

APPENDIX

INPUT DATA

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

PRV. : *KALIMANTAN SELATAN*

KAB. : *HULU SUNGAI UTARA*

SURVEY YEAR: 1984

Code No.	KECAMATAN NAME	CULTIVATED AREA : (PA)	YIELD RATE : (Y)	FARMER'S POPULATION : (AP)	CIRCULATED COMMODITY : (PG)
01	<i>DANAU PANGGANG</i>	<i>146</i>	<i>3.07</i>	<i>15,328</i>	<i>50</i>
02	<i>BABIRIK</i>	<i>1,623</i>	<i>3.60</i>	<i>13,412</i>	<i>40</i>
03	<i>SUNGAI PANDAH</i>	<i>1,846</i>	<i>3.59</i>	<i>28,740</i>	<i>150</i>
04	<i>AMUNTAI SELATAN</i>	<i>661</i>	<i>3.80</i>	<i>15,328</i>	<i>100</i>
05	<i>AMUNTAI TENGAH</i>	<i>2,103</i>	<i>2.91</i>	<i>34,488</i>	<i>250</i>
06	<i>AMUNTAI UTARA</i>	<i>2,316</i>	<i>3.48</i>	<i>22,992</i>	<i>230</i>
07	<i>LAMPIHONG</i>	<i>5,017</i>	<i>1.59</i>	<i>11,496</i>	<i>550</i>
08	<i>BATU MANDI</i>	<i>2,971</i>	<i>2.71</i>	<i>9,580</i>	<i>1,000</i>
09	<i>AWAYAN</i>	<i>2,414</i>	<i>2.70</i>	<i>11,496</i>	<i>1,100</i>
10	<i>PARINGIN</i>	<i>3,757</i>	<i>2.68</i>	<i>13,412</i>	<i>2,500</i>
11	<i>JUAI</i>	<i>7,721</i>	<i>2.53</i>	<i>7,664</i>	<i>900</i>
12	<i>HALONG</i>	<i>5,398</i>	<i>1.31</i>	<i>7,664</i>	<i>1,000</i>

	<i>r₁</i>	<i>r₂</i>	<i>r₃</i>	<i>r₄</i>
ANNUAL AVERAGE GROWTH RATE %	<i>3.2</i>	<i>1.6</i>	<i>1.5</i>	<i>5.2</i>

FARMER'S CONSUMPTION : (Cp)	NON-AGRO REQUIRMENT : (NG)
<i>0.15</i> Ton/head/year	<i>0.08</i> Ton/ton

	SEDAN	BUS	TRUCK	MOTOR CYCLE	AVERAGE FREIGHT TONAGE
RATE OF EACH VEHICLE TYPE %	<i>21.81</i>	<i>4.69</i>	<i>15.31</i>	<i>58.20</i>	<i>0.6</i> Ton/Truck

Appendix A-2 : Engineering Data

ROAD LINK DATA

PROVINCE : Kalimantan Selatan

KABUPATEN: Hulu Sungai Utara

LINK NO.	BEGINNING POINT (DESA NAME)	END POINT (DESA NAME)	LENGTH (KM)	THROUGH THE KEC. NAME & LENGTH		REMARKS
				KEC. NAME	LENGTH (KM)	
01	Jl. Jend. A. Yani	Kuripan	1	Amuntai Tengah	1	Dalam Kota
02	Jl. Basuki Rahmat	Jl. Abd. Azis	1	Amuntai Tengah	1	Dalam Kota
03	Jl. Kuripan	Jl. Mujahirin	1	Amuntai Tengah	1	Dalam Kota
04	Jl. Mujahirin	Jl. Pl. Merah	1	Amuntai Tengah	1	Dalam Kota
05	Jl. Pl. Merah	Jl. Basuki Rahmat	1	Amuntai Tengah	1	Dalam Kota
06	Jl. A.E.S Nasution	Jl. Basuki Rahmat	1	Amuntai Tengah	1	Dalam Kota
07	Jl. Lapangan	Jl. PL. Merah	1	Amuntai Tengah	1	Dalam Kota
08	Jl. K.H.A Dahlan	Jl. Karias	1	Amuntai Tengah	1	Dalam Kota
09	Jl. H.A Jamhari	Jl. K.H.A Dahlan	1	Amuntai Tengah	1	Dalam Kota
10	Jl. Pangeran Antasari	Jl. H. Ali	1	Amuntai Tengah	1	Dalam Kota
11	Jl. Abd. Azis	Jl. Sei Karias	1	Amuntai Tengah	1	Dalam Kota
12	Jl. H. Ali	Jl. Sei Karias	1	Amuntai Tengah	1	Dalam Kota
13	Jl. TGG Jalil	Jl. Pangeran Antasari	1	Amuntai Tengah	1	Dalam Kota
14	Jl. Norman Umar	Jl. Jend A. Yani	1	Amuntai Tengah	1	Dalam Kota
15	Jl. Angsoka	Jl. Abd. Azis	1	Amuntai Tengah	1	Dalam Kota
16	Jl. Pang. Rasyid	Jl. Abd. Azis	1	Amuntai Tengah	1	Dalam Kota
17	Jl. Gerpindam I	Jl. Abd. Azis	1	Amuntai Tengah	1	Dalam Kota
18	Jl. Gerpindam II	Jl. Abd. Azis	1	Amuntai Tengah	1	Dalam Kota
19	Jl. Patmaraga	Jl. Jend. A. Yani	1	Amuntai Tengah	1	Dalam Kota
20	Jl. Pelasukan Benda Lima	Jl. Patmaraga	1	Amuntai Tengah	1	Dalam Kota
21	Jl. Sp. Patmaraga I	Jl. Norman Umar	1	Amuntai Tengah	1	Dalam Kota
22	Jl. Sp Patmaraga	Jl. Norman Umar	1	Amuntai Tengah	1	Dalam Kota
23	Jl. Empupat Mika	Jl. P.G.A	1	Amuntai Tengah	1	Dalam Kota
24	Palimbangan	Pasar Selasa	2	Amuntai utara	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 : Kalimantan Selatan

KABUPATEN: Hulu Sungai Utara

LINK NO.	BEGINNING POINT (DESA NAME)	END POINT (DESA NAME)	LENGTH (KM)	THROUGH THE KEC. NAME & LENGTH		REMARKS
				KEC. NAME	LENGTH (KM)	
25	Pasar Selasa	Palimbangan	2	Amuntai Utara	2	
26						
27	Sei Malang	Pamintangan	1	Amuntai Tengah	1	Dalam Kota
28	Pamintangan	Sie.Malang	1	Amuntai Tengah	1	Dalam Kota
29	Jl.Sei.Malang	Jl. Negara Dhipa		Amuntai Tengah		Dalam Kota
30	Telaga Silaba	Sp. Telaga	3	Amuntai Tengah	3	
31	Sp.Telaga Silaba	Palimbangan	2	Amuntai Selatan	2	
32	Telaga Silaba	Bayu Hirang	2	Amuntai Selatan	2	
33	Bayu Hirang	Pasar Sabtu	2	Amuntai Selatan	2	
34	Pasar Sabtu	Alabio	5	Sungai Pandan	5	
35	Alabio	Palimbangan	7	Sungai Pandan	1	
				Amuntai Sel	6	
36	Pasar Sabtu	Danau Panggang	18	Amuntai Selatan	18	
37	Danau Panggang	Babirik	10	Danaupanggang Babirik		
38	Babirik	Sei Tabuk	18	Babirik Sungai Pandan		
39	Tapus	Babirik	19	Babirik Sungai Pandan		
40	Tl.Betung	Pasar Sabtu	3	Sungai Pandan	3	
41	Sei Tabuk	Gelagah	1	Sungai Pandan	1	
42	Pasar Sabtu	Gelagah	2	Sungai Pandan	2	
43						
44	Alabio	Pematang	2		2	
45	Rukam	Pematang	6	Sungai Pandan Amuntai Sel		
46	Padang Darat	Telaga Sari	1	Amuntai Selatan	1	
47	Rukam	Muara jumba	4	Amuntai Selatan	4	
48	Jarang Kuantan	Telaga Silaba	4	Amuntai Selatan	4	

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 : Kalimantan Selatan

KABUPATEN: Hulu Sungai utara

LINK NO.	BEGINNING POINT (DESA NAME)	END POINT (DESA NAME)	LENGTH (KM)	THROUGH THE KEC. NAME & LENGTH		REMARKS
				KEC. NAME	LENGTH (KM)	
49	Ilir Mesjid	Penyiuran	5	Amuntai Selatan	5	
50	Kandang Halang	Amuntai				
51	Jarang Kuantan	Penyiuran	5	Amuntai Selatan	5	
52	Alabio	Jarang Kuantan		Amuntai Tengah Sungai Bandan		
53	Tapus	Kandang Halang		Amuntai Tengah		
54	Jarang Kuantan	Pamintangan		Amuntai Tengah		
55	Sei. Durian	Sei Turak	4	Amuntai Selatan	4	
56	Sei. Turak	Sei. Durian	5	Amuntai Utara	5	
57	Tabalong mati	Hapalah	3	Amuntai Utara	3	
58	Tangkawang	Harus	7	Amuntai Sel	1	
				Amuntai Utara	6	
59	Pamintangan	Tabalong mati	8	Amuntai Sel	8	
				Amuntai Utara		
60	Teluk Ketuah	Haurgading	2	Amuntai Utara	2	
61	Pasar Selasa	Loksuga	3	Amuntai Utara	3	
62	Padang Besar	Garunggang	3	Amuntai Utara	3	
63	Guntung	Lampihong	8	Amuntai Utara	2	
				Lampihong	6	
64	Lampihong Kiri	Pulau Kuu	4	Lampihong	4	
65	Halong	Tabuan	8	Halong	8	
66	Wangkili	Muara Ninian	15	Awayan	1	
				Paringin	3	
				Juai	11	
67	Pudak	Wangkili	5	Awayan	1	
				Paringin	3	
68	Paringin	Awayan	12	Awayan	3	
				Paringin	9	
69	Awayan	Tundakan Hulu		Awayan		
				Juai		
70						
71	Wangkili	Haningau	3	Awayan	3	

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 : Kalimantan Selatan

KABUPATĒN; Hulu Sungai Utara

LINK NO.	BEGINNING POINT (DESA NAME)	END POINT (DESA NAME)	LENGTH (KM)	THROUGH THE KEC. NAME & LENGTH		REMARKS
				KEC. NAME	LENGTH (KM)	
72	Awayan	Bihara	5	Awayan	5	
73	Bihara	Tariwin	7	Awayan	4	
				Batu Mandi	3	
74	Tariwin	Muarajaya	7	Batu Mandi	2	
				Awayan	5	
75	Lok Batu	Batu Mandi	11	Batu Mandi	11	
76	Bihara	Sumsum	12	Awayan	12	
77	Halong	Gunung Riut		Halong		
78						
79	Pasar Senin	Pinangkara				

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

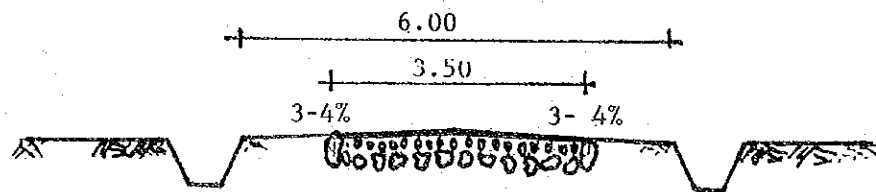
What Kind of Design Criteria has being applied for the new road construction and the improvement' for the Kabupaten Road ?

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

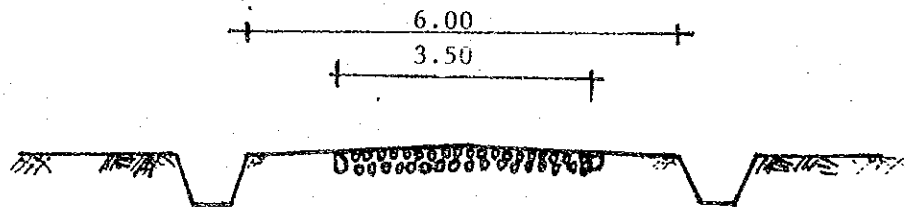
Please draw the Typical Cross Section of the Kabupaten Road.

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

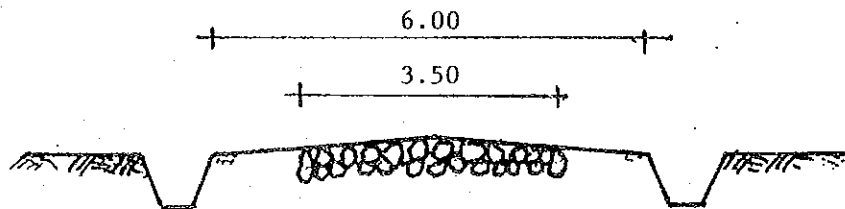
TYPICAL CROSS SECTION.



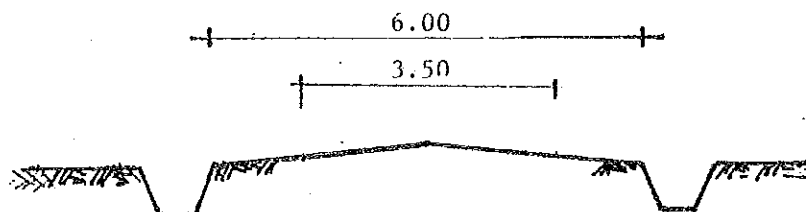
Jalan Asphalt



Jalan Kerikil/Awcas



Jalan Macadam/Batu Belah



Jalan Tanah

KABUPATEN: Hulu Sungai Utara 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 ⁶)	REMARKS Keterangan
		Lebar Jembatan	Type Jembatan			
	Amuntai-Alabio	3,5	Asphalt	8	38.174	
	Alabio-Pematang Benteng	3.5	Asphalt	10	47.737	
	Awayan-Lok Batu	4	Asphalt	20	95.408	
	Jarang Kuantan-Pd.Darat	3.5	Asphalt	7.5	35.795	
	Tigaran-Tl.Selaba	6	Earth	5.5	28.656	
	Guntung-Lampihong	6	Earth	7	33.490	
	Sei Turak-Sei Durian	3,5	Asphalt	4	19.095	
	Pudak-Wangkiti	6	Earth	3	21.297	
		4	Timber	42 m	31.658	
	Lampihong-PuilauKu'u	6	Earth	4	19.085	
	Pintu air Beton-Sei Ham- pangan		Beton		16.798	
	K.H.A.Dahlan-H.Ali	3,5	Batu Pecah	1.4	13.685	
	Sei.Kuntan-Mr.Ninian	3.5	Batu Pecah	12.1	36.700	
	Patmarang-Sukmarangin	3,5	Asphalt	2.75	25.146	
	Mr.Tapun-Getek	3.5	Asphalt	1.1	17.480	
	Ps.Selan-Sei Bareng	6	Earth	2.2	7.000	

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

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

KABUPATEN: Hulu Sungai utara LOCATION AND COSTS OF THE KABUPATEN

ROADS CONSTRUCTED OR IMPROVED IN 1981/1982

Biaya konstruksi penanganan jalan dan jembatan Kabupaten tln. 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			
	Halong-Tabuan	6	Earth	8	28.015	
	Murungsari	1.75	Timber	75 m	5.190	
	Alebio-Dn.Panggung	3.5	Batu Pecah	30	142.278	
	Bikara-Lunranu	4	Timber	81 m	87.825	
	H.Ali-P.Antasari	3.5	Batu Pecah	0.6	17.276	
	Jl.Mesjid	3.5	Asphalt	0:4	15.575	
	Hal.Pemda Amuntai	3.5	Beton		20.409	
	Tanggul-Tengkarang	6	Earth	2.05	11.912	
	Sei Manara	4	Timber	25 m	6.914	

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

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

KABUPATEN: Hulu Sungai Utara LOCATION AND COSTS OF THE KABUPATEN

ROADS CONSTRUCTED OR IMPROVED IN 1982/1983

Biaya konstruksi penanganan

jalan dan jembatan Kabupaten thn. 1982/1983

LINK NO. Nomor Ruas	LOCATION From - To (dari - ke)	Lebar perkerasan(m)	Type perkerasan	LENGTH Panjang (KM)	COSTS Harga (Rp 10 ⁶)	REMARKS Keterangan
		Lebar Jembatan	Type Jembatan			
	Babirik-Alabio	3.5	Batu Pecah	15	67.650	
	Awayan-Paringin	4	Batu Pecah	13	57.000	
	Mr. Tapus-Babirik	6	Earth	16	89.613	
	Toriwin-Awayan	3.5	Batu Pecah	7	63.840	
	Mamar-Tigarun	6/3.5	Earth/B. Pecah	1.2	15.000	
	Nig. Dipa-Empu Jatunika	3.5	Asphalt	1.45	20.000	
	Paliwara-Ps. Selasa	3.5	Batu Pecah	2.2	15.000	
	A. Yani-Sukamaraga & Abd. Aris	3.5	Asphalt	3.8	30.000	
	Mr. Ninian-Hamarung	3.5	Gravel	21	72.500	
	Pelabuhan-Teb. Selaba	4	Trimber	2 Dm	19.000	
	Gerilya	3.5	Batu Pecah		13.407	

* 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

LOCATION AND COSTS OF THE KABUPATEN

ROADS CONSTRUCTED OR IMPROVED IN 1983/1984

Biaya konstruksi penanganan

jalan dan jembatan Kabupaten thn. 1983/1984

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			
	Bikara-Sumsun	3.5	Batu Pecah	12	50.771	
	Tabuan-Hatong	3.5/6	Gravel	20	80.780	
	Alamatan-M. Umar-Candi Agung	10	Earth	2.5	90.085	
	Tb.Mili-Hapalah	3.5	Batu Pecah	3	17.000	
	Tengkawang-Hanus	6	Earth	4	45.462	
	Mr.Tapus-Getek	3.5	Asphalt	1.1	10.000	
	Jarang Kuatan-Telaga Selaba	6	Earth	4	32.523	
	Ps.Selasa-Pelimbangan	6	Earth	2.2	16.978	
	A.Yani-Abd Aris	6	Asphalt	4.6	27.931	
	Bt.Mandi-Lok Batu	4	Asphalt	8	69.576	
	Pasra Pirang Habung	7	Earth	0.1	44.062	

