Republic of the Philippines
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
LAGUNA 3rd DISTRICT ENGINEERING OFFICE
Mariflor Subd., Brgy. Del Remedio, San Pablo City, Region IV-A

C.Y. 2025 PROJECT

DETAILED ENGINEERING DESIGN PLAN FOR

CONVERGENCE AND SPECIAL SUPPORT PROGRAM
BASIC INFRASTRUCTURE PROGRAM
MULTI-PURPOSE BUILDINGS/ FACILITIES TO SUPPORT SOCIAL SERVICES
CONSTRUCTION OF MULTI-PURPOSE BUILDING, BARANGAY 3-D, SAN PABLO CITY, LAGUNA

LOCATION: SAN PABLO CITY, LAGUNA
COORDINATES : 14.069286 N, 121.332103 E

SUBMITTED/ RECOMMENDED:

MA. SHIRLEY M. SAMIANO
CHIEF, PLANNING & DESIGN SECTION
CONCURRENT CAPACITY AS OFFICER-IN-CHARGE
OFFICE OF THE ASSISTANT DISTRICT ENGINEER

DATE:

APPROVED:

CARLOS C. MUERE
OFFICER-IN-CHARGE
OFFICE OF THE DISTRICT ENGINEER

DATE:

ITEM NO.	DESCRIPTION	APPROVED QUANTITY		REMARKS
		QUANTITY	UNIT	
PART I	FACILITIES FOR THE ENGINEER			
A.1.4(1)	PROVISION OF PROGRESS PHOTOGRAPHS	5.00	Month	
PART II	OTHER GENERAL REQUIREMENTS			
B.3(1)	PERMIT AND CLEARANCE	1.00	l.s.	
B.5	PROJECT BILLBOARD/ SIGN BOARD	3.00	each	
B.7(1)	OCCUPATIONAL SAFETY AND HEALTH PROGRAM	1.00	l.s.	
B.9(1)	MOBILIZATION/ DEMOBILIZATION	1.00	l.s.	
PART III	CIVIL, MECHANICAL, ELECTRICAL AND SANITARY/ PLUMBING WORKS			
PART A	EARTH WORKS			
800(1)	CLEARING AND GRUBBING	136.00	sq.m.	
801(1)	REMOVAL OF STRUCTURES/ OBSTRUCTION (CONCRETE)	1.00	cu.m.	
803(1)a	STRUCTURE EXCAVATION(COMMON SOIL)	73.00	cu.m.	
804(1)a	EMBANKMENT FROM ROADWAY/ STRUCTURE EXCAVATION	35.00	cu.m.	
804(7)	GRAVEL FILL	12.00	cu.m.	
PART B	PLAIN AND REINFORCED CONCRETE WORKS			
900(1)c	STRUCTURAL CONCRETE (3000psi, CLASS A, 28 DAYS)	8.00	cu.m.	
900(1)d	STRUCTURAL CONCRETE (4000psi, CLASS A, 28 DAYS)	58.00	cu.m.	
902(1)a1	REINFORCING STEEL (DEFORMED, GRADE 40)	6,007.00	kg.	
902(1)a2	REINFORCING STEEL (DEFORMED, GRADE 60)	4,886.00	kg.	
903(2)	FORMWORKS AND FALSE WORKS	472.00	sq.m.	
PART C	FINISHING WORKS			
C.1	*TERMITE CONTROL WORKS*			
1000(1)	SOIL POISONING	82.00	L	
C.2	*MASONRY WORKS*			
1046(2)a1	CHB NON-LOAD BEARING (INCLUDING REINFORCING STEEL) 100mm	84.00	sq.m.	
1046(2)a2	CHB NON-LOAD BEARING (INCLUDING REINFORCING STEEL) 150mm	163.00	sq.m	
C.3	*FABRICATED MATERIALS*			
1008(1)a	ALUMINUM GLASS WINDOWS (SLIDING TYPE)	14.00	sq.m.	
1008(1)c	ALUMINUM GLASS WINDOWS (AWNING TYPE)	1.00	sq.m.	
1008(1)d	ALUMINUM GLASS WINDOWS (FIXED TYPE)	32.00	sq.m.	
1010(1)	FRAMES (JAMBS, SILLS, HEAD, TRANSOMS AND MULLIONS	6.00	set	
1007(1)a	ALUMINUM FRAME GLASS DOOR (SLIDING TYPE)	5.00	sq.m.	
1010(2)a	DOORS (FLUSH)	5.00	sq.m.	
1010(2)b	DOORS (WOOD PANEL)	7.00	sq.m.	
C.4	*FINISHING WORKS*			
1003(1)a1	CEILING (4.5mm, METAL FRAME, FIBER CEMENT BOARD)	137.00	sq.m.	
1003(11)a1	FASCIA BOARD (19mm, FIBER CEMENT BOARD)	7.00	sq.m.	
1003(17)	CARPENTRY AND JOINERY WORKS	1.00	l.s.	
1016(1)a	WATERPROOFING (CEMENT-BASE)	29.00	sq.m.	
1018(1)	GLAZED TILES AND TRIMS	51.00	sq.m.	
1018(2)	UNGLAZED TILES	65.00	sq.m.	
1021(1)a	CEMENT FLOOR FINISH (PLAIN)	26.00	sq.m.	
1027(1)	CEMENT PLASTER FINISH	513.00	sq.m.	
1051(1)a	RAILING	1.00	l.s.	
C.5	*PAINTING WORKS*			
1032(1)a	PAINTING WORKS (MASONRY/ CONCRETE)	651.00	sq.m.	
1032(1)b	PAINTING WORKS (WOOD)	19.00	sq.m.	
1032(1)c	PAINTING WORKS (STEEL)	104.00	sq.m.	
C.6	*ROOF FRAMING AND ROOFING WORKS*			
1014(1)b2	PREPAINTED METAL SHEETS (ABOVE 0.427mm, RIB TYPE, LONG SPAN)	61.00	sq.m.	
1013(2)b	FABRICATED METAL ROOFING ACCESSORY (GAUGE 26, 0.551mm, FLASHING)	26.00	l.m.	
1013(2)c	FABRICATED METAL ROOFING ACCESSORY (GAUGE 24, 0.701 00, GUTTERS)	7.00	l.m.	
1047(8)a	STRUCTURAL STEEL, (TRUSSES)	1,040.00	kg.	
1047(8)b	STRUCTURAL STEEL, (PURLINS)	339.00	kg.	
1047(5)d	METAL STRUCTURAL ACCESSORIES (STEEL PLATES)	132.00	kg.	
1047(5)a	METAL STRUCTURAL ACCESSORIES (BOLTS AND RODS)	19.00	kg.	
1047(5)b	METAL STRUCTURAL ACCESSORIES (SAGRODS)	31.00	kg.	
PART D	PLUMBING/SANITARY WORKS			
1001(8)	SEWER LINE WORKS	1.00	l.s.	
1002(24)	COLD WATER LINES	1.00	l.s.	
1001(9)	STORM DRAINAGE AND DOWNSPOUT	1.00	l.s.	
1002(4)	PLUMBING FIXTURES	1.00	l.s.	
1001(11)	SEPTIC VAULTS (CONCRETE/CHB)	1.00	l.s.	
1001(5)a	CATCH BASIN (CONCRETE)	10.00	each	
PART E	ELECTRICAL WORKS			
1100(10)	CONDUIT, BOXES, AND FITTINGS (CONDUIT WORKS/ CONDUIT ROUGH IN)	1.00	l.s.	
1101(33)	WIRES AND WIRING DEVICES	1.00	l.s.	
1102(1)	PANEL BOARD WITH MAIN AND BRANCH BREAKERS	1.00	l.s.	
1103(1)	LIGHTING FIXTURES AND LAMPS	1.00	l.s.	

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PROJECT TITLE / LOCATION :
CONVERGENCE AND SPECIAL SUPPORT PROGRAM
BASIC INFRASTRUCTURE PROGRAM
MULTI-PURPOSE BUILDINGS/ FACILITIES TO SUPPORT SOCIAL SERVICES
CONSTRUCTION OF MULTI-PURPOSE BUILDING, BARANGAY 3-D, SAN PABLO CITY, LAGUNA

SHEET CONTENT :
+ BILL OF MATERIALS

DRAFTED :
JEFFERSON R. GABANAN
DRAFTSMAN II(B)

PREPARED :
PATRICK JONES F. MAGAMPON
ARCHITECT II

REVIEWED :
JOEY CHRISTIAN L. DAYO
ENGINEER II
DATE :

SUBMITTED/ RECOMMENDED :
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OFFICE OF THE DISTRICT ENGINEER
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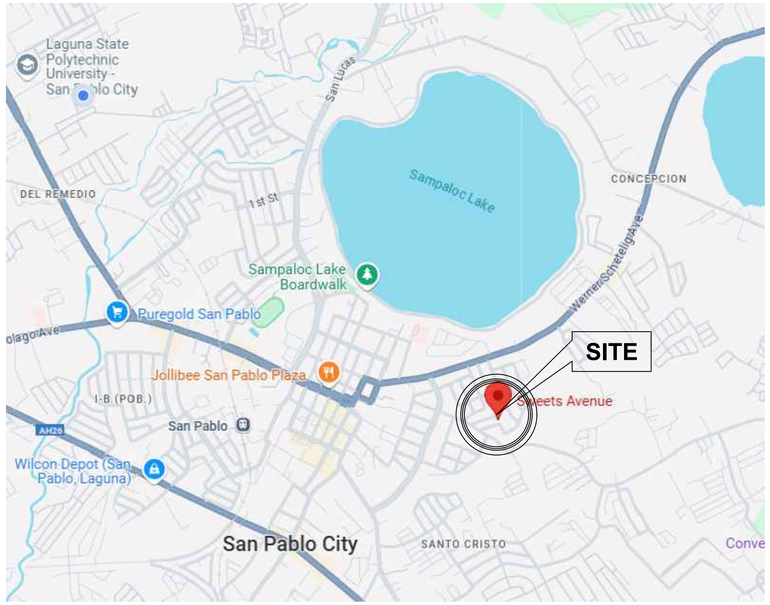
SET NO. A 2 | 10

SHEET NO. 2 | 2 | 23

1 / A - 3 **PERSPECTIVE**
NTS.



2 / A - 3 **LOCATION MAP**
NTS.

+ SCHEDULE OF DOORS AND WINDOWS

TABLE OF CONTENTS

ARCHITECTURAL

A-1 +COVER SHEET

A-2 + BILL OF MATERIALS

A-3 + PERSPECTIVE DRAWING
+ LOCATION PLAN
+ TABLE OF CONTENT

A-4 + VICINITY MAP
+ SITE DEVELOPMENT PLAN

A-5 + GROUND FLOOR PLAN
+ SECOND FLOOR PLAN
+ ROOF PLAN
+ SCHEDULE OF FINISHES
+ FRONT ELEVATION
+ LEFTSIDE ELEVATION

A-6 + REAR ELEVATION
+ RIGHT SIDE ELEVATION
+ CROSS SECTION
+ LONGITUDINAL SECTION
+ PWD TOILET DET. PLAN & SECTIONS
+ 2ND FLR. TOILET PLAN & SECTION
+ BLOW-UP DETAILS
+ SPOT DETAILS

A-7 + SCHEDULE OF DOORS AND WINDOWS

A-8 + GROUND FLOOR REFLECTED CEILING PLAN
+ SECOND FLOOR REFLECTED CEILING PLAN
+ CEILING VENT DETAIL
+ PERSPECTIVE (CEILING)
+ DET. SECTION
+ DETAIL "A"

A-9 + STAIR DETAILS
+ SPOIT DETAIL 1
+ SPOT DETAIL 2
+ SPOT DETAIL 3
+ SECTION
+ SPOT DETAIL (RAMP FLOORING)
+ RAMP RAILINGS DETAIL
+ RAMP DETAILS

A-10 + DETAIL OF FIRE ESCAPE

STRUCTURAL

S-1 + GENERAL STRUCTURAL NOTES

S-2 + GENERAL STRUCTURAL NOTES

S-3 + FOUNDATION PLAN
+ DETAIL OF STAIR ON FILL
+ REFERENCE DETAILED ELEV. OF COLUMNS
+ DETAIL OF WALL FOOTINGS
+ DETAIL OF FOOTING
+ DETAIL OF TIE BEAM
+ DESIGN CRITERIA
+ SCHEDULE OF FOOTING
+ SCHEDULE OF COLUMN

S-4 +SECOND FLOOR FRAMING PLAN
+ROOF FRAMING PLAN
+TYPICAL DETAIL OF SUSPENDED SLAB
+DETAIL OF SUN BREAKER
+TYPICAL BEAM ELEVATION
+TYPICAL SLAB ELEVATION
+SCHEDULE OF SLABS
+SCHEDULE OF BEAM
+TYP. DET. OF COLUMN LAP SPLICE

S-5 + DET. ELEV. OF STAIR
+ DET. SECT. OF STAIR
+ STAIRWAY FOOTING DET.
+ STAIRWAY COLUMN DET.
+ LANDING BEAM DET.

S-6 + HIP TRUSS-1 DETAIL
+ EAVES DET. SECTION
+ CONNECTION DETAILS
+ ROOFING FIXER
+ SAGROD CONNECTION DETAIL
+ PURLIN CONNECTION DETAIL
+ TYP. TRUSS ANCHORAGE DET.

SANITARY

P-1 +SITE DEVELOPMENT PLAN (DRAINAGE LAYOUT)
+STORM DRAINAGE PLAN
+GENERAL NOTES
+LEGEND

P-2 +GROUND FLOOR SEWER LINE LAYOUT PLAN
+SECOND FLOOR SEWER LINE LAYOUT PLAN
+ISOMETRIC SEWER LAYOUT PLAN

P-3 +DETAIL OF CATCH BASIN
+FLOOR CLEANOUT DET.
+FLOOR DRAIN DET.
+SEPTIC TANK DET.

ELECTRICAL

E-1 +GENERAL NOTES
+LEGEND
+SITE DEVELOPMENT PLAN
+SINGLE LINE DIAGRAM

E-2 +ELECTRICAL RISER DIAGRAM
+SCHED. OF LOADS & COMPUTATION
+GROUND FLOOR POWER LAYOUT
+SECOND FLOOR POWER LAYOUT
+GROUND FLOOR LIGHTING LAYOUT
+SECOND FLOOR LIGHTING LAYOUT

MECHANICAL

ELECTRONICS

BILLBOARD

B-1 + DETAIL OF DPWH STANDARD BILLBOARD

B-2 + DETAIL OF COA'S STANDARD BILLBOARD

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BARANGAY 3-D, SAN PABLO CITY, LAGUNA

SHEET CONTENT :
+ PERSPECTIVE VIEW
+ LOCATION PLAN
+ TABLE OF CONTENT

DRAFTED :
JEFFERSON R. GABANAN
DRAFTSMAN II(B)

PREPARED :
PATRICK JONES F. MAGAMPON
ARCHITECT II

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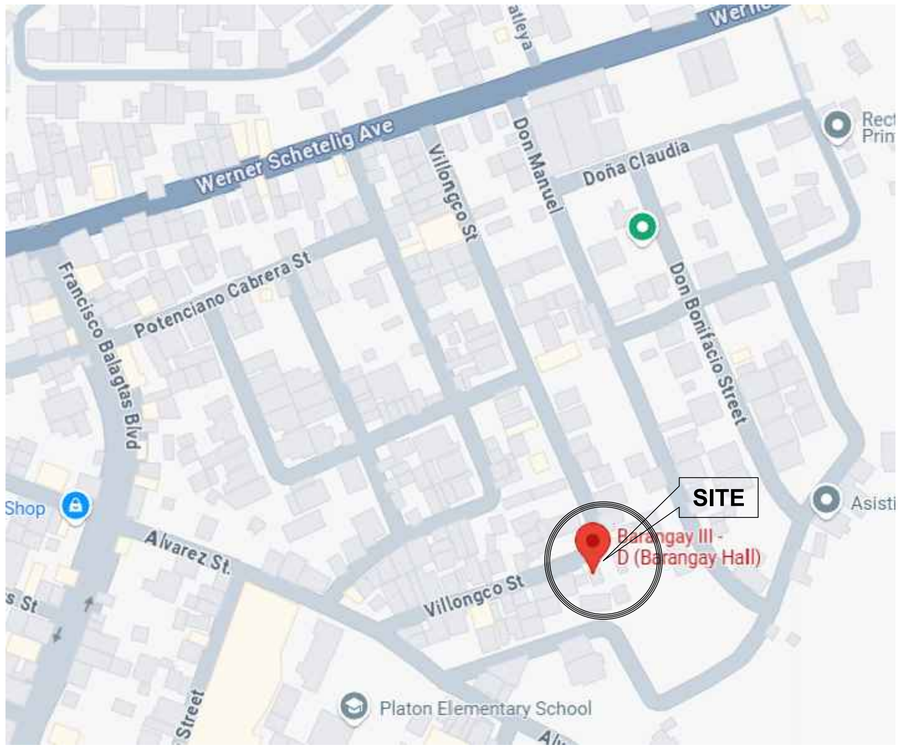
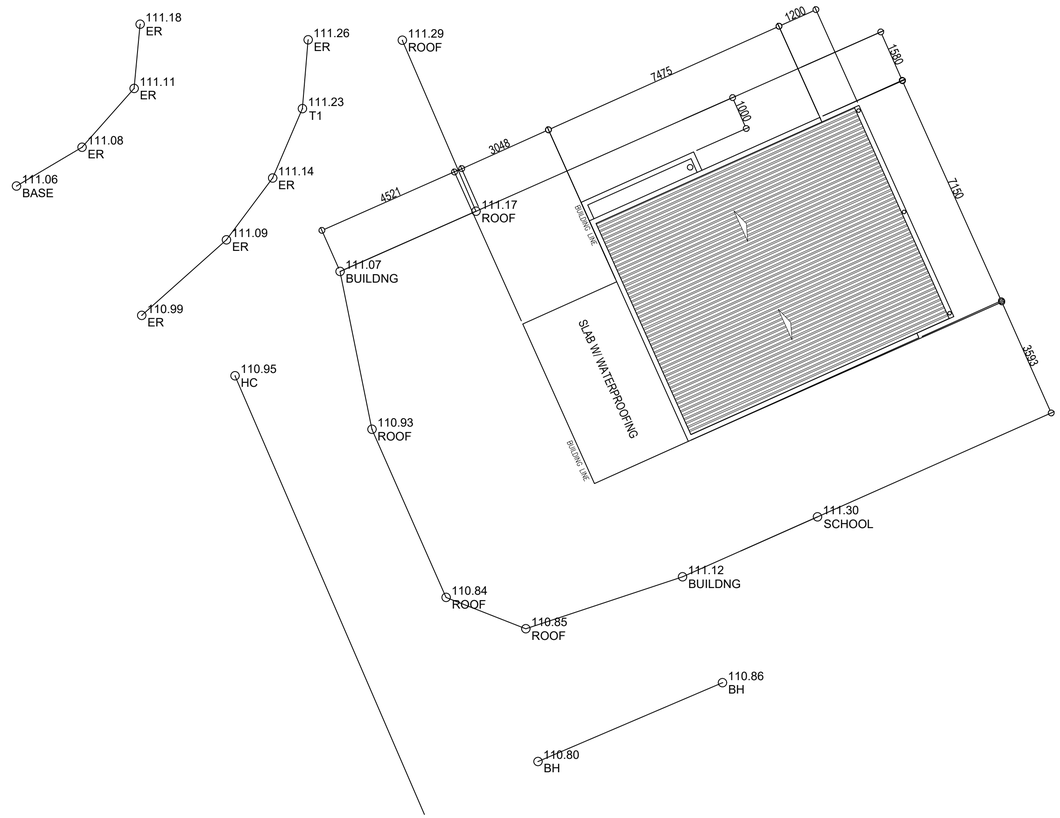
SET NO. A / 3 | 10

SHEET NO. 3 / 3 | 23



1 A - 4 **VICINITY MAP**
NTS.



2 A - 4 **SITE DEVELOPMENT P[LAN**
NTS.

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SHEET CONTENT :
VICINITY MAP
SITE DEVELOPMENT PLAN

DRAFTED :
JEFFERSON R. GABANAN
DRAFTSMAN I(B)

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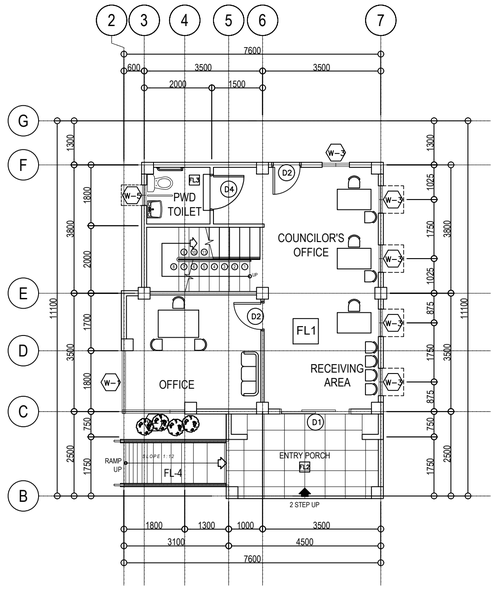
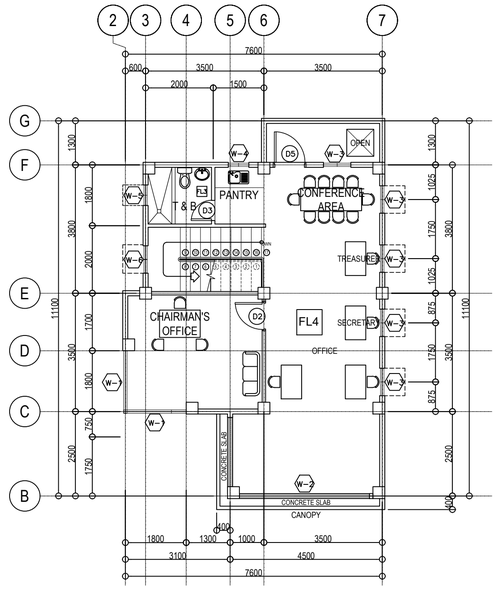
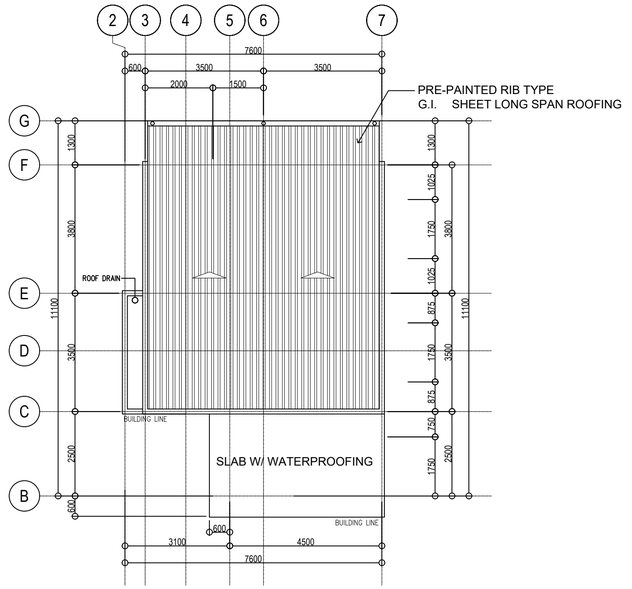


