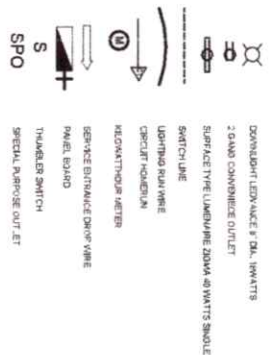


SPECIFICATION:

- 1. ALL ELECTRICAL WORKS SHALL COMPLY IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS, THE APPLICABLE PROVISIONS OF THE LATEST EDITION OF THE PHILIPPINE ELECTRICAL CODE (PEC).
- 2. THE RULES AND REGULATION OF THE LOCAL ENGINEERING AUTHORITY AND THE REQUIREMENTS OF THE LOCAL POWER COMPANY, THE ELECTRICAL WORKS SHALL BE UNDER IMMEDIATE SUPERVISION OF A DUTY REGISTERED ELECTRICAL ENGINEER.
- 3. THE ELECTRICAL SERVICE POWER IS 1 - PHASE, 2 - WIRE, 230 V AC, 60 Hz
- 4. WIRING METHOD SHALL BE AS FOLLOWS:
  - A. FEEDERS AND RISERS - INTERMEDIATE METALLIC CONDUIT
  - B. LIGHTING POWER RECEPTACLE - POLYVINYL CHLORIDE CONDUIT
  - C. BRANCH CIRCUIT, & AUXILIARY - SCH. 40
- 5. ALL WIRES SHALL BE COPPER AND THERMOPLASTIC INSULATED TYPE. THE MINIMUM SIZE OF THE WIRE SHALL BE 14 AWG. THE MINIMUM SIZE OF WIRE FOR POWER AND LIGHTING CIRCUIT HOMERUN SHALL BE 12 AWG AND INSULATED FOR 600 VOLTS. SMALLEST RACEWAY SHALL BE 15mm Ø TBA DENOMINAL SIZE.
- 6. ALL OUTLET BOXES SHALL BE PVC.

LEGEND:

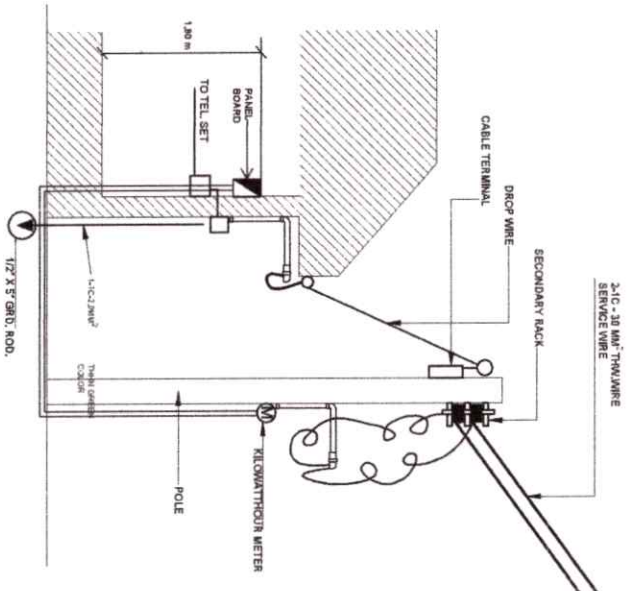


6. ALL ELECTRICAL WORKS SHALL COMPLY IN ACCORDANCE WITH THESE PLANS AND SPECIFICATIONS, THE APPLICABLE PROVISIONS OF THE LATEST EDITION OF THE PHILIPPINE ELECTRICAL CODE (PEC).

7. GROUNDING SYSTEM SHALL BE PROVIDED TO ALL LIGHTING AND POWER CIRCUIT AS PER PHILIPPINE ELECTRICAL CODE REQUIREMENT.

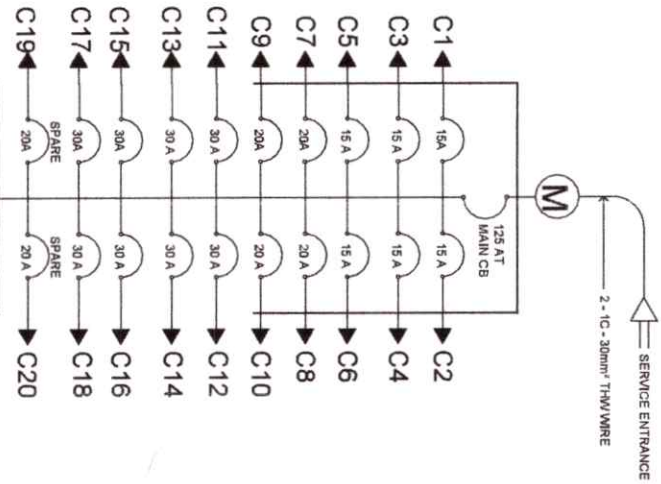
8. MOUNTING HEIGHT OF WIRING DEVICES SHALL BE AS FOLLOWS:

- A. LIGHT SWITCH - 1.20 M ABOVE FINISH FLOOR
- B. CONVENIENCE OUTLET - 0.30 M ABOVE FINISH FLOOR
- C. PANEL BOARD - 1.50 M ABOVE FINISH FLOOR




TELEPHONE & ELECTRICAL SERVICE ENTRANCE DETAIL  
SCALE: NTS.

LOCATION PLAN



SINGLE LINE DIAGRAM  
SCALE: NTS.

 PHILIPPINE SCIENCE HIGH SCHOOL Central Office - Manila 1000 N. E. Avenue, Manila 1000	PREPARED BY:		REVIEWED & CHECKED BY:		APPROVED BY:		PROJECT:  PROPOSED TWO-STORY SCHOOL BUILDING SCHOOL BUILDING LOCATION: MANGAL, BALCAL, LAMAO DEL NORTE	SHEET CONTENTS:  GENERAL SPECIFICATIONS LEGEND/LOCATION PLAN SINGLE LINE DIAGRAM TELEPHONE & SERVICE ENTRANCE CONNECTION	SHEET NO.  21 / 40
	Electrical Engineer		Jayson C. Vacunador Acting Head Engineer		Franklin L. Salsid Campus Director				

