



Republic of the Philippines
BANGSAMORO AUTONOMOUS REGION IN MUSLIM MINDANAO
OFFICE OF THE CHIEF MINISTER
BIDS AND AWARDS COMMITTEE

Bangsamoro Government Center, Governor Gutierrez Avenue, Rosary Heights VII, Cotabato City 9600

**IN RE: COMPETITIVE PUBLIC BIDDING FOR THE
CONSTRUCTION OF LEVEL II WATER SYSTEM
IN BRGY. OLANDANG, KUDARANGAN, &
KADINGASAN, MIDSAYAP CLUSTER 2, SPECIAL
GEOGRAPHIC AREA**

ABC: PHP 20,000,000.00

IB NO.: SDF-2024-06-002

SUPPLEMENTAL BID BULLETIN NO. SDF-2024-06-002

June 24, 2024/ Dhul-Hijjah 18, 1446 AH

Please be advised of the following clarifications and Modifications on the Bidding Documents:

SUBJECT	ORIGINAL			AMENDED		
1. List of Key Personnel (<i>Bid Data Sheet Clause 10.4</i>)	Key Personnel	General Experience	Minimum Relevant Experience	Key Personnel	General Experience	Minimum Relevant Experience
	1 Project Engineer	Construction	5 years	1 Project Engineer	Construction	5 years
	1 Safety Officer	Construction	3 years	1 Safety Officer	Construction	3 years
	1 Materials Engineer	Material Testing	3 years	<u>1 Materials Engineer</u>	<u>Quality Assurance</u>	<u>3 years</u>
	1 Construction Foreman	Supervision	5 years	1 Construction Foreman	Supervision	5 years
	1 Health Personnel	Construction Safety and Health	1 year	1 Health Personnel	Construction Safety and Health	1 year
				<u>1 Master Plumber</u>	<u>Construction</u>	<u>1 year</u>

2. Major Equipment Requirement (<i>Bid data Sheet Clause 10.5</i>)	Equipment	Minimum Specifications	Minimum Number of Units	Equipment	Minimum Specifications	Minimum Number of Units
	Bar Cutter	25 mm. max single phase	1	Bar Cutter	25 mm. max single phase	1
	One Bagger Mixer	4-6 cu.ft/min	1	One Bagger Mixer	4-6 cu.ft/min	1
	Bar Bender	25 mm max., three phase	1	Bar Bender	25 mm max., three phase	1
	Cutting Outfit	-	1	Cutting Outfit	-	1
	Plate Compactor	400-500 gasoline engine, 5 hp	1	Plate Compactor	400-500 gasoline engine, 5 hp	1
	Dump Truck	12 cu. yd.	<u>1</u>	Dump Truck	12 cu. yd.	2
	Backhoe	0.80 cu. m./ 1.04 cu. yd., 138 hp	1	Backhoe	0.80 cu. m./ 1.04 cu. yd., 138 hp	1
	Water Pump	16,000L	1	Water Pump	16,000L	1
	Concrete Vibrator	fst 2" head dia., 5A gdu	1	Concrete Vibrator	fst 2" head dia., 5A gdu	1
	3. Section VI. Specifications	<u>See Annex "A"</u>				
4. Section VII. Drawings	<u>See Annex "B"</u>					

This Supplemental/Bid Bulletin is issued to modify or amend the corresponding items in the Bidding Documents.

For guidance and information of all concerned.

Signed

MOHD ASNIN K. PENDATUN

Chairperson, Special Bids and Awards Committee

ANNEX “A”

Revised Technical Specifications

INTRODUCTION

The Drawings and Specifications are complementary to each other. Drawings are graphic means of showing work to be done. They are particularly suited to showing where materials are located. Thus, drawings exist essentially to show dimension, location, and placement. Not all works, however, can be presented in the drawings. Generalized works are usually statement form and hence, the contractor is required to read the specifications carefully.

Specifications, on the other hand, are used to describe the materials, construction techniques, samples, shop drawings, guarantees, and other contract requirements. Together, the drawings and the specifications are used to inform the contractor. In cases where the specified brand carries with it the manufacturer’s specifications, the manufacturer’s specifications shall hold precedence over these specifications.

The Specifications are of the abbreviated type and include incomplete sentences. The selection of the sentence depends on the underlying principles of Specifications:

1. That the Technical Specifications are only one part of the Contract Documents.
2. That the Contract is between the Procuring Entity and the General Contractor and
3. That the General Contractor is the only party responsible for completing the work in accordance with the Contract Documents.

Therefore:

1. Only the General Contractor is referred to in the Specifications so as not to violate the intent of the contract and so as not to undermine the proper chain of command.
2. Any reference to Specialty Trade Contractors in the technical Specifications is made only in so far as the selection of Specialty Trade Contractors is made through bidding. Once the Specialty Trade Contractors are selected and assigned to the General Contractor, the General Contractor assumes all the responsibilities for the execution of the whole project in accordance with the Contract Documents. Therefore, in the contract between the Owner and the General Contractor, the Specialty Trade Contractor is not referred to. In all contract Documents, the word “Contractor” means the General Contractor.
4. The omission of the phrase “The Contractor shall” is intentional because the whole Specification is directed to the Contractor. Omitted words or phrases shall be supplied by inference in the same manner as they are when a “note” occurs on the drawings.
5. Where “as shown”, “as indicated”, “as detailed” or words of similar import are used, it shall be understood that reference to the drawings accompanying the Specifications is made unless otherwise stated.
6. Where “as directed“, “as required”, “as permitted”, “as authorized”, “as approved, accepted” or words of similar import as used, it shall be understood that the direction,

requirements, permission, authorization, approval or acceptance of the Architect is intended unless otherwise stated.

7. As used herein, “provided” shall be understood to mean “provided complete in place,” that is, “furnished and installed”.
8. Most sentences are in the imperative mood. This style is especially suited for instructions covering the installation of products and equipment.

CLARIFICATIONS

All reference to any brand, material, equipment, or systems in the Specifications, plans, and bid documents is indicative of the type and quality of what is required. However, any equal material, equipment, or system can be used.

The list of items of work provided in the scope of works does not in any way limit the responsibility of the Contractor to perform all other works necessary for the completion of the

A. GENERAL CONDITIONS DESCRIPTION OF THE PROJECT

Complete all works for the Construction of Level II Water System at Brgy. Olandang, Kudarangan, and Kadingasan, Midsayap Cluster 2, SGA, including supply of all materials, equipment, and systems, as well as the performance of all necessary labor and processes, in accordance with the plans, specifications, Bidding Documents, and other related contract documents.

The contractor is not limited to the scope of works listed. They should verify all plans and actual conditions for the necessity of work. If the actual situation calls for demolition, removal, and relocation, he shall include such and all concomitant works to finish as part of the scope of work.

Any discrepancies found between the drawings and specifications and the site conditions or any errors or omissions in the drawings or specifications should be clarified with the Engineer from the Procuring entity.

Should the contractor fail to verify or clarify discrepancies, errors, conflicts, or omissions in the drawings and specifications, it shall be deemed that the contractor has included in the preparation of his bid the necessary works, materials, or items needed to satisfy the general scope of works.

B. SCOPE OF WORKS:

Enumerated below are some of the works expected from the contractor. Therefore, the scope is not limited to what has only been written below, some works are implied and expected. The objective of the project must be met by the implementing contractor before the project may be turned over to the OCM-ISS.

1. Permits and Clearances

- a. Secure and pay all permits (application and obtaining of Building Permit and all other implied permits needed, Fire Clearance, and Certificate of Occupancy, if applicable), fees, licenses, taxes, tests, etc. necessary for the execution of the general construction works.

- b. Prepare a monthly progress report which shall include an overall progress chart based on actual physical accomplishment of construction work and a progress chart based on actual value of accomplished construction work, among others.
- c. Miscellaneous Fees (Notary, Blueprint, processing requirements, and other fees)

2. Mobilization and Temporary Facilities

- a. Mobilization of all necessary personnel, labor, tools, facilities, and equipment to commence work on the project.
- b. Setting up of Temporary Facilities within the site.
- c. Preparation of logistics of contractor's equipment.
- d. Setting up of necessary water and power lines required for the Project.
- e. Provision of security and safety measures for the protection of the general public during construction work.
- f. Setting up any safety measure equipment or temporary structures such as bunk houses, tarps, signs, etc.

3. Concrete/Masonry Works

- a. Concreting of canals, catch basins, riprap, and other structures as specified in the plans.
- b. Provision of reinforcing bars for canals, catch basins, and other structures as specified in the plans.
- c. Provision of formworks for all concrete works
- d. Laying of CHB, and mortar and filler, as specified in the plans and specifications

4. Electrical Works

- a. Provide labor, materials, tools, machinery, equipment, and services necessary to complete the Electrical Work under the Contract. All systems and equipment shall be complete in every aspect and all items of material, equipment shall be provided for a fully operational system and ready for use. Coordinate the work with the work of the other trades in order to resolve all conflicts without impeding the job progress.
- b. Provide all materials, and equipment and perform all the work necessary for the complete execution of all the Electrical and Auxiliary Works as shown in the Drawings and Specifications, as herein specified or both except as otherwise excluded, and which, without excluding generality of the foregoing shall include but not limited to the following principal items of work:
 - 1. Electrical demolition for remodeling.
 - 2. Supply and installation of electrical wiring, conduit, raceway system, including necessary hanger/supports.
 - 3. Supply and installation of lighting fixtures/luminaries.
 - 4. Supply and installation of complete electrical and auxiliary wiring devices.
 - 5. Testing of all installations.
 - 6. Painting of electrical equipment, boxes, enclosures, metal conduits, and hangers/supports.

7. Sample Approvals.

- c. All materials and supplies shall be new and shall conform to the provisions of the latest editions of the following standards:
 1. Underwriters Laboratories, Inc. (UL)
 2. National Electrical Manufacturer's Association (NEMA)
 3. Philippine Electrical Code (PEC)
- d. All materials on all systems shall comply with the following specifications unless specifically exempted, and all materials that were not specified shall be of the best of their respective kind. All electrical equipment, appliances, fixtures, and devices shall be the latest of the current year in design, material, and workmanship, and shall be the type or model called for in these Specifications. Samples of any material shall be submitted for approval as required by the Engineers prior to purchase and installation.

5. Pipeline Works

- a. Supply, delivery, and installation of materials for the Pipeline Works as specified in the plans.

6. Pumping Works

- a. Supply, delivery, and installation of materials for the Pumping Works as specified in the plans.

7. Supply, Delivery, and Installation of Special Fixtures

- a. Supply, delivery, and installation of materials for special fixtures such as but not limited to solar LED lights as specified in the plans.

8. Conduct of Survey and Testing

- a. This includes the conduct of a geo-resistivity survey and a spring field capacity testing.

9. Demobilization

- a. Demobilize, dismantle and remove all temporary facilities, including all workmen's houses, construction equipment, tools, personnel and debris out of the project site and premise
- b. Cleaning of the building and site to a spic and span state, ready for use.
- c. Restoration of all possible damaged facilities during the renovation phase.

C. OTHERS








- The Contractor must have a Project Engineer who will supervise the project onsite. The Contractor shall inform SDF-PMO in case of replacement/changes of personnel assigned at the project site. The replacement must have relevant qualifications and abilities equal to or better than those of the personnel as evidenced by his/her training certification to be submitted to SDF-PMO.
- Demolitions and repairs due to the Contractor's fault shall be done by the Contractor without extra compensation to the Owner.


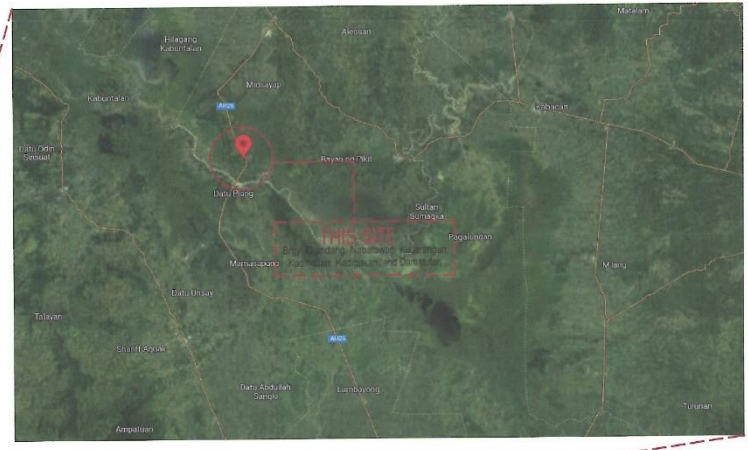





- As soon as the project is satisfactorily inspected and it conforms to the plans and specifications, the contractor shall submit to the procuring entity a written notice that said project is completed and is subject to the latter's approval.
- Five copies of As-Built Plan must be submitted not later than 7 days after project completion.

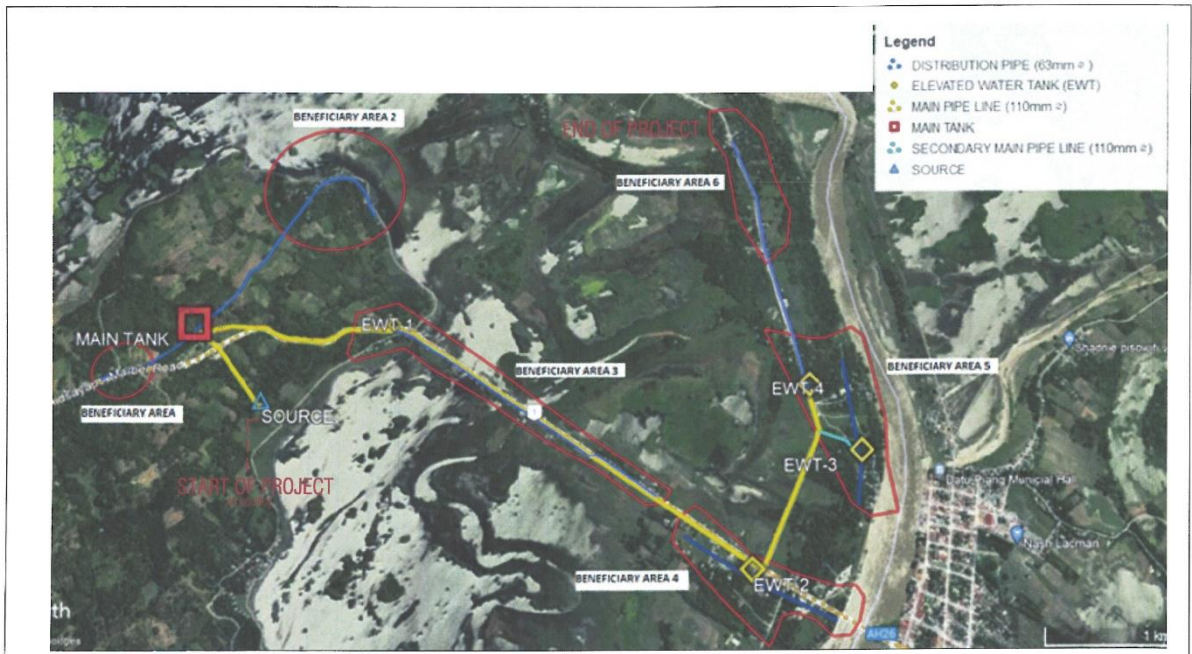
D. SPECIFICATIONS

All drawings, small scale, and detail drawings are intended to collaborate with the specifications and to form part thereof, where figures are given, they are to be followed in preference to measurement by scale. Anything shown in the drawings and not mentioned in the specifications or vice-versa, or anything not expressly outlined in either, but which is reasonably implied shall be furnished and installed as though specifically shown in mentioned both.

