

PLUMBING/SANITARY :






**PLUMBING NOTES**

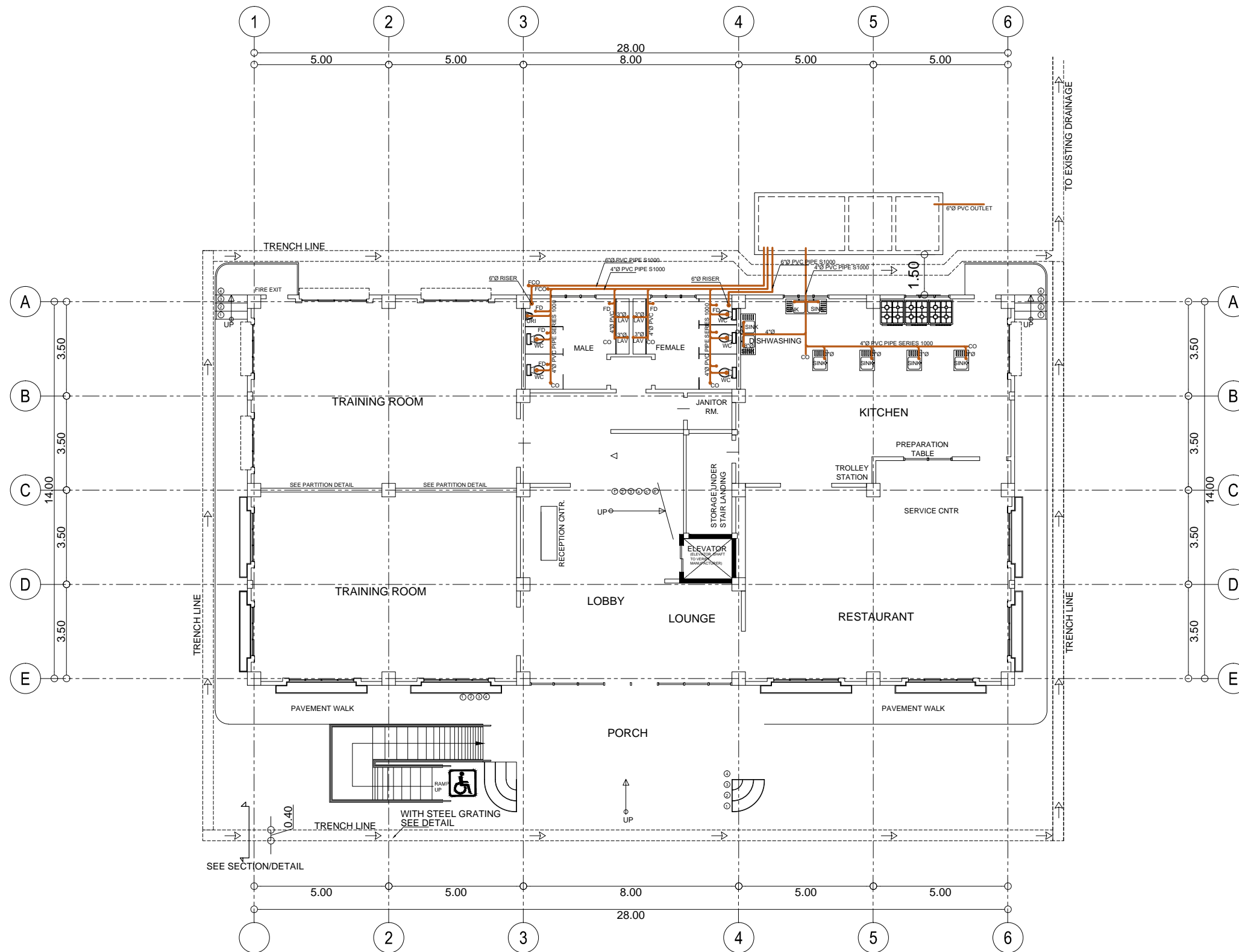
ALL PLUMBING INSTALLATION SHALL CONFORM TO THE STANDARD / RULES AND REGULATIONS OF THE NATIONAL PLUMBING CODE OF THE PHILIPPINES AND LOCAL GOVERNMENT.

