



DEPARTMENT OF AGRICULTURE

RHO XIII - CARAGA
CAPITOL SITE, BUTUAN CITY

ESTABLISHMENT OF SOLAR POWERED IRRIGATION SYSTEM (SPIS)

BRGY. MAMBALILI, BUNAWAN, AGUSAN DEL SUR
CARAGA REGION

GENERAL NOTES & SPECIFICATION

1. PUMP: Surface Pump

- a.) 3"x3" Non-Self Priming Surface Centrifugal Pump with complete pipes & fittings
- b.) 1.5 KW built-in controller.

2. SOLAR POWER MODULES

- q.) 2700WP total Solar Power Modules (minimum) or its equivalent
- b.) 1956 x 992 x 40mm 450WP per Solar Power Module
- c.) Manufactured in ISO 9001-Certified Factories
- d.) Must be CE marked
- e.) Must have TÜV Certification (IEC 61215)
- f.) Cell Type: Monocrystalline
- g.) 10° - 15° Tilt Angle
- h.) Facing South Orientation

3. STEEL WORKS







- a.) All welding works shall be full weld, plain finish, and painted with red oxide for rust resistant.

Republic of the Philippines DEPARTMENT OF AGRICULTURE Caraga Region	PROJECT TITLE: ESTABLISHMENT OF SOLAR POWERED IRRIGATION SYSTEM (SPIS)	PREPARED BY: JAY D. PANOLA ENGINEER II	CHECKED & REVIEWED BY: THEO LYN P. LIMAS ENGINEER III	SUBMITTED BY: ENGR. VICTOR RAED	NOTED & BY: MELODY M. QUIMARY CHIEF/FOOD/FEED TOTAL PERSON	RECOMMENDING APPROVAL: REPUBLIC OF THE PHILIPPINES RPD FOR OPERATION	APPROVED BY: ENGR. RICARDO M. ONATE, JR. REGIONAL EXECUTIVE DIRECTOR	SHEET NO. 1 / 7
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NAME OF PROJECT: ESTABLISHMENT OF SOLAR POWER IRRIGATION SYSTEM (SPIS)
 PROJECT LOCATION: BRGY. MAMBALILI, BUNAWAN, AGUSAN DEL SUR

BILL OF QUANTITIES

Item No.	Scope of Work	Quantity	Unit
PART I			
GENERAL REQUIREMENTS			
B.5	Project Billboard/SignBoard	1.00	each
PART II			
803(1)a	Structure Excavation	1.42	cu.m.
804 (1)b	Embankment (Side Borrow)	0.70	cu.m.
804(4)	Gravel Fill	0.27	cu.m.
PART B - PLAIN AND REINFORCED CONCRETE WORKS			
902(1)a	Reinforcing Steel (Deformed), grade 40	51.47	kgs.
900	Concrete Works	0.89	cu.m.
PART C - FINISHING AND OTHER CIVIL WORKS			
C.1 Fabricated Materials			
403(7)	Structural Steel Furnished Fabricated & Erected	1.00	lot
C.2 Finishing Works			
SPL-1	Solar Power Modules w/ complete cabling and related accessories	1.00	lot
SPL-2	2 hp Pump Engine with Complete Accessories	1.00	lot
SPL-3	Pipes w/ complete fittings & accessories	1.00	lot
1032(1)c	Painting Works(Steel)	1.00	lot

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Republic of the Philippines
 DEPARTMENT OF AGRICULTURE
 Caraga Region
 Capitol Site, Butuan City
 Tel. No. (085) 342-4092, Telefax No: (085) 341-2114

Cost
 Fund Source/s:

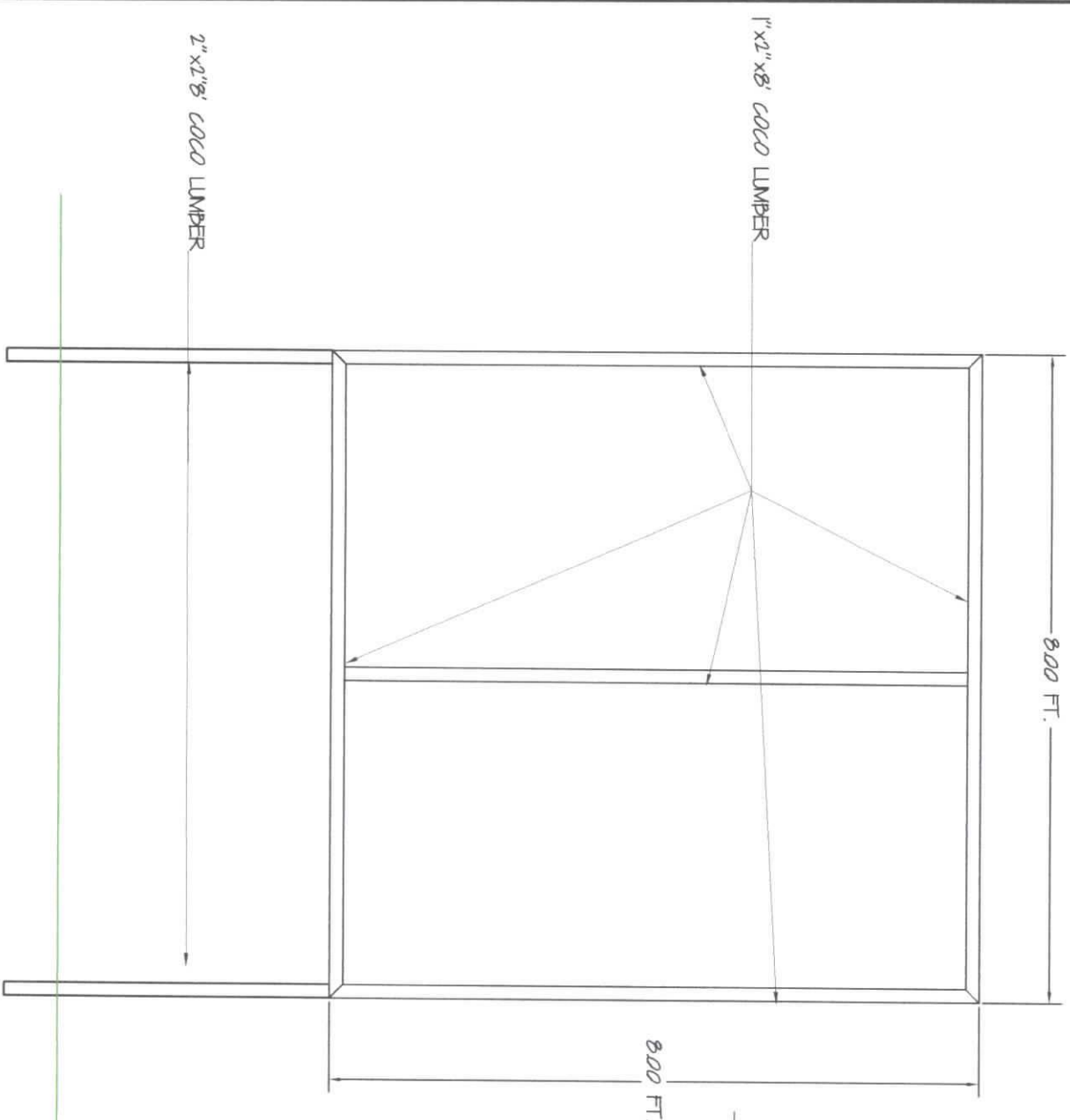
Project Name: Establishment of Solar Powered Irrigation System (SPIS)
 Location: Brgy. Mambalili, Butawan, Agusan del Sur
 Implementing Agency/ies: DA-Caraga Region
 Development Partners:
 Contractor/Supplier:
 Brief Description:

Project Details:

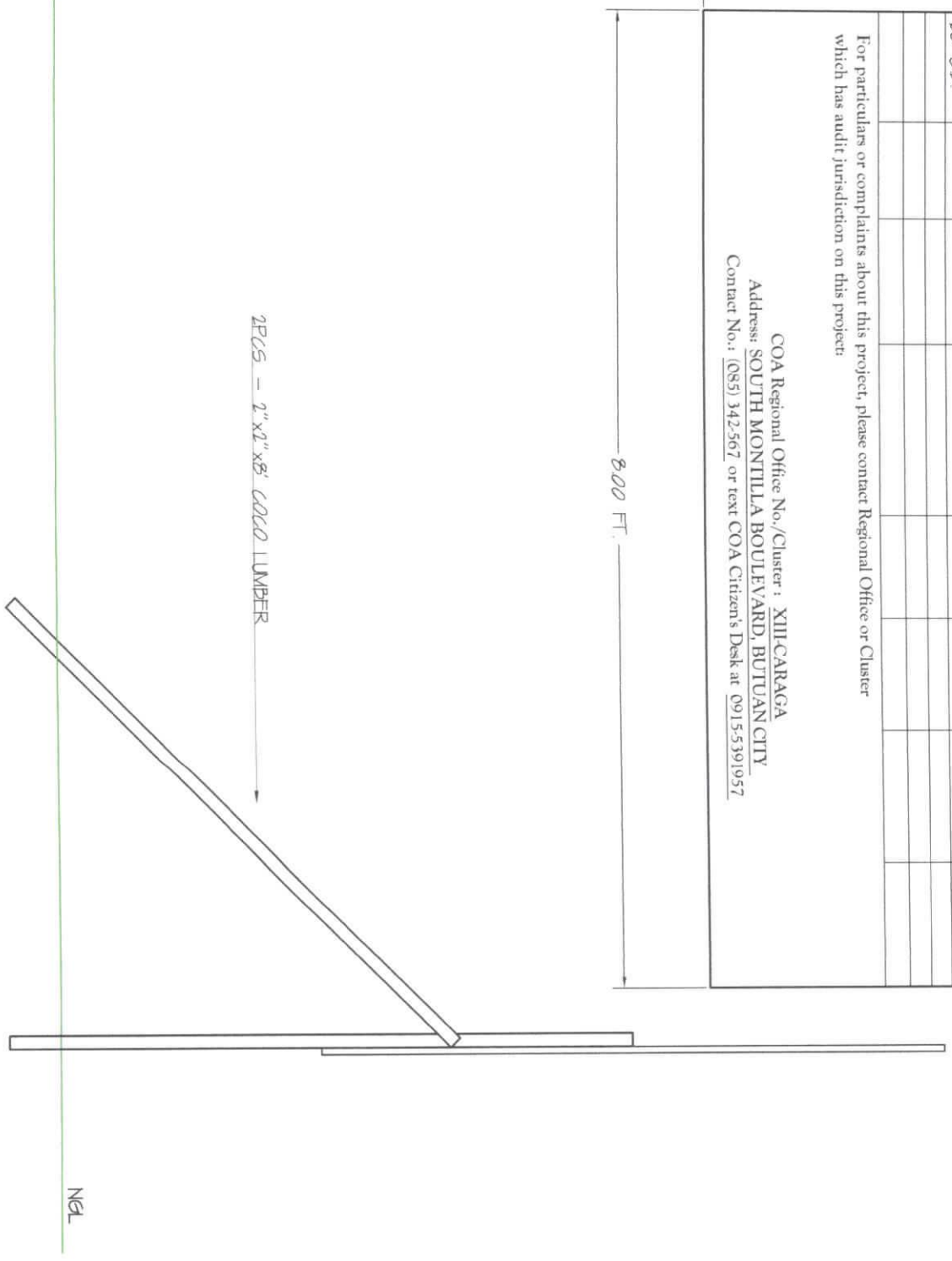
Project Date	Project Status	Remarks
Duration	Started	Target Date of Completion
60 CD.	Percentage of Completion	As of (Date)
	Cost Incurred to Date	Date Completed

For particulars or complaints about this project, please contact Regional Office or Cluster which has audit jurisdiction on this project:

COA Regional Office No./Cluster : XIII-CARAGA
 Address: SOUTH MONTILLA BOULEVARD, BUTUAN CITY
 Contact No.: (085) 342-567 or text COA Citizen's Desk at 09155391957



