

DETAILED CONSTRUCTION COST ESTIMATE (30/52)

30. Name of Bridge : PANUKID
Classification : Repair

Item No.	Description	Unit	Price	Quantity	Amount	Foreign Component	Local Component	Taxes
(I) EARTHWORK AND ROAD WORKS								
100	Clearing and Grubbing	Sq.m	2.16	-	-	-	-	-
102	Common excavation	Cu.m	43.8	-	-	-	-	-
103(2)	Bridge excavation above low water level	Cu.m	58.5	-	-	-	-	-
103(2)S	Bridge excavation below low water level	Cu.m	111	-	-	-	-	-
103(5)	Shoring, cribbing, cofferdam and related work	LS	1	-	-	-	-	-
104(1)	Embankment	Cu.m	69.0	479	33051.00	24127.23	5618.67	3305.10
104(5)	Selected borrow for backfill	Cu.m	120	-	-	-	-	-
200	Aggregate subbase course	Cu.m	195	-	-	-	-	-
311(2)	PCC Pavement (Reinforced)	Sq.m	465	-	-	-	-	-
Sub-total					33051.00	24127.23	5618.67	3305.10
					(100.0 %)	(73.0 %)	(17.0 %)	(10.0 %)
(II) SUPERSTRUCTURE WORKS								
101(S)	Removal concrete structure	Cu.m	912	26	23712.00	10196.16	11144.64	2371.20
101(1)	Removal steel structure (bridge)	LS	1	-	-	-	-	-
401	Railing	m	789	-	-	-	-	-
402	Timber structure (Detour bridge)	span	45200	7	316400.00	98084.00	186676.00	31640.00
403(S)	Structural steel (Detour bridge)	Sq.m	5180	-	-	-	-	-
404	Reinforcing steel	kg	17.9	4180	74822.00	53871.84	13467.96	7482.20
405(1)	Structural concrete, Class A	Cu.m	2760	32	88320.00	48576.00	30912.00	8832.00
407	Prestressed concrete bridge	Cu.m	15800	-	-	-	-	-
408	Steel bridge(I-beam)	ton	61400	-	-	-	-	-
411	Paint	Sq.m	68.4	550	37620.00	4890.60	28967.40	3762.00
Sub-total					540874.00	215618.60	271168.00	54087.40
					(100.0 %)	(39.8 %)	(50.1 %)	(10.0 %)
(III) SUBSTRUCTURE WORKS								
101(S)	Removal of concrete structure	Cu.m	912	-	-	-	-	-
101(1)	Removal of steel structure	LS	1	-	-	-	-	-
400(3)	Steel H-piles	m	3260	-	-	-	-	-
400(4)	Precast concrete pile (400X400mm)	m	801	-	-	-	-	-
400(6)	Steel sheet pile	m	3290	-	-	-	-	-
400(7)	Precast concrete sheet pile	m	580	-	-	-	-	-
400(16)	Cast-in-Place concrete pile(1200mm)	m	7270	-	-	-	-	-
404	Reinforcement steel	kg	15.5	-	-	-	-	-
405(1)	Structural concrete, Class A	Cu.m	1930	-	-	-	-	-
405(5)	Seal concrete	Cu.m	1740	-	-	-	-	-
501	Grouted riprap	Cu.m	945	-	-	-	-	-
505	Stone masonry	Cu.m	853	-	-	-	-	-
509	Gabion	Cu.m	663	-	-	-	-	-
Sub-total					(-)	(-)	(-)	(-)
(IV) RIVER TRAINING WORKS								
400(1)	Untreated timber pile	m	109	-	-	-	-	-
400(4)	Precast concrete pile (400X400mm)	m	801	-	-	-	-	-
400(6)	Steel sheet pile	m	3290	-	-	-	-	-
404	Reinforcement steel	kg	15.5	-	-	-	-	-
405(1)	Structural concrete, Class A	Cu.m	1930	-	-	-	-	-
405(5)	Seal concrete	Cu.m	1740	-	-	-	-	-
504	Grouted riprap	Cu.m	945	-	-	-	-	-
505	Stone masonry	Cu.m	853	-	-	-	-	-
506	Stone pitching (Hand-laid rock embankment)	Cu.m	300	-	-	-	-	-
509	Gabion	Cu.m	663	-	-	-	-	-
Sub-total					(-)	(-)	(-)	(-)
(V) SPECIAL WORKS FOR REHABILITATION								
800	Additional stringer	ton	41300	5	206500.00	156940.00	28910.00	20650.00
801	Additional sidewalk	Sq.m	6690	-	-	-	-	-
802	Reinforcing beam of RCDG	Cu.m	5960	-	-	-	-	-
803	Widening of pier coping	Cu.m	8680	-	-	-	-	-
Sub-total					206500.00	156940.00	28910.00	20650.00
					(100.0 %)	(76.0 %)	(14.0 %)	(10.0 %)
(VI) TEMPORARY WORKS								
900	Scaffolding	Sq.m	156	124	19344.00	13540.80	3868.80	1934.40
901	Staging	Cu.m	220	-	-	-	-	-
902	Temporary bridge	Sq.m	5180	-	-	-	-	-
903	Preparation works	LS	-	-	-	-	-	-
Sub-total					19344.00	13540.80	3868.80	1934.40
					(100.0 %)	(70.0 %)	(20.0 %)	(10.0 %)
Grand Total					799769.00	410226.63	309565.47	79976.90
					(100.0 %)	(51.2 %)	(38.7 %)	(10.0 %)

DETAILED CONSTRUCTION COST ESTIMATE (31/52)

31 Name of Bridge : SAN ISIDRO
Classification : Repair

Item No.	Description	Unit	Price	Quantity	Amount	Foreign Component	Local Component	Taxes
(I) EARTHWORK AND ROAD WORKS								
100	Clearing and Grubbing	Sq.m	2.16	-	-	-	-	-
102	Common excavation	Cu.m	43.8	-	-	-	-	-
103(2)	Bridge excavation above low water level	Cu.m	58.5	-	-	-	-	-
103(2)S	Bridge excavation below low water level	Cu.m	111	-	-	-	-	-
103(5)	Shoring, cribbing, cofferdam and related work	LS	1	-	-	-	-	-
104(1)	Embankment	Cu.m	69.0	479	33051.00	24127.23	5618.67	3305.10
104(5)	Selected borrow for backfill	Cu.m	120	-	-	-	-	-
200	Aggregate subbase course	Cu.m	195	-	-	-	-	-
311(2)	PCC Pavement (Reinforced)	Sq.m	465	-	-	-	-	-
* Sub-total					33051.00	24127.23	5618.67	3305.10
					(100.0 %)	(73.0 %)	(17.0 %)	(10.0 %)
(II) SUPERSTRUCTURE WORKS								
101(S)	Removal concrete structure	Cu.m	912	62	56544.00	24313.92	26575.68	5654.40
101(1)	Removal steel structure (bridge)	LS	1	-	-	-	-	-
401	Railing	m	789	50	39450.00	22092.00	13413.00	3945.00
402	Timber structure (Detour bridge)	span	45200	7	316400.00	98084.00	186676.00	31640.00
403(S)	Structural steel (Detour bridge)	Sq.m	5180	-	-	-	-	-
404	Reinforcing steel	kg	17.9	8393	150234.70	108168.98	27042.25	15023.47
405(1)	Structural concrete, Class A	Cu.m	2760	65	179400.00	98670.00	62790.00	17940.00
407	Prestressed concrete bridge	Cu.m	15800	-	-	-	-	-
408	Steel bridge(I-beam)	ton	61400	-	-	-	-	-
411	Paint	Sq.m	68.4	552	37756.80	4908.38	29072.74	3775.68
* Sub-total					779785.50	356237.29	345569.66	77978.55
					(100.0 %)	(45.6 %)	(44.3 %)	(10.0 %)
(III) SUBSTRUCTURE WORKS								
101(S)	Removal of concrete structure	Cu.m	912	-	-	-	-	-
101(1)	Removal of steel structure	LS	1	-	-	-	-	-
400(3)	Steel H-piles	m	3260	-	-	-	-	-
400(4)	Precast concrete pile (400X400mm)	m	801	-	-	-	-	-
400(6)	Steel sheet pile	m	3290	-	-	-	-	-
400(7)	Precast concrete sheet pile	m	580	-	-	-	-	-
400(16)	Cast-in-Place concrete pile(1200mm)	m	7270	-	-	-	-	-
404	Reinforcement steel	kg	15.5	-	-	-	-	-
405(1)	Structural concrete, Class A	Cu.m	1930	-	-	-	-	-
405(5)	Seal concrete	Cu.m	1740	-	-	-	-	-
501	Grouted riprap	Cu.m	945	-	-	-	-	-
505	Stone masonry	Cu.m	853	-	-	-	-	-
509	Gabion	Cu.m	663	-	-	-	-	-
* Sub-total					(-)	(-)	(-)	(-)
(IV) RIVER TRAINING WORKS								
400(1)	Untreated timber pile	m	109	-	-	-	-	-
400(4)	Precast concrete pile (400X400mm)	m	801	-	-	-	-	-
400(6)	Steel sheet pile	m	3290	-	-	-	-	-
404	Reinforcement steel	kg	15.5	-	-	-	-	-
405(1)	Structural concrete, Class A	Cu.m	1930	-	-	-	-	-
405(5)	Seal concrete	Cu.m	1740	-	-	-	-	-
504	Grouted riprap	Cu.m	945	-	-	-	-	-
505	Stone masonry	Cu.m	853	-	-	-	-	-
506	Stone pitching (Hand-laid rock embankment)	Cu.m	300	-	-	-	-	-
509	Gabion	Cu.m	663	-	-	-	-	-
* Sub-total					(-)	(-)	(-)	(-)
(V) SPECIAL WORKS FOR REHABILITATION								
800	Additional stringer	ton	41300	9	371700.00	282492.00	52038.00	37170.00
801	Additional sidewalk	Sq.m	6690	-	-	-	-	-
802	Reinforcing beam of RCDG	Cu.m	5960	-	-	-	-	-
803	Widening of pier coping	Cu.m	8680	-	-	-	-	-
* Sub-total					371700.00	282492.00	52038.00	37170.00
					(100.0 %)	(76.0 %)	(14.0 %)	(10.0 %)
(VI) TEMPORARY WORKS								
900	Scaffolding	Sq.m	156	248	38688.00	27081.60	7737.60	3868.80
901	Staging	Cu.m	220	-	-	-	-	-
902	Temporary bridge	Sq.m	5180	-	-	-	-	-
903	Preparation works	LS	-	-	-	-	-	-
* Sub-total					38688.00	27081.60	7737.60	3868.80
					(100.0 %)	(70.0 %)	(20.0 %)	(10.0 %)
** Grand Total					1223224.80	689938.12	410963.93	122322.45
					(100.0 %)	(56.4 %)	(33.6 %)	(10.0 %)

DETAILED CONSTRUCTION COST ESTIMATE (32/52)

32 Name of Bridge : SAN GABRIEL
 Classification : Replacement of Superstructure

Item No.	Description	Unit	Price	Quantity	Amount	Foreign Component	Local Component	Taxes
(I) EARTHWORK AND ROAD WORKS								
100	Clearing and Grubbing	Sq.m	2.16	-	-	-	-	-
102	Common excavation	Cu.m	43.8	-	-	-	-	-
103(2)	Bridge excavation above low water level	Cu.m	58.5	-	-	-	-	-
103(2)S	Bridge excavation below low water level	Cu.m	111	-	-	-	-	-
103(5)	Shoring, cribbing, cofferdam and related work	LS	1	-	-	-	-	-
104(1)	Embankment	Cu.m	69.0	479	33051.00	24127.23	5618.67	3305.10
104(5)	Selected borrow for backfill	Cu.m	120	-	-	-	-	-
200	Aggregate subbase course	Cu.m	195	-	-	-	-	-
311(2)	PCC Pavement (Reinforced)	Sq.m	465	-	-	-	-	-
* Sub-total					33051.00	24127.23	5618.67	3305.10
					(100.0 %)	(73.0 %)	(17.0 %)	(10.0 %)
(II) SUPERSTRUCTURE WORKS								
101(5)	Removal concrete structure	Cu.m	912	73	66576.00	28627.68	31290.72	6657.80
101(1)	Removal steel structure (bridge)	LS	1	-	-	-	-	-
401	Railing	m	789	43	33927.00	18999.12	11535.18	3392.70
402	Timber structure (Detour bridge)	span	45200	6	271200.00	84072.00	160008.00	27120.00
403(5)	Structural steel (Detour bridge)	Sq.m	5180	-	-	-	-	-
404	Reinforcing steel	kg	17.9	7854	140586.60	101222.35	25305.59	14058.66
405(1)	Structural concrete, Class A	Cu.m	2760	79	218040.00	119922.00	76314.00	21804.00
407	Prestressed concrete bridge	Cu.m	15800	-	-	-	-	-
408	Steel bridge(I-beam)	ton	61400	-	-	-	-	-
411	Paint	Sq.m	68.4	-	-	-	-	-
* Sub-total					730329.60	352843.15	304453.49	73032.96
					(100.0 %)	(48.3 %)	(41.6 %)	(10.0 %)
(III) SUBSTRUCTURE WORKS								
101(5)	Removal of concrete structure	Cu.m	912	-	-	-	-	-
101(1)	Removal of steel structure	LS	1	-	-	-	-	-
400(3)	Steel H-piles	m	3260	-	-	-	-	-
400(4)	Precast concrete pile (400X400mm)	m	801	-	-	-	-	-
400(6)	Steel sheet pile	m	3290	-	-	-	-	-
400(7)	Precast concrete sheet pile	m	580	-	-	-	-	-
400(16)	Cast-in-Place concrete pile(1200mm)	m	7270	-	-	-	-	-
404	Reinforcement steel	kg	15.5	-	-	-	-	-
405(1)	Structural concrete, Class A	Cu.m	1930	-	-	-	-	-
405(5)	Seal concrete	Cu.m	1740	-	-	-	-	-
501	Grouted riprap	Cu.m	945	84	79380.00	34133.40	37308.60	7938.00
505	Stone masonry	Cu.m	853	-	-	-	-	-
509	Gabion	Cu.m	663	-	-	-	-	-
* Sub-total					79380.00	34133.40	37308.60	7938.00
					(100.0 %)	(43.0 %)	(47.0 %)	(10.0 %)
(IV) RIVER TRAINING WORKS								
400(1)	Untreated timber pile	m	109	-	-	-	-	-
400(4)	Precast concrete pile (400X400mm)	m	801	-	-	-	-	-
400(6)	Steel sheet pile	m	3290	-	-	-	-	-
404	Reinforcement steel	kg	15.5	-	-	-	-	-
405(1)	Structural concrete, Class A	Cu.m	1930	-	-	-	-	-
405(5)	Seal concrete	Cu.m	1740	-	-	-	-	-
504	Grouted riprap	Cu.m	945	-	-	-	-	-
505	Stone masonry	Cu.m	853	-	-	-	-	-
506	Stone pitching (Hand-laid rock embankment)	Cu.m	300	-	-	-	-	-
509	Gabion	Cu.m	663	-	-	-	-	-
* Sub-total					(-)	(-)	(-)	(-)
(V) SPECIAL WORKS FOR REHABILITATION								
800	Additional stringer	ton	41300	-	-	-	-	-
801	Additional sidewalk	Sq.m	6690	-	-	-	-	-
802	Reinforcing beam of RCDG	Cu.m	5960	-	-	-	-	-
803	Widening of pier coping	Cu.m	8680	23	199640.00	105809.20	73866.80	19964.00
* Sub-total					199640.00	105809.20	73866.80	19964.00
					(100.0 %)	(53.0 %)	(37.0 %)	(10.0 %)
(VI) TEMPORARY WORKS								
900	Scaffolding	Sq.m	156	-	-	-	-	-
901	Staging	Cu.m	220	751	165220.00	102436.40	46261.60	16522.00
902	Temporary bridge	Sq.m	5180	-	-	-	-	-
903	Preparation works	LS	-	-	-	-	-	-
* Sub-total					165220.00	102436.40	46261.60	16522.00
					(100.0 %)	(62.0 %)	(28.0 %)	(10.0 %)
** Grand Total					1207620.60	619349.38	467509.16	120762.06
					(100.0 %)	(51.2 %)	(38.7 %)	(10.0 %)

DETAILED CONSTRUCTION COST ESTIMATE (33/52)

33 Name of Bridge : PAHOHO
 Classification : Repair

Item No.	Description	Unit	Price	Quantity	Amount	Foreign Component	Local Component	Taxes
(I) EARTHWORK AND ROAD WORKS								
100	Clearing and Grubbing	Sq.m	2.16	-	-	-	-	-
102	Common excavation	Cu.m	43.8	-	-	-	-	-
103(2)	Bridge excavation above low water level	Cu.m	58.5	-	-	-	-	-
103(2)S	Bridge excavation below low water level	Cu.m	111	-	-	-	-	-
103(5)	Shoring, cribbing, cofferdam and related work	LS	1	-	-	-	-	-
104(1)	Embankment	Cu.m	69.0	-	-	-	-	-
104(S)	Selected borrow for backfill	Cu.m	120	-	-	-	-	-
200	Aggregate subbase course	Cu.m	195	-	-	-	-	-
311(2)	PCC Pavement (Reinforced)	Sq.m	465	-	-	-	-	-
* Sub-total					(-)	(-)	(-)	(-)
(II) SUPERSTRUCTURE WORKS								
101(S)	Removal concrete structure	Cu.m	912	12	10944.00	4705.92	5143.68	1094.40
101(1)	Removal steel structure (bridge)	LS	1	-	-	-	-	-
401	Railing	m	789	26	20514.00	11487.84	6974.76	2051.40
402	Timber structure (Detour bridge)	span	45200	-	-	-	-	-
403(S)	Structural steel (Detour bridge)	Sq.m	5180	-	-	-	-	-
404	Reinforcing steel	kg	17.9	1450	25955.00	18687.60	4671.90	2595.50
405(1)	Structural concrete, Class A	Cu.m	2760	12	33120.00	18216.00	11592.00	3312.00
407	Prestressed concrete bridge	Cu.m	15800	-	-	-	-	-
408	Steel bridge(I-beam)	ton	61400	-	-	-	-	-
411	Paint	Sq.m	68.4	-	-	-	-	-
* Sub-total					90533.00	53097.36	28382.34	9053.30
					(100.0 %)	(58.6 %)	(31.3 %)	(10.0 %)
(III) SUBSTRUCTURE WORKS								
101(S)	Removal of concrete structure	Cu.m	912	-	-	-	-	-
101(1)	Removal of steel structure	LS	1	-	-	-	-	-
400(3)	Steel H-piles	m	3280	-	-	-	-	-
400(4)	Precast concrete pile (400X400mm)	m	801	-	-	-	-	-
400(6)	Steel sheet pile	m	3290	-	-	-	-	-
400(7)	Precast concrete sheet pile	m	580	-	-	-	-	-
400(16)	Cast-in-Place concrete pile(1200mm)	m	7270	-	-	-	-	-
404	Reinforcement steel	kg	15.5	-	-	-	-	-
405(1)	Structural concrete, Class A	Cu.m	1930	-	-	-	-	-
405(5)	Seal concrete	Cu.m	1740	-	-	-	-	-
501	Grouted riprap	Cu.m	945	54	51030.00	21942.90	23984.10	5103.00
505	Stone masonry	Cu.m	853	-	-	-	-	-
509	Gabion	Cu.m	663	-	-	-	-	-
* Sub-total					51030.00	21942.90	23984.10	5103.00
					(100.0 %)	(43.0 %)	(47.0 %)	(10.0 %)
(IV) RIVER TRAINING WORKS								
400(1)	Untreated timber pile	m	109	-	-	-	-	-
400(4)	Precast concrete pile (400X400mm)	m	801	-	-	-	-	-
400(6)	Steel sheet pile	m	3290	-	-	-	-	-
404	Reinforcement steel	kg	15.5	-	-	-	-	-
405(1)	Structural concrete, Class A	Cu.m	1930	-	-	-	-	-
405(5)	Seal concrete	Cu.m	1740	-	-	-	-	-
504	Grouted riprap	Cu.m	945	-	-	-	-	-
505	Stone masonry	Cu.m	853	-	-	-	-	-
506	Stone pitching (Hand-laid rock embankment)	Cu.m	300	-	-	-	-	-
509	Gabion	Cu.m	663	-	-	-	-	-
* Sub-total					(-)	(-)	(-)	(-)
(V) SPECIAL WORKS FOR REHABILITATION								
800	Additional stringer	ton	41300	-	-	-	-	-
801	Additional sidewalk	Sq.m	6690	-	-	-	-	-
802	Reinforcing beam of RCDG	Cu.m	5960	-	-	-	-	-
803	Widening of pier coping	Cu.m	8680	4	34720.00	18401.60	12846.40	3472.00
* Sub-total					34720.00	18401.60	12846.40	3472.00
					(100.0 %)	(53.0 %)	(37.0 %)	(10.0 %)
(VI) TEMPORARY WORKS								
900	Scaffolding	Sq.m	155	132	20592.00	14414.40	4118.40	2059.20
901	Staging	Cu.m	220	-	-	-	-	-
902	Temporary bridge	Sq.m	5180	-	-	-	-	-
903	Preparation works	LS	-	1	5906.25	3235.69	2079.94	590.62
* Sub-total					26498.25	17650.09	6198.34	2649.82
					(100.0 %)	(66.6 %)	(23.3 %)	(10.0 %)
** Grand Total					202781.25	111091.95	71411.18	20278.12
					(100.0 %)	(54.7 %)	(35.2 %)	(10.0 %)

DETAILED CONSTRUCTION COST ESTIMATE (34/52)

34. Name of Bridge : TINIGUIBAN
 Classification : Replacement of Superstructure

Item No.	Description	Unit	Price	Quantity	Amount	Foreign Component	Local Component	Taxes
(I) EARTHWORK AND ROAD WORKS								
100	Clearing and Grubbing	Sq.m	2.16	399	861.84	60.33	715.33	86.18
102	Common excavation	Cu.m	43.8	139	6088.20	4079.09	1400.29	608.82
103(2)	Bridge excavation above low water level	Cu.m	58.5	-	-	-	-	-
103(2)S	Bridge excavation below low water level	Cu.m	111	-	-	-	-	-
103(5)	Shoring, cribbing, cofferdam and related work	LS	1	-	-	-	-	-
104(1)	Embankment	Cu.m	69.0	479	33051.00	24127.23	5618.67	3305.10
104(5)	Selected borrow for backfill	Cu.m	120	-	-	-	-	-
200	Aggregate subbase course	Cu.m	195	127	24765.00	17830.80	4457.70	2476.50
311(2)	PCC Pavement (Reinforced)	Sq.m	465	221	102765.00	63714.30	28774.20	10276.50
* Sub-total					167531.04	109811.75	40966.18	16753.10
					(100.0 %)	(65.5 %)	(24.4 %)	(10.0 %)
(II) SUPERSTRUCTURE WORKS								
101(S)	Removal concrete structure	Cu.m	912	79	72048.00	30980.64	33862.56	7204.80
101(1)	Removal steel structure (bridge)	LS	1	-	-	-	-	-
401	Railinx	m	789	44	34716.00	19440.96	11803.44	3471.60
402	Timber structure (Detour bridge)	span	48200	6	271200.00	84072.00	160008.00	27120.00
403(5)	Structural steel (Detour bridge)	Sq.m	5180	-	-	-	-	-
404	Reinforcing steel	kg	17.9	9603	171893.70	123763.46	30940.87	17189.37
405(1)	Structural concrete, Class A	Cu.m	2760	96	264960.00	145728.00	92736.00	26496.00
407	Prestressed concrete bridge	Cu.m	15800	-	-	-	-	-
408	Steel bridge(I-beam)	ton	61400	-	-	-	-	-
411	Paint	Sq.m	68.4	-	-	-	-	-
* Sub-total					814817.70	403985.06	329350.87	81481.77
					(100.0 %)	(49.5 %)	(40.4 %)	(10.0 %)
(III) SUBSTRUCTURE WORKS								
101(S)	Removal of concrete structure	Cu.m	912	-	-	-	-	-
101(1)	Removal of steel structure	LS	1	-	-	-	-	-
400(3)	Steel H-piles	m	3260	-	-	-	-	-
400(4)	Precast concrete pile (400X400mm)	m	801	-	-	-	-	-
400(6)	Steel sheet pile	m	3290	-	-	-	-	-
400(7)	Precast concrete sheet pile	m	580	-	-	-	-	-
400(16)	Cast-in-Place concrete pile(1200mm)	m	7270	-	-	-	-	-
404	Reinforcement steel	kg	15.5	-	-	-	-	-
405(1)	Structural concrete, Class A	Cu.m	1930	-	-	-	-	-
405(5)	Seal concrete	Cu.m	1740	-	-	-	-	-
501	Grouted riprap	Cu.m	945	-	-	-	-	-
505	Stone masonry	Cu.m	853	-	-	-	-	-
509	Gabion	Cu.m	663	-	-	-	-	-
* Sub-total					(-)	(-)	(-)	(-)
(IV) RIVER TRAINING WORKS								
400(1)	Untreated timber pile	m	109	-	-	-	-	-
400(4)	Precast concrete pile (400X400mm)	m	801	-	-	-	-	-
400(6)	Steel sheet pile	m	3290	-	-	-	-	-
404	Reinforcement steel	kg	15.5	-	-	-	-	-
405(1)	Structural concrete, Class A	Cu.m	1930	-	-	-	-	-
405(5)	Seal concrete	Cu.m	1740	-	-	-	-	-
504	Grouted riprap	Cu.m	945	-	-	-	-	-
505	Stone masonry	Cu.m	853	-	-	-	-	-
506	Stone pitching (Hand-laid rock embankment)	Cu.m	300	-	-	-	-	-
509	Gabion	Cu.m	663	-	-	-	-	-
* Sub-total					(-)	(-)	(-)	(-)
(V) SPECIAL WORKS FOR REHABILITATION								
800	Additional stringer	ton	41300	-	-	-	-	-
801	Additional sidewalk	Sq.m	6690	-	-	-	-	-
802	Reinforcing beam of RCDG	Cu.m	5960	-	-	-	-	-
803	Widening of pier coping	Cu.m	8680	8	69440.00	36803.20	25692.80	6944.00
* Sub-total					69440.00	36803.20	25692.80	6944.00
					(100.0 %)	(53.0 %)	(37.0 %)	(10.0 %)
(VI) TEMPORARY WORKS								
900	Scaffolding	Sq.m	156	-	-	-	-	-
901	Staging	Cu.m	220	756	166320.00	103118.40	46569.60	16632.00
902	Temporary bridge	Sq.m	5180	-	-	-	-	-
903	Preparation works	LS	1	1	36543.26	19611.55	13277.38	3654.33
* Sub-total					202863.26	122729.95	59846.98	20286.33
					(100.0 %)	(60.5 %)	(29.5 %)	(10.0 %)
** Grand Total					1254652.00	673329.97	455856.83	125465.20
					(100.0 %)	(53.6 %)	(36.3 %)	(10.0 %)

DETAILED CONSTRUCTION COST ESTIMATE (35/52)

35 Name of Bridge : SGT. MATIAS
Classification : Repair

Item No.	Description	Unit	Price	Quantity	Amount	Foreign Component	Local Component	Taxes
(I) EARTHWORK AND ROAD WORKS								
100	Clearing and Grubbing	Sq.m	2.16	-	-	-	-	-
102	Common excavation	Cu.m	43.8	-	-	-	-	-
103(2)	Bridge excavation above low water level	Cu.m	58.5	-	-	-	-	-
103(2)S	Bridge excavation below low water level	Cu.m	111	-	-	-	-	-
103(5)	Shoring, cribbing, cofferdam and related work	LS	1	-	-	-	-	-
104(1)	Embankment	Cu.m	69.0	-	-	-	-	-
104(5)	Selected borrow for backfill	Cu.m	120	-	-	-	-	-
200	Aggregate subbase course	Cu.m	195	-	-	-	-	-
311(2)	PCC Pavement (Reinforced)	Sq.m	465	-	-	-	-	-
* Sub-total					(-)	(-)	(-)	(-)
(II) SUPERSTRUCTURE WORKS								
101(S)	Removal concrete structure	Cu.m	912	16	14592.00	6274.56	6858.24	1459.20
101(1)	Removal steel structure (bridge)	LS	1	-	-	-	-	-
401	Railing	m	789	-	-	-	-	-
402	Timber structure (Detour bridge)	span	45200	-	-	-	-	-
403(5)	Structural steel (Detour bridge)	Sq.m	5180	-	-	-	-	-
404	Reinforcing steel	Kg	17.9	1900	34010.00	24487.20	6121.80	3401.00
405(1)	Structural concrete, Class A	Cu.m	2760	16	44160.00	24288.00	15456.00	4416.00
407	Prestressed concrete bridge	Cu.m	15800	-	-	-	-	-
408	Steel bridge(I-beam)	ton	61400	-	-	-	-	-
411	Paint	Sq.m	68.4	-	-	-	-	-
* Sub-total					92762.00 (100.0 %)	55049.76 (59.3 %)	28436.04 (30.6 %)	9276.20 (10.0 %)
(III) SUBSTRUCTURE WORKS								
101(S)	Removal of concrete structure	Cu.m	912	-	-	-	-	-
101(1)	Removal of steel structure	LS	1	-	-	-	-	-
400(3)	Steel H-piles	m	3260	-	-	-	-	-
400(4)	Precast concrete pile (400X400mm)	m	801	-	-	-	-	-
400(6)	Steel sheet pile	m	3290	-	-	-	-	-
400(7)	Precast concrete sheet pile	m	580	-	-	-	-	-
400(16)	Cast-in-Place concrete pile(1200mm)	m	7270	-	-	-	-	-
404	Reinforcement steel	Kg	15.5	-	-	-	-	-
405(1)	Structural concrete, Class A	Cu.m	1930	-	-	-	-	-
405(5)	Seal concrete	Cu.m	1740	-	-	-	-	-
501	Grouted riprap	Cu.m	945	-	-	-	-	-
505	Stone masonry	Cu.m	853	-	-	-	-	-
509	Gabion	Cu.m	663	-	-	-	-	-
* Sub-total					(-)	(-)	(-)	(-)
(IV) RIVER TRAINING WORKS								
400(1)	Untreated timber pile	m	109	-	-	-	-	-
400(4)	Precast concrete pile (400X400mm)	m	801	-	-	-	-	-
400(6)	Steel sheet pile	m	3290	-	-	-	-	-
404	Reinforcement steel	Kg	15.5	-	-	-	-	-
405(1)	Structural concrete, Class A	Cu.m	1930	-	-	-	-	-
405(5)	Seal concrete	Cu.m	1740	-	-	-	-	-
504	Grouted riprap	Cu.m	945	-	-	-	-	-
505	Stone masonry	Cu.m	853	-	-	-	-	-
506	Stone pitching (Hand-laid rock embankment)	Cu.m	300	-	-	-	-	-
509	Gabion	Cu.m	663	-	-	-	-	-
* Sub-total					(-)	(-)	(-)	(-)
(V) SPECIAL WORKS FOR REHABILITATION								
800	Additional stringer	ton	41300	-	-	-	-	-
801	Additional sidewalk	Sq.m	6690	-	-	-	-	-
802	Reinforcing beam of RCDG	Cu.m	5960	-	-	-	-	-
803	Widening of pier coping	Cu.m	8680	3	26040.00	13801.20	9634.80	2604.00
* Sub-total					26040.00 (100.0 %)	13801.20 (53.0 %)	9634.80 (37.0 %)	2604.00 (10.0 %)
(VI) TEMPORARY WORKS								
900	Scaffolding	Sq.m	156	165	25740.00	18018.00	5148.00	2574.00
901	Staging	Cu.m	220	-	-	-	-	-
902	Temporary bridge	Sq.m	5180	-	-	-	-	-
903	Preparation works	LS	1	1	4336.26	2606.07	1296.67	433.63
* Sub-total					30076.26 (100.0 %)	20624.07 (68.6 %)	6444.67 (21.4 %)	3007.63 (10.0 %)
** Grand Total					148878.26 (100.0 %)	89476.03 (60.1 %)	44516.41 (29.9 %)	14887.83 (10.0 %)

DETAILED CONSTRUCTION COST ESTIMATE (36/52)

