REPUBLIC OF THE PHILIPPINES

DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS

REGIONAL OFFICE III

PAMPANGA 3RD DISTRICT ENGINEERING OFFICE

SAN FRANCISCO ST., BRGY. PAMPANG, ANGELES CITY

QRF FY 2025 PROJECT

DETAILED ENGINEERING DESIGN PLAN FOR THE

REPAIR / REHABILITATION OF FLOOD CONTROL STRUCTURES ALONG ALASAS CREEK (RIGHT DIKE), BRGY. SAN AGUSTIN, MAGALANG, PAMPANGA.

NET LENGTH : 267.00 m. / 1,493.87 sq.m. Slope Protection

SUBMITTED:

LOURDINO C. SORIANO
CHIEF, PLANNING & DESIGN SECTION
DATE:

RECOMMENDED:

AGUSTIN R. DAGSAAN JR.
OIC, ASSISTANT DISTRICT ENGINEER
DATE:

APPROVED :

ARNOLD R. OCAMPO
DISTRICT ENGINEER
DATE:

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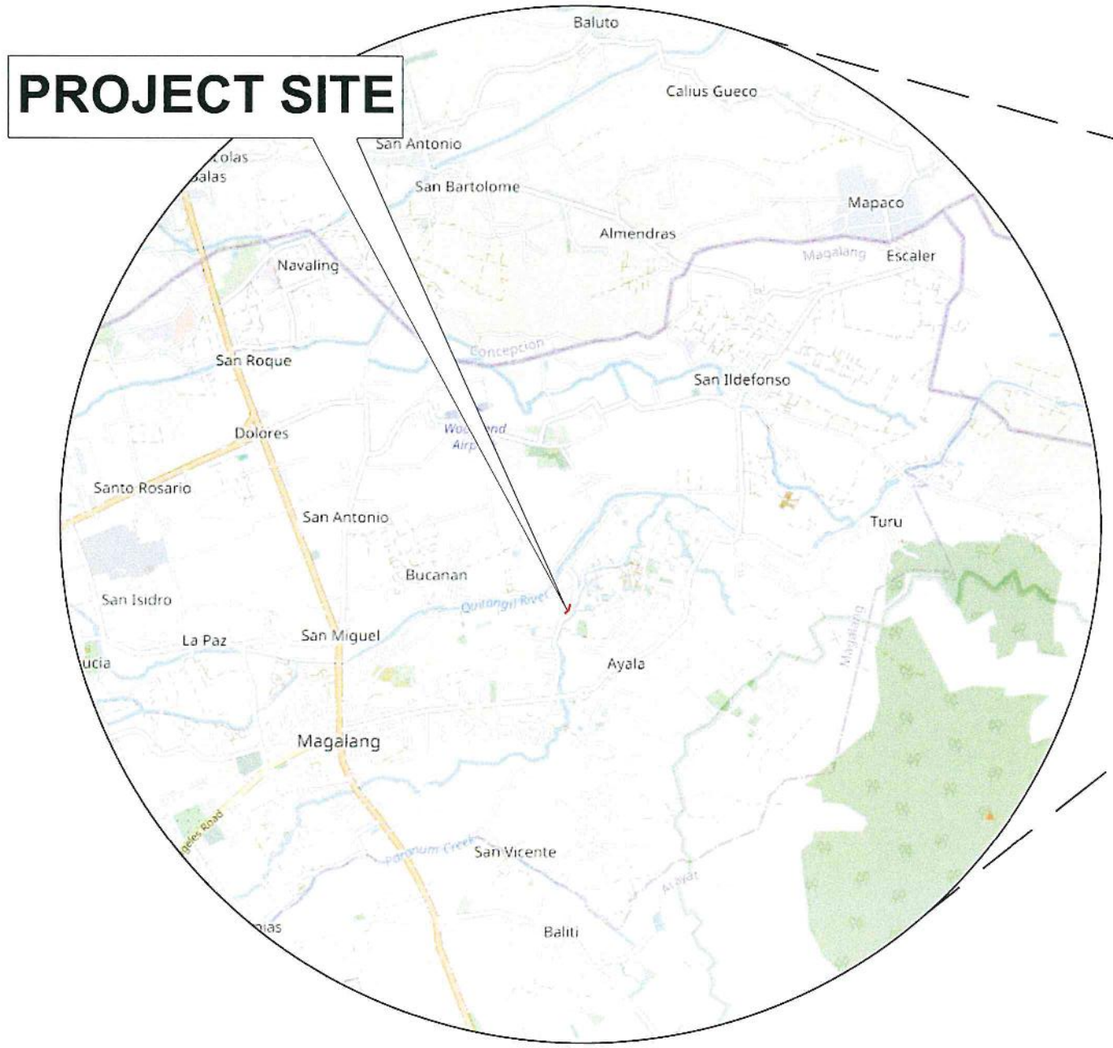
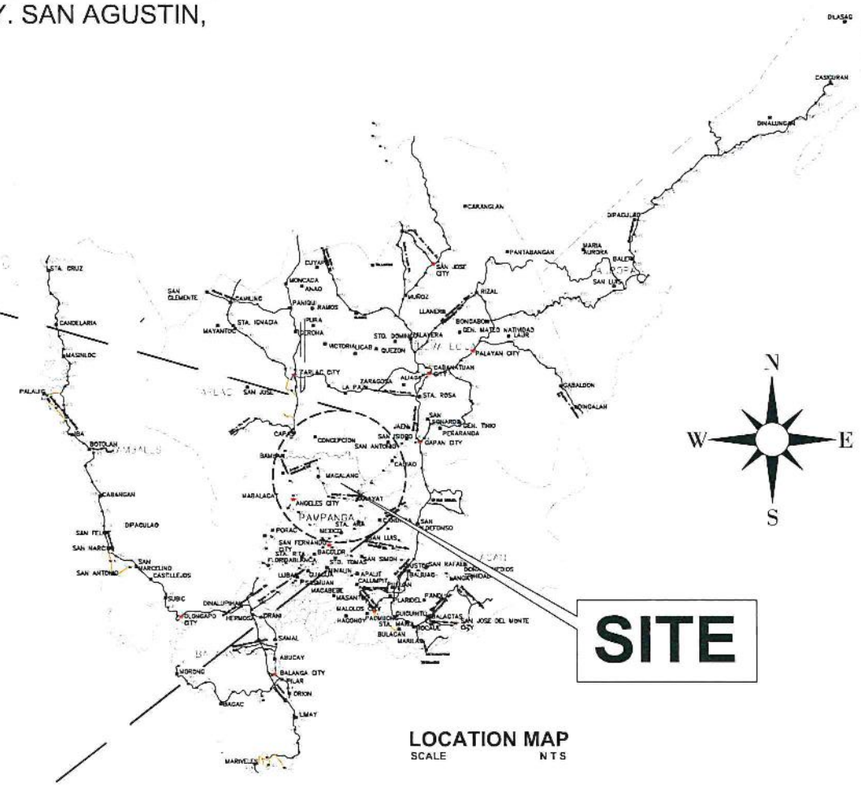


