

1 GROUND FLOOR FIRE ALARM PLAN
FA-2 Scale: 1/8"=1'-0"

Fire Alarm Alarms				Standby Battery Calculation			
by Honeywell				Firelite ES-200X Fire Alarm Control Panel			
Protected Premises: Angier & Black River Fire Department				Date: 9/2/2021			
City: Angier State: NC Zip:				Address:			
Prepared By: WACO Fire Alarm, LLC Phone: (919) 772-1745				Panel ID: FACP Location:			
City: Raleigh State: NC				System Device			
Qty	Draw	Standby	Alarm	Qty	Draw	Standby	Alarm
1	0.141000	0.141000	0.257000	1	0.141000	0.141000	0.257000
1	0.007000	0.007000	0.008000	1	0.007000	0.007000	0.008000
1	0.040000	0.040000	0.041000	1	0.040000	0.040000	0.041000
49	0.002000	0.002000	0.004000	49	0.002000	0.002000	0.004000
1	0.002000	0.002000	0.004000	1	0.002000	0.002000	0.004000
4	0.002000	0.002000	0.004000	4	0.002000	0.002000	0.004000
11	0.003000	0.003000	0.005000	11	0.003000	0.003000	0.005000
2	0.000375	0.000375	0.000500	2	0.000375	0.000375	0.000500
2	0.000350	0.000350	0.000500	2	0.000350	0.000350	0.000500
4	0.000250	0.000250	0.000500	4	0.000250	0.000250	0.000500
1	0.000000	0.000000	0.012000	1	0.000000	0.000000	0.012000
2	0.000000	0.000000	0.000000	2	0.000000	0.000000	0.000000
1	0.000000	0.000000	0.023000	1	0.000000	0.000000	0.023000
1	0.000000	0.000000	1.021000	1	0.000000	0.000000	1.021000
1	0.000000	0.000000	0.000000	1	0.000000	0.000000	0.000000
Total Standby: 0.243 Total Alarm: 5.147				Secondary Load Requirements 7.53 Amp Hours			
Total Secondary Load from the calculation table below				Current Draw (Amp)			
				Time (Hour)			
				Total (A/H)			
				Requested Standby Time			
				24			
				5.84			
				Requested Alarm Time			
				0.64			
				0.43			
				Total Secondary Load			
				6.27			
				Desiring Factor			
				1.20			
				Secondary Load Requirements			
				7.53			
				Battery Selection			
				12 Amp Hours			

FACP STANDBY BATTERY CALCULATION

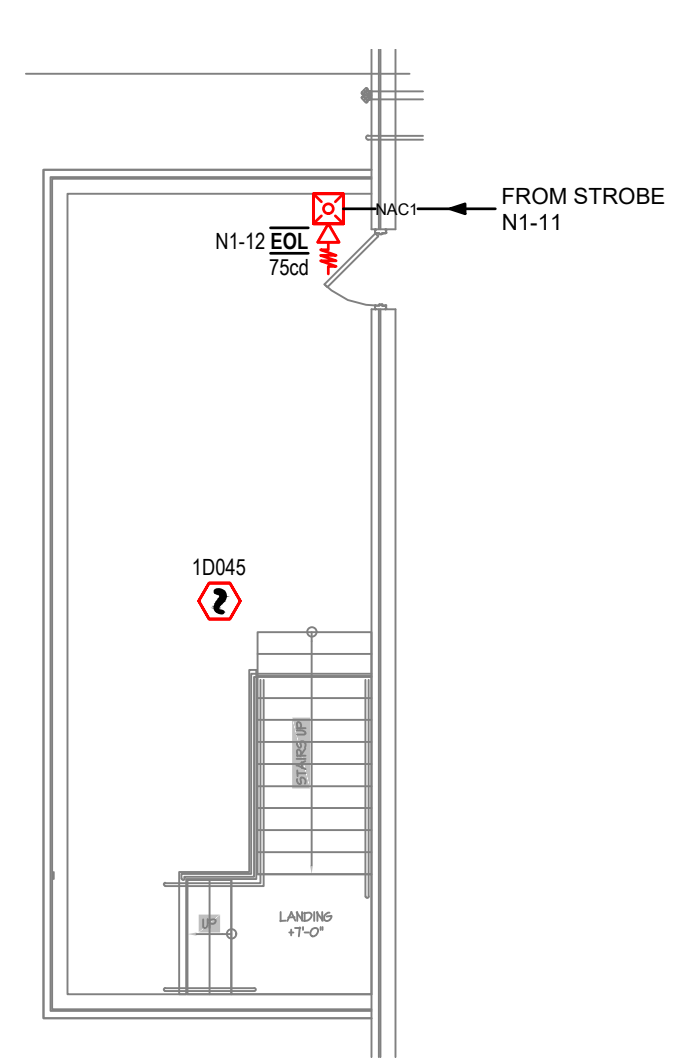
Point to Point Voltage Drop Analysis			
ES-200X Fire Alarm Control Panel			
Source Voltage: 20.4 Nominal System Voltage			
Project Name: Angier & Black River Fire Dept. Date:			
Circuit No: N1 Minimum Voltage: 16			
Area Covered: Ground Floor Wire Gauge: 14			
Ohm's per 1,000 Ft.: 3.14			
Device Number	Part Number	Current (Amps)	Distance (Feet)
Between	Total	Between	Total
Device	at Device		
1	PCZW115	0.187	110
2	PCZW115	0.187	45
3	PCZW115	0.187	89
4	PCZW115	0.187	45
5	PZW15	0.054	90
6	SWL15	0.043	30
7	SWL15	0.043	45
8	PZW15	0.054	90
9	PZW15	0.054	45
10	PZW15	0.054	45
11	SWL15	0.043	15
12	PZW15	0.054	45
Total Power: 1.281		%Voltage Drop: -12.13%	
Go			