36 Name of Bridge : NAUBOD I
 Classification : Repair

Item No.	Description	Unit	Price	Quantity	Amount	Foreign Component	Local Component	Taxes
(I) EARTHWORK AND ROAD WORKS								
100	Clearing and Grubbing	Sq.m	2.16	-	-	-	-	-
102	Common excavation	Cu.m	43.8	-	-	-	-	-
103(2)	Bridge excavation above low water level	Cu.m	58.5	-	-	-	-	-
103(2)S	Bridge excavation below low water level	Cu.m	111	-	-	-	-	-
103(5)	Shoring, cribbing, cofferdam and related work	LS	1	-	-	-	-	-
104(1)	Embankment	Cu.m	69.0	479	33051.00	24127.23	5618.67	3305.10
104(5)	Selected borrow for backfill	Cu.m	120	64	7680.00	2764.80	4147.20	768.00
200	Aggregate subbase course	Cu.m	195	-	-	-	-	-
311(2)	PCC Pavement (Reinforced)	Sq.m	465	-	-	-	-	-
Sub-total					40731.00	26892.03	9765.87	4073.10
					(100.0 %)	(66.0 %)	(23.9 %)	(10.0 %)
(II) SUPERSTRUCTURE WORKS								
101(5)	Removal concrete structure	Cu.m	912	39	35568.00	15294.24	16716.96	3556.80
101(1)	Removal steel structure (bridge)	LS	1	-	-	-	-	-
401	Railinx	m	789	33	26037.00	14580.72	8852.58	2603.70
402	Timber structure (Detour bridge)	span	45200	6	271200.00	84072.00	160008.00	27120.00
403(5)	Structural steel (Detour bridge)	Sq.m	5180	-	-	-	-	-
404	Reinforcing steel	kg	17.9	5866	99631.40	71734.61	17933.66	9963.14
405(1)	Structural concrete, Class A	Cu.m	2760	43	118680.00	65274.00	41538.00	11868.00
407	Prestressed concrete bridge	Cu.m	15800	-	-	-	-	-
408	Steel bridge(I-beam)	ton	61400	-	-	-	-	-
411	Paint	Sq.m	68.4	367	25102.80	3263.36	19329.16	2510.28
Sub-total					576219.20	254218.93	264378.35	57621.92
					(100.0 %)	(44.1 %)	(45.8 %)	(10.0 %)
(III) SUBSTRUCTURE WORKS								
101(5)	Removal of concrete structure	Cu.m	912	-	-	-	-	-
101(1)	Removal of steel structure	LS	1	-	-	-	-	-
400(3)	Steel H-piles	m	3260	-	-	-	-	-
400(4)	Precast concrete pile (400X400mm)	m	801	-	-	-	-	-
400(6)	Steel sheet pile	m	3290	-	-	-	-	-
400(7)	Precast concrete sheet pile	m	580	-	-	-	-	-
400(16)	Cast-in-Place concrete pile(1200mm)	m	7270	-	-	-	-	-
404	Reinforcement steel	kg	15.5	-	-	-	-	-
405(1)	Structural concrete, Class A	Cu.m	1930	-	-	-	-	-
405(5)	Seal concrete	Cu.m	1740	-	-	-	-	-
501	Grouted riprap	Cu.m	945	-	-	-	-	-
505	Stone masonry	Cu.m	853	44	37532.00	18015.36	15763.44	3753.20
509	Gablon	Cu.m	663	-	-	-	-	-
Sub-total					37532.00	18015.36	15763.44	3753.20
					(100.0 %)	(48.0 %)	(42.0 %)	(10.0 %)
(IV) RIVER TRAINING WORKS								
400(1)	Untreated timber pile	m	109	-	-	-	-	-
400(4)	Precast concrete pile (400X400mm)	m	801	-	-	-	-	-
400(6)	Steel sheet pile	m	3290	-	-	-	-	-
404	Reinforcement steel	kg	15.5	-	-	-	-	-
405(1)	Structural concrete, Class A	Cu.m	1930	-	-	-	-	-
405(5)	Seal concrete	Cu.m	1740	-	-	-	-	-
504	Grouted riprap	Cu.m	945	-	-	-	-	-
505	Stone masonry	Cu.m	853	-	-	-	-	-
506	Stone pitching (Hand-laid rock embankment)	Cu.m	300	-	-	-	-	-
509	Gablon	Cu.m	663	-	-	-	-	-
Sub-total					(-)	(-)	(-)	(-)
(V) SPECIAL WORKS FOR REHABILITATION								
800	Additional stringer	ton	41300	-	-	-	-	-
801	Additional sidewalk	Sq.m	6690	-	-	-	-	-
802	Reinforcing beam of RCDG	Cu.m	5960	-	-	-	-	-
803	Widening of pier coping	Cu.m	8680	-	-	-	-	-
Sub-total					(-)	(-)	(-)	(-)
(VI) TEMPORARY WORKS								
900	Scaffolding	Sq.m	156	165	25740.00	18018.00	5148.00	2574.00
901	Staging	Cu.m	220	55	12100.00	7502.00	3388.00	1210.00
902	Temporary bridge	Sq.m	5180	-	-	-	-	-
903	Preparation works	LS	1	1	20769.67	9739.39	8953.31	2076.97
Sub-total					58609.67	35259.39	17489.31	5860.97
					(100.0 %)	(60.1 %)	(29.8 %)	(10.0 %)
** Grand Total					713091.87	334386.71	307396.97	71309.19
					(100.0 %)	(46.8 %)	(43.1 %)	(10.0 %)

DETAILED CONSTRUCTION COST ESTIMATE (37/52)

37 Name of Bridge : SOOK
Classification : Repair

Item No.	Description	Unit	Price	Quantity	Amount	Foreign Component	Local Component	Taxes
(I) EARTHWORK AND ROAD WORKS								
100	Clearing and Grubbing	Sq.m	2.16	-	-	-	-	-
102	Common excavation	Cu.m	43.8	-	-	-	-	-
103(2)	Bridge excavation above low water level	Cu.m	58.5	-	-	-	-	-
103(2)S	Bridge excavation below low water level	Cu.m	111	-	-	-	-	-
103(5)	Shoring, cribbing, cofferdam and related work	LS	1	-	-	-	-	-
104(1)	Embankment	Cu.m	69.0	-	-	-	-	-
104(S)	Selected borrow for backfill	Cu.m	120	-	-	-	-	-
200	Aggregate subbase course	Cu.m	195	-	-	-	-	-
311(2)	PCC Pavement (Reinforced)	Sq.m	465	-	-	-	-	-
* Sub-total					(-)	(-)	(-)	(-)
(II) SUPERSTRUCTURE WORKS								
101(S)	Removal concrete structure	Cu.m	912	39	35568.00	15294.24	16716.96	3556.80
101(1)	Removal steel structure (bridge)	LS	1	-	-	-	-	-
401	Ralling	m	789	-	-	-	-	-
402	Timber structure (Detour bridge)	span	45200	-	-	-	-	-
403(S)	Structural steel (Detour bridge)	Sq.m	5180	-	-	-	-	-
404	Reinforcing steel	kg	17.9	6116	109476.40	78823.01	19705.75	10947.64
405(1)	Structural concrete, Class A	Cu.m	2760	47	129720.00	71346.00	45402.00	12972.00
407	Prestressed concrete bridge	Cu.m	15800	-	-	-	-	-
408	Steel bridge(I-beam)	ton	61400	-	-	-	-	-
411	Paint	Sq.m	68.4	807	55198.80	7175.84	42503.08	5519.88
* Sub-total					329963.20	172639.09	124327.79	32996.32
					(100.0 %)	(52.3 %)	(37.6 %)	(10.0 %)
(III) SUBSTRUCTURE WORKS								
101(S)	Removal of concrete structure	Cu.m	912	-	-	-	-	-
101(1)	Removal of steel structure	LS	1	-	-	-	-	-
400(3)	Steel H-piles	m	3260	-	-	-	-	-
400(4)	Precast concrete pile (400X400mm)	m	801	-	-	-	-	-
400(6)	Steel sheet pile	m	3290	-	-	-	-	-
400(7)	Precast concrete sheet pile	m	580	-	-	-	-	-
400(16)	Cast-in-Place concrete pile(1200mm)	m	7270	-	-	-	-	-
404	Reinforcement steel	kg	15.5	-	-	-	-	-
405(1)	Structural concrete, Class A	Cu.m	1930	-	-	-	-	-
405(5)	Seal concrete	Cu.m	1740	-	-	-	-	-
501	Grouted riprap	Cu.m	945	-	-	-	-	-
505	Stone masonry	Cu.m	853	-	-	-	-	-
509	Gabion	Cu.m	663	-	-	-	-	-
* Sub-total					(-)	(-)	(-)	(-)
(IV) RIVER TRAINING WORKS								
400(1)	Untreated timber pile	m	109	-	-	-	-	-
400(4)	Precast concrete pile (400X400mm)	m	801	-	-	-	-	-
400(6)	Steel sheet pile	m	3290	-	-	-	-	-
404	Reinforcement steel	kg	15.5	-	-	-	-	-
405(1)	Structural concrete, Class A	Cu.m	1930	-	-	-	-	-
405(5)	Seal concrete	Cu.m	1740	-	-	-	-	-
501	Grouted riprap	Cu.m	945	-	-	-	-	-
505	Stone masonry	Cu.m	853	-	-	-	-	-
506	Stone pitching (Hand-laid rock embankment)	Cu.m	300	-	-	-	-	-
509	Gabion	Cu.m	663	-	-	-	-	-
* Sub-total					(-)	(-)	(-)	(-)
(V) SPECIAL WORKS FOR REHABILITATION								
800	Additional stringer	ton	41300	7	289100.00	219716.00	40474.00	28910.00
801	Additional sidewalk	Sq.m	6690	-	-	-	-	-
802	Reinforcing beam of RCDG	Cu.m	5960	-	-	-	-	-
803	Widening of pier coping	Cu.m	8680	-	-	-	-	-
* Sub-total					289100.00	219716.00	40474.00	28910.00
					(100.0 %)	(76.0 %)	(14.0 %)	(10.0 %)
(VI) TEMPORARY WORKS								
900	Scaffolding	Sq.m	156	183	28548.00	19983.60	5709.60	2854.80
901	Staging	Cu.m	220	-	-	-	-	-
902	Temporary bridge	Sq.m	5180	-	-	-	-	-
903	Preparation works	LS	1	1	19428.34	12370.16	5115.34	1942.83
* Sub-total					47976.34	32353.76	10824.94	4797.63
					(100.0 %)	(67.4 %)	(22.5 %)	(10.0 %)
** Grand Total					667039.54	424708.85	175626.73	66703.95
					(100.0 %)	(63.6 %)	(26.3 %)	(10.0 %)

DETAILED CONSTRUCTION COST ESTIMATE (38/52).

38 Name of Bridge : KANAPAWAN
Classification : Repair

Item No.	Description	Unit	Price	Quantity	Amount	Foreign Component	Local Component	Taxes
(I) EARTHWORK AND ROAD WORKS								
100	Clearing and Grubbing	Sq.m	2.16	-	-	-	-	-
102	Common excavation	Cu.m	43.8	-	-	-	-	-
103(2)	Bridge excavation above low water level	Cu.m	58.5	-	-	-	-	-
103(2)S	Bridge excavation below low water level	Cu.m	111	-	-	-	-	-
103(5)	Shoring, cribbing, cofferdam and related work	LS	1	-	-	-	-	-
104(1)	Embankment	Cu.m	69.0	-	-	-	-	-
104(5)	Selected borrow for backfill	Cu.m	120	-	-	-	-	-
200	Aggregate subbase course	Cu.m	195	-	-	-	-	-
311(2)	PCC Pavement (Reinforced)	Sq.m	465	-	-	-	-	-
* Sub-total					(-)	(-)	(-)	(-)
(II) SUPERSTRUCTURE WORKS								
101(S)	Removal concrete structure	Cu.m	912	119	108528.00	46667.04	51008.16	10852.80
101(1)	Removal steel structure (bridge)	LS	1	-	-	-	-	-
401	Railing	m	789	100	78900.00	44184.00	26826.00	7890.00
402	Timber structure (Detour bridge)	span	45200	-	-	-	-	-
403(S)	Structural steel (Detour bridge)	Sq.m	5180	-	-	-	-	-
404	Reinforcing steel	kg	17.9	16775	300272.50	216196.20	54049.05	30027.25
405(1)	Structural concrete, Class A	Cu.m	2760	129	356040.00	195822.00	124614.00	35604.00
407	Prestressed concrete bridge	Cu.m	15800	-	-	-	-	-
408	Steel bridge(I-beam)	ton	61400	-	-	-	-	-
411	Paint	Sq.m	68.4	1107	75718.80	9843.44	58303.48	7571.88
* Sub-total					919459.30	512712.68	314800.69	91945.93
					(100.0 %)	(55.7 %)	(34.2 %)	(10.0 %)
(III) SUBSTRUCTURE WORKS								
101(S)	Removal of concrete structure	Cu.m	912	-	-	-	-	-
101(1)	Removal of steel structure	LS	1	-	-	-	-	-
400(3)	Steel H-piles	m	3260	-	-	-	-	-
400(4)	Precast concrete pile (400X400mm)	m	801	-	-	-	-	-
400(6)	Steel sheet pile	m	3290	-	-	-	-	-
400(7)	Precast concrete sheet pile	m	580	-	-	-	-	-
400(16)	Cast-in-Place concrete pile(1200mm)	m	7270	-	-	-	-	-
404	Reinforcement steel	kg	15.5	-	-	-	-	-
405(1)	Structural concrete, Class A	Cu.m	1930	-	-	-	-	-
405(5)	Seal concrete	Cu.m	1740	-	-	-	-	-
501	Grouted riprap	Cu.m	945	139	131355.00	56482.65	61736.85	13135.50
505	Stone masonry	Cu.m	853	-	-	-	-	-
509	Gablon	Cu.m	663	-	-	-	-	-
* Sub-total					131355.00	56482.65	61736.85	13135.50
					(100.0 %)	(43.0 %)	(47.0 %)	(10.0 %)
(IV) RIVER TRAINING WORKS								
400(1)	Untreated timber pile	m	109	-	-	-	-	-
400(4)	Precast concrete pile (400X400mm)	m	801	-	-	-	-	-
400(6)	Steel sheet pile	m	3290	-	-	-	-	-
404	Reinforcement steel	kg	15.5	-	-	-	-	-
405(1)	Structural concrete, Class A	Cu.m	1930	-	-	-	-	-
405(5)	Seal concrete	Cu.m	1740	-	-	-	-	-
504	Grouted riprap	Cu.m	945	-	-	-	-	-
505	Stone masonry	Cu.m	853	-	-	-	-	-
506	Stone pitching (Hand-laid rock embankment)	Cu.m	300	-	-	-	-	-
509	Gablon	Cu.m	663	-	-	-	-	-
* Sub-total					(-)	(-)	(-)	(-)
(V) SPECIAL WORKS FOR REHABILITATION								
800	Additional stringer	ton	41300	-	-	-	-	-
801	Additional sidewalk	Sq.m	6690	-	-	-	-	-
802	Reinforcing beam of RCDG	Cu.m	5960	-	-	-	-	-
803	Widening of pier coping	Cu.m	8580	-	-	-	-	-
* Sub-total					(-)	(-)	(-)	(-)
(VI) TEMPORARY WORKS								
900	Scaffolding	Sq.m	156	502	78312.00	54818.40	15662.40	7831.20
901	Staging	Cu.m	220	-	-	-	-	-
902	Temporary bridge	Sq.m	5180	-	-	-	-	-
903	Preparation works	LS	1	1	33873.79	18720.41	11766.00	3387.38
* Sub-total					112185.79	73538.81	27428.40	11218.58
					(100.0 %)	(65.5 %)	(24.4 %)	(10.0 %)
** Grand Total					1163000.09	642734.15	403966.93	116300.01
					(100.0 %)	(55.2 %)	(34.7 %)	(10.0 %)

DETAILED CONSTRUCTION COST ESTIMATE (39/52)

39 Name of Bridge : BASIAD
Classification : Repair

Item No.	Description	Unit	Price	Quantity	Amount	Foreign Component	Local Component	Taxes
(I) EARTHWORK AND ROAD WORKS								
100	Clearing and Grubbing	Sq.m	2.16	-	-	-	-	-
102	Common excavation	Cu.m	43.8	-	-	-	-	-
103(2)	Bridge excavation above low water level	Cu.m	58.5	-	-	-	-	-
103(2)S	Bridge excavation below low water level	Cu.m	111	-	-	-	-	-
103(5)	Shoring, cribbing, cofferdam and related work	LS	1	-	-	-	-	-
104(1)	Embankment	Cu.m	69.0	-	-	-	-	-
104(5)	Selected borrow for backfill	Cu.m	120	-	-	-	-	-
200	Aggregate subbase course	Cu.m	195	-	-	-	-	-
311(2)	PCC Pavement (Reinforced)	Sq.m	465	-	-	-	-	-
* Sub-total					(-)	(-)	(-)	(-)
(II) SUPERSTRUCTURE WORKS								
101(S)	Removal concrete structure	Cu.m	912	117	106704.00	45882.72	50150.88	10670.40
101(1)	Removal steel structure (bridge)	LS	1	-	-	-	-	-
401	Railing	m	789	129	101781.00	56997.36	34605.54	10178.10
402	Timber structure (Detour bridge)	span	45200	-	-	-	-	-
403(5)	Structural steel (Detour bridge)	Sq.m	5180	-	-	-	-	-
404	Reinforcing steel	kg	17.9	15477	277038.30	199467.58	49866.89	27703.83
405(1)	Structural concrete, Class A	Cu.m	2760	119	328440.00	180642.00	114954.00	32844.00
407	Prestressed concrete bridge	Cu.m	15800	-	-	-	-	-
408	Steel bridge(I-beam)	ton	61400	-	-	-	-	-
411	Paint	Sq.m	68.4	1214	83037.60	10794.89	63938.95	8303.76
* Sub-total					897000.90	493784.54	313516.27	89700.09
					(100.0 %)	(55.0 %)	(34.9 %)	(10.0 %)
(III) SUBSTRUCTURE WORKS								
101(S)	Removal of concrete structure	Cu.m	912	-	-	-	-	-
101(1)	Removal of steel structure	LS	1	-	-	-	-	-
400(3)	Steel H-piles	m	3260	-	-	-	-	-
400(4)	Precast concrete pile (400X400mm)	m	801	-	-	-	-	-
400(6)	Steel sheet pile	m	3290	-	-	-	-	-
400(7)	Precast concrete sheet pile	m	580	-	-	-	-	-
400(16)	Cast-in-Place concrete pile(1200mm)	m	7270	-	-	-	-	-
404	Reinforcement steel	kg	15.5	-	-	-	-	-
405(1)	Structural concrete, Class A	Cu.m	1930	-	-	-	-	-
405(5)	Seal concrete	Cu.m	1740	-	-	-	-	-
501	Grouted riprap	Cu.m	945	-	-	-	-	-
505	Stone masonry	Cu.m	853	-	-	-	-	-
509	Gabion	Cu.m	663	-	-	-	-	-
* Sub-total					(-)	(-)	(-)	(-)
(IV) RIVER TRAINING WORKS								
400(1)	Untreated timber pile	m	109	-	-	-	-	-
400(4)	Precast concrete pile (400X400mm)	m	801	-	-	-	-	-
400(6)	Steel sheet pile	m	3290	-	-	-	-	-
404	Reinforcement steel	kg	15.5	-	-	-	-	-
405(1)	Structural concrete, Class A	Cu.m	1930	-	-	-	-	-
405(5)	Seal concrete	Cu.m	1740	-	-	-	-	-
504	Grouted riprap	Cu.m	945	-	-	-	-	-
505	Stone masonry	Cu.m	853	-	-	-	-	-
506	Stone pitching (Hand-laid rock embankment)	Cu.m	300	-	-	-	-	-
509	Gabion	Cu.m	663	-	-	-	-	-
* Sub-total					(-)	(-)	(-)	(-)
(V) SPECIAL WORKS FOR REHABILITATION								
800	Additional stringer	ton	41300	24	991200.00	753312.00	138768.00	99120.00
801	Additional sidewalk	Sq.m	6690	-	-	-	-	-
802	Reinforcing beam of RCDG	Cu.m	5960	-	-	-	-	-
803	Widening of pier coping	Cu.m	8680	-	-	-	-	-
* Sub-total					991200.00	753312.00	138768.00	99120.00
					(100.0 %)	(76.0 %)	(14.0 %)	(10.0 %)
(VI) TEMPORARY WORKS								
900	Scaffolding	Sq.m	156	644	100464.00	70324.80	20092.80	10046.40
901	Staging	Cu.m	220	-	-	-	-	-
902	Temporary bridge	Sq.m	5180	-	-	-	-	-
903	Preparation works	LS	1	1	59659.95	39622.64	14171.31	5965.99
* Sub-total					160123.95	109847.44	34264.11	16012.39
					(100.0 %)	(68.6 %)	(21.4 %)	(10.0 %)
** Grand Total					2048324.85	1366943.98	486548.38	204832.48
					(100.0 %)	(66.2 %)	(23.7 %)	(10.0 %)

DETAILED CONSTRUCTION COST ESTIMATE (40/52)

40 Name of Bridge : GUNACA
 Classification : Replacement of Superstructure

Item No.	Description	Unit	Price	Quantity	Amount	Foreign Component	Local Component	Taxes
(I) EARTHWORK AND ROAD WORKS								
100	Clearing and Grubbing	Sq.m	2.12	-	-	-	-	-
102	Common excavation	Cu.m	42.9	-	-	-	-	-
103(2)	Bridge excavation above low water level	Cu.m	57.3	-	-	-	-	-
103(2)5	Bridge excavation below low water level	Cu.m	109	-	-	-	-	-
103(6)	Shoring, cribbing, cofferdam and related work	LS	1	-	-	-	-	-
104(1)	Embankment	Cu.m	67.7	-	-	-	-	-
104(5)	Selected borrow for backfill	Cu.m	118	-	-	-	-	-
200	Aggregate subbase course	Cu.m	189	-	-	-	-	-
311(2)	PCC Pavement (Reinforced)	Sq.m	423	-	-	-	-	-
* Sub-total					(-)	(-)	(-)	(-)
(II) SUPERSTRUCTURE WORKS								
101(5)	Removal concrete structure	Cu.m	894	180	160920.00	69195.60	75632.40	16092.00
101(1)	Removal steel structure (bridge)	LS	1	-	-	-	-	-
401	Railing	m	717	68	48756.00	27303.36	16577.04	4875.60
402	Timber structure (Detour bridge)	span	61900	-	-	-	-	-
403(5)	Structural steel (Detour bridge)	Sq.m	4980	-	-	-	-	-
404	Reinforcing steel	Kg	16.3	14949	243668.70	175441.46	43860.37	24366.87
405(1)	Structural concrete, Class A	Cu.m	2600	149	387400.00	213070.00	135690.00	38740.00
407	Prestressed concrete bridge	Cu.m	14400	-	-	-	-	-
408	Steel bridge(I-beam)	ton	60200	-	-	-	-	-
411	Paint	Sq.m	65.8	-	-	-	-	-
* Sub-total					840744.70	485010.42	271659.81	84074.47
					(100.0 %)	(57.6 %)	(32.3 %)	(10.0 %)
(III) SUBSTRUCTURE WORKS								
101(5)	Removal of concrete structure	Cu.m	894	-	-	-	-	-
101(1)	Removal of steel structure	LS	1	-	-	-	-	-
400(3)	Steel H-piles	m	3130	-	-	-	-	-
400(4)	Precast concrete pile (400X400mm)	m	742	-	-	-	-	-
400(6)	Steel sheet pile	m	3160	-	-	-	-	-
400(7)	Precast concrete sheet pile	m	537	-	-	-	-	-
400(16)	Cast-in-Place concrete pile(1200mm)	m	6730	-	-	-	-	-
404	Reinforcement steel	Kg	14.1	-	-	-	-	-
405(1)	Structural concrete, Class A	Cu.m	1820	-	-	-	-	-
405(5)	Seal concrete	Cu.m	1640	-	-	-	-	-
501	Grouted riprap	Cu.m	883	-	-	-	-	-
505	Stone masonry	Cu.m	797	-	-	-	-	-
509	Gabion	Cu.m	625	-	-	-	-	-
* Sub-total					(-)	(-)	(-)	(-)
(IV) RIVER TRAINING WORKS								
400(1)	Untreated timber pile	m	149	-	-	-	-	-
400(4)	Precast concrete pile (400X400mm)	m	742	-	-	-	-	-
400(6)	Steel sheet pile	m	3160	-	-	-	-	-
404	Reinforcement steel	Kg	14.1	-	-	-	-	-
405(1)	Structural concrete, Class A	Cu.m	1820	-	-	-	-	-
405(5)	Seal concrete	Cu.m	1640	-	-	-	-	-
504	Grouted riprap	Cu.m	883	-	-	-	-	-
505	Stone masonry	Cu.m	797	-	-	-	-	-
506	Stone pitching (Hand-laid rock embankment)	Cu.m	283	-	-	-	-	-
509	Gabion	Cu.m	625	-	-	-	-	-
* Sub-total					(-)	(-)	(-)	(-)
(V) SPECIAL WORKS FOR REHABILITATION								
800	Additional stringer	ton	39700	-	-	-	-	-
801	Additional sidewalk	Sq.m	6880	-	-	-	-	-
802	Reinforcing beam of RCDG	Cu.m	5520	-	-	-	-	-
803	Widening of pier coping	Cu.m	8040	26	209040.00	110791.20	77344.80	20904.00
* Sub-total					209040.00	110791.20	77344.80	20904.00
					(100.0 %)	(53.0 %)	(37.0 %)	(10.0 %)
(VI) TEMPORARY WORKS								
900	Scaffolding	Sq.m	153	-	-	-	-	-
901	Staging	Cu.m	216	1220	263520.00	163382.40	73785.60	26362.00
902	Temporary bridge	Sq.m	4980	110	547800.00	410850.00	82170.00	54780.00
903	Preparation works	LS	1	1	55833.14	35101.02	15148.81	5583.31
* Sub-total					867153.14	609333.42	171104.41	86715.31
					(100.0 %)	(70.2 %)	(19.7 %)	(10.0 %)
** Grand Total					1916937.84	1205135.04	520109.01	191693.78
					(100.0 %)	(62.8 %)	(27.1 %)	(10.0 %)

DETAILED CONSTRUCTION COST ESTIMATE (41/52)

41 Name of Bridge : TALABA
 Classification : Replacement of Superstructure

Item No.	Description	Unit	Price	Quantity	Amount	Foreign Component	Local Component	Taxes
(I) EARTHWORK AND ROAD WORKS								
100	Clearing and Grubbing	Sq.m	2.12	-	-	-	-	-
102	Common excavation	Cu.m	42.9	-	-	-	-	-
103(2)	Bridge excavation above low water level	Cu.m	57.3	25	1432.50	902.48	386.78	143.25
103(2)S	Bridge excavation below low water level	Cu.m	109	17	1853.00	1130.33	537.37	185.30
103(5)	Shoring, cribbing, cofferdam and related work	LS	1	-	-	-	-	-
104(1)	Embankment	Cu.m	67.7	685	46374.50	33853.39	7883.67	4637.45
104(S)	Selected borrow for backfill	Cu.m	118	103	12154.00	4375.44	6563.16	1215.40
200	Aggregate subbase course	Cu.m	189	-	-	-	-	-
311(2)	PCC Pavement (Reinforced)	Sq.m	423	-	-	-	-	-
* Sub-total					61814.00	40261.63	15370.97	6181.40
					(100.0 %)	(65.1 %)	(24.8 %)	(10.0 %)
(II) SUPERSTRUCTURE WORKS								
101(S)	Removal concrete structure	Cu.m	894	99	88506.00	38057.58	41597.82	8850.60
101(1)	Removal steel structure (bridge)	LS	1	-	-	-	-	-
401	Railing	m	717	51	36567.00	20477.52	12432.78	3656.70
402	Timber structure (Detour bridge)	span	61900	7	433300.00	134323.00	255647.00	43330.00
403(S)	Structural steel (Detour bridge)	Sq.m	4980	-	-	-	-	-
404	Reinforcing steel	kg	16.3	11275	183782.50	132323.40	33080.85	18378.25
405(1)	Structural concrete, Class A	Cu.m	2600	113	293800.00	161590.00	102830.00	29380.00
407	Prestressed concrete bridge	Cu.m	14000	-	-	-	-	-
408	Steel bridge(I-beam)	ton	60200	-	-	-	-	-
411	Paint	Sq.m	65.8	-	-	-	-	-
* Sub-total					1035955.50	486771.50	445588.45	103595.55
					(100.0 %)	(46.9 %)	(43.0 %)	(10.0 %)
(III) SUBSTRUCTURE WORKS								
101(S)	Removal of concrete structure	Cu.m	894	103	92082.00	39595.26	43278.54	9208.20
101(1)	Removal of steel structure	LS	1	-	-	-	-	-
400(3)	Steel H-piles	m	3130	-	-	-	-	-
400(4)	Precast concrete pile (400X400mm)	m	742	-	-	-	-	-
400(6)	Steel sheet pile	m	3160	-	-	-	-	-
400(7)	Precast concrete sheet pile	m	537	-	-	-	-	-
400(16)	Cast-in-Place concrete pile(1200mm)	m	6730	-	-	-	-	-
404	Reinforcement steel	kg	14.1	9680	136488.00	98271.36	24567.84	13648.80
405(1)	Structural concrete, Class A	Cu.m	1820	97	176540.00	107689.40	51196.60	17654.00
405(5)	Seal concrete	Cu.m	1640	-	-	-	-	-
501	Grouted riprap	Cu.m	883	56	49448.00	21262.64	23240.56	4944.80
505	Stone masonry	Cu.m	797	25	19925.00	9564.00	8368.50	1992.50
509	Gabion	Cu.m	625	211	131875.00	81762.50	36925.00	13187.50
* Sub-total					606358.00	358145.16	187577.04	60635.80
					(100.0 %)	(59.0 %)	(30.9 %)	(10.0 %)
(IV) RIVER TRAINING WORKS								
400(1)	Untreated timber pile	m	149	-	-	-	-	-
400(4)	Precast concrete pile (400X400mm)	m	742	-	-	-	-	-
400(6)	Steel sheet pile	m	3160	-	-	-	-	-
404	Reinforcement steel	kg	14.1	-	-	-	-	-
405(1)	Structural concrete, Class A	Cu.m	1820	-	-	-	-	-
405(5)	Seal concrete	Cu.m	1640	-	-	-	-	-
504	Grouted riprap	Cu.m	883	-	-	-	-	-
505	Stone masonry	Cu.m	797	-	-	-	-	-
506	Stone pitching (Hand-laid rock embankment)	Cu.m	283	-	-	-	-	-
509	Gabion	Cu.m	625	-	-	-	-	-
* Sub-total					(-)	(-)	(-)	(-)
(V) SPECIAL WORKS FOR REHABILITATION								
800	Additional stringer	ton	39700	-	-	-	-	-
801	Additional sidewalk	Sq.m	6880	-	-	-	-	-
802	Reinforcing beam of RCDG	Cu.m	5520	-	-	-	-	-
803	Widening of pier coping	Cu.m	8040	6	48240.00	25567.20	17848.80	4824.00
* Sub-total					48240.00	25567.20	17848.80	4824.00
					(100.0 %)	(53.0 %)	(37.0 %)	(10.0 %)
(VI) TEMPORARY WORKS								
900	Scaffolding	Sq.m	153	-	-	-	-	-
901	Staging	Cu.m	216	805	173880.00	107805.60	48686.40	17388.00
902	Temporary bridge	Sq.m	4980	-	-	-	-	-
903	Preparation works	LS	1	1	57787.42	30556.53	21462.15	5778.74
* Sub-total					231667.42	138362.13	70138.55	23166.74
					(100.0 %)	(59.7 %)	(30.2 %)	(10.0 %)
** Grand Total					1984034.93	1049107.62	736523.81	198403.49
					(100.0 %)	(52.8 %)	(37.1 %)	(10.0 %)

DETAILED CONSTRUCTION COST ESTIMATE (42/52)

42 Name of Bridge : BINAHAN
 Classification : Replacement of Superstructure

Item No.	Description	Unit	Price	Quantity	Amount	Foreign Component	Local Component	Taxes
(I) EARTHWORK AND ROAD WORKS								
100	Clearing and Grubbing	Sq.m	2.12	-	-	-	-	-
102	Common excavation	Cu.m	42.9	-	-	-	-	-
103(2)	Bridge excavation above low water level	Cu.m	57.3	-	-	-	-	-
103(2)S	Bridge excavation below low water level	Cu.m	109	-	-	-	-	-
103(5)	Shoring, cribbing, cofferdam and related work	LS	1	-	-	-	-	-
104(1)	Embankment	Cu.m	67.7	1646	111434.20	81346.97	18943.81	11143.42
104(5)	Selected borrow for backfill	Cu.m	118	-	-	-	-	-
200	Aggregate subbase course	Cu.m	189	-	-	-	-	-
311(2)	PCC Pavement (Reinforced)	Sq.m	423	-	-	-	-	-
Sub-total					111434.20	81346.97	18943.81	11143.42
					(100.0 %)	(73.0 %)	(17.0 %)	(10.0 %)
(II) SUPERSTRUCTURE WORKS								
101(5)	Removal concrete structure	Cu.m	894	107	95658.00	41132.94	44959.26	9565.80
101(1)	Removal steel structure (bridge)	LS	1	-	-	-	-	-
401	Railing	m	717	62	44454.00	24894.24	15114.36	4445.40
402	Timber structure (Detour bridge)	span	61900	11	680900.00	211079.00	401731.00	68090.00
403(5)	Structural steel (Detour bridge)	Sq.m	4980	-	-	-	-	-
404	Reinforcing steel	kg	16.3	12386	201891.80	145362.10	36340.52	20189.18
405(1)	Structural concrete, Class A	Cu.m	2600	124	322400.00	177320.00	112840.00	32240.00
407	Prestressed concrete bridge	Cu.m	14400	-	-	-	-	-
408	Steel bridge(I-beam)	ton	60200	-	-	-	-	-
411	Paint	Sq.m	65.8	-	-	-	-	-
Sub-total					1345303.80	599788.28	610985.14	134530.38
					(100.0 %)	(44.5 %)	(45.4 %)	(10.0 %)
(III) SUBSTRUCTURE WORKS								
101(5)	Removal of concrete structure	Cu.m	894	-	-	-	-	-
101(1)	Removal of steel structure	LS	1	-	-	-	-	-
400(3)	Steel H-piles	m	3130	-	-	-	-	-
400(4)	Precast concrete pile (400X400mm)	m	742	-	-	-	-	-
400(6)	Steel sheet pile	m	3160	-	-	-	-	-
400(7)	Precast concrete sheet pile	m	537	-	-	-	-	-
400(16)	Cast-in-Place concrete pile(1200mm)	m	6730	-	-	-	-	-
404	Reinforcement steel	kg	14.1	-	-	-	-	-
405(1)	Structural concrete, Class A	Cu.m	1820	-	-	-	-	-
405(5)	Seal concrete	Cu.m	1640	-	-	-	-	-
501	Grouted riprap	Cu.m	883	-	-	-	-	-
505	Stone masonry	Cu.m	797	-	-	-	-	-
509	Gabion	Cu.m	625	-	-	-	-	-
Sub-total					(-)	(-)	(-)	(-)
(IV) RIVER TRAINING WORKS								
400(1)	Untreated timber pile	m	149	-	-	-	-	-
400(4)	Precast concrete pile (400X400mm)	m	742	-	-	-	-	-
400(6)	Steel sheet pile	m	3160	-	-	-	-	-
404	Reinforcement steel	kg	14.1	-	-	-	-	-
405(1)	Structural concrete, Class A	Cu.m	1820	-	-	-	-	-
405(5)	Seal concrete	Cu.m	1640	-	-	-	-	-
504	Grouted riprap	Cu.m	883	-	-	-	-	-
505	Stone masonry	Cu.m	797	-	-	-	-	-
506	Stone pitching (Hand-laid rock embankment)	Cu.m	283	-	-	-	-	-
509	Gabion	Cu.m	625	-	-	-	-	-
Sub-total					(-)	(-)	(-)	(-)
(V) SPECIAL WORKS FOR REHABILITATION								
800	Additional stringer	ton	39700	-	-	-	-	-
801	Additional sidewalk	Sq.m	6880	-	-	-	-	-
802	Reinforcing beam of RCDG	Cu.m	5520	-	-	-	-	-
803	Widening of pier coping	Cu.m	8040	13	104520.00	55395.60	38672.40	10452.00
Sub-total					104520.00	55395.60	38672.40	10452.00
					(100.0 %)	(53.0 %)	(37.0 %)	(10.0 %)
(VI) TEMPORARY WORKS								
900	Scaffolding	Sq.m	153	-	-	-	-	-
901	Staging	Cu.m	216	1383	298728.00	185211.36	83643.84	29872.80
902	Temporary bridge	Sq.m	4980	220	1095600.00	821700.00	164340.00	109560.00
903	Preparation works	LS	1	1	88667.58	52303.27	27497.56	8866.76
Sub-total					1482995.58	1059214.63	275481.40	148299.56
					(100.0 %)	(71.4 %)	(18.5 %)	(10.0 %)
Grand Total					3044253.58	1795745.47	944082.75	304425.36
					(100.0 %)	(58.9 %)	(31.0 %)	(10.0 %)

