Fire Alarm

NAC — Fire Alarm Power Supply

Initiating Devices

F — Pull Station

S(P) — Smoke Detector, Photoelectric

Notification Appliances

Xxcd — Horn Strobe

Xxcd — Strobe

Miscellaneous

EOL(Re) — End of Line (EOL) Resistor

1 SYMBOL LEGEND
SCALE: NONE

NAC PANEL Battery Calculations					
Component	Stand-by Draw	Alarm Draw	Qty	Total Stand-by	Total Alarm
5495	0.075000	0.205000	1	0.075000	0.205000
NAC Circuits					
NAC 1	0.000000	0.767000	1	-	0.767000
NAC 2	0.000000	0.000000	1	-	0.000000
NAC 3	0.000000	0.000000	1	-	0.000000
NAC 4	0.000000	0.000000	1	-	0.000000
			Total	0.075000	0.972000
			24 Hour Stand By	1.800000	-
			5 Minutes of Alarm	-	0.081000
			Amp-hours Required (1.2SF)	2.26	
			Battery to be Used	7Ah	

2 Battery Calculations - NAC PANEL
SCALE: NONE

Voltage Drop Calculation	
NAC Circuit Draw (Amps)	0.7670
NAC Circuit Voltage	24
NAC Circuit Resistance	31.2907
Length of Circuit	250
Conductor Loop Resistance	1.535000
Total Resistance	32.8257
Results	
Voltage At Last Device	22.88

Load Calculation				
Model	cd	QTY	Draw (A)	Total
System Sensor PC2RL	15	4	0.0710	0.284000
System Sensor PC2RL	30	2	0.0910	0.182000
System Sensor SRL	15	7	0.0430	0.301000
			Total	0.767000

3 Load and Voltage Drop - NAC-1
SCALE: NONE

Additional Battery and SLC Load					
Component	Stand-by Draw	Alarm Draw	Qty	Total Stand-by	Total Alarm
SD500-PSDA	0.000550	0.000550	2	0.001100	0.001100
SD505-PHOTO	0.000550	0.000550	1	0.000550	0.000550
			Total	0.001650	0.001650
			24 Hour Stand By	0.039600	-
			5 Minutes of Alarm	-	0.000138
			Additional Amp-hours Required (1.2SF)	0.05	
			Additional SLC Load	0.002	

4 New System Load
SCALE: NONE

			SYSTEM OUTPUT									
			A	B	C	D	E	F	G	H	I	J
			ACTIVATE COMMON ALARM INDICATOR	ACTIVATE AUDIBLE ALARM SIGNAL	ACTIVATE COMMON SUPERVISORY INDICATOR	ACTIVATE AUDIBLE SUPERVISORY SIGNAL	ACTIVATE COMMON TROUBLE INDICATION	ACTIVATE AUDIBLE TROUBLE SIGNAL	ACTIVATE NOTIFICATION APPLIANCES	TRANSMIT ALARM SIGNAL TO CENTRAL STATION	TRANSMIT SUPERVISORY SIGNAL TO CENTRAL STATION	TRANSMIT TROUBLE SIGNAL TO CENTRAL STATION
SYSTEM INPUT	1	MANUAL FIRE ALARM BOX	X	X					X	X		
	2	WATER FLOW	X	X					X	X		
	3	SMOKE DETECTOR	X	X					X	X		
	4	VALVE SWITCH			X	X					X	
	5	FACU AC POWER FAILURE					X	X				X
	6	FACU LOW BATTERY					X	X				X
	7	OPEN CIRCUIT					X	X				X
	8	SHORT CIRCUIT					X	X				X

5 FIRE ALARM MATRIX OF OPERATIONS
SCALE: NONE

Installation of optional fire alarm equipment in a new tenant space. Fire alarm notification appliances are tied to the new NAC panel in the unit, while SLC devices are connected to the existing SLC loop. All is controlled by an existing Silent Knight 5820XL fire alarm control unit.

Contractor on site to verify additional SLC capacity.

