



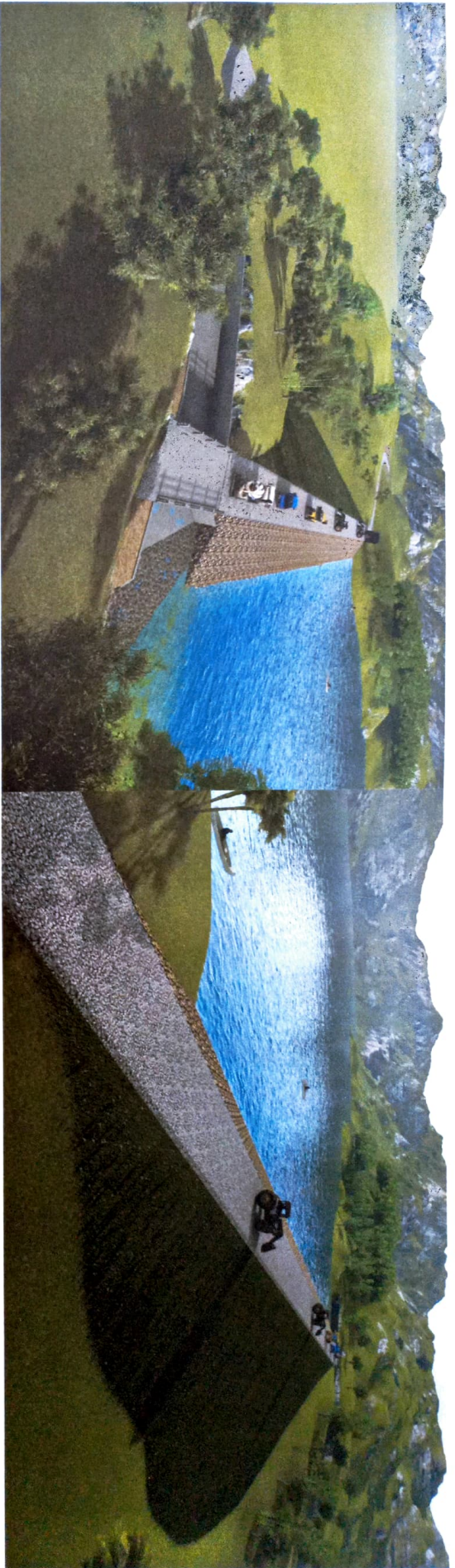
**REPUBLIC OF THE PHILIPPINES**  
**DEPARTMENT OF AGRICULTURE**  
**REGIONAL FIELD UNIT NO.5**  
SAN AGUSTIN, PILI, CAMARINES SUR.

**PROJECT TITLE:**

**CONSTRUCTION OF  
SAN ANTONIO SWIP**  
LOCATION: BRGY. SAN ANTONIO, OGAMPO, CAMARINES SUR

*PREPARED BY:*  
**RAED OFFICE**



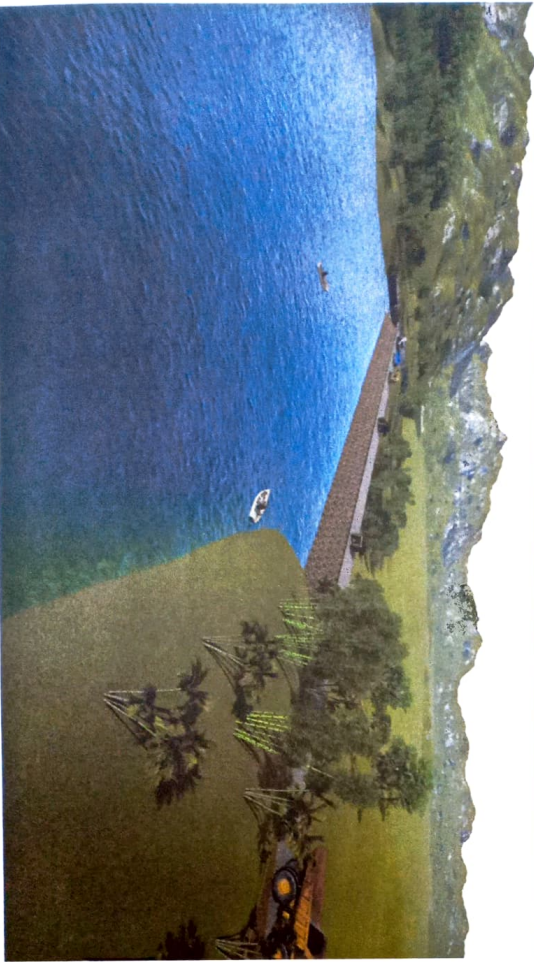


## PERSPECTIVE VIEW AND DESIGN PARAMETER

COURTESY TO THE DESIGNER

### DESIGN PARAMETER

<p><b>WATERSHED</b> : 60.00 HA</p> <p><b>POND AREA</b> : 1.50 HA</p> <p><b>DITCHARGE</b> : 0.12 m<sup>3</sup>/sec</p> <p><b>SERVICE AREA</b> : 50.00 HA</p> <p><b>ACCESS ROAD</b></p> <p style="margin-left: 20px;"><b>WIDTH</b> : 5.00 M</p> <p style="margin-left: 20px;"><b>LENGTH</b> : 700 L.M.</p> <p style="margin-left: 20px;"><b>R/CPC CROSSING</b> : 30.00 PCS. (0.50 M @)</p> <p><b>EARTH EMBANKMENT (DAM)</b></p> <p style="margin-left: 20px;"><b>DAM CREST ELEVATION</b> : 104.50</p> <p style="margin-left: 20px;"><b>TOP WIDTH</b> : 6.00 M</p> <p style="margin-left: 20px;"><b>LENGTH</b> : 95.00 L.M</p> <p style="margin-left: 20px;"><b>HEIGHT</b> : 13.00 M</p> <p style="margin-left: 20px;"><b>UP-STREAM SLOPE</b> : 1: 2.75 M</p> <p style="margin-left: 20px;"><b>DOWN- STREAM SLOPE</b> : 1: 2.50 M</p> <p style="margin-left: 20px;"><b>PERCENTAGE OF COMPACTION</b> : 95% MINIMUM</p> <p style="margin-left: 20px;"><b>TOE DRAIN ELEVATION</b> : 92.00</p> <p><b>DIVERSION OF CREEK</b></p> <p style="margin-left: 20px;"><b>INTAKE ELEVATION</b> : 92.00</p> <p style="margin-left: 20px;"><b>OUTLET ELEVATION</b> : 92.00</p> <p style="margin-left: 20px;"><b>R/CPC DIAMETER</b> : 0.80 M</p> <p style="margin-left: 20px;"><b>LENGTH</b> : 65.00 L.M</p>	<p><b>OUTLET WORKS</b></p> <p style="margin-left: 20px;"><b>INTAKE ELEVATION</b> : 98.00</p> <p style="margin-left: 20px;"><b>OUTLET ELEVATION</b> : 97.50</p> <p style="margin-left: 20px;"><b>STEEL PIPE DIAMETER</b> : 0.30 M (12")</p> <p style="margin-left: 20px;"><b>LENGTH</b> : 56.00 L.M</p> <p><b>IRRIGATION CANAL WORKS</b></p> <p style="margin-left: 20px;"><b>WIDTH</b> : 0.50 M</p> <p style="margin-left: 20px;"><b>HEIGHT</b> : 0.50 M</p> <p style="margin-left: 20px;"><b>LENGTH</b> : 755.00 L.M.</p> <p style="margin-left: 20px;"><b>FLUME</b> : 20.00 L.M.</p> <p><b>SPILLWAY AND BRIDGE</b></p> <p style="margin-left: 20px;"><b>TOP BRIDGE ELEVATION</b> : 104.50</p> <p style="margin-left: 20px;"><b>SPILLWAY WIDTH</b> : 8.00 M</p> <p style="margin-left: 20px;"><b>SPILLWAY LENGTH</b> : 73.00 M</p> <p style="margin-left: 20px;"><b>APPROACH ELEVATION</b> : 102.00</p> <p style="margin-left: 20px;"><b>STILLING BASIN ELEVATION</b> : 88.00</p> <p style="margin-left: 20px;"><b>STILLING BASIN LENGTH</b> : 12.00 M</p>
---	---



**REPUBLIC OF THE PHILIPPINES**  
**DEPARTMENT OF AGRICULTURE**  
**REGIONAL FIELD UNIT NO. 5**  
 SAN ANTONIO, PUL. CAMARINES SUR

Prepared by  
**BERNABINO G. VALANZUELA**  
 RURAL ENGINEER  
 ENGR. JEL JONERTO BONITO  
 CAD/In-charge

Checked by  
**ENGR. MICHAEL B. MIRA**  
 Engr. II

Reviewed by  
**ENGR. RICHARD A. BORDA**  
 ENGR. III

Subscribed by  
**ENGR. GILBERT S. SALCEDO**  
 Chief Engr.

Recommending Approval  
**ELIZ B. MARCELINO**  
 RFO for Operations and Extension

Approved by  
**ROBERT P. TORRES, L.A. MABE**  
 Regional Director

Name of Project: **Construction of San Antonio SWIP**

Location: **Brn. San Antonio, Camrin, Camarines Sur**

Sheet Contents: **AS SHOWN**

DATE: \_\_\_\_\_

DATE: \_\_\_\_\_

DATE: \_\_\_\_\_





REPUBLIC OF THE PHILIPPINES  
 DEPARTMENT OF AGRICULTURE  
 REGIONAL FIELD UNIT NO. 5  
 SAN AUSTIN, PUL, CAGAYAN DE ORO

Prepared by:  
 BERNARDO G. VALENZUELA  
 PROJECT ENGINEER  
 ENGR. BENJAMIN JOSEPH D. HONITO  
 (ADO In-charge)

Checked by:  
 ENGR. RICARDO B. MIRA  
 ENGR. II

Reviewed by:  
 ENGR. JERRY A. BORDA  
 ENGR. III

Submitted by:  
 ENGR. CHERIE'S SALCEDO  
 CHIEF FIELD

Recommending Approval:  
 LUIS R. MARCELIANO  
 NTO, Sr. Operations and Supervision

Approved by:  
 ROSEL E. TORRES DE LA MABE  
 Sr. District Engineer

Name of Project:  
**Construction of San Antonio SWMP**

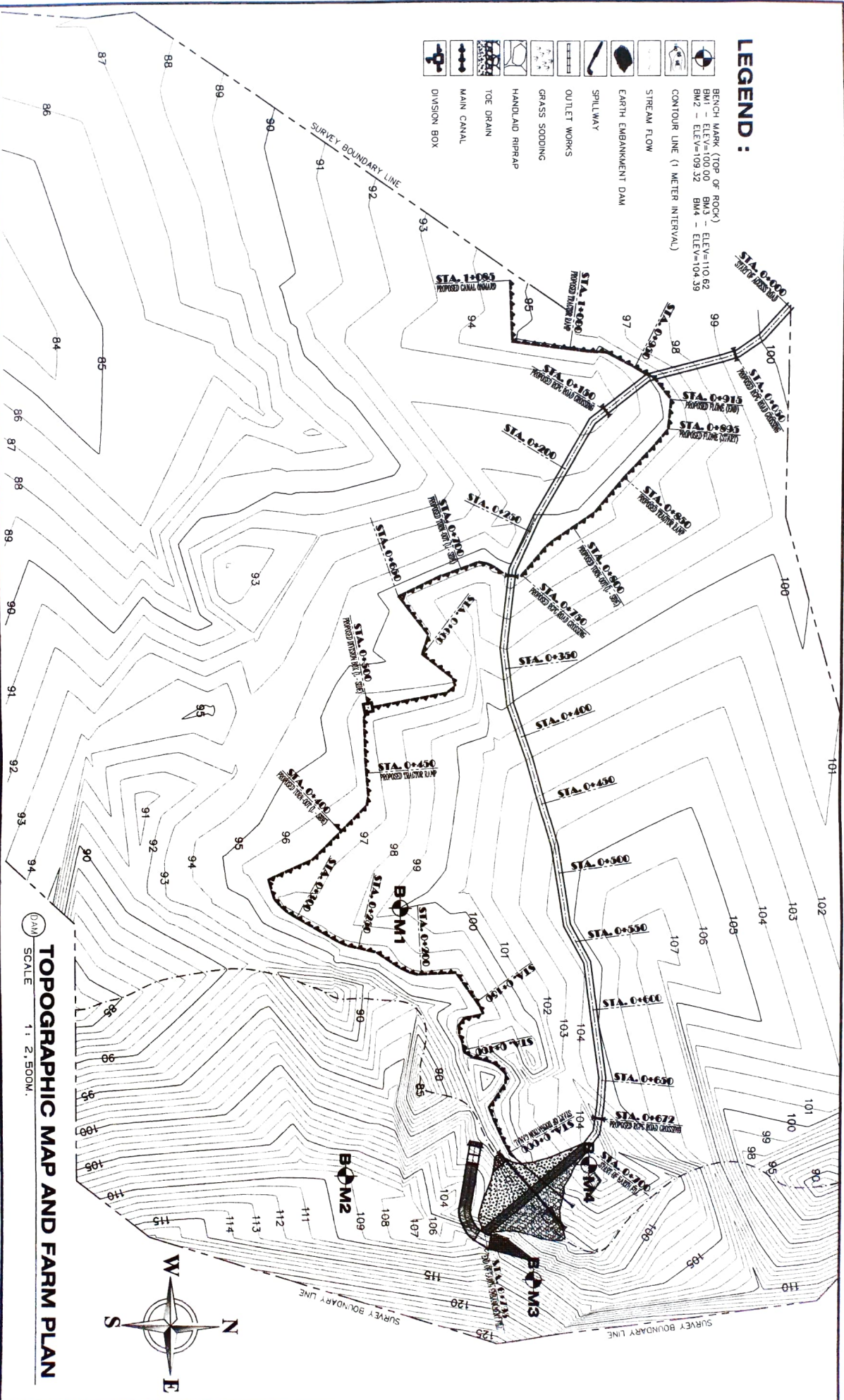
Location:  
 High San Antonio Camp, Cagayan de Oro

Sheet Content:  
 AS SHOWN

DATE	REVISION

**LEGEND :**

- BENCH MARK (TOP OF ROCK)  
 BM1 - ELEV.=100.00    BM3 - ELEV.=110.62  
 BM2 - ELEV.=109.32    BM4 - ELEV.=104.39
- CONTOUR LINE (1 METER INTERVAL)
- STREAM FLOW
- EARTH EMBANKMENT DAM
- SPILLWAY
- OUTLET WORKS
- GRASS SODDING
- HANDLAID RIPRAP
- TOE DRAIN
- MAIN CANAL
- DIVISION BOX



**TOPOGRAPHIC MAP AND FARM PLAN**  
 SCALE 1 : 2,500M.



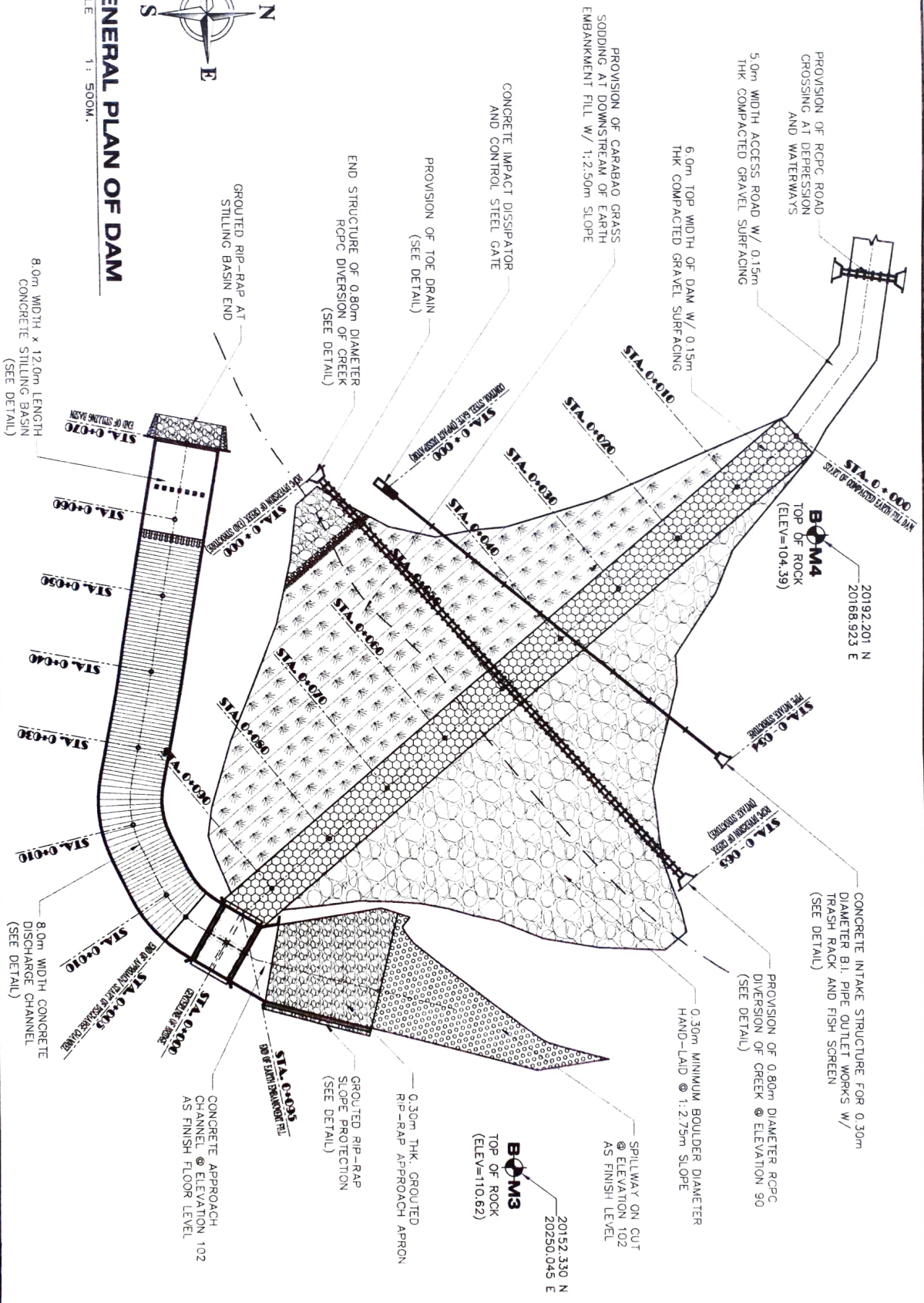






REPUBLIC OF THE PHILIPPINES  
 DEPARTMENT OF AGRICULTURE  
 REGIONAL FIELD UNIT NO. 5  
 SAN AUSTIN, PUL, CAVARINES SUR

GENERAL PLAN OF DAM  
 SCALE 1 : 500M.