DETAILED CONSTRUCTION COST ESTIMATE (43/52)

43 Name of Bridge : PALSABANGON
 Classification : Replacement of Superstructure

Item No.	Description	Unit	Price	Quantity	Amount	Foreign Component	Local Component	Taxes
(I) EARTHWORK AND ROAD WORKS								
100	Clearing and Grubbing	Sq.m	2.12	-	-	-	-	-
102	Common excavation	Cu.m	42.9	-	-	-	-	-
103(2)	Bridge excavation above low water level	Cu.m	57.3	168	9626.40	6064.63	2599.13	962.64
103(2)S	Bridge excavation below low water level	Cu.m	109	-	-	-	-	-
103(5)	Shoring, cribbing, cofferdam and related work	LS	1	-	-	-	-	-
104(1)	Embankment	Cu.m	67.7	1201	81307.70	59354.62	13822.31	8130.77
104(S)	Selected borrow for backfill	Cu.m	118	105	12390.00	4460.40	6690.60	1239.00
200	Aggregate subbase course	Cu.m	189	-	-	-	-	-
311(2)	PCC Pavement (Reinforced)	Sq.m	423	-	-	-	-	-
* Sub-total					103324.10	69879.65	23112.04	10332.41
					(100.0 %)	(67.6 %)	(22.3 %)	(10.0 %)
(II) SUPERSTRUCTURE WORKS								
101(S)	Removal concrete structure	Cu.m	894	123	109962.00	47283.66	51682.14	10996.20
101(1)	Removal steel structure (bridge)	LS	1	-	-	-	-	-
401	Railing	m	717	66	47322.00	26500.32	16089.48	4732.20
402	Timber structure (Detour bridge)	span	61900	19	1176100.00	364591.00	693899.00	117610.00
403(S)	Structural steel (Detour bridge)	Sq.m	4980	-	-	-	-	-
404	Reinforcing steel	kg	16.3	-	-	-	-	-
405(1)	Structural concrete, Class A	Cu.m	2600	146	379600.00	208780.00	132860.00	37960.00
407	Prestressed concrete bridge	Cu.m	14400	-	-	-	-	-
408	Steel bridge(I-beam)	ton	60200	-	-	-	-	-
411	Paint	Sq.m	65.8	-	-	-	-	-
* Sub-total					1950377.20	818078.08	937261.40	195037.72
					(100.0 %)	(41.9 %)	(48.0 %)	(10.0 %)
(III) SUBSTRUCTURE WORKS								
101(S)	Removal of concrete structure	Cu.m	894	-	-	-	-	-
101(1)	Removal of steel structure	LS	1	-	-	-	-	-
400(3)	Steel H-piles	m	3130	-	-	-	-	-
400(4)	Precast concrete pile (400X400mm)	m	742	-	-	-	-	-
400(6)	Steel sheet pile	m	3160	-	-	-	-	-
400(7)	Precast concrete sheet pile	m	537	-	-	-	-	-
400(16)	Cast-in-Place concrete pile(1200mm)	m	6730	-	-	-	-	-
404	Reinforcement steel	kg	14.1	-	-	-	-	-
405(1)	Structural concrete, Class A	Cu.m	1820	-	-	-	-	-
405(5)	Seal concrete	Cu.m	1640	-	-	-	-	-
501	Grouted riprap	Cu.m	883	102	90066.00	38728.38	42331.02	9006.60
505	Stone masonry	Cu.m	797	-	-	-	-	-
509	Gabion	Cu.m	625	-	-	-	-	-
* Sub-total					90066.00	38728.38	42331.02	9006.60
					(100.0 %)	(43.0 %)	(47.0 %)	(10.0 %)
(IV) RIVER TRAINING WORKS								
400(1)	Untreated timber pile	m	149	77	11473.00	5621.77	4703.93	1147.30
400(4)	Precast concrete pile (400X400mm)	m	742	-	-	-	-	-
400(6)	Steel sheet pile	m	3160	-	-	-	-	-
404	Reinforcement steel	kg	14.1	660	9306.00	6700.32	1675.08	930.60
405(1)	Structural concrete, Class A	Cu.m	1820	33	60060.00	36636.60	17417.40	6006.00
405(5)	Seal concrete	Cu.m	1640	-	-	-	-	-
504	Grouted riprap	Cu.m	883	174	153642.00	66086.06	72211.74	15364.20
505	Stone masonry	Cu.m	797	-	-	-	-	-
506	Stone pitching (Hand-laid rock embankment)	Cu.m	283	116	32828.00	9191.84	20353.36	3282.80
509	Gabion	Cu.m	625	422	263750.00	163525.00	73850.00	26375.00
* Sub-total					531059.00	287741.59	190211.51	53105.90
					(100.0 %)	(54.1 %)	(35.8 %)	(10.0 %)
(V) SPECIAL WORKS FOR REHABILITATION								
800	Additional stringer	ton	39700	-	-	-	-	-
801	Additional sidewalk	Sq.m	6880	-	-	-	-	-
802	Reinforcing beam of RCDG	Cu.m	5520	-	-	-	-	-
803	Widening of pier coping	Cu.m	8040	11	88440.00	46873.20	32722.80	8844.00
* Sub-total					88440.00	46873.20	32722.80	8844.00
					(100.0 %)	(53.0 %)	(37.0 %)	(10.0 %)
(VI) TEMPORARY WORKS								
900	Scaffolding	Sq.m	153	-	-	-	-	-
901	Staging	Cu.m	216	1650	356400.00	220968.00	99792.00	35640.00
902	Temporary bridge	Sq.m	4980	-	-	-	-	-
903	Preparation works	LS	1	1	93589.99	44468.07	39762.92	9359.00
* Sub-total					449989.99	265436.07	139554.92	44999.00
					(100.0 %)	(58.9 %)	(31.0 %)	(10.0 %)
** Grand Total					3213256.29	1626736.97	1365193.69	321325.63
					(100.0 %)	(47.5 %)	(42.4 %)	(10.0 %)

DETAILED CONSTRUCTION COST ESTIMATE (44/52)

14 Name of Bridge : LAGNAS II
Classification : Repair

Item No.	Description	Unit	Price	Quantity	Amount	Foreign Component	Local Component	Taxes
(I) EARTHWORK AND ROAD WORKS								
100	Clearing And Grubbing	Sq.m	2.12	-	-	-	-	-
102	Common excavation	Cu.m	42.9	-	-	-	-	-
103(2)	Bridge excavation above low water level	Cu.m	57.3	-	-	-	-	-
103(2)S	Bridge excavation below low water level	Cu.m	109	-	-	-	-	-
103(6)	Shoring, cribbing, cofferdam and related work	LS	1	-	-	-	-	-
104(1)	Embankment	Cu.m	67.7	-	-	-	-	-
104(5)	Selected borrow for backfill	Cu.m	118	-	-	-	-	-
200	Aggregate subbase course	Cu.m	189	-	-	-	-	-
311(2)	PCC Pavement (Reinforced)	Sq.m	423	-	-	-	-	-
Sub-total					(-)	(-)	(-)	(-)
(II) SUPERSTRUCTURE WORKS								
101(S)	Removal concrete structure	Cu.m	894	22	19668.00	8457.24	9243.96	1966.80
101(1)	Removal steel structure (bridge)	LS	1	-	-	-	-	-
401	Railing	m	717	-	-	-	-	-
402	Timber structure (Detour bridge)	span	61900	-	-	-	-	-
403(S)	Structural steel (Detour bridge)	Sq.m	4980	-	-	-	-	-
404	Reinforcing steel	kg	16.3	2620	42706.00	30748.32	7687.08	4270.60
405(1)	Structural concrete, Class A	Cu.m	2600	22	57200.00	31460.00	20020.00	5720.00
407	Prestressed concrete bridge	Cu.m	14400	-	-	-	-	-
408	Steel bridge(I-beam)	ton	60200	-	-	-	-	-
411	Paint	Sq.m	65.8	-	-	-	-	-
Sub-total					119574.00	70666.66	36951.04	11957.40
					(100.0 %)	(59.1 %)	(30.9 %)	(10.0 %)
(III) SUBSTRUCTURE WORKS								
101(S)	Removal of concrete structure	Cu.m	894	-	-	-	-	-
101(1)	Removal of steel structure	LS	1	-	-	-	-	-
400(3)	Steel H-piles	m	3130	-	-	-	-	-
400(4)	Precast concrete pile (400X400mm)	m	742	-	-	-	-	-
400(6)	Steel sheet pile	m	3160	-	-	-	-	-
400(7)	Precast concrete sheet pile	m	537	-	-	-	-	-
400(16)	Cast-in-Place concrete pile(1200mm)	m	6730	-	-	-	-	-
404	Reinforcement steel	kg	14.1	-	-	-	-	-
405(1)	Structural concrete, Class A	Cu.m	1820	-	-	-	-	-
405(5)	Seal concrete	Cu.m	1640	-	-	-	-	-
501	Grouted riprap	Cu.m	883	-	-	-	-	-
505	Stone masonry	Cu.m	797	-	-	-	-	-
509	Gabion	Cu.m	625	-	-	-	-	-
Sub-total					(-)	(-)	(-)	(-)
(IV) RIVER TRAINING WORKS								
400(1)	Untreated timber pile	m	149	-	-	-	-	-
400(4)	Precast concrete pile (400X400mm)	m	742	-	-	-	-	-
400(6)	Steel sheet pile	m	3160	-	-	-	-	-
404	Reinforcement steel	kg	14.1	-	-	-	-	-
405(1)	Structural concrete, Class A	Cu.m	1820	-	-	-	-	-
405(5)	Seal concrete	Cu.m	1640	-	-	-	-	-
504	Grouted riprap	Cu.m	883	-	-	-	-	-
505	Stone masonry	Cu.m	797	-	-	-	-	-
506	Stone pitching (Hand-laid rock embankment)	Cu.m	283	-	-	-	-	-
509	Gabion	Cu.m	625	-	-	-	-	-
Sub-total					(-)	(-)	(-)	(-)
(V) SPECIAL WORKS FOR REHABILITATION								
800	Additional stringer	ton	39700	-	-	-	-	-
801	Additional sidewalk	Sq.m	6880	-	-	-	-	-
802	Reinforcing beam of RCDG	Cu.m	5520	-	-	-	-	-
803	Widening of pier coping	Cu.m	8040	-	-	-	-	-
Sub-total					(-)	(-)	(-)	(-)
(VI) TEMPORARY WORKS								
900	Scaffolding	Sq.m	153	154	23562.00	16493.40	4712.40	2356.20
901	Staging	Cu.m	216	-	-	-	-	-
902	Temporary bridge	Sq.m	4980	-	-	-	-	-
903	Preparation works	LS	1	1	4294.08	2614.77	1249.90	429.41
Sub-total					27856.08	19108.17	5962.30	2785.61
					(100.0 %)	(68.6 %)	(21.4 %)	(10.0 %)
** Grand Total					147430.08	89773.73	42913.34	14743.01
					(100.0 %)	(60.8 %)	(29.1 %)	(10.0 %)

DETAILED CONSTRUCTION COST ESTIMATE (45/52)

45 Name of Bridge : STO CRISTO
 Classification : Replacement of Superstructure

Item No.	Description	Unit	Price	Quantity	Amount	Foreign Component	Local Component	Taxes
(I) EARTHWORK AND ROAD WORKS								
100	Clearing and Grubbing	Sq.m	2.12	559	1185.08	82.96	983.62	118.51
102	Common excavation	Cu.m	42.9	103	4418.70	2960.53	1016.30	441.87
103(2)	Bridge excavation above low water level	Cu.m	57.3	-	-	-	-	-
103(2)S	Bridge excavation below low water level	Cu.m	109	-	-	-	-	-
103(5)	Shoring, cribbing, cofferdam and related work	LS	1	-	-	-	-	-
104(1)	Embankment	Cu.m	67.7	685	46374.50	33853.39	7883.67	4637.45
104(S)	Selected borrow for backfill	Cu.m	118	-	-	-	-	-
200	Aggregate subbase course	Cu.m	189	170	32130.00	23133.60	5783.40	3213.00
311(2)	PCC Pavement (Reinforced)	Sq.m	423	295	124785.00	77366.70	34939.80	12478.50
* Sub-total					208893.28	137397.17	50606.78	20889.33
					(100.0 %)	(65.7 %)	(24.2 %)	(10.0 %)
(II) SUPERSTRUCTURE WORKS								
101(S)	Removal concrete structure	Cu.m	894	143	127842.00	54972.06	60085.74	12784.20
101(1)	Removal steel structure (bridge)	LS	1	-	-	-	-	-
401	Railing	m	717	79	56643.00	31720.08	19258.62	5664.30
402	Timber structure (Detour bridge)	span	61900	9	557100.00	172701.00	328689.00	55710.00
403(S)	Structural steel (Detour bridge)	Sq.m	4980	-	-	-	-	-
404	Reinforcing steel	KK	16.3	17391	283473.30	204100.78	51025.19	28347.33
405(1)	Structural concrete, Class A	Cu.m	2600	174	452400.00	248820.00	158340.00	45240.00
407	Prestressed concrete bridge	Cu.m	14400	-	-	-	-	-
408	Steel bridge(I-beam)	ton	60200	-	-	-	-	-
411	Paint	Sq.m	65.8	-	-	-	-	-
* Sub-total					1477458.30	712313.92	617398.55	147745.83
					(100.0 %)	(48.2 %)	(41.7 %)	(10.0 %)
(III) SUBSTRUCTURE WORKS								
101(S)	Removal of concrete structure	Cu.m	894	52	46488.00	19989.84	21849.36	4648.80
101(1)	Removal of steel structure	LS	1	-	-	-	-	-
400(3)	Steel H-piles	m	3130	-	-	-	-	-
400(4)	Precast concrete pile (400X400mm)	m	742	-	-	-	-	-
400(6)	Steel sheet pile	m	3160	-	-	-	-	-
400(7)	Precast concrete sheet pile	m	337	-	-	-	-	-
400(16)	Cast-in-Place concrete pile(1200mm)	m	6730	-	-	-	-	-
404	Reinforcement steel	KK	14.1	-	-	-	-	-
405(1)	Structural concrete, Class A	Cu.m	1820	-	-	-	-	-
405(5)	Seal concrete	Cu.m	1640	-	-	-	-	-
501	Grouted riprap	Cu.m	883	-	-	-	-	-
505	Stone masonry	Cu.m	797	-	-	-	-	-
509	Gabion	Cu.m	625	-	-	-	-	-
* Sub-total					46488.00	19989.84	21849.36	4648.80
					(100.0 %)	(43.0 %)	(47.0 %)	(10.0 %)
(IV) RIVER TRAINING WORKS								
400(1)	Untreated timber pile	m	149	-	-	-	-	-
400(4)	Precast concrete pile (400X400mm)	m	742	-	-	-	-	-
400(6)	Steel sheet pile	m	3160	-	-	-	-	-
404	Reinforcement steel	KK	14.1	-	-	-	-	-
405(1)	Structural concrete, Class A	Cu.m	1820	-	-	-	-	-
405(5)	Seal concrete	Cu.m	1640	-	-	-	-	-
504	Grouted riprap	Cu.m	883	-	-	-	-	-
505	Stone masonry	Cu.m	797	-	-	-	-	-
506	Stone pitching (Hand-laid rock embankment)	Cu.m	283	-	-	-	-	-
509	Gabion	Cu.m	625	-	-	-	-	-
* Sub-total					-	-	-	-
					(-)	(-)	(-)	(-)
(V) SPECIAL WORKS FOR REHABILITATION								
800	Additional stringer	ton	39700	-	-	-	-	-
801	Additional sidewalk	Sq.m	6880	-	-	-	-	-
802	Reinforcing beam of RCDG	Cu.m	5520	-	-	-	-	-
803	Widening of pier coping	Cu.m	8040	12	96480.00	51134.40	35697.60	9648.00
* Sub-total					96480.00	51134.40	35697.60	9648.00
					(100.0 %)	(53.0 %)	(37.0 %)	(10.0 %)
(VI) TEMPORARY WORKS								
900	Scaffolding	Sq.m	153	-	-	-	-	-
901	Staging	Cu.m	216	1426	308016.00	190969.92	86244.48	30801.60
902	Temporary bridge	Sq.m	4980	-	-	-	-	-
903	Preparation works	LS	1	1	64120.07	33354.16	24353.90	6412.01
* Sub-total					372136.07	224324.08	110698.38	37213.61
					(100.0 %)	(60.2 %)	(29.7 %)	(10.0 %)
** Grand Total					2201455.65	1146159.40	836150.68	220145.56
					(100.0 %)	(52.0 %)	(37.9 %)	(10.0 %)

DETAILED CONSTRUCTION COST ESTIMATE (46/52)

46 Name of Bridge : MAGAPONG
 Classification : Replacement of Superstructure

Item No.	Description	Unit	Price	Quantity	Amount	Foreign Component	Local Component	Taxes
(I) EARTHWORK AND ROAD WORKS								
100	Clearing and Grubbing	Sq.m	2.12	931	1973.72	138.16	1638.19	197.37
102	Common excavation	Cu.m	42.9	255	10939.50	7329.47	2516.09	1093.95
103(2)	Bridge excavation above low water level	Cu.m	57.3	-	-	-	-	-
103(2)S	Bridge excavation below low water level	Cu.m	109	-	-	-	-	-
103(5)	Shoring, cribbing, cofferdam and related work	LS	1	-	-	-	-	-
104(1)	Embankment	Cu.m	67.7	252	17060.40	12454.09	2900.27	1706.04
104(5)	Selected borrow for backfill	Cu.m	118	94	11092.00	3993.12	5989.68	1109.20
200	Aggregate subbase course	Cu.m	189	255	48195.00	34700.40	8675.10	4819.50
311(2)	PCC Pavement (Reinforced)	Sq.m	423	442	186966.00	115918.92	52350.48	18696.60
Sub-total					276226.62	174534.16	74069.80	27622.66
					(100.0 %)	(63.1 %)	(26.8 %)	(10.0 %)
(II) SUPERSTRUCTURE WORKS								
101(S)	Removal concrete structure	Cu.m	894	34	30396.00	13070.28	14286.12	3039.60
101(1)	Removal steel structure (bridge)	LS	1	168384	168384.00	112817.28	38728.32	16838.40
401	Railing	m	717	57	40869.00	22886.64	13895.46	4086.90
402	Timber structure (Detour bridge)	span	61900	-	-	-	-	-
403(S)	Structural steel (Detour bridge)	Sq.m	4980	-	-	-	-	-
404	Reinforcing steel	kg	16.3	7040	114752.00	82621.44	20655.36	11475.20
405(1)	Structural concrete, Class A	Cu.m	2600	70	182000.00	100100.00	63700.00	18200.00
407	Prestressed concrete bridge	Cu.m	14400	77	1108800.00	753984.00	243936.00	110880.00
408	Steel bridge(I-beam)	ton	60200	-	-	-	-	-
411	Paint	Sq.m	65.8	-	-	-	-	-
Sub-total					1645201.00	1085479.64	395201.26	164520.10
					(100.0 %)	(65.9 %)	(24.0 %)	(10.0 %)
(III) SUBSTRUCTURE WORKS								
101(S)	Removal of concrete structure	Cu.m	894	-	-	-	-	-
101(1)	Removal of steel structure	LS	1	-	-	-	-	-
400(3)	Steel H-piles	m	3130	-	-	-	-	-
400(4)	Precast concrete pile (400X400mm)	m	742	62	46004.00	32202.80	9200.80	4600.40
400(6)	Steel sheet pile	m	3160	-	-	-	-	-
400(7)	Precast concrete sheet pile	m	537	-	-	-	-	-
400(16)	Cast-in-Place concrete pile(1200mm)	m	6730	-	-	-	-	-
404	Reinforcement steel	kg	14.1	3520	49632.00	35735.04	8933.76	4963.20
405(1)	Structural concrete, Class A	Cu.m	1820	30	54600.00	33306.00	15834.00	5460.00
405(5)	Seal concrete	Cu.m	1640	-	-	-	-	-
501	Grouted riprap	Cu.m	883	83	73289.00	31514.27	34445.83	7328.90
505	Stone masonry	Cu.m	797	-	-	-	-	-
509	Gabion	Cu.m	625	-	-	-	-	-
Sub-total					223525.00	132758.11	68414.39	22352.50
					(100.0 %)	(59.3 %)	(30.6 %)	(10.0 %)
(IV) RIVER TRAINING WORKS								
400(1)	Untreated timber pile	m	149	-	-	-	-	-
400(4)	Precast concrete pile (400X400mm)	m	742	-	-	-	-	-
400(6)	Steel sheet pile	m	3160	-	-	-	-	-
404	Reinforcement steel	kg	14.1	-	-	-	-	-
405(1)	Structural concrete, Class A	Cu.m	1820	-	-	-	-	-
405(5)	Seal concrete	Cu.m	1640	-	-	-	-	-
504	Grouted riprap	Cu.m	883	-	-	-	-	-
505	Stone masonry	Cu.m	797	-	-	-	-	-
506	Stone pitching (Hand-laid rock embankment)	Cu.m	283	-	-	-	-	-
509	Gabion	Cu.m	625	-	-	-	-	-
Sub-total					(-)	(-)	(-)	(-)
(V) SPECIAL WORKS FOR REHABILITATION								
800	Additional stringer	ton	39700	-	-	-	-	-
801	Additional sidewalk	Sq.m	6880	-	-	-	-	-
802	Reinforcing beam of RCDG	Cu.m	5520	-	-	-	-	-
803	Widening of pier coping	Cu.m	8040	-	-	-	-	-
Sub-total					(-)	(-)	(-)	(-)
(VI) TEMPORARY WORKS								
900	Scaffolding	Sq.m	153	283	43299.00	30309.30	8659.80	4329.90
901	Staging	Cu.m	216	-	-	-	-	-
902	Temporary bridge	Sq.m	4980	-	-	-	-	-
903	Preparation works	LS	1	1	65647.55	42692.44	16390.36	6564.75
Sub-total					108946.55	73001.74	25050.16	10894.65
					(100.0 %)	(67.0 %)	(22.9 %)	(10.0 %)
Grand Total					2253899.17	1465773.64	562735.61	225389.92
					(100.0 %)	(65.0 %)	(24.9 %)	(10.0 %)

DETAILED CONSTRUCTION COST ESTIMATE (47/52)

47 Name of Bridge : BIGA
Classification : Repair

Item No.	Description	Unit	Price	Quantity	Amount	Foreign Component	Local Component	Taxes
(I) EARTHWORK AND ROAD WORKS								
100	Clearing and Grubbing	Sq.m	2.12	-	-	-	-	-
102	Common excavation	Cu.m	42.9	-	-	-	-	-
103(2)	Bridge excavation above low water level	Cu.m	57.3	-	-	-	-	-
103(2)S	Bridge excavation below low water level	Cu.m	109	-	-	-	-	-
103(5)	Shoring, cribbing, cofferdam and related work	LS	1	-	-	-	-	-
104(1)	Embankment	Cu.m	67.7	-	-	-	-	-
104(5)	Selected borrow for backfill	Cu.m	118	-	-	-	-	-
200	Aggregate subbase course	Cu.m	189	-	-	-	-	-
311(2)	PCC Pavement (Reinforced)	Sq.m	423	-	-	-	-	-
* Sub-total					(-)	(-)	(-)	(-)
(II) SUPERSTRUCTURE WORKS								
101(S)	Removal concrete structure	Cu.m	894	53	47382.00	20374.26	22269.54	4738.20
101(1)	Removal steel structure (bridge)	LS	1	-	-	-	-	-
401	Railink	m	717	-	-	-	-	-
402	Timber structure (Detour bridge)	span	61900	-	-	-	-	-
403(S)	Structural steel (Detour bridge)	Sq.m	4980	-	-	-	-	-
404	Reinforcing steel	KK	16.3	8426	137343.80	98887.54	24721.88	13734.38
405(1)	Structural concrete, Class A	Cu.m	2600	65	169000.00	92950.00	59150.00	16900.00
407	Prestressed concrete bridge	Cu.m	14400	-	-	-	-	-
408	Steel bridge(I-beam)	ton	60200	-	-	-	-	-
411	Paint	Sq.m	65.8	1111	73103.80	9503.49	56289.93	7310.38
* Sub-total					426829.80 (100.0 %)	221715.29 (51.9 %)	162431.35 (38.0 %)	42682.96 (10.0 %)
(III) SUBSTRUCTURE WORKS								
101(S)	Removal of concrete structure	Cu.m	894	-	-	-	-	-
101(1)	Removal of steel structure	LS	1	-	-	-	-	-
400(3)	Steel H-piles	m	3130	-	-	-	-	-
400(4)	Precast concrete pile (400X400mm)	m	742	-	-	-	-	-
400(6)	Steel sheet pile	m	3160	-	-	-	-	-
400(7)	Precast concrete sheet pile	m	537	-	-	-	-	-
400(16)	Cast-in-Place concrete pile(1200mm)	m	6730	-	-	-	-	-
404	Reinforcement steel	KK	14.1	-	-	-	-	-
405(1)	Structural concrete, Class A	Cu.m	1820	-	-	-	-	-
405(5)	Seal concrete	Cu.m	1640	-	-	-	-	-
501	Grouted riprap	Cu.m	883	-	-	-	-	-
505	Stone masonry	Cu.m	797	-	-	-	-	-
509	Gabion	Cu.m	625	-	-	-	-	-
* Sub-total					(-)	(-)	(-)	(-)
(IV) RIVER TRAINING WORKS								
400(1)	Untreated timber pile	m	149	-	-	-	-	-
400(4)	Precast concrete pile (400X400mm)	m	742	-	-	-	-	-
400(6)	Steel sheet pile	m	3160	-	-	-	-	-
404	Reinforcement steel	KK	14.1	-	-	-	-	-
405(1)	Structural concrete, Class A	Cu.m	1820	-	-	-	-	-
405(5)	Seal concrete	Cu.m	1640	-	-	-	-	-
504	Grouted riprap	Cu.m	883	-	-	-	-	-
505	Stone masonry	Cu.m	797	-	-	-	-	-
506	Stone pitching (Hand-laid rock embankment)	Cu.m	283	-	-	-	-	-
509	Gabion	Cu.m	625	-	-	-	-	-
* Sub-total					(-)	(-)	(-)	(-)
(V) SPECIAL WORKS FOR REHABILITATION								
800	Additional stringer	ton	39700	5	198500.00	150860.00	27790.00	19850.00
801	Additional sidewalk	Sq.m	6880	-	-	-	-	-
802	Reinforcing beam of RCDG	Cu.m	5520	-	-	-	-	-
803	Widening of pier coping	Cu.m	8040	-	-	-	-	-
* Sub-total					198500.00 (100.0 %)	150860.00 (76.0 %)	27790.00 (14.0 %)	19850.00 (10.0 %)
(VI) TEMPORARY WORKS								
900	Scaffolding	Sq.m	153	508	77418.00	54192.60	15483.60	7741.80
901	Staging	Cu.m	216	-	-	-	-	-
902	Temporary bridge	Sq.m	4980	-	-	-	-	-
903	Preparation works	LS	1	1	21082.43	12803.04	6171.15	2108.24
* Sub-total					98500.43 (100.0 %)	66996.64 (68.0 %)	21654.75 (21.9 %)	9850.04 (10.0 %)
** Grand Total					723830.03 (100.0 %)	439570.93 (60.7 %)	211876.10 (29.2 %)	72383.00 (10.0 %)

DETAILED CONSTRUCTION COST ESTIMATE (48/52)

48 Name of Bridge : SAN CRISTOBAL
Classification : Repair

Item No.	Description	Unit	Price	Quantity	Amount	Foreign Component	Local Component	Taxes
(I) EARTHWORK AND ROAD WORKS								
100	Clearing and Grubbing	Sq.m	2.12	-	-	-	-	-
102	Common excavation	Cu.m	42.9	-	-	-	-	-
103(2)	Bridge excavation above low water level	Cu.m	57.3	-	-	-	-	-
103(2)5	Bridge excavation below low water level	Cu.m	109	-	-	-	-	-
103(5)	Shoring, cribbing, cofferdam and related work	LS	1	-	-	-	-	-
104(1)	Embankment	Cu.m	67.7	776	52535.20	38350.70	8930.98	5253.52
104(5)	Selected borrow for backfill	Cu.m	118	-	-	-	-	-
200	Aggregate subbase course	Cu.m	189	-	-	-	-	-
311(2)	PCC Pavement (Reinforced)	Sq.m	423	-	-	-	-	-
* Sub-total					52535.20 (100.0 %)	38350.70 (73.0 %)	8930.98 (17.0 %)	5253.52 (10.0 %)
(II) SUPERSTRUCTURE WORKS								
101(5)	Removal concrete structure	Cu.m	894	106	94764.00	40748.52	44539.08	9476.40
101(1)	Removal steel structure (bridge)	LS	1	-	-	-	-	-
401	Railing	m	717	109	78153.00	43765.68	26572.02	7815.30
402	Timber structure (Detour bridge)	span	61900	-	-	-	-	-
403(5)	Structural steel (Detour bridge)	Sq.m	4980	506	2519880.00	1889910.00	377982.00	251988.00
404	Reinforcing steel	Kg	16.3	14190	231297.00	166533.84	41633.46	23129.70
405(1)	Structural concrete, Class A	Cu.m	2600	109	283400.00	155870.00	99190.00	28340.00
407	Prestressed concrete bridge	Cu.m	14400	-	-	-	-	-
408	Steel bridge(I-beam)	ton	60200	-	-	-	-	-
411	Paint	Sq.m	65.8	1855	122059.00	15867.67	93985.43	12205.90
* Sub-total					3329553.00 (100.0 %)	2312695.71 (69.4 %)	683901.99 (20.5 %)	332955.30 (10.0 %)
(III) SUBSTRUCTURE WORKS								
101(5)	Removal of concrete structure	Cu.m	894	-	-	-	-	-
101(1)	Removal of steel structure	LS	1	-	-	-	-	-
400(3)	Steel H-piles	m	3130	-	-	-	-	-
400(4)	Precast concrete pile (400X400mm)	m	742	-	-	-	-	-
400(6)	Steel sheet pile	m	3160	-	-	-	-	-
400(7)	Precast concrete sheet pile	m	537	-	-	-	-	-
400(16)	Cast-in-Place concrete pile(1200mm)	m	6730	-	-	-	-	-
404	Reinforcement steel	Kg	14.1	-	-	-	-	-
405(1)	Structural concrete, Class A	Cu.m	1820	-	-	-	-	-
405(5)	Seal concrete	Cu.m	1640	-	-	-	-	-
501	Grouted riprap	Cu.m	883	-	-	-	-	-
505	Stone masonry	Cu.m	797	-	-	-	-	-
509	Gabion	Cu.m	625	-	-	-	-	-
* Sub-total					(-)	(-)	(-)	(-)
(IV) RIVER TRAINING WORKS								
400(1)	Untreated timber pile	m	149	-	-	-	-	-
400(4)	Precast concrete pile (400X400mm)	m	742	-	-	-	-	-
400(6)	Steel sheet pile	m	3160	-	-	-	-	-
404	Reinforcement steel	Kg	14.1	-	-	-	-	-
405(1)	Structural concrete, Class A	Cu.m	1820	-	-	-	-	-
405(5)	Seal concrete	Cu.m	1640	-	-	-	-	-
504	Grouted riprap	Cu.m	883	-	-	-	-	-
505	Stone masonry	Cu.m	797	-	-	-	-	-
506	Stone pitching (Hand-laid rock embankment)	Cu.m	283	-	-	-	-	-
509	Gabion	Cu.m	625	-	-	-	-	-
* Sub-total					(-)	(-)	(-)	(-)
(V) SPECIAL WORKS FOR REHABILITATION								
800	Additional stringer	ton	39700	22	873400.00	663784.00	122276.00	87340.00
801	Additional sidewalk	Sq.m	6880	-	-	-	-	-
802	Reinforcing beam of RCDG	Cu.m	5520	-	-	-	-	-
803	Widening of pier coping	Cu.m	8040	-	-	-	-	-
* Sub-total					873400.00 (100.0 %)	663784.00 (76.0 %)	122276.00 (14.0 %)	87340.00 (10.0 %)
(VI) TEMPORARY WORKS								
900	Scaffolding	Sq.m	153	600	91800.00	64260.00	18360.00	9180.00
901	Staging	Cu.m	216	-	-	-	-	-
902	Temporary bridge	Sq.m	4980	-	-	-	-	-
903	Preparation works	LS	1	1	130418.65	92372.71	25004.07	13041.86
* Sub-total					222218.65 (100.0 %)	156632.71 (70.4 %)	43364.07 (19.5 %)	22221.86 (10.0 %)
** Grand Total					4477706.85 (100.0 %)	3171463.12 (70.8 %)	858473.04 (19.1 %)	447770.68 (10.0 %)

DETAILED CONSTRUCTION COST ESTIMATE (49/52)