1 A-5 **GROUND FLOOR PLAN**
SCALE: 1:100 m.



2 A-5 **SECOND FLOOR PLAN**
SCALE: 1:100 m.



3 A-5 **ROOF PLAN**
SCALE: 1:100 m.

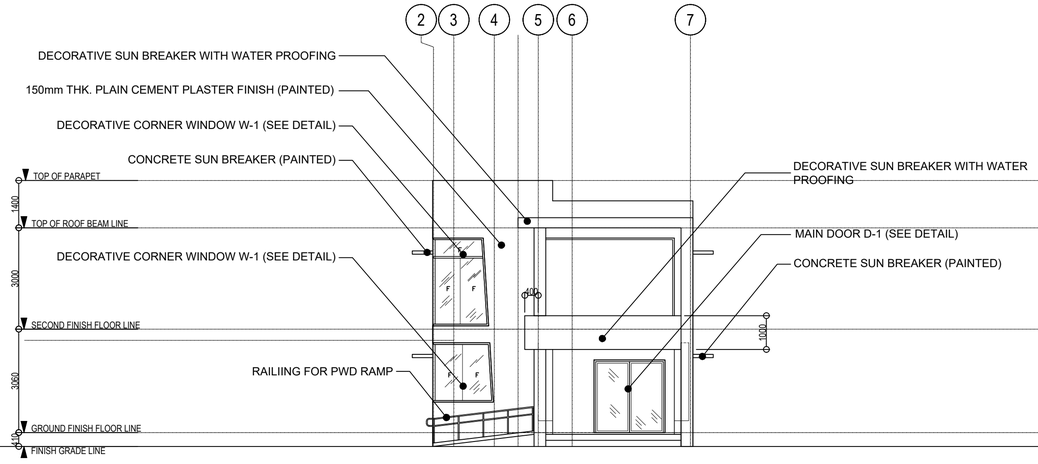
SCHEDULE OF FINISHES

FLOORS :

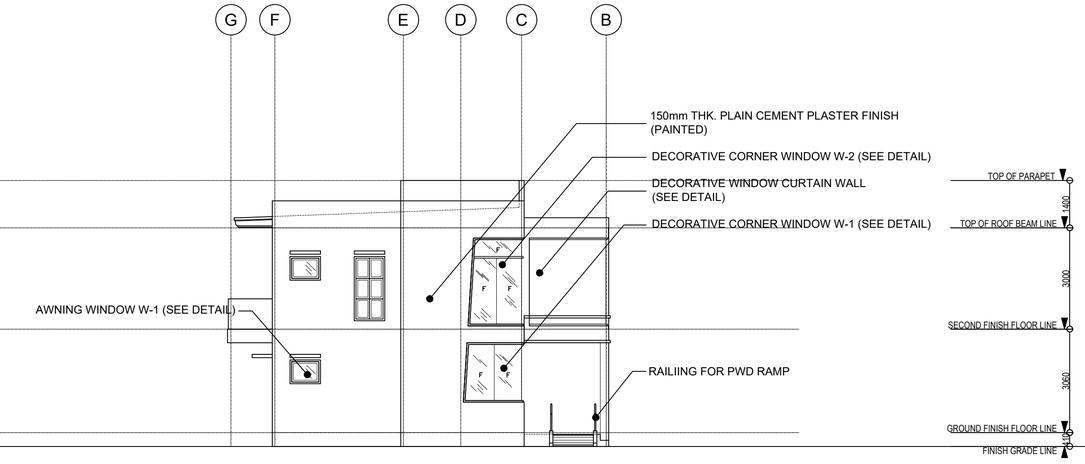
- FL1 - 400mm X 400mm X 1" THK. PORCELAIN TILE FLOOR FINISH
- FL2 - 400mm X 400mm X 1" THK. PORCELAIN TILE FLOOR FINISH WITH WATER PROOFING
- FL3 - 200X200 VITRIFIED FLOOR TILES (GLAZED)
- FL4 SMOOTH FINISH/ CONCRETE FLOORING

WALLS :

- WF1 - 150 MM THK. CHB W/ PLAIN CEMENT PLASTER FIN (PAINTED)
- WF2 - 100 MM THK. CHB W/ PLAIN CEMENT PLASTER FIN (PAINTED)
- WF3 - 200X200 VITRIFIED WALL TILES (GLAZED)



4 A-5 **FRONT ELEVATION**
SCALE: 1:100 m.



5 A-5 **LEFT SIDE ELEVATION**
SCALE: 1:100 m.

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SHEET CONTENT :
+ GROUND FLOOR PLAN
+ SECOND FLOOR PLAN
+ ROOF PLAN
+ SHEDULE OF FINISHES
+ FRONT ELEVATION
+ LEFT SIDE ELEVATION

DRAFTED :
JEFFERSON R. GABANAN
DRAFTSMAN II(B)

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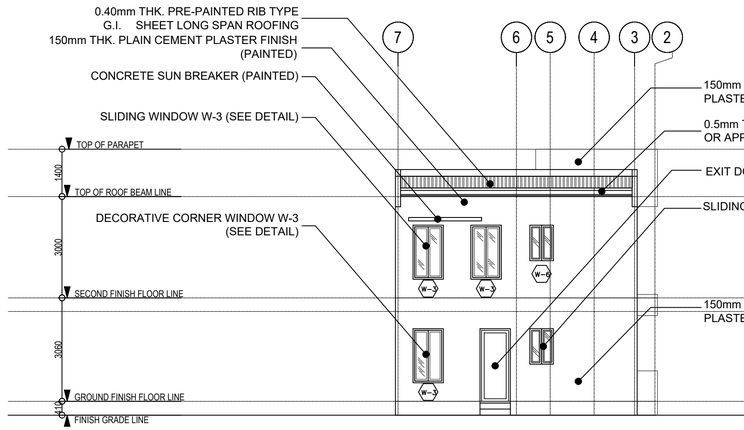
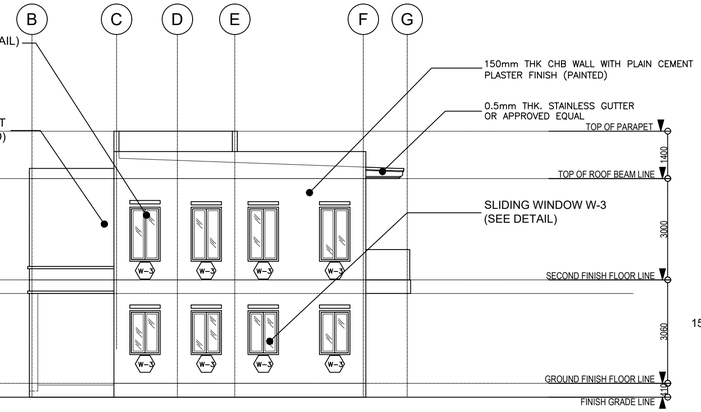
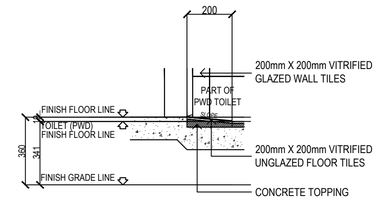


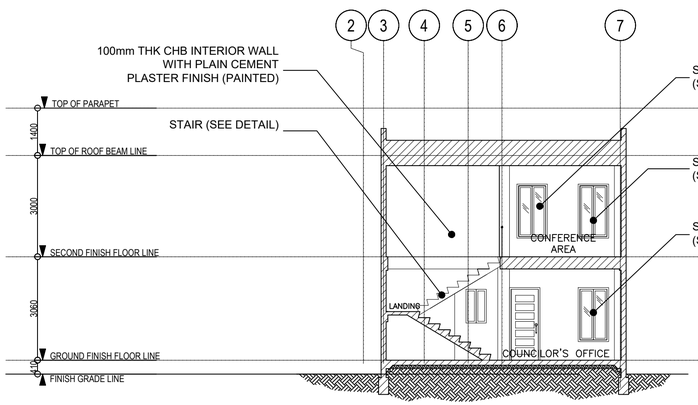
1 A-6 **REAR ELEVATION**
SCALE: 1:100 m.



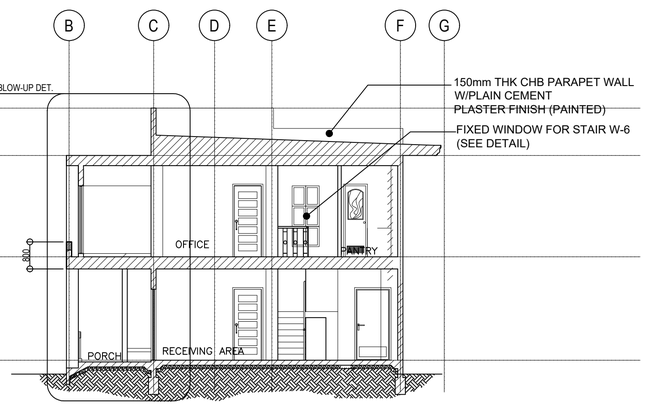
2 A-6 **RIGHT SIDE ELEVATION**
SCALE: 1:100 m.



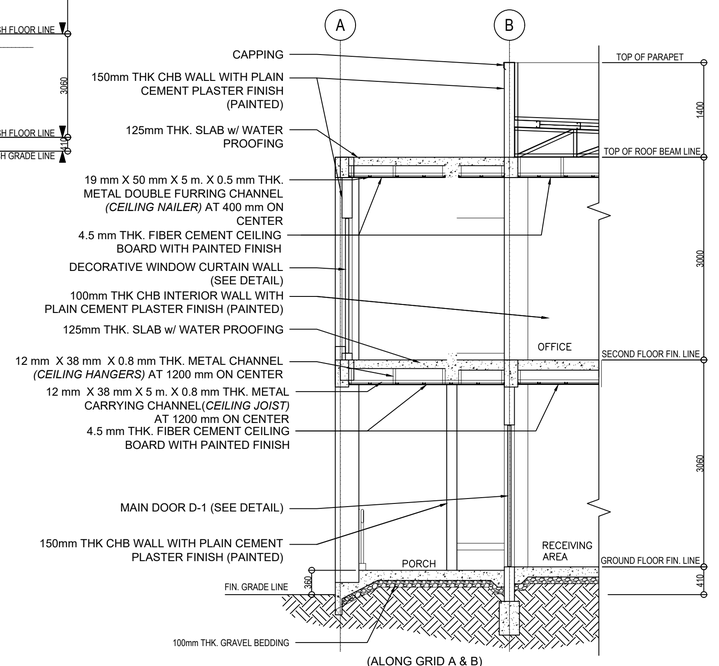
10 A-6 **SPOT DET. "A"**
NTS.



3 A-6 **CROSS SECTION**
SCALE: 1:100 m.



4 A-6 **LONGITUDINAL SECTION**
SCALE: 1:100 m.



(ALONG GRID A & B)

11 A-6 **BLOW-UP DETAIL**
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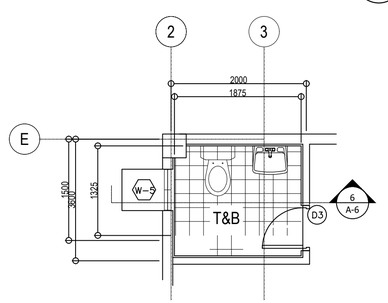
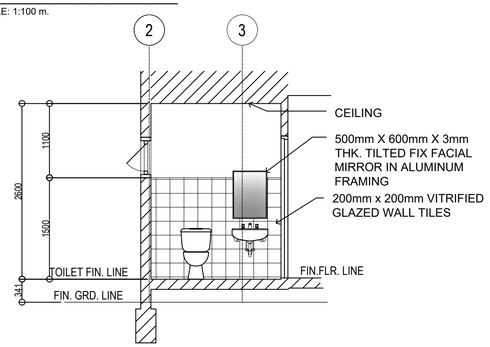
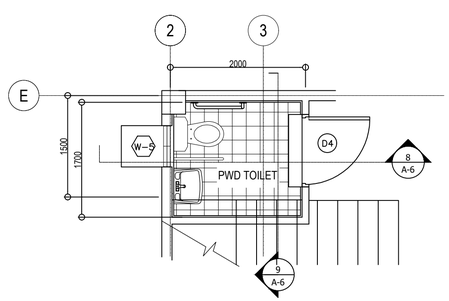


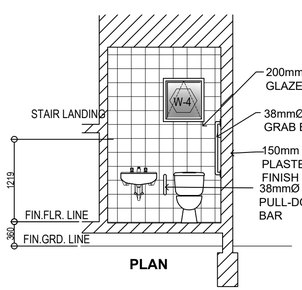
5 A-6 **2ND FLR. TOILET DET. PLAN**
SCALE: 1:50 m.



6 A-6 **SECTION**
SCALE: 1:50 m.

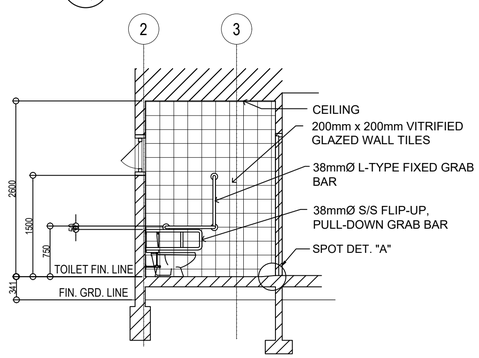


7 A-6 **PWD TOILET DET. PLAN**
SCALE: 1:50 m.



PLAN

8 A-6 **SECTION**
SCALE: 1:50 m.



9 A-6 **SECTION**
SCALE: 1:50 m.

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
LAGUNA 3RD DISTRICT ENGINEERING OFFICE
MARIFLOR SUBD., BRGY. DEL REMEDIO, SAN PABLO CITY, REGION IV-A

PROJECT TITLE / LOCATION :

CONVERGENCE AND SPECIAL SUPPORT PROGRAM
BASIC INFRASTRUCTURE PROGRAM
MULTI-PURPOSE BUILDINGS/ FACILITIES TO SUPPORT SOCIAL SERVICES
CONSTRUCTION OF MULTI-PURPOSE BUILDING,
BARANGAY 3-D, SAN PABLO CITY, LAGUNA

SHEET CONTENT :

+ REAR ELEVATION
+ RIGHT-SIDE ELEVATION
+ CROSS SECTION
+ LONGITUDINAL SECTION
+ PWD TOILET DET. PLAN & SECTION
+ 2ND FLR. TOILET PLAN & SECTION
+ BLOW-UP DETAIL
+ SPOT DETAIL

DRAFTED :
JEFFERSON R. GABANAN
DRAFTSMAN II(B)

PREPARED :
PATRICK JONES F. MAGAMPON
ARCHITECT II

REVIEWED :
JOEY CHRISTIAN L. DAYO
ENGINEER II
DATE :

SUBMITTED/ RECOMMENDED :
MA. SHIRLEY M. SAMIANO
CHIEF, PLANNING & DESIGN SECTION
CONCURRENT CAPACITY AS OFFICER-IN-CHARGE
OFFICE OF THE ASSISTANT DISTRICT ENGINEER
DATE :

APPROVED :
CARLOS C. MUERE
OFFICER-IN-CHARGE
OFFICE OF THE DISTRICT ENGINEER
DATE :

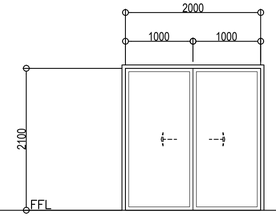
SET NO. A 6 10

SHEET NO. 6 6 23

SCHEDULE OF DOORS AND WINDOWS

1 / A-7

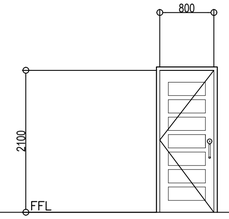
SCALE: 1:50 m.



D–1

MAINDOOR

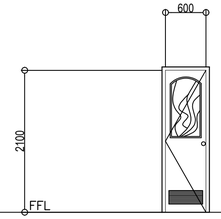
ALUMINUM FRAMED DOUBLE SLIDING DOOR WITH 1/4" THK. GLASS IN-FILL POWDER COATED FINISHW/ COMPLETE HARDWARE AND ACCESSORIES
1-SETS REQ.



D–2

BACKDOOR & OFFICE

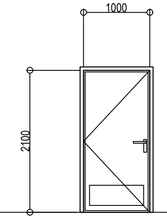
SOLID WOOD PANEL DOOR W/ 50mm X 150mm THK. KD WOOD JAMB: W/ COMPLETE HARDWARE AND ACCESSORIES
3-SETS REQ.



D–3

T & B

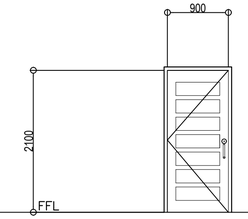
PLASTIC PVC DOOR ON 50X150mm THK. PLASTIC DOOR JAMB W/ COMPLETE HARDWAR AND ACCESSORIES
1-SET REQ.



D–4

PWD TOILET

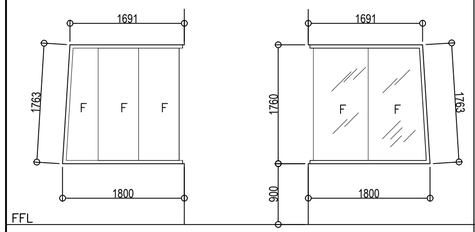
HOLLOW CORE FLUSH TYPE SWING DOOR ON 50 x 150mm WOODEN/ STEEL JAMB w/ MARINE PLYWOOD (TWO FACE) COMPLETE w/ HARDWARE AND ACCESSORIES
1 SETS



D–5

FIRE ESCAPE / BACK DOOR

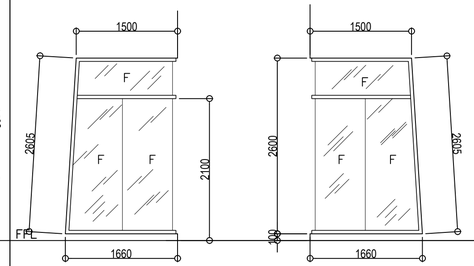
SOLID WOOD PANEL DOOR W/ 50mm X 150mm THK. KD WOOD JAMB: W/ COMPLETE HARDWARE AND ACCESSORIES
1-SET REQ.



W–1

CORNER WINDOW (GROUND FLOOR)

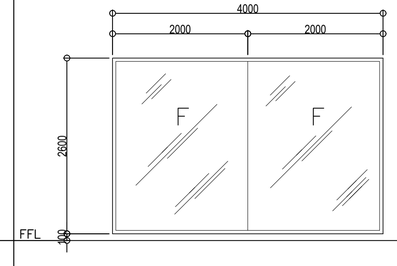
ALUMINUM FRAMED DECORATIVE SLIDING WINDOW, FIXED IN FRONT WITH 1/2" THK. GLASS IN-FILL POWDER COATED FINISH
1-SET REQ.



W–7

CORNER WINDOW (SECOND FLOOR)

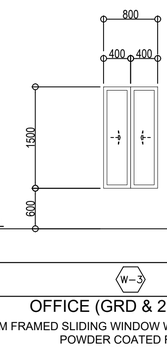
ALUMINUM FRAMED DECORATIVE FIXED WINDOW WITH 1/2" THK. GLASS IN-FILL POWDER COATED FINISH
1-SET REQ.



W–2

FRONT WINDOW (SECOND FLOOR)

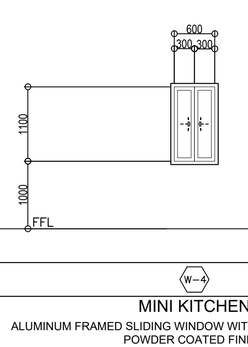
ALUMINUM FRAMED DECORATIVE FIXED WINDOW WITH 1/2" THK. GLASS IN-FILL POWDER COATED FINISH
1-SET REQ.



W–5

T & B

ALUMINUM FRAMED AWNING WINDOW WITH 1/4" THK. GLASS IN-FILL POWDER COATED FINISH
2-SET REQ.



W–4

MINI KITCHEN

ALUMINUM FRAMED SLIDING WINDOW WITH 1/4" THK. GLASS IN-FILL POWDER COATED FINISH
2-SETS REQ.

W–6

STAIR DECORATIVE WINDOW

ALUMINUM FRAMED AWNING WINDOW WITH 1/4" THK. GLASS IN-FILL POWDER COATED FINISH
1-SET REQ.

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
LAGUNA 3RD DISTRICT ENGINEERING OFFICE
MARIFLOR SUBD., BRGY. DEL REMEDIO, SAN PABLO CITY, REGION IV-A

PROJECT TITLE / LOCATION :
CONVERGENCE AND SPECIAL SUPPORT PROGRAM
BASIC INFRASTRUCTURE PROGRAM
MULTI-PURPOSE BUILDINGS/ FACILITIES TO SUPPORT SOCIAL SERVICES
CONSTRUCTION OF MULTI-PURPOSE BUILDING,
BARANGAY 3-D, SAN PABLO CITY, LAGUNA

SHEET CONTENT :
+ SCHEDULE OF DOORS AND WINDOWS

DRAFTED :
JEFFERSON R. GABANAN
DRAFTSMAN II(B)

PREPARED :
PATRICK JONES F. MAGAMPON
ARCHITECT II

REVIEWED :
JOEY CHRISTIAN L. DAYO
ENGINEER II
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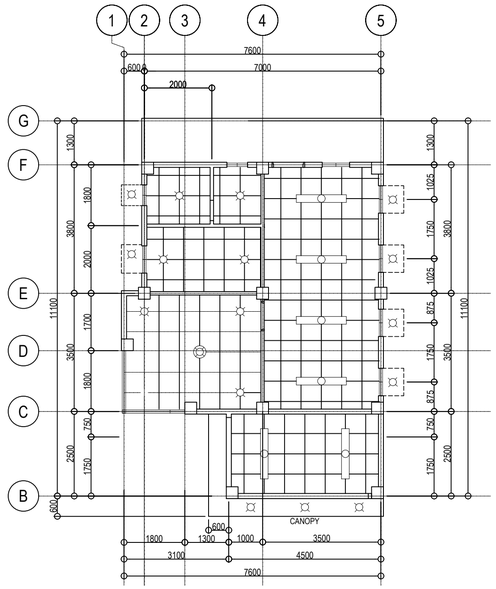
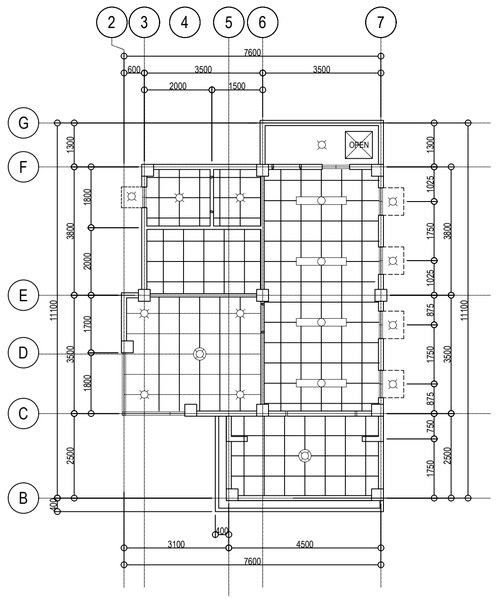


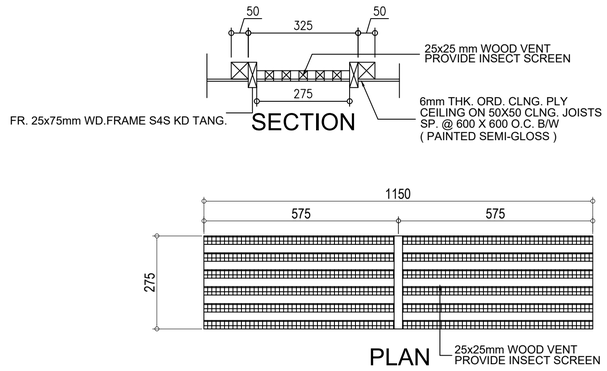
2 A-8 **SECOND FLOOR REFLECTED CEILING PLAN**

SCALE: 1:100 m.



