

TABLE-I.22 DETAILED COST ESTIMATE (ECONOMIC) SABO WORK, NASISI RIVER

(Unit: Pesos)

Description	Unit	Quantity	Foreign Currency		Local Currency		Remarks
			Unit Price	Amount	Unit Price	Amount	
1. Contract Cost							
(1) Direct Cost							
(i) No.1 Consolidation Dam (L=230m)							F/C: 2,700,540 L/C: 3,508,520
(a) Consolidation dam (230m)							
Excavation, in common	cu.m	13,000	14.60	189,800	4.62	60,060	
Backfill	cu.m	1,500	13.88	20,820	9.20	13,800	
Concrete, type A	cu.m	3,560	172.38	613,670	186.31	663,260	
Rubble concrete	cu.m	10,430	138.69	1,446,540	149.35	1,557,720	
Backfill concrete, type B	cu.m	880	144.00	126,720	175.55	154,480	
Formwork	sq.m	6,320			86.22	544,910	
Joint filler	sq.m	310	54.60	16,930	3.70	1,150	
(b) Spur Dike (180m)							
Excavation, in common	cu.m	3,230	14.60	47,160	4.62	14,920	
Embankment	cu.m	1,550	16.01	24,820	6.08	9,420	
Riprap bedding	cu.m	420	17.07	7,170	24.90	10,460	
Backfill	cu.m	1,530	13.88	21,240	9.20	14,080	
Concrete type B	cu.m	490	113.00	55,370	171.35	83,960	
Formwork	sq.m	2,750			40.42	111,160	
Joint filler	sq.m	90	54.60	4,910	3.70	330	
(c) Wet masonry (2,060 m ²)							
Backfill concrete, type B	cu.m	410	144.00	59,040	175.55	71,980	
Rubble stone masonry	sq.m	2,060	19.88	40,950	48.75	100,430	

Description	Unit	Quantity	Foreign Currency		Local Currency		Remarks
			Unit Price	Amount	Unit Price	Amount	
Cobble stone	cu.m	1,150	0.77	890	61.61	70,850	
Inter locking mortar	cu.m	100	245.13	24,510	255.45	25,550	
(ii) <u>No.2 Consolidation Dam (L=230m)</u>							F/C: 2,558,970 L/C: 3,204,020
(a) <u>Consolidation Dam (230m)</u>							
Excavation	cu.m	13,030	14.60	190,240	4.62	60,200	
Backfill	cu.m	1,500	13.88	20,820	9.20	13,800	
Concrete, type A	cu.m	3,570	172.38	615,400	186.31	655,130	
Rubble concrete	cu.m	10,430	138.69	1,446,540	149.35	1,557,720	
Backfill concrete, type B	cu.m	890	144.00	126,720	175.55	154,480	
Formwork	sq.m	6,320			86.22	544,910	
Joint filler	sq.m	310	54.60	16,930	3.70	1,150	
(b) <u>Spur Dike (160m)</u>							
Excavation, in common	cu.m	2,870	14.60	41,900	4.62	13,260	
Embankment	cu.m	1,380	16.01	22,090	6.08	8,390	
Riprap bedding	cu.m	380	17.07	6,490	24.90	9,460	
Backfill	cu.m	1,360	13.88	18,880	9.20	12,510	
Concrete, type B	cu.m	430	113.00	48,590	171.35	73,680	
Formwork	sq.m	2,450			40.42	99,030	
Joint filler	sq.m	80	54.60	4,370	3.70	300	
(iii) <u>No.1-No.3 Ground Sill (L=690m)</u>							F/C: 2,877,250 L/C: 4,254,180
(a) <u>Ground Sill (690m)</u>							

Description	Unit	Quantity	Foreign Currency		Local Currency		Remarks
			Unit Price	Amount	Unit Price	Amount	
Excavation, in common	cu.m	42,540	14.60	621,080	4.62	196,530	
Backfill	cu.m	6,900	13.88	95,770	9.20	63,480	
Concrete, type A	cu.m	7,590	126.88	963,020	179.72	1,364,070	
Formwork	sq.m	5,970			40.42	241,310	
Joint filler	sq.m	390	54.60	21,290	3.70	1,440	
(b) Spur Dike (960m)							
Excavation, in common	cu.m	8,610	14.60	125,710	4.62	39,780	
Embankment	cu.m	4,140	16.01	66,280	6.08	25,170	
Riprap bedding	cu.m	1,140	17.07	19,460	24.90	28,390	
Backfill	cu.m	4,080	13.88	56,630	9.20	37,540	
Concrete, type B	cu.m	1,290	113.00	145,770	171.35	221,040	
Formwork	sq.m	7,350			40.42	297,090	
Joint filler	sq.m	360	54.60	19,660	3.70	1,330	
(c) Wet masonry (5,490 m ²)							
Concrete, type B	cu.m	1,100	144.00	158,400	175.55	193,110	
Rubble stone masonry	sq.m	5,490	19.88	109,140	48.75	267,640	
Cobble stone	cu.m	3,060	0.77	2,360	61.61	188,530	
Inter locking mortar	cu.m	270	245.13	66,190	255.45	68,970	
(d) Concrete Block (600 nos.)							
Concrete, type B	cu.m	3,420	113.00	386,460	171.35	586,020	
Formwork	sq.m	10,440			40.42	421,980	

Description	Unit	Quantity	Foreign Currency		Local Currency		Remarks
			Unit Price	Amount	Unit Price	Amount	
Reinforcing bar, ϕ16 mm	kg	7,980	2.51	20,030	1.35	10,770	
Sub total (1)				8,136,760		10,966,730	
(2) General (10% of (1))				813,680		1,096,670	
(3) Supervision and Miscellaneous (6% of (1) to (2))				537,030		723,800	
(4) Profit (10% of (1) to (3))				-		-	
(5) Contractor's Tax (3% of (1) to (4))				-		-	
Sub total (Contract Cost)				<u>9,487,470</u>		<u>12,787,200</u>	<u>P22,274,670</u>
2. Right of Way/Site Acquisition				-		-	
3. Engineering Cost (10% of Item 1)				-		2,227,470	
4. Project Management Cost (5% of Item 1)				-		1,113,730	
5. Contingency							
(1) Physical Contingency (15% of Item 1)				1,423,120		1,918,080	
(2) Price, Escalation							
Total Estimated Project Cost				<u>10,910,590</u>		<u>18,046,480</u>	<u>P28,957,070</u>

TABLE-I.23 DETAILED COST ESTIMATE (ECONOMIC) SABO WORK, ANULING RIVER

(Unit: Pesos)

Description	Unit	Quantity	Foreign Currency		Local Currency		Remarks
			Unit Price	Amount	Unit Price	Amount	
1. Contract Cost							
(1) Direct Cost							
(i) <u>No.1 Sabo Dam (L=60m), Anuling (1)</u>							
Excavation, in common	cu.m	9,120	14.60	133,150	4.62	42,130	F/C: 1,139,810 L/C: 1,403,300
Backfill	cu.m	400	13.88	5,550	9.20	3,680	
Concrete, type A	cu.m	630	172.38	108,600	186.31	117,380	
Rubble concrete	cu.m	5,740	138.69	796,080	149.35	857,270	
Backfill concrete, type B	cu.m	590	144.00	84,960	175.55	103,570	
Formwork	sq.m	3,230			86.22	278,490	
Joint filler	sq.m	210	54.60	11,470	3.70	780	
(ii) <u>No.1 Ground Sill (A) (80m), Anuling (1)</u>							
(a) <u>Ground Sill (80m)</u>							
Excavation, in common	cu.m	4,930	14.60	71,980	4.62	22,780	
Backfill	cu.m	800	13.88	11,100	9.20	7,360	
Concrete, type A	cu.m	880	126.88	111,650	179.72	158,150	
Formwork	sq.m	690			40.42	27,890	
Joint filler	sq.m	50	54.60	2,730	3.70	190	
(b) <u>Concrete Block (80 nos.)</u>							
Concrete, type B	cu.m	460	113.00	51,980	171.35	78,820	
Formwork	sq.m	1,010			40.42	40,820	
Reinforcing bar	kg	1,060	2.51	2,660	1.35	1,430	

Description	Unit	Quantity	Foreign Currency		Local Currency		Remarks
			Unit Price	Amount	Unit Price	Amount	
(iii) <u>No.2 Ground Sill (ℓ=130m)</u>							F/C: 530,970 L/C: 780,540
(a) Ground Sill (130 m)							
Excavation, in common	cu.m	8,010	14.60	116,950	4.62	37,010	
Backfill	cu.m	1,300	13.88	18,040	9.20	11,960	
Concrete, type A	cu.m	1,430	126.88	181,440	179.72	257,000	
Formwork	sq.m	1,120			40.42	45,270	
Joint filler	sq.m	70	54.60	3,820	3.70	260	
(b) Spur Dike (170 m)							
Excavation, in common	cu.m	1,520	14.60	22,190	4.62	7,020	
Embankment	cu.m	730	16.01	11,690	6.08	4,440	
Riprap bedding	cu.m	200	17.07	3,410	24.90	4,980	
Backfill	cu.m	720	13.88	9,990	9.20	6,620	
Concrete, type B	cu.m	230	113.00	25,990	171.35	39,410	
Formwork	sq.m	1,300			40.42	52,550	
Joint filler	sq.m	60	54.60	3,280	3.70	220	
(c) Wet masonry (970 m ²)							
Concrete, type B	cu.m	190	144.00	27,360	175.55	33,350	
Rubble stone masonry	cu.m	970	19.88	19,280	48.75	47,290	
Cobble stone	cu.m	540	0.77	420	61.61	33,270	
Inter locking mortar	cu.m	50	245.13	12,260	255.45	12,770	
(d) Concrete Block (110 nos.)							
Concrete, type B	cu.m	630	113.00	71,190	171.35	107,950	

