LINK NO : 55 (111A) LENGTH : 14 Km

UPGRADE : 7.5m road bed, 4.5m road with surface Dressing (2)

(Ro)

							(Kp)
1168	11917	YTTHAUB	<<< UNI LOCAL	T COST >>> FOREIGN	))) JADDJ	CCC COST Foreign	>>>>> TOTAL
			Locus	ryne ion		1 OUT 100	1U1ni
Site Clearance in Light Bush	n2	0.0	172	91	0	0	C
Subgrade Preparation	e2	0.0	22	11	0	0	(
Normal Fill	m3	0.0	1,784	863	0	0	(
Fill in Swamp	æ3	0.0	2,621	1,053	()	0	(
Yormal Excavation to Spoil	ø3	1760.0	1,044	523	2,046,240	1,025,080	3,071,320
Sub Base Course	m3	4557.0	3,357	1,348	15,297,849	6,142,836	21,440,683
Base Course	an 3	5040.0	4,604	2,300	23,204,160	11,592,000	34,796,160
Shoulder	a2	42000.0	310	146	13,020,000	6,132,000	19,152,000
Asphalt Patching	m2	0.0	3,617	1,512	0	0	ť
Surface Dressing (Single)	m2	0.0	587	766	0	0	(
Surface Dressing (Double)	<b>a</b> 2	63000.0	737	1,207	46,431,000	78,041,000	122,472,000
Earth Drain	6	0.0	800	119	0	0	(
Earth Drain in Swamp (by machine)	$\xi_{\mathbf{R}}$	0.0	1,231	474	0	. 0	(
Pipe Culvert D80cm	a	. (1.()	44,289	50,140	0	. 0	(
Masonry Culvert (80x80cm)	ē	0.0	66,426	40,282	0	0	(
Retaining Wall and Wing Wall (Timber)	44.5	0.0	10,566	246	0	Q	(
Retaining Wall and Wing Wall (Masonry)	ø3	0.0	50.559	11,692	. 0	0	(
Gabino Protection	<b>n</b> 3	0.0	20,132	120	0	0	
lem Bridge (Timber)	SET	1.0			0	Q	(
lem Bridge (Concrete)	SEI	1.0			0	0	
			Sub Iotal		99,999,249	100,932,916	200,932,165
Overhead ( 15% )					14,999,887	15,139,937	30,139,82
			TOTAL COST		114,999,136	116,072,853	231,071,989
fanual routine maintenance of road	Ka		127 720	7 740	1,788,080	101,472	1,889,557
Routine maintenance of asphalt road	Ka Ka	14.0 14.0	127,720 361,700 Sub Fotal	7,248 151,200	5,063,800 6,851,880	2,116,800	7,180,600 9,070,150
laintenance of Timber Bridge (New)	n2	0.0	7,234	1,009	0		.,
aintenance of Concrete Bridge (New)	æ2	0.0	1,812	3,001	0		
iginifinancs of concrets actods tuski		0.0	7,746	2,347	0		
•	s2	0.0					
laintenance of Timber Bridge (Exist)	67 42	0.0	4,491	2,443	0	0	,
laintenance of Timber Bridge (Exist)			•	2,443			
laintenance of Timber Bridge (Exist)			4,491	2,443 Favement U	nit Cost (I	Rp/Ka) ;	
Maintenance of Timber Bridge (Exist)			4,491 Earthnork & Timber	2,443 Favement U. Bridge U	ait Cost (i nit Cost (i	Rp/Ka) ;	
Maintenance of Timber Bridge (Exist)			4,491 Earthwork & Timber Concrete	2,443  Favement U. Bridge U Bridge U	ait Cost (i nit Cost (i	Rp/Km) ; Rp/m2) ; Rp/m2) ;	16,505,14
Maintenance of Limber Bridge (Exist) Maintenance of Concrete Bridge (Exist)			4,491 Earthwork & Timber Concrete Survived	2,443 Favement U. Bridge U	nit Cost (i nit Cost (i nit Cost (i	Rp/Ka) ;	16,505,147 25,851,596 3,93

PROV : KALIMANTAN TIMUR

KAB : KUTAI

LINK NO : 54 (TITC) LENGTH : S Km

UPORADE : 7.5m road bed, 3.5m road with surface Subbase Cource (Rp)

LIEH				CUST >>>		1)))))	cost	>>>>>
		QUANTITY	LOCAL	FOREIGN	LOC	AL I	FORE LGN	TOTAL
Site Clearance in Light Rush	<b>a</b> 2	0.0	172	91		0	0	(
Subgrade Preparation	#Z	0.0	22	11		0	ò	į.
Normal Fill	nJ.	0.0	1,784	863		Q	0	(
Fill in Swamp	a3	0.0	2,621	1,053		0	0	
Normal Excavation to Spoil	м3	0.0	1,044	523		0	0	Į
Sub Base Course	n3	402.5	3,357	1,348	1,351,1	92	542,570	1,893,763
Base Course	คริ	1050.0	4,604	2,300	4,834,2		415,000	7,249,200
Shoulder	e?	20000.0	310	146	6,200,0	000 2,	920,000	9,120,000
Asphalt Patching	m2	0.0	3,617	1,512	, ,	0	0	(
Surface Dressing (Single)	n2		587	766		0	0	(
Surface Dressing (Double)	<b>#</b> 2		737	1,207		0	0	. (
Earth Drain	b		800	119		0	0	(
Earth Drain in Swamp (by machine)	a3		1,231	474		0	r)	Į
Pipe Culvert DBOca	я		44,289	50,140	•	0	0	(
Masonry Culvert (80x80cm)	a	0.0	66,426	40,282		0	0	ı
Retaining Wall and Wing Wall (Timber)	a?	0.0	10,566	246		Ø	0	(
Retaining Wall and Wing Wall (Masonry)	3	0.0	50,559	11,692		0	0	
Gabion Protection	<b>n</b> 3	0.0	20,132	120		0	0	- 1
New Bridge (Timber)	SET	1.0			٠	0	0	İ
New Bridge (Cancrete)	SET	1.0				0	. ()	
			Sub Total		12,305,	392 5	877,570	18,262,96
Overhead ( 15% )					1,857,	909	881,635	2,739,44
			IOTAL COST		14,243,	200 6	,757,205	21,002,40
H	·	5.0	127 720	7,248	638,	 ለበበ	36,240	674,84
Manual routine maintenance of road	Ka Va		127,720 200,130	88,092			440,460	1,441,11
Routine maintenance of gravel road	Ka	3,0	Sub Total	00,072	1,639,		476,700	2,115,95
Winterson of Tisher heiden Dland	67	0.0	7,234	1,005		0	170,700	2111017
Naintenance of Timber Bridge (New) Maintenance of Concrete Bridge (New)	ก.c ค.2		1,812	3,001		0	0	
Maintenance of Limber Bridge (Exist)	a?		7,746	2,347		Ů.	ů.	
Maintenance of Concrete Bridge (Exist)	w.S		4,491	2,443		0	0	
.,								
			Earthwork &			(Rp/Ke)		4,200,40
			limber	Bridge	Unit Cost	(Rp/m2)		
			Concrete	Bridge	Unit Cost	(Kp/e2)		161 =
			Survived	Value	1.6.4	([{p})	;	757 <sub>1</sub> 5
			Haintenance Hew Bridge		out Erlage	(%) (%)	;	10.

PROV : KALIMANTAN TIMUR

KAD : KUTAI

LINK NO : 52 (1110-2)

LEMBTH: 8 Km

UPGRADE : 6.0m road bed, 3.5m road with surface Base Cource

(Rp) ((( UNIT COST >>> **{{{{{}}}}** COST \*\*\*\*\* UNIT QUANTITY LOCAL FOREIGN LOCAL FOREIGN 0.0 172 91 Site Clearance in Light Bush ₽2 0 Subgrade Preparation 0.0 - 22 11 Ô 0 **#**2 1.704 Û Normal Fill 0.0 863 0 2,621 0 Вŝ 0.0 1,053 Fill in Swamp Normal Excavation to Spoil **£**3 0.0 1,044 523 Sub Base Course n3 1195.3 3,357 1,348 4,012,622 1,611,264 5,623,886 3,864,000 11,598,720 7,734,720 2,300 Base Course аš 1680.0 4,604 6,200,000 2,920,000 9,120,000 20000.0 310 146 Shoul der **a**2 1,512 0 0.0 3,617 Asphalt Patching 2 0 0.0 587 766 Surface Dressing (Single) ₽2 0 0.0 737 1,207 Surface Dressing (Double) æ2 0.0 800 119 ŋ 0 Earth Drain 1,231 474 Earth Drain in Swamp (by machine) аŠ 0.0 0.0 44,289 50,140 Pipe Culvert D80cm 6 0 66,426 40,282 Masonry Culvert (80x80cm) 0 0 10,586 Retaining Wall and Wing Wall (Timber) 0.0 246 ٩2 Retaining Hall and Ming Wall (Masonry) ЯŠ 0.0 50,559 11,602 0 0 Gabion Protection 83 0.0 20,132 120 O 0 Hew Bridge (limber) SET 1.0 New Bridge (Concrete) 1.0 17,347,342 8,375,264 26,342,606 Sub Total 2,692,101 1,259,289 3,951,390 Overhead (15%) TOTAL COST 20,639,443 9,654,553 30,293,996 57,984 1,079,744 8.0 127,720 1,021,760 Manual routine maintenance of road 7,248 K. 200,130 88,092 1,601,040 704,736 2,305,776 Routine maintenance of gravel road Κa 2,622,800 762,720 3,385,520 Sub Total Maintenance of limber Bridge (New) 0.0 7,234 1,009 0 0 Ŋ 62 Haintenance of Concrete Bridge (New) a? 0.0 1,812 3,001 0 0 0 Maintenance of Timber Bridge (Exist) 0.0 7,746 2,347 0 0 Û **8**2 Maintenance of Concrete Bridge (Exist) 0.04,491 2,443 #2 (Rp/Ka) Earthwork & Pavement Unit Cost 3,786,750 Timber Bridge Unit Cost (Ro/m2) Concrete Bridge Unit Cost (Rp/n2) Survived Value (fin) 2,811,943 Maintenance Rate without Bridge (2) 11.18 New Bridge Cost Rate (7.1

LINK NO : 51 (IIIA) LENGTH : 10 Km

UPORADE : 6.5m road bed, 4.5m road with surface Dressing (2)