* 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

KABUPATEN: Hulu Sungai Utara 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	LOCATION From - To (dari - ke)	Lebar perkerasan(m)		Type perkerasan	LENGTH Panjang (KM)	COSTS Harga (Rp 10 ⁶)	REMARKS Keterangan
		Lebar Jembatan	Type Jembatan				
	Ps.Semu-Piring Kara	6	Earth		6.6	128.528	
	Lok Bangkai-Pintu air Kaku	6	Earth		1.5	19.508	
	Alamatan-Sri Karias	6	Earth		1.5	74.037	
	BPM - Alamatan	6	Earth		0.75	33.846	
	Gantung Babirik	4.5	Timber		75 m	38.137	
	Sei.Banua-Hanyar/Tahuran	4	Asphalt				
	Terminal-Paringin		Asphalt			15.566	
	Galian Sei Rintisan - Dn.Panggung	10	Earth			18.615	
	Lok Batu-Awayan	4	Asphalt			30.000	
	Sei Baring-Tel.Selaka	6	Earth			14.890	
	NArmai Umar-Turi	6	Batu Pecah			18.271	
	Lok Batu-Awayan	4	Asphalt		2	20.000	

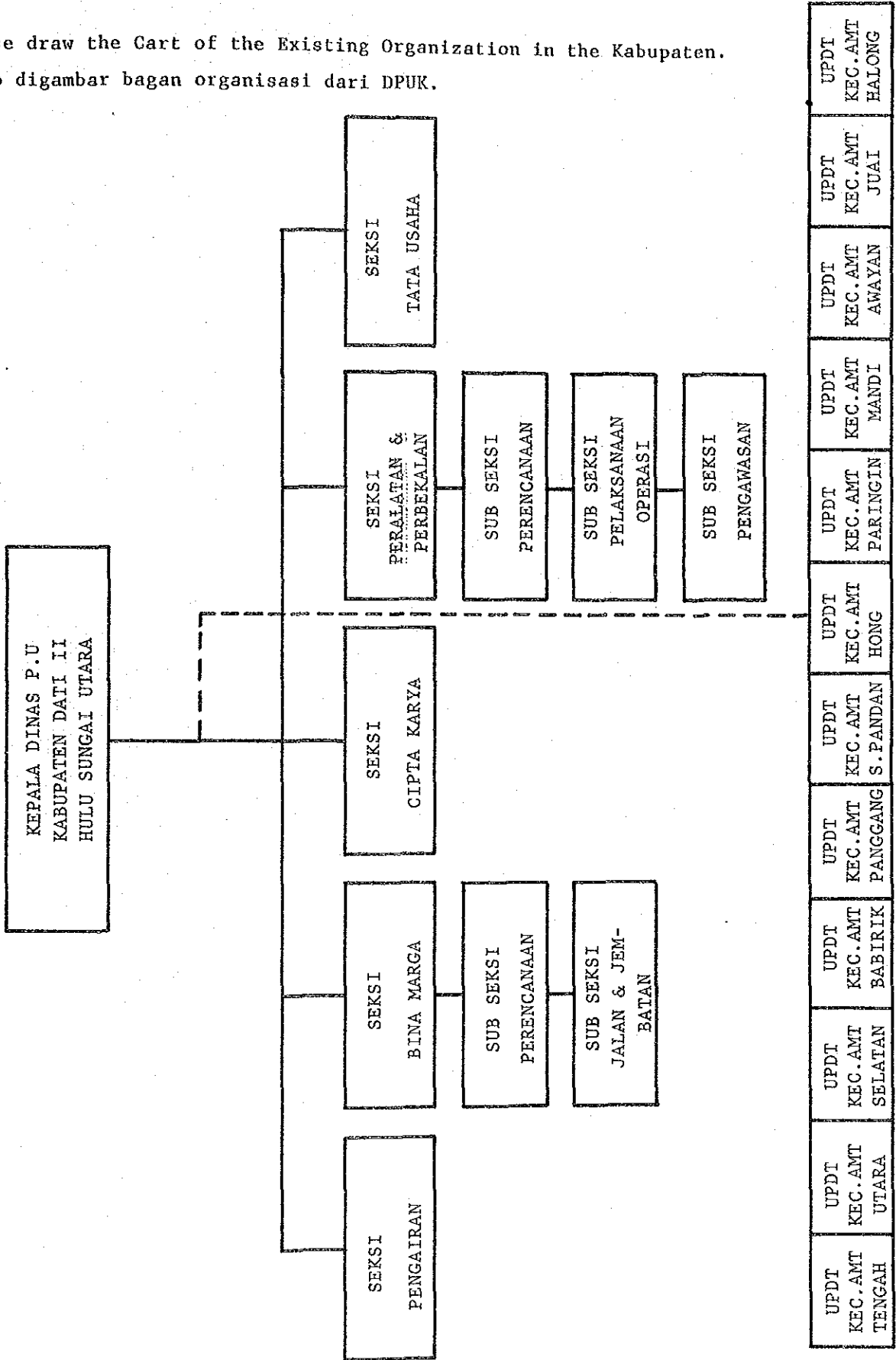
* PAVEMENT TYPE : Pls note the appropriate No. below.

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

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 KABUPATEN

Tenaga Dinas PUK yang ada

PROPINSI: Kalimantan Selatan

KABUPATEN: Hulu Sungai Utara

DESCRIPTION /Uraian	NUMBER / Jumlah	REMARKS Keterangan
CONTROLLING STAFF Staff teknis PUK	24	
DPUK ENGINEER Sarjana Teknik		
ASSISTANT ENGINEER Sarjana Muda Teknik		
TECHNICIAN STAFF Staff Teknik (STM)	24	
ADMINISTRATION Tenaga Administrasi		
SUPERVISOR Tenaga Pengawas	23	
WORKING FORCE Tenaga Pelaksana Lapangan	84	
OPERATORS Operators		
DRIVERS Supir		
MECHANICS Mechanic		
TRADESMAN Tukang		
L A B O U R Buruh / Pekerja		
OTHERS Lain-lain		
TOTAL / JUMLAH	86	

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

LOCATION AND AREA OF DPUK WORKSHOP

E-06

Lokasi Workshop DPUK
PROPINSI : Kalimantan Selatan

KABUPATEN: Hulu Sungai Utara

LOCATION Lokasi	AREA (m2) Luas	NUMBER Jumlah	REMARKS Keterangan
Samping kantor	400		

PROPINSI: Kalimantan Selatan

E-07

KABUPATEN: Hulu Sungai Utara

LAND ACQUISITION COST
Daftar harga pembebasan tanah

DESCRIPTION Uraian	UNIT Satuan	RATE (RP) Harga	REMARKS Keterangan
CITY/kota	M2	15.000	
VILLAGE / desa	M2	7.500	
RICE FIELD/sawah	M2	5.000	
DRY FIELD/ladang	M2	7.500	
MIX CROPS/panen	M2	5.000	
FOREST/hutan	M2		
SWAMP / rawa	M2		
OTHERS / lain-lain	M2		

PROPINSI: Kalimantan Selatan

E-08

KABUPATEN: Hulu Sungai Utara

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
2	C1	78.000.000	10	
2	C2	68.587.500	7	
78	C3	31.419.000	6	

LIST OF EXISTING EQUIPMENT OF LOCAL CONTRACTOR

Name of contractor

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 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 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						REQUIRE - MENT / Ke- butuhan peralatan baru
	TYPE/ Tipe	P.Y	NUMBER / Jumlah			REASON OF BAD CONDI TION/Sebab Kerusakan	
			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							

Appendix A-3 CONSTRUCTION AND MAINTENANCE COST FOR PROPOSED ROAD LINKS

PROV : KALIMANTAN SELATAN KAB : HULU SUNGAI UTARA
 LINK NO : 2 (IIB-1) LENGTH : 1 Km
 UPGRADE : 9.0m 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	0.0	164	91	0	0	0	
Subgrade Preparation	m2	0.0	21	11	0	0	0	
Normal Fill	m3	0.0	1,698	863	0	0	0	
Fill in Swamp	m3	0.0	2,537	1,052	0	0	0	
Normal Excavation to Spoil	m3	0.0	995	522	0	0	0	
Sub Base Course	m3	228.0	3,221	1,347	734,388	307,116	1,041,504	
Base Course	m3	280.0	4,405	2,299	1,233,400	643,720	1,877,120	
Shoulder	m2	5000.0	295	146	1,475,000	730,000	2,205,000	
Asphalt Patching	m2	0.0	3,819	1,377	0	0	0	
Surface Dressing (Single)	m2	4000.0	605	595	2,420,000	2,380,000	4,800,000	
Surface Dressing (Double)	m2	0.0	757	936	0	0	0	
Earth Drain	m	0.0	937	119	0	0	0	
Earth Drain in Swamp (by machine)	m3	0.0	1,210	474	0	0	0	
Pipe Culvert Ø80cm	m	0.0	44,708	43,411	0	0	0	
Masonry Culvert (80x80cm)	m	0.0	62,536	37,886	0	0	0	
Retaining Wall and Wing Wall (Timber)	m2	0.0	10,216	246	0	0	0	
Retaining Wall and Wing Wall (Masonry)	m3	0.0	46,225	11,868	0	0	0	
Gabion Protection	m3	0.0	14,482	120	0	0	0	
New Bridge (Timber)	SET	1.0	--	--	0	0	0	
New Bridge (Concrete)	SET	1.0	--	--	0	0	0	
					Sub Total	5,862,788	4,060,836	9,923,624
Overhead (15%)						879,418	609,125	1,488,543
					TOTAL COST	6,742,206	4,669,961	11,412,167

Manual routine maintenance of road	Km	1.0	153,768	7,248	153,768	7,248	161,016
Routine maintenance of asphalt road	Km	1.0	381,900	137,700	381,900	137,700	519,600
			Sub Total		535,668	144,948	680,616
Maintenance of Timber Bridge (New)	m2	0.0	7,240	1,176	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.0	1,794	2,790	0	0	0
Maintenance of Timber Bridge (Exist)	m2	0.0	7,494	2,432	0	0	0
Maintenance of Concrete Bridge (Exist)	m2	0.0	4,232	2,402	0	0	0

Earthwork & Pavement Unit Cost	(Rp/Km)	:	11,412,168
Timber Bridge Unit Cost	(Rp/m2)	:	
Concrete Bridge Unit Cost	(Rp/m2)	:	
Survived Value	(Rp)	:	1,104,476
Maintenance Rate without Bridge	(%)	:	5.96
New Bridge Cost Rate	(%)	:	

PRDV : KALIMANTAN SELATAN KAB : HULU SUNGAI UTARA

LINK NO : 3 (IIIB-1) LENGTH : 1 Km

UPGRADE : 9.0m road bed, 4.0m road with surface Dressing (1)

(Rp)

ITEM	UNITY	QUANTITY	<<< UNIT COST >>>		<<<<< COST >>>>>		TOTAL	
			LOCAL	FOREIGN	LOCAL	FOREIGN		
Site Clearance in Light Bush	m2	0.0	164	91	0	0	0	
Subgrade Preparation	m2	0.0	21	11	0	0	0	
Normal Fill	m3	0.0	1,698	863	0	0	0	
Fill in Swamp	m3	0.0	2,537	1,052	0	0	0	
Normal Excavation to Spoil	m3	0.0	995	522	0	0	0	
Sub Base Course	m3	222.0	3,221	1,347	715,062	299,034	1,014,096	
Base Course	m3	280.0	4,405	2,299	1,233,400	643,720	1,877,120	
Shoulder	m2	5000.0	295	146	1,475,000	730,000	2,205,000	
Asphalt Patching	m2	0.0	3,819	1,377	0	0	0	
Surface Dressing (Single)	m2	4000.0	605	595	2,420,000	2,380,000	4,800,000	
Surface Dressing (Double)	m2	0.0	757	936	0	0	0	
Earth Drain	m	0.0	937	119	0	0	0	
Earth Drain in Swamp (by machine)	m3	0.0	1,210	474	0	0	0	
Pipe Culvert 80cm	m	0.0	44,708	43,411	0	0	0	
Masonry Culvert 180x80cm	m	0.0	62,536	37,886	0	0	0	
Retaining Wall and Wing Wall (Timber)	m2	0.0	10,216	246	0	0	0	
Retaining Wall and Wing Wall (Masonry)	m3	0.0	46,225	11,868	0	0	0	
Babion Protection	m3	0.0	14,482	120	0	0	0	
New Bridge (Timber)	SET	1.0	--	--	0	0	0	
New Bridge (Concrete)	SET	1.0	--	--	0	0	0	
					Sub Total	5,843,462	4,052,754	9,896,216
Overhead (15%)						876,519	607,913	1,484,432
					TOTAL COST	6,719,981	4,660,667	11,380,648

Manual routine maintenance of road	Km	1.0	153,768	7,248	153,768	7,248	161,016
Routine maintenance of asphalt road	Km	1.0	381,900	137,700	381,900	137,700	519,600
			Sub Total		535,668	144,948	680,616
Maintenance of Timber Bridge (New)	m2	0.0	7,240	1,176	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.0	1,794	2,790	0	0	0
Maintenance of Timber Bridge (Exist)	m2	0.0	7,494	2,432	0	0	0
Maintenance of Concrete Bridge (Exist)	m2	0.0	4,232	2,402	0	0	0

Earthwork & Pavement Unit Cost	(Rp/Km)	:	11,380,648
Timber Bridge Unit Cost	(Rp/m2)	:	
Concrete Bridge Unit Cost	(Rp/m2)	:	
Survived Value	(Rp)	:	1,085,291
Maintenance Rate without Bridge	(%)	:	5.98
New Bridge Cost Rate	(%)	:	

PROV : KALIMANTAN SELATAN KAB : HULU SUNGAI UTARA

LINK NO : 11 (IIIA) LENGTH : 1 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 ²	0.0	164	91	0	0	0
Subgrade Preparation	m ²	0.0	21	11	0	0	0
Normal Fill	m ³	0.0	1,698	863	0	0	0
Fill in Swamp	m ³	0.0	2,537	1,052	0	0	0
Normal Excavation to Spoil	m ³	0.0	995	522	0	0	0
Sub Base Course	m ³	0.0	3,221	1,347	0	0	0
Base Course	m ³	0.0	4,405	2,299	0	0	0
Shoulder	m ²	2000.0	295	146	590,000	292,000	882,000
Asphalt Patching	m ²	110.0	3,819	1,377	420,090	151,470	571,560
Surface Dressing (Single)	m ²	4000.0	605	595	2,420,000	2,380,000	4,800,000
Surface Dressing (Double)	m ²	0.0	757	936	0	0	0
Earth Drain	m	0.0	937	119	0	0	0
Earth Drain in Swamp (by machine)	m ³	0.0	1,210	474	0	0	0
Pipe Culvert Ø80cm	m	0.0	44,708	43,411	0	0	0
Masonry Culvert (80x80cm)	m	0.0	62,536	37,886	0	0	0
Retaining Wall and Wing Wall (Timber)	m ²	0.0	10,216	246	0	0	0
Retaining Wall and Wing Wall (Masonry)	m ³	0.0	46,225	11,868	0	0	0
Gabion Protection	m ³	0.0	14,482	120	0	0	0
New Bridge (Timber)	SET	1.0	--	--	0	0	0
New Bridge (Concrete)	SET	1.0	--	--	0	0	0
			Sub Total		3,430,090	2,823,470	6,253,560
Overhead (15%)					514,513	423,520	938,033
			TOTAL COST		3,944,603	3,246,990	7,191,593

Manual routine maintenance of road	Km	1.0	153,768	7,248	153,768	7,248	161,016
Routine maintenance of asphalt road	Km	1.0	381,900	137,700	381,900	137,700	519,600
			Sub Total		535,668	144,948	680,616
Maintenance of Timber Bridge (New)	m ²	0.0	7,240	1,176	0	0	0
Maintenance of Concrete Bridge (New)	m ²	0.0	1,794	2,790	0	0	0
Maintenance of Timber Bridge (Exist)	m ²	0.0	7,494	2,432	0	0	0
Maintenance of Concrete Bridge (Exist)	m ²	0.0	4,232	2,402	0	0	0

Earthwork & Pavement	Unit Cost	(Rp/Km)	:	7,191,594
Timber Bridge	Unit Cost	(Rp/m ²)	:	
Concrete Bridge	Unit Cost	(Rp/m ²)	:	
Survived Value	(Rp)	:		0
Maintenance Rate without Bridge	(%)	:		9.46
New Bridge Cost Rate	(%)	:		

