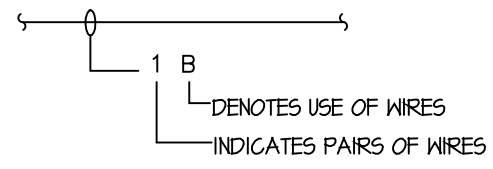


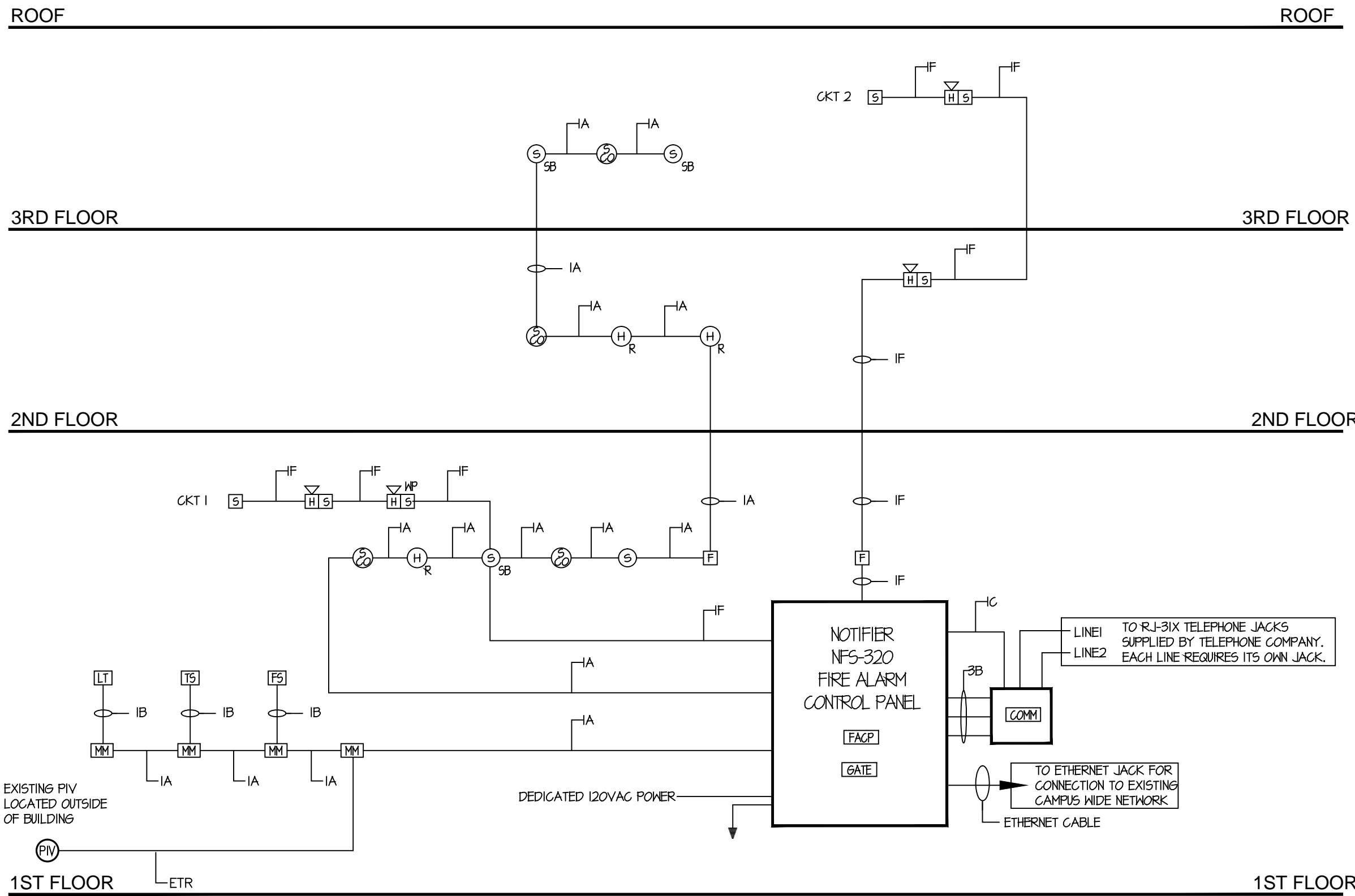
WIRE GUIDE		
LTR	DESCRIPTION	TYPE
A	SLC LOOP	16AWG UTP
B	CONVENTIONAL ZONE	16AWG UTP
C	24V DC POWER	16AWG UTP
D	EIA-485 COMMUNICATION (ACS MODEL)	16AWG STP
F	AVV CIRCUIT	16AWG STP