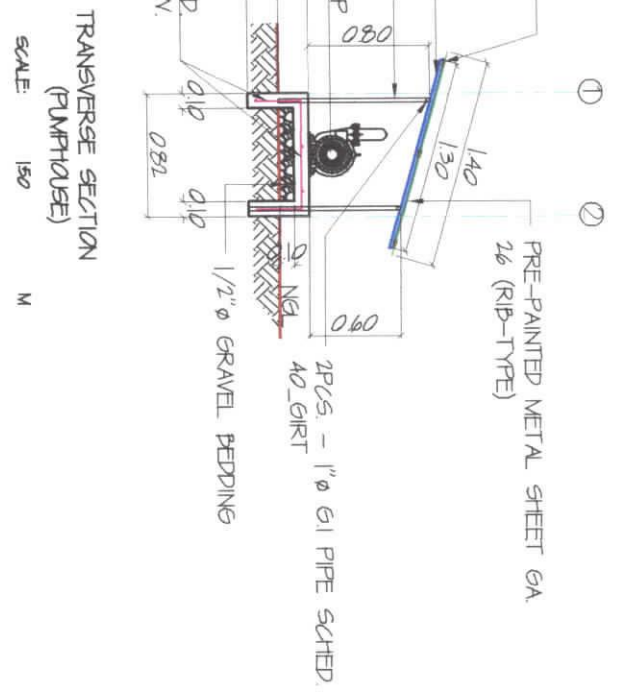
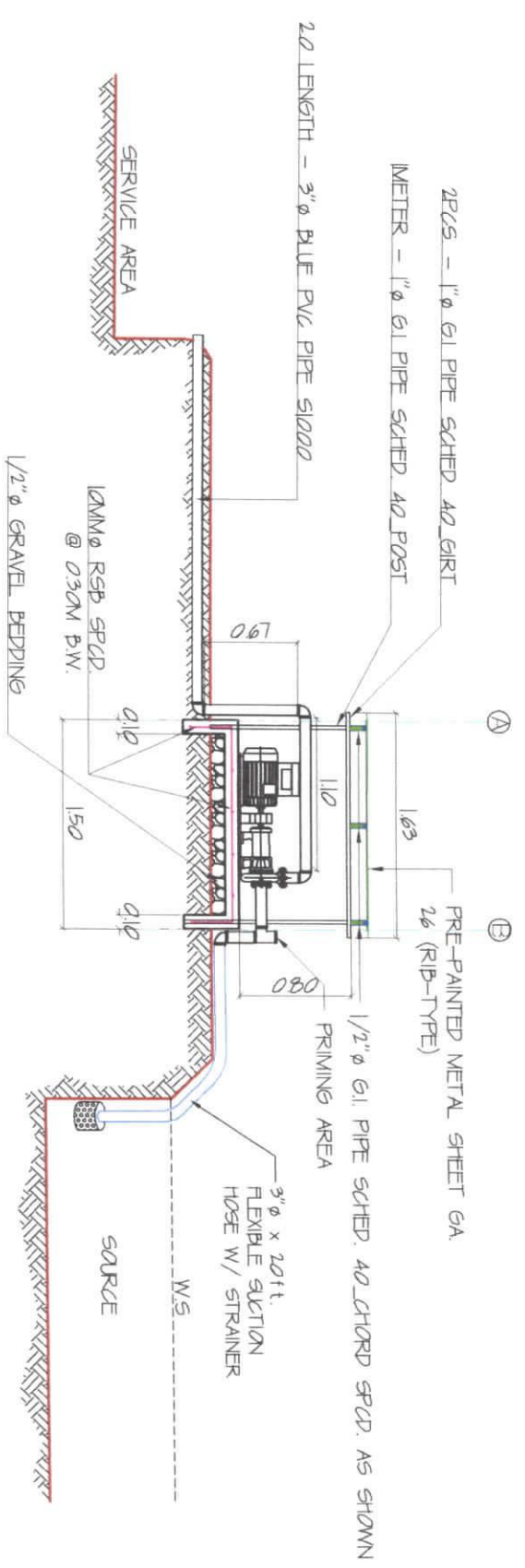
