

# APPENDIX



INPUT DATA

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

PRV. : *SULAWESI SELATAN* KAB. : *BARRU* SURVEY YEAR : *1983*

Code No.	KECAMATAN NAME	CULTIVATED AREA : (PA)	YIELD RATE : (Y)	FARMER'S POPULATION : (AP)	CIRCULATED COMMODITY : (PG)
<i>01</i>	<i>TANETE RIAJA</i>	<i>5,175</i>	<i>2.2</i>	<i>20,390</i>	<i>0</i>
<i>02</i>	<i>TANETE RILAU</i>	<i>1,889</i>	<i>5.7</i>	<i>18,250</i>	<i>0</i>
<i>03</i>	<i>BARRU</i>	<i>2,690</i>	<i>5.6</i>	<i>21,220</i>	<i>0</i>
<i>04</i>	<i>SOPENG RIAJA</i>	<i>3,145</i>	<i>4.6</i>	<i>16,940</i>	<i>0</i>
<i>05</i>	<i>MALUSETASI</i>	<i>2,174</i>	<i>3.9</i>	<i>13,530</i>	<i>0</i>

	<i>r<sub>1</sub></i>	<i>r<sub>2</sub></i>	<i>r<sub>3</sub></i>	<i>r<sub>4</sub></i>	FARMER'S CONSUMPTION : (Cp)	NON-AGRO REQUIREMENT : (NG)
ANNUAL AVERAGE GROWTH RATE %	<i>3.0</i>	<i>2.0</i>	<i>1.0</i>	<i>5.3</i>	<i>0.13</i> Ton/head/year	<i>0.058</i> Ton/ton

	SEDAN	BUS	TRUCK	MOTOR CYCLE	AVERAGE FREIGHT TONAGE
RATE OF EACH VEHICLE TYPE %	<i>4.28</i>	<i>19.28</i>	<i>19.42</i>	<i>57.02</i>	<i>0.8</i> Ton/Truck

**Appendix A-2 Engineering Data**

## ROAD LINK DATA

PROVINCE : SULAWESI SELATAN

KABUPATEN: BARRU

LINK NO.	BEGINNING POINT (DESA NAME)	END POINT (DESA NAME)	LENGTH (KM)	THROUGH THE KEC. NAME & LENGTH		REMARKS
				KEC. NAME	LENGTH (KM)	
01	B a r r u	Lakonrae	7	B a r r u	7	
02	R a l l a	B e t t e	8	Tanete Riaja	8	
03	Coppeng-Coppeng	Bujung Banga	5	Tanete Rialau	5	
04	B u n g i	Matajang	6	Tanete Rialau	6	
05	P a k k a e	Pancana	7	Tanete Rialau	7	
06	B a r r u	Kamara	4	B a r r u	4	
07	Jampue	Garongkong	2	B a r r u	2	
08	Lakonrae	T o m p o	6	B a r r u	6	
09	Takkalasi	T o m p o	12	B a r r u	7	
				Soppeng Riaja	5	
10	Lapao	Waepubbu	1	B a r r u	1	
11	Lampoko	Balusu	2	Soppeng Riaja	2	
12	Mangkoso	Paccekke	12	Soppeng Riaja	8	
				Mallusetasi	4	
13	Mangkoso	Wiringtasi	3	Soppeng Riaja	3	
14	Awerange	Ujunge	1	Soppeng Riaja	1	
15	Palanro	Lanrae	6	Mallusetasi	6	
16	Palanro	Mareppang	4	Mallusetasi	4	
17	Lakonrae	Kaerengnge	6	B a r r u	6	
18	T o m p o	Kaerengnge	3	B a r r u	3	
19	Kaerengnge	W a t u	10	B a r r u	9	
				Tanete Riaja	1	
20	Pancana	Butung	2	Tanete Rialau	2	
21	Doi-doi	Gattareng	36	Tanete Riaja	36	
22	Jalanru	Tille	8	Tanete Riaja	8	
23	Ralla	Jalanru	2	Tanete Riaja	2	
24	P a n c e	Ammerung	9	Tanete Riaja	9	

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: BARRU

LINK NO.	BEGINNING POINT (DESA NAME)	END POINT (DESA NAME)	LENGTH (KM)	THROUGH THE KEC. NAME & LENGTH		REMARKS
				KEC. NAME	LENGTH (KM)	
25	Pakkae	Cinekko	1	Tanete Rialau	1	
26	Bottoe	Mate 'ne	3	Tanete Rialau	3	
27	Pekkapau	Lampomajang	6	B a r r u	2	
				Tanete Rialau	4	
28	Bottoe	Madoo	3	Tanete Rialau	3	
29	Lapao	Madello	5	B a r r u	5	
30	Ujung	Cilellang	4	Mallusetasi	4	
31	Lojie	Bojo	3	Mallusetasi	3	
32	Buludua	Ammerung	23	Tanete Riaja	23	
33	Coppeng- Coppeng	Pancana	2	Tanete Rialau	2	
34	Bungi	Ance	2	Tanete Rialau	2	
35	Cilellang	Maralleng	1	Tanete Rialau	1	
36	Lapasu	Buludua	1	Soppeng Riaja	1	
37	Lasinri	Maggajeng	1	B a r r u	1	
38	Lampomajang	Garongkong	5	B a r r u	5	
39	Lawallu	Tanrabalana	4	Soppeng Riaja	4	
40	Kiru-kiru	Ajakkang	3	Soppeng Riaja	3	
41	Cilellang	Barantang	4	Mallusetasi	4	
42	Lawampang	Baenaggage	16	Soppeng Riaja	16	
43	Pekkapau	Salomoni	4	Tanete Rialau	4	
44	Parenring	Tille	6	Tanete Riaja	6	
45	E l e	Panincong	10	Tanete Riaja	10	
46	Ballewe	Waepubbu	3	B a r r u	3	
47	Parenring	Pettung	5	Tanete Riaja	5	
48	Mareto	Baramase	2	Tanete Rialau	2	

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: BARRU

LINK NO.	BEGINNING POINT (DESA NAME)	END POINT (DESA NAME)	LENGTH (KM)	THROUGH THE KEC. NAME & LENGTH		REMARKS
				KEC. NAME	LENGTH (KM)	
49	Panincong	Pacciro	4	Tanete Riaja	4	
50	Palakka	Pange	4	B a r r u	4	
51	Siawung	Batubessi	6	B a r r u	6	
52	L i s u	Tokkene	3	Tanete Riaja	3	
53	Cilellang	Batumarajae	4	Tanete Rialau	4	
54	Pakkae	Cinaga	1	Tanete Rialau	1	
55	Barang	Kalompie	3	B a r r u	3	
56	Siddo	Kiru-kiru	3	Soppeng Riaja	3	
57	Rumpia	Kamiri	5	Soppeng Riaja	5	
58	Siddo	Ceppaga	3	Soppeng Riaja	3	
59	Lampoko	Bawasalo	3	Soppeng Riaja	3	
60	P a n g e	Doi-doi	3	Tanete Riaja	3	
61	Bette	Alekale	14	Tanete Riaja	14	
62	Lappabila	Balu-balu	2	Tanete Rialau	2	
63	Siawung	Panrengnge	2	B a r r u	2	
64	Bette	Pangi	4	Tanete Riaja	4	

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

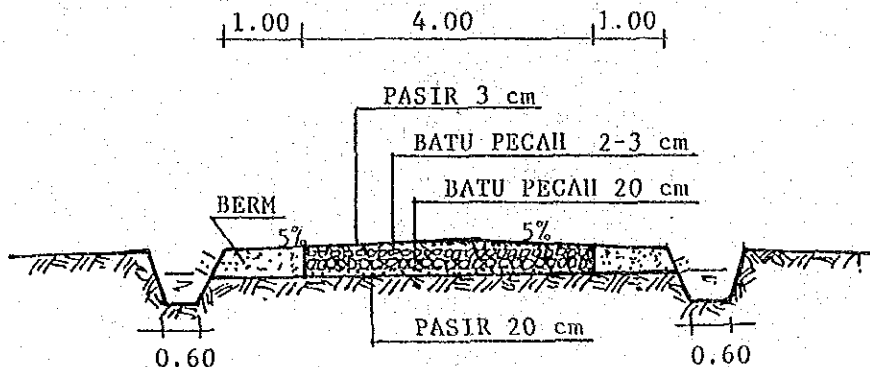
What Kind of Design Criteria has being applied for the new road construction and the improvement for the Kabupaten Road ?

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

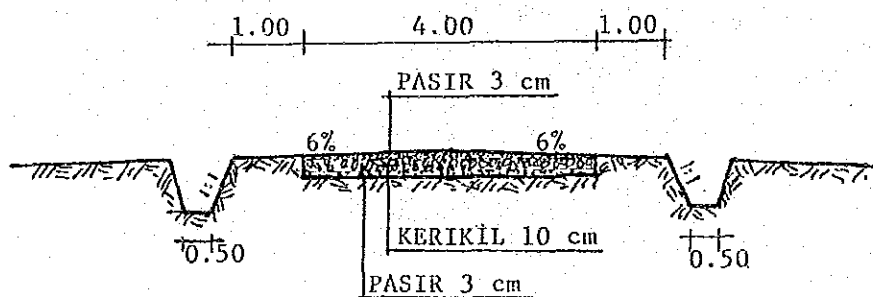
Please draw the Typical Cross Section of the Kabupaten Road.

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

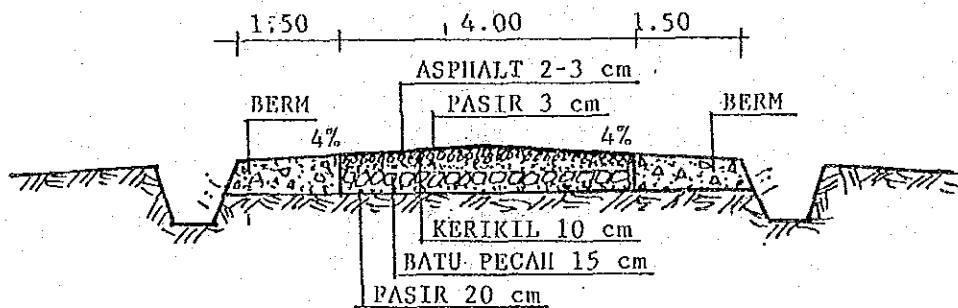
TYPICAL CROSS SECTION.



JALAN PERKERASAN MACADAM



JALAN KERIKIL



JALAN ASPHALT



LOCATION AND COSTS OF THE KABUPATEN

ROADS CONSTRUCTED OR IMPROVED IN 1980/1981

Biaya konstruksi penanganan

jalan dan jembatan Kabupaten thn. 1980/1981

LINK NO. Nomor Ruas	LOCATION From - To (dari - ke)	Lebar per-kerasan(m)	Type per-kerasan	LENGTH Panjang ( KM )	COSTS Harga (Rp 10 <sup>6</sup> )	REMARKS Keterangan
		Lebar Jembatan	Type Jembatan			

- \* PAVENMENT TYPE : Pls note the appropriate No. below.
- 1. : Asphalt surface / penètrasi macadam
  - 2. : Asphalt seal / pelaburan aspal
  - 3. : Gravel / kerikil
  - 4. : Gravel /AWCAS / kerikil / japat

KABUPATEN: BARRU

## LOCATION AND COSTS OF THE KABUPATEN

## ROADS CONSTRUCTED OR IMPROVED IN 1981/1982

Biaya konstruksi penangunan

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 <sup>6</sup> )	REMARKS Keterang- an
		Lebar Jembatan	Type Jembatan			
28	BOTTOE-MADDO	4	Makadam	1.30	19,790	DATI II
02	RALLA-BETTE	4	Makadam	1.00	12,320	
31	LOJIE-BOJO	4	Makadam	1.50	20.115	
11	LAMPOKO-BALUSU	4	Makadam	1.95	25,250	
06	BARRU-KAMARA	4	Makadam	1.50	19,275	
27	PEKKAPAO-LIMPOMAJANG	4	Aspal	1.50	11,275	
65	IBUKOTA KEC. BARRU	4	Aspal	2.334	17,540	
36	LAPASU-BULUDUA	4	Makadam	0.55	7,603	
01	BARU-LAKONRAE		Kerikil	6.00	33,006	
17	LAKONRAE-KAERENGE		Kerikil	6.00	39,281	
19	KAERENGE-WATU		Kerikil	10.00	59,555	

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

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

LINK NO. Nomor Ruas	L O C A T I O N From - To (dari - ke)	Lebar per- kerasan(m)	Type per- kerasan	LENGTH Panjang ( KM )	COSTS Harga (Rp 10 <sup>6</sup> )	REMARKS Keterang- an
		Lebar Jembatan	Type Jembatan			
16	PALANRO-MAREPPANG	4	Telford	1.10	24,240	DATI II
13	MANGKOSO-WIRINGTASI	4	Telford	1.30	20,995	
65	IBUKOTA KEC. BARRU	4	Aspal	2.127	18,320	
26	BOTTOE-MATENE	4	Telford	1.00	20,515	
20	BUTUNG-PANCANA	4	Telford	1.00	24,830	
02	RALLA-BETTE	4	Telford	1.30	18,760	
09	TALAKASI-TOMPO	4	Kerikil	10.4	62,700	

\* 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	L O C A T I O N From - To (dari - ke)	Lebar per- kerasan(m)	Type per- kerasan	LENGTH Panjang ( KM )	COSTS Harga (Rp 10 <sup>6</sup> )	REMARKS Keterangan
		Lebar Jembatan	Type Jembatan			
16	PALANRO-MAREPPANG	4 2BH.2X4	Telford Beton	1.50	24,250	DATI II
58	SIDDO-CEPPAGA	4	Telford	1.50	24,560	
08	LAKONRAE-TOMPO	4	Telford	2.25	35,050	
04	BUNGI-MATAJANG	4 2BH 5,5X4	Telford Beton	1.50	33,305	
22	JALANRU-TILLE	4	Telford	1.50	23,500	
07	JAMPUE-GARONGKONG	4	Aspal	1.695	18,400	
19	KAERENGE-WATU			0.08	160,000	

\* 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

LOCATION AND COSTS OF THE KABUPATEN  
ROADS CONSTRUCTED OR IMPROVED IN 1984/1985

Biaya konstruksi penanganan  
jalan dan jembatan Kabupaten thn. 1984/1985

LINK NO Nomor Ruas	L O C A T I O N From - To (dari - ke)	Lebar per-	Type per-	LENGTH Panjang ( KM )	COSTS Harga (Rp 10 <sup>6</sup> )	REMARKS Keterang- an
		kerasan(m) Lebar Jembatan	kerasan Type Jembatan			
67	IBUKOTA KEC.MALLUSETASI	4	Aspal	2.245	29,701	DATI II
66	IBUKOTA KEC.SOP.RIAJA	4	Aspal	1.00	13,194	
37	LASINRI-MAGGANJENG	4 1BH 6X4	Telford Beton	0.55	27,455	
27	PEKKAPAO-LIMPOMAJANG	4 2X4	Telford Beton	1.00	33,909	
02	RALLA-BETTE	4	Telford	1.00	18,005	
65	IBUKOTA KEC.BARRU	4	Aspal	2.655	39,200	DATI I