PROV : KALIMANTAN SELATAN KAB : HULU SUNGAI UTARA

LINK NO : 12 (IIIA) LENGTH : 1 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 ²	0.0	164	91	0	0	0	
Subgrade Preparation	m ²	0.0	21	11	0	0	0	
Normal Fill	m ³	0.0	1,698	863	0	0	0	
Fill in Swamp	m ³	0.0	2,537	1,052	0	0	0	
Normal Excavation to Spoil	m ³	0.0	995	522	0	0	0	
Sub Base Course	m ³	0.0	3,221	1,347	0	0	0	
Base Course	m ³	0.0	4,405	2,299	0	0	0	
Shoulder	m ²	2000.0	295	146	590,000	292,000	882,000	
Asphalt Patching	m ²	125.0	3,819	1,377	477,375	172,125	649,500	
Surface Dressing (Single)	m ²	4000.0	605	595	2,420,000	2,380,000	4,800,000	
Surface Dressing (Double)	m ²	0.0	757	936	0	0	0	
Earth Drain	m	0.0	937	119	0	0	0	
Earth Drain in Swamp (by machine)	m ³	0.0	1,210	474	0	0	0	
Pipe Culvert D80cm	m	0.0	44,708	43,411	0	0	0	
Masonry Culvert (80x80cm)	m	0.0	62,536	37,896	0	0	0	
Retaining Wall and Wing Wall (Timber)	m ²	0.0	10,216	246	0	0	0	
Retaining Wall and Wing Wall (Masonry)	m ³	0.0	46,225	11,868	0	0	0	
Gabion Protection	m ³	0.0	14,482	120	0	0	0	
New Bridge (Timber)	SET	1.0	--	--	0	0	0	
New Bridge (Concrete)	SET	1.0	--	--	0	0	0	
					Sub Total	3,487,375	2,844,125	6,331,500
Overhead (15%)						523,106	426,618	949,724
					TOTAL COST	4,010,481	3,270,743	7,281,224

Manual routine maintenance of road	Km	1.0	153,768	7,248	153,768	7,248	161,016
Routine maintenance of asphalt road	Km	1.0	381,900	137,700	381,900	137,700	519,600
			Sub Total		535,668	144,948	680,616
Maintenance of Timber Bridge (New)	m ²	0.0	7,240	1,176	0	0	0
Maintenance of Concrete Bridge (New)	m ²	0.0	1,794	2,790	0	0	0
Maintenance of Timber Bridge (Exist)	m ²	24.0	7,494	2,432	179,856	58,368	238,224
Maintenance of Concrete Bridge (Exist)	m ²	0.0	4,232	2,402	0	0	0

Earthwork & Pavement Unit Cost (Rp/Km)	:	7,281,225
Timber Bridge Unit Cost (Rp/m ²)	:	
Concrete Bridge Unit Cost (Rp/m ²)	:	
Survived Value (Rp)	:	0
Maintenance Rate without Bridge (X)	:	9.35
New Bridge Cost Rate (X)	:	

PROV : KALIMANTAN SELATAN KAB : HULU SUNGAI UTARA
 LINK NO : 13 (IIIB-1) LENGTH : 1 Km
 UPGRADE : 6.0m 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	m ²	0.0	184	91	0	0	0
Subgrade Preparation	m ²	0.0	21	11	0	0	0
Normal Fill	m ³	0.0	1,698	863	0	0	0
Fill in Swamp	m ³	0.0	2,537	1,052	0	0	0
Normal Excavation to Spoil	m ³	0.0	995	522	0	0	0
Sub Base Course	m ³	188.0	3,221	1,347	605,548	253,236	858,784
Base Course	m ³	280.0	4,405	2,299	1,233,400	613,720	1,877,120
Shoulder	m ²	2000.0	295	146	590,000	292,000	882,000
Asphalt Patching	m ²	0.0	3,819	1,377	0	0	0
Surface Dressing (Single)	m ²	4000.0	605	595	2,420,000	2,380,000	4,800,000
Surface Dressing (Double)	m ²	0.0	757	936	0	0	0
Earth Drain	m	0.0	937	119	0	0	0
Earth Drain in Swamp (by machine)	m ³	0.0	1,210	474	0	0	0
Pipe Culvert Ø80cm	m	0.0	44,708	43,411	0	0	0
Masonry Culvert (80x80cm)	m	0.0	62,536	37,886	0	0	0
Retaining Wall and Wing Wall (Timber)	m ²	0.0	10,216	246	0	0	0
Retaining Wall and Wing Wall (Masonry)	m ³	0.0	46,225	11,868	0	0	0
Gabion Protection	m ³	0.0	14,482	120	0	0	0
New Bridge (Timber)	SET	1.0	--	--	0	0	0
New Bridge (Concrete)	SET	1.0	--	--	0	0	0
			Sub Total		4,848,948	3,568,956	8,417,904
Overhead (15%)					727,342	535,343	1,262,685
			TOTAL COST		5,576,290	4,104,299	9,680,589

Manual routine maintenance of road	Km	1.0	153,768	7,248	153,768	7,248	161,016
Routine maintenance of asphalt road	Km	1.0	381,900	137,700	381,900	137,700	519,600
			Sub Total		535,668	144,948	680,616
Maintenance of Timber Bridge (New)	m ²	0.0	7,240	1,176	0	0	0
Maintenance of Concrete Bridge (New)	m ²	0.0	1,794	2,790	0	0	0
Maintenance of Timber Bridge (Exist)	m ²	0.0	7,494	2,432	0	0	0
Maintenance of Concrete Bridge (Exist)	m ²	0.0	4,232	2,402	0	0	0

Earthwork & Pavement Unit Cost (Rp/Km)	:	9,680,590
Timber Bridge Unit Cost (Rp/m ²)	:	
Concrete Bridge Unit Cost (Rp/m ²)	:	
Survived Value (Rp)	:	976,572
Maintenance Rate without Bridge (%)	:	7.03
New Bridge Cost Rate (%)	:	

PROV : KALIMANTAN SELATAN KAB : HULU SUNGAI UTARA
 LINK NO : 20 (IIIB-2) LENGTH : 1 Km
 UPGRADE : 6.0m road bed, 4.0m road with surface Base Course

I T E M	UNIT	QUANTITY	<<< UNIT COST >>>		<<<<< COST >>>>>		TOTAL
			LOCAL	FOREIGN	LOCAL	FOREIGN	
Site Clearance in Light Bush	m2	0.0	164	91	0	0	0
Subgrade Preparation	m2	0.0	21	11	0	0	0
Normal Fill	m3	0.0	1,898	863	0	0	0
Fill in Swamp	m3	0.0	2,537	1,052	0	0	0
Normal Excavation to Spot	m3	0.0	995	522	0	0	0
Sub Base Course	m3	0.0	3,271	1,347	0	0	0
Base Course	m3	0.0	4,105	2,299	0	0	0
Shoulder	m2	2000.0	295	146	590,000	292,000	882,000
Asphalt Patching	m2	110.0	3,819	1,377	420,090	151,470	571,560
Surface Dressing (Single)	m2	0.0	605	595	0	0	0
Surface Dressing (Double)	m2	0.0	757	936	0	0	0
Earth Drain	m	0.0	937	119	0	0	0
Earth Drain in Swamp (by machine)	m3	0.0	1,210	474	0	0	0
Pipe Culvert 800cm	m	0.0	44,708	43,411	0	0	0
Masonry Culvert (80x80cm)	m	0.0	62,536	37,886	0	0	0
Retaining Wall and Wing Wall (Timber)	m2	0.0	10,216	246	0	0	0
Retaining Wall and Wing Wall (Masonry)	m3	0.0	16,225	11,868	0	0	0
Rapion Protection	m3	0.0	14,482	120	0	0	0
New Bridge (Timber)	SET	1.0	--	--	0	0	0
New Bridge (Concrete)	SET	1.0	--	--	0	0	0
Sub Total					1,010,090	443,470	1,453,560
Overhead (15%)					151,513	66,520	218,033
TOTAL COST					1,161,603	509,990	1,671,593

Manual routine maintenance of road	Km	1.0	153,768	7,218	153,768	7,218	161,016
Routine maintenance of gravel road	Km	1.0	192,232	88,047	192,232	88,047	280,279
Sub Total					346,000	95,295	441,295
Maintenance of Timber Bridge (New)	m2	0.0	7,240	1,176	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.0	1,794	2,790	0	0	0
Maintenance of Timber Bridge (Exist)	m2	0.0	7,494	2,432	0	0	0
Maintenance of Concrete Bridge (Exist)	m2	0.0	4,232	2,402	0	0	0

Earthwork & Pavement	Unit Cost	(Rp/Km)	:	1,671,594
Timber Bridge	Unit Cost	(Rp/m2)	:	
Concrete Bridge	Unit Cost	(Rp/m2)	:	
Survived Value		(Rp)	:	0
Maintenance Rate without Bridge		(%)	:	26.40
New Bridge Cost Rate		(%)	:	

PROV : KALIMANTAN SELATAN KAB : HULU SUNGAI UTARA
 LINK NO : 19 (IIIB-2) LENGTH : 2 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	0.0	164	91	0	0	0
Subgrade Preparation	m2	0.0	21	11	0	0	0
Normal Fill	m3	0.0	1,698	863	0	0	0
Fill in Swamp	m3	0.0	2,537	1,052	0	0	0
Normal Excavation to Spoil	m3	0.0	995	522	0	0	0
Sub Base Course	m3	0.0	3,221	1,347	0	0	0
Base Course	m3	0.0	4,405	2,299	0	0	0
Shoulder	m2	4000.0	295	146	1,180,000	584,000	1,764,000
Asphalt Patching	m2	383.0	3,819	1,377	1,462,677	527,391	1,990,068
Surface Dressing (Single)	m2	0.0	605	595	0	0	0
Surface Dressing (Double)	m2	0.0	757	936	0	0	0
Earth Drain	m	0.0	937	119	0	0	0
Earth Drain in Swamp (by machine)	m3	0.0	1,210	474	0	0	0
Pipe Culvert 800cm	m	0.0	44,708	43,411	0	0	0
Masonry Culvert (80x80cm)	m	0.0	62,536	37,888	0	0	0
Retaining Wall and Wing Wall (Timber)	m2	0.0	10,216	246	0	0	0
Retaining Wall and Wing Wall (Masonry)	m3	0.0	46,225	11,868	0	0	0
Gabion Protection	m3	0.0	14,482	120	0	0	0
New Bridge (Timber)	SET	1.0	--	--	0	0	0
New Bridge (Concrete)	SET	1.0	--	--	0	0	0
				Sub Total	2,642,677	1,111,391	3,754,068
Overhead (15%)					396,401	166,708	563,109
				TOTAL COST	3,039,078	1,278,099	4,317,177

Manual routine maintenance of road	Km	2.0	153,768	7,248	307,536	14,496	322,032
Routine maintenance of gravel road	Km	2.0	192,232	88,047	384,464	176,094	560,558
				Sub Total	692,000	190,590	882,590
Maintenance of Timber Bridge (New)	m2	0.0	7,240	1,176	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.0	1,794	2,790	0	0	0
Maintenance of Timber Bridge (Exist)	m2	0.0	7,494	2,432	0	0	0
Maintenance of Concrete Bridge (Exist)	m2	0.0	4,232	2,402	0	0	0

Earthwork & Pavement Unit Cost (Rp/Km)	:	2,158,589
Timber Bridge Unit Cost (Rp/m2)	:	
Concrete Bridge Unit Cost (Rp/m2)	:	
Survived Value (Rp)	:	0
Maintenance Rate without Bridge (%)	:	20.44
New Bridge Cost Rate (%)	:	

PROV : KALIMANTAN SELATAN KAB : HULU SUNGAI UTARA
 LINK NO : 23 (IIIA) LENGTH : 2 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 ²	0.0	164	91	0	0	0
Subgrade Preparation	m ²	0.0	21	11	0	0	0
Normal Fill	m ³	0.0	1,698	863	0	0	0
Fill in Swamp	m ³	0.0	2,537	1,052	0	0	0
Normal Excavation to Spoil	m ³	0.0	995	522	0	0	0
Sub Base Course	m ³	0.0	3,221	1,347	0	0	0
Base Course	m ³	0.0	4,405	2,299	0	0	0
Shoulder	m ²	4000.0	295	146	1,180,000	584,000	1,764,000
Asphalt Patching	m ²	250.0	3,819	1,377	954,750	344,250	1,299,000
Surface Dressing (Single)	m ²	8000.0	605	595	4,840,000	4,760,000	9,600,000
Surface Dressing (Double)	m ²	0.0	757	936	0	0	0
Earth Drain	m	0.0	937	119	0	0	0
Earth Drain in Swamp (by machine)	m ³	0.0	1,210	474	0	0	0
Pipe Culvert Ø80cm	m	0.0	44,708	43,411	0	0	0
Masonry Culvert (80x80cm)	m	0.0	62,536	37,886	0	0	0
Retaining Wall and Wing Wall (Timber)	m ²	0.0	10,216	246	0	0	0
Retaining Wall and Wing Wall (Masonry)	m ³	0.0	46,225	11,868	0	0	0
Gabion Protection	m ³	0.0	14,482	120	0	0	0
New Bridge (Timber)	SET	1.0	--	--	0	0	0
New Bridge (Concrete)	SET	1.0	--	--	0	0	0
				Sub Total	6,974,750	5,688,250	12,663,000
Overhead (15%)					1,046,212	853,237	1,899,449
				TOTAL COST	8,020,962	6,541,487	14,562,449

Manual routine maintenance of road	Ka	2.0	153,768	7,248	307,536	14,496	322,032
Routine maintenance of asphalt road	Ka	2.0	381,900	137,700	763,800	275,400	1,039,200
				Sub Total	1,071,336	289,896	1,361,232
Maintenance of Timber Bridge (New)	m ²	0.0	7,240	1,176	0	0	0
Maintenance of Concrete Bridge (New)	m ²	0.0	1,794	2,790	0	0	0
Maintenance of Timber Bridge (Exist)	m ²	0.0	7,494	2,432	0	0	0
Maintenance of Concrete Bridge (Exist)	m ²	0.0	4,232	2,402	0	0	0

Earthwork & Pavement	Unit Cost (Rp/Ka)	:	7,281,225
Timber Bridge	Unit Cost (Rp/m ²)	:	
Concrete Bridge	Unit Cost (Rp/m ²)	:	
Survived Value	(Rp)	:	0
Maintenance Rate without Bridge	(%)	:	9.35
New Bridge Cost Rate	(%)	:	

PROV : KALIMANTAN SELATAN KAB : HULU SUNGAI UTARA

LINK NO : 30 (IIC) LENGTH : 3 Km

UPGRADE : 7.5m road bed, 4.0m road with surface Subbase Course (Rp)

I T E M	UNIT	QUANTITY	<<< UNIT COST >>>		<<<<< COST >>>>>		>>>>> TOTAL
			LOCAL	FOREIGN	LOCAL	FOREIGN	
Site Clearance in Light Bush	m ²	0.0	164	91	0	0	0
Subgrade Preparation	m ²	22500.0	21	11	472,500	247,500	720,000
Normal Fill	m ³	0.0	1,698	863	0	0	0
Fill in Swamp	m ³	3712.5	2,537	1,052	9,418,612	3,905,550	13,324,162
Normal Excavation to Spoil	m ³	441.0	995	522	438,795	230,202	668,997
Sub Base Course	m ³	1920.0	3,221	1,347	6,184,320	2,588,240	8,770,560
Base Course	m ³	0.0	4,405	2,299	0	0	0
Shoulder	m ²	10500.0	295	146	3,097,500	1,533,000	4,630,500
Asphalt Patching	m ²	0.0	3,819	1,377	0	0	0
Surface Dressing (Single)	m ²	0.0	605	595	0	0	0
Surface Dressing (Double)	m ²	0.0	757	936	0	0	0
Earth Drain	m	0.0	937	119	0	0	0
Earth Drain in Swamp (by machine)	m ³	18500.0	1,210	474	19,965,000	7,821,000	27,786,000
Pipe Culvert Ø80cm	m	0.0	44,708	43,411	0	0	0
Masonry Culvert (80x80cm)	m	0.0	62,536	37,888	0	0	0
Retaining Wall and Wing Wall (Timber)	m ²	0.0	10,216	246	0	0	0
Retaining Wall and Wing Wall (Masonry)	m ³	0.0	46,225	11,868	0	0	0
Gabion Protection	m ³	0.0	14,482	120	0	0	0
New Bridge (Timber)	SET	1.0	--	--	0	0	0
New Bridge (Concrete)	SET	1.0	--	--	0	0	0
			Sub Total		39,576,727	16,323,492	55,900,219
Overhead (15%)					5,936,509	2,448,523	8,385,032
			TOTAL COST		45,513,236	18,772,015	64,285,251

Manual routine maintenance of road	Km	3.0	153,768	7,240	461,304	21,744	483,048
Routine maintenance of gravel road	Km	3.0	192,232	88,047	576,696	264,141	840,837
			Sub Total		1,038,000	285,885	1,323,885
Maintenance of Timber Bridge (New)	m ²	0.0	7,240	1,176	0	0	0
Maintenance of Concrete Bridge (New)	m ²	0.0	1,794	2,790	0	0	0
Maintenance of Timber Bridge (Exist)	m ²	0.0	7,494	2,432	0	0	0
Maintenance of Concrete Bridge (Exist)	m ²	0.0	4,232	2,402	0	0	0

Earthwork & Pavement	Unit Cost (Rp/Km)	:	21,428,417
Timber Bridge	Unit Cost (Rp/m ²)	:	
Concrete Bridge	Unit Cost (Rp/m ²)	:	
Survived Value	(Rp)	:	3,508,224
Maintenance Rate without Bridge	(%)	:	2.06
New Bridge Cost Rate	(%)	:	

PROV : KALIMANTAN SELATAN KAB : HULU SUNGAI UTARA

LINK NO : 31 (IIIC) LENGTH : 2 Km

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

(Rp)

