

APPENDIX

INPUT DATA

Appendix A-1 FOR ESTIMATION OF THE PRODUCER'S SURPLUS BENEFIT

PRV. : SULAWESI SELATAN

KAB. : GOWA

SURVEY YEAR: 1983

[illegible]

	r_1	r_2	r_3	r_4	FARMER'S CONSUMPTION : (C_p)	NON-AGRO REQUIREMENT : (NG)
ANNUAL AVERAGE GROWTH RATE %	0.9	0.7	0.05	4.2	0.13 Ton/head/year	0.06 Ton/ton

	SEDAN	BUS	TRUCK	MOTOR CYCLE	AVERAGE FREIGHT TONAGE	
RATE OF EACH VEHICLE TYPE %	24.00	6.79	23.60	45.61		0.8 Ton/Truck

Appendix A-2 Engineering Data

ROAD LINK DATA

PROVINCE : Sulawesi Selatan

KABUPATEN: Gowa

LINK NO.	BEGINNING POINT (DESA NAME)	END POINT (DESA NAME)	LENGTH (KM)	THROUGH THE KEC. NAME & LENGTH		REMARKS
				KEC. NAME	LENGTH (KM)	
01	Pabbangngiang	Pattallassang	12	Bonto Marannu	10	1
				Sombaopu	2	
02	Pattallassang	Pacellekang	3	Bontomarannu	3	6
03	Pallangga	Cambaya	4	Pallangga	4	
04	Limbung	Mandalle	6	Bajeng	6	
05	Rappokaleleng	Pabbundukang	14	Bontonompo	14	4
06 a	Pallangga	Candika	9	Bajeng	1	9
				Pallangga	8	
06 b	Candika	Lassang	4	Bajeng	4	I.L.N No. 59
06 c	Lassang	Sapaya	33	Tompobulu	11	I.L.N No. 60
				Parang Lo'e	16	
				Bontomarannu	6	
07	Rappodaang	Tonrorita	30	Tompobulu	30	9
08	Sapaya	Simp.Malino	12	Tompobulu	5	9
				Tinggi Moncong	7	
09	Sapaya	Malakaji	45	Tompobulu	31	8
				Tinggi Moncong	14	
10	Malakaji	Salakowa	7	Tompobulu	7	
11	Sanrangang	Malakaji	39	Tompobulu	39	8
12	Pattallassang	Pakkatto	7	Bontomarannu	7	6
13	Pabbentenggang	Bontoramba	6	Bajeng	6	
14	Pabbentenggang	Lassang	7	Bajeng	7	3
15	Lauwa	Tonrorita	14	Tompobulu	14	
16	Botolempangang	Majanang	-	Tinggi Moncong	-	
				Tompo Bulu	-	
17	Tamaona	B o n e	-	Tinggi Moncong	-	
18	L a n n a	Pattallassang	9	Tinggi Moncong	3	7
				Bontomarannu	6	
19	L a n n a	P e o	14	Parang Lo'e	14	7
20	Bonto Jai	Kab. Maros	-	Tinggi Moncong	-	
21	Malakaji	Campagaya	6	Tompobulu	6	

Please note the priority No. in the Remarks of this list for each links No. according to the each Kabupaten's development plan.

ROAD LINK DATA

PROVINCE : Sulawesi Selatan

KABUPATEN: Gowa

LINK NO.	BEGINNING POINT (DESA NAME)	END POINT (DESA NAME)	LENGTH (KM)	THROUGH THE KEC. NAME & LENGTH		REMARKS
				KEC. NAME	LENGTH (KM)	
22	Borongloe	Samata	2	Bontomarannu	2	
23	Bontoramba	Samata	3	Bontomarannu	3	
24	Jemb.Timbang	Somba Ompu	2	Sombaopu	2	
25	Tamallayang	Bontocaradde	2	Bontonompo	2	
26	Comp.DAM XIV	Kallengtala	3	Sombaopu	3	
27	Bontokamase	Katangka	5	Sombaopu	5	
28	Sungguminasa	Pabbangngi-ang	2	Sombaopu	2	
29	Tamaranca	Lakiung	1	Sombaopu	1	
30	Mangasa	Batas UP	1	Sombaopu	1	
31	Mangasa	Katangka	2	Sombaopu	2	
32	Kattangka	Pabbangngi-ang	1	Sombaopu	1	1
33	Bontoala	Tangngalla	4	Bajeng	2	
				Pallangga	2	
34	Cambaya	Tangngalla	6	Bajeng	4	
				Pallangga	2	
35	Tangngalla	Bontomanai	4	Bajeng	4	
36	Bontorea	Tacciri	2	Bajeng	2	
37	B o k a	Bontomanai	3	Bajeng	3	2
38	Panciro	Barombong	6	Bajeng	6	
39	Kalukuang	B o n e	7	Bajeng	7	2
40	Moncobalang	Simpang Limbung	7	Bajeng	7	
41	B o k a	Pabbentengang	11	Bajeng	6	
				Pallangga	5	
42	Limbung	C a n d i k a	9	Bajeng	9	3
43	Bontonompo	Barembeng	5	Bontonompo	5	
44	D o j a	Ciniayo	6	Bontonompo	1	
				Bajeng	5	
45	Paccellekang	K M U P	7	Bontomarannu	7	6

Please note the priority No. in the Remarks of this list for each links No. according to the each Kabupaten's development plan.

KABUPATEN: Gowa

Please note the priority No. in the Remarks of this list for each links No. according to the each Kabupaten's development plan.

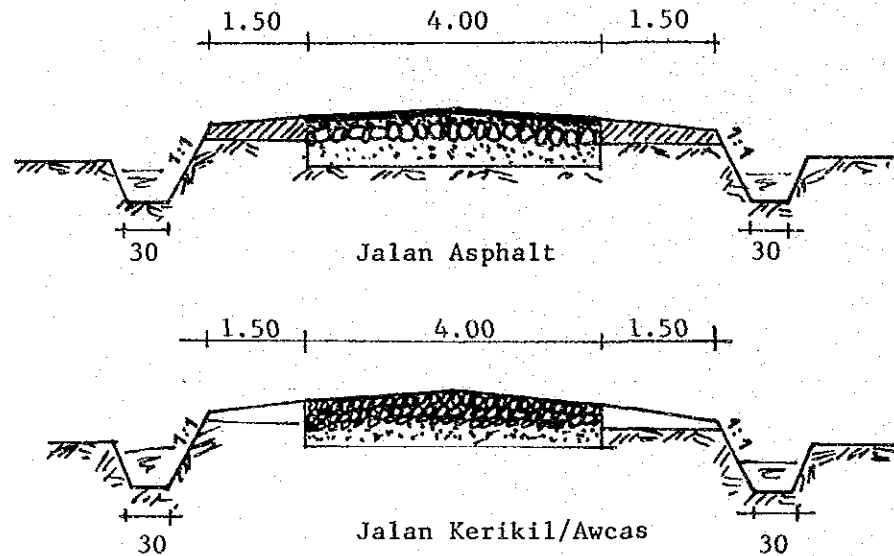
What Kind of Design Criteria has being applied for the new road construction and the improvement for the Kabupaten Road ?

Kriteria Perencanaan yang dipakai pada program penanganan jalan Kabupaten, baik untuk jalan lama maupun pembangunan baru.

Please draw the Typical Cross Section of the Kabupaten Road.

Buat gambar dan penjelasan dari: Typical cross section yang dipakai pada program penanganan jalan selama ini (baik untuk jalan lama, maupun pembangunan baru)

TYPICAL CROSS SECTION.



LOCATION AND COSTS OF THE KABUPATEN

ROADS CONSTRUCTED OR IMPROVED IN 1980/1981

Biaya konstruksi penanganan

Jalan dan Jembatan Kabupaten tln. 1980/1981

[illegible]

* PAVEMENT TYPE : Pls note the appropriate No. below.

1. : Asphalt surface / penetrasi macadam
2. : Asphalt seal / pelaburan aspal
3. : Gravel / kerikil
4. : Gravel /AWCAS / kerikil / japat

PROPINSI: Sulawesi SelatanKABUPATEN: Gowa

LOCATION AND COSTS OF THE KABUPATEN

ROADS CONSTRUCTED OR IMPROVED IN 1981/1982

Biaya konstruksi penanganan

jalan dan jembatan Kabupaten thn. 1981/1982

LINK NO. Nomor Ruas	LOCATION From - To (dari - ke)	Lebar per- kerasan(m)	Type per- kerasan	LENGTH Panjang (KM)	COSTS Harga (Rp 10 ⁶)	REMARKS Keterangan
		Lebar Jembatan	Type Jembatan			
27	Bonto ² a - Komplek Kodam	4	Gravel	1.76	54,983	
		-	-	-		
27	Katangka - Bonto ² a	4	Gravel	2.24	66,600	
		-	-	-		
-	Jl.HOS.Cokroaminoto	4	Asphalt Surface	0.8	9,569	
		-	-	-		
15	S. Esere	-	-	-	26,711	
		4.5	Timber	12 m		
-	Pa'Bangiang - Bonto ² a	4	Gravel	1.65	18,900	
		-	-	-		
18	Lanna - Pattallasang	4	Gravel	3	43,495	
		-	-	-		
05	Sengka - Pa'Bundukang	4	Gravel	3	35,661	
		-	-	-		
-	Kota Malino	4	Asphalt Surface	0.91	19,500	
		-	-	-		
-	Jl.KH.Wahid Hasyim Kota Sungguminasa	8	Asphalt Surface	-	35,075	
		-	-	-		
32	Katangka - Samata	4	Asphalt Surface	1.63	17,329	
		-	-	-		
-	Jl.Makam.S. Hasanuddin	4	Asphalt Surface	1	16,738	
		-	-	-		
-	Kalukuang-Kab.Takalar	4	Gravel	1.1	11,441	
		-	-	-		

* PAVEMENT TYPE : Pls note the appropriate No. below.

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4. : Gravel /AWCAS / kerikil / japat

LINK NO : Nomor Ruas	LOCATION From - To (dari - ke)	Lebar per- kerasan(m)	Type per- kerasan	LENGTH Panjang	COSTS Harga (Rp 10 ⁶)	REMARKS Keterangan
		Lebar Jembatan	Type Jembatan	(KM)		
05	Sengaka - Pa' Bundukang	4	Gravel	2	53,527	
18	Lanna - Pattallasang	4	Gravel	2.57	60,073	
06	-	4.5	Duiker Plat	40 m	22,198	
04	Limbung - Takalar (Mandale)	4	Asphalt Surface	3.35	51,244	
23	Samata - Bontoramba	4	Gravel	1.89	77,285	
-	S. Moncabalong	4.5	Timber	11 m	14,896	
25	Bontocarade - Tamalayang	4	Gravel	1.3	17,935	
-	Timbuseng - Pa' Bangngiang	4	Asphalt Surface	1.75	27,655	
37	Boka - Julubori (Bontoma nai)	4	Gravel	0.7	9,527	
-	Kota Sungguminasa - Pallang ga	4	-	10	39,098	
-	Samata - Kassi	4	Asphalt Surface	1.5	29,578	

* PAVEMENT TYPE : Pls note the appropriate No. below.

1. : Asphalt surface / penetrasi macadam
2. : Asphalt seal / pelaburan aspal
3. : Gravel / kerikil
4. : Gravel / AWCAS / kerikil / japat

LINK NO Nomor Ruas	LOCATION From - To (dari - ke)	Lebar per- kerasan(m) Lebar Jembatan	Type per- kerasan Type Jembatan	LENGTH Panjang (KM)	COSTS Harga (Rp 10 ⁶)	REMARKS Keterangan
23	Botoramba - Samata	4	Gravel	0.8	13,312	
37	Boka-Julubori (Bontomanai)	4	Gravel	5	42,474	
04	Limbung - Takalar	4	Asphalt Surface	2.10	35,283	
-	S. Tanggala	4.5	Timber	12 m	15,062	
14	Pa'Bentengang - Kab. Taka lar (Lassang)	4	Gravel	1.75	36,341	
-	Balang Punnia - Pam U. Pandang	4	Gravel	4	50,018	
22	Bonongloe - Samata	4	Gravel	1.98	26,003	
12	Pa'Katto - Pattallasang	4	Gravel	2.10	20,768	
-	Bonto Kamase - Pa'Bangi ang	4	Asphalt Surface	4	69,938	
-	Panggentungang-Samata	4	Asphalt Surface	2.18	36,959	
-	Pandang ² - Bonto ² A	4	Gravel	1.96	35,411	
-	Pemeliharaan Jalan Kota Sungguminasa	4	-	9.5	16,595	

* PAVEMENT TYPE : Pls note the appropriate No. below.

1. : Asphalt surface / penetrasi macadam
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LINK NO Nomor Ruas	LOCATION From - To (dari - ke)	Lebar per- kerasan(m)	Type per- kerasan	LENGTH Panjang (KM)	COSTS Harga (Rp 10 ⁶)	REMARKS Keterangan
		Lebar Jembatan	Type Jembatan			
45	Paccele kang - Pam UP	4	Gravel	2.45	34,979	
		-	-	-		
12	Pakkatto - Pattallasang	4	Gravel	1.75	32,933	
		-	-	-		
-	Bontocradde - Galesong	4	Gravel	3.66	33,100	
		-	-	-		
-	Barembeng - Salekowa	4	Gravel	2.34	21,259	
		-	-	-		
-	Borimatangkasa - Kale - Bajeng - Tamattia	4	Gravel	3.05	25,850	
		-	-	-		
39	Moncobalang-Kec.Pallangga	4	Gravel	3.86	47,061	
		-	-	-		
-	Pattapang - Lombassang	4	Gravel	1.110	14,785	
		-	-	-		
33	Cambayya - Tangalla	4	Gravel	5.662	60,000	
		-	-	-		
-	Kota Sungguminasa	4	Asphalt Surface	3.45	54,540	
		-	-	-		
-	Samata - Pattallassang	4	Asphalt Surface	3.03	54,780	
		-	-	-		
-	Bonto ² A - U.Pandang	4	Asphalt Surface	2.50	13,835	
		-	-	-		
-	Jl.Propinsi-Kantor Camat	4	Gravel	0.55	10,427	
		-	-	-		
-	Sungai Komang Loe	4.5	Timber	5 m	9,421	

* PAVEMENT TYPE : Pls note the appropriate No. below.

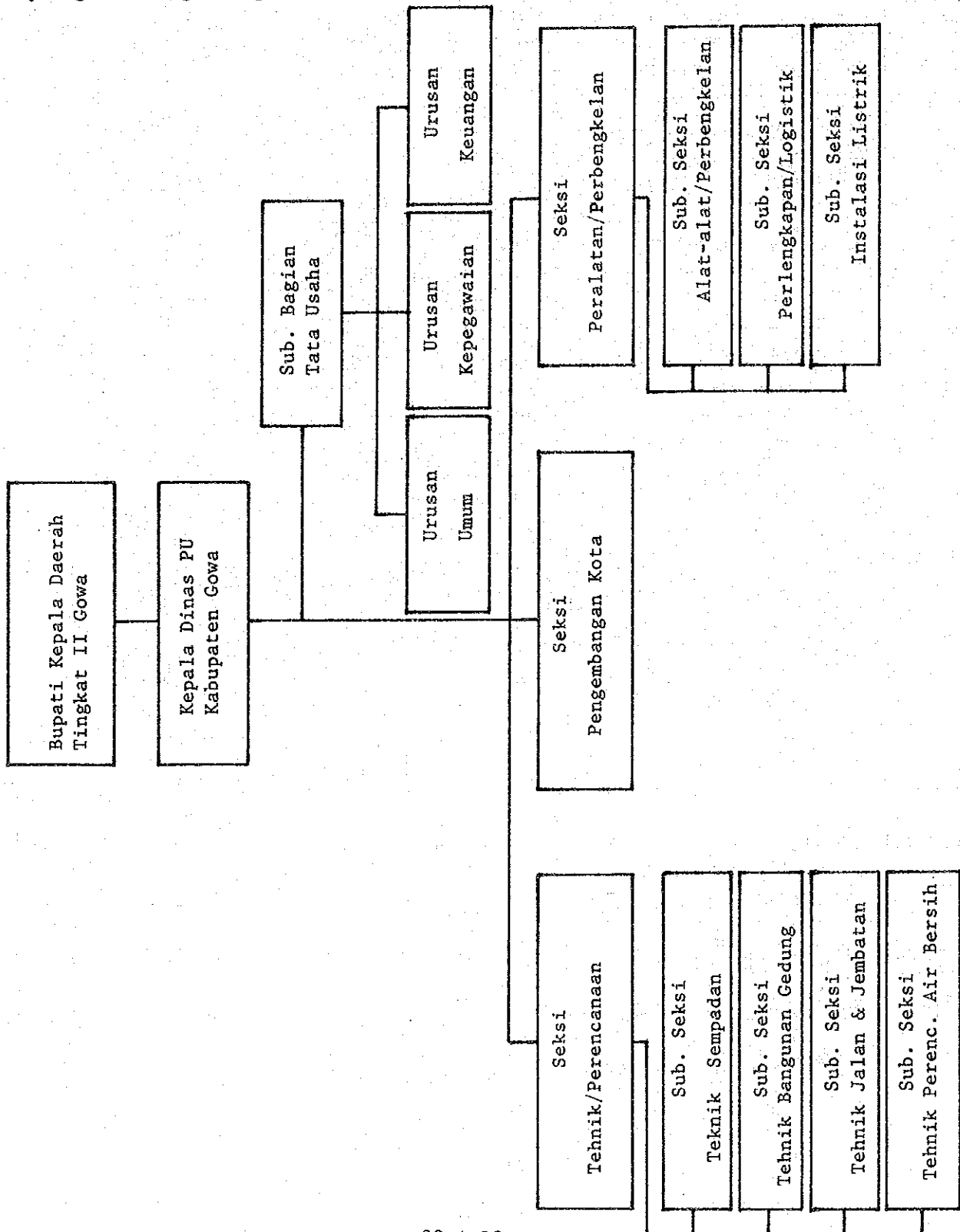
1. : Asphalt surface / penetrasi macadam
2. : Asphalt seal / pelaburan aspal
3. : Gravel / kerikil
4. : Gravel /AWCAS / kerikil / japat

EXISTING ORGANIZATION IN KABUPATEN

Struktur Organisasi yang ada dari P.U Kabupaten

Please draw the Cart of the Existing Organization in the Kabupaten.

Harap digambar bagan organisasi dari DPUK.



EXISTING STAFF RESOURCES OF BINA MARGA OF PU KABUPATENTenaga Dinas PUK yang adaPROPINSI: Sulawesi SelatanKABUPATEN: Gowa

DESCRIPTION / Uraian	NUMBER / Jumlah	REMARKS Keterangan
CONTROLLING STAFF Staff teknis PUK	(24)	(19)
DPUK ENGINEER Sarjana Teknik	-	-
ASSISTANT ENGINEER Sarjana Muda Teknik	8	7
TECHNICIAN STAFF Staff Teknik (STM)	16	12
ADMINISTRATION Tenaga Administrasi	3	2
SUPERVISOR Tenaga Pengawas	16	16
WORKING FORCE Tenaga Pelaksana Lapangan	(31)	(2)
OPERATORS Operators	5	2
DRIVERS Supir	3	-
MECHANICS Mechanic	1	-
TRADESMAN Tukang	5	-
LABOUR Buruh / Pekerja	16	-
OTHERS Lain-lain	1	-
TOTAL / JUMLAH	74	39

Catatan ; Untuk kolom keterangan harap diisi berapa orang yang telah mendapat Training.

LOCATION AND AREA OF DPUK WORKSHOP

E-06

Lokasi Workshop DPUKPROPINSI : Sulawesi SelatanKABUPATEN: Gowa

LOCATION Lokasi	AREA (m2) Luas	NUMBER Jumlah	REMARKS Keterangan
Sungguminasa	20.000	1	Rencana

PROPINSI: Sulawesi Selatan

E-07

KABUPATEN: GowaLAND ACQUISITION COST
Daftar harga pembebasan tanah

DESCRIPTION Uraian	UNIT Satuan	RATE (RP) Harga	REMARKS Keterangan
CITY/kota	M2	15,000	
VILLAGE / desa	M2	2,500	
RICE FIELD/sawah	M2	2,000	
DRY FIELD/ladang	M2	1,500	
MIX CROPS/panen	M2	2,750	
FOREST/hutan	M2	750	
SWAMP / rawa	M2	500	
OTHERS / lain-lain	M2	-	

Classification of local contractors at Kabupaten level.

