

MINISTRY OF PUBLIC WORKS

MORKS

***Endorsement of
Proposed
Infrastructure
Projects by Other
BARMM
Ministries/Offices to
MFBM***





Outline of the Presentation:

- A. Memorandum Order No. 0045 S. 2021
- B. Required Documents
- C. Endorsement Letter
- D. Status of Projects Submitted by other Ministries/Agencies for Endorsement
- E. Other References
- F. Common Errors and Mistakes





بِسْمِ اللّٰهِ الرَّحْمٰنِ الرَّحِیْمِ
 Republic of the Philippines
 Bangsamoro Autonomous Region in Muslim Mindanao
MINISTRY OF PUBLIC WORKS
 Office of the Minister



MEMORANDUM
 Order No. **0045**
 Series of 2021

TO : **NORALIA A. MARAKI**
 Engineer IV,
NABIL S. MAMORIBID
 Engineer III,
NOJA P. TUMAGANTANG
 Engineer III,
MIKHAEL K. DEBAROSAN
 Engineer III,
ALEXANDER B. IBRA
 Engineer III
 This Ministry

SUBJECT : **Creation of MPW Technical Working Group (TWG) for
 Endorsement of Proposed Infrastructure Projects by
 Other BARMM Ministries/Offices to MFBM**

DATE : **2-August-2021 / 23 Dhul-Hijjah 1442**



In the exigency of the service, pursuant to Section 5.9 of Bangsamoro Budget Memorandum Circular No. 2021-01 of the Ministry of Finance and Budget Management (MFBM), budget proposals of Ministries/Offices involving specific concerns shall require Ministry/Office endorsement. For buildings and infrastructure related proposals, the endorsing entity is the Ministry of Public of Works (MPW), as such, you are hereby designated members of the MPW-TWG to wit:

Name	Designation
1. Noralia A. Maraki	Head
2. Nabil S. Mamoribid	Member
3. Noja P. Tumagantang	Member
4. Mikhael K. Debarosan	Member
5. Alexander B. Ibra	Member

Functions of the Technical Working Group shall include, but are not limited to, the following:

- a. Verify that there are no other government projects proposed in the MPW with the same purpose and location to avoid duplication of projects.



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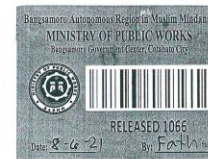


- b. Check the completeness/sufficiency of the submitted Detailed Engineering Design (DED) Plan together with supporting/pertinent documents (feasibility studies/reports, design analysis, quantity calculations, deed of donation, etc.)
- c. Evaluate the project costing in accordance with the MPW standards.
- d. Ensure that all pertinent reports and data to be endorsed to the MFBM are true and correct based on available records and information that can be verified.
- e. Prepare a memorandum to be signed by the Minister together with an endorsement with the following signatories:

Prepared by:	TWG Member
Reviewed and Submitted by:	TWG Head
Recommending Approval:	Director General
Approved by:	Minister

This Memorandum shall take effect immediately.

EDUARD UY GUERRA, Arch't.
 Minister





A. Memorandum Order No. 0045 S. 2021

- a. Verify that there are no other government projects proposed in the MPW with the same purpose and location to avoid duplication of projects.
- b. Check the completeness/sufficiency of the submitted Detailed Engineering Design (DED) Plan together with supporting/pertinent documents. (Feasibility studies/reports, design analysis, quantity calculations, specific location of the project, etc.)
- c. Evaluate the project costing in accordance with the MPW standards.
- d. Ensure that all pertinent reports and data to be endorsed to the MFBM are true and correct based on available records and information that can be verified.
- e. Prepare a memorandum to be signed by the Minister together with an endorsement.






B. Required Documents:

- I. Transmittal / Letter Request for Endorsement
- II. List of Projects (Name of Project, Specific Location, Number of Units, Unit Cost, and Total Cost)
- III. Detailed Engineering Design (DED)
- IV. Program of Works (POW) in accordance with DPWH-Detailed Unit Price Analysis (DUPA) manual and Approved Budget for the Contract (ABC)
- V. Certificate of Lot Availability/Deed of Donation
- VI. Certificate of Materials Canvassed
- VII. Feasibility Study (Optional, For 100 million & above projects)






I. Transmittal / II. Letter Request for Endorsement


 Republic of the Philippines
BANGSAMORO AUTONOMOUS REGION IN MUSLIM MINDANAO
 OFFICE OF THE CHIEF MINISTER
BARMM - MARAWI REHABILITATION PROGRAM
 Program Management Office
 MPW Compound, Brgy. Matampay, Marawi City

18 November 2021

ARCH. EDUARD UY GUERRA
 Minister
 Ministry of Public Works
 Bangsamoro Government Center, Cotabato City

THRU: TARHATA P. KALIM
 Chief, Planning and Programming Division
 MPW-BARMM
 Bangsamoro Government Center, Cotabato City



Dear MINISTER GUERRA:

Assalamu 'alaykum wa rahmatullahi wa barakatuhu.

Respectfully requesting from your good office the endorsement of the Construction and Rehabilitation of Water System Project in Transitory Sites in Marawi City, Lanao Del Sur and Lanao Del Norte of the Ministry of Social Services and Development (MSSD) under the Marawi Rehabilitation Program for your consideration.


Attached herewith are the following documents:


1. Program of Works (POW);
2. Detailed Engineering Plan (DED);
3. Certificate of Canvassed Materials; and
4. Certificate of Lot Availability.



We appreciate your continued support to the successful implementation of the Marawi Rehabilitation Program. For queries and concerns, please do not hesitate to contact us through mrp@bangsamoro.gov.ph or 0966-288-6066 (Mr. Mac Macapendeg).

Thank you.

Respectfully yours,


ATTY. ANNA TARHATA S. BASMAN, MP
 Program Manager




 Republic of the Philippines
 Bangsamoro Autonomous Region in Muslim Mindanao
MINISTRY OF HUMAN SETTLEMENTS AND DEVELOPMENT
 Dilangalen Building, Mongeau Street, Cotabato City
 Telephone No. (064) 425-5358/ Email Add: mhsd@bangsamoro.gov.ph


July 26, 2021

HON. ARCHT. EDWARD U. GUERRA
 Minister
 Ministry of Public Works-BARMM
 Bangsamoro Government Center, BARMM Compound
 Cotabato City

Dear Minister Guerra:

Assalamu Alaikum Warahmatullahi Wabarakatuhu!

We are pleased to submit to your good office the attached list of proposed Infrastructure Assets of the Ministry of Human Settlements and Development (MHSD) under Fiscal Year (FY) 2022 together with the Individual Program of Works, and Plan for your evaluation and subsequent endorsement to the Ministry of Finance, and Budget and Management-BARMM. Please see attached documents for your reference.