I T E M	UNIT	QUANTITY	<<< UNIT COST >>>		<<<<< COST >>>>>		TOTAL
			LOCAL	FOREIGN	LOCAL	FOREIGN	
Site Clearance In Light Bush	m2	0.0	164	91	0	0	0
Subgrade Preparation	m2	12000.0	21	11	252,000	132,000	384,000
Normal Fill	m3	0.0	1,698	863	0	0	0
Fill in Swamp	m3	2700.0	2,537	1,052	6,849,900	2,840,400	9,690,300
Normal Excavation to Spoil	m3	230.0	995	522	228,850	120,060	348,910
Sub Base Course	m3	1280.0	3,221	1,347	4,122,880	1,724,160	5,847,040
Base Course	m3	0.0	4,405	2,299	0	0	0
Shoulder	m2	4000.0	295	146	1,180,000	584,000	1,764,000
Asphalt Patching	m2	0.0	3,019	1,377	0	0	0
Surface Dressing (Single)	m2	0.0	605	595	0	0	0
Surface Dressing (Double)	m2	0.0	757	936	0	0	0
Earth Drain	m	0.0	937	119	0	0	0
Earth Drain in Swamp (by machine)	m3	12000.0	1,210	474	14,520,000	5,688,000	20,208,000
Pipe Culvert 880cm	m	0.0	44,708	43,411	0	0	0
Masonry Culvert (80x80cm)	m	0.0	62,536	37,886	0	0	0
Retaining Wall and Wing Wall (Timber)	m2	0.0	10,216	246	0	0	0
Retaining Wall and Wing Wall (Masonry)	m3	0.0	46,225	11,868	0	0	0
Babion Protection	m3	0.0	14,482	120	0	0	0
New Bridge (Timber)	SET	1.0	--	--	0	0	0
New Bridge (Concrete)	SET	1.0	--	--	0	0	0
Sub Total					27,153,630	11,088,620	38,242,250
Overhead (15%)					4,073,044	1,663,293	5,736,337
TOTAL COST					31,226,674	12,751,913	43,978,587

Manual routine maintenance of road	Km	2.0	153,768	7,248	307,536	14,496	322,032
Routine maintenance of gravel road	Km	2.0	192,232	88,047	384,464	176,094	560,558
Sub Total					692,000	190,590	882,590
Maintenance of Timber Bridge (New)	m2	0.0	7,240	1,176	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.0	1,794	2,790	0	0	0
Maintenance of Timber Bridge (Exist)	m2	28.0	7,494	2,432	209,832	68,096	277,928
Maintenance of Concrete Bridge (Exist)	m2	0.0	4,232	2,402	0	0	0

Earthwork & Pavement Unit Cost (Rp/Km) :					21,989,294		
Timber Bridge Unit Cost (Rp/m2) :							
Concrete Bridge Unit Cost (Rp/m2) :							
Survived Value (Rp) :					2,338,816		
Maintenance Rate without Bridge (Z) :					2.01		
New Bridge Cost Rate (Z) :							

PROV : KALIMANTAN SELATAN KAB : HULU SUNGAI UTARA
 LINK NO : 35 (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	m ²	0.0	164	91	0	0	0	
Subgrade Preparation	m ²	0.0	21	11	0	0	0	
Normal Fill	m ³	0.0	1,698	863	0	0	0	
Fill in Swamp	m ³	0.0	2,537	1,052	0	0	0	
Normal Excavation to Spoil	m ³	0.0	995	522	0	0	0	
Sub Base Course	m ³	0.0	3,221	1,347	0	0	0	
Base Course	m ³	0.0	4,405	2,299	0	0	0	
Shoulder	m ²	14000.0	295	146	4,130,000	2,044,000	6,174,000	
Asphalt Patching	m ²	1069.0	3,819	1,377	4,082,511	1,472,013	5,554,524	
Surface Dressing (Single)	m ²	28000.0	605	595	16,940,000	16,660,000	33,600,000	
Surface Dressing (Double)	m ²	0.0	757	936	0	0	0	
Earth Drain	m	0.0	937	119	0	0	0	
Earth Drain in Swamp (by machine)	m ³	0.0	1,210	474	0	0	0	
Pipe Culvert Ø80cm	m	0.0	44,708	43,411	0	0	0	
Masonry Culvert (80x80cm)	m	0.0	62,536	37,886	0	0	0	
Retaining Wall and Wing Wall (Timber)	m ²	0.0	10,216	246	0	0	0	
Retaining Wall and Wing Wall (Masonry)	m ³	0.0	46,225	11,868	0	0	0	
Gabion Protection	m ³	0.0	14,482	120	0	0	0	
New Bridge (Timber)	SET	1.0	--	--	0	0	0	
New Bridge (Concrete)	SET	1.0	--	--	0	0	0	
					Sub Total	25,152,511	20,176,013	45,328,524
Overhead (15%)						3,772,876	3,026,401	6,799,277
					TOTAL COST	28,925,387	23,202,414	52,127,801

Manual routine maintenance of road	Km	7.0	153,768	7,248	1,076,376	50,736	1,127,112
Routine maintenance of asphalt road	Km	7.0	381,900	137,700	2,673,300	963,900	3,637,200
				Sub Total	3,749,676	1,014,636	4,764,312
Maintenance of Timber Bridge (New)	m ²	0.0	7,240	1,176	0	0	0
Maintenance of Concrete Bridge (New)	m ²	0.0	1,794	2,790	0	0	0
Maintenance of Timber Bridge (Exist)	m ²	35.0	7,494	2,432	262,290	85,120	347,410
Maintenance of Concrete Bridge (Exist)	m ²	0.0	4,232	2,402	0	0	0

Earthwork & Pavement	Unit Cost	(Rp/Km)	:	7,446,829
Timber Bridge	Unit Cost	(Rp/m ²)	:	
Concrete Bridge	Unit Cost	(Rp/m ²)	:	
Survived Value		(Rp)	:	0
Maintenance Rate without Bridge		(%)	:	9.14
New Bridge Cost Rate		(%)	:	

PROV : KALIMANTAN SELATAN KAB : HULU SUNGAI UTARA
 LINK NO : 55 (IIB-2) LENGTH : 4 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 ²	0.0	164	91	0	0	0	
Subgrade Preparation	m ²	0.0	21	11	0	0	0	
Normal Fill	m ³	0.0	1,878	863	0	0	0	
Fill in Swamp	m ³	0.0	2,537	1,052	0	0	0	
Normal Excavation to Spoil	m ³	0.0	995	522	0	0	0	
Sub Base Course	m ³	0.0	3,221	1,347	0	0	0	
Base Course	m ³	0.0	4,405	2,299	0	0	0	
Shoulder	m ²	8000.0	295	146	2,360,000	1,168,000	3,528,000	
Asphalt Patching	m ²	725.0	3,819	1,377	2,768,775	998,325	3,767,100	
Surface Dressing (Single)	m ²	0.0	605	595	0	0	0	
Surface Dressing (Double)	m ²	0.0	757	936	0	0	0	
Earth Drain	m	0.0	937	119	0	0	0	
Earth Drain in Swamp (by machine)	m ³	0.0	1,210	474	0	0	0	
Pipe Culvert 880cm	m	0.0	44,708	43,411	0	0	0	
Masonry Culvert (80x80cm)	m	0.0	62,536	37,886	0	0	0	
Retaining Wall and Wing Wall (Timber)	m ²	0.0	10,216	246	0	0	0	
Retaining Wall and Wing Wall (Masonry)	m ³	0.0	46,225	11,868	0	0	0	
Gabion Protection	m ³	0.0	14,482	120	0	0	0	
New Bridge (Timber)	SET	1.0	--	--	0	0	0	
New Bridge (Concrete)	SET	1.0	--	--	0	0	0	
					Sub Total	5,128,775	2,166,325	7,295,100
Overhead (15%)						769,316	324,948	1,094,264
					TOTAL COST	5,898,091	2,491,273	8,389,364

Manual routine maintenance of road	Km	4.0	153,768	7,248	615,072	28,992	644,064
Routine maintenance of gravel road	Km	4.0	192,232	88,047	768,928	352,188	1,121,116
			Sub Total		1,384,000	381,180	1,765,180
Maintenance of Timber Bridge (New)	m ²	0.0	7,240	1,176	0	0	0
Maintenance of Concrete Bridge (New)	m ²	0.0	1,794	2,790	0	0	0
Maintenance of Timber Bridge (Exist)	m ²	112.0	7,494	2,432	839,328	272,384	1,111,712
Maintenance of Concrete Bridge (Exist)	m ²	0.0	4,232	2,402	0	0	0

Earthwork & Pavement	Unit Cost	(Rp/Km)	:	2,097,341
Timber Bridge	Unit Cost	(Rp/m ²)	:	
Concrete Bridge	Unit Cost	(Rp/m ²)	:	
Survived Value		(Rp)	:	0
Maintenance Rate without Bridge		(%)	:	21.04
New Bridge Cost Rate		(%)	:	

PROV : KALIMANTAN SELATAN KAB : HULU SUNGAI UTARA
 LINK NO : 58 (IIC) LENGTH : 7 Km
 UPGRADE : 6.0m road bed, 4.0m road with surface Subbase Course
 (Rp)

ITEM	UNIT	QUANTITY	<<< UNIT COST >>>		<<<<< COST >>>>>		TOTAL
			LOCAL	FOREIGN	LOCAL	FOREIGN	
Site Clearance in Light Bush	m ²	0.0	164	91	0	0	0
Subgrade Preparation	m ²	36000.0	21	11	756,000	396,000	1,152,000
Normal Fill	m ³	0.0	1,698	863	0	0	0
Fill in Swamp	m ³	0.0	2,537	1,052	0	0	0
Normal Excavation to Spoil	m ³	760.0	995	522	756,200	396,720	1,152,920
Sub Base Course	m ³	3882.0	3,221	1,347	12,503,922	5,229,054	17,732,976
Base Course	m ³	240.0	4,405	2,299	1,057,200	551,760	1,608,960
Shoulder	m ²	14000.0	295	146	4,130,000	2,044,000	6,174,000
Asphalt Patching	m ²	0.0	3,819	1,377	0	0	0
Surface Dressing (Single)	m ²	0.0	605	595	0	0	0
Surface Dressing (Double)	m ²	0.0	757	936	0	0	0
Earth Drain	m	0.0	937	119	0	0	0
Earth Drain in Swamp (by machine)	m ³	0.0	1,210	474	0	0	0
Pipe Culvert 80x80cm	m	0.0	44,708	43,411	0	0	0
Masonry Culvert (80x80cm)	m	0.0	62,536	37,886	0	0	0
Retaining Wall and Wing Wall (Timber)	m ²	0.0	10,216	246	0	0	0
Retaining Wall and Wing Wall (Masonry)	m ³	0.0	46,225	11,868	0	0	0
Gabion Protection	m ³	0.0	14,482	120	0	0	0
New Bridge (Timber)	SET	1.0	--	--	0	0	0
New Bridge (Concrete)	SET	1.0	--	--	0	0	0
					19,203,322	8,617,534	27,820,856
Overhead (15%)					2,880,498	1,292,630	4,173,128
					TOTAL COST	9,910,164	31,993,984

Manual routine maintenance of road	Ka	7.0	153,768	7,248	1,076,376	50,736	1,127,112
Routine maintenance of gravel road	Km	7.0	192,232	88,047	1,345,624	616,329	1,961,953
			Sub Total		2,422,000	667,065	3,089,065
Maintenance of Timber Bridge (New)	m ²	0.0	7,240	1,176	0	0	0
Maintenance of Concrete Bridge (New)	m ²	0.0	1,794	2,790	0	0	0
Maintenance of Timber Bridge (Exist)	m ²	0.0	7,494	2,432	0	0	0
Maintenance of Concrete Bridge (Exist)	m ²	0.0	4,232	2,402	0	0	0

Earthwork & Pavement Unit Cost (Rp/Ka)	:	4,370,569
Timber Bridge Unit Cost (Rp/m ²)	:	
Concrete Bridge Unit Cost (Rp/m ²)	:	
Survived Value (Rp)	:	7,093,190
Maintenance Rate without Bridge (%)	:	9.66
New Bridge Cost Rate (%)	:	

PROV : KALIMANTAN SELATAN KAB : HULLU SUNGAI UTARA

LINK NO : 59 (IIIC) LENGTH : 8 Km

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

(Rp)

ITEM	UNIT	QUANTITY	<<< UNIT COST >>>		<<<<< COST >>>>>		TOTAL	
			LOCAL	FOREIGN	LOCAL	FOREIGN		
Site Clearance in Light Bush	m ²	0.0	164	91	0	0	0	
Subgrade Preparation	m ²	48000.0	21	11	1,008,000	528,000	1,536,000	
Normal Fill	m ³	0.0	1,698	863	0	0	0	
Fill in Swamp	m ³	0.0	2,537	1,052	0	0	0	
Normal Excavation to Spoil	m ³	1068.0	995	522	1,062,660	557,496	1,620,156	
Sub Base Course	m ³	5120.0	3,221	1,347	16,491,520	6,896,640	23,388,160	
Base Course	m ³	0.0	4,405	2,299	0	0	0	
Shoulder	m ²	16000.0	295	146	4,720,000	2,336,000	7,056,000	
Asphalt Patching	m ²	0.0	3,819	1,377	0	0	0	
Surface Dressing (Single)	m ²	0.0	605	595	0	0	0	
Surface Dressing (Double)	m ²	0.0	757	936	0	0	0	
Earth Drain	m	0.0	937	119	0	0	0	
Earth Drain in Swamp (by machine)	m ³	0.0	1,210	474	0	0	0	
Pipe Culvert D80cm	m	0.0	44,708	43,411	0	0	0	
Masonry Culvert (80x80cm)	m	0.0	62,536	37,886	0	0	0	
Retaining Wall and Wing Wall (Timber)	m ²	0.0	10,216	246	0	0	0	
Retaining Wall and Wing Wall (Masonry)	m ³	0.0	46,225	11,868	0	0	0	
Babion Protection	m ³	0.0	14,482	120	0	0	0	
New Bridge (Timber)	SET	1.0	--	--	0	0	0	
New Bridge (Concrete)	SET	1.0	--	--	0	0	0	
					Sub Total	23,282,180	10,318,136	33,600,316
Overhead (15%)						3,492,327	1,547,720	5,040,047
					TOTAL COST	26,774,507	11,865,856	38,640,363

Manual routine maintenance of road	Km	8.0	153,768	7,248	1,230,144	57,984	1,288,128
Routine maintenance of gravel road	Km	8.0	192,232	88,047	1,537,856	704,376	2,242,232
				Sub Total	2,768,000	762,360	3,530,360
Maintenance of Timber Bridge (New)	m ²	0.0	7,240	1,176	0	0	0
Maintenance of Concrete Bridge (New)	m ²	0.0	1,794	2,790	0	0	0
Maintenance of Timber Bridge (Exist)	m ²	14.0	7,494	2,432	104,916	34,048	138,964
Maintenance of Concrete Bridge (Exist)	m ²	0.0	4,232	2,402	0	0	0

Earthwork & Pavement Unit Cost (Rp/Km)	:	4,830,045
Timber Bridge Unit Cost (Rp/m ²)	:	
Concrete Bridge Unit Cost (Rp/m ²)	:	
Survived Value (Rp)	:	9,355,264
Maintenance Rate without Bridge (%)	:	9.14
New Bridge Cost Rate (%)	:	

PROV : KALIMANTAN SELATAN KAB : HULU SUNGAI UTARA
 LINK NO : 60 (IIC) LENGTH : 2 Km
 UPGRADE : 6.0m road bed, 4.0m road with surface Subbase Course
 (Rp)

ITEM	UNIT	QUANTITY	<<< UNIT COST >>>		<<<<< COST >>>>>		>>>>> TOTAL
			LOCAL	FOREIGN	LOCAL	FOREIGN	
Site Clearance in Light Bush	m2	0.0	164	91	0	0	0
Subgrade Preparation	m2	12000.0	21	11	252,000	132,000	384,000
Normal Fill	m3	0.0	1,698	863	0	0	0
Fill in Swamp	m3	0.0	2,537	1,052	0	0	0
Normal Excavation to Spoil	m3	204.0	995	522	202,980	106,488	309,468
Sub Base Course	m3	1280.0	3,221	1,347	4,122,880	1,724,160	5,847,040
Base Course	m3	0.0	4,405	2,299	0	0	0
Shoulder	m2	4000.0	295	146	1,180,000	584,000	1,764,000
Asphalt Patching	m2	0.0	3,819	1,377	0	0	0
Surface Dressing (Single)	m2	0.0	605	595	0	0	0
Surface Dressing (Double)	m2	0.0	757	936	0	0	0
Earth Drain	m	0.0	937	119	0	0	0
Earth Drain in Swamp (by machine)	m3	0.0	1,210	474	0	0	0
Pipe Culvert Ø80cm	m	0.0	44,708	43,411	0	0	0
Masonry Culvert (80x80cm)	m	0.0	62,536	37,886	0	0	0
Retaining Wall and Wing Wall (Timber)	m2	0.0	10,216	246	0	0	0
Retaining Wall and Wing Wall (Masonry)	m3	0.0	46,225	11,868	0	0	0
Gabion Protection	m3	0.0	14,482	120	0	0	0
New Bridge (Timber)	SET	1.0	--	--	0	0	0
New Bridge (Concrete)	SET	1.0	--	--	0	0	0
Sub Total					5,757,860	2,546,648	8,304,508
Overhead (15%)					863,679	381,997	1,245,676
TOTAL COST					6,621,539	2,928,645	9,550,184

Manual routine maintenance of road	Km	2.0	153,768	7,248	307,536	14,496	322,032
Routine maintenance of gravel road	Km	2.0	192,232	88,047	384,464	176,094	560,558
Sub Total					692,000	190,590	882,590
Maintenance of Timber Bridge (New)	m2	0.0	7,240	1,176	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.0	1,794	2,790	0	0	0
Maintenance of Timber Bridge (Exist)	m2	84.0	7,494	2,432	629,496	204,288	833,784
Maintenance of Concrete Bridge (Exist)	m2	0.0	4,232	2,402	0	0	0

Earthwork & Pavement Unit Cost	(Rp/Km)	:	4,775,092
Timber Bridge Unit Cost	(Rp/m2)	:	
Concrete Bridge Unit Cost	(Rp/m2)	:	
Survived Value	(Rp)	:	2,338,816
Maintenance Rate without Bridge	(%)	:	9.24
New Bridge Cost Rate	(%)	:	