Klasifikasi kontraktor di Kabupaten

[illegible]

NOTE: DATI II

LIST OF EXISTING EQUIPMENT OF LOCAL CONTRACTOR

Name of contractor

NAME OF EQUIPMENT Jenis peralatan	EXISTING CONDITION/ Kondisi Peralatan						REQUIRE - MENT / Ke- butuhan peralatan baru
	TYPE/ Tipe	P.Y	NUMBER / Jumlah			REASON OF BAD CONDI TION/Sebab Kerusakan	
Bulldozer	Sakai	1980	2	-	2		
Motor Grader							
Tyre Roller							
Steel Whell Roller							
Vibration Roller							
Wheel Loader							
Front End Loader and Backhoe							
Mobile Crane							
Concrete Mixer							
Stone Crusher							
Portable Compressor							
Hydraulic Excavator							
Asphalt Paving Machine							
Asphalt Sprayer							
Asphalt Mixing Machine							
Mobile Workshop							
Mechanic Ranmer							
Plate Tamper							
Pile Driver							
Leg Drill							
Hand Hammer							
Farm Tractor							
Dump Truck	Toyota	1979	135	25	160	Tua	
Water Tank Truck							
Fuel Tank Truck							
Pick Up	Datsun	1980	57	11	68	Tua	
Jeep							
Motorcycle	Honda	1983	65	5	70	Tua	
Generator	Sakai	1983	6	-	6		
Water Pump	Sanyo	1983	92	10	102	Tua	
Others (Sedan)		1979	20	3	23		

LIST OF EXISTING EQUIPMENT OF P.U KABUPATEN

NAME OF EQUIPMENT Jenis peralatan	EXISTING CONDITION/ Kondisi Peralatan					REASON OF BAD CONDI TION/Sebab Kerusakan	REQUIRE - MENT / Ke- butuhan peralatan baru
	TYPE/ Tipe	P.Y	NUMBER / Jumlah				
			GOOD Baik	BAD Rusak	TOTAL Jumlah		
Bulldozer							
Motor Grader							
Tyre Roller							
Steel Wheel Roller		1976	6	-	6		
Vibration Roller		1983	4	-	4		
Wheel Loader							
Front End Loader and Backhoe							
Mobile Crane							
Concrete Mixer							
Stone Crusher		1979	-	1	1		
Portable Compressor							
Hydraulic Excavator							
Asphalt Paving Machine							
Asphalt Sprayer		1984	1	-	1		
Asphalt Mixing Machine							
Mobile Workshop							
Mechanic Rammer							
Plate Tamper							
Pile Driver							
Leg Drill							
Hand Hammer							
Farm Tractor							
Dump Truck							
Water Tank Truck							
Fuel Tank Truck							
Pick Up							
Jeep							
Motorcycle							
Generator							
Water Pump							
Others							

Appendix A-3

CONSTRUCTION AND MAINTENANCE COST FOR PROPOSED ROAD LINKS

PROV : SULAWESI SELATAN

KAB : BOWA

LINK NO : 5B (111B-2)

LENGTH : 14 Km

UPGRADE : 7.0m road bed, 4.0m road with surface Base Course

(Rp)

ITEM	UNIT	QUANTITY	<<< UNIT COST >>>		<<<<< COST >>>>>		>>>>> TOTAL
			LOCAL	FOREIGN	LOCAL	FOREIGN	
Site Clearance in Light Bush	m2	0.0	163	91	0	0	0
Subgrade Preparation	m2	98000.0	20	11	1,960,000	1,078,000	3,038,000
Normal Fill	m3	0.0	1,683	865	0	0	0
Fill in Swamp	m3	0.0	2,494	1,055	0	0	0
Normal Excavation to Spoil	m3	1008.0	986	524	993,888	528,192	1,522,080
Sub Base Course	m3	7840.0	3,189	1,351	25,001,760	10,591,840	35,593,600
Base Course	m3	3360.0	4,364	2,303	14,663,040	7,738,080	22,401,120
Shoulder	m2	42000.0	293	146	12,306,000	6,132,000	18,438,000
Asphalt Patching	m2	0.0	3,372	1,346	0	0	0
Surface Dressing (Single)	m2	0.0	587	552	0	0	0
Surface Dressing (Double)	m2	0.0	734	868	0	0	0
Earth Drain	m	7000.0	773	119	5,411,000	833,600	6,244,600
Earth Drain in Swamp (by machine)	m3	0.0	1,157	475	0	0	0
Pipe Culvert Ø80cm	m	0.0	39,235	40,307	0	0	0
Masonry Culvert (80x80cm)	m	30.0	53,753	34,731	1,612,590	1,041,930	2,654,520
Retaining Wall and Wing Wall (Timber)	m2	0.0	16,836	246	0	0	0
Retaining Wall and Wing Wall (Masonry)	m3	2.9	37,429	11,421	108,544	33,120	141,664
Gabion Protection	m3	0.0	9,029	121	0	0	0
New Bridge (Timber)	SET	1.0	--	--	0	0	0
New Bridge (Concrete)	SET	1.0	--	--	0	0	0
Sub Total					62,056,822	27,976,162	90,032,984
Overhead (15%)					9,308,523	4,196,424	13,504,947
TOTAL COST					71,365,345	32,172,586	103,537,931

Manual routine maintenance of road	Km	14.0	121,976	7,260	1,707,664	101,640	1,809,304
Routine maintenance of gravel road	Km	14.0	188,115	88,186	2,633,610	1,234,604	3,868,214
Sub Total					4,341,274	1,336,244	5,677,518
Maintenance of Timber Bridge (New)	m2	0.0	10,222	1,344	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.0	2,003	2,456	0	0	0
Maintenance of Timber Bridge (Exist)	m2	0.0	8,935	2,517	0	0	0
Maintenance of Concrete Bridge (Exist)	m2	0.0	4,224	2,336	0	0	0

Earthwork & Pavement	Unit Cost	(Rp/Km)	:	7,395,567
Timber Bridge	Unit Cost	(Rp/m2)	:	
Concrete Bridge	Unit Cost	(Rp/m2)	:	
Survived Value		(Rp)	:	17,796,000
Maintenance Rate without Bridge		(%)	:	5.48
New Bridge Cost Rate		(%)	:	

PROV : SULAWESI SELATAN KAB : GOWA

LINK NO : 47 (IIB-2) LENGTH : 6 Km

UPGRADE : 8.0m road bed, 4.0m road with surface Base Course

(Rp)

ITEM	UNIT	QUANTITY	UNIT COST LOCAL FOREIGN	LOCAL	FOREIGN	COST LOCAL FOREIGN	TOTAL
Site Clearance in Light Rush	m2	9.0	163	91	0	0	0
Subgrade Preparation	m2	48000.0	20	11	960,000	528,000	1,488,000
Normal Fill	m3	0.0	1,683	865	0	0	0
Fill in Swamp	m3	0.0	2,494	1,055	0	0	0
Normal Excavation to Spoil	m3	614.0	986	524	605,404	321,736	927,140
Sub Base Course	m3	3360.0	3,189	1,351	10,715,040	4,539,360	15,254,400
Base Course	m3	1440.0	4,364	2,303	6,284,160	3,316,320	9,600,480
Shoulder	m2	24000.0	293	146	7,032,000	3,504,000	10,536,000
Asphalt Patching	m2	0.0	3,372	1,346	0	0	0
Surface Dressing (Single)	m2	0.0	587	552	0	0	0
Surface Dressing (Double)	m2	0.0	734	868	0	0	0
Earth Drain	m	5900.0	773	119	4,560,700	702,100	5,262,800
Earth Drain in Swamp (by machine)	m3	0.0	1,157	475	0	0	0
Pipe Culvert 80cm	m	0.0	39,235	40,307	0	0	0
Masonry Culvert (80x80cm)	m	0.0	53,753	34,731	0	0	0
Retaining Wall and Wing Wall (Timber)	m2	0.0	16,836	246	0	0	0
Retaining Wall and Wing Wall (Masonry)	m3	0.0	37,429	11,421	0	0	0
Gabion Protection	m3	0.0	9,029	121	0	0	0
New Bridge (Timber)	SET	1.0	--	--	0	0	0
New Bridge (Concrete)	SET	1.0	--	--	0	0	0
Sub Total					30,157,304	12,911,516	43,068,820
Overhead (15%)					4,523,595	1,936,727	6,460,322
TOTAL COST					34,680,899	14,848,243	49,529,142

Manual routine maintenance of road	Km	6.0	121,976	7,260	731,856	43,560	775,416
Routine maintenance of gravel road	Km	6.0	188,115	88,186	1,128,690	529,116	1,657,806
Sub Total					1,860,546	572,676	2,433,222
Maintenance of Timber Bridge (New)	m2	0.0	10,222	1,344	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.0	2,003	2,456	0	0	0
Maintenance of Timber Bridge (Exist)	m2	0.0	8,935	2,517	0	0	0
Maintenance of Concrete Bridge (Exist)	m2	99.0	4,224	2,336	418,176	231,264	649,440

Earthwork & Pavement Unit Cost (Rp/Km)	:	8,254,857
Timber Bridge Unit Cost (Rp/m2)	:	
Concrete Bridge Unit Cost (Rp/m2)	:	
Survived Value (Rp)	:	7,627,200
Maintenance Rate without Bridge (%)	:	4.91
New Bridge Cost Rate (%)	:	

PROV : SULAWESI SELATAN KAB : BOWA

LINK NO : 54 (IIB-2) LENGTH : 6 Km

UPGRADE : 7.0m road bed, 4.0m road with surface Base Course

(Rp)

ITEM	UNIT	QUANTITY	<<< UNIT COST >>>		<<<<< COST >>>>>		>>>>> TOTAL
			LOCAL	FOREIGN	LOCAL	FOREIGN	
Site Clearance in Light Bush	m2	0.0	163	91	0	0	0
Subgrade Preparation	m2	21000.0	20	11	420,000	231,000	651,000
Normal Fill	m3	0.0	1,683	865	0	0	0
Fill in Swamp	m3	0.0	2,494	1,055	0	0	0
Normal Excavation to Spoil	m3	256.0	986	524	252,416	134,144	386,560
Sub Base Course	m3	2044.4	3,189	1,351	6,519,591	2,761,984	9,281,575
Base Course	m3	1440.0	4,364	2,303	6,284,160	3,316,320	9,600,480
Shoulder	m2	18000.0	293	146	5,274,000	2,628,000	7,902,000
Asphalt Patching	m2	0.0	3,372	1,346	0	0	0
Surface Dressing (Single)	m2	0.0	587	552	0	0	0
Surface Dressing (Double)	m2	0.0	734	868	0	0	0
Earth Drain	m	0.0	773	119	0	0	0
Earth Drain in Swamp (by machine)	m3	0.0	1,157	475	0	0	0
Pipe Culvert Ø80cm	m	6.0	39,235	40,307	235,410	241,842	477,252
Masonry Culvert (80x80cm)	m	0.0	53,753	34,731	0	0	0
Retaining Wall and Wing Wall (Timber)	m2	0.0	16,836	246	0	0	0
Retaining Wall and Wing Wall (Masonry)	m3	0.0	37,429	11,421	0	0	0
Gabion Protection	m3	0.0	9,029	121	0	0	0
New Bridge (Timber)	SET	1.0	--	--	3,970,636	490,698	4,461,334
New Bridge (Concrete)	SET	1.0	--	--	0	0	0
Sub Total					22,956,213	9,803,988	32,760,201
Overhead (15%)					3,443,431	1,470,598	4,914,029
TOTAL COST					26,399,644	11,274,586	37,674,230

Manual routine maintenance of road	Km	6.0	121,976	7,260	731,856	43,560	775,416
Routine maintenance of gravel road	Km	6.0	188,115	88,186	1,128,690	529,116	1,657,806
Sub Total					1,860,546	572,676	2,433,222
Maintenance of Timber Bridge (New)	m2	18.0	10,222	1,344	183,996	24,192	208,188
Maintenance of Concrete Bridge (New)	m2	0.0	2,003	2,456	0	0	0
Maintenance of Timber Bridge (Exist)	m2	0.0	8,935	2,517	0	0	0
Maintenance of Concrete Bridge (Exist)	m2	0.0	4,224	2,336	0	0	0

Earthwork & Pavement	Unit Cost	(Rp/Km)	:	5,423,950
Timber Bridge	Unit Cost	(Rp/m2)	:	285,030
Concrete Bridge	Unit Cost	(Rp/m2)	:	
Survived Value		(Rp)	:	4,640,787
Maintenance Rate without Bridge		(%)	:	7.48
New Bridge Cost Rate		(%)	:	13.62

PROV : SULAWESI SELATAN KAB : GOWA

LINK NO : 45 (IIIB-2) LENGTH : 7 Km

UPGRADE : 8.0m road bed, 4.0m road with surface Base Course

(Rp)

ITEM	UNIT	QUANTITY	UNIT COST	LOCAL	FOREIGN	LOCAL	FOREIGN	TOTAL
Site Clearance in Light Bush	m2	0.0	163	91	0	0	0	0
Subgrade Preparation	m2	56000.0	20	11	1,120,000	616,000	1,736,000	1,736,000
Normal Fill	m3	0.0	1,683	865	0	0	0	0
Fill in Swamp	m3	0.0	2,494	1,055	0	0	0	0
Normal Excavation to Spoil	m3	256.0	986	524	252,416	134,144	386,560	386,560
Sub Base Course	m3	3920.0	3,189	1,351	12,500,000	5,295,920	17,796,000	17,796,000
Base Course	m3	1680.0	4,364	2,303	7,331,520	3,869,040	11,200,560	11,200,560
Shoulder	m2	28000.0	293	146	8,204,000	4,088,000	12,292,000	12,292,000
Asphalt Patching	m2	0.0	3,372	1,346	0	0	0	0
Surface Dressing (Single)	m2	0.0	587	552	0	0	0	0
Surface Dressing (Double)	m2	0.0	734	868	0	0	0	0
Earth Drain	m	2200.0	773	119	1,700,600	261,800	1,962,400	1,962,400
Earth Drain in Swamp (by machine)	m3	0.0	1,157	475	0	0	0	0
Pipe Culvert Ø80cm	m	0.0	39,235	40,307	0	0	0	0
Masonry Culvert (80x80cm)	m	0.0	53,753	34,731	0	0	0	0
Retaining Wall and Wing Wall (Timber)	m2	0.0	16,836	246	0	0	0	0
Retaining Wall and Wing Wall (Masonry)	m3	0.0	37,429	11,421	0	0	0	0
Gabion Protection	m3	0.0	9,029	121	0	0	0	0
New Bridge (Timber)	SET	1.0	--	--	0	0	0	0
New Bridge (Concrete)	SET	1.0	--	--	0	0	0	0
Sub Total					31,109,416	14,264,904	45,374,320	
Overhead (15%)					4,666,412	2,139,735	6,806,147	
TOTAL COST					35,775,828	16,404,639	52,180,467	

Manual routine maintenance of road	Km	7.0	121,976	7,260	853,832	50,820	904,652	
Routine maintenance of gravel road	Km	7.0	188,115	88,186	1,316,805	617,302	1,934,107	
Sub Total					2,170,637	668,122	2,838,759	
Maintenance of Timber Bridge (New)	m2	0.0	10,222	1,344	0	0	0	
Maintenance of Concrete Bridge (New)	m2	0.0	2,003	2,456	0	0	0	
Maintenance of Timber Bridge (Exist)	m2	0.0	8,935	2,517	0	0	0	
Maintenance of Concrete Bridge (Exist)	m2	12.0	4,224	2,336	50,688	28,032	78,720	

Earthwork & Pavement Unit Cost	(Rp/Km)	:	7,454,353
Timber Bridge Unit Cost	(Rp/m2)	:	
Concrete Bridge Unit Cost	(Rp/m2)	:	
Survived Value	(Rp)	:	8,898,400
Maintenance Rate without Bridge	(%)	:	5.44
New Bridge Cost Rate	(%)	:	

PROV : SULAWESI SELATAN KAD : GOWA

LINK NO : 44 (IIIB-2) LENGTH : 6 Km

UPGRADE : 8.0m road bed, 4.0m road with surface Base Course (Rp)

ITEM	UNIT	QUANTITY	<<< UNIT COST >>>		<<<<< COST >>>>>		
			LOCAL	FOREIGN	LOCAL	FOREIGN	TOTAL
Site Clearance in Light Bush	m2	0.0	163	91	0	0	0
Subgrade Preparation	m2	32000.0	20	11	640,000	352,000	992,000
Normal Fill	m3	0.0	1,683	865	0	0	0
Fill in Swamp	m3	0.0	2,494	1,055	0	0	0
Normal Excavation to Spoil	m3	400.0	986	524	394,400	209,600	604,000
Sub Base Course	m3	2620.0	3,189	1,351	8,355,180	3,539,620	11,894,800
Base Course	m3	1440.0	4,364	2,303	6,284,160	3,316,320	9,600,480
Shoulder	m2	24000.0	293	146	7,032,000	3,504,000	10,536,000
Asphalt Patching	m2	0.0	3,372	1,346	0	0	0
Surface Dressing (Single)	m2	0.0	587	552	0	0	0
Surface Dressing (Double)	m2	0.0	734	868	0	0	0
Earth Drain	m	2000.0	773	119	1,546,000	238,000	1,784,000
Earth Drain in Swamp (by machine)	m3	0.0	1,157	475	0	0	0
Pipe Culvert Ø80cm	m	0.0	39,235	40,307	0	0	0
Masonry Culvert (80x80cm)	m	0.0	53,753	34,731	0	0	0
Retaining Wall and Wing Wall (Timber)	m2	0.0	16,836	246	0	0	0
Retaining Wall and Wing Wall (Masonry)	m3	0.0	37,429	11,421	0	0	0
Gabion Protection	m3	0.0	9,029	121	0	0	0
New Bridge (Timber)	SET	1.0	--	--	0	0	0
New Bridge (Concrete)	SET	1.0	--	--	0	0	0
Sub Total					24,251,740	11,159,540	35,411,280
Overhead (15%)					3,637,761	1,673,931	5,311,692
TOTAL COST					27,889,501	12,833,471	40,722,972

Manual routine maintenance of road	Km	6.0	121,976	7,260	731,856	43,560	775,416
Routine maintenance of gravel road	Km	6.0	189,115	88,186	1,128,690	529,116	1,657,806
Sub Total					1,860,546	572,676	2,433,222
Maintenance of Timber Bridge (New)	m2	0.0	10,222	1,344	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.0	2,003	2,456	0	0	0
Maintenance of Timber Bridge (Exist)	m2	0.0	8,935	2,517	0	0	0
Maintenance of Concrete Bridge (Exist)	m2	0.0	4,224	2,336	0	0	0

Earthwork & Pavement	Unit Cost	(Rp/Km)	:	6,787,162
Timber Bridge	Unit Cost	(Rp/m2)	:	
Concrete Bridge	Unit Cost	(Rp/m2)	:	
Survived Value		(Rp)	:	5,947,400
Maintenance Rate without Bridge		(%)	:	5.98
New Bridge Cost Rate		(%)	:	

PROV : SULAWESI SELATAN KAB : GOWA

LINK NO : 43 (IIIB-2) LENGTH : 5 Km

UPGRADE : 6.5m road bed, 4.5m road with surface Base Course

(Rp)

ITEM	UNIT	QUANTITY	<<< UNIT COST >>>		<<<<< COST >>>>>		>>>>> TOTAL
			LOCAL	FOREIGN	LOCAL	FOREIGN	
Site Clearance in Light Bush	m2	2500.0	163	91	407,500	227,500	635,000
Subgrade Preparation	m2	32500.0	20	11	650,000	357,500	1,007,500
Normal Fill	m3	0.0	1,683	865	0	0	0
Fill in Swamp	m3	0.0	2,494	1,055	0	0	0
Normal Excavation to Spoil	m3	467.0	986	524	460,462	244,708	705,170
Sub Base Course	m3	3150.0	3,189	1,351	10,045,350	4,255,650	14,301,000
Base Course	m3	1350.0	4,364	2,303	5,891,400	3,107,050	9,000,450
Shoulder	m2	10000.0	293	146	2,930,000	1,460,000	4,390,000
Asphalt Patching	m2	0.0	3,372	1,346	0	0	0
Surface Dressing (Single)	m2	0.0	587	552	0	0	0
Surface Dressing (Double)	m2	0.0	734	868	0	0	0
Earth Drain	m	0.0	773	119	0	0	0
Earth Drain in Swamp (by machine)	m3	0.0	1,157	475	0	0	0
Pipe Culvert Ø80cm	m	0.0	39,235	40,307	0	0	0
Masonry Culvert (80x80cm)	m	6.0	53,753	34,731	322,518	208,386	530,904
Retaining Wall and Wing Wall (Timber)	m2	0.0	16,836	246	0	0	0
Retaining Wall and Wing Wall (Masonry)	m3	0.0	37,429	11,421	0	0	0
Gabion Protection	m3	0.0	9,029	121	0	0	0
New Bridge (Timber)	SET	1.0	---	---	0	0	0
New Bridge (Concrete)	SET	1.0	---	---	0	0	0
Sub Total					20,707,230	9,862,794	30,570,024
Overhead (15%)					3,106,084	1,479,419	4,585,503
TOTAL COST					23,813,314	11,342,213	35,155,527

Manual routine maintenance of road	Km	5.0	121,976	7,260	609,880	36,300	646,180
Routine maintenance of gravel road	Km	5.0	188,115	88,186	940,575	440,930	1,381,505
Sub Total					1,550,455	477,230	2,027,685
Maintenance of Timber Bridge (New)	m2	0.0	10,222	1,344	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.0	2,003	2,456	0	0	0
Maintenance of Timber Bridge (Exist)	m2	0.0	8,935	2,517	0	0	0
Maintenance of Concrete Bridge (Exist)	m2	0.0	4,224	2,336	0	0	0

