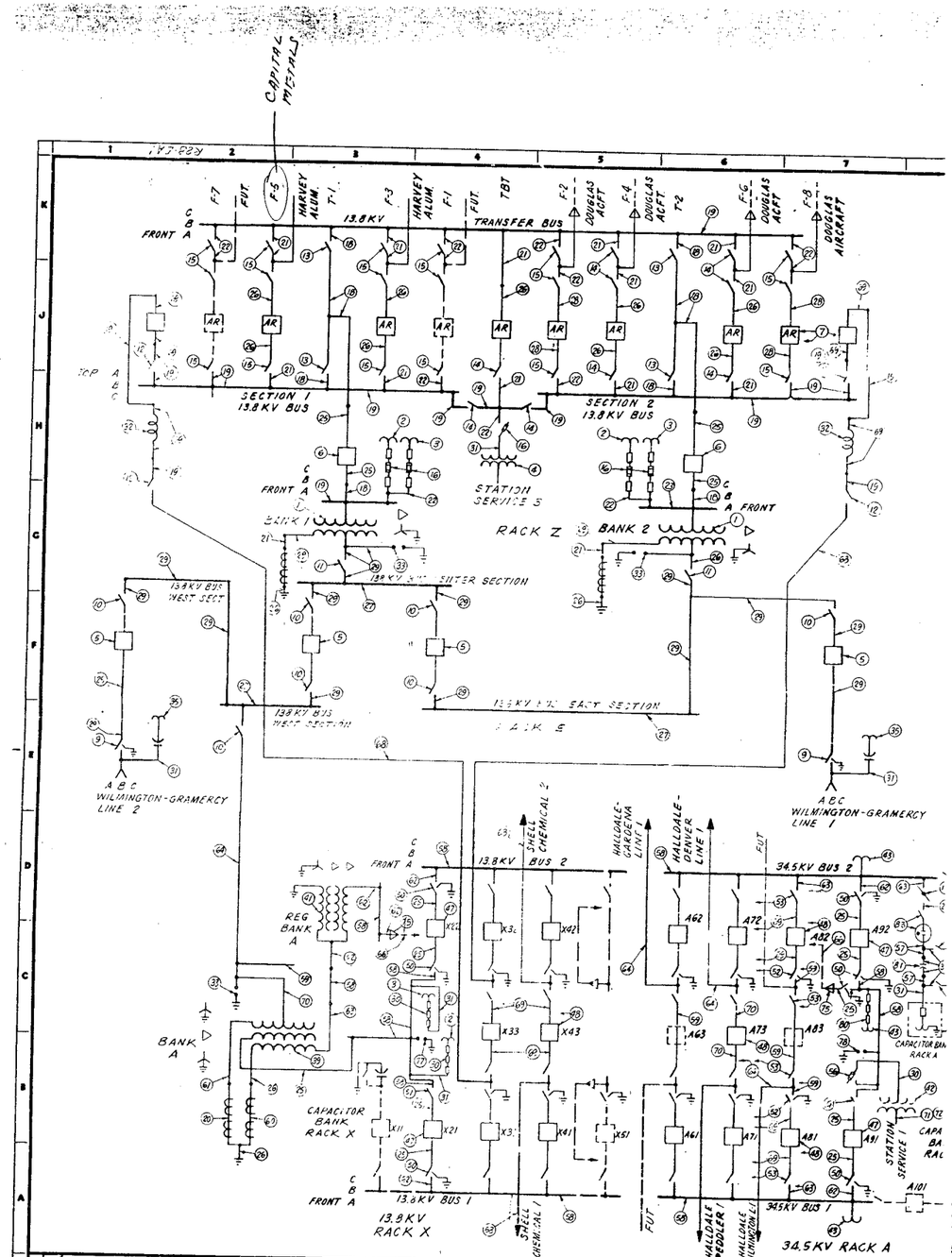

NOTE:

- ———— PRESENT
- - - - - - - - UNDERGROUND
- — — — — — FUTURE

ULTIMATE INSTALLATION:

2	138KV LINES
2	138-13.8KV BANKS 37.5 MVA
2	138-34.5-13.8KV BANKS 120 MVA
2	34.5KV REGULATING BANK 75 MVA
12	34.5KV LINES
2	34.5KV CAPACITOR BANK
14	13.8KV FEEDERS
2	13.8KV BUS TIE
2	13.8KV REACTOR BUS TIE
2	13.8KV CAPACITOR BANKS

SUPERVISORY CONTROLLED FROM RS-C
OPERATING VOLTAGE: TRIPPING, CLOSING
SUPERVISORY AND AUTOMATIC RECLOSING RELAY
125V DC

46	
47	PCB, OIL, 34.5KV 2000A, 1500 MVA
48	PCB, OIL, 34.5KV 1200A, 1500 MVA
49	
50	SWITCH, DISC (1) 34.5KV 2000A, 3PST W/GRD SW
51	SWITCH, DISC (1) 34.5KV 2000A, 3PST
52	SWITCH, DISC (1) 34.5KV 1200A, 3PST W/GRD SW
53	SWITCH, DISC (1) 34.5KV 1200A, 3PST
54	SWITCH, DISC (3) GND 34.5KV 600A SP OD
55	SWITCH, DISC GND 34.5KV 600A SP OD
56	SWITCH, DISC FUSED (3) 34.5KV 10A SPST HOOKSTICK
57	BUS, AL I IN TUBULAR ANSI 40
58	PIPE, BUS 4 IN AL USAS 40
59	PIPE, BUS 2 IN AL USAS 40
60	PIPE, BUS 2 IN CU USAS 80
61	PIPE, BUS 3/4 IN CU USAS 80
62	CABLE, AL 2500KCMIL BARE STRANDED 2 PER Ø
63	CABLE, AL 2500KCMIL BARE STRANDED
64	CABLE, AL 750KCMIL BARE STRANDED
65	CABLE, CU 2000KCMIL 34.5KV, 1/C CROSS-LINKED PE 1 PER Ø
66	CABLE, CU 2000KCMIL 34.5KV, 1/C CROSS-LINKED PE 2 PER Ø
67	
68	CABLE, CU 300KCMIL BARE STRANDED 2 PER Ø
69	CABLE, CU 500KCMIL BARE STRANDED 2 PER Ø
70	CABLE, CU 500KCMIL BARE STRANDED
71	CABLE, CU 750KCMIL 600V 1/C STRD THW
72	CABLE, CU 500KCMIL 600V 1/C STRD THW
73	
74	POTENTIAL DEVICE 34.5KV-115V 30VA
75	POTHEAD 46KV 2 PER Ø
76	POTHEAD 46KV 1 PER Ø
77	ARRESTER LIGHTNING 21KV
78	ARRESTER LIGHTNING 30KV
79	
80	ASSEMBLY, FUSED & RESISTOR 34.5KV
81	CAPACITOR BANK 10.8 MVAR, 34.5V/19.9KV, 1Ø 60HZ
82	BUS BAR, CU 1/4" x 2" SPEC P242
83	CKT. SWITCHER SFG 34.5KV 3Ø 1200A SP OD
84	
85	
86	
87	