SCHEDULE OF LOADS

CKT. NO.	LOAD DESCRIPTION	SPO	L.O.	C.O.	WATTS	VOLTS	AMPERE/CKT.	PROTECT/CKT.	CABLE WIRE SIZE THHN	GROUND GREEN CABLE SIZE THHN	CONDUIT DIA. ,RSC
C1	LIGHTING OUTLET	---	18	---	1800	220	8.18 A	15 A	2-1C-.35 MM <sup>2</sup> THW WIRE	1-1C-2.0 MM <sup>2</sup>	20MM dia.
C2	LIGHTING OUTLET	---	12	---	1200	220	5.45 A	15 A	2-1C-.35 MM <sup>2</sup> THW WIRE	1-1C-2.0 MM <sup>2</sup>	20MM dia.
C3	LIGHTING OUTLET	---	14	---	1400	220	6.38 A	15 A	2-1C-.55 MM <sup>2</sup> THW WIRE	1-1C-2.0 MM <sup>2</sup>	20MM dia.
C4	LIGHTING OUTLET	---	18	---	1800	220	8.18 A	15 A	2-1C-.35 MM <sup>2</sup> THW WIRE	1-1C-2.0 MM <sup>2</sup>	20MM dia.
C5	LIGHTING OUTLET	---	12	---	1200	220	5.45 A	15 A	2-1C-.35 MM <sup>2</sup> THW WIRE	1-1C-2.0 MM <sup>2</sup>	20MM dia.
C6	LIGHTING OUTLET	---	14	---	1400	220	6.38 A	15 A	2-1C-.55 MM <sup>2</sup> THW WIRE	1-1C-2.0 MM <sup>2</sup>	20MM dia.
C7	CONVENIENCE OUTLET	---	---	4	1440	220	6.54 A	20 A	2-1C-.55 MM <sup>2</sup> THW WIRE	1-1C-2.0 MM <sup>2</sup>	20MM dia.
C8	CONVENIENCE OUTLET	---	---	6	2160	220	9.82 A	20 A	2-1C-.55 MM <sup>2</sup> THW WIRE	1-1C-2.0 MM <sup>2</sup>	20MM dia.
C9	CONVENIENCE OUTLET	---	---	4	1440	220	6.54 A	20 A	2-1C-.55 MM <sup>2</sup> THW WIRE	1-1C-2.0 MM <sup>2</sup>	20MM dia.
C10	CONVENIENCE OUTLET	---	---	8	2160	220	9.82 A	20 A	2-1C-.55 MM <sup>2</sup> THW WIRE	1-1C-2.0 MM <sup>2</sup>	20MM dia.
C11	SPECIAL PURPOSE OUTLET	---	---	---	1500	220	6.82 A	30 A	2-1C-.55 MM <sup>2</sup> THW WIRE	1-1C-2.0 MM <sup>2</sup>	25MM dia.
<del>C12</del>	<del>SPECIAL PURPOSE OUTLET</del>	<del>1</del>	<del>---</del>	<del>---</del>	<del>1500</del>	<del>220</del>	<del>6.82 A</del>	<del>30 A</del>	<del>2-1C-.55 MM<sup>2</sup> THW WIRE</del>	<del>1-1C-2.0 MM<sup>2</sup></del>	<del>20MM dia.</del>
C13	SPECIAL PURPOSE OUTLET	1	---	---	1500	220	6.82 A	30 A	2-1C-.55 MM <sup>2</sup> THW WIRE	1-1C-2.0 MM <sup>2</sup>	20MM dia.
C14	SPECIAL PURPOSE OUTLET	1	---	---	1500	220	6.82 A	30 A	2-1C-.55 MM <sup>2</sup> THW WIRE	1-1C-2.0 MM <sup>2</sup>	20MM dia.
C15	SPECIAL PURPOSE OUTLET	1	---	---	1500	220	6.82 A	30 A	2-1C-.55 MM <sup>2</sup> THW WIRE	1-1C-2.0 MM <sup>2</sup>	20MM dia.
C16	SPECIAL PURPOSE OUTLET	1	---	---	1500	220	6.82 A	30 A	2-1C-.55 MM <sup>2</sup> THW WIRE	1-1C-2.0 MM <sup>2</sup>	20MM dia.
C17	SPECIAL PURPOSE OUTLET	1	---	---	1500	220	6.82 A	30 A	2-1C-.55 MM <sup>2</sup> THW WIRE	1-1C-2.0 MM <sup>2</sup>	20MM dia.
C18	SPECIAL PURPOSE OUTLET	1	---	---	1500	220	6.82 A	30 A	2-1C-.55 MM <sup>2</sup> THW WIRE	1-1C-2.0 MM <sup>2</sup>	20MM dia.
C18	SPECIAL PURPOSE OUTLET	1	---	---	1500	220	6.82 A	30 A	2-1C-.55 MM <sup>2</sup> THW WIRE	1-1C-2.0 MM <sup>2</sup>	20MM dia.
C19	SPARE	---	---	---	1000	220	4.55 A	20 A	2-1C-.55 MM <sup>2</sup> THW WIRE	1-1C-2.0 MM <sup>2</sup>	20MM dia.
C20	SPARE	---	---	---	1000	220	4.55 A	20 A	2-1C-.55 MM <sup>2</sup> THW WIRE	1-1C-2.0 MM <sup>2</sup>	25MM dia.
C20	TOTAL	8	88	20	31500	220	143.18 A	125 A	2-1C-.30 MM <sup>2</sup> THW WIRE	1-1C-2.0 MM <sup>2</sup>	45 MM dia.

PANEL BOARD

A. SUB-CONNECTED LOADS OF TWO STOREY SCHOOL BLDG.

1	TOTAL CONNECTED LOADS	KW	31.50
2	CONNECTED	KVA	39.375
3	% DEMAND FACTOR	%	80
4	DEMAND	KVA	31.50
5	DEMAND AMPERES	AMPS	143.18

FOR MAIN FEEDER SIZE:

143.18 AT 125% = 178.975 AMPS

USE 2-1C-22 mm<sup>2</sup> THW with cable ampacities of 110 AMPS

Ground Cable Use: 1-1C-3.5 MM<sup>2</sup> THHN

FOR MAIN CIRCUIT BREAKER PROTECTION:

143.18 AT 150% = 214.77 AMPS

USE: 125 AMPERES CIRCUIT BREAKER 2P BOLTED TYPE, 65 KVAIC SUB - MAIN PROTECTION

%DEMAND FACTOR = DEMAND LOAD KVA/ CONNECTED KVA X 100%

DEMAND LOAD KVA = CONNECTED KVA / DIVERSITY FACTOR 1.25 FOR 100% D.F

39.375 KVA / 1.25 = 31.50 KVA

50 % DEMAND FACTOR = 31.50 KVA / 39.375 X 100% = 80%

DEMAND AMPERES = 39.375 KVA X 0.8 / 0.22 = 143.18 AMPS

GROUND CABLE SIZE:

143.18 AMPS, AT 20% = 28.636 AMPS

1-1C-3.5 MM<sup>2</sup>Q, (12 AWG)

PREPARED BY :

REVIEWED & CHECKED BY :

APPROVED BY :

PROJECT:

SHEET CONTENTS :

SHT NO.



