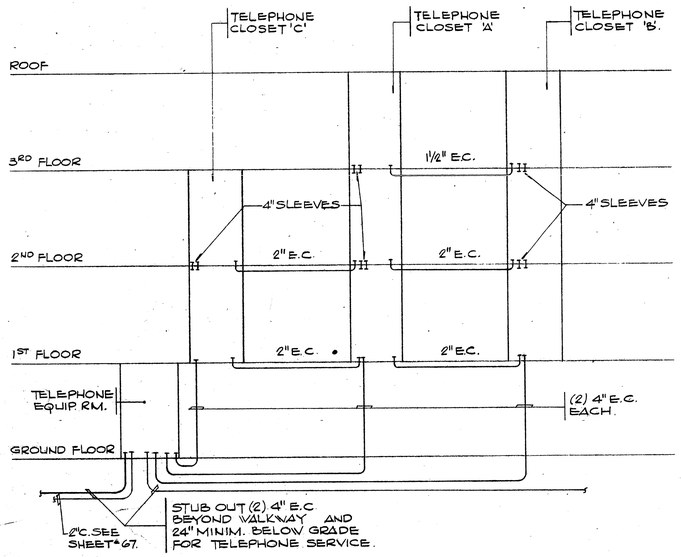
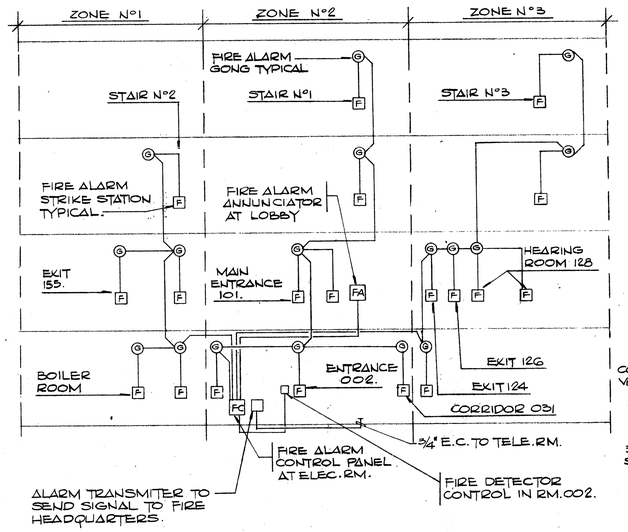


TELEPHONE RISER DIAGRAM

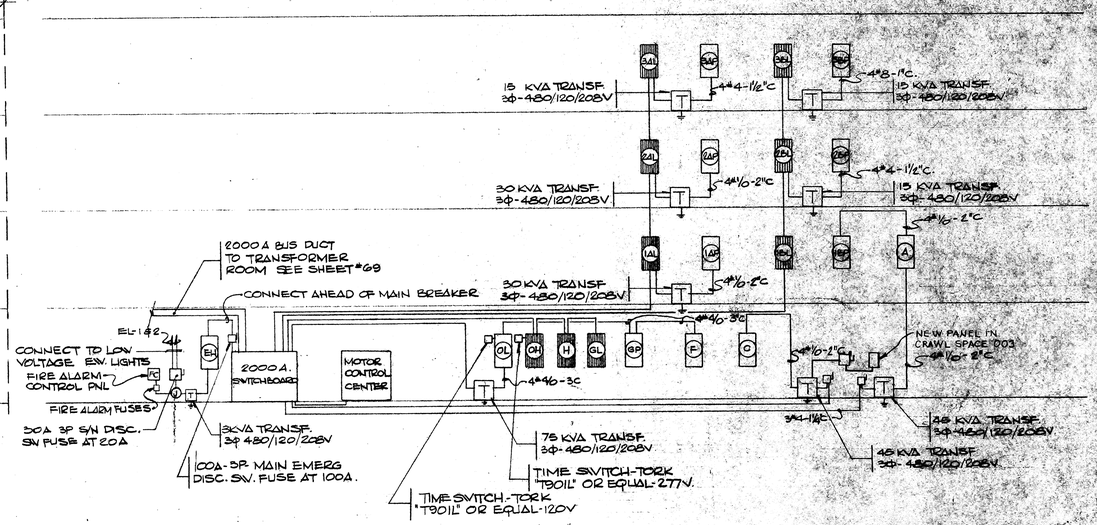
NO SCALE

NOTE:
STUB UP ALL CONDUITS AND SLEEVES IN TELEPHONE CLOSETS 6" A.F.F.



