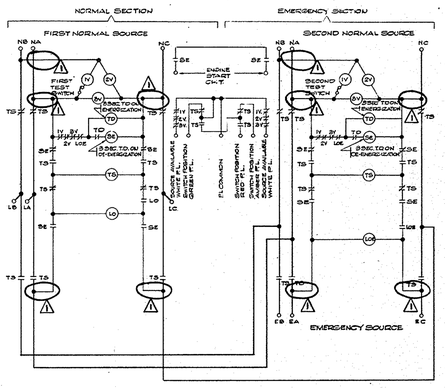
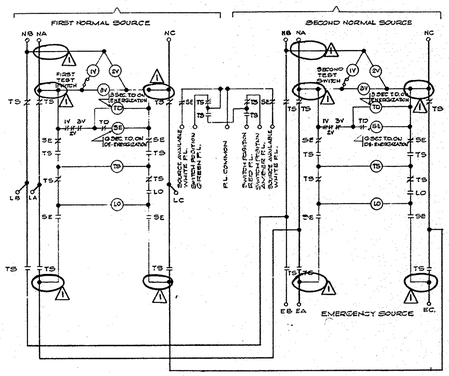
SCHEDULE OF ELECTRICALLY OPERATED MECHANICALLY HELD 3Φ 600V POWER TRANSFER SWITCHES FOR 277/480V OPERATION