PHILIPPINE SCIENCE HIGH SCHOOL  
1001 DAVAO DEL NORTE AVENUE  
DASMARINAS, DAVAO DEL NORTE

Electrical Engineer

Jayson C. Vacunador  
Acting Head Engineer

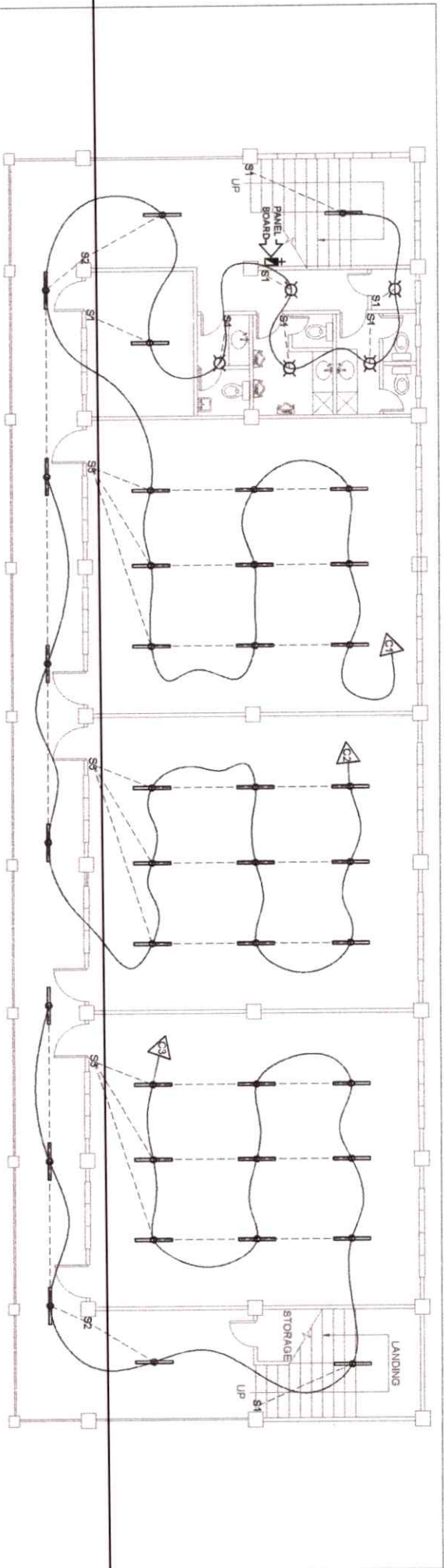
Franklin L. Saldaña  
Campus Director

PROPOSED TWO-STOREY  
SCHOOL BUILDING

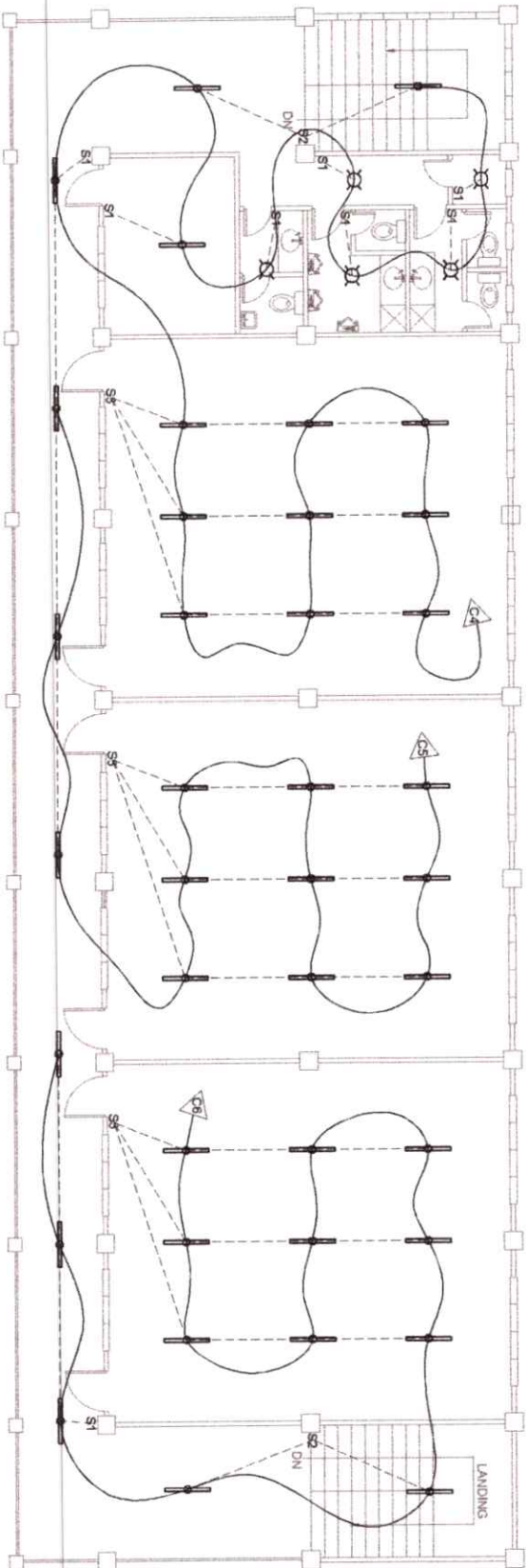
SCHEDULE OF LOADS

22/40




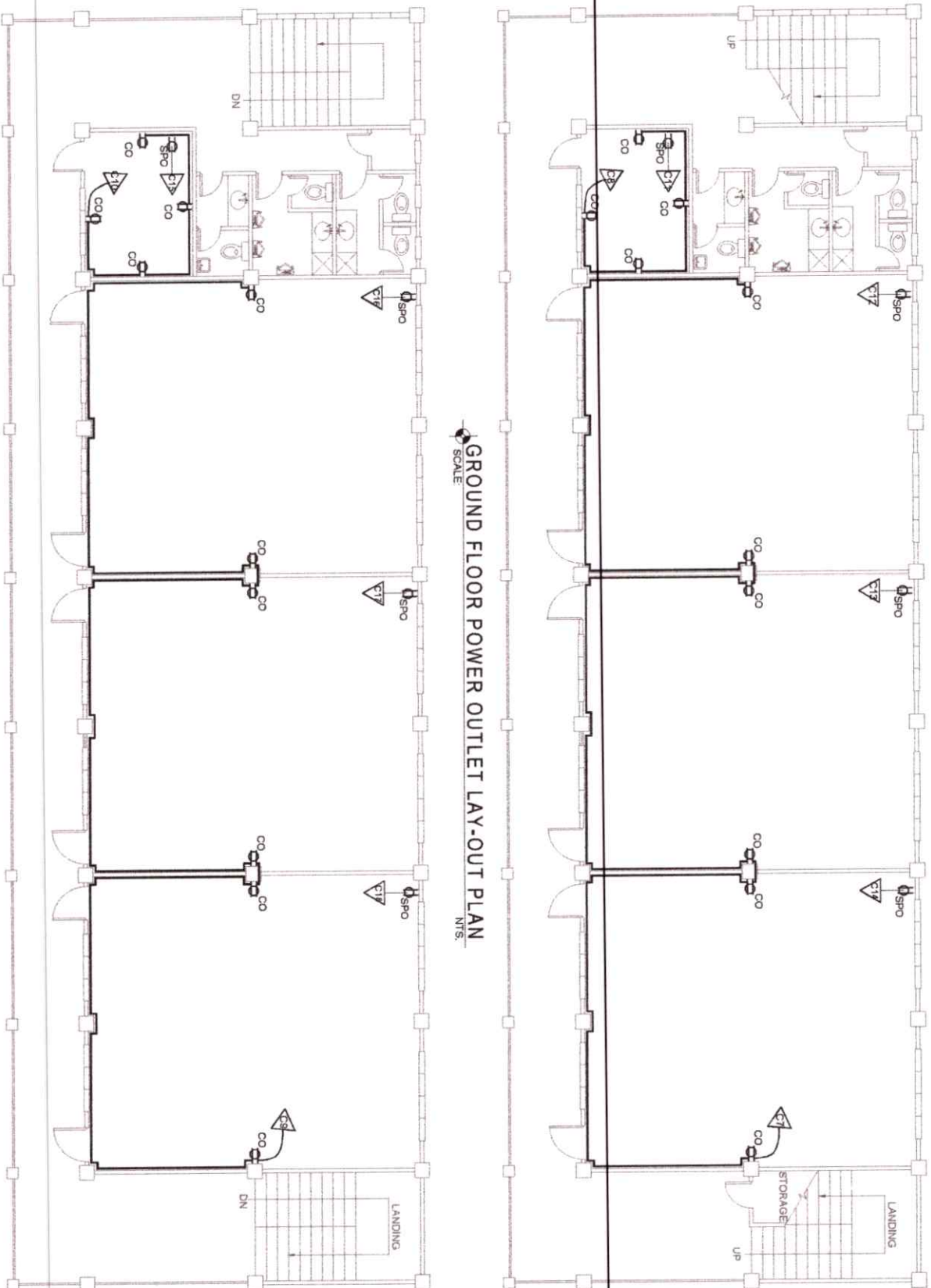


GROUND FLOOR LIGHTING LAY-OUT PLAN  
NTS. SCALE

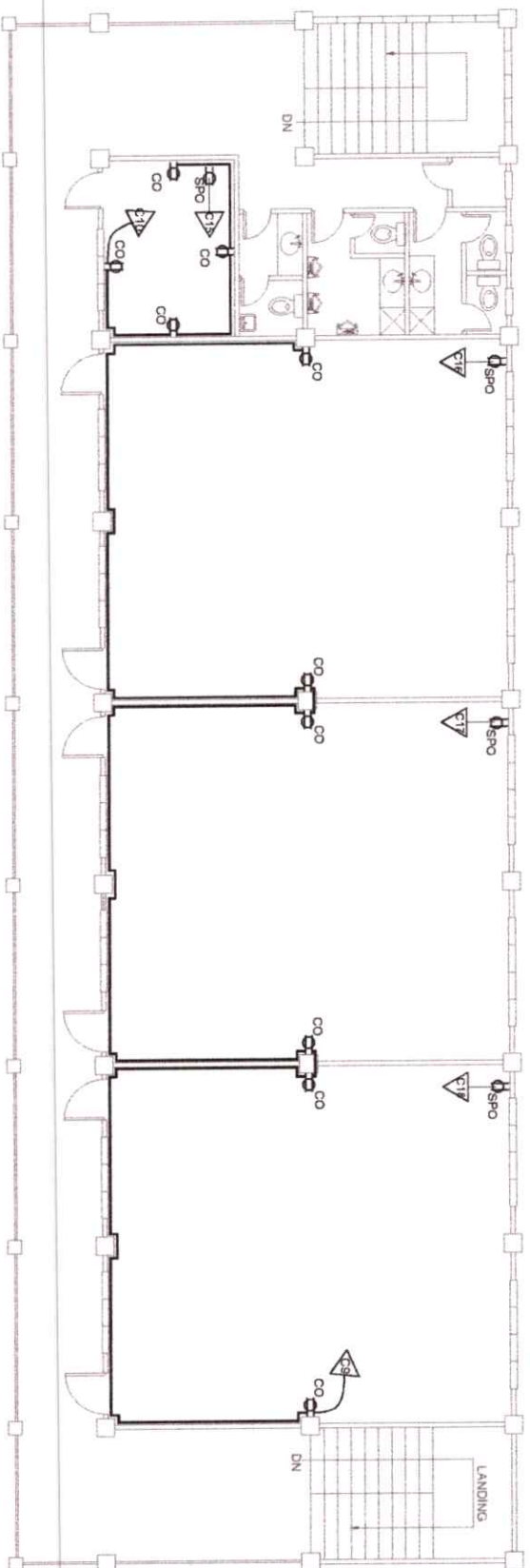


SECOND FLOOR LIGHTING LAY-OUT PLAN  
NTS. SCALE


 <p>PHILIPPINE SCIENCE HIGH SCHOOL CENTRAL CAMPUS DASMARINAS, CEBU</p>	<p>PREPARED BY :</p> <p>Electrical Engineer</p>	<p>REVIEWED &amp; CHECKED BY :</p> <p>Jayson C. Vacunador Acting Head Engineer</p>	<p>APPROVED BY :</p> <p>Franklin L. Salido Campus Director</p>	<p>PROJECT:</p> <p>PROPOSED TWO-STOREY SCHOOL