Subject proposed infrastructure projects are as follow, to wit:


No.	Project Name	Quantity/ Unit	Project Cost per unit	Total Amount
1	Construction of MHSD-BARMM Housing Project Phase II	53	550,000.00	29,150,000.00
2	Construction of 1-km Perimeter Fence at Resettlement Projects	1	3,500,000.00	3,500,000.00
3	Repairs/Renovation for Unsold Housing Projects Phase III	28	34,616.16	969,252.48
4	Construction of Housing Resettlement Projects in Lanao Del Sur	200	685,000.00	137,000,000.00
5	Construction of Housing Resettlement Projects in Maguindanao	300	675,000.00	202,500,000.00
6	Construction of Housing Resettlement Projects in Cotabato City	100	675,000.00	67,500,000.00
7	Construction of Housing Resettlement Projects in 63 barangays	100	675,000.00	67,500,000.00
8	Construction of Housing Resettlement Projects in Basilan	200	700,000.00	140,000,000.00
9	Construction of Housing Resettlement Projects in Sulu	200	725,000.00	145,000,000.00
10	Construction of Housing Resettlement Projects in Tawi-Tawi	200	745,000.00	149,000,000.00
	Total			942,119,252.48

For inquiry, please contact our focal person Engr. Zainodin A. Buisan at 09264345228.

Thank you and Wassalam.

Very truly yours,


HAMID AMINUDDIN D. BARRA
 Minister



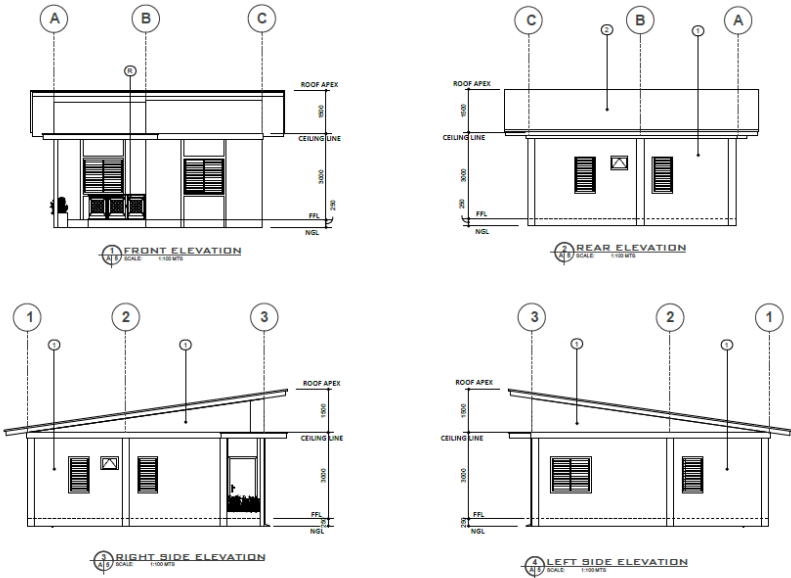


III. Detailed Engineering Design (DED)

1. Cover Page/Title Sheet
2. Architectural Plan
3. Structural Plan
4. Plumbing/Sanitary Plan
5. Electrical Plan
6. Mechanical Plan

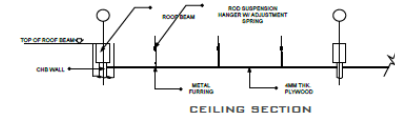
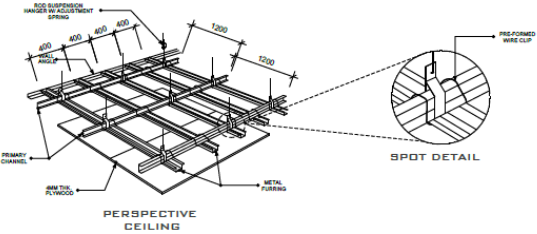
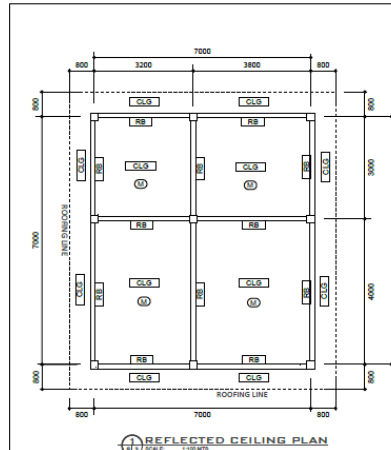
Note: DED should be in proper format and presentation, drawings should be scaled according to its paper size (A3). The Template of the drawing should have BARMM and Office Headings, Project Title with corresponding Location, Sheet Content, Signatories (Prepared by, Checked by, Submitted by, Recommending Approval, and Approved by), and Drawing No. and/or Sheet No.



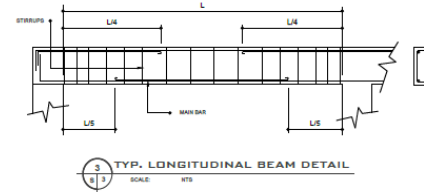


FINISHES	
MARK	DESCRIPTION
①	PAINTED AND FINISHED EXTERIOR WALL
②	RESIDENTIAL GRASS 4-6MM THK. ROOFING SHEET

MATERIALS	
MARK	DESCRIPTION
③	INCLUDE WINDOW BY TYPED BLACKS OR STANDARD JOCKUS TRAMES
④	INCLUDE WINDOW BY TYPED BLACKS OR STANDARD JOCKUS TRAMES
⑤	INCLUDE WINDOW BY TYPED BLACKS OR STANDARD JOCKUS TRAMES
⑥	INCLUDE WINDOW BY TYPED BLACKS OR STANDARD JOCKUS TRAMES
⑦	INCLUDE WINDOW BY TYPED BLACKS OR STANDARD JOCKUS TRAMES
⑧	INCLUDE WINDOW BY TYPED BLACKS OR STANDARD JOCKUS TRAMES
⑨	INCLUDE WINDOW BY TYPED BLACKS OR STANDARD JOCKUS TRAMES
⑩	INCLUDE WINDOW BY TYPED BLACKS OR STANDARD JOCKUS TRAMES



