

2CFN0039-DED



REPUBLIC OF THE PHILIPPINES  
**DEPARTMENT OF PUBLIC WORKS & HIGHWAYS**  
REGIONAL OFFICE V  
CAMARINES SUR 5<sup>th</sup> DISTRICT ENGINEERING OFFICE  
STA. TERESITA, BAAO, CAMARINES SUR

C.Y. 2025 PROJECT  
DETAILED ENGINEERING DESIGN PLAN FOR  
**OO1:ENSURE SAFE AND RELIABLE NATIONAL ROAD SYSTEM-BRIDGE PROGRAM**  
**WIDENING OF PERMANENT BRIDGES**  
**TAPAYAS BR. (B00470LZ) ALONG NABUA-BALATAN RD. (PHASE 2)**  
STATION LIMITS: K0483+393.00 - K0483+420.00 (R/S)  
LOCATION: BALATAN, CAMARINES SUR  
TOTAL NET LENGTH = 27 LIN. M.  
PHYSICAL TARGET = 136.62 SQ.M.  
N: 13.375719, E: 123.275116, END. N: 13.375393, E: 123.275070

SUBMITTED:

**ARMAN C. IBARRETA**  
OIC-CHIEF, PLANNING AND DESIGN SECTION  
DATE:

RECOMMENDED:

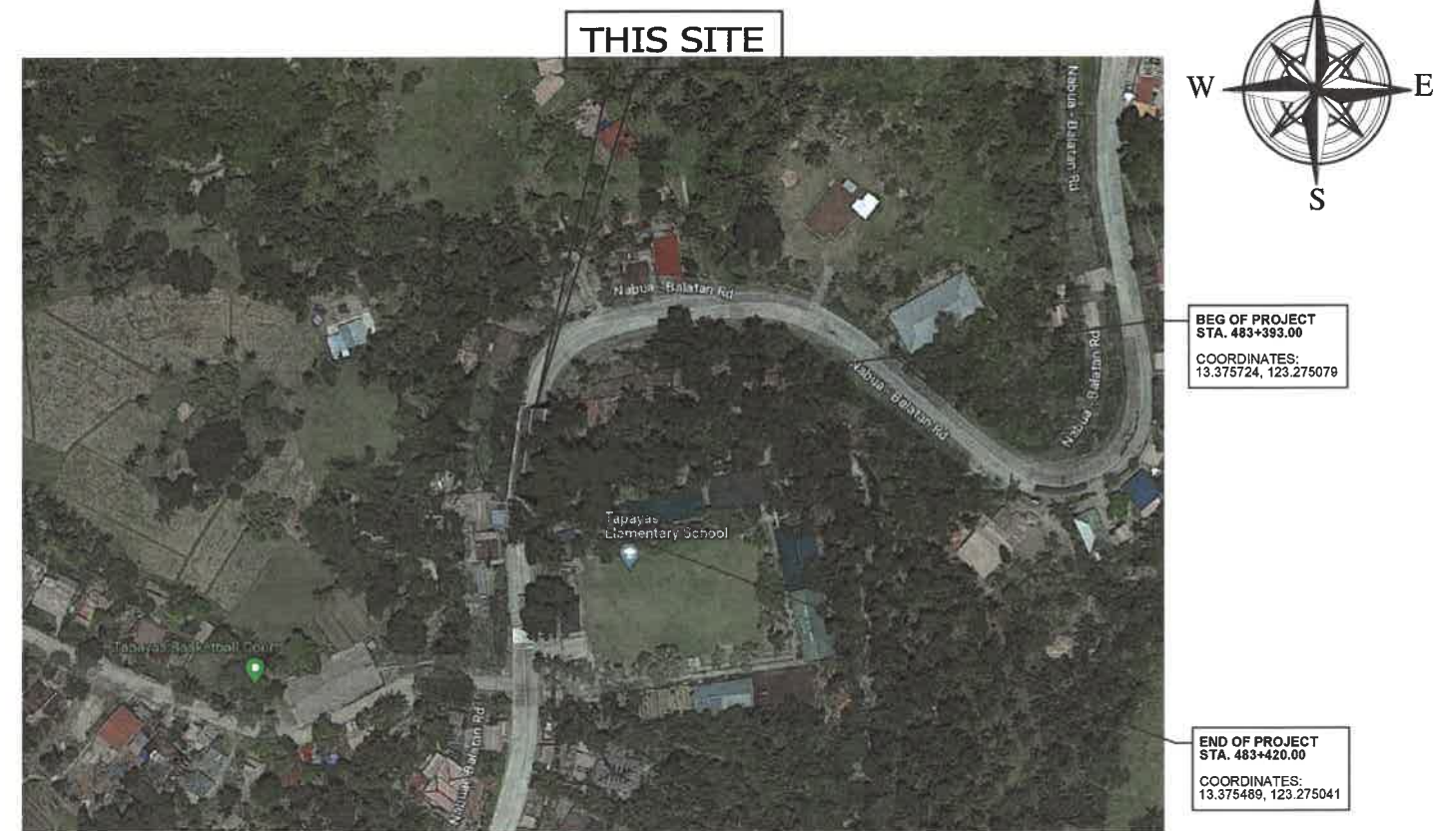
**BRILLIANCE M. SALAS**  
ASSISTANT DISTRICT ENGINEER  
DATE:

APPROVED:

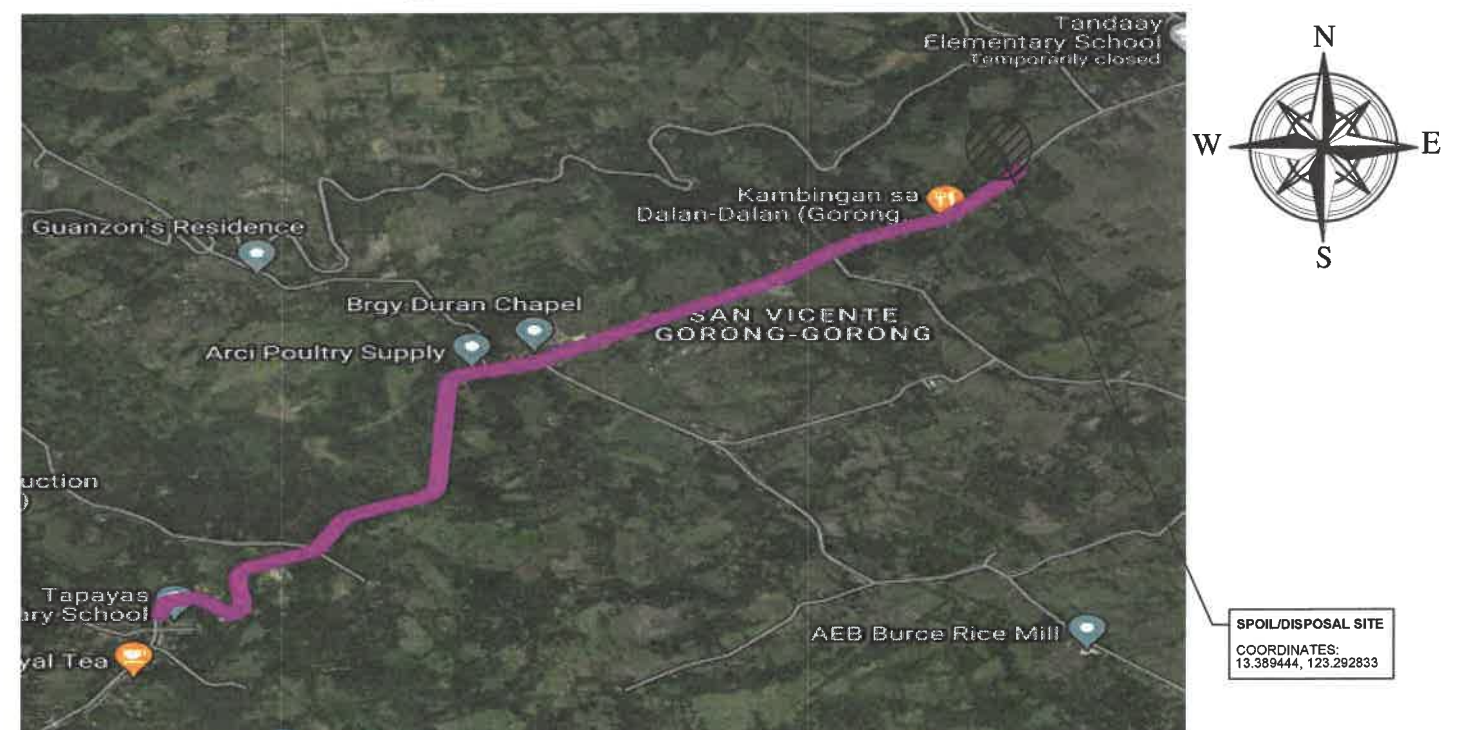
**LEOPOLDO A. BARELA, JR.**  
DISTRICT ENGINEER  
DATE:



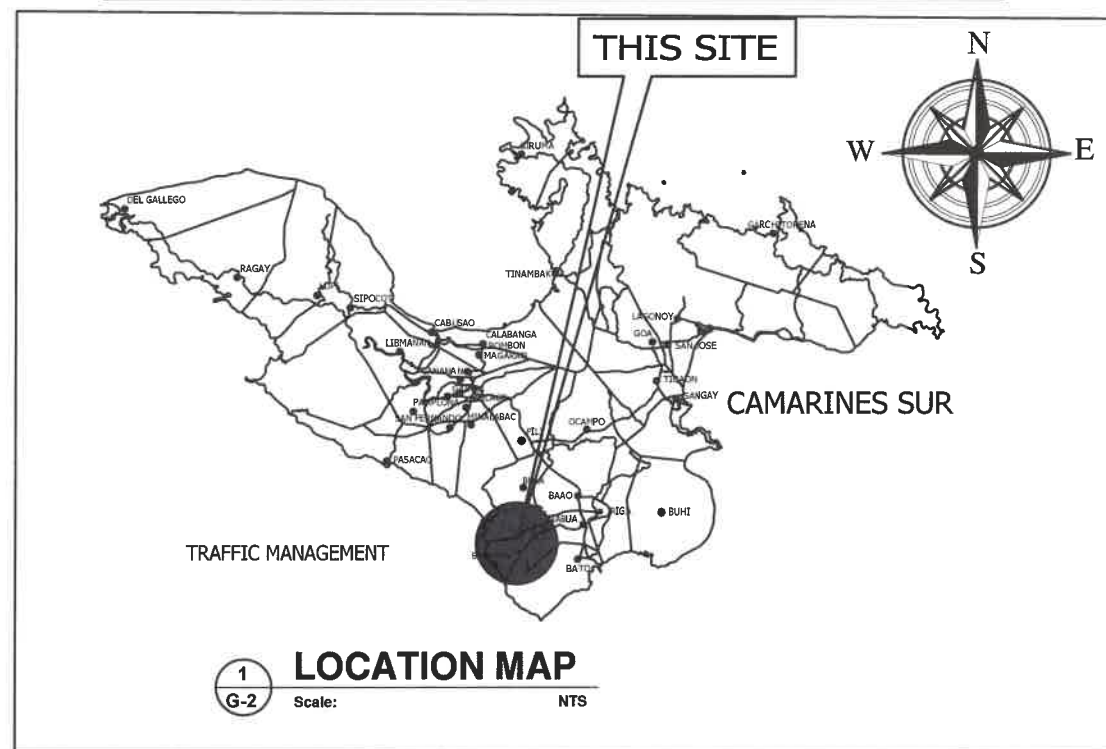
# PROJECT LOCATION




4 VICINITY MAP Scale: NTS



3 DISPOSAL MAP Scale: NTS



1 LOCATION MAP Scale: NTS

 <div>REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS &amp; HIGHWAYS REGION V CAMARINES SUR 5<sup>th</sup> DISTRICT ENGINEERING OFFICE STA. TERESITA, BAAO, CAMARINES SUR</div>	PROJECT NAME AND LOCATION: 001-ENSURE SAFE AND RELIABLE NATIONAL ROAD SYSTEM-BRIDGE PROGRAM TAPAYAS BR. (B00470.2) ALONG NABUA-BALATAN RD. (PHASE 2) (STATION LIMIT: 483+393.00 TO 483+420.00)	SHEET CONTENTS: LOCATION MAP, VICINITY MAP, KEY MAP	PREPARED: XYRN O. CAÑESO ENGINEER II	REVIEWED: JET ARGENE M. MANAOG II ENGINEER II	SUBMITTED: ARMAN C. IBARRETA OIC - CHIEF, PLANNING AND DESIGN SECTION	RECOMMENDED: BRILLIANCE M. SALAS ASSISTANT DISTRICT ENGINEER	APPROVED: LEOPOLDO A. BARELA, JR. DISTRICT ENGINEER	SET NO. G-2 2 9	SHEET NO. 2 50
			DATE:	DATE:	DATE:	DATE:	DATE:		