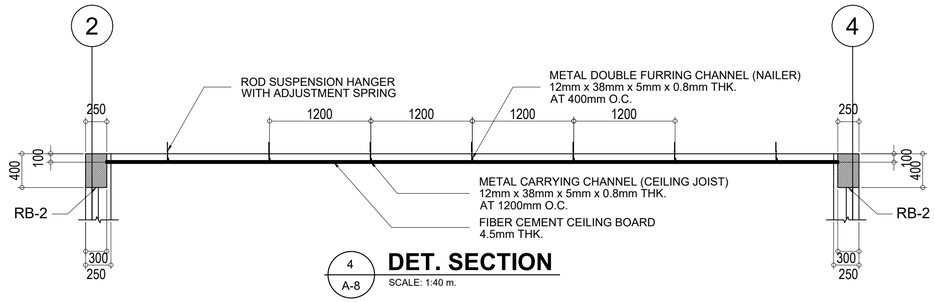
1 A-8 **GROUND FLOOR REFLECTED CEILING PLAN**

SCALE: 1:100 m.



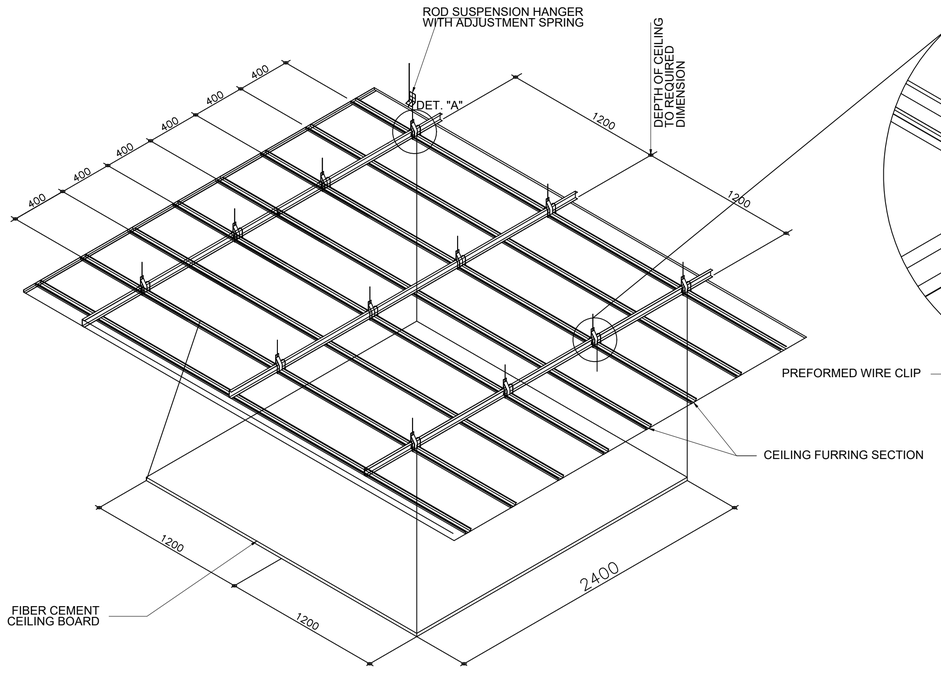
3 A-8 **CEILING VENT DETAIL**

SCALE: 1:10 m.



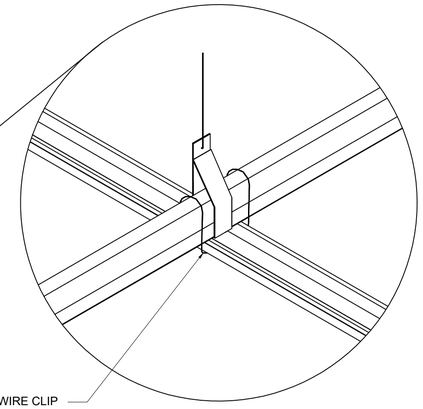
4 A-8 **DET. SECTION**

SCALE: 1:40 m.



5 A-8 **PERSPECTIVE (CEILING)**

NTS.



6 A-8 **DETAIL "A"**

NTS.

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
LAGUNA 3RD DISTRICT ENGINEERING OFFICE
MARIFLOR SUBD., BRGY. DEL REMEDIO, SAN PABLO CITY, REGION IV-A

PROJECT TITLE / LOCATION :

CONVERGENCE AND SPECIAL SUPPORT PROGRAM (CSSP) SOCIAL INFRASTRUCTURE PROGRAM
MULTI-PURPOSE BUILDINGS/ FACILITIES TO SUPPORT SOCIAL SERVICES CONSTRUCTION OF MULTI-PURPOSE BUILDING/ BARANGAY MULTI-PURPOSE BUILDING
BARANGAY 3-D, SAN PABLO CITY, LAGUNA

SHEET CONTENT :

+GROUND FLOOR REFLECTED CEILING PLAN
+SECOND FLOOR REFLECTED CEILING PLAN
+CEILING VENT DETAIL
+PERSPECTIVE (CEILING)
+DET. SECTION
+DETAIL "A"

DRAFTED :

JEFFERSON R. GABANAN
DRAFTSMAN II(B)

PREPARED :

PATRICK JONES F. MAGAMPON
ARCHITECT II

REVIEWED :

JOEY CHRISTIAN L. DAYO
ENGINEER II
DATE :

SUBMITTED/ RECOMMENDED :

MA. SHIRLEY M. SAMIANO
CHIEF, PLANNING & DESIGN SECTION
CONCURRENT CAPACITY AS OFFICER-IN-CHARGE
OFFICE OF THE ASSISTANT DISTRICT ENGINEER
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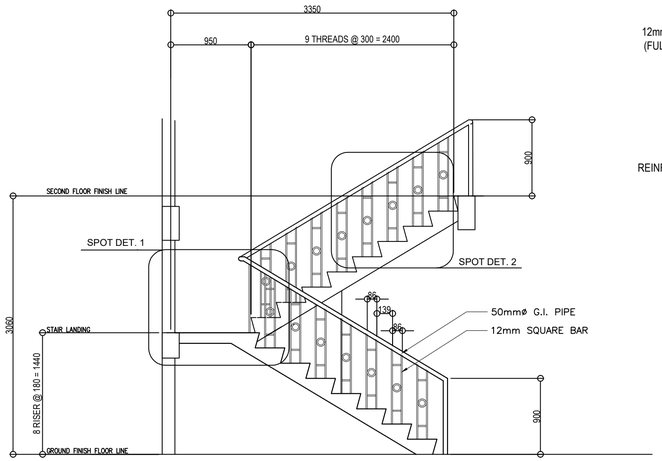
APPROVED :

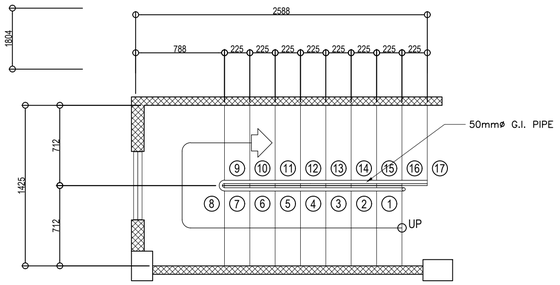
CARLOS C. MUERE
OFFICER-IN-CHARGE
OFFICE OF THE DISTRICT ENGINEER
DATE :

SET NO. A 8 | 10

SHEET NO. 8 | 23

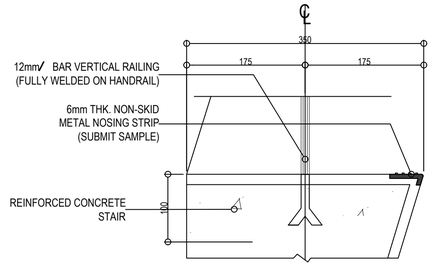


SIDE ELEVATION



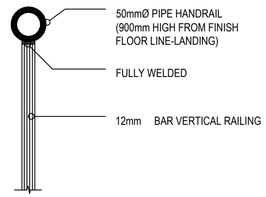
PLAN

1 A-9 **STAIR DETAILS**
SCALE: 1:40 m.



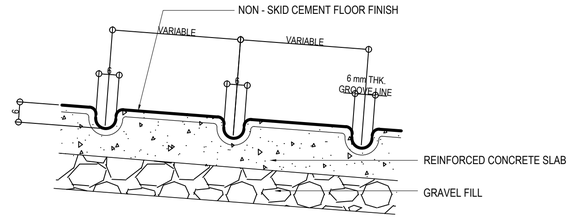
(NON-SKID NOSING STRIP)

4 A - 8 **SPOT DETAIL 3**
SCALE: 1:10 m.

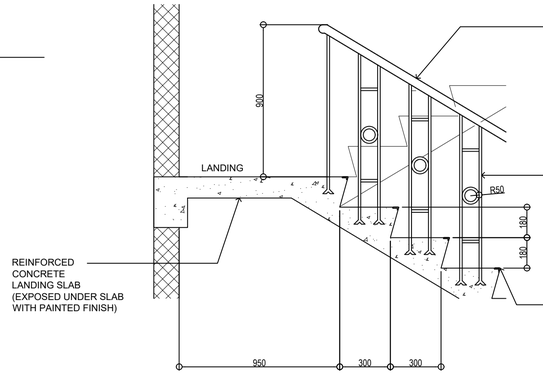


(TYP. HANDRAIL)

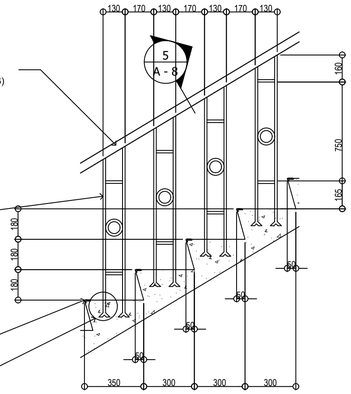
5 A - 8 **SECTION**
SCALE: 1:10 m.



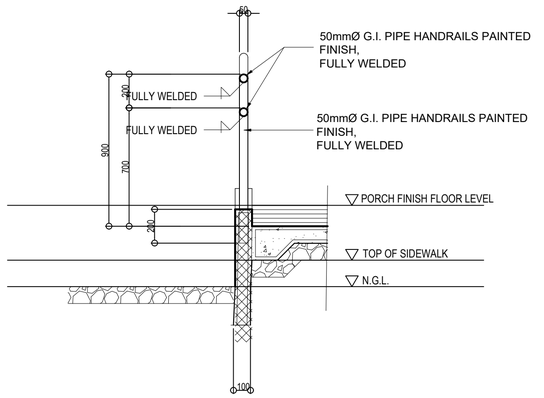
6 A - 8 **SPOT DET. (RAMP FLOORING)**
SCALE: 1:10 m.



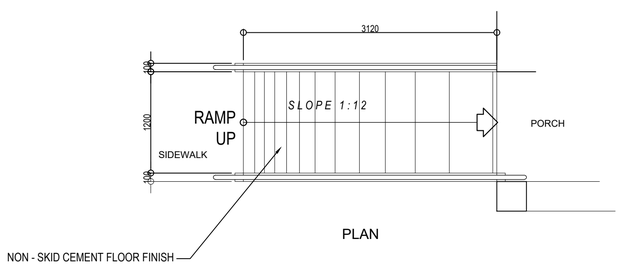
2 A-9 **SPOT DETAIL 1**
SCALE: 1:20 m.



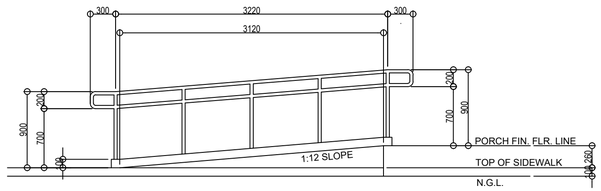
3 A-9 **SPOT DETAIL 2**
SCALE: 1:20 m.



7 A-9 **RAMP RAILING DETAILS**
SCALE: 1:20 m.

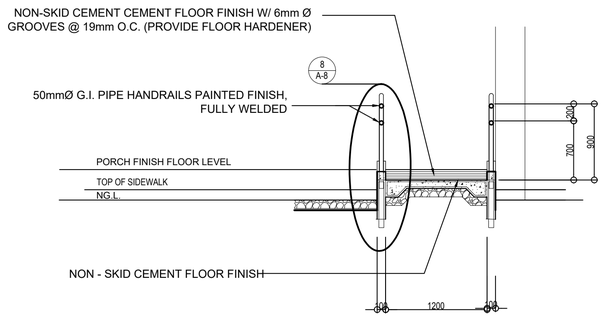


PLAN



ELEVATION

6 A-9 **RAMP DETAILS (FOR PWD)**
SCALE: 1:40 m.



SECTION

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
LAGUNA 3RD DISTRICT ENGINEERING OFFICE
MARIFLOR SUBD., BRGY. DEL REMEDIO, SAN PABLO CITY, REGION IV-A

PROJECT TITLE / LOCATION :

CONVERGENCE AND SPECIAL SUPPORT PROGRAM
BASIC INFRASTRUCTURE PROGRAM
MULTI-PURPOSE BUILDINGS/ FACILITIES TO SUPPORT SOCIAL SERVICES
CONSTRUCTION OF MULTI-PURPOSE BUILDING,
BARANGAY 3-D, SAN PABLO CITY, LAGUNA

SHEET CONTENT :

+ STAIR DETAILS
+ SPOIT DETAIL 1
+ SPOT DETAIL 2
+ SPOT DETAIL 3
+ SECTION
+ SPOT DETAIL (RAMP FLOORING)
+ RAMP RAILINGS DETAIL
+ RAMP DETAILS

DRAFTED :
JEFFERSON R. GABANAN
DRAFTSMAN II(B)

PREPARED :
PATRICK JONES F. MAGAMPON
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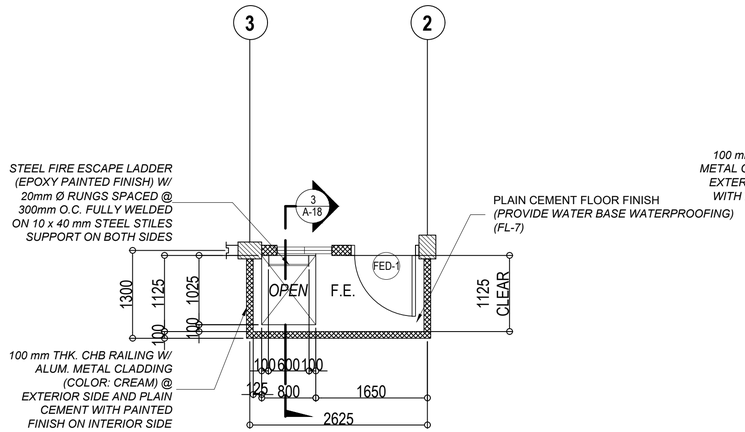
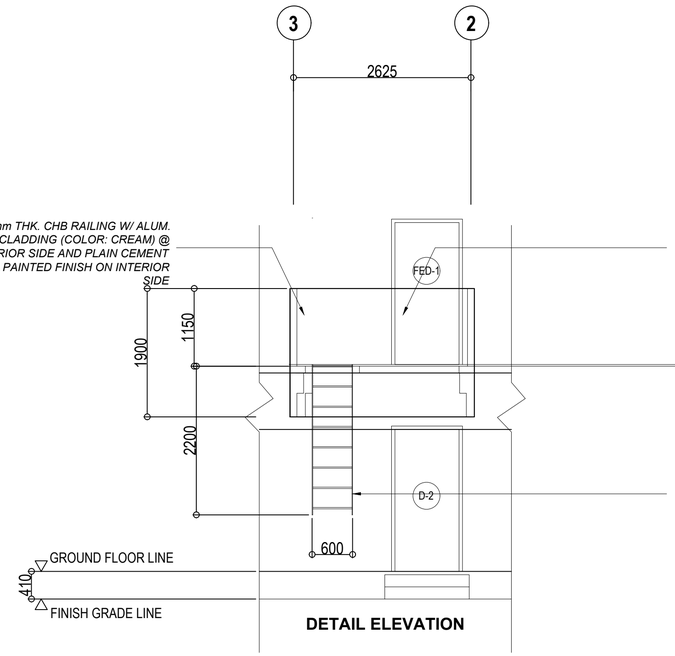
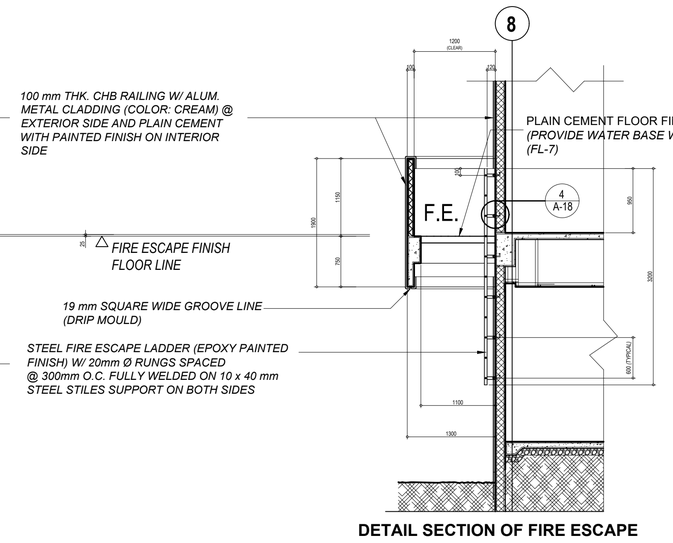


DETAIL PLAN



DETAIL ELEVATION



DETAIL SECTION OF FIRE ESCAPE

1 / A - 10 DETAIL OF FIRE ESCAPE

SCALE: 1:50 m.

REPUBLIC OF THE PHILIPPINES
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LAGUNA 3RD DISTRICT ENGINEERING OFFICE
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MULTI-PURPOSE BUILDINGS/ FACILITIES TO SUPPORT SOCIAL SERVICES
CONSTRUCTION OF MULTI-PURPOSE BUILDING, BARANGAY 3-D, SAN PABLO CITY, LAGUNA

SHEET CONTENT :
* DETAIL OF FIRE ESCAPE

DRAFTED :
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DRAFTSMAN II(B)

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GENERAL CONSTRUCTION NOTES

GENERAL NOTES

1.0 STANDARDS AND REFERENCES

THE FOLLOWING SHALL GOVERN THE DESIGN FABRICATION AND CONSTRUCTION OF THE PROJECT.

1.1 NATIONAL STRUCTURAL CODE OF THE PHILIPPINES (N.S.C.P 2015) VOL. 1, SEVENTH EDITION.

2.0 DESIGN CRITERIA

2.1 LOADINGS

A. DEAD LOAD

CONCRETE	24 kN/m^3
STEEL	77 kN/m^3
150 mm THK. CHB WALL	3.3 kPa (INCLUDING FINISH)
100 mm THK. CHB WALL	2.7 kPa (INCLUDING FINISH)

B. LIVE LOAD

OFFICE	2.40 kPa
COMFORT ROOM	2.40 kPa

C. WIND LOAD

BUILDING CATEGORY = 1 (ESSENTIAL FACILITIES)

	OPTION 1
EXPOSURE CAT.	ENCLOSED BUILDING "B"
WIND VELOCITY	V=260 KPH

P = qh [(GCpf)-(GCpi)] (DESIGN WIND PRESSURE)

WHERE: qh = VELOCITY PRESSURE (kPa)
GCpf = EXTERNAL PRESSURE COFFECIENT
GCpf = INTERNAL PRESSURE COFFECIENT

D. SEISMIC LOAD

$V = \frac{CvI}{RT} W$ (DESIGN BASE SHEAR)

$Vmax = \frac{2.50CaI}{RT} W$ $Vmin = 0.11\ CaIW$

$Vmin = \frac{0.80\ ZNvI}{R} W$ (ZONE 4)

WHERE: W = TOTAL DEAD LOAD
T = NATURAL PERIOD = Ct (h)
WHERE: C = NUMERICAL COEFFICIENT
h = BUILDING HEIGHT
I = IMPORTANCE FACTOR = 1.00
R = NUMERICAL FACTOR = 8.50
SEISMIC COEFFICIENT Cv = 0.44 Nv
Ca = 0.64 Nv
NEAR SOURCE FACTOR (11.10 km) Nv = 1.6
Na = 1.2
Z = SEISMIC ZONE = 0.40 (ZONE 4)
S = SOIL TYPE = D

E. LOAD COMBINATION

DRIFT CHECK = NSCP Eq. 203-3 - Eq. 203-7
ULTIMATE STRENGTH DESIGN = NSCP 2015 203.3.1
ALLOWABLE STRESS DESIGN = NSCP 2015 203.4.1
SERVICE LOAD COMBINATION = NSCP 2015 203.4.2

2.2 DESIGN STRESSES

A. CONCRETE COMPRESSIVE STRENGTH @ 28 DAYS:

a. FOOTINGS, COLUMNS, BEAMS AND SLABS	f'c = 20.6 MPa (3,000 psi)
b. SLAB ON FILL	f'c = 20.6 MPa (3,000 psi)
C. SLAB	f'c = 20.6 MPa (3,000 psi)

B. REINFORCING STEEL BARS

a. FOR BARS 16mm AND GREATER (INTERMEDIATE GRADE DEFORMED BAR)	fy = 414 MPa (60,000 psi)
b. FOR BARS LESS THAN 16mm (STRUCTURAL GRADE DEFORMED BAR)	fy = 275 MPa (40,000 psi)

C. STRUCTURAL STEEL ASTM-A36

FOR TRUSSES, BRACINGS , & STRUTS	fy = 248 MPa (36,000 psi)

D. PURLINS

COLD FORMED LIGHT	fy = 248 MPa (36,000 psi)

E. MASONRY UNIT (CHB)

NON - LOADING BEARING CHB WALLS	fm' = 3.45 MPa (500 psi)
F. WELDS	E - 60XX ELECTRODE
G. STRUCTURAL BOLTS ASTM- A307	a. Ft = 96.60 mPa (14, 000 psi)
	b. Fv= 69.00 mPa (10, 000 psi)

3.0 IN THE INTERPRETATION OF THE DRAWING, INDICATED DIMENSIONS SHALL GOVERN. DISTANCES AND SIZES SHALL NOT BE SCALED FOR CONSTRUCTIONS PURPOSES

4.0 IN REFERENCES TO OTHER DRAWINGS, SEE ARCHITECTURAL DRAWINGS FOR DEPRESSIONS IN FLOOR SLABS , OPENINGS IN THE WALLS AND SLABS , INTERIOR PARTITIONS , LOCATIONS OF DRAINS ETC.