④ CEILING DETAILS
SCALE: 1:100



MARK	SUPPORT	CENTER	SUPPORT	STIRRUP
ROOF BEAM (RB)				10MMØ STIRRUP 1@50, 6@100, 4@200, REST @250

BEAM SCHEDULE

FINISHES	
MARK	DESCRIPTION
①	PAINTED FINISHED CEILING
②	4MM THK. PLYWOOD ON METAL PURLING SYSTEM

MATERIALS	
MARK	DESCRIPTION
③	PANEL DOOR ON 2"X4" WOODEN JOIST (STRAP)
④	PNG FLOOR BOARD W/ 4"X4" JOIST (STRAP)
⑤	PANEL DOOR ON 2"X4" WOODEN JOIST (STRAP)
⑥	INCLUDE WINDOW BY TYPED BLACKS OR STANDARD JOCKUS TRAMES
⑦	4MM THK. PLYWOOD ON METAL PURLING SYSTEM

	PROJECT TITLE CONSTRUCTION OF MHSD - BARMM RESETTLEMENT PROJECT 2022 LOCATION: BASILAN	SHEET CONTENT • Front Elevation • Rear Elevation • Right Side Elevation • Left Side Elevation	PREPARED BY SHARJA ABELA USMAN KIDAS PROJECT EVALUATION OFFICER I	CHECKED BY ZAINODIN A. BUISAN PLANNING OFFICER II	RECOMMENDED BY ESMUEL W. EBRARIM DIRECTOR GENERAL	APPROVED BY HAMID AMINUDDIN D. BARRA MINISTER
	Republic of the Philippines Bangsamoro Autonomous Region in Muslim Mindanao MINISTRY OF HUMAN SETTLEMENTS AND DEVELOPMENTS 2nd Floor Dilangan Bldg., ND Village, RR 101, Comaba City					

	PROJECT TITLE CONSTRUCTION OF MHSD - BARMM RESETTLEMENT PROJECT 2022 LOCATION: BASILAN	SHEET CONTENT • Reflected Ceiling Plan • Ceiling Perspective • Ceiling Section • Schedule of Beams • Typical Longitudinal Beam Detail	PREPARED BY SHARJA ABELA USMAN KIDAS PROJECT EVALUATION OFFICER I	CHECKED BY ZAINODIN A. BUISAN PLANNING OFFICER II	RECOMMENDED BY ESMUEL W. EBRARIM DIRECTOR GENERAL	APPROVED BY HAMID AMINUDDIN D. BARRA MINISTER	DRAWING NO.
	Republic of the Philippines Bangsamoro Autonomous Region in Muslim Mindanao MINISTRY OF HUMAN SETTLEMENTS AND DEVELOPMENTS 2nd Floor Dilangan Bldg., ND Village, RR 101, Comaba City						

Sample of Detailed Engineering Design (DED)





IV. Detailed Unit Price Analysis (DUPA)

is the determination of reasonable unit cost of each item of work which reflects the breakdown showing the quantities of work items, unit prices of materials, equipment rental rates, labor rates and DPWH-prescribed indirect costs including taxes.





DETAILED UNIT PRICE ANALYSIS (DUPA)

Item No./Description : 1032(1)a Painting Works (Masonry Painting)
 Unit of Measurement : m²
 Output per hour : 2.100
 Quantity : 37.53 m²

Designation		No. of Person	No. of Hours	Hourly Rate	Amount
A. Labor					
a.	Construction Foreman	1	18	63.59	1,144.62
b.	Skilled Laborer	2	18	50.60	1,821.60
c.	Unskilled Laborer	1	18	39.03	702.54
Sub - Total for A					3,668.76
Name and Capacity		No of Units	No. of Hours	Hourly Rate	Amount
B. Equipment					
Minor Tools (10% of Labor Cost)					366.88
Sub - Total for B					366.88
Name and Specification		Unit	Quantity	Unit Cost	Amount
C. Materials					
a.	Concrete Neutralizer	gal	1	339.00	339.00
b.	Concrete Sealer/Primer	gal	2	743.00	1,486.00
c.	Patching Compound	gal	2	515.00	1,030.00
d.	Semi Gloss Latex (two coat only)	gal	4	545.97	2,183.88
e.	Consumables (5% of Materials Cost)				251.94
Sub - Total for C					5,290.82
D. Total Direct Cost (A + B + C)					9,326.46
E. Overhead, Contingencies & Miscellaneous (OCM)				8% of D	746.12
F. Contractor's Profit (CP)				10% of D	932.65
G. Value Added Tax (VAT) + BARM Tax				6% of (D + E + F)	660.31
H. Total Cost (D + E + F + G)					11,665.54
I. Total Unit Cost					310.83

DETAILED UNIT PRICE ANALYSIS (DUPA)

Item No./Description : 1003(1) 4.5 mm Ordinary Plywood on Metal Frame Ceiling
 Unit of Measurement : m²
 Output per hour : 1.243
 Quantity : 44.5825 m²

Designation		No. of Person	No. of Hours	Hourly Rate	Amount
A. Labor					
a.	Construction Foreman	1	36	63.59	2,289.24
b.	Skilled Laborer	1	36	50.60	1,821.60
c.	Unskilled Laborer	2	36	39.03	2,810.16
Sub - Total for A					6,921.00
Name and Capacity		No of Units	No. of Hours	Hourly Rate	Amount
B. Equipment					
Minor Tools (10% of Labor Cost)					692.10
Sub - Total for B					692.10
Name and Specification		Unit	Quantity	Unit Cost	Amount
C. Materials					
a.	4.5 mm Ordinary Plywood	pcs.	17	250.00	4,250.00
b.	Metal Purring - 3 m length	pcs.	51	186.67	9,520.17
c.	Carrying Channels	pcs.	16	132.00	2,112.00
d.	Hanger Bar/Rod	pcs.	45	100.00	4,500.00
e.	Channel Clip	pcs.	268	5.50	1,474.00
f.	Wall angle	pcs.	11	56.00	616.00
g.	Rivets	pcs.	624	1.00	624.00
h.	1" Metal Screw	pcs.	179	1.83	327.57
<i>Note:</i> Quantities were derived from plans and specifications of a standard school building with carrying channels spaced by 1.20 m and metal furring spaced by 0.40 m on center.					
Sub - Total for C					23,423.74
D. Total Direct Cost (A + B + C)					31,036.84
E. Overhead, Contingencies & Miscellaneous (OCM)				8% of D	2,482.95
F. Contractor's Profit (CP)				10% of D	3,103.68
G. Value Added Tax (VAT) + BARM Tax				6% of (D + E + F)	2,197.41
H. Total Cost (D + E + F + G)					38,820.88
I. Total Unit Cost					871.16

Sample of Detailed Unit Price Analysis (DUPA)





IV. Program of Works (POW)

is the total estimated cost of the project which covers the Civil Works Cost, Engineering Supervision and Administrative Overhead, Road Right-of-Way Acquisition Cost, Construction Contingency, etc. The POW shall include information about the project location and limits, quantity and unit cost for each item of work, construction duration, funding source, equipment requirements, etc.