49 Name of Bridge : JIABONG
Classification : Reconstruction

Item No.	Description	Unit	Price	Quantity	Amount	Foreign Component	Local Component	Taxes
(I)	EARTHWORK AND ROAD WORKS							
100	Clearing and Grubbing	Sq.m	2.18	5214	11366.52	795.66	9434.21	1136.65
102	Common excavation	Cu.m	44.2	170	7514.00	5034.38	1728.22	751.40
103(2)	Bridge excavation above low water level	Cu.m	59.0	979	57761.00	36389.43	15395.47	5776.10
103(2)S	Bridge excavation below low water level	Cu.m	112	1344	150528.00	91822.08	43653.12	15052.80
103(5)	Shoring, cribbing, cofferdam and related work	LS	1	1232	1232.00	887.04	221.76	123.20
104(1)	Embankment	Cu.m	69.7	5019	349824.30	255311.74	59470.13	34982.43
104(S)	Selected borrow for backfill	Cu.m	122	1782	217404.00	78255.44	117398.16	21740.40
200	Aggregate subbase course	Cu.m	195	849	165555.00	119199.60	29799.90	16555.50
311(2)	PCC Pavement (Reinforced)	Sq.m	474	1474	698676.00	433179.12	195629.28	69867.60
*	Sub-total				1659860.82	1020944.49	472930.25	165986.08
					(100.0 %)	(61.5 %)	(28.4 %)	(10.0 %)
(II)	SUPERSTRUCTURE WORKS							
101(S)	Removal concrete structure	Cu.m	921	283	260643.00	112076.49	122502.21	26064.30
101(1)	Removal steel structure (bridge)	LS	1	-	-	-	-	-
401	Railing	m	803	165	132495.00	74197.20	45048.30	13249.50
402	Timber structure (Detour bridge)	span	43300	-	-	-	-	-
403(S)	Structural steel (Detour bridge)	Sq.m	5430	-	-	-	-	-
404	Reinforcing steel	kg	18.5	20537	379934.50	273552.84	68388.21	37993.45
405(1)	Structural concrete, Class A	Cu.m	2760	205	565800.00	311190.00	198030.00	56580.00
407	Prestressed concrete bridge	Cu.m	16100	223	3590300.00	2441404.00	789866.00	359030.00
408	Steel bridge(I-beam)	ton	62000	-	-	-	-	-
411	Paint	Sq.m	71.7	-	-	-	-	-
*	Sub-total				4929172.50	3212420.53	1223834.72	492917.25
					(100.0 %)	(65.1 %)	(24.8 %)	(10.0 %)
(III)	SUBSTRUCTURE WORKS							
101(S)	Removal of concrete structure	Cu.m	921	123	113283.00	48711.69	53243.01	11328.30
101(1)	Removal of steel structure	LS	1	-	-	-	-	-
400(3)	Steel H-piles	m	3410	-	-	-	-	-
400(4)	Precast concrete pile (400X400mm)	m	816	1220	995520.00	696864.00	199104.00	99552.00
400(6)	Steel sheet pile	m	3440	-	-	-	-	-
400(7)	Precast concrete sheet pile	m	587	-	-	-	-	-
400(16)	Cast-in-Place concrete pile(1200mm)	m	7400	-	-	-	-	-
404	Reinforcement steel	kg	16.2	36740	595188.00	428535.36	107133.84	59518.80
405(1)	Structural concrete, Class A	Cu.m	1930	460	887800.00	541558.00	257462.00	88780.00
405(5)	Seal concrete	Cu.m	1740	114	198360.00	124966.80	53557.20	19836.00
501	Grouted riprap	Cu.m	883	-	-	-	-	-
505	Stone masonry	Cu.m	797	-	-	-	-	-
509	Gabion	Cu.m	600	-	-	-	-	-
*	Sub-total				2790151.00	1840635.85	670500.05	279015.10
					(100.0 %)	(65.9 %)	(24.0 %)	(10.0 %)
(IV)	RIVER TRAINING WORKS							
400(1)	Untreated timber pile	m	104	-	-	-	-	-
400(4)	Precast concrete pile (400X400mm)	m	816	-	-	-	-	-
400(6)	Steel sheet pile	m	3440	-	-	-	-	-
404	Reinforcement steel	kg	16.2	-	-	-	-	-
405(1)	Structural concrete, Class A	Cu.m	1930	-	-	-	-	-
405(5)	Seal concrete	Cu.m	1740	-	-	-	-	-
504	Grouted riprap	Cu.m	883	81	71523.00	30754.89	33615.81	7152.30
505	Stone masonry	Cu.m	797	-	-	-	-	-
506	Stone pitching (Hand-laid rock embankment)	Cu.m	272	-	-	-	-	-
509	Gabion	Cu.m	600	-	-	-	-	-
*	Sub-total				71523.00	30754.89	33615.81	7152.30
					(100.0 %)	(43.0 %)	(47.0 %)	(10.0 %)
(V)	SPECIAL WORKS FOR REHABILITATION							
800	Additional stringer	ton	43300	-	-	-	-	-
801	Additional sidewalk	Sq.m	7220	-	-	-	-	-
802	Reinforcing beam of RCDG	Cu.m	6070	-	-	-	-	-
803	Widening of pier coping	Cu.m	8840	-	-	-	-	-
*	Sub-total				-	-	-	-
					(-)	(-)	(-)	(-)
(VI)	TEMPORARY WORKS							
900	Scaffolding	Sq.m	158	825	130350.00	91245.00	26070.00	13035.00
901	Staging	Cu.m	222	110	24420.00	15140.40	6837.60	2442.00
902	Temporary bridge	Sq.m	5430	821	4458030.00	3343522.50	668704.50	445803.00
903	Preparation works	LS	1	1	421905.22	286639.91	93074.79	42190.52
*	Sub-total				5034705.22	3736547.81	794686.89	503470.52
					(100.0 %)	(74.2 %)	(15.7 %)	(10.0 %)
**	Grand Total				14485412.54	9841303.57	3195567.72	1448541.25
					(100.0 %)	(67.9 %)	(22.0 %)	(10.0 %)

DETAILED CONSTRUCTION COST ESTIMATE (50/52)

50 Name of Bridge : HINGBONGAN
Classification : Repair

Item No.	Description	Unit	Price	Quantity	Amount	Foreign Component	Local Component	Taxes
(I) EARTHWORK AND ROAD WORKS								
100	Clearing and Grubbing	Sq. m	2.18	-	-	-	-	-
102	Common excavation	Cu. m	44.2	-	-	-	-	-
103(2)	Bridge excavation above low water level	Cu. m	59.0	387	22833.00	14384.79	6164.91	2283.30
103(2)S	Bridge excavation below low water level	Cu. m	112	1042	116704.00	71189.44	33844.16	11670.40
103(5)	Shoring, cribbing, cofferdam and related work	LS	1	-	-	-	-	-
104(1)	Embankment	Cu. m	69.7	-	-	-	-	-
104(5)	Selected borrow for backfill	Cu. m	122	568	69296.00	24946.56	37419.84	6929.60
200	Aggregate subbase course	Cu. m	195	-	-	-	-	-
311(2)	PCC Pavement (Reinforced)	Sq. m	474	-	-	-	-	-
* Sub-total					208833.00	110520.79	77428.91	20883.30
					(100.0 %)	(52.9 %)	(37.0 %)	(10.0 %)
(II) SUPERSTRUCTURE WORKS								
101(5)	Removal concrete structure	Cu. m	921	-	-	-	-	-
101(1)	Removal steel structure (bridge)	LS	1	-	-	-	-	-
401	Railink	m	803	-	-	-	-	-
402	Timber structure (Detour bridge)	span	43300	-	-	-	-	-
403(5)	Structural steel (Detour bridge)	Sq. m	5430	-	-	-	-	-
404	Reinforcing steel	kg	18.5	-	-	-	-	-
405(1)	Structural concrete, Class A	Cu. m	2760	-	-	-	-	-
407	Prestressed concrete bridge	Cu. m	16100	-	-	-	-	-
408	Steel bridge(I-beam)	ton	62000	-	-	-	-	-
411	Paint	Sq. m	71.7	-	-	-	-	-
* Sub-total					(-)	(-)	(-)	(-)
(III) SUBSTRUCTURE WORKS								
101(5)	Removal of concrete structure	Cu. m	921	-	-	-	-	-
101(1)	Removal of steel structure	LS	1	-	-	-	-	-
400(3)	Steel H-piles	m	3410	-	-	-	-	-
400(4)	Precast concrete pile (400X400mm)	m	816	264	215424.00	150796.80	43084.80	21542.40
400(6)	Steel sheet pile	m	3440	-	-	-	-	-
400(7)	Precast concrete sheet pile	m	587	435	255345.00	176188.05	53622.45	25534.50
400(16)	Cast-in-Place concrete pile(1200mm)	m	7400	-	-	-	-	-
404	Reinforcement steel	kg	16.2	11000	178200.00	128304.00	32076.00	17820.00
405(1)	Structural concrete, Class A	Cu. m	1930	91	175630.00	107134.30	50932.70	17563.00
405(5)	Seal concrete	Cu. m	1740	-	-	-	-	-
501	Grouted riprap	Cu. m	883	-	-	-	-	-
505	Stone masonry	Cu. m	797	-	-	-	-	-
509	Gabion	Cu. m	600	-	-	-	-	-
* Sub-total					824599.00	562423.15	179715.95	82459.90
					(100.0 %)	(68.2 %)	(21.7 %)	(10.0 %)
(IV) RIVER TRAINING WORKS								
400(1)	Untreated timber pile	m	104	-	-	-	-	-
400(4)	Precast concrete pile (400X400mm)	m	816	435	354960.00	248472.00	70992.00	35496.00
400(6)	Steel sheet pile	m	3440	-	-	-	-	-
404	Reinforcement steel	kg	16.2	-	-	-	-	-
405(1)	Structural concrete, Class A	Cu. m	1930	-	-	-	-	-
405(5)	Seal concrete	Cu. m	1740	-	-	-	-	-
504	Grouted riprap	Cu. m	883	123	108609.00	46701.87	51046.23	10860.90
505	Stone masonry	Cu. m	797	-	-	-	-	-
506	Stone pitching (Hand-laid rock embankment)	Cu. m	272	-	-	-	-	-
509	Gabion	Cu. m	600	-	-	-	-	-
* Sub-total					463569.00	295173.87	122038.23	46356.90
					(100.0 %)	(63.6 %)	(26.3 %)	(10.0 %)
(V) SPECIAL WORKS FOR REHABILITATION								
800	Additional stringer	ton	43300	-	-	-	-	-
801	Additional sidewalk	Sq. m	7220	-	-	-	-	-
802	Reinforcing beam of RCDG	Cu. m	6070	-	-	-	-	-
803	Widening of pier coping	Cu. m	8840	-	-	-	-	-
* Sub-total					(-)	(-)	(-)	(-)
(VI) TEMPORARY WORKS								
900	Scaffolding	Sq. m	158	-	-	-	-	-
901	Staking	Cu. m	222	-	-	-	-	-
902	Temporary bridge	Sq. m	5430	-	-	-	-	-
903	Preparation works	LS	1	1	44910.03	29043.53	11375.49	4491.00
* Sub-total					44910.03	29043.53	11375.49	4491.00
					(100.0 %)	(64.6 %)	(25.3 %)	(10.0 %)
** Grand Total					1541911.03	997161.34	390568.58	154191.10
					(100.0 %)	(64.6 %)	(25.3 %)	(10.0 %)

DETAILED CONSTRUCTION COST ESTIMATE (51/52)

51 Name of Bridge : JUBASAN II
 Classification : Replacement of Superstructure

Item No.	Description	Unit	Price	Quantity	Amount	Foreign Component	Local Component	Taxes
(I) EARTHWORK AND ROAD WORKS								
100	Clearing and Grubbling	Sq.m	2.18	917	1999.06	139.93	1659.22	199.91
102	Common excavation	Cu.m	44.2	-	-	-	-	-
103(2)	Bridge excavation above low water level	Cu.m	59.0	210	12390.00	7805.70	3345.30	1239.00
103(2)S	Bridge excavation below low water level	Cu.m	112	262	29344.00	17899.84	8509.76	2934.40
103(5)	Shoring, cribbing, cofferdam and related work	LS	1	317302	317302.00	228457.44	57114.36	31730.20
104(1)	Embankment	Cu.m	89.7	1421	99043.70	72301.90	16837.43	9904.37
104(S)	Selected borrow for backfill	Cu.m	122	180	21960.00	7905.60	11858.40	2196.00
200	Aggregate subbase course	Cu.m	195	255	49725.00	35802.00	8950.50	4972.50
311(2)	PCC Pavement (Reinforced)	Sq.m	474	442	209508.00	129894.96	58662.24	20950.80
* Sub-total					741271.76	500207.38	166937.21	74127.18
					(100.0 %)	(67.4 %)	(22.5 %)	(10.0 %)
(II) SUPERSTRUCTURE WORKS								
101(S)	Removal concrete structure	Cu.m	921	87	80127.00	34454.61	37659.69	8012.70
101(1)	Removal steel structure (bridge)	LS	1	369459	369459.00	247537.63	84975.67	36945.90
401	Railing	m	803	98	78694.00	44068.64	26755.96	7869.40
402	Timber structure (Detour bridge)	span	43300	11	476300.00	147663.00	281017.00	47630.00
403(S)	Structural steel (Detour bridge)	Sq.m	5430	-	-	-	-	-
404	Reinforcing steel	kg	18.5	12210	225885.00	162637.20	40659.30	22588.50
405(1)	Structural concrete, Class A	Cu.m	2760	122	336720.00	185195.00	117852.00	33672.00
407	Prestressed concrete bridge	Cu.m	16100	133	2141300.00	1456084.00	471086.00	214130.00
408	Steel bridge(I-beam)	ton	62000	-	-	-	-	-
411	Paint	Sq.m	71.7	-	-	-	-	-
* Sub-total					3708485.00	2277630.98	1060005.52	370848.50
					(100.0 %)	(61.4 %)	(28.5 %)	(10.0 %)
(III) SUBSTRUCTURE WORKS								
101(S)	Removal of concrete structure	Cu.m	921	-	-	-	-	-
101(1)	Removal of steel structure	LS	1	-	-	-	-	-
400(3)	Steel H-piles	m	3410	-	-	-	-	-
400(4)	Precast concrete pile (400X400mm)	m	816	469	382704.00	267892.80	76540.80	38270.40
400(6)	Steel sheet pile	m	3440	-	-	-	-	-
400(7)	Precast concrete sheet pile	m	587	-	-	-	-	-
400(16)	Cast-in-Place concrete pile(1200mm)	m	7400	-	-	-	-	-
404	Reinforcement steel	kg	16.2	29150	472230.00	340005.60	85001.40	47223.00
405(1)	Structural concrete, Class A	Cu.m	1930	292	563560.00	343771.60	163432.40	56356.00
405(5)	Seal concrete	Cu.m	1740	44	76560.00	48232.80	20671.20	7656.00
501	Grouted riprap	Cu.m	883	-	-	-	-	-
505	Stone masonry	Cu.m	797	-	-	-	-	-
509	Gabion	Cu.m	600	-	-	-	-	-
* Sub-total					1495054.00	999902.80	345645.80	149505.40
					(100.0 %)	(66.8 %)	(23.1 %)	(10.0 %)
(IV) RIVER TRAINING WORKS								
400(1)	Untreated timber pile	m	104	-	-	-	-	-
400(4)	Precast concrete pile (400X400mm)	m	816	-	-	-	-	-
400(6)	Steel sheet pile	m	3440	-	-	-	-	-
404	Reinforcement steel	kg	16.2	-	-	-	-	-
405(1)	Structural concrete, Class A	Cu.m	1930	-	-	-	-	-
405(5)	Seal concrete	Cu.m	1740	-	-	-	-	-
504	Grouted riprap	Cu.m	883	-	-	-	-	-
505	Stone masonry	Cu.m	797	-	-	-	-	-
506	Stone pitching (Hand-laid rock embankment)	Cu.m	272	-	-	-	-	-
509	Gabion	Cu.m	600	-	-	-	-	-
* Sub-total					(-)	(-)	(-)	(-)
(V) SPECIAL WORKS FOR REHABILITATION								
800	Additional stringer	ton	43300	-	-	-	-	-
801	Additional sidewalk	Sq.m	7220	-	-	-	-	-
802	Reinforcing beam of RCDG	Cu.m	6070	-	-	-	-	-
803	Widening of pier coping	Cu.m	8840	-	-	-	-	-
* Sub-total					(-)	(-)	(-)	(-)
(VI) TEMPORARY WORKS								
900	Scaffolding	Sq.m	158	491	77578.00	54304.60	15516.60	7757.80
901	Staging	Cu.m	222	99	21978.00	13626.36	6153.84	2197.80
902	Temporary bridge	Sq.m	5430	183	993690.00	745267.50	149053.50	99369.00
903	Preparation works	LS	1	1	211141.70	137728.19	62299.34	21114.17
* Sub-total					1304387.70	950926.65	223022.28	130438.77
					(100.0 %)	(72.9 %)	(17.1 %)	(10.0 %)
** Grand Total					7249198.46	4728667.80	1795610.81	724919.85
					(100.0 %)	(65.2 %)	(24.7 %)	(10.0 %)

DETAILED CONSTRUCTION COST ESTIMATE (52/52)

52 Name of Bridge : JUBASAN I
Classification : Reconstruction

Item No.	Description	Unit	Price	Quantity	Amount	Foreign Component	Local Component	Taxes
(I) EARTHWORK AND ROAD WORKS								
100	Clearing and Grubblinx	Sq.m	2.18	7073	15419.14	1079.34	12797.89	1541.91
102	Common excavation	Cu.m	44.2	182	8044.40	5389.75	1850.21	804.44
103(2)	Bridge excavation above low water level	Cu.m	59.0	2590	152810.00	96270.30	41258.70	15281.00
103(2)S	Bridge excavation below low water level	Cu.m	112	361	40432.00	24663.52	11725.28	4043.20
103(5)	Shoring, cribbing, cofferdam and related work	LS	1	419958	419958.00	302369.76	75592.44	41995.80
104(1)	Embankment	Cu.m	69.7	7784	542544.80	396057.70	92232.62	54254.48
104(5)	Selected borrow for backfill	Cu.m	122	2562	312564.00	112523.04	168784.56	31256.40
200	Aggregate subbase course	Cu.m	195	1062	207090.00	149104.80	37276.20	20709.00
311(2)	PCC Pavement (Reinforced)	Sq.m	474	1843	873582.00	541620.84	244602.96	87358.20
* Sub-total					2572444.34	1629079.05	686120.85	257244.43
					(100.0 %)	(63.3 %)	(26.6 %)	(10.0 %)
(II) SUPERSTRUCTURE WORKS								
101(S)	Removal concrete structure	Cu.m	921	148	136308.00	58612.44	64064.76	13630.80
101(1)	Removal steel structure (bridge)	LS	1	760883	760883.00	509791.61	175003.09	76088.30
401	Railing	m	803	163	130889.00	73297.84	44502.26	13088.90
402	Timber structure (Detour bridge)	span	43300	-	-	-	-	-
403(S)	Structural steel (Detour bridge)	Sq.m	5430	-	-	-	-	-
404	Reinforcing steel	kg	18.5	20262	374847.00	269889.84	67472.46	37484.70
405(1)	Structural concrete, Class A	Cu.m	2760	203	560280.00	308154.00	196098.00	56028.00
407	Prestressed concrete bridge	Cu.m	16100	221	3558100.00	2419508.00	782782.00	355810.00
408	Steel bridge(I-beam)	ton	62000	-	-	-	-	-
411	Paint	Sq.m	71.7	-	-	-	-	-
* Sub-total					5521307.00	3639253.73	1329922.57	552130.70
					(100.0 %)	(65.9 %)	(24.0 %)	(10.0 %)
(III) SUBSTRUCTURE WORKS								
101(S)	Removal of concrete structure	Cu.m	921	-	-	-	-	-
101(1)	Removal of steel structure	LS	1	-	-	-	-	-
400(3)	Steel H-piles	m	3410	-	-	-	-	-
400(4)	Precast concrete pile (400X400mm)	m	816	-	-	-	-	-
400(6)	Steel sheet pile	m	3440	-	-	-	-	-
400(7)	Precast concrete sheet pile	m	587	-	-	-	-	-
400(16)	Cast-in-Place concrete pile(1200mm)	m	7400	374	2767600.00	1937320.00	553520.00	276760.00
404	Reinforcement steel	kg	16.2	39600	641520.00	461894.40	115473.60	64152.00
405(1)	Structural concrete, Class A	Cu.m	1930	400	772000.00	470920.00	223880.00	77200.00
405(5)	Seal concrete	Cu.m	1740	9	15660.00	9855.80	4228.20	1566.00
501	Grouted riprap	Cu.m	883	-	-	-	-	-
505	Stone masonry	Cu.m	797	-	-	-	-	-
509	Gabion	Cu.m	600	-	-	-	-	-
* Sub-total					4196780.00	2880000.20	897101.80	419678.00
					(100.0 %)	(68.6 %)	(21.3 %)	(10.0 %)
(IV) RIVER TRAINING WORKS								
400(1)	Untreated timber pile	m	104	-	-	-	-	-
400(4)	Precast concrete pile (400X400mm)	m	816	-	-	-	-	-
400(6)	Steel sheet pile	m	3440	-	-	-	-	-
404	Reinforcement steel	kg	16.2	-	-	-	-	-
405(1)	Structural concrete, Class A	Cu.m	1930	-	-	-	-	-
405(5)	Seal concrete	Cu.m	1740	-	-	-	-	-
504	Grouted riprap	Cu.m	883	209	184547.00	79355.21	86737.09	18454.70
505	Stone masonry	Cu.m	797	-	-	-	-	-
506	Stone pitching (Hand-laid rock embankment)	Cu.m	272	-	-	-	-	-
509	Gabion	Cu.m	600	-	-	-	-	-
* Sub-total					184547.00	79355.21	86737.09	18454.70
					(100.0 %)	(43.0 %)	(47.0 %)	(10.0 %)
(V) SPECIAL WORKS FOR REHABILITATION								
800	Additional stringer	ton	43300	-	-	-	-	-
801	Additional sidewalk	Sq.m	7220	-	-	-	-	-
802	Reinforcing beam of RCDG	Cu.m	6070	-	-	-	-	-
803	Widening of pier coping	Cu.m	8840	-	-	-	-	-
* Sub-total					(-)	(-)	(-)	(-)
(VI) TEMPORARY WORKS								
900	Scaffolding	Sq.m	158	814	128612.00	90028.40	25722.40	12861.20
901	Staging	Cu.m	222	119	26418.00	16379.16	7397.04	2641.80
902	Temporary bridge	Sq.m	5430	277	1504110.00	1128082.50	225616.50	150411.00
903	Preparation works	LS	1	1	424026.55	283865.35	97758.55	42402.65
* Sub-total					2083166.55	1518355.41	356494.49	208316.66
					(100.0 %)	(72.8 %)	(17.1 %)	(10.0 %)
** Grand Total					14558244.89	9746043.60	3356376.80	1455824.49
					(100.0 %)	(66.9 %)	(23.0 %)	(10.0 %)

APPENDIX 12.1

PROJECT AVERAGE DAILY TRAFFIC VOLUME

Appendix 12.1 PROJECTED AVERAGE DAILY TRAFFIC VOLUME
(CAR)

Bridge No.	Bridge Name	Car													
		1986	1990	1992	1994	1996	1998	2000	2002	2004	2006	2008	2010	2012	2014
1	MARILAO	5968	8171	9869	11919	14396	17132	17132	17132	17132	17132	17132	17132	17132	17132
2	LABANGAN 1	3940	5394	6515	7869	9504	11479	13771	13771	13771	13771	13771	13771	13771	13771
3	SULIPAN	3940	5095	6163	7455	9007	10871	13120	13875	13875	13875	13875	13875	13875	13875
4	PLARIDEL	2465	3404	4105	4951	5969	7195	8673	9976	11475	13217	15246	17586	18745	18745
5	TAGAMUSING	3536	4882	5888	7102	8582	10321	12441	14310	16460	18960	21704	21704	21704	21704
6	BUED	1657	2288	2759	3328	4012	4837	5830	6706	7713	8885	10248	11821	13636	15728
7	LOMBOY	1084	1481	1779	2137	2568	3086	3710	4254	4878	5600	6436	7398	8503	9774
8	BAUANG 1	2421	3307	3973	4772	5734	6893	8286	9501	10894	12506	14375	16522	17458	17458
9	BAUANG 2	2421	3307	3973	4772	5734	6893	8286	9501	10849	12506	14375	16522	17458	17458
10	STA CRUZI	590	788	923	1110	1334	1602	1924	2206	2529	2904	3338	3836	4409	5068
11	LANGLANGKA 1	450	586	704	847	1017	1222	1467	1683	1929	2215	2546	2926	3363	3866
12	STA MARIA	450	586	704	847	1017	1222	1467	1683	1929	2215	2546	2826	3363	3866
13	TIPCAL	264	363	437	527	634	763	918	1054	1211	1393	1605	1850	2132	2457
14	PLARIDEL-PULILA	2356	4047	4888	5904	7130	8612	10402	12844	15859	18483	18483	18483	18483	18483
15	SAN ROGUE	3591	4816	5938	7172	8662	10462	12636	15603	18391	18391	18391	18391	18391	18391
16	SICSICAN	2662	3736	4523	5477	6637	8046	9755	12080	14960	18551	20200	20200	20200	20200
17	INDIANA	441	592	715	867	1049	1266	1527	1810	2145	2545	3025	3594	4271	5076
18	BATU	577	774	937	1135	1372	1656	1998	2368	2807	3330	3958	4703	5589	6641
19	NAMANPARAN 1	443	594	720	871	1053	1271	1534	1818	2155	2557	3039	3611	4291	5099
20	SAN LUIS	423	627	780	921	1113	1343	1619	1920	2277	2705	3218	3829	4556	5421
21	NAGUILAN	904	1340	1824	1968	2379	2860	3460	4103	4866	5780	6877	8183	9737	11585
22	MALALAN	236	350	424	514	621	749	903	1071	1270	1509	1795	2136	2542	3024
23	BALASIG	237	351	426	516	624	752	907	1076	1276	1515	1803	2145	2553	3037
24	SAN PABLO	272	403	489	592	716	863	1041	1235	1464	1739	2069	2462	2930	3486
25	PINACANAUAN	126	170	207	252	306	371	450	535	636	758	905	1079	1288	1537
26	PARED	93	125	153	186	226	274	332	395	470	560	668	797	951	1134
27	SUJE(RIZAL)	257	341	411	497	601	728	883	1000	1133	1285	1459	1656	1880	2134
28	GUINOBATAN	784	1045	1268	1539	1869	2271	2760	3135	3560	4048	4609	5247	5974	6801

Appendix 12.1 PROJECTED AVERAGE DAILY TRAFFIC VOLUME (Cont'd)
(CAR)

Bridge No.	Bridge Name	Car													
		1986	1990	1992	1994	1996	1998	2000	2002	2004	2006	2008	2010	2012	2014
29	SAN FERNANDO	666	879	1062	1283	1552	1878	2273	2574	2915	3305	3753	4261	4839	5495
30	PAMUKID	666	879	1062	1283	1552	1878	2273	2574	2915	3305	3753	4261	4839	5495
31	SAN ISIDRO	666	879	1062	1283	1552	1878	2273	2574	2915	3305	3753	4261	4839	5495
32	SAN GABRIEL	666	879	1062	1283	1552	1878	2273	2574	2915	3305	3753	4261	4839	5495
33	PAHOHO	666	879	1062	1283	1552	1878	2273	2574	2915	3305	3753	4261	4839	5495
34	TINIGUIBAN	666	879	1062	1283	1552	1878	2273	2574	2915	3305	3753	4261	4839	5495
35	SGT.MATIAS	666	879	1062	1283	1552	1878	2273	2574	2915	3305	3753	4261	4839	5495
36	NAUBOD 1	666	879	1062	1283	1552	1878	2273	2574	2915	3305	3753	4261	4839	5495
37	SOOK	313	413	499	603	729	883	1068	1210	1370	1553	1764	2003	2274	2582
38	KANAPAWAN	425	560	676	816	986	1194	1445	1636	1852	2099	2382	2703	3067	3480
39	BASIAD	425	560	676	816	986	1194	1445	1636	1852	2099	2382	2703	3067	3480
40	GUMACA	706	916	1106	1336	1612	1945	2345	2824	3401	4102	4955	5984	7228	8729
41	TALABA	706	916	1106	1336	1612	1945	2345	2824	3401	4102	4955	5984	7228	8729
42	BINAHAN	843	1093	1321	1595	1925	2322	2800	3372	4061	4898	5916	7145	8630	10423
43	PALSABANGON	843	1093	1321	1595	1925	2322	2800	3372	4061	4898	5916	7145	8630	10423
44	LAGNAS 2	1106	1435	1733	2093	2526	3046	3674	4424	5328	6426	7762	9374	11323	13675
45	STO CRISTO	1106	1435	1733	2093	2526	3046	3674	4424	5328	6426	7762	9374	11323	13675
46	MAGAPONG	1077	1400	1691	2042	2467	2981	3602	4345	5241	6330	7656	9258	11196	13540
47	BIGA	3595	4674	5644	6815	8233	9949	12023	14503	17495	21130	25425	25425	25425	25425
48	SAN CRISTBAL	3595	4609	5536	6648	7988	9603	11543	13861	16644	19931	23802	25196	25196	25196
49	JABONG	78	109	135	168	208	256	320	378	447	529	627	743	880	1043
50	HINOGBONGAN	115	161	199	247	307	380	471	557	659	780	924	1095	1297	1537
51	JUBASAN 2	206	288	357	443	549	681	844	998	1180	1397	1655	1961	2324	2754
52	JUBASAN 1	206	288	357	443	549	681	844	998	1180	1397	1655	1961	2324	2754

Appendix 12.1 PROJECTED AVERAGE DAILY TRAFFIC VOLUME
(JEEPNEY)

Bridge No.	Bridge Name	Jeepney													
		1985	1990	1992	1994	1996	1998	2000	2002	2004	2006	2008	2010	2012	2014
1	MARILAO	6056	7847	9135	10636	12373	14172	14172	14172	14172	14172	14172	14172	14172	14172
2	LABANGAN 1	4731	6130	7137	8309	9666	11237	12976	12976	12976	12976	12976	12976	12976	12976
3	SULIPAN	4731	5868	6836	7965	9266	10764	12504	12923	12923	12923	12923	12923	12923	12923
4	PLARIDEL	1179	1523	1764	2043	2365	2736	3165	3532	3941	4399	4912	5484	5697	5697
5	TAGAMUSING	1108	1431	1658	1920	2223	2571	2975	3319	3703	4134	4581	4581	4581	4581
6	BUED	301	389	450	522	604	699	808	902	1006	1123	1254	1400	1563	1746
7	LOMBOY	165	213	246	285	330	382	442	493	550	613	684	763	852	950
8	BAUANG 1	2365	3049	3530	4087	4731	5473	6332	7062	7877	8767	9804	10939	11389	11389
9	BAUANG 2	2365	3049	3530	4087	4731	5473	6332	7062	7877	8767	9804	10939	11389	11389
10	STA CRUZ1	583	723	838	970	1122	1297	1499	1672	1864	2079	2320	2589	2869	3223
11	LANGLANGKA 1	206	256	296	343	397	458	530	591	659	735	820	915	1021	1139
12	STA MARIA	206	256	296	343	397	458	530	591	659	735	820	915	1021	1139
13	TIPCAL	85	110	127	147	170	196	227	253	282	314	351	392	438	488
14	PLARIDEL-PULILA	2216	2871	3343	3892	4528	5263	6119	7221	8521	9479	9479	9479	9479	9479
15	SAN ROQUE	1711	2217	2581	3005	3496	4064	4724	5575	6280	6280	6280	6280	6280	6280
16	SICSICAN	806	1058	1231	1433	1668	1941	2258	2666	3148	3718	3948	3948	3948	3948
17	INDIANA	396	507	591	690	804	935	1087	1244	1425	1632	1870	2142	2455	2813
18	BATU	327	418	488	570	664	772	897	1027	1177	1348	1544	1769	2027	2322
19	NAMANPARAN 1	399	510	596	695	810	942	1095	1254	1436	1644	1884	2159	2473	2834
20	SAN LUIS	170	240	280	327	381	442	514	588	674	772	885	1014	1162	1332
21	NAGUILAN	212	299	349	408	475	551	640	733	840	963	1103	1264	1449	1661
22	MALALAN	60	85	99	115	134	156	181	208	238	272	312	358	410	470
23	BALASIG	92	130	152	177	206	239	278	318	365	418	479	549	629	721
24	SAN PABLO	95	134	157	183	213	247	287	329	376	431	494	567	649	744
25	PINACANAUAN	42	54	63	73	85	99	115	132	151	174	199	228	262	300
26	PARED	103	131	153	179	209	243	283	324	371	426	488	560	642	737
27	SUJE(RIZAL)	235	297	345	401	467	544	634	701	776	859	950	1051	1163	1287
28	GUINOBATAN	477	603	703	819	954	1112	1296	1434	1588	1757	1946	2154	2385	2640

Appendix 12.1 PROJECTED AVERAGE DAILY TRAFFIC VOLUME (Cont'd)
(JEEPNEY)

Bridge No.	Bridge Name	Jeepney													
		1986	1990	1992	1994	1996	1998	2000	2002	2004	2006	2008	2010	2012	2014
29	SAN FERNANDO	574	722	841	978	1139	1325	1543	1706	1887	2088	2311	2557	2830	3132
30	PAMUKID	574	722	841	978	1139	1325	1543	1706	1887	2088	2311	2557	2830	3132
31	SAN ISIDRO	574	722	841	978	1139	1325	1543	1706	1887	2088	2311	2557	2830	3132
32	SAN GABRIEL	574	722	841	978	1139	1325	1543	1706	1887	2088	2311	2557	2830	3132
33	PAHOHO	574	722	841	978	1139	1325	1543	1706	1887	2088	2311	2557	2830	3132
34	TINIGUIBAN	574	722	841	978	1139	1325	1543	1706	1887	2088	2311	2557	2830	3132
35	S.GT.MATIAS	574	722	841	978	1139	1325	1543	1706	1887	2088	2311	2557	2830	3132
36	NAUBOD 1	574	722	841	978	1139	1325	1543	1706	1887	2088	2311	2557	2830	3132
37	SOOK	120	151	176	204	238	277	323	357	395	437	483	535	592	655
38	KANAPAWAN	460	579	673	783	912	1062	1236	1367	1512	1673	1851	2046	2265	2506
39	BASIAO	460	579	673	783	912	1062	1236	1367	1512	1673	1851	2046	2265	2506
40	GUMACA	328	407	473	550	636	740	859	994	1150	1331	1542	1785	2067	2394
41	TALABA	328	407	473	550	636	740	859	994	1150	1331	1542	1785	2067	2394
42	BINAHAAN	143	177	206	240	278	323	374	433	501	580	672	778	901	1044
43	PALSABANGON	143	177	206	240	278	323	374	433	501	580	672	778	901	1044
44	LAGNAS 2	613	760	884	1027	1193	1384	1605	1857	2149	2488	2881	3336	3863	4474
45	STO CRISTO	613	760	884	1027	1193	1384	1605	1857	2149	2488	2881	3336	3863	4474
46	MAGAPONG	412	511	594	690	801	929	1079	1249	1445	1674	1938	2245	2600	3012
47	BIGA	1277	1585	1841	2138	2482	2881	3343	3870	4480	5187	5978	6935	8095	9478
48	SAN CRISTBAL	1277	1582	1836	2132	2473	2867	3325	3845	4447	5122	5875	6835	8035	9495
49	JIABONG	149	192	226	266	313	368	433	491	557	632	716	815	925	1050
50	HINOGBONGAN	79	102	120	141	166	195	230	260	296	335	381	432	490	557
51	JUBASAN 2	197	254	299	352	414	487	573	650	737	836	949	1077	1223	1388
52	JUBASAN 1	197	254	299	352	414	487	573	650	737	836	949	1077	1223	1388

Appendix 12.1 PROJECTED AVERAGE DAILY TRAFFIC VOLUME
(BUS)