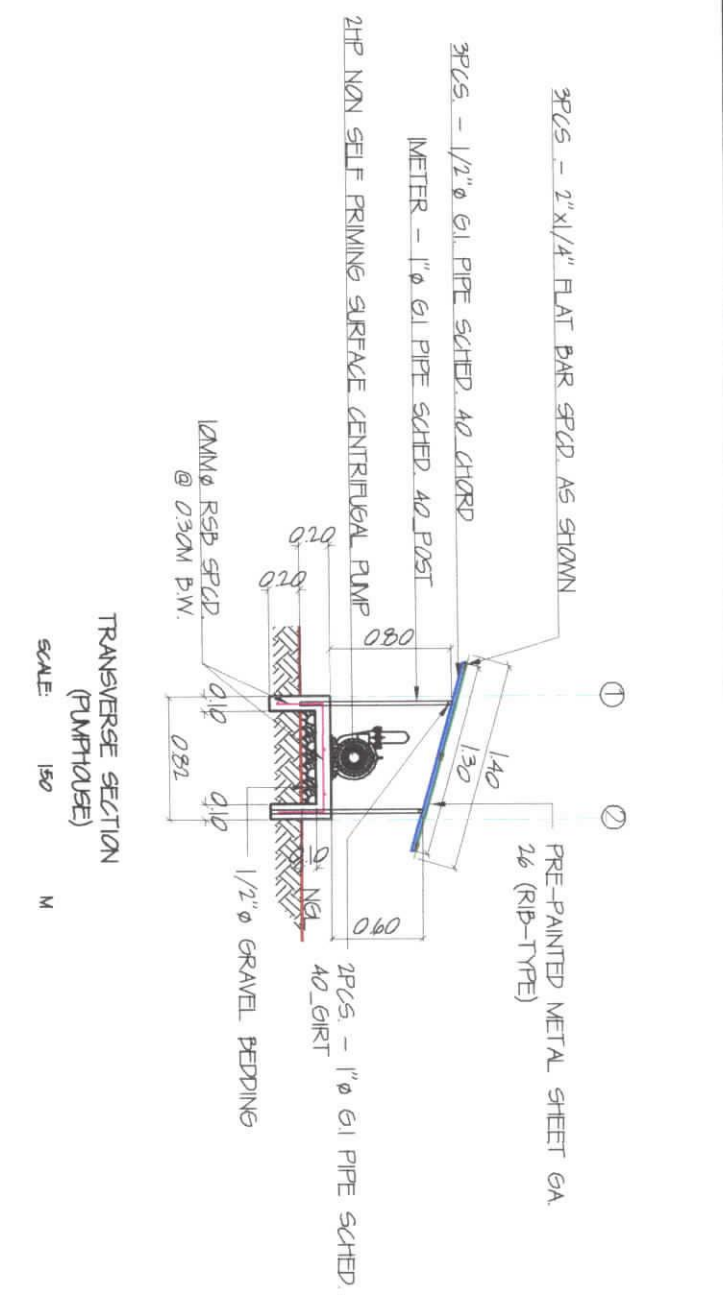
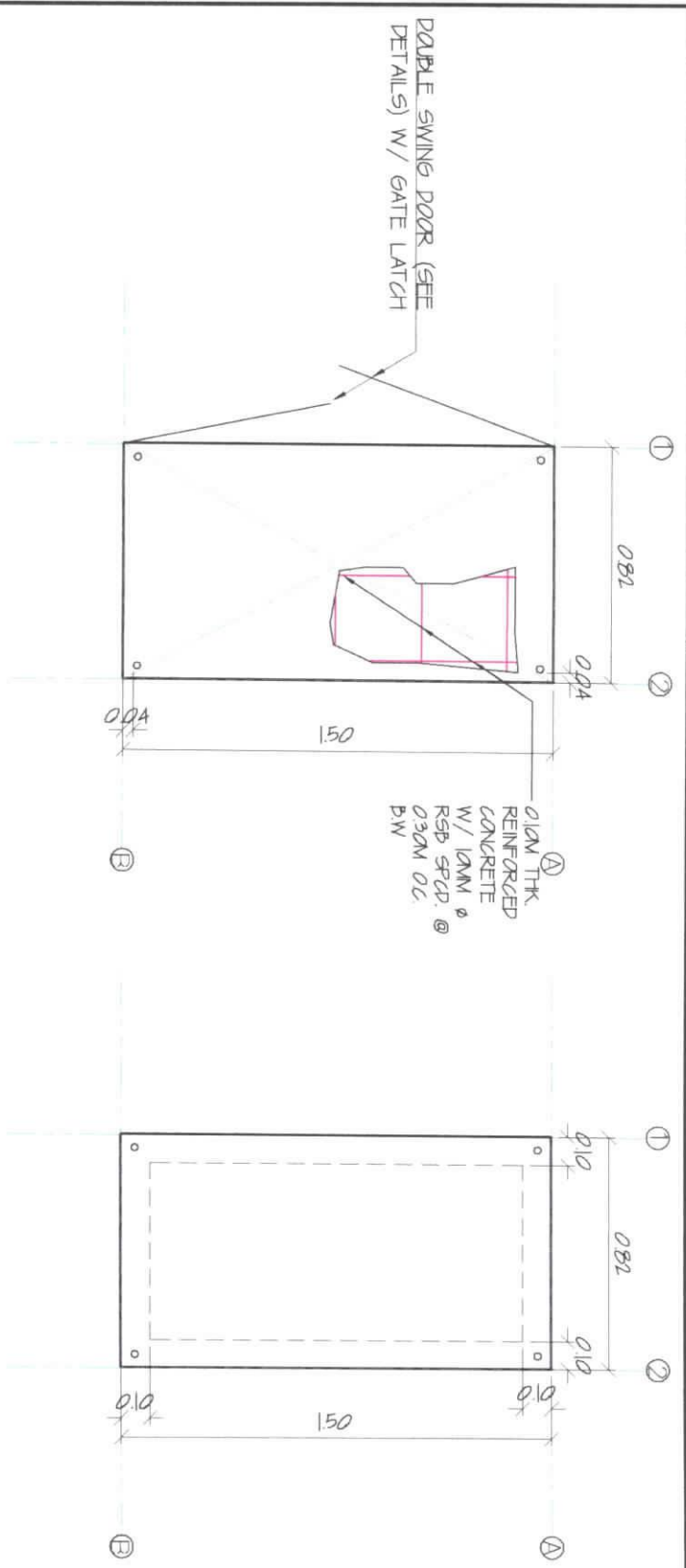
FRONT VIEW
 SCALE 1/25 MTS