IV. Approved Budget for the Contract (ABC)

is the total estimated agency estimate (direct cost, indirect cost and tax) for civil works contract of infrastructure projects, wherein it is the ceiling of award of contract for government locally-funded projects and reference for comparison of bid costs of contractors for both locally funded and foreign-assisted projects.





V. Certificate of Lot Availability w/ VI. Certificate of Material Canvassed



Republic of the Philippines
Bangsamoro Autonomous Region in Muslim Mindanao
MINISTRY OF HUMAN SETTLEMENTS AND DEVELOPMENT
Dilangalen Building, Mongeau Street, RH-8, Cotabato City
Telephone No. (064) 425-5358 Email Address: mhsd@bangsamoro.gov.ph



August 17, 2021 (Muharram 09, 1443 AH)

CERTIFICATION

On efforts to expedite the implementation of the Construction of Resettlement Housing Project for Fiscal Year (FY) 2022, the undersigned certifies that the construction materials for the purpose were properly canvassed to ensure that they are procured at lowest prices.

This is to certify further that as to the acquisition of land for the erection of the housing units, the ministry is now in the initial stage of suitability inspection and obtention of necessary documents for the purchase of the land.

This certification is prepared and issued upon request for whatever legal purpose/s it may serve best.


HAMID AMINODDIN D. BARRA
Minister



CERTIFICATION

On the efforts on expediting the endorsement of the **BWC Three (3) Storey Office Building** with an estimated cost of **Ten Million Pesos Only (PHP 10,000,000.00)**, the undersigned certifies that the construction materials for the above-mentioned purpose were properly canvassed to ensure that the procurement will be advantageous to the **Bangsamoro Autonomous Region in Muslim Mindanao (BARMM)** in terms of cost and quality.

Further, the undersigned also certifies that the land in which the building will be constructed is owned by the **Bangsamoro Women Commission**, represented by the undersigned, **MP Hadja Bainon G. Karon**, and is ready for any inspection whatsoever.

This certification is prepared upon the request of the **Ministry of Public Works (MPW)** for whatever legal purpose it may serve best.

Issued this 13th Day of September 2021 at BWC, BGC Compound, RH 07, Cotabato City.


MP HADJA BAINON G. KARON
Chairperson, Bangsamoro Women Commission
Member of Parliament, BARMM





C. Endorsement Letter





Sample Endorsement Letter

FILE

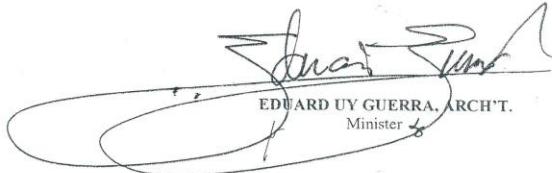
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Republic of the Philippines
Bangsamoro Autonomous Region in Muslim Mindanao
MINISTRY OF PUBLIC WORKS
Office of the Minister

Endorsement
November 29, 2021


Respectfully forwarded to **HON. AHOD B EBRAHIM, AL HAJ**, Interim Chief Minister, Office of the Chief Minister, BARMM and Concurrent Minister, Ministry of Finance, Budget and Management thru **ATTY. UBAIDA C. PACASEM, CPA**, Deputy Minister, the herein attached project proposal of the Ministry of Human Settlement and Development which this office has found in conformity with Ministry of Public Works standards.

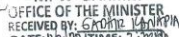
It is suggested that the funding requirement for the above-mentioned projects be considered in the FY 2022 GAAB Budget.





EDUARD UY GUERRA, ARCH'T.
Minister

MINISTRY OF FINANCE, AND
BUDGET AND MANAGEMENT-BARMM

RECEIVED

BY:  DATE: 12/2/21 TIME: 2:25

MPW - BARMM
OFFICE OF THE MINISTER
RECEIVED BY: 
DATE: 12/02/21 TIME: 2:25 PM
copy





D. Status of Projects Submitted by Ministries for Endorsement





Status of Projects Submitted by Ministries for Endorsement

NO.	NAME OF AGENCY	NO. OF PROJECT (Submitted)	NO. OF ENDORSED	DOCUMENTS RECEIVED				REMARKS	STATUS
				DATE	POW	DED	SUBMISSION		
BAA 2020									
1	Ministry of Human Settlement and Development (MHSD)	3	3	June 25, 2021	√	√	3RD	Endorsed on July 12, 2021	Endorsed
2	Ministry of Indigenous Peoples' Affairs (MIPA)	1	0	September 17, 2021	√	√	1ST	Returned to sender on September 27, 2021	Pending (for compliance)
MRP 2021									
3	Ministry of Agriculture, Fisheries and Agrarian Reform (MAFAR- MRP) (MP Basman)	4	0	November 18, 2021	√	√	3RD	Waiting for pick up (last contact:March 4, 2022)	Pending (for compliance)
4	Ministry of Social Services and Development (MSSD-MRP)	2	0	March 02, 2022	√	√	9TH	Waiting for final submission (signed) of POW and DED	To be endorsed
5	Office of the Chief Minister (MP Basman)	6	0	January 12, 2022	√	√	5TH		On Going Evaluation
GAAB 2021									
6	Ministry of Indigenous Peoples' Affairs (MIPA)	2	0	September 17, 2021	√	√	2ND	Returned to sender on September 27, 2021	Pending (for compliance)
GAAB 2022									
7	Bangsamoro Women Commission (BWC)	1	1	October 04, 2021	√	√	5TH	Endorsed on October 6, 2021	Endorsed
8	Ministry of Human Settlement and Development (MHSD)	10	9	November 25, 2021	√	√	9TH	Endorsed on November 29, 2021	Endorsed
9	Ministry of Trade Investment and Tourism (Polloc Freeport and Ecozone)	3	0	July 16, 2021	√	√	4TH	Returned to sender on September 2, 2021	Pending DED only (for compliance)
10	Ministry of Science and Technology (MOST)	2	0	June 9, 2021	√		1ST	Returned to sender on June 11, 2021	Pending (for compliance)
11	Ministry of Trade, Investment and Tourism (MTIT)	1	0	June 24, 2021	√	√	1ST	Returned to sender on June 28, 2021	Pending (for compliance)

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Status of Projects Submitted by Ministries for Endorsement

