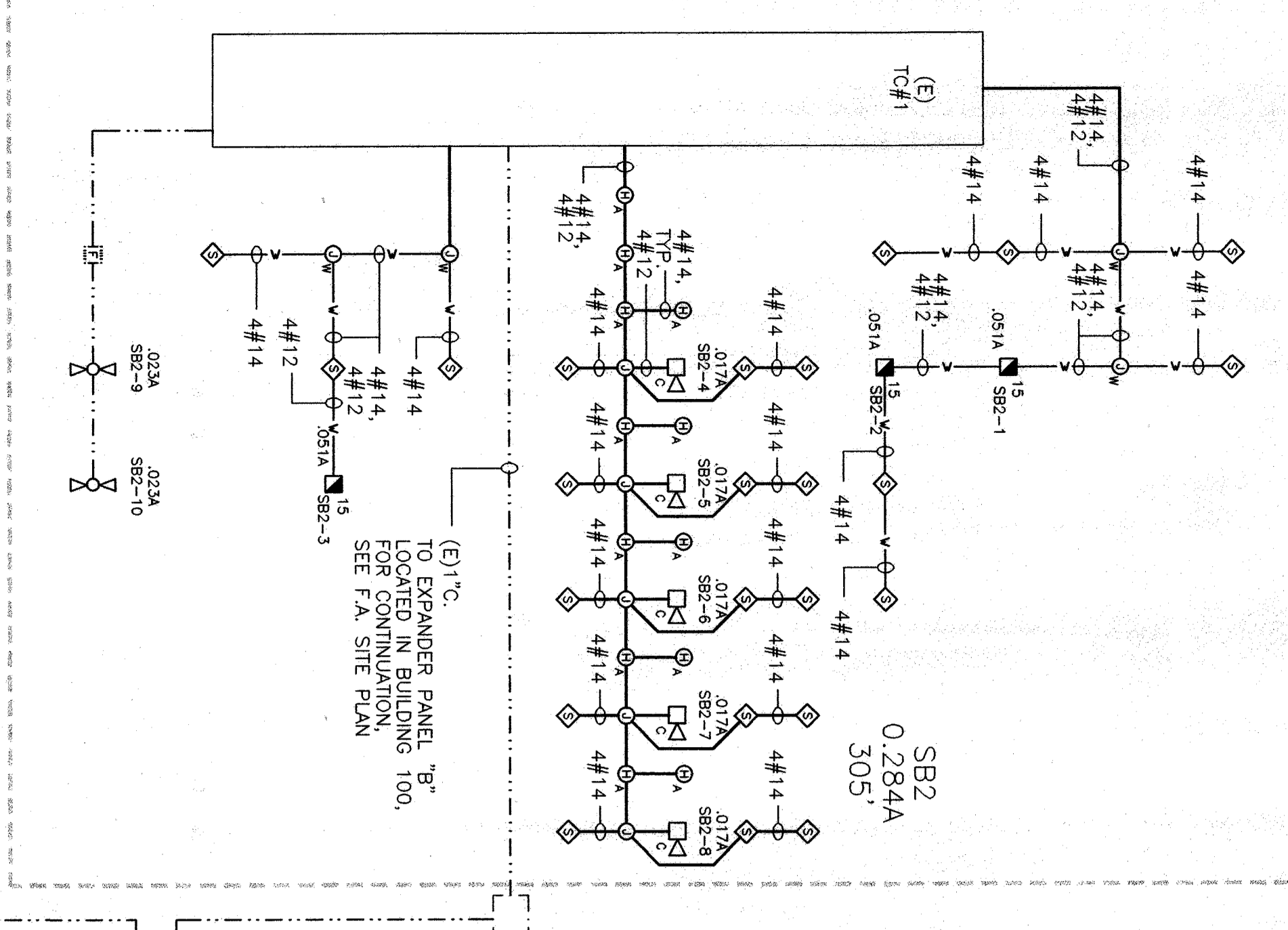
