












GENERAL NOTES FOR FIRE DETECTION AND ALARM SYSTEM

- ALL FIRE DETECTION AND ALARM SYSTEM INSTALLATION WORKS HEREIN SHALL BE DONE IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS, THE APPLICABLE PROVISIONS OF THE LATEST EDITION OF THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) FIRE CODE, AND THE RULES AND REGULATIONS OF THE LOCAL FIRE BUREAU.
- THE FIRE DETECTION AND ALARM SYSTEM SHALL BE DESIGNED AND CONSTRUCTED SO THAT THERE ARE APPROPRIATE PROVISIONS FOR THE EARLY WARNING OF FIRE, AND APPROPRIATE MEANS OF ESCAPE IN CASE OF FIRE FROM THE BUILDING TO A PLACE OF SAFETY OUTSIDE THE BUILDING CAPABLE OF BEING SAFELY AND EFFECTIVELY USED AT ALL MATERIAL TIMES.
- THE FIRE DETECTION PRINCIPLE INCORPORATED HEREIN IS OF A CONVENTIONAL SYSTEM TYPE AND IS WIRED IN A CLASS "B" MANNER (WITH END OF LINE RESISTOR), RISER DIAGRAM PROVIDED HEREIN SHALL BE USED AS A REFERENCE FOR THE DIFFERENT ZONE DESIGNATIONS.
- FIRE ALARM CONTROL PANEL (FACP) MUST BE PRESET IN SUCH A WAY THAT THE ZONE IN EACH DETECTOR FOLLOWS SIMILARLY AS INDICATED ON THE RISER DIAGRAM, AND THE CONTROL PANEL IS PROGRAMMED TO DISPLAY THE INFORMATION REQUIRED WHEN THAT PARTICULAR DETECTOR IS OPERATED. ADDITIONAL FIELD DEVICES ARE AVAILABLE WHICH MAY BE WIRED TO THE LOOP FOR DETECTION ONLY IF IT IS NECESSARY.
- FIRE ALARM CONTROL PANEL MUST SITUATED IN AN AREA THAT IS FULLY AIR CONDITIONED SO THAT THE ELECTRONIC COMPONENTS OPERATE WELL. TWO POWER SUPPLIES ARE REQUIRED, (eg: MAINS AND BATTERY) AND THESE ARE NORMALLY BUILT INTO THE FIRE ALARM CONTROL PANEL. STANDBY BATTERIES MUST ALLOW THE SYSTEM TO OPERATE WITHOUT MAINS FOR 24 HOURS LONGER THAN THE BUILDING IS LIKELY TO BE UNOCCUPIED AND THEN SUPPORT THE SOUNDERS FOR AN ADDITIONAL HALF HOUR. IF THE MAINS SUPPLY IS SUPPORTED BY AN EMERGENCY GENERATOR, THEN SIX HOURS STANDBY PLUS HALF AN HOUR ALARM LOAD IS SUFFICIENT. ALL MODERN FIRE ALARM SYSTEMS ARE 24 VOLTS. ON THE MEDIUM AND LARGER SIZED FIRE ALARM SYSTEMS, THE STANDBY BATTERIES WILL OFTEN NOT FIT WITHIN THE CONTROL PANEL. WHERE STANDBY BATTERIES ARE CONTAINED WITHIN A SEPARATE HOUSING, THEN THIS HOUSING MUST BE AS CLOSE AS POSSIBLE TO THE MAIN FIRE ALARM CONTROL PANEL. IF THE POWER SUPPLY OR BATTERY HOUSING IS LOCATED MORE THAN 10 METRES FROM THE MAIN FIRE ALARM CONTROL PANEL THEN SERIOUS VOLT DROP PROBLEMS CAN ARISE.
- SOUNDERS ARE WIRED IN A WAY THAT THESE ARE EXACTLY CONNECTED TO LOOP ISOLATION MODULES OR SIGNALING DEVICES ADAPTER COMMONLY. MOREOVER, SOUNDER ARE CONNECTED IN A CLASS "A" MANNER AND LOOP ISOLATION MODULES ARE AVAILABLE FOR FITTING ON TO THE DETECTION LOOP/LOOPS SUCH THAT THE LOOP IS ASECTIONED IN ORDER TO ENSURE THAT A EVERY BUILDING LEVEL MUST BE PROVIDED WITH SEPARATE OUTPUT DEVICE SIGNAL WHENEVER ONE LOOP IS SHORT CIRCUITED OR THE OTHER WAY AROUND.
- LED ALARM ANNUNCIATOR TOGETHER WITH THE FIREFIGHTER'S TELEPHONE JACK MUST ALSO BE WIRED ACCORDINGLY AS SPECIFIED ON THIS PLAN AND SHALL BE INSTALLED BESIDE MANUAL CALL POINT STATION. AT LEAST TWO SETS OF FIREFIGHTER'S PLUGGABLE PHONE SHALL BE PROVIDED FOR EVERY SYSTEM AND SHALL BE LOCATED NEAR FIRE ALARM CONTROL PANEL FOR EASY RETRIEVAL DURING EMERGENCY AND FIRE SITUATION.
- MOUNTING HEIGHTS OF FIRE DETECTION DEVICES ARE THE FOLLOWING:
 - DETECTORS (CEILING-MOUNTED), VARIES
 - SOUNDERS 2.00 meters
 - MANUAL PULL STATION 1.40 meters
 - FIREFIGHTER'S TELEPHONE JACK 1.40 meters
 - CONTROL PANEL 1.40 meters
- ALL KINDS OF CURRENT-CARRYING CONDUCTORS MUST BE OF FIRE-RETARDANT TYPE. CONDUCTOR SIZE SHOULD TAKE VOLTAGE DROP INTO ACCOUNT. IN ANY CASE CONDUCTORS SHOULD HAVE A CROSS SECTIONAL AREA OF NOT LESS THAN 1 SQUARE MILLIMETER, UNLESS A DETECTION CIRCUIT OR DETECTOR LOOP EXCEEDS 1 KILOMETRE IN LENGTH. IT IS UNLIKELY TO GIVE RISE TO A CONCERN ABOUT VOLTAGE DROP IF THERE ARE FAIRLY LONG SOUNDER CIRCUITS OR A SOUNDER CIRCUIT HAS A LARGE NUMBER OF SOUNDERS/BUZZERS, VOICE ALARMS OR FLASHING BEACONS ETC ON IT, THEN VOLTAGE DROPS CAN CAUSE PROBLEMS. PROVIDING THE OVERALL VOLT DROP DOES NOT EXCEED 4 VOLTS ON SOUNDER CIRCUIT THEN THE SYSTEM SHOULD OPERATE SATISFACTORILY.
- FIRE ALARM CABLES, SHOULD ALWAYS BE SEGREGATED FROM CABLES FOR OTHER SYSTEMS TO MINIMIZE HARMONIC INTERFERENCES. AS FAR AS POSSIBLE, JOINTS SHOULD BE AVOIDED EXCEPT WHERE A JOINT IS INSIDE ONE OF THE SYSTEMS COMPONENTS (eg: CONTROL PANEL, DETECTOR, CALL POINT, SOUNDER ETC.) WHERE JOINTS ARE REQUIRED ELSEWHERE THEY SHOULD BE ENCLOSED IN A SUITABLE JUNCTION BOX MARKED FIRE ALARM TO ENSURE THAT THE FIRE ALARM SYSTEMS IS NOT ACCIDENTALLY INTERFERED WITH. GOOD WIRING INSTALLATION PRACTICES MUST BE OBSERVED DURING THE ENTIRE DURATION OF INSTALLATION.
- WHERE POSSIBLE CABLES SHOULD BE ROUTED THROUGH AREAS OF LOW FIRE RISK, CABLES INSTALLED IN DAMP, CORROSIVE OR UNDERGROUND LOCATIONS SHOULD BE PVC SHEATHED AND WHERE THERE IS A RISK OF MECHANICAL DAMAGE SHOULD BE PROTECTED ACCORDINGLY. IF CABLES ARE INSTALLED LESS THAN 1.40 M ABOVE THE FLOOR SHOULD THEY NORMALLY BE PROTECTED. ELECTRICAL METALLIC TUBING (EMT) PIPES SHALL BE USED ON ALL EXPOSED TYPE OF RACEWAYS. FLEXIBLE METALLIC TUBING MUST BE USED ON EXPOSED CABLE DROPPINGS.
- THE INTENTION OF THIS PLAN, NOTES AND SPECIFICATION IS TO KEEP THE INFORMATION GIVEN AS SIMPLE AS POSSIBLE. THIS NECESSITATES THE OMISSION OF MUCH INFORMATION CONTAINED WITHIN THE VARIOUS FIRE BUREAU STANDARDS AND THE REQUIREMENT OF THE VARIOUS FIRE ACTS.
- ALL COMPONENTS, CIRCUITS, SYSTEM OPERATIONS AND PRE-SET CONTROL PANEL SOFTWARE FUNCTIONS KNOWN TO BE AFFECTED BY CHANGES OR MODIFICATIONS MADE TO THE SYSTEM MUST BE 100 PERCENT TESTED. ALL FIXTURES REFLECTED HEREIN ARE REPRESENTATION DRAWINGS ONLY. THIS DRAWING DOESNT DIRECTLY SHOW THE ACTUAL APPEARANCE OF EACH FIXTURES WHILE ACTUAL DETERMINATION OF EXACT LOCATION MUST BE DONE BY THE CONTRACTOR DURING PRE-BID CONFERENCE AND DURING THE START OF INSTALLATION.
- ALL WIRING AND FIRE ALARM DEVICES INSTALLATIONS HEREIN SHALL DONE UNDER THE DIRECT SUPERVISION OF A LICENSED ELECTRONICS ENGINEER AND ELECTRICAL ENGINEER.

