

**SYMBOL LEGEND**

- PULL STATION
- STROBE
- SPEAKER/STROBE
- SMOKE DETECTOR
- DUCT SMOKE DETECTOR
- RELAY
- REMOTE TEST SWITCH
- ZAM
- IAM
- WATERFLOW
- TAMPERSWITCH
- FIRE ALARM CONTROL PANEL
- POWER EXTENDER PANEL
- VOICE CONTROL PANEL
- END-OF-LINE RESISTOR

**WIRE LEGEND**

- A 1-#18/2 SHIELDED IDNET CKT M1
- B 2-#12AWG STROBE CKT #1
- C 2-#12AWG STROBE CKT #2
- D 2-#12AWG STROBE CKT #3
- E 2-#12AWG STROBE CKT #4
- F 2-#12AWG STROBE CKT #5
- G 1-#18/2 SHIELDED SPEAKER CKT #6
- H 1-#18/2 SHIELDED SPEAKER CKT #7
- I 1-#18/2 SHIELDED SPEAKER CKT #8
- J 2-#12AWG AHU SHUT DOWN CKT
- K 4-#14AWG DUCT DET. TO REMOTE TEST SW
- L 2-#12AWG 24VDC PWR CKT
- M 4-#14AWG FACP TO VCP TRIP CKT
- N 2-#14AWG IAM TO MONITORED DEVICE

**CLASS 'B' WIRING PER NEC**

**NOTES:**

1. ALL WIRE COUNTS ARE BASED ON EQUIPMENT NEEDS. THE TYPE OF WIRE USED (SIZE, INSULATION, # OF STRANDS, ETC.) AND HOW IT IS INSTALLED IS THE SOLE RESPONSIBILITY OF THE ELECT. CONTRACTOR. IT MUST MEET ALL APPLICABLE CODES AND SPECIFICATIONS.
2. DEVICE LOCATIONS ARE SHOWN DIAGRAMMATICALLY ONLY. REFER TO ENGINEERING DRAWINGS FOR CORRECT LOCATION AND QUANTITY.
3. SIMPLEX REQUIRES A MINIMUM OF 3/4" CONDUIT. THE INSTALLATION OF THE FIRE ALARM RACEWAY SYSTEM IS THE SOLE RESPONSIBILITY OF THE ELECT. CONTRACTOR. IT MUST MEET ALL APPLICABLE CODES AND SPECIFICATIONS.
4. WIRING COLOR CODE IS HIGHLY RECOMMENDED FOR EASE OF TERMINATIONS. IF COLOR CODE IS NOT USED, LABEL WIRES WITH CORRESPONDING LETTER DESIGNATION.
5. ALL STROBE DEVICES ARE 75 CANDELLA EXCEPT AS NOTED.

**tyco** Fire & Security / **SimplexGrinnell**

4480 MEDICAL CENTER WAY  
WEST PALM BEACH, FLORIDA 33407  
SALES: 561-863-4203  
OFFICE: 561-863-3145  
FAX: 561-863-3145

NO.	DATE	REVISION DESCRIPTION	AS-BUILT		
	3/5/04				

THIS DRAWING IS BASED ON CONTRACT DRAWINGS BY ENGINEER OF RECORD

CHPA WINDERLY PLACE  
SUITE 101  
MAITLAND, FL 32751  
PH:(407) 660-9099  
FAX:(407) 660-8702

**FIRE ALARM PLAN**  
SCALE: 1/16" = 1'-0"  
OKEECHOBEE AGRI CIVIC CENTER

4218 HWY 70 EAST  
OKEECHOBEE, FLORIDA

DRAWN BY: WALDRON	DATE: 5/7/03
DESIGNED BY: DICKENS	DATE: 0/0/00
APPROVED BY:	DATE:

PROJECT NUMBER: 401715-01  
SHEET TITLE: 02512AFIRECIVIC.DWG  
SHEET NUMBER: FA-1

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**MAIN FACP PANEL (4010) BATTERY CALCULATION**

**OKEECHOBEE AGRI CENTER - CIVIC CENTER - OKEECHOBEE, FLORIDA**

HOURS OF BATTERY STAND BY REQUIRED: 24

STANDBY POWER FROM EQUIPMENT:	0.235
STANDBY POWER OF PERIPHERALS:	0.000
TOTAL:	0.235
TIMES HOURS REQUIRED:	24.000
SUB-TOTAL STANDBY:	5.640

ALARM POWER FROM EQUIPMENT:	0.335
ALARM POWER OF PERIPHERALS:	0.925
TOTAL:	1.260
TIMES 5 MIN. RINGTIME:	0.083
SUB-TOTAL ALARM:	0.105