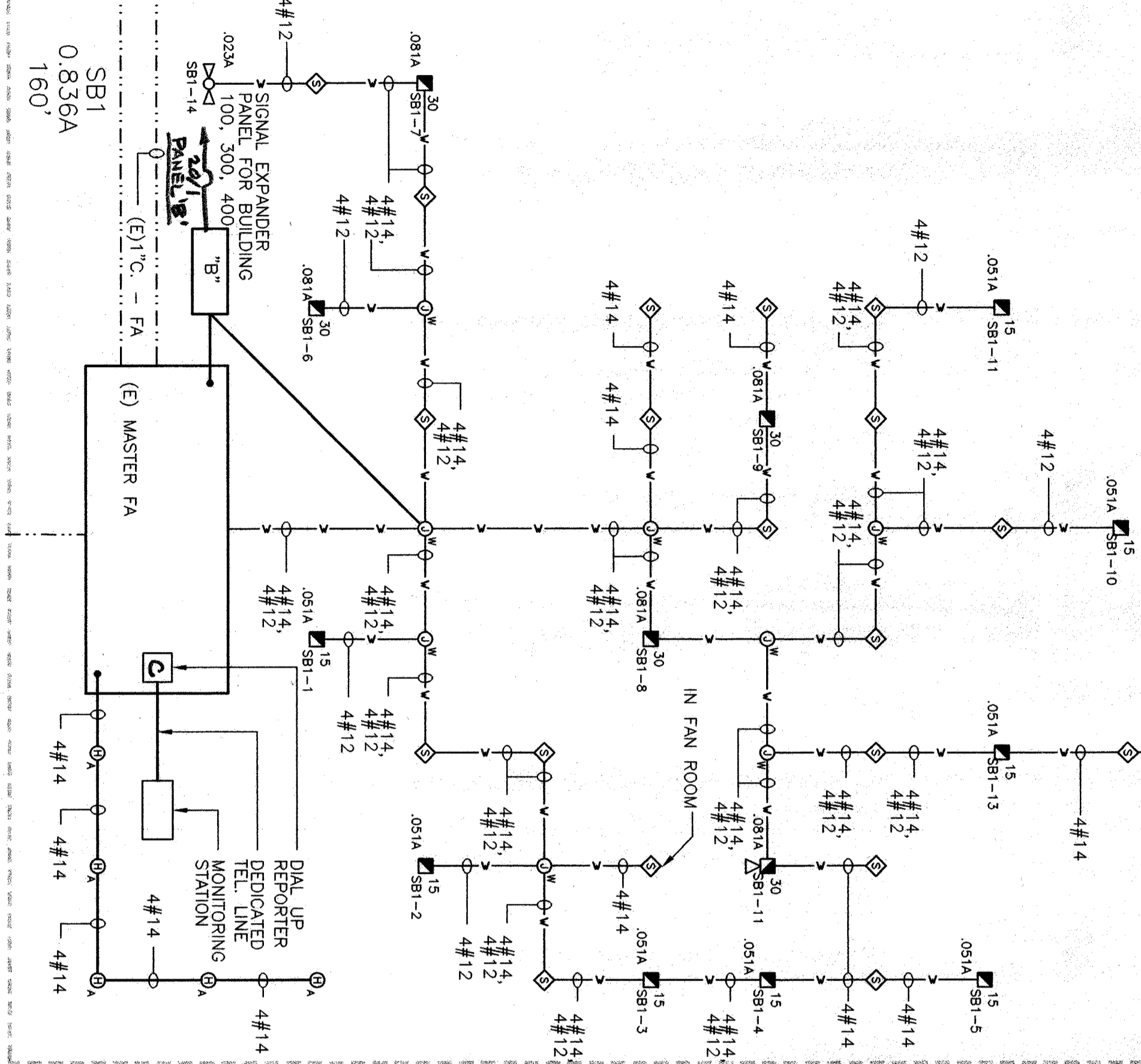