Annex "B"

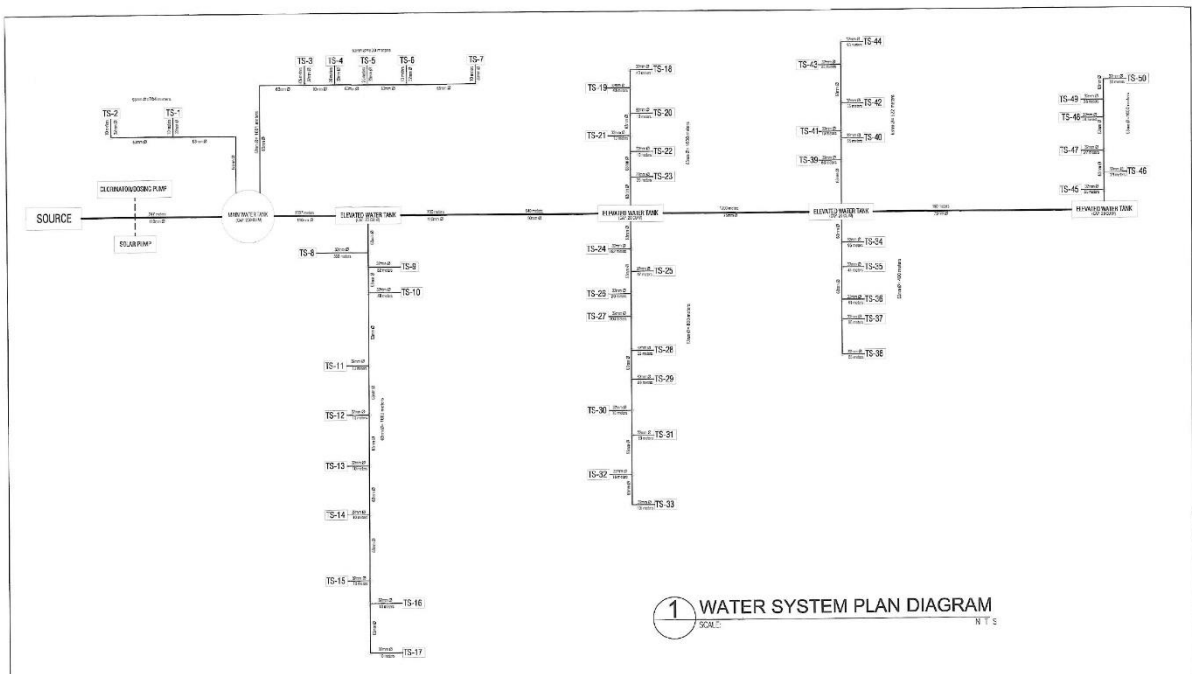
 <p style="text-align: center;"> REPUBLIC OF THE PHILIPPINES BANGSAMORO AUTONOMOUS REGION IN MUSLIM MINDANAO SPECIAL DEVELOPMENT FUND - PROJECT MANAGEMENT OFFICE BANGSAMORO GOVERNMENT CENTER, COTABATO CITY </p> 	<p style="font-size: 1.2em; font-weight: bold;">CONSTRUCTION OF LEVEL II WATER SYSTEM</p> <p style="font-weight: bold;">BARANGAYS OF OLANDANG, KUDARANGAN, AND KADIGASAN</p>					
 <p style="font-size: 0.8em;"> REPUBLIC OF THE PHILIPPINES BANGSAMORO AUTONOMOUS REGION IN MUSLIM MINDANAO SPECIAL DEVELOPMENT FUND - PMO BANGSAMORO GOVERNMENT CENTER, COTABATO CITY </p>	<p>PROJECT TITLE CONSTRUCTION OF LEVEL II WATER SYSTEM</p> <p>BARANGAYS OF OLANDANG, KUDARANGAN, AND KADIGASAN, MINDANAO CLUSTER LOCAL BARRIO</p>	<p>PREPARED BY  ENGR. HUMBERTO A. MAMULTAO JR. PROJECT COORDINATOR (PMO/PMF)</p> <p>ENGR. EMMANUEL USOP PROJECT COORDINATOR (PMO/PMF)</p>	<p>REVISIONS BY  ENGR. RAUL A. SAIN JR.</p>	<p>RECOMMENDED BY  ENGR. MONAHAN T. ALLANSA</p>	<p>APPROVED BY  ABDULRAFFIQ MACACUA</p>	<p>SHEET NO.</p> <p style="font-size: 1.2em; border: 1px solid black; border-radius: 50%; padding: 2px;">01</p> <p style="font-size: 1.2em; border: 1px solid black; border-radius: 50%; padding: 2px;">33</p>

						
<p style="font-weight: bold; font-size: 1.2em;">LOCATION PLAN</p> <p>SCALE: N T S</p>						
 <p style="font-size: 0.8em;"> BANGSAMORO AUTONOMOUS REGION IN MUSLIM MINDANAO SPECIAL DEVELOPMENT FUND - PMO BANGSAMORO GOVERNMENT CENTER, COTABATO CITY </p>	<p>PROJECT TITLE CONSTRUCTION OF LEVEL II WATER SYSTEM</p> <p>BARANGAYS OF OLANDANG, KUDARANGAN, AND KADIGASAN, MINDANAO CLUSTER LOCAL BARRIO</p>	<p>PREPARED BY  ENGR. HUMBERTO A. MAMULTAO JR. PROJECT COORDINATOR (PMO/PMF)</p> <p>ENGR. EMMANUEL USOP PROJECT COORDINATOR (PMO/PMF)</p>	<p>REVISIONS BY  ENGR. RAUL A. SAIN JR.</p>	<p>RECOMMENDED BY  ENGR. MONAHAN T. ALLANSA</p>	<p>APPROVED BY  ABDULRAFFIQ MACACUA</p>	<p>SHEET NO.</p> <p style="font-size: 1.2em; border: 1px solid black; border-radius: 50%; padding: 2px;">02</p> <p style="font-size: 1.2em; border: 1px solid black; border-radius: 50%; padding: 2px;">33</p>



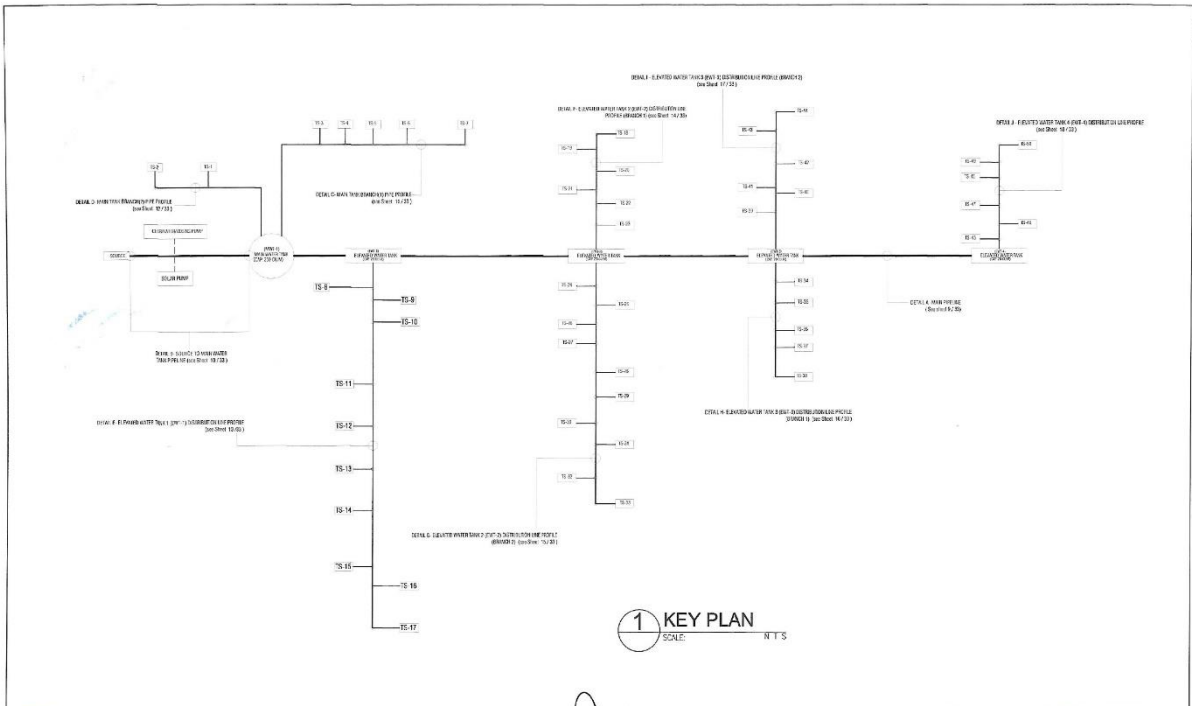
GENERAL PLAN

BANGSAMORO AUTONOMOUS REGION IN MUSLIM MINDANAO SPECIAL DEVELOPMENT FUND - PMO BANGSAMORO GOVERNMENT CENTER, COTABATO CITY	PROJECT TITLE: CONSTRUCTION OF LEVEL II WATER SYSTEM	PREPARED BY: ENGR. HUSSAIN A. MANJURTAG JR. PROJECT COORDINATOR	REVIEWED BY: ENGR. MOHAMMAD A. ABUJAK JR. PROJECT COORDINATOR	RECOMMENDED BY: ENGR. MOHAMMAD T. ALI MNSA PROJECT COORDINATOR	APPROVED BY: ABDULKADIR MACAGUA PROJECT COORDINATOR	SHEET NO.: 03 33
	BARANGAYS OF GLANDANG, KUDRANGKAL, AND KADIGASAN, MEGAYAP CLUSTER 1, SGA, BARMM					



1 WATER SYSTEM PLAN DIAGRAM
SCALE: 1:1000

BANGSAMORO AUTONOMOUS REGION IN MUSLIM MINDANAO SPECIAL DEVELOPMENT FUND - PMO BANGSAMORO GOVERNMENT CENTER, COTABATO CITY	PROJECT TITLE: CONSTRUCTION OF LEVEL II WATER SYSTEM	PREPARED BY: ENGR. HUSSAIN A. MANJURTAG JR. PROJECT COORDINATOR	REVIEWED BY: ENGR. MOHAMMAD A. ABUJAK JR. PROJECT COORDINATOR	RECOMMENDED BY: ENGR. MOHAMMAD T. ALI MNSA PROJECT COORDINATOR	APPROVED BY: ABDULKADIR MACAGUA PROJECT COORDINATOR	SHEET NO.: 04 33
	BARANGAYS OF GLANDANG, KUDRANGKAL, AND KADIGASAN, MEGAYAP CLUSTER 1, SGA, BARMM					



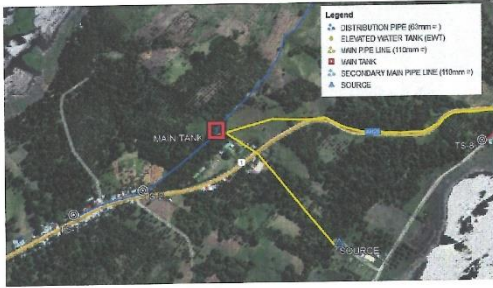
BANGSAMORO AUTONOMOUS REGION IN MUSLIM MINDANAO SPECIAL DEVELOPMENT FUND - PMO BANGSAMORO GOVERNMENT CENTER, COTASATO CITY	SUBJECT TITLE CONSTRUCTION OF LEVEL II WATER SYSTEM	PREPARED BY ENGR. HUMBERTO P. MARJAL, NTAO, JR. PROJECT ENGINEER	REVIEWED BY ENGR. MOHAMMAD S. SALAJK, JR. PROJECT SUPERVISOR	RECOMMENDED BY ENGR. MOHAMMAD T. ALI, INSA PROJECT SUPERVISOR	APPROVED BY ABDULRAOF A. MACAGUA PROJECT SUPERVISOR	SHEET NO. 05 33
	BARANGAYS OF OLINDANG, KUDASANGAN, AND KADIGASAN, MDSAYAP CLUSTER 1, SCA, BARAW	ENGR. EDWALD L. USOP PROJECT ENGINEER (SDF-PMO)	ENGR. MOHAMMAD T. ALI, INSA PROJECT SUPERVISOR	ENGR. MOHAMMAD T. ALI, INSA PROJECT SUPERVISOR	ENGR. MOHAMMAD T. ALI, INSA PROJECT SUPERVISOR	ENGR. MOHAMMAD T. ALI, INSA PROJECT SUPERVISOR

MAIN ITEM	LATITUDE	LONGITUDE	ELEVATION(M)	MAIN ITEM	LATITUDE	LONGITUDE	ELEVATION(M)
TS-1	7.060619°	124.509291°	39	TS-26	7.034632°	124.501388°	10
TS-2	7.058940°	124.509849°	45	TS-27	7.034831°	124.499635°	10
TS-3	7.054614°	124.517512°	13	TS-28	7.033828°	124.501559°	11
TS-4	7.053538°	124.518058°	14	TS-29	7.033464°	124.501951°	13
TS-5	7.052605°	124.518796°	16	TS-30	7.033424°	124.500933°	10
TS-6	7.051476°	124.518736°	7	TS-31	7.032612°	124.501395°	10
TS-7	7.050614°	124.517106°	13	TS-32	7.031979°	124.500255°	7
TS-8	7.050705°	124.510867°	13	TS-33	7.031370°	124.501237°	8
TS-9	7.049208°	124.512098°	17	TS-34	7.029858°	124.506039°	12
TS-10	7.048393°	124.512195°	13	TS-35	7.030295°	124.506092°	14
TS-11	7.046638°	124.510167°	5	TS-36	7.030477°	124.505581°	12
TS-12	7.045667°	124.509522°	4	TS-37	7.030272°	124.505197°	11
TS-13	7.044289°	124.508561°	4	TS-38	7.030468°	124.504841°	11
TS-14	7.042943°	124.507650°	5	TS-39	7.031110°	124.509116°	8
TS-15	7.041463°	124.506663°	5	TS-40	7.030128°	124.509563°	11
TS-16	7.039662°	124.505776°	7	TS-41	7.030855°	124.509842°	10
TS-17	7.038758°	124.505133°	7	TS-42	7.030143°	124.510224°	12
TS-18	7.037567°	124.503823°	7	TS-43	7.031674°	124.510995°	9
TS-19	7.037883°	124.503067°	8	TS-44	7.030687°	124.511845°	10
TS-20	7.036735°	124.502846°	9	TS-45	7.031853°	124.509541°	8
TS-21	7.036823°	124.501839°	8	TS-46	7.033043°	124.511646°	8
TS-22	7.036075°	124.502414°	7	TS-47	7.034023°	124.515860°	10
TS-23	7.035098°	124.502017°	8	TS-48	7.034905°	124.520221°	11
TS-24	7.035661°	124.500520°	7	TS-49	7.035408°	124.521572°	9
TS-25	7.034628°	124.502070°	9	TS-50	7.034550°	124.521914°	11