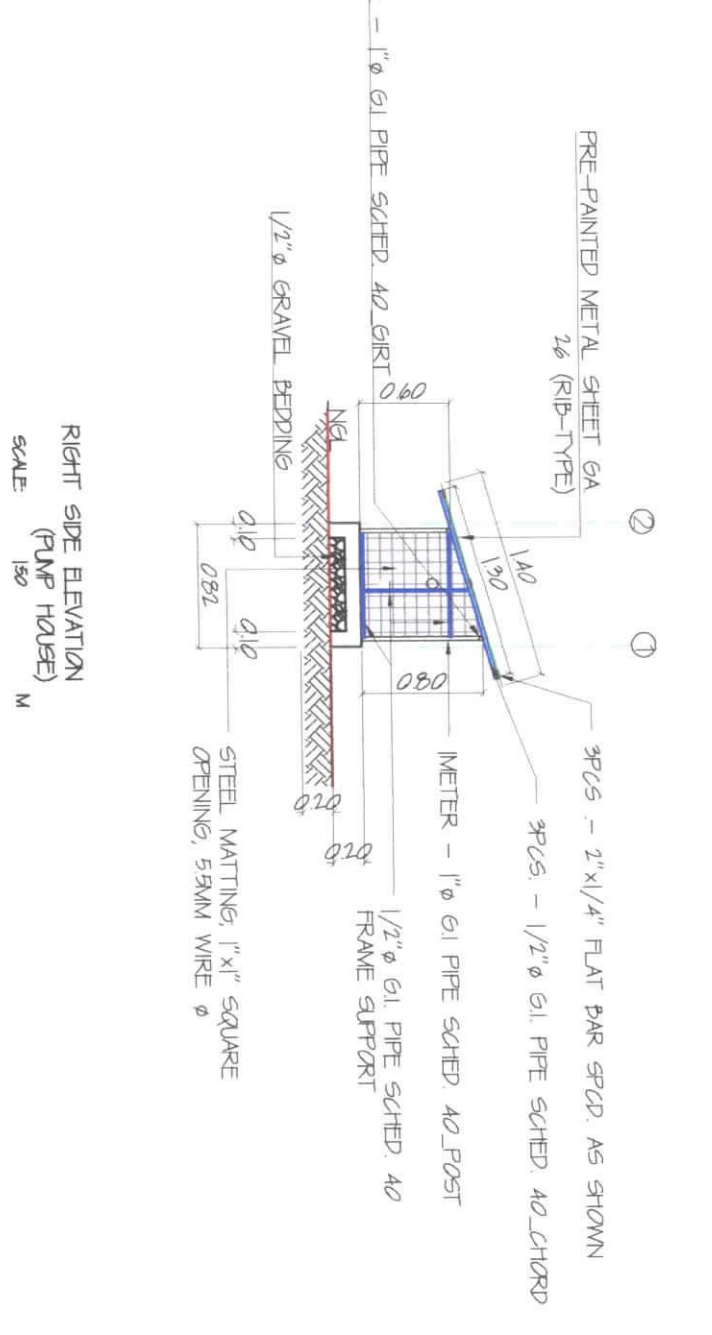
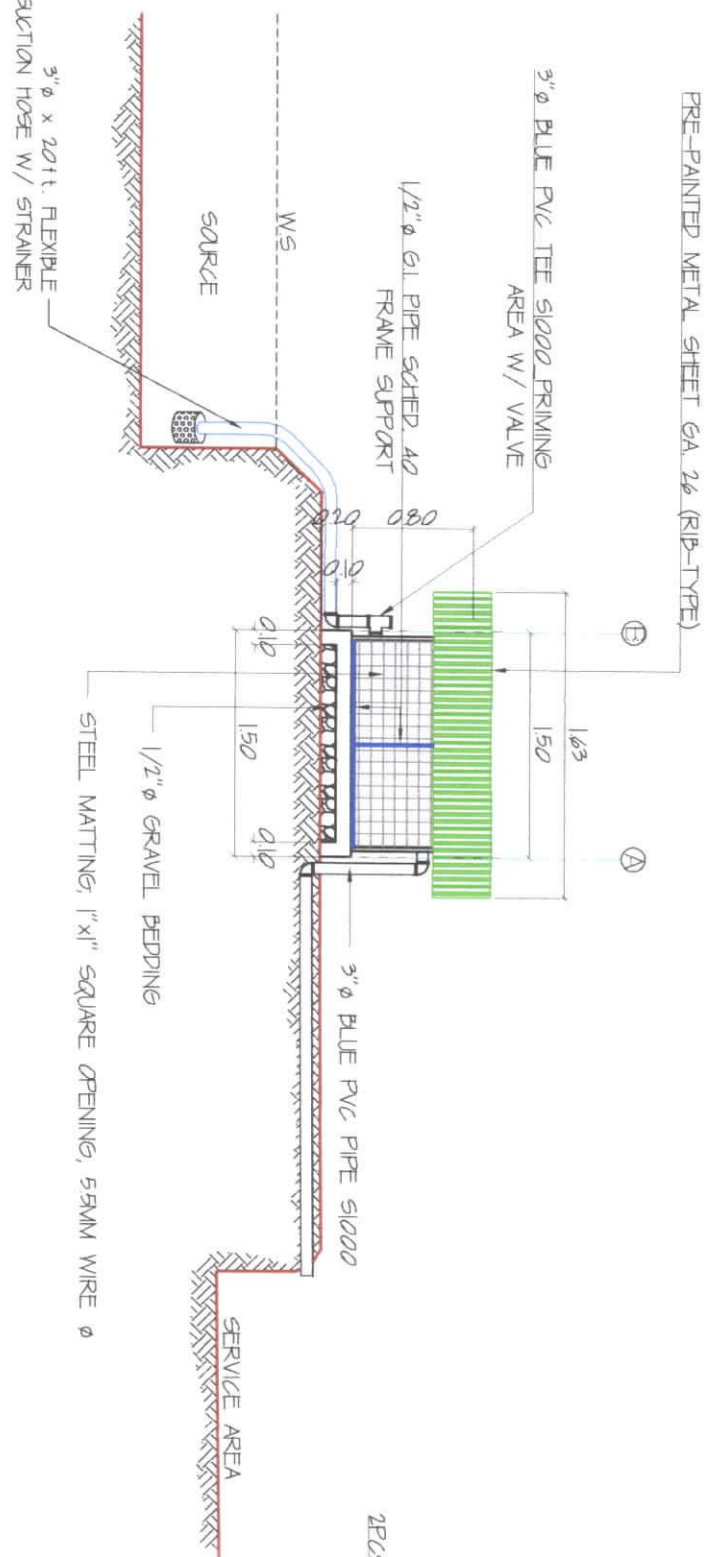