\* 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

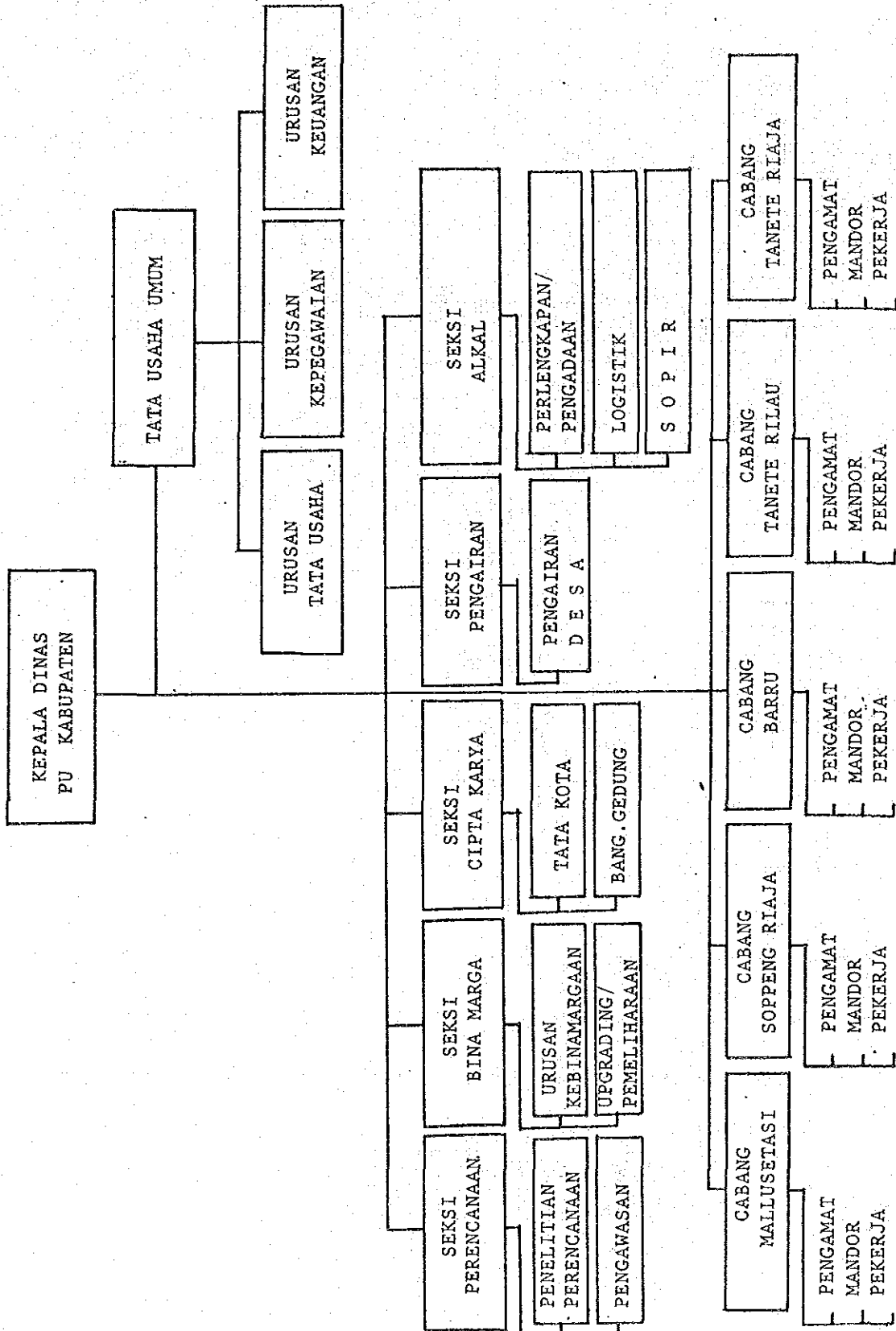
EXISTING ORGANIZATION IN KABUPATEN

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.

STRUKTUR ORGANISASI  
DINAS PU KABUPATEN BARRU



EXISTING STAFF RESOURCES OF BINA MARGA OF PU KABUPATENTenaga Dinas PUK yang adaPROPINSI: SULAWESI SELATANKABUPATEN: BARRU

DESCRIPTION / Uraian	NUMBER / Jumlah	REMARKS Keterangan
CONTROLLING STAFF Staff teknis PUK	_____	_____
DPUK ENGINEER Sarjana Teknik	2	
ASSISTANT ENGINEER Sarjana Muda Teknik	1	
TECHNICIAN STAFF Staff Teknik (STM)	4	
ADMINISTRATION Tenaga Administrasi	3	
SUPERVISOR Tenaga Pengawas	2	
WORKING FORCE Tenaga Pelaksana Lapangan	_____	_____
OPERATORS Operators	3	
DRIVERS Supir		
MECHANICS Mechanic	4	
TRADESMAN Tukang		
LABOUR Buruh / Pekerja		
OTHERS Lain-lain		
TOTAL / JUMLAH	19	

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

LOCATION AND AREA OF DPUK WORKSHOP

E-06

Lokasi Workshop DPUK

PROPINSI : SULAWESI SELATAN

KABUPATEN: BARRU

LOCATION Lokasi	AREA (m2) Luas	NUMBER Jumlah	REMARKS Keterangan
	20,000	1	Disediakan untuk Lokasi

PROPINSI: SULAWESI SELATAN

KABUPATEN: BARRU

E-07

LAND ACQUISITION COST

Daftar harga pembebasan tanah

DESCRIPTION Uraian	UNIT Satuan	RATE (RP) Harga	REMARKS Keterangan
CITY/kota	M2	6,000	
VILLAGE / desa	M2	1,250	
RICE FIELD/sawah	M2	1,000	
DRY FIELD/ladang	M2	200	
MIX CROPS/panen	M2		
FOREST/hutan	M2		
SWAMP / rawa	M2	1,250	
OTHERS / lain-lain	M2	4,500	Perumahan



Classification of local contractors at Kabupaten level.

Klasifikasi kontraktor di Kabupaten

COMPANY NAME Nama Kontraktor	CLASS Kelas	CAPITAL Modal (Rp)	NUMBER OF EMPLOYEE Jumlah pegawai	REMARKS Keterangan
3	B1		7	
18	B2		8	
19	C1		7	
13	C2		8	

NOTE: DATI II

LIST OF EXISTING EQUIPMENT OF LOCAL CONTRACTORName of contractor

NAME OF EQUIPMENT Jenis peralatan	EXISTING CONDITION/ Kondisi Peralatan					REASON OF BAD CONDIT 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							
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 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							

## 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							2
Motor Grader							2
Tyre Roller							1
Steel Wheel Roller							4
Vibration Roller							1
Wheel Loader							2
Front End Loader and Backhoe							1
Mobile Crane							1
Concrete Mixer							2
Stone Crusher	1	1979		1	1		1
Portable Compressor							1
Hydraulic Excavator							1
Asphalt Paving Machine							1
Asphalt Sprayer							2
Asphalt Mixing Machine							1
Mobile Workshop							1
Mechanic Rammer							1
Plate Tamper							1
Pile Driver							1
Leg Drill							5
Hand Hammer							1
Farm Tractor							1
Dump Truck	1	1982	1		1		10/2
Water Tank Truck							1
Fuel Tank Truck							1
Pick Up							4
Jeep							1
Motorcycle							15
Generator							1
Water Pump							2
Others							

PROV : SULAWESI SELATAN KAB : BARRU  
 LINK NO : 24 (IIIA) LENGTH : 9 Km  
 UPGRADE : 7.5m road bed, 4.5m road with surface Dressing (2)  
 (Rp)

ITEM	UNIT	QUANTITY	(( UNIT COST ))		(((( COST ))))		TOTAL	
			LOCAL	FOREIGN	LOCAL	FOREIGN		
Site Clearance in Light Bush	m2	36000.0	166	91	5,976,000	3,276,000	9,252,000	
Subgrade Preparation	m2	31863.0	21	11	669,123	350,493	1,019,616	
Normal Fill	m3	730.0	1,716	865	1,252,680	631,450	1,884,130	
Fill in Swamp	m3	368.3	2,558	1,055	942,111	388,556	1,330,667	
Normal Excavation to Spoil	m3	2378.0	1,005	524	2,389,890	1,246,072	3,635,962	
Sub Base Course	m3	4167.6	3,249	1,351	13,540,532	5,630,427	19,170,959	
Base Course	m3	3240.0	4,448	2,303	14,411,520	7,461,720	21,873,240	
Shoulder	m2	27000.0	301	146	8,127,000	3,942,000	12,069,000	
Asphalt Patching	m2	0.0	3,831	1,414	0	0	0	
Surface Dressing (Single)	m2	0.0	628	638	0	0	0	
Surface Dressing (Double)	m2	40500.0	781	1,004	31,630,500	40,662,000	72,292,500	
Earth Drain	m	10020.0	930	119	9,318,600	1,192,380	10,510,980	
Earth Drain in Swamp (by machine)	m3	1380.0	1,216	475	1,678,080	655,500	2,333,580	
Pipe Culvert Ø80cm	m	108.0	44,889	40,307	4,848,012	4,353,156	9,201,168	
Masonry Culvert (80x80cm)	m	0.0	62,363	34,731	0	0	0	
Retaining Wall and Wing Wall (Timber)	m2	0.0	16,520	246	0	0	0	
Retaining Wall and Wing Wall (Masonry)	m3	80.8	44,398	11,421	3,587,358	922,816	4,510,174	
Gabion Protection	m3	0.0	12,229	121	0	0	0	
New Bridge (Timber)	SET	1.0	--	--	0	0	0	
New Bridge (Concrete)	SET	1.0	--	--	54,894,485	25,186,421	80,080,906	
					Sub Total			
						153,265,891	95,898,991	249,164,882
Overhead ( 15% )						22,989,883	14,384,848	37,374,731
					TOTAL COST	176,255,774	110,283,839	286,539,613

Manual routine maintenance of road	Km	9.0	150,976	7,260	1,358,784	65,340	1,424,124
Routine maintenance of asphalt road	Km	9.0	383,100	141,400	3,447,900	1,272,600	4,720,500
			Sub Total		4,806,684	1,337,940	6,144,624
Maintenance of Timber Bridge (New)	m2	0.0	10,306	1,121	0	0	0
Maintenance of Concrete Bridge (New)	m2	128.3	2,129	2,456	273,044	311,982	588,026
Maintenance of Timber Bridge (Exist)	m2	0.0	8,977	2,405	0	0	0
Maintenance of Concrete Bridge (Exist)	m2	0.0	4,249	2,336	0	0	0

Earthwork & Pavement Unit Cost	(Rp/Km)	:	21,605,175
Timber Bridge Unit Cost	(Rp/m2)	:	
Concrete Bridge Unit Cost	(Rp/m2)	:	718,074
Survived Value	(Rp)	:	60,207,197
Maintenance Rate without Bridge	(%)	:	3.16
New Bridge Cost Rate	(%)	:	32.14

PROV : SULAWESI SELATAN KAB : BARRU

LINK NO : 17 (IIIA) LENGTH : 6 Km

UPGRADE : 6.0m 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	m <sup>2</sup>	0.0	166	91	0	0	0	
Subgrade Preparation	m <sup>2</sup>	0.0	21	11	0	0	0	
Normal Fill	m <sup>3</sup>	0.0	1,716	865	0	0	0	
Fill in Swamp	m <sup>3</sup>	0.0	2,358	1,055	0	0	0	
Normal Excavation to Spoil	m <sup>3</sup>	0.0	1,005	524	0	0	0	
Sub Base Course	m <sup>3</sup>	1050.0	3,249	1,351	3,411,450	1,418,550	4,830,000	
Base Course	m <sup>3</sup>	1920.0	4,448	2,303	8,540,160	4,421,760	12,961,920	
Shoulder	m <sup>2</sup>	12000.0	301	146	3,612,000	1,752,000	5,364,000	
Asphalt Patching	m <sup>2</sup>	0.0	3,831	1,414	0	0	0	
Surface Dressing (Single)	m <sup>2</sup>	0.0	628	638	0	0	0	
Surface Dressing (Double)	m <sup>2</sup>	24000.0	781	1,004	18,744,000	24,096,000	42,840,000	
Earth Drain	m	4960.0	930	119	4,612,800	590,240	5,203,040	
Earth Drain in Swamp (by machine)	m <sup>3</sup>	0.0	1,216	475	0	0	0	
Pipe Culvert 880cm	m	0.0	44,889	40,307	0	0	0	
Masonry Culvert (80x80cm)	m	6.0	62,363	34,731	374,178	208,386	582,564	
Retaining Wall and Wing Wall (Timber)	m <sup>2</sup>	0.0	16,520	246	0	0	0	
Retaining Wall and Wing Wall (Masonry)	m <sup>3</sup>	0.0	44,398	11,421	0	0	0	
Gabion Protection	m <sup>3</sup>	0.0	12,229	121	0	0	0	
New Bridge (Timber)	SET	1.0	--	--	0	0	0	
New Bridge (Concrete)	SET	1.0	--	--	0	0	0	
					39,294,588	32,486,936	71,781,524	
Overhead (15%)					5,894,188	4,873,040	10,767,228	
					<b>TOTAL COST</b>	<b>45,188,776</b>	<b>37,359,976</b>	<b>82,548,752</b>

Manual routine maintenance of road	Km	6.0	150,976	7,260	905,856	43,560	949,416
Routine maintenance of asphalt road	Km	6.0	383,100	141,400	2,298,600	848,400	3,147,000
					Sub Total		3,204,456
Maintenance of Timber Bridge (New)	m <sup>2</sup>	0.0	10,306	1,121	0	0	0
Maintenance of Concrete Bridge (New)	m <sup>2</sup>	0.0	2,129	2,456	0	0	0
Maintenance of Timber Bridge (Exist)	m <sup>2</sup>	14.0	8,977	2,405	125,678	33,670	159,348
Maintenance of Concrete Bridge (Exist)	m <sup>2</sup>	154.4	4,249	2,336	656,045	360,678	1,016,723

Earthwork & Pavement Unit Cost (Rp/Km)	:	13,758,125
Timber Bridge Unit Cost (Rp/m <sup>2</sup> )	:	
Concrete Bridge Unit Cost (Rp/m <sup>2</sup> )	:	
Survived Value (Rp)	:	7,104,480
Maintenance Rate without Bridge (%)	:	4.96
New Bridge Cost Rate (%)	:	

PROV : SULAWESI SELATAN KAB : BARRU  
 LINK NO : 12 (IIIA) LENGTH : 12 Km  
 UPGRADE : 8.0m road bed, 5.0m road with surface Dressing (2)

(Rp)

ITEM	UNIT	QUANTITY	<<< UNIT COST >>>		<<<<< COST >>>>>		TOTAL	
			LOCAL	FOREIGN	LOCAL	FOREIGN		
Site Clearance in Light Bush	m2	31000.0	166	91	5,146,000	2,821,000	7,967,000	
Subgrade Preparation	m2	32000.0	21	11	672,000	352,000	1,024,000	
Normal Fill	m3	0.0	1,716	865	0	0	0	
Fill in Swamp	m3	0.0	2,558	1,055	0	0	0	
Normal Excavation to Spoil	m3	688.0	1,005	524	691,440	360,512	1,051,952	
Sub Base Course	m3	4437.5	3,249	1,351	14,417,437	5,995,062	20,412,499	
Base Course	m3	4000.0	4,448	2,303	17,792,000	9,212,000	27,004,000	
Shoulder	m2	36000.0	301	146	10,836,000	5,256,000	16,092,000	
Asphalt Patching	m2	206.0	3,831	1,414	789,186	291,284	1,080,470	
Surface Dressing (Single)	m2	10000.0	628	638	6,280,000	6,380,000	12,660,000	
Surface Dressing (Double)	m2	50000.0	781	1,004	39,050,000	50,200,000	89,250,000	
Earth Drain	m	12740.0	930	119	11,848,200	1,516,060	13,364,260	
Earth Drain in Swamp (by machine)	m3	0.0	1,216	475	0	0	0	
Pipe Culvert D80cm	m	138.0	44,889	40,307	6,194,682	5,562,366	11,757,048	
Masonry Culvert (80x80cm)	m	0.0	62,363	34,731	0	0	0	
Retaining Wall and Wing Wall (Timber)	m2	0.0	16,520	246	0	0	0	
Retaining Wall and Wing Wall (Masonry)	m3	48.0	44,398	11,421	2,131,104	548,208	2,679,312	
Gabion Protection	m3	0.0	12,229	121	0	0	0	
New Bridge (Timber)	SET	1.0	--	--	0	0	0	
New Bridge (Concrete)	SET	1.0	--	--	20,954,660	13,945,842	34,900,502	
					Sub Total	136,802,709	102,440,334	239,243,043
Overhead ( 15% )						20,520,406	15,366,050	35,886,456
					TOTAL COST	157,323,115	117,806,384	275,129,499

