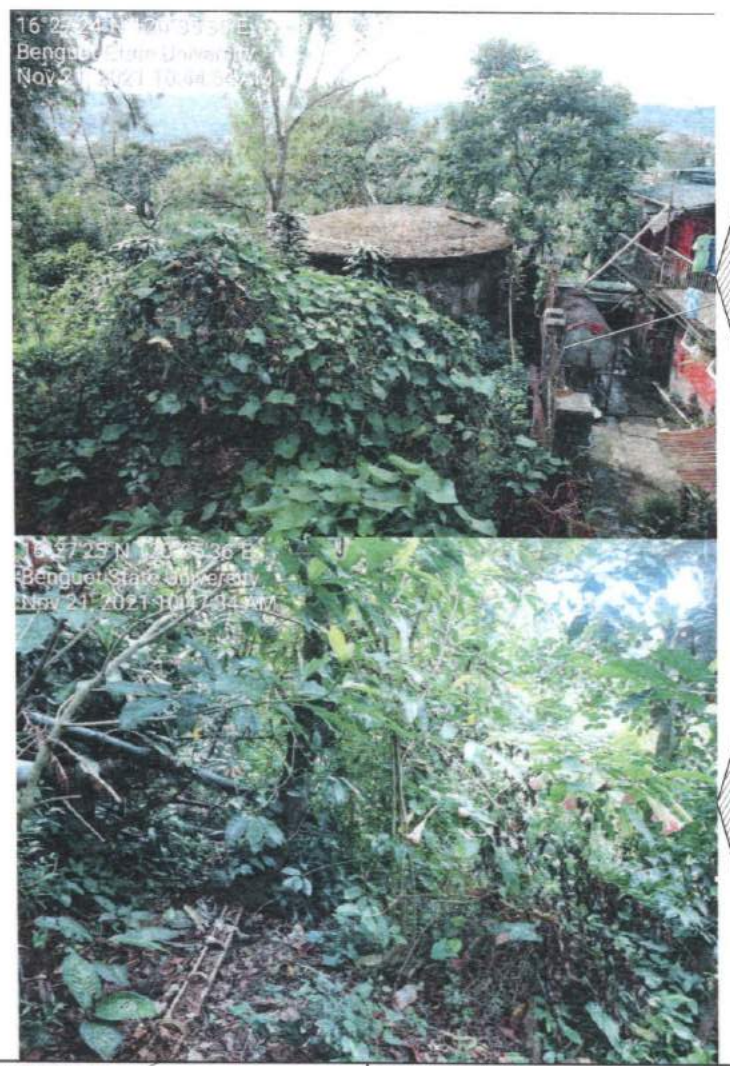


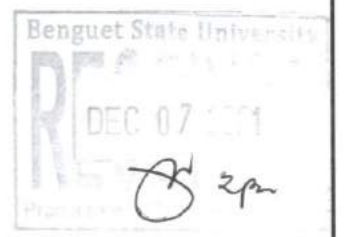
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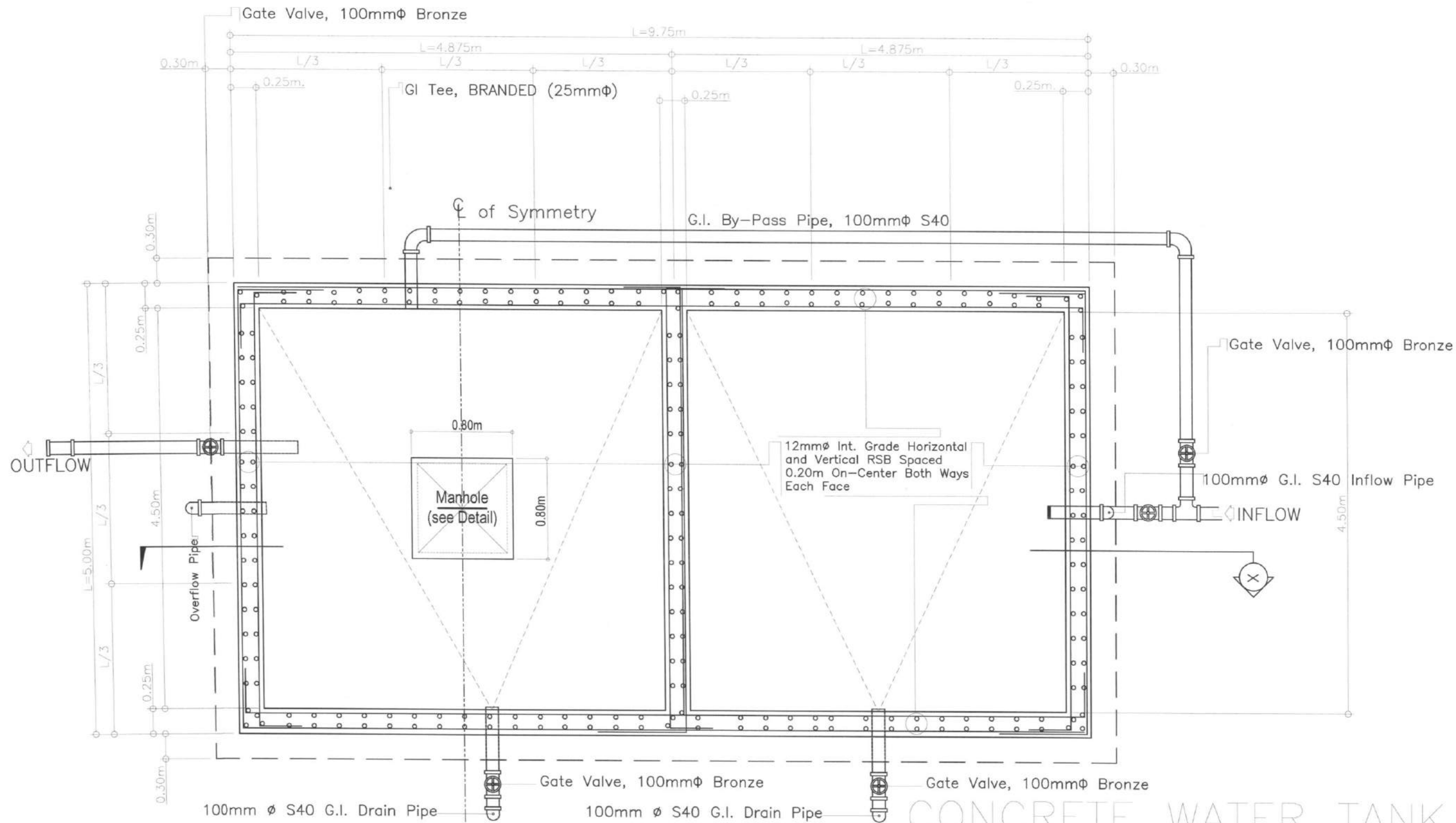
LOCATION OF EXISTING CONCRETE WATER TANK

NOTE: BEFORE THE START OF THE ACTUAL CONSTRUCTION, THE "AS-STAKED" PLAN SHOULD BE SUBMITTED TO THE BENGUET STATE UNIVERSITY PLANNING AND DEVELOPMENT OFFICE IN ORDER THAT IMMEDIATE STEPS MAY BE TAKEN TO CORRECT OR ADJUST WHATEVER APPRECIABLE DEVIATION THERE MAY BE FROM THE ORIGINAL PLAN.

