

Republic of the Philippines  
Department of Public Works and Highways

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

**PROGRAM OF WORK**

(For all types of Project)

Date : April 28, 2017

<b>NAME OF PROJECT :</b> Road Widening and Construction of Four (4) Lanes Concreting Road Zamboanga City By-Pass Road (Culianan-Patalon Section) Zamboanga City  <b>LOCATION:</b> Zamboanga City  <b>PROJECT CATEGORY :</b> NATIONAL ROAD  <b>PROJECT DESCRIPTION :</b> Scope of Work : Road Upgrading (Gravel to Concrete)  Road Width : 6.70 m. Roadbed Width : 12.00 m. Subbase Course : 0.30 m. thk. Surface Course : 0.15 m. thk.	Appropriation : P <b>150,000,000.00</b> Source of Funds : CY-2017 GAA Issued Obligated Authority : Released : Cal. Days to Complete : 270 Calendar Days Desirable Starting Date : upon approval Mode of Implementation : by contract  <b>Station Limits:</b> Beg. - End Sta. 1983+780 - Sta. 1985+750.36 (widening) Sta. 1985+750.36 - Sta. 1986+470.71 (BK)/ Sta. 1935+617.23 (AH)(4-lanes)  Length 1,970.36 m (widening, two lanes) 720.35 m (construction of 4-lane road )  <b>Total Length 2,690.71 In.m. / 2.691 km.</b> <b>Lane Kilometer 6,822.120 In. km.</b>
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MINIMUM EQUIPMENT REQUIREMENT :			TECHNICAL PERSONNEL REQUIRED :		
Description	No.	Description	No.	Description	No.
Dump Truck	12	Water Pump	1	Project Engineer	1
Transti Mixer	4	Concrete Screeder	1	Materials Engineer	1
Bulldozer	2	Concrete Vibrator	2	Geometric Surveyor	1
Backhoe	3	Concrete Cutter	2	Foreman	1
Road Grader	2	Bar Cutter	1	Materials Lab. Tech.	1
Road Roller	2	Bar Bender	1	Mason	12
Payloader	4	One Bagger Mixer	2	Carpenter	8
Water Truck	2	Batching Plant	1	Laborers (Skilled)	20
Water Tank	2	Plate Compactor	1	Laborers (Unskilled)	30
Kneading Machine	1	Cargo Truck	1	Safety Practitioner	1
Applicator Machine	1				

**ESTIMATED COST OF PROPOSED WORK**

ITEM NO.	DESCRIPTION	% OF TOTAL	UNIT	QUANTITY	DIRECT COST	
					TOTAL	UNIT COST
<b>PART A - FACILITIES FOR THE ENGINEER</b>						
A.1.1(3)	Construction of Field Office for the Engineer	0.46	L.S.	1.00	358,742.95	358,742.95
A.1.1(11)	Provision of Furnitures/Fixtures, Equipment and Appliances for the Field Office for the Field Engineer	0.21	L.S.	1.00	163,602.74	163,602.74
A.1.2(5)	Operation and Maintenance of 4x4 Pick Up Type Service Vehicle for the Engineer	0.64	month	9.00	497,791.40	55,310.16
<b>PART B - OTHER GENERAL REQUIREMENTS</b>						
B.4(1)	Construction Survey & Staking	0.15	km.	2.69	118,859.59	44,174.06
B.5	Project Billboard/Signboard	0.01	each	2.00	10,259.20	5,129.60
B.7	Occupation Safety and Health Program	1.04	month	9.00	812,862.00	90,318.00
B.9	Mobilization & Demobilization	0.94	L.S.	1.00	736,135.00	736,135.00
<b>PART C - EARTHWORKS</b>						
101(3)b5	Removal of of Actual Structure/Obstruction	0.01	cu.m.	53.50	7,488.95	139.98
102(1)	Unsuitable Excavation	0.00	cu.m.	18.00	1,742.05	96.78
103(1)a	Structure Excavation	0.13	cu.m.	436.00	100,330.42	230.12
103(3)	Foundation Fill	0.03	cu.m.	15.50	26,645.42	1,719.06
103(6)a	Pipe Culvert and Drain Excavation	0.06	cu.m.	206.00	47,403.82	230.12
104(1)a	Embankment from Roadway Excavation	2.81	cu.m.	9,662.00	2,196,275.31	227.31
104(3)a	Selected Borrow for topping	17.58	cu.m.	13,068.00	13,737,042.40	1,051.20
105(1)a	Subgrade Preparation	0.33	sq.m.	15,997.00	255,608.06	15.98

ITEM NO.	DESCRIPTION	% OF TOTAL	UNIT	QUANTITY	DIRECT COST	
					TOTAL	UNIT COST
<b>PART D - SUBBASE AND BASE COURSE</b>						
200(1)	Aggregate Subbase Course	15.05	cu.m.	9,602.00	11,761,331.37	1,224.88
<b>PART E - SURFACE COURSES</b>						
300(1)	Gravel Surface Course	1.42	cu.m.	869.00	1,107,325.86	1,274.25
311(1)a	Portland Cement Concrete Pavement, 150 mm. thk.	3.26	sq.m.	3,034.50	2,551,111.90	840.70
311(1)e1	Portland Cement Concrete Pavement	45.04	sq.m.	22,907.50	35,199,398.57	1,536.59
<b>PART G - DRAINAGE AND SLOPE PROTECTION STRUCTURES</b>						
404(1)a	Reinforcing Steel Bar, Grade 40	0.22	kg.	3,642.50	171,476.66	47.08
404(1)b	Reinforcing Steel Bar, Grade 60	0.91	kg.	14,507.00	713,405.50	49.18
405(1)a3	Structural Concrete, Class A	1.99	cu.m.	247.00	1,552,342.69	6,284.79
407(8)	Concrete Structures (Lean Concrete)	0.03	cu.m.	10.50	26,383.36	2,512.70
500(1)a3	Pipe Culvert and Storm Drain	0.37	ln.m.	100.00	289,004.28	2,890.04
505(2)a	Grouted Riprap, Class A	3.76	cu.m.	877.00	2,938,792.11	3,350.96
506(1)	Stone Masonry	0.43	cu.m.	82.00	332,308.33	4,052.54
<b>PART H - MISCELLANEOUS STRUCTURES</b>						
612(1)	Reflectorized Thermoplastic Pavement Markings White	0.85	sq.m.	906.00	661,323.13	729.94
622(1)a	Coconet Bio-Engineering Solutions (Coco-net)	0.33	sq.m.	1,882.00	257,762.60	136.96
622(1)b	Coconet Bio-Engineering Solutions (Coco-net)	0.73	sq.m.	3,207.00	573,931.33	178.96
622(2)b	Coco-logs/Fascine (CN200)	0.42	ln.m.	720.00	332,068.94	461.21
622(3)b	Vegetation (Vetiver Grass System)	0.79	sq.m.	5,089.00	615,070.69	120.86
<b>TOTAL</b>		<b>100.00</b>			<b>P 78,153,826.63</b>	

**NAME OF PROJECT :** Road Widening and Construction of Four (4) Lanes Concreting Road Zamboanga City By-Pass Road (Culianan-Patalon Section) Zamboanga City

Zamboanga City

BREAKDOWN OF ESTIMATED EXPENDITURES	% OF TOTAL	AMOUNT
I. ESTIMATED COST		
A. DIRECT COST		
A.1. Labor	1.55	2,331,914.17
A.2. Equipment Expenses	7.47	11,206,308.96
A.3. Materials	43.08	64,615,603.50
<b>SUB-TOTAL (DIRECT COST)</b>	<b>52.10</b>	<b>P 78,153,826.63</b>
B. INDIRECT COST (Per D.O. # 197, s. 2016)		
B.1. Overhead, Contingency & Misc. (10 % Max. of D.C.)	5.06	7,594,343.55
B.2. Profit (8 % Max. of D.C.)	4.10	6,153,592.02
C. VAT (5% of D.C. and I.C. Per D.O. # 197, s. 2016)	3.06	4,595,088.11
<b>SUBTOTAL (CONTRACT COST)</b>	<b>64.33</b>	<b>P 96,496,850.31</b>
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	32.17	48,253,149.69
4. Physical Reserved		
<b>TOTAL ESTIMATED PROJECT COST</b>	<b>100.00</b>	<b>P 150,000,000.00</b>

Prepared :	Checked :
<b><u>MARK ANTHON P. REBOLLOS</u></b> Engineer II	<b><u>JERALD R. BARRERA</u></b> Engineer II
Submitted :	Recommending Approval :
<b><u>LEONCIO B. SOLAMILLO</u></b> Chief, Construction Division	<b><u>CAYAMOMBAO D. DIA</u></b> OIC - Assistant Regional Director
Approved :	
<b><u>JORGE U. SEBASTIAN, JR., CESO III</u></b> Regional Director	

**APPROVED BUDGET FOR THE CONTRACT**

**Road Widening and Construction of Four (4) Lanes Concreting Road Zamboanga City By-Pass Road (Culianan-Patalon Section) Zamboanga City**

Stations : Sta. 1983+780 to Sta. 1985+750.36 (widening)  
Sta. 1985+750.36 to Sta. 1986+470.71 (BK)  
Sta. 1935+617.23 (AH)(4-lanes)

Length 1,970.36 m (widening)  
 720.35 m (construction of 4-lane road )