FIRE ALARM RISER DIAGRAM

NO SCALE



A.C. RISER DIAGRAM

NO SCALE

NOTE: THE SECONDARY NEUTRAL OF ALL DRY TYPE TRANSFORMERS SHALL BE BONDED TO THE METAL TRANSFORMER ENCLOSURE AND THE COMMON MAIN GROUNDING CONDUCTOR GROUNDED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE

PANEL SCHEDULES

PANEL 'GL' 100A 3Φ-4W 277/480V M.L.O.

CKT Nº	DESIGNATION	CLASS	TRIP	P	WIRE & COND.
1-12	LIGHTS	2a	20	1	#12 - ½"OR ¾"
13-18	SPARES	2a	20	1	— — —

PANEL 'GP' 225A 3Φ-4W 120/208V MAIN CIRC/BKR

CKT Nº	DESIGNATION	CLASS	TRIP	P	WIRE & COND.
1-25	RECEPTACLES	2b	20	1	#12 - ½"OR ¾"
26-32	PUMPS & FANS	2b	20	1	#12 - ½"
33-36	SPACES	2b	20	1	— — —

PANEL 'IAL' 400A 3Φ-4W 277/480V M.L.O.

CKT Nº	DESIGNATION	CLASS	TRIP	P	WIRE & COND.
1-18	LIGHTS	2a	20	1	#12 - ½"OR ¾"
19-23	SPARES	2a	20	1	— — —
24	TRANSFORMER	2d	50	3	3#6 - 1"C.

PANEL 'IAP' 200A 3Φ-4W 120/208V MAIN CIRC/BKR

CKT Nº	DESIGNATION	CLASS	TRIP	P	WIRE & COND.
1-34	RECEPTACLES	2b		1	#12 - ½"OR ¾"
35-40	SPARES	2b		1	— — —

PANEL 'IBL' 225A 3Φ-4W 277/480V M.L.O.

CKT Nº	DESIGNATION	CLASS	TRIP	P	WIRE & COND.
1-5	LIGHTS	2a	20	1	#12 - ½"OR ¾"
6-10	SPARES	2a	20	1	— — —

PANEL 'IBP' 200A 3Φ-4W 120/208V MAIN CIRC/BKR

CKT Nº	DESIGNATION	CLASS	TRIP	P	WIRE & COND.
1-17	RECEPTACLES	2b	20	1	#12 - ½"OR ¾"
18-24	SPARES	2b	20	1	— — —

PANEL '2AL' 400A 3Φ-4W 277/480V M.L.O.

CKT Nº	DESIGNATION	CLASS	TRIP	P	WIRE & COND.
1-16	LIGHTS	2a	20	1	#12 - ½"OR ¾"
17-21	SPARES	2a	20	1	— — —
22	TRANSFORMER	2d	50	3	3#6 - 1"

PANEL '2AP' 200A 3Φ-4W 120/208V MAIN CIRC/BKR.

CKT Nº	DESIGNATION	CLASS	TRIP	P	WIRE & COND.
1-30	RECEPTACLES	2b	20	1	#12 - ½"OR ¾"
31-38	SPARES	2b	20	1	— — —

PANEL '2BL' 225A 3Φ-4W 277/480V M.L.O.

CKT Nº	DESIGNATION	CLASS	TRIP	P	WIRE & COND.
1-11	LIGHTS	2a	20	1	#12 - ½"OR ¾"
12-15	SPARES	2a	20	1	— — —
16	TRANSFORMER	2d	30	3	3#8 - ¾"

PANEL '2BP' 100A 3Φ-4W-120/208V MAIN CIRC/BKR.

CKT Nº	DESIGNATION	CLASS	TRIP	P	WIRE & COND.
1-14	RECEPTACLES	2b	20	1	#12 - ½"OR ¾"
15-22	SPARES	2b	20	1	— — —

PANEL '3AL' 400A 3Φ-4W 277/480V M.L.O.

CKT Nº	DESIGNATION	CLASS	TRIP	P	WIRE & COND.
1-8	LIGHTS	2a	20	1	#12 - ½"OR ¾"
9-13	SPARES	2a	20	1	— — —
14	TRANSFORMER	2d	30	3	3#10 - ¾"

PANEL '3AP' 100A 3Φ-4W 120/208V MAIN CIRC/BKR.

CKT Nº	DESIGNATION	CLASS	TRIP	P	WIRE & COND.
1-13	RECEPTACLES	2b	20	1	#12 - ½" OR ¾"
14-15	HEAT TAPE	2b	20	1	#12 - ½" OR ¾"
16	HEAT CABLE	2c	20	2	#10 - ¾"
17,18	IMMERSION HEATER	2c	30	2	#10 - ¾"
19-22	SPARES				

PANEL '3BL' 225 A 3Φ-4W 277/480V M.L.O.