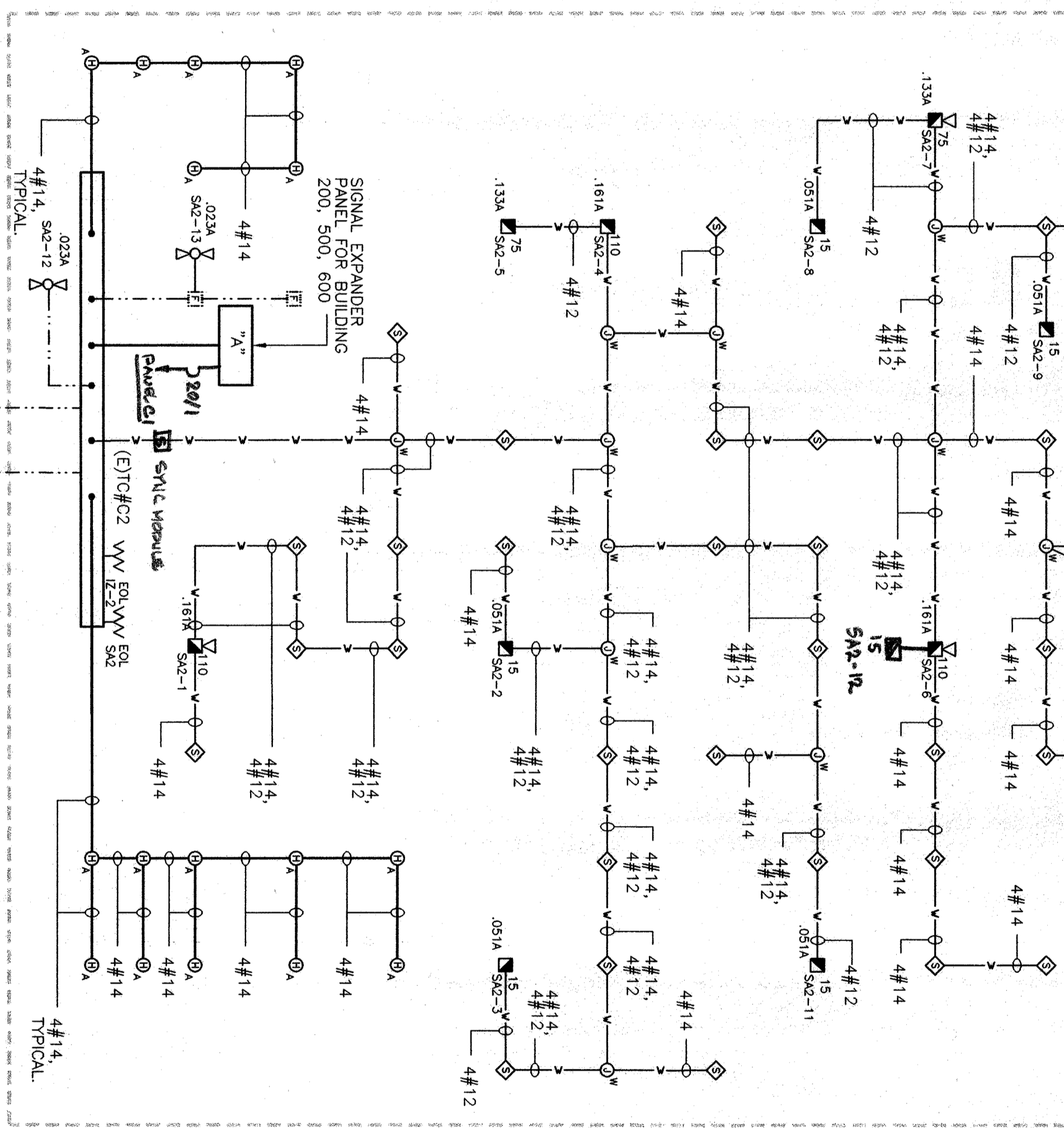
BUILDING 400



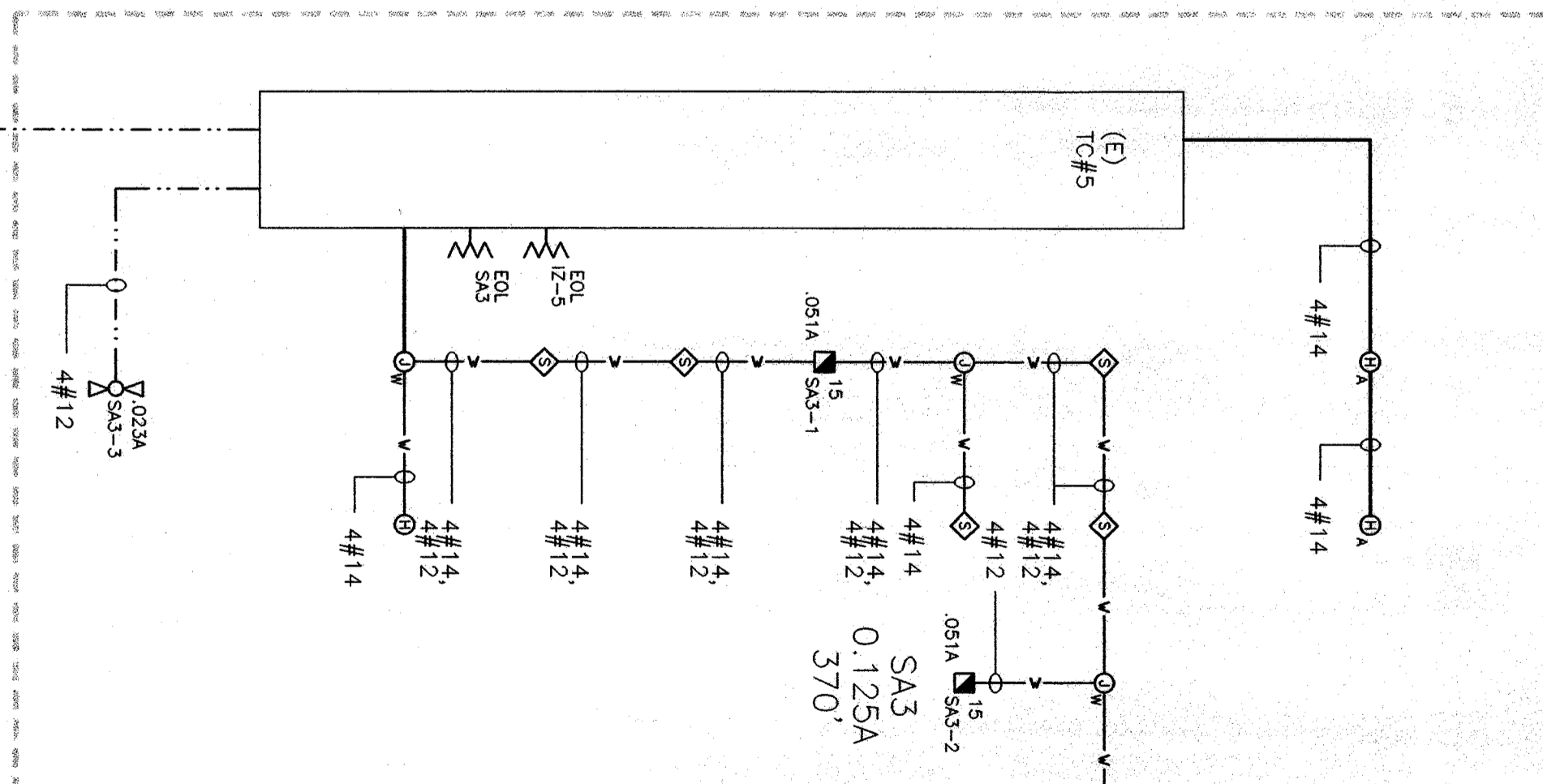
BUILDING 100



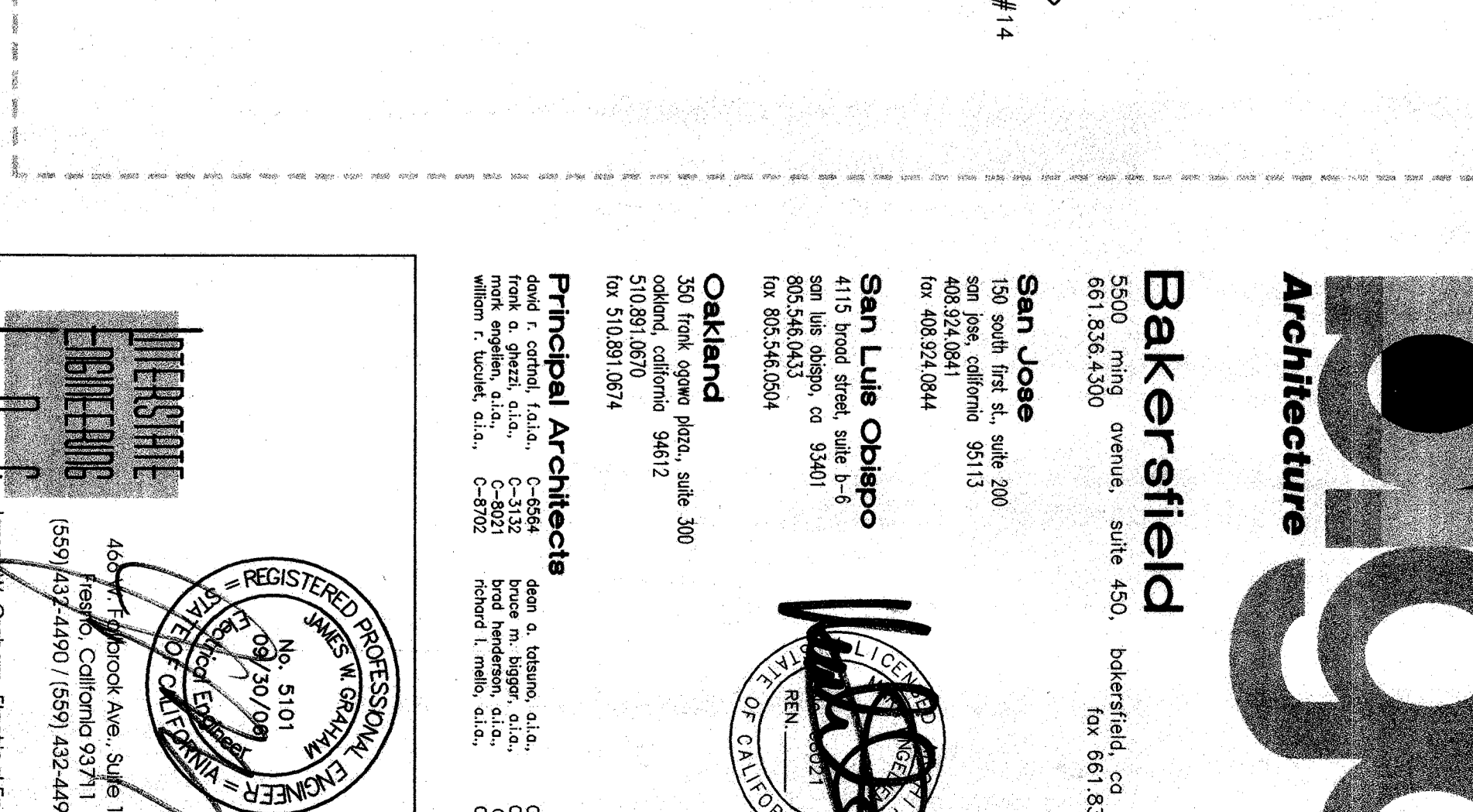
BUILDING 200



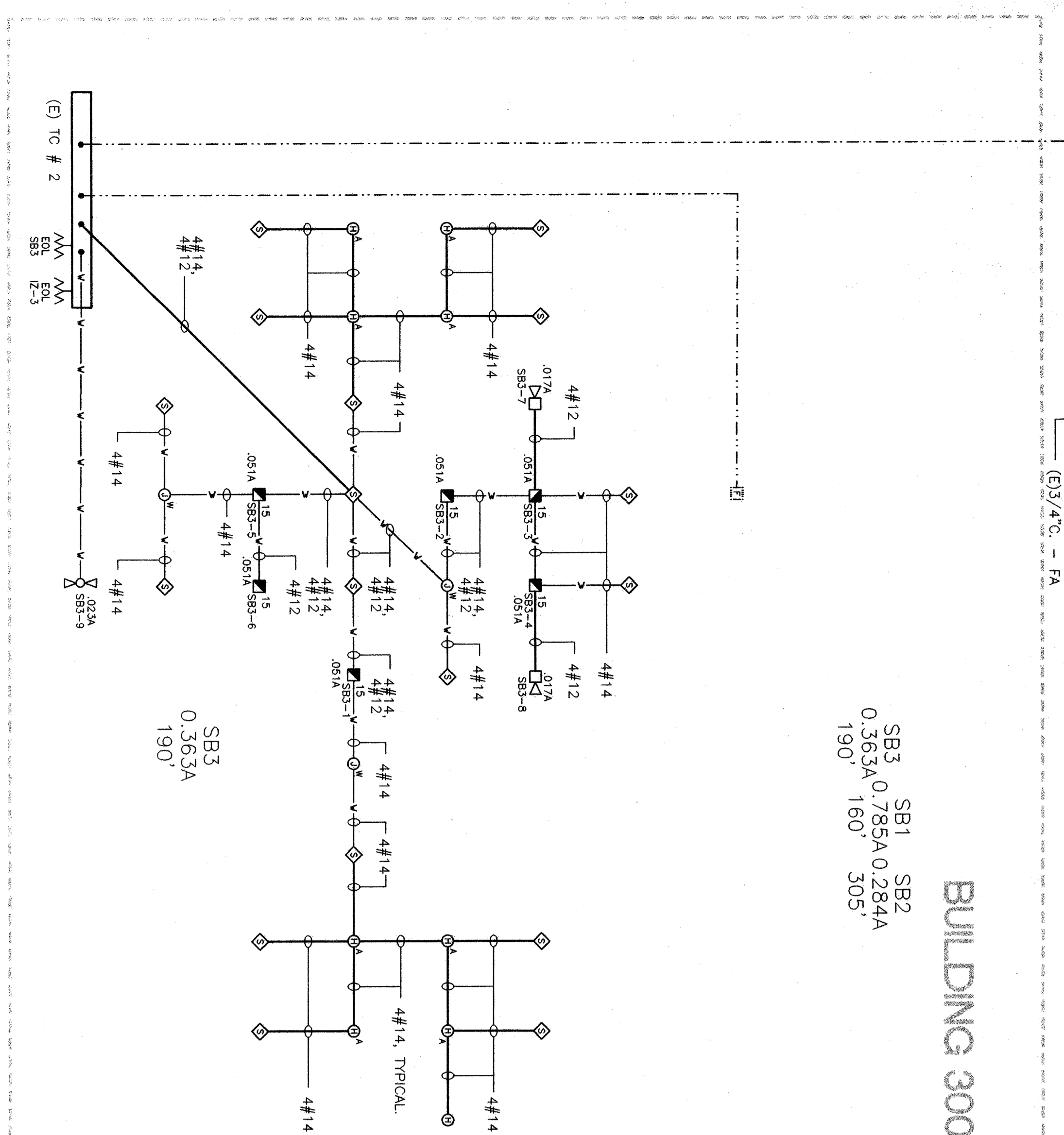
BUILDING 300



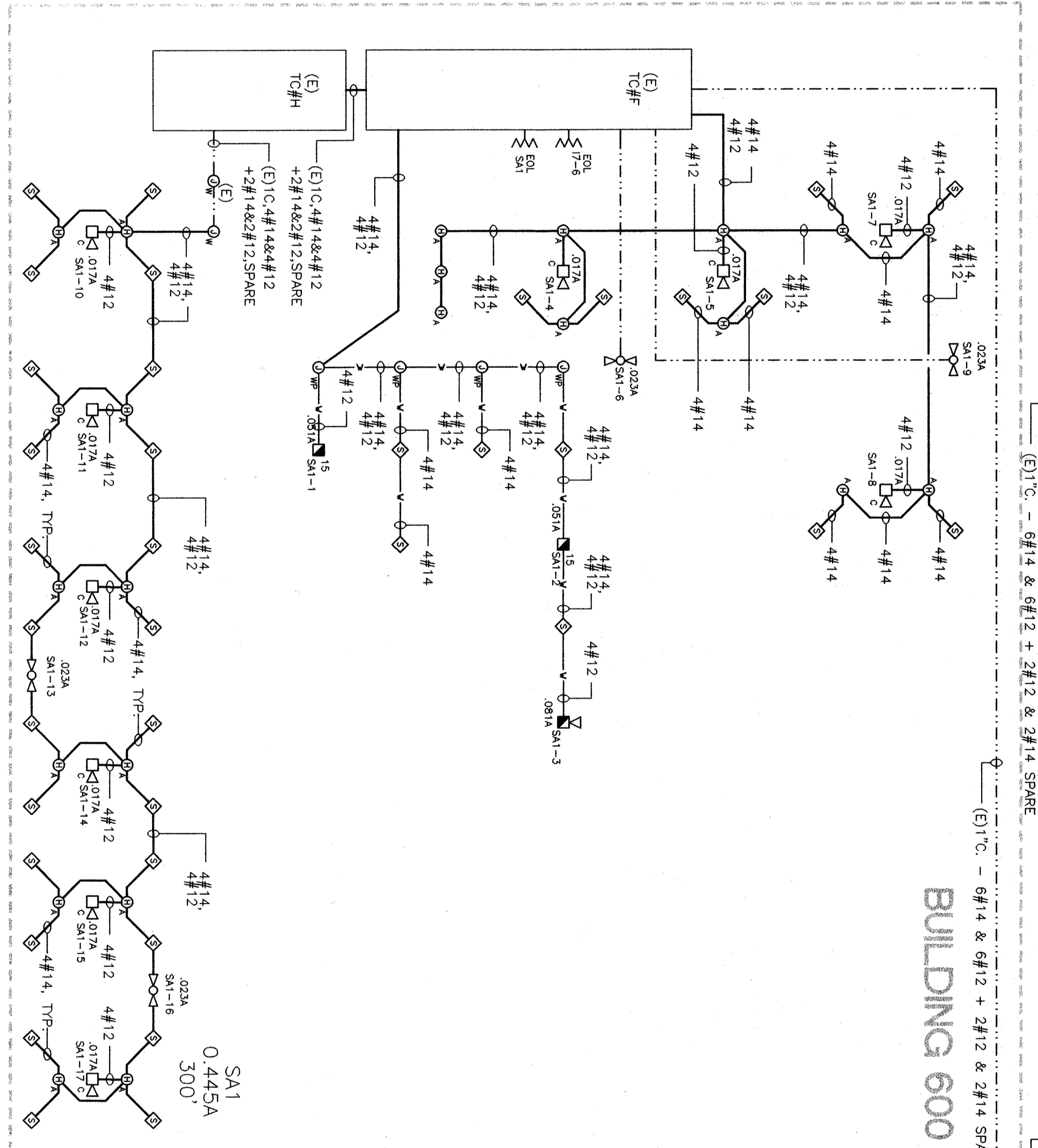
BUILDING 500



BUILDING 300