- NOTES:
- RISER DIAGRAM SHOWS NUMBER OF CIRCUITS AND WIRE SIZES. ACTUAL QUANTITY OF DEVICES IS SHOWN ON THE FLOOR PLANS. DEVICES TO BE ADDRESSED IN FIELD.
 - LABEL EXAMPLE:



ABBREVIATIONS:

- STP+ SHIELDED TWISTED PAIR
UTP+ UNSHIELDED TWISTED PAIR
FRT+ UNSHIELDED UNTWISTED PAIR
SLC+ SIGNALING LINE CIRCUIT
NAC+ NOTIFICATION APPLIANCE CIRCUIT
CKT+ CIRCUIT
AWG+ AMERICAN WIRE GAUGE
ETR+ EXISTING WIRING TO REMAIN
URF+ MOUNTED UNDER RAISED FLOOR
ROR+ RATE OF RISE
RSH+ ROOM



NOTIFIER NFS-320 FIRE ALARM RISER DIAGRAM

ELECTRICAL WIRING SPECIFICATIONS:

ALL WIRING SHALL BE IN STRICT COMPLIANCE WITH THE NATIONAL ELECTRICAL CODE (ESPECIALLY ARTICLE 300) AND THE MANUFACTURERS WRITTEN GUIDELINES. ALL WIRING TO BE IL LISTED WIRING GAUGES, SHIELDING AND CHARACTERISTICS AS DESCRIBED ON RISER AND WIRING DIAGRAMS.

- NON-POWER LIMITED FIRE ALARM (NFPA) CIRCUITS
NFPA CIRCUIT POWER SOURCE REQUIREMENTS:

- POWER SOURCE: THE POWER SOURCE OF NON-POWER-LIMITED FIRE ALARM CIRCUITS SHALL COMPLY WITH CHAPTERS 1 THROUGH 4 OF THE NATIONAL ELECTRIC CODE AND THE OUTPUT VOLTAGE SHALL BE NOT MORE THAN 600 VOLTS NOMINAL.
- BRANCH CIRCUIT: AN INDIVIDUAL BRANCH CIRCUIT SHALL BE REQUIRED FOR THE SUPPLY OF THE POWER SOURCE. THIS BRANCH CIRCUIT SHALL NOT BE SERVED THROUGH GROUND-FAULT CIRCUIT INTERRUPTERS OR ARC-FAULT CIRCUIT INTERRUPTERS. CIRCUIT BREAKER SHALL BE MARKED IN FIELD AND LOCKED. LOCATION AND NUMBER OF CIRCUIT BREAKER TO BE MARKED ON THE FIRE ALARM CONTROL PANEL.
- ONLY COPPER CONDUCTORS SHALL BE PERMITTED TO BE USED FOR FIRE ALARM SYSTEMS.
- INSULATION: INSULATION ON CONDUCTORS SHALL BE SUITABLE FOR 600 VOLTS. CONDUCTORS LARGER THAN 16 AWG SHALL COMPLY WITH ARTICLE 300.
- ALL NON-POWER LIMITED WIRING SHALL BE RUN IN METALLIC RACEWAY. WIRING SHALL BE IN GAUGE MINIMUM TYPE THIN. NOTE: NON-POWER LIMITED WIRING FOR THIS PROJECT LIMITED TO PRIMARY 120VAC FIRE ALARM CONTROL PANEL DEDICATED BRANCH CIRCUIT.