CKT Nº	DESIGNATION	CLASS	TRIP	P	WIRE & COND.
1-7	LIGHTS	2a	20	1	#12 - ½"OR ¾"
8-11	SPARES	2a	20	1	— — —
12	TRANSFORMER	2d	30	3	3#8 - ¾"C.

PANEL '3BP' 100A 3Φ-4W 120/208V MAIN CIRC/BKR

CKT Nº	DESIGNATION	CLASS	TRIP	P	WIRE & COND.
1-14	RECEPTACLES	2b	20	1	#12 - ½"OR ¾"
15-20	SPARES	2b	20	1	— — —

PANEL 'H' 200A-3Φ-4W 277/480V M.L.O

CKT Nº	DESIGNATION	CLASS	TRIP	P	WIRE & COND.
1-10	LIGHTS	2a	20	1	#12 - ½"OR ¾"
11-15	SPARES	2a	20	1	— — —
16	ELEV. SIGNAL SW.	2a	20	3	3#12 - ½"C.

PANEL 'OH' 200A-3Φ-4W 277/480V M.L.O. ****

CKT Nº	DESIGNATION	CLASS	TRIP	P	WIRE & COND.
1-8	LIGHTS	2a	20	1	#10 - ¾"
9-12	SPARES	2a	20	1	

PANEL 'OL' 225 A 3Φ-4W 120/208V MAIN CIRC/BKR. ****

CKT Nº	DESIGNATION	CLASS	TRIP	P	WIRE & COND.
1-5	LIGHTS	2b	20	1	#10 - ¾"
6-10	SPARES	2b	20	1	

PANEL 'F' 225 A 3Φ-4W 120/208V MAIN CIRC/BKR.

CKT Nº	DESIGNATION	CLASS	TRIP	P	WIRE & COND.
1-24	SPARES	2b	20	1	

PANEL 'C' 200 A 3Φ-4W 120/208V MAIN CIR/BKR.*

CKT Nº	DESIGNATION	CLASS	TRIP	P	WIRE & COND.
1	SHUNT TRIP MAIN BRKR.	3a	150	3	
2-14	SPACES			3	

PANEL 'A' 200 A 3Φ-4W 120/208V MAIN CIR/BKR.**

CKT Nº	DESIGNATION	CLASS	TRIP	P	WIRE & COND.
1	CONTACTOR FOR 'A' SECTION	2c	60	3	
2-9	LIGHTS & SPARES	2b	20	1	#12 - ½" OR ¾"
10	CONTACTOR FOR 'B' SECTION	2c	60	3	
11-20	LIGHTS & SPARES	2b	20	1	#12 - ½" OR ¾"

PANEL 'EH' 100A-3Φ-4W 277/480V M.L.O (PLUG FUSES ONLY)

CKT Nº	DESIGNATION	CLASS	TRIP	P	WIRE & COND.
1-9	LIGHTS & SPARES		20	1	#12 - ½" OR ¾"
10	TRANSFORMER		20	3	3#12 - ½"

NOTE

PROVIDE EMPTY CONDUIT AS REQUIRED FROM EACH RECESSED PANEL TO A POINT ABOVE HUNG CEILING FOR FUTURE SPARE CIRCUIT WIRING.

* PANEL SHALL HAVE AN EQUIPMENT GROUND IN PLACE OF NEUTRAL

** SPLIT BUS PANEL - PROVIDE (2) 60A-3P ENCLOSED TYPE CONTACTORS (NORMALY OPEN A-C 208V), TO BE CONTROLLED BY REMOTE CONTROL SWITCHES, FROM HEARING ROOM.

*** PROVIDE SHUNT TRIP BREAKER FOR BOILER

**** PROVIDE 200A-3P CONTACTOR WITH CABINET AND CONNECT TO TIME SWITCH

'MCC' 1000A 3Φ-3W-480V (MOTOR CONTROL CENTER)