8.0m WIDTH x 12.0m LENGTH  
 CONCRETE STILLING BASIN  
 (SEE DETAIL)

8.0m WIDTH CONCRETE  
 DISCHARGE CHANNEL  
 (SEE DETAIL)

Prepared by: ENR. BERNARDO VALENZUELA PROJ. INCH. [Signature]	Checked by: ENR. JERWIN B. MORA [Signature]	Reviewed by: ENR. JERRY A. TOROSA ENR. DIVISION III [Signature]	Submitted by: ENR. GILBERT S. SALCEDO [Signature]	Recommending Approval: LIZ B. MARCELINO ENR. DIVISION III [Signature]	Approved by: RODEL TORONJA, A. MAHE [Signature]	Name of Project: <b>Construction of San Antonio SWMP</b>	Date: 08/20/2025
Location: Brgy. San Antonio, Cavarines, Cavarines Sur	Sheet No.: AS SHOWN	Notes: 1. All dimensions are in meters unless otherwise specified. 2. Refer to details for construction specifications.		Scale: 1:500		Drawing No.: [Blank]	

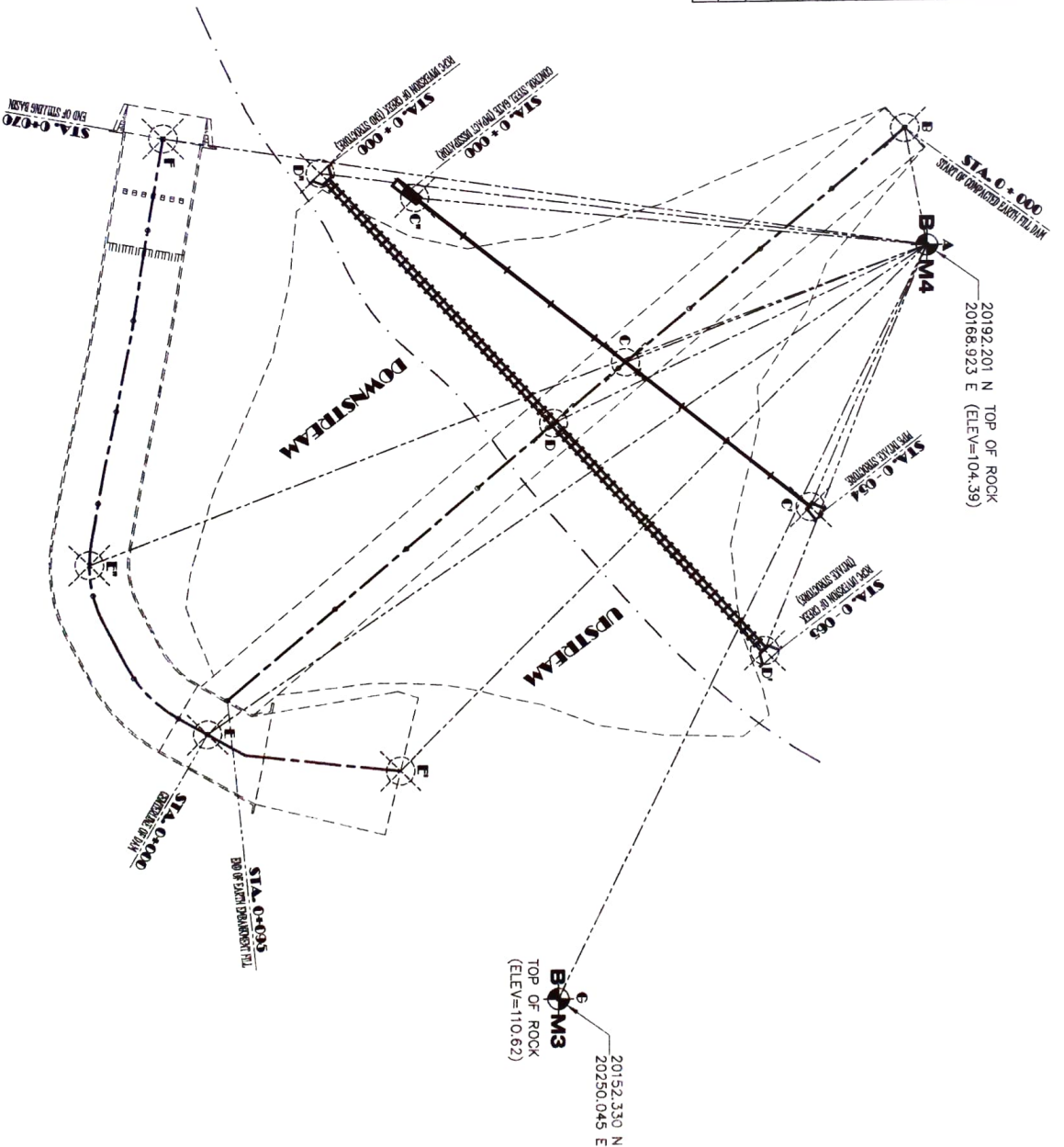
LINE	DESCRIPTION	DISTANCE	BEARING
A-B	START-EMBANKMENT	12.840 m	S 10°43' W
A-C'	INTAKE / TRASH RACK	30.994 m	S 23°48' E
A-C	PIPE @ CL OF DAM	34.514 m	S 68°26' E
A-C''	END OF OUTLET PIPE	54.951 m	S 84°22' W
A-D'	INTAKE OF DIVERSION	47.202 m	S 21°45' E
A-D	RPC @ CL OF DAM	44.277 m	S 64°10' E
A-D''	END OF DIVERSION	65.261 m	S 82°55' W
A-E'	SPILLWAY APPROACH	79.965 m	S 44°49' E
A-E	END OF EMBANKMENT	93.212 m	S 55°35' E
A-E''	CL OF SPILLWAY	95.590 m	S 69°02' E
A-F	END OF SPILLWAY	82.214 m	S 81°45' W
A-G	TOP OF ROCK (BM4)	90.391 m	S 26°01' E

POINT	ELEVATION
A	104.39 m
B	104.50 m
C'	98.00 m
C	97.75 m
C''	97.50 m
D'	92.00 m
D	92.00 m
D''	92.00 m
E'	102.00 m
E	102.00 m
E''	98.00 m
F	88.00 m
G	101.62 m



### REFERENCE LINES AND POINTS

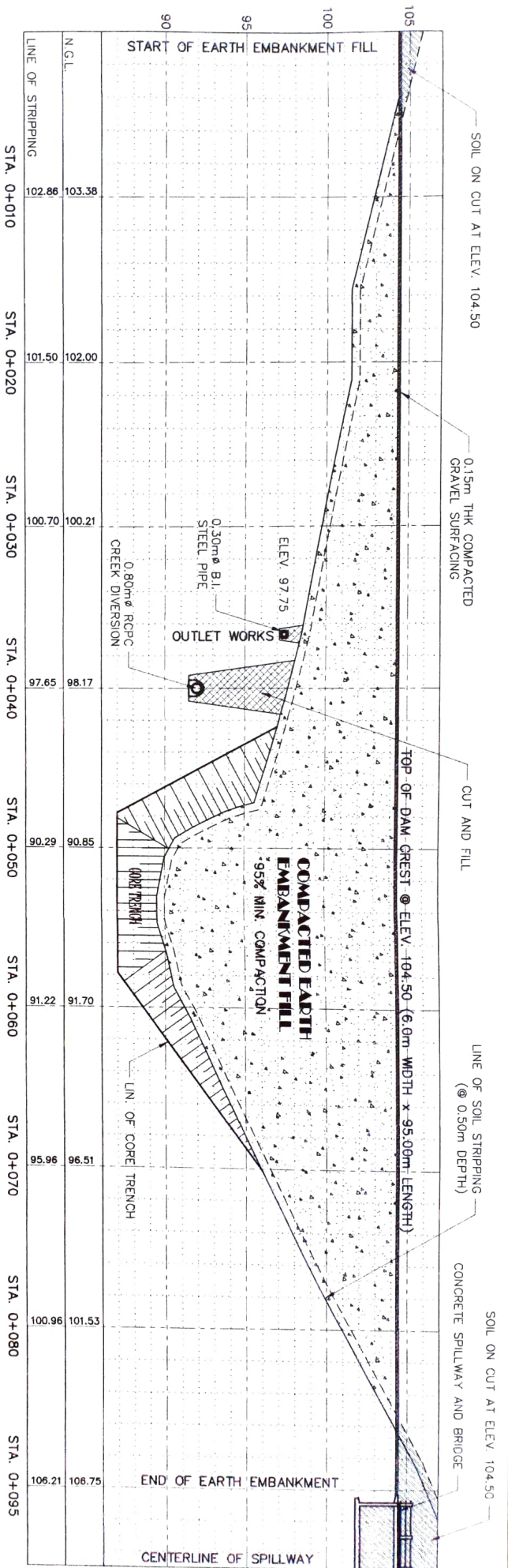
SCALE: 1 : 500M



REPUBLIC OF THE PHILIPPINES  
DEPARTMENT OF AGRICULTURE  
REGIONAL FIELD UNIT NO. 5  
SAN ANTONIO, PUL. CAMARINES SUR

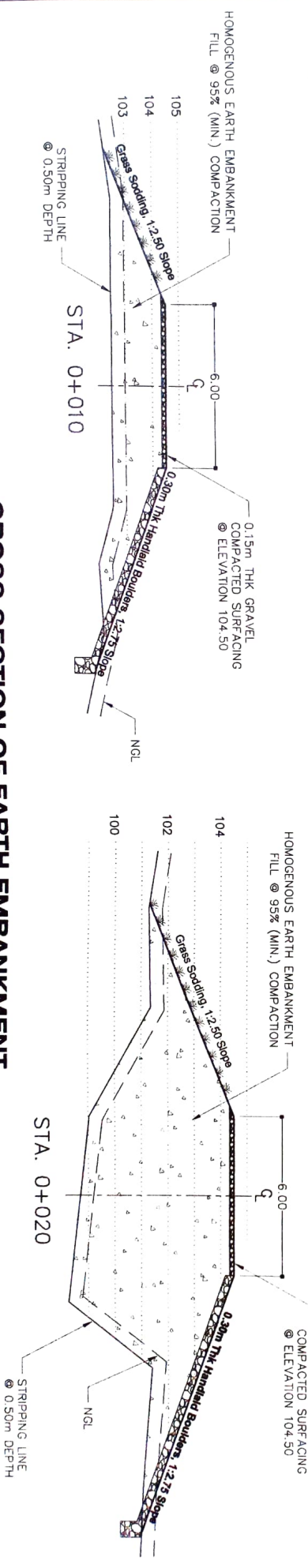
Prepared by: BERNARDO G. VALENZUELA PROJ. IN-CHARGE <i>[Signature]</i> ENGR. BEI JOSEPH B. BONITO (CAL) 0104	Checked by: <i>[Signature]</i> ENGR. ALBERTO B. MIRA ENR II	Reviewed by: <i>[Signature]</i> ENGR. TERRY A. ESPINA ENR III	Submitted by: <i>[Signature]</i> ENGR. ROBERT S. SALCEDO CHIEF RAISED	Recommending Approval: <i>[Signature]</i> LUIZ R. MARCELINEO RTO for Operation and Maintenance	Approved by: <i>[Signature]</i> RODEL P. TORRES ENR III	Name of Project: Construction of San Antonio SMP	Location: Brgy. San Antonio, Campana, Camarines Sur	Sheet Contents: AS SHOWN	DATE: 10/20/2023	OTHER NO.:
---	--	--	--	---	--	---	--	-----------------------------	---------------------	------------





**PROFILE ALONG CENTERLINE OF EARTH EMBANKMENT FILL**

SCALE 1 : 250M.



**CROSS SECTION OF EARTH EMBANKMENT**

SCALE 1 : 150M.



REPUBLIC OF THE PHILIPPINES  
DEPARTMENT OF AGRICULTURE  
REGIONAL FIELD UNIT NO. 5  
SAN AUSTIN, PUL, CAMARINES SUR

Prepared by: BERNARDO G. VALENZUELA PROJ. ENGR. ENGR. BEL JOSEPH D. BONTITO Checked by: ENGR. ARTHUR B. MIRA Reviewed by: ANDREW HERRY A. BRONIA ENGR. III Supervised by: ENGR. EDUARDO S. SALCEDO Checked Field Recommending Approval: LIZ B. MARCELINE NTO for Operation and Maintenance Approved by: RODEL P. JANSILA, MABE Engr. Supervisor Name of Project: Construction of San Antonio SWMP Location: Brgy. San Antonio, Camarines Sur Sheet Counting: AS SHOWN	DATE: 08/20/2024
--	---------------------



REPUBLIC OF THE PHILIPPINES  
DEPARTMENT OF AGRICULTURE  
REGIONAL FIELD UNIT NO. 5  
SAN AGUSTIN, PULI, CAMARINES SUR

Prepared by:  
BERNARDO G. VALENZUELA  
PROJ. II - ESMU  
ENGR. BENJAMIN D. BOUNTO

Checked by:  
ENGR. ANTONIO B. MIRA  
ENR. II

Reviewed by:  
ENGR. JERRY A. ESPINA  
ENR. III

Supervised by:  
ENGR. GILBERT S. SALCEDO  
CHIEF, ESMU

Recommending Approval:  
LUIZ M. MARDELINO  
I.D.O. for Operations and Extension

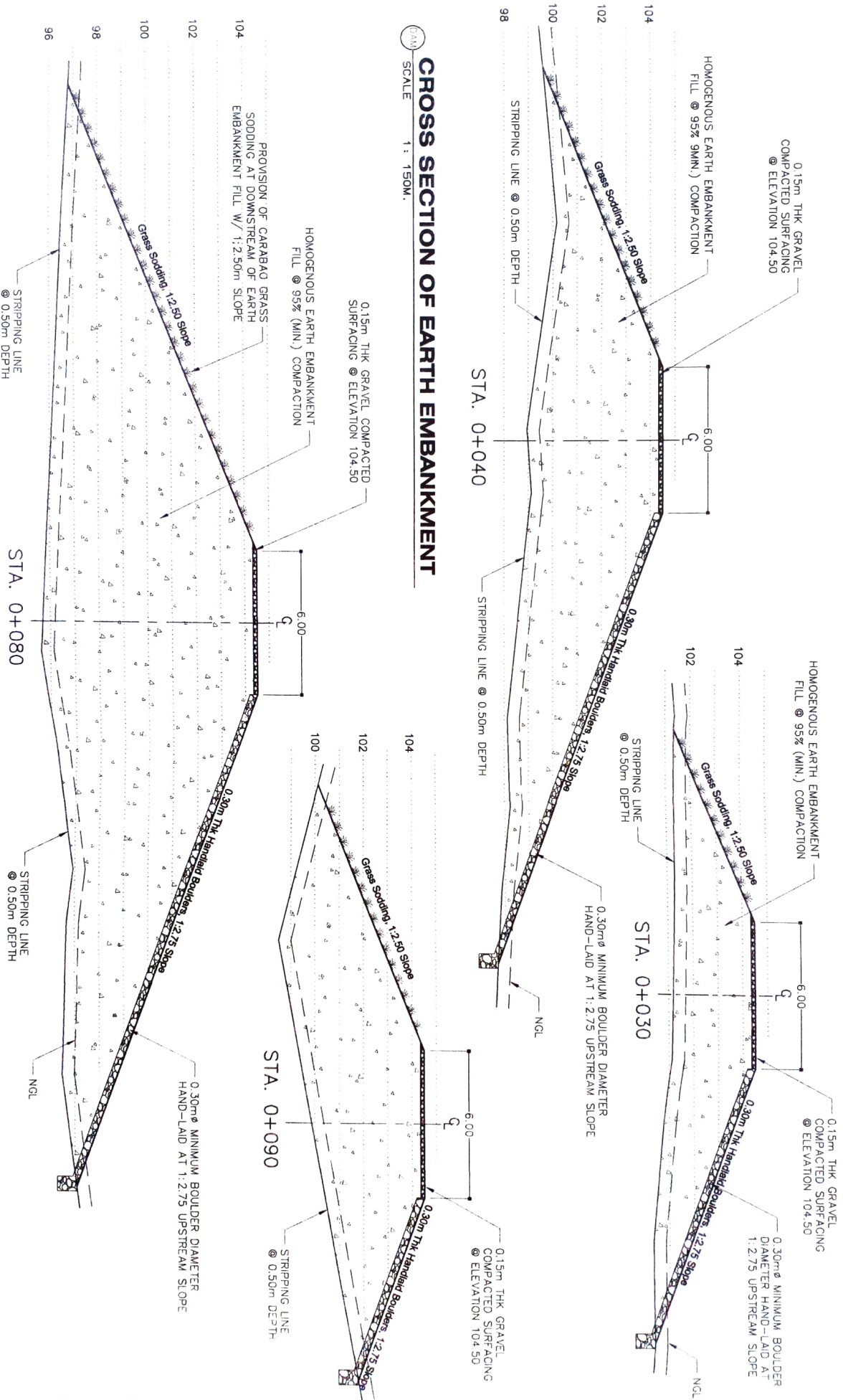
Approved by:  
RODEL P. CORONA, CA. MAAB  
Regional Director