Manual routine maintenance of road	Km	12.0	150,976	7,260	1,811,712	87,120	1,898,832
Routine maintenance of asphalt road	Km	12.0	383,100	141,400	4,597,200	1,676,800	6,294,000
			Sub Total		6,408,912	1,763,920	8,192,832
Maintenance of Timber Bridge (New)	m2	0.0	10,306	1,121	0	0	0
Maintenance of Concrete Bridge (New)	m2	81.0	2,129	2,456	172,449	198,936	371,385
Maintenance of Timber Bridge (Exist)	m2	0.0	8,977	2,405	0	0	0
Maintenance of Concrete Bridge (Exist)	m2	16.0	4,249	2,336	67,984	37,376	105,360

Earthwork & Pavement Unit Cost (Rp/Km)	:	19,582,827
Timber Bridge Unit Cost (Rp/m2)	:	
Concrete Bridge Unit Cost (Rp/m2)	:	495,501
Survived Value (Rp)	:	40,531,250
Maintenance Rate without Bridge (%)	:	3.49
New Bridge Cost Rate (%)	:	14.59

PROV : SULAWESI SELATAN KAB : BARRU

LINK NO : 42 (IIB-2) LENGTH : 16 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	m <sup>2</sup>	2500.0	166	91	415,000	227,500	642,500	
Subgrade Preparation	m <sup>2</sup>	76000.0	21	11	2,016,000	1,056,000	3,072,000	
Normal Fill	m <sup>3</sup>	0.0	1,716	865	0	0	0	
Fill in Swamp	m <sup>3</sup>	0.0	2,558	1,055	0	0	0	
Normal Excavation to Spoil	m <sup>3</sup>	2779.0	1,005	524	2,792,895	1,456,196	4,249,091	
Sub Base Course	m <sup>3</sup>	8960.0	3,249	1,351	29,111,040	12,104,960	41,216,000	
Base Course	m <sup>3</sup>	3840.0	4,448	2,303	17,080,320	8,843,520	25,923,840	
Shoulder	m <sup>2</sup>	32000.0	301	146	9,632,000	4,672,000	14,304,000	
Asphalt Patching	m <sup>2</sup>	0.0	3,831	1,414	0	0	0	
Surface Dressing (Single)	m <sup>2</sup>	0.0	628	638	0	0	0	
Surface Dressing (Double)	m <sup>2</sup>	0.0	781	1,004	0	0	0	
Earth Drain	m	21840.0	930	119	20,311,200	2,598,960	22,910,160	
Earth Drain in Swamp (by machine)	m <sup>3</sup>	0.0	1,216	475	0	0	0	
Pipe Culvert Ø80cm	m	234.0	44,889	40,307	10,504,026	9,431,838	19,935,864	
Masonry Culvert (80x80cm)	m	0.0	62,363	34,731	0	0	0	
Retaining Wall and Wing Wall (Timber)	m <sup>2</sup>	0.0	16,520	246	0	0	0	
Retaining Wall and Wing Wall (Masonry)	m <sup>3</sup>	76.8	44,398	11,421	3,409,766	877,132	4,286,898	
Gabion Protection	m <sup>3</sup>	85.0	12,229	121	1,039,465	10,285	1,049,750	
New Bridge (Timber)	SET	1.0	--	--	40,355,223	3,754,225	44,109,448	
New Bridge (Concrete)	SET	1.0	--	--	0	0	0	
					Sub Total	136,666,935	45,032,616	181,699,551
Overhead (15%)						20,500,040	6,754,892	27,254,932
					TOTAL COST	157,166,975	51,787,508	208,954,483

Manual routine maintenance of road	Km	16.0	150,976	7,260	2,415,616	116,160	2,531,776
Routine maintenance of gravel road	Km	16.0	193,432	88,186	3,094,912	1,410,976	4,505,888
			Sub Total		5,510,528	1,527,136	7,037,664
Maintenance of Timber Bridge (New)	m <sup>2</sup>	204.0	10,306	1,121	2,102,424	228,684	2,331,108
Maintenance of Concrete Bridge (New)	m <sup>2</sup>	0.0	2,129	2,456	0	0	0
Maintenance of Timber Bridge (Exist)	m <sup>2</sup>	0.0	8,977	2,405	0	0	0
Maintenance of Concrete Bridge (Exist)	m <sup>2</sup>	0.0	4,249	2,336	0	0	0

Earthwork & Pavement Unit Cost (Rp/Km)	:	9,889,287
Timber Bridge Unit Cost (Rp/m <sup>2</sup> )	:	248,656
Concrete Bridge Unit Cost (Rp/m <sup>2</sup> )	:	
Survived Value (Rp)	:	20,608,000
Maintenance Rate without Bridge (%)	:	4.45
New Bridge Cost Rate (%)	:	24.28

PROV : SULAWESI SELATAN KAB : BARRU  
 LINK NO : 32 (IIIB-1) LENGTH : 23 Km  
 UPGRADE : 7.0m road bed, 4.0m road with surface Dressing (1)

(Rp)

ITEM	UNIT	QUANTITY	<<< UNIT COST >>>		<<<<< COST >>>>>		TOTAL
			LOCAL	FOREIGN	LOCAL	FOREIGN	
Site Clearance in Light Bush	m2	81500.0	166	91	13,529,000	7,416,500	20,945,500
Subgrade Preparation	m2	161000.0	21	11	3,381,000	1,771,000	5,152,000
Normal Fill	m3	0.0	1,716	865	0	0	0
Fill in Swamp	m3	0.0	2,558	1,055	0	0	0
Normal Excavation to Spoil	m3	2554.0	1,005	524	2,566,770	1,338,296	3,905,066
Sub Base Course	m3	12880.0	3,249	1,351	41,847,120	17,400,880	59,248,000
Base Course	m3	6440.0	4,448	2,303	28,645,120	14,831,320	43,476,440
Shoulder	m2	69000.0	301	146	20,769,000	10,074,000	30,843,000
Asphalt Patching	m2	0.0	3,831	1,414	0	0	0
Surface Dressing (Single)	m2	92000.0	628	638	57,776,000	58,696,000	116,472,000
Surface Dressing (Double)	m2	0.0	781	1,004	0	0	0
Earth Drain	m	23620.0	930	119	21,966,600	2,810,780	24,777,380
Earth Drain in Swamp (by machine)	m3	0.0	1,216	475	0	0	0
Pipe Culvert 80cm	m	0.0	44,889	40,307	0	0	0
Masonry Culvert (80x80cm)	m	0.0	62,363	34,731	0	0	0
Retaining Wall and Wing Wall (Timber)	m2	0.0	16,520	246	0	0	0
Retaining Wall and Wing Wall (Masonry)	m3	650.0	44,398	11,421	28,858,700	7,423,650	36,282,350
Gabion Protection	m3	0.0	12,229	121	0	0	0
New Bridge (Timber)	SET	1.0	--	--	41,102,342	3,223,896	44,326,238
New Bridge (Concrete)	SET	1.0	--	--	0	0	0
					Sub Total		
					260,441,652	124,986,322	385,427,974
Overhead (15%)					39,066,247	18,747,948	57,814,195
					TOTAL COST		
					299,507,899	143,734,270	443,242,169

Manual routine maintenance of road	Km	23.0	150,976	7,260	3,472,448	166,980	3,639,428
Routine maintenance of asphalt road	Km	23.0	383,100	141,400	8,811,300	3,252,200	12,063,500
			Sub Total		12,283,748	3,419,180	15,702,928
Maintenance of Timber Bridge (New)	m2	296.0	10,306	1,121	3,050,576	331,816	3,382,392
Maintenance of Concrete Bridge (New)	m2	0.0	2,129	2,456	0	0	0
Maintenance of Timber Bridge (Exist)	m2	0.0	8,977	2,405	0	0	0
Maintenance of Concrete Bridge (Exist)	m2	0.0	4,249	2,336	0	0	0

Earthwork & Pavement Unit Cost (Rp/Km)	:	17,055,087
Timber Bridge Unit Cost (Rp/m2)	:	172,213
Concrete Bridge Unit Cost (Rp/m2)	:	
Survived Value (Rp)	:	50,168,888
Maintenance Rate without Bridge (1)	:	4.00
New Bridge Cost Rate (1)	:	11.50



PROV : SULAWESI SELATAN KAB : BARRU  
 LINK NO : 19 (IIIA) LENGTH : 10 Km  
 UPGRADE : 6.0m road bed, 4.0m road with surface Dressing (2)

(Rp)

I T E M	UNIT	QUANTITY	<<< UNIT COST >>>		<<<<< COST >>>>>		>>>>> TOTAL	
			LOCAL	FOREIGN	LOCAL	FOREIGN		
Site Clearance in Light Bush	m2	0.0	166	91	0	0	0	
Subgrade Preparation	m2	0.0	21	11	0	0	0	
Normal Fill	m3	0.0	1,716	865	0	0	0	
Fill in Swamp	m3	0.0	2,558	1,055	0	0	0	
Normal Excavation to Spoil	m3	0.0	1,005	524	0	0	0	
Sub Base Course	m3	1500.0	3,249	1,351	4,873,500	2,026,500	6,900,000	
Base Course	m3	3200.0	4,448	2,303	14,233,600	7,369,600	21,603,200	
Shoulder	m2	20000.0	301	146	6,020,000	2,920,000	8,940,000	
Asphalt Patching	m2	0.0	3,831	1,414	0	0	0	
Surface Dressing (Single)	m2	0.0	628	638	0	0	0	
Surface Dressing (Double)	m2	40000.0	781	1,004	31,240,000	40,160,000	71,400,000	
Earth Drain	m	3940.0	930	119	3,664,200	468,860	4,133,060	
Earth Drain in Swamp (by machine)	m3	0.0	1,216	475	0	0	0	
Pipe Culvert D80cm	m	0.0	44,889	40,307	0	0	0	
Masonry Culvert (80x80cm)	m	6.0	62,363	34,731	374,178	208,386	582,564	
Retaining Wall and Wing Wall (Timber)	m2	0.0	16,520	246	0	0	0	
Retaining Wall and Wing Wall (Masonry)	m3	0.0	44,398	11,421	0	0	0	
Babion Protection	m3	45.0	12,229	121	550,305	5,445	555,750	
New Bridge (Timber)	SET	1.0	--	--	0	0	0	
New Bridge (Concrete)	SET	1.0	--	--	0	0	0	
					60,955,783	53,158,791	114,114,574	
Overhead (15%)					9,143,367	7,973,818	17,117,185	
					TOTAL COST	70,099,150	61,132,609	131,231,759

Manual routine maintenance of road	Ka	10.0	150,976	7,260	1,509,760	72,600	1,582,360
Routine maintenance of asphalt road	Ka	10.0	383,100	141,400	3,831,000	1,414,000	5,245,000
			Sub Total		5,340,760	1,486,600	6,827,360
Maintenance of Timber Bridge (New)	m2	0.0	10,306	1,121	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.0	2,129	2,456	0	0	0
Maintenance of Timber Bridge (Exist)	m2	0.0	8,977	2,405	0	0	0
Maintenance of Concrete Bridge (Exist)	m2	300.0	4,249	2,336	1,274,700	700,800	1,975,500

Earthwork & Pavement	Unit Cost (Rp/Km)	:	13,123,176
Timber Bridge	Unit Cost (Rp/m2)	:	
Concrete Bridge	Unit Cost (Rp/m2)	:	
Survived Value	(Rp)	:	10,920,800
Maintenance Rate without Bridge	(%)	:	5.20
New Bridge Cost Rate	(%)	:	

PROV : SULAWESI SELATAN KAB : BARRU

LINK NO : 9 (IIIA) LENGTH : 12 Km

UPGRADE : 6.0m 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	166	91	0	0	0	
Subgrade Preparation	m2	4860.0	21	11	102,060	53,460	155,520	
Normal Fill	m3	1250.0	1,716	865	2,145,000	1,091,250	3,236,250	
Fill in Swamp	m3	663.8	2,558	1,055	1,698,000	700,309	2,398,309	
Normal Excavation to Spoil	m3	0.0	1,005	524	0	0	0	
Sub Base Course	m3	2283.2	3,249	1,351	7,418,116	3,084,603	10,502,719	
Base Course	m3	3840.0	4,448	2,303	17,080,320	8,843,520	25,923,840	
Shoulder	m2	24000.0	301	146	7,224,000	3,504,000	10,728,000	
Asphalt Patching	m2	0.0	3,831	1,414	0	0	0	
Surface Dressing (Single)	m2	0.0	628	638	0	0	0	
Surface Dressing (Double)	m2	48000.0	781	1,004	37,488,000	48,192,000	85,680,000	
Earth Drain	m	9060.0	930	119	8,425,800	1,078,140	9,503,940	
Earth Drain in Swamp (by machine)	m3	3600.0	1,216	475	4,377,600	1,710,000	6,087,600	
Pipe Culvert 880cm	m	150.0	44,889	40,307	6,733,350	6,046,050	12,779,400	
Masonry Culvert (80x80cm)	m	6.0	62,363	34,731	374,178	208,386	582,564	
Retaining Wall and Wing Wall (Timber)	m2	0.0	16,520	246	0	0	0	
Retaining Wall and Wing Wall (Masonry)	m3	54.4	44,398	11,421	2,415,251	621,302	3,036,553	
Gabion Protection	m3	0.0	12,229	121	0	0	0	
New Bridge (Timber)	SET	1.0	--	--	0	0	0	
New Bridge (Concrete)	SET	1.0	--	--	73,224,578	41,385,699	114,610,277	
					Sub Total	168,706,253	116,508,719	285,214,972
Overhead (15%)						25,305,937	17,476,307	42,782,244
					TOTAL COST	194,012,190	133,985,026	327,997,216

Manual routine maintenance of road	Km	12.0	150,976	7,260	1,811,712	87,120	1,898,832
Routine maintenance of asphalt road	Km	12.0	383,100	141,400	4,597,200	1,696,800	6,294,000
			Sub Total		6,408,912	1,783,920	8,192,832
Maintenance of Timber Bridge (New)	m2	0.0	10,306	1,121	0	0	0
Maintenance of Concrete Bridge (New)	m2	231.8	2,129	2,456	493,395	569,178	1,062,573
Maintenance of Timber Bridge (Exist)	m2	48.0	8,977	2,405	430,896	115,440	546,336
Maintenance of Concrete Bridge (Exist)	m2	53.5	4,249	2,336	227,321	124,976	352,297

Earthwork & Pavement Unit Cost (Rp/Km)	:	16,349,617
Timber Bridge Unit Cost (Rp/m2)	:	
Concrete Bridge Unit Cost (Rp/m2)	:	568,724
Survived Value (Rp)	:	70,249,281
Maintenance Rate without Bridge (%)	:	4.18
New Bridge Cost Rate (%)	:	40.18

PROV : SULAWESI SELATAN KAB : BARRU

LINK NO : 3 (III B-1) LENGTH : 5 Km

UPGRADE : 6.5m road bed, 4.0m road with surface Dressing (1)

(Rp)

I T E M	UNIT	QUANTITY	<<< UNIT COST >>>		<<<<< COST >>>>>		TOTAL
			LOCAL	FOREIGN	LOCAL	FOREIGN	
Site Clearance in Light Bush	m2	11600.0	166	91	1,925,600	1,055,600	2,981,200
Subgrade Preparation	m2	32500.0	21	11	682,500	357,500	1,040,000
Normal Fill	m3	1148.0	1,716	865	1,969,968	993,020	2,962,988
Fill in Swamp	m3	270.0	2,558	1,055	690,660	284,850	975,510
Normal Excavation to Spoil	m3	1482.0	1,005	524	1,489,410	776,568	2,265,978
Sub Base Course	m3	2800.0	3,249	1,351	9,097,200	3,782,800	12,880,000
Base Course	m3	1400.0	4,448	2,303	6,227,200	3,224,200	9,451,400
Shoulder	m2	12500.0	301	146	3,762,500	1,825,000	5,587,500
Asphalt Patching	m2	0.0	3,831	1,414	0	0	0
Surface Dressing (Single)	m2	20000.0	678	638	12,560,000	12,760,000	25,320,000
Surface Dressing (Double)	m2	0.0	781	1,004	0	0	0
Earth Drain	m	8880.0	930	119	8,258,400	1,056,720	9,315,120
Earth Drain in Swamp (by machine)	m3	1200.0	1,216	475	1,459,200	570,000	2,029,200
Pipe Culvert 80cm	m	30.0	44,889	40,307	1,346,670	1,209,210	2,555,880
Masonry Culvert (80x80cm)	m	66.0	62,363	34,731	4,115,958	2,292,246	6,408,204
Retaining Wall and Wing Wall (Timber)	m2	0.0	16,520	246	0	0	0
Retaining Wall and Wing Wall (Masonry)	m3	19.8	44,398	11,421	879,080	226,135	1,105,215
Gabion Protection	m3	0.0	12,229	121	0	0	0
New Bridge (Timber)	SET	1.0	--	--	5,779,091	498,253	6,277,344
New Bridge (Concrete)	SET	1.0	--	--	0	0	0
					Sub Total		
					60,243,437	30,912,102	91,155,539
Overhead ( 15% )					9,036,515	4,636,815	13,673,330
					TOTAL COST		
					69,279,952	35,548,917	104,828,869