VICINITY MAP
SCALE NTS



LOCATION MAP
SCALE NTS

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SHEET		TYPICAL DETAIL SLOPE PROTECTION
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SHEET		PROFILE ELEVATION
SHEET		DIGITAL TERRAIN MODEL
SHEET		CROSS SECTIONS
SHEET		DETAIL OF GROUNDSILL
SHEET		DETAIL OF BILLBOARDS
SHEET		BORELOGS

REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
REGIONAL OFFICE NO. III
PAMPANGA 3RD DISTRICT ENGINEERING OFFICE
ANGELES CITY

PROJECT NAME AND LOCATION :	SHEET CONTENTS :	DRAFTED:	REVIEWED:	SUBMITTED:	RECOMMENDED:	APPROVED:	SCT NO	SHEETNO
REPAIR / REHABILITATION OF FLOOD CONTROL STRUCTURES ALONG ALASAS CREEK (RIGHT DIKE), BRGY. SAN AGUSTIN, MAGALANG, PAMPANGA.	TITLE PAGE INDEX OF SHEETS LOCATION MAP VICINITY MAP	**ERWIN S. DAVID** ENGINEERING ASSISTANT PREPARED: **GIE YANE S. MIRANDA** ENGINEER II	**GIL A. RIVERA** ENGINEER II DATE	**LOURDINO C. SORIANO** CHIEF, PLANNING & DESIGN SECTION DATE	**AGUSTIN R. DAGSAAN JR.** OIC, ASSISTANT DISTRICT ENGINEER DATE	**ARNOLD R. OCAMPO** DISTRICT ENGINEER DATE		

A2 TITLE BLOCK AS PER DO_127_s2023

GENERAL NOTES :

I. DESIGN CRITERIA

A. Design Codes and Standards

1. DPWH Design Guidelines, Criteria and Standards, 2015 Edition
2. National Structural Code of the Philippines (NSCP), Volume I - Buildings, Towers and Other Vertical Sructures, 5th Edition, 2001
3. National Structural Code of the Philippines (NSCP), Volume II - Bridges 2nd Edition, 1997
4. National Building Code of the Philippines (NBCP)
5. Philippine National Standards (PNS)
6. AASHTO Standard Specifications for Highway Bridges, 16 Edition, 1996
7. Standard Drawings for concrete Bridges (DPWH)
8. Technical Standards and Guidelines for Planning and Design (FCSEC), 2002

II. SURVEY

A. Specifications

1. DENR Administrative Order No. 2007-29

B. Horizontal and Vertical Control

1. Basic traverse station were established based on station of existing KM post and permanent structures at the project site.
2. Elevation were assumed at the first benchmark at the beginning of each section of the project.
3. Benchmark were established at existing undisturbed structures at different intervals along the project.