Name of Project:  
**Construction of San Antonio SWIP**

Location:  
Brgy. San Antonio, Quampo, Camarines Sur

Sheet Counting:  
AS SHOWN

DATE: \_\_\_\_\_  
SCALE: \_\_\_\_\_



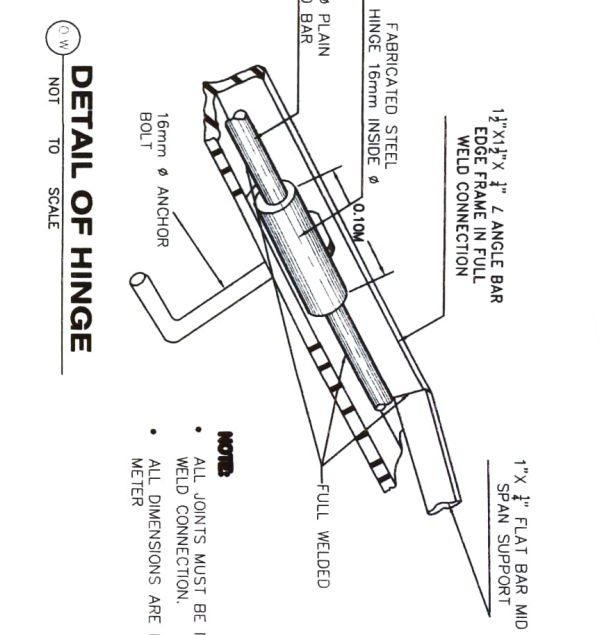
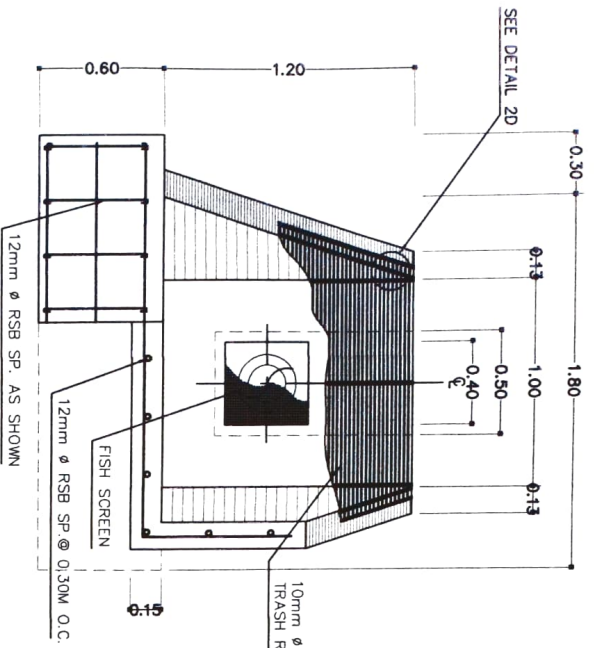






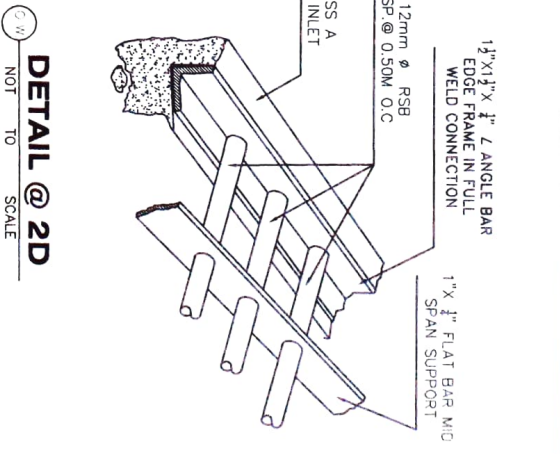






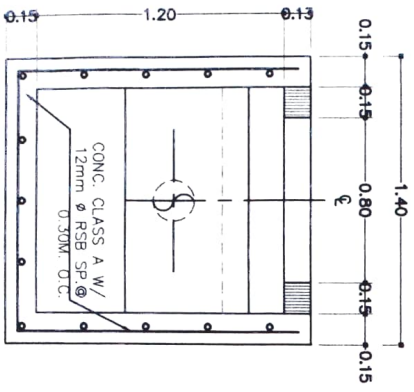
**DETAIL OF HINGE**  
 NOT TO SCALE

**NOTE**  
 • ALL JOINTS MUST BE IN FULL WELD CONNECTION.  
 • ALL DIMENSIONS ARE IN METER

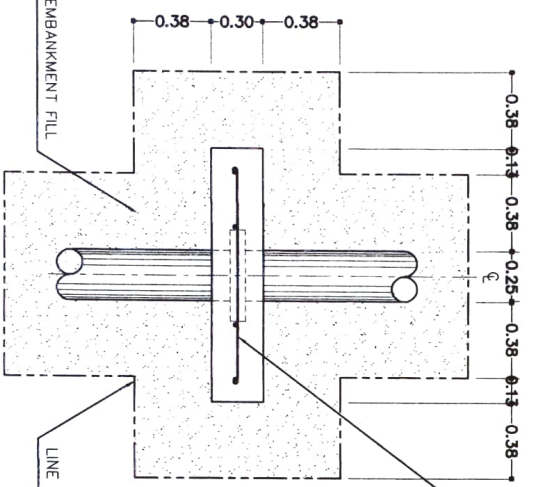


**DETAIL @ 2D**  
 NOT TO SCALE

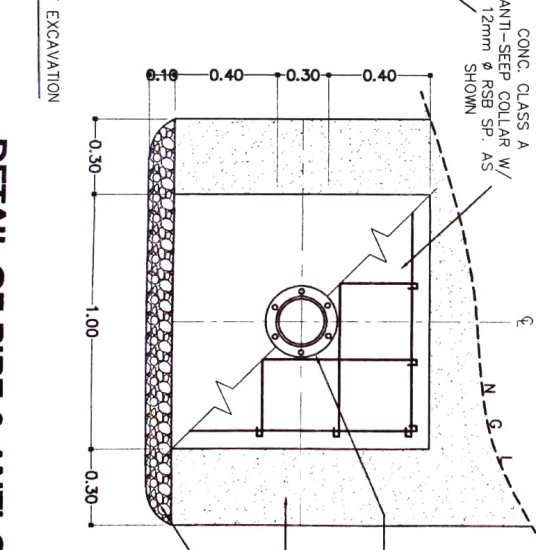
**@ SECTION 2B**  
 SCALE 1:25M



**@ SECTION 2C**  
 SCALE 1:25M



**PLAN**



**SECTIONS**

**DETAIL OF PIPE & ANTI-SEEP COLLAR**  
 SCALE 1:20M

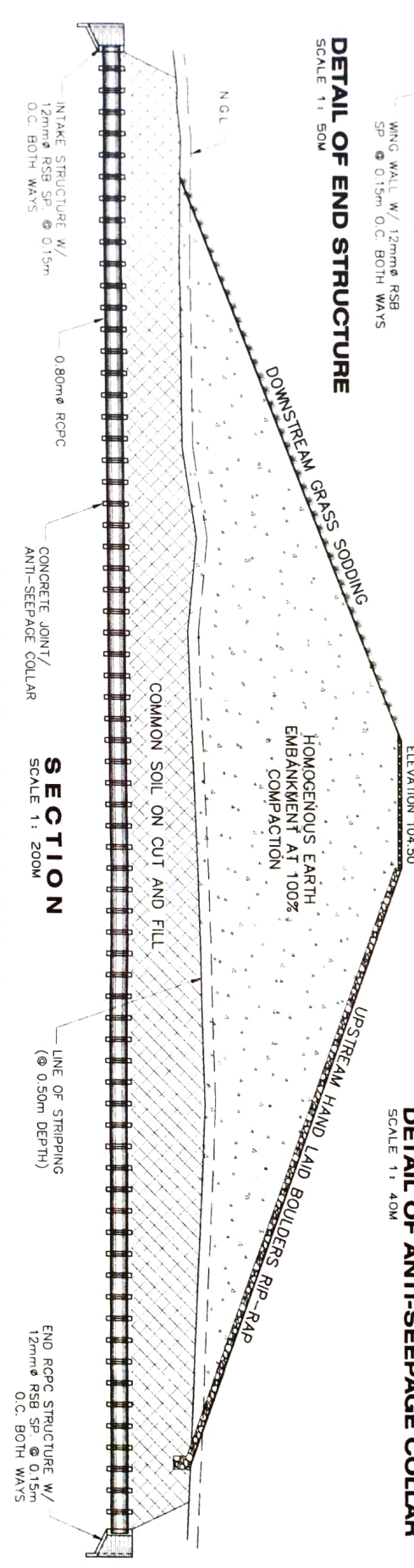
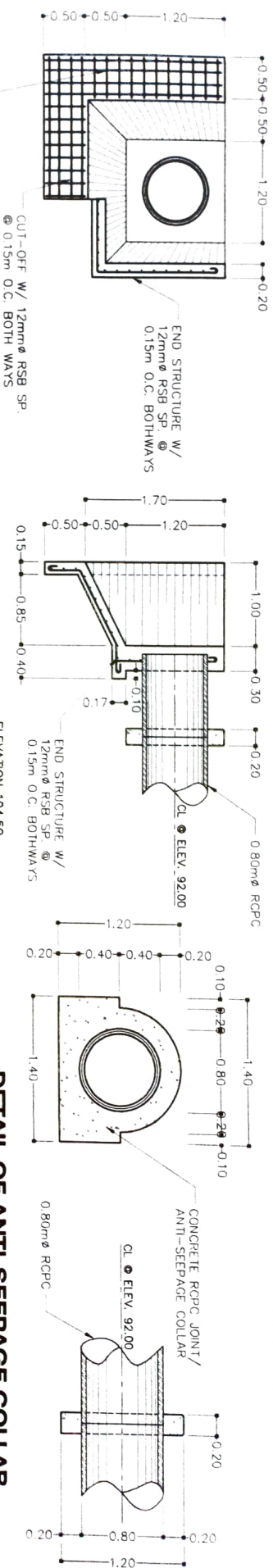
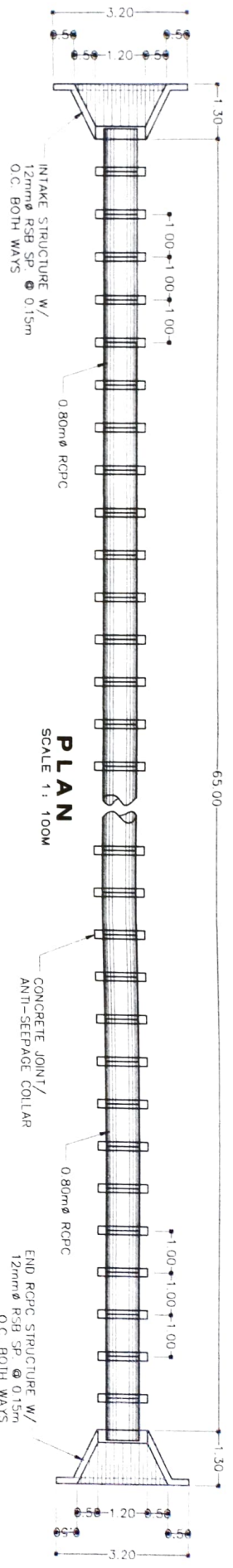


REPUBLIC OF THE PHILIPPINES  
 DEPARTMENT OF AGRICULTURE  
 REGIONAL FIELD UNIT NO. 5  
 SAN AUSTIN, PULI, CAVARINES SUR

Prepared by BERNARDO G. VALENZUELA PROJ. ENGR.	Checked by ENGR. ANTONIO B. MIRA ENR. II	Reviewed by ENGR. MERRY A. EBORA ENR. III	Submitted by ENGR. GILBERT S. SALCEDO CHIEF ENGINEER	Recommending Approval LIZ B. MARCELINO RFD for Operations and Maintenance	Approved by RODEL B. PEREZ RFD for Operations and Maintenance	Name of Project Construction of San Antonio SWP	Location Hgt. San Antonio, Osmang, Caintara, Sur	Drawn by AS SHOWN
--	--	---	--	---	---	--	---	----------------------







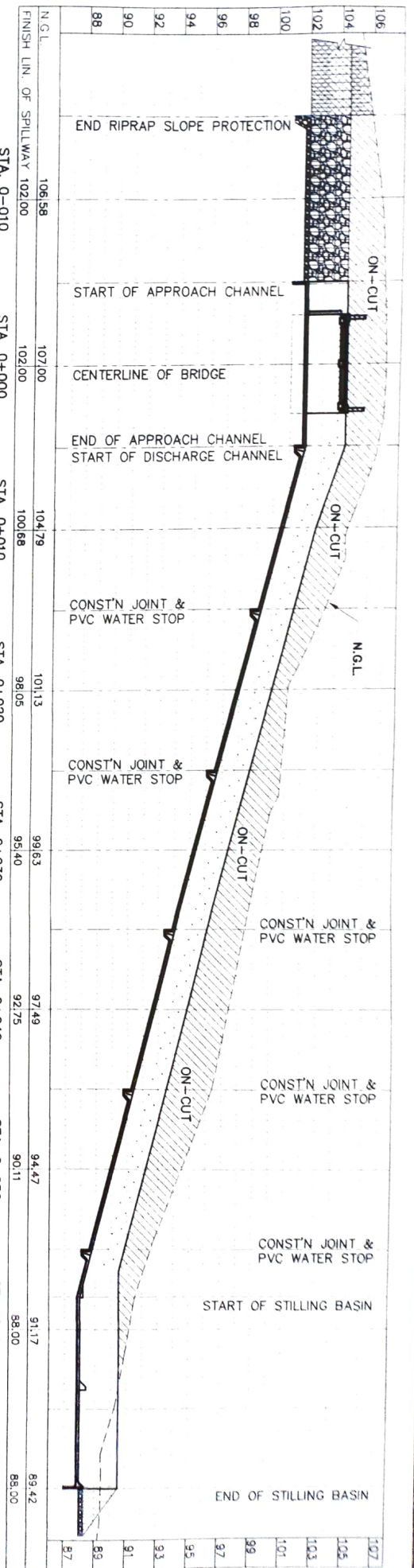
**DETAIL OF CREEK DIVERSION WORKS**  
SCALE AS SHOWN



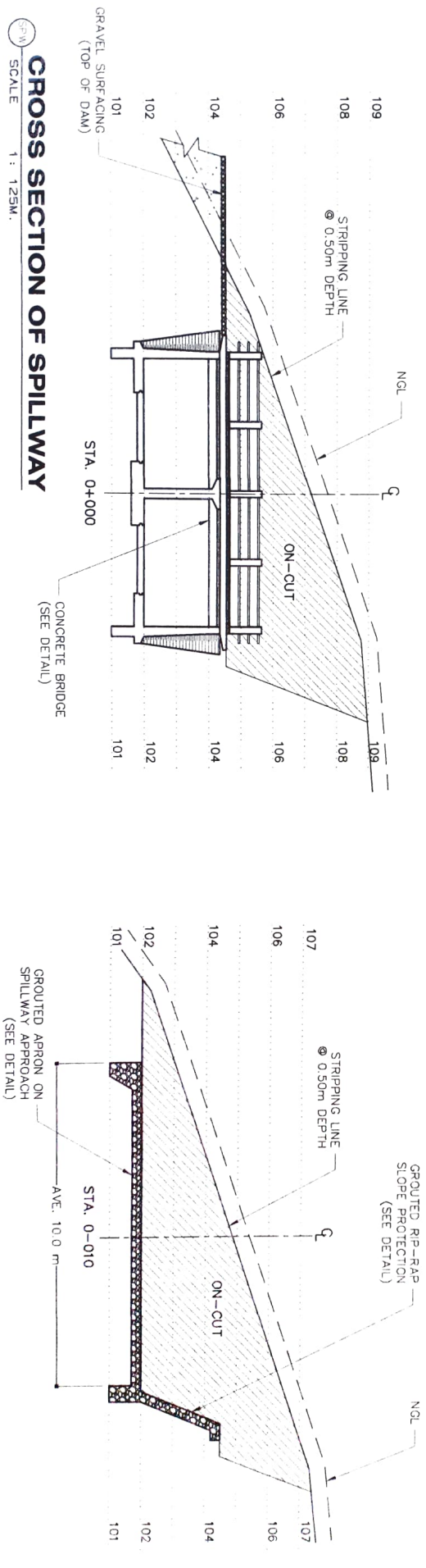
REPUBLIC OF THE PHILIPPINES  
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS  
REGIONAL FIELD UNIT NO. 5  
SAN AGUSTIN, PULI, CAVANES SUR