Description	Unit	Quantity	Foreign Currency		Local Currency		Remarks
			Unit Price	Amount	Unit Price	Amount	
Formwork	sq.m	1,910			40.42	77,200	
Reinforcing bar ϕ 16 mm	kg	1,460	2.51	3,660	1.35	1,970	
(iv) <u>No.1 Training Levee (600 m), Anuling (1)</u>							F/C: 771,700 L/C: 1,556,080
(a) Levee (600 m)							
Excavation, in common	cu.m	4,500	14.60	65,700	4.62	20,790	
Embankment	cu.m	3,600	16.01	57,640	6.08	21,890	
Riprap bedding	cu.m	900	17.07	15,360	24.90	22,410	
Backfill	cu.m	3,570	13.88	49,550	9.20	32,840	
Concrete, type B	cu.m	1,140	113.00	128,820	171.35	195,340	
Formwork	sq.m	6,420			40.42	259,500	
Joint filler	sq.m	210	54.60	11,470	3.70	780	
(b) Wet masonry (4800 m ²)							
Backfill concrete, type B	cu.m	960	144.00	138,240	175.55	168,530	
Rubble stone masonry	sq.m	4,800	19.88	95,420	48.75	234,000	
Cobble stone	cu.m	2,690	0.77	2,070	61.61	165,730	
Inter locking mortar	cu.m	240	245.13	58,830	255.45	61,310	
(c) Concrete Block (220 nos.)							
Concrete, type B	cu.m	1,250	113.00	141,250	171.35	214,190	
Formwork	sq.m	3,830			40.42	154,810	
Reinforcing bar, ϕ 16 mm	kg	2,930	2.51	7,350	1.35	3,960	

Description	Unit	Quantity	Foreign Currency		Local Currency		Remarks
			Unit Price	Amount	Unit Price	Amount	
(v) <u>No.1 & No.2 Spur Dike (520m).</u> <u>Anuling (1)</u>							F/C: 947,460 L/C: 1,783,670
(a) Spur Dike (520m)	cu.m	9,340	14.60	136,360	4.62	43,150	
Excavation, in common	cu.m	4,480	16.01	71,720	6.08	27,240	
Embankment	cu.m	1,220	17.07	20,830	24.90	30,380	
Riprap bedding	cu.m	4,420	13.88	61,350	9.20	40,660	
Backfill	cu.m	1,400	113.00	158,200	171.35	239,890	
Concrete, type B	sq.m	7,960			40.42	321,740	
Formwork	sq.m	260	54.60	14,200	3.70	960	
Joint filler							
(b) Wet masonry (5,960 m ²)							
Backfill concrete, type B	cu.m	1,190	144.00	171,360	175.55	208,900	
Rubble stone masonry	sq.m	5,960	19.88	118,480	48.75	290,550	
Cobble stone	cu.m	3,340	0.77	2,570	61.61	205,780	
Inter locking mortar	cu.m	300	245.13	73,540	255.45	76,640	
(c) Concrete Block (175 nos.)							
Concrete, type B	cu.m	1,000	113.00	113,000	171.35	171,350	
Formwork	sq.m	3,050			40.42	123,280	
Reinforcing bar, ϕ16 mm	kg	2,330	2.51	5,850	1.35	3,150	
(vi) <u>No.3 Spur Dike (480m).</u> <u>Anuling (1)</u>							F/C: 1,033,270 L/C: 1,869,810
(a) Spur Dike (480 m)							

Description	Unit	Quantity	Foreign Currency		Local Currency		Remarks
			Unit Price	Amount	Unit Price	Amount	
Excavation, in common	cu.m	8,620	14.60	125,850	4.62	39,820	
Embankment	cu.m	4,130	16.01	66,120	6.08	25,110	
Riprap bedding	cu.m	1,130	17.07	19,290	24.90	28,140	
Backfill	cu.m	4,080	13.88	56,630	9.20	37,540	
Concrete, type B	cu.m	1,300	113.00	146,900	171.35	222,760	
Formwork	sq.m	7,340			40.42	296,680	
Joint filler	sq.m	240	54.60	13,100	3.70	890	
(b) Wet masonry (5,500 m ²)							
Backfill concrete, type B	cu.m	1,100	144.00	158,400	175.55	193,110	
Rubble stone masonry	sq.m	5,500	19.88	109,340	48.75	268,130	
Cobble stone	cu.m	3,080	0.77	2,370	61.61	189,760	
Inter locking mortar	cu.m	280	245.13	68,640	255.45	71,530	
(c) Ground Sill (240 m)							
Excavation, in common	cu.m	1,760	14.60	25,700	4.62	8,130	
Backfill	cu.m	600	13.88	8,330	9.20	5,520	
Concrete, type A	cu.m	960	126.88	121,800	179.72	172,530	
Formwork	sq.m	960			40.42	38,800	
Joint filler	sq.m	48	54.60	2,620	3.70	180	
(d) Concrete Block (160 nos.)							
Concrete, type B	cu.m	910	113.00	102,830	171.35	155,930	
Formwork	sq.m	2,780			40.42	112,370	
Reinforcing bar, ϕ 16mm	kg	2,130	2.51	5,350	1.35	2,880	

Description	Unit	Quantity	Foreign Currency		Local Currency		Remarks
			Unit Price	Amount	Unit Price	Amount	
(vii) <u>No.4 Spur Dike (170 m).</u> <u>Anuling (1)</u>							F/C: 316,280 L/C: 589,340
(a) Spur Dike (170 m)							
Excavation, in common	cu.m	3,340	14.60	48,760	4.62	15,430	
Embankment	cu.m	1,460	16.01	23,370	6.08	8,880	
Riprap bedding	cu.m	400	17.07	6,830	24.90	9,960	
Backfill	cu.m	1,440	13.88	19,990	9.20	13,250	
Concrete, type B	cu.m	460	113.00	51,980	171.35	78,820	
Formwork	sq.m	2,600			40.42	105,090	
Joint filler	sq.m	85	54.60	4,640	3.70	310	
(b) Wet masonry (1950 m ²)							
Backfill concrete, type B	cu.m	390	144.00	56,160	175.55	68,460	
Rubble stone masonry	sq.m	1,950	19.88	38,770	48.75	95,060	
Cobble stone	cu.m	1,090	0.77	840	61.61	67,150	
Inter locking mortar	cu.m	100	245.13	24,510	255.45	25,550	
(c) Concrete Block (60 nos.)							
Concrete, type B	cu.m	340	113.00	38,420	171.35	58,260	
Formwork	sq.m	1,040			40.42	42,040	
Reinforcing bar, ϕ16mm	kg	800	2.51	2,010	1.35	1,080	
(viii) <u>No.5 Spur Dike (170m).</u> <u>Anuling (1)</u>							F/C: 316,280 L/C: 589,340
(a) Spur Dike (170 m)							

Description	Unit	Quantity	Foreign Currency		Local Currency		Remarks
			Unit Price	Amount	Unit Price	Amount	
Excavation, in common	cu.m	3,340	14.60	48,760	4.62	15,430	
Embankment	cu.m	1,460	16.01	23,370	6.08	8,880	
Riprap bedding	cu.m	400	17.07	6,830	24.90	9,960	
Backfill	cu.m	1,440	13.88	19,990	9.20	13,250	
Concrete, type B	cu.m	460	113.00	51,980	171.35	78,820	
Formwork	sq.m	2,600			40.42	105,090	
Joint filler	sq.m	85	54.60	4,640	3.70	310	
(b) Wet masonry (1,950 m ²)							
Backfill concrete, type B	cu.m	390	144.00	56,160	175.55	68,460	
Rubble stone masonry	sq.m	1,950	19.88	38,770	48.75	95,060	
Cobble stone	cu.m	1,090	0.77	840	61.61	67,150	
Inter locking	cu.m	100	245.13	24,510	255.45	25,550	
(c) Concrete Block (60 nos.)							
Concrete, type B	cu.m	340	113.00	38,420	171.35	58,260	
Formwork	sq.m	1,040			40.42	42,040	
Reinforcing bar, ϕ 16 mm	kg	800	2.51	2,010	1.35	1,080	
(ix) <u>No.1 Sabo Dam (70m)</u> <u>Anuling (2)</u>							F/C: 1,327,120 L/C: 1,634,410
Excavation, in common	cu.m	10,630	14.60	155,200	4.62	49,110	
Backfill	cu.m	460	13.88	6,380	9.20	4,230	
Concrete, type A	cu.m	730	172.38	125,840	186.31	136,010	
Rubble concrete	cu.m	6,700	138.69	929,220	149.35	1,000,650	

Description	Unit	Quantity	Foreign Currency		Local Currency		Remarks
			Unit Price	Amount	Unit Price	Amount	
Backfill concrete, type B	cu.m	680	144.00	97,920	175.55	119,370	
Formwork	sq.m	3,760			86.22	324,190	
Joint filler	sq.m	230	54.60	12,560	3.70	850	
(x) <u>No.1 & No.2 Spur Dike (540 m)</u>							F/C: 981,000 L/C: 1,846,750
(a) <u>Spur Dike (540 m)</u>							
Excavation, in common	cu.m	9,700	14.60	141,620	4.62	44,810	
Embankment	cu.m	4,640	16.01	74,290	6.08	28,210	
Riprap bedding	cu.m	1,260	17.07	21,510	24.90	31,370	
Backfill	cu.m	4,600	13.88	63,850	9.20	42,320	
Concrete, type B	cu.m	1,460	113.00	164,980	171.35	250,170	
Formwork	sq.m	8,260			40.42	333,870	
Joint filler	sq.m	270	54.60	14,740	3.70	1,000	
(b) <u>Wet masonry (6,180 m²)</u>							
Backfill concrete, type B	cu.m	1,240	144.00	178,560	175.55	217,680	
Rubble stone masonry	sq.m	6,180	19.88	122,860	48.75	301,280	
Cobble stone	cu.m	3,460	0.77	2,660	61.61	213,170	
Inter locking mortar	cu.m	300	245.13	73,540	255.45	76,640	
(c) <u>Concrete Block (180 nos.)</u>							
Concrete, type B	cu.m	1,030	113.00	116,390	171.35	176,490	
Formwork	sq.m	3,130			40.42	126,510	
Reinforcing bar, ϕ16 mm	kg	2,390	2.51	6,000	1.35	3,230	
Sub total (1)				7,615,990		12,390,680	

