



REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
REGIONAL OFFICE VIII
SOUTHERN LEYTE 2nd DISTRICT ENGINEERING OFFICE
SOGOD, SOUTHERN LEYTE

C.Y. 2025 PROJECT
DETAILED ENGINEERING PLAN FOR
**Convergence and Special Support Program - Construction/ Rehabilitation of Water Supply/
Septage and Sewerage/ Rain Water Collectors - Construction (Completion) of Public Water
Supply System (Level II), Barangay Mabicay, Sogod, Southern Leyte**

SOUTHERN LEYTE 2nd DEO

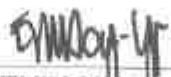
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SUBMITTED


RAINIER LOU C. RUIZ
CHIEF PLANNING AND DESIGN SECTION

DATE: FEB 10 2025

RECOMMENDED


EVELYN D. YAP
ASSISTANT DISTRICT ENGINEER

DATE: FEB 14 2025

APPROVED


EDUARDO V. SANTOS
DISTRICT ENGINEER

DATE: FEB 14 2025

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 REPUBLIC OF THE PHILIPPINES DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS REGIONAL OFFICE VII SOUTHERN LEYTE 2ND DISTRICT ENGINEERING OFFICE BOGOD, SOUTHERN LEYTE	PROJECT NAME AND LOCATION: Convergence and Special Support Program - Construction/ Rehabilitation of Water Supply Septage and Sewerage Plan Water Collectors-Construction (Completion) of Public Water Supply System (Level II), Barangay Malocay, Bogod, Southern Leyte	SHEET CONTENTS: INDEX OF SHEETS	DRAFTED: KENNEDY L. CEDRINO CIVIL ENGINEER DATE: FEB 07 2025	SUBMITTED: JONE A. BALTAZAR CIVIL ENGINEER DATE: FEB 20 2025	REVIEWED: RAINIER LOU C. RUIZ CIVIL ENGINEER AND DESIGN SECTION DATE: FEB 10 2025	RECOMMENDED: EVELYN OLIVERA ASSISTANT DISTRICT ENGINEER DATE: FEB 14 2025	APPROVED: EDUARDO V. SANTOS DISTRICT ENGINEER DATE: FEB 14 2025	SET NO. 2	SHEET NO. 2 16

START OF PROJECT
CY 2025

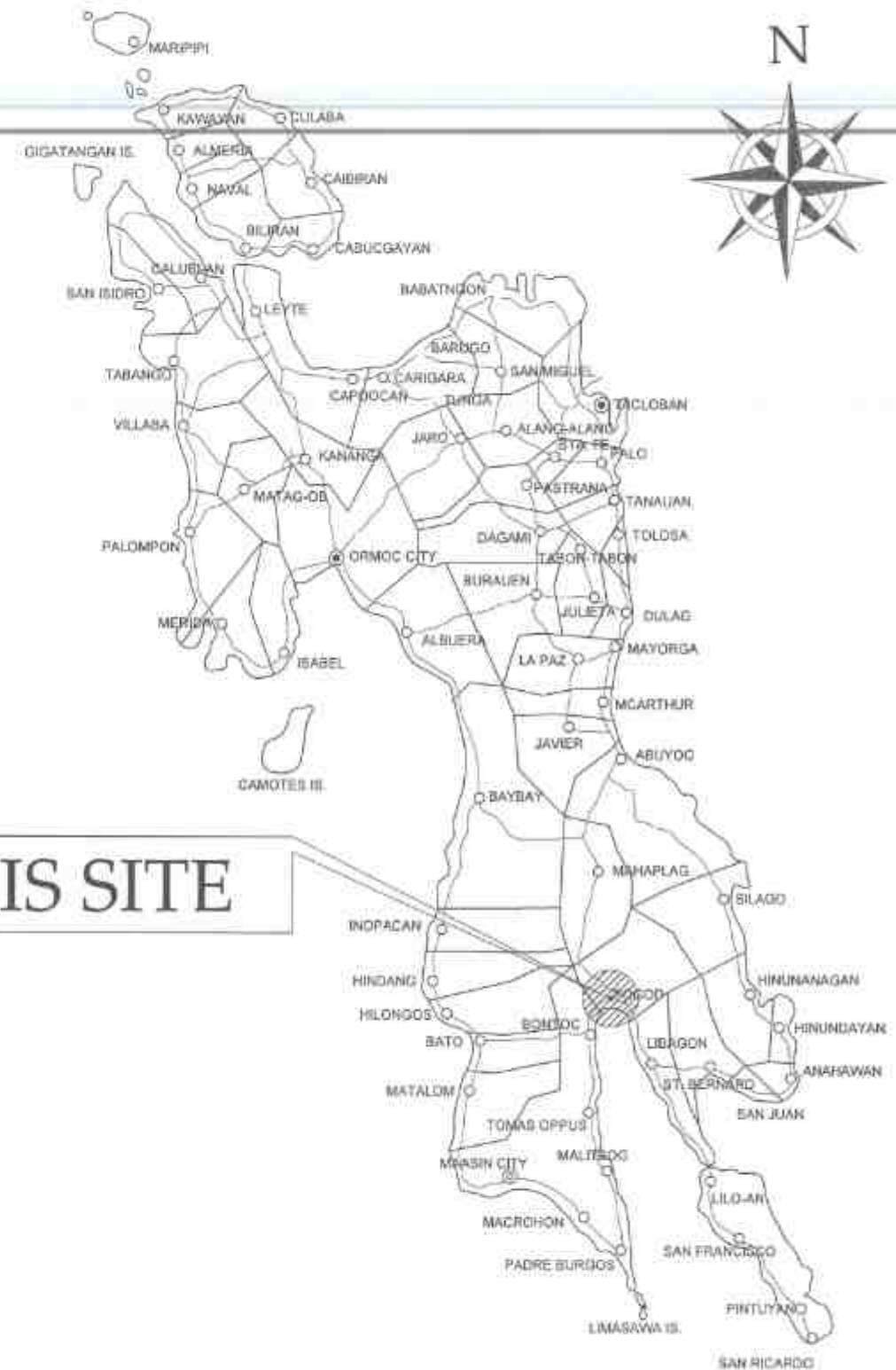
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E=124°57'46"



END OF PROJECT
CY 2025

END OF PROJECT: N=10°23'07"N
E=124°57'46"E

THIS SITE



VICINITY MAP



REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
REGIONAL OFFICE VII
SOUTHERN LEYTE 2ND DISTRICT ENGINEERING OFFICE
SOGOO, SOUTHERN LEYTE

PROJECT NAME AND LOCATION:
Convergence and Support Program -
Construction Rehabilitation of Water Supply/
Sewage and Sewerage/ Rain Water
Collection-Construction (Completion) of Public
Water Supply System (Level II), Mabicay
Municipality, Sogod, Southern Leyte

SHEET CONTENTS:
LOCATION MAP

DRAFTED: KENNETH A. EDOR
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SUMMARY OF QUANTITIES

ITEM NO.	DESCRIPTION	QUANTITY	UNIT	REMARKS
Part B	OTHER GENERAL REQUIREMENTS - Blue Book Vol. II			
B.3 (1)	Permits and Clearances	1	L.S.	
B.4 (10)	Miscellaneous survey and staking	1	L.S.	
B.5	Project Billboard/Signboard	6	Each	
B.7 (1)	Occupational Safety and Health Program	1	L.S.	
B.9 (1)	Mobilization / Demobilization	1	L.S.	
B.11(1)	Provisional Sum (10kva Generator Including Manual Transfer Switch)	1	L.S.	
PART C	EARTHWORK - Blue Book Vol. III, Part III, Division I - General			
800 (2)	Clearing and Grubbing	1	Ls	
803 (1)a	Structure Excavation (Common Soil)	15	Cu.m.	
804 (1)a	Embankment from Roadway/Structure Excavation	11.00	Cu.m.	
804 (7)	Gravel Fill	3.00	Cu.m.	
PART D	REINFORCED CONCRETE - Blue Book Vol. III, Part III, Division I - General			
900 (1)c	Structural Concrete (Class A, 28 days)	14	Cu.m.	
902 (1)a1	Reinforcing Steel (Deformed), Grade 40	2679	Kgs.	
903 (2)	Formworks and Falseworks	45	Sq.m	
PART E	FINISHING & OTHER CIVIL WORKS - Blue Book Vol. III, Part III, Division II - Buildings			
	Cement Plaster Finish/Decorative Stone			
1027 (1)	Cement Plaster Finish	33	Sq.m.	
	Painting, Varnishing and Other Related Works			
1032 (1)c	Painting Works,Steel	1	Sq.m.	
	Water Proofing Works			
1016(1)a	Waterproofing, Cement Based	33	Sq.m.	
	Structural Steel Works			
1047 (2)	Metal Structure	1	L.S.	
PART F	ELECTRICAL - Blue Book Vol. III, Part III, Division II - Buildings			
1101 (33)	Wires & Wiring Devices	1	L.S.	
PART G	Mechanical - Blue Book Vol. III, Part III, Division II - Buildings			
	Water Pumping System			
1201 (1)	Water Pumping System	1	L.S.	
PART K	WATER SUPPLY -Protective Works and Accesories - Blue Book Vol. III, Part III, Division IV - Flood Control, Drainage and Water Supply			
	EXCAVATION FOR WATER SUPPLY SYSTEM			
1600 (2)	Pipeline Trench Excavation	55	CU.M	
	FILL AND BACKFILL			
1601 (1)	Fill and Backfill	50	CU.M	
	Pipeline System			
1602 (4)	Polyethylene (PE) Plastic Pipe	1	L.S.	

GENERAL NOTES

B.4 CONSTRUCTION SURVEY AND STAKING

B.4.1 DESCRIPTION

THIS ITEM SHALL CONSIST OF FURNISHING THE NECESSARY EQUIPMENT AND THE MATERIAL TO SURVEY, STAKE, CALCULATE, AND RECORD THE DATA FOR THE CONTROL OF WORK IN ACCORDANCE WITH THIS SPECIFICATION AND CONFORMITY WITH THE LINES, GRADES AND DIMENSIONS SHOWN ON THE PLANS OR AS ESTABLISHED BY THE ENGINEER.

B.4.2. CONSTRUCTION REQUIREMENTS

B.4.2.1 GENERAL

STAKING ACTIVITIES SHALL BE INCLUDED IN THE CONSTRUCTION SCHEDULE TO BE SUBMITTED BY THE CONTRACTOR. DATES AND SEQUENCE OF EACH STAKING ACTIVITY BE INCLUDED.