Earthwork & Pavement Unit Cost	(Rp/Km)	:	7,031,106
Timber Bridge Unit Cost	(Rp/m2)	:	
Concrete Bridge Unit Cost	(Rp/m2)	:	
Survived Value	(Rp)	:	7,150,500
Maintenance Rate without Bridge	(%)	:	5.77
New Bridge Cost Rate	(%)	:	

PROV : SULAWESI SELATAN KAB : GOWA

LINK NO : 41 (111B-2) LENGTH : 11 Km

UPGRADE : 7.0m road bed, 4.0m road with surface Base Course

(Rp)

ITEM	UNIT	QUANTITY	UNIT COST LOCAL	UNIT COST FOREIGN	LOCAL	FOREIGN	TOTAL
Site Clearance in Light Bush	m2	0.0	163	91	0	0	0
Subgrade Preparation	m2	21000.0	20	11	420,000	231,000	651,000
Normal Fill	m3	0.0	1,683	865	0	0	0
Fill in Swamp	m3	0.0	2,494	1,055	0	0	0
Normal Excavation to Spoil	m3	88.0	986	524	86,768	46,112	132,880
Sub Base Course	m3	2760.0	3,189	1,351	8,801,640	3,728,760	12,530,400
Base Course	m3	2640.0	4,364	2,303	11,520,960	6,079,920	17,600,880
Shoulder	m2	33000.0	293	146	9,669,000	4,818,000	14,487,000
Asphalt Patching	m2	0.0	3,372	1,346	0	0	0
Surface Dressing (Single)	m2	0.0	587	552	0	0	0
Surface Dressing (Double)	m2	0.0	734	868	0	0	0
Earth Drain	m	1400.0	773	119	1,082,200	166,600	1,248,800
Earth Drain in Swamp (by machine)	m3	0.0	1,157	475	0	0	0
Pipe Culvert Ø80cm	m	0.0	39,235	40,307	0	0	0
Masonry Culvert (80x80cm)	m	6.0	53,753	34,731	322,518	208,386	530,904
Retaining Wall and Wing Wall (Timber)	m2	0.0	16,836	246	0	0	0
Retaining Wall and Wing Wall (Masonry)	m3	0.0	37,429	11,421	0	0	0
Gabion Protection	m3	0.0	9,029	121	0	0	0
New Bridge (Timber)	SET	1.0	--	--	0	0	0
New Bridge (Concrete)	SET	1.0	--	--	0	0	0
Sub Total					31,903,086	15,278,778	47,181,864
Overhead (15%)					4,785,462	2,291,816	7,077,278
TOTAL COST					36,688,548	17,570,594	54,259,142

Manual routine maintenance of road	Km	11.0	121,976	7,260	1,341,736	79,860	1,421,596
Routine maintenance of gravel road	Km	11.0	188,115	88,186	2,069,265	970,046	3,039,311
Sub Total					3,411,001	1,049,906	4,460,907
Maintenance of Timber Bridge (New)	m2	0.0	10,222	1,344	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.0	2,003	2,456	0	0	0
Maintenance of Timber Bridge (Exist)	m2	0.0	8,935	2,517	0	0	0
Maintenance of Concrete Bridge (Exist)	m2	0.2	4,224	2,336	633	350	983

Earthwork & Pavement	Unit Cost	(Rp/Km)	:	4,932,649
Timber Bridge	Unit Cost	(Rp/m2)	:	
Concrete Bridge	Unit Cost	(Rp/m2)	:	
Survived Value		(Rp)	:	6,265,200
Maintenance Rate without Bridge		(%)	:	8.22
New Bridge Cost Rate		(%)	:	

PROV : SULAWESI SELATAN KAB : GOWA

LINK NO : 40 (IIIB-2) LENGTH : 7 Km

UPGRADE : 6.0m road bed, 4.0m road with surface Base Course

(Rp)

ITEM	UNIT	QUANTITY	<<< UNIT COST >>>		<<<<< COST >>>>>		
			LOCAL	FOREIGN	LOCAL	FOREIGN	TOTAL
Site Clearance in Light Bush	m2	0.0	163	91	0	0	0
Subgrade Preparation	m2	31620.0	20	11	632,400	347,020	980,220
Normal Fill	m3	0.0	1,683	865	0	0	0
Fill in Swamp	m3	128.3	2,494	1,055	319,980	135,356	455,336
Normal Excavation to Spoil	m3	370.0	986	524	364,820	193,880	558,700
Sub Base Course	m3	3236.0	3,189	1,351	10,319,604	4,371,836	14,691,440
Base Course	m3	1680.0	4,364	2,303	7,331,520	3,869,040	11,200,560
Shoulder	m2	14000.0	293	146	4,102,000	2,044,000	6,146,000
Asphalt Patching	m2	0.0	3,372	1,346	0	0	0
Surface Dressing (Single)	m2	0.0	587	552	0	0	0
Surface Dressing (Double)	m2	0.0	734	868	0	0	0
Earth Drain	m	0.0	773	119	0	0	0
Earth Drain in Swamp (by machine)	m3	1200.0	1,157	475	1,388,400	570,000	1,958,400
Pipe Culvert Ø80cm	m	2.0	39,235	40,307	78,470	80,614	159,084
Masonry Culvert 180x80cm	m	0.0	53,753	34,731	0	0	0
Retaining Wall and Wing Wall (Timber)	m2	0.0	16,836	246	0	0	0
Retaining Wall and Wing Wall (Masonry)	m3	0.0	37,429	11,421	0	0	0
Gabion Protection	m3	0.0	9,029	121	0	0	0
New Bridge (Timber)	SET	1.0	--	--	0	0	0
New Bridge (Concrete)	SET	1.0	--	--	0	0	0
Sub Total					24,537,194	11,612,546	36,149,740
Overhead (15%)					3,680,579	1,741,881	5,422,460
TOTAL COST					28,217,773	13,354,427	41,572,200

Manual routine maintenance of road	Km	7.0	121,976	7,260	853,832	50,820	904,652
Routine maintenance of gravel road	Km	7.0	188,115	88,186	1,316,805	617,302	1,934,107
Sub Total					2,170,637	668,122	2,838,759
Maintenance of Timber Bridge (New)	m2	0.0	10,222	1,344	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.0	2,003	2,456	0	0	0
Maintenance of Timber Bridge (Exist)	m2	0.0	8,935	2,517	0	0	0
Maintenance of Concrete Bridge (Exist)	m2	36.0	4,224	2,336	152,064	84,096	236,160

Earthwork & Pavement Unit Cost	(Rp/Km)	:	5,938,886
Timber Bridge Unit Cost	(Rp/m2)	:	
Concrete Bridge Unit Cost	(Rp/m2)	:	
Survived Value	(Rp)	:	7,345,720
Maintenance Rate without Bridge	(%)	:	6.83
New Bridge Cost Rate	(%)	:	

PROV : SULAWESI SELATAN KAB : GOWA

LINK NO : 39 (IIB-1) LENGTH : 7 Km

UPGRADE : 6.0m road bed, 4.0m road with surface Dressing (1)

(Rp)

ITEM	UNIT	QUANTITY	UNIT COST	LOCAL	FOREIGN	LOCAL	FOREIGN	TOTAL
Site Clearance in light Bush	m2	0.0	163	91	0	0	0	0
Subgrade Preparation	m2	81.0	20	11	1,620	891	2,511	2,511
Normal Fill	m3	0.0	1,683	863	0	0	0	0
Fill in Swamp	m3	4.2	2,494	1,055	10,474	4,431	14,905	14,905
Normal Excavation to Spoil	m3	0.0	986	524	0	0	0	0
Sub Base Course	m3	1025.0	3,189	1,351	3,268,725	1,384,775	4,653,500	4,653,500
Base Course	m3	1960.0	4,364	2,303	8,553,440	4,513,880	13,067,320	13,067,320
Shoulder	m2	14000.0	293	146	4,102,000	2,044,000	6,146,000	6,146,000
Asphalt Patching	m2	0.0	3,372	1,346	0	0	0	0
Surface Dressing (Single)	m2	28000.0	587	552	16,436,000	15,456,000	31,892,000	31,892,000
Surface Dressing (Double)	m2	0.0	734	868	0	0	0	0
Earth Drain	m	0.0	773	119	0	0	0	0
Earth Drain in Swamp (by machine)	m3	60.0	1,157	475	69,420	28,500	97,920	97,920
Pipe Culvert Ø80cm	m	0.0	39,235	40,307	0	0	0	0
Masonry Culvert (80x80cm)	m	0.0	53,753	34,731	0	0	0	0
Retaining Wall and Wing Wall (Timber)	m2	0.0	16,836	246	0	0	0	0
Retaining Wall and Wing Wall (Masonry)	m3	0.0	37,429	11,421	0	0	0	0
Babion Protection	m3	0.0	9,029	121	0	0	0	0
New Bridge (Timber)	SET	1.0	--	--	0	0	0	0
New Bridge (Concrete)	SET	1.0	--	--	0	0	0	0
Sub Total					32,441,679	23,432,477	55,874,156	
Overhead (15%)					4,866,251	3,514,871	8,381,122	
TOTAL COST					37,307,930	26,947,348	64,255,278	

Manual routine maintenance of road	Km	7.0	121,976	7,260	853,832	50,820	904,652	
Routine maintenance of asphalt road	Km	7.0	337,200	134,600	2,360,400	942,200	3,302,600	
Sub Total					3,214,232	993,020	4,207,252	
Maintenance of Timber Bridge (New)	m2	0.0	10,222	1,344	0	0	0	
Maintenance of Concrete Bridge (New)	m2	0.0	2,003	2,456	0	0	0	
Maintenance of Timber Bridge (Exist)	m2	0.0	8,935	2,517	0	0	0	
Maintenance of Concrete Bridge (Exist)	m2	0.0	4,224	2,336	0	0	0	

Earthwork & Pavement Unit Cost	(Rp/Km)	:	9,179,326
Timber Bridge Unit Cost	(Rp/m2)	:	
Concrete Bridge Unit Cost	(Rp/m2)	:	
Survived Value	(Rp)	:	5,870,914
Maintenance Rate without Bridge	(%)	:	6.55
New Bridge Cost Rate	(%)	:	

PROV : SULAWESI SELATAN KAB : GOWA

LINK NO : 32 (111B-2) LENGTH : 1 Km

UPGRADE : 8.5m road bed, 4.0m road with surface Base Course

(Rp)

ITEM	UNIT	QUANTITY	<<< UNIT COST >>>		<<<<< COST >>>>>		TOTAL
			LOCAL	FOREIGN	LOCAL	FOREIGN	
Site Clearance in Light Bush	m2	0.0	163	91	0	0	0
Subgrade Preparation	m2	0.0	20	11	0	0	0
Normal Fill	m3	0.0	1,683	865	0	0	0
Fill in Swamp	m3	0.0	2,494	1,055	0	0	0
Normal Excavation to Spoil	m3	0.0	986	524	0	0	0
Sub Base Course	m3	0.0	3,189	1,351	0	0	0
Base Course	m3	0.0	4,364	2,303	0	0	0
Shoulder	m2	4500.0	293	146	1,318,500	657,000	1,975,500
Asphalt Patching	m2	80.0	3,372	1,346	269,760	107,680	377,440
Surface Dressing (Single)	m2	0.0	587	552	0	0	0
Surface Dressing (Double)	m2	0.0	734	868	0	0	0
Earth Drain	m	0.0	773	119	0	0	0
Earth Drain in Swamp (by machine)	m3	0.0	1,157	475	0	0	0
Pipe Culvert Ø80cm	m	0.0	39,235	40,307	0	0	0
Masonry Culvert (80x80cm)	m	0.0	53,753	34,731	0	0	0
Retaining Wall and Wing Wall (Timber)	m2	0.0	16,836	246	0	0	0
Retaining Wall and Wing Wall (Masonry)	m3	0.0	37,429	11,421	0	0	0
Gabion Protection	m3	0.0	9,029	121	0	0	0
New Bridge (Timber)	SET	1.0	--	--	0	0	0
New Bridge (Concrete)	SET	1.0	--	--	0	0	0
Sub Total					1,588,260	764,680	2,352,940
Overhead (15%)					238,239	114,702	352,941
TOTAL COST					1,826,499	879,382	2,705,881

Manual routine maintenance of road	Km	1.0	121,976	7,260	121,976	7,260	129,236
Routine maintenance of gravel road	Km	1.0	188,115	88,186	188,115	88,186	276,301
Sub Total					310,091	95,446	405,537
Maintenance of Timber Bridge (New)	m2	0.0	10,222	1,344	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.0	2,003	2,456	0	0	0
Maintenance of Timber Bridge (Exist)	m2	0.0	8,935	2,517	0	0	0
Maintenance of Concrete Bridge (Exist)	m2	16.0	4,224	2,336	67,584	37,376	104,960

Earthwork & Pavement	Unit Cost	(Rp/Km)	:	2,705,881
Timber Bridge	Unit Cost	(Rp/m2)	:	
Concrete Bridge	Unit Cost	(Rp/m2)	:	
Survived Value		(Rp)	:	0
Maintenance Rate without Bridge		(%)	:	14.99
New Bridge Cost Rate		(%)	:	

PROV : SULAWESI SELATAN KAB : GOWA

LINK NO : 31 (IIIA) LENGTH : 2 Km

UPGRADE : 8.0m road bed, 4.0m road with surface Dressing (2)

(Rp)

ITEM	UNIT	QUANTITY	<<< UNIT COST >>>		<<<<< COST >>>>>		>>>>> TOTAL
			LOCAL	FOREIGN	LOCAL	FOREIGN	
Site Clearance in Light Bush	m2	0.0	163	91	0	0	0
Subgrade Preparation	m2	0.0	20	11	0	0	0
Normal Fill	m3	0.0	1,683	865	0	0	0
Fill in Swamp	m3	0.0	2,494	1,055	0	0	0
Normal Excavation to Spoil	m3	0.0	986	524	0	0	0
Sub Base Course	m3	0.0	3,189	1,351	0	0	0
Base Course	m3	0.0	4,364	2,303	0	0	0
Shoulder	m2	8000.0	293	146	2,344,000	1,168,000	3,512,000
Asphalt Patching	m2	147.0	3,372	1,346	495,684	197,862	693,546
Surface Dressing (Single)	m2	8000.0	587	552	4,696,000	4,416,000	9,112,000
Surface Dressing (Double)	m2	0.0	734	858	0	0	0
Earth Drain	m	2400.0	773	119	1,855,200	285,600	2,140,800
Earth Drain in Swamp (by machine)	m3	0.0	1,157	475	0	0	0
Pipe Culvert 80cm	m	0.0	39,235	40,307	0	0	0
Masonry Culvert (80x80cm)	m	2.0	53,753	34,731	107,506	69,462	176,968
Retaining Wall and Wing Wall (Timber)	m2	0.0	16,836	246	0	0	0
Retaining Wall and Wing Wall (Masonry)	m3	0.0	37,429	11,421	0	0	0
Gabion Protection	m3	0.0	9,029	121	0	0	0
New Bridge (Timber)	SET	1.0	--	--	0	0	0
New Bridge (Concrete)	SET	1.0	--	--	0	0	0
Sub Total					9,498,390	6,136,924	15,635,314
Overhead (15%)					1,424,758	920,538	2,345,296
TOTAL COST					10,923,148	7,057,462	17,980,610

Manual routine maintenance of road	Km	2.0	121,976	7,260	243,952	14,520	258,472
Routine maintenance of asphalt road	Km	2.0	337,200	134,600	674,400	269,200	943,600
Sub Total					918,352	283,720	1,202,072
Maintenance of timber Bridge (New)	m2	0.0	10,222	1,344	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.0	2,003	2,456	0	0	0
Maintenance of Timber Bridge (Exist)	m2	0.0	8,935	2,517	0	0	0
Maintenance of Concrete Bridge (Exist)	m2	0.0	4,224	2,336	0	0	0

Earthwork & Pavement	Unit Cost	(Rp/Km)	:	8,990,306
Timber Bridge	Unit Cost	(Rp/m2)	:	
Concrete Bridge	Unit Cost	(Rp/m2)	:	
Survived Value		(Rp)	:	0
Maintenance Rate without Bridge		(%)	:	6.69
New Bridge Cost Rate		(%)	:	

PROV : SULAWESI SELATAN KAB : GOWA

LINK NO : 27 (IIB-2) LENGTH : 5 Km

UPGRADE : 8.0m road bed, 4.0m road with surface Base Course

(Rp)

ITEM	UNIT	QUANTITY	<<< UNIT COST >>>		<<<<< COST >>>>>		
			LOCAL	FOREIGN	LOCAL	FOREIGN	TOTAL
Site Clearance in Light Bush	m2	0.0	163	91	0	0	0
Subgrade Preparation	m2	8000.0	20	11	160,000	88,000	248,000
Normal Fill	m3	0.0	1,683	865	0	0	0
Fill in Swamp	m3	0.0	2,494	1,055	0	0	0
Normal Excavation to Spoil	m3	96.0	986	524	94,656	50,304	144,960
Sub Base Course	m3	560.0	3,189	1,351	1,785,840	756,560	2,542,400
Base Course	m3	240.0	4,364	2,303	1,047,360	552,720	1,600,080
Shoulder	m2	20000.0	293	146	5,860,000	2,920,000	8,780,000
Asphalt Patching	m2	71.0	3,372	1,346	239,412	95,566	334,978
Surface Dressing (Single)	m2	0.0	587	552	0	0	0
Surface Dressing (Double)	m2	0.0	734	868	0	0	0
Earth Drain	m	200.0	773	119	154,600	23,800	178,400
Earth Drain in Swamp (by machine)	m3	0.0	1,157	475	0	0	0
Pipe Culvert D80cm	m	6.0	39,235	40,307	235,410	241,842	477,252
Masonry Culvert (80x80cm)	m	0.0	53,753	34,731	0	0	0
Retaining Wall and Wing Wall (Timber)	m2	0.0	16,836	246	0	0	0
Retaining Wall and Wing Wall (Masonry)	m3	0.0	37,429	11,421	0	0	0
Gabion Protection	m3	0.0	9,029	121	0	0	0
New Bridge (Timber)	SET	1.0	--	--	0	0	0
New Bridge (Concrete)	SET	1.0	--	--	0	0	0
Sub Total					9,577,278	4,728,792	14,306,070
Overhead (15%)					1,436,591	709,318	2,145,909
TOTAL COST					11,013,869	5,438,110	16,451,979

Manual routine maintenance of road	Km	5.0	121,976	7,260	609,880	36,300	646,180
Routine maintenance of gravel road	Km	5.0	188,115	88,186	940,575	440,930	1,381,505
Sub Total					1,550,455	477,230	2,027,685
Maintenance of Timber Bridge (New)	m2	0.0	10,222	1,344	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.0	2,003	2,456	0	0	0
Maintenance of Timber Bridge (Exist)	m2	0.0	8,935	2,517	0	0	0
Maintenance of Concrete Bridge (Exist)	m2	73.0	4,224	2,336	308,352	170,528	478,880

Earthwork & Pavement	Unit Cost	(Rp/Km)	:	3,290,396
Timber Bridge	Unit Cost	(Rp/m2)	:	
Concrete Bridge	Unit Cost	(Rp/m2)	:	
Survived Value		(Rp)	:	1,271,200
Maintenance Rate without Bridge		(%)	:	12.32
New Bridge Cost Rate		(%)	:	

PROV : SULAWESI SELATAN KAB : GOWA

LINK NO : 31 (IIIA) LENGTH : 2 Km

(UPGRADE : 8.0m road bed, 4.0m road with surface Dressing (2)

(Rp)

ITEM	UNIT	QUANTITY	<<< UNIT COST >>>		<<<<< COST >>>>>		
			LOCAL	FOREIGN	LOCAL	FOREIGN	TOTAL
Site Clearance in Light Bush	m2	0.0	163	91	0	0	0
Subgrade Preparation	m2	0.0	20	11	0	0	0
Normal Fill	m3	0.0	1,683	865	0	0	0
Fill in Swamp	m3	0.0	2,494	1,055	0	0	0
Normal Excavation to Spoil	m3	0.0	986	524	0	0	0
Sub Base Course	m3	0.0	3,189	1,351	0	0	0
Base Course	m3	0.0	4,364	2,303	0	0	0
Shoulder	m2	8000.0	293	146	2,344,000	1,168,000	3,512,000
Asphalt Patching	m2	147.0	3,372	1,346	495,684	197,862	693,546
Surface Dressing (Single)	m2	8000.0	587	552	4,696,000	4,416,000	9,112,000
Surface Dressing (Double)	m2	0.0	734	868	0	0	0
Earth Drain	m	2400.0	773	119	1,855,200	285,600	2,140,800
Earth Drain in Swamp (by machine)	m3	0.0	1,157	475	0	0	0
Pipe Culvert Ø80cm	m	0.0	39,235	40,307	0	0	0
Masonry Culvert (80x80cm)	m	2.0	53,753	34,731	107,506	69,462	176,968
Retaining Wall and Wing Wall (Timber)	m2	0.0	16,836	246	0	0	0
Retaining Wall and Wing Wall (Masonry)	m3	0.0	37,429	11,421	0	0	0
Gabion Protection	m3	0.0	9,029	121	0	0	0
New Bridge (Timber)	SET	1.0	--	--	0	0	0
New Bridge (Concrete)	SET	1.0	--	--	0	0	0
Sub Total					9,498,390	6,136,924	15,635,314
Overhead (15%)					1,424,758	920,538	2,345,296
TOTAL COST					10,923,148	7,057,462	17,980,610

