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 : **Road Widening - Primary Road - Lanao - Pagadian - Zamboanga City Road**	Approriation : P 175,000,000.00 Source of Funds : CY-2018 Issued Obligated Authority : Released : Cal. Days to Complete : 225.00 Cal. Days
PROJECT CATEGORY : NATIONAL ROAD	Desirable Starting Date : Upon Approval Mode of Implementation :
PROJECT DESCRIPTION : Scope of Work : Road Widening Road Width : 6.70 m. Roadbed Width : 12.00 m. Subbase Course : 0.30 mtrs thick Surface Course : 0.15 mtrs thick	NET LENGTH : K1724+110.00 - K1724+310.90 K1724+560.00 - K1726+480.00 K1728+885.97 - K1729+367.02 K1734+918.00 - K1736+403.50 K1737+500.00 - K1738+454.08 Net Length : **9.97** lane km. Net Length : **4,984.97** ln.m. / **4.985** km

MINIMUM EQUIPMENT REQUIREMENT : TECHNICAL PERSONNEL REQUIRED :

DESCRIPTION	NO.	DESCRIPTION	NO.	DESCRIPTION	NO.
Dumptruck (10 Wheeler)	10	Water Pump	1	Project Engineer	1
Bulldozer	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
101(6)	Removal of Actual Structures and Obstruction	0.325	cu.m	1,323.00	443,145.47	334.96
101(8)	Removal of Existing Guardrails	0.050	ln.m	2,483.50	67,877.90	27.33
101(9)	Removal of Existing Guardrails Post	0.014	each	719.00	19,651.38	27.33
102(2)	Surplus Common Excavation	12.067	cu.m.	99,066.50	16,464,579.87	166.20
103(1)a	Structure Excavation	0.108	cu.m.	638.00	146,813.78	230.12
103(3)	Foundation Fill	0.015	cu.m.	21.00	20,316.41	967.45
103(6)a	Pipe Culvert and Drain Excavation	0.040	cu.m.	236.00	54,307.29	230.12
104(1)a1	Embankment (from excavation)	4.059	cu.m.	24,430.00	5,537,895.74	226.68
105 (1)a	Subgrade Preparation	0.580	sq.m.	51,634.50	791,651.55	15.33
200 (1)	Aggregate Subbase Course	22.080	cu.m.	19,439.50	30,125,101.56	1,549.69
300 (1)	Aggregate Surface Course	1.328	cu.m.	1,187.00	1,812,175.10	1,526.69
311(1)e1a	Portland Cement Concrete Pavement-using Conventional Method, 0.28m thick	38.996	sq.m.	33,399.50	53,206,059.24	1,593.02
311(1)a	Portland Cement Concrete Pavement, 0.15m. Thick	5.580	sq.m	8,704.91	7,612,895.18	874.55
405 (1) a3	Structural Concrete, Class A	1.678	cu.m	319.00	2,289,227.31	7,176.26
500(1)b3	RC Culvert Pipe, 910 mm (36" dia.)	0.353	ln.m	140.00	481,690.80	3,440.65

500(1)b4	RC Culvert Pipe, 1070 mm (42" dia.)	0.067	ln.m	22.00	91,530.88	4,160.49
500(1)b6	RC Culvert Pipe, 1520 mm (60" dia.)	0.082	ln.m	14.00	112,066.99	8,004.79
505(1a)	Grouted Riprap, Class A	0.209	cu.m	82.50	285,258.34	3,457.68
506 (1)	Stone Masonry	0.617	cu.m	200.00	841,704.97	4,208.52
603(3)	Metal Guardrail (Metal Beam) Including Post	7.511	m	2,483.50	10,248,387.59	4,126.59
603(4)b	Metal Beam End Piece	0.079	each	68.00	108,123.66	1,590.05
612(1)	Reflectorized Thermoplastic Pavement Markings (White)	0.533	sq.m	997.00	726,627.86	728.81
622(1a)	Bio-Engineered Solutions (Coco-net), CN 400	0.763	sq.m	4,827.00	1,041,242.11	215.71
622(1b)	Bio-Engineered Solutions (Coco-net), CN 700	0.111	sq.m	705.00	152,077.00	215.71
622(2b)	Bio-Engineered Erosion Coco Logs/Fascine Control System	0.209	ln.m	463.50	284,823.93	614.51
622(3a)	Bio-Engineered Erosion Control System Vegetation	0.874	sq.m	5,532.50	1,192,059.01	215.46
A.1.1(3)	Construction of Field Office for the Engineer	0.297	LS	1.00	405,318.01	405,318.01
A.1.1(11)	Prov. Of Furniture, Equipment and Appliances for Field Engineer	0.180	LS	1.00	246,143.32	246,143.32
A.1.2(5)	Operation & Maintenance of Gov't. Service Vehicle	0.247	L.S	1.00	336,900.00	336,900.00
B.5	Project Billboard	0.004	each	2.00	5,100.90	2,550.45
B.7	Construction Safety and Health Program	0.133	L.S	1.00	180,921.00	180,921.00
B.9	Mobilization and Demobilization	0.679	L.S	1.00	926,872.00	926,872.00
B.4(1)	Construction Survey and Staking	0.132	Km.	4.98	180,593.75	36,227.65
TOTAL		**100.000**			**P 136,439,139.90**	

Name of Project : **Road Widening - Primary Road - Lanao - Pagadian - Zamboanga City Road**

BREAKDOWN OF ESTIMATED EXPENDITURES	% OF TOTAL		AMOUNT
I. ESTIMATED COST			
A. DIRECT COST			
A.1 Materials	56.77		99,343,599.31
A.2 Labor	1.30		2,267,810.96
A.3 Equipment Expenses	19.90		34,827,729.64
SUB-TOTAL (DIRECT COST)	77.97	P	136,439,139.90
B. INDIRECT COST (Per DO # 197 s. 2016)			
B.1 Overhead, Contingency & Misc. (10% Max. of D.C.)	7.70		13,474,830.36
B.2 Profit (8% Max. D.C.)	6.17		10,794,337.97
C. VAT (12% of D.C. and I.C. per D.O. # 197)	4.59		8,035,415.41
SUB-TOTAL (CONTRACT COST)	96.42	P	168,743,723.64
II. ESTIMATED GOVERNMENT EXPENDITURES			
1 Engineering and Administrative Overhead (3.5%)	3.50		6,125,000.00
2 Detailed Engineering (1%)			
3 Reserved for the Payment of RROW)	0.08		131,276.36
4 Physical Reserved			
TOTAL ESTIMATED PROJECT COST	100.00	P	175,000,000.00

Prepared by:

JERALD R. BARRERA
Engineer II

Submitted by:

LEONCIO B. SOLAMILLO
Chief, Construction Division

Recommending Approval:

CAYAMOMBAO D. DIA
Assistant Regional Director

APPROVED:

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

APPROVED [illegible]GET FOR THE CONTRACT

Road Widening including Drainage - Lanao - Pagadian - Zamboanga City Road, Zamboanga Sibugay 1st DEO