Prepared by BERNARDO VALINZUELA PROJECT ENGINEER 	Checked by ENGR. ANTHONY B. MIKA SUPERVISOR 	Reviewed by ENGR. JERRY A. BORDA DISTRICT ENGINEER III 	Submitted by ENGR. GILBERTO SALCEDO CHIEF ENGINEER 	Recommended Approval LIZ B. MARCELINO RFD for Operations and Extension 	Approved by RODEL P. BERNILLA MAABE REGIONAL ENGINEER IN CHARGE 	Name of Project Construction of San Antonio SWP	DATE 08-2024
ENR BR. JOSEPH D. BONITO (CADD)	ENR BR. JOSEPH D. BONITO (CADD)	ENR BR. JOSEPH D. BONITO (CADD)	ENR BR. JOSEPH D. BONITO (CADD)	ENR BR. JOSEPH D. BONITO (CADD)	ENR BR. JOSEPH D. BONITO (CADD)	District Office BRG. San Antonio, Osmanga, Cavanilles Sur	SHEET NO. 01
AS SHOWN						DIVISION SAN AGUSTIN	SCALE AS SHOWN





**PROFILE ALONG CENTERLINE OF SPILLWAY**  
 SCALE 1 : 250M.



DEPARTMENT OF AGRICULTURE  
 REGIONAL FIELD UNIT NO. 5  
 SAN AGUSTIN, PULI, CAGAYAN SUR

REPUBLIC OF THE PHILIPPINES  
 DEPARTMENT OF AGRICULTURE  
 REGIONAL FIELD UNIT NO. 5  
 SAN AGUSTIN, PULI, CAGAYAN SUR

Prepared by	Checked by	Reviewed by	Submitted by	Recommending Approval	Approved by	Nature of Project
HIRNARDO G. VALENZUELA PROJ. ENGINEER	ENGR. ARTHUR B. MIRA ENR II	ENGR. JERRY A. EROSA ENR III	ENGR. GILBERT S. SALCEDO SENIOR ENGR.	LUIZ R. MARCELIANO AGRI. ENGR. (OPERATIONS AND EXTENSION)	ROBERT P. KORTUPEL SENIOR ENGR. (OPERATIONS)	Construction of San Antonio SWP
ENGR. JEROME D. BONITO CADD ENGINEER						Location: Brgy. San Antonio, Cagayan, Cagayan Sur
						Sheet Contents: AS SHOWN



REPUBLIC OF THE PHILIPPINES  
 DEPARTMENT OF AGRICULTURE  
 REGIONAL FIELD UNIT NO. 5  
 SAN AGUSTIN, PULI, CAMARINES SUR

Prepared by:  
 BERNARDO G. VALENZUELA  
 PROJ. ENGR.  
 ENGR. BR. JOSEPH D. BONITO  
 C.A.D. type

Checked by:  
 ENGR. ARTHUR B. MIRA  
 Engr. II

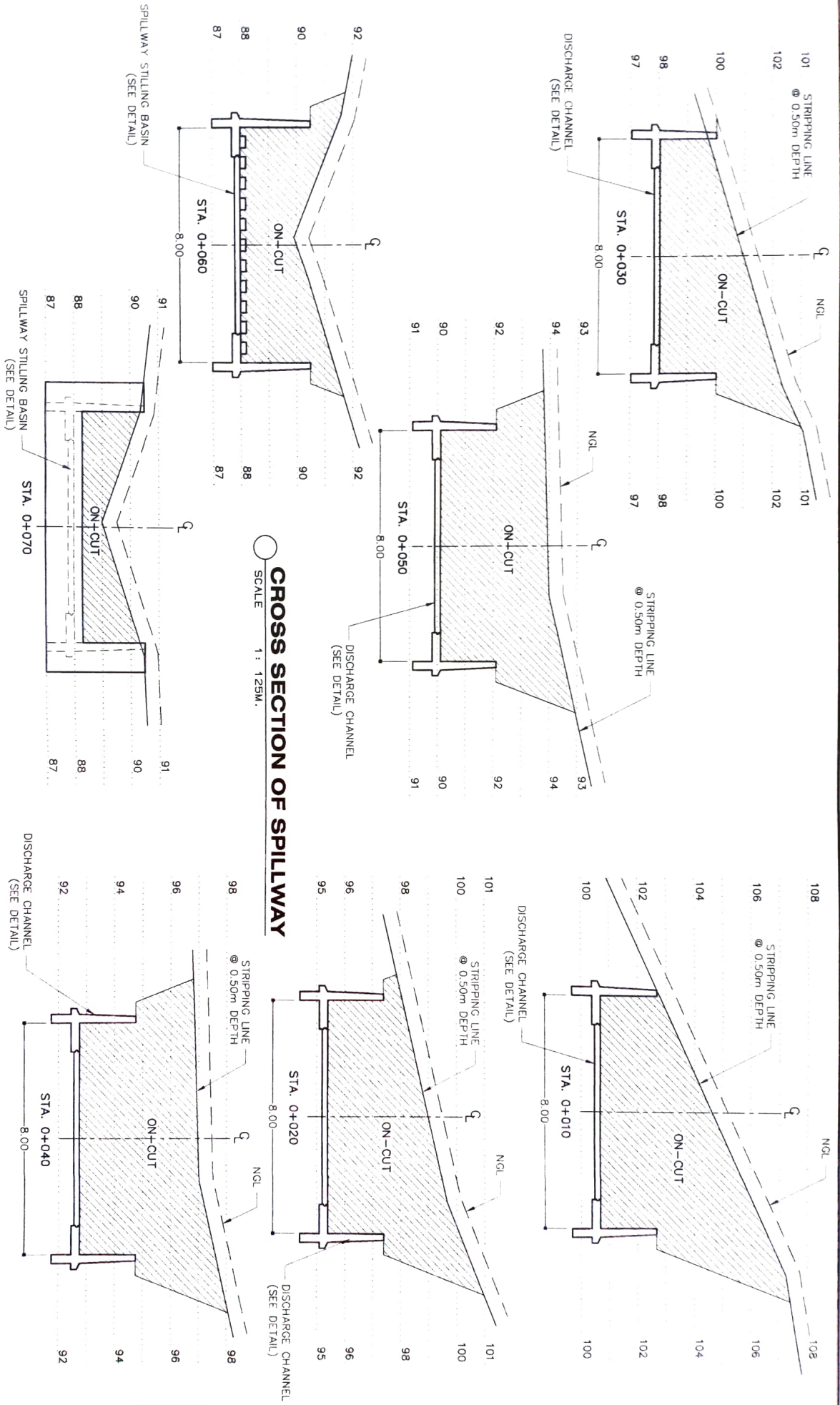
Reviewed by:  
 ENGR. JERRY A. BERONA  
 Engr. III

Submitted by:  
 ENGR. GILBERT S. SALCEDO  
 (Seal, Stamp)

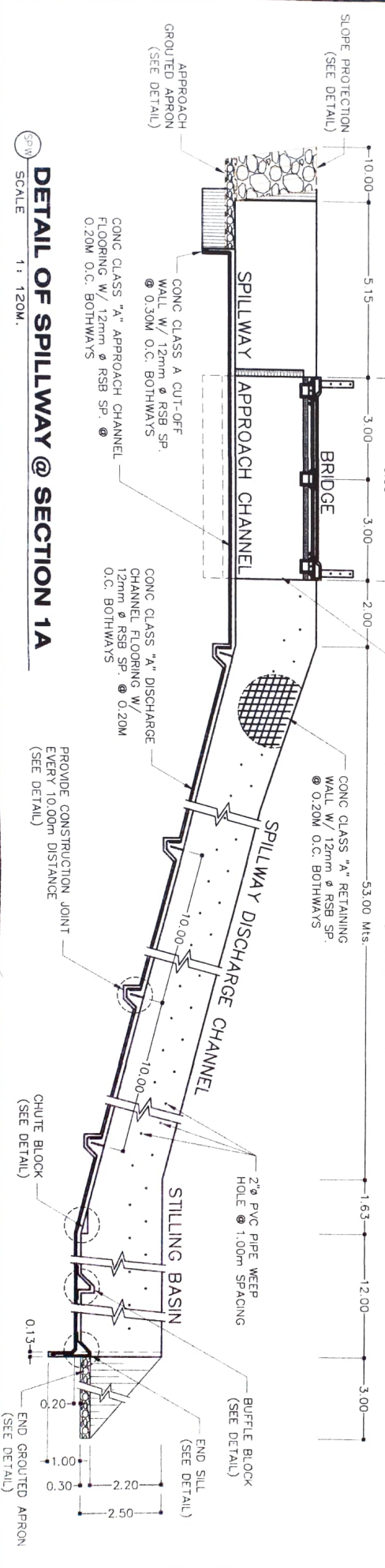
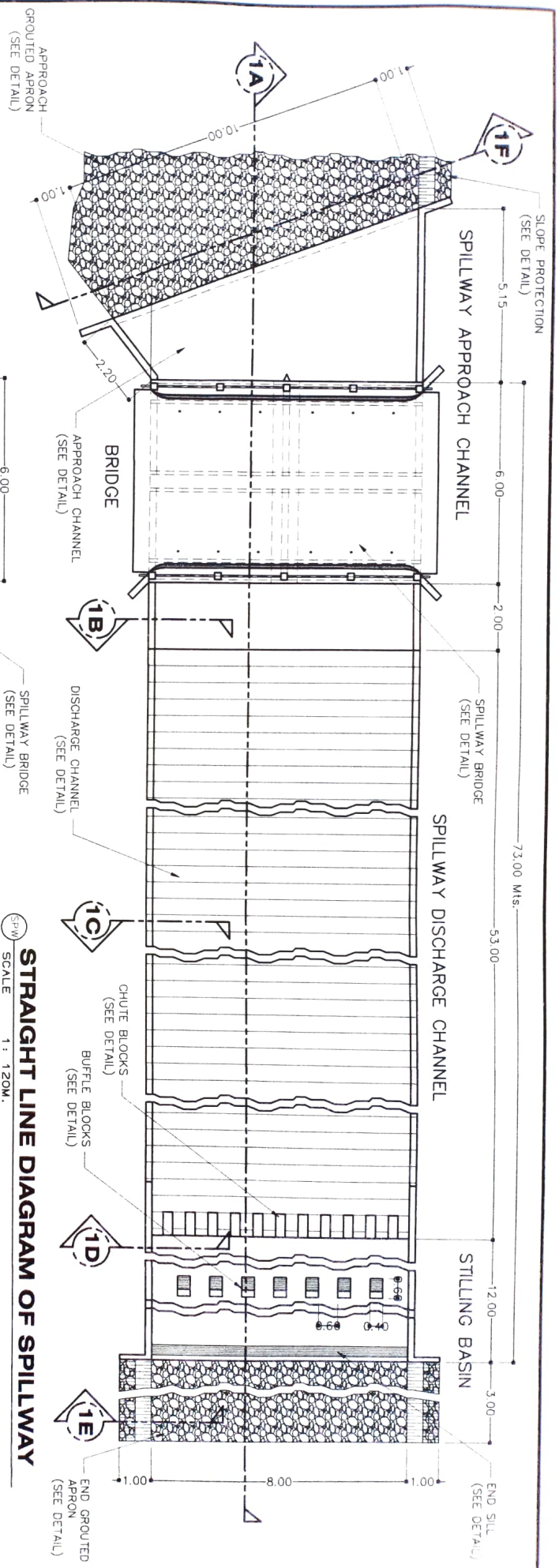
Recommending Approval:  
 LIZ R. MARCELINEO  
 RTO, Site Operator and Designer

Approved by:  
 ROSEL P. DOMITILA  
 Engr. III

Nature of Project:  
 Construction of San Antonio SWP  
 Location:  
 Brgy. San Antonio, Ocampo, Camarines Sur  
 Sheet Contents:  
 AS SHOWN







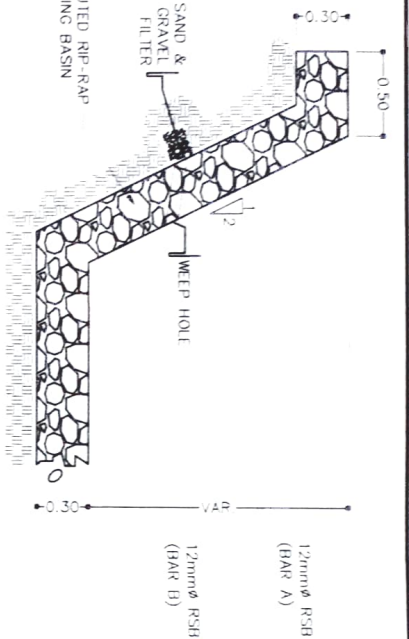
Prepared by: BERNARDO D. VALENZUELA PROJ. II. ASST.	Checked by: ENGR. ARTHUR A. MIRA Fig. II	Reviewed by: ENGR. ALBERT A. EBONIA ENGR. J. M. ESTRELLA, Temp. III	Sanctioned by: ENGR. GUILLERMO SALCEDO CHIEF, RAED	Recommending Approver: LIZ R. MARCELANO MTO, Agr. Operations and Extension	Approved by: RODEL E. JANSILIA, MAJE Regional Extension Officer	Name of Project: Construction of San Antonio SWP	Location: Brgy. San Antonio, Ocampo, Cagaites Sur	Sheet No.: AS SHOWN
ENGR. BE. JOSEPH J. BONITO CAD/OPER						DATE: _____	SCALE: _____	

**SCHEDULE OF REINFORCEMENT**

BAR	SIZE	SPACING
A	12mm $\phi$	0.20M O.C.
B	12mm $\phi$	0.20M O.C.
C	10mm $\phi$	0.20M O.C.

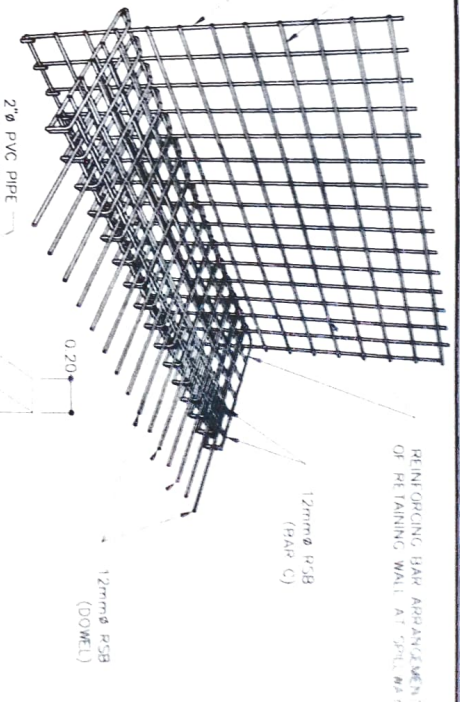
- NOTE:**
- PROVIDE 2"  $\phi$  PVC PIPE WEEP HOLE  $\phi$   $\frac{1}{4}$  OF CHANNEL WALL HEIGHT
  - ALL DIMENSIONS ARE IN METER

0.30m THK GROUTED RIP-RAP AT END OF STILLING BASIN

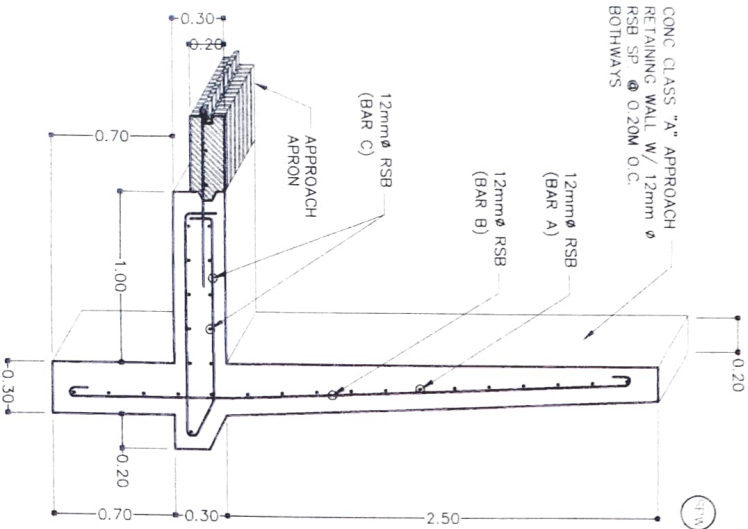


**DET. OF GROUTED RIPRAP @ SEC. 1D**

SCALE 1 : 30M.