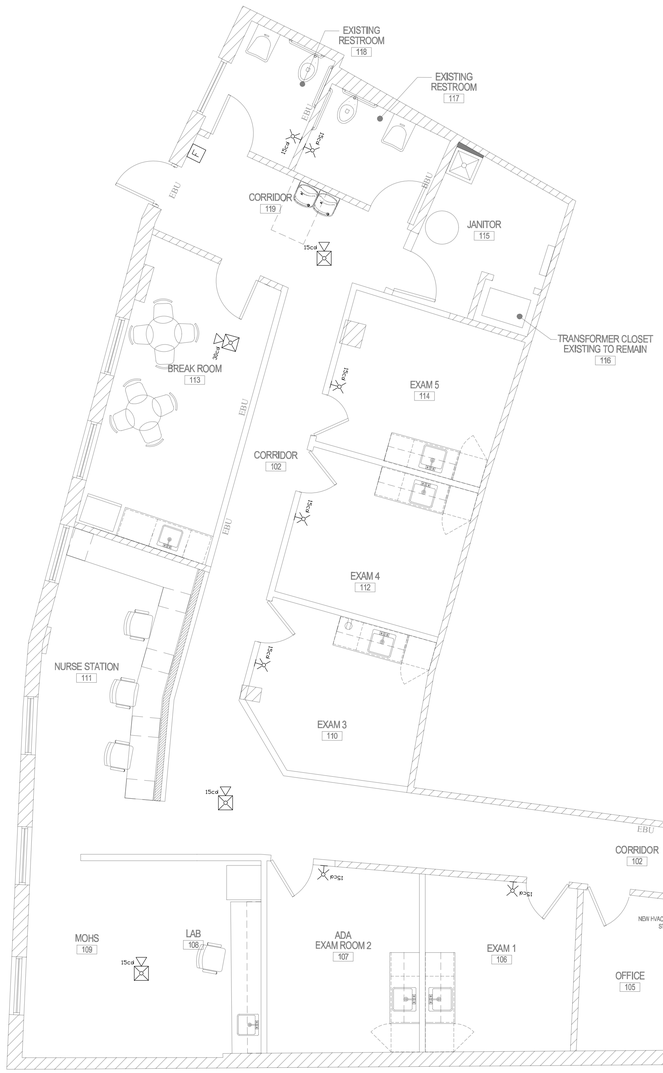
6 SYSTEM NARRATIVE
SCALE: NONE

Floor	Occupancy Type
1	NFPA 101: Ch. 38 New Business
1	IBC 2015: Business Group B

7 OCCUPANCY TYPES
SCALE: NONE

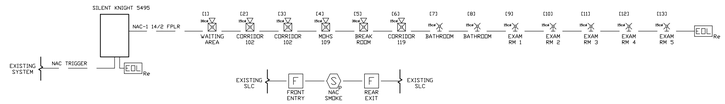
Document	Edition
NFPA 1	2018ed*
NFPA 72	2019ed*
NFPA 101	2018ed*
IBC	2015ed, component of MUBEC*
* Indicates state version	

8 APPLICABLE CODES
SCALE: NONE



9 FLOOR PLAN
SCALE: 3/16" = 1'-0"

0 4' 8'



10 FIRE ALARM RISER DIAGRAM
SCALE: DIAGRAMMATIC

North

Reviewed for Code Compliance
Permitting and Inspections Department
Approved with Conditions
01/13/2020

John Mocker, SET
John Mocker
NICET Level IV - Fire Alarm
Technician ID: 137219
Expires: 11/1/2022

CUNNINGHAM SECURITY SYSTEMS

STOLER CONSULTING

Revision Information

01	12/25/2019
	Issued for Review
02	02/20/2020
	Added strobes to exam rooms
03	
04	
05	
06	
07	
08	
09	
10	

Project Information

NORTHEAST DERMATOLOGY ASSOCIATES PORTLAND

125 Presumpscot Street
Portland, ME

Sheet Information

AUTHOR	ZMS
SCALE	VARIES
FA-01	FIRE ALARM ADDITIONS