Project Name and Location

Length : *4,984.97 ln.m.*

Contract Duration : *225.00 Calendar Days*

Item No.	Description	Quantity	Unit	Estimated Direct Cost	MARK-UP IN PERCENT		TOTAL MARK-UPS		VAT	TOTAL INDIRECT COST	TOTAL COST	TOTAL COST
					OCM	PROFIT	%	VALUE				
(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)	Construction of Field Office for the Engineer	1.00	LS	405,318.01	10.00	8.00	18.00	72,957.24	23,913.76	96,871.01	502,189.02	502,189.02
A.1.1(11)	Prov. Of Furniture, Equipment and Appliances for Field Engineer	1.00	LS	246,143.32	0.00	0.00	0.00	-	12,307.17	12,307.17	258,450.49	258,450.49
A.1.2(5)	Operation & Maintenance of Gov't. Service Vehicle	1.00	L.S	336,900.00	0.00	0.00	0.00	-	16,845.00	16,845.00	353,745.00	353,745.00
	TOTAL OF PART A			988,361.33				72,957.24	53,065.93	126,023.17	1,114,384.51	
PART B	**OTHER GENERAL REQUIREMENTS**											
B.5	Project Billboard	2.00	each	5,100.90	10.00	8.00	18.00	918.16	300.95	1,219.12	6,320.02	3,160.01
B.7	Construction Safety and Health Program	1.00	L.S	180,921.00	0.00	8.00	8.00	14,473.68	9,769.73	24,243.41	205,164.41	205,164.41
B.9	Mobilization and Demobilization	1.00	L.S	926,872.00	0.00	0.00	0.00	-	46,343.60	46,343.60	973,215.60	973,215.60
B.4(1)	Construction Survey and Staking	4.98	Km.	180,593.75	10.00	8.00	18.00	32,506.88	10,655.03	43,161.91	223,755.66	44,886.06
	TOTAL OF PART B			1,293,487.65				47,898.72	67,069.32	114,968.04	1,408,455.69	
PART C	**EARTHWORKS**											
101(6)	Removal of Actual Structures and Obstruction	1,323.00	cu.m	443,145.47	10.00	8.00	18.00	79,766.18	26,145.58	105,911.77	549,057.23	415.01
101(8)	Removal of Existing Guardrails	2,483.50	ln.m	67,877.90	10.00	8.00	18.00	12,218.02	4,004.80	16,222.82	84,100.72	33.86
101(9)	Removal of Existing Guardrails Post	719.00	each	19,651.38	10.00	8.00	18.00	3,537.25	1,159.43	4,696.68	24,348.07	33.86
102(2)	Surplus Common Excavation	99,066.50	cu.m.	16,464,579.87	10.00	8.00	18.00	2,963,624.38	971,410.21	3,935,034.59	20,399,614.46	205.92
103(1)a	Structure Excavation	638.00	cu.m.	146,813.78	10.00	8.00	18.00	26,426.48	8,662.01	35,088.49	181,902.28	285.11
103(3)	Foundation Fill	21.00	cu.m.	20,316.41	10.00	8.00	18.00	3,656.95	1,198.67	4,855.62	25,172.03	1,198.67
103(6)a	Pipe Culvert and Drain Excavation	236.00	cu.m.	54,307.29	10.00	8.00	18.00	9,775.31	3,204.13	12,979.44	67,286.74	285.11
104(1)a1	Embankment (from excavation)	24,430.00	cu.m.	5,537,895.74	10.00	8.00	18.00	996,821.23	326,735.85	1,323,557.08	6,861,452.82	280.86
105 (1)a	Subgrade Preparation	51,634.50	sq.m.	791,651.55	10.00	8.00	18.00	142,497.28	46,707.44	189,204.72	980,856.27	19.00
	TOTAL OF PART C			23,546,239.39				4,238,323.09	1,389,228.12	5,627,551.22	29,173,790.61	
PART D	**SUBBASE AND BASE COURSE**											
200 (1)	Aggregate Subbase Course	19,439.50	cu.m.	30,125,101.56	10.00	8.00	18.00	5,422,518.28	1,777,380.99	7,199,899.27	37,325,000.83	1,920.06
	TOTAL OF PART D			30,125,101.56				5,422,518.28	1,777,380.99	7,199,899.27	37,325,000.83	
PART E	**SURFACE COURSES**											
300 (1)	Aggregate Surface Course	1,187.00	cu.m.	1,812,175.10	10.00	8.00	18.00	326,191.52	106,918.33	433,109.85	2,245,284.94	1,891.56
311(1)e1a	Portland Cement Concrete Pavement-using Conventional Method, 0.28m thick	33,399.50	sq.m.	53,206,059.24	10.00	8.00	18.00	9,577,090.66	3,139,157.49	12,716,248.16	65,922,307.39	1,973.75
311(1)a	Portland Cement Concrete Pavement, 0.15m. Thick	8,704.91	sq.m	7,612,895.18	10.00	8.00	18.00	1,370,321.13	449,160.82	1,819,481.95	9,432,377.13	1,083.57
	TOTAL OF PART E			62,631,129.51				11,273,603.31	3,695,236.64	14,968,839.95	77,599,969.46	
PART F	**BRIDGE STRUCTURE**											
405 (1) a3	Structural Concrete, Class A	319.00	cu.m	2,289,227.31	10.00	8.00	18.00	412,060.91	135,064.41	547,125.33	2,836,352.63	8,891.39
	TOTAL OF PART F			2,289,227.31				412,060.91	135,064.41	547,125.33	2,836,352.63	
PART G	**DRAINAGE AND SLOPE PROTECTION STRUCTURES**											
500(1)b3	RC Culvert Pipe, 910 mm (36" dia.)	140.00	ln.m	481,690.80	10.00	8.00	18.00	86,704.34	28,419.76	115,124.10	596,814.90	4,262.96
500(1)b4	RC Culvert Pipe, 1070 mm (42" dia.)	22.00	ln.m	91,530.88	10.00	8.00	18.00	16,475.56	5,400.32	21,875.88	113,406.76	5,154.85
500(1)b6	RC Culvert Pipe, 1520 mm (60" dia.)	14.00	ln.m	112,066.99	10.00	8.00	18.00	20,172.06	6,611.95	26,784.01	138,851.01	9,917.93
505(1a)	Grouted Riprap, Class A	82.50	cu.m	285,258.34	10.00	8.00	18.00	51,346.50	16,830.24	68,176.74	353,435.09	4,284.06
506 (1)	Stone Masonry	200.00	cu.m	841,704.97	10.00	8.00	18.00	151,506.89	49,660.59	201,167.49	1,042,872.46	5,214.36
	TOTAL OF PART G			1,812,251.99				326,205.36	106,922.87	433,128.23	2,245,380.22	
PART H	**MISCELLANEOUS STRUCTURES**											
603(3)	Metal Guardrail (Metal Beam) Including Post	2,483.50	m	10,248,387.59	10.00	8.00	18.00	1,844,709.77	604,654.87	2,449,364.63	12,697,752.22	5,112.85
603(4)b	Metal Beam End Piece	68.00	each	108,123.66	10.00	8.00	18.00	19,462.26	6,379.30	25,841.55	133,965.21	1,970.08
612(1)	Reflectorized Thermoplastic Pavement Markings (White)	997.00	sq.m	726,627.86	10.00	8.00	18.00	130,793.01	42,871.04	173,664.06	900,291.91	903.00
622(1a)	Bio-Engineered Solutions (Coco-net), CN 400	4,827.00	sq.m	1,041,242.11	10.00	8.00	18.00	187,423.58	61,433.28	248,856.87	1,290,098.98	267.27
622(1b)	Bio-Engineered Solutions (Coco-net), CN 700	705.00	sq.m	152,077.00	10.00	8.00	18.00	27,373.86	8,972.54	36,346.40	188,423.41	267.27
622(2b)	Bio-Engineered Erosion Coco Logs/Fascine Control System	463.50	ln.m	284,823.93	10.00	8.00	18.00	51,268.31	16,804.61	68,072.92	352,896.85	761.37
622(3a)	Bio-Engineered Erosion Control System Vegetation	5,532.50	sq.m	1,192,059.01	10.00	8.00	18.00	214,570.62	70,331.48	284,902.10	1,476,961.11	266.96
	TOTAL OF PART H			13,753,341.15				2,475,601.41	811,447.13	3,287,048.54	17,040,389.69	
	TOTAL			136,439,139.90				24,269,168.32	6,258,034.42	32,304,583.74	168,743,723.64	

Prepared by:

BELEN A. SAPALLEDA
Head TWG, BAC

Recommending Approval:

CAYAMOMBAO D. DIA
Assistant Regional Director

APPROVED:

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

SUMMARY

Name of Project : **Road Widening Including Drainage - Lanao - Pagadian - Zamboanga City Road, Zamboanga Sibugay 1st DEO**

Item No.	Description	Quantity	Unit	Labor	Equipment	Materials	OCM	Profit	VAT	TOTAL
101(6)	Removal of Actual Structures and Obstruction	1,323.00	cu.m	21,439.22	421,706.25	-	44,314.55	35,451.64	26,145.58	549,057.23
101(8)	Removal of Existing Guardrails	2,483.50	ln.m	4,024.51	63,853.39	-	6,787.79	5,430.23	4,004.80	84,100.72
101(9)	Removal of Existing Guardrails Post	719.00	each	1,165.14	18,486.24	-	1,965.14	1,572.11	1,159.43	24,348.07
102(2)	Surplus Common Excavation	99,066.50	cu.m.	275,049.88	16,189,529.99	-	1,646,457.99	1,317,166.39	971,410.21	20,399,614.46
103(1)a	Structure Excavation	638.00	cu.m.	6,534.08	140,279.71	-	14,681.38	11,745.10	8,662.01	181,902.28
103(3)	Foundation Fill	21.00	cu.m.	4,159.85	2,478.00	13,678.56	2,031.64	1,625.31	1,198.67	25,172.03
103(6)a	Pipe Culvert and Drain Excavation	236.00	cu.m.	2,416.99	51,890.30	-	5,430.73	4,344.58	3,204.13	67,286.74
104(1)a1	Embankment (from excavation)	24,430.00	cu.m.	144,895.06	5,393,000.68	-	553,789.57	443,031.66	326,735.85	6,861,452.82
105 (1)a	Subgrade Preparation	51,634.50	sq.m.	27,891.24	763,760.31	-	79,165.15	63,332.12	46,707.44	980,856.27
200 (1)	Aggregate Subbase Course	19,439.50	cu.m.	63,003.42	1,725,255.63	28,336,842.51	3,012,510.16	2,410,008.12	1,777,380.99	37,325,000.83
300 (1)	Aggregate Surface Course	1,187.00	cu.m.	3,847.07	105,346.25	1,702,981.78	181,217.51	144,974.01	106,918.33	2,245,284.94
311(1)e1a	Portland Cement Concrete Pavement-using Conventional Method, 0.28m thick	33,399.50	sq.m.	469,705.79	6,967,689.95	45,768,663.50	5,320,605.92	4,256,484.74	3,139,157.49	65,922,307.39
311(1)a	Portland Cement Concrete Pavement, 0.15m. Thick	8,704.91	sq.m	65,811.97	1,021,623.36	6,525,459.85	761,289.52	609,031.61	449,160.82	9,432,377.13
405 (1) a3	Structural Concrete, Class A	319.00	cu.m	274,378.74	136,420.01	1,878,428.56	228,922.73	183,138.18	135,064.41	2,836,352.63
500(1)b3	RC Culvert Pipe, 910 mm (36" dia.)	140.00	ln.m	28,672.80	69,267.28	383,750.72	48,169.08	38,535.26	28,419.76	596,814.90
500(1)b4	RC Culvert Pipe, 1070 mm (42" dia.)	22.00	ln.m	5,282.96	12,579.90	73,668.02	9,153.09	7,322.47	5,400.32	113,406.76
500(1)b6	RC Culvert Pipe, 1520 mm (60" dia.)	14.00	ln.m	401.28	7,709.33	103,956.39	11,206.70	8,965.36	6,611.95	138,851.01
505(1a)	Grouted Riprap, Class A	82.50	cu.m	34,948.98	21,184.45	229,124.92	28,525.83	22,820.67	16,830.24	353,435.09
506 (1)	Stone Masonry	200.00	cu.m	67,779.84	64,147.58	709,777.55	84,170.50	67,336.40	49,660.59	1,042,872.46
603(3)	Metal Guardrail (Metal Beam) Including Post	2,483.50	m	211,931.25	340,029.88	9,696,426.46	1,024,838.76	819,871.01	604,654.87	12,697,752.22
603(4)b	Metal Beam End Piece	68.00	each	2,464.43	13,859.22	91,800.00	10,812.37	8,649.89	6,379.30	133,965.21
612(1)	Reflectorized Thermoplastic Pavement Markings (White)	997.00	sq.m	17,705.52	59,550.81	649,371.52	72,662.79	58,130.23	42,871.04	900,291.91
622(1a)	Bio-Engineered Solutions (Coco-net), CN 400	4,827.00	sq.m	40,424.19	63,173.17	937,644.75	104,124.21	83,299.37	61,433.28	1,290,098.98
622(1b)	Bio-Engineered Solutions (Coco-net), CN 700	705.00	sq.m	5,904.09	9,226.66	136,946.25	15,207.70	12,166.16	8,972.54	188,423.41
622(2b)	Bio-Engineered Erosion Coco Logs/Fascine Control System	463.50	ln.m	12,938.76	1,293.88	270,591.30	28,482.39	22,785.91	16,804.61	352,896.85
622(3a)	Bio-Engineered Erosion Control System Vegetation	5,532.50	sq.m	14,344.67	178,544.84	999,169.50	119,205.90	95,364.72	70,331.48	1,476,961.11
A.1.1(3)	Construction of Field Office for the Engineer	1.00	LS	53,245.60	31,804.56	320,267.85	40,531.80	32,425.44	23,913.76	502,189.02
A.1.1(11)	Prov. Of Furniture, Equipment and Appliances for Field Engineer	1.00	LS	-	-	246,143.32	-	-	12,307.17	258,450.49
A.1.2(5)	Operation & Maintenance of Gov't. Service Vehicle	1.00	L.S	99,720.00	-	237,180.00	-	-	16,845.00	353,745.00
B.5	Project Billboard	2.00	each	434.90	-	4,666.00	510.09	408.07	300.95	6,320.02
B.7	Construction Safety and Health Program	1.00	L.S	168,561.00	-	12,360.00	-	14,473.68	9,769.73	205,164.41
B.9	Mobilization and Demobilization	1.00	L.S	-	926,872.00	-	-	-	46,343.60	973,215.60
B.4(1)	Construction Survey and Staking	4.98	Km.	138,727.73	27,166.03	14,700.00	18,059.38	14,447.50	10,655.03	223,755.66
TOTAL				**2,267,810.96**	**34,827,729.64**	**99,343,599.31**	**13,474,830.36**	**10,794,337.97**	**8,035,415.41**	**168,743,723.64**