Total Length **2,690.71 In.m.**

Contract Duration : **270 CD**

ITEM NO.	DESCRIPTION	QUANTITY	UNIT	ESTIMATED DIRECT COST	MARK-UPS IN %		TOTAL MARK-UPS		VAT	TOTAL INDIRECT COST	TOTAL COST	UNIT COST
					OCM	PROFIT	%	VALUE				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
									(5%[(5) + (9)])	(9) + (10)	(5) + (11)	(12) / (3)
<b>PART A - FACILITIES FOR THE ENGINEER</b>												
A.1.1(3)	Construction of Field Office for the Engineer	1.00	L.S.	358,742.95	10.00	8.00	18.00	64,573.73	21,165.83	85,739.57	444,482.52	444,482.52
A.1.1(11)	Provision of Furnitures/Fixtures, Equipment and Appliances for the Field Office for the Field Engineer	1.00	L.S.	163,602.74	-	8.00	8.00	13,088.22	8,834.55	21,922.77	185,525.51	185,525.51
A.1.2(5)	Operation and Maintenance of 4x4 Pick Up Type Service Vehicle for the Engineer	9.00	month	497,791.40	-	-	-	-	24,889.57	24,889.57	522,680.97	58,075.66
<b>TOTAL OF PART A</b>				<b>1,020,137.10</b>				<b>77,661.95</b>	<b>54,889.95</b>	<b>132,551.90</b>	<b>1,152,689.00</b>	
<b>PART B - OTHER GENERAL REQUIREMENTS</b>												
B.4(1)	Construction Survey & Staking	2.69	km.	118,859.59	10.00	8.00	18.00	21,394.73	7,012.72	28,407.44	147,267.03	54,731.66
B.5	Project Billboard/Signboard	2.00	each	10,259.20	10.00	8.00	18.00	1,846.66	605.29	2,451.95	12,711.15	6,355.57
B.7	Occupation Safety and Health Program	9.00	month	812,862.00	-	8.00	8.00	65,028.96	43,894.55	108,923.51	921,785.51	102,420.61
B.9	Mobilization & Demobilization	1.00	L.S.	736,135.00	-	-	-	-	36,806.75	36,806.75	772,941.75	772,941.75
<b>TOTAL OF PART B</b>				<b>1,678,115.79</b>				<b>88,270.34</b>	<b>88,319.31</b>	<b>176,589.65</b>	<b>1,854,705.44</b>	
<b>PART C - EARTHWORKS</b>												
101(3)b5	Removal of Actual Structure/Obstruction	53.50	cu.m.	7,488.95	10.00	8.00	18.00	1,348.01	441.85	1,789.86	9,278.81	173.44
102(1)	Unsuitable Excavation	18.00	cu.m.	1,742.05	10.00	8.00	18.00	313.57	102.78	416.35	2,158.40	119.91
103(1)a	Structure Excavation	436.00	cu.m.	100,330.42	10.00	8.00	18.00	18,059.48	5,919.49	23,978.97	124,309.39	285.11
103(3)	Foundation Fill	15.50	cu.m.	26,645.42	10.00	8.00	18.00	4,796.18	1,572.08	6,368.26	33,013.67	2,129.91
103(6)a	Pipe Culvert and Drain Excavation	206.00	cu.m.	47,403.82	10.00	8.00	18.00	8,532.69	2,796.83	11,329.51	58,733.34	285.11
104(1)a	Embankment from Roadway Excavation	9,662.00	cu.m.	2,196,275.31	10.00	8.00	18.00	395,329.56	129,580.24	524,909.80	2,721,185.11	281.64
104(3)a	Selected Borrow for Topping	13,068.00	cu.m.	13,737,042.40	10.00	8.00	18.00	2,472,667.63	810,485.50	3,283,153.13	17,020,195.53	1,302.43
105(1)a	Subgrade Preparation	15,997.00	sq.m.	255,608.06	10.00	8.00	18.00	46,009.45	15,080.88	61,090.33	316,698.39	19.80
<b>TOTAL OF PART C</b>				<b>16,372,536.44</b>				<b>2,947,056.56</b>	<b>965,979.65</b>	<b>3,913,036.21</b>	<b>20,285,572.65</b>	
<b>PART D - SUBBASE AND BASE COURSE</b>												
200(1)	Aggregate Subbase Course	9,602.00	cu.m.	11,761,331.37	10.00	8.00	18.00	2,117,039.65	693,918.55	2,810,958.20	14,572,289.56	1,517.63
<b>TOTAL OF PART D</b>				<b>11,761,331.37</b>				<b>2,117,039.65</b>	<b>693,918.55</b>	<b>2,810,958.20</b>	<b>14,572,289.56</b>	
<b>PART E - SURFACE COURSES</b>												
300(1)	Gravel Surface Course	869.00	cu.m.	1,107,325.86	10.00	8.00	18.00	199,318.65	65,332.23	264,650.88	1,371,976.74	1,578.80
311(1)a	Portland Cement Concrete Pavement, 150 mm. thk.	3,034.50	sq.m.	2,551,111.90	10.00	8.00	18.00	459,200.14	150,515.60	609,715.74	3,160,827.64	1,041.63
311(1)e1	Portland Cement Concrete Pavement	22,907.50	sq.m.	35,199,398.57	10.00	8.00	18.00	6,335,891.74	2,076,764.52	8,412,656.26	43,612,054.83	1,903.83
<b>TOTAL OF PART E</b>				<b>38,857,836.33</b>				<b>6,994,410.54</b>	<b>2,292,612.34</b>	<b>9,287,022.88</b>	<b>48,144,859.21</b>	
<b>PART G - DRAINAGE AND SLOPE PROTECTION STRUCTURES</b>												
404(1)a	Reinforcing Steel Bar, Grade 40	3,642.50	kg.	171,476.66	10.00	8.00	18.00	30,865.80	10,117.12	40,982.92	212,459.58	58.33
404(1)b	Reinforcing Steel Bar, Grade 60	14,507.00	kg.	713,405.50	10.00	8.00	18.00	128,412.99	42,090.92	170,503.91	883,909.41	60.93
405(1)a3	Structural Concrete, Class A	247.00	cu.m.	1,552,342.69	10.00	8.00	18.00	279,421.68	91,588.22	371,009.90	1,923,352.59	7,786.85
407(8)	Concrete Structures (Lean Concrete)	10.50	cu.m.	26,383.36	10.00	8.00	18.00	4,749.00	1,556.62	6,305.62	32,688.98	3,113.24
500(1)a3	Pipe Culvert and Storm Drain	100.00	ln.m.	289,004.28	10.00	8.00	18.00	52,020.77	17,051.25	69,072.02	358,076.31	3,580.76
505(2)a	Grouted Riprap, Class A	877.00	cu.m.	2,938,792.11	10.00	8.00	18.00	528,982.58	173,388.73	702,371.31	3,641,163.42	4,151.84
506(1)	Stone Masonry	82.00	cu.m.	332,308.33	10.00	8.00	18.00	59,815.50	19,606.19	79,421.69	411,730.01	5,021.10
<b>TOTAL OF PART G</b>				<b>6,023,712.92</b>				<b>1,084,268.33</b>	<b>355,399.06</b>	<b>1,439,667.39</b>	<b>7,463,380.31</b>	
<b>PART H - MISCELLANEOUS STRUCTURES</b>												
612(1)	Reflectorized Thermoplastic Pavement Markings White	906.00	sq.m.	661,323.13	10.00	8.00	18.00	119,038.16	39,018.06	158,056.23	819,379.36	904.39
622(1)a	Coconet Bio-Engineering Solutions (Coco-net)	1,882.00	sq.m.	257,762.60	10.00	8.00	18.00	46,397.27	15,207.99	61,605.26	319,367.86	169.70
622(1)b	Coconet Bio-Engineering Solutions (Coco-net)	3,207.00	sq.m.	573,931.33	10.00	8.00	18.00	103,307.64	33,861.95	137,169.59	711,100.91	221.73
622(2)b	Coco-logs/Fascine (CN200)	720.00	ln.m.	332,068.94	10.00	8.00	18.00	59,772.41	19,592.07	79,364.48	411,433.42	571.44
622(3)b	Vegetation (Vetiver Grass System)	5,089.00	sq.m.	615,070.69	10.00	8.00	18.00	110,712.72	36,289.17	147,001.90	762,072.59	149.75
<b>TOTAL OF PART H</b>				<b>2,440,156.69</b>				<b>439,228.20</b>	<b>143,969.24</b>	<b>583,197.45</b>	<b>3,023,354.14</b>	
<b>TOTAL</b>				<b>78,153,826.63</b>				<b>13,747,935.57</b>	<b>4,595,088.11</b>	<b>18,343,023.68</b>	<b>96,496,850.31</b>	

Prepared by :

Submitted by :

Recommending Approval:

Approved by :

**BELEN A. SAPALIEDA**  
 Head, BAC Technical Working Group

**LEONCIO B. SOLAMILLO**  
 Chief, Construction Division

**CAYAMOMBAO D. DIA**  
 OIC - Assistant, Regional Director

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

## DETAILED UNIT PRICE ANALYSIS

PROJECT NAME: Road Widening and Construction of Four (4) Lanes Concreting Road Zamboanga City By-Pass Road (Culianan-Patalon Section) Zamboanga City

Item No./Description: 103(1)a Structure Excavation

Unit of Measurement: cu.m.

Output per hour: 20.00

Quantity: 436.00

*For Lined Canal and RCBC*

Designation		No. of Persons	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Const. Foreman	1	2.73	611.92	1,667.48
	b. Unskilled Labor	3	2.73	342.24	2,797.81
Sub-total for A				P	4,465.29
Name and Capacity		No. of Equipment	No. of Days	Daily Rate	Amount
B.	Equipment, (2014 ACEL Rates)				
	a. Dump Truck (12 cu.yd.)	2	2.73	11,360.00	61,912.00
	b. Backhoe (0.80 cu.m.)	1	2.73	12,296.00	33,506.60
	Minor Tools 10% of Labor				446.53
Sub-total for B				P	95,865.13
C.	Total (A+B)				100,330.42
D.	Output/day	160.00	cu.m./day		
Name and Specifications		Quantity	Unit	Unit Cost	Amount
E.	Materials				
Sub-total for E				P	-
F.	Direct Cost (C + E)				100,330.42
G.	Overhead, Contingencies and Miscellaneous		10% per D.O. 197, s. 2016		10,033.04
H.	Contractor's Profit (CP)		8% per D.O. 197, s. 2016		8,026.43
I.	Value Added Tax (VAT)		5% per D.O. 197, s. 2016		5,919.49
J.	Total Unit Cost				285.11

## DETAILED UNIT PRICE ANALYSIS

PROJECT NAME: Road Widening and Construction of Four (4) Lanes Concreting Road Zamboanga City By-Pass Road (Culianan-Patalon Section) Zamboanga City

Item No./Description: 103(3) Foundation Fill

Unit of Measurement: cu.m.

Output per hour: 1.25

Quantity: 15.50

*For RCCP Bedding*

Designation		No. of Persons	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Const. Foreman	1	1.55	611.92	948.48
	b. Unskilled Labor	4	1.55	342.24	2,121.89
Sub-total for A				P	3,070.36
Name and Capacity		No. of Equipment	No. of Days	Daily Rate	Amount
B.	Equipment, (2014 ACEL Rates)				
	a. Plate Compactor	1	1.55	984.00	1,525.20
	b. Water Truck/Pump (16000 L)	1	0.02	19,600.00	303.80
	Minor Tools 10% of Labor				307.04
Sub-total for B				P	2,136.04
C.	Total (A+B)				5,206.40
D.	Output/day	10.00	cu.m./day		
Name and Specifications		Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Filling Materials (Granular Materials for RCCP Bedding) with 15% Shrinkage Factor	17.83	cu.m.	1,202.75	21,439.02
Sub-total for E				P	21,439.02
F.	Direct Cost (C + E)				26,645.42
G.	Overhead, Contingencies and Miscellaneous		10% per D.O. 197, s. 2016		2,664.54
H.	Contractor's Profit (CP)		8% per D.O. 197, s. 2016		2,131.63
I.	Value Added Tax (VAT)		5% per D.O. 197, s. 2016		1,572.08
J.	Total Unit Cost				2,129.91

## DETAILED UNIT PRICE ANALYSIS

PROJECT NAME: Road Widening and Construction of Four (4) Lanes Concreting Road Zamboanga City By-Pass Road (Culianan-Patalon Section) Zamboanga City

Item No./Description: 103(6)a Pipe Culvert and Drain Excavation

Unit of Measurement: cu.m.