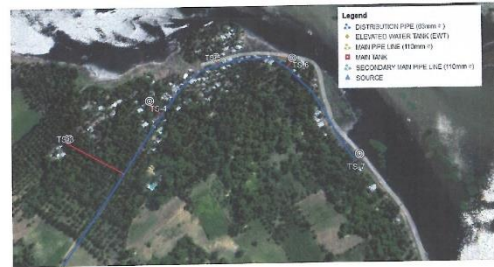
MARK	ELEVATION (m/meters)	LOCATION
SOURCE	15.0	Lat. = 7.04420° Long. = 124.50800°
MAIN WATER TANK	50.0	Lat. = 7.03208° Long. = 124.51120°
ELEVATED WATER TANK 1 (EWT-1)	13.0	Lat. = 7.05400° Long. = 124.51100°
ELEVATED WATER TANK 2 (EWT-2)	15.0	Lat. = 7.05010° Long. = 124.50800°
ELEVATED WATER TANK 3 (EWT-3)	21.0	Lat. = 7.05480° Long. = 124.50800°
ELEVATED WATER TANK 4 (EWT-4)	14.0	Lat. = 7.05000° Long. = 124.50400°

MARK	TRANSMISSION LINE (m/meters)	P.E PIPF SDR 13.5 (Outside Diameter)
SOURCE TO MAIN WATER TANK	5,504.0	110 mmØ
MAIN WATER TANK TO ELEVATED WATER TANK 4	8,487.0	63 mmØ
ELEVATED WATER TANKS TO TAPSTANDS	2,411.0	32 mmØ

BANGSAMORO AUTONOMOUS REGION IN MUSLIM MINDANAO SPECIAL DEVELOPMENT FUND - PMO BANGSAMORO GOVERNMENT CENTER, COTASATO CITY	SUBJECT TITLE CONSTRUCTION OF LEVEL II WATER SYSTEM	PREPARED BY ENGR. HUMBERTO P. MARJAL, NTAO, JR. PROJECT ENGINEER	REVIEWED BY ENGR. MOHAMMAD S. SALAJK, JR. PROJECT SUPERVISOR	RECOMMENDED BY ENGR. MOHAMMAD T. ALI, INSA PROJECT SUPERVISOR	APPROVED BY ABDULRAOF A. MACAGUA PROJECT SUPERVISOR	SHEET NO. 06 33
	BARANGAYS OF OLINDANG, KUDASANGAN, AND KADIGASAN, MDSAYAP CLUSTER 1, SCA, BARAW	ENGR. EDWALD L. USOP PROJECT ENGINEER (SDF-PMO)	ENGR. MOHAMMAD T. ALI, INSA PROJECT SUPERVISOR	ENGR. MOHAMMAD T. ALI, INSA PROJECT SUPERVISOR	ENGR. MOHAMMAD T. ALI, INSA PROJECT SUPERVISOR	ENGR. MOHAMMAD T. ALI, INSA PROJECT SUPERVISOR



1 BENEFICIARY AREA 1 PIPE LAYOUT



2 BENEFICIARY AREA 2 PIPE LAYOUT

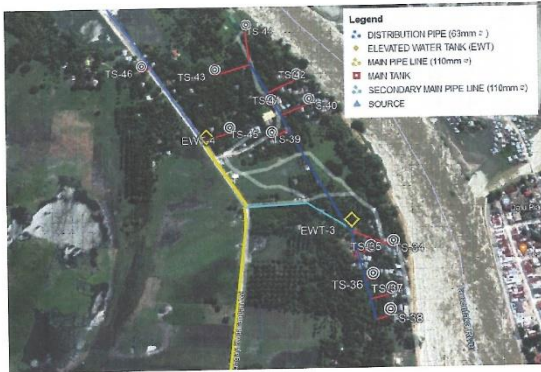


3 BENEFICIARY AREA 3 PIPE LAYOUT



4 BENEFICIARY AREA 4 PIPE LAYOUT

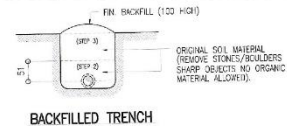
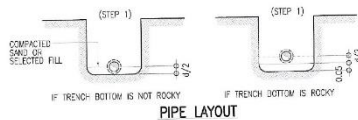
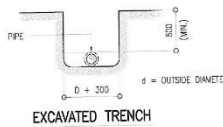
<p>BANGSAMORO AUTONOMOUS REGION IN MUSLIM MINDANAO SPECIAL DEVELOPMENT FUND - PMO BANGSAMORO GOVERNMENT CENTER, COTABATO CITY</p>	PROJECT TITLE	PREPARED BY	REVIEWED BY	RECOMMENDED BY	APPROVED BY	SHEET NO.
	CONSTRUCTION OF LEVEL II WATER SYSTEM	ENGR. HUMBERTO A. VASILUNTAO, JR. PROJECT CONSULTANT/ENGINEER	ENGR. ESTEBAN S. USOP PROJECT CONSULTANT/ENGINEER	ENGR. MOHAMMAD T. ALLINSA PROJECT CONSULTANT/ENGINEER	ABULKADIR A. MACACUA PROJECT CONSULTANT/ENGINEER	07 33
	BARANGAYS OF GLANDANG, KUDRANGGAN, AND KADANGAN, M'DENYAP CLUSTER I, ISA, BARMM					



1 BENEFICIARY AREA 5 PIPE LAYOUT

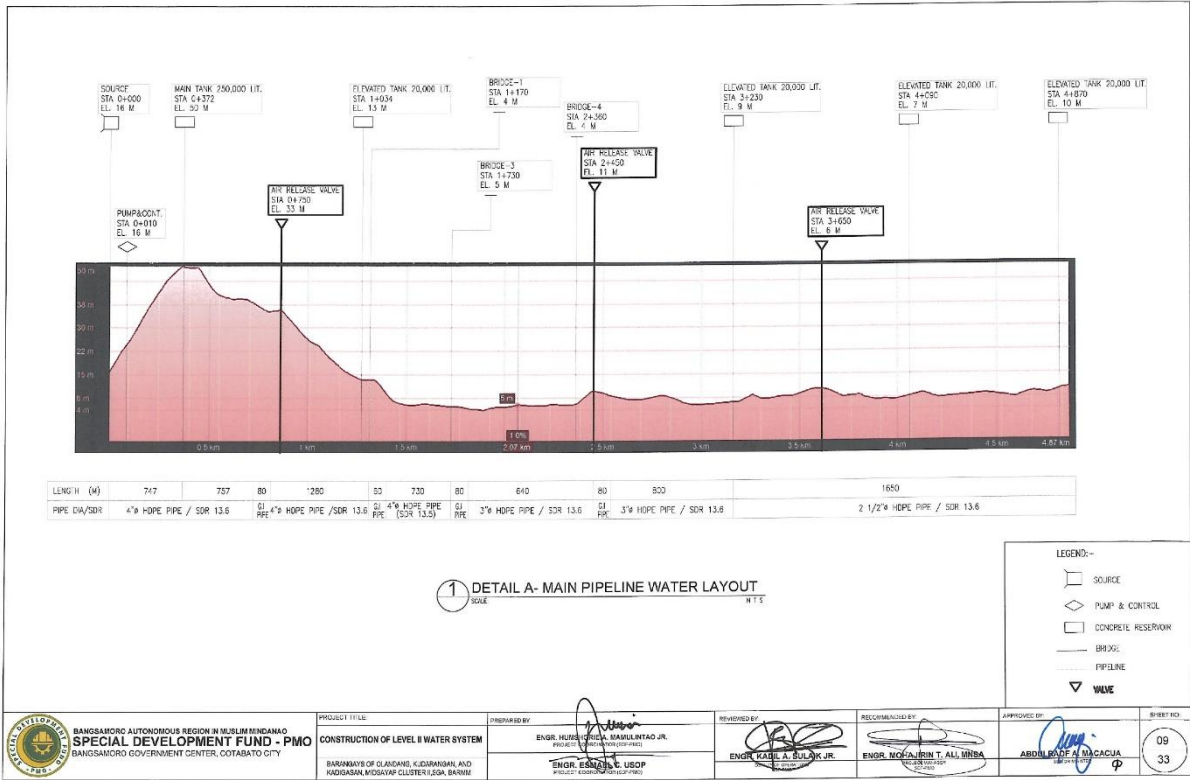


2 BENEFICIARY AREA 6 PIPE LAYOUT

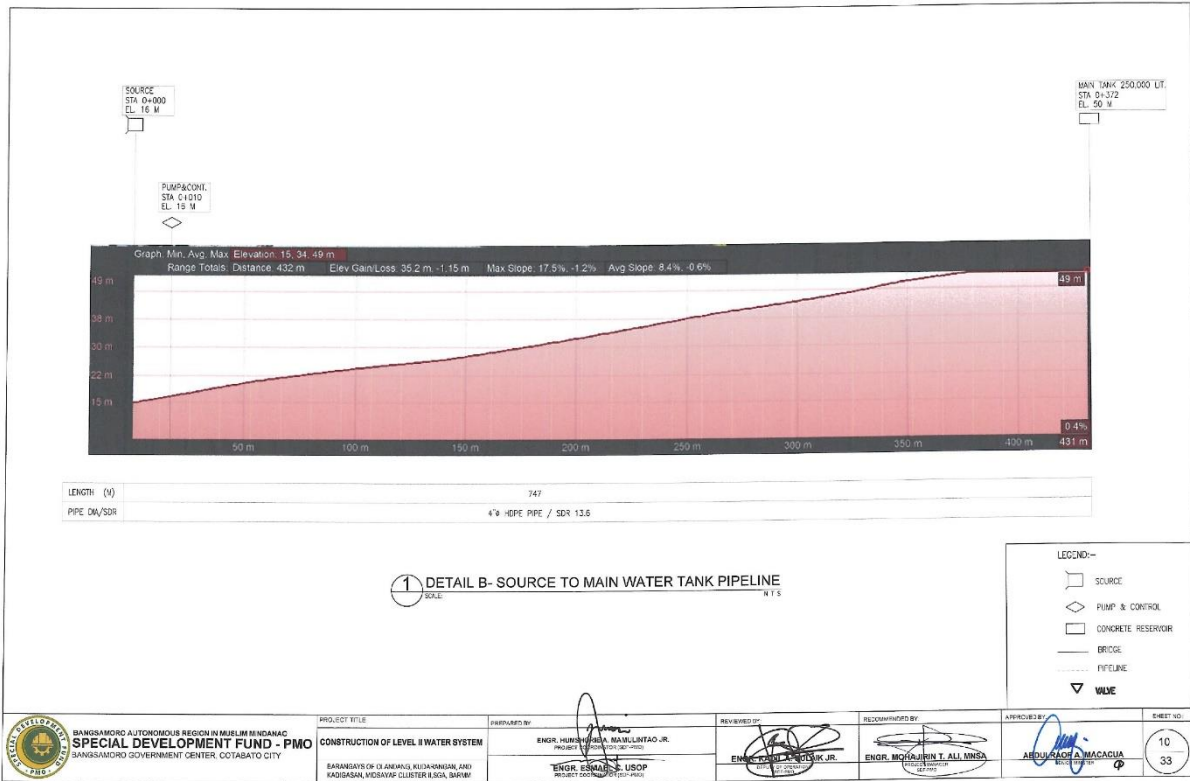


3 PIPE EMBEDMENT DETAIL

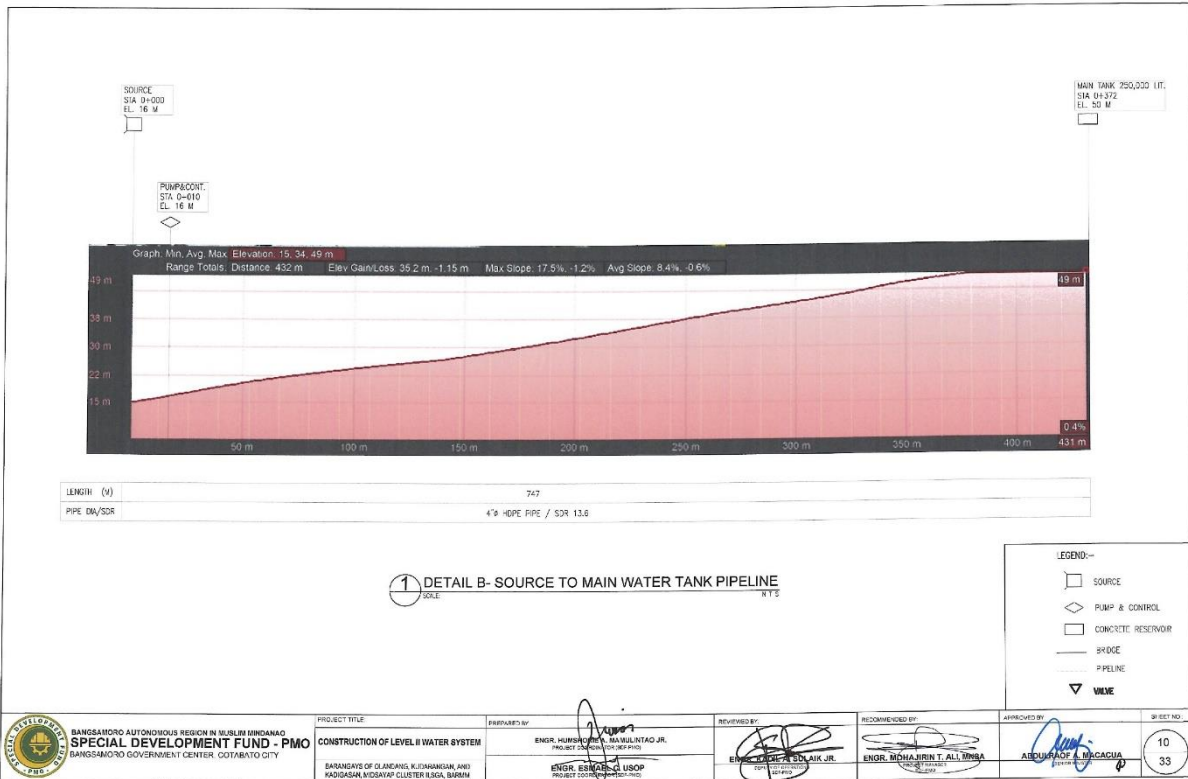
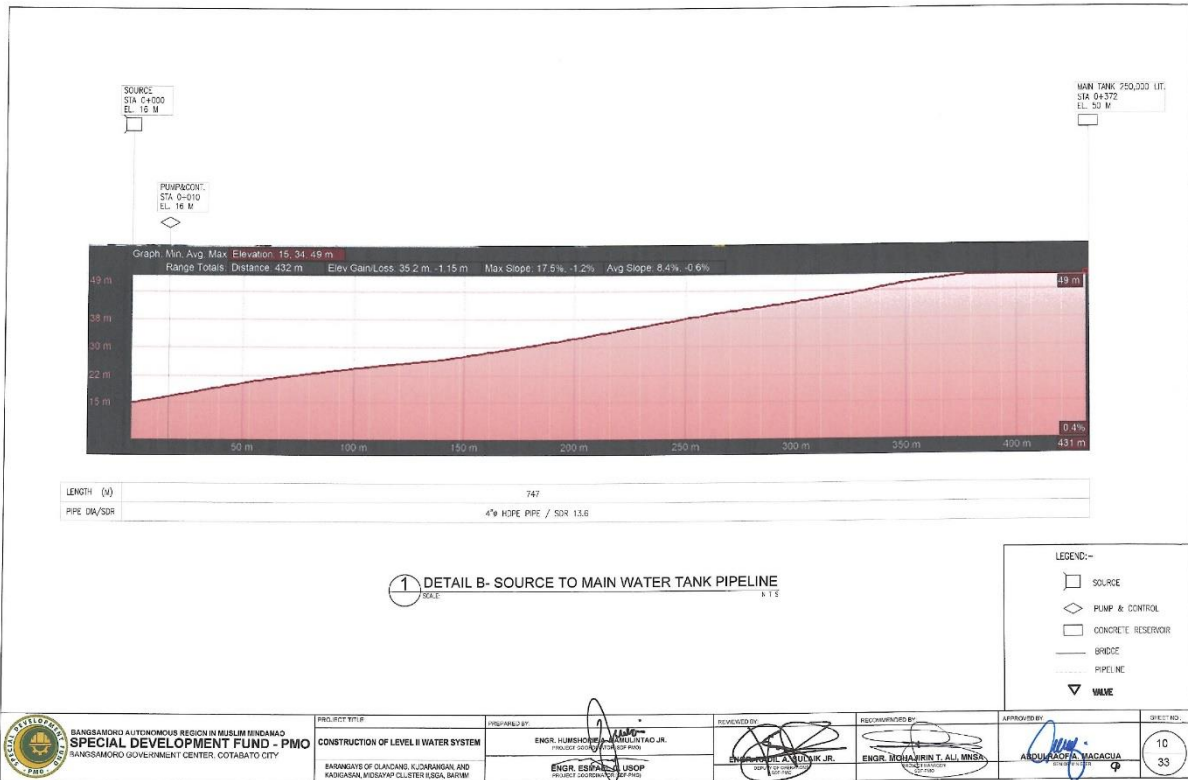
<p>BANGSAMORO AUTONOMOUS REGION IN MUSLIM MINDANAO SPECIAL DEVELOPMENT FUND - PMO BANGSAMORO GOVERNMENT CENTER, COTABATO CITY</p>	PROJECT TITLE	PREPARED BY	REVIEWED BY	RECOMMENDED BY	APPROVED BY	SHEET NO.
	CONSTRUCTION OF LEVEL II WATER SYSTEM	ENGR. HUMBERTO A. VASILUNTAO, JR. PROJECT CONSULTANT/ENGINEER	ENGR. ESTEBAN S. USOP PROJECT CONSULTANT/ENGINEER	ENGR. MOHAMMAD T. ALLINSA PROJECT CONSULTANT/ENGINEER	ABULKADIR A. MACACUA PROJECT CONSULTANT/ENGINEER	08 33
	BARANGAYS OF GLANDANG, KUDRANGGAN, AND KADANGAN, M'DENYAP CLUSTER I, ISA, BARMM					