5.0 IN CASE OF DISCREPANCIES AS TO THE LAYOUT, DIMENSIONS AND ELEVATIONS BETWEEN THE STRUCTURAL PLANS AND ARCHITECTURAL DRAWINGS, THE CONTRACTORS SHALL NOTIFY BOTH THE

6.0 ALL CONCRETE WORKS AND CONCRETE REINFORCEMENTS SHALL BE DONE IN ACCORDANCE WITH THE ACI.318-14M BUILDING CODE REQUIREMENT AND ALL STRUCTURAL STEEL WORKS ACCORDING WITH THE WITH THE AISC-05 IN SOFAR AS THEY DO NOT CONFLICT WITH THE LOCAL BUILDING CODE REQUIREMENT.

7.0 ACI REFERS TO AMERICAN CONCRETE INSTITUTE, AISC REFERS TO AMERICAN INSTITUTE OF STEEL CONSTRUCTION AND ASTM REFERS TO AMERICAN SOCIETY FOR TESTING MATERIALS.

8.0 CONSTURCTION NOTES AND TYPICAL DETAILS APPLY TO ALL DRAWINGS UNLESS OTHERWISE SHOWN OR NOTED. MODIFY TYPICAL DETAILS AS DIRECTED TO MEET SPECIAL CONDITIONS.

9.0 SHOP DRAWING WITH ERECTION AND PLACING DIAGRAMS OF ALL STRUCTURAL STEELS, MISCELLANEOUS IRON, PRE-CAST CONCRETE, ETC. SHALL BE SUBMITTED FOR ENGINEERS APPROVAL BEFORE FABRICATION.

10. CONTRACTOR SHALL NOTE AND PROVIDE ALL MISCELLANEUOS CURBS, SILLS , STOOLS EQUIPMENT AND MECHANICAL BASES THAT ARE REQUIRED BY THE ARCHITECTURAL , ELECTRICAL AND MECHANICAL DRAWINGS.

11. ALL RESULTS OF THE MATERIAL TESTING FOR CONCRETE, REINFORCING BARS & STRUCTURAL STEEL MUST BE NOTED & APPROVED BY THE MATERIALS ENGINEER/STRUCTURAL DESIGNER.

NOTES ON CONCRETE MIXES & PLACING

1. ALL CONCRETE SHALL DEVELOP A MIN. COMPRESSIVE STRENGTH AT THE END OF TWENTY EIGHT (28) DAYS W/ CORRESPONDING MAXIMUM SIZE AGGREGATE & SLUMP AS FOLLOWS.

LOCATION	28 DAYS STRENGTH	MAX. SIZE OF AGGREGATE	MAX SLUMP
ALL OTHERS, INCLUDING SUSPENDED SLABS	4000 PSI (28 MPa)	20 mm	100mm
COLUMNS	4000 PSI (28 MPa)	20 mm	100mm
BEAMS	4000 PSI (28 MPa)	20 mm	100mm
SLAB ON FILL	3000 PSI (20.6 MPa)	20 mm	100mm

2. MAINTAIN MINIMUM CONCRETE COVER FOR REINFORCING STEEL AS FOLLOWS.

SUSPENDED SLABS	20mm
SLAB ON GRADE	40mm
WALLS ABOVE THE GRADE	25mm
BEAM STIRRUPS AND COLUMN TIES WHERE CONCRETE IS EXPOSED TO	40mm
EARTH BUT POURED AGAINST FORMS WHERE CONCRETE IS DEPOSITED	50mm
DIRECTLY AGAINST EARTH	75mm

3. CONCRETE SHALL BE DEPOSITED IN ITS FINAL POSISITON WITHOUT SEGREGATION. RE-HANDLING OR PLACING SHALL BE DONE PREFERABLY WITH BUGGIES , BUCKETS OR WHEELBARROWS, NO CHUTES WILL BE ALLOWED EXCEPT TO TRANSFER CONCRETE FROM HOPPERS TO BUIGGIES, WHEELBARROWS OR BUCKETS IN WHICH CASE THEY SHALL NOT EXCEED SIX (6) METERS IN AGGREGATE LENGTH.
4. NO DEPOSITING OF CONCRETE SHALL BE ALLOWED WITHOUT THE USE OF VIBRATORS UNLESS AUTHORIZED IN WRITING DESIGNER AND ONLY FOR UNUSUAL CONDITIONS WHERE VIBRATIONS ARE EXTREMELY DIFFICULT TO ACCOMPLISH.
5. ALL ANCHOR BOLTS, DOWELS, AND OTHER INSERTS SHALL BE PROPERLY POSITIONED & SECURED IN PLACE PRIOR TO PLACING OF CONCRETE.
6. ALL CONCRETE SHALL BE KEPT MOST FOR A MINIMUM OF SEVEN CONSECUTIVE DAYS IMMEDIATELY AFTER POURING BY THE USE O WET BURLAP, FOG SPRAYING, CURING COMPOUNDS OR OTHER APPROVED METHODS.
7. STRIPPING OF FORMS AND SHORES:

FOUNDATION	24 HOURS
SUSPENDED SLAB EXCEPT WHEN ADDITIONAL LOADS ARE IMPOSED	8 DAYS
WALLS	21 DAYS
BEAMS	14 DAYS
COLUMNS	21 DAYS

8. THE CONTRACTOR SHALL SUBMIT THE SCHEDULE OF POURING AND THE LOCATION OF THE CONSTRUCTION JOINTS TO THE STRUCTURAL ENGINEER AT LEAST (4) DAYS PRIOR TO THE POURING FOR APPROVAL.
9. THE CONTRACTOR SHALL FURNISH AND MAITAIN ADEQUATE FORMS AND SHORINGS UNTIL THE CONCRETE MEMBERS HAVE ATTAINED THEIR WORKING CONDITION AND STRENGTH.

NOTES ON FOOTINGS

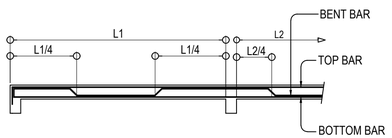
1. FOOTINGS ARE DESIGNED FOR AN ALLOWANCE SOIL BEARING PRESSURE OF 96 KPa (2000psf). CONTRACTOR SHALL REPORT TO THE ENGINEER, IN WRITING ,THE ACTUAL SOIL CONDITIONS UNCOVERED AND CONFIRM ACTUAL BEARING CAPACITY OF SOIL BEFORE DEPOSITING CONCRETE.
2. FOOTING SHALL REST AT LEAST 1500mm BELOW NATURAL GRADE LINE UNLESS OTHERWISE INDICATED IN PLANS. NO FOOTING SHALL REST ON FILL
3. MINIMUM CONCRETE PROTECTION FOR REINFORCEMENT SHALL BE 75mm CLEAR FOR CONCRETE DEPOSITED THE GROUND AND 50mm FOR CONCRETE DEPOSITED AGAINST A FORMWORK.
4. IN CASES WHERE THE SOIL CONDITION IS SUCH THAT THE MINIMUM ALLOWABLE SOIL PRESSURE OF 96KPa (2000 psf) CAN NOT BE ATTAINED AT A PRACTICAL DEPTHS THE USE OF MICROPILES , BORED PILES, OR DRIVEN PILES MAY BE ADOPTED IN LIEU OF STANDARD ISOLATED FOOTINGS.

NOTES ON REINFORCEMENT

1. UNLESS OTHERWISE NOTED IN PLANS, THE YIELD STRENGTH OF REINFORCING BARS SHALL BE:
   A. FOOTINGS , FOOTING BEAMS AND GIRDERS — fy = 414 MPa (60,000 psi)
   B. COLUMNS AND SHEAR WALLS — fy = 414 MPa (60,000 psi)
   C. BEAMS AND GIRDER — fy = 414 MPa (60,000 psi)
   D. NON-LOAD BEARING WALL PARTITIONS ,BEDDED SLABS , FLOOR & ROOF SLABS, PARAPETS ,CATCH BASIN,SIDE WALK — fy = 275 MPa (40,000 psi)
2. ALL REINFORCING BARS SIZE 10mm OR LARGER SHALL BE DEFORMED IN ACCORDANCE WITH THE ASTM A-706 BARS SMALLER THAN 10mm MAY BE PLAIN.
3. SPLICES SHALL BE SECURELY WIRED TOGETHER & SHALL LAP OR EXTEND IN ACCORDANCE w/ TABLE B (TABLE OF LAP SPLICE & ANCHORAGE LENGTH) UNLESS OTHERWISE SHOWNON DRAWINGS , SPLICES SHALL BE STAGGERED WHENEVER POSSIBLE.

NOTES ON CONCRETE SLABS

1. ALL SLAB REINFORCEMENTS SHALL BE 20mm CLEAR MINIMUM FROM BOTTOM AND FROM THE TOP OF SLAB.
2. UNLESS OTHERWISE SHOWN, REINFORCEMENT IN CONTINUOUS ELEVETED SLAB SHALL BE CUT AS FOLLOWS:

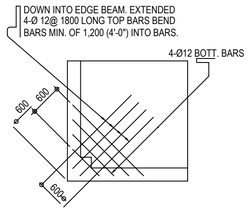


3. IF SLABS AR E REINFORCED BOTHWAYS BARS ALONG THE SHORTER SPAN SHALL BE PLACED BELOW THOSE ALONE THE LONG SPAN AT THE CENTER AND OVER THE LONGER SPAN FOR REINFORCING BARS NEAR THE SUPPORTS. THE SPACING OF THE BARS AT THE COLUMN STRIPS SHALL NOT BE MORE THAN ONE AND A HALF (1 1/2) SLAB THICKNESS.
4. TEMPERATURE BARS FOR SLAB SHALL BE GENERALLY PLACED NEAR THE FACE IN TENSION AND SHALL NOT BE LESS THAN 0.0025 X GROSS-SECTIONAL AREA (Ag) OF THE SLAB. (SEE SCHEDULE BELOW)

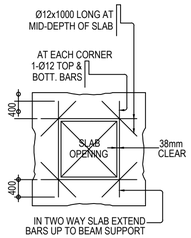
SCHEDULE OF MINIMUM SLAB REINFORCEMENT

	MINIMUM TEMPERATURE BARS
100 mm	10mm Ø @ 250mm EACH WAY
125 mm	10mm Ø @ 250mm EACH WAY
150 mm	10mm Ø @ 250mm EACH WAY
175 mm	10mm Ø @ 250mm EACH WAY
200 mm	10mm Ø @ 250mm EACH WAY

5. UNLESS OTHERWISE NOTED IN THE PLANS ALL BEDDED SLABS SHALL BE REINFORCED WITH 10mm Ø AT 250mm O.C. EACH WAY TO CENTER OF SLAB AND CONSTRUCTION JOINTS FOR SAME SHALL NOT BE LESS THAN 3.65 METER APART.
6. PROVIDE EXTRA REINFORCEMENTS FOR CORNER SLAB (TWO ADJACENT DISCONTINUOES EDGES) AS SHOWN BELOW.
7. CONCRETE SLAB REINFORCEMENT BE PROPERLY SUPPORTED WITH 10mm STEEL CHAIR OR APPROVED EQUIVALENT SPACED AT 1.0 METER ON CENTER BOTHWAYS.



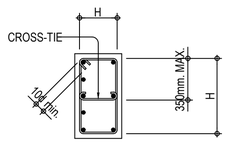
TYPICAL CORNER SLAB DETAIL

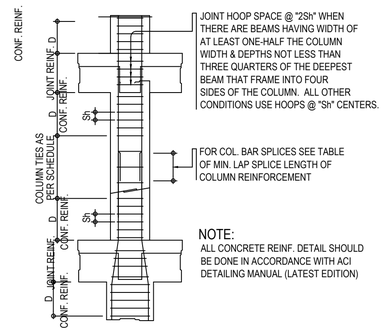


TYPICAL SLAB OPENING DET.

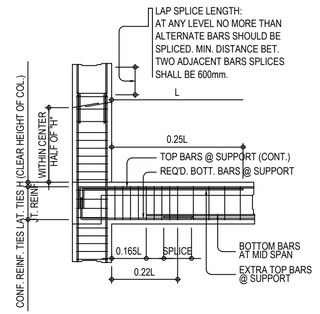
NOTES ON COLUMNS

1. PROVIDE EXTRA SETS OF TIES AT 100 O.C. FOR TIED COLUMN REINFORCEMENT ABOVE AND BELOW BEAM-COLUMN CONNECTIONS FOR A DISTANCE FROM FACE OF CONNECTION EQUAL TO GREATER OF THE OVERALL THICKNESS OF COLUMN, 1/6 THE CLEAR HEIGHT OF COLUMN OR 450mm.
2. COLUMN TIES SHALL BE PROTECTED EVERYWHERE BY A COVERING OF CONCRETE CAST MONOLITHICALLY WIT HTHE CORE WITH A MINIMUM THICKNESS OF 40mm AND NOT LESS THAN 40 TIMES THE MAXIMUM SIZE OF COARSE AGGREGATE IN MILLIMETERS.
3. WHERE COLUMNS CHANGE IN SIZE ,VERTICAL REINFORCEMENT SHALL BE OFFSET AT A SLOPE MONOLITHICALLY WITH THE CORE WITH MINIMUM THICKNESS OF 40mm AND NOT LESS THAN 40 TIMES THE MAXIMUM SIZE COARSE AGGREGATE IN MILLIMETERS
4. UNLESS OTHERWISE INDICATED IN THE PLANS, LAP SPLICES FOR VERTICAL COLUMN REINFORCEMENT SHALL BE MADE WITHIN THE CENTER HALF OF COLUMN HEIGHT, AND THE SPLICE LENGTH SHALL BE LESS THAN 40 BAR DIAMETERS. WELDING OR APPROVED MECHANICAL DEVICES MAY BE USED PROVIDED THAT NOT MORE THAN ALTERNATE BARS ARE WELDED OR MECHANICALLY SPLICED AT ANY LEVEL AND THE VERTICAL DISTANCES BETWEEN THESE WELDS OR SPLICES OF ADJACENT BARS IS NOT LESS THAN 600mm.





TYPICAL COLUMN ELEV. SHOWING DOWELS AND TIES SPACING



TYP. DETAIL OF COL. LAP SPLICE & EXT. GIRDER TO COL. CONNECT.

NOTES ON BEAMS AND GIRDERS

1. UNLESS, OTHERWISE NOTED IN PLANS , CAMBER ALL BEAMS AND GIRDER AT LEAST 6mmØ FOR EVERY 4.50 M OF SPAN , EXCEPT CANTILEVERS FOR WHICH THE CAMBER SHALL BE AS NOTED IN PLANS OR AS ORDERED BY THE ENGINEER BUT IN NO CASE LESS THAN 20 mm FOR EVERY 3.0 M OF FREE SPAN.
2. TYPICAL BARS BENDING AND CUTTING DETAILS FOR BEAMS SHALL BE AS SHOWN IN FIG. B-1

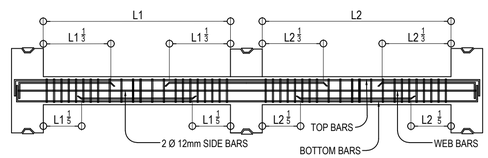


FIGURE B-1

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
LAGUNA 3RD DISTRICT ENGINEERING OFFICE
MARIFLOR SUBD., BRGY. DEL REMEDIO, SAN PABLO CITY, REGION IV-A

PROJECT TITLE / LOCATION :
CONVERGENCE AND SPECIAL SUPPORT PROGRAM
BASIC INFRASTRUCTURE PROGRAM
MULTI-PURPOSE BUILDINGS/ FACILITIES TO SUPPORT SOCIAL SERVICES
CONSTRUCTION OF MULTI-PURPOSE BUILDING, BARANGAY 3-D, SAN PABLO CITY, LAGUNA

SHEET CONTENT :
•GENERAL CONSTRUCTION NOTES

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MA. SHIRLEY M. SAMIANO
CHIEF, PLANNING & DESIGN SECTION
CONCURRENT CAPACITY AS OFFICER-IN-CHARGE
OFFICE OF THE ASSISTANT DISTRICT ENGINEER
DATE :

APPROVED :
CARLOS C. MUERE
OFFICER-IN-CHARGE
OFFICE OF THE DISTRICT ENGINEER
DATE :

SET NO. S 1 6

SHEET NO. 11 11 23

GENERAL CONSTRUCTION NOTES

TABLE 'A'
TENSION BARS
TABLE OF LAP SPLICE & ANCHORAGE LENGTH (mm)

BAR SIZES (DEFORMED MM)	fc' = 20.7MPa(300psi)		fc' = 27.6 MPa (4000psi)	
	EMBEDMENT	LAPPED	EMBEDMENT	LAPPED
Ø10	300	300	300	300
Ø12	300	300	300	300
Ø16	300	400	300	400
Ø20	400	550	350	500
Ø25	600	800	550	750
Ø28	750	1000	650	850
Ø32	950	1300	850	1100

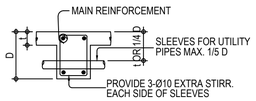
NOTES:
1. TOP PLAIN BARS, MULTIPLY VALUE BY 2
2. NOT MORE THAN 33% OF THE BARS SHALL BE SPLICED WITHIN THE REQUIRED LAP LENGTH

TABLE 'B'
COMPRESSION BARS
TABLE OF LAP SPLICE & ANCHORAGE LENGTH (mm)

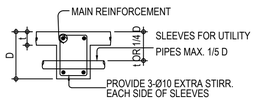
BAR SIZES (DEFORMED MM)	fc' = 20.7MPa(300psi)		fc' = 27.6 MPa (4000psi)	
	EMBEDMENT	LAPPED	EMBEDMENT	LAPPED
Ø10	225	300	200	300
Ø12	275	300	250	300
Ø16	350	400	325	400
Ø20	450	500	475	500
Ø25	550	625	550	625
Ø28	625	675	625	675
Ø32	700	775	700	775

NOTES:
1. TOP PLAIN BARS, MULTIPLY VALUE BY 2
2. NOT MORE THAN 33% OF THE BARS SHALL BE SPLICED WITHIN THE REQUIRED LAP LENGTH
3. VALUES GIVEN ABOVE CAN ALSO BE USED FOR COLUMNS

3. IF THE BEAM REINFORCING BARS END IN A WALL, THE CLEAR DISTANCE FROM THE BAR TO THE FARTHER FACE OF THE WALL IS NOT LESS THAN 25mm. EMBEDMENT LENGTH SHALL BE SHOWN IN A TABLE 'A' FOR TENSION BARS AND TABLE 'B' FOR COMPRESSION BARS UNLESS UNLESS SPECIFIED IN PLAN. TOP BARS AND SHALL NOT BE SPLICED WITHIN THE COLUMN OR TWO STIRRUPS SHALL BE PROVED AT ALL SPLICES.
4. IF THERE ARE TWO OR MORE LAYERS OF REINFORCING BARS, USED 25mm BAR SEPARATORS SPACED AT 1.0M ON ON CENTER ON NO CASE SHALL THERE BE THAN TWO (2) SEPARATORS BETWEEN LAYERS OF BARS
5. MINIMUM CONCRETE PROTECTION FOR REINFORCING BARS OR STEEL SHAPES SHALL BE AS SHOWN IN FIGURE B-2 UNLESS ELSEWHERE.



TYP. DET. FOR SLEEVES THRU CONCRETE BEAM
FIG. B-2



TYP. DET. FOR SLEEVES THRU CONCRETE BEAM
FIG. B-3

6. WHEN A BEAM CROSSES A GIRDER , REST BEAM ON TOP OF GIRDER BARS, BEAM REINFORCING BARS SHALL BE SYMMETRICAL ABOUT THE CENTER LINE WHENEVER POSSIBLE.
7. GENERALLY, NO SPLICES SHALL BE PERMITTED AT POINTS WHERE CRITICAL BENDING STRESSES OCCUR, SPLICES WHERE SO PERMITTED SHALL BE INDICATED IN TABLE 'A' AND 'B'. WELDED SPLICES SHALL DEVELOP IN TENSION AT LEAST 125% OF THE SPLICED YIELD STRENGTH OF THE BAR NOT MORE THAN 50% OF THE BARS AT ANY ONE SECTION IS ALLOWED TO BE SPLICED THEREIN.

NOTES ON CONCRETE HOLLOW BLOCKS WALLS

1. UNLESS OTHERWISE SHOWN IN PLANS ALL CONCRETE HOLLOW BLOCKS AND CERAMIC BLOCKS SHALL BE REINFORCED AS SHOWN IN THE SCHEDULE OF CONCRETE HOLLOW BLOCKS AND CERAMIC BLOCK REINFORCEMENT.
2. PROVIDE 150mm x 300mm STIFFENER COLUMN REINFORCED WITH 4-12mm WITH 10mm Ø TIES AT 150mm ON CENTER WHERE CONCRETE HOLLOW BLOCK TERMINATES AND AT EVERY 3.0M LENGTH OF CONCRETE HOLLOW BLOCK WALLS UNLESS NOTED IN STRUCTURAL PLANS.

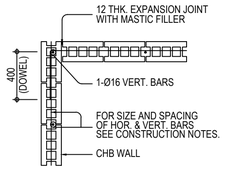
NOTES ON CONCRETE HOLLOW BLOCKS WALLS REINFORCEMENTS

BLOCK THICKNESS	REINFORCEMENT		NOTES
	HORIZONTAL	LAPPED	
75 mm	10mm Ø EVERY 3RD LEVEL	10mm Ø @ 600mm O.C.	A. MINIMUM LAPS AT SPLICE= 0.25 M
125 mm	10mm Ø EVERY 3RD LEVEL	10mm Ø @ 600mm O.C.	B. PROVIDE RIGHT ANGLED REINFORCEMENT AT CORNERS 0.92 m LONG
150mm	10mm Ø EVERY 3RD LEVEL	10mm Ø @ 600mm O.C.	C.WHERE CHB OR CER. BLK. WALL DOWELS WITH THE SAME SIZE AS VER. OR HOR. REINFORCEMENT SHALL BE PROVIDED
200 mm	12mm Ø EVERY 3RD LEVEL	10mm Ø @ 600mm O.C.	