Output per hour: 20.00

Quantity: 206.00

*For RCPC Excavation*

Designation		No. of Persons	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Const. Foreman	1	1.29	611.92	787.85
	b. Unskilled Labor	3	1.29	342.24	1,321.90
Sub-total for A				P	2,109.75
Name and Capacity		No. of Equipment	No. of Days	Daily Rate	Amount
B.	Equipment, (2014 ACEL Rates)				
	a. Dump Truck (12 cu.yd.)	2	1.29	11,360.00	29,252.00
	b. Backhoe (0.80 cu.m.)	1	1.29	12,296.00	15,831.10
	Minor Tools 10% of Labor				210.97
Sub-total for B				P	45,294.07
C.	Total (A+B)				47,403.82
D.	Output/day	160.00	cu.m./day		
Name and Specifications		Quantity	Unit	Unit Cost	Amount
E.	Materials				
Sub-total for E				P	-
F.	Direct Cost (C + E)				47,403.82
G.	Overhead, Contingencies and Miscellaneous		10% per D.O. 197, s. 2016		4,740.38
H.	Contractor's Profit (CP)		8% per D.O. 197, s. 2016		3,792.31
I.	Value Added Tax (VAT)		5% per D.O. 197, s. 2016		2,796.83
J.	Total Unit Cost				285.11

## DETAILED UNIT PRICE ANALYSIS

PROJECT NAME: Road Widening and Construction of Four (4) Lanes Concreting Road Zamboanga City By-Pass Road (Culianan-Patalon Section) Zamboanga City

Item No./Description: 104(1)a Embankment from Roadway Excavator

Unit of Measurement: cu.m.

Output per hour: 50.00

Quantity: 9,662.00

**Compacted Volume**

Designation		No. of Persons	No. of Days	Daily Rate	Amount
A.	Labor				
	For Excavation Work:				
	a. Const. Foreman	1	20.05	611.92	12,268.17
	c. Unskilled Labor	2	20.05	342.24	13,722.90
	Spreading and Compaction				
	a. Const. Foreman	1	24.16	611.92	14,780.93
	c. Unskilled Labor	2	24.16	342.24	16,533.61
Sub-total for A				P	57,305.61
Name and Capacity		No. of Equipment	No. of Days	Daily Rate	Amount
B.	Equipment, (2014 ACEL Rates)				
	For Excavation Work				
	a. Bulldozer, D6H Series II PSDS/DD	1	20.05	27,032.00	541,955.11
	b. Backhoe (0.80 cu.m.)	1	20.05	12,296.00	246,518.20
	c. Dump Truck (12 cu.yd.)	2	20.05	11,360.00	455,505.33
	Spreading and Compaction				
	a. Motorized Road Grader (140 hp), G170A	1	24.16	17,384.00	419,910.52
	b. Vibratory Roller (10 mt), SD100C	1	24.16	14,768.00	356,721.04
	c. Water Truck/Pump (16000 L)	1	6.04	19,600.00	118,359.50
Sub-total for B				P	2,138,969.70
C.	Total (A+B)				2,196,275.31
D.	Output/day	400.00	cu.m./day		
Name and Specifications		Quantity	Unit	Unit Cost	Amount
E.	Materials				
Sub-total for E				P	-
F.	Direct Cost (C + E)				2,196,275.31
G.	Overhead, Contingencies and Miscellaneous		10% per D.O. 197, s. 2016		219,627.53
H.	Contractor's Profit (CP)		8% per D.O. 197, s. 2016		175,702.02
I.	Value Added Tax (VAT)		5% per D.O. 197, s. 2016		129,580.24
J.	Total Unit Cost				281.64



## DETAILED UNIT PRICE ANALYSIS

PROJECT NAME: Road Widening and Construction of Four (4) Lanes Concreting Road Zamboanga City By-Pass Road (Culianan-Patalon Section) Zamboanga City

Item No./Description: 105(1)a Subgrade Preparation

Unit of Measurement: sq.m.

Output per hour: 300.00

Quantity: 15,997.00

*Variable Width*

Designation		No. of Persons	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Const. Foreman	1	6.67	611.92	4,078.70
	b. Unskilled Labor	2	6.67	342.24	4,562.34
Sub-total for A					P 8,641.05
Name and Capacity		No. of Equipment	No. of Days	Daily Rate	Amount
B.	Equipment, (2014 ACEL Rates)				
	a. Motorized Road Grader (140 hp), G710A	1	6.67	17,384.00	115,871.60
	b. Vibratory Roller (10 mt), SD100DC	1	6.67	14,768.00	98,434.87
	c. Water Truck/Pump (16000 L)	1	1.67	19,600.00	32,660.54
Sub-total for B					P 246,967.02
C.	Total (A+B)				255,608.06
D.	Output/day	2,400.00	sq.m./day		
Name and Specifications		Quantity	Unit	Unit Cost	Amount
E.	Materials				
Sub-total for E					P -
F.	Direct Cost (C + E)				255,608.06
G.	Overhead, Contingencies and Miscellaneous		10% per D.O. 197, s. 2016		25,560.81
H.	Contractor's Profit (CP)		8% per D.O. 197, s. 2016		20,448.65
I.	Value Added Tax (VAT)		5% per D.O. 197, s. 2016		15,080.88
J.	Total Unit Cost				19.80

## DETAILED UNIT PRICE ANALYSIS

PROJECT NAME: Road Widening and Construction of Four (4) Lanes Concreting Road Zamboanga City By-Pass Road (Culianan-Patalon Section) Zamboanga City

Item No./Description: 200(1) Aggregate Subbase Course

Unit of Measurement: cu.m.

Output per hour: 50.00

Quantity: 9,602.00

**0.30 m. thk. (min.), Compacted Volume**

Designation		No. of Persons	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Const. Foreman	1	24.01	611.92	14,689.14
	b. Unskilled Labor	2	24.01	342.24	16,430.94
Sub-total for A					P 31,120.08
Name and Capacity		No. of Equipment	No. of Days	Daily Rate	Amount
B.	Equipment, (2014 ACEL Rates)				
	a. Motorized Road Grader (140 hp), G710A	1	24.01	17,384.00	417,302.92
	b. Vibratory Roller (10 mt), SD100DC	1	24.01	14,768.00	354,505.84
	c. Water Truck/Pump (16000 L)	1	6.00	19,600.00	117,624.50
Sub-total for B					P 889,433.26
C.	Total (A+B)				920,553.34
D.	Output/day	400.00	cu.m./day		
Name and Specifications		Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Aggregate Subbase Course (w/ 15% Shrinkage Factor)	11,042.30	cu.m.	981.75	10,840,778.03
Sub-total for E					P 10,840,778.03
F.	Direct Cost (C + E)				11,761,331.37
G.	Overhead, Contingencies and Miscellaneous		10% per D.O. 197, s. 2016		1,176,133.14
H.	Contractor's Profit (CP)		8% per D.O. 197, s. 2016		940,906.51
I.	Value Added Tax (VAT)		5% per D.O. 197, s. 2016		693,918.55
J.	Total Unit Cost				1,517.63

## DETAILED UNIT PRICE ANALYSIS

PROJECT NAME: Road Widening and Construction of Four (4) Lanes Concreting Road Zamboanga City By-Pass Road (Culianan-Patalon Section) Zamboanga City

Item No./Description: 300(1) Gravel Surface Course

Unit of Measurement: cu.m.

Output per hour: 50.00

Quantity: 869.00

0.15 m. thk. For shouldering compacted volume

Designation		No. of Persons	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Const. Foreman	1	2.17	611.92	1,329.40
	b. Unskilled Labor	2	2.17	342.24	1,487.03
Sub-total for A					P 2,816.43
Name and Capacity		No. of Equipment	No. of Days	Daily Rate	Amount
B.	Equipment, (2014 ACEL Rates)				
	a. Motorized Road Grader (140 hp), G710A	1	2.17	17,384.00	37,766.74
	b. Vibratory Roller (10 mt), SD100DC	1	2.17	14,768.00	32,083.48
	c. Water Truck/Pump (16000 L)	1	0.54	19,600.00	10,645.25
Sub-total for B					P 80,495.47
C.	Total (A+B)				83,311.90
D.	Output/day	400.00	cu.m./day		
Name and Specifications		Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Uncrushed Aggregate Surface Course (w/ 15% Shrinkage Factor)	999.35	cu.m.	1,024.68	1,024,013.96
Sub-total for E					P 1,024,013.96
F.	Direct Cost (C + E)				1,107,325.86
G.	Overhead, Contingencies and Miscellaneous		10% per D.O. 197, s. 2016		110,732.59
H.	Contractor's Profit (CP)		8% per D.O. 197, s. 2016		88,586.07
I.	Value Added Tax (VAT)		5% per D.O. 197, s. 2016		65,332.23
J.	Total Unit Cost				1,578.80

## DETAILED UNIT PRICE ANALYSIS

PROJECT NAME: Road Widening and Construction of Four (4) Lanes Concreting Road Zamboanga City By-Pass Road (Culianan-Patalon Section) Zamboanga City

Item No./Description: 311(1)e1 Portland Cement Concrete Pavement

Unit of Measurement: sq.m.

