CONSTRUCTION OF MISSING LINKS/NEW ROADS
SINDANGAN - BAYOG - LAKEWOOD ROAD,
Talinga-Dagohoy-Tinaplan-Titik
Zamboanga del Norte

K0024+130.00 to K0025+700.00

Net Length **1,570.00 Ln.M.** | **1.57 kM.** | **3.14 Lane kM.**

SUMMARY OF QUANTITIES

Item No.	Description	Unit	Quantity	Remarks
102 (2)	Surplus Common Excavation	Cu.M.	148,738.00	For Disposal
103 (1) a	Structure Excavation	Cu.M.	948.00	For Lined Canal
103 (3)	Foundation Fill	Cu.M.	14.00	For RCPC bedding
103 (6) a	Pipe Culvert and Drain Excavation	Cu.M.	92.00	For RCPC Excavation
104 (1) a1	Embankment (from Excavation)	Cu.M.	109,319.00	Compacted Volume
105 (1) a	Subgrade Preparation	Sq.M.	11,460.00	Variable Width
200 (1)	Aggregate Subbase Course	Cu.M.	5,846.00	0.30 m. thick (min.) Compacted Volume
300 (1)	Gravel Surface Course	Cu.M.	83.00	0.15 m thick for shouldering Compacted Volume
311 (1) e1	Portland Cement Concrete Pavement	Sq.M.	11,193.00	0.28 m thick, includes widening (Width = 6.70 m.)
311 (1) a	Portland Cement Concrete Pavement	Sq.M.	4,368.00	0.15 m thick for shouldering
404 (1) a	Reinforcing Steel Bar (Grade 40)	Kg.	19,175.00	For Lined Canal
405 (1) b3	Structural Concrete, Class "A"	Cu.M.	474.00	For Lined Canal
500 (1) b3	Reinforced Concrete Culvert Pipe (910 mm Ø)	Ln.M.	92.00	Class IV, Wall B, AASHTO M - 170 - 85
505 (5)	Grouted Riprap, Class "A"	Cu.M.	27.00	For Slope Protection & Headwall apron
506 (1)	Stone Masonry	Cu.M.	81.00	For Headwall and Wingwall
612 (1)	Reflectorized Thermoplastic Pavement Markings (White)	Sq.M.	393.00	For Center Lines (Separation) & Edge Lines
612 (2)	Reflectorized Thermoplastic Pavement Markings (Yellow)	Sq.M.	102.00	For Barrier Lines
622 (1) b	Bio-Engineered Coco Fiber Erosion Control Net (CGN 700)	Sq.M.	31,834.00	For Slope Protection (Cut Slope)
622 (1) a	Coconet Bio-Engineering Solutions - Coco-net (CN 400)	Sq.M.	15,595.00	For Slope Protection (Fill Slope)
622 (2) b	Coconet Bio-Engineering Solutions - Coco-logs/Fascine (CN 200)	Ln.M.	5,010.00	For Slope Protection
622 (3) a	Coconet Bio-Engineering Solutions - Vegetation (Grass-Cover)	Sq.M.	47,429.00	For Slope Protection
A.1.1 (3)	Construction of Field Office for the Engineer	Each	1.00	7.00m X 9.00m
B.5	Project Billboard	Each	2.00	Per D.O. # 37, s. 2010
B.7	Construction Safety & Health Program	L.S.	1.00	

v2b P150m

Prepared by:

KENTH KRISTOFFER M. LACHICA
Engineer II

Checked by:

PABLO L. ESCUADRO
Engineer III
Chief, Highway Design Section

Engr. Kristoffer Lachica

18 J00029

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

MAR 15 2018

MEMORANDUM

FOR **: MARK A. VILLAR**
Secretary
This Department

Respectfully submitted is the Memorandum dated February 19, 2018 of **Regional Director JORGE U. SEBASTIAN, JR., CESO III** of DPWH - Region IX, requesting for approval the Modification of Project to be implemented by the said region under FY2018 GAA, to wit:

As per GAA/Original			***As Modified***		
Project Description					
UACS No. 310205100156000 **Project ID: P00200475MN** OO1: Ensure Safe and Reliable National Road System Network Development Construction of Missing Links/New Roads Sindangan – Bayog – Lakewood Road (Talinga-Dagohoy-Tinaplan-Titik), Zamboanga del Norte			OO1: Ensure Safe and Reliable National Road System Network Development Construction of Missing Links/New Roads Sindangan – Bayog – Lakewood Road (Talinga-Dagohoy-Tinaplan-Titik), Zamboanga del Norte		
Physical Target	**Unit Cost**	**Allocation**	**Physical Target**	**Unit Cost**	**Estimated Cost**
CW-1 - Paving of Unpaved Road: 3.360 lane km	₱ 43,080,357.14 /lane km	₱ 144,750,000	CW-1 - Paving of Unpaved Road: **3.14** lane km	₱ 46,097,617.17 /lane km	₱ 144,746,517.91
			CW-2 ROW **11.61** sq.m	₱ 300/sq.m	₱ 3,482.09
EAO	-	₱ 5,250,000	EAO	-	₱ 5,250,000.00
Total		**₱ 150,000,000**	**Total**		**₱ 150,000,000**

Justification:
1.The physical target has **decreased** due to huge excavation which constituted 45.18% of the total project cost so that the vertical and horizontal alignments meet with the DPWH Design Guidelines and Criteria to attain a safe and comfortable road for the riding public.
2. Inclusion of Right Of Way Acquisition for smooth implementation of the project since same was not considered in the GAA.

Based on our evaluation, the submitted request for modification of the said project is in order; hence, approval hereof is recommended.

RAFAEL C. YABUT
Senior Undersecretary
Undersecretary for Mindanao Regional Operations

APPROVED/DISAPPROVED:

MARK A. VILLAR
Secretary

2.1 NDJC/ACF/RCY

Department of Public Works and Highways
Office of the Secretary
WIN8C02136

Department of Public Works and Highways

Bureau : DPWH
Region : IX
District/City : Zamboanga City

PROGRAM OF WORK

(For all types of Project)

NAME/LOCATION OF PROJECT : **Construction of Missing Links/New Roads Sindangan - Bayog Lakewood Road, Talinga - Dagohoy - Tinaplan - Titik Zamboanga del Norte**	Apporiation : P 150,000,000.00 Source of Funds : CY-2018 Issued Obligated Authority : Released : Cal. Days to Complete : 198.00 Cal. Days Desirable Starting Date : Upon Approval Mode of Implementation :
PROJECT CATEGORY : NATIONAL ROAD	
PROJECT DESCRIPTION : Scope of Work : Construction of Concrete Road Road Width : 6.70 m. Roadbed Width : 12.00 m. Subbase Course : 0.30 mtrs thick Surface Course : 0.15 mtrs thick	NET LENGTH : K0024+130.00 - K0025+700.00 Net Length : **3.14** lane km Net Length : **1,570.00** ln.m. / **1.570** km

MINIMUM EQUIPMENT REQUIREMENT : TECHNICAL PERSONNEL REQUIRED :

DESCRIPTION	NO.	DESCRIPTION	NO.	DESCRIPTION	NO.
Dumptruck (10 Wheeler)	10	Water Pump	1	Project Engineer	1
Bullduzer	2	Portable Screed	1	Materials Engineer	1
Backhoe	3	Concrete Vibrator	2	Geometric Control	1
Road Grader	2	Concrete Cutter	2	Foreman	1
Road Roller	2	Bar Cutter	1	Materials Lab. Tech	1
Pay Loader	4	Bar Bender	1	Mason	10
Water Truck	2	Conc. Mixer (1-Bagger)	2	Carpenter	6
Water Tank	2	Plate Compactor	1	Laborers (Skilled)	10
Transit Mixer	4			Laborers (Unskilled)	20

ESTIMATED COST OF PROPOSED WORK

ITEM NO.	DESCRIPTION	% OF TOTAL	UNIT	QUANTITY	DIRECT COST	
					TOTAL	UNIT COST
102(2)	Surplus Common Excavation	22.541	cu.m.	146,199.00	26,378,165.75	180.43
103 (1)a	Structure Excavation	0.186	cu.m.	948.00	218,149.64	230.12
103(3)	Foundation Fill	0.012	cu.m.	14.00	14,107.77	1,007.70
103(6)a	Pipe Culvert and Drain Excavation	0.018	cu.m.	92.00	21,170.64	230.12
104(1)a1	Embankment from Roadway Excavation	22.191	cu.m.	113,046.00	25,968,686.78	229.72
105 (1)a	Subgrade Preparation	0.150	sq.m.	11,460.00	175,702.81	15.33
200 (1)	Aggregate Subbase Course	8.121	cu.m.	5,846.00	9,503,789.59	1,625.69
300 (1)	Aggregate Surface Course	0.108	cu.m.	83.00	126,714.86	1,526.69
311(1)e1a	Portland Cement Concrete Pavement-using Conventional Method, 0.28m thick	14.893	sq.m.	11,193.00	17,427,608.82	1,557.01
311(1)a	Portland Cement Concrete Pavement, 0.15m. Thick	3.195	sq.m	4,368.00	3,738,382.74	855.86
404 (1)a	Reinforcing Steel Bar, Grade 40	0.812	kg.	19,175.00	949,665.06	49.53
405 (1) b3	Structural Concrete, Class A	2.826	cu.m	474.00	3,306,496.09	6,975.73
500(1)b3	Pipe Culvert & Storm Drain	0.293	ln.m	92.00	343,143.22	3,729.82
505(5)	Grouted Riprap, Class A	0.102	cu.m	27.00	119,754.85	4,435.36
506(1)	Stone Masonry	0.312	cu.m	81.00	364,734.04	4,502.89
612(1)	Reflectorized Thermoplastic Pavement Markings (White)	0.245	sq.m	394.00	287,152.83	728.81
612(2)	Reflectorized Thermoplastic Pavement Markings (Yellow)	0.071	sq.m	102.00	82,503.83	808.86
622(1)a	Bio-Engineered Erosion Coco Fiber Erosion Control Net (CGN 400)	1.685	sq.m	15,595.00	1,972,175.83	126.46
622(1)b	Bio-Engineered Erosion Coco Fiber Erosion Control Net (CGN 700)	3.983	sq.m	31,834.00	4,660,881.52	146.41
622(2)b	Bio-Engineered Erosion Coco Logs/Fascine Control System	2.253	ln.m	5,010.00	2,636,797.40	526.31

622(3)a	Bio-Engineered Erosion Control System Vegetation	14.435	sq.m	47,429.00	16,892,540.30	356.16
A.1.1(3)	Const. of Field Office for the Engineer	0.340	LS	1.00	397,510.51	397,510.51
A.1.1(11)	Prov. Of Furniture, Equipment and Appliances for Field Engineer	0.209	LS	1.00	244,223.32	244,223.32
A.1.2(5)	Operation & Maintenance of Gov't. Service Vehicle	0.262	L.S	1.00	306,992.00	306,992.00
B.5	Project Billboard	0.004	Unit	2.00	4,420.90	2,210.45
B.7	Occupational Safety & Health Program	0.137	L.S	1.00	160,693.68	160,693.68
B.9	Mobilization and Demobilization	0.558	L.S	1.00	653,562.00	653,562.00
B.4(1)	Construction Survey and Staking	0.057	Km.	1.57	66,947.70	42,641.84
TOTAL		**100.000**			**P 117,022,674.46**	

Name of Project : **Construction of Missing Links/New Roads Sindangan - Bayog - Lakewood Road, Talinga - Dagohoy - Tinaplan - Titik Zamboanga del Norte**