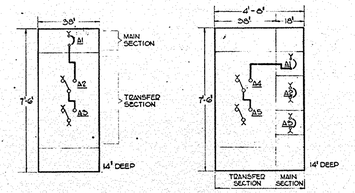
SWITCH DESIGNATION	LOCATION	ENCLOSURE	LINE I & LOAD CAPACITY	LINE I & LOAD FEEDER	LINE II CAPACITY	LINE II FEEDER	ACCESSORIES (SEE NOTES 4&5)	REMARKS
ATS-7A2 & ATS-7A3	EPC 7A	COMMON TO XFER SECTION OF PANEL	200A	*3Φ/Φ 200A BUS *3Φ/Φ	200A	200A BUS	03-04-E2-E3, F1-F2, F3 01-02-E1-E2, F1-F2, F3	AUTOMATIC 2-SOURCE ARRANGEMENT FOR LIGHTING TRANSFORMER
			200A	*3Φ/Φ	200A	200A BUS		
ATS-41A4 & ATS-41A5	EPC 41A	COMMON TO XFER SECTION OF PANEL	200A	*3Φ/Φ 200A BUS *3Φ/Φ	200A	200A BUS	03-04-E2-E3, F1-F2, F3 01-02-E1-E2, F1-F2, F3	AUTOMATIC 2-SOURCE ARRANGEMENT FOR LIGHTING TRANSFORMER
			200A	*3Φ/Φ	200A	200A BUS		
TS-41SL	SS-41S	SEPARATE FLOOR MOUNTED CABINET	1200A	5-500MCM/Φ 5-500MCM/Φ	1200A	2-500MCM/Φ	05-E3(225Ω-2ED) 04-E4	FOR FIRE PUMP
ATS-41N2	SS-41N	SEPARATE FLOOR MOUNTED CABINET	1200A	4-500MCM/Φ 4-500MCM/Φ	400A	1-* 1/0/Φ	C (SET 54 SEC) G (SET 24 MIN) E1 (2 REQUIRED) E3 (2 REQUIRED) U4	AUTOMATIC FOR BANK ELEVATORS.
ATS-41S2	SS-41S	SEPARATE FLOOR MOUNTED CABINET	1200A	5-500MCM/Φ 5-500MCM/Φ	400A	1-* 1/0/Φ	C (SET 54 SEC) G (SET 24 MIN) E1 (2 REQUIRED) E3 (2 REQUIRED) U4	AUTOMATIC FOR BANK ELEVATORS.
ATS-41NL	SS-41N	SEPARATE FLOOR MOUNTED CABINET	1600A	4-500MCM/Φ 4-500MCM/Φ	600A	2-350MCM/Φ	C (SET 66 SEC) G (SET 26 MIN) E1 (2 REQUIRED) E3 (2 REQUIRED) U4	AUTOMATIC FOR SHUTTLE ELEVATORS
ATS-41SL	SS-41S	SEPARATE FLOOR MOUNTED CABINET	2000A	5-500MCM/Φ 5-500MCM/Φ	600A	2-350MCM/Φ	C (SET 66 SEC) G (SET 26 SEC) E1 (2 REQUIRED) E3 (2 REQUIRED) U4	AUTOMATIC FOR SHUTTLE ELEVATORS
ATS-7S4 & ATS-7S5	EPC 7A	COMMON TO XFER SECTION OF PANEL	200A	*3Φ/Φ 200A BUS *3Φ/Φ	200A	200A BUS	03-04-E3, F1-F2, F3 01-02-E1-E2, F1-F2, F3	AUTOMATIC 2-SOURCE ARRANGEMENT FOR LIGHTING TRANSFORMER
			200A	*3Φ/Φ	200A	200A BUS		
ATS-75N2	SS-75N	SEPARATE FLOOR MOUNTED CABINET	1200A	5-500MCM/Φ 5-500MCM/Φ	400A	*+3/0/Φ	C (SET 30 SEC) G (SET 20 MIN) E1 (2 REQUIRED) E3 (2 REQUIRED) U4	AUTOMATIC FOR BANK ELEVATORS.
ATS-75S2	SS-75S	SEPARATE FLOOR MOUNTED CABINET	1200A	4-500MCM/Φ 4-500MCM/Φ	400A	*+3/0 Φ	C (SET 30 SEC) G (SET 20 MIN) E1 (2 REQUIRED) E3 (2 REQUIRED) U4	AUTOMATIC FOR BANK ELEVATORS.
ATS-75NL	SS-75N	SEPARATE FLOOR MOUNTED CABINET	2000A	5-500MCM/Φ 5-500MCM/Φ	600A	2-350MCM/Φ	C (SET 42 SEC) G (SET 22 MIN) E1 (2 REQUIRED) E3 (2 REQUIRED) U4	AUTOMATIC FOR SHUTTLE ELEVATORS
ATS-75SL	SS-75S	SEPARATE FLOOR MOUNTED CABINET	2000A	5-500MCM/Φ 5-500MCM/Φ	600A	2-350MCM/Φ	C (SET 42 SEC) G (SET 22 MIN) E1 (2 REQUIRED) E3 (2 REQUIRED) U4	AUTOMATIC FOR SHUTTLE ELEVATORS
ATS-108A5 & ATS-108A6	EPC 108A	COMMON TO XFER SECTION OF PANEL.	200A	*3Φ/Φ 200A BUS *3Φ/Φ	200A	200A BUS	03-04-E2, E3, F1, F2, F3 01-02-E1, E2, F1, F2, F3	AUTOMATIC 2-SOURCE ARRANGEMENT FOR LIGHTING TRANSFORMER.
			200A	*3Φ/Φ	200A	200A BUS		
ATS-108N2	SS-108N	SEPARATE FLOOR MOUNTED CABINET	1200A	5-500MCM/Φ 5-500MCM/Φ	400A	*+3/0/Φ	C (SET 6 SEC) G (SET 2 MIN) E1 (2 REQUIRED) E3 (2 REQUIRED) U4	AUTOMATIC FOR BANK ELEVATORS.
ATS-108S2	SS-108S	SEPARATE FLOOR MOUNTED CABINET.	1200A	5-500MCM/Φ 5-500MCM/Φ	400A	1-* 3/0/Φ	C (SET 6 SEC) G (SET 2 MIN) E1 (2 REQUIRED) E3 (2 REQUIRED) U4	AUTOMATIC FOR BANK ELEVATORS.
ATS-108NL	SS-108N	SEPARATE FLOOR MOUNTED CABINET	600A	2-350MCM/Φ 2-350MCM/Φ	600A	2-350MCM/Φ	C (SET 4 SEC) G (SET 1 MIN) E1 (2 REQUIRED) E3 (2 REQUIRED) U4	AUTOMATIC FOR SHUTTLE ELEVATORS
ATS-108SL	SS-108S	SEPARATE FLOOR MOUNTED CABINET	600A	2-350MCM/Φ 2-350MCM/Φ	600A	2-350MCM/Φ	C (SET 16 SEC) G (SET 5 MIN) E1 (2 REQUIRED) E3 (2 REQUIRED) U4	AUTOMATIC FOR SHUTTLE ELEVATORS.
ATS-110 A2 & ATS-110 A3	EPC 110 A	COMMON TO XFER SECTION OF PANEL.	600A	2-350MCM/Φ 600A BUS 2-350MCM/Φ	600A	600A BUS	04-02, E2, E3, F4 01-02, E1, E2, F4	AUTOMATIC 2-SOURCE ARRANGEMENT FOR F.E.*50 (F.D. ELEVATOR)
			600A	2-350MCM/Φ	600A	600A BUS		
ATS-5LA3 & ATS-5LA4	EPC-5LA	COMMON TO XFER SECTION OF PANEL	200 A	*3Φ/Φ 200A BUS *3Φ/Φ	200 A	200A BUS	03-04-E3, F1, F2, F3 01-02-E1, E2, F1, F2, F3	AUTOMATIC 2-SOURCE ARRANGEMENT FOR LIGHTING TRANSFORMER
			200 A	*3Φ/Φ	200 A	200A BUS		
ATS-5LA	PUMP RM. AT SERV. LEVEL	SEPARATE WALL MOUNTED CABINET	150 A	*1Φ/Φ *1Φ/Φ	150 A	1-*1Φ/Φ	05-06-E3, E4, F4	AUTOMATIC FOR SPRINKLER & JOCKEY PUMPS
TS-5LA	PUMP RM. AT SERV. LEVEL	SEPARATE FLOOR MOUNTED CABINET	1200A	3-500 MCM/Φ 3-500 MCM/Φ	1200A	2-250MCM/Φ	05-E3 (2 REQUIRED) E4 (2 REQUIRED) U4	FOR FIRE PUMP