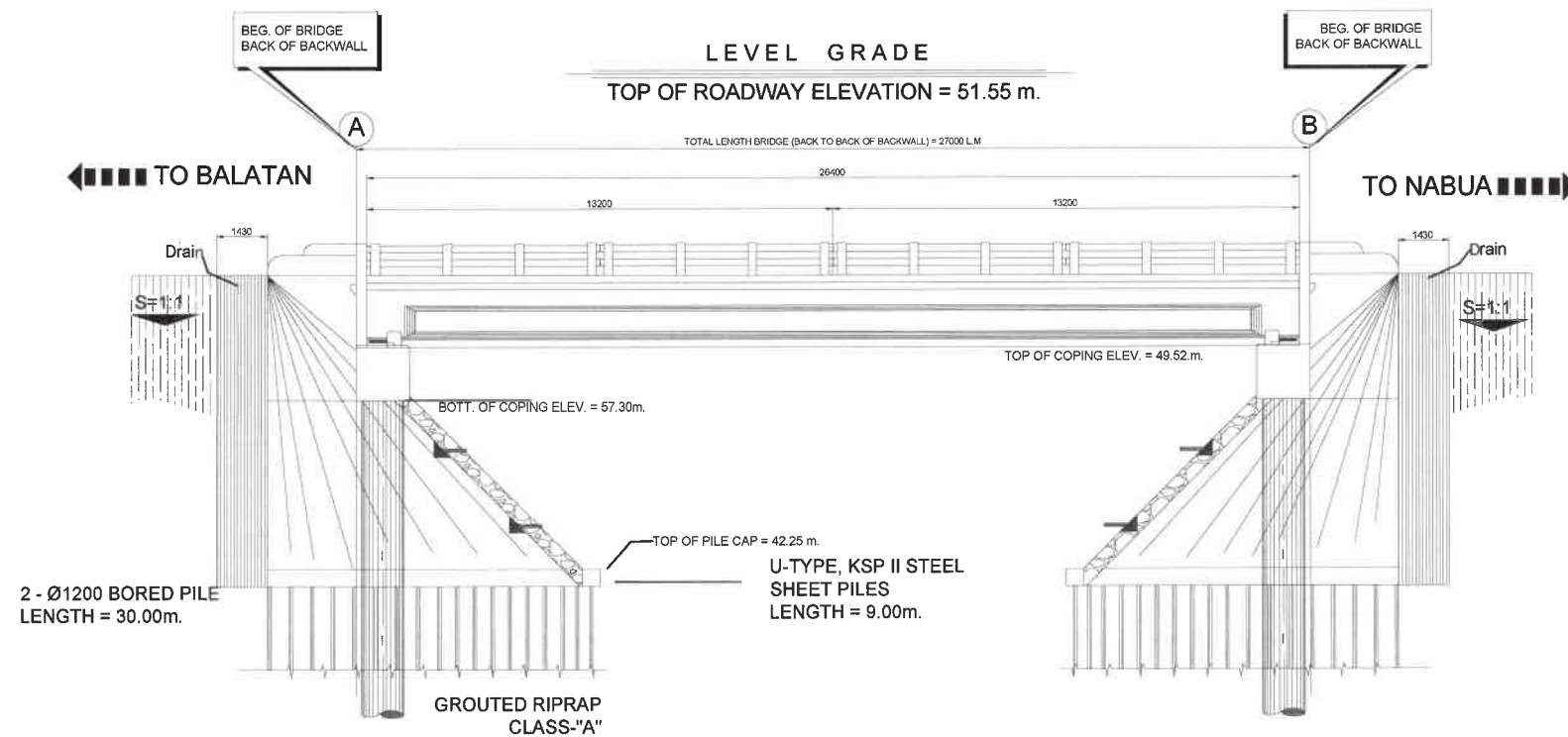
# SUMMARY OF QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	QTY
<b>PART A</b>	<b>FACILITIES FOR THE ENGINEER</b>		
A.1.1 (8)	Provision of Field Office for the Engineer (Rental Basis)	mo.	6.47
<b>PART B</b>	<b>OTHER GENERAL REQUIREMENTS</b>		
B.5	Project Billboard/Signboard	ea.	2.00
B.7(2)	Occupational Safety & Health Program	l.s.	1.00
B.8 (2)	Traffic Management	l.s.	1.00
B.9	Mobilization / Demobilization	l.s.	1.00
<b>PART C</b>	<b>EARTHWORK</b>		
100(3)a2	Individual Removal of Trees (150 - 300 mm.dia)	ea	12.00
100(3)a2	Individual Removal of Trees (301 - 500 mm.dia)	ea	8.00
100(1)	Removal of Structures and Obstruction	l.s.	1.00
101(3) b3	Removal of Actual Structures/Obstruction - 0.28 m thick PCCP (Unreinforced)	sq.m.	25.00
101(6)	Removal of Structures and Obstruction (Concrete)	cu.m.	141.00
103(3)	Foundation Fill	cu.m.	31.00
103 (5) b	Shoring, Cribbing and related works (Cribbing / Cofferdaming)	ls.	1.00
104(1)a	Embankment from Roadway/Structure Excavation(Common Soil)	cu.m.	1,271.00
104(2) a	Embankment from borrow (Common Soil)	cu.m.	617.00
105(1)a	Subgrade Preparation (Common Material)	sq.m.	32.00
<b>PART D</b>	<b>SUBBASE AND BASE COURSE</b>		
201(1)	Aggregate Subbase Course	cu.m.	7.00
201(1)	Aggregate Base Course	cu.m.	178.00
<b>PART E</b>	<b>SURFACE COURSES</b>		
311(1)e1	Portland Cement Concrete Pavement (Unreinforced) - (0.28 m thick, 14 days)	sq.m.	35.00
<b>PART F</b>	<b>BRIDGE CONSTRUCTION</b>		
400(17)e	Concrete Pile Casts in Drilled Holes, 1.20 m dia.	m.	120.00
400(23)e1	Permanent Casing, 1.2 m dia., 10mm thick	m.	120.00
400(26)	Pile Integrity Testing	ea.	2.00
400(27)	High Strain Dynamic Testing (P.D.A)	ea.	1.00
401 (2)a	Concrete Railing (Standard)	m	27.00
404(1)a	Reinforcing Steel, Grade 40	kg.	14,900.00
404(1)b	Reinforcing Steel, Grade 60	kg.	6,290.00
405(1)b3	Structural Concrete - 27.58 Mpa, Class A (28 days)	cu.m.	96.00
406(1)g2	Prestressed Structural Concrete Members - 27.00 m., Type V, I-Girders	ea.	2.00
411(2)	Paint	sq.m.	286.00
412(1)c	Elastomeric Bearing Pads	ea.	4.00
413(1)	Preformed Sponge Rubber Joint Expansion	cu.m.	0.04
413(7)	Asphaltic Plug Joints (APJ) for bridges	l.m.	35.00