Station Limits : K0024+130.00 - K0025+700.00

BREAKDOWN OF ESTIMATED EXPENDITURES	% OF TOTAL	AMOUNT
I. ESTIMATED COST		
A. DIRECT COST		
A.1 Materials	37.10	55,654,112.65
A.2 Labor	1.73	2,601,871.64
A.3 Equipment Expenses	39.18	58,766,690.17
SUB-TOTAL (DIRECT COST)	78.02	P 117,022,674.46
B. INDIRECT COST (Per DO # 197 s. 2016)		
B.1 Overhead, Contingency & Misc. (10% Max. of D.C.)	7.71	11,565,720.35
B.2 Profit (8% Max. D.C.)	6.18	9,265,431.77
C. VAT (5% of D.C. and I.C. per D.O. # 197)	4.60	6,892,691.33
SUB-TOTAL (CONTRACT COST)	96.50	P 144,746,517.91
II. ESTIMATED GOVERNMENT EXPENDITURES		
1 Engineering and Administrative Overhead (3.5%)	3.50	5,250,000.00
2 Detailed Engineering (1%)		
3 Reserved for the Payment of RROW)	0.00	3,482.09
4 Physical Reserved	0.00	
TOTAL ESTIMATED PROJECT COST	100.00	P 150,000,000.00

Prepared by:

JERALD R. BARRERA
Engineer II

Submitted by:

LEONCIO B. SOLAMILLO
Chief, Construction Division

Recommending Approval:

CAYAMOMBAO D. DIA
OIC-Assistant Regional Director

APPROVED:

JORGE U. SEBASTIAN, JR., CESO III
Regional Director

APPROV[illegible]DGET FOR THE CONTRACT

Construction of Missing Links/New Roads Sindangan - Bayog - Lakewood Road, Talinga - Dagohoy - Tinaplan - Titik Zamboanga del Norte

Project Name and Location

Station Limits : K0024+130.00 - K0025+700.00   0   0   0

Length : *1,570.00* *ln.m.*   *Contract Duration* : *198.00* *Calendar Days*

Item No.	Description	Quantity	Unit	Estimated Direct Cost	MARK-UP IN PERCENT OCM	MARK-UP IN PERCENT PROFIT	TOTAL MARK-UPS %	TOTAL MARK-UPS VALUE	VAT	TOTAL INDIRECT COST	TOTAL COST	TOTAL COST
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9) = (5)X(8)	(10) = [(5)+(9)]*5%	(11) = (9) + (10)	(12) = (5) + (11)	(13) = (12) / (3)
PART A	**FACILITIES FOR THE ENGINEER**				10.00	8.00	18.00					
A.1.1(3)	Const. of Field Office for the Engineer	1.00	LS	397,510.51	10.00	8.00	18.00	71,551.89	23,453.12	95,005.01	492,515.53	492,515.53
A.1.1(11)	Prov. Of Furniture, Equipment and Appliances for Field Engineer	1.00	LS	244,223.32	0.00	0.00	0.00	-	12,211.17	12,211.17	256,434.49	256,434.49
A.1.2(5)	Operation & Maintenance of Gov't. Service Vehicle	1.00	L.S	306,992.00	0.00	0.00	0.00	-	15,349.60	15,349.60	322,341.60	322,341.60
	TOTAL OF PART A			**948,725.83**				**71,551.89**	**51,013.89**	**122,565.78**	**1,071,291.61**	
PART B	**OTHER GENERAL REQUIREMENTS**											
B.5	Project Billboard	2.00	Unit	4,420.90	10.00	8.00	18.00	795.76	260.83	1,056.60	5,477.50	2,738.75
B.7	Occupational Safety & Health Program	1.00	L.S	160,693.68	0.00	8.00	8.00	12,855.49	8,677.46	21,532.95	182,226.63	182,226.63
B.9	Mobilization and Demobilization	1.00	L.S	653,562.00	0.00	0.00	0.00	-	32,678.10	32,678.10	686,240.10	686,240.10
B.4(1)	Construction Survey and Staking	1.57	Km.	66,947.70	10.00	8.00	18.00	12,050.59	3,949.91	16,000.50	82,948.19	52,833.24
	TOTAL OF PART B			**885,624.28**				**25,701.84**	**45,566.31**	**71,268.15**	**956,892.42**	
PART C	**EARTHWORKS**											
102(2)	Surplus Common Excavation	146,199.00	cu.m.	26,378,165.75	10.00	8.00	18.00	4,748,069.84	1,556,311.78	6,304,381.61	32,682,547.37	223.55
103 (1)a	Structure Excavation	948.00	cu.m.	218,149.64	10.00	8.00	18.00	39,266.93	12,870.83	52,137.76	270,287.40	285.11
103(3)	Foundation Fill	14.00	cu.m.	14,107.77	10.00	8.00	18.00	2,539.40	832.36	3,371.76	17,479.53	1,248.54
103(6)a	Pipe Culvert and Drain Excavation	92.00	cu.m.	21,170.64	10.00	8.00	18.00	3,810.72	1,249.07	5,059.78	26,230.42	285.11
104(1)a1	Embankment from Roadway Excavation	113,046.00	cu.m.	25,968,686.78	10.00	8.00	18.00	4,674,363.62	1,532,152.52	6,206,516.14	32,175,202.93	284.62
105 (1)a	Subgrade Preparation	11,460.00	sq.m.	175,702.81	10.00	8.00	18.00	31,626.51	10,366.47	41,992.97	217,695.78	19.00
	TOTAL OF PART C			**52,775,983.39**				**9,499,677.01**	**3,113,783.02**	**12,613,460.03**	**65,389,443.42**	
PART D	**SUBBASE AND BASE COURSE**											
200 (1)	Aggregate Subbase Course	5,846.00	cu.m.	9,503,789.59	10.00	8.00	18.00	1,710,682.13	560,723.59	2,271,405.71	11,775,195.30	2,014.23
	TOTAL OF PART D			**9,503,789.59**				**1,710,682.13**	**560,723.59**	**2,271,405.71**	**11,775,195.30**	
PART E	**SURFACE COURSES**											
300 (1)	Aggregate Surface Course	83.00	cu.m.	126,714.86	10.00	8.00	18.00	22,808.67	7,476.18	30,284.85	156,999.71	1,891.56
311(1)e1a	Portland Cement Concrete Pavement-using Conventional Method, 0.28m thick	11,193.00	sq.m.	17,427,608.82	10.00	8.00	18.00	3,136,969.59	1,028,228.92	4,165,198.51	21,592,807.33	1,929.13
311(1)a	Portland Cement Concrete Pavement, 0.15m. Thick	4,368.00	sq.m	3,738,382.74	10.00	8.00	18.00	672,908.89	220,564.58	893,473.47	4,631,856.21	1,060.41
	TOTAL OF PART E			**21,292,706.42**				**3,832,687.16**	**1,256,269.68**	**5,088,956.83**	**26,381,663.25**	
PART F	**BRIDGE CONSTRUCTION**											
404 (1)a	Reinforcing Steel Bar, Grade 40	19,175.00	kg.	949,665.06	10.00	8.00	18.00	170,939.71	56,030.24	226,969.95	1,176,635.00	61.36
405 (1) b3	Structural Concrete, Class A	474.00	cu.m	3,306,496.09	10.00	8.00	18.00	595,169.30	195,083.27	790,252.57	4,096,748.65	8,642.93
	TOTAL OF PART F			**4,256,161.14**				**766,109.01**	**251,113.51**	**1,017,222.51**	**5,273,383.66**	
PART G	**DRAINAGE AND SLOPE PROTECTION STRUCTURES**											
500(1)b3	Pipe Culvert & Storm Drain	92.00	ln.m	343,143.22	10.00	8.00	18.00	61,765.78	20,245.45	82,011.23	425,154.44	4,621.24
505(5)	Grouted Riprap, Class A	27.00	cu.m	119,754.85	10.00	8.00	18.00	21,555.87	7,065.54	28,621.41	148,376.26	5,495.42
506(1)	Stone Masonry	81.00	cu.m	364,734.04	10.00	8.00	18.00	65,652.13	21,519.31	87,171.44	451,905.47	5,579.08
	TOTAL OF PART G			**827,632.11**				**148,973.78**	**48,830.29**	**197,804.07**	**1,025,436.18**	
PART H	**MISCELLANEOUS STRUCTURES**											
612(1)	Reflectorized Thermoplastic Pavement Markings (White)	394.00	sq.m	287,152.83	10.00	8.00	18.00	51,687.51	16,942.02	68,629.53	355,782.36	903.00
612(2)	Reflectorized Thermoplastic Pavement Markings (Yellow)	102.00	sq.m	82,503.83	10.00	8.00	18.00	14,850.69	4,867.73	19,718.41	102,222.24	1,002.18
622(1)a	Bio-Engineered Erosion Coco Fiber Erosion Control Net (CGN 400)	15,595.00	sq.m	1,972,175.83	10.00	8.00	18.00	354,991.65	116,358.37	471,350.02	2,443,525.85	156.69
622(1)b	Bio-Engineered Erosion Coco Fiber Erosion Control Net (CGN 700)	31,834.00	sq.m	4,660,881.52	10.00	8.00	18.00	838,958.67	274,992.01	1,113,950.68	5,774,832.20	181.40
622(2)b	Bio-Engineered Erosion Coco Logs/Fascine Control System	5,010.00	ln.m	2,636,797.40	10.00	8.00	18.00	474,623.53	155,571.05	630,194.58	3,266,991.98	652.09
622(3)a	Bio-Engineered Erosion Control System Vegetation	47,429.00	sq.m	16,892,540.30	10.00	8.00	18.00	3,040,657.25	996,659.88	4,037,317.13	20,929,857.43	441.29
	TOTAL OF PART H			**26,532,051.71**				**4,775,769.31**	**1,565,391.05**	**6,341,160.36**	**32,873,212.06**	
	TOTAL			**117,022,674.46**				**20,831,152.12**	**6,331,967.74**	**27,723,843.45**	**144,746,517.91**	

Prepared by:

BELEN A. SAPALLEDA
Head TWG, BAC

Recommending Approval:

CAYAMOMBAO D. DIA
OIC-Assistant Regional Director

APPROVED:

JORGE U. SEBASTIAN, JR., CESO III
Regional Director

SUMMARY

Name of Project : **Construction of Missing Links/New Roads Sindangan - Bayog - Lakewood Road, Talinga - Dagohoy - Tinaplan - Titik Zamboanga del**

