

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 :		Appropriation : P 295,000,000.00
Construction of By-Pass and Diversion Roads - Jct. National Highway Siocon - Jct. National Highway R.T. Lim (Pob. Siocon Brgy. Tagaytay Section) Zamboanga del Norte		Source of Funds : CY-2018
PROJECT CATEGORY : NATIONAL ROAD		Issued Obligated Authority :
		Released :
		Cal. Days to Complete : 315.00 Cal. Days
		Desirable Starting Date : Upon Approval
		Mode of Implementation :
PROJECT DESCRIPTION :	NET LENGTH :	
Scope of Work : Construction of Gravel Road	Sta. 6+640.00 - Sta. 8+412.35	
Road Width : 6.70 m.	Sta. 8+565.99 - Sta. 15+920.00	
Roadbed Width : 12.00 m.		
Subbase Course : 0.30 mtrs thick		
Surface Course : 0.15 mtrs thick		
Net Length : 18.25 lane km		
Net Length : 9,126.36 In.m. / 9,126 km		

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(4a1)	Removal of Structures and Obstruction	0.009	In.m	57.00	21,129.95	370.70
101(6)	Removal of Structures and Obstruction	0.026	cu.m	181.50	60,795.24	334.96
102(2)	Surplus Common Excavation	1.628	cu.m.	22,830.50	3,787,090.05	165.88
103(3)	Foundation Fill	0.019	cu.m.	37.00	44,708.95	1,208.35
103(6)a	Pipe Culvert and Drain Excavation	0.036	cu.m.	363.00	83,531.98	230.12
104(1)a1	Embankment from Roadway Excavation	12.931	cu.m.	133,929.00	30,078,388.15	224.58
105(1)a	Subgrade Preparation	0.293	sq.m.	44,504.50	682,335.58	15.33
200(1)	Aggregate Subbase Course	20.672	cu.m.	37,204.50	48,085,067.64	1,292.45
300(1)	Aggregate Surface Course	1.948	cu.m.	3,125.00	4,531,259.38	1,450.00
311(1)e1a	Portland Cement Concrete Pavement-using Conventional Method, 0.28m thick	45.140	sq.m.	64,766.50	104,998,271.47	1,621.18
311(1)a	Portland Cement Concrete Pavement, 0.15m. Thick	3.512	sq.m	9,175.00	8,168,197.88	890.27
404(1)a	Reinforcing Steel Bar, Grade 40	0.712	kg.	33,343.00	1,657,185.07	49.70
404(1)b	Reinforcing Steel Bar, Grade 60	0.669	kg.	30,035.50	1,555,873.11	51.80
405(1)a3	Structural Concrete, Class A	2.551	cu.m	824.00	5,933,555.38	7,200.92
405(1)b3	Structural Concrete, Class A	1.066	cu.m	328.00	2,480,130.63	7,561.37
407(8)	Concrete Structure (Lean Concrete)	0.095	cu.m	26.00	220,996.21	8,499.85
500(1)b3	Pipe Culvert & Storm Drain	0.472	In.m	305.00	1,097,387.24	3,597.99
505(1a)	Grouted Riprap, Class A	2.025	cu.m	1,335.50	4,711,243.66	3,527.70
506(1)	Stone Masonry	0.410	cu.m	219.50	952,800.57	4,340.78
605(1aj2)	Warning Signs (W6-2C)	0.011	each	2.00	26,645.80	13,322.90
612(1)	ReflectORIZED Thermoplastic Pavement Markings (White)	0.687	sq.m	2,192.00	1,597,560.95	728.81

612(2)	ReflectORIZED Thermoplastic Pavement Markings (Yellow)	0.112	sq.m	322.50	260,857.69	808.86
622(1)a	Bio-Engineered Erosion Coco Fiber Erosion Control Net (CGN 400)	0.960	sq.m	13,180.00	2,234,168.95	169.51
622(1)b	Bio-Engineered Erosion Coco Fiber Erosion Control Net (CGN 700)	0.719	sq.m	10,958.00	1,673,418.75	152.71
622(2)b	Bio-Engineered Erosion Coco Logs/Fascine Control System	0.546	ln.m	2,754.50	1,270,394.31	461.21
622(3)a	Bio-Engineered Erosion Control System Vegetation	1.212	sq.m	24,138.50	2,818,527.12	116.76
A.1.1(3)	Const. of Field Office for the Engineer	0.175	LS	1.00	407,441.33	407,441.33
A.1.1(11)	Prov. Of Furniture, Equipment and Appliances for Field Engineer	0.109	LS	1.00	252,543.32	252,543.32
A.1.2(5)	Operation & Maintenance of Gov'l. Service Vehicle	0.182	L.S	1.00	422,760.00	422,760.00
B.5	Project Billboard	0.002	Unit	2.00	4,530.90	2,265.45
B.7	Occupational Safety & Health Program	0.107	L.S	1.00	248,345.40	248,345.40
B.9	Mobilization and Demobilization	0.826	L.S	1.00	1,921,860.00	1,921,860.00
B.4(1)	Construction Survey and Staking	0.137	Km.	9.13	318,414.19	34,889.51
TOTAL		100.000			P 232,607,416.86	

Name of Project

: Construction of By-Pass and Diversion Roads - Jct. National Highway Siocon - Jct. National Highway R.I. Lim (Pob. Siocon - Brigy. Tagaytay Section) Zamboanga del Norte

Station Limits

: Sta. 6+640.00 - Sta. 8+412.35
Sta. 8+565.99 - Sta. 15+920.00

BREAKDOWN OF ESTIMATED EXPENDITURES	% OF TOTAL	AMOUNT
I. ESTIMATED COST		
A. DIRECT COST		
A.1 Materials	57.94	170,934,171.62
A.2 Labor	1.58	4,669,443.28
A.3 Equipment Expenses	19.32	57,003,801.95
SUB-TOTAL (DIRECT COST)	78.85	232,607,416.86
B. INDIRECT COST (Per DO # 197 s. 2016)		
B.1 Overhead, Contingency & Misc. (8% Max. of D.C.)	6.23	18,380,952.65
B.2 Profit (8% Max. D.C.)	6.24	18,400,820.28
C. VAT (5% of D.C. and I.C. per D.O. # 197)	4.57	13,469,459.49
SUB-TOTAL (CONTRACT COST)	95.88	282,858,649.28
II. ESTIMATED GOVERNMENT EXPENDITURES		
1 Engineering and Administrative Overhead (3.5%)	3.50	10,325,000.00
2 Detailed Engineering (1%)	0.62	1,816,350.72
3 Reserved for the Payment of RROW)	0.00	
4 Physical Reserved		
TOTAL ESTIMATED PROJECT COST	100.00	295,000,000.00

Prepared by:


JERALD R. BARRERA
Engineer II

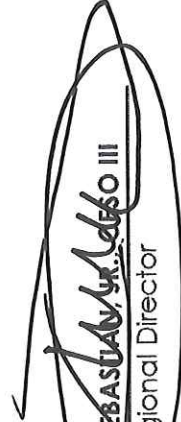
Submitted by:


LEONCIO B. SOLAMILLO
Chief, Construction Division

Recommending Approval:


CAYAMBAO D. DIA
Assistant Regional Director

APPROVED:


JORGE U. SEBASTIAN JR. Ledesma III
Regional Director

APPROVED BUDGET FOR THE CONTRACT

Item No.	Description	Quantity	Unit	Estimated Direct Cost	OCM	Profit	%	VALUE	VAT	TOTAL INDIRECT COST	TOTAL COST	TOTAL COST
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9) = (5)+(7)+(8)	(10) = [(5)+(9)]*5%	(11) = (9) + (10)	(12) = (5) + (11)	(13) = (12) + (3)
PART A												
FACILITIES FOR THE ENGINEER												
A.1.(3)	Const. of Field Office for the Engineer	1.00	LS	407,441.33	8.00	16.00		45,190.61	23,631.60	88,822.21	496,263.54	496,263.54
A.1.(1)	Prov. of Furniture, Equipment and Appliances for Field Engineer	1.00	LS	252,543.32	0.00	0.00		-	12,627.17	12,627.17	265,170.49	265,170.49
A.1.(2S)	Operation & Maintenance of Govt. Service Vehicle	1.00	LS	422,760.00	0.00	0.00		-	21,138.00	21,138.00	443,898.00	443,898.00
OTHER GENERAL REQUIREMENTS												
B.5	Project Billboard	2.00	Unit	4,530.90	8.00	16.00		724.94	262.79	987.74	5,518.64	2,759.32
B.7	Occupational Safety & Health Program	1.00	LS	248,345.40	8.00	8.00		19,867.63	13,410.65	33,278.28	281,623.68	281,623.68
B.9	Mobilization and Demobilization	1.00	LS	1,921,860.00	0.00	0.00		-	96,093.00	96,093.00	2,017,953.00	2,017,953.00
B.4(1)	Construction Survey and Staking	9.13	Km.	318,414.19	8.00	8.00		50,946.27	18,468.02	69,414.29	387,828.48	42,495.42
PART C												
EARTHWORKS												
101(4a)	Removal of Structures and Obstruction	57.00	hm	21,129.95	8.00	16.00		3,380.79	1,225.54	4,606.33	25,736.28	451.51
101(6)	Removal of Structures and Obstruction	181.50	cum	60,795.24	8.00	16.00		9,727.24	3,523.12	13,250.36	74,045.60	407.98
102(2)	Surplus Common Excavation	22,830.50	cum	3,787,090.05	8.00	16.00		605,934.41	219,651.22	825,585.63	4,612,675.68	202.04
103(3)	Foundation Fill	37.00	cum	44,708.95	8.00	16.00		7,153.43	2,593.12	9,746.55	54,455.50	1,471.77
103(6a)	Pipe Culvert and Drain Excavation	363.00	cum	83,531.98	8.00	16.00		13,365.12	4,844.85	18,209.97	101,741.95	280.28
104(1)a	Embankment from Roadway Excavation	133,929.00	cum	30,078,388.15	8.00	16.00		4,812,542.10	1,744,546.51	6,557,088.62	36,635,476.76	273.54
105(1)a	Subgrade Preparation	44,504.50	sq.m.	682,335.58	8.00	16.00		39,575.46	148,749.16	188,324.62	831,084.73	18.67
PART D												
SUBBASE AND BASE COURSE												
200(1)	Aggregate Subbase Course	37,204.50	cum.	48,085,067.64	8.00	16.00		7,693,610.82	2,788,933.92	10,482,544.75	58,567,612.38	1,574.21
PART E												
SURFACE COURSES												
300(1)	Aggregate Surface Course	3,125.00	cum.	4,531,259.38	8.00	16.00		725,001.50	262,813.04	987,814.54	5,519,073.92	1,766.10
311(1)a	Portland Cement Concrete Pavement-using Conventional Method, 0.28m thick	64,766.50	sq.m.	104,998,271.47	8.00	16.00		16,799,723.44	6,089,899.75	22,889,623.18	127,887,894.65	1,974.60
311(1)c	Portland Cement Concrete Pavement, 0.15m. Thick	9,175.00	sq.m.	8,168,197.88	8.00	16.00		1,306,911.66	473,755.48	1,780,667.14	9,948,865.02	1,084.34
PART F												
BRIDGE CONSTRUCTION												
404(1)a	Reinforcing Steel Bar, Grade 40	33,343.00	kg.	1,557,185.07	8.00	16.00		265,149.61	96,116.73	361,266.35	2,018,451.42	60.54
404(1)b	Reinforcing Steel Bar, Grade 60	30,035.50	kg.	1,555,873.11	8.00	16.00		248,940.64	90,218.34	339,158.98	1,895,053.44	63.09
405(1)a3	Structural Concrete, Class A	824.00	cum	5,938,555.38	8.00	16.00		949,688.66	344,146.21	1,293,834.87	7,227,070.46	8,770.72
405(1)b3	Structural Concrete, Class A	328.00	cum	2,480,130.63	8.00	16.00		393,847.58	143,648.48	540,496.06	3,020,799.11	9,209.75
407(8)	Concrete Structure (Lean Concrete)	26.00	cum	220,996.21	8.00	16.00		35,359.39	12,817.78	48,177.17	269,173.39	10,352.82
PART G												
DRAINAGE AND SLOPE PROTECTION STRUCTURES												
500(1)b3	Pipe Culvert & Storm Drain	305.00	hm	1,097,387.24	8.00	16.00		175,581.96	63,648.46	239,230.42	1,336,617.66	4,382.35
505(1)a	Grouted Riprap, Class A	1,335.50	cum	4,711,243.66	8.00	16.00		753,798.98	273,252.13	1,027,051.12	5,738,294.77	4,296.74
506(1)	Stone Masonry	219.50	cum	952,800.57	8.00	16.00		152,448.09	55,262.43	207,710.52	1,160,511.10	5,287.07
PART H												
MISCELLANEOUS STRUCTURES												
605(1a)(2)	Warning Signs (W-2C)	2.00	each	26,645.80	8.00	16.00		4,263.33	1,545.46	5,808.79	32,454.59	16,227.29
612(1)	Reflectized Thermoplastic Pavement Markings (White)	2,192.00	sq.m	1,597,560.95	8.00	16.00		255,609.75	92,658.53	348,268.29	1,945,829.23	887.70
612(2)	Reflectized Thermoplastic Pavement Markings (Yellow)	322.50	sq.m	260,857.69	8.00	16.00		41,737.23	15,129.75	56,866.98	317,724.66	985.19
622(1)a	Bio-Engineered Erosion Control Net (CGN 400)	13,180.00	sq.m	2,234,168.95	8.00	16.00		357,467.03	129,581.80	487,048.83	2,721,217.78	206.47
622(1)b	Bio-Engineered Erosion Control Net (CGN 700)	10,958.00	sq.m	1,673,418.75	8.00	16.00		267,147.00	97,058.29	364,205.29	2,038,224.04	186.00
622(2)b	Bio-Engineered Erosion Control System	2,754.50	hm	1,270,394.31	8.00	16.00		203,263.09	73,682.87	276,945.96	1,547,340.27	561.75
622(3)a	Bio-Engineered Erosion Control System Vegetation	24,138.50	sq.m	2,818,527.12	8.00	16.00		450,964.34	163,474.57	614,438.91	3,432,966.04	142.22
TOTAL OF PART H												
				9,881,573.58				1,581,051.27	573,131.27	2,154,182.54	12,036,756.62	282,858,649.28
TOTAL												
				232,607,416.86				36,781,772.93	10,680,525.57	47,462,298.50	289,850,215.36	3,150,000,000.00

Prepared by:

BELEN A. SAPALIDA
Head TWE, BAC

Recommending Approval:

CAYAMOMBAO D. DIA
Assistant Regional Director

APPROVED:

JORGE U. SORIANO JR., CFSO-III
Regional Director

SUMMARY

Name of Project : Construction of By-Pass and Diversion Roads - Jct. National Highway Sloccon - Jct. National Highway R.T. Lim (Pop. Sloccon - Brgy. Tagaytay Section) Zamboanga del Norte

Item No.	Description	Quantity	Unit	Labor	Equipment	Materials	OCM	Profit	VAT	TOTAL
101(4a)	Removal of Structures and Obstruction	57.00	ln.m	1,539.48	19,590.47	-	1,690.40	1,690.40	1,225.54	25,736.28
101(6)	Removal of Structures and Obstruction	181.50	cu.m	2,941.21	57,854.03	-	4,863.62	4,863.62	3,526.12	74,048.60
102(2)	Surplus Common Excavation	22,830.50	cu.m.	56,110.71	3,730,979.34	-	302,967.20	302,967.20	219,651.22	4,612,675.68
103(3)	Foundation Fill	37.00	cu.m.	7,329.26	4,366.00	33,013.69	3,576.72	3,576.72	2,593.12	54,455.50
103(6a)	Pipe Culvert and Drain Excavation	363.00	cu.m.	3,717.66	79,814.32	-	6,682.56	6,682.56	4,844.85	101,741.95
104(1a)	Embankment from Roadway Excavation	133,929.00	cu.m.	513,132.83	29,565,255.32	-	2,406,271.05	2,406,271.05	1,744,546.51	36,635,476.76
105(1a)	Subgrade Preparation	44,504.50	sq.m.	24,039.85	658,295.73	-	54,586.85	54,586.85	39,575.46	831,084.73
200(1)	Aggregate Subbase Course	37,204.50	cu.m.	120,579.78	3,301,899.38	44,662,588.48	3,846,805.41	3,846,805.41	2,788,933.92	58,567,612.38
300(1)	Aggregate Surface Course	3,125.00	cu.m.	10,128.13	277,343.75	4,243,787.50	362,500.75	362,500.75	262,813.04	5,519,073.92
311(1e)	Portland Cement Concrete Pavement-using Conventional Method, 0.28m thick	64,766.50	sq.m.	910,828.01	13,511,366.66	90,576,076.79	8,399,861.72	8,399,861.72	6,089,899.75	127,887,894.66
311(1a)	Portland Cement Concrete Pavement, 0.15m. Thick	9,175.00	sq.m.	69,366.01	1,076,793.94	7,022,037.93	653,455.83	653,455.83	473,755.48	9,948,865.02
404(1a)	Reinforcing Steel Bar, Grade 40	33,343.00	kg.	98,089.55	74,665.17	1,484,430.36	132,574.81	132,574.81	96,116.73	2,018,451.42
404(1b)	Reinforcing Steel Bar, Grade 60	30,035.50	kg.	88,359.44	67,258.66	1,400,255.01	124,469.85	124,469.85	90,240.64	1,895,053.44
405(1) c3	Structural Concrete, Class A	824.00	cu.m	686,230.14	351,257.22	4,896,068.02	474,684.43	474,684.43	344,146.21	7,227,070.46
405(1) b3	Structural Concrete, Class A	328.00	cu.m	286,728.23	244,482.13	1,948,920.28	198,410.45	198,410.45	143,847.58	3,020,799.11
407(6)	Concrete Structure (Lean Concrete)	26.00	cu.m	11,891.84	50,388.93	158,715.44	17,679.70	17,679.70	12,817.78	269,173.39
500(1)b3	Pipe Culvert & Storm Drain	305.00	ln.m	109,315.05	264,081.51	723,990.68	87,790.98	87,790.98	63,648.46	1,336,617.66
505(1a)	Grouted Riprap, Class A	1,335.50	cu.m	524,888.89	340,888.24	3,845,466.52	376,899.49	376,899.49	273,252.13	5,738,294.77
506(1)	Stone Masonry	219.50	cu.m	74,388.37	70,401.97	808,010.22	76,224.05	76,224.05	55,262.43	1,160,511.10
605(1c)2	Warning Signs (W-2C)	2.00	each	305.96	636.60	25,703.25	2,131.66	2,131.66	1,545.46	32,454.59
612(1)	Reflectorized Thermoplastic Pavement Markings (White)	2,192.00	sq.m	38,927.29	130,928.16	1,427,705.50	127,804.88	127,804.88	92,658.53	1,945,829.23
612(2)	Reflectorized Thermoplastic Pavement Markings (Yellow)	322.50	sq.m	5,727.21	19,262.93	235,867.55	20,868.62	20,868.62	15,129.75	317,724.66
622(1)a	Bio-Engineered Erosion Coco Fiber Erosion Control Net (CGN 4700)	13,180.00	sq.m	110,377.23	172,492.72	1,951,299.00	178,733.52	178,733.52	129,581.80	2,721,217.78
622(1)b	Bio-Engineered Erosion Coco Fiber Erosion Control Net (CGN 700)	10,958.00	sq.m	91,768.87	143,412.39	1,438,237.50	133,873.50	133,873.50	97,058.29	2,038,224.04
622(2)b	Bio-Engineered Erosion Coco Logs/Fascine Control System	2,754.50	ln.m	76,892.79	7,689.28	1,185,812.25	101,631.55	101,631.55	73,682.87	1,547,340.27
622(3)a	Bio-Engineered Erosion Control System Vegetation	24,138.50	sq.m	62,586.30	778,997.67	1,976,943.15	225,482.17	225,482.17	163,474.57	3,432,966.04
A.1(13)	Const. of Field Office for the Engineer	1.00	LS	53,245.60	31,804.56	322,391.17	32,595.31	32,595.31	23,631.60	496,263.54
A.1(11)	Prov. Of Furniture, Equipment and Appliances for Field Engineer	1.00	LS	-	-	252,543.32	-	-	12,627.17	265,170.49
A.1(25)	Operation & Maintenance of Gov't. Service Vehicle	1.00	L.S	139,608.00	-	283,152.00	-	-	21,138.00	443,898.00
B.5	Project Billboard	2.00	Unit	434.90	-	4,096.00	362.47	362.47	262.79	5,518.64
B.7	Occupational Safety & Health Program	1.00	L.S	235,985.40	-	12,360.00	-	-	13,410.65	281,623.68
B.9	Mobilization and Demobilization	1.00	L.S	-	1,921,860.00	-	-	-	96,093.00	2,017,953.00
B.4(1)	Construction Survey and Staking	9.13	Km.	253,979.30	49,734.89	14,700.00	25,473.13	25,473.13	18,468.02	387,828.48
TOTAL				4,669,443.28	57,003,801.95	170,934,171.62	18,380,952.65	18,400,820.28	13,469,459.49	282,858,649.28

Net Length : 9.126.36 in.m.

