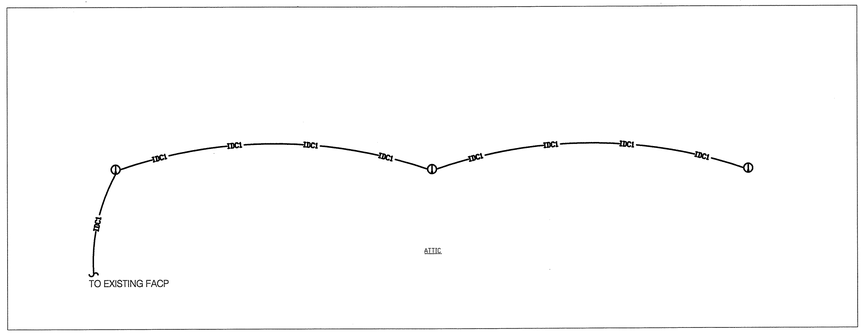

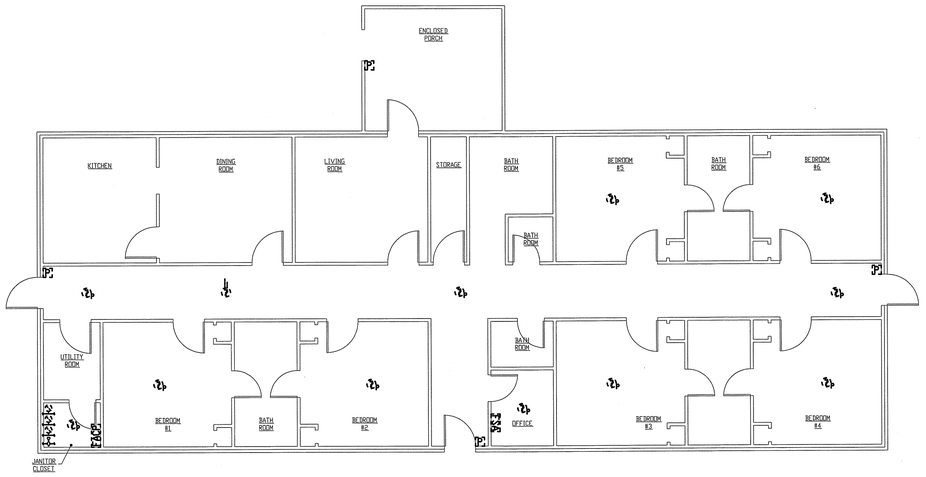

INSTALLATION OF HEAT DETECTORS IN ATTIC OF BUILDING AS REQUIRED BY AHJ.
FIRE ALARM SYSTEM IN LIVING AREA OF BUILDING HAS BEEN INSPECTED AND PASSED.

FIRE ALARM DEVICE LEGEND

FACP	FIRE ALARM CONTROL PANEL (34.4AH BATTERIES PROVIDED)
FSA	FIRE ALARM ANNUNCIATOR
P	MANUAL PULL STATION
	PHOTOELECTRIC SMOKE DETECTOR
	PHOTOELECTRIC DUCT SMOKE DETECTOR (BY OTHERS)
	WATERFLOW SWITCH (BY OTHERS) POINT OF CONNECTION ONLY
	TAMPER SWITCH (BY OTHERS) POINT OF CONNECTION ONLY
MPS	ADDRESSABLE MONITOR MODULE

NOTE: DEVICES SHOWN AS DASHED LINES INDICATE EXISTING, TO REMAIN.

A FIRE ALARM - SHOP DRAWINGS
SCALE: 1/8" = 1'-0"

Johnson Controls
JOHNSON CONTROLS
633 HUTTON ST., STE. 104
RALEIGH, NC 27606
COLLIN.HURLEY@JCI.COM
919.743.3560

INSTALLING CONTRACTOR:
tyco Integrated Security

GIBBENS DRAKE SCOTT, INC
8201 E. 63rd STREET, SUITE 100
RAYTOWN, MISSOURI 64133
ENGINEERING NC Firm Number - C-2254

NORTH CAROLINA PROFESSIONAL SEAL 035201 ENGINEER TIM L. SCOTT
7-29-19

ABSOLUTE CARE
ASSISTED LIVING
BUILDING 4
431 JUNNY RD.
ANGIER, NC 27501

ISSUE LOG:

MARK	DATE	INT	DESCRIPTION
*	*	*	

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SYSTEM: FIRE ALARM
SHEET: SHOP DRAWINGS