BUILDING 600



BATTERY CALCULATIONS - FIRE/ALARM

ALARM	SUPERVISORY
1.484A	0.71A
9.578A	0.073A
20.628A	0.073A
SUB-TOTAL	0.857A
ALARM CURRENT	24 HR X 3.332 A = 79.968 AH
SUP. CURRENT	24 HR X 0.857 A = 20.568 AH
TOTAL REQ'D	100.536 AH
EXISTING BATTERIES HAVE CAPACITY FOR 144HR	
PROVIDE 154HR CAPACITY BATTERIES	

BATTERY CALCULATION SIGNAL EXPANDER 'A' BLDG = 100, 300, 400

ALARM	SUPERVISORY
1.9 AMPS	0.75A
1.432 AMPS	0.75A
3.332 AMPS	0.75A
SUB-TOTAL	0.75A
ALARM CURRENT 1 HR X 3.332 A = 3.332 AH	
SUP. CURRENT 24 HR X 0.75 A = 18.00 AH	
TOTAL REQ'D	21.332 AH
PROVIDE 154HR CAPACITY BATTERIES	

BATTERY CALCULATION SIGNAL EXPANDER 'B' BLDG = 200, 500, 600

ALARM	SUPERVISORY
3.332 AMPS	0.75A
1.696 AMPS	0.75A
5.028 AMPS	0.75A
SUB-TOTAL	0.75A
ALARM CURRENT 1 HR X 5.028 A = 5.028 AH	
SUP. CURRENT 24 HR X 0.75 A = 18.00 AH	
TOTAL REQ'D	23.028 AH
PROVIDE 154HR CAPACITY BATTERIES	