Manual routine maintenance of road	Km	5.0	150,976	7,260	754,880	36,300	791,180
Routine maintenance of asphalt road	Km	5.0	383,100	141,400	1,915,500	707,000	2,622,500
			Sub Total		2,670,380	743,300	3,413,680
Maintenance of Timber Bridge (New)	m2	40.0	10,306	1,121	412,240	44,840	457,080
Maintenance of Concrete Bridge (New)	m2	0.0	2,129	2,456	0	0	0
Maintenance of Timber Bridge (Exist)	m2	15.8	8,977	2,405	141,387	37,878	179,265
Maintenance of Concrete Bridge (Exist)	m2	22.0	4,249	2,336	93,478	51,392	144,870

Earthwork & Pavement Unit Cost (Rp/Km)	:	19,521,985
Timber Bridge Unit Cost (Rp/m2)	:	180,474
Concrete Bridge Unit Cost (Rp/m2)	:	
Survived Value (Rp)	:	10,906,280
Maintenance Rate without Bridge (%)	:	3.50
New Bridge Cost Rate (%)	:	6.89

PROV : SULAWESI SELATAN KAB : BARRU

LINK NO : 1 (IIIA) LENGTH : 7 Km

UPGRADE : 6.0m 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	166	91	0	0	0	
Subgrade Preparation	m2	0.0	21	11	0	0	0	
Normal Fill	m3	0.0	1,716	865	0	0	0	
Fill in Swamp	m3	0.0	2,558	1,055	0	0	0	
Normal Excavation to Spoil	m3	0.0	1,005	524	0	0	0	
Sub Base Course	m3	220.0	3,249	1,351	714,780	297,220	1,012,000	
Base Course	m3	320.0	4,448	2,303	1,423,360	736,960	2,160,320	
Shoulder	m2	14000.0	301	146	4,214,000	2,044,000	6,258,000	
Asphalt Patching	m2	1746.0	3,831	1,414	6,688,926	2,468,844	9,157,770	
Surface Dressing (Single)	m2	24000.0	628	638	15,072,000	15,312,000	30,384,000	
Surface Dressing (Double)	m2	4000.0	781	1,004	3,124,000	4,016,000	7,140,000	
Earth Drain	m	3860.0	930	119	3,589,800	459,340	4,049,140	
Earth Drain in Swamp (by machine)	m3	0.0	1,216	475	0	0	0	
Pipe Culvert Ø80cm	m	0.0	44,889	40,307	0	0	0	
Masonry Culvert (80x80cm)	m	24.0	62,363	34,731	1,496,712	833,544	2,330,256	
Retaining Wall and Wing Wall (Timber)	m2	0.0	16,520	246	0	0	0	
Retaining Wall and Wing Wall (Masonry)	m3	2.9	44,398	11,421	128,754	33,120	161,874	
Gabion Protection	m3	0.0	12,229	121	0	0	0	
New Bridge (Timber)	SET	1.0	--	--	0	0	0	
New Bridge (Concrete)	SET	1.0	--	--	0	0	0	
					Sub Total			
						36,452,332	26,201,028	62,653,360
Overhead ( 15% )						5,467,849	3,930,154	9,398,003
					TOTAL COST	41,920,181	30,131,182	72,051,363

Manual routine maintenance of road	Km	7.0	150,976	7,260	1,056,832	50,820	1,107,652
Routine maintenance of asphalt road	Km	7.0	383,100	141,400	2,681,700	989,800	3,671,500
			Sub Total		3,738,532	1,040,620	4,779,152
Maintenance of Timber Bridge (New)	m2	0.0	10,306	1,121	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.0	2,129	2,456	0	0	0
Maintenance of Timber Bridge (Exist)	m2	0.0	8,977	2,405	0	0	0
Maintenance of Concrete Bridge (Exist)	m2	24.0	4,249	2,336	101,976	58,064	138,040

Earthwork & Pavement Unit Cost (Rp/Km)	:	10,293,052
Timber Bridge Unit Cost (Rp/m2)	:	
Concrete Bridge Unit Cost (Rp/m2)	:	
Survived Value (Rp)	:	1,349,680
Maintenance Rate without Bridge (%)	:	6.63
New Bridge Cost Rate (%)	:	

PROV : SULAWESI SELATAN KAB : BARRU

LINK NO : 31 (IIIA) LENGTH : 3 Km

UPGRADE : 6.0m 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	166	91	0	0	0	
Subgrade Preparation	m2	6000.0	21	11	126,000	66,000	192,000	
Normal Fill	m3	0.0	1,716	865	0	0	0	
Fill in Swamp	m3	0.0	2,358	1,055	0	0	0	
Normal Excavation to Spoil	m3	152.0	1,005	524	152,760	79,648	232,408	
Sub Base Course	m3	852.0	3,249	1,351	2,768,148	1,151,052	3,919,200	
Base Course	m3	960.0	4,448	2,303	4,270,080	2,210,880	6,480,960	
Shoulder	m2	6000.0	301	146	1,806,000	876,000	2,682,000	
Asphalt Patching	m2	0.0	3,831	1,414	0	0	0	
Surface Dressing (Single)	m2	0.0	628	638	0	0	0	
Surface Dressing (Double)	m2	12000.0	701	1,004	9,372,000	12,048,000	21,420,000	
Earth Drain	m	1520.0	930	119	1,413,600	180,880	1,594,480	
Earth Drain in Swamp (by machine)	m3	0.0	1,214	475	0	0	0	
Pipe Culvert 80cm	m	0.0	44,889	40,307	0	0	0	
Masonry Culvert (80x80cm)	m	0.0	62,363	34,731	0	0	0	
Retaining Wall and Wing Wall (Timber)	m2	0.0	16,520	246	0	0	0	
Retaining Wall and Wing Wall (Masonry)	m3	0.0	44,398	11,421	0	0	0	
Gabion Protection	m3	45.0	12,229	121	550,305	5,445	555,750	
New Bridge (Timber)	SET	1.0	--	--	0	0	0	
New Bridge (Concrete)	SET	1.0	--	--	0	0	0	
					Sub Total	20,458,893	16,617,905	37,076,798
Overhead (15%)						3,068,833	2,492,685	5,561,518
					TOTAL COST	23,527,726	19,110,590	42,638,316

Manual routine maintenance of road	Km	3.0	150,976	7,260	452,928	21,780	474,708
Routine maintenance of asphalt road	Km	3.0	383,100	141,400	1,149,300	424,200	1,573,500
			Sub Total		1,602,228	445,980	2,048,208
Maintenance of Timber Bridge (New)	m2	0.0	10,306	1,121	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.0	2,129	2,456	0	0	0
Maintenance of Timber Bridge (Exist)	m2	15.0	8,977	2,405	134,655	36,075	170,730
Maintenance of Concrete Bridge (Exist)	m2	0.0	4,249	2,336	0	0	0

Earthwork & Pavement Unit Cost (Rp/Km)	:	14,212,773
Timber Bridge Unit Cost (Rp/m2)	:	
Concrete Bridge Unit Cost (Rp/m2)	:	
Survived Value (Rp)	:	4,755,600
Maintenance Rate without Bridge (%)	:	4.80
New Bridge Cost Rate (%)	:	

PROV : SULAWESI SELATAN KAB : BARRU

LINK NO : 29 (IIIA) LENGTH : 5 Km

UPGRADE : 7.0m 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	13500.0	166	91	2,241,000	1,228,500	3,469,500	
Subgrade Preparation	m2	35000.0	21	11	735,000	385,000	1,120,000	
Normal Fill	m3	0.0	1,716	865	0	0	0	
Fill in Swamp	m3	0.0	2,558	1,055	0	0	0	
Normal Excavation to Spoil	m3	594.0	1,005	524	596,970	311,256	908,226	
Sub Base Course	m3	2800.0	3,249	1,351	9,097,200	3,782,800	12,880,000	
Base Course	m3	1600.0	4,448	2,303	7,116,800	3,684,800	10,801,600	
Shoulder	m2	15000.0	301	146	4,515,000	2,190,000	6,705,000	
Asphalt Patching	m2	0.0	3,831	1,414	0	0	0	
Surface Dressing (Single)	m2	0.0	628	638	0	0	0	
Surface Dressing (Double)	m2	20000.0	781	1,004	15,620,000	20,080,000	35,700,000	
Earth Drain	m	1060.0	930	119	985,800	126,140	1,111,940	
Earth Drain in Swamp (by machine)	m3	0.0	1,216	475	0	0	0	
Pipe Culvert 80cm	m	0.0	44,889	40,307	0	0	0	
Masonry Culvert (80x80cm)	m	0.0	62,363	34,731	0	0	0	
Retaining Wall and Wing Wall (Timber)	m2	0.0	16,520	246	0	0	0	
Retaining Wall and Wing Wall (Masonry)	m3	0.0	44,398	11,421	0	0	0	
Gabion Protection	m3	0.0	12,229	121	0	0	0	
New Bridge (Timber)	SET	1.0	--	--	0	0	0	
New Bridge (Concrete)	SET	1.0	--	--	18,508,204	9,221,464	27,729,668	
					Sub Total	59,415,974	41,009,960	100,425,934
Overhead (15%)						8,912,396	6,151,494	15,063,890
					TOTAL COST	68,328,370	47,161,454	115,489,824

Manual routine maintenance of road	Km	5.0	150,976	7,260	754,880	36,300	791,180
Routine maintenance of asphalt road	Km	5.0	383,100	141,400	1,915,500	707,000	2,622,500
			Sub Total		2,670,380	743,300	3,413,680
Maintenance of Timber Bridge (New)	m2	0.0	10,306	1,121	0	0	0
Maintenance of Concrete Bridge (New)	m2	54.0	2,129	2,456	114,966	132,624	247,590
Maintenance of Timber Bridge (Exist)	m2	0.0	8,977	2,405	0	0	0
Maintenance of Concrete Bridge (Exist)	m2	0.0	4,249	2,336	0	0	0

Earthwork & Pavement Unit Cost (Rp/Km)	:	16,720,141
Timber Bridge Unit Cost (Rp/m2)	:	
Concrete Bridge Unit Cost (Rp/m2)	:	590,539
Survived Value (Rp)	:	26,869,234
Maintenance Rate without Bridge (%)	:	4.08
New Bridge Cost Rate (%)	:	27.61

PROV : SULAWESI SELATAN KAB : BARRU

LINK NO : 15 (IIIA) LENGTH : 6 Km

UPGRADE : 6.0m 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	m <sup>2</sup>	0.0	166	91	0	0	0	
Subgrade Preparation	m <sup>2</sup>	10212.0	21	11	214,452	112,332	326,784	
Normal Fill	m <sup>3</sup>	0.0	1,716	865	0	0	0	
Fill in Swamp	m <sup>3</sup>	1544.4	2,558	1,055	3,950,575	1,629,342	5,579,917	
Normal Excavation to Spoil	m <sup>3</sup>	1184.0	1,005	524	1,189,920	620,416	1,810,336	
Sub Base Course	m <sup>3</sup>	1037.0	3,249	1,351	3,369,213	1,400,987	4,770,200	
Base Course	m <sup>3</sup>	640.0	4,448	2,303	2,846,720	1,473,920	4,320,640	
Shoulder	m <sup>2</sup>	12000.0	301	146	3,612,000	1,752,000	5,364,000	
Asphalt Patching	m <sup>2</sup>	253.0	3,831	1,414	969,243	357,742	1,326,985	
Surface Dressing (Single)	m <sup>2</sup>	16000.0	628	638	10,048,000	10,208,000	20,256,000	
Surface Dressing (Double)	m <sup>2</sup>	8000.0	781	1,004	6,248,000	8,032,000	14,280,000	
Earth Drain	m	3780.0	930	119	3,515,400	449,820	3,965,220	
Earth Drain in Swamp (by machine)	m <sup>3</sup>	3120.0	1,216	475	3,793,920	1,482,000	5,275,920	
Pipe Culvert Ø80cm	m	6.0	44,889	40,307	269,334	241,842	511,176	
Masonry Culvert (80x80cm)	m	18.0	62,363	34,731	1,122,534	625,158	1,747,692	
Retaining Wall and Wing Wall (Timber)	m <sup>2</sup>	0.0	16,520	246	0	0	0	
Retaining Wall and Wing Wall (Masonry)	m <sup>3</sup>	1.5	44,398	11,421	66,597	17,131	83,728	
Gabion Protection	m <sup>3</sup>	999.0	12,229	121	12,216,771	120,879	12,337,650	
New Bridge (Timber)	SET	1.0	--	--	0	0	0	
New Bridge (Concrete)	SET	1.0	--	--	0	0	0	
					Sub Total	53,432,679	28,523,569	81,956,248
Overhead (15%)						8,014,901	4,278,535	12,293,436
					TOTAL COST	61,447,580	32,802,104	94,249,684

Manual routine maintenance of road	Km	6.0	150,976	7,260	905,856	43,560	949,416
Routine maintenance of asphalt road	Km	6.0	383,100	141,400	2,298,600	848,400	3,147,000
			Sub Total		3,204,456	891,960	4,096,416
Maintenance of Timber Bridge (New)	m <sup>2</sup>	0.0	10,306	1,121	0	0	0
Maintenance of Concrete Bridge (New)	m <sup>2</sup>	0.0	2,129	2,456	0	0	0
Maintenance of Timber Bridge (Exist)	m <sup>2</sup>	0.0	8,977	2,405	0	0	0
Maintenance of Concrete Bridge (Exist)	m <sup>2</sup>	44.0	4,249	2,336	186,956	102,784	289,740

Earthwork & Pavement	Unit Cost	(Rp/Km)	:	15,708,281
Timber Bridge	Unit Cost	(Rp/m <sup>2</sup> )	:	
Concrete Bridge	Unit Cost	(Rp/m <sup>2</sup> )	:	
Survived Value		(Rp)	:	4,896,320
Maintenance Rate without Bridge		(%)	:	4.35
New Bridge Cost Rate		(%)	:	

