APPENDIX

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INPUT DATA

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

PRV. : KALIMANTAN TIMUR KAB. : BULUNGAN

SURVEY YEAR : 1983

| | ىن يوم _{الم} ين المراجع من يا عند ال مسلم المراجع المراجع المراجع المراجع المراجع المراجع المراجع المراجع المراجع ا | and the second se | | Jan vey H | EAR 1983 |
|-------------|--|---|---------------------------------------|----------------------------------|---------------------------------|
| Code No. | KECAMATAN NAME | CULTIVATED AREA : (PA) | YIELD RATE :(Y) | FARMER'S POPULATION : (AP) | CIRCULATED COMMODITY (PG) |
| 01 | KAYAN HULU | 661 | 1.59 | 2,310 | 0 |
| 02 | KAYAN HILIR | 432 | 1.60 | 800 | 0 |
| 03 | PUJUNGAN | 693 | 1.61 | 1,200 | 0 |
| 04 | MALINAU | 1.851 | 2.40 | 6,230 | 0 |
| 05 | LONG PESO | 807 | 1.72 | 2,000 | 0 |
| 06 | TANJUNG PALAS | 5,758 | 2.04 | 6,100 | 0 |
| 07 | TARAKAN | 15 | 1.60 | 820 | 0 |
| 08 | SESAYAP | 871 | 2.02 | 1,040 | 0 |
| 09 | SEMBAKUNG | 920 | 1.93 | 1,630 | 0 |
| 10 | MENTARANG | 444 | 1.98 | 1,970 | 0 |
| 11 | KERAYAN | 2,731 | 2.15 | 2,200 | 0 |
| 12 | LUMBIS | 755 | 1.63 | 1,810 | 0 |
| 13 | NUNUKAN | 1.282 | 2.06 | 4,980 | 0 |
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| | سا فان و در رسستان مناسب استان ها الله استان که توجه ۲۰۰۰ مور مرمود بردو موجد مساف است. | | | | |
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| | F ₁ F ₂ F ₃ | | ARMER'S PTION : (Cp | | -AGRO 4ENT : (NG) |

| | 53 | r 2 | r ₃ | 14 | | NON-AGRO JIRMENT : (NG) |
|------------------------------------|-----|------------|----------------|----|------------------------|----------------------------|
| ANNUAL AVERAGE % GROWTH RATE | 4.0 | 2.7 | 5.5 | 51 | 0.15 Ton/head/year 0.0 | и |

| | SEDAN | BUS | TRUCK | MOTOR CYCLE | AVERAGE | |
|--------------------------------|-------|------|-------|----------------|-------------------|---------------|
| RATE OF EACH VEHICLE TYPE % | 27.64 | 3.26 | 15.66 | 53.44 | FREIGHT TONAGE | 0.4 Ton/Truck |
| • | | 1 | 6-A-1 | - | | |

Appendix A-2 Engineering Data

PROVINCE :Kalimantan Timur

KABUPATEN: Bulungan

| LINK | BEGINNING POINT | END POINT | LENGTH | THROUGH TH NAME & LE | | BENADRO |
|------|-------------------------------|----------------------|--------|--------------------------|----------------|--|
| NO. | (DESA NAME) | (DESA NAME) | (км) | KEC. NAME | LENGTH (KM) | REMARKS |
| 01 | Tg.Palas | Pimping | 25 | Tanjung Palas | 25 | |
| 02 | Pimping | Sekatak Be- ngara | 32 | Tanjung Palas | 20 | ······································ |
| 03 | Sekatak Be- ngara | Sekatak Buji | 24 | Tanjung Palas | 25 | ······································ |
| 04 | Sekatak Buji | Betayau | 24 ' | Tanjung Palas Sesayap | 10 25 | |
| 05 | Betayau | Tideng Pale | 12 | Sesayap | 35 | |
| 06 | Sesayap | Tideng Pale | 12 | Sesayap | 15 | |
| 07 | Tideng Pale | Malinau | 25 | Sesayap Malinau | 10 25 | ······································ |
| 08 | Malinau | Tanjung La- pang | 13 | Malinau | 13 | · · · · · · · · · · · · · · · · · · · |
| 09 | Tanjung La- pang | Pulau Sapi | 3 | Malinau | 3 | |
| 10 | Malinau Se- berang | Salap | 15 | Malinau | 10 | |
| 11 | Salap | Mensalong | 16 | Malinau Lumbis | 8 8 | |
| 12 | Mensalong | Atap | 43 | Lumbis Nunukan | 15 25 | |
| 13 | Ama 1 | Juata Laut | 37 | Tarakan | 25 | |
| 14 | Mamburungan | Amal | 4 | Tarakan | 6 | |
| 15 | Gunung Sari- ang | Mara Ilir | 40 | Tanjung Palas | 40 | |
| 16 | Antutan | Pejalin | 1 | Tanjung Palas | 25 | |
| 17 | Main Road Bu- lungan/Berau | Mangkupadi | 2.3 | Tanjung Palas | 25 | |
| 18 | Mara I | Long Beluah | 15 | Tanjung Palas | 40 | <u></u> |
| 19 | Jelarai Selor | Mara I | 40 | Nunukan | 40 | |
| 20 | Sungai Pan- cang | Sungai Tai- wan | 20 | Nunukan | 15 | |
| 21 | Sungai Tai- wan | Stabu-Liang Bunyu | 15 | Nunukan | 15 | |
| 22 | Sungai Bilal | Sungai Pati- ma | 15 | | 15 | |
| 23 | Selisun | Nunukan | 3 | Nunukan | 3 | |
| 24 | Bangsal Te- ngah | Pangkalan - Bunyu | 10 | Tarakan | 10 | |

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 Timur

KABUPATEN: Bulungan

| LINK | BEGINNING POINT | END POINT | LENGTH | THROUGH TH NAME & LE | Second Contraction of the | REMARKS |
|------|----------------------|----------------------------|--------|-------------------------|---------------------------|------------|
| NO. | (DESA NAME) | (DESA NAME) | (км) | KEC. NAME | LENGTH (KM) | |
| 25 | Sengkawit | Jelarai- Selor | 5 | | 5 | |
| 26 | Tg.Harapan | Jelarai - Selor | 5 | | 5 | |
| 27 | Jelarai - Selor | Gunung Seri- ang | 7 | Tanjung Palas | 7.5 | |
| 28 | Long Bawan | PA. Nado | 14 | Kayan | 15 | |
| 29 | Long Nawang | Long Ampung | 20 | Kayan Hulu | 45 | |
| 30 | Long Nawang | Long Lore | 22 | Kayan Hulu | 60 | |
| 31 | Tideng Pale | Sedulun | 2 | Sesayap | 2 | Dalam Kota |
| 32 | Gunung Belah | Sebengkok | 2 | Tarakan | 2 | Dalam Kota |
| 33 | Selumit | Sebengkok | 1 | Tarakan | 1 | Dalam Kota |
| 34 | Jl. Akbar | Tanah Seribu | 2 | N.I | 2 | Dalam Kota |
| 35 | Jl.H.Mansyur | J1.Akbar | 2 | N.I | 2 | Dalam Kota |
| 36 | Jl.M.T.Har- yono | R.S.U. S.Bu- aya | 5 | N.I | 5 | Dalam Kota |
| 37 | J1.Suprapto | J1.Kuburan | 1 | N.1 | 1 | Dalam Kota |
| - 38 | Tanah Seribu | Sengkawit | 2 | N.I | 2 | Dalam Kota |
| 39 | Agatis | K.N.P.I | 1 | N.I | 1 | Dalam Kota |
| 40 | Tg.Harapan | PAM S. Buaya | 1 | N.I | 1 | Dalam Kota |
| 41 | Tg.Harapan | Kapling Pega- wai | 1 | N.I | 1 | Dalam Kota |
| 42 | Tg.Palas Ilir | Tg.Palas Ulu | 4 | N.I | 4 | Dalam Kota |
| 43 | KS.Tubun | J1. PMD | 1 | N.I | 1 | Dalam Kota |
| 44 | J1.Jalaluddin | Karang Jera- wi | . 2 | N.I | : 2 | Dalam Kota |
| 45 | Karang Jera- wi A | Karang Jera- wi Selatan | 1 | N.I | 1 | Dalam Kota |
| 46 | Karang Jera- wi B | Jl.Jalaluddin | 3 | N.I | 3 | Dalam Kota |
| 47 | Karang Jera- wi A | G. Putih | 1 | N.I | 1 | Dalam Kota |
| 48 | G. Putih | Karang Anyar | 1 | N.I | 1 | Dalam Kota |

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 Timur

KABUPATEN: Bulungan

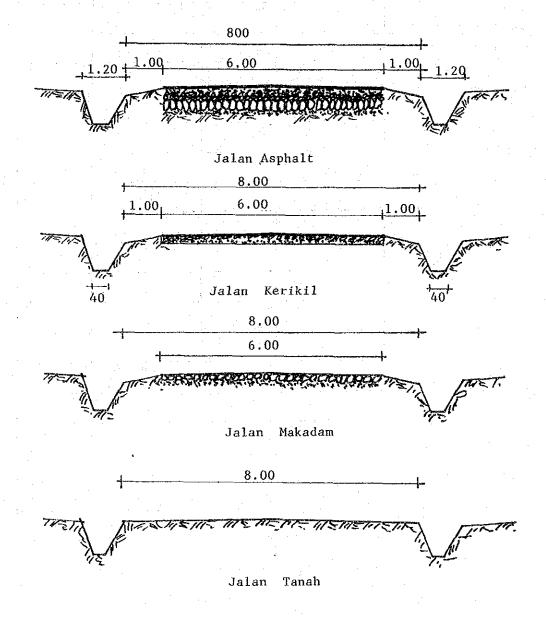
| ľ | ····· | | ************************************** | | | | |
|---|-----------|---------------------------------------|--|---------------------------------------|---------------------------------------|----------------|------------|
| | LINK | BEGINNING POINT | END POINT | LENGTH | THROUGH I NAME & LI | | REMARKS |
| | NO. | (DESA NAME) | (DESA NAME) | (KM) | KEC. NAME | LENGTH (KM) | - REMARKS |
| | 49 | Mesjid Tg. Palas | Karang Anyar | 1 | N.I | 1 | Dalam Kota |
| | 50 | lskandar Mu- da | Tg. Batu | 1 | N.I | 1 | Dalam Kota |
| | 51 | Kecamatan Nunukan | | 4 | N.I | 4 | Dalam Kota |
| | 52 | Pelabuhan | Mambunut | 5 | N.I | 5 | Dalam Kota |
| | 53 | Kampung Rel | Tanjung | 1 | N.I | 1 | Dalam Kota |
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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 Gross 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.



KABUPATEN: Bulungan

LOCATION AND COSTS OF THE KABUPATEN

ROADS CONSTRUCTED OR INPROVED 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) Lebar _lembatan | kerasan Type | LENGTH Panjang (KM) | COSTS Harga (Rp 10 ⁶) | REMARKS Keterang- an |
|-----------------------------|---------------------------------------|--|-------------------------------|-----------------------------|---|----------------------------|
| 11 | Salap - Mensalong | <u>lembatan</u> 3 4 | _lemhatan Gravel Timber | 17 | 167,599 | |
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* 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

16-A-7

E-03-(1)

KABUPATEN: Bulungan

LOCATION AND COSTS OF THE KABUPATEN

ROADS CONSTRUCTED OR INPROVED IN 1981/1982

Biaya konstruksi penanganan

jalan dan jembatan Kabupaten thn. 1981/1982

| LINK NO .: Nomor | .LOCATION From - To | Lebar per- kerasan(m) Lebar | Type per- kerasan Type | LENGTH Panjang | Ĭ | REMARKS Keterang- an |
|------------------------|---------------------------------------|-----------------------------------|------------------------------|---------------------|-----------------------|--|
| Ruas | (dari - ke) | Jembatan 4 | Iype Jambatan Gravel | (KM) | (Rp 10 ⁶) | ell |
| 15 | Amal - Juata | 4 | Timber | • | 302,411 | |
| 26 | Tg Harapan - Jl. Selor | 5 | Gravel | 7.5 | 101,984 | |
| <u></u> | | 4 | Timber Gravel | 5 | 41.045 | |
| 8 | Malinan Pelita - Kenaan Tg. Lapang | 4 | Timber | | 41,945 | |
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* PAVEMENT TYPE : Pls note the appropriate No. below.

1. : Asphalt surface / penetrasi macadam

2. : Asphalt seal / pelaburan aspal

- 3. : Cravel / kerikil
- 4. : Gravel /AWCAS / kerikil / japat

KABUPATEN; Bulungan

LOCATION AND COSTS OF THE KABUPATEN

ROADS CONSTRUCTED OR INPROVED IN 1982/1983

Biaya konstruksi penanganan

jalan dan jembatan Kabupaten thn. 1982/1983

| LINK NO Nomor | LOCATION From - To | Lebar per- kerasan(m) Lebar | kerasan | LENGTH Panjang | COSTS Harga | REMARKS Keterang- |
|---------------------|--|-----------------------------------|----------------------------|-------------------|-----------------------------|----------------------|
| Ruas 25 | (dari ~ ke) Sengkawit - Jelarai Selor | -lembatan4 | Type Lembatan Gravel | (KM) 5 | $\frac{(Rp\ 10^6)}{53,060}$ | an |
| 9 | Tg. Lapang - Pulau Sapi | 4 | Timber Gravel Timber | 2.5 | 24,384 | |
| 19 | Jelapai Selor - Gunung- Seriang-Mara I/Mara Hilir | 4 | Gravel Timber | 40 | 377,544 | |
| 1 | Tg. Palas - Pimping | 4 | Gravel . Timber | 25 | 228,639 | |
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* PAVENENT 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

E-03-(3)

KABUPATEN: Bulungan

LOCATION AND COSTS OF THE KABUPATEN

ROADS CONSTRUCTED OR INPROVED IN 1983/1984

Biaya konstruksi penanganan

jalan dan jembatan Kabupaten thn. 1983/1984

| LINK NO | LOCATION From - To | Lebar per- kerasan(m) | Type perr kerasan | LENGTH Panjang | COSTS Harga | REMARKS Keterang- |
|--|--|--------------------------|--|-------------------|---|--|
| Nomor Ruas | (dari - ke) | Lebar Jembatan 4 | Type Jembatan | (KM) | (Rp 10 ⁶) | an |
| 2 | Pimping - Sekatak Bengara Tideng Pale | 4 | Gravel Timber | 35 | 317,411 | |
| 26 | Tg. Harapan - Jelarai Selo | 4 | Telford Timber | 5.3 | 88,168 | |
| | Kamp. IV - Mamburungan Pantai Amal | 5 | Asphalt Timber | 1.2 | 59,303 | <u></u> |
| 20 | Sungai Pancang - Sungai | 4 | Gravel Timber | 15 | 125,564 | ,, |
| 23 | Taiwan Selisun | 4 | Gravel | 3 | 32,554 | |
| | | 4 | Timber | - | | |
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* 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

16-A-10

E-03-(4)

KABUPATEN: Bulungan

LOCATION AND COSTS OF THE KABUPATEN

ROADS CONSTRUCTED OR INPROVED IN 1984/1985

Biaya konstruksi penanganan

<u>· jalan dan jembatan Kabupaten thn. 1984/1985</u>

| LINK NO Nomor | LOCATION From - To | Lebar per- kerasan(m) | kerasan | LENGTH Panjang | COSTS Harga | REMARKS Keterang- |
|---------------------|---|---------------------------------------|--|--|---------------------------------|----------------------|
| Ruas 3 | (dari - ke) | Lebar Jembatan 4 | Type <u>Jembatan</u> Gravel | (KM) | (Rp ^{10⁶}) | an |
| 3 | | 4 | Timber | 40 | 388,000 | |
| 21 | | 4 | Gravel Timber | 15 | 164,295 | |
| 10 | | 4 4 | Gravel Timber | 10 | 121,325 | |
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" 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

