

PROJECT TITLE:

Solar Powered and Automated Drip Irrigation System

TITLE:

Perspective View

DATE:

August 10, 2023

DESIGN CONCEPT:

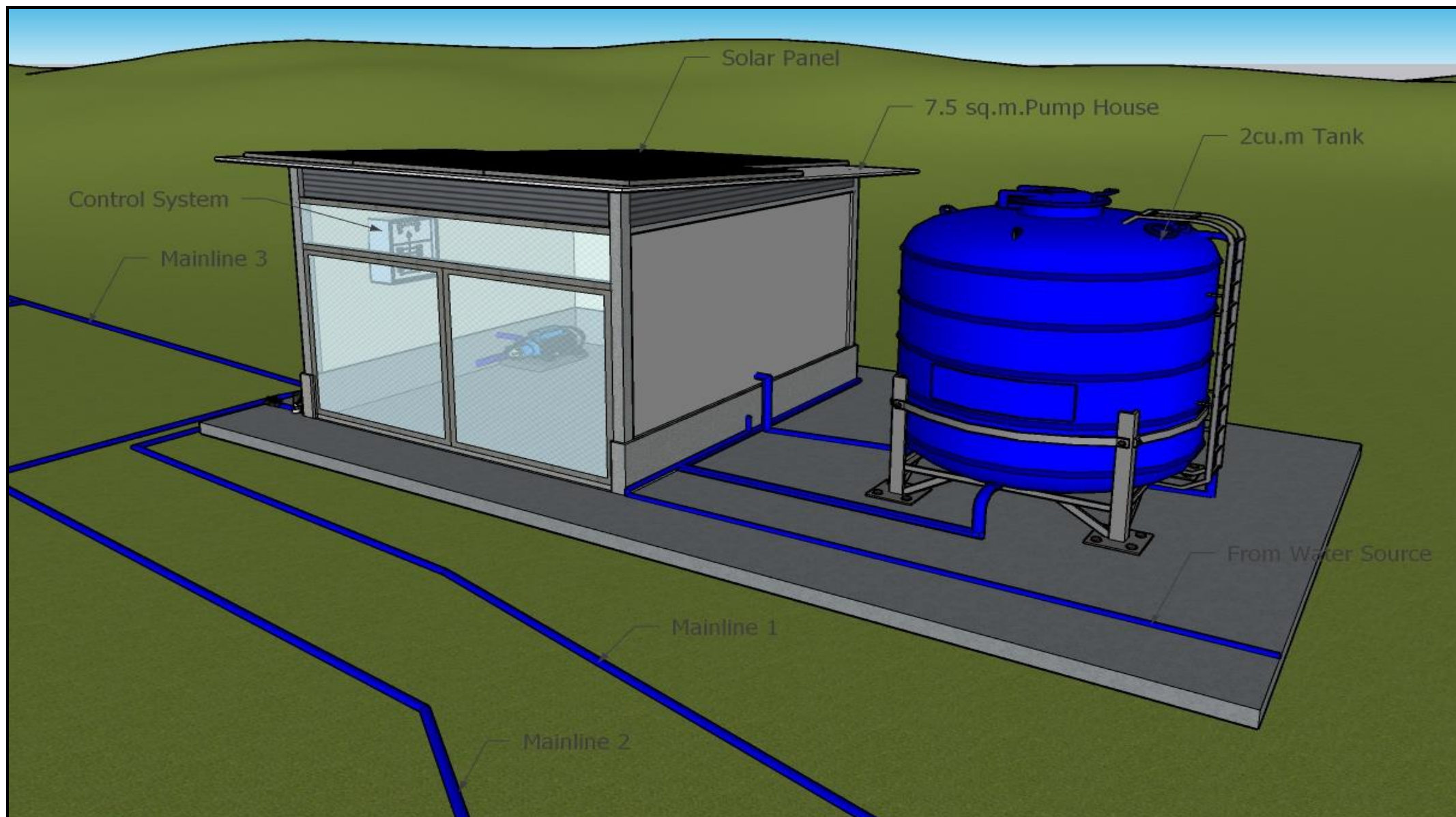
Richard M. Cawaling

DRAWN BY:

Richard M. Cawaling

NOTED BY:

Marcelina V. Servañez



PROJECT TITLE:

Solar Powered and Automated Drip Irrigation System

TITLE:

Pump House & Control System

DATE:

August 10, 2023

DESIGN CONCEPT:

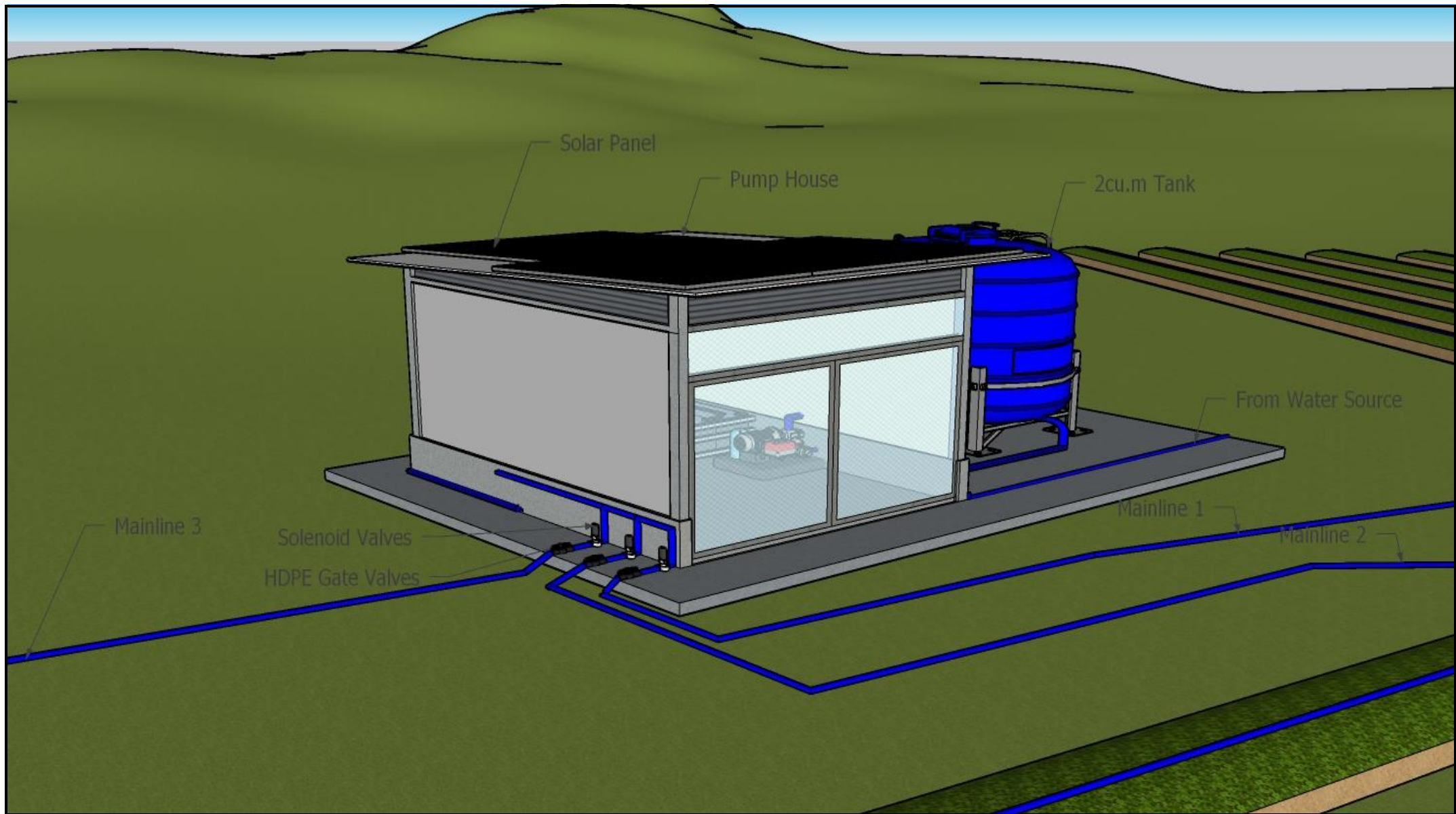
Richard M. Cawaling

DRAWN BY:

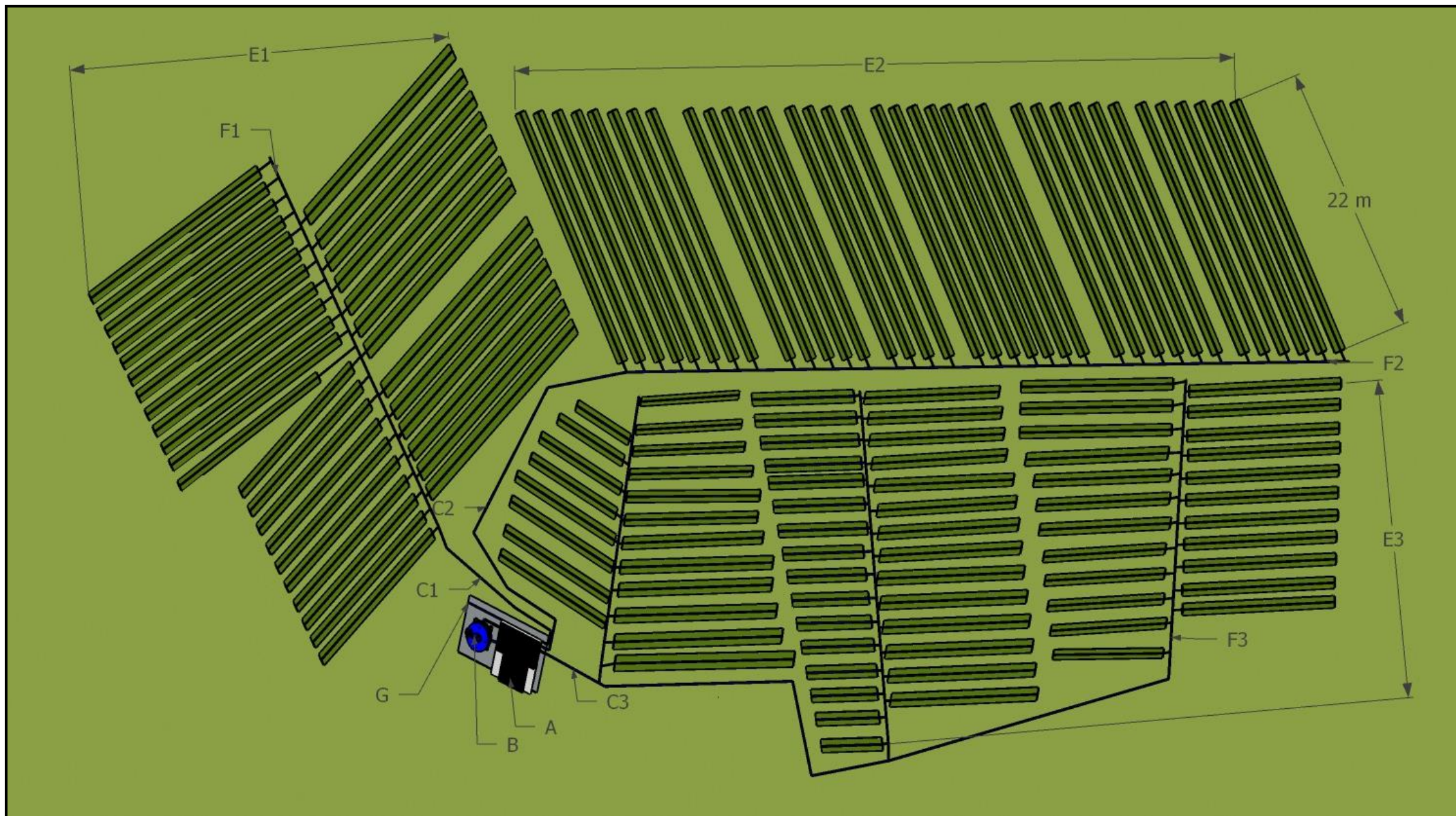
Richard M. Cawaling

NOTED BY:

Marcelina V. Servañez



PROJECT TITLE: Solar Powered and Automated Drip Irrigation System		DESIGN CONCEPT: Richard M. Cawaling
TITLE: Pump House & Piping	DATE: August 10, 2023	DRAWN BY: Richard M. Cawaling
		NOTED BY: Marcelina V. Servañez



PROJECT TITLE:

Solar Powered and Automated Drip Irrigation System

TITLE:

Top View

DATE:

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DESIGN CONCEPT:

Richard M. Cawaling

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Marcelina V. Servañez

INDICATORS:

A – 7.5 sq. m. Pump House includes Solar Panel, water pump, inverter, charge controller, battery, automation controller and accessories.

B – 2 cu.m. PVC Water Tank

C1 – 1½"Ø Mainline 1

C2 – 1½"Ø Mainline 2

C3 – 1½"Ø Mainline 3

E1 – Area 1 with 35 plots

E2 – Area 2 with 36 plots

E3 – Area 3 with 73 plots

F1 - 1¼"Ø Drip Pipe

F2 - 1¼"Ø Drip Pipe

F3 - 1¼"Ø Drip Pipe

G – 1"Ø pipe 80 meters from the deep well/flowing water source

Dimension of Plot

1 x 22 meters

Area of plot

22 sq. meters

No. of hill per plot, hill spacing=0.5m, lateral spacing=0.6m

22m/0.5m/hill

44hill x 2

88hills/plot

No. of plots

144 plots

Total number of hills

144 plots x 88 hills/plot

12,672 hills

SOIL MOISTURE & WATER CONSUMPTION FOR DIFFERENT CROPS

Crop	Moisture level	Water Consumption (Liter)
Cucumbers	80-90%	500-800
Eggplants	70-80%	600-900
String beans (Green beans)	70-80%	400-700
Bitter gourd (Bitter melon)	70-80%	500-800
Squash	70-80%	500-800
Bell peppers	70-80%	500-800
Chili peppers	70-80%	500-800
Okra	70-80%	500-800
Tomatoes	70-90%	600-900
Total		4600-7300

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Description

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