BUILDING</p> <p>LOCATION: NANOKA, BALICH LAMAO DEL NORTE</p> <p>SHEET CONTENTS :</p> <p>GROUND FLOOR LIGHTING LAYOUT PLAN SECOND FLOOR LIGHTING LAYOUT PLAN</p> <p>SHT. NO.</p> <p>23 / 40</p>
---	---	--	--	--



GROUND FLOOR POWER OUTLET LAY-OUT PLAN  
SCALE N.T.S.



SECOND FLOOR POWER OUTLET LAY-OUT PLAN  
SCALE N.T.S.

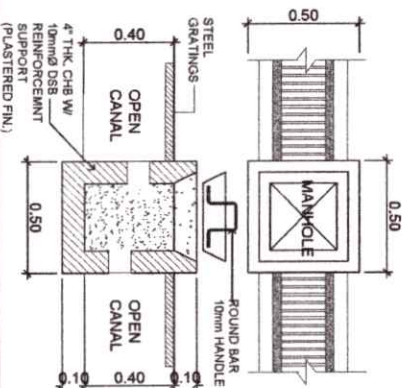
 PHILIPPINE SCIENCE HIGH SCHOOL CENTRAL CAMPUS DANAU ALI, MARICOR, CAGAYAN DE ORO CITY, Cebu	PREPARED BY : Electrical Engineer	REVIEWED & CHECKED BY : Jayson C. Vacunador Acting Head Engineer	APPROVED BY : Franklin L. Salasid Campus Director	PROJECT: PROPOSED TWO-STOREY SCHOOL BUILDING LOCATION: NANGKA, BALUCH LAMAO DEL NORTE	SHEET CONTENTS : GROUND FLOOR POWER OUTLET LAY-OUT PLAN SECOND FLOOR POWER OUTLET LAY-OUT PLAN	SHT. NO. 24 / 40
	REG. NO. P.E.P. NO. DATE TRA. NO.					