Bridge No.	Bridge Name	1985	1990	1992	1994	1996	1998	2000	2002	2004	2006	2008	2010	2012	2014
1	MARILAO	25	32	38	44	51	58	58	58	58	58	58	58	58	58
2	LABANGAN 1	2178	2822	3285	3825	4450	5173	5974	5974	5974	5974	5974	5974	5974	5974
3	SULIPAN	2178	2701	3147	3667	4266	4956	5757	5951	5951	5951	5951	5951	5951	5951
4	PLARIDEL	1280	1653	1915	2218	2568	2970	3437	3834	4278	4775	5332	5954	6245	6245
5	TAGAMUSING	1293	1670	1935	2241	2594	3001	3471	3873	4322	4824	5345	5345	5345	5345
6	BUED	929	1200	1390	1610	1863	2156	2494	2783	3105	3466	3870	4321	4825	5388
7	LOMBOY	664	856	991	1148	1328	1537	1778	1983	2211	2467	2753	3071	3427	3824
8	BAUANG 1	697	899	1040	1205	1394	1613	1866	2081	2321	2590	2899	3224	3357	3357
9	BAUANG 2	697	899	1040	1205	1394	1613	1866	2081	2321	2590	2899	3224	3357	3357
10	STA. CRUZI	376	467	540	626	724	837	967	1078	1202	1341	1496	1670	1863	2079
11	LANGLANGKA 1	499	619	717	830	960	1110	1283	1431	1596	1780	1986	2216	2472	2759
12	STA. MARIA	499	619	717	830	960	1110	1283	1431	1596	1780	1986	2216	2472	2759
13	TIPCAL	342	441	510	591	683	789	912	1017	1134	1265	1412	1577	1760	1965
14	PLARIDEL-PULILA	990	1283	1493	1739	2023	2351	2734	3226	3807	4235	4235	4235	4235	4235
15	SAN ROQUE	1137	1473	1715	1997	2323	2701	3139	3705	4173	4173	4173	4173	4173	4173
16	SICSICAN	1187	1558	1813	2111	2456	2858	3325	3926	4536	5475	5815	5815	5815	5815
17	INDIANA	289	370	432	504	587	682	793	908	1040	1191	1365	1564	1791	2053
18	BATU	187	239	279	326	380	441	513	588	673	771	883	1012	1159	1328
19	NAMANPARAN 1	291	372	435	507	591	687	798	914	1047	1199	1374	1574	1804	2067
20	SAN LUIS	301	425	496	579	674	783	909	1041	1193	1367	1566	1795	2058	2359
21	NAGUILAN	225	318	371	433	504	585	680	778	892	1022	1171	1342	1538	1763
22	MALALAN	4	6	7	8	9	10	12	14	16	18	21	24	27	31
23	BALASIG	149	210	246	287	334	388	450	516	590	676	775	889	1019	1138
24	SAN PABLO	162	229	267	312	363	421	489	560	642	736	843	966	1108	1269
25	PINACANAUAN	137	175	204	238	278	323	376	431	494	566	650	745	854	980
26	PARED	81	103	121	141	164	191	222	255	292	335	384	440	505	579
27	SUJE(RIZAL)	186	235	273	317	369	430	502	555	614	680	752	832	921	1019
28	GUINOBATAN	489	618	720	839	978	1140	1329	1471	1627	1801	1994	2208	2445	2707

Appendix 12.1 PROJECTED AVERAGE DAILY TRAFFIC VOLUME (Cont'd)
(BUS)

Bridge No.	Bridge Name	Bus													
		1986	1990	1992	1994	1996	1998	2000	2002	2004	2006	2008	2010	2012	2014
29	SAN FERNANDO	733	922	1073	1249	1454	1692	1970	2179	2410	2666	2951	3266	3614	4000
30	PAMUKID	733	922	1073	1249	1454	1692	1970	2179	2410	2666	2951	3266	3614	4000
31	SAN ISIDRO	733	922	1073	1249	1454	1692	1970	2179	2410	2666	2951	3266	3614	4000
32	SAN GABRIEL	733	922	1073	1249	1454	1692	1970	2179	2410	2666	2951	3266	3614	4000
33	PAHOHO	733	922	1073	1249	1454	1692	1970	2179	2410	2666	2951	3266	3614	4000
34	TINIGUIBAN	733	922	1073	1249	1454	1692	1970	2179	2410	2666	2951	3266	3614	4000
35	SGT. MATIAS	733	922	1073	1249	1454	1692	1970	2179	2410	2666	2951	3266	3614	4000
36	NAUBOD 1	733	922	1073	1249	1454	1692	1970	2179	2410	2666	2951	3266	3614	4000
37	SOOK	167	210	245	285	331	386	449	496	549	608	672	744	823	911
38	KANAPAWAN	207	260	303	353	410	478	556	615	681	753	833	921	1019	1128
39	BASIAD	207	260	303	353	410	478	556	615	681	753	833	921	1019	1128
40	GLUMACA	323	401	466	541	629	729	846	979	1133	1311	1518	1758	2036	2357
41	TALABA	323	401	466	541	629	729	846	979	1133	1311	1518	1758	2036	2357
42	BINAHAAN	325	403	469	545	633	734	851	985	1140	1319	1527	1769	2048	2372
43	PALSABANGON	325	403	469	545	633	734	851	985	1140	1319	1527	1769	2048	2372
44	LAGNAS 2	688	853	992	1153	1339	1553	1802	2085	2412	2792	3234	3744	4336	5021
45	STO CRISTO	688	853	992	1153	1339	1553	1802	2085	2412	2792	3234	3744	4336	5021
46	MAGAPONG	813	1009	1172	1361	1580	1834	2129	2464	2852	3303	3825	4430	5131	5943
47	BIGA	391	485	564	655	760	882	1024	1185	1372	1588	1831	2131	2488	2911
48	SAN CRISTBAL	391	494	562	653	757	878	1018	1177	1362	1568	1799	2067	2372	2711
49	JIABONG	80	103	121	143	168	198	233	264	299	340	385	438	497	564
50	HINOGBONGAN	28	36	43	50	59	69	81	92	105	119	135	153	174	197
51	JUBASAN 2	108	139	164	193	227	267	314	356	404	458	520	591	670	761
52	JUBASAN 1	108	139	164	193	227	267	314	356	404	458	520	591	670	761

Appendix 12.1 PROJECTED AVERAGE DAILY TRAFFIC VOLUME
(TRUCK)

Bridge No.	Bridge Name	Truck													
		1986	1990	1992	1994	1996	1998	2000	2002	2004	2006	2008	2010	2012	2014
1	MARILAO	1816	2257	2555	2892	3269	3638	3638	3638	3638	3638	3638	3638	3638	3638
2	LABANGAN 1	1000	1243	1407	1593	1800	2033	2280	2280	2280	2280	2280	2280	2280	2280
3	SULIPAN	1000	1202	1360	1540	1740	1963	2215	2250	2250	2250	2250	2250	2250	2250
4	PLARIDEL	1239	1522	1709	1919	2154	2415	2707	2952	3218	3508	3822	4164	4313	4313
5	TAGAMUSING	1101	1352	1519	1706	1914	2146	2405	2623	2860	3117	3370	3370	3370	3370
6	BUED	560	698	772	868	974	1091	1223	1334	1455	1585	1727	1882	2050	2234
7	LOMBOY	547	675	760	855	962	1081	1215	1327	1449	1582	1726	1883	2054	2241
8	BAUANG 1	789	973	1096	1233	1387	1559	1752	1914	2090	2282	2489	2716	2796	2796
9	BAUANG 2	789	973	1096	1233	1387	1559	1752	1914	2090	2282	2489	2716	2796	2796
10	STA CRUZI	164	196	221	249	279	314	352	384	420	458	500	545	595	649
11	LANGLANGKA 1	174	208	234	264	296	333	373	408	445	486	530	579	631	689
12	STA MARIA	174	208	234	264	296	333	373	408	445	486	530	579	631	689
13	TIPCAL	163	200	225	252	283	317	355	387	422	460	501	546	595	649
14	PLARIDEL-PULILA	875	1088	1231	1393	1575	1779	2008	2290	2610	2803	2803	2803	2803	2803
15	SAN ROQUE	2152	2687	3042	3443	3892	4395	4962	5657	6156	6156	6156	6156	6156	6156
16	SICSICAN	1436	1792	2023	2284	2578	2907	3279	3733	4249	4834	5037	5037	5037	5037
17	INDIANA	566	698	792	899	1018	1150	1300	1450	1617	1803	2009	2239	2495	2780
18	BATU	657	811	920	1044	1182	1335	1509	1683	1877	2093	2332	2599	2896	3227
19	NAMANPARAN 1	456	563	638	725	820	927	1047	1168	1303	1453	1619	1704	2010	2240
20	SAN LUIS	318	432	491	557	630	711	802	895	998	1112	1239	1380	1537	1712
21	NAGUILAN	272	370	420	476	539	608	686	765	853	951	1059	1180	1314	1464
22	MALALAN	126	171	194	221	250	282	318	355	395	441	491	547	609	678
23	BALASIG	147	200	227	257	291	329	371	414	461	514	573	638	710	791
24	SAN PABLO	162	220	250	284	321	362	409	456	508	566	631	703	783	872
25	PINACANAUAN	217	265	300	340	384	433	488	543	605	674	749	834	928	1032
26	PARED	80	98	111	125	141	160	180	200	223	248	276	307	342	381
27	SUJE(RIZAL)	97	118	133	151	170	192	217	236	257	279	303	328	356	387
28	GUINOBATAN	422	512	579	654	739	834	942	1022	1109	1203	1304	1413	1531	1660

Appendix 12.1 PROJECTED AVERAGE DAILY TRAFFIC VOLUME (Cont'd)
(TRUCK)

Bridge No.	Bridge Name	Truck													
		1986	1990	1992	1994	1996	1998	2000	2002	2004	2006	2008	2010	2012	2014
29	SAN FERNANDO	424	515	582	658	744	841	950	1033	1122	1219	1323	1436	1558	1691
30	PAMUKID	424	515	582	658	744	841	950	1033	1122	1219	1323	1436	1558	1691
31	SAN ISIDRO	424	515	582	658	744	841	950	1033	1122	1219	1323	1436	1558	1691
32	SAN GABRIEL	424	515	582	658	744	841	950	1033	1122	1219	1323	1436	1558	1691
33	PAHOHO	424	515	582	658	744	841	950	1033	1122	1219	1323	1436	1558	1691
34	TINIGUIBAN	424	515	582	658	744	841	950	1033	1122	1219	1323	1436	1558	1691
35	SGT. MATIAS	424	515	582	658	744	841	950	1033	1122	1219	1323	1436	1558	1691
36	NAUBOD 1	424	515	582	658	744	841	950	1033	1122	1219	1323	1436	1558	1691
37	SOOK	171	208	235	265	300	339	383	416	453	492	534	579	629	682
38	KANAPAWAN	286	348	393	445	503	568	642	698	759	824	894	971	1053	1143
39	BASIAD	286	348	393	445	503	568	642	698	759	824	894	971	1053	1143
40	GUMACA	537	644	727	821	925	1042	1173	1317	1478	1658	1858	2083	2336	2618
41	TALABA	537	644	727	821	925	1042	1173	1317	1478	1658	1858	2083	2336	2618
42	BINAHAAN	461	553	624	705	795	895	1007	1130	1269	1423	1595	1789	2005	2248
43	PALSABANGON	461	553	624	705	795	895	1007	1130	1269	1423	1595	1789	2005	2248
44	LAGNAS 2	608	729	823	929	1048	1180	1328	1491	1673	1877	2104	2359	2644	2964
45	STO CRISTO	608	729	823	929	1048	1180	1328	1491	1673	1877	2104	2359	2644	2964
46	MAGAPONG	803	962	1085	1223	1378	1550	1745	1957	2195	2461	2757	3089	3461	3878
47	BIGA	517	620	699	788	887	998	1123	1260	1413	1584	1766	1956	2156	2366
48	SAN CRISTBAL	517	624	706	799	902	1018	1148	1290	1449	1620	1803	1992	2186	2384
49	JIABONG	76	92	104	118	133	150	170	186	205	225	247	272	298	328
50	HINOGBONGAN	44	53	60	68	77	87	98	108	119	130	143	157	173	190
51	JUBASAN 2	128	155	175	198	224	253	286	314	345	379	416	457	502	552
52	JUBASAN 1	128	155	175	198	224	253	286	314	345	379	416	457	502	552

Appendix 12.1 PROJECTED AVERAGE DAILY TRAFFIC VOLUME
(TOTAL)

Bridge No.	Bridge Name	Total														
		1986	1990	1992	1994	1996	1998	2000	2002	2004	2006	2008	2010	2012	2014	
1	MARILAO	13865	18307	21597	25491	30089	35000	35000	35000	35000	35000	35000	35000	35000	35000	
2	LABANGAN 1	11849	15589	18344	21596	25420	29922	35000	35000	35000	35000	35000	35000	35000	35000	
3	SULIPAN	11849	14866	17506	20627	24279	28554	33596	35000	35000	35000	35000	35000	35000	35000	
4	PLARIDEL	6163	8102	9493	11131	13056	15316	17982	20294	22912	25899	29312	33188	35000	35000	
5	TAGAMUSING	7038	9335	11000	12969	15293	18039	21292	24125	27345	31035	35000	35000	35000	35000	
6	BUED	3447	4565	5371	6328	7453	8783	10355	11725	13279	15059	17099	19424	22074	25096	
7	LOMBOY	2460	3225	3776	4425	5188	6086	7145	8057	9088	10262	11599	13115	14836	16789	
8	BAUANG 1	6272	8228	9639	11297	13246	15538	18236	20558	23182	26165	29557	33401	35000	35000	
9	BAUANG 2	6272	8228	9639	11297	13246	15538	18236	20558	23137	26165	29557	33401	35000	35000	
10	STA CRUZI	1713	2154	2522	2955	3459	4050	4742	5340	6015	6782	7654	8640	9756	11019	
11	LANGLANGKA 1	1329	1669	1951	2284	2670	3123	3653	4113	4629	5216	5882	6636	7487	8453	
12	STA MARIA	1329	1669	1951	2284	2670	3123	3653	4113	4629	5216	5882	6636	7487	8453	
13	TIPCAL	854	1114	1299	1517	1770	2065	2412	2711	3049	3432	3869	4365	4925	5559	
14	PLARIDEL-PULILA	7037	9289	10955	12928	15256	18005	21263	25581	30797	35000	35000	35000	35000	35000	
15	SAN ROQUE	8601	11293	13276	15617	18373	21622	25461	30540	35000	35000	35000	35000	35000	35000	
16	SICSICAN	5091	8144	9590	11305	13339	15752	18617	22405	26993	32578	35000	35000	35000	35000	
17	INDIANA	1692	2167	2531	2960	3458	4033	4707	5412	6227	7171	8269	9539	11012	12722	
18	BATU	1748	2242	2624	3075	3598	4204	4917	5666	6534	7542	8717	10083	11671	13518	
19	NAMANPARAN 1	1589	2039	2389	2798	3274	3827	4474	5154	5941	6853	7916	9048	10578	12240	
20	SAN LUIS	1212	1724	2027	2364	2798	3279	3844	4444	5142	5955	6908	8018	9313	10824	
21	NAGUILAN	1613	2327	2764	3285	3897	4613	5466	6379	7451	8716	10210	11969	14036	16473	
22	MALALAN	426	612	724	858	1014	1197	1414	1648	1919	2240	2619	3065	3588	4203	
23	BALASIG	625	891	1051	1237	1455	1708	2006	2324	2692	3123	3630	4221	4911	5687	
24	SAN PABLO	691	986	1163	1371	1613	1893	2226	2580	2990	3472	4037	4698	5470	6371	
25	PINACANAUAN	522	664	774	903	1053	1226	1429	1621	1886	2172	2503	2886	3332	3849	
26	PARED	357	457	538	631	740	868	1017	1174	1356	1569	1816	2104	2440	2831	
27	SUJE(RIZAL)	775	991	1162	1366	1607	1894	2236	2492	2780	3103	3464	3867	4320	4827	
28	GUINOBATAN	2172	2778	3270	3851	4540	5357	6327	7062	7884	8809	9853	11022	12335	13808	

Appendix 12.1 PROJECTED AVERAGE DAILY TRAFFIC VOLUME (Cont'd)
(TOTAL)

Bridge No.	Bridge Name	Total													
		1986	1990	1992	1994	1996	1998	2000	2002	2004	2006	2008	2010	2012	2014
29	SAN FERNANDO	2397	3038	3558	4168	4889	5736	6736	7492	8334	9278	10338	11520	12841	14318
30	PAMUKID	2397	3038	3558	4168	4889	5736	6736	7492	8334	9278	10338	11520	12841	14318
31	SAN ISIDRO	2397	3038	3558	4168	4889	5736	6736	7492	8334	9278	10338	11520	12841	14318
32	SAN GABRIEL	2397	3038	3558	4168	4889	5736	6736	7492	8334	9278	10338	11520	12841	14318
33	PAHOHO	2397	3038	3558	4168	4889	5736	6736	7492	8334	9278	10338	11520	12841	14318
34	TINIGUIBAN	2397	3038	3558	4168	4889	5736	6736	7492	8334	9278	10338	11520	12841	14318
35	SGT. MATIAS	2397	3038	3558	4168	4889	5736	6736	7492	8334	9278	10338	11520	12841	14318
36	NAUBOD 1	2397	3038	3558	4168	4889	5736	6736	7492	8334	9278	10338	11520	12841	14318
37	SOOK	771	982	1155	1357	1598	1885	2223	2479	2767	3090	3453	3861	4318	4830
38	KANAPAWAN	1378	1747	2045	2397	2811	3302	3879	4316	4804	5349	5960	6643	7404	8257
39	BASIAO	1378	1747	2045	2397	2811	3302	3879	4316	4804	5349	5960	6643	7404	8257
40	GUMACA	1894	2368	2772	3248	3804	4456	5223	6114	7162	8402	9873	11610	13667	16098
41	TALABA	1894	2368	2772	3248	3804	4456	5223	6114	7162	8402	9873	11610	13667	16098
42	BINAHAAN	1772	2226	2620	3085	3631	4274	5032	5920	6971	8220	9710	11481	13584	16087
43	PALSABANGON	1772	2226	2620	3085	3631	4274	5032	5920	6971	8220	9710	11481	13584	16087
44	LAGNAS 2	3015	3777	4432	5202	6106	7163	8409	9857	11562	13583	15981	18813	22166	26134
45	STO CRISTO	3015	3777	4432	5202	6106	7163	8409	9857	11562	13583	15981	18813	22166	26134
46	MAGAPONG	3105	3882	4542	5316	6226	7294	8555	10015	11733	13788	16176	19022	22388	26373
47	BIGA	5780	7364	8748	10396	12362	14710	17513	20818	24760	29489	35000	35000	35000	35000
48	SAN CRISTBAL	5780	7299	8640	10232	12120	14366	17034	20173	23902	28241	33279	35000	35000	35000
49	JIABONG	383	496	586	695	822	974	1156	1319	1508	1726	1977	2268	2600	2985
50	HINGBONGAN	266	352	422	506	609	731	880	1017	1179	1364	1583	1837	2134	2461
51	JUBASAN 2	639	836	995	1186	1414	1688	2017	2318	2666	3070	3540	4086	4719	5455
52	JUBASAN 1	639	836	995	1186	1414	1688	2017	2318	2666	3070	3540	4086	4719	5455

APPENDIX 12.2

VEHICLE OPERATION COST

Appendix 12.2 VEHICLE OPERATING COSTS

(1) VEHICLE OPERATING COSTS BY COST COMPONENT

a) BASIC RUNNING COST (Pesos/Vehicle-Km)

Vehicle Type	Fuel	Lubricant	Tires	Maintenance			Total
				Parts	Labour	Depreciation	
Car	0.32	0.02	0.06	0.48	0.10	0.69	1.70
Jeepney	0.28	0.02	0.08	0.28	0.08	0.34	1.09
Bus	0.62	0.08	0.13	0.77	0.09	1.05	2.74
Truck	0.88	0.09	0.31	1.06	0.03	0.92	3.40

b) BASIC FIXED COST (Pesos/Vehicle-Hour)

Vehicle Type	Depreciation	Oppotunity Cost of Capital	Crew Cost	Overhead Taxes and Licences	Total	Basic Fixed Costs
Car	5.32	9.30	1.54	1.40	17.60	6.92
Jeepney	1.20	4.30	9.22	14.32	29.04	26.14
Bus	4.69	17.28	15.30	15.59	52.85	39.20
Truck	8.09	20.24	20.16	14.39	62.88	42.76

c) BASIC COSTS

Vehicle Type	Running (P/km)	Fixed (P/min.)	Time (P/min.)
Car	1.740	0.105	0.270
Jeepney	1.120	0.396	0.371
Bus	2.820	0.594	1.336
Truck	3.500	0.648	0.000

(2) VEHICLE OPERATING SPEED AND DELTA-L VALUES

Road Type	Surface Condition	Vehicle Type	Speed (km/h)	Delta-L Values /km
Paved	Very Bad	Car	30.00	0.60
		Jeepney	30.00	0.60
		Bus	30.00	0.90
		Truck	30.00	0.90
	Bad	Car	40.00	0.40
		Jeepney	40.00	0.40
		Bus	40.00	0.60
		Truck	40.00	0.60
	Fair	Car	60.00	0.20
		Jeepney	60.00	0.20
		Bus	50.00	0.30
		Truck	50.00	0.30
	Good	Car	70.00	0.00
		Jeepney	70.00	0.00
		Bus	60.00	0.00
		Truck	60.00	0.00
Gravel	Very Bad	Car	30.00	0.90
		Jeepney	30.00	0.90
		Bus	30.00	1.30
		Truck	30.00	1.30
	Bad	Car	40.00	0.60
		Jeepney	40.00	0.60
		Bus	30.00	0.90
		Truck	30.00	0.90
	Fair	Car	50.00	0.30
		Jeepney	50.00	0.30
		Bus	40.00	0.50
		Truck	40.00	0.50
	Good	Car	60.00	0.15
		Jeepney	60.00	0.15
		Bus	50.00	0.25
		Truck	50.00	0.25

APPENDIX 12.3

LIST OF ROAD LINK

Appendix 12.3 LIST OF ROAD LINK

1. Manila North Road (Manila - Laog)

Link No.	Region	Kilometer Post	Link Length (km)	Rehabilitation Bridges		Detouring Length(Km)		ADT in 1986	Traffic of Heavy Vehicle (%)
				No.	Name	Main Road	Detouring Length		
MN-1	III	14.0-41.0	27.0	3	MARILAO	13.75	20.00	13,865	1,816 (13.1)
MN-2	III	41.0-51.0	10.0	14	LABANGANI	5.00	8.75	11,849	1,000 (8.4)
MN-3	III	51.0-61.0	10.0	22	SULIPAN	5.00	17.75	11,849	1,000 (8.4)
MN-4	III	61.0-152.0	91.0	-	-	-	-	-	-
MN-5	I	152.0-173.0	21.0	48	PLARIDEL	2.50	48.75	6,163	1,239 (20.0)
MN-6	I	173.0-201.0	28.0	54	TAGAMVSING	7.50	11.25	7,038	1,101 (15.6)
MN-7	I	201.0-219.0	18.0	58	BUED	20.00	25.00	3,447	560 (16.2)
MN-8	I	219.0-238.0	19.0	65	LOMBOY	20.00	25.00	2,460	547 (22.2)
MN-9	I	238.0-260.0	22.0	77	BAVANG I	22.00	None	6,272	789 (12.6)
MN-10	I	260.0-321.0	61.0	77-1	BAVANG II	22.00	None	6,272	789 (12.6)
MN-11	I	321.0-345.5	24.5	104	STA. CRUZI	24.50	None	1,713	164 (9.6)
MN-12	I	345.5-353.0	7.5	113	LANGLANGKAI	7.50	None	1,329	174 (13.1)
MN-13	I	353.0-369.0	16.0	-	-	-	-	-	-
MN-14	I	369.0-396.0	27.0	120	STA. MARIA	27.00	None	1,329	174 (13.1)
MN-15	I	396.0-453.0	57.0	-	-	-	-	-	-
MN-16	I	453.0-470.0	17.0	148	TIPCAL	17.00	None	854	163 (19.1)
MN-17	I	470.0-488.0	18.0	-	-	-	-	-	-

2. Pan-Philippine Highway (Manila - Allacapan)

Link No.	Region	Kilometer Post	Link Length (km)	Rehabilitation Bridges		Detouring Length(Km)		ADT in 1986	Traffic of Heavy Vehicle (%)
				No.	Name	Main Road	Detouring Length		
PN-1	III	35.0-55.0	20.0	3	PLARIDEL PULIA	5.00	12.50	7,037	875 (12.4)
PN-2	III	55.0-85.0	30.0	14	SAN ROQUE	30.00	None	8,601	2,162 (25.1)
PN-3	III	85.0-125.5	40.5	-	-	-	-	-	-
PN-4	III	125.5-162.0	36.5	43	SICSICAN	12.50	32.50	6,091	1,436 (23.6)
PN-5	III	162.0-236.0	74.0	-	-	-	-	-	-
PN-6	II	236.0-248.0	12.0	71	INDIANA	10.00	17.50	1,692	566 (33.5)
PN-7	II	248.0-268.0	20.0	73	BATU	20.00	None	1,748	657 (37.6)
PN-8	II	268.0-316.5	48.5	86	NAMANPARAN I	48.50	None	1,589	456 (28.7)
PN-9	II	316.5-368.0	51.5	89	SAN LUIS	48.50	None	1,212	318 (26.2)
PN-10	II	368.0-388.5	20.5	109	NAGUILAN	20.00	57.50	1,613	272 (16.9)
PN-11	II	388.5-427.5	39.0	113	MALALAM	38.75	None	426	128 (29.6)
PN-12	II	427.5-445.0	17.5	126	BALASIG	17.50	None	625	147 (23.5)
PN-13	II	445.0-479.0	34.0	129	SAN PABLO	26.25	None	691	162 (23.4)
PN-14	II	479.0-533.0	54.0	139	PINAGANAUAN	26.25	None	522	217 (41.5)
PN-15	II	533.0-570.0	37.0	154	PARED	54.00	None	357	80 (22.4)

Appendix 12.3 LIST OF ROAD LINK (Cont'd)

3. Pan-Philippine Highway (Matnog - Manila)

Link No.	Region	Kilometer Post	Link Length (km)	Rehabilitation Bridges		Detouring Length (km)		ADT in 1986	Traffic of Heavy Vehicle (%)
				No.	Name	Main Road	Detouring Route		
PS-1	V	644.0-588.0	56.0	19	SUJE	Repl.	10.50 30.00	775	97 (12.5)
PS-2	V	588.0-510.5	77.5	-	-	Rep.	8.50 15.00	2,172	422 (19.4)
PS-3	V	510.5-501.5	9.0	43	GUINOBATAN	Rep.	-	-	-
PS-4	V	501.5-442.0	59.5	-	-	Rep.	27.50 32.50	2,397	424 (17.7)
PS-5	V	442.0-408.0	34.0	75	SAN FERNANDO	Rep.	-	-	-
				76	PAMUKID	Rep.	-	-	-
				77	SAN ISIDRO	Rep.	-	-	-
				78	SAN GABRIEL	Rep.	-	-	-
				79	PAHOHO	Rep.	-	-	-
				80	TINIGUIBAN	Rep.	-	-	-
				82	SGT. MALLAS	Rep.	-	-	-
				86	NAUBOD I	Rep.	-	-	-
PS-6	V	408.0-387.5	20.5	-	-	Rep.	30.00 50.00	771	171 (22.2)
PS-7	V	387.5-353.0	34.5	99	SOOK	Rep.	-	-	-
PS-8	V	353.0-302.0	51.0	-	-	Rep.	25.00 50.00	1,378	286 (20.8)
PS-9	V	302.0-266.0	36.0	143	KANPAWAN	Rep.	-	-	-
PS-10	V	266.0-214.0	52.0	154	BASLAD	Rep.	52.00 None	1,378	286 (20.8)
PS-11	IV	214.0-199.5	14.5	-	-	Rep.	17.50 50.00	1,894	537 (28.4)
PS-12	IV	199.5-179.0	20.5	173	GUMACA	Rep.	17.25 47.50	1,894	537 (28.4)
PS-13	IV	179.0-150.5	28.5	181	TALABA	Rep.	29.50 None	1,772	461 (26.0)
PS-14	IV	150.5-121.0	29.5	188	BINAHAN	Rep.	29.50 None	1,772	461 (26.0)
				190	PAISABANGON	Rep.	40.00 50.00	3,015	608 (20.2)
PS-15	IV	121.0-81.5	39.5	206	LAGNAS II	Rep.	40.00 50.00	3,015	608 (20.2)
				208	STD CRISTO	Rep.	30.00 32.00	3,015	803 (25.9)
PS-16	IV	81.5-51.0	30.5	220	MAGAPONG	Rep.	30.00 32.00	3,015	803 (25.9)
				223	BIGA	Rep.	30.00 32.00	3,015	803 (25.9)
PS-17	IV	51.0-29.0	22.0	227	SANCRISTOBAL	Rep.	13.75 15.00	5,780	517 (8.9)

4. Pan-Philippine Highway (Lillean - Allen)

Link No.	Region	Kilometer Post	Link Length (km)	Rehabilitation Bridges		Detouring Length (km)		ADT in 1986	Traffic of Heavy Vehicle (%)
				No.	Name	Main Road	Detouring Route		
PL-1	VIII	1059.0-883.0	176.0	-	-	-	-	-	-
PL-2	VIII	883.0-831.0	52.0	-	-	-	-	-	-
PL-3	VIII	831.0-759.0	72.0	109	JIABONG	Rec.	72.00 None	383	76 (19.8)
PL-4	VIII	759.0-728.0	31.0	120	HINDOBONGAN	Rep.	31.00 None	266	44 (16.5)
PL-5	VIII	728.0-666.0	62.0	160	JUBAGAN II	Rep.	62.00 None	639	128 (20.0)
				161	JUBASAN I	Rec.	62.00 None	639	128 (20.0)

APPENDIX 12.4

COST/BENEFIT STREAM

COST/BENEFIT STREAM (1/26)

I. MARILAO (MNR 3)		Replacement of Superstructure										Unit: 1000 Pesos	
Year	Cost		EVL		TCHV		M.Cost		Flood w/o	Residual Value	Total Benefits		
	Rehab.	Dis'd	w/o	with	w/o	with	w/o	with			Dis'd		
1990	58	58	2,012	2,012	92,263	92,263	30	30	0	0	0	0	
1991	1,123	977	2,651	2,651	98,190	98,190	30	30	0	0	0	0	
1992	0	0	3,489	326	104,445	99,222	30	2	0	0	8,413	6,361	
1993	0	0	4,588	432	111,108	105,552	30	2	0	0	9,739	6,403	
1994	0	0	6,024	571	118,221	112,310	30	2	0	0	11,391	6,513	
1995	0	0	7,897	756	125,783	119,494	30	2	0	0	13,458	6,691	
1996	0	0	10,327	1,000	133,632	126,950	30	2	0	0	16,036	6,933	
1997	0	0	13,472	1,322	142,012	134,911	30	2	0	0	19,277	7,247	
1998	0	0	17,266	1,723	148,716	141,280	30	2	0	0	23,006	7,521	
1999	0	0	20,633	2,099	148,716	141,280	30	2	0	0	25,997	7,390	
2000	0	0	24,553	2,557	148,716	141,280	30	2	0	0	29,459	7,282	
2001	0	0	29,076	3,113	148,716	141,280	30	2	0	0	33,426	7,185	
2002	0	0	34,240	3,787	148,716	141,280	30	2	0	0	37,916	7,087	
2003	0	0	40,066	4,604	148,716	141,280	30	2	0	0	42,926	6,977	
2004	0	0	46,551	5,590	148,716	141,280	30	2	0	0	48,424	6,844	
2005	0	0	53,663	6,779	148,716	141,280	30	2	0	0	54,347	6,679	
2006	0	0	61,334	8,209	148,716	141,280	30	2	0	0	60,588	6,475	
2007	0	0	69,464	9,922	148,716	141,280	30	2	0	0	67,004	6,226	
2008	0	0	77,920	11,967	148,716	141,280	30	2	0	0	73,416	5,932	
2009	0	0	86,546	14,396	148,716	141,280	30	2	0	0	79,612	5,594	
2010	0	0	95,172	17,266	148,716	141,280	30	2	0	0	85,369	5,216	
2011	0	0	103,628	20,633	148,716	141,280	30	2	0	0	90,458	4,806	
2012	0	0	111,758	24,553	148,716	141,280	30	2	0	0	94,667	4,374	
2013	0	0	119,429	29,076	148,716	141,280	30	2	0	0	97,816	3,930	
2014	0	0	126,540	34,240	148,716	141,280	30	2	0	394	100,156	3,499	
Total	1,181	1,035	1,168,299	209,584	3,453,626	3,290,652	750	106	0	394	1,122,901	143,163	

Net Present Value 142,128
 B/C Ratio 138.32
 Internal Rate of Return 572.1%

2. LABANGAN I (MNR 14)		Reconstruction										Unit: 1000 Pesos	
Year	Cost		EVL		TCHV		M.Cost		Flood w/o	Residual Value	Total Benefits		
	Rehab.	Dis'd	w/o	with	w/o	with	w/o	with			Dis'd		
1990	3,717	3,717	7,878	7,878	18,819	18,819	1,857	1,857	0	0	0	0	
1991	11,140	9,687	10,099	10,099	20,015	20,015	1,857	1,857	0	0	0	0	
1992	25,997	19,657	12,876	12,876	21,302	21,302	1,857	1,857	0	0	0	0	
1993	25,997	17,093	16,315	16,315	22,665	22,665	1,857	1,857	0	0	0	0	
1994	7,434	4,250	20,529	20,529	24,118	24,118	1,857	1,857	0	0	0	0	
1995	0	0	25,628	5	25,647	24,365	1,857	149	1,585	0	30,199	15,014	
1996	0	0	31,709	6	27,252	25,890	1,857	149	1,715	0	36,490	15,776	
1997	0	0	38,881	8	28,963	27,515	1,857	149	1,858	0	43,888	16,499	
1998	0	0	47,224	11	30,780	29,241	1,857	149	2,012	0	52,473	17,154	
1999	0	0	56,801	14	32,703	31,068	1,857	149	2,179	0	62,310	17,712	
2000	0	0	67,197	18	34,520	32,794	1,857	149	2,344	0	72,957	18,034	
2001	0	0	73,167	22	34,520	32,794	1,857	149	2,344	0	78,923	16,964	
2002	0	0	78,908	27	34,520	32,794	1,857	149	2,344	0	84,659	15,823	
2003	0	0	84,324	34	34,520	32,794	1,857	149	2,344	0	90,069	14,639	
2004	0	0	89,345	41	34,520	32,794	1,857	149	2,344	0	95,082	13,438	
2005	0	0	93,924	50	34,520	32,794	1,857	149	2,344	0	99,652	12,247	
2006	0	0	98,037	61	34,520	32,794	1,857	149	2,344	0	103,755	11,088	
2007	0	0	101,684	75	34,520	32,794	1,857	149	2,344	0	107,387	9,979	
2008	0	0	104,877	91	34,520	32,794	1,857	149	2,344	0	110,564	8,934	
2009	0	0	107,645	111	34,520	32,794	1,857	149	2,344	0	113,312	7,962	
2010	0	0	110,022	136	34,520	32,794	1,857	149	2,344	0	115,665	7,067	
2011	0	0	112,048	166	34,520	32,794	1,857	149	2,344	0	117,661	6,251	
2012	0	0	113,763	203	34,520	32,794	1,857	149	2,344	0	119,339	5,514	
2013	0	0	115,207	248	34,520	32,794	1,857	149	2,344	0	120,738	4,851	
2014	0	0	116,417	302	34,520	32,794	1,857	149	2,344	44,571	166,464	5,815	
Total	74,285	54,405	1,734,505	69,326	770,064	736,908	46,425	12,265	44,510	44,571	1,821,587	240,760	