Item No.	Description	Quantity	Unit	DURATION # OF DAYS
101(4a1)	Removal of Structures and Obstruction	57.00	lrm	1,19
101(6)	Removal of Structures and Obstruction	181.50	cum	2,27
102(2)	Surplus Common Excavation	22,830.50	cum.	11.89
103(3)	Foundation Fill	37.00	cum.	3,70
103(6)a	Pipe Culvert and Drain Excavation	363.00	cum.	2,27
104(1)a1	Embankment from Roadway Excavation	133,929.00	cum.	69,48
105(1)a	Subgrade Preparation	44,504.50	sqm.	18,54
200(1)	Aggregate Subbase Course	37,204.50	cum.	93,01
300(1)	Aggregate Surface Course	3,125.00	cum.	7,81
311(1)e1a	Portland Cement Concrete Pavement-using Conventional Method, 0.25m thick	64,766.50	sqm.	140,31
311(1)o	Portland Cement Concrete Pavement, 0.15m, Thick	9,175.00	sqm	10,69
404(1)b	Reinforcing Steel Bar, Grade 40	33,343.00	kg.	23,15
404(1)b3	Structural Concrete, Class A	824.00	cum.	36,79
405(1) b3	Structual Concrete, Class A	328.00	cum.	14,64
407(b)	Concrete Structure [lean concrete]	26.00	cum.	2,32
500(1)b3	Pipe Culvert & Storm Drain	305.00	lrm	38,13
505(1o)	Grouded Riprap, Class A	1,335.50	cum.	66,78
506(1)	Stone Masonry	219.50	cum.	17,56
605(1q2)	Warning Signs (W-2C)	2.00	each	0,25
612(1)	Reflectized Thermoplastic Pavement Markings (White)	2,192.00	sqm	10,96
612(2)	Reflectized Thermoplastic Pavement Markings (Yellow)	322.50	sqm	1,61
622(1)a	Bio-Engineered Erosion Coco Fiber Biocorn-Control Net - JCGH 400	13,180.00	sqm	32,95
622(1)b	Bio-Engineered Erosion Coco Fiber Biocorn-Control Net - JCGH 700	10,953.00	sqm	27,40
622(2)b	Bio-Engineered Erosion Coco Log/Techie Control System	2,754.50	lrm	22,95
622(3)a	Bio-Engineered Erosion Control System Vegetation	24,138.50	sqm	48,28
A.1.(3)	Const. of Field Office for the Engineer	1.00	LS	10,00
A.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	LS	315.00
B.5	Project Billboard	2.00	Unit	0,25
B.7	Occupational Safety & Health Program	1.00	LS	210.00
B.9	Mobilization and Demobilization	1.00	LS	6,00
B.4(1)	Construction Survey and Staking	9.13	Km.	121.68

WEEKS (6 WORKING DAYS)

TOTAL NO. OF WORKING DAYS : 210

INCLEMENT WEATHER & CURING TIME : 70

NUMBER OF SUNDAYS : 35

TOTAL NO. CALENDAR DAYS : 315

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Construction of By-Pass and Diversion Roads - Jct. National Highway Siocon - Jct. National Highway R.T. Lim (Pob. Siocon - Brgy. Tagaytay Section) Zamboanga del Norte

Item No./Description : 603(1a)2 Warning Signs (W6-2C)

Unit of Measurement : each

Output per hour : 1.00

Quantity : 2.00

Designation	No. of Person	No. of Days	Daily Rate	Amount
A. Labor				
a. Construction Foreman	1	0.25	0.00	0.00
b. Skilled Laborer	1	0.25	0.00	0.00
c. Laborer	2	0.25	611.92	305.96
Sub-total for A				P 305.96
Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B				
Equipment, (2014 ACEL Rates)				
a. Cargo Truck	1	0.06	9,696.00	606.00
Minor Tools (10% of Labor)				30.60
Sub-total for B				P 636.60
Total (A+B)				P 942.56
D. Output/day	8.00	each	/day	
Name and Specifications	Quantity	Unit	Unit Cost	Amount
E. Materials				
a. Portland Cement	0.96	bag	289.44	277.87
b. Sand	0.05	cu.m	1,275.88	63.79
c. Gravel	0.10	cu.m	1,275.88	127.59
d. Form Lumber, Good	16.00	bd.ft	42.00	672.00
e. 3" dia. GI Pipe	6.20	m	250.00	1,550.00
f. Plate	4.00	kg	500.00	2,000.00
g. Bolts, 5mm dia.	24.00	pc	250.00	6,000.00
h. Sign Face, 3mm thk Aluminum Sheet	2.00	pc	7,500.00	15,000.00
i. Assorted CWN	0.16	kg	75.00	12.00
Sub-total for E				P 25,703.25
Direct Cost (C+E)				26,645.80
Overhead, Contingencies and Miscellaneous				8% per D.O 197 s 2016
Contractor's Profit (CP)				8% per D.O 197 s 2016
Value Added Tax (VAT)				5% per D.O 197 s 2016
Total Unit Cost				1,545.46
				16,227.29

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Construction of By-Pass and Diversion Roads - Jct. National Highway Siocon - Jct. National Highway R.T. Lim (Pob. Siocon - Brgy. Tagaytay Section) Zamboanga del Norte

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

Unit of Measurement : sq.m

Output per hour : 25.00

Quantity : 2,192.00

Designation	No. of Person	No. of Days	Daily Rate	Amount
A. Labor				
a. Construction Foreman	1	10.96	611.92	6,706.64
b. Skilled Laborer	2	10.96	443.20	9,714.94
c. Laborer	6	10.96	342.24	22,505.70
Sub-total for A				P 38,927.29
Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B Equipment, (2014 ACEL Rates)				
a. Cargo Truck/Delivery Truck	1	10.96	9,696.00	106,268.16
b. Applicator Machine	1	10.96	750.00	8,220.00
c. Kneading Machine	1	10.96	1,500.00	16,440.00
Minor Tools (10% of labor)				
Sub-total for B				P 130,928.16
Total (A+B)				P 169,855.45
D. Output/day	200.00	sq.m	/day	
Name and Specifications	Quantity	Unit	Unit Cost	Amount
E. Materials				
a. Thermoplastic Paint (white)	712.40	bag	1,585.00	1,129,154.00
b. Glass Beads	72.34	bag	2,500.00	180,840.00
c. Primer	263.04	liter	180.00	47,347.20
d. LPG (50 kg.)	8.77	cyl	90.00	789.12
e. LPG (12 kg.)	4.38	cyl	50.00	219.20
f. Calsumine	274.00	kg	5.00	1,370.00
Miscellaneous (5% of Materials)				67,985.98
Sub-total for E				P 1,427,705.50
Direct Cost (C+E)				1,597,560.95
Overhead, Contingencies and Miscellaneous				8% per D.O 197 s 2016
Contractor's Profit (CP)				8% per D.O 197 s 2016
Value Added Tax (VAT)				5% per D.O 197 s 2016
Total Unit Cost				92,658.53
				887.70

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Construction of By-Pass and Diversion Roads - Jct. National Highway Siocon - Jct. National Highway R.T. Lim (Pob. Siocon - Brgy. Tagaytay Section) Zamboanga del Norte

Item No./Description : 612(2) ReflectORIZED Thermoplastic Pavement Markings (Yellow)

Unit of Measurement : sq.m

Output per hour : 25.00

Quantity : 322.50

Designation	No. of Person	No. of Days	Daily Rate	Amount
A. Labor				
a. Construction Foreman	1	1.61	611.92	986.72
b. Skilled Laborer	2	1.61	443.20	1,429.32
c. Laborer	6	1.61	342.24	3,311.17
Sub-total for A				
			P	5,727.21
Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B Equipment, (2014 ACCEL Rates)				
a. Cargo Truck/Delivery Truck	1	1.61	9,696.00	15,634.80
b. Applicator Machine	1	1.61	750.00	1,209.38
c. Kneading Machine	1	1.61	1,500.00	2,418.75
Minor Tools (10% of labor)				
Sub-total for B				
			P	19,262.93
Total (A+B)				
			P	24,990.14
D. Output/day	200.00	sq.m	/day	
Name and Specifications	Quantity	Unit	Unit Cost	Amount
E. Materials				
a. Thermoplastic Paint (yellow)	104.81	bag	1,800.00	188,662.50
b. Glass Beads	10.64	bag	2,500.00	26,606.25
c. Primer	38.70	liter	233.00	9,017.10
d. LPG (50 kg.)	1.29	cyl	90.00	116.10
e. LPG (12 kg.)	0.65	cyl	50.00	32.25
f. Calsumine	40.31	kg	5.00	201.56
Miscellaneous (5% of Materials)				11,231.79
Sub-total for E				
			P	235,867.55
Direct Cost (C+E)				
				260,857.69
Overhead, Contingencies and Miscellaneous				
	8%	per D.O 197 s 2016		20,868.62
Contractor's Profit (CP)				
	8%	per D.O 197 s 2016		20,868.62
Value Added Tax (VAT)				
	5%	per D.O 197 s 2016		15,129.75
Total Unit Cost				
				985.19

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Construction of By-Pass and Diversion Roads - Jct. National Highway Siocon - Jct. National Highway R.T. Lim (Pob. Siocon - Brgy. Tagaytay Section) Zamboanga del Norte

Item No./Description : 622(1)a Bio-Engineered Erosion Coco Fiber Erosion Control Net (CGN 400)

Unit of Measurement : sq.m

Output per hour : 50.00

Quantity : 13,180.00

Designation	No. of Person	No. of Days	Daily Rate	Amount
A. Labor				
a. Construction Foreman	1	32.95	611.92	20,162.76
b. Laborer	8	32.95	342.24	90,214.46
Sub-total for A				P 110,377.23
Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B Equipment, (2014 ACEL Rates)				
a. Water Truck	1	8.24	19,600.00	161,455.00
Minor Tools (10% of Labor)				11,037.72
Sub-total for B				P 172,492.72
Total (A+B)				P 282,869.95
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)	13,839.00	sq.m	141.00	1,951,299.00
Sub-total for E				P 1,951,299.00
Direct Cost (C+E)				2,234,168.95
G. Overhead, Contingencies and Miscellaneous	8%	per D.O 197 s 2016		178,733.52
H. Contractor's Profit (CP)	8%	per D.O 197 s 2016		178,733.52
I. Value Added Tax (VAT)	5%	per D.O 197 s 2016		129,581.80
J. Total Unit Cost				206.47

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Construction of By-Pass and Diversion Roads - Jct. National Highway Siocon - Jct. National Highway R.T. Lim (Pob. Siocon - Brgy. Tagaytay Section) Zamboanga del Norte

Item No./Description : 622(1)b Bio-Engineered Erosion Coco Fiber Erosion Control Net (CGN 700)