CKT-Nº	DESIGNATION	CLASS	TRIP	P	HP	STARTER SIZE	PB & PL	WIRE & CONDUIT
1	ELEC WATER HTR #1	2f	30	3	—	—	—	3#10 - ¾"C.
2	CIRC. PUMP #1		20	3	1/3	0	1	3#12 - ½"C.
3	AIR HANDLING UNIT #1		20	3	2	0		3#12 - ½"C.
4	#2		20	3	1½	0		3#12 - ½"C.
5	#3		90	3	15	2		3#6 - 1"C.
6	#4		20	3	5	1		3#12 - ½"C.
7	#5		100	3	30	3		3#4 - 1"C.
8	#6		80	3	25	3		3#8 - ¾"C.
9	FAN #5		20	3	1	0		3#12 - ½"C
10	6		20	3	5	1		3#12 - ½"C.
11	9		20	3	1	0		3#12 - ½"C.
12	10		20	3	1	0		3#12 - ½"C.
13	11		20	3	3	1		3#12 - ½"C.
14	12		20	3	1½	0		3#12 - ½"C.
15	SPACE			3				
16	COOLING TOWER		30	3	7½	1		3#10 - ¾"C
17	" "		30	3	7½	1		3#10 - ¾"C
18	PUMP #1		80	3	25	3		3#8 - ¾"C
19	#2		30	3	7½	1		3#10 - ¾"C
20	#3		30	3	7½	1		3#10 - ¾"C
21	#4		20	3	5	1		3#12 - ½"C.
22	#5		20	3	5	1		3#12 - ½"C.
23	#6		20	3	5	1		3#12 - ½"C.
24	#7		20	3	3	1		3#12 - ½"C.
25	CONDENSATE PUMP		20	3	1½	0		3#12 - ½"C.
26	" "		20	3	1½	0		3#12 - ½"C.
27	COND WATER PUMP		60	3	15	2		3#10 - ¾"C.
28	" " "		60	3	15	2		3#10 - ¾"C.
29	OIL HEATER	2f	20	3	—	—		3#12 - ½"C.
30	SPACE							
31								
32								
33	PRIMARY AIR FAN	2f	100	3	30	3		3#6 - 1"C.
34	CONTROL AIR COMP.	2f	40	3	(2)7½	1		3#10 - ¾"C.
35	CHILLER	3a	600	3	—	—		3#500MCM - 3"C
36	BOILER ***	2f	30	3	7½	1		3#10 - ¾"C.
37	SPACE FOR BOILER			3				
38	SPACE			3				
39	SPACE			3				
40	SPACE			3				

'SWBD' 2000A 3Φ-4W-480/277V (SWITCHBOARD)

CKT Nº	DESIGNATION	CLASS	TRIP	P	WIRE & CONDUIT
1	MAIN BREAKER		2000	3	BUS
2	PANELS 'A' & 'IBP'	2f	80	3	3#4 - 1¼"C.
3	" 'OL' 'GP' & 'F'	3a	125	3	3#2 - 1¼"C.
4	" 'OH' 'H' & 'GL'	4a	200	3	4#4/0 - 2½"C.
5	" 'IBL' '2BL' & '3BL'	4a	225	3	4#4/0 - 2"C.
6	" 'IAL' '2AL' & '3AL'	4a	400	3	4#350MCM - 3½"C
7	" 'C'	2f	85	3	3#4 - 1¼"C
8	" 'MCC'		1000	3	3#4/0 ACSR CH - 3½"C
9	ELEVATORS	2f	100	3	3#2 - 1¼"C
10	SPACE	3b		3	
11	"	2f		3	
12	"	2f		3	

REV.	DATE	DESCRIPTION	BY	APP.
	May 80	No Changes		
	Oct 74	As Constructed		EGH

CALLMER & MILSTEAD - ARCHITECTS
2011 K ST. N.W. WASHINGTON, D.C. 20006
COTTON & HARRIS CONSULTING ENGINEERS
MICHAEL K. JOHNS STRUCTURAL ENGINEERS

DEPARTMENT OF THE ARMY
NORFOLK DISTRICT, CORPS OF ENGINEERS
NORFOLK, VA.

DESIGNED: E.R.
DRAWN: E.R.
CHECKED: M.H.
REVIEWED:

KINGMAN BUILDING

RISER DIAGRAMS & PANEL SCHEDULES

SUBMITTED: William Quitterbach, CHIEF, ELECTRICAL SECTION
APPROVED: CHIEF, DESIGN BRANCH
APPROVED: CHIEF, ENGINEERING DIVISION
APPROVED: James H. Lemay, CHIEF, DESIGN OF ENGINEERS, DIVISION OF ENGINEERS

SCALE: TO ACCOMPANY SPECIFICATION
DATE: MARCH 71
NO.
SHEET 78 OF 81
DWG. NO. 30-04-38

NORFOLK DISTRICT FILE NO. F.B. 275-1-78