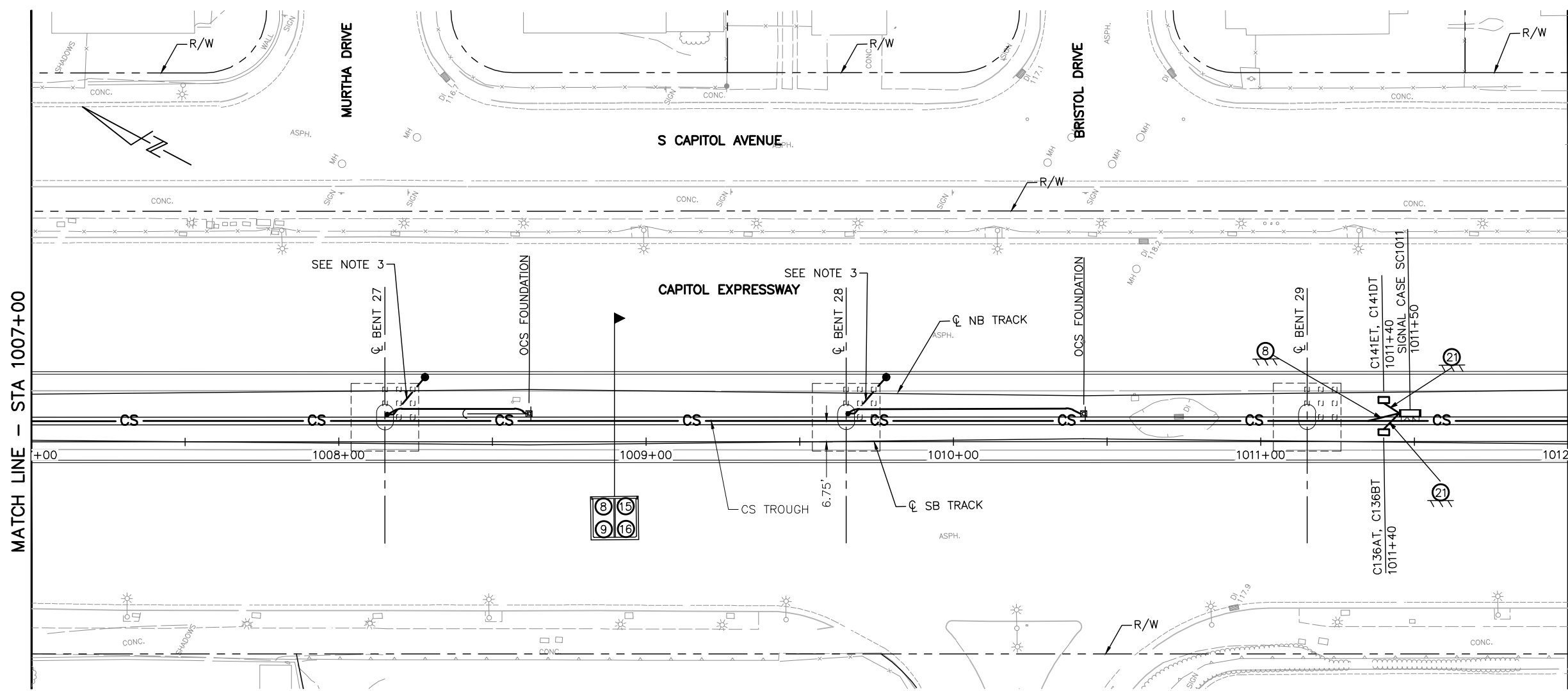
EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 ELECTRICAL  
 COMBINED SYSTEM DUCT  
 STA 1002+00 TO 1007+00

PCA NO.: 000  
 CONTRACT NO.: C801  
 FILE LOCATION: PROJECTWISE

SHEET OF	EC009
DRAWING NO.	EC009
REVISION	C

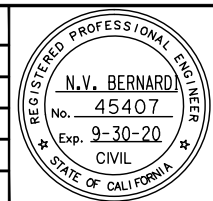
**NOTES:**

1. FOR ABBREVIATIONS AND LEGEND, SEE GN DRAWINGS.
2. STATION/OFFSET ARE REFERENCED TO SB TRACK UNLESS OTHERWISE NOTED.
3. FOR TES GROUNDING, SEE DRAWING ED412.
4. FOR TES SURGE ARRESTER GROUNDING, SEE DRAWING ED413.
5. FOR CS TROUGH EXPANSION JOINT, SEE DRAWING ED411.



Jun 24, 2020 - 4:29pm C:\cadd\ba\ahernandez\west\smas8381\801EC010.dwg

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



**BKF 100+ YEARS**  
ENGINEERS / SURVEYORS / PLANNERS

DESIGNED: B. Silkwood  
CHECKED: M. Cosentino  
DRAWN: A. Hernandez  
CADD FILE NAME: 801EC010.dwg



**BKF 100+ YEARS**  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/06/20  
SUBMITTAL DATE: 06/29/20  
SCALE: 1"=20' H; 1"=10' V  
BOARD APPROVAL DATE:

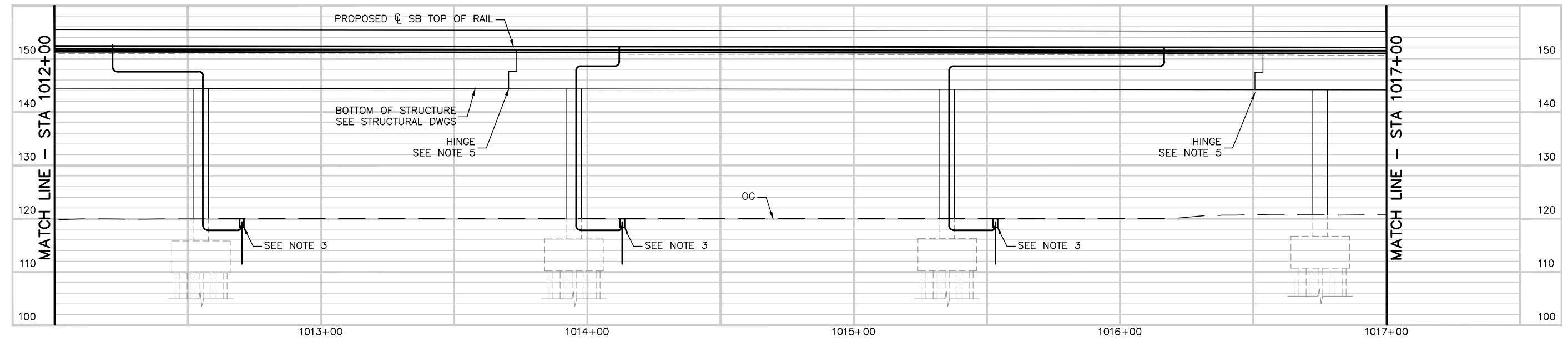
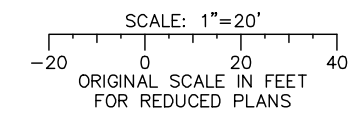
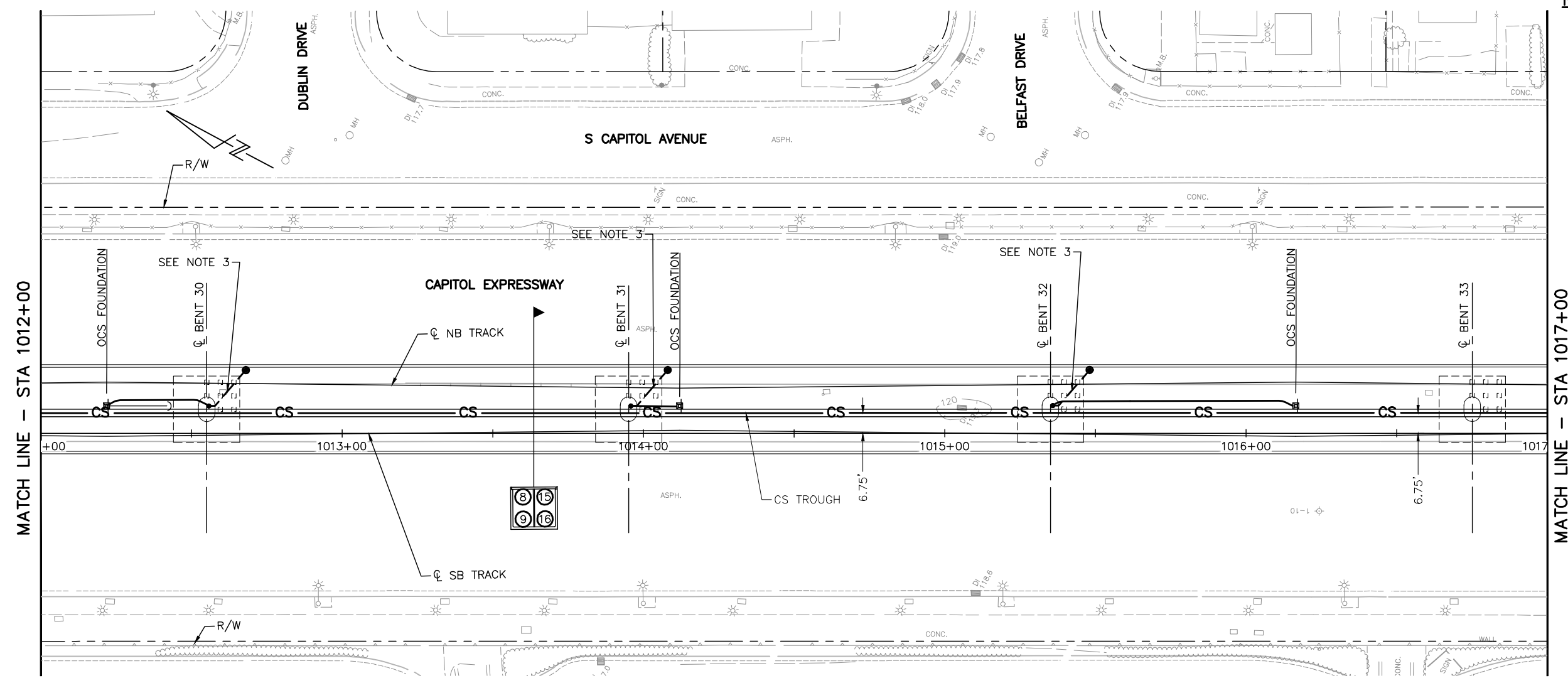
EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
ELECTRICAL  
COMBINED SYSTEM DUCT  
STA 1007+00 TO 1012+00

PCA NO.: 000  
CONTRACT NO.: C801  
FILE LOCATION: PROJECTWISE

SHEET OF	EC010
DRAWING NO.	EC010
REVISION	C

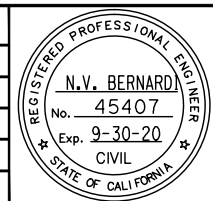
**NOTES:**

1. FOR ABBREVIATIONS AND LEGEND, SEE GN DRAWINGS.
2. STATION/OFFSET ARE REFERENCED TO SB TRACK UNLESS OTHERWISE NOTED.
3. FOR TES GROUNDING, SEE DRAWING ED412.
4. FOR TES SURGE ARRESTER GROUNDING, SEE DRAWING ED413.
5. FOR CS TROUGH EXPANSION JOINT, SEE DRAWING ED411.



Jun 24, 2020 - 4:30pm C:\cadd\ba\cherrandez\west\mas8381\801EC011.dwg

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



**BKF 100+ YEARS**  
 ENGINEERS / SURVEYORS / PLANNERS

DESIGNED: B. Silkwood  
 CHECKED: M. Cosentino  
 DRAWN: A. Hernandez  
 CADD FILE NAME: 801EC011.dwg



**BKF 100+ YEARS**  
 ENGINEERS / SURVEYORS / PLANNERS

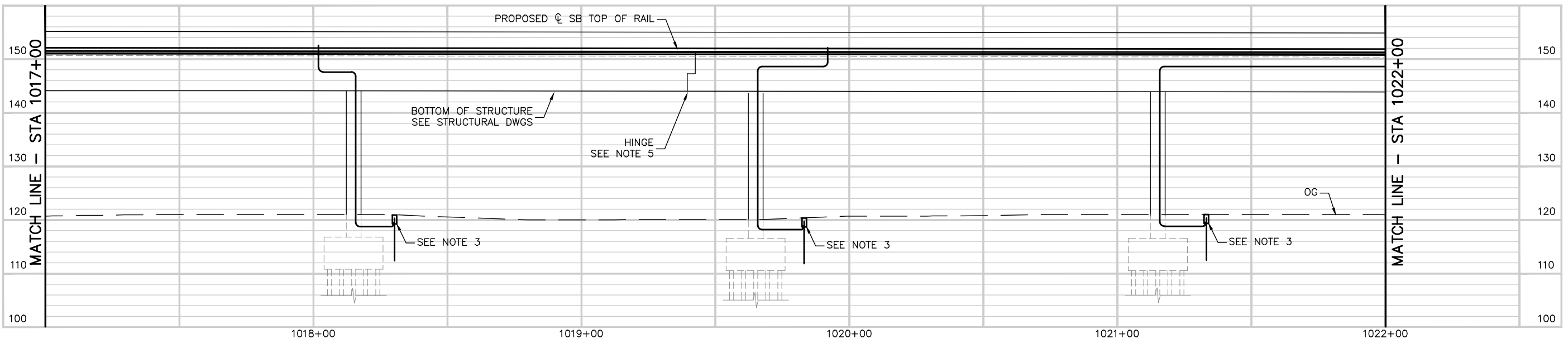
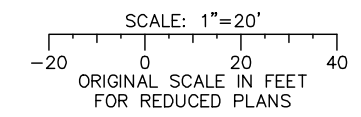
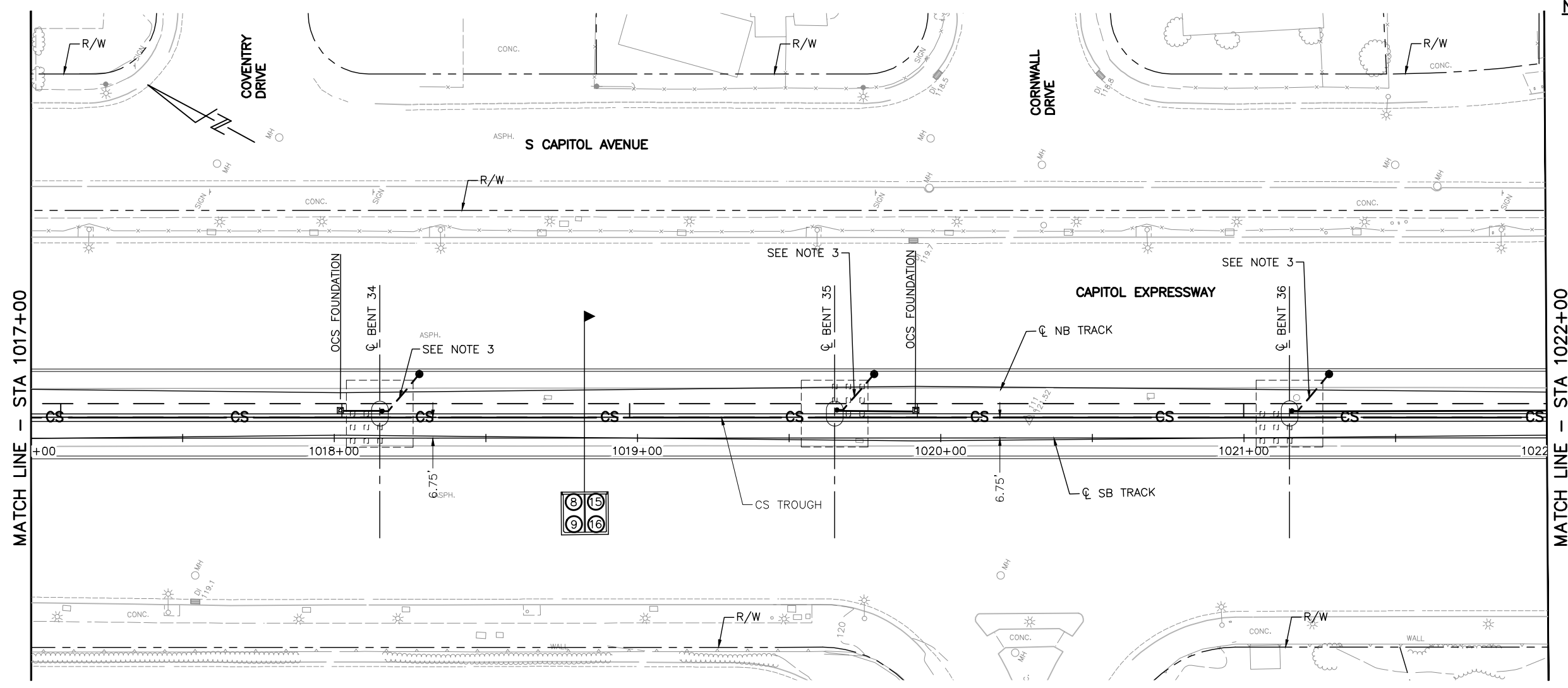
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 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 ELECTRICAL  
 COMBINED SYSTEM DUCT  
 STA 1012+00 TO 1017+00

PCA NO.: 000  
 CONTRACT NO.: C801  
 FILE LOCATION: PROJECTWISE

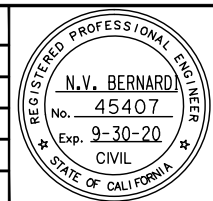
SHEET OF	EC011
DRAWING NO.	EC011
REVISION	C

- NOTES:**
1. FOR ABBREVIATIONS AND LEGEND, SEE GN DRAWINGS.
  2. STATION/OFFSET ARE REFERENCED TO SB TRACK UNLESS OTHERWISE NOTED.
  3. FOR TES GROUNDING, SEE DRAWING ED412.
  4. FOR TES SURGE ARRESTER GROUNDING, SEE DRAWING ED413.
  5. FOR CS TROUGH EXPANSION JOINT, SEE DRAWING ED411.



Jun 24, 2020 - 4:30pm C:\cadd\ba\cherrandez\west\mms8381\801EC012.dwg

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



**BKF 100+ YEARS**  
**ENGINEERS / SURVEYORS / PLANNERS**

DESIGNED: B. Silkwood  
 CHECKED: M. Cosentino  
 DRAWN: A. Hernandez  
 CADD FILE NAME: 801EC012.dwg



**BKF 100+ YEARS**  
**ENGINEERS / SURVEYORS / PLANNERS**

CADD FILE DATE: 03/06/20  
 SCALE: 1"=20' H; 1"=10' V  
 SUBMITTAL DATE: 06/29/20  
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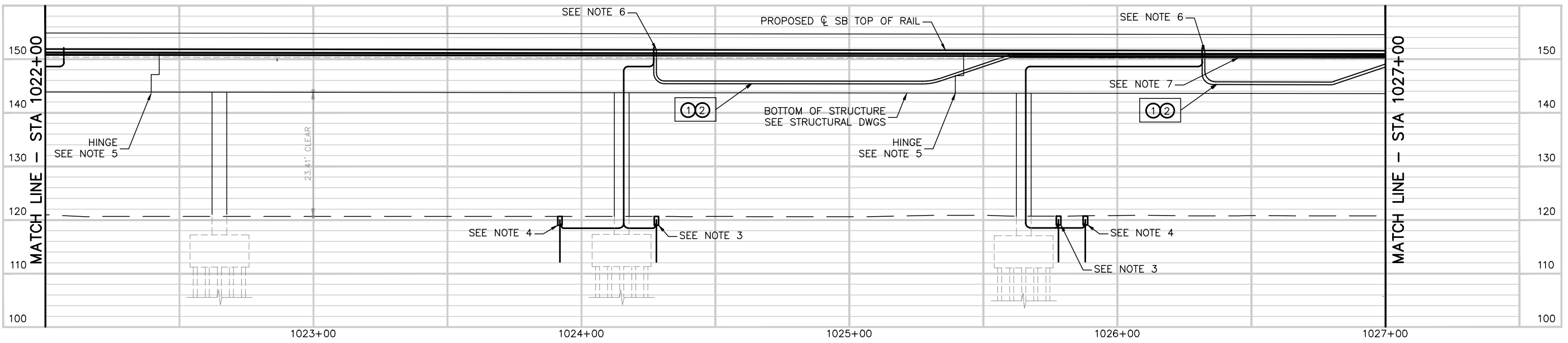
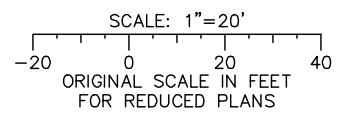
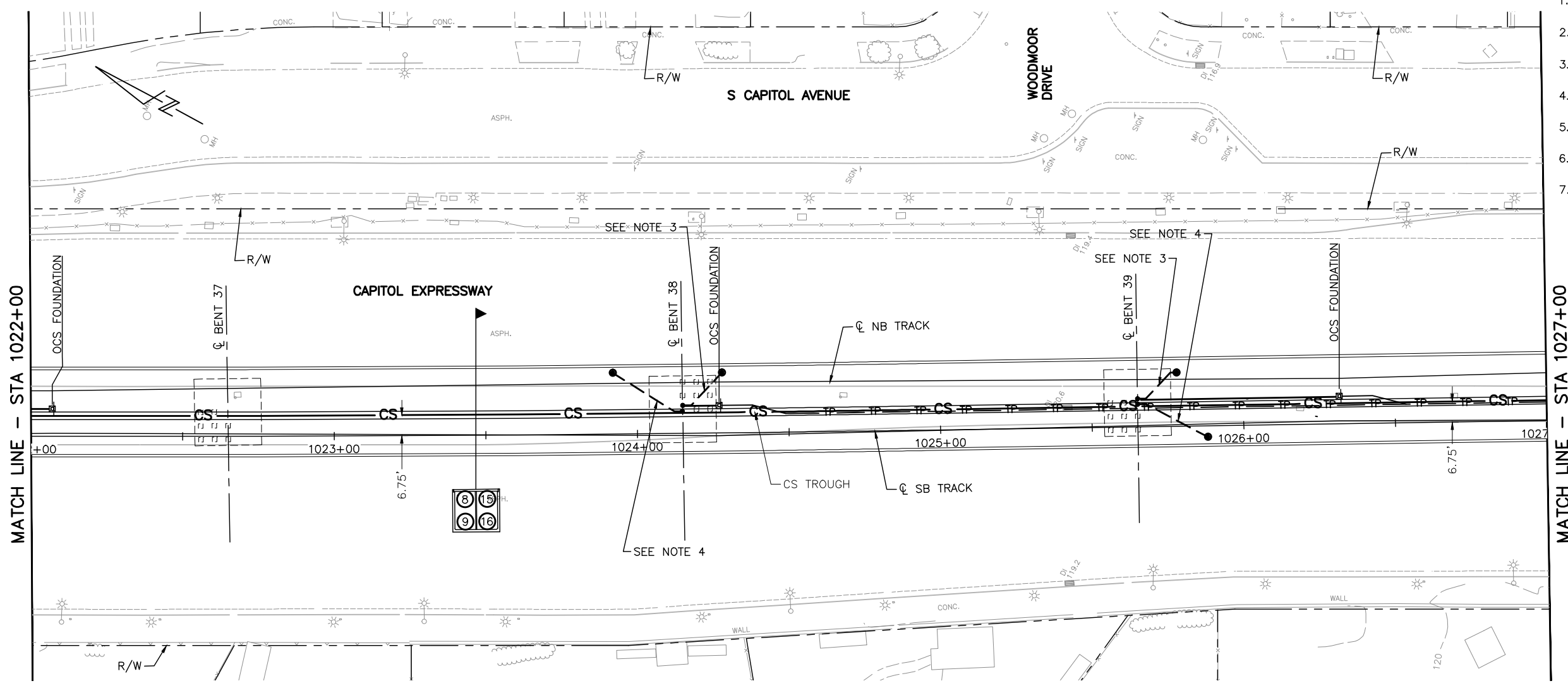
EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 ELECTRICAL  
 COMBINED SYSTEM DUCT  
 STA 1017+00 TO 1022+00

PCA NO.: 000  
 CONTRACT NO.: C801  
 FILE LOCATION: PROJECTWISE

SHEET OF	EC012
DRAWING NO.	EC012
REVISION	C

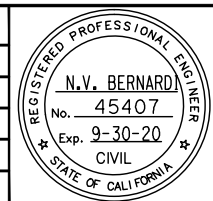
**NOTES:**

1. FOR ABBREVIATIONS AND LEGEND, SEE GN DRAWINGS.
2. STATION/OFFSET ARE REFERENCED TO SB TRACK UNLESS OTHERWISE NOTED.
3. FOR TES GROUNDING, SEE DRAWING ED412.
4. FOR TES SURGE ARRESTER GROUNDING, SEE DRAWING ED413.
5. FOR CS TROUGH EXPANSION JOINT, SEE DRAWING ED411.
6. CONNECT TRACTION POWER CABLES TO OCS POLE.
7. RUN TRACTION POWER CABLES IN GUIDEWAY GIRDER, SEE STRUCTURAL DRAWINGS AND DRAWINGS ED415.



Jun 25, 2020 - 9:49am C:\cadd\ba\cherrandez\west\mms8381\801EC013.dwg

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



**BKF 100+ YEARS**  
 ENGINEERS / SURVEYORS / PLANNERS  
 DESIGNED BY: B. Silkwood  
 CHECKED BY: M. Cosentino  
 DRAWN BY: A. Hernandez  
 CADD FILE NAME: 801EC013.dwg



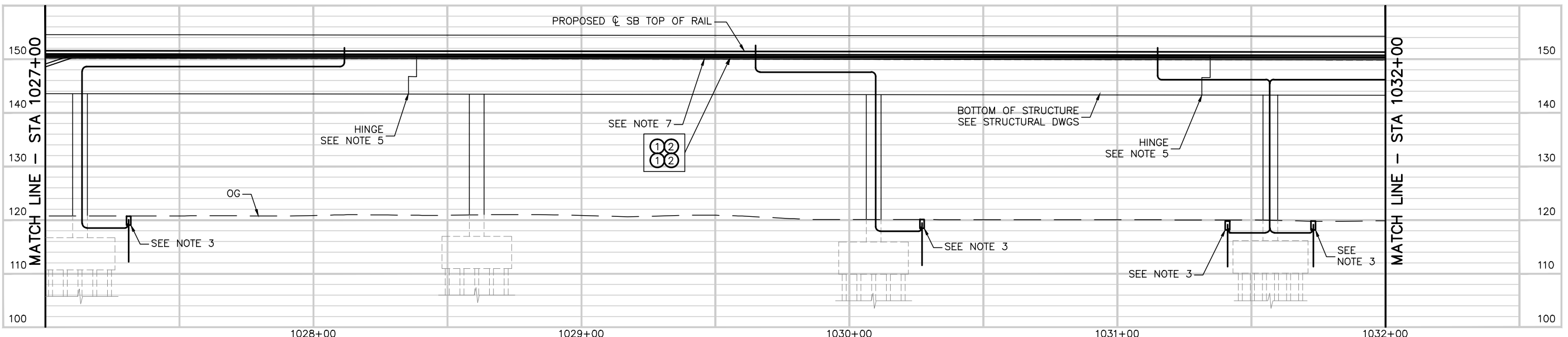
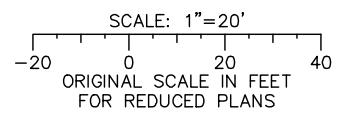
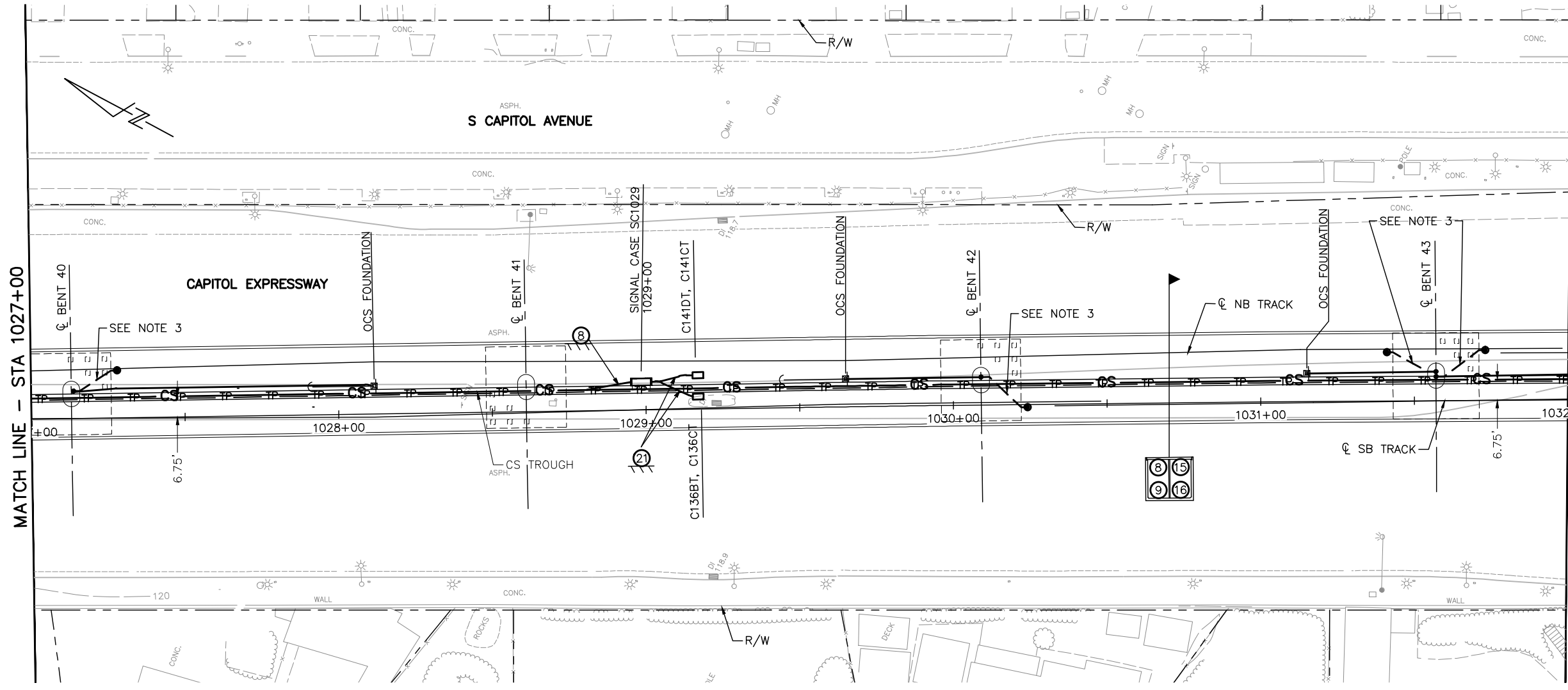
**BKF 100+ YEARS**  
 ENGINEERS / SURVEYORS / PLANNERS  
 CADD FILE DATE: 03/06/20  
 SUBMITTAL DATE: 06/29/20  
 SCALE: 1"=20' H; 1"=10' V  
 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 ELECTRICAL  
 COMBINED SYSTEM DUCT  
 STA 1022+00 TO 1027+00  
 PCA NO.: 000  
 CONTRACT NO.: C801  
 FILE LOCATION: PROJECTWISE

SHEET OF	EC013
DRAWING NO.	EC013
REVISION	C

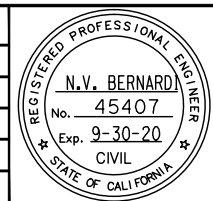
**NOTES:**

1. FOR ABBREVIATIONS AND LEGEND, SEE GN DRAWINGS.
2. STATION/OFFSET ARE REFERENCED TO SB TRACK UNLESS OTHERWISE NOTED.
3. FOR TES GROUNDING, SEE DRAWING ED412.
4. FOR TES SURGE ARRESTER GROUNDING, SEE DRAWING ED413.
5. FOR CS TROUGH EXPANSION JOINT, SEE DRAWING ED411.
6. CONNECT TRACTION POWER CABLES TO OCS POLE.
7. RUN TRACTION POWER CABLES IN GUIDEWAY GIRDER, SEE STRUCTURAL DRAWINGS AND DRAWINGS ED415.