GENERAL NOTES	
Reference Benchmark Details	-
ELEVATION:	
NORTHING:	
EASTING:	
	PRS 92, ZONE 3
Date of Survey	-
Equipment Used	Leica Viva GNSS/GS15 Smart Antenna 555 channels (1)
	Leica Captivate Controller/CS20 Disto Field Controller (3)
	Leica Viva GNSS/GS15 Smart Antenna 555 channels (3)

III. CONSTRUCTION

A. Specifications

1. DPWH Design Guidelines, Criteria, and Standards (DGCS) - Volume III, 2015 Edition
2. The Item No. and description are taken from DPWH D.O. No. 5, series of 2017
3. DPWH Standard Specifications for Highways, Bridges and Airports - Vol. II, 2013 Edition
4. DPWH Standard Specifications for Public Works Structures (Buildings, Ports and Harbors, Flood Control and Drainage Structures and Water Supply Systems) - Vol. III, 2019 Edition

B. Dimensions, Elevations and Stations

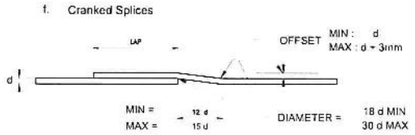
1. All dimensions are in millimeters unless otherwise specified.
2. All stations are in km + meter and elevations are in meters.
3. Figures shall govern over scaled dimension.
4. Reference datum Plane shall be the mean sea level ,See General Plan, for benchmark locations
5. All elevations are subject to change pending their verification during the Pre-construction Survey, based on the latest certified benchmarks of the NAMRIA .

C. Civil Works

1. Structure Excavation
   a. Depth of excavation shall be as specified in the drawings.
   b Post excavation surface shall be compacted to the required degree as specified in the plans.
2. Fill
   a. Filling materials shall be placed in layers of 250 mm max. thickness compacted and properly watered to attain at least 95 % of max. dry density.
   b. Truck dumping of materials in huge lumps shall not be permitted. The dump truck shall unload embankment materials by spreading it on top of the fill area sufficient to allow compaction by layers as specified.
3. Compaction
   a. Embankment materials shall be free from stones, twigs and other deleterious materials to ensure compaction and cohesion. Lumps of filling materials should be pulverized prior to compaction.
   b. Field Density Tests (FDT) for each compaction layer shall be undertaken until the required degree of compaction is attained, and under the supervision of the Materials Engineer.

4. Roadway
   a. Alignment and grades are subject to adjustment to suit existing field conditions.
   b. Clearing and grubbing shall be confined only within the limits of the acquired R.O.W.
   c. Unsuitable subgrade material shall be excavated to the required width and depth and replaced with approved material as directed by the Engineer. No embankment material shall be placed until foundation is suitable.
   d. Painting of metal beam guardrails pavement markings shall be considered subsidiary work only. No direct payment shall be made for this work except for specific items mentioned in the Bid Schedule.

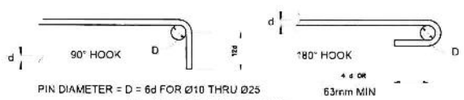
5. Material Requirement
   a. Embankment Fill (Lahar)
      1. Fill materials shall be obtained from borrow areas designated by the Consultant Materials Engineer.
      2. At the designated source, the top 300 mm shall be scarified and should not be part of the filling material.
   b. Reinforced Concrete
      1. Concrete
         a. Unless otherwise indicated, the compressive strength shall be fc=35MPa for Pre-cast Panel, 24MPa for PCCP, RCBC and Side drainage structures @ 28 days, with max. water cement ratio of 0.53, slump range of 50-100 mm and max. size of aggregates shall be 40 mm.
      2. Reinforcement
         a. Bars shall be of intermediate grade fy=275 MPa.
         b. Standard hooks shall be complied with at the free end of bar equivalent to 90 ‹ bend plus 12 db and minimum diameter for bends shall be 6db.
         c. Splicing of bars shall be by lapping or butt welding at 20 bar Ø or a minimum of 30 cm.
         d. Adjacent bars shall be securely held together by #16 tie-wires, each having a minimum length of 25 cm.
         e. Clear concrete cover between reinforcement bars and embankment materials shall be 75 mm and precast mortar blocks should be provide for this purpose.
         f. Cranked Splices



Hooks and Bends

DIMENSIONS OF 90-DEGREE AND 180-DEGREE HOOKS

g.



PIN DIAMETER = D = 6d FOR Ø10 THRU Ø25
D = 8d FOR Ø28, Ø32 AND Ø36

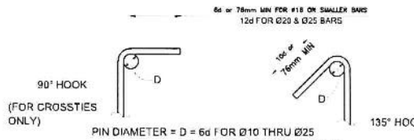
DIAMETER (mm)	90° HOOK	180° HOOK
10	160	105
12	195	115
16	260	130
20	320	160
25	400	200
28	480	255
32	545	290
36	615	325

3. Mixing Water
   a. Water to be used shall be clean and free from injurious amounts of oil, acid, alkali, salt, organic material and substances that may be deleterious to concrete or reinforcement.
   b. Non-potable water shall not be used unless it passes equivalent strength of at least 90% of the strength results of similar samples made using potable water with same proportions through compressive strength tests (ASTM C109).
4. Gabion Mattress
   1. Mesh Properties

Wire Diameter	=	2.70 mm
Selvage Wire Diameter	=	3.40mm
Tensile Strength (Minimun)	=	4,700 kg./cm² (460 MPa)
Compression Resistance	=	300 - 400 tons/m²
Filled Gabion Density	=	17 kn/cum (min)
Minimum Zinc Coating	=	244.00 gm/m (ASTM A 641-82)
Mesh Size	=	6x8
Tying / Connecting Wire	=	2.70mm
Wire Should Be Triple Twisted		

   2. Product tests shall be conducted on the product sample prior to its acceptance. Stones should be of durable pieces and resistant to weathering having a minimum density of 1.7 g/cc, at saturated surface dry (SSD) condition with sizes ranging from 100-200 mm in diameter, properly hand-laid for minimum voids.