Manual routine maintenance of road	Km	2.0	121,976	7,260	243,952	14,520	258,472
Routine maintenance of asphalt road	Km	2.0	337,200	134,600	674,400	269,200	943,600
Sub Total					918,352	283,720	1,202,072
Maintenance of Timber Bridge (New)	m2	0.0	10,222	1,344	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.0	2,003	2,456	0	0	0
Maintenance of Timber Bridge (Exist)	m2	0.0	8,935	2,517	0	0	0
Maintenance of Concrete Bridge (Exist)	m2	0.0	4,224	2,336	0	0	0

Earthwork & Pavement Unit Cost	(Rp/Km)	:	8,990,306
Timber Bridge Unit Cost	(Rp/m2)	:	
Concrete Bridge Unit Cost	(Rp/m2)	:	
Survived Value	(Rp)	:	0
Maintenance Rate without Bridge	(%)	:	6.69
New Bridge Cost Rate	(%)	:	

PROV : SULAWESI SELATAN KAB : GOWA

LINK NO : 27 (I11B-2) LENGTH : 5 Km

UPGRADE : 8.0m road bed, 4.0m road with surface Base Course

(Rp)

ITEM	UNIT	QUANTITY	<<< UNIT COST >>>		<<<<< COST >>>>>		TOTAL
			LOCAL	FOREIGN	LOCAL	FOREIGN	
Site Clearance in Light Push	m2	0.0	163	91	0	0	0
Subgrade Preparation	m2	8000.0	20	11	160,000	88,000	248,000
Normal Fill	m3	0.0	1,683	865	0	0	0
Fill in Swamp	m3	0.0	2,494	1,055	0	0	0
Normal Excavation to Spoil	m3	96.0	986	524	94,656	50,304	144,960
Sub Base Course	m3	560.0	3,189	1,351	1,785,840	756,560	2,542,400
Base Course	m3	240.0	4,364	2,303	1,047,360	552,720	1,600,080
Shoulder	m2	20000.0	293	146	5,860,000	2,920,000	8,780,000
Asphalt Patching	m2	71.0	3,372	1,346	239,412	95,566	334,978
Surface Dressing (Single)	m2	0.0	587	552	0	0	0
Surface Dressing (Double)	m2	0.0	734	868	0	0	0
Earth Drain	m	200.0	773	119	154,600	23,800	178,400
Earth Drain in Swamp (by machine)	m3	0.0	1,157	475	0	0	0
Pipe Culvert Ø80cm	m	6.0	39,235	40,307	235,410	241,842	477,252
Masonry Culvert (80x80cm)	m	0.0	53,753	34,731	0	0	0
Retaining Wall and Wing Wall (Timber)	m2	0.0	16,836	246	0	0	0
Retaining Wall and Wing Wall (Masonry)	m3	0.0	37,429	11,421	0	0	0
Gabion Protection	m3	0.0	9,029	121	0	0	0
New Bridge (Timber)	SET	1.0	--	--	0	0	0
New Bridge (Concrete)	SET	1.0	--	--	0	0	0
Sub Total					9,577,278	4,728,792	14,306,070
Overhead (15%)					1,436,591	709,318	2,145,909
TOTAL COST					11,013,869	5,438,110	16,451,979

Manual routine maintenance of road	Km	5.0	121,976	7,260	609,880	36,300	646,180
Routine maintenance of gravel road	Km	5.0	188,115	88,186	940,575	440,930	1,381,505
Sub Total					1,550,455	477,230	2,027,685
Maintenance of Timber Bridge (New)	m2	0.0	10,222	1,344	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.0	2,003	2,456	0	0	0
Maintenance of Timber Bridge (Exist)	m2	0.0	8,935	2,517	0	0	0
Maintenance of Concrete Bridge (Exist)	m2	73.0	4,224	2,336	308,352	170,528	478,880

Earthwork & Pavement Unit Cost	(Rp/Km)	:	3,290,396
Timber Bridge Unit Cost	(Rp/m2)	:	
Concrete Bridge Unit Cost	(Rp/m2)	:	
Survived Value	(Rp)	:	1,271,200
Maintenance Rate without Bridge	(%)	:	12.32
New Bridge Cost Rate	(%)	:	

PROV : SULAWESI SELATAN KAB : BOWA

LINK NO : 12 (IIB-1) LENGTH : 14 Km

UPGRADE : 7.0m road bed, 3.5m road with surface Dressing (1)

(Rp)

ITEM	UNIT	QUANTITY	UNIT COST	LOCAL	FOREIGN	LOCAL	FOREIGN	TOTAL
Site Clearance in Light Bush	m2	0.0	163	91	0	0	0	0
Subgrade Preparation	m2	63000.0	20	11	1,260,000	693,000	1,953,000	1,953,000
Normal Fill	m3	0.0	1,683	865	0	0	0	0
Fill in Swamp	m3	0.0	2,494	1,055	0	0	0	0
Normal Excavation to Spoil	m3	864.0	986	524	851,904	452,736	1,304,640	1,304,640
Sub Base Course	m3	4410.0	3,189	1,351	14,063,490	5,957,910	20,021,400	20,021,400
Base Course	m3	2205.0	4,364	2,303	9,622,620	5,078,115	14,700,735	14,700,735
Shoulder	m2	49000.0	293	146	14,357,000	7,154,000	21,511,000	21,511,000
Asphalt Patching	m2	464.0	3,372	1,346	1,564,608	624,544	2,189,152	2,189,152
Surface Dressing (Single)	m2	49000.0	587	552	28,763,000	27,048,000	55,811,000	55,811,000
Surface Dressing (Double)	m2	0.0	734	868	0	0	0	0
Earth Drain	m	4000.0	773	119	3,092,000	476,000	3,568,000	3,568,000
Earth Drain in Swamp (by machine)	m3	0.0	1,157	475	0	0	0	0
Pipe Culvert Ø80cm	m	17.0	39,235	40,307	666,995	685,219	1,352,214	1,352,214
Masonry Culvert (80x80cm)	m	0.0	53,753	34,731	0	0	0	0
Retaining Wall and Wing Wall (Timber)	m2	0.0	16,836	246	0	0	0	0
Retaining Wall and Wing Wall (Masonry)	m3	0.0	37,429	11,421	0	0	0	0
Gabion Protection	m3	0.0	9,029	121	0	0	0	0
New Bridge (Timber)	SET	1.0	--	--	0	0	0	0
New Bridge (Concrete)	SET	1.0	--	--	0	0	0	0
Sub Total					74,241,617	48,169,524	122,411,141	122,411,141
Overhead (15%)					11,136,242	7,225,428	18,361,670	18,361,670
TOTAL COST					85,377,859	55,394,952	140,772,811	140,772,811

Manual routine maintenance of road	Km	14.0	121,976	7,260	1,707,664	101,640	1,809,304	1,809,304
Routine maintenance of asphalt road	Km	14.0	337,200	134,600	4,720,800	1,884,400	6,605,200	6,605,200
Sub Total					6,428,464	1,986,040	8,414,504	8,414,504
Maintenance of Timber Bridge (New)	m2	0.0	10,222	1,344	0	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.0	2,003	2,456	0	0	0	0
Maintenance of Timber Bridge (Exist)	m2	0.0	8,935	2,517	0	0	0	0
Maintenance of Concrete Bridge (Exist)	m2	215.0	4,224	2,336	908,160	502,240	1,410,400	1,410,400

Earthwork & Pavement	Unit Cost	(Rp/Km)	:	10,055,201
Timber Bridge	Unit Cost	(Rp/m2)	:	
Concrete Bridge	Unit Cost	(Rp/m2)	:	
Survived Value		(Rp)	:	16,955,127
Maintenance Rate without Bridge		(%)	:	5.98
New Bridge Cost Rate		(%)	:	

PROV : SULAWESI SELATAN KAB : GOWA

LINK NO : 10 (IIB-2) LENGTH : 7 Km

UPGRADE : 0.0m road bed, 4.0m road with surface Base Course

(Rp)

ITEM	UNIT	QUANTITY	UNIT COST	LOCAL	FOREIGN	LOCAL	FOREIGN	TOTAL
Site Clearance in Light Bush	m2	0.0	163	91	0	0	0	0
Subgrade Preparation	m2	72000.0	20	11	1,440,000	792,000	2,232,000	2,232,000
Normal Fill	m3	0.0	1,683	865	0	0	0	0
Fill in Swamp	m3	0.0	2,494	1,055	0	0	0	0
Normal Excavation to Spoil	m3	772.0	986	524	761,192	404,528	1,165,720	1,165,720
Sub Base Course	m3	5040.0	3,189	1,351	16,072,560	6,809,040	22,881,600	22,881,600
Base Course	m3	2160.0	4,364	2,303	9,426,240	4,774,480	14,400,720	14,400,720
Shoulder	m2	36000.0	293	146	10,548,000	5,256,000	15,804,000	15,804,000
Asphalt Patching	m2	0.0	3,372	1,346	0	0	0	0
Surface Dressing (Single)	m2	0.0	587	552	0	0	0	0
Surface Dressing (Double)	m2	0.0	734	868	0	0	0	0
Earth Drain	m	400.0	773	119	309,200	47,600	356,800	356,800
Earth Drain in Swamp (by machine)	m3	0.0	1,157	475	0	0	0	0
Pipe Culvert Ø80cm	m	0.0	39,235	40,307	0	0	0	0
Masonry Culvert (80x80cm)	m	0.0	53,753	34,731	0	0	0	0
Retaining Wall and Wing Wall (Timber)	m2	0.0	16,836	246	0	0	0	0
Retaining Wall and Wing Wall (Masonry)	m3	0.0	37,429	11,421	0	0	0	0
Gabion Protection	m3	0.0	9,029	121	0	0	0	0
New Bridge (Timber)	SET	1.0	--	--	0	0	0	0
New Bridge (Concrete)	SET	1.0	--	--	0	0	0	0
Sub Total					38,557,192	18,283,648	56,840,840	
Overhead (15%)					5,783,578	2,742,547	8,526,125	
TOTAL COST					44,340,770	21,026,195	65,366,965	

Manual routine maintenance of road	Km	9.0	121,976	7,260	1,097,784	65,340	1,163,124
Routine maintenance of gravel road	Km	9.0	188,115	88,186	1,693,035	793,674	2,486,709
Sub Total					2,790,819	859,014	3,649,833
Maintenance of Timber Bridge (New)	m2	0.0	10,222	1,344	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.0	2,003	2,456	0	0	0
Maintenance of Timber Bridge (Exist)	m2	0.0	8,935	2,517	0	0	0
Maintenance of Concrete Bridge (Exist)	m2	58.0	4,224	2,336	244,992	135,468	380,460

Earthwork & Pavement Unit Cost	(Rp/Km)	:	7,262,996
Timber Bridge Unit Cost	(Rp/m2)	:	
Concrete Bridge Unit Cost	(Rp/m2)	:	
Survived Value	(Rp)	:	11,440,800
Maintenance Rate without Bridge	(%)	:	5.58
New Bridge Cost Rate	(%)	:	

PROV : SULAWESI SELATAN KAB : GOWA

LINK NO : 12 (IIIB-2) LENGTH : 7 Km

UPGRADE : 8.0m road bed, 4.0m road with surface Base Course (Rp)

ITEM	UNIT	QUANTITY	<<< UNIT COST >>>		<<<<< COST >>>>>		>>>>> TOTAL
			LOCAL	FOREIGN	LOCAL	FOREIGN	
Site Clearance in Light Bush	m2	0.0	163	91	0	0	0
Subgrade Preparation	m2	56000.0	20	11	1,120,000	616,000	1,736,000
Normal Fill	m3	0.0	1,683	865	0	0	0
Fill in Swamp	m3	0.0	2,494	1,055	0	0	0
Normal Excavation to Spoil	m3	864.0	986	524	851,904	452,736	1,304,640
Sub Base Course	m3	3920.0	3,189	1,351	12,500,880	5,295,920	17,796,800
Base Course	m3	1680.0	4,364	2,303	7,331,520	3,869,040	11,200,560
Shoulder	m2	28000.0	293	146	8,204,000	4,088,000	12,292,000
Asphalt Patching	m2	0.0	3,372	1,346	0	0	0
Surface Dressing (Single)	m2	0.0	587	552	0	0	0
Surface Dressing (Double)	m2	0.0	734	868	0	0	0
Earth Drain	m	4600.0	773	119	3,555,800	547,400	4,103,200
Earth Drain in Swamp (by machine)	m3	0.0	1,157	475	0	0	0
Pipe Culvert 880cm	m	0.0	39,235	40,307	0	0	0
Masonry Culvert 880x80cm	m	0.0	53,753	34,731	0	0	0
Retaining Wall and Wing Wall (Timber)	m2	0.0	16,036	246	0	0	0
Retaining Wall and Wing Wall (Masonry)	m3	0.0	37,429	11,421	0	0	0
Bablon Protection	m3	0.0	9,029	121	0	0	0
New Bridge (Timber)	SET	1.0	--	--	0	0	0
New Bridge (Concrete)	SET	1.0	--	--	0	0	0
Sub Total					33,564,104	14,869,096	48,433,200
Overhead (15%)					5,034,615	2,230,364	7,264,979
TOTAL COST					38,598,719	17,099,460	55,698,179

Manual routine maintenance of road	Km	7.0	121,976	7,260	853,832	50,820	904,652
Routine maintenance of gravel road	Km	7.0	188,115	88,186	1,316,805	617,302	1,934,107
Sub Total					2,170,637	668,122	2,838,759
Maintenance of Timber Bridge (New)	m2	0.0	10,222	1,344	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.0	2,003	2,456	0	0	0
Maintenance of Timber Bridge (Exist)	m2	0.0	8,935	2,517	0	0	0
Maintenance of Concrete Bridge (Exist)	m2	114.0	4,224	2,336	481,536	266,304	747,840

Earthwork & Pavement	Unit Cost	(Rp/Km)	:	7,956,883
Timber Bridge	Unit Cost	(Rp/m2)	:	
Concrete Bridge	Unit Cost	(Rp/m2)	:	
Survived Value		(Rp)	:	8,898,400
Maintenance Rate without Bridge		(%)	:	5.10
New Bridge Cost Rate		(%)	:	

PROV : SULAWESI SELATAN KAB : GOWA

LINK NO : 11 (IIIB-2) LENGTH : 39 Km

UPGRADE : 6.0m road bed, 4.0m road with surface Base Course

(Rp)

ITEM	UNIT	QUANTITY	<<< UNIT COST >>>		<<<<< COST >>>>>		TOTAL
			LOCAL	FOREIGN	LOCAL	FOREIGN	
Site Clearance in Light Bush	m2	30000.0	163	91	4,890,000	2,730,000	7,620,000
Subgrade Preparation	m2	234000.0	20	11	4,680,000	2,574,000	7,254,000
Normal Fill	m3	700.0	1,683	865	1,178,100	805,500	1,983,600
Fill in Swamp	m3	0.0	2,494	1,055	0	0	0
Normal Excavation to Spoil	m3	6730.0	986	524	6,635,780	3,526,520	10,162,300
Sub Base Course	m3	21840.0	3,189	1,351	69,647,760	29,505,840	99,153,600
Base Course	m3	9360.0	4,364	2,303	40,847,040	21,556,080	62,403,120
Shoulder	m2	78000.0	293	146	22,854,000	11,388,000	34,242,000
Asphalt Patching	m2	0.0	3,372	1,346	0	0	0
Surface Dressing (Single)	m2	0.0	587	552	0	0	0
Surface Dressing (Double)	m2	0.0	734	868	0	0	0
Earth Drain	m	2000.0	773	119	1,546,000	238,000	1,784,000
Earth Drain in Swamp (by machine)	m3	0.0	1,157	475	0	0	0
Pipe Culvert Ø80cm	m	6.0	39,235	40,307	235,410	241,842	477,252
Masonry Culvert (80x80cm)	m	0.0	53,753	34,731	0	0	0
Retaining Wall and Wing Wall (Timber)	m2	0.0	16,836	246	0	0	0
Retaining Wall and Wing Wall (Masonry)	m3	30.0	37,429	11,421	1,122,870	342,630	1,465,500
Gabion Protection	m3	0.0	9,029	121	0	0	0
New Bridge (Timber)	SET	1.0	--	--	24,529,944	2,638,044	27,167,988
New Bridge (Concrete)	SET	1.0	--	--	0	0	0
Sub Total					178,166,904	75,346,456	253,513,360
Overhead (15%)					26,725,035	11,301,968	38,027,003
TOTAL COST					204,891,939	86,648,424	291,540,363

Manual routine maintenance of road	Km	39.0	121,976	7,260	4,757,064	283,140	5,040,204
Routine maintenance of gravel road	Km	39.0	188,115	88,186	7,336,485	3,439,254	10,775,739
Sub Total					12,093,549	3,722,394	15,815,943
Maintenance of Timber Bridge (New)	m2	154.0	10,222	1,344	1,574,188	206,976	1,781,164
Maintenance of Concrete Bridge (New)	m2	0.0	2,003	2,456	0	0	0
Maintenance of Timber Bridge (Exist)	m2	14.0	8,935	2,517	125,090	35,238	160,328
Maintenance of Concrete Bridge (Exist)	m2	96.0	4,224	2,336	405,504	224,256	629,760

Earthwork & Pavement Unit Cost	(Rp/Km)	:	6,674,287
Timber Bridge Unit Cost	(Rp/m2)	:	202,878
Concrete Bridge Unit Cost	(Rp/m2)	:	
Survived Value	(Rp)	:	49,576,800
Maintenance Rate without Bridge	(%)	:	6.08
New Bridge Cost Rate	(%)	:	10.72

PROV : SULAWESI SELATAN KAB : GOWA

LINK NO : 7 (IIIC) LENGTH : 30 Km

UPGRADE : 6.0m road bed, 3.5m road with surface Subbase Course
(Rp)

ITEM	UNIT	QUANTITY	<<< UNIT COST >>>		<<<<< COST >>>>>		TOTAL
			LOCAL	FOREIGN	LOCAL	FOREIGN	
Site Clearance in Light Bush	m2	64000.0	163	91	10,432,000	5,824,000	16,256,000
Subgrade Preparation	m2	180000.0	20	11	3,600,000	1,980,000	5,580,000
Normal Fill	m3	0.0	1,683	865	0	0	0
Fill in Swamp	m3	0.0	2,494	1,055	0	0	0
Normal Excavation to Spoil	m3	4244.0	986	524	4,184,584	2,223,856	6,408,440
Sub Base Course	m3	16000.0	3,189	1,351	53,575,200	22,696,800	76,272,000
Base Course	m3	0.0	4,364	2,303	0	0	0
Shoulder	m2	75000.0	293	146	21,975,000	10,950,000	32,925,000
Asphalt Patching	m2	0.0	3,372	1,346	0	0	0
Surface Dressing (Single)	m2	0.0	587	552	0	0	0
Surface Dressing (Double)	m2	0.0	734	868	0	0	0
Earth Drain	m	42000.0	773	119	32,466,000	4,998,000	37,464,000
Earth Drain in Swamp (by machine)	m3	0.0	1,157	475	0	0	0
Pipe Culvert Ø80cm	m	121.0	39,235	40,307	4,747,435	4,877,147	9,624,582
Masonry Culvert (80x80cm)	m	0.0	53,753	34,731	0	0	0
Retaining Wall and Wing Wall (Timber)	m2	0.0	16,836	246	0	0	0
Retaining Wall and Wing Wall (Masonry)	m3	22.4	37,429	11,421	838,409	255,830	1,094,239
Gabion Protection	m3	0.0	9,029	121	0	0	0
New Bridge (Timber)	SET	1.0	--	--	7,003,048	895,844	7,898,892
New Bridge (Concrete)	SET	1.0	--	--	0	0	0
Sub Total					138,821,676	54,701,477	193,523,153
Overhead (15%)					20,823,251	8,205,221	29,028,472
TOTAL COST					159,644,927	62,906,698	222,551,625

Manual routine maintenance of road	Km	30.0	121,976	7,260	3,659,280	217,800	3,877,080
Routine maintenance of gravel road	Km	30.0	188,115	88,186	5,643,450	2,645,580	8,289,030
Sub Total					9,302,730	2,863,380	12,166,110
Maintenance of Timber Bridge (New)	m2	28.0	10,222	1,344	286,216	37,632	323,848
Maintenance of Concrete Bridge (New)	m2	0.0	2,003	2,456	0	0	0
Maintenance of Timber Bridge (Exist)	m2	12.0	8,935	2,517	107,220	30,204	137,424
Maintenance of Concrete Bridge (Exist)	m2	0.0	4,224	2,336	0	0	0

Earthwork & Pavement Unit Cost	(Rp/Km)	:	7,115,597
Timber Bridge Unit Cost	(Rp/m2)	:	324,419
Concrete Bridge Unit Cost	(Rp/m2)	:	
Survived Value	(Rp)	:	30,500,800
Maintenance Rate without Bridge	(%)	:	5.70
New Bridge Cost Rate	(%)	:	4.08

PROV : SULAWESI SELATAN KAB : GOWA

LINK NO : 5 (IIIB-1) LENGTH : 14 Km

UPGRADE : 8.0m road bed, 4.0m road with surface Dressing (1)