16-A-11

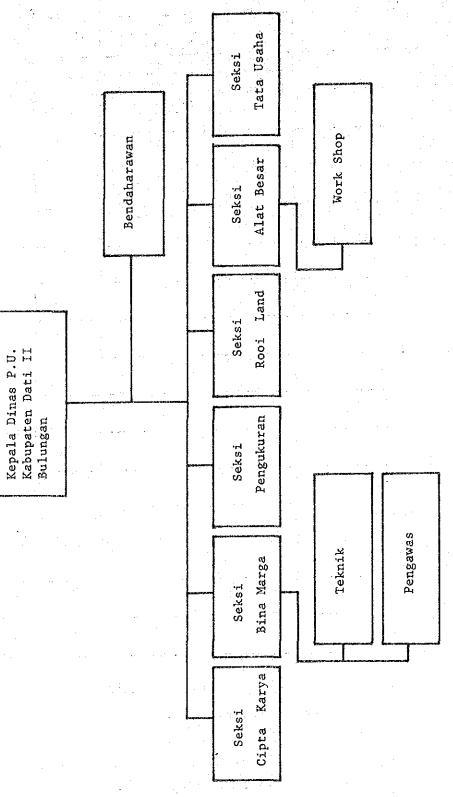
E-03-(5)

KABUPATEN: Bulungan

EXISTING ORGANIZATION IN KABUPATEN

Structur 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

PROPINSI: Kalimantan Timur Tenaga Dinas PUK yang ada

KABUPATEN:Bulungan

| DESCRIPTION /Uraian | NUMBER / Jumlah | REMARKS Keterangan |
|--|-----------------|-----------------------|
| CONTROLING STAFF Staff teknis PUK | <u>(10)</u> | (7) |
| DPUK ENGINEED Sarjana Teknik | - | |
| ASSISTANT ENGINEER Sarjana Muda Teknik | 1 | |
| TECHNICIAN STAFF Staff Teknik (STM) | 9 | 7 |
| ADMINISTRATION Tenaga Administrasi | 5 | - |
| SUPERVISOR Tenaga Pengawas | 8 | |
| | | |
| . WORKING FORCE Tenaga Pelaksana Lapangan | (5) | (3) |
| OPERATORS Operators | 3 | 3 |
| DRIVERS Supir | 2 | - |
| MECHANICS Mechanic | - | - |
| TRADESMAN Tukang | - | - |
| L A B O U R Buruh / Pekerja | - | |
| OTHERS Lain-lain | | - |
| TOTAL / JUMLAN | 28 | 10 |

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

LOCATION AND AREA OF DPUK WORKSHOP

E-06

Lokasi Workshop DPUK PROPINSI : Kalimantan Timur

KABUPATEN: Bulungan

| LOCATION Lokasi | AREA Luas | (m2) | NUMBER Jumlah | REMARKS Keterangan |
|--------------------|--------------|------|------------------|-----------------------|
| Tg. Selor | 138 | | 1 | |
| | | | | |

PROPINSI: Kalimantan Timur

KABUPATEN: Bulungan

LAND ACQUISITION COST Daftar harga pembebasan tanah

| DESCRIPTION Uraian | UNIT Satuan | RATE (RP) Harga | REMARKS Keterangan |
|-----------------------|----------------|--------------------|-----------------------|
| CITY/kota | M2 | 10,000 | Berdasarkan S.K. |
| VILLAGE / desa | M2 | 5,000 | Bupati KDH TK II |
| RICE FIELD/sawah | M2 | 3,000 | Bulungan No. 55 |
| DRY FIELD/ladang | M2 | 2,000 | 1981 |
| MIX CROPS/panen | M2 | 2,000 | Tgl l Desember 1981 |
| FOREST/hutan | M2 | 300 | |
| SWAMP / rawa | M2 | 300 | |
| OTHERS / lain-lain | M2 | 200 | |

E-07

KABUPATEN: Bulungan

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Classification of local contractors at Kabupaten level.

Klasifikasi kontraktor di Kabupaten

| COMPANY NAME CLASS Nama Kontraktor Kelas | | CAPITAL Modal (Rp) | NUMBER OF EMPLOYEE Jumlah pegawai | REMARKS Keterangan | | |
|---|----|-----------------------|--|---------------------------------------|--|--|
| 3 | A2 | 243.000.000 | 14 | | | |
| 7 | B1 | 127.714.000 | 13 | | | |
| 10 | B2 | 62.700.000 | 10 | | | |
| 5 | C1 | 38.100.000 | 8 | | | |
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NOTE: DATI II

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E-08

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KABUPATEN: Bulungan

LIST OF EXISTING EQUIPMENT OF LOCAL CONTRACTOR

Name of contractor

| NAME OF EQUIPMENT | EXISTIN | EXISTING CONDITION/ Kondisi Peralatan | | | | | | | |
|---|---------------|---------------------------------------|--------------------------------------|-----------------|-------------------------|---|---|--|--|
| Jenis peralatan | TYPE/ Tipe | P.Y | NUMBER / J GOOD BAD Baik Rusak | | mlah TOTAL Jumlah | REASON OF BAD CONDT FION/Sebal Kerusakan | MENT /Ke- butuhan peralatan baru | | |
| Bulldozer | D.8. | 1970 | Baik | | 5 | ~ | | | |
| Motor Grader | 125 HP. | 1975 | Baik | | 2 | | | | |
| Tyre Roller | | | | | | - | | | |
| Steel Whell Roller | 8-15 Ton | 1975 | Baik | - | 1 | - | - | | |
| Vibration Roller | 3 Ton | 1980 | Baik | - | 2 | - | - | | |
| Wheel Loader | 95 HP | 1975 | Baik | | 1 | - | - | | |
| Front End Loader and Backhoe | _ | - | - | - | - | - | - | | |
| Mobile Crane | - | - | _ | _ | _ | - | • | | |
| Concrete Mixer | | - | - | - | - | - | | | |
| Stone Crusher | | 1974 | Baik | - | 3 | - | - | | |
| Portable Compressor | - | PC . | - | - | - | | - | | |
| Hydraulic Excavator | _ | - | | - | | - | - | | |
| Asphalt Paving Machine | - | | - | | | - | - | | |
| Asphalt Sprayer | | 1981 | Baik | - | 2 | _ | - | | |
| Asphalt Mixing Machine | - | - | - | | - | _ | - | | |
| Mobile Workshop | - | - | ** | - | _ | - | - | | |
| Mechanic Rammer | - | - | | - | - | - | - | | |
| Plate Tamper | - | - | - | 2 <u>1</u> 8 19 | - | - | - | | |
| Pile Driver | | | - | - | - | ~ | - | | |
| Leg Drill | - | | | - | - | 1 | - | | |
| Nand Hammer | | 1980 | Baik | - | 20 | - | - | | |
| Farm Tractor | _ | : | - | | - | _ | - | | |
| Dump Truck | litsubisi | 1980 | Baik | | 8 | | | | |
| Water Tank Truck | 1. <u>1</u> | 1982 | Baik | | 2 | | - | | |
| Fuel Tank Truck | - | - | - | - | - | ~ | - | | |
| Pick Up | Toyota | 1981 | Baik | | 10 | | | | |
| Jeep | Toyota | 1980 | Baik | | 5 | | - | | |
| Motorcycle | Yamaha | 1981 | Baik | - | 40 | - | _ | | |
| Generator | 7,5 KVA | 1979 | Baik | | 10 | | - | | |
| Water Pump | 3,5 НР | 1980 | Baik | - | 10 | | _ | | |
| Others | 5 KVA | 1981 | Baik | _ | 5 | - | | | |
| ne a alar ya kana ya mana ya farfa ya na a ƙwallon da ya da da ya da da da ya da da A | | | | | | | | | |

KABUPATEN: Bulungan

• •

LIST OF EXISTING EQUIPMENT OF P.U KABUPATEN

| NAME OF EQUIPMENT | EXISTIN | IG CONI | DITION | / Kondi | si Pera | latan | REQUIRE - |
|------------------------------|--|---------|--------------|--------------|-----------|-------------------------|--|
| Jenis peralatan | TYPE/ | | | SR / Ju | | REASON OF BAD CONDT | MENT / Ke- butuhan |
| | Tipe | P.Y | GOOD Baik | BAD Rusak | TOTAL | flon/Sebal Kerusakan | peralatan baru |
| Bulldozer | | | 1 | | | | |
| Motor Grader | ************************************** | · | 1 | - | · · · · · | | ······································ |
| Tyre Roller | | | | | | | |
| Steel Whell Roller | - | | Y | <u> </u> | | | |
| Vibration Roller | | | | | | | |
| Wheel Loader | | | | | | | |
| Front End Loader and Backhoe | | | | 1 | | | |
| Mobile Crane | | | | | | | |
| Concrete Mixer | | | | | | | |
| Stone Crusher | , <u></u> | | | | | | |
| Portable Compressor | •••• •••• ••• ••• ••• ••• ••• | | | | | | |
| Hydraulic Excavator | | | | | | | |
| Asphalt Paving Machine | | | | | | | |
| Asphalt Sprayer | | | | | | | |
| Asphalt Nixing Machine | · · · · · · · · · · · · · · · · · · · | | | | | | |
| Mobile Workshop | • | | | | [| | |
| Mechanic Rammer | | | | | | | |
| Plate Tamper | | | | | | | |
| Pile Driver | | | | | | | |
| Leg Drill | | | | • | | | |
| Hand Hammer | | | · | | | | \ <u>\</u> |
| Farm Tractor | | | | | | | |
| Dump Truck | | | | · | | | · |
| Water Tank Truck | | | | | <u> </u> | | <u> </u> |
| Fuel Tank Truck | | | | | <u> </u> | | |
| Pick Up | | | | | | | |
| Jeep | | | _ | | <u> </u> | | |
| Notorcycle | | | | | <u> </u> | | |
| Generator | | | | | | | |
| Water Pump | | | | | <u> </u> | | - |
| Others | | | | | L | | |

16-A-17

Appendix A-3

CONSTRUCTION AND MAINTENANCE COST FOR PROPOSED ROAD LINKS

PROV I KALIMANTAN TIMUR KAB : BULUNGAN

LINK NO : 5 (IIIC) : LENOTH : 12 Km

UPGRADE : 6.0m road bed, 4.0m road with surface Subbase Cource 10-1

| ITER STATES | UNIT | QUANTITY | LOCAL | COST >>> FOREIGN | ((((() Local | COST Foreign | >>>>> Total |
|---|--------------|---|-------------|--------------------------------------|---------------------------------------|-----------------|----------------|
| | ****** | | | | | | |
| te Clearance in Light Bush | • a 2 | 66000.0 | 278 | 91 | 18,348,000 | 6,006,000 | 24,354,000 |
| ubgrade Preparation | #2 | 72000.0 | | H | 2,520,000 | 792,000 | 3,312,000 |
| ormal Fill | a3 | 0.0 | 2,924 | 863 | 0 | 0 | 0 |
| 11 In Swamp | ₹3 | 0.0 | 4,067 | 1.053 | 0 | 0 | |
| real Excavation to Spoil | #3 | 192.0 | 1,705 | 523 | 327,360 | 100,416 | 427,778 |
| b Base Course | £∉ | 7680.0 | 5,293 | 1,348 | | 10,352,640 | 51,002,880 |
| se Course | a3 | 0.0 | 7,317 | 2,300 | 0 | 0 | i de la c |
| oulder | #2 | 24000.0 | 499 | | 11,976,000 | 3,504,000 | 15,480,000 |
| phall Patching | . 12 | 0.0 | 4,997 | 1,512 | 0 | 0 | |
| rface Dressing (Single) | #2 | 0.0 | 711 | 765 | 0 | 0 | C |
| rface Dressing (Double) | a2 | 0.0 | 924 | 1,207 | 0 | 0 | |
| rth Drain | ar B | 21600.0 | 1,038 | 119 | 22,420,800 | 2,570,400 | 24,991,200 |
| rth Drain in Swamp (by machine) | R J | 0.0 | | 474 | 0 | 0 | |
| pe Culvert D80cm | | 108.0 | 51,840 | 50,140 | 5,598,720 | 5,415,120 | 11,013,840 |
| sonry Culvert (60x80cm) | | 0.0 | 81,531 | 40,282 | 010101120 | ມງບຸເມນ ຄ | |
| taining Wall and Wing Wall (Timber) | a7. | | 14,144 | 246 | 0 | Ō | |
| taining Wall and Wing Wall (Hasonry) | . aš | | 60,126 | 11,692 | 2,308,838 | 448,588 | 2,757,42 |
| bion Protection | BĴ | 0.0 | 20,721 | 120 | | 0 | |
| × Bridge (Timber) | SET | 1.0 | | | 14,953,059 | 1,221,948 | 16,178,000 |
| | SET | | | | 1111001000 | 112231310 | 1011101000 |
| w Bridge (Concrete) | 961 | 1.0 | | en en alle i Alle en alle en alle | | . · · · · · | |
| | | | Sub Total | | 119,103,016 | 30,414,112 | 149,517,128 |
| | | | uuv lotat | | trijivajvio | antitite. | (information |
| erhead (15%) | | | | · · · · · · · · · · · | 17,865,452 | 4,562,116 | 22,427,568 |
| | | | | | 11 Jupol tor | 41001110 | 11111100 |
| | | | TOTAL COST | 1. K. 1. (1993) 1. (19 | 136,968,468 | 34,976,228 | 171,944,698 |
| in the second | | | Terme Goar | 1 | 10011001100 | 211101110 | 111111101 |
| | | | | | | | |
| | | 1 A 1 | | | | 1.1 | - |
| nual routine maintenance of road | Ka | 12.0 | 165,472 | 7,248 | 1,985,664 | 86,976 | 2,072,64 |
| utine maintenance of gravel road | Kø | 12.0 | 327,067 | 88,072 | 3,948,804 | 1,057,104 | 5,005,90 |
| orine motorenance of graver ford | 1,30 | 1110 | Sub Total | 00,011 | 5,934,468 | 1,144,080 | 7,078,54 |
| intenance of Timber Bridge (New) | n 2 | 120.0 | | 1,054 | 1,165,200 | 126,480 | 1,291,68 |
| intenance of Concrete Bridge (New) | | 0.0 | 2,380 | 3,001 | 0 | 1.0,105 | .12.1.100 |
| intenance of Timber Bridge (Exist) | a? | 0.0 | 11,930 | 2,370 | · · · · · · · · · · · · · · · · · · · | ŏ | |
| intenance of Concrete Bridge (Exist) | #2 | | 7,551 | 2,443 | . 0 | ů. | |
| CONCERNER OF CONCIECE OF IDDE SEALS() | . #L | ; ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | r jool | | • | v | · . |
| | | | | | | | |
| | | | | | | | • |
| 14 | 1 | | Earthwork k | Pavoson‡ II. | it Cost (Rp/) | (a) I | 12,778,33 |
| | | | | | nit Cost IRp/n | | 12,778,33 |
| | | | | | | | 1.0.03 |

| Concret | e Bridge | Unit Cost | (Rp/m2) | Ľ | |
|---------|---------------|-------------|---------|---|------------|
| Survive | d Value | | (Rp) | 1 | 20,401,152 |
| Hainten | ance Rate wit | hout Bridge | (%) | t | 4.62 |
| Hen Bri | dge Cost Ral | 12 | (23 | : | 10.82 |

16-A-18 1. A. 1. C.