DIMENSIONS FOR STIRRUPS AND CROSSTIE HOOKS



PIN DIAMETER = D = 6d FOR Ø10 THRU Ø25
D = 8d FOR Ø26, Ø32 AND Ø36

DIAMETER (mm)	90° HOOK	135° HOOK
10	120	125
12	125	150
16	160	200
20	320	250
25	400	313
28	450	365
32	545	420
36	615	470

c. Geotextile Filter - 100 % Polypropylene, non-woven geotextile, resistant to biological & chemical environments.

Permeability	=	100 - 180 l/m² /sec
Pore Size	=	80 - 100 microns
Tensile Strength CBR Puncture	=	10 KN/m (min)
Strength Grab Tensile	=	2.1 KN (min)
Strength	=	600 N (min)
Thickness	=	1.2 mm (min)
Min. Overlap	=	0.30 m (min.)
Bonding Medium	=	Mechanical (sewn)

End weights shall be 12mm Ø RSB wrapped around at both edges of the geotextile, parallel to the bank, and held together by sewing.

d. Sodding
   1. The approved species of sod shall include roots and earth of at least 50 mm. thick.
   2. Prior to placing of sod, the top soil should be sufficiently watered.The newly planted sod should be regularly watered by the contractor until plant growth is fully established and until their demobilization.
   3. Coconet with Hydro seeding

D. Others

Signboard showing name of project, station limits, package no. and name of contractor shall always be visible during construction until after the project has been accepted by the implementing agency. As-built drawings shall be done by the contractor based from the post construction survey of completed segments featuring deviations from the approved construction plans. The contractor shall prepare as built drawings on completed segment, as construction progresses to minimize the review period after construction. Subject for checking by the consultants.

DESIGN PARAMETERS

HYDRAULIC DESIGN DATA:

CATCHMENT AREA	=
RIVER LENGTH	=
HIGHEST ELEVATION	=
LOWEST ELEVATION	=
DIFFERENCE IN ELEVATION	=
SLOPE	=
Lca	=
Ct	=
MEAN VELOCITY	=
LAG TIME	=
ORDINARY WATER LEVEL	=
MAXIMUM EXPERIENCE FLOOD ELEV.	=
PEAK DISCHARGE (50 yrs. return period)	=
DESIGN FLOOD ELEVATION (50 yrs. return period)	=

SYMBOLS AND ABBREVIATIONS

	CONTOUR		EMBANKMENT & SLOPE PROTECTION
	DIKE		ORIENTATION
	RIVER / CREEK		SECTION VIEW OF SLOPE PROTECTION
	CLAY/MOUNTAIN SOIL EARTH SECTION		BENCH MARK BORE HOLE TEST PIT
LIMIT -EL-	LIMIT OF DIMENSION INDICATION OF ELEVATION	A (B1 - Z)	IDENTIFICATION OF SECTION/DETAIL SHEET ON WHICH SECTION/DETAIL IS SHOWN IF DRAWING IS ON ANOTHER SHEET
	DESIGN GRADE LINE		EXISTING GRADE LINE

PCCP	- PORTLAND CEMENT CONCRETE PAVEMENT	BM	- BENCH MARK
AZIM	- AZIMUTH	e	- RATE OF SUPER ELEVATION IN %
DIST	- DISTANCE	PC	- POINT OF CURVATURE
N	- NORTHING	PT	- POINT OF TANGENCY
E	- EASTING	AC	- ASPHALT CONCRETE
PI	- POINT OF HORIZONTAL INTERSECTION	cm	- CENTIMETER
R	- RADIUS	mm	- MILLIMETER
ΔR	- OFFSET OF THE CIRCULAR CURVE	Km	- KILOMETER
T	- TOTAL TANGENT LENGTH OF THE CIRCULAR CURVE	NC	- NORMAL CROWN
Lc	- LENGTH OF CIRCULAR CURVE	RCPC	- REINFORCED CONC. PIPE CULVERT
D	- DEGREE OF CURVE	DIA(Ø)	- DIAMETER
E	- TOTAL EXTERNAL DISTANCE	VAR	- VARIES
PVI	- POINT OF VERTICAL INTERSECTION	INV ELEV(IE)	- INVERT ELEVATION
LVC	- LENGTH OF VERTICAL CURVE	WEP	- WOODEN ELECTRICAL POST
Mo	- MIDDLE ORDINATE	RCBC	- REINF. CONCRETE BOX CULVERT
g	- GRADE IN PERCENT	ER	- EDGE OF ROAD
ROW	- RIGHT OF WAY	EL OR ELEV	- ELEVATION

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REPAIR / REHABILITATION OF FLOOD CONTROL STRUCTURES ALONG ALASAS CREEK (RIGHT DIKE), BRGY. SAN AGUSTIN, MAGALANG, PAMPANGA.