Name of Project : **Road Widening including ... nage - Lanao - Pagadian - Zamboanga City Road, Zambo... Sibugay 1st DEO**

Net Length : 4,984.97 ln.m.

Item No.	Description	Quantity	Unit	DURATION # OF DAYS
101(6)	Removal of Actual Structures and Obstruction	1,323.00	cu.m	16.54
101(8)	Removal of Existing Guardrails	2,483.50	ln.m	3.10
101(9)	Removal of Existing Guardrails Post	719.00	each	0.90
102(2)	Surplus Common Excavation	99,066.50	cu.m.	103.19
103(1)a	Structure Excavation	638.00	cu.m.	3.99
103(3)	Foundation Fill	21.00	cu.m.	2.10
103(6)a	Pipe Culvert and Drain Excavation	236.00	cu.m.	1.48
104(1)a1	Embankment (from excavation)	24,430.00	cu.m.	50.69
105 (1)a	Subgrade Preparation	51,634.50	sq.m.	21.51
200 (1)	Aggregate Subbase Course	19,439.50	cu.m.	48.60
300 (1)	Aggregate Surface Course	1,187.00	cu.m.	2.97
311(1)e1a	Portland Cement Concrete Pavement-using Conventional Method, 0.28m thick	33,399.50	sq.m.	72.36
311(1)a	Portland Cement Concrete Pavement, 0.15m. Thick	8,704.91	sq.m	10.14
405 (1) a3	Structural Concrete, Class A	319.00	cu.m	28.48
500(1)b3	RC Culvert Pipe, 910 mm (36" dia.)	140.00	ln.m	10.00
500(1)b4	RC Culvert Pipe, 1070 mm (42" dia.)	22.00	ln.m	1.84
500(1)b6	RC Culvert Pipe, 1520 mm (60" dia.)	14.00	ln.m	1.17
505(1a)	Grouted Riprap, Class A	82.50	cu.m	8.25
506 (1)	Stone Masonry	200.00	cu.m	16.00
603(3)	Metal Guardrail (Metal Beam) Including Post	2,483.50	m	73.91
603(4)b	Metal Beam End Piece	68.00	each	1.42
612(1)	Reflectorized Thermoplastic Pavement Markings (White	997.00	sq.m	4.99
622(1a)	Bio-Engineered Solutions (Coco-net), CN 400	4,827.00	sq.m	12.07
622(1b)	Bio-Engineered Solutions (Coco-net), CN 700	705.00	sq.m	1.76
622(2b)	Bio-Engineered Erosion Coco Logs/Fascine Control System	463.50	ln.m	3.86
622(3a)	Bio-Engineered Erosion Control System Vegetation	5,532.50	sq.m	11.07
A.1.1(3)	Construction 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	225.00
B.5	Project Billboard	2.00	each	0.25
B.7	Construction Safety and Health Program	1.00	L.S	150.00
B.9	Mobilization and Demobilization	1.00	L.S	4.00
B.4(1)	Construction Survey and Staking	4.98	Km.	66.47

WEEKS (6 WORKING DAYS): 1–60

TOTAL NO. OF WORKING DAYS	:	150
INCLEMENT WEATHER & CURING TIME	:	50
NUMBER OF SUNDAYS	:	25
TOTAL NO. CALENDAR DAYS	:	**225**

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 : Road Widening - Primary Road - Lanao - Pagadian - Zamboanga City Road

Item No./Description : 101(6) Removal of Actual Structures and Obstruction
Unit of Measurement : cu.m
Output per hour : 10.00
Quantity : 1,323.00

	Designation	No. of Person	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Construction Foreman	1	16.54	611.92	10,119.63
	b. Laborer	2	16.54	342.24	11,319.59
	Sub-total for A			P	21,439.22
	Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B	Equipment, (2014 ACEL Rates)				
	a. Backhoe w/ breaker	1	8.27	15,984.00	132,167.70
	b. Backhoe	1	8.27	12,296.00	101,672.55
	c. Dumptruck	1	16.54	11,360.00	187,866.00
	Sub-total for B			P	421,706.25
C.	Total (A+B)			P	443,145.47
D.	Output/day 80.00 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)				443,145.47
G.	Overhead, Contingencies and Miscellaneous		10% per D.O 197 s 2016		44,314.55
H.	Contractor's Profit (CP)		8% per D.O 197 s 2016		35,451.64
I.	Value Added Tax (VAT)		5% per D.O 197 s 2016		26,145.58
J.	Total Unit Cost				415.01

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DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Road Widening including Drainage - Lanao - Pagadian - Zamboanga City Road, Zamboanga Sibugay 1st DEO

Item No./Description : 101(8) Removal of Existing Guardrails
Unit of Measurement : ln.m
Output per hour : 100.00
Quantity : 2,483.50

Designation	No. of Person	No. of Days	Daily Rate	Amount
A. Labor				
a. Construction Foreman	1	3.10	611.92	1,899.63
b. Laborer	2	3.10	342.24	2,124.88
Sub-total for A			P	4,024.51
Name and Capacity	**No. of Equip.**	**No. of Days**	**Daily Rate**	**Amount**
B Equipment, (2014 ACEL Rates)				
a. Backhoe	1	3.10	12,296.00	38,171.40
b. Boom Truck	1	3.10	8,143.20	25,279.55
Minor Tools (10% of Labor Cost)				402.45
Sub-total for B			P	63,853.39
C. Total (A+B)			P	67,877.90
D. Output/day 800.00 ln.m /day				
Name and Specifications	**Quantity**	**Unit**	**Unit Cost**	**Amount**
E. Materials				
Sub-total for E			P	0.00
F. Direct Cost (C+E)				67,877.90
G. Overhead, Contingencies and Miscellaneous		10% per D.O 197 s 2016		6,787.79
H. Contractor's Profit (CP)		8% per D.O 197 s 2016		5,430.23
I. Value Added Tax (VAT)		5% per D.O 197 s 2016		4,004.80
J. Total Unit Cost				33.86

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DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Road Widening including Drainage - Lanao - Pagadian - Zamboanga City Road, Zamboanga Sibugay 1st DEO

Item No./Description : 101(9) Removal of Existing Guardrails Post
Unit of Measurement : each
Output per hour : 100.00
Quantity : 719.00

	Designation	No. of Person	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Construction Foreman	1	0.90	611.92	549.96
	b. Laborer	2	0.90	342.24	615.18
	Sub-total for A			P	1,165.14
	Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B	Equipment, (2014 ACEL Rates)				
	a. Backhoe	1	0.90	12,296.00	11,051.03
	b. Boom Truck	1	0.90	8,143.20	7,318.70
	Minor Tools (10% of Labor Cost)				116.51
	Sub-total for B			P	18,486.24
C.	Total (A+B)			P	19,651.38
D.	Output/day 800.00 each /day				
	Name and Specifications	Quantity	Unit	Unit Cost	Amount
E.	Materials				
	Sub-total for E			P	0.00
F.	Direct Cost (C+E)				19,651.38
G.	Overhead, Contingencies and Miscellaneous		10% per D.O 197 s 2016		1,965.14
H.	Contractor's Profit (CP)		8% per D.O 197 s 2016		1,572.11
I.	Value Added Tax (VAT)		5% per D.O 197 s 2016		1,159.43
J.	Total Unit Cost				33.86