PROV : KALIMANTAN SELATAN KAB : HULU SUNGAI UTARA

LINK NO : 63 (IIIB-1) LENGTH : 8 Km

UPGRADE : 6.0m 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	0.0	164	91	0	0	0	
Subgrade Preparation	m2	16200.0	21	11	340,200	178,200	518,400	
Normal Fill	m3	0.0	1,698	863	0	0	0	
Fill in Swamp	m3	7762.5	2,537	1,052	19,693,462	8,166,150	27,859,612	
Normal Excavation to Spoil	m3	0.0	995	522	0	0	0	
Sub Base Course	m3	2905.0	3,221	1,347	9,357,005	3,913,035	13,270,040	
Base Course	m3	2240.0	4,405	2,299	9,867,200	5,149,760	15,016,960	
Shoulder	m2	16000.0	295	146	4,720,000	2,336,000	7,056,000	
Asphalt Patching	m2	0.0	3,819	1,377	0	0	0	
Surface Dressing (Single)	m2	32000.0	605	595	19,360,000	19,040,000	38,400,000	
Surface Dressing (Double)	m2	0.0	757	936	0	0	0	
Earth Drain	m	400.0	937	119	374,800	47,600	422,400	
Earth Drain in Swamp (by machine)	m3	12000.0	1,210	474	14,520,000	5,688,000	20,208,000	
Pipe Culvert 80cm	m	0.0	44,708	43,411	0	0	0	
Masonry Culvert (80x80cm)	m	5.0	62,536	37,886	312,680	189,430	502,110	
Retaining Wall and Wing Wall (Timber)	m2	50.0	10,216	246	510,800	12,300	523,100	
Retaining Wall and Wing Wall (Masonry)	m3	100.0	46,225	11,868	4,622,500	1,186,800	5,809,300	
Gabion Protection	m3	0.0	14,482	120	0	0	0	
New Bridge (Timber)	SET	1.0	--	--	0	0	0	
New Bridge (Concrete)	SET	1.0	--	--	0	0	0	
					Sub Total	83,678,647	45,907,275	129,585,922
Overhead (15%)						12,551,797	6,886,091	19,437,888
					TOTAL COST	96,230,444	52,793,366	149,023,810

Manual routine maintenance of road	Km	8.0	153,768	7,248	1,230,144	57,984	1,288,128
Routine maintenance of asphalt road	Km	8.0	381,900	137,700	3,055,200	1,101,600	4,156,800
			Sub Total		4,285,344	1,159,584	5,444,928
Maintenance of Timber Bridge (New)	m2	0.0	7,240	1,176	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.0	1,794	2,790	0	0	0
Maintenance of Timber Bridge (Exist)	m2	238.0	7,494	2,432	1,783,572	578,816	2,362,388
Maintenance of Concrete Bridge (Exist)	m2	0.0	4,232	2,402	0	0	0

Earthwork & Pavement Unit Cost (Rp/Km)	:	18,627,976
Timber Bridge Unit Cost (Rp/m2)	:	
Concrete Bridge Unit Cost (Rp/m2)	:	
Survived Value (Rp)	:	12,292,420
Maintenance Rate without Bridge (%)	:	3.65
New Bridge Cost Rate (%)	:	

PROV : KALIMANTAN SELATAN KAB : HULU SUNGAI UTARA
 LINK NO : 65 (IIIC) LENGTH : 8 Km
 UPGRADE : 6.0m road bed, 4.0m road with surface Subbase Course
 (Rp)

ITEM	UNIT	QUANTITY	<<< UNIT COST >>>		<<<<< COST >>>>>		TOTAL	
			LOCAL	FOREIGN	LOCAL	FOREIGN		
Site Clearance in Light Bush	m2	0.0	164	91	0	0	0	
Subgrade Preparation	m2	0.0	21	11	0	0	0	
Normal Fill	m3	0.0	1,698	863	0	0	0	
Fill in Swamp	m3	0.0	2,937	1,052	0	0	0	
Normal Excavation to Spoil	m3	0.0	995	522	0	0	0	
Sub Base Course	m3	462.0	3,221	1,347	1,488,102	622,314	2,110,416	
Base Course	m3	1920.0	4,405	2,299	8,457,600	4,414,080	12,871,680	
Shoulder	m2	16000.0	295	146	4,720,000	2,336,000	7,056,000	
Asphalt Patching	m2	0.0	3,819	1,377	0	0	0	
Surface Dressing (Single)	m2	0.0	605	595	0	0	0	
Surface Dressing (Double)	m2	0.0	757	936	0	0	0	
Earth Drain	m	0.0	937	119	0	0	0	
Earth Drain in Swamp (by machine)	m3	0.0	1,210	474	0	0	0	
Pipe Culvert 80cm	m	0.0	44,708	43,411	0	0	0	
Masonry Culvert 180x80cm	m	0.0	62,536	37,886	0	0	0	
Retaining Wall and Wing Wall (Timber)	m2	0.0	10,216	246	0	0	0	
Retaining Wall and Wing Wall (Masonry)	m3	0.0	46,225	11,868	0	0	0	
Gabion Protection	m3	0.0	14,482	120	0	0	0	
New Bridge (Timber)	SET	1.0	--	--	0	0	0	
New Bridge (Concrete)	SET	1.0	--	--	0	0	0	
					14,665,702	7,372,394	22,038,096	
Overhead (15%)					2,199,855	1,105,859	3,305,714	
					TOTAL COST	16,865,557	8,478,253	25,343,810

Manual routine maintenance of road	Ka	8.0	153,768	7,248	1,230,144	57,984	1,288,128
Routine maintenance of gravel road	Ka	8.0	192,232	88,047	1,537,856	704,376	2,242,232
			Sub Total		2,768,000	762,360	3,530,360
Maintenance of Timber Bridge (New)	m2	0.0	7,240	1,176	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.0	1,794	2,790	0	0	0
Maintenance of Timber Bridge (Exist)	m2	126.0	7,494	2,432	944,244	306,432	1,250,676
Maintenance of Concrete Bridge (Exist)	m2	0.0	4,232	2,402	0	0	0

Earthwork & Pavement Unit Cost (Rp/Ka)	:	3,167,976
Timber Bridge Unit Cost (Rp/m2)	:	
Concrete Bridge Unit Cost (Rp/m2)	:	
Survived Value (Rp)	:	844,166
Maintenance Rate without Bridge (%)	:	13.93
New Bridge Cost Rate (%)	:	

PROV : KALIMANTAN SELATAN KAB : HULU SUNGAI UTARA

LINK NO : 66 (IIIA) LENGTH : 15 Km

UPGRADE : 7.0m road bed, 4.5m 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	m ²	2000.0	164	91	328,000	182,000	510,000	
Subgrade Preparation	m ²	6480.0	21	11	136,080	71,280	207,360	
Normal Fill	m ³	0.0	1,698	863	0	0	0	
Fill in Swamp	m ³	1920.0	2,537	1,052	4,871,040	2,019,840	6,890,880	
Normal Excavation to Spoil	m ³	70.0	995	522	69,650	36,540	106,190	
Sub Base Course	m ³	4026.0	3,221	1,347	12,967,746	5,423,022	18,390,768	
Base Course	m ³	5400.0	4,405	2,299	23,787,000	12,414,600	36,201,600	
Shoulder	m ²	37500.0	295	146	11,062,500	5,475,000	16,537,500	
Asphalt Patching	m ²	0.0	3,819	1,377	0	0	0	
Surface Dressing (Single)	m ²	0.0	605	595	0	0	0	
Surface Dressing (Double)	m ²	67500.0	757	936	51,097,500	63,180,000	114,277,500	
Earth Drain	m	0.0	937	119	0	0	0	
Earth Drain in Swamp (by machine)	m ³	4800.0	1,210	474	5,808,000	2,275,200	8,083,200	
Pipe Culvert 90cm	m	0.0	44,708	43,411	0	0	0	
Masonry Culvert (80x80cm)	m	0.0	62,536	37,886	0	0	0	
Retaining Wall and Wing Wall (Timber)	m ²	0.0	10,216	246	0	0	0	
Retaining Wall and Wing Wall (Masonry)	m ³	100.0	46,225	11,868	4,622,500	1,186,800	5,809,300	
Gabion Protection	m ³	0.0	14,482	120	0	0	0	
New Bridge (Timber)	SET	1.0	--	--	0	0	0	
New Bridge (Concrete)	SET	1.0	--	--	0	0	0	
					Sub Total	114,750,016	92,264,282	207,014,298
Overhead (15%)						17,212,502	13,839,642	31,052,144
					TOTAL COST	131,962,518	106,103,924	238,066,442

Manual routine maintenance of road	Km	15.0	153,768	7,248	2,306,520	108,720	2,415,240
Routine maintenance of asphalt road	Km	15.0	381,900	137,700	5,728,500	2,065,500	7,794,000
			Sub Total		8,035,020	2,174,220	10,209,240
Maintenance of Timber Bridge (New)	m ²	0.0	7,240	1,176	0	0	0
Maintenance of Concrete Bridge (New)	m ²	0.0	1,794	2,790	0	0	0
Maintenance of Timber Bridge (Exist)	m ²	141.8	7,494	2,432	1,062,274	344,736	1,407,010
Maintenance of Concrete Bridge (Exist)	m ²	0.0	4,232	2,402	0	0	0

Earthwork & Pavement Unit Cost	(Rp/Km)	:	15,871,096
Timber Bridge Unit Cost	(Rp/m ²)	:	
Concrete Bridge Unit Cost	(Rp/m ²)	:	
Survived Value	(Rp)	:	23,763,014
Maintenance Rate without Bridge	(%)	:	4.29
New Bridge Cost Rate	(%)	:	

PROV : KALIMANTAN SELATAN KAB : HULU SUNGAI UTARA

LINK NO : 68 (IIIB-1) LENGTH : 12 Km

UPGRADE : 6.0m 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	m ²	0.0	164	91	0	0	0	
Subgrade Preparation	m ²	66000.0	21	11	1,386,000	726,000	2,112,000	
Normal Fill	m ³	0.0	1,698	863	0	0	0	
Fill in Swamp	m ³	0.0	2,537	1,052	0	0	0	
Normal Excavation to Spoil	m ³	1272.0	995	522	1,265,640	663,984	1,929,624	
Sub Base Course	m ³	6329.2	3,221	1,347	20,386,353	8,525,432	28,911,785	
Base Course	m ³	3360.0	4,405	2,299	14,800,800	7,724,640	22,525,440	
Shoulder	m ²	24000.0	295	146	7,080,000	3,504,000	10,584,000	
Asphalt Patching	m ²	0.0	3,819	1,377	0	0	0	
Surface Dressing (Single)	m ²	48000.0	605	595	29,040,000	28,560,000	57,600,000	
Surface Dressing (Double)	m ²	0.0	757	936	0	0	0	
Earth Drain	m	0.0	937	119	0	0	0	
Earth Drain in Swamp (by machine)	m ³	0.0	1,210	474	0	0	0	
Pipe Culvert 80cm	m	0.0	44,708	43,411	0	0	0	
Masonry Culvert (80x80cm)	m	0.0	62,536	37,886	0	0	0	
Retaining Wall and Wing Wall (Timber)	m ²	0.0	10,216	246	0	0	0	
Retaining Wall and Wing Wall (Masonry)	m ³	0.0	46,225	11,868	0	0	0	
Gabion Protection	m ³	0.0	14,482	120	0	0	0	
New Bridge (Timber)	SET	1.0	--	--	0	0	0	
New Bridge (Concrete)	SET	1.0	--	--	0	0	0	
					Sub Total	73,958,793	49,704,056	123,662,849
Overhead (15%)						11,093,818	7,455,608	18,549,426
					TOTAL COST	85,052,611	57,159,664	142,212,275

Manual routine maintenance of road	Km	12.0	153,768	7,248	1,845,216	86,976	1,932,192
Routine maintenance of asphalt road	Km	12.0	381,900	137,700	4,582,800	1,652,400	6,235,200
			Sub Total		6,428,016	1,739,376	8,167,392
Maintenance of Timber Bridge (New)	m ²	0.0	7,240	1,176	0	0	0
Maintenance of Concrete Bridge (New)	m ²	0.0	1,794	2,790	0	0	0
Maintenance of Timber Bridge (Exist)	m ²	301.0	7,494	2,432	2,255,694	732,032	2,987,726
Maintenance of Concrete Bridge (Exist)	m ²	0.0	4,232	2,402	0	0	0

Earthwork & Pavement Unit Cost (Rp/Km)	:	11,851,023
Timber Bridge Unit Cost (Rp/m ²)	:	
Concrete Bridge Unit Cost (Rp/m ²)	:	
Survived Value (Rp)	:	24,743,337
Maintenance Rate without Bridge (%)	:	5.74
New Bridge Cost Rate (%)	:	

PROV : KALIMANTAN SELATAN KAB : HULU SUNGAI UTARA

LINK NO : 69 (IIIB-1) LENGTH : 8 Km

UPGRADE : 6.0m 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	m ²	0.0	164	91	0	0	0	
Subgrade Preparation	m ²	48000.0	21	11	1,008,000	528,000	1,536,000	
Normal Fill	m ³	0.0	1,898	863	0	0	0	
Fill in Swamp	m ³	7200.0	2,537	1,052	18,266,400	7,574,400	25,840,800	
Normal Excavation to Spoil	m ³	10918.0	995	522	10,863,410	5,699,196	16,562,606	
Sub Base Course	m ³	4480.0	3,221	1,347	14,430,080	6,034,560	20,464,640	
Base Course	m ³	2240.0	4,405	2,299	9,867,200	5,149,760	15,016,960	
Shoulder	m ²	16000.0	295	146	4,720,000	2,336,000	7,056,000	
Asphalt Patching	m ²	0.0	3,819	1,377	0	0	0	
Surface Dressing (Single)	m ²	32000.0	605	595	19,360,000	19,040,000	38,400,000	
Surface Dressing (Double)	m ²	0.0	757	936	0	0	0	
Earth Drain	m	0.0	937	119	0	0	0	
Earth Drain in Swamp (by machine)	m ³	18000.0	1,210	474	21,780,000	8,532,000	30,312,000	
Pipe Culvert Ø80cm	m	0.0	44,708	43,411	0	0	0	
Masonry Culvert (80x80cm)	m	0.0	62,536	37,886	0	0	0	
Retaining Wall and Wing Wall (Timber)	m ²	0.0	10,216	246	0	0	0	
Retaining Wall and Wing Wall (Masonry)	m ³	0.0	46,225	11,868	0	0	0	
Gabion Protection	m ³	0.0	14,482	120	0	0	0	
New Bridge (Timber)	SET	1.0	--	--	0	0	0	
New Bridge (Concrete)	SET	1.0	--	--	0	0	0	
					Sub Total	100,295,090	54,893,916	155,189,006
Overhead (15%)						15,044,263	8,234,087	23,278,350
					TOTAL COST	115,339,353	63,128,003	178,467,356

Manual routine maintenance of road	Km	8.0	153,768	7,248	1,230,144	57,984	1,288,128
Routine maintenance of asphalt road	Km	8.0	381,900	137,700	3,055,200	1,101,600	4,156,800
			Sub Total		4,285,344	1,159,584	5,444,928
Maintenance of Timber Bridge (New)	m ²	0.0	7,240	1,176	0	0	0
Maintenance of Concrete Bridge (New)	m ²	0.0	1,794	2,790	0	0	0
Maintenance of Timber Bridge (Exist)	m ²	329.0	7,494	2,432	2,465,526	800,128	3,265,654
Maintenance of Concrete Bridge (Exist)	m ²	0.0	4,232	2,402	0	0	0

Earthwork & Pavement Unit Cost (Rp/Km)	:	22,308,420
Timber Bridge Unit Cost (Rp/m ²)	:	
Concrete Bridge Unit Cost (Rp/m ²)	:	
Survived Value (Rp)	:	17,328,640
Maintenance Rate without Bridge (%)	:	3.05
New Bridge Cost Rate (%)	:	