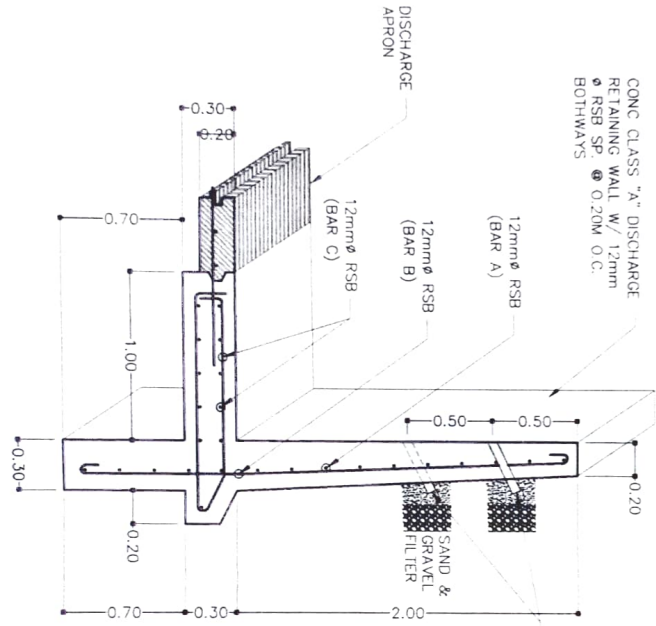


REINFORCING BAR ARRANGEMENT OF RETAINING WALL AT SEC. 1D



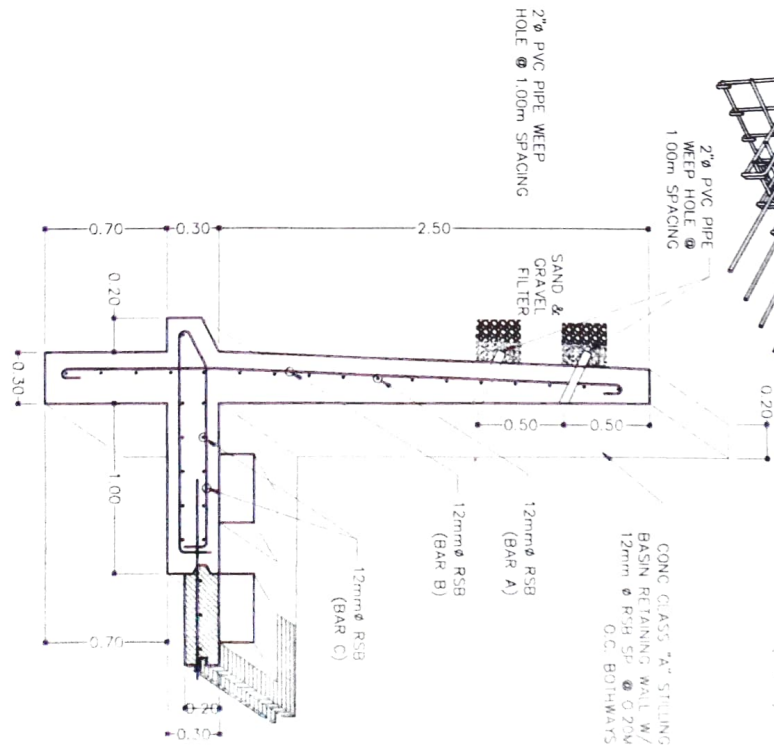
**DET. OF RET. WALL @ SEC. 1B**

SCALE 1 : 30M.



**DET. OF RET. WALL @ SEC. 1C**

SCALE 1 : 30M.



**DET. OF RET. WALL @ SEC. 1D**

SCALE 1 : 30M.



REPUBLIC OF THE PHILIPPINES  
DEPARTMENT OF AGRICULTURE  
REGIONAL FIELD UNIT NO. 5  
SAN AGUSTIN, PUL, CAGAYANES SUR

Requested by:  
BERNARDO G. VALENZUELA  
PROJ. INSMU  
ENGR. DR. JOSEPH D. BONTON  
CADD

Checked by:  
ENGR. ARTHUR H. MIRA  
ENR II

Reviewed by:  
ENGR. MERRY A. ESPINA  
ENR III

Supervised by:  
ENGR. GILBERT S. SALCEDO  
CHIEF ENGINEER

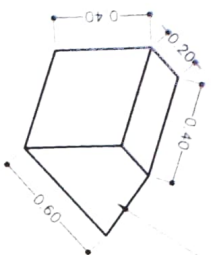
Recommending Approval:  
LIZ R. MARCELINO  
EIT for Construction and Inspection

Approved by:  
RODEL P. MORAYNA A. MABE  
Regional Director

Name of Project:  
Construction of San Antonio SWMP  
Location:  
Brgy. San Antonio (Nasipit), Cagayan Sur  
Number of Sheets:  
AS SHOWN

DATE: \_\_\_\_\_  
DRAWN BY: \_\_\_\_\_  
CHECKED BY: \_\_\_\_\_  
APPROVED BY: \_\_\_\_\_

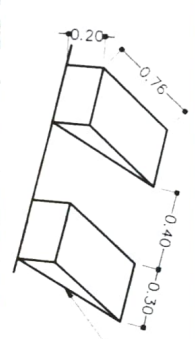




CONC CLASS "A" BUFFER BLOCK W/ 12mm  $\phi$  RSB SP @ 0.20M O.C. BOTH WAYS

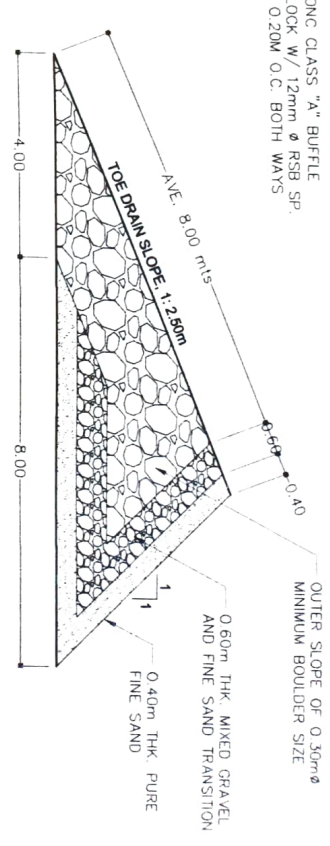
**DET. OF BUFFLE BLOCK**  
NOT TO SCALE

CONC CLASS "A" DISCHARGE CHANNEL RETAINING WALL W/ 12mm  $\phi$  RSB SP @ 0.20M O.C. BOTH WAYS



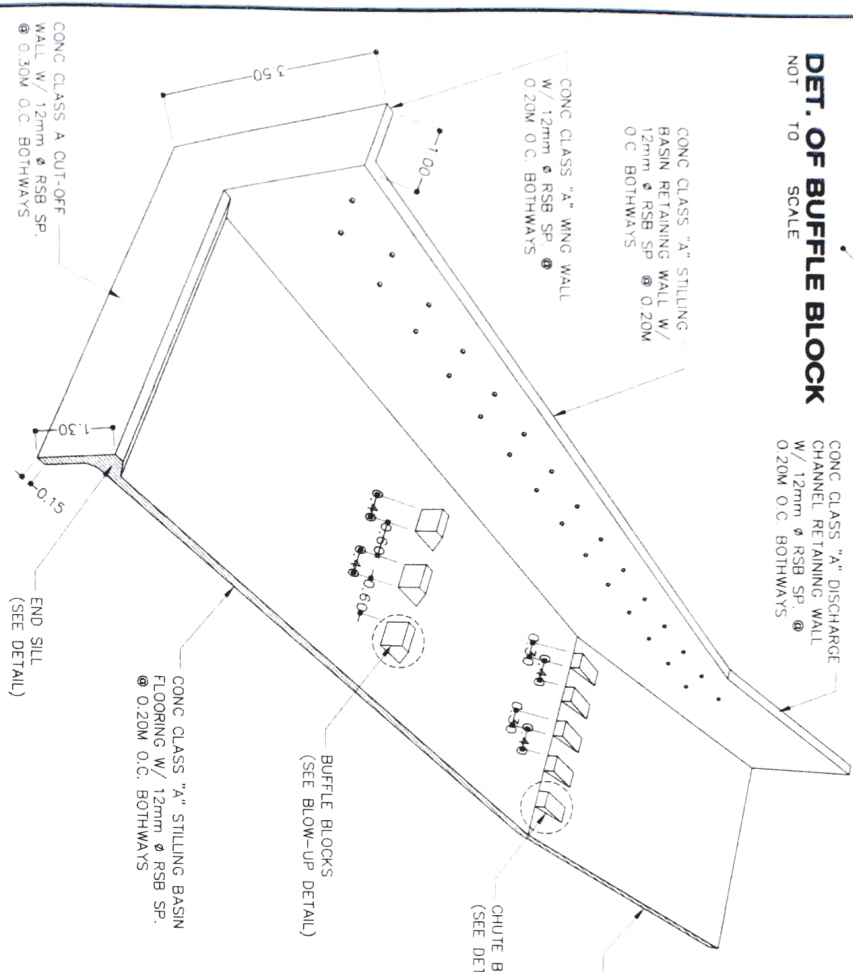
**DET. OF CHUTE BLOCK**  
NOT TO SCALE

CONC CLASS "A" BUFFER BLOCK W/ 12mm  $\phi$  RSB SP @ 0.20M O.C. BOTH WAYS



**DETAIL OF TOE DRAIN**  
SCALE 1 : 100M.

0.30m THK GROUDED RIPRAP SLOPE PROTECTION AT SPILLWAY APPROACH CHANNEL

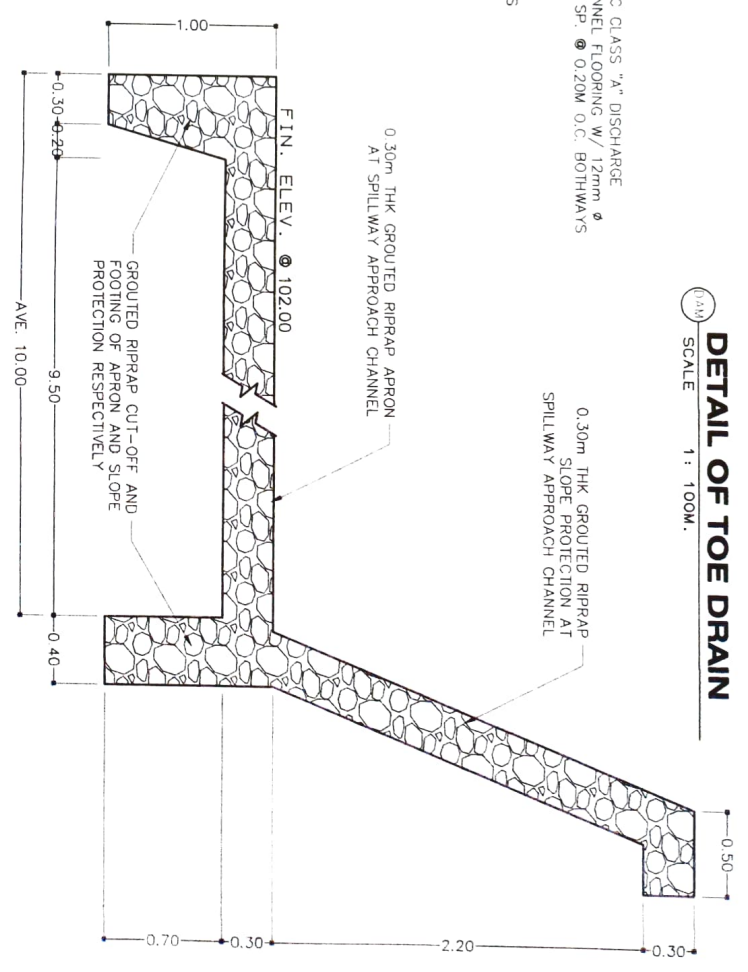


CONC CLASS "A" STILLING BASIN FLOORING W/ 12mm  $\phi$  RSB SP @ 0.20M O.C. BOTH WAYS

CONC CLASS "A" DISCHARGE CHANNEL FLOORING W/ 12mm  $\phi$  RSB SP @ 0.20M O.C. BOTH WAYS

**DET. OF SPILLWAY STILLING BASIN**  
NOT TO SCALE

**DET. OF GROUDED RIPRAP @ SEC. 1F**  
SCALE 1 : 30M.



0.30m THK GROUDED RIPRAP APRON AT SPILLWAY APPROACH CHANNEL

GROUDED RIPRAP CUT-OFF AND FOOTING OF APRON AND SLOPE PROTECTION RESPECTIVELY

Prepared by: **HERNARDO VALLENUELA**  
PROJECT ENGINEER

Checked by: **ENGR. ANTHONY B. MIRA**  
ENR II

Reviewed by: **ENGR. GERRY A. EBORNA**  
EROSION ENGINEER III

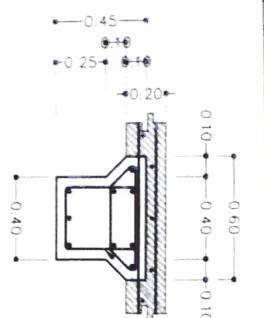
Submitted by: **ENGR. GILBERT S. SALCEDO**  
CHIEF ENGINEER

Recommending Approval: **LITZ B. MARCELINO**  
RFD for Operation and Estimates

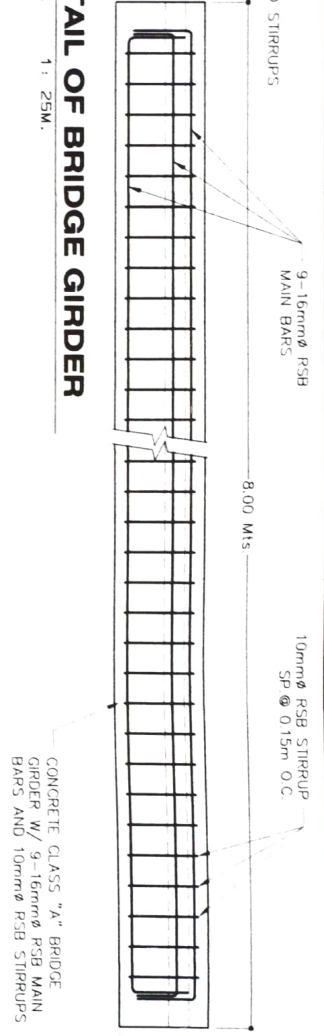
Approved by: **RODEL P. FORNIA, A. MARE**  
Regional Executive Director

Name of Project: **Construction of San Antonio SWP**  
Location: **Bar. San Antonio, Cagayan, Cagayan de Oro**  
Special Drawing: **AS SHOWN**

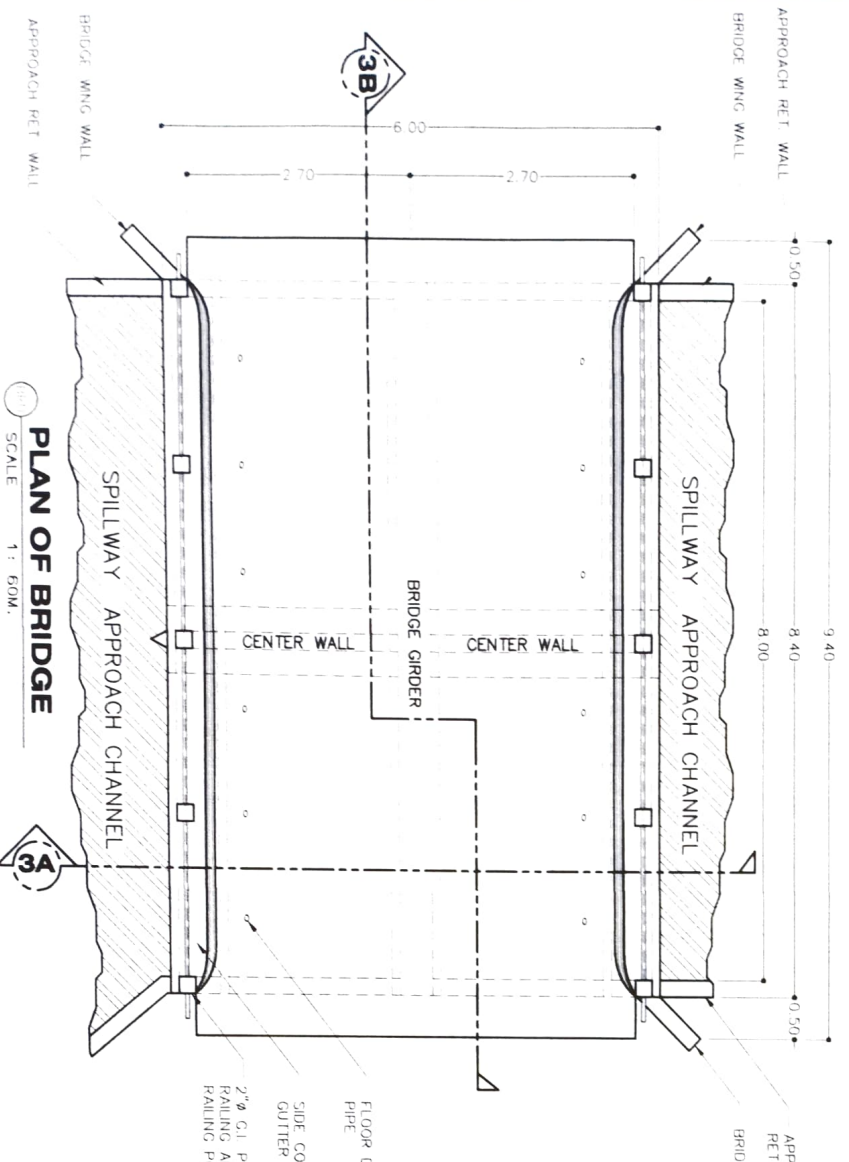
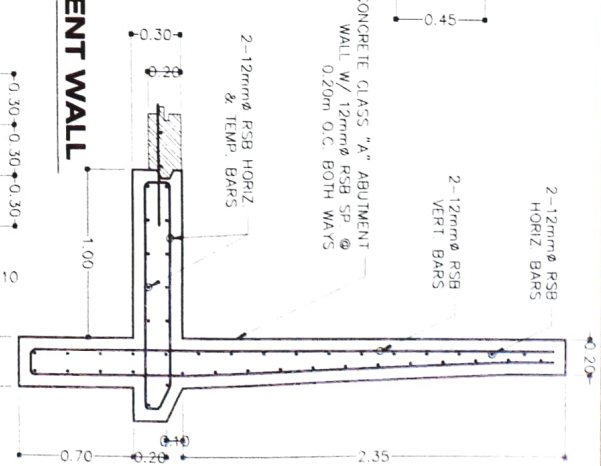
DATE: **08/20/2023**  
DRAWN BY: **[Signature]**