Point to Point Voltage Drop Analysis			
ES-200X Fire Alarm Control Panel			
Source Voltage: 20.4 Nominal System Voltage			
Project Name: Angier & Black River Fire Dept. Date:			
Circuit No: N2 Minimum Voltage: 16			
Area Covered: Ground Floor Wire Gauge: 14			
Ohm's per 1,000 Ft.: 3.14			
Device Number	Part Number	Current (Amps)	Distance (Feet)
Between	Total	Between	Total
Device	at Device		
1	PZW15	0.054	35
2	PZW15	0.206	40
3	SWL15	0.043	35
4	SWL15	0.043	25
5	SWL15	0.043	30
6	SWL15	0.043	195
7	PZW15	0.054	30
8	SWL15	0.043	15
9	SWL15	0.043	90
10	PZW15	0.054	15
11	SWL15	0.043	25
12	PZW15	0.054	45
13	SWL15	0.043	40
14	SWL15	0.043	35
15	PZW15	0.054	25
Total Power: 0.823		%Voltage Drop: -4.85%	
Go			

Point to Point Voltage Drop Analysis			
ES-200X Fire Alarm Control Panel			
Source Voltage: 20.4 Nominal System Voltage			
Project Name: Angier & Black River Fire Dept. Date:			
Circuit No: N3 Minimum Voltage: 16			
Area Covered: Ground Floor Wire Gauge: 14			
Ohm's per 1,000 Ft.: 3.14			
Device Number	Part Number	Current (Amps)	Distance (Feet)
Between	Total	Between	Total
Device	at Device		
1	SWL15	0.043	35
2	SWL15	0.043	35
3	PZW15	0.206	30
4	PZW15	0.206	30
5	PZW15	0.206	30
6	PZW15	0.054	25
7	PZW15	0.054	45
8	PZW15	0.054	45
9	SWL15	0.043	25
10	PZW15	0.206	45
11	PZW15	0.206	25
Total Power: 1.821		%Voltage Drop: -10.73%	
Go			

Point to Point Voltage Drop Analysis			
ES-200X Fire Alarm Control Panel			
Source Voltage: 20.4 Nominal System Voltage			
Project Name: Angier & Black River Fire Dept. Date:			
Circuit No: N4 Minimum Voltage: 16			
Area Covered: Ground Floor Wire Gauge: 14			
Ohm's per 1,000 Ft.: 3.14			
Device Number	Part Number	Current (Amps)	Distance (Feet)
Between	Total	Between	Total
Device	at Device		
1	SWL15	0.043	35
2	SWL15	0.043	35
3	PZW15	0.206	100
4	PZW15	0.206	100
5	PZW15	0.206	100
6	PZW15	0.054	15
7	SWL15	0.107	45
8	PZW15	0.054	40
9	SWL15	0.054	30
10	PZW15	0.121	90
11	PZW15	0.121	45
Total Power: 0.660		%Voltage Drop: -3.73%	
Go			

2 MEZZANINE FIRE ALARM PLAN
FA-2 Scale: 1/8"=1'-0"



NO.	DATE	REVISION

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FIRE ALARM SYSTEM FOR:
**ANGIER & BLACK RIVER
FIRE DEPARTMENT**
ANGIER, NORTH CAROLINA

GROUND FLOOR &
MEZZANINE
FIRE ALARM PLANS

DATE: 09/02/2021
DRAWN BY: JRC
CHECKED BY: RP
SCALE: AS SHOWN

SHEET:
FA-2

Randy Pleasant
License # SP, FALV, 33515