Jun 24, 2020 - 4:31pm C:\cadd\ba\ahernandez\west\csm98381\801EC014.dwg

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



**BKF 100+ YEARS**  
 ENGINEERS / SURVEYORS / PLANNERS

DESIGNED: B. Silkwood  
 CHECKED: M. Cosentino  
 DRAWN: A. Hernandez  
 CADD FILE NAME: 801EC014.dwg



**BKF 100+ YEARS**  
 ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/06/20  
 SUBMITTAL DATE: 06/29/20  
 SCALE: 1"=20' H ; 1"=10' V  
 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 ELECTRICAL  
 COMBINED SYSTEM DUCT  
 STA 1027+00 TO 1032+00

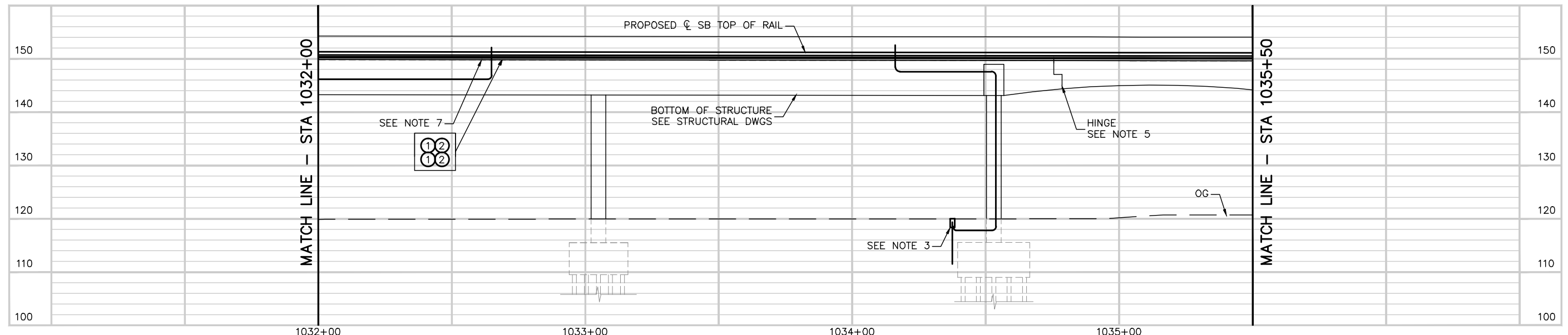
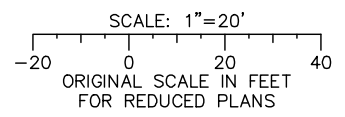
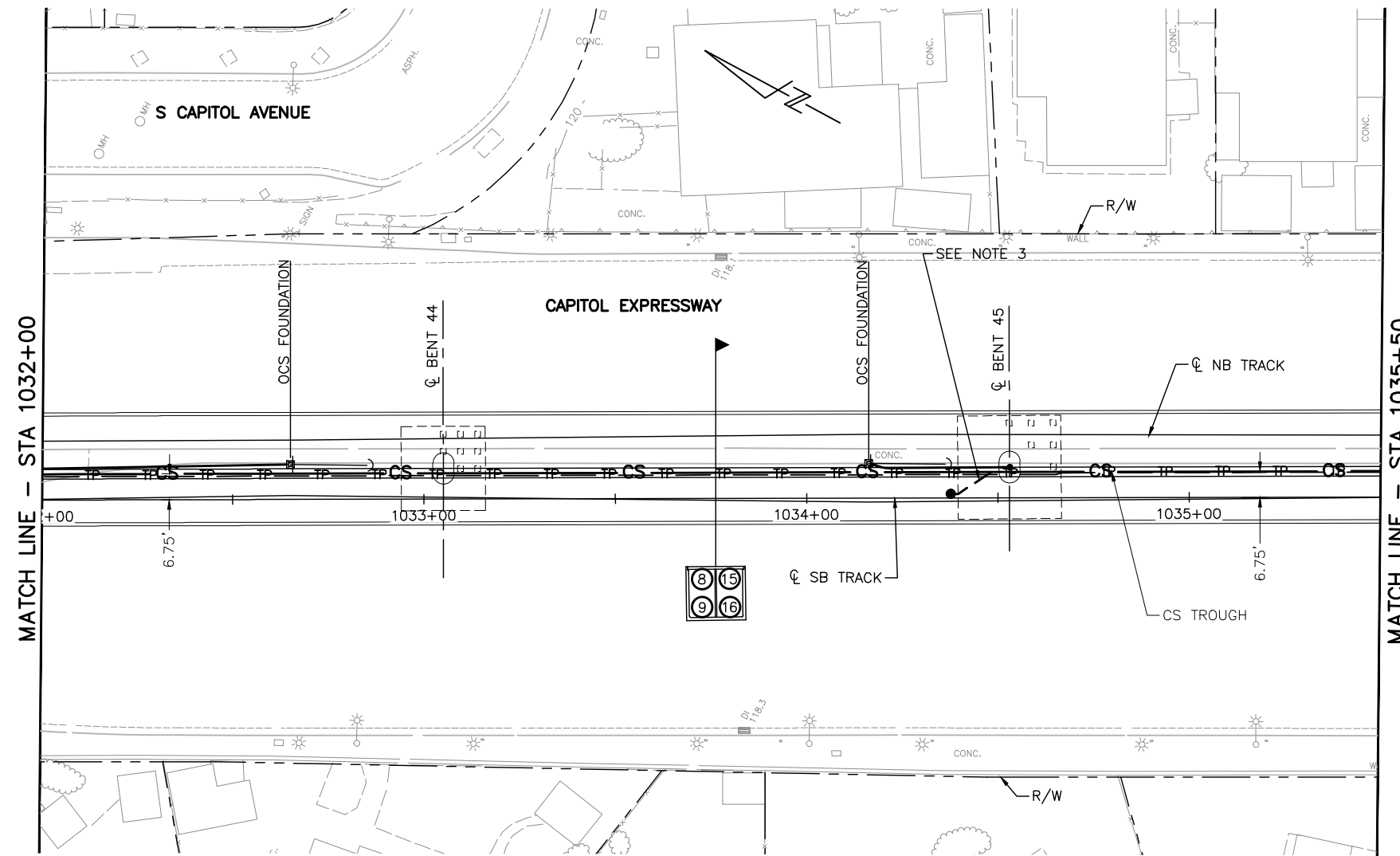
PLA NO: 000  
 CONTRACT NO: C801  
 FILE LOCATION: PROJECTWISE

SHEET OF	EC014
DRAWING NO.	EC014
REVISION	C



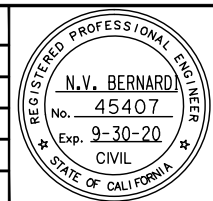
**NOTES:**

1. FOR ABBREVIATIONS AND LEGEND, SEE GN DRAWINGS.
2. STATION/OFFSET ARE REFERENCED TO SB TRACK UNLESS OTHERWISE NOTED.
3. FOR TES GROUNDING, SEE DRAWING ED412.
4. FOR TES SURGE ARRESTER GROUNDING, SEE DRAWING ED413.
5. FOR CS TROUGH EXPANSION JOINT, SEE DRAWING ED411.
6. CONNECT TRACTION POWER CABLES TO OCS POLE.
7. RUN TRACTION POWER CABLES IN GUIDEWAY GIRDER, SEE STRUCTURAL DRAWINGS AND DRAWINGS ED415.



Jun 24, 2020 - 4:37pm C:\cadd\ba\ahernandez\west\csm98381\801EC015.dwg

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



**BKF 100+ YEARS**  
 ENGINEERS / SURVEYORS / PLANNERS  
 DESIGNED BY: B. Silkwood  
 CHECKED BY: M. Cosentino  
 DRAWN BY: A. Hernandez  
 CADD FILE NAME: 801EC015.dwg



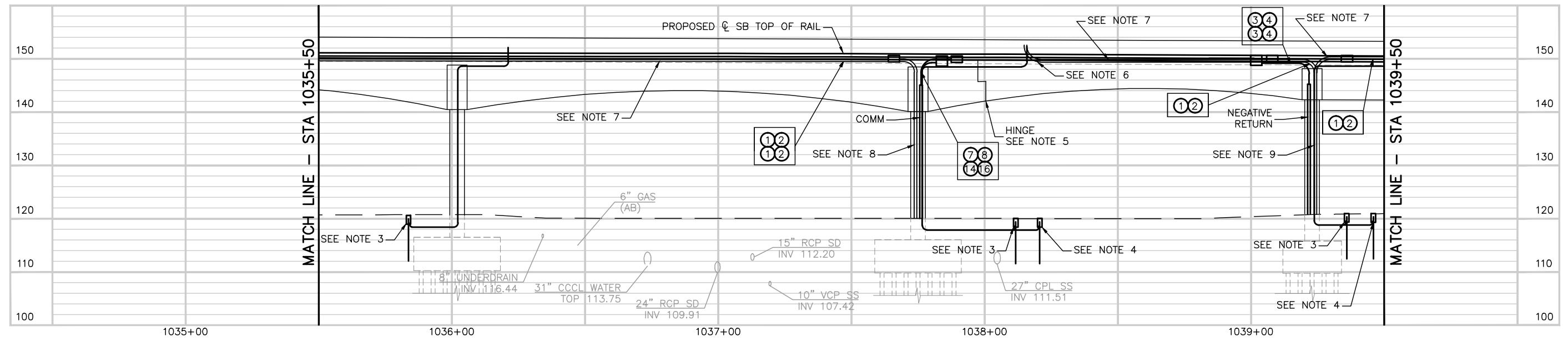
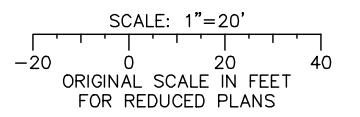
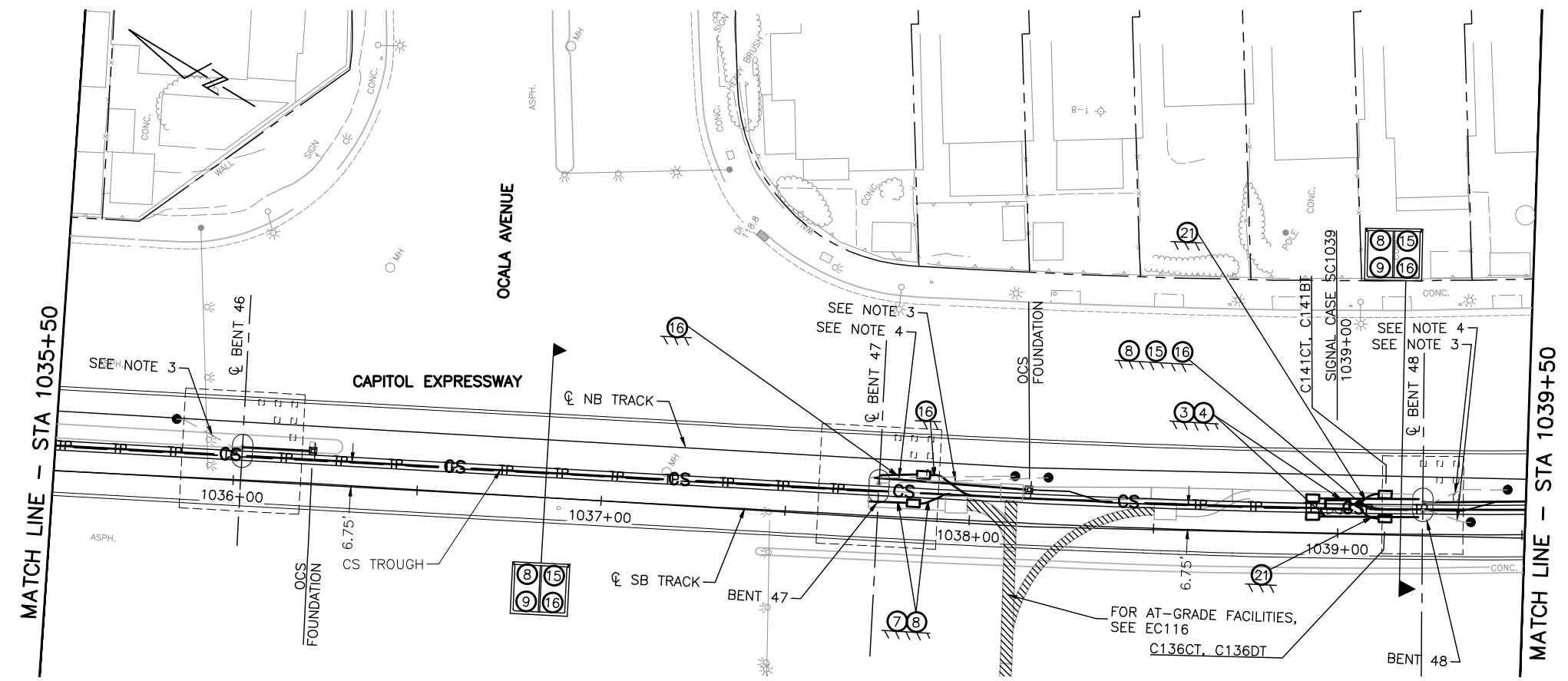
**BKF 100+ YEARS**  
 ENGINEERS / SURVEYORS / PLANNERS  
 CADD FILE DATE: 03/06/20  
 SUBMITTAL DATE: 06/29/20  
 SCALE: 1"=20' H; 1"=10' V  
 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 ELECTRICAL  
 COMBINED SYSTEM DUCT  
 STA 1032+00 TO 1035+50

SHEET OF	EC015
DRAWING NO.	EC015
REVISION	C
PCA NO.	000
CONTRACT NO.	C801
FILE LOCATION	PROJECTWISE

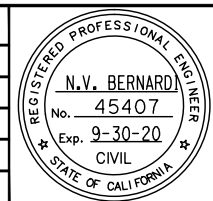
**NOTES:**

1. FOR ABBREVIATIONS AND LEGEND, SEE GN DRAWINGS.
2. STATION/OFFSET ARE REFERENCED TO SB TRACK UNLESS OTHERWISE NOTED.
3. FOR TES GROUNDING, SEE DRAWING ED412.
4. FOR TES SURGE ARRESTER GROUNDING, SEE DRAWING ED413.
5. FOR CS TROUGH EXPANSION JOINT, SEE DRAWING ED411.
6. CONNECT TRACTION POWER CABLES TO OCS POLE.
7. RUN TRACTION POWER CABLES IN GUIDEWAY GIRDER, SEE STRUCTURAL DRAWINGS AND DRAWINGS ED415.
8. FOR BENT 47 CONDUIT LAYOUT, SEE DRAWING ED404.
9. FOR BENT 48 CONDUIT LAYOUT, SEE DRAWING ED405.



Jun 24, 2020 - 4:32pm C:\cadd\ba\cherranodes\west\omas8381\801EC016.dwg

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



**BKF 100+ YEARS**  
 ENGINEERS / SURVEYORS / PLANNERS

DESIGNED BY: B. Silkwood  
 CHECKED BY: M. Cosentino  
 DRAWN BY: A. Hernandez  
 CADD FILE NAME: 801EC016.dwg

**Santa Clara Valley Transportation Authority**

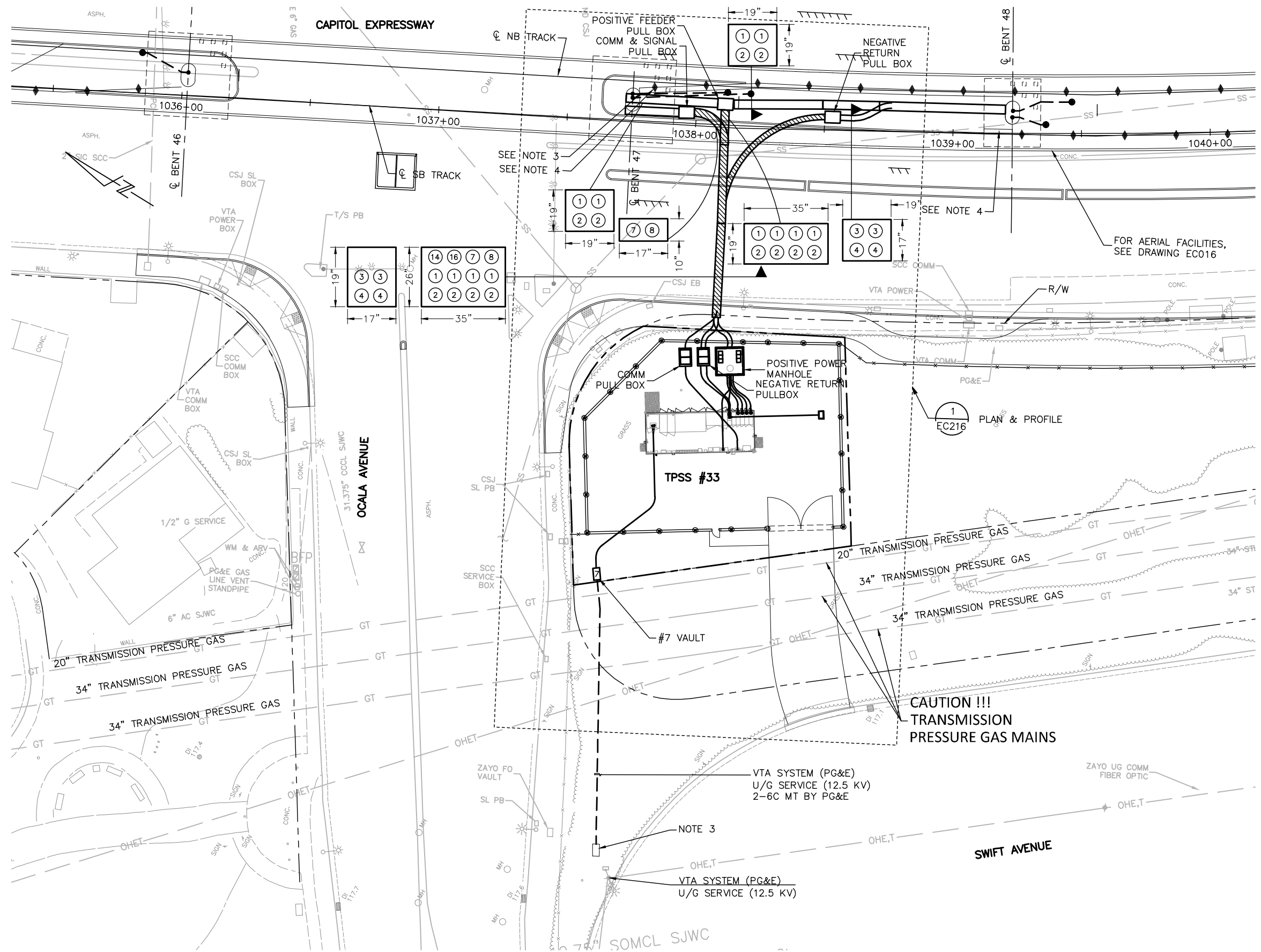
**BKF 100+ YEARS**  
 ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/06/20  
 SUBMITTAL DATE: 06/29/20  
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 BOARD APPROVAL DATE:

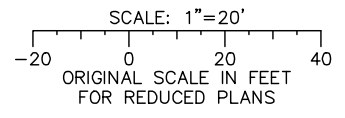
EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 ELECTRICAL  
 COMBINED SYSTEM DUCT  
 STA 1035+50 TO 1039+50

PCA NO.: 000  
 CONTRACT NO.: C801  
 FILE LOCATION: PROJECTWISE

SHEET OF	EC016
DRAWING NO.	EC016
REVISION	C

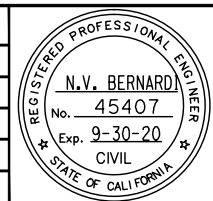


- NOTES:**
1. FOR ABBREVIATIONS AND LEGEND, SEE GN DRAWINGS.
  2. STATION/OFFSET ARE REFERENCED TO SB TRACK UNLESS OTHERWISE NOTED.
  3. INSTALL 2C FOR TRAFFIC SIGNAL. SEE ET DRAWINGS.
  4. INSTALL CSD THROUGH FOOTING AND COLUMN. SEE STRUCTURAL DRAWINGS.



Jun 24, 2020 - 4:32pm C:\cadd\ba\cherranides\west\mms8381\801EC116.dwg

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



DESIGNED BY: B. Silkwood  
 CHECKED BY: M. Cosentino  
 DRAWN BY: A. Hernandez  
 CADD FILE NAME: 801EC116.dwg



APPROVED BY: [Signature]

**BKF 100+ YEARS**  
 ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/06/20  
 SUBMITTAL DATE: 06/29/20

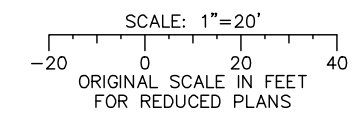
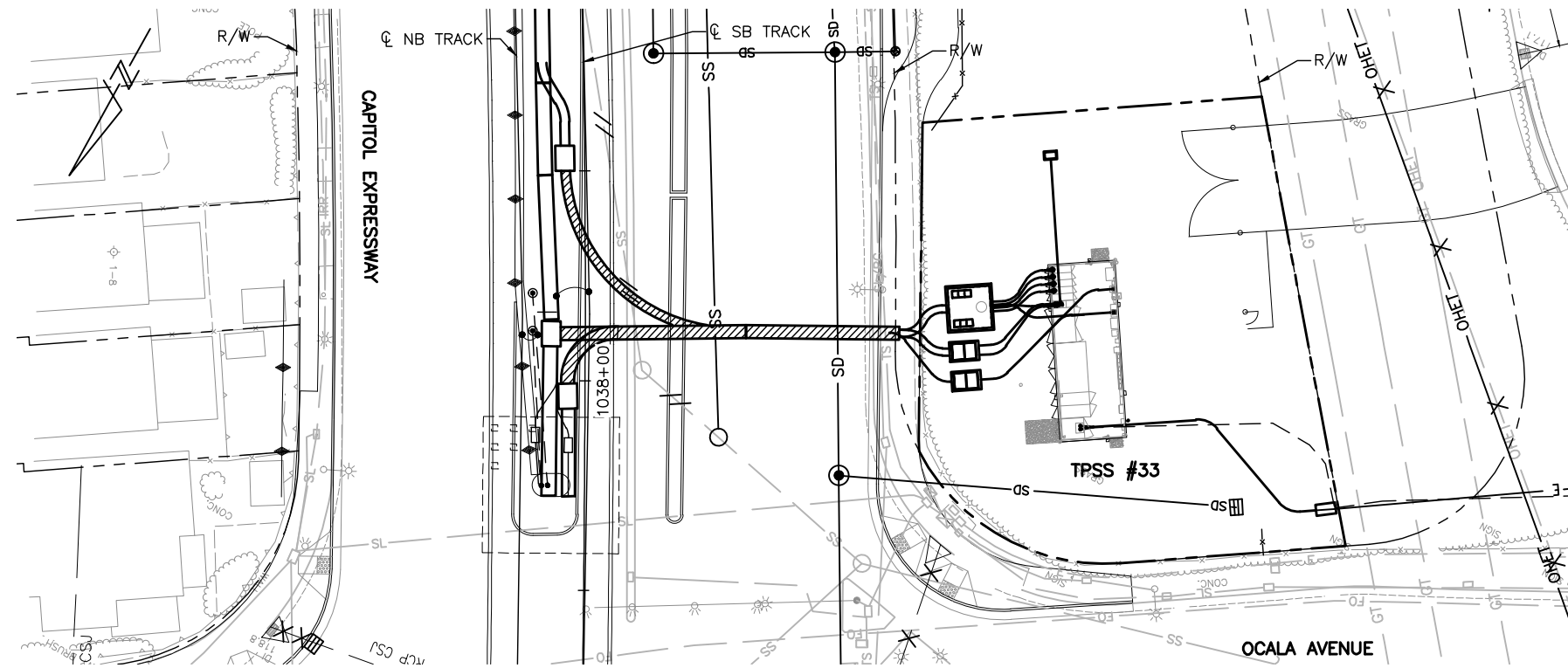
SCALE: 1" = 20'  
 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 ELECTRICAL  
 COMBINED SYSTEM DUCT (AT-GRADE)  
 STA 1035+50 TO 1039+50

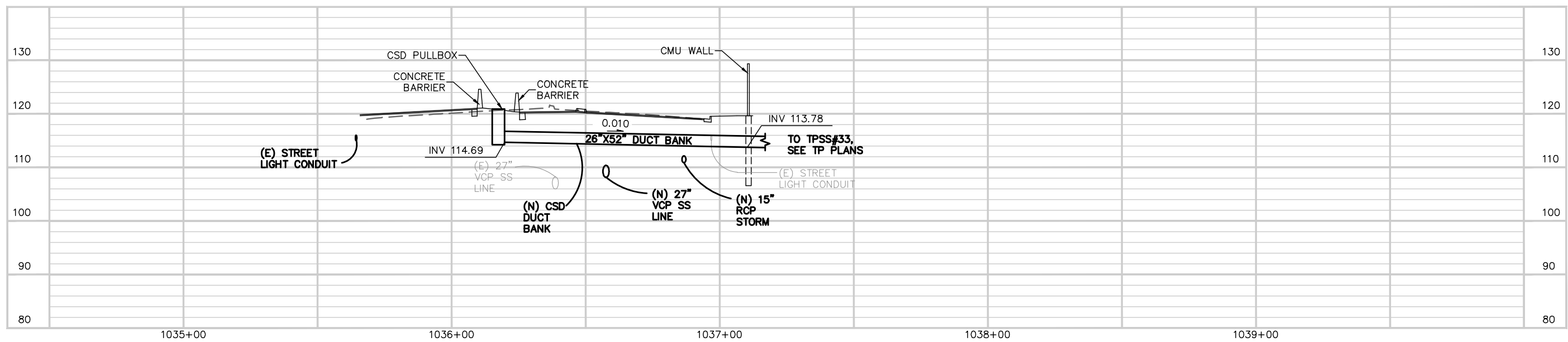
PROJECTWISE

PCA NO.: 000  
 CONTRACT NO.: C801  
 SHEET OF: EC116  
 REVISION: C

**NOTE:**  
FOR ABBREVIATIONS AND LEGEND, SEE  
GN DRAWINGS.



PLAN

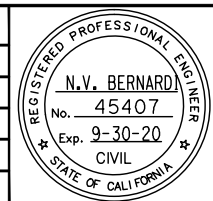


PROFILE

1 TPSS#33 TO MEDIAN

Jun 24, 2020 - 4:33pm C:\cadd\ba\cherrandez\west\mas8381\801EC216.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



SUBMITTED  
**BKF 100+**  
 YEARS  
 ENGINEERS / SURVEYORS / PLANNERS  
 DESIGNED: B. Silkwood  
 CHECKED: M. Cosentino  
 DRAWN: A. Hernandez  
 CADD FILE NAME: 801EC216.dwg



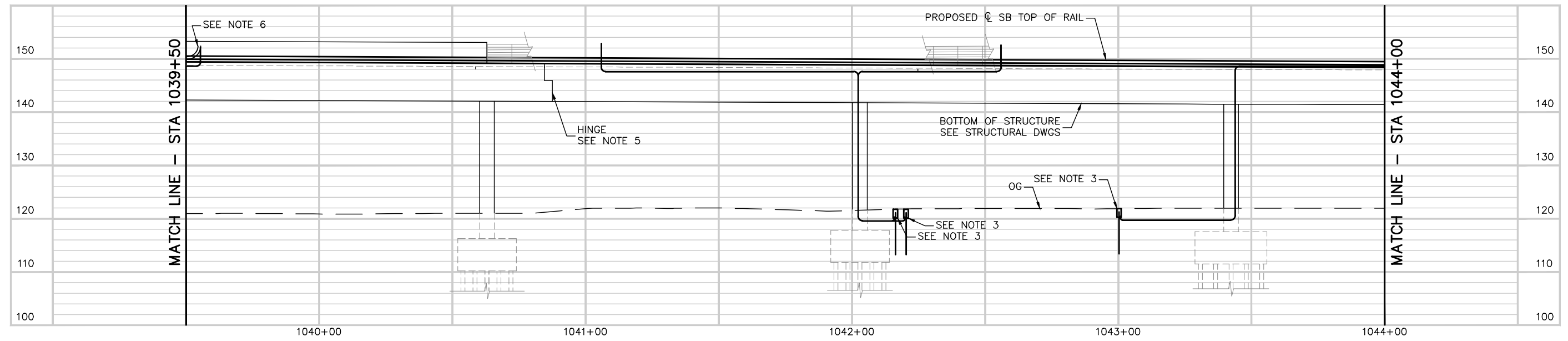
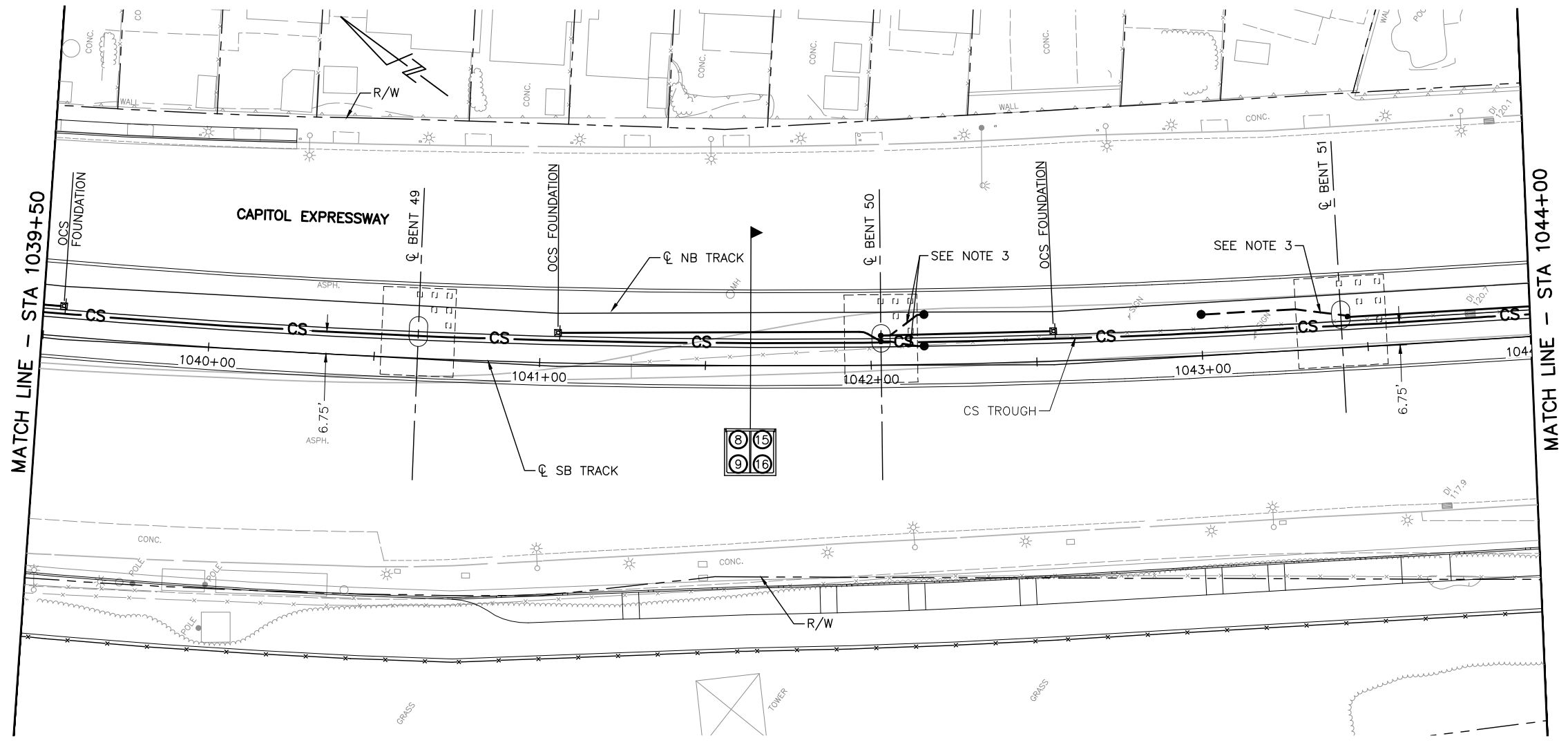
APPROVED  
**BKF 100+**  
 YEARS  
 ENGINEERS / SURVEYORS / PLANNERS  
 CADD FILE DATE: 03/06/20  
 SCALE: 1"=20' H ; 1"=10' V  
 SUBMITTAL DATE: 06/29/20  
 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 ELECTRICAL  
 COMBINED SYSTEM DUCT (AT-GRADE)  
 PLAN & PROFILE  
 PCA NO.: 000  
 CONTRACT NO.: C801  
 FILE LOCATION: PROJECTWISE

SHEET OF	
DRAWING NO.	EC216
REVISION	B

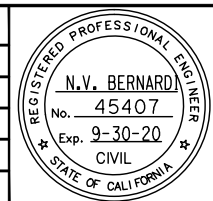
**NOTES:**

1. FOR ABBREVIATIONS AND LEGEND, SEE GN DRAWINGS.
2. STATION/OFFSET ARE REFERENCED TO SB TRACK UNLESS OTHERWISE NOTED.
3. FOR TES GROUNDING, SEE DRAWING ED412.
4. FOR TES SURGE ARRESTER GROUNDING, SEE DRAWING ED413.
5. FOR CS TROUGH EXPANSION JOINT, SEE DRAWING ED411.
6. CONNECT TRACTION POWER CABLES TO OCS POLE.
7. RUN TRACTION POWER CABLES IN GUIDEWAY GIRDER, SEE STRUCTURAL DRAWINGS AND DRAWINGS ED415.



