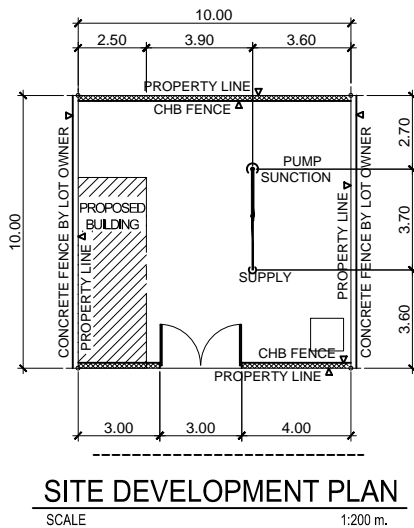


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PERSPECTIVE



- NOTES:**
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REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS
TRANSPORTATION and
COMMUNICATION
OFFICE OF THE BUILDING OFFICIAL

DISTRICT / CITY / MUNICIPALITY

LAND USE & ZONING

LINE & GRADE

ARCHITECTURAL

STRUCTURAL

MECHANICAL

ELECTRICAL

PLUMBING

W CALAMBA WATER DISTRICT
ENGINEERING DEPARTMENT
PLANNING AND DESIGN DIVISION

24/7 Public Service

PROJECT TITLE:
PROPOSED PUMPING STATION

DRAWN BY: A. L. DEL PRADO
DESIGNED BY: ENGR. R. S. CARTAGO
RECOMMENDED BY: ENGR. R. S. CARTAGO

SHEET CONTENTS:
PERSPECTIVE
SITE DEVELOPMENT PLAN
LOCATION PLAN

DATE: 03/30/2020

SHEET NO.

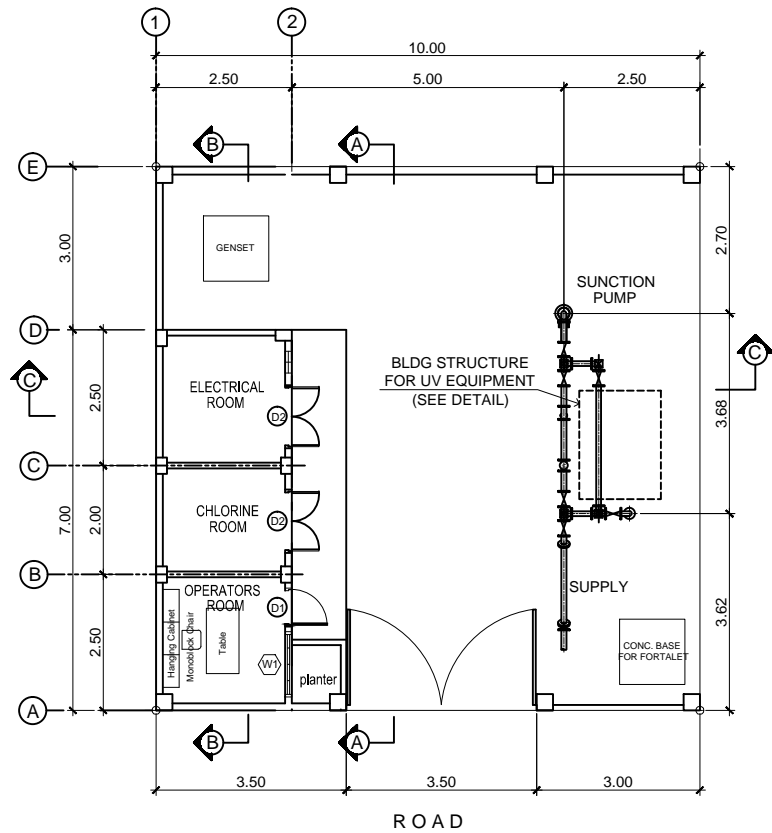
CS

LAKEVIEW SUBD., HALANG, CALAMBA CITY

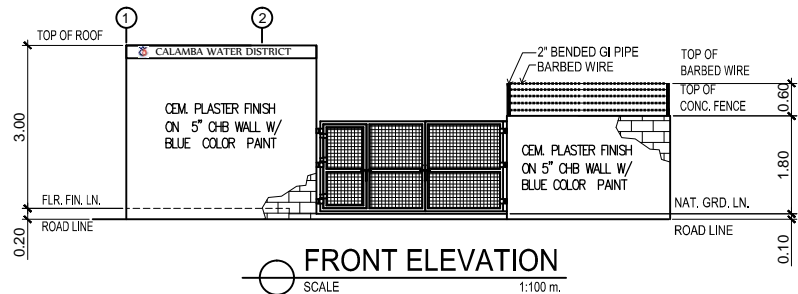
LOCATION: Brgy. Bungo, Calamba City, Laguna

APPROVED BY: MR. E. A. AGUILAR JR.

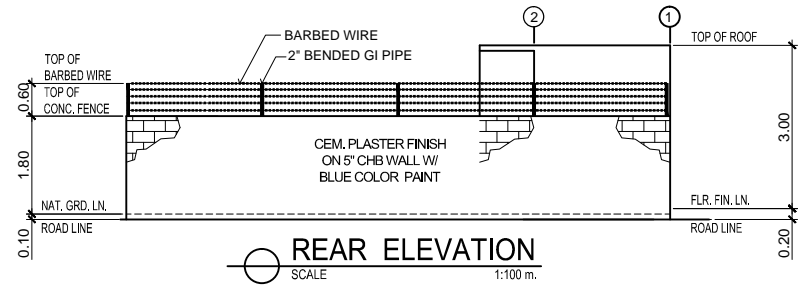
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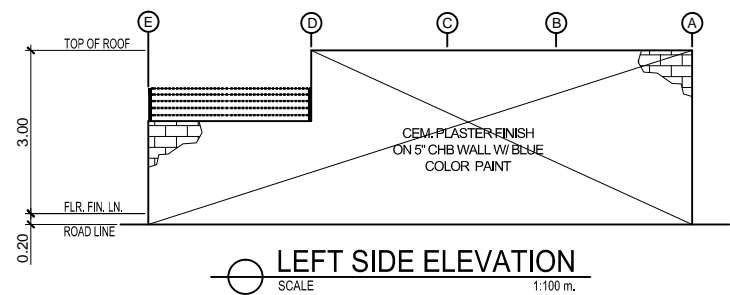
FLOOR PLAN
SCALE 1:100 m.



FRONT ELEVATION
SCALE 1:100 m.




REAR ELEVATION
SCALE 1:100 m.

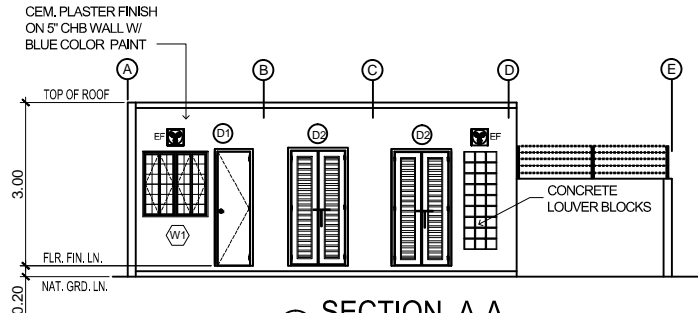


LEFT SIDE ELEVATION
SCALE 1:100 m.

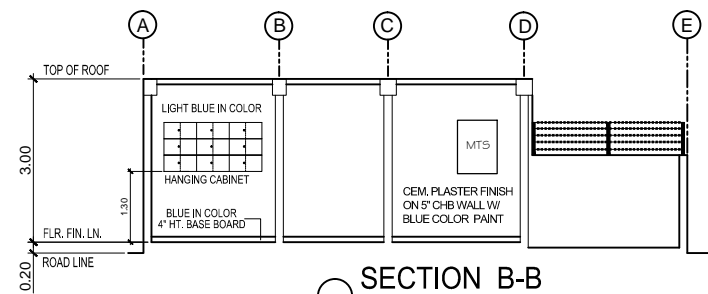
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 CALAMBA WATER DISTRICT ENGINEERING DEPARTMENT PLANNING AND DESIGN DIVISION LAKEVIEW SUBD., HALANG, CALAMBA CITY	PROJECT TITLE:	DRAWN BY:	SHEET CONTENTS:	DATE: 03/30/2020
	PROPOSED PUMPING STATION	DESIGNED BY:	FLOOR PLAN FRONT ELEVATION LEFT SIDE ELEVATION	SHEET NO.
	LOCATION: Brgy. Bungo, Calamba City, Laguna	RECOMMENDED BY:		A-1
		APPROVED BY:		

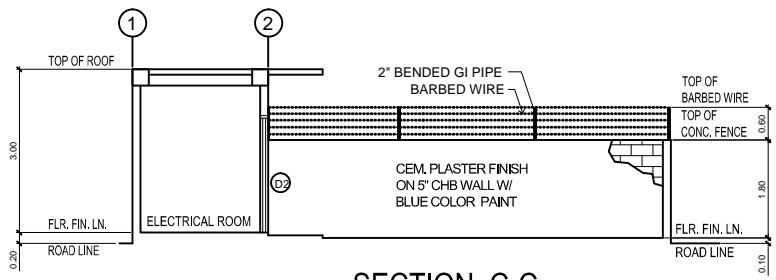
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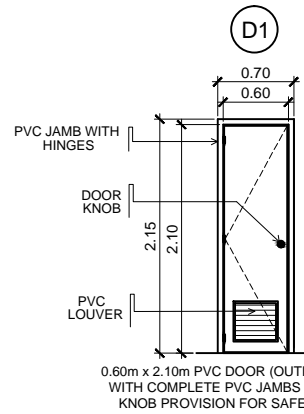
SECTION A-A
SCALE 1:100m.



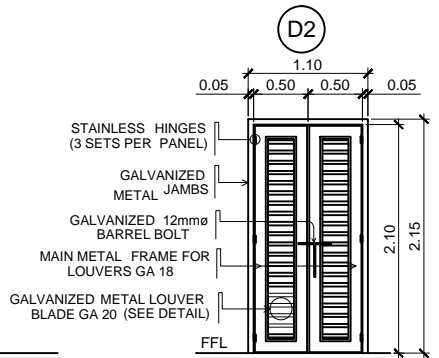
SECTION B-B
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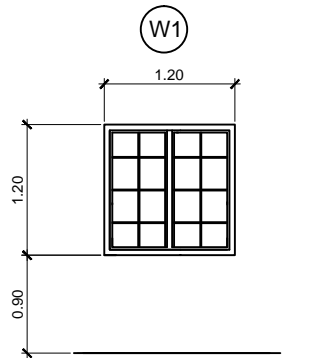
SECTION C-C
SCALE 1:100 m.



0.60m x 2.10m PVC DOOR (OUTDOOR TYPE) WITH COMPLETE PVC JAMBS AND DOOR KNOB PROVISION FOR SAFETY LOCK

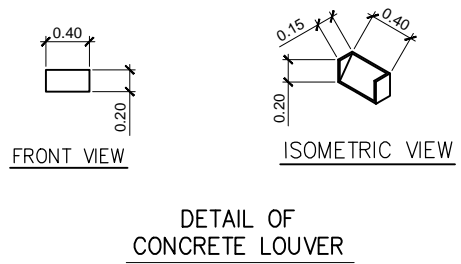


DOUBLE PANEL METAL LOUVER GA 20 ON GA 18 FRAME WITH BARREL BOLT PROVISION FOR SAFETY LOCK WITH EPOXY PRIMER & TOP COAT FINISH



1.20M X 1.20M STEEL CASEMENT TYPE WINDOW STEEL GRILLS - 12MM SQUARE BAR

SCHEDULE OF DOORS & WINDOW
SCALE 1:50 m.

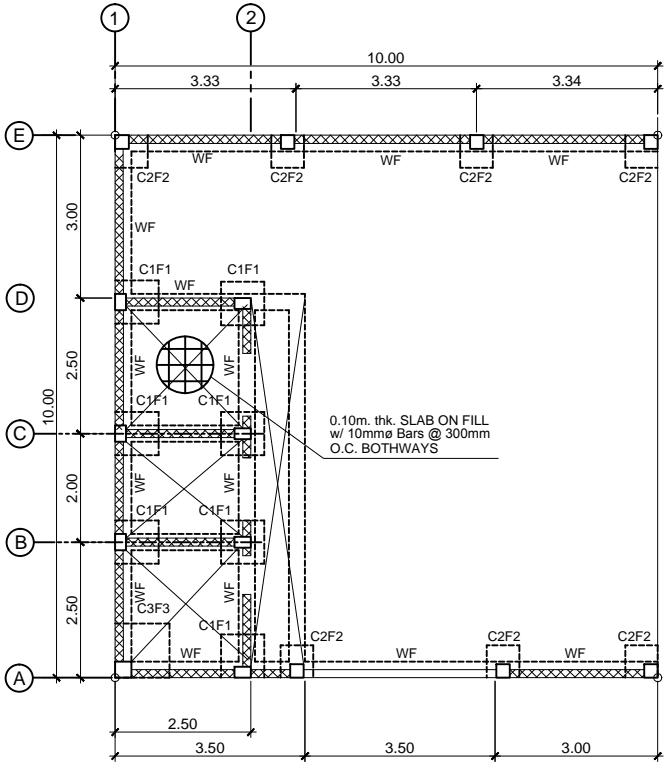


DETAIL OF CONCRETE LOUVER

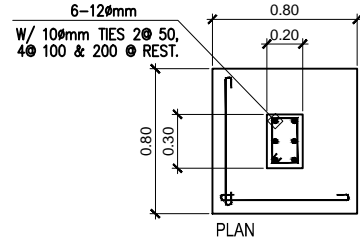
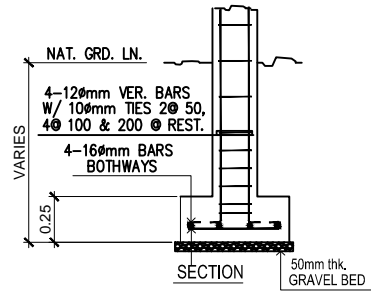
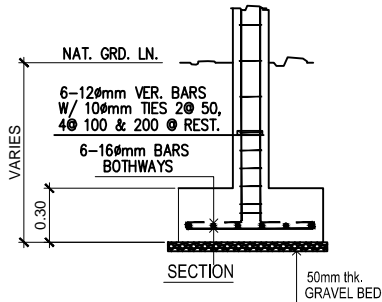
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<p>CALAMBA WATER DISTRICT ENGINEERING DEPARTMENT PLANNING AND DESIGN DIVISION LAKEVIEW SUBD., HALANG, CALAMBA CITY</p>	PROJECT TITLE:	DRAWN BY:	A. L. DEL PRADO	SHEET CONTENTS:	DATE: 03/30/2020
	PROPOSED PUMPING STATION	DESIGNED BY:	ENGR. R. S. CARTAGO	SECTION A-A SECTION B-B SECTION C-C SCHEDULE OF DOORS & WINDOWS DETAIL OF CONCRETE LOUVER	SHEET NO. A-2
		LOCATION: Brgy. Bungo, Calamba City, Laguna	RECOMMENDED BY:		
	APPROVED BY:	MR. E. A. AGUILAR JR.			

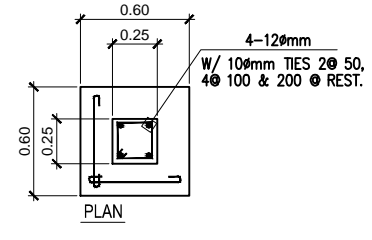
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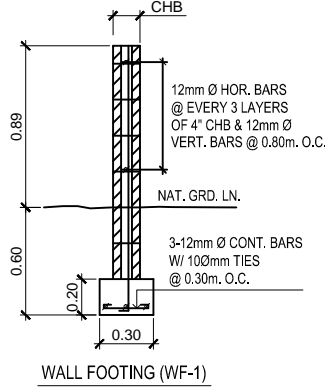
FOUNDATION PLAN
SCALE 1:100 m.



F1C1

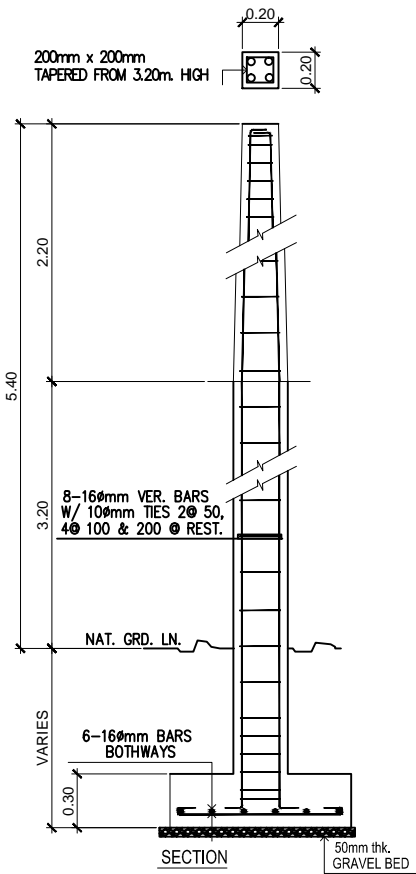


F2C2

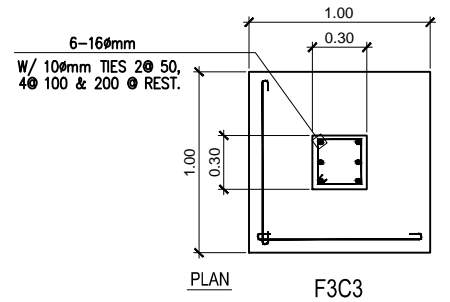


WALL FOOTING (WF-1)

DETAIL OF FOOTINGS
SCALE 1:30m.



SECTION



F3C3

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CALAMBA WATER DISTRICT
 ENGINEERING DEPARTMENT
 PLANNING AND DESIGN DIVISION

PROJECT TITLE:
PROPOSED PUMPING STATION

DRAWN BY: A. L. DEL PRADO
 DESIGNED BY: ENGR. R. S. CARTAGO
 RECOMMENDED BY: ENGR. R. S. CARTAGO

SHEET CONTENTS:
 FOUNDATION PLAN
 DETAIL OF FOOTINGS
 DETAIL OF COLUMN
 DETAIL OF GRADE BEAM

DATE: 03/30/2020

SHEET NO.

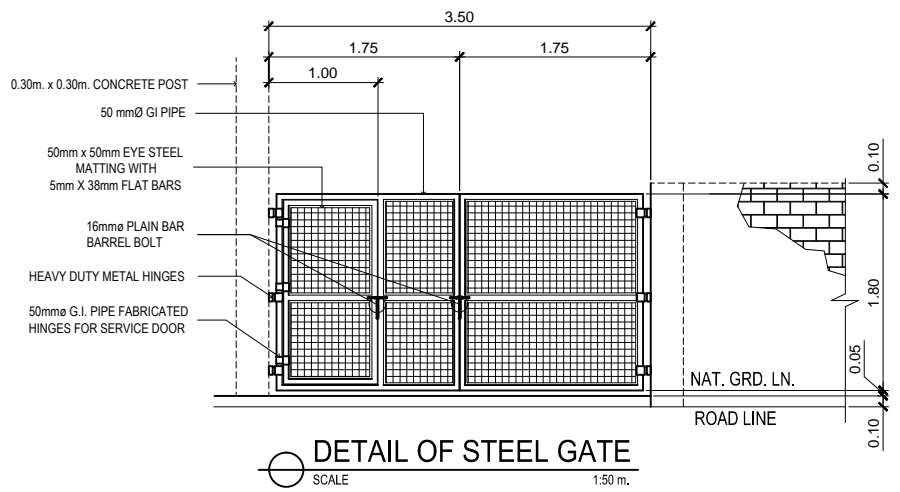
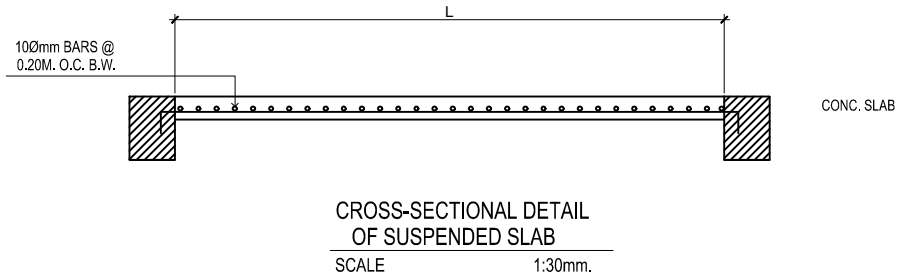
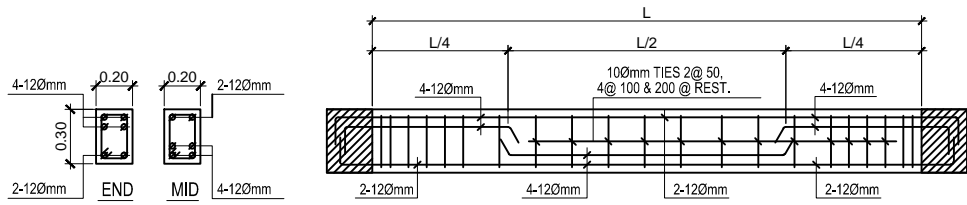
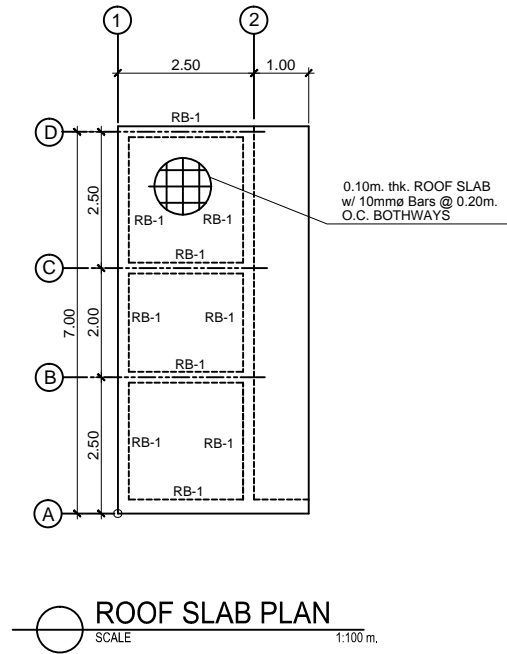
S-1

LAKEVIEW SUBD., HALANG, CALAMBA CITY


LOCATION: Brgy. Bungo, Calamba City, Laguna

APPROVED BY: MR. E. A. AGUILAR JR.

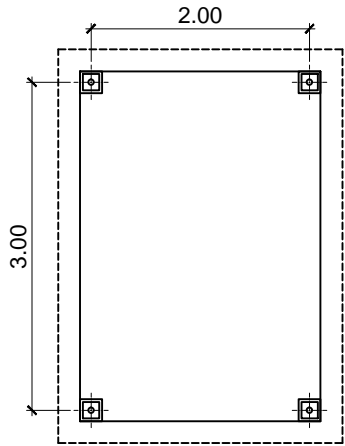
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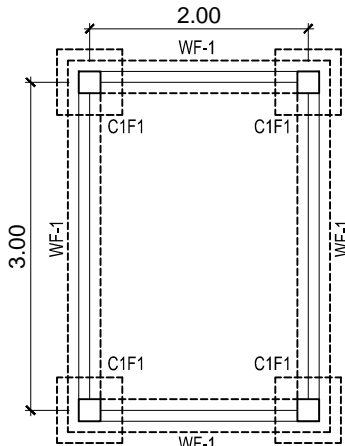
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 CALAMBA WATER DISTRICT ENGINEERING DEPARTMENT PLANNING AND DESIGN DIVISION LAKEVIEW SUBD., HALANG, CALAMBA CITY	PROJECT TITLE:	DRAWN BY: A. L. DEL PRADO	SHEET CONTENTS:	DATE: 03/30/2020
	PROPOSED PUMPING STATION	DESIGNED BY: ENGR. R. S. CARTAGO	ROOF SLAB PLAN ELEVATION BUILDING DETAIL CROSS-SECTIONAL DETAIL OF BEAM DETAIL OF STEEL GATE	SHEET NO.
	LOCATION: Brgy. Bungo, Calamba City, Laguna	RECOMMENDED BY: ENGR. R. S. CARTAGO		S-2
		APPROVED BY: MR. E. A. AGUILAR JR.		

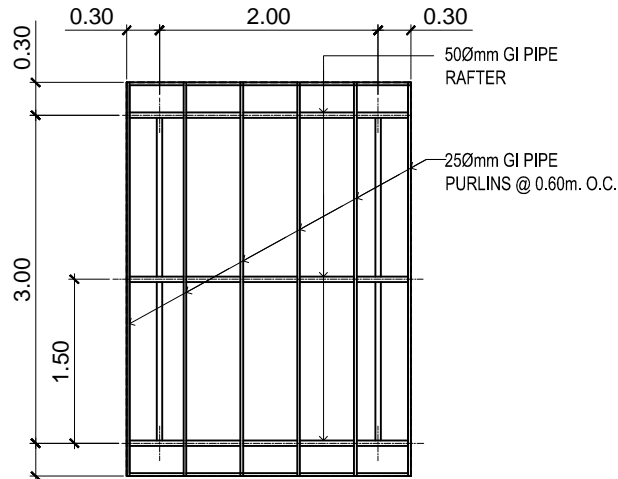
TYPICAL UV ENCLOSURE



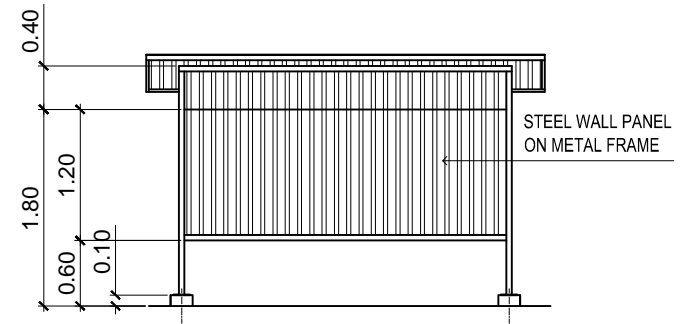
FLOOR PLAN
SCALE 1:50 m.



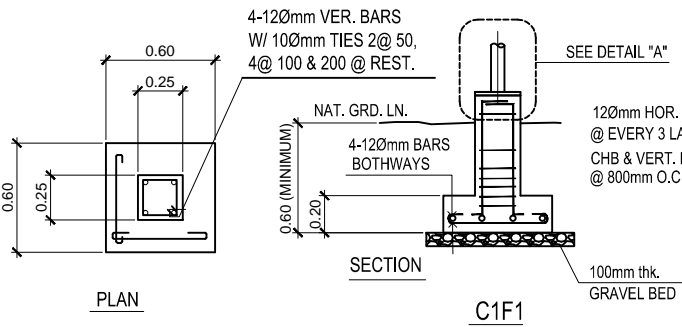
FOUNDATION PLAN
SCALE 1:50 m.



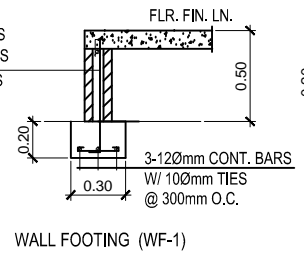
ROOF FRAMING PLAN
SCALE 1:50 m.



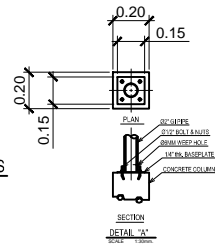
FRONT ELEVATION
SCALE 1:50 m.



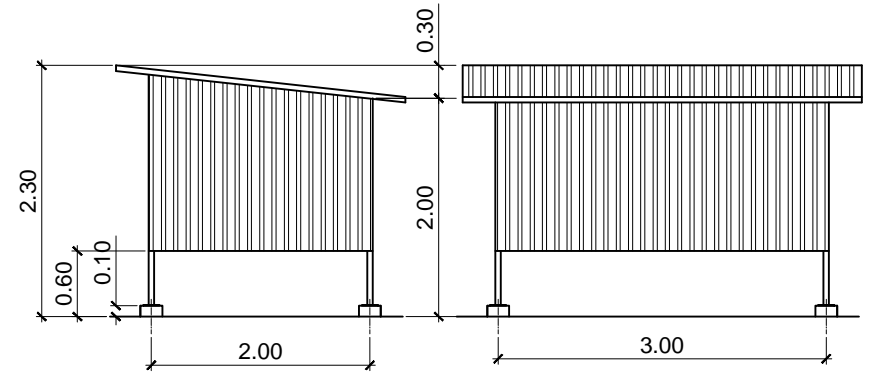
DETAIL OF FOOTINGS
SCALE: 1:30 M.



WALL FOOTING (WF-1)



SECTION DETAIL 'A'



SIDE ELEVATION
SCALE 1:50 m.

REAR ELEVATION
SCALE 1:50 m.

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W CALAMBA WATER DISTRICT
ENGINEERING DEPARTMENT
PLANNING AND DESIGN DIVISION
24/7 Public Service

PROJECT TITLE:
PROPOSED PUMPING STATION
LOCATION: Brgy. Bungo, Calamba City, Laguna

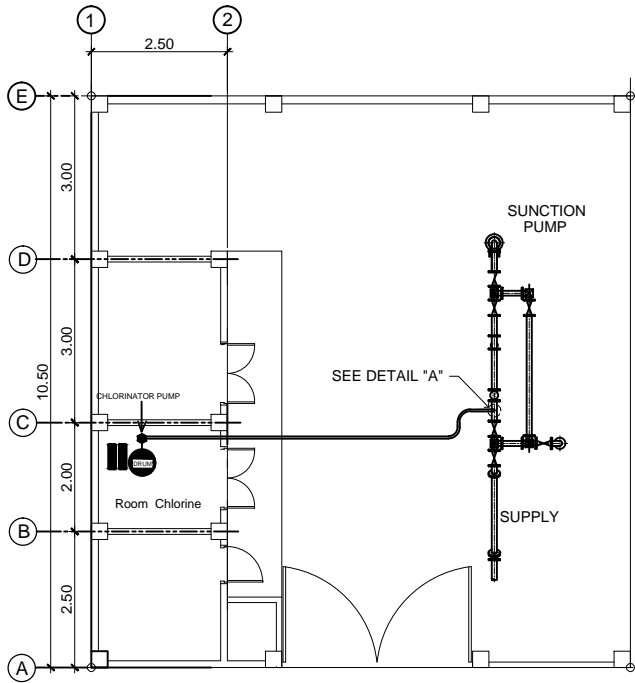
DRAWN BY: A. L. DEL PRADO
DESIGNED BY: ENGR. R. S. CARTAGO
RECOMMENDED BY: ENGR. R. S. CARTAGO
APPROVED BY: MR. E. A. AGUILAR JR.

SHEET CONTENTS:
UV ENCLOSURE FLOOR PLAN
FOUNDATION PLAN
ROOF FRAMING PLAN

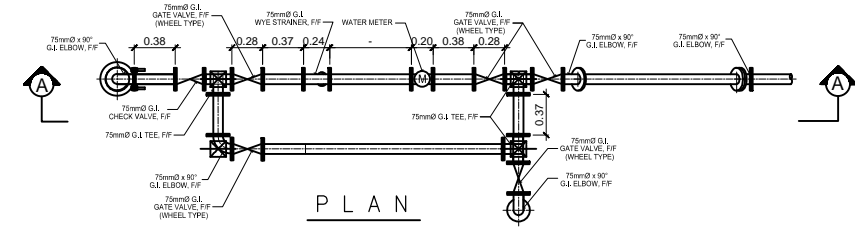
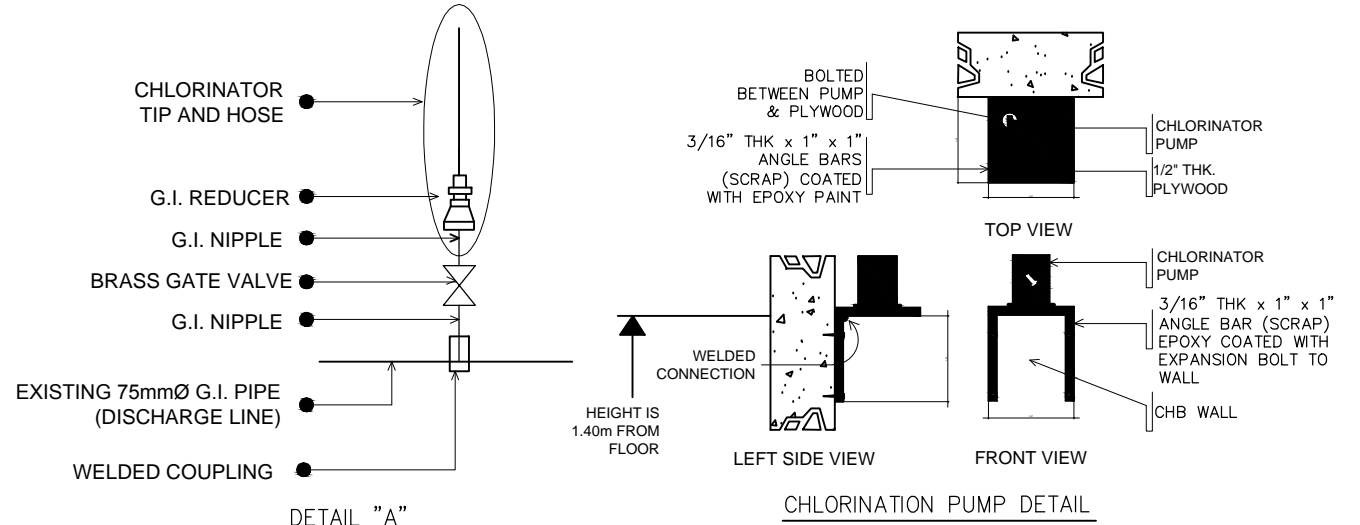
DATE: 03/30/2020
SHEET NO.
S-3

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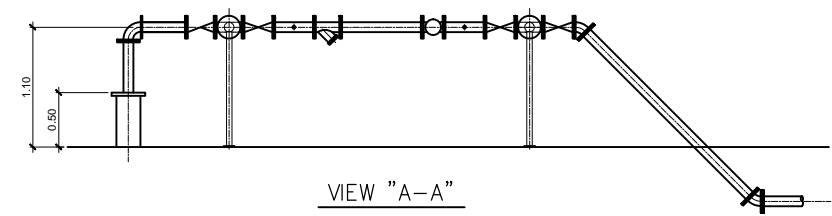
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MECHANICAL LAYOUT
SCALE 1:100 m.



PLAN



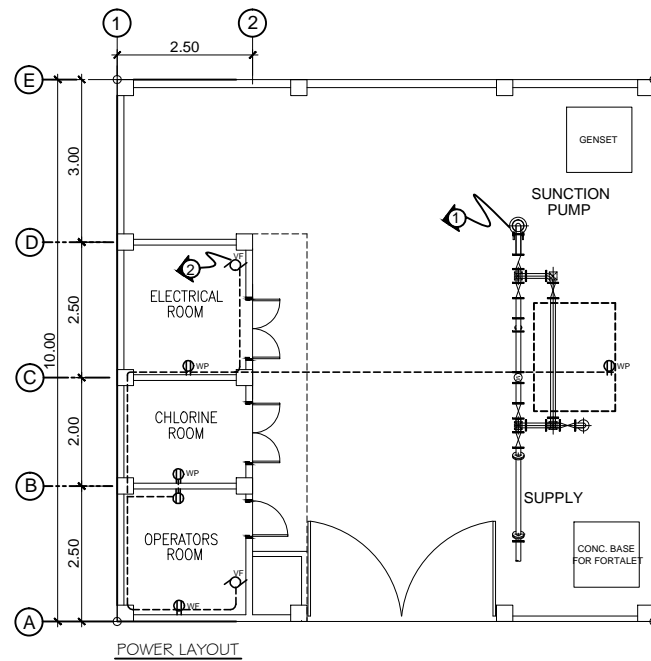
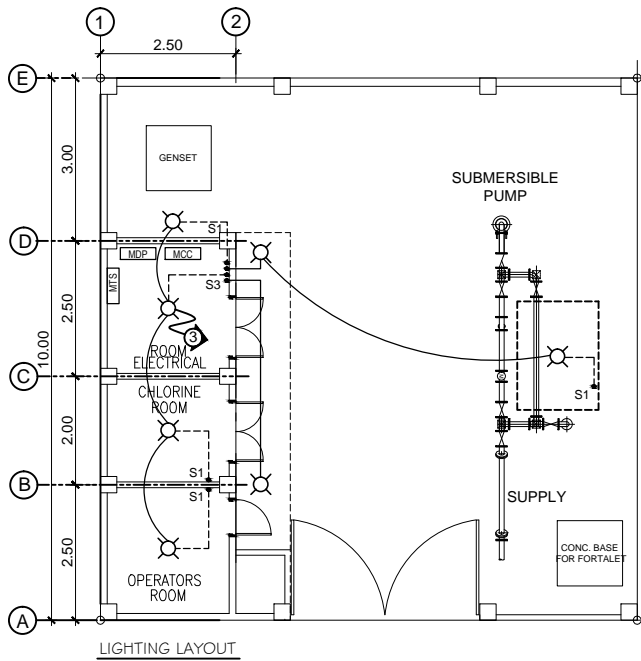
VIEW "A-A"

DETAIL OF DISCHARGE PIPE
SCALE 1:50 m.