THE ENGINEER SHALL SET INITIAL REFERENCE LINES, HORIZONTAL AND VERTICAL CONTROL POINTS, AND SHALL FURNISH THE DATA FOR USE IN ESTABLISHING CONTROL FOR COMPLETION OF EACH ELEMENT OF THE WORK, DATA RELATING TO HORIZONTAL AND VERTICAL ALIGNMENTS, THEORETICAL SLOPE STAKE CATCH POINTS, AND OTHER DESIGN DATA SHALL BE FURNISHED.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE TRUE SETTLING OF THE WORKS OR IMPROVEMENTS AND FOR CORRECTNESS OF POSITIONS, LEVELS, DIMENSIONS AND ALIGNMENT OF ALL PARTS OF THE WORKS. HE SHALL PROVIDE ALL NECESSARY INSTRUMENTS, APPLIANCES, MATERIALS AND SUPPLIES, AND LABOR IN CONNECTION THEREWITH. THE CONTRACTOR SHALL PROVIDE A SURVEY CREW SUPERVISOR AT THE PROJECT SITE WHENEVER SURVEYING/STAKING ACTIVITY IS IN PROGRESS.

PRIOR TO CONSTRUCTION, THE ENGINEER SHALL BE NOTIFIED OF ANY MISSING INITIAL REFERENCE LINES, CONTROLS, POINTS, STAKES. THE ENGINEER SHALL REESTABLISH MISSING INITIAL REFERENCE LINES, CONTROLS, POINTS, OR STAKES.

THE CONTRACTOR FOR CONVENIENT USE OF GOVERNMENT-FURNISHED DATA SHALL PERFORM ADDITIONAL CALCULATIONS, IMMEDIATE NOTIFICATION OF APPARENT ERRORS IN THE INITIAL STAKING OR IN THE FURNISHED DATA SHALL BE PROVIDED.

ALL INITIAL REFERENCE AND CONTROL POINTS SHALL BE PRESERVED. AT THE START OF CONSTRUCTION, ALL DESTROYED OR DISTURBED INITIAL REFERENCE OR CONTROL POINTS NECESSARY TO THE WORK SHALL BE REPLACED.

BEFORE SURVEYING AND STAKING, THE CONTRACTOR SHALL DISCUSS AND COORDINATE THE FOLLOWING WITH THE ENGINEER:

1. SURVEYING AND STAKING METHODS
2. STAKE MARKING/CONCRETE MONUMENTS
3. GRADE CONTROL FOR COURSES OF MATERIALS
4. REFERENCING
5. STRUCTURE CONTROL
6. ANY OTHER PROCEDURES AND CONTROLS NECESSARY FOR THE WORK

ESTABLISHED CONTROLS SHALL BE WITHIN THE TOLERANCE SHOWN IN TABLE 1

TABLE 1
CONSTRUCTION SURVEY AND STAKING TOLERANCE

STAKING PHASE	HORIZONTAL	VERTICAL
EXISTING GOVERNMENT NETWORK CONTROL POINTS	±21 mm	±30 mm ± 4X
LOCAL SUPPLEMENTAL CONTROL POINTS SET FROM EXISTING GOVERNMENT NETWORK POINTS	±10 mm	±3 mm ± 3X
CENTERLINE POINTS (IPC, IPT, IPTs)	±10 mm	±10 mm
OTHER CENTERLINE REFERENCES	±55 mm	±55 mm
CROSS-SECTION POINTS AND BLOPE STAKES	±10 mm	±50 mm
BLOPE STAKES REFERENCES	±50 mm	±50 mm
CULVERT, DITCHES AND MINOR DRAINAGE STRUCTURES	±50 mm	±20 mm
RETAINING WALLS AND CURBS AND GUTTER	±20 mm	±10 mm
BRIDGE TIE-UP STRUCTURES	±10 mm	±10 mm
BRIDGE SUPERSTRUCTURES	±25 mm	±10 mm
CLEMINES AND GRASSING LOTS	±100 mm	-
ROADWAY SUBGRADE PIER STAKES	±50 mm	±10 mm
ROADWAY FRESH CATCH STAKES	±50 mm	±10 mm

B.4 MISCELLANEOUS SURVEY AND STAKING

ALL SURVEY, STAKING, AND RECORDING OF DATA ESSENTIAL FOR ESTABLISHING THE LAYOUT AND CONTROL OF THE FOLLOWING SHALL BE PERFORMED, AS APPLICABLE:

- A. APPROACH ROADS AND TRAILS
- B. ROAD RIGHT OF WAY AND CONSTRUCTION LIMIT IN ACCORDANCE WITH THE APPROVED PARCELLARY PLAN.
- C. CURBS AND GUTTER
- D. GUARDRAIL
- E. PARKING AREAS
- F. PAVED WATERWAYS AND OUTFALL STRUCTURES
- G. LINED CANALS AND OTHER DITCHES
- H. CHUTES AND SPILLWAYS
- I. TURF ESTABLISHMENT
- J. UTILITIES
- K. SIGNS, DELINEATORS, AND OBJECT MARKERS
- L. PAVEMENT MARKINGS

B.5 PROJECT BILLBOARD/SIGNBOARD

1. GENERAL REQUIREMENTS

THE CONTRACTOR SHALL INSTALL TWO (2) PROJECT INFORMATION SIGNS AT / OR NEAR THE BEGINNING AND THE END OF THE PROJECT OR UPON THE DISCRETION OF THE ENGINEER.

THE SIGNS ARE PRESCRIBED SEPARATELY BY THE DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS (DPWH) FOR GOVERNMENT INFRASTRUCTURE PROJECTS TO INFORM THE PUBLIC OF THE IMPLEMENTATION OF THE PROJECT AND TO ADVISE THE ROAD USERS OF THE ONGOING CONSTRUCTION.

THE NEW BILLBOARD DESIGN LAYOUT, DIMENSION AND LETTER SIZES ON WHITE BACKGROUND, SHALL BE DEPICTED ON STANDARD BILLBOARD MEASURING 1220MM X 2,440 MM USING 12.50 MM THICK MARINE PLYWOOD OR TAPAULIN OF THE SAME SIZE POSTED ON 5 MM MARINE PLYWOOD. FOR EACH BUILDING PROJECT, THE BILLBOARD SHALL BE INSTALLED IN FRONT OF THE PROJECT SITE. FOR EACH ROAD/BRIDGE/FLOOD CONTROL PROJECT, TWO BILLBOARDS SHALL BE INSTALLED, ONE (1) AT THE BEGINNING AND ONE (1) AT THE END OF THE PROJECT.

FOR ROAD PROJECTS WITH A LENGTH OF 10KM OR MORE, ADDITIONAL BILLBOARD SHALL ALSO BE INSTALLED AT EVERY 5KM INTERVAL. NAME(S) AND/OR PICTURE(S) OF ANY PERSONAGES SHOULD NOT APPEAR ON THE BILLBOARD.

NOT OTHER BILLBOARDS SHALL BE ALLOWED 100 M BEFORE AND 100 M AFTER ALL DPWH PROJECTS AND IN-BETWEEN THE PROJECT LIMITS OR WITHIN THE ROAD RIGHT-OF-WAY. DPWH CONTRACTORS SHALL NOT BE ALLOWED TO PLACE NAMES OF POLITICIANS OR CARRY POLITICAL BILLBOARD ON THEIR EQUIPMENT.

THE CONTRACTOR SHALL ALSO INSTALL ONE (1) BILLBOARD AS PER COA CIRCULAR NO. 2010-004. INFORMATION AND PUBLICITY ON PROGRAMS/PROJECTS/ACTIVITIES OF GOVERNMENT AGENCIES.

UPON COMPLETION OF THE WORK, ALL SIGNS INSTALLED SHALL BE REMOVED FROM THE SITE.

B.7 OCCUPATIONAL SAFETY AND HEALTH

B.7.1 DESCRIPTION

THIS ITEM COVERS THE IMPLEMENTATION OF CONSTRUCTION SAFETY IN ALL STAGES OF PROJECT PROCUREMENT (DESIGN, ESTIMATE, CONSTRUCTION AND MAINTENANCE). REQUIREMENTS, PROVISIONS, AND INSTRUCTIONS FOR THE GUIDANCE OF THE ENGINEER.

B.7.2 CONSTRUCTION SAFETY AND HEALTH PROGRAM(CSHP)

EVERY CONSTRUCTION PROJECT SHALL HAVE A SUITABLE AND APPROVED CONSTRUCTION SAFETY AND HEALTH PROGRAM (CSHP) AS REQUIRED IN ALL PROJECTS REGARDLESS OF AMOUNT, FUNDING SOURCE AND MODE OF IMPLEMENTATION WHICH SHALL COMPLY WITH THE MINIMUM SAFETY AND HEALTH REQUIREMENTS AS SPECIFIED IN THE OCCUPATIONAL SAFETY AND HEALTH STANDARDS.

THE REQUIRE CSHP SHALL INCLUDE BUT NOT LIMITED TO THE FOLLOWING:

1. COMPOSITION OF THE SAFETY AND HEALTH PERSONNEL RESPONSIBLE FOR THE PROPER IMPLEMENTATION OF CSHP;
2. SPECIFIC SAFETY POLITIES WHICH SHALL BE UNDERTAKEN IN THE CONSTRUCTION SITE, INCLUDING FREQUENCY OF AND PERSONS RESPONSIBLE FOR CONDUCTING TOOLBOX AND GANG MEETINGS;
3. PENALTIES AND SANCTIONS FOR VIOLATION OF THE CSHP;
4. FREQUENCY, CONTENT AND PERSONS RESPONSIBLE FOR ORIENTING, INSTRUCTING AND TRAINING ALL WORKERS AT THE SITE WITH REGARD TO THE CSHP WHICH THEY OPERATE;
5. THE MANNER OF DISPOSING WASTE ARISING FROM THE CONSTRUCTION

B.8.2 CONSTRUCTION REQUIREMENTS

8.8.2.1 ACCOMMODATING TRAFFIC DURING WORK

TRAFFIC SHALL BE ACCOMMODATED IN ACCORDANCE WITH THE MUTCD, CONTRACT TRAFFIC CONTROL PLAN, AND THIS SECTION. AN ALTERNATE TRAFFIC CONTROL PLAN MAY BE SUBMITTED FOR APPROVAL TO THE ENGINEER. ALTERNATE TRAFFIC CONTROL PLANS SHALL BE SUBMITTED AT LEAST 30 DAYS BEFORE INTENDED USE.

WORK SHOULD BE PERFORMED IN A MANNER THAT ENSURES THE SAFETY AND CONVENIENCE OF THE PUBLIC AND PROTECTS THE RESIDENTS AND PROPERTY ADJACENT TO THE PROJECT. ACCOMMODATE PUBLIC TRAFFIC ON ROADS ADJACENT TO AND WITHIN THE PROJECT UNTIL THE PROJECT IS ACCEPTED.