Jun 24, 2020 - 4:33pm C:\cadd\ba\cherranides\west\mas8381\801EC017.dwg

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



**BKF 100+ YEARS**  
**ENGINEERS / SURVEYORS / PLANNERS**

DESIGNED: B. Silkwood  
 CHECKED: M. Cosentino  
 DRAWN: A. Hernandez  
 CADD FILE NAME: 801EC017.dwg



**BKF 100+ YEARS**  
**ENGINEERS / SURVEYORS / PLANNERS**

CADD FILE DATE: 03/06/20  
 SUBMITTAL DATE: 06/29/20  
 SCALE: 1"=20' H ; 1"=10' V  
 BOARD APPROVAL DATE:

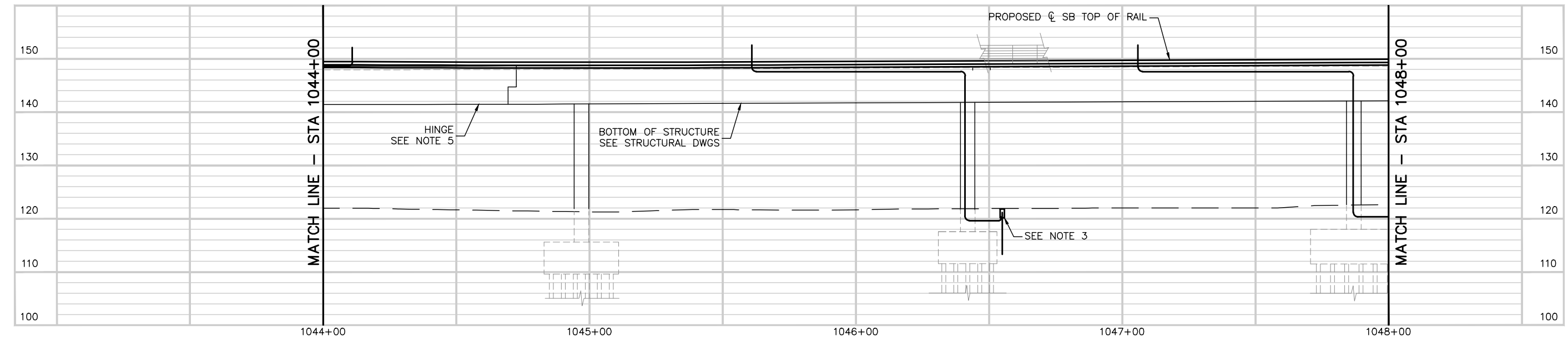
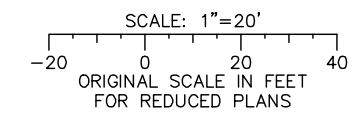
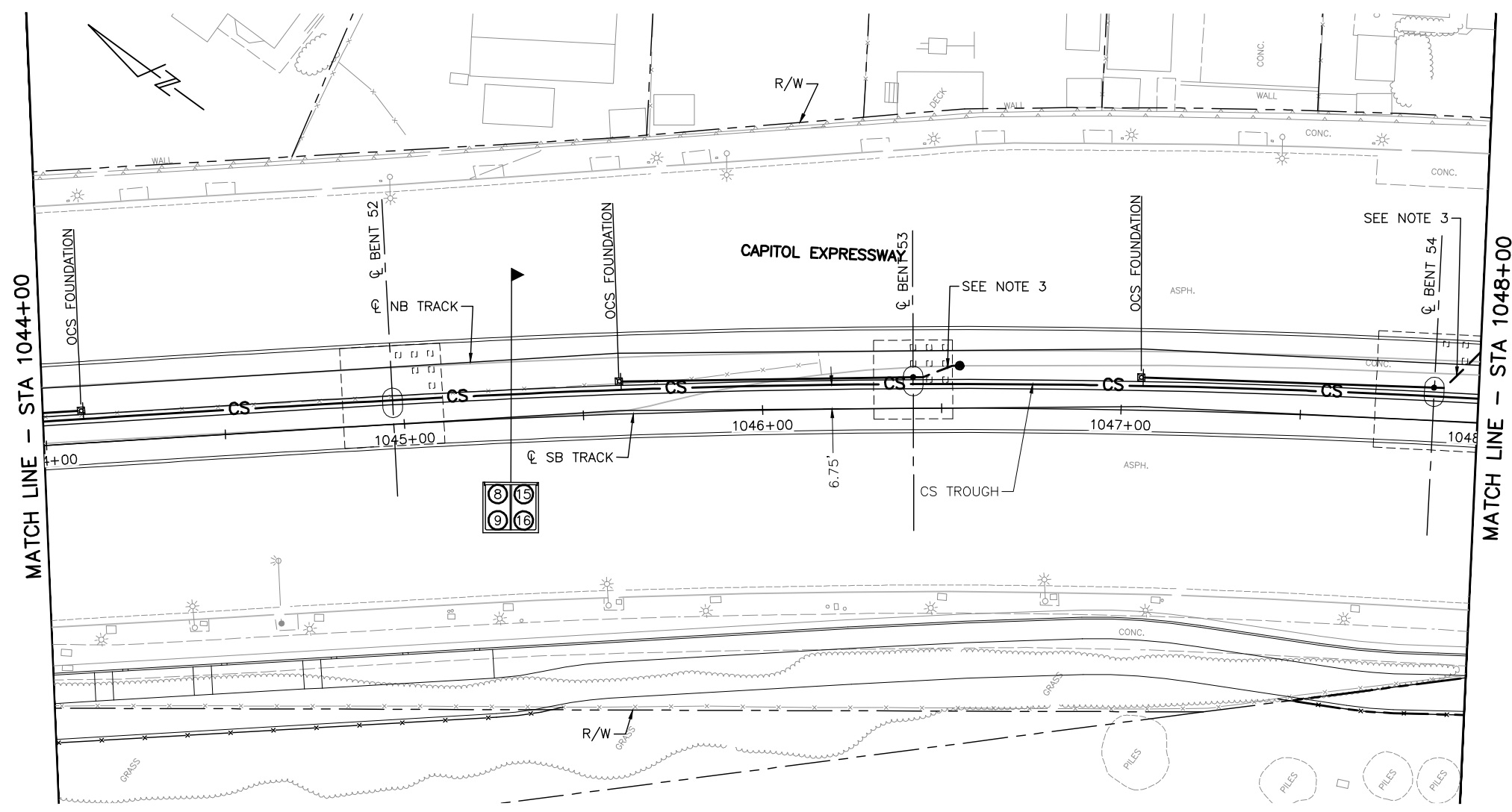
EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 ELECTRICAL  
 COMBINED SYSTEM DUCT  
 STA 1039+50 TO 1044+00

PCA NO.: 000  
 CONTRACT NO.: C801  
 FILE LOCATION: PROJECTWISE

SHEET OF	EC017
DRAWING NO.	EC017
REVISION	C

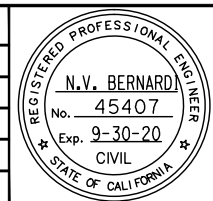
**NOTES:**

1. FOR ABBREVIATIONS AND LEGEND, SEE GN DRAWINGS.
2. STATION/OFFSET ARE REFERENCED TO SB TRACK UNLESS OTHERWISE NOTED.
3. FOR TES GROUNDING, SEE DRAWING ED412.
4. FOR TES SURGE ARRESTER GROUNDING, SEE DRAWING ED413.
5. FOR CS TROUGH EXPANSION JOINT, SEE DRAWING ED411.



Jun 24, 2020 - 4:34pm C:\cadd\ba\ahernandez\west\cadd\801EC018.dwg

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



SUBMITTED

**BKF 100+ YEARS**  
ENGINEERS / SURVEYORS / PLANNERS

DESIGNED: B. Silkwood  
CHECKED: M. Cosentino  
DRAWN: A. Hernandez  
CADD FILE NAME: 801EC018.dwg

Santa Clara Valley  
Transportation  
Authority

APPROVED

**BKF 100+ YEARS**  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/06/20  
SUBMITTAL DATE: 06/29/20  
SCALE: 1"=20' H; 1"=10' V  
BOARD APPROVAL DATE:

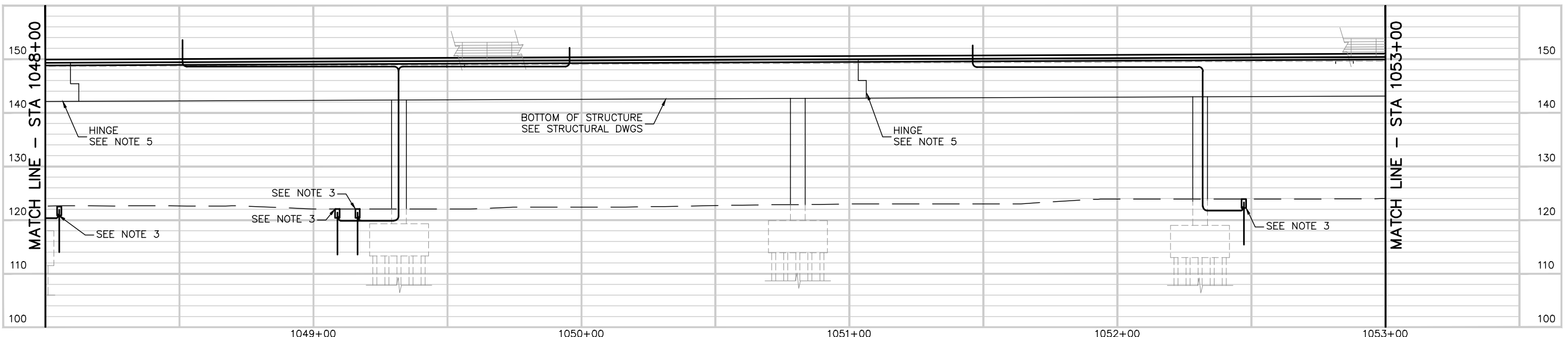
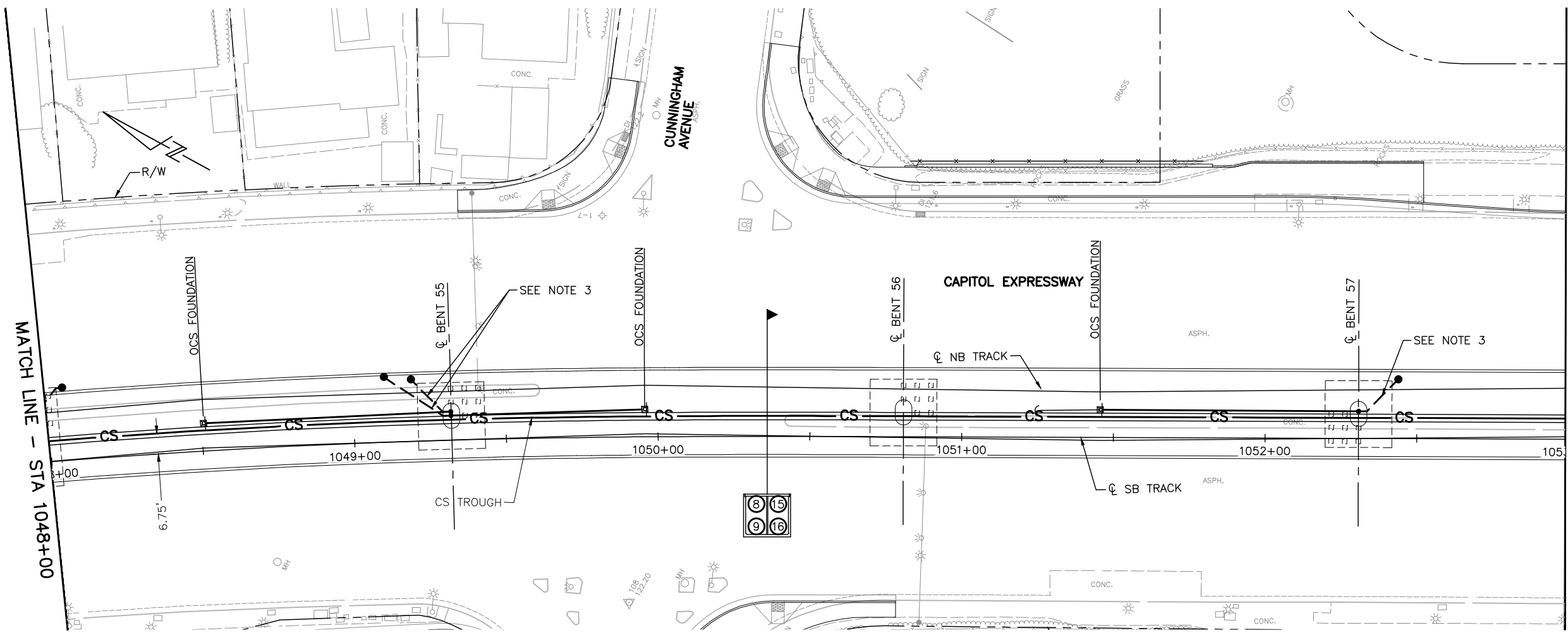
EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
ELECTRICAL  
COMBINED SYSTEM DUCT  
STA 1044+00 TO 1048+00

PCA NO.: 000  
CONTRACT NO.: C801  
FILE LOCATION: PROJECTWISE

SHEET OF	EC018
DRAWING NO.	EC018
REVISION	C

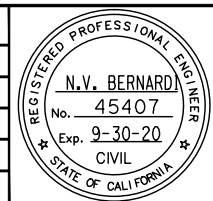
**NOTES:**

1. FOR ABBREVIATIONS AND LEGEND, SEE GN DRAWINGS.
2. STATION/OFFSET ARE REFERENCED TO SB TRACK UNLESS OTHERWISE NOTED.
3. FOR TES GROUNDING, SEE DRAWING ED412.
4. FOR TES SURGE ARRESTER GROUNDING, SEE DRAWING ED413.
5. FOR CS TROUGH EXPANSION JOINT, SEE DRAWING ED411.



Jun 24, 2020 - 4:34pm C:\cadd\ba\ahernandez\west\csm\801EC019.dwg

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



**BKF 100+ YEARS**  
**ENGINEERS / SURVEYORS / PLANNERS**

DESIGNED: B. Silkwood  
 CHECKED: M. Cosentino  
 DRAWN: A. Hernandez  
 CADD FILE NAME: 801EC019.dwg



**BKF 100+ YEARS**  
**ENGINEERS / SURVEYORS / PLANNERS**

CASD FILE DATE: 03/06/20  
 SUBMITTAL DATE: 06/29/20  
 SCALE: 1"=20' H ; 1"=10' V  
 BOARD APPROVAL DATE:

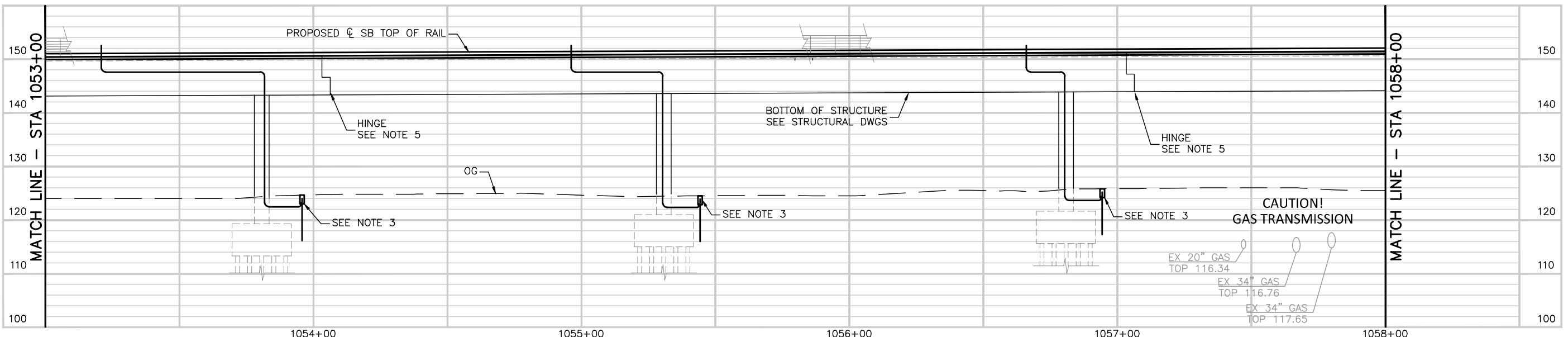
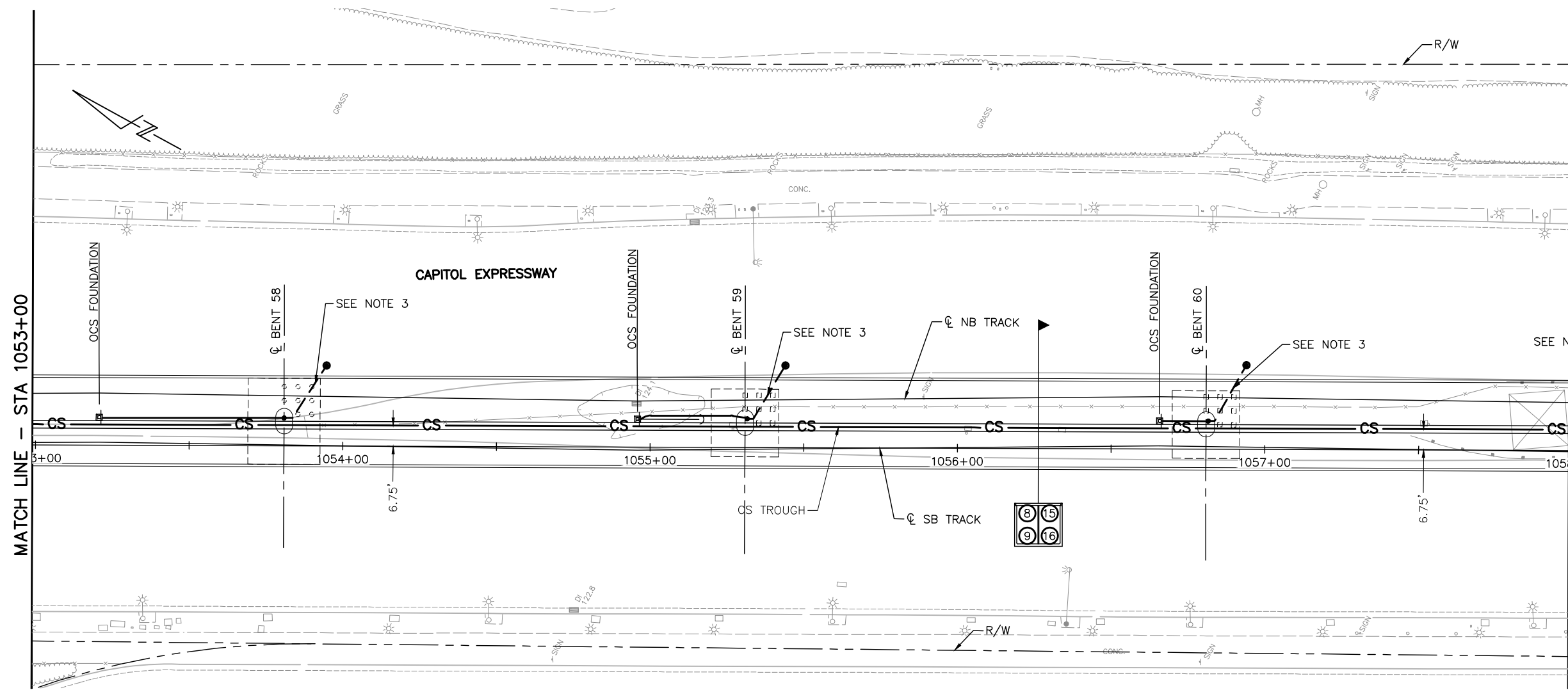
EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 ELECTRICAL  
 COMBINED SYSTEM DUCT  
 STA 1048+00 TO 1053+00

PCA NO.: 000  
 CONTRACT NO.: C801  
 FILE LOCATION: PROJECTWISE

SHEET OF	EC019
DRAWING NO.	EC019
REVISION	C

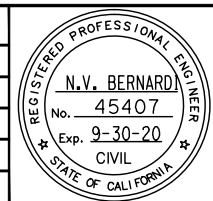
**NOTES:**

1. FOR ABBREVIATIONS AND LEGEND, SEE GN DRAWINGS.
2. STATION/OFFSET ARE REFERENCED TO SB TRACK UNLESS OTHERWISE NOTED.
3. FOR TES GROUNDING, SEE DRAWING ED412.
4. FOR TES SURGE ARRESTER GROUNDING, SEE DRAWING ED413.
5. FOR CS TROUGH EXPANSION JOINT, SEE DRAWING ED411.



Jun 24, 2020 - 4:35pm C:\cadd\ba\ahernandez\west\dmsh381\801EC020.dwg

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



**BKF 100+ YEARS**  
ENGINEERS / SURVEYORS / PLANNERS

DESIGNED: B. Silkwood  
CHECKED: M. Cosentino  
DRAWN: A. Hernandez  
CADD FILE NAME: 801EC020.dwg



**BKF 100+ YEARS**  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/06/20  
SCALE: 1"=20' H; 1"=10' V  
SUBMITTAL DATE: 06/29/20  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
ELECTRICAL  
COMBINED SYSTEM DUCT  
STA 1053+00 TO 1058+00

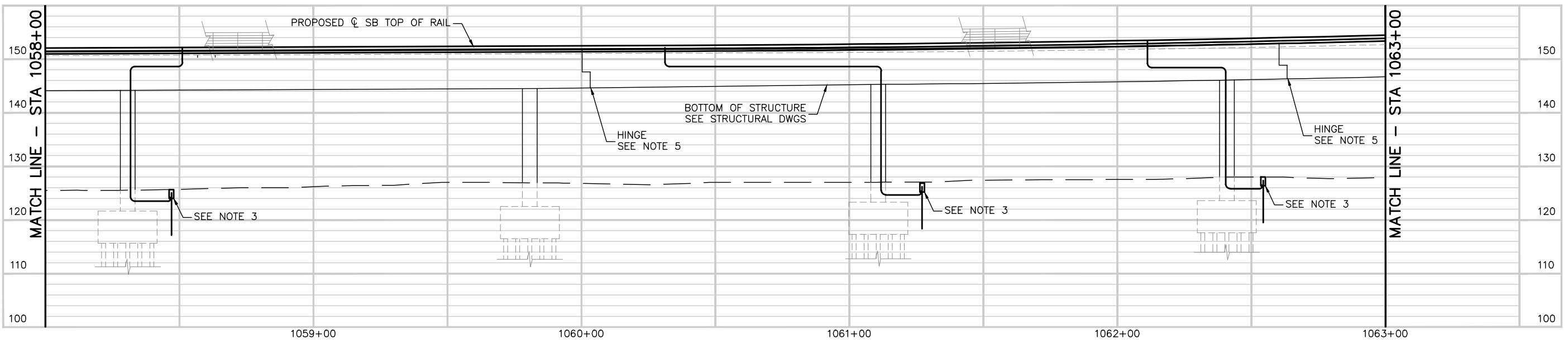
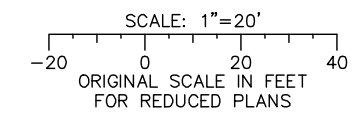
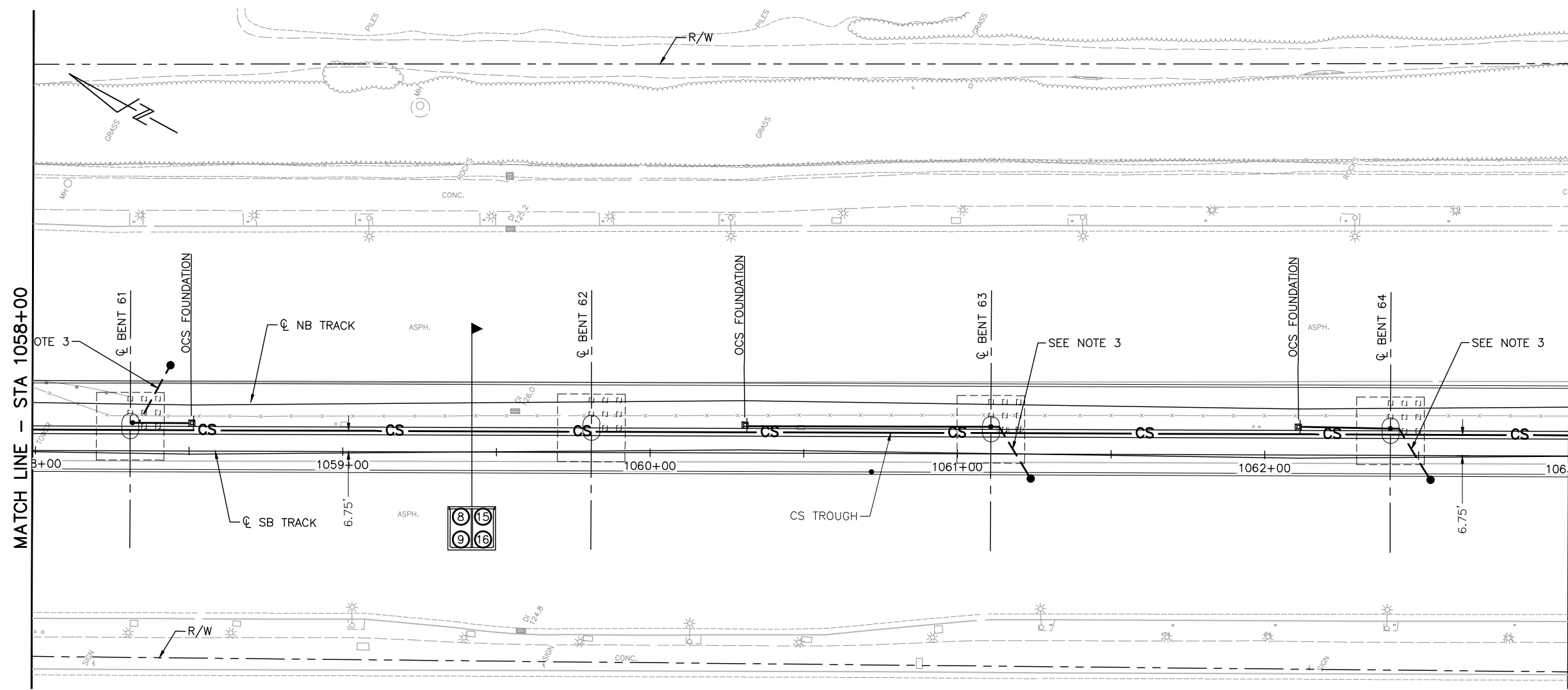
PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

SHEET OF	EC020
DRAWING NO.	EC020
REVISION	C



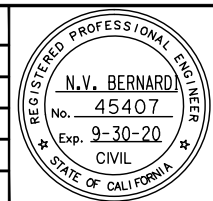
**NOTES:**

1. FOR ABBREVIATIONS AND LEGEND, SEE GN DRAWINGS.
2. STATION/OFFSET ARE REFERENCED TO SB TRACK UNLESS OTHERWISE NOTED.
3. FOR TES GROUNDING, SEE DRAWING ED412.
4. FOR TES SURGE ARRESTER GROUNDING, SEE DRAWING ED413.
5. FOR CS TROUGH EXPANSION JOINT, SEE DRAWING ED411.



Jun 24, 2020 - 4:35pm C:\cadd\B\A\hernandez\west\omas8381\801EC021.dwg

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



**BKF 100+ YEARS**  
**ENGINEERS / SURVEYORS / PLANNERS**

DESIGNED: B. Silkwood  
 CHECKED: M. Cosentino  
 DRAWN: A. Hernandez  
 CADD FILE NAME: 801EC021.dwg



**BKF 100+ YEARS**  
**ENGINEERS / SURVEYORS / PLANNERS**

APPROVED: [Signature]  
 CADD FILE DATE: 03/06/20  
 SUBMITTAL DATE: 06/29/20  
 SCALE: 1"=20' H ; 1"=10' V  
 BOARD APPROVAL DATE:

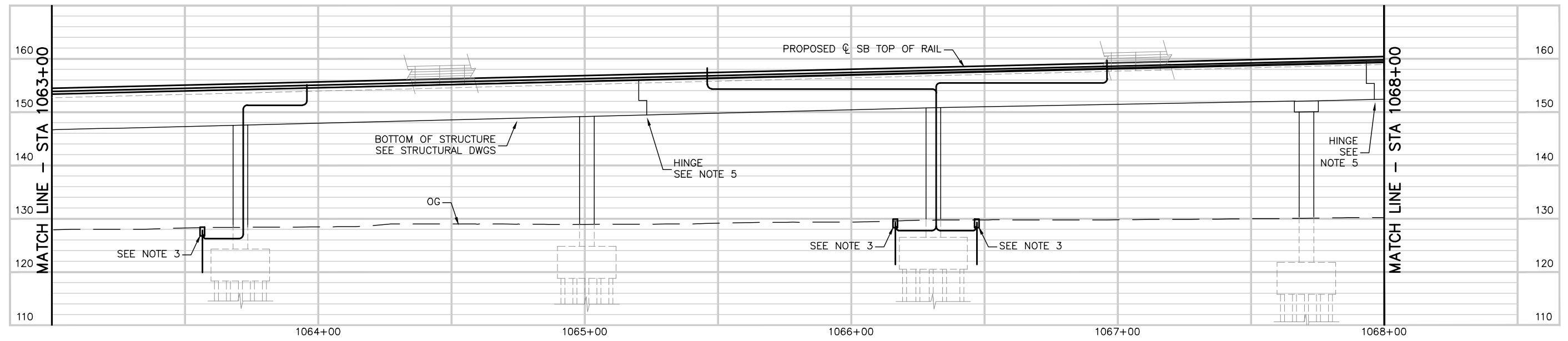
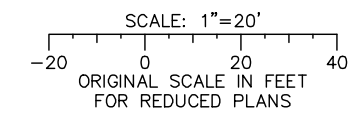
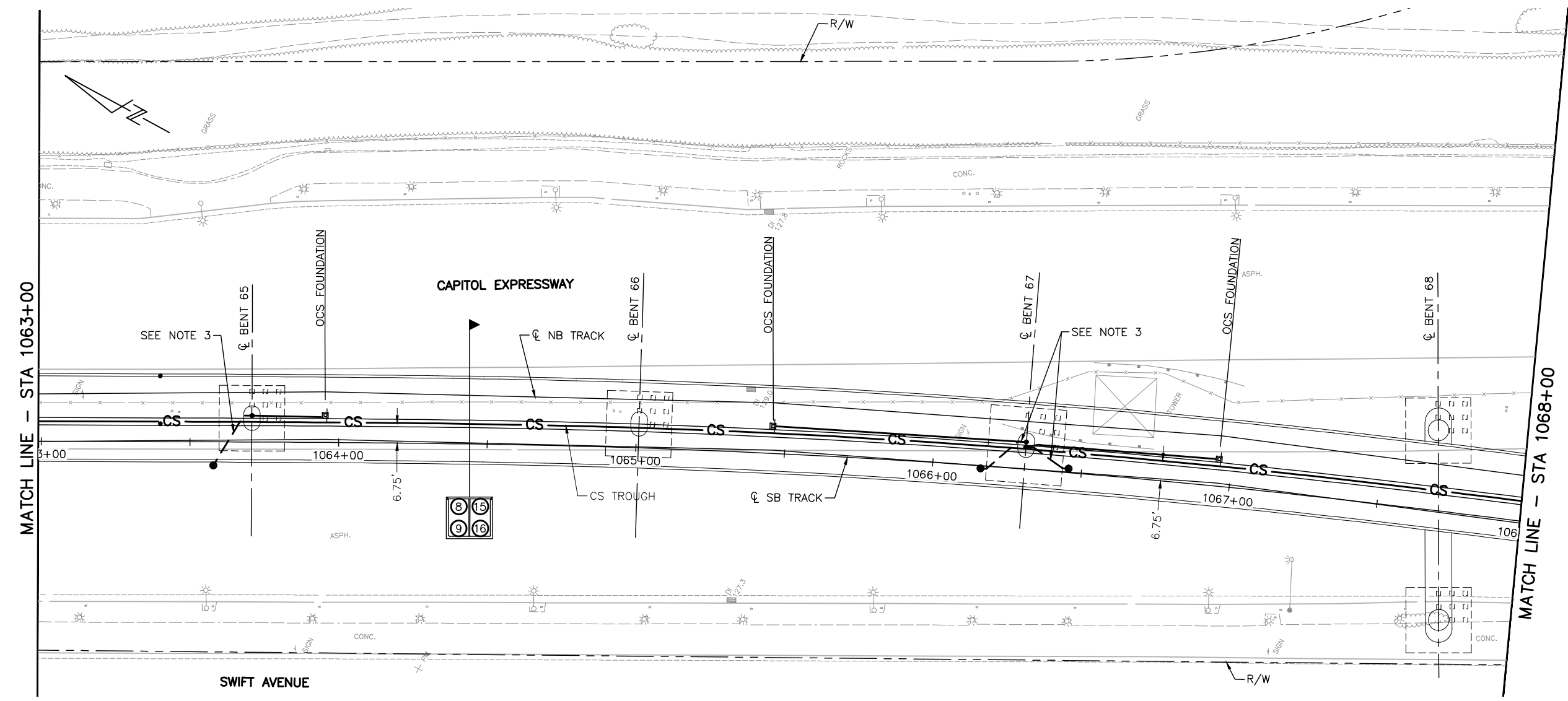
EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 ELECTRICAL  
 COMBINED SYSTEM DUCT  
 STA 1058+00 TO 1063+00

PCA NO.: 000  
 CONTRACT NO.: C801  
 FILE LOCATION: PROJECTWISE

SHEET OF	EC021
DRAWING NO.	EC021
REVISION	C

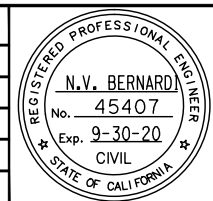
**NOTES:**

1. FOR ABBREVIATIONS AND LEGEND, SEE GN DRAWINGS.
2. STATION/OFFSET ARE REFERENCED TO SB TRACK UNLESS OTHERWISE NOTED.
3. FOR TES GROUNDING, SEE DRAWING ED412.
4. FOR TES SURGE ARRESTER GROUNDING, SEE DRAWING ED413.
5. FOR CS TROUGH EXPANSION JOINT, SEE DRAWING ED411.