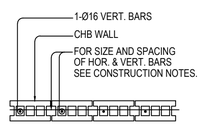
REINFORCING CONCRETE LINTEL BEAMS IN CONCRETE BLOCK WALLS

LINTELS IN BLOCK WALLS

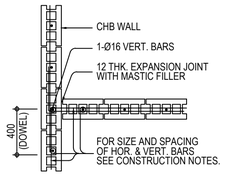
CLEAR SPAN (L)	TOTAL LENGTH (L+0.40M)	MIN. fc' (MPa)	HEIGHT OF LINTEL (mm)	REINFORCEMENT		
				BOTTOM	TOP	STIRRUPS
1.20 M	1.60 M	14.0	200	1-Ø10	1-Ø10	Ø6 mm @ 200mm
1.50 M	1.90 M		200	1-Ø10	1-Ø10	Ø6 mm @ 200mm
1.80 M	2.20 M		200	1-Ø12	1-Ø10	Ø6 mm @ 200mm
2.10 M	2.50 M	17.0	250	1-Ø12	1-Ø10	Ø6 mm @ 200mm
2.40 M	2.90 M		250	1-Ø12	1-Ø10	Ø6 mm @ 200mm
2.70 M	3.10 M		250	1-Ø16	1-Ø12	Ø10mm @ 200mm
3.00 M	3.40 M	20.0	300	1-Ø16	1-Ø12	Ø10mm @ 200mm
3.30 M	3.70 M		300	1-Ø16	1-Ø12	Ø10mm @ 200mm
3.60 M	4.00 M		300	1-Ø20	1-Ø12	Ø10mm @ 200mm



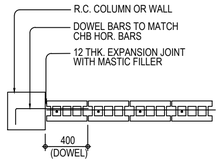
CORNER WALL



OPENING OR END WALL

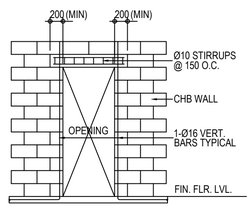


INTERSECTION WALL

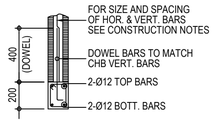


INTERSECTING R.C. COLUMN OR WALL

TYPICAL CONNECTION DETAIL OF MASONRY WALL

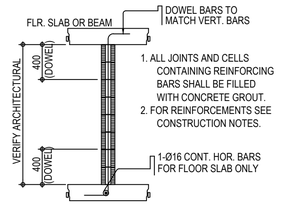


ELEVATION

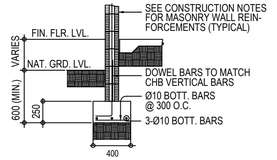


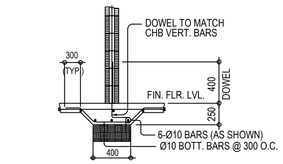
SECTION

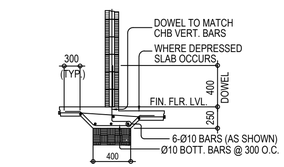
TYP. DET. OF LINTEL BEAM AT CHB WALL OPENING



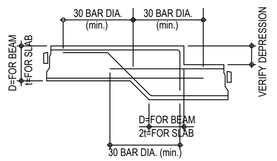
TYP. SECTION OF MASONRY PARTITION REINFORCEMENTS



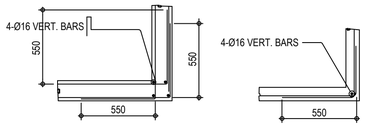




TYPICAL CHB FOOTING DETAILS (WHERE APPLICABLE)



TYPICAL DETAIL FOR BEAM OR SLAB CHANGE SOFFIT



TYPICAL CONNECTION DETAIL OF R.C. WALL AT CORNERS

NOTES ON WELDS

1. USE E60xx ELECTRODES FOR ALL MEMBERS WELDED.
2. WELDS SHALL DEVELOP THE FULL STRENGTH OF MEMBERS JOINED UNLESS OTHERWISE SHOWN OR DETAILED IN THE DRAWINGS.

NOTES ON STRUCTURAL STEEL

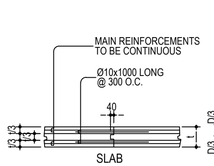
1. STRUCTURAL STEEL TO BE USED FOR FABRICATION AND ERECTION OF THIS STRUCTURE SHALL COMPLY WITH ALL THE PERTINENT PROVISION OF AISC SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDING LATEST EDITION.
2. ALL STRUCTURAL STEEL SHAPES SHALL CONFORM TO ASTM A36 STRUCTURAL STEEL UNLESS OTHERWISE INDICATED.
3. ALL WELDED CONNECTIONS SHALL DEVELOP THE FULL STRENGTH OF THE MEMBERS CONNECTED.
4. UNLESS OTHERWISE SPECIFIED ALL WELDING RODS SHALL CONFORM WITH E60 ELECTRODES.
5. ALL BOLTS USED UNLESS OTHERWISE SPECIFIED SHALL BE ASTM A 307 BOLTS.

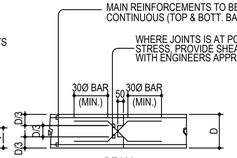
NOTES ON EMBBED PIPES

1. ALL EMBEDED PIPES FOR UTILITIES ETC. THAT PASS THRU BEAMS SHALL NOT EXCEED 100mm IN DIAMETER OR 1/3 BEAM DETPH WHICHEVER IS LESS, UNLESS OTHERWISE APPROVED IN WRITING BY THE STRUCTURAL ENGINEER.
2. NO PIPES SHALL BE ALLOWED TO PASS THRU BEAMS VERTICALLY.
3. NO PIPES SHALL BE EMBEDDED IN COLUMNS.

NOTES ON CONSTRUCTION JOINTS IN CONCRETE

1. WHERE A CONSTRUCTION JOINT IS TO BE MADE, THE SURFACE OF CONCRETE SHALL BE CLEANED AND ALL LAITANCE AND STANDING WATER REMOVED SHEAR KEY SHALL BE PROVIDE AT THE JOINT.





TYPICAL SLAB & BEAM CONSTRUCTION JOINT DET.

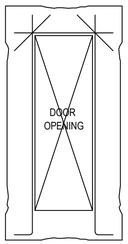
NOTES ON CONCRETE WALLS

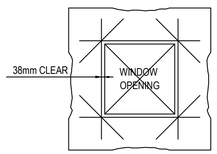
1. ALL WALLS SHALL BE REINFORCED ACCORDING TO THE FOLLOWING SCHEDULE OF WALL REINFORCEMENT UNLESS OTHERWISE INDICATED IN THE PLANS.

WALL THICKNESS	REINFORCEMENT			VERTICAL SECTION
	HORIZONTAL	VERTICAL	REMARKS	
100mm	Ø10mm @ 250mm O.C.	Ø10mm @ 300mm O.C.	HORIZONTAL BARS AT CENTERS VERTICAL BARS STAGGED OUT	VER. BARS / HOR. BARS
125mm	Ø10mm @ 200mm O.C.	Ø10mm @ 250mm O.C.		
150mm	Ø12mm @ 250mm O.C.	Ø12mm @ 300mm O.C.		

REINFORCING BARS SHALL HAVE 25mm CLEAR CONCRETE COVER FROM FACE OF WALL EXCEPT FOR WALLS IN CONTACT WITH THE GROUND WHERE A MINIMUM OF 60mm SHALL BE PROVIDED AND FOR EXPOSED FACES OF FORMED WALLS WHERE THE MINIMUM SHALL BE 50mm CLEAR.

2. CARRY VERTICAL BARS AT LEAST 60mm ABOVE FLOOR LEVEL TO PROVIDE FOR SPLICES WHEN NECESSARY STOP AT 50mm BELOW TOP SLAB OR SOLID BAND WHERE THE WALL ENDS VERTICAL AND HORIZONTAL BARS SHALL BE SPLICED BY LAPPING A DISTANCE EQUAL TO 30 DIAMETERS AND WIRED SECURELY WITH 16 G.I. WIRE PROVIDED THAT SPLICES IN ADJACENT BARS ARE STAGGERED AT LEAST 1.50M O.C.
3. UNLESS OTHERWISE NOTED IN THE PLANS, ALL OPENINGS IN WALLS 250mm OR THICKER SHALL BE REINFORCED AROUND WITH 2-20mmØ BARS. FOR 225mm, 200mm, 175mm, 150mm THICK WALLS, USE 2-16mmØ. FOR 125mm AND 100mm THICK WALLS, USE 2-12mmØ BARS. ALL WALLS SPANNING SHALL HAVE VERTICAL REINFORCEMENT BENT A U-FORM LIKE STIRRUPS AND SPACED ACCORDING TO THE SCHEDULE UNLESS OTHERWISE NOTED.





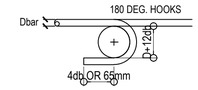
TYP. EXTERIOR WDW. & DOOR OPENING

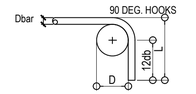
NOTE:
PROVIDE THESE ADDITIONAL BARS FOR ALL OPENINGS PLUS BARS (NOT SHOWN) PARALLEL TO SIDE OF OPENING EQUAL TO THE NUMBER OF TERMINATED BARS AT OPENING

SEE ARCHITECTURAL & MECHANICAL PLANS FOR SLAB OPENING LOCATION.

NOTES ON STIRUPS

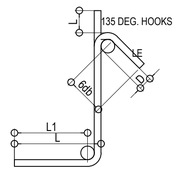
1. ALL REINFORCEMENT SHALL BE BENT COLD UNLESS OTHERWISE PERMITTED BY THE STRUCTURAL ENGINEER.
2. AS SHOWN IN THE DESIGN DRAWINGS OR PERMITTED BY THE STRUCTURAL ENGINEER.
3. TIES & CLOSE STIRRUPS MUST BE AT 135.





MAIN BAR END HOOKS (ALL GRADES)

BAR SIZE (DEFORMED)	DIAMETER (mm)	180° HOOK		90° HOOK
		D+2db	L	L
10 mm Ø	60	75	125	150
12 mm Ø	75	100	150	200
16 mm Ø	95	125	175	250
20 mm Ø	115	150	200	300
25 mm Ø	150	200	230	450
28 mm Ø	240	300	350	550
32 mm Ø	300	335	450	600



STIRRUP AND THE TIE HOOKS (ALL GRADES)

BAR SIZE (DEFORMED)	DIAMETER (mm)	180° HOOK		90° HOOK
		D+2db	L	L
10 mm Ø	40	125	85	100
12 mm Ø	50	165	115	115
16 mm Ø	65	200	140	150
20 mm Ø	115	300	165	300
32 mm Ø	150	335	230	405

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CONVERGENCE AND SPECIAL SUPPORT PROGRAM
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MULTI-PURPOSE BUILDINGS/ FACILITIES TO SUPPORT SOCIAL SERVICES
CONSTRUCTION OF MULTI-PURPOSE BUILDING, BARANGAY 3-D, SAN PABLO CITY, LAGUNA

SHEET CONTENT :
•GENERAL CONSTRUCTION NOTES

DRAFTED :
JEFFERSON R. GABANAN
DRAFTSMAN II(B)

PREPARED :
CAMILA ROSE D. DE BORJA
ENGINEER I

REVIEWED :
JOEY CHRISTIAN L. DAYO
ENGINEER II
DATE :

SUBMITTED/ RECOMMENDED :
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CHIEF, PLANNING & DESIGN SECTION
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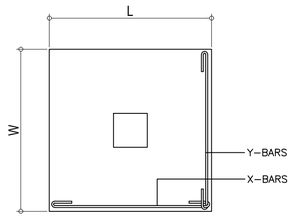
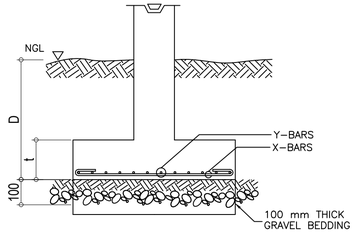
OFFICE OF THE DISTRICT ENGINEER
DATE :

SET NO. S 2 6

SHEET NO. 12 / 12 23



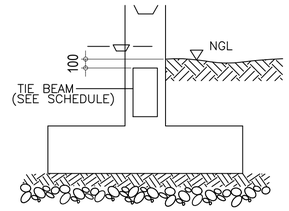
PLAN



SECTION

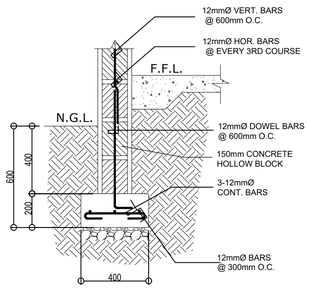
4 S-3 **DETAIL OF FOOTING**

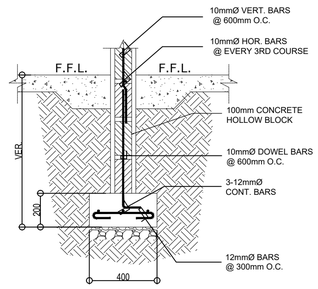
NTS.



5 S-3 **DETAIL OF TIE BEAM**

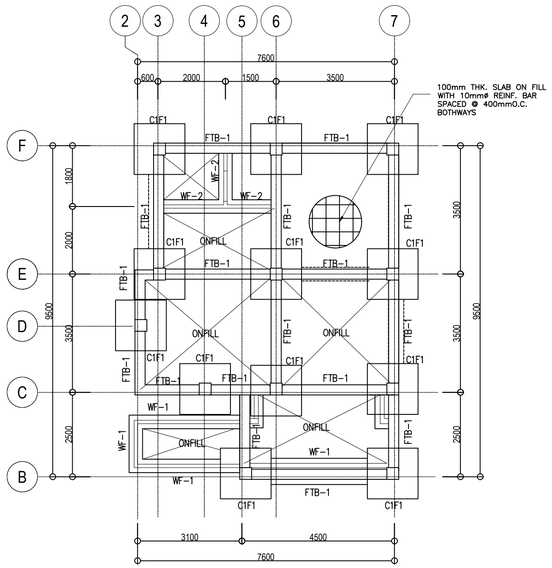
NTS.





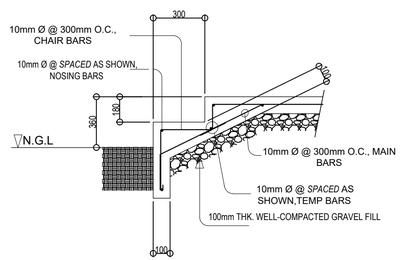
3 S-3 **DETAIL OF WALL FOOTING**

SCALE: 1:20m.



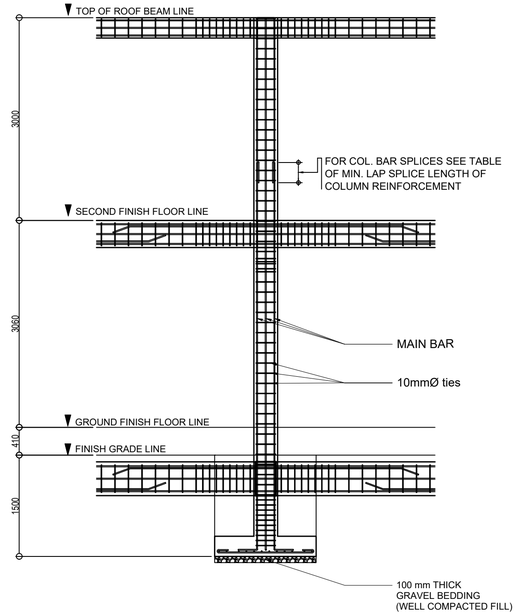
1 S-3 **FOUNDATION PLAN**

SCALE: 1:100 m.



2 S-3 **DETAIL OF STAIR ON FILL**

SCALE: 1:20m.



3 S-3 **REFERENCE DETAILED ELEV. OF COLUMNS**

SCALE: 1:40 m.

DESIGN CRITERIA

A. CONCRETE	f'c = 20.685 Mpa (3000psi), minimum compresive strength of concrete a 28 days unless otherwise specified.
B. REBAR	< 16mmØ, fy = 276 Mpa (40,000 psi), minimum yield strength of reinforcing bars, Grade 40;.
	> 16mmØ, fy = 415 Mpa (60,000 psi), minimum yield strength of reinforcing bars, Grade 60, unless otherwise specified.
C. FOUNDATION	SBP = 95.706 Kpa (2000psf) was used in the design for all footings. No footing shall rest on fill.
REFERENCES	NSCP 2015,

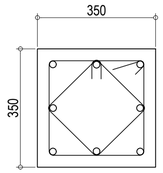
SCHEDULE OF FOOTING

FOOTING MARK	FOOTING DIMENSIONS (mm)				REINFORCEMENT		REMARKS
	LENGTH (L)	WIDTH (W)	DEPTH (D)	Thickness (t)	BAR X	BAR Y	
F-1	1500	1500	1500	300	12 - 16mmØ	12 - 16mmØ	SQUARE FOOTING

SCHEDULE & DET. OF COLUMN

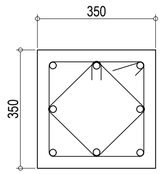
LEVEL

C-1



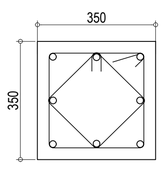
MAIN BAR:
8-16mmØ
TIES : Ø10 mm
1@50, 8@75, REST @
150mm TO CENTER

2ND FLOOR LEVEL TO ROOF LEVEL



MAIN BAR:
8-Ø16mm
TIES : Ø10 mm
1@50, 10@75, REST @
150mm TO CENTER

GROUND FLOOR LEVEL TO SECOND FLOOR LEVEL



MAIN BAR:
8-Ø16mm
TIES : Ø10 mm
1@50, 10@75, REST @
150mm TO CENTER

FOUNDATION LEVEL TO GROUND FLOOR LEVEL

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BARANGAY 3-D, SAN PABLO CITY, LAGUNA

SHEET CONTENT :

+ FOUNDATION PLAN
+ DETAIL OF STAIR ON FILL
+ REFERENCE DETAILED ELEV. OF COLUMNS
+ DETAIL OF WALL FOOTINGS
+ DETAIL OF FOOTING
+ DETAIL OF TIE BEAM
+ DESIGN CRITERIA
+ SCHEDULE OF FOOTING
+ SCHEDULE OF COLUMN

DRAFTED :

JEFFERSON R. GABANAN
DRAFTSMAN II(B)

PREPARED :

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ENGINEER I

REVIEWED :

JOEY CHRISTIAN L. DAYO
ENGINEER II
DATE :

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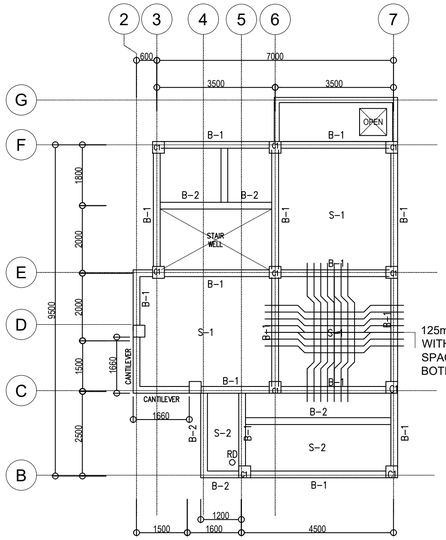
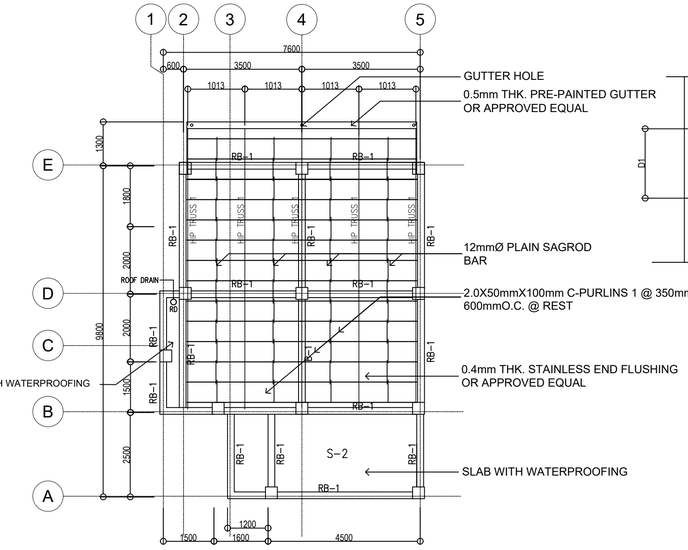


125mm THK. SUSPENDED SLAB WITH 12mmØ REINF. BAR SPACED @ 150mmO.C. BOTHWAYS

1 / S-4 SECOND FLOOR FRAMING PLAN

SCALE: 1:100 m.



GUTTER HOLE

0.5mm THK. PRE-PAINTED GUTTER OR APPROVED EQUAL

12mmØ PLAIN SAGROD BAR

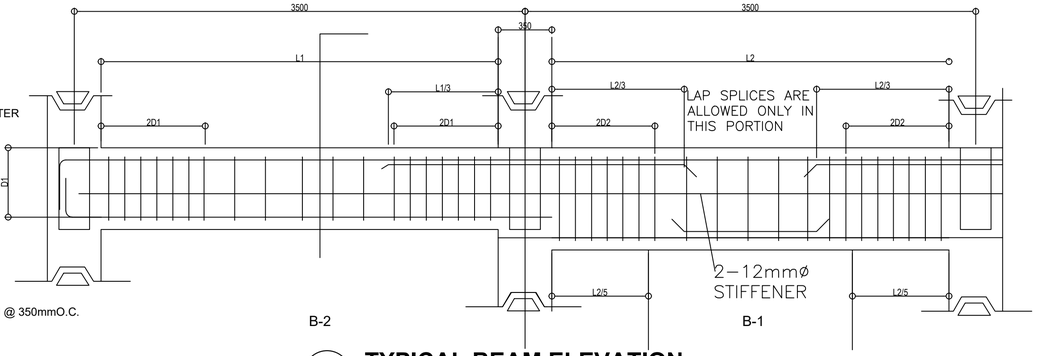
2.0X50mmX100mm C-PURLINS 1 @ 350mmO.C. 600mmO.C. @ REST

0.4mm THK. STAINLESS END FLUSHING OR APPROVED EQUAL

SLAB WITH WATERPROOFING

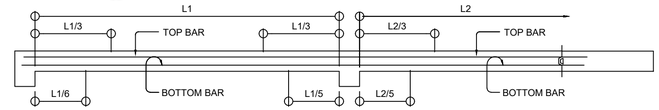
2 / S-4 ROOF FRAMING PLAN

SCALE: 1:100 m.