ITER								(Rp)
	TINU	QUANTITY	LOCAL	COST >>> Foreign	( Local	((((	COST FOREIGN	>>>>> TOTAL
				~ <del></del>				
Sile Clearance in Light Bush	<b>a</b> ?	0.0	172	. 61	•			
Subgrade Preparation	#2	0.0	172	91		)	0	0
Normal Fill	En .	0.0	27	11	1	)	0	ġ.
Fill in Swamp	63		1,784	863	•	)	0	0
Normal Excavation to Spoil	Ea	0.0	2,621	1,053		)	0	t
Sub Base Course	es Se	1400.0	1,044	523	1,461,60	) .	732,200	2,193,800
Base Course	#3 #3	2892.8	3,357	1,349	9,711,12	3,	899,494	13,610,623
Shoulder	-	3600.0	4,604	2,300	16,574,40	9,	200,000	24,854,400
Asphalt Patching	#5	20000.0	310	146	6,200,00	0 2,	920,000	9,120,000
Surface Dressing (Single)	#2	0.0	3,617	1,512		)	0	, , ,
Surface Dressing (Double)	<b>6</b> 2	0.0	59 <i>7</i>	766	1	)	0	Č
Earth Drain	e2	45000.0	737	1,207	33,165,00	54,	315,000	87,480,000
	9	0.0	800	119		) .	. 0	(
Earth Drain in Swamp (by machine)	a3	0.0	1,231	474		0	0	· ·
Pipe Culvert D80cm	A	0.0	44,289	50,140		0	0	ì
Masonry Culvert (80x80cm)	8	0.0	66,426	40,282		0	ò	
Retaining Wall and Wing Wall (Timber)	<b>A</b> 2	0.0	10,586	746		0.	0	1
Retaining Hall and Hing Wall (Masonry)	<b>43</b>	0.0	50,559	11.692		0	0	
Gabian Protection	мŠ	0.0	20,132	120		0	0	
New Bridge (Timber)	SET	1.0			4,710,06	i	503,803	5,213,86
Neu Oridge (Cancrete)	581	1.0				0	Ű	51217100
· ·			Sub Total		71,822,19	0 70	,650,497	142,472,68
Overhead (15%)					10,773,32	8 10,	,597,574	21,370,90
	•		TOTAL COST		82,595,51	8 81	,248,071	163,843,58
	<b></b>	1 (1) H. M. W. W. W. W. W. W. W. W.		e are dit top tol 😑 top are are are less 🕾				
Manual routine naintenance of road	Ķа	10.0	127,720	7,248	1,277,20	0	72,480	1,349,68
Routine maintenance of asphalt road	Ka	10.0	361,700	151,200	3,617,00	0 (	512,000	5,129,00
			Sub Total		4,894,20	0 i	584,480	6,478,68
Maintenance of limber Bridge (New)	a2	40.0	7,234	1,009	289,38		40,380	329,72
Maintenance of Concrete Bridge (New)	α2	0.0	1,812	3,001		0	0	
· · · · · · · · · · · · · · · · · · ·	n7		•	•	185.90	14	-	242,23
	<b>#</b> 2	0.0	4,491	2,443		0	0	1.5(20
Maintenance of limber Bridge (Exist) Maintenance of Concrete Bridge (Exist)	m2	24.0	7,746	2,347 2,443 Fayement U	~~~~~	14	56,328	15,
				•	nit Cost	(Rp/s2)	;	
			Survived	Value		(Rp)	;	17,102,0
			Kaintenance	Rate withou	t Bridge	(%)	:	4.1
			New Bridge	n 1 n i	-	(X)	:	3.6

RUV : KALIMANTAN TIMUR :

KAB : KUTAL

LINK NO : 42 (1118-2)

LENGTH : 3 Km

UPGRADE : 5.5m road bed, 3.5m road with surface Base Cource

							(Rp)
ITEN	110011	QUANTITY	COCAL	COST >>> FOREIGN		(((( CUSI	>>>>>>
	7811	ACHAILLI			LOCAL	. FOREIGN	JAIOI
Site Classes in Link Buck	_a				•		
Site Clearance in Light Bush	42	0.0	172			) ,	
Subgrade Preparation	67	3240.0	22	11	71,28		
Normal Fill	83	0.0	1,784	863		0 0	
ill in Swamp	įs.	744.0	7,621	1,053	1,950,02		_
Hornal Excavation to Spoil	ø3	0.0	1,044	523		0 0	
Sub Base Course	<b>u</b> 3	640.5	3,357	1,348	2,150,15		
Rase Course	<b>£</b> 3		4,604	2,300	2,900,52		
Shoul der	a2	6000.0	310	146	1,860,00		
Asphalt Fatching	#2	0.0	3,617	1,512		0 0	
Surface Dressing (Single)	R2	0.0	597	766		0 0	١.,
Surface Dressing (Double)	e2	0.0	737	1,207		0 0	•
Earth Drain		0.0	800	- 119		0 , 0	
Earth Drain in Swamp (by machine)	<b>#3</b>	2400.0	1,231	474	2,954,40	0 I,137,600	4,092,00
Pipe Culvert DBOra	2	0.0	44,289	50,140	•	ė (	Υ.,
Nasonry Culvert (80x80cm)	曹	0.0	66,426	40,282		0 0	)
Retaining Wall and Wing Wall (fimber)	<b>a</b> 2	0.0	10,566	246		0 (	)
Retaining Wall and Wing Wall (Masonry)	in 3	0.0	50,559	11,682		0 (0	)
Babion Protection	£a.	0.0	20,132	120		0 (	)
New Bridge (Timber)	SET	1.0				0 (	)
New Bridge (Concrete)	SET	1.0				0	) .
			Sub Total		11,886,38	3,145,06	17,031,44
Overhead (15%)					1,782,95	771,759	2,554,71
			TOTAL COST		13,869,33	5,916,825	5 19,586,16
lanual routine paintenance of road	Ka	3.0	127,720	7,248	383,16		
Routine maintenance of gravel road	Ke	3.0	200,130	89,092	600,39		-
	:		Sub Total		783,5		
Raintenance of Timber Bridge (New)	B2		7,234	1,009		-	0
Maintenance of Concrete Bridge (New)	ø2		1,812	3,001		•	0
Maintenance of Timber Bridge (Exist)	•2		7,746	2,347	522,0		
Kaintenance of Concrete Bridge (Exist)	<b>£</b> 2	0.0	4,491	2,443		0	0
Haintenance of Concrete Bridge (Exist)	<u>\$2</u>	0.0	4,491  Earthwork & lieber  Concrete	favement l Bridge i	Init Cost Init Cost Init Cost	(Rp/Kn) : (Rp/a2) : (Rp/a2) ;	6,528
			Survived	Value		(Rp) :	1,508,7
			Haintenance		ut Bridae	(1)	
					3 -		

PROV

\* KALIMANTAN TIMUR

KAB : KUTAI

LINK NO : 49 (1118-2) LENGTH : 8 Km

UPGRADE : 5.5m road bed, 3.5m road with surface Base Cource

							(Rp)
LTEH			((( UNIT			<<<< cost	<b>&gt;&gt;&gt;&gt;&gt;</b>
	UNIY 	YIITHAUD	LOCAL	FOREIGN	LOCAL	FOREIGN	JATOT
Site Clearance in Light Bush	#2	0.0	172	91	(	)	0
Subgrade Preparation	n2	0.0	22	. H		•	Ú
Rormal Fill	n 3	0.0	1,781	863	,	•	0
Fill in Swamp	n3 n3	0.0	2,621	1,053	`	•	(
Mormal Excavation to Spoil	no R3	0.0	1,044	523		) 0	(
Sub-Base Course	m: m3	1273.3	•				5,755,626
Base Course		1680.0	3,357	1,348	4,106,611		11,578,72
Shoulder	n3		4,604 310	2,300	7,734,720		
	P2	16000.0		146	4,960,00	0 - 2,336,000 0 - 0	7,296,00
Asphalt Patching	n2	0.0	3,617	1,512		•	
Surface Dressing (Single)	a2	0.0	587	766		•	
Surface Dressing (Double)	• 2	0.0	737	1,207		) (	. (
Earth Drain	A	0.0	800	119		0	
Earth Drain in Swamp (by machine)	n3	0.0	1,231	474		0 0	
Pipe Culvert DAOra	a	0.0	44,289	50,140		0 0	
Kasonry Culvert (80x80cm)		0.0	66,426	40,282		0 0	
Retaining Hall and Hing Hall (Timber)	<b>8</b> 2		10,566	246		0	
Retaining Wall and Wing Wall (Masonry)	គំរី		50,559	11,682		0 0	
Gabion Protection	<b>s</b> 3	0.0	20,132	120		0 0	
New Bridge (limber)	SET	1.0			2,487,26	9 323,858	2,811,12
New Bridge (Concrete)	SEI	1.0				0	
			Sub Total	٠	19,288,60	8,172,866	27,461,47
Overhead ( 15% )					2,893,29	0 1,225,929	4,119,25
			TOTAL COST		22,181,85	6 9,398,795	31,580,69
							, A10. 31
Hanual routine maintenance of road	Ke.		127,720	7,248	1,021,76	-	1,079,74
Routine maintenance of gravel road	Ka	0.0	200,130	88,092	1,691,04		2,305,7
	_		Sub Total		2,622,80		3,385,5
Maintenance of Timber Bridge (New)	<b>\$</b> 2		7,234	1,009	86,80		98,9
Maintenance of Concrete Bridge (New)	e2		•	3,001	-n	0 0	407.0
Maintenance of Timber Bridge (Exist)	<b>\$</b> 2		7,746	2,347	325,33		423,9
Maintenance of Concrete Bridge (Exist)	#2	0.0	4,491	2,443		0 0	
				**************************************			
			Earthwork &	Pavement U	nit Cost	(Rp/Ka) :	3,543,4
			Timber	Bridge U	nit Cost	(Rp/m2) :	269,4
			Concrete	Aridge U	nit Cost	(Rp/a2) ;	•
			Survived	Value		(Rp) :	2.977.8
				Value Rate withou	t Bridae	(Rp) :	2,977,81 11.9

PROV : KALIMANTAN TIMUR

KAD : KUTAI

11NK NO : 39 (111A)

LENOTH : 6 Km

UPGRADE : 6.0m road bed, 4.0m road with surface Dressing (2)