ALL PLUMBING INSTALLATIONS SHALL BE UNDER THE DIRECT AND STRICT SUPERVISION OF DULY LICENSED PLUMBING ENGINEER OR REGISTERED MASTER PLUMBER.

ALL SPECIFICATION ABOVE SHOULD BE STRICTLY OBSERVED.

**PLUMBING SYMBOLS**

<b>F</b>	FAUCET
<b>FD</b>	FLOOR DRAIN
<b>WC</b>	WATER CLOSET
<b>KS</b>	KITCHEN SINK
<b>DS</b>	DOWN SPOUT
	WATER LINE G.I PIPE
	DRAIN PIPE
	WATER SOIL PIPE
	TEE
	45 DEG. ELBOW



## GROUND FLOOR DRAINAGE LAY-OUT

SCALE

1:100MTS



PROJECT TITLE :  
**CONSTRUCTION OF H.R.M  
BUILDING W/ HOSTEL AT  
PAGADIAN CAMPUS**

LOCATION : BALANGASAN DISTRICT, PAGADIAN CITY

PREPARED BY:

*Alvy B. Gapol*  
**ALVY B. GAPOL, CE**  
ENGINEERING ASSISTANT

DATE :

CHECKED & SUBMITTED BY:

*Pangasian B. Mantas*  
**PANGASIAN B. MANTAS, CE**  
COLLEGE ENGINEER

DATE :

NOTED BY:

*Atty. Domingo T. Rezelosa IV*  
**ATTY. DOMINGO T. REZELOSA IV**  
PAGADIAN-CAMPUS ADMIN.

DATE :

RECOMMENDING APPROVAL:

*Rodrigo P. Millares Jr.*  
**RODRIGO P. MILLARES, JR., REE, EnP.**  
PLANNING AND DEVELOPMENT DIRECTOR

DATE :

APPROVED BY:

*Mary Jocelyn V. Battung*  
**MARY JOCELYN V. BATTUNG, Ph.D.**  
JHCSC - PRESIDENT

DATE :

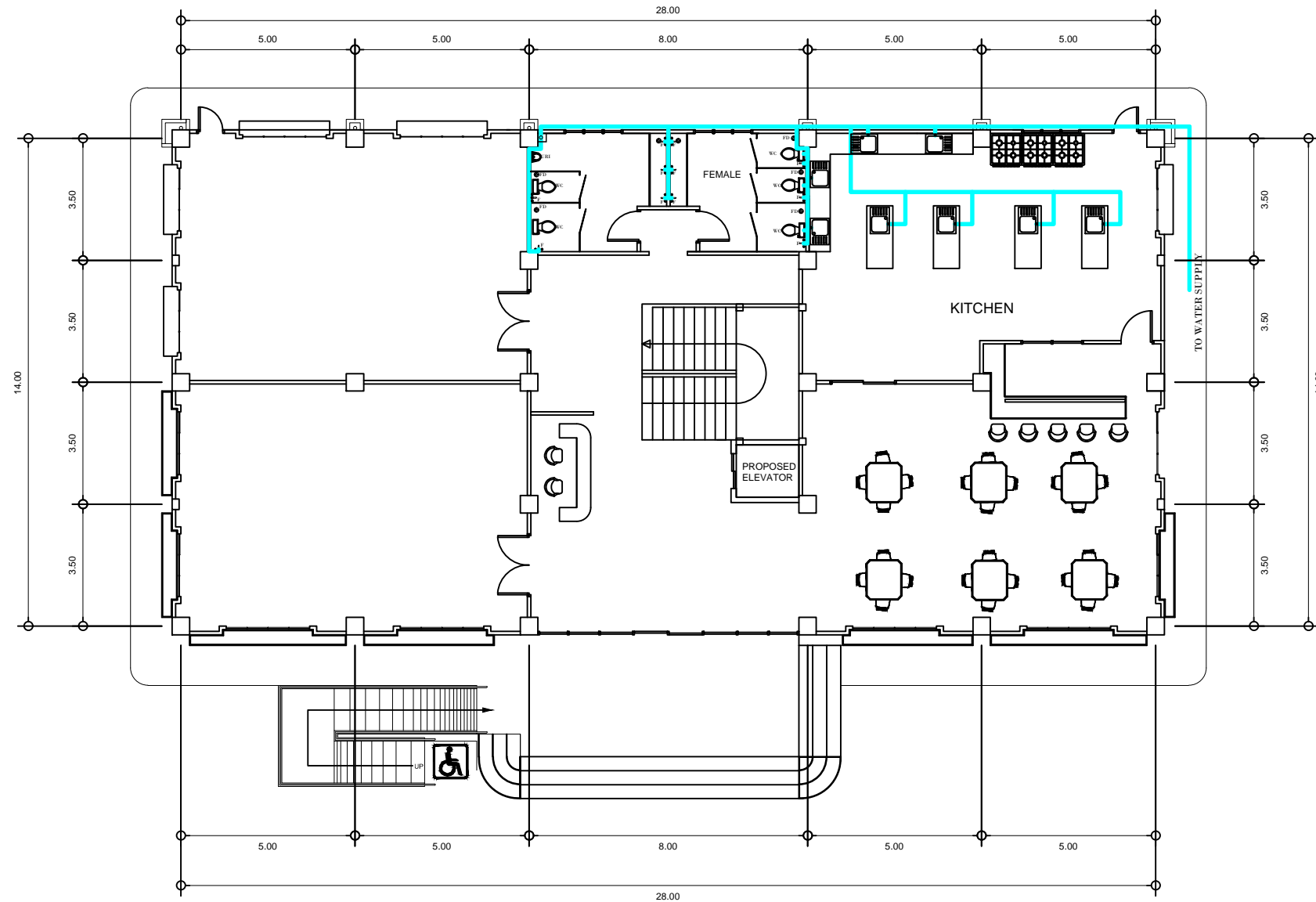
SHEET CONTENT :