FA101

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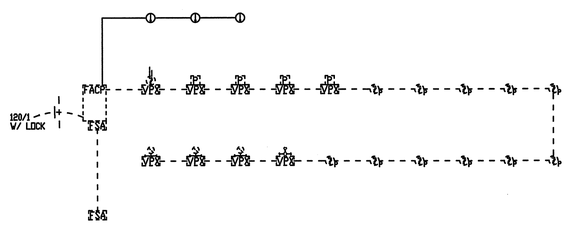
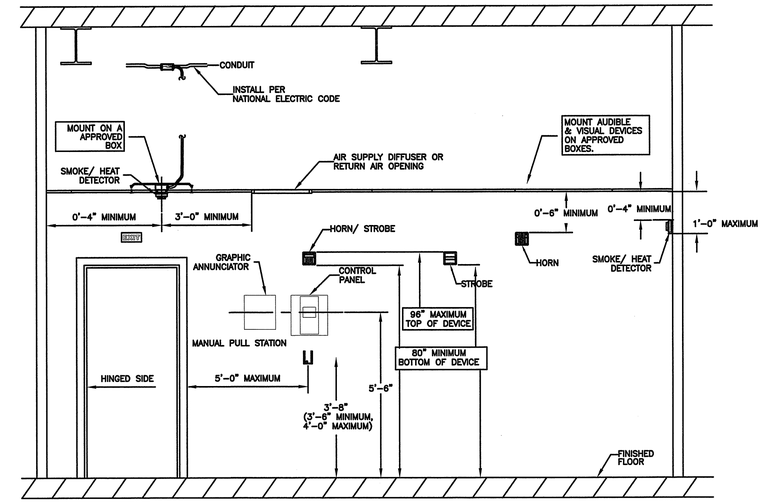


A SCHEDULES & RISER DIAGRAMS

SCALE:

NFPA 72 AND ADA DEVICE INSTALLATION REQUIREMENTS



B SCHEDULES - MOUNTING HEIGHT REQUIREMENTS

SCALE:

SYSTEM OUTPUTS

	SYSTEM OUTPUTS	CONTROL UNIT ANNUNCIATOR					NOTIFICATION					MISC.	
		A	B	C	D	E	F	G	H	I	J	K	
		ACTUATE COMMON ALARM SIGNAL INDICATOR	ACTIVATE AUDIBLE SIGNAL AT PANEL	ACTUATE COMMON SUPERVISORY SIGNAL INDICATOR	ACTIVATE COMMON TROUBLE INDICATOR	ANNUNCIATE ORIGIN AND DESCRIPTION OF SIGNAL ON LCD DISPLAY	ACTUATE HORN / STROBE DEVICES	TRANSMIT DISTINCT ALARM SIGNAL TO MONITORING STATION	TRANSMIT DISTINCT SUPERVISORY SIGNAL TO MONITORING STATION	TRANSMIT DISTINCT TROUBLE SIGNAL TO MONITORING STATION	SHUTDOWN ALL AIR HANDLING EQUIPMENT	SHUTDOWN RESPECTIVE RTU	
1	SPRINKLER WATERFLOW	●	●			●	●	●			●		1
2	SMOKE/HEAT DETECTOR (FACP)	●	●			●	●	●			●		2
3	MANUAL STATION	●	●			●	●	●			●		3
4	DUCT SMOKE DETECTOR		●	●		●			●		●		4
5	VALVE TAMPER		●	●		●			●				5
6	FIRE ALARM SYSTEM AC POWER FAILURE		●		●	●				●			6
7	FIRE ALARM SYSTEM LOW BATTERY		●		●	●				●			7
8	OPEN CIRCUIT		●		●	●				●			8
9	GROUND FAULT		●		●	●				●			9
10	WIRE-TO-WIRE SHORT (SLC & NAC)		●		●	●				●			10
11	WIRE-TO-WIRE SHORT (IDC)	●	●			●	●	●			●		11
12	LOSS OF CARRIER	●	●		●	●				●			12

NOTE:
1. HVAC SHUTDOWN BY OTHERS.

C SCHEDULES - SEQUENCE OF OPERATIONS MATRIX

SCALE:

Johnson Controls
JOHNSON CONTROLS
633 HUTTON ST., STE. 104
RALEIGH, NC 27606
COLLIN.HURLEY@JCI.COM
919.743.3560

INSTALLING CONTRACTOR:
tyco Integrated Security

GIBBENS DRAKE SCOTT, INC
9201 E. 63rd STREET, SUITE 100
RAYTOWN, MISSOURI 64133
ENGINEERING NC Firm Number - C-1594

NORTH CAROLINA PROFESSIONAL SEAL 036201 ENGINEER JIM L. SCOTT
7-29-19

ABSOLUTE CARE
ASSISTED LIVING
BUILDING 4
431 JUNNY RD.
ANGIER, NC 27501

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JOHNSON CONTROLS

SYSTEM:
FIRE ALARM

SHEET:
SCHEDULES & RISER DIAGRAMS

FA201

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Honeywell Security

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Battery Calculation Form Limit: Required to maintain UL calling requirements (Table 1)

