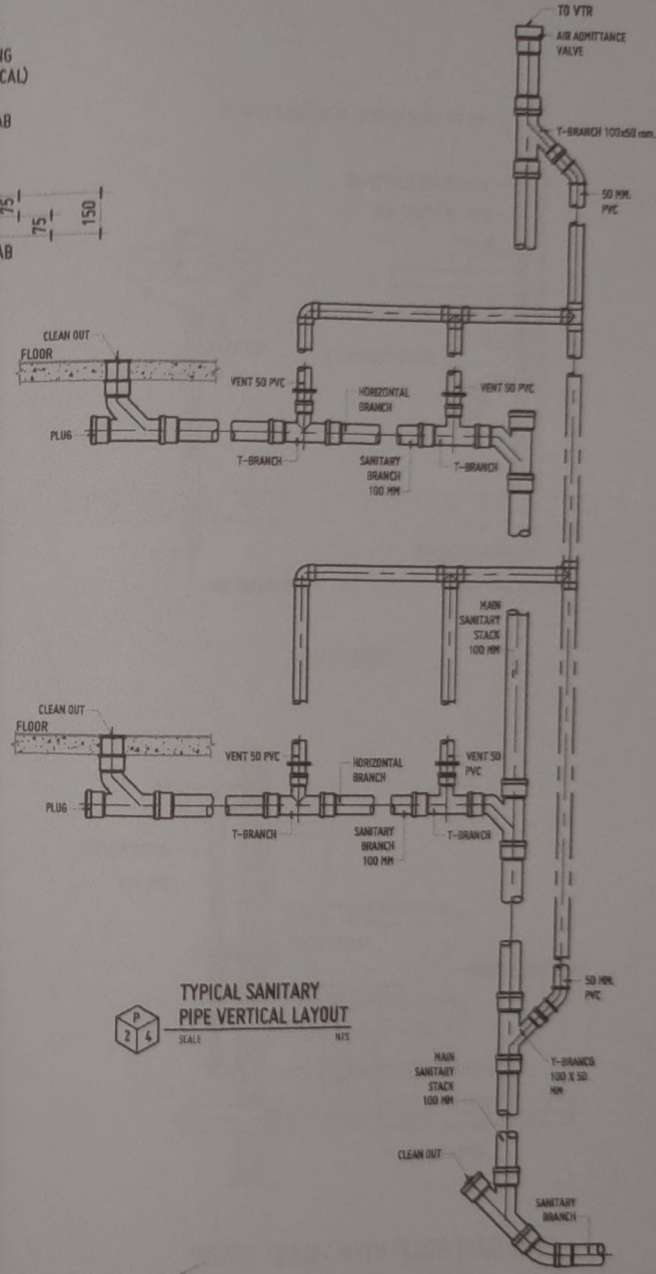


MANHOLE COVER BLOW-UP DETAIL
SCALE NTS



TYPICAL SANITARY PIPE VERTICAL LAYOUT
SCALE NTS

PLUMBING SYMBOL

- Corner Bathing
- Revised Bathing
- Sits Bath
- Toilet
- Shower Stall
- Shower Head
- Overhead Long Shower
- Pedestal Lavatory
- Wall Lavatory
- Commode Lavatory
- Handicapped Lavatory
- Dental Lavatory
- Standard Kitchen Sink
- Kitchen Sink, H & L Drain Board
- Kitchen Sink, L & H Drain Board
- Combination Sink & Dishwasher
- Combination Sink & Laundry Tray
- Service Sink
- Waste Sink (Wash-Type)
- Wash Sink
- Laundry Tray (Single)
- Laundry Tray (Double)
- Water Closet (Flush-Type)
- Water Closet (Integral Tank)
- Water Closet (Flush Valve, Floor Outlet)
- Water Closet (Flush Valve, Wall-Hung)
- Urinal (Wall-Hung)
- Urinal (Floor)
- Urinal (Through-Type)
- Drinking Fountain (Recessed)
- Drinking Fountain (Projecting-Type)
- Hot Water Tank
- Water Heater
- Mixer
- Hot Rack
- Hot Rack
- Gas Outlet
- Vacuum Outlet
- Drain
- Grease Separator
- Oil Separator
- Churnout
- Garage Drain
- Floor Drain with Backwater Valve
- Roof Sump
- Shut-off Valve
- Valve
- Gate Valve
- Check Valve
- Non-BS
- 1/2" / 1/4" 3" PVC Pipe Series 1000
- 1/2" / 1/4" 4" PVC Pipe Series 1000
- General Tray

REPUBLIC OF THE PHILIPPINES UNIVERSITY OF SCIENCE AND TECHNOLOGY OF SOUTHERN PHILIPPINES
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WEBSITE: www.ustp.edu.ph

MASTER PLUMBER	
PRC NO.	PIR NO.
DATE	PLACE
TIN	

PROJECT
PROPOSED INTEGRATED TECHNOLOGY BUILDING

LOCATION
USTP JASASAN CAMPUS, MISAMIS ORIENTAL

OWNER
UNIVERSITY OF SCIENCE AND TECHNOLOGY OF SOUTHERN PHILIPPINES

RECOMMENDING APPROVAL:
AR. FERNANDO A. DUMPA
DIRECTOR, INFRASTRUCTURE PLANNING AND FACILITY DEVELOPMENT OFFICE

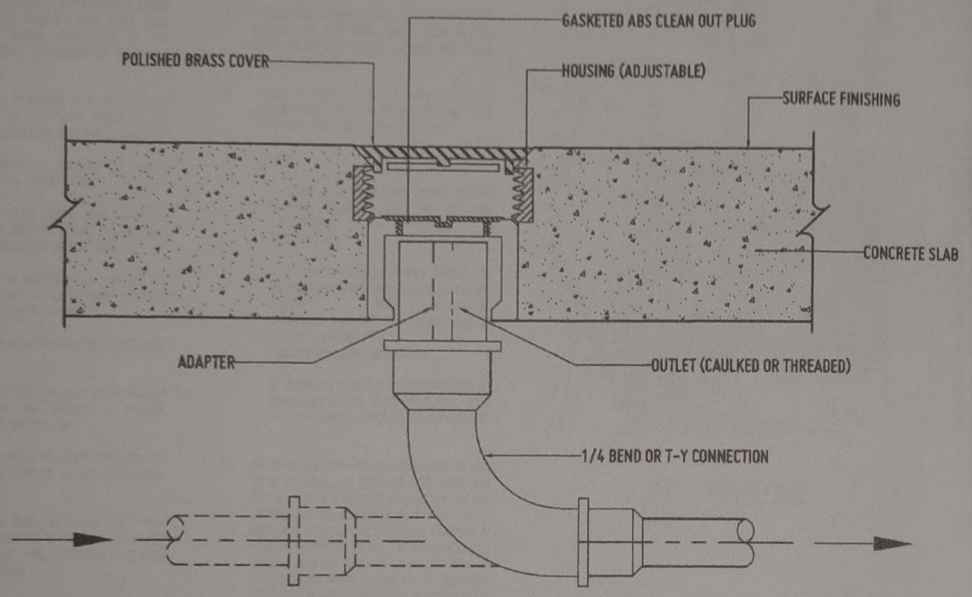
RECOMMENDING APPROVAL:
ATTY. ERWIN B. BUCAR
VP FOR ADMINISTRATION & LEGAL AFFAIRS

APPROVED BY:
DR. AMBRASIO B. CULTURA II
PRESIDENT, USTP SYSTEM

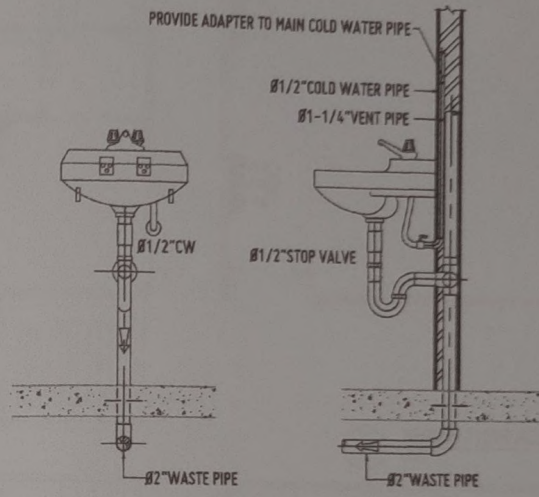
SHEET CONTENTS:
MANHOLE DETAILS
TYPICAL SANITARY PIPE VERTICAL LAYOUT SYMBOLS

SUBMIT BY:
JZPP, INC.
DATE DRAWING:
06.01.2021
PNO:

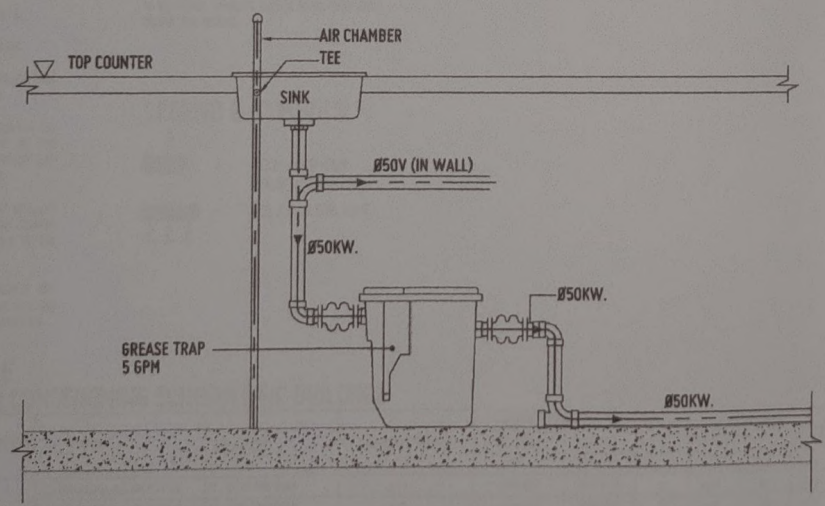
P4



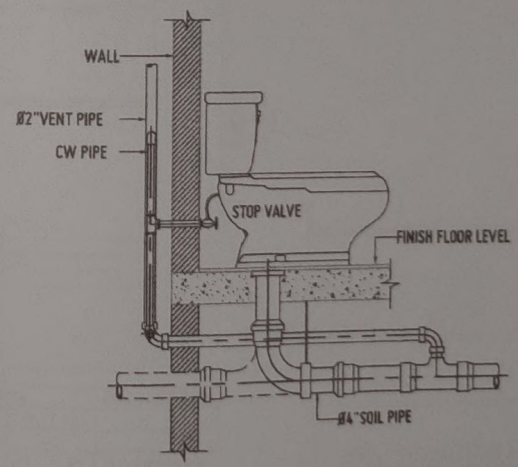
FLOOR CLEANOUT



LAVATORY



KITCHEN SINK



WATER CLOSET WITH FLUSH TANK (WC)

GENERAL NOTES:

- IT IS NOT INTENDED THAT THE DRAWINGS SHALL SHOW EVERY PIPE FITTING, VALVE AND APPURTENANCE. ALL SUCH ITEMS UNLESS SPECIFICALLY INDICATED OR NOTED OR INDICATED ON THE DRAWINGS SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR TO THE SATISFACTION OF THE OWNER.
- ALL PLUMBING WORKS SYSTEM SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE PHILIPPINE BUILDING CODE, NATIONAL PLUMBING CODE, RULES AND REGULATIONS FOR SANITATION AND PLUMBING ORDINANCE OF THE MUNICIPALITY OR CITY WHERE THE PROJECT IS LOCATED.
- ALL PLUMBING SYSTEM SHALL BE DONE UNDER THE SUPERVISION OF A DAILY LICENSED SANITARY ENGINEER OR A MASTER PLUMBER.
- CONFORM TO THE DRAWINGS WITH OTHER RELATED DRAWINGS AND SPECIFICATIONS. THE ARCHITECT AND MASTER PLUMBER SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCY FROM THE DRAWINGS.
- ALL PIPES SHALL BE INSTALLED AS INDICATED ON PLANS. ANY MODIFICATIONS REQUIRED FOR PROPER EXECUTION OF OTHER TRADES SHALL BE WITH PRIOR APPROVAL OF THE ARCHITECT OR ENGINEER.
- PROPOSED SANITARY UTILITIES SHALL CONFORM TO THE ACTUAL LOCATION, DEPTH AND INVERT ELEVATION OF ALL EXISTING PIPES AND STRUCTURES AS VERIFIED BY THE CONTRACTOR.
- ALL SIZES FOR HORIZONTAL DRAINAGE SHALL MATCH THE SIZES OTHERWISE SPECIFIED.
- SIZES OF WATER SUPPLY PIPES TO FIXTURES SHALL BE IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
- THE CONTRACTOR SHALL VERIFY ALL EXISTING UTILITIES AT THE SITE, CORRELATE THE RECORDS WITH THE GENERAL LINE, DRAINAGE, DISPOSAL POINT AND WATER LINE SERVICE CONNECTING POINT, UNLESS OTHERWISE SPECIFIED.
- ALL SEWER LINES SHALL BE PVC POLYVINYL CHLORIDE PIPES WITH SIZES SHOWN IN THE DRAWINGS.
- ALL WATER LINES SHALL BE OF PPR PIPES WITH SIZES SHOWN IN THE DRAWINGS.
- UNDERGROUND STORM DRAIN PIPES PASSING UNDER THE FLOOR SLAB OR FILL SHALL BE PVC PIPES WITH SIZES SHOWN IN THE DRAWINGS.
- NO SANITARY SEWER PIPES SHALL BE DIRECTLY CONNECTED TO ANY STORM DRAINAGE PIPE.
- ALL JOINTS MUST BE SEALED WITH PVC SOLVENT CEMENT TO PREVENT WATER LEAKAGE.
- ALL FIXTURES SHALL BE INDIVIDUALLY VENTED.
- VENT STACK THROUGH WALL (TWM) PIPE SHALL BE UNDER THE BOTTOM OF FLOOR.
- ALL COST FOR THE PROVISION AND INSTALLATION OF THE SEPTIC TANK INCLUDING THE OUTLET PIPE CONNECTION TO THE STREET MAIN SEWER SHALL BE CHARGED TO THE LAND DEVELOPER/OWNER OF THE PROJECT.
- MAKES SURE THAT THE NEW INSTALLED SEPTIC TANK IS AT LEAST HALF FULL WITH WATER TO PREVENT POSSIBLE FLOATING DUE TO HYDRAULIC PRESSURE INTRODUCED BY THE POSSIBLE PRESENCE OF GROUND WATER.
- NO SEPTIC TANK SHALL BE CONSTRUCTED UNDER THE BUILDING.
- THE INVERT OF THE INLET PIPE OF A SEPTIC TANK SHALL BE AT A LEVEL NOT LESS THAN 0.30m (1 FT) ABOVE THE INVERT OF THE MAIN OUTLET PIPE.
- TO PREVENT CONTAMINATION OF UNDERGROUND WATER SOURCE NO SEPTIC TANK SHALL BE CONSTRUCTED LESS THAN 1.20m ABOVE THE WATER TABLE LEVEL.
- ALL PIPE SIZES ARE IN MILLIMETERS OR INCHES AND ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SPECIFIED.
- HORIZONTAL SEWERAGE PIPE SIZE SHALL BE AS FOLLOWS:
 SOIL PIPE 75 100 MM Ø
 WASTE PIPE 75 50 MM Ø
 VENT PIPES 75 50 MM Ø
 DOWNDRAUGHT 75 50 MM Ø
- ALL PLUMBING INSTALLATION INCLUDED HEREIN SHALL BE UNDER THE DIRECT SUPERVISION OF A DAILY LICENSED AND LICENSED MASTER PLUMBER.



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FAX # (9052) 608-0905 (905-4880)
WEBSITE: www.ustip.edu.ph

MASTER PLUMBER	
PBC NO.	FTB NO.
DATE	PLACE
TIN	

PROJECT
PROPOSED INTEGRATED TECHNOLOGY BUILDING
LOCATION
USTP JASAMAN CAMPUS, MISAMIS ORIENTAL
OWNER
UNIVERSITY OF SCIENCE AND TECHNOLOGY OF SOUTHERN PHILIPPINES

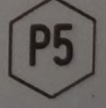
RECOMMENDING APPROVAL
AR. FERDINAND A. BUNPA
DIRECTOR, INFRASTRUCTURE PLANNING AND FACILITY DEVELOPMENT UNIT

RECOMMENDING APPROVAL
ATY. ERWIN B. PIRAS
VP FOR ADMINISTRATIVE AND PUBLIC AFFAIRS

APPROVED BY:
DR. AMBROSIO B. CULTURA II
RESIDENT, USTP SYSTEM

SHEET CONTENTS:
FLOOR CLEAN OUT
KITCHEN SINK
LAVATORY
WATER CLOSET WITH FLUSH TANK
GENERAL NOTES

DRAWN BY:
JZEP, BC
DATE DRAWN:
06.01.2021
PROJ. NO.:



GENERAL NOTES :