Jun 24, 2020 - 4:36pm C:\cadd\sb\p\cherrandez\west\smas8381\801EC022.dwg

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



**BKF 100+ YEARS**  
ENGINEERS / SURVEYORS / PLANNERS

DESIGNED: B. Silkwood  
CHECKED: M. Cosentino  
DRAWN: A. Hernandez  
CADD FILE NAME: 801EC022.dwg



**BKF 100+ YEARS**  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/06/20  
SUBMITTAL DATE: 06/29/20  
SCALE: 1"=20' H ; 1"=10' V  
BOARD APPROVAL DATE:

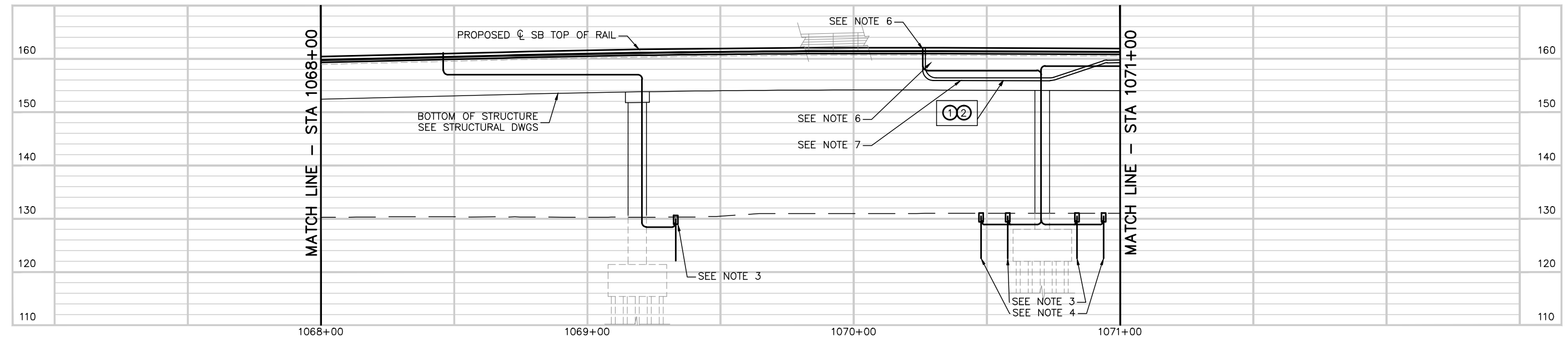
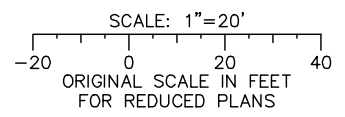
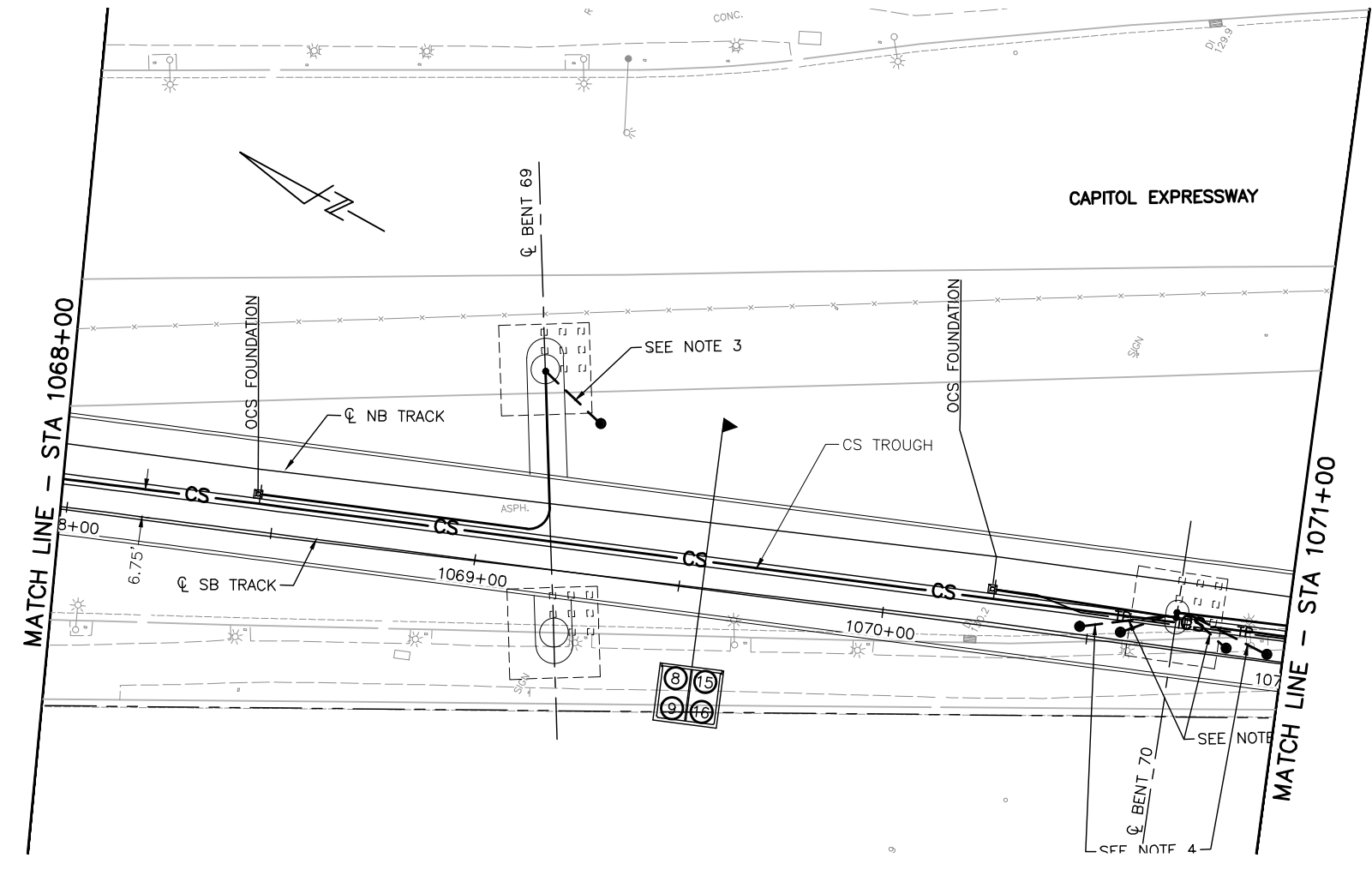
EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
ELECTRICAL  
COMBINED SYSTEM DUCT  
STA 1063+00 TO 1068+00

PCA NO.: 000  
CONTRACT NO.: C801  
FILE LOCATION: PROJECTWISE

SHEET OF	EC022
DRAWING NO.	EC022
REVISION	C

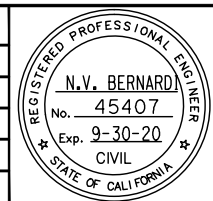
**NOTES:**

1. FOR ABBREVIATIONS AND LEGEND, SEE GN DRAWINGS.
2. STATION/OFFSET ARE REFERENCED TO SB TRACK UNLESS OTHERWISE NOTED.
3. FOR TES GROUNDING, SEE DRAWING ED413.
4. FOR TES SURGE ARRESTER GROUNDING, SEE DRAWING ED413.
5. FOR CS TROUGH EXPANSION JOINT, SEE DRAWING ED411.
6. CONNECT TRACTION POWER CABLES TO OCS POLE.
7. RUN TRACTION POWER CABLES IN GUIDEWAY GIRDER, SEE STRUCTURAL DRAWINGS AND DRAWINGS ED415.



Jun 24, 2020 - 4:36pm C:\cadd\ba\ahernandez\west\mas8381\801EC023.dwg

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



**BKF 100+**  
 YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

DESIGNED: B. Silkwood  
 CHECKED: M. Cosentino  
 DRAWN: A. Hernandez  
 CADD FILE NAME: 801EC023.dwg



**BKF 100+**  
 YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/06/20  
 SUBMITTAL DATE: 06/29/20  
 SCALE: 1"=20' H; 1"=10' V  
 BOARD APPROVAL DATE:

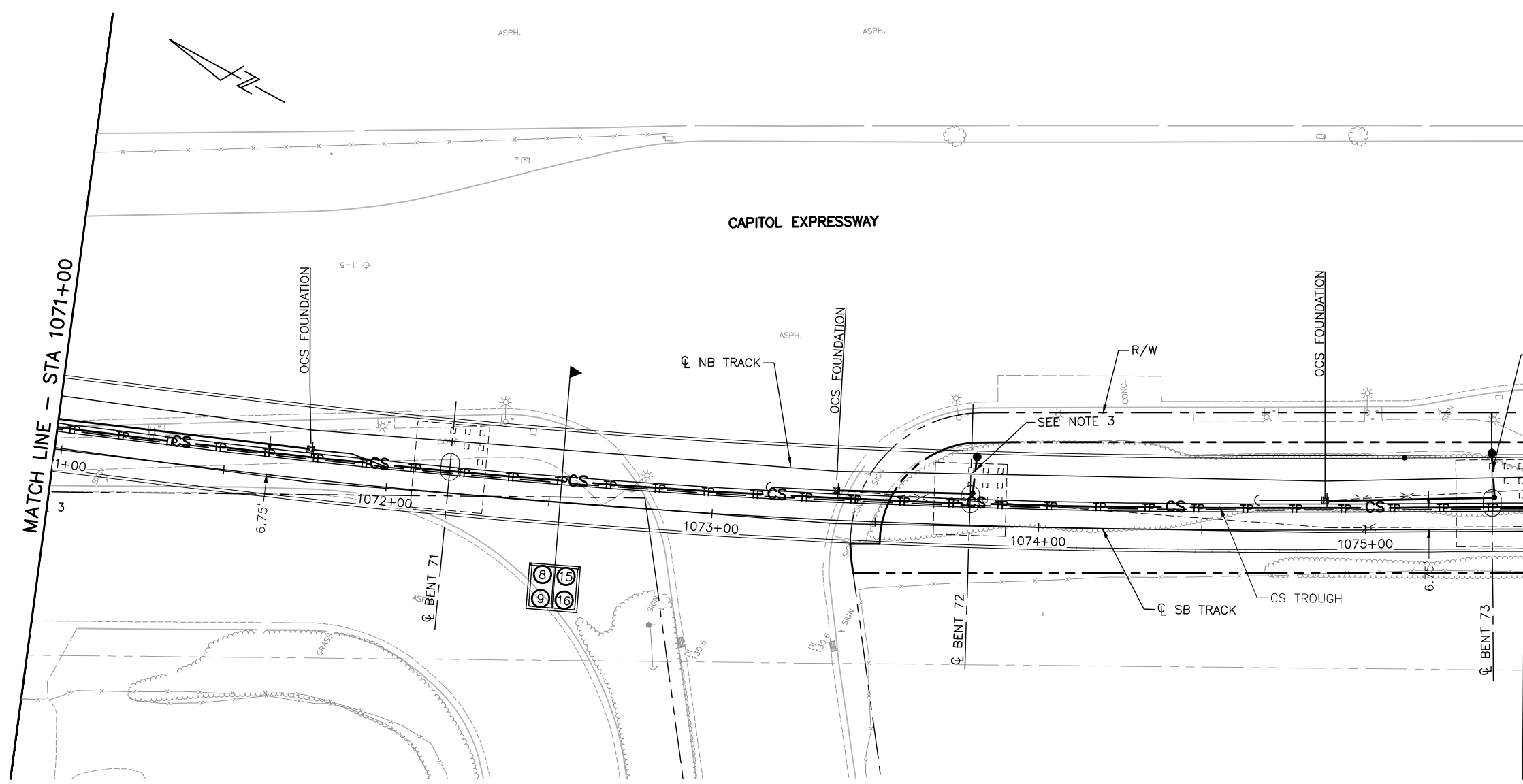
EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 ELECTRICAL  
 COMBINED SYSTEM DUCT  
 STA 1068+00 TO 1071+00

PCA NO.: 000  
 CONTRACT NO.: C801  
 FILE LOCATION: PROJECTWISE

SHEET OF	EC023
DRAWING NO.	EC023
REVISION	C

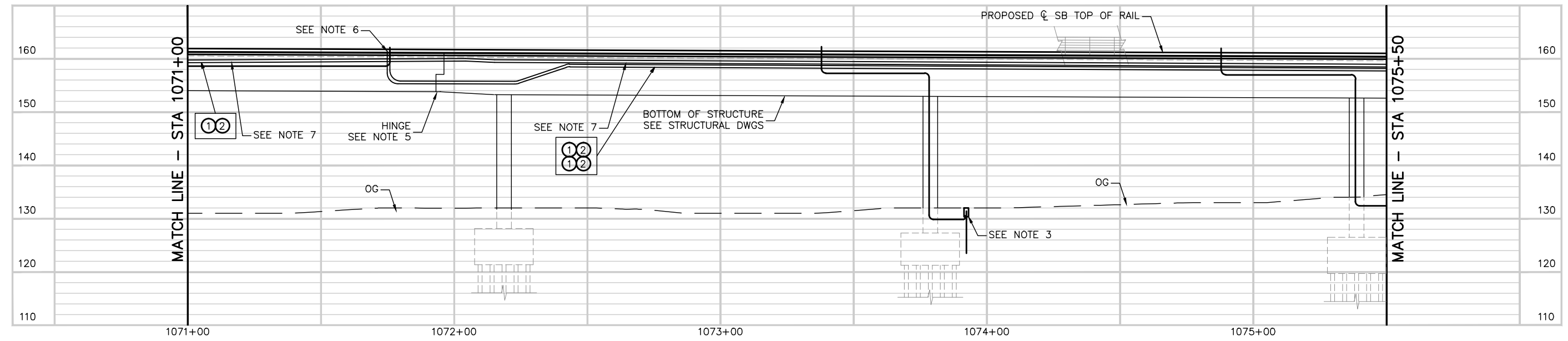
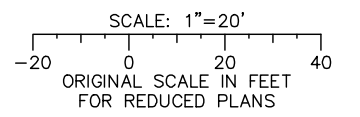
**NOTES:**

1. FOR ABBREVIATIONS AND LEGEND, SEE GN DRAWINGS.
2. STATION/OFFSET ARE REFERENCED TO SB TRACK UNLESS OTHERWISE NOTED.
3. FOR TES GROUNDING, SEE DRAWING ED413.
4. FOR TES SURGE ARRESTER GROUNDING, SEE DRAWING ED413.
5. FOR CS TROUGH EXPANSION JOINT, SEE DRAWING ED411.
6. CONNECT TRACTION POWER CABLES TO OCS POLE.
7. RUN TRACTION POWER CABLES IN GUIDEWAY GIRDER, SEE STRUCTURAL DRAWINGS AND DRAWINGS ED415.



MATCH LINE - STA 1075+50

MATCH LINE - STA 1071+00

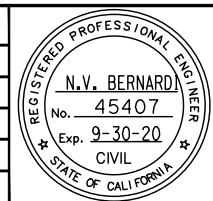


MATCH LINE - STA 1075+50

MATCH LINE - STA 1071+00

Jun 24, 2020 - 4:37pm C:\cadd\ba\cherrandez\west\mns8381\801EC024.dwg

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



**BKF 100+ YEARS**  
ENGINEERS / SURVEYORS / PLANNERS

DESIGNED: B. Silkwood  
CHECKED: M. Cosentino  
DRAWN: A. Hernandez  
CADD FILE NAME: 801EC024.dwg



**BKF 100+ YEARS**  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/06/20  
SUBMITTAL DATE: 06/29/20  
SCALE: 1"=20' H; 1"=10' V  
BOARD APPROVAL DATE:

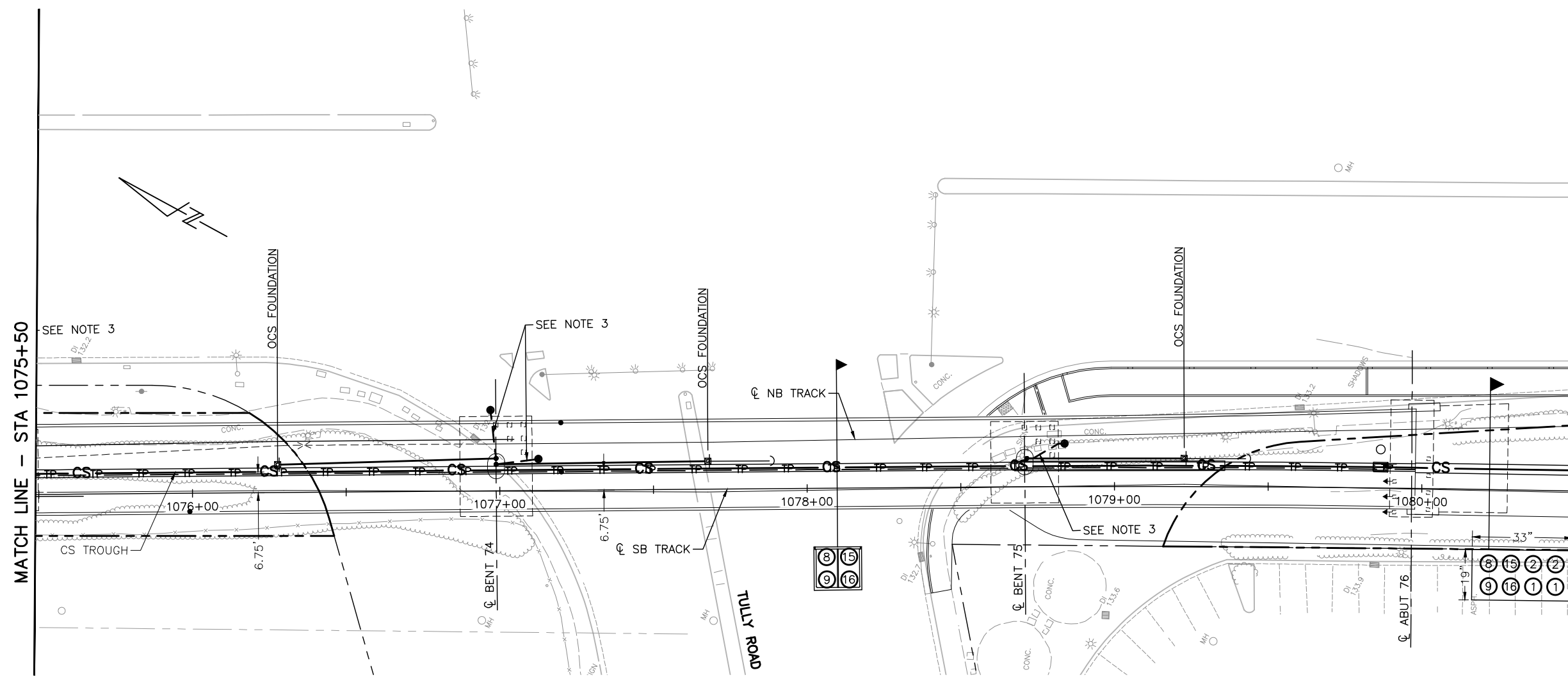
EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
ELECTRICAL  
COMBINED SYSTEM DUCT  
STA 1071+00 TO 1075+50

PCA NO.: 000  
CONTRACT NO.: C801  
FILE LOCATION: PROJECTWISE

SHEET OF	EC024
DRAWING NO.	EC024
REVISION	C

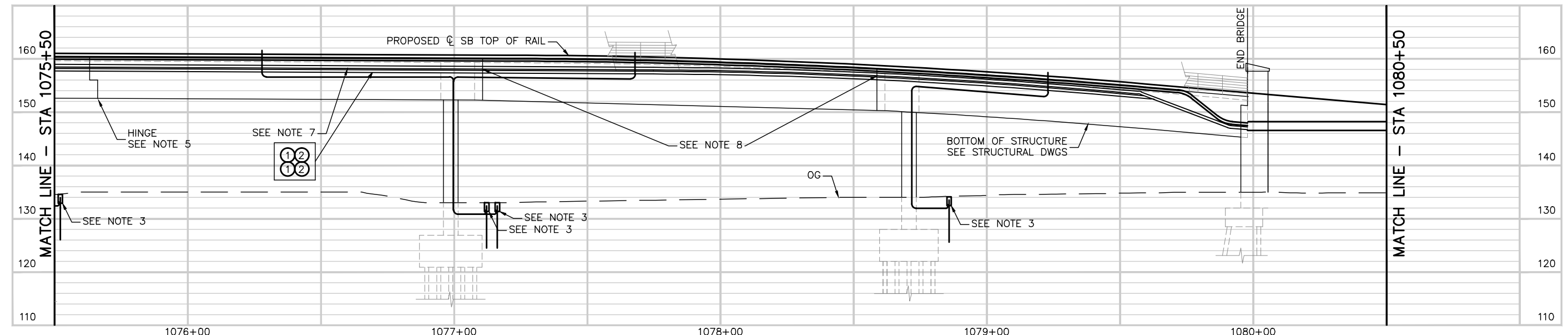
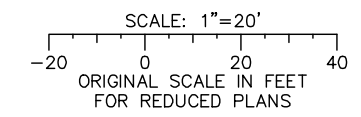
**NOTES:**

1. FOR ABBREVIATIONS AND LEGEND, SEE GN DRAWINGS.
2. STATION/OFFSET ARE REFERENCED TO SB TRACK UNLESS OTHERWISE NOTED.
3. FOR TES GROUNDING, SEE DRAWING ED412.
4. FOR TES SURGE ARRESTER GROUNDING, SEE DRAWING ED413.
5. FOR CS TROUGH EXPANSION JOINT, SEE DRAWING ED411.
6. CONNECT TRACTION POWER CABLES TO OCS POLE.
7. RUN TRACTION POWER CABLES IN GUIDEWAY GIRDER, SEE STRUCTURAL DRAWINGS AND DRAWINGS ED415.
8. RUN TRACTION POWERS CABLES UNDERNEATH TULLY PRECAST GIRDER, SEE STRUCTURAL DRAWINGS AND SHEET ED414.



MATCH LINE - STA 1075+50

MATCH LINE - STA 1080+50

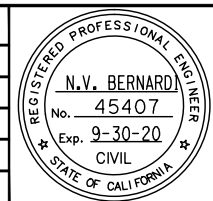


MATCH LINE - STA 1075+50

MATCH LINE - STA 1080+50

Jun 24, 2020 - 4:37pm C:\cadd\ba\cherranodes\west\dmsh8381\801EC025.dwg

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



**BKF 100+ YEARS**  
ENGINEERS / SURVEYORS / PLANNERS

DESIGNED: B. Silkwood  
CHECKED: M. Cosentino

DRAWN: A. Hernandez  
CADD FILE NAME: 801EC025.dwg



**BKF 100+ YEARS**  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/06/20  
SUBMITTAL DATE: 06/29/20

SCALE: 1"=20' H ; 1"=10' V  
BOARD APPROVAL DATE:

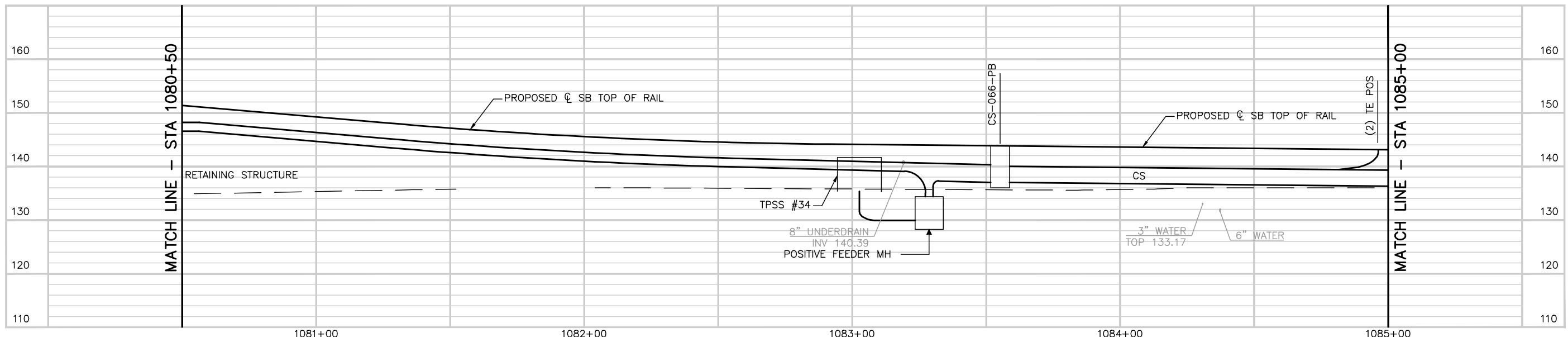
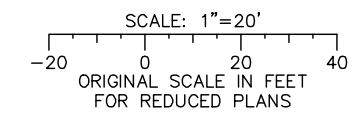
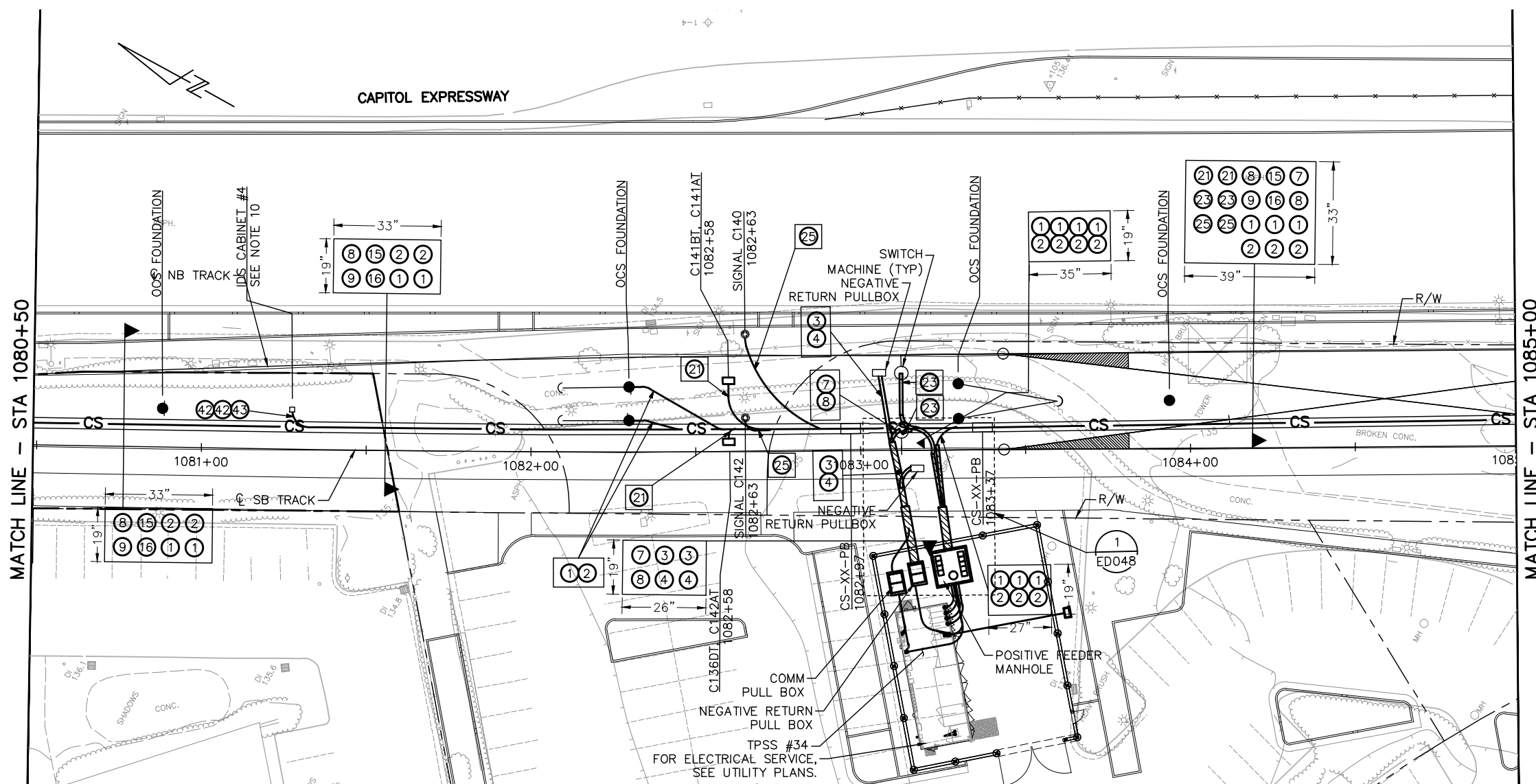
EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
ELECTRICAL  
COMBINED SYSTEM DUCT  
STA 1075+50 TO 1080+50

PLA NO: 000 CONTRACT NO: C801 FILE LOCATION: PROJECTWISE

SHEET OF	EC025
DRAWING NO.	EC025
REVISION	C

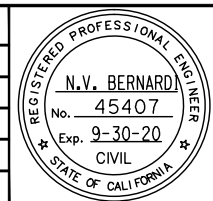
**NOTES:**

1. FOR ABBREVIATIONS AND LEGEND, SEE GN DRAWINGS.
2. STATION/OFFSET ARE REFERENCED TO SB TRACK UNLESS OTHERWISE NOTED.
3. 4C STUB-OUT FOR TRACTION POWER CABLES.
4. 2-4C THROUGH BENT FOR TRACTION POWER CABLES.
5. TRACTION POWER CABLES DROP INTO POWER CABLE TRAY.
6. INSTALL 1.5C, 1 #4/0 (BARE COPPER OCS POLE GROUND).
7. SEE CS TROUGH EXPANSION JOINT DETAIL ON DRAWING ED410.
8. COIL UP 3FT #4/0 AT BASE OF OCS POLE, SEE OCS PLANS FOR CONTINUATION.
9. SEE GROUND WELL DETAIL ON DRAWING ED411.
10. 2-4C PASS TROUGH 2-6C SLEEVES.
11. SEE IDS WIRING DIAGRAM ON DRAWINGS KC106 AND KD140.



Jun 24, 2020 - 4:35pm C:\cadd\ba\ahernandez\west\mas8381\801EC026.dwg

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



**BKF 100+ YEARS**  
**ENGINEERS / SURVEYORS / PLANNERS**

DESIGNED: B. Silkwood  
 CHECKED: M. Cosentino  
 DRAWN: A. Hernandez  
 CADD FILE NAME: 801EC026.dwg



**BKF 100+ YEARS**  
**ENGINEERS / SURVEYORS / PLANNERS**

CADD FILE DATE: 03/06/20  
 SUBMITTAL DATE: 06/29/20  
 SCALE: 1"=20' H; 1"=10' V  
 BOARD APPROVAL DATE:

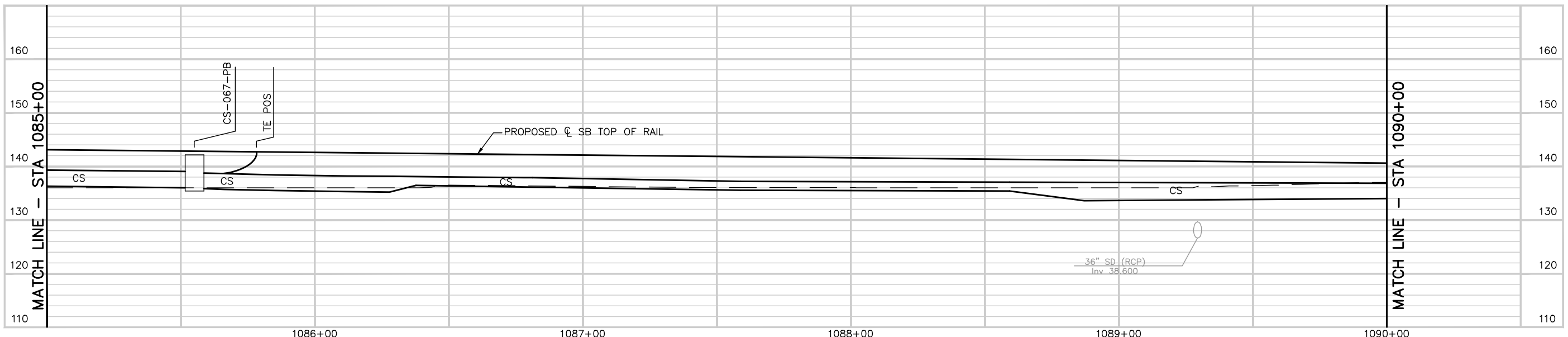
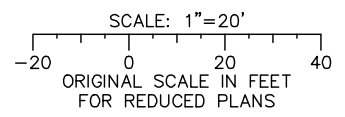
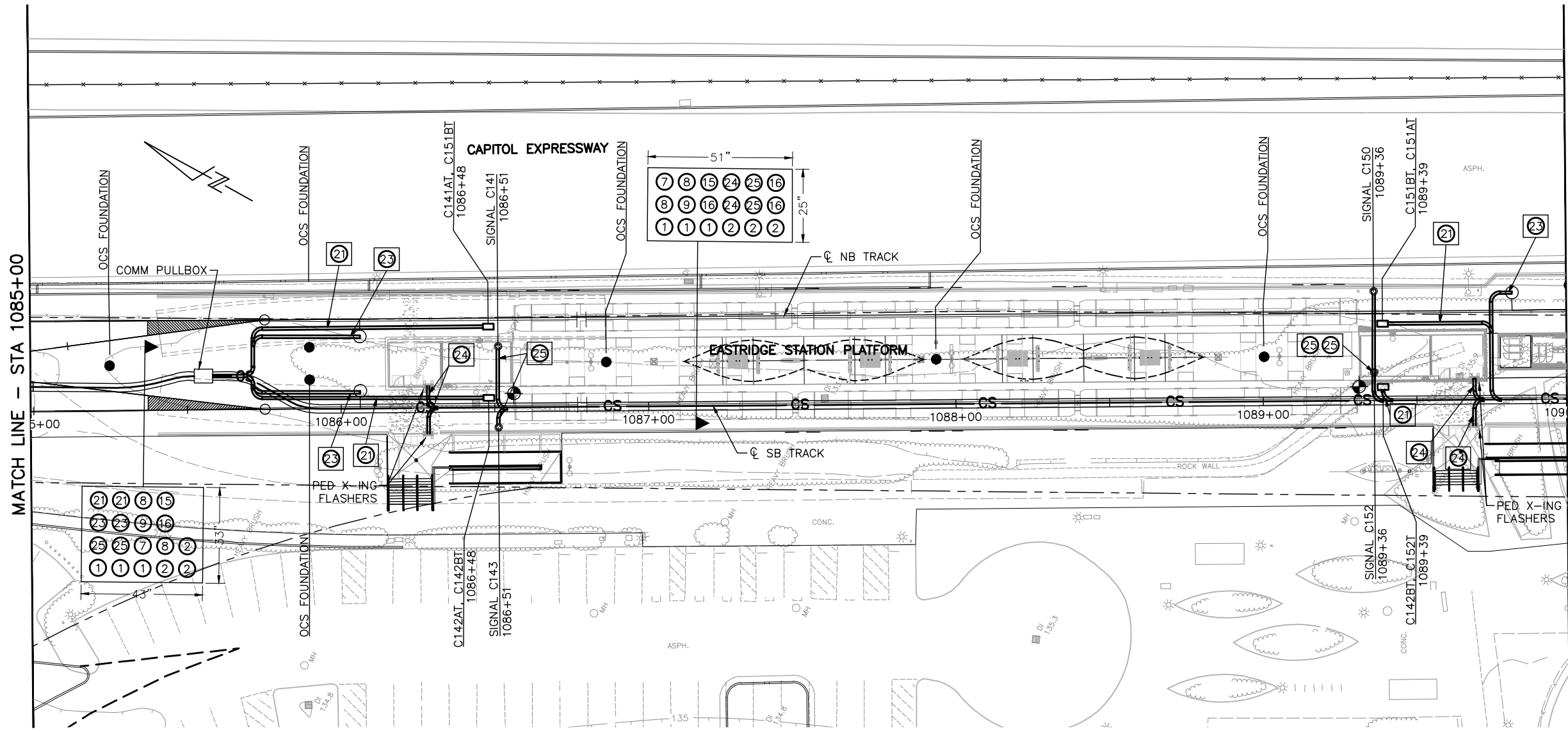
EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 ELECTRICAL  
 COMBINED SYSTEM DUCT  
 STA 1080+50 TO 1085+00

PCA NO.: 000  
 CONTRACT NO.: C801  
 FILE LOCATION: PROJECTWISE

SHEET OF	EC026
DRAWING NO.	EC026
REVISION	C

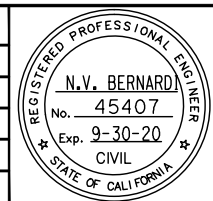
**NOTES:**

1. INSTALL CSD UNDER PLATFORM.
2. LATERALS NOT CROSSING THE TRACKS SHALL BE CONCRETE ENCASED.
3. LATERALS CROSSING TRACKS SHALL BE REINFORCED CONCRETE ENCASED.
4. FOR ABBREVIATIONS AND LEGEND, SEE GN DRAWINGS.
5. STATION/OFFSET ARE REFERENCED TO SB TRACK UNLESS OTHERWISE NOTED.