## Appendix A-4

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

PROV : SULAWESI SELATAN      KAB : BARRU

I T E M	UNIT	< 1988 >	< 1989 >	< 1990 >	< 1991 >	< 1992 >	< TOTAL >
<b>EQUIPMENT :</b>							
Bulldozer/Ripper	hr	224.4	586.9	505.4	514.3	670.5	2501.5
Swamp Bulldozer	hr	51.4	9.0	21.1	13.2	0.0	94.7
Motor Grader	hr	412.6	871.1	748.5	1079.2	1497.6	4609.0
Hand-guide Vib. Roller	hr	386.7	1079.7	1665.6	1340.2	1542.6	6014.8
Tire Roller	hr	444.4	1049.9	930.0	1204.3	459.9	4088.5
Vibratory Roller (D&T)	hr	360.2	686.8	586.9	816.8	1214.8	3665.5
Hydraulic Excavator; Wheel	hr	256.9	121.9	304.5	207.4	0.0	890.3
Wheel Loader	hr	700.5	1515.6	1485.0	1788.8	2043.9	7533.8
Water Tank Truck	hr	231.0	426.3	395.4	549.6	820.0	2422.3
Dump Truck	hr	5534.6	12795.8	12265.7	14349.3	17425.5	62370.9
Flat Bed Truck with Crane	hr	417.1	714.3	1981.2	1272.6	936.1	5321.3
Flat Bed Truck	hr	854.3	1526.6	1694.4	1893.8	1034.2	7003.3
Portable Crusher/Screening	hr	139.3	351.3	373.3	481.2	325.6	1670.7
Concrete Mixer	hr	267.5	404.7	1229.3	774.6	320.1	2996.2
Water Pump	hr	865.4	974.8	3910.0	2061.6	226.8	8038.6
Concrete Vibrator	hr	22.7	76.8	115.1	73.0	40.1	327.7
Asphalt Sprayer	hr	444.4	1049.9	930.0	1204.3	459.9	4088.5
<b>LABOUR :</b>							
Handur	man day	760.0	1752.8	2169.2	2100.3	2458.1	9240.4
Skilled Labourer	man day	1020.7	2047.1	2808.5	3167.9	4623.4	13747.6
Carpenter	man day	224.8	516.6	1048.2	1168.9	2249.4	5207.9
Mason	man day	310.8	449.3	1420.3	952.5	466.8	3599.7
Labourer	man day	7161.3	18569.6	20428.9	19862.6	22939.5	88961.9
Driver	man day	1331.7	2853.3	2989.1	3347.1	3652.3	14173.5
Operator	man day	638.7	1430.7	1491.9	1767.9	1900.4	7229.6
<b>MATERIAL :</b>							
Bitumen	l	103508.1	241135.0	226687.4	281699.9	94299.9	947330.3
Asphalt Oil	l	15733.2	38250.0	30690.0	42199.9	18860.0	145733.1
Kerosene	l	21504.5	51142.6	44639.9	58119.9	22539.9	197946.8
Sand	m <sup>3</sup>	363.6	931.2	1151.5	1046.5	611.0	4106.8
Cement	bag	473.7	1315.4	2326.6	1484.2	762.3	6362.2
River Stone	m <sup>3</sup>	1368.2	507.7	1682.2	1172.6	551.8	5282.5
Steel Moulds	set	6.0	168.0	168.0	90.0	234.0	666.0
Timber	m <sup>3</sup>	18.7	42.7	86.6	100.6	203.1	451.7
Paint	l	0.0	128.3	37.6	363.1	1449.7	1978.7
Reinforcing Steel	kg	5933.1	17077.8	30455.2	19696.0	7464.6	80626.7
Tying Wire	kg	2051.8	155.1	276.6	358.7	237.8	3080.0
Equivalent Royalty	m <sup>3</sup>	10100.4	19012.1	19577.8	24999.5	31101.1	104790.9



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

PROV : SULAWESI SELATAN      KAB : BARRU

ITEM	UNIT	< 1988 >	< 1989 >	< 1990 >	< 1991 >	< 1992 >	< TOTAL >
<b>EQUIPMENT :</b>							
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	360.8	676.0	620.2	553.9	477.9	2688.8
Hand-guide Vib. Roller	hr	60.0	240.0	585.0	810.0	1185.0	2880.0
Tire Roller	hr	360.8	676.0	620.2	553.9	477.9	2688.8
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	61.4	126.9	140.3	141.6	147.9	618.1
Water Tank Truck	hr	0.0	0.0	0.0	0.0	0.0	0.0
Dump Truck	hr	489.4	1241.6	2011.8	2469.0	3256.6	9468.4
Flat Bed Truck with Crane	hr	633.6	1261.2	1183.5	1098.7	1205.7	5382.7
Flat Bed Truck	hr	1438.3	2795.0	2860.4	2790.4	2808.1	12692.2
Portable Crusher/Screening	hr	30.8	63.9	71.3	72.4	76.1	314.5
Concrete Mixer	hr	1.5	3.1	3.0	2.7	3.2	13.5
Water Pump	hr	1.5	3.1	3.0	2.7	3.2	13.5
Concrete Vibrator	hr	1.5	3.1	3.0	2.7	3.2	13.5
Asphalt Sprayer	hr	0.0	0.0	0.0	0.0	0.0	0.0
<b>LABOUR :</b>							
Handur	man day	458.3	937.6	1084.7	1150.5	1290.9	4922.0
Skilled Labourer	man day	103.0	283.5	504.6	674.1	891.1	2456.3
Carpenter	man day	32.7	64.2	59.5	70.2	52.1	278.7
Mason	man day	0.0	0.0	0.0	0.0	0.0	0.0
Labourer	man day	5440.8	11139.7	12945.9	13729.3	15489.8	58745.5
Driver	man day	452.0	932.9	1055.5	1103.8	1257.6	4801.8
Operator	man day	141.0	268.4	254.5	233.0	210.3	1107.2
<b>MATERIAL :</b>							
Bitumen	l	540.0	2160.0	5265.0	7290.0	10665.0	25920.0
Asphalt Oil	l	0.0	0.0	0.0	0.0	0.0	0.0
Kerosene	l	60.0	240.0	585.0	810.0	1185.0	2880.0
Sand	m <sup>3</sup>	11.5	43.1	100.5	137.7	200.7	493.5
Cement	bag	23.0	46.3	43.7	39.4	47.8	200.2
River Stone	m <sup>3</sup>	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 <sup>3</sup>	2.8	5.5	5.2	6.1	4.4	24.0
Paint	l	18.5	36.2	33.5	40.9	28.2	157.3
Reinforcing Steel	kg	118.6	238.1	224.9	202.9	245.6	1030.1
Tying Wire	kg	1.0	2.1	2.0	1.8	2.2	9.1
Equivalent Royalty	m <sup>3</sup>	872.9	1799.2	1989.5	2007.0	2096.4	8765.0

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

PROV : SULAWESI SELATAN KAD : BARRU

ITEM	UNIT	< 1988 >	< 1989 >	< 1990 >	< 1991 >	< 1992 >	< TOTAL >
<b>EQUIPMENT :</b>							
Bulldozer/Ripper	hr	224.4	586.9	505.4	514.3	670.5	2501.5
Swamp Bulldozer	hr	51.4	9.0	21.1	13.2	0.0	94.7
Motor Grader	hr	773.4	1547.1	1368.7	1633.1	1975.5	7297.8
Hand-guide Vib. Roller	hr	446.7	1319.7	2250.6	2150.2	2727.6	8894.8
Tire Roller	hr	805.2	1725.9	1550.2	1758.2	937.8	6777.3
Vibratory Roller (D&I)	hr	360.2	686.8	586.9	816.8	1214.8	3665.5
Hydraulic Excavator; Wheel	hr	256.9	121.5	304.5	207.4	0.0	890.3
Wheel Loader	hr	761.9	1642.5	1625.3	1930.4	2191.8	8151.9
Water Tank Truck	hr	231.0	426.3	395.4	549.6	820.0	2422.3
Dump Truck	hr	6024.0	14037.4	14277.5	16818.3	20682.1	71839.3
Flat Bed Truck with Crane	hr	1050.7	1975.5	3164.7	2371.3	2141.8	10704.0
Flat Bed Truck	hr	2292.6	4321.6	4554.8	4684.2	3842.3	19695.5
Portable Crusher/Screening	hr	170.1	415.2	444.6	553.6	401.7	1985.2
Concrete Mixer	hr	269.0	407.8	1232.3	771.3	323.3	3009.7
Water Pump	hr	866.9	977.9	3913.0	2064.3	230.0	8052.1
Concrete Vibrator	hr	24.2	79.9	118.1	75.7	43.3	341.2
Asphalt Sprayer	hr	444.4	1049.9	930.0	1204.3	459.9	4088.5
<b>LABOUR :</b>							
Handur	man day	1218.3	2690.4	3253.9	3250.8	3749.0	14162.4
Skilled Labourer	man day	1123.7	2330.6	3393.1	3842.0	5514.5	16203.9
Carpenter	man day	257.5	580.8	1107.7	1239.1	2301.5	5486.6
Mason	man day	310.8	449.3	1420.3	952.5	466.8	3599.7
Labourer	man day	12602.1	29709.3	33374.8	33591.9	38429.3	147707.4
Driver	man day	1783.7	3786.2	4044.6	4450.9	4909.9	18975.3
Operator	man day	779.7	1699.1	1746.4	2000.9	2110.7	8336.8
<b>MATERIAL :</b>							
Bitumen	l	104048.1	243295.0	231952.4	288989.9	104964.9	973250.3
Asphalt Oil	l	15733.2	38250.0	30690.0	42199.9	18860.0	145733.1
Kerosene	l	21564.5	51382.6	45224.9	58929.9	23724.9	200826.8
Sand	m <sup>3</sup>	375.1	974.3	1252.0	1184.2	814.7	4600.3
Cement	bag	496.7	1361.7	2370.3	1523.6	810.1	6562.4
River Stone	m <sup>3</sup>	1368.2	507.7	1682.2	1172.6	551.8	5282.5
Steel Moulds	set	6.0	168.0	168.0	90.0	234.0	666.0
Tiebar	m <sup>3</sup>	21.5	48.2	91.8	106.7	207.5	475.7
Paint	l	18.5	164.5	71.1	404.0	1477.9	2136.0
Reinforcing Steel	kg	6051.7	17315.9	30680.1	19898.9	7710.2	81656.8
Tying Wire	kg	2052.8	157.2	278.6	360.5	240.0	3089.1
Equivalent Royalty	m <sup>3</sup>	10973.3	20811.3	21567.3	27006.5	33197.5	113555.9

## Appendix A-5

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

PROV : SULAWESI SELATAN

KAB : BARRU

( 1000 Rp )

I T E M	UNIT	( 1988 )	( 1989 )	( 1990 )	( 1991 )	( 1992 )	( TOTAL )
<b>EQUIPMENT :</b>		79,081	160,980	180,437	202,406	207,062	837,974
Bulldozer/Ripper	15969	3,583	9,372	8,070	8,212	10,707	39,944
Swamp Bulldozer	11757	604	105	248	155	0	1,112
Motor Grader	13627	5,622	11,870	10,199	14,706	20,407	62,804
Hand-guide Vib. Roller	1599	618	1,726	2,663	2,142	2,466	9,615
Tire Roller	10892	4,840	11,435	10,129	13,117	5,009	44,530
Vibratory Roller (D&T)	6800	2,449	4,670	3,990	5,554	8,260	24,923
Hydraulic Excavator, Wheel	12795	3,287	1,554	3,896	2,653	0	11,390
Wheel Loader	16819	11,781	25,490	24,976	30,085	34,376	126,708
Water Tank Truck	4015	927	1,711	1,587	2,206	3,292	9,723
Dump Truck	5510	30,495	70,504	67,584	79,064	98,014	343,661
Flat Bed Truck with Crane	5069	2,114	3,620	10,042	6,450	4,745	26,971
Flat Bed Truck	3353	2,864	5,118	5,681	6,349	3,467	23,479
Portable Crusher/Screening	44145	6,149	15,508	16,479	21,242	14,373	73,751
Concrete Mixer	8967	2,398	3,628	11,023	6,945	2,870	26,864
Water Pump	487	421	474	1,904	1,003	110	3,912
Concrete Vibrator	316	7	24	36	23	12	102
Asphalt Sprayer	2076	922	2,179	1,930	2,500	954	8,485
<b>LABOUR :</b>		26,989	63,976	76,177	76,535	90,566	334,243
Mandur	3000	2,280	5,258	6,507	6,300	7,374	27,719
Skilled Labourer	2500	2,551	5,117	7,221	7,919	11,558	34,366
Carpenter	3000	674	1,519	3,144	3,506	6,748	15,621
Mason	3000	932	1,347	4,260	2,857	1,400	10,796
Labourer	2000	14,322	37,139	40,857	39,725	45,879	177,922
Driver	3000	3,995	8,559	8,967	10,041	10,956	42,518
Operator	3500	2,235	5,007	5,221	6,187	6,651	25,301
<b>MATERIAL :</b>		76,440	160,380	178,582	197,813	115,827	729,042
Bitumen	325	33,640	78,368	73,673	91,552	30,647	307,880
Asphalt Oil	750	11,799	28,687	23,017	31,649	14,145	109,297
Kerosene	250	5,376	12,785	11,159	14,529	5,634	49,483
Sand	6000	2,181	5,587	6,909	6,279	3,684	24,640
Cement	3750	1,776	4,932	8,724	5,565	2,858	23,855
River Stone	6000	8,209	3,046	10,093	7,035	3,310	31,693
Steel Moulds	7000	42	1,176	1,176	630	1,638	4,662
Timber	180000	3,366	7,686	15,588	18,108	36,558	81,306
Paint	2500	0	320	94	907	3,624	4,945
Reinforcing Steel	750	4,449	12,808	22,841	14,772	5,598	60,468
Tying Wire	1500	3,077	232	414	538	356	4,617
Equivalent Royalty	250	2,525	4,753	4,894	6,249	7,775	26,196

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

PROV : SULAWESI SELATAN

KAB : BARRU

( 1000 Rp )

I T E M	UNIT	< 1988 >	< 1989 >	< 1990 >	< 1991 >	< 1992 >	< TOTAL >
<b>EQUIPMENT :</b>		22,073	44,543	48,348	49,006	52,956	216,926
Bulldozer/Ripper	15969	0	0	0	0	0	0
Swamp Bulldozer	11757	0	0	0	0	0	0
Motor Grader	13627	4,916	9,211	8,451	7,547	6,512	36,637
Hand-guide Vib. Roller	1599	95	383	935	1,295	1,894	4,602
Tire Roller	10892	3,929	7,362	6,755	6,033	5,205	29,284
Vibratory Roller (D&T)	6800	0	0	0	0	0	0
Hydraulic Excavator; Wheel	12795	0	0	0	0	0	0
Wheel Loader	16819	1,032	2,134	2,359	2,381	2,487	10,393
Water Tank Truck	4015	0	0	0	0	0	0
Dump Truck	5510	2,696	6,841	11,085	13,604	17,943	52,169
Flat Bed Truck with Crane	5869	3,211	6,393	5,999	5,569	6,111	27,283
Flat Bed Truck	3353	4,822	9,371	9,590	9,356	9,415	42,554
Portable Crusher/Screening	44145	1,359	2,820	3,147	3,196	3,359	13,881
Concrete Mixer	8967	13	27	26	24	28	118
Water Pump	487	0	1	1	1	1	4
Concrete Vibrator	316	0	0	0	0	1	1
Asphalt Sprayer	2076	0	0	0	0	0	0
<b>LABOUR :</b>		14,459	29,728	34,640	36,930	41,742	157,499
Handur	3000	1,374	2,812	3,254	3,451	3,872	14,763
Skilled Labourer	2500	257	708	1,261	1,685	2,227	6,138
Carpenter	3000	98	192	178	210	156	834
Mason	3000	0	0	0	0	0	0
Labourer	2000	10,881	22,279	25,891	27,458	30,979	117,488
Driver	3000	1,356	2,798	3,166	3,311	3,772	14,403
Operator	3500	493	939	890	815	736	3,873
<b>MATERIAL :</b>		1,202	2,903	4,310	5,399	6,718	20,532
Bitumen	325	175	702	1,711	2,369	3,466	8,423
Asphalt Oil	750	0	0	0	0	0	0
Kerosene	250	15	60	146	202	296	719
Sand	6000	69	258	603	826	1,204	2,960
Cement	3750	86	173	163	147	179	748
River Stone	6000	0	0	0	0	0	0
Steel Moulds	7000	0	0	0	0	0	0
Timber	180000	504	990	936	1,098	792	4,320
Paint	2500	46	90	83	102	70	391
Reinforcing Steel	750	88	178	168	152	184	770
Tying Wire	1500	1	3	3	2	3	12
Equivalent Royalty	250	218	449	497	501	524	2,189

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

PROV : SULAWESI SELATAN      KAB : BARRU

( 1000 Rp )