AMP-HOUR BATTERY REQUIRED: 5.745

AMP-HOUR BATTERY SUPPLIED: 10.000

**IDNET NAC PANEL #1 (4009) BATTERY CALCULATION**

**OKEECHOBEE AGRI CENTER - CIVIC CENTER - OKEECHOBEE, FLORIDA**

HOURS OF BATTERY STAND BY REQUIRED: 24

STANDBY POWER FROM EQUIPMENT:	0.085
STANDBY POWER OF PERIPHERALS:	0.000
TOTAL:	0.085
TIMES HOURS REQUIRED:	24.000
SUB-TOTAL STANDBY:	2.040

ALARM POWER FROM EQUIPMENT:	0.185
ALARM POWER OF PERIPHERALS:	6.575
TOTAL:	6.760
TIMES 5 MIN. RINGTIME:	0.083
SUB-TOTAL ALARM:	0.561

AMP-HOUR BATTERY REQUIRED: 2.601

AMP-HOUR BATTERY SUPPLIED: 6.200

**MAIN FACP PANEL (4010) VOLTAGE DROP CALCULATION**

**OKEECHOBEE AGRI CENTER - CIVIC CENTER - OKEECHOBEE, FLORIDA**

FORMULAS:  $V=2K \times I \times L / \text{cir mil}$ ,  $V=2R \times I \times L$

RESISTIVITY OF CONDUCTOR: K=12 FOR COPPER

CIR MILS: #18=1620, #16=2580, #14=4110, #12=6530, #10=10380

CKT #	DEVICE	QTY	AMPS EA	AMPS TOTAL	SUMMARY
3	4903-9359 (STROBE ONLY)	5	0.185	0.925	TOTAL = 0.925 V-DROP = 1.700
A	SPARE				
B	SPARE				
C	SPARE				

THE ABOVE CALCULATIONS ARE BASED ON USING #14 AWG WIRE @ 500 FT.  
NOTE: APPLIANCES ARE DESIGNED TO OPERATE BETWEEN 18 TO 32 VOLTS.

**IDNET NAC PANEL #1 (4009) VOLTAGE DROP CALCULATION**

**OKEECHOBEE AGRI CENTER - CIVIC CENTER - OKEECHOBEE, FLORIDA**

FORMULAS:  $V=2K \times I \times L / \text{cir mil}$ ,  $V=2R \times I \times L$

RESISTIVITY OF CONDUCTOR: K=12 FOR COPPER

CIR MILS: #18=1620, #16=2580, #14=4110, #12=6530, #10=10380

CKT #	DEVICE	QTY	AMPS EA	AMPS TOTAL	SUMMARY
1	4903-9356	3	0.125	0.375	TOTAL = 1.625
	4903-9358	9	0.125	1.125	V-DROP = 2.986
	4904-9332 (STROBE ONLY)	1	0.125	0.125	
2	4903-9359 (STROBE ONLY)	10	0.185	1.850	TOTAL = 1.850 V-DROP = 3.400
4	4903-9359 (STROBE ONLY)	10	0.185	1.850	TOTAL = 1.850 V-DROP = 3.400
5	4903-9356	1	0.125	0.125	TOTAL = 1.250
	4903-9358	8	0.125	1.000	V-DROP = 2.297
	4904-9332 (STROBE ONLY)	1	0.125	0.125	

THE ABOVE CALCULATIONS ARE BASED ON USING #12 AWG WIRE @ 500 FT.  
NOTE: APPLIANCES ARE DESIGNED TO OPERATE BETWEEN 18 TO 32 VOLTS.

**Type # of IDNET Devices Below**

Type #	Device	Qty	Supv.	Dim.
4010-9810	DACT (Common Event Reporting)	1	0.04	0.04
4010-9816	DACT (Point Reporting)		0.	0.
4010-9821	Network, Wired Communications		0.	0.
4010-9817	Network Modular (req. 2 Media Cards)		0.	0.
4010-9818	Network Wired Media		0.	0.
4010-9819	Network Fiber Optic Media		0.	0.
4010-9811	Dual RS-232		0.	0.
4010-9812	Single RS-232 w/Service Modem		0.	0.
4010-9806	Dual Class A NAC Modem		0.	0.
4010-9809	Dual City Circuit Connect		0.	0.
4010-9829	Dual City Circuit Connect w/o Disc. sw		0.	0.
4010-9803	Relay Option Module		0.	0.
4010-9813	4A Expansion Power Supply	1		

**Total Panel Equip. Supervisory Ampacity 0.04**

**Total Panel Equip. Alarm Ampacity 0.04**

4606-9101 Remote LCD Annunciator - FAAP 0. 0. supv. dim.