PROV : KALIMANTAN TIMUR

KAB : BULUNGAN

24 Km

LINK NO : 4 (IIIC)

UPGRADE : 7.0m road bed, 4.0m road with surface Subbase Cource

LENOTH :

| ITEN | · · | | KKK UNI | COST >>> | | | t |
|---|------------|----------|-------------|-----------|------------|---|--|
| | UNIT | QUANTITY | LOCAL | FOREIGN | LOCA | | |
| | | | **** | | | | |
| ite Clearance in Light Bush | a2 | 0,0 | 278 | 71 | | 0 | Λ |
| ubgrade Preparation | ÷ #2 | 168000.0 | 35 | 11 | 5,880,00 | - | v 0 7,728,00 |
| ormal Fill | a 3 | 0.0 | 2,924 | 863 | 0120410 | 0 19010100 | u itirofor |
| ill in Swamp | ø3 | 0.0 | 4,057 | 1,053 | | 0 | ň. |
| ermal Excavation to Speil | e3 | 3168.0 | • | 523 | 5,401,44 | | , 1 7,058,30 |
| ub Base Course | ē2 | 15360.0 | 5,293 | 1,348 | 81,300,48 | | |
| ase Course | ∎3 | 0,0 | 7,317 | 2,300 | | | 0 rorjoogin |
| houlder | a2 | 72000.0 | 499 | 146 | 35,928,00 | - | |
| sphalt Patching | a2 | 0.0 | 4,997 | 1,512 | naisenta | Λ ΙΟ <u>Ι</u> ΔΙΖΙΟΟ | ν ιυ _μ τιν _μ υυ Δ |
| urface Dressing (Single) | | 0.0 | 711 | 766 | | 0 | ĥ |
| urface Dressing (Double) | | 0,0 | 924 | 1,207 | | ۵ (| e R |
| arth Drain | | 0.0 | 1,039 | 119 | | 0 | n i i i i i i i i i i i i i i i i i i i |
| arth Drain in Swamp (by machine) | #3 | 0.0 | 2,008 | 474 | ÷. | â | ĥ |
| ipe Culvert DBOcm | 9 | 312.0 | 51,840 | 50,140 | 16,174,00 | 30 15,643,68 | 0 31,817,7 <i>0</i> |
| asonry Culvert (80x80cm) | 9 | 0.0 | 81,531 | 40,282 | 16111110 | 0 191919100 | 0 01186611 1 |
| etaining Wall and Wing Wall (Timber) | a2 | .0.0 | 14,144 | 246 | | - | ¢ N |
| etaining Wall and Wing Wall (Masonry) | 83 | 76.8 | 60,126 | 11,682 | 4,617,62 | - | , 7 5,514,85 |
| abion Protection | 83 | 0.0 | 20,721 | 120 | | | 0 |
| ew Bridge (Timber) | SET | 1.0 | | | | 0 . | 0 |
| en Bridge (Concrete) | SET | 1.0 | | | | 0 | 0 |
| an an Araba An Araba an Araba An Araba an Araba | | · . | Sub Total | | 149,301,62 | 6 51,263,00 | 1 200,564,62 |
| verhead (15%) | | | | | 22,395,2 | 51 7,689,45 | 0 30,084,70 |
| | | | TOTAL COST | | 171,696,92 | 27 58,952,45 | 1 230,649,37 |
| | | **** | | | | . ge ga at de lei er er in en an in in an | |
| anual routine maintenance of road | Ka | | 165,472 | 7,248 | 3,971,3 | | |
| outine maintenance of gravel road | Ke | 24.0 | | 88,092 | 7,897,6 | | |
| | | | Sub Total | | 11,868,93 | 56 2,288,16 | 0 14,157,09 |
| aintenance of Timber Bridge (New) | ¤2 | 0.0 | 9,710 | 1,054 | | | 0 |
| aintenance of Concrete Bridge (New) | =2 | 0.0 | • | 3,001 | | • | 0 |
| aintenance of Timber Bridge (Exist) | B 2 | 50.0 | 11,930 | 2,370 | 715,80 | | |
| aintenance of Concrete Bridge (Exist) | · e2 | 0.0 | 7,551 | 2,443 | | 0 | 0 |
| | | | | | | | |
| | | | Earthwork & | | hit Cost | (Rp/Ka) : | 9,610,3 |
| | | | linder | | hit Cost | (Rp/a2) : | |
| | | | Concrete | | Init Cost | (Rp/m2) : | |
| | | | Sur vi ved | Yalue | | (Rp) : | - 1Y- |
| | | | Maintenance | | it Bridge | (1) : | |
| · · · · · · · · · · · · · · · · · · · | | - | New Bridge | Cost Rate | | · (1) - 1 | |

PROV

ŝ

* KALIMANTAN TIMUR

12 (IIIB-2)

KAB : BULUNGAN

43 Km

LINK NO

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

LENGTH :

(Rp)

| | | | | | · · · · · · · · · · · · · · · · · · · | | (Rp) |
|--|------------|----------|---|-----------|---------------------------------------|---------------|--|
| 11EN | | | (<< UNIT | COST >>> |) (| ((((COST | >>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>> |
| | UNIT | QUANTITY | LOCAL | FORELGN | LOCA | L FOREIGN | A101 |
| | | ***** | F = = = 5 = = = = = = = = = = = = = = = | | | · · · · · · · | |
| Site Clearance in Light Bush | a2 | 172000.0 | 278 | 91 | 47,816,00 | | |
| Subgrade Preparation | M2 | | 35 | - 11 | 10,535,00 | | |
| loreal Fill | ÷ 63 | 0.0 | 2,924 | 863 | | 0 0 | |
| fill in Swamp | n 3 | | 4,067 | 1,053 | 135,431,10 | | |
| formal Excavation to Spoil | m3 | 5031.0 | 1,705 | 523 | 8,577,85 | | |
| Sub Base Course | m 3 | 24080.0 | 5,293 | 1,349 | | | |
| Pase Course | | 10320.0 | 7,317 | 2,300 | 75,511,44 | | |
| Shoulder | B2 | 129000.0 | 499 | - 146 | 64,371,00 | 0 18,834,000 | 83,205,00 |
| Asphalt Patching | # 2 | 0.0 | 4,997 | 1,512 | | 0 0 | |
| Surface Dressing (Single) | •2 | 0.0 | 711 | 766 | | 0 | |
| Surface Dressing (Double) | 62 | 0.0 | 924 | 1,207 | | 0 0 | |
| Earth Drain | a | 0.0 | 1,038 | 119 | | 0 0 | |
| Earth Drain in Swamp (by machine) | - . | 36000.0 | 2,008 | - 474 | 72,288,00 | 0 17,064,000 | 89,352,00 |
| Pipe Culvert DBOcm | , A | 0.0 | 51,810 | 50,140 | | 0 0 | |
| Hasonry Culvert (80x80cm) | 4 | 0.0 | 61,531 | 40,282 | | 0 | |
| Retaining Hall and Hing Hall (Timber) | n2 | 0.0 | 14,144 | 246 | | 0 0 | 14 |
| Retaining Wall and Wing Wall (Masonry) | | 0.0 | 60,125 | 11,682 | | 0 0 | |
| Sabion Protection | B 3 | 0.0 | 20,721 | 120 | | 0 0 | |
| Ren Bridge (Timber) | SET | 1.0 | | | 29,228,11 | 6 2,309,128 | 31,617,24 |
| New Bridge (Concrete) | 5E1 | 1.0 | | | | Û Û | ÷ • • |
| · · · · · · · · · | | | Sub Total | | 571,213,95 | 1 151,142,081 | 722,356,03 |
| Iverhead (15%) | | | | | 85,682,09 | 2 22,671,312 | 108,353,40 |
| | | : | TOTAL COST | | 656,896,04 | 3 173,813,393 | 830,709,43 |
| | | | | | | | • • |
| | | | | | | · | |
| fanual routine maintenance of road | Ka | 43.0 | 165,472 | 7,248 | 7,115,29 | 311,66 | 7,426,98 |
| Routine maintenance of gravel road | Ka | 43.0 | 329,067 | 88,092 | 14,149,00 | 3,787,950 | |
| | | | Sub Total | | 21,265,17 | 7 4,099,620 | |
| Haintenance of Timber Bridge (New) | n2 | 240.0 | 9,710 | 1,054 | 2,330,40 | 252,960 | 2,593,36 |
| Maintenance of Concrete Bridge (Newl | ¢2 | 0.0 | 2,380 | 3,001 | | Q (|) 1 |
| Haintenance of Timber Bridge (Exist) | e2 | 0.0 | 11,930 | 2,370 | | 0 0 |) - |
| Naintenance of Concrete Bridge (Exist) | a2 | 0.0 | 7,551 | 2,443 | • • • • • | 0 (|) |
| | | | | | | | |
| | | | Earthwork & | | | (Rp/Km) : | 18,473,2 |
| | | | Tinber | • • • • | Unit Cost | (Rp/#2) : | 151,4 |
| | | | Concrete | | Unit Cost | (Rp/#2) : | |
| | | | Survived | Value | | (Rp) 1 | 79,957,6 |
| · · · · | | | Maintenance | | ut Bridge | (2) 3 | 3. |
| | | | New Bridge | Cost Rate | | (1) : | 4,3 |

PROV

KALIMANTAN TIMUR KAB : BULUNGAN 1

LINK ND : 11 (IIIC) LENGTH : 16 Km

UPGRADE : 10.0m road bed, 4.0m road with surface Subbase Cource

| ITEH Valoria da anti-articlaria da anti- | UNIT | QUANTITY | LDCAL | COST >> FOREIGN | | COST FORETEN | >>>>> 10101 |
|---|------------|----------|--------------|--------------------|-------------|-------------------|----------------|
| | | ***** | 44668722.ne, | | | ***************** | |
| lite Clearance in Light Bush | #2 | 0.0 | 278 | 91 | . 0 | A | |
| Subgrade Preparation | a2 | 160000.0 | -35 | 11 | | | 7,360,00 |
| loreat Fill | · #3 | 150.0 | 2,924 | 863 | | | |
| ill in Swamp | e3 | 0.0 | 4,067 | 1,053 | | • | 568,05 |
| lormal Excavation to Spoil | e3 | 108.0 | 1 705 | 523 | | | |
| lub Base Course | •3 | 10240.0 | 5,293 | 1,348 | | | 240,62 |
| lase Course | a3 | | | 2,300 | | • • | 68,003,B4 |
| lioutder | #2 | 96000.0 | 499 - | 146 | | • | L\$ 030 00 |
| isphalt Patching | 12 | 0.0 | 4,997 | 1,512 | | · · · | 61,920,00 |
| Surface Dressing (Single) | B 2 | 0.0 | 711 | 766 | | • | |
| iurface Dressing (Double) | a2 | 0.0 | 924 | 1,207 | • | | |
| arth Drain | | 15240.0 | 1,038 | 119 | | (BIT 5/0 | 17 /79 /8 |
| arth Drain in Swamp (by machine) | #3 | 0.0 | 2,008 | 474 | | | 17,632,68 |
| 'ipe Culvert DBOcm | | 25.0 | 51,840 | | | • | .D. C4D. C4 |
| fasonry Culvert (80x80cm) | | 0.0 | | 50,140 | | | 2,549,50 |
| Retaining Hall and Wing Hall (Timber) | •2 | 200.0 | | 40,282 | | • | 0 0 0 0 0 0 0 |
| Retaining Wall and Wing Well (Masonry) | a3 | 209.6 | 14,144 | 246 | | | 2,878,00 |
| labion Protection | | | 60,126 | 11,682 | | - | 15,050,95 |
| len Bridge (Timber) | a3 CCT | 0.0 | 20,721 | 120 | | 0 | . 1 |
| len Bridge (Concrete) | SET | 1.0 | *- | | 0 | • | i |
| ski ditađe isnistetet | SET | 1.0 | | | 0 | ,0 | |
| | | | Sub Total | | 140,873,389 | 35,330,261 | 176,203,65 |
| Iverhead (15%) | | · · | | | 21,131,008 | 5,299,539 | 26,430,54 |
| | | | TOTAL COST | | 162,004,397 | 40,629,800 | 202,634,19 |
| anual routine maintenance of road | Ka | 16.0 | 165,472 | 7,248 | 2,647,552 | 115,968 | 2,763,52 |
| loutine maintenance of gravel road | Ke | | 329,067 | 68,092 | | | 6,674,54 |
| ······································ | | | Sub Total | | 7,912,624 | | 9,438,06 |
| laintenance of Timber Bridge (New) | ⇒Z | 0.0 | 9,710 | 1,054 | | | .1.00100 |
| laintenance of Concrete Bridge (Hew) | #2 | | 2,380 | 3,001 | | | |
| laintenance of Timber Bridge (Exist) | #2 | | 11,930 | 2,370 | | - | 4,862,00 |
| laintenance of Concrete Bridge (Exist) | #Z | 0.0 | 7,551 | 2,443 | | | 1002100 |
| | | | | | | ************* | |
| | | | Earthwork & | | | Rp/K#) : | 12,664,63 |
| | | | Tinber | | | Rp/#2) : | |
| · · · · · | | | Concrete | | Unit Cost (| Rp/#2) : | |
| | | | Survived | Value | | (Rp) : | 27,201,53 |
| | | | Maintenance | | ut Bridge | (1) : | 4.6 |
| : | | | Nex Bridge | Cost Rate | | (7) : | |

PROV : KALIMANTAN TIMUR

KAB : BULUNGAN

LINK ND : 8 (IIIB-1) LENGTH : 13 Km

UFGRADE : 6.5m road bed, 4.5m road with surface Dressing (1)

(Rp)

| | | · · · · | | | | · | (Rp) |
|--|------------------|----------|---------------------------|----------|-------------|--------------|------------|
| 11EN | | | (((UNII | COST >>> | | <<< COST | >>>>>> |
| | UNIT | QUANTITY | LOCAL | FOREIGN | LOCAL | FOREIGN | ALOI |
| A11. 01 | - 7 | | | | 119 000 | 171 644 | FE3 64 |
| Site Clearance in Light Bush | 62 | | | 91 | 417,000 | | 553,50 |
| Subgrade Preparation | B2 -7 | 84500.0 | 35 | . 11 | 2,957,500 | 929,500 | 3,887,00 |
| Normal Fill | - a 3 | | | 863 | 2,924,000 | 863,000 | 3,787,00 |
| Fill in Swamp | e3 | | 4,067 | 1,053 | 0 | 0 101 005 | 7 776 81 |
| Normal Excavation to Spoil | " a 3 | | 1,705 | 523 | 2,510,975 | 781,895 | 3,330,88 |
| Sub Base Course | #3 | | 5,293 | 1,348 | 43,349,670 | | |
| Base Course | 2.3 | | 7,317 | 2,300 | 29,963,115 | | 39,381,61 |
| Shoulder | s2 | | 499 | | • • | | 16,770,00 |
| Asphalt Patching | . 62 | | 4,997 | 1,512 | | 0 | |
| Surface Dressing (Single) | #2 | 58500.0 | 711 | 766 | 41,593,500 | 44,811,000 | 86,404,50 |
| Surface Dressing (Double) | ÷ #2 | 0.0 | 924 | 1,207 | 0 | 0 | |
| Earth Drain | · • | 17820.0 | 1,038 | 119 | 18,497,160 | 2,120,580 | 20,617,74 |
| Earth Drain in Swamp (by machine) | a3 | 0.0 | 2,008 | . 474 | 0 - 1 | 0 | |
| Pipe Culvert DBOcm | A | 167.0 | 51,840 | 50,140 | 8,760,960 | 0,473,660 | 17,234,62 |
| Hasonry Culvert (80x80cm) | | | | 40,282 | 3,261,240 | 1,611,280 | 4,872,52 |
| Retaining Hall and Wing Hall (Timbe | er) n2 | | 14,144 | | 1,414,400 | | 1,439,00 |
| Retaining Wall and Wing Wall (Mason | | 364.9 | 60,126 | 11,692 | 21,939,977 | | 26,202,73 |
| Sabion Protection | a3 | | | 120 | 0 | | |
| New Bridge (Timber) | SET | | | | 8,749,637 | 723,270 | 9,472,90 |
| lew Bridge (Concrete) | SEI | 1.0 | | | 0 | 0 | |
| • • • | | | Sub Totai | : : | 199,351,134 | 88,992,656 | 288,343,79 |
| Iverhead (15%) | | | | | 29,902,670 | 13,348,890 | 43,251,51 |
| ······································ | | | | | | | |
| | | | IOTAL COST | | 229,253,804 | 102,341,554 | 331,595,35 |
| | | | | | | | |
| fanual routine maintenance of road | Ka | 13.0 | 165,472 | 7,248 | 2,151,136 | 94,224 | 2,245,3 |
| coutine maintenance of asphalt road | l Ke | 13,0 | 499,700 | 151,200 | 6,476,100 | 1,965,600 | 0,461,7 |
| | | | .Sub Total | | 8,647,236 | | 10,707,0 |
| laintenance of Timber Bridge (New) | ¥2 | 69.0 | 9,710 | 1,054 | 621,440 | | 688,8 |
| iaintenance of Concrete Bridge (New | | | 2,380 | 3,001 | 0 | | |
| laintenance of Timber Bridge (Exist | | | • | 2,370 | 1,336,160 | 265,440 | 1,601,60 |
| faintenance of Concrete Bridge (Exi | | | 7,551 | 2,443 | 0 | 0 | |
| naritenance of concrete of toge (cx) | | | | | v | v. | |
| · · · · | | | Caribuart 1 | Davagest | lait fact / | Po /Kal | 71 110 7 |
| | · ··· | | Earthwork & | | | Rp/Ka) t | 24,669,3 |
| | | | Tinber | | | Rp/m21 : | 170,2 |
| | • | | Concrete | | | Rp/n2) : | 15 516 ··· |
| • | | | Survived | Value | | (Rp) : | 45,949,1 |
| | | • | Naintenance New Bridge | | ut Bridge | (2) 1 | 3. |
| | | | | | | (Ω) : | 3.3 |