VOLTAGE DROP CALCULATION BLDG 100 CKT# SB1

V = Voltage Drop = 785 Amperes
 K = 11 (Copper Constant)
 L = Distance to the load (200')
 V = Voltage (240V)
 $V_D = \frac{K \cdot I \cdot L}{1000} = \frac{11 \cdot 785 \cdot 200}{1000} = 1727$ OR $11 \cdot 785 \cdot 200 = 1727$
 V = 1727V OR 11.1 * 108.50V (270' * 2) = 0.282

VOLTAGE DROP CALCULATION BLDG 200 CKT# SB2

V = Voltage Drop = 123 Amperes
 K = 11 (Copper Constant)
 L = Distance to the load (370')
 V = Voltage (240V)
 $V_D = \frac{K \cdot I \cdot L}{1000} = \frac{11 \cdot 123 \cdot 370}{1000} = 489$ OR $11 \cdot 464.4 \cdot 395 \cdot 21 = 0.292$

VOLTAGE DROP CALCULATION BLDG 300 CKT# SB3

V = Voltage Drop = 108 Amperes
 K = 11 (Copper Constant)
 L = Distance to the load (190')
 V = Voltage (240V)
 $V_D = \frac{K \cdot I \cdot L}{1000} = \frac{11 \cdot 108 \cdot 190}{1000} = 228$ OR $11 \cdot 363 \cdot 190 \cdot 21 = 0.232$

VOLTAGE DROP CALCULATION BLDG 400 CKT# SA1

V = Voltage Drop = 443 Amperes
 K = 11 (Copper Constant)
 L = Distance to the load (300')
 V = Voltage (240V)
 $V_D = \frac{K \cdot I \cdot L}{1000} = \frac{11 \cdot 443 \cdot 300}{1000} = 1459$ OR $11 \cdot 443 \cdot 300 \cdot 21 = 0.449$

VOLTAGE DROP CALCULATION BLDG 500 CKT# SA2

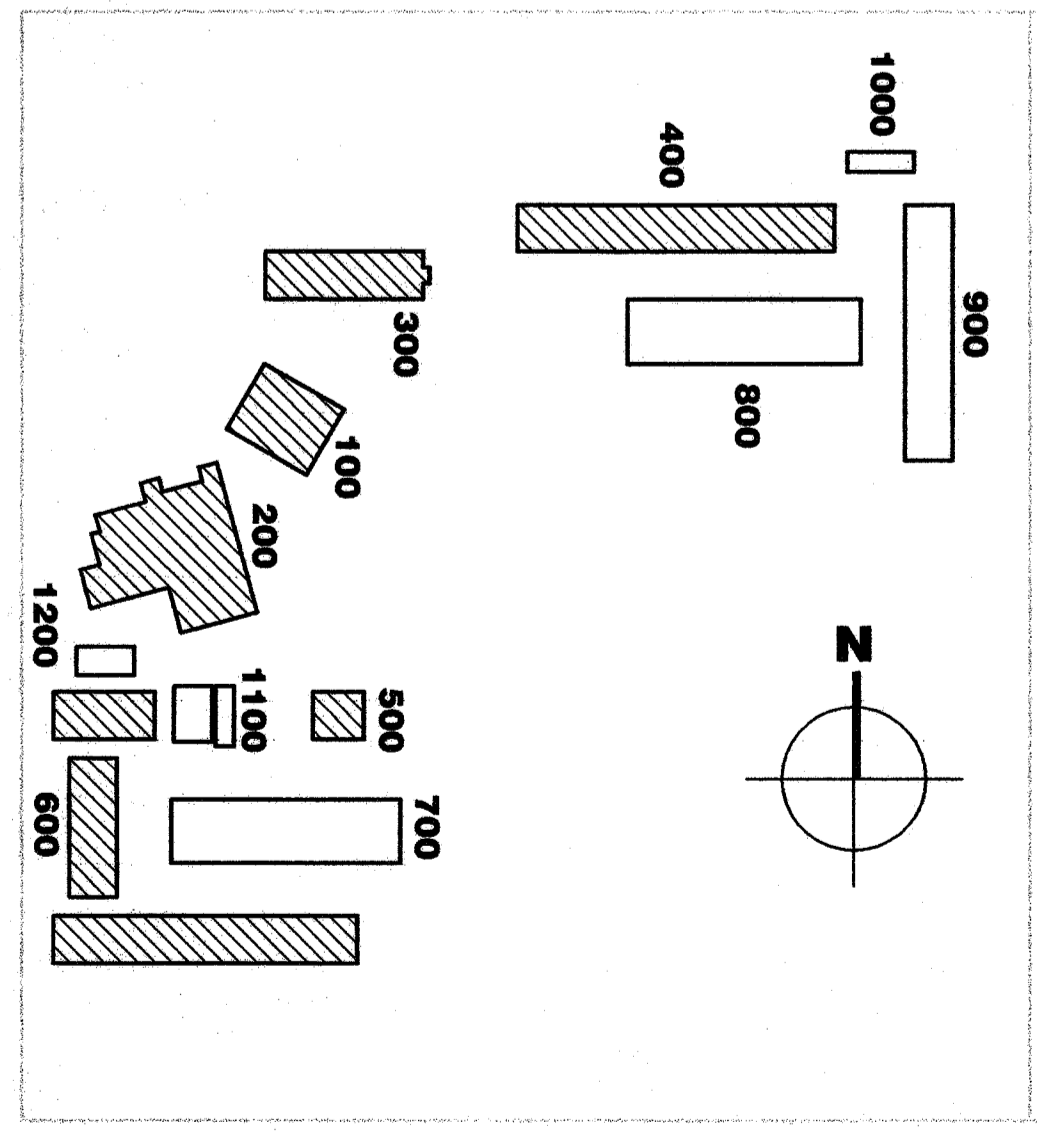
V = Voltage Drop = 194 Amperes
 K = 11 (Copper Constant)
 L = Distance to the load (270')
 V = Voltage (240V)
 $V_D = \frac{K \cdot I \cdot L}{1000} = \frac{11 \cdot 194 \cdot 270}{1000} = 578$ OR $11 \cdot 684.4 \cdot 395 \cdot 21 = 0.292$