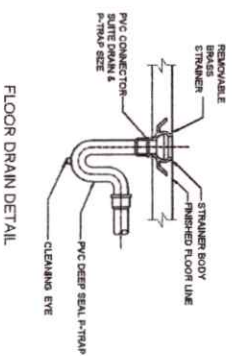
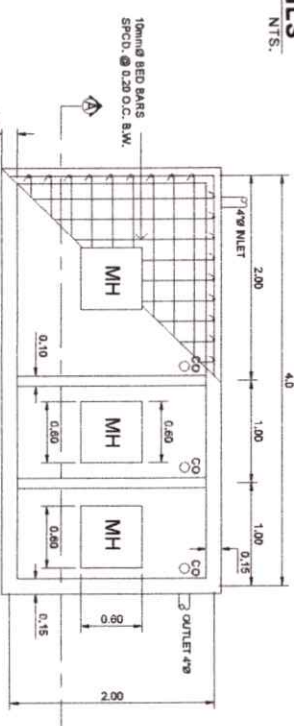
1. GRADES OF HORIZON PIPINGS  
RUN ALL HORIZONTAL IN PERFECT ALIGNMENT AND AT A FORM GRADE NOT LESS  
THAN TWO PERCENT (2%)

2. CHANGE IN DIRECTION:  
A CHANGE IN DIRECTION SHALL BE MADE BY APPROPRIATE USE OF FOUR-FIVE DEGREES "WYE" OR THREE-FOUR FIVE DEGREES "TEE" FITTINGS  
QUARTER BENDS, SIXTY-THREE OR SIXTY-NINE BEND, WHEN THE CHANGE OF FLOW IS FROM HORIZONTAL TO VERTICAL.  
A SINGLE .75 BEND COMBINATION WAVE USED ON VERTICAL STACKS AND SHORT QUARTER BENDS MAYBE USED ON WASTE
3. PROHIBITED FITTINGS  
THE FOLLOWING TYPES OF BRANCH SHALL BE USED ON HORIZONTAL AND WASTE LINES, THE DRINK WATER AND SPOIL LINE  
OF HOUSE DRAIN, WASTE OR BEND PIPE AND USED OF SLATE 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) OVERHEAD DRAINAGE (2' DIA.) INSIDE THE PROPERTY LINE BEFORE THE FIRST DRAINAGE CONNECTION  
c) EVERY FIFTEEN FEET (15.0m) IN HORIZONTAL RUN OF PIPES.  
d) AT THE END OF AN HORIZONTAL PIPE LINES.

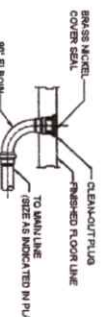
WC	-	WATER CLOSET
F	-	FALCET
KS	-	KITCHEN SINK
FD	-	FLOOR DRAIN
LAV	-	LAVATORY
CO	-	CLEAN OUT
YTR	-	VENT THRU ROOF
WH	-	WASHHOLE
CB	-	CATCH BASIN
CV	-	CHECK VALVE
GV	-	GATE VALVE
DS	-	DOWN SPOUT
ST	-	SEPTIC TANK



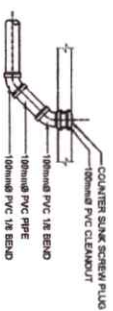
## SCALE: NT



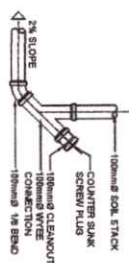
### FLOOR DRAIN DETAIL



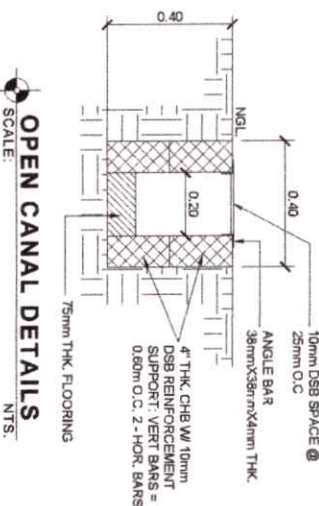
FLUSH TYPE  
CLEAN-OUT DETAIL



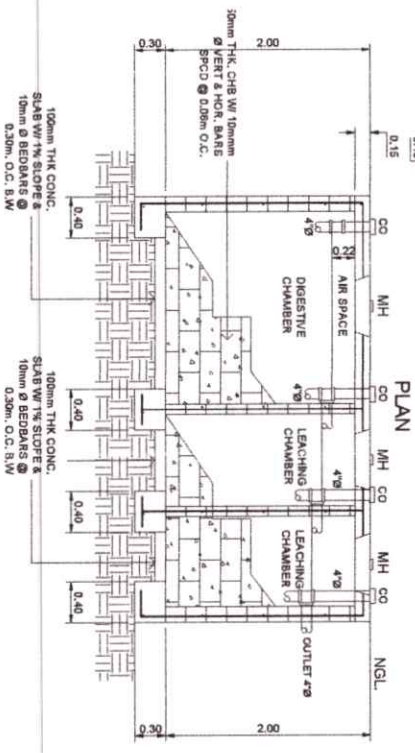
STANDARD CONNECTION  
CLEAN-OUT DETAIL

VERTICAL TO HORIZONTAL  
SOIL PIPE CONNECTION

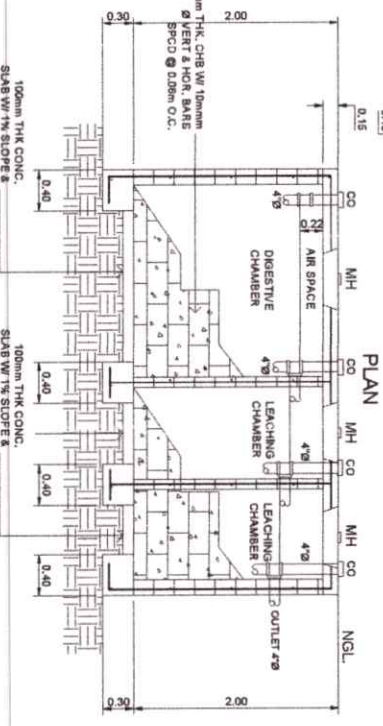
SCALE: \_\_\_\_\_ NTS.