3 / S-4 TYPICAL BEAM ELEVATION

NTS



4 / S-4 TYPICAL SLAB ELEVATION

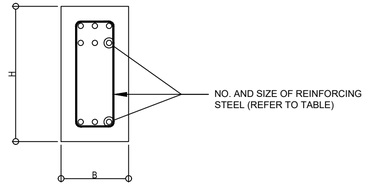
NTS

SCHEDULE OF SLABS

FLOOR LEVEL	SLAB MARK	THICK-NESS in mm	REBAR SPACING ALONG SHORT DIRECTION in mm							REBAR SPACING ALONG LONG DIRECTION in mm							REMARKS
			REBAR SIZE	LEFT SUPPORT		MIDSPAN		RIGHT SUPPORT		REBAR SIZE	LEFT SUPPORT		MIDSPAN		RIGHT SUPPORT		
				TOP	BOTT.	TOP	BOTT.	TOP	BOTT.		TOP	BOTT.	TOP	BOTT.	TOP	BOTT.	
SECOND LEVEL	S-1	125	12Ø	150	200	-	200	150	200	12Ø	250	300	-	300	250	300	TWO-WAY
	S-2	125	12Ø	175	175	-	300	300	300	10Ø	300	300	-	300	300	300	TWO-WAY
GROUND LEVEL	S-1	100	10Ø	400	-	-	-	400	-	-	400	-	-	-	400	-	ONE-WAY

SCHEDULE OF BEAM

FLOOR LEVEL	BEAM MARK	BEAM DIMENSIONS (in / mm)		STEEL REINFORCEMENTS							STIRRUPS Ø10mm (UNLESS NOTED OTHERWISE)
				REBAR (mm Ø)	LEFT		MID SPAN		RIGHT		
		b	h		TOP	BOTTOM	TOP	BOTTOM	TOP	BOTTOM	
2ND FLR. LEVEL	B-1	250	400	Ø16mm	6	3	2	6	6	3	1@50, 6@100, REST@200
	B-2	250	300	Ø16mm	2	2	2	2	2	2	1@50, 6@100, REST@200
ROOF LEVEL	RB-1	250	300	Ø16mm	3	2	2	3	3	2	1@50, 8@100, REST@200
TIE BEAM	FTB-1	300	500	Ø16mm	4	4	2	2	4	4	1@50, 8@100, REST@200
STAIR BEAM	LB-1	250	400	Ø16mm	2	2	2	4	2	2	1@50, 6@100, REST@200
CANTI LEVER	CL-1	250	400	Ø16mm	6	2	6	2	6	2	1@50, 6@100, REST@200



NO. AND SIZE OF REINFORCING STEEL (REFER TO TABLE)

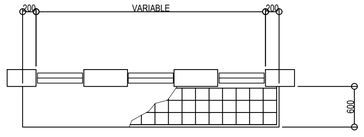
TWO-WAY SLAB W/ 10mmØ SPACED @ 250mm B.W.

6 / S-4 DETAIL OF SUSPENDED SLAB

SCALE: 1:20m.

5 / S-4 TYP. BEAM DETAILS

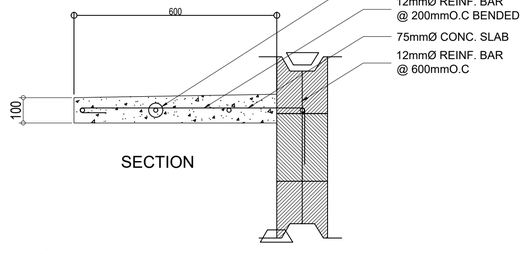
NTS.



PLAN

4mmx50mmX100mm TUBULAR BAR WITH DECORATIVE PAINTED SPACED EVERY 100mmO.C.

4mmx50mmX150mm TUBULAR BAR WITH DECORATIVE PAINTED SPACED EVERY 100mmO.C.



SECTION

12mmØ REINF. BAR @ 200mmO.C

12mmØ REINF. BAR @ 200mmO.C BENDED

75mmØ CONC. SLAB

12mmØ REINF. BAR @ 600mmO.C

7 / S-4 DETAIL OF SUN BREAKER

SCALE: 1:10m.

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SHEET CONTENT :
+SECOND FLOOR FRAMING PLAN
+ROOF FRAMING PLAN
+TYPICAL DETAIL OF SUSPENDED SLAB
+DETAIL OF SUN BREAKER
+TYPICAL BEAM ELEVATION
+TYPICAL SLAB ELEVATION
+SCHEDULE OF SLABS
+SCHEDULE OF BEAM
+TYP. DET. OF COLUMN LAP SPLICE

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JEFFERSON R. GABANAN
DRAFTSMAN II(B)

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CAMILA ROSE D. DE BORJA
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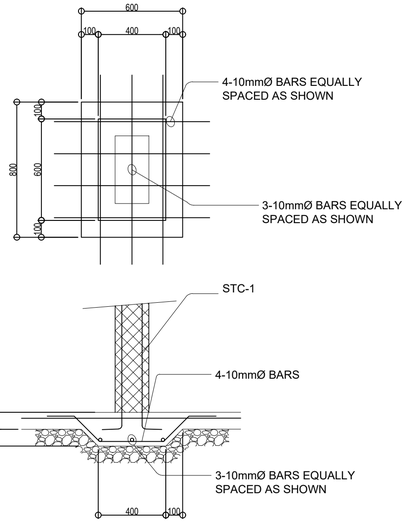
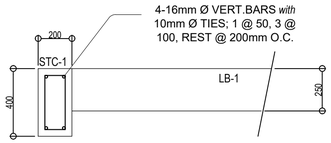
SET NO. S 4 6

SHEET NO. 14 14 23



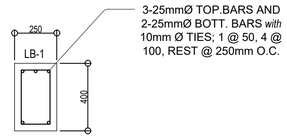
3 S-5 STAIRWAY FOOTING (SF-1) DETAIL

SCALE: 1:20 m.



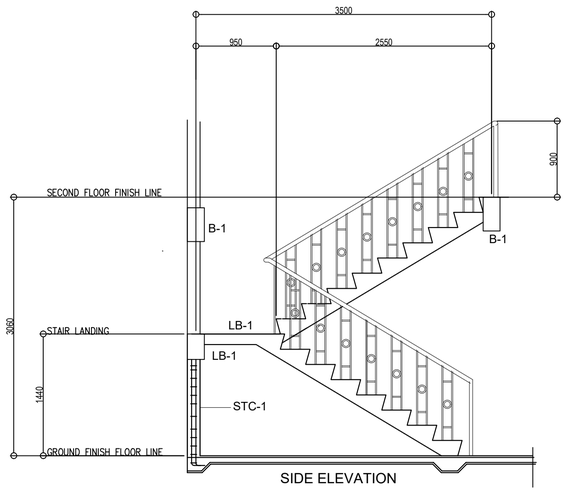
4 S-5 DETAIL OF STAIRWAY COLUMN (STC-1)

SCALE: 1:20 m.



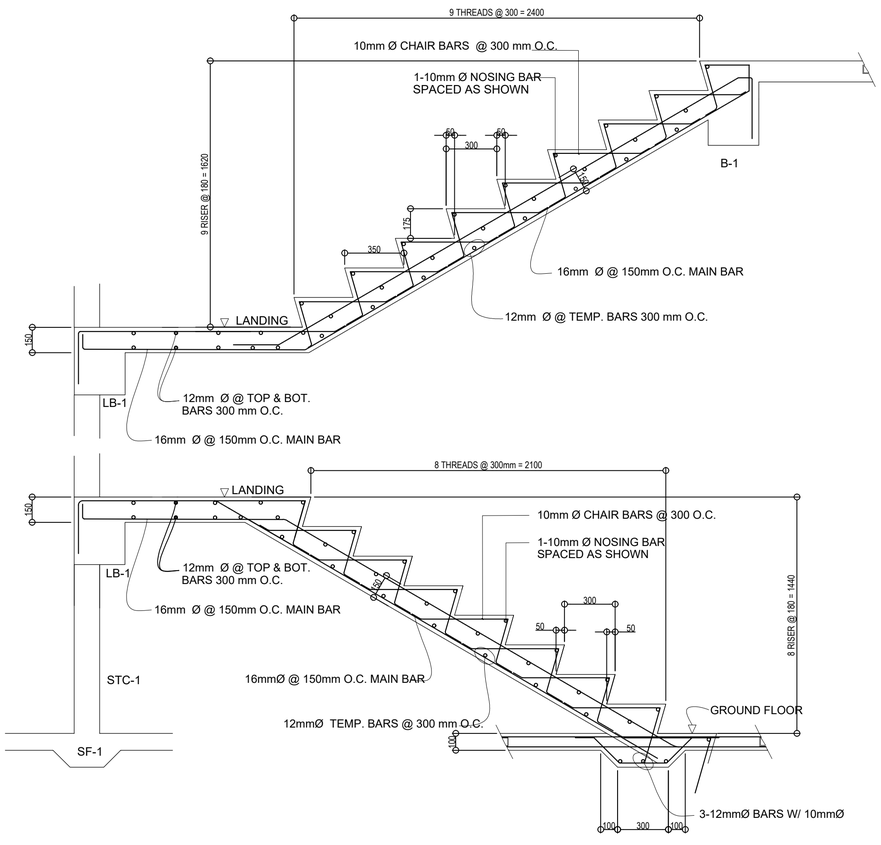
5 S-5 DETAIL OF LANDING BEAM (LB-1)

SCALE: 1:20 m.



1 S-5 DET. ELEVATION OF STAIR

SCALE: 1:40 m.



2 S-5 DET. SECTION OF STAIR

SCALE: 1:40 m.

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LAGUNA 3RD DISTRICT ENGINEERING OFFICE
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SHEET CONTENT :
+ DET. ELEV. OF STAIR
+ DET. SECT. OF STAIR
+ STAIRWAY FOOTING DET.
+ STAIRWAY COLUMN DET.
+ LANDING BEAM DET.

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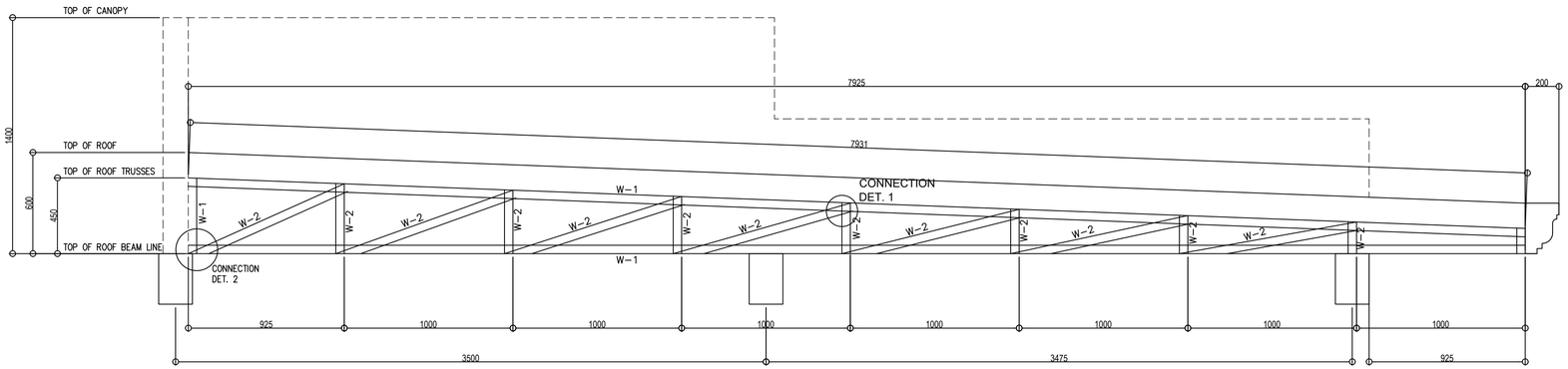
SET NO. S 5 | 6

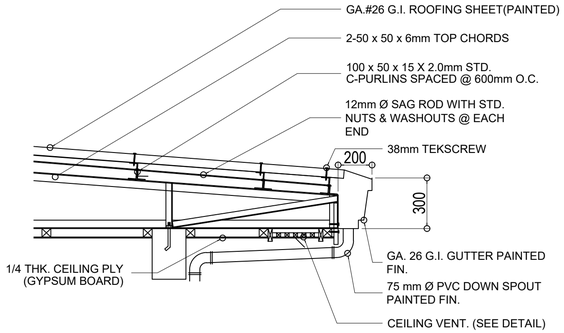
SHEET NO. 15 | 15 | 23



1 S-6 DETAIL OF HIP TRUSS-1

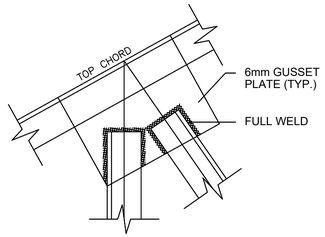
SCALE: 1:40 m.

SCHEDULE OF TRUSS MEMBERS AND WELDS						
MARK	TRUSS MEMBERS SIZES	SIZE OF WELDS				DESCRIPTION
		THICKNESS	LENGTH mm			
			L_1	L_2	L_3	
W-1	2∠s - 50 x 50 x 6mm	7mm	FULL WELD			TOP & BOTTOM CHORDS
W-2	2∠s - 50 x 50 x 4mm	7mm	FULL WELD			WEB MEMBER



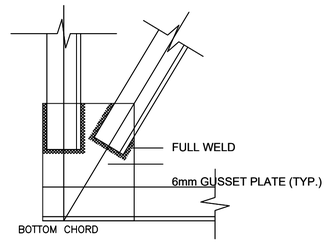
2 S-6 EAVES DET. SECTION

SCALE: 1:20 m.



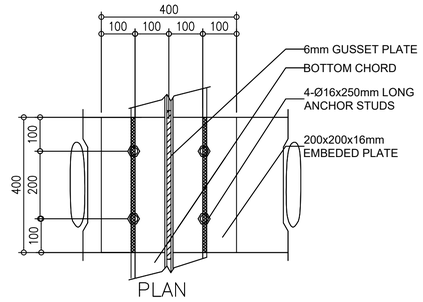
3 S-6 CONNECTION DET. 1

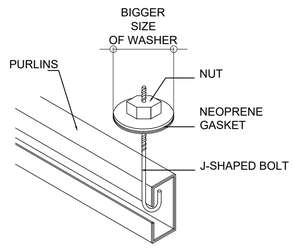
SCALE: 1:10 m.



4 S-6 CONNECTION DET. 2

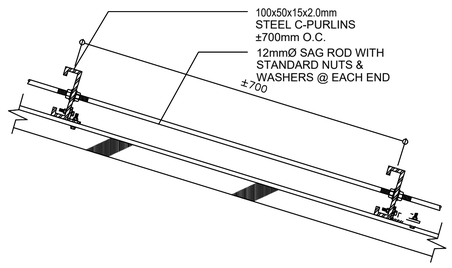
SCALE: 1:10 m.





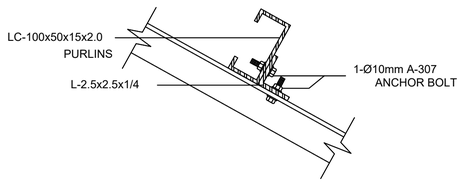
5 S-6 ROOFING FIXER

NTS.



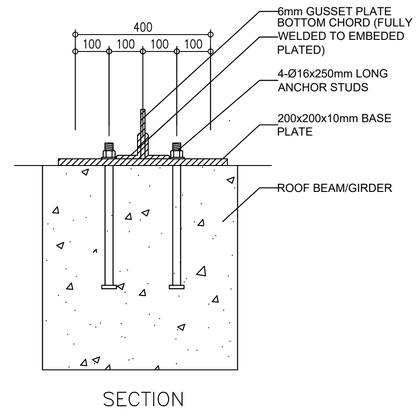
6 S-6 SAGROD CONNECTION DET.

SCALE: 1:10 m.



7 S-6 PURLIN CONNECTION DET.

SCALE: 1:10 m.



8 S-6 TYP. TRUSS ANCHORAGE DET.

SCALE: 1:20 m.

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SHEET CONTENT :
+ HIP TRUSS-1 DETAIL
+ EAVES DET. SECTION
+ CONNECTION DETAILS
+ ROOFING FIXER
+ SAGROD CONNECTION DETAIL
+ PURLIN CONNECTION DETAIL
+ TYP. TRUSS ANCHORAGE DET.

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OFFICER-IN-CHARGE
OFFICE OF THE DISTRICT ENGINEER
DATE :

SET NO. S 6 6

SHEET NO. 16 16 23

GENERAL NOTES :

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

CHANGE IN DIRECTION
ALL CHANGE IN DIRECTION SHALL BE MADE BY APPROPRIATE USE OF FORTY-FIVE DEGREES (45°) WYES, LONG SWEEP QUARTER BEND, SIXTH-EIIGHT OR SIXTEENTH BEND. WHEN THE CHANGE OF FLOW IS FROM HORIZONTAL TO VERTICAL A SINGLE 1/8 BEND COMBINATION MAYBE USED ON VERTICAL STACKS AND SHORT QUARTER BENDS MAYBE USED ON WASTE LINE, TEE AND CROSSES MAYBE USED IN BENT PIPES.

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 USED OF SADDLE HUB AND BEND ARE PROHIBITED.

PIPE CLEAN-OUTS
CLEAN-OUTS ARE REQUIRED UNDER THE F0LLOWING CONDITIONS:
a) EVERY CHANGE OF HORIZONTAL DIRECTION EXCEEDING TWENTY TWOAND 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.

THE DIGESTION CHAMBER OF SEPTIC VAULT MUST BE WATERPROOFED.

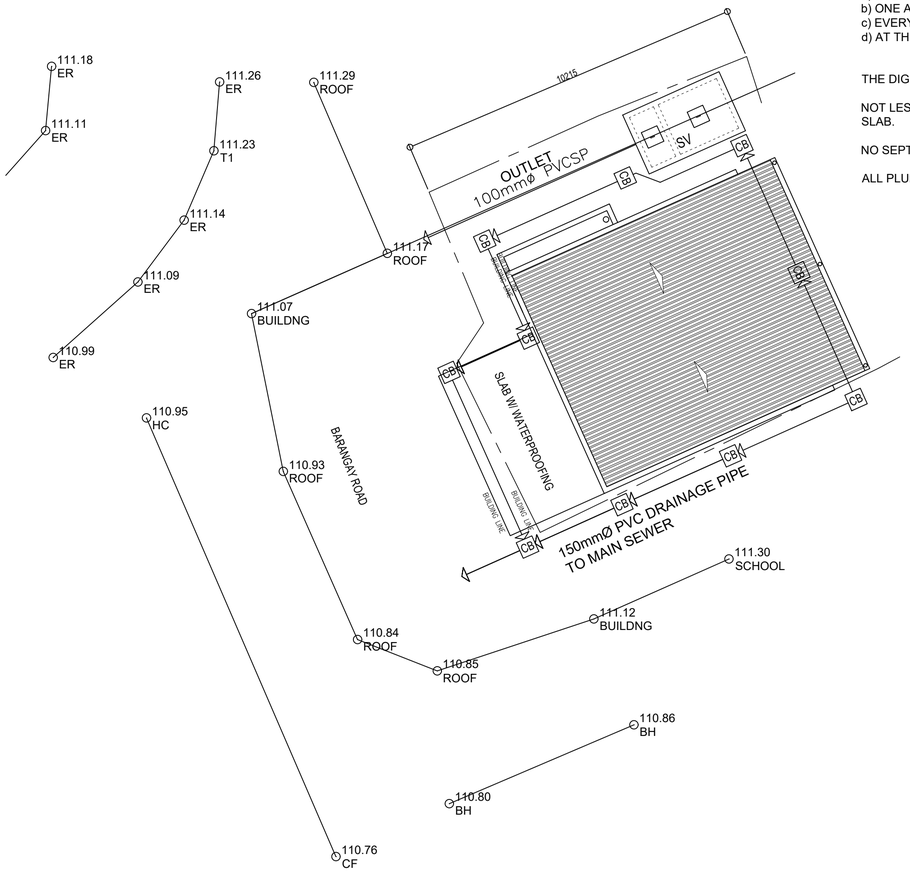
NOT LESS THAN 0.30 METER OF AIR SPACE MUST BE LEFT BETWEEN THE TOP OF THE SEWAGE AND THE UNDER PART OF VAULT ROOF SLAB.

NO SEPTIC VAULT SHALL BE CONSTRUCTED UNDER THE BUILDING.

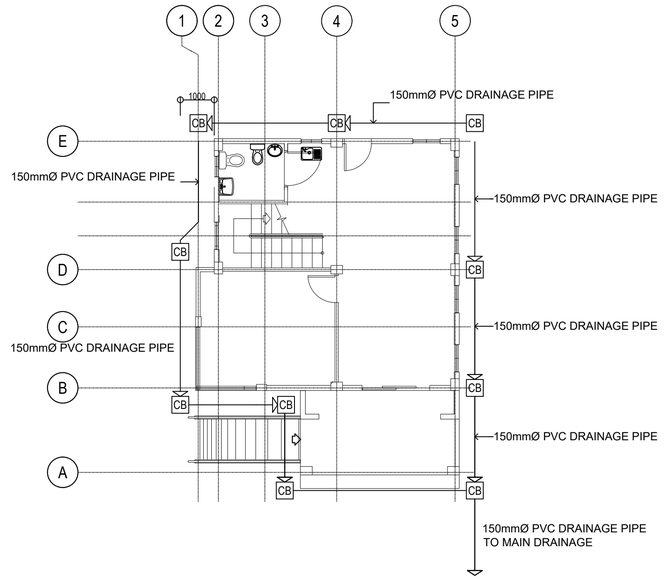
ALL PLUMBING WORKS SHALL BE UNDER THE SUPRVISION OF A LICENSED MASTER PLUMBER AND A LICENCED PLUMBING CONTRACTOR.

LEGEND :

CB	CATCH BASIN
CDP	CONCRETE DRAIN PIPE
CO	CLEAN OUT
CV	CHECK VALVE
HB	HOSE BIBB
FD	FLOOR DRAIN
GICWL	GALVANIZED IRON COLD WATER LINE (SCH. 40)
GICWR	GALVANIZED IRON COLD WATER RISER (SCH. 40)
GV	GATE VALVE
MH	MANHOLE
PVCDS	POLYVINYL CHLORIDE DOWNSPOUT
PVCDP	POLYVINYL CHLORIDE DRAIN PIPE
PVCDS	POLYVINYL CHLORIDE DOWNSPOUT
PVCSP	POLYVINYL CHLORIDE SOIL PIPE
PVCVAC	POLYVINYL CHLORIDE VENT. ACROSS CEILING
PVCVP	POLYVINYL CHLORIDE VENT. PIPE
PVCVS	POLYVINYL CHLORIDE VENT STACK
PVCVTR/W	POLYVINYL CHLORIDE VENT TROUGH ROOF/WALL
PVCWP	POLYVINYL CHLORIDE WASTE PIPE
PVCWS	POLYVINYL CHLORIDE WASTE STACK
RD	ROOF DRAIN
UD	URINAL DRAIN
WC	WATER CLOSET
LAV	LAVATORY
CS	COUNTER SINK
F	FAUCET



1 / P-1 **SITE DEVELOPMENT PLAN(DRAINAGE LAYOUT)**
SCALE: 1:150 m.



2 / P - 1 **STORM DRAINAGE PLAN**
SCALE: 1:100 m.