☐ Commercial Fire Installation

☐ Commercial Burg Installation

Facility Information

Location:	Absolute Care Assisted Living
Account #:	
Model:	
Engineer:	
Date:	7.23.2019

Enter Standby and Alarm Times

Battery Standby (hours):	24
Alarm Duration (minutes):	5

Battery Contingency Factor: 0% ☐

Recommended Battery (AH): **13.4**

SELECTED PANEL MAXIMUM OUTPUT RATINGS

Select Panel from pulldown list:	Polling Loop (mA)	Standby Auxiliary Power (mA)	Alarm Auxiliary Power (mA)	Panel Standby (mA)	Panel Alarm (mA)	Bell #1 Output (mA)	Bell #2 Output (mA)	Maximum Panel Standby Output	Maximum Panel Alarm Output	Max Battery Supported by Panel
VS2000-9	128	1000	2700	300	470	1700	1700	5000	2300	34.4
		Total Polling Loop				Total Bell #1	Total Bell #2	Total Standby	Total Alarm	
Calculated Current Draw	44.3	130	410	Calculated Bell Draw		0	0	174	410	
						Standby Budget	Alarm Budget			
Power Budget	83.7	870.0	1290.0	Bell Power Budget		1700.0	1700.0	815.7	1315.7	

☐ Power Limited Devices Free List

External Bell Power Req'd (mA): 0.0 Ext UL Power Req'd (mA): 0.0

Unpopulated cell(s) are not supported by selected panel

KEYPADS/INTERFACES	Enter Quantity	How many powered externally?	Standby (not per)	Alarm Current (Aux)	Polling Loop	Total Polling Loop	Total Standby Current	Total Alarm Current	Total External Current Required
6150	0	0	40	120			0	0	0
6152	0	0	40	120			40	120	0
6162*	0	0	40	120			0	0	0
6160INF	0	0	100	170			0	0	0
5128/5128R	0	0	40	120			0	0	0
6150CN	0	0	40	120			0	0	0
6160CN	0	0	100	170			0	0	0
6150INT	0	0	40	120			0	0	0
6160INTIOCR	0	0	45	150			0	0	0
6150CR-2	0	0	40	160			90	320	0
6160PX	0	0	40	165			0	0	0
6160RF	0	0	50	150			0	0	0
6160V	0	0	60	190			0	0	0
6164US ☐ (long Alias)	0	0	55	210			0	0	0
6160EX	0	0	40	70			0	0	0
6460S	0	0	40	150			0	0	0
6460W	0	0	40	160			0	0	0
Tuxedo Family: TUXW/TUXS ☐ (widgets Out)	0	0	140	340			0	0	0
Tux WiFi Family: TUXWFIHI/TUXSWIFI ☐ (widgets Out)	0	0	140	350			0	0	0
FSA-8 Fire Zone Annunciator	0	0	35	65			0	0	0
FSA-24 Fire Zone Annunciator	0	0	35	130			0	0	0
AA01 Keypad (Enter # and Currents)	0	0	0	0			0	0	0
AA01 Keypad (Enter # and Currents)	0	0	0	0			0	0	0
AA01 Keypad (Enter # and Currents)	0	0	0	0			0	0	0
AA01 Keypad (Enter # and Currents)	0	0	0	0			0	0	0

2 WIRE & 4 WIRE SMOKE DETECTORS (except Vplex Polling Loop detectors)	Enter Quantity	How many powered externally?	Standby (not per)	Alarm Current (Aux)	Polling Loop	Total Polling Loop	Total Standby Current	Total Alarm Current	Total External Current Required
2 wire smoke detector (none powered)	0								
2 wire smoke detector (none powered)	0								
2 wire smoke detector (none powered)	0								
2 wire smoke detector (none powered)	0								
12V 4 wire Smoke (Qnt'y & Current's)	0	0	0	0			0	0	0
12V 4 wire Smoke (Qnt'y & Current's)	0	0	0	0			0	0	0
12V 4 wire Smoke (Qnt'y & Current's)	0	0	0	0			0	0	0
12V 4 wire Smoke (Qnt'y & Current's)	0	0	0	0			0	0	0

Note: Some models require extra power to operate their sounders in addition to the amount required by the smoke sensor. This extra power is not included in the smoke equipment lists. The line below contains 2 number of sounders ensure power capacity, or if the selected panel does not support 2-wire smoke detectors.