(Rp)

ITEM	UNIT	QUANTITY	<<< UNIT COST >>>		<<<<< COST >>>>>		
			LOCAL	FOREIGN	LOCAL	FOREIGN	TOTAL
Site Clearance in Light Bush	m2	0.0	163	91	0	0	0
Subgrade Preparation	m2	0.0	20	11	0	0	0
Normal Fill	m3	0.0	1,683	865	0	0	0
Fill in Swamp	m3	0.0	2,494	1,055	0	0	0
Normal Excavation to Spoil	m3	0.0	986	524	0	0	0
Sub Base Course	m3	2116.0	3,189	1,351	6,747,924	2,858,716	9,606,640
Base Course	m3	3920.0	4,364	2,303	17,106,880	9,027,760	26,134,640
Shoulder	m2	56000.0	293	146	16,408,000	8,176,000	24,584,000
Asphalt Patching	m2	0.0	3,372	1,346	0	0	0
Surface Dressing (Single)	m2	56000.0	587	552	32,872,000	30,912,000	63,784,000
Surface Dressing (Double)	m2	0.0	734	868	0	0	0
Earth Drain	m	1600.0	773	119	1,236,800	190,400	1,427,200
Earth Drain in Swamp (by machine)	m3	0.0	1,157	475	0	0	0
Pipe Culvert Ø80cm	m	0.0	39,235	40,307	0	0	0
Masonry Culvert (80x80cm)	m	0.0	53,753	34,731	0	0	0
Retaining Wall and Wing Wall (Timber)	m2	0.0	16,836	246	0	0	0
Retaining Wall and Wing Wall (Masonry)	m3	0.0	37,429	11,421	0	0	0
Gabion Protection	m3	0.0	9,029	121	0	0	0
New Bridge (Timber)	SET	1.0	--	--	0	0	0
New Bridge (Concrete)	SET	1.0	--	--	0	0	0
Sub Total					74,371,604	51,164,876	125,536,480
Overhead (15%)					11,155,740	7,674,731	18,830,471
TOTAL COST					85,527,344	58,839,607	144,366,951

Manual routine maintenance of road	Km	14.0	121,976	7,260	1,707,664	101,640	1,809,304
Routine maintenance of asphalt road	Km	14.0	337,200	134,600	4,720,800	1,884,400	6,605,200
Sub Total					6,428,464	1,986,040	8,414,504
Maintenance of Timber Bridge (New)	m2	0.0	10,222	1,344	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.0	2,003	2,456	0	0	0
Maintenance of Timber Bridge (Exist)	m2	0.0	8,935	2,517	0	0	0
Maintenance of Concrete Bridge (Exist)	m2	67.5	4,224	2,336	285,120	157,680	442,800

Earthwork & Pavement	Unit Cost	(Rp/Km)	:	10,311,925
Timber Bridge	Unit Cost	(Rp/m2)	:	
Concrete Bridge	Unit Cost	(Rp/m2)	:	
Survived Value		(Rp)	:	11,951,576
Maintenance Rate without Bridge		(%)	:	5.83
New Bridge Cost Rate		(%)	:	

PROV : SULAWESI SELATAN KAD : GOWA

LINK NO : 2 (IIC) LENGTH : 3 Km

UPGRADE : 8.0m road bed, 4.0m road with surface Subbase Course (Rp)

ITEM	UNIT	QUANTITY	<<< UNIT COST >>>		<<<<< COST >>>>>		
			LOCAL	FOREIGN	LOCAL	FOREIGN	TOTAL
Site Clearance in Light Bush	m2	0.0	163	91	0	0	0
Subgrade Preparation	m2	24000.0	20	11	480,000	264,000	744,000
Normal Fill	m3	0.0	1,683	865	0	0	0
Fill in Swamp	m3	0.0	2,494	1,055	0	0	0
Normal Excavation to Spoil	m3	324.0	986	524	319,464	169,776	489,240
Sub Base Course	m3	1920.0	3,189	1,351	6,122,880	2,593,920	8,716,800
Base Course	m3	0.0	4,364	2,303	0	0	0
Shoulder	m2	12000.0	293	146	3,516,000	1,752,000	5,268,000
Asphalt Patching	m2	0.0	3,372	1,346	0	0	0
Surface Dressing (Single)	m2	0.0	587	552	0	0	0
Surface Dressing (Double)	m2	0.0	734	868	0	0	0
Earth Drain	m	4000.0	773	119	3,092,000	476,000	3,568,000
Earth Drain in Swamp (by machine)	m3	0.0	1,157	475	0	0	0
Pipe Culvert Ø80cm	m	0.0	39,235	40,307	0	0	0
Masonry Culvert 180x80cm	m	0.0	53,753	34,731	0	0	0
Retaining Wall and Wing Wall (Timber)	m2	0.0	16,836	246	0	0	0
Retaining Wall and Wing Wall (Masonry)	m3	0.0	37,429	11,421	0	0	0
Gabion Protection	m3	0.0	9,029	121	0	0	0
New Bridge (Timber)	SET	1.0	--	--	112,286,830	11,437,690	123,724,520
New Bridge (Concrete)	SET	1.0	--	--	0	0	0
Sub Total					125,817,174	16,693,386	142,510,560
Overhead (15%)					18,872,576	2,504,007	21,376,583
TOTAL COST					144,689,750	19,197,393	163,887,143

Manual routine maintenance of road	Km	3.0	121,976	7,260	365,928	21,780	387,708
Routine maintenance of gravel road	Km	3.0	188,115	88,186	564,345	264,558	828,903
Sub Total					930,273	286,338	1,216,611
Maintenance of Timber Bridge (New)	m2	818.4	10,222	1,344	8,365,684	1,099,929	9,465,613
Maintenance of Concrete Bridge (New)	m2	0.0	2,003	2,456	0	0	0
Maintenance of Timber Bridge (Exist)	m2	0.0	8,935	2,517	0	0	0
Maintenance of Concrete Bridge (Exist)	m2	0.0	1,224	2,336	0	0	0

Earthwork & Pavement Unit Cost	(Rp/Km)	:	7,201,315
Timber Bridge Unit Cost	(Rp/m2)	:	173,855
Concrete Bridge Unit Cost	(Rp/m2)	:	
Survived Value	(Rp)	:	3,486,720
Maintenance Rate without Bridge	(%)	:	5.63
New Bridge Cost Rate	(%)	:	86.82

PROV : SULAWESI SELATAN KAB : GOWA

LINK NO : 1 (IIB-1) LENGTH : 12 Km

UPGRADE : 7.0m road bed, 4.0m road with surface Dressing (1)

(Rp)

ITEM	UNIT	QUANTITY	<<< UNIT COST >>>		<<<<< COST >>>>>		
			LOCAL	FOREIGN	LOCAL	FOREIGN	TOTAL
Site Clearance in Light Bush	m2	0.0	163	91	0	0	0
Subgrade Preparation	m2	22620.0	20	11	452,400	248,820	701,220
Normal Fill	m3	0.0	1,683	865	0	0	0
Fill in Swamp	m3	372.0	2,494	1,055	927,768	392,460	1,320,228
Normal Excavation to Spoil	m3	292.0	986	524	287,912	153,008	440,920
Sub Base Course	m3	1792.0	3,189	1,351	5,714,688	2,420,992	8,135,680
Base Course	m3	840.0	4,364	2,303	3,665,760	1,934,520	5,600,280
Shoulder	m2	36000.0	293	146	10,548,000	5,256,000	15,804,000
Asphalt Patching	m2	502.0	3,372	1,346	1,692,744	675,692	2,368,436
Surface Dressing (Single)	m2	48000.0	587	552	28,176,000	28,496,000	54,672,000
Surface Dressing (Double)	m2	0.0	734	868	0	0	0
Earth Drain	m	400.0	773	119	309,200	47,600	356,800
Earth Drain in Swamp (by machine)	m3	1200.0	1,157	475	1,388,400	570,000	1,958,400
Pipe Culvert Ø80cm	m	0.0	39,235	40,307	0	0	0
Masonry Culvert (80x80cm)	m	24.0	53,753	34,731	1,290,072	833,544	2,123,616
Retaining Wall and Wing Wall (Timber)	m2	0.0	16,836	246	0	0	0
Retaining Wall and Wing Wall (Masonry)	m3	1.5	37,429	11,421	56,143	17,131	73,274
Gabion Protection	m3	0.0	9,029	121	0	0	0
New Bridge (Timber)	SET	1.0	--	--	0	0	0
New Bridge (Concrete)	SET	1.0	--	--	0	0	0
Sub Total					54,509,087	39,045,767	93,554,854
Overhead (15%)					8,176,363	5,856,865	14,033,228
TOTAL COST					62,685,450	44,902,632	107,588,082

Manual routine maintenance of road	Km	12.0	121,976	7,260	1,463,712	87,120	1,550,832
Routine maintenance of asphalt road	Km	12.0	337,200	134,600	4,046,400	1,615,200	5,661,600
Sub Total					5,510,112	1,702,320	7,212,432
Maintenance of Timber Bridge (New)	m2	0.0	10,222	1,344	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.0	2,003	2,456	0	0	0
Maintenance of Timber Bridge (Exist)	m2	0.0	8,935	2,517	0	0	0
Maintenance of Concrete Bridge (Exist)	m2	87.5	4,224	2,336	369,600	204,400	574,000

Earthwork & Pavement	Unit Cost	(Rp/Km)	:	8,965,674
Timber Bridge	Unit Cost	(Rp/m2)	:	
Concrete Bridge	Unit Cost	(Rp/m2)	:	
Survived Value		(Rp)	:	6,815,032
Maintenance Rate without Bridge		(%)	:	6.70
New Bridge Cost Rate		(%)	:	

Appendix A-4

CONSTRUCTION AND MAINTENANCE QUANTITIES
FOR ALL PROPOSED ROAD LINKS
(CONSTRUCTION)

PROV : SULAWESI SELATAN KAB : GOWA

ITEM	UNIT	< 1988 >	< 1989 >	< 1990 >	< 1991 >	< 1992 >	< TOTAL >
EQUIPMENT :							
Bulldozer/Ripper	hr	276.9	626.0	794.5	718.7	1002.7	3498.8
Swamp Bulldozer	hr	16.6	0.1	0.0	0.0	0.0	16.7
Motor Grader	hr	655.4	1703.1	1911.0	2353.4	2266.0	8888.9
Hand-guide Vib. Roller	hr	170.1	155.1	186.9	763.3	282.6	1558.0
Tire Roller	hr	466.6	641.6	466.6	0.0	0.0	1574.8
Vibratory Roller (D&T)	hr	499.2	1328.0	1475.5	1885.3	1856.4	7044.4
Hydraulic Excavator; Wheel	hr	183.1	4.5	0.0	4.3	0.7	192.6
Wheel Loader	hr	760.0	1987.1	2351.7	2432.0	2556.4	10087.2
Water Tank Truck	hr	258.7	819.9	920.3	1168.2	1100.2	4267.3
Dump Truck	hr	6184.9	15234.6	16994.3	20009.2	21849.5	80272.5
Flat Bed Truck with Crane	hr	28.0	74.3	146.8	873.4	198.9	1321.4
Flat Bed Truck	hr	578.0	798.2	616.5	251.2	97.8	2341.7
Portable Crusher/Screening	hr	144.5	378.4	429.4	344.5	205.1	1501.9
Concrete Mixer	hr	20.1	8.6	14.3	27.8	39.4	110.2
Water Pump	hr	14.8	6.8	10.1	20.3	33.8	85.8
Concrete Vibrator	hr	4.2	3.2	1.7	5.4	22.6	37.1
Asphalt Sprayer	hr	466.6	641.6	466.6	0.0	0.0	1574.8
LABOUR :							
Handur	man day	496.4	1070.7	1135.8	2343.3	1818.3	6864.5
Skilled Labourer	man day	372.5	925.6	1417.1	7448.6	786.4	10950.2
Carpenter	man day	4.6	259.7	604.3	4007.9	378.3	5254.8
Mason	man day	26.5	9.0	21.0	37.5	28.1	122.1
Labourer	man day	4738.2	9794.6	8617.1	15988.6	20896.1	60034.6
Driver	man day	1277.0	2996.3	3268.4	3922.3	4028.8	15492.8
Operator	man day	719.3	1569.4	1770.5	1944.7	1908.6	7912.5
MATERIAL :							
Bitumen	l	96650.7	132168.0	95762.4	0.0	0.0	324581.1
Asphalt Oil	l	19133.3	26308.3	19133.3	0.0	0.0	64574.9
Kerosene	l	22975.9	31511.2	22877.2	0.0	0.0	77364.3
Sand	m3	311.6	415.2	296.6	16.5	116.7	1156.6
Cement	bag	71.8	50.4	33.4	93.0	341.3	589.9
River Stone	m3	26.5	9.0	21.0	37.5	28.1	122.1
Steel Moulds	set	2.0	18.8	10.2	0.0	127.0	158.0
Timber	m3	0.3	23.4	54.6	364.1	33.5	475.9
Paint	l	0.0	162.6	379.9	2412.7	268.6	3223.8
Reinforcing Steel	kg	445.2	599.7	325.3	528.1	4139.3	6037.6
Tying Wire	kg	3.9	5.4	2.9	4.8	37.6	54.6
Equivalent Royalty	m3	10355.3	29769.9	34061.6	40300.0	37671.2	152158.0

CONSTRUCTION AND MAINTENANCE QUANTITIES
FOR ALL PROPOSED ROAD LINKS
(MAINTENANCE)

PROV : SULAWESI SELATAN KAB : GOWA

ITEM	UNIT	< 1988 >	< 1989 >	< 1990 >	< 1991 >	< 1992 >	< TOTAL >
EQUIPMENT :							
Bulldozer/Ripper	hr	0.0	0.0	0.0	0.0	0.0	0.0
Swamp Bulldozer	hr	0.0	0.0	0.0	0.0	0.0	0.0
Motor Grader	hr	541.0	1049.7	1000.0	1084.0	1146.2	4820.9
Hand-guide Vib. Roller	hr	390.0	862.5	1110.0	1290.0	1290.0	4942.5
Tire Roller	hr	541.0	1049.7	1000.0	1084.0	1146.2	4820.9
Vibratory Roller (D&T)	hr	0.0	0.0	0.0	0.0	0.0	0.0
Hydraulic Excavator; Wheel	hr	0.0	0.0	0.0	0.0	0.0	0.0
Wheel Loader	hr	154.6	321.2	335.0	406.2	464.2	1681.2
Water Tank Truck	hr	0.0	0.0	0.0	0.0	0.0	0.0
Dump Truck	hr	1707.4	3651.4	4228.4	5015.4	5363.4	19966.0
Flat Bed Truck with Crane	hr	1222.0	2346.9	2443.5	2549.5	2664.4	11226.3
Flat Bed Truck	hr	2360.4	4652.4	4656.8	5082.9	5277.2	22029.7
Portable Crusher/Screening	hr	78.0	162.4	169.7	205.7	234.7	850.5
Concrete Mixer	hr	4.2	8.2	8.5	8.8	9.1	38.8
Water Pump	hr	4.2	8.2	8.5	8.8	9.1	38.8
Concrete Vibrator	hr	4.2	8.2	8.5	8.8	9.1	38.8
Asphalt Sprayer	hr	0.0	0.0	0.0	0.0	0.0	0.0
LABOUR :							
Handur	man day	857.9	1727.9	1822.8	2023.7	2101.3	8533.6
Skilled Labourer	man day	294.2	641.5	808.6	935.1	1033.4	3712.8
Carpenter	man day	15.5	30.2	31.1	34.3	87.0	198.1
Mason	man day	0.0	0.0	0.0	0.0	0.0	0.0
Labourer	man day	10268.5	20677.7	21830.1	24213.7	24905.4	101975.4
Driver	man day	926.1	1860.8	1977.0	2200.7	2319.2	9283.8
Operator	man day	232.8	459.1	447.3	499.4	539.6	2178.2
MATERIAL :							
Bitumen	l	3510.0	7762.5	9990.0	11610.0	11610.0	44482.5
Asphalt Oil	l	0.0	0.0	0.0	0.0	0.0	0.0
Kerosene	l	390.0	862.5	1110.0	1290.0	1290.0	4942.5
Sand	m ³	69.2	151.9	193.5	223.8	224.1	862.5
Cement	bag	62.4	119.7	124.7	129.4	133.3	569.5
River Stone	m ³	0.0	0.0	0.0	0.0	0.0	0.0
Steel Moulds	set	0.0	0.0	0.0	0.0	0.0	0.0
Timber	m ³	1.1	2.2	2.2	2.5	7.2	15.2
Paint	l	2.9	5.8	5.8	7.3	40.9	62.7
Reinforcing Steel	kg	320.6	615.1	641.1	665.3	685.3	2927.4
Tying Wire	kg	2.9	5.5	5.8	6.0	6.2	26.4
Equivalent Royalty	m ³	2191.1	4551.0	4745.2	5753.7	6575.4	23816.4

CONSTRUCTION AND MAINTENANCE QUANTITIES
FOR ALL PROPOSED ROAD LINKS
(TOTAL)

PROV : SULAWESI SELATAN KAB : GOWA

ITEM	UNIT	< 1988 >	< 1989 >	< 1990 >	< 1991 >	< 1992 >	< TOTAL >
EQUIPMENT :							
Bulldozer/Ripper	hr	276.9	626.0	794.5	718.7	1082.7	3498.8
Swamp Bulldozer	hr	16.6	0.1	0.0	0.0	0.0	16.7
Motor Grader	hr	1196.4	2752.8	2911.0	3437.4	3412.2	13709.8
Hand-guide Vib. Roller	hr	560.1	1017.6	1296.9	2053.3	1572.6	6500.5
Tire Roller	hr	1007.6	1691.3	1466.6	1084.0	1146.2	6395.7
Vibratory Roller (O&I)	hr	499.2	1328.0	1475.5	1885.3	1856.4	7044.4
Hydraulic Excavator; Wheel	hr	183.1	4.5	0.0	4.3	0.7	192.6
Wheel Loader	hr	914.6	2308.3	2686.7	2838.2	3020.6	11768.4
Water Tank Truck	hr	258.7	819.9	920.3	1168.2	1100.2	4267.3
Dump Truck	hr	7892.3	18886.0	21222.7	25024.6	27212.9	100238.5
Flat Bed Truck with Crane	hr	1250.0	2421.2	2590.3	3422.9	2863.3	12547.7
Flat Bed Truck	hr	2938.4	5450.6	5273.3	5334.1	5375.0	24371.4
Portable Crusher/Screening	hr	222.5	540.8	599.1	550.2	439.8	2352.4
Concrete Mixer	hr	24.3	16.8	22.8	36.6	48.5	149.0
Water Pump	hr	19.0	15.0	18.6	29.1	42.9	124.6
Concrete Vibrator	hr	8.4	11.4	10.2	14.2	31.7	75.9
Asphalt Sprayer	hr	466.6	641.6	466.6	0.0	0.0	1574.8
LABOUR :							
Handur	man day	1354.3	2798.6	2958.6	4367.0	3919.6	15398.1
Skilled Labourer	man day	666.7	1567.1	2225.7	8383.7	1819.8	14663.0
Carpenter	man day	20.1	289.9	635.4	4042.2	465.3	5452.9
Mason	man day	26.5	9.0	21.0	37.5	28.1	122.1
Labourer	man day	15006.7	30472.3	30447.2	40202.3	45881.5	162010.0
Driver	man day	2203.1	4857.1	5245.4	6123.0	6348.0	24776.6
Operator	man day	952.1	2028.5	2217.8	2444.1	2448.2	10090.7
MATERIAL :							
Bitumen	l	100160.7	139930.5	105752.4	11610.0	11610.0	369063.6
Asphalt Oil	l	19133.3	26308.3	19133.3	0.0	0.0	64574.9
Kerosene	l	23365.9	32373.7	23987.2	1290.0	1290.0	82306.8
Sand	m ³	380.8	567.1	490.1	240.3	340.8	2019.1
Cement	bag	134.2	170.1	158.1	222.4	474.6	1159.4
River Stone	m ³	26.5	9.0	21.0	37.5	28.1	122.1
Steel Moulds	set	2.0	18.8	10.2	0.0	127.0	158.0
Timber	m ³	1.4	25.6	56.8	366.6	40.7	491.1
Paint	l	2.9	168.4	385.7	2420.0	309.5	3286.5
Reinforcing Steel	kg	765.8	1214.8	966.4	1193.4	4824.6	8965.0
Tying Wire	kg	6.8	10.9	8.7	10.8	43.8	81.0
Equivalent Royalty	m ³	12546.4	34320.9	38806.8	46053.7	44246.6	175974.4

Appendix A-5

CONSTRUCTION AND MAINTENANCE COSTS
FOR ALL PROPOSED ROAD LINKS
(CONSTRUCTION)

PROV : SULAWESI SELATAN

KAB : GOWA

(1000 Rp)