Unit of Measurement : sq.m

Output per hour : 50.00

Quantity : 10,958.00

Designation	No. of Person	No. of Days	Daily Rate	Amount
A. Labor				
a. Construction Foreman	1	27.40	611.92	16,763.55
b. Laborer	8	27.40	342.24	75,005.32
Sub-total for A				P 91,768.87
Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B Equipment, (2014 ACEL Rates)				
a. Water Truck	1	6.85	19,600.00	134,235.50
Minor Tools (10% of Labor)				9,176.89
Sub-total for B				P 143,412.39
Total (A+B)				P 235,181.25
D. Output/day 400.00 sq.m /day				
Name and Specifications	Quantity	Unit	Unit Cost	Amount
E. Materials				
a. Erosion Control Net CGN 700 w/ 5% wastage (Price includes bamboo pegs)	11,505.90	sq.m	125.00	1,438,237.50
Sub-total for E				P 1,438,237.50
Direct Cost (C+E)				1,673,418.75
G. Overhead, Contingencies and Miscellaneous	8%	per D.O 197 s 2016		133,873.50
H. Contractor's Profit (CP)	8%	per D.O 197 s 2016		133,873.50
I. Value Added Tax (VAT)	5%	per D.O 197 s 2016		97,058.29
J. Total Unit Cost				186.00

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Construction of By-Pass and Diversion Roads - Jct. National Highway Siocon - Jct. National Highway R.T. Lim (Pob. Siocon - Brgy. Tagaytay Section) Zamboanga del Norte

Item No./Description : 622(2)b Bio-Engineered Erosion Coco Logs/Fascine Control System

Unit of Measurement : In.m

Output per hour : 15.00

Quantity : 2,754.50

Designation	No. of Person	No. of Days	Daily Rate	Amount
A. Labor				
a. Construction Foreman	1	22.95	611.92	14,046.11
b. Laborer	8	22.95	342.24	62,846.67
Sub-total for A				P 76,892.79
Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B Equipment, (2014 ACEL Rates) Minor Tools (10% of Labor)				7,689.28
Sub-total for B				P 7,689.28
Total (A+B)				P 84,582.06
C. Output/day 120.00 In.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)	2,892.23	In.m	410.00	1,185,812.25
Sub-total for E				P 1,185,812.25
Direct Cost (C+E)				1,270,394.31
G. Overhead, Contingencies and Miscellaneous	8%	per D.O 197 s 2016		101,631.55
H. Contractor's Profit (CP)	8%	per D.O 197 s 2016		101,631.55
I. Value Added Tax (VAT)	5%	per D.O 197 s 2016		73,682.87
J. Total Unit Cost				561.75

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Construction of By-Pass and Diversion Roads - Jct. National Highway Siocon - Jct. National Highway R.T. Lim (Pob. Siocon - Brgy. Tagaytay Section) Zamboanga del Norte

Item No./Description : 622(3)a Bio-Engineered Erosion Control System Vegetation

Unit of Measurement : sq.m

Output per hour : 62.50

Quantity : 24,138.50

Designation	No. of Person	No. of Days	Daily Rate	Amount
A. Labor				
a. Construction Foreman	1	48.28	611.92	29,541.66
b. Laborer	2	48.28	342.24	33,044.64
Sub-total for A				P 62,586.30
Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B				
Equipment, (2014 ACEL Rates)				
a. Hydroseeding Machine	1	48.28	7,616.00	367,677.63
b. Water Truck	1	48.28	8,520.00	411,320.04
Sub-total for B				P 778,997.67
Total (A+B)				P 841,583.97
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)	25,345.43	sq.m	78.00	1,976,943.15
Sub-total for E				P 1,976,943.15
Direct Cost (C+E)				2,818,527.12
G. Overhead, Contingencies and Miscellaneous	8%	per D.O 197 s 2016		225,482.17
H. Contractor's Profit (CP)	8%	per D.O 197 s 2016		225,482.17
I. Value Added Tax (VAT)	5%	per D.O 197 s 2016		163,474.57
J. Total Unit Cost				142.22

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Construction of By-Pass and Diversion Roads - Jct. National Highway Siocon - Jct. National Highway R.T. Lim (Pob. Siocon - Brgy. Tagaytay Section) Zamboanga del Norte

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

Unit of Measurement : LS

Output per hour : :

Quantity : 1.00

Designation		No. of Person	No. of Days	Daily Rate	Amount
A. Labor					
a. Construction Foreman	1	10.00	611.92	6,119.20	
b. Masons	3	10.00	443.20	13,296.00	
c. Carpenters	3	10.00	443.20	13,296.00	
d. Laborers	6	10.00	342.24	20,534.40	
Sub-total for A					P 53,245.60
Name and Capacity		No. of Equip.	No. of Days	Daily Rate	Amount
B Equipment, (2014 ACEL Rates)					
a. Bagger Mixer	1	5.00	1,376.00	6,880.00	
b. Water Truck	1	1.00	19,600.00	19,600.00	
Minor Tools (10% of Labor)				5,324.56	
Sub-total for B					P 31,804.56
Total (A+B)					P 85,050.16
C. 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	1,275.88	4,465.58	
b. Selected Fill	10.00	cu.m	775.88	7,758.80	
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	289.44	26,049.89	
b. Crushed Gravel	20.00	cu.m	1,275.88	25,517.60	
c. Washed Sand	17.00	cu.m	1,275.88	21,689.96	
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	81.00	1,620.00	
IV. Formworks (Columns & Beams)					
a. Coco Lumber	400.00	bd.ft	15.00	6,000.00	
b. Ordinary Plywood, 1/4"x4'x8'	18.00	pc	520.00	9,360.00	
c. CWN, Assorted	5.00	kg	44.00	220.00	
V. Masonry Works (masonry walls & plastering)					
a. CHB 6" thk	650.00	pc	18.00	11,700.00	
b. Portland Cement	50.00	bag	289.44	14,472.16	
c. Washed Sand	10.00	cu.m	1,275.88	12,758.80	
d. 10mm dia. X 6m RSB	75.00	kg	43.00	3,225.00	
e. No. 16 GI Tie Wire	2.50	kg	81.00	202.50	
VI. Doors and Windows					
a. D-1, Hollow Core Flush Type swing door, complete w/ accessories, 0.90mx2.1m	2.00	set	1,765.27	3,530.54	
b. W-1, Jalousie window, 1.4m x 1.2m	2.00	set	924.00	1,848.00	
c. W-2, Jalousie window, 2.8m x 1.2m	2.00	set	1,848.00	3,696.00	
Sub-Total for E					P 178,864.82
Sub-total for E					P 322,391.17
F. Direct Cost (C+E)					407,441.33
G. Overhead, Contingencies and Miscellaneous	8%	per D.O 197 s 2016	32,595.31		
H. Contractor's Profit (CP)	8%	per D.O 197 s 2016	32,595.31		
I. Value Added Tax (VAT)	5%	per D.O 197 s 2016	23,631.60		
J. Total Unit Cost					496,263.54

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME

: Construction of By-Pass and Diversion Roads - Jct. National Highway Siocon - Jct. National Highway R.T. Lim (Pob. Siocon - Brgy. Tagaytay Section) Zamboanga del Norte
 : A.1.1(3) Const. of Field Office for the Engineer
 : LS
 :
 :
 :
 : 1.00

Item No./Description

Unit of Measurement

Output per hour

Quantity

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
Total (A+B)				P 0.00
C.				
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 Chromate	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 1 1/2"	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 tangle	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
Direct Cost (C+E)				
Overhead, Contingencies and Miscellaneous				8% per D.O 197 s 2016
Contractor's Profit (CP)				8% per D.O 197 s 2016
Value Added Tax (VAT)				5% per D.O 197 s 2016
Total Unit Cost				

PROJECT NAME

: Construction of By-Pass and Diversion Roads - Jct. National Highway Siocon - Jct. National Highway R.T. Lim (Pob. Siocon - Brgy. Tagaytay Section) Zamboanga del Norte

DETAILED UNIT PRICE ANALYSIS

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

Unit of Measurement : LS

Output per hour :

Quantity : 1.00

Name and Specifications	Quantity	Unit	Unit Cost	Amount
E. Materials				
X. Electrical Works				
a. 2 x 40w Fluorescent lighting fixtures	5.00	set	1,500.00	7,500.00
b. Porcelain Ceiling Outlet w/ female	2.00	pc	50.00	100.00
c. duplex Convenience 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		8%	per D.O 197 s 2016	
H. Contractor's Profit (CP)		8%	per D.O 197 s 2016	
I. Value Added Tax (VAT)		5%	per D.O 197 s 2016	
J. Total Unit Cost				

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Construction of By-Pass and Diversion Roads - Jct. National Highway Siocon - Jct. National Highway R.T. Lim (Pob. Siocon - Brgy. Tagaytay Section) Zambaanga del Norte

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

Unit of Measurement : LS

Output per hour :

Quantity : 1.00

Designation	No. of Person	No. of Days	Daily Rate	Amount
A.				
Sub-total for A				
			P	0.00
Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B				
Sub-total for B				
			P	0.00
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	7.00	mons	1,200.00	8,400.00
b. Water Bill	7.00	mons	1,000.00	7,000.00
c. LPG Gasul (11 kg)	7.00	mons	1,000.00	7,000.00
Sub-total for E				252,543.32
Sub-total for E				252,543.32
Sub-total for E				252,543.32
F. Direct Cost (C+E)				
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	12,627.17
J. Total Unit Cost				265,170.49

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Construction of By-Pass and Diversion Roads - Jct. National Highway Siocon - Jct. National Highway R.T. Lim (Pob. Siocon - Brgy. Tagaytay Section) Zamboanga del Norte

Item No./Description : A.1.2(5) Operation & Maintenance of Gov't. Service Vehicle

Unit of Measurement : L.S

Output per hour :

Quantity : 1.00

Designation	No. of Person	No. of Days	Daily Rate	Amount
A. Labor				
a. Service Driver	1	315.00	443.20	139,608.00
Sub-total for A				P 139,608.00
Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B Equipment, (2014 ACEL Rates)				
Sub-total for B				P 0.00
Total (A+B)				P 139,608.00
D. Output/day	0.00	L.S	/day	
Name and Specifications	Quantity	Unit	Unit Cost	Amount
E. Materials				
a. Liters, Diesel Fuel	3,150.00	liters	35.00	110,250.00
b. Engine Oil & Lubricants	1.00	ls	34,902.00	34,902.00
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 283,152.00
Direct Cost (C+E)				422,760.00
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		21,138.00
J. Total Unit Cost				443,898.00

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Construction of By-Pass and Diversion Roads - Jct. National Highway Siocon - Jct. National Highway R.T. Lim (Pob. Siocon - Brgy. Tagaytay Section) Zamboanga del Norte