3 SOURCE LIGHTING TRANSFER SWITCH CONTROL WIRING (TYPICAL FOR ALL)
(SEE NOTE 3)



3 SOURCE FIRE DEPARTMENT ELEVATOR TRANSFER SWITCH CONTROL WIRING
(SEE NOTE 3)



EMERG. POWER CENTER EPC-7A FRONT ELEVATION

EMERG. POWER CENTER EPC-41A & EPC-75A FRONT ELEVATION

EMERG POWER CENTER EPC-110A FRONT ELEVATION

EMERG. POWER CENTER EPC-108A FRONT ELEVATION

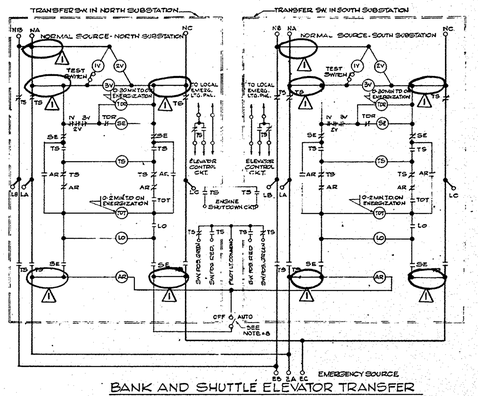
EMERG. POWER CENTER EPC-5LA FRONT ELEVATION

EMERGENCY POWER CENTER SCHEDULE CLASS I SWITCHBOARD CONSTRUCTION

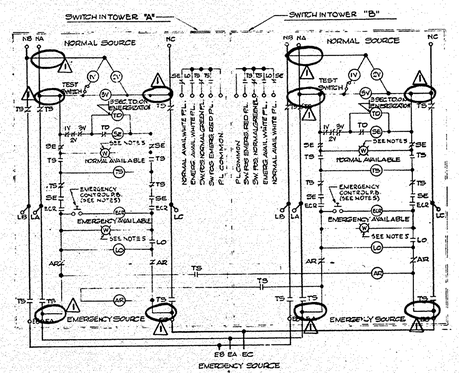
POWER CENTER NO	SECTION	DEVICE NO	DEVICE DESIGNATION	FEEDER SYMBOL	DEVICE DESCRIPTION	FEEDER	SERVICE TO	REMARKS
EPC-7A	MAIN	A1	CB-7A1	——	225A.F, 200A.T. 3P 600V MOLDED CASE CKT. BKR.	——	ATS-7A2-LINE II	
	TRANSFER	A2	ATS-7A2	——	AUTOMATIC TRANSFER SWITCH (SEE NOTE*1 BELOW)	——	ATS-7A3-LINE II	
		A3	ATS-7A3	F-EPC7A-3	AUTOMATIC TRANSFER SWITCH (SEE NOTE*1 BELOW)	3# 3/0 & 1#6 (GRD)-2½" C.	EMLTG. PNLS. EPC7A-EPC23A & 100A 3P 250V DISC. SW.	VIA. 150 KVA TRANSF.
EPC-41A	MAIN	A1	CB-41A1	——	225 A.F. 200 A.T. 3P. 600V. MOLDED CASE CKT. BKR.	——	ATS-41A4-LINE II	
		A2	CB-41A2	F-EPC41A-2	600 A.F. 600 A.T. 3P. 600V. MOLDED CASE CKT. BKR.	2 SETS OF 3-350 MCM (1#4(GRD) IN 2"C	ATS-41SL & 41NL-LINE II	PROVIDE 4 LUGS/Φ
		A3	CB-41A3	F-EPC41A-3	225 A.F., 150 A.T., 3P, 600V. MOLDED CASE CKT. BKR.	3# 1/0 & 1#6 (GRD)- 2"C.	ATS-41S2 & 41N2-LINE II	PROVIDE 2 LUGS/Φ
	TRANSFER	A4	ATS-41A4	——	AUTOMATIC TRANSFER SWITCH (SEE NOTE*1 BELOW)	——	ATS-41A5-LINE II	
		A5	ATS-41A5	F-EPC41A-5	AUTOMATIC TRANSFER SWITCH (SEE NOTE*1 BELOW)	3# 3/0 & 1#6 (GRD)- 2½"C	EMLTG PNLS EPC23A-EPC57A	VIA. 150 KVA TRANSF.
EPC-75A	MAIN	A1	CB-75A1	——	225 A.F. 200 A.T. 3P. 600V. MOLDED CASE CKT. BKR.	——	ATS-75A4-LINE II	
		A2	CB-75A2	F-EPC75A-2	600 A.F. 600 A.T. 3P. 600V. MOLDED CASE CKT. BKR.	2 SETS OF 3-350 MCM (1#4(GRD) IN 2"C	ATS-75SL & 75NL-LINE II	PROVIDE 4 LUGS/Φ