ITEM	UNIT	< 1988 >	< 1989 >	< 1990 >	< 1991 >	< 1992 >	< TOTAL >
EQUIPMENT :							
		82,147	191,350	213,893	234,218	239,817	961,425
Bulldozer/Ripper	15969	4,421	9,996	12,687	11,476	17,289	55,869
Swamp Bulldozer	11757	195	1	0	0	0	196
Motor Grader	13627	8,931	23,208	26,041	32,069	30,878	121,127
Hand-guide Vib. Roller	1599	271	248	298	1,220	451	2,488
Tire Roller	10892	5,082	6,988	5,082	0	0	17,152
Vibratory Roller (D&T)	6800	3,394	9,030	10,033	12,820	12,623	47,900
Hydraulic Excavator; Wheel	12795	2,342	57	0	55	8	2,462
Wheel Loader	16819	12,782	33,421	39,553	40,903	42,996	169,655
Water Tank Truck	4015	1,038	3,291	3,695	4,690	4,417	17,131
Dump Truck	5510	34,078	83,942	93,638	110,250	120,390	442,298
Flat Bed Truck with Crane	5069	141	376	744	4,427	1,008	6,696
Flat Bed Truck	3353	1,938	2,676	2,067	842	327	7,850
Portable Crusher/Screening	44145	6,378	16,704	18,955	15,207	9,054	66,298
Concrete Mixer	8967	180	77	128	249	353	987
Water Pump	487	7	3	4	9	16	39
Concrete Vibrator	316	1	1	0	1	7	10
Asphalt Sprayer	2076	968	1,331	968	0	0	3,267
LABOUR :							
		15,449	34,227	36,036	72,735	56,810	215,257
Handur	2000	992	2,141	2,271	4,686	3,636	13,726
Skilled Labourer	2000	745	1,851	2,834	14,897	1,572	21,899
Carpenter	2500	11	649	1,510	10,019	945	13,134
Mason	2500	66	22	52	93	70	303
Labourer	1500	7,107	14,691	12,925	23,982	31,344	90,049
Driver	3000	3,831	8,988	9,805	11,766	12,086	46,476
Operator	3750	2,697	5,885	6,639	7,292	7,157	29,670
MATERIAL :							
		50,335	77,810	67,927	92,304	23,015	311,391
Bitumen	275	26,578	36,346	26,334	0	0	89,258
Asphalt Oil	700	13,393	18,415	13,393	0	0	45,201
Kerosene	250	5,743	7,877	5,719	0	0	19,339
Sand	4000	1,246	1,660	1,186	66	466	4,624
Cement	3750	269	189	125	348	1,279	2,210
River Stone	4000	106	36	84	150	112	488
Steel Moulds	7500	15	141	76	0	952	1,184
Timber	200000	60	4,680	10,920	72,820	6,700	95,180
Paint	3500	0	569	1,329	8,444	940	11,282
Reinforcing Steel	750	333	449	243	396	3,104	4,525
Tying Wire	1200	4	6	3	5	45	63
Equivalent Royalty	250	2,588	7,442	8,515	10,075	9,417	38,037

CONSTRUCTION AND MAINTENANCE COSTS
FOR ALL PROPOSED ROAD LINKS
(MAINTENANCE)

PROV : SULAWESI SELATAN

KAB : BOWA

(1000 Rp)

ITEM	UNIT	< 1988 >	< 1989 >	< 1990 >	< 1991 >	< 1992 >	< TOTAL >
EQUIPMENT :		43,485	87,379	90,798	102,233	109,170	433,065
Bulldozer/Ripper	15969	0	0	0	0	0	0
Swamp Bulldozer	11757	0	0	0	0	0	0
Motor Grader	13627	7,372	14,304	13,627	14,771	15,619	65,693
Hand-guide Vib. Roller	1599	623	1,379	1,774	2,062	2,062	7,900
Tire Roller	10892	5,892	11,433	10,892	11,806	12,484	52,507
Vibratory Roller (D&T)	6800	0	0	0	0	0	0
Hydraulic Excavator; Wheel	12795	0	0	0	0	0	0
Wheel Loader	16819	2,600	5,402	5,634	6,831	7,807	28,274
Water Tank Truck	4015	0	0	0	0	0	0
Dump Truck	5510	9,407	20,119	23,298	27,634	29,552	110,010
Flat Bed Truck with Crane	5069	6,194	11,896	12,386	12,923	13,505	56,904
Flat Bed Truck	3353	7,914	15,599	15,614	17,042	17,694	73,863
Portable Crusher/Screening	44145	3,443	7,169	7,491	9,080	10,360	37,543
Concrete Mixer	8967	37	73	76	78	81	345
Water Pump	487	2	3	4	4	4	17
Concrete Vibrator	316	1	2	2	2	2	9
Asphalt Sprayer	2076	0	0	0	0	0	0
LABOUR :		21,394	43,132	45,692	50,796	52,943	213,957
Mandur	2000	1,715	3,455	3,645	4,047	4,202	17,064
Skilled Labourer	2000	588	1,283	1,617	1,870	2,066	7,424
Carpenter	2500	38	75	77	85	217	492
Mason	2500	0	0	0	0	0	0
Labourer	1500	15,402	31,016	32,745	36,320	37,478	152,961
Driver	3000	2,778	5,582	5,931	6,602	6,957	27,850
Operator	3750	873	1,721	1,677	1,872	2,023	8,166
MATERIAL :		2,592	5,468	6,397	7,362	8,655	30,474
Bitumen	275	965	2,134	2,747	3,192	3,192	12,230
Asphalt Oil	700	0	0	0	0	0	0
Kerosene	250	97	215	277	322	322	1,233
Sand	4000	276	607	774	895	896	3,448
Cement	3750	234	448	467	485	499	2,133
River Stone	4000	0	0	0	0	0	0
Steel Moulds	7500	0	0	0	0	0	0
Timber	200000	220	440	440	500	1,440	3,040
Paint	3500	10	20	20	25	143	218
Reinforcing Steel	750	240	461	480	498	513	2,192
Tying Wire	1200	3	6	6	7	7	29
Equivalent Royalty	250	547	1,137	1,186	1,438	1,743	5,951

CONSTRUCTION AND MAINTENANCE COSTS
FOR ALL PROPOSED ROAD LINKS
(TOTAL)

PROV : SULAWESI SELATAN

KAB : GOWA

(1000 Rp)

ITEM	UNIT	< 1988 >	< 1989 >	< 1990 >	< 1991 >	< 1992 >	< TOTAL >
EQUIPMENT :		125,632	278,729	304,691	336,451	348,987	1,394,490
Bulldozer/Ripper	15969	4,421	9,996	12,687	11,476	17,289	55,869
Swamp Bulldozer	11757	195	1	0	0	0	196
Motor Grader	13627	16,303	37,512	39,668	46,840	46,497	186,820
Hand-guide Vib. Roller	1599	894	1,627	2,072	3,282	2,513	10,388
Tire Roller	10892	10,974	18,421	15,974	11,806	12,484	69,659
Vibratory Roller (D&T)	6800	3,394	9,030	10,033	12,820	12,623	47,900
Hydraulic Excavator; Wheel	12795	2,342	57	0	55	8	2,462
Wheel Loader	16819	15,382	38,823	45,187	47,734	50,803	197,929
Water Tank Truck	4015	1,038	3,291	3,695	4,690	4,417	17,131
Dump Truck	5510	43,485	104,061	116,936	137,884	149,942	552,308
Flat Bed Truck with Crane	5069	6,335	12,272	13,130	17,350	14,513	63,600
Flat Bed Truck	3353	9,852	18,275	17,681	17,884	18,021	81,713
Portable Crusher/Screening	44145	9,821	23,873	26,446	24,287	19,414	103,841
Concrete Mixer	8967	217	150	204	327	434	1,332
Water Pump	487	9	6	8	13	20	56
Concrete Vibrator	316	2	3	2	3	9	19
Asphalt Sprayer	2076	968	1,331	968	0	0	3,267
LABOUR :		36,843	77,359	81,728	123,531	109,753	429,214
Manur	2000	2,707	5,596	5,916	8,733	7,838	30,790
Skilled Labourer	2000	1,333	3,134	4,451	16,767	3,638	29,323
Carpenter	2500	49	724	1,587	10,104	1,162	13,626
Mason	2500	66	22	52	93	70	303
Labourer	1500	22,509	45,707	45,670	60,302	68,822	243,010
Driver	3000	6,609	14,570	15,736	18,368	19,043	74,326
Operator	3750	3,570	7,606	8,316	9,164	9,180	37,836
MATERIAL :		52,927	83,278	74,324	99,666	31,670	341,865
Bitumen	275	27,543	38,480	29,081	3,192	3,192	101,488
Asphalt Oil	700	13,393	18,415	13,393	0	0	45,201
Kerosene	250	5,840	8,092	5,996	322	322	20,572
Sand	4000	1,522	2,267	1,960	961	1,362	8,072
Cement	3750	503	637	592	833	1,778	4,343
River Stone	4000	106	36	84	150	112	488
Steel Moulds	7500	15	141	76	0	952	1,184
Timber	200000	280	5,120	11,360	73,320	8,140	98,220
Paint	3500	10	589	1,349	8,469	1,083	11,500
Reinforcing Steel	750	573	910	723	894	3,617	6,717
Tying Wire	1200	7	12	9	12	52	92
Equivalent Royalty	250	3,135	8,579	9,701	11,513	11,060	43,988

Appendix A-6

QUANTITIES OF BRIDGE ON PROPOSED ROAD LINKS

PROV : SULAWESI SELATAN KAB : GOWA

LINK NO	BRIDGE NAME	Km	From	<< TYPE >> (EXIST) (NEW)	DESIGN LOAD CLASS	SPAN LENGTH (m)	SPAN NO (no)	SPAN LENGTH (m)	WIDTH (m)	AREA (EXIST) (m2)	AREA (NEW) (m2)	PIER (no)	ABUT (no)	ROAD CLASS
27	PABANGIANG	4	BTKS	KB		3.00	1	3.00	7.00	21.00		0	2	1118-2
	PACCINONGANG	4	BTKS	KB		4.00	1	4.00	7.00	28.00		0	2	
32	PABANGIANG	1	KTHK	KB		4.00	1	4.00	4.00	16.00		0	2	1118-2
40	KOKOA	4	MCBL	KB		9.00	1	9.00	4.00	36.00		0	2	1118-2
41	CORING	1	LNBS	KB		0.01	1	0.01	3.00	0.03		0	2	1118-2
	LABBAKANG	3	BOKA	KB		0.01	1	0.01	5.00	0.05		0	2	
	BIRING BALANG	5	BOKA	KB		0.02	2	0.01	3.50	0.07		1	2	
45	SALURAN PAN	7	DCLK	KB		3.00	1	3.00	4.00	12.00		0	2	1118-2
47	PACCELLEKANG 1	3	PCLK	KB		7.00	1	7.00	4.50	31.50		0	2	1118-2
	PACCELLEKANG 2	4	PCLK	KB		10.00	1	10.00	4.50	45.00		0	2	
	MONCONGLOE	5	PCLK	KB		5.00	1	5.00	4.50	22.50		0	2	
54	TAMHATTIA	6	BLKS	KK	TM 10T (B)	4.50	1	4.50	4.00	11.25	18.00	0	2	1118-2

PROV : SULAWESI SELATAN KAB : GOWA

LINK NO	BRIDGE NAME	Km	From	<< TYPE >>		DESIGN LOAD	SPAN CLASS	LENGTH (m)	SPAN NO (no)	SPAN LENGTH (m)	WIDTH (m)	AREA	AREA	PIER (no)	ABUT (no)	ROAD CLASS	
				(EXIST)	(NEW)							(EXIST)	(NEW)				
1	CINDAYA	7	PBNG		KB			7.00	1	7.00	4.50	31.50		0	2	111B-1	
	ROMANG PULONG	3	PRNG		KB			5.00	1	5.00	4.00	20.00		0	2		
	KAMPUNG BARU	8	PBNG		KB			8.00	1	8.00	4.50	36.00		0	2		
2	TAMBAJAKO	1	MMJ		KK	TM	10T	(B)	3.60	1	3.60	4.00	14.40	14.40	0	2	111C
	BUYA	2	MMJ		KK	TM	10T	(C)	40.00	5	8.00	4.00	160.00	160.00	4	2	
	SIMBORO	3	MMJ		--	TM	10T	(C)	40.00	5	8.00	4.00	0.00	160.00	4	2	
	SALUNIU	3	MMJ		--	TM	10T	(B)	10.00	2	5.00	4.00	0.00	40.00	1	2	
	BONELANBE	4	MMJ		--	TM	10T	(C)	14.00	2	7.00	4.00	0.00	56.00	1	2	
	KULASI	4	MMJ		--	TM	10T	(C)	13.00	2	6.50	4.00	0.00	52.00	1	2	
	MANADATU	7	MMJ		--	TM	10T	(B)	10.00	2	5.00	4.00	0.00	40.00	1	2	
	RANGAS	7	MMJ		--	TM	10T	(B)	10.00	2	5.00	4.00	0.00	40.00	1	2	
	RANGAS POANG	7	MMJ		--	TM	10T	(C)	14.00	2	7.00	4.00	0.00	56.00	1	2	
	TAMBUNG	8	MMJ		--	TM	10T	(B)	10.00	2	5.00	4.00	0.00	40.00	1	2	
	BATU PINDANG	9	MMJ		--	TM	10T	(B)	10.00	2	5.00	4.00	0.00	40.00	1	2	
	LUMANDANG	10	MMJ		--	TM	10T	(B)	10.00	2	5.00	4.00	0.00	40.00	1	2	
	LUMIKU	11	MMJ		--	TM	10T	(C)	15.00	2	7.50	4.00	0.00	60.00	1	2	
	TUEKE	14	MMJ		--	TM	10T	(B)	5.00	1	5.00	4.00	0.00	20.00	0	2	
5	PARINRING	1	RPKL			KB		5.00	1	5.00	4.50	22.50		0	2	111B-1	
	CAMBAJA WAIYA	6	RPKL			KB		5.00	1	5.00	4.50	22.50		0	2		
	PABUDUKAN	3	RPKL			KB		5.00	1	5.00	4.50	22.50		0	2		
7	N.I	5	RPOG			KK		4.00	1	4.00	3.00	12.00		0	2	111C	
	BALANG CICI	7	RPOG		--	TM	10T	(A)	3.00	1	3.00	4.00	0.00	12.00	0	2	
	RAPPODAENG	9	RPOG		--	TM	10T	(B)	4.00	1	4.00	4.00	0.00	16.00	0	2	
11	LMBANG REMBANG	10	SRNG		--	TM	10T	(C)	7.00	1	7.00	4.00	0.00	28.00	0	2	111B-2
	BINA ARUNG	11	SRNG		LL			4.00	1	4.00	3.50	14.00		0	2		
	BATU MENTENG	12	SRNG		--	TM	10T	(C)	20.00	3	6.67	4.00	0.00	80.00	2	2	
	TUNGGENG	21	SRNG		--	TM	10T	(C)	8.00	1	8.00	4.00	0.00	32.00	0	2	
	ESERE	32	SRNG			KB		24.00	1	24.00	4.00	96.00		0	2		
	BARUKEKE	38	SRNG		KK	TM	10T	(B)	3.50	1	3.50	4.00	14.00	14.00	0	2	
12	TABUSALAYA	2	PTLS			KB		4.00	1	4.00	4.00	16.00		0	2	111B-2	
	PARANGLUARA	3	PTLS			KB		3.50	1	3.50	4.00	14.00		0	2		
	PABAENG BAENG	4	PTLS			KB		5.00	1	5.00	4.50	22.50		0	2		
	KOK CIKANG	6	PTLS			KB		12.00	1	12.00	4.00	48.00		0	2		
	PAKKATTO CADDI	6	PTLS			KB		3.00	1	3.00	4.50	13.50		0	2		
18	LANNA I	4	LANA			KB		4.00	1	4.00	4.00	16.00		0	2	111B-2	
	LANNA II	5	LANA			KB		3.00	1	3.00	4.00	12.00		0	2		
	LANNA III	5	LANA			KB		3.00	1	3.00	5.00	15.00		0	2		
	LANNA IV	6	LANA			KB		3.00	1	3.00	5.00	15.00		0	2		
19	N.I	12	LANA			KB		4.00	1	4.00	3.50	14.00		0	2	111B-1	
	N.I	10	LANA			KB		3.00	1	3.00	3.50	10.50		0	2		
	N.I	9	LANA			RB		21.00	1	21.00	3.50	73.50		0	2		
	N.I	4	LANA			RB		26.00	1	26.00	4.50	117.00		0	2		
27	KALONG TALA	2	BTKS			KB		4.00	1	4.00	6.00	24.00		0	2	111B-2	

Appendix A-7

CONSTRUCTION AND MAINTENANCE COST OF BRIDGES
ON PROPOSED ROAD LINKS

PROV : SULAWESI SELATAN KAD : GOWA

LINK NO : 1 (IIIB-1) LENGTH : 12 Km

(Rp)

I T E M	UNIT	QUANTITY	<<< UNIT COST >>>		<<<<< COST >>>>>		>>>>> TOTAL
			LOCAL	FOREIGN	LOCAL	FOREIGN	
Superstructure (Timber; Span 3m; 10T)	m2	0.00	57,600	4,626	0	0	0
Superstructure (Timber; Span 5m; 10T)	m2	0.00	63,802	5,107	0	0	0
Superstructure (Timber; Span 8m; 10T)	m2	0.00	84,511	6,706	0	0	0
Superstructure (Timber; Span 3m; BM50)	m2	0.00	71,423	5,719	0	0	0
Superstructure (Timber; Span 5m; BM50)	m2	0.00	77,976	6,195	0	0	0
Superstructure (Timber; Span 8m; BM50)	m2	0.00	98,895	7,841	0	0	0
Superstructure (Concrete; Span 3m; BM50)	m2	0.00	57,937	8,925	0	0	0
Superstructure (Concrete; Span 5m; BM50)	m2	0.00	59,060	9,542	0	0	0
Superstructure (Concrete; Span 8m; BM50)	m2	0.00	60,502	99,704	0	0	0
Superstructure (Concrete; Span 10m; BM50)	m2	0.00	65,879	113,234	0	0	0
Superstructure (Concrete; Span 15m; BM50)	m2	0.00	70,320	133,369	0	0	0
Substructure (Pier; for Timber; 10T)	NO	0.00	501,630	43,123	0	0	0
Substructure (Abut; for Timber; 10T)	NO	0.00	1,322,754	189,655	0	0	0
Substructure (Pier; for Timber; BM50)	NO	0.00	737,732	63,842	0	0	0
Substructure (Abut; for Timber; BM50)	NO	0.00	1,500,543	212,676	0	0	0
Substructure (Pier; for Concrete; BM50)	NO	0.00	1,532,352	452,906	0	0	0
Substructure (Abut; for Concrete; BM50)	NO	0.00	3,265,387	959,362	0	0	0
Demolition of Bridge (Timber->Timber)	m2	0.00	15,706	1,730	0	0	0
Demolition of Bridge (Timber->Concrete)	m2	0.00	15,706	1,730	0	0	0
Demolition of Bridge (Concrete)	m2	0.00	81,154	64,824	0	0	0
Maintenance of Timber Bridge (New)	m2	0.00	10,222	1,344	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.00	2,003	2,456	0	0	0
Maintenance of Timber Bridge (Exist)	m2	0.00	8,935	2,517	0	0	0
Maintenance of Concrete Bridge (Exist)	m2	87.50	4,224	2,336	369,600	204,400	574,000
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(Without Overhead)		TOTAL COST (Timber Bridge)			0	0	0
		(Concrete Bridge)			0	0	0
		TOTAL COST (without Maintenance)			0	0	0
<hr/>							
(Overhead : 15%)		TOTAL COST (Timber Bridge)			0	0	0
		(Concrete Bridge)			0	0	0
		TOTAL COST (without Maintenance)			0	0	0

PROV : SULAWESI SELATAN KAB : GOWA

LINK NO : 2 (IIC) LENGTH : 3 Km

(Rp)