**DETAIL OF BRIDGE GIRDER**  
SCALE 1 : 25M.

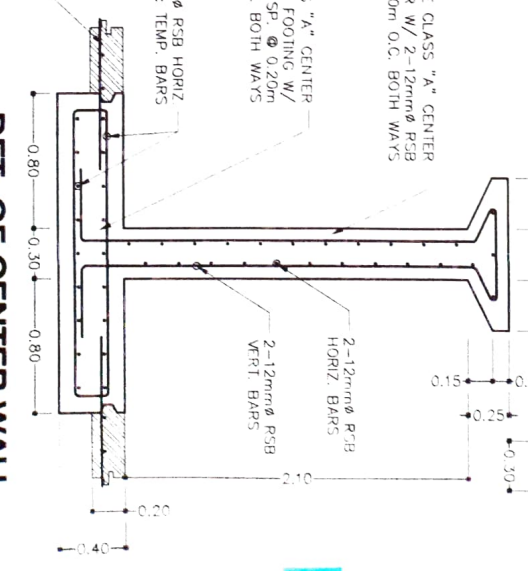


**DET. OF ABUTMENT WALL**  
SCALE 1 : 30M.



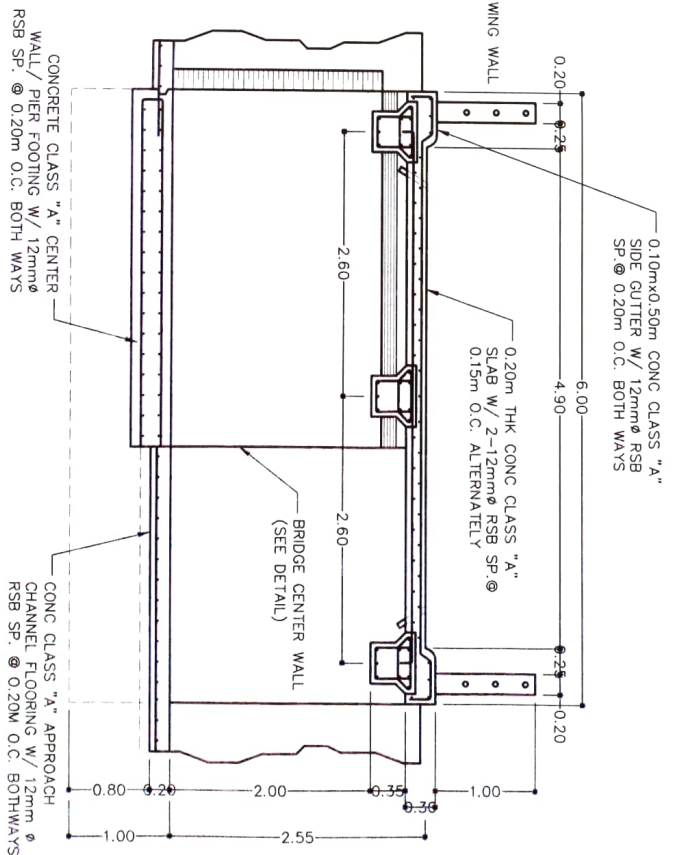
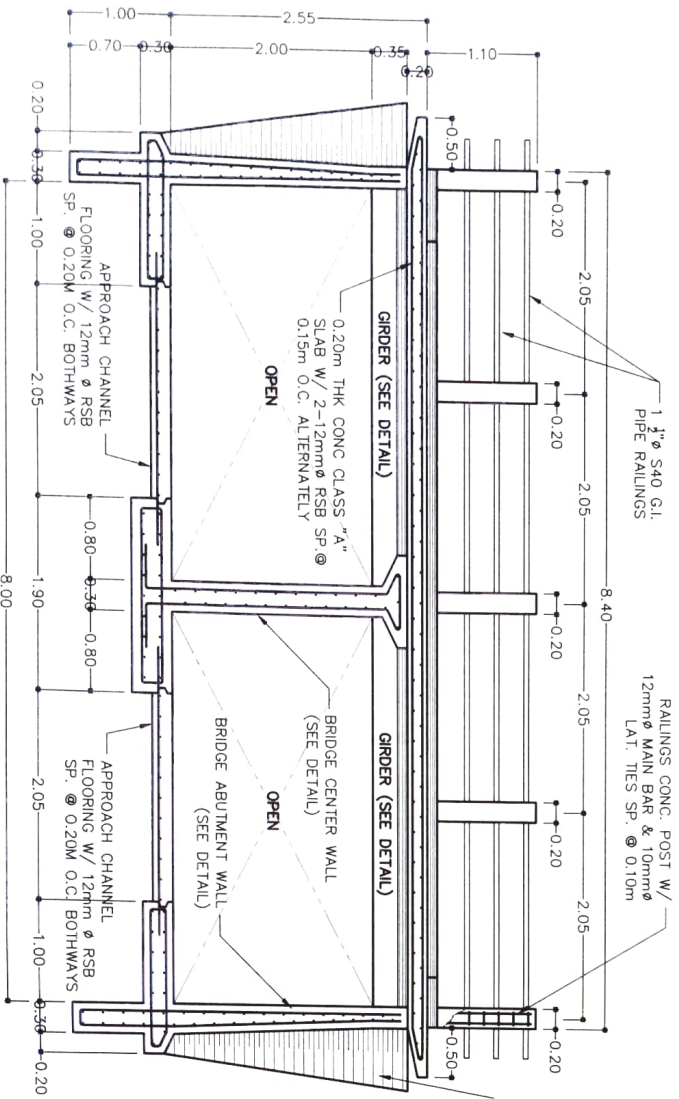
**PLAN OF BRIDGE**  
SCALE 1 : 60M.

**DET. OF CENTER WALL**  
SCALE 1 : 30M.



Prepared by HERNANDEZ VALENZUELA TERRA ROY	Checked by LYNN MATHIELO MORA TERRA ROY	Reviewed by RODRIGUEZ A. TORRES TERRA ROY	Submitted by ENRIE GILBERT S. SANCHEZ TERRA ROY	Recommending Approval LIZ R. MARCELINO RTRR (RTRR) (Specialist in soil foundation)	Approved by ROHEL P. GONZALEZ A. MAHE Regional Engineer in Charge	Location Hwy. San Antonio, Cagayan de Oro, Cagayan de Oro	Contract No. AS SHOWN
Construction of San Antonio SWP							
DATE 06/20/2017							





**DET. OF BRIDGE @ SECTION 3A**

SCALE 1 : 50M.

**DET. OF BRIDGE @ SECTION 3B**

SCALE 1 : 50M.

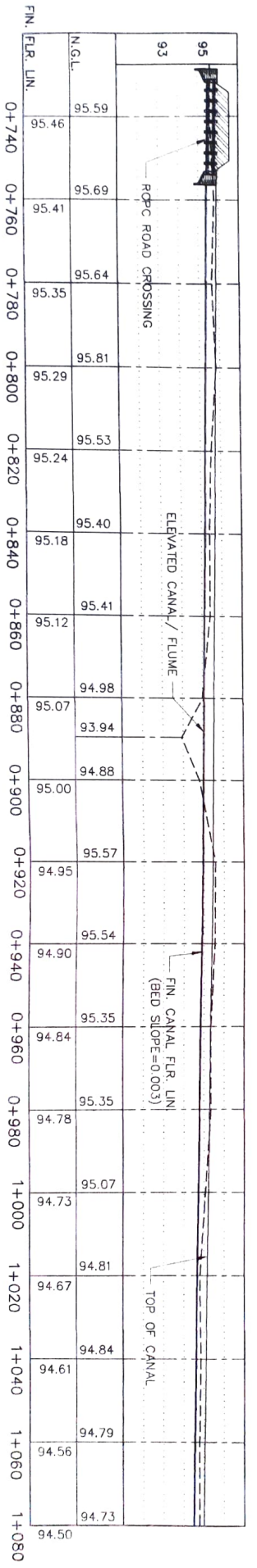
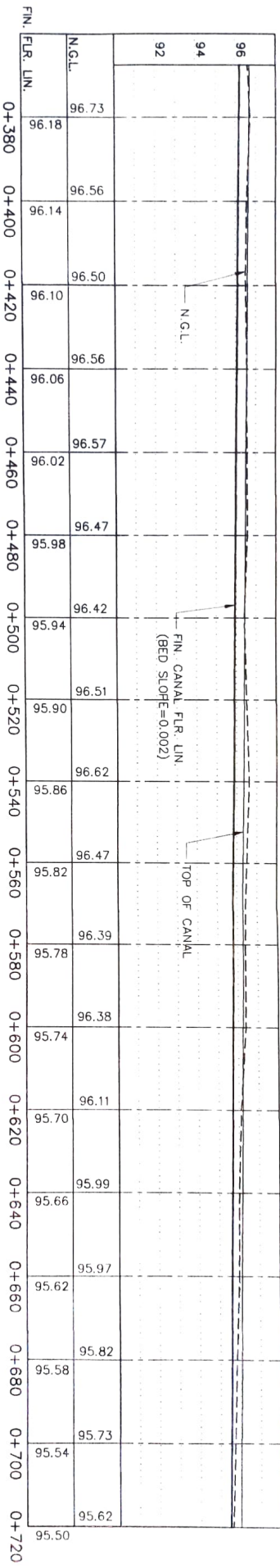
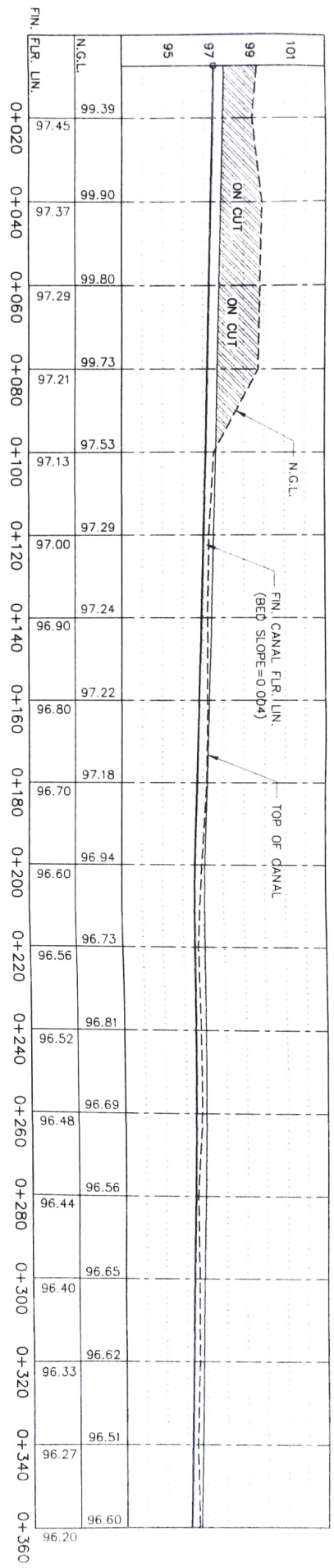


REPUBLIC OF THE PHILIPPINES  
DEPARTMENT OF AGRICULTURE  
REGIONAL FIELD UNIT NO. 5  
SAN AGUSTIN, PULI, CAGAYANES SUR

Prepared by: BERNABDO VALENZUELA PROJ. ENGINEER ENGR. BEL JOSEPH D. BONITO 7/20/2019	Checked by: ENGR. ALVIN B. MIRA TAG. II	Reviewed by: ENGR. JERRY A. BERAÑA ENR 05537667 Tag. III	Submitted by: ENGR. GILBERT S. SALCEDO Chief, T&E	Recommending Approval: LIZ R. MANCENANO Rtd. for Operations and Estimation	Approved by: RODEL FORSYTH A. MABE Regional Director	Name of Project: Construction of San Antonio SWIP
Location: Brgy. San Antonio, Campana, Camarines Sur	Scale: AS SHOWN	Date: 08/20/2019	Sheet No.:	Sheet Count:	Drawn by:	Checked by:

SCALE H 1 : 200M, V 1 : 1,000M

**PROFILE OF ALONG CENTERLINE OF CANAL**



Prepared by: BERNABDO, VALENZUELA ENGR. BERNARDO VALENZUELA (C/O-10/10/10)	Checked by: ENGR. ANTONIO B. MIRA (C/O-10/10/10)	Reviewed by: ENGR. JERRY A. ERONA (C/O-10/10/10)	Submitted by: ENGR. GILBERT S. SALCEDO (C/O-10/10/10)	Recommending Approval: LIZ R. MARDELINO (C/O-10/10/10)	Approved by: RODEL TORRES, A. MABE (C/O-10/10/10)	Name of Project: Construction of San Antonio SWP
Location: Brgy. San Antonio, Ocampo, Camarines Sur	Date: 10/10/10	Sheet No.: 01	Scale: AS SHOWN	Drawing No.: 01	Date: 10/10/10	Sheet No.: 01





REPUBLIC OF THE PHILIPPINES  
 DEPARTMENT OF AGRICULTURE  
 REGIONAL FIELD UNIT NO. 5  
 SAN AGUSTIN, PULI, CAMARINES SUR

Prepared by:  
 BERNARDO G. VALENZUELA  
 ENGR. (P) (SENIOR) (ELECTRICAL)  
 ENGR. (P) (SENIOR) (ELECTRICAL)

Checked by:  
 ENGR. ANTHONY B. MIRA  
 ENR. II

Reviewed by:  
 ENGR. MARVIN A. BERONA  
 ENR. III

Blended by:  
 ENGR. GUILLERMO S. SANCHEZ  
 CHIEF BLDG.

Recommending Approval:  
 ENGR. R. MARCELO  
 CHIEF OF OPERATIONS AND TRAINING

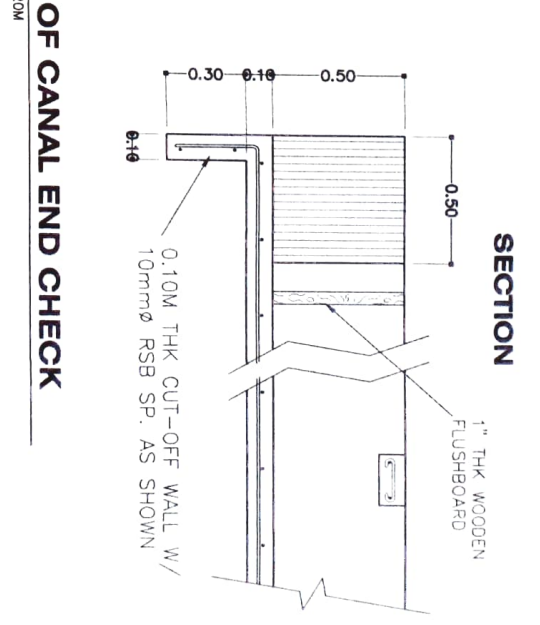
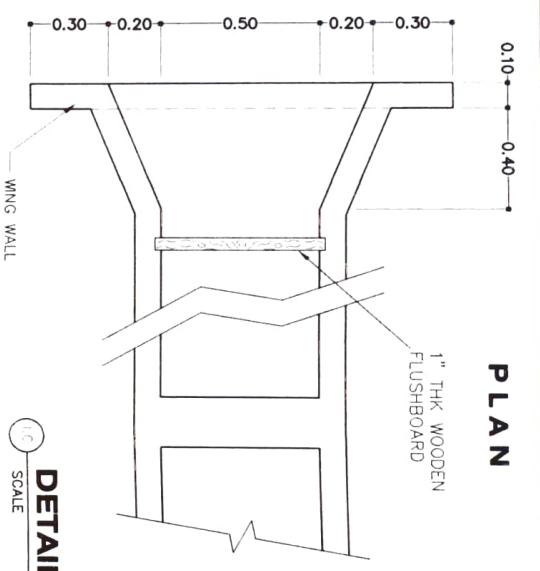
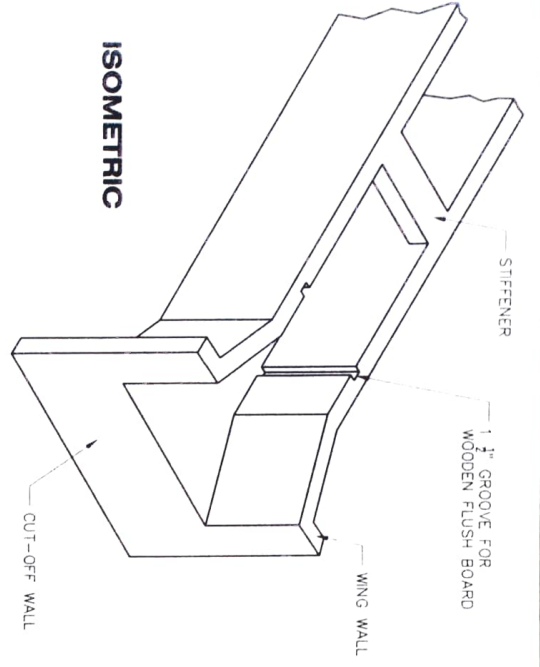
Approved by:  
 ROSEL P. MORILLAS  
 CHIEF OF DIVISION