Description	Unit	Quantity	Foreign Currency		Local Currency		Remarks
			Unit Price	Amount	Unit Price	Amount	
(2) General (10% of (1))				761,600		1,239,070	
(3) Supervision and Miscellaneous (6% of (1) to (2))				502,660		817,790	
(4) Profit (10% of (1) to (3))			-	-		-	
(5) Contractor's Tax (3% of (1) to (4))			-	-		-	
Sub total (Contract Cost)				<u>8,880,250</u>		<u>14,447,540</u>	<u>P23,327,790</u>
2. Right of Way/Site Acquisition	ha.			-		-	
3. Engineering Cost (10% of Item 1)				-		2,332,780	
4. Project Management Cost (5% of Item 1)				-		1,166,390	
5. Contingency							
(1) Physical Contingency (15% of Item 1)				1,332,040		2,167,130	
(2) Price Escalation							
Total Estimated Project Cost				<u>10,212,290</u>		<u>20,113,840</u>	<u>P30,326,130</u>

TABLE-I.24

DETAILED COST ESTIMATE (ECONOMIC), SABO WORK, BUDLAO RIVER

(Unit: Pesos)

Description	Unit	Quantity	Foreign Currency		Local Currency		Remarks
			Unit Price	Amount	Unit Price	Amount	
1. Contract Cost							
(1) Direct Cost							
(i) No.1 Sabo Dam (90 m)							F/C: 1,708,050 L/C: 2,102,010
Excavation, in common	cu.m	13,670	14.60	199,580	4.62	63,160	
Backfill	cu.m	600	13.88	8,330	9.20	5,520	
Concrete, type A	cu.m	950	172.38	163,760	186.31	176,990	
Rubble concrete	cu.m	8,600	138.69	1,192,730	149.35	1,284,410	
Backfill concrete, type B	cu.m	880	144.00	126,720	175.55	154,480	
Formwork	sq.m	4,840			86.22	417,300	
Joint filler	sq.m	310	54.60	16,930	3.70	1,150	
(ii) No.1 Training Levee (400 m)							F/C: 396,190 L/C: 788,540
(a) Levee (400 m)							
Excavation	cu.m	3,000	14.60	43,800	4.62	13,860	
Embankment	cu.m	2,400	16.01	38,420	6.08	14,590	
Riprap bedding	cu.m	600	17.07	10,240	24.90	14,940	
Backfill	cu.m	2,380	13.88	33,030	9.20	21,900	
Concrete, type B	cu.m	760	113.00	85,880	171.35	130,230	
Formwork	sq.m	4,280			40.42	173,000	
Joint filler	sq.m	140	54.60	7,640	3.70	520	
(b) Wet masonry (3200 m ²)							
Backfill concrete, type B	cu.m	640	114.00	72,960	175.55	112,350	

Description	Unit	Quantity	Foreign Currency		Local Currency		Remarks
			Unit Price	Amount	Unit Price	Amount	
Rubble stone masonry	sq.m	3,200	19.88	63,620	48.75	156,000	
Cobble stone	cu.m	1,790	0.77	1,380	61.61	110,280	
Inter locking mortar	cu.m	160	245.13	39,220	255.45	40,870	
(iii) <u>No.1 Spur Dike (270 m)</u>							F/C: 491,330 L/C: 924,480
(a) <u>Spur Dike (270 m)</u>							
Excavation, in common	cu.m	4,850	14.60	70,810	4.62	22,410	
Embankment	cu.m	2,320	16.01	37,140	6.08	14,110	
Riprap	cu.m	630	17.07	10,750	24.90	15,690	
Backfill	cu.m	2,300	13.88	31,920	9.20	21,160	
Concrete, type B	cu.m	730	113.00	82,490	171.35	125,090	
Formwork	sq.m	4,130			40.42	166,930	
Joint filler	sq.m	140	54.60	7,640	3.70	520	
(b) <u>Wet masonry (3,090 m²)</u>							
Backfill concrete, type B	cu.m	620	144.00	89,280	175.55	108,840	
Rubble stone	sq.m	3,090	19.88	61,430	48.75	150,640	
Cobble stone	cu.m	1,730	0.77	1,330	61.61	106,590	
Inter locking mortar	cu.m	150	245.13	36,770	255.45	38,320	
(c) <u>Concrete Block (90 nos.)</u>							
Concrete, type B	cu.m	520	113.00	58,760	171.35	89,100	
Formwork	sq.m	1,570			40.42	63,460	
Reinforcing bar, ϕ 16 mm	kg	1,200	2.51	3,010	1.35	1,620	

Description	Unit	Quantity	Foreign Currency		Local Currency		Remarks
			Unit Price	Amount	Unit Price	Amount	
(iv) <u>No.2 Spur Dike (270 m)</u>							F/C: 463,360 L/C: 905,910
(a) <u>Spur Dike (270 m)</u>							
Excavation, in common	cu.m	4,850	14.60	70,810	4.62	22,410	
Embankment	cu.m	2,320	16.01	37,140	6.08	14,110	
Riprap bedding	cu.m	630	17.07	10,750	24.90	15,690	
Backfill	cu.m	230	13.88	3,190	9.20	2,120	
Concrete, type B	cu.m	730	113.00	82,490	171.35	125,090	
Formwork	sq.m	4,130			40.42	166,930	
Joint filler	sq.m	135	54.60	7,370	3.70	500	
(b) <u>Wet masonry (3,090 m²)</u>							
Backfill concrete, type B	cu.m	618	144.00	88,990	175.55	108,490	
Rubble stone masonry	sq.m	3,090	19.88	61,430	48.75	150,640	
Cobble stone	cu.m	1,730	0.77	1,330	61.61	106,590	
Inter locking mortar	cu.m	160	245.13	39,220	255.45	40,870	
(c) <u>Concrete Block (90 nos.)</u>							
Concrete, type B	cu.m	510	113.00	57,630	171.35	87,390	
Cobble stone							
Formwork	sq.m	1,570			40.42	63,460	
Reinforcing bar, ϕ16 mm	kg	1,200	2.51	3,010	1.35	1,620	
(v) <u>No.3 Spur Dike (400 m)</u>							F/C: 833,910 L/C: 1,520,120
(a) <u>Spur Dike</u>							

Description	Unit	Quantity	Foreign Currency		Local Currency		Remarks
			Unit Price	Amount	Unit Price	Amount	
Excavation, in common	cu.m	7,180	14.60	104,830	4.62	33,170	
Embankment	cu.m	3,440	16.01	55,070	6.08	20,920	
Riprap bedding	cu.m	940	17.07	16,050	24.90	23,410	
Backfill	cu.m	3,400	13.88	47,190	9.20	31,280	
Concrete, type B	cu.m	1,080	113.00	122,040	171.35	185,060	
Formwork	sq.m	6,120			40.42	247,370	
Joint filler	sq.m	200	54.60	10,920	3.70	740	
(b) Wet masonry (4,580 m ²)							
Backfill concrete, type B	cu.m	920	144.00	132,480	175.55	161,510	
Rubble stone	sq.m	4,580	19.88	91,050	48.75	223,280	
Cobble stone	cu.m	2,560	0.77	1,970	61.61	157,720	
Inter locking mortar	cu.m	230	245.13	56,380	255.45	58,750	
(c) Ground Sill (190 m)							
Excavation, in common	cu.m	1,170	14.60	17,080	4.62	5,410	
Backfill	cu.m	400	13.88	5,550	9.20	3,680	
Concrete, type A	cu.m	640	126.88	81,200	179.72	115,020	
Formwork	sq.m	640			40.42	25,870	
Joint filler	sq.m	32	54.60	1,750	3.70	120	
(d) Concrete Block (134 nos.)							
Concrete, type B	cu.m	760	113.00	85,880	171.35	130,230	
Formwork	sq.m	2,330			40.42	94,180	
Reinforcing bar, ϕ 16 mm	kg	1,780	2.51	4,470	1.35	2,400	

Description	Unit	Quantity	Foreign Currency		Local Currency		Remarks
			Unit Price	Amount	Unit Price	Amount	
(vi) <u>No. 4 Spur Dike (280 m)</u>							F/C: 509,230 L/C: 958,460
(a) <u>Spur Dike (280 m)</u>							
Excavation, in common	cu.m	5,030	14.60	73,440	4.62	23,240	
Embankment	cu.m	2,410	16.01	38,580	6.08	14,650	
Riprap bedding	cu.m	660	17.07	11,270	24.90	16,430	
Backfill	cu.m	2,380	13.88	33,030	9.20	21,900	
Concrete, type B	cu.m	760	113.00	85,880	171.35	130,230	
Formwork	sq.m	4,290			40.42	173,400	
Joint filler	sq.m	140	54.60	7,640	3.70	520	
(b) <u>Wet masonry (3,210 m²)</u>							
Backfill concrete, type B	cu.m	640	144.00	92,160	175.55	112,350	
Rubble stone masonry	sq.m	3,200	19.88	63,620	48.75	156,000	
Cobble stone	cu.m	1,800	0.77	1,390	61.61	110,900	
Inter locking mortar	cu.m	160	245.13	39,220	255.45	40,870	
(c) <u>Concrete Block (93 nos.)</u>							
Concrete, type B	cu.m	530	113.00	59,890	171.35	90,820	
Formwork	sq.m	1,620			40.42	65,480	
Reinforcing bar, ϕ 16 mm	kg	1,240	2.51	3,110	1.35	1,670	
Sub total (1)				4,402,070		7,200,520	

Description	Unit	Quantity	Foreign Currency		Local Currency		Remarks
			Unit Price	Amount	Unit Price	Amount	
(2) General (10% of (1))				440,210		720,050	
(3) Supervision and Miscellaneous (6% of (1) to (2))				290,540		475,230	
(4) Profit (10% of (1) to (3))			-	-		-	
(5) Contractor's Tax (3% of (1) to (4))			-	-		-	
Sub total (Contract Cost)				<u>5,132,820</u>		<u>8,395,800</u>	<u>₱13,528,620</u>
2. Right of Way/Site Acquisition				-		-	
3. Engineering Cost (10% of Item 1)				-		1,352,860	
4. Project Management Cost (5% of Item 1)				-		676,430	
5. Contingency				769,920		1,259,370	
(1) Physical Contingency (15% of Item 1)							
(2) Price Escalation							
Total Estimated Project Cost				<u>5,902,740</u>		<u>11,684,460</u>	<u>₱17,587,200</u>