(Ŕn

		•						(Rp)
ITEN	UNIT	YIIIKNUQ	<<< UNIT	COST >>:	) (	(((((	COST FORE LGN	>>>>> TOTAL
Site Clearance in Light Bush	<b>#2</b>	0.0	172	91		0	0	
Subgrade Preparation	m2	36000.0	22	H	792,00		396,000	1,188,000
Mormal Fill	43	0.0	1,784	863		0	0	0
Fill in Swamp	ьJ	3847.5	2,621	1,053	10,084,29	?) 4.	051,417	14,135,714
Normal Excavation to Spoil	a3	576.0	1,044	523	601,34		301,248	902,59
Sub Base Course	<b>a</b> 3		3,357	1,348	11,279,5		529,280	15,808,800
Pase Course	83	1920.0	4,604	2,300	0,839,60		416,000	13,255,680
Shoulder	n2	12000.0	310	146	3,720,00		752.000	5,472,000
Asphalt Patching	e2	0.0	3,617	1,512		0	0	(
Surface Dressing (Single)	<b>#</b> 2	0.0	581	766		8	0	
Surface Dressing (Double)	a2	24000.0	737	1 207	17,688,0	00 28.	968.000	46,656,000
Earth Drain		8320.0	800	119	6,656,0		990,080	7,646,080
Earth Drain in Swamp (by machine)	<b>a</b> 3	36000.0	1,231	474			064,000	61,380,000
Pipe Cuivert DHOca	6	56.0	44,289	50,140			807,840	5,288,024
Hasonry Culvert (80x80cm)	4	12.0	66,426	40,282	797,1		483,384	1,280,498
Retaining Wall and Wing Wall (limber)	n-2	0.0	10,566	246		0	0	1,200,177
Retaining Wall and Wing Wall (Masonry)	n3	20.7	50,559	11,692		71	241,817	1,280,380
Sabion Protection	m3	0.0	20,132	120	*,,*,**	0	0	112001000
New Bridge (limber)	SET	1.0				Ô	0	. (
Hen Bridge (Concrete)	. 251	1.0		<b></b> -		0	. 0	
			Sub Total		108,300,7	09 66,	880,100	174,301,77
Overhead (15%)				÷	16,245,1	o an	900, 159	26,145,26
					10111011	,,		2011/0120
			TOTAL COST		124,545,8	14 75,	901,225	200,447,039
Manual routine maintenance of road	Ka	6.0	157 770	7 240	7LL 1	70	AT AGG	807,80
· · · · · · · · · · · · · · · · · · ·	Kn Ka	6.0	127,720 361,700	7,248 151,200			43,489 907,200	
Routine maintenance of asphalt road	P, M	0,0	Sub lotal	1011700	2,170,2		950,800	3,077,40 3,807,20
Haintenance of Timber Bridge (New)	<b>#</b> 2	0.0	7,234	1,009		0	130,000	2,00,110
Raintenance of Concrete Bridge (New)	a2		1,812	3,001		ů.	0	
Maintenance of Timber Bridge (Exist)	#2		7,746	2,347	786,9		238,455	1,025,44
Maintenance of Concrete Bridge (Exist)	a2	0.0	4,471	2,443		0	0	1,020,11
						~~~~~		
			Earthwork L	Pavement	Unit Cost	(Rp/Ka)	;	33,407,84
			linber		Unit Cost	(Rp/a2)	;	
			Concrete		Unit Cost	(Rp/#2)	:	
			Survived	Value	•	(Rp)	;	15,960,98
		•	Haintenance	Rate witho	ut Bridge	<b>(X)</b>	:	1.9
			New Bridge		-	(2)		

PROV : KALIM

KALIMANTAN TIMUR

KAB : KUTAI

LINK NO : 32 (111A).

LENGTH: 8 Km

UPGRADE : 8.0m road bed, 4.5m road with surface Dressing (2)

((( UNLT COST >>> (((((C COST UNII QUANTITY LOCAL FOREIGN TOTAL LOCAL FORE LGN Site Clearance in Light Bush 172 **#**2 0.0 91 Subgrade Preparation **#**2 9215.0 22 - 11 202,730 101,365 Normal Fill ĸЗ 0.0 1,784 893 0 0 : 0 Fill in Swamp **a**3 469,111 1,636,766 445.5 2,521 1,053 1,167,655 Normal Excavation to Spoil 1,813,428 908,451 2,721,879 3.3 1737.0 1,044 523 Sub Base Course •3 3132.0 3,357 1,348 10,514,124 4,221,936 14,736,060 19,883,520 Base Course e3 2880.0 13,259,520 6,624,000 4,604 2,300 4,080,000 12,768,000 Shoul der 28000.0 310 146 8,480,000 0 Asphalt Fatching 0.0 3,617 1,512 0 0 Surface Dressing (Single) 0 62 0.0 587 766 0 Surface Dressing (Double) 131 1,207 26,532,000 43,452,000 69,984,000 #2 36000.0 Earth Drain 0.0 800 119 0 0 - 0 126,600 Earth Drain in Swamp (by machine) 3 900.0 1,231 474 1,107,900 Pipe Culvert 080cm 0.0 44,289 50,140 桑 40,282 Ō. 0 Masonry Culvert (80x80cm) 66,426 Û 0.0 Retaining Wall and Wing Wall (Timber) 0.0 10,566 246 02 0.0 Retaining Wall and Wing Wall (Masonry) 28 50,559 11,682 6 Gabion Protection 23 0.0 20,132 120 New Bridge (Timber) SET 1.0 New Bridge (Concrete) 63,277,357 60,291,463 123,568,820 Sub Total 9,043,719 9,491,603 18,535,322 Overhead 1 15% ) TOTAL COST 67,335,182 142,104,142 72,768,960 1,079,744 127,720 7,248 1,021,760 57,984 Ύg 8.0 Hanual routine maintenance of road 1,209,600 2,893,600 4,103,200 151,200 9.0 361,700 Routine maintenance of asphalt road 3,915,360 1,267,584 5,182,744 Sub Total 1,007 O 0 0.07,234 Maintenance of limber Bridge (Newl 1,012 3,001 0 Maintenance of Concrete Bridge (New) 0.0 æΖ 0 Haintenance of Timber Bridge (Exist) 7,746 2,347 0 **#**2 0.0 4,491 2,443 Û Maintenance of Concrete Bridge (Exist) 0.0(Rp/ke) Earthwork & Pavement Unit Cost 17,763,018 Bridge Unit Cost (Ro/#21 Timber • Concrete Bridge Unit Cost (Ro/a21 : Survived Value (Rp)16,759,728 Maintenance Rate without Bridge (7.) 3.65 New Bridge Cost Rate (X)

LINK MO : 40 (111A)

LENGTH : 6 Km

UPGRADE : 6.0m road bed, 4.0m road with surface Dressing (2)

(Rp)

1168				cost >>>		<<< COST	<b>&gt;&gt;&gt;&gt;&gt;</b>
	11140	QUANTITY	LOCAL	FOREIGN	LOCAL	FOREIGN .	ATOT
Site Clearance in Light Bush	<b>a</b> 2	0.0	172	91	. 0	0 -	
Subgrade Preparation	n?	35000.0	22	11	792,000	396,000	1,188,00
Normal Fill	m3	0.0	1,784	863	0	0	•
Fill in Swamp	<b>a</b> 3	3847.5	2,621	1,053	10,084,297	4,051,417	14,135,71
Mormal Excavation to Spoil	En	534.0	1,044	523	557,584	280,328	839,91
Sub Pase Course	23	3360.0	3,357	1,348	11,279,520	4,529,280	15,808,80
Base Course	63	1720.0	4,604	2,300	8,839,680	4,416,000	13,255,68
Shoul der	a2	12000.0	310	146	3,720,000	1,752,000	5,472,00
Asphalt Patching	<b>e</b> 2	0.0	3,617	1,512	. 0	Ó	
Surface Dressing (Single)	<b>#</b> 2	0.0	587	766	Û	0	(
Surface Dressing (Double)	₽2	24000.0	737	1,207	17,488,000	28,968,000	
Earth Drain	鞋	11880.0	800	119	9,504,000	1,413,720	10,917,72
Earth Drain in Swamp (by machine)	<b>a</b> 3	34000.0	1,231	474	44,316,000	17,064,000	61,380,00
Pipe Culvert D80cm	2	96.0	44,789	50,140	4,251,744	4,813,440	9,065,18
Hasonry Culvert (80x80cm)	ħ	0.0	66,426	40,282	0	Ó.	
Retaining Wall and Wing Wall (Timber)	<b>a</b> 2	0.0	10,566	246	0	0	
Retaining Wall and Wing Wall (Masonry)	m3	38.4	50,559	11,682	1,941,465	448,589	2,390,05
Gabion Protection	<b>m3</b>	0.0	20,132	120	0	0	
llex Bridge (Timber)	SET	1.0			0	0	
New Bridge (Concrete)	SET	1.0			Û	0	
			Sub Total		112,978,290	68,132,773	181,109,06
Overhead (15%)					16,946,443	10,219,915	27,166,35
			TOTAL COST		129,922,733	78,352,688	208,275,42
Nanual routine maintenance of road	Ke	6.0	127,720	7,248	766,320	43,468	809,80
Routine maintenance of asphalt road	Ka	6.0	361,700	151,200	2,170,200	•	3,077,40
nontric agracement of aspirals road	17 M	010	Sub Total	1011204	2,934,520	•	3,887,20
Maintenance of Timber Bridge (New)	. n2	0.0	7,234	1,009		•	01001150
Maintenance of Concrete Bridge (New)	#2		1,812	3,001	Ô	0	
Maintenance of Timber Bridge (Exist)	n2		7,746	2,347	0		
Maintenance of Concrete Bridge (Exist)	#2		4,491	2,443	0	0	
			Earthmork &			Rp/km) :	34,712,57
			liaber	-		Rp/m21 :	
			Concrete		hit Cost (	(p/a2) :	
			Survived	Value		(Rp) ;	15,960,96
			Haintenance		it Bridge	(X) :	1.8
			Hen Bridge	COSE NATE		(%) :	

: KALIMANTAN TIMUR

KAB : KUTAI

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

UPGRADE : 6.5m road bed, 3.5m road with surface Dressing (1)

				((( 1203	***	((( COS1	} <b>&gt;&gt;&gt;&gt;</b> >
	URIT	OUANTITY	LOCAL	FOREIGN	LOCAL	FOREIGN	ATOT
ille Clearance in Light Bush	<b>a</b> 2	0.0	172	0.1			
Subgrade Preparation	#2 #2	32500.0	772	91	0	0	1 612 FA
ormal Fill	M.Ž	0.0		- 11	715,000	357,500	1,072,50
ill in Swamp	ea Ea	3861.0	1,784 2,621	963	10 110 111	0	24 (nt 3)
ormal Excavation to Spoil	а3 a3	700.0		1,053	10,119,601	4,065,633	14,185,31
lub Base Course	e3	2450.0	1,044 3,357	523	730,800	366,100	1,096,90
lase Course	mu AJ	1225.0	•	1,348	8,224,650	3,302,600	11,527,25
ihoulder	#2	15000.0	4,604 310	2,300	5,637,900	2,917,500	8,457,40
isphalt Fatching	*2	0.0		146	4,650,000	2,170,000	6,840,00
urface Dressing (Single)	a2	17500.0	3,617 587	1,512	0 222 500	0 000 201 51	27 177 56
orface Dressing (Double)	#2	0.0	737	766	10,272,500	13,405,000	23,677,50
arth Drain	a S	0.0	800	1,207	0	. 0	
arth Drain in Swamp (by machine)	2 23	7800.0		117	0 101 000	0	17 200 00
ine Culvert DBOca	19 183		1,231	474 50 140	7,601,800	3,697,200	13,299,00
asonry Culvert (80x80cm)		0.0 A A	44,289	50,140	0	0	
etaining Wall and Wing Wall (Timber)		0.0	66,426	40,282	0	0	
etaining Wall and Wing Wall (Masonry)	#2	0.0	10,566	246	0	0	
abion Protection	e3 e3	0.0	50 <sub>1</sub> 559	11,692	0	0	
en Bridge (Tiaber)	SET	0.0	20,132	120	0	0	
en Bridge (Concrete)	SET	1.0			0	0	
en errode contracer	ĐE I	1.0	<del></del> .		0	V	
			Sub Total		49,954,331	30,201,533	80,155,86
verhead (15%)		•			7,493,149	4,530,229	12,023,37
			TOTAL COST		57,447,480	34,731,762	92,179,24
anual routine maintenance of road	Ка	5 A	127 770	7 740	. 130 100	11 740	£74 04
outine maintenance of asphalt road	Ka Ka	5.0 5.0	127,720 361,700	7,248 151,200	639,600 1,809,500	36,240 756,000	674,84 2,564,50
overse maintenance of applicate then	4.9	3.0	Sub Total	191,200	2,447,100		3,239,34
aintenance of Timber Bridge (New)	m 2	0.0	7,234	1,009	2,117,100	7121230	Alraita.
aintenance of Concrete Bridge (New)	# Z	0.0	1,812	3,001	0	0	
aintenance of Timber Bridge (Exist)	#2	0.0	7,746	2,347	ů 0	ő	
aintenance of Concrete Bridge (Exist)	s 2	0.0	4,491	2,443	Ů	0	
			Earthwork &			Rp/Kml :	18,435,8
				•		Rp/s2) :	
					nit Cost - (	Rp/∉2} ;	
				Value		(Rp) :	9,760,5
			Haintenance	Rate without	Deidan	(I) :	3.3