Item No./Description : B.5 Project Billboard

Unit of Measurement : Unit

Output per hour :

Quantity : 2.00

Designation	No. of Person	No. of Days	Daily Rate	Amount
A. Labor				
a. Construction Foreman	1	0.25	611.92	152.98
b. Carpenters	1	0.25	443.20	110.80
c. Laborer	2	0.25	342.24	171.12
Sub-total for A				P 434.90
Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B Equipment, (2014 ACCEL Rates)				
Sub-total for B				P 0.00
Total (A+B)				P 434.90
D. Output/day	0.00	Unit /day		
Name and Specifications	Quantity	Unit	Unit Cost	Amount
E. Materials				
a. Marine Plywood 3/16" thk. X 4' x 8'	2.00	pc	423.00	846.00
b. Tarpaulin (4' x 8')	2.00	pc	800.00	1,600.00
c. Assorted Sizes Lumber	100.00	bd. Ft	15.00	1,500.00
d. Assorted Sizes CW Nails	2.00	kg	75.00	150.00
Sub-total for E				P 4,096.00
Direct Cost (C+E)				4,530.90
G. Overhead, Contingencies and Miscellaneous	8%	per D.O 197 s 2016		362.47
H. Contractor's Profit (CP)	8%	per D.O 197 s 2016		362.47
I. Value Added Tax (VAT)	5%	per D.O 197 s 2016		262.79
Total Unit Cost				2,759.32

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Construction of By-Pass and Diversion Roads - Jct. National Highway Siocon - Jct. National Highway R.T. Lim (Pob. Siocon - Brgy. Tagaytay Section) Zamboanga del Norte
Item No./Description : B.7 Occupational Safety & Health Program
Unit of Measurement : L.S
Output per hour :
Quantity : 1.00

Designation		No. of Person	No. of Days	Daily Rate	Amount
A. Labor					
a. Safety Practitioner		1	157.50	611.92	96,377.40
b. First Aider		1	315.00	443.20	139,608.00
Sub-total for A					
					P 235,985.40
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 235,985.40			
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)					P 248,345.40
3. Overhead, Contingencies and Miscellaneous					
1. Contractor's Profit (CP)			per D.O 197 s 2016 0.00		
Value Added Tax (VAT)			8% per D.O 197 s 2016 19,867.63		
			5% per D.O 197 s 2016 13,410.65		
Total Unit Cost			281,623.68		

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME

: Construction of By-Pass and Diversion Roads - Jct. National Highway Siocon - Jct. National Highway R.T. Lim (Pob. Siocon - Brgy. Tagaytay Section) Zamboanga del Norte

Item No./Description

: B.9 Mobilization and Demobilization

Unit of Measurement

: L.S

Output per hour

:

Quantity

: 1.00

Designation	No. of Person	No. of Days	Daily Rate	Amount
Sub-total for A				
A. Labor				0.00
Sub-total for B				
Name and Capacity				
B Equipment, (2014 ACEL Rates)	No. of Equip.	No. of Days	Daily Rate	Amount
a. Low Bed Trailer	2	6.00	34,043.00	408,516.00
b. Water Truck	2	6.00	19,600.00	235,200.00
c. Backhoe	2	6.00	12,296.00	147,552.00
d. Payloader	2	6.00	13,864.00	166,368.00
e. Dumptruck	4	6.00	11,360.00	272,640.00
f. Bulldozer	2	6.00	27,032.00	324,384.00
g. Road Roller	2	6.00	13,216.00	158,592.00
h. Road Grader	2	6.00	17,384.00	208,608.00
Sub-total for B				
Total (A+B)			P	1,921,860.00
Sub-total for C				
Output/day			P	1,921,860.00
Sub-total for D				
Name and Specifications				
E. Materials	Quantity	Unit	Unit Cost	Amount
Sub-total for E				
Direct Cost (C+E)			P	0.00
Sub-total for F				
Overhead, Contingencies and Miscellaneous				
Contractor's Profit (CP)			per D.O 197 s 2016	0.00
Value Added Tax (VAT)			per D.O 197 s 2016	0.00
Total Unit Cost			5% per D.O 197 s 2016	96,093.00
				2,017,953.00

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Construction of By-Pass and Diversion Roads - Jct. National Highway Siocon - Jct. National Highway R.T. Lim (Pob. Siocon - Brgy. Tagaytay Section) Zamboanga del Norte

Item No./Description : B.4(1) Construction Survey and Staking

Unit of Measurement : Km.

Output per hour : 0.04

Quantity : 9.13

Designation	No. of Person	No. of Days	Daily Rate	Amount
A. Labor (For Field Works)				
a. Geodetic Engineer	1	30.42	833.31	25,350.29
b. Skilled Laborer	3	30.42	443.20	40,448.03
c. Laborer	3	30.42	342.24	31,234.05
(For Office Works)				
a. Geodetic Engineer	1	91.26	833.31	76,050.87
b. Skilled Laborer	2	91.26	443.20	80,896.06
Sub-total for A				
P				
253,979.30				
Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B Equipment, (2014 ACEL Rates)				
a. Total Station w/ complete accessories Minor Tools (10% of labor)	1	30.42	800.00	24,336.96
				25,397.93
Sub-total for B				
P				
49,734.89				
Total (A+B)				
P				
303,714.19				
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				
Direct Cost (C+E)				
318,414.19				
Overhead, Contingencies and Miscellaneous				
	8%	per D.O 197 s 2016		25,473.13
Contractor's Profit (CP)				
	8%	per D.O 197 s 2016		25,473.13
Value Added Tax (VAT)				
	5%	per D.O 197 s 2016		18,468.02
Total Unit Cost				
42,495.42				

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Construction of By-Pass and Diversion Roads - Jct. National Highway Siocon - Jct. National Highway R.T. Lim (Pob. Siocon - Brgy. Tagaytay Section) Zamboanga del Norte

Item No./Description : 101(4a1) Removal of Structures and Obstruction

Unit of Measurement : ln.m

Output per hour : 6.00

Quantity : 57.00

Designation	No. of Person	No. of Days	Daily Rate	Amount
A. Labor				
a. Construction Foreman	1	1.19	611.92	726.66
b. Laborer	2	1.19	342.24	812.82
Sub-total for A				P 1,539.48
Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B Equipment, (2014 ACEL Rates)				
a. Backhoe	1	1.19	12,296.00	14,601.50
b. Boom Truck	1	0.59	8,143.20	4,835.03
Minor Tools (10% of Labor)				153.95
Sub-total for B				P 19,590.47
Total (A+B)				P 21,129.95
D. Output/day	48.00	ln.m /day		
Name and Specifications	Quantity	Unit	Unit Cost	Amount
E. Materials				
Sub-total for E				P 0.00
Direct Cost (C+E)				21,129.95
G. Overhead, Contingencies and Miscellaneous	8%	per D.O 197 s 2016		1,690.40
H. Contractor's Profit (CP)	8%	per D.O 197 s 2016		1,690.40
I. Value Added Tax (VAT)	5%	per D.O 197 s 2016		1,225.54
J. Total Unit Cost				451.51

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Construction of By-Pass and Diversion Roads - Jct. National Highway Siocon - Jct. National Highway R.T. Lim (Pob. Siocon - Brgy. Tagaytay Section) Zamboanga del Norte
Item No./Description : 101(6) Removal of Structures and Obstruction
Unit of Measurement : cu.m
Output per hour : 10.00
Quantity : 181.50

Designation	No. of Person	No. of Days	Daily Rate	Amount
A. Labor				
a. Construction Foreman	1	2.27	611.92	1,388.29
b. Laborer	2	2.27	342.24	1,552.91
Sub-total for A				P 2,941.21
Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B Equipment, (2014 ACEL Rates)				
a. Backhoe w/ Breaker	1	1.13	15,984.80	18,132.76
b. Backhoe	1	1.13	12,296.00	13,948.28
c. Dumptruck	1	2.27	11,360.00	25,773.00
Sub-total for B				P 57,854.03
Total (A+B)				P 60,795.24
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
Direct Cost (C+E)				60,795.24
G. Overhead, Contingencies and Miscellaneous	8%	per D.O 197 s 2016		4,863.62
H. Contractor's Profit (CP)	8%	per D.O 197 s 2016		4,863.62
I. Value Added Tax (VAT)	5%	per D.O 197 s 2016		3,526.12
Total Unit Cost				407.98

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Construction of By-Pass and Diversion Roads - Jct. National Highway Siocon - Jct. National Highway R.T. Lim (Pob. Siocon - Brgy. Tagaytay Section) Zamboanga del Norte

Item No./Description : 102(2) Surplus Common Excavation

Unit of Measurement : cu.m.

Output per hour : 60.00

Quantity : 22,830.5

Use Four (4) gangs					
Designation	No. of Person	No. of Days	Daily Rate	Amount	
A. Labor					
a. Construction Foreman	1	11.89	611.92	7,276.27	
b. Laborer	12	11.89	342.24	48,834.44	
Sub-total for A				P	56,110.71
Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount	
B Equipment, (2014 ACEL Rates)					
a. Bulldozer	4	11.89	27,032.00	1,285,737.66	
b. Payloader	4	11.89	13,864.00	659,420.94	
c. Payloader	4	2.97	13,864.00	164,855.24	
d. Dumptruck	12	11.89	11,360.00	1,620,965.50	
Sub-total for B				P	3,730,979.34
Total (A+B)				P	3,787,090.05
D. Output/day 1,920.00 cu.m /day					
Name and Specifications	Quantity	Unit	Unit Cost	Amount	
E. Materials					
Sub-total for E				P	0.00
Direct Cost (C+E)					3,787,090.05
G. Overhead, Contingencies and Miscellaneous	8%	per D.O 197 s 2016		302,967.20	
H. Contractor's Profit (CP)	8%	per D.O 197 s 2016		302,967.20	
I. Value Added Tax (VAT)	5%	per D.O 197 s 2016		219,651.22	
Total Unit Cost					202.04

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Construction of By-Pass and Diversion Roads - Jct. National Highway Siocon - Jct. National Highway R.T. Lim (Pob. Siocon - Brgy. Tagaytay Section) Zamboanga del Norte

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

Unit of Measurement : cu.m.