TABLE-I-25 DETAILED COST ESTIMATE (ECONOMIC). SABO WORK, PAVA-BURABOD RIVER

(Unit: Pesos)

Description	Unit	Quantity	Foreign Currency		Local Currency		Remarks
			Unit Price	Amount	Unit Price	Amount	
1. Contract Cost							
(1) Direct Cost							
(i) No.1 Sabo Dam (80 m)							F/C: 1,517,840 L/C: 1,872,720
Excavation, in common	cu.m	11,700	14.60	170,820	4.62	54,050	
Excavation, in rock	cu.m	150	45.49	6,820	40.51	6,080	
Backfill	cu.m	530	13.88	7,360	9.20	4,880	
Concrete, type A	cu.m	840	172.38	144,800	186.31	156,500	
Rubble concrete	cu.m	7,650	138.69	1,060,980	149.35	1,142,530	
Backfill concrete, type B	cu.m	780	144.00	112,320	175.55	136,930	
Formwork	sq.m	4,300			86.22	370,750	
Joint filler	sq.m	270	54.60	14,740	3.70	1,000	
(ii) No.1 Consolidation Dam (120 m)							F/C: 1,260,190 L/C: 1,563,470
Excavation, in common	cu.m	6,800	14.60	99,280	4.62	31,420	
Backfill	cu.m	780	13.88	10,830	9.20	7,180	
Concrete, type A	cu.m	1,860	172.38	320,630	186.31	346,540	
Rubble concrete	cu.m	5,440	138.69	754,470	149.35	812,460	
Backfill concrete, type B	cu.m	460	144.00	66,240	175.55	80,750	
Formwork	sq.m	3,300			86.22	284,530	
Joint filler	sq.m	160	54.60	8,740	3.70	590	

Description	Unit	Quantity	Foreign Currency		Local Currency		Remarks
			Unit Price	Amount	Unit Price	Amount	
(iii) <u>No.1 & No.2 Spur Dike (500 m)</u>							F/C: 909,780 L/C: 1,715,780
(a) Spur Dike (500 m)							
Excavation, in common	cu.m	9,160	14.60	133,740	4.62	42,320	
Embankment	cu.m	4,300	16.01	68,840	6.08	26,140	
Riprap bedding	cu.m	1,180	17.07	20,140	24.90	29,380	
Backfill	cu.m	4,260	13.88	59,130	9.20	39,190	
Concrete, type B	cu.m	1,360	113.00	153,680	171.35	233,040	
Formwork	sq.m	7,650			40.42	309,210	
Joint filler	sq.m	250	54.60	13,650	3.70	930	
(b) <u>Wet masonry (5,720 m²)</u>							
Backfill concrete, type B	cu.m	1,150	144.00	165,600	175.55	201,880	
Rubble stone masonry	sq.m	5,720	19.88	113,710	48.75	278,850	
Cobble stone	cu.m	3,200	0.77	2,460	61.61	197,150	
Inter locking mortar	cu.m	280	245.13	68,640	255.45	71,530	
(c) <u>Concrete Block (170 nos.)</u>							
Concrete, type B	cu.m	970	113.00	109,610	171.35	166,210	
Formwork	sq.m	2,960			40.42	119,640	
Reinforcing bar, ϕ 16 mm	kg	230	2.51	580	1.35	310	
(iv) <u>No.3 Spur Dike (240 m)</u>							F/C: 436,030 L/C: 814,630
(a) Spur Dike (240 m)							
Excavation, in common	cu.m	4,310	14.60	62,930	4.62	19,910	

Description	Unit	Quantity	Foreign Currency		Local Currency		Remarks
			Unit Price	Amount	Unit Price	Amount	
Embankment	cu.m	2,060	16.01	32,980	6.08	12,520	
Riprap bedding	cu.m	520	17.07	8,880	24.90	12,950	
Backfill	cu.m	2,040	13.88	28,320	9.20	18,770	
Concrete, type B	cu.m	650	113.00	73,450	171.35	111,380	
Formwork	sq.m	3,530			40.42	142,680	
Joint filler	sq.m	120	54.60	6,550	3.70	440	
(b) Wet masonry (2,750 m ²)							
Backfill concrete, type B	cu.m	550	144.00	79,200	175.55	96,550	
Rubble stone masonry	sq.m	2,750	19.88	54,670	48.75	134,060	
Cobble stone	cu.m	1,540	0.77	1,190	61.61	94,880	
Inter locking mortar	cu.m	140	245.13	34,320	255.45	35,760	
(c) Concrete Block (180 nos.)							
Concrete, type B	cu.m	450	113.00	50,850	171.35	77,110	
Formwork	sq.m	1,390			40.42	56,180	
Reinforcing bar, ø16 mm	kg	1,070	2.51	2,690	1.35	1,440	
(v) No.4 Spur Dike (260 m)							F/C: 475,660 L/C: 896,310
(a) Spur Dike (260 m)							
Excavation, in common	cu.m	4,670	14.60	68,180	4.62	21,580	
Embankment	cu.m	2,240	16.01	35,860	6.08	13,620	
Riprap bedding	cu.m	610	17.07	10,410	24.90	15,190	
Backfill	cu.m	2,210	13.88	30,670	9.20	20,330	

Description	Unit	Quantity	Foreign Currency		Local Currency		Remarks
			Unit Price	Amount	Unit Price	Amount	
Concrete, type B	cu.m	700	113.00	79,100	171.35	119,950	
Formwork	sq.m	3,980			40.42	160,870	
Joint filler	sq.m	130	54.60	7,100	3.70	480	
(b) Wet masonry (2,980 m ²)							
Backfill concrete, type B	cu.m	600	144.00	86,400	175.55	105,330	
Rubble stone masonry	sq.m	2,980	19.88	59,240	48.75	145,280	
Cobble stone	cu.m	1,670	0.77	1,290	61.61	102,890	
Inter locking mortar	cu.m	150	245.13	36,770	255.45	38,320	
(c) Concrete Block (90 nos.)							
Concrete, type B	cu.m	510	113.00	57,630	171.35	87,390	
Formwork	sq.m	1,570			40.42	63,460	
Reinforcing bar, ϕ 16 mm	kg	1,200	2.51	3,010	1.35	1,620	
(vi) <u>No.5 Spur Dike (500 m)</u>							F/C: 1,009,540 L/C: 1,845,800
(a) Spur Dike (500 m)							
Excavation, in common	cu.m	8,970	14.60	130,960	4.62	41,440	
Embankment	cu.m	4,300	16.01	68,840	6.08	26,140	
Riprap bedding	cu.m	1,170	17.07	19,970	24.90	29,130	
Backfill	cu.m	4,260	13.88	59,130	9.20	39,190	
Concrete, type B	cu.m	1,360	113.00	153,680	171.35	233,040	
Formwork	sq.m	7,660			40.42	309,620	
Joint filler	sq.m	250	54.60	13,650	3.70	930	

Description	Unit	Quantity	Foreign Currency		Local Currency		Remarks
			Unit Price	Amount	Unit Price	Amount	
(b) Wet masonry (5,730 m ²)							
Backfill concrete, type B	cu.m	1,150	144.00	165,600	175.55	201,880	
Rubble stone masonry	sq.m	5,730	19.88	113,910	48.75	279,340	
Cobble stone	cu.m	3,210	0.77	2,470	61.61	197,770	
Inter locking mortar	cu.m	290	245.13	71,090	255.45	74,080	
(c) Ground Sill (160 m)							
Excavation, in common	cu.m	1,170	14.60	17,080	4.62	5,410	
Backfill	cu.m	400	13.88	5,550	9.20	3,680	
Concrete, type A	cu.m	640	126.88	81,200	179.72	115,020	
Formwork	sq.m	640			40.42	25,870	
Joint filler	sq.m	32	54.60	1,750	3.70	120	
(d) Concrete Block (156 nos.)							
Concrete, type B	cu.m	880	113.00	99,440	171.35	150,790	
Formwork	sq.m	2,710			40.42	109,540	
Reinforcing bar, ϕ 16 mm	kg	2,080	2.51	5,220	1.35	2,810	
(vii) <u>No. 6 Spur Dike (250 m)</u>							F/C: 642,890 L/C: 1,197,890
(a) Spur Dike (250 m)							
Excavation, in common	cu.m	4,490	14.60	65,550	4.62	20,740	
Embankment	cu.m	2,150	16.01	34,420	6.08	13,070	
Riprap bedding	cu.m	580	17.07	9,900	24.90	14,440	
Backfill	cu.m	2,130	13.88	29,560	9.20	19,600	

Description	Unit	Quantity	Foreign-Currency		Local Currency		Remarks
			Unit Price	Amount	Unit Price	Amount	
Concrete, type B	cu.m	680	113.00	76,840	171.35	116,520	
Formwork	sq.m	3,820			40.42	154,400	
Joint filler	sq.m	130	54.60	7,100	3.70	480	
(b) Wet masonry (2,860 m ²)							
Backfill concrete, type B	cu.m	570	144.00	82,080	175.55	100,060	
Rubble stone	sq.m	2,860	19.88	56,860	48.75	139,430	
Cobble stone	cu.m	1,600	0.77	1,230	61.61	98,580	
Inter locking mortar	cu.m	140	245.13	34,320	255.45	35,760	
(c) Ground Sill (180 m)							
Excavation, in common	cu.m	1,320	14.60	19,270	4.62	6,100	
Backfill	cu.m	450	13.88	6,250	9.20	4,140	
Concrete, type A	cu.m	720	126.88	91,250	179.72	129,400	
Formwork	sq.m	720			40.42	29,100	
Joint filler	sq.m	40	54.60	2,180	3.70	150	
(d) Concrete Block (186 nos.)							
Concrete, type B	cu.m	1,060	113.00	119,780	171.35	181,630	
Formwork	sq.m	3,240			40.42	130,960	
Reinforcing bar, ϕ 16 mm	kg	2,470	2.51	6,200	1.35	3,330	
(viii) <u>No.7 Spur Dike (350 m)</u>							F/C: 783,520 L/C: 1,449,230
(a) <u>Spur Dike (350 m)</u>							
Excavation, in common	cu.m	6,280	14.60	91,690	4.62	29,010	