NO.	NAME OF AGENCY	NO. OF PROJECT (Submitted)	NO. OF ENDORSED	DOCUMENTS RECEIVED				REMARKS	STATUS
				DATE	POW	DED	SUBMISSION		
12	Office of the Chief Minister (Project Tabang)	3	0	July 21, 2021	√	√	1ST	Returned to sender on August 04, 2021	Pending (for compliance)
13	Ministry of Public Order and Safety (MPOS)	2	0	August 03, 2021	√		2ND	Returned to sender on August 04, 2021	Pending (for compliance)
14	Ministry of Social Services and Development (MSSD)	7	0	August 16, 2021	√	√	8TH	Returned to sender on August 24, 2021	Pending (for compliance)
15	Ministry of Agriculture, Fisheries and Agrarian Reform (MAFAR)	5	0	August 31, 2021	√	√	4TH	Returned to sender on September 27, 2021	Pending (for compliance)
16	Ministry of Basic Higher and Technical Education (MBHTE)	141	0	August 17, 2021	√	√	2ND	Returned to sender on October 04, 2021	Pending (for compliance)
17	Ministry of Indigenous Peoples' Affairs (MIPA)	1	0	September 17, 2021	√	√	1ST	Returned to sender on September 27, 2021	Pending (for compliance)
18	Office of the Chief Minister (KAPYANAN)	8	0	September 16, 2021	√		1ST	Returned to sender on October 06, 2021	Pending (for compliance)
19	Ministry of Transportation and Communication (MOTC)	26	0	November 15, 2021	√	√	4TH	Returned to sender on December 20, 2021	Pending (for compliance)
20	Ministry of Health (MOH)	21	0	September 22, 2021	√	√	3RD	Waiting for pick up (last contact: January 11, 2022)	Pending (for compliance)
21	Ministry of Trade, Investment and Tourism (MTIT)	2 (1)	0	January 10, 2022	√	√	7TH		To be endorsed
TOTAL		251							





E. Other References





MPW Standard Programming References:

1. DPWH D.O 137, S. 2017 (Cost Estimation for Low Rise Buildings)
2. DPWH D.O 028, S. 2019 (Cost Estimation for High Rise Buildings)
3. DPWH D.O 068, S. 2016 (Road Construction Cost Estimate)
4. DPWH D.O 207, S. 2016 (Bridge Construction Cost Estimate)
5. DPWH D.O 143, S. 2017 (Revised Standard Pay Item List for Infrastructure Projects)
6. DPWH D.O 197, S. 2016 (Revised Guidelines in the Preparation of Approved Budget for the Contract)





Republic of the Philippines
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
OFFICE OF THE SECRETARY
Manila

097.13 DPWH
12-06-2017

22 NOV 2017

DEPARTMENT ORDER)
NO. **137**)
Series of 2017 *12.06.17*

SUBJECT: **Cost Estimation Manual for Low Rise Buildings**

In line with the Department's Quality Policy to implement projects at the right cost, all Implementing Offices are hereby directed to adopt the herein **Cost Estimation Manual for Low Rise Buildings** in the determination of unit cost of Pay Items of Work involved in the construction and repair/retrofitting of low rise building projects.

This *Manual* aims to enhance the technical capability of DPWH engineers in the preparation and review of Program of Works (POW) and Approved Budget for the Contract (ABC) and to establish consistency in the format of preparation and serve as a uniform basis/reference in the derivation of unit cost for each item of work. It shall be distributed to all concerned offices of the Department and uploaded in the DPWH Intranet.

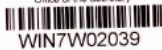
This Order shall be consistent with the implementation of D.O. No. 163, Series of 2015 "Standard Forms of Program of Works (POW) and Approved Budget for the Contract (ABC)" with modification on its format and description of item number and scope of works (Annex A) to conform with the DPWH Standard Specifications for Public Works Structures, Volume III (Buildings, Ports and Harbors, Flood Control and Drainage Structures and Water Supply Systems) and Standardized Pay Items of Work for Buildings as embodied in D.O. 05, Series of 2017.

This Order shall take effect immediately.

MARK A. VILLAR
Secretary

6.1.3 CSSD/BOC

Department of Public Works and Highways
Office of the Secretary



WIN7W02039



Republic of the Philippines
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
OFFICE OF THE SECRETARY
Manila

097.13 DPWH
08-14-2019

MAR 05 2019

DEPARTMENT ORDER)
NO. **28**)
Series of 2019 *03.14.19*

SUBJECT: **Cost Estimation Manual for High Rise Buildings**

In line with the Department's Quality Policy to implement projects at the right cost, all Implementing Offices are hereby directed to adopt the herein **Cost Estimation Manual for High Rise Buildings** in the determination of unit cost of Pay Items of Work involved in the construction and repair/retrofitting of high-rise building projects.

This *Manual* aims to enhance the technical capability of DPWH engineers in the preparation and review of Program of Works (POW) and Approved Budget for the Contract (ABC) and to establish consistency in the format of preparation and serve as a uniform basis/reference in the derivation of unit cost for each item of work. It shall be distributed to all concerned offices of the Department and uploaded in the DPWH Intranet.

This Order shall be consistent with the implementation of D.O. No. 163, Series of 2015 "Standard Forms of Program of Works (POW) and Approved Budget for the Contract (ABC)" with modification on its format and description of item number and scope of works (Annex A) to conform with the DPWH Standard Specifications for Public Works Structures, Volume III (Buildings, Ports and Harbors, Flood Control and Drainage Structures and Water Supply Systems) and Standardized Pay Items of Work for Buildings as embodied in D.O. 143, Series of 2017.

This Order shall take effect immediately.

MARK A. VILLAR
Secretary

6.1.3 ECG/AMD/WRO

Department of Public Works and Highways
Office of the Secretary



WIN9W02111



Republic of the Philippines
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
OFFICE OF THE SECRETARY
Manila

097.13 DPWH
12-14-2017

11 DEC 2017
DEPARTMENT ORDER)
NO. **143**)
Series of 2017 *12.14.17*

SUBJECT: **Revised Standard Pay Item List for Infrastructure Projects**

To ensure uniformity in the application/adoption of the Pay Item Numbers for Pay Items of Work involved in the preparation of the Design Plans and Quantities, Programs of Works (POW) and Approved Budget for the Contract (ABC) for Infrastructure Projects nationwide, all implementing offices of the Department are hereby directed to use the revised Standard Pay Item List as prescribed (**Annex "A"**) for various pay items based on the DPWH Standard Specifications for Highways, Bridges and Airports (Volume II) and Buildings, Ports and Harbors, Flood Control and Drainage Structures and Water Supply Systems (Volume III). This consolidates pay items subscript based on different dimensions/sizes, classifications, and types of an item, and incorporates other new pay items not yet included in the Blue Book but are deemed necessary in the actual implementation.

The revised Standard Pay Item List shall be adopted with the following considerations:

- For projects already bid out/awarded/contracted, change of pay items number description/unit of measure to conform with the standard pay items shall be effected with the approval of the Head of Implementing Office (IO);
- For projects with already approved Plans, POW & ABC, change of pay items number description/unit of measure to conform with the standard pay items shall be effected with the approval of the Head of Implementing Office, prior to the bidding;
- For pay items provided with a Certificate of Conditional Approval, also known as **pilot pay items**, shall only be valid during the five-year evaluation span as defined in their respective issuances of standard specification unless found successful and approved as regular pay item. Starting for FY 2018-funded projects, the usage of Special Pay Item (SPL) is not allowed.