Output per hour : 1.25

Quantity : 37.00

Designation	No. of Person	No. of Days	Daily Rate	Amount
A. Labor				
a. Construction Foreman	1	3.70	611.92	2,264.10
b. Laborer	4	3.70	342.24	5,065.15
Sub-total for A				P 7,329.26
Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B Equipment, (2014 ACEL Rates)				
a. Plate Compactor	1	3.70	984.00	3,640.80
b. Water Truck	1	0.04	19,600.00	725.20
c. Minor Tools (10% of Labor)				
Sub-total for B				P 4,366.00
Total (A+B)				P 11,695.26
D. Output/day 10.00 cu.m. /day				
Name and Specifications	Quantity	Unit	Unit Cost	Amount
E. Materials				
a. Filling Materials	42.55	cu.m.	775.88	33,013.69
Sub-total for E				P 33,013.69
Direct Cost (C+E)				44,708.95
G. Overhead, Contingencies and Miscellaneous		8% per D.O 197 s 2016		3,576.72
H. Contractor's Profit (CP)		8% per D.O 197 s 2016		3,576.72
I. Value Added Tax (VAT)		5% per D.O 197 s 2016		2,593.12
J. Total Unit Cost				1,471.77

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Construction of By-Pass and Diversion Roads - Jct. National Highway Siocon - Jct. National Highway R.T. Lim (Pob. Siocon - Brgy. Tagaytay Section) Zamboanga del Norte

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

Unit of Measurement : cu.m.

Output per hour : 20.00

Quantity : 363.00

Designation	No. of Person	No. of Days	Daily Rate	Amount
A. Labor				
a. Construction Foreman	1	2.27	611.92	1,388.29
b. Laborer	3	2.27	342.24	2,329.37
Sub-total for A				P 3,717.66
Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B Equipment, (2014 ACEL Rates)				
a. Dumptruck	2	2.27	11,360.00	51,546.00
b. Backhoe Minor Tools (10% of Labor)	1	2.27	12,296.00	27,896.55
				371.77
Sub-total for B				P 79,814.32
Total (A+B)				P 83,531.98
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)				83,531.98
G. Overhead, Contingencies and Miscellaneous	8%	per D.O 197 s 2016		6,682.56
H. Contractor's Profit (CP)	8%	per D.O 197 s 2016		6,682.56
I. Value Added Tax (VAT)	5%	per D.O 197 s 2016		4,844.85
J. Total Unit Cost				280.28

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Construction of By-Pass and Diversion Roads - Jct. National Highway Siocon - Jct. National Highway R.T. Lim (Pob. Siocon - Brgy. Tagaytay Section) Zamboanga del Norte

Item No./Description : 104(1)a1 Embankment from Roadway Excavation

Unit of Measurement : cu.m.

Output per hour : 50.00

Quantity : 133,929.00

Use Four (4) gangs					
Designation	No. of Person	No. of Days	Daily Rate	Amount	
A. Labor					
For Excavation Work					
a. Construction Foreman	1	69.48	611.92	42,513.55	
b. Laborer	8	69.48	342.24	190,218.82	
Spreading & Compaction					
a. Construction Foreman	1	83.71	611.92	51,221.15	
b. Laborer	8	83.71	342.24	229,179.30	
Sub-total for A				P	513,132.83
Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount	
B Equipment, (2014 ACEL Rates)					
For Excavation Work					
a. Bulldozer	4	69.48	27,032.00	7,512,265.11	
b. Payloader	4	69.48	13,864.00	3,852,842.69	
c. Dumptruck	8	69.48	11,360.00	6,313,948.78	
Spreading and Compaction					
a. Road Grader	4	83.71	17,384.00	5,820,554.34	
b. Road Roller	4	83.71	13,216.00	4,425,014.16	
c. Water Truck	4	20.93	19,600.00	1,640,630.25	
Sub-total for B				P	29,565,255.32
Total (A+B)				P	30,078,388.15
D. Output/day 1,600.00 cu.m. /day					
Name and Specifications	Quantity	Unit	Unit Cost	Amount	
E. Materials					
Sub-total for E				P	0.00
Direct Cost (C+E)					30,078,388.15
G. Overhead, Contingencies and Miscellaneous	8%	per D.O 197 s 2016		2,406,271.05	
H. Contractor's Profit (CP)	8%	per D.O 197 s 2016		2,406,271.05	
I. Value Added Tax (VAT)	5%	per D.O 197 s 2016		1,744,546.51	
J. Total Unit Cost					273.54

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Construction of By-Pass and Diversion Roads - Jct. National Highway Siocon - Jct. National Highway R.T. Lim (Pob. Siocon - Brgy. Tagaytay Section) Zamboanga del Norte

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

Unit of Measurement : sq.m.

Output per hour : 300.00

Quantity : 44,504.50

Designation	No. of Person	No. of Days	Daily Rate	Amount
A. Labor				
a. Construction Foreman	1	18.54	611.92	11,347.16
b. Laborer	2	18.54	342.24	12,692.68
Sub-total for A				P 24,039.85
Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B Equipment, (2014 ACEL Rates)				
a. Road Grader	1	18.54	17,384.00	322,360.93
b. Road Roller	1	18.54	13,216.00	245,071.45
c. Water Truck	1	4.64	19,600.00	90,863.35
Sub-total for B				P 658,295.73
Total (A+B)				P 682,335.58
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
Direct Cost (C+E)				682,335.58
G. Overhead, Contingencies and Miscellaneous	8%	per D.O 197 s 2016		54,586.85
H. Contractor's Profit (CP)	8%	per D.O 197 s 2016		54,586.85
I. Value Added Tax (VAT)	5%	per D.O 197 s 2016		39,575.46
J. Total Unit Cost				18.67

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Construction of By-Pass and Diversion Roads - Jct. National Highway Siocon - Jct. National Highway R.T. Lim (Pob. Siocon - Brgy. Tagaytay Section) Zamboanga del Norte

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

Unit of Measurement : cu.m.

Output per hour : 50.00

Quantity : 37,204.50

Designation	No. of Person	No. of Days	Daily Rate	Amount
A. Labor				
a. Construction Foreman	1	93.01	611.92	56,915.44
b. Laborer	2	93.01	342.24	63,664.34
Sub-total for A				P 120,579.78
Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B Equipment, (2014 ACEL Rates)				
a. Road Grader	1	93.01	17,384.00	1,616,907.57
b. Road Roller	1	93.01	13,216.00	1,229,236.68
c. Water Truck	1	23.25	19,600.00	455,755.13
Sub-total for B				P 3,301,899.38
Total (A+B)				P 3,422,479.16
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%)	42,785.18	cu.m.	1,043.88	44,662,588.48
Sub-total for E				P 44,662,588.48
Direct Cost (C+E)				48,085,067.64
G. Overhead, Contingencies and Miscellaneous	8%	per D.O 197 s 2016		3,846,805.41
H. Contractor's Profit (CP)	8%	per D.O 197 s 2016		3,846,805.41
I. Value Added Tax (VAT)	5%	per D.O 197 s 2016		2,788,933.92
J. Total Unit Cost				1,574.21

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Construction of By-Pass and Diversion Roads - Jct. National Highway Siocon - Jct. National Highway R.T. Lim (Pob. Siocon - Brgy. Tagaytay Section) Zamboanga del Norte
Item No./Description : 300 (1) Aggregate Surface Course
Unit of Measurement : cu.m.
Output per hour : 50.00
Quantity : 3,125.00

Designation	No. of Person	No. of Days	Daily Rate	Amount
A. Labor				
a. Construction Foreman	1	7.81	611.92	4,780.63
b. Laborer	2	7.81	342.24	5,347.50
Sub-total for A				P 10,128.13
Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B Equipment, (2014 ACEL Rates)				
a. Road Grader	1	7.81	17,384.00	135,812.50
b. Road Roller	1	7.81	13,216.00	103,250.00
c. Water Truck	1	1.95	19,600.00	38,281.25
Sub-total for B				P 277,343.75
Total (A+B)				P 287,471.88
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%)	3,593.75	cu.m.	1,180.88	4,243,787.50
Sub-total for E				P 4,243,787.50
Direct Cost (C+E)				4,531,259.38
G. Overhead, Contingencies and Miscellaneous	8%	per D.O 197 s 2016		362,500.75
H. Contractor's Profit (CP)	8%	per D.O 197 s 2016		362,500.75
I. Value Added Tax (VAT)	5%	per D.O 197 s 2016		262,813.04
J. Total Unit Cost				1,766.10

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Construction of By-Pass and Diversion Roads - Jct. National Highway Siocon - Jct. National Highway R.T. Lim (Pob. Siocon - Brgy. Tagaytay Section) Zamboanga del Norte
Item No./Description : 311(1)1e1a Portland Cement Concrete Pavement-using Conventional Method, 0.28m thick
Unit of Measurement : sq.m.
Output per hour : 57.70
Quantity : 64,766.50

Designation	No. of Person	No. of Days	Daily Rate	Amount
A. Labor				
a. Construction Foreman	1	140.31	611.92	85,857.71
b. Skilled	4	140.31	443.20	248,739.28
c. Laborer	12	140.31	342.24	576,231.03
Sub-total for A				P 910,828.01
Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B Equipment, (2014 ACEL Rates)				
a. Transit Mixer	4	140.31	10,544.00	5,917,660.10
b. Concrete Vibrator	2	140.31	730.00	204,850.71
c. Batching Plant	1	140.31	14,076.00	1,974,985.39
d. Pay Loader	1	140.31	13,864.00	1,945,239.94
e. Concrete Screeder	1	140.31	4,360.00	611,745.97
f. Water Truck	1	140.31	19,600.00	2,750,050.69
g. Concrete Saw	1	140.31	261.04	36,626.19
h. Bar Cutter	1	14.03	1,758.00	24,666.27
Minor Tools (5% of labor)				45,541.40
Sub-total for B				P 13,511,366.66
Total (A+B)				P 14,422,194.68
D. Output/day	461.60	sq.m.	/day	
Name and Specifications	Quantity	Unit	Unit Cost	Amount
E. Materials				
a. Reinforcing Steel Bar	32,383.25	kg	41.00	1,327,713.25
b. Curing Compound	18,782.29	lit	40.00	751,291.40
c. Asphalt Sealant	11,010.31	lit	75.00	825,772.88
d. Sand	9,974.04	cu.m	1,275.88	12,725,679.43
e. Gravel	18,134.62	cu.m	1,275.88	23,137,598.97
f. Cement	172,278.89	bag	289.44	49,864,948.15
g. Concrete Saw	9.71	pc	8,000.00	77,719.80
h. Pipe Sleeve, 2" dia.	505.18	l.m	133.00	67,188.77
i. Grease/Tar	505.18	lit	21.00	10,608.75
j. Steel Forms	29,792.59	lit	60.00	1,787,555.40
Sub-total for E				P 90,576,076.79
Direct Cost (C+E)				104,998,271.47
G. Overhead, Contingencies and Miscellaneous	8%	per D.O 197 s 2016		8,399,861.72
H. Contractor's Profit (CP)	8%	per D.O 197 s 2016		8,399,861.72
I. Value Added Tax (VAT)	5%	per D.O 197 s 2016		6,089,899.75
Total Unit Cost				1,974.60

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Construction of By-Pass and Diversion Roads - Jct. National Highway Siocon - Jct. National Highway R.T. Lim (Pob. Siocon - Brgy. Tagaytay Section) Zamboanga del Norte