FROV : KALIMANTAN TIMUR KAB : BULUNBAN

LINK ND : 7 (IIIC) LENGTH : 25 Km

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

| ΙΤΕΝ | UNIT | QUANTITY | <<< UNI Local | FORELGK | • | <cost L Foreign</cost | >>>>>> Total |
|--|-----------|---------------------|--------------------|-----------|-------------|------------------------------|-----------------|
| ilte Clearance in Light Bush | •2 | 1775A A | A10 | | | | |
| Subgrade Preparation | | 13750.0 150000.0 | 278 | 91 | | | 5,073,750 |
| loraat Fill | 82 83 | | 35 | 11 | 5,250,000 | | 6,900,00 |
| ill in Swamp | | 0.0 | 2,924 | 863 | | | |
| lormal Excavation to Spoil | #3 - 7 | | 4,067 | 1,053 | 233,852,500 | | 294,400,00 |
| Sub Base Course | . 03 | | 1,705 | 523 | 682,000 | | 891,20 |
| lase Course | - 43 | 16000.0 | 5,293 | 1,349 | • • | • • | 106,256,00 |
| houlder | #3 | | 7,317 | 2,300 | | 0 0 | |
| | #Z | | 499 | 146 | | 0 7,300,000 | 32,250,00 |
| isphalt Patching | #2 | 0.0 | 4 ₁ 997 | 1,512 | • | 0 0 | |
| Surface Dressing (Single) | #2 | 0.0 | 711 | 766 | (| 0 0 | |
| Jurface Dressing (Double) | #2 | 0.0 | 924 | 1,207 | t | 0 0 | |
| arth Drain | 8 | 45000.0 | 1,038 | 119 | 46,710,00 | 0. 5,355,000 | 52,065,00 |
| arth Drain in Swamp (by machine) | e3 | 62500.0 | 2,008 | - 474 | 125,500,00 | | |
| ipe Culvert D80cm | * | 275.0 | 51,840 | 50,140 | | | |
| lasonry Culvert (BOxBOca) | 9 | 0.0 | 81,531 | 40,282 | | | 1 1 |
| letaining Wall and Wing Wall (Timber) | #Z | 80.0 | 14,144 | 246 | | 0 17,680 | 1,151,20 |
| letaining Wall and Wing Wall (Masonry) | #3 | 0.0 | | 11,692 | | 0 0 | |
| abion Protection | n3 | 0.0 | 20,721 | 120 | | 0 0 | |
| lex Bridge (Tinber) | SET | 1.0 | | | 48,639,64 | • • | 52,625,00 |
| len Bridge (Concrete) | SET | 1.0 | | | | 0 0 | |
| | | • | Sub Total | | 587,482,154 | 9 145,299,489 | 734,781,65 |
| lverhead { ISX } | | | | | 88,422,32 | 5 21,794,923 | 110,217,24 |
| | | | TOTAL COST | | 677,904,49 | 1 157,094,412 | 814,998,90 |
| lanual routine maintenance of road | Ke | 25.0 | 163,472 | 7,248 | 4,136,80 | 0 181,200 | 4,318,00 |
| outine maintenance of gravel road | Ke | 25.0 | 329,067 | 88,092 | | | |
| | | | Sub Total | * | 12,363,47 | • • | |
| aintenance of Timber Bridge (New) | #2 | 375.0 | 9,710 | 1,054 | | | 4,036,50 |
| aintenance of Concrete Bridge (New) | #2 | 0.0 | 2,380 | 3,001 | • • | 0 0 | .,, |
| aintenance of Timber Bridge (Exist) | •7 | 0.0 | | 2,370 | | 0 0 | |
| aintenance of Concrete Bridge (Exist) | •2 | 0.0 | 7,551 | 2,443 | | 0 0 | |
| | | | | | | | |
| | | | Earthwork & | | | (Rp/Ka) : | 31,379,20 |
| | | | Tisber | | | (Rp/m2) 3 | 181,38 |
| | | | Concrete | • | Init Cast | (Rp/#2) : | |
| | | | Survived | Value | | (Rp) : | 42,502,40 |
| | | | Maintenance | | ut Bridge | (2) : | 1.8 |
| | | | New Bridge | Cost Rate | | {X} : | 7.1 |

PROV

KALIMANTAN TIMUR

(Rp)

LÍNK NO (1110) LENGTH 24 Km 3 t 2

2

UPGRADE : 7.0m road bed, 4.0m road with surface Subbase Cource

| ITEN Distances | - | QUANFITY | | CUST >>> | LÜC | {((((AL | COST Foreign | / |
|--|--------------|------------|-------------|-------------|-----------|-------------|-----------------|--|
| | | ****** | ******* | *** | | | | 41. 34 pe 24 44 pe 46 fe 16 fe 16 fe 16 fe |
| lite Clearance in Light Bush | # 2 | 0.0 | 278 | 91 | | 0 | ·0 | un num a |
| Subgrade Preparation | 12 | 0.0 | - 35 - | | | 0 | . 0. | ti shala |
| lormal Fill | • • 3 | 0.0 | 2,924 | 863 | | 0 | 0 | · . |
| fill in Swamp | · # 3 | 0.0 | - | 1,053 | | 0 | 0 | 1 |
| lormal Excavation to Spoil | ∎3 | 0.0 | 1,705 | 523 | | 0 | | e de la Carlo |
| ub Base Course | еJ | | 5,293 | 1,318 | 5,589,4 | 08 1 | 423.400 | 7,012,8 |
| lase Course | a3 | 5760.0 | | 2,300 | 42,145,9 | | ,248,000 | 55,393,97 |
| ihoulder | •2 | 72000.0 | 499 | 146 | 35,928,0 | | 512,000 | 46,440,00 |
| sphalt Patching | #2 | 0.0 | | 1,512 | | 0 | 0 | |
| ourface Dressing (Single) | #2 | 0.0 | 711 | 766 | 1.1 | 0 | . 0 | |
| Surface Dressing (Double) | #2 #2 | 0.0 | 924 | 1,207 | | Ô | · · · · | |
| Earth Drain | | 0.0 | 1,039 | 117 | | ð | · ^ | |
| arth Drain in Swamp (by machine) | •3 | 0.0 | 2,008 | 474 | | 6 | Å | |
| ipe Culvert DBOce | | 0.0 | 51,840 | 50,140 | | A . | · Å | |
| lasonry Culvert (BoxBoc#) | E A | 0.0 | | 40,282 | | ٥ ٥ | Ň | |
| etaining Wall and Wing Hall (Timber) | . =2 | 0.0 | 54 144 | 246 | | Ó | v ۵ | |
| etaining Wall and Wing Wall (Masonry) | . <u>n</u> z | | 60,125 | 11,692 | | V | v A | |
| abion Protection | #3 #3 | 0.0 | | 120 | 1 - F - F | n i | | |
| | SET | 0.0 | 20,721 | 120 | | 0 | 0- 0- | |
| ен Bridge (Ti#ber) ен Bridge (Concrete) | SET | 1.0 1.0 | | | | 0 | v 0 | |
| ek prinde (ravc le (6) | 521 | 1.0 | · | | | V | . y | |
| $= \sum_{i=1}^{n} \left(\frac{1}{2} \sum_{i=1}^{n} \left(\frac{1}{2} \sum_{i=1}^{n} \sum_{j=1}^{n} \left(\frac{1}{2} \sum_{i=1}^{n} \sum_{j=1}^{n} \sum_{j=1}^{n} \sum_{i=1}^{n} \sum_{j=1}^{n} \sum_{i=1}^{n} \sum_{j=1}^{n} \sum_{j=1}^{n} \sum_{i=1}^{n} \sum_{j=1}^{n} \sum_{j=1}^{n} \sum_{i=1}^{n} \sum_{i=1}^{n} \sum_{i=1}^{n} \sum_{j=1}^{n} \sum_{i=$ | | • • | Sub Total | | 82199213 | 28 25 | ,183,488 | 108,845,8 |
| verhead (15%) | | | | | 12,549,4 | 99 3 | ,777,523 | 16,327,0 |
| | | | TOTAL COST | | 96,212,6 | 27 28 | ,961,011 | 125,173,8 |
| | | ****** | | | | | | |
| anual routine maintenance of road | Ka | 24.0 | 165,472 | 7,248 | 3,971,3 | 28 | 173 952 | 4,145,2 |
| outine maintenance of gravel road | Ke | 24.0 | 329,067 | 88,092 | 7,897,6 | 08 2 | ,114,209 | 0,011,8 |
| | | | Sub lotal | | 11,868,9 | | ,288,160 | 14,157,0 |
| aintenance of Timber Bridge (New) | a2 | 0.0 | 9,710 | 1,054 | | | . 0 | |
| sintenance of Concrete Bridge (New) | #2 | 0.0 | 2,380 | 3,001 | | 0 | 0 | .* |
| aintenance of Timber Bridge (Exist) | »2 | 60.0 | 11,930 | 2,370 | 715,8 | 00 | 142,200 | 858,0 |
| aintenance of Concrete Bridge (Exist) | , # 2 | 0.0 | 7,551 | 2,443 | · . · | 0 | . 0 | |
| | | : | | | | | | |
| | | | Earthwork & | Pavesant II | alt Pack | (Rp/Ks) | 1 | 5,215,5 |
| | | | Tiøber | | nit Cost | (Rp/#2) | | 41114 |
| | | | Concrete | | nit Cost | (Rp/m2) | | |
| · . | | 2 | Survived | Value vi | | | | ግ ወለፍ ቀ |
| | | | Maintenance | | Reidan | (Ap) (7) | 1 | 2,805,1 |
| | | | New Bridge | | r ni tađe | (7) | 1 | Ц. |
| | | | HEN DUIDGE | SUSE RALE | | (%) | : | |

FROV

I KALIMANTAN TIMUR

2 (IIIC)

KAB : BULUNGAN

LENGTH : 32 Km

LINK NO

1

UPGRADE : 7.0m road bed, 4.0m road with surface Subbase Cource

| ITEN. A | UNIT | QUANTITY | <<< UNIT | COST >>> Foreign | <pre> Cocal Cocal</pre> | <<< COST FOREIGN | >>>>> Total |
|--|------------|----------|-------------|---------------------|---|---------------------|----------------|
| | | | | | | | ************ |
| Site Clearance in Light Bush | #2 | 0.0 | 278 | 91 | 0 | . 0 | c |
| Subgrade Preparation | ∎2 | 84000.0 | 35 | | 2,940,000 | | 3,864,000 |
| Normal Fill | #3 | 0.0 | 2,924 | 863 | -1 | 0 | 0,001,000 |
| fill in Swamp | | 0.0 | 4,067 | 1,053 | ů | 0 | |
| Normal Excavation to Spoll | #3 | | 1,705 | 523 | 2,182,400 | | 2 051 04 |
| Sub Base Course | #3 | | 5,293 | 1,348 | 41,073,680 | | |
| Base Course | #3 | | 7,317 | 2,300 | | | |
| Shoulder | #2 | | 499 | 146 | 35,121,600 | | 46,161,600 |
| Asphalt Patching | •2 | 0.0 | 4,997 | | 47,904,000 | | 61,920,000 |
| Surface Dressing (Single) | #2 | | | 1,512 | 0 | 0 | (|
| Surface Dressing (Double) | | | 711 | 766 | 0 | 0 | · (|
| | #2 | | 924 | 1,207 | • 0 | Q . | (|
| | Đ - T | 0.0 | 1,038 | 119 | 0 | 0 | (|
| Earth Drain in Swamp (by machine) | #3 | 0.0 | 2,008 | 474 | 0 | 0 | . (|
| Pipe Culvert D80c# | 8 | 10.0 | 51,840 | 50,140 | 518,400 | 501,400 | 1,017,80 |
| Nasonry Culvert (BOx80cm) | 8 | 0.0 | 81,531 | 40,282 | Q | 0 | I. |
| Retaining Wall and Wing Wall (Timber) | a2 | 0.0 | - 14,144 | 246 | 0 | 0 | 4 |
| Retaining Wall and Wing Wall (Masonry) | #3 | 0.0 | 60,126 | 11,602 | Ö | 0 | (|
| Gabion Protection | s 3 | 0.0 | • | 120 | 0 | O | |
| New Bridge (Tisber) | SET | 1.0 | | | ů. | | |
| New Bridge (Concrete) | SEI | 1.0 | | ~~ | 0 | 0 | ! |
| | | | Sub Total | | 129,740,080 | 37,611,320 | 167,351,400 |
| Overhead (15%) | | ÷. | · . | | 19,461,012 | 5,641,698 | 25,102,710 |
| | | • | TOTAL COST | | 149,201,092 | 43,253,018 | 192,454,110 |
| | | | .********** | | • 8 3 8 4 4 4 4 4 4 4 5 5 4 5 5 5 | | |
| Nanual routine maintenance of road | Ka | | | 7,249 | 5,295,104 | 231,936 | 5,527,04 |
| Routine maintenance of gravel road | Кв | 32.0 | | 88,092 | 10,530,144 | 2,818,944 | 13,349,08 |
| | | | Sub Total | | 15,825,248 | 3,050,880 | 18,876,12 |
| Haintenance of Timber Bridge (New) | ø2 | 0:0 | 9,710 | 1,054 | 0 | 0 | I |
| Naintenance of Concrete Bridge (New) | #2 | 0.0 | 2,380 | 3,001 | 0 | 0 | : |
| Haintenance of Timber Bridge (Exist) | 6Ž | 60.0 | | | | 142,200 | 858,00 |
| Haintenance of Concrete Bridge (Exist) | 92 | 0.0 | | 2,443 | . 0 | . 0 | |
| | | | | | | | ********* |
| | | | Firthursh 4 | Daugarsk H. | | | 6 614 10 |
| | | | | Pavement Un | | p/Ke) : | 6,014,19 |
| | | | Tiaber | | | p/=2) : | |
| | | | Concrete | · · · · · | | p/#2] 1 | |
| | ÷ | | Survived | Value | | (Rp) 3 | 20,613,66 |
| | | | | Rate without | t Bridge | ()) 1 | 9.8 |
| | | | Ken Bridge | fnet Rate | | (2) 1 | |