If the pay items of work required in the DPWH Infrastructure Projects are not found in the revised Standard Pay Item List, the concerned IO is required to apply for its inclusion as a regular pay item by submitting the Generic Technical Specification, i.e; materials requirement, construction methodology, unit of measure, method of payment, etc. with corresponding references to the Bureau of Research and Standards for evaluation and approval. Non-compliance shall result in no payment to the contractor concerned on pay items of work not included in the said Standard Pay Item list.

The Standard Pay Item List prescribed in this Department Order shall be adopted for all infrastructure projects to be implemented for CY 2018 and onwards.

This Order supersedes Department Order 05, Series of 2017 and shall take effect immediately.

MARK A. VILLAR
Secretary

6.1.3 AMD/WRO

Department of Public Works and Highways
Office of the Secretary



WIN7W02042

D.O 137 S. 2017, D.O 028 S. 2019 & D.O 143 S. 2017





17 MAR 2016

Republic of the Philippines
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
OFFICE OF THE SECRETARY
Manila

BPP. 13 DPAW
03-17-2016

DEPARTMENT ORDER)
NO. 68)
Series of 2016)

SUBJECT: **Road Construction Cost Estimation Manual (RCCEM)**

In line with the Department's Quality Policy to implement projects at the right cost, all concerned Implementing Offices are hereby directed to adopt the herein **Road Construction Cost Estimation Manual** in the determination of the unit cost of pay items of Work involved in the construction, upgrading and repair/rehabilitation/ reconstruction of roads and roadside structures.

This *Manual*, prepared by the Bureau of Construction in collaboration with Implementing Offices, aims to enhance the technical capability of engineers in the preparation and review of Program of Works (POW) and to establish consistency in the format of presentation and uniform basis/reference for materials cost, labor and equipment rental rates. It shall be distributed to all Regional Offices, District Engineering Offices and Unified Project Management Offices of the Department.

This Department Order shall be coherent with the implementation of Department Order No. 163 Series of 2015 "Standard Forms of Program of Works (POW), Approved Budget for the Contract (ABC) and Detailed Unit Price Analysis (DUPA)."

This Order shall take effect immediately.

ROGELIO L. SINGSON
Secretary

5.2.1 AMD/WRO/RCA

Department of Public Works and Highways
Office of the Secretary

WIN6W01897



20 OCT 2016

Republic of the Philippines
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
CENTRAL OFFICE
Manila

BPP. 13 DPAW
10-24-2016

DEPARTMENT ORDER)
NO. 207)
Series of 2016)

SUBJECT: **ADOPTION OF THE BRIDGE CONSTRUCTION COST ESTIMATION MANUAL (BCCEM)**

In line with the Department's Quality Policy to implement projects at the right cost, all concerned Implementing Offices are hereby directed to adopt the herein **Bridge Construction Cost Estimation Manual (BCCEM)** in the determination of the unit cost of Pay Items of Work involved in the construction, upgrading and repair/reconstruction/rehabilitation of bridge structures.

This Manual aims to enhance the technical capability of engineers in the preparation and review of Program of Works (POW) and Approved Budget for the Contract (ABC), and to establish consistency in the format of presentation and uniformity in estimating materials cost, labor cost, and equipment rental rates.

This Order likewise serves to supplement the implementation of Department Order No. 163, Series of 2015, regarding "Standard Forms of Program of Works (POW), Approved Budget for the Contract (ABC) and Detailed Unit Price Analysis (DUPA)."

This Order shall take effect immediately.

ROMEO S. MOMBESAESO I
Undersecretary for Luzon Operations
Officer-In-Charge

6.1.1: AMD/WRO/RCA
Proposed D.O. for DEQ/rd

Department of Public Works and Highways
Office of the Secretary

WIN6W01966



07 OCT 2016

Republic of the Philippines
DEPARTMENT OF PUBLIC WORKS AND HIGHWAYS
OFFICE OF THE SECRETARY
Manila

BPP. 13 DPAW
10-10-2016

DEPARTMENT ORDER)
NO. 197)
Series of 2016)

SUBJECT: **Revised Guidelines in the Preparation of Approved Budget for the Contract (ABC)**

The following policies, rules and procedures relative to the preparation of the "Approved Budget for the Contract" (ABC) previously prescribed under Department Order No. 22, Series of 2015, are hereby revised/reiterated.

The ABC shall be prepared on the basis of the design plans for the project which has been duly approved by authorized officials in accordance with existing regulations.

All items of work to be used in preparing the ABC shall conform to the Standard Specifications for Highways, Bridges and Airports, revised 2013, Standard Specifications for Public Works Structures, 1995, and approved Special Specifications for the project.

The ABC shall be composed of the Direct Cost and the Indirect Cost.

A. The Direct Cost shall consist of the following:

- A.1 Cost of materials to be used in doing the work item called for, which shall include, inter alia, the following:
 - A.1.1 Cost at source, including processing, crushing, stockpiling, loading, royalties, local taxes, construction and/or maintenance of haul roads, etc.
 - A.1.2 Expenses for hauling to project site.
 - A.1.3 Handling expenses.
 - A.1.4 Storage expenses.
 - A.1.5 Allowance for waste and/or losses, not to exceed 5% of materials requirement.
- A.2 Cost of Labor:
 - A.2.1 Salaries and wages, as authorized by the Department of Labor and Employment.
 - A.2.2 Fringe benefits, such as vacation and sick leaves, benefits under the Workmen's Compensation Act, GSIS and/or SSS contributions, allowances, 13th month pay, bonuses, etc.

D.O 068 S. 2016, D.O 207 S. 2016 & D.O 197 S. 2016





OCM and Profit Mark-Up

The following items shall not be subjected to OCM and Profit mark-up:

1. Mobilization and demobilization
2. Provision of Service Vehicle
3. Permits and Clearances





OCM and Profit Mark-Up

The following non-civil works items shall not be subjected to OCM mark-up:

1. Field/Laboratory Office & Living Quarters (Rental Basis)
2. Furnishing of Furniture, Laboratory Equipment, Survey Equipment and Consumables
3. Assistance to the Engineers
4. Photographs
5. Health and Safety
6. Traffic Management
7. Environmental Compliance
8. Communication Equipment, etc.





OCM and Profit Mark-Up

Below are the presentation of estimated Direct Cost and the corresponding Indirect Cost.