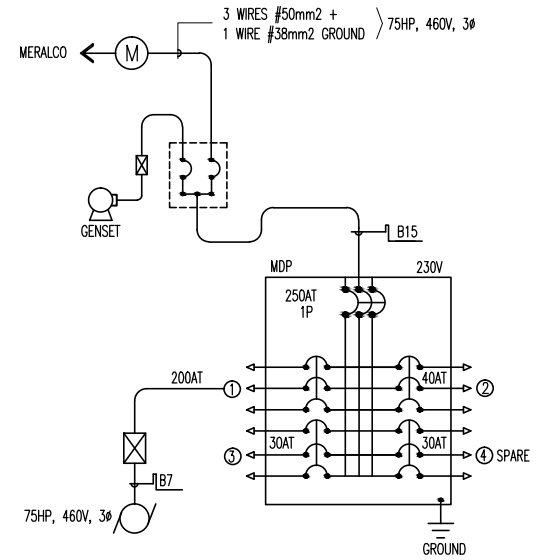
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<p>CALAMBA WATER DISTRICT ENGINEERING DEPARTMENT PLANNING AND DESIGN DIVISION</p> <p>LAKEVIEW SUBD., HALANG, CALAMBA CITY</p>	PROJECT TITLE:	DRAWN BY:	A. L. DEL PRADO	SHEET CONTENTS:	DATE: 03/30/2020
	PROPOSED PUMPING STATION	DESIGNED BY:	ENGR. R. S. CARTAGO	MECHANICAL LAYOUT CHLORINATION PUMP DETAIL DETAIL OF DISCHARGE PIPE	SHEET NO.
LOCATION: Brgy. Bungo, Calamba City, Laguna	RECOMMENDED BY:	ENGR. R. S. CARTAGO	M-1		
	APPROVED BY:	MR. E. A. AGUILAR JR.			

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ELECTRICAL LAYOUT
SCALE: 1/100m



FEEDER RISER DIAGRAM

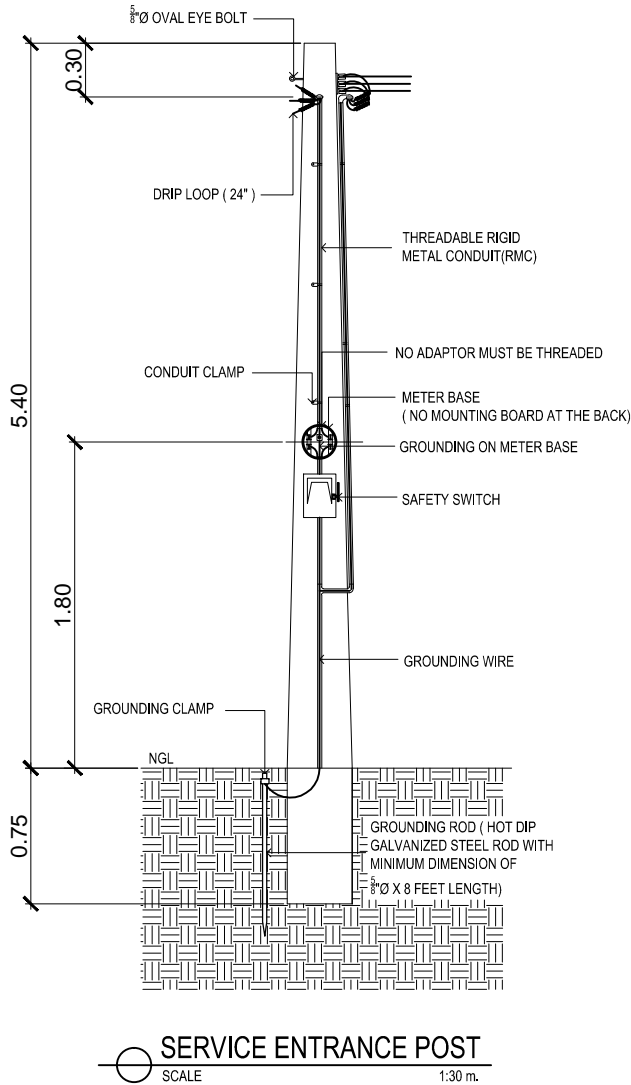
SCHEDULE OF LOADS						
CKT. NO.	LOAD DESCRIPTION	WATTS	VOLTS	BREAKER	SIZE OF WIRES	CONDUITS
1	30Hp Submersible motor	22371	230	2P,100A,230V.	3-38mmø + 14mm ² (G) THHN Cable	20mmø PVC PIPE
2	5-Convenience Outlet & 2-Exhaust Fan	1100	230	2P,20A,230V.	2-3.5mm ² THHN	20mmø PVC PIPE
3	5-100w Lighting Outlet 1-500w Spotlight Outlet	1000	230	2P,15A,230V.	2-2.0mm ² THHN	20mmø PVC PIPE
4	SPARE					
TOTAL		24271	230	2P,110A,230V.	5.5mm ² THHN	25mmø PVC PIPE

$A = \frac{24271 \times 0.8}{230} = 84.42 \times 1.25$
 $A = 105.53$ (USE 2-5.5mm THHN & 3.5mm THHN GROUNDING IN 25mmø PVC PIPE)

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<p>CALAMBA WATER DISTRICT ENGINEERING DEPARTMENT PLANNING AND DESIGN DIVISION</p> <p>LAKEVIEW SUBD., HALANG, CALAMBA CITY</p>	PROJECT TITLE:	DRAWN BY:	SHEET CONTENTS:	DATE: 03/30/2020
	PROPOSED PUMPING STATION	DESIGNED BY:	ELECTRICAL LAYOUT SCHEDULE OF LOADS RISER DIAGRAM	SHEET NO. E-1
		RECOMMENDED BY:		
LOCATION: Brgy. Bungo, Calamba City, Laguna	APPROVED BY:			

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ELECTRICAL SPECIFICATION

A. GENERAL SPECIFICATIONS:

- The work under this Division consists of furnishing all materials, equipment, tools, labor and all other services necessary to complete and make ready for operation the Electrical Power described below and or indicated in the Electrical Plans and Specifications in accordance with the latest edition of the Philippine Electrical Code with the Local Requirements of the Utility. Companies concerned and with the Local Government.
- Service to the Pump and Motor Load must 440v, 3Ø, 3w+1G Power System. And service to the Perimeter Lighting must be 230v, 1Ø, 2w+ 1G power system and service to Pump and Motor Load for single phase location.
- The Low Voltage Cables are THHN Insulated, Stranded, and Copper Conductor.
- All Ground Wires shall be Insulated Grounds.
- Cable sizes are selected by applying appropriate de-rating factors for ambient conditions of installations as per PEC.
- Power factor for all loads is assumed 0.80.
- Size of grounding wire will be based on PEC Table 3.10.1.16
- Ampacities of feeders supplying continuous loads are taken as 125% of Full Load Current as per PEC.
- All electrical materials shall be new and listed with the Underwriters Laboratories, Inc., shall meet their requirements and shall bear their label wherever standards have been established and label service is regularly furnished by that agency.
- Mounting height shall be as follows:
 - Convenience outlet shall be 300mm above floor finish
 - Convenience outlet shall be 300mm above lavatories
 - Wall switches shall be 1400mm on center from floor finish.
- Wiring Method shall be as follows:
 - Poly Vinyl Chloride (PVC) or Unplasticised Poly Vinyl Chloride (uPVC)- Used when embedded in concrete wall or masonry and can be laid underground within 500mm deep from earth grade.
 - Rigid Steel Conduit (RSC) - Used in exposed/wet location and can be laid underground within 200mm deep from earth grade.
- For easily identify the polarity, use color coded THHN/THWN and TW stranded copper conductor.
 - RED - positive or line 1
 - YELLOW - negative or line 2
 - BLUE - line 3
 - GREEN - ground
 - WHITE - neutral or lineside ground
 - BLACK - homerun or Main Feederline
- PVC and metal conduit shall be joined to junction boxes and pull box to make a grid and waterproof connection. If metal conduit is used, an insulated busing shall be provided at the end of the metal conduit on the inside of the junction box or pull box to prevent scuffing of the cable insulation.
- All works herein shall be done under the strict supervision of duly LICENSE ELECTRICAL ENGINEER.

B. LIGHTING FIXTURES SPECIFICATIONS:

All luminaires and ballasts shall be certified by the manufacturer

Fixture Type A

- 18W CFL w/ 4" Vertical Type Downlight, Aluminum Glossy Reflector and White Baked Finish Steel

Fixture Type B

- 30W Floodlight (CFL Type Lamp)

C. OUTLETS AND SWITCHES SPECIFICATIONS:

- Duplex Wide Series Universal Convenience Outlet - grounding type w/ faceplate, 15A, 230V, 1-phase
- 1-gang Normal Switch (Wide Series), 10A, 230V
- 2-gang Normal Switch (Wide Series), 10A, 230V
- 3-gang Normal Switch (Wide Series), 10A, 230V

D. PULL BOX (S), JUNCTION BOX(S) AND UTILITY BOX(S) SPECIFICATIONS:

- The junction box cover shall be made watertight and a suitable gasket and secured with stainless steel or cadmium plated screws or bolts
- Junction boxes shall be stainless steel.
- Junction boxes shall be flanged and designed for flush mounting if encased in concrete, or designed for surface mounting if external mounting is specified.
- Junction boxes shall be drilled or tapped for all conduit connections. Junction boxes shall be installed such that covers removable.

E. PANEL BOARD, MOTOR CONTROLLER AND MANUAL TRANSFER SWITCH SPECIFICATIONS:

- Factory assembly
- The panelboards shall be UL Listed.
- GENERAL: Except as otherwise indicated, provide panelboards, enclosures and ancillary components of types, sizes, and ratings indicated, which comply with manufacturer's standard materials, design and construction in accordance with published product information; equip with number of unit panelboard devices as required for complete installation. Where more than one type of component meets indicated requirements, selection is installer's option. Where types, sizes, or ratings are not indicated, comply with PEC, UL and established industry standards for applications indicated.
- ENCLOSURES: Provide galvanized sheet steel cabinet type enclosures, in sizes NEMA types as indicated, code-gage, minimum 16-gauge thickness. Construct with multiple knockouts and wiring gutters. Provide fronts with adjustable indicating trim clamps, and doors with flush locks and keys, all panelboard enclosures keyed alike, with concealed door hinges and door swings Equip with interior circuit-directory frame, and card with clear plastic covering. Provide POWDER COATED GRAY finish.
- Wet location panelboards shall be NEMA 4 enclosures/
- Use NEMA 1 enclosures for indoor use, primarily to provide a degree of protection against limited amounts of falling dirt.
- Use NEMA 3R enclosures for outdoor use, primarily to provide a degree of protection against rain, sleet, and damage from external ice formation.
- Equipment shall have a nameplate installed and mounted to the front cover and indicate: panelboard type, amp rating, voltage rating and short-circuit current rating.

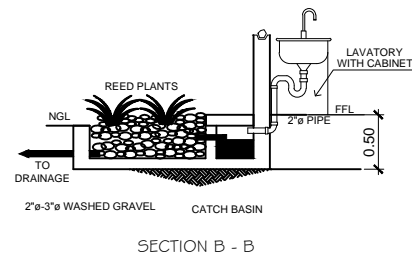
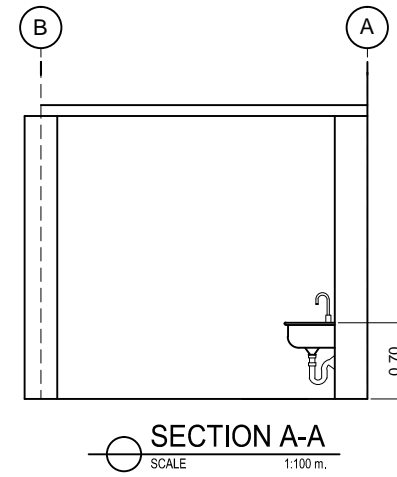
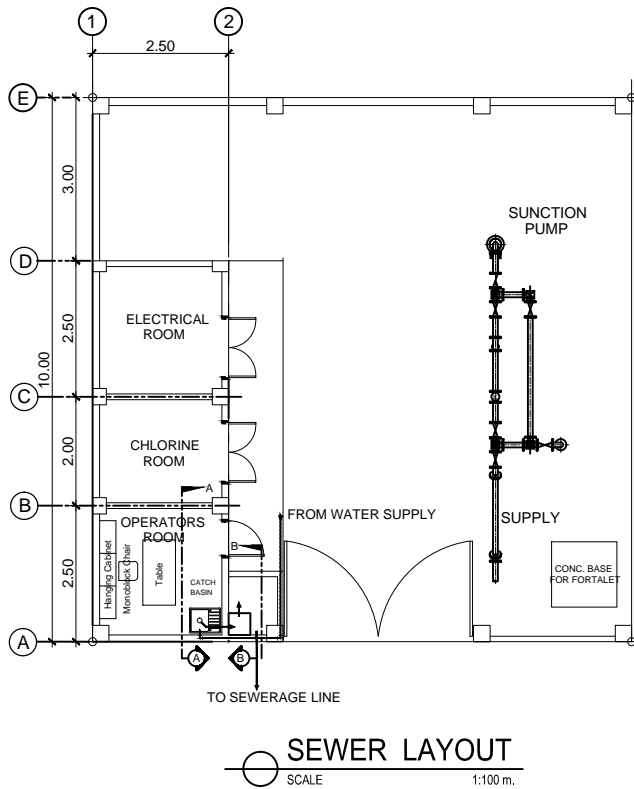
LEGEND:

- 18W compact florescent lamp (CFL)
- 1-Gang Normal Switch (Wide Series), 10 A, 230V
- Duplex Wide Series Universal Convenience Outlet, Beige in color, 230V with amperage as required with grounding. Tandem with grounding, 15A, 250V
- Wall Fan Outlet Duplex Wide Series Universal Convenience Outlet, Beige in color, 230V with amperage as required with grounding. Tandem with grounding, 15A, 250V
- Weatherproof Outlet Duplex Wide Series Universal Convenience Outlet, Beige in color, 230V with amperage as required with grounding. Tandem with grounding, 15A, 250V
- Exhaust Fan
- Switch, Power and Lightig Lay-out
- Circuit Number

NOTES:
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<p>CALAMBA WATER DISTRICT ENGINEERING DEPARTMENT PLANNING AND DESIGN DIVISION</p> <p>LAKEVIEW SUBD., HALANG, CALAMBA CITY</p>	PROJECT TITLE:	DRAWN BY:	A. L. DEL PRADO	SHEET CONTENTS:	DATE: 03/30/2020
	PROPOSED PUMPING STATION	DESIGNED BY:	PEDRO ESTALAR	DETAIL OF ELECTRICAL CONCRETE POST ELECTRICAL SPECIFICATION LEGEND	SHEET NO.
		RECOMMENDED BY:	ENGR. R. S. CARTAGO		E-2
LOCATION: Brgy. Bungo, Calamba City, Laguna	APPROVED BY:	MR. E. A. AGUILAR JR.			

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PLANTERS BOX DETAIL

- NOTES:
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CALAMBA WATER DISTRICT
 ENGINEERING DEPARTMENT
 PLANNING AND DESIGN DIVISION

24/7 Public Service

PROJECT TITLE:

PROPOSED PUMPING STATION

DRAWN BY: A. L. DEL PRADO

DESIGNED BY: ENGR. R. S. CARTAGO

RECOMMENDED BY: ENGR. R. S. CARTAGO

APPROVED BY: MR. E. A. AGUILAR JR.

SHEET CONTENTS:

SEWER LAYOUT
 PLANTERS BOX DETAIL

DATE: 03/30/2020

SHEET NO.

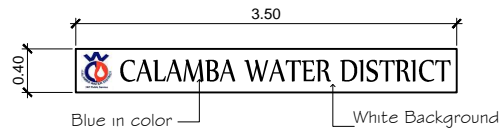
P-1

LAKEVIEW SUBD., HALANG, CALAMBA CITY

LOCATION: Brgy. Bungo, Calamba City, Laguna



TANK CAPACITY: 227 lits (maximum)
 DIMENSION: 2.4m(H) x 1.2m(W) x 1.2m(L)
 PROPOSED PORTALET



ACRYLIC SIGN

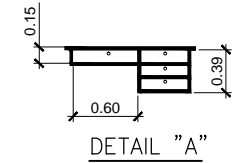
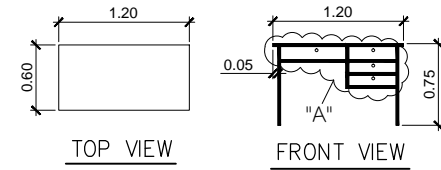
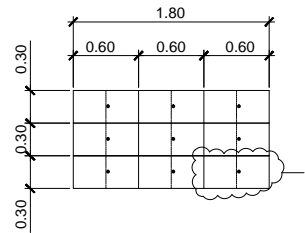
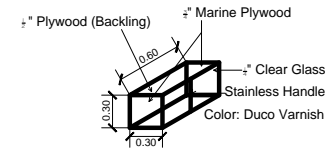


TABLE DETAILS



DETAIL OF HANGING WOOD CABINET




SECTION A OF HANGING WOOD CABINET

- MATERIAL SPECIFICATIONS:
- 3/4" Marine Plywood
 - 1/2" Plywood (backing)
 - 4" Stainless Hinges
 - Magnetic Catches w/ lockset
 - 4" Stainless Cabinet Handle
 - 1/4" Clear Glass
 - Duco Varnish

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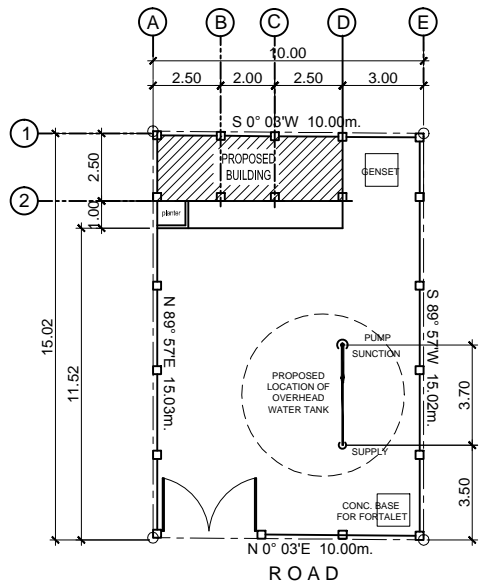
- NOTES:
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 CALAMBA WATER DISTRICT ENGINEERING DEPARTMENT PLANNING AND DESIGN DIVISION LAKEVIEW SUBD., HALANG, CALAMBA CITY	PROJECT TITLE:	DRAWN BY: A. L. DEL PRADO	SHEET CONTENTS:	DATE: 03/30/2020
	PROPOSED PUMPING STATION	DESIGNED BY: ENGR. R. S. CARTAGO	PROPOSED PORTALET DETAIL OF SIGNAGE DETAIL OF HANGING CABINET	SHEET NO.
LOCATION: Brgy. Bungo, Calamba City, Laguna	RECOMMENDED BY: ENGR. R. S. CARTAGO	APPROVED BY: MR. E. A. AGUILAR JR.		SPECIALTIES

NOTES:
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PERSPECTIVE



SITE DEVELOPMENT PLAN

SCALE 1:100 m.

TABLE OF CONTENTS

COVER SHEET (CS):
 PERSPECTIVE
 SITE DEVELOPMENT PLAN
 LOCATION PLAN

ARCHITECTURAL 1 (A1):
 FLOOR PLAN
 FRONT ELEVATION
 REAR ELEVATION
 LEFT SIDE ELEVATION

ARCHITECTURAL 2 (A2):
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 LONGITUDINAL SECTION
 SCHEDULE OF DOORS
 & WINDOWS

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 DECK FLOOR FRAMING PLAN
 DETAIL OF BEAMS
 DETAIL OF SLAB
 DETAIL OF STEEL GATE

STRUCTURAL 3 (S3):
 DETAIL OF UV ENCLOSURE

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 SEWER LAYOUT

ELECTRICAL 1 (E1):
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 SCHEDULE OF LOADS
 DETAIL OF PANELBOARD
 SINGLE LINE DIAGRAM

ELECTRICAL 2 (E2):
 SERVICE ENTRANCE POST DETAIL
 GENERAL NOTES
 ELECTRICAL LEGEND

MECHANICAL 1 (M1):
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 DETAIL OF DISCHARGE PIPE
 CHLORINATION PUMP DETAIL

SPECIALTIES:
 PROPOSED PORTALET
 SIGNAGE DETAIL
 TABLE DETAIL
 HANGING WOOD CABINET DETAIL

REPUBLIC OF THE PHILIPPINES
 DEPARTMENT OF PUBLIC WORKS
 TRANSPORTATION and
 COMMUNICATION
 OFFICE OF THE BUILDING OFFICIAL

DISTRICT / CITY / MUNICIPALITY

LAND USE & ZONING

LINE & GRADE

ARCHITECTURAL

STRUCTURAL

MECHANICAL

ELECTRICAL

PLUMBING

W CALAMBA WATER DISTRICT
 ENGINEERING DEPARTMENT
 PLANNING AND DESIGN DIVISION

LAKEVIEW SUBD., HALANG, CALAMBA CITY

PROJECT TITLE:

PROPOSED PUMPING STATION

LOCATION: Southville, Brgy. Kay-anlog, Calamba City, Laguna

DRAWN BY: A. L. DEL PRADO

DESIGNED BY: ENGR. R. S. CARTAGO

RECOMMENDED BY: ENGR. R. S. CARTAGO

APPROVED BY: MR. E. A. AGUILAR JR.

SHEET CONTENTS:

PERSPECTIVE
 SITE DEVELOPMENT PLAN
 LOCATION PLAN

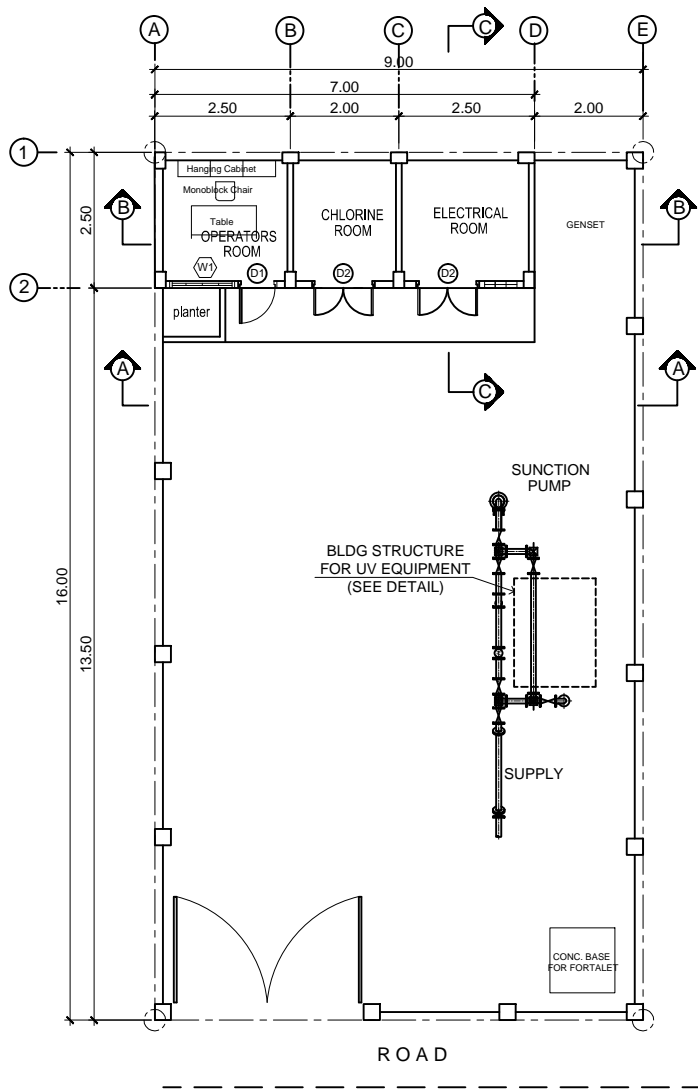
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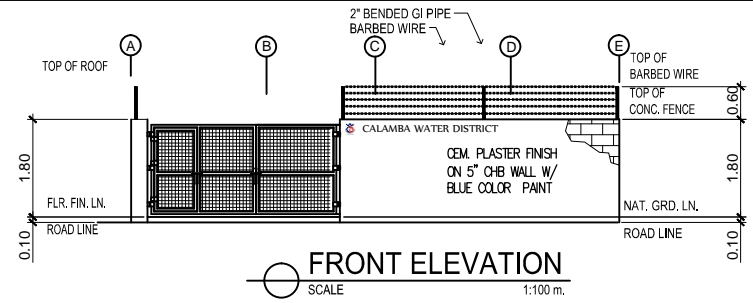
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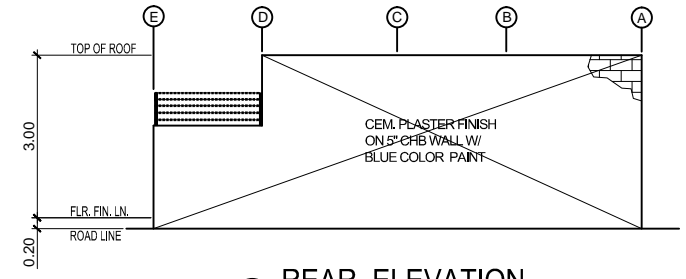


FLOOR PLAN
SCALE 1:100 m.

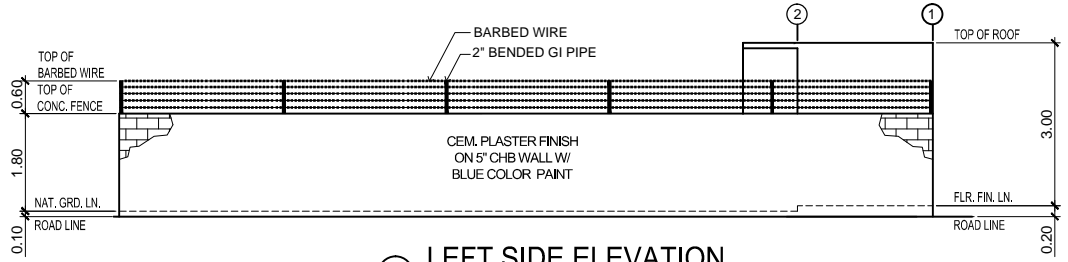
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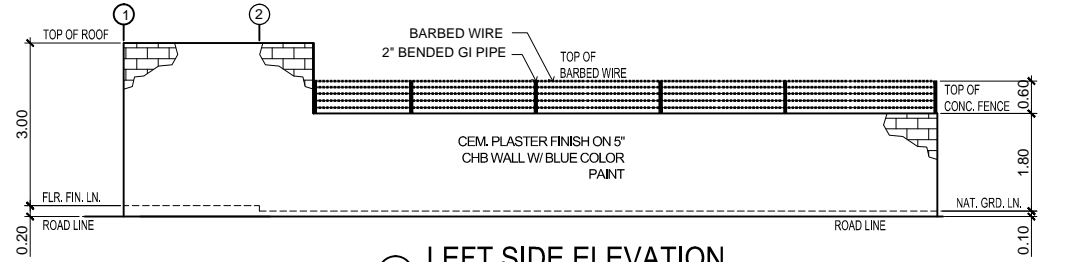
FRONT ELEVATION
SCALE 1:100 m.




REAR ELEVATION
SCALE 1:100 m.



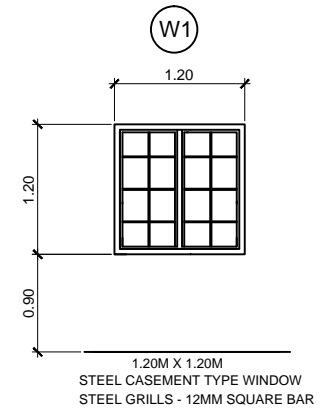
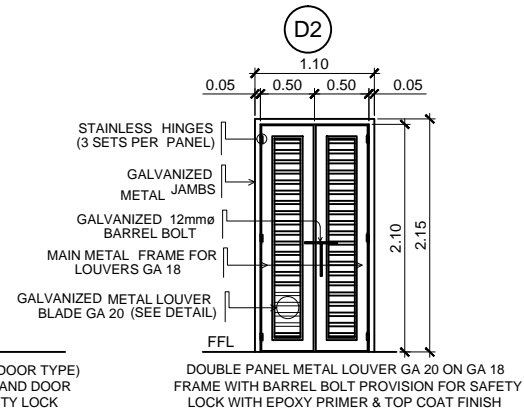
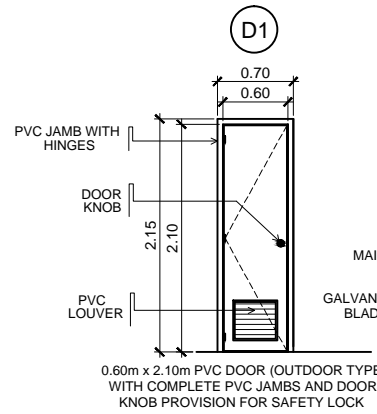
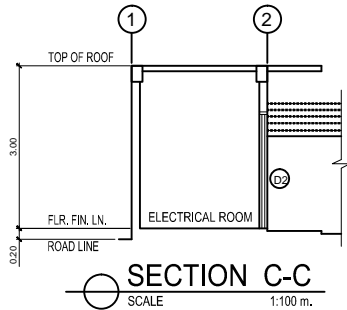
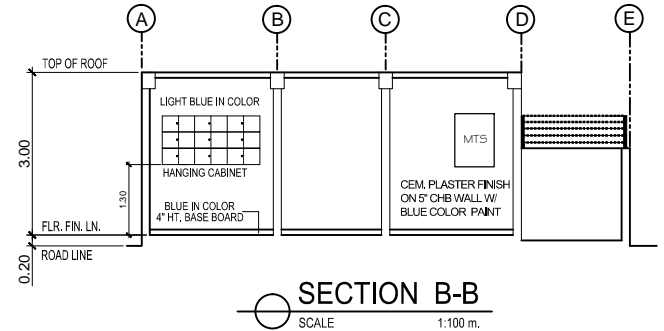
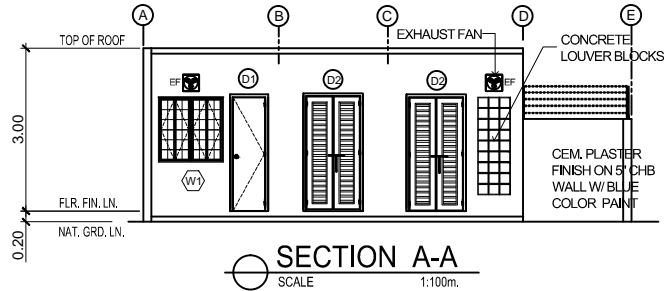
LEFT SIDE ELEVATION
SCALE 1:100 m.



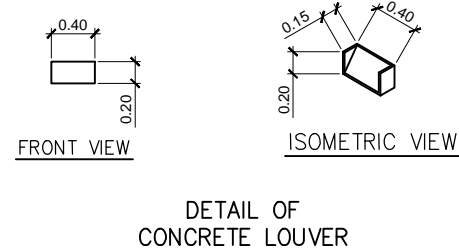
LEFT SIDE ELEVATION
SCALE 1:100 m.

 CALAMBA WATER DISTRICT ENGINEERING DEPARTMENT PLANNING AND DESIGN DIVISION 24/7 Public Service	PROJECT TITLE:	DRAWN BY:	A. L. DEL PRADO	SHEET CONTENTS:	DATE: 03/30/2020
	PROPOSED PUMPING STATION	DESIGNED BY:	ENGR. R. S. CARTAGO	FLOOR PLAN FRONT ELEVATION REAR ELEVATION LEFT SIDE ELEVATION RIGHT SIDE ELEVATION	SHEET NO.
LAKEVIEW SUBD., HALANG, CALAMBA CITY	LOCATION: Southville, Brgy. Kay-anlog, Calamba City, Laguna	RECOMMENDED BY:	ENGR. R. S. CARTAGO		A-1
		APPROVED BY:	MR. E. A. AGUILAR JR.		

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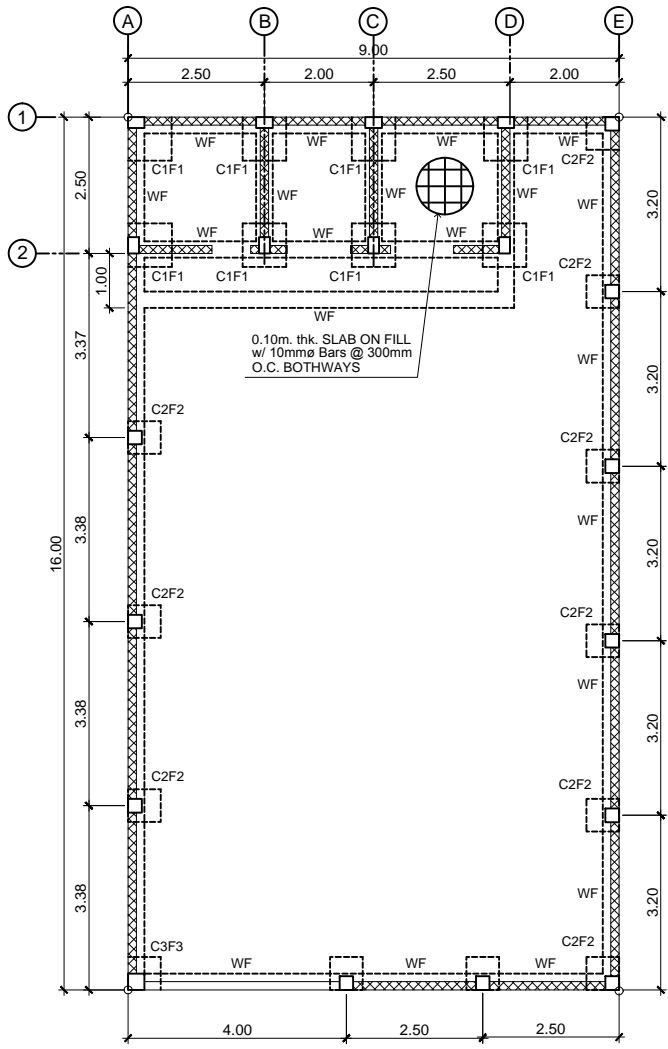
SCHEDULE OF DOORS
SCALE 1:50 m.



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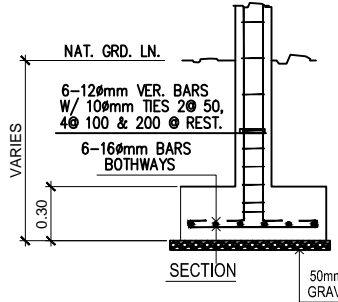
<p>CALAMBA WATER DISTRICT ENGINEERING DEPARTMENT PLANNING AND DESIGN DIVISION 24/7 Public Service</p>	PROJECT TITLE:	DRAWN BY: A. L. DEL PRADO	SHEET CONTENTS:	DATE: 03/30/2020
	PROPOSED PUMPING STATION	DESIGNED BY: ENGR. R. S. CARTAGO	SECTION A-A SECTION B-B SECTION C-C SCHEDULE OF DOORS & WINDOWS DETAIL OF CONCRETE BLOCKS	SHEET NO.
		RECOMMENDED BY: ENGR. R. S. CARTAGO		A-2
LAKEVIEW SUBD., HALANG, CALAMBA CITY	Southville, Brgy. Kay-anlog, Calamba City, Laguna	APPROVED BY: MR. E. A. AGUILAR JR.		

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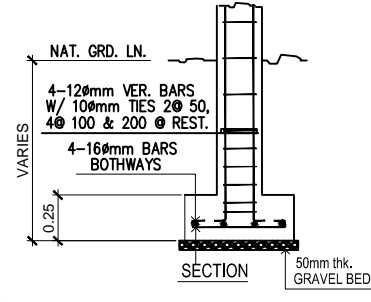


FOUNDATION PLAN
SCALE 1:100 m.

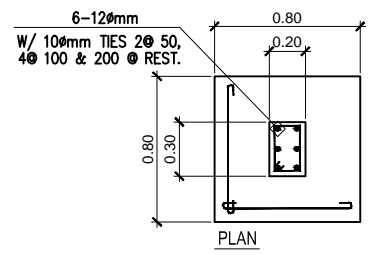
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SECTION

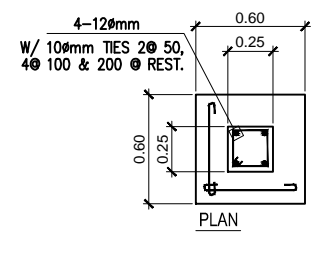


SECTION



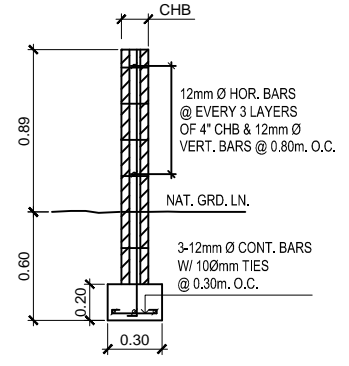
PLAN

F1C1



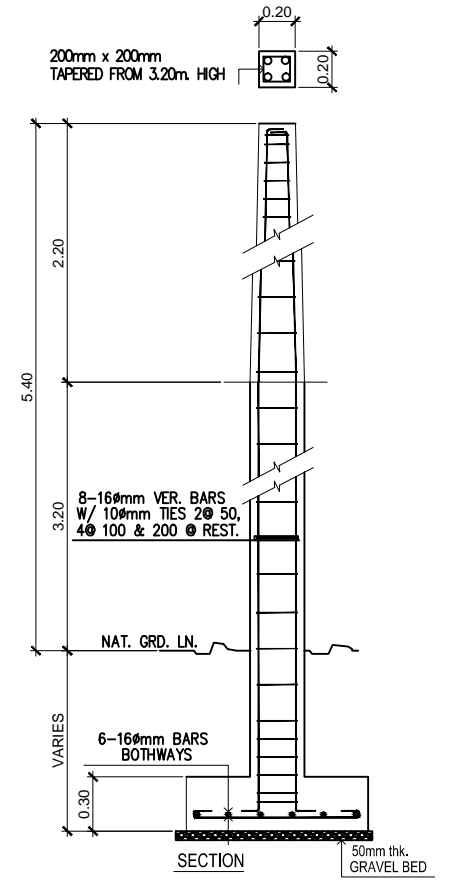
PLAN

F2C2

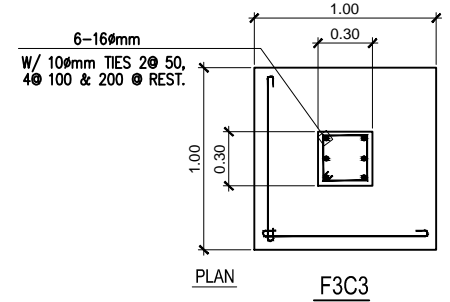


WALL FOOTING (WF-1)

DETAIL OF FOOTINGS
SCALE 1:30m.