Output per hour: 57.50

Quantity: 22,907.50

**0.28 m. thk., includes widening**

Designation		No. of Persons	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Const. Foreman	1	49.80	611.92	30,472.95
	b. Skilled Labor	4	49.80	443.20	88,283.51
	c. Unskilled Labor	12	49.80	342.24	204,518.16
Sub-total for A					P 323,274.62
Name and Capacity		No. of Equipment	No. of Days	Daily Rate	Amount
B.	Equipment, (2014 ACEL Rates)				
	a. Transit Mixer (5 cu.m.)	4	49.80	10,544.00	2,100,318.96
	b. Concrete Vibrator	2	49.80	730.00	72,706.41
	c. Concrete Batch Plant (30 cu.m.)	1	49.80	14,076.00	700,969.50
	d. Payloader (1.50 cu.m.), LX80-2C	1	49.80	13,864.00	690,412.13
	e. Concrete Screeder (5.5 hp)	1	49.80	4,360.00	217,123.26
	f. Water truck/Pump (16000 L)	1	49.80	19,600.00	976,058.70
	g. Concrete Saw (7.5 hp), 14" Blade Ø	1	49.80	261.04	12,999.51
	h. Bar Cutter, Single Phase	1	4.98	1,758.00	8,754.65
	Minor Tools 5% of Labor				16,163.73
Sub-total for B					P 4,795,506.84
C.	Total (A+B)				5,118,781.47
D.	Output/day	460.00	sq.m./day		
Name and Specifications		Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Reinforcing Steel Bar	11,453.75	kg.	38.00	435,242.50
	b. Curing Compound	6,643.18	L	35.00	232,511.13
	c. Asphalt Sealant	3,894.28	L	100.00	389,427.50
	d. Steel Forms (Rental)	10,537.45	m	52.00	547,947.40
	e. Sand	3,527.76	cu.m.	1,202.75	4,243,007.33
	f. Gravel	6,414.10	cu.m.	1,202.75	7,714,558.78
	g. Cement	60,933.95	bag	270.00	16,452,166.50
	h. Concrete Saw (Diamond Blade 14" Ø)	3.44	pc.	8,000.00	27,489.00
	i. Pipe Sleeve, 2" Ø	178.68	m.	101.67	18,165.65
	j. Grease/Tar	178.68	L	112.50	20,101.33
Sub-total for E					P 30,080,617.11
F.	Direct Cost (C + E)				35,199,398.57
G.	Overhead, Contingencies and Miscellaneous		10% per D.O. 197, s. 2016		3,519,939.86
H.	Contractor's Profit (CP)		8% per D.O. 197, s. 2016		2,815,951.89
I.	Value Added Tax (VAT)		5% per D.O. 197, s. 2016		2,076,764.52
J.	Total Unit Cost				1,903.83

## DETAILED UNIT PRICE ANALYSIS

PROJECT NAME: Road Widening and Construction of Four (4) Lanes Concreting Road Zamboanga City By-Pass Road (Culianan-Patalon Section) Zamboanga City

Item No./Description: 404(1)a Reinforcing Steel Bar, Grade 40  
 Unit of Measurement: kg.

Output per hour: 180.00

Quantity: 3,642.50

*For Lined Canal*

Designation		No. of Persons	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Const. Foreman	1	2.53	611.92	1,547.86
	b. Skilled Labor	2	2.53	443.20	2,242.16
	c. Unskilled Labor	8	2.53	342.24	6,925.61
Sub-total for A					P 10,715.63
Name and Capacity		No. of Equipment	No. of Days	Daily Rate	Amount
B.	Equipment, (2014 ACEL Rates)				
	a. Bar Cutter	1	1.26	1,758.00	2,223.44
	b. Bar Bender	1	1.26	2,812.00	3,556.50
	c. Cargo Truck (9-10 mt)	1	0.38	9,696.00	3,678.93
Sub-total for B					P 9,458.86
C.	Total (A+B)				20,174.49
D.	Output/day	1,440.00	kg./day		
Name and Specifications		Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Tie Wire (2% of RSB)	76.49	kg.	78.00	5,966.42
	b. Reinforcing Steel Bar, Grade 40 (w/ 5% Wastage)	3,824.63	kg.	38.00	145,335.75
Sub-total for E					P 151,302.17
F.	Direct Cost (C + E)				171,476.66
G.	Overhead, Contingencies and Miscellaneous		10% per D.O. 197, s. 2016		17,147.67
H.	Contractor's Profit (CP)		8% per D.O. 197, s. 2016		13,718.13
I.	Value Added Tax (VAT)		5% per D.O. 197, s. 2016		10,117.12
J.	Total Unit Cost				58.33

## DETAILED UNIT PRICE ANALYSIS

PROJECT NAME: Road Widening and Construction of Four (4) Lanes Concreting Road Zamboanga City By-Pass Road (Culianan-Patalon Section) Zamboanga City

Item No./Description: 404(1)b Reinforcing Steel Bar, Grade 60

Unit of Measurement: kg.

Output per hour: 180.00

Quantity: 14,507.00

**For RCBC**

Designation		No. of Persons	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Const. Foreman	1	10.07	611.92	6,164.67
	b. Skilled Labor	2	10.07	443.20	8,929.86
	c. Unskilled Labor	8	10.07	342.24	27,582.64
Sub-total for A					P 42,677.18
Name and Capacity		No. of Equipment	No. of Days	Daily Rate	Amount
B.	Equipment, (2014 ACEL Rates)				
	a. Bar Cutter	1	5.04	1,758.00	8,855.31
	b. Bar Bender	1	5.04	2,812.00	14,164.47
	c. Cargo Truck (9-10 mt)	1	1.51	9,696.00	14,652.07
Sub-total for B					P 37,671.86
C.	Total (A+B)				80,349.03
D.	Output/day	1,440.00	kg./day		
Name and Specifications		Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Tie Wire (2% of RSB)	304.65	kg.	78.00	23,762.47
	b. Reinforcing Steel Bar, Grade 60 (w/ 5% Wastage)	15,232.35	kg.	40.00	609,294.00
Sub-total for E					P 633,056.47
F.	Direct Cost (C + E)				713,405.50
G.	Overhead, Contingencies and Miscellaneous		10% per D.O. 197, s. 2016		71,340.55
H.	Contractor's Profit (CP)		8% per D.O. 197, s. 2016		57,072.44
I.	Value Added Tax (VAT)		5% per D.O. 197, s. 2016		42,090.92
J.	Total Unit Cost				60.93

## DETAILED UNIT PRICE ANALYSIS

PROJECT NAME: Road Widening and Construction of Four (4) Lanes Concreting Road Zamboanga City By-Pass Road (Culianan-Patalon Section) Zamboanga City

Item No./Description: 405(1)a3 Structural Concrete, Class A

Unit of Measurement: cu.m.

Output per hour: 1.40

Quantity: 247.00

*For Lined Canal and RCBC*

Designation		No. of Persons	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Const. Foreman	1	22.05	611.92	13,495.02
	c. Skilled Labor	4	22.05	443.20	39,096.57
	d. Unskilled Labor	8	22.05	342.24	60,380.91
	Installation/Removal of Formwork:				
	b. Skilled Labor	4	22.05	443.20	39,096.57
	c. Unskilled Labor	8	22.05	342.24	60,380.91
Sub-total for A					P 212,449.99
Name and Capacity		No. of Equipment	No. of Days	Daily Rate	Amount
B.	Equipment, (2014 ACEL Rates)				
	a. One Bagger Mixer	1	22.05	1,376.00	30,345.71
	b. Concrete Vibrator	1	22.05	730.00	16,099.11
	c. Water Truck/Pump (16000 L)	1	2.21	19,600.00	43,225.00
	Minor Tools 5% of Labor Cost				10,622.50
Sub-total for B					P 100,292.32
C.	Total (A+B)				312,742.31
D.	Output/day	11.20	cu.m./day		
Name and Specifications		Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Lumber, Good - 4 uses	17,290.00	bd.ft.	15.00	64,837.50
	b. Marine Plywood (1/2" x 4' x 8') - 4 uses	395.20	pc.	880.00	86,944.00
	c. Assorted CWN (1 kg/100 bd.ft. of Lumber	172.90	kg.	50.00	8,645.00
	d. Cement	2,346.50	bag	270.00	633,555.00
	e. Sand	123.50	cu.m.	1,202.75	148,539.63
	f. Gravel	247.00	cu.m.	1,202.75	297,079.25
Sub-total for E					P 1,239,600.38
F.	Direct Cost (C + E)				1,552,342.69
G.	Overhead, Contingencies and Miscellaneous		10% per D.O. 197, s. 2016		155,234.27
H.	Contractor's Profit (CP)		8% per D.O. 197, s. 2016		124,187.42
I.	Value Added Tax (VAT)		5% per D.O. 197, s. 2016		91,588.22
J.	Total Unit Cost				7,786.85

## DETAILED UNIT PRICE ANALYSIS

PROJECT NAME: Road Widening and Construction of Four (4) Lanes Concreting Road Zamboanga City By-Pass Road (Culianan-Patalon Section) Zamboanga City

Item No./Description: 407(8) Concrete Structures (Lean Concrete)

Unit of Measurement: cu.m.

Output per hour: 1.40

Quantity: 10.50

**For RCBC**

Designation		No. of Persons	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Const. Foreman	1	0.94	611.92	573.68
	c. Skilled Labor	1	0.94	443.20	415.50
	d. Unskilled Labor	2	0.94	342.24	641.70
Sub-total for A				P	1,630.88
Name and Capacity		No. of Equipment	No. of Days	Daily Rate	Amount
B.	Equipment, (2014 ACEL Rates)				
	a. One Bagger Mixer	1	0.94	1,376.00	1,290.00
	b. Concrete Vibrator	1	0.94	730.00	684.38
	c. Water Truck/Pump (16000 L)	1	0.09	19,600.00	1,837.50
Sub-total for B				P	3,811.88
C.	Total (A+B)				5,442.75
D.	Output/day	11.20	cu.m./day		
Name and Specifications		Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Cement	99.75	bag	270.00	6,733.13
	b. Sand	5.25	cu.m.	1,202.75	1,578.61
	c. Gravel	10.50	cu.m.	1,202.75	12,628.88
Sub-total for E				P	20,940.61
F.	Direct Cost (C + E)				26,383.36
G.	Overhead, Contingencies and Miscellaneous		10% per D.O. 197, s. 2016		2,638.34
H.	Contractor's Profit (CP)		8% per D.O. 197, s. 2016		2,110.67
I.	Value Added Tax (VAT)		5% per D.O. 197, s. 2016		1,556.62
J.	Total Unit Cost				3,113.24



## DETAILED UNIT PRICE ANALYSIS

PROJECT NAME: Road Widening and Construction of Four (4) Lanes Concreting Road Zamboanga City By-Pass Road (Culianan-Patalon Section) Zamboanga City

Item No./Description: 500(1)a3 Pipe Culvert and Storm Drain

Unit of Measurement: In.m.