Description	Unit	Quantity	Foreign-Currency		Local Currency		Remarks
			Unit Price	Amount	Unit Price	Amount	
Embankment	cu.m	3,020	16.01	48,350	6.08	18,360	
Riprap bedding	cu.m	820	17.07	14,000	24.90	20,420	
Backfill	cu.m	2,980	13.88	41,360	9.20	27,420	
Concrete, type B	cu.m	950	113.00	107,350	171.35	162,780	
Formwork	sq.m	5,350			40.42	216,250	
Joint filler	sq.m	180	54.60	9,830	3.70	670	
(b) Wet masonry (4,000 m ²)							
Backfill concrete, type B	cu.m	800	144.00	115,200	175.55	140,440	
Rubble stone masonry	sq.m	4,000	19.88	79,520	48.75	195,000	
Cobble stone	cu.m	2,230	0.77	1,720	61.61	137,390	
Inter locking mortar	cu.m	200	245.13	49,030	255.45	51,090	
(c) Ground Sill (160 m)							
Excavation, in common	cu.m	1,170	14.60	17,080	4.62	5,410	
Backfill	cu.m	400	13.88	5,550	9.20	3,680	
Concrete, type A	cu.m	640	126.88	81,200	179.72	115,020	
Formwork	sq.m	640			40.42	25,870	
Joint filler	sq.m	30	54.60	1,640	3.70	110	
(d) Concrete Block (176 nos.)							
Concrete, type B	cu.m	1,010	113.00	114,130	171.35	173,060	
Formwork	sq.m	3,070			40.42	124,090	
Reinforcing bar, ϕ 16 mm	kg	2,340	2.51	5,870	1.35	3,160	
Sub total (1)				7,035,450		11,355,830	

Description	Unit	Quantity	Foreign Currency		Local Currency		Remarks
			Unit Price	Amount	Unit Price	Amount	
(2) General (10% of (1))				703,550		1,135,580	
(3) Supervision & Miscellaneous (6% of (1) to (2))				464,340		749,480	
(4) Profit (10% of (1) to (3))				-		-	
(5) Contractor's Tax (3% of (1) to (4))				-		-	
Sub total (Contract Cost)				<u>8,203,340</u>		<u>13,240,890</u>	<u>P21,444,230</u>
2. Right of Way/Site Acquisition				-		-	
3. Engineering Cost (10% of Item 1)				-		2,144,420	
4. Project Management Cost (5% of Item 1)				-		1,072,210	
5. Contingency							
(1) Physical Contingency (15% of Item 1)				1,230,500		1,986,130	
(2) Price Escalation				-		-	
Total Estimated Project Cost				<u>9,433,840</u>		<u>18,443,650</u>	<u>P27,877,490</u>

TABLE-I.26 DETAILED COST ESTIMATE (ECONOMIC). SABO WORK, BUANG RIVER

Description	Unit	Quantity	Foreign Currency		Local Currency		Remarks
			Unit Price	Amount	Unit Price	Amount	
1. Contract Cost							
(1) Direct Cost							
(i) Sabo Dam							F/C: 710,910 L/C: 954,460
Excavation, in common	cu.m	6,000	14.60	87,600	4.62	27,720	
Excavation, in rock	cu.m	400	45.49	18,200	40.51	16,200	
Concrete, type A	cu.m	230	172.38	39,650	186.31	42,850	
Rubble concrete	cu.m	3,060	138.69	424,390	149.35	475,010	
Backfill concrete, type B	cu.m	330	144.00	47,520	175.55	57,930	
Backfill concrete, type B	cu.m	280	144.00	40,320	175.55	49,150	
Formwork	sq.m	1,750			86.22	150,890	
Joint filler	sq.m	140	54.60	7,640	3.70	520	
Rubble stone masonry	sq.m	1,400	19.88	27,830	48.75	68,250	
Cobble stone	cu.m	780	0.77	600	61.61	48,060	
Inter locking mortar	cu.m	70	245.13	17,160	255.45	17,880	
(ii) Consolidation Dam, No.1-No.4							F/C: 427,460 L/C: 681,940
Excavation, in common	cu.m	1,500	14.60	21,900	4.62	6,930	
Concrete, type A	cu.m	410	172.38	70,680	186.31	76,390	
Rubble concrete	cu.m	1,230	138.69	170,590	149.35	183,700	
Backfill concrete, type B	cu.m	530	144.00	76,320	175.55	93,040	
Formwork	sq.m	820			86.22	70,700	

Description	Unit	Quantity	Foreign Currency		Local Currency		Remarks
			Unit Price	Amount	Unit Price	Amount	
Joint filler	sq.m	50	54.60	2,730	3.70	190	
Rubble stone masonry	sq.m	2,630	19.88	52,280	48.75	128,210	
Cobble stone	cu.m	1,470	0.77	1,130	61.61	90,570	
Inter locking	cu.m	130	245.13	31,830	255.45	32,210	
Sub total (1)				1,138,370		1,636,400	
(2) General (10% of (1))				113,840		163,640	
(3) Supervision and Miscellaneous (6% of (1) to (4))				75,130		108,000	
(4) Profit (10% of (1) to (3))				-		-	
(5) Contractor's Tax (3% of (1) to (4))				-		-	
Sub total (Contract Cost)				<u>1,327,340</u>		<u>1,908,040</u>	₹3,235,380
2. Right of Way/Site Acquisition				-		-	
3. Engineering Cost (10% of Item 1)				-		323,540	
4. Project Management Cost (5% of Item 1)				-		161,770	
5. Contingency							
(1) Physical Contingency (15% of Item 1)				199,100		286,210	
(2) Price Escalation				-		-	
Total Estimated Project Cost				<u>1,526,440</u>		<u>2,679,560</u>	<u>₹4,206,000</u>

TABLE-I.27 DETAILED COST ESTIMATE (ECONOMIC), RIVER IMPROVEMENT WORKS, QUINALI (A) RIVER

(Unit: Pesos)

Description	Unit	Quantity	Foreign Currency		Local Currency		Remarks
			Unit Price	Amount	Unit Price	Amount	
1. Contract Cost							
(1) Direct Cost							
<u>Quinali (A) River</u>							
Excavation, in common	cu.m	1,738,000	31.64	54,990,320	7.98	13,869,240	
Embankment	cu.m	3,706,000	16.06	59,518,360	4.99	18,492,940	
Sod facing	sq.m	1,493,000	--	--	23.66	35,324,380	
Slope protection	sq.m	299,000	17.32	5,178,680	42.25	12,632,750	
<u>Talisay River</u>							
Excavation, in common	cu.m	31,000	19.53	605,430	5.11	158,410	
Embankment	cu.m	1,327,000	16.06	21,311,620	4.99	6,621,730	
Sod facing	sq.m	640,000	--	--	23.66	15,142,400	
Slope protection	sq.m	128,000	17.32	2,216,960	42.25	5,408,000	
<u>Nasisi River</u>							
Excavation, in common	cu.m	901,000	29.67	26,732,670	7.99	7,198,990	
Embankment	cu.m	252,000	16.06	4,047,120	4.99	1,257,480	
Sod facing	sq.m	267,000	--	--	23.66	6,317,220	
Slope protection	sq.m	53,000	17.32	917,960	42.25	2,239,250	

Description	Unit	Quantity	Foreign Currency		Local Currency		Remarks
			Unit Price	Amount	Unit Price	Amount	
<u>Removal of Existing Head Works</u>							
South-Quinali head works	cu.m	260	61.34	15,950	80.26	20,870	
San Agustin head works	cu.m	230	61.34	14,110	80.26	18,460	
Agus. Sta. Cruz head works	cu.m	200	61.34	12,270	80.26	16,050	
<u>Relating Structures</u>							
Sluiceway	nos.	10	29,400	294,000	20,300.00	203,000	
<u>Infrastructure</u>							
(a) Quinali (A) River							
Matacon Bridge	m	359	17,500	6,282,500	11,900	4,272,100	
Quinali Bridge	m	318	17,500	5,565,000	11,900	3,784,200	
Tagpo Bridge	m	196	17,500	3,430,000	11,900	2,332,400	
Busac Bridge	m	270	17,500	4,725,000	11,900	3,213,000	
Oas Bridge	m	270	17,500	4,725,000	11,900	3,213,000	
(b) Nasisi River							
Binategan Bridge	m	94	17,500	1,645,000	11,900	1,118,600	
Ganot Bridge	m	94	17,500	1,645,000	11,900	1,118,600	
(c) Talisay River							
Bacolod Bridge	m	200	17,500	3,500,000	11,900	2,380,000	
Bailey Bridge	m	200	17,500	3,500,000	11,900	2,380,000	

Description	Unit	Quantity	Foreign Currency		Local Currency		Remarks
			Unit Price	Amount	Unit Price	Amount	
(d) National Railway							
Nasisi Bridge	m	100	7,000	700,000	4,800	480,000	
Sub total (1)			211,572,950			149,213,070	
(2) General (10% of (1))			21,157,300			14,921,310	
(3) Supervision and Miscellaneous (6% of (1) to (2))				13,963,820		9,848,060	
(4) Profit (10% of (1) to (3))				-		-	
(5) Contractor's Tax (3% of (1) to (4))				-		-	
Sub total (Contract Cost)				<u>246,694,070</u>		<u>173,982,440</u>	<u>₱420,676,510</u>
2. Right of way / Site Acquisition	ha	1,114.0		-		-	
3. Resettlement (Type A: 113 nos., Type B: 322 nos., Type C: 676 nos.)	L.S.			-		24,293,400	(Type A: ₱115,000) (Type B: ₱ 29,000) (Type C: ₱ 2,900)
4. Engineering Cost (10% of Item 1)	L.S.			24,669,410		17,398,240	
5. Project Management Cost (5% of Item 1.)	L.S.			-		21,033,830	

Description	Unit	Quantity	Foreign Currency		Local Currency		Remarks
			Unit Price	Amount	Unit Price	Amount	
6. Contingency							
(1) Physical Contingency (20% of Item 1.)	L.S.			49,338,810		34,796,490	
(2) Price Escalation (F/C: 7%, L/C: 13%)L.S.						-	
Total Estimated Project Cost				<u>320,702,290</u>		<u>271,504,400</u>	<u>P592,206,690</u>