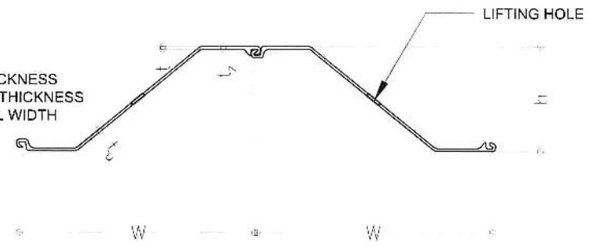
SHEET CONTENTS :
GENERAL NOTES AND SYMBOLS

DRAFTED:	REVIEWED:	SUBMITTED:	RECOMMENDED:	APPROVED:	SET NO.	SHEET NO.
ERWIN S. DAVID ENGINEERING ASSISTANT	**GIL A. RIVERA** ENGINEER II DATE	**LOURDINO C. SORIANO** CHIEF, PLANNING & DESIGN SECTION DATE	**AGUSTIN R. DAGSAAM JR.** OIC, ASSISTANT DISTRICT ENGINEER DATE	**ARNOLD R. OCAMPO** DISTRICT ENGINEER DATE		
PREPARED: **GIE YANE S. MIRANDA** ENGINEER II						

Login: ESD
Plot Date: Monday, 30 June 2025 2:38:24 pm
File Name:E:\PWDEO\DPWH P3DEO 2025\2025 10 GRP\AGUSTIN 2\PDE GRF AGUSTIN2 RIGHT DIKE DET.dwg

LEGEND:

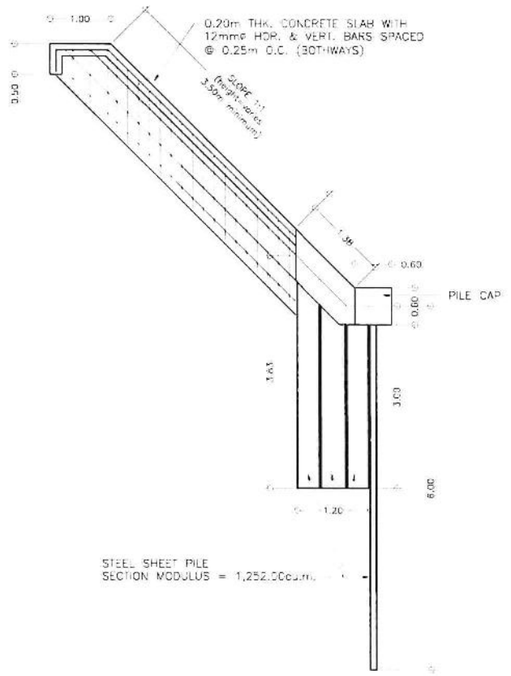
f = NOMINAL
h = HEIGHT
t_w = WEB THICKNESS
t_z = FLANGE THICKNESS
w = NOMINAL WIDTH



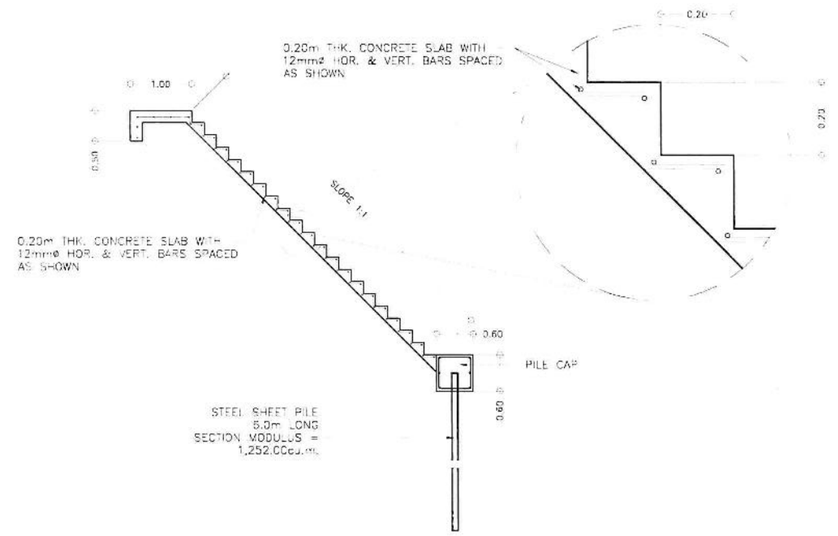
GENERAL NOTES:

1. CLASS "A" CONCRETE SHALL BE USED WITH A MINIMUM COMPRESSIVE STRENGTH OF 20.70 MPa.
2. ALL REINFORCING BARS SHALL HAVE THE MINIMUM GRADE OF 40 (fy = 276 MPa).
3. ALLOWABLE STRESS FOR STEEL SHEET PILE SHALL BE 1800kg/cm^2
4. THE CENTER OF LIFTING HOLE SHALL BE LOCATED AT DISTANCE OF 150mm FROM END OF EACH PILE. DIAMETER OF LIFTING HOLES SHALL BE 32mm.
5. ONE MAN BOULDERS (300-400mm DIA.) SHALL BE USED FOR THE BOULDER NEAR THE TOE OF THE FILL. ALL VOIDS BETWEEN BOULDERS SHALL BE FILLED WITH SAND AND GRAVEL AND SUFFICIENTLY WATERED TO SECURE COMPACTION.
6. DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
7. FIGURES SHALL GOVERN OVER SCALED DIMENSIONS IN CASE OF DISCREPANCIES.