EQUIPMENT LIST

NO.	DESCRIPTION
1	TRANSFORMER, POWER (3) 12.5 MVA 138-13.8KV
2	TRANSFORMER, POTENTIAL (2) 14,400-120V (METER)
3	TRANSFORMER, POTENTIAL (3) 14,400-120V (GRD DET.)
4	TRANS STA SERV (1) 15KVA, (1) 5KVA, 14,400-120/240V
5	PCB, OIL, 138KV, 1200A, 5000 MVA
6	PCB, OIL, 15KV, 2000A, 500 MVA
7	PCB, OIL, 15KV, 1200A, 500 MVA
8	
9	SWITCH, DISC (1) 138KV 1200A, 3PST W/GRD SW
10	SWITCH, DISC (1) 138KV, 1200A, 3PST
11	SWITCH, DISC (1) 138KV, 600A, 3PST
12	SWITCH, DISC (3) 34.5KV 1200A SPST
13	SWITCH, DISC (3) 15KV 2000A, 3PST
14	SWITCH, DISC (3) 15KV 1200A, 3PST
15	SWITCH, DISC (3) 15KV 600A, 3PST
16	SWITCH, DISC (3) 15KV FUSED
17	SWITCH, DISC 34.5KV 1200A 3Ø HORIZ 28BKV OD
18	PIPE, BUS, 1½ IN CU, USAS 80
19	PIPE BUS, 1½ IN CU, USAS 40
20	PIPE BUS, 1 IN CU, USAS 80
21	PIPE, BUS, 1 IN CU, USAS 40
22	PIPE, BUS, 1/2 IN CU USAS 40
23	BAR BUS, CU 1/4" X 4" 2 PER Ø
24	CABLE, CU, 1/0 BARE STRANDED
25	CABLE, CU, 1000KCMIL BARE STRANDED 2 PER Ø
26	CABLE, CU, 1000KCMIL BARE STRANDED
27	CABLE, CU, 750KCMIL BARE STRANDED
28	CABLE, CU, 300KCMIL BARE STRANDED
29	CABLE, CU, 250KCMIL BARE STRANDED
30	CABLE, CU 4/0 BARE STRANDED
31	CABLE, CU 2/0 BARE STRANDED
32	REACTOR, 11 BKV 1200A 60HZ 3Ø 17.5KVA, 2.9% IMP
33	ARRESTER LIGHTNING 12KV
34	
35	COUPLING CAPACITOR & POT DEVICE (3) 138KV-115V
36	
37	
38	
39	TRANSFORMER, POWER (3) 20 MVA 138-34.5-13.8KV
40	
41	TRANSFORMER, POWER, VOLT REG 15 MVA, 34.5V/19.9KV
42	TRANS PWR STA SERV (3) 100KVA, 14,400-120/240V
43	TRANSFORMER, POTENTIAL (2) 14,400-115V
44	TRANSFORMER, POTENTIAL (2) 14,400-120
45	

RELAY & METERING SCHEMATIC EA2

Revision Number	18
DRAFTING RELEASE	
DRAWN BY	W.S. CHUN, K. SAM
CHECKED BY	
ENGINEERING APPROVAL	

OWNER/AGENT APPROVAL

DRAWING REVISION RELEASE APPROVAL

REVISIONS

NO	DESCRIPTION
17	0016 3: NA1S4(1SG-A & 2) ADD HALLDALE-GARDENA LINE 1, REMOVED HALLDALE PEDDLER 1 HALLDALE WILMINGTON L1 (AS WILMINGTON GARDENA L-1
18	0008 3: AFA-4(1A-B D) ADD 2AR RK. RK A

REVISIONS LOCATED BY GRID COORDINATES

Revision	17
DR RELEASE	
DRAWN BY	CORPUS
CHECKED BY	
ENGINEERING APPROVAL	

OWNER/AGENT APPROVAL

DRAWING REVISION RELEASE APPROVAL

SCALE	NONE
DRAWN	C.L.C.
CHECKED	C.F.S.
SENIOR ENGINEER	

RECOMMENDED FOR APPROVAL

APPROVED

ONE LINE WIRING DIAGRAM
HALLDALE RECEIVING STATION 1425 EAST AMO BLVD.

POWER SYSTEM
DEPARTMENT OF WATER & POWER CITY OF LOS ANGELES

PROJECT R28 | DRAWING EA1

JOB NO.

DASHED LINES INDICATE FUTURE CONSTRUCTION.
CROSS REFERENCES OMIT PROJECT DESIGNATION, WHICH IS SAME AS SHOWN IN TITLE BLOCK

old D70

A-25500

SMA

BOE-C6-0090042