Item No.	Description	Quantity	Unit	Labor	Equipment	Materials	OCM	Profit	VAT	TOTAL
102(2)	Surplus Common Excavation	146,199.00	cu.m.	374,846.11	26,003,319.64	-	2,637,816.58	2,110,253.26	1,556,311.78	32,682,547.37
103 (1)a	Structure Excavation	948.00	cu.m.	9,708.94	208,440.69	-	21,814.96	17,451.97	12,870.83	270,287.40
103(3)	Foundation Fill	14.00	cu.m.	2,773.23	1,652.00	9,682.54	1,410.78	1,128.62	832.36	17,479.53
103(6)a	Pipe Culvert and Drain Excavation	92.00	cu.m.	942.22	20,228.42	-	2,117.06	1,693.65	1,249.07	26,230.42
104(1)a1	Embankment from Roadway Excavation	113,046.00	cu.m.	459,495.14	25,509,191.65	-	2,596,868.68	2,077,494.94	1,532,152.52	32,175,202.93
105 (1)a	Subgrade Preparation	11,460.00	sq.m.	6,190.31	169,512.50	-	17,570.28	14,056.22	10,366.47	217,695.78
200 (1)	Aggregate Subbase Course	5,846.00	cu.m.	18,946.89	733,673.00	8,751,169.70	950,378.96	760,303.17	560,723.59	11,775,195.30
300 (1)	Aggregate Surface Course	83.00	cu.m.	269.00	7,366.25	119,079.60	12,671.49	10,137.19	7,476.18	156,999.71
311(1)e1a	Portland Cement Concrete Pavement-using Conventional Method, 0.28m thick	11,193.00	sq.m.	157,410.05	2,335,045.54	14,935,153.23	1,742,760.88	1,394,208.71	1,028,228.92	21,592,807.33
311(1)a	Portland Cement Concrete Pavement, 0.15m. Thick	4,368.00	sq.m	33,023.51	512,636.07	3,192,723.16	373,838.27	299,070.62	220,564.58	4,631,856.21
404 (1)a	Reinforcing Steel Bar, Grade 40	19,175.00	kg.	56,409.65	42,938.68	850,316.72	94,966.51	75,973.20	56,030.24	1,176,635.00
405 (1) b3	Structural Concrete, Class A	474.00	cu.m	407,697.56	202,705.59	2,696,092.94	330,649.61	264,519.69	195,083.27	4,096,748.65
500(1)b3	Pipe Culvert & Storm Drain	92.00	ln.m	32,973.72	79,657.37	230,512.12	34,314.32	27,451.46	20,245.45	425,154.44
505(5)	Grouted Riprap, Class A	27.00	cu.m	11,437.85	25,455.09	82,861.91	11,975.49	9,580.39	7,065.54	148,376.26
506(1)	Stone Masonry	81.00	cu.m	27,450.84	25,979.77	311,303.43	36,473.40	29,178.72	21,519.31	451,905.47
612(1)	Reflectorized Thermoplastic Pavement Markings (White)	394.00	sq.m	6,996.97	23,533.62	256,622.25	28,715.28	22,972.23	16,942.02	355,782.36
612(2)	Reflectorized Thermoplastic Pavement Markings (Yellow)	102.00	sq.m	1,811.40	6,092.46	74,599.97	8,250.38	6,600.31	4,867.73	102,222.24
622(1)a	Bio-Engineered Erosion Coco Fiber Erosion Control Net (CGN 40	15,595.00	sq.m	130,601.89	204,098.94	1,637,475.00	197,217.58	157,774.07	116,358.37	2,443,525.85
622(1)b	Bio-Engineered Erosion Coco Fiber Erosion Control Net (CGN 70	31,834.00	sq.m	266,597.02	416,626.20	3,977,658.30	466,088.15	372,870.52	274,992.01	5,774,832.20
622(2)b	Bio-Engineered Erosion Coco Logs/Fascine Control System	5,010.00	ln.m	139,855.82	13,985.58	2,482,956.00	263,679.74	210,943.79	155,571.05	3,266,991.98
622(3)a	Bio-Engineered Erosion Control System Vegetation	47,429.00	sq.m	122,973.91	1,530,628.69	15,238,937.70	1,689,254.03	1,351,403.22	996,659.88	20,929,857.43
A.1.1(3)	Const. of Field Office for the Engineer	1.00	LS	53,245.60	31,804.56	312,460.35	39,751.05	31,800.84	23,453.12	492,515.53
A.1.1(11)	Prov. Of Furniture, Equipment and Appliances for Field Engineer	1.00	LS	-	-	244,223.32	-	-	12,211.17	256,434.49
A.1.2(5)	Operation & Maintenance of Gov't. Service Vehicle	1.00	L.S	87,753.60	-	219,238.40	-	-	15,349.60	322,341.60
B.5	Project Billboard	2.00	Unit	434.90	-	3,986.00	442.09	353.67	260.83	5,477.50
B.7	Occupational Safety & Health Program	1.00	L.S	148,333.68	-	12,360.00	-	12,855.49	8,677.46	182,226.63
B.9	Mobilization and Demobilization	1.00	L.S	-	653,562.00	-	-	-	32,678.10	686,240.10
B.4(1)	Construction Survey and Staking	1.57	Km.	43,691.84	8,555.85	14,700.00	6,694.77	5,355.82	3,949.91	82,948.19
TOTAL				***2,601,871.64***	***58,766,690.17***	***55,654,112.65***	***11,565,720.35***	***9,265,431.77***	***6,892,691.33***	***144,746,517.91***

Name of Project : **Construction of Missing Links/New Roads Sindangan - Bayog - Lakewood Road, Talinga - Dagohoy - Tinaplan - Titik Zamboanga del Norte**

Net Length : 1,570.00 ln.m.

Item No.	Description	Quantity	Unit	DURATION # OF DAYS
102(2)	Surplus Common Excavation	146,199.00	cu.m.	101.53
103 (1)a	Structure Excavation	948.00	cu.m.	5.93
103(3)	Foundation Fill	14.00	cu.m.	1.40
103(6)a	Pipe Culvert and Drain Excavation	92.00	cu.m.	0.58
104(1)a1	Embankment from Roadway Excavation	113,046.00	cu.m.	78.19
105 (1)a	Subgrade Preparation	11,460.00	sq.m.	4.78
200 (1)	Aggregate Subbase Course	5,846.00	cu.m.	14.62
300 (1)	Aggregate Surface Course	83.00	cu.m.	0.21
311(1)e1a	Portland Cement Concrete Pavement-using Conventional Method, 0.28m thick	11,193.00	sq.m.	24.25
311(1)a	Portland Cement Concrete Pavement, 0.15m. Thick	4,368.00	sq.m	5.09
404 (1)a	Reinforcing Steel Bar, Grade 40	19,175.00	kg.	13.32
405 (1) b3	Structural Concrete, Class A	474.00	cu.m	42.32
500(1)b3	Pipe Culvert & Storm Drain	92.00	ln.m	11.50
505(5)	Grouted Riprap, Class A	27.00	cu.m	2.70
506(1)	Stone Masonry	81.00	cu.m	6.48
612(1)	Reflectorized Thermoplastic Pavement Markings (White)	394.00	sq.m	1.97
612(2)	Reflectorized Thermoplastic Pavement Markings (Yellow)	102.00	sq.m	0.51
622(1)a	Bio-Engineered Erosion Coco Fiber Erosion Control Net (CGN	15,595.00	sq.m	38.99
622(1)b	Bio-Engineered Erosion Coco Fiber Erosion Control Net (CGN	31,834.00	sq.m	79.59
622(2)b	Bio-Engineered Erosion Coco Logs/Fascine Control System	5,010.00	ln.m	41.75
622(3)a	Bio-Engineered Erosion Control System Vegetation	47,429.00	sq.m	94.86
A.1.1(3)	Const. of Field Office for the Engineer	1.00	LS	10.00
A.1.1(11)	Prov. Of Furniture, Equipment and Appliances for Field Engineer	1.00	LS	
A.1.2(5)	Operation & Maintenance of Gov't. Service Vehicle	1.00	L.S	198.00
B.5	Project Billboard	2.00	Unit	0.25
B.7	Occupational Safety & Health Program	1.00	L.S	132.00
B.9	Mobilization and Demobilization	1.00	L.S	3.00
B.4(1)	Construction Survey and Staking	1.57	Km.	20.93

WEEKS (6 WORKING DAYS): 1 – 60

TOTAL NO. OF WORKING DAYS	:	132
INCLEMENT WEATHER & CURING TIME	:	44
NUMBER OF SUNDAYS	:	22
TOTAL NO. CALENDAR DAYS	:	**198**

Prepared by:

JERALD R. BARRERA
Engineer II

Submitted by:

LEONCIO B. SOLAMILLO
Chief, Construction Division

APPROVED:

JORGE U. SEBASTIAN, JR., CESO III
Regional Director

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME	: Construction of Missing Links/New Roads Sindangan - Bayog - Lakewood Road, Talinga - Dagohoy - Tinaplan - Titik Zamboanga del Norte
Item No./Description	: 102(2) Surplus Common Excavation
Unit of Measurement	: cu.m.
Output per hour	: 60.00
Quantity	: 146,199.0

Note: Use Three (3) gangs

	Designation	No. of Person	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Construction Foreman	1	101.53	611.92	62,126.45
	b. Laborer	9	101.53	342.24	312,719.66
	Sub-total for A			P	374,846.11
	Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B	Equipment, (2014 ACEL Rates)				
	a. Bulldozer	3	101.53	27,032.00	8,233,440.35
	b. Payloader	3	101.53	13,864.00	4,222,714.45
	c. Payloader	3	76.15	13,864.00	3,167,035.84
	d. Dumptruck	9	101.53	11,360.00	10,380,129.00
	Sub-total for B			P	26,003,319.64
C.	Total (A+B)			P	26,378,165.75
D.	Output/day 1,440.00 cu.m /day				
	Name and Specifications	Quantity	Unit	Unit Cost	Amount
E.	Materials				
	Sub-total for E			P	0.00
F.	Direct Cost (C+E)				26,378,165.75
G.	Overhead, Contingencies and Miscellaneous		10% per D.O 197 s 2016		2,637,816.58
H.	Contractor's Profit (CP)		8% per D.O 197 s 2016		2,110,253.26
I.	Value Added Tax (VAT)		5% per D.O 197 s 2016		1,556,311.78
J.	Total Unit Cost				223.55

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DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Construction of Missing Links/New Roads Sindangan - Bayog - Lakewood Road, Talinga - Dagohoy - Tinaplan - Titik Zamboanga del Norte

Item No./Description : 103 (1)a Structure Excavation
Unit of Measurement : cu.m.
Output per hour : 20.00
Quantity : 948.00

	Designation	No. of Person	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Construction Foreman	1	5.93	611.92	3,625.63
	b. Laborers	3	5.93	342.24	6,083.32
	Sub-total for A			P	9,708.94
	Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B	Equipment, (2014 ACEL Rates)				
	a. Dumptruck	2	5.93	11,360.00	134,616.00
	b. Backhoe	1	5.93	12,296.00	72,853.80
	Minor Tools (10% of Labor)				970.89
	Sub-total for B			P	208,440.69
C.	Total (A+B)			P	218,149.64
D.	Output/day 160.00 cu.m /day				
	Name and Specifications	Quantity	Unit	Unit Cost	Amount
E.	Materials				
	Sub-total for E			P	0.00
F.	Direct Cost (C+E)				218,149.64
G.	Overhead, Contingencies and Miscellaneous		10% per D.O 197 s 2016		21,814.96
H.	Contractor's Profit (CP)		8% per D.O 197 s 2016		17,451.97
I.	Value Added Tax (VAT)		5% per D.O 197 s 2016		12,870.83
J.	Total Unit Cost				285.11

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DETAILED UNIT PRICE ANALYSIS

PROJECT NAME	:	Construction of Missing Links/New Roads Sindangan - Bayog - Lakewood Road, Talinga - Dagohoy - Tinaplan - Titik Zamboanga del Norte
Item No./Description	:	103(3) Foundation Fill
Unit of Measurement	:	cu.m.
Output per hour	:	1.25
Quantity	:	14.00

	Designation	No. of Person	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Construction Foreman	1	1.40	611.92	856.69
	b. Laborer	4	1.40	342.24	1,916.54
	Sub-total for A			P	2,773.23
	Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B	Equipment, (2014 ACEL Rates)				
	a. Plate Compactor	1	1.40	984.00	1,377.60
	b. Water Truck	1	0.01	19,600.00	274.40
	c. Minor Tools (10% of Labor)				
	Sub-total for B			P	1,652.00
C.	Total (A+B)			P	4,425.23
D.	Output/day 10.00 cu.m.	/day			
	Name and Specifications	Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Filling Materials	16.10	cu.m.	601.40	9,682.54
	Sub-total for E			P	9,682.54
F.	Direct Cost (C+E)				14,107.77
G.	Overhead, Contingencies and Miscellaneous		10% per D.O 197 s 2016		1,410.78
H.	Contractor's Profit (CP)		8% per D.O 197 s 2016		1,128.62
I.	Value Added Tax (VAT)		5% per D.O 197 s 2016		832.36
J.	Total Unit Cost				1,248.54

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DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Construction of Missing Links/New Roads Sindangan - Bayog - Lakewood Road, Talinga - Dagohoy - Tinaplan - Titik Zamboanga del Norte

Item No./Description : 103(6)a Pipe Culvert and Drain Excavation
Unit of Measurement : cu.m.
Output per hour : 20.00
Quantity : 92.00