ESTIMATED DIRECT COST (EDC)	INDIRECT COST % FOR OCM AND PROFIT		TOTAL INDIRECT COST % FOR OCM AND PROFIT
	OCM (% OF EDC)	PROFIT (% OF EDC)	
Up to P5Million	15	10	25
Above P5M up to P50M	12	8	20
Above P50M up to P150M	10	8	18
Above P150M	8	8	16





F. Common Errors and Mistakes





DETAILED UNIT PRICE ANALYSIS (DUPA)

Item No./Description : 903(2) Formworks and Falseworks for (One-Storey Building)
 Unit of Measurement : m²
 Output per hour : 3.24 m²
 Quantity : 125.06

Designation	No. of Person/s	No. of Hour/s	Hourly Rate	Amount (PhP)
A. Labor				
Installation				
a. Construction Foreman	1	39.00	100.49	3,919.11
b. Skilled Laborer	2	39.00	72.74	5,673.72
c. Unskilled Laborer	4	39.00	56.03	8,740.68
Stripping				
a. Construction Foreman	1	16.00	100.49	1,607.84
b. Unskilled Laborer	6	16.00	56.03	5,378.88
Sub - Total for A				25,320.23
Name and Capacity	Quantity	No. of Day/s	Daily Rental Rate	Amount (PhP)
B. Equipment				
a. Minor Tools (10% of Labor Cost)				
Sub - Total for B				2,532.02
Sub-Total for C (B/Area)				12.35
Name and Specification	Unit	Quantity	Unit Cost	Amount (PhP)
C. Materials				
a. Phenolic Board (0.019 x 1.2 x 2.4) - 4 uses	pc	11.00	1,522.50	4,186.88
b. Good Lumber - 3 uses	bd ft	300.00	38.44	3,844.00
c. Assorted Common Nails	kg	27.00	85.00	765.00
d. Consumables (5% of Materials Cost)				439.79
Sub - Total for F				9,235.67
D. Direct Cost			(A + B + C)	34,568.25
E. Direct Unit Cost			(A + B + C)/Quantity	276.41
F. Overhead, Contingencies & Miscellaneous (OCM) Expenses			15% of D	5,185.24
G. Contractor's Profit (CP)			10% of D	3,456.82
H.			3	6% of (D + F + G)
I. Total Cost			(D + F + G + H)	45,802.93
J. Total Adjusted Unit Cost			(I/Quantity)	366.25

Incorrect Computation of Amount

Amount = Quantity x Unit Cost
 Amount = 11 x 1522.50
Amount = 16,747.5





DETAILED UNIT PRICE ANALYSIS (DUPA)

No./Description : 1047(2)b Structural Steel, Trusses
 Unit of Measurement : kg
 Output per hour : 85.00 kg
 Quantity : 48.00

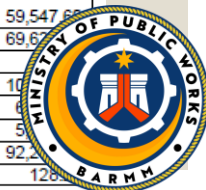
Designation	No. of Person/s	No. of Hour/s	Hourly Rate	Amount (PhP)
A. Labor				
Fabrication				
a. Construction Foreman	1	1.00	100.49	100.49
b. Skilled Laborer	2	1.00	72.74	145.48
c. Unskilled Laborer	2	1.00	56.03	112.06
Erection				
a. Skilled Laborer	3	1.00	72.74	218.22
b. Unskilled Laborer	3	1.00	56.03	168.09
Sub - Total for A				744.34
Name and Capacity	No. of Unit/s	No. of Hour/s	Hourly Rate	Amount (PhP)
B. Equipment				
a. Welding Machine	1	1.00	371.00	371.00
b. Cutting Outfit	1	1.00	5.45	5.45
c. Truck Mounted Crane (20-25 mt)	1	1.00	1,611.00	1,611.00
Minor Tools (10 % of Labor Cost)				
Sub - Total for B				2,121.88
Total (A + B)				2,866.22
Name and Specification	Unit	Quantity	Unit Cost	Amount (PhP)
C. Materials				
a. Structural Steel Truss	kg	48.00	51.92	2,492.28
b. Acetylene	kg	1.00	99.00	99.00
c. Oxygen	kg	2.00	152.00	304.00
d. Welding Rod	kg	1.00	86.36	86.36
e. Consumables (5% of Materials Cost)				
Sub - Total for F				3,130.72
D. Direct Cost			(A + B + C)	5,252.61
E. Direct Unit Cost			(A + B + C)/Quantity	109.43
F. Overhead, Contingencies & Miscellaneous (OCM) Expenses		15%	of D	787.89
G. Contractor's Profit (CP)		10%	of D	525.26
H. Value Added Tax (VAT)		6%	of (D + F + G)	393.95
I. Total Cost			(D + F + G + H)	6,959.70
J. Total Adjusted Unit Cost			(I/Quantity)	144.99

DETAILED UNIT PRICE ANALYSIS (DUPA)

Item No./Description : 1047(2)c Structural Steel Purlins
 Unit of Measurement : kg
 Output per hour : 90.45 kg
 Quantity : 719.28

Designation	No. of Person/s	No. of Hour/s	Hourly Rate	Amount (PhP)
A. Labor				
a. Construction Foreman	1	8.00	100.49	803.92
b. Skilled Laborer	2	8.00	72.74	1,163.84
c. Unskilled Laborer	4	8.00	56.03	1,792.96
Sub - Total for A				3,760.72
Name and Capacity	No. of Unit/s	No. of Hour/s	Hourly Rate	Amount (PhP)
B. Equipment				
a. Welding Machine	2	8.00	371.00	5,936.00
Minor Tools (10% of Labor Cost)				
Sub - Total for B				376.07
Sub - Total for B				6,312.07
Total (A + B)				10,072.79
Name and Specification	Unit	Quantity	Unit Cost	Amount (PhP)
C. Materials				
a. Structural Steel Purlins	kg	756.00	72.00	54,432.00
b. Welding Rod	kg	15.00	152.00	2,280.00
b. Consumables (5% of Materials Cost)				
Sub - Total for F				2,835.60
Sub - Total for F				59,547.60
D. Direct Cost			(A + B + C)	69,670.46
E. Direct Unit Cost			(A + B + C)/Quantity	96.87
F. Overhead, Contingencies & Miscellaneous (OCM) Expenses		15%	of D	10,450.57
G. Contractor's Profit (CP)		10%	of D	6,960.37
H. Value Added Tax (VAT)		6%	of (D + F + G)	5,079.95
I. Total Cost			(D + F + G + H)	92,171.75
J. Total Adjusted Unit Cost			(I/Quantity)	128.14

Inconsistent Unit Cost





DETAILED UNIT PRICE ANALYSIS (DUPA)