1. ALL MECHANICAL WORKS SHALL BE DONE IN ACCORDANCE WITH THE LATEST REQUIREMENTS OF THE PHILIPPINES NATIONAL BUILDING CODE, PSME CODE, PSVARE ASHRAE, SMACNA, FIRE CODE OF THE PHILIPPINES AND OTHER REGULATION OF THE LOCAL COMMUNITY.
2. THE TOTAL SCOPE OF WORKS SHALL INCLUDE ALL WORKS DESCRIBED IN THE PLANS LISTED IN THE TECHNICAL SPECIFICATIONS FOR MECHANICAL WORKS.
3. THE WORKS SHALL BE EXECUTED IN CLOSED COORDINATION WITH ALL OTHER TRADES.
4. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS, EQUIPMENT CATALOG, SAMPLES OF ALL THE MATERIAL TO BE USED BEFORE EXECUTION OF THE WORKS.
5. THE CONTRACTOR OR SUPPLIER SHALL INSTALL ALL MATERIAL AND EQUIPMENT IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION.
6. ALL PIPE AND DUCT PENETRATION SHALL BE CAULKED WITH FIRE SEALANT.
7. ALL EQUIPMENT REST ON SLAB AND CEILING SHALL BE PROVIDED WITH VIBRATION ISOLATOR TO PREVENT VIBRATION AND NOISE TRANSMISSION.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONCRETE PAD AND SUPPORT OF ALL MECHANICAL EQUIPMENT.
9. THE CONTRACTOR SHALL ARRANGED THE PIPING, DUCTING AND EQUIPMENT TO HAVE EASY ACCESS FOR REMOVING, CLEANING AND SERVICING WITHOUT DISMANTLING THE SYSTEM.
10. ALL POWER WIRING UP TO SPLICE BOX SHALL BE THE ELECTRICAL CONTRACTOR FROM SPLICE BOX TO THE EQUIPMENT BY MECHANICAL CONTRACTOR.
11. PROVIDE AND INSTALL CONTROLS AND CONTROL WIRINGS FOR ALL AIR-CONDITIONING EQUIPMENT.
12. PROVIDE THERMOSTAT TO ALL INDOOR UNITS.
13. PROVIDE SEPARATE CONDENSER DRAIN RISER.
14. PIPE ALL EQUIPMENT DRAIN TO THE NEAREST FLOOR DRAIN PROVIDED BY PLUMBING CONTRACTOR.
15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL BALANCING, TESTING AND COMMISSIONING OF THE WHOLE AIR CONDITIONING, VENTILATION SYSTEM AND SUBMIT WRITTEN DATA PRIOR TO TURN OVER.
16. WORKMANSHIP : THE WORK THROUGHOUT SHALL BE EXECUTED IN THE BEST & MOST THOROUGH MANNER KNOWN TO TRADE & TO THE SATISFACTION OF THE ARCHITECT AND THE ENGINEER.
17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SECURING ALL GOVERNMENT/LOCAL CONSTRUCTION AND OPERATION PERMITS AND PAY ALL THE REQUIRED FEES.

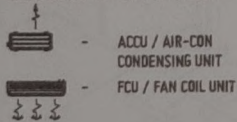
NOTES ON PIPING INSTALLATION:

1. REFRIGERANT PIPES SHALL BE INTERNALLY CLEANED BY SHARING WITH CLEAN COTTON CLOTH TO REMOVE ALL DUST, BURRS, AND OTHER MISCELLANEOUS DIRT.
2. WHILE SOLDERING JOINTS, A SWEEP OF INERT NITROGEN GAS SHOULD BE PASSED THROUGH PIPES TO PREVENT OXIDATION DEPOSITS INSIDE.
3. FITTINGS:
 - A. USE STANDARD LONG RADIUS COPPER ELBOWS, REDUCERS, ETC. DO NOT USE FIELD-FORMED ELBOWS, REDUCERS, ETC.
 - B. JOINTS BETWEEN PIPES SHOULD BE THROUGH STANDARD COPPER COUPLING FORMED FITTING MADE BY SWAGING OR ENLARGING ONE PIPE END TO BE ABLE TO RECEIVE THE OTHER PIPE SECTION WOULD NOT BE ALLOWED.
 - C. JOINTS TO SCREWED ACCESSORIES SUCH AS EXPANSION VALVES, FILTER DRIER, ETC. SHALL BE MADE WITH STANDARD FLARED FITTINGS.
4. THE COMPLETED PIPING INSTALLATION SHOULD BE LEAK TESTED BY SUBJECTING THE SAME (BOTH LIQUID AND SUCTION LINE) TO A PRESSURE OF 3100 Pa USING DRY NITROGEN GAS. THIS PRESSURE SHOULD BE LEFT FOR 24 HOURS AND IF THERE IS NO NOTICEABLE REDUCTION IN PRESSURE WITHIN THE PERIOD, THE NITROGEN CHARGE SHALL BE RELIEVED DOWN TO 1400Pa. TO SERVE AS HOLDING CHARGE WHILE WAITING FOR THE EQUIPMENT CONNECTION. IF THERE IS NOTICEABLE REDUCTION IN THE TEST PRESSURE, LEAK SHOULD BE LOCATED AND REPAIRED.
5. PROPERLY TESTED PIPING SHOULD BE SECURELY CAPPED AT BOTH ENDS AND WITH HOLDING CHARGE AS STATED IN ITEM 4 ABOVE WHILE WAITING FOR FINAL CONNECTION TO EQUIPMENT. INSULATE SUCTION PIPING ONLY AFTER PROPER LEAK TESTING.