SECTION



PLAN

F3C3

W CALAMBA WATER DISTRICT
 ENGINEERING DEPARTMENT
 PLANNING AND DESIGN DIVISION
 247 Public Service

PROJECT TITLE:
PROPOSED PUMPING STATION

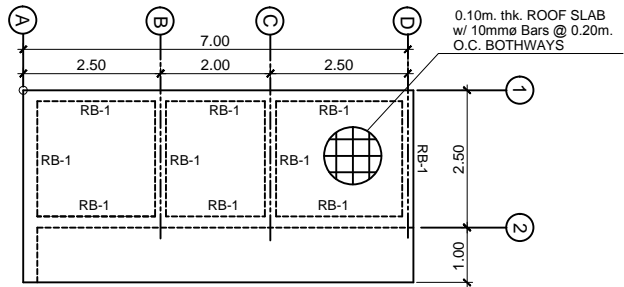
LOCATION: Southville, Brgy. Kay-anlog, Calamba City, Laguna

DRAWN BY: A. L. DEL PRADO
 DESIGNED BY: ENGR. R. S. CARTAGO
 RECOMMENDED BY: ENGR. R. S. CARTAGO
 APPROVED BY: MR. E. A. AGUILAR JR.

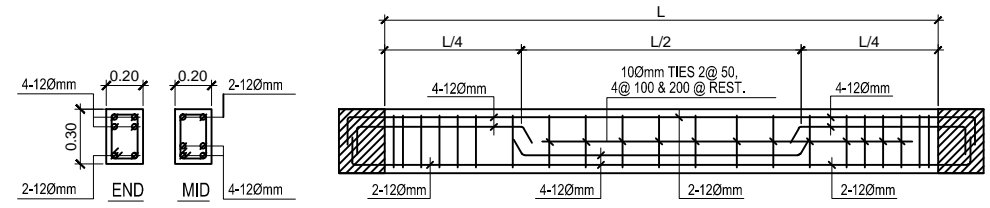
SHEET CONTENTS:
 FOUNDATION PLAN
 DETAIL OF FOOTINGS
 DETAIL OF COLUMN

DATE: 03/30/2020
 SHEET NO.
S-1

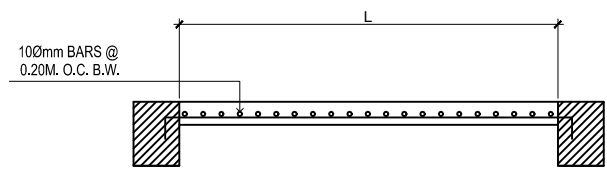
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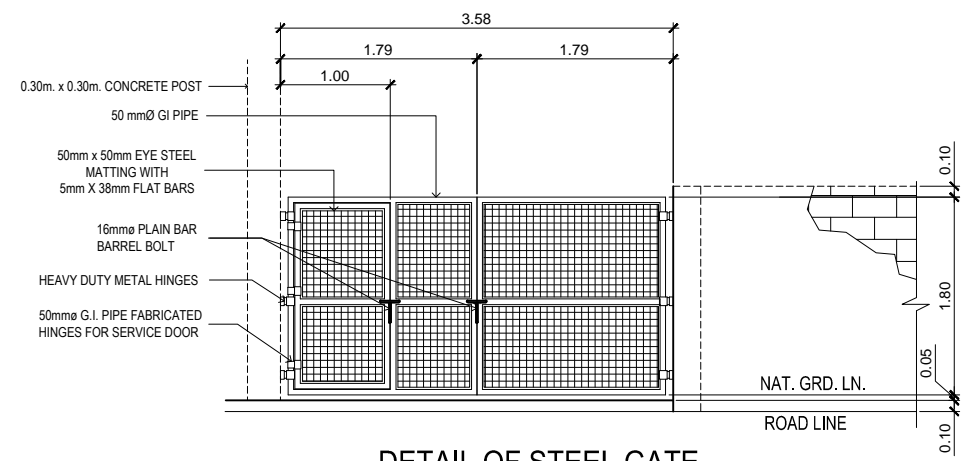
ROOF SLAB PLAN
SCALE 1:100 m.



DETAIL OF ROOF BEAM
SCALE 1:30mm.



CROSS-SECTIONAL DETAIL OF SUSPENDED SLAB
SCALE 1:30mm.



DETAIL OF STEEL GATE
SCALE 1:50 m.

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W CALAMBA WATER DISTRICT
ENGINEERING DEPARTMENT
PLANNING AND DESIGN DIVISION
24/7 Public Service

PROJECT TITLE:
PROPOSED PUMPING STATION

DRAWN BY: A. L. DEL PRADO
DESIGNED BY: ENGR. R. S. CARTAGO
RECOMMENDED BY: ENGR. R. S. CARTAGO
APPROVED BY: MR. E. A. AGUILAR JR.

SHEET CONTENTS:
ROOF SLAB PLAN
ROOF BEAM DETAIL
CROSS-SECTIONAL DETAIL OF BEAM
DETAIL OF STEEL GATE

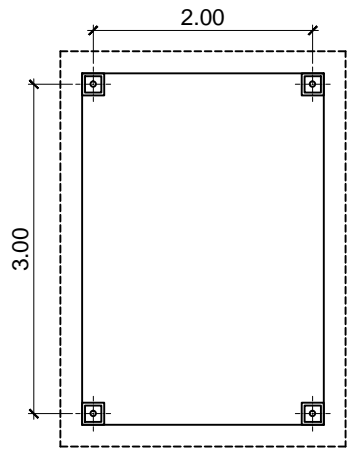
DATE: 03/30/2020
SHEET NO.
S-2

LAKEVIEW SUBD., HALANG, CALAMBA CITY

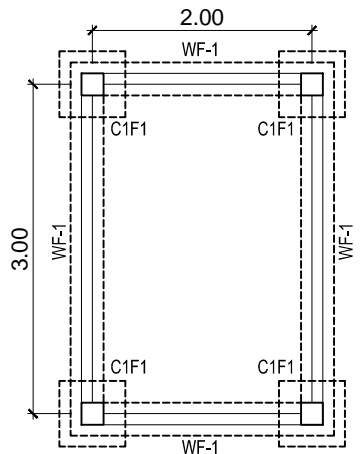
LOCATION: Southville, Brgy. Kay-anlog, Calamba City, Laguna

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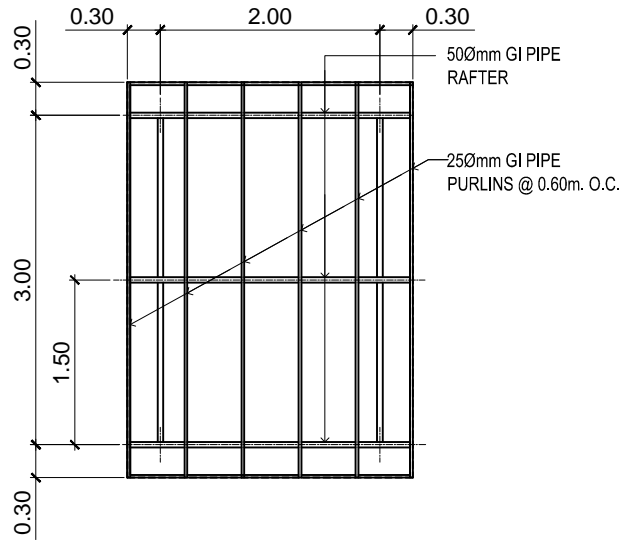
TYPICAL UV ENCLOSURE



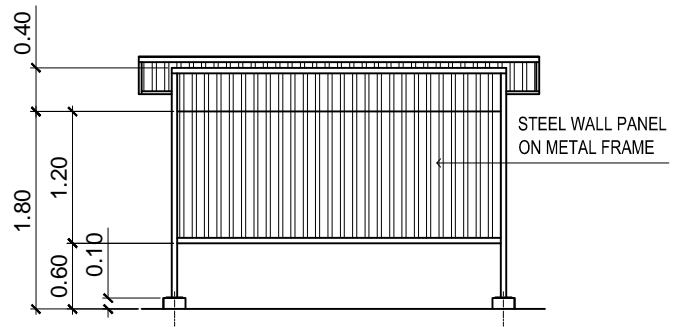
○ **FLOOR PLAN**
SCALE 1:50 m.



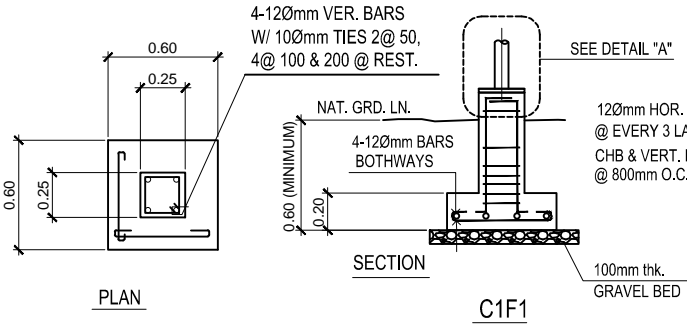
○ **FOUNDATION PLAN**
SCALE 1:50 m.



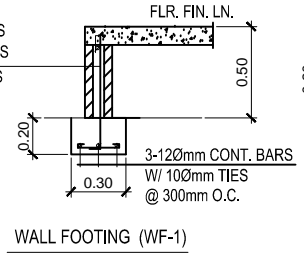
○ **ROOF FRAMING PLAN**
SCALE 1:50 m.



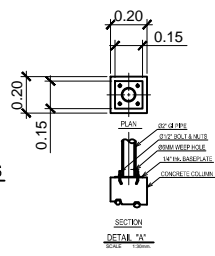
○ **FRONT ELEVATION**
SCALE 1:50 m.



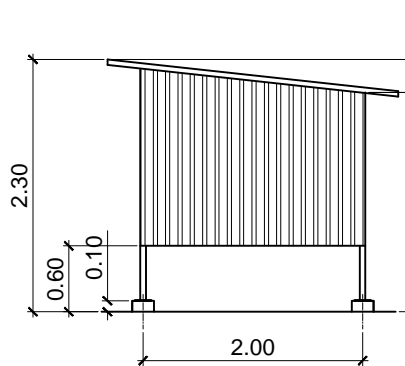
○ **DETAIL OF FOOTINGS**
SCALE: 1:30 M.



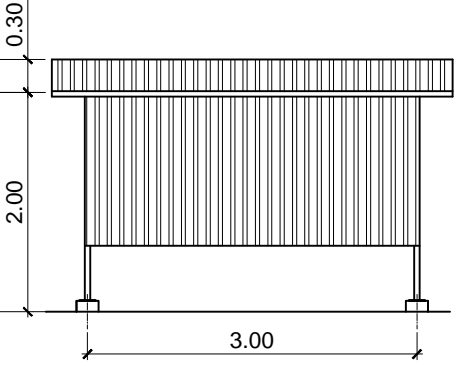
○ **WALL FOOTING (WF-1)**



○ **DETAIL "A"**



○ **SIDE ELEVATION**
SCALE 1:50 m.



○ **REAR ELEVATION**
SCALE 1:50 m.

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W CALAMBA WATER DISTRICT
 ENGINEERING DEPARTMENT
 PLANNING AND DESIGN DIVISION

PROJECT TITLE:
PROPOSED PUMPING STATION

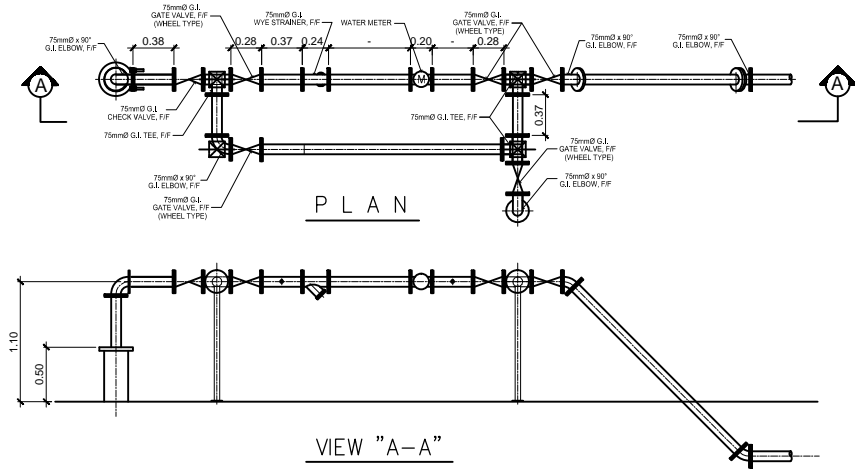
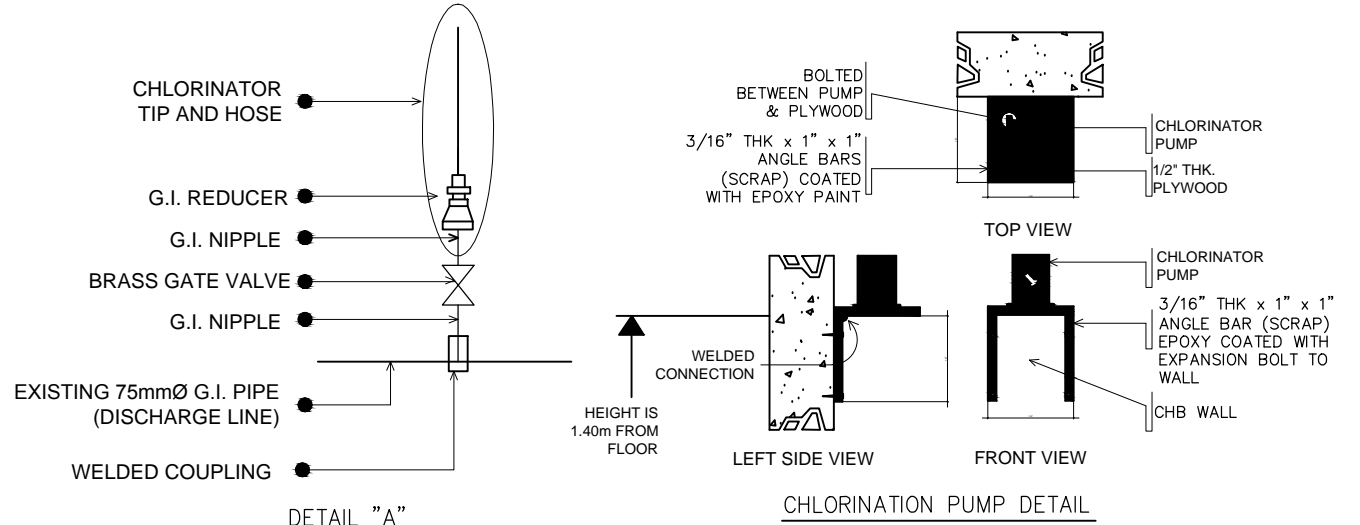
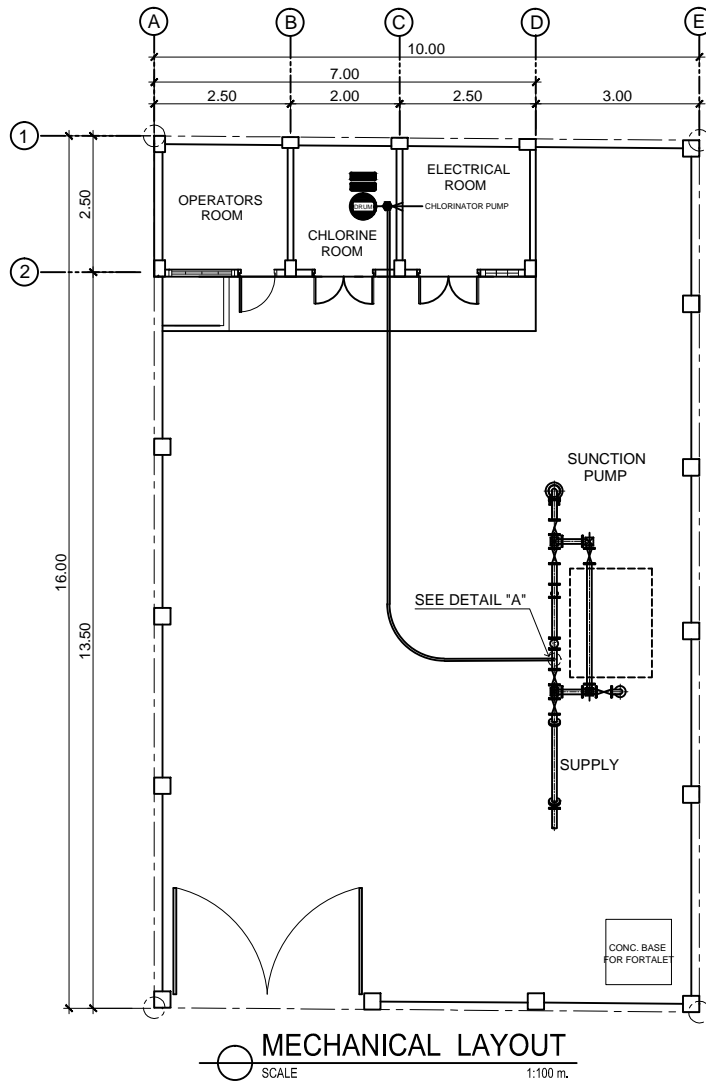
LOCATION: Southville, Brgy. Kay-anlog, Calamba City, Laguna

DRAWN BY: A. L. DEL PRADO
 DESIGNED BY: ENGR. R. S. CARTAGO
 RECOMMENDED BY: ENGR. R. S. CARTAGO
 APPROVED BY: MR. E. A. AGUILAR JR.


SHEET CONTENTS:
 UV ENCLOSURE FLOOR PLAN
 FOUNDATION PLAN
 ROOF FRAMING PLAN

DATE: 03/30/2020
 SHEET NO.
S-3

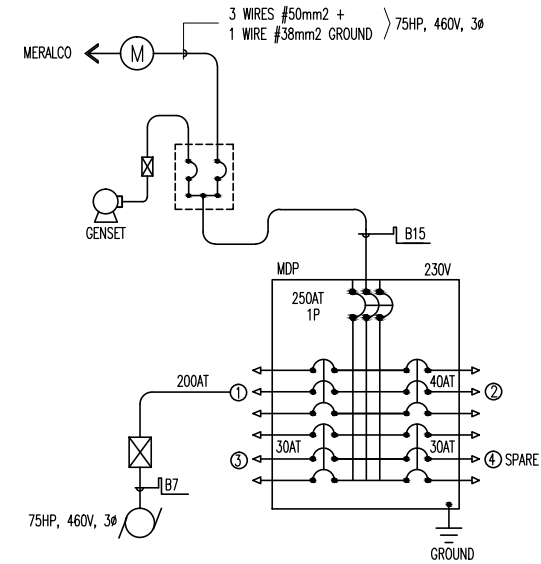
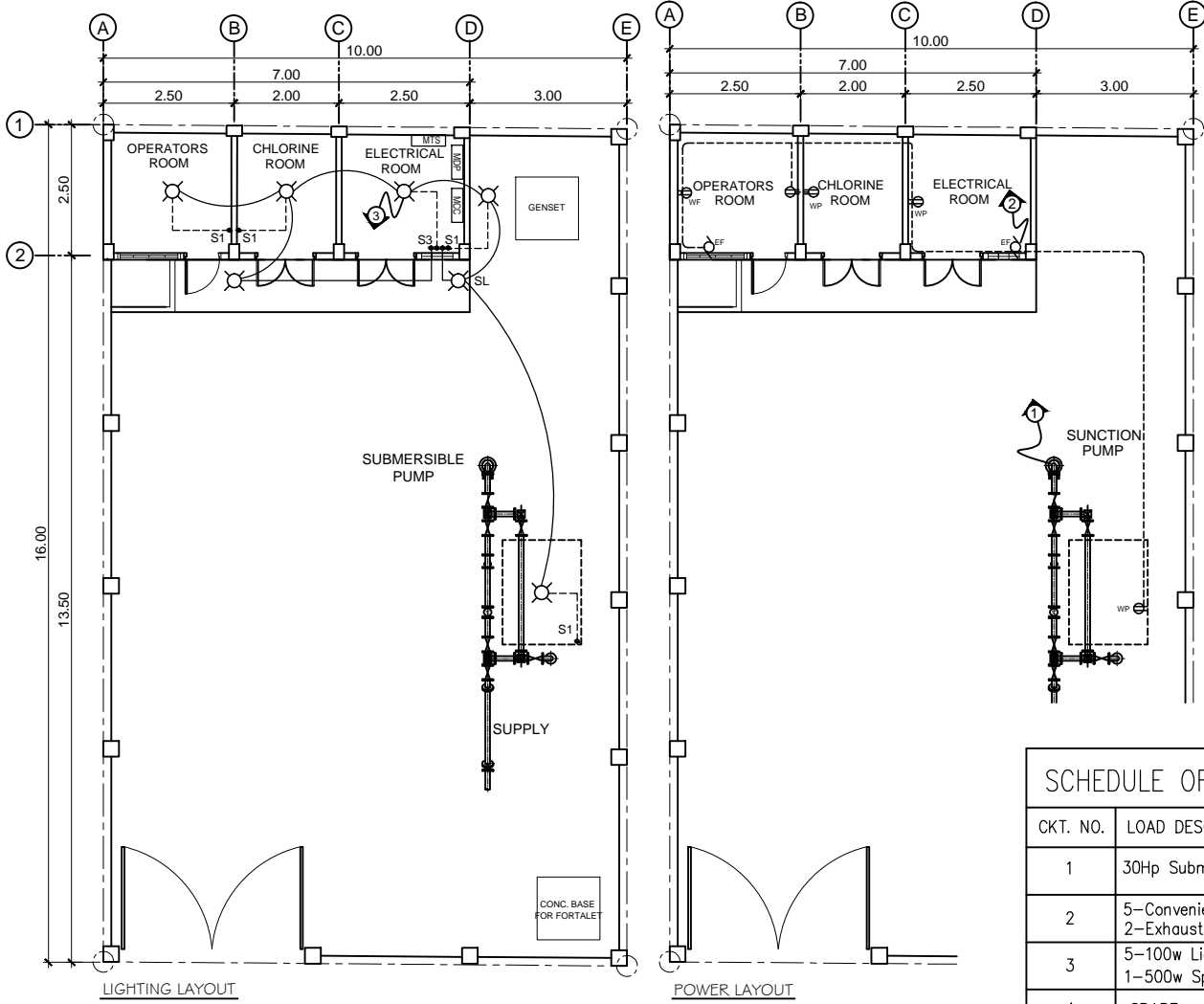
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 CALAMBA WATER DISTRICT ENGINEERING DEPARTMENT PLANNING AND DESIGN DIVISION LAKEVIEW SUBD., HALANG, CALAMBA CITY	PROJECT TITLE:	DRAWN BY:	A. L. DEL PRADO	SHEET CONTENTS:	DATE: 03/30/2020
	PROPOSED PUMPING STATION	DESIGNED BY:	ENGR. R. S. CARTAGO	MECHANICAL LAYOUT CHLORINATION PUMP DETAIL DETAIL OF DISCHARGE PIPE	SHEET NO.
LOCATION: Southville, Brgy. Kay-anlog, Calamba City, Laguna	RECOMMENDED BY:	ENGR. R. S. CARTAGO	M-1		
	APPROVED BY:	MR. E. A. AGUILAR JR.			

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FEEDER RISER DIAGRAM

SCHEDULE OF LOADS						
CKT. NO.	LOAD DESCRIPTION	WATTS	VOLTS	BREAKER	SIZE OF WIRES	CONDUITS
1	30Hp Submersible motor	22371	230	2P,100A,230V.	3-38mm ϕ + 14mm ² (G) THHN Cable	20mm ϕ PVC PIPE
2	5-Convenience Outlet & 2-Exhaust Fan	1100	230	2P,20A,230V.	2-3.5mm ² THHN	20mm ϕ PVC PIPE
3	5-100w Lighting Outlet 1-500w Spotlight Outlet	1000	230	2P,15A,230V.	2-2.0mm ² THHN	20mm ϕ PVC PIPE
4	SPARE					
TOTAL		24271	230	2P,110A,230V.	5.5mm ² THHN	25mm ϕ PVC PIPE

A= 24271x0.8
230
84.42x1.25

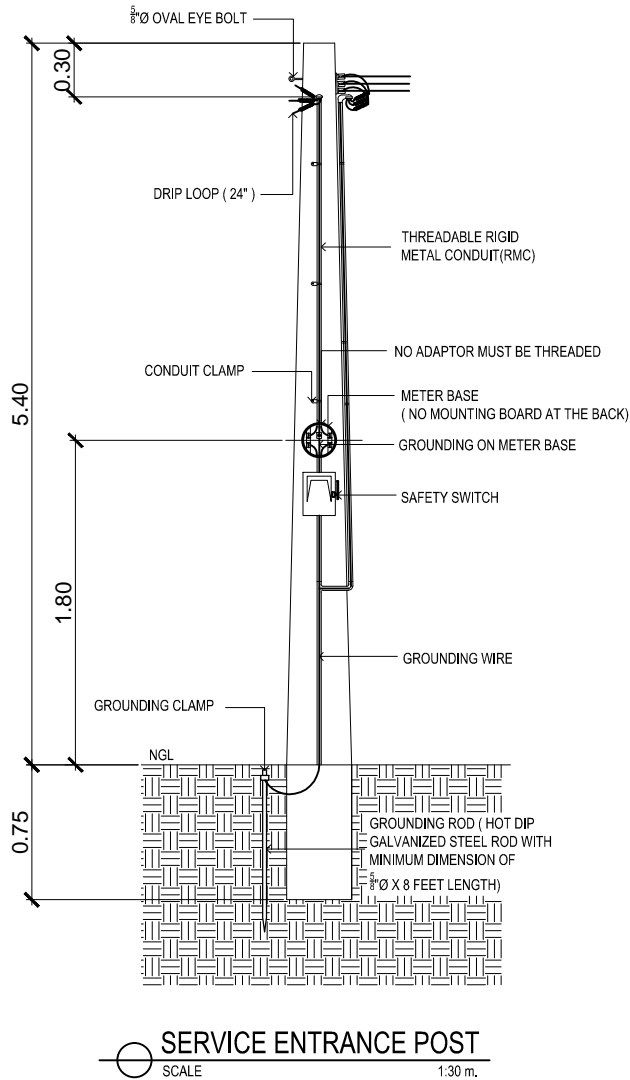
A=105.53 (USE 2-5.5mm THHN & 3.5mm THHN GROUNDING IN 25mm ϕ PVC PIPE)

ELECTRICAL LAYOUT
SCALE 1:100

- NOTES:**
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<p>CALAMBA WATER DISTRICT ENGINEERING DEPARTMENT PLANNING AND DESIGN DIVISION 247 Public Service</p>	PROJECT TITLE:	DRAWN BY: A. L. DEL PRADO	SHEET CONTENTS:	DATE: 03/30/2020	
	LAKEVIEW SUBD., HALANG, CALAMBA CITY	PROPOSED PUMPING STATION	DESIGNED BY: PEDRO ESTALAR	ELECTRICAL LAYOUT SCHEDULE OF LOADS RISER DIAGRAM	SHEET NO.
		LOCATION: Southville, Brgy. Kay-anlog, Calamba City, Laguna	RECOMMENDED BY: ENGR. R. S. CARTAGO		E-1
		APPROVED BY: MR. E. A. AGUILAR JR.			

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ELECTRICAL SPECIFICATION

A. GENERAL SPECIFICATIONS:

- The work under this Division consists of furnishing all materials, equipment, tools, labor and all other services necessary to complete and make ready for operation the Electrical Power described below and or indicated in the Electrical Plans and Specifications in accordance with the latest edition of the Philippine Electrical Code with the Local Requirements of the Utility. Companies concerned and with the Local Government.
- Service to the Pump and Motor Load must 440v, 3Ø, 3w+1G Power System. And service to the Perimeter Lighting must be 230v, 1Ø, 2w+ 1G power system and service to Pump and Motor Load for single phase location.
- The Low Voltage Cables are THHN Insulated, Stranded, and Copper Conductor.
- All Ground Wires shall be Insulated Grounds.
- Cable sizes are selected by applying appropriate de-rating factors for ambient conditions of installations as per PEC.
- Power factor for all loads is assumed 0.80.
- Size of grounding wire will be based on PEC Table 3.10.1.16
- Ampacities of feeders supplying continuous loads are taken as 125% of Full Load Current as per PEC.
- All electrical materials shall be new and listed with the Underwriters Laboratories, Inc., shall meet their requirements and shall bear their label wherever standards have been established and label service is regularly furnished by that agency.
- Mounting height shall be as follows:
 - Convenience outlet shall be 300mm above floor furnish
 - Convenience outlet shall be 300mm above lavatories
 - Wall switches shall be 1400mm on center from floor finish.
- Wiring Method shall be as follows:
 - Poly Vinyl Chloride (PVC) or Unplasticised Poly Vinyl Chloride (uPVC)- Used when embedded in concrete wall or masonry and can be laid underground within 500mm deep from earth grade.
 - Rigid Steel Conduit (RSC) - Used in exposed/wet location and can be laid underground within 200mm deep from earth grade.
- For easily identify the polarity, use color coded THHN/THWN and TW stranded copper conductor.
 - RED - positive or line 1
 - YELLOW - negative or line 2
 - BLUE - line 3
 - GREEN - ground
 - BLUE - neutral or lineside ground
 - BLACK - homerun or Main Feederline
- PVC and metal conduit shall be joined to junction boxes and pull box to make a grid and waterproof connection. If metal conduit is used, an insulated busing shall be provided at the end of the metal conduit on the inside of the junction box or pull box to prevent scuffing of the cable insulation.
- All works herein shall be done under the strict supervision of duly LICENSE ELECTRICAL ENGINEER.

B. LIGHTING FIXTURES SPECIFICATIONS:

All luminaires and ballasts shall be certified by the manufacturer

Fixture Type A

- 18W CFL w/ 4" Vertical Type Downlight, Aluminum Glossy Reflector and BLUE Baked Finish Steel

Fixture Type B

- 30W Floodlight (CFL Type Lamp)

C. OUTLETS AND SWITCHES SPECIFICATIONS:

- Duplex Wide Series Universal Convenience Outlet - grounding type w/ faceplate, 15A, 230V, 1-phase
- 1-gang Normal Switch (Wide Series), 10A, 230V
- 2-gang Normal Switch (Wide Series), 10A, 230V
- 3-gang Normal Switch (Wide Series), 10A, 230V

D. PULL BOX (S), JUNCTION BOX(S) AND UTILITY BOX(S) SPECIFICATIONS:

- The junction box cover shall be made watertight and a suitable gasket and secured with stainless steel or cadmium plated screws or bolts
- Junction boxes shall be stainless steel.
- Junction boxes shall be flanged and designed for flush mounting if encased in concrete, or designed for surface mounting if external mounting is specified.
- Junction boxes shall be drilled or tapped for all conduit connections. Junction boxes shall be installed such that covers removable.

E. PANEL BOARD, MOTOR CONTROLLER AND MANUAL TRANSFER SWITCH SPECIFICATIONS:

- Factory assembly
- The panelboards shall be UL Listed.
- GENERAL: Except as otherwise indicated, provide panelboards, enclosures and ancillary components of types, sizes, and ratings indicated, which comply with manufacturer's standard materials, design and construction in accordance with published product information; equip with number of unit panelboard devices as required for complete installation. Where more than one type of component meets indicated requirements, selection is installer's option. Where types, sizes, or ratings are not indicated, comply with PEC, UL and established industry standards for applications indicated.
- ENCLOSURES: Provide galvanized sheet steel cabinet type enclosures, in sizes NEMA types as indicated, code-gage, minimum 16-gauge thickness. Construct with multiple knockouts and wiring gutters. Provide fronts with adjustable indicating trim clamps, and doors with flush locks and keys, all panelboard enclosures keyed alike, with concealed door hinges and door swings Equip with interior circuit-directory frame, and card with clear plastic covering. Provide POWDER COATED GRAY finish.
- Wet location panelboards shall be NEMA 4 enclosures/
- Use NEMA 1 enclosures for indoor use, primarily to provide a degree of protection against limited amounts of falling dirt.
- Use NEMA 3R enclosures for outdoor use, primarily to provide a degree of protection against rain, sleet, and damage from external ice formation.
- Equipment shall have a nameplate installed and mounted to the front cover and indicate: panelboard type, amp rating, voltage rating and short-circuit current rating.

LEGEND:

- 18W compact fluorescent lamp (CFL)
- 1-Gang Normal Switch (Wide Series), 10 A, 230V
- Duplex Wide Series Universal Convenience Outlet, Beige in color, 230V with amperage as required with grounding. Tandem with grounding, 15A, 250V
- Wall Fan Outlet Duplex Wide Series Universal Convenience Outlet, Beige in color, 230V with amperage as required with grounding. Tandem with grounding, 15A, 250V
- Weatherproof Outlet Duplex Wide Series Universal Convenience Outlet, Beige in color, 230V with amperage as required with grounding. Tandem with grounding, 15A, 250V
- Exhaust Fan
- Switch, Power and Light Lay-out
- Circuit Number

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CALAMBA WATER DISTRICT
ENGINEERING DEPARTMENT
PLANNING AND DESIGN DIVISION

24/7 Public Service

LAKEVIEW SUBD., HALANG, CALAMBA CITY

PROJECT TITLE:

PROPOSED PUMPING STATION

LOCATION: Southville, Brgy. Kay-anlog, Calamba City, Laguna

DRAWN BY:

A. L. DEL PRADO

DESIGNED BY:

PEDRO ESTALAR

RECOMMENDED BY:

ENGR. R. S. CARTAGO

APPROVED BY:

MR. E. A. AGUILAR JR.

SHEET CONTENTS:

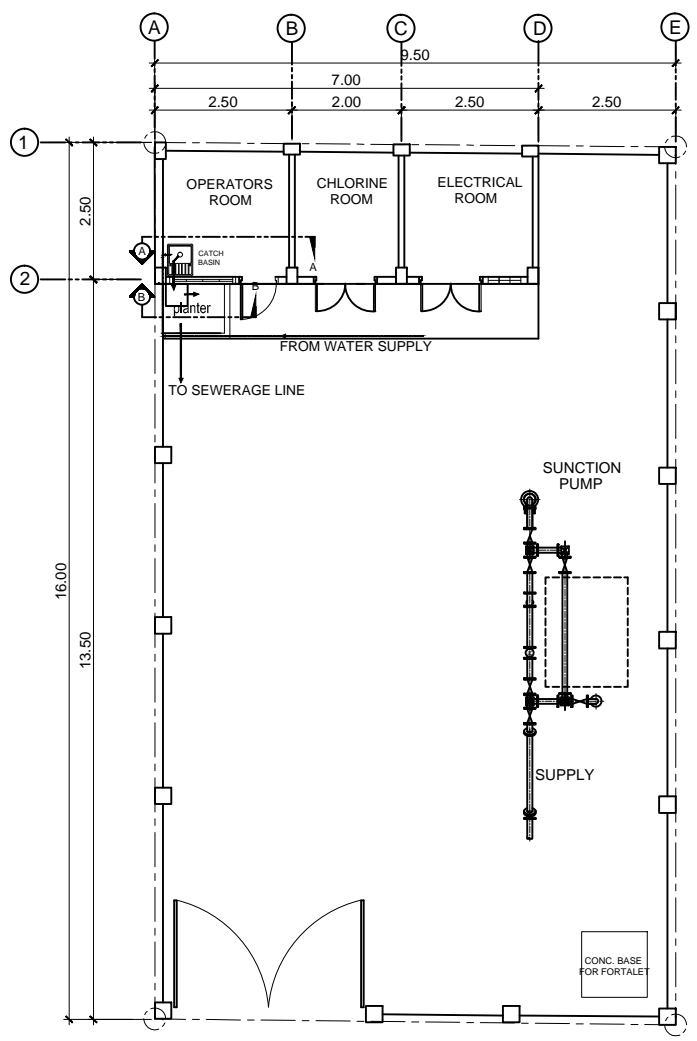
DETAIL OF ELECTRICAL
CONCRETE POST
ELECTRICAL SPECIFICATION
LEGEND

DATE: 03/30/2020

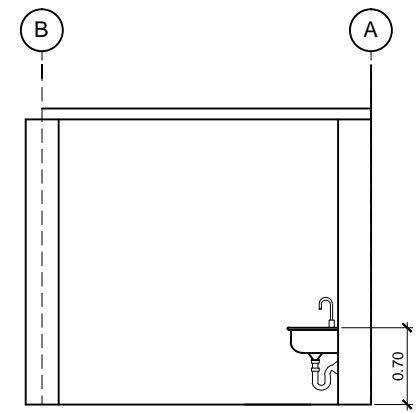
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E-2

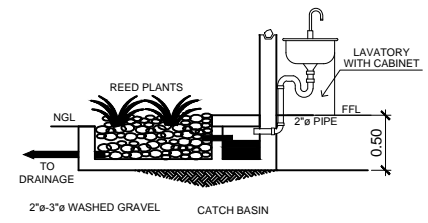
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SEWER LAYOUT
SCALE 1:100 m.



SECTION A-A
SCALE 1:100 m.