Net Present Value 186,355
 B/C Ratio 4.43
 Internal Rate of Return 37.1%

COST/BENEFIT STREAM (2/26)

3.SULIPAN (MNR 22)		Reconstruction										Unit: 1000 Pesos	
Year	Cost		EVL		TCHV		M.Cost		Flood	Residual	Total Benefits		
	Rehab.	Dis'd	w/o	with	w/o	with	w/o	with	w/o	Value	Dis'd		
1990	6,137	6,137	23,887	23,887	0	0	3,071	3,071	0	0	0	0	
1991	18,424	16,021	30,627	30,627	0	0	3,071	3,071	0	0	0	0	
1992	42,997	32,512	39,048	39,048	0	0	3,071	3,071	0	0	0	0	
1993	42,997	28,271	49,482	49,482	0	0	3,071	3,071	0	0	0	0	
1994	12,298	7,031	62,271	62,271	0	0	3,071	3,071	0	0	0	0	
1995	0	0	77,754	14	0	0	3,071	246	0	0	80,566	40,055	
1996	0	0	96,130	18	0	0	3,071	246	0	0	98,937	42,773	
1997	0	0	117,796	24	0	0	3,071	246	0	0	120,598	45,337	
1998	0	0	142,971	32	0	0	3,071	246	0	0	145,765	47,651	
1999	0	0	171,841	42	0	0	3,071	246	0	0	174,624	49,639	
2000	0	0	204,521	56	0	0	3,071	246	0	0	207,291	51,239	
2001	0	0	231,355	71	0	0	3,071	246	0	0	234,110	50,320	
2002	0	0	249,506	87	0	0	3,071	246	0	0	252,245	47,146	
2003	0	0	266,632	106	0	0	3,071	246	0	0	269,352	43,777	
2004	0	0	282,508	130	0	0	3,071	246	0	0	285,205	40,308	
2005	0	0	296,987	158	0	0	3,071	246	0	0	299,654	36,826	
2006	0	0	309,994	193	0	0	3,071	246	0	0	312,626	33,409	
2007	0	0	321,523	236	0	0	3,071	246	0	0	324,113	30,118	
2008	0	0	331,621	288	0	0	3,071	246	0	0	334,158	27,002	
2009	0	0	340,373	352	0	0	3,071	246	0	0	342,847	24,090	
2010	0	0	347,890	430	0	0	3,071	246	0	0	350,286	21,403	
2011	0	0	354,296	525	0	0	3,071	246	0	0	356,597	18,946	
2012	0	0	359,720	641	0	0	3,071	246	0	0	361,904	16,720	
2013	0	0	364,285	783	0	0	3,071	246	0	0	366,328	14,717	
2014	0	0	368,110	956	0	0	3,071	246	0	73,712	443,692	15,500	
Total	122,853	89,972	5,441,128	210,457	0	0	76,775	20,275	0	73,712	5,360,898	696,977	

Net Present Value 607,005
 B/C Ratio 7.75
 Internal Rate of Return 48.4%

4.PLARIDEL (MNR 46)		Repair										Unit: 1000 Pesos	
Year	Cost		EVL		TCHV		M.Cost		Flood	Residual	Total Benefits		
	Rehab.	Dis'd	w/o	with	w/o	with	w/o	with	w/o	Value	Dis'd		
1990	1,830	1,830	6,008	6,008	0	0	915	915	0	0	0	0	
1991	0	0	7,811	7,811	0	0	915	915	0	0	0	0	
1992	9,148	6,917	10,131	10,131	0	0	915	915	0	0	0	0	
1993	18,296	12,030	13,101	13,101	0	0	915	915	0	0	0	0	
1994	7,307	4,178	16,884	16,884	0	0	915	915	0	0	0	0	
1995	0	0	21,674	1,247	0	0	915	73	0	0	21,268	10,574	
1996	0	0	27,678	1,640	0	0	915	73	0	0	26,879	11,621	
1997	0	0	35,152	2,155	0	0	915	73	0	0	33,838	12,721	
1998	0	0	44,365	2,832	0	0	915	73	0	0	42,375	13,852	
1999	0	0	55,614	3,719	0	0	915	73	0	0	52,736	14,991	
2000	0	0	69,181	4,883	0	0	915	73	0	0	65,140	16,101	
2001	0	0	83,734	6,285	0	0	915	73	0	0	78,290	16,628	
2002	0	0	100,437	8,083	0	0	915	73	0	0	93,195	17,419	
2003	0	0	119,332	10,382	0	0	915	73	0	0	109,791	17,844	
2004	0	0	140,404	13,318	0	0	915	73	0	0	127,927	18,080	
2005	0	0	163,574	17,054	0	0	915	73	0	0	147,361	18,110	
2006	0	0	188,826	21,806	0	0	915	73	0	0	167,861	17,938	
2007	0	0	215,911	27,813	0	0	915	73	0	0	188,939	17,557	
2008	0	0	244,682	35,374	0	0	915	73	0	0	210,150	16,981	
2009	0	0	274,947	44,831	0	0	915	73	0	0	230,957	16,228	
2010	0	0	306,566	56,585	0	0	915	73	0	0	250,823	15,325	
2011	0	0	336,370	70,438	0	0	915	73	0	0	266,774	14,174	
2012	0	0	348,880	82,948	0	0	915	73	0	0	266,774	12,325	
2013	0	0	359,637	97,062	0	0	915	73	0	0	263,617	10,591	
2014	0	0	369,334	112,772	0	0	915	73	0	7,316	264,720	9,248	
Total	36,581	24,955	3,560,433	675,162	0	0	22,875	6,035	0	7,316	2,909,427	298,509	

Net Present Value 273,554
 B/C Ratio 11.96
 Internal Rate of Return 54.2%

COST/BENEFIT STREAM (3/26)

5.TAGAMUSING (MNR 54)		Reconstruction										Unit : 1000 Pesos	
Year	Cost		EVL		TCHV		M.Cost		Flood w/o	Residual Value	Total Benefits		
	Rehab.	Dis'd	w/o	with	w/o	with	w/o	with			Dis'd		
1990	764	764	6,070	6,070	71,201	71,201	380	380	0	0	0	0	
1991	3,798	3,303	7,769	7,769	75,467	75,467	380	380	0	0	0	0	
1992	7,608	5,753	9,890	9,890	79,996	79,996	380	380	0	0	0	0	
1993	3,034	1,995	12,510	12,510	84,736	84,736	380	380	0	0	0	0	
1994	0	0	15,719	3	89,844	85,352	380	30	1,121	0	21,678	12,395	
1995	0	0	19,594	4	95,216	90,455	380	30	1,212	0	25,913	12,983	
1996	0	0	24,214	6	100,798	95,758	380	30	1,311	0	30,909	13,363	
1997	0	0	29,657	7	106,749	101,412	380	30	1,417	0	36,754	13,817	
1998	0	0	35,980	10	113,016	107,365	380	30	1,533	0	43,503	14,221	
1999	0	0	43,229	13	119,652	113,669	380	30	1,658	0	51,206	14,556	
2000	0	0	51,432	17	126,656	120,323	380	30	1,794	0	59,891	14,804	
2001	0	0	59,429	22	132,291	125,677	380	30	1,904	0	68,275	14,675	
2002	0	0	68,012	29	138,137	131,230	380	30	2,020	0	77,260	14,440	
2003	0	0	77,140	37	144,246	137,033	380	30	2,144	0	86,809	14,109	
2004	0	0	86,756	49	150,618	143,087	380	30	2,276	0	96,864	13,690	
2005	0	0	96,814	63	157,254	149,391	380	30	2,416	0	107,380	13,196	
2006	0	0	107,365	82	164,153	155,945	380	30	2,567	0	118,407	12,654	
2007	0	0	118,316	106	171,315	162,749	380	30	2,727	0	129,853	12,067	
2008	0	0	128,698	137	177,477	168,603	380	30	2,876	0	140,661	11,366	
2009	0	0	132,095	167	177,477	168,603	380	30	2,876	0	144,028	10,120	
2010	0	0	135,012	204	177,477	168,603	380	30	2,876	0	146,908	8,976	
2011	0	0	137,498	249	177,477	168,603	380	30	2,876	0	149,349	7,935	
2012	0	0	139,603	304	177,477	168,603	380	30	2,876	0	151,399	6,995	
2013	0	0	141,375	371	177,477	168,603	380	30	2,876	0	153,104	6,151	
2014	0	0	142,859	453	177,477	168,603	380	30	2,876	9,122	163,629	5,716	
Total	15,204	11,814	1,827,036	38,572	3,363,684	3,211,067	9,500	2,150	46,232	9,122	2,003,780	248,130	

Net Present Value 236,316
 B/C Ratio 21.00
 Internal Rate of Return 82.1%

6.BUED (MNR 56)		Reconstruction										Unit : 1000 Pesos	
Year	Cost		EVL		TCHV		M.Cost		Flood w/o	Residual Value	Total Benefits		
	Rehab.	Dis'd	w/o	with	w/o	with	w/o	with			Dis'd		
1990	5,998	5,998	4,347	4,347	0	0	2,999	2,999	0	0	0	0	
1991	17,995	15,648	5,559	5,559	0	0	2,999	2,999	0	0	0	0	
1992	41,989	31,750	7,068	7,068	0	0	2,999	2,999	0	0	0	0	
1993	41,989	27,608	8,937	8,937	0	0	2,999	2,999	0	0	0	0	
1994	11,997	6,859	11,219	11,219	0	0	2,999	2,999	0	0	0	0	
1995	0	0	13,969	2	0	0	2,999	240	864	0	17,590	8,745	
1996	0	0	17,250	3	0	0	2,999	240	934	0	20,939	9,053	
1997	0	0	21,106	4	0	0	2,999	240	1,009	0	24,870	9,349	
1998	0	0	25,587	6	0	0	2,999	240	1,090	0	29,430	9,621	
1999	0	0	30,717	8	0	0	2,999	240	1,178	0	34,646	9,849	
2000	0	0	36,508	10	0	0	2,999	240	1,273	0	40,530	10,018	
2001	0	0	42,162	13	0	0	2,999	240	1,351	0	46,259	9,943	
2002	0	0	48,213	17	0	0	2,999	240	1,432	0	52,388	9,792	
2003	0	0	54,643	22	0	0	2,999	240	1,519	0	58,900	9,573	
2004	0	0	61,409	28	0	0	2,999	240	1,611	0	65,751	9,292	
2005	0	0	68,483	36	0	0	2,999	240	1,709	0	72,914	8,961	
2006	0	0	75,880	47	0	0	2,999	240	1,814	0	80,406	8,593	
2007	0	0	83,558	61	0	0	2,999	240	1,926	0	88,182	8,194	
2008	0	0	91,509	80	0	0	2,999	240	2,045	0	96,233	7,776	
2009	0	0	99,743	103	0	0	2,999	240	2,172	0	104,571	7,348	
2010	0	0	108,272	134	0	0	2,999	240	2,307	0	113,204	6,917	
2011	0	0	117,121	174	0	0	2,999	240	2,450	0	122,156	6,490	
2012	0	0	126,320	225	0	0	2,999	240	2,603	0	131,457	6,073	
2013	0	0	135,914	292	0	0	2,999	240	2,765	0	141,146	5,670	
2014	0	0	145,927	379	0	0	2,999	240	2,938	71,981	223,226	7,798	
Total	119,968	87,663	1,441,421	38,774	0	0	74,975	19,795	34,990	71,981	1,564,798	169,056	

Net Present Value 81,193
 B/C Ratio 1.92
 Internal Rate of Return 22.2%

COST/BENEFIT STREAM (4/26)

7.LOHBOY (MNR 65)		Replacement of Superstructure										Unit: 1000 Pesos	
Year	Cost		EVL		TCHV		M.Cost		Flood	Residual	Total Benefits		
	Rehab.	Dis'd	w/o	with	w/o	with	w/o	with	w/o	Value	Dis'd		
1990	46	46	497	497	0	0	24	24	0	0	0	0	
1991	926	805	650	650	0	0	24	24	0	0	0	0	
1992	0	0	851	80	0	0	24	2	0	0	794	600	
1993	0	0	1,112	105	0	0	24	2	0	0	1,030	677	
1994	0	0	1,452	138	0	0	24	2	0	0	1,337	764	
1995	0	0	1,892	181	0	0	24	2	0	0	1,733	862	
1996	0	0	2,460	238	0	0	24	2	0	0	2,244	970	
1997	0	0	3,191	313	0	0	24	2	0	0	2,900	1,090	
1998	0	0	4,126	412	0	0	24	2	0	0	3,737	1,222	
1999	0	0	5,318	541	0	0	24	2	0	0	4,799	1,364	
2000	0	0	6,826	711	0	0	24	2	0	0	6,136	1,517	
2001	0	0	8,555	916	0	0	24	2	0	0	7,662	1,647	
2002	0	0	10,665	1,180	0	0	24	2	0	0	9,508	1,777	
2003	0	0	13,210	1,518	0	0	24	2	0	0	11,714	1,904	
2004	0	0	16,247	1,951	0	0	24	2	0	0	14,318	2,024	
2005	0	0	19,833	2,506	0	0	24	2	0	0	17,350	2,132	
2006	0	0	24,009	3,213	0	0	24	2	0	0	20,818	2,225	
2007	0	0	28,804	4,114	0	0	24	2	0	0	24,712	2,296	
2008	0	0	34,236	5,258	0	0	24	2	0	0	29,000	2,343	
2009	0	0	40,293	6,703	0	0	24	2	0	0	33,613	2,362	
2010	0	0	46,948	8,517	0	0	24	2	0	0	38,453	2,349	
2011	0	0	54,176	10,787	0	0	24	2	0	0	43,412	2,306	
2012	0	0	61,927	13,605	0	0	24	2	0	0	48,344	2,234	
2013	0	0	70,150	17,079	0	0	24	2	0	0	53,094	2,133	
2014	0	0	78,796	21,321	0	0	24	2	0	324	57,821	2,020	
Total	972	851	536,224	102,534	0	0	600	94	0	324	434,531	38,819	

Net Present Value 37,968
 B/C Ratio 45.62
 Internal Rate of Return 100.0%

8.BAUANG I (MNR 77)		Reconstruction										Unit: 1000 Pesos	
Year	Cost		EVL		TCHV		M.Cost		Flood	Residual	Total Benefits		
	Rehab.	Dis'd	w/o	with	w/o	with	w/o	with	w/o	Value	Dis'd		
1990	3,625	3,625	12,627	12,627	0	0	1,812	1,812	0	0	0	0	
1991	10,874	9,456	16,142	16,142	0	0	1,812	1,812	0	0	0	0	
1992	25,360	19,176	20,517	20,517	0	0	1,812	1,812	0	0	0	0	
1993	25,360	16,675	25,927	25,927	0	0	1,812	1,812	0	0	0	0	
1994	7,249	4,145	32,521	32,521	0	0	1,812	1,812	0	0	0	0	
1995	0	0	40,488	7	0	0	1,812	145	0	0	42,147	20,955	
1996	0	0	49,970	10	0	0	1,812	145	0	0	51,627	22,320	
1997	0	0	61,133	13	0	0	1,812	145	0	0	62,788	23,604	
1998	0	0	74,071	17	0	0	1,812	145	0	0	75,721	24,753	
1999	0	0	88,891	22	0	0	1,812	145	0	0	90,536	25,736	
2000	0	0	105,617	29	0	0	1,812	145	0	0	107,255	26,512	
2001	0	0	121,873	37	0	0	1,812	145	0	0	123,502	26,546	
2002	0	0	139,289	49	0	0	1,812	145	0	0	140,907	26,337	
2003	0	0	157,763	63	0	0	1,812	145	0	0	159,367	25,902	
2004	0	0	177,174	81	0	0	1,812	145	0	0	178,760	25,264	
2005	0	0	197,461	105	0	0	1,812	145	0	0	199,023	24,459	
2006	0	0	218,599	136	0	0	1,812	145	0	0	220,129	23,524	
2007	0	0	240,479	177	0	0	1,812	145	0	0	241,970	22,485	
2008	0	0	263,117	229	0	0	1,812	145	0	0	264,555	21,377	
2009	0	0	286,521	296	0	0	1,812	145	0	0	287,892	20,229	
2010	0	0	310,725	384	0	0	1,812	145	0	0	312,008	19,064	
2011	0	0	330,951	490	0	0	1,812	145	0	0	332,128	17,646	
2012	0	0	336,017	599	0	0	1,812	145	0	0	337,085	15,574	
2013	0	0	340,282	731	0	0	1,812	145	0	0	341,218	13,708	
2014	0	0	343,855	893	0	0	1,812	145	0	43,481	388,110	13,558	
Total	72,468	53,076	3,992,010	112,102	0	0	45,300	11,960	0	43,481	3,956,728	439,552	

Net Present Value 386,476
 B/C Ratio 8.28
 Internal Rate of Return 46.4%

COST/BENEFIT STREAM (5/26)

9. BAUANG 2 (MNR 77-1) Reconstruction														Unit: 1000 Pesos	
Year	Cost		EVL		TCHV		M.Cost		Flood w/o	Residual Value	Total Benefits				
	Rehab.	Dis'd	w/o	with	w/o	with	w/o	with			Dis'd				
1990	2,235	2,235	12,627	12,627	0	0	1,117	1,117	0	0	0	0			
1991	11,175	9,717	16,142	16,142	0	0	1,117	1,117	0	0	0	0			
1992	22,349	16,899	20,517	20,517	0	0	1,117	1,117	0	0	0	0			
1993	8,928	5,870	25,927	25,927	0	0	1,117	1,117	0	0	0	0			
1994	0	0	32,521	7	0	0	1,117	89	0	0	33,542	19,178			
1995	0	0	40,488	9	0	0	1,117	89	0	0	41,507	20,636			
1996	0	0	49,970	12	0	0	1,117	89	0	0	50,986	22,043			
1997	0	0	61,133	15	0	0	1,117	89	0	0	62,146	23,363			
1998	0	0	74,071	20	0	0	1,117	89	0	0	75,078	24,543			
1999	0	0	88,891	27	0	0	1,117	89	0	0	89,892	25,553			
2000	0	0	105,617	35	0	0	1,117	89	0	0	106,610	26,352			
2001	0	0	121,873	46	0	0	1,117	89	0	0	122,855	26,407			
2002	0	0	139,289	59	0	0	1,117	89	0	0	140,258	26,215			
2003	0	0	157,763	77	0	0	1,117	89	0	0	158,715	25,796			
2004	0	0	177,174	99	0	0	1,117	89	0	0	178,103	25,171			
2005	0	0	197,461	129	0	0	1,117	89	0	0	198,360	24,377			
2006	0	0	218,599	166	0	0	1,117	89	0	0	219,460	23,453			
2007	0	0	240,479	216	0	0	1,117	89	0	0	241,292	22,422			
2008	0	0	263,117	279	0	0	1,117	89	0	0	263,865	21,322			
2009	0	0	286,521	362	0	0	1,117	89	0	0	287,187	20,179			
2010	0	0	310,725	469	0	0	1,117	89	0	0	311,284	19,020			
2011	0	0	330,951	599	0	0	1,117	89	0	0	331,380	17,606			
2012	0	0	336,017	731	0	0	1,117	89	0	0	336,314	15,538			
2013	0	0	340,282	893	0	0	1,117	89	0	0	340,417	13,676			
2014	0	0	343,855	1,090	0	0	1,117	89	0	26,812	370,606	12,947			
Total	44,687	34,722	3,992,010	80,553	0	0	27,925	6,337	0	26,812	3,959,857	455,797			

Net Present Value 421,075
 B/C Ratio 13.13
 Internal Rate of Return 61.0%

10. STA CRUZ 1 (MNR 104) Reconstruction														Unit: 1000 Pesos	
Year	Cost		EVL		TCHV		M.Cost		Flood w/o	Residual Value	Total Benefits				
	Rehab.	Dis'd	w/o	with	w/o	with	w/o	with			Dis'd				
1990	938	938	3,649	3,649	0	0	467	467	0	0	0	0			
1991	4,667	4,058	4,682	4,662	0	0	467	467	0	0	0	0			
1992	9,345	7,066	5,926	5,926	0	0	467	467	0	0	0	0			
1993	3,729	2,452	7,482	7,482	0	0	467	467	0	0	0	0			
1994	0	0	9,395	2	0	0	467	37	670	0	10,492	5,999			
1995	0	0	11,688	3	0	0	467	37	723	0	12,838	6,383			
1996	0	0	14,410	3	0	0	467	37	780	0	15,617	6,751			
1997	0	0	17,609	4	0	0	467	37	842	0	18,876	7,096			
1998	0	0	21,325	6	0	0	467	37	909	0	22,658	7,407			
1999	0	0	25,548	8	0	0	467	37	980	0	26,950	7,661			
2000	0	0	30,332	10	0	0	467	37	1,058	0	31,810	7,863			
2001	0	0	34,980	13	0	0	467	37	1,121	0	36,517	7,849			
2002	0	0	39,952	17	0	0	467	37	1,187	0	41,551	7,766			
2003	0	0	45,240	22	0	0	467	37	1,257	0	46,905	7,623			
2004	0	0	50,764	28	0	0	467	37	1,332	0	52,497	7,419			
2005	0	0	56,560	37	0	0	467	37	1,411	0	58,364	7,173			
2006	0	0	62,556	48	0	0	467	37	1,496	0	64,434	6,886			
2007	0	0	68,789	62	0	0	467	37	1,586	0	70,742	6,574			
2008	0	0	75,216	80	0	0	467	37	1,681	0	77,246	6,242			
2009	0	0	81,860	103	0	0	467	37	1,782	0	83,969	5,900			
2010	0	0	88,712	134	0	0	467	37	1,890	0	90,897	5,554			
2011	0	0	95,820	173	0	0	467	37	2,004	0	98,081	5,211			
2012	0	0	103,154	224	0	0	467	37	2,125	0	105,485	4,873			
2013	0	0	110,780	291	0	0	467	37	2,254	0	113,173	4,547			
2014	0	0	118,745	376	0	0	467	37	2,391	11,207	132,396	4,625			
Total	18,679	14,514	1,185,154	23,363	0	0	11,675	2,645	29,479	11,207	1,211,498	137,402			

Net Present Value 122,888
 B/C Ratio 9.47
 Internal Rate of Return 50.0%

COST/BENEFIT STREAM (6/26)

11. LANGKANGKA 1 (MNR 113) Replacement of Superstructure													Unit: 1000 Pesos	
Year	Cost		EVL		TCHV		M.Cost		Flood w/o	Residual Value	Total Benefits			
	Rehab.	Dis'd	w/o	with	w/o	with	w/o	with			Dis'd			
1990	127	127	197	197	0	0	65	65	0	0	0	0		
1991	0	0	259	259	0	0	65	65	0	0	0	0		
1992	0	0	340	340	0	0	65	65	0	0	0	0		
1993	0	0	1,183	1,183	0	0	65	65	0	0	0	0		
1994	2,478	1,417	1,545	1,545	0	0	65	65	0	0	0	0		
1995	0	0	2,013	106	0	0	65	5	0	0	1,967	978		
1996	0	0	2,616	139	0	0	65	5	0	0	2,536	1,096		
1997	0	0	3,393	183	0	0	65	5	0	0	3,269	1,229		
1998	0	0	4,385	241	0	0	65	5	0	0	4,204	1,374		
1999	0	0	5,649	317	0	0	65	5	0	0	5,391	1,533		
2000	0	0	7,244	417	0	0	65	5	0	0	6,887	1,702		
2001	0	0	9,078	538	0	0	65	5	0	0	8,600	1,849		
2002	0	0	11,317	694	0	0	65	5	0	0	10,683	1,997		
2003	0	0	14,012	894	0	0	65	5	0	0	13,178	2,142		
2004	0	0	17,231	1,152	0	0	65	5	0	0	16,138	2,281		
2005	0	0	21,022	1,487	0	0	65	5	0	0	19,598	2,409		
2006	0	0	25,446	1,910	0	0	65	5	0	0	23,596	2,522		
2007	0	0	30,518	2,456	0	0	65	5	0	0	28,122	2,613		
2008	0	0	36,256	3,154	0	0	65	5	0	0	33,162	2,680		
2009	0	0	42,656	4,046	0	0	65	5	0	0	38,670	2,717		
2010	0	0	49,690	5,181	0	0	65	5	0	0	44,570	2,723		
2011	0	0	57,307	6,618	0	0	65	5	0	0	50,749	2,696		
2012	0	0	65,466	8,433	0	0	65	5	0	0	57,092	2,638		
2013	0	0	74,131	10,717	0	0	65	5	0	0	63,474	2,550		
2014	0	0	83,232	13,571	0	0	65	5	0	868	70,588	2,466		
Total	2,605	1,544	566,186	65,778	0	0	1,625	425	0	868	502,474	42,194		

Net Present Value 40,650
 B/C Ratio 27.33
 Internal Rate of Return 79.5%

12. STA MARIA (MNR 120) Reconstruction													Unit: 1000 Pesos	
Year	Cost		EVL		TCHV		M.Cost		Flood w/o	Residual Value	Total Benefits			
	Rehab.	Dis'd	w/o	with	w/o	with	w/o	with			Dis'd			
1990	1,679	1,679	3,420	3,420	0	0	839	839	0	0	0	0		
1991	8,396	7,301	4,365	4,365	0	0	839	839	0	0	0	0		
1992	16,791	12,696	5,541	5,541	0	0	839	839	0	0	0	0		
1993	6,705	4,409	6,991	6,991	0	0	839	839	0	0	0	0		
1994	0	0	8,762	2	0	0	839	67	625	0	10,157	5,807		
1995	0	0	10,888	2	0	0	839	67	674	0	12,332	6,131		
1996	0	0	13,405	3	0	0	839	67	726	0	14,900	6,442		
1997	0	0	16,371	4	0	0	839	67	782	0	17,922	6,737		
1998	0	0	19,790	5	0	0	839	67	843	0	21,400	6,996		
1999	0	0	23,693	7	0	0	839	67	909	0	25,367	7,211		
2000	0	0	28,078	9	0	0	839	67	979	0	29,820	7,371		
2001	0	0	32,353	12	0	0	839	67	1,036	0	34,150	7,340		
2002	0	0	36,939	16	0	0	839	67	1,097	0	38,792	7,251		
2003	0	0	41,767	20	0	0	839	67	1,161	0	43,680	7,099		
2004	0	0	46,837	26	0	0	839	67	1,229	0	48,812	6,899		
2005	0	0	52,112	34	0	0	839	67	1,300	0	54,150	6,655		
2006	0	0	57,607	44	0	0	839	67	1,377	0	59,712	6,381		
2007	0	0	63,270	57	0	0	839	67	1,458	0	65,444	6,081		
2008	0	0	69,115	73	0	0	839	67	1,545	0	71,359	5,766		
2009	0	0	75,142	95	0	0	839	67	1,636	0	77,455	5,442		
2010	0	0	81,358	123	0	0	839	67	1,733	0	83,741	5,117		
2011	0	0	87,759	159	0	0	839	67	1,836	0	90,208	4,793		
2012	0	0	94,384	205	0	0	839	67	1,945	0	96,895	4,477		
2013	0	0	101,281	266	0	0	839	67	2,060	0	103,848	4,172		
2014	0	0	108,451	344	0	0	839	67	2,183	20,143	131,206	4,584		
Total	33,571	26,085	1,089,679	21,823	0	0	20,975	4,763	27,134	20,143	1,131,350	128,751		

Net Present Value 102,666
 B/C Ratio 4.94
 Internal Rate of Return 37.2%

COST/BENEFIT STREAM (7/26)

13.TIPCAL (MNR 148) Replacement of superstructure													Unit: 1000 Pesos	
Year	Cost		EVL		TCHV		M.Cost		Flood	Residual	Total Benefits	Dis'd		
	Rehab.	Dis'd	w/o	with	w/o	with	w/o	with					Value	
1990	174	174	140	140	6,395	6,395	88	88	0	0	0	0		
1991	0	0	183	183	6,779	6,779	88	88	0	0	0	0		
1992	0	0	241	241	7,194	7,194	88	88	0	0	0	0		
1993	0	0	316	316	7,610	7,610	88	88	0	0	0	0		
1994	3,335	1,907	414	414	8,058	8,058	88	88	0	0	0	0		
1995	0	0	542	75	8,537	8,110	88	7	0	0	975	485		
1996	0	0	709	98	9,049	8,596	88	7	0	0	1,144	495		
1997	0	0	926	129	9,560	9,082	88	7	0	0	1,356	510		
1998	0	0	3,079	169	10,136	9,629	88	7	0	0	3,497	1,143		
1999	0	0	3,963	222	10,711	10,176	88	7	0	0	4,356	1,238		
2000	0	0	5,076	292	11,351	10,783	88	7	0	0	5,432	1,343		
2001	0	0	6,356	377	11,862	11,269	88	7	0	0	6,653	1,430		
2002	0	0	7,913	485	12,374	11,755	88	7	0	0	8,127	1,519		
2003	0	0	9,791	625	12,918	12,272	88	7	0	0	9,893	1,608		
2004	0	0	12,030	805	13,493	12,819	88	7	0	0	11,981	1,693		
2005	0	0	14,663	1,035	14,101	13,396	88	7	0	0	14,414	1,771		
2006	0	0	17,737	1,331	14,708	13,973	88	7	0	0	17,222	1,840		
2007	0	0	21,265	1,711	15,348	14,580	88	7	0	0	20,402	1,896		
2008	0	0	25,245	2,196	16,019	15,218	88	7	0	0	23,930	1,934		
2009	0	0	29,686	2,816	16,723	15,886	88	7	0	0	27,787	1,952		
2010	0	0	34,571	3,604	17,458	16,585	88	7	0	0	31,920	1,950		
2011	0	0	39,853	4,602	18,225	17,314	88	7	0	0	36,243	1,926		
2012	0	0	45,511	5,863	19,025	18,074	88	7	0	0	40,681	1,879		
2013	0	0	51,514	7,447	19,888	18,894	88	7	0	0	45,142	1,814		
2014	0	0	57,804	9,425	20,751	19,714	88	7	0	1,170	50,666	1,770		
Total	3,509	2,081	389,528	44,601	318,273	304,161	2,200	580	0	1,170	361,821	30,196		

Net Present Value 28,115
 B/C Ratio 1451
 Internal Rate of Return 50.0%

14.PLARIDEL-PULILAN (PPH North 3) Repair													Unit: 1000 Pesos	
Year	Cost		EVL		TCHV		M.Cost		Flood	Residual	Total Benefits	Dis'd		
	Rehab.	Dis'd	w/o	with	w/o	with	w/o	with					Value	
1990	1,413	1,413	3,775	3,775	32,945	32,945	706	706	0	0	0	0		
1991	7,064	6,143	4,930	4,930	35,034	35,034	706	706	0	0	0	0		
1992	14,116	10,674	6,425	6,425	37,275	37,275	706	706	0	0	0	0		
1993	5,639	3,708	8,348	8,348	39,667	39,667	706	706	0	0	0	0		
1994	0	0	10,810	740	42,181	40,072	706	56	0	0	12,829	7,335		
1995	0	0	13,942	978	44,906	42,661	706	56	0	0	15,858	7,684		
1996	0	0	17,864	1,291	47,692	45,307	706	56	0	0	19,627	8,485		
1997	0	0	22,818	1,704	50,689	48,155	706	56	0	0	24,298	9,134		
1998	0	0	28,931	2,248	53,869	51,175	706	56	0	0	30,026	9,815		
1999	0	0	36,430	2,964	57,230	54,368	706	56	0	0	36,977	10,511		
2000	0	0	45,522	3,905	60,803	57,763	706	56	0	0	45,306	11,199		
2001	0	0	56,887	5,185	64,921	61,675	706	56	0	0	55,597	11,950		
2002	0	0	70,462	6,877	69,342	65,875	706	56	0	0	67,702	12,654		
2003	0	0	86,452	9,108	74,036	70,334	706	56	0	0	81,695	13,278		
2004	0	0	105,055	12,044	79,032	75,080	706	56	0	0	97,612	13,795		
2005	0	0	126,417	15,896	84,391	80,172	706	56	0	0	115,389	14,181		
2006	0	0	142,092	19,740	88,876	80,632	706	56	0	0	127,245	13,598		
2007	0	0	153,240	23,675	84,876	80,632	706	56	0	0	134,458	12,495		
2008	0	0	163,758	28,292	84,876	80,632	706	56	0	0	140,360	11,342		
2009	0	0	173,509	33,667	84,876	80,632	706	56	0	0	144,735	10,170		
2010	0	0	182,401	39,869	84,876	80,632	706	56	0	0	147,426	9,008		
2011	0	0	190,390	46,950	84,876	80,632	706	56	0	0	148,333	7,881		
2012	0	0	197,471	54,938	84,876	80,632	706	56	0	0	147,426	6,811		
2013	0	0	203,672	63,830	84,876	80,632	706	56	0	0	144,735	5,815		
2014	0	0	209,048	73,581	84,876	80,632	706	56	0	5,646	146,006	5,101		
Total	28,232	21,937	2,260,669	470,960	1,637,897	1,563,246	17,650	4,000	0	5,646	1,883,640	212,442		

Net Present Value 190,505
 B/C Ratio 9.68
 Internal Rate of Return 48.9%

COST/BENEFIT STREAM (8/26)