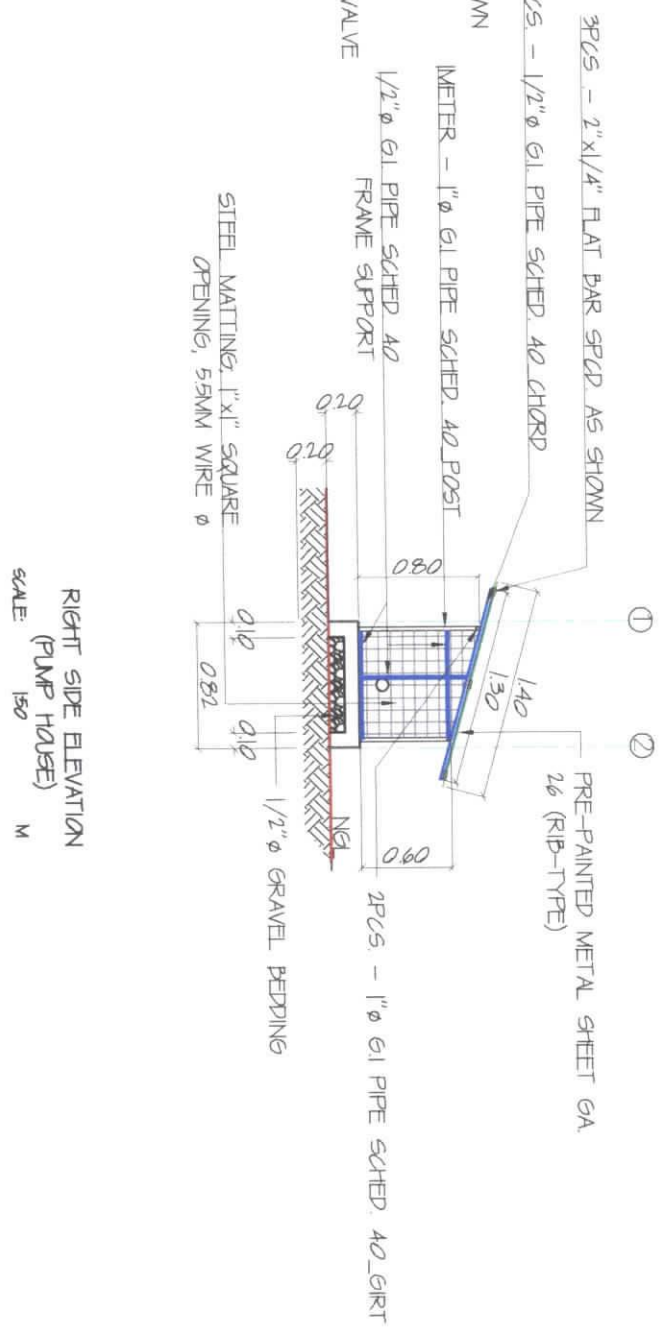
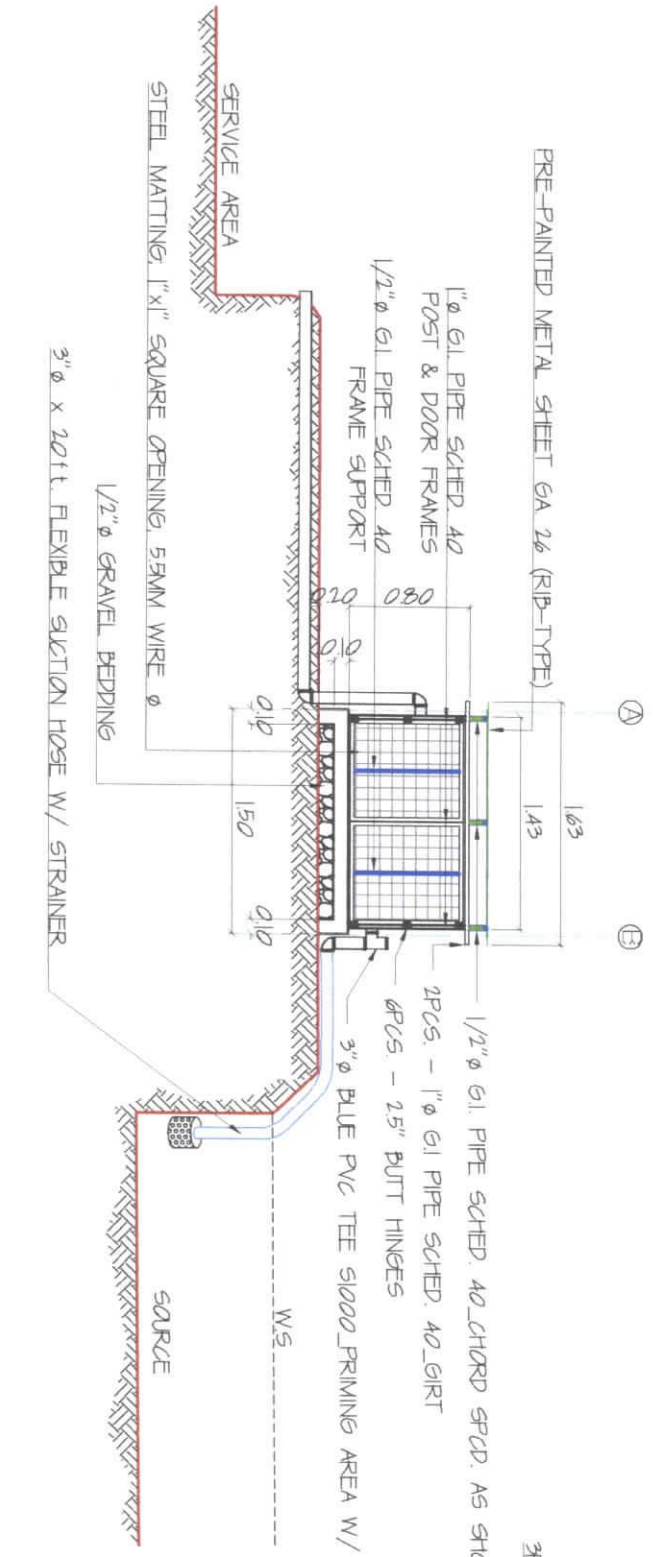
RIGHT & LEFT SIDE
 VIEW
 SCALE 1/25 MTS