MULTI-POWER DEVICES	Enter Quantity	How many powered externally?	Standby (not per)	Alarm Current (Aux)	Polling Loop	Total Polling Loop	Total Standby Current	Total Alarm Current	Total External Current Required
4208U (powered by polling loop)	0	0							
4208U (powered by panel aux power)	0	0							
4208U (powered externally)	0	0							
4208SN (powered by polling loop)	0	0							
4208SN (powered by panel aux power)	0	0							
4208SN (powered externally)	0	0							
4208SNF (powered by polling loop)	0	0							
4208SNF (powered by panel aux power)	0	0							
4208SNF (powered externally)	0	0							
4208SNF (Class B to A Zone Converter)	0	0	40	40	0	0	0	0	0
4208U Grouped Zone Mux. Module	0	0	0	0	0	0	0	0	0
4206U (powered externally)	0	0	0	0	0	0	0	0	0
4297 Polling Loop Extender	0	0	0	0	0	0	0	0	0
AA01 Device (enter quant. & current's)	0		0	0	0	0	0	0	0
AA01 Device (enter quant. & current's)	0		0	0	0	0	0	0	0
AA01 Device (enter quant. & current's)	0		0	0	0	0	0	0	0
AA01 Device (enter quant. & current's)	0		0	0	0	0	0	0	0

AUXILIARY POWERED DEVICES	Enter Quantity	How many powered externally?	Standby (not per)	Alarm Current (Aux)	Polling Loop	Total Polling Loop	Total Standby Current	Total Alarm Current	Total External Current Required
5824 24 volt Power Supply Module	0	0	0	100			0	0	0
4100SM (no more than one per system)	0	0	25	25			0	0	0
4204 Enter no. of relays used	0	0	40	40			0	0	0
4204CF Enter no. of relays used	0	0	80	80			0	0	0
4286 with warning speakers	0	0	290	300			0	0	0
5140UM Backup Dialer Module	0	0	0	15			0	0	0
5800RF wireless repeater module	0	0	80	80			0	0	0

5881EN receiver	0	0	60	60			0	0	0
5883 tri-security receiver	0	0	80	80			0	0	0
VA005 Panel Linking Module	0	0	85	85			0	0	0
Add'l Device (enter quant. & current's)	0	0	0	0			0	0	0
Add'l Device (enter quant. & current's)	0	0	0	0			0	0	0
Add'l Device (enter quant. & current's)	0	0	0	0			0	0	0
Add'l Device (enter quant. & current's)	0	0	0	0			0	0	0
Communicators									
7845GSM/7845I-GSM	0	0	10	10			0	0	0
7845I/7845I-ENT	0	0	10	10			0	0	0
GSM5X0	0	0	65	200			0	0	0
GSM1X0	0	0	10	10			0	0	0
GSM4X0	0	0	10	10			0	0	0
IPGSM-4G	0	0	0	0			0	0	0
GSMCF/GSMCF Fire Communicator	0	0	10	10			0	0	0
Vista-GSM4G/Vista-GSM4GCN (Vista-21IP only)	0	0	10	10			0	0	0
7847i/7847i-E Internet Communicator	0	0	75	75			0	0	0
Add'l Device (enter quant. & current's)	0	0	0	0			0	0	0
Add'l Device (enter quant. & current's)	0	0	0	0			0	0	0
Air Motion Detectors (non Vplex)									
5916T ☐ (450 AdMod)	0	0	10	7			0	0	0
5915T/E	0	0	16	16			0	0	0
5235T/5235DT ☐ (30 AdMod)	0	0	4	4			0	0	0
5240	0	0	8	8			0	0	0
5250LT	0	0	25	25			0	0	0
5235W5/5235T	0	0	20	20			0	0	0
5250W5/5250T	0	0	20	20			0	0	0
5260CT	0	0	25	25			0	0	0
5310/5320 Request to Exit (RTE)	0	0	35	35			0	0	0
997 Ceiling Mount PIR ☐ (450 AdMod)	0	0	17	12			0	0	0
998 Wall Mount PIR ☐ (30 AdMod)	0	0	13	13			0	0	0
Motion Detctrs (enter quant. & current's)	0	0	0	0			0	0	0
Motion Detctrs (enter quant. & current's)	0	0	0	0			0	0	0
Motion Detctrs (enter quant. & current's)	0	0	0	0			0	0	0
Motion Detctrs (enter quant. & current's)	0	0	0	0			0	0	0
Dual Tech Motion Detectors (non Vplex)									
DT-516	0	0	30	30			0	0	0
DT-6100BTC	0	0	35	35			0	0	0
DT-7235T	0	0	20	20			0	0	0
DT-7435/DT-7435C	0	0	30	30			0	0	0
DT-7450/DT-7450MC	0	0	35	35			0	0	0
DT-7250	0	0	40	40			0	0	0
Motion Detctrs (enter quant. & current's)	0	0	0	0			0	0	0
Motion Detctrs (enter quant. & current's)	0	0	0	0			0	0	0
Motion Detctrs (enter quant. & current's)	0	0	0	0			0	0	0
Motion Detctrs (enter quant. & current's)	0	0	0	0			0	0	0