PROPOSED NEW LOCATION OF THE CONCRETE WATER TANK



	<b>PROJECT TITLE / LOCATION:</b> REPAIR BSU WATER TANK AT TABANGAOEN, BALILI -BSU Compound, Tabangaoen, Balili, La Trinidad, Benguet	<b>SHEET CONTENT:</b> LOCATION MAP SITE DEVELOPMENT PLAN TABLE OF CONTENTS	<b>PREPARED BY:</b>  SHERIFF JOHN C. LA MADRID PROJECT DEVELOPMENT OFFICER	<b>SUBMITTED BY:</b>  MELVIN JOHN M. AROMIN DIRECTOR, PLANNING AND DEVELOPMENT OFFICE	<b>RECOMMENDED BY:</b>  ALLAN C. SACPA VICE PRESIDENT - ADMINISTRATION & FINANCE	<b>APPROVED:</b>  FELIPE SALANG COMILA UNIVERSITY PRESIDENT	<b>SHEET NO.:</b> 01 04
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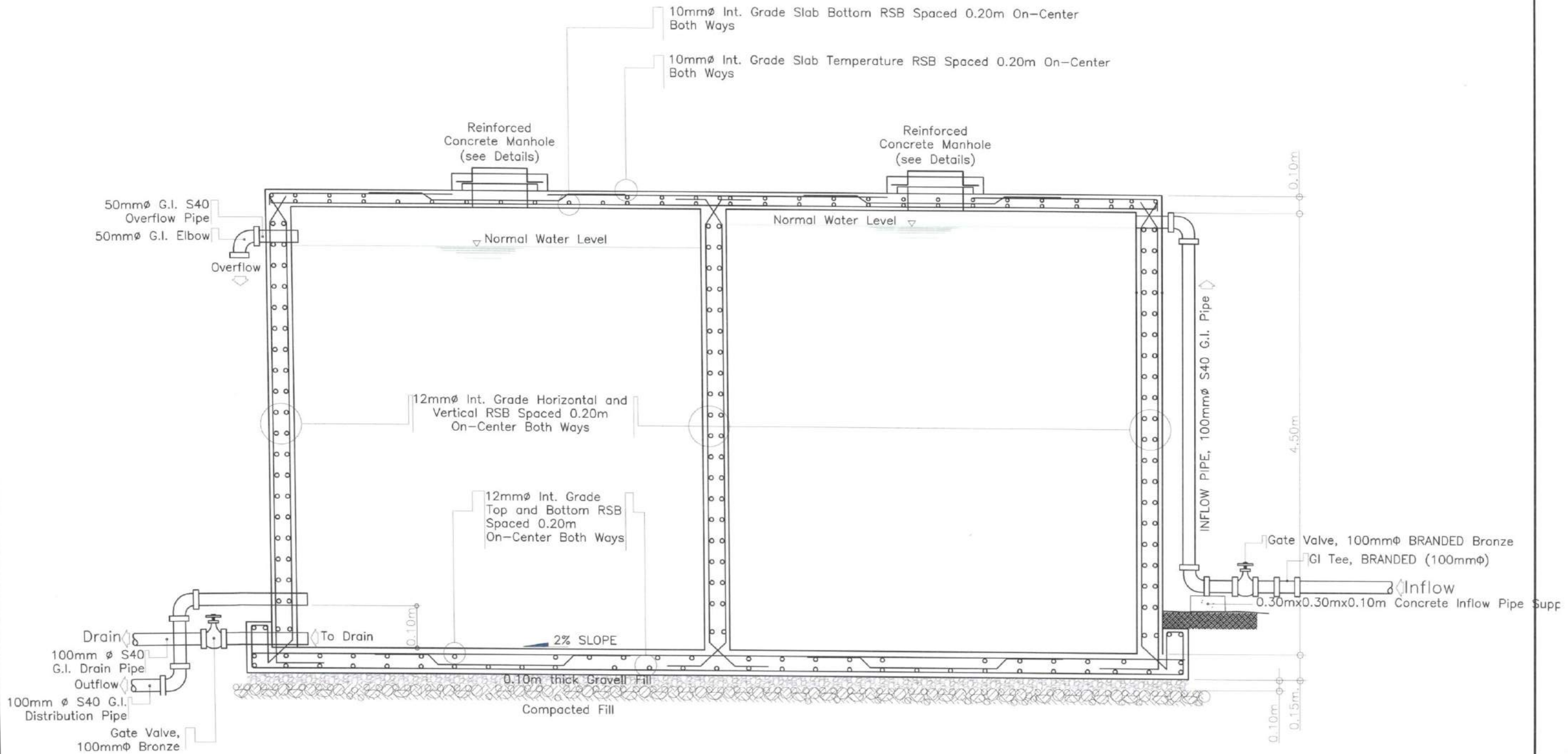
PLAN

# CONCRETE WATER TANK

SCALE: AS SHOWN

- NOTES IN THE CONSTRUCTION OF THE CONCRETE DISTRIBUTION TANK:
1. Splicing of RSB should not be applied on corners.
  2. Clear rebar covering at the external face portion of the wall is only 40 mm.
  3. Clear rebar covering at the internal face portion of the wall is 70 mm.
  4. Rebars should be arranged in such a way that all horizontal bars are external and vertical bars are internal.