	Designation	No. of Person	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Construction Foreman	1	0.58	611.92	351.85
	b. Laborer	3	0.58	342.24	590.36
	Sub-total for A			P	942.22
	Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B	Equipment, (2014 ACEL Rates)				
	a. Dumptruck	2	0.58	11,360.00	13,064.00
	b. Backhoe	1	0.58	12,296.00	7,070.20
	Minor Tools (10% of Labor)				94.22
	Sub-total for B			P	20,228.42
C.	Total (A+B)			P	21,170.64
D.	Output/day 160.00 cu.m /day				
	Name and Specifications	Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a.				
	Sub-total for E			P	0.00
F.	Direct Cost (C+E)				21,170.64
G.	Overhead, Contingencies and Miscellaneous		10%	per D.O 197 s 2016	2,117.06
H.	Contractor's Profit (CP)		8%	per D.O 197 s 2016	1,693.65
I.	Value Added Tax (VAT)		5%	per D.O 197 s 2016	1,249.07
J.	Total Unit Cost				285.11

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DETAILED UNIT PRICE ANALYSIS

PROJECT NAME	: Construction of Missing Links/New Roads Sindangan - Bayog - Lakewood Road, Talinga - Dagohoy - Tinaplan - Titik Zamboanga del Norte
Item No./Description	: 104(1)a1 Embankment from Roadway Excavation
Unit of Measurement	: cu.m.
Output per hour	: 50.00
Quantity	: 113,046.0

Note: Use Two (2) gangs

	Designation	No. of Person	No. of Days	Daily Rate	Amount
A.	Labor				
	For Excavation Work				
	a. Construction Foreman	1	78.19	611.92	47,846.12
	b. Laborer	6	78.19	342.24	160,558.78
	Spreading & Compaction				
	a. Construction Foreman	1	94.21	611.92	57,645.92
	b. Laborer	6	94.21	342.24	193,444.32
	Sub-total for A			P	459,495.14
	Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B	Equipment, (2014 ACEL Rates)				
	For Excavation Work				
	a. Bulldozer	3	78.19	27,032.00	6,340,908.40
	b. Payloader	3	78.19	13,864.00	3,252,084.72
	c. Dumptruck	6	78.19	11,360.00	5,329,440.62
	Spreading and Compaction				
	a. Road Grader	3	94.21	17,384.00	4,912,979.16
	b. Road Roller	3	94.21	13,216.00	3,735,039.84
	c. Water Truck	3	32.97	19,600.00	1,938,738.90
	Sub-total for B			P	25,509,191.65
C.	Total (A+B)			P	25,968,686.78
D.	Output/day 1,200.00 cu.m. /day				
	Name and Specifications	Quantity	Unit	Unit Cost	Amount
E.	Materials				
	Sub-total for E			P	0.00
F.	Direct Cost (C+E)				25,968,686.78
G.	Overhead, Contingencies and Miscellaneous		10%	per D.O 197 s 2016	2,596,868.68
H.	Contractor's Profit (CP)		8%	per D.O 197 s 2016	2,077,494.94
I.	Value Added Tax (VAT)		5%	per D.O 197 s 2016	1,532,152.52
J.	Total Unit Cost				284.62

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DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Construction of Missing Links/New Roads Sindangan - Bayog - Lakewood Road, Talinga - Dagohoy - Tinaplan - Titik Zamboanga del Norte

Item No./Description : 105 (1)a Subgrade Preparation
Unit of Measurement : sq.m.
Output per hour : 300.00
Quantity : 11,460.00

	Designation	No. of Person	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Construction Foreman	1	4.78	611.92	2,921.92
	b. Laborer	2	4.78	342.24	3,268.39
	Sub-total for A			P	6,190.31
	Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B	Equipment, (2014 ACEL Rates)				
	a. Road Grader	1	4.78	17,384.00	83,008.60
	b. Road Roller	1	4.78	13,216.00	63,106.40
	c. Water Truck	1	1.19	19,600.00	23,397.50
	Sub-total for B			P	169,512.50
C.	Total (A+B)			P	175,702.81
D.	Output/day 2,400.00 sq.m. /day				
	Name and Specifications	Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a.				
	Sub-total for E			P	0.00
F.	Direct Cost (C+E)				175,702.81
G.	Overhead, Contingencies and Miscellaneous		10%	per D.O 197 s 2016	17,570.28
H.	Contractor's Profit (CP)		8%	per D.O 197 s 2016	14,056.22
I.	Value Added Tax (VAT)		5%	per D.O 197 s 2016	10,366.47
J.	Total Unit Cost				19.00

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DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Construction of Missing Links/New Roads Sindangan - Bayog - Lakewood Road, Talinga - Dagohoy - Tinaplan - Titik Zamboanga del Norte

Item No./Description : 200 (1) Aggregate Subbase Course
Unit of Measurement : cu.m.
Output per hour : 50.00
Quantity : 5,846.00

	Designation	No. of Person	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Construction Foreman	1	14.62	611.92	8,943.21
	b. Laborer	2	14.62	342.24	10,003.68
	Sub-total for A			P	18,946.89
	Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B	Equipment, (2014 ACEL Rates)				
	a. Road Grader	1	14.62	17,384.00	254,067.16
	b. Road Roller	1	14.62	13,216.00	193,151.84
	c. Water Truck	1	14.62	19,600.00	286,454.00
	Sub-total for B			P	733,673.00
C.	Total (A+B)			P	752,619.89
D.	Output/day 400.00 cu.m. /day				
	Name and Specifications	Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Aggregate Subbase Course (w/ Shrinkage of 15%)	7,307.50	cu.m.	1,197.56	8,751,169.70
	Sub-total for E			P	8,751,169.70
F.	Direct Cost (C+E)				9,503,789.59
G.	Overhead, Contingencies and Miscellaneous		10% per D.O 197 s 2016		950,378.96
H.	Contractor's Profit (CP)		8% per D.O 197 s 2016		760,303.17
I.	Value Added Tax (VAT)		5% per D.O 197 s 2016		560,723.59
J.	Total Unit Cost				2,014.23

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DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Construction of Missing Links/New Roads Sindangan - Bayog - Lakewood Road, Talinga - Dagohoy - Tinaplan - Titik Zamboanga del Norte

Item No./Description : 300 (1) Aggregate Surface Course
Unit of Measurement : cu.m.
Output per hour : 50.00
Quantity : 83.00

	Designation	No. of Person	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Construction Foreman	1	0.21	611.92	126.97
	b. Laborer	2	0.21	342.24	142.03
	Sub-total for A			P	269.00
	Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B	Equipment, (2014 ACEL Rates)				
	a. Road Grader	1	0.21	17,384.00	3,607.18
	b. Road Roller	1	0.21	13,216.00	2,742.32
	c. Water Truck	1	0.05	19,600.00	1,016.75
	Sub-total for B			P	7,366.25
C.	Total (A+B)			P	7,635.25
D.	Output/day 400.00 cu.m. /day				
	Name and Specifications	Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Aggregate Surface Course (w/ shrinkage of 15%)	95.45	cu.m.	1,247.56	119,079.60
	Sub-total for E			P	119,079.60
F.	Direct Cost (C+E)				126,714.86
G.	Overhead, Contingencies and Miscellaneous		10% per D.O 197 s 2016		12,671.49
H.	Contractor's Profit (CP)		8% per D.O 197 s 2016		10,137.19
I.	Value Added Tax (VAT)		5% per D.O 197 s 2016		7,476.18
J.	Total Unit Cost				1,891.56

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DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Construction of Missing Links/New Roads Sindangan - Bayog - Lakewood Road, Talinga - Dagohoy - Tinaplan - Titik Zamboanga del Norte

Item No./Description : 311(1)e1a Portland Cement Concrete Pavement-using Conventional Method, 0.28m thick
Unit of Measurement : sq.m.
Output per hour : 57.70
Quantity : 11,193.00

	Designation	No. of Person	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Construction Foreman	1	24.25	611.92	14,838.00
	b. Skilled	4	24.25	443.20	42,987.33
	c. Laborer	12	24.25	342.24	99,584.72
	Sub-total for A			P	157,410.05
	Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B	Equipment, (2014 ACEL Rates)				
	a. Transit Mixer	4	24.25	10,544.00	1,022,694.90
	b. Concrete Vibrator	2	24.25	730.00	35,402.47
	c. Batching Plant	1	24.25	14,076.00	341,318.60
	d. Pay Loader	1	24.25	13,864.00	336,177.97
	e. Concrete Screeder	1	24.25	4,360.00	105,722.44
	f. Water Truck	1	24.25	19,600.00	475,266.03
	g. Concrete Saw	1	24.25	261.04	6,329.77
	h. Bar Cutter	1	2.42	1,758.00	4,262.85
	Minor Tools (5% of labor)				7,870.50
	Sub-total for B			P	2,335,045.54
C.	Total (A+B)			P	2,492,455.59
D.	Output/day 461.60 sq.m. /day				
	Name and Specifications	Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Reinforcing Steel Bar	5,596.50	kg	41.00	229,456.50
	b. Curing Compound	3,245.97	lit	40.00	129,838.80
	c. Asphalt Sealant	1,902.81	lit	75.00	142,710.75
	d. Sand	1,723.72	cu.m	1,057.56	1,822,939.44
	e. Gravel	3,134.04	cu.m	1,227.56	3,847,222.14
	f. Cement	29,773.38	bag	283.04	8,427,182.17
	g. Concrete Saw	1.68	pc	8,000.00	13,431.60
	h. Pipe Sleeve, 2" dia.	87.31	l.m	133.00	11,611.62
	i. Grease/Tar	87.31	lit	21.00	1,833.41
	j. Steel Forms	5,148.78	lit	60.00	308,926.80
	Sub-total for E			P	14,935,153.23
F.	Direct Cost (C+E)				17,427,608.82
G.	Overhead, Contingencies and Miscellaneous		10% per D.O 197 s 2016		1,742,760.88
H.	Contractor's Profit (CP)		8% per D.O 197 s 2016		1,394,208.71
I.	Value Added Tax (VAT)		5% per D.O 197 s 2016		1,028,228.92
J.	Total Unit Cost				1,929.13

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DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Construction of Missing Links/New Roads Sindangan - Bayog - Lakewood Road, Talinga - Dagohoy - Tinaplan - Titik Zamboanga del Norte

Item No./Description : 311(1)a Portland Cement Concrete Pavement, 0.15m. Thick
Unit of Measurement : sq.m
Output per hour : 107.33
Quantity : 4,368.00

	Designation	No. of Person	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Construction Foreman	1	5.09	611.92	3,112.91
	b. Skilled	4	5.09	443.20	9,018.44
	c. Laborer	12	5.09	342.24	20,892.17
	Sub-total for A			P	33,023.51
	Name and Capacity	**No. of Equip.**	**No. of Days**	**Daily Rate**	**Amount**
B	Equipment, (2014 ACEL Rates)				
	a. Transit Mixer	4	5.09	10,544.00	214,554.14
	b. Concrete Vibrator	2	5.09	730.00	7,427.19
	c. Batching Plant	1	5.09	14,076.00	71,606.22
	d. Pay Loader	1	5.09	13,864.00	70,527.76
	e. Concrete Screeder	1	5.09	4,360.00	22,179.82
	f. Water Truck	1	5.09	19,600.00	99,707.44
	g. Concrete Saw	1	5.09	261.04	1,327.94
	h. Bar Cutter	1	0.51	1,758.00	894.31
	Minor Tools (5% of Labor)				24,411.24
	Sub-total for B			P	512,636.07
C.	Total (A+B)			P	545,659.58
D.	Output/day 858.64 sq.m /day				
	Name and Specifications	**Quantity**	**Unit**	**Unit Cost**	**Amount**
E.	Materials				
	a. Reinforcing Steel Bar	1,441.44	kg	41.00	59,099.04
	b. Curing Compound	1,266.72	lit	40.00	50,668.80
	c. Asphalt Sealant	524.16	lit	75.00	39,312.00
	d. Steel Form	2,009.28	l.m	40.00	80,371.20
	e. Sand	360.36	cu.m	1,057.56	381,102.32
	f. Gravel	655.20	cu.m	1,227.56	804,297.31
	g. Cement	6,246.24	bag	283.04	1,767,961.93
	h. Concrete Saw	0.66	pc	8,000.00	5,241.60
	i. Pipe Sleeve, 1" dia.	34.07	l.m	133.00	4,531.36
	j. Grease/Tar	6.55	lit	21.00	137.59
	Sub-total for E			P	3,192,723.16
F.	Direct Cost (C+E)				3,738,382.74
G.	Overhead, Contingencies and Miscellaneous		10%	per D.O 197 s 2016	373,838.27
H.	Contractor's Profit (CP)		8%	per D.O 197 s 2016	299,070.62
I.	Value Added Tax (VAT)		5%	per D.O 197 s 2016	220,564.58
J.	Total Unit Cost				1,060.41