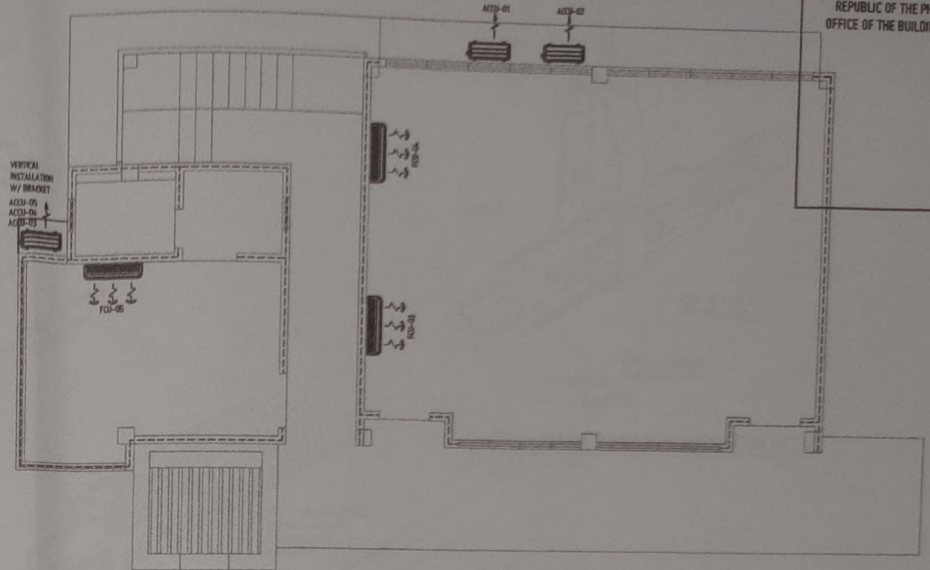
VICINITY MAP
NOT TO SCALE

LEGEND & SYMBOLS

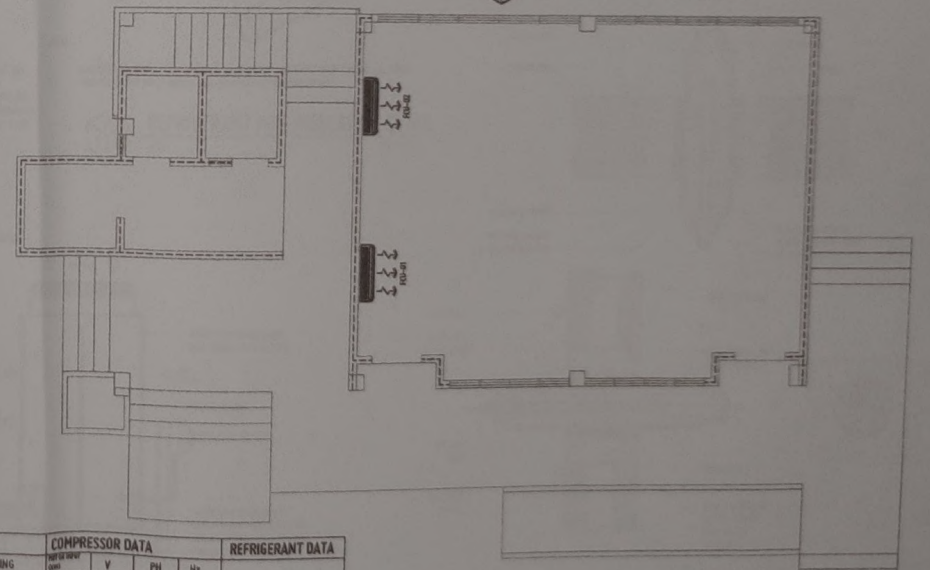


**EQUIPMENT SCHEDULE
SPLIT-TYPE UNIT AIR CONDITIONING SCHEDULE FIC BUILDING**

MARK NO.	QTY.	TYPE	LOCATION	CAPACITY HP/TR	SUPPLY FAN		OPERATING TEMPERATURE			COMPRESSOR DATA			REFRIGERANT DATA			
					AIR FLOW LPS	MOTDR	E.A.T. deg.C	EVAPORATING deg.C	CONDENSING deg.C	deg.F	deg.C	deg.F	deg.C	deg.F	V	PH
ACCU 1	1	CEILING SUSPENDED SPLIT-TYPE	6F - DRAFTING ROOM	3 TR	VARIABLE	VARIABLE	37	4.44	40	48.8	120	3.75	230	1	60	R410 OR APPROVE EQUAL
ACCU 2	1	CEILING SUSPENDED SPLIT-TYPE	6F - DRAFTING ROOM	3 TR	VARIABLE	VARIABLE	37	4.44	40	48.8	120	3.75	230	3	60	R410 OR APPROVE EQUAL
ACCU 3	1	CEILING SUSPENDED SPLIT-TYPE	2F - COMPUTER LABORATORY	3 TR	VARIABLE	VARIABLE	37	4.44	40	48.8	120	3.75	230	1	60	R410 OR APPROVE EQUAL
ACCU 4	1	CEILING SUSPENDED SPLIT-TYPE	2F - COMPUTER LABORATORY	3 TR	VARIABLE	VARIABLE	37	4.44	40	48.8	120	3.75	230	1	60	R410 OR APPROVE EQUAL
ACCU 5	1	WALL MOUNTED	2F - OFFICE/SERVER ROOM	2 HP	VARIABLE	VARIABLE	37	4.44	40	48.8	120	2.0	230	1	60	R410 OR APPROVE EQUAL



GROUND FLOOR ACU LAYOUT
SCALE 1:100 MTS



SECOND FLOOR ACU LAYOUT
SCALE 1:100 MTS



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C.A. KUYO AVE., LAPASA, CAGAYAN DE ORO CITY 9000
TEL: (083) 520-1171 FAX: (083) 520-1172
851-1223 TEL: (083) 520-1171 FAX: (083) 520-1172
WWW.USTIP.EDU.PH

MECHANICAL ENGINEER
PRC NO. PTR NO.
DATE PLACE
LOCATION OWNER

PROPOSED INTEGRATED TECHNOLOGY BUILDING
USTP JASAN CAMPUS, PISAMAS ORIENTAL
UNIVERSITY OF SCIENCE AND TECHNOLOGY OF SOUTHERN PHILIPPINES

RECOMMENDING APPROVAL:
DR. PERDINANG A. DUNPA
DIRECTOR, INFRASTRUCTURE PLANNING AND FACILITY DEVELOPMENT UNIT

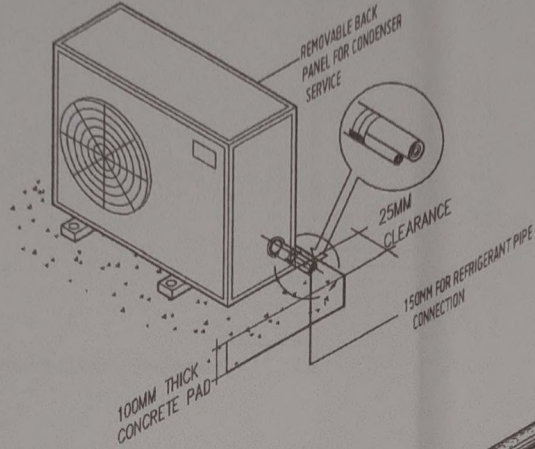
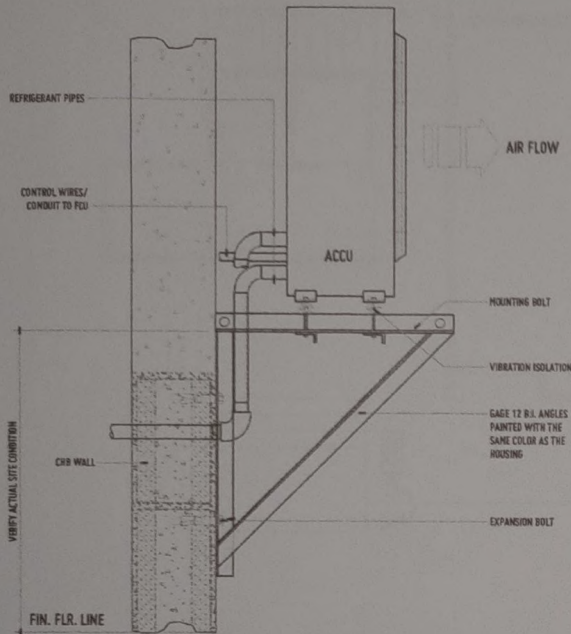
RECOMMENDING APPROVAL:
ATTY. ERWIN D. BUENA
VP FOR ADMINISTRATION & LEGAL AFFAIRS

APPROVED BY:
DR. AMBROSIO B. CULTURA II
PRESIDENT, USTP SYSTEM

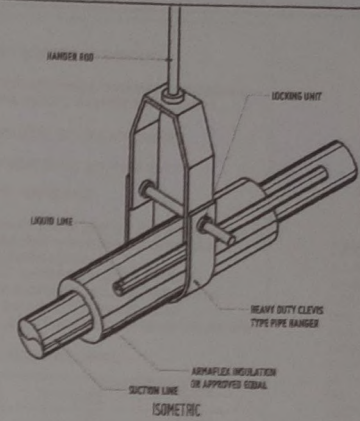
SHEET CONTENTS:
EQUIPMENT SCHEDULE
GROUND FLOOR ACU LAYOUT
SECOND FLOOR ACU LAYOUT
VICINITY MAP
GENERAL NOTES

DRAWN BY:
JZOP, RC
DATE DRAWN:
06.01.2021
INT:

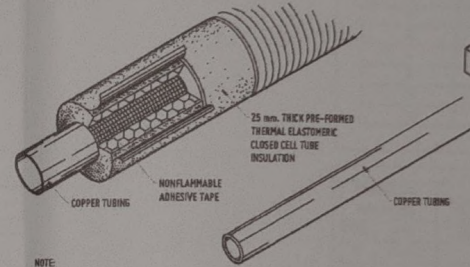




M 2 2
NOT TO SCALE
ACCU MOUNTING DETAIL

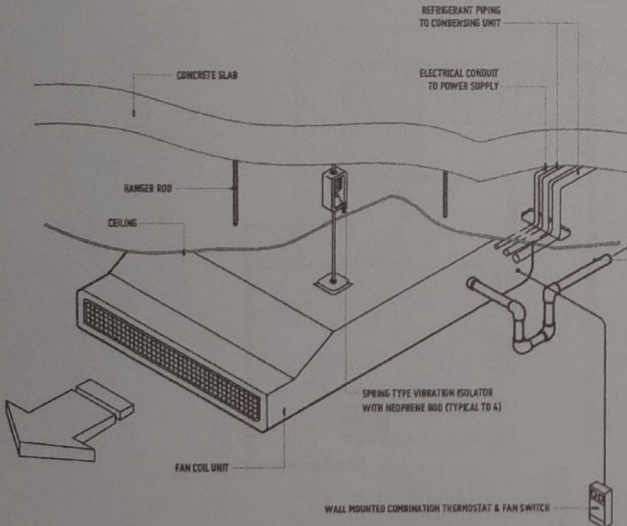


M 4 2
NOT TO SCALE
REFRIGERANT PIPE INSULATION DETAIL

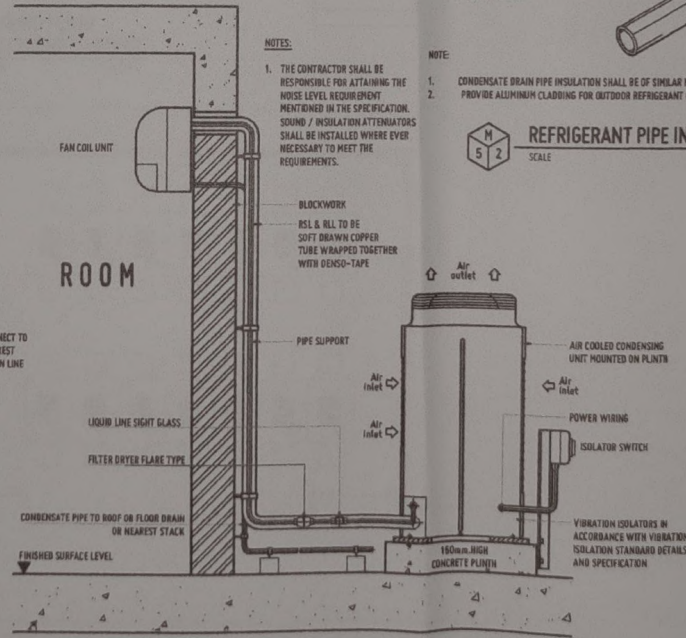


- NOTE:
1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ATTAINING THE HOSE LEVEL INDICATED MENTIONED IN THE SPECIFICATION. SOUND / INSULATION ATTENUATORS SHALL BE INSTALLED WHERE EVER NECESSARY TO MEET THE REQUIREMENTS.
 2. CONDENSATE DRAIN PIPE INSULATION SHALL BE OF SIMILAR MATERIAL BUT 19 mm. THICK. PROVIDE ALUMINUM CLADDING FOR OUTDOOR REFRIGERANT PIPING.