VOLTAGE DROP CALCULATION BLDG 600 CKT# SA3

V = Voltage Drop = 123 Amperes
 K = 11 (Copper Constant)
 L = Distance to the load (370')
 V = Voltage (240V)
 $V_D = \frac{K \cdot I \cdot L}{1000} = \frac{11 \cdot 123 \cdot 370}{1000} = 489$ OR $11 \cdot 464.4 \cdot 395 \cdot 21 = 0.292$

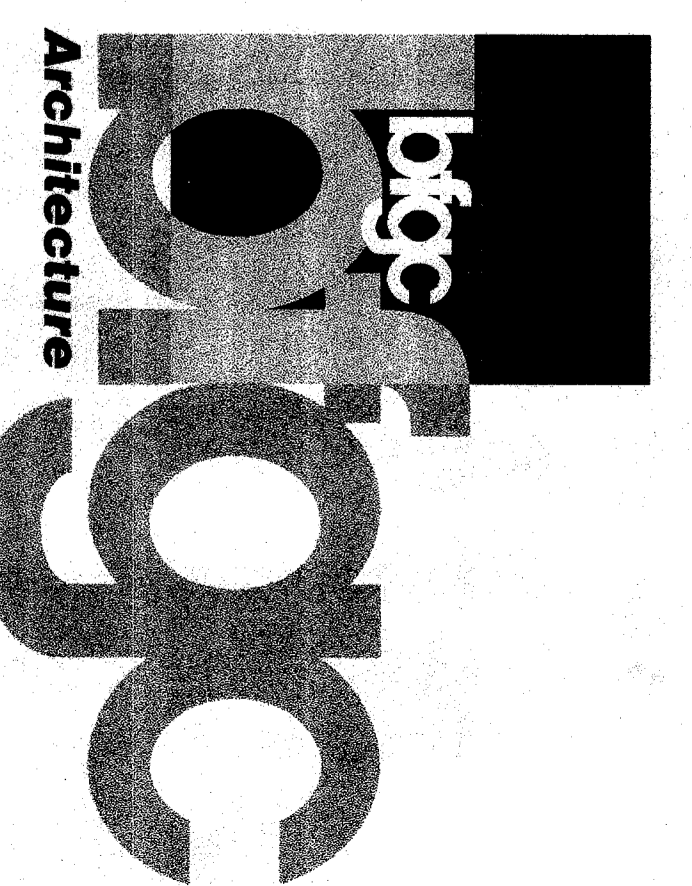
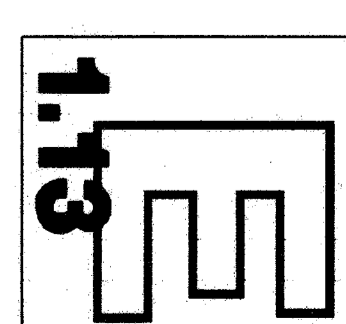
**FULLY AUTOMATIC SYSTEM
FIRE ALARM COMPLETE
PLAN SUBMITTAL**

KEY PLAN



**FIRE ALARM
RISED DIAGRAM,
CALCULATIONS**

Version Date:	02-126	Version Time:	
date	06/24/03	drawn by	TV/A
chk'd by	D.P.G.	copyright	2003



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**FIRE ALARM
RISED DIAGRAM,
CALCULATIONS**