ITEM	UNIT	QUANTITY	<<< UNIT COST >>>		<<<<< COST >>>>>		TOTAL
			LOCAL	FOREIGN	LOCAL	FOREIGN	
Superstructure (Timber; Span 3m; IOT)	m2	0.00	57,600	4,626	0	0	0
Superstructure (Timber; Span 5m; IOT)	m2	274.40	63,802	5,107	17,507,268	1,401,360	18,908,628
Superstructure (Timber; Span 8m; IOT)	m2	544.00	84,511	6,706	45,973,984	3,648,064	49,622,048
Superstructure (Timber; Span 3m; BHSO)	m2	0.00	71,423	5,719	0	0	0
Superstructure (Timber; Span 5m; BHSO)	m2	0.00	77,976	6,195	0	0	0
Superstructure (Timber; Span 8m; BHSO)	m2	0.00	98,895	7,841	0	0	0
Superstructure (Concrete; Span 3m; BHSO)	m2	0.00	57,937	81,925	0	0	0
Superstructure (Concrete; Span 5m; BHSO)	m2	0.00	59,060	91,542	0	0	0
Superstructure (Concrete; Span 8m; BHSO)	m2	0.00	60,502	99,704	0	0	0
Superstructure (Concrete; Span 10m; BHSO)	m2	0.00	65,879	113,234	0	0	0
Superstructure (Concrete; Span 15m; BHSO)	m2	0.00	70,320	133,369	0	0	0
Substructure (Pier; for Timber; IOT)	NO	18.00	501,630	43,123	9,029,340	776,214	9,805,554
Substructure (Abut; for Timber; IOT)	NO	28.00	1,322,754	189,655	37,037,112	5,310,340	42,347,452
Substructure (Pier; for Timber; BHSO)	NO	0.00	737,732	63,842	0	0	0
Substructure (Abut; for Timber; BHSO)	NO	0.00	1,500,543	212,676	0	0	0
Substructure (Pier; for Concrete; BHSO)	NO	0.00	1,532,352	452,906	0	0	0
Substructure (Abut; for Concrete; BHSO)	NO	0.00	3,265,387	959,362	0	0	0
Demolition of Bridge (Timber->Timber)	m2	174.40	15,706	1,730	2,739,126	301,712	3,040,838
Demolition of Bridge (Timber->Concrete)	m2	0.00	15,706	1,730	0	0	0
Demolition of Bridge (Concrete)	m2	0.00	81,154	64,824	0	0	0
Maintenance of Timber Bridge (New)	m2	818.40	10,222	1,344	8,365,684	1,099,929	9,465,613
Maintenance of Concrete Bridge (New)	m2	0.00	2,003	2,456	0	0	0
Maintenance of Timber Bridge (Exist)	m2	0.00	8,935	2,517	0	0	0
Maintenance of Concrete Bridge (Exist)	m2	0.00	4,224	2,336	0	0	0
(Without Overhead)			TOTAL COST (Timber Bridge)		112,286,830	11,437,690	123,724,520
			(Concrete Bridge)		0	0	0
			TOTAL COST (without Maintenance)		112,286,830	11,437,690	123,724,520
(Overhead : 15%)			TOTAL COST (Timber Bridge)		129,129,855	13,153,344	142,283,198
			(Concrete Bridge)		0	0	0
			TOTAL COST (without Maintenance)		129,129,855	13,153,344	142,283,198

PROV : SULAWESI SELATAN KAB : GOWA

LINK NO : 5 (IIB-1) LENGTH : 14 Km

(Rp)

ITEM	UNIT	QUANTITY	<<< UNIT COST >>>		<<<<< COST >>>>>		TOTAL
			LOCAL	FOREIGN	LOCAL	FOREIGN	
Superstructure (Timber; Span 3m; IOT)	m2	0.00	57,600	4,626	0	0	0
Superstructure (Timber; Span 5m; IOT)	m2	0.00	63,802	5,107	0	0	0
Superstructure (Timber; Span 8m; IOT)	m2	0.00	84,511	6,706	0	0	0
Superstructure (Timber; Span 3m; BHSO)	m2	0.00	71,423	5,719	0	0	0
Superstructure (Timber; Span 5m; BHSO)	m2	0.00	77,976	6,195	0	0	0
Superstructure (Timber; Span 8m; BHSO)	m2	0.00	98,895	7,841	0	0	0
Superstructure (Concrete; Span 3m; BHSO)	m2	0.00	57,937	81,925	0	0	0
Superstructure (Concrete; Span 5m; BHSO)	m2	0.00	59,060	91,542	0	0	0
Superstructure (Concrete; Span 8m; BHSO)	m2	0.00	60,502	99,704	0	0	0
Superstructure (Concrete; Span 10m; BHSO)	m2	0.00	65,879	113,234	0	0	0
Superstructure (Concrete; Span 15m; BHSO)	m2	0.00	70,320	133,369	0	0	0
Substructure (Pier; for Timber; IOT)	NO	0.00	501,630	43,123	0	0	0
Substructure (Abut; for Timber; IOT)	NO	0.00	1,322,754	109,455	0	0	0
Substructure (Pier; for Timber; BHSO)	NO	0.00	737,732	63,842	0	0	0
Substructure (Abut; for Timber; BHSO)	NO	0.00	1,500,543	212,676	0	0	0
Substructure (Pier; for Concrete; BHSO)	NO	0.00	1,532,352	452,906	0	0	0
Substructure (Abut; for Concrete; BHSO)	NO	0.00	3,265,387	959,362	0	0	0
Demolition of Bridge (Timber->Timber)	m2	0.00	15,706	1,730	0	0	0
Demolition of Bridge (Timber->Concrete)	m2	0.00	15,706	1,730	0	0	0
Demolition of Bridge (Concrete)	m2	0.00	81,154	64,824	0	0	0
Maintenance of Timber Bridge (New)	m2	0.00	10,222	1,344	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.00	2,003	2,456	0	0	0
Maintenance of Timber Bridge (Exist)	m2	0.00	8,935	2,517	0	0	0
Maintenance of Concrete Bridge (Exist)	m2	67.50	4,224	2,336	285,120	157,680	442,800

(Without Overhead)

TOTAL COST (Timber Bridge)	0	0	0
(Concrete Bridge)	0	0	0
TOTAL COST (without Maintenance)	0	0	0

(Overhead : 15%)

TOTAL COST (Timber Bridge)	0	0	0
(Concrete Bridge)	0	0	0
TOTAL COST (without Maintenance)	0	0	0

PROV : SULAWESI SELATAN KAB : GOWA

LINK NO : 7 (IIC) LENGTH : 30 Km

(Rp)

ITEM	UNIT	QUANTITY	<<< UNIT COST >>>		<<<<< COST >>>>>		>>>>> TOTAL
			LOCAL	FOREIGN	LOCAL	FOREIGN	
Superstructure (Timber; Span 3m; IOT)	m2	12.00	57,600	4,626	691,200	55,512	746,712
Superstructure (Timber; Span 5m; IOT)	m2	16.00	63,802	5,107	1,020,832	81,712	1,102,544
Superstructure (Timber; Span 8m; IOT)	m2	0.00	84,511	6,706	0	0	0
Superstructure (Timber; Span 3m; BHSO)	m2	0.00	71,423	5,719	0	0	0
Superstructure (Timber; Span 5m; BHSO)	m2	0.00	77,976	6,195	0	0	0
Superstructure (Timber; Span 8m; BHSO)	m2	0.00	98,895	7,841	0	0	0
Superstructure (Concrete; Span 3m; BHSO)	m2	0.00	57,937	81,925	0	0	0
Superstructure (Concrete; Span 5m; BHSO)	m2	0.00	59,060	91,542	0	0	0
Superstructure (Concrete; Span 8m; BHSO)	m2	0.00	60,502	99,704	0	0	0
Superstructure (Concrete; Span 10m; BHSO)	m2	0.00	65,879	113,234	0	0	0
Superstructure (Concrete; Span 15m; BHSO)	m2	0.00	70,320	133,369	0	0	0
Substructure (Pier; for Timber; IOT)	NO	0.00	501,630	43,123	0	0	0
Substructure (Abut; for Timber; IOT)	NO	4.00	1,322,754	189,655	5,291,016	758,620	6,049,636
Substructure (Pier; for Timber; BHSO)	NO	0.00	737,732	63,842	0	0	0
Substructure (Abut; for Timber; BHSO)	NO	0.00	1,500,543	212,676	0	0	0
Substructure (Pier; for Concrete; BHSO)	NO	0.00	1,532,352	452,906	0	0	0
Substructure (Abut; for Concrete; BHSO)	NO	0.00	3,265,387	959,362	0	0	0
Demolition of Bridge (Timber->Timber)	m2	0.00	15,706	1,730	0	0	0
Demolition of Bridge (Timber->Concrete)	m2	0.00	15,706	1,730	0	0	0
Demolition of Bridge (Concrete)	m2	0.00	81,154	64,824	0	0	0
Maintenance of Timber Bridge (New)	m2	28.00	10,222	1,344	286,216	37,632	323,848
Maintenance of Concrete Bridge (New)	m2	0.00	2,003	2,456	0	0	0
Maintenance of Timber Bridge (Exist)	m2	12.00	8,935	2,517	107,220	30,204	137,424
Maintenance of Concrete Bridge (Exist)	m2	0.00	4,224	2,336	0	0	0
(Without Overhead)			TOTAL COST (Timber Bridge)		7,003,048	895,844	7,898,892
			(Concrete Bridge)		0	0	0
			TOTAL COST (without Maintenance)		7,003,048	895,844	7,898,892
(Overhead : 15%)			TOTAL COST (Timber Bridge)		8,053,505	1,030,221	9,083,726
			(Concrete Bridge)		0	0	0
			TOTAL COST (without Maintenance)		8,053,505	1,030,221	9,083,726

PROV : SULAWESI SELATAN KAD : GOWA
 LINK NO : 11 (IIB-2) LENGTH : 39 Km

(Rp)

I T E M	UNIT	QUANTITY	<<< UNIT COST >>>		<<<<< COST >>>>>		>>>>> TOTAL
			LOCAL	FOREIGN	LOCAL	FOREIGN	
Superstructure (Timber; Span 3m; 10T)	m2	0.00	57,600	4,626	0	0	0
Superstructure (Timber; Span 5m; 10T)	m2	14.00	63,802	5,107	893,228	71,498	964,726
Superstructure (Timber; Span 8m; 10T)	m2	140.00	84,511	6,706	11,831,540	938,840	12,770,380
Superstructure (Timber; Span 3m; BMSO)	m2	0.00	71,423	5,719	0	0	0
Superstructure (Timber; Span 5m; BMSO)	m2	0.00	77,976	6,195	0	0	0
Superstructure (Timber; Span 8m; BMSO)	m2	0.00	98,895	7,841	0	0	0
Superstructure (Concrete; Span 3m; BMSO)	m2	0.00	57,937	81,925	0	0	0
Superstructure (Concrete; Span 5m; BMSO)	m2	0.00	59,060	91,542	0	0	0
Superstructure (Concrete; Span 8m; BMSO)	m2	0.00	60,502	99,704	0	0	0
Superstructure (Concrete; Span 10m; BMSO)	m2	0.00	65,879	113,234	0	0	0
Superstructure (Concrete; Span 15m; BMSO)	m2	0.00	70,320	133,369	0	0	0
Substructure (Pier; for Timber; 10T)	NO	2.00	501,630	43,123	1,003,260	86,246	1,089,506
Substructure (Abut; for Timber; 10T)	NO	8.00	1,322,754	189,655	10,582,032	1,517,240	12,099,272
Substructure (Pier; for Timber; BMSO)	NO	0.00	737,732	63,842	0	0	0
Substructure (Abut; for Timber; BMSO)	NO	0.00	1,500,543	212,676	0	0	0
Substructure (Pier; for Concrete; BMSO)	NO	0.00	1,532,352	452,906	0	0	0
Substructure (Abut; for Concrete; BMSO)	NO	0.00	3,265,387	959,362	0	0	0
Demolition of Bridge (Timber->Timber)	m2	14.00	15,706	1,730	219,884	24,220	244,104
Demolition of Bridge (Timber->Concrete)	m2	0.00	15,706	1,730	0	0	0
Demolition of Bridge (Concrete)	m2	0.00	81,154	64,824	0	0	0
Maintenance of Timber Bridge (New)	m2	154.00	10,222	1,344	1,574,188	206,976	1,781,164
Maintenance of Concrete Bridge (New)	m2	0.00	2,003	2,456	0	0	0
Maintenance of Timber Bridge (Exist)	m2	14.00	8,935	2,517	125,090	35,238	160,328
Maintenance of Concrete Bridge (Exist)	m2	96.00	4,224	2,336	405,504	224,256	629,760
(Without Overhead)			TOTAL COST (Timber Bridge)		24,529,944	2,638,044	27,167,988
			(Concrete Bridge)		0	0	0
			TOTAL COST (without Maintenance)		24,529,944	2,638,044	27,167,988
(Overhead : 15%)			TOTAL COST (Timber Bridge)		28,209,436	3,033,751	31,243,186
			(Concrete Bridge)		0	0	0
			TOTAL COST (without Maintenance)		28,209,436	3,033,751	31,243,186

PROV : SULAWESI SELATAN KAB : GOWA
 LINK NO : 12 (IIIB-2) LENGTH : 7 Km

(Rp)

ITEM	UNIT	QUANTITY	<<< UNIT COST >>>		<<<<< COST >>>>>		>>>>> TOTAL
			LOCAL	FOREIGN	LOCAL	FOREIGN	
Superstructure (Timber; Span 3m; 10T)	m2	0.00	57,600	4,626	0	0	0
Superstructure (Timber; Span 5m; 10T)	m2	0.00	63,802	5,107	0	0	0
Superstructure (Timber; Span 8m; 10T)	m2	0.00	84,511	6,706	0	0	0
Superstructure (Timber; Span 3m; BHSO)	m2	0.00	71,423	5,719	0	0	0
Superstructure (Timber; Span 5m; BHSO)	m2	0.00	77,976	6,195	0	0	0
Superstructure (Timber; Span 8m; BHSO)	m2	0.00	98,895	7,841	0	0	0
Superstructure (Concrete; Span 3m; BHSO)	m2	0.00	57,937	81,925	0	0	0
Superstructure (Concrete; Span 5m; BHSO)	m2	0.00	59,060	91,542	0	0	0
Superstructure (Concrete; Span 8m; BHSO)	m2	0.00	60,502	99,704	0	0	0
Superstructure (Concrete; Span 10m; BHSO)	m2	0.00	65,879	113,234	0	0	0
Superstructure (Concrete; Span 15m; BHSO)	m2	0.00	70,320	133,369	0	0	0
Substructure (Pier; for Timber; 10T)	NO	0.00	501,630	43,123	0	0	0
Substructure (Abut; for Timber; 10T)	NO	0.00	1,322,754	189,655	0	0	0
Substructure (Pier; for Timber; BHSO)	NO	0.00	737,732	63,842	0	0	0
Substructure (Abut; for Timber; BHSO)	NO	0.00	1,500,543	212,676	0	0	0
Substructure (Pier; for Concrete; BHSO)	NO	0.00	1,532,352	452,906	0	0	0
Substructure (Abut; for Concrete; BHSO)	NO	0.00	3,265,387	959,362	0	0	0
Demolition of Bridge (Timber->Timber)	m2	0.00	15,706	1,730	0	0	0
Demolition of Bridge (Timber->Concrete)	m2	0.00	15,706	1,730	0	0	0
Demolition of Bridge (Concrete)	m2	0.00	81,154	64,824	0	0	0
Maintenance of Timber Bridge (New)	m2	0.00	10,222	1,344	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.00	2,003	2,456	0	0	0
Maintenance of Timber Bridge (Exist)	m2	0.00	8,935	2,517	0	0	0
Maintenance of Concrete Bridge (Exist)	m2	114.00	4,224	2,336	481,536	266,304	747,840
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(Without Overhead)		TOTAL COST (Timber Bridge)			0	0	0
		(Concrete Bridge)			0	0	0
		TOTAL COST (without Maintenance)			0	0	0
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(Overhead : 15%)		TOTAL COST (Timber Bridge)			0	0	0
		(Concrete Bridge)			0	0	0
		TOTAL COST (without Maintenance)			0	0	0

PROV : SULAWESI SELATAN KAB : GOWA
 LINK NO : 18 (111B-2) LENGTH : 9 Km

(Rp)

ITEM	UNIT	QUANTITY	<<< UNIT COST >>>		<<<<< COST >>>>>		TOTAL
			LOCAL	FOREIGN	LOCAL	FOREIGN	
Superstructure (Timber; Span 3m; 10T)	m2	0.00	57,600	4,626	0	0	0
Superstructure (Timber; Span 5m; 10T)	m2	0.00	63,802	5,107	0	0	0
Superstructure (Timber; Span 8m; 10T)	m2	0.00	84,511	6,706	0	0	0
Superstructure (Timber; Span 3m; BHSO)	m2	0.00	71,423	5,719	0	0	0
Superstructure (Timber; Span 5m; BHSO)	m2	0.00	77,976	6,195	0	0	0
Superstructure (Timber; Span 8m; BHSO)	m2	0.00	98,895	7,841	0	0	0
Superstructure (Concrete; Span 3m; BHSO)	m2	0.00	57,937	81,925	0	0	0
Superstructure (Concrete; Span 5m; BHSO)	m2	0.00	59,060	91,542	0	0	0
Superstructure (Concrete; Span 8m; BHSO)	m2	0.00	60,502	99,704	0	0	0
Superstructure (Concrete; Span 10m; BHSO)	m2	0.00	65,879	113,234	0	0	0
Superstructure (Concrete; Span 15m; BHSO)	m2	0.00	70,320	133,369	0	0	0
Substructure (Pier; for Timber; 10T)	NO	0.00	501,630	43,123	0	0	0
Substructure (Abut; for Timber; 10T)	NO	0.00	1,322,754	189,655	0	0	0
Substructure (Pier; for Timber; BHSO)	NO	0.00	737,732	63,842	0	0	0
Substructure (Abut; for Timber; BHSO)	NO	0.00	1,500,543	212,676	0	0	0
Substructure (Pier; for Concrete; BHSO)	NO	0.00	1,532,352	452,906	0	0	0
Substructure (Abut; for Concrete; BHSO)	NO	0.00	3,265,387	959,362	0	0	0
Demolition of Bridge (Timber->Timber)	m2	0.00	15,706	1,730	0	0	0
Demolition of Bridge (Timber->Concrete)	m2	0.00	15,706	1,730	0	0	0
Demolition of Bridge (Concrete)	m2	0.00	81,154	64,824	0	0	0
Maintenance of Timber Bridge (New)	m2	0.00	10,222	1,344	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.00	2,003	2,456	0	0	0
Maintenance of Timber Bridge (Exist)	m2	0.00	8,935	2,517	0	0	0
Maintenance of Concrete Bridge (Exist)	m2	58.00	4,224	2,336	244,992	135,488	380,480
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(Without Overhead)		TOTAL COST (Timber Bridge)			0	0	0
		(Concrete Bridge)			0	0	0
		TOTAL COST (without Maintenance)			0	0	0
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(Overhead : 15%)		TOTAL COST (Timber Bridge)			0	0	0
		(Concrete Bridge)			0	0	0
		TOTAL COST (without Maintenance)			0	0	0

PROV : SULAWESI SELATAN KAB : GOWA
 LINK NO : 12 (IIB-1) LENGTH : 14 Km

(Rp)

ITEM	UNIT	QUANTITY	<<< UNIT COST >>>		<<<<< COST >>>>>		TOTAL
			LOCAL	FOREIGN	LOCAL	FOREIGN	
Superstructure (Timber; Span 3m; IOT)	m2	0.00	57,600	4,626	0	0	0
Superstructure (Timber; Span 5m; IOT)	m2	0.00	63,802	5,107	0	0	0
Superstructure (Timber; Span 8m; IOT)	m2	0.00	84,511	6,706	0	0	0
Superstructure (Timber; Span 3m; BHSO)	m2	0.00	71,423	5,719	0	0	0
Superstructure (Timber; Span 5m; BHSO)	m2	0.00	77,976	6,195	0	0	0
Superstructure (Timber; Span 8m; BHSO)	m2	0.00	98,895	7,841	0	0	0
Superstructure (Concrete; Span 3m; BHSO)	m2	0.00	57,937	81,925	0	0	0
Superstructure (Concrete; Span 5m; BHSO)	m2	0.00	59,060	91,542	0	0	0
Superstructure (Concrete; Span 8m; BHSO)	m2	0.00	60,502	99,704	0	0	0
Superstructure (Concrete; Span 10m; BHSO)	m2	0.00	65,879	113,234	0	0	0
Superstructure (Concrete; Span 15m; BHSO)	m2	0.00	70,320	133,369	0	0	0
Substructure (Pier; for Timber; IOT)	NO	0.00	501,630	43,123	0	0	0
Substructure (Abut; for Timber; IOT)	NO	0.00	1,322,754	189,655	0	0	0
Substructure (Pier; for Timber; BHSO)	NO	0.00	737,732	63,842	0	0	0
Substructure (Abut; for Timber; BHSO)	NO	0.00	1,500,543	212,676	0	0	0
Substructure (Pier; for Concrete; BHSO)	NO	0.00	1,532,352	452,906	0	0	0
Substructure (Abut; for Concrete; BHSO)	NO	0.00	3,265,387	959,362	0	0	0
Demolition of Bridge (Timber->Timber)	m2	0.00	15,706	1,730	0	0	0
Demolition of Bridge (Timber->Concrete)	m2	0.00	15,706	1,730	0	0	0
Demolition of Bridge (Concrete)	m2	0.00	81,154	64,824	0	0	0
Maintenance of Timber Bridge (New)	m2	0.00	10,222	1,344	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.00	2,003	2,456	0	0	0
Maintenance of Timber Bridge (Exist)	m2	0.00	8,935	2,517	0	0	0
Maintenance of Concrete Bridge (Exist)	m2	215.00	4,224	2,336	908,160	502,240	1,410,400
(Without Overhead)	TOTAL COST (Timber Bridge)				0	0	0
	(Concrete Bridge)				0	0	0
	TOTAL COST (without Maintenance)				0	0	0
(Overhead : 15%)	TOTAL COST (Timber Bridge)				0	0	0
	(Concrete Bridge)				0	0	0
	TOTAL COST (without Maintenance)				0	0	0

PROV : SULAWESI SELATAN KAD : GOWA
 LINK NO : 27 (TLIB-2) LENGTH : 5 Km

(Rp)