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DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Road Widening Including Drainage - Lanao - Pagadian - Zamboanga City Road, Zamboanga Sibugay 1st DEO

Item No./Description : 102(2) Surplus Common Excavation
Unit of Measurement : cu.m.
Output per hour : 60.00
Quantity : 99,066.50

Use Two (2) gangs

	Designation	No. of Person	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Construction Foreman	1	103.19	611.92	63,146.64
	b. Laborer	6	103.19	342.24	211,903.24
	Sub-total for A			P	275,049.88
	Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B	Equipment, (2014 ACEL Rates)				
	a. Bulldozer	2	103.19	27,032.00	5,579,095.06
	b. Payloader	2	103.19	13,864.00	2,861,370.74
	c. Payloader	2	25.80	13,864.00	715,342.69
	d. Dumptruck	6	103.19	11,360.00	7,033,721.50
	Sub-total for B			P	16,189,529.99
C.	Total (A+B)			P	16,464,579.87
D.	Output/day 960.00 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)				16,464,579.87
G.	Overhead, Contingencies and Miscellaneous		10% per D.O 197 s 2016		1,646,457.99
H.	Contractor's Profit (CP)		8% per D.O 197 s 2016		1,317,166.39
I.	Value Added Tax (VAT)		5% per D.O 197 s 2016		971,410.21
J.	Total Unit Cost				205.92

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DETAILED UNIT PRICE ANALYSIS

PROJECT NAME	: Road Widening including Drainage - Lanao - Pagadian - Zamboanga City Road, Zamboanga Sibugay 1st DEO
Item No./Description	: 103(1)a Structure Excavation
Unit of Measurement	: cu.m.
Output per hour	: 20.00
Quantity	: 638.00

	Designation	No. of Person	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Construction Foreman	1	3.99	611.92	2,440.03
	b. Laborers	3	3.99	342.24	4,094.05
	Sub-total for A			P	6,534.08
	Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B	Equipment, (2014 ACEL Rates)				
	a. Dumptruck	2	3.99	11,360.00	90,596.00
	b. Backhoe	1	3.99	12,296.00	49,030.30
	Minor Tools (10% of Labor)				653.41
	Sub-total for B			P	140,279.71
C.	Total (A+B)			P	146,813.78
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)				146,813.78
G.	Overhead, Contingencies and Miscellaneous		10% per D.O 197 s 2016		14,681.38
H.	Contractor's Profit (CP)		8% per D.O 197 s 2016		11,745.10
I.	Value Added Tax (VAT)		5% per D.O 197 s 2016		8,662.01
J.	Total Unit Cost				285.11

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DETAILED UNIT PRICE ANALYSIS

PROJECT NAME	:	Road Widening including Drainage - Lanao - Pagadian - Zamboanga City Road, Zamboanga Sibugay 1st DEO
Item No./Description	:	103(3) Foundation Fill
Unit of Measurement	:	cu.m.
Output per hour	:	1.25
Quantity	:	21.00

	Designation	No. of Person	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Construction Foreman	1	2.10	611.92	1,285.03
	b. Laborer	4	2.10	342.24	2,874.82
	Sub-total for A			P	4,159.85
	Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B	Equipment, (2014 ACEL Rates)				
	a. Plate Compactor	1	2.10	984.00	2,066.40
	b. Water Truck	1	0.02	19,600.00	411.60
	c. Minor Tools (10% of Labor)				
	Sub-total for B			P	2,478.00
C.	Total (A+B)			P	6,637.85
D.	Output/day 10.00 cu.m. /day				
	Name and Specifications	Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Filling Materials	24.15	cu.m.	566.40	13,678.56
	Sub-total for E			P	13,678.56
F.	Direct Cost (C+E)				20,316.41
G.	Overhead, Contingencies and Miscellaneous		10% per D.O 197 s 2016		2,031.64
H.	Contractor's Profit (CP)		8% per D.O 197 s 2016		1,625.31
I.	Value Added Tax (VAT)		5% per D.O 197 s 2016		1,198.67
J.	Total Unit Cost				1,198.67

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DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Road Widening Including Drainage - Lanao - Pagadian - Zamboanga City Road, Zamboanga Sibugay 1st DEO

Item No./Description : 103(6)a Pipe Culvert and Drain Excavation
Unit of Measurement : cu.m.
Output per hour : 20.00
Quantity : 236.00

	Designation	No. of Person	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Construction Foreman	1	1.48	611.92	902.58
	b. Laborer	3	1.48	342.24	1,514.41
	Sub-total for A			P	2,416.99
	Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B	Equipment, (2014 ACEL Rates)				
	a. Dumptruck	2	1.48	11,360.00	33,512.00
	b. Backhoe	1	1.48	12,296.00	18,136.60
	Minor Tools (10% of Labor)				241.70
	Sub-total for B			P	51,890.30
C.	Total (A+B)			P	54,307.29
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)				54,307.29
G.	Overhead, Contingencies and Miscellaneous		10% per D.O 197 s 2016		5,430.73
H.	Contractor's Profit (CP)		8% per D.O 197 s 2016		4,344.58
I.	Value Added Tax (VAT)		5% per D.O 197 s 2016		3,204.13
J.	Total Unit Cost				285.11

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DETAILED UNIT PRICE ANALYSIS

PROJECT NAME	: Road Widening including Drainage - Lanao - Pagadian - Zamboanga City Road, Zamboanga Sibugay 1st DEO
Item No./Description	: 104(1)a1 Embankment (from excavation)
Unit of Measurement	: cu.m.
Output per hour	: 50.00
Quantity	: 24,430.00

	Designation	No. of Person	No. of Days	Daily Rate	Amount
A.	Labor				
	For Excavation Work				
	a. Construction Foreman	1	50.69	611.92	31,019.60
	b. Laborer	2	50.69	342.24	34,697.83
	Spreading & Compaction				
	a. Construction Foreman	1	61.08	611.92	37,373.01
	b. Laborer	2	61.08	342.24	41,804.62
	Sub-total for A			P	144,895.06
	Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B	Equipment, (2014 ACEL Rates)				
	For Excavation Work				
	a. Bulldozer	1	50.69	27,032.00	1,370,312.90
	b. Payloader	1	50.69	13,864.00	702,797.35
	c. Dumptruck	2	50.69	11,360.00	1,151,727.92
	Spreading and Compaction				
	a. Road Grader	1	61.08	17,384.00	1,061,727.80
	b. Road Roller	1	61.08	13,216.00	807,167.20
	c. Water Truck	1	15.27	19,600.00	299,267.50
	Sub-total for B			P	5,393,000.68
C.	Total (A+B)			P	5,537,895.74
D.	Output/day 400.00 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)				5,537,895.74
G.	Overhead, Contingencies and Miscellaneous		10%	per D.O 197 s 2016	553,789.57
H.	Contractor's Profit (CP)		8%	per D.O 197 s 2016	443,031.66
I.	Value Added Tax (VAT)		5%	per D.O 197 s 2016	326,735.85
J.	Total Unit Cost				280.86

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DETAILED UNIT PRICE ANALYSIS

PROJECT NAME	:	Road Widening including Drainage - Lanao - Pagadian - Zamboanga City Road, Zamboanga Sibugay 1st DEO
Item No./Description	:	105 (1)a Subgrade Preparation
Unit of Measurement	:	sq.m.
Output per hour	:	300.00
Quantity	:	51,634.50

	Designation	No. of Person	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Construction Foreman	1	21.51	611.92	13,165.08
	b. Laborer	2	21.51	342.24	14,726.16
	Sub-total for A			P	27,891.24
	Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B	Equipment, (2014 ACEL Rates)				
	a. Road Grader	1	21.51	17,384.00	374,005.90
	b. Road Roller	1	21.51	13,216.00	284,333.98
	c. Water Truck	1	5.38	19,600.00	105,420.44
	Sub-total for B			P	763,760.31
C.	Total (A+B)			P	791,651.55
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)				791,651.55
G.	Overhead, Contingencies and Miscellaneous		10% per D.O 197 s 2016		79,165.15
H.	Contractor's Profit (CP)		8% per D.O 197 s 2016		63,332.12
I.	Value Added Tax (VAT)		5% per D.O 197 s 2016		46,707.44
J.	Total Unit Cost				19.00

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DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Road Widening including Drainage - Lanao - Pagadian - Zamboanga City Road, Zamboanga Sibugay 1st DEO

Item No./Description : 200 (1) Aggregate Subbase Course
Unit of Measurement : cu.m.
Output per hour : 50.00
Quantity : 19,439.50

	Designation	No. of Person	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Construction Foreman	1	48.60	611.92	29,738.55
	b. Laborer	2	48.60	342.24	33,264.87
	Sub-total for A			P	63,003.42
	Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B	Equipment, (2014 ACEL Rates)				
	a. Road Grader	1	48.60	17,384.00	844,840.67
	b. Road Roller	1	48.60	13,216.00	642,281.08
	c. Water Truck	1	12.15	19,600.00	238,133.88
	Sub-total for B			P	1,725,255.63
C.	Total (A+B)			P	1,788,259.04
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%)	22,355.43	cu.m.	1,267.56	28,336,842.51
	Sub-total for E			P	28,336,842.51
F.	Direct Cost (C+E)				30,125,101.56
G.	Overhead, Contingencies and Miscellaneous		10% per D.O 197 s 2016		3,012,510.16
H.	Contractor's Profit (CP)		8% per D.O 197 s 2016		2,410,008.12
I.	Value Added Tax (VAT)		5% per D.O 197 s 2016		1,777,380.99
J.	Total Unit Cost				1,920.06

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DETAILED UNIT PRICE ANALYSIS