B.9 MOBILIZATION / DEMOBILIZATION

B.9.1 GENERAL REQUIREMENTS

MOBILIZATION SHALL MEAN THE TRANSPORT TO THE PROJECT SITE OF THE CONTRACTOR'S PERSONNEL, CONSTRUCTION PLANT AND EQUIPMENT AS STIPULATED IN THE PROPOSAL AND CONTRACT OF THE PROJECT WHILE DEMOBILIZATION SHALL BE THEIR SUBSEQUENT REMOVAL FROM THE SITE AFTER THE COMPLETION OF THE PROJECT. THE CONTRACTOR SHALL SECURE APPROVAL OF THE ENGINEER SHOULD HE OPTED TO DEMOBILIZE ANY OF THE MAJOR PLANT AND/OR EQUIPMENT BEFORE THE COMPLETION OF THE PROJECT.

GENERAL NOTES

C. STRUCTURAL STEEL

STRUCTURAL STEEL SHALL CONFORM TO THE REQUIREMENTS OF ASTM SPECIFICATION UNLESS OTHER STEEL IS SPECIFIED. ALLOWABLE STRESSES ARE COMPUTED IN ACCORDANCE WITH THE PROVISIONS OF THE 7TH EDITION OF AISC MANUAL OF STEEL CONSTRUCTION (SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDING) EXCEPT THAT FOR HYDRAULIC STRUCTURES, A REDUCTION IN BASIC WORKING STRESS TO 85% OF THAT USED FOR BUILDING IS CONSIDERED.

VII. DESIGN DETAILS

A. REINFORCING STEEL

1. TEMPERATURE AND SHRINKAGE REINFORCEMENT

MINIMUM SECTIONAL AREA OF REINFORCEMENT FOR THE EFFECT OF TEMPERATURE AND SHRINKAGE AREA AS FOLLOWS

A. WALLS AND PIERS - 0.25% OF THE GROSS AREA OF CONCRETE FOR HORIZONTAL REINFORCEMENT AND 0.15% FOR VERTICAL REINFORCEMENT IN EACH FACE WITH NO INCREASE IN THE STEEL AREA FOR MEMBERS MORE THAN 80cm THICK.

2. PLACING AND SPACING OF REINFORCEMENT

STEEL REINFORCEMENT IS PLACED AND SPACED IN ACCORDANCE WITH THE ACI BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (LATEST EDITION)

3. CONCRETE COVER FOR REINFORCEMENT

THE MINIMUM CONCRETE COVER PROVIDED FOR REINFORCING BARS ARE AS FOLLOWS:

A. BOTTOM OF FOUNDATION - 100mm

B. OTHER EXTERIOR SURFACES - 75mm

C. MISCELLANEOUS STRUCTURES - 50mm

THESE FIGURES ARE CLEAR COVER TO THE NEAREST REINFORCEMENT, I.E., TIES, BEAM STIRRUPS OR MAIN REINFORCEMENT AS THE CASE MAY BE.

4. SPLICES AND DEVELOPMENT LENGTH OF REINFORCEMENT

THE PROPERTIES, DEVELOP LENGTH AND LAP SPLICES OF STEEL REINFORCEMENT BASED ON THE PHILIPPINES STANDARD INTERMEDIATE GRADE 275 DEFORMED BARS ARE GIVEN IN TABLES 1 AND 2.

5. PROPERTIES OF STEEL REINFORCEMENTS:

THE PROPERTIES OF STEEL REINFORCEMENT ARE GIVEN IN TABLE 1.

TABLE 1: PROPERTIES OF REINFORCING BARS (PNS 49)

PROPERTIES OF STEEL REINFORCING BARS				
NOMINAL DIAMETER (mm)	AREA (mm ²)	PERIMETER (mm)	UNIT WEIGHT (kg/m)	
6	28.27	18.85	0.222	NO. 2 (1/4")
10	78.54	31.42	0.616	NO. 3 (3/8")
12	113.10	37.70	0.889	NO. 4 (1/2")
16	201.06	50.27	1.580	NO. 5 (5/8")
20	314.16	62.83	2.469	NO. 6 (3/4")

6. LAP SPLICES CRITERIA

* THE DEVELOPMENT LENGTH AND LAP SPICE OF EACH BAR OF BUNDLED BARS SHALL BE THAT FOR THE INDIVIDUAL BAR BE INCREASED BY 20% FOR A THREE-BAR BUNDLE AND 33% FOR A FOUR - BAR BUNDLE.

* IN REGIONS OF MAXIMUM MOMENT OR HIGH COMPUTED STRESS (MORE THAN 0.50 fy) I.E., SPLICES SHALL BE LAPPED, WELDED, OR OTHERWISE ANCHORED FOR THEIR FULLY fy:

CLASS B SPICE - NO MORE THAN ONE - HALF OF THE BARS ARE LAP SPICED WITHIN A REQUIRED LAP LENGTH. CLASS C SPICE - MORE THAN ONE-HALF OF THE BARS ARE LAP SPICED WITHIN A REQUIRED LAP LENGTH.

IN REGIONS OF LOW COMPUTED STRESS (LESS THAN 0.50 fy):

CLASS B SPICE - NO MORE THAN THREE-QUARTERS OF THE BARS ARE LAP SPICED WITHIN A REQUIRED LAP LENGTH. CLASS C SPICE - MORE THAN THREE-QUARTERS OF THE BARS ARE LAP SPICED WITHIN A REQUIRED LAP LENGTH.

** TENSION TIE MEMBERS: THE BARS SHALL BE ENCLOSED WITHIN A SPIRAL AND THE ENDS OF BARS LARGER THAN NO. 12 SHALL BE HOOKED 180 DEGREES

** WHEN THE SPECIFIED CONCRETE STRENGTHS ARE LESS THAN 3000 PSI, THE LAP SHALL BE INCREASED BY ONE - THIRD.

TABLE 2: TABLE OF LAP SPLICES OF DEFORMED REINFORCING BAR (GRADE 275)

DEVELOPMENT LENGTH OF REINFORCEMENT (cm)				LAP SPLICES (cm)				COMPRESSION
NOMINAL DIAMETER (mm)	TENSION		COMPRESSION	TENSION				
	TOP BARS	BOT. BARS		CLASS A	CLASS B	CLASS C	CLASS D	
8	30	30	20	30	30	30	30	
10	30	30	20	30	30	30	32	
12	30	30	20	30	30	20	39	
16	36	30	24	30	44	44	52	
20	51	37	30	51	62	62	73	

ALL WELDED WIRE FABRIC SHALL BE LAPPED TO FULL MESH OPENING BUT NOT LESS THAN 300mm SECURELY FASTENED.

LAP TWO MESH OPENING

7. BAR BENDING, SPLICING AND PLACING

1. PRIOR TO FABRICATION, THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR APPROVAL, SHOP DRAWINGS INDICATING THE BENDING, CUTTING, SPLICING AND INSTALLATION OF ALL REINFORCING BARS.

2. BARS SHALL BE BENT COLD. BARS PARTIALLY EMBEDDED IN CONCRETE SHALL NOT BE FIELD BENT UNLESS PERMITTED BY THE ENGINEER.

3. BAR SPLICING NOT INDICATED IN DRAWINGS SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.

4. WELDED SPLICES, IF APPROVED BY THE ENGINEER, SHALL DEVELOP IN TENSION AT LEAST 125% OF THE SPECIFIED YIELD STRENGTH OF THE BARS.

5. NOT MORE THAN 50% OF THE BARS AT ANY ONE SECTION SHALL BE SPLICED, UNLESS SPECIFICALLY INDICATED.



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8000, SOUTHERN LEYTE

PROJECT NAME AND LOCATION:

Convergence and Special Support Program -
Construction/ Rehabilitation of Water Supply/
Sewage and Sewerage/ Rain Water
Collectors-Construction (Completion) of Public
Water Supply System (Level II), Barangay
Matunay, Sogod, Southern Leyte

8000, SOUTHERN LEYTE

SHEET CONTENTS

GENERAL NOTES

DRAWN BY

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DATE: FEB 10 2025

REVIEWED BY

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DATE: FEB 14 2025

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6. UNLESS OTHERWISE SHOWN IN DRAWINGS, THE CLEAR DISTANCE BETWEEN PARALLEL BARS IN A LAYER SHALL NOT BE LESS THAN 1.5 TIMES THE NORMAL DIAMETER OF THE BAR NOR LESS THAN 1.5 TIMES THE MAXIMUM SIZE OF COARSE AGGREGATE. THE CLEAR DISTANCE BETWEEN LAYERS SHALL NOT BE LESS THAN 25mm. THE BARS IN THE UPPER LAYERS SHALL BE PLACED DIRECTLY ABOVE THOSE IN THE BOTTOM LAYER.

Technical drawing of a shaft-hub assembly. The drawing shows a shaft with a diameter of 10 ± 0.01 mm and a hub with a diameter of 10 ± 0.02 mm. The shaft is inserted into the hub. The drawing includes the following dimensions and formulas:

- OFFSET** = $\frac{\text{MIN. } d}{\text{MAX. } d + 3 \text{ mm}}$
- DIAMETER** = $\frac{10 \pm d \text{ MIN}}{30 \pm d \text{ MAX}}$

DIMENSIONS OF 90-DEGREE AND 180-DEGREE HOOKS



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

DIMENSION FOR STIRRUPS AND CROSSTIE HOOKS
5d OR 76mm MIN FOR Ø16 OR SMALLER BARS
12d FOR Ø20 & Ø25 BARS



PIN DIAMETER = $D = 5d$ FOR $\varnothing 10$ THRU $\varnothing 25$
 $D = 8d$ FOR $\varnothing 28$, $\varnothing 32$ AND $\varnothing 36$

9. REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY AND IS NOT NECESSARILY SHOWN IN TRUE PROJECTION. ALL BARS ON ANY SECTION ARE INDICATED AND GENERALLY TO BE UNIFORMLY SPACED NO.

10. PROVIDE ADDITIONAL 18mm DIA. DISTRIBUTION STEEL REINFORCEMENT TO ANY OUTSIDE RC SURFACES WHERE THE SPACING OF OUTSIDE BARS IS ANYWHERE LESS THAN 250mm. IMPLEMENTATION.

EMBANKMENT FROM BORROW ARE MATERIALS WHICH HAS COHESIVE AND NONE LOOSE PROPERTIES OR ANY SUITABLE MATERIAL THAT IS IN ACCORDANCE WITH THE EXISTING STANDARD MATERIAL TESTING AND COMPACTED TO AT LEAST 95% COMPACTION.

THESE GENERAL NOTE AND DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE
CONSTRUCTION SPECIFICATION AND SUCH AS OTHER RELATED DOCUMENT, WRITTEN INSTRUCTIONS,
FORMING PART OF THE CONTRACT

ALL CONSTRUCTION MATERIALS SHALL CONFORM TO:
1.1 CONDITIONS OF CONTRACT
1.2 PARTICULAR CONDITIONS OF CONTRACT

2. CONDUCT ACTUAL SURVEY AND RE-EVALUATE PLANS AND DESIGN OF THIS PROPOSAL FOR SITE VERIFICATION. ALL DISCREPANCY HEREIN SHALL BE REFERRED IMMEDIATELY TO THE ENGINEER FOR RESOLUTION.