POLLING LOOP DEVICES	Enter Quantity	How many powered by 4297?	Standby (not per)	Alarm Current (Aux)	Polling Loop	Total Polling Loop	Total Standby Current	Total Alarm Current	Total External Current Required
4101SN Single Output Relay Module	0	0			7	0			
4190SN Two Zone SIM	0	0			2	0			
4191SN-WH	0	0			0.5	0			
4193SN Two Zone SIM	0	0			13.5	13.5			
4193SNF Two Zone SIM	0	0			1.5	0			
4194SN	0	0			16.5	0			
5775WSN ☐ (30 AdMod)	0	0			2.4	0			
4293SN	0	0			1	0			
4020SN HYVERVIDY Surf.Mt. Cnbtd.	0	0			1	0			
4944SN Recessed Contact	0	0			1	0			
4945SN-WH	0	0			0.5	0			
4990SN Overhead Door Contact	0	0			0.5	0			
5193SD Smoke Detector ☐ (30 AdMod)	0	0			1.2	0			
5193SDT Smoke w/ Heat ☐ (30 AdMod)	0	0			1.2	0			
5193SD Smoke Detector ☐ (30 AdMod)	11	0			2.8	30.8			
5193SDT Smoke w/ Heat ☐ (30 AdMod)	0	0			1.2	0			
999WX PIR ☐ (30 AdMod)	0	0			1	0			
5200SBN PIR ☐ (30 AdMod)	0	0			1.6	0			
FS-1605SN Glass Break Detector	0	0			1	0			
Quest2200SN ☐ (30 AdMod)	0	0			6	0			
Vplex-V30 Short Isolator	0	0			5	0			
Vibrations	0	0			5	0			
Add'l VPlex (enter qnty & current)	0	0			0	0			
Add'l VPlex (enter qnty & current)	0	0			0	0			
Add'l VPlex (enter qnty & current)	0	0			0	0			
Add'l VPlex (enter qnty & current)	0	0			0	0			

12V NOTIFICATION DEVICES ON BELL OUTPUT #1	Enter Quantity	How many powered externally?	Standby (not per)	Alarm Current (Aux)	Polling Loop	Total Polling Loop	Total Standby Current	Total Alarmin Current (Current Draw Total Bell #1)	Total Standby Current (Ioutside)
Enter device name, quant., & current	0	0		0				0	0
Enter device name, quant., & current	0	0		0				0	0
Enter device name, quant., & current	0	0		0				0	0
Enter device name, quant., & current	0	0		0				0	0
Enter device name, quant., & current	0	0		0				0	0

12V NOTIFICATION DEVICES ON BELL OUTPUT #2 (IF USED)	Enter Quantity	How many powered externally?	Standby (not per)	Alarm Current (Aux)	Polling Loop	Total Polling Loop	Total Standby Current	Total Alarmin Current (Current Draw Total Bell #2)	Total Standby Current (Ioutside)
Enter device name, quant., & current	0	0		0				0	0
Enter device name, quant., & current	0	0		0				0	0
Enter device name, quant., & current	0	0		0				0	0
Enter device name, quant., & current	0	0		0				0	0
Enter device name, quant., & current	0	0		0				0	0

A POWER CALCULATIONS

SCALE:

Johnson Controls

JOHNSON CONTROLS

633 HUTTON ST., STE. 104
RALEIGH, NC 27606
COLLIN.HURLEY@JCI.COM
919.743.3560

INSTALLING CONTRACTOR:

tyco Integrated Security

GIBBENS DRAKE SCOTT, INC
5501 S. 43rd STREET, SUITE 100
BAYTOWN, MISSOURI 64133

ENGINEERING INC Firm Number - C-2594

NORTH CAROLINA PROFESSIONAL SEAL 035201 ENGINEER TIM L. SCOTT 7-24-19

ABSOLUTE CARE ASSISTED LIVING
BUILDING 4
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ANGIER, NC 27501

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SYSTEM: FIRE ALARM

SHEET: POWER CALCULATIONS

FA301