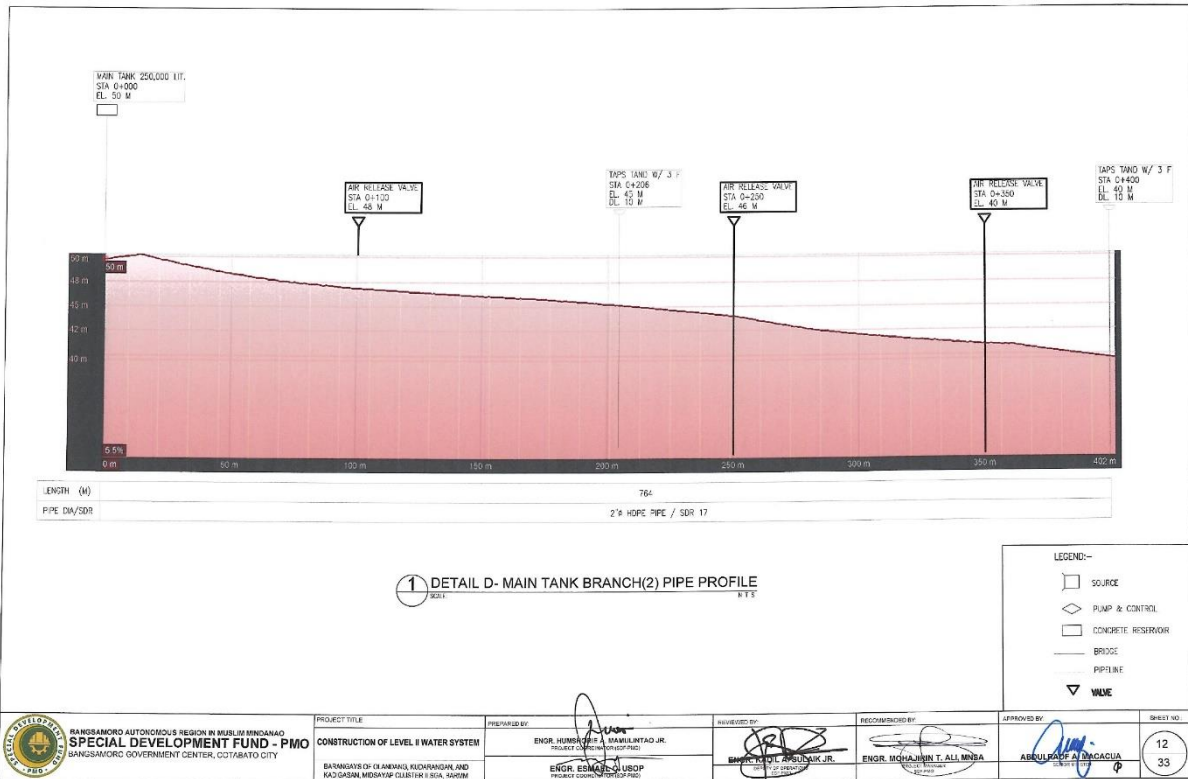
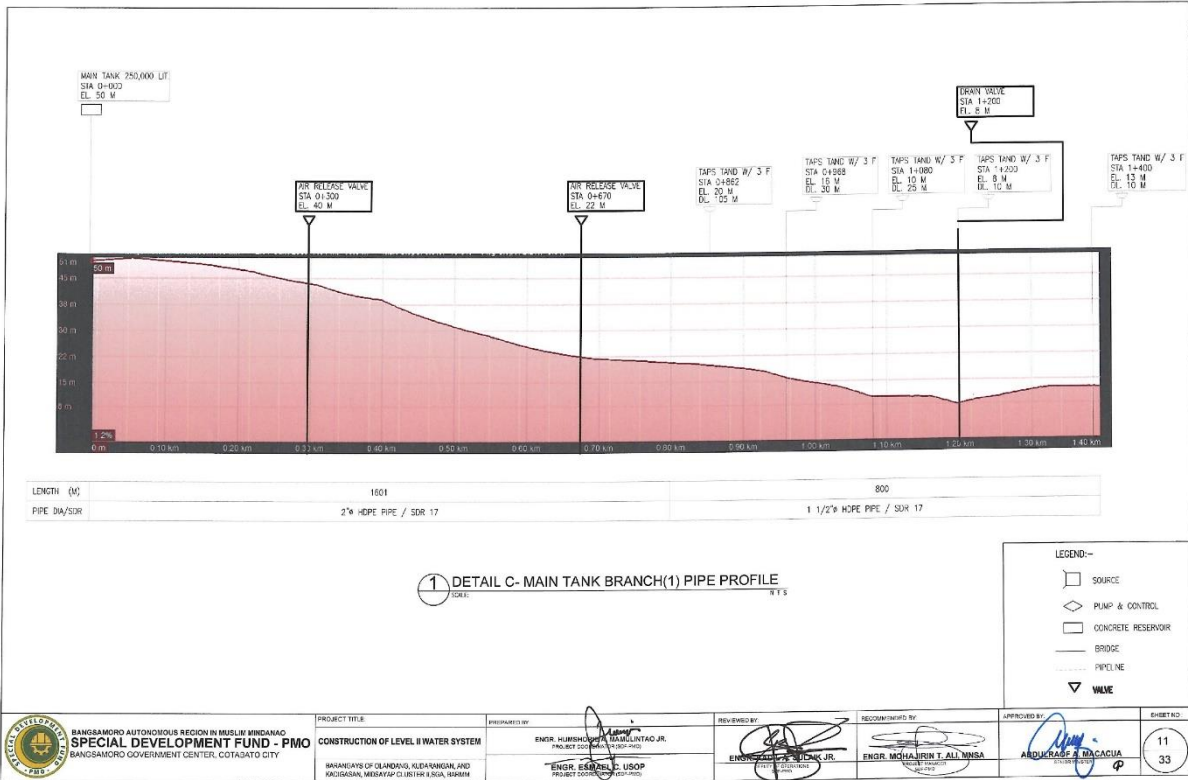


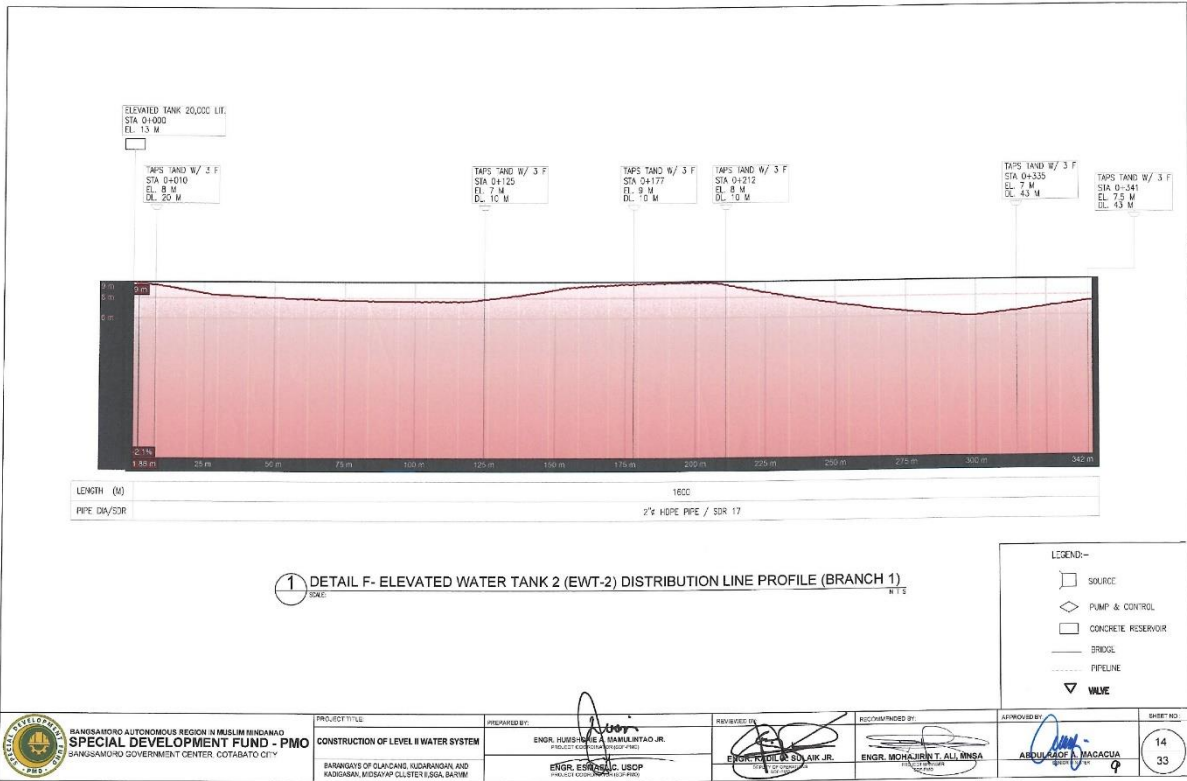
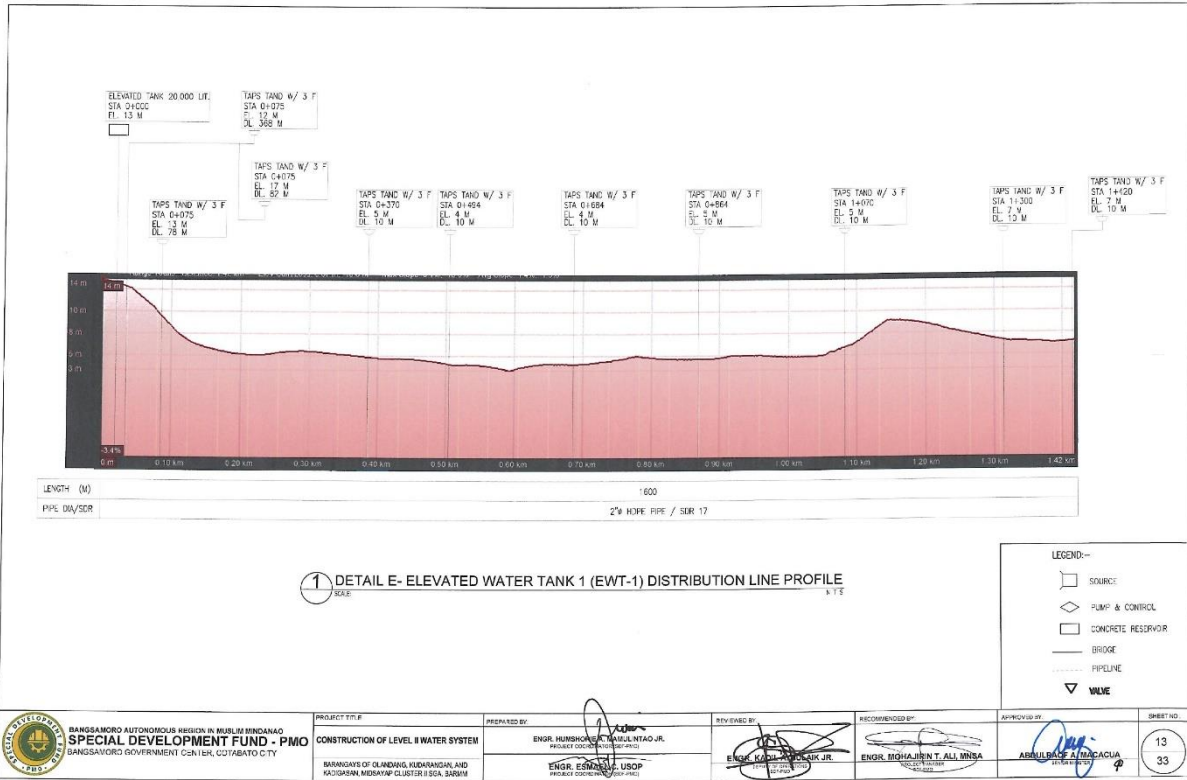
 BANGSAMORO AUTONOMOUS REGION IN MUSLIM MINDANAO SPECIAL DEVELOPMENT FUND - PMO BANGSAMORO GOVERNMENT CENTER, COTABATO CITY	PROJECT TITLE CONSTRUCTION OF LEVEL II WATER SYSTEM	PREPARED BY ENGR. HUBERTUS M. MANULINTAO JR. PROJECT COORDINATOR	REVIEWED BY ENGR. KAREL A. SOLER JR.	RECOMMENDED BY ENGR. MOHAMMAD T. ALLI UNDA	APPROVED BY ARDUL RAHMAN MACACIA	SHEET NO. 09 33
	BARANAYAS OF CLAUDANG, KUDARANAN, AND KADIGASAN, MDSAWAF CLUSTER II, SGA, BARAW	ENGR. ESMAR S. USOP PROJECT COORDINATOR	ENGR. MOHAMMAD T. ALLI UNDA PROJECT COORDINATOR	ENGR. MOHAMMAD T. ALLI UNDA PROJECT COORDINATOR	ARDUL RAHMAN MACACIA PROJECT COORDINATOR	10 33