**AS - SHOWN**

SHEET NO. :





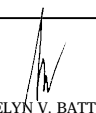
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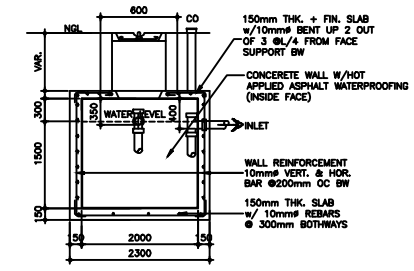
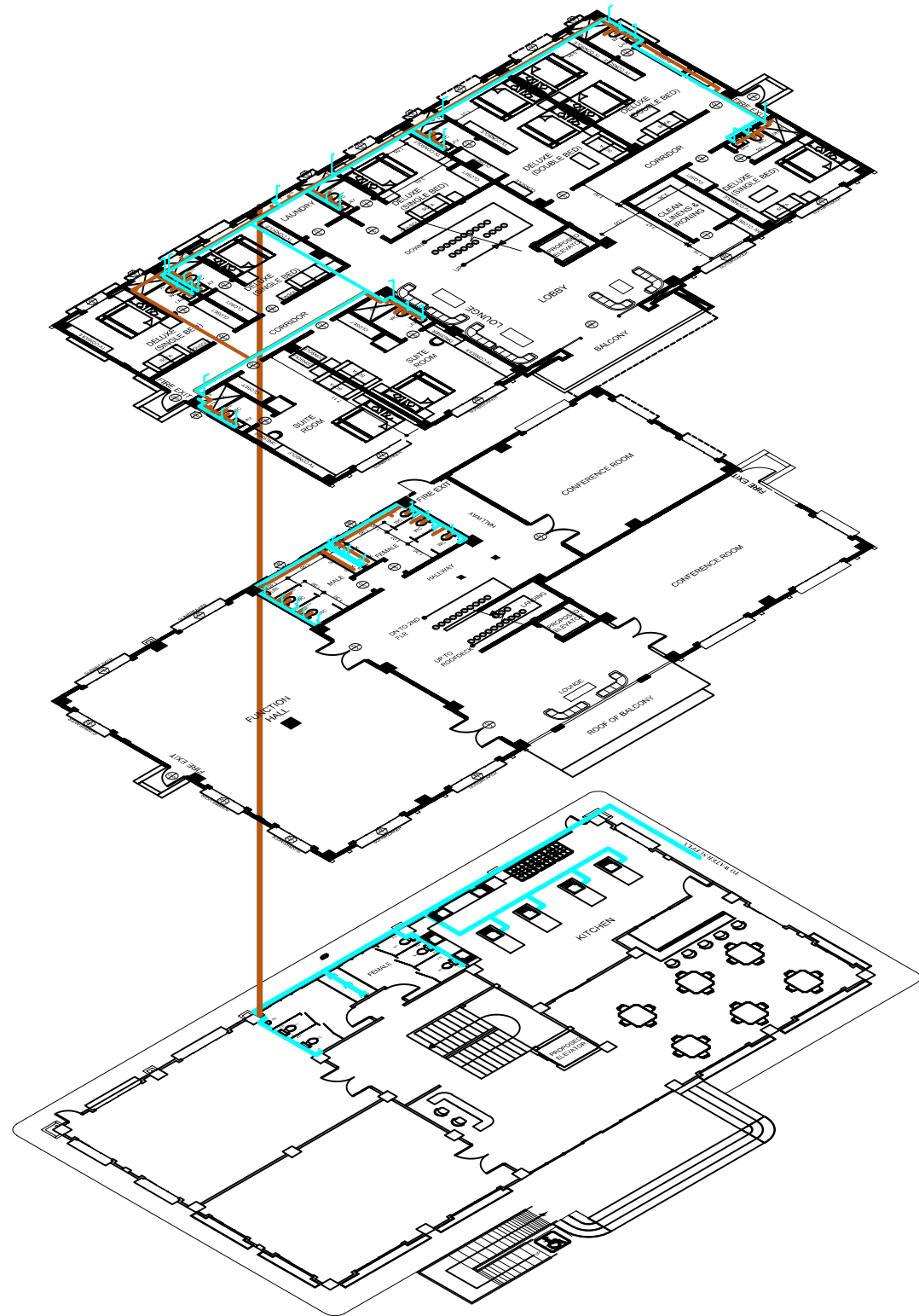