Item No./Description : 311(1)a Portland Cement Concrete Pavement, 0.15m. Thick

Unit of Measurement : sq.m

Output per hour : 107.33

Quantity : 9,175.00

Designation	No. of Person	No. of Days	Daily Rate	Amount
A. Labor				
a. Construction Foreman	1	10.69	611.92	6,538.67
b. Skilled	4	10.69	443.20	18,943.26
c. Laborer	12	10.69	342.24	43,884.08
Sub-total for A				P 69,366.01
Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B Equipment, (2014 ACEL Rates)				
a. Transit Mixer	4	10.69	10,544.00	450,671.76
b. Concrete Vibrator	2	10.69	730.00	15,600.83
c. Batching Plant	1	10.69	14,076.00	150,409.14
d. Pay Loader	1	10.69	13,864.00	148,143.81
e. Concrete Screeder	1	10.69	4,360.00	46,588.79
f. Water Truck	1	10.69	19,600.00	209,435.85
g. Concrete Saw	1	10.69	261.04	2,789.34
h. Bar Cutter	1	1.07	1,758.00	1,878.51
Minor Tools (5% of Labor)				51,275.90
Sub-total for B				P 1,076,793.94
Total (A+B)				P 1,146,159.95
D. Output/day	858.64	sq.m /day		
Name and Specifications	Quantity	Unit	Unit Cost	Amount
E. Materials				
a. Reinforcing Steel Bar	3,027.75	kg	41.00	124,137.75
b. Curing Compound	2,660.75	lit	40.00	106,430.00
c. Asphalt Sealant	1,101.00	lit	75.00	82,575.00
d. Steel Form	4,220.50	l.m	40.00	168,820.00
e. Sand	756.94	cu.m	1,275.88	965,761.42
f. Gravel	1,376.25	cu.m	1,275.88	1,755,929.85
g. Cement	13,120.25	bag	289.44	3,797,566.76
h. Concrete Saw	1.38	pc	8,000.00	11,010.00
i. Pipe Sleeve, 1" dia.	71.57	l.m	133.00	9,518.15
j. Grease/Tar	13.76	lit	21.00	289.01
Sub-total for E				P 7,022,037.93
Direct Cost (C+E)				8,168,197.88
G. Overhead, Contingencies and Miscellaneous				8% per D.O 197 s 2016 653,455.83
H. Contractor's Profit (CP)				8% per D.O 197 s 2016 653,455.83
I. Value Added Tax (VAT)				5% per D.O 197 s 2016 473,755.48
J. Total Unit Cost				1,084.34

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Construction of By-Pass and Diversion Roads - Jct. National Highway Siocon - Jct. National Highway R.T. Lim (Pob. Siocon - Brgy. Tagaytay Section) Zamboanga del Norte

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

Unit of Measurement : kg.

Output per hour : 180.00

Quantity : 33,343.00

Designation	No. of Person	No. of Days	Daily Rate	Amount
A. Labor				
a. Construction Foreman	1	23.15	611.92	14,168.92
b. Skilled	2	23.15	443.20	20,524.47
c. Laborer	8	23.15	342.24	63,396.16
Sub-total for A				P 98,089.55
Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B Equipment, (2014 ACEL Rates)				
a. Bar Cutter	1	11.58	1,758.00	20,353.12
b. Bar Bender	1	11.58	2,812.00	32,555.73
c. Cargo Truck	1	3.47	6,264.00	21,756.31
Sub-total for B				P 74,665.17
Total (A+B)				P 172,754.71
D. Output/day	1,440.00 kg. /day			
Name and Specifications	Quantity	Unit	Unit Cost	Amount
E. Materials				
a. Tie Wire	700.20	kgs	70.00	49,014.21
b. Reinforcing Steel Bar, Grade 40	35,010.15	kgs	41.00	1,435,416.15
Sub-total for E				P 1,484,430.36
Direct Cost (C+E)				1,657,185.07
G. Overhead, Contingencies and Miscellaneous	8%	per D.O 197 s 2016		132,574.81
H. Contractor's Profit (CP)	8%	per D.O 197 s 2016		132,574.81
I. Value Added Tax (VAT)	5%	per D.O 197 s 2016		96,116.73
J. Total Unit Cost				60.54

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Construction of By-Pass and Diversion Roads - Jct. National Highway Siocon - Jct. National Highway R.T. Lim (Pob. Siocon - Brgy. Tagaytay Section) Zamboanga del Norte

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

Unit of Measurement : kg.

Output per hour : 180.00

Quantity : 30.035,50

Designation	No. of Person	No. of Days	Daily Rate	Amount
A. Labor				
a. Construction Foreman	1	20.86	611.92	12,763.42
b. Skilled Laborer	2	20.86	443.20	18,488.52
c. Laborer	8	20.86	342.24	57,107.50
Sub-total for A				P 88,359.44
Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B Equipment, (2009 ACEL Rates)				
a. Bar Cutter	1	10.43	1,758.00	18,334.17
b. Bar Bender	1	10.43	2,812.00	29,326.33
c. Cargo Truck	1	3.13	6,264.00	19,598.16
Sub-total for B				P 67,258.66
Total (A+B)				P 155,618.10
D. Output/day	1,440.00	kg. /day		
Name and Specifications	Quantity	Unit	Unit Cost	Amount
E. Materials				
a. Tie Wire	630.75	kg	70.00	44,152.19
b. Reinforcing Steel Bar, Grade 60	31,537.28	kg	43.00	1,356,102.83
Sub-total for E				P 1,400,255.01
Direct Cost (C+E)				1,555,873.11
G. Overhead, Contingencies and Miscellaneous	8%	per D.O 197 s 2016		124,469.85
H. Contractor's Profit (CP)	8%	per D.O 197 s 2016		124,469.85
I. Value Added Tax (VAT)	5%	per D.O 197 s 2016		90,240.64
J. Total Unit Cost				63.09

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Construction of By-Pass and Diversion Roads - Jct. National Highway Siocon - Jct. National Highway R.T. Lim (Pob. Siocon - Brgy. Tagaytay Section) Zamboanga del Norte

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

Unit of Measurement : cu.m

Output per hour : 1.40

Quantity : 824.00

Note: Use Two (2) gangs

Designation	No. of Person	No. of Days	Daily Rate	Amount
A. Labor				
a. Construction Foreman	1	36.79	611.92	22,509.91
b. Skilled Laborer	8	36.79	443.20	130,427.43
c. Laborer	16	36.79	342.24	201,432.69
<i>Installation/Removal of Form Works</i>				
a. Skilled Laborer	8	36.79	443.20	130,427.43
b. Laborer	16	36.79	342.24	201,432.69
Sub-total for A				P 686,230.14
Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B Equipment, (2014 ACEL Rates)				
a. One Bagger Mixer	2	36.79	1,376.00	101,234.29
b. Concrete Vibrator	2	36.79	972.00	71,511.43
c. Water Truck	2	3.68	19,600.00	144,200.00
Minor Tools (5% of Labor)				34,311.51
Sub-total for B				P 351,257.22
Total (A+B)				P 1,037,487.36
D. Output/day	22.40	cu.m	/day	
Name and Specifications	Quantity	Unit	Unit Cost	Amount
E. Materials				
a. Form Lumber	14,420.00	bd.ft	42.00	605,640.00
b. Plywood	329.60	pc	1,227.00	404,419.20
c. Assorted CW Nails	576.80	kg.	75.00	43,260.00
d. Portland Cement	7,828.00	bag	289.44	2,265,761.14
e. Sand	412.00	cu.m	1,275.88	525,662.56
f. Gravel	824.00	cu.m	1,275.88	1,051,325.12
Sub-total for E				P 4,896,068.02
Direct Cost (C+E)				5,933,555.38
G. Overhead, Contingencies and Miscellaneous	8%	per D.O 197 s 2016		474,684.43
H. Contractor's Profit (CP)	8%	per D.O 197 s 2016		474,684.43
I. Value Added Tax (VAT)	5%	per D.O 197 s 2016		344,146.21
Total Unit Cost				8,770.72

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Construction of By-Pass and Diversion Roads - Jct. National Highway Siocon - Jct. National Highway R.T. Lim (Pob. Siocon - Brgy. Tagaytay Section) Zamboanga del Norte

Item No./Description : 405 (1) b3 Structural Concrete, Class A

Unit of Measurement : cu.m

Output per hour : 1.40

Quantity : 328.00

Note: Use Two (2) gangs

Designation	No. of Person	No. of Days	Daily Rate	Amount
A. Labor				
a. Construction Foreman	1	14.64	0.00	0.00
b. Skilled Laborer	8	14.64	0.00	0.00
c. Laborer	16	14.64	611.92	143,364.11
<i>Installation/Removal of Form Works</i>				
a. Skilled Laborer	8	14.64	0.00	0.00
b. Laborer	16	14.64	611.92	143,364.11
Sub-total for A				P 286,728.23
Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B				
Equipment, (2014 ACEL Rates)				
a. One Bagger Mixer	2	36.79	1,376.00	101,234.29
b. Concrete Vibrator	2	36.79	972.00	71,511.43
c. Water Truck	2	1.46	19,600.00	57,400.00
Minor Tools (5% of Labor)				14,336.41
Sub-total for B				P 244,482.13
Total (A+B)				P 531,210.35
D. Output/day	22.40	cu.m	/day	
Name and Specifications	Quantity	Unit	Unit Cost	Amount
E. Materials				
a. Form Lumber	5,740.00	bd.ft	42.00	241,080.00
b. Plywood	131.20	pc	1,227.00	160,982.40
c. Assorted CW Nails	229.60	kg.	75.00	17,220.00
d. Portland Cement	3,116.00	bag	289.44	901,904.92
e. Sand	164.00	cu.m	1,275.88	209,244.32
f. Gravel	328.00	cu.m	1,275.88	418,488.64
Sub-total for E				P 1,948,920.28
Direct Cost (C+E)				2,480,130.63
G. Overhead, Contingencies and Miscellaneous				8% per D.O 197 s 2016 198,410.45
H. Contractor's Profit (CP)				8% per D.O 197 s 2016 198,410.45
I. Value Added Tax (VAT)				5% per D.O 197 s 2016 143,847.58
J. Total Unit Cost				9,209.75

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Construction of By-Pass and Diversion Roads - Jct. National Highway Siocon - Jct. National Highway R.T. Lim (Pob. Siocon - Brgy. Tagaytay Section) Zamboanga del Norte