TABLE-I.28 DETAILED COST ESTIMATE (ECONOMIC), RIVER IMPROVEMENT WORKS, QUINALI (B) RIVER

(Unit: Pesos)

Description	Unit	Quantity	Foreign Currency		Local Currency		Remarks
			Unit Price	Amount	Unit Price	Amount	
1. Contract Cost							
(1) Direct Cost							
<u>Quinali (B) River</u>							
Excavation, in common	cu.m	1,130,000	29.67	33,527,100	7.99	9,028,700	
Embankment	cu.m	745,000	16.06	11,964,700	4.99	3,717,550	
Sod facing	sq.m	456,000	-	-	23.66	10,788,960	
Slope protection	sq.m	91,000	17.32	1,576,120	42.25	3,844,750	
<u>San Francisco River</u>							
Excavation, in common	cu.m	509,000	29.67	15,102,030	7.99	4,066,910	
Embankment	cu.m	142,000	16.06	2,280,520	4.99	708,580	
Sod facing	sq.m	236,000	-	-	23.66	5,583,760	
Slope protection	sq.m	49,000	17.32	848,680	42.25	2,070,250	
<u>San Vicente River</u>							
Excavation, in common	cu.m	94,000	29.67	2,788,980	7.99	751,060	
Embankment	cu.m	89,000	16.06	1,429,340	4.99	444,110	
Sod facing	sq.m	136,000	-	-	23.66	3,217,760	
Slope protection	sq.m	27,000	17.32	467,640	42.25	1,140,750	

Description	Unit	Quantity	Foreign Currency		Local Currency		Remarks
			Unit Price	Amount	Unit Price	Amount	
<u>Infrastructure</u>							
(a) Quinali (B) River							
Balza Bridge	m	270	17,500	4,725,000	11,900	3,213,000	
Labnig Bridge	m	220	17,500	3,850,000	11,900	2,618,000	
(b) San Francisco River							
Tulw Bridge	m	98	17,500	1,715,000	11,900	1,166,200	
Sub total (1)				80,275,120		52,360,340	
(2) General (10% of (1))				8,027,510		5,236,030	
(3) Supervision and Miscellaneous (6% of (1) to (2))				5,298,160		3,455,780	
(4) Profit (10% of (1) to (3))				-		-	
(5) Contractor's Tax (3% of (1) to (4))				-		-	
Sub total (Contract Cost)				<u>93,600,780</u>		<u>61,052,150</u>	<u>₱154,652,930</u>
2. Right of Way / Site Acquisition	ha	227.3		-		-	
3. Resettlement	L.S.			-		877,600	(Type A: ₱115,000) (Type B: ₱29,000) (Type C: ₱ 2,900)
(Type A: 4 nos., Type B: 12 nos., Type C 24 nos.)							
4. Engineering Cost (10% of Item 1.)	L.S.			9,360,080		6,105,220	

Description	Unit	Quantity	Foreign Currency		Local Currency		Remarks
			Unit Price	Amount	Unit Price	Amount	
5. Project Management Cost (5% of Item 1.) L.S.			-			7,732,650	
6. Contingency							
(1) Physical Contingency (20% of Item 1.) L.S.				18,720,160		12,210,430	
(2) Price Escalation (F/C: 7%, L/C: 13%) L.S.				-		-	
Total Estimated Project Cost				<u>121,681,020</u>		<u>87,978,050</u>	<u>#209,659,070</u>

TABLE-I.29 DETAILED COST ESTIMATE (ECONOMIC), RIVER IMPROVEMENT WORKS, YAWA RIVER

Description	Unit	Quantity	Foreign Currency		Local Currency		Remarks
			Unit Price	Amount	Unit Price	Amount	
(Unit: Pesos)							
1. Contract Cost							
(1) Direct Cost							
<u>Yawa River</u>							
Embankment	cu.m	317,000	16.06	5,091,020	4.99	1,581,830	
Sod facing	sq.m	217,000	-	-	23.66	5,134,220	
Slope protection	sq.m	43,000	17.32	744,760	42.25	1,816,750	
<u>Infrastructure</u>							
Yawa Bridge	m	196	17,500	3,430,000	11,900	2,332,400	
Sub total (1)				9,265,780		10,865,200	
(2) General (10% of (1))				926,580		1,086,520	
(3) Supervision and Miscellaneous (6% of (1) to (2))				611,540		717,100	
(4) Profit (10% of (1) to (3))				-		-	
(5) Contractor's Tax (3% of (1) to (4))				-		-	
Sub total (Contract Cost)				<u>10,803,900</u>		<u>12,668,820</u>	<u>₱23,472,720</u>
2. Right of Way / Site Acquisition	ha	24.6		-		-	
3. Resettlement	L.S.	5		-		1,133,700	(Type A: ₱115,000) (Type B: ₱ 29,000) (Type C: ₱ 2,900)

Description	Unit	Quantity	Foreign Currency		Local Currency		Remarks
			Unit Price	Amount	Unit Price	Amount	
4. Engineering Cost (10% of Item 1.)	L.S.			1,080,390		1,266,880	
5. Project Management Cost (5% of Item 1.)	L.S.			-		1,173,640	
6. Contingency							
(1) Physical Contingency (20% of Item 1.)	L.S.			2,160,780		2,533,760	
(2) Price Escalation (F/C: 7%, L/C: 13%)	L.S.			-		-	
Total Estimated Project Cost				<u>14,045,070</u>		<u>18,776,800</u>	<u>232,821,870</u>

TABLE-I.30 DETAILED COST ESTIMATE (ECONOMIC), RIVER IMPROVEMENT WORKS, QUINALI (A) RIVER, DIVERSION TO TALISAY RIVER
(Unit: Pesos)

Description	Unit	Quantity	Foreign Currency		Local Currency		Remarks
			Unit Price	Amount	Unit Price	Amount	
1. Contract Cost							
(1) Direct Cost							
<u>Quinali (A) River</u>							
Excavation, in common	cu.m	211,000	31.64	6,676,040	7.98	1,682,780	
Embankment	cu.m	2,006,000	16.06	32,216,360	4.99	10,009,940	
Sod facing	sq.m	833,000	-	-	23.66	19,708,780	
Slope protection	sq.m	167,000	17.32	2,892,440	42.25	7,055,750	
Concrete weir, type B concrete	cu.m	12,000	113.00	1,356,000	171.35	2,056,200	
Sheet pile	m	2,750	160.64	441,760	56.11	154,300	
<u>Talisay River</u>							
Excavation, in common	cu.m	9,524,000	19.53	186,003,720	5.11	48,667,640	
Embankment	cu.m	834,000	16.06	13,394,040	4.99	4,161,660	
Sod facing	sq.m	768,000	-	-	23.66	18,170,880	
Slope protection	sq.m	154,000	17.32	2,667,280	42.25	6,506,500	
<u>Nasisi River</u>							
Excavation, in common	cu.m	901,000	29.67	26,732,670	7.99	7,198,990	
Embankment	cu.m	252,000	16.06	4,047,120	4.99	1,257,480	
Sod facing	sq.m	267,000	-	-	23.66	6,317,220	
Slope protection	sq.m	53,000	17.32	917,960	42.25	2,239,250	

Description	Unit	Quantity	Foreign Currency		Local Currency		Remarks
			Unit Price	Amount	Unit Price	Amount	
Removal of Existing Head Works							
San Agustin head works	cu.m	230	61.34	14,110	80.26	18,460	
Agus. Sta. Cruz head works	cu.m	200	61.34	12,270	80.26	16,050	
<u>Gate</u>							
Flood control gate (30 m x 6.7 m) L.S.				4,824,000		1,608,000	
<u>Infrastructure</u>							
(a) Quinali (A) River							
Matacon Bridge	m	199	17,500	3,482,500	11,900	2,368,100	
Quinali Bridge	m	108	17,500	1,890,000	11,900	1,285,200	
Tagpo Bridge	m	196	17,500	3,430,000	11,900	2,332,400	
Oas Bridge	m	270	17,500	4,725,000	11,900	3,213,000	
(b) Nasisi River							
Binatagan Bridge	m	94	17,500	1,645,000	11,900	1,118,600	
Gamot Bridge	m	94	17,500	1,645,000	11,900	1,118,600	
(c) Talisay River							
Bacolod Bridge	m	420	17,500	7,350,000	11,900	4,998,000	
Bailey Bridge	m	430	17,500	7,525,000	11,900	4,998,000	

Description	Unit	Quantity	Foreign Currency		Local Currency		Remarks
			Unit Price	Amount	Unit Price	Amount	
(d) National Railway							
Nasisi Bridge	m	100	7,000	700,000	4,800	480,000	
Sub total (1)				314,588,270		158,742,780	
(2) General (10% of (1))				31,458,830		15,874,280	
(3) Supervision and Miscellaneous (6% of (1) to (2))				20,762,830		10,477,020	
(4) Profit (10% of (1) to (3))				-		-	
(5) Contractor's Tax (3% of (1) to (4))				-		-	
Sub total (Contract Cost)				<u>366,809,930</u>		<u>185,094,080</u>	<u>₱551,904,010</u>
2. Right of Way / Site Acquisition	ha	1,039.2		-		-	
3. Resettlement (Type A: 64 nos., Type B: 177 nos., Type C: 383 nos.)	L.S.			-		13,603,700	(Type A: ₱115,000) (Type B: ₱29,000) (Type C: ₱2,900)
4. Engineering Cost (10% of Item 1.)				36,680,990		18,509,410	

Description	Unit	Quantity	Foreign Currency		Local Currency		Remarks
			Unit Price	Amount	Unit Price	Amount	
5. Project Management Cost (5% of Item 1.)			-		27,595,200		
6. Contingency							
(1) Physical Contingency (20% of Item 1.)				73,361,990	37,018,820		
(2) Price Escalation (F/C: 7%, L/C: 13%)				-	-		
Total Estimated Project Cost				<u>476,852,910</u>	<u>281,821,210</u>		<u>₱758,674,120</u>