**SYMBOL LEGEND**

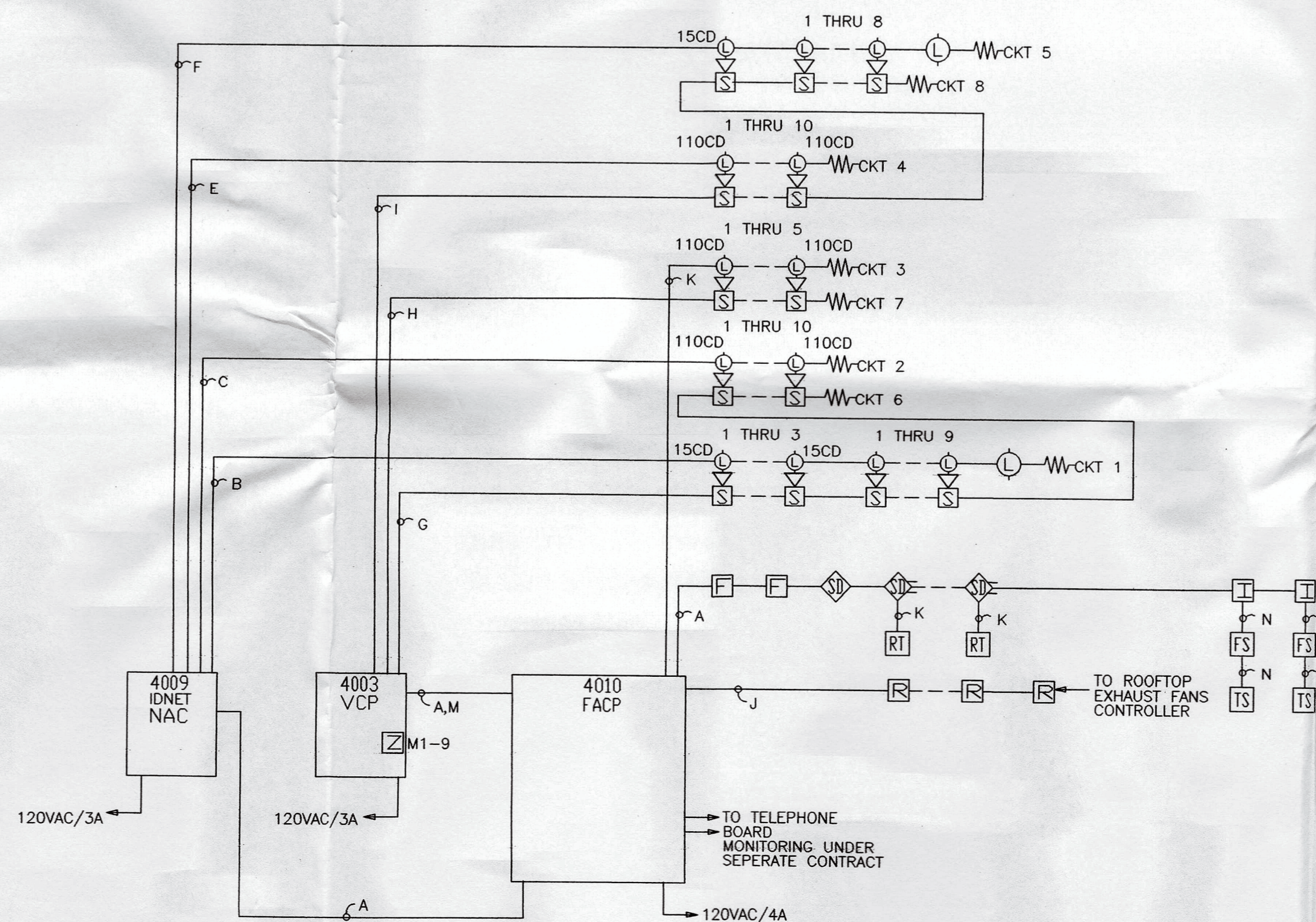
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THIS DRAWING IS BASED ON CONTRACT DRAWINGS BY ENGINEER OF RECORD	CHPA WINDLERLY PLACE SUITE 101 MAILAND, FL 32751 PH(407) 660-9099 FAX(407) 660-8702

**FIRE ALARM RISER DIAGRAM**

SCALE: N.T.S.

OKEECHOBEE AGRI CIVIC CENTER

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DESIGNED BY:	DICKENS	DATE:	0/0/00
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PROJECT NUMBER: 401715-01

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**tyco Fire & Security**

**SimplexGrinnell**

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