LINK NO : 3 (IIIA) - LENGTH : 10 Km

UPGRADE : 7.5m road bed, 4.5m road with surface Dressing (2)

*					•		(Rp)
1188	WIT	QUANTITY	((( UNIT	COST >>> FOREIGN		CUST >>>>	<<<<<
		40					
Site Clearance in Light Bush	a2	6000.0	172	91	1,032,000	546,000	1,578,00
Subgrade Preparation	a2	38100.0	22	11	838,200	•	1,257,300
loraal Fill	e3	0.0	1,784	863	000,1200		1 (201 100
Fill in Swamp	n)	2400.0	2,621	1,053	6,290,400		8,817,60
formal Excavation to Spoil	Ea	761.0	1,044	523	1,003,284		1,505,88
Sub Dase Course	ครี ครี	4307.1	3,357	1,349	14,458,934		20,264,90
lase Course	#3	2520.0	4,604	2,300	11,602,080		17,398,08
Shoulder	#2	30000.0	310	146	9,300,000		13,680,00
Asphalt Patching	<b>#</b> 2	1491.0		1,512	5,392,947		7,647,33
Surface Dressing (Single)	e2	13500.0	507	766	7,924,500		18,265,50
Surface Dressing (Double)	n2	31500.0	131	1,207	23,215,500		61,236,00
arth Drain	8f L	0.0	800	119	191219190		01,230,00
earth Drain in Swamp (by machine)	#3	6,000	1,231	474			10,230,00
	B B	0.0					10,230,00
Pipe Culvert DBOCA			44,209	50,140			
lasonry Culvert (80x80cm)	.a	0.0	88,426	40,282	0		:
Retaining Wall and Wing Wall (finber)	#2 -7	0.0	10,566	246	. ()		
Retaining Wall and Wing Wall (Masonry)	я.3 - 7	0.0	50,559	11,682	0	*	
Sabion Protection	<b>a</b> 3	0.0	20,132	120	. ()	•	
len Bridge (Finber)	SET	1.0			0	0	
len Aridge (Concrete)	acı	1.0			V		•
			Sub Total		88,443,845	73,436,765	161,089,61
lverhead (15%)					13,266,576	11,015,514	24,282,09
· ·			TOTAL COST	•	101,710,421	81,452,279	186,162,70
anual routine maintenance of road	K.a	10.0	127,720	7,248	1,277,200	72,480	1,349,68
outine maintenance of asphalt road	Ke	10.0	361,700	151,200	3,617,000	1,512,000	5,129,00
			Sub Total		4,894,200	1,584,480	6,478,68
laintenance of Timber Bridge (New)	e2	0.0	7,234	1,009	. 0	0	
laintenance of Concrete Bridge (New)	<b>₽</b> 2	0.0	1,812	3,001	0	0	
faintenance of Timber Bridge (Exist)	n2	332.0	7,746	2,347	2,571,672	779,204	3,350,87
aintenance of Concrete Bridge (Exist)	, s?	64.0	4,491	2,443	287,424	156,352	443,77
			rit		U-14 C-4	n_ # . 1	10 /11 3
			Earthwork &			Rp/ka) :	18,616,2
			Timber	-		Rp/a2) :	
			Concrete	•	Unit Cost (	Rp/m21 :	20 541 5
			Survived	Value		(kp)	20,561,44
	•		Maintenance			(2)	3.4
•			New Bridge	L051 H310		. (%)	

LINK MU : 1 (IIIA) LENGTH : 2 Km

UPGRADE : 8.5m road bed, 4.5m road with surface Dressing (2)

		*****					(Rp)
1188			TINU >>>	COS1 >>>	)))	<<< cos1	>>>>>
	1114U 	YTTTHAUD	LOCAL	FORE16N	LOCAL	FOREIGN	JAIOT
Site Clearance in Light Bush							
Subgrade Preparation	a?	0.0	172	91	0	0	(
Normal Fill	<b>92</b>	17000.6	22	- 11	374,000	187,000	561,000
Fill in Swamp	ลเรื่	0.0	1,784	863	0	0	. (
Normal Excavation to Spoil	я3 я3	0.0	2,621	1,053	. 0	0	ı
Sub Base Course	มง กวี	0.0	1,044	523	0	0	
Base Course	•	1260.0	3,357	1,348	4,229,820	1,698,480	5,928,30
Shoul der	a3 -2	720.0	4,604	2,300	3,314,880	1,656,000	4,970,98
Asphalt Patching	a2 -2	8000.0	310	146	2,480,000	1,168,000	3,648,000
Surface Dressing (Single)	я2 -3	0.0	3,617	1,512	0	0	(
Surface Dressing (Double)	n2 n2	0.0	597	766		0	
Earth Drain		9000.0	737	1,207	6,633,000	10,863,000	17,496,00
Earth Drain in Swamp (by machine)	e a3	0.0 0.0	800	119	0	0	(
Pipe Culvert 080ca	\$ a·)	0.0	1,231	474	. 0	0	1
Masonry Culvert (80x80cm)			44,289	50,140	9	Û	
Retaining Wall and Wing Wall (Timber)	n n2	0.0 0.0	66,426	10,292	. 0	0	
Retaining Wall and Wing Wall (Masonry)	83	0.0	10,566 50,550	246 11,682	0	0	
Gabion Protection	ča	0.0	50,559 20,132	11,002	0	0	
New Bridge (Tigher)	SET	1.0	20,132	+-		()	ta 158 51
New Bridge (Concrete)	SET	1.0			9,158,056 0	1,001,458 0	10,159,51
ach bringe toonerecer	UL I	110				·	
			Sub Iotal		26, 187, 756	16,573,938	42,763,69
Overhead ( 15% )					3,928,463	2,486,090	6,414,55
			TOTAL COST		30,118,219	19,060,028	49,178,24
Nanual routine maintenance of road	Ke	2.0	. 127,720	7,248	255,440	14,496	269,93
Routine maintenance of asphalt road	Ku	2.0	361,700	151,200	723,400	302,400	1,025,80
			Sub Total		978,840	316,896	1,295,73
Maintenance of Timber Bridge (New)	₽2	8.88	7,234	1,009	483,231	67,401	550,63
Maintenance of Concrete Bridge (New)	e2	0.0	1,817	3,001	0	0	
Haintenance of Timber Bridge (Exist)	<b>n</b> ?		7,746	2,347	114,640	34,735	149,37
Maintenance of Concrete Bridge (Exist)	<b>s</b> 2	0.0	4,491	2,443	0	0	
			Earthwork &	Pavement Un	it Cost (	Rp/K#) :	18,747,40
			Tiaber	Bridge Un	it Cost (	Rp/m21 :	174,90
			Concrete	Bridge Un	it Cost - 1	Rp/≨2) :	
			Survived	Value		(Rp) :	5,985,36
			Kaintenance	Rate without	Bridge	(X) ;	3.4
		•	Hew Bridge	Cost Rate		(X) :	23.7

#### Appendix A-4

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

1168	וואט			+	( 1991 )	( 1997 )	' IATOT >
			1 +101			- 4475	
ITPHENT :							
Bulldozer/Ripper	hr .	267.9	861.5	929.6	1314.7	1704.6	5070.3
Swamp Bulldozer	hr	128.7	80.0	479.7	675.1	878.2	2281.7
Notor Grader	hr	857.2	2248.4	1581.6	1916.5	1922.0	8525.7
Hand-guide Vib, Roller	hr .	433.4	577.4	1677.2	1747.0	3151.7	7806.7
Tire Roller	hr	845.8	2129.0	1588.6	1645.6	965.4	7174.6
Vibratory Roller (D&I)	ի իւ	749.5	1696.1	1603.8	2057.1	2290.7	8397.4
Hydraulic Excavator; Wheel	hr	585.0	450.0	3750.0	4255.5	2358.8	11399.3
Nheel Loader	hr	1363.6	3298.4	3424.6	1077.3	4429,1	16613.0
Water lank Truck	hr	515.2		1142.1	1384.6	1510.8	5635.7
Dump Truck	hr	11011.5	24995.4	28490.8	32233.6	31553.6	128281.9
Flat Bed Truck with Crane	hr	349.3	212.9	1127.0	1169.4	1865.2	4724.6
Flat Bed Iruck	hr	1160.2	2655.3	2467.4	2598.2	2158,3	11039.4
Portable Crusher/Screening	hr	336.1	868.4	687.3	643.6	443.9	2979.3
Concrete Mixer	hr	98.7	74.0	204.0	138.9	195.8	711.4
Water Pump	hr	79.5	59.6	164.3	110.7	156.1	570.2
Concrete Vibrator	hr	41.1	30.8	85.0	54.3	76.6	287.8
Asphalt Sprayer	hr	845.8	2129.0	1588.8	1645.6	965.4	7174.6
OUR :		•	ı	•			
Handur	san day	1195.8	2036.9	3784.6	4132.7	4745.7	15895.7
Skilled Labourer	man day	1547.0	1822.7	6743.5	8751.8	13479,4	32344,4
Carpenter	ean day	482.5	128.3	2939.0	4023.0	6699.3	14272.1
Nason	man day	96.0	72.0	198.4	140.9	198.7	706.0
Labourer	man day	10277.4	19178.6	30909.9	30326.9	30318.9	121011.6
Driver	man day	2360.3	5276.7	6062.7	6843.3	6779.4	27342.4
Operator	man day	1316.1	2815.0	3434.2	3909.9	3851.9	15327.1
ERIAL :	-						
Hituzea	1	200520.7	505483.4	387291.6	371864.6	199252.3	1670612.8
Asphalt Oil	i	29079.1	73562.5	52433.3	59251.1	39582.0	253908.0
Kernsene	·	40745.7	102910.5	76266.6	79685.7	47454.5	347063.0
Sand	ลงี	634.4	1243.6	1194.3	1141.0	1023.3	5236.6
Ceaent	bag	636.4	477.3	1315.3	846.4	1194.4	4469.8
River Stone	คริ	96.0	72.0	198.4	140.9	178.7	706.0
Steel Houlds	set	240.0	180.0	496.0	294.6	419.4	1630.0
Tieber	n3	42.5	10.7	264.5	364.0	606.6	1288.3
Paint	1	305.1	87.5	2040.3	2027.0	4713.1	9973.B
Reinforcing Steet	kg	7656.0	5742.0	15822.4	9776.2	13851.2	52847.8
Tying Wire	kg	69.6	52.2	143.0	88.8	125.8	480.2
Equivalent Royalty	a3	22575.5	48062.7	52942.9	62050.5	65083.8	250715.4