15.SAN ROQUE (PPH North 14)		Repair										Unit: 1000 Pesos	
Year	Cost		EVL		TCHV		M.Cost		Flood	Residual	Total Benefits		
	Rehab.	Dis'd	w/o	with	w/o	with	w/o	with	w/o	Value	Dis'd		
1990	35	35	3,090	3,090	0	0	18	18	0	0	0	0	
1991	695	604	4,055	4,055	0	0	18	18	0	0	0	0	
1992	0	0	5,317	1,344	0	0	18	1	0	0	3,990	3,017	
1993	0	0	6,964	1,770	0	0	18	1	0	0	5,211	3,427	
1994	0	0	9,109	2,330	0	0	18	1	0	0	6,796	3,886	
1995	0	0	11,895	3,066	0	0	18	1	0	0	8,846	4,398	
1996	0	0	15,492	4,030	0	0	18	1	0	0	11,479	4,962	
1997	0	0	20,130	5,296	0	0	18	1	0	0	14,851	5,583	
1998	0	0	26,081	6,954	0	0	18	1	0	0	19,144	6,258	
1999	0	0	33,675	9,124	0	0	18	1	0	0	24,568	6,984	
2000	0	0	43,303	11,956	0	0	18	1	0	0	31,363	7,753	
2001	0	0	55,872	15,774	0	0	18	1	0	0	40,115	8,622	
2002	0	0	71,712	20,781	0	0	18	1	0	0	50,948	9,523	
2003	0	0	91,474	27,322	0	0	18	1	0	0	64,169	10,429	
2004	0	0	110,629	34,213	0	0	18	1	0	0	76,433	10,802	
2005	0	0	127,529	41,032	0	0	18	1	0	0	86,514	10,632	
2006	0	0	145,759	49,034	0	0	18	1	0	0	96,742	10,338	
2007	0	0	165,080	58,351	0	0	18	1	0	0	106,746	9,919	
2008	0	0	185,176	69,099	0	0	18	1	0	0	116,093	9,381	
2009	0	0	205,675	81,372	0	0	18	1	0	0	124,320	8,735	
2010	0	0	226,175	95,217	0	0	18	1	0	0	130,974	8,003	
2011	0	0	246,270	110,629	0	0	18	1	0	0	135,658	7,208	
2012	0	0	265,591	127,529	0	0	18	1	0	0	138,079	6,379	
2013	0	0	283,821	145,759	0	0	18	1	0	0	138,079	5,547	
2014	0	0	300,721	165,080	0	0	18	1	0	146	135,604	4,744	
Total	730	639	2,660,595	1,094,207	0	0	450	59	0	146	1,566,922	166,531	

Net Present Value 165,892
 B/C Ratio 260.62
 Internal Rate of Return 475.6%

16.SICSICAN (PPH North 43)		Repair										Unit: 1000 Pesos	
Year	Cost		EVL		TCHV		M.Cost		Flood	Residual	Total Benefits		
	Rehab.	Dis'd	w/o	with	w/o	with	w/o	with	w/o	Value	Dis'd		
1990	197	197	6,148	6,148	123,022	123,022	100	100	0	0	0	0	
1991	3,798	3,303	8,010	8,010	130,711	130,711	100	100	0	0	0	0	
1992	0	0	10,410	1,022	138,881	131,937	100	8	0	0	16,424	12,419	
1993	0	0	13,493	1,346	147,599	140,219	100	8	0	0	19,619	12,900	
1994	0	0	17,429	1,773	156,799	148,959	100	8	0	0	23,587	13,486	
1995	0	0	22,421	2,335	166,616	158,285	100	8	0	0	28,508	14,174	
1996	0	0	28,711	3,074	176,982	168,133	100	8	0	0	34,578	14,949	
1997	0	0	36,564	4,044	187,966	178,568	100	8	0	0	42,009	15,793	
1998	0	0	46,282	5,318	199,568	189,590	100	8	0	0	51,035	16,663	
1999	0	0	58,184	6,987	211,994	201,394	100	8	0	0	61,889	17,593	
2000	0	0	72,576	9,169	225,106	213,851	100	8	0	0	74,755	18,478	
2001	0	0	90,497	12,112	240,209	228,199	100	8	0	0	90,487	19,450	
2002	0	0	111,835	15,975	256,274	243,460	100	8	0	0	108,766	20,329	
2003	0	0	136,921	21,029	273,368	259,699	100	8	0	0	129,653	21,072	
2004	0	0	166,053	27,622	291,697	277,113	100	8	0	0	153,108	21,639	
2005	0	0	199,407	36,176	311,194	295,635	100	8	0	0	178,882	21,984	
2006	0	0	237,329	47,254	331,858	315,265	100	8	0	0	206,760	22,095	
2007	0	0	273,440	60,075	345,794	328,505	100	8	0	0	230,747	21,442	
2008	0	0	292,209	71,141	345,794	328,505	100	8	0	0	238,449	19,268	
2009	0	0	309,609	83,777	345,794	328,505	100	8	0	0	243,214	17,089	
2010	0	0	325,476	98,031	345,794	328,505	100	8	0	0	244,826	14,959	
2011	0	0	339,731	113,899	345,794	328,505	100	8	0	0	243,214	12,922	
2012	0	0	352,366	131,298	345,794	328,505	100	8	0	0	238,449	11,017	
2013	0	0	363,432	150,067	345,794	328,505	100	8	0	0	230,747	9,270	
2014	0	0	373,024	169,959	345,794	328,505	100	8	0	799	221,246	7,729	
Total	3,995	3,500	3,891,557	1,087,641	6,336,196	6,032,080	2,500	384	0	799	3,110,952	376,740	

Net Present Value 373,240
 B/C Ratio 107.64
 Internal Rate of Return 367.7%

COST/BENEFIT STREAM (9/26)

17.INDIANA (PPH North 71)												
Reconstruction											Unit : 1000 Pesos	
Year	Cost		EVL		TCHV		M.Cost		Flood w/o	Residual Value	Total Benefits	
	Rehab.	Dis'd	w/o	with	w/o	with	w/o	with			Dis'd	
1990	0	0	3,187	3,187	15,754	15,754	657	657	0	0	0	0
1991	1,320	1,148	4,063	4,063	16,792	16,792	657	657	0	0	0	0
1992	6,577	4,973	5,155	5,155	17,876	17,876	657	657	0	0	0	0
1993	13,143	8,642	6,499	6,499	19,049	19,049	657	657	0	0	0	0
1994	5,246	2,999	8,139	8,139	20,291	20,291	657	657	0	0	0	0
1995	0	0	10,111	2	21,622	20,541	657	53	625	0	12,421	6,175
1996	0	0	12,435	2	22,976	21,828	657	53	673	0	14,859	6,424
1997	0	0	15,151	3	24,421	23,200	657	53	724	0	17,698	6,653
1998	0	0	18,286	4	25,956	24,658	657	53	779	0	20,964	6,853
1999	0	0	21,858	5	27,603	26,223	657	53	838	0	24,676	7,014
2000	0	0	25,878	7	29,341	27,874	657	53	903	0	28,845	7,130
2001	0	0	30,115	9	30,989	29,439	657	53	965	0	33,225	7,141
2002	0	0	34,700	12	32,727	31,090	657	53	1,031	0	37,960	7,095
2003	0	0	39,632	16	34,555	32,827	657	53	1,102	0	43,050	6,997
2004	0	0	44,892	21	36,496	34,671	657	53	1,178	0	48,479	6,851
2005	0	0	50,459	27	38,550	36,622	657	53	1,259	0	54,223	6,664
2006	0	0	56,323	35	40,694	38,659	657	53	1,347	0	60,274	6,441
2007	0	0	62,503	46	42,974	40,825	657	53	1,441	0	66,652	6,194
2008	0	0	68,962	60	45,343	43,076	657	53	1,541	0	73,315	5,924
2009	0	0	75,738	78	47,871	45,478	657	53	1,649	0	80,307	5,643
2010	0	0	82,840	102	50,535	48,008	657	53	1,765	0	87,633	5,354
2011	0	0	90,305	134	53,356	50,688	657	53	1,889	0	95,333	5,065
2012	0	0	98,135	175	56,312	53,497	657	53	2,022	0	103,402	4,777
2013	0	0	106,421	229	59,450	56,477	657	53	2,165	0	111,934	4,497
2014	0	0	115,150	299	62,745	59,608	657	53	2,318	15,772	136,682	4,775
Total	26,286	17,762	1,086,937	28,309	874,278	835,051	16,425	4,345	26,214	15,772	1,151,932	123,669

Net Present Value 105,907
 B/C Ratio 6.96
 Internal Rate of Return 45.9%

18.BATU (PPH North 73)												
Repair											Unit : 1000 Pesos	
Year	Cost		EVL		TCHV		M.Cost		Flood w/o	Residual Value	Total Benefits	
	Rehab.	Dis'd	w/o	with	w/o	with	w/o	with			Dis'd	
1990	0	0	1,731	1,731	30,507	30,507	786	786	0	0	0	0
1991	1,575	1,370	2,248	2,248	32,463	32,463	786	786	0	0	0	0
1992	7,863	5,946	2,914	2,914	34,608	34,608	786	786	0	0	0	0
1993	15,714	10,332	3,768	3,768	36,865	36,865	786	786	0	0	0	0
1994	6,276	3,588	4,852	4,852	39,272	39,272	786	786	0	0	0	0
1995	0	0	6,223	358	41,830	39,738	786	63	841	0	9,521	4,734
1996	0	0	7,931	470	44,463	42,240	786	63	905	0	11,312	4,891
1997	0	0	10,046	616	47,247	44,884	786	63	974	0	13,489	5,071
1998	0	0	12,653	808	50,219	47,708	786	63	1,048	0	16,128	5,272
1999	0	0	15,828	1,059	53,378	50,709	786	63	1,129	0	19,290	5,483
2000	0	0	19,648	1,387	56,764	53,926	786	63	1,215	0	23,037	5,695
2001	0	0	24,003	1,802	59,924	56,928	786	63	1,299	0	27,219	5,851
2002	0	0	29,067	2,339	63,309	60,144	786	63	1,389	0	32,005	5,982
2003	0	0	34,866	3,033	66,883	63,539	786	63	1,485	0	37,385	6,076
2004	0	0	41,412	3,928	70,607	67,077	786	63	1,586	0	43,325	6,123
2005	0	0	48,707	5,078	74,594	70,865	786	63	1,699	0	49,780	6,118
2006	0	0	56,752	6,554	78,732	74,796	786	63	1,818	0	56,675	6,057
2007	0	0	65,514	8,439	83,133	78,977	786	63	1,946	0	63,900	5,938
2008	0	0	74,926	10,832	87,723	83,336	786	63	2,083	0	71,286	5,760
2009	0	0	84,996	13,859	92,613	87,982	786	63	2,230	0	78,721	5,531
2010	0	0	95,692	17,662	97,766	92,878	786	63	2,388	0	86,029	5,256
2011	0	0	106,987	22,404	103,221	98,060	786	63	2,558	0	93,025	4,942
2012	0	0	118,856	28,259	108,939	103,492	786	63	2,740	0	99,507	4,597
2013	0	0	131,352	35,431	114,995	109,245	786	63	2,935	0	105,329	4,232
2014	0	0	144,466	44,111	121,390	115,320	786	63	3,146	6,286	116,579	4,073
Total	31,428	21,236	1,145,436	223,942	1,691,445	1,615,559	19,650	5,190	35,416	6,286	1,053,542	107,681

Net Present Value 86,445
 B/C Ratio 5.07
 Internal Rate of Return 37.2%

COST/BENEFIT STREAM (10/26)

19.NAMANPARAN 1 (PPH North B6) Replacement of superstructure													Unit : 1000 Pesos	
Year	Cost		EVL		TCHV		M.Cost		Flood	Residual	Total Benefits			
	Rehab.	Dis'd	w/o	with	w/o	with	w/o	with	w/o	Value	Dis'd			
1990	0	0	602	602	51,357	51,357	122	122	0	0	0	0		
1991	243	211	788	788	54,641	54,641	122	122	0	0	0	0		
1992	4,644	3,512	1,033	1,033	58,199	58,199	122	122	0	0	0	0		
1993	0	0	1,351	104	62,030	58,929	122	10	0	0	4,461	2,933		
1994	0	0	1,765	137	66,135	62,828	122	10	0	0	5,047	2,886		
1995	0	0	2,302	181	70,423	66,901	122	10	0	0	5,755	2,861		
1996	0	0	2,989	237	74,601	71,061	122	10	0	0	6,604	2,855		
1997	0	0	3,873	312	79,545	75,567	122	10	0	0	7,651	2,876		
1998	0	0	5,005	410	84,562	80,334	122	10	0	0	8,935	2,921		
1999	0	0	6,443	538	89,853	85,360	122	10	0	0	10,510	2,988		
2000	0	0	8,259	706	95,508	90,733	122	10	0	0	12,441	3,075		
2001	0	0	10,482	920	100,890	95,846	122	10	0	0	14,699	3,159		
2002	0	0	13,180	1,198	106,546	101,219	122	10	0	0	17,421	3,256		
2003	0	0	16,502	1,560	112,567	106,938	122	10	0	0	20,682	3,361		
2004	0	0	20,517	2,029	118,861	112,918	122	10	0	0	24,544	3,469		
2005	0	0	25,306	2,636	125,520	119,244	122	10	0	0	29,058	3,571		
2006	0	0	30,969	3,423	132,544	125,917	122	10	0	0	34,285	3,664		
2007	0	0	37,562	4,439	139,933	132,936	122	10	0	0	40,232	3,739		
2008	0	0	45,121	5,746	147,687	140,302	122	10	0	0	46,872	3,787		
2009	0	0	53,678	7,422	155,897	148,102	122	10	0	0	54,163	3,806		
2010	0	0	63,230	9,565	164,563	156,335	122	10	0	0	62,006	3,789		
2011	0	0	73,761	12,290	173,685	165,001	122	10	0	0	70,268	3,733		
2012	0	0	85,245	15,738	183,354	174,186	122	10	0	0	78,787	3,640		
2013	0	0	97,628	20,071	193,571	183,892	122	10	0	0	87,348	3,509		
2014	0	0	110,884	25,479	204,335	194,118	122	10	0	1,629	97,364	3,401		
Total	4,887	3,723	718,455	117,564	2,847,007	2,712,864	3,050	586	0	1,629	739,133	73,280		

Net Present Value 69,557
 B/C Ratio 19.68
 Internal Rate of Return 100.0%

20.SAN LUIS (PPH North B9) Repair													Unit : 1000 Pesos	
Year	Cost		EVL		TCHV		M.Cost		Flood	Residual	Total Benefits			
	Rehab.	Dis'd	w/o	with	w/o	with	w/o	with	w/o	Value	Dis'd			
1990	0	0	199	199	0	0	8	8	0	0	0	0		
1991	12	10	263	263	0	0	8	8	0	0	0	0		
1992	301	228	920	920	0	0	8	8	0	0	0	0		
1993	0	0	1,206	251	0	0	8	1	0	0	962	633		
1994	0	0	1,577	331	0	0	8	1	0	0	1,254	717		
1995	0	0	2,059	436	0	0	8	1	0	0	1,631	811		
1996	0	0	2,678	572	0	0	8	1	0	0	2,113	913		
1997	0	0	3,472	751	0	0	8	1	0	0	2,728	1,026		
1998	0	0	4,492	985	0	0	8	1	0	0	3,514	1,149		
1999	0	0	5,788	1,291	0	0	8	1	0	0	4,504	1,280		
2000	0	0	7,427	1,691	0	0	8	1	0	0	5,744	1,420		
2001	0	0	9,422	2,197	0	0	8	1	0	0	7,232	1,555		
2002	0	0	11,887	2,850	0	0	8	1	0	0	9,044	1,690		
2003	0	0	14,901	3,690	0	0	8	1	0	0	11,218	1,823		
2004	0	0	18,559	4,771	0	0	8	1	0	0	13,795	1,950		
2005	0	0	22,922	6,149	0	0	8	1	0	0	16,780	2,062		
2006	0	0	28,102	7,911	0	0	8	1	0	0	20,199	2,159		
2007	0	0	34,132	10,138	0	0	8	1	0	0	24,001	2,230		
2008	0	0	41,071	12,942	0	0	8	1	0	0	28,137	2,274		
2009	0	0	48,940	16,442	0	0	8	1	0	0	32,505	2,284		
2010	0	0	57,753	20,778	0	0	8	1	0	0	36,982	2,260		
2011	0	0	67,491	26,095	0	0	8	1	0	0	41,404	2,200		
2012	0	0	78,132	32,545	0	0	8	1	0	0	45,594	2,106		
2013	0	0	89,633	40,275	0	0	8	1	0	0	49,365	1,983		
2014	0	0	101,981	49,430	0	0	8	1	0	63	52,620	1,838		
Total	313	238	655,007	243,903	0	0	200	46	0	63	411,326	36,361		

Net Present Value 36,123
 B/C Ratio 152.78
 Internal Rate of Return 305.3%

COST/BENEFIT STREAM (11/26)

21.NAGUILAN (PPH North 109) Repair													Unit : 1000 Pesos	
Year	Cost		EVL		TCHV		M.Cost		Flood	Residual	Total Benefits			
	Rehab.	Dis'd	w/o	with	w/o	with	w/o	with	w/o	Value	Dis'd			
1990	0	0	1,582	1,582	14,266	14,266	744	744	0	0	0	0		
1991	1,494	1,299	2,070	2,070	15,192	15,192	744	744	0	0	0	0		
1992	7,446	5,630	2,704	2,704	16,194	16,194	744	744	0	0	0	0		
1993	14,800	9,784	3,520	3,520	17,235	17,235	744	744	0	0	0	0		
1994	5,941	3,397	4,567	4,567	18,353	18,353	744	744	0	0	0	0		
1995	0	0	5,903	340	19,549	18,571	744	60	798	0	8,023	3,989		
1996	0	0	7,572	449	20,782	19,743	744	60	864	0	9,712	4,199		
1997	0	0	9,661	592	22,055	20,952	744	60	937	0	11,792	4,433		
1998	0	0	12,250	782	23,443	22,271	744	60	1,015	0	14,340	4,688		
1999	0	0	15,433	1,032	24,908	23,663	744	60	1,101	0	17,432	4,955		
2000	0	0	19,286	1,361	26,450	25,128	744	60	1,193	0	21,125	5,222		
2001	0	0	23,724	1,781	27,954	26,556	744	60	1,284	0	25,309	5,440		
2002	0	0	28,917	2,327	29,496	28,022	744	60	1,382	0	30,131	5,632		
2003	0	0	34,930	3,039	31,154	29,597	744	60	1,488	0	35,621	5,789		
2004	0	0	41,781	3,963	32,889	31,245	744	60	1,603	0	41,749	5,900		
2005	0	0	49,476	5,158	34,740	33,003	744	60	1,726	0	48,465	5,956		
2006	0	0	58,088	6,708	36,668	34,835	744	60	1,861	0	55,758	5,959		
2007	0	0	67,544	8,701	38,712	36,776	744	60	2,006	0	63,469	5,898		
2008	0	0	77,827	11,252	40,832	38,791	744	60	2,163	0	71,465	5,775		
2009	0	0	88,956	14,505	43,107	40,952	744	60	2,334	0	79,625	5,595		
2010	0	0	100,871	18,618	45,498	43,223	744	60	2,517	0	87,729	5,360		
2011	0	0	113,604	23,789	48,004	45,604	744	60	2,716	0	95,616	5,080		
2012	0	0	127,145	30,229	50,664	48,131	744	60	2,931	0	103,064	4,762		
2013	0	0	141,553	38,182	53,479	50,805	744	60	3,163	0	109,893	4,415		
2014	0	0	156,826	47,885	56,448	53,626	744	60	3,415	5,952	121,815	4,256		
Total	29,761	20,110	1,195,790	235,136	788,072	752,734	18,600	4,920	36,497	5,952	1,052,133	103,301		

Net Present Value 83,191
 B/C Ratio 5.14
 Internal Rate of Return 36.5%

22.MALALAN (PPH North 113) Repair													Unit : 1000 Pesos	
Year	Cost		EVL		TCHV		M.Cost		Flood	Residual	Total Benefits			
	Rehab.	Dis'd	w/o	with	w/o	with	w/o	with	w/o	Value	Dis'd			
1990	0	0	154	154	12,543	12,543	226	226	0	0	0	0		
1991	452	393	202	202	13,424	13,424	226	226	0	0	0	0		
1992	8,569	6,479	265	265	14,230	14,230	226	226	0	0	0	0		
1993	0	0	348	73	15,184	14,425	226	18	171	0	1,413	929		
1994	0	0	458	96	16,211	15,400	226	18	185	0	1,565	895		
1995	0	0	598	127	17,238	16,376	226	18	200	0	1,741	866		
1996	0	0	780	167	18,338	17,421	226	18	216	0	1,954	845		
1997	0	0	1,015	219	19,439	18,467	226	18	234	0	2,209	830		
1998	0	0	1,315	288	20,686	19,651	226	18	253	0	2,521	824		
1999	0	0	1,699	379	21,933	20,836	226	18	273	0	2,898	824		
2000	0	0	2,188	498	23,226	22,160	226	18	296	0	3,360	830		
2001	0	0	2,786	650	24,647	23,414	226	18	318	0	3,894	837		
2002	0	0	3,526	845	26,040	24,738	226	18	342	0	4,532	847		
2003	0	0	4,428	1,097	27,434	26,062	226	18	367	0	5,278	858		
2004	0	0	5,532	1,422	28,974	27,526	226	18	394	0	6,161	871		
2005	0	0	12,154	1,839	30,588	29,059	226	18	424	0	12,476	1,533		
2006	0	0	14,252	2,375	32,349	30,731	226	18	457	0	14,159	1,513		
2007	0	0	16,539	3,054	34,109	32,404	226	18	491	0	15,890	1,477		
2008	0	0	19,036	3,914	36,016	34,215	226	18	529	0	17,660	1,427		
2009	0	0	21,711	4,989	37,997	36,097	226	18	570	0	19,399	1,363		
2010	0	0	24,600	6,332	40,124	38,118	226	18	614	0	21,096	1,289		
2011	0	0	27,664	7,983	42,325	40,208	226	18	661	0	22,667	1,204		
2012	0	0	30,910	9,991	44,672	42,438	226	18	712	0	24,072	1,112		
2013	0	0	34,372	12,418	47,166	44,808	226	18	768	0	25,288	1,016		
2014	0	0	38,018	15,295	49,733	47,247	226	18	828	1,804	28,050	980		
Total	9,021	6,872	264,550	74,672	694,726	661,998	5,650	1,074	9,303	1,804	238,283	23,170		

Net Present Value 16,298
 B/C Ratio 3.37
 Internal Rate of Return 29.6%

COST/BENEFIT STREAM (12/26)

23.BALASIG (PPH North 126)												Repair		Unit: 1000 Pesos	
Year	Cost		EVL		TCHV		M.Cost		Flood w/o	Residual Value	Total Benefits	Dis'd			
	Rehab.	Dis'd	w/o	with	w/o	with	w/o	with							
1990	0	0	268	268	0	0	100	100	0	0	0	0			
1991	197	171	352	352	0	0	100	100	0	0	0	0			
1992	3,810	2,881	463	463	0	0	100	100	0	0	0	0			
1993	0	0	607	127	0	0	100	8	297	0	870	572			
1994	0	0	795	167	0	0	100	8	321	0	1,041	595			
1995	0	0	1,039	220	0	0	100	8	348	0	1,259	626			
1996	0	0	1,352	289	0	0	100	8	375	0	1,530	661			
1997	0	0	1,754	379	0	0	100	8	405	0	1,872	704			
1998	0	0	2,272	498	0	0	100	8	437	0	2,302	753			
1999	0	0	2,929	654	0	0	100	8	471	0	2,839	807			
2000	0	0	8,223	857	0	0	100	8	509	0	7,967	1,969			
2001	0	0	10,079	1,114	0	0	100	8	546	0	9,603	2,064			
2002	0	0	12,242	1,447	0	0	100	8	585	0	11,472	2,144			
2003	0	0	14,721	1,875	0	0	100	8	627	0	13,566	2,205			
2004	0	0	17,527	2,424	0	0	100	8	672	0	15,867	2,243			
2005	0	0	20,677	3,128	0	0	100	8	721	0	18,362	2,257			
2006	0	0	24,159	4,025	0	0	100	8	774	0	21,000	2,244			
2007	0	0	27,968	5,164	0	0	100	8	831	0	23,728	2,205			
2008	0	0	32,104	6,600	0	0	100	8	892	0	26,488	2,140			
2009	0	0	36,525	8,393	0	0	100	8	958	0	29,183	2,051			
2010	0	0	41,249	10,617	0	0	100	8	1,029	0	31,753	1,940			
2011	0	0	46,229	13,340	0	0	100	8	1,105	0	34,087	1,811			
2012	0	0	51,533	16,658	0	0	100	8	1,188	0	36,155	1,670			
2013	0	0	57,117	20,635	0	0	100	8	1,276	0	37,851	1,521			
2014	0	0	62,999	25,344	0	0	100	8	1,372	801	39,920	1,395			
Total	4,007	3,052	475,183	125,038	0	0	2,500	476	15,739	801	368,715	34,576			

Net Present Value 31,524
 B/C Ratio 11.33
 Internal Rate of Return 47.7%

24.SAN PABLO (PPH North 129)												Repair		Unit: 1000 Pesos	
Year	Cost		EVL		TCHV		M.Cost		Flood w/o	Residual Value	Total Benefits	Dis'd			
	Rehab.	Dis'd	w/o	with	w/o	with	w/o	with							
1990	0	0	296	296	14,069	14,069	365	365	0	0	0	0			
1991	730	635	389	389	15,028	15,028	365	365	0	0	0	0			
1992	3,659	2,767	511	511	15,987	15,987	365	365	0	0	0	0			
1993	7,307	4,804	669	669	17,010	17,010	365	365	0	0	0	0			
1994	2,918	1,668	877	877	18,161	18,161	365	365	0	0	0	0			
1995	0	0	1,146	163	19,313	18,347	365	29	0	0	2,285	1,136			
1996	0	0	1,492	215	20,528	19,501	365	29	0	0	2,640	1,141			
1997	0	0	1,937	282	21,807	20,716	365	29	0	0	3,081	1,158			
1998	0	0	2,506	371	23,149	21,992	365	29	0	0	3,628	1,186			
1999	0	0	7,298	488	24,620	23,389	365	29	0	0	8,377	2,381			
2000	0	0	9,083	641	26,155	24,847	365	29	0	0	10,086	2,493			
2001	0	0	11,138	836	27,626	26,245	365	29	0	0	12,020	2,584			
2002	0	0	13,522	1,088	29,161	27,703	365	29	0	0	14,228	2,659			
2003	0	0	16,267	1,415	30,759	29,221	365	29	0	0	16,725	2,718			
2004	0	0	19,379	1,838	32,486	30,862	365	29	0	0	19,502	2,756			
2005	0	0	22,869	2,384	34,340	32,623	365	29	0	0	22,538	2,770			
2006	0	0	26,732	3,087	36,195	34,385	365	29	0	0	25,791	2,756			
2007	0	0	30,955	3,988	38,241	36,329	365	29	0	0	29,215	2,715			
2008	0	0	35,526	5,136	40,352	38,334	365	29	0	0	32,744	2,646			
2009	0	0	40,442	6,594	42,590	40,460	365	29	0	0	36,313	2,552			
2010	0	0	45,667	8,429	44,956	42,708	365	29	0	0	39,822	2,433			
2011	0	0	51,217	10,725	47,450	45,077	365	29	0	0	43,201	2,295			
2012	0	0	57,099	13,576	50,072	47,588	365	29	0	0	46,363	2,142			
2013	0	0	63,289	17,072	52,822	50,181	365	29	0	0	49,195	1,976			
2014	0	0	69,819	21,318	55,763	52,975	365	29	0	2,923	54,548	1,906			
Total	14,614	9,874	530,125	102,388	778,640	743,718	9,125	2,405	0	2,923	472,302	44,404			

Net Present Value 34,530
 B/C Ratio 4.50
 Internal Rate of Return 32.4%

COST/BENEFIT STREAM (13/26)

25. PINACANAUAN (PPH North 139) Repair													Unit : 1000 Pesos	
Year	Cost		EVL		TCHV		M.Cost		Flood w/o	Residual Value	Total Benefits			
	Rehab.	Dis'd	w/o	with	w/o	with	w/o	with			Dis'd			
1990	0	0	232	232	0	0	367	367	0	0	0	0		
1991	730	635	303	303	0	0	367	367	0	0	0	0		
1992	3,671	2,776	398	398	0	0	367	367	0	0	0	0		
1993	7,342	4,827	517	517	0	0	367	367	0	0	0	0		
1994	2,941	1,682	674	674	0	0	367	367	0	0	0	0		
1995	0	0	877	125	0	0	367	29	293	0	1,383	688		
1996	0	0	1,137	164	0	0	367	29	315	0	1,626	703		
1997	0	0	1,469	214	0	0	367	29	339	0	1,931	726		
1998	0	0	1,894	281	0	0	367	29	364	0	2,316	757		
1999	0	0	2,433	367	0	0	367	29	392	0	2,796	795		
2000	0	0	3,115	481	0	0	367	29	421	0	3,393	839		
2001	0	0	3,939	624	0	0	367	29	450	0	4,103	882		
2002	0	0	4,952	808	0	0	367	29	480	0	4,961	927		
2003	0	0	6,190	1,047	0	0	367	29	513	0	5,993	974		
2004	0	0	7,681	1,354	0	0	367	29	548	0	7,212	1,019		
2005	0	0	16,787	1,750	0	0	367	29	586	0	15,960	1,961		
2006	0	0	19,531	2,255	0	0	367	29	626	0	18,239	1,949		
2007	0	0	22,515	2,900	0	0	367	29	669	0	20,621	1,916		
2008	0	0	25,727	3,719	0	0	367	29	715	0	23,060	1,863		
2009	0	0	29,142	4,752	0	0	367	29	764	0	25,493	1,791		
2010	0	0	32,768	6,048	0	0	367	29	818	0	27,875	1,703		
2011	0	0	36,586	7,661	0	0	367	29	875	0	30,137	1,601		
2012	0	0	40,600	9,653	0	0	367	29	936	0	32,220	1,489		
2013	0	0	44,815	12,088	0	0	367	29	1,002	0	34,066	1,369		
2014	0	0	49,222	15,029	0	0	367	29	1,072	2,937	38,539	1,346		
Total	14,684	9,920	353,502	73,442	0	0	9,175	2,415	12,178	2,937	301,924	25,299		

Net Present Value 15,379
 B/C Ratio 2.55
 Internal Rate of Return 24.1%

26. PARED (PPH North 154) Reconstruction													Unit : 1000 Pesos	
Year	Cost		EVL		TCHV		M.Cost		Flood w/o	Residual Value	Total Benefits			
	Rehab.	Dis'd	w/o	with	w/o	with	w/o	with			Dis'd			
1990	0	0	866	866	9,953	9,953	553	553	0	0	0	0		
1991	1,112	967	1,110	1,110	10,563	10,563	553	553	0	0	0	0		
1992	5,535	4,185	1,413	1,413	11,274	11,274	553	553	0	0	0	0		
1993	11,070	7,279	1,781	1,781	11,985	11,985	553	553	0	0	0	0		
1994	4,412	2,523	2,236	2,236	12,696	12,696	553	553	0	0	0	0		
1995	0	0	2,783	0	13,508	12,833	553	44	172	0	4,139	2,058		
1996	0	0	3,429	1	14,321	13,605	553	44	186	0	4,839	2,092		
1997	0	0	4,190	1	15,235	14,473	553	44	200	0	5,661	2,128		
1998	0	0	5,078	1	16,251	15,438	553	44	216	0	6,615	2,162		
1999	0	0	6,073	1	17,165	16,306	553	44	233	0	7,672	2,181		
2000	0	0	7,214	2	18,282	17,368	553	44	252	0	8,887	2,197		
2001	0	0	8,417	3	19,297	18,333	553	44	270	0	10,158	2,183		
2002	0	0	9,720	3	20,313	19,297	553	44	289	0	11,530	2,155		
2003	0	0	11,129	4	21,430	20,359	553	44	309	0	13,014	2,115		
2004	0	0	12,632	6	22,649	21,517	553	44	331	0	14,599	2,063		
2005	0	0	14,232	8	23,868	22,675	553	44	355	0	16,282	2,001		
2006	0	0	15,930	10	25,188	23,929	553	44	381	0	18,069	1,931		
2007	0	0	17,723	13	26,610	25,280	553	44	409	0	19,958	1,855		
2008	0	0	19,593	17	28,032	26,631	553	44	438	0	21,924	1,772		
2009	0	0	21,563	22	29,556	28,078	553	44	469	0	23,996	1,686		
2010	0	0	23,647	29	31,181	29,622	553	44	504	0	26,190	1,600		
2011	0	0	25,857	38	32,907	31,262	553	44	541	0	28,513	1,515		
2012	0	0	28,170	50	34,735	32,999	553	44	580	0	30,945	1,430		
2013	0	0	30,624	66	36,665	34,832	553	44	623	0	33,523	1,347		
2014	0	0	33,219	86	38,697	36,762	553	44	669	13,277	49,523	1,730		
Total	22,129	14,953	308,629	7,767	542,361	518,072	13,825	3,645	7,427	13,277	356,037	38,200		

Net Present Value 23,247
 B/C Ratio 2.56
 Internal Rate of Return 26.8%

COST/BENEFIT STREAM (14/26)

27.SUJE(RIZAL) (PPH South19) Replacement of Superstructure Unit: 1000 Pesos

Year	Cost		EVL		TCHV		M.Cost		Flood w/o	Residual Value	Total Benefits	
	Rehab.	Dis'd	w/o	with	w/o	with	w/o	with			Dis'd	
1990	0	0	101	101	0	0	78	78	0	0	0	0
1991	162	141	133	133	0	0	78	78	0	0	0	0
1992	0	0	176	176	0	0	78	78	0	0	0	0
1993	0	0	231	231	0	0	78	78	0	0	0	0
1994	2,976	1,702	304	304	0	0	78	78	0	0	0	0
1995	0	0	400	55	0	0	78	6	0	0	417	207
1996	0	0	526	73	0	0	78	6	0	0	525	227
1997	0	0	692	96	0	0	78	6	0	0	668	251
1998	0	0	908	127	0	0	78	6	0	0	853	279
1999	0	0	2,995	168	0	0	78	6	0	0	2,899	824
2000	0	0	3,858	222	0	0	78	6	0	0	3,708	917
2001	0	0	4,818	285	0	0	78	6	0	0	4,695	990
2002	0	0	5,974	366	0	0	78	6	0	0	5,680	1,062
2003	0	0	7,372	471	0	0	78	6	0	0	6,974	1,133
2004	0	0	9,028	604	0	0	78	6	0	0	8,497	1,201
2005	0	0	10,973	774	0	0	78	6	0	0	10,270	1,262
2006	0	0	13,228	993	0	0	78	6	0	0	12,308	1,315
2007	0	0	15,797	1,271	0	0	78	6	0	0	14,598	1,356
2008	0	0	18,686	1,626	0	0	78	6	0	0	17,133	1,384
2009	0	0	21,879	2,075	0	0	78	6	0	0	19,876	1,397
2010	0	0	25,376	2,646	0	0	78	6	0	0	22,802	1,393
2011	0	0	29,150	3,366	0	0	78	6	0	0	25,856	1,374
2012	0	0	33,160	4,272	0	0	78	6	0	0	28,961	1,338
2013	0	0	37,369	5,402	0	0	78	6	0	0	32,038	1,287
2014	0	0	41,790	6,814	0	0	78	6	0	1,046	36,094	1,261
Total	3,138	1,842	284,924	32,651	0	0	1,950	510	0	1,046	254,752	20,459