LEGENDS AND SYMBOLS

SYMBOLS	DESCRIPTION	MOUNTING HEIGHT
 SD	PHOTOELECTRIC SMOKE DETECTOR, 24VDC,	VARIES, CEILING MOUNTED
 RR	RATE OF RISE DETECTOR, 24VDC	VARIES, CEILING MOUNTED
 FX	HEAT DETECTOR, FIXED TYPE, 24VDC	VARIES, CEILING MOUNTED
 FD	FLAME DETECTOR, 24VDC	VARIES, CEILING MOUNTED
 B	6" ALARM BELL OR ALARM SOUNDER	2.00 meters from Center to Finish Floor Line
		
FACP	FIRE ALARM CONTROL PANEL, ZONE NOS SPECIFIED	1.50 meters from Center to Finished Floor Line
 FA	FIRE ALARM MANUAL CALL POINT, WITH TELEPHONE JACK	1.50 meters from Center to Finished Floor Line
	EMERGENCY LIGHTS WITH CHARGEABLE BATTERY	2.50 meters from Center to Finished Floor Line
	COUNTER-TOP CONVENIENCE OUTLET	Counter-Top Height (Verify Actual)
 FAA	FIRE ALARM ANNUNCIATOR	1.50 meters from Center to Finished Floor Line
	STEEL PANIC DOOR	(NOT INTERFACED WITH ANY SOUNDERS)



REPUBLIC ACT 9246: Article IV, Section 33
 The University of the Philippines shall be the primary and principal institution of higher learning in the Philippines.
 It shall be authorized for any person, without the consent of the University to construct or cause the construction of buildings on the campus.

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