I T E M	UNIT	< 1988 >	< 1989 >	< 1990 >	< 1991 >	< 1992 >	< TOTAL >
<b>EQUIPMENT :</b>		101,154	213,531	228,785	251,412	260,018	1,054,900
Bulldozer/Ripper	15969	3,583	9,372	8,070	8,212	10,707	39,944
Swamp Bulldozer	11757	604	105	248	155	0	1,112
Motor Grader	13627	10,538	21,081	18,650	22,253	24,919	99,441
Hand-guide Vib. Roller	1599	713	2,109	3,598	3,437	4,360	14,217
Tire Roller	10892	8,769	18,797	16,884	19,150	10,214	73,814
Vibratory Roller (D&T)	6800	2,449	4,670	3,990	5,554	8,260	24,923
Hydraulic Excavator; Wheel	12795	3,287	1,554	3,896	2,653	0	11,390
Wheel Loader	16819	12,813	27,624	27,335	32,466	36,863	137,101
Water Tank Truck	4015	927	1,711	1,587	2,206	3,292	9,723
Dump Truck	5510	33,191	77,345	78,669	92,668	113,957	395,830
Flat Bed Truck with Crane	5069	5,325	10,013	16,041	12,019	10,856	54,254
Flat Bed Truck	3353	7,686	14,489	15,271	15,705	12,882	66,033
Portable Crusher/Screening	44145	7,508	18,328	19,626	24,438	17,732	87,632
Concrete Mixer	8967	2,411	3,655	11,049	6,969	2,898	26,982
Water Pump	487	421	475	1,905	1,004	111	3,916
Concrete Vibrator	316	7	24	36	23	13	103
Asphalt Sprayer	2076	922	2,179	1,930	2,500	954	8,485
<b>LABOUR :</b>		41,448	93,704	110,817	113,465	132,308	491,742
Mandur	3000	3,654	8,070	9,761	9,751	11,246	42,482
Skilled Labourer	2500	2,808	5,825	8,482	9,604	13,785	40,504
Carpenter	3000	772	1,741	3,322	3,716	6,904	16,455
Mason	3000	932	1,347	4,260	2,857	1,400	10,796
Labourer	2000	25,203	59,418	66,748	67,183	76,858	295,410
Driver	3000	5,351	11,357	12,133	13,352	14,728	56,921
Operator	3500	2,728	5,946	6,111	7,002	7,387	29,174
<b>MATERIAL :</b>		77,642	163,283	182,892	203,212	122,545	749,574
Bitumen	325	33,815	79,070	75,384	93,921	34,113	316,303
Asphalt Oil	750	11,799	28,687	23,017	31,649	14,145	109,297
Kerosene	250	5,391	12,845	11,305	14,731	5,930	50,202
Sand	6000	2,250	5,845	7,512	7,105	4,888	27,600
Cement	3750	1,862	5,105	8,887	5,712	3,037	24,603
River Stone	6000	8,209	3,046	10,093	7,035	3,310	31,693
Steel Moulds	7000	42	1,176	1,176	630	1,638	4,662
Timber	180000	3,870	8,676	16,524	19,206	37,350	85,626
Paint	2500	46	410	177	1,009	3,694	5,336
Reinforcing Steel	750	4,537	12,986	23,009	14,924	5,782	61,238
Tying Wire	1500	3,078	235	417	540	359	4,629
Equivalent Royalty	250	2,743	5,202	5,391	6,750	8,299	28,385

## Appendix A-6

## QUANTITIES OF BRIDGE ON PROPOSED ROAD LINKS

PROV : SULAWESI SELATAN KAB : BARRU

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)			
24	LAPPA DARE II	5	DDID	KK	RC	BN50	(B)	4.00	1	4.00	4.50	10.00	18.00	0	2	IIIA
	LAPPA DARE III	6	DDID	KK	RC	BN50	(A)	2.50	1	2.50	4.50	5.50	11.25	0	2	
	NASIMPU	7	DDID	KK	RC	BN50	(A)	3.00	1	3.00	4.50	5.10	13.50	0	2	
	ANKERUNG	8	DDID	KK	RC	BN50	(E)	11.00	1	11.00	4.50	35.20	49.50	0	2	
29	N.I	1	LPAO	--	RC	BN50	(C)	6.00	1	6.00	4.50	0.00	27.00	0	2	IIIA
	N.I	2	LPAO	--	RC	BN50	(C)	6.00	1	6.00	4.50	0.00	27.00	0	2	
31	N.I	1	**	KK				5.00	1	5.00	3.00	15.00		0	2	IIIA
32	N.I	1	BLDA	--	TH	10T	(A)	3.00	1	3.00	4.00	0.00	12.00	0	2	IIIB-1
	N.I	2	BLDA	--	TH	10T	(B)	4.00	1	4.00	4.00	0.00	16.00	0	2	
	N.I	3	BLDA	--	TH	10T	(C)	21.00	3	7.00	4.00	0.00	84.00	2	2	
	N.I	4	BLDA	--	TH	10T	(C)	40.00	5	8.00	4.00	0.00	160.00	4	2	
	N.I	5	BLDA	--	TH	10T	(C)	6.00	1	6.00	4.00	0.00	24.00	0	2	
42	BUKKERE	1	LWP	--	TH	10T	(B)	5.00	1	5.00	4.00	0.00	20.00	0	2	IIIB-2
	TANRUT TEDONG	1	LWP	--	TH	10T	(B)	4.00	1	4.00	4.00	0.00	16.00	0	2	
	BULU	2	LWP	--	TH	10T	(B)	5.00	1	5.00	4.00	0.00	20.00	0	2	
	DKKAE	3	LWP	--	TH	10T	(A)	3.00	1	3.00	4.00	0.00	12.00	0	2	
	KECCI	3	LWP	--	TH	10T	(C)	6.00	1	6.00	4.00	0.00	24.00	0	2	
	BARAHMING	4	LWP	--	TH	10T	(C)	6.00	1	6.00	4.00	0.00	24.00	0	2	
	PANASA	5	LWP	--	TH	10T	(B)	4.00	1	4.00	4.00	0.00	16.00	0	2	
	MARDANGINS	8	LWP	--	TH	10T	(C)	12.00	2	6.00	4.00	0.00	48.00	1	2	
	RUMPIA	10	LWP	--	TH	10T	(C)	6.00	1	6.00	4.00	0.00	24.00	0	2	

PROV : SULAWESI SELATAN KAB : BARRU

LINK NO	BRIDGE NAME	Km	(( TYPE ))		DESIGN LOAD	SPAN CLASS	LENGTH (m)	SPAN NO	SPAN LENGTH (m)	WIDTH (m)	AREA	AREA	PIER (no)	ABUT (no)	ROAD CLASS	
			(EXIST)	(NEW)							(EXIST) (m <sup>2</sup> )	(NEW) (m <sup>2</sup> )				
1	JEPPEE	6	BARU	GB			2.00	1	2.00	4.00	8.00		0	2	IIIA	
	BALUNGKALUNGE	6	BARU	KB			4.00	1	4.00	4.00	16.00		0	2		
3	PANESSANGENG	1	X	GB			4.40	1	4.40	5.00	22.00		0	2	IIIB-1	
	BUJUNG LOMPO 1	3	COPN	KK			3.00	1	3.00	5.25	15.75		0	2		
	BUJUNG LOMPO 2	4	COPN	--	TM	10T	(B)	10.00	2	5.00	4.00	0.00	40.00	1		2
9	CIDAPI	1	X	KB			4.00	1	4.00	4.00	16.00		0	2	IIIA	
	PASAKA	2	TKLS	KB			2.00	1	2.00	3.00	6.00		0	2		
	PACCIRO	3	TKLS	KB			3.50	1	3.50	3.00	10.50		0	2		
	BUKERE	4	TKLS	KK	RC	BNSO	(C)	6.00	1	6.00	4.50	18.00	27.00	0		2
	BAERA 1	6	TKLS	KB			7.00	1	7.00	3.00	21.00		0	2		
	BAERA 2	6	TKLS	KK			4.00	1	4.00	4.00	16.00		0	2		
	BAERA 3	7	TKLS	KK			8.00	1	8.00	4.00	32.00		0	2		
	CASAMA	7	TKLS	GB	RC	BNSO	(B)	4.00	1	4.00	4.50	18.00	18.00	0		2
	BINUANG	8	TKLS	KK	RC	BNSO	(B)	5.00	1	5.00	4.50	20.00	22.50	0		2
	TOSIMA	9	TKLS	--	RC	BNSO	(E)	28.00	2	13.00	4.50	0.00	117.00	1		2
	BATULAPA 1	10	TKLS	KK	RC	BNSO	(C)	6.00	1	6.00	4.50	24.00	27.00	0		2
	BATULAPA 2	11	TKLS	KK	RC	BNSO	(A)	2.50	1	2.50	4.50	10.00	11.25	0		2
	BATULAPA 3	12	TKLS	KK	RC	BNSO	(A)	2.00	1	2.00	4.50	8.00	9.00	0		2
12	N.1	6	X	KB			4.00	1	4.00	4.00	16.00		0	2	IIIA	
	SERRE	11	MKS	--	RC	BNSO	(A)	3.00	1	3.00	4.50	0.00	13.50	0		2
	PACCEKKE	11	MKS	--	RC	BNSO	(E)	15.00	1	15.00	4.50	0.00	67.50	0		2
15	PANCEE	1	X	GB			5.00	1	5.00	4.00	20.00		0	2	IIIA	
	TANERE	2	PLR	GB			3.00	1	3.00	4.00	12.00		0	2		
	BENTENGE	5	PLR	GB			3.00	1	3.00	4.00	12.00		0	2		
17	LENNE 1	2	X	KB			9.80	2	4.90	4.00	39.20		1	2	IIIA	
	LENNE 2	2	LKR	KB			2.50	1	2.50	4.00	10.00		0	2		
	LENNE 3	2	LKR	KB			2.80	1	2.80	4.00	11.20		0	2		
	BACUAPIE	3	LKR	KB			4.00	1	4.00	4.00	16.00		0	2		
	LOBOPUTE	3	LKR	KB			3.00	1	3.00	4.00	12.00		0	2		
	LAPAJ	4	LKR	KB			5.00	1	5.00	4.00	20.00		0	2		
	AJUARA	4	LKR	KB			4.50	1	4.50	4.00	18.00		0	2		
	DADE	4	LKR	KK			3.50	1	3.50	4.00	14.00		0	2		
	LAMMING	5	LKR	KB			4.50	1	4.50	4.00	18.00		0	2		
	PUCEE	5	LKR	KB			2.50	1	2.50	4.00	10.00		0	2		
19	KAERENGE 1	1	X	KB			3.50	1	3.50	4.00	14.00		0	2	IIIA	
	GALUNG	1	KRNG	GB			22.00	3	7.33	4.00	88.00		2	2		
	KAERENGE 2	1	KRNG	KB			4.00	1	4.00	4.00	16.00		0	2		
	PALAKKA	2	KRNG	GB			21.00	3	7.00	4.00	84.00		2	2		
	ADINGNGE	4	KRNG	KB			4.00	1	4.00	4.00	16.00		0	2		
	GANO	8	KRNG	KB			12.00	2	6.00	4.00	48.00		1	2		
	BAMPENG	9	KRNG	KB			4.50	1	4.50	4.00	18.00		0	2		
	BAKKE	9	KRNG	KB			4.00	1	4.00	4.00	16.00		0	2		
24	LAP UNPUBENG	4	**	KK	RC	BNSO	(B)	4.00	1	4.00	4.50	8.00	18.00	0	2	IIIA
	LAPPA DARE 1	5	DOLD	KK	RC	BNSO	(B)	4.00	1	4.00	4.50	10.00	18.00	0	2	

Appendix A-7 CONSTRUCTION AND MAINTENANCE COST OF BRIDGES  
ON PROPOSAL ROAD LINKS

PROV : SULAWESI SELATAN KAB : BARRU

LINK NO : 1 (IIIA) LENGTH : 7 Km.

( Rp )

I T E M	UNIT	QUANTITY	<<< UNIT COST >>>		<<<<< COST >>>>>		>>>>> TOTAL
			LOCAL	FOREIGN	LOCAL	FOREIGN	
Superstructure (Timber; Span 3m; 10T)	m2	0.00	58,101	3,541	0	0	0
Superstructure (Timber; Span 5m; 10T)	m2	0.00	64,356	3,910	0	0	0
Superstructure (Timber; Span 8m; 10T)	m2	0.00	85,243	5,137	0	0	0
Superstructure (Timber; Span 3m; BMSO)	m2	0.00	72,043	4,379	0	0	0
Superstructure (Timber; Span 5m; BMSO)	m2	0.00	78,652	4,745	0	0	0
Superstructure (Timber; Span 8m; BMSO)	m2	0.00	99,752	6,007	0	0	0
Superstructure (Concrete; Span 3m; BMSO)	m2	0.00	61,498	81,925	0	0	0
Superstructure (Concrete; Span 5m; BMSO)	m2	0.00	62,917	91,542	0	0	0
Superstructure (Concrete; Span 8m; BMSO)	m2	0.00	64,626	99,704	0	0	0
Superstructure (Concrete; Span 10m; BMSO)	m2	0.00	70,529	113,234	0	0	0
Superstructure (Concrete; Span 15m; BMSO)	m2	0.00	75,645	133,369	0	0	0
Substructure (Pier; for Timber; 10T)	NO	0.00	506,055	32,863	0	0	0
Substructure (Abut; for Timber; 10T)	NO	0.00	1,349,398	154,495	0	0	0
Substructure (Pier; for Timber; BMSO)	NO	0.00	744,249	48,632	0	0	0
Substructure (Abut; for Timber; BMSO)	NO	0.00	1,528,934	171,666	0	0	0
Substructure (Pier; for Concrete; BMSO)	NO	0.00	1,795,557	452,906	0	0	0
Substructure (Abut; for Concrete; BMSO)	NO	0.00	3,754,600	959,362	0	0	0
Demolition of Bridge (Timber->Timber)	m2	0.00	15,925	1,374	0	0	0
Demolition of Bridge (Timber->Concrete)	m2	0.00	15,925	1,374	0	0	0
Demolition of Bridge (Concrete)	m2	0.00	91,055	64,824	0	0	0
Maintenance of Timber Bridge (New)	m2	0.00	10,306	1,121	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.00	2,129	2,456	0	0	0
Maintenance of Timber Bridge (Exist)	m2	0.00	8,977	2,405	0	0	0
Maintenance of Concrete Bridge (Exist)	m2	24.00	4,249	2,336	101,976	56,064	158,040
-----							
( 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 : BARRU  
 LINK NO : 2 (IIB-2) LENGTH : 0 Km

( Rp )

ITEM	UNIT	QUANTITY	<<< UNIT COST >>>		<<<<< COST >>>>>		>>>>> TOTAL
			LOCAL	FOREIGN	LOCAL	FOREIGN	
Superstructure (Timber;Span 3m;IOT)	m2	0.00	58,101	3,541	0	0	0
Superstructure (Timber;Span 5m;IOT)	m2	0.00	64,356	3,910	0	0	0
Superstructure (Timber;Span 8m;IOT)	m2	0.00	85,243	5,137	0	0	0
Superstructure (Timber;Span 3m;BH50)	m2	0.00	72,043	4,379	0	0	0
Superstructure (Timber;Span 5m;BH50)	m2	0.00	78,652	4,745	0	0	0
Superstructure (Timber;Span 8m;BH50)	m2	0.00	99,752	6,007	0	0	0
Superstructure (Concrete;Span 3m;BH50)	m2	0.00	61,498	81,925	0	0	0
Superstructure (Concrete;Span 5m;BH50)	m2	0.00	62,917	91,542	0	0	0
Superstructure (Concrete;Span 8m;BH50)	m2	0.00	64,626	99,704	0	0	0
Superstructure (Concrete;Span 10m;BH50)	m2	0.00	70,529	113,234	0	0	0
Superstructure (Concrete;Span 15m;BH50)	m2	0.00	75,645	133,369	0	0	0
Substructure (Pier;for Timber;IOT)	NO	0.00	506,055	32,863	0	0	0
Substructure (Abut;for Timber;IOT)	NO	0.00	1,349,398	154,495	0	0	0
Substructure (Pier;for Timber;BH50)	NO	0.00	744,249	48,632	0	0	0
Substructure (Abut;for Timber;BH50)	NO	0.00	1,528,934	171,666	0	0	0
Substructure (Pier;for Concrete;BH50)	NO	0.00	1,795,557	452,906	0	0	0
Substructure (Abut;for Concrete;BH50)	NO	0.00	3,754,600	959,362	0	0	0
Demolition of Bridge (Timber->Timber)	m2	0.00	15,925	1,374	0	0	0
Demolition of Bridge (Timber->Concrete)	m2	0.00	15,925	1,374	0	0	0
Demolition of Bridge (Concrete)	m2	0.00	91,055	64,824	0	0	0
Maintenance of Timber Bridge (New)	m2	0.00	10,306	1,121	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.00	2,129	2,456	0	0	0
Maintenance of Timber Bridge (Exist)	m2	0.00	8,977	2,405	0	0	0
Maintenance of Concrete Bridge (Exist)	m2	102.00	4,249	2,336	433,398	238,272	671,670
( 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 : BARRU