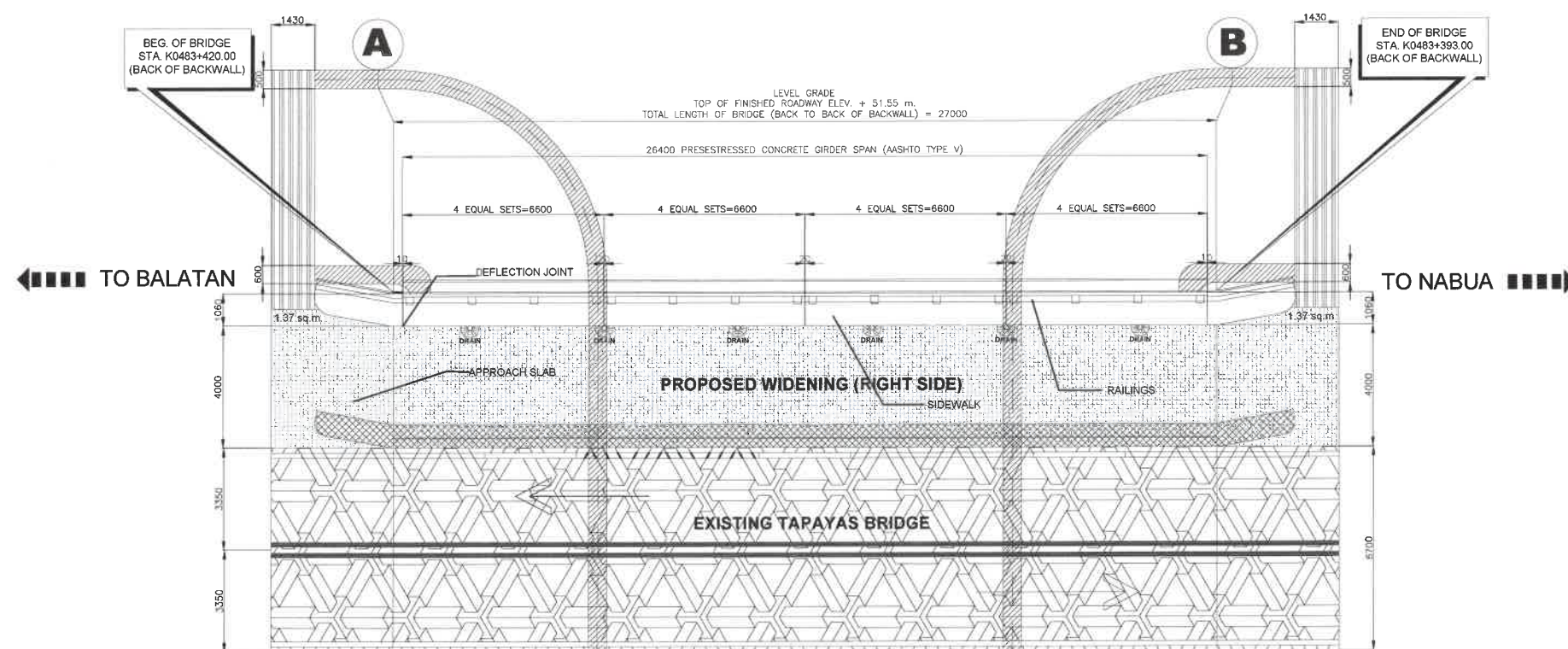
ITEM NO.	DESCRIPTION	UNIT	QTY
<b>PART G</b>	<b>DRAINAGE AND SLOPE PROTECTION STRUCTURES</b>		
505 (2)a	Grouted Riprap (Class A)	cu.m.	693.00
509(1)b1	Sheet Piles (Steel/Slope Protection)	l.m.	3,123.00
517(1)	Drain Pipes (Galvanized)	l.m	4.00
<b>PART H</b>	<b>MISCELLANEOUS STRUCTURES</b>		
603(3)a1	Metal Guardrail (Metal Beam) Including Post, Single, W- Beam	l.m.	8.00
603(4)b	Metal Beam End Piece, Bull Nose	ea.	4.00
611(1)	Trees (Furnishing and Transplanting)	ea.	2,000.00
612(1)	Reflectorized Thermoplastic Pavement Markings (White)	sq.m.	8.00
<b>PART L</b>	<b>FLOOD AND RIVER CONTROL AND DRAINAGE</b>		
<b>PART L.A.</b>	<b>EARTHWORKS</b>		
1700(1)	Clearing and Grubbing	sq.m.	733.00
1701(1)	Channel Excavation (Unsuitable Excvation)	cu.m.	10.00
<b>PART L.B.</b>	<b>BANK AND SLOPE PROTECTION WORKS</b>		
405(1)a3	Individual Removal of Trees (301 - 500 mm.dia) - Small	cu.m.	39.00
508(1)	Removal of Actual Structures/Obstruction - 0.23 m thick PCCP (Unreinforced)	cu.m.	383.00
1712(1)	Concrete Slope Protection	cu.m.	187.00