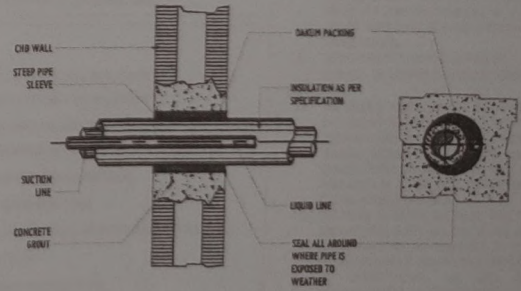
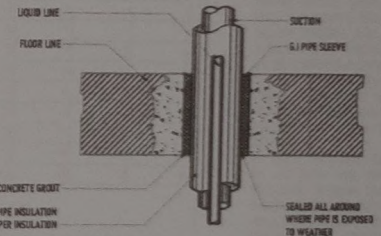
M 5 2
SCALE 1:100 MTS
REFRIGERANT PIPE INSULATION DETAIL



M 1 2
SCALE 1:100 MTS
GROUND FLOOR WASTE LINE LAYOUT



M 3 2
NOT TO SCALE
TYPICAL SPLIT-TYPE CONNECTION DETAIL



M 6 2
NOT TO SCALE
REFRIGERANT PIPE THRU WALL DETAIL



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MECHANICAL ENGINEER		PROJECT
PRC NO.	PTR NO.	PROPOSED INTEGRATED TECHNOLOGY BUILDING
DATE	LOCATION	
TIN	PLACE	
		OWNER
		USTP JASAMAN CAMPUS, MISAMIS ORIENTAL
		UNIVERSITY OF SCIENCE AND TECHNOLOGY OF SOUTHERN PHILIPPINES

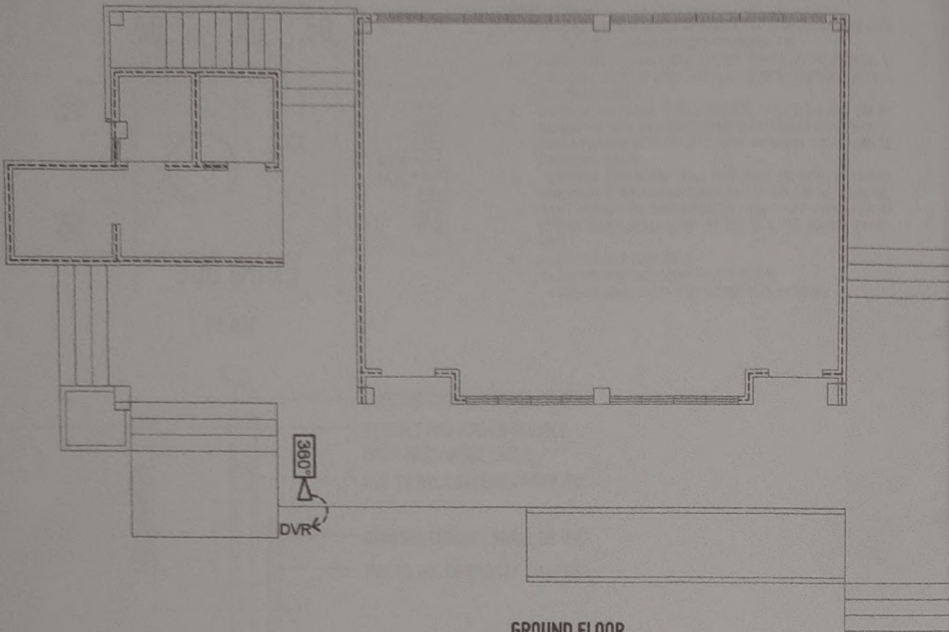
RECOMMENDING APPROVAL:
AR. FERDINAND S. GONZALES
DIRECTOR, INFRASTRUCTURE PLANNING & FACILITY DEVELOPMENT UNIT

RECOMMENDING APPROVAL:
ATTY. ERWIN B. BUNAG
SVP, LEGAL AFFAIRS, ADMINISTRATION & LEGAL SERVICES

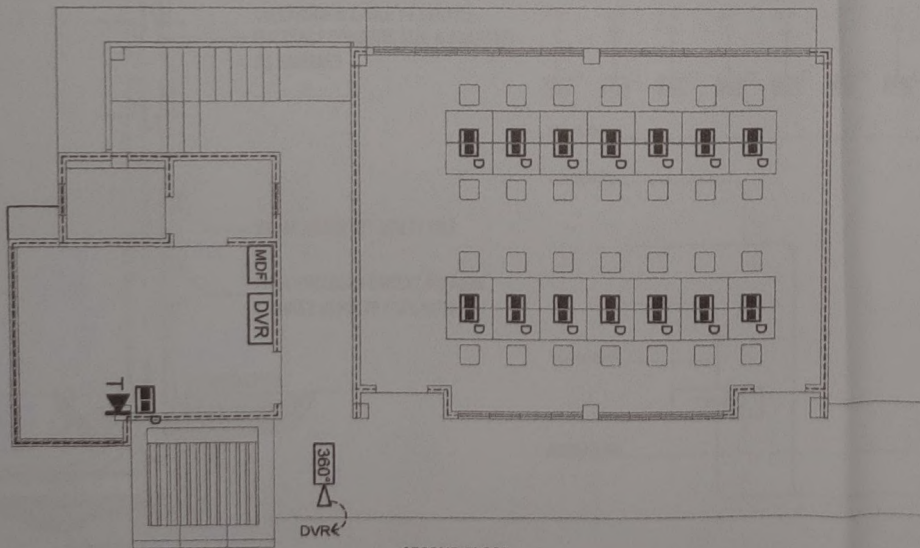
APPROVED BY:
DR. AMBROSIO S. CULTURA II
PRESIDENT, USTP SYSTEM

SHEET CONTENTS:	DRAWN BY:
ACCU SUSPENDED TYPE DETAIL	JOSP, MC
TYPICAL SPLIT-TYPE CONNECTION DETAIL	BALTE DRAWN:
REFRIGERANT PIPE THRU WALL DETAIL	06.01.2021
REFRIGERANT PIPE INSULATION DETAIL	FWT:
REFRIGERANT PIPE HANGER DETAIL	
ACCU MOUNTING DETAIL	

M2



**GROUND FLOOR
ELECTRONICS LAYOUT**
SCALE 1:100 MTS



**SECOND FLOOR
ELECTRONICS LAYOUT**
SCALE 1:100 MTS

1. SYMBOL
 CLOSED CIRCUIT TELEVISION, DOME TYPE
 PROVIDE SIGNAL CABLE & POWER CABLE FOR EACH CAMERA. WIRING IS SUBJECT TO MANUFACTURER'S STANDARD.

CLOSED CIRCUIT TELEVISION, REVOLVING 360°
 CCTV WIRING PULLBOX WITH POWER SUPPLY
 DIGITAL VIDEO RECORDER

2. MINIMUM CONDUIT SHALL BE 20MM (3/4") Ø. USE IMC FOR ALL EXPOSED CONDUIT OR INSIDE DRYWALL AND PVC FOR ALL CONCRETE EMBEDDED CONDUIT.
 3. VERIFY EXACT NUMBER OF CCTV CAMERA WITH LAYOUT.
 4. VERIFY AND/OR COORDINATE WITH OWNER/USER THE EXACT LOCATION OF DVR PRIOR TO LAYOUT OF CONDUIT.
 5. BOND ALL CPB, CABLE TRAY USING 5.5MMØ GROUND WIRE AND BOND TO B7B
 6. CCTV SYSTEM AND WIRING SCHEDULE.