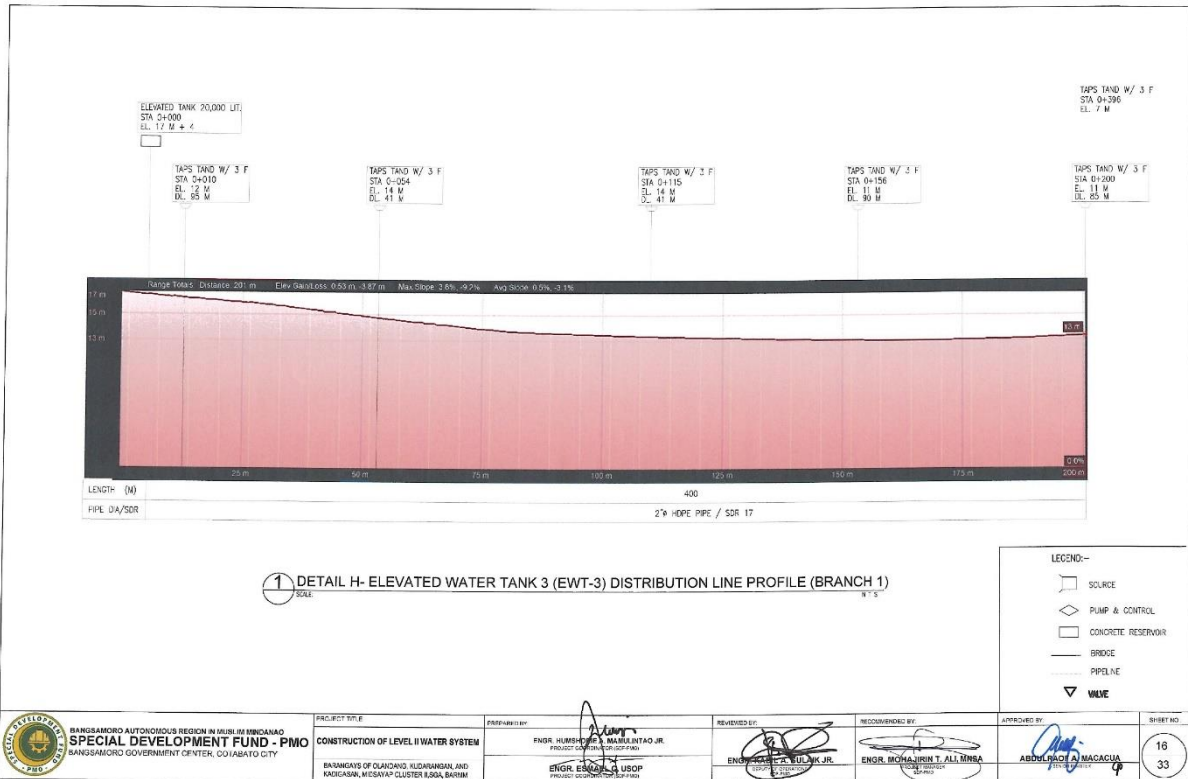
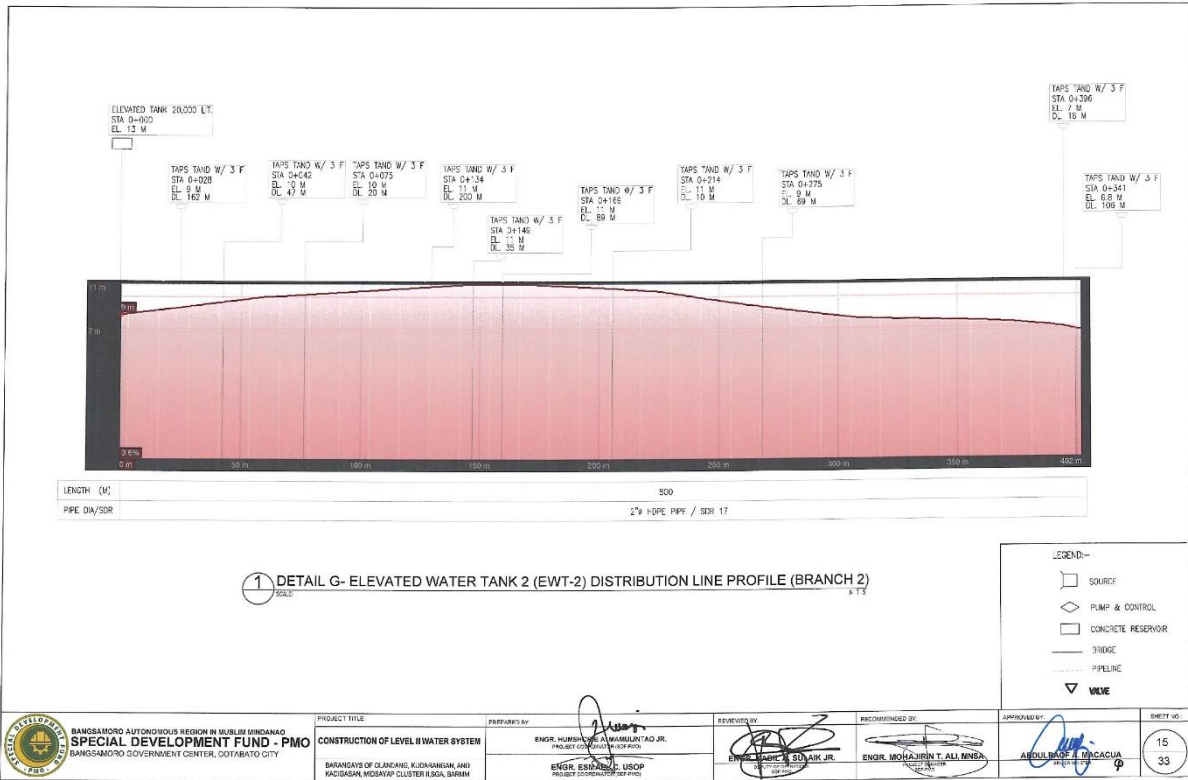


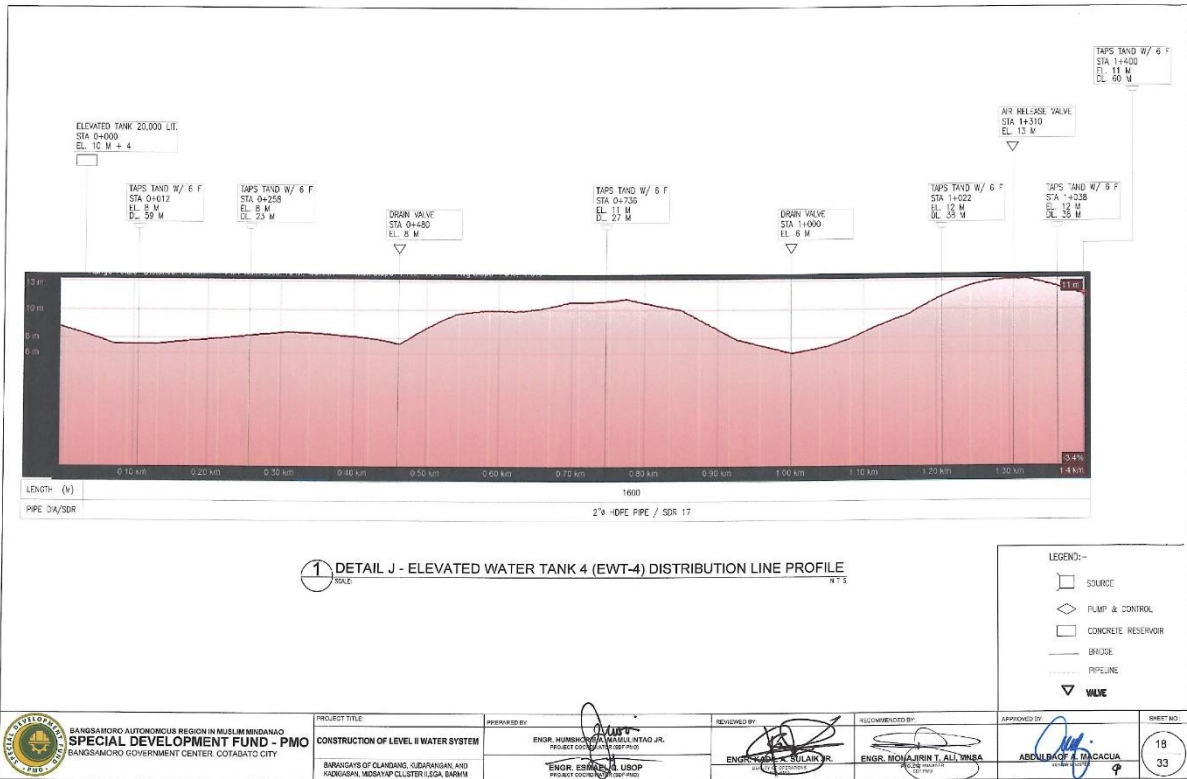
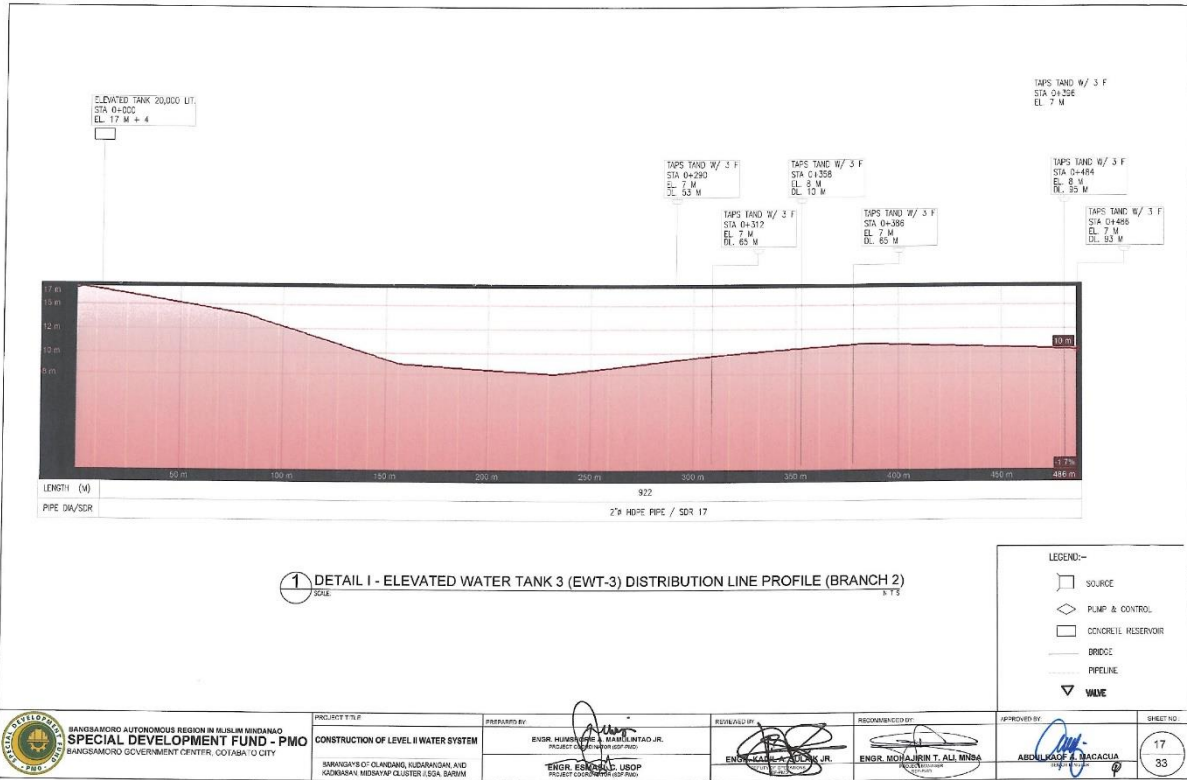
 BANGSAMORO AUTONOMOUS REGION IN MUSLIM MINDANAO SPECIAL DEVELOPMENT FUND - PMO BANGSAMORO GOVERNMENT CENTER, COTABATO CITY	PROJECT TITLE CONSTRUCTION OF LEVEL II WATER SYSTEM	PREPARED BY ENGR. HUBERTUS M. MANULINTAO JR. PROJECT COORDINATOR	REVIEWED BY ENGR. KAREL A. SOLER JR.	RECOMMENDED BY ENGR. MOHAMMAD T. ALLI UNDA	APPROVED BY ARDUL RAHMAN MACACIA	SHEET NO. 10 33
	BARANAYAS OF CLAUDANG, KUDARANAN, AND KADIGASAN, MDSAWAF CLUSTER II, SGA, BARAW	ENGR. ESMAR S. USOP PROJECT COORDINATOR	ENGR. MOHAMMAD T. ALLI UNDA PROJECT COORDINATOR	ENGR. MOHAMMAD T. ALLI UNDA PROJECT COORDINATOR	ARDUL RAHMAN MACACIA PROJECT COORDINATOR	10 33