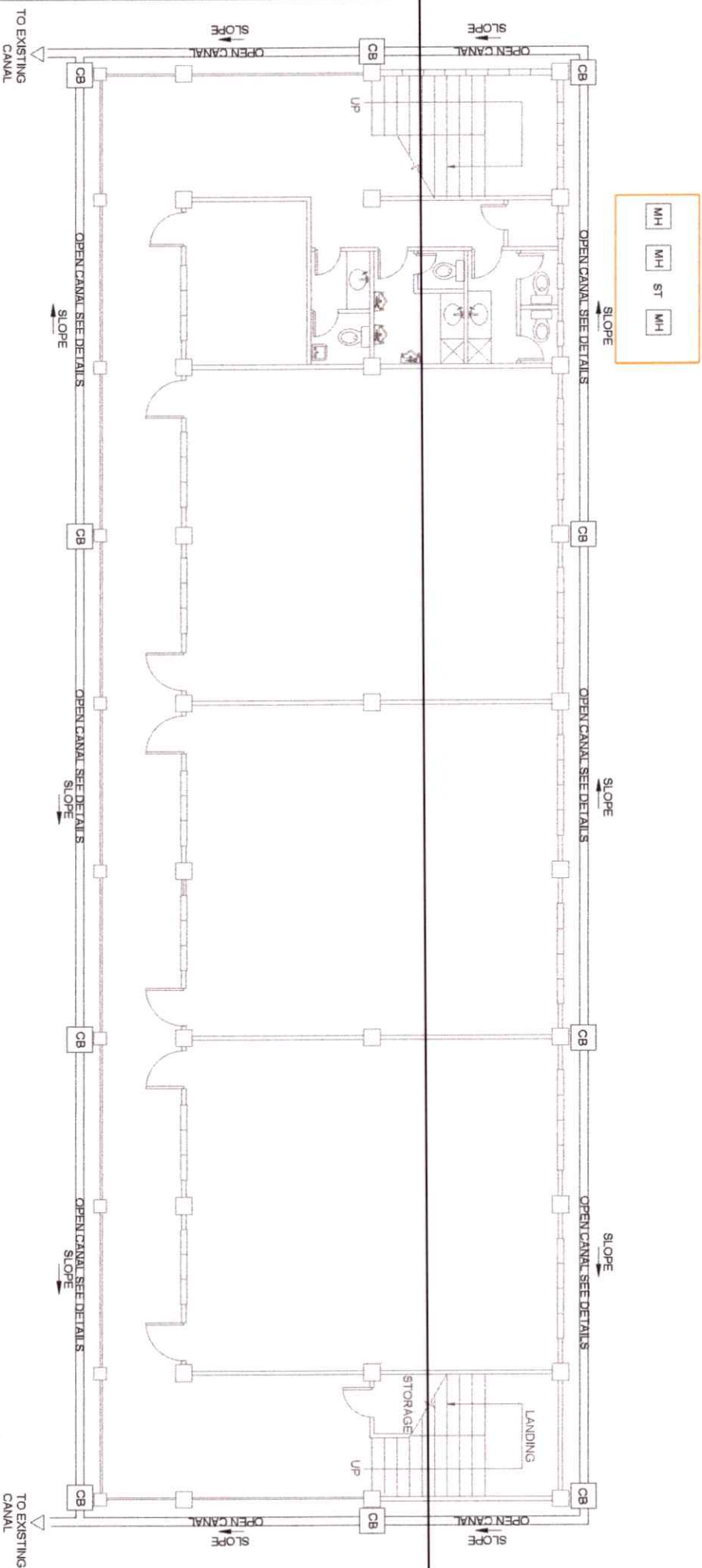


**OPEN CANAL DETAILS**  
SCALE: NT



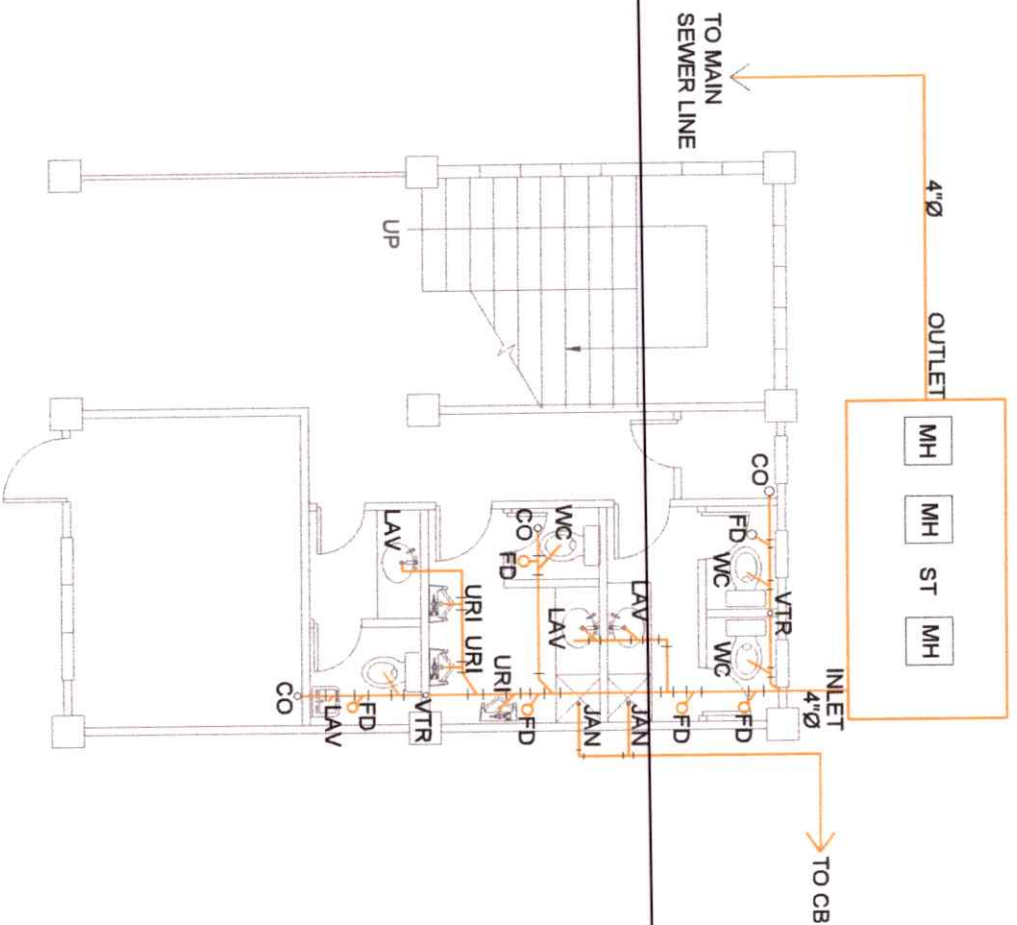
## SCALE: NTS



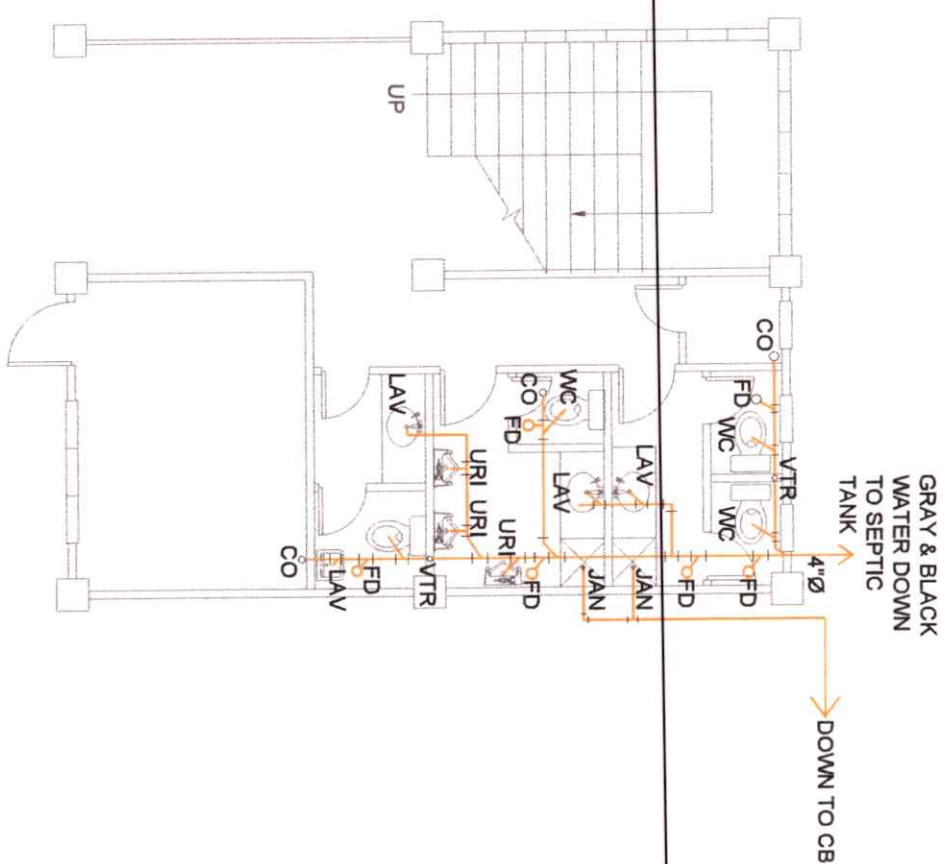


GROUND FLOOR STORM DRAINAGE LAY-OUT PLAN  
SCALE

 PHILIPPINE SCIENCE HIGH SCHOOL Department of Education - Division Office - Marikina City Marikina City, Philippines		PREPARED BY :    Master Planner		REVIEWED & CHECKED BY :   DES. NO. P.H.S.H.S. / DATE TH. NO.		APPROVED BY :   Jayson C. Vacunador Asst. Civil Engineer		PROJECT:   PROPOSED TWO-STORY SCHOOL BUILDING		SHEET CONTENTS :  STORM DRAINAGE LAYOUT PLAN		SHT NO. <div>26 / 40</div>	
						Franklin L. Salido Campus Director		LOCATION: NANGKA, BALUCH LAMNO DEL NORTE					