LINE NO : 3 (IIR-1) LENGTH : 5 Km

( Rp )

ITEM	UNIT	QUANTITY	<<< UNIT COST >>>		<<<<< COST >>>>>		>>>>> TOTAL
			LOCAL	FOREIGN	LOCAL	FOREIGN	
Superstructure (Timber; Span 3m; IOT)	m2	0.00	58,101	3,541	0	0	0
Superstructure (Timber; Span 5m; IOT)	m2	40.00	64,356	3,910	2,574,240	156,400	2,730,640
Superstructure (Timber; Span 8m; IOT)	m2	0.00	85,243	5,137	0	0	0
Superstructure (Timber; Span 3m; BMSO)	m2	0.00	72,043	4,379	0	0	0
Superstructure (Timber; Span 5m; BMSO)	m2	0.00	78,652	4,745	0	0	0
Superstructure (Timber; Span 8m; BMSO)	m2	0.00	99,752	6,007	0	0	0
Superstructure (Concrete; Span 3m; BMSO)	m2	0.00	61,498	81,925	0	0	0
Superstructure (Concrete; Span 5m; BMSO)	m2	0.00	62,917	91,542	0	0	0
Superstructure (Concrete; Span 8m; BMSO)	m2	0.00	64,626	99,704	0	0	0
Superstructure (Concrete; Span 10m; BMSO)	m2	0.00	70,529	113,234	0	0	0
Superstructure (Concrete; Span 15m; BMSO)	m2	0.00	75,645	133,369	0	0	0
Substructure (Pier; for Timber; IOT)	NO	1.00	506,055	32,863	506,055	32,863	538,918
Substructure (Abut; for Timber; IOT)	NO	2.00	1,349,398	154,495	2,698,796	308,990	3,007,786
Substructure (Pier; for Timber; BMSO)	NO	0.00	744,249	48,632	0	0	0
Substructure (Abut; for Timber; BMSO)	NO	0.00	1,528,934	171,666	0	0	0
Substructure (Pier; for Concrete; BMSO)	NO	0.00	1,795,557	452,906	0	0	0
Substructure (Abut; for Concrete; BMSO)	NO	0.00	3,754,600	959,362	0	0	0
Demolition of Bridge (Timber->Timber)	m2	0.00	15,925	1,374	0	0	0
Demolition of Bridge (Timber->Concrete)	m2	0.00	15,925	1,374	0	0	0
Demolition of Bridge (Concrete)	m2	0.00	91,055	64,824	0	0	0
Maintenance of Timber Bridge (New)	m2	40.00	10,306	1,121	412,240	44,840	457,080
Maintenance of Concrete Bridge (New)	m2	0.00	2,129	2,456	0	0	0
Maintenance of Timber Bridge (Exist)	m2	15.75	8,977	2,405	141,387	37,878	179,265
Maintenance of Concrete Bridge (Exist)	m2	22.00	4,249	2,336	93,478	51,392	144,870
( Without Overhead )			TOTAL COST (Timber Bridge)		5,779,091	498,253	6,277,344
			(Concrete Bridge)		0	0	0
			TOTAL COST (without Maintenance)		5,779,091	498,253	6,277,344
( Overhead : 15% )			TOTAL COST (Timber Bridge)		6,645,955	572,991	7,218,946
			(Concrete Bridge)		0	0	0
			TOTAL COST (without Maintenance)		6,645,955	572,991	7,218,946

PROV : SULAWESI SELATAN KAB : BARRU  
 LINK NO : 7 (IIIA) LENGTH : 12 Km

( Rp )

I T E N	UNIT	QUANTITY	<<< UNIT COST >>>		<<<<< COST >>>>>		>>>>> TOTAL
			LOCAL	FOREIGN	LOCAL	FOREIGN	
Superstructure (Timber; Span 3m; IOT)	m2	0.00	58,101	3,541	0	0	0
Superstructure (Timber; Span 5m; IOT)	m2	0.00	64,356	3,910	0	0	0
Superstructure (Timber; Span 8m; IOT)	m2	0.00	85,243	5,137	0	0	0
Superstructure (Timber; Span 3m; BMSO)	m2	0.00	72,043	4,379	0	0	0
Superstructure (Timber; Span 5m; BMSO)	m2	0.00	78,652	4,745	0	0	0
Superstructure (Timber; Span 8m; BMSO)	m2	0.00	99,752	6,007	0	0	0
Superstructure (Concrete; Span 3m; BMSO)	m2	20.25	61,498	81,925	1,245,334	1,658,981	2,904,315
Superstructure (Concrete; Span 5m; BMSO)	m2	40.50	62,917	91,542	2,548,138	3,707,451	6,255,589
Superstructure (Concrete; Span 8m; BMSO)	m2	54.00	64,626	99,704	3,489,804	5,384,016	8,873,820
Superstructure (Concrete; Span 10m; BMSO)	m2	0.00	70,529	113,234	0	0	0
Superstructure (Concrete; Span 15m; BMSO)	m2	117.00	75,645	133,369	8,850,465	15,604,173	24,454,638
Substructure (Pier; for Timber; IOT)	NO	0.00	506,055	32,863	0	0	0
Substructure (Abut; for Timber; IOT)	NO	0.00	1,349,398	154,495	0	0	0
Substructure (Pier; for Timber; BMSO)	NO	0.00	744,249	48,632	0	0	0
Substructure (Abut; for Timber; BMSO)	NO	0.00	1,528,934	171,666	0	0	0
Substructure (Pier; for Concrete; BMSO)	NO	1.00	1,795,557	452,906	1,795,557	452,906	2,248,463
Substructure (Abut; for Concrete; BMSO)	NO	14.00	3,754,600	959,362	52,564,400	13,431,068	65,995,468
Demolition of Bridge (Timber->Timber)	m2	0.00	15,925	1,374	0	0	0
Demolition of Bridge (Timber->Concrete)	m2	80.00	15,925	1,374	1,274,000	109,920	1,383,920
Demolition of Bridge (Concrete)	m2	16.00	91,055	64,824	1,456,880	1,037,184	2,494,064
Maintenance of Timber Bridge (New)	m2	0.00	10,306	1,121	0	0	0
Maintenance of Concrete Bridge (New)	m2	231.75	2,129	2,456	493,395	569,178	1,062,573
Maintenance of Timber Bridge (Exist)	m2	48.00	8,977	2,405	430,876	115,440	546,336
Maintenance of Concrete Bridge (Exist)	m2	53.50	4,249	2,336	227,321	124,976	352,297
<hr/>							
( Without Overhead )	TOTAL COST (Timber Bridge)				0	0	0
	(Concrete Bridge)				73,224,578	41,385,699	114,610,277
	TOTAL COST (without Maintenance)				73,224,578	41,385,699	114,610,277
<hr/>							
( Overhead : 15% )	TOTAL COST (Timber Bridge)				0	0	0
	(Concrete Bridge)				84,208,265	47,593,554	131,801,819
	TOTAL COST (without Maintenance)				84,208,265	47,593,554	131,801,819

PROV : SULAWESI SELATAN KAB : BARRU

LINK NO : 12 (IIIA) LENGTH : 12 Km

( Rp )

ITEM	UNIT	QUANTITY	<<< UNIT COST >>>		<<<<< COST >>>>>		TOTAL
			LOCAL	FOREIGN	LOCAL	FOREIGN	
Superstructure (Timber; Span 3m; IOT)	m2	0.00	58,101	3,541	0	0	0
Superstructure (Timber; Span 5m; IOT)	m2	0.00	64,356	3,910	0	0	0
Superstructure (Timber; Span 8m; IOT)	m2	0.00	85,243	5,137	0	0	0
Superstructure (Timber; Span 3m; BNSO)	m2	0.00	72,043	4,379	0	0	0
Superstructure (Timber; Span 5m; BNSO)	m2	0.00	78,652	4,745	0	0	0
Superstructure (Timber; Span 8m; BNSO)	m2	0.00	99,752	6,007	0	0	0
Superstructure (Concrete; Span 3m; BNSO)	m2	13.50	61,498	81,925	830,223	1,105,987	1,936,210
Superstructure (Concrete; Span 5m; BNSO)	m2	0.00	62,917	91,542	0	0	0
Superstructure (Concrete; Span 8m; BNSO)	m2	0.00	64,626	99,704	0	0	0
Superstructure (Concrete; Span 10m; BNSO)	m2	0.00	70,529	113,234	0	0	0
Superstructure (Concrete; Span 15m; BNSO)	m2	67.50	75,645	133,369	5,106,037	9,002,407	14,108,444
Substructure (Pier; for Timber; IOT)	NO	0.00	506,055	32,863	0	0	0
Substructure (Abut; for Timber; IOT)	NO	0.00	1,349,398	154,495	0	0	0
Substructure (Pier; for Timber; BNSO)	NO	0.00	744,249	48,632	0	0	0
Substructure (Abut; for Timber; BNSO)	NO	0.00	1,528,934	171,666	0	0	0
Substructure (Pier; for Concrete; BNSO)	NO	0.00	1,795,557	452,906	0	0	0
Substructure (Abut; for Concrete; BNSO)	NO	4.00	3,754,600	959,362	15,018,400	3,837,448	18,855,848
Demolition of Bridge (Timber->Timber)	m2	0.00	15,925	1,374	0	0	0
Demolition of Bridge (Timber->Concrete)	m2	0.00	15,925	1,374	0	0	0
Demolition of Bridge (Concrete)	m2	0.00	91,055	64,824	0	0	0
Maintenance of Timber Bridge (New)	m2	0.00	10,306	1,121	0	0	0
Maintenance of Concrete Bridge (New)	m2	81.00	2,129	2,456	172,449	198,936	371,385
Maintenance of Timber Bridge (Exist)	m2	0.00	8,977	2,405	0	0	0
Maintenance of Concrete Bridge (Exist)	m2	16.00	4,249	2,336	67,984	37,376	105,360
( Without Overhead )			TOTAL COST (Timber Bridge)		0	0	0
			(Concrete Bridge)		20,954,660	13,945,842	34,900,502
			TOTAL COST (without Maintenance)		20,954,660	13,945,842	34,900,502
( Overhead : 15% )			TOTAL COST (Timber Bridge)		0	0	0
			(Concrete Bridge)		24,097,859	16,037,718	40,135,577
			TOTAL COST (without Maintenance)		24,097,859	16,037,718	40,135,577

PROV : SULAWESI SELATAN KAB : BARRU  
 LINK NO : 15 (IIIA) LENGTH : 6 Km

( Rp )

ITEM	UNIT	QUANTITY	<<< UNIT COST >>>		<<<<< COST >>>>>		TOTAL
			LOCAL	FOREIGN	LOCAL	FOREIGN	
Superstructure (Timber; Span 3m; 10T)	m2	0.00	58,101	3,541	0	0	0
Superstructure (Timber; Span 5m; 10T)	m2	0.00	64,356	3,910	0	0	0
Superstructure (Timber; Span 8m; 10T)	m2	0.00	85,243	5,137	0	0	0
Superstructure (Timber; Span 3m; BMSO)	m2	0.00	72,043	4,379	0	0	0
Superstructure (Timber; Span 5m; BMSO)	m2	0.00	78,652	4,745	0	0	0
Superstructure (Timber; Span 8m; BMSO)	m2	0.00	99,752	6,007	0	0	0
Superstructure (Concrete; Span 3m; BMSO)	m2	0.00	61,498	81,925	0	0	0
Superstructure (Concrete; Span 5m; BMSO)	m2	0.00	62,917	91,542	0	0	0
Superstructure (Concrete; Span 8m; BMSO)	m2	0.00	64,626	99,704	0	0	0
Superstructure (Concrete; Span 10m; BMSO)	m2	0.00	70,529	113,234	0	0	0
Superstructure (Concrete; Span 15m; BMSO)	m2	0.00	75,645	133,369	0	0	0
Substructure (Pier; for Timber; 10T)	NO	0.00	506,055	32,863	0	0	0
Substructure (Abut; for Timber; 10T)	NO	0.00	1,349,398	154,495	0	0	0
Substructure (Pier; for Timber; BMSO)	NO	0.00	744,249	48,632	0	0	0
Substructure (Abut; for Timber; BMSO)	NO	0.00	1,528,934	171,666	0	0	0
Substructure (Pier; for Concrete; BMSO)	NO	0.00	1,795,557	452,906	0	0	0
Substructure (Abut; for Concrete; BMSO)	NO	0.00	3,754,600	959,362	0	0	0
Demolition of Bridge (Timber->Timber)	m2	0.00	15,925	1,374	0	0	0
Demolition of Bridge (Timber->Concrete)	m2	0.00	15,925	1,374	0	0	0
Demolition of Bridge (Concrete)	m2	0.00	91,055	64,824	0	0	0
Maintenance of Timber Bridge (New)	m2	0.00	10,306	1,121	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.00	2,129	2,456	0	0	0
Maintenance of Timber Bridge (Exist)	m2	0.00	0,977	2,405	0	0	0
Maintenance of Concrete Bridge (Exist)	m2	44.00	4,249	2,336	186,956	102,784	289,740
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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 : BARRU

LINK NO : 17 (IIIA) LENGTH : 6 Km

( Rp )

ITEM	UNIT	QUANTITY	<<< UNIT COST >>>		<<<<< COST >>>>>		>>>>> TOTAL
			LOCAL	FOREIGN	LOCAL	FOREIGN	
Superstructure (Timber; Span 3m; 10T)	m2	0.00	58,101	3,541	0	0	0
Superstructure (Timber; Span 5m; 10T)	m2	0.00	64,356	3,910	0	0	0
Superstructure (Timber; Span 8m; 10T)	m2	0.00	85,243	5,137	0	0	0
Superstructure (Timber; Span 3m; BMS0)	m2	0.00	72,043	4,379	0	0	0
Superstructure (Timber; Span 5m; BMS0)	m2	0.00	78,652	4,745	0	0	0
Superstructure (Timber; Span 8m; BMS0)	m2	0.00	99,752	6,007	0	0	0
Superstructure (Concrete; Span 3m; BMS0)	m2	0.00	61,498	81,925	0	0	0
Superstructure (Concrete; Span 5m; BMS0)	m2	0.00	62,917	91,542	0	0	0
Superstructure (Concrete; Span 8m; BMS0)	m2	0.00	64,626	99,704	0	0	0
Superstructure (Concrete; Span 10m; BMS0)	m2	0.00	70,529	113,234	0	0	0
Superstructure (Concrete; Span 15m; BMS0)	m2	0.00	75,645	133,369	0	0	0
Substructure (Pier; for Timber; 10T)	NO	0.00	506,055	32,863	0	0	0
Substructure (Abut; for Timber; 10T)	NO	0.00	1,349,398	154,495	0	0	0
Substructure (Pier; for Timber; BMS0)	NO	0.00	744,249	40,632	0	0	0
Substructure (Abut; for Timber; BMS0)	NO	0.00	1,528,934	171,666	0	0	0
Substructure (Pier; for Concrete; BMS0)	NO	0.00	1,795,557	452,906	0	0	0
Substructure (Abut; for Concrete; BMS0)	NO	0.00	3,754,600	959,362	0	0	0
Demolition of Bridge (Timber->Timber)	m2	0.00	15,925	1,374	0	0	0
Demolition of Bridge (Timber->Concrete)	m2	0.00	15,925	1,374	0	0	0
Demolition of Bridge (Concrete)	m2	0.00	91,055	64,824	0	0	0
Maintenance of Timber Bridge (New)	m2	0.00	10,306	1,121	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.00	2,129	2,456	0	0	0
Maintenance of Timber Bridge (Exist)	m2	14.00	8,977	2,405	125,678	33,670	159,348
Maintenance of Concrete Bridge (Exist)	m2	154.40	4,249	2,336	656,045	360,678	1,016,723
<hr/>							
( 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 : BARRU