SECTION B - B
PLANTERS BOX DETAIL

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W CALAMBA WATER DISTRICT
 ENGINEERING DEPARTMENT
 PLANNING AND DESIGN DIVISION
 24/7 Public Service

PROJECT TITLE: PROPOSED PUMPING STATION
 LOCATION: Southville, Brgy. Kay-anlog, Calamba City, Laguna

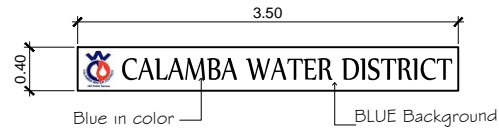
DRAWN BY: A. L. DEL PRADO
 DESIGNED BY: ENGR. R. S. CARTAGO
 RECOMMENDED BY: ENGR. R. S. CARTAGO
 APPROVED BY: MR. E. A. AGUILAR JR.

SHEET CONTENTS: SEWER LAYOUT
 PLANTERS BOX DETAIL

DATE: 03/30/2020
 SHEET NO. P-1



TANK CAPACITY: 227 lits (maximum)
 DIMENSION: 2.4m(H) x 1.2m(W) x 1.2m(L)
 PROPOSED PORTALET



ACRYLIC SIGN

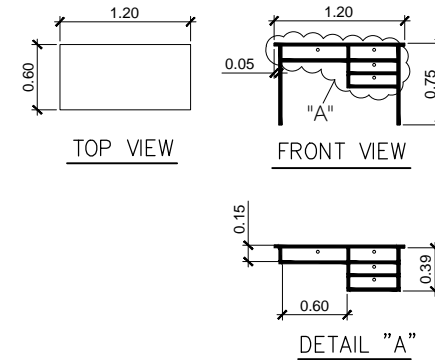
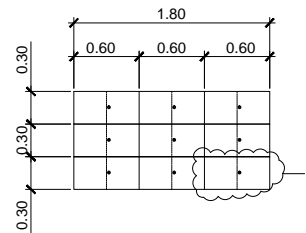
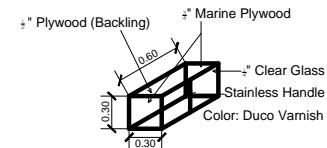


TABLE DETAILS



DETAIL OF HANGING WOOD CABINET



SECTION A OF HANGING WOOD CABINET

- MATERIAL SPECIFICATIONS:
- 3/4" Marine Plywood
 - 1/2" Plywood (backing)
 - 4" Stainless Hinges
 - Magnetic Catches w/ lockset
 - 4" Stainless Cabinet Handle
 - 1/4" Clear Glass
 - Duco Varnish

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W CALAMBA WATER DISTRICT
 ENGINEERING DEPARTMENT
 PLANNING AND DESIGN DIVISION

PROJECT TITLE:
 PROPOSED PUMPING STATION

DRAWN BY: A. L. DEL PRADO
 DESIGNED BY: ENGR. R. S. CARTAGO
 RECOMMENDED BY: ENGR. R. S. CARTAGO
 APPROVED BY: MR. E. A. AGUILAR JR.

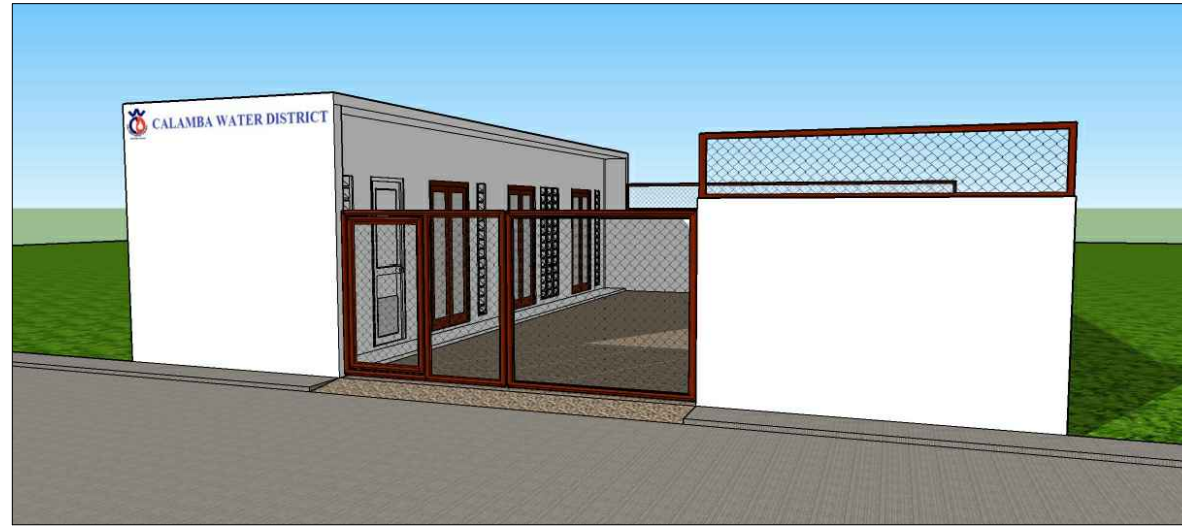
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 PROPOSED PORTALET
 DETAIL OF SIGNAGE
 DETAIL OF CABINET
 DETAIL OF TABLE

DATE: 03/30/2020
 SHEET NO.
 SPECIALTIES

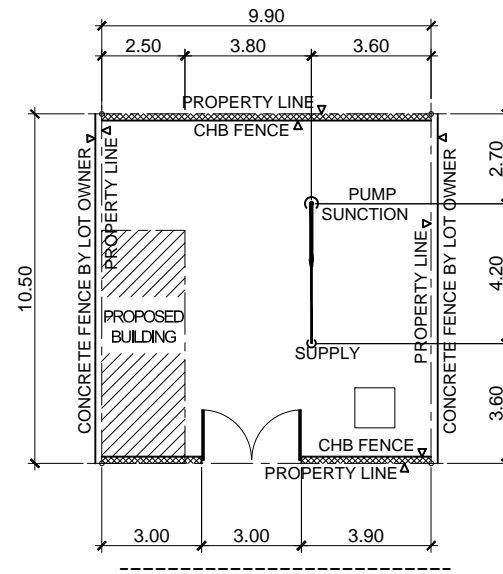
LAKEVIEW SUBD., HALANG, CALAMBA CITY

LOCATION: Southville, Brgy. Kay-anlog, Calamba City, Laguna

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PERSPECTIVE




SITE DEVELOPMENT PLAN

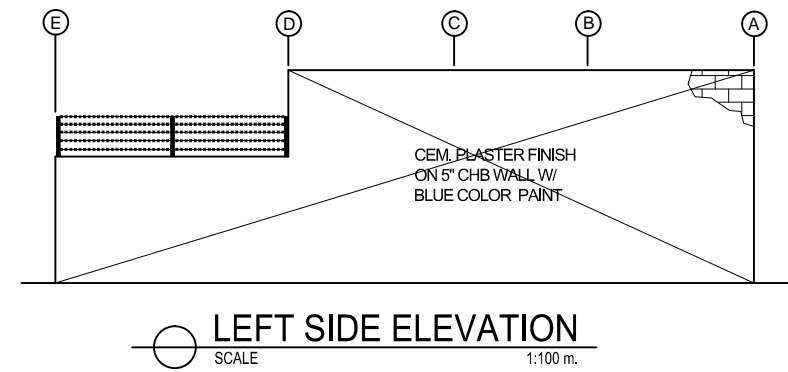
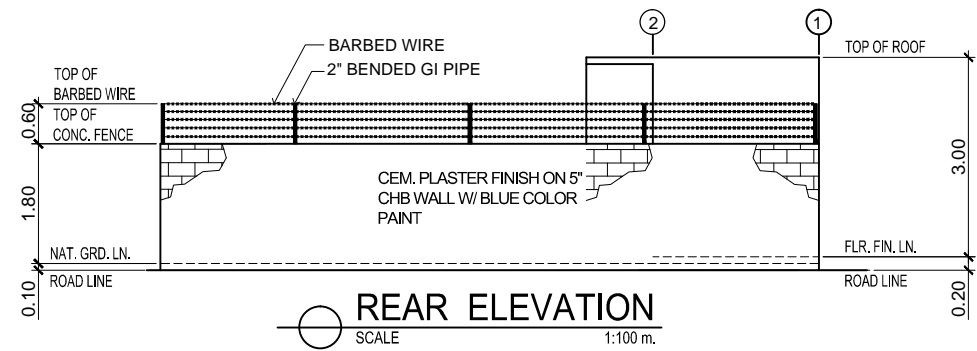
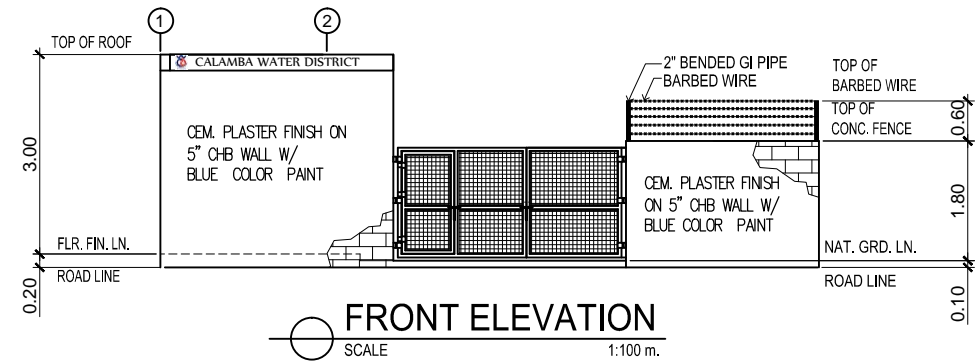
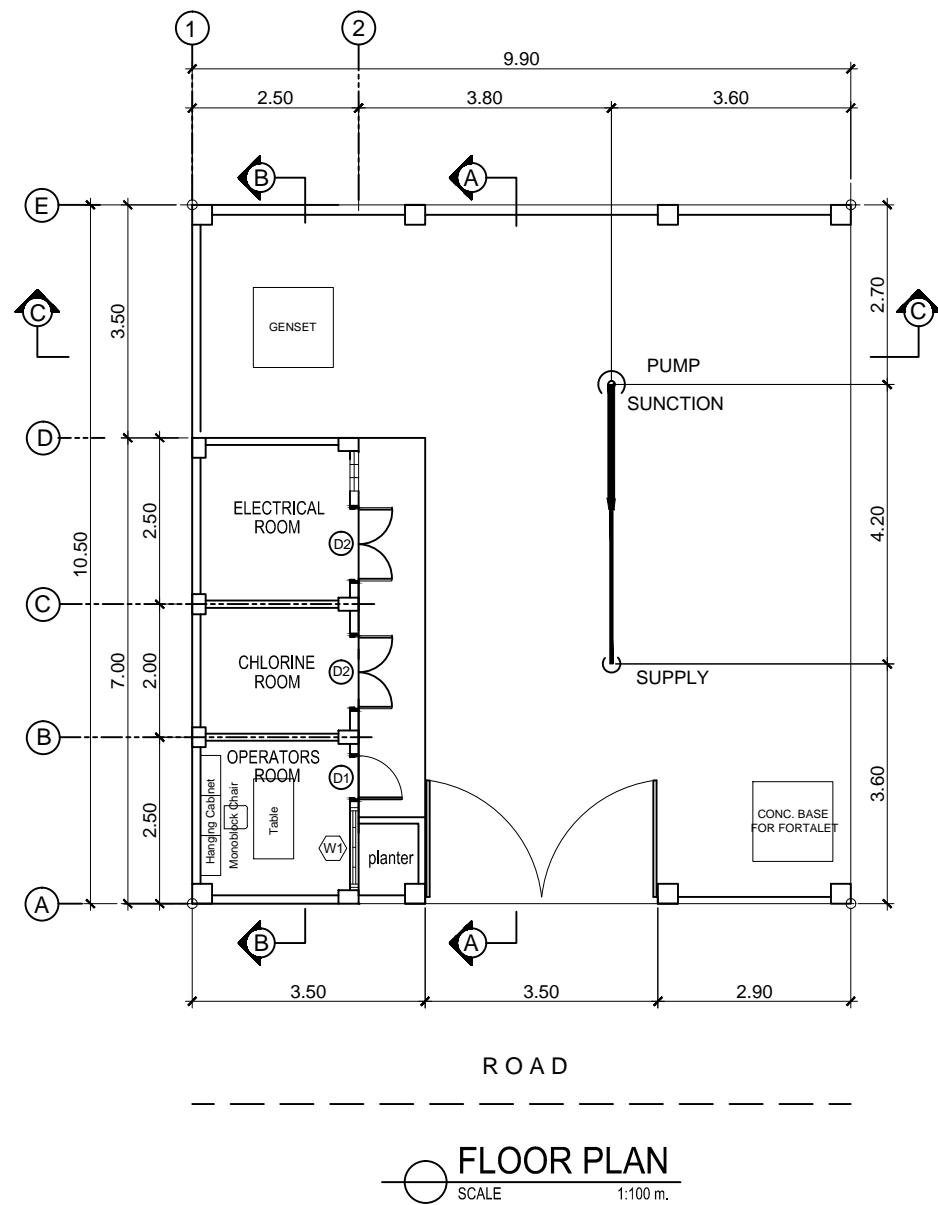
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REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS TRANSPORTATION and COMMUNICATION OFFICE OF THE BUILDING OFFICIAL
DISTRICT / CITY / MUNICIPALITY
TABLE OF CONTENTS
COVER SHEET (CS): PERSPECTIVE SITE DEVELOPMENT PLAN LOCATION PLAN
ARCHITECTURAL 1 (A1): GROUND FLOOR PLAN DECK FLOOR PLAN SCHEDULE OF DOORS & WINDOWS
ARCHITECTURAL 2 (A2): FRONT ELEVATION REAR ELEVATION LEFT SIDE ELEVATION RIGHT SIDE ELEVATION CROSS SECTION LONGITUDINAL SECTION
STRUCTURAL 1 (S1): FOUNDATION PLAN SCHEDULE OF FOOTINGS DETAIL OF STAIR
STRUCTURAL 2 (S2): DECK FLOOR FRAMING PLAN DETAIL OF BEAMS DETAIL OF SLAB
PLUMBING 1 (P1): SEWER & PLUMBING LAYOUT DETAIL OF SEPTIC VAULT DETAIL OF CATCH BASIN PLUMBING ISOMETRIC PLUMBING LEGEND
ELECTRICAL 1 (E1): ELECTRICAL LAYOUT SCHEDULE OF LOADS DETAIL OF PANELBOARD SINGLE LINE DIAGRAM GENERAL NOTES ELECTRICAL LEGEND
LAND USE & ZONING
LINE & GRADE
ARCHITECTURAL
STRUCTURAL
MECHANICAL
ELECTRICAL
PLUMBING

 CALAMBA WATER DISTRICT ENGINEERING DEPARTMENT PLANNING AND DESIGN DIVISION LAKEVIEW SUBD., HALANG, CALAMBA CITY	PROJECT TITLE:	DRAWN BY: A. L. DEL PRADO	SHEET CONTENTS:	DATE: 03/30/2020
	PROPOSED PUMPING STATION	DESIGNED BY: ENGR. R. S. CARTAGO	PERSPECTIVE SITE DEVELOPMENT PLAN LOCATION PLAN	SHEET NO.
MOUNTAINVIEW SUBD. BRGY PALO-ALTO, CALAMBA CITY, LAGUNA	RECOMMENDED BY: ENGR. R. S. CARTAGO	APPROVED BY: MR. E. A. AGUILAR		CS

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CALAMBA WATER DISTRICT
 ENGINEERING DEPARTMENT
 PLANNING AND DESIGN DIVISION

LAKEVIEW SUBD., HALANG, CALAMBA CITY

PROJECT TITLE:

PROPOSED PUMPING STATION

MOUNTAINVIEW SUBD. BRGY PALO-ALTO, CALAMBA CITY, LAGUNA

DRAWN BY: A. L. DEL PRADO

DESIGNED BY: ENGR. R. S. CARTAGO

RECOMMENDED BY: ENGR. R. S. CARTAGO

APPROVED BY: MR. E. A. AGUILAR

SHEET CONTENTS:

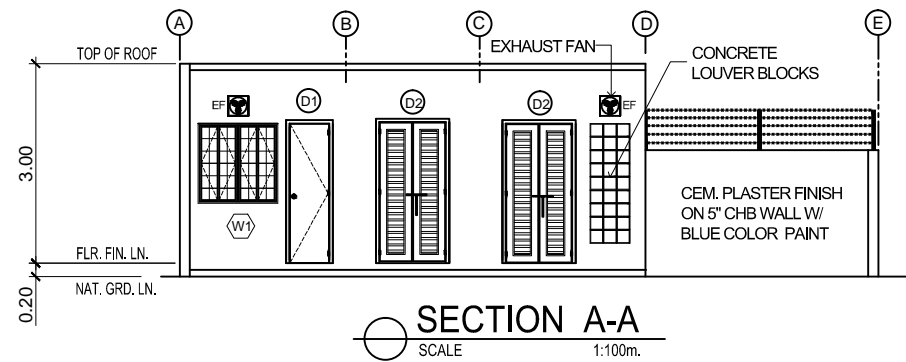
FLOOR PLAN
 FRONT ELEVATION
 REAR ELEVATION
 LEFT SIDE ELEVATION

DATE: 03/30/2020

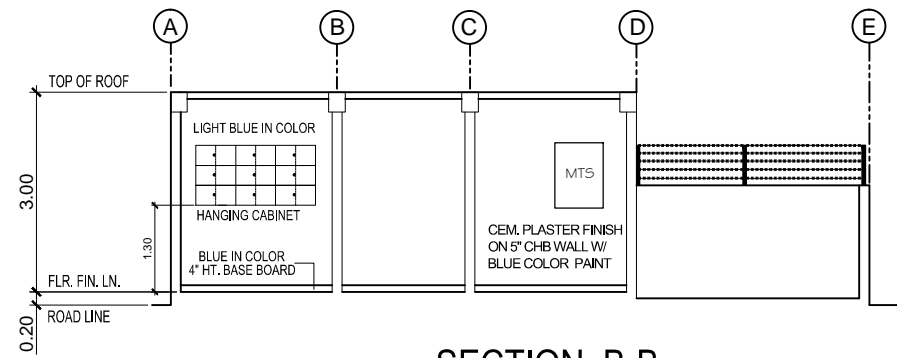
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A-1

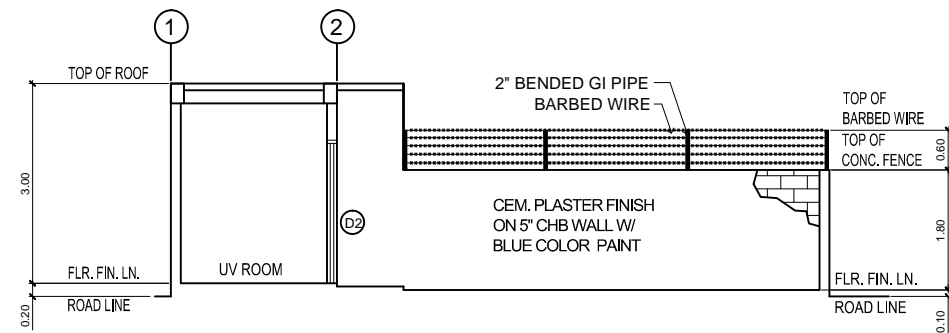
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SECTION A-A
SCALE 1:100m.

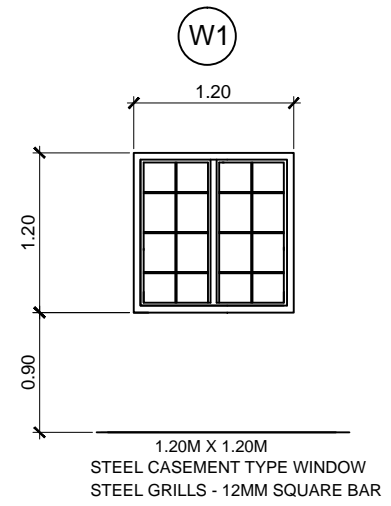
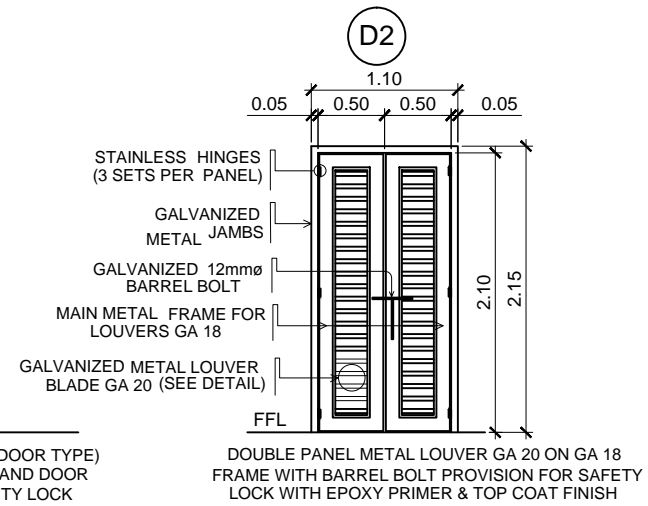
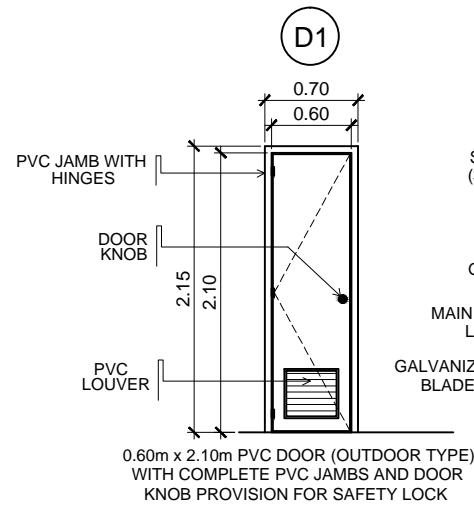


SECTION B-B
SCALE 1:100 m.

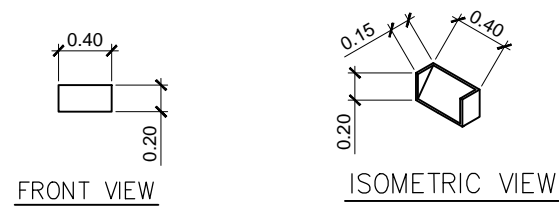


SECTION C-C
SCALE 1:100 m.

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SCHEDULE OF DOORS
SCALE 1:50 m.



DETAIL OF CONCRETE LOUVER



CALAMBA WATER DISTRICT
ENGINEERING DEPARTMENT
PLANNING AND DESIGN DIVISION

LAKEVIEW SUBD., HALANG, CALAMBA CITY

PROJECT TITLE:

PROPOSED PUMPING STATION

MOUNTAINVIEW SUBD. BRGY PALO-ALTO, CALAMBA CITY, LAGUNA

DRAWN BY: A. L. DEL PRADO

DESIGNED BY: ENGR. R. S. CARTAGO

RECOMMENDED BY: ENGR. R. S. CARTAGO

APPROVED BY: MR. E. A. AGUILAR

SHEET CONTENTS:

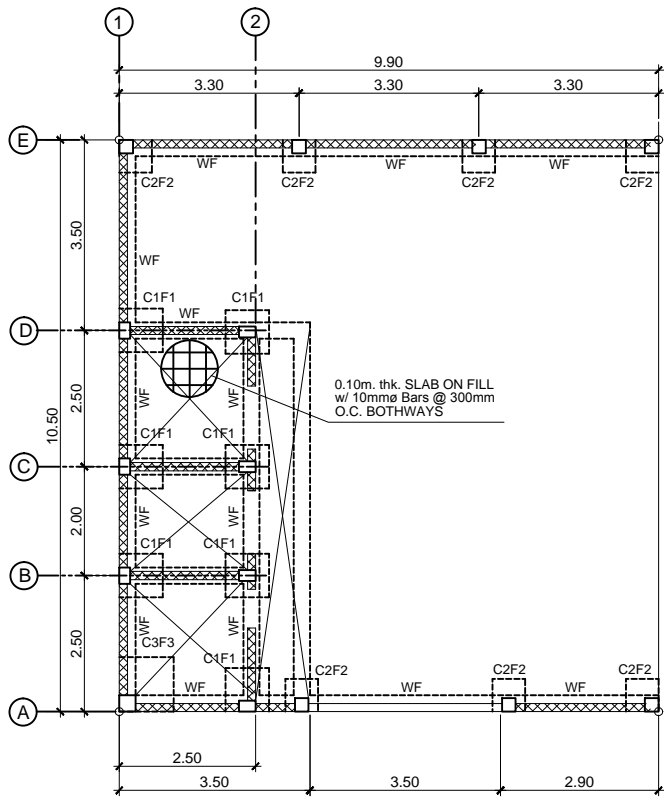
SECTION A-A
SECTION B-B
SECTION C-C
SCHEDULE OF DOORS & WINDOWS
DETAIL OF CONCRETE LOUVER

DATE: 03/30/2020

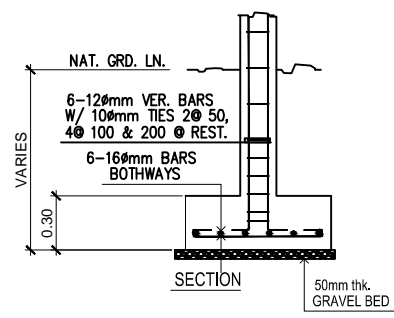
SHEET NO.

A-2

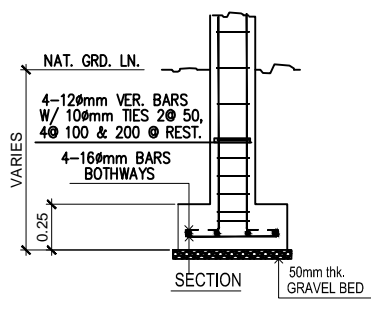
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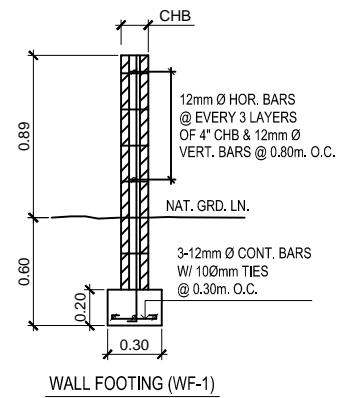
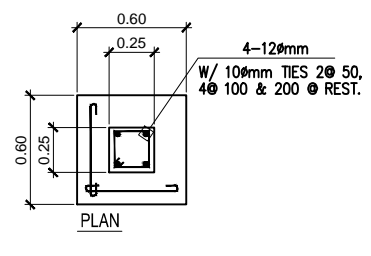
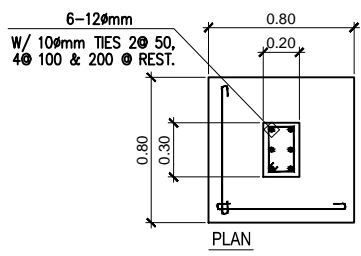
FOUNDATION PLAN
SCALE 1:100 m.



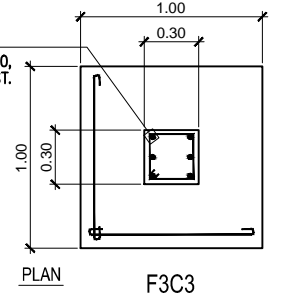
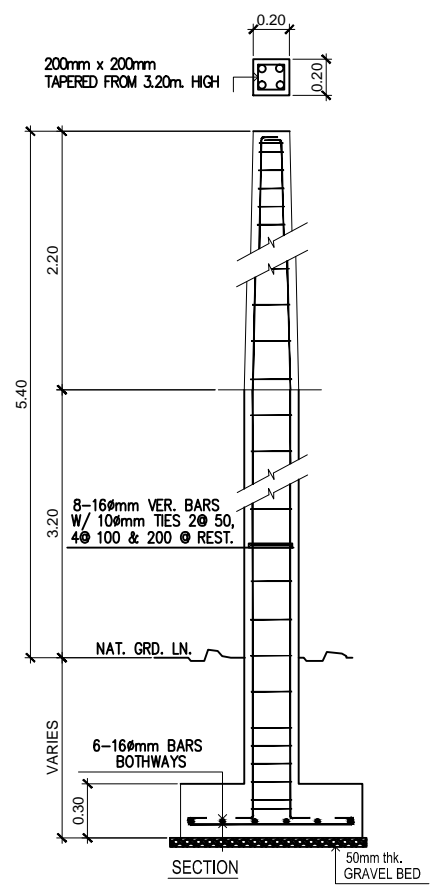
F1C1



F2C2



DETAIL OF FOOTINGS
SCALE 1:30m.



F3C3

- NOTES:**
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W CALAMBA WATER DISTRICT
ENGINEERING DEPARTMENT
PLANNING AND DESIGN DIVISION
24/7 Public Service

PROJECT TITLE:
PROPOSED PUMPING STATION

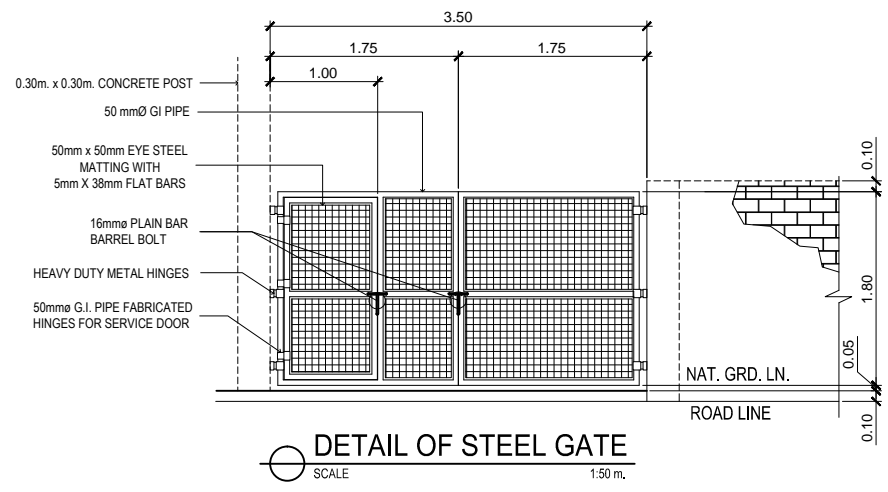
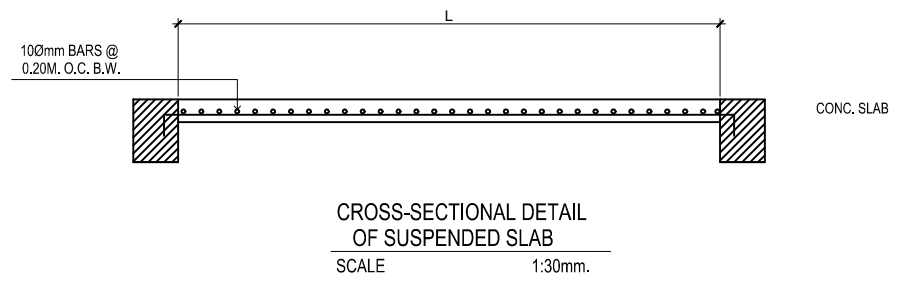
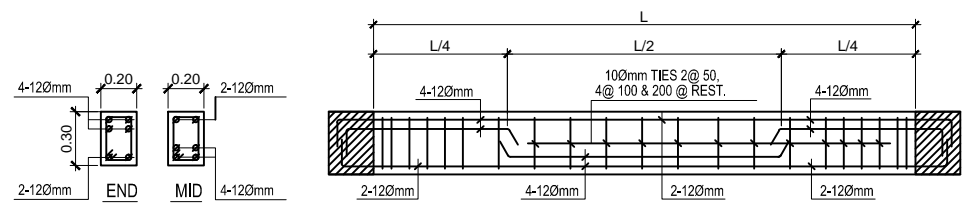
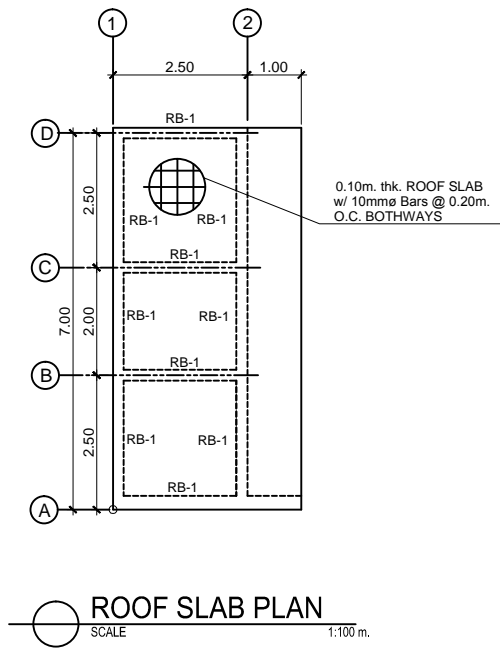
MOUNTAINVIEW SUBD. BRGY PALO-ALTO, CALAMBA CITY, LAGUNA

DRAWN BY: A. L. DEL PRADO
DESIGNED BY: ENGR. R. S. CARTAGO
RECOMMENDED BY: ENGR. R. S. CARTAGO
APPROVED BY: MR. E. A. AGUILAR JR.

SHEET CONTENTS:
FOUNDATION PLAN
DETAIL OF FOOTINGS
DETAIL OF COLUMN

DATE: 03/30/2020
SHEET NO.
S-1

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 ENGINEERING DEPARTMENT
 PLANNING AND DESIGN DIVISION
 24/7 Public Service

LAKEVIEW SUBD., HALANG, CALAMBA CITY

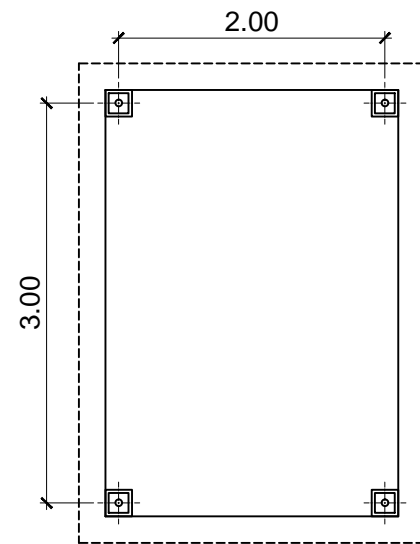
PROJECT TITLE:	PROPOSED PUMPING STATION
LOCATION:	MOUNTAINVIEW SUBD. BRGY PALO-ALTO, CALAMBA CITY, LAGUNA

DRAWN BY:	A. L. DEL PRADO
DESIGNED BY:	ENGR. R. S. CARTAGO
RECOMMENDED BY:	ENGR. R. S. CARTAGO
APPROVED BY:	MR. E. A. AGUILAR JR.

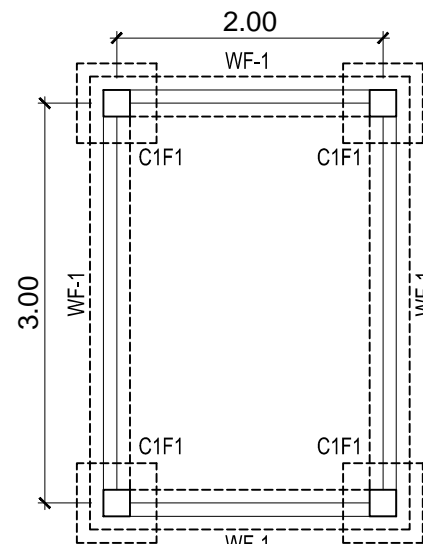
SHEET CONTENTS:	ROOF SLAB PLAN DETAIL OF BEAM DETAIL OF ROOF SLAB DETAIL OF STEEL GATE
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DATE:	03/30/2020
SHEET NO.	S-2

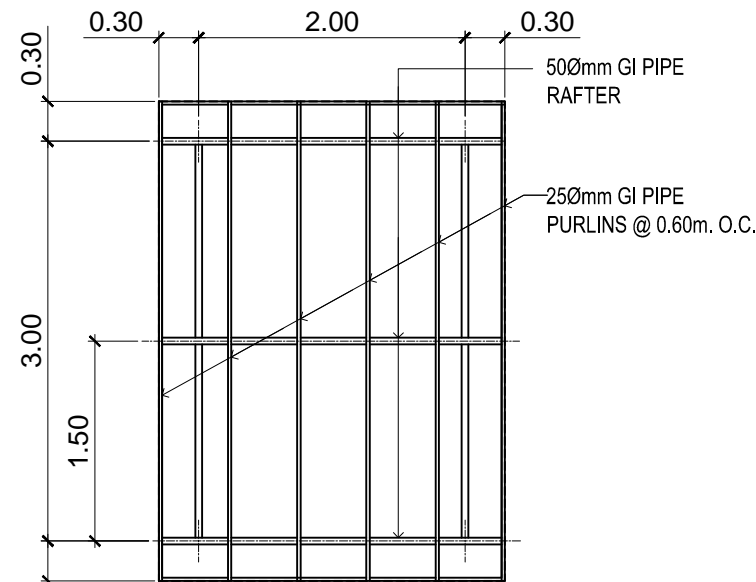
TYPICAL UV ENCLOSURE



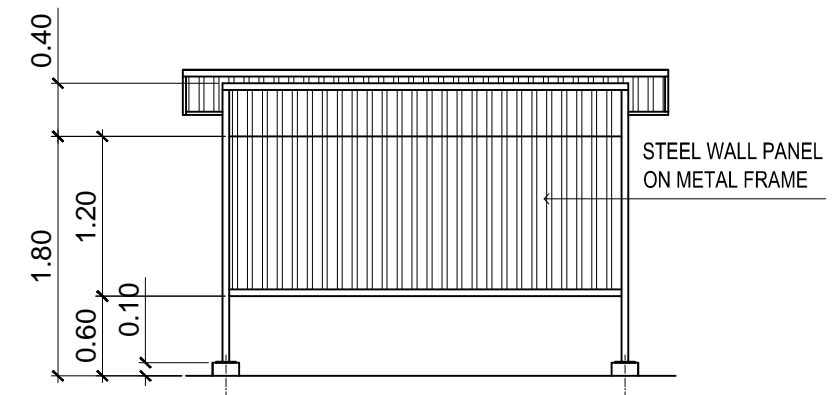
FLOOR PLAN
SCALE 1:50 m.