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

PROV : KALIMANIAN TIMUR KAB : KUTAI

ITEN	UNIT	( 1988 )	( 1989 )	( 1990 )	( 1991 )	( 1992 )	< TOTAL
DIJPHENT :							
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
Notor Grader	hr	489.1	871.9	865.3	744.1	645.3	3635.6
Hand-guide Vib. Roller	hr	75.0	397.5	885.0	1537.5	1795.0	4970.0
Tire Roller	hr	489.1	891.8	865.3	744.1	645.3	3635.6
Vibratory Roller (0&1)	hr	0.0	0.0	0.0	0.0	0.0	0.0
Nydraulic Excavator; Wheel	hr	0.0	0.0	0.0	0.0	0.0	0.0
Nheel Loader	hr	104.6	208.3	244.6	276.8	294.7	1129.0
Water lank Truck	hr	0.0	0.0	0.0	0.0	0.0	0.0
Dump Truck	hr	778.0	2044.7	3236.8	4733.7	5755.7	16548.9
Flat Bed Truck with Crane	hr	426.7	800.2	1255.3	1246.5	1334.2	5070.9
Flat Bed Truck	hг	1923.1	3717.8	4003.3	4057.9	4045.5	17747.0
Portable Crusher/Screening	hr	52.4	104.B	123.9	141.2	151.0	573.3
Concrete Hixer	hr	0.0	0.0	0.2	0.2	0.2	0.8
Water Pump	hr	0.0	0.0	0.2	0.2	0.2	0.6
Concrete Vibrator	hr	0.0	0.0	0.2	0.7	0.2	0.0
Asphalt Sprayer	ħr	0.0	0.0	0.0	0.0	0.0	0.0
AROUR :		,					
Mandur	aan day	617.9	1288.4	1576.4	1833.4	2011.9	7328.4
Skilled Labourer	man day	168.4	489.3	958.7	1360.8	1742.8	4720.0
Carpenter	man day	63.6	120.4	197.8	180.2	221.5	783.5
Nason	aan day	0.0	0.0	0.0	0.0	0.0	0.0
Labour e <i>r</i>	man day	7277.6	15220.3	18534.3	21705.0	23785.9	86523.
Driver	man day	541.3	1132.8	1475.3	1729.8	1919.0	6798.1
Operator	man day	197.9	366.9	370.7	341.6	315.1	1592.7
ATERIAL :					·		
Bituaen	1	675.0	3577.5	7965.0	13837.5	17955.0	44010.0
Asphalt Oil	l	0.0	0.0	0.0	0.0	0.0	0.0
Kerosene	1	75.0	397.5	885.0	1537.5	1995.0	4890.0
Sand	a.J	12.5	66.2	147.7	256.4	332.7	815,5
Cement	bag	0.0	0.0	3.4	3.4	3.4	10.2
River Stone	a.3	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
Tinber	ត្	5.7	10.9	17.8	16.2	20.0	70.0
Paint	1	41.1	78.0	127.7	116.7	143.0	504.
Reinforcing Steel	kg	0.0	0.0	17.6	17.6	17.6	52.6
lying Wire	kg	0.0	0.0	0.1	0.1	0.1	0.7
Equivalent Royalty	<b>23</b>	1483.1	2951.5	3465.6	3920.1	4173.6	15993.5

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

KAB

**KUTA1** 

PROV : KALIHANTAN TIHUR :

Bitumen

Kerosene

Sand

Cepent

Tiaber

Paint

Asohalt Oil

River Stone

Steel Moulds

Tying Mire

Reinforcing Steel

Equivalent Royalty

UNIT (1988) (1989) (1990) (1991) (1992) (TOTAL) EOUTPRENT : Bulldozer/Ripper 267.9 861.5 727.6 1314.7 1704.6 5070.3 hε Swamp Bulldozer hr 80.0 499.7 695.1 878.2 128.7 2281.7 Hotor Grader 3140.2 2446.9 2660.6 2567.3 hr 1346.3 12161.3 994.9 2562.2 3484.5 5146.7 12696.7 Hand-guide Vib. Roller hr 508.4 Tire Roller 1334.9 3020.8 2454.1 2389.7 1610.7 hr 10810.2 Vibratory Roller (O&I) 749.5 1696.1 1603.8 2057.1 2290.9 hr 8397.4 Hydraulic Excavator; Wheel 450.0 3750.0 4255.5 2350.0 hr 505.0 11399.3 4374.1 4723.8 Wheel Loader 1468.2 3506.7 3669.2 hr 17742.0 Water Tank Truck 515.2 1083.0 1142.1 1384.6 1510.8 hr 5635.7 Dump Iruck 11789.5 27040.1 31727.6 36967.3 37309.3 hr. 144833.8 3199.4 Flat Bed Truck with Crane 776.0 1021.1 2383.1 2415.9 hε 9795.5 6373.1 Flat Ded Truck hr 7082'7 6470.7 6656.1 6203.8 28787.0 973.2 Portable Crusher/Screening hr 300.5 B11.2 784.8 594.9 3552.6 Concrete Hixer hr 98.7 74.0 204.2 139.1 196.0 712.0 164.5 110.9 156.3 Water Pump hr 79.5 59.6 570.8 Concrete Vibrator hr 41.1 30.8 85.2 54.5 76.8 288.4 Asphalt Sprayer hr 845.8 2129.0 1588.8 1645.6 965.4 7174.6 LABOUR : Handur man day 1913.7 3325.3 5361.0 5966.1 6757.6 23223.7 Skilled Labourer man day 1715.4 2312:0 1702.2 10112.6 15222.2 37064.4 Carpenter man day 546.1 248.7 3136.9 4203.2 6920.B 15055.6 Hason man day 96.0 72.0 198.4 140.9 198.7 706.0 Labourer man day 17555.0 34398.9 49444.1 52031.9 54104.8 207534.7 Or i ver man day 2701.6 6409.5 7530.0 0573. L 8718.4 34140.6 Operator 1514.0 3181.9 3804.9 4251.5 4167.0 16919.3 nan day HATERIAL :

1

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93

201195.7

29079.1

40820.7

646.9

636.4

96.0

240.0

48.2

346.2

7656.0

24058.6

69.6

509261.1

73562.5

10330B.0

1309.8

477.3

72.0

180.0

21.6

165.5

5742.0

51014.2

52.2

395256.6

52433.3

77151.6

1342.0

1318.7

198.4

496.0

282.3

2168.0

15840.0

143.9

56408.5

391702.1

59251.1

81223.2

1397.4

849.8

140.9

294.6

380.2

2944.0

9773.8

65770.6

88.9

217207.3

39582.0

49449.5

1356.0

1197.8

198.7

419.4

626.6

4056.1

125.9

13068.8

69257.4

1714622.8

253908.0

351953.0

6052.1

4480.0

706.0

1630.0

1358.9

10479.8

52700.6

266709.3

480.5

#### Appendix A-5

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

**************************************	*****	***					( 1000 Rp )
1181	UNIT	( 1988 )	( 1989 )	( 1990 )	7 1991 3	£ 1992 S	(TOTAL)
OUIFHENI :		155,534	352,910	407,629	464,820	438,242	1,019,135
Bulldozer/Ripper	16676	4,467	14,366	15,502	21,923	28,425	84,683
Swamp Bulldozer	12741	1,575	979	6.116	8,508	10,750	27,928
Hotor Grader	14168	12,144	31,855	22,408	27,152	27,230	120,789
Hand-guide Vib. Roller	1608	696	960	2,696	3,130		12,549
Tire Roller	11647	9,852	24,800	18,507	3,130 19,169	11,245	83,573
Vibratory Roller (D&T)	7045	5,280		11,298	14,492	16,139	59,150
Nydraulic Excavator; Wheel	13462	-	6,057	50,482	57,287	31,754	153,455
Wheel Loader	17329	23,629	57,157			76,751	
Water Tank Truck	4288	2,209	•	4,897		6,478	
Dump Truck	5779	63,635	144,449			•	741,356
Flat Bed Truck with Crane	5372	1,876	1,143			10,019	25,378
Flat Bed Truck	3664	4,250		9 080	9,519	7,908	40,446
Portable Crusher/Screening	45755	15,378	71727	9,040 31,447	29,447	20,310	136,315
Concrete Mixer	B773 ·	865	649	1,789	1,218	1,717	6,239
Water Pump	508	40	30	93	56	79	298
Concrete Vibrator	342	14	10	29	18	26	97
Asphalt Sprayer	2048			3,285		1,996	
ABDUR :		34,631	63,686	107,362	117,946	135,423	459,048
Handur	2500	2,989	5,072	9,461	10,331	11,864	39,737
Skilled Labourer	2000	3,094	3,645	13,487	17,503	28,959	64,697
Carpenter	2500	1,206	320	7,347		16,748	35,678
Hason	2500	240	180	496	352	496	1,764
Labourer	1500	. 15,416	28,767	46,364	45,490	45,478	181,515
Driver	3000	7,080	15,830	18,108			82,025
Operator	3500	4,606	9,852	12,019	13,684	13,481	53,642
ATERIAL :		137,381	305,816	287,616	291,470	235,564	1,257,847
Ritumen	400			154,916	151,145	77,700	668,747
Asphalt Oil	600	17,447	44,137	31,459	35,550	23,749	152,342
Kerosene	250	10,186	25,727	19,066	19,921	11,863	86,763
Sand	8000	5,075	9,948	9,554	9,120	9,196	41,891
Cement	4500	2,863	2,147	5,918	3,808	5,374	20,110
River Stone	15000	1,440	1,080	2,976	2,113	2,980	10,589
Steel Houlds	8000	1,920	1,440	3,968	2,356	3,355	13,037
lisber	100000	4,250	1,070	26,450	36,400	60,660	120,030
Paint	2000	610	175	4,080	5,655	9,425	17,746
Reinforcing Steel	1000	7,656	5,742	15,822	9,776	13,851	52,847
Tying Wire	1200	83	62	172	105	150	573
Equivalent Royalty	250	5,643	12,015	13,235	15,512	16,270	62,675