Output per hour: 1.00

Quantity: 100.00

*Class IV, Wall B, AASHTO M-170-85*

Designation		No. of Persons	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Const. Foreman	1	7.13	611.92	4,359.93
	b. Skilled Labor	2	7.13	443.20	6,315.60
	c. Unskilled Labor	4	7.13	342.24	9,753.84
Sub-total for A					P 20,429.37
Name and Capacity		No. of Equipment	No. of Days	Daily Rate	Amount
B.	Equipment, (2014 ACEL Rates)				
	a. Backhoe	1	3.63	12,296.00	44,573.00
	b. Plate Compactor	1	3.63	984.00	3,567.00
	Minor Tools 10% of Labor Cost				2,042.94
Sub-total for B					P 50,182.94
C.	Total (A+B)				70,612.31
D.	Output/day	8.00	cu.m./day		
Name and Specifications		Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Cement	108.00	bag	270.00	29,160.00
	b. Sand	6.10	cu.m.	1,202.75	7,336.78
	c. Sand Bedding/Selected Sandy Soil	12.80	cu.m.	1,202.75	15,395.20
	d. RC Pipes (910mm dia)	100.00	pc.	1,665.00	166,500.00
Sub-total for E					P 218,391.98
F.	Direct Cost (C + E)				289,004.28
G.	Overhead, Contingencies and Miscellaneous		10% per D.O. 197, s. 2016		28,900.43
H.	Contractor's Profit (CP)		8% per D.O. 197, s. 2016		23,120.34
I.	Value Added Tax (VAT)		5% per D.O. 197, s. 2016		17,051.25
J.	Total Unit Cost				3,580.76

## DETAILED UNIT PRICE ANALYSIS

PROJECT NAME: Road Widening and Construction of Four (4) Lanes Concreting Road Zamboanga City By-Pass Road (Culianan-Patalon Section) Zamboanga City

Item No./Description: 505(2)a Grouted Riprap, Class A

Unit of Measurement: cu.m.

Output per hour: 5.00

Quantity: 877.00

*For Headwall apron and Slope protection*

Designation		No. of Persons	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Const. Foreman	1	21.93	611.92	13,416.35
	b. Leadman	4	21.93	561.36	49,231.27
	c. Skilled Labor	8	21.93	443.20	77,737.28
	d. Unskilled Labor	32	21.93	342.24	240,115.58
	<b>use quadruple gang of labor and equipment</b>				
Sub-total for A					P 380,500.48
Name and Capacity		No. of Equipment	No. of Days	Daily Rate	Amount
B.	Equipment, (2014 ACEL Rates)				
	a. One Bagger Mixer	4	21.93	1,376.00	120,675.20
	b. Water Truck/Pump (16000 L)	4	1.10	19,600.00	85,946.00
	Minor Tools 5% of Labor				19,025.02
Sub-total for B					P 225,646.22
C.	Total (A+B)				606,146.71
D.	Output/day	40.00	cu.m./day		
Name and Specifications		Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Cement	2,631.00	bag	270.00	710,370.00
	b. Sand	219.25	cu.m.	1,202.75	263,702.94
	c. Gravel	13.16	cu.m.	1,202.75	15,822.18
	d. Weep Holes (PVC)	263.10	m.	101.67	26,748.50
	e. Filter Cloth	13.16	sq.m.	160.00	2,104.80
	f. Boulders (15 - 25 kg.)	920.85	cu.m.	1,401.75	1,290,801.49
	Miscellaneous 1% of Materials Cost				23,095.50
Sub-total for E					P 2,332,645.40
F.	Direct Cost (C + E)				2,938,792.11
G.	Overhead, Contingencies and Miscellaneous		10% per D.O. 197, s. 2016		293,879.21
H.	Contractor's Profit (CP)		8% per D.O. 197, s. 2016		235,103.37
I.	Value Added Tax (VAT)		5% per D.O. 197, s. 2016		173,388.73
J.	Total Unit Cost				4,151.84

## DETAILED UNIT PRICE ANALYSIS

PROJECT NAME: Road Widening and Construction of Four (4) Lanes Concreting Road Zamboanga City By-Pass Road (Culianan-Patalon Section) Zamboanga City

Item No./Description: 506(1) Stone Masonry  
 Unit of Measurement: cu.m.

Output per hour: 1.60

Quantity: 82.00

*For Headwall and Wingwall*

Designation		No. of Persons	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Const. Foreman	1	6.41	611.92	3,920.11
	b. Skilled Labor	2	6.41	443.20	5,678.50
	c. Unskilled Labor	8	6.41	342.24	17,539.80
Sub-total for A					P 27,138.41
Name and Capacity		No. of Equipment	No. of Days	Daily Rate	Amount
B.	Equipment, (2014 ACEL Rates)				
	a. One Bagger Mixer	1	6.41	1,376.00	8,815.00
	b. Water Truck/Pump (16000 L)	1	0.32	19,600.00	6,278.13
	c. Backhoe (Wheel Type 0.28 cu.m.)	1	0.64	12,296.00	7,877.13
	Minor Tools 10% of Labor				2,713.84
Sub-total for B					P 25,684.09
C.	Total (A+B)				52,822.50
D.	Output/day	12.80	cu.m./day		
Name and Specifications		Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Cement	451.00	bag	270.00	121,770.00
	b. Sand	24.60	cu.m.	1,202.75	29,587.65
	c. Gravel Fill	1.64	cu.m.	1,202.75	1,972.51
	d. Weep Holes (PVC)	24.60	m.	101.67	2,501.00
	e. Filter Cloth	1.23	sq.m.	160.00	196.80
	f. Boulders (15 - 25 kg.)	86.10	cu.m.	1,401.75	120,690.68
	Miscellaneous 1% of Materials Cost				2,767.19
Sub-total for E					P 279,485.82
F.	Direct Cost (C + E)				332,308.33
G.	Overhead, Contingencies and Miscellaneous		10% per D.O. 197, s. 2016		33,230.83
H.	Contractor's Profit (CP)		8% per D.O. 197, s. 2016		26,584.67
I.	Value Added Tax (VAT)		5% per D.O. 197, s. 2016		19,606.19
J.	Total Unit Cost				5,021.10

## DETAILED UNIT PRICE ANALYSIS

PROJECT NAME: Road Widening and Construction of Four (4) Lanes Concreting Road Zamboanga City By-Pass Road (Culianan-Patalon Section) Zamboanga City

Item No./Description: 612(1) Reflectorized Thermoplastic Pavement Markings White

Unit of Measurement: sq.m.

Output per hour: 25.00

Quantity: 906.00

*For Center Lines & Edge Lines*

Designation		No. of Persons	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Const. Foreman	1	4.53	611.92	2,772.00
	b. Skilled Labor	2	4.53	443.20	4,015.39
	c. Unskilled Labor	6	4.53	342.24	9,302.08
Sub-total for A					P 16,089.47
Name and Capacity		No. of Equipment	No. of Days	Daily Rate	Amount
B.	Equipment, (2014 ACEL Rates)				
	a. Cargo Truck/Delivery Truck (2-5 mt)	1	4.53	6,264.00	28,375.92
	b. Applicator Machine	1	4.53	750.00	3,397.50
	c. Kneading Machine	1	4.53	1,500.00	6,795.00
	Minor Tools 10% of Labor				1,608.95
Sub-total for B					P 40,177.37
C.	Total (A+B)				56,266.84
D.	Output/day	200.00	sq.m./day		
Name and Specifications		Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Thermoplastic Paint (White)	294.45	bag	1,585.00	466,703.25
	b. Glass Beads	29.90	bag	2,500.00	74,745.00
	c. Primer	108.72	L	160.00	17,395.20
	d. LPG (50 kg)	3.62	cyl.	3,450.00	12,502.80
	e. LPG (12 kg)	1.81	cyl.	828.00	1,500.34
	f. Calsumine	113.25	kg.	30.00	3,397.50
	Miscellaneous 5% of Materials Cost				28,812.20
Sub-total for E					P 605,056.29
F.	Direct Cost (C + E)				661,323.13
G.	Overhead, Contingencies and Miscellaneous		10% per D.O. 197, s. 2016		66,132.31
H.	Contractor's Profit (CP)		8% per D.O. 197, s. 2016		52,905.85
I.	Value Added Tax (VAT)		5% per D.O. 197, s. 2016		39,018.06
J.	Total Unit Cost				904.39

## DETAILED UNIT PRICE ANALYSIS

PROJECT NAME: Road Widening and Construction of Four (4) Lanes Concreting Road Zamboanga City By-Pass Road (Culianan-Patalon Section) Zamboanga City

Item No./Description: 622(1)a Coconet Bio-Engineering Solutions (Coco-net)  
 Unit of Measurement: sq.m.

Output per hour: 50.00

Quantity: 1,882.00

*(CGN 400) For Slope Protection (Cut Slope)*

Designation		No. of Persons	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Const. Foreman	1	4.71	611.92	2,879.08
	b. Unskilled Labor	8	4.71	342.24	12,881.91
Sub-total for A				P	15,761.00
Name and Capacity		No. of Equipment	No. of Days	Daily Rate	Amount
B.	Equipment, (2014 ACEL Rates)				
	a. Water Truck/Pump (16000L)	1	1.18	19,600.00	23,054.50
	Minor Tools 10% of Labor				1,576.10
Sub-total for B				P	24,630.60
C.	Total (A+B)				40,391.60
D.	Output/day	400.00	sq.m./day		
Name and Specifications		Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Erosion Control Net CGN 400 with 5% wastage factor	1,976.10	sq.m.	110.00	217,371.00
Sub-total for E				P	217,371.00
F.	Direct Cost (C + E)				257,762.60
G.	Overhead, Contingencies and Miscellaneous		10% per D.O. 197, s. 2016		25,776.26
H.	Contractor's Profit (CP)		8% per D.O. 197, s. 2016		20,621.01
I.	Value Added Tax (VAT)		5% per D.O. 197, s. 2016		15,207.99
J.	Total Unit Cost				169.70

## DETAILED UNIT PRICE ANALYSIS

PROJECT NAME: Road Widening and Construction of Four (4) Lanes Concreting Road Zamboanga City By-Pass Road (Culianan-Patalon Section) Zamboanga City

Item No./Description: 622(1)b Coconet Bio-Engineering Solutions (Coco-net)  
 Unit of Measurement: sq.m.