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DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Construction of Missing Links/New Roads Sindangan - Bayog - Lakewood Road, Talinga - Dagohoy - Tinaplan - Titik Zamboanga del Norte

Item No./Description : 404 (1)a Reinforcing Steel Bar, Grade 40
Unit of Measurement : kg.
Output per hour : 180.00
Quantity : 19,175.00

	Designation	No. of Person	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Construction Foreman	1	13.32	611.92	8,148.31
	b. Skilled Laborer	2	13.32	443.20	11,803.28
	c. Laborer	8	13.32	342.24	36,458.07
	Sub-total for A			P	56,409.65
	Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B	Equipment, (2009 ACEL Rates)				
	a. Bar Cutter	1	6.66	1,758.00	11,704.74
	b. Bar Bender	1	6.66	2,812.00	18,722.26
	c. Cargo Truck	1	2.00	6,264.00	12,511.69
	Sub-total for B			P	42,938.68
C.	Total (A+B)			P	99,348.34
D.	Output/day 1,440.00 kg. /day				
	Name and Specifications	Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Tie Wire	402.68	kg	61.67	24,832.97
	b. Reinforcing Steel Bar, Grade 40	20,133.75	kg	41.00	825,483.75
	Sub-total for E			P	850,316.72
F.	Direct Cost (C+E)				949,665.06
G.	Overhead, Contingencies and Miscellaneous		10%	per D.O 197 s 2016	94,966.51
H.	Contractor's Profit (CP)		8%	per D.O 197 s 2016	75,973.20
I.	Value Added Tax (VAT)		5%	per D.O 197 s 2016	56,030.24
J.	Total Unit Cost				61.36

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DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Construction of Missing Links/New Roads Sindangan - Bayog - Lakewood Road, Talinga - Dagohoy - Tinaplan - Titik Zamboanga del Norte

Item No./Description : 405 (1) b3 Structural Concrete, Class A
Unit of Measurement : cu.m
Output per hour : 1.40
Quantity : 474.00

	Designation	No. of Person	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Construction Foreman	1	42.32	611.92	25,897.33
	b. Skilled Laborer	4	42.32	443.20	75,027.43
	c. Laborer	8	42.32	342.24	115,872.69
	Installation/Removal of Form Works				
	a. Skilled Laborer	4	42.32	443.20	75,027.43
	b. Laborer	8	42.32	342.24	115,872.69
	Sub-total for A			P	407,697.56
	Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B	Equipment, (2014 ACEL Rates)				
	a. One Bagger Mixer	1	42.32	1,376.00	58,234.29
	b. Concrete Vibrator	1	42.32	972.00	41,136.43
	c. Water Truck	1	4.23	19,600.00	82,950.00
	Minor Tools (5% of Labor)				20,384.88
	Sub-total for B			P	202,705.59
C.	Total (A+B)			P	610,403.15
D.	Output/day 11.20 cu.m /day				
	Name and Specifications	Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Form Lumber	8,295.00	bd.ft	42.00	348,390.00
	b. Plywood	189.60	pc	1,173.00	222,400.80
	c. Assorted CW Nails	331.80	kg.	55.00	18,249.00
	d. Portland Cement	4,503.00	bag	283.04	1,274,547.98
	e. Sand	237.00	cu.m	1,057.56	250,641.72
	f. Gravel	474.00	cu.m	1,227.56	581,863.44
	Sub-total for E			P	2,696,092.94
F.	Direct Cost (C+E)				3,306,496.09
G.	Overhead, Contingencies and Miscellaneous		10%	per D.O 197 s 2016	330,649.61
H.	Contractor's Profit (CP)		8%	per D.O 197 s 2016	264,519.69
I.	Value Added Tax (VAT)		5%	per D.O 197 s 2016	195,083.27
J.	Total Unit Cost				8,642.93

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DETAILED UNIT PRICE ANALYSIS

PROJECT NAME	:	Construction of Missing Links/New Roads Sindangan - Bayog - Lakewood Road, Talinga - Dagohoy - Tinaplan - Titik Zamboanga del Norte
Item No./Description	:	500(1)b3 Pipe Culvert & Storm Drain
Unit of Measurement	:	ln.m
Output per hour	:	1.00
Quantity	:	92.00

	Designation	No. of Person	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Construction Foreman	1	11.50	611.92	7,037.08
	b. Skilled Laborer	2	11.50	443.20	10,193.60
	c. Laborer	4	11.50	342.24	15,743.04
	Sub-total for A			P	32,973.72
	Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B	Equipment, (2014 ACEL Rates)				
	a. Backhoe	1	5.75	12,296.00	70,702.00
	b. Plate Compactor	1	5.75	984.00	5,658.00
	Minor Tools (10% of Labor)				3,297.37
	Sub-total for B			P	79,657.37
C.	Total (A+B)			P	112,631.09
D.	Output/day 8.00 ln.m	/day			
	Name and Specifications	Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Portland Cement	99.36	bag	283.04	28,123.27
	b. Sand	5.61	cu.m	1,057.56	5,935.03
	c. RC Pipes (910 mm dia.)	92.00	pc	2,000.00	184,000.00
	d. Sand Bedding	11.78	cu.m	1,057.56	12,453.83
	Sub-total for E			P	230,512.12
F.	Direct Cost (C+E)				343,143.22
G.	Overhead, Contingencies and Miscellaneous		10% per D.O 197 s 2016		34,314.32
H.	Contractor's Profit (CP)		8% per D.O 197 s 2016		27,451.46
I.	Value Added Tax (VAT)		5% per D.O 197 s 2016		20,245.45
J.	Total Unit Cost				4,621.24

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DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Construction of Missing Links/New Roads Sindangan - Bayog - Lakewood Road, Talinga - Dagohoy - Tinaplan - Titik Zamboanga del Norte

Item No./Description : 505(5) Grouted Riprap, Class A
Unit of Measurement : cu.m
Output per hour : 1.25
Quantity : 27.00

	Designation	No. of Person	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Construction Foreman	1	2.70	611.92	1,652.18
	b. Skilled Laborer	2	2.70	443.20	2,393.28
	c. Laborer	8	2.70	342.24	7,392.38
	Sub-total for A			P	11,437.85
	Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B	Equipment, (2014 ACEL Rates)				
	a. One Bagger Mixer	1	2.70	1,376.00	3,715.20
	b. Water Truck	1	1.08	19,600.00	21,168.00
	Minor Tools (5% of Labor)				571.89
	Sub-total for B			P	25,455.09
C.	Total (A+B)			P	36,892.94
D.	Output/day 10.00 cu.m	/day			
	Name and Specifications	Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Cement	81.00	bag	283.04	22,926.58
	b. Sand	6.75	cu.m	1,057.56	7,138.53
	c. Gravel Fill	0.41	cu.m	1,227.56	497.16
	d. Weep Holes (PVC), 2" dia.	8.10	ln.m	133.00	1,077.30
	e. Filter Cloth	0.41	sq.m	160.00	64.80
	f. Boulders	28.35	cu.m	1,775.56	50,337.13
	Miscellaneous (1% of Materials)				820.41
	Sub-total for E			P	82,861.91
F.	Direct Cost (C+E)				119,754.85
G.	Overhead, Contingencies and Miscellaneous		10% per D.O 197 s 2016		11,975.49
H.	Contractor's Profit (CP)		8% per D.O 197 s 2016		9,580.39
I.	Value Added Tax (VAT)		5% per D.O 197 s 2016		7,065.54
J.	Total Unit Cost				5,495.42

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DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Construction of Missing Links/New Roads Sindangan - Bayog - Lakewood Road, Talinga - Dagohoy - Tinaplan - Titik Zamboanga del Norte

Item No./Description : 506(1) Stone Masonry
Unit of Measurement : cu.m
Output per hour : 1.56
Quantity : 81.00

	Designation	No. of Person	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Construction Foreman	1	6.48	611.92	3,965.24
	b. Skilled Laborer	2	6.48	443.20	5,743.87
	c. Laborer	8	6.48	342.24	17,741.72
	Sub-total for A			P	27,450.84
	Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B	Equipment, (2014 ACEL Rates)				
	a. One Bagger Mixer	1	6.48	1,376.00	8,916.48
	b. Water Truck	1	0.32	19,600.00	6,350.40
	c. Backhoe	1	0.65	12,296.00	7,967.81
	Minor Tools (10% of Labor)				2,745.08
	Sub-total for B			P	25,979.77
C.	Total (A+B)			P	53,430.61
D.	Output/day 12.50 cu.m /day				
	Name and Specifications	Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Cement	445.50	bag	283.04	126,096.19
	b. Sand	24.30	cu.m	1,057.56	25,698.71
	c. Gravel Fill	1.62	cu.m	1,227.56	1,988.65
	d. Weep Holes (PVC)	24.30	ln.m	133.00	3,231.90
	e. Filter Cloth	1.22	sq.m	160.00	194.40
	f. Boulders	85.05	cu.m	1,775.56	151,011.38
	Miscellaneous (1% of Materials)				3,082.21
	Sub-total for E			P	311,303.43
F.	Direct Cost (C+E)				364,734.04
G.	Overhead, Contingencies and Miscellaneous		10% per D.O 197 s 2016		36,473.40
H.	Contractor's Profit (CP)		8% per D.O 197 s 2016		29,178.72
I.	Value Added Tax (VAT)		5% per D.O 197 s 2016		21,519.31
J.	Total Unit Cost				5,579.08

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DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Construction of Missing Links/New Roads Sindangan - Bayog - Lakewood Road, Talinga - Dagohoy - Tinaplan - Titik Zamboanga del Norte

Item No./Description : 612(1) Reflectorized Thermoplastic Pavement Markings (White)
Unit of Measurement : sq.m
Output per hour : 25.00
Quantity : 394.00

	Designation	No. of Person	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Construction Foreman	1	1.97	611.92	1,205.48
	b. Skilled Laborer	2	1.97	443.20	1,746.21
	c. Laborer	6	1.97	342.24	4,045.28
	Sub-total for A			P	6,996.97
	Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B	Equipment, (2014 ACEL Rates)				
	a. Cargo Truck/Delivery Truck	1	1.97	9,696.00	19,101.12
	b. Applicator Machine	1	1.97	750.00	1,477.50
	c. Kneading Machine	1	1.97	1,500.00	2,955.00
	Minor Tools (10% of labor)				
	Sub-total for B			P	23,533.62
C.	Total (A+B)			P	30,530.59
D.	Output/day 200.00 sq.m	/day			
	Name and Specifications	Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Thermoplastic Paint (white)	128.05	bag	1,585.00	202,959.25
	b. Glass Beads	13.00	bag	2,500.00	32,505.00
	c. Primer	47.28	liter	180.00	8,510.40
	d. LPG (50 kg.)	1.58	cyl	90.00	141.84
	e. LPG (12 kg.)	0.79	cyl	50.00	39.40
	f. Calsumine	49.25	kg	5.00	246.25
	Miscellaneous (5% of Materials)				12,220.11
	Sub-total for E			P	256,622.25
F.	Direct Cost (C+E)				287,152.83
G.	Overhead, Contingencies and Miscellaneous		10%	per D.O 197 s 2016	28,715.28
H.	Contractor's Profit (CP)		8%	per D.O 197 s 2016	22,972.23
I.	Value Added Tax (VAT)		5%	per D.O 197 s 2016	16,942.02
J.	Total Unit Cost				903.00

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DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Construction of Missing Links/New Roads Sindangan - Bayog - Lakewood Road, Talinga - Dagohoy - Tinaplan - Titik Zamboanga del Norte