		A3	CB-75A3	F-EPC75A-3	225 A.F. 200 A.T. 3P. 600V. MOLDED CASE CKT. BKR.	3-* 3/0 & 1#6 (GRD)- 2½"C	ATS-75S2 & 75N2-LINE II	PROVIDE 2 LUGS/Φ
	TRANSFER	A4	ATS-75A4	——	AUTOMATIC TRANSFER SWITCH (SEE NOTE*1 BELOW)	——	ATS-75A5-LINE II	
		A5	ATS-75A5	F-EPC75A-5	AUTOMATIC TRANSFER SWITCH (SEE NOTE*1 BELOW)	3# 3/0 & 1#6 (GRD)- 2½"C.	EMLTG PNLS EPC60A-EPC75A	VIA. 150 KVA TRANSF.
EPC-108A	MAIN	A1	CB-108A1	EPC108A-1	600 A.F. 600 A.T. 3P. 600V. MOLDED CASE CKT. BKR.	2 SETS OF 3-350 MCM (1#6 (GRD) IN 2"C	EPC-110A-(MAIN SW-110A1)	
		A2	CB-108A2		225 A.F. 200 A.T. 3P. 600V. MOLDED CASE CKT. BKR.		ATS-108A5-LINE II	
		A3	CB-108A3	F-EPC108A-3	600 A.F. 600 A.T. 3P. 600V. MOLDED CASE CKT. BKR.	2 SETS OF 3-350 MCM (1#4(GRD) IN 2"C	ATS-108SL & 108NL-LINE II	PROVIDE 4 LUGS/Φ
		A4	CB-108A4	F-EPC108A-4	225 A.F. 150 A.T. 3P. 600V. MOLDED CASE CKT. BKR.	3# 1/0 & 1#6 (GRD)- 2"C.	ATS-108S2 & 108N2-LINE II	PROVIDE 2 LUGS/Φ
	TRANSFER	A5	ATS-108A5	——	AUTOMATIC TRANSFER SWITCH (SEE NOTE*1 BELOW)	——	ATS-108A6-LINE II	
		A6	ATS-108A6	F-EPC108A-6	AUTOMATIC TRA. SFER SWITCH (SEE NOTE*1 BELOW)	3# 3/0 & 1#6 (GRD)- 2½"C.	EMLTG. PNLS. EPC74A-EPC110A	VIA. 150 KVA TRANSF.
EPC-110A	MAIN	A1	SW-110A1	——	600 A. 3P. 600V. UNFUSED Q.I.S. SWITCH	——	ATS-110A2-LINE II	
	TRANSFER	A2	ATS-110 A2	——	AUTOMATIC TRANSFER SWITCH (SEE NOTE*1 BELOW)	——	ATS-110 A3-LINE II	
		A3	ATS-110 A3	F-EPC110A3	AUTOMATIC TRANSFER SWITCH (SEE NOTE*1 BELOW)	2 SETS OF 3-350 MCM (1#6(GRD) IN 2"C	FIRE DEPT. ELEV. (FE*50)	
EPC-5LA	MAIN	A-1	CB-5LA1	——	225 A.F. 200 A.T. 3P-600V MOLDED CASE CKT. BKR.	——	ATS-5LA3-LINE II	
		A-2	CB-5LA2	F-EPC5LA-2	225 A.F. 125 A.T. 3P-600V MOLDED CASE CKT. BKR.	3#1#10 (GRD)- 3/4"C	ATS-5LA4 & 5LA5-LINE II	
	TRANSFER	A-3	ATS-5LA3	——	AUTOMATIC TRANSFER SWITCH (SEE NOTE*1 BELOW)	——	ATS-5LA4-LINE II EMLTG. PNLS. EPC 65A-EPC 68A 100A 3P. 250V. UNF. DISC. SW.	
		A-4	ATS-5LA4	F-EPC5LA-4	AUTOMATIC TRANSFER SWITCH (SEE NOTE*1 BELOW)	3# 3/0 & 1#6 (GRD)- 2½"C		VIA 150 KVA TRANSF.