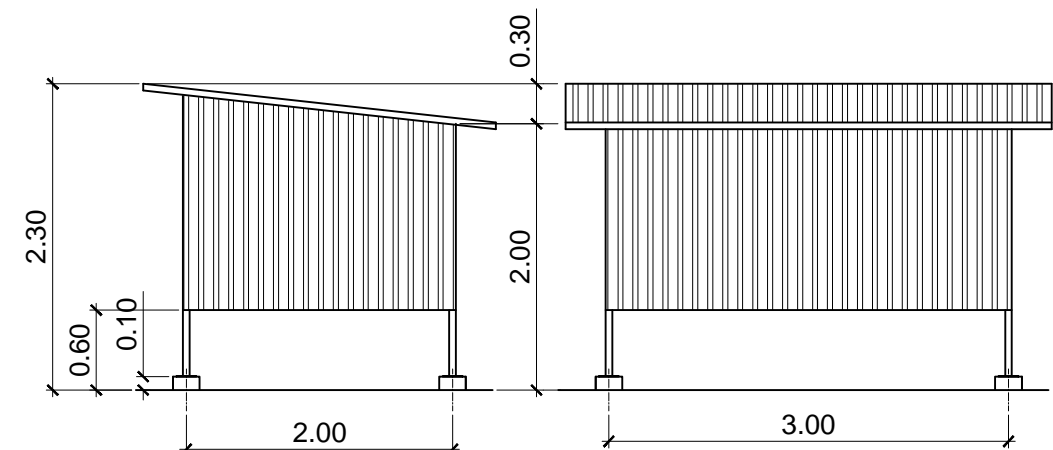
FOUNDATION PLAN
SCALE 1:50 m.



ROOF FRAMING PLAN
SCALE 1:50 m.

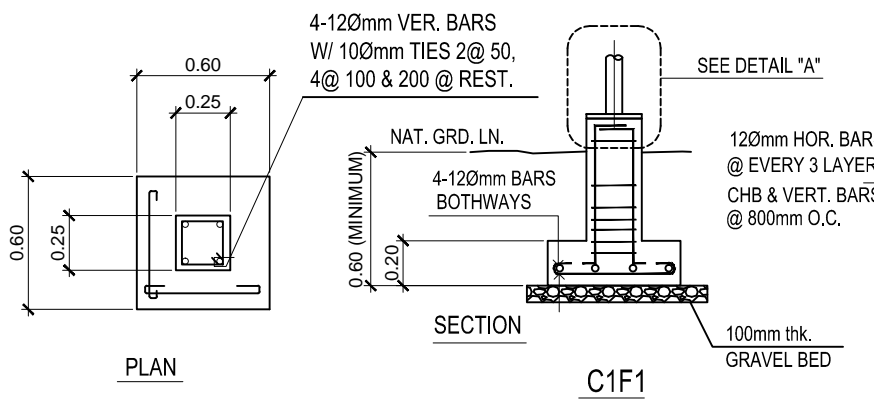


FRONT ELEVATION
SCALE 1:50 m.

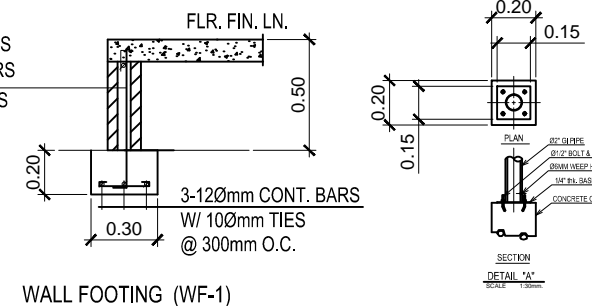


SIDE ELEVATION
SCALE 1:50 m.

REAR ELEVATION
SCALE 1:50 m.

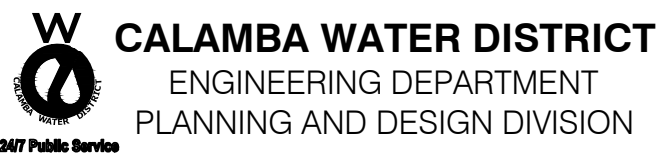


DETAIL OF FOOTINGS
SCALE: 1:30 M.



WALL FOOTING (WF-1)

- NOTES:
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LAKEVIEW SUBD., HALANG, CALAMBA CITY

PROJECT TITLE:

PROPOSED PUMPING STATION

LOCATION: MOUNTAINVIEW SUBD. BRGY PALO-ALTO, CALAMBA CITY, LAGUNA

DRAWN BY: A. L. DEL PRADO

DESIGNED BY: ENGR. R. S. CARTAGO

RECOMMENDED BY: ENGR. R. S. CARTAGO

APPROVED BY: MR. E. A. AGUILAR

SHEET CONTENTS:

UV ENCLOSURE FLOOR PLAN
 FOUNDATION PLAN
 ROOF FRAMING PLAN

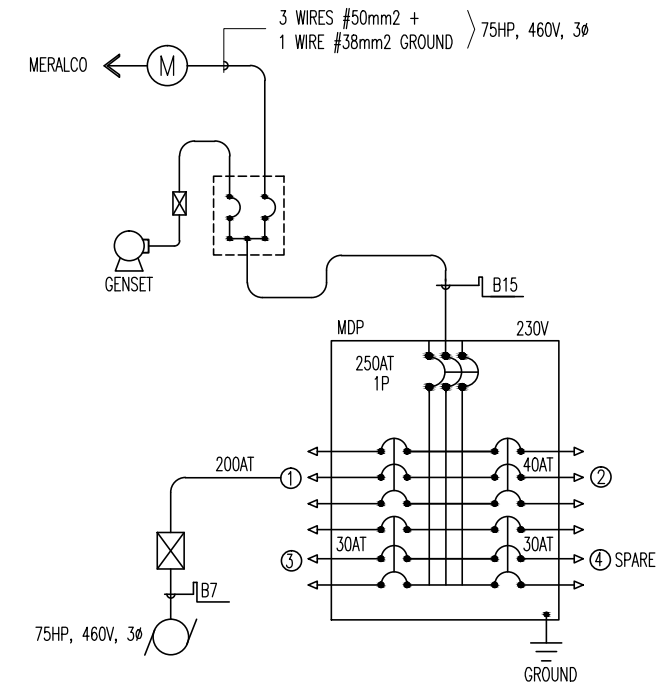
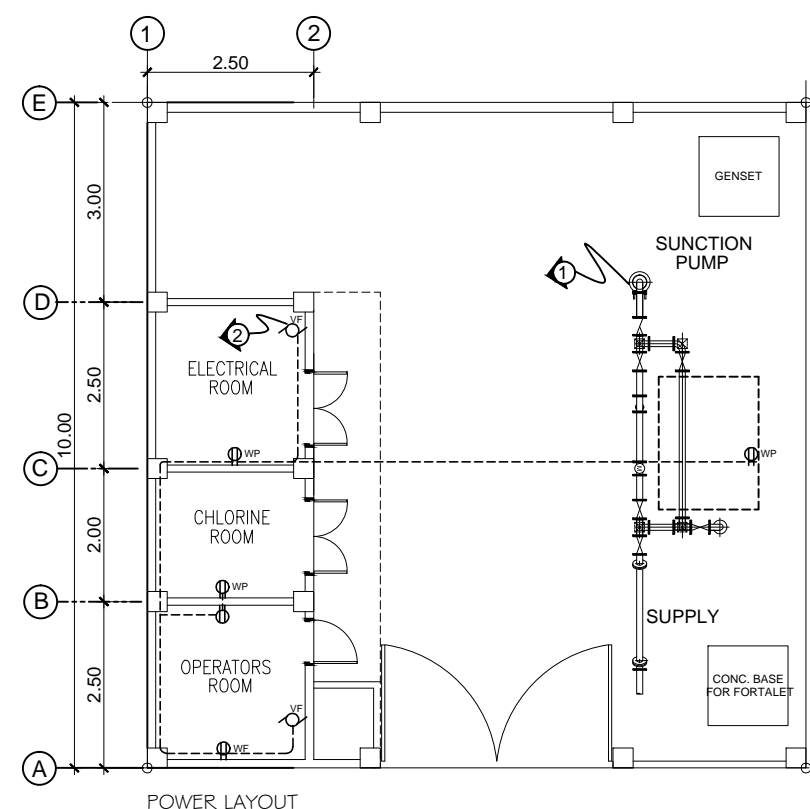
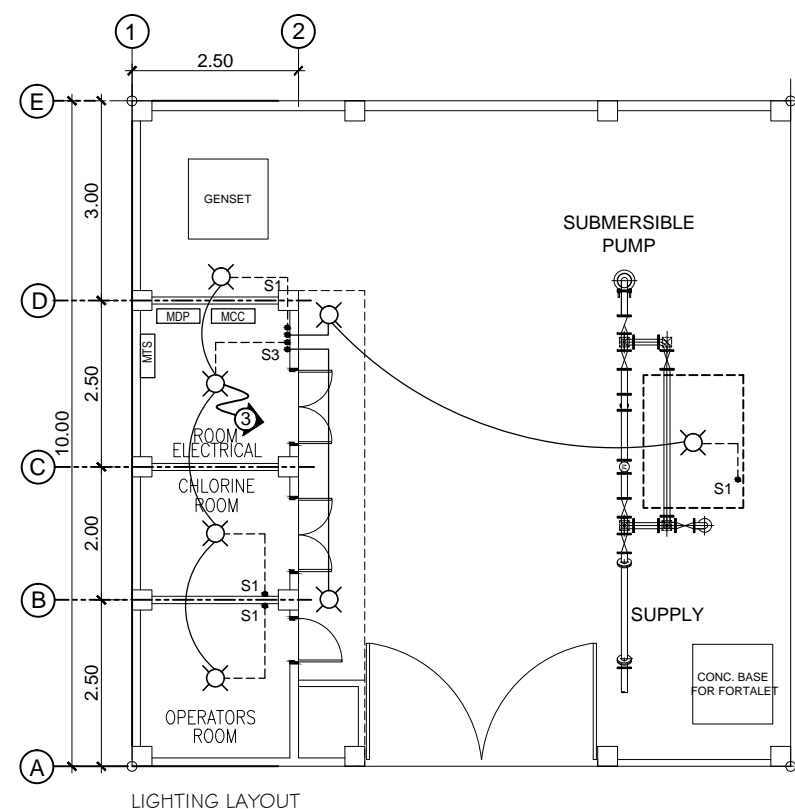
DATE: 03/30/2020

SHEET NO.

S-3

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ELECTRICAL LAYOUT
SCALE 1:100 m.

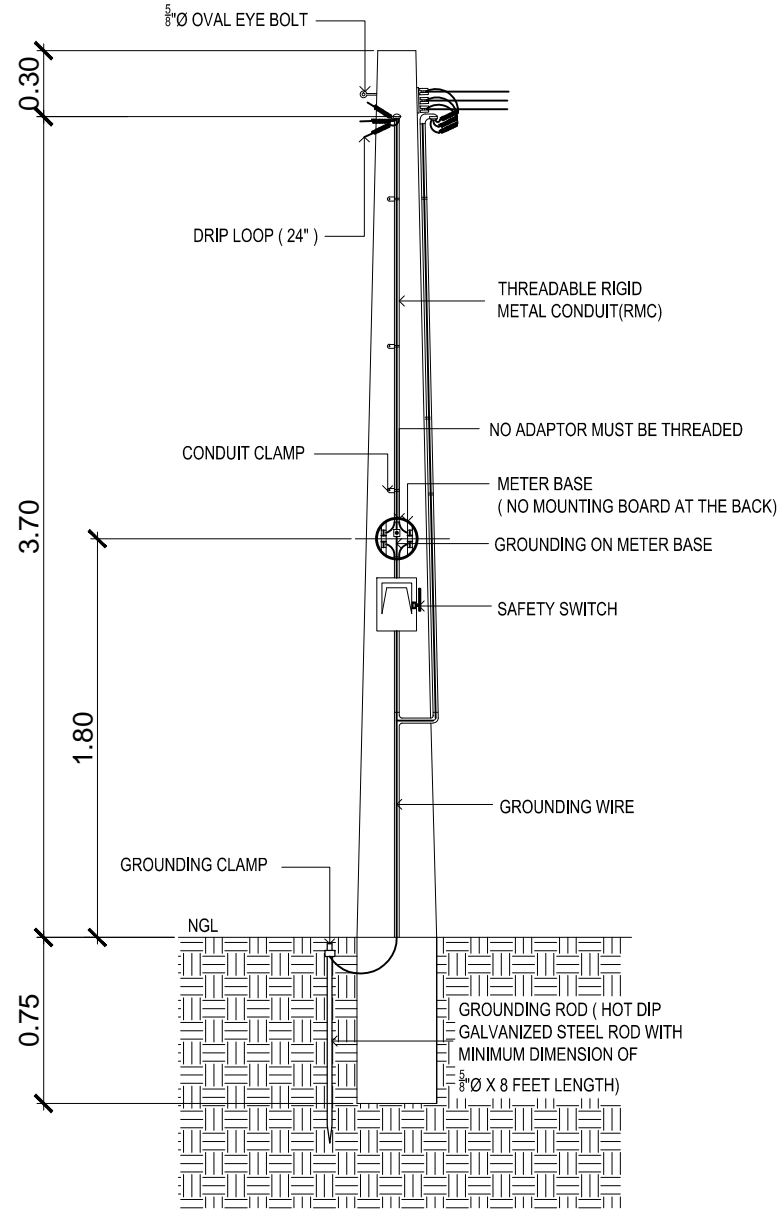
SCHEDULE OF LOADS						
CKT. NO.	LOAD DESCRIPTION	WATTS	VOLTS	BREAKER	SIZE OF WIRES	CONDUITS
1	30Hp Submersible motor	22371	230	2P,100A,230V.	3-38mm ϕ + 14mm ² (G) THHN Cable	20mm ϕ PVC PIPE
2	5-Convenience Outlet & 2-Exhaust Fan	1100	230	2P,20A,230V.	2-3.5mm ² THHN	20mm ϕ PVC PIPE
3	5-100w Lighting Outlet 1-500w Spotlight Outlet	1000	230	2P,15A,230V.	2-2.0mm ² THHN	20mm ϕ PVC PIPE
4	SPARE					
TOTAL		24271	230	2P,110A,230V.	5.5mm ² THHN	25mm ϕ PVC PIPE

$A = \frac{24271 \times 0.8}{230} = 84.42 \times 1.25$
 $A = 105.53$ (USE 2-5.5mm THHN & 3.5mm THHN GROUNDING IN 25mm ϕ PVC PIPE)

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 CALAMBA WATER DISTRICT ENGINEERING DEPARTMENT PLANNING AND DESIGN DIVISION LAKEVIEW SUBD., HALANG, CALAMBA CITY	PROJECT TITLE:	DRAWN BY: A. L. DEL PRADO	SHEET CONTENTS:	DATE: 03/30/2020
	PROPOSED PUMPING STATION	DESIGNED BY: PEDRO ESTALAR	ELECTRICAL LAYOUT SCHEDULE OF LOADS RISER DIAGRAM	SHEET NO.
LOCATION: MOUNTAINVIEW SUBD. BRGY PALO-ALTO, CALAMBA CITY, LAGUNA	RECOMMENDED BY: ENGR. R. S. CARTAGO	APPROVED BY: MR. E. A. AGUILAR		E-1

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SERVICE ENTRANCE POST
SCALE 1:30 m.

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ELECTRICAL SPECIFICATION

A. GENERAL SPECIFICATIONS:

1. The work under this Division consists of furnishing all materials, equipment, tools, labor and all other services necessary to complete and make ready for operation the Electrical Power described below and or indicated in the Electrical Plans and Specifications in accordance with the latest edition of the Philippine Electrical Code with the Local Requirements of the Utility, Companies concerned and with the Local Government.
2. Service to the Pump and Motor Load must 440v, 3Ø, 3w+1G Power System. And service to the Perimeter Lighting must be 230v, 1Ø, 2w+ 1G power system and service to Pump and Motor Load for single phase location.
3. The Low Voltage Cables are THHN Insulated, Stranded, and Copper Conductor.
4. All Ground Wires shall be Insulated Grounds.
5. Cable sizes are selected by applying appropriate de-rating factors for ambient conditions of installations as per PEC.
6. Power factor for all loads is assumed 0.80.
7. Size of grounding wire will be based on PEC Table 3.10.1.16
8. Ampacities of feeders supplying continuous loads are taken as 125% of Full Load Current as per PEC.
9. All electrical materials shall be new and listed with the Underwriters Laboratories, Inc., shall meet their requirements and shall bear their label wherever standards have been established and label service is regularly furnished by that agency.
10. Mounting height shall be as follows:
 - Convenience outlet shall be 300mm above floor furnish
 - Convenience outlet shall be 300mm above lavatories
 - Wall switches shall be 1400mm on center from floor finish.
11. Wiring Method shall be as follows:
 - Poly Vinyl Chloride (PVC) or Unplasticised Poly Vinyl Chloride (uPVC)- Used when embedded in concrete wall or masonry and can be laid underground within 500mm deep from earth grade.
 - Rigid Steel Conduit (RSC) - Used in exposed/wet location and can be laid underground within 200mm deep from earth grade.
12. For easily identify the polarity, use color coded THHN/THWN and TW stranded copper conductor.
 - RED - positive or line 1
 - YELLOW - negative or line 2
 - BLUE - line 3
 - GREEN - ground
 - BLUE - neutral or lineside ground
 - BLACK - homerun or Main Feederline
13. PVC and metal conduit shall be joined to junction boxes and pull box to make a grid and waterproof connection. If metal conduit is used, an insulated busing shall be provided at the end of the metal conduit on the inside of the junction box or pull box to prevent scuffing of the cable insulation.
14. All works herein shall be done under the strict supervision of duly LICENSE ELECTRICAL ENGINEER.

B. LIGHTING FIXTURES SPECIFICATIONS:

All luminaires and ballasts shall be certified by the manufacturer

Fixture Type A

- 18W CFL w/ 4" Vertical Type Downlight, Aluminum Glossy Reflector and BLUE Baked Finish Steel

Fixture Type B

- 30W Floodlight (CFL Type Lamp)

C. OUTLETS AND SWITCHES SPECIFICATIONS:

- Duplex Wide Series Universal Convenience Outlet - grounding type w/ faceplate, 15A, 230V, 1-phase
- 1-gang Normal Switch (Wide Series), 10A, 230V
- 2-gang Normal Switch (Wide Series), 10A, 230V
- 3-gang Normal Switch (Wide Series), 10A, 230V

D. PULL BOX (S), JUNCTION BOX(S) AND UTILITY BOX(S) SPECIFICATIONS:


- The junction box cover shall be made watertight and a suitable gasket and secured with stainless steel or cadmium plated screws or bolts
- Junction boxes shall be stainless steel.
- Junction boxes shall be flanged and designed for flush mounting if encased in concrete, or designed for surface mounting if external mounting is specified.
- Junction boxes shall be drilled or tapped for all conduit connections. Junction boxes shall be installed such that covers removable.

E. PANEL BOARD, MOTOR CONTROLLER AND MANUAL TRANSFER SWITCH SPECIFICATIONS:

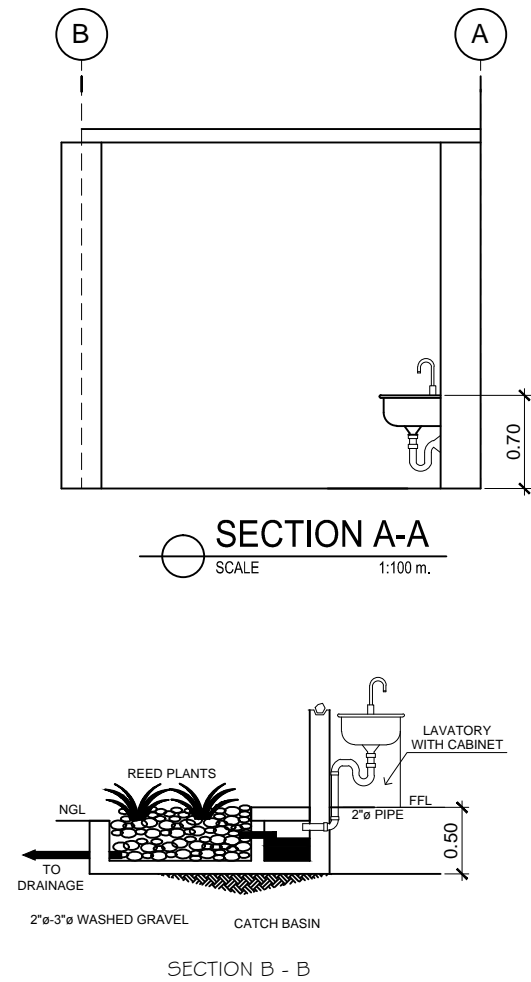
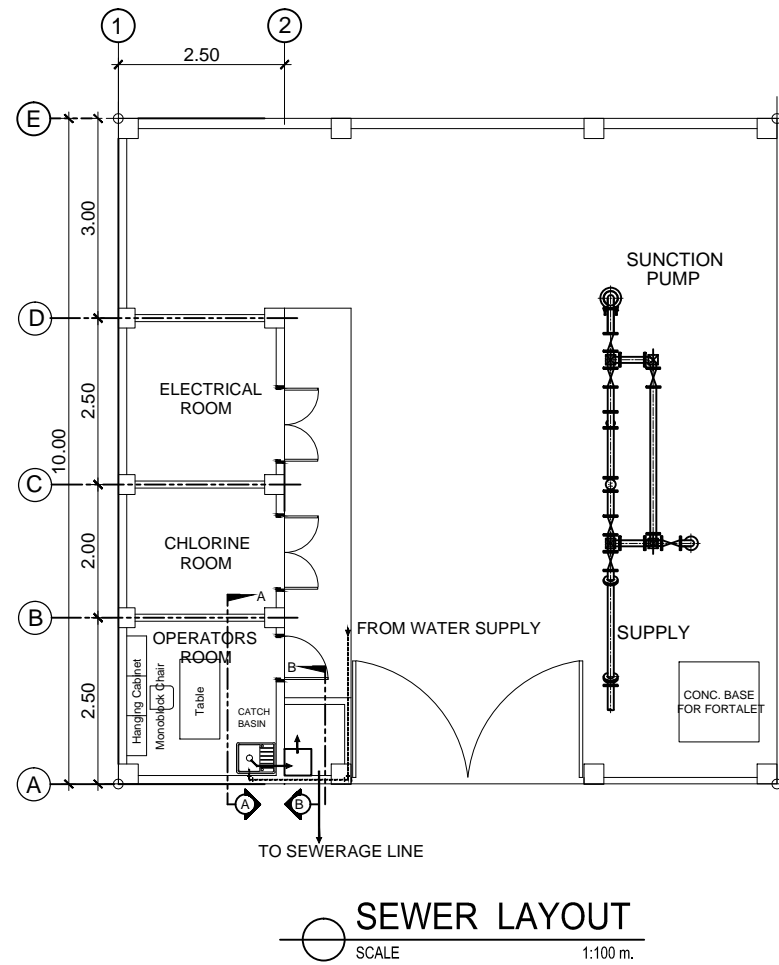
- Factory assembly
- The panelboards shall be UL Listed.
- GENERAL: Except as otherwise indicated, provide panelboards, enclosures and ancillary components of types, sizes, and ratings indicated, which comply with manufacturer's standard materials, design and construction in accordance with published product information; equip with number of unit panelboard devices as required for complete installation. Where more than one type of component meets indicated requirements, selection is installer's option. Where types, sizes, or ratings are not indicated, comply with PEC, UL and established industry standards for applications indicated.
- ENCLOSURES: Provide galvanized sheet steel cabinet type enclosures, in sizes NEMA types as indicated, code-gage, minimum 16-gauge thickness. Construct with multiple knockouts and wiring gutters. Provide fronts with adjustable indicating trim clamps, and doors with flush locks and keys, all panelboard enclosures keyed alike, with concealed door hinges and door swings Equip with interior circuit-directory frame, and card with clear plastic covering. Provide POWDER COATED GRAY finish.
- Wet location panelboards shall be NEMA 4 enclosures/
- Use NEMA 1 enclosures for indoor use, primarily to provide a degree of protection against limited amounts of falling dirt.
- Use NEMA 3R enclosures for outdoor use, primarily to provide a degree of protection against rain, sleet, and damage from external ice formation.
- Equipment shall have a nameplate installed and mounted to the front cover and indicate: panelboard type, amp rating, voltage rating and short-circuit current rating.

LEGEND:

- ⊙ — 18W compact fluorescent lamp (CFL)
- Sa — 1-Gang Normal Switch (Wide Series), 10 A, 230V
- ⊕ — Duplex Wide Series Universal Convenience Outlet, Beige in color, 230V with amperage as required with grounding. Tandem with grounding, 15A, 250V
- ⊕WF — Wall Fan Outlet Duplex Wide Series Universal Convenience Outlet, Beige in color, 230V with amperage as required with grounding. Tandem with grounding, 15A, 250V
- ⊕WP — Weatherproof Outlet Duplex Wide Series Universal Convenience Outlet, Beige in color, 230V with amperage as required with grounding. Tandem with grounding, 15A, 250V
- ⊙EF — Exhaust Fan
- — Switch, Power and Light Lay-out
- ⊕ — Circuit Number


 <p>CALAMBA WATER DISTRICT ENGINEERING DEPARTMENT PLANNING AND DESIGN DIVISION 24/7 Public Service</p> <p>LAKEVIEW SUBD., HALANG, CALAMBA CITY</p>	PROJECT TITLE:	DRAWN BY: A. L. DEL PRADO	SHEET CONTENTS:	DATE: 03/30/2020
	PROPOSED PUMPING STATION	DESIGNED BY: PEDRO ESTALAR	DETAIL OF ELECTRICAL CONCRETE POST ELECTRICAL SPECIFICATION LEGEND	SHEET NO.
	LOCATION: MOUNTAINVIEW SUBD. BRGY PALO-ALTO, CALAMBA CITY, LAGUNA	RECOMMENDED BY: ENGR. R. S. CARTAGO		E-2
		APPROVED BY: MR. E. A. AGUILAR		

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PLANTERS BOX DETAIL

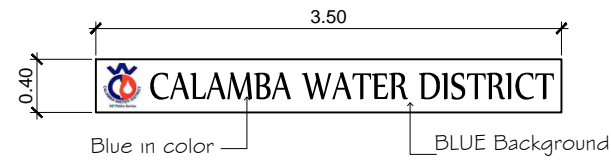
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 CALAMBA WATER DISTRICT ENGINEERING DEPARTMENT PLANNING AND DESIGN DIVISION 24/7 Public Service	PROJECT TITLE:	DRAWN BY: A. L. DEL PRADO	SHEET CONTENTS:	DATE: 03/30/2020
	PROPOSED PUMPING STATION	DESIGNED BY: ENGR. R. S. CARTAGO	SEWER LAYOUT PLANTERS BOX DETAIL	SHEET NO.
LAKEVIEW SUBD., HALANG, CALAMBA CITY	LOCATION: MOUNTAINVIEW SUBD. BRGY PALO-ALTO, CALAMBA CITY, LAGUNA	RECOMMENDED BY: ENGR. R. S. CARTAGO		P-1
		APPROVED BY: MR. E. A. AGUILAR		

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TANK CAPACITY: 227 lits (maximum)
 DIMENSION: 2.4m(H) x 1.2m(W) x 1.2m(L)
 PROPOSED PORTALET



ACRYLIC SIGN

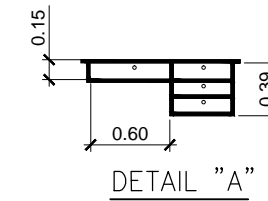
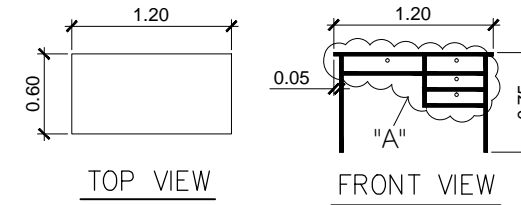
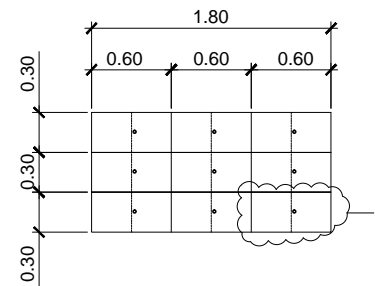
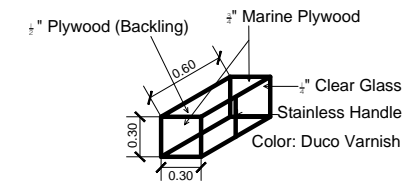


TABLE DETAILS




DETAIL OF HANGING WOOD CABINET



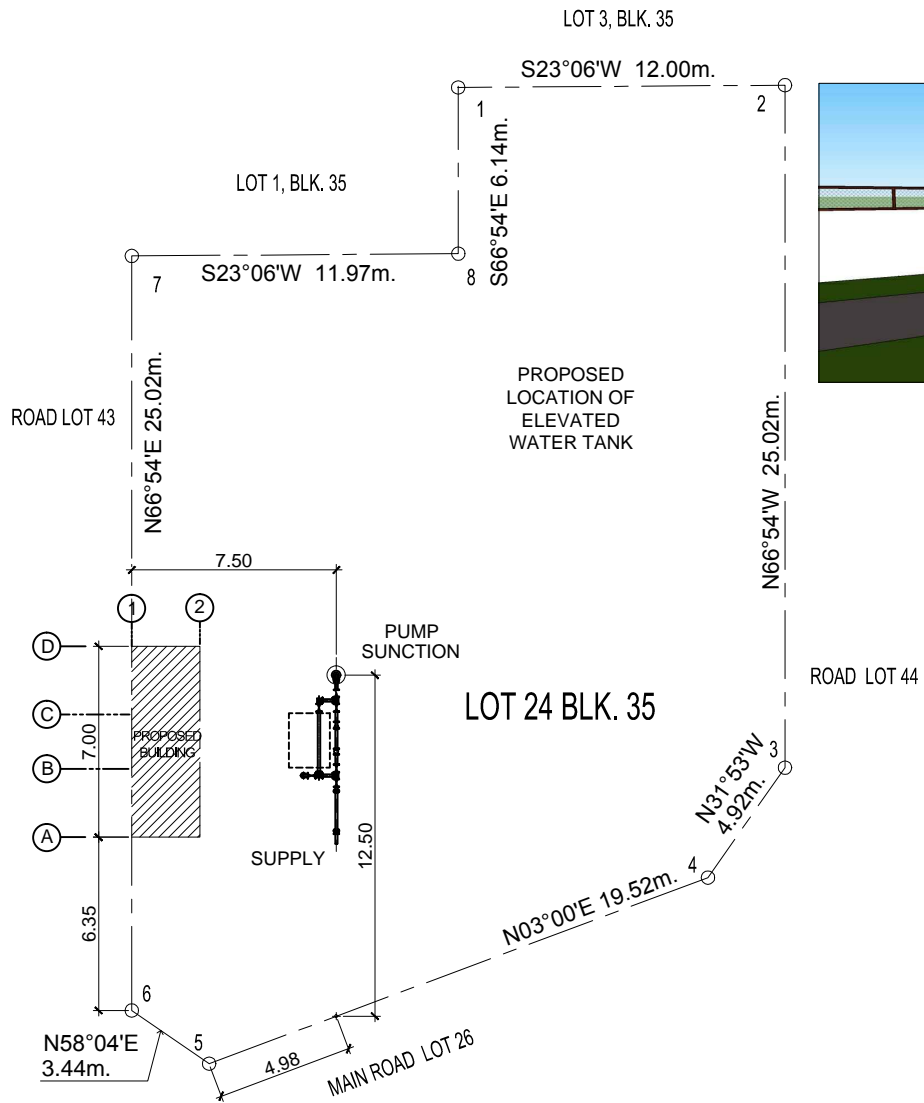
SECTION A OF HANGING WOOD CABINET

- MATERIAL SPECIFICATIONS:
- 3/4" Marine Plywood
 - 1/2" Plywood (backing)
 - 4" Stainless Hinges
 - Magnetic Catches w/ lockset
 - 4" Stainless Cabinet Handle
 - 1/4" Clear Glass
 - Duco Varnish

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 CALAMBA WATER DISTRICT ENGINEERING DEPARTMENT PLANNING AND DESIGN DIVISION LAKEVIEW SUBD., HALANG, CALAMBA CITY	PROJECT TITLE:	DRAWN BY: A. L. DEL PRADO	SHEET CONTENTS:	DATE: 03/30/2020
	PROPOSED PUMPING STATION	DESIGNED BY: ENGR. R. S. CARTAGO	PROPOSED PORTALET DETAIL OF SIGNAGE	SHEET NO.
	LOCATION: MOUNTAINVIEW SUBD. BRGY PALO-ALTO, CALAMBA CITY, LAGUNA	RECOMMENDED BY: ENGR. R. S. CARTAGO		SPECIALTIES
		APPROVED BY: MR. E. A. AGUILAR		

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SITE DEVELOPMENT PLAN
SCALE 1:200 m.

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PERSPECTIVE

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 LEFT SIDE ELEVATION

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 LONGITUDINAL SECTION
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 ELECTRICAL LEGEND

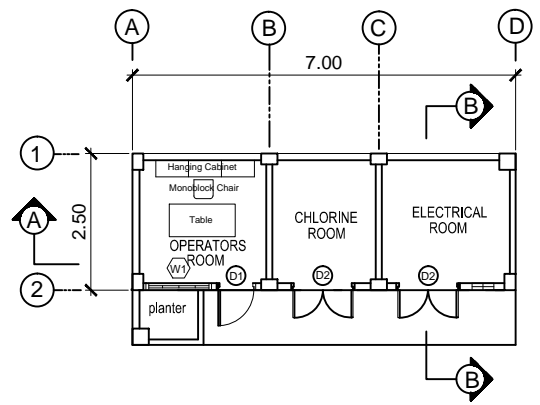
MECHANICAL 1 (M1):
 MECHANICAL LAYOUT
 DETAIL OF DISCHARGE PIPE
 CHLORINATION PUMP DETAIL

SPECIALTIES:
 PROPOSED PORTALET
 SIGNAGE DETAIL
 TABLE DETAIL
 HANGING WOOD CABINET DETAIL

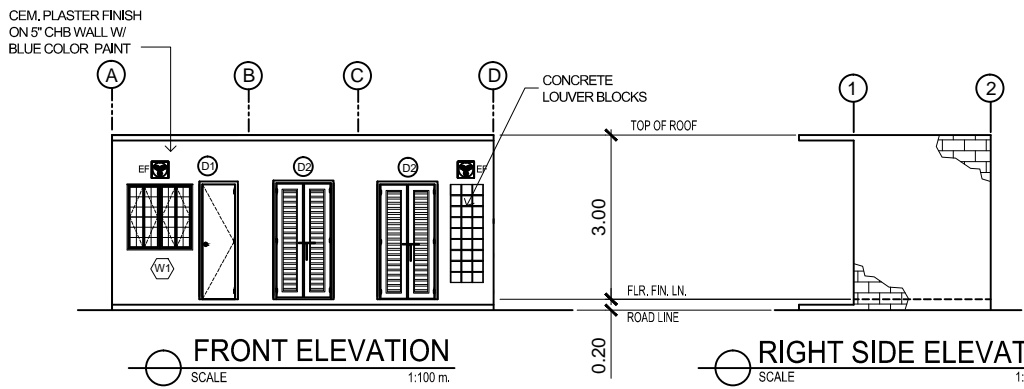
REPUBLIC OF THE PHILIPPINES DEPARTMENT of PUBLIC WORKS TRANSPORTATION and COMMUNICATION OFFICE OF THE BUILDING OFFICIAL	
DISTRICT / CITY / MUNICIPALITY	
LAND USE & ZONING	
LINE & GRADE	
ARCHITECTURAL	
STRUCTURAL	
MECHANICAL	
ELECTRICAL	
PLUMBING	

CALAMBA WATER DISTRICT ENGINEERING DEPARTMENT PLANNING AND DESIGN DIVISION LAKEVIEW SUBD., HALANG, CALAMBA CITY	PROJECT TITLE:	DRAWN BY:	A. L. DEL PRADO	SHEET CONTENTS:	DATE: 03/30/2020
	PROPOSED PUMPING STATION	DESIGNED BY:	ENGR. R. S. CARTAGO	PERSPECTIVE SITE DEVELOPMENT PLAN LOCATION PLAN	SHEET NO.
	LOCATION: Landmark Subd., Calamba City, Laguna	RECOMMENDED BY:	ENGR. R. S. CARTAGO		CS
		APPROVED BY:	MR. E. A. AGUILAR JR.		

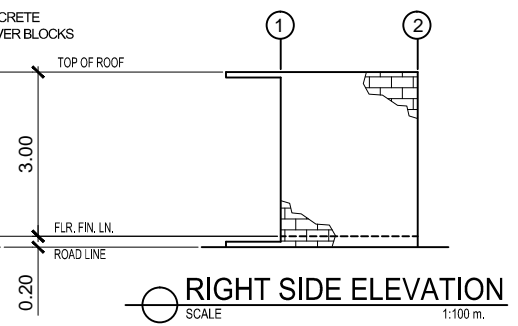
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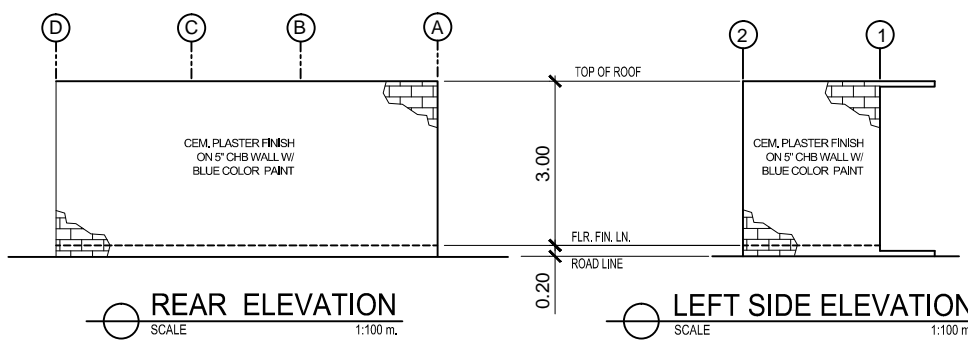
FLOOR PLAN
SCALE 1:100 m.