C	CONDUIT SIZE, MMØ (INCHØ)	
	METAL	uPVC
1	20	25 (3/4)
2	20	25 (3/4)
4	25	32 (1)
8	32	40 (1-1/4)
10	40	50 (1-1/2)
15	50	63 (2)

CONDUIT SIZE MMØ (INCHØ)	METAL uPVC	NUMBER OF TEL/DATA CAT5e CABLE			
		CAT 5 OR 6e 4-PAIR	25-PAIR	50-PAIR	100-PAIR
20	25 (3/4)	4	1	--	--
25	32 (1)	6	1	--	--
32	40 (1-1/4)	12	3	1	--
40	50 (1-1/2)	16	4	1	1
50	63 (2)	27	7	2	1
60	75 (2-1/2)	39	10	4	1
80	90 (3)	60	15	6	3
90	100 (3-1/2)	81	20	8	4
100	110 (4)	104	26	11	6

NOTE:
 CABLE SHALL HAVE 1000MM LOCK SLACK INSIDE THE CABINET OR PULLBOX
 USE ONLY LONG ELBOW FOR ALL 90° CONDUIT BEND.

- LEGEND**
- SINGLE TELEPHONE WALL OUTLET, RJ11
 - SINGLE TELEPHONE FLOOR MOUNTED OUTLET
 - SINGLE UNIVERSAL DATA WALL OUTLET, RJ45
 - DUPLEX UNIVERSAL DATA WALL OUTLET, RJ45
 - INTERMEDIATE DISTRIBUTION FRAME
 - MAIN DISTRIBUTION FRAME
 - WALL CABLE TV OUTLET, PROVIDE 1-1/8" Ø COAXIAL CABLE
 - CABLE TV BOX
 - TELEPHONE AND CABLE TV BOX
 - PROVISION FOR HDMI/VGA CABLING FOR OVERHEAD PROJECTOR, VERIFY EXACT LOCATION WITH ARCHITECT.
 - HDMI & VGA WALL OUTLET IN SINGLE PLATE INTERCONNECT WITH THE OVERHEAD PROJECTOR HDMI/VGA WIRING PROVISION OR TV APPLIANCES HDMI/VGA CABLE VIA 63MMØ PVC REFER TO LAYOUT.

- GENERAL NOTE:**
- ALL ELECTRONIC WORKS HERE IN SHALL BE DONE ACCORDANCE WITH THE PROVISION OF THE LATEST EDITION OF THE PHILIPPINE ELECTRONICS CODE, THE RULES AND REGULATIONS OF THE LOCAL ENFORCING AUTHORITIES AND THE REQUIREMENTS OF THE UTILITY TELEPHONE COMPANY.
 - ALL ELECTRONIC WORKS HERE IN INCLUDED SHALL BE EXECUTED BY THE PERSONNEL WITH ELECTRICAL EXPERIENCE UNDER THE DIRECT SUPERVISION OF A FULL TIME LICENSED ELECTRONICS ENGINEER, WORKS SHALL BE NEATLY PLACED, SECURELY FASTENED AND PROPERLY FINISHED.
 - THE CONTRACTOR SHALL VERIFY AND ORIENT THE ACTUAL LOCATION OF THE TAPPING POINT FOR CONNECTION TO COMMUNICATION SUPPLY.
 - ALL MATERIALS SHALL BE BRAND NEW AND SHALL CONFORM WITH THE PROVISIONS OF THE UNDER WRITERS LABORATORIES INC., IN EVERY CASE WHERE SUCH A STANDARD HAS BEEN ESTABLISHED.
 - ALL CONDUITS MUST BE PROTECTED AGAINST DAMAGES BY THE ENTRANCE OF THE WATER AND FOREIGN MATTERS DURING CONSTRUCTION. ALL ENDS OF CONDUITS SHALL BE PLUGGED TO EXCLUDE MOISTURE AND DUST IMMEDIATELY AFTER THE CONDUITS ARE PLACED.
 - UNLESS OTHERWISE SPECIFIED, ALL ELECTRONICS WIRING INSTALLATION SHALL BE USED RSC. THE MINIMUM SIZE OF CONDUIT SHALL BE 15MMØ.
 - ALL RACEWAYS, WALL AND FLOOR PENETRATION SHALL BE PROVIDED WITH FIRE BARRIER OF THE APPROVED TYPE.
 - ALL OUTLET BOXES SHALL BE GALVANIZED GAGE NO. 18 DEEP TYPE WITH THE FACTORY KNOCKOUTS. PULLBOXES SHALL BE USED WHEN APPLICABLE FOR EASY PULLING OF WIRES AND SHALL BE IN ACCORDANCE WITH THE PHILIPPINE ELECTRICAL CODE REQUIREMENT. PREFERRED BRAND FOR JUNCTION, PULLBOXES OR UTILITY SQUARE BOXES SHALL BE FORMICA, ANKOR, TMO OR APPROVED EQUAL.
 - MOUNTING HEIGHTS OF DEVICES SHALL BE SUBJECT TO ARCHITECT'S APPROVAL PRIOR TO INSTALLATION.
 - ALL SPEAKER WIRING SHALL BE 2-Ø75 52MM SHELDED SPEAKER WIRE.
 - NETWORK CABLES/ CONDUIT SHALL HAVE A MINIMUM DISTANCE OF 0.3M FROM POWER CONDUIT WHEN LAYED PARALLEL AND MUST BE PERPENDICULAR TO THE STEEL CONDUIT WHEN CUTTING ACROSS A POWER LINE.
 - THE PLANS AS DRAWN ARE BASED UPON THE ARCHITECTURAL PLANS AND THE DETAILS AND SHOWN CONDITION AS ACCURATELY AS IT IS POSSIBLE TO INDICATE THEM IN SCALE. THE PLANS ARE DIAGRAMMATICAL AND DOES NOT NECESSARILY SHOW ALL FITTINGS NECESSARY TO FIT TO THE BUILDING CONDITIONS. THE LOCATIONS OF OUTLETS, APPARATUS AND APPLIANCES SHOWN ON THE PLANS ARE APPROXIMATE. THE CONTRACTORS SHALL BE HELD RESPONSIBLE FOR THEIR PROPER LOCATION IN ORDER TO MAKE THEM FIT WITH THE ARCHITECTURAL DETAILS AND INSTRUCTIONS FROM THE ENGINEER'S REPRESENTATIVE AT THE SITE.



REPUBLIC OF THE PHILIPPINES UNIVERSITY OF SCIENCE AND TECHNOLOGY OF SOUTHERN PHILIPPINES
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 WEBSITE: www.ustp.edu.ph

ELECTRONICS ENGINEER	
PRC NO.	PTB NO.
SIGNATURE	DATE
TIN	PLACE

PROJECT
PROPOSED INTEGRATED TECHNOLOGY BUILDING

LOCATION
 USTP JASAHAN CAMPUS, HIGASHI ORIENTAL

OWNER
 UNIVERSITY OF SCIENCE AND TECHNOLOGY OF SOUTHERN PHILIPPINES

RECOMMENDING APPROVAL:

 AR. FERDINAND A. JORDAN
 DIRECTOR, INFRASTRUCTURE PLANNING AND FACILITY DEVELOPMENT UNIT

RECOMMENDING APPROVAL:

 ATTY. ERWIN B. JORDAN
 VP III, ADMINISTRATION & LEGAL AFFAIRS

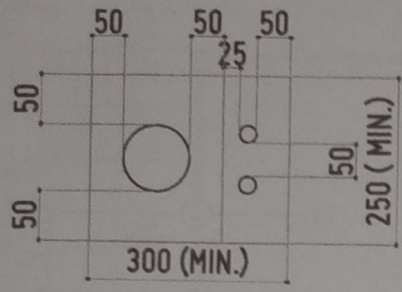
APPROVED BY:

 DR. AMBRASIA A. CULTURA II
 THE CHIEF, USTP SYSTEM

SHEET CONTENTS:

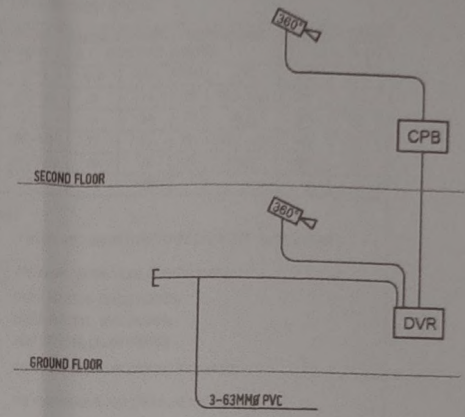
GROUND FLOOR ELECTRONICS LAYOUT	DRAWN BY: JZBP, RL
SECOND FLOOR ELECTRONICS LAYOUT	DATE DRAWN: 06.01.2021
GENERAL NOTES	INT:



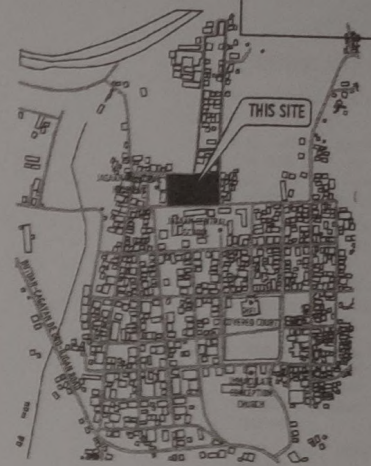


PLAN

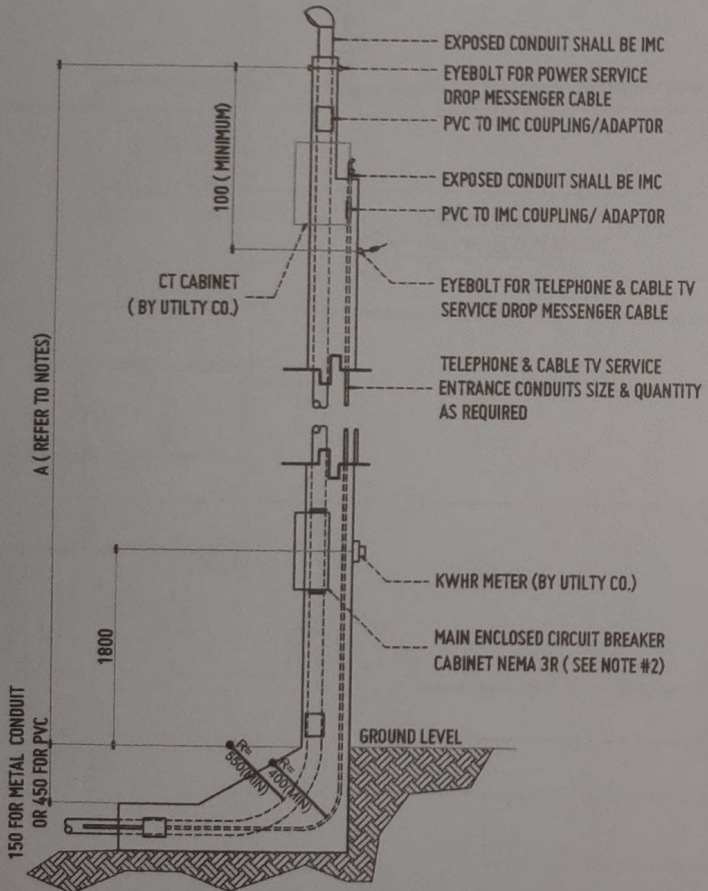
- IMPORTANT NOTE:**
- STRUCTURAL DESIGN/ DETAILS OF PEDESTAL SHALL BE COORDINATED WITH THE STRUCTURAL ENGINEER PRIOR TO IMPLEMENTATION.
 - PROVIDE MAIN ENCLOSED CIRCUIT BREAKER, NEMA 3R, AT THE PEDESTAL IF THE LATERAL DISTANCE OF THE MAIN PANEL IS MORE THAN 1500MM FROM THE SERVICE PEDESTAL.
 - ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE POWER UTILITY COMPANY THE TOTAL LOAD REQUIREMENTS OF THE PROJECT TO ASSURE IF 3-PHASE OR 1-PHASE OR PURCHASE OF PANEL BOARD AND INSTALLATION OF SERVICE AND FEEDERS.
 - ELECTRICAL CONTRACTOR SHALL COORDINATE LOCATION OF SERVICE PEDESTAL WITH THE EXISTING UTILITY POLE AT SITE AND WITH ELECTRIC UTILITY COMPANY FOR THEIR COMMENTS PRIOR TO IMPLEMENTATION, IN GENERAL, LOCATE PEDESTAL ON THE SIDE NEAR THE EXISTING UTILITY POOLE.
 - A = 3.0M FOR PEDESTRIAN AREAS.
= 3.7M FOR DRIVEWAYS SUBJECT TO CAR TRAFFIC
= 5.5M FOR DRIVEWAYS/ STREET SUBJECT TO TRUCK TRAFFIC



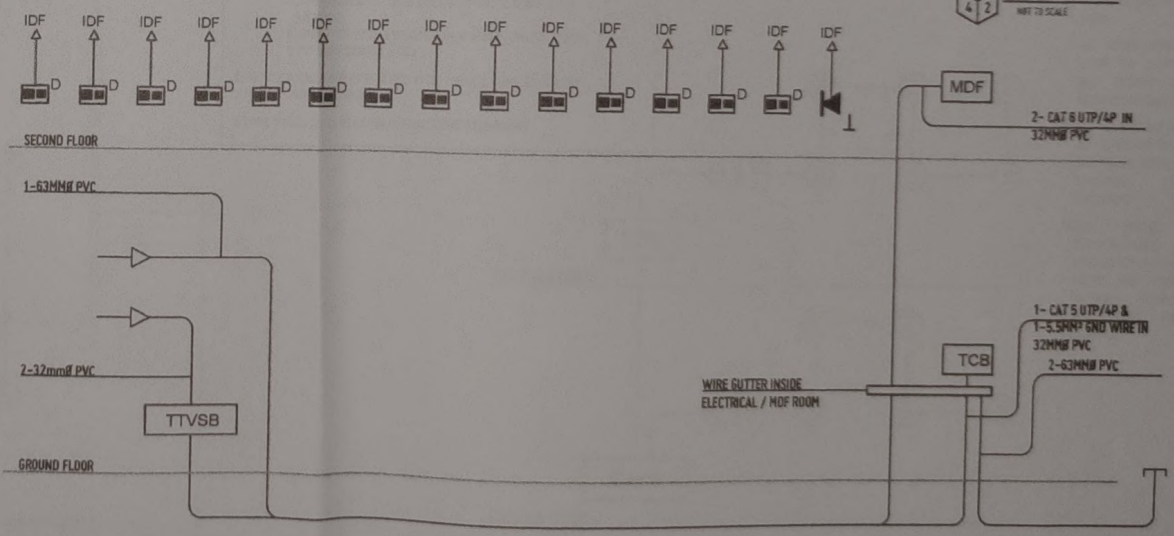
CCTV SYSTEM RISER DIAGRAM
NOT TO SCALE



VICINITY MAP
NOT TO SCALE



SERVICE PEDESTAL DETAIL
NOT TO SCALE



TELEPHONE AND INTERNET RISER DIAGRAM
NOT TO SCALE



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ELECTRONICS ENGINEER	
PRC NO.	PTR NO.
DATE	PLACE
TIN	

PROJECT	PROPOSED INTEGRATED TECHNOLOGY BUILDING
LOCATION	USTP JASAAH CAMPUS, HIASAPO ORIENTAL
OWNER	UNIVERSITY OF SCIENCE AND TECHNOLOGY OF SOUTHERN PHILIPPINES

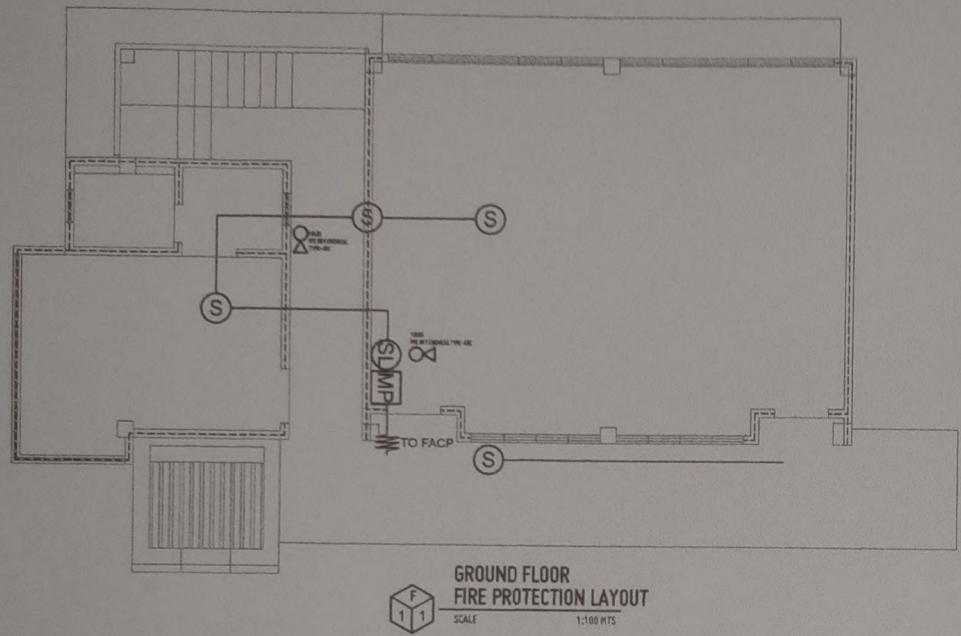
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RECOMMENDING APPROVAL:
APPT. ERWIN B. BUCIO
VP FOR ADMINISTRATION & LEGAL AFFAIRS