Jun 25, 2020 - 11:27am C:\cadd\B\p\sternandez\west\cros\B381\801EC027.dwg

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



**BKF 100+ YEARS**  
 ENGINEERS / SURVEYORS / PLANNERS

DESIGNED: B. Silkwood  
 CHECKED: M. Cosentino  
 DRAWN: A. Hernandez  
 CADD FILE NAME: 801EC027.dwg



**BKF 100+ YEARS**  
 ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/06/20  
 SUBMITTAL DATE: 06/29/20  
 SCALE: 1"=20' H; 1"=10' V  
 BOARD APPROVAL DATE:

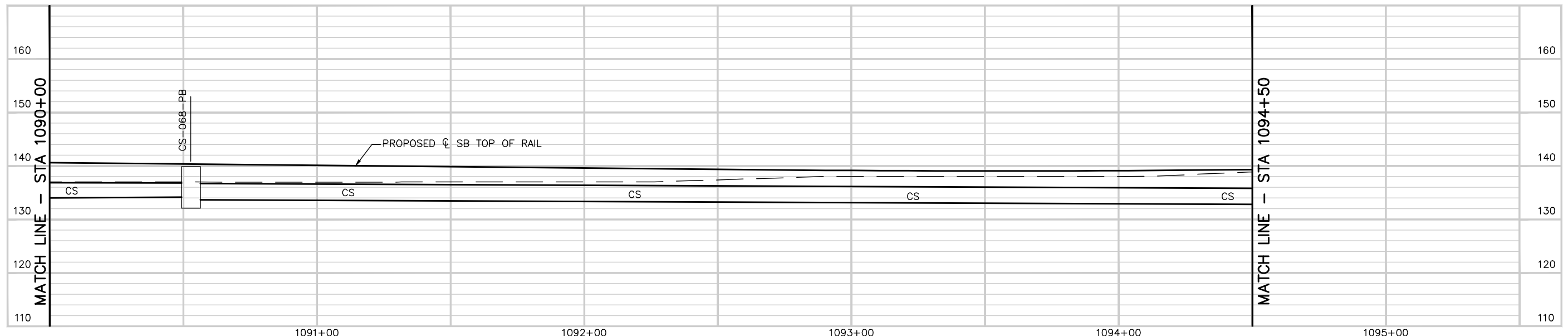
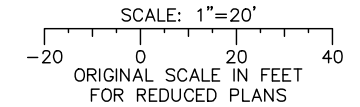
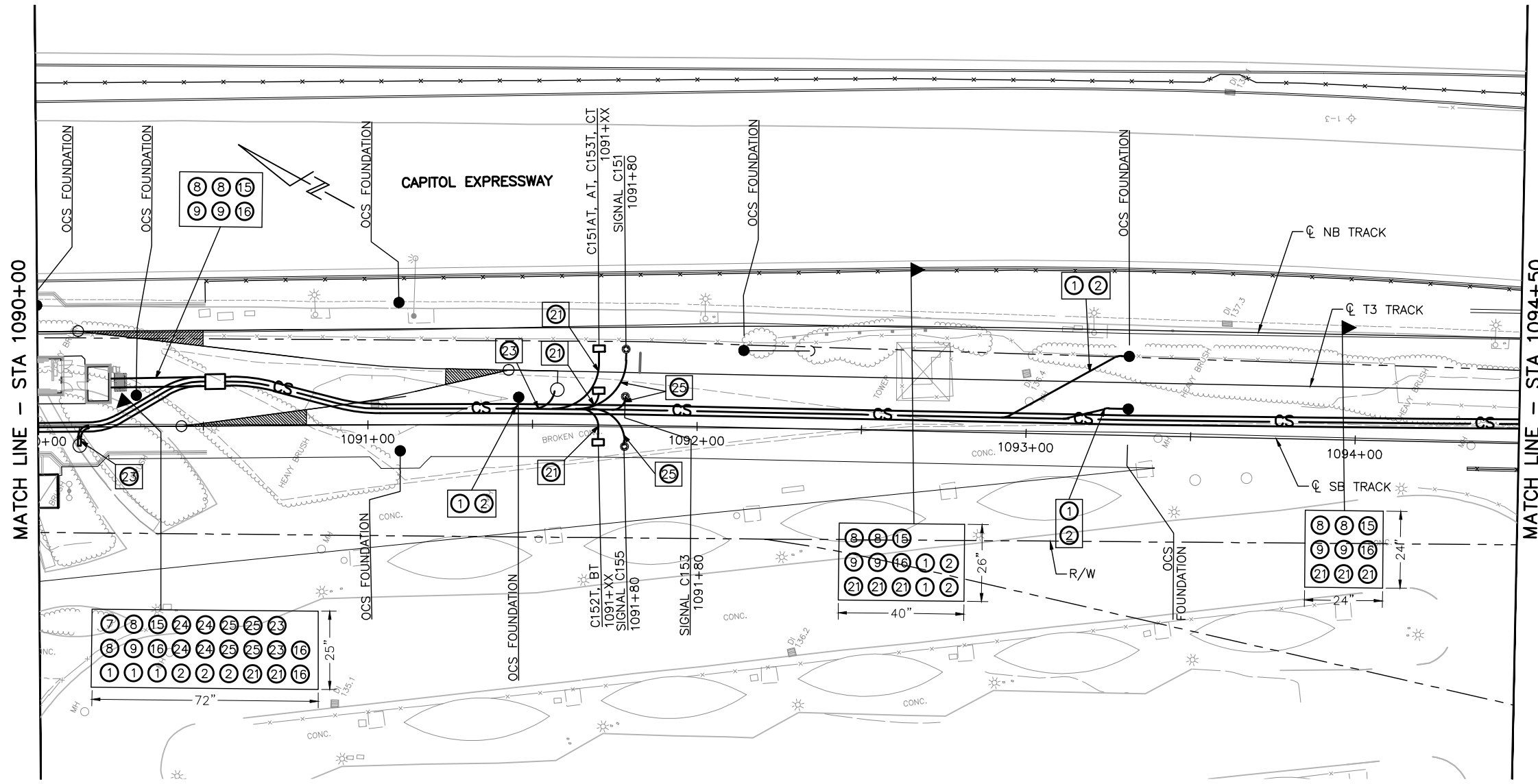
EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 ELECTRICAL  
 COMBINED SYSTEM DUCT  
 STA 1085+00 TO 1090+00

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

SHEET OF	EC027
DRAWING NO.	EC027
REVISION	C

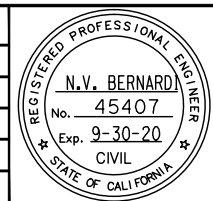
**NOTES:**

1. INSTALL CSD UNDER PLATFORM.  
SEE **ED401** <sup>3</sup>.
2. LATERALS NOT CROSSING THE TRACKS SHALL BE CONCRETE ENCASED.
3. LATERALS CROSSING TRACKS SHALL BE REINFORCED CONCRETE ENCASED.  
SEE **ED401** <sup>1</sup>.
4. FOR ABBREVIATIONS AND LEGEND, SEE GN DRAWINGS.
5. STATION/OFFSET ARE REFERENCED TO SB TRACK UNLESS OTHERWISE NOTED.



Jun 25, 2020 - 11:27am C:\cadd\B\p\sternandez\west\csm\8581\801EC028.dwg

NO.	DATE	REVISIONS
C	06/20	95% SUBMITTAL SET
B	03/19	65% SUBMITTAL SET
A	06/18	35% SUBMITTAL SET



**BKF 100+ YEARS**  
**ENGINEERS / SURVEYORS / PLANNERS**  
 DESIGNED: B. Silkwood  
 CHECKED: M. Cosentino  
 DRAWN: A. Hernandez  
 CADD FILE NAME: 801EC028.dwg



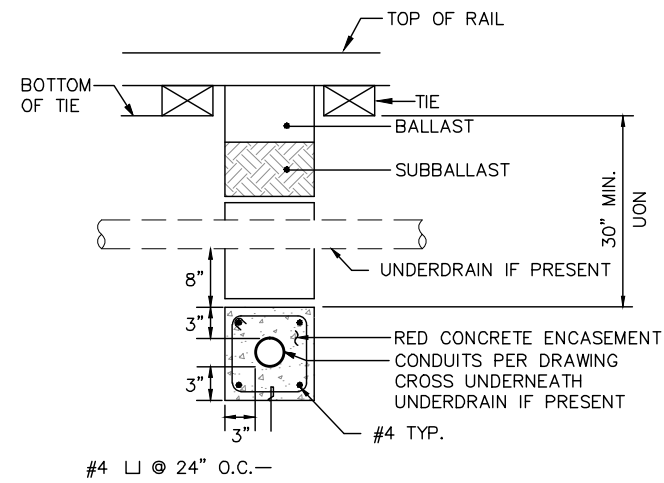
**BKF 100+ YEARS**  
**ENGINEERS / SURVEYORS / PLANNERS**  
 CADD FILE DATE: 03/06/20  
 SUBMITTAL DATE: 06/29/20  
 SCALE: 1"=20' H ; 1"=10' V  
 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 ELECTRICAL  
 COMBINED SYSTEM DUCT  
 STA 1090+00 TO 1094+50

SHEET OF	EC028
DRAWING NO.	EC028
REVISION	C



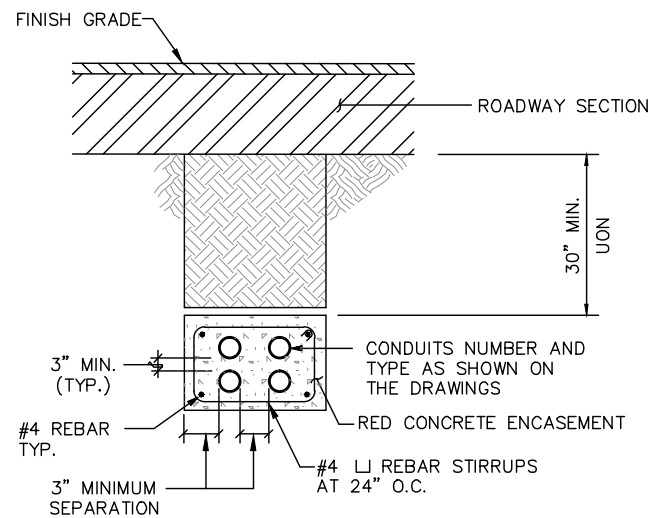




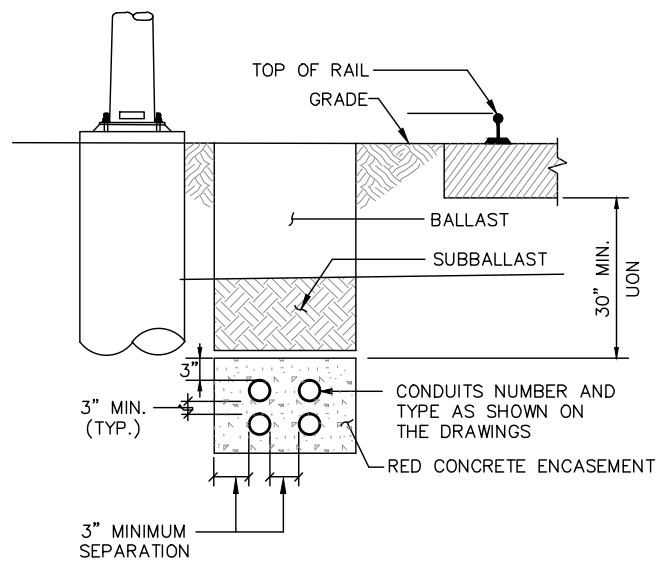
**LATERAL UNDER TRACKS**

**1** TYPICAL LATERAL DETAILS  
(CONCRETE ENCASED REINFORCED)

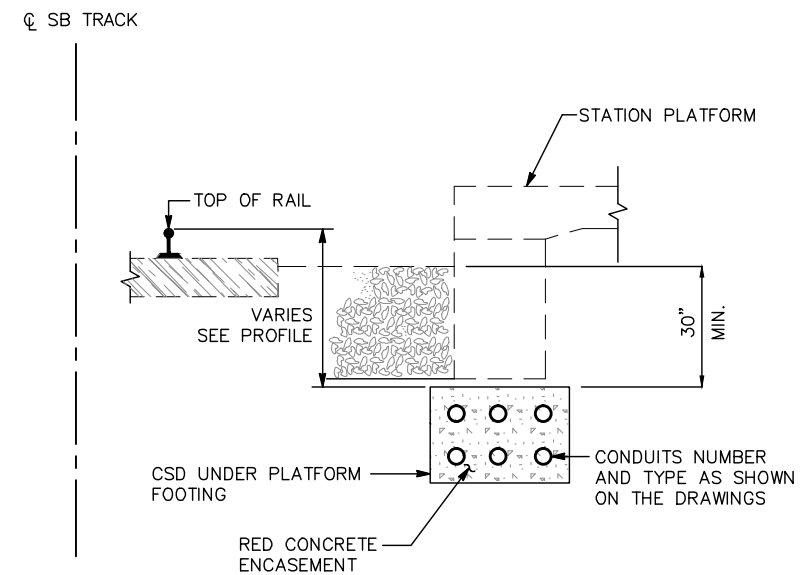
- DUCT BANK SHALL BE REINFORCED:
1. AT RAIL CROSSING 6 FT BEYOND RAIL
  2. WITHIN ROADWAYS
  3. AT OTHER LOCATIONS SHOWN ON DRAWINGS.



**4** TYPICAL DUCTBANK SECTION  
(CONCRETE ENCASED REINFORCED)



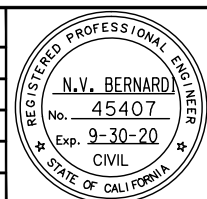
**2** TYPICAL DUCTBANK SECTION  
(CONCRETE ENCASED)



**3** CSD UNDER STATION PLATFORM  
(CONCRETE ENCASED)

Jun 24, 2020 - 4:39pm C:\cadd\ba\cherranides\west\dmsh382\801ED401.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



SUBMITTED			
DESIGNED	B. Silkwood	CHECKED	M. Cosentino
DRAWN	A. Hernandez	CADD FILE NAME	801ED401.dwg

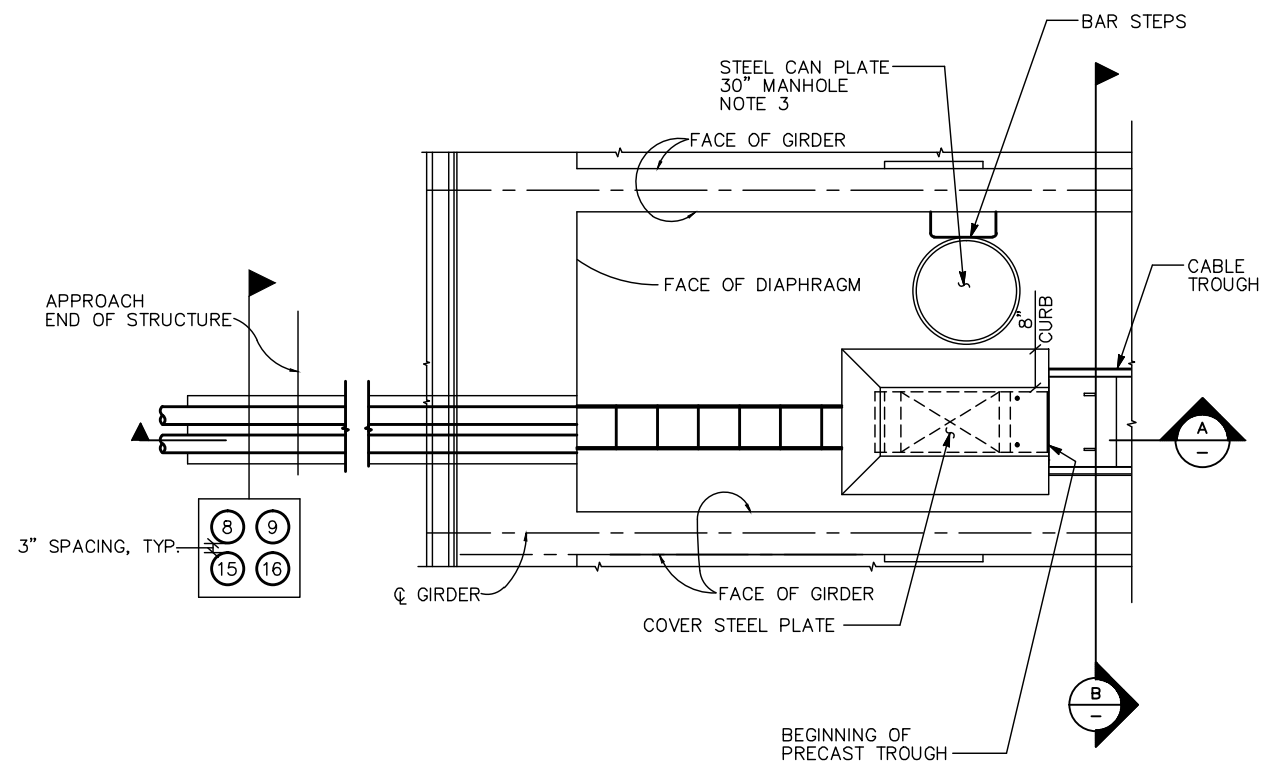


APPROVED			
CADD FILE DATE	03/06/20	SCALE	NTS
SUBMITTAL DATE	06/29/20	BOARD APPROVAL DATE	

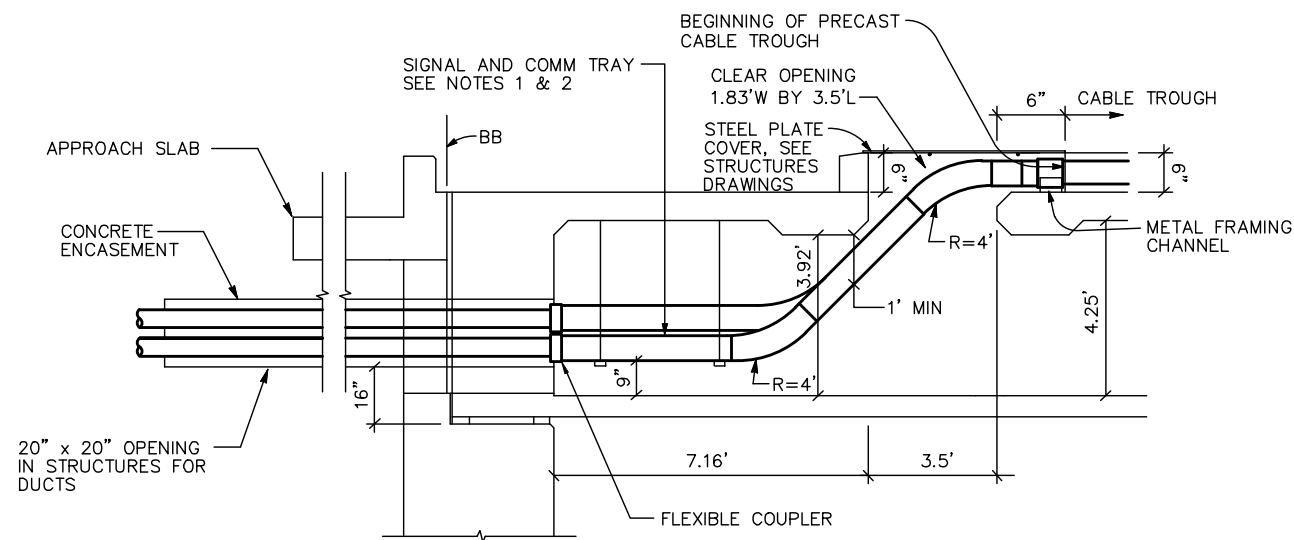
EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT ELECTRICAL COMBINED SYSTEM DUCT TYPICAL DUCTBANK SECTIONS			SHEET OF DRAWING NO. ED401 REVISION B
PCA NO.	CONTRACT NO.	FILE LOCATION	
000	C801	PROJECTWISE	

**NOTES:**

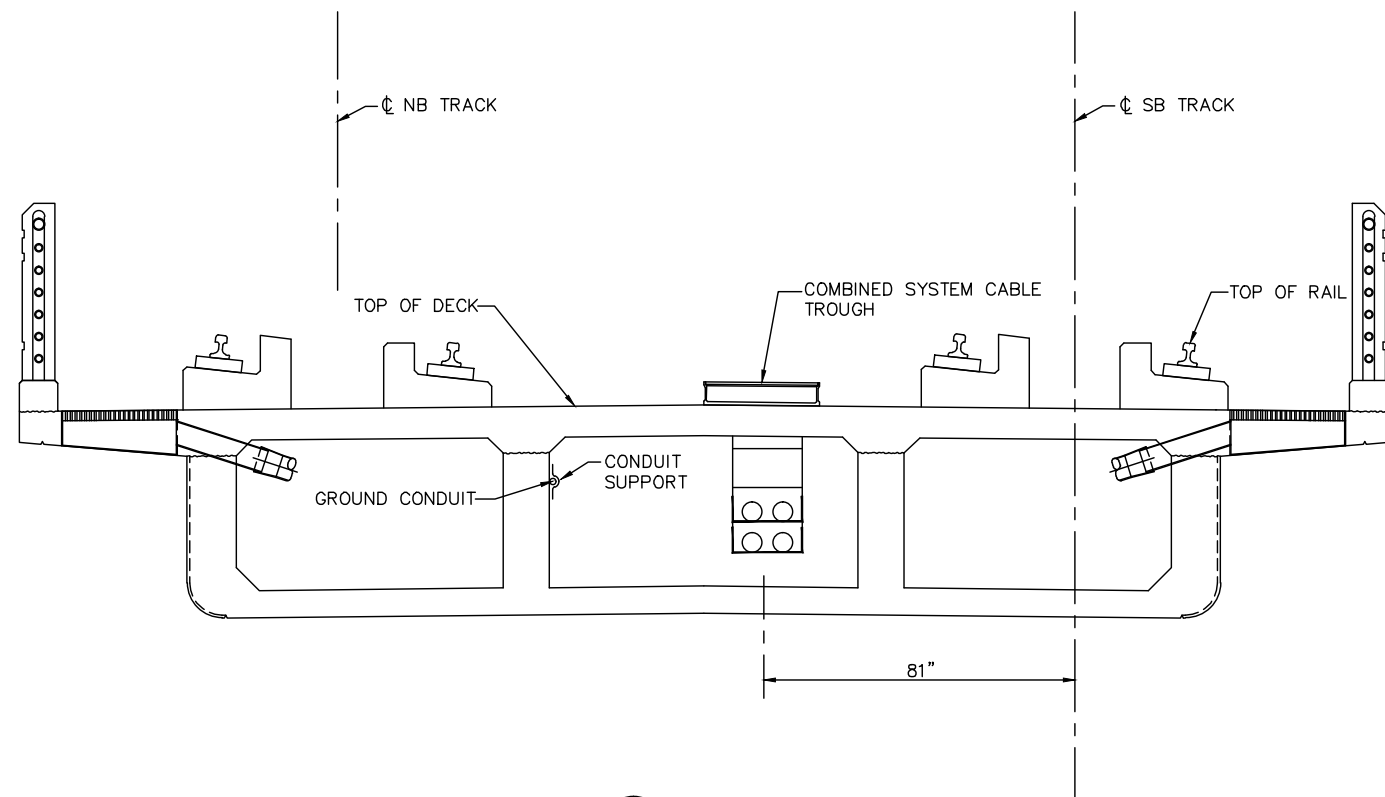
1. TRACTION POWER CABLE TRAY SHALL BE THE LADDER TYPE, 18" WIDE, 5" SIDE RAILS, 6" RUNG SPACING MADE FROM GALVANIZED STEEL. POWER CABLE TRAY SHALL BE 18" WIDE. SIGNAL/COMM TRAY SHALL BE 18" WIDE.
2. THIS CABLE TRAY SHALL HAVE A VENTILATED FLANGED COVER.
3. FOR EXACT LOCATION AND DETAILS FOR OPENINGS, SEE STRUCTURAL DRAWINGS.



**1**  
-  
ABUTMENT DETAIL



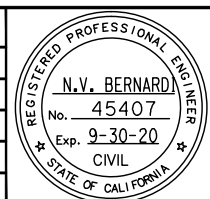
**A**  
-  
SECTION



**B**  
-  
SECTION

Jun 24, 2020 - 4:39pm C:\cadd\ba\cherrandez\west\mas8382\801ED402.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



**BKF 100+ YEARS**  
**ENGINEERS / SURVEYORS / PLANNERS**  
 DESIGNED BY: B. Silkwood  
 CHECKED BY: M. Cosentino  
 DRAWN BY: A. Hernandez  
 CADD FILE NAME: 801ED402.dwg



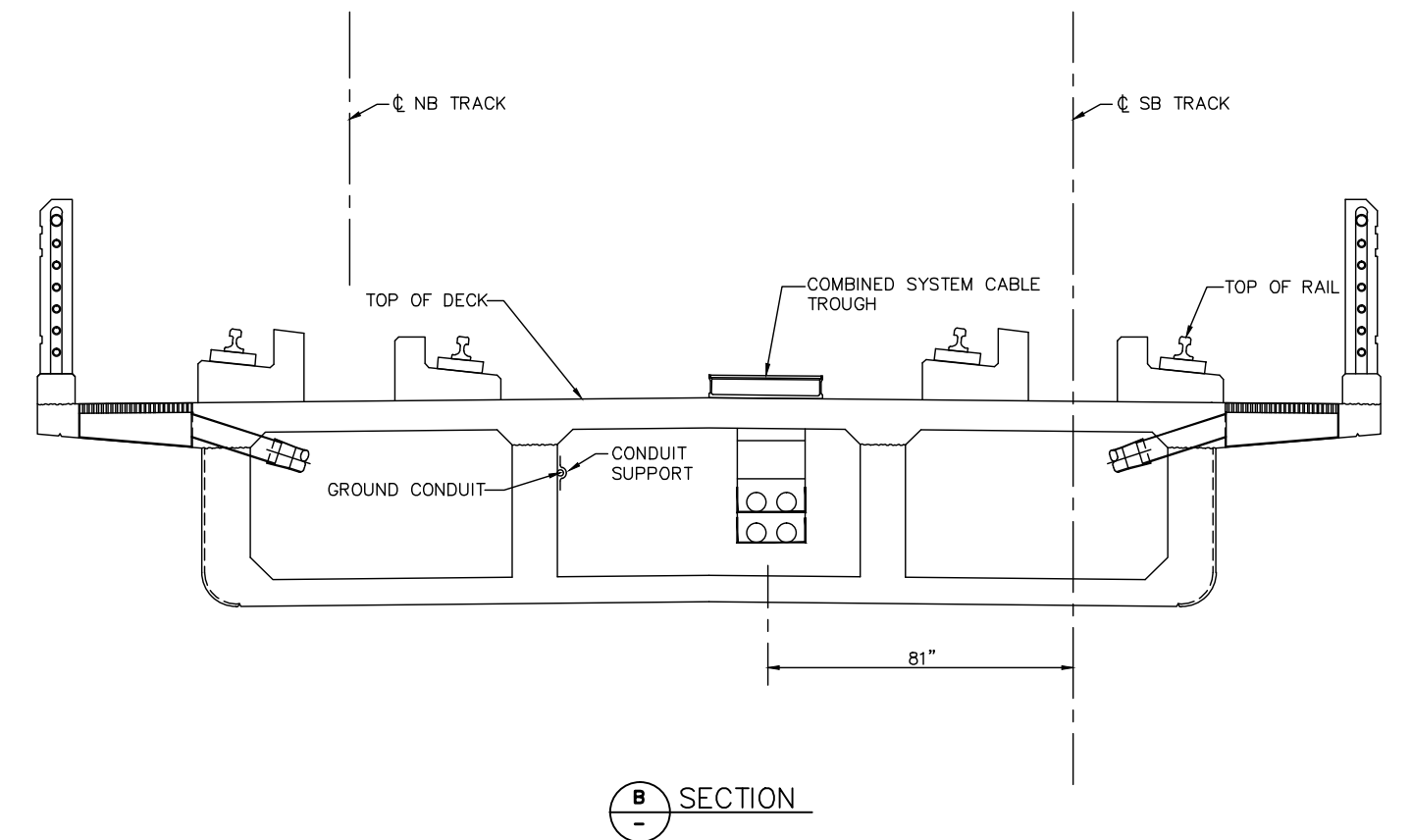
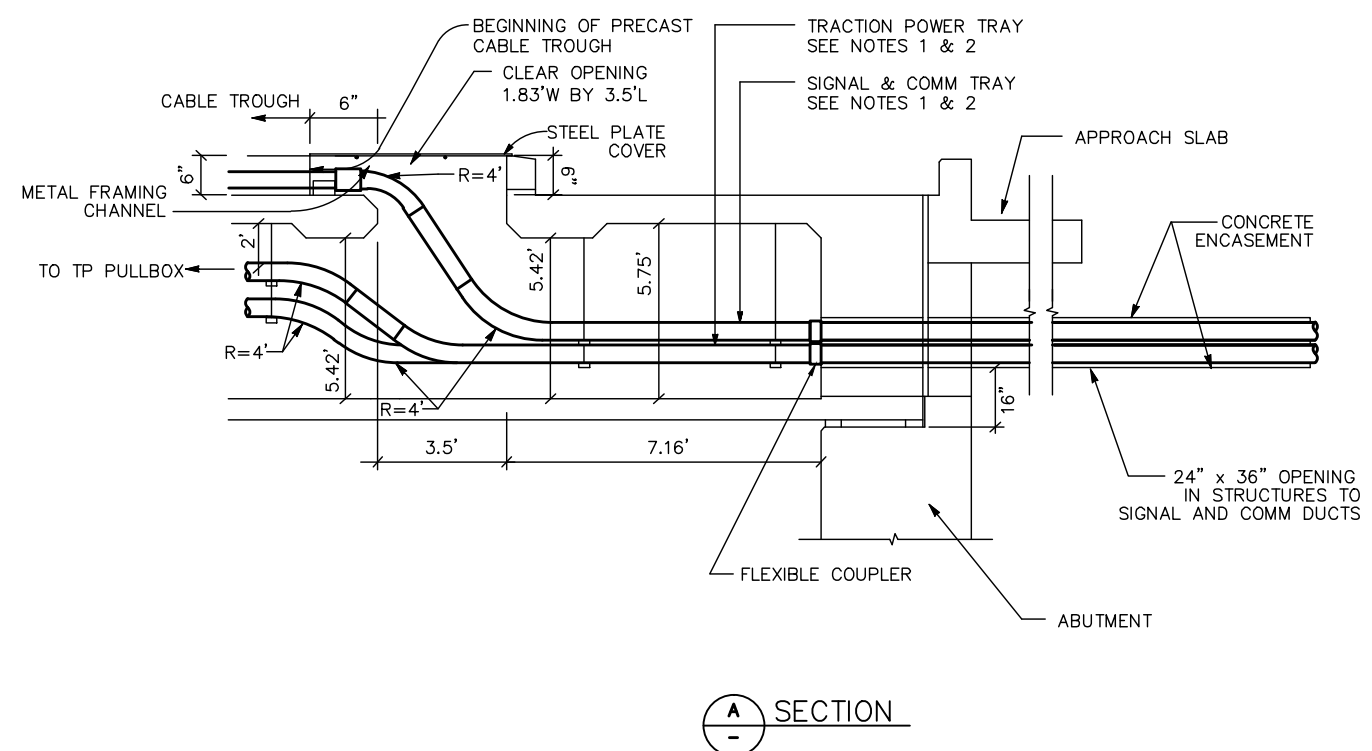
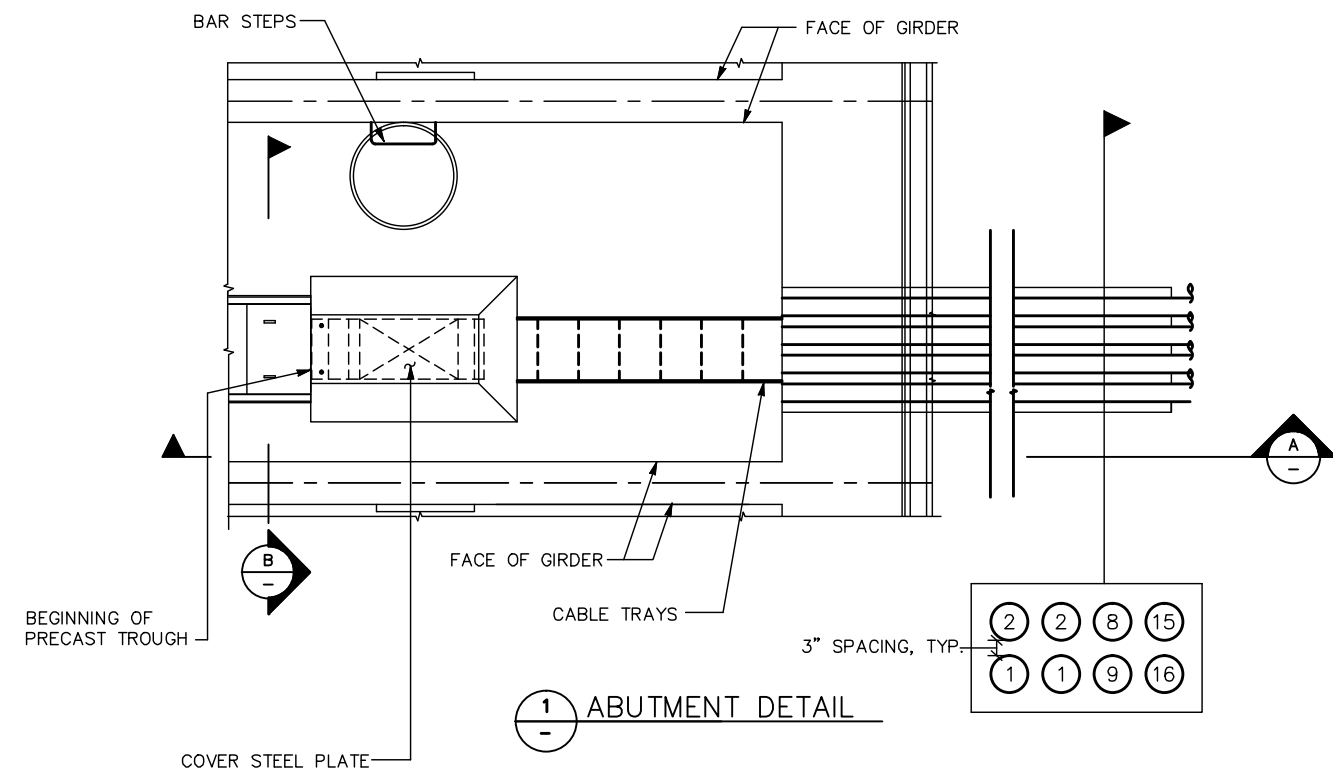
**BKF 100+ YEARS**  
**ENGINEERS / SURVEYORS / PLANNERS**  
 APPROVED  
 CADD FILE DATE: 03/06/20  
 SCALE: NTS  
 SUBMITTAL DATE: 06/29/20  
 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 ELECTRICAL  
 COMBINED SYSTEM DUCT  
 CAPITOL EXPRESSWAY NORTH END  
 PCA NO.: 000  
 CONTRACT NO.: C801  
 FILE LOCATION: PROJECTWISE

SHEET OF	
DRAWING NO.	ED402
REVISION	B

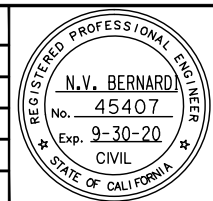
**NOTES:**

1. CABLE TRAY SHALL BE THE LADDER TYPE, 18" WIDE, 5" SIDE RAILS, 6" RUNG SPACING MADE FROM GALVANIZED STEEL. POWER CABLE TRAY SHALL BE 18" WIDE. SIGNAL/COMM TRAY SHALL BE 18" WIDE.
2. THIS CABLE TRAY SHALL HAVE A VENTILATED FLANGED COVER.
3. FOR EXACT LOCATION AND DETAILS FOR OPENINGS, SEE STRUCTURAL DRAWINGS.