PROJECT BILLBOARD DETAILS

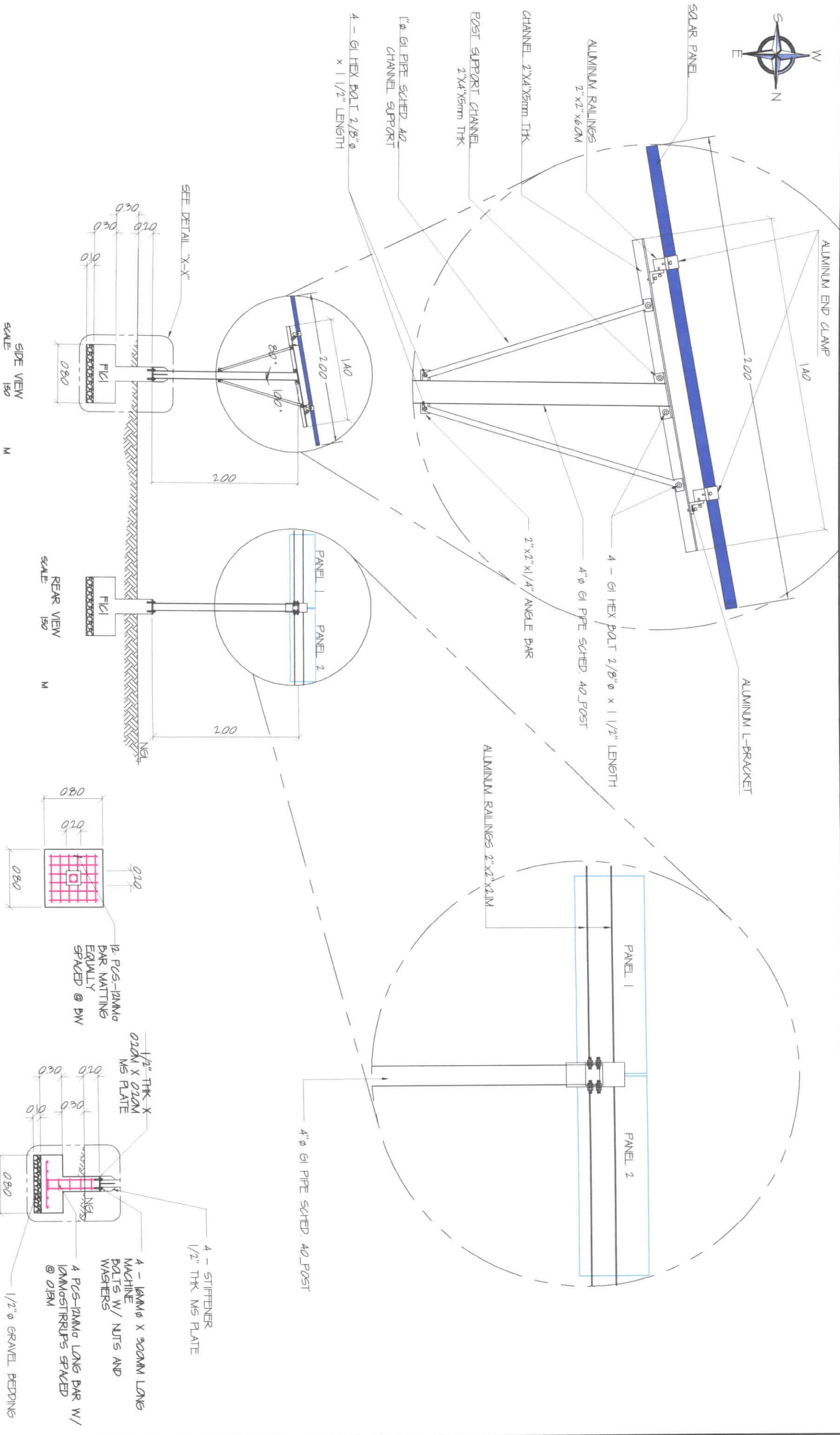
Republic of the Philippines DEPARTMENT OF AGRICULTURE Caraga Region		PROJECT TITLE: ESTABLISHMENT OF SOLAR POWERED IRRIGATION SYSTEM (SPIS)	PREPARED BY: J. P. ESPINOLA ENGINEER II	CHECKED & REVIEWED BY: THEODOR B. LIMAS ENGINEER III	SUBMITTED BY: R. M. MORALES ENGINEER / CHIEF RAED	NOTED BY: MELODY M. GANARY CHIEF/RAED / FOCAL PERSON	RECOMMENDING APPROVAL: REBECCA R. ATEGA RPD FOR OPERATIONS	APPROVED BY: ENGR. RICARDO M. ONATE, JR. REGIONAL EXECUTIVE DIRECTOR	SHEET NO. 3 / 7
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Republic of the Philippines DEPARTMENT OF AGRICULTURE Caraga Region	PROJECT TITLE: ESTABLISHMENT OF SOLAR POWERED IRRIGATION SYSTEM (SPIS)	PREPARED BY: AY F. MANA ENGINEER II	CHECKED & REVIEWED BY: THEO LYN B. LIMAS ENGINEER III	SUBMITTED BY: REYNOLDO A. MANA ENGINEER V/CHIEF RAED	NOTED BY: MELROY M. GIMINARY CHIEF/ RICE FOCAL PERSON	RECOMMENDING APPROVAL: REBECCA R. ATEGA RIP FOR OPERATIONS	APPROVED BY: ENGR. GABRIEL M. ONATE, JR. REGIONAL EXECUTIVE DIRECTOR	SHEET NO. 4 7
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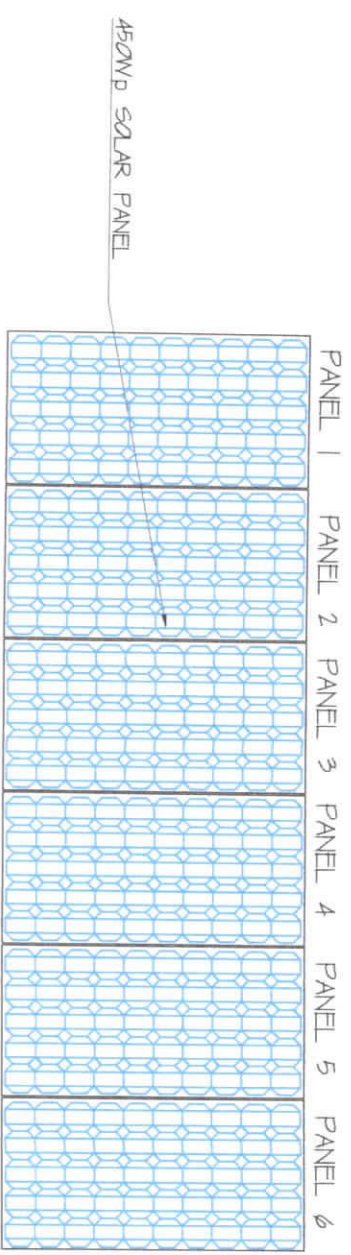
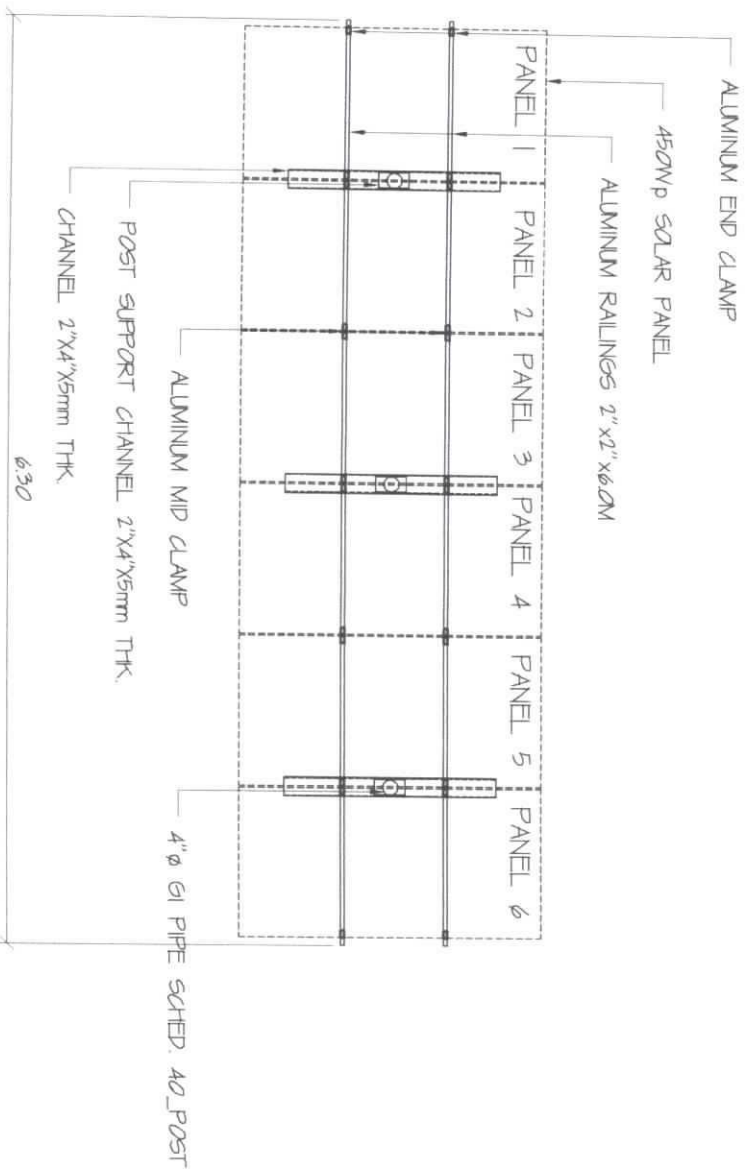
SOLAR ARRAY MOUNTING STRUCTURE
SCALE 150 MTS