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

Unit of Measurement : cu.m

Output per hour : 1.40

Quantity : 26.00

Designation	No. of Person	No. of Days	Daily Rate	Amount
A. Labor				
a. Construction Foreman	1	2.32	611.92	1,420.53
b. Skilled Laborer	4	2.32	443.20	4,115.43
c. Laborer	8	2.32	342.24	6,355.89
Sub-total for A				P 11,891.84
Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B Equipment, (2014 ACEL Rates)				
a. One Bagger Mixer	1	2.32	1,376.00	3,194.29
b. Concrete Vibrator	1	2.32	730.00	1,694.64
c. Water Truck	1	2.32	19,600.00	45,500.00
Sub-total for B				P 50,388.93
Total (A+B)				P 62,280.77
D. Output/day 11.20 cu.m /day				
Name and Specifications	Quantity	Unit	Unit Cost	Amount
E. Materials				
a. Form Lumber	8.58	bd.ft	42.00	360.36
b. Plywood	41.60	pc	853.00	35,484.80
c. Assorted CW Nails	21.58	kg.	75.00	1,618.50
d. Portland Cement	247.00	bag	289.44	71,492.46
e. Sand	13.00	cu.m	1,275.88	16,586.44
f. Gravel	26.00	cu.m	1,275.88	33,172.88
Sub-total for E				P 158,715.44
Direct Cost (C+E)				220,996.21
Overhead, Contingencies and Miscellaneous			8% per D.O 197 s 2016	17,679.70
Contractor's Profit (CP)			8% per D.O 197 s 2016	17,679.70
Value Added Tax (VAT)			5% per D.O 197 s 2016	12,817.78
Total Unit Cost				10,352.82

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Construction of By-Pass and Diversion Roads - Jct. National Highway Siocon - Jct. National Highway R.T. Lim (Pob. Siocon - Brgy. Tagaytay Section) Zamboanga del Norte

Item No./Description : 500(1)b3 Pipe Culvert & Storm Drain

Unit of Measurement : ln.m

Output per hour : 1.00

Quantity : 305.00

Designation	No. of Person	No. of Days	Daily Rate	Amount
A. Labor				
a. Construction Foreman	1	38.13	611.92	23,329.45
b. Skilled Laborer	2	38.13	443.20	33,794.00
c. Laborer	4	38.13	342.24	52,191.60
Sub-total for A				P 109,315.05
Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B Equipment, (2014 ACEL Rates)				
a. Backhoe	1	19.06	12,296.00	234,392.50
b. Plate Compactor	1	19.06	984.00	18,757.50
Minor Tools (10% of Labor)				10,931.51
Sub-total for B				P 264,081.51
Total (A+B)				P 373,396.56
D. Output/day	8.00	ln.m	/day	
Name and Specifications	Quantity	Unit	Unit Cost	Amount
E. Materials				
a. Portland Cement	329.40	bag	289.44	95,342.58
b. Sand	18.61	cu.m	1,275.88	23,737.75
c. RC Pipes (910 mm dia.)	305.00	pc	1,820.00	555,100.00
d. Sand Bedding	39.04	cu.m	1,275.88	49,810.36
Sub-total for E				P 723,990.68
Direct Cost (C+E)				1,097,387.24
G. Overhead, Contingencies and Miscellaneous	8%	per D.O 197 s 2016		87,790.98
H. Contractor's Profit (CP)	8%	per D.O 197 s 2016		87,790.98
I. Value Added Tax (VAT)	5%	per D.O 197 s 2016		63,648.46
J. Total Unit Cost				4,382.35

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Construction of By-Pass and Diversion Roads - Jct. National Highway Siocon - Jct. National Highway R.T. Lim (Pob. Siocon - Brgy. Tagaytay Section) Zamboanga del Norte

Item No./Description : 505(1a) Grouted Riprap, Class A

Unit of Measurement : cu.m

Output per hour : 1.25

Quantity : 1,335.50

Note: Use Two (2) gangs

Designation	No. of Person	No. of Days	Daily Rate	Amount
A. Labor				
a. Construction Foreman	1	66.78	611.92	40,860.96
b. Skilled Laborer	4	66.78	443.20	118,378.72
c. Laborer	16	66.78	342.24	365,649.22
Sub-total for A				P 524,888.89
Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B Equipment, (2014 ACEL Rates)				
a. One Bagger Mixer	2	66.78	1,376.00	183,764.80
b. Water Truck	2	3.34	19,600.00	130,879.00
Minor Tools (5% of Labor)				26,244.44
Sub-total for B				P 340,888.24
Total (A+B)				P 865,777.14
D. Output/day 20.00 cu.m /day				
Name and Specifications	Quantity	Unit	Unit Cost	Amount
E. Materials				
a. Cement	4,006.50	bag	289.44	1,159,654.06
b. Sand	333.88	cu.m	1,275.88	425,984.44
c. Gravel Fill	20.03	cu.m	1,275.88	25,559.07
d. Weep Holes (PVC), 2" dia.	400.65	ln.m	133.00	53,286.45
e. Filter Cloth	20.03	sq.m	160.00	3,205.20
f. Boulders	1,402.28	cu.m	1,525.88	2,139,703.38
Miscellaneous (1% of Materials)				38,073.93
Sub-total for E				P 3,845,466.52
Direct Cost (C+E)				4,711,243.66
Overhead, Contingencies and Miscellaneous		8%	per D.O 197 s 2016	376,899.49
Contractor's Profit (CP)		8%	per D.O 197 s 2016	376,899.49
Value Added Tax (VAT)		5%	per D.O 197 s 2016	273,252.13
Total Unit Cost				4,296.74

DETAILED UNIT PRICE ANALYSIS

PROJECT NAME : Construction of By-Pass and Diversion Roads - Jct. National Highway Siocon - Jct. National Highway R.T. Lim (Pob. Siocon - Brgy. Tagaytay Section) Zamboanga del Norte

Item No./Description : 506(1) Stone Masonry

Unit of Measurement : cu.m

Output per hour : 1.56

Quantity : 219.50

Designation	No. of Person	No. of Days	Daily Rate	Amount
A. Labor				
a. Construction Foreman	1	17.56	611.92	10,745.32
b. Skilled Laborer	2	17.56	443.20	15,565.18
c. Laborer	8	17.56	342.24	48,077.88
Sub-total for A				P 74,388.37
Name and Capacity	No. of Equip.	No. of Days	Daily Rate	Amount
B Equipment, (2014 ACEL Rates)				
a. One Bagger Mixer	1	17.56	1,376.00	24,162.56
b. Water Truck	1	0.88	19,600.00	17,208.80
c. Backhoe	1	1.76	12,296.00	21,591.78
Minor Tools (10% of Labor)				7,438.84
Sub-total for B				P 70,401.97
Total (A+B)				P 144,790.35
D. Output/day	12.50	cu.m	/day	
Name and Specifications	Quantity	Unit	Unit Cost	Amount
E. Materials				
a. Cement	1,207.25	bag	289.44	349,430.27
b. Sand	65.85	cu.m	1,275.88	84,016.70
c. Gravel Fill	4.39	cu.m	1,275.88	5,601.11
d. Weep Holes (PVC)	65.85	ln.m	133.00	8,758.05
e. Filter Cloth	3.29	sq.m	160.00	526.80
f. Boulders	230.48	cu.m	1,525.88	351,677.19
Miscellaneous (1% of Materials)				8,000.10
Sub-total for E				P 808,010.22
Direct Cost (C+E)				952,800.57
G. Overhead, Contingencies and Miscellaneous	8%	per D.O 197 s 2016		76,224.05
H. Contractor's Profit (CP)	8%	per D.O 197 s 2016		76,224.05
I. Value Added Tax (VAT)	5%	per D.O 197 s 2016		55,262.43
Total Unit Cost				5,287.07

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 DEL NORTE 2ND 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	42.00	X 10.14	= 425.88	+ 850.00	= 1,275.88
Cost of Coarse Aggregates	42.00	X 10.14	= 425.88	+ 850.00	= 1,275.88
Cost of Item 200 Materials	42.00	X 10.14	= 425.88	+ 618.00	= 1,043.88
Cost of Item 201 Materials	42.00	X 10.14	= 425.88	+ 663.00	= 1,088.88
Cost of Item 300 Materials	42.00	X 10.14	= 425.88	+ 755.00	= 1,180.88
Cost of Boulders	42.00	X 10.14	= 425.88	+ 1,100.00	= 1,525.88
Cost of Embankment, Common Borrow	42.00	X 10.14	= 425.88	+ 270.00	= 695.88
Cost of Embankment, Selected Borrow	42.00	X 10.14	= 425.88	+ 350.00	= 775.88

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	172,278.89
Portland Cement Concrete Pavement; 0.15m. Thick	13,120.25
Structural Concrete, Class A	7,828.00
Grouted Riprap, Class A	4,006.50
Stone Masonry	1,207.25
Const. of Field Office for the Engineer	90.00
	50.00
Concrete Structure (Lean Concrete)	247.00
TOTAL	198,827.89

Quantity = 198,827.89 Bags

Delivery Charge = P 0.12 /bag/km

SITE	HAULING DISTANCE
Zamboanga de Norte 2ND DEO	47.00
PROJECT SITE	

* Average Hauling Distance from source to assumed stockpiling area:
say 47.00 km.

Delivery Charge = P 0.12 X 47.00
Delivery Charge = P 5.64 /bag

* Delivery Truck : 198,827.89 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
*Dumprtruck (10 Wheeler) days computation : **TIME - MOTION ANALYSIS**

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

Loaded Running = $\frac{47.00 \times 60.00}{30.00}$ = 94 mins.

Unloading Running = $\frac{47.00 \times 60.00}{40.00}$ = 70.5 mins.

Loading & Unloading = 45.00 mins.

Capacity of Dumphtruck = 8.00 cu.m.

500.00 bags

Total Cycle Time = 209.50 mins.

No. of trips for Dumptruck per day = $\frac{8.00}{209.50} \times \frac{60.00}{1} = 2.29$ trips

Dumptruck Daily Outpout = $500.00 \times 2.29 = 1,145.58$ cu.m.
Using 4 Dumptruck = $1,145.58 \times 4.00 = 4,582.34$ cu.m.

No. of Days for Dumptruck = $\frac{198,827.89}{4,582.34} = 43.39$ days

No. of Days for Labor for unloading = complimentary to D.Truck days = 43.39 days

DELIVERY COST:

198,827.89 Bags, Portland Cement @ P 5.64 /bag = P 1,121,389.30
Sub-total **1,121,389.30**

LABOR:

1 Foreman @ P 558.00 /day X 43.39 days = P 24,211.64
10 Laborers @ P 312.24 /day X 43.39 days = 135,481.08
Sub-total **159,692.72**

MATERIALS:

198,827.89 Bags, Portland Cement @ P 283.00 /bag = P 56,268,292.87
Sub-total **56,268,292.87**

Estimated Quantity : 198,827.89 Bags

Unit Cost P 289.44
Grand Total P 57,549,374.89
Delivery Cost P 1,121,389.30
Labor P 159,692.72
Materials P 56,268,292.87