- POWER LIMITED FIRE ALARM (PLFA) CIRCUITS

- PLFA WIRING METHODS AND MATERIALS: POWER-LIMITED FIRE ALARM CONDUCTORS AND CABLES SHALL BE INSTALLED AS FOLLOWS:
- WIRING SHALL BE INSTALLED IN RACEWAY OR FISHER IN CONCEALED SPACES. NO EXPOSED WIRING SHALL BE INSTALLED. CABLE SPLICES OR TERMINATIONS SHALL BE MADE IN LISTED FITTINGS, BOXES, ENCLOSURES, FIRE ALARM DEVICES, OR UTILIZATION EQUIPMENT.
- PASSING THROUGH A FLOOR OR HALL, IN METAL RACEWAYS OR RIGID NONMETALLIC CONDUIT WHERE PASSING THROUGH A FLOOR OR HALL TO A HEIGHT OF 21 M (7 FT) ABOVE THE FLOOR, UNLESS ADEQUATE PROTECTION CAN BE AFFORDED BY BUILDING CONSTRUCTION.
- PLFA WIRING SHALL BE KEPT SEPARATED FROM NFPA WIRING AS DESCRIBED BY ARTICLE 760 OF NATIONAL ELECTRIC CODE.
- POWER-LIMITED FIRE ALARM CIRCUIT CONDUCTORS SHALL NOT BE STRAPPED, TAPED, OR ATTACHED BY ANY MEANS TO THE EXTERIOR OF ANY CONDUIT OR OTHER RACEWAY AS A MEANS OF SUPPORT.
- APPLICATIONS OF LISTED PLFA CABLES:
NOTE: THE BUILDING COVERED BY THIS PROJECT CONTAINS NO PLFA AREAS!
(1) PLENUM CABLES INSTALLED IN EXITS, PLENUMS, AND OTHER SPACES USED FOR ENVIRONMENTAL AIR SHALL BE TYPE PLEP.
(2) RISER CABLES INSTALLED IN RISERS, VERTICAL RIMS AND PENETRATING MORE THAN ONE FLOOR, OR CABLES INSTALLED IN VERTICAL RIMS IN A SHUNT, SHALL BE TYPE PFR. FLOOR PENETRATIONS REGARDING TYPE PFR SHALL CONTAIN ONLY CABLES SUITABLE FOR RISER OR STAIRWELL USE.
(3) OTHER WIRING WITHIN BUILDINGS: CABLES INSTALLED IN BUILDING LOCATIONS OTHER THAN THE ABOVE SHALL BE TYPE PFL.

- GENERAL

- ALL CONDUCTORS ARE TO BE PROPERLY TAPPED OR NUMBERED IN THE CONTROL PANEL AND CORRESPOND WITH THE CONTROL PANEL TERMINAL NUMBERS. FOR IDENTIFICATION PURPOSES, WIRING MUST GO TO AND FROM EACH DEVICE, BRANCH CIRCUITS (IT - TAPS ARE NOT PERMITTED), POLARITY TO BE OBSERVED THROUGHOUT.
- ALL CIRCUITS SHALL RUN CONTINUOUS BETWEEN DEVICES WITHOUT SPLICES WHERE PRACTICAL. WHERE A CONTINUOUS WIRE RUN IS NOT POSSIBLE, CONNECTIONS SHALL BE MADE IN AN IDENTIFIED IL LISTED ELECTRICAL BOX UTILIZING TERMINAL STRIPS. THE USE OF WIRE NUTS IS NOT PERMITTED.
- ALL WORK TO BE IN ACCORDANCE WITH THE NFPA 70M & NFPA 7200 STANDARDS.