Appendix A-4

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

PROV : KALIMANTAN TIMUR KAB : BULUNGAN

· · ·

| ITEH | UNIT | < 1988 > | (1989) | (1990) | (1991) | (1992) | (TOTAL) | |
|---|--------------------|----------|-------------|--|---------------------------|----------|------------------------------|---|
| | | | | | | | • | |
| IVIPHENT I | | | 1 | n Ser ser | | | • | |
| Bulldozer/Ripper | hr | 672.0 | 917.0 | 215.2 | 948.5 | 1218.6 | 3971.3 | |
| Swamp Bulldozer | hr | 0.0 | 207.5 | 1437.4 | 413.6 | 888.0 | 3026.5 | |
| Hotor Grader | hr hr | 1523.6 | 1908.2 | 772.5 | 2301.1 | 1821.7 | 9327.1 | |
| Hand-guide Vib. Roller | hr | 6.9 | 666.3 | 382.8 | 1389.2 | 150.2 | 2595.4 | : |
| Tire Roller | hr | 0.0 | 0.0 | 0.0 | 487.4 | 0.0 | 487.4 | |
| Vibratory Roller (D&T) | hr | 1050.4 | 1882.1 | 1047.5 | 2252.2 | 2180.0 | 9212.2 | |
| Rydraulic Excavator; Wheel | hr | 0.0 | 703.1 | 3515.6 | 1013.4 | 2160.0 | 7392.1 | |
| Nheel Loader | hr | 1690.6 | 2441.2 | 2458.3 | 3002.4 | 3667.6 | 13260.1 | |
| Water Tank Truck | hr | 539.2 | 1156.4 | 1302.3 | 1386.1 | 1478.3 | 5862.3 | |
| Dump Truck | hr | 12009.1 | 21413.6 | 24434.6 | 26865.5 | 25845.8 | 110568.6 | |
| Flat Bed Truck with Crane | hr i | B.0 | 628.9 | 477.9 | 753.9 | 196.4 | 2055.1 | • |
| Flat Bed Truck | hr | 2.8 | 232.7 | 138.1 | 974.6 | 50.0 | 1398.2 | |
| Portable Crusher/Screening | hr | 332.1 | 47.7 | A REAL PROPERTY OF A REAL PROPER | 274.3 | 291.3 | 948.6 | |
| Concrete Nixer | hr - | . 1.7 | 148,1 | | 411.7 | 0.0 | 576.8 | |
| Water Pump | hr | 1.7 | 125.0 | | 289.1 | 0.0 | 451.1 | |
| Concrete Vibrator | hr | 1.7 | 79.0 | 35.3 | 43.9 | 0.0 | 159.9 | |
| Asphalt Sprayer | hr | 0.0 | 0.0 | | 487.4 | 0.0 | 487.4 | ÷ |
| 180UR 1 | · . · | • | • · · · · • | | | · · · · | : | |
| Handur | man day | 595.7 | 2143.2 | 2536.0 | 2763.8 | 1816.7 | 9855.4 | |
| Skilled Labourer | man day | 6.9 | 1985.4 | 2907.7 | 2176.7 | 1741.7 | 8818.4 | |
| Carpenter | wan day | 0.5 | 925.1 | 1503.9 | 941.6 | 939.5 | 4310.6 | |
| Hason | nan day | 0.0 | 115.2 | 0.0 | 613.0 | 0.0 | 728.2 | |
| rason Fsponter | man day | 4584.5 | | 23959.3 | 27412.0 | 12615.6 | 88274.2 | |
| Dr i ver | aan day | 2121.1 | 4012.1 | 4650.7 | 5276.9 | 4744.0 | 20804.9 | |
| Operator | man day man day | 1316.5 | 2043.7 | 2098.8 | 2867.2 | 2584.9 | 10711.1 | |
| υρειατοι | KON DOL | 191819 | 201001 | £410+0 | 100112 | | ******* | |
| NERIAL : | | · · · | | | | | | |
| Bitumen | 1 | 0.0 | 0.0 | 0.0 | 99937.4 | 0.0 | 99937.4 | • |
| Asphalt Dil | l | 0.0 | 0.0 | 0.0 | 19987.5 | 0.0 | 19987.5 | |
| Kerosene | 1 | 0.0 | 0.0 | 0.0 | 23887.4 | 0.0 | 23887,4 | |
| Sand | #3 | 8.4 | 424.9 | 174.5 | 669.7 | 0.0 | 1277.5 | |
| Cement | bag | 25.0 | 1196.8 | 515.6 | 874.1 | 0.0 | 2611.5 | |
| River Stone | B 3 | 0.0 | 115.2 | 0.0 | 613.0 | 0.0 | 728.2 | |
| Charl Maulda | set | .10.0 | 461.2 | 206.2 | 221.5 | 0,0 | 898.9 | |
| Steel Houlds | аЗ | 0.0 | 81.9 | 136.9 | 91.0 | 85.3 | 395.0 | |
| Steel noulus Timber | 40. | | 532.5 | 873.5 | 469.9 | 558.9 | 2434.8 | |
| A CONTRACT OF | 1 | 0.0 | | | | | | |
| Tinber Paint Reinforcing Steel | | 319,0 | 14713.8 | 6579.3 | 7652.6 | 0.0 | 29264.7 | |
| Tisber Paint | 1.1 | | | | 7652.6 69.5 51792.0 | | 29264.7 265.9 231621.9 | |

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

PROV : KALIMANTAN TIMUR KAB : BULLINGAN

| 1 T E H | UNIT | (1988) | (1989) | < 1990 > | < 1991 > | < 1992 > | < 10TAL > |
|----------------------------|--------------------|----------|----------|-----------------|-----------------|--------------|------------------|
| PAULAUPUT | | | | | | | #¥#844666 |
| EQUIPHENT : | ~ | · · | · . | | | | |
| 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 |
| Hotor Grader | hr | 299.9 | 707.2 | 880.0 | 954.0 | 1012.5 | 0.0 |
| Hand-guide Vib. Roller | hr | 135.0 | 270,0 | 270.0 | 270.0 | 465.0 | 3753.6 |
| Tire Roller | hr | 299.9 | 707.2 | BB0.0 | 854.0 | 1012.5 | 1410.0 3753.6 |
| Vibratory Roller (D&T) | hr | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| Hydraulic Excavator; Wheel | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Wheel Loader | hr | 96.4 | 237.4 | 300.4 | 300.4 | | 0.0 |
| Nater Tank Truck | hr | 0.0 | 0.0 | 0.0 | | 380.7 | 1317.3 |
| Dung Truck | | 849.1 | 1976.7 | 2342.6 | 0.0 | .0.0 | 0.0 |
| Flat Bed Truck with Grane | hr | 968.4 | 1992.1 | 2068.2 | 2342.6 | 3213.9 | 10724.9 |
| Flat Bed Truck | | 1226.3 | 2038.4 | 3472.0 | 2003.4 | 2386.5 | 9418.6 |
| Portable Crusher/Screening | hr | 48,5 | 120.2 | 150.7 | 3368.0 | 4096.5 | 15001.2 |
| Concrete Nixer | hr | 0.0 | 0.0 | | 150.7 | 191.2 | 661.3 |
| Water Pump | 'n | 0.0 | | 0.0 | 0,0 | 0.0 | 0.0 |
| Concrete Vibrator | hr | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Asphalt Sprayer | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| ushaare shi qist | hr | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| LABOUR : | - | · | | | | | |
| Handur | ean day | 456,4 | 1033.6 | 1590 A | 1765 1 | 1000 - | 617A 1 |
| Skilled Labourer | man day | 358.8 | 733.0 | 1229.0 754.1 | 1205.4 802.7 | 1505.7 | 5430.1 |
| Carpenter | aan day | 144,3 | 296.9 | 308.2 | | 972.5 | 3621.1 |
| Hason | aan day aan day | 0.0 | 0.0 | 0.0 | 334.3 | 355.7 0.0 | 1439.4 |
| Labourer | RAN GAY | 5137,5 | 11682.1 | 13980.1 | 0.0 13631,4 | 17174.0 | 0.0 |
| Driver | aan day | 553.0 | 1228.6 | 1411.5 | 1303.6 | 1729.6 | 61605.1 |
| Operator | • | 132.1 | | 393.6 | | | 6305.3 |
| nhaiarni | man day | 132.1 | 313.7 | 373.0 | 384,9 | 464.7 | 1691.0 |
| NATERIAL 1 | | | | | | | |
| Bitunen | 1 | 1215.0 | 2430.0 | 2430.0 | 2430.0 | 4185.0 | 12670.0 |
| Asphalt Oil | 1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Kerosene | 1 | 135.0 | 270.0 | 270.0 | 270.0 | 465.0 | 1410.0 |
| Sand | a3 | 22.5 | 45.0 | 45.0 | 45.0 | 17.5 | 235.0 |
| Ceaent | bag | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| River Stone | 83 83 | 0.0 | 0,0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Steel Houlds | set | 0.0 | 0,0 | 0.0 | 0.0 | 0.0 | 0.0 |
| linber | ∎3 | 13.1 | 26.9 | 28.0 | 30.3 | 32.3 | 130:6 |
| Paint | j | 93.4 | 192.3 | 199.6 | 216.5 | 230.4 | 932.2 |
| 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 | a 3 | 1368.0 | 3393.0 | 4257.0 | 4257.0 | 5394.0 | 18669.0 |

16-A-27

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

| PROV : KALIMAN | атал ті | MUR | KAB : | BULUNI | 3AN | | |
|----------------------------|---------|----------|----------|----------|----------|-----------|-----------|
| | | < 1988 > | < 1989 > | < 1990 > | < 1991 > | (1992) | < TOTAL > |
| | | | | | | | |
| QUIPHENT : | | | | | | | |
| Bulldozer/Ripper | hr | 672.0 | 917.0 | 215.2 | 948.5 | 1218.6 | 3971.3 |
| Swamp Bulldozer | hr | 0.0 | 287.5 | 1437.4 | 113.6 | 880.0 | 3026.5 |
| Hotor Grader | hr | 1823.5 | 2615.4 | 1652.5 | 3155.1 | 2834.2 | 12080.7 |
| Hand-guide Vib. Roller | hr | 141.9 | 936.3 | 652.8 | 1659.2 | 615.2 | 4005.4 |
| Tire Roller | hr | 299.9 | 707.2 | 860.0 | 1341.4 | 1012.5 | 4241.0 |
| Vibratory Roller (D&T) | hr | 1050.4 | 1092.1 | 1817.5 | 2252.2 | 2180.0 | 9212.2 |
| Nydraulic Excavator; Wheel | hr | 0.0 | 703.1 | 3515.6 | | 2160.0 | 7392.1 |
| Wheel Loader | - hr | 1787.0 | 2680.6 | 2758.7 | | 4048.3 | 14577.4 |
| Water Jank Truck | hr | 539.2 | 1156.4 | 1302.3 | 1386.1 | 1478.3 | 5862.3 |
| Duap Truck | hr hr | 12858.2 | 23390.3 | 26777.2 | 29208.1 | 29059.7 | 121293.5 |
| Flat Bed Truck with Crane | hr | 976.4 | 2621.0 | 2546.1 | 2757.3 | 2582.9 | 11483.7 |
| Flat Bed Truck | hr | 1229.1 | 3071.1 | 3610.1 | 4342.6 | 4146.5 | 16399.4 |
| Portable Crusher/Screening | | 380.6 | 167.9 | 153.9 | | 492.5 | 1607.9 |
| Concrete Mixer | hr | 1.7 | 148.1 | | 411.7 | 0.0 | 596.8 |
| Nater Pump | hr | 1.7 | 125.0 | 35.3 | 209.1 | 0.0 | 451.1 |
| Concrete Vibrator | hr | 1.7 | 79.0 | 35.3 | 43.9 | 0.0 | 159.9 |
| Asphalt Sprøyer | hr | 0.0 | 0.0 | | 487.4 | 0.0 | 497.4 |
| ABOUR : | | , | | | | | |
| Nandur | man day | 1052.1 | 3176.8 | 3765.0 | 3969.2 | 3322.4 | 15285.5 |
| Skilled Labourer | man day | 365.7 | 2718.4 | 3661.8 | 2979.4 | 2714.2 | 12439.5 |
| Carpenter | ean day | 144.0 | 1222.0 | 1812.1 | 1275.9 | 1295.2 | 5750.0 |
| Hason | man day | 0.0 | 115.2 | 0.0 | 613.0 | 0.0 | 728.2 |
| Labourer | nan day | 9722.0 | 31485.9 | 37838.4 | 41043.4 | 29789.6 | 149879.3 |
| Oriver | man day | 2674.1 | 5240.7 | 6062.2 | 6660.5 | 6472.6 | 27110.1 |
| Operator | wan day | 1448.6 | 2359.4 | 2492.4 | 3252.1 | 3049.6 | 12602.1 |
| ATERIAL : | | | | | | Х., 19 | . * |
| Bitunen | 1 | 1215.0 | 2430.0 | 2430.0 | 102367.4 | 41B5.0 | 112627,4 |
| Asphalt Oil | 1 | 0.0 | 0.0 | 1.2.2 | 19987.5 | 0.0 | 19787.5 |
| Kerosene | 1 | 135.0 | 270.0 | 270.0 | 24157.4 | 465.0 | 25297.4 |
| Sand | #3 | 30.9 | 469.9 | 219.5 | 714.7 | 77.5 | 1512.5 |
| Cenent | bag | 25.0 | 1196.8 | 515.6 | 874.1 | 0.0 | 2611.5 |
| River Stone | a3 | 0.0 | 115.2 | 0.0 | 613.0 | 0.0 | 729.2 |
| Steel Houlds | set | 10.0 | 461.2 | 206.2 | 221,5 | 0.0 | 898.9 |
| liaber | #3 | 13.1 | 108.7 | 164.9 | 121.3 | 117.6 | 525.6 |
| Paint | 1 | 93.4 | 724.0 | 1073.1 | 686.4 | 789.3 | 3367.0 |
| Reinforcing Steel | - kg | 319.0 | 14713.8 | 6579.3 | 7652,6 | 0.0 | 29264.7 |
| Tying Hire | kg | 2.9 | 133.7 | 59.8 | 69.5 | 0,0 | 265.9 |
| Equivalent Royalty | . a3 | 21411.3 | 45796.0 | 62761.6 | 56019,0 | 64273.0 | 250290,9 |

Appendix A-5

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

| PROV : KALIMANT | тэнч 144 | imt/ | KAB : | BULUNG | AN | | | | | |
|----------------------------|--|----------|-----------|----------|----------|----------------------------|------------------|--|--|--|
| ITEN | UNIT | < 1988 > | (1989) | | *=+===== | | (1000 Rp) | | | |
| | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | 11100 / | \ \$707 / | (1990) | (1991) | < 1992 > | (TOTAL) | | | |
| EQUIPHENT : | · . | 231,556 | 373,032 | 4TT 376 | | PAL 006 | | | | |
| | | a | anatont | 433,270 | 493,647 | 501,000 | 2,032,505 | | | |
| Bulldozer/Ripper | 24290 | 16,322 | 22,273 | 5,227 | 23,039 | 29,599 | 01 110 | | | |
| Swamp Bulldozer | 17281 | 0 | 4,968 | | 7,147 | 15,345 | 96,460 52,299 | | | |
| Notor Grader | 20018 | 30,499 | | 15,463 | 46,063 | 36,466 | 166,689 | | | |
| Hand-guide Vib. Roller | 2037 | - 14 | 1,357 | 779 | · 7 070 | 105 | 5,284 | | | |
| fire Roller | 19449 | 0 | 0 | 0 | 9,479 | 0 | 9,479 | | | |
| Vibratory Roller (D&T) | 9760 | 10,251 | 18,369 | 18,031 | 21,981 | 21 276 | | | | |
| Hydraulic Excavator; Wheel | 20482 | 0 | | 12,006 | 20,758 | 44.941 | 151,403 | | | |
| Wheel Loader | 23023 | 39,922 | 56,203 | 56,597 | 69,124 | 21,276 44,241 84,439 | 305,285 | | | |
| Nater Tank Truck | 7434 | 4,008 | | 9,681 | 10,304 | 10,989 | 43,578 | | | |
| Dump Truck | 9211 | 110,615 | 197,240 | 225,067 | 247,458 | | 1,018,445 | | | |
| Flat Bed Truck with Crane | 8518 | 68 | 5,356 | 4,070 | 6,421 | | 17,587 | | | |
| Flat Bed Truck | 6810 | 19 | 1,584 | | 6,637 | 340 | 9,520 | | | |
| Portable Crusher/Screening | 62695 | 20,821 | 2 990 | | | 18,263 | 59,471 | | | |
| Concrete Nixer | 9159 | 15 | 1,356 | 323 | 3,770 | 0 | 5,464 | | | |
| Water Pump | 762 | t | 95 | 28 | 220 | ů | 342 | | | |
| Concrete Vibrator | 596 | l. | 47 | 21 | 26 | 0 | 95 | | | |
| Asphalt Sprayer | 2454 | 0 | 0 | 0 | 1,196 | Ó | 1,196 | | | |
| LABOUR : | | 17,526 | 57,880 | 69,615 | 78,236 | 48,739 | 271,996 | | | |
| Handur | 3000 | 1,707 | 6,429 | 7,608 | 8,291 | 5,450 | 29,565 | | | |
| Skilled Labourer | 2000 | 13 | 3,970 | 5,915 | 4,353 | 3,483 | 17,634 | | | |
| Carpenter | 2500 | 1 | 2,312 | 3,759 | 2,354 | 2,348 | 10,774 | | | |
| Hason | 2500 | 0 | 288 | 0 | 1 532 | . 0 | 1,920 | | | |
| Labourer | 1500 | 6,876 | 29,705 | 35,787 | | 18,923 | | | | |
| Driver | 2000 | 4,242 | 8,024 | 9,301 | | 9,409 | 41,608 | | | |
| Operator | 3500 | 4,607 | 7,152 | 7.345 | 10,035 | 9,047 | 38,186 | | | |
| HATERIAL : | | 5,561 | 51,628 | 48,486 | 111,216 | 28,743 | 245,634 | | | |
| Bitunen | 400 | 0 | 0 | 0 | 39,974 | Ó | 39,974 | | | |
| Asphalt Dil | 600 | Q | 0 | 0 | 11,992 | 0 | 11,992 | | | |
| Kerösene | 250 | 0 | 0 | 0 | 5,971 | 0 | 5,971 | | | |
| Sand | 4500 | 37 | 1,912 | 785 | 3,013 | 0 | 5,747 | | | |
| Семель | 4500 | 112 | 5,385 | 2,320 | 3,933 | 0 | 11,750 | | | |
| River Stone | 15000 | 0 | 1,728 | 0 | 9,195 | 0 | 10,923 | | | |
| Steel Houlds | 8000 | 80 | 3,689 | 1,649 | 1,772 | 0 | 7,190 | | | |
| lisber | 150000 | 0 | 12,270 | 20,535 | 13,650 | 12,795 | 59,250 | | | |
| Paint | 2200 | 0 | 1,171 | 1,921 | 1,033 | t,227 | 5,354 | | | |
| Reinforcing Steel | 1000 | 319 | 14,713 | 6,579 | 7,652 | 0 | 29,263 | | | |
| lying Nire | 1200 | 3 | 160 | 71 | 83 | 0 | 317 | | | |
| Equivalent Royalty | 250 | 5,010 | 10,600 | 14,626 | 12,940 | 54,719 | 57,903 | | | |