Description : 1021(1)c Plain Cement Floor Finish with Floor Hardener
 Measurement : m²
 per hour : 5.95 m²
 : 161.4

Designation	No. of Person/s	No. of Hour/s	Hourly Rate	Amount (PhP)
A. Labor				
a. Construction Foreman	1	28.00	100.49	2,813.72
b. Skilled Laborer	1	28.00	72.74	2,036.72
c. Unskilled Laborer	3	28.00	56.03	4,706.52
Sub - Total for A				9,556.96
Name and Capacity	No. of Unit/s	No. of Hour/s	Hourly Rate	Amount (PhP)
B. Equipment				
Minor Tools (10% of Labor Cost)				955.70
Sub - Total for B				955.70
Total (A + B)				10,512.66
Name and Specification	Unit	Quantity	Unit Cost	Amount (PhP)
C. Materials				
a. Cement	bag	118.00	277.00	32,686.00
b. Sand	m ³	9.00	775.00	6,975.00
c. Floor Hardener	bag	9.00	262.50	2,362.50
Sub - Total for F				42,023.50
D. Direct Cost		(A + B + C)		52,536.16
E. Direct Unit Cost		(A + B + C)/Quantity		325.50
F. Overhead, Contingencies & Miscellaneous (OCM) Expenses	10%	of D		5,253.62
G. Contractor's Profit (CP)	8%	of D		4,202.89
H. Value Added Tax (VAT)	3%	of (D + F + G)		3,719.58
I. Total Cost		(D + F + G + H)		65,712.22
J. Total Adjusted Unit Cost		(I/Quantity)		407.14

DETAILED UNIT PRICE ANALYSIS (DUPA)

Item No./Description : 1010(2)b Wooden Doors
 Unit of Measurement : m²
 Output : 0.36 m²
 Quantity : 31.74

Designation	No. of Person/s	No. of Hour/s	Hourly Rate	Amount (PhP)
A. Labor				
a. Construction Foreman	1	89.00	100.49	8,943.61
b. Skilled Laborer	1	89.00	72.74	6,473.86
c. Unskilled Laborer	2	89.00	56.03	9,973.34
Sub - Total for A				25,390.81
Name and Capacity	No of Unit/s	No. of Hour/s	Hourly Rate	Amount (PhP)
B. Equipment				
Minor Tools (10% of Labor Cost)				2,539.08
Sub - Total for B				2,539.08
Total (A + B)				27,929.89
Name and Specification	Unit	Quantity	Unit Cost	Amount (PhP)
C. Materials				
a. Wooden Panel Door	m ²	32.00	4,702.50	150,479.95
Sub - Total for F				150,479.95
D. Direct Cost		(A + B + C)		178,409.84
E. Direct Unit Cost		(A + B + C)/Quantity		5,575.31
F. Overhead, Contingencies & Miscellaneous (OCM) Expenses	15%	of D		26,761.48
G. Contractor's Profit (CP)	10%	of D		17,840.98
H. Value Added Tax (VAT)	3%	of (D + F + G)		13,308.74
I. Total Cost		(D + F + G + H)		236,320.04
J. Total Adjusted Unit Cost		(I/Quantity)		7,447.80

Inconsistent Mark-Ups





DETAILED UNIT PRICE ANALYSIS

Project Title : PROPOSED CONSTRUCTION OF (2) TWO-STOREY PROVINCIAL HOSPITAL
Project Location : Tamparan, Lanao del Sur
Item No./Description : B.9 Mobilization and Demobilization
Unit of Measurement : l.s
Quantity : 1

Mobilization and demobilization shall not exceed 1% of the Estimated Direct Cost (EDC) of the civil works items.

Equipment for Mobilization and Demobilization are not Itemized.

Designation	No. of Person	No. of Days	Hourly Rate	Amount
Labors				
Sub-Total of A				
-				
Name and Capacity	No. of Units	No. of Hours	Hourly Rate	Amount
Equipment				
a. Mobilization/ Demobilization (0.75% of Civil Works)				1,091,250.00
Sub-Total of B				1,091,250.00
Name & Specification	Quantity	Unit	Unit Cost	Amount
Materials				
Sub-Total of C				-
D	Direct Cost (A+B+C)			1,091,250.00
E	Direct Unit Cost			1,091,250.00
F	Overhead, Contingencies & Miscellaneous (OCM)			12% 130,950.00
G	Contractor's Profit			8% 87,300.00
H	Value Added Tax (VAT) +1% BARMM TAX			6% 78,570.00
I	Total Cost			1,388,070.00
J	Total Unit Cost			1,388,070.00

This particular item shall not be subjected to OCM and Profit mark-up





DETAILED UNIT PRICE ANALYSIS

Project Title : PROPOSED CONSTRUCTION OF (2) TWO-STOREY PROVINCIAL HOSPITAL
 Project Location : Tamparan, Lanao del Sur
 Item No./Description : 902(1)d Reinforcing Steel of Reinforced Concrete Structures, Grade 60
 Unit of Measurement : kgs
 Output per hour : 143.44
 Quantity : 143,355.00

	Designation	No. of Person	No. of Hours	Hourly Rate	Amount
A	Labors				
	a. Construction Foreman	1	1000	68.75	68,750.00
	b. Skilled Laborer	30	1000	56.25	1,687,500.00
	c. Unskilled Laborer	30	1000	43.75	1,312,500.00
Sub-Total of A					3,068,750.00
	Name and Capacity	No. of Unit	No. of Hours	Hourly Rate	Amount
B	Equipment				
	a. Bar Cutter	1	20	219.75	4,395.00
	b. bar Bender	1	20	351.50	7,030.00
minor Tools (10% of Labor Cost)					306,875.00
Sub-Total of B					318,300.00
	Name & Specification	Quantity	Unit	Unit Cost	Amount
C	Materials				
	a. Deformed Reinforcing Steel	kgs	143,355.00	65.00	9,318,075.00
	b. #16 G.I Tie wire	kgs	700	86.00	60,200.00
	Consumables (5% of materials cost)				468,913.75
Sub-Total of C					9,847,188.75
D	Direct Cost (A+B+C)				13,234,238.75
E	Direct Unit Cost				92.32
F	Overhead, Contingencies & Miscellaneous (OCM)				12% 1,588,108.65
G	Contractor's Profit				8% 1,058,739.10
H	Value Added Tax (VAT) +1% BARMM TAX				6% 952,865.19
I	Total Cost				16,833,951.69
J	Total Unit Cost				117.43

Remarks and Findings:

1. Incorrect Output per Hour.
2. Incorrect number of labors
3. Incorrect number of hours for labor and equipment.
4. Incorrect labor hourly rates.
5. Incorrect G.I tie wire quantity.



Thank You!