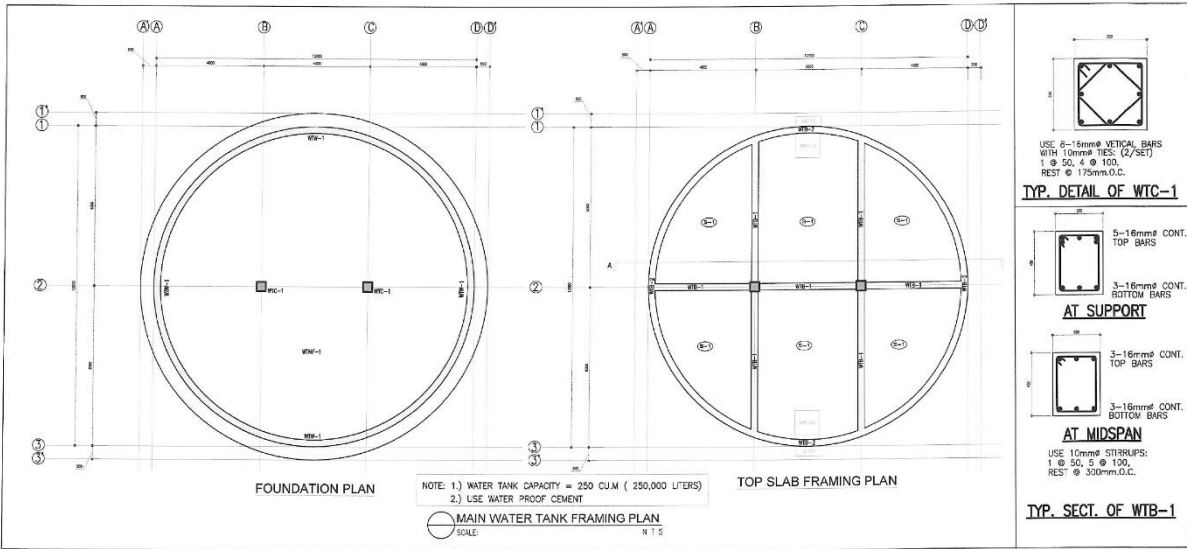










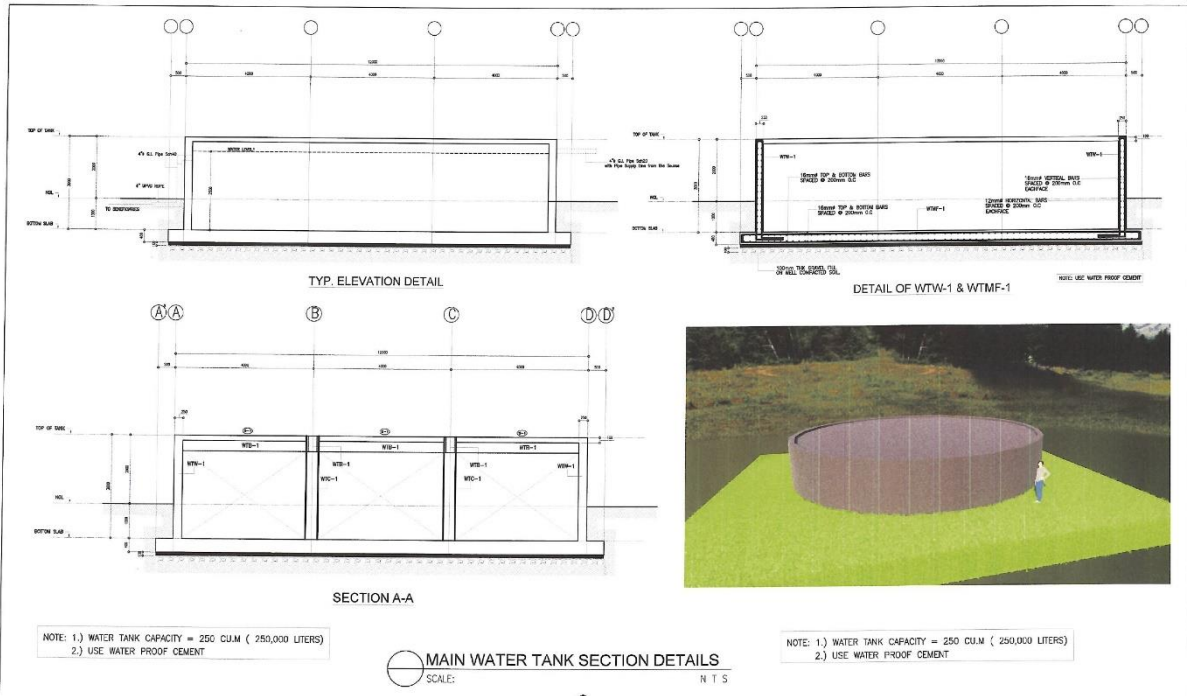


SCHEDULE OF SLABS														
MARK	L (m)	SHORT SPAN						LONG SPAN						REMARKS
		BOTTOM BARS (mm)		TOP BARS (mm)		TOP BARS (mm)		BOTTOM BARS (mm)		TOP BARS (mm)		TOP BARS (mm)		
		CONF.	EXTRA	CONF.	EXTRA	CONF.	EXTRA	CONF.	EXTRA	CONF.	EXTRA	CONF.	EXTRA	
2nd FLOOR & ROOF SLAB	5-7	150	128 @ 300mm O.C.	128 @ 300mm O.C.	128 @ 300mm O.C.	128 @ 300mm O.C.	128 @ 300mm O.C.	128 @ 300mm O.C.	128 @ 300mm O.C.	128 @ 300mm O.C.	128 @ 300mm O.C.	128 @ 300mm O.C.	128 @ 300mm O.C.	TWO WAY

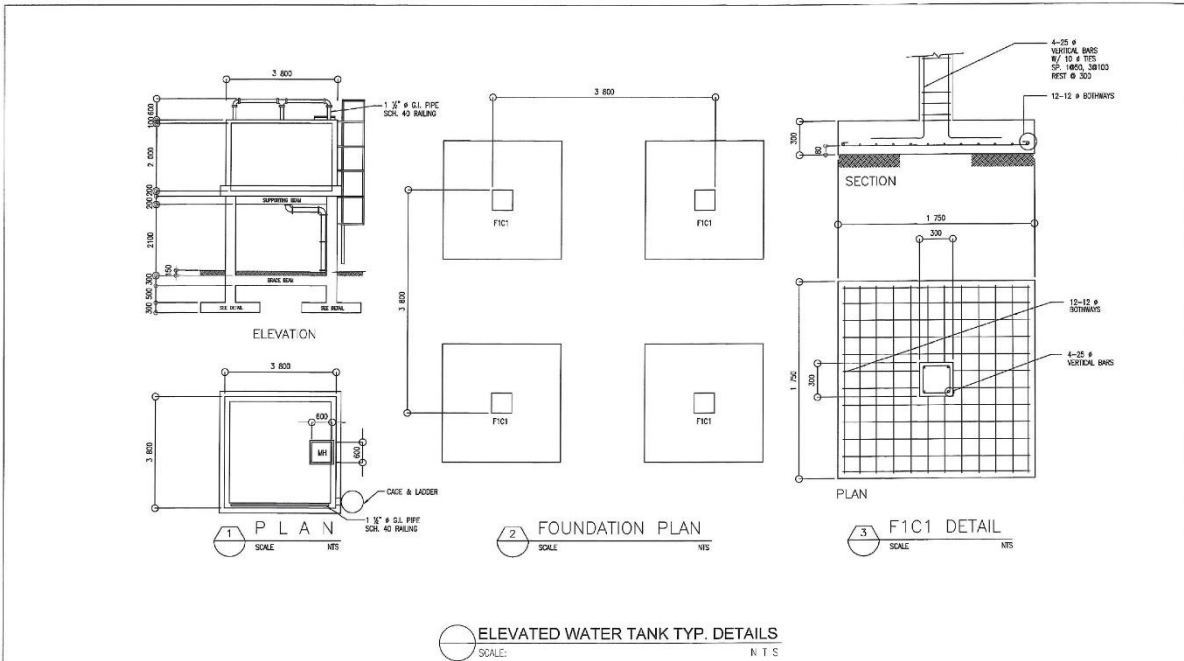
KEY ELEVATION OF SLAB

TYP. KEY PLAN OF R.C. SLAB SHOWING REBAR ARRANGEMENT

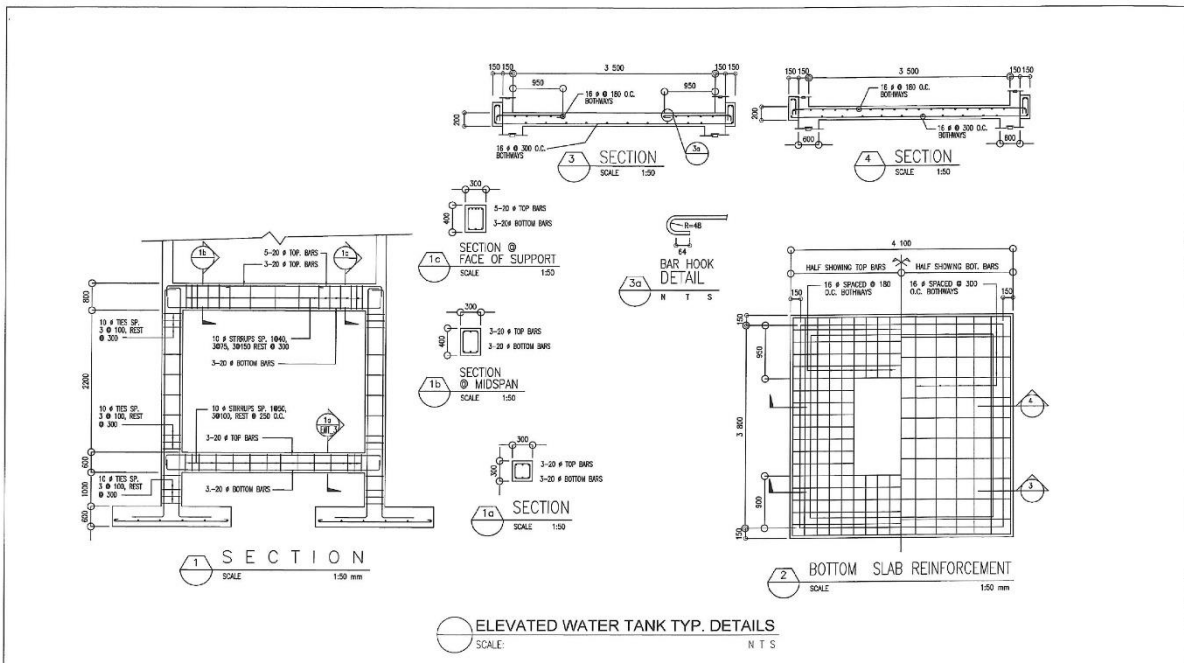
<p>BANSAWANGON AUTONOMOUS REGION IN MUSUM MINDANAO SPECIAL DEVELOPMENT FUND - PMO BANSAWANGON GOVERNMENT CENTER, CAGAYAN CITY</p>	<p>PROJECT TITLE CONSTRUCTION OF LEVEL II WATER SYSTEM</p>	<p>PREPARED BY ENGR. HUBERT S. BAMBALINTAO JR. PROJECT ENGINEER (REGISTERED)</p>	<p>REVIEWED BY ENGR. KAREN A. SULLUK JR. PROJECT ENGINEER (REGISTERED)</p>	<p>RECOMMENDED BY ENGR. MONALYN T. ALLINSA PROJECT ENGINEER (REGISTERED)</p>	<p>APPROVED BY ABDOLKARIM M. MACACUA SUPERVISOR</p>	<p>SHEET NO. 19 33</p>
	<p>BANWANGON OF CLANDAYAS, KIDANGMAGAL AND KADAGANAN MDSAWAP CULITERER, BAWAN</p>	<p>ENGR. ESMARTE USOP PROJECT ENGINEER (REGISTERED)</p>	<p>ENGR. HUBERT S. BAMBALINTAO JR. PROJECT ENGINEER (REGISTERED)</p>	<p>ENGR. KAREN A. SULLUK JR. PROJECT ENGINEER (REGISTERED)</p>	<p>ENGR. MONALYN T. ALLINSA PROJECT ENGINEER (REGISTERED)</p>	<p>ABDOLKARIM M. MACACUA SUPERVISOR</p>



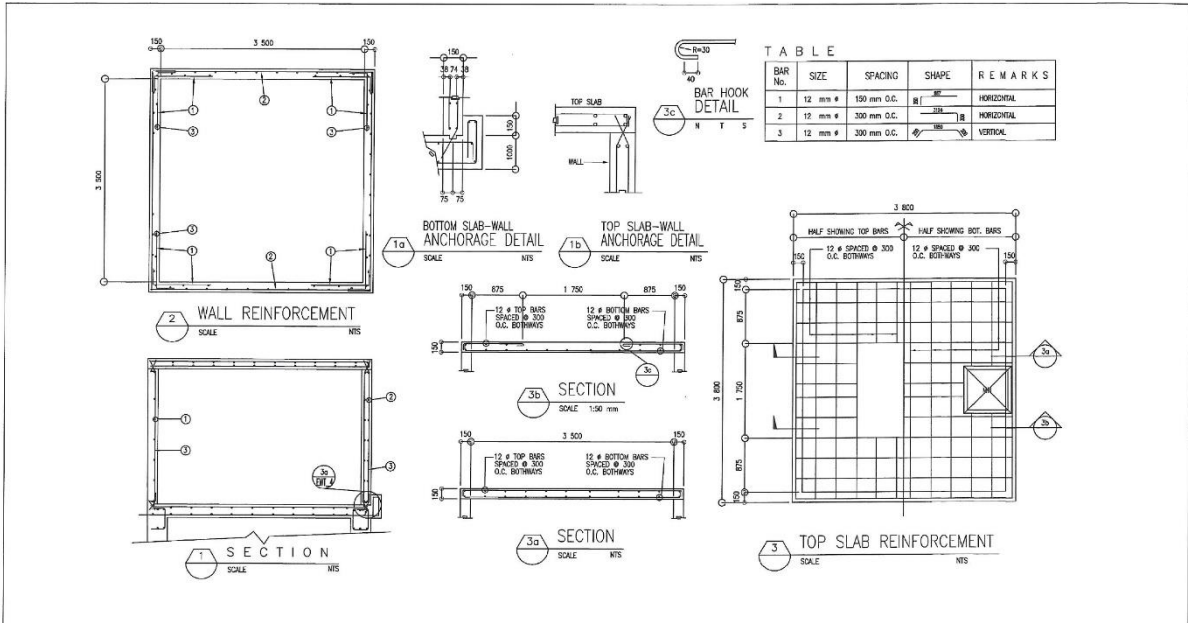
<p>BANSAWANGON AUTONOMOUS REGION IN MUSUM MINDANAO SPECIAL DEVELOPMENT FUND - PMO BANSAWANGON GOVERNMENT CENTER, CAGAYAN CITY</p>	<p>PROJECT TITLE CONSTRUCTION OF LEVEL II WATER SYSTEM</p>	<p>PREPARED BY ENGR. HUBERT S. BAMBALINTAO JR. PROJECT ENGINEER (REGISTERED)</p>	<p>REVIEWED BY ENGR. HUBERT S. BAMBALINTAO JR. PROJECT ENGINEER (REGISTERED)</p>	<p>RECOMMENDED BY ENGR. MONALYN T. ALLINSA PROJECT ENGINEER (REGISTERED)</p>	<p>APPROVED BY ABDOLKARIM M. MACACUA SUPERVISOR</p>	<p>SHEET NO. 20 33</p>
	<p>BANWANGON OF CLANDAYAS, KIDANGMAGAL AND KADAGANAN MDSAWAP CULITERER, BAWAN</p>	<p>ENGR. ESMARTE USOP PROJECT ENGINEER (REGISTERED)</p>	<p>ENGR. HUBERT S. BAMBALINTAO JR. PROJECT ENGINEER (REGISTERED)</p>	<p>ENGR. HUBERT S. BAMBALINTAO JR. PROJECT ENGINEER (REGISTERED)</p>	<p>ENGR. MONALYN T. ALLINSA PROJECT ENGINEER (REGISTERED)</p>	<p>ABDOLKARIM M. MACACUA SUPERVISOR</p>



BANGSAMORO AUTONOMOUS REGION IN MUSLIM MINDANAO SPECIAL DEVELOPMENT FUND - PMO BANGSAMORO GOVERNMENT CENTER, COTABATO CITY	PROJECT TITLE:	PREPARED BY:	REVIEWED BY:	RECOMMENDED BY:	APPROVED BY:	SHEET NO.:
	CONSTRUCTION OF LEVEL II WATER SYSTEM	ENGR. HUNSAH M. MAMUNTALAO JR. PROJECT COORDINATOR (SVP) PMO	ENGR. MOHAMMAD T. ALLI MINSA SVP	ENGR. MOHAMMAD T. ALLI MINSA SVP	ABDULLAH Z. MACAGUA SVP	21 33
	BARANGAYS OF OLANBAYO, KIDARANGAL, AND MADRASAH, MINDAYUP CLUSTER (SUSA, SARAWI)	ENGR. ESMERALD C. USOP PROJECT COORDINATOR (SVP) PMO	ENGR. MOHAMMAD T. ALLI MINSA SVP	ENGR. MOHAMMAD T. ALLI MINSA SVP	ABDULLAH Z. MACAGUA SVP	22 33