Item No./Description : 612(2) Reflectorized Thermoplastic Pavement Markings (Yellow)
Unit of Measurement : sq.m
Output per hour : 25.00
Quantity : 102.00

	Designation	No. of Person	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Construction Foreman	1	0.51	611.92	312.08
	b. Skilled Laborer	2	0.51	443.20	452.06
	c. Laborer	6	0.51	342.24	1,047.25
	Sub-total for A			P	1,811.40
	Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B	Equipment, (2014 ACEL Rates)				
	a. Cargo Truck/Delivery Truck	1	0.51	9,696.00	4,944.96
	b. Applicator Machine	1	0.51	750.00	382.50
	c. Kneading Machine	1	0.51	1,500.00	765.00
	Minor Tools (10% of labor)				
	Sub-total for B			P	6,092.46
C.	Total (A+B)			P	7,903.86
D.	Output/day 200.00 sq.m	/day			
	Name and Specifications	Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Thermoplastic Paint (yellow)	33.15	bag	1,800.00	59,670.00
	b. Glass Beads	3.37	bag	2,500.00	8,415.00
	c. Primer	12.24	liter	233.00	2,851.92
	d. LPG (50 kg.)	0.41	cyl	90.00	36.72
	e. LPG (12 kg.)	0.20	cyl	50.00	10.20
	f. Calsumine	12.75	kg	5.00	63.75
	Miscellaneous (5% of Materials)				3,552.38
	Sub-total for E			P	74,599.97
F.	Direct Cost (C+E)				82,503.83
G.	Overhead, Contingencies and Miscellaneous		10%	per D.O 197 s 2016	8,250.38
H.	Contractor's Profit (CP)		8%	per D.O 197 s 2016	6,600.31
I.	Value Added Tax (VAT)		5%	per D.O 197 s 2016	4,867.73
J.	Total Unit Cost				1,002.18

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DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Construction of Missing Links/New Roads Sindangan - Bayog - Lakewood Road, Talinga - Dagohoy - Tinaplan - Titik Zamboanga del Norte

Item No./Description : 622(1)a Bio-Engineered Erosion Coco Fiber Erosion Control Net (CGN 400)
Unit of Measurement : sq.m
Output per hour : 50.00
Quantity : 15,595.00

	Designation	No. of Person	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Construction Foreman	1	38.99	611.92	23,857.23
	b. Laborer	8	38.99	342.24	106,744.66
	Sub-total for A			P	130,601.89
	Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B	Equipment, (2014 ACEL Rates)				
	a. Water Truck	1	9.75	19,600.00	191,038.75
	Minor Tools (10% of Labor)				13,060.19
	Sub-total for B			P	204,098.94
C.	Total (A+B)			P	334,700.83
D.	Output/day 400.00 sq.m /day				
	Name and Specifications	Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Erosion Control Net CGN 400 w/ 5% wastage (Price includes bamboo pegs)	16,374.75	sq.m	100.00	1,637,475.00
	Sub-total for E			P	1,637,475.00
F.	Direct Cost (C+E)				1,972,175.83
G.	Overhead, Contingencies and Miscellaneous		10% per D.O 197 s 2016		197,217.58
H.	Contractor's Profit (CP)		8% per D.O 197 s 2016		157,774.07
I.	Value Added Tax (VAT)		5% per D.O 197 s 2016		116,358.37
J.	Total Unit Cost				156.69

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DETAILED UNIT PRICE ANALYSIS

PROJECT NAME	:	Construction of Missing Links/New Roads Sindangan - Bayog - Lakewood Road, Talinga - Dagohoy - Tinaplan - Titik Zamboanga del Norte
Item No./Description	:	622(1)b Bio-Engineered Erosion Coco Fiber Erosion Control Net (CGN 700)
Unit of Measurement	:	sq.m
Output per hour	:	50.00
Quantity	:	31,834.00

	Designation	No. of Person	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Construction Foreman	1	79.59	611.92	48,699.65
	b. Laborer	8	79.59	342.24	217,897.36
	Sub-total for A			P	266,597.02
	Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B	Equipment, (2014 ACEL Rates)				
	a. Water Truck	1	19.90	19,600.00	389,966.50
	Minor Tools (10% of Labor)				26,659.70
	Sub-total for B			P	416,626.20
C.	Total (A+B)			P	683,223.22
D.	Output/day 400.00 sq.m /day				
	Name and Specifications	Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Erosion Control Net CGN 700 w/ 5% wastage (Price includes bamboo pegs)	33,425.70	sq.m	119.00	3,977,658.30
	Sub-total for E			P	3,977,658.30
F.	Direct Cost (C+E)				4,660,881.52
G.	Overhead, Contingencies and Miscellaneous		10%	per D.O 197 s 2016	466,088.15
H.	Contractor's Profit (CP)		8%	per D.O 197 s 2016	372,870.52
I.	Value Added Tax (VAT)		5%	per D.O 197 s 2016	274,992.01
J.	Total Unit Cost				181.40

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DETAILED UNIT PRICE ANALYSIS

PROJECT NAME	:	Construction of Missing Links/New Roads Sindangan - Bayog - Lakewood Road, Talinga - Dagohoy - Tinaplan - Titik Zamboanga del Norte
Item No./Description	:	622(2)b Bio-Engineered Erosion Coco Logs/Fascine Control System
Unit of Measurement	:	ln.m
Output per hour	:	15.00
Quantity	:	5,010.00

	Designation	No. of Person	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Construction Foreman	1	41.75	611.92	25,547.66
	b. Laborer	8	41.75	342.24	114,308.16
	Sub-total for A			P	139,855.82
	Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B	Equipment, (2014 ACEL Rates)				
	Minor Tools (10% of Labor)				13,985.58
	Sub-total for B			P	13,985.58
C.	Total (A+B)			P	153,841.40
D.	Output/day 120.00 ln.m /day				
	Name and Specifications	Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Coco Fiber Roll (CGR 200) (Price includes nylon ropes and live stakes)	5,260.50	ln.m	472.00	2,482,956.00
	Sub-total for E			P	2,482,956.00
F.	Direct Cost (C+E)				2,636,797.40
G.	Overhead, Contingencies and Miscellaneous		10%	per D.O 197 s 2016	263,679.74
H.	Contractor's Profit (CP)		8%	per D.O 197 s 2016	210,943.79
I.	Value Added Tax (VAT)		5%	per D.O 197 s 2016	155,571.05
J.	Total Unit Cost				652.09

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DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Construction of Missing Links/New Roads Sindangan - Bayog - Lakewood Road, Talinga - Dagohoy - Tinaplan - Titik Zamboanga del Norte

Item No./Description : 622(3)a Bio-Engineered Erosion Control System Vegetation
Unit of Measurement : sq.m
Output per hour : 62.50
Quantity : 47,429.00

	Designation	No. of Person	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Construction Foreman	1	94.86	611.92	58,045.51
	b. Laborer	2	94.86	342.24	64,928.40
	Sub-total for A			P	122,973.91
	Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B	Equipment, (2014 ACEL Rates)				
	a. Hydroseeding Machine	1	94.86	7,616.00	722,438.53
	b. Water Truck	1	94.86	8,520.00	808,190.16
	Sub-total for B			P	1,530,628.69
C.	Total (A+B)			P	1,653,602.60
D.	Output/day 500.00 sq.m /day				
	Name and Specifications	Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Grass Cover (Price includes grass seeds, mulch, cocopeat & binding agent for hydroseeding)	49,800.45	sq.m	306.00	15,238,937.70
	Sub-total for E			P	15,238,937.70
F.	Direct Cost (C+E)				16,892,540.30
G.	Overhead, Contingencies and Miscellaneous		10%	per D.O 197 s 2016	1,689,254.03
H.	Contractor's Profit (CP)		8%	per D.O 197 s 2016	1,351,403.22
I.	Value Added Tax (VAT)		5%	per D.O 197 s 2016	996,659.88
J.	Total Unit Cost				441.29

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DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Construction of Missing Links/New Roads Sindangan - Bayog - Lakewood Road, Talinga - Dagohoy - Tinaplan - Titik Zamboanga del Norte

Item No./Description : A.1.1(3) Const. of Field Office for the Engineer

Unit of Measurement : LS

Output per hour :

Quantity : 1.00

	Designation	No. of Person	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Construction Foreman	1	10.00	611.92	6,119.20
	b. Masons	3	10.00	443.20	13,296.00
	c. Carpenters	3	10.00	443.20	13,296.00
	d. Laborers	6	10.00	342.24	20,534.40
	Sub-total for A			P	53,245.60
	Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B	Equipment, (2014 ACEL Rates)				
	a. Bagger Mixer	1	5.00	1,376.00	6,880.00
	b. Water Truck	1	1.00	19,600.00	19,600.00
	Minor Tools (10% of Labor)				5,324.56
	Sub-total for B			P	31,804.56
C.	Total (A+B)			P	85,050.16
D.	Output/day 0.00 LS	/day			
	Name and Specifications	Quantity	Unit	Unit Cost	Amount
E.	Materials				
	I. Earthworks (Excavation, Embankment, Bedding)				
	a. Gravel Bedding	3.50	cu.m	1,227.56	4,296.46
	b. Selected Fill	10.00	cu.m	601.40	6,014.00
	c. Soil Poisoning	2.50	lit	1,900.00	4,750.00
	II. Concrete Works (Footing, Columns, Beams & Slab on Grade)				
	a. Portland Cement	90.00	bag	283.04	25,473.98
	b. Crushed Gravel	20.00	cu.m	1,227.56	24,551.20
	c. Washed Sand	17.00	cu.m	1,057.56	17,978.52
	III. Reinforcing Bars(Footing Columns, Beams, & Slabs on Grade)				
	a. Deformed Round Bar, Grade 40	500.00	kg	40.00	20,000.00
	b. No. 16 GI Tie Wire	20.00	kg	68.00	1,360.00
	IV. Formworks (Columns & Beams)				
	a. Coco Lumber	400.00	bd.ft	15.00	6,000.00
	b. Ordinary Plywood, 1/4"x4'x8'	18.00	pc	520.00	9,360.00
	c. CWN, Assorted	5.00	kg	44.00	220.00
	V. Masonry Works (masonry walls & plastering)				
	a. CHB 6" thk	650.00	pc	18.00	11,700.00
	b. Portland Cement	50.00	bag	283.04	14,152.21
	c. Washed Sand	10.00	cu.m	1,057.56	10,575.60
	d. 10mm dia. X 6m RSB	75.00	kg	43.00	3,225.00
	e. No. 16 GI Tie Wire	2.50	kg	81.00	202.50
	VI. Doors and Windows				
	a. D-1, Hollow Core Flush Type swing door, complete w/ accessories, 0.90mx2.1m	2.00	set	1,765.27	3,530.54
	b. W-1, Jalousie window, 1.4m x 1.2m	2.00	set	924.00	1,848.00
	c. W-2, Jalousie window, 2.8m x 1.2m	2.00	set	1,848.00	3,696.00
	Sub-Total for E				168,934.00
	Sub-total for E			P	312,460.35
F.	Direct Cost (C+E)				397,510.51
G.	Overhead, Contingencies and Miscellaneous		10%	per D.O 197 s 2016	39,751.05
H.	Contractor's Profit (CP)		8%	per D.O 197 s 2016	31,800.84
I.	Value Added Tax (VAT)		5%	per D.O 197 s 2016	23,453.12
J.	Total Unit Cost				492,515.53

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Construction of Missing Links/New Roads Sindangan - Bayog - Lakewood Road, Talinga - Dagohoy - Tinaplan - Titik Zamboanga del Norte

Item No./Description : A.1.1(3) Const. of Field Office for the Engineer

Unit of Measurement : LS

Output per hour :