3. ALL DIMENSIONS, LEVELS AND REFERENCES ARE NOT TO SCALE. THE DESIGN SHALL BE RE-EVALUATED, NOTED AND COORDINATED TO THE PROJECT ENGINEER.

4. ALL WORKMANSHIP AND MATERIALS TO BE INCORPORATED INTO THE WORKS SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS, CURRENT RELEVANT CODES AND STANDARDS, BUILDING ACTS AND BY-LAWS, ORDINANCES, STATUTORY REQUIREMENTS OF RELEVANT GOVERNMENT AUTHORITIES, AND GENERALLY ACCEPTED STANDARDS OF GOOD BUILDING AND ENGINEERING PRACTICE.

5. PROVIDE ALL TEMPORARY SUPPORTS, BRACINGS AND OTHER INCIDENTALS NECESSARY TO MAINTAIN THE WORKS, INCLUDING ADJACENT STRUCTURES, IN A STABLE AND OR FIRM CONDITION DURING CONSTRUCTION.

6. ALL DIMENSIONS RELATING TO EXISTING WORK, GROUND AND SEA BED LEVELS, OR OTHER INFORMATION SUPPLIED BY OTHERS SHALL BE VERIFIED ON SITE BY THE CONTRACTOR WHO SHALL BE RESPONSIBLE FOR THEIR CORRECTNESS. ALL TO BE AGREED WITH THE ENGINEER PRIOR TO START OF THE WORK.

7. ALL PROPRIETARY ITEMS OF ANY KIND FORMING PART OF THE WORKS SHALL BE INSTALLED STRICTLY IN ACCORDANCE WITH THE MANUFACTURE'S/SUPPLIER'S INSTRUCTIONS.

8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARY SITE DRAINAGE AND GENERAL MAINTENANCE OF THE WORK AREA DURING CONSTRUCTION.

9. ENGINEER TO INSPECT ALL EXCAVATIONS PRIOR TO ANY BACK FILLING, CONCRETE PLACEMENT AND ALL OTHER ACTIVITIES WITH RESPECT TO THE WORKS.

10. EXISTING STRUCTURES, INCLUDING OTHER NEIGHBORING STRUCTURES SHALL BE MAINTAINED IN A SAFE AND STABLE CONDITION DURING CONSTRUCTION. NO PART THERE OF SHALL BE OVER STRESSED DUE TO LACK OF FIT.

11. COORDINATE WITH SERVICES DRAWINGS FOR ANY OPENINGS, PENETRATION, CAST-IN ITEMS THAT MAY BE REQUIRED.

THE SETTING OUT AND THE ELEVATIONS OF THE DIFFERENT COMPONENTS OF THE STRUCTURE SHALL BE APPROVED BY THE ENGINEER PRIOR TO THE START OF ANY CONSTRUCTION WORK. ALL SET OUTS ARE AS SHOWN ON DRAWING UNLESS NOTED OTHERWISE.

ALL EXISTING PERMANENT WORKS (SUCH AS PAVEMENT, CURBS, GUTTERS, RIPRAP, SLOPE PROTECTION WORKS, AND ALL OTHER SIMILAR WORKS) WHICH WILL INTERFERE WITH THE WORK SHALL BE COMPLETELY REMOVED AND DISPOSED OF FROM THE SITE BY THE CONTRACTOR. ALL SALVAGEABLE MATERIAL SHALL BE PROPERLY AND CAREFULLY DISMANTLED AND DEPOSITED ON A CONVENIENT SITE AS INSTRUCTED BY THE ENGINEER. HOWEVER, IF SUCH PERMANENT WORKS ARE DESIGNATED TO REMAIN BUT WILL BE DEMOLISHED BY THE CONTRACTOR FOR OR REINSTATED THE NECESSARY EXECUTION OF THE WORKS, THESE DEMOLISHED PERMANENT WORKS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT HIS OWN EXPENSE.

EXCAVATION FOR STRUCTURES SHALL BE NEAT LINE AS SHOWN ON THE PLANS AND THE SOIL UNDER NEATH STRUCTURE FOUNDATIONS SHALL NOT BE DISTURBED.

16. CONCRETE FORMS SHALL NOT BE STRIPPED FOR 24 HOURS AND SHALL RECEIVE NO TRAFFIC OR OTHER LOADING FOR 7 DAYS WITHOUT THE WRITTEN OR UNTIL 48 HOURS HAVE ELAPSED WHICHEVER TAKES LONGER.

17. BEAM DEPTHS ARE WRITTEN FIRST AND INCLUDE SLAB THICKNESS.

GENERAL NOTES

I. GENERAL

1. THESE NOTES SHALL APPLY UNLESS SPECIFICALLY OTHERWISE INDICATED IN THE PLAN IN CASE OF CONFLICT BETWEEN PLANS AND SPECIFICATION SHALL GOVERN.
2. ALL DIMENSION ARE IN MILLIMETER UNLESS OTHERWISE NOTED IN THE PLANS.
3. ALL ELEVATION ARE IN METERS UNLESS OTHERWISE NOTED IN THE PLANS.
4. ALL DIMENSION AND ELEVATION SHOWN IN THE PLANS SHALL BE VERIFIED BEFORE COMMENCEMENT OF THE WORKS.
5. ALL DIMENSIONS, ELEVATIONS AND LOCATION OF OPENING RELATED TO THE EQUIPMENT ARE TENTATIVE AND SUBJECT TO CHANGE AFTER THE EQUIPMENT DIMENSION HAVE BEEN ESTABLISHED.

II. DESIGN CRITERIA AND SPECIFICATIONS

1. DPWH DESIGN GUIDELINES, CRITERIA AND STANDARDS (DGCS) - VOLUME 3 2015 EDITION.
2. DPWH STANDARD SPECIFICATIONS FOR HIGHWAYS, BRIDGES, AND AIRPORTS - VOLUME II, LATEST EDITION.
3. DPWH STANDARD SPECIFICATIONS FOR PUBLIC WORKS STRUCTURES (BUILDINGS, PORTS AND HARBORS, FLOOD CONTROL AND DRAINAGE STRUCTURES AND WATER SUPPLY SYSTEMS) - VOLUME III, 2019 EDITION.
4. RURAL WATER SUPPLY VOLUME I DESIGN MANUAL.
5. PHILIPPINE SOCIETY OF MECHANICAL ENGINEERING CODE.
6. PHILIPPINE ELECTRICAL CODE.
7. NATIONAL STRUCTURAL CODE OF THE PHILIPPINES, VOLUME I (BUILDING TOWERS AND OTHER VERTICAL STRUCTURES) 7TH EDITION 2015, (NSCP).

III. CIVIL AND STRUCTURE DESIGN

1. REINFORCED CONCRETE SCHEDULE OF STRUCTURAL CONCRETE

LOCATION	STRUCTURE	DESIGN STRENGTH	MIN. CURE
FOUNDATION	FOOTING (100% CEMENT)	30MPa (28MPa)	21 days
GROUND	SLAB (100% CEMENT)	30MPa (28MPa)	21 days
WALL	WALL (100% CEMENT)	30MPa (28MPa)	21 days

- 1.1 LOCATION OF ALL CONSTRUCTION OR COLD JOINTS MUST BE APPROVED BY THE ENGINEER.
- 1.2 REINFORCING BARS, ANCHOR BOLTS, AND OTHER INSERTS SHALL BE SECURED IN PLACE BEFORE POURING CONCRETE. BAR PLACEMENT AND SUPPORTS SHALL BE IN ACCORDANCE WITH RECOMMENDED ACI PRACTICE.

2. REINFORCING STEEL

SCHEDULE OF REINFORCING BARS

DIAMETER OF BARS	GRADE (PS)	YIELD
10mm	GRADE 40 (PS 40)	400MPa (PS 40)
12mm	GRADE 40 (PS 40)	400MPa (PS 40)

MINIMUM REINFORCING LAP SPLICE AND BEND

BAR LAP (mm)	BAR LAP (mm)
210	210
210	210
210	210
210	210
210	210
210	210
210	210
210	210
210	210
210	210

3. STRUCTURAL STEEL

- 3.1 ALL STRUCTURAL MILL SECTIONS AND BUILT UP PLATE SECTIONS SHALL BE DESIGNED IN ACCORDANCE WITH AISC'S LATEST SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS.
- 3.2 DESIGN LOADS SHALL MEET THE REQUIRED STRUCTURAL DESIGN CRITERIA.
- 3.3 STEEL PLATES, SHAPES, BARS AND METAL FABRICATIONS: ASTM A-36.
- 3.4 STRUCTURAL BOLTS AND NUTS: ASTM A-325, GALVANIZED 7/8" AND BELOW.

IV. MECHANICAL NOTES

1. ALL MECHANICAL WORKS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE PHILIPPINE MECHANICAL ENGINEERING CODE.
2. THE TOTAL SCOPE OF WORKS SHALL INCLUDE ALL WORKS DESCRIBED IN PLANS AND LISTED IN TECHNICAL SPECIFICATIONS FOR MECHANICAL WORKS.
3. THE WORK SHALL BE EXECUTED IN CLOSED COORDINATION WITH OTHER TRADES.
4. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS, TECHNICAL DATA SPECIFICATION (BROCHURES/ CATALOGUE) SUBJECT FOR FURTHER TECHNICAL EVALUATION OF THE CONCERNED AUTHORITY PRIOR TO PROCUREMENT / INSTALLATION OF EQUIPMENT/ UNIT.
5. PROVIDE SEISMIC RESTRAINTS FOR ALL RIGIDLY & AS SPECIFIED DESIGN & RESILIENTLY SUPPORTED EQUIPMENT FOR APPLICABLE CODE & AS SPECIFIED DESIGN & PROVIDE RESTRAINTS FOR PUMPS, FANS, TANKS. ALL PIPING WORKS, GENERATORS ENGINE EXHAUST PIPES ETC. RESTRAINTS SHALL BE DESIGNED TO PREVENT PERMANENT DISPLACEMENT IN ANY DIRECTION CAUSE BY LATERAL MOTION.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TESTING AND COMMISSIONING OF ALL EQUIPMENT INSTALLED.
7. PROVIDE PIPE SLEEVES FOR ALL PIPING PASSING THROUGH BUILDING STRUCTURES.
8. PROVIDE GUIDES, HANGER AND SUPPLEMENTAL SUPPORT STEEL FOR ALL PIPING.
9. ALL STEEL PIPE SUPPORTS SHALL BE PHOSPHATES PRIOR TO APPLICATION OF TWO COATS OF RED LEAD AND A COAT OF ENAMEL PAINT FOR FINISHING.
10. THE QUANTITY OF EACH EQUIPMENT INDICATED IN THE SCHEDULE IS FOR GUIDANCE ONLY. FOR QUANTITY TAKE-OFF COUNT THE NUMBER OF UNITS IN THE PLANS.
11. ALL MECHANICAL WORKS SHALL BE DONE UNDER THE DIRECT AND IMMEDIATE SUPERVISION OF A DULY REGISTERED MECHANICAL ENGINEER.