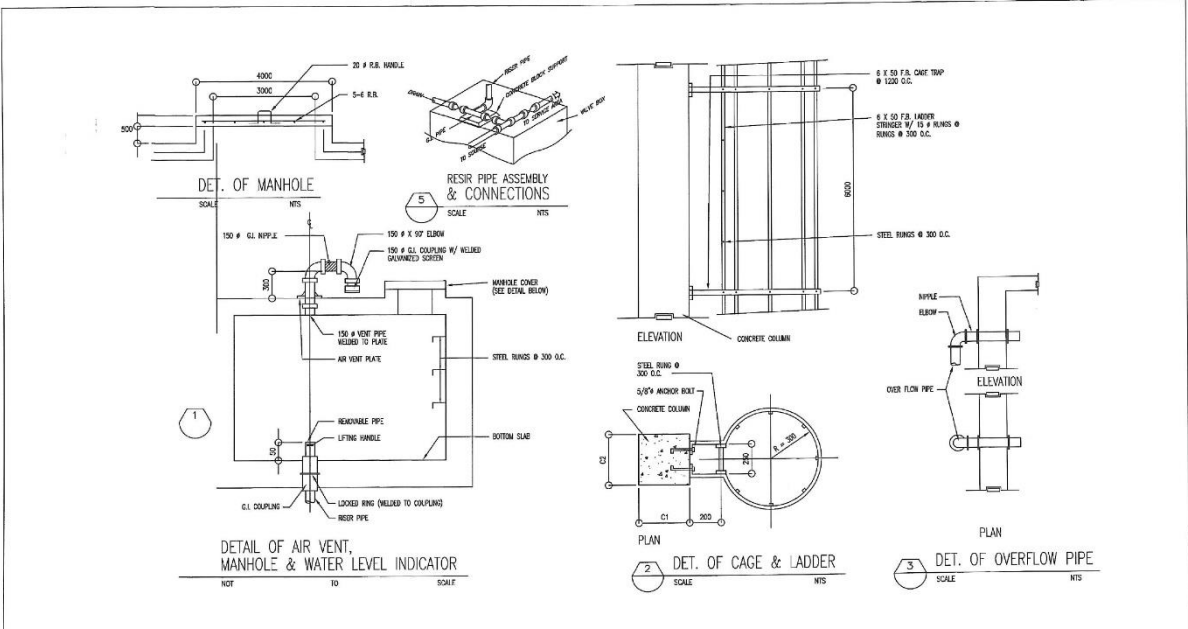
BANGSAMORO AUTONOMOUS REGION IN MUSLIM MINDANAO SPECIAL DEVELOPMENT FUND - PMO BANGSAMORO GOVERNMENT CENTER, COTABATO CITY	PROJECT TITLE:	PREPARED BY:	REVIEWED BY:	RECOMMENDED BY:	APPROVED BY:	SHEET NO.:
	CONSTRUCTION OF LEVEL II WATER SYSTEM	ENGR. HUNSAH M. MAMUNTALAO JR. PROJECT COORDINATOR (SVP) PMO	ENGR. MOHAMMAD T. ALLI MINSA SVP	ENGR. MOHAMMAD T. ALLI MINSA SVP	ABDULLAH Z. MACAGUA SVP	22 33
	BARANGAYS OF OLANBAYO, KIDARANGAL, AND MADRASAH, MINDAYUP CLUSTER (SUSA, SARAWI)	ENGR. ESMERALD C. USOP PROJECT COORDINATOR (SVP) PMO	ENGR. MOHAMMAD T. ALLI MINSA SVP	ENGR. MOHAMMAD T. ALLI MINSA SVP	ABDULLAH Z. MACAGUA SVP	22 33



ELEVATED WATER TANK TYP. DETAILS
SCALE: N T S

NOTE: 1) WATER TANK CAPACITY = 20 CU.M (20,000 LITERS)
2) USE WATER PROOF CEMENT

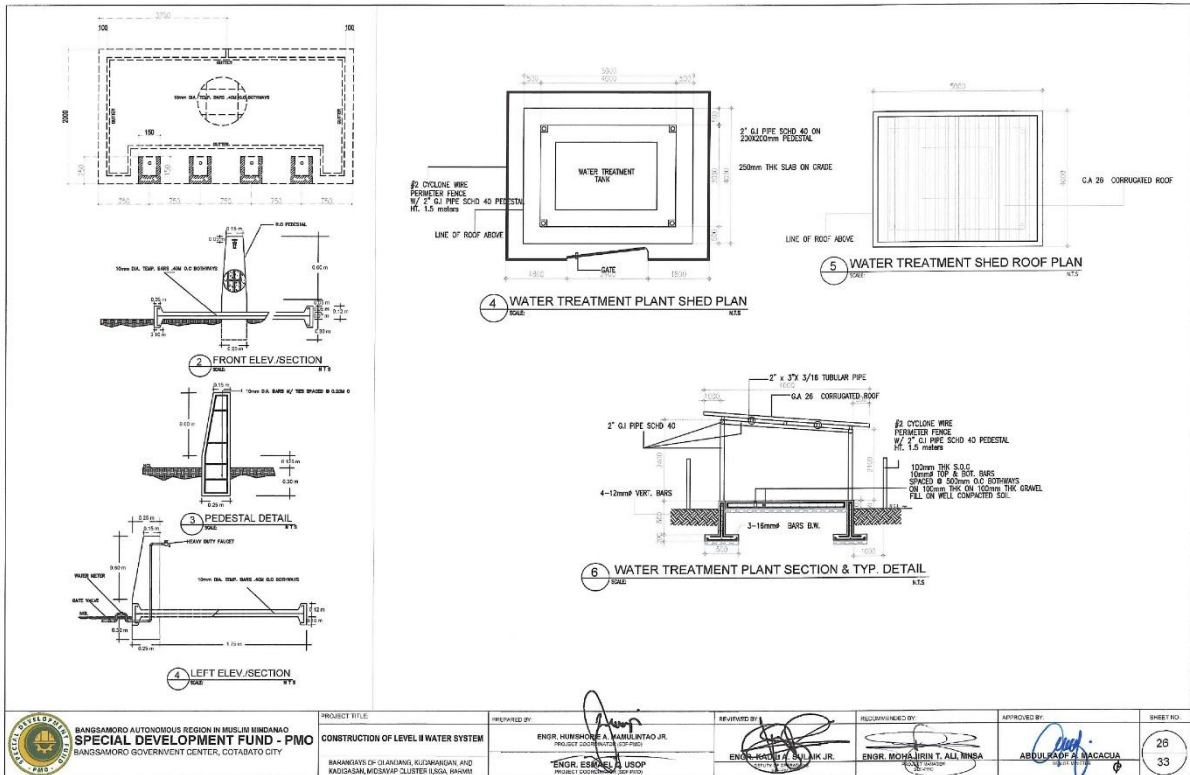
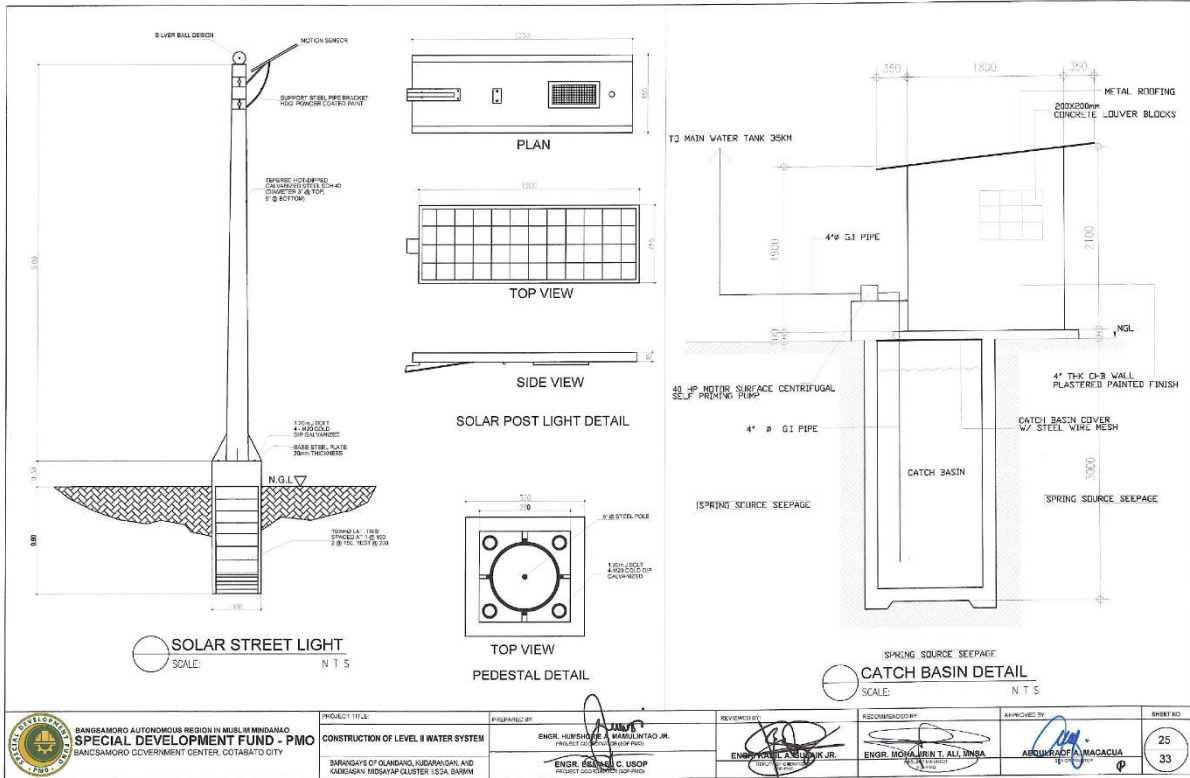
BANGSAMORO AUTONOMOUS REGION IN MUSLIM MINDANAO SPECIAL DEVELOPMENT FUND - PMO BANGSAMORO GOVERNMENT CENTER, COTABATO CITY	PROJECT TITLE CONSTRUCTION OF LEVEL II WATER SYSTEM	PREPARED BY ENGR. HUMBERTO A. MARULIANTAD JR. <small>PROJECT ENGINEER (REGISTERED)</small>	REVIEWED BY ENGR. ERNESTO C. USOP <small>PROJECT COORDINATOR (REGISTERED)</small>	RECOMMENDED BY ENGR. MOHAMMAD T. ALLI MNSA <small>PROJECT ENGINEER (REGISTERED)</small>	APPROVED BY ABDULKADIR A. DINGACUA <small>PROJECT ENGINEER (REGISTERED)</small>	SHEET NO. 23 33
	BARANGAYS OF GUANDANG, KUDARANANG, AND KADISARAN, MEDIANAP CLUSTER II, SDA, BAHAM					

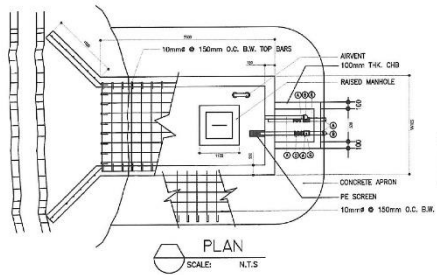


ELEVATED WATER TANK TYP. DETAILS
SCALE: N T S

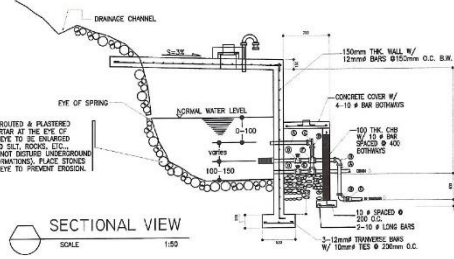
NOTE: 1) WATER TANK CAPACITY = 20 CU.M (20,000 LITERS)
2) USE WATER PROOF CEMENT

BANGSAMORO AUTONOMOUS REGION IN MUSLIM MINDANAO SPECIAL DEVELOPMENT FUND - PMO BANGSAMORO GOVERNMENT CENTER, COTABATO CITY	PROJECT TITLE CONSTRUCTION OF LEVEL II WATER SYSTEM	PREPARED BY ENGR. HUMBERTO A. MARULIANTAD JR. <small>PROJECT ENGINEER (REGISTERED)</small>	REVIEWED BY ENGR. ERNESTO C. USOP <small>PROJECT COORDINATOR (REGISTERED)</small>	RECOMMENDED BY ENGR. MOHAMMAD T. ALLI MNSA <small>PROJECT ENGINEER (REGISTERED)</small>	APPROVED BY ABDULKADIR A. DINGACUA <small>PROJECT ENGINEER (REGISTERED)</small>	SHEET NO. 24 33
	BARANGAYS OF GUANDANG, KUDARANANG, AND KADISARAN, MEDIANAP CLUSTER II, SDA, BAHAM					

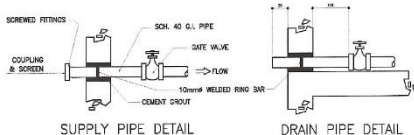




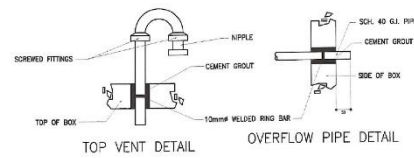
PLAN
SCALE: N.T.S.



SECTIONAL VIEW
SCALE: 1:50



SUPPLY PIPE DETAIL DRAIN PIPE DETAIL



TOP VENT DETAIL OVERFLOW PIPE DETAIL

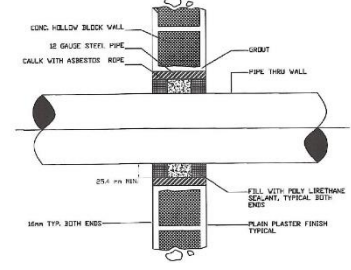
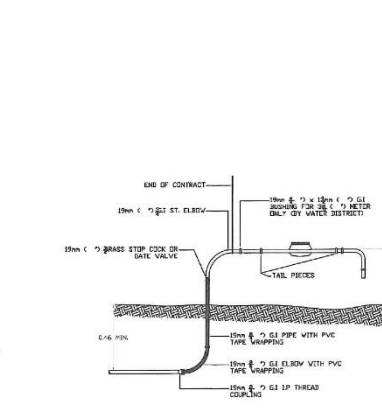
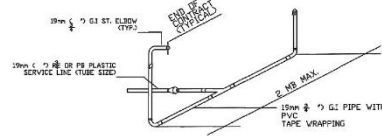
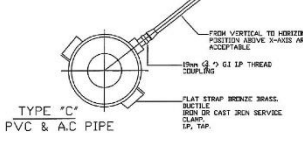
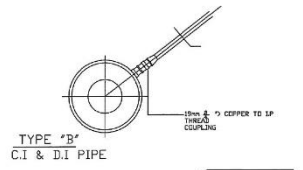
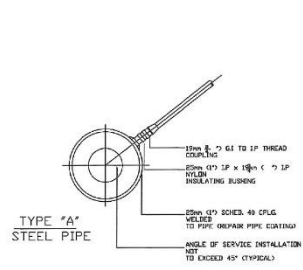
SPRING BOX PIPING DETAIL
SCALE: N.T.S.

INTAKE BOX TYP. DETAIL
SCALE: N.T.S.

NOTE: ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS OTHERWISE INDICATED.