TABLE-I.31 DETAILED COST ESTIMATE (ECONOMIC), IRRIGATION WORKS, QUINTALI (A) RIVER BASIN AREA

(Unit: Pesos)

Description	Unit	Quantity	Foreign Currency		Local Currency		Remarks
			Unit Price	Amount	Unit Price	Amount	
1. Contract Cost							
(1) Direct Cost							
<u>Irrigation Canal and Farm Road</u>							
(a) Main Canal							
Stripping	sq.m	420,000	3.94	1,654,800	1.09	457,800	
Excavation, in common	cu.m	120,000	10.33	1,239,600	3.89	466,800	
Embankment	cu.m	233,000	5.84	1,360,720	31.55	7,351,150	
(b) Lateral Canal							
Stripping	sq.m	610,000	3.94	2,403,400	1.09	664,900	
Excavation, in common	cu.m	96,000	10.33	991,680	3.89	373,440	
Embankment	cu.m	165,000	5.84	963,600	31.55	5,205,750	
<u>Related Structures for Main Canal & Lateral Canal</u>							
Concrete, type A	cu.m	7,070	126.88	897,040	179.72	1,270,620	
Concrete, type B	cu.m	3,880	113.00	438,440	171.35	664,840	
Metal	ton	220	12,000.00	2,640,000	4,000.00	880,000	
Reinforcing bar	ton	512	2,509.08	1,284,650	1,354.44	693,470	
R.C. pipe, 1350 mm dia.	m	350	6.48	2,270	702.50	245,880	

Description	Unit	Quantity	Foreign Currency		Local Currency		Remarks
			Unit Price	Amount	Unit Price	Amount	
<u>Drainage Canal</u>							
Excavation, in common	cu.m	310,000	10.33	3,202,300	3.89	1,205,900	
Field drain	cu.m	29,000	-	-	15.71	455,590	
<u>Related Structures for Drainage Canal</u>							
Concrete, type A	cu.m	2,000	126.88	253,760	179.72	359,440	
Concrete, type B	cu.m	800	113.00	90,400	171.35	137,080	
Metal	ton	40	12,000.00	480,000	4,000.00	160,000	
Reinforcing bar	ton	95	2,509.08	238,360	1,354.44	128,670	
<u>Land Clearing and Grading</u>	ha	50	1,765.80	83,790	519.40	25,970	
<u>Head Works</u>							
Cabilogan head works	cu.m	1,425	113.00	161,030	171.35	244,170	
South Quinali head works	cu.m	2,025	113.00	228,830	171.35	346,980	
Relating structures (16 nos. sluiceway, 8 nos. irrigation intake)	L.S.			557,300		454,100	
<u>Gate Work</u>							
Cabilogan head works (35m x 2.5m)	L.S.			2,275,000		0	
South Quinali head works (55m x 2.5m)	L.S.			3,575,000		0	
Sub total (1)				25,021,970		21,772,550	

Description	Unit	Quantity	Foreign Currency		Local Currency		Remarks
			Unit Price	Amount	Unit Price	Amount	
(2) General (10% of (1))				2,502,200		2,177,260	
(3) Supervision and Miscellaneous (6% of (1) to (2))				1,651,450		1,436,990	
(4) Profit (10% of (1) to (3))				-		-	
(5) Contractor's Tax (3% of (1) to (4))				-		-	
Sub total (Contract Cost)				<u>29,175,620</u>		<u>25,386,800</u>	<u>₱54,562,420</u>
2. Engineering Cost (10% of Item 1.)				-		5,456,240	
3. Project Management Cost (5% of Item 1.)				-		2,728,120	
4. Contingency							
(1) Physical Contingency (20% of Item 1.)				5,835,120		5,077,360	
(2) Price Escalation (F/C: 7%, L/C: 13%)				-		-	
Total Estimated Project Cost				<u>35,010,740</u>		<u>38,648,520</u>	<u>₱73,659,260</u>

TABLE- I.32 DETAILED COST ESTIMATE (ECONOMIC), IRRIGATION WORKS, QUINALI (B) RIVER BASIN AREA

Description	Unit	Quantity	Foreign Currency		Local Currency		Remarks
			Unit Price	Amount	Unit Price	Amount	
1. Contract Cost							
(1) Direct Cost							
<u>Irrigation Canal and Farm Road</u>							
(a) Main Canal							
Stripping	sq.m	179,000	3.94	705,260	1.09	195,110	
Excavation, in common	cu.m	66,000	10.33	681,780	3.89	256,740	
Embankment	cu.m	78,000	5.84	455,520	31.55	2,460,900	
(b) Lateral Canal							
Stripping	sq.m	273,000	3.94	1,075,620	1.09	297,570	
Excavation, in common	cu.m	54,000	10.33	557,820	3.89	210,060	
Embankment	cu.m	108,000	5.84	630,720	31.55	3,407,400	
<u>Related Structures for Main Canal & Lateral Canal</u>							
Concrete, type A	cu.m	2,400	126.88	304,510	179.92	431,320	
Concrete, type B	cu.m	1,500	113.00	169,500	171.35	257,030	
Metal	ton	90	12,000.00	1,080,000	4,000.00	360,000	
Reinforcing bar	ton	210	2,509.08	526,910	1,354.44	284,430	
R.C. pipe, 1350 mm dia.	m	180	6.48	1,170	702.50	126,450	
<u>Drainage Canal</u>							
Excavation	cu.m	60,500	10.33	624,970	3.89	235,350	

Description	Unit	Quantity	Foreign Currency		Local Currency		Remarks
			Unit Price	Amount	Unit Price	Amount	
Field drain	cu.m	9,600			15.71	150,820	
<u>Related Structures for Drainage Canal</u>							
Concrete, type A	cu.m	290	126.88	36,800	179.72	52,120	
Concrete, type B	cu.m	120	113.00	13,560	171.35	19,360	
Metal	ton	6	12,000.00	72,000	4,000.00	24,000	
Reinforcing bar	ton	14	2,509.08	35,130	1,354.44	18,960	
<u>Land Clearing and Grading</u>	ha	380	1,765.80	671,000	519.40	197,370	
<u>Head Works</u>							
Bantayan head works							
Concrete	cu.m	825	113.00	93,230	171.25	141,360	
Gate (98m x 1m)	L.S.			2,548,000		0	
Pipe culvert	m	19	304.00	5,780	982.00	18,660	
Sub total (1)				10,289,280		9,145,020	
(2) General (10% of (1))				1,028,930		914,500	
(3) Supervision and Miscellaneous (6% of (1) to (2))				679,090		603,570	
(4) Profit (10% of (1) to (3))				-		-	

Description	Unit	Quantity	Foreign Currency		Local Currency		Remarks
			Unit Price	Amount	Unit Price	Amount	
(5) Contractor's Tax (3% of (1) to (4))			-	-	-	-	
Sub total (Contract Cost)			<u>11,997,300</u>		<u>10,663,090</u>	<u>22,660,390</u>	
2. Engineering Cost (10% of Item 1.)			-		2,266,040		
3. Project Management Cost (5% of Item 1.)			-		1,133,020		
4. Contingency							
(1) Physical Contingency (20% of Item 1.)				2,399,460	2,132,620		
(2) Price Escalation (F/C: 7%, L/C: 13%)				-	-		
Total Estimated Project Cost			<u>14,396,760</u>		<u>16,194,770</u>	<u>30,591,530</u>	

II. UNIT PRICE BREAKDOWN

TABLE-II.1 UNIT PRICE LIST (DIRECT COST)

Description	Unit	Financial Cost		Economic Cost	
		Foreign (Pesos)	Local (Pesos)	Foreign (Pesos)	Local (Pesos)
1. Sabo Works					
S-001 Excavation, common	cu.m	14.60	8.06	14.60	4.62
S-002 Excavation, rock	cu.m	45.49	54.73	45.49	40.51
S-003 Backfill	cu.m	13.88	12.17	13.88	9.20
S-004 Embankment	cu.m	16.01	9.85	16.01	6.08
S-005 Riprap bedding	cu.m	17.07	28.93	17.07	24.90
S-006 Concrete, type A	cu.m	172.38	233.33	172.38	186.31
S-007 Rubble concrete	cu.m	138.69	186.87	138.69	149.35
S-008 Backfill concrete, type B	cu.m	144.00	215.06	144.00	175.55
S-009 Concrete, type B	cu.m	113.00	203.54	113.00	171.35
S-010 Concrete, type A	cu.m	126.88	216.37	126.88	179.72
S-011 Concrete, type C	cu.m	156.94	243.43	156.94	198.06
S-012 Formwork, F1	sq.m		40.42		40.42
S-013 Formwork, F2	sq.m		86.22		86.22
S-014 Reinforcing bar	ton	2,509.08	2,190.80	2,509.08	1,354.44
S-015 Waterstop, width 300 mm	m	80.00	26.30	80.00	6.30
S-016 Joint filler	sq.m	54.60	17.35	54.60	3.70
S-017 R.C. pipe, 300 mm dia.	m	2.78	60.43	2.78	52.84
S-018 R.C. pipe, 600 mm dia.	m	4.63	188.55	4.63	163.16

Description	Unit	Financial Cost		Economic Cost		
		Foreign (Pesos)	Local (Pesos)	Foreign (Pesos)	Local (Pesos)	
S-019	Wet-rubble masonry, spur dike	sq.m	19.88	53.06	19.88	48.75
S-020	Wet-rubble masonry, levee	sq.m	17.32	46.56	17.32	42.25
S-021	Weep hole, 50 mm dia.	m	28.00	10.21	28.00	3.21
S-022	Crib work	m	16.41	15.50	16.41	11.36
S-050	Spoil banking, sand & gravel	cu.m	0.54	0.51	0.54	0.38
S-052	Blasting	cu.m	16.80	39.36	16.80	31.90
S-053	Spoil banking, rock	cu.m	0.76	0.62	0.76	0.44
S-054	Filling with hand, sand & gravel	cu.m		4.78		4.78
S-055	Backfilling cobble stone behind wet masonry	cu.m	0.77	61.74	0.77	61.61
S-056	Filling with hand, rock & rubble	cu.m		8.01		8.01
S-057	Excavation with hand, sand & gravel	cu.m		15.71		15.71
S-058	Excavation with hand, weathered rock	cu.m	18.91	20.24	18.91	15.66
S-059	Excavating rock with hand	cu.m	21.11	53.30	21.11	48.18
S-060	Concrete material, type A	cu.m	99.44	167.14	99.44	137.31
S-061	Mixing concrete with portable batcher, 0.75cu.m	cu.m	26.77	22.09	26.77	15.86
S-062	Carrying concrete with agitator truck, 1.7cu.m	cu.m	21.42	11.32	21.42	6.24
S-063	Placing concrete with concrete bucket	cu.m	24.75	31.34	24.75	25.46
S-064	Curing concrete with mat	cu.m		1.44		1.44
S-065	Placing rubble stone	cu.m	20.52	26.55	20.52	21.60