V. ELECTRICAL NOTES

1. ALL ELECTRICAL WORKS SHALL BE DONE IN ACCORDANCE AND IN STRICT COMPLIANCE WITH THE PROVISIONS OF THE LATEST EDITION OF THE PHILIPPINE ELECTRICAL CODE (PEC) EXISTING APPLICABLE LAWS, ORDINANCES, REQUIREMENT, RULES AND REGULATIONS OF THE LOCAL GOVERNMENT AND LOCAL POWER COMPANY.
2. WHENEVER REQUIRED AND NECESSARY, JUNCTION BOXES OR PULL BOXES SHALL BE INSTALLED AT INCONSPICUOUS LOCATIONS ALTHOUGH SUCH BOXES ARE NOT SHOWN ON THE PLANS NOR MENTIONED IN THE SPECIFICATIONS.
3. ALL NON-CURRENT CARRYING PARTS/ ENCLOSURES OF ELECTRICAL EQUIPMENT AND OVER-CURRENT PROTECTION DEVICES SHALL BE PROPERLY GROUNDED IN ACCORDANCE WITH ARTICLE 2.50 OF THE PHILIPPINE ELECTRICAL CODE PART 1, 2000 EDITION.
4. THE ELECTRICAL SYSTEM SHALL HAVE A GROUND RESISTANCE NOT EXCEEDING 5 OHMS.
5. STANDARD TYPE OF ACCESSORIES, SPLICING DEVICES, TERMINATIONS AND OTHER APPURTENANCES FOR THE ENTIRE ELECTRICAL INSTALLATION SHALL BE USED.
6. ALL MATERIALS TO BE USED AND INSTALLED SHALL BE BRAND NEW AND OF THE APPROVED TYPE FOR THE LOCATIONS AND PURPOSE.
7. SOLAR CONTRACTOR SHALL PROVIDE FINAL QUANTITY AND RATING OF SOLAR PANEL (PHOTOVOLTAIC PANEL), SOLAR CHARGE CONTROLLERS, BATTERIES, AND INVERTERS BASED ON ACTUAL ROOF AND SITE ORIENTATION AND SPACES.
8. SOLAR CONTRACTOR SHALL PROVIDE FINAL DRAWINGS, SHOP SPECIFICATIONS AND OTHER RELATED DOCUMENTS FOR SOLAR POWER SYSTEM.
9. DESIGN OF DISTRIBUTION SYSTEM IS NOT INCLUDED IN THIS STANDARD PLAN AS IT VARIES DEPENDING ON THE SITE LOCATION.
10. ALL ELECTRICAL WORKS SHALL BE DONE UNDER THE DIRECT AND IMMEDIATE SUPERVISION OF A DULY REGISTERED ELECTRICAL ENGINEER.

VII. AQUIFER / PUMP WELL

1. THE LOCATION AND DEPTH OF WELL SHALL BE BASED ON GEO-RESISTIVITY SURVEY.
2. THE DESIGNER SHALL CONDUCT A PUMPING (SAFETY YIELD) TEST AT LEAST EQUAL TO THE SYSTEM PEAK DEMAND AND OPERATE IT FOR 24-48 HRS.
3. WELL DRILLING WILL COMMENCE UPON SECURING OF DRILLING PERMIT FROM THE NWRB AND MUST BE CONTRACTED TO AN EXPERIENCED AND COMPETENT WELL DRILLING COMPANY DULY ACCREDITED BY THE NWRB.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR WELL HEAD PROTECTION TO PROVIDE SEAL FROM LEAKAGE AND RUN-OFF ENTERING THE WELL HEAD.

VIII. ABBREVIATIONS

BOTT. BARS	BOTTOM BARS	m	METERS
C	COLUMN	mm	MILIMETER
CHB	CONCRETE HOLLOW BLOCK	ND	NOMINAL DIAMETER
cm	CENTIMETER	N	NORTH
DWG	DRAWING	NTS	NOT TO SCALE
D	DOOR	NGL	NATURAL GRADE LINE
DS	DOWN SPOUT	PV	PHOTOVOLTAIC
EA	EACH	RC	REINFORCE CONCRETE
EF	EACH FACE	STD	STANDARD
EW	EACH WAY	STL	STEEL
EL. ELEV.	ELEVATION	t. THK	THICKNESS
FLR	FLOOR	TDH	TOTAL DYNAMIC
FTG	FOOTING TIE BEAM	TYP.	TYPICAL
GI	GALVANIZED IRON	TB	TOP BAR
GRD. GRND	GROUND	VERT	VERTICAL
HOR	HORIZONTAL	W/	WITH
L	LENGTH	W/O	WITHOUT
WP	WATER PROOFING		

GENERAL LEGEND

SYMBOL	MEANING	SYMBOL	MEANING
	Water Pipe		Gate Valve
	Coupling		Slide Valve
	Union		Check Valve
	Tee		Foot Valve
	Cross		Butterfly Valve
	Reducer/Inserter		Shut-off Valve
	Adaptor		Fire Hydrant (Residential or Commercial)
	Mechanical Sleeve Coupling		Water Meter
	Expansion Joint		Pressure Relief Valve Assembly
	Flanged Joint		Air Release and Air Inlet Assembly
	Elbow 90°		Air Release Valve
	Elbow 45°		Air Vacuum Assembly
	Cap		Ground Level Storage Tank
	Plug		Pump Station
	Air Vent (Gasket Neck)		Control Valve
	Pipe Support		Spot Elevation
	Fence		Road
	Electrical Post		Intermittent Creek
	Telephone Post		Water Tank
	Angle Valve		Household (assumed)
	PVC Flange Adaptor		
	Contour Lines		
	Supplementary Contour		
	RCPG / RCB		
	Spring box / Water Source		
	Filtration / Chlorination Plant		

GENERAL ABBREVIATIONS

AIR RELEASE VALVE	A. R. V.	REINFORCED CONCRETE BOX CULVERT	R C B C
BLOW - OFF - VALVE	B O V	REINFORCED CONCRETE PIPE CULVERT	R C P C
BOTHWAYS	B W	SCHEDULE	S
CAST IRON	C I	STANDARD	STD.
CUBIC METRE	m ³	STATION	STA.
DETAIL	DET.	THICK	THD.
DRAWING	DWG.	WATER LINE	W L
DIAMETER	DIA. or D or Ø	WATER SURFACE	W S
ELECTRIC POST	E P	WITH	W/
ELEVATION	ELEV.	METRE	M
FIRE HYDRANT	F. H.	MILLIMETRE	mm
GALVANIZED	GALV.	MINIMUM	MIN.
GALVANIZED IRON PIPE	G I P	NATURAL GROUND LEVEL	N G L
GATE VALVE	G V	ON CENTER	O. C.
INSIDE DIAMETER	I. D.	POLYETHYLENE	PE
MANHOLE	M H	POLYVINYL CHLORIDE	P V C
MAXIMUM	MAX.		



REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
REGIONAL OFFICE VII
SOUTHERN LEYTE 2ND DISTRICT ENGINEERING OFFICE
BAGUIO, SOUTHERN LEYTE

PROJECT NAME AND LOCATION
Convergence and Special Support Program -
Construction/ Rehabilitation of Water Supply/
Sewerage and Sewerage Rain Water
Collection/Construction (Completion) of Public
Water Supply System (Level II), Balingasay
Municipality, Sogod, Southern Leyte