SCOPE OF WORK:

- INSTALL NEW NOTIFIER NFS-320 ADDRESSABLE FIRE ALARM CONTROL PANEL.
- PROVIDE AND INSTALL NEW DETECTION AND NOTIFICATION APPLIANCES IN EACH RESIDENTIAL UNIT AND COMMON AREAS.
- MONITOR EXISTING WATER FLOW SWITCHES, TAMPERS SWITCHES, & POST INDICATING VALVE.
- PROVIDE AND INSTALL MONITORED LOW TEMPERATURE SWITCH IN MECHANICAL ROOM.
- RESIDENCE APARTMENTS ARE EQUIPPED WITH ELECTRIC KITCHENS ONLY. HVAC UNITS ARE PROVIDED WITH GAS FIRED HEATING. CO PRODUCING EQUIPMENT IS LOCATED WITHIN THE BUILDING.
- CONTRACTOR IS REQUIRED TO SUBMIT THREE (3) SETS OF SIGNED AND SEALED FIRE ALARM DRAWINGS AND CALCULATIONS. THESE DOCUMENTS SHALL INCLUDE BATTERY AND VOLTAGE DROP CALCULATIONS AND MANUFACTURERS DEVICES AND COMPONENTS WHICH WILL BE INSTALLED ON THIS PROJECT. SUBMITTALS TO BE REVIEWED AND APPROVED BY DESIGNER OF RECORD, AS PER NJLAC 5.25-2.2(2)(a)(ii), NJLAC 5.25-2.2(3), & NJLAC 5.25-2.2(4).

		CONTROL PANEL ACTION				
SYSTEM CONDITION		DOWN & SOUND BELL AT CONTROL PANEL, INSTANTLY EXISTING BELL, STRIKE A CHIME THROUGHOUT THE BUILDING	DOWN ALARM SOUND TO TAMPERS CHIMES THROUGHOUT THE BUILDING	DOWN ALARM SOUND TO TAMPERS CHIMES THROUGHOUT THE BUILDING	DOWN ALARM SOUND TO TAMPERS CHIMES THROUGHOUT THE BUILDING	DOWN ALARM SOUND TO TAMPERS CHIMES THROUGHOUT THE BUILDING
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	AREA SMOKE DETECTOR	X	X	X	X	X
	BEDROOM SMOKE DETECTOR	X	X	X	X	X
	MANUAL PULL STATION	X	X	X	X	X
	HEAT DETECTOR	X	X	X	X	X
	COMBINATION FIRE/CO DETECTOR	X	X	X	X	X
	WATERFLOW SWITCH	X	X	X	X	X
	PRESSURE SWITCH	X	X	X	X	X
	LOW TEMPERATURE SWITCH	X	X	X	X	X
	TAMPER SWITCH	X	X	X	X	X
	POST INDICATOR VALVE, TAMPERS	X	X	X	X	X
	FIELD WIRING OR SYSTEM COMPONENT FAULT	X	X	X	X	X
	LOSS OF PRIMARY AC POWER	X	X	X	X	X