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

PROV : KALINANTAN SELATAN KAB : HULU SUNGAI UTARA

I T E M	UNIT	< 1988 >	< 1989 >	< 1990 >	< 1991 >	< 1992 >	< TOTAL >
EQUIPMENT :							
Bulldozer/Ripper	hr	181.8	578.5	490.3	0.0	0.0	1250.6
Swamp Bulldozer	hr	0.0	274.0	502.5	0.0	0.0	776.5
Motor Grader	hr	632.2	1326.1	1185.5	0.0	0.0	3143.8
Hand-guide Vib. Roller	hr	120.4	387.1	297.6	0.0	0.0	805.1
Tire Roller	hr	533.3	1249.9	399.9	0.0	0.0	2183.1
Vibratory Roller (D&T)	hr	496.0	1229.4	1337.1	0.0	0.0	3062.5
Hydraulic Excavator; Wheel	hr	0.0	1935.0	2813.0	0.0	0.0	4748.0
Wheel Loader	hr	792.5	2176.2	2078.4	0.0	0.0	5047.1
Water Tank Truck	hr	328.2	787.3	890.2	0.0	0.0	2005.7
Dump Truck	hr	6031.6	17795.9	18116.1	0.0	0.0	41943.6
Flat Bed Truck with Crane	hr	0.0	60.0	69.4	0.0	0.0	129.4
Flat Bed Truck	hr	640.0	1544.9	528.2	0.0	0.0	2713.1
Portable Crusher/Screening	hr	191.4	415.1	242.8	0.0	0.0	849.3
Concrete Mixer	hr	0.0	60.0	63.6	0.0	0.0	123.6
Water Pump	hr	0.0	40.0	42.6	0.0	0.0	82.6
Concrete Vibrator	hr	0.0	0.0	0.7	0.0	0.0	0.7
Asphalt Sprayer	hr	533.3	1249.9	399.9	0.0	0.0	2183.1
LABOUR :							
Mandur	man day	413.1	1411.8	1366.3	0.0	0.0	3191.2
Skilled Labourer	man day	400.3	891.4	356.9	0.0	0.0	1648.6
Carpenter	man day	0.0	0.0	23.5	0.0	0.0	23.5
Mason	man day	0.0	100.0	104.8	0.0	0.0	204.8
Labourer	man day	3601.1	12145.1	11233.0	0.0	0.0	26979.2
Driver	man day	1275.4	3647.0	3422.2	0.0	0.0	8344.6
Operator	man day	646.7	2025.0	1920.6	0.0	0.0	4592.3
MATERIAL :							
Bitumen	l	110417.3	287221.2	82978.6	0.0	0.0	480617.1
Asphalt Oil	l	21866.6	45250.0	16400.0	0.0	0.0	83516.6
Kerosene	l	26253.7	60711.9	19708.6	0.0	0.0	106674.2
Sand	m ³	340.0	702.8	290.2	0.0	0.0	1333.0
Cement	bag	0.0	38.0	50.7	0.0	0.0	88.7
River Stone	m ³	0.0	100.0	104.8	0.0	0.0	204.8
Steel Moulds	set	0.0	0.0	0.0	0.0	0.0	0.0
Tiebar	m ³	0.0	0.0	3.1	0.0	0.0	3.1
Paint	l	0.0	0.0	0.0	0.0	0.0	0.0
Reinforcing Steel	kg	0.0	0.0	73.3	0.0	0.0	73.3
Tying Wire	kg	0.0	0.0	0.6	0.0	0.0	0.6
Equivalent Royalty	m ³	12884.9	34780.8	37373.2	0.0	0.0	85038.9

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

PROV : KALIMANTAN SELATAN KAB : HULU SUNGAI UTARA

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	164.7	279.5	282.5	0.0	0.0	726.7
Hand-guide Vib. Roller	hr	333.7	795.0	1080.0	0.0	0.0	2208.7
Tire Roller	hr	164.7	279.5	282.5	0.0	0.0	726.7
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	63.2	136.4	168.0	0.0	0.0	367.6
Water Tank Truck	hr	0.0	0.0	0.0	0.0	0.0	0.0
Dump Truck	hr	1046.5	2407.4	3167.1	0.0	0.0	6621.0
Flat Bed Truck with Crane	hr	1047.0	2114.5	2086.0	0.0	0.0	5247.5
Flat Bed Truck	hr	890.7	1683.5	1914.5	0.0	0.0	4488.7
Portable Crusher/Screening	hr	32.1	69.6	86.0	0.0	0.0	187.7
Concrete Mixer	hr	0.0	0.0	0.0	0.0	0.0	0.0
Water Pump	hr	0.0	0.0	0.0	0.0	0.0	0.0
Concrete Vibrator	hr	0.0	0.0	0.0	0.0	0.0	0.0
Asphalt Sprayer	hr	0.0	0.0	0.0	0.0	0.0	0.0
LABOUR :							
Handor	man day	430.9	882.6	1058.4	0.0	0.0	2371.9
Skilled Labourer	man day	513.1	1117.0	1299.0	0.0	0.0	2929.1
Carpenter	man day	156.0	315.1	310.9	0.0	0.0	782.0
Mason	man day	0.0	0.0	0.0	0.0	0.0	0.0
Labourer	man day	4836.9	9916.2	12050.6	0.0	0.0	26803.7
Driver	man day	546.5	1133.4	1292.1	0.0	0.0	2972.0
Operator	man day	76.1	139.2	151.0	0.0	0.0	366.3
MATERIAL :							
Bitumen	l	3003.7	7155.0	9720.0	0.0	0.0	19878.7
Asphalt Oil	l	0.0	0.0	0.0	0.0	0.0	0.0
Kerosene	l	333.7	795.0	1080.0	0.0	0.0	2208.7
Sand	m ³	55.6	132.5	180.0	0.0	0.0	368.1
Cement	bag	0.0	0.0	0.0	0.0	0.0	0.0
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	14.1	28.6	28.2	0.0	0.0	70.9
Paint	l	101.0	204.1	201.3	0.0	0.0	506.4
Reinforcing Steel	kg	0.0	0.0	0.0	0.0	0.0	0.0
Tying Wire	kg	0.0	0.0	0.0	0.0	0.0	0.0
Equivalent Royalty	m ³	895.8	1932.0	2380.5	0.0	0.0	5208.3

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

PROV : KALIHANTAN SELATAN KAB : HILU SUNGAI UTARA

I T E M	UNIT	< 1988 >	< 1989 >	< 1990 >	< 1991 >	< 1992 >	< TOTAL >
EQUIPMENT :							
Bulldozer/Ripper	hr	181.8	578.5	490.3	0.0	0.0	1250.6
Swamp Bulldozer	hr	0.0	274.0	502.5	0.0	0.0	776.5
Motor Grader	hr	796.9	1605.6	1468.0	0.0	0.0	3870.5
Hand-guide Vib. Roller	hr	454.1	1182.1	1377.6	0.0	0.0	3013.8
Tire Roller	hr	698.0	1529.4	682.4	0.0	0.0	2909.8
Vibratory Roller (D&I)	hr	496.0	1229.4	1337.1	0.0	0.0	3062.5
Hydraulic Excavator; Wheel	hr	0.0	1935.0	2813.0	0.0	0.0	4748.0
Wheel Loader	hr	855.7	2312.6	2246.4	0.0	0.0	5414.7
Water Tank Truck	hr	328.2	787.3	890.2	0.0	0.0	2005.7
Dump Truck	hr	7078.1	20203.3	21283.2	0.0	0.0	48564.6
Flat Bed Truck with Crane	hr	1047.0	2174.5	2155.4	0.0	0.0	5376.9
Flat Bed Truck	hr	1530.7	3228.4	2442.7	0.0	0.0	7201.8
Portable Crusher/Screening	hr	223.5	484.7	328.8	0.0	0.0	1037.0
Concrete Mixer	hr	0.0	60.0	63.6	0.0	0.0	123.6
Water Pump	hr	0.0	40.0	42.6	0.0	0.0	82.6
Concrete Vibrator	hr	0.0	0.0	0.7	0.0	0.0	0.7
Asphalt Sprayer	hr	533.3	1249.9	399.9	0.0	0.0	2183.1
LABOUR :							
Mandur	man day	844.0	2294.4	2424.7	0.0	0.0	5563.1
Skilled Labourer	man day	913.4	2008.4	1655.9	0.0	0.0	4577.7
Carpenter	man day	156.0	315.1	334.4	0.0	0.0	805.5
Mason	man day	0.0	100.0	104.8	0.0	0.0	204.8
Labourer	man day	8438.0	22061.3	23283.6	0.0	0.0	53782.9
Driver	man day	1821.9	4780.4	4714.3	0.0	0.0	11316.6
Operator	man day	722.8	2164.2	2071.6	0.0	0.0	4958.6
MATERIAL :							
Bitumen	l	113421.0	294376.2	92698.6	0.0	0.0	500495.8
Asphalt Oil	l	21066.6	45250.0	16400.0	0.0	0.0	83516.6
Kerosene	l	26587.4	61506.9	20788.6	0.0	0.0	108882.9
Sand	m ³	395.6	835.3	470.2	0.0	0.0	1701.1
Cement	bag	0.0	38.0	50.7	0.0	0.0	88.7
River Stone	m ³	0.0	100.0	104.8	0.0	0.0	204.8
Steel Moulds	set	0.0	0.0	0.0	0.0	0.0	0.0
Timber	m ³	14.1	28.6	31.3	0.0	0.0	74.0
Paint	l	101.0	204.1	201.3	0.0	0.0	506.4
Reinforcing Steel	kg	0.0	0.0	73.3	0.0	0.0	73.3
Tying Wire	kg	0.0	0.0	0.6	0.0	0.0	0.6
Equivalent Royalty	m ³	13780.7	36712.8	39753.7	0.0	0.0	90247.2

Appendix A-5

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

PROV : KALIMANTAN SELATAN

KAB : HULU SUNGAI UTARA

(1000 Rp)

I T E M	UNIT	< 1988 >	< 1989 >	< 1990 >	< 1991 >	< 1992 >	< TOTAL >
EQUIPMENT :							
		80,587	242,948	232,614	0	0	556,109
Bulldozer/Ripper	16035	2,915	9,276	7,861	0	0	20,052
Swamp Bulldozer	11845	0	3,245	5,952	0	0	9,197
Motor Grader	13675	8,645	18,134	16,211	0	0	42,990
Hand-guide Vib. Roller	1564	188	605	465	0	0	1,258
Tire Roller	11028	5,881	13,783	4,410	0	0	24,074
Vibratory Roller (D&T)	6812	3,378	8,374	9,108	0	0	20,860
Hydraulic Excavator; Wheel	12889	0	24,940	36,256	0	0	61,196
Wheel Loader	16832	13,339	36,629	34,983	0	0	84,951
Water Tank Truck	4033	1,323	3,175	3,590	0	0	8,088
Dump Truck	5490	33,113	97,699	99,457	0	0	230,269
Flat Bed Truck with Crane	5118	0	307	355	0	0	662
Flat Bed Truck	3418	2,187	5,280	1,805	0	0	9,272
Portable Crusher/Screening	44400	8,498	18,430	10,780	0	0	37,708
Concrete Mixer	8670	0	520	551	0	0	1,071
Water Pump	486	0	19	20	0	0	39
Concrete Vibrator	321	0	0	0	0	0	0
Asphalt Sprayer	2026	1,080	2,532	810	0	0	4,422
LABOUR :							
		14,766	46,750	42,631	0	0	104,147
Mandur	3500	1,445	4,941	4,782	0	0	11,168
Skilled Labourer	2500	1,000	2,228	892	0	0	4,120
Carpenter	3000	0	0	70	0	0	70
Mason	3000	0	300	314	0	0	614
Labourer	2000	7,202	24,290	22,466	0	0	53,958
Driver	3000	3,826	10,941	10,266	0	0	25,033
Operator	2000	1,293	4,050	3,841	0	0	9,184
MATERIAL :							
		59,915	146,317	53,592	0	0	259,824
Bitumen	300	33,125	86,166	24,893	0	0	144,184
Asphalt Oil	700	15,306	31,675	11,480	0	0	58,461
Kerosene	250	6,563	15,177	4,927	0	0	26,667
Sand	5000	1,700	3,514	1,451	0	0	6,665
Cement	5000	0	190	253	0	0	443
River Stone	9000	0	900	943	0	0	1,843
Steel Moulds	8000	0	0	0	0	0	0
Timber	80000	0	0	248	0	0	248
Paint	2750	0	0	0	0	0	0
Reinforcing Steel	750	0	0	54	0	0	54
Iying Wire	1100	0	0	0	0	0	0
Equivalent Royalty	250	3,221	8,695	9,343	0	0	21,259

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

PROV : KALIMANTAN SELATAN

KAB : HULU SUNGAI UTARA

(1000 Rp)

I T E M	UNIT	< 1988 >	< 1989 >	< 1990 >	< 1991 >	< 1992 >	< TOTAL >
EQUIPMENT :		21,224	43,324	49,918	0	0	114,466
Bulldozer/Ripper	16035	0	0	0	0	0	0
Swamp Bulldozer	11845	0	0	0	0	0	0
Motor Grader	13675	2,252	3,822	3,863	0	0	9,937
Hand-guide Vib. Roller	1564	521	1,243	1,689	0	0	3,453
Tire Roller	11028	1,816	3,082	3,115	0	0	8,013
Vibratory Roller (D&I)	6812	0	0	0	0	0	0
Hydraulic Excavator; Wheel	12889	0	0	0	0	0	0
Wheel Loader	16832	1,063	2,295	2,827	0	0	6,185
Water Tank Truck	4033	0	0	0	0	0	0
Dump Truck	5490	5,745	13,216	17,387	0	0	36,348
Flat Bed Truck with Crane	5118	5,358	10,822	10,676	0	0	26,856
Flat Bed Truck	3418	3,044	5,754	6,543	0	0	15,341
Portable Crusher/Screening	44400	1,425	3,090	3,818	0	0	8,333
Concrete Mixer	8670	0	0	0	0	0	0
Water Pump	486	0	0	0	0	0	0
Concrete Vibrator	321	0	0	0	0	0	0
Asphalt Sprayer	2026	0	0	0	0	0	0
LABOUR :		14,722	30,336	36,162	0	0	81,220
Kandur	3500	1,508	3,089	3,704	0	0	8,301
Skilled Labourer	2500	1,282	2,792	3,247	0	0	7,321
Carpenter	3000	468	945	932	0	0	2,345
Mason	3000	0	0	0	0	0	0
Labourer	2000	9,673	19,832	24,101	0	0	53,606
Driver	3000	1,639	3,400	3,876	0	0	8,915
Operator	2000	152	278	302	0	0	732
MATERIAL :		2,890	6,338	7,490	0	0	16,718
Bitumen	300	901	2,146	2,916	0	0	5,963
Asphalt Oil	700	0	0	0	0	0	0
Kerosene	250	83	198	270	0	0	551
Sand	5000	278	662	900	0	0	1,840
Cement	5000	0	0	0	0	0	0
River Stone	9000	0	0	0	0	0	0
Steel Moulds	8000	0	0	0	0	0	0
Timber	80000	1,128	2,288	2,256	0	0	5,672
Paint	2750	277	561	553	0	0	1,391
Reinforcing Steel	750	0	0	0	0	0	0
Tying Wire	1100	0	0	0	0	0	0
Equivalent Royalty	250	223	483	595	0	0	1,301

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

PROV : KALIMANTAN SELATAN

KAB : HULU SUNGAI UTARA

(1000 Rp)

I T E M	UNIT	< 1988 >	< 1989 >	< 1990 >	< 1991 >	< 1992 >	< TOTAL >
EQUIPMENT :		101,771	206,272	282,532	0	0	670,575
Bulldozer/Ripper	16035	2,915	9,276	7,861	0	0	20,052
Swamp Bulldozer	11845	0	3,245	5,952	0	0	9,197
Motor Grader	13675	10,897	21,956	20,074	0	0	52,927
Hand-guide Vib. Roller	1564	709	1,848	2,154	0	0	4,711
Tire Roller	11028	7,697	16,865	7,525	0	0	32,087
Vibratory Roller (D&I)	6812	3,378	8,374	9,108	0	0	20,860
Hydraulic Excavator; Wheel	12889	0	24,940	36,256	0	0	61,196
Wheel Loader	16832	14,402	38,924	37,810	0	0	91,136
Water Tank Truck	4033	1,323	3,175	3,590	0	0	8,088
Dump Truck	5490	38,858	110,915	116,844	0	0	266,617
Flat Bed Truck with Crane	5118	5,358	11,129	11,031	0	0	27,518
Flat Bed Truck	3418	5,231	11,034	8,348	0	0	24,613
Portable Crusher/Screening	44400	9,923	21,520	14,598	0	0	46,041
Concrete Mixer	8670	0	520	551	0	0	1,071
Water Pump	488	0	19	20	0	0	39
Concrete Vibrator	321	0	0	0	0	0	0
Asphalt Sprayer	2026	1,080	2,532	810	0	0	4,422
LABOUR :		29,488	77,086	78,793	0	0	185,367
Mandur	3500	2,953	8,030	8,486	0	0	19,469
Skilled Labourer	2500	2,282	5,020	4,139	0	0	11,441
Carpenter	3000	468	945	1,002	0	0	2,415
Mason	3000	0	300	314	0	0	614
Labourer	2000	16,875	44,122	46,567	0	0	107,564
Driver	3000	5,465	14,341	14,142	0	0	33,948
Operator	2000	1,445	4,328	4,143	0	0	9,916
MATERIAL :		62,805	152,655	61,082	0	0	276,542
Bitumen	300	34,026	88,312	27,809	0	0	150,147
Asphalt Oil	700	15,306	31,675	11,480	0	0	58,461
Kerosene	250	6,646	15,375	5,197	0	0	27,218
Sand	5000	1,978	4,176	2,351	0	0	8,505
Cement	5000	0	190	253	0	0	443
River Stone	9000	0	900	943	0	0	1,843
Steel Moulds	8000	0	0	0	0	0	0
Timber	80000	1,128	2,288	2,504	0	0	5,920
Paint	2750	277	561	553	0	0	1,391
Reinforcing Steel	750	0	0	54	0	0	54
Tying Wire	1100	0	0	0	0	0	0
Equivalent Royalty	250	3,444	9,178	9,938	0	0	22,560

Appendix A-6

QUANTITIES OF BRIDGE ON PROPOSED ROAD LINKS

PROV : KALIMANTAN SELATAN KAB : HULU SUNGAI UTARA

LINK NO	BRIDGE NAME	Km	From	<< TYPE >>		DESIGN LOAD CLASS	SPAN CLASS	SPAN LENGTH (m)	SPAN NO (no)	SPAN LENGTH (m)	WIDTH (m)	AREA	AREA	PIER (no)	ABUT (no)	ROAD CLASS
				(EXIST)	(NEW)							(a1)	(a2)			
69	HANINGAU II	2	AWN	KK				4.00	1	4.00	3.50	14.00		0	2	111B-1
	HANINGAU III	3	AWN	KK				5.00	1	5.00	3.50	17.50		0	2	
	TUNDAKAN	3	AWN	KK				3.00	1	3.00	3.50	10.50		0	2	
	TUNDAKAN II	3	AWN	KK				15.00	3	5.00	3.50	52.50		2	2	
	WANGKILI	3	AWN	KK				4.00	1	4.00	3.50	14.00		0	2	
	WANGKILI II	4	AWN	KK				3.00	1	3.00	3.50	10.50		0	2	
	BHR WANGKILI	5	AWN	KK				3.00	1	3.00	3.50	10.50		0	2	
	WANGKILI III	5	AWN	KK				3.00	1	3.00	3.50	10.50		0	2	
	WANGKILI IV	6	AWN	KK				9.00	2	4.50	3.50	31.50		1	2	
	SIKUNTAR	7	AWN	KK				3.00	1	3.00	3.50	10.50		0	2	
	SIKUNTAR II	8	AWN	KK				3.00	1	3.00	3.50	10.50		0	2	