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

PROV : KALIMAN			KAB :	KUTAI	· · · · · · · · · · · · · · · · · · ·		( 1000 Rp )
ITEN	TINU	( 1988 )	< 9891 >	〈 1990 〉	( 1991 )	〈 1992 〉	( TOTAL )
EQUIFHERT :		30,789	61,845	73,785	81,859	87,133	335,411
Bulldozer/Ripper	16676	0	. 0	. 0	0	0	0
Swamp Bulldozer	12241	0	0	0	0	0	0
Notor Grader	14168	6,929	12,635	12,259	10,542	9,142	51,507
Nand-guide Vib. Roller	1808	120	639	1,423	2,472	3,207	7,861
Tire Roller	11649	5,697	10,398	10.079	8,668		
Vibratory Roller (D&T)	7045	0	0	0	0	0	. 0
Hydraulic Excavator; Wheel	13462	. 0	0	0	0	0	. 0
Wheel Loader	17329	1,812	3,609	4,238	4,796	5,106	19,561
Nater Tank Truck	4288	0	0	-	0	0	. 0
Dump Truck	5779	4,498	11,816	18,705	27,356	33,262	75,635
Flat Bed Fruck with Crane	5372	2,292	4,341	6,743		7,167	
Flat Bed Truck	3664	7,046	13,622	14,668	14,968	14,822	65,026
Portable Crusher/Screening	45755	2,397	4,795	5,669		6,909	26,230
Concrete Mixer	8773	. 0	0	j	1	1	3
Water Pump	508	0	0 -	0	. 0	. 0	0
Concrete Vibrator	342	0	0	• 8	0	0	0
Asphalt Sprayer	2068	0	0	0	0	0	0
ABOUR :		15,270	32,012	39,875	46,695	51,604	185,456
Handur	2500	1,544	3,221	3,941		5,029	18,318
Skilled Labourer	2000	336	978	1,917	2,721	3,485	9,437
Carpenter	2500	159	301	494	450	553	1,957
Hason	2500	0	0	0	. 0	0	0
Labourer	1500	10,316	22,830		32,557		
Driver	3000			4,425	5,109	5,757	
Operator	3500	692	1,284	1,297	1,195	1,102	5,570
HATERIAL :		1,410	4,042	7,521	10,834	13,702	37,509
Bitumen	400	270	1,431	3,184	5,535	7,182	17,604
Asphalt Oil	600	1.0	0	0	0	0	. 0
Kerosene	250	18	99	221	384	498	1,220
Sand	9000	100	529	1,181	2,051	2,661	6,522
Cenent	4500	0	. 0	15	. 15	15	45
River Stone	15000	0	0	0	0	0	0
Steel Houlds	8000	. 0	0	0	0	. 0	0
lisber	100000	570	1,090	1,780	1,620	2,000	7,060
Faint	2000	82	156	255	232	286	1,011
Reinforcing Steel	1000	0	0	17	. 17	17	51
Tying Wire	1200	0	0 -	•	. 0	. 0	0
Equivalent Royalty	250	370	737	866	980	1,043	3,996

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

·	******						( 1000 Rp )
I T E N	UNIT	( 1988 )	( 1989 )	/ 100A \	/ 1001 \	< 1992 >	( TOTAL )
EOUIFMENT :			414,755			•	
		1001020	4141170	481,414	546,679	575,575	2,154,546
Bulldozer/Ripper	16676	4,467	14,366	15,502	21,923	20.425	84,683
Swamp Bulldozer	12241	1,575	979	6.116	8,509	10.750	27,928
Hotor Grader	14168	19,073	44,490	34,667	37,694	36,372	172,296
Nand-guide Vib. Roller	1608		1,599			8,274	
Tire Roller	11649	15,549	35,188	28,586	27, 837	19,762	
Vibratory Roller (D&T)	7045	5,290	11,949	11,298	14,492	16,139	59.158
Hydraulic Excavator; Wheel	13462	7,875	6,057	50 482	57. 287	31,754	153,455
Wheel Loader	17329	25,441	6,057 60,766 4,643	63.582	75.790	81.857	307.444
Water lank Iruck	4288	2.209	4.643	4.897	5.937	6.478	24.164
Dump Truck	5779	68.131	156,764	183.353	213.633	215,610	836,991
Flat Bed Truck with Crane		4,168	5.484	12.801	12,978		52,617
Flat Bed Iruck	3664	11,296	23,351	23.709			105,472
• • · · · · · · · · · · · · · · · · · ·	<b>(</b> 5755		44,528				
Concrete Mixer	8773	B65	LAG	1 700	1,219	1.7IR	6.241
Water Pump	508	40	30	83	56	79	289
Concrete Vibrator	342	14	10	83 29	18	26	97
Asphalt Sprayer		1,749	4,402	3,285		1,996	
LAROUR :		49,901	95,698	147,237	164,641	187,027	644,504
Handur	2500	4,533	8,313	13,402	14.914	16.873	58.055
Skilled Labourer	2000	3.430	4,623	15,404	20,224	30.443	74,124
Carpenter	2500	1,365	621	7.841	10.507	17.301	37.635
Mason	2500	240	180	7,841 496	10,507 352	496	1,764
Labourer		26,332	51.597	74.165			
Driver		8,703			25,718		
Operator		5,298			14,879		
MATERIAL :		138,791	309,858	295,137	302,304	249,266	1,295,358
Bitumen	400	80,478	203,704	158,102	156,680	86,882	685,846
Asphalt Oil	600	17,447	44,137	31,459	35,550	23,749	152,342
Kerosene	250	10,204	25,826	19,287	20,305	12,361	87,983
Sand	8000	5,175	10,477	10,735	11,179	10,847	48,413
Cement	4500	5,863	2,147	5,933	3,823	5,387	20,155
River Stone	15000	1,440	1,080	2,976	2,113	2,980	10,589
Steel Houlds	8000	1,920	1,440	3,968	2,356	3,355	13,039
limher	100000	4,820	2,160	20,230	38,020	62,660	135,890
Faint	2000	692	331	4,335	5,887	9,712	20,957
Reinforcing Steel	1900	7,656	5,742	15,839	9,793	13,868	52,898
Tying Hire	1200	83	62	172	106	150	5/3
Equivalent Royalty	250	4,013	12,752	14,101	16,492	17,313	66,671

Appendix A-6 QUANTITIES OF BRIDGE ON PROPOSED ROAD LINKS

	PROV		: K	AL IMA	ИТАІ	HT P	4UR	K	AB	: KI	JTAI					
L TAK No	BRIDGE NAME	Kn	From	(( TYE				LENGTH		SPAN LENGTH	MIDTH	AREA (EXIST)	AREA (NEW)	PIER	ABUT	ROAD CLASS
								(a)		(a)	(a)	(#2)	(s2)	(no)	(no)	*******
1	KERAH	1	LAJN	tL				4.00	2	2.00	3.70	14.80		1	2	IIIA
	HIJAN	3	LAJN	KK	18	BH50	(8)	12.50	3	4.17	4.00	28.75	50.00	2	2	
	N. 1	3	LAJN	KK	TH	BH50	(8)	4.20	i	4.20	4,00	10.50	18.80	0	2	
3	N. I	Û	**	ll		~~~~~ <del>~</del>		7.00	1	7.00	6.00	42.00		0	2	IIIA
	N. I	2	TORG	KK				3.00	3	1.00	5.00	15.00		2	2	
	N. 1		TGRG	KB				3.00	3	1.00	5.00	15.00		2	2	
	N. I		TERE	KB				4.00	3	1.33	5.00	20.00		. 2	2	
	N. 1	2		KB				3.00	3	1 00	3.00	9.00		?	2	
	N. I	2	TGRG	KK				3.00	3	1.00	5.00	15.00		2	. 2	
	HANGKURAWANG	3	TGRG	KK				30.00	7	4.29	4.50	135.00		á	2	
	N. I	4	TGRG	- KK				4.00	2	2.00	5.00	20.00		i	2	
	N. I	8	TGRG	KK				2.00	2	1.00	5.00	10.00		1	2 -	
	N. 1	8	TGRE	KK				5.00	2	2.50	5.00	25.00		i	. 2	
	N. 1	9	IGRG	KB				5,00	2	2.50	4.00	20.00		1	2	
	N. I	q	TERE	KK				2.00	2	1.00	5.00	10.00		1	2	
	1.4	9	TGRG	KK				10.00	4	2.50	4.00	40.00		3	2	
	N. I	10	TERG	KK				5.00	4	1.25	4.00	20.00		3	2	
39	RADEN BARON	2	41	КK	•	*******		25.40	2	12.70		101.60		1	2	IIIA
42	BEKOTOK		 f f	KK				3.00	1	3,00	4.00	12.00	,	0	2	1118-2
	LEHAS	3	BKTK	ЖK				3,00	!	3.00	4.00	12.00		0	2	
	BEKOTOK	2	BKTK	KK				5.50	3	1.83	5.00	27.50		2	2	
	8EKO10K	J	BKTK	KK				4.00	3	1.33	4.00	16.00		2	2	
49	N. I	4	# #	KK	IŅ.	101	(A)	3,00	i	3,00	4.00	12.00	12.00	0	2	1118-2
	N. 5	4	<b>EGNK</b>	KK				3.50	1	3,50	4.00	14.00		Û	2	
	N. I	5	GGNK	, KK				5.00	1	5.00	4.00	20.00		0	2	•
	N.I	5	68NK	KK		·		2.00	1	2.00	4.00	8.00		0	2	
51	LOA GELAN	53	41	KK				6.00	3	2.00	4.00			?	2	111A
	LAA GELAP	54	LARY		18	RM50	(8)	10.00	2	5.00	4,00	0,00	40.00	1	2	