PROJECT NAME	:	Road Widening including Drainage - Lanao - Pagadian - Zamboanga City Road, Zamboanga Sibugay 1st DEO
Item No./Description	:	300 (1) Aggregate Surface Course
Unit of Measurement	:	cu.m.
Output per hour	:	50.00
Quantity	:	1,187.00

Designation	No. of Person	No. of Days	Daily Rate	Amount
A. Labor				
a. Construction Foreman	1	2.97	611.92	1,815.87
b. Laborer	2	2.97	342.24	2,031.19
Sub-total for A			P	3,847.07
Name and Capacity	**No. of Equip.**	**No. of Days**	**Daily Rate**	**Amount**
B Equipment, (2014 ACEL Rates)				
a. Road Grader	1	2.97	17,384.00	51,587.02
b. Road Roller	1	2.97	13,216.00	39,218.48
c. Water Truck	1	0.74	19,600.00	14,540.75
Sub-total for B			P	105,346.25
C. Total (A+B)			P	109,193.32
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%)	1,365.05	cu.m.	1,247.56	1,702,981.78
Sub-total for E			P	1,702,981.78
F. Direct Cost (C+E)				1,812,175.10
G. Overhead, Contingencies and Miscellaneous		10%	per D.O 197 s 2016	181,217.51
H. Contractor's Profit (CP)		8%	per D.O 197 s 2016	144,974.01
I. Value Added Tax (VAT)		5%	per D.O 197 s 2016	106,918.33
J. Total Unit Cost				1,891.56

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DETAILED UNIT PRICE ANALYSIS

PROJECT NAME	: Road Widening including Drainage - Lanao - Pagadian - Zamboanga City Road, Zamboanga Sibugay 1st DEO
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	: 33,399.50

	Designation	No. of Person	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Construction Foreman	1	72.36	611.92	44,276.04
	b. Skilled	4	72.36	443.20	128,272.60
	c. Laborer	12	72.36	342.24	297,157.15
	Sub-total for A			P	469,705.79
	Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B	Equipment, (2014 ACEL Rates)				
	a. Transit Mixer	4	72.36	10,544.00	3,051,683.95
	b. Concrete Vibrator	2	72.36	730.00	105,639.67
	c. Batching Plant	1	72.36	14,076.00	1,018,482.15
	d. Pay Loader	1	72.36	13,864.00	1,003,142.69
	e. Concrete Screeder	1	72.36	4,360.00	315,471.88
	f. Water Truck	1	72.36	19,600.00	1,418,176.34
	g. Concrete Saw	1	72.36	261.04	18,887.79
	h. Bar Cutter	1	7.24	1,758.00	12,720.17
	Minor Tools (5% of labor)				23,485.29
	Sub-total for B			P	6,967,689.95
C.	Total (A+B)			P	7,437,395.74
D.	Output/day 461.60 sq.m.	/day			
	Name and Specifications	Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Reinforcing Steel Bar	16,699.75	kg	39.00	651,290.25
	b. Curing Compound	9,685.86	lit	45.00	435,863.48
	c. Asphalt Sealant	5,677.92	lit	75.00	425,843.63
	d. Sand	5,143.52	cu.m	1,247.56	6,416,853.55
	e. Gravel	9,351.86	cu.m	1,297.56	12,134,599.46
	f. Cement	88,842.67	bag	278.04	24,702,188.05
	g. Concrete Saw	5.01	pc	8,000.00	40,079.40
	h. Pipe Sleeve, 2" dia.	260.52	l.m	133.00	34,648.64
	i. Grease/Tar	260.52	lit	21.00	5,470.84
	j. Steel Forms	15,363.77	lit	60.00	921,826.20
	Sub-total for E			P	45,768,663.50
F.	Direct Cost (C+E)				53,206,059.24
G.	Overhead, Contingencies and Miscellaneous		10%	per D.O 197 s 2016	5,320,605.92
H.	Contractor's Profit (CP)		8%	per D.O 197 s 2016	4,256,484.74
I.	Value Added Tax (VAT)		5%	per D.O 197 s 2016	3,139,157.49
J.	Total Unit Cost				1,973.75

gerald_0101

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME	: Road Widening including Drainage - Lanao - Pagadian - Zamboanga City Road, Zamboanga Sibugay 1st DEO
Item No./Description	: 311(1)a Portland Cement Concrete Pavement, 0.15m. Thick
Unit of Measurement	: sq.m
Output per hour	: 107.33
Quantity	: 8,704.91

Designation	No. of Person	No. of Days	Daily Rate	Amount
A. Labor				
a. Construction Foreman	1	10.14	611.92	6,203.66
b. Skilled	4	10.14	443.20	17,972.68
c. Laborer	12	10.14	342.24	41,635.63
Sub-total for A			P	65,811.97
Name and Capacity	**No. of Equip.**	**No. of Days**	**Daily Rate**	**Amount**
B Equipment, (2014 ACEL Rates)				
a. Transit Mixer	4	10.14	10,544.00	427,581.16
b. Concrete Vibrator	2	10.14	730.00	14,801.51
c. Batching Plant	1	10.14	14,076.00	142,702.78
d. Pay Loader	1	10.14	13,864.00	140,553.52
e. Concrete Screeder	1	10.14	4,360.00	44,201.77
f. Water Truck	1	10.14	19,600.00	198,705.20
g. Concrete Saw	1	10.14	261.04	2,646.43
h. Bar Cutter	1	1.01	1,758.00	1,782.26
Minor Tools (5% of Labor)				48,648.73
Sub-total for B			P	1,021,623.36
C. Total (A+B)			P	1,087,435.33
D. Output/day 858.64 sq.m /day				
Name and Specifications	**Quantity**	**Unit**	**Unit Cost**	**Amount**
E. Materials				
a. Reinforcing Steel Bar	2,872.62	kg	40.00	114,904.81
b. Curing Compound	2,524.42	lit	40.00	100,976.96
c. Asphalt Sealant	1,044.59	lit	75.00	78,344.19
d. Steel Form	4,004.26	l.m	40.00	160,170.34
e. Sand	718.16	cu.m	1,247.56	895,941.55
f. Gravel	1,305.74	cu.m	1,297.56	1,694,271.45
g. Cement	12,448.02	bag	278.04	3,461,099.98
h. Concrete Saw	1.31	pc	8,000.00	10,445.89
i. Pipe Sleeve, 1" dia.	67.90	l.m	133.00	9,030.47
j. Grease/Tar	13.06	lit	21.00	274.20
Sub-total for E			P	6,525,459.85
F. Direct Cost (C+E)				7,612,895.18
G. Overhead, Contingencies and Miscellaneous		10%	per D.O 197 s 2016	761,289.52
H. Contractor's Profit (CP)		8%	per D.O 197 s 2016	609,031.61
I. Value Added Tax (VAT)		5%	per D.O 197 s 2016	449,160.82
J. Total Unit Cost				1,083.57

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DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Road Widening including Drainage - Lanao - Pagadian - Zamboanga City Road, Zamboanga Sibugay 1st DEO

Item No./Description : 405 (1) a3 Structural Concrete, Class A
Unit of Measurement : cu.m
Output per hour : 1.40
Quantity : 319.00

	Designation	No. of Person	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Construction Foreman	1	28.48	611.92	17,428.79
	b. Skilled Laborer	4	28.48	443.20	50,493.14
	c. Laborer	8	28.48	342.24	77,981.83
	Installation/Removal of Form Works				
	a. Skilled Laborer	4	28.48	443.20	50,493.14
	b. Laborer	8	28.48	342.24	77,981.83
	Sub-total for A			P	274,378.74
	Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B	Equipment, (2014 ACEL Rates)				
	a. One Bagger Mixer	1	28.48	1,376.00	39,191.43
	b. Concrete Vibrator	1	28.48	972.00	27,684.64
	c. Water Truck	1	2.85	19,600.00	55,825.00
	Minor Tools (5% of Labor)				13,718.94
	Sub-total for B			P	136,420.01
C.	Total (A+B)			P	410,798.74
D.	Output/day 11.20 cu.m	/day			
	Name and Specifications	Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Form Lumber	5,582.50	bd.ft	40.00	223,300.00
	b. Plywood	127.60	pc	1,345.00	171,622.00
	c. Assorted CW Nails	223.30	kg.	125.33	27,986.19
	d. Portland Cement	3,030.50	bag	278.04	842,612.91
	e. Sand	159.50	cu.m	1,247.56	198,985.82
	f. Gravel	319.00	cu.m	1,297.56	413,921.64
	Sub-total for E			P	1,878,428.56
F.	Direct Cost (C+E)				2,289,227.31
G.	Overhead, Contingencies and Miscellaneous		10% per D.O 197 s 2016		228,922.73
H.	Contractor's Profit (CP)		8% per D.O 197 s 2016		183,138.18
I.	Value Added Tax (VAT)		5% per D.O 197 s 2016		135,064.41
J.	Total Unit Cost				8,891.39

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DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Road Widening including Drainage - Lanao - Pagadian - Zamboanga City Road, Zamboanga Sibugay 1st DEO

Item No./Description : 500(1)b3 RC Culvert Pipe, 910 mm (36" dia.)
Unit of Measurement : ln.m
Output per hour : 1.75
Quantity : 140.00