**GROUND FLOOR WATER LINE LAY-OUT**  
 SCALE 1:100MTS

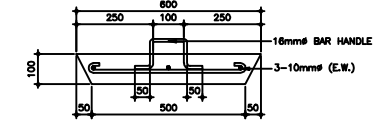


PROJECT TITLE :  <b>CONSTRUCTION OF H.R.M BUILDING W/ HOSTEL AT PAGADIAN CAMPUS</b>  LOCATION : BALANGASAN DISTRICT, PAGADIAN CITY	PREPARED BY:   <b>AIVY B. GAPOL, CE</b> ENGINEERING ASSISTANT  DATE :	CHECKED & SUBMITTED BY:   <b>PANGASIAN B. MAMINTAS, CE</b> COLLEGE ENGINEER  DATE :	NOTED BY:   <b>ATTY. DOMINGO T. REUELOS IV</b> PAGADIAN CAMPUS ADMIN.  DATE :	RECOMMENDING APPROVAL:   <b>RODRIGO P. VILLARES JR., REE, EnP.</b> PLANNING AND DEVELOPMENT DIRECTOR  DATE :	APPROVED BY:   <b>MARY JOCELYN V. BATTUNG, Ph.D.</b> JHCSO - PRESIDENT  DATE :	SHEET CONTENT :  <p style="text-align: center; font-weight: bold; font-size: 1.2em;">AS - SHOWN</p>	SHEET NO. :  <div style="border: 1px solid black; border-radius: 50%; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center; margin: 0 auto;"> <div style="text-align: center; padding: 5px;">             P-3  <hr style="width: 100%;"/>             3   5           </div> </div>
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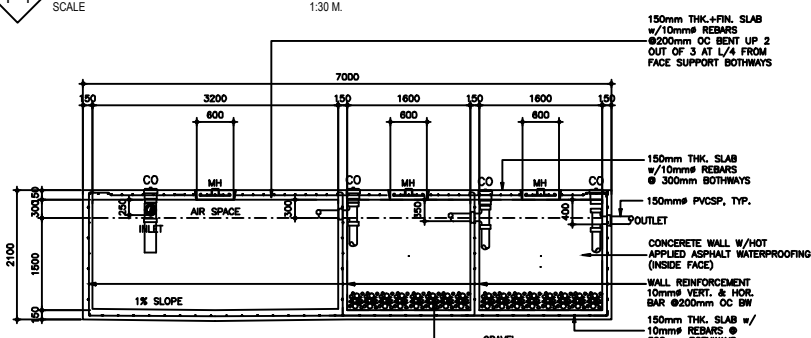