F1 - G1 DETAIL
SCALE 150 M

DETAIL "X-X"
SCALE 150 M

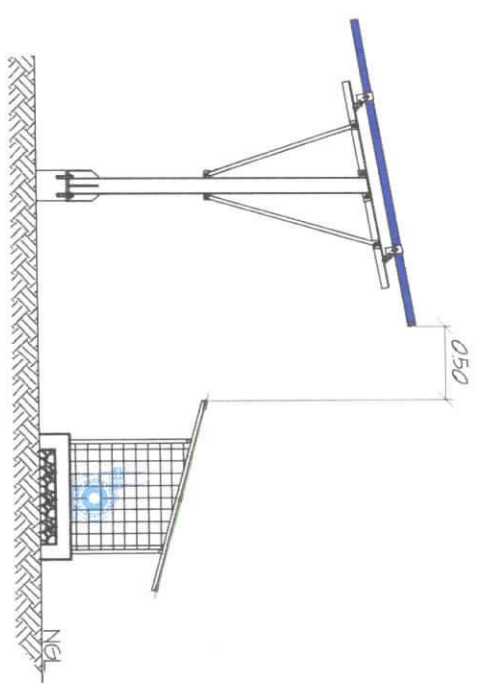
Republic of the Philippines
DEPARTMENT OF AGRICULTURE
Caraga Region

PROJECT TITLE: ESTABLISHMENT OF SOLAR POWERED IRRIGATION SYSTEM (SPIS)	PREPARED BY: MAY DELA ANA ENGINEER II	CHECKED & REVIEWED BY: THEO LYN B. LIMAS ENGINEER III	SUBMITTED BY: MELZDY IN GUINABARY CHIEF/OP/RIE/FOCAL PERSON	NOTED BY: [Signature]	RECOMMENDING APPROVAL: REPELCA R. ARANDA RIP FOR OPERATIONS	APPROVED BY: ENGR. RAYDINO M. ONATE, JR. REGIONAL EXECUTIVE DIRECTOR	SHEET NO. 6 7
LOCATION: BRGY. MAMPALLI, BINAWAN, ADS							



SOLAR PANEL ARRANGEMENT & FRAMING DETAIL
SCALE: 1/50

NOTE:
SOLAR PANEL SHALL BE:
= 10° - 15° TILT ANGLE
= FACING SOUTH ORIENTATION



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