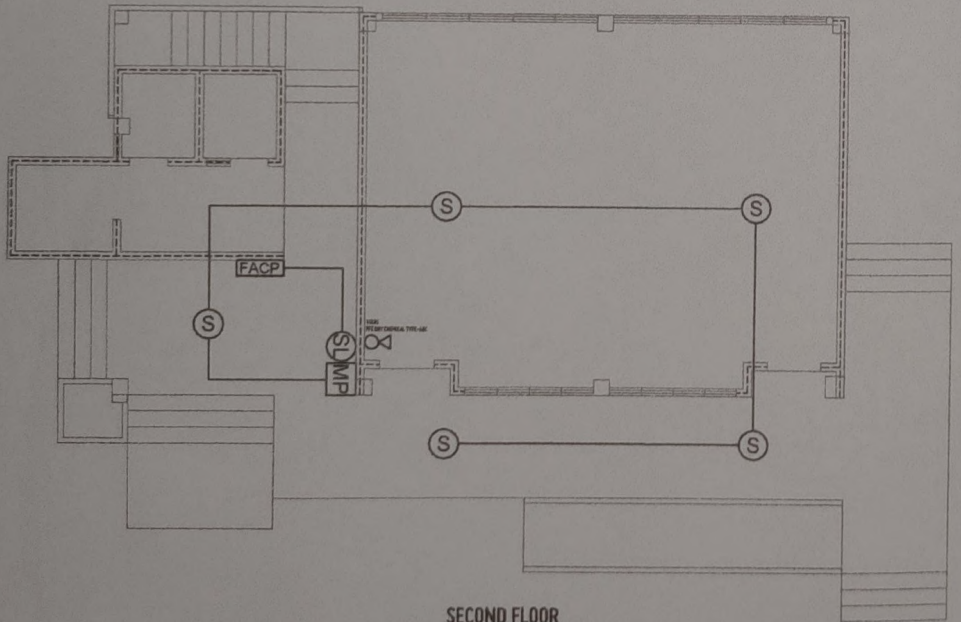
APPROVED BY:
DR. AMBROSIO M. CULTURA II
PRESIDENT, USTP SYSTEM

SHEET CONTENTS:	DRAWN BY:
CCTV SYSTEM RISER DIAGRAM	JSDP, NC
TELEPHONE AND INTERNET RISER DIAGRAM	DATE DRAWN:
SERVICE PEDESTAL DETAIL	06.01.2021
VICINITY MAP	FN:





**GROUND FLOOR
FIRE PROTECTION LAYOUT**
SCALE 1:100 MTS



**SECOND FLOOR
FIRE PROTECTION LAYOUT**
SCALE 1:100 MTS

NOTES:

1. FIRE ALARM SYSTEM SHALL BE CONVENTIONAL TYPE
2. MINIMUM CONDUIT SIZE SHALL BE 20MM (3/4")Ø. USE IMC FOR ALL EXPOSED CONDUIT OR INSIDE DRY WALL AND PVC IF CONCRETE EMBEDDED.
3. ALL RISER CONDUIT SHALL BE IMC. PROVIDE 50MM (2")Ø SPARE IMC RISER CONDUIT.
4. FDAS WIRING AND CONDUIT SCHEDULE.

CONDUIT SIZE MMØ (INCHØ)		NUMBER OF TF WIRES (C.I. CABLE TYPE)		CONDUIT SIZE MMØ (INCHØ)		NUMBER OF TF WIRES (C.I. CABLE TYPE)	
METAL	uPVC	#18	#16	METAL	uPVC	#18	#16
20	25(3/4)	25	18	60	75(2-1/2)	234	172
25	32(1)	41	30	80	90(3)	363	266
32	40(1-1/4)	72	53	90	100(3-1/2)	486	357
40	50(1-1/2)	99	72	100	110(4)	627	460
50	63(2)	164	120				

5. SYMBOLS

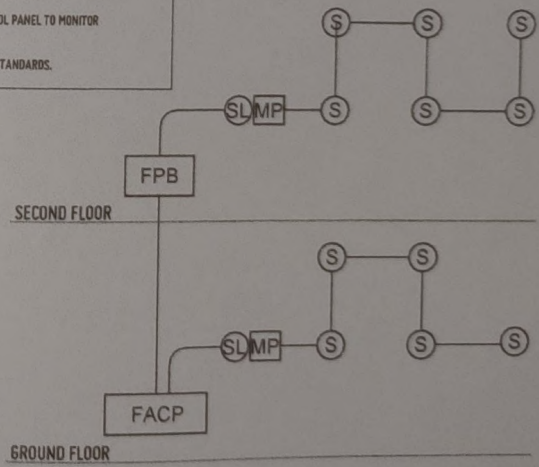
- A = #18/2 AWG. CIRCUIT INTEGRITY (CI) CABLE TYPE, UL LISTED BRAND
- FACP FIRE ALARM CONTROL PANEL, UL LISTED BRAND
- S SMOKE DETECTOR- CEILING MOUNTED
- SW SMOKE DETECTOR- WALL MOUNTED
- H HEAT DETECTOR, CEILING MOUNTED
- SLMP FIRE ALARM STROBE AND HORN, UL LISTED BRAND
- MP FIRE ALARM MANUAL PULL STATION, UL LISTED BRAND
- FPB FIRE ALARM SYSTEM WIRING PULL BOX

6. PROVIDE SUPERVISORY WIRES TO THE FOLLOWING:

- A. ELEVATOR/S
- B. FIRE PROTECTION FLOW SWITCH CONTROL PANEL OR INDIVIDUAL FLOW SWITCH(VERIFY LOCATION)
- C. STAIR PRESSURIZATION BLOWER/S OR FAN/S(VERIFY EXACT LOCATION)
- D. SMOKE VENTILATION SYSTEM AND/OR SMOKE CONTROL SYSTEM
- E. FIRE PUMP CONTROL PANEL

7. PROVIDE WIRING FROM FACP TO GENERATOR CONTROL PANEL TO MONITOR THE FOLLOWING CONDITIONS:

8. FINAL WIRING SHALL BE AS PER MANUFACTURER'S STANDARDS.



**FIRE ALARM
SYSTEM RISER DIAGRAM**
NOT TO SCALE

GENERAL NOTES:

1. FFL = FINISH FLOOR LINE. VERIFY FLOOR FINISHES/MATERIALS.
2. ALL INTERIOR PARTITIONS AND FURNITURE LAYOUT ARE INDICATIVE ONLY AND MAY CHANGE. VERIFY INTERIOR DESIGN DRAWINGS.
3. ALL LANDSCAPE ARCHITECTURE ELEMENTS ARE INDICATIVE ONLY AND MAY CHANGE. VERIFY LANDSCAPE ARCHITECTURE DRAWINGS.
4. DO NOT SCALE DRAWINGS. WRITTEN DIMENSIONS TO GOVERN.
5. IN CASE OF DISCREPANCY IN THE FIGURES AND DRAWINGS THE MATTER SHALL BE SUBMITTED IMMEDIATELY TO THE ARCHITECT BEFORE ADJUSTMENTS ARE TO BE MADE.
6. VERIFY ACTUAL TECHNICAL SITE CONDITIONS.
7. VERIFY ACTUAL ELEVATION MARKS AND LOT BOUNDARIES PRIOR TO COMMENCING WORK.
8. ALL WORKS HEREIN SHALL BE DONE UNDER THE STRICT SUPERVISION OF ONLY LICENSED AND EXPERIENCED ARCHITECT/ENGINEER.
9. LOT AND BUILDING BOUNDARIES SHOULD BE SUPPORTED BY RETAINING WALLS AND FENCES. VERIFY EXISTING HEIGHTS, ELEVATIONS AND OTHER SITE CONDITIONS.
10. THE GENERAL CONTRACTOR, SUB-CONTRACTORS INCLUDING SPECIALTY CONTRACTORS, SHALL SUBMIT PROPER SHOP DRAWINGS INCLUDING MATERIALS SAMPLE PRIOR TO INSTALLATIONS FOR ARCHITECTS APPROVAL.