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

PROV

: KALIMANTAN TIMUR KAB : KUTAI

LINE NO : 1 (111A) LENGTH : 2 Km

( Rp	******	******	424V4V4V4	************	- m,		#=====================================
>>>>> 101A	COST FOREIGN	COCAL COCAL	COST >>> FOREIGN	CCC UNIT	QUANT[1Y	1180	11E#
	0	0	2,998	38,480	0.00	<b>e</b> 2	Superstructure (Timber;Span 3m;101)
	. 0	0	3,311	42,622	0.00	<b>a</b> 2	Superstructure (Timber:Span 5m:101)
	0	0	4,351	56,454	0.00	a2	Superstructure (Fisher;Span 8a;101)
	0	0	3,707	47,713	0.00	<b>a</b> 2	Superstructure (Timber;Span 3m;BM50)
3,748,01	268,469	3,479,545	4,019	52,089	65.80	<b>a</b> 2	Superstructure (Timber;Span Sm;8MSO)
	. 0	, , 0	5,088	66,063	0.00	n2	Superstructure (Timber:Span 8m;8M50)
	0	0	105,747	44,804	0.00	#2	Superstructure (Concrete; Span 3m; 8HSO)
	0	0	118,299	46,108	0.00	a2	Superstructure (Concrete; Span Su; 9H50)
	0	. 0	128,919	47,568	0.00	<b>e</b> 2	Superstructure (Concrete; Span Ba; 8H50)
	0	0	146,517	52,059	0.00	<b>a</b> 2	Superstructure (Concrete; Span10x; BM50)
	0	0	172,712	56,260	0.00	<b>a</b> 2	Superstructure (Concrete Spanise;8M50)
	0	0	27,724	335,202	0.00	NO	Substructure (Pier; for Timber; 101)
	0	0	136,771	947,708	0.00	NO	Substructure (Abut; for Timber; 101)
1,060,0	82,030	985,970	41,015	492,985	2.00	НO	Substructure (Pier; for Timber; BHSO)
4,871,08	604,056	4,267,032	151,014	1,066,758	4.00	NO	Substructure (Abut; for Timber; 8N50)
	. 0	0	467,275	2,060,372	0.00	NO	Substructure (Pier; for Concrete; 8H50)
	Ú.	- ()	782,926	4,152,360	0.00	NO	Substructure (Abut; for Concrete; 8H5O)
472,41	46,903	425,509	1,195	10,841	39.25	62	Demolition of Bridge (limber-)limber)
	0	. 0	1,195	10,841	9.00	n2	Descrition of Bridge (limber-)Concrete)
	0	0	79,820	89,220	0.00	æ2	Desolition of Bridge (Concrete)
550,6	67,401	483,231	1,009	7,234	66.80	<b>e</b> 2	Haintenance of Timber Bridge (New)
	0	0	3,001	1,812	0.00	<b>+2</b>	Haintenance of Concrete Bridge (New)
149,3	34,735	114,640	2,347	7,746	14.80	#2	Naintenance of limber Bridge (Exist)
	Û	0	2,443	4,491	0.00	<b>#</b> ?	Maintenance of Concrete Bridge (Exist)
10,159,5	1,001,458	9,158,056	ge)	(Timber Brid	OTAL COST		( Hithout Overhead )
	0	0	*	(Concrete Br			( in those of the field )
10,159,5	1,001,458	9,158,058	•	(without Hai	OTAL COST		
11,683,4	1,151,677	10,531,764	gg)	(Timber Brid	TOTAL COST		( Overhead : 15% )
	0	0		(Concrete Dr			1 Overness 1 10% /
11,683,4	1,151,677	10,531,764	-	(without Nai	1903 14101		

: KALIMANTAN TIMUR KAB : KUTAT

TINE NO : 3 (IIIA) LENGTH : 10 Km

			i				( Rp )
11EH	וואט	QUANTITY	<<< UNIT LOCAL	COST >>> FOREIGN	(((((( L0CAL	COST Foreign	>>>>> Total
7-107		. 4 00	70 400	2 000	. 0	0	
Superstructure (limber;Span 3m;101)	a 2 a 2	0.00 0.00	38,480 42,622	2,998 3,311	0	. 0	0
Superstructure (limber;Span 5m;101)	e 2	0.00	56,454	4,351	0	0	0
Superstructure (Timber;Span 8m;101)	e 2	0.00	47,713	3,707	Α .	. 0	0
Superstructure (Timber; Span 3m; RHSO)	#2	0.00	52,089	1,019	۸ .	. 0	0
Superstructure (liaber;Span 54;BM50)	_	0.00	66,063	5,088	0	0	0
Superstructure (Timber; Span 8m; 8450)	#2 #2	0.00	44,804	105,767	0	Û	. 0
Superstructure (Concrete:Span 3m; BHSO)	m2	0.00	46,108	118,299	6	0	,
Superstructure (Concrete; Span 5m; 8450)	a2	0.00	47,568	128,919	0	0	0
Superstructure (Concrete;Span 84;BN50) Superstructure (Concrete;Span10a;BN50)	#2	0.00	52,059	146,517	0	0	. 0
	W.S.		58,260	172,712	0	. 0	0
Superstructure (Concrete; SpanlSm; PMSD)	M Z NO	0.00	335,202	27,724	Ô	0	. 0
Substructure (Fier; for Tisber; 101)			947,708	136,771	0	0	
Substructure (Abut; for limber; 101)	NO NO	0.00	•	•	· V	0	0
Substructure (Fier; for limber; 19150)	NO	0.00	192,985	41,015	0	. 0	0
Substructure (Abut; for Timber; 8150)	NO	0.00	1,066,758	151,014	0	0	. 0
Substructure (Pier; for Concrete; BM50)	NO	0.00	2,060,372	467,275	•		•
Substructure (Abut; for Concrete; 19850)	NO	0.00	1,152,380	982,926	0	0	0
Demolition of Bridge (Timber->Timber)	m2	0.00	10,841	1,195	0	Ų	-
(Page   Timber - )   Pridge   Timber - )   Concrete	<b>a</b> 2	0.00	10,811	1,195	0	0	0
Demolition of Bridge (Concrete)	<b>e</b> 2	0.00	89,220	79,820	0		
laintenance of limber Bridge (Hem)	<b>s</b> 2	0.00	7,234	1,009	0	0	0
Maintenance of Concrete Bridge (New)	e2		1,812	3,001	0	0	C
faintenance of Timber Bridge (Exist)		332.00	7,746	2,347	2,571,672	779,204	3,350,878
daintenance of Concrete Bridge (Exist)	n2		4,491	2,443	287,424	156,352	443,776
l Without Overhead )	1	IOTAL COST	Himber Brid		0	0	0
			(Concrete Dr		0	0	0
	·	IDTAL COST	(without Kai	ntenance)	0	0.	0
( Overhead : 15% )		IDTAL COST	llimber Brid	ge)	0	. 0	(
			(Concrete Br		0	0	
		TOTAL COST	(without Mai	ntenancel	0	Ó.	(

LINE NO : 37 (IIIA) LENGTH : 6 Km

							( Rp )
1164	UNIT	VIITHAUD	<<< URIT Local	COST >>> FOREIGN	CCCCC LOCAL	COST Fore LGH	>>>>> TOTAL
Superstructure (Timber:Span Jm;101)	<b>a</b> 2	0.00	38,480	2,998	10	0	0
Superstructure (limber Span 5m;107)	e2	0.00	42,622	3,311	0	0	0
Superstructure (Timber;Span 8m;[0])	92	0.00	55,454	4,351	0	. 0	0
Superstructure (limber;Span 3m;BH50)	e2	0,00	47,713	3,707	0	0 -	0
Superstructure (Timber;Span 5m;RN50)	#2	0.00	52,089	4,019	0	0	0
uperstructure (Timber;Span Bm;9H5O)	ø2	0.00	66,063	5,098	0	0	0
uperstructure (Concrete;Span 3m;9MSO)	n2	0.00	44,804	105,767	0	0	٥
imperstructure (Concrete;Span Sa;BK50)	<b>6</b> 2	0.00	46,108	118,299	0	0	0
Superstructure (Concrete;Span 8m;8N50)	92		47,568	128,919	0	0	0
uperstructure (Concrete;Span10m;8H50)	m2	0.00	52,059	146,517	0	0	0
uperstructure (Concrete;Spanl5#;8H50)	a2	0.00	56,260	172,712	0	0	0
Substructure (Pier; for Timber; 101)	NO	0.00	335,202	27,724	0	0	0
Substructure (Abut; for Timber; 101)	NO	0.00	947,708	136,771	0	0	0
ubstructure (Pier; for Timber; BMSO)	NO	0.00	492,985	41,015	0	0	. (
ubstructure (Abut;for limber;8M50)	NO	0.00	1,066,758	151,014	0	0	0
Substructure (Pieryfor Concrete;8H50)	HO	0.00	2,060,372	467,275	. 0	0	(
Substructure (Abut; for Concrete; 8H50)	NO	0.00	4,152,360	982,926	0	0	Ó
emplition of Bridge (limber-)limber)	a2		10,841	1,195	0	0	(
emolition of Bridge (limber-)Concrete)	e2	0.00	10,841	1,175	.0	0	0
Demolition of Bridge (Concrete)	a2		89,220	79,820	0	0	0
laintenance of Timber Bridge (Hew)	a2	0.00	7,234	1,009	0	0	
laintenance of Concrete Bridge (New)	<b>s</b> 2		1,812	3,001	0	0	(
laintenance of limber Bridge (Exist)	#2	101.60	7,746	2,347	786,973	238,455	1,025,44
faintenance of Concrete Bridge (Exist)	₽2	0.00	4,493	2,443	0	. 0	(
( Without Overhead )		TOTAL COST	(Timber Brid	ge)	0	0	(
			(Concrete Br		0	Q.	
	:	TOTAL COST	(without Mai		0	0	(
	·	TOTAL POST	272.ba. P-5-4			0	
( Overhead : 15% )		TUTAL LUST	(Timber Brid		0	0	
		total Dunt	(Concrete Br (without Mai		0	0	,
·		IUTAL COST	INICODUL DEI	uceusuces	v	V	,

FROV : KALIMANTAN TIMUR

KAB : KUTAI

LINK MO : 42, (1118-2)

LENGTH : 3 Km

							t Rp
TIEN	UNIT	QUANTITY	<<< UNIT	CUST >>> FOREIGN	CCCAL	COST FOREIGN	>>>>> 101A
uperstructure (Timber;Span 3m;101)	<b>a</b> 2	0.00	38,480	2,998	0	0	
uperstructure (limber;Span Sm;101)	<b>a</b> 2	0.00	42,672	3,311	0	Ò	
uperstructure (limber;Span 8m;10f)	#2	0.00	56,454	1,351	0	Û	
uperstructure (limber;Span 3m;RN50)	<b>=2</b>	0.00	47,713	3,707	0	0	
uperstructure (limber;Span 5m;BMS0)	<b>e</b> 2	0.00	52,089	4,019	0	0	
uperstructure (limber;Span Bo;BM50)	m2	0.00	66,063	5,089	0	0	
uperstructure (Concrete;Span 3a;BMSO)	<b>#2</b>	0.00	44,804	105,767	0	0	
uperstructure (Concrete; Span Sm; 8H50)	n2	0.00	46,108	118,299	0	0	
uperstructure (Concrete;Span 8m;RM50)	<b>e</b> 2	0.00	47,568	128,919	0	0	
uperstructure (Concrete;Spanioa;BH50)	<b>#</b> 2	0.00	52,059	146,517	0	0	
uperstructure (Concrete;Span15a;8HSO)	<b>s</b> 2	0.00	56,260	172,712	0	0	
obstructure (Pier; for Timber; 101)	HO	0.00	335,202	27,724	0	. 0	
ubstructure (Abut;for Timber;101)	HO	0.00	947,708	136,771	0	0	
ubstructure (Pier; for Timber; 19450)	ЮК	0.00	492,985	41,015	0	Ŋ	
ubstructure (Abut; for Timber; 8850)	NO	0.00	1,066,758	151,014	ŋ	. 0	
ubstructure (Pierylar Concrete;8H5O)	HO	0.00	2,060,372	467,275	0	, O	
ubstructure (Abut; for Concrete; 9850)	NO	0.00	4,152,360	982,926	0	. 0	
emplition of Bridge (limber->limber)	<b>a</b> 2		10,841	1,195	0	0	
emolition of Bridge (Timber-)Concrete)	62	0.00	10,841	1,195	Ó	0	
emolition of Bridge (Concrete)	a2	0.00	89,220	79,820	0	0	
aintenance of Timber Bridge (New)	<b>a</b> 2	0.00	7,234	1,009	0	0	
aintenance of Concrete Bridge (New)	a2	0.00	1,812	3,001	.0	0	
aintenance of limber Bridge (Exist)	a2	67.50	7,746	2,347	522,855	158,422	681,2
aintenance of Concrete Bridge (Exist)	<b>a</b> 2	0.00	4,491	2,443	0	0	•
( Without Overhead )	·	IOTAL COST	(Tieber Bride	16)	0	0	
			(Concrete Bri		0	0	
	. 1	TOTAL COST	(without Hair		0	0	
				· · · · · · · · · · · · · · · · · · ·			*******
( Overhead : 15% )	1	IOTAL COST	(Timber Prid		0	. 0	
			(Concrete Br	idgel	0	. 0	
	1	IDIAL COST	(without Hair	ntonaocel	۵	ð	