Description	Unit	Financial Cost		Economic Cost	
		Foreign (Pesos)	Local (Pesos)	Foreign (Pesos)	Local (Pesos)
S-066 Supply rubble stone from riverbed	cu.m	17.07	20.92	17.07	16.89
S-067 Concrete material, type B	cu.m	85.56	154.61	85.56	128.94
S-068 Placing concrete	cu.m	10.25	25.60	10.25	23.07
S-069 Concrete material, type B	cu.m	85.56	154.61	85.56	128.94
S-070 Mixing concrete with light mixer, 0.2cu.m	cu.m	17.19	21.89	17.19	17.90
S-071 Concrete material, type C	cu.m	129.50	194.50	129.50	155.65
<u>2. River Improvement Works</u>					
R-001 Excavation, common	cu.m	31.64	15.48	31.64	7.98
R-002 Embankment	cu.m	16.06	8.77	16.06	4.99
R-003 Sod facing	sq.m		23.66		23.66
R-004 Excavation, common	cu.m	19.53	9.73	19.53	5.11
R-005 Excavation, common	cu.m	29.67	14.98	29.67	7.99
R-006 Removal of existing headworks	cu.m	61.34	94.93	61.34	80.26
R-007 Sluiceway	no.	29,400	29,700	29,400	20,300
R-009 Road bridge	m	17,500	17,500	17,500	11,900
R-010 Railway bridge	m	7,000	7,000	7,000	4,800
R-008 Sheet pile	m	160.64	106.51	160.64	56.11

Description	Unit	Financial Cost		Economic Cost	
		Foreign	Local	Foreign	Local
3. <u>Irrigation Works</u>					
I-001 Land clearing	sq.m	3.94	2.01	3.94	1.09
I-002 Excavation, common	cu.m	10.33	5.53	10.33	3.89
I-003 Embankment	cu.m	5.84	33.22	5.84	31.55
I-004 R.C. pipe, 1,350 mm dia.	m	6.48	809.44	6.48	702.50
I-005 Excavation, common, field drain	cu.m		15.71		15.71
I-006 Land levelling and grading	ha	1,765.80	935.40	1,765.80	519.40
I-007 Relating structure	L.S.	557,300	643,200	557,300	454,100
I-008 Gate	sq.m	26,000.00	6,500.00	26,000.00	0.00

TABLE-II.2 ESTIMATED HOURLY CONSTRUCTION EQUIPMENT COST

Equipment	Spec.	M/T	Purchase Price (F.O.B) (1000Y)	Freight (1000Y)	Insurance (1000Y)	CIF Manila (1000Y)	CIF Manila (Pesos)	Market Price (Pesos)	Economic Life (Hrs)	Hours Used Yearly (Hrs)	Ownership Rate (x10 ⁻⁶)	Estimated Hourly Ownership Cost	Operating & Owning Cost			
													Foreign	Local	Tax	Sub-total
Bulldozer W/R	21t	41.9	26,900	838	269	28,007	933,567	1,260,315	6,600	1,100	352	443.63	288.36	88.73	66.54	155.27
Bulldozer	11t	31.5	12,000	630	120	12,750	425,000	573,750	6,600	1,100	352	201.96	131.27	40.39	30.30	70.69
Bulldozer	3t	7.5	4,350	150	44	4,544	151,467	204,480	4,000	800	513	104.90	68.19	20.98	15.73	36.71
Backhoe	0.2m ³	28.0	6,450	560	65	7,075	235,833	318,375	5,000	1,000	380	120.98	78.64	24.20	18.14	42.34
Backhoe	0.4m ³	52.8	12,800	1,056	128	13,984	466,133	629,280	6,500	1,300	308	193.82	125.98	38.76	29.08	67.84
Backhoe	0.6m ³	69.8	15,800	1,396	158	17,354	578,467	780,930	6,500	1,300	308	240.53	156.34	48.11	36.08	84.19
Tractor shovel	1.4m ³	28.1	11,350	562	114	12,026	400,867	541,170	6,600	1,100	359	194.28	126.28	38.86	29.14	68.00
Tractor shovel	1.8m ³	37.7	14,800	754	148	15,702	523,400	706,590	6,600	1,100	359	253.67	164.89	50.73	38.05	88.78
Dump truck	6t	41.2	6,000	824	60	6,884	229,467	309,781	6,000	1,500	367	113.69	73.90	22.74	17.05	39.79
Dump truck	8t	45.4	8,000	908	80	8,988	299,600	404,460	6,400	1,600	328	132.67	86.24	26.53	19.90	46.43
Dump truck	10t	56.4	8,600	1,128	86	9,814	327,133	441,630	6,800	1,700	309	136.46	88.70	27.29	20.47	47.76
Truck crane (M)	15t	85.9	23,000	1,718	230	24,948	831,600	1,122,660	6,600	1,100	276	309.85	201.40	61.97	46.48	108.45
Truck crane (M)	20t	99.9	26,500	1,998	265	28,763	958,767	1,294,335	6,600	1,100	276	357.24	232.21	71.45	53.58	125.03
Truck crane (H)	15t	85.9	21,000	1,718	210	22,928	764,267	1,031,760	6,600	1,100	276	284.77	185.10	56.95	42.72	99.67
Truck crane (H)	20t	99.9	25,500	1,998	255	27,753	925,100	1,248,885	6,600	1,100	276	344.69	224.05	68.94	51.70	120.64
Hand hammer	20kg	0.2	200	4	2	206	6,867	9,270			(a)4,500	(a) 41.72	(a) 27.12	(a) 8.34	(a) 6.26	(a) 14.60
Pick hammer	7kg	0.1	30	2	-	32	1,067	1,440			(a)4,500	(a) 6.48	(a) 4.21	(a) 1.30	(a) 0.97	(a) 2.27
Crawler drill	7m ³ /min	6.5	6,300	130	63	6,493	216,433	292,185	4,000	1,000	470	137.33	89.26	27.47	20.60	48.07
Crawler drill	10m ³ /min	10.1	8,200	202	82	8,484	282,800	381,780	4,000	1,000	470	179.44	116.64	35.89	26.91	62.80
Vibration Roller	1t	2.7	1,500	54	15	1,569	52,300	70,605	3,750	750	520	36.71	23.87	7.34	5.50	12.84
Vibration Roller	3-4t	9.2	4,000	184	40	4,224	140,800	190,080	3,750	750	471	89.53	58.19	17.91	13.43	31.34
Tamper, Rammer	60-100kg	0.5	250	10	3	263	8,767	11,835			(a)4,167	(a) 49.32	(a) 32.06	(a) 9.86	(a) 7.40	(a) 17.26
Portable Conc. Mix	0.5-0.75	110.0	10,500	2,200	105	12,805	426,833	576,224	4,000	800	463	266.78	173.41	53.36	40.02	93.38
Concrete Mixer	0.08m ³	3.0	150	60	2	212	7,067	9,540			(a)3,083	(a) 29.41	(a) 19.12	(a) 5.88	(a) 4.41	(a) 10.29
Concrete Mixer	0.15m ³	11.3	1,500	226	15	1,741	58,033	78,345			(a)3,083	(a)241.54	(a)157.00	(a) 48.31	(a) 36.23	(a) 84.54
Agitator truck	1.9m ³	32.5	4,500	650	45	5,195	173,167	233,775	4,500	900	400	93.51	60.78	18.70	14.03	32.73
Agitator	3.2m ³	58.1	6,500	1,162	65	7,727	257,567	347,715	5,000	1,000	360	125.18	81.37	25.04	18.77	43.81
Air Compressor	3.5m ³ /min	7.0	2,000	140	20	2,160	72,000	97,200			(a)2,500	(a)243.00	(a)157.95	(a) 48.60	(a) 36.45	(a) 85.05
Air Compressor	7m ³ /min	11.7	4,000	234	40	4,274	142,467	192,330			(a)2,500	(a)480.83	(a)312.54	(a) 96.17	(a) 72.12	(a)168.29
Air Compressor	10m ³ /min	15.4	5,600	308	56	5,964	198,800	268,380			(a)2,500	(a)670.95	(a)436.12	(a)134.19	(a)100.64	(a)234.83
Conc. Vibrator	45m/m	0.1	150	2	2	154	5,133	6,930			(a)4,028	(a) 27.91	(a) 18.14	(a) 5.58	(a) 4.19	(a) 9.77
Velt Conveyor 10 ^m	4PS	1.5	250	30	3	283	9,433	12,735			(a)8,667	(a)110.38	(a) 71.75	(a) 22.08	(a) 16.55	(a) 38.63
Water Sprinkler	1750ℓ	15.8	2,500	316	25	2,841	94,700	127,845	6,000	1,200	333	42.57	27.67	8.51	6.39	14.90
Water Sprinkler	5500ℓ	38.5	5,000	770	50	5,820	184,000	261,900	6,000	1,200	333	87.21	56.68	17.44	13.09	30.53
Motor Grader	3.1m	37.4	11,500	748	115	12,363	412,100	556,335	6,000	1,000	353	196.39	127.65	39.28	29.46	68.74
Generator	20kVA		2,800			3,024	100,800	136,080			(a)1,905	259.23	168.50	51.85	38.88	90.73
Bulldozer	15 ton		15,300			16,218	540,600	729,810			352	256.89	166.98	51.38	38.53	89.91
Tamping roller			6,600			6,996	233,200	314,820			317	99.80	64.87	19.96	14.97	34.93