Net Present Value 18,617
 B/C Ratio 11.11
 Internal Rate of Return 46.1%

28.GUINOBATAN (PPH South 43) Repair Unit: 1000 Pesos

Year	Cost		EVL		TCHV		M.Cost		Flood w/o	Residual Value	Total Benefits	
	Rehab.	Dis'd	w/o	with	w/o	with	w/o	with			Dis'd	
1990	0	0	1,356	1,356	0	0	22	22	0	0	0	0
1991	46	40	1,767	1,767	0	0	22	22	0	0	0	0
1992	0	0	2,298	2,298	0	0	22	22	0	0	0	0
1993	0	0	2,978	2,978	0	0	22	22	0	0	0	0
1994	834	477	3,849	3,849	0	0	22	22	0	0	0	0
1995	0	0	4,953	285	0	0	22	2	0	0	4,688	2,331
1996	0	0	6,345	376	0	0	22	2	0	0	5,990	2,590
1997	0	0	8,084	496	0	0	22	2	0	0	7,608	2,860
1998	0	0	10,235	653	0	0	22	2	0	0	9,602	3,139
1999	0	0	12,872	861	0	0	22	2	0	0	12,031	3,420
2000	0	0	16,063	1,134	0	0	22	2	0	0	14,949	3,695
2001	0	0	19,345	1,452	0	0	22	2	0	0	17,914	3,850
2002	0	0	23,093	1,858	0	0	22	2	0	0	21,255	3,973
2003	0	0	27,302	2,375	0	0	22	2	0	0	24,947	4,055
2004	0	0	31,957	3,031	0	0	22	2	0	0	28,946	4,091
2005	0	0	37,045	3,862	0	0	22	2	0	0	33,203	4,080
2006	0	0	42,537	4,912	0	0	22	2	0	0	37,645	4,023
2007	0	0	48,387	6,233	0	0	22	2	0	0	42,174	3,919
2008	0	0	54,538	7,885	0	0	22	2	0	0	46,674	3,771
2009	0	0	60,956	9,939	0	0	22	2	0	0	51,037	3,586
2010	0	0	67,593	12,476	0	0	22	2	0	0	55,137	3,369
2011	0	0	74,431	15,586	0	0	22	2	0	0	58,865	3,128
2012	0	0	81,457	19,367	0	0	22	2	0	0	62,111	2,870
2013	0	0	88,641	23,910	0	0	22	2	0	0	64,751	2,601
2014	0	0	96,021	29,319	0	0	22	2	0	176	66,898	2,337
Total	860	517	824,103	158,258	0	0	550	150	0	176	666,425	67,688

Net Present Value 67,171
 B/C Ratio 130.93
 Internal Rate of Return 223.4%

COST/BENEFIT STREAM (15/26)

29.SAN FERNAND (PPH South 75) Repair												Unit: 1000 Pesos	
Year	Cost		EVL		TCHV		M.Cost		Flood w/o	Residual Value	Total Benefits		
	Rehab.	Dis'd	w/o	with	w/o	with	w/o	with			Dis'd		
1990	0	0	1,215	1,215	0	0	42	42	0	0	0	0	
1991	81	70	1,581	1,581	0	0	42	42	0	0	0	0	
1992	0	0	2,052	2,052	0	0	42	42	0	0	0	0	
1993	1,610	1,059	2,657	2,657	0	0	42	42	0	0	0	0	
1994	0	0	3,425	235	0	0	42	3	0	0	3,229	1,846	
1995	0	0	4,401	309	0	0	42	3	0	0	4,131	2,054	
1996	0	0	5,627	406	0	0	42	3	0	0	5,260	2,274	
1997	0	0	7,156	534	0	0	42	3	0	0	6,661	2,504	
1998	0	0	9,041	703	0	0	42	3	0	0	8,377	2,739	
1999	0	0	11,349	923	0	0	42	3	0	0	10,464	2,975	
2000	0	0	14,130	1,212	0	0	42	3	0	0	12,957	3,203	
2001	0	0	17,001	1,550	0	0	42	3	0	0	15,490	3,330	
2002	0	0	20,267	1,978	0	0	42	3	0	0	18,328	3,426	
2003	0	0	23,935	2,522	0	0	42	3	0	0	21,452	3,487	
2004	0	0	27,979	3,208	0	0	42	3	0	0	24,810	3,506	
2005	0	0	32,397	4,074	0	0	42	3	0	0	28,362	3,486	
2006	0	0	37,145	5,160	0	0	42	3	0	0	32,024	3,422	
2007	0	0	42,197	6,519	0	0	42	3	0	0	35,717	3,319	
2008	0	0	47,498	8,206	0	0	42	3	0	0	39,331	3,178	
2009	0	0	53,005	10,285	0	0	42	3	0	0	42,759	3,004	
2010	0	0	58,704	12,831	0	0	42	3	0	0	45,912	2,805	
2011	0	0	64,556	15,919	0	0	42	3	0	0	48,675	2,566	
2012	0	0	70,533	19,623	0	0	42	3	0	0	50,949	2,354	
2013	0	0	76,656	24,024	0	0	42	3	0	0	52,671	2,116	
2014	0	0	82,897	29,178	0	0	42	3	0	338	54,096	1,890	
Total	1,691	1,129	717,404	156,904	0	0	1,050	231	0	338	561,655	59,503	

Net Present Value 58,374
 B/C Ratio 52.70
 Internal Rate of Return 173.1%

30.PAMUKID (PPH South 76) Repair												Unit: 1000 Pesos	
Year	Cost		EVL		TCHV		M.Cost		Flood w/o	Residual Value	Total Benefits		
	Rehab.	Dis'd	w/o	with	w/o	with	w/o	with			Dis'd		
1990	0	0	1,215	1,215	0	0	28	28	0	0	0	0	
1991	58	50	1,581	1,581	0	0	28	28	0	0	0	0	
1992	0	0	2,052	2,052	0	0	28	28	0	0	0	0	
1993	1,042	685	2,657	2,657	0	0	28	28	0	0	0	0	
1994	0	0	3,425	235	0	0	28	2	0	0	3,216	1,839	
1995	0	0	4,401	309	0	0	28	2	0	0	4,118	2,047	
1996	0	0	5,627	406	0	0	28	2	0	0	5,246	2,268	
1997	0	0	7,156	534	0	0	28	2	0	0	6,647	2,499	
1998	0	0	9,041	703	0	0	28	2	0	0	8,364	2,734	
1999	0	0	11,349	923	0	0	28	2	0	0	10,451	2,971	
2000	0	0	14,130	1,212	0	0	28	2	0	0	12,943	3,199	
2001	0	0	17,001	1,550	0	0	28	2	0	0	15,477	3,327	
2002	0	0	20,267	1,978	0	0	28	2	0	0	18,314	3,423	
2003	0	0	23,935	2,522	0	0	28	2	0	0	21,439	3,484	
2004	0	0	27,979	3,208	0	0	28	2	0	0	24,797	3,505	
2005	0	0	32,397	4,074	0	0	28	2	0	0	28,348	3,484	
2006	0	0	37,145	5,160	0	0	28	2	0	0	32,010	3,421	
2007	0	0	42,197	6,519	0	0	28	2	0	0	35,703	3,318	
2008	0	0	47,498	8,206	0	0	28	2	0	0	39,318	3,177	
2009	0	0	53,005	10,285	0	0	28	2	0	0	42,746	3,004	
2010	0	0	58,704	12,831	0	0	28	2	0	0	45,898	2,804	
2011	0	0	64,556	15,919	0	0	28	2	0	0	48,662	2,585	
2012	0	0	70,533	19,623	0	0	28	2	0	0	50,935	2,353	
2013	0	0	76,656	24,024	0	0	28	2	0	0	52,658	2,115	
2014	0	0	82,897	29,178	0	0	28	2	0	220	53,964	1,885	
Total	1,100	736	717,404	156,904	0	0	700	154	0	220	561,254	59,442	

Net Present Value 58,706
 B/C Ratio 80.76
 Internal Rate of Return 222.9%

COST/BENEFIT STREAM (16/26)

31.SAN ISIDRO (PPH South 77) Repair												Unit: 1000 Pesos	
Year	Cost		EVL		TCHV		M.Cost		Flood w/o	Residual Value	Total Benefits		
	Rehab.	Dis'd	w/o	with	w/o	with	w/o	with			Dis'd		
1990	0	0	1,215	1,215	0	0	42	42	0	0	0	0	
1991	81	70	1,581	1,581	0	0	42	42	0	0	0	0	
1992	0	0	2,052	2,052	0	0	42	42	0	0	0	0	
1993	1,598	1,051	2,657	2,657	0	0	42	42	0	0	0	0	
1994	0	0	3,425	235	0	0	42	3	0	0	3,229	1,846	
1995	0	0	4,401	309	0	0	42	3	0	0	4,131	2,054	
1996	0	0	5,627	406	0	0	42	3	0	0	5,259	2,274	
1997	0	0	7,156	534	0	0	42	3	0	0	6,660	2,504	
1998	0	0	9,041	703	0	0	42	3	0	0	8,377	2,738	
1999	0	0	11,349	923	0	0	42	3	0	0	10,464	2,975	
2000	0	0	14,130	1,212	0	0	42	3	0	0	12,956	3,203	
2001	0	0	17,001	1,550	0	0	42	3	0	0	15,490	3,330	
2002	0	0	20,267	1,978	0	0	42	3	0	0	18,328	3,426	
2003	0	0	23,935	2,522	0	0	42	3	0	0	21,452	3,487	
2004	0	0	27,979	3,208	0	0	42	3	0	0	24,810	3,506	
2005	0	0	32,397	4,074	0	0	42	3	0	0	28,362	3,465	
2006	0	0	37,145	5,160	0	0	42	3	0	0	32,024	3,422	
2007	0	0	42,197	6,519	0	0	42	3	0	0	35,717	3,319	
2008	0	0	47,498	8,206	0	0	42	3	0	0	39,330	3,178	
2009	0	0	53,005	10,285	0	0	42	3	0	0	42,759	3,004	
2010	0	0	58,704	12,831	0	0	42	3	0	0	45,912	2,805	
2011	0	0	64,556	15,919	0	0	42	3	0	0	48,675	2,586	
2012	0	0	70,533	19,623	0	0	42	3	0	0	50,948	2,354	
2013	0	0	76,656	24,024	0	0	42	3	0	0	52,671	2,116	
2014	0	0	82,897	29,178	0	0	42	3	0	336	54,093	1,890	
Total	1,679	1,121	717,404	156,904	0	0	1,050	231	0	336	561,647	59,502	

Net Present Value 58,381
 B/C Ratio 53.08
 Internal Rate of Return 173.7%

32.SAN GABRIEL (PPH South 78) Replacement of Superstructure												Unit: 1000 Pesos	
Year	Cost		EVL		TCHV		M.Cost		Flood w/o	Residual Value	Total Benefits		
	Rehab.	Dis'd	w/o	with	w/o	with	w/o	with			Dis'd		
1990	0	0	464	464	0	0	41	41	0	0	0	0	
1991	81	70	608	608	0	0	41	41	0	0	0	0	
1992	0	0	797	797	0	0	41	41	0	0	0	0	
1993	1,575	1,036	1,043	1,043	0	0	41	41	0	0	0	0	
1994	0	0	1,363	87	0	0	41	3	0	0	1,314	751	
1995	0	0	1,779	114	0	0	41	3	0	0	1,702	846	
1996	0	0	2,316	151	0	0	41	3	0	0	2,203	953	
1997	0	0	3,009	198	0	0	41	3	0	0	2,848	1,071	
1998	0	0	3,896	261	0	0	41	3	0	0	3,673	1,201	
1999	0	0	5,030	344	0	0	41	3	0	0	4,724	1,343	
2000	0	0	6,465	454	0	0	41	3	0	0	6,050	1,495	
2001	0	0	8,060	582	0	0	41	3	0	0	7,516	1,615	
2002	0	0	9,990	746	0	0	41	3	0	0	9,282	1,735	
2003	0	0	12,307	956	0	0	41	3	0	0	11,389	1,851	
2004	0	0	15,050	1,224	0	0	41	3	0	0	13,863	1,959	
2005	0	0	18,267	1,567	0	0	41	3	0	0	16,738	2,057	
2006	0	0	21,985	2,004	0	0	41	3	0	0	20,019	2,139	
2007	0	0	26,228	2,560	0	0	41	3	0	0	23,706	2,203	
2008	0	0	30,989	3,265	0	0	41	3	0	0	27,763	2,243	
2009	0	0	36,252	4,156	0	0	41	3	0	0	32,134	2,258	
2010	0	0	41,999	5,281	0	0	41	3	0	0	36,756	2,246	
2011	0	0	48,179	6,693	0	0	41	3	0	0	41,524	2,206	
2012	0	0	54,734	8,456	0	0	41	3	0	0	46,316	2,140	
2013	0	0	61,633	10,648	0	0	41	3	0	0	51,024	2,050	
2014	0	0	68,804	13,350	0	0	41	3	0	552	56,044	1,958	
Total	1,656	1,106	481,247	66,009	0	0	1,025	227	0	552	416,588	36,321	

Net Present Value 35,215
 B/C Ratio 32.84
 Internal Rate of Return 98.2%

COST/BENEFIT STREAM (17/26)

33.PAHONO (PPH South 79) Repair													Unit: 1000 Pesos	
Year	Cost		EVL		TCHV		M.Cost		Flood w/o	Residual Value	Total Benefits			
	Rehab.	Dis'd	w/o	with	w/o	with	w/o	with			Dis'd			
1990	0	0	464	464	0	0	7	7	0	0	0	0		
1991	12	10	608	608	0	0	7	7	0	0	0	0		
1992	0	0	797	797	0	0	7	7	0	0	0	0		
1993	255	168	1,043	1,043	0	0	7	7	0	0	0	0		
1994	0	0	1,363	235	0	0	7	1	0	0	1,134	649		
1995	0	0	1,779	309	0	0	7	1	0	0	1,476	734		
1996	0	0	2,316	406	0	0	7	1	0	0	1,916	828		
1997	0	0	3,009	534	0	0	7	1	0	0	2,481	933		
1998	0	0	3,896	703	0	0	7	1	0	0	3,200	1,046		
1999	0	0	5,030	923	0	0	7	1	0	0	4,113	1,169		
2000	0	0	6,465	1,212	0	0	7	1	0	0	5,259	1,300		
2001	0	0	8,060	1,550	0	0	7	1	0	0	6,516	1,401		
2002	0	0	9,990	1,978	0	0	7	1	0	0	8,018	1,499		
2003	0	0	12,307	2,522	0	0	7	1	0	0	9,792	1,591		
2004	0	0	15,050	3,208	0	0	7	1	0	0	11,848	1,674		
2005	0	0	18,267	4,074	0	0	7	1	0	0	14,199	1,745		
2006	0	0	21,985	5,160	0	0	7	1	0	0	16,831	1,799		
2007	0	0	26,228	6,519	0	0	7	1	0	0	19,715	1,832		
2008	0	0	30,989	8,206	0	0	7	1	0	0	22,790	1,842		
2009	0	0	36,252	10,285	0	0	7	1	0	0	25,974	1,825		
2010	0	0	41,999	12,831	0	0	7	1	0	0	29,174	1,783		
2011	0	0	48,179	15,919	0	0	7	1	0	0	32,266	1,714		
2012	0	0	54,734	19,623	0	0	7	1	0	0	35,117	1,622		
2013	0	0	61,633	24,024	0	0	7	1	0	0	37,616	1,511		
2014	0	0	68,804	29,178	0	0	7	1	0	53	39,685	1,386		
Total	267	178	481,247	152,311	0	0	175	49	0	53	329,120	29,863		

Net Present Value 29,705
 B/C Ratio 167.88
 Internal Rate of Return 289.5%

34.TINIGUIBAN (PPH South 80) Replacement of Superstructure													Unit: 1000 Pesos	
Year	Cost		EVL		TCHV		M.Cost		Flood w/o	Residual Value	Total Benefits			
	Rehab.	Dis'd	w/o	with	w/o	with	w/o	with			Dis'd			
1990	0	0	464	464	0	0	42	42	0	0	0	0		
1991	81	70	608	608	0	0	42	42	0	0	0	0		
1992	0	0	797	797	0	0	42	42	0	0	0	0		
1993	1,586	1,043	1,043	1,043	0	0	42	42	0	0	0	0		
1994	0	0	1,363	87	0	0	42	3	0	0	1,314	751		
1995	0	0	1,779	114	0	0	42	3	0	0	1,703	847		
1996	0	0	2,316	151	0	0	42	3	0	0	2,204	953		
1997	0	0	3,009	198	0	0	42	3	0	0	2,849	1,071		
1998	0	0	3,896	261	0	0	42	3	0	0	3,673	1,201		
1999	0	0	5,030	344	0	0	42	3	0	0	4,724	1,343		
2000	0	0	6,465	454	0	0	42	3	0	0	6,050	1,495		
2001	0	0	8,060	582	0	0	42	3	0	0	7,516	1,616		
2002	0	0	9,990	746	0	0	42	3	0	0	9,282	1,735		
2003	0	0	12,307	956	0	0	42	3	0	0	11,389	1,851		
2004	0	0	15,050	1,224	0	0	42	3	0	0	13,864	1,959		
2005	0	0	18,267	1,567	0	0	42	3	0	0	16,738	2,057		
2006	0	0	21,985	2,004	0	0	42	3	0	0	20,020	2,139		
2007	0	0	26,228	2,560	0	0	42	3	0	0	23,707	2,203		
2008	0	0	30,989	3,265	0	0	42	3	0	0	27,763	2,243		
2009	0	0	36,252	4,156	0	0	42	3	0	0	32,134	2,258		
2010	0	0	41,999	5,281	0	0	42	3	0	0	36,757	2,246		
2011	0	0	48,179	6,693	0	0	42	3	0	0	41,524	2,206		
2012	0	0	54,734	8,456	0	0	42	3	0	0	46,316	2,140		
2013	0	0	61,633	10,648	0	0	42	3	0	0	51,024	2,050		
2014	0	0	68,804	13,350	0	0	42	3	0	556	56,048	1,958		
Total	1,667	1,113	481,247	66,009	0	0	1,050	231	0	556	416,599	36,322		

Net Present Value 35,209
 B/C Ratio 32.63
 Internal Rate of Return 97.9%

COST/BENEFIT STREAM (18/26)

35.SGT. MATIAS (PPH South 82)												Repair		Unit: 1000 Pesos	
Year	Cost		EVL		TCHV		M.Cost		Flood	Residual	Total Benefits				
	Rehab.	Dis'd	w/o	with	w/o	with	w/o	with	w/o	Value	Dis'd				
1990	0	0	464	464	0	0	5	5	0	0	0	0			
1991	12	10	608	608	0	0	5	5	0	0	0	0			
1992	0	0	797	797	0	0	5	5	0	0	0	0			
1993	185	122	1,043	1,043	0	0	5	5	0	0	0	0			
1994	0	0	1,363	235	0	0	5	0	0	0	1,133	648			
1995	0	0	1,779	309	0	0	5	0	0	0	1,474	733			
1996	0	0	2,316	406	0	0	5	0	0	0	1,914	828			
1997	0	0	3,009	534	0	0	5	0	0	0	2,479	932			
1998	0	0	3,896	703	0	0	5	0	0	0	3,198	1,045			
1999	0	0	5,030	923	0	0	5	0	0	0	4,111	1,169			
2000	0	0	6,465	1,212	0	0	5	0	0	0	5,257	1,300			
2001	0	0	8,060	1,550	0	0	5	0	0	0	6,515	1,400			
2002	0	0	9,990	1,978	0	0	5	0	0	0	8,017	1,498			
2003	0	0	12,307	2,522	0	0	5	0	0	0	9,790	1,591			
2004	0	0	15,050	3,208	0	0	5	0	0	0	11,846	1,674			
2005	0	0	18,267	4,074	0	0	5	0	0	0	14,198	1,745			
2006	0	0	21,985	5,160	0	0	5	0	0	0	16,829	1,798			
2007	0	0	26,228	6,519	0	0	5	0	0	0	19,713	1,832			
2008	0	0	30,989	8,206	0	0	5	0	0	0	22,788	1,841			
2009	0	0	36,252	10,285	0	0	5	0	0	0	25,972	1,825			
2010	0	0	41,999	12,831	0	0	5	0	0	0	29,173	1,782			
2011	0	0	48,179	15,919	0	0	5	0	0	0	32,265	1,714			
2012	0	0	54,734	19,623	0	0	5	0	0	0	35,116	1,622			
2013	0	0	61,633	24,024	0	0	5	0	0	0	37,614	1,511			
2014	0	0	68,804	29,178	0	0	5	0	0	39	39,670	1,386			
Total	197	132	481,247	152,311	0	0	125	20	0	39	329,072	29,875			

Net Present Value 29,743
 B/C Ratio 226.33
 Internal Rate of Return 317.4%

36.NAUBDD 1 (PPH South 86)												Repair		Unit: 1000 Pesos	
Year	Cost		EVL		TCHV		M.Cost		Flood	Residual	Total Benefits				
	Rehab.	Dis'd	w/o	with	w/o	with	w/o	with	w/o	Value	Dis'd				
1990	0	0	464	464	0	0	24	24	0	0	0	0			
1991	46	40	608	608	0	0	24	24	0	0	0	0			
1992	0	0	797	797	0	0	24	24	0	0	0	0			
1993	903	594	1,043	1,043	0	0	24	24	0	0	0	0			
1994	0	0	3,425	235	0	0	24	2	0	0	3,212	1,837			
1995	0	0	4,401	309	0	0	24	2	0	0	4,114	2,046			
1996	0	0	5,627	406	0	0	24	2	0	0	5,243	2,266			
1997	0	0	7,156	534	0	0	24	2	0	0	6,644	2,498			
1998	0	0	9,041	703	0	0	24	2	0	0	8,360	2,733			
1999	0	0	11,349	923	0	0	24	2	0	0	10,447	2,970			
2000	0	0	14,130	1,212	0	0	24	2	0	0	12,940	3,198			
2001	0	0	17,001	1,550	0	0	24	2	0	0	15,473	3,326			
2002	0	0	20,267	1,978	0	0	24	2	0	0	18,311	3,422			
2003	0	0	23,935	2,522	0	0	24	2	0	0	21,435	3,484			
2004	0	0	27,979	3,208	0	0	24	2	0	0	24,793	3,504			
2005	0	0	32,397	4,074	0	0	24	2	0	0	28,345	3,483			
2006	0	0	37,145	5,160	0	0	24	2	0	0	32,007	3,420			
2007	0	0	42,197	6,519	0	0	24	2	0	0	35,700	3,317			
2008	0	0	47,498	8,206	0	0	24	2	0	0	39,314	3,177			
2009	0	0	53,005	10,285	0	0	24	2	0	0	42,742	3,003			
2010	0	0	58,704	12,831	0	0	24	2	0	0	45,895	2,804			
2011	0	0	64,556	15,919	0	0	24	2	0	0	48,658	2,585			
2012	0	0	70,533	19,623	0	0	24	2	0	0	50,932	2,353			
2013	0	0	76,656	24,024	0	0	24	2	0	0	52,654	2,115			
2014	0	0	82,897	29,178	0	0	24	2	0	190	53,930	1,884			
Total	949	634	712,811	152,311	0	0	600	138	0	190	561,149	59,427			

Net Present Value 58,793
 B/C Ratio 93.73
 Internal Rate of Return 247.8%

COST/BENEFIT STRAM (19/26)

37.SOOK (PPH South 99)		Repair										Unit: 1000 Pesos	
Year	Cost		EVL		TCHV		M.Cost		Flood	Residual	Total Benefits	Dis'd	
	Rehab.	Dis'd	w/o	with	w/o	with	w/o	with					
1990	0	0	287	287	0	0	22	22	0	0	0	0	
1991	46	40	377	377	0	0	22	22	0	0	0	0	
1992	845	639	494	494	0	0	22	22	0	0	0	0	
1993	0	0	647	135	0	0	22	2	0	0	533	350	
1994	0	0	845	177	0	0	22	2	0	0	668	394	
1995	0	0	1,104	234	0	0	22	2	0	0	891	443	
1996	0	0	1,439	307	0	0	22	2	0	0	1,152	498	
1997	0	0	1,871	405	0	0	22	2	0	0	1,467	559	
1998	0	0	2,428	533	0	0	22	2	0	0	1,916	626	
1999	0	0	7,079	700	0	0	22	2	0	0	6,400	1,819	
2000	0	0	8,824	919	0	0	22	2	0	0	7,925	1,959	
2001	0	0	10,627	1,175	0	0	22	2	0	0	9,473	2,036	
2002	0	0	12,670	1,497	0	0	22	2	0	0	11,193	2,092	
2003	0	0	14,975	1,907	0	0	22	2	0	0	13,089	2,127	
2004	0	0	17,534	2,425	0	0	22	2	0	0	15,130	2,138	
2005	0	0	20,309	3,072	0	0	22	2	0	0	17,257	2,121	
2006	0	0	23,326	3,866	0	0	22	2	0	0	19,460	2,080	
2007	0	0	26,503	4,893	0	0	22	2	0	0	21,631	2,010	
2008	0	0	29,870	6,141	0	0	22	2	0	0	23,750	1,919	
2009	0	0	33,363	7,666	0	0	22	2	0	0	25,717	1,807	
2010	0	0	36,993	9,522	0	0	22	2	0	0	27,492	1,680	
2011	0	0	40,717	11,749	0	0	22	2	0	0	28,968	1,540	
2012	0	0	44,545	14,399	0	0	22	2	0	0	30,167	1,394	
2013	0	0	48,452	17,504	0	0	22	2	0	0	30,968	1,244	
2014	0	0	52,456	21,103	0	0	22	2	0	178	31,551	1,102	
Total	891	679	437,735	111,507	0	0	550	110	0	178	326,858	31,938	

Net Present Value 31,259
 B/C Ratio 47.04
 Internal Rate of Return 92.8%

38.KANAPAWAN (PPH South 143)		Repair										Unit: 1000 Pesos	
Year	Cost		EVL		TCHV		M.Cost		Flood	Residual	Total Benefits	Dis'd	
	Rehab.	Dis'd	w/o	with	w/o	with	w/o	with					
1990	0	0	466	466	23,563	23,563	39	39	0	0	0	0	
1991	81	70	611	611	25,053	25,053	39	39	0	0	0	0	
1992	1,471	1,112	2,060	2,060	26,610	26,610	39	39	0	0	0	0	
1993	0	0	2,666	218	28,303	26,888	39	3	0	0	3,898	2,563	
1994	0	0	3,438	287	30,131	28,625	39	3	0	0	4,694	2,684	
1995	0	0	4,412	377	32,027	30,426	39	3	0	0	5,672	2,820	
1996	0	0	5,643	496	34,058	32,355	39	3	0	0	6,885	2,977	
1997	0	0	7,176	653	36,157	34,349	39	3	0	0	8,368	3,146	
1998	0	0	9,073	858	38,460	36,537	39	3	0	0	10,174	3,326	
1999	0	0	11,390	1,126	40,897	38,852	39	3	0	0	12,344	3,509	
2000	0	0	14,178	1,477	43,470	41,297	39	3	0	0	14,910	3,686	
2001	0	0	17,066	1,886	45,366	43,098	39	3	0	0	17,484	3,758	
2002	0	0	20,339	2,404	47,262	44,899	39	3	0	0	20,334	3,801	
2003	0	0	24,026	3,059	49,293	46,829	39	3	0	0	23,467	3,814	
2004	0	0	28,098	3,885	51,392	48,823	39	3	0	0	26,818	3,790	
2005	0	0	32,533	4,921	53,559	50,881	39	3	0	0	30,326	3,727	
2006	0	0	37,301	6,215	55,793	53,004	39	3	0	0	33,911	3,624	
2007	0	0	42,365	7,822	58,096	55,191	39	3	0	0	37,484	3,483	
2008	0	0	47,688	9,804	60,533	57,506	39	3	0	0	40,946	3,309	
2009	0	0	53,229	12,231	63,106	59,951	39	3	0	0	44,189	3,105	
2010	0	0	58,947	15,173	65,747	62,459	39	3	0	0	47,097	2,878	
2011	0	0	64,815	18,703	68,455	65,032	39	3	0	0	49,571	2,634	
2012	0	0	70,819	22,892	71,299	67,734	39	3	0	0	51,528	2,381	
2013	0	0	76,971	27,808	74,278	70,564	39	3	0	0	52,913	2,126	
2014	0	0	83,256	33,494	77,393	73,523	39	3	0	310	53,978	1,886	
Total	1,552	1,183	718,566	178,926	1,200,301	1,144,049	975	183	0	310	596,991	69,024	

Net Present Value 67,841
 B/C Ratio 58.35
 Internal Rate of Return 243.5%

COST/BENEFIT STREAM (20/26)

39.BASIASD (PPH South 154)													Repair		Unit: 1000 Pesos	
Year	Cost		EVL		TCHV		M.Cost		Flood w/o	Residual Value	Total Benefits	Dis'd				
	Rehab.	Dis'd	w/o	with	w/o	with	w/o	with								
1990	0	0	466	466	34,036	34,036	68	68	0	0	0	0				
1991	139	121	611	611	36,187	36,187	68	68	0	0	0	0				
1992	2,594	1,961	2,060	2,060	38,437	38,437	68	68	0	0	0	0				
1993	0	0	2,666	216	40,862	38,838	68	5	0	0	4,554	2,995				
1994	0	0	3,438	287	43,523	41,347	68	5	0	0	5,390	3,082				
1995	0	0	4,412	377	46,261	43,948	68	5	0	0	6,411	3,187				
1996	0	0	5,643	496	49,195	46,736	68	5	0	0	7,669	3,316				
1997	0	0	7,176	653	52,227	49,616	68	5	0	0	9,198	3,458				
1998	0	0	9,073	858	55,553	52,775	68	5	0	0	11,055	3,614				
1999	0	0	11,390	1,126	59,074	56,120	68	5	0	0	13,280	3,775				
2000	0	0	14,178	1,477	62,790	59,651	68	5	0	0	15,903	3,931				
2001	0	0	17,066	1,886	65,529	62,252	68	5	0	0	18,519	3,981				
2002	0	0	20,339	2,404	68,267	64,854	68	5	0	0	21,412	4,002				
2003	0	0	24,026	3,059	71,201	67,641	68	5	0	0	24,589	3,996				
2004	0	0	28,098	3,885	74,233	70,522	68	5	0	0	27,988	3,955				
2005	0	0	32,533	4,921	77,363	73,495	68	5	0	0	31,543	3,876				
2006	0	0	37,301	6,215	80,590	76,561	68	5	0	0	35,178	3,759				
2007	0	0	42,365	7,822	83,916	79,720	68	5	0	0	38,802	3,606				
2008	0	0	47,688	9,804	87,437	83,065	68	5	0	0	42,319	3,420				
2009	0	0	53,229	12,231	91,153	86,596	68	5	0	0	45,619	3,205				
2010	0	0	58,947	15,173	94,968	90,219	68	5	0	0	48,585	2,969				
2011	0	0	64,815	18,703	98,880	93,936	68	5	0	0	51,119	2,716				
2012	0	0	70,819	22,892	102,988	97,838	68	5	0	0	53,140	2,455				
2013	0	0	76,971	27,808	107,291	101,926	68	5	0	0	54,591	2,193				
2014	0	0	83,256	33,494	111,790	106,200	68	5	0	547	55,961	1,955				
Total	2,733	2,082	718,566	178,926	1,733,771	1,652,516	1,700	314	0	547	622,625	73,447				

Net Present Value 71,365
 B/C Ratio 35.28
 Internal Rate of Return 172.0%

40.GUMACA (PPH South 173)													Replacement of Superstructure		Unit: 1000 Pesos	
Year	Cost		EVL		TCHV		M.Cost		Flood w/o	Residual Value	Total Benefits	Dis'd				
	Rehab.	Dis'd	w/o	with	w/o	with	w/o	with								
1990	127	127	693	693	0	0	64	64	0	0	0	0				
1991	0	0	907	907	0	0	64	64	0	0	0	0				
1992	0	0	1,187	1,187	0	0	64	64	0	0	0	0				
1993	2,432	1,599	1,551	1,551	0	0	64	64	0	0	0	0				
1994	0	0	2,024	129	0	0	64	5	0	0	1,954	1,117				
1995	0	0	2,639	170	0	0	64	5	0	0	2,528	1,257				
1996	0	0	3,427	223	0	0	64	5	0	0	3,263	1,411				
1997	0	0	4,443	293	0	0	64	5	0	0	4,209	1,582				
1998	0	0	5,742	385	0	0	64	5	0	0	5,415	1,770				
1999	0	0	7,396	506	0	0	64	5	0	0	6,949	1,975				
2000	0	0	9,487	666	0	0	64	5	0	0	8,880	2,195				
2001	0	0	12,100	874	0	0	64	5	0	0	11,285	2,426				
2002	0	0	15,348	1,146	0	0	64	5	0	0	14,261	2,665				
2003	0	0	19,347	1,503	0	0	64	5	0	0	17,903	2,910				
2004	0	0	24,225	1,971	0	0	64	5	0	0	22,313	3,153				
2005	0	0	30,095	2,582	0	0	64	5	0	0	27,572	3,388				
2006	0	0	37,097	3,381	0	0	64	5	0	0	33,775	3,609				
2007	0	0	45,322	4,423	0	0	64	5	0	0	40,958	3,806				
2008	0	0	54,851	5,779	0	0	64	5	0	0	49,132	3,970				
2009	0	0	65,758	7,539	0	0	64	5	0	0	58,278	4,095				
2010	0	0	78,045	9,814	0	0	64	5	0	0	68,290	4,173				
2011	0	0	91,759	12,748	0	0	64	5	0	0	79,070	4,201				
2012	0	0	106,876	16,512	0	0	64	5	0	0	90,423	4,178				
2013	0	0	123,361	21,312	0	0	64	5	0	0	102,108	4,102				
2014	0	0	141,203	27,398	0	0	64	5	0	853	114,717	4,008				
Total	2,559	1,726	884,883	123,692	0	0	1,600	361	0	853	763,283	61,992				

Net Present Value 60,266
 B/C Ratio 35.92
 Internal Rate of Return 88.2%