SHEET CONTENTS
SYMBOLS AND
ABBREVIATIONS

DRAFTED
KENNETH M. BACALAN
DESIGNER
JANUARY 14, 2025
DATE
FEB 07 2025

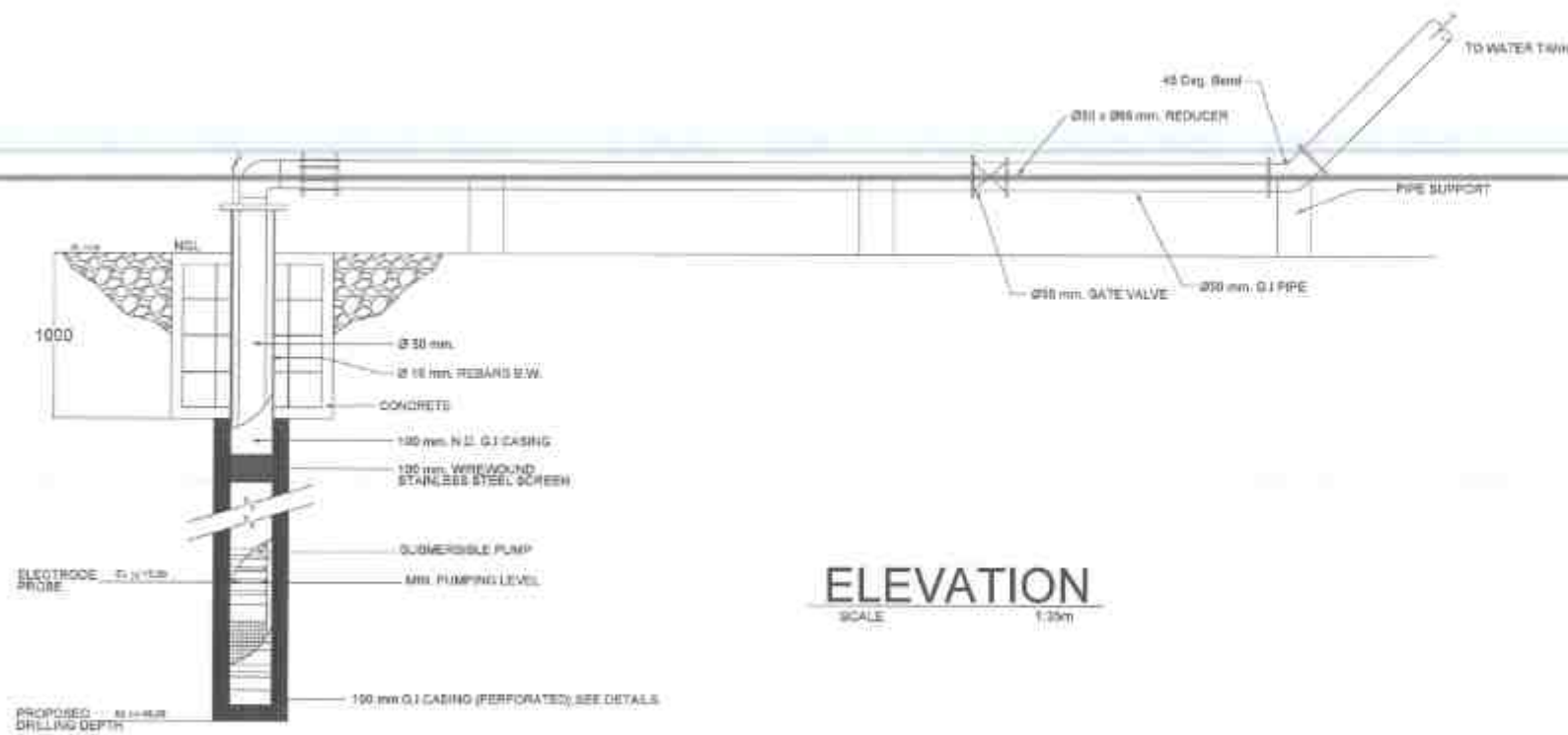
SUBMITTED
JOSE A. BALTAZAR
ENGINEER
DATE
FEB 11 2025

REVIEWED
RAINIER LOU C. RUIZ
CHECKED FOR CORRECTION AND DESIGN
DATE
FEB 13 2025

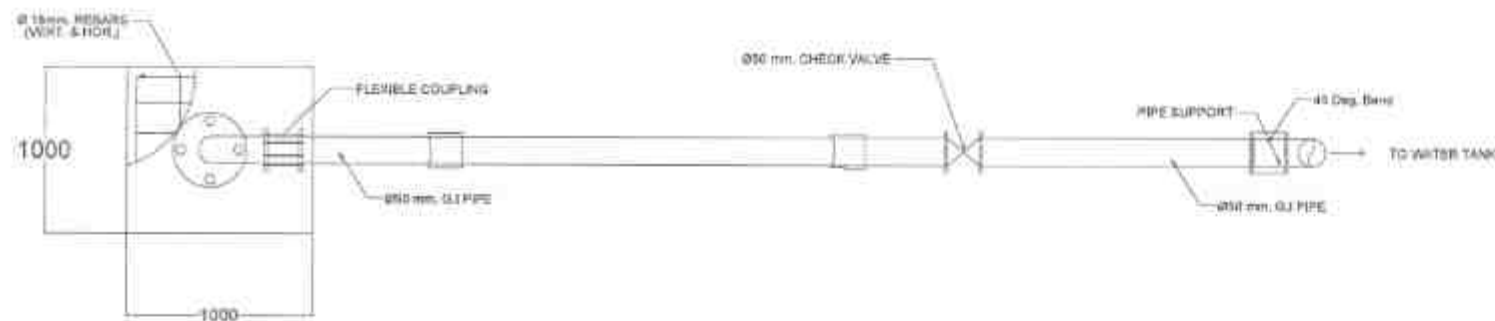
RECOMMENDED
EVELYN D. YAP
ASSISTANT DISTRICT ENGINEER
DATE
FEB 14 2025

APPROVED
EDUARDO V. SANTOS
DISTRICT ENGINEER
DATE
FEB 14 2025

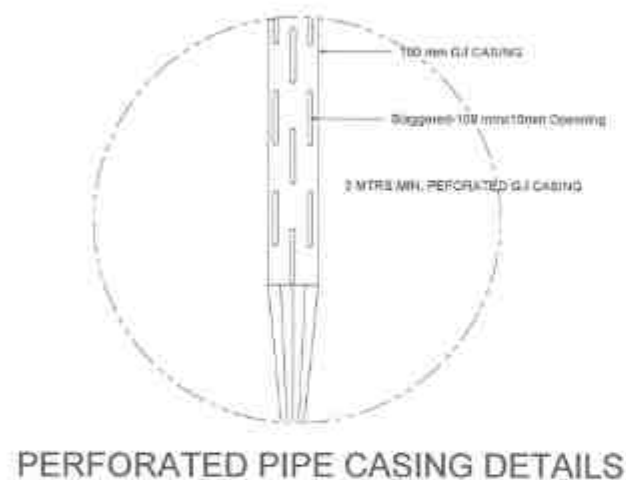
SHEET NO.
9
SHEET NO.
9
16



ELEVATION
SCALE 1:25m



PLAN
SCALE 1:35m



PERFORATED PIPE CASING DETAILS

1 SUBMERSIBLE PUMP DETAILS



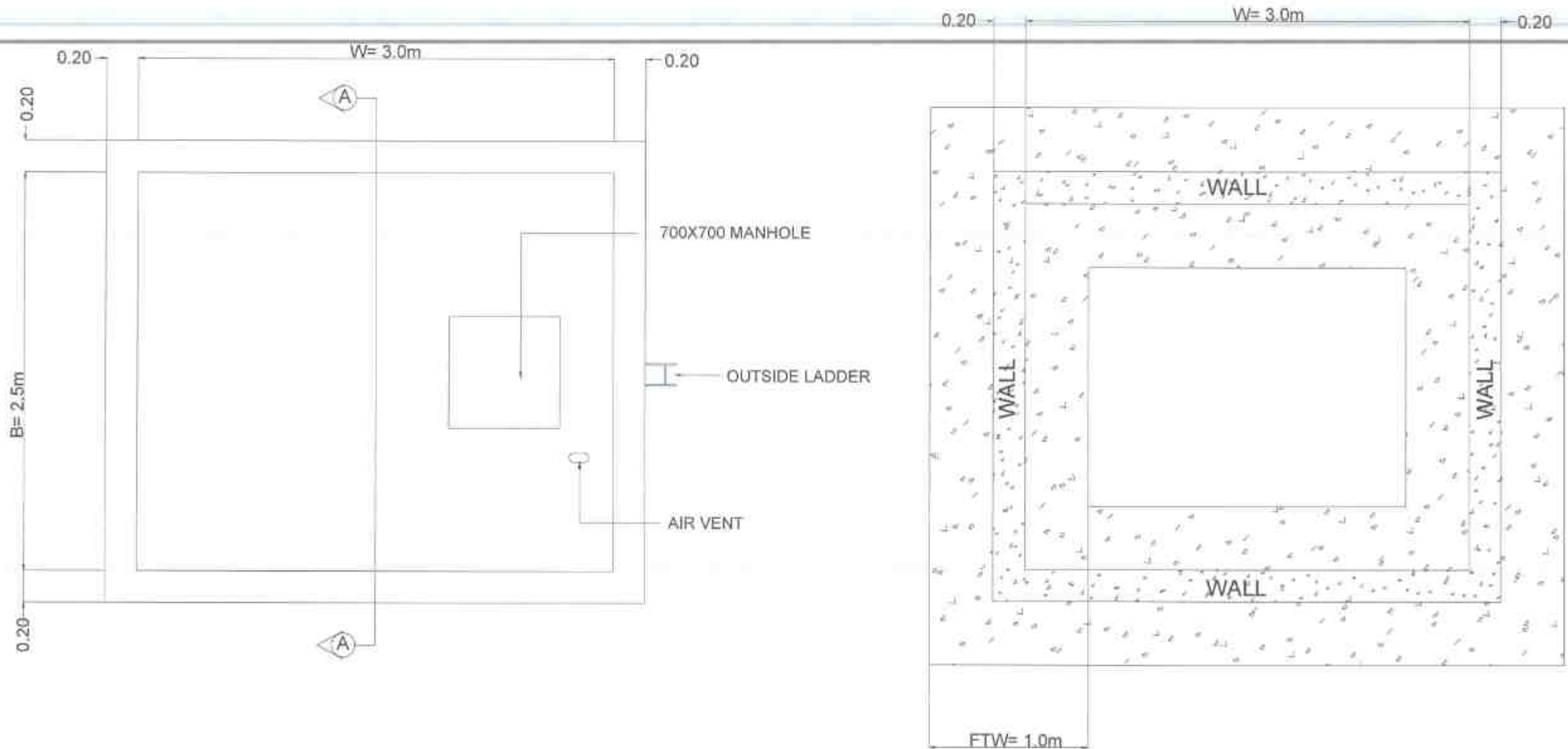
DETAIL A

DETAIL B



SCHEDULE OF EQUIPMENT

DESIGNATION	QTY	CAPACITY (GPM)	TYPE	TDH (FT)	SPEED (RPM)	MOTOR RATING			
						POWER (HP)	VOLTS	PHASE	HERTZ
PUMP	1	55-50	SUBMERSIBLE	60-80	3450	5	230	SINGLE	60



 **WATER TANK DETAILED PLAN**
SCALE 1 : 25 NTS



REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
REGIONAL OFFICE VII
SOUTHERN LEYTE 2ND DISTRICT ENGINEERING OFFICE
SOGOD, SOUTHERN LEYTE

PROJECT NAME AND LOCATION
Convergence and Special Support Program -
Construction/ Rehabilitation of Water Supply/
Sewage and Sewerage/ Rain Water
Collectors-Construction (Completion) of Public
Water Supply System (Level II) Barangay
Matheay, Sogod, Southern Leyte
SOGOD, SOUTHERN LEYTE