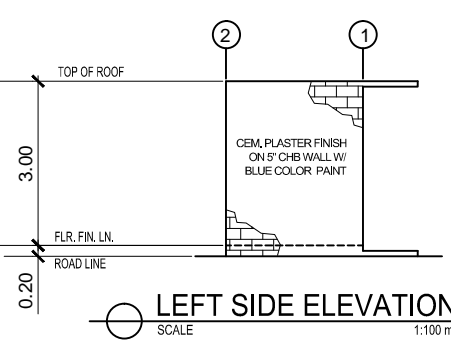
FRONT ELEVATION
SCALE 1:100 m.



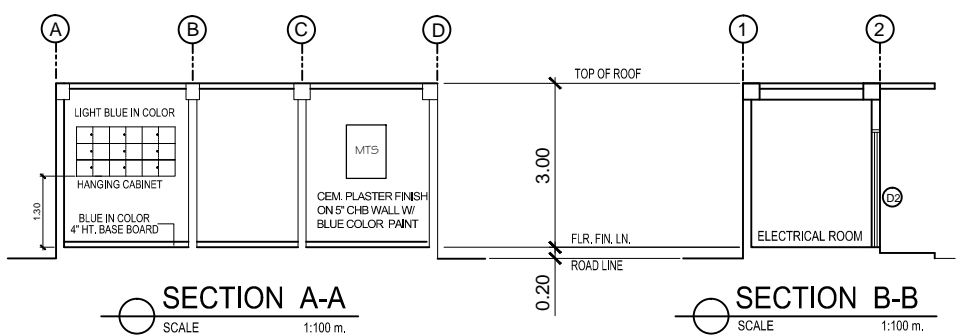
RIGHT SIDE ELEVATION
SCALE 1:100 m.



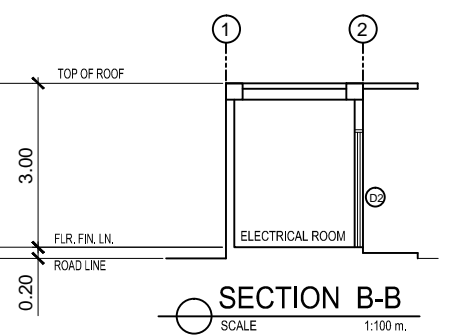
REAR ELEVATION
SCALE 1:100 m.



LEFT SIDE ELEVATION
SCALE 1:100 m.




SECTION A-A
SCALE 1:100 m.

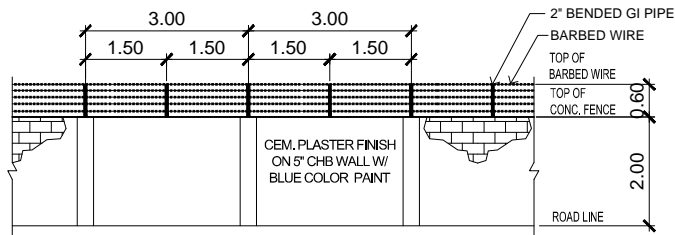


SECTION B-B
SCALE 1:100 m.

NOTES:
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2. THE DESIGNER SHALL NOT BE LIABLE FOR ANY ALTERATION/ REVISION ON THE PLANS/ DRAWINGS AND SPECIFICATIONS IMPROVED BY THE AUTHORIZED SUPERVISING ENGINEER DONE WITHOUT THEIR KNOWLEDGE THAT MAY IMPAIR THE STRENGTH OF THE PROJECT.

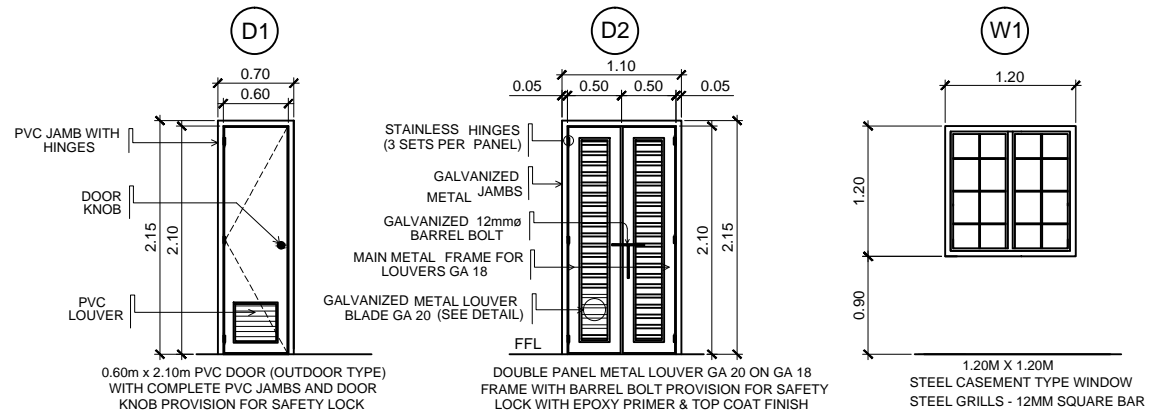
 CALAMBA WATER DISTRICT ENGINEERING DEPARTMENT PLANNING AND DESIGN DIVISION 24/7 Public Service	PROJECT TITLE:	DRAWN BY: A. L. DEL PRADO	SHEET CONTENTS:	DATE: 03/30/2020
	PROPOSED PUMPING STATION	DESIGNED BY: ENGR. R. S. CARTAGO	FLOOR PLAN FRONT ELEVATION LEFT SIDE ELEVATION	SHEET NO.
LAKEVIEW SUBD., HALANG, CALAMBA CITY	LOCATION: Landmark Subd., Calamba City, Laguna	RECOMMENDED BY: ENGR. R. S. CARTAGO		A-1
		APPROVED BY: MR. E. A. AGUILAR JR.		

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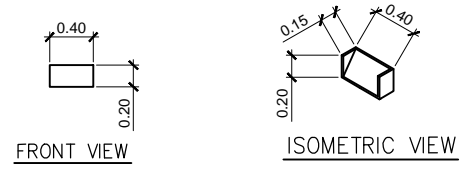
TYPICAL CONCRETE FENCE ELEVATION

SCALE 1:100 m.




SCHEDULE OF DOORS & WINDOW

SCALE 1:50 m.

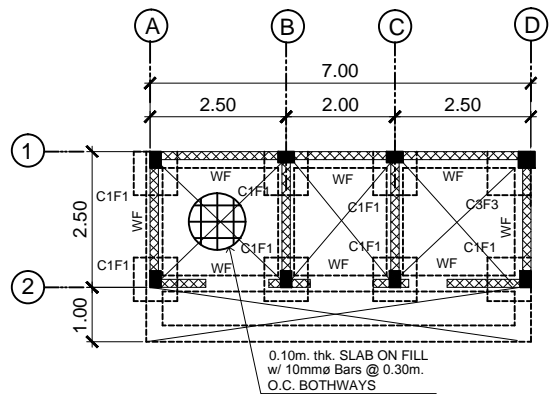


DETAIL OF CONCRETE LOUVER

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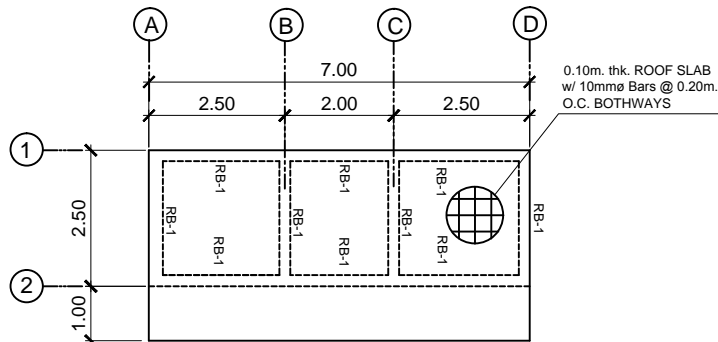
 <p>CALAMBA WATER DISTRICT ENGINEERING DEPARTMENT PLANNING AND DESIGN DIVISION 24/7 Public Service</p>	PROJECT TITLE:	DRAWN BY: A. L. DEL PRADO	SHEET CONTENTS:	DATE: 03/30/2020
	PROPOSED PUMPING STATION	DESIGNED BY: ENGR. R. S. CARTAGO	SECTION A-A SECTION B-B SECTION C-C SCHEDULE OF DOORS & WINDOWS DETAIL OF CONCRETE LOUVER	SHEET NO.
LAKEVIEW SUBD., HALANG, CALAMBA CITY	RECOMMENDED BY: ENGR. R. S. CARTAGO	APPROVED BY: MR. E. A. AGUILAR JR.		A-2
	LOCATION: Landmark Subd., Calamba City, Laguna			

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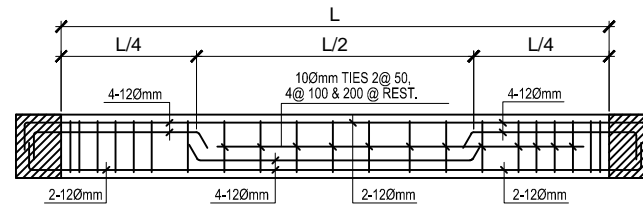
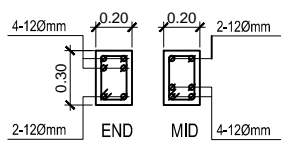
BUILDING FOUNDATION PLAN

SCALE 1:100 m.



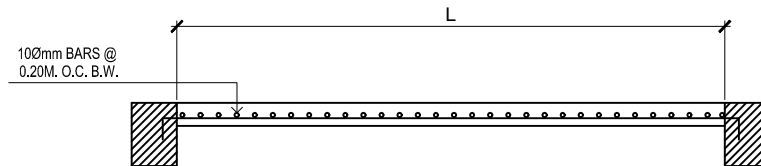
ROOF SLAB PLAN

SCALE 1:100m.



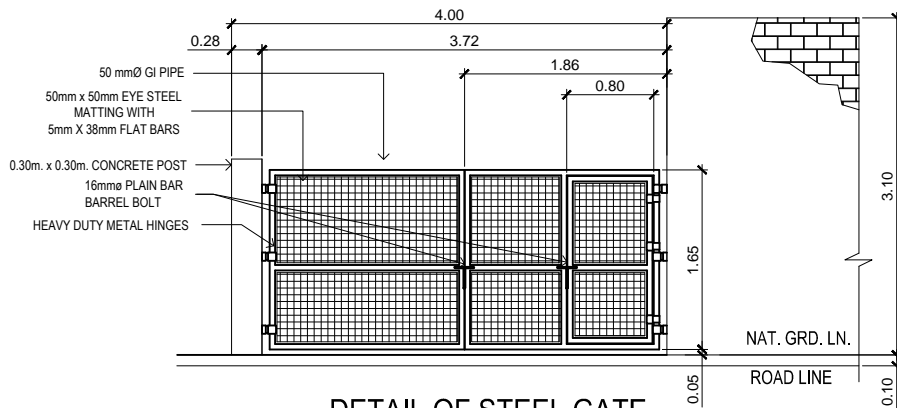
DETAIL OF ROOF BEAM

SCALE 1:30mm.



CROSS-SECTIONAL DETAIL OF SUSPENDED SLAB

SCALE 1:30mm.



DETAIL OF STEEL GATE

SCALE 1:50 m.

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W CALAMBA WATER DISTRICT
ENGINEERING DEPARTMENT
PLANNING AND DESIGN DIVISION

24/7 Public Service

LAKEVIEW SUBD., HALANG, CALAMBA CITY

PROJECT TITLE:

PROPOSED PUMPING STATION

LOCATION: Landmark Subd., Calamba City, Laguna

DRAWN BY: A. L. DEL PRADO

DESIGNED BY: ENGR. R. S. CARTAGO

RECOMMENDED BY: ENGR. R. S. CARTAGO

APPROVED BY: MR. E. A. AGUILAR JR.

SHEET CONTENTS:

ROOF SLAB PLAN
 ELEVATION BUILDING DETAIL
 CROSS-SECTIONAL DETAIL
 OF BEAM
 DETAIL OF STEEL GATE

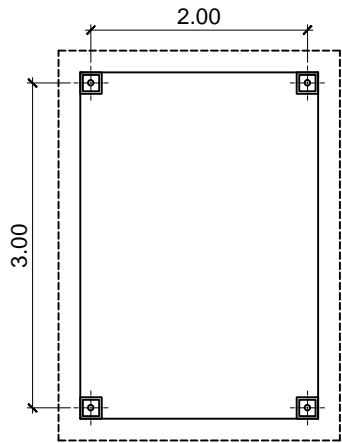
DATE: 03/30/2020

SHEET NO.

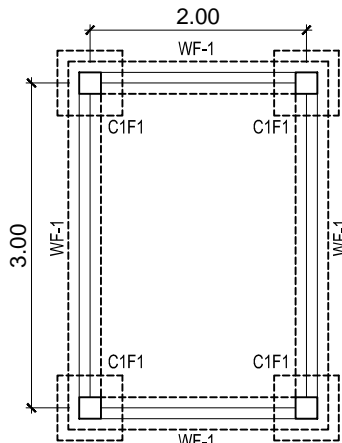
S-2

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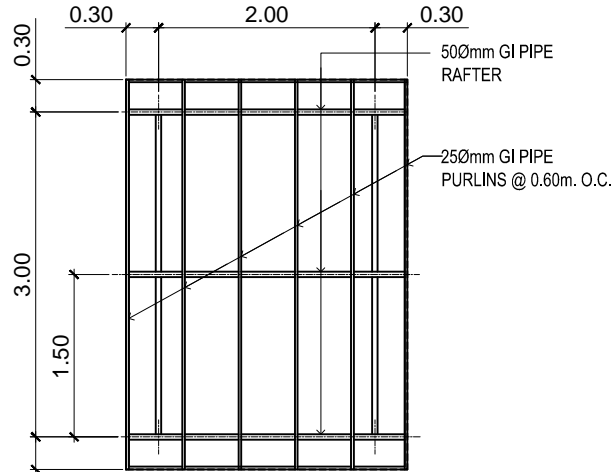
TYPICAL UV ENCLOSURE



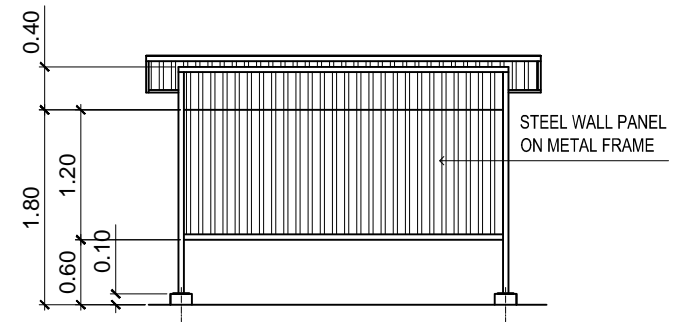
FLOOR PLAN
SCALE 1:50 m.



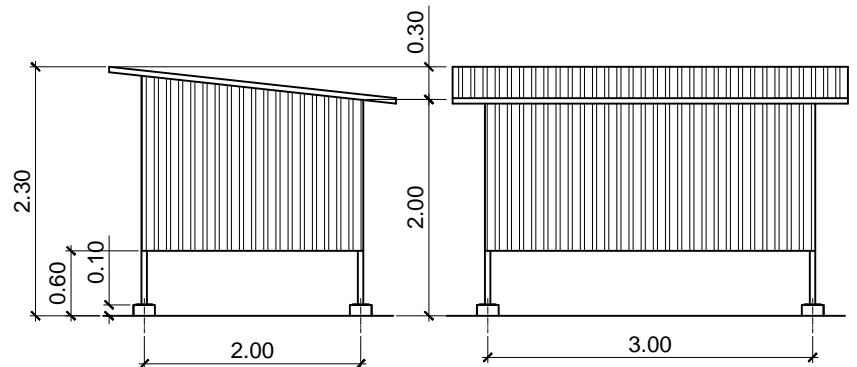
FOUNDATION PLAN
SCALE 1:50 m.



ROOF FRAMING PLAN
SCALE 1:50 m.

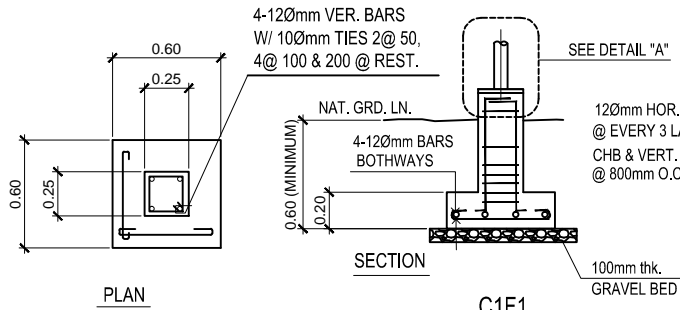


FRONT ELEVATION
SCALE 1:50 m.

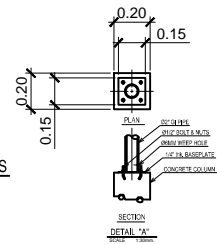
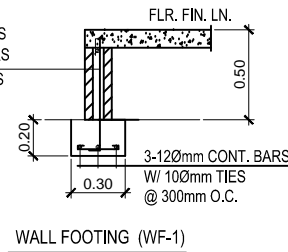


SIDE ELEVATION
SCALE 1:50 m.

REAR ELEVATION
SCALE 1:50 m.



DETAIL OF FOOTINGS
SCALE: 1:30 M.



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W CALAMBA WATER DISTRICT
 ENGINEERING DEPARTMENT
 PLANNING AND DESIGN DIVISION

PROJECT TITLE:
 PROPOSED PUMPING STATION

DRAWN BY: A. L. DEL PRADO
 DESIGNED BY: ENGR. R. S. CARTAGO
 RECOMMENDED BY: ENGR. R. S. CARTAGO
 APPROVED BY: MR. E. A. AGUILAR JR.

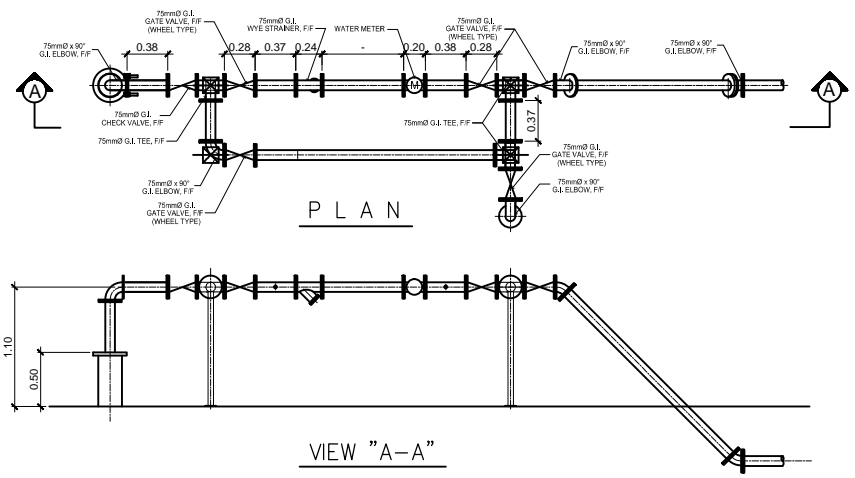
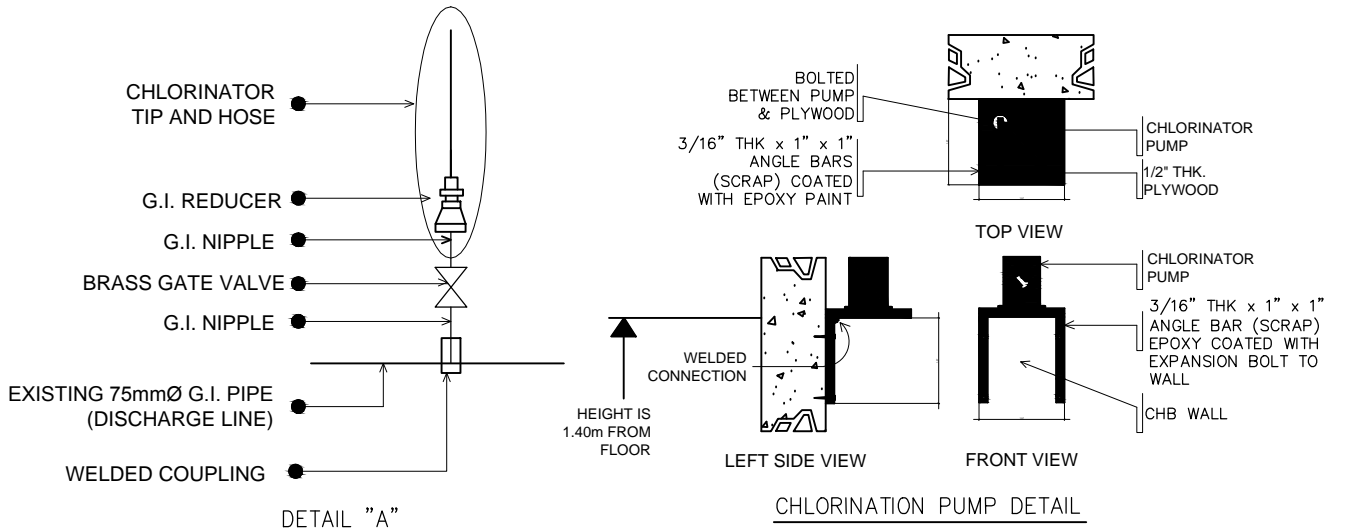
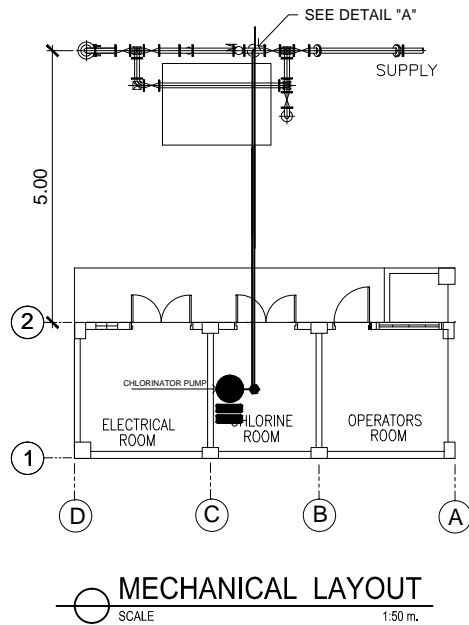
SHEET CONTENTS:
 UV ENCLOSURE FLOOR PLAN
 FOUNDATION PLAN
 ROOF FRAMING PLAN

DATE: 03/30/2020
 SHEET NO.
S-3

LAKEVIEW SUBD., HALANG, CALAMBA CITY


LOCATION: Landmark Subd., Calamba City, Laguna

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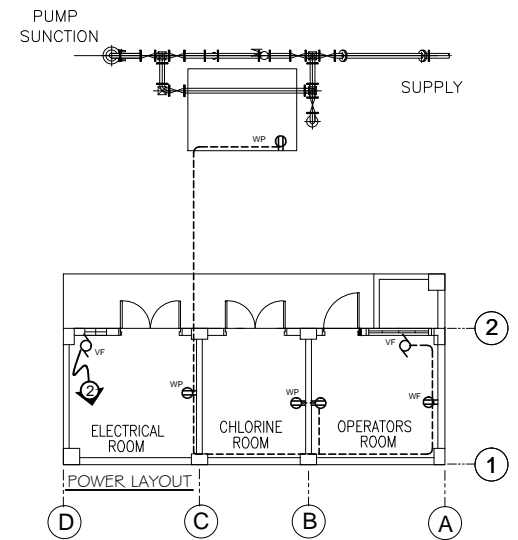
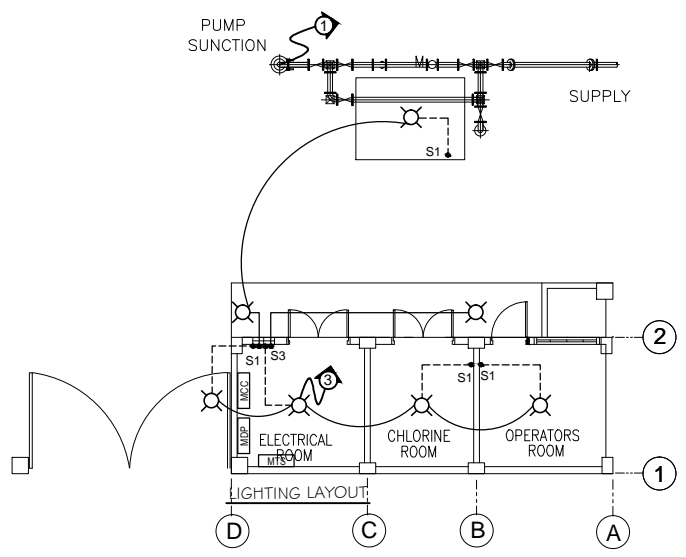


DETAIL OF DISCHARGE PIPE
SCALE 1:50 m.

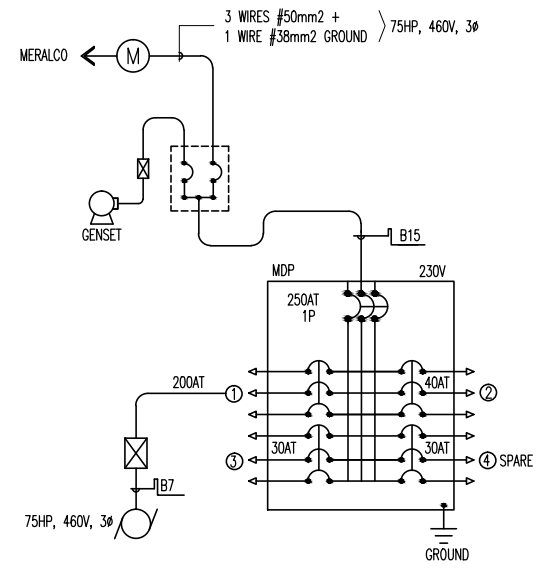
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 CALAMBA WATER DISTRICT ENGINEERING DEPARTMENT PLANNING AND DESIGN DIVISION LAKEVIEW SUBD., HALANG, CALAMBA CITY	PROJECT TITLE:	DRAWN BY:	A. L. DEL PRADO	SHEET CONTENTS:	DATE: 03/30/2020
	PROPOSED PUMPING STATION	DESIGNED BY:	ENGR. R. S. CARTAGO	MECHANICAL LAYOUT CHLORINATION PUMP DETAIL DETAIL OF DISCHARGE PIPE	SHEET NO.
		RECOMMENDED BY:	ENGR. R. S. CARTAGO		M-1
LOCATION: Landmark Subd., Calamba City, Laguna	APPROVED BY:	MR. E. A. AGUILAR JR.			

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ELECTRICAL LAYOUT
SCALE: 1:100 m



FEEDER RISER DIAGRAM

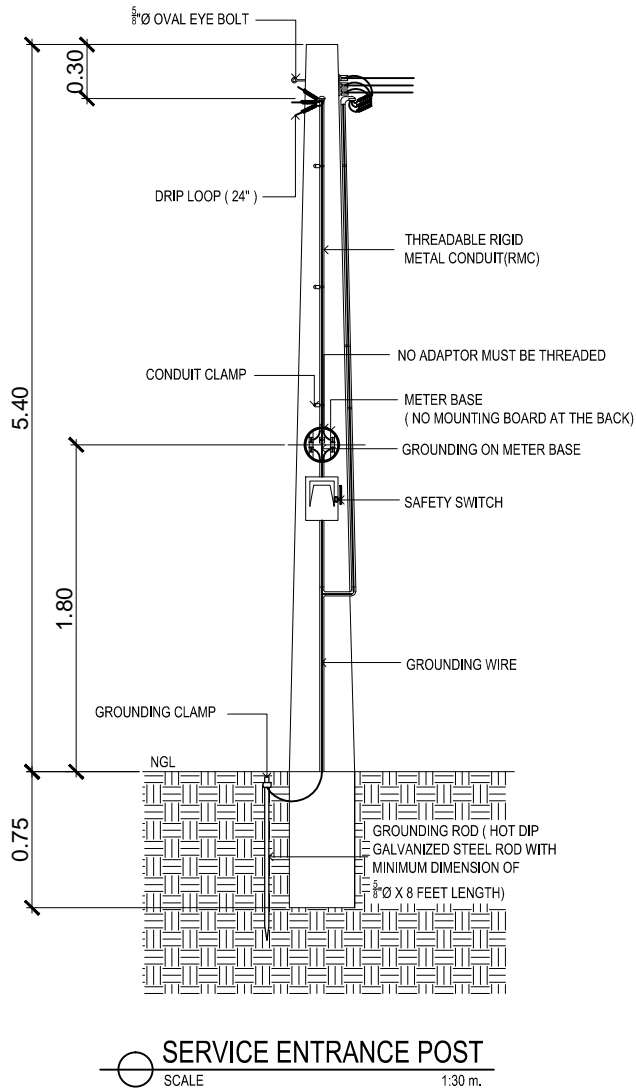
SCHEDULE OF LOADS						
CKT. NO.	LOAD DESCRIPTION	WATTS	VOLTS	BREAKER	SIZE OF WIRES	CONDUITS
1	30Hp Submersible motor	22371	230	2P,100A,230V.	3-38mm ϕ + 14mm ² (G) THHN Cable	20mm ϕ PVC PIPE
2	5-Convenience Outlet & 2-Exhaust Fan	1100	230	2P,20A,230V.	2-3.5mm ² THHN	20mm ϕ PVC PIPE
3	5-100w Lighting Outlet 1-500w Spotlight Outlet	1000	230	2P,15A,230V.	2-2.0mm ² THHN	20mm ϕ PVC PIPE
4	SPARE					
TOTAL		24271	230	2P,110A,230V.	5.5mm ² THHN	25mm ϕ PVC PIPE

$A = \frac{24271 \times 0.8}{230} = 84.42 \times 1.25$
 $A = 105.53$ (USE 2-5.5mm THHN & 3.5mm THHN GROUNDING IN 25mm ϕ PVC PIPE)

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<p>CALAMBA WATER DISTRICT ENGINEERING DEPARTMENT PLANNING AND DESIGN DIVISION</p> <p>LAKEVIEW SUBD., HALANG, CALAMBA CITY</p>	PROJECT TITLE:	DRAWN BY:	SHEET CONTENTS:	DATE: 03/30/2020
	PROPOSED PUMPING STATION	DESIGNED BY:	ELECTRICAL LAYOUT SCHEDULE OF LOADS RISER DIAGRAM	SHEET NO.
		RECOMMENDED BY:		E-1
LOCATION: Landmark Subd., Calamba City, Laguna	APPROVED BY:			

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ELECTRICAL SPECIFICATION

A. GENERAL SPECIFICATIONS:

- The work under this Division consists of furnishing all materials, equipment, tools, labor and all other services necessary to complete and make ready for operation the Electrical Power described below and or indicated in the Electrical Plans and Specifications in accordance with the latest edition of the Philippine Electrical Code with the Local Requirements of the Utility. Companies concerned and with the Local Government.
- Service to the Pump and Motor Load must 440v, 3Ø, 3w+1G Power System. And service to the Perimeter Lighting must be 230v, 1Ø, 2w+ 1G power system and service to Pump and Motor Load for single phase location.
- The Low Voltage Cables are THHN Insulated, Stranded, and Copper Conductor.
- All Ground Wires shall be Insulated Grounds.
- Cable sizes are selected by applying appropriate de-rating factors for ambient conditions of installations as per PEC.
- Power factor for all loads is assumed 0.80.
- Size of grounding wire will be based on PEC Table 3.10.1,16
- Ampacities of feeders supplying continuous loads are taken as 125% of Full Load Current as per PEC.
- All electrical materials shall be new and listed with the Underwriters Laboratories, Inc., shall meet their requirements and shall bear their label wherever standards have been established and label service is regularly furnished by that agency.
- Mounting height shall be as follows:
 - Convenience outlet shall be 300mm above floor finish
 - Convenience outlet shall be 300mm above lavatories
 - Wall switches shall be 1400mm on center from floor finish.
- Wiring Method shall be as follows:
 - Poly Vinyl Chloride (PVC) or Unplasticized Poly Vinyl Chloride (uPVC) - Used when embedded in concrete wall or masonry and can be laid underground within 500mm deep from earth grade.
 - Rigid Steel Conduit (RSC) - Used in exposed/wet location and can be laid underground within 200mm deep from earth grade.
- For easily identify the polarity, use color coded THHN/THWN and TW stranded copper conductor.
 - RED - positive or line 1
 - YELLOW - negative or line 2
 - BLUE - line 3
 - GREEN - ground
 - WHITE - neutral or lineside ground
 - BLACK - homerun or Main Feederline
- PVC and metal conduit shall be joined to junction boxes and pull box to make a grid and waterproof connection. If metal conduit is used, an insulated busing shall be provided at the end of the metal conduit on the inside of the junction box or pull box to prevent scuffing of the cable insulation.
- All works herein shall be done under the strict supervision of duly LICENSE ELECTRICAL ENGINEER.

B. LIGHTING FIXTURES SPECIFICATIONS:

All luminaires and ballasts shall be certified by the manufacturer

Fixture Type A

- 18W CFL w/ 4" Vertical Type Downlight, Aluminum Glossy Reflector and White Baked Finish Steel

Fixture Type B

- 30W Floodlight (CFL Type Lamp)

C. OUTLETS AND SWITCHES SPECIFICATIONS:

- Duplex Wide Series Universal Convenience Outlet - grounding type w/ faceplate, 15A, 230V, 1-phase
- 1-gang Normal Switch (Wide Series), 10A, 230V
- 2-gang Normal Switch (Wide Series), 10A, 230V
- 3-gang Normal Switch (Wide Series), 10A, 230V

D. PULL BOX (S), JUNCTION BOX(S) AND UTILITY BOX(S) SPECIFICATIONS:

- The junction box cover shall be made watertight and a suitable gasket and secured with stainless steel or cadmium plated screws or bolts
- Junction boxes shall be stainless steel.
- Junction boxes shall be flanged and designed for flush mounting if encased in concrete, or designed for surface mounting if external mounting is specified.
- Junction boxes shall be drilled or tapped for all conduit connections. Junction boxes shall be installed such that covers removable.

E. PANEL BOARD, MOTOR CONTROLLER AND MANUAL TRANSFER SWITCH SPECIFICATIONS:

- Factory assembly
- The panelboards shall be UL Listed.
- GENERAL: Except as otherwise indicated, provide panelboards, enclosures and ancillary components of types, sizes, and ratings indicated, which comply with manufacturer's standard materials, design and construction in accordance with published product information; equip with number of unit panelboard devices as required for complete installation. Where more than one type of component meets indicated requirements, selection is installer's option. Where types, sizes, or ratings are not indicated, comply with PEC, UL and established industry standards for applications indicated.
- ENCLOSURES: Provide galvanized sheet steel cabinet type enclosures, in sizes NEMA types as indicated, code-gage, minimum 16-gauge thickness. Construct with multiple knockouts and wiring gutters. Provide fronts with adjustable indicating trim clamps, and doors with flush locks and keys, all panelboard enclosures keyed alike, with concealed door hinges and door swings Equip with interior circuit-directory frame, and card with clear plastic covering. Provide POWDER COATED GRAY finish.
- Wet location panelboards shall be NEMA 4 enclosures/
- Use NEMA 1 enclosures for indoor use, primarily to provide a degree of protection against limited amounts of falling dirt.
- Use NEMA 3R enclosures for outdoor use, primarily to provide a degree of protection against rain, sleet, and damage from external ice formation.
- Equipment shall have a nameplate installed and mounted to the front cover and indicate: panelboard type, amp rating, voltage rating and short-circuit current rating.

LEGEND:

- 18W compact fluorescent lamp (CFL)
- 1-Gang Normal Switch (Wide Series), 10 A, 230V
- Duplex Wide Series Universal Convenience Outlet, Beige in color, 230V with amperage as required with grounding. Tandem with grounding, 15A, 250V
- Wall Fan Outlet Duplex Wide Series Universal Convenience Outlet, Beige in color, 230V with amperage as required with grounding. Tandem with grounding, 15A, 250V
- Weatherproof Outlet Duplex Wide Series Universal Convenience Outlet, Beige in color, 230V with amperage as required with grounding. Tandem with grounding, 15A, 250V
- Exhaust Fan
- Switch, Power and Lightig Lay-out
- Circuit Number

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W CALAMBA WATER DISTRICT
 ENGINEERING DEPARTMENT
 PLANNING AND DESIGN DIVISION

247 Public Service

LAKEVIEW SUBD., HALANG, CALAMBA CITY

PROJECT TITLE:

PROPOSED PUMPING STATION

LOCATION: Landmark Subd., Calamba City, Laguna

DRAWN BY:

A. L. DEL PRADO

DESIGNED BY:

PEDRO ESTALAR

RECOMMENDED BY:

ENGR. R. S. CARTAGO

APPROVED BY:

MR. E. A. AGUILAR JR.