PROV : KALIMANTAN SELATAN KAB : HULU SUNGAI UTARA

LINK NO	BRIDGE NAME	Km	From	« 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) (m2)	(NEW) (m2)			
12	KARIAS	1	T&JL	KK				3.00	1	3.00	4.00	12.00		0	2	IIIA
	KARIAS II	1	T&JL	KK				3.00	1	3.00	4.00	12.00		0	2	
31	N.1	1	TLSB	KK				4.00	1	4.00	3.50	14.00		0	2	IIIC
	N.1	1	TLSB	KK				4.00	1	4.00	3.50	14.00		0	2	
35	N.1	7	PLT	KK				2.00	1	2.00	3.50	7.00		0	2	IIIA
	BARU	1	PLT	KK				8.00	2	4.00	3.50	28.00		1	2	
55	DURIAN	1	SDRN	KK				4.00	1	4.00	3.50	14.00		0	2	IIIB-2
	N.1	1	SDRN	KK				4.00	1	4.00	3.50	14.00		0	2	
	TINGGIRAN	2	SDRN	KK				4.00	1	4.00	3.50	14.00		0	2	
	PULANTAN I	3	SDRN	KK				4.00	1	4.00	3.50	14.00		0	2	
	PULANTAN II	3	SDRN	KK				4.00	1	4.00	3.50	14.00		0	2	
	PULAU III	3	SDRN	KK				12.00	3	4.00	3.50	42.00		2	2	
59	N.1	1	PTN	KK				4.00	1	4.00	3.50	14.00		0	2	IIIC
60	HAUR GADING	1	HRDN	KK				24.00	5	4.80	3.50	84.00		4	2	IIIC
63	BERUNAI	1	GTN	KK				16.00	4	4.00	3.50	56.00		3	2	IIIB-1
	TANJUNG	1	GTN	KK				16.00	3	5.33	3.50	56.00		2	2	
	PULAU	2	GTN	KK				11.00	3	3.67	3.50	38.50		2	2	
	PANAITAN	2	GTN	KK				5.00	1	5.00	3.50	17.50		0	2	
	TABUK	7	GTN	KK				20.00	5	4.00	3.50	70.00		4	2	
65	MANTANGAI	1	HLG	KK				6.00	2	3.00	3.50	21.00		1	2	IIIC
	MANDALUR	1	HLG	KK				4.00	1	4.00	3.50	14.00		0	2	
	PELAPI	2	HLG	KK				8.00	3	2.67	3.50	28.00		2	2	
	MATUMBUI	3	HLG	KK				4.00	1	4.00	3.50	14.00		0	2	
	FEPU	4	HLG	KK				10.00	1	10.00	3.50	35.00		0	2	
	MAPAI	5	HLG	KK				4.00	1	4.00	3.50	14.00		0	2	
66	BINGUANG	2	WKL	KK				4.00	1	4.00	3.50	14.00		0	2	IIIA
	BATUNG	3	WKL	KK				3.50	1	3.50	3.50	12.25		0	2	
	N.1	3	WKL	KK				4.00	1	4.00	3.50	14.00		0	2	
	GOLINGGANG	4	WKL	KK				4.00	1	4.00	3.50	14.00		0	2	
	N.1	15	WKL	KK				25.00	4	6.25	3.50	87.50		3	2	
68	PALUHI	4	PRN	KK				10.00	2	5.00	3.50	35.00		1	2	IIIB-1
	HARAKBA	4	PRN	KK				12.00	2	6.00	3.50	42.00		1	2	
	HARAUB HAWA	5	PRN	KK				12.00	2	6.00	3.50	42.00		1	2	
	PITAP	6	PRN	KK				24.00	3	8.00	3.50	84.00		2	2	
	BELANTI	9	PRN	KK				4.00	1	4.00	3.50	14.00		0	2	
	BARU	10	PRN	KK				12.00	2	6.00	3.50	42.00		1	2	
	KETUAR	11	PRN	KK				12.00	2	6.00	3.50	42.00		1	2	
69	DAYAK PITAK	1	AWN	KK				28.00	3	9.33	3.50	98.00		2	2	IIIB-1
	PINDIK	1	AWN	KK				3.00	1	3.00	3.50	10.50		0	2	
	TABUR	2	AWN	KK				4.00	1	4.00	3.50	14.00		0	2	
	MAHINGAU I	2	AWN	KK				4.00	1	4.00	3.50	14.00		0	2	

Appendix A-7

CONSTRUCTION AND MAINTENANCE COST OF BRIDGES
ON PROPOSED ROAD LINKS

PROV : KALIMANTAN SELATAN KAB : HULU SUNGAI UTARA

LINK NO : 12 (IIIA) LENGTH : 1 Km

(Rp)

I T E M	UNIT	QUANTITY	<<< UNIT COST >>>		<<<<< COST >>>>>		>>>>> TOTAL
			LOCAL	FOREIGN	LOCAL	FOREIGN	
Superstructure (Timber; Span 3m; 101)	m2	0.00	38,866	3,812	0	0	0
Superstructure (Timber; Span 5m; 101)	m2	0.00	43,049	4,209	0	0	0
Superstructure (Timber; Span 8m; 101)	m2	0.00	57,019	5,529	0	0	0
Superstructure (Timber; Span 3m; BHSO)	m2	0.00	48,192	4,713	0	0	0
Superstructure (Timber; Span 5m; BHSO)	m2	0.00	52,610	5,107	0	0	0
Superstructure (Timber; Span 8m; BHSO)	m2	0.00	66,723	6,465	0	0	0
Superstructure (Concrete; Span 3m; BHSO)	m2	0.00	46,273	87,419	0	0	0
Superstructure (Concrete; Span 5m; BHSO)	m2	0.00	47,686	97,527	0	0	0
Superstructure (Concrete; Span 8m; BHSO)	m2	0.00	49,245	106,131	0	0	0
Superstructure (Concrete; Span 10m; BHSO)	m2	0.00	53,983	120,381	0	0	0
Superstructure (Concrete; Span 15m; BHSO)	m2	0.00	58,444	141,603	0	0	0
Substructure (Pier; for Timber; 101)	NO	0.00	338,631	35,424	0	0	0
Substructure (Abut; for Timber; 101)	NO	0.00	960,831	163,152	0	0	0
Substructure (Pier; for Timber; BHSO)	NO	0.00	498,037	52,429	0	0	0
Substructure (Abut; for Timber; BHSO)	NO	0.00	1,081,276	181,784	0	0	0
Substructure (Pier; for Concrete; BHSO)	NO	0.00	1,798,331	477,161	0	0	0
Substructure (Abut; for Concrete; BHSO)	NO	0.00	3,718,725	999,497	0	0	0
Demolition of Bridge (Timber->Timber)	m2	0.00	10,970	1,462	0	0	0
Demolition of Bridge (Timber->Concrete)	m2	0.00	10,970	1,462	0	0	0
Demolition of Bridge (Concrete)	m2	0.00	82,929	68,697	0	0	0
Maintenance of Timber Bridge (New)	m2	0.00	7,240	1,176	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.00	1,794	2,790	0	0	0
Maintenance of Timber Bridge (Exist)	m2	24.00	7,494	2,432	179,856	58,368	238,224
Maintenance of Concrete Bridge (Exist)	m2	0.00	4,232	2,402	0	0	0
<hr/>							
(Without Overhead)	TOTAL COST (Timber Bridge)				0	0	0
	TOTAL COST (Concrete Bridge)				0	0	0
	TOTAL COST (without Maintenance)				0	0	0
<hr/>							
(Overhead : 15%)	TOTAL COST (Timber Bridge)				0	0	0
	TOTAL COST (Concrete Bridge)				0	0	0
	TOTAL COST (without Maintenance)				0	0	0

PROV : KALIMANTAN SELATAN KAB : HULU SUNGAI UTARA

LINK NO : 31 (IIIC) LENGTH : 2 Km

(Rp)

ITEM	UNIT	QUANTITY	<<< UNIT COST >>>		<<<<< COST >>>>>		>>>>> TOTAL
			LOCAL	FOREIGN	LOCAL	FOREIGN	
Superstructure (Timber; Span 3m; 10T)	m2	0.00	38,866	3,812	0	0	0
Superstructure (Timber; Span 5m; 10T)	m2	0.00	43,049	4,209	0	0	0
Superstructure (Timber; Span 8m; 10T)	m2	0.00	57,019	5,529	0	0	0
Superstructure (Timber; Span 3m; BMSO)	m2	0.00	48,192	4,713	0	0	0
Superstructure (Timber; Span 5m; BMSO)	m2	0.00	52,610	5,107	0	0	0
Superstructure (Timber; Span 8m; BMSO)	m2	0.00	66,723	6,465	0	0	0
Superstructure (Concrete; Span 3m; BMSO)	m2	0.00	46,273	87,419	0	0	0
Superstructure (Concrete; Span 5m; BMSO)	m2	0.00	47,686	97,527	0	0	0
Superstructure (Concrete; Span 8m; BMSO)	m2	0.00	49,245	106,131	0	0	0
Superstructure (Concrete; Span 10m; BMSO)	m2	0.00	53,983	120,381	0	0	0
Superstructure (Concrete; Span 15m; BMSO)	m2	0.00	58,444	141,603	0	0	0
Substructure (Pier; for Timber; 10T)	NO	0.00	338,631	35,424	0	0	0
Substructure (Abut; for Timber; 10T)	NO	0.00	960,831	163,152	0	0	0
Substructure (Pier; for Timber; BMSO)	NO	0.00	498,037	52,429	0	0	0
Substructure (Abut; for Timber; BMSO)	NO	0.00	1,081,276	181,784	0	0	0
Substructure (Pier; for Concrete; BMSO)	NO	0.00	1,798,331	477,161	0	0	0
Substructure (Abut; for Concrete; BMSO)	NO	0.00	3,718,725	999,497	0	0	0
Demolition of Bridge (Timber->Timber)	m2	0.00	10,970	1,462	0	0	0
Demolition of Bridge (Timber->Concrete)	m2	0.00	10,970	1,462	0	0	0
Demolition of Bridge (Concrete)	m2	0.00	82,929	68,697	0	0	0
Maintenance of Timber Bridge (New)	m2	0.00	7,240	1,176	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.00	1,794	2,790	0	0	0
Maintenance of Timber Bridge (Exist)	m2	28.00	7,494	2,432	209,832	68,096	277,928
Maintenance of Concrete Bridge (Exist)	m2	0.00	4,232	2,402	0	0	0
<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 : KALIMANTAN SELATAN KAB : HULU SUNGAI UTARA

LINK NO : 35 (IIIA) LENGTH : 7 Km

(Rp)

ITEM	UNIT	QUANTITY	«« UNIT COST »»		«««« COST »»»»»		»»»»» TOTAL
			LOCAL	FOREIGN	LOCAL	FOREIGN	
Superstructure (Timber; Span 3m; 10T)	m2	0.00	38,866	3,812	0	0	0
Superstructure (Timber; Span 5m; 10T)	m2	0.00	43,049	4,209	0	0	0
Superstructure (Timber; Span 8m; 10T)	m2	0.00	57,019	5,529	0	0	0
Superstructure (Timber; Span 3m; BH50)	m2	0.00	48,192	4,713	0	0	0
Superstructure (Timber; Span 5m; BH50)	m2	0.00	52,610	5,107	0	0	0
Superstructure (Timber; Span 8m; BH50)	m2	0.00	66,723	6,465	0	0	0
Superstructure (Concrete; Span 3m; BH50)	m2	0.00	46,273	87,419	0	0	0
Superstructure (Concrete; Span 5m; BH50)	m2	0.00	47,686	97,527	0	0	0
Superstructure (Concrete; Span 8m; BH50)	m2	0.00	49,245	106,131	0	0	0
Superstructure (Concrete; Span 10m; BH50)	m2	0.00	53,983	120,381	0	0	0
Superstructure (Concrete; Span 15m; BH50)	m2	0.00	58,444	141,603	0	0	0
Substructure (Pier; for Timber; 10T)	NO	0.00	338,631	35,424	0	0	0
Substructure (Abut; for Timber; 10T)	NO	0.00	960,831	163,152	0	0	0
Substructure (Pier; for Timber; BH50)	NO	0.00	498,037	52,429	0	0	0
Substructure (Abut; for Timber; BH50)	NO	0.00	1,081,276	181,784	0	0	0
Substructure (Pier; for Concrete; BH50)	NO	0.00	1,798,331	477,161	0	0	0
Substructure (Abut; for Concrete; BH50)	NO	0.00	3,718,725	999,497	0	0	0
Demolition of Bridge (Timber->Timber)	m2	0.00	10,970	1,462	0	0	0
Demolition of Bridge (Timber->Concrete)	m2	0.00	10,970	1,462	0	0	0
Demolition of Bridge (Concrete)	m2	0.00	82,929	68,597	0	0	0
Maintenance of Timber Bridge (New)	m2	0.00	7,240	1,176	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.00	1,794	2,790	0	0	0
Maintenance of Timber Bridge (Exist)	m2	35.00	7,494	2,432	262,290	85,120	347,410
Maintenance of Concrete Bridge (Exist)	m2	0.00	4,232	2,402	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 : KALIMANTAN SELATAN KAB : HULLI SUNGAI UTARA

LINK NO : 55 (IIB-2) LENGTH : 4 Km

(Rp)

I T E M	UNIT	QUANTITY	<<< UNIT COST >>>		<<<<< COST >>>>>		TOTAL
			LOCAL	FOREIGN	LOCAL	FOREIGN	
Superstructure (Timber;Span 3m;10T)	m2	0.00	38,866	3,812	0	0	0
Superstructure (Timber;Span 5m;10T)	m2	0.00	43,049	4,209	0	0	0
Superstructure (Timber;Span 8m;10T)	m2	0.00	57,019	5,529	0	0	0
Superstructure (Timber;Span 3m;BK50)	m2	0.00	48,192	4,713	0	0	0
Superstructure (Timber;Span 5m;BK50)	m2	0.00	52,610	5,107	0	0	0
Superstructure (Timber;Span 8m;BK50)	m2	0.00	66,723	6,465	0	0	0
Superstructure (Concrete;Span 3m;BK50)	m2	0.00	46,273	87,419	0	0	0
Superstructure (Concrete;Span 5m;BK50)	m2	0.00	47,686	97,527	0	0	0
Superstructure (Concrete;Span 8m;BK50)	m2	0.00	49,245	106,131	0	0	0
Superstructure (Concrete;Span10m;BK50)	m2	0.00	53,983	120,381	0	0	0
Superstructure (Concrete;Span15m;BK50)	m2	0.00	58,444	141,603	0	0	0
Substructure (Pier;for Timber;10T)	NO	0.00	338,631	35,424	0	0	0
Substructure (Abut;for Timber;10T)	NO	0.00	960,831	163,152	0	0	0
Substructure (Pier;for Timber;BK50)	NO	0.00	498,037	52,429	0	0	0
Substructure (Abut;for Timber;BK50)	NO	0.00	1,081,276	181,784	0	0	0
Substructure (Pier;for Concrete;BK50)	NO	0.00	1,798,331	477,161	0	0	0
Substructure (Abut;for Concrete;BK50)	NO	0.00	3,718,725	999,497	0	0	0
Demolition of Bridge (Timber->Timber)	m2	0.00	10,970	1,462	0	0	0
Demolition of Bridge (Timber->Concrete)	m2	0.00	10,970	1,462	0	0	0
Demolition of Bridge (Concrete)	m2	0.00	82,929	68,697	0	0	0
Maintenance of Timber Bridge (New)	m2	0.00	7,240	1,176	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.00	1,794	2,790	0	0	0
Maintenance of Timber Bridge (Exist)	m2	112.00	7,494	2,432	839,328	272,384	1,111,712
Maintenance of Concrete Bridge (Exist)	m2	0.00	4,232	2,402	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 : KALIMANTAN SELATAN KAB : HULU SUNGAI UTARA

LINK NO : 59 (IIC) LENGTH : 8 Km

(Rp)