NOTE :

IF ACTUAL FIELD CONDITION NECESSITATES THE REVISION OF THIS PLAN THE PROJECT ENGINEER AND DISTRICT ENGINEER OF THIS OFFICE MUST BE OFFICIALLY INFORMED IN WRITING AND NO ADDITIONAL WORKS WILL BE UNDERTAKEN WITHOUT APPROVAL BY THE AUTHORITIES CONCERNED.



**1 GENERAL ELEVATION**  
B-2 Scale: 1:150m.



**1 GENERAL PLAN**  
B-1 Scale: 1:150m.



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STATION LIMIT: ROAD=393.00 - ROAD=420.00 (R/S)  
LOCATION: BALATAN, CAMARINES SUR

SHEET CONTENTS:

GENERAL PLAN  
GENERAL ELEVATION

PREPARED:

XYRN Q. CAÑESO  
ENGINEER II

DATE:

REVIEWED:

JET ARGENE M. MANAOG II  
ENGINEER II

DATE:

SUBMITTED:

ARMAN C. IBARRETA  
OIC - CHIEF, PLANNING AND DESIGN SECTION

DATE:

RECOMMENDED:

BRILLIANCE M. SALAS  
ASSISTANT DISTRICT ENGINEER

DATE:

APPROVED:

LEOPOLDO A. BARELA, JR.  
DISTRICT ENGINEER

DATE:

SET NO.

**B-1**  
1 27

SHEET NO.

**10**  
50