SHEET CONTENTS:

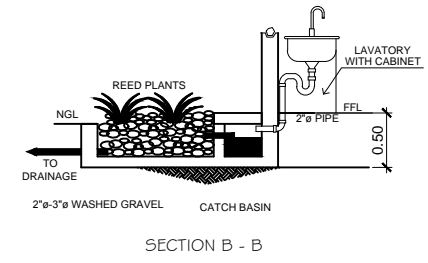
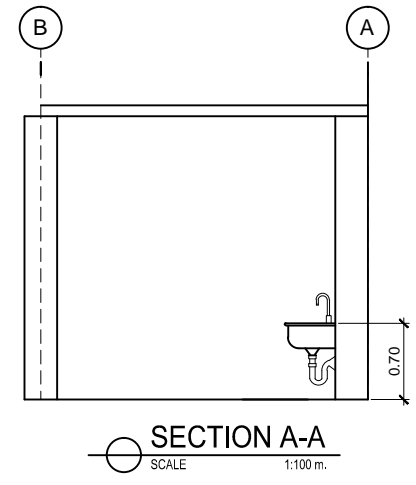
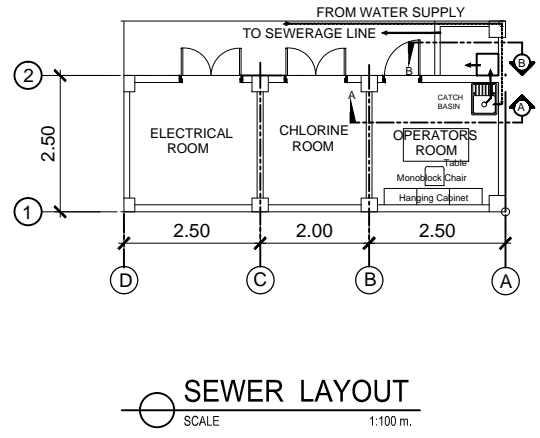
DETAIL OF ELECTRICAL
 CONCRETE POST
 ELECTRICAL SPECIFICATION
 LEGEND

DATE: 03/30/2020


SHEET NO.

E-2

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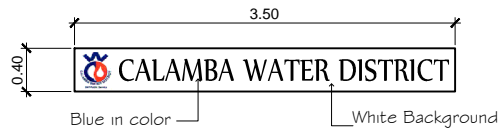
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 <p>CALAMBA WATER DISTRICT ENGINEERING DEPARTMENT PLANNING AND DESIGN DIVISION</p> <p>LAKEVIEW SUBD., HALANG, CALAMBA CITY</p>	PROJECT TITLE:	DRAWN BY: A. L. DEL PRADO	SHEET CONTENTS:	DATE: 03/30/2020
	PROPOSED PUMPING STATION	DESIGNED BY: ENGR. R. S. CARTAGO	SEWER LAYOUT PLANTERS BOX DETAIL	SHEET NO.
		RECOMMENDED BY: ENGR. R. S. CARTAGO		P-1
LOCATION: Landmark Subd., Calamba City, Laguna	APPROVED BY: MR. E. A. AGUILAR JR.			



TANK CAPACITY: 227 lits (maximum)
 DIMENSION: 2.4m(H) x 1.2m(W) x 1.2m(L)

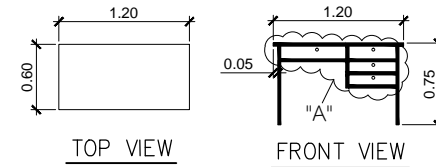
PROPOSED PORTALET



ACRYLIC SIGN

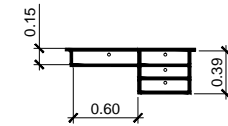


SIGNAGE DETAIL



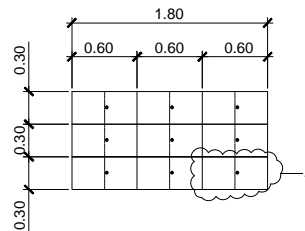
TOP VIEW

FRONT VIEW

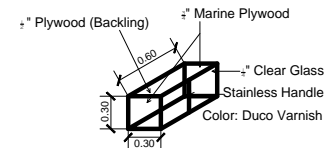


DETAIL "A"

TABLE DETAILS



DETAIL OF HANGING WOOD CABINET




SECTION A OF HANGING WOOD CABINET

- MATERIAL SPECIFICATIONS:**
- 3/4" Marine Plywood
 - 1/2" Plywood (backling)
 - 4" Stainless Hinges
 - Magnetic Catches w/ lockset
 - 4" Stainless Cabinet Handle
 - 1/4" Clear Glass
 - Duco Varnish

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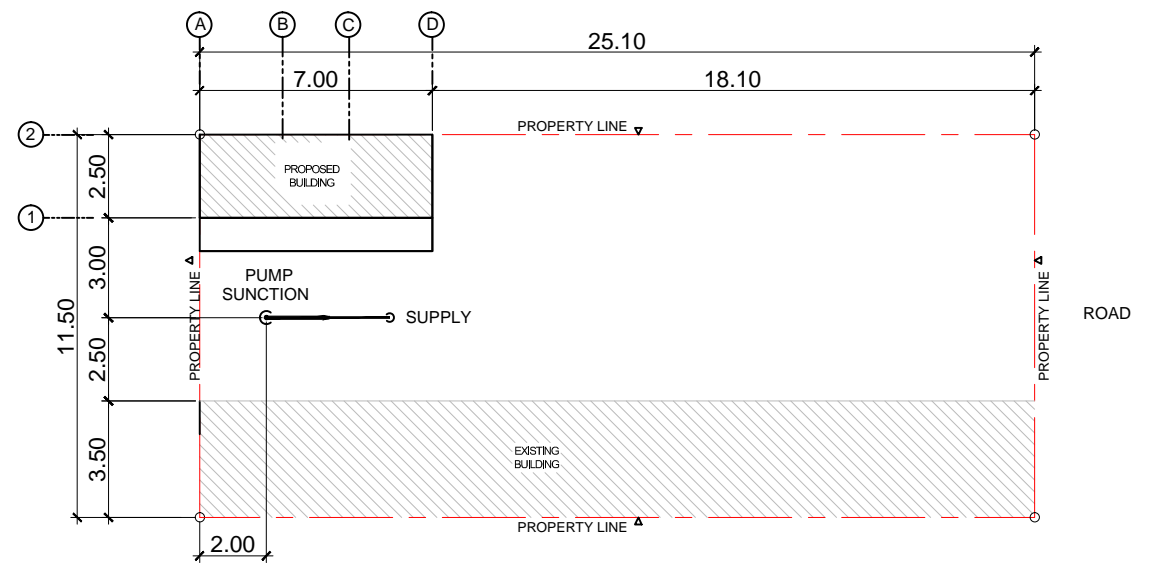
- NOTES:**
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 2. THE DESIGNER SHALL NOT BE LIABLE FOR ANY ALTERATION/ REVISION ON THE PLANS/ DRAWINGS AND SPECIFICATIONS IMPROVED BY THE AUTHORIZED SUPERVISING ENGINEER DONE WITHOUT THEIR KNOWLEDGE THAT MAY IMPAIR THE STRENGTH OF THE PROJECT.

 CALAMBA WATER DISTRICT ENGINEERING DEPARTMENT PLANNING AND DESIGN DIVISION <small>24/7 Public Service</small>	PROJECT TITLE:	DRAWN BY: A. L. DEL PRADO	SHEET CONTENTS:	DATE: 03/30/2020
	PROPOSED PUMPING STATION	DESIGNED BY: ENGR. R. S. CARTAGO	PROPOSED PORTALET DETAIL OF SIGNAGE DETAIL OF HANGING CABINET	SHEET NO.
LAKEVIEW SUBD., HALANG, CALAMBA CITY	RECOMMENDED BY: ENGR. R. S. CARTAGO	APPROVED BY: MR. E. A. AGUILAR JR.		SPECIALTIES
LOCATION: Landmark Subd., Calamba City, Laguna				

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PERSPECTIVE



SITE DEVELOPMENT PLAN

SCALE 1:200 m.

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 LOCATION PLAN

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 SECTION
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 & WINDOWS

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 DETAIL OF SLAB

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 TABLE DETAIL
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 DETAIL OF DISCHARGE PIPE
 CHLORINATION PUMP DETAIL

SPECIALTIES
 SIGNAGE DETAIL
 TABLE DETAIL
 HANGING WOOD CABINET DETAIL

REPUBLIC OF THE PHILIPPINES
 DEPARTMENT of PUBLIC WORKS
 TRANSPORTATION and
 COMMUNICATION
 OFFICE OF THE BUILDING OFFICIAL

DISTRICT / CITY / MUNICIPALITY

LAND USE & ZONING

LINE & GRADE

ARCHITECTURAL

STRUCTURAL

MECHANICAL

ELECTRICAL

PLUMBING

CALAMBA WATER DISTRICT
 ENGINEERING DEPARTMENT
 PLANNING AND DESIGN DIVISION
 LAKEVIEW SUBD., HALANG, CALAMBA CITY

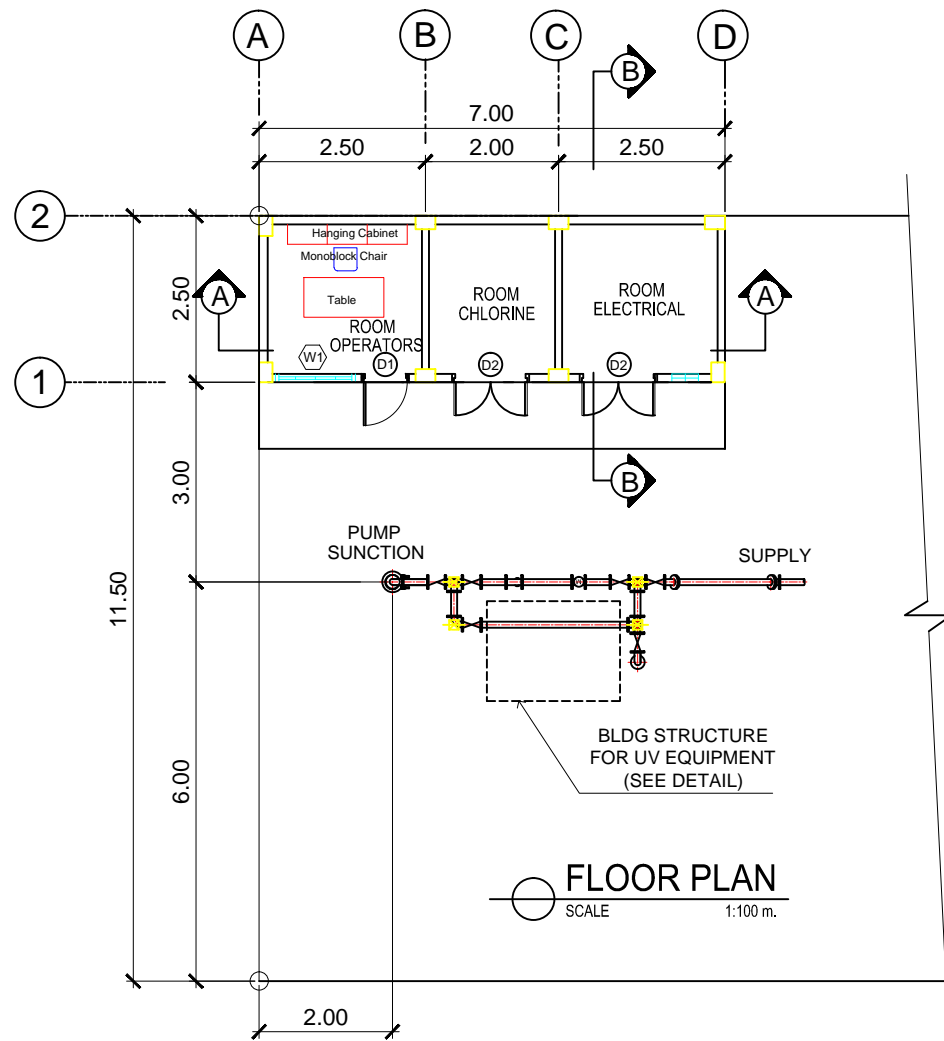
PROJECT TITLE:
PROPOSED PUMPING STATION
 LOCATION: Brgy. Halang, Calamba City, Laguna

DRAWN BY: A. L. DEL PRADO
 DESIGNED BY: ENGR. R. S. CARTAGO
 RECOMMENDED BY: ENGR. R. S. CARTAGO
 APPROVED BY: MR. E. A. AGUILAR JR.

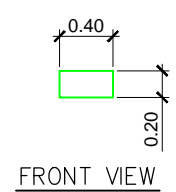
SHEET CONTENTS:
 PERSPECTIVE
 SITE DEVELOPMENT PLAN
 LOCATION PLAN

DATE: 11/03/2020
 SHEET NO.
CS

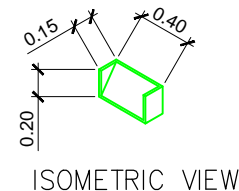
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FLOOR PLAN
SCALE 1:100 m.

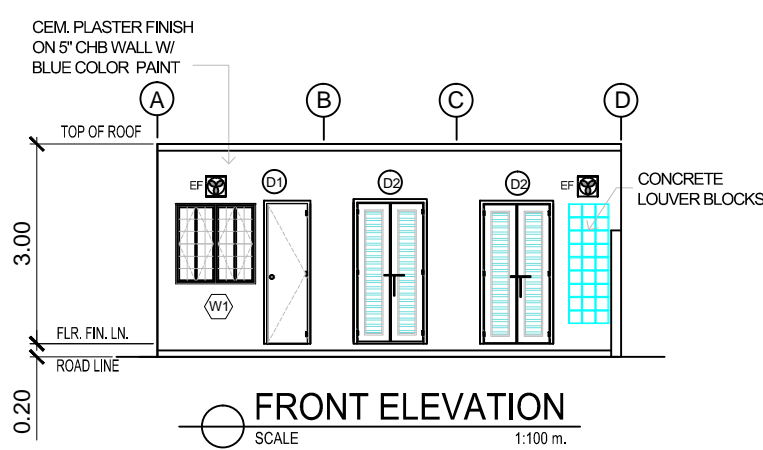


FRONT VIEW

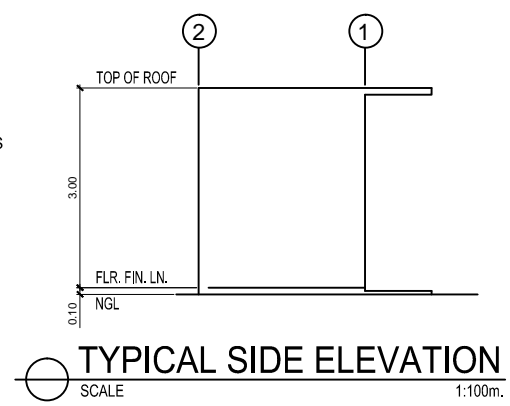


ISOMETRIC VIEW

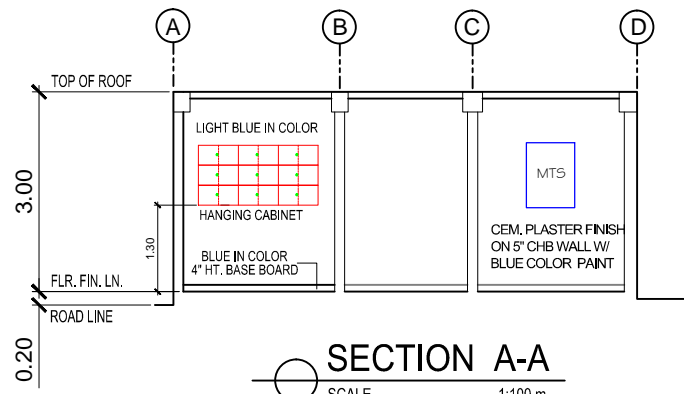
DETAIL OF CONCRETE LOUVER



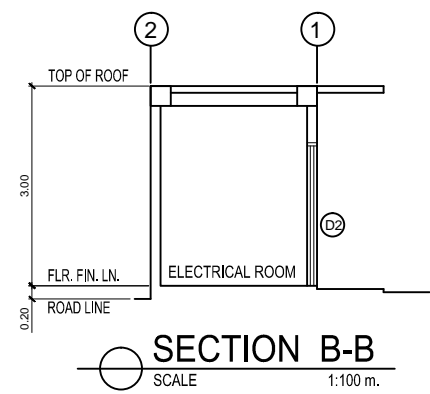
FRONT ELEVATION
SCALE 1:100 m.



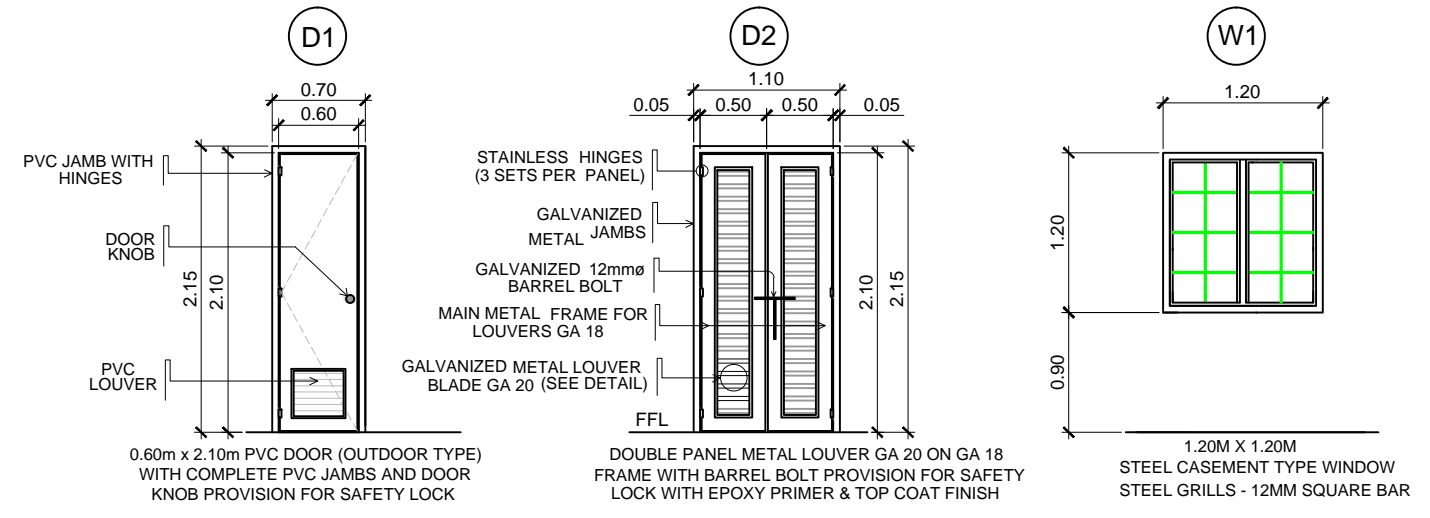
TYPICAL SIDE ELEVATION
SCALE 1:100m.



SECTION A-A
SCALE 1:100 m.




SECTION B-B
SCALE 1:100 m.

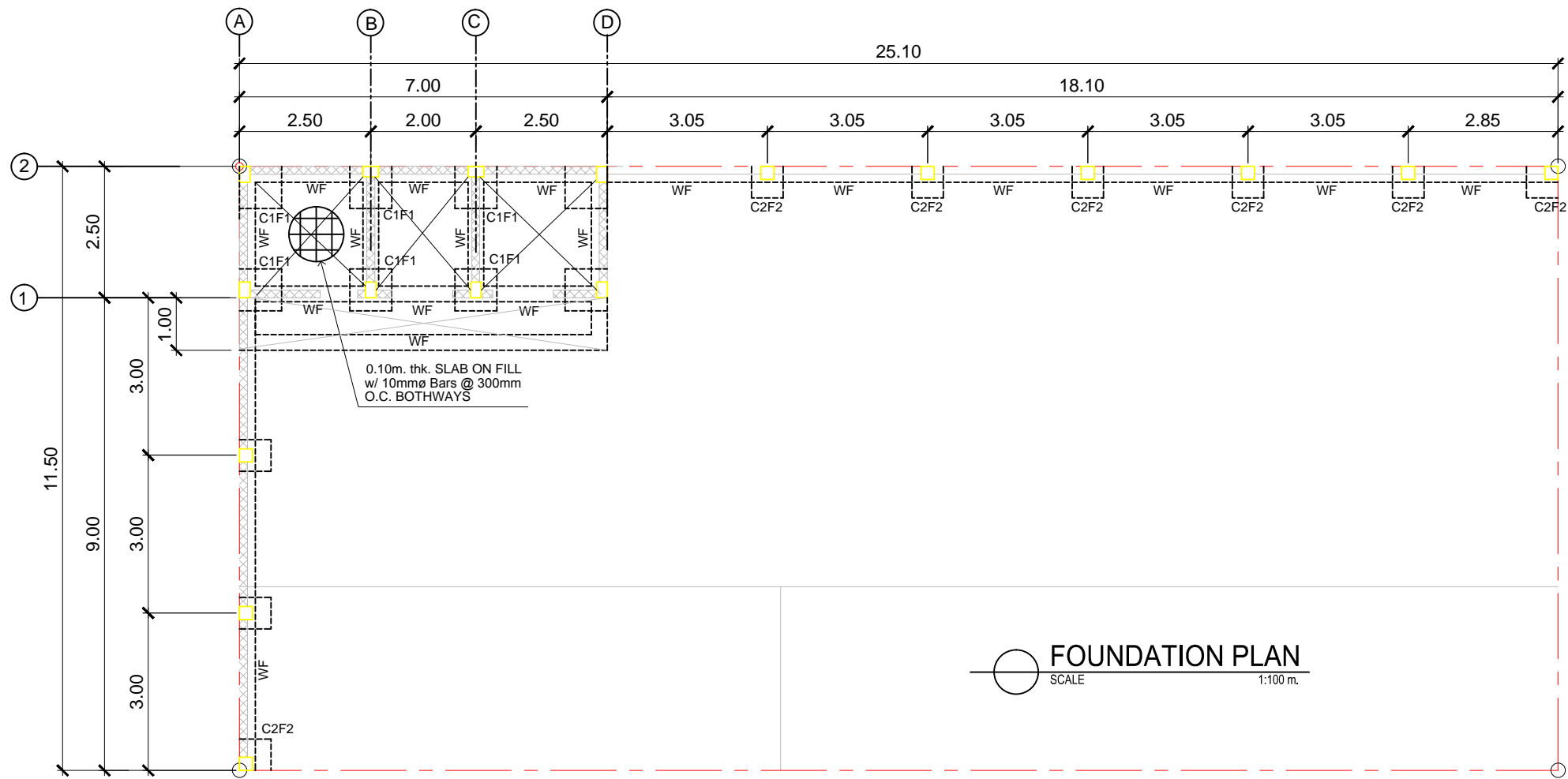


SCHEDULE OF DOORS & WINDOW
SCALE 1:50 m.

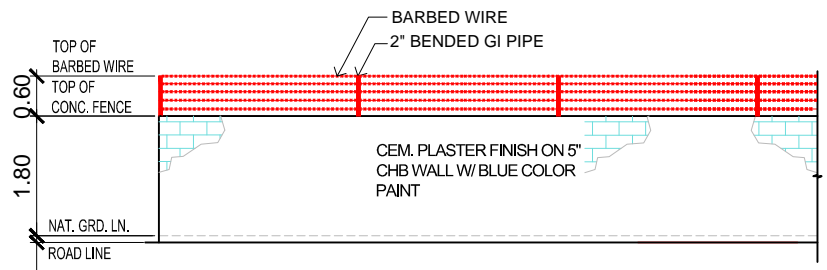
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 CALAMBA WATER DISTRICT ENGINEERING DEPARTMENT PLANNING AND DESIGN DIVISION LAKEVIEW SUBD., HALANG, CALAMBA CITY	PROJECT TITLE:	DRAWN BY:	SHEET CONTENTS:	DATE: 11/03/2020
	PROPOSED PUMPING STATION	A. L. DEL PRADO	FLOOR PLAN ELEVATION SECTION SCHEDULE OF DOORS & WINDOWS	SHEET NO.
LOCATION: Brgy. Halang, Calamba City, Laguna	DESIGNED BY:	RECOMMENDED BY:	A-1	
	ENGR. R. S. CARTAGO	ENGR. R. S. CARTAGO		
	APPROVED BY:	MR. E. A. AGUILAR JR.		

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FOUNDATION PLAN
SCALE 1:100 m.

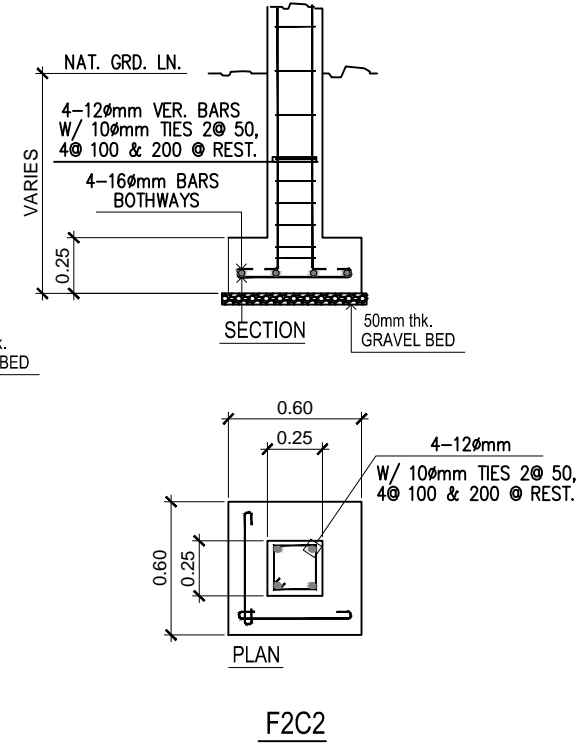
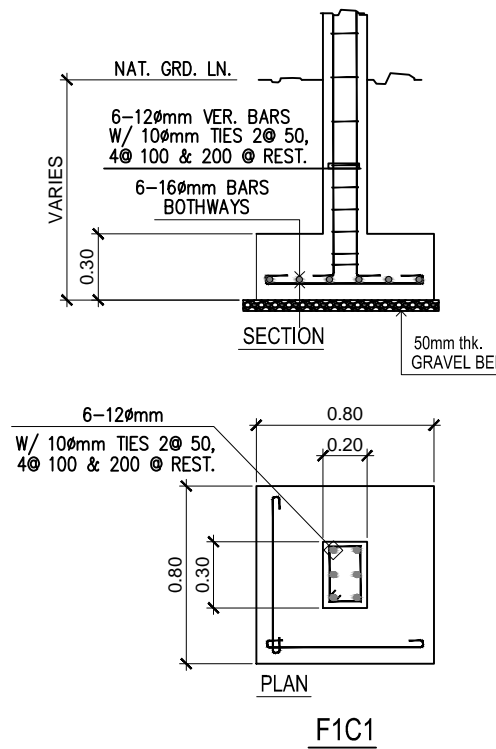
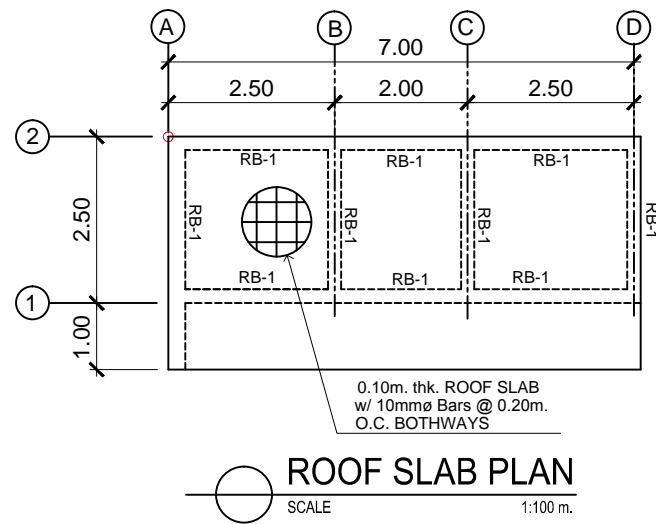


TYPICAL ELEVATION OF FENCE
SCALE 1:100 m.

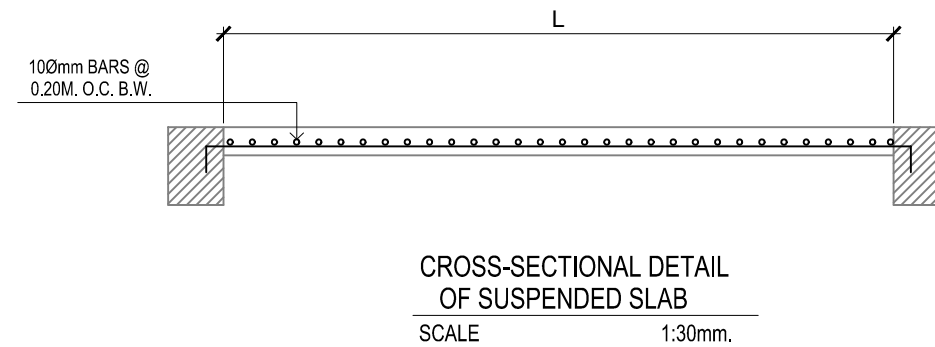
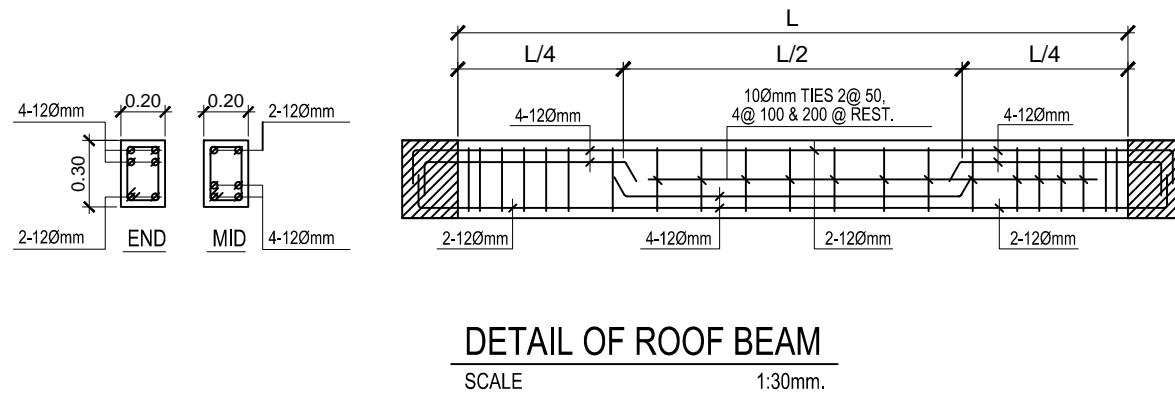
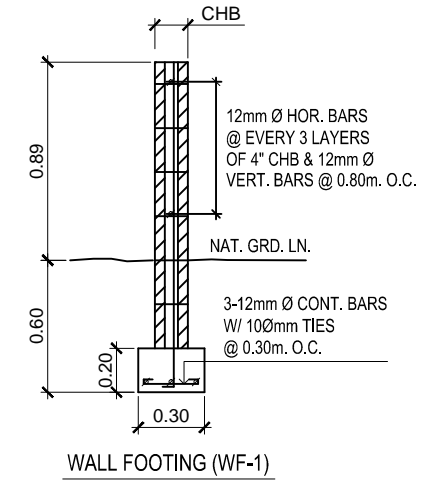
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 CALAMBA WATER DISTRICT ENGINEERING DEPARTMENT PLANNING AND DESIGN DIVISION 24/7 Public Service	PROJECT TITLE:	DRAWN BY: A. L. DEL PRADO	SHEET CONTENTS:	DATE: 11/03/2020
	PROPOSED PUMPING STATION	DESIGNED BY: ENGR. R. S. CARTAGO	FOUNDATION PLAN TYPICAL ELEVATION OF FENCE	SHEET NO.
LAKEVIEW SUBD., HALANG, CALAMBA CITY	LOCATION: Brgy. Halang, Calamba City, Laguna	RECOMMENDED BY: ENGR. R. S. CARTAGO		S-1
		APPROVED BY: MR. E. A. AGUILAR JR.		


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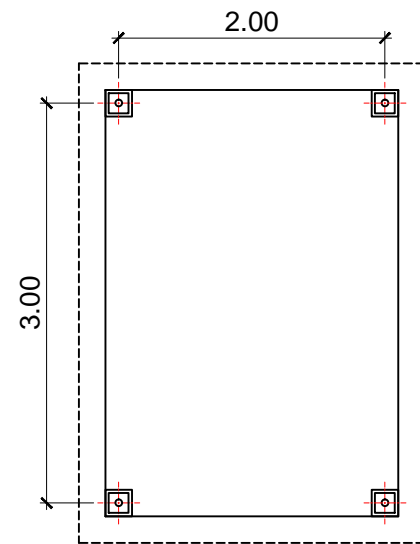
DETAIL OF FOOTINGS
SCALE 1:30m.



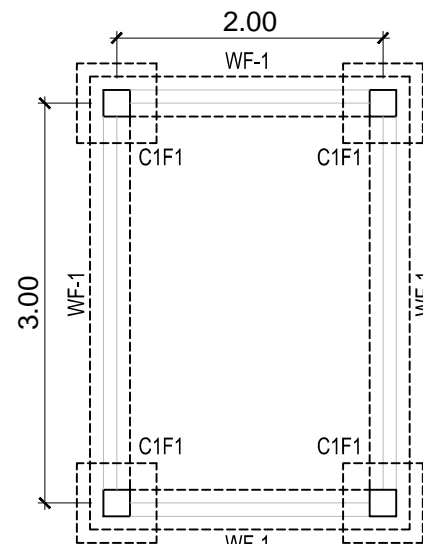
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 CALAMBA WATER DISTRICT ENGINEERING DEPARTMENT PLANNING AND DESIGN DIVISION LAKEVIEW SUBD., HALANG, CALAMBA CITY	PROJECT TITLE:	DRAWN BY:	A. L. DEL PRADO	SHEET CONTENTS:	DATE: 11/03/2020
	PROPOSED PUMPING STATION	DESIGNED BY:	ENGR. R. S. CARTAGO	ROOF DECK PLAN DETAIL OF FOOTINGS DETAIL OF COLUMN DETAIL OF GRADE BEAM	SHEET NO.
	LOCATION: Brgy. Halang, Calamba City, Laguna	RECOMMENDED BY:	ENGR. R. S. CARTAGO		S-2
		APPROVED BY:	MR. E. A. AGUILAR JR.		

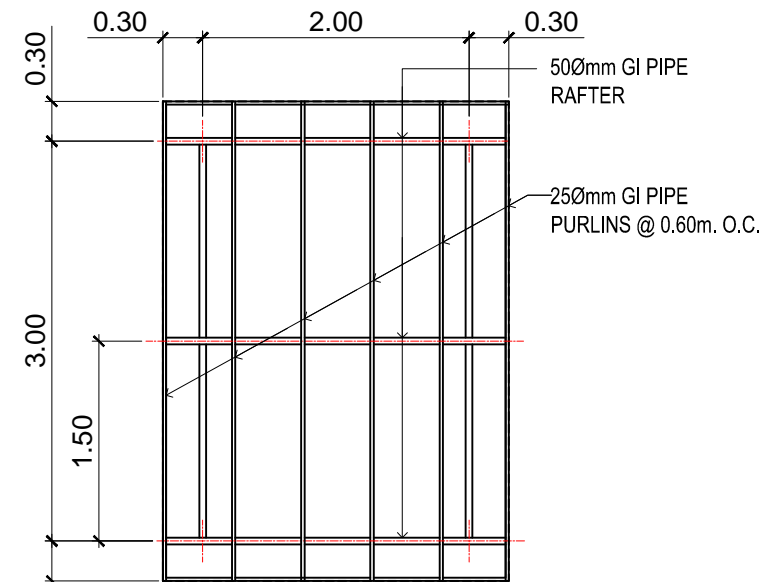
TYPICAL UV ENCLOSURE



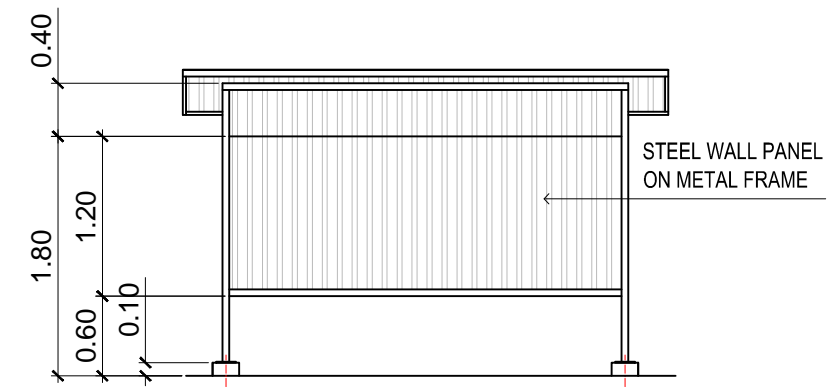
FLOOR PLAN
SCALE 1:50 m.



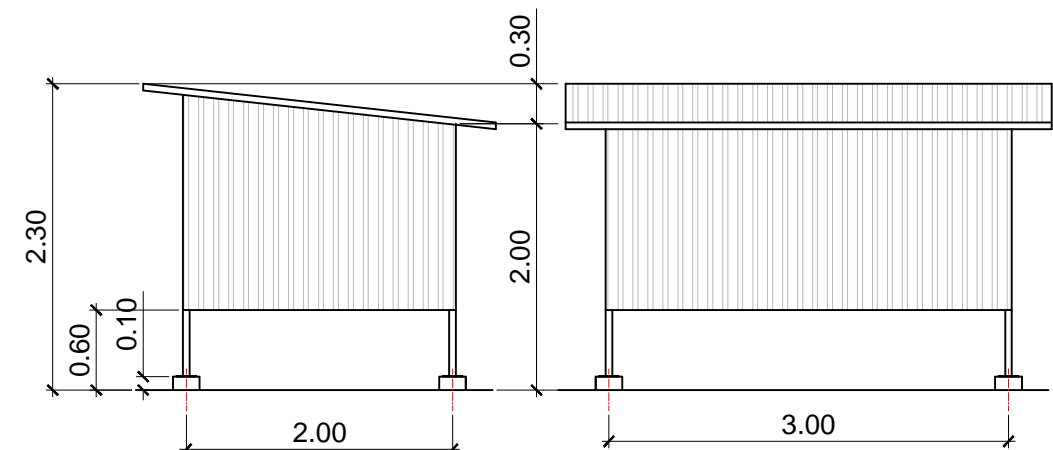
FOUNDATION PLAN
SCALE 1:50 m.