ITEM	UNIT	QUANTITY	<<< UNIT COST >>>		<<<<< COST >>>>>		TOTAL
			LOCAL	FOREIGN	LOCAL	FOREIGN	
Superstructure (Timber; Span 3m; 10T)	m2	0.00	57,600	4,626	0	0	0
Superstructure (Timber; Span 5m; 10T)	m2	0.00	63,802	5,107	0	0	0
Superstructure (Timber; Span 8m; 10T)	m2	0.00	84,511	6,706	0	0	0
Superstructure (Timber; Span 3m; BNSO)	m2	0.00	71,423	5,719	0	0	0
Superstructure (Timber; Span 5m; BNSO)	m2	0.00	77,976	6,195	0	0	0
Superstructure (Timber; Span 8m; BNSO)	m2	0.00	98,895	7,841	0	0	0
Superstructure (Concrete; Span 3m; BNSO)	m2	0.00	57,937	81,925	0	0	0
Superstructure (Concrete; Span 5m; BNSO)	m2	0.00	59,060	91,542	0	0	0
Superstructure (Concrete; Span 8m; BNSO)	m2	0.00	60,502	99,704	0	0	0
Superstructure (Concrete; Span 10m; BNSO)	m2	0.00	65,879	113,234	0	0	0
Superstructure (Concrete; Span 15m; BNSO)	m2	0.00	70,320	133,369	0	0	0
Substructure (Pier; for Timber; 10T)	N0	0.00	501,630	43,123	0	0	0
Substructure (Abut; for Timber; 10T)	N0	0.00	1,322,754	189,655	0	0	0
Substructure (Pier; for Timber; BNSO)	N0	0.00	737,732	63,842	0	0	0
Substructure (Abut; for Timber; BNSO)	N0	0.00	1,500,543	212,676	0	0	0
Substructure (Pier; for Concrete; BNSO)	N0	0.00	1,532,352	452,906	0	0	0
Substructure (Abut; for Concrete; BNSO)	N0	0.00	3,265,387	959,362	0	0	0
Demolition of Bridge (Timber->Timber)	m2	0.00	15,706	1,730	0	0	0
Demolition of Bridge (Timber->Concrete)	m2	0.00	15,706	1,730	0	0	0
Demolition of Bridge (Concrete)	m2	0.00	81,154	64,824	0	0	0
Maintenance of Timber Bridge (New)	m2	0.00	10,222	1,344	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.00	2,003	2,456	0	0	0
Maintenance of Timber Bridge (Exist)	m2	0.00	8,935	2,517	0	0	0
Maintenance of Concrete Bridge (Exist)	m2	73.00	4,224	2,336	308,352	170,528	478,880
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(Without Overhead)		TOTAL COST (Timber Bridge)			0	0	0
		(Concrete Bridge)			0	0	0
		TOTAL COST (without Maintenance)			0	0	0
<hr/>							
(Overhead : 15%)		TOTAL COST (Timber Bridge)			0	0	0
		(Concrete Bridge)			0	0	0
		TOTAL COST (without Maintenance)			0	0	0

PROV : SULAWESI SELATAN KAB : GOWA
 LINK NO : 32 (IIB-2) LENGTH : 1 Km

(Rp)

ITEM	UNIT	QUANTITY	<<< UNIT COST >>>		<<<<< COST >>>>>		TOTAL
			LOCAL	FOREIGN	LOCAL	FOREIGN	
Superstructure (Timber;Span 3m;IOT)	m2	0.00	57,600	4,626	0	0	0
Superstructure (Timber;Span 5m;IOT)	m2	0.00	63,802	5,107	0	0	0
Superstructure (Timber;Span 8m;IOT)	m2	0.00	84,511	6,706	0	0	0
Superstructure (Timber;Span 3m;BH50)	m2	0.00	71,423	5,719	0	0	0
Superstructure (Timber;Span 5m;BH50)	m2	0.00	77,976	6,195	0	0	0
Superstructure (Timber;Span 8m;BH50)	m2	0.00	98,895	7,841	0	0	0
Superstructure (Concrete;Span 3m;BH50)	m2	0.00	57,937	81,925	0	0	0
Superstructure (Concrete;Span 5m;BH50)	m2	0.00	59,060	91,542	0	0	0
Superstructure (Concrete;Span 8m;BH50)	m2	0.00	60,502	99,704	0	0	0
Superstructure (Concrete;Span10m;BH50)	m2	0.00	65,879	113,234	0	0	0
Superstructure (Concrete;Span15m;BH50)	m2	0.00	70,320	133,369	0	0	0
Substructure (Pier;for Timber;IOT)	NO	0.00	501,630	43,123	0	0	0
Substructure (Abut;for Timber;IOT)	NO	0.00	1,322,754	189,655	0	0	0
Substructure (Pier;for Timber;BH50)	NO	0.00	737,732	63,842	0	0	0
Substructure (Abut;for Timber;BH50)	NO	0.00	1,500,543	212,676	0	0	0
Substructure (Pier;for Concrete;BH50)	NO	0.00	1,532,352	452,906	0	0	0
Substructure (Abut;for Concrete;BH50)	NO	0.00	3,265,387	959,362	0	0	0
Demolition of Bridge (Timber->Timber)	m2	0.00	15,706	1,730	0	0	0
Demolition of Bridge (Timber->Concrete)	m2	0.00	15,706	1,730	0	0	0
Demolition of Bridge (Concrete)	m2	0.00	81,154	64,824	0	0	0
Maintenance of Timber Bridge (New)	m2	0.00	10,222	1,344	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.00	2,003	2,456	0	0	0
Maintenance of Timber Bridge (Exist)	m2	0.00	8,935	2,517	0	0	0
Maintenance of Concrete Bridge (Exist)	m2	16.00	4,224	2,336	67,584	37,376	104,960
(Without Overhead)	TOTAL COST (Timber Bridge)				0	0	0
	(Concrete Bridge)				0	0	0
	TOTAL COST (without Maintenance)				0	0	0
(Overhead : 15%)	TOTAL COST (Timber Bridge)				0	0	0
	(Concrete Bridge)				0	0	0
	TOTAL COST (without Maintenance)				0	0	0

PROV : SULAWESI SELATAN KAB : GOWA
 LINK NO : 40 (IIID-2) LENGTH : 7 Km

(Rp)

ITEM	UNIT	QUANTITY	<<< UNIT COST >>>		<<<<< COST >>>>>		>>>>> TOTAL
			LOCAL	FOREIGN	LOCAL	FOREIGN	
Superstructure (Timber; Span 3a; 101)	m2	0.00	57,600	4,626	0	0	0
Superstructure (Timber; Span 5a; 101)	m2	0.00	63,802	5,107	0	0	0
Superstructure (Timber; Span 8a; 101)	m2	0.00	84,511	6,706	0	0	0
Superstructure (Timber; Span 3a; BHSO)	m2	0.00	71,423	5,719	0	0	0
Superstructure (Timber; Span 5a; BHSO)	m2	0.00	77,976	6,195	0	0	0
Superstructure (Timber; Span 8a; BHSO)	m2	0.00	98,895	7,841	0	0	0
Superstructure (Concrete; Span 3a; BHSO)	m2	0.00	57,937	81,925	0	0	0
Superstructure (Concrete; Span 5a; BHSO)	m2	0.00	59,060	91,542	0	0	0
Superstructure (Concrete; Span 8a; BHSO)	m2	0.00	60,502	99,704	0	0	0
Superstructure (Concrete; Span 10a; BHSO)	m2	0.00	65,879	113,234	0	0	0
Superstructure (Concrete; Span 15a; BHSO)	m2	0.00	70,320	133,369	0	0	0
Substructure (Pier; for Timber; 101)	NO	0.00	501,630	43,123	0	0	0
Substructure (Abut; for Timber; 101)	NO	0.00	1,322,754	189,655	0	0	0
Substructure (Pier; for Timber; BHSO)	NO	0.00	737,732	63,842	0	0	0
Substructure (Abut; for Timber; BHSO)	NO	0.00	1,500,543	212,676	0	0	0
Substructure (Pier; for Concrete; BHSO)	NO	0.00	1,532,352	452,906	0	0	0
Substructure (Abut; for Concrete; BHSO)	NO	0.00	3,265,387	959,362	0	0	0
Demolition of Bridge (Timber->Timber)	m2	0.00	15,706	1,730	0	0	0
Demolition of Bridge (Timber->Concrete)	m2	0.00	15,706	1,730	0	0	0
Demolition of Bridge (Concrete)	m2	0.00	81,154	64,824	0	0	0
Maintenance of Timber Bridge (New)	m2	0.00	10,222	1,344	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.00	2,003	2,456	0	0	0
Maintenance of Timber Bridge (Exist)	m2	0.00	8,935	2,517	0	0	0
Maintenance of Concrete Bridge (Exist)	m2	36.00	4,224	2,336	152,064	84,096	236,160
(Without Overhead)			TOTAL COST (Timber Bridge)		0	0	0
			(Concrete Bridge)		0	0	0
			TOTAL COST (without Maintenance)		0	0	0
(Overhead : 15%)			TOTAL COST (Timber Bridge)		0	0	0
			(Concrete Bridge)		0	0	0
			TOTAL COST (without Maintenance)		0	0	0

PROV : SULAWESI SELATAN KAB : GOWA
 LINK NO : 41 (IIB-2) LENGTH : 11 Km

(Rp)

ITEM	UNIT	QUANTITY	LOCAL	FOREIGN	LOCAL	FOREIGN	TOTAL
Superstructure (Timber; Span 3m; 101)	m2	0.00	57,600	4,626	0	0	0
Superstructure (Timber; Span 5m; 101)	m2	0.00	63,802	5,107	0	0	0
Superstructure (Timber; Span 8m; 101)	m2	0.00	84,511	6,706	0	0	0
Superstructure (Timber; Span 3m; BH50)	m2	0.00	71,423	5,719	0	0	0
Superstructure (Timber; Span 5m; BH50)	m2	0.00	77,976	6,195	0	0	0
Superstructure (Timber; Span 8m; BH50)	m2	0.00	98,895	7,841	0	0	0
Superstructure (Concrete; Span 3m; BH50)	m2	0.00	57,937	81,925	0	0	0
Superstructure (Concrete; Span 5m; BH50)	m2	0.00	59,060	91,542	0	0	0
Superstructure (Concrete; Span 8m; BH50)	m2	0.00	60,502	99,704	0	0	0
Superstructure (Concrete; Span 10m; BH50)	m2	0.00	65,879	113,234	0	0	0
Superstructure (Concrete; Span 15m; BH50)	m2	0.00	70,320	133,369	0	0	0
Substructure (Pier; for Timber; 101)	m0	0.00	501,630	43,123	0	0	0
Substructure (Abut; for Timber; 101)	m0	0.00	1,322,754	189,655	0	0	0
Substructure (Pier; for Timber; BH50)	m0	0.00	737,732	63,842	0	0	0
Substructure (Abut; for Timber; BH50)	m0	0.00	1,500,543	212,676	0	0	0
Substructure (Pier; for Concrete; BH50)	m0	0.00	1,532,352	452,906	0	0	0
Substructure (Abut; for Concrete; BH50)	m0	0.00	3,265,387	959,362	0	0	0
Demolition of Bridge (Timber->Timber)	m2	0.00	15,706	1,730	0	0	0
Demolition of Bridge (Timber->Concrete)	m2	0.00	15,706	1,730	0	0	0
Demolition of Bridge (Concrete)	m2	0.00	81,154	64,824	0	0	0
Maintenance of Timber Bridge (New)	m2	0.00	10,222	1,344	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.00	2,003	2,456	0	0	0
Maintenance of Timber Bridge (Exist)	m2	0.00	8,935	2,517	0	0	0
Maintenance of Concrete Bridge (Exist)	m2	0.15	4,224	2,336	633	350	983
(Without Overhead)	TOTAL COST (Timber Bridge)				0	0	0
	(Concrete Bridge)				0	0	0
	TOTAL COST (without Maintenance)				0	0	0
(Overhead : 15%)	TOTAL COST (Timber Bridge)				0	0	0
	(Concrete Bridge)				0	0	0
	TOTAL COST (without Maintenance)				0	0	0

PROV : SULAWESI SELATAN KAD : BOWA
 LINK NO : 45 (IIB-2) LENGTH : 7 Km

(Rp)

ITEM	UNIT	QUANTITY	<<< UNIT COST >>>		<<<<< COST >>>>>		TOTAL
			LOCAL	FOREIGN	LOCAL	FOREIGN	
Superstructure (Timber;Span 3m;101)	m2	0.00	57,600	4,626	0	0	0
Superstructure (Timber;Span 5m;101)	m2	0.00	63,802	5,107	0	0	0
Superstructure (Timber;Span 8m;101)	m2	0.00	84,511	6,706	0	0	0
Superstructure (Timber;Span 3m;BMS0)	m2	0.00	71,423	5,719	0	0	0
Superstructure (Timber;Span 5m;BMS0)	m2	0.00	77,976	6,195	0	0	0
Superstructure (Timber;Span 8m;BMS0)	m2	0.00	98,895	7,841	0	0	0
Superstructure (Concrete;Span 3m;BMS0)	m2	0.00	57,937	81,925	0	0	0
Superstructure (Concrete;Span 5m;BMS0)	m2	0.00	59,060	91,542	0	0	0
Superstructure (Concrete;Span 8m;BMS0)	m2	0.00	60,502	99,704	0	0	0
Superstructure (Concrete;Span10m;BMS0)	m2	0.00	65,879	113,234	0	0	0
Superstructure (Concrete;Span15m;BMS0)	m2	0.00	70,320	133,369	0	0	0
Substructure (Pier;for Timber;101)	NO	0.00	501,630	43,123	0	0	0
Substructure (Abut;for Timber;101)	NO	0.00	1,322,754	189,655	0	0	0
Substructure (Pier;for Timber;BMS0)	NO	0.00	737,732	63,842	0	0	0
Substructure (Abut;for Timber;BMS0)	NO	0.00	1,500,543	212,676	0	0	0
Substructure (Pier;for Concrete;BMS0)	NO	0.00	1,532,352	452,906	0	0	0
Substructure (Abut;for Concrete;BMS0)	NO	0.00	3,265,387	959,362	0	0	0
Demolition of Bridge (Timber->Timber)	m2	0.00	15,706	1,730	0	0	0
Demolition of Bridge (Timber->Concrete)	m2	0.00	15,706	1,730	0	0	0
Demolition of Bridge (Concrete)	m2	0.00	81,154	64,824	0	0	0
Maintenance of Timber Bridge (New)	m2	0.00	10,222	1,344	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.00	2,003	2,456	0	0	0
Maintenance of Timber Bridge (Exist)	m2	0.00	8,935	2,517	0	0	0
Maintenance of Concrete Bridge (Exist)	m2	12.00	4,224	2,336	50,688	28,032	78,720
(Without Overhead)	TOTAL COST (Timber Bridge)				0	0	0
	(Concrete Bridge)				0	0	0
	TOTAL COST (without Maintenance)				0	0	0
(Overhead : 15%)	TOTAL COST (Timber Bridge)				0	0	0
	(Concrete Bridge)				0	0	0
	TOTAL COST (without Maintenance)				0	0	0

PROV : SULAWESI SELATAN KAD : GOWA
 LINK NO : 47 (TIB-2) LENGTH : 6 Km

(Rp)

ITEM	UNIT	QUANTITY	<<< UNIT COST >>>		<<<<< COST >>>>>		TOTAL
			LOCAL	FOREIGN	LOCAL	FOREIGN	
Superstructure (Timber; Span 3m; IOT)	m2	0.00	57,600	4,626	0	0	0
Superstructure (Timber; Span 5m; IOT)	m2	0.00	63,802	5,107	0	0	0
Superstructure (Timber; Span 8m; IOT)	m2	0.00	84,511	6,706	0	0	0
Superstructure (Timber; Span 3m; BNSO)	m2	0.00	71,423	5,719	0	0	0
Superstructure (Timber; Span 5m; BNSO)	m2	0.00	77,976	6,195	0	0	0
Superstructure (Timber; Span 8m; BNSO)	m2	0.00	98,895	7,841	0	0	0
Superstructure (Concrete; Span 3m; BNSO)	m2	0.00	57,937	81,925	0	0	0
Superstructure (Concrete; Span 5m; BNSO)	m2	0.00	59,060	91,542	0	0	0
Superstructure (Concrete; Span 8m; BNSO)	m2	0.00	60,502	99,704	0	0	0
Superstructure (Concrete; Span 10m; BNSO)	m2	0.00	65,879	113,234	0	0	0
Superstructure (Concrete; Span 15m; BNSO)	m2	0.00	70,320	133,369	0	0	0
Substructure (Pier; for Timber; IOT)	NO	0.00	501,630	43,123	0	0	0
Substructure (Abut; for Timber; IOT)	NO	0.00	1,322,754	189,655	0	0	0
Substructure (Pier; for Timber; BNSO)	NO	0.00	737,732	63,842	0	0	0
Substructure (Abut; for Timber; BNSO)	NO	0.00	1,500,543	212,676	0	0	0
Substructure (Pier; for Concrete; BNSO)	NO	0.00	1,532,352	452,906	0	0	0
Substructure (Abut; for Concrete; BNSO)	NO	0.00	3,265,387	939,362	0	0	0
Demolition of Bridge (Timber->Timber)	m2	0.00	15,706	1,730	0	0	0
Demolition of Bridge (Timber->Concrete)	m2	0.00	15,706	1,730	0	0	0
Demolition of Bridge (Concrete)	m2	0.00	81,154	64,824	0	0	0
Maintenance of Timber Bridge (New)	m2	0.00	10,222	1,344	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.00	2,003	2,456	0	0	0
Maintenance of Timber Bridge (Exist)	m2	0.00	8,935	2,517	0	0	0
Maintenance of Concrete Bridge (Exist)	m2	99.00	4,224	2,336	418,176	231,264	649,440
(Without Overhead)	TOTAL COST (Timber Bridge)				0	0	0
	(Concrete Bridge)				0	0	0
	TOTAL COST (without Maintenance)				0	0	0
(Overhead : 15%)	TOTAL COST (Timber Bridge)				0	0	0
	(Concrete Bridge)				0	0	0
	TOTAL COST (without Maintenance)				0	0	0

PROV : SULAWESI SELATAN KAB : BOWA
LINK NO : 54 (TIIB-2) LENGTH : 6 Km

(Rp)

ITEM	UNIT	QUANTITY	(((UNIT COST)))		((((COST))))		(>>>>> TOTAL
			LOCAL	FOREIGN	LOCAL	FOREIGN	
Superstructure (Timber; Span 3a; I01)	m2	0.00	57,600	4,626	0	0	0
Superstructure (Timber; Span 5a; I01)	m2	18.00	63,802	5,107	1,148,436	91,926	1,240,362
Superstructure (Timber; Span 8a; I01)	m2	0.00	94,511	6,706	0	0	0
Superstructure (Timber; Span 3a; BHS0)	m2	0.00	71,423	5,719	0	0	0
Superstructure (Timber; Span 5a; BHS0)	m2	0.00	77,976	6,195	0	0	0
Superstructure (Timber; Span 8a; BHS0)	m2	0.00	98,895	7,841	0	0	0
Superstructure (Concrete; Span 3a; BHS0)	m2	0.00	57,937	81,925	0	0	0
Superstructure (Concrete; Span 5a; BHS0)	m2	0.00	59,060	91,542	0	0	0
Superstructure (Concrete; Span 8a; BHS0)	m2	0.00	60,502	99,704	0	0	0
Superstructure (Concrete; Span 10a; BHS0)	m2	0.00	65,879	113,234	0	0	0
Superstructure (Concrete; Span 15a; BHS0)	m2	0.00	70,320	133,369	0	0	0
Substructure (Pier; for Timber; I01)	N0	0.00	501,630	43,123	0	0	0
Substructure (Abut; for Timber; I01)	N0	2.00	1,322,754	189,655	2,645,508	379,310	3,024,818
Substructure (Pier; for Timber; BHS0)	N0	0.00	737,732	63,842	0	0	0
Substructure (Abut; for Timber; BHS0)	N0	0.00	1,500,543	212,676	0	0	0
Substructure (Pier; for Concrete; BHS0)	N0	0.00	1,532,352	452,906	0	0	0
Substructure (Abut; for Concrete; BHS0)	N0	0.00	3,265,387	959,362	0	0	0
Demolition of Bridge (Timber->Timber)	m2	11.25	15,706	1,730	176,692	19,462	198,154
Demolition of Bridge (Timber->Concrete)	m2	0.00	15,706	1,730	0	0	0
Demolition of Bridge (Concrete)	m2	0.00	81,154	64,824	0	0	0
Maintenance of Timber Bridge (New)	m2	18.00	10,222	1,344	183,996	24,192	208,188
Maintenance of Concrete Bridge (New)	m2	0.00	2,003	2,456	0	0	0
Maintenance of Timber Bridge (Exist)	m2	0.00	8,935	2,517	0	0	0
Maintenance of Concrete Bridge (Exist)	m2	0.00	4,224	2,336	0	0	0
(Without Overhead)			TOTAL COST (Timber Bridge)		3,970,636	490,698	4,461,334
			(Concrete Bridge)		0	0	0
			TOTAL COST (without Maintenance)		3,970,636	490,698	4,461,334
(Overhead : 15%)			TOTAL COST (Timber Bridge)		4,566,231	564,303	5,130,534
			(Concrete Bridge)		0	0	0
			TOTAL COST (without Maintenance)		4,566,231	564,303	5,130,534

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