Jun 24, 2020 - 4:39pm C:\cadd\ba\cherrandez\west\dmsh322\801ED403.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



**BKF 100+ YEARS**  
ENGINEERS / SURVEYORS / PLANNERS

DESIGNED: B. Silkwood  
CHECKED: M. Cosentino  
DRAWN: A. Hernandez  
CADD FILE NAME: 801ED403.dwg

**Santa Clara Valley Transportation Authority**

**BKF 100+ YEARS**  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/06/20  
SCALE: NTS  
SUBMITTAL DATE: 06/29/20  
BOARD APPROVAL DATE:

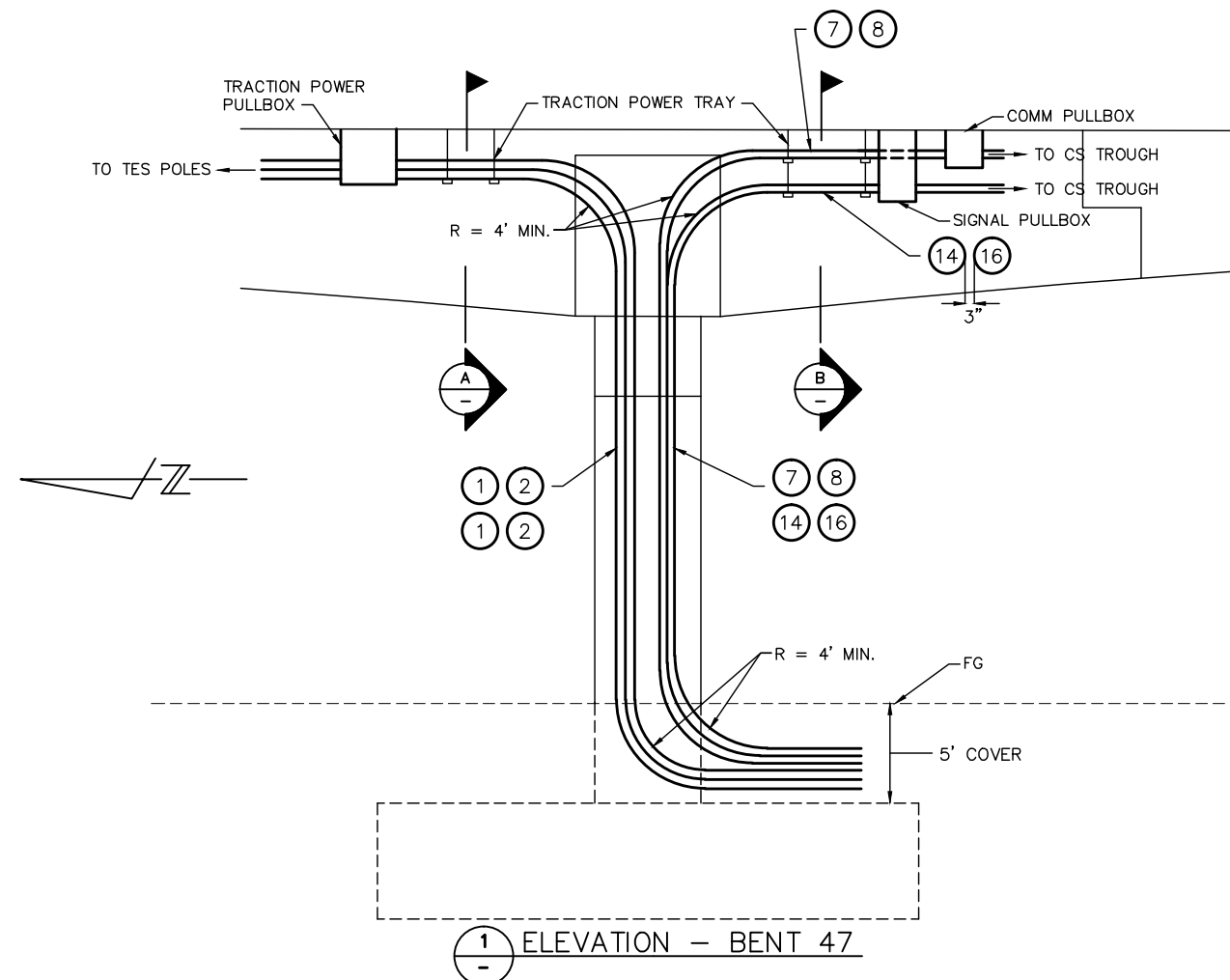
EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
ELECTRICAL  
COMBINED SYSTEM DUCT  
CAPITOL EXPRESSWAY SOUTH END

PCA NO.: 000  
CONTRACT NO.: C801  
FILE LOCATION: PROJECTWISE

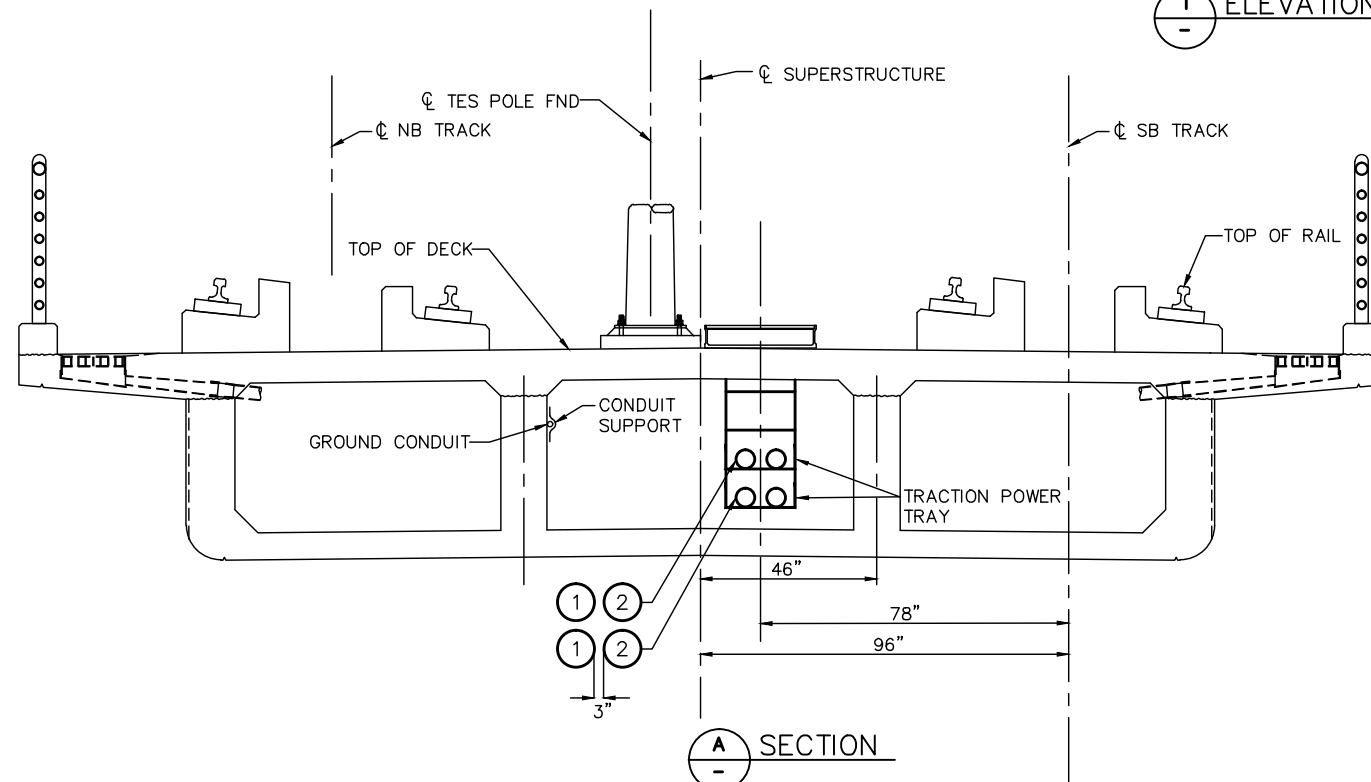
SHEET OF	ED403
DRAWING NO.	ED403
REVISION	B

**NOTES:**

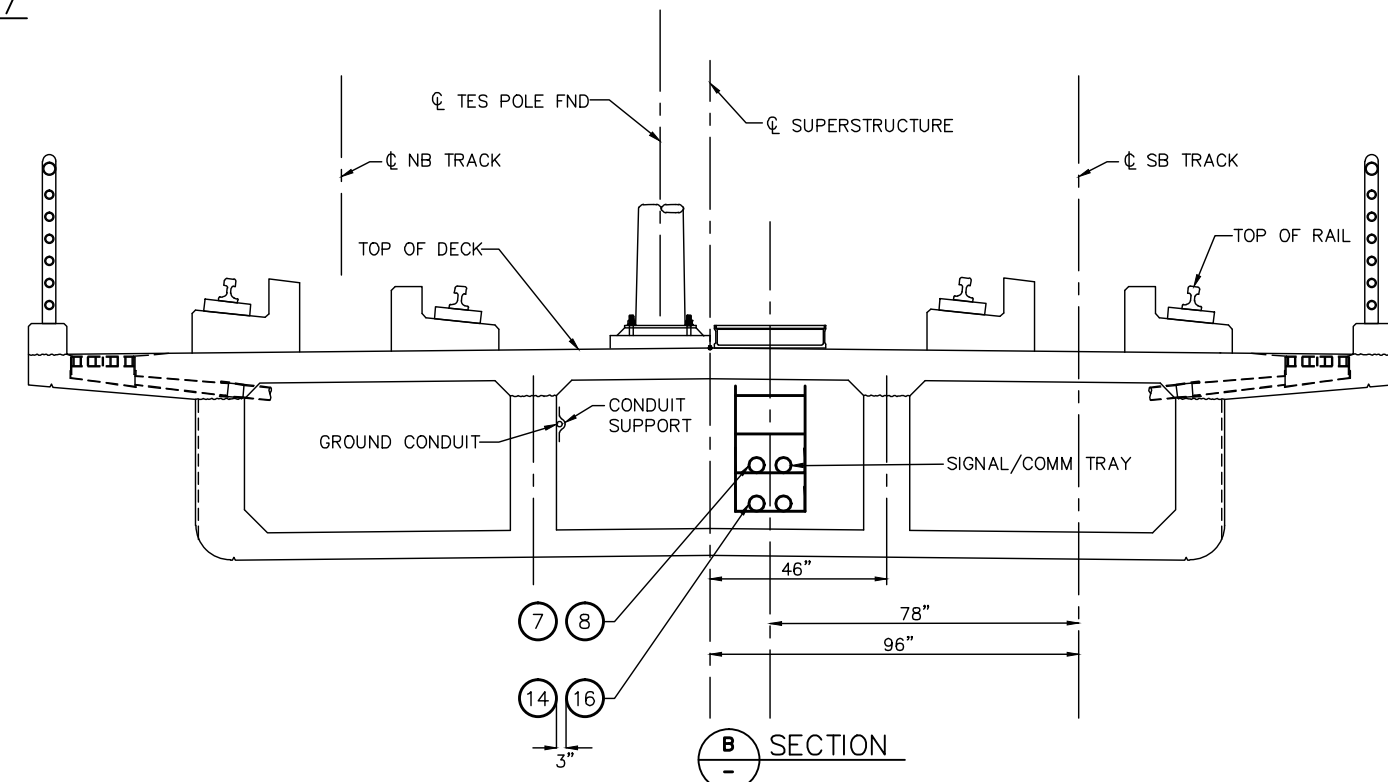
1. CABLE TRAY SHALL BE THE LADDER TYPE, 18" WIDE, 5" SIDE RAILS, 6" RUNG SPACING MADE FROM GALVANIZED STEEL. POWER CABLE TRAY SHALL BE 18" WIDE. SIGNAL/COMM TRAY SHALL BE 18" WIDE.
2. THIS CABLE TRAY SHALL HAVE A VENTILATED FLANGED COVER.
3. FOR EXACT LOCATION AND DETAILS FOR OPENINGS, SEE STRUCTURAL DRAWINGS.



1 ELEVATION - BENT 47



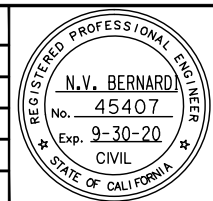
A SECTION



B SECTION

Jun 24, 2020 - 4:40pm C:\cadd\ba\cherrandez\west\mas8382\801ED404.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



**BKF 100+ YEARS**  
 ENGINEERS / SURVEYORS / PLANNERS  
 DESIGNED BY: B. Silkwood  
 CHECKED BY: M. Cosentino  
 DRAWN BY: A. Hernandez  
 CADD FILE NAME: 801ED404.dwg

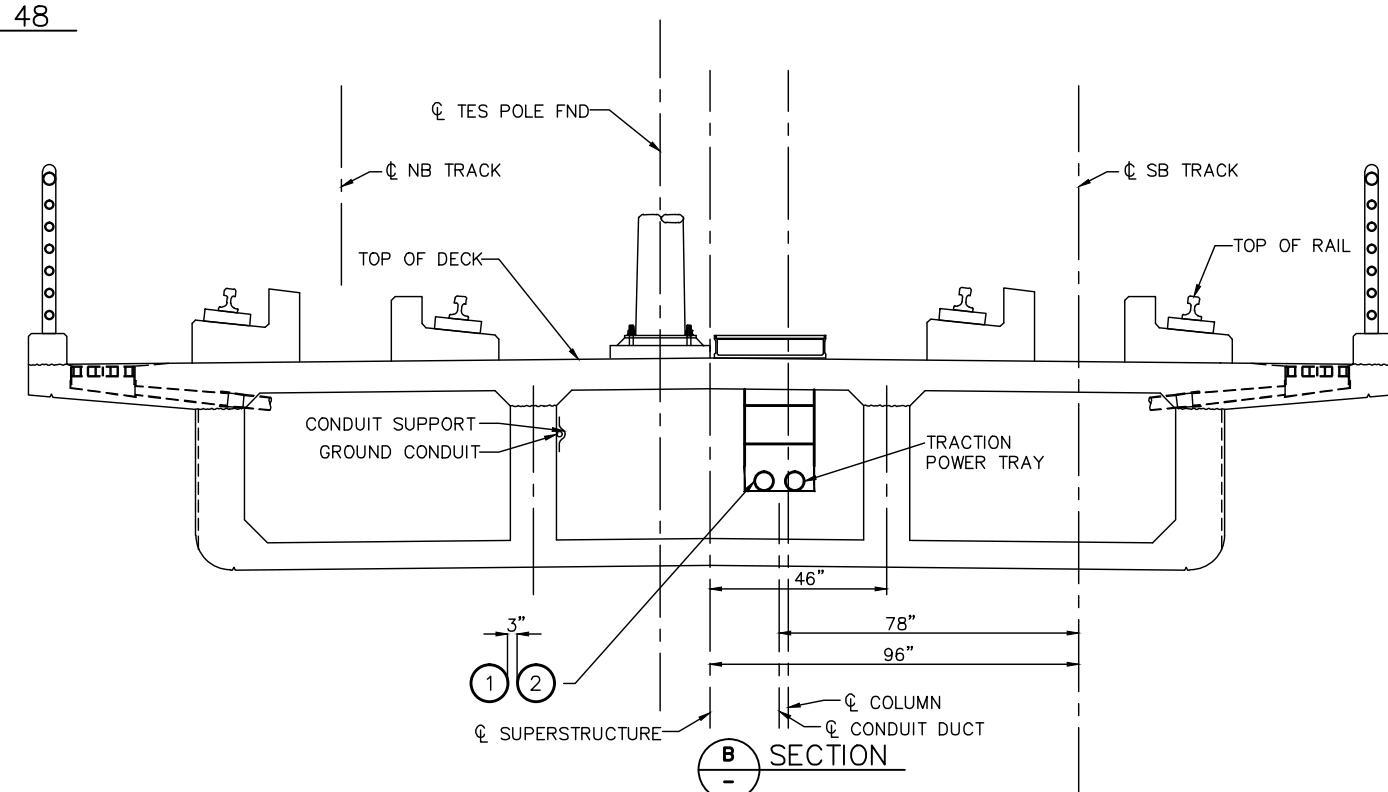
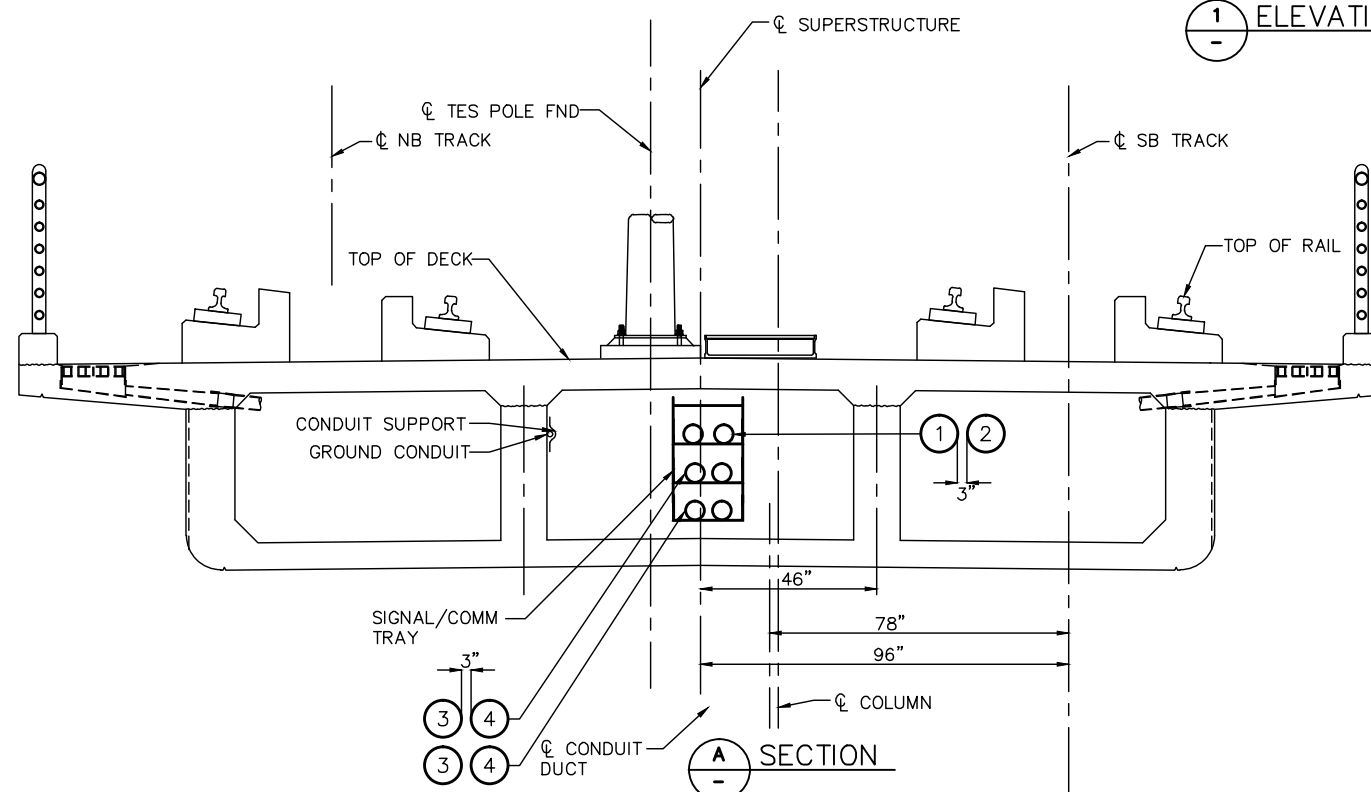
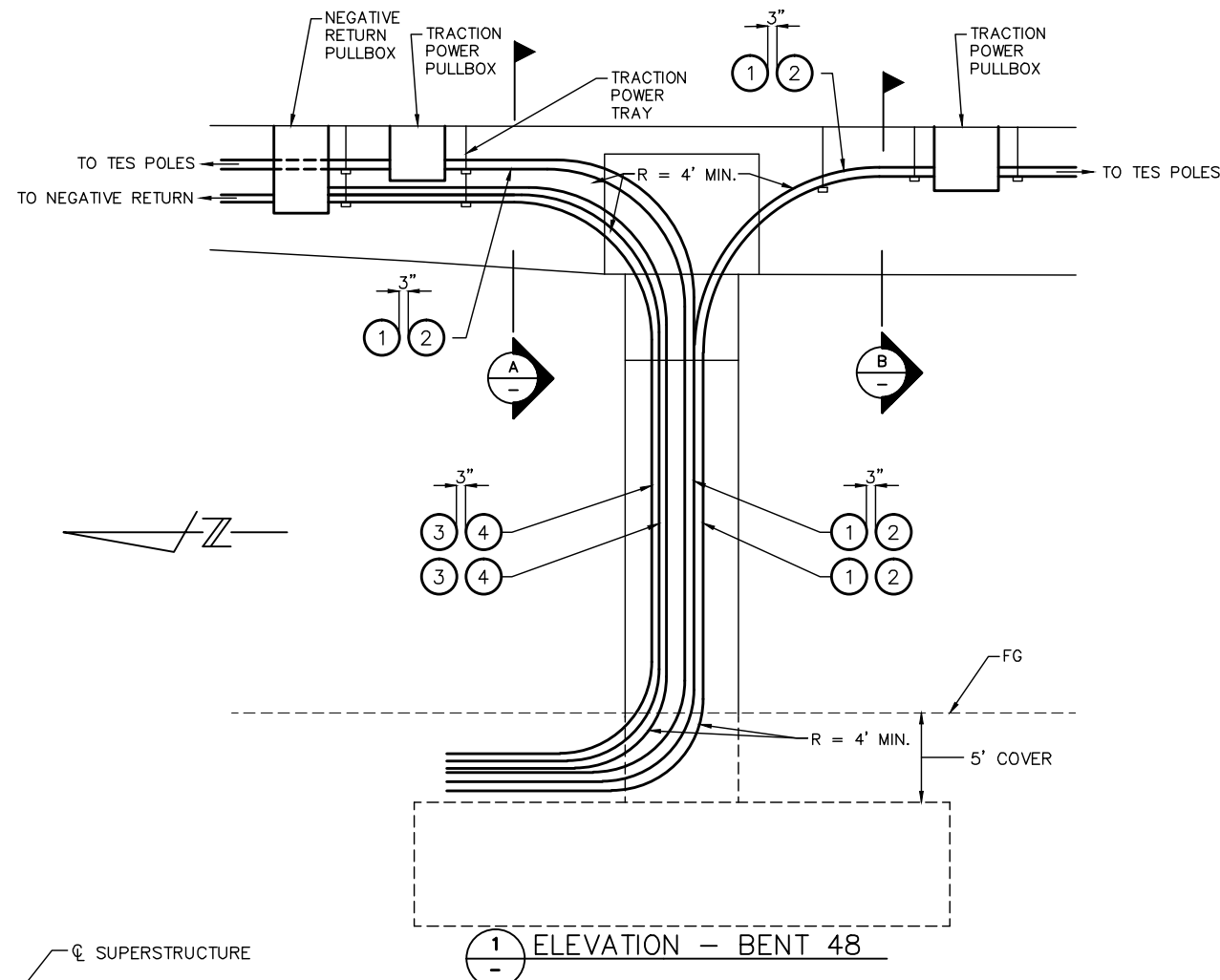


**BKF 100+ YEARS**  
 ENGINEERS / SURVEYORS / PLANNERS  
 CADD FILE DATE: 03/06/20  
 SUBMITTAL DATE: 06/29/20  
 SCALE: NTS  
 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 ELECTRICAL  
 COMBINED SYSTEM DUCT  
 BENT 47  
 SHEET OF ED404 REVISION B  
 PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

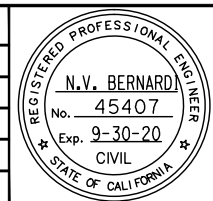
**NOTES:**

1. CABLE TRAY SHALL BE THE LADDER TYPE, 18" WIDE, 5" SIDE RAILS, 6" RUNG SPACING MADE FROM GALVANIZED STEEL. POWER CABLE TRAY SHALL BE 18" WIDE. SIGNAL/COMM TRAY SHALL BE 18" WIDE.
2. THIS CABLE TRAY SHALL HAVE A VENTILATED FLANGED COVER.
3. FOR EXACT LOCATION AND DETAILS FOR OPENINGS, SEE STRUCTURAL DRAWINGS.



Jun 24, 2020 - 4:40pm C:\cadd\ba\cherranides\west\mas8382\801ED405.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



**BKF 100+ YEARS**  
**ENGINEERS / SURVEYORS / PLANNERS**  
 DESIGNED: B. Silkwood  
 CHECKED: M. Cosentino  
 DRAWN: A. Hernandez  
 CADD FILE NAME: 801ED405.dwg

**Santa Clara Valley Transportation Authority**

**BKF 100+ YEARS**  
**ENGINEERS / SURVEYORS / PLANNERS**  
 CADD FILE DATE: 03/06/20  
 SCALE: NTS  
 SUBMITTAL DATE: 06/29/20  
 BOARD APPROVAL DATE:

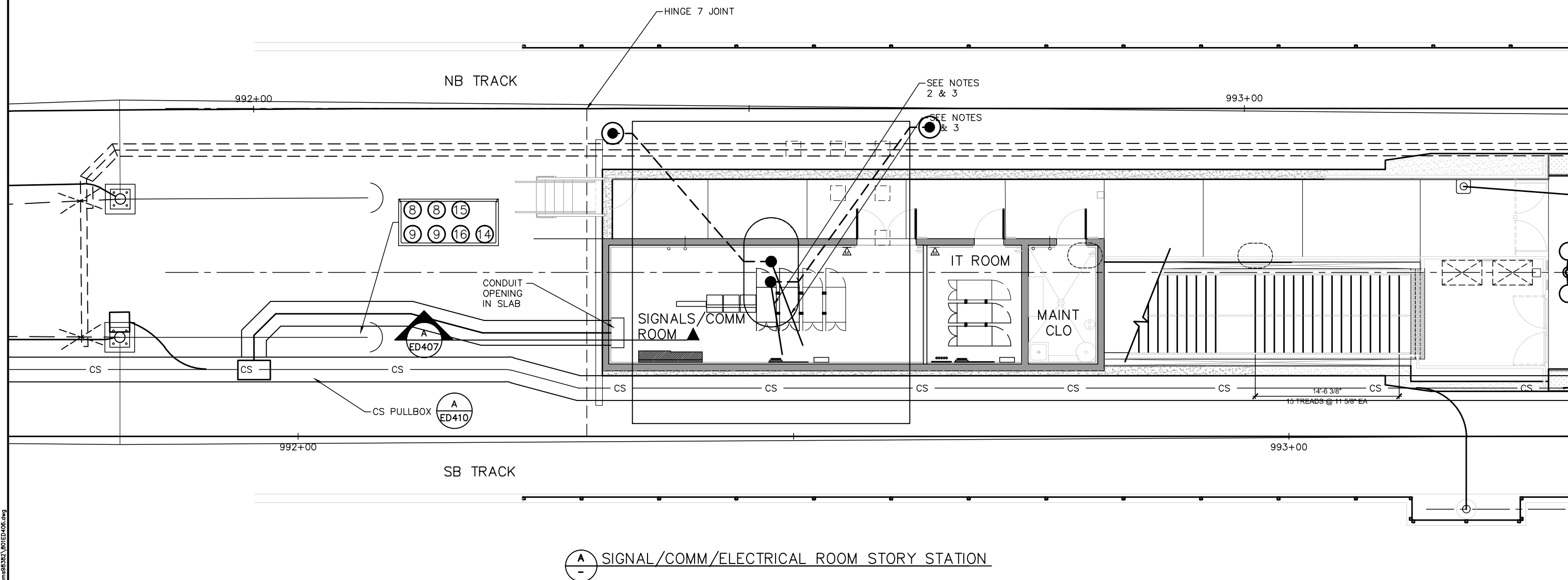
**EASTRIDGE TO BART REGIONAL CONNECTOR**  
**CAPITOL EXPRESSWAY LIGHT RAIL PROJECT**  
**ELECTRICAL**  
**COMBINED SYSTEM DUCT**  
**BENT 48**

SHEET OF ED405 REVISION B

PCA NO. 000 CONTRACT NO. C801 FILE LOCATION PROJECTWISE

**NOTES:**

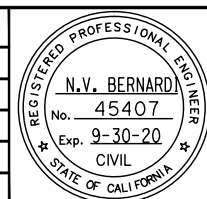
1. INSTALL 1.5" CONDUIT, 1 #2 (ELECTRICAL SYSTEM GROUNDING).
2. INSTALL 1.5" CONDUIT, 1 #4 (COMMUNICATION GROUNDING) 1 #4 (SIGNAL GROUNDING).
3. SEE DRAWING ED412 FOR GROUND DETAILS.



**A** SIGNAL/COMM/ELECTRICAL ROOM STORY STATION

Jun 24, 2020 - 4:40pm C:\cadd\ba\cherrandez\west\mas332\01ED406.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



SUBMITTED  
**BKF 100+**  
 YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

DESIGNED: B. Silkwood  
 CHECKED: M. Cosentino  
 DRAWN: A. Hernandez  
 CADD FILE NAME: 801ED406.dwg



APPROVED  
**BKF 100+**  
 YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/06/20  
 SUBMITTAL DATE: 06/29/20  
 SCALE: NTS  
 BOARD APPROVAL DATE:

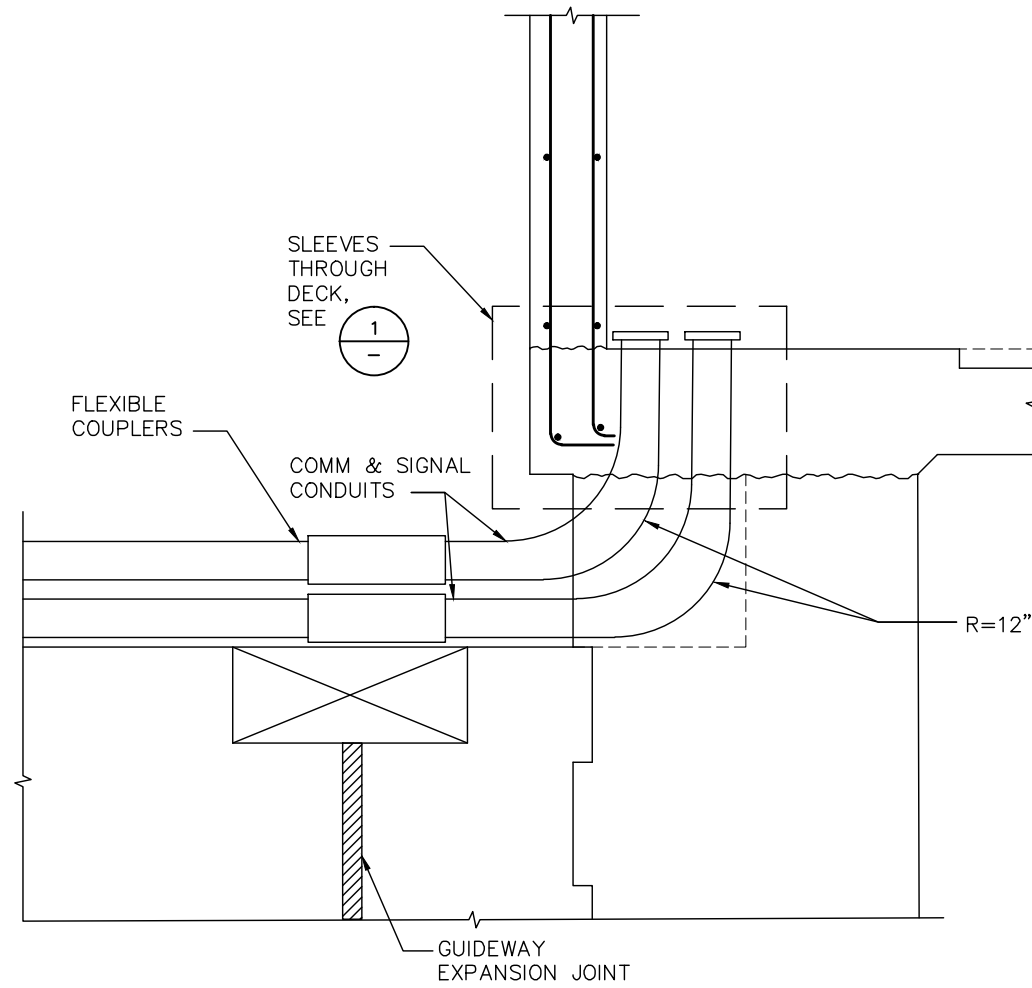
EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 ELECTRICAL  
 COMBINED SYSTEM DUCT  
 SIGNAL/COMM/ELECTRICAL ROOM (STORY STATION)

SHEET OF: ED406  
 REVISION: B

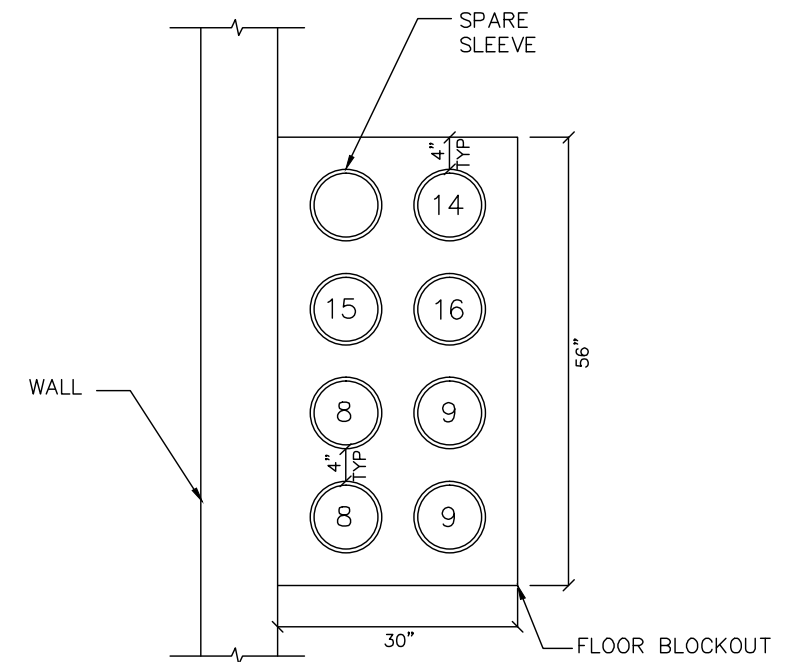
PCA NO.: 000  
 CONTRACT NO.: C801  
 FILE LOCATION: PROJECTWISE

**NOTE:**

⑭ CONDUIT TO BE COORDINATED WITH POWER PANEL LOCATION IN EQUIPMENT ROOM.