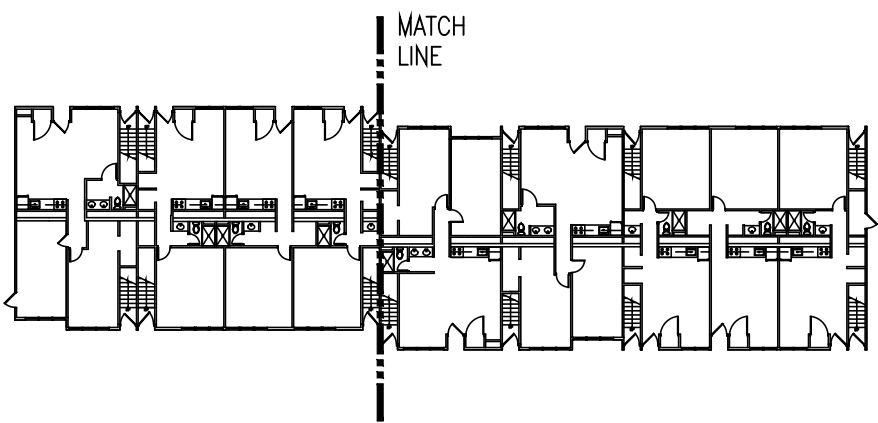
FIRE ALARM SYSTEM FUNCTION MATRIX

FIRE ALARM SYSTEM COMPONENTS			
SYMBOL	DEVICE	MANUFACTURER	MODEL NO.
[FACP]	FIRE ALARM CONTROL PANEL	NOTIFIER	NFS-320
[GATE]	GATEWAY	NOTIFIER	NFK-6WH-3
[COMM]	DIGITAL COMMUNICATOR	NOTIFIER	4H-4D
[P]	MANUAL PULL STATION	NOTIFIER	NBS-12LX
[S]	ADDRESSABLE PHOTOELECTRIC SMOKE DETECTOR	NOTIFIER	FSP-851
[S]	ADDRESSABLE PHOTOELECTRIC SMOKE DETECTOR WITH SOUNDER BASE	NOTIFIER	FSP-851
[R]	ADDRESSABLE RATE OF RISE, HEAT DETECTOR	NOTIFIER	FSP-851R
[R]	ADDRESSABLE HIGH TEMP. RATE, HEAT DETECTOR	NOTIFIER	FSP-851H
[S]	ADDRESSABLE COMBINATION FIRE/CARBON MONOXIDE DETECTOR	NOTIFIER	FCO-851
[S]	ADJUSTABLE CANDELA STROBE LIGHT	SYSTEM SENSOR	SR
[S]	COMBINATION, ADJUSTABLE CANDELA, HORN AND STROBE	SYSTEM SENSOR	P2R
[S]	COMBINATION, ADJUSTABLE CANDELA, HORN AND STROBE WEATHERPROOF	SYSTEM SENSOR	P2R
[M]	ADDRESSABLE MONITOR MODULE	NOTIFIER	PMH-1
[T]	LOW TEMPERATURE SWITCH	POTTER	R15-0
[T]	TAMPER SWITCH	BY FIRE PROTECTION CONTRACTOR	
[T]	FLOH SWITCH	BY FIRE PROTECTION CONTRACTOR	
[T]	PRESSURE SWITCH	BY FIRE PROTECTION CONTRACTOR	
[V]	POST INDICATOR VALVE	EXISTING	

Revisions

Date	Issue	Description
08-03-15	1	ISSUE FOR CONSTRUCTION

Key Plan



Consultants

LINWOOD ENGINEERING ASSOCIATES, P.A.

CONSULTING MECHANICAL & ELECTRICAL ENGINEERS

LEA 955 Lincoln Ave. 2301 Dupont Drive-Suite 150
Glen Rock, New Jersey Irvine, California
07452 92612
t: 201.857.3998 f: 714.424.0001
t: 201.857.3994 f: 714.424.0004
www.linwoodengineering.com

Michael T. Davina, P.E. Robert J. Hatch, P.E.

- NJ #48654 AR #13868
CT #0025779 CA #E16118
CT #13318 FL #69560
MA #48516
NJ #30419
NV #019975
NY #56608
PA #036014-E

Project

INTERIOR RENOVATIONS
AT THE
TAMARACK - N RESIDENCE

RAMAPO COLLEGE
OF NEW JERSEY
505 Ramapo Valley Road
Mahwah, New Jersey 07430-1680

Client

RAMAPO COLLEGE
OF NEW JERSEY
505 Ramapo Valley Road
Mahwah, New Jersey 07430-1680

SNS Architects & Engineers, PC

1 PARAGON DRIVE . MONTVALE . NEW JERSEY . 07645
tel: 201.573.1767 fax: 201.573.0808 www.sns-arch-eng.com

- Fay W. Logan, AIA
John M. Lignos, AIA
Lorin J. Sonenshine, AIA
Steven Napolitano, PE

Cert./Lic. No.	Date	Scale	AS NOTED
	04-10-15		
Drawn By	MD	Checked By	SE

Dwg. Title
FIRE ALARM NOTES, RISER DIAGRAM,
SCHEDULE & SYSTEM SEQUENCE OF
OPERATION MATRIX

Work Order No. Dwg. No.

4698N E403