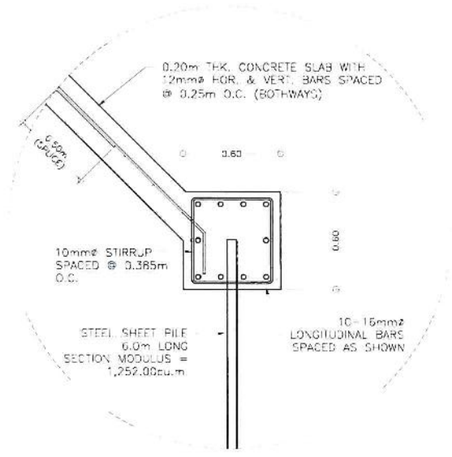
CROSS SECTION OF STEEL SHEET PILE
SCALE NTS



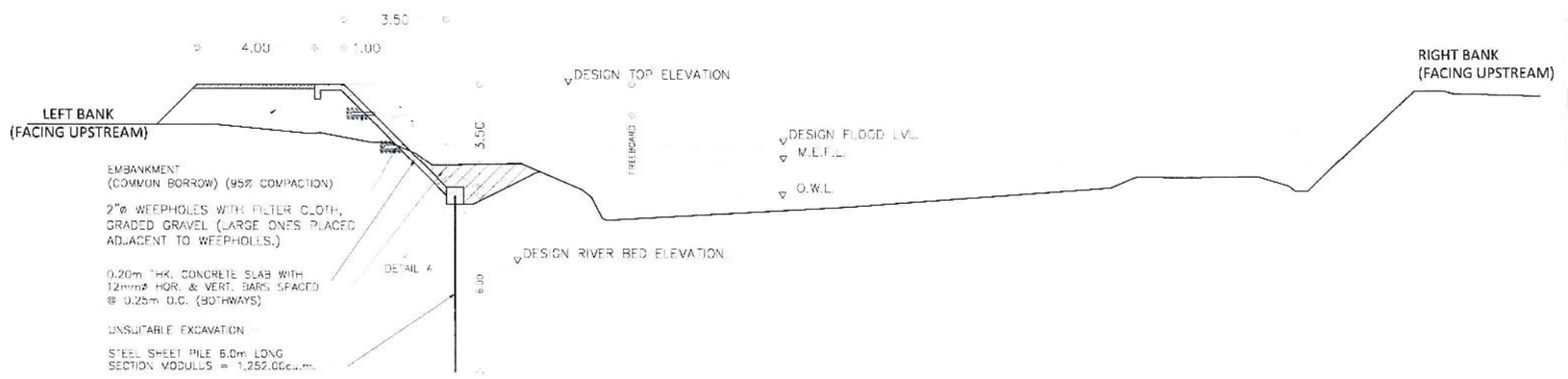
END PROTECTION
SCALE 1 : 50



DETAIL OF STAIRS
SCALE 1 : 50



DETAIL A
SCALE NTS



DETAIL OF SLOPE PROTECTION
SCALE 1 : 100

REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS REGIONAL OFFICE NO. III PAMPANGA 3RD DISTRICT ENGINEERING OFFICE ANGELES CITY	PROJECT NAME AND LOCATION : REPAIR / REHABILITATION OF FLOOD CONTROL STRUCTURES ALONG ALASAS CREEK (RIGHT DIKE), BRGY. SAN AGUSTIN, MAGALANG, PAMPANGA.	SHEET CONTENTS : TYPICAL DETAIL OF SLOPE PROTECTION	DRAFTED: ERWIN S. DAVID ENGINEERING ASSISTANT PREPARED GIE YANE S. MIRANDA ENGINEER II	REVIEWED: GIL A. RIVERA ENGINEER II DATE	SUBMITTED: LOURDINO C. SORIANO CHIEF, PLANNING & DESIGN SECTION DATE	RECOMMENDED AGUSTIN R. DAGSAAN JR. OIC, ASSISTANT DISTRICT ENGINEER DATE	APPROVED ARNOLD R. OCAMPO DISTRICT ENGINEER DATE	SET NO.	SHEET NO.

SUMMARY OF QUANTITIES				
ITEM NO.	DESCRIPTION	QUANTITY	UNIT	REMARKS
B.4(10)	Miscellaneous Survey and Staking	1.00	l.s.	
B.5	Project Billboard / Signboard	1.00	ea.	
B.7(2)	Occupational Safety and Health Program	1.00	l.s.	
B.9	Mobilization / Demobilization	1.00	l.s.	
	TOTAL OF PART B			
PART C	EARTHWORKS			
101(1)	Removal of Structures and Obstruction	1.00	l.s.	
	TOTAL OF PART C			
PART F	BRIDGE CONSTRUCTION			
404(1)a	Reinforcing Steel (Grade 40)	7,018.54	kg	
405(1)a3	Structural Concrete (20.68 Mpa Class A, 28 days)	97.56	cu.m.	
	TOTAL OF PART F			
PART L	FLOOD AND RIVER CONTROL AND DRAINAGE			
1700(1)	Clearing and Grubbing	3,990.05	sq.m.	
1701(1)	Unsuitable Excavation	880.50	cu.m.	
1704(1)b	Embankment From Borrow (Common Soil)	2,776.35	cu.m.	
1712(2)	Concrete Slope Protection	336.42	cu.m	
1717(2)a1	Steel Sheet Pile (Slope Protection)	2,142.86	m.	