SHEET CONTENTS
WATER TANK DETAILED PLAN

DRAWN BY

WENDEL TORRES
ENGINEER
FEB 07 2025

PREPARED BY

JOSE A. BALTAZAR
ENGINEER
FEB 14 2025

REVIEWED BY

RAINIER LOU C. RUIZ
DISTRICT PLANNING AND RECORDS SECTION
FEB 14 2025

MODIFIED BY

EVELYNIA YAP
ASSISTANT DISTRICT ENGINEER
FEB 14 2025

APPROVED BY

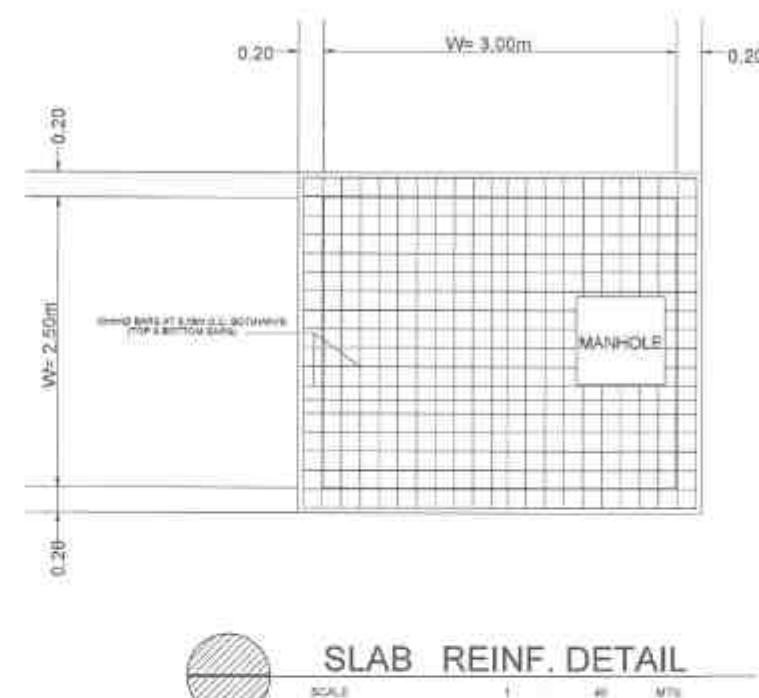
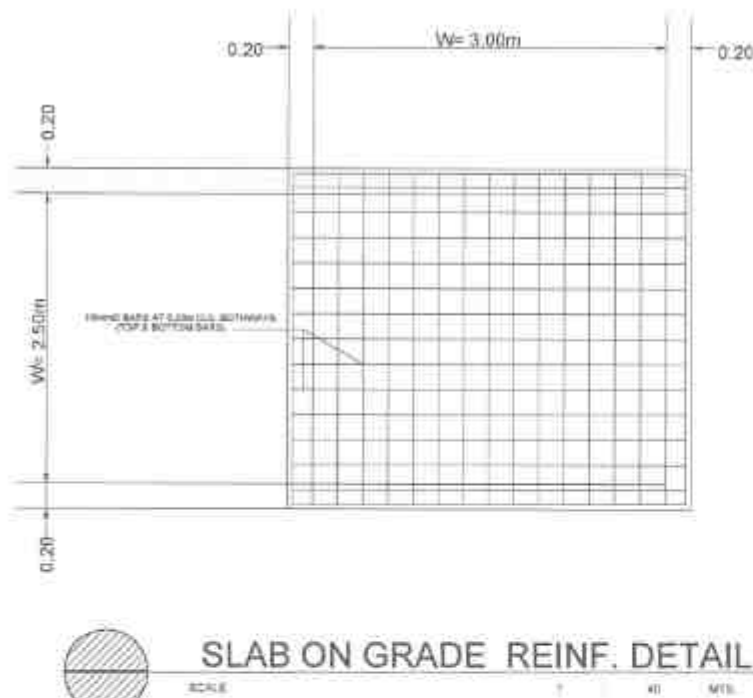
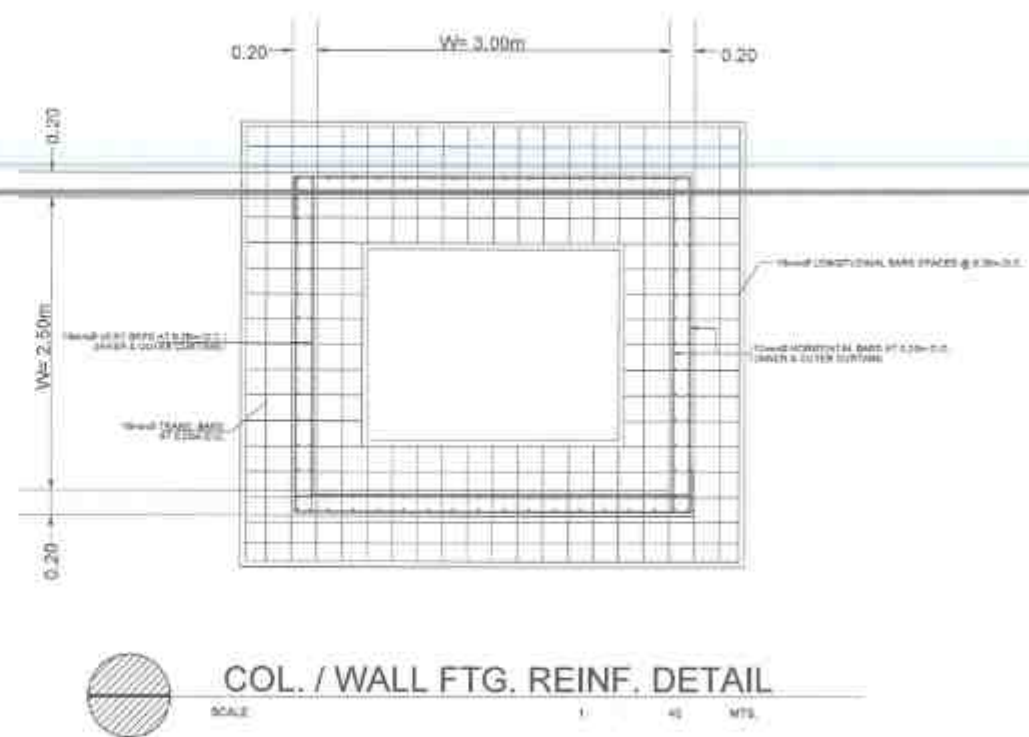
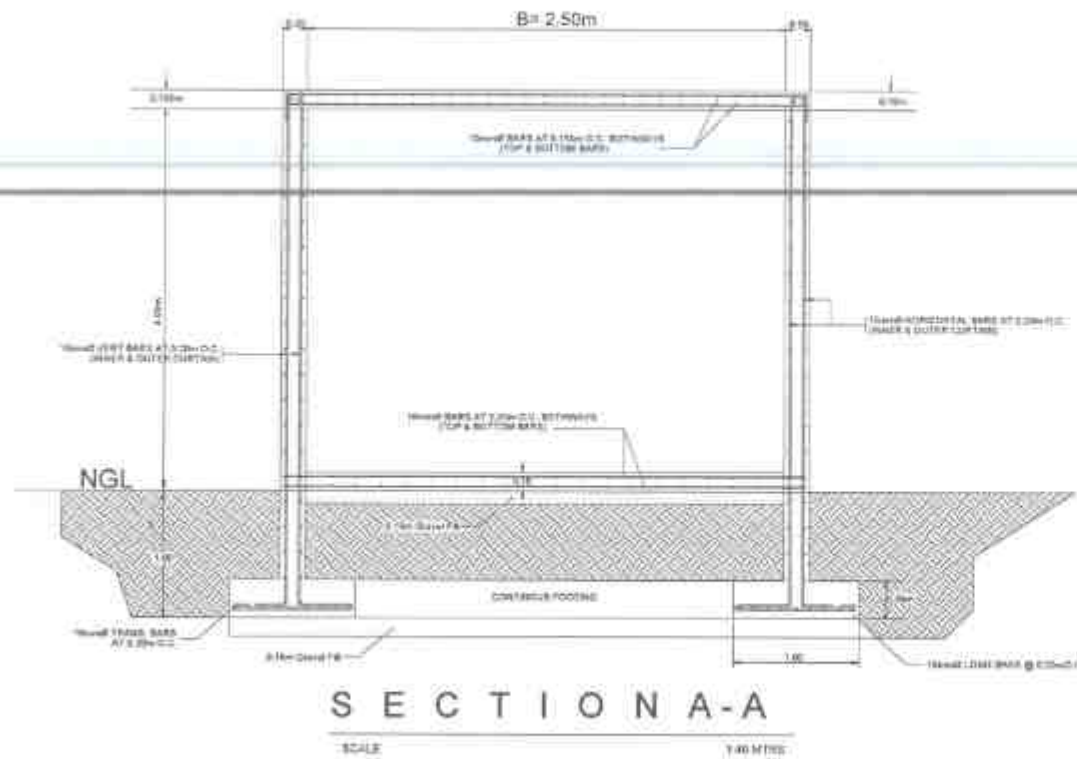
EDUARDO V. SANTOS
DISTRICT ENGINEER
FEB 14 2025

SET NO.

11

SHEET NO.

11
16



REPUBLIC OF THE PHILIPPINES
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
REGIONAL OFFICE VIII
SOUTHERN LEYTE DISTRICT ENGINEERING OFFICE
BODOO, SOUTHERN LEYTE

PROJECT NAME AND LOCATION
Convergence and Special Support Program -
Construction/ Rehabilitation of Water Supply
Bypass and Sewerage/Rain Water
Collectors-Construction (Completion) of Purok
Water Supply System (Level II), Barangay
Mahikay, Tugos, Southern Leyte
BODOO, SOUTHERN LEYTE