 <p>REPUBLIC OF THE PHILIPPINES <b>BENGUET STATE UNIVERSITY</b> LA TRINIDAD, BENGUET, 2601</p>	<p>PROJECT TITLE / LOCATION: REPAIR BSU WATER TANK AT TABANGAOEN, BALILI -BSU Compound, Tabangaoen, Balili, La Trinidad, Benguet</p>	<p>SHEET CONTENT: CONCRETE WATER TANK DETAILS - PLAN</p>	<p>PREPARED BY:  SHERIFF JOHN C. LA MADRID PROJECT DEVELOPMENT OFFICER</p>	<p>SUBMITTED BY:  MELVIN JOHN M. AROMIN DIRECTOR, PLANNING AND DEVELOPMENT OFFICE</p>	<p>RECOMMENDED BY:  ALLAN C. SACPA VICE PRESIDENT - ADMINISTRATION &amp; FINANCE</p>	<p>APPROVED:  FELIPE SALAING COMILA UNIVERSITY PRESIDENT</p>	<p>SHEET NO.: 02 04</p>
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@ SECTION "X-X"  
ELEVATION

# CONCRETE WATER TANK

SCALE:

AS SHOWN



PROJECT TITLE / LOCATION:  
REPAIR BSU WATER TANK AT  
TABANGAOEN, BALILI  
-BSU Compound, Tabangaoen,  
Balili, La Trinidad, Benguet

SHEET CONTENT:  
CONCRETE WATER TANK DETAILS  
- ELEVATION

PREPARED BY:  
  
SHERIFF JOHN C. LA MADRID  
PROJECT DEVELOPMENT OFFICER

SUBMITTED BY:  
  
MELVIN JOHN M. AROMIN  
DIRECTOR, PLANNING AND DEVELOPMENT OFFICE

RECOMMENDED BY:  
  
ALLAN C. SACPA  
VICE PRESIDENT - ADMINISTRATION & FINANCE

APPROVED:  
  
FELIPE SALAING COMILA  
UNIVERSITY PRESIDENT

SHEET NO.:

03  
04

# GENERAL NOTES

## I. STANDARD SPECIFICATIONS

a) ALL WORKS SHALL COMPLY WITH DPWH STANDARD SPECIFICATIONS FOR HIGHWAYS, BRIDGES, AND AIRPORTS, REVISED 2013, SPECIAL PROVISIONS AND SUPPLEMENTAL SPECIFICATIONS PERTAINING TO THE PROJECT.

## II. DIMENSIONS

a) UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS AS SHOWN IN THE PLAN, PROFILE, AND CROSS-SECTION ARE IN METERS, AND THE UNIT OF MEASURE AS SHOWN IN THE DETAILS OF STRUCTURES ARE IN METERS.

## III. STRUCTURAL CONCRETE STRUCTURES

a) UNLESS OTHERWISE INDICATED ON THE PLANS, THE MINIMUM CYLINDER STRENGTH OF STRUCTURAL CONCRETE @ 28 DAYS SHALL BE 3000PSI or 21.00 MPa.

b) THE MINIMUM COVERING FROM SURFACE OF CONCRETE TO THE FACE OF THE NEAREST BAR SHALL BE 40mm. ALL CONCRETE SHALL BE POURED WHERE THERE IS A PERMISSIBLE WEATHER CONDITION AND NO OTHER ENVIRONMENTAL HAZARD WILL AFFECT THE POURING.

## REINFORCING STEEL

a) REINFORCING BARS FOR ALL STRUCTURES SHALL BE GRADE 33 ( $F_y=228$  MPa). ALL REBARS SHALL BE FREE OF MILL SCALES, OIL OR ANY SUBSTANCE THAT MAY IMPAIR/WEAKEN BOND WITH CONCRETE.

## b) REINFORCING BAR SPLICING

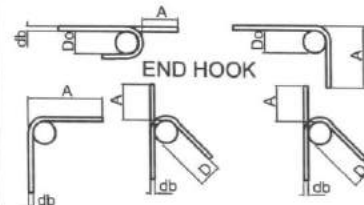
WHERE SPLICING IS PERMITTED, THE MINIMUM LAP LENGTH OF BARS SHALL BE AS PER AASHTO ARTICLE 8.32. ALL SPLICES SHALL BE STAGGERED AT LEAST 40 BAR DIAMETER. WHERE BUTT WELD IS USED IN LIEU OF LAPPED CONNECTIONS, THIS SHALL DEVELOP AT LEAST 125 % OF THE SPECIFIED YIELD STRENGTH OF THE REINFORCING STEEL BAR. REINFORCING BARS SHALL BE ACCURATELY FORMED TO THE SHAPES AND DIMENSIONS INDICATED ON THE PLAN UNLESS OTHERWISE PERMITTED, ALL REINFORCING BARS REQUIRING BENDING SHALL BE BENT COLD. WHEN REINFORCING BARS ARE BENT BY HEATING, THE ENTIRE OPERATION SHALL BE APPROVED BY THE ENGINEER.