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SHEET CONTENTS :
SUMMARY OF QUANTITIES

DRAFTED:
ERWIN S. DAVID
ENGINEERING ASSISTANT

PREPARED:
GIE YANE S. MIRANDA
ENGINEER II

REVIEWED:
GIL A. RIVERA
ENGINEER II
DATE:

SUBMITTED:
LOURDINO C. SORIANO
CHIEF, PLANNING & DESIGN SECTION
DATE:

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AGUSTIN R. DAGSAAN JR.
OIC, ASSISTANT DISTRICT ENGINEER
DATE:

APPROVED:
ARNOLD R. OCAMPO
DISTRICT ENGINEER
DATE:

SHT NO
SHEET NO

A2 TITLE BLOCK AS PER DO_127_s2023

GUIDELINES ON THE INSTALLATION OF PROJECT BILLBOARDS:

1.) THE BILLBOARD DESIGN LAYOUT, DIMENSION AND LETTER SIZES ON WHITE BACKGROUND, AS SHOWN ON THE ATTACHED DRAWING, SHALL BE DEPICTED ON A STANDARD BILLBOARD MEASURING 1220mm X 2440mm (4ft. x 8ft.) USING 12.50mm ($\frac{1}{2}$ inch) THICK MARINE PLYWOOD OR TARPAULIN OF THE SAME SIZE POSTED ON 5mm ($\frac{1}{16}$ inch) MARINE PLYWOOD.

2.) ALL EXISTING BILLBOARD OF ON-GOING PROJECTS SHALL BE REPLACED WITH THE NEW ONE ADOPTING THE ABOVE GUIDELINES.

3.) FOR EACH BUILDING PROJECT, THE BILLBOARD SHALL BE INSTALLED IN FRONT OF THE PROJECT SITE.

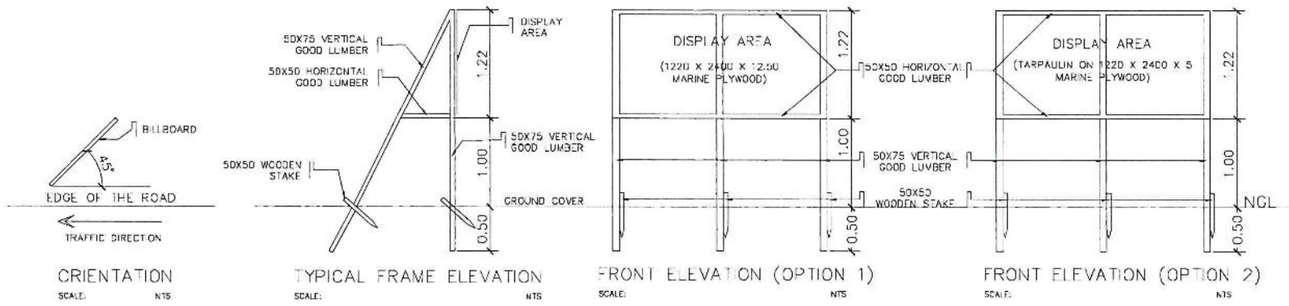
4.) FOR EACH ROAD/BRIDGE/FLOOD CONTROL PROJECT, TWO BILLBOARDS SHALL BE INSTALLED, ONE AT BEGINNING AND ONE AT THE END OF THE PROJECT.

5.) FOR ROAD PROJECTS WITH LENGTH OF 10 KILOMETERS OR MORE, ADDITIONAL BILLBOARD SHALL ALSO BE INSTALLED AT EVERY 5 KILOMETER INTERVAL.

6.) NAME(S) AND/OR PICTURE(S) OF ANY PERSONAGES SHOULD NOT APPEAR IN THE BILLBOARD.

7.) NO OTHER BILLBOARDS SHALL BE ALLOWED TO BE INSTALLED 100 METERS BEFORE AND 100 METERS AFTER ALL DPWH PROJECTS AND IN-BETWEEN THE PROJECT LIMITS OR WITHIN THE ROAD RIGHT-OF WAY.

8.) DPWH CONTRACTORS SHALL NOT BE ALLOWED TO PLACE NAMES OF POLITICIANS OR CARRY POLITICAL BILLBOARD ON THEIR EQUIPMENT.