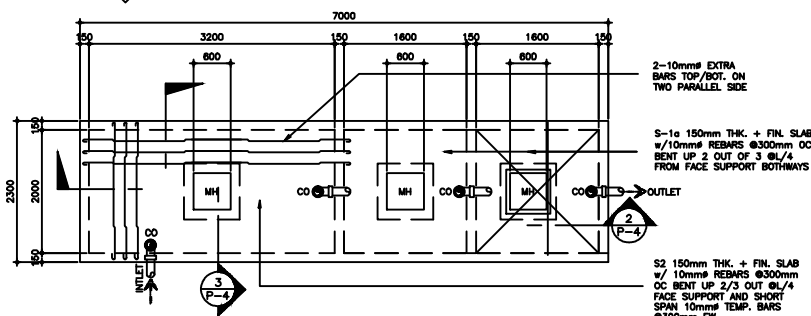
CROSS SECTION DETAIL SCALE 1:30 M.



MANHOLE COVER DETAIL SCALE 1:10 M.



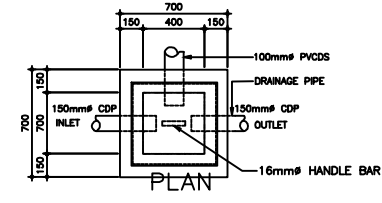
LONGITUDINAL SECTION DETAIL SCALE 1:30 M.



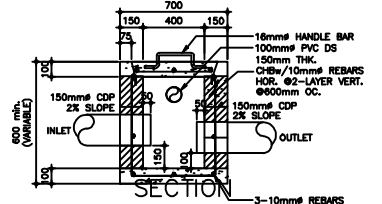
PLAN DET. OF SEPTIC TANK SCALE 1:30 M.

- PT BLADDER/PNEUMATIC TANK
- E ELECTRIC MOTOR
- P PUMP
- U UNION PATENTE
- FTV FOOT VALVE
- FV FLOAT VALVE
- FP FIRMING PORT
- CB CATCH BASIN
- CDP CONCRETE DRAIN PIPE
- CV CHECK VALVE
- HB HOSE BIBB
- FD FLOOR DRAIN
- PPR POLYPROPYLENE COLD WATER LINE
- PPR POLYPROPYLENE COLD WATER RISER
- CV GATE VALVE
- MH MANHOLE
- PVCDS POLYVINYL CHLORIDE DOWNSPOUT
- PVCDP POLYVINYL CHLORIDE DRAIN PIPE
- PVCDS POLYVINYL CHLORIDE DOWNSPOUT
- CO CLEAN OUT
- PVCSP POLYVINYL CHLORIDE SOIL PIPE
- PVCVC POLYVINYL CHLORIDE VENT. ACROSS CEILING
- PVCVP POLYVINYL CHLORIDE VENT. PIPE
- PVCVS POLYVINYL CHLORIDE VENT STACK
- PVCVTR/W POLYVINYL CHLORIDE VENT TROUGH ROOF/WALL
- PVCMP POLYVINYL CHLORIDE WASTE PIPE
- PVCWS POLYVINYL CHLORIDE WASTE STACK
- RD ROOF DRAIN
- UD URINAL DRAIN
- WC WATER CLOSET
- LAV LAVATORY
- KS KITCHEN SINK