MARK	DETAILS	SIZE
A	G.I. PIPE	50mm
B	G.I. ELBOW	50mm
C	WIRE COUPLER	Ø200mm
D	GATE VALVE	50mm
E	G.I. FIT	50mm
F	G.I. REDUCING TEE	Ø150/50mm
G	G.I. WELD. FLANGE	Ø150mm
H	G.I. ELBOW	150mm

<p>BANGSAMORO AUTONOMOUS REGION IN MUSLIM MINDANAO SPECIAL DEVELOPMENT FUND - PMO BANGSAMORO GOVERNMENT CENTER, COTABATO CITY</p>	<p>CONSTRUCTION OF LEVEL II WATER SYSTEM</p> <p>BANGSAWIS OF CLAYANG, KUDASANGAL AND KAGISAWAN, MCKSAP CLUSTER I, SDA, BARRI</p>	<p>PREPARED BY: </p> <p>ENGR. HUMBER A. MANALINTAO JR. PROJECT COORDINATOR</p>	<p>REVIEWED BY: </p> <p>ENGR. ESMAIL C. USOP PROJECT COORDINATOR</p>	<p>RECOMMENDED BY: </p> <p>ENGR. MOHAMINT T. ALL MINNA PROJECT ENGINEER</p>	<p>APPROVED BY: </p> <p>ABDULRAHMAN A. MACACUA PROJECT MANAGER</p>	<p>27</p>
		<p>28</p>	<p>33</p>			

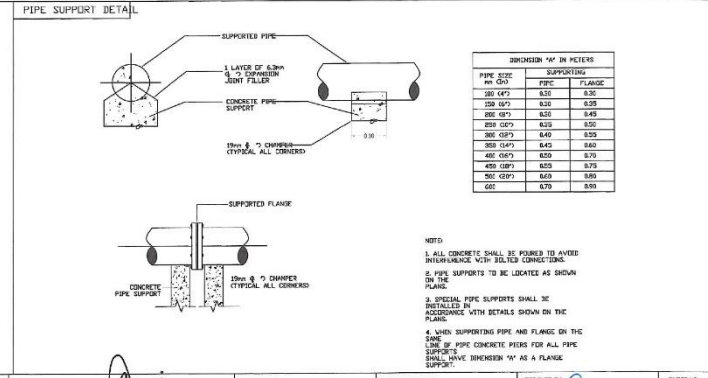
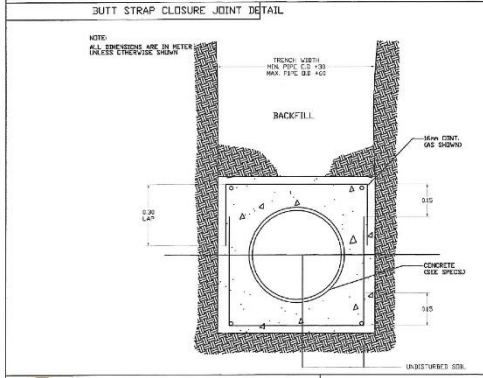
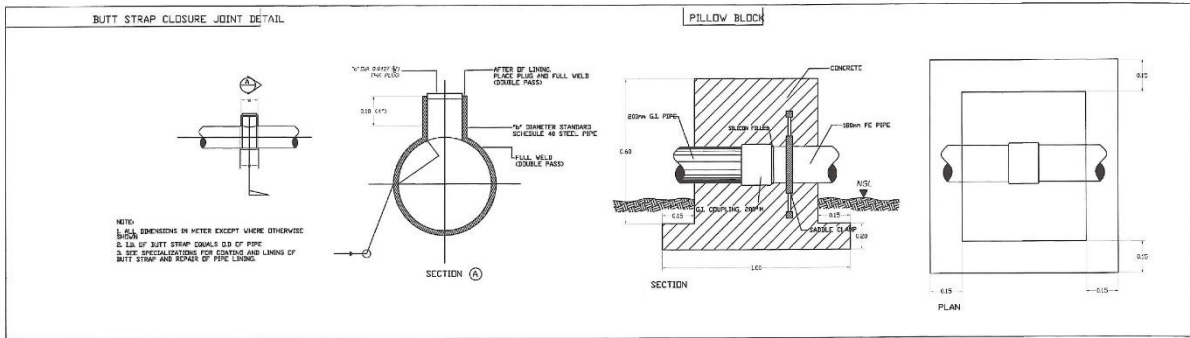


STEEL PIPE SLEEVE THRU CHB WALL

- NOTES:
1. ALL DIMENSIONS IN METERS UNLESS OTHERWISE SHOWN.
 2. M.P.S. NAME SHOWN FOR ILLUSTRATIVE PURPOSES ONLY.
 3. THE G.I. COVER TO IP THROUGH PIPE SHALL BE 15mm (15) mm.
 4. PRESSURE TEST WITH WATER MAIN PRIOR TO BACKFILLING.
 5. SERVICE LINE TO BE 15mm (15) mm ABOVE GROUND SURFACE.
 6. RETAINING G.I. OR GALVANIZED IRON PIPE SHALL BE 15mm (15) mm ABOVE GROUND SURFACE.
 7. THE SERVICE CONNECTION SHALL BE LOCATED AS SHOWN.
 8. THE SERVICE CONNECTION SHALL BE LOCATED AS SHOWN.
 9. THE SERVICE CONNECTION SHALL BE LOCATED AS SHOWN.
 10. THE SERVICE CONNECTION SHALL BE LOCATED AS SHOWN.
 11. THE SERVICE CONNECTION SHALL BE LOCATED AS SHOWN.
 12. THE SERVICE CONNECTION SHALL BE LOCATED AS SHOWN.
 13. ALL G.I. PIPES & FITTINGS SHALL BE SCHEDULE 40.
 14. INSTALL PVC TEE IN LIEU OF SADDLE ON 25mm P.P.P.

SERVICE CONNECTION FOR 3 M (") AND 5M (") ABOVE GROUND METER SETS

<p>BANGSAMORO AUTONOMOUS REGION IN MUSLIM MINDANAO SPECIAL DEVELOPMENT FUND - PMO BANGSAMORO GOVERNMENT CENTER, COTABATO CITY</p>	<p>CONSTRUCTION OF LEVEL II WATER SYSTEM</p> <p>BANGSAWIS OF CLAYANG, KUDASANGAL AND KAGISAWAN, MCKSAP CLUSTER I, SDA, BARRI</p>	<p>PREPARED BY: </p> <p>ENGR. HUMBER A. MANALINTAO JR. PROJECT COORDINATOR</p>	<p>REVIEWED BY: </p> <p>ENGR. ESMAIL C. USOP PROJECT COORDINATOR</p>	<p>RECOMMENDED BY: </p> <p>ENGR. MOHAMINT T. ALL MINNA PROJECT ENGINEER</p>	<p>APPROVED BY: </p> <p>ABDULRAHMAN A. MACACUA PROJECT MANAGER</p>	<p>28</p>
		<p>28</p>	<p>33</p>			



BANGSAMORO AUTONOMOUS REGION IN MUSLIM MINDANAO
SPECIAL DEVELOPMENT FUND - PMO
 BANGSAMORO GOVERNMENT CENTER, COTABATO CITY

CONSTRUCTION OF LEVEL II WATER SYSTEM

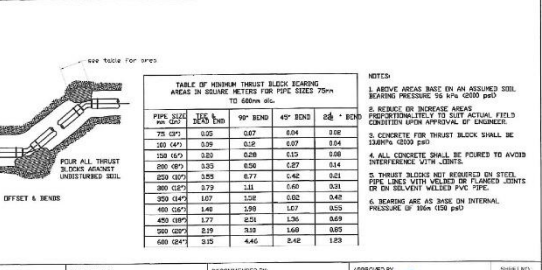
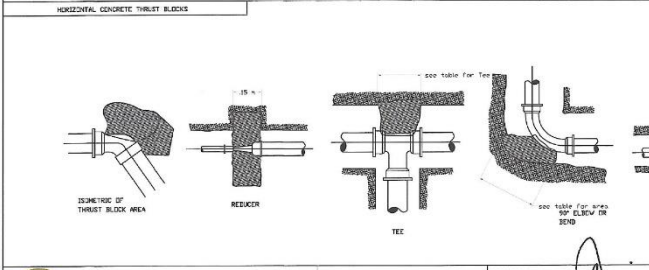
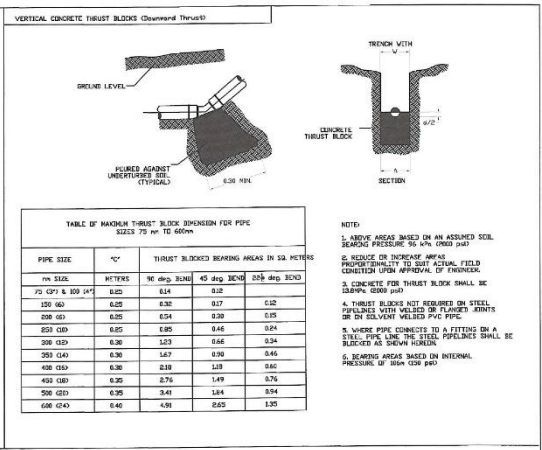
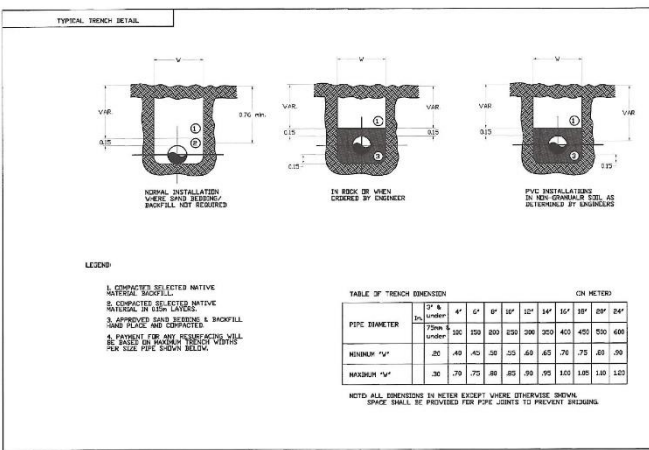
PREPARED BY: ENGR. HUNGRON A. MANALITA D.JR.
 PROJECT COORDINATOR (SVP/PM)

REVIEWED BY: ENGR. ELMAR C. USOP
 PROJECT COORDINATOR (SVP/PM)

RECOMMENDED BY: ENGR. MOHAMMAD T. ALL RINGA
 PROJECT COORDINATOR (SVP/PM)

APPROVED BY: ABDULLAH A. MACACUA
 PROJECT COORDINATOR (SVP/PM)

SHEET NO. 29 / 33



BANGSAMORO AUTONOMOUS REGION IN MUSLIM MINDANAO
SPECIAL DEVELOPMENT FUND - PMO
 BANGSAMORO GOVERNMENT CENTER, COTABATO CITY

CONSTRUCTION OF LEVEL II WATER SYSTEM

PREPARED BY: ENGR. HUNGRON A. MANALITA D.JR.
 PROJECT COORDINATOR (SVP/PM)

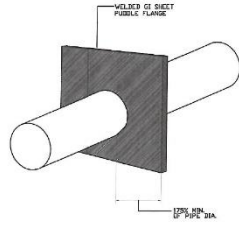
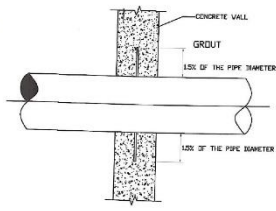
REVIEWED BY: ENGR. ELMAR C. USOP
 PROJECT COORDINATOR (SVP/PM)

RECOMMENDED BY: ENGR. MOHAMMAD T. ALL RINGA
 PROJECT COORDINATOR (SVP/PM)

APPROVED BY: ABDULLAH A. MACACUA
 PROJECT COORDINATOR (SVP/PM)

SHEET NO. 30 / 33

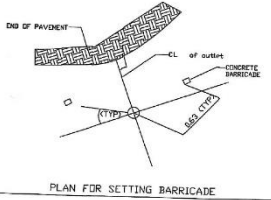
COUPLING AND HARNESS SET DETAIL



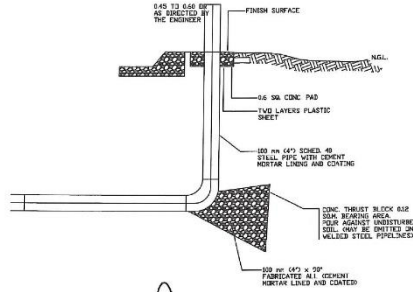
DIMENSIONS IN MM										
Pipe Size	Design	T	OS	BC	D	N	L	A	R	CR
100	100 x 100	100	100	100	100	100	100	100	100	100
150	150 x 150	150	150	150	150	150	150	150	150	150
200	200 x 200	200	200	200	200	200	200	200	200	200
250	250 x 250	250	250	250	250	250	250	250	250	250

DIMENSIONS IN INCHES										
Pipe Size	Design	T	OS	BC	D	N	L	A	R	CR
4	4 in x 4 in	4	4	4	4	4	4	4	4	4
6	6 in x 6 in	6	6	6	6	6	6	6	6	6
8	8 in x 8 in	8	8	8	8	8	8	8	8	8
10	10 in x 10 in	10	10	10	10	10	10	10	10	10

TYPICAL DETAIL OF PUDDLE FLANGE
(All pipes penetrating through wall)



DEAD-END BLOW-OFF ASSEMBLY



- NOTE:
1. ALL DIMENSIONS ARE IN METERS EXCEPT WHERE OTHERWISE SPECIFY.
 2. LATERALS INSTALLED UNDER CURB AND GUTTERS SHALL BE BORED.
 3. WHERE NO CURBS OR GUTTERS EXIST, THE BLOW-OFF SHALL BE LOCATED WITHIN 150 M. OF THE ROAD RIGHT OF THE WAY OR AS DIRECTED BY THE ENGINEER AND BARRICADES SHALL BE INSTALLED AS SHOWN HEREIN.
 4. COLOR SHALL BE YELLOW UNLESS OTHERWISE DIRECTED BY THE ENGINEER WHEN SPECIFIED COAL TAR ENAMEL COATING.
 5. WELD ALL JOINTS EXCEPT WHERE OTHER SHOWN.

<p>BANSAWANGKANG AUTONOMOUS REGION IN MUSLIM MINDANAO SPECIAL DEVELOPMENT FUND - PMO BANSAWANGKANG GOVERNMENT CENTER, COTABATO CITY</p>	<p>CONSTRUCTION OF LEVEL II WATER SYSTEM</p> <p>BARANGAYS OF GUANDANG, CUDRANGAN, AND KADIGSAL, MESA-TRAP CLUSTER (LSA, BARIM)</p>	<p>PREPARED BY:</p> <p>ENGR. HENRIETTE T. MARILITAJO JR. PROJECT COORDINATOR (SP-FIO)</p>	<p>RECHECKED BY:</p> <p>ENGR. MARILITAJO JR.</p>	<p>RECOMMENDED BY:</p> <p>ENGR. MOHAMMAD T. ALI, BNSA</p>	<p>APPROVED BY:</p> <p>ABDULLAH A. MACAGUA</p>	<p>SHEET NO.</p> <p>32</p>
		<p>ENGR. EDWIN C. USOP PROJECT COORDINATOR (SP-FIO)</p>	<p>ENGR. MOHAMMAD T. ALI, BNSA</p>	<p>ABDULLAH A. MACAGUA</p>	<p>33</p>	