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SHEET CONTENT :
+SITE DEVELOPMENT PLAN (DRAINAGE LAYOUT)
+STORM DRAINAGE PLAN
+GENERAL NOTES
+LEGEND

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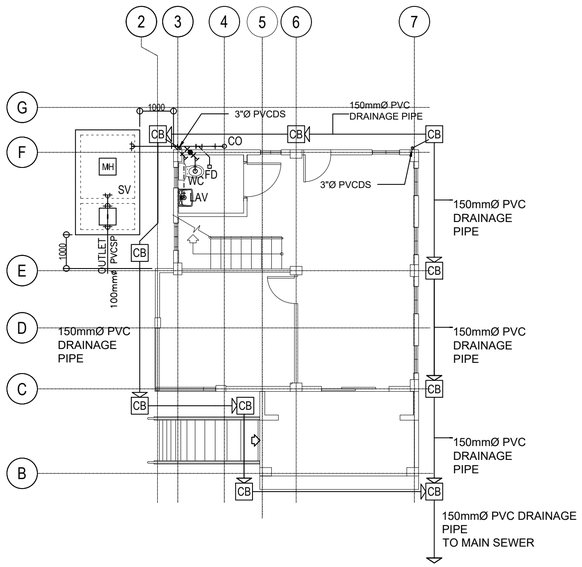
SET NO. P 1 3

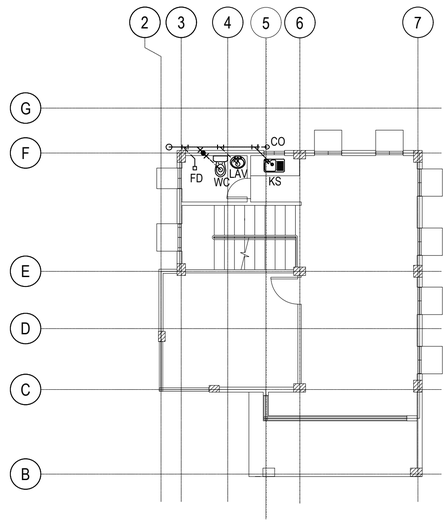
SHEET NO. 17 17 23



1 / P - 2

GROUND FLOOR SEWER LINE LAYOUT PLAN

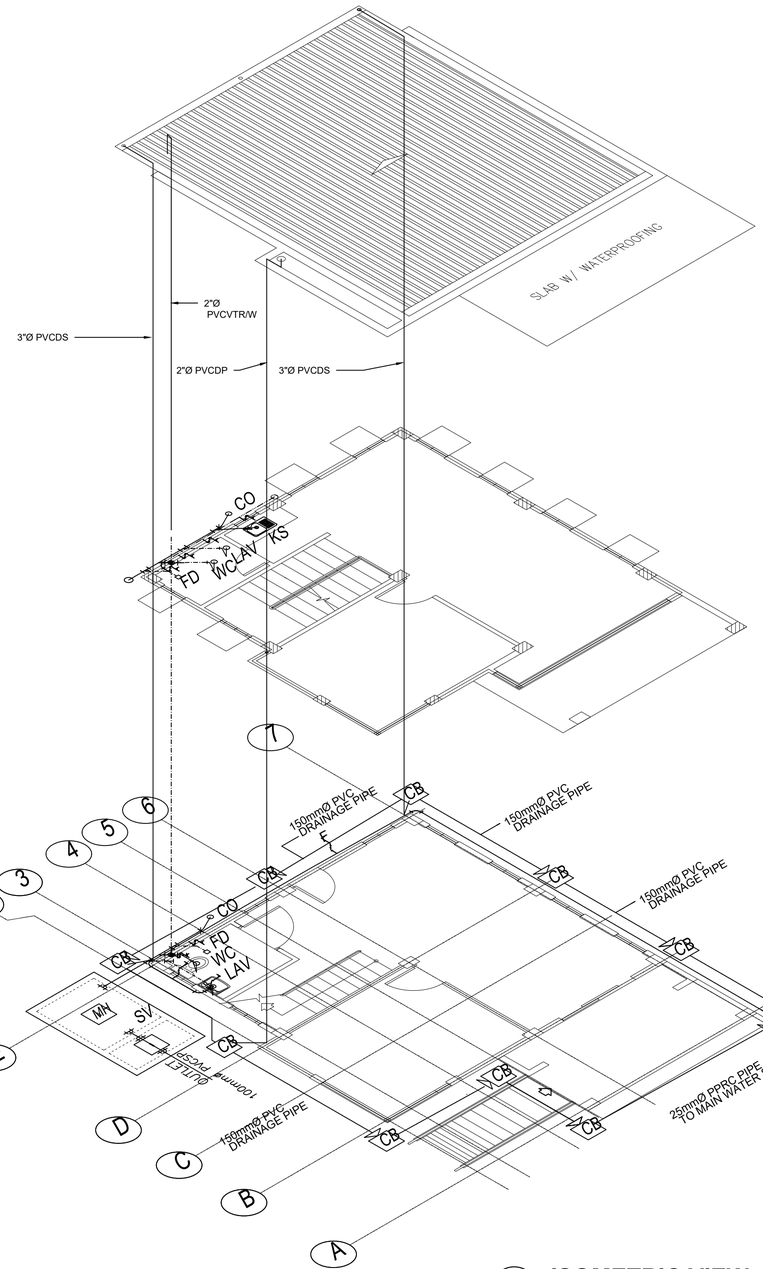
SCALE: 1:100 m.



2 / P - 2

SECOND FLOOR SEWER LINE LAYOUT PLAN

SCALE: 1:100 m.



5 / P - 2

ISOMETRIC VIEW

NTS.

3 / P -3

GROUND FLOOR WATERLINE LAYOUT PLAN

SCALE: 1:100 m.

4 / P - 2

SECOND FLOOR WATERLINE LAYOUT PLAN

SCALE: 1:100 m.

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SHEET CONTENT :

+GROUND FLOOR SEWER LINE LAYOUT PLAN
+SECOND FLOOR SEWER LINE LAYOUT PLAN
+GROUND FLOOR WATER LINE LAYOUT PLAN
+SECOND FLOOR WATER LINE LAYOUT PLAN
+ISOMETRIC VIEW

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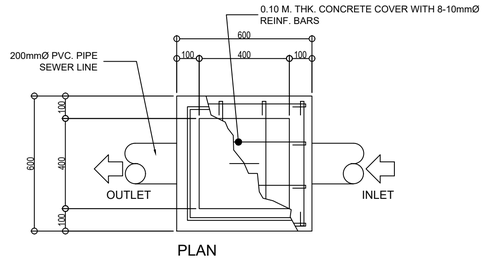
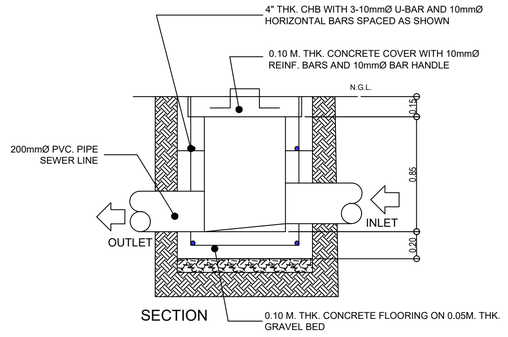
SET NO. P 2 | 3

SHEET NO. 18 | 18 | 23



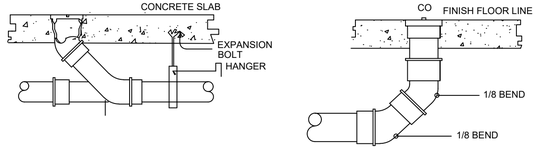
PLAN



SECTION

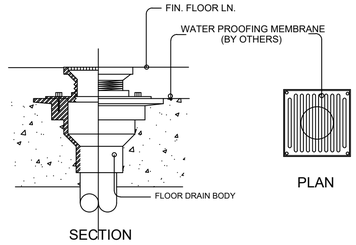
1 P - 3 DETAIL OF CATCH BASIN

SCALE: 1:20m.



2 P - 3 FLOOR CLEANOUT DETAIL

NTS.



SECTION

3 P - 3 DETAIL OF FLOORDRAIN

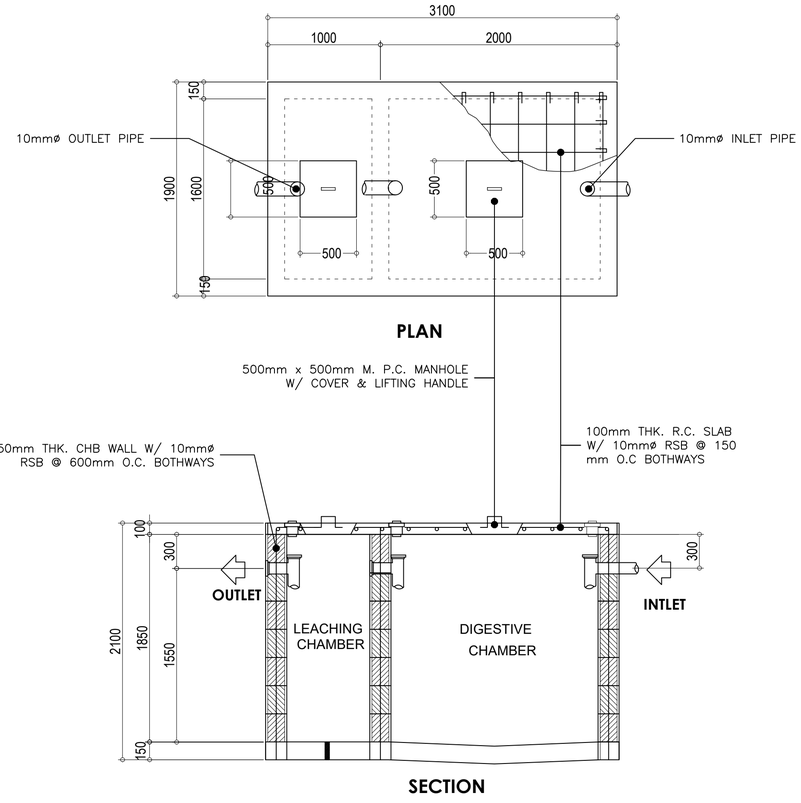
NTS.

DESIGN CRITERIA :

i. LIVE LOAD_____ 1000Pa
ii ALLOWABLE STRESSES
1. CONCRETE
a. FOR FOOTING, BEAMS AND SLABS
fc'' = 20 MPa
2. CONCRETE MASONRY UNITS (LOAD BEARING CHB)
fm' =6.90 MPa, fm = 2.41 MPa
3. REINFORCING STEEL BARS
FOR BARS SMALLER THAN 16mmø
fy = 230 MPa
4. ASSUMED ALLOWABLE BEARING CAPACITY Y = 100KPa

NOTE :

- WATER TABLE IS 1500 BELOW GROUND LEVEL.



PLAN

SECTION

4 P - 3 DETAIL OF SEPTIC VAULT

SCALE: 1:30m.

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SHEET CONTENT :
+DETAIL OF CATCH BASIN
+FLOOR CLEANOUT DET.
+FLOOR DRAIN DET.
+SEPTIC TANK DET.

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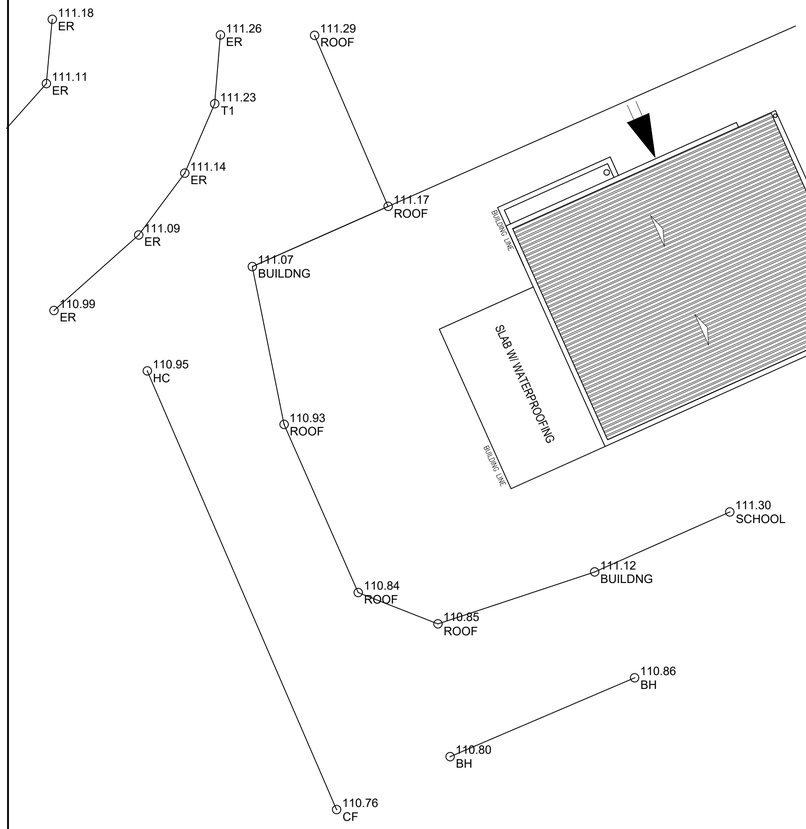
SET NO. P 3 | 3

SHEET NO. 19 | 19 | 23



1 E-1

SITE DEVELOPMENT PLAN (ELECTRICAL)

SCALE: 1:150 m.

SHORT CIRCUIT ANALYSIS :

$$Isc = \frac{V}{Z_t + Z_f}$$

WHERE :

Isc = Short Circuit Current, A
V = System Voltage, V
Z_t = Transformer Impedance, Ω
Z_f = Feeder Impedance, Ω

From "Impedance Data for Single-Phase and Three-Phase Transformers Supplement", EATON
%Z for 15kVA Transformer = 1.3%

$Z_t = \frac{\%Z}{100} \times$ (Base Impedance)

$= \frac{1.3}{100} \times \frac{230^2}{15000}$

$= 0.0458\ \Omega$

From Table 2, IEEE Standard 242: Z = 0.45 Ω / 305m (for 14.0mm² wire)
L = 15m

$Z_f = 2 \times Z \times L$

$= 2 \times \frac{0.45\ \Omega}{305m} \times 15m$

$= 0.0443\ \Omega$

$$Isc = \frac{V}{Z_t + Z_f}$$

$= \frac{230}{0.0458 + 0.0443}$

$= 2552.7$ A

Use at least 5kAIC for Main Breaker

VOLTAGE DROP COMPUTATION :

$$VD = \frac{2 \times k \times I \times L}{A_{cm}}$$

WHERE :

VD = Voltage Drop, V
k = Constant, 12.9 for Copper
I = Current, A
L = Length of Conductor, ft
A_{cm} = Cross-sectional Area of Conductor, Circular Mils from Table 8, NEC

VD for Farthest Load, Circuit # 3 :

$VD = \frac{2 \times k \times I \times L}{A_{cm}}$

$= \frac{2 \times 12.9 \times 1.07\ A \times 58.07\ ft}{6530\ CM}$

$= 0.25$ V

% Voltage Drop = (0.25 / 230) x 100
= 0.11%

VD for Main Feeder :

$VD = \frac{2 \times 12.9 \times I \times L}{A_{cm}}$

$= \frac{2 \times 12.9 \times 34.47\ A \times 49.21\ ft}{26240\ CM}$

$= 1.67$ V

% Voltage Drop = (1.67 / 230) x 100
= 0.73%

Total % Voltage Drop = 0.11% + 0.73%
=0.84% < 5%

ILLUMINATION LEVEL COMPUTATION :

$$E = \frac{\Phi \times MF \times UF}{A}$$

WHERE :

E = Maintained Illuminance
Φ = System Luminous Flux
MF = Maintenance Factor
UF = Utilization Factor
A = Illuminated Area

Illuminance level at Receiving Area and Councilor's Office :

One 18W T8 LED emits 1800 lumens

Coefficient of Utilization (CU) = 0.35 (Average Fixture, Medium Sized Room)

Maintenance Factor (MF) = 0.7 (Average Condition)

$\Phi = 4\ \text{fixtures} \times \frac{2\ \text{lamps}}{\text{fixture}} \times \frac{1800\ \text{lumens}}{\text{lamp}}$

= 14400 lumens

$E = \frac{\Phi \times MF \times UF}{A}$

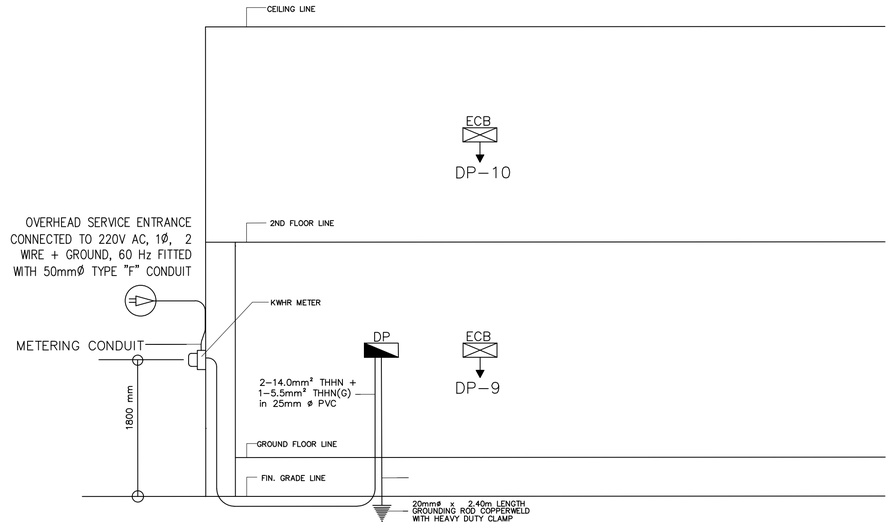
$= \frac{14400\ \text{lumens} \times 0.7 \times 0.35}{7.3m \times 3.5m}$

$= 138.08\ \text{lumens} / m^2$

= 138.08 lux

LEGEND :

SYMBOL		DESCRIPTION
	–	2X18W, T8 LED IN PARABOLIC LOUVER(RECESSED)
	–	7 W LED DOWNLIGHT (BLACK CYLINDER HOUSING)
	–	7 W LED DOWNLIGHT (RECESSED)
	–	24 W LED CEILING LIGHT
	–	7 W LED PORCH LIGHT (WALL–MOUNTED)
SL	–	7 W LED SIGN LIGHT (WALL–MOUNTED)
EF	–	50W EXHAUST FAN
S/Sa	–	ONE–GANG DEVICE SWITCH
Sab	–	TWO–GANG DEVICE SWITCH
Sabc	–	THREE–GANG DEVICE SWITCH
S3W	–	THREE–WAY DEVICE SWITCH
	–	RACEWAY CONDUIT CONCEALED IN CEILING
	–	RACEWAY CONDUIT CONCEALED UNDER FLOOR
	–	PANELBOARD
	–	CKT. BREAKER, RATING AS INDICATED
	–	ENCLOSED CIRCUIT BREAKER (ECB) FOR ACU
	–	DUPLEX CONVENIENCE OUTLET, GROUNDING TYPE 16 AMPS, 240V
GFCI	–	DUPLEX GROUND–FAULT CIRCUIT INTERRUPTER
WP	–	WEATHERPROOF DUPLEX CONVENIENCE OUTLET,TAMPERED PROOF,GROUNDING TYPE,
DP 1	–	CIRCUIT HOMERUN
M	–	SERVICE METER
	–	SERVICE ENTRANCE



2 E-1

SINGLE LINE DIAGRAM

NTS.

GENERAL NOTES :

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). THE RULES AND REGULATIONS OF THE LOCAL ENFORCING AUTHORITY AND THE REQUIREMENTS OF THE LOCAL POWER COMPANY. THE ELECTRICAL WORKS SHALL BE UNDER IMMEDIATE SUPERVISION OF A DULY REGISTERED ELECTRICAL ENGINEER.

2. THE ELECTRICAL SERVICE POWER IS 1-PHASE, 2-WIRE + GROUND 230 V AC, 60 Hz.

3. WIRING METHOD SHALL BE AS FOLLOWS :
   a. MAIN FEEDER
   b. LIGHTING, POWER RECEPTACLE
   (PVC) BRANCH CKT., & AUXILIARY

4. ALL WIRES SHALL BE COPPER AND THERMOPLASTIC INSULATED TYPE "THHN" UNLESS OTHERWISE INDICATED IN THE PLAN. THE MINIMUM SIZE OF WIRE FOR POWER AND LIGHTING CIRCUIT HOMERUN SHALL BE 3.5mm² AND INSULATED FOR 600 VOLTS. SMALLEST RACEWAY SHALL BE 20mm Ø TRADE/NOMINAL SIZE.

5. ALL OUTLET BOXES SHALL BE GALVANIZED GAGE NO. 16 DEEP TYPE WITH FACTORY KNOCKOUTS.
   6. ALL MATERIALS TO BE USED SHALL BE BRAND NEW AND APPROVED TYPE FOR THE PARTICULAR LOCATION AND PURPOSE OF USAGE.

7. EQUIPMENT GROUNDING SYSTEM SHALL BE PROVIDED TO THE ELECTRICAL SYSTEM AS PER PHILIPPINE ELECTRICAL CODE REQUIREMENT.

8. MOUNTING HEIGHT OF WIRING DEVICES SHALL BE AS FOLLOWS :
   a. LIGHT SWITCH - 1.50m ABOVE FINISH FLOOR
   b. CONVENIENCE OUTLET - 0.30m ABOVE FINISH FLOOR
   C. PANELBOARD - 1.60m ABOVE FINISH FLOOR

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
LAGUNA 3RD DISTRICT ENGINEERING OFFICE
MARIFLOR SUBD., BRGY. DEL REMEDIO, SAN PABLO CITY, REGION IV-A

PROJECT TITLE / LOCATION :	SHEET CONTENT :	DRAFTED :	REVIEWED :	SUBMITTED/ RECOMMENDED :	APPROVED :	SET NO.	SHEET NO.
CONVERGENCE AND SPECIAL SUPPORT PROGRAM BASIC INFRASTRUCTURE PROGRAM MULTI-PURPOSE BUILDINGS/ FACILITIES TO SUPPORT SOCIAL SERVICES CONSTRUCTION OF MULTI-PURPOSE BUILDING, BARANGAY 3-D, SAN PABLO CITY, LAGUNA	+GENERAL NOTES +LEGEND +SITE DEVELOPMENT PLAN +SINGLE LINE DIAGRAM	**JEFFERSON R. GABANAN** DRAFTSMAN II(B) PREPARED : **FRANS ROQUE S. DELA CRUZ** ENGINEER II (ELECTRICAL ENGINEER)	**JOEY CHRISTIAN L. DAYO** ENGINEER II DATE :	**MA. SHIRLEY M. SAMIANO** CHIEF, PLANNING & DESIGN SECTION CONCURRENT CAPACITY AS OFFICER-IN-CHARGE OFFICE OF THE ASSISTANT DISTRICT ENGINEER DATE :	**CARLOS C. MUERE** OFFICER-IN-CHARGE OFFICE OF THE DISTRICT ENGINEER DATE :	E 1 | 2	20 20 | 23

2 / E-2 SCHEDULE OF LOADS & COMPUTATION

NTS.