	Designation	No. of Person	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Construction Foreman	1	10.00	611.92	6,119.20
	b. Skilled Laborer	2	10.00	443.20	8,864.00
	c. Laborer	4	10.00	342.24	13,689.60
	Sub-total for A			P	28,672.80
	Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B	Equipment, (2014 ACEL Rates)				
	a. Backhoe	1	5.00	12,296.00	61,480.00
	b. Plate Compactor	1	5.00	984.00	4,920.00
	Minor Tools (10% of Labor)				2,867.28
	Sub-total for B			P	69,267.28
C.	Total (A+B)			P	97,940.08
D.	Output/day 14.00 ln.m	/day			
	Name and Specifications	Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Portland Cement	151.20	bag	278.04	42,040.28
	b. Sand	8.54	cu.m	1,247.56	10,654.16
	c. RC Pipes (910 mm dia.)	140.00	pc	2,205.00	308,700.00
	d. Sand Bedding	17.92	cu.m	1,247.56	22,356.28
	Sub-total for E			P	383,750.72
F.	Direct Cost (C+E)				481,690.80
G.	Overhead, Contingencies and Miscellaneous		10% per D.O 197 s 2016		48,169.08
H.	Contractor's Profit (CP)		8% per D.O 197 s 2016		38,535.26
I.	Value Added Tax (VAT)		5% per D.O 197 s 2016		28,419.76
J.	Total Unit Cost				4,262.96

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DETAILED UNIT PRICE ANALYSIS

PROJECT NAME	:	Road Widening including Drainage - Lanao - Pagadian - Zamboanga City Road, Zamboanga Sibugay 1st DEO
Item No./Description	:	500(1)b4 RC Culvert Pipe, 1070 mm (42" dia.)
Unit of Measurement	:	ln.m
Output per hour	:	1.00
Quantity	:	22.00

	Designation	No. of Person	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Construction Foreman	1	1.84	611.92	1,127.46
	b. Skilled Laborer	2	1.84	443.20	1,633.19
	c. Laborer	4	1.84	342.24	2,522.31
	Sub-total for A			P	5,282.96
	Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B	Equipment, (2014 ACEL Rates)				
	a. Backhoe	1	0.91	12,296.00	11,158.62
	b. Plate Compactor	1	0.91	984.00	892.98
	Minor Tools (10% of Labor)				528.30
	Sub-total for B			P	12,579.90
C.	Total (A+B)			P	17,862.86
D.	Output/day 8.00 ln.m	/day			
	Name and Specifications	Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Portland Cement	27.32	bag	278.04	7,597.28
	b. Sand	1.54	cu.m	1,247.56	1,921.24
	c. RC Pipes (1070 mm dia.)	22.00	pc	2,730.00	60,060.00
	d. Sand Bedding	3.28	cu.m	1,247.56	4,089.50
	Sub-total for E			P	73,668.02
F.	Direct Cost (C+E)				91,530.88
G.	Overhead, Contingencies and Miscellaneous		10% per D.O 197 s 2016		9,153.09
H.	Contractor's Profit (CP)		8% per D.O 197 s 2016		7,322.47
I.	Value Added Tax (VAT)		5% per D.O 197 s 2016		5,400.32
J.	Total Unit Cost				5,154.85

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DETAILED UNIT PRICE ANALYSIS

PROJECT NAME	: Road Widening including Drainage - Lanao - Pagadian - Zamboanga City Road, Zamboanga Sibugay 1st DEO
Item No./Description	: 500(1)b6 RC Culvert Pipe, 1520 mm (60" dia.)
Unit of Measurement	: ln.m
Output per hour	: 1.00
Quantity	: 14.00

Designation	No. of Person	No. of Days	Daily Rate	Amount
A. Labor				
a. Construction Foreman	1	1.17	342.24	401.28
b. Skilled Laborer	2	1.17	0.00	0.00
c. Laborer	4	1.17	0.00	0.00
Sub-total for A			P	401.28
Name and Capacity	**No. of Equip.**	**No. of Days**	**Daily Rate**	**Amount**
B Equipment, (2014 ACEL Rates)				
a. Backhoe	1	0.58	12,296.00	7,100.94
b. Plate Compactor	1	0.58	984.00	568.26
Minor Tools (10% of Labor)				40.13
Sub-total for B			P	7,709.33
C. Total (A+B)			P	8,110.60
D. Output/day 8.00 ln.m	/day			
Name and Specifications	**Quantity**	**Unit**	**Unit Cost**	**Amount**
E. Materials				
a. Portland Cement	23.94	bag	278.04	6,656.38
b. Sand	1.36	cu.m	1,247.56	1,694.19
c. RC Pipes (1070 mm dia.)	14.00	pc	6,567.00	91,938.00
d. Sand Bedding	2.94	cu.m	1,247.56	3,667.83
Sub-total for E			P	103,956.39
F. Direct Cost (C+E)				112,066.99
G. Overhead, Contingencies and Miscellaneous		10% per D.O 197 s 2016		11,206.70
H. Contractor's Profit (CP)		8% per D.O 197 s 2016		8,965.36
I. Value Added Tax (VAT)		5% per D.O 197 s 2016		6,611.95
J. Total Unit Cost				9,917.93

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DETAILED UNIT PRICE ANALYSIS

PROJECT NAME	:	Road Widening including Drainage - Lanao - Pagadian - Zamboanga City Road, Zamboanga Sibugay 1st DEO
Item No./Description	:	505(1a) Grouted Riprap, Class A
Unit of Measurement	:	cu.m
Output per hour	:	1.25
Quantity	:	82.50

	Designation	No. of Person	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Construction Foreman	1	8.25	611.92	5,048.34
	b. Skilled Laborer	2	8.25	443.20	7,312.80
	c. Laborer	8	8.25	342.24	22,587.84
	Sub-total for A			P	34,948.98
	Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B	Equipment, (2014 ACEL Rates)				
	a. One Bagger Mixer	1	8.25	1,376.00	11,352.00
	b. Water Truck	1	0.41	19,600.00	8,085.00
	Minor Tools (5% of Labor)				1,747.45
	Sub-total for B			P	21,184.45
C.	Total (A+B)			P	56,133.43
D.	Output/day 10.00 cu.m	/day			
	Name and Specifications	Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Cement	247.50	bag	278.04	68,815.94
	b. Sand	20.63	cu.m	1,247.56	25,730.93
	c. Gravel Fill	1.24	cu.m	1,297.56	1,605.73
	d. Weep Holes (PVC), 2" dia.	24.75	ln.m	133.00	3,291.75
	e. Filter Cloth	1.24	sq.m	160.00	198.00
	f. Boulders	86.63	cu.m	1,468.56	127,214.01
	Miscellaneous (1% of Materials)				2,268.56
	Sub-total for E			P	229,124.92
F.	Direct Cost (C+E)				285,258.34
G.	Overhead, Contingencies and Miscellaneous		10%	per D.O 197 s 2016	28,525.83
H.	Contractor's Profit (CP)		8%	per D.O 197 s 2016	22,820.67
I.	Value Added Tax (VAT)		5%	per D.O 197 s 2016	16,830.24
J.	Total Unit Cost				4,284.06

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DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Road Widening Including Drainage - Lanao - Pagadian - Zamboanga City Road, Zamboanga Sibugay 1st DEO

Item No./Description : 506 (1) Stone Masonry
Unit of Measurement : cu.m
Output per hour : 1.56
Quantity : 200.00

	Designation	No. of Person	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Construction Foreman	1	16.00	611.92	9,790.72
	b. Skilled Laborer	2	16.00	443.20	14,182.40
	c. Laborer	8	16.00	342.24	43,806.72
	Sub-total for A			P	67,779.84
	Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B	Equipment, (2014 ACEL Rates)				
	a. One Bagger Mixer	1	16.00	1,376.00	22,016.00
	b. Water Truck	1	0.80	19,600.00	15,680.00
	c. Backhoe	1	1.60	12,296.00	19,673.60
	Minor Tools (10% of Labor)				6,777.98
	Sub-total for B			P	64,147.58
C.	Total (A+B)			P	131,927.42
D.	Output/day 12.50 cu.m /day				
	Name and Specifications	Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Cement	1,100.00	bag	278.04	305,848.61
	b. Sand	60.00	cu.m	1,247.56	74,853.60
	c. Gravel Fill	4.00	cu.m	1,297.56	5,190.24
	d. Weep Holes (PVC)	60.00	ln.m	133.00	7,980.00
	e. Filter Cloth	3.00	sq.m	160.00	480.00
	f. Boulders	210.00	cu.m	1,468.56	308,397.60
	Miscellaneous (1% of Materials)				7,027.50
	Sub-total for E			P	709,777.55
F.	Direct Cost (C+E)				841,704.97
G.	Overhead, Contingencies and Miscellaneous		10% per D.O 197 s 2016		84,170.50
H.	Contractor's Profit (CP)		8% per D.O 197 s 2016		67,336.40
I.	Value Added Tax (VAT)		5% per D.O 197 s 2016		49,660.59
J.	Total Unit Cost				5,214.36

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DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Road Widening including Drainage - Lanao - Pagadian - Zamboanga City Road, Zamboanga Sibugay 1st DEO

Item No./Description : 603(3) Metal Guardrail (Metal Beam) Including Post
Unit of Measurement : m
Output per hour : 4.20
Quantity : 2,483.50