Output per hour: 50.00

Quantity: 3,207.00

*(CGN 700) For Slope Protection (Fill Slope)*

Designation		No. of Persons	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Const. Foreman	1	8.02	611.92	4,906.07
	b. Unskilled Labor	8	8.02	342.24	21,951.27
Sub-total for A					P 26,857.34
Name and Capacity		No. of Equipment	No. of Days	Daily Rate	Amount
B.	Equipment, (2014 ACEL Rates)				
	a. Water Truck/Pump (16000L) Minor Tools 10% of Labor	1	2.00	19,600.00	39,285.75 2,685.73
Sub-total for B					P 41,971.48
C.	Total (A+B)				68,828.83
D.	Output/day	400.00	sq.m./day		
Name and Specifications		Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Erosion Control Net CGN 700 with 5% wastage factor	3,367.35	sq.m.	150.00	505,102.50
Sub-total for E					P 505,102.50
F.	Direct Cost (C + E)				573,931.33
G.	Overhead, Contingencies and Miscellaneous		10% per D.O. 197, s. 2016		57,393.13
H.	Contractor's Profit (CP)		8% per D.O. 197, s. 2016		45,914.51
I.	Value Added Tax (VAT)		5% per D.O. 197, s. 2016		33,861.95
J.	Total Unit Cost				221.73

## DETAILED UNIT PRICE ANALYSIS

PROJECT NAME: Road Widening and Construction of Four (4) Lanes Concreting Road Zamboanga City By-Pass Road (Culianan-Patalon Section) Zamboanga City

Item No./Description: 622(2)b Coco-logs/Fascine (CN200)

Unit of Measurement: In.m.

Output per hour: 15.00

Quantity: 720.00

*For Slope Protection*

Designation		No. of Persons	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Const. Foreman	1	6.00	611.92	3,671.52
	b. Unskilled Labor	8	6.00	342.24	16,427.52
Sub-total for A				P	20,099.04
Name and Capacity		No. of Equipment	No. of Days	Daily Rate	Amount
B.	Equipment, (2014 ACEL Rates)				
	Minor Tools 10% of Labor				2,009.90
Sub-total for B				P	2,009.90
C.	Total (A+B)				22,108.94
D.	Output/day	120.00	In.m./day		
Name and Specifications		Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Coco Fiber Roll (CGR 200)	756.00	sq.m.	410.00	309,960.00
Sub-total for E				P	309,960.00
F.	Direct Cost (C + E)				332,068.94
G.	Overhead, Contingencies and Miscellaneous		10% per D.O. 197, s. 2016		33,206.89
H.	Contractor's Profit (CP)		8% per D.O. 197, s. 2016		26,565.52
I.	Value Added Tax (VAT)		5% per D.O. 197, s. 2016		19,592.07
J.	Total Unit Cost				571.44

## DETAILED UNIT PRICE ANALYSIS

PROJECT NAME: Road Widening and Construction of Four (4) Lanes Concreting Road Zamboanga City By-Pass Road (Culianan-Patalon Section) Zamboanga City

Item No./Description: 622(3)b Vegetation (Vetiver Grass System)  
 Unit of Measurement: sq.m.

Output per hour: 105.00

Quantity: 5,089.00

*For Slope Protection*

Designation		No. of Persons	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Const. Foreman	1	6.06	611.92	3,707.22
	b. Leadman	3	6.06	561.36	10,202.72
	c. Unskilled Labor	24	6.06	342.24	49,761.70
	<b>use triple gang of labor and equipment</b>				
Sub-total for A				P	63,671.63
Name and Capacity		No. of Equipment	No. of Days	Daily Rate	Amount
B.	Equipment, (2014 ACEL Rates)				
	b. Water Truck/Pump (16000 L)	3	3.03	19,600.00	178,115.00
	Minor Tools 10% of Labor				6,367.16
Sub-total for B				P	6,367.16
C.	Total (A+B)				70,038.79
D.	Output/day	840.00	sq.m./day		
Name and Specifications		Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Vetiver Grass System	5,343.45	sq.m.	102.00	545,031.90
Sub-total for E				P	545,031.90
F.	Direct Cost (C + E)				615,070.69
G.	Overhead, Contingencies and Miscellaneous		10% per D.O. 197, s. 2016		61,507.07
H.	Contractor's Profit (CP)		8% per D.O. 197, s. 2016		49,205.66
I.	Value Added Tax (VAT)		5% per D.O. 197, s. 2016		36,289.17
J.	Total Unit Cost				149.75



## DETAILED UNIT PRICE ANALYSIS

PROJECT NAME: Road Widening and Construction of Four (4) Lanes Concreting Road Zamboanga City By-Pass Road (Culianan-Patalon Section) Zamboanga City

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

Unit of Measurement: L.S.

Output per hour:

Quantity: 1.00

*For Government Field Office (7.00 x 9.00m)*

Designation		No. of Persons	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Const. Foreman	1	8.00	611.92	4,895.36
	b. Mason	3	8.00	443.20	10,636.80
	c. Carpenter	3	8.00	443.20	10,636.80
	d. Laborer	6	8.00	342.24	16,427.52
Sub-total for A					P 42,596.48
Name and Capacity		No. of Equipment	No. of Days	Daily Rate	Amount
B.	Equipment, (2014 ACEL Rates)				
	a. One Bagger Mixer	1	6.00	-	-
	b. Water Truck	1	1.00	-	-
	Minor Tools 10% of Labor				4,259.65
Sub-total for B					P 4,259.65
C.	Total (A+B)				46,856.13
D.	Output/day	-	L.S./day		
Name and Specifications		Quantity	Unit	Unit Cost	Amount
E.	Materials				
	<b>I. Earthworks (Excavation, Embankment, Bedding)</b>				
	a. Gravel Bedding	3.50	cu.m.	1,202.75	4,209.63
	b. Selected Fill	10.00	cu.m.	763.75	7,637.50
	c. Soil Poisoning	2.50	L	1,900.00	4,750.00
	<b>II. Concrete Works (Footing, Columns, Beams &amp; Slab on Grade)</b>				
	a. Portland Cement	90.00	bag	270.00	24,300.00
	b. Crushed Gravel	21.00	cu.m.	1,202.75	25,257.75
	c. Washed Sand	18.00	cu.m.	1,202.75	21,649.50
	<b>III. Reinforcing Bars(Footing Columns, Beams, &amp; Slabs on Grade)</b>				
	a. Deformed Round Bar, Grade 40	435.00	kg.	38.00	16,530.00
	b. No. 16 GI Tie Wire	20.00	kg.	78.00	1,560.00
	<b>IV. Formworks (Columns &amp; Beams)</b>				
	a. Coco Lumber	400.00	bd.ft.	15.00	6,000.00
	b. Ordinary Plywood, 1/4"x4"x8'	18.00	pc.	385.00	6,930.00
	c. CWN, Assorted	5.00	kg.	50.00	250.00
	<b>V. Masonry Works (masonry walls &amp; plastering)</b>				
	a. CHB 6" thk	650.00	pc.	16.00	10,400.00
	b. Portland Cement	45.00	bag	270.00	12,150.00
	c. Washed Sand	8.00	cu.m.	1,202.75	9,622.00
	d. 10mm dia. X 6m RSB	65.00	kg.	38.00	2,470.00
	e. No. 16 GI Tie Wire	2.50	kg.	78.00	195.00
	<b>VI. Doors and Windows</b>				
	a. D-1, Hollow Core Flush Type swing door, complete w/ accessories, 0.90mx2.1m	2.00	set	1,765.26	3,530.52
	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					P 162,985.90
Sub-total for E (I + II + III)					P 311,886.83
F.	Direct Cost (C + E)				358,742.95
G.	Overhead, Contingencies and Miscellaneous		10% per D.O. 197, s. 2016		35,874.30
H.	Contractor's Profit (CP)		8% per D.O. 197, s. 2016		28,699.44
I.	Value Added Tax (VAT)		5% per D.O. 197, s. 2016		21,165.83
J.	Total Unit Cost				444,482.52

## DETAILED UNIT PRICE ANALYSIS

PROJECT NAME: Road Widening and Construction of Four (4) Lanes Concreting Road Zamboanga City By-Pass Road (Culianan-Patalon Section) Zamboanga City

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

Unit of Measurement: L.S.

Output per hour:

Quantity: 1.00

*For Government Field Office*

Designation		No. of Persons	No. of Days	Daily Rate	Amount
A.	Labor				
Sub-total for A				P	-
Name and Capacity		No. of Equipment	No. of Days	Daily Rate	Amount
B.	Equipment, (2014 ACEL Rates)				-
Sub-total for B				P	-
C.	Total (A+B)				-
D.	Output/day	-	L.S./day		
Name and Specifications		Quantity	Unit	Unit Cost	Amount
E.	Materials				
	<b>VII. Steel Works</b>				
	a. 65 x 65 x 6mm. L	350.00	kg.	48.00	16,800.00
	b. 50 x 50 x 6mm. L	250.00	kg.	48.00	12,000.00
	c. 50 x 50 x 4mm. L	100.00	kg.	48.00	4,800.00
	d. Purlins C- 150 x 50 x 3mm.	18.00	kg.	48.00	864.00
	e. 16mm dia. Cross bracing	35.00	kg.	38.00	1,330.00
	f. 16mm dia. Turn buckle	20.00	pc.	118.00	2,360.00
	g. 12mm thk base plate	25.00	kg.	47.00	1,175.00
	h. 10mm thk batten plate	15.00	kg	47.00	705.00
	i. 10mm dia. Sag rod	10.00	kg.	38.00	380.00
	j. 20mm dia. X 350 mm anchor bolts	10.00	pc.	36.00	360.00
	k. Welding Rod	15.00	kg.	149.00	2,235.00
	l. Primer, Zinc Cromate	5.00	gal.	531.00	2,655.00
	<b>VIII Roofing Works</b>				
	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 1 1/2"	1,000.00	pc.	1.25	1,250.00
	e. Roof Sealant	2.00	L	242.84	485.68
	<b>IX. Carpentry Works</b>				
	a. Rough Lumber, sun dried tanguile	500.00	bd.ft.	37.00	18,500.00
	b. Plywood, ordinary 1/4" x 4' x 8'	30.00	pc.	350.00	10,500.00
	c. Finishing Nails	5.00	kg.	90.00	450.00
	d. Common Wire Nails	10.00	kg.	50.00	500.00
	e. Wood Preservative Brown	5.00	L	398.00	1,990.00
Sub-total for E				P	104,707.68
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 and Construction of Four (4) Lanes Concreting Road Zamboanga City By-Pass Road (Culianan-Patalon Section) Zamboanga City

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

Unit of Measurement: L.S.