GROUND FLOOR SANITARY LINE LAY-OUT PLAN  
SCALE N.T.S.



SECOND FLOOR SANITARY LINE LAY-OUT PLAN  
SCALE N.T.S.



PHILIPPINE SCIENCE HIGH SCHOOL  
CENTRAL CAMPUS  
GENERAL A. RAMOS AVENUE  
DASMARINAS, CEBU

PREPARED BY :

Master Planner

REVIEWED & CHECKED BY :

Jayson C. Vacunador  
Acting Head Engineer

APPROVED BY :

Franklin L. Salisid  
Campus Director

PROJECT:

PROPOSED TWO-STORY  
SCHOOL BUILDING  
LOCATION: NANKA, BALUCH LUNAO DEL NORTE

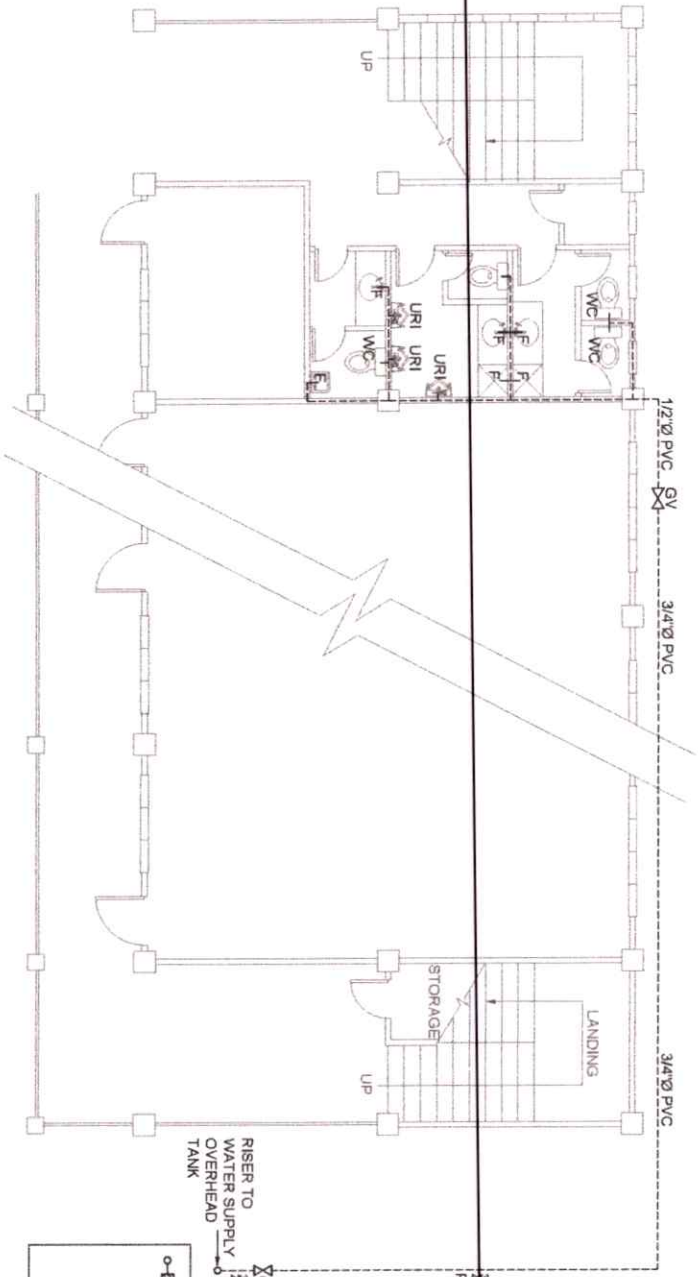
SHEET CONTENTS :

GROUND FLOOR SANITARY LINE  
SECOND FLOOR SANITARY LINE  
LAY-OUT PLAN

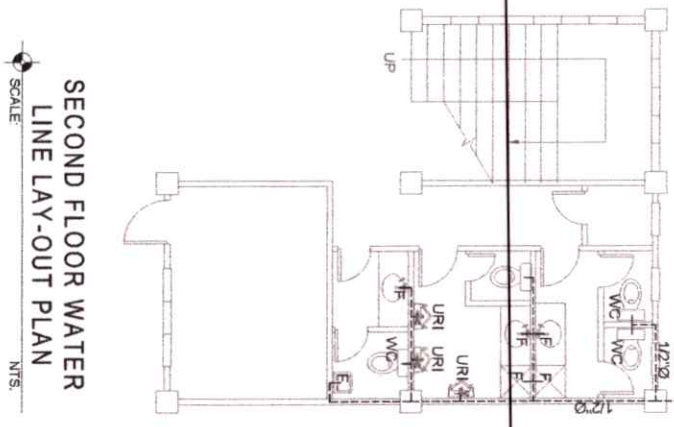
SHT. NO.

27 / 40

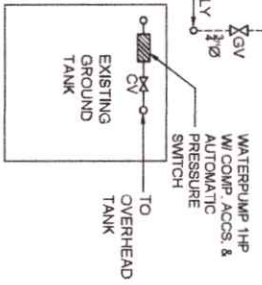




GROUND FLOOR WATER LINE LAY-OUT PLAN  
SCALE N.T.S.