	Designation	No. of Person	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Construction Foreman	1	73.91	611.92	45,229.27
	b. Skilled Laborer	2	73.91	443.20	65,517.10
	c. Laborer	4	73.91	342.24	101,184.89
	Sub-total for A			P	211,931.25
	Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B	Equipment, (2014 ACEL Rates)				
	a. One Bagger Mixer	1	36.96	1,376.00	50,852.62
	b. Concrete Vibrator	1	36.96	730.00	26,978.50
	c. Water Truck	1	3.70	19,600.00	72,435.42
	d. Cargo Truck	1	18.48	9,696.00	179,166.79
	Minor Tools (5%of Labor Cost)				10596.56232
	Sub-total for B			P	340,029.88
C.	Total (A+B)			P	551,961.13
D.	Output/day 33.60 m /day				
	Name and Specifications	Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Cement	819.56	bag	278.04	227,872.50
	b. Sand	44.70	cu.m	1,247.56	55,769.67
	c. Gravel	89.41	cu.m	1,297.56	116,009.65
	d. Metal Beam Guardrail	2,483.50	m	1,650.00	4,097,775.00
	e. Plywood Marine	620.88	pc	1,247.00	774,231.13
	f. Lumber	19,868.00	bd-ft	20.00	397,360.00
	g. Reinforcing Steel Bars	9,934.00	kg	42.00	417,228.00
	h. Tie Wire	198.68	kg	80.00	15,894.40
	i. Assorted CWN	198.68	kg	65.83	13,079.10
	j. Bolt, Nut & Washer 5/8" dia. X 9"	124,175.00	pc	28.00	3,476,900.00
	k. Bolt, Nut & Washer 5/8" dia. X 1"	4,967.00	pc	21.00	104,307.00
	Sub-total for E			P	9,696,426.46
F.	Direct Cost (C+E)				10,248,387.59
G.	Overhead, Contingencies and Miscellaneous		10% per D.O 197 s 2016		1,024,838.76
H.	Contractor's Profit (CP)		8% per D.O 197 s 2016		819,871.01
I.	Value Added Tax (VAT)		5% per D.O 197 s 2016		604,654.87
J.	Total Unit Cost				5,112.85

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DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Road Widening including Drainage - Lanao - Pagadian - Zamboanga City Road, Zamboanga Sibugay 1st DEO

Item No./Description : 603(4)b Metal Beam End Piece
Unit of Measurement : each
Output per hour : 6.00
Quantity : 68.00

Designation	No. of Person	No. of Days	Daily Rate	Amount
A. Labor				
a. Construction Foreman	1	1.42	611.92	866.89
b. Skilled Laborer	1	1.42	443.20	627.87
c. Laborer	2	1.42	342.24	969.68
Sub-total for A			P	2,464.43
Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B Equipment, (2014 ACEL Rates)				
a. Cargo Truck	1	1.42	9,696.00	13,736.00
Minor Tools (5%of Labor Cost)				123.22
Sub-total for B			P	13,859.22
C. Total (A+B)			P	16,323.66
D. Output/day 48.00 each /day				
Name and Specifications	Quantity	Unit	Unit Cost	Amount
E. Materials				
a. Metal Guardrail End Piece	68.00	each	1,350.00	91,800.00
Sub-total for E			P	91,800.00
F. Direct Cost (C+E)				108,123.66
G. Overhead, Contingencies and Miscellaneous		10% per D.O 197 s 2016		10,812.37
H. Contractor's Profit (CP)		8% per D.O 197 s 2016		8,649.89
I. Value Added Tax (VAT)		5% per D.O 197 s 2016		6,379.30
J. Total Unit Cost				1,970.08

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DETAILED UNIT PRICE ANALYSIS

PROJECT NAME	: Road Widening including Drainage - Lanao - Pagadian - Zamboanga City Road, Zamboanga Sibugay 1st DEO
Item No./Description	: 612(1) Reflectorized Thermoplastic Pavement Markings (White)
Unit of Measurement	: sq.m
Output per hour	: 25.00
Quantity	: 997.00

	Designation	No. of Person	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Construction Foreman	1	4.99	611.92	3,050.42
	b. Skilled Laborer	2	4.99	443.20	4,418.70
	c. Laborer	6	4.99	342.24	10,236.40
	Sub-total for A			P	17,705.52
	Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B	Equipment, (2014 ACEL Rates)				
	a. Cargo Truck/Delivery Truck	1	4.99	9,696.00	48,334.56
	b. Applicator Machine	1	4.99	750.00	3,738.75
	c. Kneading Machine	1	4.99	1,500.00	7,477.50
	Minor Tools (10% of labor)				
	Sub-total for B			P	59,550.81
C.	Total (A+B)			P	77,256.33
D.	Output/day 200.00 sq.m /day				
	Name and Specifications	Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Thermoplastic Paint (white)	324.03	bag	1,585.00	513,579.63
	b. Glass Beads	32.90	bag	2,500.00	82,252.50
	c. Primer	119.64	liter	180.00	21,535.20
	d. LPG (50 kg.)	3.99	cyl	90.00	358.92
	e. LPG (12 kg.)	1.99	cyl	50.00	99.70
	f. Calsumine	124.63	kg	5.00	623.13
	Miscellaneous (5% of Materials)				30,922.45
	Sub-total for E			P	649,371.52
F.	Direct Cost (C+E)				726,627.86
G.	Overhead, Contingencies and Miscellaneous		10%	per D.O 197 s 2016	72,662.79
H.	Contractor's Profit (CP)		8%	per D.O 197 s 2016	58,130.23
I.	Value Added Tax (VAT)		5%	per D.O 197 s 2016	42,871.04
J.	Total Unit Cost				903.00

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DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Road Widening including Drainage - Lanao - Pagadian - Zamboanga City Road, Zamboanga Sibugay 1st DEO

Item No./Description : 622(1a) Bio-Engineered Solutions (Coco-net), CN 400
Unit of Measurement : sq.m
Output per hour : 50.00
Quantity : 4,827.00

	Designation	No. of Person	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Construction Foreman	1	12.07	611.92	7,384.34
	b. Laborer	8	12.07	342.24	33,039.85
	Sub-total for A			P	40,424.19
	Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B	Equipment, (2014 ACEL Rates)				
	a. Water Truck	1	3.02	19,600.00	59,130.75
	Minor Tools (10% of Labor)				4,042.42
	Sub-total for B			P	63,173.17
C.	Total (A+B)			P	103,597.36
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)	5,068.35	sq.m	185.00	937,644.75
	Sub-total for E			P	937,644.75
F.	Direct Cost (C+E)				1,041,242.11
G.	Overhead, Contingencies and Miscellaneous		10% per D.O 197 s 2016		104,124.21
H.	Contractor's Profit (CP)		8% per D.O 197 s 2016		83,299.37
I.	Value Added Tax (VAT)		5% per D.O 197 s 2016		61,433.28
J.	Total Unit Cost				267.27

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DETAILED UNIT PRICE ANALYSIS

PROJECT NAME	:	Road Widening including Drainage - Lanao - Pagadian - Zamboanga City Road, Zamboanga Sibugay 1st DEO
Item No./Description	:	622(1b) Bio-Engineered Solutions (Coco-net), CN 700
Unit of Measurement	:	sq.m
Output per hour	:	50.00
Quantity	:	705.00

	Designation	No. of Person	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Construction Foreman	1	1.76	611.92	1,078.51
	b. Laborer	8	1.76	342.24	4,825.58
	Sub-total for A			P	5,904.09
	Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B	Equipment, (2014 ACEL Rates)				
	a. Water Truck	1	0.44	19,600.00	8,636.25
	Minor Tools (10% of Labor)				590.41
	Sub-total for B			P	9,226.66
C.	Total (A+B)			P	15,130.75
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)	740.25	sq.m	185.00	136,946.25
	Sub-total for E			P	136,946.25
F.	Direct Cost (C+E)				152,077.00
G.	Overhead, Contingencies and Miscellaneous		10% per D.O 197 s 2016		15,207.70
H.	Contractor's Profit (CP)		8% per D.O 197 s 2016		12,166.16
I.	Value Added Tax (VAT)		5% per D.O 197 s 2016		8,972.54
J.	Total Unit Cost				267.27

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DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Road Widening including Drainage - Lanao - Pagadian - Zamboanga City Road, Zamboanga Sibugay 1st DEO

Item No./Description : 622(2b) Bio-Engineered Erosion Coco Logs/Fascine Control System
Unit of Measurement : ln.m
Output per hour : 15.00
Quantity : 463.50

Designation	No. of Person	No. of Days	Daily Rate	Amount
A. Labor				
a. Construction Foreman	1	3.86	611.92	2,363.54
b. Laborer	8	3.86	342.24	10,575.22
Sub-total for A			P	12,938.76
Name and Capacity	**No. of Equip.**	**No. of Days**	**Daily Rate**	**Amount**
B Equipment, (2014 ACEL Rates)				
Minor Tools (10% of Labor)				1,293.88
Sub-total for B			P	1,293.88
C. Total (A+B)			P	14,232.63
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)	486.68	ln.m	556.00	270,591.30
Sub-total for E			P	270,591.30
F. Direct Cost (C+E)				284,823.93
G. Overhead, Contingencies and Miscellaneous		10% per D.O 197 s 2016		28,482.39
H. Contractor's Profit (CP)		8% per D.O 197 s 2016		22,785.91
I. Value Added Tax (VAT)		5% per D.O 197 s 2016		16,804.61
J. Total Unit Cost				761.37

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DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Road Widening including Drainage - Lanao - Pagadian - Zamboanga City Road, Zamboanga Sibugay 1st DEO

Item No./Description : 622(3a) Bio-Engineered Erosion Control System Vegetation
Unit of Measurement : sq.m
Output per hour : 62.50
Quantity : 5,532.50

	Designation	No. of Person	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Construction Foreman	1	11.07	611.92	6,770.89
	b. Laborer	2	11.07	342.24	7,573.77
	Sub-total for A			P	14,344.67
	Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B	Equipment, (2014 ACEL Rates)				
	a. Hydroseeding Machine	1	11.07	7,616.00	84,271.04
	b. Water Truck	1	11.07	8,520.00	94,273.80
	Sub-total for B			P	178,544.84
C.	Total (A+B)			P	192,889.51
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)	5,809.13	sq.m	172.00	999,169.50
	Sub-total for E			P	999,169.50
F.	Direct Cost (C+E)				1,192,059.01
G.	Overhead, Contingencies and Miscellaneous		10% per D.O 197 s 2016		119,205.90
H.	Contractor's Profit (CP)		8% per D.O 197 s 2016		95,364.72
I.	Value Added Tax (VAT)		5% per D.O 197 s 2016		70,331.48
J.	Total Unit Cost				266.96