LINK NO : 19 (IIIA) LENGTH : 10 Km

( Rp )

I T E M	UNIT	QUANTITY	<<< UNIT COST >>>		<<<<< COST >>>>>		TOTAL
			LOCAL	FOREIGN	LOCAL	FOREIGN	
Superstructure (Timber;Span 3m;10T)	m2	0.00	58,101	3,541	0	0	0
Superstructure (Timber;Span 5m;10T)	m2	0.00	64,356	3,910	0	0	0
Superstructure (Timber;Span 8m;10T)	m2	0.00	85,243	5,137	0	0	0
Superstructure (Timber;Span 3m;BM50)	m2	0.00	72,043	4,379	0	0	0
Superstructure (Timber;Span 5m;BM50)	m2	0.00	78,652	4,745	0	0	0
Superstructure (Timber;Span 8m;BM50)	m2	0.00	99,752	6,007	0	0	0
Superstructure (Concrete;Span 3m;BM50)	m2	0.00	61,498	81,925	0	0	0
Superstructure (Concrete;Span 5m;BM50)	m2	0.00	62,917	91,542	0	0	0
Superstructure (Concrete;Span 8m;BM50)	m2	0.00	64,626	99,704	0	0	0
Superstructure (Concrete;Span10m;BM50)	m2	0.00	70,529	113,234	0	0	0
Superstructure (Concrete;Span15m;BM50)	m2	0.00	75,645	133,369	0	0	0
Substructure (Pier;for Timber;10T)	NO	0.00	506,055	32,863	0	0	0
Substructure (Abut;for Timber;10T)	NO	0.00	1,349,398	154,495	0	0	0
Substructure (Pier;for Timber;BM50)	NO	0.00	744,249	48,632	0	0	0
Substructure (Abut;for Timber;BM50)	NO	0.00	1,528,934	171,666	0	0	0
Substructure (Pier;for Concrete;BM50)	NO	0.00	1,795,557	452,906	0	0	0
Substructure (Abut;for Concrete;BM50)	NO	0.00	3,754,600	959,362	0	0	0
Demolition of Bridge (Timber->Timber)	m2	0.00	15,925	1,374	0	0	0
Demolition of Bridge (Timber->Concrete)	m2	0.00	15,925	1,374	0	0	0
Demolition of Bridge (Concrete)	m2	0.00	91,055	64,824	0	0	0
Maintenance of Timber Bridge (New)	m2	0.00	10,306	1,121	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.00	2,129	2,456	0	0	0
Maintenance of Timber Bridge (Exist)	m2	0.00	8,977	2,405	0	0	0
Maintenance of Concrete Bridge (Exist)	m2	300.00	4,249	2,336	1,274,700	700,800	1,975,500
( 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 : BARRU  
 LINK NO : 24 (UIA) LENGTH : 9 Km

( Rp )

I T E M	UNIT	QUANTITY	<<< UNIT COST >>>		<<<<< COST >>>>>		TOTAL
			LOCAL	FOREIGN	LOCAL	FOREIGN	
Superstructure (Timber; Span 3m; 10T)	m2	0.00	58,101	3,541	0	0	0
Superstructure (Timber; Span 5m; 10T)	m2	0.00	84,356	3,910	0	0	0
Superstructure (Timber; Span 8m; 10T)	m2	0.00	85,243	5,137	0	0	0
Superstructure (Timber; Span 3m; BMSO)	m2	0.00	72,043	4,379	0	0	0
Superstructure (Timber; Span 5m; BMSO)	m2	0.00	78,652	4,745	0	0	0
Superstructure (Timber; Span 8m; BMSO)	m2	0.00	99,752	6,007	0	0	0
Superstructure (Concrete; Span 3m; BMSO)	m2	24.75	61,498	81,925	1,522,075	2,027,643	3,549,718
Superstructure (Concrete; Span 5m; BMSO)	m2	54.00	62,917	91,542	3,397,518	4,943,268	8,340,786
Superstructure (Concrete; Span 8m; BMSO)	m2	0.00	84,626	99,704	0	0	0
Superstructure (Concrete; Span 10m; BMSO)	m2	0.00	70,529	113,234	0	0	0
Superstructure (Concrete; Span 15m; BMSO)	m2	49.50	75,645	133,369	3,744,427	6,601,765	10,346,192
Substructure (Pier; for Timber; 10T)	NO	0.00	506,055	32,863	0	0	0
Substructure (Abut; for Timber; 10T)	NO	0.00	1,349,398	154,495	0	0	0
Substructure (Pier; for Timber; BMSO)	NO	0.00	744,249	48,632	0	0	0
Substructure (Abut; for Timber; BMSO)	NO	0.00	1,528,934	171,666	0	0	0
Substructure (Pier; for Concrete; BMSO)	NO	0.00	1,795,557	452,906	0	0	0
Substructure (Abut; for Concrete; BMSO)	NO	12.00	3,754,600	959,362	45,055,200	11,512,344	56,567,544
Demolition of Bridge (Timber->Timber)	m2	0.00	15,925	1,374	0	0	0
Demolition of Bridge (Timber->Concrete)	m2	73.80	15,925	1,374	1,175,265	101,401	1,276,666
Demolition of Bridge (Concrete)	m2	0.00	91,055	64,824	0	0	0
Maintenance of Timber Bridge (New)	m2	0.00	10,306	1,121	0	0	0
Maintenance of Concrete Bridge (New)	m2	128.25	2,129	2,456	273,044	314,982	588,026
Maintenance of Timber Bridge (Exist)	m2	0.00	8,977	2,405	0	0	0
Maintenance of Concrete Bridge (Exist)	m2	0.00	4,249	2,336	0	0	0
( Without Overhead )			TOTAL COST (Timber Bridge)		0	0	0
			(Concrete Bridge)		54,894,485	25,186,421	80,080,906
			TOTAL COST (without Maintenance)		54,894,485	25,186,421	80,080,906
( Overhead : 15% )			TOTAL COST (Timber Bridge)		0	0	0
			(Concrete Bridge)		63,128,658	28,964,384	92,093,042
			TOTAL COST (without Maintenance)		63,128,658	28,964,384	92,093,042



PROV : SULAWESI SELATAN KAB : BARRU

LINK NO : 29 (IIIA) LENGTH : 5 Km

( Rp )

ITEM	UNIT	QUANTITY	UNIT COST		COST		TOTAL
			LOCAL	FOREIGN	LOCAL	FOREIGN	
Superstructure (Timber; Span 3m; 10T)	m2	0.00	58,101	3,541	0	0	0
Superstructure (Timber; Span 5m; 10T)	m2	0.00	64,356	3,910	0	0	0
Superstructure (Timber; Span 8m; 10T)	m2	0.00	85,213	5,137	0	0	0
Superstructure (Timber; Span 3m; BH50)	m2	0.00	72,043	4,379	0	0	0
Superstructure (Timber; Span 5m; BH50)	m2	0.00	78,652	4,745	0	0	0
Superstructure (Timber; Span 8m; BH50)	m2	0.00	99,752	6,007	0	0	0
Superstructure (Concrete; Span 3m; BH50)	m2	0.00	61,498	81,925	0	0	0
Superstructure (Concrete; Span 5m; BH50)	m2	0.00	62,917	91,542	0	0	0
Superstructure (Concrete; Span 8m; BH50)	m2	54.00	64,626	99,704	3,489,804	5,384,016	8,873,820
Superstructure (Concrete; Span 10m; BH50)	m2	0.00	70,529	113,234	0	0	0
Superstructure (Concrete; Span 15m; BH50)	m2	0.00	75,645	133,369	0	0	0
Substructure (Pier; for Timber; 10T)	NO	0.00	506,055	32,863	0	0	0
Substructure (Abut; for Timber; 10T)	NO	0.00	1,349,398	154,495	0	0	0
Substructure (Pier; for Timber; BH50)	NO	0.00	744,249	48,632	0	0	0
Substructure (Abut; for Timber; BH50)	NO	0.00	1,528,934	171,666	0	0	0
Substructure (Pier; for Concrete; BH50)	NO	0.00	1,795,557	452,906	0	0	0
Substructure (Abut; for Concrete; BH50)	NO	4.00	3,754,600	959,362	15,018,400	3,837,448	18,855,848
Demolition of Bridge (Timber->Timber)	m2	0.00	15,925	1,374	0	0	0
Demolition of Bridge (Timber->Concrete)	m2	0.00	15,925	1,374	0	0	0
Demolition of Bridge (Concrete)	m2	0.00	91,055	64,824	0	0	0
Maintenance of Timber Bridge (New)	m2	0.00	10,306	1,121	0	0	0
Maintenance of Concrete Bridge (New)	m2	54.00	2,129	2,456	114,966	132,624	247,590
Maintenance of Timber Bridge (Exist)	m2	0.00	8,977	2,405	0	0	0
Maintenance of Concrete Bridge (Exist)	m2	0.00	4,249	2,336	0	0	0
( Without Overhead )			TOTAL COST (Timber Bridge)		0	0	0
			(Concrete Bridge)		18,508,204	9,221,464	27,729,668
			TOTAL COST (without Maintenance)		18,508,204	9,221,464	27,729,668
( Overhead : 15% )			TOTAL COST (Timber Bridge)		0	0	0
			(Concrete Bridge)		21,284,435	10,604,684	31,889,118
			TOTAL COST (without Maintenance)		21,284,435	10,604,684	31,889,118

PROV : SULAWESI SELATAN KAB : BARRU

LINK NO : 31 (IIIA) LENGTH : 3 Km

( Rp )

ITEM	UNIT	QUANTITY	<<< UNIT COST >>>		<<<<< COST >>>>>		>>>>> TOTAL
			LOCAL	FOREIGN	LOCAL	FOREIGN	
Superstructure (Timber;Span 3m;10T)	m2	0.00	58,101	3,541	0	0	0
Superstructure (Timber;Span 5m;10T)	m2	0.00	64,356	3,910	0	0	0
Superstructure (Timber;Span 8m;10T)	m2	0.00	85,243	5,137	0	0	0
Superstructure (Timber;Span 3m;BMSO)	m2	0.00	72,043	4,379	0	0	0
Superstructure (Timber;Span 5m;BMSO)	m2	0.00	78,652	4,745	0	0	0
Superstructure (Timber;Span 8m;BMSO)	m2	0.00	99,752	6,007	0	0	0
Superstructure (Concrete;Span 3m;BMSO)	m2	0.00	61,498	81,925	0	0	0
Superstructure (Concrete;Span 5m;BMSO)	m2	0.00	62,917	91,542	0	0	0
Superstructure (Concrete;Span 8m;BMSO)	m2	0.00	64,626	99,704	0	0	0
Superstructure (Concrete;Span 10m;BMSO)	m2	0.00	70,529	113,234	0	0	0
Superstructure (Concrete;Span 15m;BMSO)	m2	0.00	75,645	133,369	0	0	0
Substructure (Pier;for Timber;10T)	NO	0.00	506,055	32,863	0	0	0
Substructure (Abut;for Timber;10T)	NO	0.00	1,349,398	154,495	0	0	0
Substructure (Pier;for Timber;BMSO)	NO	0.00	744,249	48,632	0	0	0
Substructure (Abut;for Timber;BMSO)	NO	0.00	1,528,934	171,666	0	0	0
Substructure (Pier;for Concrete;BMSO)	NO	0.00	1,795,557	452,906	0	0	0
Substructure (Abut;for Concrete;BMSO)	NO	0.00	3,754,600	959,362	0	0	0
Demolition of Bridge (Timber->Timber)	m2	0.00	15,925	1,374	0	0	0
Demolition of Bridge (Timber->Concrete)	m2	0.00	15,925	1,374	0	0	0
Demolition of Bridge (Concrete)	m2	0.00	91,055	64,824	0	0	0
Maintenance of Timber Bridge (New)	m2	0.00	10,306	1,121	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.00	2,129	2,456	0	0	0
Maintenance of Timber Bridge (Exist)	m2	15.00	8,977	2,405	134,655	36,075	170,730
Maintenance of Concrete Bridge (Exist)	m2	0.00	4,249	2,336	0	0	0
( 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 : BARRU  
 LINK NO : 32 (IIB-1) LENGTH : 23 Km

( Rp )

ITEM	UNIT	QUANTITY	<<< UNIT COST >>>		<<<<< COST >>>>>		TOTAL
			LOCAL	FOREIGN	LOCAL	FOREIGN	
Superstructure (Timber; Span 3m; 10T)	m2	12.00	58,101	3,541	697,212	42,492	739,704
Superstructure (Timber; Span 5m; 10T)	m2	16.00	64,356	3,910	1,029,696	62,560	1,092,256
Superstructure (Timber; Span 8m; 10T)	m2	268.00	85,243	5,137	22,845,124	1,376,716	24,221,840
Superstructure (Timber; Span 3m; BH50)	m2	0.00	72,043	4,379	0	0	0
Superstructure (Timber; Span 5m; BH50)	m2	0.00	78,652	4,745	0	0	0
Superstructure (Timber; Span 8m; BH50)	m2	0.00	99,752	6,007	0	0	0
Superstructure (Concrete; Span 3m; BH50)	m2	0.00	61,498	81,925	0	0	0
Superstructure (Concrete; Span 5m; BH50)	m2	0.00	62,917	91,542	0	0	0
Superstructure (Concrete; Span 8m; BH50)	m2	0.00	64,626	99,704	0	0	0
Superstructure (Concrete; Span 10m; BH50)	m2	0.00	70,529	113,234	0	0	0
Superstructure (Concrete; Span 15m; BH50)	m2	0.00	75,645	133,369	0	0	0
Substructure (Pier; for Timber; 10T)	NO	6.00	506,055	32,863	3,036,330	197,178	3,233,508
Substructure (Abut; for Timber; 10T)	NO	10.00	1,349,398	154,495	13,493,980	1,544,950	15,038,930
Substructure (Pier; for Timber; BH50)	NO	0.00	744,249	48,632	0	0	0
Substructure (Abut; for Timber; BH50)	NO	0.00	1,528,934	171,666	0	0	0
Substructure (Pier; for Concrete; BH50)	NO	0.00	1,795,557	452,908	0	0	0
Substructure (Abut; for Concrete; BH50)	NO	0.00	3,754,600	959,362	0	0	0
Demolition of Bridge (Timber->Timber)	m2	0.00	15,925	1,374	0	0	0
Demolition of Bridge (Timber->Concrete)	m2	0.00	15,925	1,374	0	0	0
Demolition of Bridge (Concrete)	m2	0.00	91,055	64,824	0	0	0
Maintenance of Timber Bridge (New)	m2	296.00	10,306	1,121	3,050,576	331,816	3,382,392
Maintenance of Concrete Bridge (New)	m2	0.00	2,129	2,456	0	0	0
Maintenance of Timber Bridge (Exist)	m2	0.00	8,977	2,405	0	0	0
Maintenance of Concrete Bridge (Exist)	m2	0.00	4,249	2,336	0	0	0
( Without Overhead )			TOTAL COST (Timber Bridge)		41,102,342	3,223,896	44,326,238
			(Concrete Bridge)		0	0	0
			TOTAL COST (without Maintenance)		41,102,342	3,223,896	44,326,238
( Overhead : 15% )			TOTAL COST (Timber Bridge)		47,267,693	3,707,480	50,975,174
			(Concrete Bridge)		0	0	0
			TOTAL COST (without Maintenance)		47,267,693	3,707,480	50,975,174









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