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

| PROV : KALIMAN | TAN TH | MUR | KAB I | BULUN | IGAN | (1000 Rp) | | | |
|-----------------------------------|--------------|---------------------------------------|-----------|-----------|-----------|-------------|------------|--|--|
| ITEN | UNIT | (1988) | < 1989 > | < 1990 > | < 1991 > | < 1992 > | < TOTAL > | | |
| EQUIPHENT : | | 41,788 | 96,009 | 114,480 | 112,194 | 139,486 | 503,957 | | |
| Bulldozer/Ripper | 24290 | 0 | 0 | | 0 | 0 | . Q | | |
| Shamp Bulldozer | 17281 | 0 | 0 | 0 | . 0 | 0 | 0 | | |
| Motor Grader | 20018 | 6,003 | 14,156 | 17,615 | 17,095 | 20,268 | 75,137 | | |
| lland-guide Vib. Roller | 2037 | 274 | 549 | 549 | | 947 | 2,968 | | |
| Tire Roller | 19449 | 5,932 | 13,754 | 17,115 | 16,609 | 19,692 | 73,002 | | |
| Vibratory Roller (D&T) | 9760 | 0 | Ó | 0 | 0 | 0 | 0 | | |
| llydraulic Excavator; Wheel | 20482 | 0 | Q | 0 | 0 | 0 | 0 | | |
| Wheel Loader | 23023 | 2,219 | 5,511 | 6,916 | 6,916 | 8,764 | 30,326 | | |
| Water Tank Truck | 7434 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| Dunp Truck | 9211 | 7,821 | 18,207 | 21,577 | 21,577 | 29,603 | | | |
| Flat Bed Truck with Crane | 8518 | | | 17,616 | | 20,328 | | | |
| Flat Red Truck | 6810 | 8,351 | 19,329 | 23,644 | 22,936 | 27, 897 | | | |
| Portable Crusher/Screening | 62695 | 3,040 | 7,535 | 9,448 | 9,448 | | 41,458 | | |
| Concrete Hixer | 9159 | | 0 | | 0 | 0 | 0 | | |
| Nater Pusp | 762 | 0 | 0 | Û. | 0 | õ | Ó | | |
| Concrete Vibrator | 596 | · · · · · · · · · · · · · · · · · · · | | . V | О | ۰ ۸ | | | |
| Asphalt Sprayer | 2454 | 0 | 0 0 | Õ | 0 | 0 | 0 | | |
| ABOUR : | | 11,720 | 26,392 | 31,135 | 30,617 | 30,195 | 138,059 | | |
| Mandur | 3000 | 1,369 | 3,100 | 3,687 | 3,616 | 4,517 | 16,289 | | |
| Skilled Labourer | 2000 | 717 | 1,466 | 1,508 | 1,605 | 1,945 | 7,241 | | |
| Carpenter | 2500 | 360 | 742 | 770 | 835 | 887 | 3,596 | | |
| Hason | 2500 | 0 | 0 | 0 | . 0 | 0 | 0 | | |
| Labourer | 1500 | 7,706 | 17,523 | - | | 25,761 | 92,407 | | |
| Driver | 2000 | | 2,457 | | 2,767 | 3,457 | 12,610 | | |
| Operator | 3500 | 462 | 1,104 | 1,377 | | 1,626 | 5,916 | | |
| NATERIAL : | | 3,132 | 6,547 | 6,944 | 7,326 | 8,837 | 32,786 | | |
| Bituaen | 400 | 485 | 972 | 972 | 972 | 1 171 | 5 074 | | |
| Asphalt Dil | 600 | - 0 | 0 | | 0 | 1,674 | 5,076 | | |
| Kerosene | 250 | 33 | | 0 | | 0 | .0 | | |
| Sand | 4500 | | 67 707 | 67 202 | 67 107 | 116 | 350 | | |
| Cement | 4300 4500 | 101 | 202 | 202 | 202 | 348 | 1,055 | | |
| | | · 0 | 0 | 0 | | 0 | 0 | | |
| River Stone Stori Moulds | 15000 | 0 | . 0 | 0 | 0 | 0 | 0 | | |
| Steel Moulds Vieber | 8000 | 0 | Ú | 0 | 0 | 0 | 0 | | |
| linber Paint | 150000 | 1,965 | 4,035 | 4,200 | 4,545 | 4,845 | 19,590 | | |
| Reinforcing Steel | 2200 | 205 | 423 | 439 | 476 | 505 | 2,049 | | |
| | 1000 | 0 O | : 0 | 0 | . 0 | 0 | 0 | | |
| Tying Hire Equivalent Provatto | 1200 | 0 | 0 | 0 | 0 | 0 | 0 | | |
| Equivalent Royalty | 250 | 342 | 948 | 1,064 | 1,064 | 1,349 | 4,666 | | |

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

PROV 3 KALIMANTAN TIMUR KAB : BULUNGAN

| LTEN | ÜNIT | (1988) | < 1989 > | (1990) | (1991) | / 1000 \ | < TOTAL > |
|----------------------------|--------|-----------|-----------|----------|----------|----------|---------------------|
| ************** | | ********* | ********* | ****** | | 1 1172 7 | \ 1018L > |
| OULPHENT : | | 273,344 | 467,041 | E17 1PA | | | |
| | - | ~ | 101101 | 517,750 | 605,841 | 640,486 | 2,536,462 |
| Bulldozer/Ripper | 24290 | 16,322 | 22,273 | 5,227 | 23,039 | 29,599 | 96,460 |
| Swamp Bulldozer | 17201 | . 0 | 4,968 | 24,839 | 7,147 | 15,345 | 52,299 |
| Notor Grader | 20018 | 36,502 | 52,354 | 33,078 | 63,158 | 56,734 | 241,825 |
| Hand-guide Vib. Roller | 2037 | 288 | 1,906 | 1,320 | 3,378 | 1,252 | 8,152 |
| Tire Roller | 19449 | 5,832 | 13,754 | 17,115 | 26,099 | 19,692 | 82,481 |
| Vibratory Roller (D&T) | 9760 | 10,251 | 18,369 | 18,031 | 21,981 | 21,276 | 89,908 |
| Hydraulic Excavator; Wheel | 20482 | 0 | 14,400 | 72,006 | 20,756 | 44,241 | |
| Wheel Loader | 23023 | 41,141 | 61,714 | 63,513 | 76,040 | 93,203 | 335,611 |
| Nater Tank Truck | 7434 | 4,008 | 8,598 | 9,681 | 10,304 | 10,989 | |
| Dump Truck | 9211 | 118,436 | | 246,644 | 269,035 | 267,668 | 43,578 |
| Flat Bed Truck with Crane | 8518 | 8,316 | 22,324 | 21,686 | 23,485 | 22,000 | 1,117,230 97,911 |
| Flat Bed Truck | 6810 | | 20,913 | 24,584 | | 28,237 | 111,677 |
| Portable Crusher/Screening | 62595 | 23,861 | 10,525 | 9,648 | 28,645 | 30,250 | 100,929 |
| Concrete Hixer | 9159 | 15 | 1,356 | 323 | 3,770 | 30,230 | 5,464 |
| Nater Pump | 762 | 1 | 95 | 26 | 220 | 0 | 342 |
| Concrete Vibrator | 596 | 1 | 47 | 21 | 26 | 0 | 95 |
| Asphalt Sprayer | 2454 | 0 | 0 | 0 | 1,196 | ŏ | 1,196 |
| | | | | | | | |
| LADDUR : | | 29,246 | 84,272 | 100,750 | 108,853 | 86,934 | 410,055 |
| Nandur | 3000 | 3,156 | 9 529 | 11,295 | 11,907 | 9,967 | 45,854 |
| Skilled Labourer | 2000 | 730 | 5,436 | 7,323 | 5,958 | 5,428 | 24,875 |
| Carpenter | 2500 | 361 | 3,054 | 4,529 | 3,187 | 3,237 | 14,370 |
| Hason | 2500 | 0 | 288 | 0 | 1,532 | . 0 | 1,820 |
| Labourer | 1500 | 14,582 | 47,228 | 56,757 | 61,565 | 44,684 | |
| Driver | 2000 | 5,340 | 10,401 | 12,124 | 13,320 | 12,945 | 54,218 |
| Operator | 3500 | 5 069 | 8,256 | 8,722 | 11,382 | 10,673 | 44,102 |
| NATERIAL : | | 8,693 | 58,175 | 55,430 | 118,542 | 37,580 | 278,420 |
| | | | | | | | |
| Bitumen | 400 | 486 | 972 | 972 | 40,946 | 1,674 | 45,050 |
| Asphalt Oil | 600 | 0 | 0 | 0 | 11,992 | 0 | 11,992 |
| Kerosene | 250 | 33 | 67 | | \$ 038 | 118 | 8,321 |
| Sand | 4500 | 138 | 2,114 | 987 | 3,215 | 348 | 6,802 |
| Cesent | 4500 | 112 | 5,385 | 2,320 | 3,933 | 0 | 11,750 |
| River Stone | 15000 | 0 | 1,728 | 0 | 9,195 | 0 | 10,923 |
| Steel Moulds | 8000 | 60 | 3,689 | 1,649 | 1,772 | 0 | 7,190 |
| lisber | 120000 | 1,965 | 16,305 | 24,735 | 18,195 | 17,640 | |
| Paint | 2200 | 205 | 1,594 | 2,360 | 1,509 | 1,735 | 7,403 |
| Reinforcing Steel | 1000 | 319 | 14,713 | 6,579 | 7,652 | 0 | 29,263 |
| Tying Hire | 1200 | 3 | 160 | 71 | 83 | • • • | 317 |
| Equivalent Royalty | 250 | 5,352 | 11,440 | 15,690 | 14,012 | 16,067 | 62,569 |

Appendix A-6

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| PROV | Ľ | KALIMANTAN | TIMUR | KAB | BULUNGAN |
|------|---|------------|-------|-----|----------|
| | | | | | |

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| | | | | | | | | | | · · | | | | · · | | |
|------------|---|------------------------------|------------------------------|---------------------------------------|----------------------|--------------------------|--------------------------|--|-----------------------|--|--|--|----------------------------------|-----------------------|---|---------------|
| LINK No | BRIDGE NAME | | | (TY (EX19T) | | | | LENGTH (a) | | SPAN Length (a) | 1.000 | AREA (EXIST) (#2) | AREA (NEW) (p2) | | ÁÐUT (no) | RDAD Class |
| 2 | SUNGAT PUNGIT | 31 | PINP | KK | | | | 15.00 | | 15.00 | 4.00 | 60.00 | | 0 | 2 | IIIC |
| 3 | SUNGAL SEKATAK | 3 | SKTB | KK | | ****** | | 15.00 | : 1 | 15.00 | 4.00 | 60.00 | | 0 | 2 | 1110 |
| 4 | SUNGAI BETAYAN | 23 | SKÐT | KK | | | | 15.00 | 1 | 15.00 | 4.00 | 60.00 | | 0 | 2 | IIIC |
| 5 | AK.SEI SESAYAP Sei betaya II | 11 1 | BOKG BOKG | KK KK | | 10T 10T | (C) (C) | 15.00 15.00 | 2 2 | 7.50 7.50 | 4.00 | 12.00 12.00 | 60.00 60.00 | | 2 2 | JIIC |
| 8 | SEBANBAN MASA1R LAPANG | 1 2 11 | HLIN HLIN HLIN | KK KK LL | IN | iot | | 5.00 14.00 16.00 | 1 3 4 | | 5.80 6.00 4.00 | 28.00 84.00 64.00 | 64.00 | 0 2 5 | 2 2 2 | 1118-1 |
| 11 | BULAN I BULAN II SERUYUNG LIBANG PEGATASON SUHALANAP | 2 2 5 8 11 15 | SLAP | KK KK KK KK KK | | | | 17.00 10.00 13.00 11.00 22.00 12.00 | 1 1 1 5 3 | 17.00 10.00 13.00 11.00 4.40 4.00 | 4.00 4.00 4.00 4.00 4.00 4.00 | 68.00 40.00 52.00 44.00 88.00 48.00 | | 0 0 0 4 2 | 2 2 2 2 2 2 2 2 2 | LIIC |
| 12 | N. I N. I N. I N. I | 18 21 23 30 | HSLS NSLG KSLG NSLG | · · · · · · · · · · · · · · · · · · · | TH TN Th Th | 10T 10T 10T 10T | (C) (C) (C) (C) | 15.00 15.00 15.00 15.00 | 2 2 2 2 2 | 7.50 7.50 7.50 7.50 7.50 | 4.00 4.00 4.00 4.00 | 9.00 0.00 0.00 0.00 | 60.00 60.00 60.00 60.00 | 1 | 2 2 2 2 2 | 1118-2 |