DISTRIBUTION PANEL (DP)								
MOUNTING : FLUSH		TYPE: PLUG-IN						
CKT NO.	DESCRIPTION	VA LOAD	AMPS	CIRCUIT BREAKER				WIRE & CONDUIT SIZE
				VOLT	POLE	AT	AF	
1	2-24W, LED CEILING LIGHT 4-7W, LED DOWNLIGHT, RECESSED 2-7W, LED WALL LIGHT 4-7W, LED SIGN LIGHT	169	0.73	230	2	15	50	2-3.5mm² THHN in 20mmØ PVC
2	4-2X18W, T8 LED, RECESSED 2-7W, LED DOWNLIGHT, RECESSED 5-7W, LED DOWNLIGHT, SURFACE-MOUNTED 1-60W, EXHAUST FAN	347	1.51	230	2	15	50	2-3.5mm² THHN in 20mmØ PVC
3	1-24W, LED CEILING LIGHT 12-7W, LED DOWNLIGHT, RECESSED	154	0.67	230	2	15	50	2-3.5mm² THHN in 20mmØ PVC
4	4-2X18W, T8 LED, RECESSED 2-7W, LED DOWNLIGHT, RECESSED 5-7W, LED DOWNLIGHT, SURFACE-MOUNTED 1-60W, EXHAUST FAN	347	1.51	230	2	15	50	2-3.5mm² THHN in 20mmØ PVC
5	CONVENIENCE OUTLET (7X180VA)	1260	5.48	230	2	20	50	2-3.5mm² THHN + 1-3.5mm² THHN(G) in 20mmØ PVC
6	CONVENIENCE OUTLET (6X180VA)	1080	4.7	230	2	20	50	2-3.5mm² THHN + 1-3.5mm² THHN(G) in 20mmØ PVC
7	CONVENIENCE OUTLET (6X180VA)	1080	4.7	230	2	20	50	2-3.5mm² THHN + 1-3.5mm² THHN(G) in 20mmØ PVC
8	CONVENIENCE OUTLET (6X180VA)	1080	4.7	230	2	20	50	2-3.5mm² THHN + 1-3.5mm² THHN(G) in 20mmØ PVC
9	ACU, INVERTER (1.0hp, Split-type)	1840	8	230	2	20	50	2-3.5mm² THHN + 1-3.5mm² THHN(G) in 20mmØ PVC
10	ACU, INVERTER (1.0hp, Split-type)	1840	8	230	2	20	50	2-3.5mm² THHN + 1-3.5mm² THHN(G) in 20mmØ PVC
11	SPARE	1000	4.35	230	2	20	50	----------
12	SPARE	1000	4.35	230	2	30	50	----------
TOTAL CONNECTED LOADS		11197						

TOTAL CONNECTED LOADS = 11197 VA

At 0.7 Demand Factor,

It = ((11197/230) x0.7) + 0.25(8)

= 36.08 A

Icb= 36.08 x 1.15

= 41.5 A

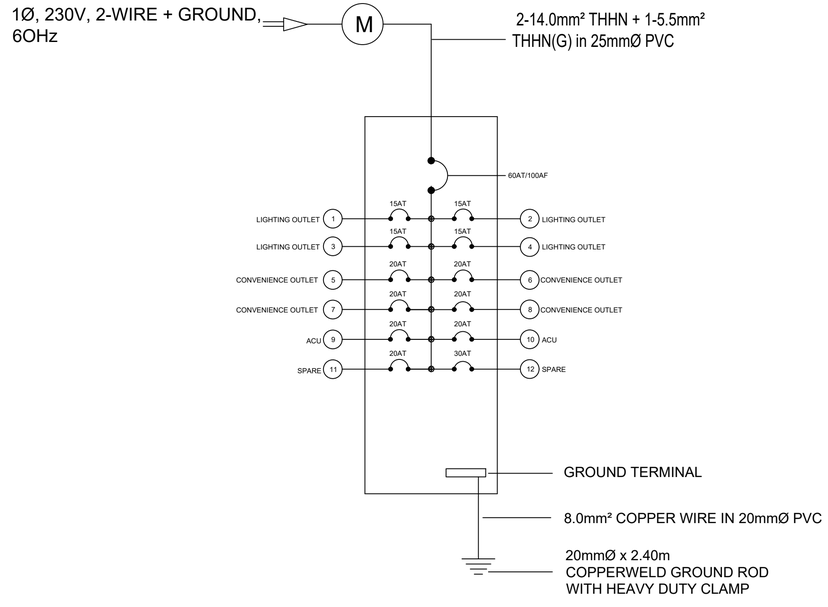
USE : 60AT/100AF, 2P, 240V, MCB

Ifeeder = 36.08 x 1.25

= 45.1 A

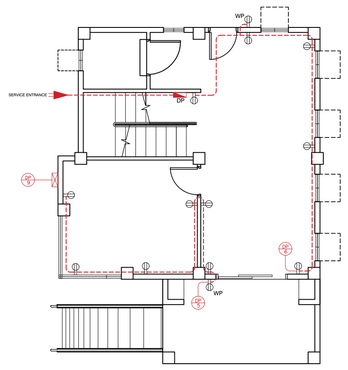
USE : 2-14.0mm² THHN + 1-5.5mm² THHN(G) in 25mmØ PVC

SERVICE ENTRANCE



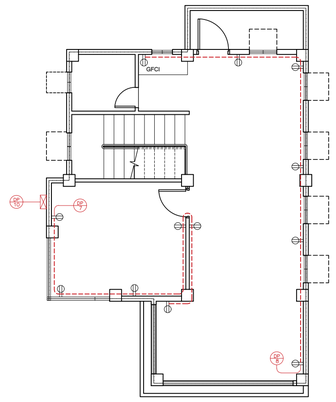
1 / E-2 ELECTRICAL RISER DIAGRAM

NTS.



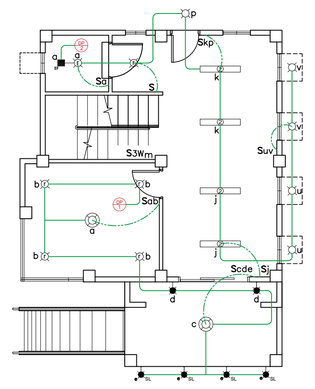
4 / E-2 GROUND FLOOR POWER LAYOUT

SCALE: 1:100 m.



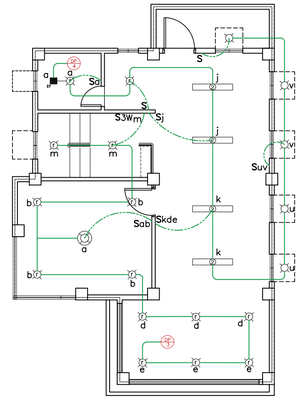
5 / E-2 SECOND FLOOR POWER LAYOUT

SCALE: 1:100 m.



2 / E-2 GROUND FLOOR LIGHTING LAYOUT

SCALE: 1:100 m.



3 / E-2 SECOND FLOOR LIGHTING LAYOUT

SCALE: 1:100 m.

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
LAGUNA 3RD DISTRICT ENGINEERING OFFICE
MARIFLOR SUBD., BRGY. DEL REMEDIO, SAN PABLO CITY, REGION IV-A

PROJECT TITLE / LOCATION :
CONVERGENCE AND SPECIAL SUPPORT PROGRAM
BASIC INFRASTRUCTURE PROGRAM
MULTI-PURPOSE BUILDINGS/ FACILITIES TO SUPPORT SOCIAL SERVICES
CONSTRUCTION OF MULTI-PURPOSE BUILDING,
BARANGAY 3-D, SAN PABLO CITY, LAGUNA

SHEET CONTENT :
+ELECTRICAL RISER DIAGRAM
+SCHED. OF LOADS & COMPUTATION
+GROUND FLOOR POWER LAYOUT
+SECOND FLOOR POWER LAYOUT
+GROUND FLOOR LIGHTING LAYOUT
+SECOND FLOOR LIGHTING LAYOUT

DRAFTED :
JEFFERSON R. GABANAN
DRAFTSMAN II(B)

PREPARED :
FRANS ROQUE S. DELA CRUZ
ENGINEER II (ELECTRICAL ENGINEER)

REVIEWED :
JOEY CHRISTIAN L. DAYO
ENGINEER II
DATE :

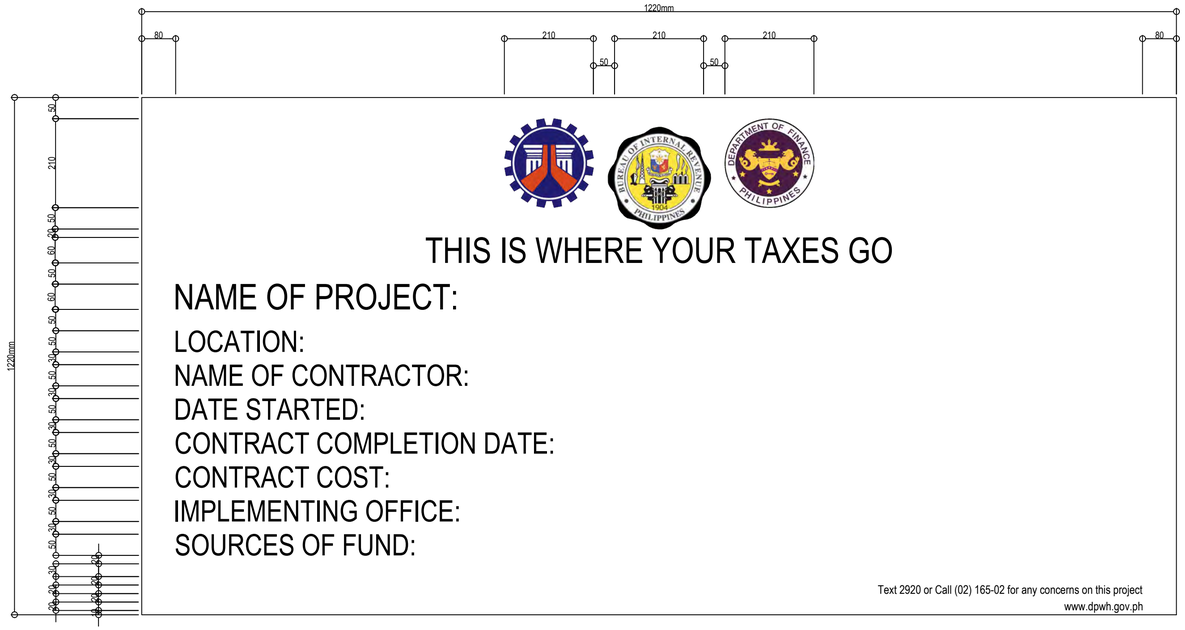
SUBMITTED/ RECOMMENDED :
MA. SHIRLEY M. SAMIANO
CHIEF, PLANNING & DESIGN SECTION
CONCURRENT CAPACITY AS OFFICER-IN-CHARGE
OFFICE OF THE ASSISTANT DISTRICT ENGINEER
DATE :

APPROVED :
CARLOS C. MUERE
OFFICER-IN-CHARGE
OFFICE OF THE DISTRICT ENGINEER
DATE :

SET NO. E 2 | 2

SHEET NO. 21 | 21 | 23

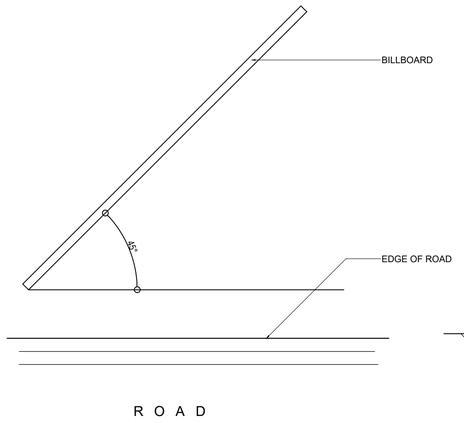
DPWH STANDARD PROJECT BILLBOARD



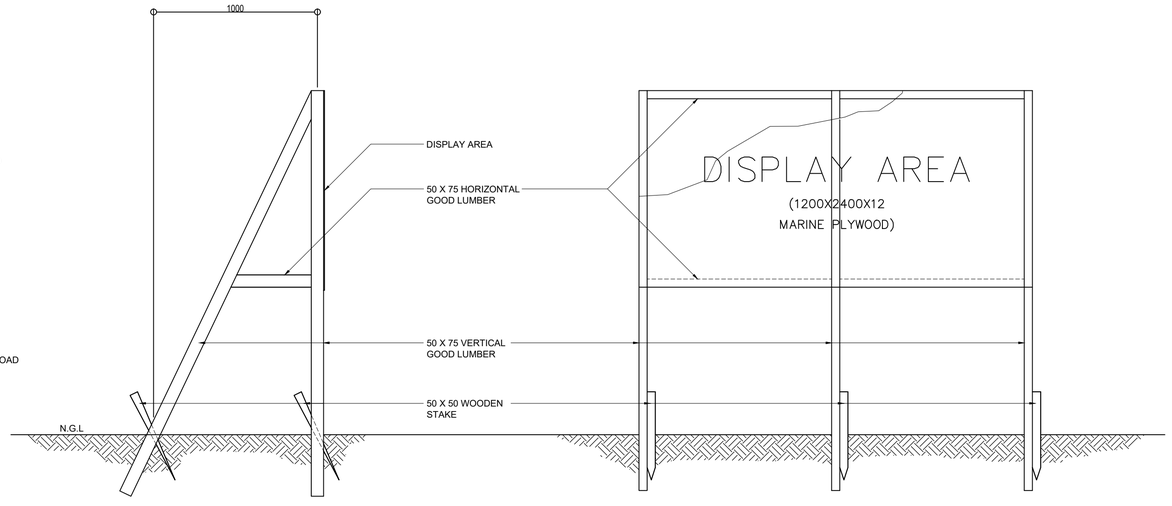
NOTE:

FOR SOURCE OF FUND, STATE IF DPWH REGULAR BUDGET, PRIORITY DEVELOPMENT ASSISTANCE FUND, DepEd/DA/DAR BUDGET, CALAMITY FUND, MVUC FUND, etc.

ISOMETRIC VIEW OF BILLBOARD

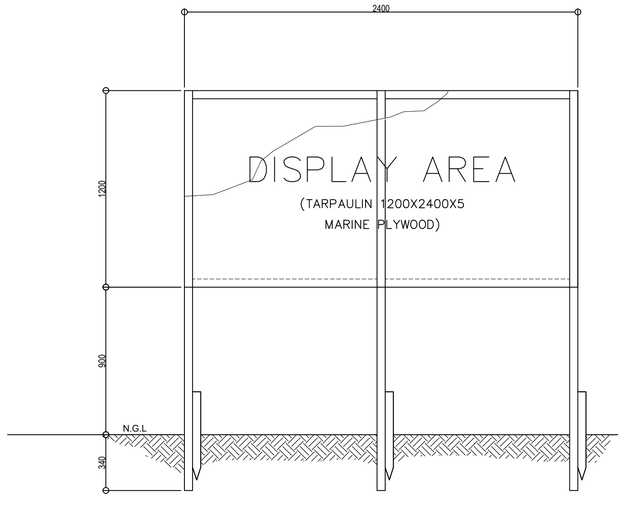


ORIENTATION



TYPICAL FRAME ELEVATION

FRONT ELEVATION



FRONT ELEVATION

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
LAGUNA 3RD DISTRICT ENGINEERING OFFICE
MARIFLOR SUBD., BRGY. DEL REMEDIO, SAN PABLO CITY, REGION IV-A

PROJECT TITLE / LOCATION :
CONVERGENCE AND SPECIAL SUPPORT PROGRAM
BASIC INFRASTRUCTURE PROGRAM
MULTI-PURPOSE BUILDINGS/ FACILITIES TO SUPPORT SOCIAL SERVICES
CONSTRUCTION OF MULTI-PURPOSE BUILDING,
BARANGAY 3-D, SAN PABLO CITY, LAGUNA

SHEET CONTENT :
•DPWH STANDARD PROJECT BILLBOARD

DRAFTED :
JEFFERSON R. GABANAN
DRAFTSMAN II(B)

PREPARED :
CAMILA ROSE D. DE BORJA
ENGINEER I

REVIEWED :
JOEY CHRISTIAN L. DAYO
ENGINEER II
DATE :

SUBMITTED/ RECOMMENDED :
MA. SHIRLEY M. SAMIANO
CHIEF, PLANNING & DESIGN SECTION
CONCURRENT CAPACITY AS OFFICER-IN-CHARGE
OFFICE OF THE ASSISTANT DISTRICT ENGINEER
DATE :

APPROVED :
CARLOS C. MUERE
OFFICER-IN-CHARGE
OFFICE OF THE DISTRICT ENGINEER
DATE :

SET NO. B 1 2

SHEET NO. 22 22 23

COA'S STANDARD PROJECT BILLBOARD

Republic of the Philippines
COMMISSION ON AUDIT
Office of the Audit Team Leader
DPWH LAGUNA 3RD DISTRICT ENGINEERING OFFICE
San Pablo City, Laguna

Project : _____ Cost: _____

_____

_____

Location : _____ Fund Source/S: _____

Implementing Agency/ies : _____

Development Partner/s : _____

Contractor/ Supplier : _____

Brief Description of Project : _____

Project Detail :

PROJECT DATE				PROJECT STATUS			
DURATION	STARTED	TARGET DATE OF COMPLETION	PERCENTAGE OF COMPLETION	AS OF DATE	COST INCURRED TO DATE	DATE COMPLETED	REMARKS

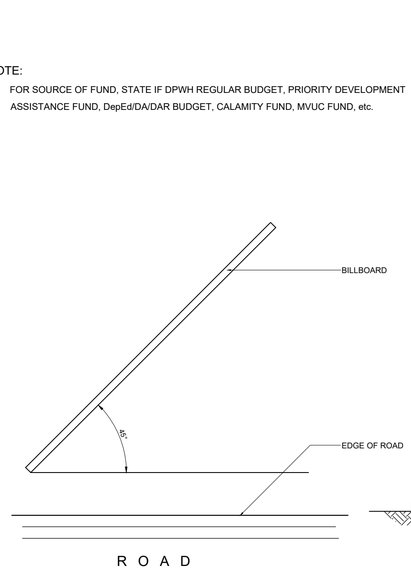
For particulars or complains about this project, Contact the Regional office or Cluster which has audit jurisdiction on this project.

COA Regional Office no./ Cluster: _____
Address: _____
Contact no.: _____ or TExt COA Citizen's Desk at 0915-539-1957

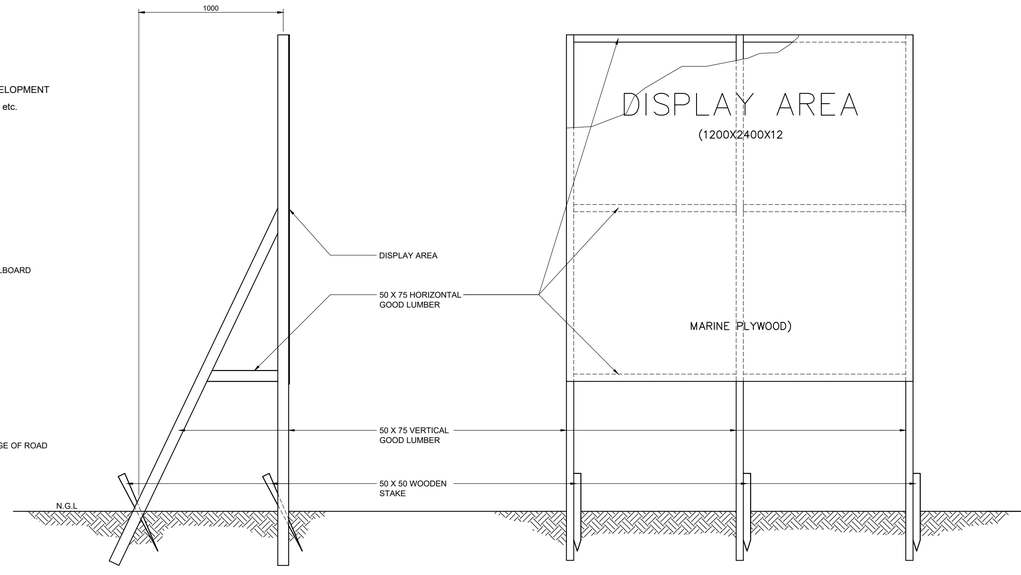
NOTE:

FOR SOURCE OF FUND, STATE IF DPWH REGULAR BUDGET, PRIORITY DEVELOPMENT ASSISTANCE FUND, DepEd/DA/DAR BUDGET, CALAMITY FUND, MVUC FUND, etc.

ISOMETRIC VIEW OF BILLBOARD

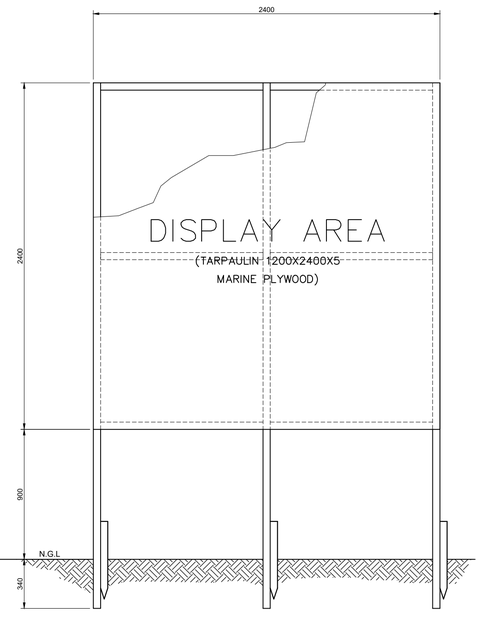


ORIENTATION



TYPICAL FRAME ELEVATION

FRONT ELEVATION
(OPTION 1)



FRONT ELEVATION
(OPTION 2)

	PROJECT TITLE / LOCATION :	SHEET CONTENT :	DRAFTED :	REVIEWED :	SUBMITTED/ RECOMMENDED :	APPROVED :	SET NO.	SHEET NO.
REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS LAGUNA 3RD DISTRICT ENGINEERING OFFICE MARIFLOR SUBD., BRGY. DEL REMEDIO, SAN PABLO CITY, REGION IV-A	CONVERGENCE AND SPECIAL SUPPORT PROGRAM BASIC INFRASTRUCTURE PROGRAM MULTI-PURPOSE BUILDINGS/ FACILITIES TO SUPPORT SOCIAL SERVICES CONSTRUCTION OF MULTI-PURPOSE BUILDING, BARANGAY 3-D, SAN PABLO CITY, LAGUNA	+COA'S STANDARD PROJECT BILLBOARD	**JEFFERSON R. GABANAN** DRAFTSMAN I(B) PREPARED : **CAMILA ROSE D. DE BORJA** ENGINEER I	**JOEY CHRISTIAN L. DAYO** ENGINEER II DATE :	**MA. SHIRLEY M. SAMIANO** CHIEF, PLANNING & DESIGN SECTION CONCURRENT CAPACITY AS OFFICER-IN-CHARGE OFFICE OF THE ASSISTANT DISTRICT ENGINEER DATE :	**CARLOS C. MUERE** OFFICER-IN-CHARGE OFFICE OF THE DISTRICT ENGINEER DATE :	B 2 | 2	23 23 | 23