Name of Project:  
 Construction of San Antonio SWP

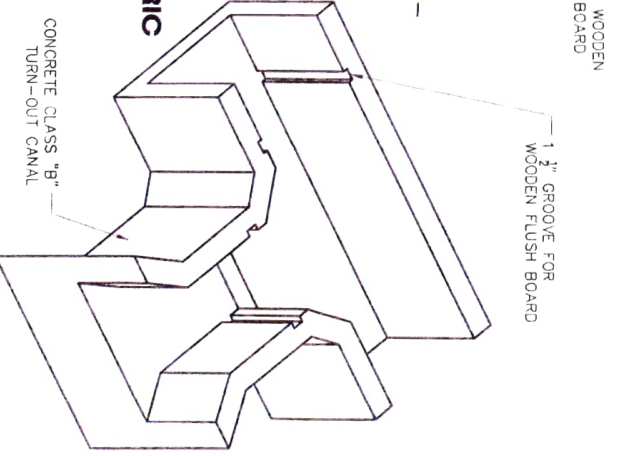
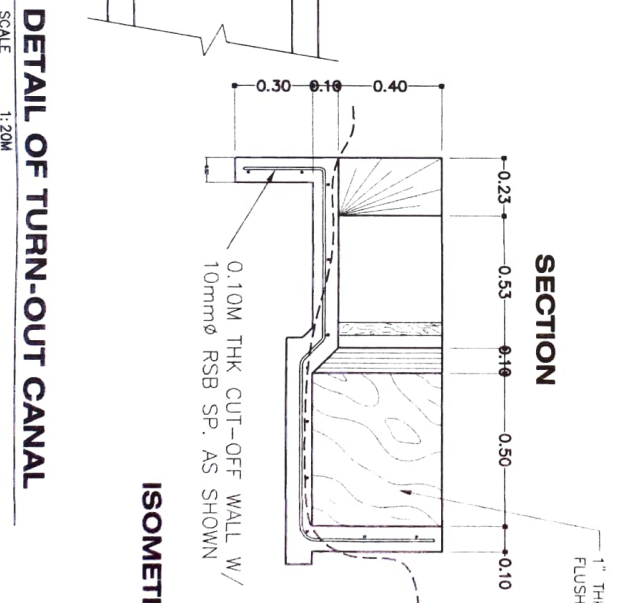
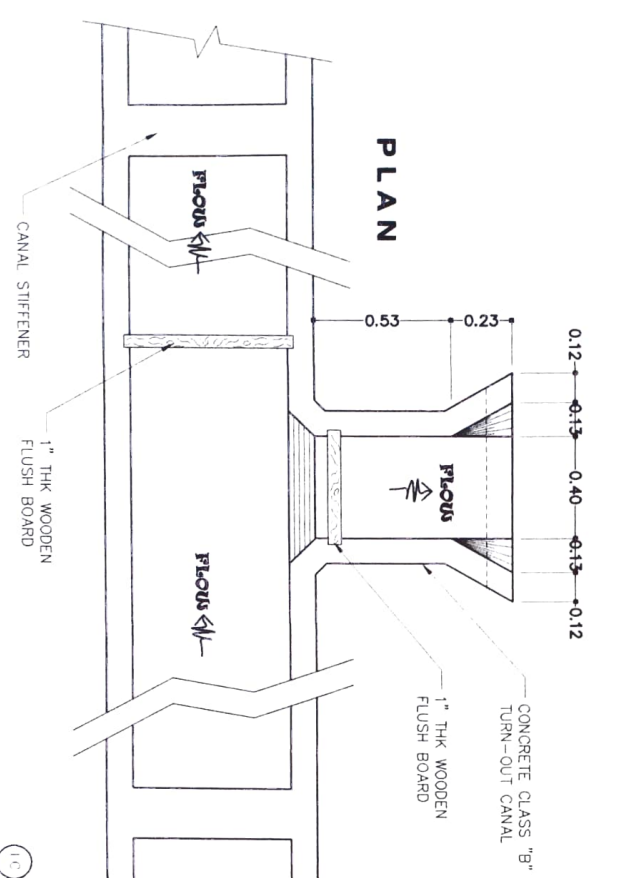
Location:  
 Brgy. San Agustin, Camarines Sur

Sheet Contents:  
 AS SHOWN

DATE:	REVISED:
DATE:	REVISED:
DATE:	REVISED:



DETAIL OF CANAL END CHECK  
 SCALE 1:20M



DETAIL OF TURN-OUT CANAL  
 SCALE 1:20M



REPUBLIC OF THE PHILIPPINES  
 DEPARTMENT OF AGRICULTURE  
 REGIONAL FIELD UNIT NO. 5  
 SAN ANTONIO, PUL. CAGAYANES SUR

Prepared by  
 HIRNAPPOG VALENZUELA  
 PESE II BSN  
 ENGR. BJF. JOSEPH D. BUNTO  
 (AED) III

Checked by  
 ENGR. ALBERTA B. MIRA  
 PESE II

Reviewed by  
 ENGR. THARY A. EROSA  
 PESE III

Submitted by  
 ENGR. GILBERT S. SALCEDO  
 CHIEF FIELD

Recommending Approval  
 LIZ R. MARCELIÑO  
 ENR for operation and inspection

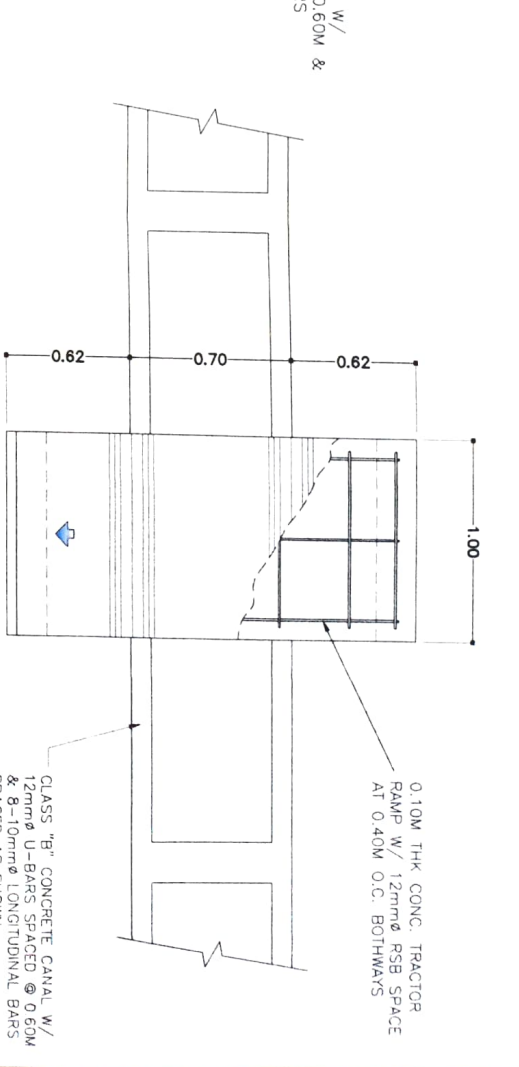
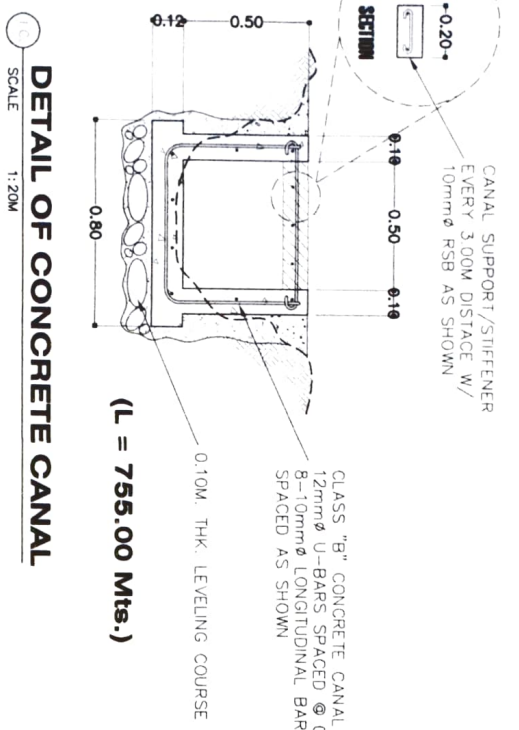
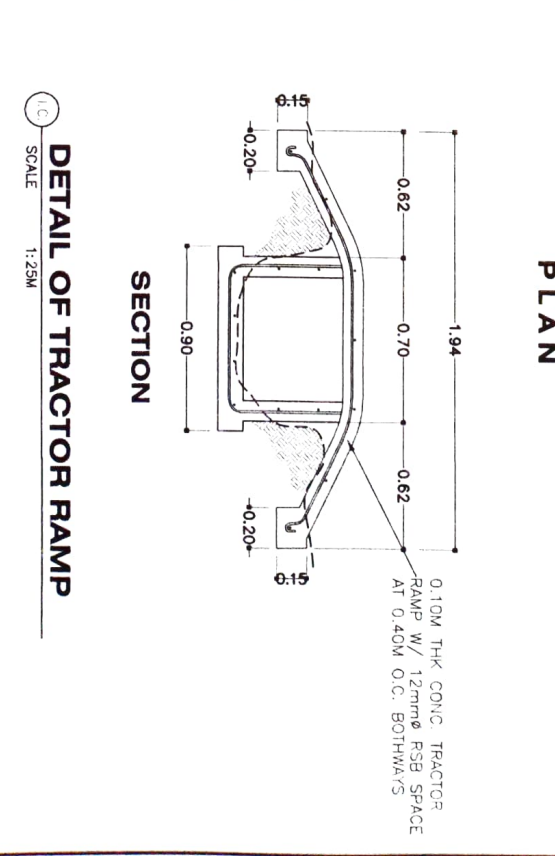
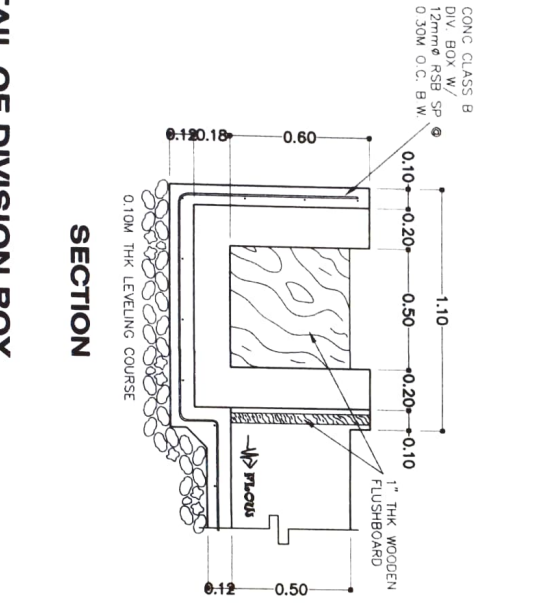
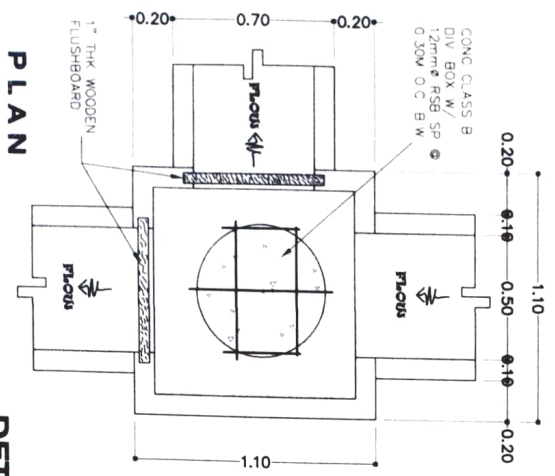
Approved by  
 RODEL TORRES A. MABE  
 Regional Engineering Director

Nature of Project  
 Construction of San Antonio SWP

Location  
 Brgy. San Antonio, Ocampo, Cagayanes Sur

Sheet No. \_\_\_\_\_ of \_\_\_\_\_

Scale  
 AS SHOWN



PLAN

SECTION

SECTION

DETAIL OF CONCRETE CANAL

(L = 755.00 Mts.)

PLAN

DETAIL OF TRACTOR RAMP

SCALE 1:20M

SCALE 1:25M

SCALE 1:20M





REPUBLIC OF THE PHILIPPINES  
 DEPARTMENT OF AGRICULTURE  
 REGIONAL FIELD UNIT NO. 5  
 SAN AGUSTIN, PINAR DEL RIO, CAMARINES SUR

Requested by: **BIENARDIO G. VALENZUELA**  
 FOR: **FIELD SERVICE**  
 ENGR. **BEL JOSEPH D. BONITO**

Checked by: **ENGR. ARTHUR B. MIRA**  
 ENR. II

Reviewed by: **ENGR. JERRY A. EBONA**  
 ENR. III

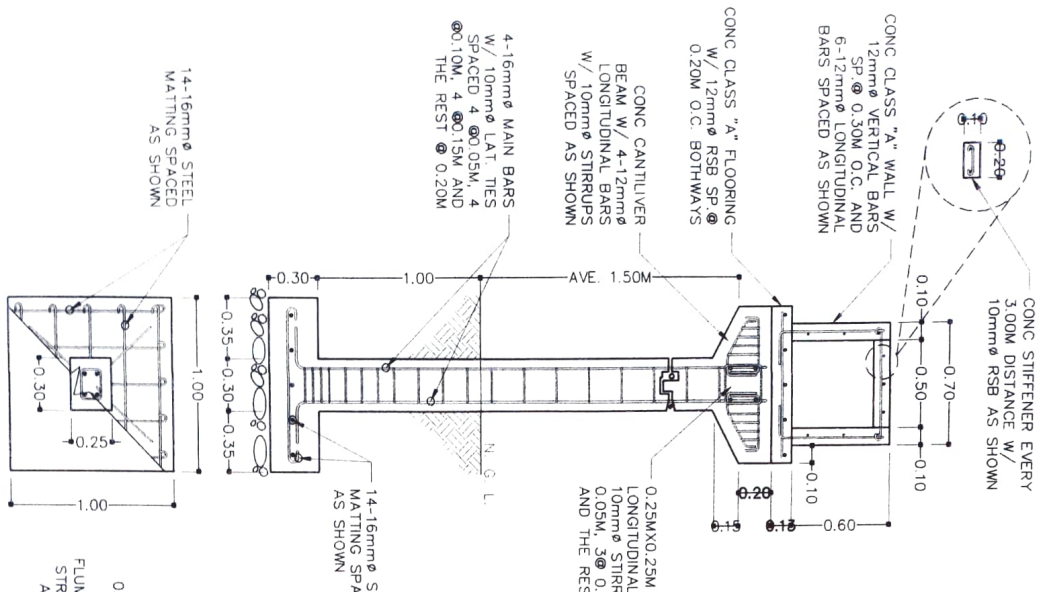
Submitted by: **ENGR. GUILLERMO SALCEDO**  
 CHIEF FIELD

Recommending Approval: **ALFREY MANGCINON**  
 HD. OF REGIONAL FIELD UNIT

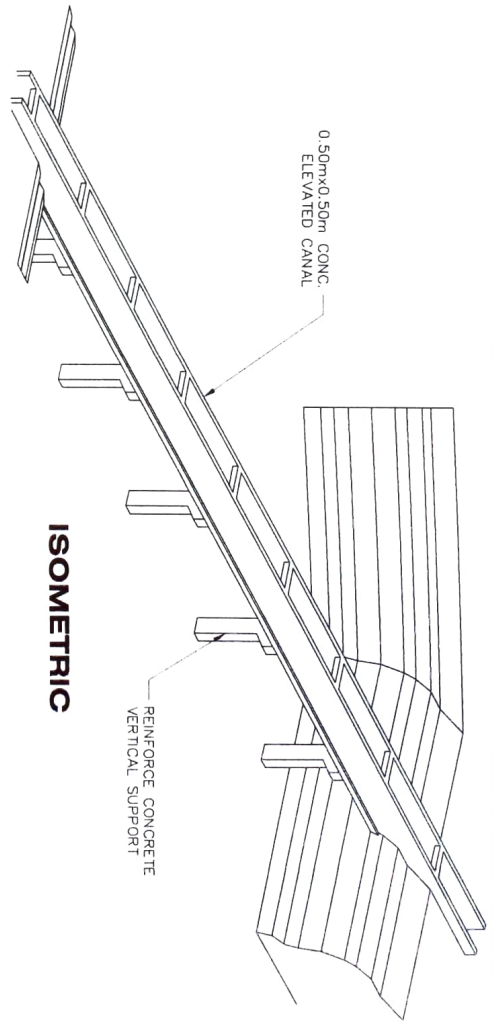
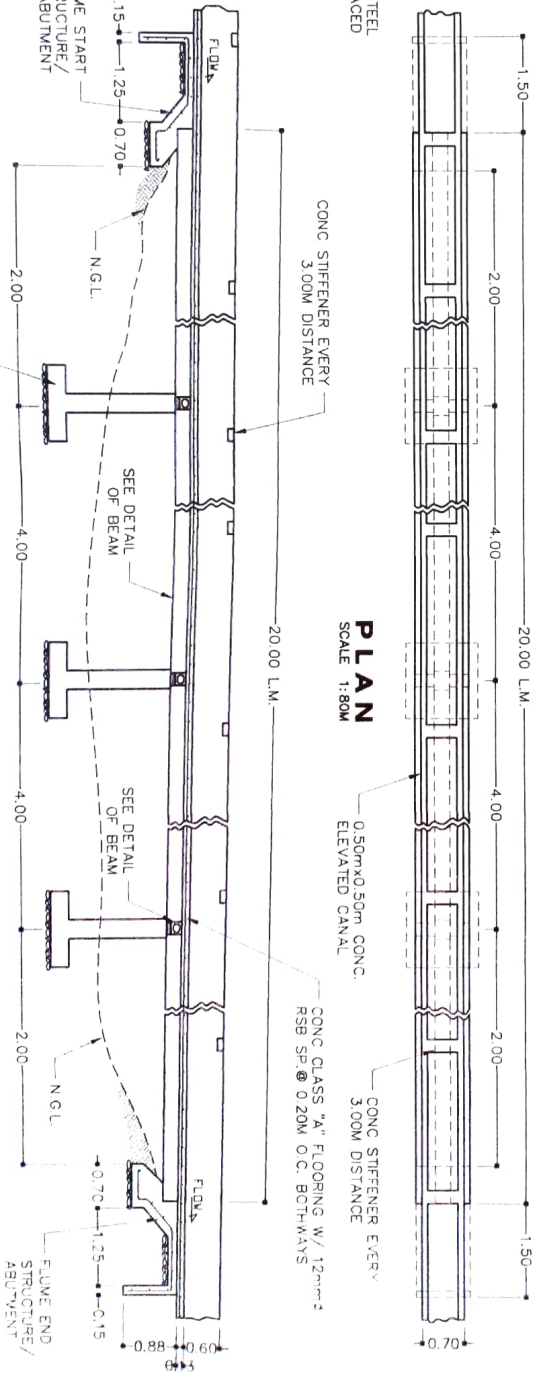
Approved by: **RODEL P. JOSHUA M. MARE**  
 ENR. III

NAME OF PROJECT: **Construction of San Antonio SWIP**  
 LOCATION: **Brgy. San Antonio, Occidental Camarines Sur**  
 SHEET NUMBER: **AS SHOWN**

**DETAIL OF FLUME COLUMN**  
 SCALE 1:30M



**SECTION @ CENTERLINE OF FLUME**  
 SCALE 1:80M



**ISOMETRIC**



REPUBLIC OF THE PHILIPPINES  
 DEPARTMENT OF AGRICULTURE  
 REGIONAL FIELD UNIT NO. 5  
 SAN AGUSTIN, PULI, CAMARINES SUR

Prepared by:  
 HERNANDO VALENZUELA  
 PROJ. ENGR.  
 ENGR. BEA JASPER D. BONITO

Checked by:  
 ENGR. ARTHUR B. MIRA  
 ENR. II

Reviewed by:  
 ENGR. JERRY A. EROSA  
 ENR. III

Submitted by:  
 ENGR. GILBERT S. SALCEDO  
 CHIEF ENGR.