Quantity : 1.00

	Designation	No. of Person	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Construction Foreman	1	16.00	611.92	
	b. Masons	3	16.00	443.20	
	c. Carpenters	3	16.00	443.20	
	d. Laborers	6	16.00	342.24	
	Sub-total for A			P	0.00
	Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B	Equipment, (2014 ACEL Rates)				
	a. Bagger Mixer	1	5.00	1,376.00	
	b. Water Truck	1	1.00	19,600.00	
	Minor Tools (10% of Labor)				
	Sub-total for B			P	0.00
C.	Total (A+B)			P	0.00
D.	Output/day 0.00 LS	/day			
	Name and Specifications	Quantity	Unit	Unit Cost	Amount
E.	Materials				
	VII Steel Works				
	a. 65 x 65 x 6mm. L	300.00	kg	48.00	14,400.00
	b. 50 x 50 x 6mm. L	200.00	kg	48.00	9,600.00
	c. 50 x 50 x 4mm. L	100.00	kg	48.00	4,800.00
	d. Purlins C- 150 x 50 x 3mm.	19.00	kg	45.00	855.00
	e. 16mm dia. Cross bracing	32.00	kg	50.00	1,600.00
	f. 16mm dia. Turn buckle	15.00	pc	123.00	1,845.00
	g. 12mm thk base plate	22.00	kg	45.00	990.00
	h. 10mm thk batten plate	15.00	kg	45.00	675.00
	i. 10mm dia. Sag rod	7.50	kg	50.00	375.00
	j. 20mm dia. X 350 mm anchor bolts	7.00	pc	60.00	420.00
	k. Welding Rod	12.50	kg	125.00	1,562.50
	l. Primer, Zinc Cromate	5.00	gal	531.00	2,655.00
	VII Roofing Works				
	a. Pre-painted GI Roofing Sheet long span	55.00	sq.m	420.00	23,100.00
	b. Pre-painted ridge roll ga 24, 0.60m width	10.00	ln.m	189.00	1,890.00
	c. Pre-painted flashing, ga. 24	2.00	ln.m	189.00	378.00
	d. Teckscrew 11/2"	500.00	pc	1.25	625.00
	e. Roof Sealant	2.00	lit	242.84	485.68
	IX. Carpentry Works				
	a. Rough Lumber, sun dried tanguile	350.00	bd.ft	37.00	12,950.00
	b. Plywood, ordinary 1/4" x 4' x 8'	30.00	pc	350.00	10,500.00
	c. Finishing Nails	5.00	kg	74.00	370.00
	d. Common Wire Nails	10.00	kg	74.00	740.00
	e. Wood Preservative Brown	5.00	lit	900.00	4,500.00
	Sub-Total for E				95,316.18
	Sub-total for E			P	95,316.18
F.	Direct Cost (C+E)				
G.	Overhead, Contingencies and Miscellaneous		10%	per D.O 197 s 2016	
H.	Contractor's Profit (CP)		8%	per D.O 197 s 2016	
I.	Value Added Tax (VAT)		5%	per D.O 197 s 2016	
J.	Total Unit Cost				

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Construction of Missing Links/New Roads Sindangan - Bayog - Lakewood Road, Talinga - Dagohoy - Tinaplan - Titik Zamboanga del Norte

Item No./Description : A.1.1(3) Const. of Field Office for the Engineer

Unit of Measurement : LS

Output per hour :

Quantity : 1.00

Name and Specifications	Quantity	Unit	Unit Cost	Amount
E. Materials				
X. Electrical Works				
a. 2 x 40w Flourescent lighting fixtures	5.00	set	1,500.00	7,500.00
b. Porcelain Ceiling Outlet w/ femal	2.00	pc	50.00	100.00
c. douplex Convinience outlet	3.00	pc	170.00	510.00
d. two gang switch	3.00	pc	132.00	396.00
e. 3.5mm2 thw	3.00	roll	3,600.00	10,800.00
f. 8.00mm2 thw	25.00	m	69.33	1,733.25
g. 15mm dia. PVC pipe	20.00	pc	76.00	1,520.00
h. 15mm dia. PVC Coupling	25.00	pc	27.00	675.00
i. 15mm dia. PVC Elbow	25.00	pc	26.00	650.00
j. 15mm dia. PVC Clamp	55.00	pc	8.00	440.00
k. 20mm dia. RSC Pipe	4.00	pc	240.00	960.00
l. 20mm dia. RSC Coupling	3.00	pc	36.00	108.00
m. 20mm dia. RSC elbow	3.00	pc	30.00	90.00
n. 20mm dia. RSC Clamp	10.00	pc	18.00	180.00
o. 20mm dia. Service entrance cap	2.00	pc	101.49	202.98
p. wire holder	2.00	pc	50.00	100.00
q. utility box	7.00	pc	32.00	224.00
r. octagonal box	8.00	pc	34.00	272.00
s. electrical tape (big)	7.00	pc	28.00	196.00
t. panel board (side main w/ braches)	2.00	set	3,000.00	6,000.00
XI. Plumbing Works				
a. Water Closet (include. Fitting & Accessories	1.00	set	7,631.94	7,631.94
b. Lavatory (include fitting & Accessories)	1.00	set	5,000.00	5,000.00
c. 1/2" GI Pipe S-40	2.00	pc	292.00	584.00
d. 1/2" Water Faucet	2.00	pc	165.00	330.00
e. 1/2" Assorted Connector	8.00	pc	19.00	152.00
f. 4" PVC series 1000	1.00	pc	640.00	640.00
g. 2" PVC series 1000	1.00	pc	305.00	305.00
h. 4" PVC assorted Connector	6.00	pc	77.00	462.00
i. 2" PVC assorted Connector	8.00	pc	56.00	448.00
Sub-Total for E				48,210.17
Sub-total for E			P	48,210.17
F. Direct Cost (C+E)				
G. Overhead, Contingencies and Miscellaneous		10%	per D.O 197 s 2016	
H. Contractor's Profit (CP)		8%	per D.O 197 s 2016	
I. Value Added Tax (VAT)		5%	per D.O 197 s 2016	
J. Total Unit Cost				

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Construction of Missing Links/New Roads Sindangan - Bayog - Lakewood Road, Talinga - Dagohoy - Tinaplan - Titik Zamboanga del Norte

Item No./Description : A.1.1(11) Prov. Of Furniture, Equipment and Appliances for Field Engineer

Unit of Measurement : LS

Output per hour :

Quantity : 1.00

	Designation	No. of Person	No. of Days	Daily Rate	Amount
A.					
	Sub-total for A			P	0.00
	Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B					
	Sub-total for B			P	0.00
C.	Total (A+B)			P	0.00
D.	Output/day 0.00 LS	/day			
	Name and Specifications	Quantity	Unit	Unit Cost	Amount
E.	Materials				
	Office Equipment/Facilities & Supplies				
	a. Office Table, Executive type w/ chair	2.00	unit	7,000.00	14,000.00
	b. 1/2" wooden office table	2.00	each	2,830.00	5,660.00
	c. Drawing Table	2.00	unit	5,000.00	10,000.00
	d. Electric Desk Fan	3.00	unit	1,370.00	4,110.00
	e. Folding Beds, Good Quality	3.00	each	2,700.00	8,100.00
	f. 6" sleeping beds w/ pillows and blanket	3.00	each	5,000.00	15,000.00
	g. Double burner gas stove (Gasul)	1.00	unit	3,700.00	3,700.00
	h. 10 cups Rice Cooker	1.00	unit	2,500.00	2,500.00
	i. Aluminum Cookware	1.00	set	3,500.00	3,500.00
	j. Plate, Glass, Spoon and fork	1.00	dozen	2,000.00	2,000.00
	k. 6 seater dinning table	1.00	each	2,800.00	2,800.00
	l. Monoblock Backrest chair	2.00	dozen	2,500.00	5,000.00
	m. Plastic Pail & Basin	2.00	pc	500.00	1,000.00
	n. White Board	3.00	Unit	7,000.00	21,000.00
	o. Bond Paper (Long)	20.00	ream	300.00	6,000.00
	p. Bond Paper (Short)	20.00	ream	270.00	5,400.00
	q. Yellow Pad	6.00	pad	35.00	210.00
	r. White Board Marker	10.00	pc	75.00	750.00
	s. Sign Pen (assorted color)	2.00	dozen	650.00	1,300.00
	t. Ballpen (assorted color)	4.00	box	180.00	720.00
	u. Mechanical Pencil	6.00	unit	350.00	2,100.00
	v. Pencil Lead, No. 5	4.00	box	145.00	580.00
	w. Puncher	1.00	Unit	253.32	253.32
	x. Staple Pad w/ wire	2.00	Unit	275.00	550.00
	y. Cutter Blade	2.00	box	240.00	480.00
	z. Scotch Tape	10.00	roll	45.00	450.00
	aa Brown Envelop	7.00	dozen	125.00	875.00
	bb Folder, Long	7.00	dozen	85.00	595.00
	cc Folder, Short	7.00	dozen	70.00	490.00
	dd Data File Folder	12.00	pc	85.00	1,020.00
	ee Desktop w/ complete accessories	1.00	unit	60,000.00	60,000.00
	ff Printer (3in1)	1.00	unit	20,000.00	20,000.00
	gg Camera	2.00	unit	15,000.00	30,000.00
	Lighting/Water Fixtures				
	a. Electric Bill	4.40	mons	1,200.00	5,280.00
	b. Water Bill	4.40	mons	1,000.00	4,400.00
	c. LPG Gasul (11 kg)	4.40	mons	1,000.00	4,400.00
	Sub-Total for E				244,223.32
	Sub-total for E			P	244,223.32
F.	Direct Cost (C+E)				244,223.32
G.	Overhead, Contingencies and Miscellaneous			per D.O 197 s 2016	
H.	Contractor's Profit (CP)			per D.O 197 s 2016	
I.	Value Added Tax (VAT)		5%	per D.O 197 s 2016	12,211.17
J.	Total Unit Cost				256,434.49

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME	: Construction of Missing Links/New Roads Sindangan - Bayog - Lakewood Road, Talinga - Dagohoy - Tinaplan - Titik Zamboanga del Norte
Item No./Description	: A.1.2(5) Operation & Maintenance of Gov't. Service Vehicle
Unit of Measurement	: L.S
Output per hour	:
Quantity	: 1.00

	Designation	No. of Person	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Service Driver	1	198.00	443.20	87,753.60
	Sub-total for A			P	87,753.60
	Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B	Equipment, (2014 ACEL Rates)				
	Sub-total for B			P	0.00
C.	Total (A+B)			P	87,753.60
D.	Output/day 0.00 L.S /day				
	Name and Specifications	Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Liters, Diesel Fuel	1,980.00	liters	35.00	69,300.00
	b. Engine Oil & Lubricants	1.00	ls	21,938.40	21,938.40
	c. Tires	4.00	pcs	9,500.00	38,000.00
	d. Spare parts etc.	1.00	ls	90,000.00	90,000.00
	Sub-total for E			P	219,238.40
F.	Direct Cost (C+E)				306,992.00
G.	Overhead, Contingencies and Miscellaneous		0%	per D.O 197 s 2016	0.00
H.	Contractor's Profit (CP)		0%	per D.O 197 s 2016	0.00
I.	Value Added Tax (VAT)		5%	per D.O 197 s 2016	15,349.60
J.	Total Unit Cost				322,341.60

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DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Construction of Missing Links/New Roads Sindangan - Bayog - Lakewood Road, Talinga - Dagohoy - Tinaplan - Titik Zamboanga del Norte

Item No./Description : B.5 Project Billboard
Unit of Measurement : Unit
Output per hour :
Quantity : 2.00

	Designation	No. of Person	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Construction Foreman	1	0.25	611.92	152.98
	b. Carpenters	1	0.25	443.20	110.80
	c. Laborer	2	0.25	342.24	171.12
	Sub-total for A			P	434.90
	Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B	Equipment, (2014 ACEL Rates)				
	Sub-total for B			P	0.00
C.	Total (A+B)			P	434.90
D.	Output/day 0.00 Unit /day				
	Name and Specifications	Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Marine Plywood 3/16" thk. X 4' x 8'	2.00	pc	388.00	776.00
	b. Tarpaulin (4' x 8')	2.00	pc	800.00	1,600.00
	c. Assorted Sizes Lumber	100.00	bd. Ft	15.00	1,500.00
	d. Assorted Sizes CW Nails	2.00	kg	55.00	110.00
	Sub-total for E			P	3,986.00
F.	Direct Cost (C+E)				4,420.90
G.	Overhead, Contingencies and Miscellaneous		10% per D.O 197 s 2016		442.09
H.	Contractor's Profit (CP)		8% per D.O 197 s 2016		353.67
I.	Value Added Tax (VAT)		5% per D.O 197 s 2016		260.83
J.	Total Unit Cost				2,738.75