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

PROV : KALIMANTAN TIMUR KAB : BULUNGAN LINK ND : 2 (IIIC) LENGTH : 32 Km

| ITEN STATES | | | | | *********** | **** | (Rp |
|--|------------|-----------|--------------------------------|---------------------|----------------|-----------------|---------------|
| • • • • • | UNIT | QUANTITY | <<< UNIT Local | COST >>> Foreign | >>>>> Local | COST FOREIGN | >>>>> Tota |
| | | | | ******* | ************* | ******** | |
| uperstructure (Timber;Span Jm;101) | •2 | 0.00 | 49,834 | 3,215 | 0 | - 0 | |
| uperstructure (Timber;Span 5m;101) | •2 | 0.00 | 55,199 | 3,550 | ò | - Q | |
| uperstructure (Tlaber;Span 8#;101) | #2 | 0.00 | 73,115 | 4,665 | . ^ | ů ů | |
| uperstructure (limber;Span 3m;BH50) | •2 | 0.00 | 61,793 | 3,975 | ő | Ň | |
| uperstructure (Tlaber;Span 5a;8H50) | n2 | 0.00 | 67,462 | 4,309 | Ő | 0 | |
| uperstructure (limber;Span 8m;8H5O) | •2 | 0.00 | 85,560 | 5,455 | ů | ĥ | |
| operstructure (Concrete;Span 3m;BH50) | ¤ 2 | 0.00 | 54,675 | 105.767 | ő | · · · · · | |
| uperstructure (Concrete;Span 5m;BH50) | •2 | 0.00 | 56,060 | 118,299 | , O | ů | |
| operstructure (Concrete;Span 8m;BN50) | •2 | 0.00 | 57,678 | 128,919 | ů. | ŏ | |
| uperstructure (Concrete;Span10m;BHSO) | •2 | 0.00 | 62,984 | 146,517 | Ď | ŏ | |
| uperstructure (Concrete;Span15m;BHSO) | •2 | 0,00 | 67,745 | 172,712 | 0 | Ō | |
| ubstructure (Pier;for Timber;107) | NO | 0.00 | | 29.776 | Ō | ò | |
| ubstructure (Abut;for Timber;101) | NO | 0.00 | 1,243,048 | 143 803 | 0 | 0 | |
| ubstructure (Pier;for Timber;8850) | ND | 0.00 | 638,325 | 44,057 | Ő | Ō | |
| ubstructure (Abut;for Timber;BHSO) | NO | 0.00 | 1,396,980 | 159 216 | Ó | Ō | |
| ubstructure (Pier;for Concrete;0050) | NO | 0.00 | 2,390,993 | 467,275 | 0 | 0 | |
| ubstructure (Abut;for Concrete;BH50) | HO | 0.00 | 5,007,281 | 982,926 | 0 | Ô | |
| enolition of Bridge (limber-)limber) | 12 | | 14,125 | 1,266 | . 0 | ŏ | |
| emolition of Bridge (Himber-)Concrete) | •2 | 0.00 | • | 1,266 | ů. | Ô | |
| emolition of Bridge (Concrete) | •2 | 0.00 | 107,156 | 79,820 | 0 | 0 | |
| aintenance of Timber Bridge (New) | •2 | 0.00 | 9,710 | 1.054 | 0 | | |
| aintenance of Concrete Bridge (New) | 2 | | 2,380 | 3,001 | 0 | ő | |
| aintenance of Timber Bridge (Exist) | -2 | | 11,930 | 2,370 | 715,800 | 142,200 | 858,00 |
| aintenance of Concrete Bridge (Exist) | #2 | | 7,551 | 2,443 | 0 | 0 | 40030 |
| / Without numbers 1 | | | ····· | | | | |
| (Without Overhead) | I | OTHE CUST | (Nimber Bridg | | Ų A | V | |
| | | DTAL PART | (Concrete Bri (without Main | | Ų ^ | ν V | |
| | | UIAL CUSI | | cenance) | U | | |
| (Dverhead ; 15%) | Y | OTAL COST | (limber Bridg | | Û | 0 | |
| · · · | . " | | (Concrete Brl | | 0 | 0 | |
| | . T | OTAL COST | without Hain | tenance) | 0 | 0 | |

PROV : KALIMANTAN TIMUR KAÐ : ÐULUNGAN

LINK NO : 3 (IIIC) LENGTH :

: 24 Km

| | | | | | : · · · | | | | · | | | (Rp) |
|-----------------|---------------|---|-----|-------|------------|------------------|--|-----|----------------|--------------------|---|--|
| ITEN | | · • • • • • • • • • • • • • • • • • • • | | NTT | QUANTITY | <<< UNI Local | T COST >>> Foretgy | | <<<<< Local | COST Foreign | | >>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>> |
| | | | | | | ***** | (* 16 % Pa av a (* 14 a) ²⁴ * * * | | | | | |
| ioperstructure | (Timber;Span | 3#;101) | | #2 | 0.00 | 49,834 | 3,215 | | | 0 | | |
| Niperstructure | | | | a2 | 0.00 | | | ÷1 | 0 | 0 | • | . (|
| Superstructure | (liaber;Span | (8a; 107) | ÷., | 82 | 0.00 | 73,115 | 4,665 | | 0 | is. i s 0 i | | - s - s - j (|
| Super structure | (Timber; Span | 3m; 8H50) | | n2 | 0.00 | 61,793 | 3,975 | | 0 | 0 | | (|
| Superstructure | (lisber)Span | Se; BH501 | | #2 | 0.00 | 67,462 | 4,309 | | 0 | 0 | | (|
| Superstructure | | | | #Ż | 0.00 | 85,560 | 5,455 | | 0 | 0 | : | (|
| uperstructure- | (Concrete; Sp | an Ja; BMS01 | · · | e2 | | 51,675 | 105,767 | | 0 | 0 | | |
| Superstructure | | | . · | 82 | | 56,040 | | | •• | • 0 | • | (|
| Superstructure | | | | 42 | | •. • | | | • Q • | ·. 0. | | , (|
| Superstructure | | | | #2 | 0.00 | 62,984 | | | 0 | - 0 | | |
| Superstructure | | | 111 | .2 | | | | | 0. | | | . · (|
| Substructure (P | | | ÷ . | NO | | 434,033 | • | | 0 | 0 | | A second |
| Substructure (A | | | 11 | NO | | 1,243,048 | | | 0. | · · · · • | | |
| Substructure (P | | | | NB | | 638,325 | • | | 0 | 0 | | |
| Substructure (A | | | | NO | | 1,396,980 | | | 0 | 0 | | i |
| Substructure (P | | | • . | NO | | 2,390,993 | | | 0 | 0 | | 1 |
| Substructure (A | | | | NÖ | | 5,007,201 | | | 0 | 0 | | · |
| Demolition of B | | | | 82 | | 14,125 | 1,266 | | 0 | · | | 1. 1. 1 |
| Demolition of B | | | | 62 | | • | 1,266 | | Ô | . 0 | | · `` |
| Demolition of B | | | | a2 | | 107,156 | | | 0 | 0 | | . I |
| laintenance of | Tiøber Bridg | le (Hen) | | #2 | 0.00 | 9,710 | 1,054 | | 0 | | | · · · |
| Haintenance of | Concrete Bri | dge (Nex) | | a2 | 0.00 | 2,380 | 3,001 | | 0 | · 0 | | |
| laintenance of. | | | | e2 | 60.00 | 11,930 | 2,370 | | 715,800 | 142,200 | | 858,00 |
| iaintenance of | Concrete Bri | dge (Exist) | | 'n2 | 0.00 | 7,551 | 2,443 | · . | at 0 | 0 | | |
| | Without Over | head 1 | | | INTAL COST | (Tiøber Øri | | | . 0 | 0 | | |
| | | | | | | (Concrete 8 | | | Ö | 0 | | |
| • | : | | | | | (without Ha | | | 0 | 0 | | |
| t | Overhead : 1 | 51) | | ۱ | INTAL COST | {Tisber Bri | dqe) | | 0 | 0 | | |
| - | | | | | | (Concrete B | | | 0 | 0 | | |
| | | | | | | (without Na | | | Å | 0 | | |

PROV

KALIMANTAN TIMUR

(IIIC)

KAB BULUNGAN

LINK NO

LENGTH 1 24 Km

(Rp) I TEN (<< UNIT COST >>> (((((COST >>>>>> UNIT QUANTITY LOCAL FORELGH LOCAL FORELGN TOTAL -----****** Superstructure (limber;Span 3m;101) 82 0.00 49,834 3,215 ۵ Ô Superstructure (Timber;Span 5m;101) a2 0.00 55,199 3,550 0 . 0 ۵ Superstructure (limber:Span 8m:101) •2 0.00 73,115 4,665 0 Ô. ð Superstructure (Timber;Span Jm;BN50) #2 0.00 61,793 3,975 ð -Ô Ô Superstructure (Ilaber;Span 5m;BH50) .e2 0.00. 67,462 4,309 Q 0 n Superstructure (Timber;Span 8m;BH50) m2 0.00 85,560 5,455 0 0 Superstructure (Concrete;Span Ja;BH50) ÷ #2 0.00 54,675 105,767 0 ۵ ۵ Superstructure (Concrete;Span 5m;BH50) e2 0.00 56,060 118,299 Q 0 ٨ Superstructure (Concrete;Span Bm;BM50) #Z 0.00 57,678 128,919 0 Q Ô Superstructure (Concrete; Span10a; BHSO) **a**2 0.00 62,984 146,517 172,712 0 ۵ ſ) Superstructure (Concrete; Span15a; 8H50) #2 0.00 67,745 Q ٥ 0 Substructure (Pier; for Timber; 10T) NÖ 0.00 434,033 29,776 Û ð Substructure (Abut; for Timber; 101) NO 0.00 1,243,048 143,803 0 0 ۵ Substructure (Pier; for Timber; 0850) ND 0.00 638,325 44,057 0 0 0 Substructure (Abut; for Timber; BN50) NQ 0.00 1,396,980 159,216 0 0 ٨ Substructure (Pier; for Concrete; BNSO) NŰ 0.00 2,390,993 467.275 0 0 ۵ Substructure (Abut; for Concrete; BK50) RO 5,007,281 0.00 982,926 0 0 n Demolition of Bridge (Timber-)Timber) ¥2 0.00 14,125 1,266 0 0 0 Demolition of Bridge (Timber->Concrete) 1,266 s2 0.00 14,125 0 ۵ Û Demolition of Bridge (Concrete) **#**2 0.00 107,156 79,820 ٥ ٥ Ô Maintenance of Timber Bridge (New) 0.00 9,710 e2 1,054 Ô .0 Ð Haintenance of Concrete Bridge (New) **Q**2 0.00 2,380 3,001 0 0 Û Haintenance of Himber Bridge (Exist) 2,370 60.00 11,930 #2 715,800 142,200 858,000 Maintenance of Concrete Bridge (Exist) 7,551 82 0.00 2,443 Ð a â (Without Overhead) TOTAL COST (Timber Bridge) 0 0 0 (Concrete Bridge) 0 0 Û TOTAL COST (without Maintenance) Ô 0 0 (Overhead : 15%) TOTAL COST (Timber Bridge) 0 0 ۵ (Concrete Bridge) 0 Q Q TOTAL COST (without Haintenance) 0 ۵ 0 _____ PROV : KALIMANTAN TIMUR KAB : BULUNGAN

LINK NO : 5 (IIIC) LENGTH : 12 Km

| | | | | | | | | | (Rp) |
|----------------|---|--------------------|-----------------|-----------|-------------------|--|------------------------------------|-----------------|----------------------------|
| ITEH | | 9 | NIT | QUANTLTY | <<< UNIT Local | | <<<<< Local | COST Foreign | >>>>>> Total |
| | | | Klen | | | وريغ محاجز بقر بعا ها الع الع المريق و | بو یہ غربی پنی نہ غراب شاہ لا کہ ب | | |
| Superstructure | (lisber;Span 3s;101) | | •2 | 0.00 | 49,834 | 3,215 | 10 O 1 | 0 | 0 |
| Superstructure | (Tisber;Span 5a;101) | | a2 | 0.00 | 55,199 | 3,550 | 0 | 0 | 0 |
| Superstructure | (Timber;Span 8m;101) | | •2 | 120.00 | 73,115 | 4,665 | 8,773,800 | 559,800 | 9,333,600 |
| Superstructure | (Timber;Span 3m;BMSO) | | n2 | 0.00 | 61,793 | 3,975 | 0 | 0 | - 1 - 1 - 1 - 1 - (|
| Superstructure | (Timber;Span 5m;Bh50) | | -2 | 0,00 | 67,462 | 4,309 | o 0 | 0 | - 18 - 19 - (|
| Superstructure | (Timber;Span Bm;BHSO) | | ∎2 | 0.00 | 85,560 | 5,455 | 0 | 1 O | (|
| Superstructure | (Concrete;Span 3#;BN50) | | m2 | 0.00 | 54,675 | 105,767 | 0 | · · · 0 | - m (i) (|
| | (Concrete;Span 5m;BN50) | . 1 | ¤2 | 0.00 | 56,060 | 118,299 | 0 m | 0. | 11. se 1 (|
| | (Concrete; Span 8a; BM50) | | a2 | 0.00 | 57,678 | 128,919 | | | ана (|
| | (Concrete;Span10e;BH50) | / | n 2 | 0.00 | 62,984 | 146,517 | 0 | 0 | n i se de la |
| | (Concrete; Span15e; BH50) | | #Z | 0.00 | 67,745 | 172,712 | 0 | 0 | n, saba (|
| | Pier;for Timber;101) | | NO | 2.00 | 434,033 | 29,776 | 868,056 | 59,552 | 927,61 |
| | Abutifor Timber;101) | | NO | 4.00 | 1,243,048 | 143,803 | 4,972,192 | 575,212 | 5,547,40 |
| | Pier;for Tisber;BH50} | ÷. | NO. | 0.00 | 638,325 | 44,057 | 0 | 0 | |
| | Nout;for Tisber;BN50) | | NO | 0,00 | 1,396,980 | 159,215 | 0.1 | 0 | a a i a i |
| | Pier;for Concrete;BK50) | | ND | 0.00 | 2,390,993 | 467,275 | 0 | . 0 | 1. 1. 1. I |
| | Abut; for Concrete; BN50) | (\cdot, \cdot) | NO | 0.00 | 5,007,281 | 982,926 | 1 1 1 0 | 0 | an an a |
| | Bridge (Timber-)Timber) | _ 4 ¹ 4 | B 2 | 24.00 | 14,125 | 1,265 | 339,000 | 30,384 | 369,38 |
| | Bridge (fimber-)Concrete) | | 82 | 0.00 | 11,125 | 1,266 | 0 | 0 | |
| | Bridge (Concrete) | • • | n2 | | 107,156 | 79,820 | 0 | 0 | |
| aintenance of | lisber Bridge (New) | | · #2 | 120.00 | 9,710 | 1,054 | 1,165,200 | 126,180 | 1,291,68 |
| | Concrete Bridge (New) | | n2 | 0.00 | • | 3,001 | 0 | 0 | |
| | lisber Bridge (Exist) | | e2 | 0.00 | 11,930 | 2,370 | 0 | Q | a a ser esta |
| | Concrete Bridge (Exist) | | •2 | 0.00 | 7,551 | 2,443 | 0 | . 0 | |
| | Without Overhead) | | | DTAL COST | (Tinber Brid | <u>16)</u> | 14,953,059 | 1,224,948 | 16,178,00 |
| | | | | | (Concrete Br | | 0 | 0 | |
| | | | `• • ⊺ i | | (without Nai) | | 14,953,058 | 1,224,948 | 16,178,00 |
| | *************************************** | | ** ** | | | | | | ****** |
| 1 | Overhead : 15%) | | T | DIAL COST | (Timber Brid | ie) | . 17,196,017 | 1,408,690 | 18,604,70 |
| • | | | | | (Concrete Br | | 0 | 0 | |
| | | | . 7 | | fwithoùt Mai | | 17,196,017 | 1,408,690 | 18,604,70 |

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PROV : KALIMANTAN TIMUR KAB : BULUNGAN