SHEET CONTENTS
WATER TANK REINFORCEMENT
DETAILS

DRAWN BY
KENNETH M. RAMONOR
DATE
FEB 07 2025

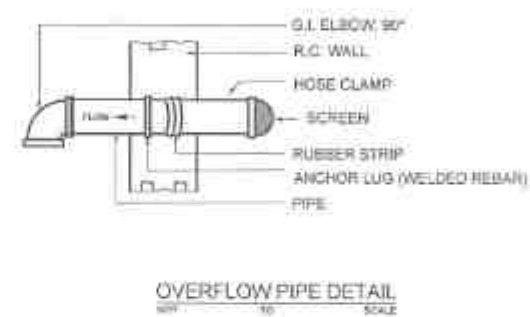
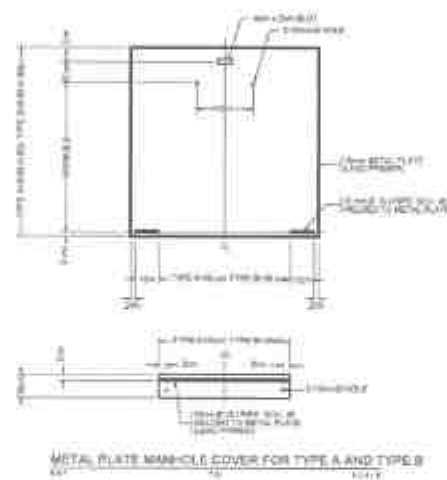
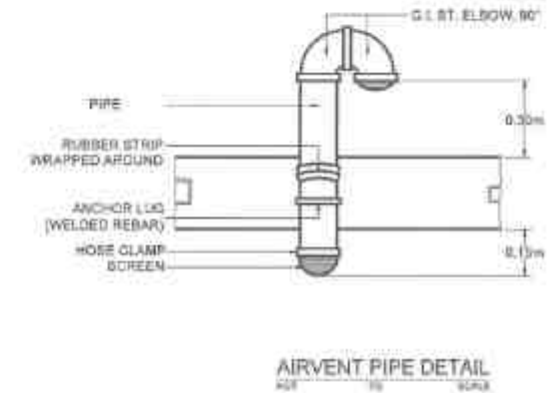
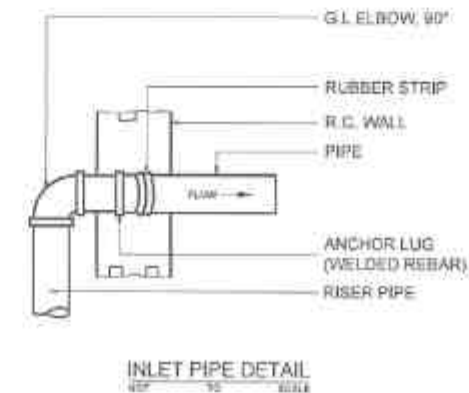
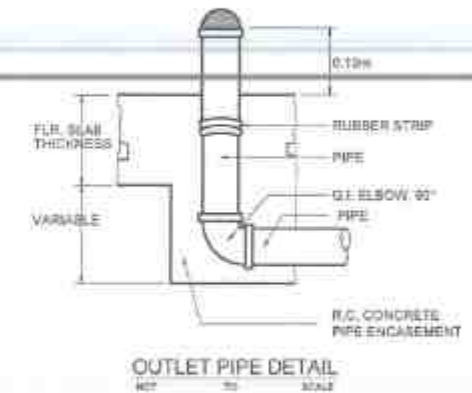
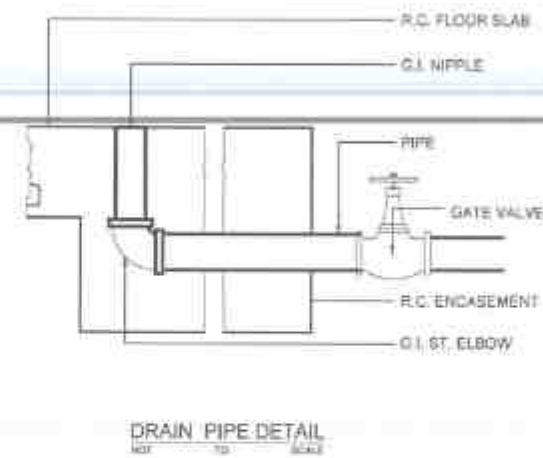
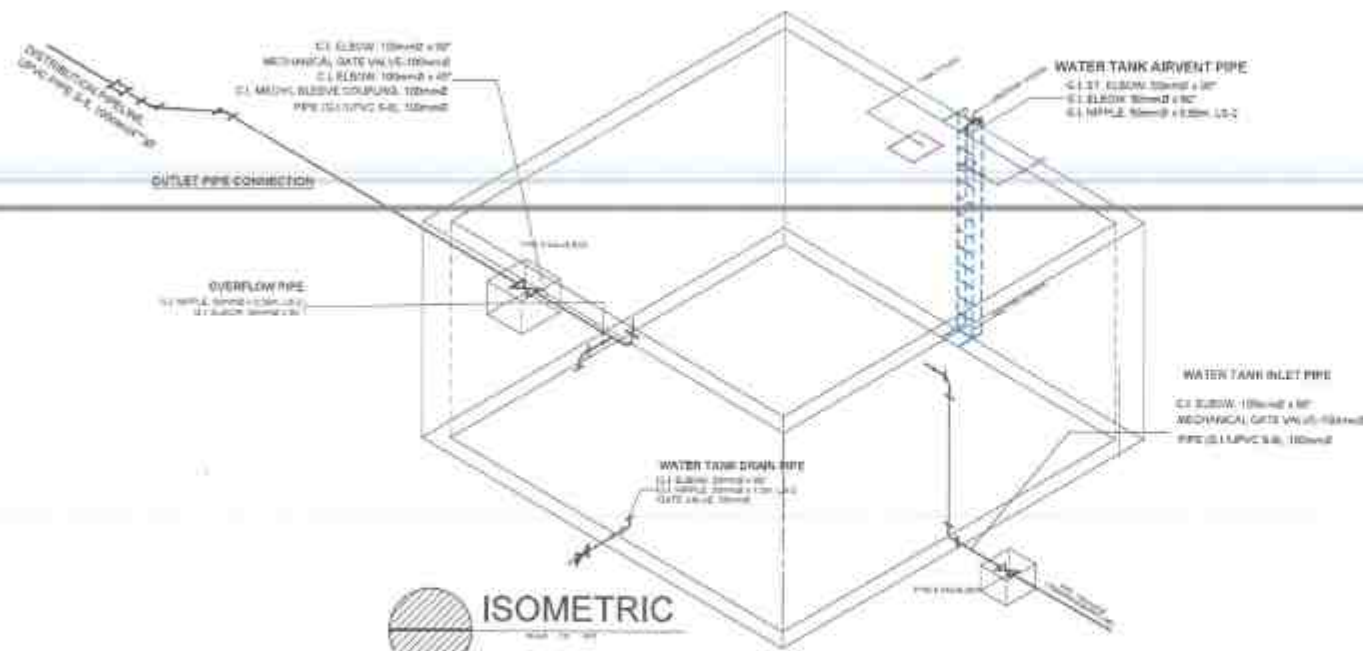
PREPARED BY
JENNIFER C. V. LEAO
DATE
FEB 10 2025

REVIEWED BY
JOSE A. BALTAZAR
DATE
FEB 10 2025

RECOMMENDED BY
EVELYN D. YAP
DATE
FEB 14 2025

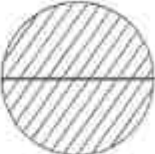
APPROVED BY
EDUARDO V. SANTOS
DATE
FEB 14 2025

SET NO. 12
SHEET NO. 12/16



NOTE: Installed welded to the vertical rebars with spacing at 0.50 m o.c. from groundlevel up to roof slab level both inside and outside.





PLAN

SCALE 1: 700 MTRS

CONCRETE WATER TANK DETAILS			
	WIDTH (m)	LENGTH(m)	HEIGHT (m)
WATER TANK	2.50	3.00	3.00



END OF PROJECT

N+1 148 348.728

E+485 753.577





SCALE

NOTS

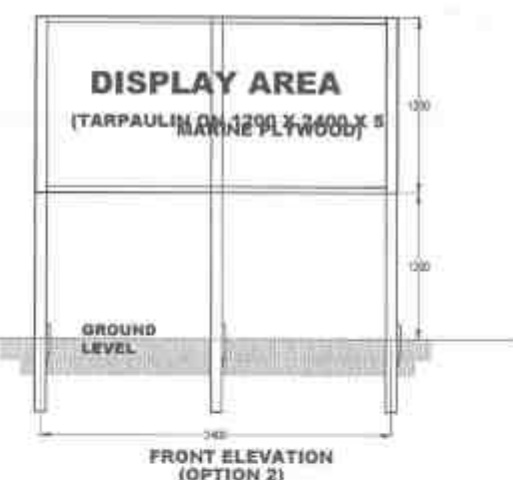
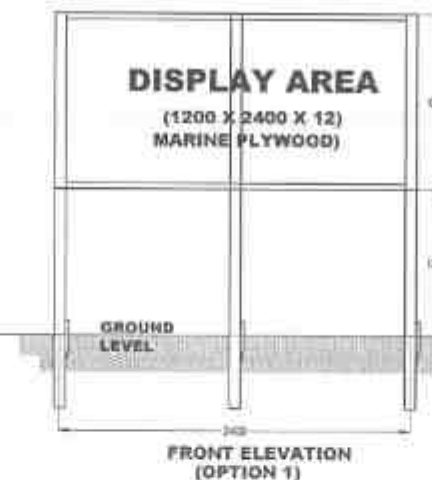
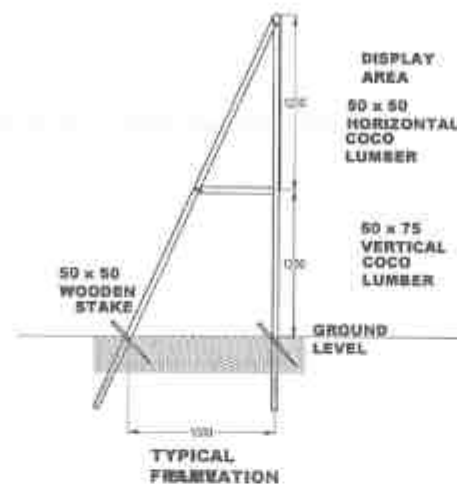
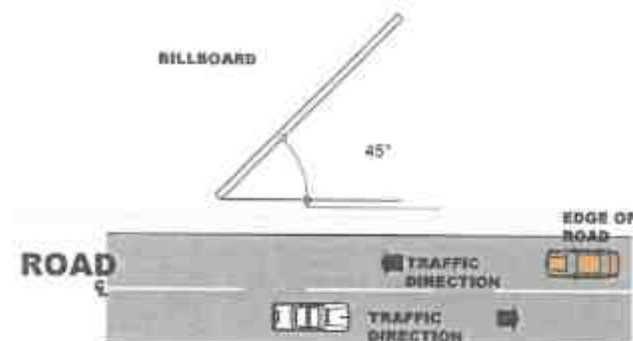
- LEGEND:
-  2" Ø DIAMETER PIPELINES (m)
 -  SOURCE/DRILLING
 -  WATER TANK


THIS IS WHERE YOUR TAXES GO

NAME OF PROJECT:
 LOCATION:
 NAME OF CONTRACTOR:
 DATE STARTED:
 CONTRACT COMPLETION DATE:
 CONTRACT COST:
 IMPLEMENTING OFFICE:
 SOURCE OF FUND:

Department of Public Works and Highways
 Text 2916 or Call (02) 165-02 for any concerns on this project
www.dpw.gov.ph

DPWH STANDARD PROJECT BILLBOARD



BILLBOARD FRAME

(NOT TO SCALE, ALL DIMENSIONS ARE IN MILLIMETERS)

NOTE:

D.O. 11, SERIES OF 2022 : AMENDMENT TO DEPARTMENT ORDER NO. 21 SERIES OF 2017 "REVISED GUIDELINES ON THE INSTALLATION OF PROJECT BILLBOARD"

REVISED GUIDELINES ON THE INSTALLATION OF PROJECT BILLBOARD (PER D.O. 21, S. 2017)

1. THE NEW 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 ($\frac{1}{8}$ inch) MARINE PLYWOOD.
2. ALL EXISTING BILLBOARDS OF ON-GOING PROJECTS SHALL BE REPLACED WITH 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 THE BEGINNING AND ONE AT THE END OF THE PROJECT.
5. FOR ROAD PROJECTS WITH LENGTH OF 10 KILOMETER INTERVAL 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.



REPUBLIC OF THE PHILIPPINES
 DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
 REGIONAL OFFICE VII
 SOUTHERN LEYTE 2ND DISTRICT ENGINEERING OFFICE
 BOGOD, SOUTHERN LEYTE

PROJECT NAME AND LOCATION
 Convergence and Local Support Program -
 Construction/ Rehabilitation of Water Supply
 Systems and Sewerage/Rain Water
 Collection/Construction (Completion of Public
 Water Supply System Level II), Barangay
 Matay, Bogod, Southern Leyte
 BOGOD, SOUTHERN LEYTE

SHEET CONTENTS
 DETAIL OF PROJECT BILLBOARD

DRAFTER
 HENRIETTA L. COMOR
 PREPARED BY
 JENNIFER C. VILLALBA
 DATE
 FEB 10 2025

SUBMITTED
 JOSE A. BALTAZAR
 DATE
 FEB 10 2025

REVIEWED
 RAIMELLO C. RUIZ
 DATE
 FEB 10 2025

RECOMMENDED
 EVELYN P. YAP
 DATE
 FEB 14 2025

APPROVED
 EDUARDO V. SANTOS
 DATE
 FEB 14 2025

SET NO.
 15
 SHEET NO.
 15
 16

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

[illegible]

COA STANDARD PROJECT BILLBOARD

	NOTICE TO THE PUBLIC	
	This is to inform that <u>(name of proponent)</u> has been issued with Certificate of Non-Coverage (CNC) No. <u> </u> by the DENR-Environmental Management Bureau R8 for the <u>(name of project)</u> Located at <u>(project location)</u>. Issued on <u> </u>.	

CNC BILLBOARD (4' x 8')