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DETAILED UNIT PRICE ANALYSIS

PROJECT NAME	:	Construction of Missing Links/New Roads Sindangan - Bayog - Lakewood Road, Talinga - Dagohoy - Tinaplan - Titik Zamboanga del Norte
Item No./Description	:	B.7 Occupational Safety & Health Program
Unit of Measurement	:	L.S
Output per hour	:	
Quantity	:	1.00

	Designation	No. of Person	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Safety Practitioner	1	99.00	611.92	60,580.08
	b. First Aider	1	198.00	443.20	87,753.60
	Sub-total for A			P	148,333.68
	Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B	Equipment, (2014 ACEL Rates)				
	Sub-total for B			P	0.00
C.	Total (A+B)			P	148,333.68
D.	Output/day 0.00 L.S /day				
	Name and Specifications	Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Pairs, Rubber Boots Men, Long with Steel Toe, Black	24.00	pair	400.00	9,600.00
	b. Pairs, Working Gloves (Maong Materials)	24.00	pair	15.00	360.00
	c. Pcs. Rain Coats (Rain Forced, Hip Length Small, Medium & Large)	24.00	pcs	100.00	2,400.00
	Sub-total for E			P	12,360.00
F.	Direct Cost (C+E)				160,693.68
G.	Overhead, Contingencies and Miscellaneous			per D.O 197 s 2016	0.00
H.	Contractor's Profit (CP)		8%	per D.O 197 s 2016	12,855.49
I.	Value Added Tax (VAT)		5%	per D.O 197 s 2016	8,677.46
J.	Total Unit Cost				182,226.63

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DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Construction of Missing Links/New Roads Sindangan - Bayog - Lakewood Road, Talinga - Dagohoy - Tinaplan - Titik Zamboanga del Norte

Item No./Description : B.9 Mobilization and Demobilization
Unit of Measurement : L.S
Output per hour :
Quantity : 1.00

	Designation	No. of Person	No. of Days	Daily Rate	Amount
A.	Labor				
	Sub-total for A			P	0.00
	Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B	Equipment, (2014 ACEL Rates)				
	a. Low Bed Trailer	2	3.00	34,043.00	204,258.00
	b. Water Truck	1	3.00	19,600.00	58,800.00
	c. Backhoe	2	3.00	12,296.00	73,776.00
	d. Payloader	1	3.00	13,864.00	41,592.00
	e. Dumptruck	3	3.00	11,360.00	102,240.00
	f. Bulldozer	1	3.00	27,032.00	81,096.00
	g. Road Roller	1	3.00	13,216.00	39,648.00
	h. Road Grader	1	3.00	17,384.00	52,152.00
	Sub-total for B			P	653,562.00
C.	Total (A+B)			P	653,562.00
D.	Output/day 0.00 L.S /day				
	Name and Specifications	Quantity	Unit	Unit Cost	Amount
E.	Materials				
	Sub-total for E			P	0.00
F.	Direct Cost (C+E)				653,562.00
G.	Overhead, Contingencies and Miscellaneous			per D.O 197 s 2016	0.00
H.	Contractor's Profit (CP)			per D.O 197 s 2016	0.00
I.	Value Added Tax (VAT)		5%	per D.O 197 s 2016	32,678.10
J.	Total Unit Cost				686,240.10

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DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Construction of Missing Links/New Roads Sindangan - Bayog - Lakewood Road, Talinga - Dagohoy - Tinaplan - Titik Zamboanga del Norte

Item No./Description : B.4(1) Construction Survey and Staking
Unit of Measurement : Km.
Output per hour : 0.04
Quantity : 1.57

	Designation	No. of Person	No. of Days	Daily Rate	Amount
A.	Labor				
	(For Field Works)				
	a. Geodetic Engineer	1	5.23	833.31	4,360.99
	b. Skilled Laborer	3	5.23	443.20	6,958.24
	c. Laborer	3	5.23	342.24	5,373.17
	(For Office Works)				
	a. Geodetic Engineer	1	15.70	833.31	13,082.97
	b. Skilled Laborer	2	15.70	443.20	13,916.48
	Sub-total for A			P	43,691.84
	Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B	Equipment, (2014 ACEL Rates)				
	a. Total Station w/ complete accessories	1	5.23	800.00	4,186.67
	Minor Tools (10% of labor)				4,369.18
	Sub-total for B			P	8,555.85
C.	Total (A+B)			P	52,247.70
D.	Output/day 0.30 Km.	/day			
	Name and Specifications	Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Standard Stake Plan (800 mm x 910 mm)	35.00	pcs	200.00	7,000.00
	b. Blue Printing	175.00	pcs	40.00	7,000.00
	Miscellaneous (5% of Materials)				700.00
	Sub-total for E			P	14,700.00
F.	Direct Cost (C+E)				66,947.70
G.	Overhead, Contingencies and Miscellaneous		10%	per D.O 197 s 2016	6,694.77
H.	Contractor's Profit (CP)		8%	per D.O 197 s 2016	5,355.82
I.	Value Added Tax (VAT)		5%	per D.O 197 s 2016	3,949.91
J.	Total Unit Cost				52,833.24

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UNIT COST ANALYSIS FOR HAULING COST FOR ALL AGGREGATES

Hauling Cost from the District Office to Site

Item No	: *ALL AGGREGATES*	*Terrain*	: *Flat to Rolling*
Quantity	: *1,000.00*	*Unit*	: *cu.m.*
		Hauling Distance	: *5.00 km.*
		Effective Working Hours	: *8.00 hrs.*

Hauling : *Using 10.00 cu.m. capacity Dumptruck*

Weight of Dumptruck (cap. 10.00 cu.m.)	: *16,000.00*	kgs
Unit Weight of Fine Aggrgates	: *1,640.00*	kg/cu.m.
Unit Weight of Course Aggrgates	: *1,534.00*	kg/cu.m.
Maximum Volumeto be Carried per DT	: *11.57*	cu.m.

* Dumptruck (10 Wheeler) days computation : **TIME-MOTION ANALYSIS**

Speed when loaded : *30.00* kph
Speed when unloaded : *40.00* kph

Loaded Running $= \dfrac{5.00 \times 60.00}{30.00} = 10$ mins.

Unloaded Running $= \dfrac{5.00 \times 60.00}{40.00} = 7.5$ mins.

Loading & Unloading = *5.00 mins.*
Capacity of Dumptruck = *10.00 cu.m.*
Total Cycle Time = *22.50 mins.*

No. of trips for Dumptruck per day $= \dfrac{8.00 \times 60.00}{22.50} = 21.33$ trips

Dumptruck Daily Outpout = *10.00 X 21.33* = *213.33* cu.m.
Using 4 Dumptruck = *213.33 X 4.00* = *853.33* cu.m.

No. of Days for Dumptruck $= \dfrac{1{,}000.00}{853.33} = 1.17$ days

EQUIPMENT USED: (2009 ACEL RATES)

4.00 - Unit Dumptruck @ P 10,816.00 / day X 1.17 days = P 50,700.00

Sub-Total **P 50,700.00**

Estimated Quantity	=	1,000.00 cu.m.
Unit Cost	***P***	***10.14*** **/cu.m/km. (unit cost hauling per cu.m. per km.)**
Grand Total	*P*	*50,700.00*
Equipment	*P*	*50,700.00*
Labor	*P*	
Equipment	*P*	

ZAMBOANGA DEL NORTE 1ST DEO *(using 2nd Quarter 2017)*

	Hauling Distance		Unit Cost per cu.m/km		Hauling Cost per km.		Unit Price		Unit cost per cu.m.
Cost of Fine Aggregates	54.00	X	10.14	=	547.56	+	510.00	=	1,057.56
Cost of Coarse Aggregates	54.00	X	10.14	=	547.56	+	680.00	=	1,227.56
Cost of Item 200 Materails	54.00	X	10.14	=	547.56	+	650.00	=	1,197.56
Cost of Item 201 Materails	54.00	X	10.14	=	547.56	+	625.00	=	1,172.56
Cost of Item 300 Materails	54.00	X	10.14	=	547.56	+	700.00	=	1,247.56
Cost of Boulders	54.00	X	10.14	=	547.56	+	1,228.00	=	1,775.56
Cost of Embankment, Common Borrow	10.00	X	10.14	=	101.40	+	340.00	=	441.40
Cost of Embankment, Selected Borrow	10.00	X	10.14	=	101.40	+	500.00	=	601.40

UNIT COST DERIVATION FOR PORTLAND CEMENT

TOTAL QUANTITY REQUIREMENTS FOR PORTLAND CEMENT

Description	Quantity (Bags)
Portland Cement Concrete Pavement-using Conventional Method, 0.28m thick	29,773.38
Portland Cement Concrete Pavement, 0.15m. Thick	6,246.24
Structural Concrete, Class A	4,503.00
Grouted Riprap, Class A	81.00
Stone Masonry	445.50
Const. of Field Office for the Engineer	90.00
	50.00
Concrete Structure (Lean Concrete)	-
TOTAL	***41,189.12***

Quantity = 41,189.12 Bags

Delivery Charge = P 0.12 /bag/km

SITE	*HAULING DISTANCE*
Zamboanga del Norte 1st DEO	59.00
PROJECT SITE	

* Average Hauling Distance from source to assumed stockpilling area:
say 59.00 km.

Delivery Charge = P 0.12 X 59.00
Delivery Charge = P 7.08 /bag

* Delivery Truck : 41,189.12 bags (hauling works)
20,000.00 kgs., (capacity per haul)
500.00 bags, (capacity per haul)

* Capacity of Laborers unloading bags of Cement from Delivery Truck:
Assume 10 laborers can unload 500.00 bags of Cement
*Dumptruck (10 Wheeler) days computation : **TIME - MOTION ANALYSIS**
Speed when loaded : *30.00* kph
Speed when unloaded : *40.00* kph

Loaded Running $= \dfrac{59.00 \times 60.00}{30.00} = 118$ mins.

Unloading Running $= \dfrac{59.00 \times 60.00}{40.00} = 88.5$ mins.

Loading & Unloading = *45.00 mins.*
Capacity of Dumptruck = *8.00 cu.m.*
500.00 bags

Total Cycle Time = *251.50 mins.*

No. of trips for Dumptruck per day $= \dfrac{8.00 \times 60.00}{251.50} =$ 1.91 trips

Dumptruck Daily Outpout	=	*500.00*	*X*	*1.91*	=	*954.27*	cu.m.
Using 4 Dumptruck	=	*954.27*	*X*	*4.00*	=	*3,817.10*	cu.m.

No. of Days for Dumptruck $= \dfrac{41{,}189.12}{3{,}817.10} =$ 10.79 days

No. of Days for Labor for unloading = complimentary to D.Truck days = 10.79 days

DELIVERY COST:

41,189.12	Bags, Portland Cement	@	P	7.08	/bag	=	P	291,618.97
					Sub-total			**291,618.97**

LABOR:

1	Foreman	@	P	558.00	/day	X	10.79	days	=	P	6,021.21
10	Laborers	@	P	312.24	/day	X	10.79	days	=		33,692.85
								Sub-total			**39,714.06**

MATERIALS:

41,189.12	Bags, Portland Cement	@	P	275.00	/bag	=	P	11,327,008.00
					Sub-total			**11,327,008.00**

Estimated Quantity : 41,189.12 Bags

Unit Cost	P	283.04
Grand Total	P	11,658,341.03
Delivery Cost	P	291,618.97
Labor	P	39,714.06
Materials	P	11,327,008.00