LINK NO : 7 (IIIC) LENGTH : 25 Km

| the factor of the second se | * . | | | | | | | |
|---|--|------------|-------------|---------------|------------|------------|-----------|---|
| | | *** | | | | | | (Rp |
| ITEN | | | . 197 | (((UNIT | COST >>> | (((((| EOST | >>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>> |
| | and an | UNIT | QUANTITY | LOCAL | FOREIGN | LOCAL | FOREIGN | TOTA |
| | ********************* | | ********* | 30 | ********** | | | |
| uperstructure (Timb | eriSpan 3mil01) | e2 | 0.00 | 49,834 | 1 112 | | | |
| Superstructure (Timb | er:Span 5a:101) | B2 | 0.00 | 55,199 | 3,215 | 0 | 0 | |
| uperstructure (finb | | #2 | 375.00 | 73,115 | 3,550 | 0 | 0 | |
| Superstructure (limb | | #2 | 0.00 | | 4,665 | 27,418,125 | 1,749,375 | 29,167,50 |
| Superstructure (Ilab | er:Snan 5e:RH501 | •2 | | 61,793 | 3,975 | 0 | 0 | |
| Superstructure (linb | sriSnan RetBN501 | a2 | | | 4,309 | 0 | Û | |
| Superstructure (Conc | | _ | 0.00 | 85,560 | 5,455 | 0 | 0 | |
| | | 82 | 0.00 | 54,675 | 105,767 | - 0 | 0 | |
| Superstructure (Conc | erelaban asinuavi | #Z | 0.00 | 56,060 | 118,299 | 0 | 0 | |
| Superstructure (Conc | erejopan 84180001 | a 2 | 0.00 | 57,678 | 128,919 | - 0 | 0 | |
| Superstructure (Conc | ete:SpantOm;8150) | | 0.00 | 62,984 | 146,517 | . 0 | 0 | |
| iuperstructure (Conc | | #2 | 0.00 | 67,745 | 172,712 | 0 | | |
| Substructure (Pier;1 | | NO | 6.00 | 434,033 | 29,776 | 2,604,198 | 178,656 | 2,782,8 |
| Substructure (Abut;f | or Timber;101) | HO | 12.00 | 1,243,048 | 143,803 | 14,916,576 | 1,725,636 | 16,642,2 |
| lubstructure (Pier)f | pr Timber;BN50) | NO | | 638,325 | 44,057 | 0 | 0 | colourit |
| lubstructure (Abut;f | or Timber:BH50) | КО | 0.00 | 1,396,980 | 159,216 | ŏ | Õ | |
| ubstructure (Pier;f | | NO | 0.00 | 2,390,993 | 467,275 | ů i | ů. | |
| Substructure (Abut)f | | KO. | | 5,007,281 | 982,926 | . 0 | 0 | |
| emolition of Bridge | | #2 | 262.00 | 14,125 | 1,266 | - | • | 4 475 4 |
| epolition of Bridge | | #2 | 0.00 | | | 3,700,750 | 331,692 | 4,032,4 |
| Demolition of Bridge | | | | 14,125 | 1,266 | 0 | 0 | |
| sedition of bridge | (LUNCI eter | a2 | 0.00 | 107,156 | 79,820 | 0 | 0 | |
| laintenance of Timbe | Pridge (New) | n2 | 375.00 | 9,710 | 1,054 | 3,641,250 | 395,250 | 4,036,5 |
| laintenance of Concr | | a2 | 0.00 | 2,300 | 3,001 | 0 | 0.01106 | 1100010 |
| laintenance of Timbe | | n2 | | 11,930 | 2,370 | . 0 | ŏ | |
| laintenance of Concr | | #Ž | 0.00 | 7,551 | 2,443 | Ő | Ô | |
| | te bitby texistr | 9E | | 11001 | 21110 | . V | v | |
| | · · · · · · · · · · · · · · · · · · · | | | ****** | | | ********* | |
| (Witho | ut Overhead) | I | OTAL COST | (Timber Bridg | | 48,639,649 | 3,985,359 | 52,625,0 |
| | | | | (Concrete Bri | dgel | 0 | Q | - |
| | | 1 | OTAL COST | Awithout Hain | tenance) | 48,639,649 | 3,985,359 | 52,625,0 |
| | | | *** * * * * | | | | | |
| (flyorh | ead : 15%) | Ť | ATAL COST | (Timber Bridg | (e) | 55,935,596 | 4,583,163 | 60,518,7 |
| 2 Official | | | | (Concrete Bri | | 0 | 10001100 | 20101211 |
| 1. A. | | T | 11A3 COCT | without Main | | 55,935,596 | 4,583,163 | 60,518,7 |
| | | | ALUE COSI | INTERNOL USIE | | 4011001010 | 10001100 | 1010101 |

PROV : KALIMANTAN TIMUR KAB : BULUNGAN LINK NO : 0 (IIID-1) LENGTH : 13 Km

| Ł | Ro | Ł |
|---|----|---|

| | | | | | | | | i up i |
|----------------|---------------------------|------------|--|------------------|-----------------------|--|-----------------|----------------|
| 1 T E H | | UNIT | QUANTETY | <<< UNI Local | I COST >>> Foreign | ////////////////////////////////////// | COST FOREIGN | >>>>> Total |
| | | | | | | | | *********** |
| | (limber;Span 3m;101) | n 2 | 64.00 | 49,834 | 3,215 | 3,189,376 | 205,760 | 3,395,136 |
| | (Timber;Span 5m;101) | 82 | 0.00 | 55,199 | 3,550 | 0.0 | | 010101100 |
| | (Timber;Span 8m;101) | | 0.00 | 73,115 | 1,665 | · 0 | 0 | |
| | (Timber;Span 3s;BH50) | a2 | 0.00 | 61,793 | 3,975 | 0 | ò | |
| | (Timber;Span 5m;BM50) | | 0.00 | 67,462 | 4,309 | 0 | 0 | |
| | (Timber;Span: Ba;BH50) | •2 | 0.00 | 85,560 | 5,455 | 0 | 0 | |
| | (Concrete;Span Ja;BH50) | | 0.00 | 54,675 | 105,767 | 0 | 0 | |
| | (Concrete;Span Sm;BHSO) | #2 #2 | 0.00 | 56,050 | 110,299 | 0 | 0 | |
| | (Concrete;Span 8#;BH50) | 2 | | 57,679 | 128,919 | Ő. | Ð | |
| | (Concrete; Span Om; BHSO) | =2 | | 62,984 | 146,517 | Ô | 0 | |
| | (Concrete; Span15a; BH50) | .2 | - | 67,745 | | ň | Â | |
| | Pier;for Timber;10T) | ND ND | | 434,033 | 29,776 | 2,170,165 | 148,880 | 2,319,04 |
| | | NO | 2.00 | 1,243,048 | 143,803 | 2,485,096 | 287,606 | 2,773,70 |
| | but; for Timber; 101) | | 0.00 | | 44,057 | 4100,070 | 201,000 | cluatio |
| | Pier;for Timber;BN50) | - NO | | 638,325 | 159,216 | . v | . V.; | |
| | but;for Timber;BN50) | KO | 0.00 | 1,396,980 | | | ۰ ۸ | ÷., |
| | ier; for Concrete; 91150) | ND | | 2,390,993 | 467,275 | е <u>м</u> ц 0 | 0 | |
| | ibut;for Concrete;8H50) | HO | 0.00 | 5,007,281 | 982,926 | | BI,024 | 985,02 |
| | ridge (limber-)limber) | ±2 | | 14,125 | 1,266 | 904,000 | . 01,024 . | 101145 |
| | ridge (limber-)Concrete) | #2 | | 14,125 | 1,266 | V | V A | |
| ENDITCION OF F | ridge (Concrete) | a2 | 0.00 | 107,156 | 79,820 | . V . | · · · · · | |
| aintenance of | Timber Bridge (New) | #2 | 64.00 | 9,710 | 1,054 | 621,440 | 67,456 | 688,89 |
| | Concrete Bridge (New) | ∎2 | 0.00 | 2,380 | 3,001 | 0 | 0 | |
| | limber Bridge (Exist) | #2 | 112.00 | 11,930 | 2,370 | 1,336,160 | 265,440 | 1,601,60 |
| | Concrete Bridge (Exist) | ii2 | 0.00 | 7,551 | 2,143 | 0 | 0 | |
| | | | | • | | | | |
| | | | | | | | | |
| (| Without Overhead } | 1 | OTAL COST | (Timber Bri | | 8,749,637 | 723,270 | 9,472,90 |
| | | | 1997 - 19 | (Concrete B | ridge) | · 0 | 0 | |
| · · | .1 | ۱ | OTAL COST | lwithout Ha | intenance) | 8,749,637 | 723,270 | 9,472,90 |
| | | | | | | | | |
| | | | | ····· | | | | |
| · f | Overhead : 15%) | | | (limber Bri | | 10,062,083 | 831,761 | 10,893,84 |
| | · | | | (Concrete B | | 0 | 0 | |
| | | 1 | OTAL COST | (without Ma | Intenancel | 10,062,083 | B31,761 | 10,893,84 |
| - | 4 | | | | | 1 | | |

PROV : KALIMANTAN TIMUR

KAB : BULUNGAN

LINK NO : 11 (IIIC) LENGTH : 16 Km

| ITEN | . • | | ((C UNIT | COST >>> | <pre>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>></pre> | COST | ····· |
|--|-------------|-----------|---------------------|----------|---|---------|--|
| | <u>IIKU</u> | QUANTITY | LOCAL | FOREIGN | LOCAL | FOREIGN | IOTA |
| | | | | | | | |
| Superstructure (Timber;Span Ja;10T) | +2 | 0.00 | 49,834 | 3,215 | 0 | Û | |
| Superstructure (Timber;Span 5m;10T) | a2 | 0.00 | 55,199 | 3,550 | õ | 0 | |
| uperstructure (Timber;Span 8#;107) | e2 | 0.00 | 73,115 | 4,665 | ň | | |
| uperstructure (Timber;Span 3m;BHSO) | . ∎2 | 0.00 | 61,793 | 3,975 | Å. | - A | |
| uperstructure (Timber;Span 5m;8HSO) | •2 | 0.00 | 67,462 | 4,309 | | ۸ | |
| uperstructure (Timber;Span 8m;BH50) | #2 | 0.00 | 85,550 | 5,455 | Õ | Ň | |
| uperstructure (Concrete;Span 3m;BHSO) | ∎2 | 0.00 | 51,675 | 105,767 | . 0 | ů. | |
| uperstructure (Concrete;Span 5m;BH30) | n 2 | 0,00 | 56,060 | 110,277 | 0 | v A | |
| uperstructure (Concrete;Span 8m;BH50) | -2 | 0.00 | 57,678 | 128,919 | ů | 0 | |
| uperstructure (Concrete;SpanlOa;BH50) | =2 | | 62,984 | 146,517 | Ô. | ń | |
| uperstructure (Concrete;Span15#;8850) | ×2 | 0.00 | 67,745 | 172,712 | Ň | ۰ ۵ | |
| ubstructure (Pier;for Timber;101) | NO | 0.00 | 434,033 | 29,776 | ň. | v A | |
| ubstructure (Abut;for Timber;10T) | NO | 0.00 | | 143,803 | Ŏ | 0 | |
| ubstructure (Pier;for Timber;BH50) | NO | 0.00 | 638,325 | 44,057 | ů. | v 0 | |
| ubstructure (Abut;for Tieber;8N50) | NO | 0.00 | 1,396,980 | 159,216 | ő | 0 | |
| ubstructure (Pier;for Concrete;BMSO) | RD | 0.00 | 2,390,993 | 467 275 | Ô. | Ŭ, | |
| ubstructure (Abut;for Concrete;8850) | NO | 0.00 | 5,007,281 | 982,926 | Ň | v n | |
| emplition of Bridge (limber-)limber) | 112 | 0.00 | 14,125 | 1,266 | ů. | v ñ | |
| exolition of Bridge (lisber-)Concrete) | •2 | 0.00 | 14,125 | 1,266 | õ | 0 | |
| emolition of Bridge (Concrete) | a2 | 0.00 | 107,156 | 79,820 | Ň | V A | |
| | | | 10/1100 | 11020 | v | v | |
| aintenance of Timber Bridge (Hew) | a2 | 0.00 | 9,710 | 1,054 | 0 | 0 | |
| aintenance of Concrete Bridge (New) | a2 | 0,00 | 2,380 | 3,001 | 0 | 0 | |
| aintenance of Timber Bridge (Exist) | #2 | 340.00 | | 2,370 | 4,056,200 | 805,800 | 4,862,0 |
| aintenance of Concrete Bridge (Exist) | #2 | | 7,551 | 2,443 | 0 | 0 | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |
| | ****** | | | | | | |
| (Without Overhead) | I | DIAL COST | (Tiaber Bridg | e) | 0 | 0 | |
| | | | (Concrete 8rl | dgel | 0 | 0 | |
| | Ţ | OTAL COST | (without Main | tenance) | 0 | 0 | |
| | | ******** | | | | | |
| (Overhead : 15%) | 1 | OTAL COST | (linber Bridg | | Ŷ | 0 | |
| | | | (Concrete Bri | | 0 | 0 | |
| | 1 | OTAL COST | Without Hain | tenancel | 0 | 0 | |

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| | | | | | (Ap) |
|--|--------------------|----------------------------------|---|--------------------|--|
| TTEN National States of States National States of States | UNIT RUANTITY | < | ///// Local | (CDST FORE IGN | >>>>> Total |
| | | | Contraction of the second s | | |
| uperstructure (Timber;Span 3m;101) | s2 0.00 | 49,834 3,215 | 0 | 0 | 0 |
| uperstructure (limber;Span 5#;101) | D2 0.00 | 55,199 3,550 | 0 | 0 | |
| uperstructure (Timber;Span Bm;10f) | a2· 240.00 | 73,115 4,665 | 17,547,600 | 1,119,600 | 18,667,200 |
| uperstructure (Timber;Span;3m;8H50) | a2 0.00 | 61,793 3,975 | V | | 0 |
| uperstructure (limber;Span 5s;8H50) | a 2 0.00 | 67,462 4,309 | 0 | V | 0 |
| uperstructure (Timber;Span 8#;BH50) | 2 0.00 | 05,560 5,455 54,675 105,767 | U 10 | 0 N | 0 |
| uperstructure (Concrete;Span 3a;BMSO) uperstructure (Concrete;Span 5a;BMSO) | ₽2 0.00 ∎2 0.00 | 54,675 105,767 56,060 118,299 | м. С. С. С. | | . v |
| uperstructure (Concrete;Span 8#;BN50) | a2 0.00 | 57,678 128,919 | A | | ŏ |
| uperstructure (Concrete;Spanlow;BNSO) | #2 0.00 | 62,984 146,517 | Õ | 0 | 0 |
| uperstructure (Concrete;Span(5#;BN50) | #2 0.00 | 67,745 172,712 | Ő | an and a ora | 0 |
| ubstructure (Pier;for Timber;101) | NO 4.00 | 434,033 29,776 | 1,736,132 | 119,104 | 1,855,236 |
| ubstructure (Abut;for Timber;101) | NO 8.00 | 1,243,048 143,803 | 9,944,384 | 1,150,424 | 11.094,808 |
| ubstructure (Pier;for Timber;8050) | ND 0.00 | 638,325 44,057 | 0 | 0 | 0 |
| ubstructure (Abut;for Timber;8N50) | NO 0.00 | 1,396,980 159,216 | 0 | 0 | 0 - 1 |
| ubstructure (Pier;for Concrete;BK50) | ND 0.00 | 2,390,993 467,275 | 0 | 0 | 0 |
| ubstructure (Abut;for Concrete;8H50) | NO 0.00 | 5,007,281 982,926 | 0 | • 0 | 0 |
| emolition of Bridge (limber-)limber) | R2 0.00 | 14,125 1,266 | 0 | 0 | 0 |
| emolition of Bridge (limber-)Concrete) | m2 0.00 | 14,125 1,266 | 0 | 0 | 0 |
| eaulition of Bridge (Concrete) | ∎2 0.00 | 107,156 79,820 | 0 | 0 | C |
| aintenance of Timber Bridge (New) | m2 240.00 | 9,710 1,054 | 2,330,400 | 252,960 | 2,583,360 |
| aintenance of Concrete Bridge (New) | a2 0.00 | 2,380 3,001 | 0 | 0. | 0 |
| aintenance of Timber Bridge (Exist) | e2 0.00 | | 0 | 0 | (|
| aintenance of Concrete Bridge (Extst) | B2 0.00 | 7,551 2,443 | 0 | 0 | 0 |
| | | | | | |
| (Without Overhead) | 101AL COST | (Tiøber Bridge) | 29,228,116 | 2,389,128 | 31,617,244 |
| | | (Concrete Bridge) | 0 | Q | |
| | TOTAL COST | (without Maintenance) | 29,228,116 | 2,389,128 | 31,617,244 |
| | | | | | |
| (Overhead : 15%) | TATAL PART | (Tiøber Bridge) | 33,612,333 | 2,747,497 | 36,359,831 |
| v usernedu s 136 i | iuine cuol | (Concrete Bridge) | oofereloop . | 0 | in the second of |
| . · · · · · · · · · · · · · · · · · · · | 10101 1001 | (without Haintenance) | 33,612,333 | 2,747,497 | 36,359,831 |

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