ROOF FRAMING PLAN
SCALE 1:50 m.

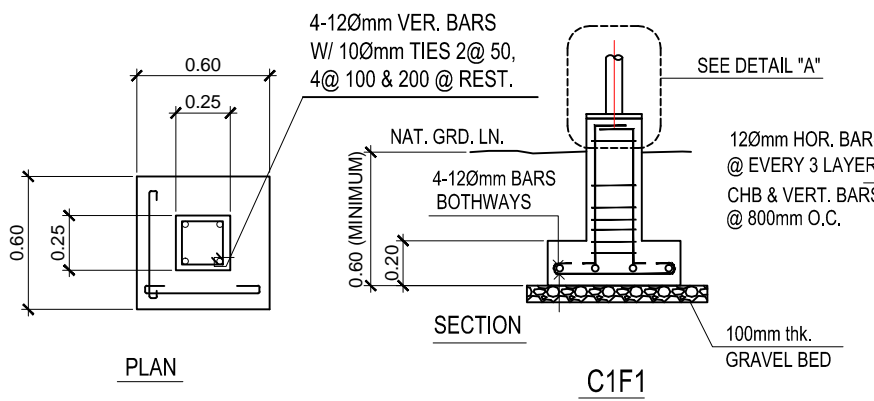


FRONT ELEVATION
SCALE 1:50 m.

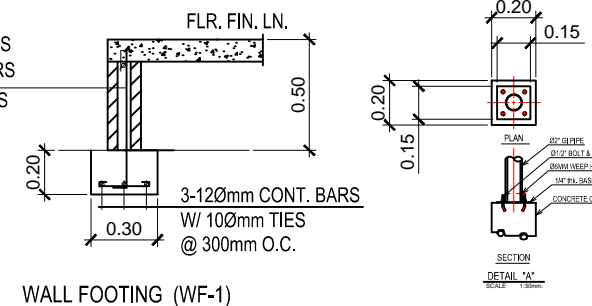


SIDE ELEVATION
SCALE 1:50 m.

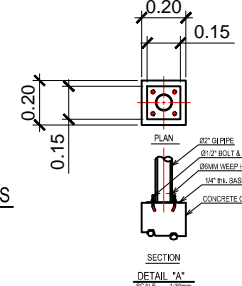
REAR ELEVATION
SCALE 1:50 m.



DETAIL OF FOOTINGS
SCALE: 1:30 M.




WALL FOOTING (WF-1)



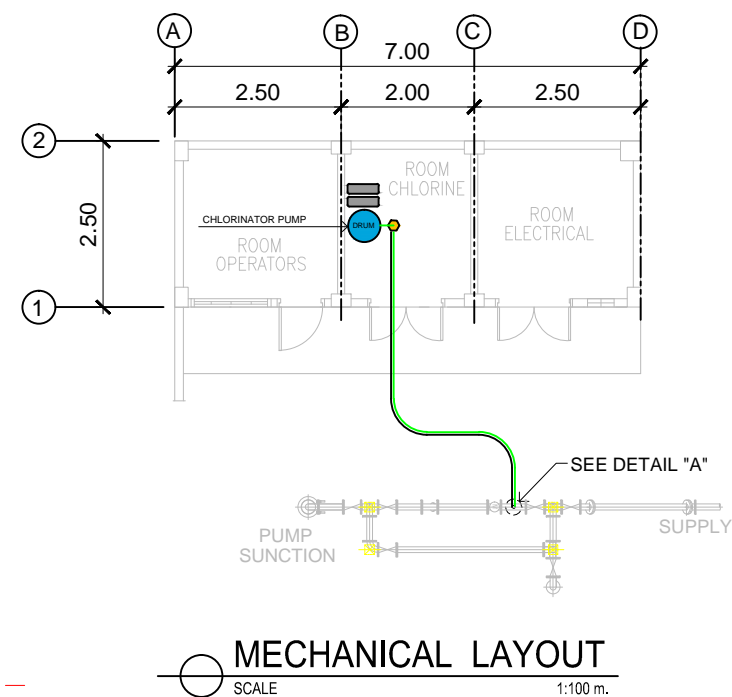
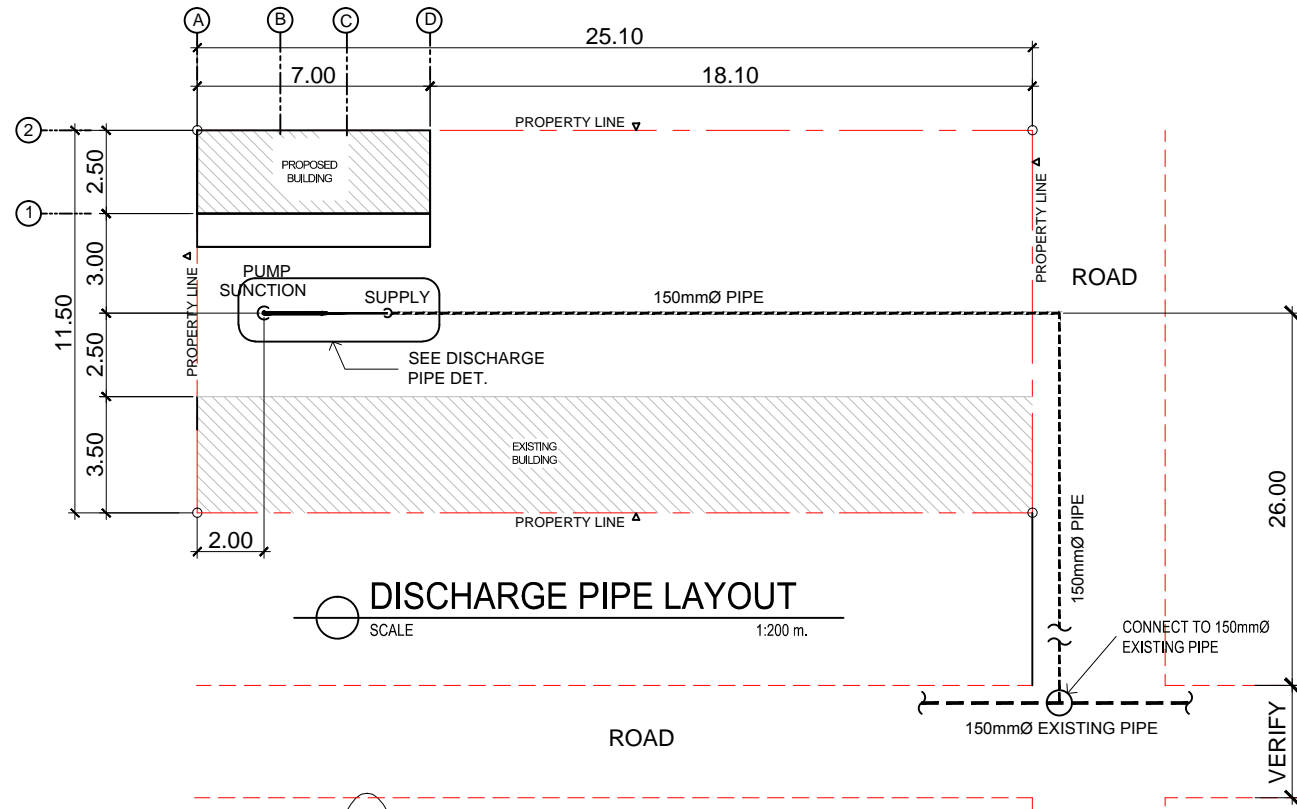
DETAIL "A"

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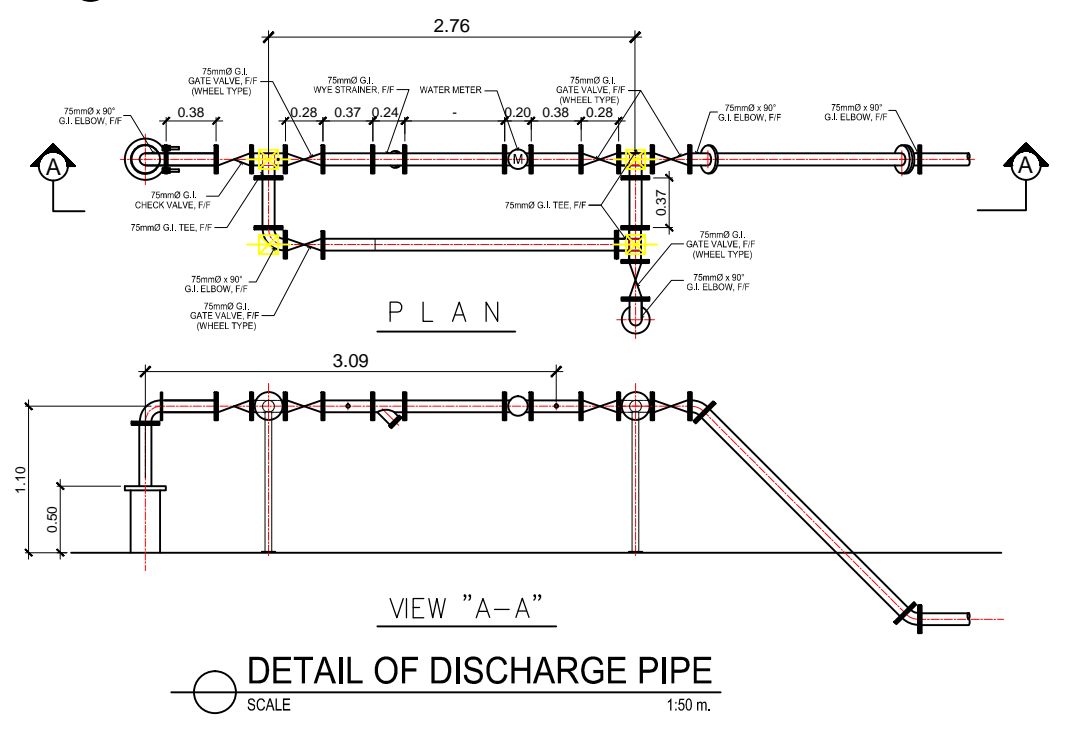
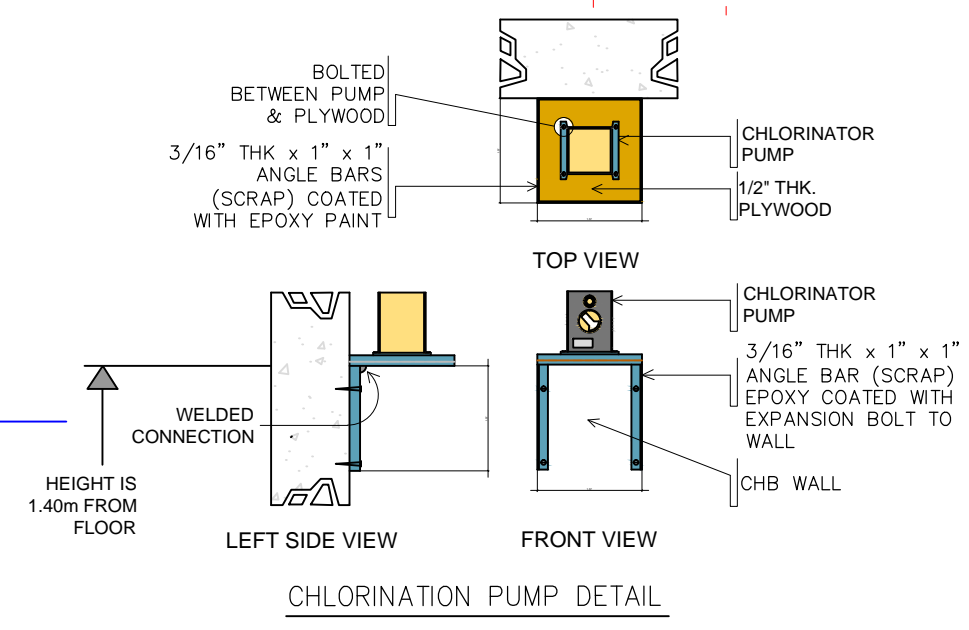
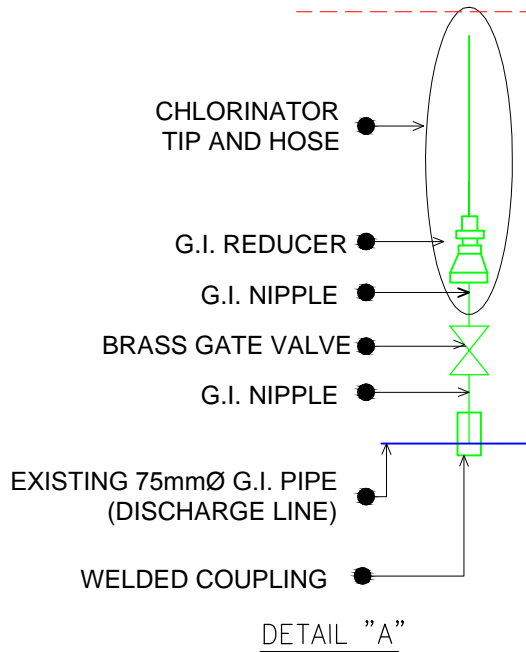
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 <p>CALAMBA WATER DISTRICT ENGINEERING DEPARTMENT PLANNING AND DESIGN DIVISION 24/7 Public Service</p>	PROJECT TITLE:	DRAWN BY:	A. L. DEL PRADO	SHEET CONTENTS:	DATE: 11/03/2020
	PROPOSED PUMPING STATION	DESIGNED BY:	ENGR. R. S. CARTAGO	UV ENCLOSURE FLOOR PLAN FOUNDATION PLAN ROOF FRAMING PLAN	SHEET NO.
LAKEVIEW SUBD., HALANG, CALAMBA CITY	LOCATION: Brgy. Halang, Calamba City, Laguna	RECOMMENDED BY:	ENGR. R. S. CARTAGO		S-3
		APPROVED BY:	MR. E. A. AGUILAR JR.		

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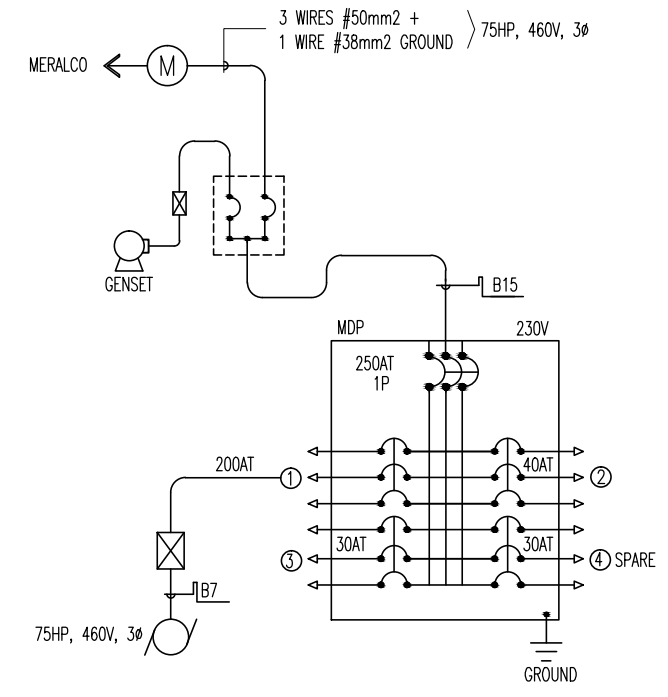
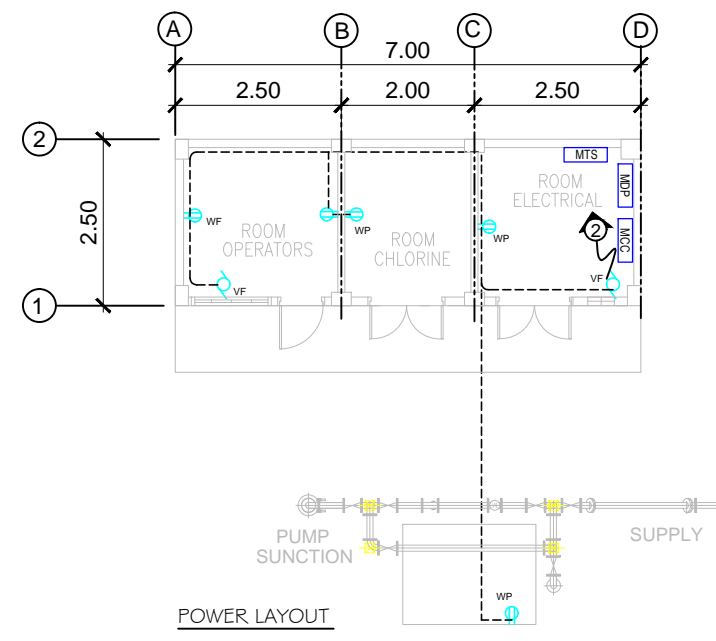
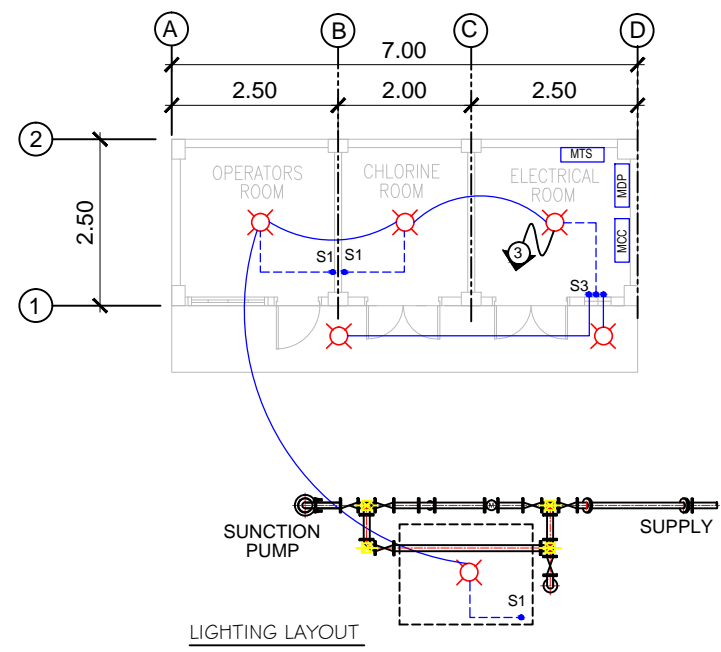


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 CALAMBA WATER DISTRICT ENGINEERING DEPARTMENT PLANNING AND DESIGN DIVISION 24/7 Public Service	PROJECT TITLE:	DRAWN BY:	SHEET CONTENTS:	DATE: 11/03/2020
	PROPOSED PUMPING STATION	DESIGNED BY:	MECHANICAL LAYOUT CHLORINATION PUMP DETAIL DETAIL OF DISCHARGE PIPE	SHEET NO.
LAKEVIEW SUBD., HALANG, CALAMBA CITY	LOCATION: Brgy. Halang, Calamba City, Laguna	RECOMMENDED BY:	M-1	
		APPROVED BY:		

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ELECTRICAL LAYOUT

SCALE 1:100 m.

FEEDER RISER DIAGRAM

- LEGEND:**
- 18W compact fluorescent lamp (CFL)
 - 1-Gang Normal Switch (Wide Series), 10 A, 230V
 - Duplex Wide Series Universal Convenience Outlet, Beige in color, 230V with amperage as required with grounding. Tandem with grounding, 15A, 250V
 - Wall Fan Outlet Duplex Wide Series Universal Convenience Outlet, Beige in color, 230V with amperage as required with grounding. Tandem with grounding, 15A, 250V
 - Weatherproof Outlet Duplex Wide Series Universal Convenience Outlet, Beige in color, 230V with amperage as required with grounding. Tandem with grounding, 15A, 250V
 - Exhaust Fan
 - Switch, Power and Lightig Lay-out
 - Circuit Number

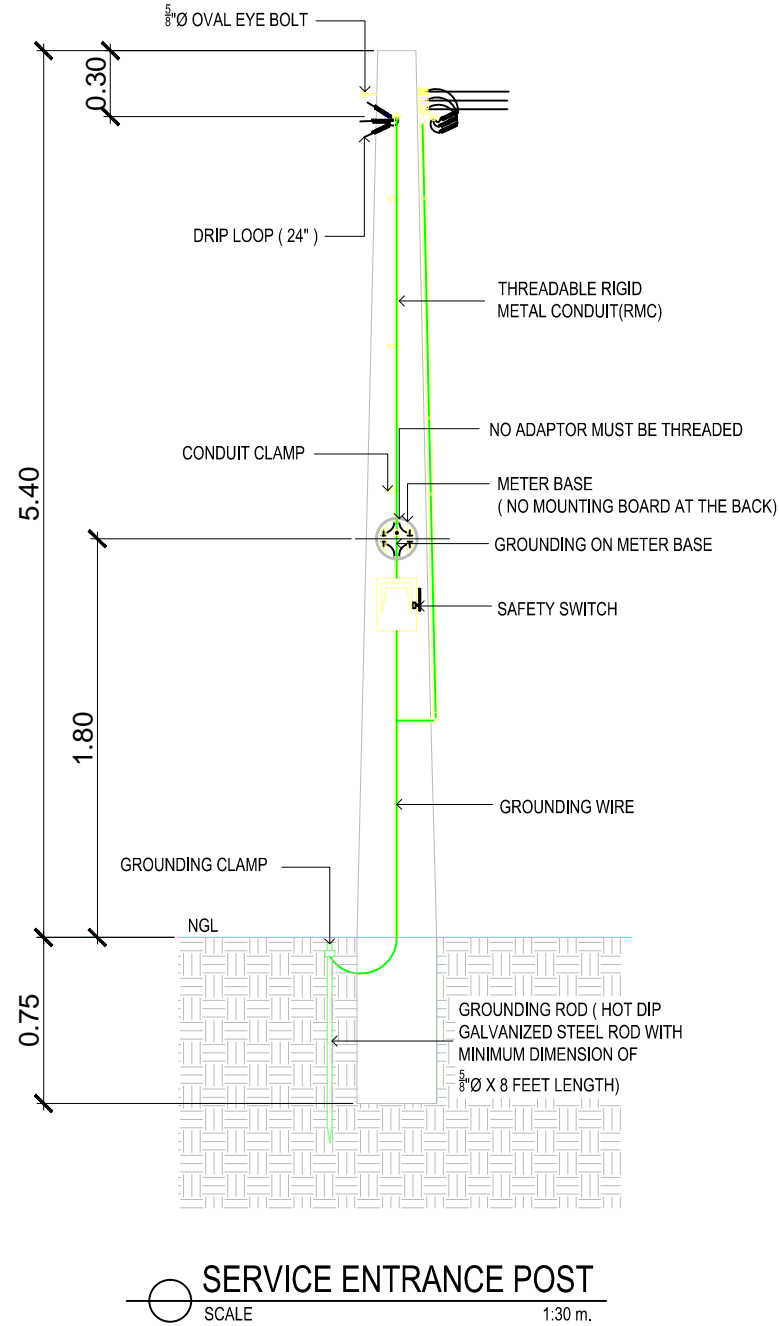
SCHEDULE OF LOADS						
CKT. NO.	LOAD DESCRIPTION	WATTS	VOLTS	BREAKER	SIZE OF WIRES	CONDUITS
1	30Hp Submersible motor	22371	230	2P,100A,230V.	3-38mm ϕ + 14mm 2 (G) THHN Cable	20mm ϕ PVC PIPE
2	5-Convenience Outlet & 2-Exhaust Fan	1100	230	2P,20A,230V.	2-3.5mm 2 THHN	20mm ϕ PVC PIPE
3	5-100w Lighting Outlet 1-500w Spotlight Outlet	1000	230	2P,15A,230V.	2-2.0mm 2 THHN	20mm ϕ PVC PIPE
4	SPARE					
TOTAL		24271	230	2P,110A,230V.	5.5mm2 THHN	25mmϕ PVC PIPE

$A = \frac{24271 \times 0.8}{230} = 84.42 \times 1.25$
 $A = 105.53$ (USE 2-5.5mm THHN & 3.5mm THHN GROUNDING IN 25mm ϕ PVC PIPE)

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 CALAMBA WATER DISTRICT ENGINEERING DEPARTMENT PLANNING AND DESIGN DIVISION LAKEVIEW SUBD., HALANG, CALAMBA CITY	PROJECT TITLE:	DRAWN BY: A. L. DEL PRADO	SHEET CONTENTS:	DATE: 11/03/2020
	PROPOSED PUMPING STATION	DESIGNED BY: PEDRO ESTALAR	ELECTRICAL LAYOUT SCHEDULE OF LOADS RISER DIAGRAM	SHEET NO.
LOCATION: Brgy. Halang, Calamba City, Laguna	RECOMMENDED BY: ENGR. R. S. CARTAGO	E-1		
	APPROVED BY: MR. E. A. AGUILAR JR.			

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ELECTRICAL SPECIFICATION

A. GENERAL SPECIFICATIONS:

- The work under this Division consists of furnishing all materials, equipment, tools, labor and all other services necessary to complete and make ready for operation the Electrical Power described below and or indicated in the Electrical Plans an Specifications in accordance with the latest edition of the Philippine Electrical Code with the Local Requirements of the Utility. Companies concerned and with the Local Government.
- Service to the Pump and Motor Load must 440v, 3Ø, 3w+1G Power System. And service to the Perimeter Lighting must be 230v, 1Ø, 2w+ 1G power system and service to Pump and Motor Load for single phase location.
- The Low Voltage Cables are THHN Insulated, Stranded, and Copper Conductor.
- All Ground Wires shall be Insulated Grounds.
- Cable sizes are selected by applying appropriate de-rating factors for ambient conditions of installations as per PEC.
- Power factor for all loads is assumed 0.80.
- Size of grounding wire will be based on PEC Table 3.10.1.16
- Ampacities of feeders supplying continuous loads are taken as 125% of Full Load Current as per PEC.
- All electrical materials shall be new and listed with the Underwriters Laboratories, Inc., shall meet their requirements and shall bear their label wherever standards have been established and label service is regularly furnished by that agency.
- Mounting height shall be as follows:
 - Convenience outlet shall be 300mm above floor furnish
 - Convenience outlet shall be 300mm above lavatories
 - Wall switches shall be 1400mm on center from floor finish.
- Wiring Method shall be as follows:
 - Poly Vinyl Chloride (PVC) or Unplasticised Poly Vinyl Chloride (uPVC)- Used when embedded in concrete wall or masonry and can be laid underground within 500mm deep from earth grade.
 - Rigid Steel Conduit (RSC) - Used in exposed/wet location and can be laid underground within 200mm deep from earth grade.
- For easily identify the polarity, use color coded THHN/THWN and TW stranded copper conductor.
 - RED - positive or line 1
 - YELLOW - negative or line 2
 - BLUE - line 3
 - GREEN - ground
 - WHITE - neutral or lineside ground
 - BLACK - homerun or Main Feederline
- PVC and metal conduit shall be joined to junction boxes and pull box to make a grid and waterproof connection. If metal conduit is used, an insulated busing shall be provided at the end of the metal conduit on the inside of the junction box or pull box to prevent scuffing of the cable insulation.
- All works herein shall be done under the strict supervision of duly LICENSE ELECTRICAL ENGINEER.

B. LIGHTING FIXTURES SPECIFICATIONS:

All luminaires and ballasts shall be certified by the manufacturer

Fixture Type A

- 18W CFL w/ 4" Vertical Type Downlight, Aluminum Glossy Reflector and White Baked Finish Steel

Fixture Type B

- 30W Floodlight (CFL Type Lamp)

C. OUTLETS AND SWITCHES SPECIFICATIONS:

- Duplex Wide Series Universal Convenience Outlet - grounding type w/ faceplate, 15A, 230V, 1-phase
- 1-gang Normal Switch (Wide Series), 10A, 230V
- 2-gang Normal Switch (Wide Series), 10A, 230V
- 3-gang Normal Switch (Wide Series), 10A, 230V


D. PULL BOX (S), JUNCTION BOX(S) AND UTILITY BOX(S) SPECIFICATIONS:

- The junction box cover shall be made watertight and a suitable gasket and secured with stainless steel or cadmium plated screws or bolts
- Junction boxes shall be stainless steel.
- Junction boxes shall be flanged and designed for flush mounting if encased in concrete, or designed for surface mounting if external mounting is specified.
- Junction boxes shall be drilled or tapped for all conduit connections. Junction boxes shall be installed such that covers removable.

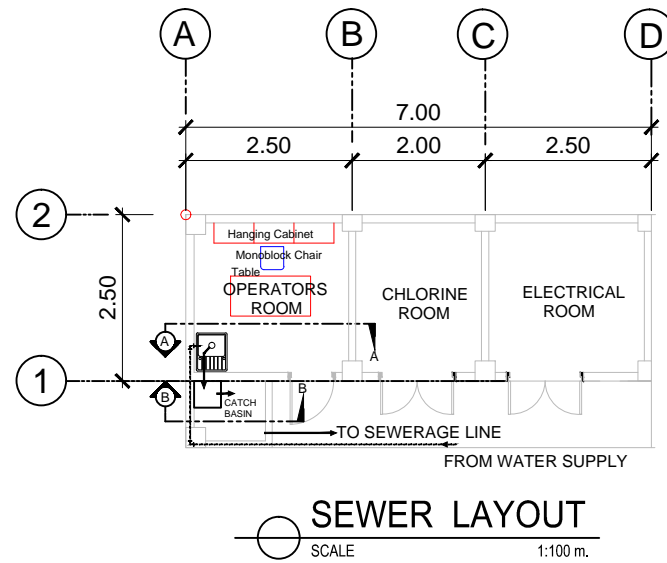
E. PANEL BOARD, MOTOR CONTROLLER AND MANUAL TRANSFER SWITCH SPECIFICATIONS:

- Factory assembly
- The panelboards shall be UL Listed.
- GENERAL: Except as otherwise indicated, provide panelboards, enclosures and ancillary components of types, sizes, and ratings indicated, which comply with manufacturer's standard materials, design and construction in accordance with published product information; equip with number of unit panelboard devices as required for complete installation. Where more than one type of component meets indicated requirements, selection is installer's option. Where types, sizes, or ratings are not indicated, comply with PEC, UL and established industry standards for applications indicated.
- ENCLOSURES: Provide galvanized sheet steel cabinet type enclosures, in sizes NEMA types as indicated, code-gage, minimum 16-gauge thickness. Construct with multiple knockouts and wiring gutters. Provide fronts with adjustable indicating trim clamps, and doors with flush locks and keys, all panelboard enclosures keyed alike, with concealed door hinges and door swings Equip with interior circuit-directory frame, and card with clear plastic covering. Provide POWDER COATED GRAY finish.
- Wet location panelboards shall be NEMA 4 enclosures/
- Use NEMA 1 enclosures for indoor use, primarily to provide a degree of protection against limited amounts of falling dirt.
- Use NEMA 3R enclosures for outdoor use, primarily to provide a degree of protection against rain, sleet, and damage from external ice formation.
- Equipment shall have a nameplate installed and mounted to the front cover and indicate: panelboard type, amp rating, voltage rating and short-circuit current rating.

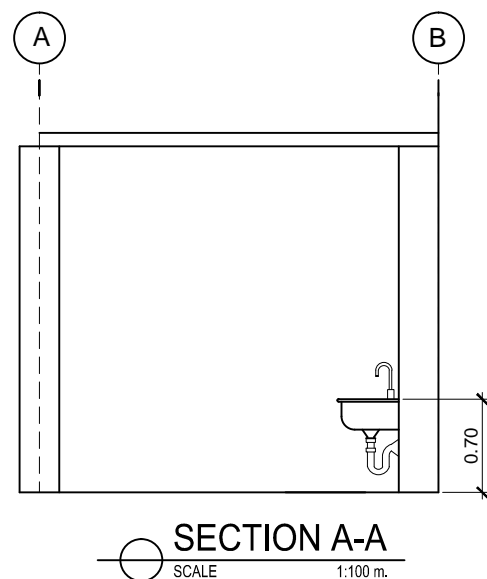
- NOTES:
- ALL SIZES AND LOCATIONS ARE SUBJECT TO CHANGE TO SUIT FIELD CONDITIONS.
 - THE DESIGNER SHALL NOT BE LIABLE FOR ANY ALTERATION/ REVISION ON THE PLANS/ DRAWINGS AND SPECIFICATIONS IMPROVED BY THE AUTHORIZED SUPERVISING ENGINEER DONE WITHOUT THEIR KNOWLEDGE THAT MAY IMPAIR THE STRENGTH OF THE PROJECT.

 <p>CALAMBA WATER DISTRICT ENGINEERING DEPARTMENT PLANNING AND DESIGN DIVISION 24/7 Public Service</p>	PROJECT TITLE:	DRAWN BY:	A. L. DEL PRADO	SHEET CONTENTS:	DATE: 11/03/2020
	LAKEVIEW SUBD., HALANG, CALAMBA CITY	PROPOSED PUMPING STATION	DESIGNED BY:	PEDRO ESTALAR	DETAIL OF ELECTRICAL CONCRETE POST ELECTRICAL SPECIFICATION LEGEND
LOCATION: Brgy. Halang, Calamba City, Laguna		RECOMMENDED BY:	ENGR. R. S. CARTAGO	E-2	
		APPROVED BY:	MR. E. A. AGUILAR JR.		

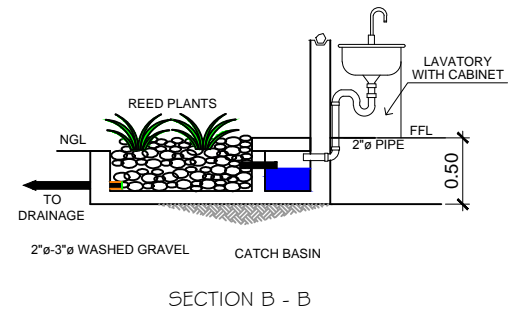
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SEWER LAYOUT
SCALE 1:100 m.




SECTION A-A
SCALE 1:100 m.

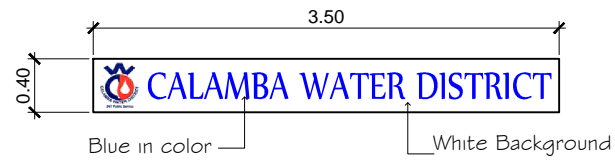


SECTION B - B
PLANTERS BOX DETAIL

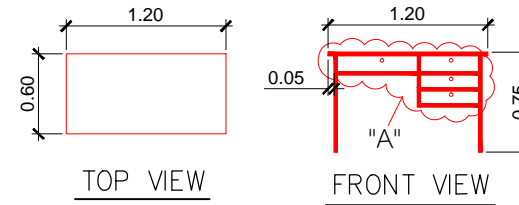
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 CALAMBA WATER DISTRICT ENGINEERING DEPARTMENT PLANNING AND DESIGN DIVISION 24/7 Public Service	PROJECT TITLE:	DRAWN BY: A. L. DEL PRADO	SHEET CONTENTS:	DATE: 11/03/2020
	PROPOSED PUMPING STATION	DESIGNED BY: ENGR. R. S. CARTAGO	SEWER LAYOUT PLANTERS BOX DETAIL	SHEET NO.
LAKEVIEW SUBD., HALANG, CALAMBA CITY	RECOMMENDED BY: ENGR. R. S. CARTAGO	APPROVED BY: MR. E. A. AGUILAR JR.		P-1
	LOCATION: Brgy. Halang, Calamba City, Laguna			

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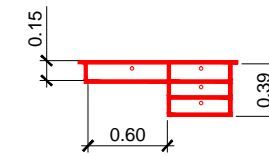


ACRYLIC SIGN



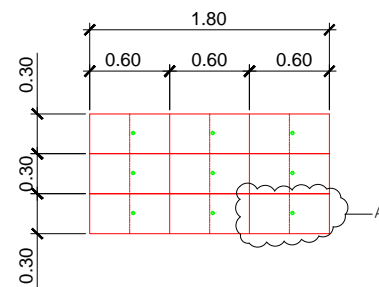
TOP VIEW

FRONT VIEW

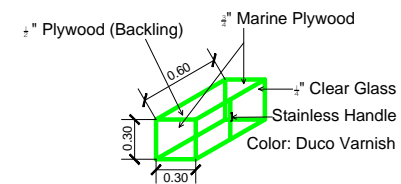


DETAIL "A"

TABLE DETAILS




DETAIL OF HANGING WOOD CABINET



SECTION A OF HANGING WOOD CABINET

- MATERIAL SPECIFICATIONS:
- 3/4" Marine Plywood
 - 1/2" Plywood (backling)
 - 4" Stainless Hinges
 - Magnetic Catches w/ lockset
 - 4" Stainless Cabinet Handle
 - 1/4" Clear Glass
 - Duco Varnish

- NOTES:
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 CALAMBA WATER DISTRICT ENGINEERING DEPARTMENT PLANNING AND DESIGN DIVISION 24/7 Public Service	PROJECT TITLE:	DRAWN BY: A. L. DEL PRADO	SHEET CONTENTS:	DATE: 11/03/2020
	PROPOSED PUMPING STATION	DESIGNED BY: ENGR. R. S. CARTAGO	SEWER LAYOUT PLANTERS BOX DETAIL	SHEET NO.
LAKEVIEW SUBD., HALANG, CALAMBA CITY	LOCATION: Brgy. Halang, Calamba City, Laguna	RECOMMENDED BY: ENGR. R. S. CARTAGO		SPECIALTIES
		APPROVED BY: MR. E. A. AGUILAR JR.		