I T E M	UNIT	QUANTITY	<<< UNIT COST >>>		<<<<< COST >>>>>		TOTAL
			LOCAL	FOREIGN	LOCAL	FOREIGN	
Superstructure (Timber;Span 3m;IOT)	m2	0.00	38,866	3,812	0	0	0
Superstructure (Timber;Span 5m;IOT)	m2	0.00	43,049	4,209	0	0	0
Superstructure (Timber;Span 8m;IOT)	m2	0.00	57,019	5,529	0	0	0
Superstructure (Timber;Span 3m;BMSO)	m2	0.00	48,192	4,713	0	0	0
Superstructure (Timber;Span 5m;BMSO)	m2	0.00	52,610	5,107	0	0	0
Superstructure (Timber;Span 8m;BMSO)	m2	0.00	66,723	6,465	0	0	0
Superstructure (Concrete;Span 3m;BMSO)	m2	0.00	46,273	87,419	0	0	0
Superstructure (Concrete;Span 5m;BMSO)	m2	0.00	47,686	97,527	0	0	0
Superstructure (Concrete;Span 8m;BMSO)	m2	0.00	49,245	106,131	0	0	0
Superstructure (Concrete;Span10m;BMSO)	m2	0.00	53,983	120,381	0	0	0
Superstructure (Concrete;Span15m;BMSO)	m2	0.00	58,444	141,603	0	0	0
Substructure (Pier;for Timber;IOT)	NO	0.00	338,631	35,424	0	0	0
Substructure (Abut;for Timber;IOT)	NO	0.00	960,831	163,152	0	0	0
Substructure (Pier;for Timber;BMSO)	NO	0.00	498,037	52,429	0	0	0
Substructure (Abut;for Timber;BMSO)	NO	0.00	1,081,276	181,784	0	0	0
Substructure (Pier;for Concrete;BMSO)	NO	0.00	1,798,331	477,161	0	0	0
Substructure (Abut;for Concrete;BMSO)	NO	0.00	3,718,725	999,497	0	0	0
Demolition of Bridge (Timber->Timber)	m2	0.00	10,970	1,462	0	0	0
Demolition of Bridge (Timber->Concrete)	m2	0.00	10,970	1,462	0	0	0
Demolition of Bridge (Concrete)	m2	0.00	82,929	68,697	0	0	0
Maintenance of Timber Bridge (New)	m2	0.00	7,240	1,176	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.00	1,794	2,790	0	0	0
Maintenance of Timber Bridge (Exist)	m2	14.00	7,494	2,432	104,916	34,048	138,964
Maintenance of Concrete Bridge (Exist)	m2	0.00	4,232	2,402	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 : KALIMANTAN SELATAN KAB : HULU SUNGAI UTARA
 LINK NO : 60 (IIC) LENGTH : 2 Km

(Rp)

I T E M	UNIT	QUANTITY	<<< UNIT COST >>>		<<<<< COST >>>>>		>>>>> TOTAL
			LOCAL	FOREIGN	LOCAL	FOREIGN	
Superstructure (Timber;Span 3m;10T)	m2	0.00	38,866	3,812	0	0	0
Superstructure (Timber;Span 5m;10T)	m2	0.00	43,049	4,209	0	0	0
Superstructure (Timber;Span 8m;10T)	m2	0.00	57,019	5,529	0	0	0
Superstructure (Timber;Span 3m;BMSO)	m2	0.00	48,192	4,713	0	0	0
Superstructure (Timber;Span 5m;BMSO)	m2	0.00	52,610	5,107	0	0	0
Superstructure (Timber;Span 8m;BMSO)	m2	0.00	66,723	6,465	0	0	0
Superstructure (Concrete;Span 3m;BMSO)	m2	0.00	46,273	87,419	0	0	0
Superstructure (Concrete;Span 5m;BMSO)	m2	0.00	47,686	97,527	0	0	0
Superstructure (Concrete;Span 8m;BMSO)	m2	0.00	49,245	106,131	0	0	0
Superstructure (Concrete;Span10m;BMSO)	m2	0.00	53,983	120,381	0	0	0
Superstructure (Concrete;Span15m;BMSO)	m2	0.00	58,444	141,603	0	0	0
Substructure (Pier;for Timber;10T)	NO	0.00	338,631	35,424	0	0	0
Substructure (Abut;for Timber;10T)	NO	0.00	960,831	163,152	0	0	0
Substructure (Pier;for Timber;BMSO)	NO	0.00	498,037	52,429	0	0	0
Substructure (Abut;for Timber;BMSO)	NO	0.00	1,081,276	181,784	0	0	0
Substructure (Pier;for Concrete;BMSO)	NO	0.00	1,798,331	477,161	0	0	0
Substructure (Abut;for Concrete;BMSO)	NO	0.00	3,718,725	999,497	0	0	0
Demolition of Bridge (Timber->Timber)	m2	0.00	10,970	1,462	0	0	0
Demolition of Bridge (Timber->Concrete)	m2	0.00	10,970	1,462	0	0	0
Demolition of Bridge (Concrete)	m2	0.00	82,929	68,697	0	0	0
Maintenance of Timber Bridge (New)	m2	0.00	7,240	1,176	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.00	1,794	2,790	0	0	0
Maintenance of Timber Bridge (Exist)	m2	84.00	7,494	2,432	629,496	204,288	833,784
Maintenance of Concrete Bridge (Exist)	m2	0.00	4,232	2,402	0	0	0
<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

PRDV : KALIMANTAN SELATAN KAB : HULU SUNGAI UTARA

LINK NO : 63 (111B-1) LENGTH : 8 Km

(Rp)

ITEM	UNIT	QUANTITY	<<< UNIT COST >>>		<<<<< COST >>>>>		TOTAL
			LOCAL	FOREIGN	LOCAL	FOREIGN	
Superstructure (Timber; Span 3a; 10T)	m2	0.00	38,866	3,812	0	0	0
Superstructure (Timber; Span 5a; 10T)	m2	0.00	43,049	4,209	0	0	0
Superstructure (Timber; Span 8a; 10T)	m2	0.00	57,019	5,529	0	0	0
Superstructure (Timber; Span 3a; BN50)	m2	0.00	48,192	4,713	0	0	0
Superstructure (Timber; Span 5a; BN50)	m2	0.00	52,610	5,107	0	0	0
Superstructure (Timber; Span 8a; BN50)	m2	0.00	66,723	6,465	0	0	0
Superstructure (Concrete; Span 3a; BN50)	m2	0.00	46,273	87,419	0	0	0
Superstructure (Concrete; Span 5a; BN50)	m2	0.00	47,686	97,527	0	0	0
Superstructure (Concrete; Span 8a; BN50)	m2	0.00	49,245	106,131	0	0	0
Superstructure (Concrete; Span 10a; BN50)	m2	0.00	53,983	120,381	0	0	0
Superstructure (Concrete; Span 15a; BN50)	m2	0.00	58,444	141,603	0	0	0
Substructure (Pier; for Timber; 10T)	NO	0.00	338,631	35,424	0	0	0
Substructure (Abut; for Timber; 10T)	NO	0.00	980,831	163,152	0	0	0
Substructure (Pier; for Timber; BN50)	NO	0.00	498,037	52,429	0	0	0
Substructure (Abut; for Timber; BN50)	NO	0.00	1,081,276	181,784	0	0	0
Substructure (Pier; for Concrete; BN50)	NO	0.00	1,798,331	477,161	0	0	0
Substructure (Abut; for Concrete; BN50)	NO	0.00	3,718,725	999,497	0	0	0
Demolition of Bridge (Timber->Timber)	m2	0.00	10,970	1,462	0	0	0
Demolition of Bridge (Timber->Concrete)	m2	0.00	10,970	1,462	0	0	0
Demolition of Bridge (Concrete)	m2	0.00	82,929	68,697	0	0	0
Maintenance of Timber Bridge (New)	m2	0.00	7,240	1,176	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.00	1,794	2,790	0	0	0
Maintenance of Timber Bridge (Exist)	m2	238.00	7,494	2,432	1,783,572	578,816	2,362,388
Maintenance of Concrete Bridge (Exist)	m2	0.00	4,232	2,402	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 : KALIMANTAN SELATAN KAB : HULU SUNGAI UTARA

LINK NO : 65 (IIC) LENGTH : 8 Km

(Rp)

I T E M	UNIT	QUANTITY	<<< UNIT COST >>>		<<<<< COST >>>>>		>>>>> TOTAL
			LOCAL	FOREIGN	LOCAL	FOREIGN	
Superstructure (Timber;Span 3m;10T)	m2	0.00	38,866	3,812	0	0	0
Superstructure (Timber;Span 5m;10T)	m2	0.00	43,049	4,209	0	0	0
Superstructure (Timber;Span 8m;10T)	m2	0.00	57,019	5,529	0	0	0
Superstructure (Timber;Span 3m;BM50)	m2	0.00	48,192	4,713	0	0	0
Superstructure (Timber;Span 5m;BM50)	m2	0.00	52,610	5,107	0	0	0
Superstructure (Timber;Span 8m;BM50)	m2	0.00	66,723	6,465	0	0	0
Superstructure (Concrete;Span 3m;BM50)	m2	0.00	46,273	87,419	0	0	0
Superstructure (Concrete;Span 5m;BM50)	m2	0.00	47,686	97,527	0	0	0
Superstructure (Concrete;Span 8m;BM50)	m2	0.00	49,245	106,131	0	0	0
Superstructure (Concrete;Span 10m;BM50)	m2	0.00	53,983	120,381	0	0	0
Superstructure (Concrete;Span 15m;BM50)	m2	0.00	58,444	141,603	0	0	0
Substructure (Pier;for Timber;10T)	N0	0.00	338,631	35,424	0	0	0
Substructure (Abut;for Timber;10T)	N0	0.00	960,831	163,152	0	0	0
Substructure (Pier;for Timber;BM50)	N0	0.00	498,037	52,429	0	0	0
Substructure (Abut;for Timber;BM50)	N0	0.00	1,081,276	181,784	0	0	0
Substructure (Pier;for Concrete;BM50)	N0	0.00	1,798,331	477,161	0	0	0
Substructure (Abut;for Concrete;BM50)	N0	0.00	3,718,725	999,497	0	0	0
Demolition of Bridge (Timber->Timber)	m2	0.00	10,970	1,462	0	0	0
Demolition of Bridge (Timber->Concrete)	m2	0.00	10,970	1,462	0	0	0
Demolition of Bridge (Concrete)	m2	0.00	82,929	68,697	0	0	0
Maintenance of Timber Bridge (New)	m2	0.00	7,240	1,176	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.00	1,794	2,790	0	0	0
Maintenance of Timber Bridge (Exist)	m2	126.00	7,494	2,432	944,244	306,432	1,250,676
Maintenance of Concrete Bridge (Exist)	m2	0.00	4,232	2,402	0	0	0
<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 : KALIMANTAN SELATAN KAB : HULU SUNGAI UTARA

LINK NO : 66 (IIIA) LENGTH : 15 Km

(Rp)

I T E M	UNIT	QUANTITY	<<< UNIT COST >>>		<<<<< COST >>>>>		TOTAL
			LOCAL	FOREIGN	LOCAL	FOREIGN	
Superstructure (Timber; Span 3m; 10T)	m2	0.00	38,866	3,812	0	0	0
Superstructure (Timber; Span 5m; 10T)	m2	0.00	43,049	4,209	0	0	0
Superstructure (Timber; Span 8m; 10T)	m2	0.00	57,019	5,529	0	0	0
Superstructure (Timber; Span 3m; BM50)	m2	0.00	48,192	4,713	0	0	0
Superstructure (Timber; Span 5m; BM50)	m2	0.00	52,610	5,107	0	0	0
Superstructure (Timber; Span 8m; BM50)	m2	0.00	66,723	6,465	0	0	0
Superstructure (Concrete; Span 3m; BM50)	m2	0.00	46,273	87,419	0	0	0
Superstructure (Concrete; Span 5m; BM50)	m2	0.00	47,686	97,527	0	0	0
Superstructure (Concrete; Span 8m; BM50)	m2	0.00	49,245	106,131	0	0	0
Superstructure (Concrete; Span 10m; BM50)	m2	0.00	53,983	120,381	0	0	0
Superstructure (Concrete; Span 15m; BM50)	m2	0.00	58,444	141,603	0	0	0
Substructure (Pier; for Timber; 10T)	NO	0.00	338,631	35,424	0	0	0
Substructure (Abut; for Timber; 10T)	NO	0.00	960,831	183,152	0	0	0
Substructure (Pier; for Timber; BM50)	NO	0.00	498,037	52,429	0	0	0
Substructure (Abut; for Timber; BM50)	NO	0.00	1,091,276	181,784	0	0	0
Substructure (Pier; for Concrete; BM50)	NO	0.00	1,798,331	477,161	0	0	0
Substructure (Abut; for Concrete; BM50)	NO	0.00	3,718,725	999,497	0	0	0
Demolition of Bridge (Timber->Timber)	m2	0.00	10,970	1,462	0	0	0
Demolition of Bridge (Timber->Concrete)	m2	0.00	10,970	1,462	0	0	0
Demolition of Bridge (Concrete)	m2	0.00	82,929	68,697	0	0	0
Maintenance of Timber Bridge (New)	m2	0.00	7,240	1,176	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.00	1,794	2,790	0	0	0
Maintenance of Timber Bridge (Exist)	m2	141.75	7,494	2,432	1,062,274	344,736	1,407,010
Maintenance of Concrete Bridge (Exist)	m2	0.00	4,232	2,402	0	0	0
<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 : KALIMANTAN SELATAN KAB : HULU SUNGAI UTARA

LINK NO : 68 (IIIB-1) LENGTH : 12 Km

(Rp)

I T E M	UNIT	QUANTITY	<<< UNIT COST >>>		<<<<< COST >>>>>		>>>>> TOTAL
			LOCAL	FOREIGN	LOCAL	FOREIGN	
Superstructure (Timber; Span 3m; IOT)	m2	0.00	38,866	3,812	0	0	0
Superstructure (Timber; Span 5m; IOT)	m2	0.00	43,049	4,209	0	0	0
Superstructure (Timber; Span 8m; IOT)	m2	0.00	57,019	5,529	0	0	0
Superstructure (Timber; Span 3m; BMSO)	m2	0.00	48,192	4,713	0	0	0
Superstructure (Timber; Span 5m; BMSO)	m2	0.00	52,610	5,107	0	0	0
Superstructure (Timber; Span 8m; BMSO)	m2	0.00	66,723	6,465	0	0	0
Superstructure (Concrete; Span 3m; BMSO)	m2	0.00	46,273	87,419	0	0	0
Superstructure (Concrete; Span 5m; BMSO)	m2	0.00	47,686	97,527	0	0	0
Superstructure (Concrete; Span 8m; BMSO)	m2	0.00	49,245	106,131	0	0	0
Superstructure (Concrete; Span 10m; BMSO)	m2	0.00	53,983	120,381	0	0	0
Superstructure (Concrete; Span 15m; BMSO)	m2	0.00	58,444	141,603	0	0	0
Substructure (Pier; for Timber; IOT)	NO	0.00	338,631	35,424	0	0	0
Substructure (Abut; for Timber; IOT)	NO	0.00	960,831	163,152	0	0	0
Substructure (Pier; for Timber; BMSO)	NO	0.00	498,037	52,429	0	0	0
Substructure (Abut; for Timber; BMSO)	NO	0.00	1,081,276	181,784	0	0	0
Substructure (Pier; for Concrete; BMSO)	NO	0.00	1,798,331	477,161	0	0	0
Substructure (Abut; for Concrete; BMSO)	NO	0.00	3,718,725	999,497	0	0	0
Demolition of Bridge (Timber->Timber)	m2	0.00	10,970	1,462	0	0	0
Demolition of Bridge (Timber->Concrete)	m2	0.00	10,970	1,462	0	0	0
Demolition of Bridge (Concrete)	m2	0.00	82,929	68,697	0	0	0
Maintenance of Timber Bridge (New)	m2	0.00	7,240	1,176	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.00	1,794	2,790	0	0	0
Maintenance of Timber Bridge (Exist)	m2	301.00	7,494	2,432	2,255,694	732,032	2,987,726
Maintenance of Concrete Bridge (Exist)	m2	0.00	4,232	2,402	0	0	0
<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 : KALIMANTAN SELATAN KAB : HULU SUNGAI UTARA

LINK NO : 69 (IIIB-1) LENGTH : 8 Km

(Rp)

I T E M	UNIT	QUANTITY	<<< UNIT COST >>>		<<<<< COST >>>>>		>>>>> TOTAL
			LOCAL	FOREIGN	LOCAL	FOREIGN	
Superstructure (Timber;Span 3a;10T)	m2	0.00	38,866	3,812	0	0	0
Superstructure (Timber;Span 5a;10T)	m2	0.00	43,049	4,209	0	0	0
Superstructure (Timber;Span 8a;10T)	m2	0.00	57,019	5,529	0	0	0
Superstructure (Timber;Span 3a;BH50)	m2	0.00	48,192	4,713	0	0	0
Superstructure (Timber;Span 5a;BH50)	m2	0.00	52,610	5,107	0	0	0
Superstructure (Timber;Span 8a;BH50)	m2	0.00	66,723	6,465	0	0	0
Superstructure (Concrete;Span 3a;BH50)	m2	0.00	46,273	87,419	0	0	0
Superstructure (Concrete;Span 5a;BH50)	m2	0.00	47,686	97,527	0	0	0
Superstructure (Concrete;Span 8a;BH50)	m2	0.00	49,245	106,131	0	0	0
Superstructure (Concrete;Span10a;BH50)	m2	0.00	53,983	120,381	0	0	0
Superstructure (Concrete;Span15a;BH50)	m2	0.00	58,444	141,603	0	0	0
Substructure (Pier;for Timber;10T)	NO	0.00	338,631	35,424	0	0	0
Substructure (Abut;for Timber;10T)	NO	0.00	960,831	163,152	0	0	0
Substructure (Pier;for Timber;BH50)	NO	0.00	498,037	52,429	0	0	0
Substructure (Abut;for Timber;BH50)	NO	0.00	1,081,276	181,784	0	0	0
Substructure (Pier;for Concrete;BH50)	NO	0.00	1,798,331	477,161	0	0	0
Substructure (Abut;for Concrete;BH50)	NO	0.00	3,718,725	999,497	0	0	0
Demolition of Bridge (Timber->Timber)	m2	0.00	10,970	1,462	0	0	0
Demolition of Bridge (Timber->Concrete)	m2	0.00	10,970	1,462	0	0	0
Demolition of Bridge (Concrete)	m2	0.00	82,929	68,697	0	0	0
Maintenance of Timber Bridge (New)	m2	0.00	7,240	1,176	0	0	0
Maintenance of Concrete Bridge (New)	m2	0.00	1,794	2,790	0	0	0
Maintenance of Timber Bridge (Exist)	m2	329.00	7,494	2,432	2,465,526	800,128	3,265,654
Maintenance of Concrete Bridge (Exist)	m2	0.00	4,232	2,402	0	0	0
<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

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