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DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Road Widening including Drainage - Lanao - Pagadian - Zamboanga City Road, Zamboanga Sibugay 1st DEO

Item No./Description : A.1.1(3) Construction 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 : Road Widening including Drainage - Lanao - Pagadian - Zamboanga City Road, Zamboanga Sibugay 1st DEO

Item No./Description : A.1.1(3) Construction 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	1,297.56	4,541.46
	b. Selected Fill	10.00	cu.m	566.40	5,664.00
	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	278.04	25,023.98
	b. Crushed Gravel	20.00	cu.m	1,297.56	25,951.20
	c. Washed Sand	17.00	cu.m	1,247.56	21,208.52
	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	70.00	1,400.00
	IV. Formworks (Columns & Beams)				
	a. Coco Lumber	400.00	bd.ft	20.00	8,000.00
	b. Ordinary Plywood, 1/4"x4'x8'	18.00	pc	520.00	9,360.00
	c. CWN, Assorted	5.00	kg	58.00	290.00
	V. Masonry Works (masonry walls & plastering)				
	a. CHB 6" thk	650.00	pc	18.00	11,700.00
	b. Portland Cement	50.00	bag	278.04	13,902.21
	c. Washed Sand	10.00	cu.m	1,247.56	12,475.60
	d. 10mm dia. X 6m RSB	75.00	kg	43.00	3,225.00
	e. No. 16 GI Tie Wire	2.50	kg	70.00	175.00
	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				176,741.50
	Sub-total for E			P	320,267.85
F.	Direct Cost (C+E)				405,318.01
G.	Overhead, Contingencies and Miscellaneous		10%	per D.O 197 s 2016	40,531.80
H.	Contractor's Profit (CP)		8%	per D.O 197 s 2016	32,425.44
I.	Value Added Tax (VAT)		5%	per D.O 197 s 2016	23,913.76
J.	Total Unit Cost				502,189.02

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Road Widening including Drainage - Lanao - Pagadian - Zamboanga City Road, Zamboanga Sibugay 1st DEO

Item No./Description : A.1.1(3) Construction 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 : Road Widening including Drainage - Lanao - Pagadian - Zamboanga City Road, Zamboanga Sibugay 1st DEO

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	5.00	mons	1,200.00	6,000.00
	b. Water Bill	5.00	mons	1,000.00	5,000.00
	c. LPG Gasul (11 kg)	5.00	mons	1,000.00	5,000.00
	Sub-Total for E				246,143.32
	Sub-total for E			P	246,143.32
F.	Direct Cost (C+E)				246,143.32
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	12,307.17
J.	Total Unit Cost				258,450.49

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME	: Road Widening Including Drainage - Lanao - Pagadian - Zamboanga City Road, Zamboanga Sibugay 1st DEO
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	225.00	443.20	99,720.00
	Sub-total for A			P	99,720.00
	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	99,720.00
D.	Output/day 0.00 L.S	/day			
	Name and Specifications	Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Liters, Diesel Fuel	2,250.00	liters	33.00	74,250.00
	b. Engine Oil & Lubricants	1.00	ls	24,930.00	24,930.00
	c. Tires	4.00	pcs	9,500.00	38,000.00
	d. Spare parts etc.	1.00	ls	100,000.00	100,000.00
	Sub-total for E			P	237,180.00
F.	Direct Cost (C+E)				336,900.00
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	16,845.00
J.	Total Unit Cost				353,745.00

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DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Road Widening including Drainage - Lanao - Pagadian - Zamboanga City Road, Zamboanga Sibugay 1st DEO

Item No./Description : B.5 Project Billboard
Unit of Measurement : each
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 each /day				
	Name and Specifications	Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Marine Plywood 3/16" thk. X 4' x 8'	2.00	pc	475.00	950.00
	b. Tarpaulin (4' x 8')	2.00	pc	800.00	1,600.00
	c. Assorted Sizes Lumber	100.00	bd. Ft	20.00	2,000.00
	d. Assorted Sizes CW Nails	2.00	kg	58.00	116.00
	Sub-total for E			P	4,666.00
F.	Direct Cost (C+E)				5,100.90
G.	Overhead, Contingencies and Miscellaneous		10% per D.O 197 s 2016		510.09
H.	Contractor's Profit (CP)		8% per D.O 197 s 2016		408.07
I.	Value Added Tax (VAT)		5% per D.O 197 s 2016		300.95
J.	Total Unit Cost				3,160.01

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DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Road Widening Including Drainage - Lanao - Pagadian - Zamboanga City Road, Zamboanga Sibugay 1st DEO

Item No./Description : B.7 Construction Safety and 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	112.50	611.92	68,841.00
	b. First Aider	1	225.00	443.20	99,720.00
	Sub-total for A			P	168,561.00
	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	168,561.00
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)				180,921.00
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	14,473.68
I.	Value Added Tax (VAT)		5%	per D.O 197 s 2016	9,769.73
J.	Total Unit Cost				205,164.41

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DETAILED UNIT PRICE ANALYSIS

PROJECT NAME	:	Road Widening including Drainage - Lanao - Pagadian - Zamboanga City Road, Zamboanga Sibugay 1st DEO
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	4.00	34,043.00	272,344.00
	b. Water Truck	1	4.00	19,600.00	78,400.00
	c. Backhoe	2	4.00	12,296.00	98,368.00
	d. Payloader	2	4.00	13,864.00	110,912.00
	e. Dumptruck	3	4.00	11,360.00	136,320.00
	f. Bulldozer	1	4.00	27,032.00	108,128.00
	g. Road Roller	1	4.00	13,216.00	52,864.00
	h. Road Grader	1	4.00	17,384.00	69,536.00
	Sub-total for B			P	926,872.00
C.	Total (A+B)			P	926,872.00
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)				926,872.00
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	46,343.60
J.	Total Unit Cost				973,215.60

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DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Road Widening including Drainage - Lanao - Pagadian - Zamboanga City Road, Zamboanga Sibugay 1st DEO

Item No./Description : B.4(1) Construction Survey and Staking
Unit of Measurement : Km.
Output per hour : 0.04
Quantity : 4.98

	Designation	No. of Person	No. of Days	Daily Rate	Amount
A.	Labor				
	(For Field Works)				
	a. Geodetic Engineer	1	16.62	833.31	13,846.75
	b. Skilled Laborer	3	16.62	443.20	22,093.39
	c. Laborer	3	16.62	342.24	17,060.56
	(For Office Works)				
	a. Geodetic Engineer	1	49.85	833.31	41,540.25
	b. Skilled Laborer	2	49.85	443.20	44,186.77
	Sub-total for A			P	138,727.73
	Name and Capacity	**No. of Equip.**	**No. of Days**	**Daily Rate**	**Amount**
B	Equipment, (2014 ACEL Rates)				
	a. Total Station w/ complete accessories	1	16.62	800.00	13,293.25
	Minor Tools (10% of labor)				13,872.77
	Sub-total for B			P	27,166.03
C.	Total (A+B)			P	165,893.75
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)				180,593.75
G.	Overhead, Contingencies and Miscellaneous		10% per D.O 197 s 2016		18,059.38
H.	Contractor's Profit (CP)		8% per D.O 197 s 2016		14,447.50
I.	Value Added Tax (VAT)		5% per D.O 197 s 2016		10,655.03
J.	Total Unit Cost				44,886.06

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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 $= \frac{5.00 \times 60.00}{30.00} =$ 10 mins.

Unloaded Running $= \frac{5.00 \times 60.00}{40.00} =$ *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 $= \frac{8.00 \times 60.00}{22.50} =$ 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 $= \frac{1{,}000.00}{853.33} =$ 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 SIBUGAY 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	+	700.00	=	1,247.56
Cost of Coarse Aggregates	54.00	X	10.14	=	547.56	+	750.00	=	1,297.56
Cost of Item 200 Materails	54.00	X	10.14	=	547.56	+	720.00	=	1,267.56
Cost of Item 201 Materails	54.00	X	10.14	=	547.56	+	714.00	=	1,261.56
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	+	921.00	=	1,468.56
Cost of Embankment, Common Borrow	10.00	X	10.14	=	101.40	+	325.00	=	426.40
Cost of Embankment, Selected Borrow	10.00	X	10.14	=	101.40	+	465.00	=	566.40

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	88,842.67
Portland Cement Concrete Pavement, 0.15m. Thick	12,448.02
Structural Concrete, Class A	3,030.50
Grouted Riprap, Class A	247.50
Stone Masonry	1,100.00
Construction of Field Office for the Engineer	90.00
	50.00
Lean Concrete	-
TOTAL	***105,808.69***

Quantity = 105,808.69 Bags

Delivery Charge = P 0.12 /bag/km

SITE	*HAULING DISTANCE*
Zamboanga Sibugay 1st DEO PROJECT SITE	59.00

* 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 : 105,808.69 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 $= \dfrac{105,808.69}{3,817.10} =$ 27.72 days

No. of Days for Labor for unloading = complimentary to D.Truck days = 27.72 days

DELIVERY COST:

105,808.69	Bags, Portland Cement	@	P	7.08	/bag	=	P	749,125.53
					Sub-total			**749,125.53**

LABOR:

1	Foreman	@	P	558.00	/day	X	27.72	days	=	P	15,467.58
10	Laborers	@	P	312.24	/day	X	27.72	days	=		86,551.91
								Sub-total			**102,019.48**

MATERIALS:

105,808.69	Bags, Portland Cement	@	P	270.00	/bag	=	P	28,568,346.65
					Sub-total			**28,568,346.65**

Estimated Quantity : 105,808.69 Bags

Unit Cost	P	278.04
Grand Total	P	29,419,491.67
Delivery Cost	P	749,125.53
Labor	P	102,019.48
Materials	P	28,568,346.65