Recommending Approval:  
 LIZ R. MARCELINEO  
 ETD for Operations and Extension

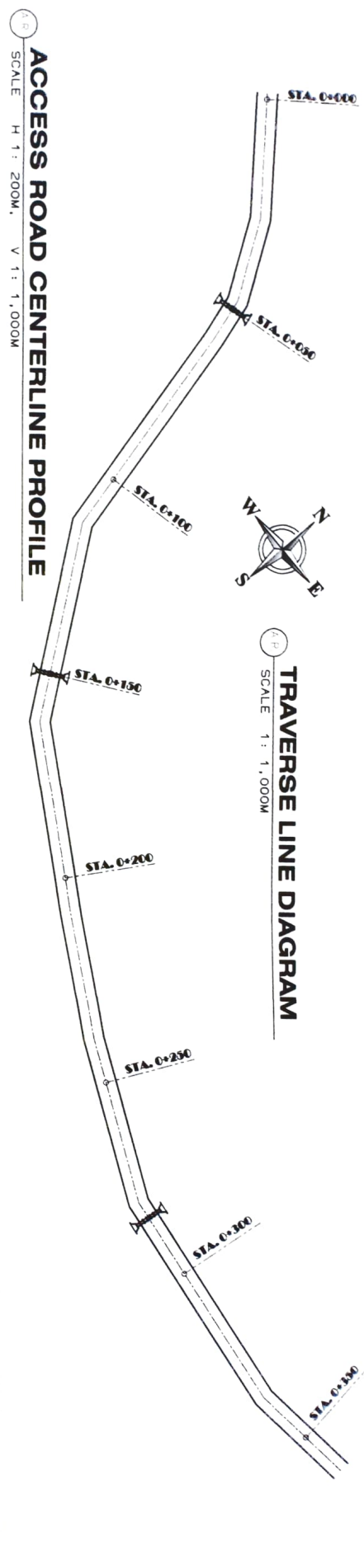
Approved by:  
 RODRIGUEZ A. MADR  
 Regional Executive

Name of Project:  
 Construction of San Antonio SWIP

Location:  
 Brgy. San Antonio, Ocampo, Camarines Sur

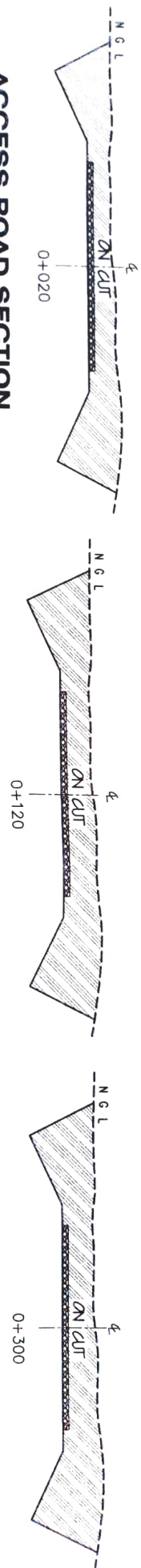
Sheet Contents:  
 AS SHOWN

Drawn by:  
 Date:  
 Scale:



### ACCESS ROAD SECTION

SCALE 1 : 100M







REPUBLIC OF THE PHILIPPINES  
 DEPARTMENT OF AGRICULTURE  
 REGIONAL FIELD UNIT NO. 5  
 SAN AGUSTIN, PULI, CAVARINES SUR

Prepared by:  
 BERNARDO G. VALENZUELA  
 PECE II  
 ENGR. BJ. JOSEPH D. BONITO  
 CAD 1998

Checked by:  
 ENGR. ARTHUR B. MIWA  
 Type II

Reviewed by:  
 ENGR. LARRY A. EROSA  
 EROSA III

Supervised by:  
 ENGR. GUILLERMO S. SALCEDO  
 CHAD KROED

Recommending Approval:  
 LITZ B. MARCELINO  
 RFD for Questions and Estimates

Approved by:  
 RODOLFO P. RONILLO, MAABE  
 Region 5 Executive Director

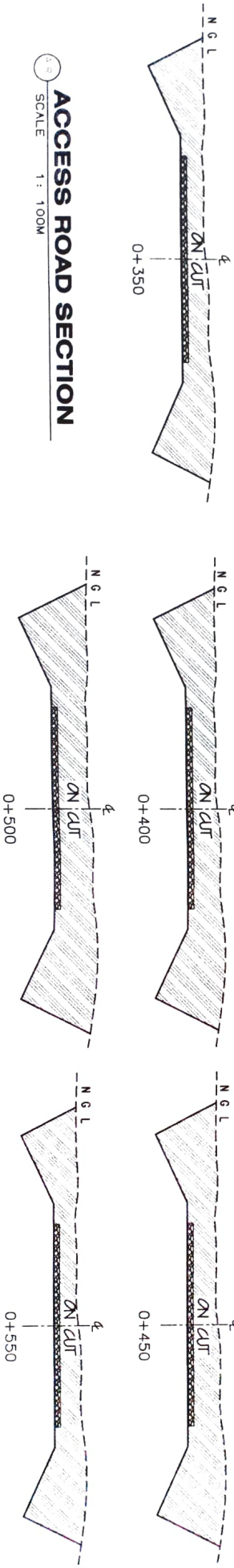
Name of Project:  
**Construction of San Antonio SWIP**

Location:  
 BRG. San Antonio, Ocampo, Camarines Sur

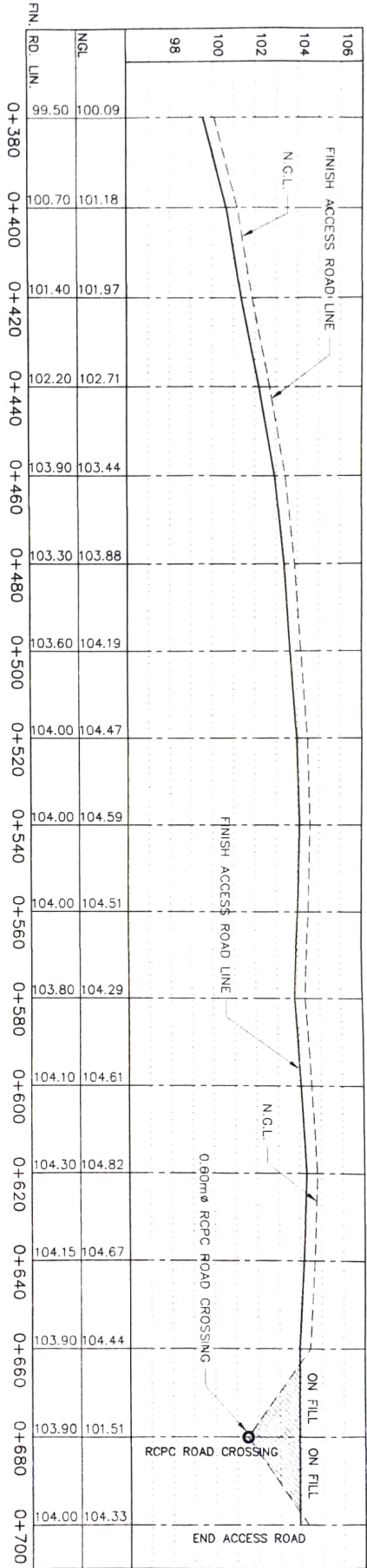
Sheet Contents:  
 AS SHOWN

DATE: \_\_\_\_\_  
 SHEET NO: \_\_\_\_\_  
 OF \_\_\_\_\_

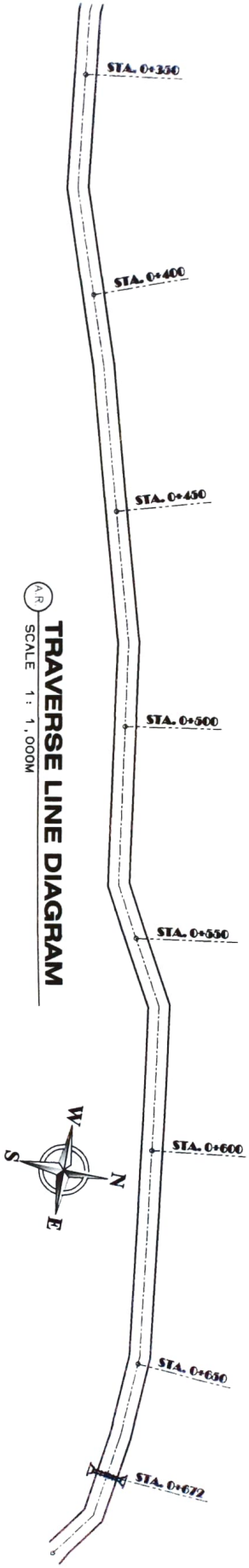
**ACCESS ROAD SECTION**  
 SCALE 1 : 100M

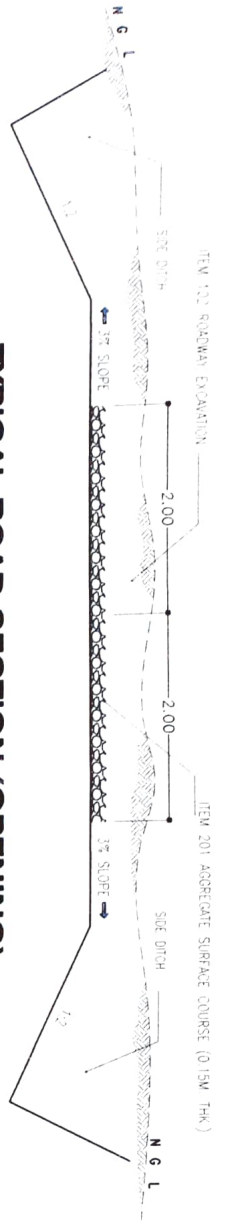


**ACCESS ROAD CENTERLINE PROFILE**  
 SCALE H 1 : 200M, V 1 : 1,000M

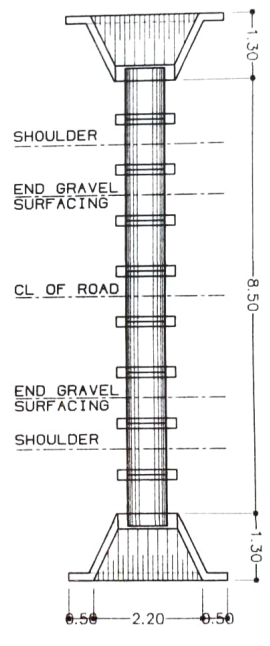
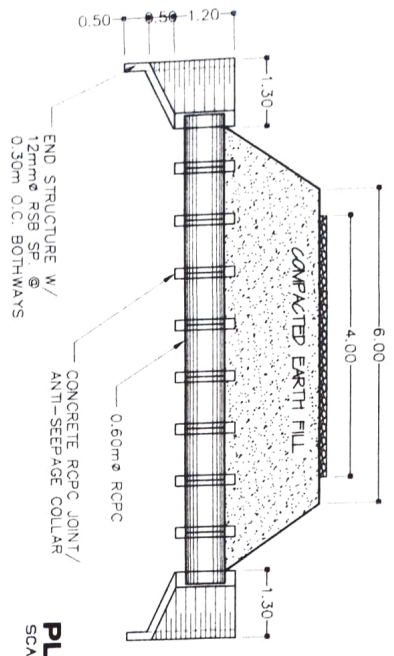
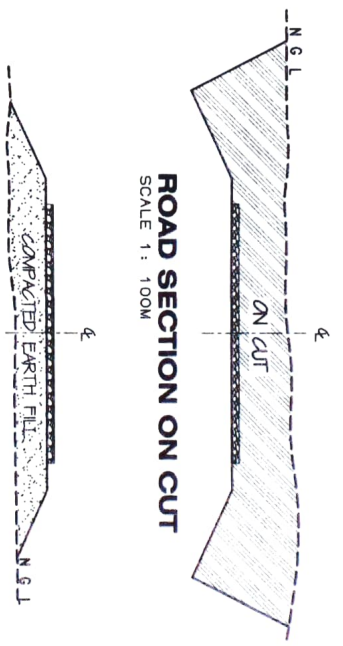


**TRAVERSE LINE DIAGRAM**  
 SCALE 1 : 1,000M





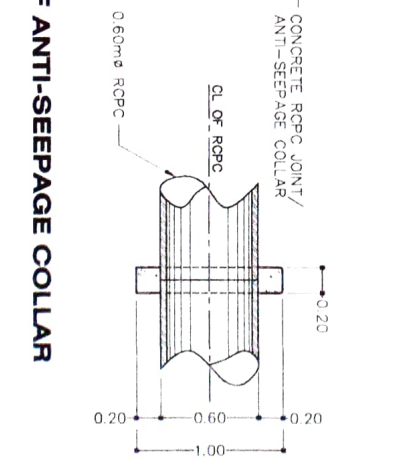
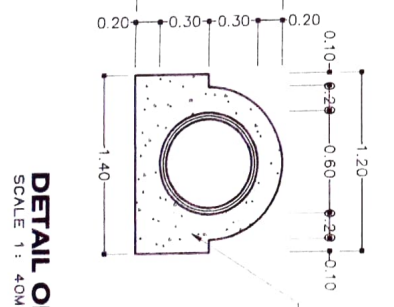
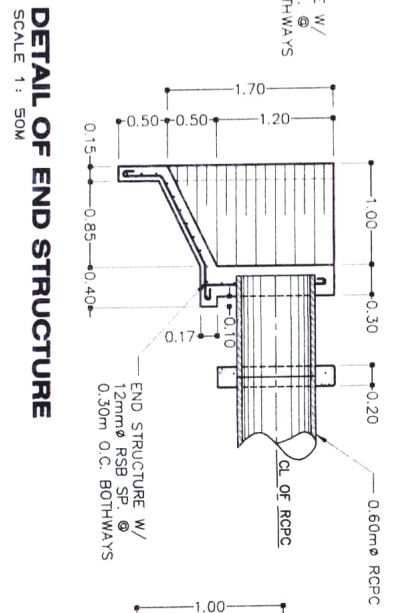
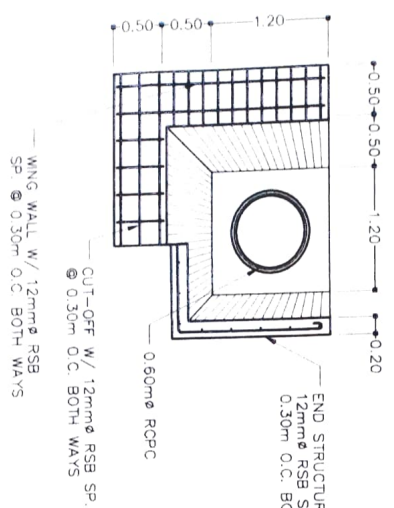
**TYPICAL ROAD SECTION (OPENING)**  
SCALE 1 : 1.50M



**ROAD SECTION ON FILL**  
SCALE 1 : 1.00M

**PLAN / SECTION**  
SCALE 1 : 1.00M

**DETAIL OF RCPC ROAD CROSSING**  
SCALE AS SHOWN



**DETAIL OF END STRUCTURE**  
SCALE 1 : 50M

**DETAIL OF ANTI-SEEPAGE COLLAR**  
SCALE 1 : 40M



REPUBLIC OF THE PHILIPPINES  
DEPARTMENT OF TRANSPORTATION  
REGIONAL FIELD UNIT NO. 5  
SAN ANTONIO, PULUPULAN, CAVENAGUE SUP

Prepared by: BERNARDO VALENZUELA PROJ. ENGR. ENGR. BEL KRISTEN DI BONTIO	Checked by: ENGR. ARTHUR B. MIRA ENR. II	Reviewed by: ENGR. JERRY A. EDONA ENR. III	Submitted by: ENGR. GILBERT S. SALCEDO CHIEF FIELD	Recommending Approval: LIZ R. MARCELIANO RTR for Operation and Extension	Approved by: RODEL P. TORIL SARHE Regional Director - Extension	Name of Project: Construction of San Antonio SWMP	Location: Brg. San Antonio, Caxambo, Caramoran, Sar	Scale: AS SHOWN
---	--	--	--	--	--	--	--	--------------------