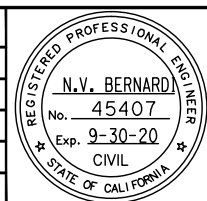
① STORY STATION PLATFORM SECTION



① PLAN VIEW  
- CONDUIT SLEEVING

Jun 24, 2020 - 4:40pm C:\cadd\ba\ahernandez\west\sm5832\801ED407.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



SUBMITTED  
**BKF 100+**  
 YEARS  
 ENGINEERS / SURVEYORS / PLANNERS  
 DESIGNED: B. Silkwood  
 CHECKED: M. Cosentino  
 DRAWN: A. Hernandez  
 CADD FILE NAME: 801ED407.dwg

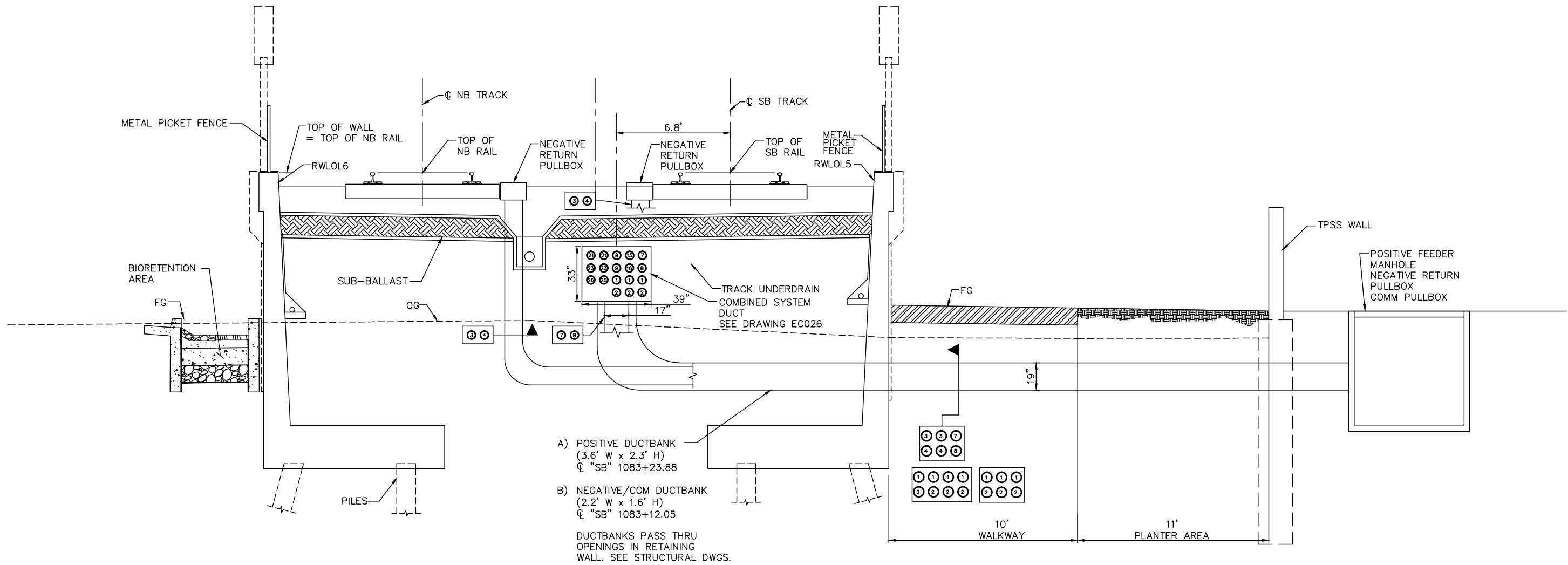


APPROVED  
**BKF 100+**  
 YEARS  
 ENGINEERS / SURVEYORS / PLANNERS  
 CADD FILE DATE: 03/06/20  
 SCALE: NTS  
 SUBMITTAL DATE: 06/29/20  
 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 ELECTRICAL  
 COMBINED SYSTEM DUCT  
 STORY STATION PLATFORM SECTION  
 PCA NO.: 000  
 CONTRACT NO.: C801  
 FILE LOCATION: PROJECTWISE

SHEET OF	
DRAWING NO.	ED407
REVISION	B

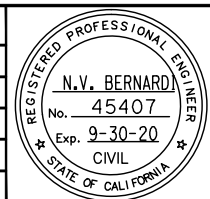




1 SECTION DETAIL

Jun 24, 2020 - 4:40pm C:\cadd\ba\cherrandez\west\dmsh332\801ED408.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



SUBMITTED  
**BKF 100+**  
 YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

DESIGNED: B. Silkwood  
 CHECKED: M. Cosentino  
 DRAWN: A. Hernandez  
 CADD FILE NAME: 801ED408.dwg



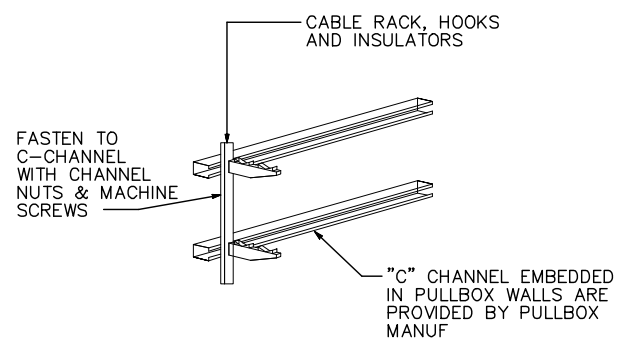
APPROVED  
**BKF 100+**  
 YEARS  
 ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/06/20  
 SUBMITTAL DATE: 06/29/20  
 SCALE: NTS  
 BOARD APPROVAL DATE:

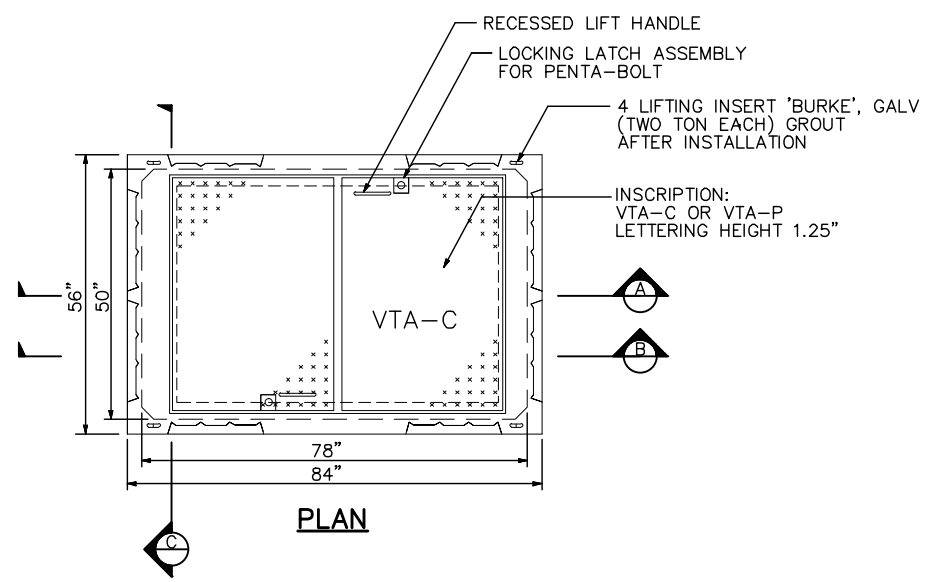
EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT ELECTRICAL COMBINED SYSTEM DUCT DUCT BANKS FROM TPSS #34			SHEET OF DRAWING NO. ED408 REVISION B
PCA NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE	

**NOTES:**

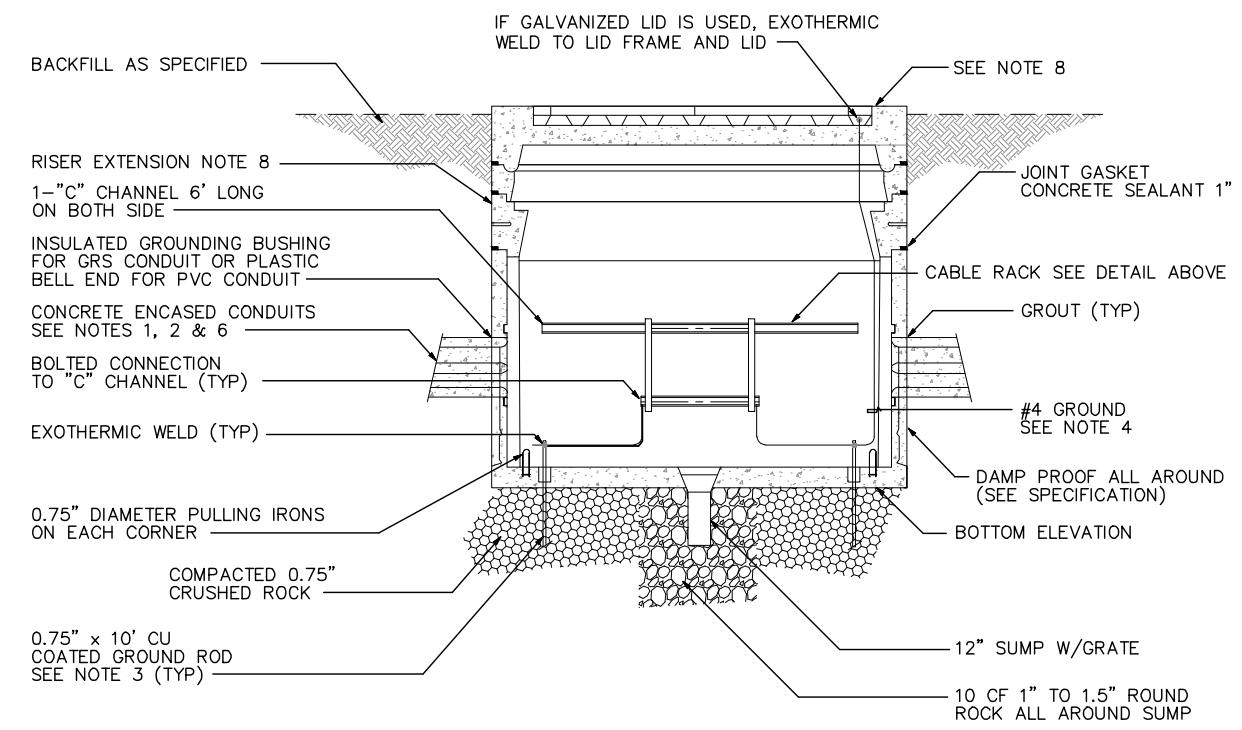
1. ALL CONDUITS SHALL ENTER MANHOLE WALLS AT 90° TO WALLS.
2. THE ELEVATION OF DUCTS, BETWEEN PULLBOXES, WHERE THE GRADE DOES NOT PROVIDE A NATURAL SLOPE INTO THE PULLBOXES, SHALL BE HIGHEST IN CENTER AND HAVE A CONTINUOUS SLOPE DOWNWARD TOWARD THE PULLBOXES WITH A SLOPE OF NOT LESS THAN 0.6 PERCENT, WHENEVER POSSIBLE.
3. EXERCISE CAUTION IN INSTALLATION OF GROUND RODS SO DAMAGE TO OTHER UTILITIES DOES NOT OCCUR.
4. GROUND CABLE RACKS, CONDUIT GROUNDING BUSHINGS AND PULL BOX COVER WITH #4 BARE COPPER WIRE. RING AROUND BOTTOM OF VAULT.
5. GROUND ALL CABLE RACKS AND CONDUIT GROUNDING BUSHING TO GROUND ROD W/#4 AWG. CU.
6. SEE DRAWINGS FOR NUMBERS AND TYPES OF DUCTS. DIMENSIONS VARY (TYPICAL).
7. USE RISER EXTENSIONS AS REQUIRED TO ACHIEVE FINAL ELEVATIONS.
8. THE TOP OF PULLBOXES SHALL BE 1" ABOVE TOP OF FINISHED GRADE. CONTRACTOR SHALL ENSURE THAT POSITIVE DRAINAGE IS MAINTAINED AWAY FROM PULLBOX.



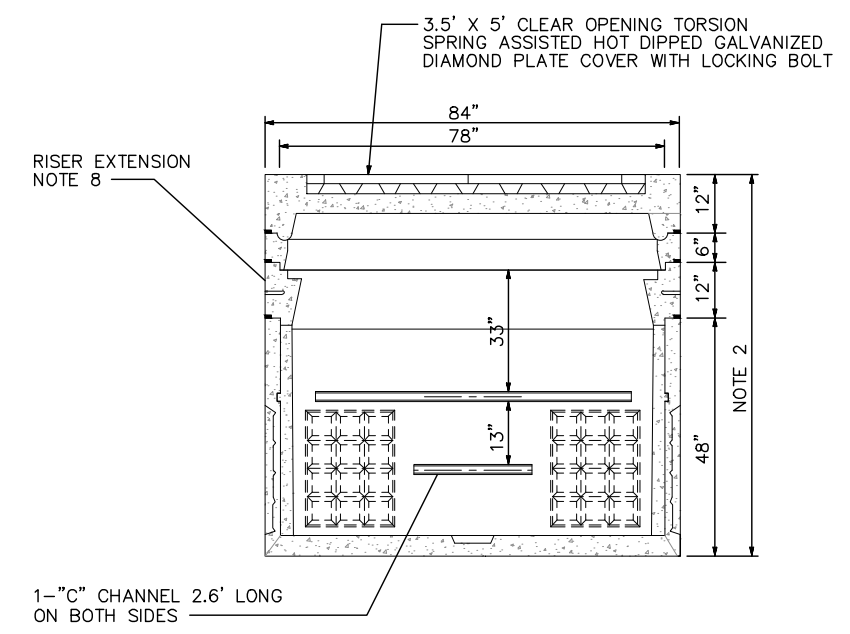
**TYPICAL CABLE SUPPORT**



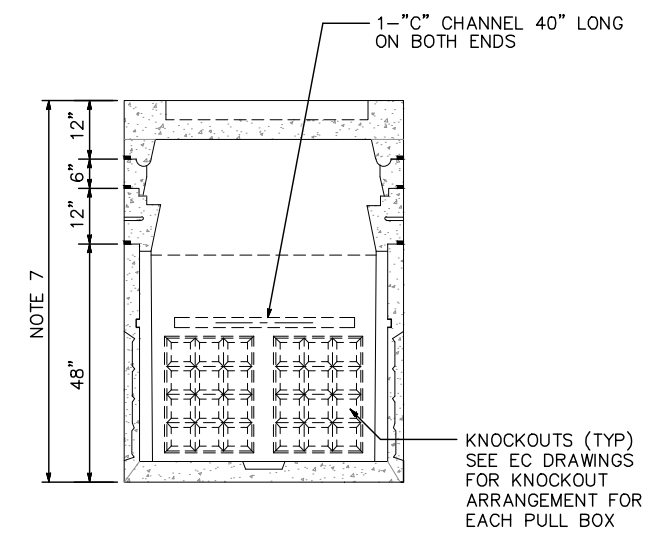
**PLAN**



**A TYPICAL PRECAST PULLBOX INSTALLATION**



**B TYPICAL PRECAST PULLBOX**

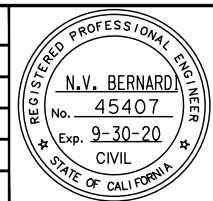


**C TYPICAL PRECAST PULLBOX**

**END**

Jun 24, 2020 - 4:40pm C:\cadd\ba\cherran\west\mas8382\801ED409.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



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**ENGINEERS / SURVEYORS / PLANNERS**

DESIGNED: B. Silkwood  
 CHECKED: M. Cosentino  
 DRAWN: A. Hernandez  
 CADD FILE NAME: 801ED409.dwg

**Santa Clara Valley Transportation Authority**

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**ENGINEERS / SURVEYORS / PLANNERS**

CADD FILE DATE: 03/06/20  
 SUBMITTAL DATE: 06/29/20  
 SCALE: NTS  
 BOARD APPROVAL DATE:

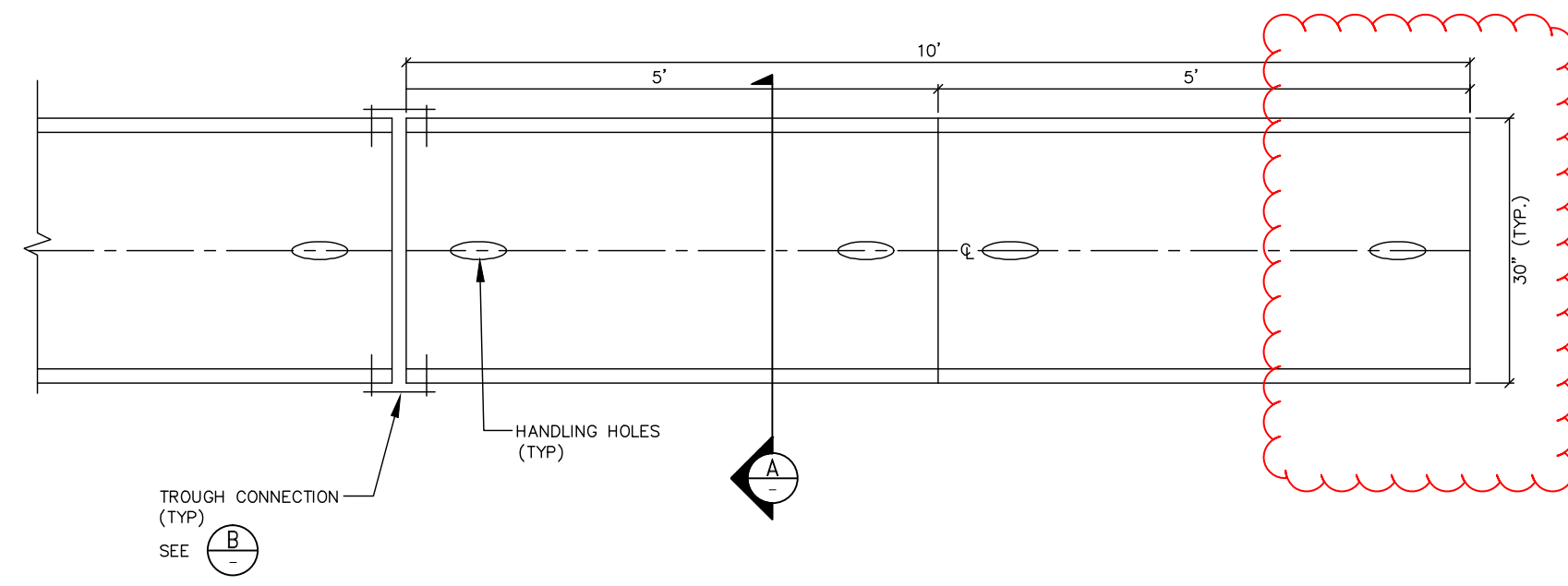
**EASTRIDGE TO BART REGIONAL CONNECTOR**  
**CAPITOL EXPRESSWAY LIGHT RAIL PROJECT**  
**ELECTRICAL**  
**COMBINED SYSTEM DUCT**  
**PULL BOX DETAILS - 1**

SHEET OF: ED409  
 REVISION: B

PCA NO.: 000  
 CONTRACT NO.: C801  
 FILE LOCATION: PROJECTWISE

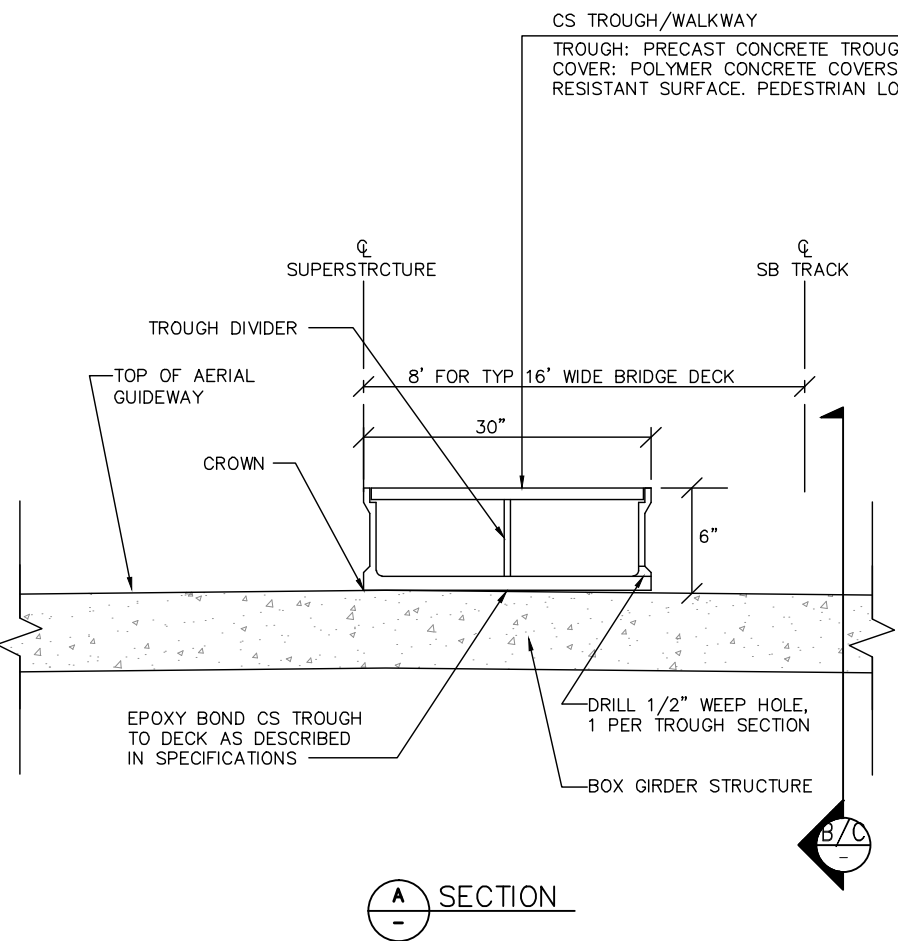


**NOTE:**  
THIS DRAWING SHOWS TYPICAL DETAILS FOR CABLE TROUGH. SEE DRAWINGS FOR WIDTH OF CABLE TROUGH.

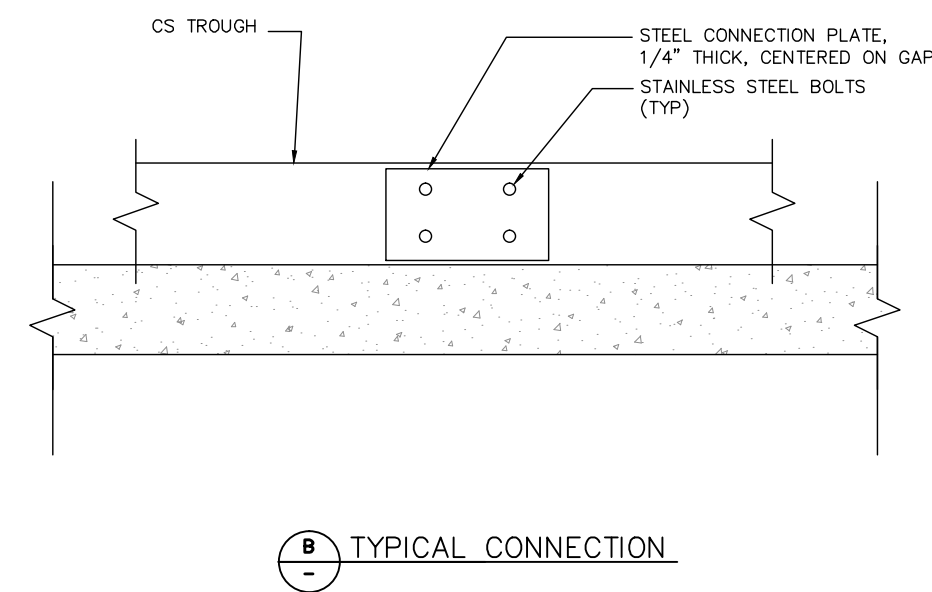


Provide details for trough on non-tangent sections

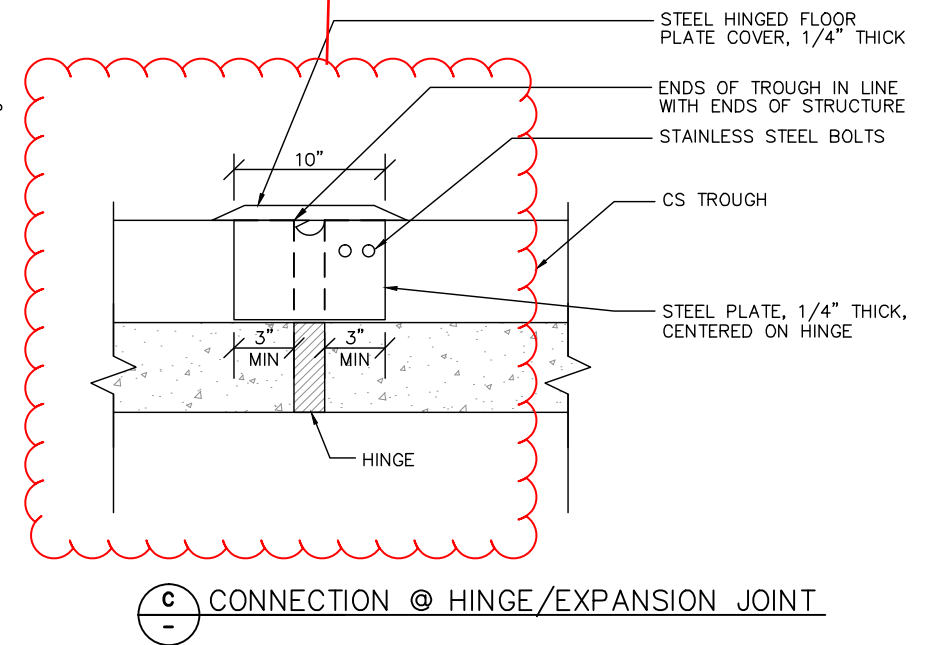
1 PLAN



A SECTION



B TYPICAL CONNECTION

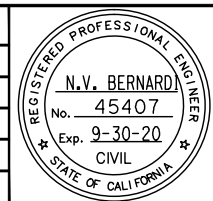


C CONNECTION @ HINGE/EXPANSION JOINT

Need to coordinated conduit crossings through/over structural hinges

Jun 24, 2020 - 4:40pm C:\cadd\ba\cherranides\west\mas8382\801ED411.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



**BKF 100+ YEARS**  
ENGINEERS / SURVEYORS / PLANNERS

DESIGNED: B. Silkwood  
CHECKED: M. Cosentino  
DRAWN: A. Hernandez  
CADD FILE NAME: 801ED411.dwg

**Santa Clara Valley Transportation Authority**

**BKF 100+ YEARS**  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/06/20  
SUBMITTAL DATE: 06/29/20  
SCALE: NTS  
BOARD APPROVAL DATE:

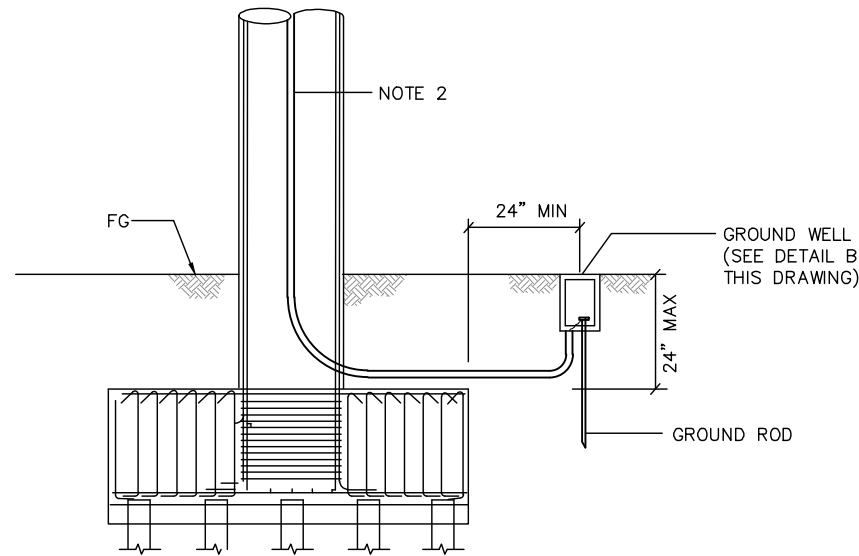
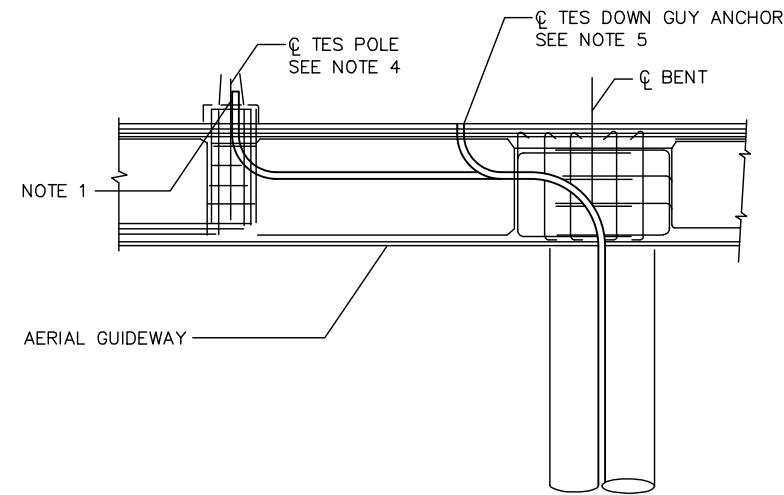
EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
ELECTRICAL  
COMBINED SYSTEM DUCT  
CS TROUGH DETAILS

PCA NO.: 000  
CONTRACT NO.: C801  
FILE LOCATION: PROJECTWISE

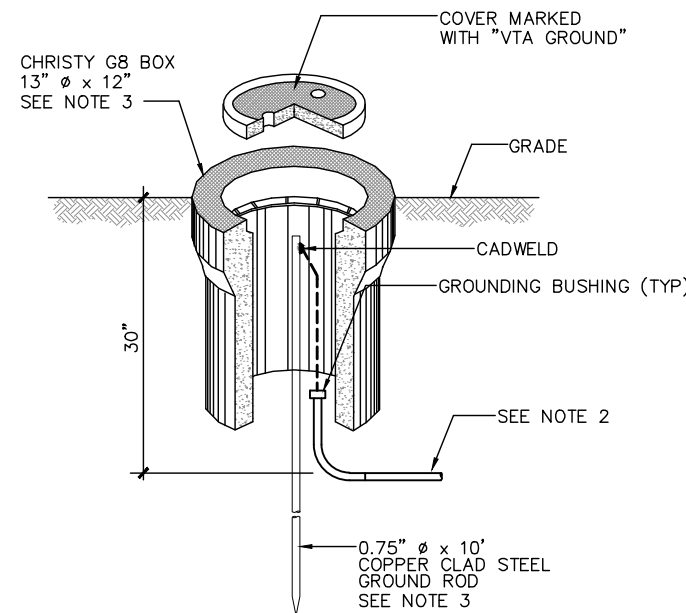
SHEET OF	ED411
DRAWING NO.	ED411
REVISION	B

**NOTES:**

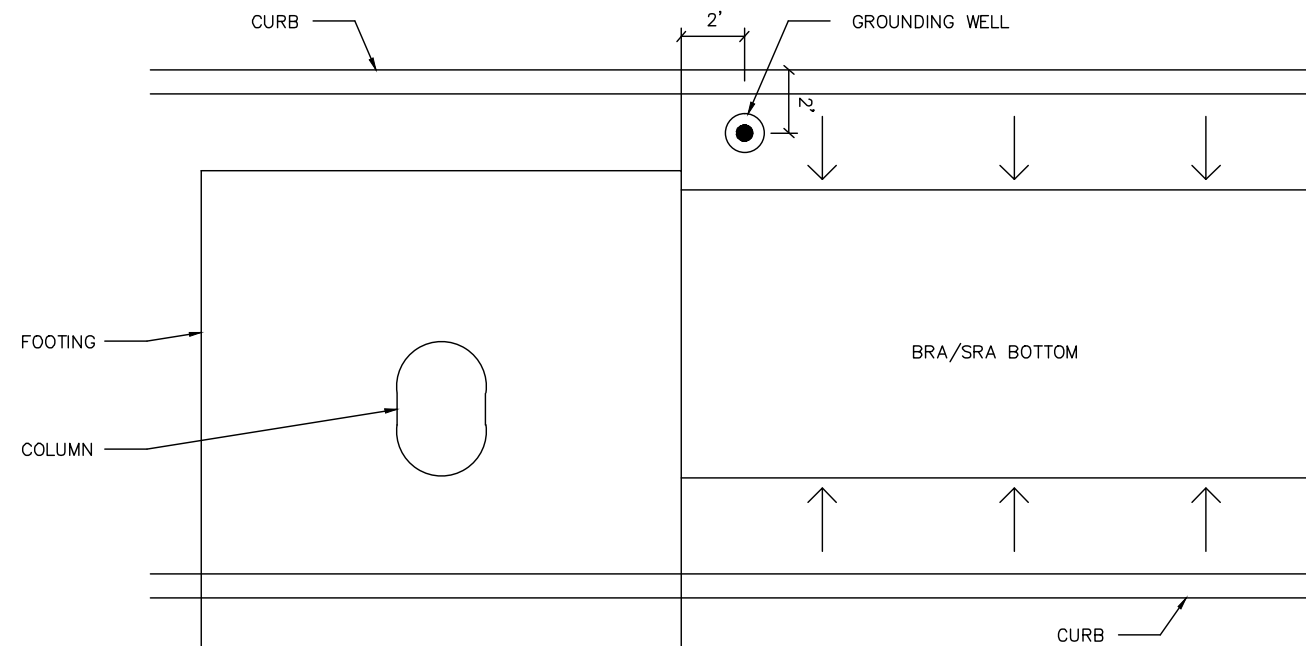
1. COIL UP 16' FOR GROUNDING TO TES POLES. (REQUIRED ON ALL TES POLES ON AERIAL GUIDEWAY)
2. 1.5" CONDUIT. 4/0 BARE STRANDED COPPER WIRE. WIRE SHALL BE CONTINUOUS.
3. GROUND ROD IN EARTH OR BALLAST SHALL BE GROUND ROD AND CADWELDED.
4. SEE SD DRAWINGS FOR TES POLE STRUCTURAL DETAILS.
5. TES DOWN GUY ANCHOR TO BE GROUNDED WHERE OCCURS. CONNECT POLE AND ANCHOR GROUNDING WIRES WITH EXOTHERMIC WELD TO THE SAME GROUND ROD.