Output per hour:

Quantity: 1.00

*For Government Field Office*

Designation	No. of Persons	No. of Days	Daily Rate	Amount
A. Labor				
Sub-total for A				P -
Name and Capacity	No. of Equipment	No. of Days	Daily Rate	Amount
B. Equipment, (2014 ACEL Rates)				
Sub-total for B				P -
C. Total (A+B)				-
D. Output/day	-	L.S./day		
Name and Specifications	Quantity	Unit	Unit Cost	Amount
E. Materials				
<b>X. Electrical Works</b>				
a. 2 x 40w Flourescent lighting fixtures	5.00	set	1,030.00	5,150.00
b. Porcelain Ceiling Outlet w/ female socket	2.00	pc	50.00	100.00
c. Duplex 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	73.00	1,460.00
h. 15mm dia. PVC Coupling	25.00	pc	16.00	400.00
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	100.00	200.00
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	31.00	217.00
t. panel board (side main w/ braches)	2.00	set	1,627.00	3,254.00
<b>XI. Plumbing Works</b>				
a. Water Closet (include. Fitting & Accessories)	1.00	set	7,353.00	7,353.00
b. Lavatory (include fitting & Accessories)	1.00	set	6,615.00	6,615.00
c. 1/2" GI Pipe S-40	2.00	pc	321.00	642.00
d. 1/2" Water Faucet	2.00	pc	166.00	332.00
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				P 44,193.25
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 and Construction of Four (4) Lanes Concreting Road Zamboanga City By-Pass Road (Culianan-Patalon Section) Zamboanga City

Item No./Description: A.1.1(11) Provision of Furnitures/Fixtures, Equipment and Appliances for the Field Office for the Field Engineer

Unit of Measurement: L.S.

Output per hour:

Quantity: 1.00

Designation	No. of Persons	No. of Days	Daily Rate	Amount
A. Labor				
Sub-total for A				P -
Name and Capacity	No. of Equipment	No. of Days	Daily Rate	Amount
B. Equipment, (2014 ACEL Rates)				
Sub-total for B				P -
C. Total (A+B)				-
D. Output/day	-	L.S./day		
Name and Specifications	Quantity	Unit	Unit Cost	Amount
E. Materials				
<b>Office Equipment/Facilities &amp; Supplies</b>				
Electric Desk Fan	3.00	unit	1,370.00	4,110.00
Folding Beds, Good Quality	6.00	each	2,700.00	16,200.00
pillows w/ pillow cases, fitted sheets and blanket	6.00	each	5,000.00	30,000.00
Double burner gas stove (Gasul)	1.00	unit	3,700.00	3,700.00
10 cups Rice Cooker	1.00	unit	2,500.00	2,500.00
Aluminum Cookware	1.00	set	3,500.00	3,500.00
Plate, Glass, Spoon and fork	1.00	dozen	2,000.00	2,000.00
6 seater dining table	1.00	each	2,800.00	2,800.00
Monoblock w/ Backrest chair	2.00	dozen	2,500.00	5,000.00
Plastic Pail & Basin	2.00	pc.	250.00	500.00
White Board	1.00	Unit	3,000.00	3,000.00
Bond Paper (Long)	20.00	ream	300.00	6,000.00
Bond Paper (Short)	20.00	ream	270.00	5,400.00
Yellow Pad	6.00	pad	35.00	210.00
White Board Marker	10.00	pc.	75.00	750.00
Sign Pen (assorted color)	2.00	dozen	580.00	1,160.00
Ballpen (assorted color)	4.00	box	180.00	720.00
Mechanical Pencil	6.00	unit	350.00	2,100.00
Pencil Lead, No. 5	4.00	box	145.00	580.00
Puncher	1.00	unit	250.00	250.00
Staple Pad w/ wire	2.00	unit	275.00	550.00
Cutter Blade	2.00	box	240.00	480.00
Scotch Tape	10.00	roll	45.00	450.00
Brown Envelop	7.00	dozen	125.00	875.00
Folder, Long	7.00	dozen	85.00	595.00
Folder, Short	7.00	dozen	70.00	490.00
Data File Folder	12.00	pc.	85.00	1,020.00
Digital Camera	1.00	set	9,089.41	9,089.41
Cellphone	1.00	set	10,000.00	10,000.00
<b>Lighting/Water Fixtures</b>				
a. Electrical Bill	9.01	mos.	3,000.00	27,040.00
b. Water Bill	9.01	mos.	1,500.00	13,520.00
c. LPG (11 kg)	9.01	mos.	1,000.00	9,013.33
Sub-total for E				P 163,602.74
F. Direct Cost (C + E)				163,602.74
G. Overhead, Contingencies and Miscellaneous		per D.O. 197, s. 2016		-
H. Contractor's Profit (CP)		8% per D.O. 197, s. 2016		13,088.22
I. Value Added Tax (VAT)		5% per D.O. 197, s. 2016		8,834.55
J. Total Unit Cost				185,525.51

## DETAILED UNIT PRICE ANALYSIS

PROJECT NAME: Road Widening and Construction of Four (4) Lanes Concreting Road Zamboanga City By-Pass Road (Culianan-Patalon Section) Zamboanga City

Item No./Description: B.5 Project Billboard/Signboard

Unit of Measurement: each

Output per hour:

Quantity: 2.00

*Per D.O. 141, s. 2016*

Designation		No. of Persons	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Const. Foreman	1	2.00	611.92	1,223.84
	b. Skilled Labor	1	2.00	443.20	886.40
	c. Unskilled Labor	2	2.00	342.24	1,368.96
Sub-total for A				P	3,479.20
Name and Capacity		No. of Equipment	No. of Days	Daily Rate	Amount
B.	Equipment, (2014 ACEL Rates)				
Sub-total for B				P	-
C.	Total (A+B)				3,479.20
D.	Output/day	-	each/day		
Name and Specifications		Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Ordinary Plywood 1/2" thk. x 4' x 8'	2.00	pc.	690.00	1,380.00
	b. Tarpaulin (4' x 8')	2.00	pc.	800.00	1,600.00
	c. Assorted Lumber	100.00	bd.ft.	37.00	3,700.00
	d. Assorted CW Nails	2.00	kg.	50.00	100.00
Sub-total for E				P	6,780.00
F.	Direct Cost (C + E)				10,259.20
G.	Overhead, Contingencies and Miscellaneous		10% per D.O. 197, s. 2016		1,025.92
H.	Contractor's Profit (CP)		8% per D.O. 197, s. 2016		820.74
I.	Value Added Tax (VAT)		5% per D.O. 197, s. 2016		605.29
J.	Total Unit Cost				6,355.57

## DETAILED UNIT PRICE ANALYSIS

PROJECT NAME: Road Widening and Construction of Four (4) Lanes Concreting Road Zamboanga City By-Pass Road (Culianan-Patalon Section) Zamboanga City

Item No./Description: B.7 Occupation Safety and Health Program

Unit of Measurement: month

Output per hour:

Quantity: 9.00

Designation		No. of Persons	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Safety Practioner	1	135.00	611.92	82,609.20
	b. First Aider	1	270.00	443.20	119,664.00
	c. Flagman ( 2 per shift )	6	270.00	342.24	554,428.80
Sub-total for A					P 756,702.00
Name and Capacity		No. of Equipment	No. of Days	Daily Rate	Amount
B.	Equipment, (2014 ACEL Rates)				
	a. Warning Signs and Barricades				30,000.00
Sub-total for B					P 30,000.00
C.	Total (A+B)				786,702.00
D.	Output/day	-	L.S./day		
Name and Specifications		Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Rubber Boots (Long w/ steel toe, Black)	24.00	pair	400.00	9,600.00
	b. Working Gloves (Maong Material)	24.00	pair	15.00	360.00
	c. Rain Coats (Reinforced, Hip Lenth)	18.00	pc.	100.00	1,800.00
	d. Safety Hats	24.00	pc,	600.00	14,400.00
Sub-total for E					P 26,160.00
F.	Direct Cost (C + E)				812,862.00
G.	Overhead, Contingencies and Miscellaneous		per D.O. 197, s. 2016		-
H.	Contractor's Profit (CP)		8% per D.O. 197, s. 2016		65,028.96
I.	Value Added Tax (VAT)		5% per D.O. 197, s. 2016		43,894.55
J.	Total Unit Cost				102,420.61

## DETAILED UNIT PRICE ANALYSIS

PROJECT NAME: Road Widening and Construction of Four (4) Lanes Concreting Road Zamboanga City By-Pass Road (Culianan-Patalon Section) Zamboanga City

Item No./Description: A.1.2(5) Operation and Maintenance of 4x4 Pick Up Type Service Vehicle for the Enginee

Unit of Measurement: month

Output per hour:

Quantity: 9.00

Designation		No. of Persons	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Driver	1	270	422.32	114,026.40
Sub-total for A				P	114,026.40
Name and Capacity		No. of Equipment	No. of Months	Monthly Rate	Amount
B.	Equipment, (2014 ACEL Rates)				
Sub-total for B				P	-
C.	Total (A+B)				114,026.40
D.	Output/day	-	L.S./day		
Name and Specifications		Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Diesel	8,100.00	L	31.00	251,100.00
	b. Spare Parts	1.00	L.S.	50,000.00	50,000.00
	c. Engine Oil & Lubricants	1.00	L.S.	37,665.00	37,665.00
	d. Miscellaneous	1.00	L.S.	45,000.00	45,000.00
Sub-total for E				P	383,765.00
F.	Direct Cost (C + E)				497,791.40
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		24,889.57
J.	Total Unit Cost				58,075.66

## DETAILED UNIT PRICE ANALYSIS

PROJECT NAME: Road Widening and Construction of Four (4) Lanes Concreting Road Zamboanga City By-Pass Road (Culianan-Patalon Section) Zamboanga City

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

Designation	No. of Persons	No. of Days	Daily Rate	Amount
A. Labor				
Sub-total for A				P -
Name and Capacity	No. of Equipment	No. of Days	Daily Rate	Amount
B. Equipment, (2014 ACEL Rates)				
a. Low Bed Trailer	1	5.00	34,043.00	170,215.00
b. Water Truck	1	5.00	19,600.00	98,000.00
c. Backhoe	2	5.00	12,296.00	122,960.00
d. Bulldozer	1	5.00	27,032.00	135,160.00
e. Dumptruck	1	5.00	11,360.00	56,800.00
g. Road Grader	1	5.00	17,384.00	86,920.00
h. Road Roller	1	5.00	13,216.00	66,080.00
Sub-total for B				P 736,135.00
C. Total (A+B)				736,135.00
D. Output/day	-	L.S./day		
Name and Specifications	Quantity	Unit	Unit Cost	Amount
E. Materials				
Sub-total for E				P -
F. Direct Cost (C + E)				736,135.00
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		36,806.75
J. Total Unit Cost				772,941.75