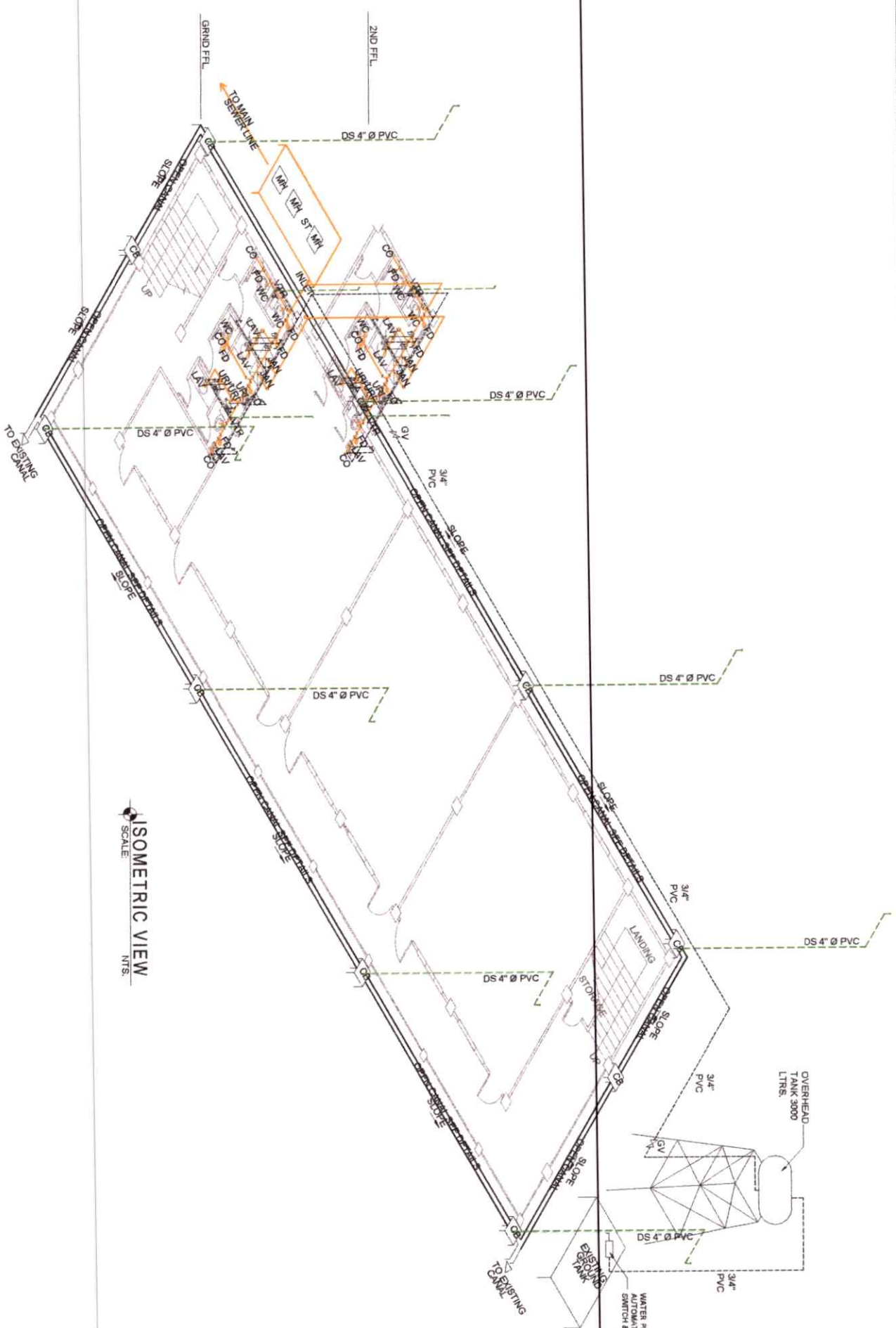


SECOND FLOOR WATER  
LINE LAY-OUT PLAN  
SCALE N.T.S.




 <p>PHILIPPINE SCIENCE HIGH SCHOOL Department of Education Division Office - Marikina City</p>	<p>PREPARED BY :</p> <p>Water Planner</p>	<p>REVIEWED &amp; CHECKED BY :</p> <p>Jayson C. Vacunador Acting Head Engineer</p>	<p>APPROVED BY :</p> <p>Franklin L. Salasid Campus Director</p>	<p>PROJECT :</p> <p>PROPOSED TWO-STOREY SCHOOL BUILDING</p>	<p>SHEET CONTENTS :</p> <p>GROUND FLOOR WATER LINE LAY-OUT PLAN SECOND FLOOR WATER LINE LAY-OUT PLAN</p>
	<p>REG. NO. P.R. NO. D.A. NO. T.M. NO.</p>				<p>SHT. NO.</p> <p>28 / 40</p>





ISOMETRIC VIEW  
SCALE  
NTS.

 PHILIPPINE SCIENCE HIGH SCHOOL Department of Engineering Office of the Chief Engineer Office of the Assistant Chief Engineer Office of the Assistant Chief Engineer		PREPARED BY :  Master Planner		REVIEWED & CHECKED BY :  Jayson C. Vacunador Acting Head Engineer		APPROVED BY :  Franklin L. Salido Campus Director		PROJECT: PROPOSED TWO-STOREY SCHOOL BUILDING		SHEET CONTENTS:		SHT NO. 29 / 40	
REF. NO. DATE THE NO.								LOCATION: NARIKA BALCH LUNGO DEL NORTE		ISOMETRIC VIEW			

TILES 400mmx400mm  
CERAMIC NON-SKID  
FLR TILES

TYPICAL WATER CLOSET  
L700XW400XH765 mm  
(LAFONZA)

TYPICAL LAVATORY  
LA FONZA K249A  
(600X400X180mm WHITE)

TYPICAL URINAL  
LA FONZA D32  
TERAMO WHITE

JANITOR

# TYPICAL COMFORT ROOM PLAN

SCALE

1:100

M.

3 LAYERS - GRANITE  
WALL TILES  
(600mmx600mm)

TYPICAL WATER CLOSET  
L700XW400XH765 mm  
(LAFONZA)

TYPICAL LAVATORY  
LA FONZA K249A  
(600X400X180mm WHITE)

## SECTION "Y"

SCALE

NTS.

TYPICAL URINAL LA FONZA  
D32 TERAMO WHITE

TYPICAL LAVATORY  
LA FONZA K249A  
(600X400X180mm WHITE)

3 LAYERS - GRANITE  
WALL TILES  
(600mmx600mm)

TYPICAL WATER CLOSET  
L700XW400XH765 mm  
(LAFONZA)

## SECTION "X"

SCALE

NTS.



PHILIPPINE SCIENCE HIGH SCHOOL  
CENTRAL DIVISION - CALABARZON  
SCHOOL DIVISION OFFICE - CALABARZON

PREPARED BY :

Master Planner

REVIEWED & CHECKED BY :

Jayson C. Vacunador  
Acting Head Engineer

APPROVED BY :

Franklin L. Salido  
Campus Director

PROJECT :

PROPOSED TWO-STOREY  
SCHOOL BUILDING

SHEET CONTENTS :

COMFORT ROOM PLAN  
SECTION

SHT NO.

30/40