**A** TYPICAL TES POLE GROUNDING



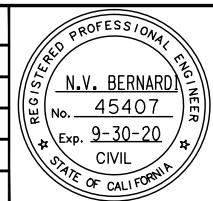
**B** GROUND WELL DETAIL



**C** GROUND WELL DETAIL PLAN VIEW

Jun 24, 2020 - 4:40pm C:\cadd\ba\ahernandez\west\mas8382\801ED412.dwg  
 Item

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



SUBMITTED  
**BKF 100+**  
 YEARS  
 ENGINEERS / SURVEYORS / PLANNERS  
 DESIGNED: B. Silkwood  
 CHECKED: M. Cosentino  
 DRAWN: A. Hernandez  
 CADD FILE NAME: 801ED412.dwg

Santa Clara Valley  
**Transportation Authority**

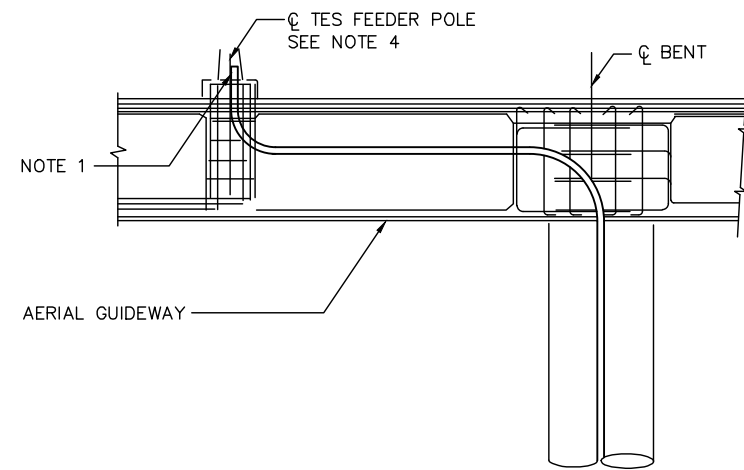
APPROVED  
**BKF 100+**  
 YEARS  
 ENGINEERS / SURVEYORS / PLANNERS  
 CADD FILE DATE: 03/06/20  
 SUBMITTAL DATE: 06/29/20  
 SCALE: NTS  
 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
 CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
 ELECTRICAL  
 COMBINED SYSTEM DUCT  
 GROUNDING DETAILS  
 PCA NO.: 000  
 CONTRACT NO.: C801  
 FILE LOCATION: PROJECTWISE

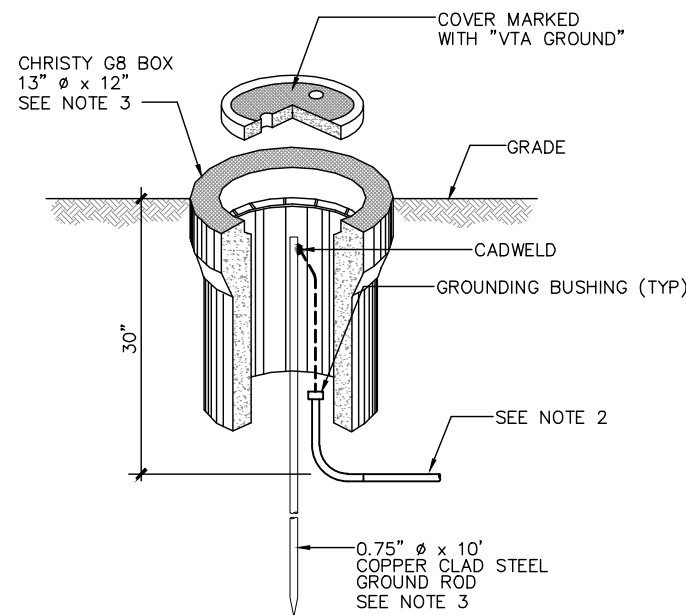
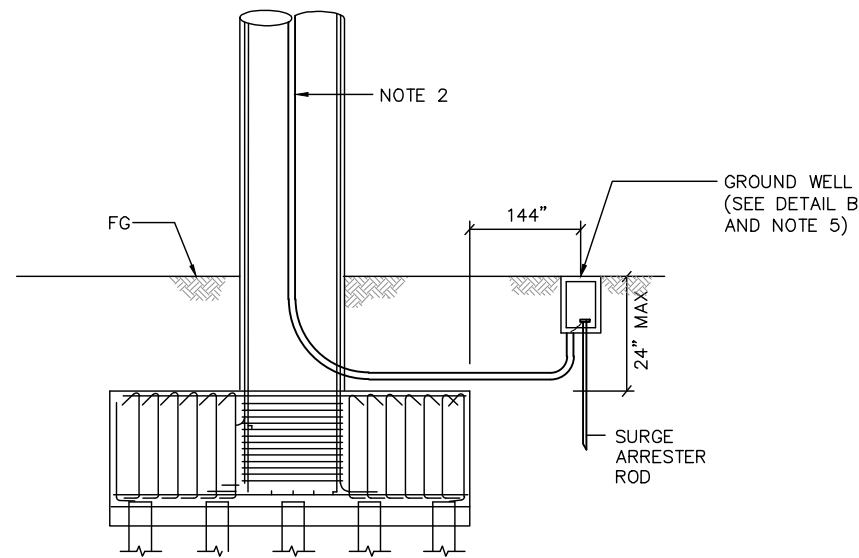
SHEET OF	
DRAWING NO.	ED412
REVISION	B

**NOTES:**

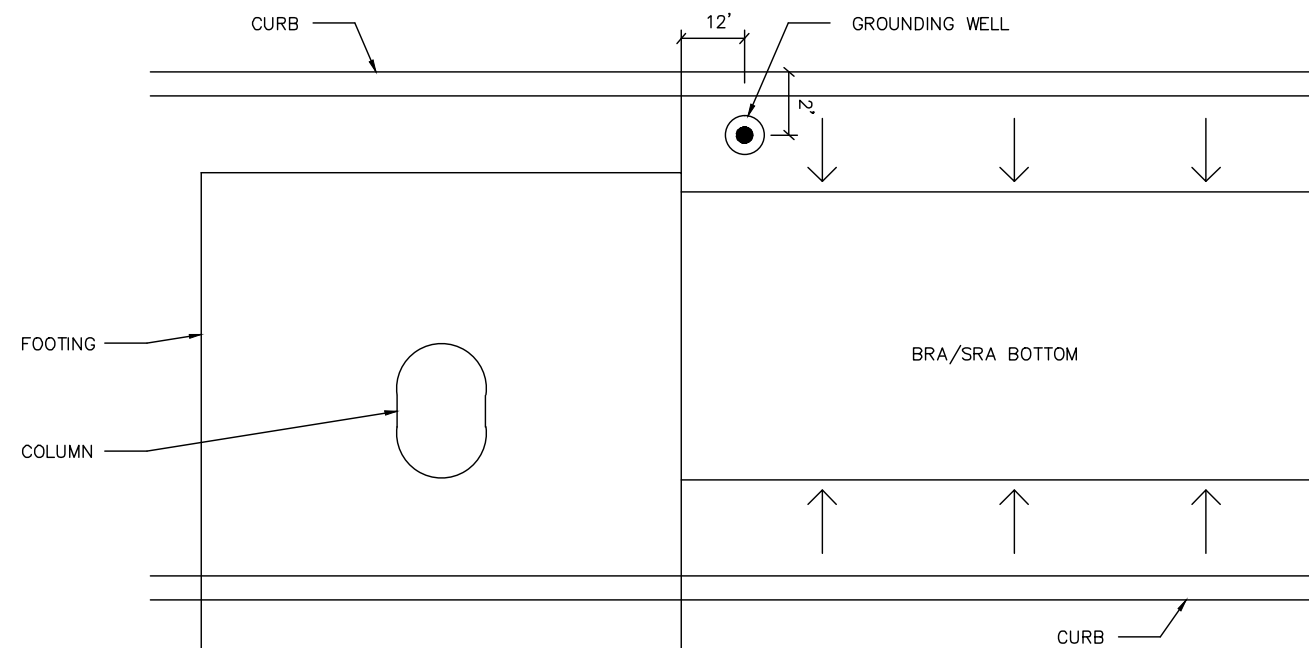
1. COIL UP 16' FOR GROUNDING TO TES POLES. (REQUIRED ON ALL TES POLES ON AERIAL GUIDEWAY)
2. 1.5" CONDUIT. #4 AWG FLEX INSULATED. 2 KV RATED WIRE. WIRE SHALL BE CONTINUOUS.
3. GROUND ROD IN EARTH OR BALLAST SHALL BE GROUND ROD AND CADWELDED.
4. SEE SD DRAWINGS FOR TES POLE STRUCTURAL DETAILS.
5. SURGE ARRESTOR GROUNDING WELL SHALL HAVE 10' CLEARANCE FROM OCS POLE GROUNDING WELL.



**A** TYPICAL TES SURGE ARRESTER GROUNDING



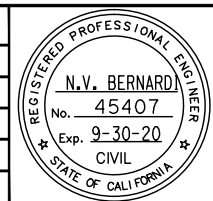
**B** GROUND WELL DETAIL



**C** GROUND WELL DETAIL PLAN VIEW

Jun 24, 2020 - 4:40pm C:\cadd\ba\ahernandez\west\mas8382\801ED413.dwg  
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NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



SUBMITTED  
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 YEARS  
 ENGINEERS / SURVEYORS / PLANNERS  
 DESIGNED: B. Silkwood  
 CHECKED: M. Cosentino  
 DRAWN: A. Hernandez  
 CADD FILE NAME: 801ED413.dwg

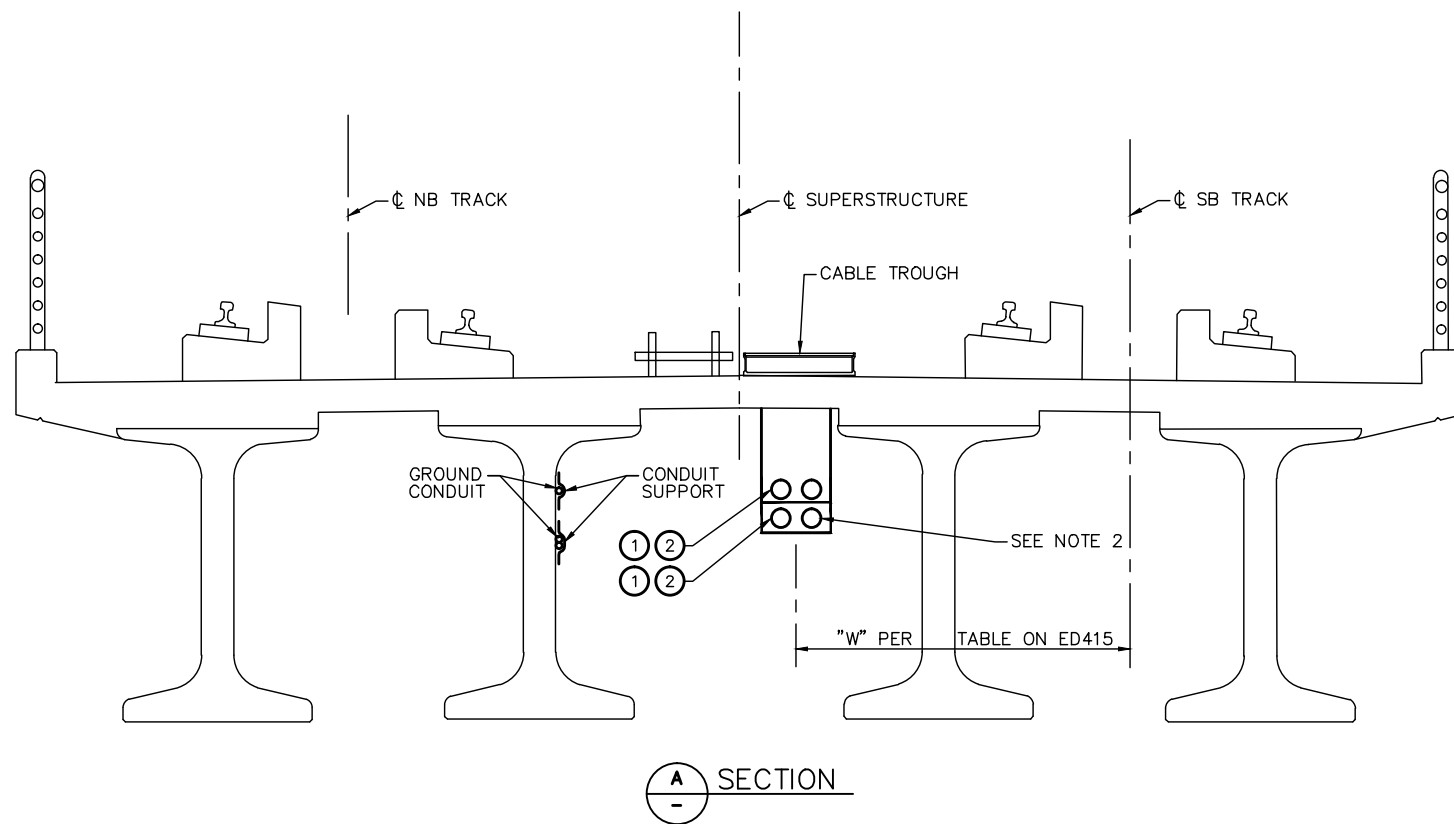
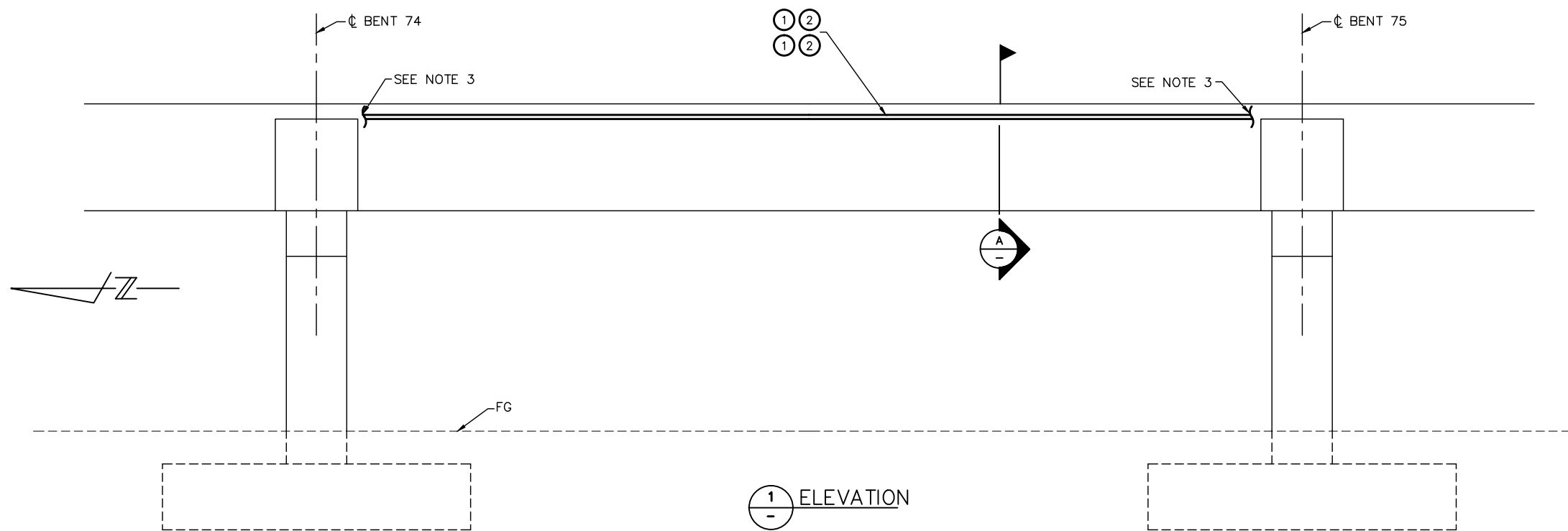


APPROVED  
**BKF 100+**  
 YEARS  
 ENGINEERS / SURVEYORS / PLANNERS  
 CADD FILE DATE: 03/06/20  
 SCALE: NTS  
 SUBMITTAL DATE: 06/29/20  
 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT ELECTRICAL COMBINED SYSTEM DUCT GROUNDING DETAILS			SHEET OF DRAWING NO. ED413 REVISION B
PCA NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE	

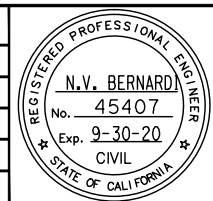
**NOTES:**

1. CABLE TRAY SHALL BE THE LADDER TYPE, 24" WIDE, 5" SIDE RAILS, MADE FROM GALVANIZED STEEL. MOUNT TO DECK CEILING.
2. TP CONDUITS SHALL BE PVC.
3. FOR EXACT LOCATION AND DETAILS FOR OPENINGS, SEE STRUCTURAL DRAWINGS.



Jun 24, 2020 - 4:41pm C:\cadd\ba\vhernandez\west\dm98382\801ED414.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



SUBMITTED  
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 YEARS  
 ENGINEERS / SURVEYORS / PLANNERS  
 DESIGNED: B. Silkwood  
 CHECKED: M. Cosentino  
 DRAWN: A. Hernandez  
 CADD FILE NAME: 801ED414.dwg

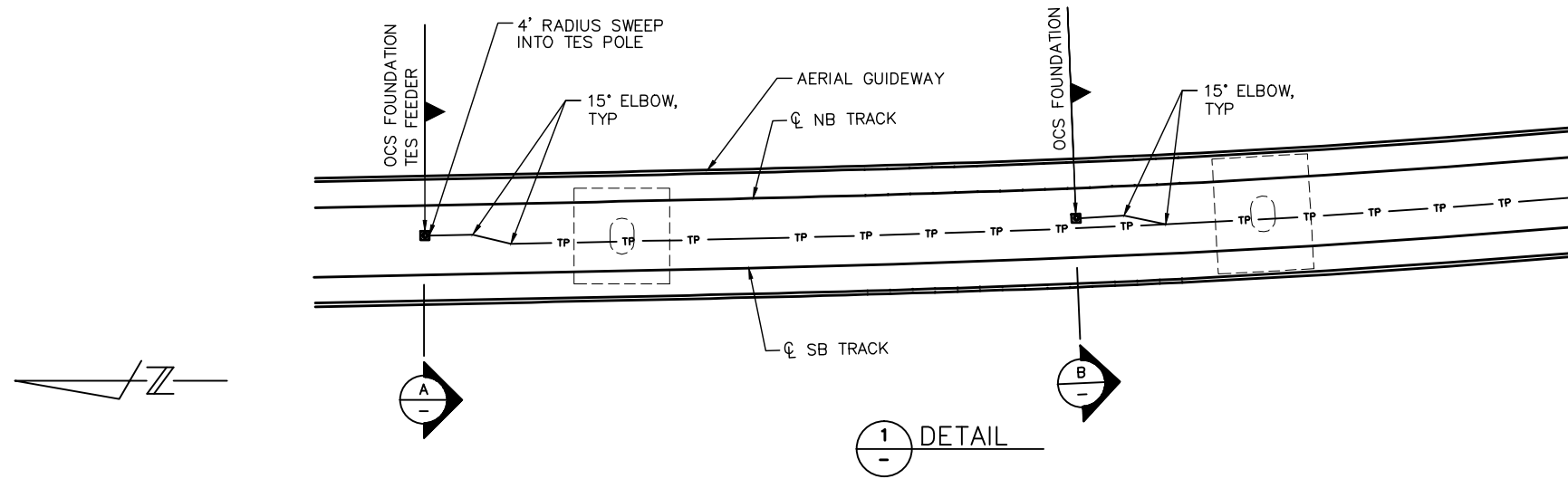


APPROVED  
**BKF 100+**  
 YEARS  
 ENGINEERS / SURVEYORS / PLANNERS  
 CADD FILE DATE: 03/06/20  
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 SUBMITTAL DATE: 06/29/20  
 BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR CAPITOL EXPRESSWAY LIGHT RAIL PROJECT ELECTRICAL COMBINED SYSTEM DUCT PRECAST GIRDER			SHEET OF DRAWING NO. ED414 REVISION B
PCA NO. 000	CONTRACT NO. C801	FILE LOCATION PROJECTWISE	

**NOTES:**

1. CABLE TRAY SHALL BE THE LADDER TYPE, 12" WIDE, 5" SIDE RAILS, 6" RUNG SPACING MADE FROM GALVANIZED STEEL. POWER CABLE TRAY SHALL BE 18" WIDE. SIGNAL/COMM TRAY SHALL BE 18" WIDE.
2. THIS CABLE TRAY SHALL HAVE A VENTILATED FLANGED COVER.
3. FOR EXACT LOCATION AND DETAILS FOR OPENINGS, SEE STRUCTURAL DRAWINGS.



**RUN 1 - OCS FEEDER POLE TO BENT 47**

STATION	W	DESCRIPTION
"SB" 1024+28	109"	CONNECT TO OCS POLE
"SB" 1024+38	109"	INSTALL 15 DEGREE ELBOW
"SB" 1024+49	73.5"	INSTALL 15 DEGREE ELBOW
"SB" 1034+65	73.5"	INSTALL 15 DEGREE ELBOW
"SB" 1034+67	78"	INSTALL 15 DEGREE ELBOW
"SB" 1037+75	78"	CONNECT TO COLUMN, SEE DRAWING ED404

**RUN 2 - OCS FEEDER POLE TO BENT 47**

STATION	W	DESCRIPTION
"SB" 1026+32	109"	CONNECT TO OCS POLE
"SB" 1026+42	109"	INSTALL 15 DEGREE ELBOW
"SB" 1026+54	73.5"	INSTALL 15 DEGREE ELBOW
SEE RUN 1		

**RUN 3 - OCS FEEDER POLE TO BENT 48**

STATION	W	DESCRIPTION
"SB" 1038+16	109"	CONNECT TO OCS POLE
"SB" 1038+26	109"	INSTALL 15 DEGREE ELBOW
"SB" 1038+36	78"	INSTALL 15 DEGREE ELBOW
"SB" 1039+23	78"	CONNECT TO COLUMN, SEE DRAWING ED405

**RUN 4 - BENT 48 TO OCS FEEDER POLE**

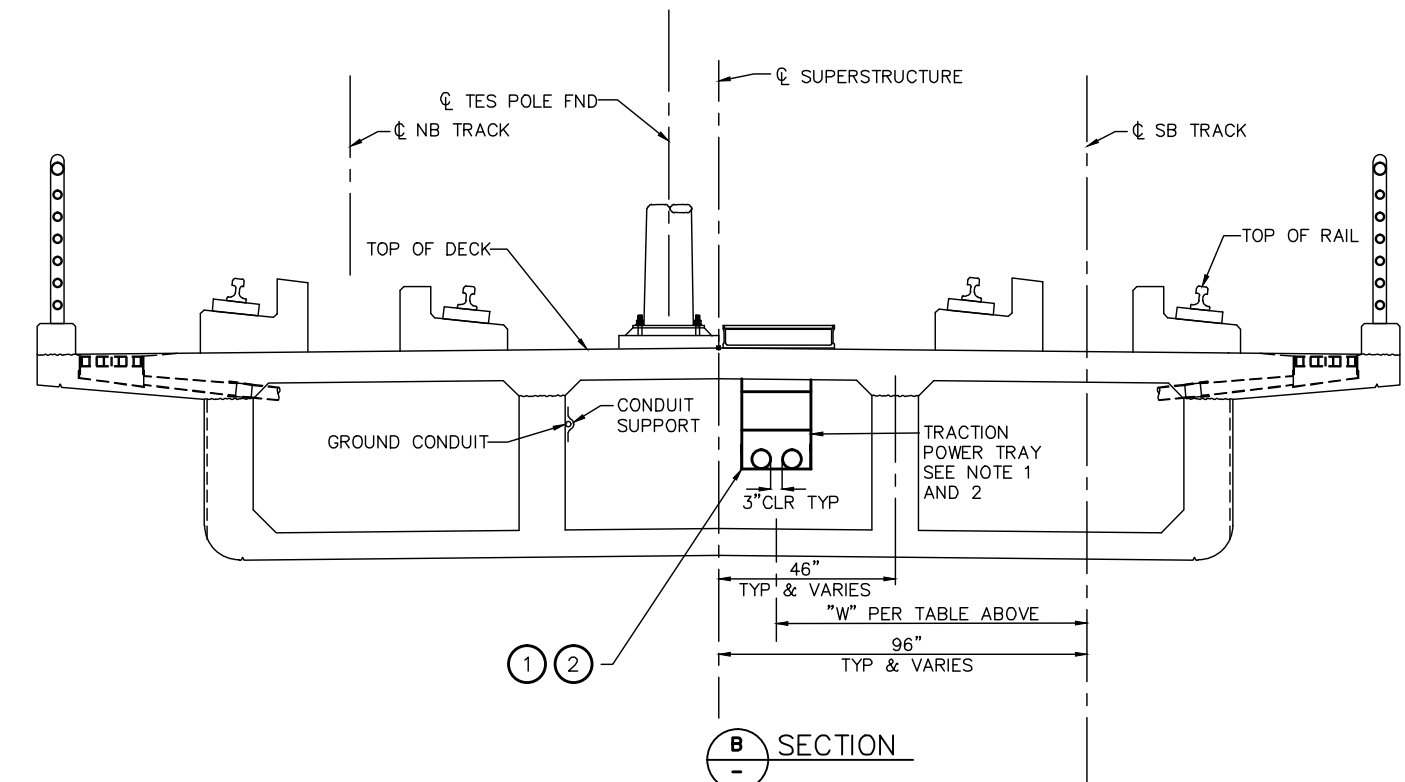
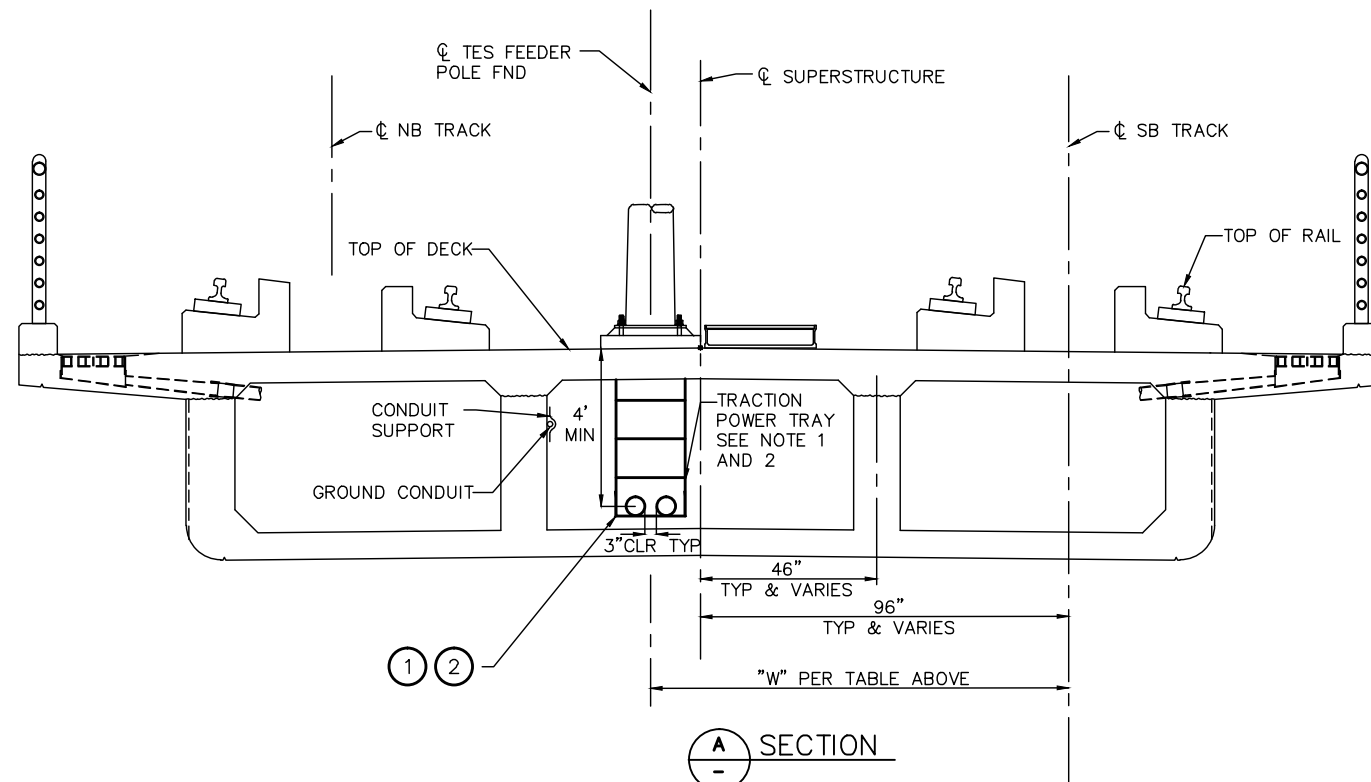
STATION	W	DESCRIPTION
"SB" 1039+23	78"	CONNECT TO COLUMN, SEE DRAWING ED405
"SB" 1039+34	78"	INSTALL 15 DEGREE ELBOW
"SB" 1039+43	109"	INSTALL 15 DEGREE ELBOW
"SB" 1039+55	109"	CONNECT TO OCS POLE

**RUN 5 - OCS FEEDER POLE TO ABUT 76**

STATION	W	DESCRIPTION
"SB" 1070+25	109"	CONNECT TO OCS POLE
"SB" 1070+36	109"	INSTALL 15 DEGREE ELBOW
"SB" 1070+47	81"	INSTALL 15 DEGREE ELBOW
"SB" 1079+97	81"	CONNECT TO ABUTMENT, SEE DRAWING ED403

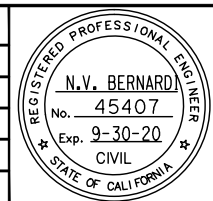
**RUN 6 - OCS FEEDER POLE TO ABUT 76**

STATION	W	DESCRIPTION
"SB" 1071+75	109"	CONNECT TO OCS POLE
"SB" 1071+87	109"	INSTALL 15 DEGREE ELBOW
"SB" 1071+98	81"	INSTALL 15 DEGREE ELBOW
SEE RUN 5		



Jun 24, 2020 - 4:41pm C:\cadd\ba\ahernandez\west\csm98352\801ED415.dwg

NO.	DATE	REVISIONS
B	06/20	95% SUBMITTAL SET
A	03/19	65% SUBMITTAL SET



**BKF 100+ YEARS**  
ENGINEERS / SURVEYORS / PLANNERS

DESIGNED: B. Silkwood  
CHECKED: M. Cosentino  
DRAWN: A. Hernandez  
CADD FILE NAME: 801ED415.dwg

**Santa Clara Valley Transportation Authority**

**BKF 100+ YEARS**  
ENGINEERS / SURVEYORS / PLANNERS

CADD FILE DATE: 03/06/20  
SCALE: NTS  
SUBMITTAL DATE: 06/29/20  
BOARD APPROVAL DATE:

EASTRIDGE TO BART REGIONAL CONNECTOR  
CAPITOL EXPRESSWAY LIGHT RAIL PROJECT  
ELECTRICAL  
COMBINED SYSTEM DUCT  
TES FEEDER POLE

FILE NO.: 000  
CONTRACT NO.: C801  
FILE LOCATION: PROJECTWISE

SHEET OF: ED415  
REVISION: B