NOTES

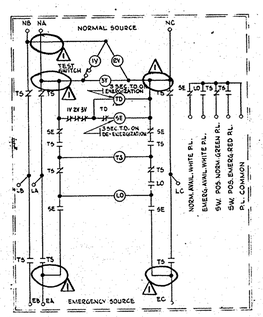
1. SEE SCHEDULE OF ELECTRICALLY OPERATED-MECHANICALLY HELD POWER TRANSFER SWITCHES (THIS DRAWING) FOR DESCRIPTION.
2. PROVIDE GROUND AND NEUTRAL BUS IN EACH POWER CENTER (SEE SPECIFICATIONS).
3. TRANSFER SWITCH CONTROL WIRING DIAGRAMS ARE SHOWN WITH THE SWITCH UNDER NORMAL OPERATING CONDITIONS.
4. FOR DESCRIPTION OF ACCESSORIES AND OPERATION OF TRANSFER SWITCHES SEE SPECIFICATIONS.
5. FOR THE 11TH FLOOR FIRE PUMP SWITCHES ONLY, PROVIDE THE ACCESSORIES INDICATED IN WIRING DIAGRAM IN A SEPARATE CABINET LOCATED AT THE FIRE PUMP.
6. FOR CONTROL CIRCUIT RISER DIAGRAM SEE DWG E-X-11.
7. FOR EMERGENCY SINGLE LINE DIAGRAM SEE DWG. E-X-10.
8. AUTO-OFF CONTROL SWITCH LOCATED IN MAIN TRANSFER SWITCH CONTROL PANEL SEE DWG. E-X-11.



BANK AND SHUTTLE ELEVATOR TRANSFER SWITCH CONTROL WIRING
(SEE NOTE 3)



FIRE PUMP TRANSFER SWITCH CONTROL WIRING (SEE NOTES 3&5)



SPRINKLER & JOCKEY PUMPS TRANSFER SWITCH CONTROL WIRING
(SEE NOTE 3)

TRANSFER SWITCH LEGEND

- (IV) (2V) (3V) — NORMAL SOURCE SUPERVISORY RELAY.
- (5E) — SOURCE SELECTOR RELAY.
- (TS) — TRANSFER SW. TCH SOLENOID COIL.
- (LO) — VOLTAGE FREQUENCY SENSITIVE LOCKOUT RELAY.
- (TD) (TDN) (TDT) — TIME DELAY RELAYS.
- (AR) — AUXILIARY RELAY.
- (EC) — EMERGENCY CONTROL RELAY.
- (W) — "SOURCE AVAILABILITY" WHITE PILOT LIGHT.

CONTRACT BID DRAWING date OCT. 16, 1967

NO.	DATE	BUL. NO.	BY
REVISIONS			
1	12-16-67		

APPROVED

CHIEF, PLANNING DIVISION

DATE

THE WORLD TRADE CENTER

THE PORT OF NEW YORK AUTHORITY

MINORU YAMASAKI & ASSOCIATES — MINORU YAMASAKI, ARCHITECT
EMERY ROTH & SONS — RICHARD ROTH, ARCHITECT
WORTHINGTON, SKILLING, HELLE & JACKSON — STRUCTURAL ENGINEERS
JAROS, BAUM & BOLLES — MECHANICAL ENGINEERS
JOSEPH R. LORING & ASSOCIATES — ELECTRICAL ENGINEERS
THE PORT OF NEW YORK AUTHORITY — PAVING, UTILITIES, FOUNDATIONS

TITLE: EMERG. POWER CENTER AND TRANSFER SWITCH SCHEDULES AND WIRING DIAGRAMS

DRAWN	R.F.H.	CHECKED	J.R.L.
SCALE	NONE	DATE	OCT. 16, 1967
PROJECT NUMBER		SHEET	85 OF 114
DRAWING NUMBER	E-A-99		

FileJuicer