1. GRADES OF HORIZONTAL PIPINGS RUN ALL HORIZONTAL PIPINGS IN PERFECT ALIGNMENT AND AT A FORM GRADE NOT LESS THAN TWO PERCENT (2%)
  2. CHANGE IN DIRECTION ALL CHANGE IN DIRECTION SHALL BE MADE BY APPROPRIATE USE OF FORTY-FIVE DEGREES (45°) WYES, LONG SWEEP QUARTER BEND, SIXTY-EIGHT OR SIXTYEIGHT BEND, WHEN THE CHANGE OF FLOW IS FROM HORIZONTAL TO VERTICAL, A SINGLE 1/8 BEND COMBINATION MAY BE USED ON VERTICAL STACKS, AND SHORT QUARTER BENDS MAY BE USED ON WASTE LINE, TEE AND CROSSES MAYBE USED IN BENT PIPES.
  3. PROHIBITED FITTINGS NO DOUBLE HUB OR TEE BRANCH SHALL BE USED ON HORIZONTAL SOIL AND WASTE LINES, THE DRILLINGS AND TAPPING OF HOUSE DRAIN, WASTE OR VENT PIPES AND USE OF SADDLE HUB AND BEND ARE PROHIBITED.
  4. PIPE CLEAN-OUTS CLEAN-OUTS ARE REQUIRED UNDER THE FOLLOWING CONDITIONS:
    - a) EVERY CHANGE OF HORIZONTAL DIRECTION EXCEEDING TWENTY TWO AND ONE-HALF DEGREES (22 1/2°).
    - b) ONE AND ONE-HALF METERS (1.50m.) INSIDE THE PROPERTY LINES BEFORE THE HOUSE DRAINAGE CONNECTION.
    - c) EVERY FIFTEEN METERS (15.00m) IN HORIZONTAL RUN OF PIPES.
    - d) AT THE END OF ANY HORIZONTAL PIPE LINES.
  5. THE DIGESTION CHAMBER OF SEPTIC VAULT MUST BE WATERPROOFED.
  6. NOT LESS THAN 0.30 METER OF AIR SPACE MUST BE LEFT BETWEEN THE TOP OF THE SEWAGE AND THE UNDER PART OF VAULT ROOF SLAB.
  7. NO SEPTIC VAULT SHALL BE CONSTRUCTED UNDER THE BUILDING.
  8. ALL PLUMBING WORKS SHALL BE UNDER THE SUPERVISION OF A LICENSED MASTER PLUMBER AND A LICENSED PLUMBING CONTRACTOR.
- DESIGN CRITERIA**
1. LIVE LOAD = 1000Pa
  2. ALLOWABLE STRESSES
    - a. FOR FOOTING, BEAMS AND SLABS  $f_c = 20 \text{ MPa}$
    - b. FOR REINFORCING STEEL BARS FOR BARS SMALLER THAN 16mm#  $f_y = 230 \text{ MPa}$
  3. CONCRETE MASONRY UNITS (LOAD BEARING CHB)  $f_m = 6.90 \text{ MPa}$ ,  $f_m = 2.41 \text{ MPa}$
  4. ASSUMED ALLOWABLE BEARING CAPACITY  $\gamma = 100 \text{ kPa}$
- NOTE**  
WATER TABLE IS 1500 BELOW GROUND LEVEL.



PLAN SCALE 1:30 M.



SECTION SCALE 1:30 M.

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	<b>CONSTRUCTION OF H.R.M BUILDING W/ HOSTEL AT PAGADIAN CAMPUS</b> LOCATION : BALANGASAN DISTRICT, PAGADIAN CITY	<i>Alvy B. Gapol</i> <b>ALVY B. GAPOL, CE</b> ENGINEERING ASSISTANT	<i>Pangasian B. Mamintas</i> <b>PANGASIAN B. MAMINTAS, CE</b> COLLEGE ENGINEER	<i>Atty. Domingo T. Rezelosa IV</i> <b>ATTY. DOMINGO T. REDELOSA IV</b> PAGADIAN-CAMPUS ADMIN.	<i>Rodrigo H. Millares Jr.</i> <b>RODRIGO H. MILLARES, JR., REE, EnP.</b> PLANNING AND DEVELOPMENT DIRECTOR	<i>Mary Jocelyn V. Battung</i> <b>MARY JOCELYN V. BATTUNG, Ph.D.</b> JHCSO - PRESIDENT	<b>AS - SHOWN</b>	<div style="border: 1px solid black; border-radius: 50%; width: 40px; height: 40px; display: flex; align-items: center; justify-content: center;"> <div style="border: 1px solid black; border-radius: 50%; width: 20px; height: 20px; display: flex; align-items: center; justify-content: center;">             P-5           </div> </div>