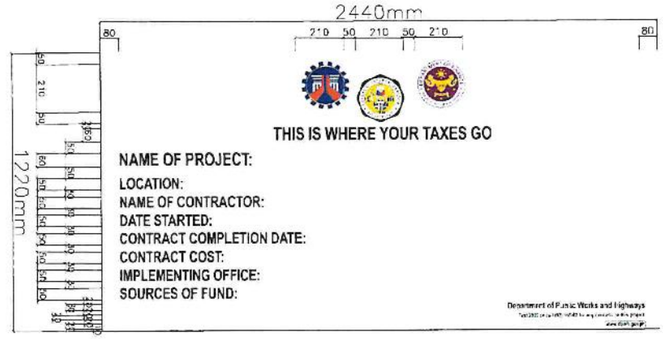


ORIENTATION — SCALE: NTS

TYPICAL FRAME ELEVATION — SCALE: NTS

FRONT ELEVATION (OPTION 1) — SCALE: NTS

FRONT ELEVATION (OPTION 2) — SCALE: NTS



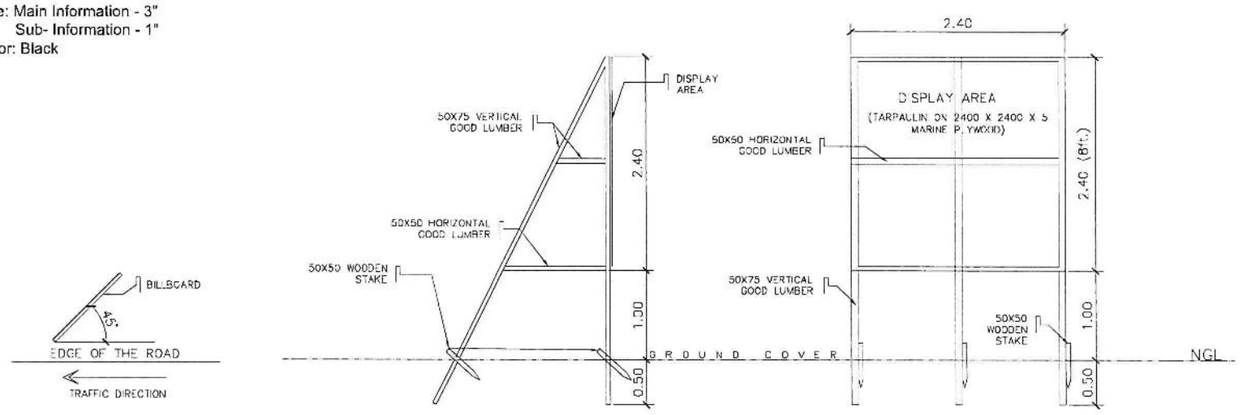
DPWH STANDARD PROJECT BILLBOARD

Notes:

1. For infrastructure projects, a tarpaulin signboard must be suitably framed for outdoor display at the project location, and shall be posted as soon as the award has been made.

   Specifications:
   Tarpaulin, White, 8ft x 8ft
   Resolution: 70dpi
   Font: Helvetica
   Font Size: Main Information - 3"
   Sub- Information - 1"
   Font Color: Black

2. The display and/or affixture of the picture, image, motto, logo, color, motif, initials or other symbol or graphic representation associated with the top leadership of the project proponent or implementing agency/office, on signboards, is considered unnecessary.



ORIENTATION — SCALE: NTS

TYPICAL FRAME ELEVATION — SCALE: NTS

TYPICAL FRAME ELEVATION — SCALE: NTS

COMMISION ON AUDIT
REGIONAL OFFICE NO. III
MAIMPIS, CITY OF SAN FERNANDO, PAMPANGA

PROJECT: _____ COST: _____
_____ FUND SOURCE/S: _____

LOCATION: _____
Implementing Agency/ies: DPWH PAMPANGA 2ND D.E.O
Development Partner/s: _____
Contractor / Supplier: _____
Brief Description of Project: _____

Project Details :

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

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

COA Regional Office No. /Cluster: III
Address: Gov't. Center, Maimpis, City of San Fernando Pampanga
Contact No.: 4554266 or 4554272 or Text COA Citizen's Desk at 0915-5391957.

COA BILLBOARD

REPUBLIC OF THE PHILIPPINES **DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS** REGIONAL OFFICE NO. III PAMPANGA 3RD DISTRICT ENGINEERING OFFICE ANGELES CITY	PROJECT NAME AND LOCATION : REPAIR / REHABILITATION OF FLOOD CONTROL STRUCTURES ALONG ALASAS CREEK (RIGHT DIKE), BRGY. SAN AGUSTIN, MAGALANG, PAMPANGA.	SHEET CONTENTS : **DETAIL OF BILLBOARDS (COA AND DPWH)**	DRAFTED: **ERWIN S. DAVID** ENGINEERING ASS STANT PREPARED: **GIE YANE S. MIRANDA** ENGINEER II	REVIEWED: **GIL A. RIVERA** ENGINEER II DATE	SUBMITTED: **LOURDINO C. SORIANO** CH IEF, PLANNING & DESIGN SECTION DATE	RECOMMENDED: **AGUSTIN R. DAGSAAN JR.** OIC-ASSISTANT DISTRICT ENGINEER DATE	APPROVED: **ARNOLD R. OCAMPO** DISTRICT ENGINEER DATE	SET NO	SHEET NO

Logon: ESD
Plot Date: Monday, 30 June 2025 2:38:26 pm
File Name:E:\P3DEO\DPWH P3DEO 2025\2025 10 QRF\AGUSTIN 2\FDE QRF AGUSTIN2 RIGHT DIKE MIS.dwg