## DETAILED UNIT PRICE ANALYSIS

PROJECT NAME: Road Widening and Construction of Four (4) Lanes Concreting Road Zamboanga City By-Pass Road (Culianan-Patalon Section) Zamboanga City

Item No./Description: B.4(1) Construction Survey & Staking  
 Unit of Measurement: km.  
 Output per hour: 0.04  
 Quantity: 2.691

Designation		No. of Persons	No. of Days	Daily Rate	Amount
A.	Labor				
	For Field Works				
	a. Geodetic Engineer	1	8.41	833.31	7,006.86
	b. Skilled Laborer	3	8.41	443.20	11,179.90
	c. Laborer	3	8.41	342.24	8,633.14
	For Office Works				
	a. Geodetic Engineer	1	25.23	833.31	21,020.58
	b. Skilled Laborer	2	25.23	443.20	22,359.80
Sub-total for A				P	70,200.29
Name and Capacity		No. of Equipment	No. of Days	Daily Rate	Amount
B.	Equipment, (2014 ACEL Rates)				
	a. Total Station w/ complete accessories: Minor Tools 10% of Labor	1	8.41	800.00	6,726.78 7,020.03
Sub-total for B				P	13,746.80
C.	Total (A+B)				83,947.09
D.	Output/day	0.32	km./day		
Name and Specifications		Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Standard Stake Plan (800 mm x 910 mm)	70.00	pc	400.00	28,000.00
	b. Blue Printing	350.00	pc	15.00	5,250.00
	Miscellaneous 5% of Materials Cost				1,662.50
Sub-total for E				P	34,912.50
F.	Direct Cost (C + E)				118,859.59
G.	Overhead, Contingencies and Miscellaneous			10% per D.O. 197, s. 2016	11,885.96
H.	Contractor's Profit (CP)			8% per D.O. 197, s. 2016	9,508.77
I.	Value Added Tax (VAT)			5% per D.O. 197, s. 2016	7,012.72
J.	Total Unit Cost				54,731.66

## DETAILED UNIT PRICE ANALYSIS

PROJECT NAME: Road Widening and Construction of Four (4) Lanes Concreting Road Zamboanga City By-Pass Road (Culianan-Patalon Section) Zamboanga City

Item No./Description: 104(3)a Selected Borrow for topping

Unit of Measurement: cu.m.

Output per hour: 100.00

Quantity: 13,068.00

**Compacted Volume**

Designation		No. of Persons	No. of Days	Daily Rate	Amount
A.	Labor				
	For Excavation Work:				
	a. Const. Foreman	1	16.34	611.92	9,995.71
	b. Leadman	2	16.34	561.36	18,339.63
	c. Unskilled Labor	4	16.34	342.24	22,361.96
	<b>use double gang of labor and equipment</b>				
Sub-total for A				P	50,697.31
Name and Capacity		No. of Equipment	No. of Days	Daily Rate	Amount
B.	Equipment, (2014 ACEL Rates)				
	Spreading and Compaction				
	a. Motorized Road Grader (140 hp), G170A	2	16.34	17,384.00	567,935.28
	b. Vibratory Roller (10 mt), SD100C	2	16.34	14,768.00	482,470.56
	c. Water Truck/Pump (16000 L)	2	4.08	19,600.00	160,083.00
Sub-total for B				P	1,210,488.84
C.	Total (A+B)				1,261,186.15
D.	Output/day	800.00	cu.m./day		
Name and Specifications		Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Common Borrow (w/ 25% Shrinkage Factor)	16,335.00	Cu.m	763.75	12,475,856.25
Sub-total for E				P	12,475,856.25
F.	Direct Cost (C + E)				13,737,042.40
G.	Overhead, Contingencies and Miscellaneous		10% per D.O. 197, s. 2016		1,373,704.24
H.	Contractor's Profit (CP)		8% per D.O. 197, s. 2016		1,098,963.39
I.	Value Added Tax (VAT)		5% per D.O. 197, s. 2016		810,485.50
J.	Total Unit Cost				1,302.43

## DETAILED UNIT PRICE ANALYSIS

PROJECT NAME: Road Widening and Construction of Four (4) Lanes Concreting Road Zamboanga City By-Pass Road (Culianan-Patalon Section) Zamboanga City

Item No./Description: 311(1)a Portland Cement Concrete Pavement, 150 mm. thk  
 Unit of Measurement: sq.m.  
 Output per hour: 107.33  
 Quantity: 3,034.50

*For Shouldering*

Designation		No. of Persons	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Const. Foreman	1	3.53	611.92	2,162.57
	b. Skilled Labor	4	3.53	443.20	6,265.21
	c. Unskilled Labor	12	3.53	342.24	14,514.03
Sub-total for A					P 22,941.82
Name and Capacity		No. of Equipment	No. of Days	Daily Rate	Amount
B.	Equipment, (2014 ACEL Rates)				
	a. Transit Mixer (5 cu.m.)	4	3.53	10,544.00	149,053.24
	b. Concrete Vibrator	2	3.53	730.00	5,159.75
	c. Concrete Batch Plant (30 cu.m.)	1	3.53	14,076.00	49,745.67
	d. Payloader (1.50 cu.m.), LX80-2C	1	3.53	13,864.00	48,996.45
	e. Concrete Screeder (5.5 hp)	1	3.53	4,360.00	15,408.58
	f. Water truck/Pump (16000 L)	1	3.53	19,600.00	69,267.91
	g. Concrete Saw (7.5 hp), 14" Blade Ø	1	3.53	261.04	922.54
	h. Bar Cutter, Single Phase	1	0.35	1,758.00	621.29
	Minor Tools 5% of Labor				1,147.09
Sub-total for B					P 340,322.51
C.	Total (A+B)				363,264.33
D.	Output/day	858.64	sq.m./day		
Name and Specifications		Quantity	Unit	Unit Cost	Amount
E.	Materials				
	a. Reinforcing Steel Bar	1,001.39	kg.	38.00	38,052.63
	b. Curing Compound	880.01	L	35.00	30,800.18
	c. Asphalt Sealant	364.14	L	100.00	36,414.00
	d. Steel Forms (Rental)	1,395.87	m	40.00	55,834.80
	e. Sand	250.35	cu.m.	1,202.75	301,103.95
	f. Gravel	455.18	cu.m.	1,202.75	547,461.73
	g. Cement	4,339.34	bag	270.00	1,171,620.45
	h. Concrete Saw (Diamond Blade 14" Ø)	0.46	pc.	8,000.00	3,641.40
	i. Pipe Sleeve, 2" Ø	23.67	m.	101.67	2,406.36
	j. Grease/Tar	4.55	L	112.50	512.07
Sub-total for E					P 2,187,847.57
F.	Direct Cost (C + E)				2,551,111.90
G.	Overhead, Contingencies and Miscellaneous			10% per D.O. 197, s. 2016	255,111.19
H.	Contractor's Profit (CP)			8% per D.O. 197, s. 2016	204,088.95
I.	Value Added Tax (VAT)			5% per D.O. 197, s. 2016	150,515.60
J.	Total Unit Cost				1,041.63

## DETAILED UNIT PRICE ANALYSIS

PROJECT NAME: Road Widening and Construction of Four (4) Lanes Concreting Road Zamboanga City By-Pass Road (Culianan-Patalon Section) Zamboanga City

Item No./Description: 101(3)b5 Removal of of Actual Structure/Obstruction

Unit of Measurement: sq.m.

Output per hour: 33.00

Quantity: 53.50

**Removal of Existing PCCP (0.28m thk.)**

Designation		No. of Persons	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Const. Foreman	1	0.20	611.92	124.01
	b. Unskilled Labor	2	0.20	342.24	138.71
Sub-total for A				P	262.72
Name and Capacity		No. of Equipment	No. of Days	Daily Rate	Amount
B.	Equipment, (2014 ACEL Rates)				
	a. Backhoe w/ Pavement Breaker (0.80 cu.m.)	1	0.20	15,984.80	3,239.34
	b. Payloader (1.50 cu.m.), LX80-2C	1	0.20	13,864.00	2,809.56
	c. Dump Truck (12 cu.yd.)	1	0.10	11,360.00	1,151.06
	Minor Tools 10% of Labor				26.27
Sub-total for B				P	7,226.24
C.	Total (A+B)				7,488.95
D.	Output/day	264.00	sq.m./day		
Name and Specifications		Quantity	Unit	Unit Cost	Amount
E.	Materials				
Sub-total for E				P	-
F.	Direct Cost (C + E)				7,488.95
G.	Overhead, Contingencies and Miscellaneous		10% per D.O. 197, s. 2016		748.90
H.	Contractor's Profit (CP)		8% per D.O. 197, s. 2016		599.12
I.	Value Added Tax (VAT)		5% per D.O. 197, s. 2016		441.85
J.	Total Unit Cost				173.44

## DETAILED UNIT PRICE ANALYSIS

PROJECT NAME: Road Widening and Construction of Four (4) Lanes Concreting Road Zamboanga City By-Pass Road (Culianan-Patalon Section) Zamboanga City

Item No./Description: 102(1) Unsuitable Excavation

Unit of Measurement: cu.m.

Output per hour: 20.00

Quantity: 18.00

*Unsuitable materials(ricefield)*

Designation		No. of Persons	No. of Days	Daily Rate	Amount
A.	Labor				
	a. Const. Foreman	1	0.11	611.92	68.84
	c. Unskilled Labor	3	0.11	342.24	115.51
Sub-total for A				P	184.35
Name and Capacity		No. of Equipment	No. of Days	Daily Rate	Amount
B.	Equipment, (2014 ACEL Rates)				
	d. Dump Truck (12 cu.yd.)	2	0.11	11,360.00	2,556.00
	b. Backhoe (0.80 cu.m)	1	0.11	12,296.00	1,383.30
	c. Payloader (1.50 cu.m.) - at disposal area	1	0.01	13,864.00	155.97
	Minor tools (10% of Labor Cost)				18.43
Sub-total for B				P	1,557.70
C.	Total (A+B)				1,742.05
D.	Output/day	160.00	cu.m./day		
Name and Specifications		Quantity	Unit	Unit Cost	Amount
E.	Materials				
Sub-total for E				P	-
F.	Direct Cost (C + E)				1,742.05
G.	Overhead, Contingencies and Miscellaneous			10% per D.O. 197, s. 2016	174.21
H.	Contractor's Profit (CP)			8% per D.O. 197, s. 2016	139.36
I.	Value Added Tax (VAT)			5% per D.O. 197, s. 2016	102.78
J.	Total Unit Cost				119.91