## a) HOOKS AND BENDS

HOOKS AND BENDS SHALL BE AS SHOWN IN THE FOLLOWING TABLE

TABLE FOR VALUES OF A OR G

SIZE OF BARS	END HOOKS		STIRRUP & TIE		STIRRUP TIE
	180°	90°	90°	135°	135°
10	125	150	100	100	125
12	150	200	113	113	163
16	175	250	150	138	200



STIRRUP & TIE HOOK STIRRUP - TIE  
 $D_o = 6 db$  for  $db < 30$   $D = 4 db$  for  $db < 20$   
 $D_o = 8.7 db$  for  $db > 30$   $D = 6 db$  for  $db > 30$

## XI. SLOPE/EMBANKMENT PROTECTION WORKS (GROUTED RIPRAP/STONE MASONRY)

a) FOUNDATION OF EMBANKMENT PROTECTION WORKS SHALL SIT ON A FIRM AND STABLE FOUNDATION. SOIL BORING TEST SHALL BE CONDUCTED DURING CONSTRUCTION TO VERIFY THE ACTUAL SOIL BEARING CAPACITY OF SOIL. SOFT SPOTS UNDER THE FOUNDATION SHALL BE REMOVED AND REPLACED WITH SUITABLE BEDDING MATERIALS OR CONCRETE CLASS "B".

b) SOFT SPOTS BETWEEN THE CUT FACE AND SLOPE/EMBANKMENT PROTECTION WALLS MUST BE FILLED WITH ROCKS OR SUITABLE MATERIALS. SUCH BACKFILL MATERIALS PLACED BEHIND THE WALL SHALL BE FREE DRAINING, NON EXPANSIVE AND WATER SHALL BE DRAINED BY WEEPHOLES PLACED AT SUITABLE INTERVALS AND ELEVATIONS.

c) THE DEPTH OF PENETRATION SHALL BE MEASURED FROM THE LEVEL OF THE ORIGINAL GROUND SURFACE AND SHALL NOT INCLUDE EXCAVATED MATERIALS.

d) THE THICKNESS OR DIAMETER OF STONES FOR STONE MASONRY SHALL NOT BE LESS THAN 150MM.

## XII. BATAS PAMBANSA BLG. 344 (ACCESSIBILITY LAW)

IN ACCORDANCE TO BATAS PAMBANSA BLG. 344, ACCESSIBILITY FOR THE DISABLED PERSON SHALL BE PROVIDED AT THE DESIGNATED PLACED IN BUILT-UP AREAS ALONG THE PROJECT ROAD, THE IMPLEMENTING OFFICE SHALL IDENTIFY THE LOCATIONS OF AND PROVIDE ACCESSIBILITY FACILITIES FOR PERSONS WITH DISABILITY AND ACCORDANCE WITH D.O. 37 SERIES OF 2009.

## REINFORCED CONCRETE MANHOLE COVER



 REPUBLIC OF THE PHILIPPINES <b>BENQUET STATE UNIVERSITY</b> LA TRINIDAD, BENQUET, 2601	PROJECT TITLE / LOCATION: REPAIR BSU WATER TANK AT TABANGAOEN, BALILI -BSU Compound, Tabangaoen, Balili, La Trinidad, Benguet	SHEET CONTENT: GENERAL NOTES	PREPARED BY:  SHERIFF JOHN C. LA MADRID PROJECT DEVELOPMENT OFFICER	SUBMITTED BY:  MELVIN JOHN M. AROMIN DIRECTOR, PLANNING AND DEVELOPMENT OFFICE	RECOMMENDED BY:  ALLAN C. SACPA VICE PRESIDENT - ADMINISTRATION & FINANCE	APPROVED:  FELIPE SALAING COMILA UNIVERSITY PRESIDENT	SHEET NO.: 04 04
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