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CALIMANTAN TIMUR

: KAB : KUTAI

LINK NO : 47 (IIIB-2)

LENGTH : 0 Km

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1118	UNIT	QUARTITY	CCAL LOCAL	COST >>> FOREIGN	\(\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	COST FORE 16N	>>>>> 101AL
			LUUNL		LOUNL	L GWE 10W	1018 
Superstructure (limber:Span 3m:101)	<b>u</b> 2	12.00	20 100	3 000		WG 841	
Superstructure (Timber;Span 5m;101)	#2	0.00	38,480	2,998	461,760	35,976	497,73
Superstructure (Timber Span 8m;[0])	92 92	7.1	42,622	3,311	0		
Superstructure (limber(Span 3m(RHSO)	,#2 #2	0.00	56,454 47,713	4,351 3,707	0	0	
Superstructure (finber:Span Sm:8H50)	n2	0.00	52,089	•	0	0	
Superstructure (limber:Span 8m; RNSO)	#Z 82	0.00	•	4,019	0	V	
Superstructure (Concrete;Span 3m;BMSO)	#2 #2	0.00	66,063	5,08B	0	ų	
Superstructure (Concrete/Span Sm/RHSO)	#2 #2	0.00	14,804	105,767	. 0	()	
Superstructure (Concrete;Span Ba;BNSO)	#Z	-	46,108	118,299	0	. ()	
Superstructure (Concrete;SpaniOn;AMSO)	#2	0.00	47,568	128,919	U	0	
Superstructure (Concrete;SpaniSm;RMSO)	_		57,059	146,517	V	0	
Substructure (fier for limber: 101)	n2	0.00	56,260	172,712	0	. 0	1.
Substructure (Abut;for Timber;101)	NO	0.00	335,202	27,721	0	0	
	NO	2.00	947,708	136,771	1,895,416	273,542	2,168,95
Substructure (Piersfor Timber, 18850)	NO	0.00	492,985	11,015	0	0	
Substructure (Abut; for Timber; BNSO)	NO	0.00	1,066,758	151,014	0	. 0	
Substructure (Pier; for Concrete; BMSO)	NO	0.00	2,060,372	167,275	0	0	
Substructure (Abut; for Concrete; 8M50)	NO	0.00	4,152,360	982,926	0	0	
Demolition of Bridge (fimber-)limber)	n2	12.00	10,841	1,195	130;092	14,340	144,43
Demolition of Bridge (Timber->Concrete)	02	0.00	10,841	1,195	0	. 0	
Demolition of Bridge (Concrete)	62	0.00	89,220	79,820	0	0	
Maintenance of Timber Bridge (New)	62	12.00	7,234	1,009	86,808	12,108	98,91
Maintenance of Concrete Bridge (New)	*2	0.00	1,812	3,001	0	0	•
Maintenance of Timber Oridge (Exist)	<b>4</b> 2	42.00	7,746	2,347	325,332	98,574	423,90
Maintenance of Concrete Bridge (Exist)	45	0.00	4,491	2,443	0.	0.	
		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					
( Without Overhead )	1	OTAL COST	(Timber Bridg		2,487,268	323,858	2,811,13
			(Concrete Bri		0	0	
	. 1	OTAL COST	(without Mair	itenance)	2,487,268	323,058	2,811,11
( Overhead ; 15% )	1	OTAL COST	(Timber Bridg	re)	2,860,358	372,437	3,232,7
			(Concrete Bri		0	0	-,,
	. 1	OTAL COST	(without Mair		2,860,358	372,437	3,232,79
					-11	,	-11.

KALIMANTAN TIMUR KAB

51 (IIIA) LENGTH : 10 Km

				-			( Rp )
1   F   H			TINÚ >>>	cosi >>>	\\\\\\	COST	)} <b>&gt;&gt;&gt;</b>
	UNIT	QUANTITY	LOCAL	FOREIGN	LOCAL	FOREIGN	TOTAL
	- 5		70 400	0.000		٨	
uperstructure (Timber;Span 3m;10T)	<b>#</b> 2	0.00	38,480	2,998	0	,	0
uperstructure (limber;Span Sa;101)	<b>82</b>	0.00	42,622	3,311	0	0	(
uperstructure (limber;Span 8m;10f)	a2	0.00	56,454	4,351	Ų	U	(
uperstructure (Timber;Span 3m;8H50)	82	0.00	47,713	3,707	0	0	4 544 45
uperstructure (limber;Span Sm;DMSO)	62	40.00	52,089	4,019	2,083,560	160,760	2,244,320
uperstructure (limber;Span 8m;BHSO)	12	0.00	66,063	5,088	0	0	(
uperstructure (Concrete;Span 3a;RHSO)	<b>a</b> 2	0.00	44,804	105,787	0	()	(
uperstructure (Concrete;Span 5a;8N50)	•2	0.00	46,10B	118,299	. 0	Ò.	1 (
uperstructure (Concrete;Span 8m;8N50)	02	0.00	47,568	128,919	Û	. 0	1
uperstructure (Concrete;Span10a;BH50)	n?	0.00	52,059	146,517	0	0	
uperstructure (Concrete;Span15 <b>a;</b> 0X50)	. a?	0.00	56,260	172,712	0	0	. 4
ubstructure (Pier; for Timber; 101)	NO	0.00	335,202	27,724	0	0	* 1
ubstructure (Abut;for Timber;10T)	NO	0.00	947,708	136,771	0	0	
ubstructure (fier:for limber;PH50)	NO	1.00	492,985	41,015	492,985	41,015	534,00
ubstructure (Abutifor Timber;8NSO)	NO	2.00	1.086,758	151,014	2,133,516	302,028	2,435,54
ubstructure (Pier:for Concrete:BM50)	NO	0.00	2,060,372	467,275	0	0	i
ubstructure (Abut; for Concrete; BH50)	NO	0.00	4,152,360	982,926	0	0	10
emolition of Bridge (Fisher->limber)	<b>#2</b>	0.00	10,841	1,175	0	: 0	
emolition of Bridge (Timber-)Concrete)	#2	0.00	10,841	1,195	. 0	0.	
e≘olition of Bridge (Concrete)	83	0.00	87,220	79,820	. 0	0	
aintenance of Timber Bridge (New)	67	40.00	7,234	1,009	289,360	40,360	327,72
aintenance of Concrete Bridge (New)	в2	0.00	1,812	100,8	0	0	
sintenance of limber Bridge (Exist)	a2	24.00	1,746	2,347	(85,904	56,328	242,23
aintenance of Concrete Bridge (Exist)	я2	0.00	4,491	2,443	0	0	
( Without Overhead )	1	OTAL COST	(Timber Bride (Concrete Bri		4,710,061	503,803 0	5,213,86
	. 1	OTAL COST	(without Hair	•	4,710,061	503,803	5,213,86
· ·							
( Overhead : 15% )	1	MIAL COST	(Timber Brid	ge)	5,416,570	579,373	5,995,94
1 015.0024 1 100 1	,		(Concrete Pri		0	0	51775377
· · · · · · · · · · · · · · · · · · ·		DIAL POCE	(without Hair		5,416,570	579,373	5,995,94

: KALIMANIAN TÍMUR - KAR : KUTAI

LINK NO : 74 (LLIC) LENGTH : 23 Km

							( Rp )
TTEN	UNIT	DUANTITY	COCAL UNIT	COST >>> FOREIGN	(((((	COSI FOREIGN	>>>>> TOTAL
(sarahanahan //inhan/8 7. (AT)					***************		**********
uperstructure (limber;Span 3m;101)	a2	0.00	38,480	2,998	0	0	0
uperstructure (Timber;Span 5m;101)		2000,00	12,622	3,311	85,244,000	6,622,000	91,856,000
uperstructure (Timber;Span 8m;101) uperstructure (Timber;Span 3m;8HSO)	e2	0.00	56,454	4,351	. ()	Q	0
	e2	0.00	47,713	3,707	0	0	0
uperstructure (Timber;Span Sm;DNSO)	62	0.00	52,089	4,019	0	0	0
uperstructure (limber;Span Bm;BK50)	<b>a</b> 2		66,063	5,088	0	0	
uperstructure (Concrete;Span 3*;8850)	<b>2</b> 2	0.00	14,801	105,767	. 0 .	Q	. (
perstructure (Concrete;Span 5a;BK50)	<b>a</b> 2	0.00	46,108	118,299	0	0	(
uperstructure (Concrete:Span Ba; PHSO)	<b>a</b> 2	0.00	47,568	128,919	0	0	(
uperstructure (Concrete; Spanion; BNSO)	m2	0.00	52,059	146,517	0	0	(
operstructure (Concrete; Spani5a; 8H50)	#2	0.00	56,260	172,712	. 0	0	(
ubstructure (Pier; for Timber; 101)	NO	0.00	335,202	21,124	0	0	(
ubstructure (Abut;for Timber;101)	KO	200.00	947,708	136,771	189,541,600	27,354,200	216,895,80
ubstructure (Pier;for Timber;BH50)	HO	0.00	492,985	41,015	0	0	. (
ubstructure (Abut;for Timber;BH50)	HO	0,00	1,066,758	151,014	0	0	
ubstructure (Pier;for Concrete;8K50)	MO	0.00	2,060,372	467,275	0	0	:
ubstructure (Abut;for Concrete;BH50)	ИО	0.00	4,152,360	982,926	0	0	
emolition of Bridge (Timber-)Timber)	e2	0.00	10,841	1,195	0	0	1
emolition of Bridge (Timber-)Concrete)	<b>s</b> 2	0.00	10,841	1,195	. 0	0	
emolition of Bridge (Concrete)	<b>#</b> 2	0.00	89,220	79,820	0	. 0	į
aintenance of Timber Bridge (New)	<b>a</b> 2	2000.00	7,234	1,009	14,468,000	2,018,000	16,486,00
aintenance of Concrete Bridge (New)	67	0.00	1,812	3,001	0	Û	
aintenance of Timber Bridge (Exist)	a2	0.00	7,746	2,347	0	0	
aintenance of Concrete Bridge (Exist)	<b>9</b> 2	0.00	4,491	2,443	0	0	
( Without Overhead )	,	OTAL COST	(Timber Bride		274,785,600	33,976,200	308,761,800
·			(Concrete Bri		0	9	•
	1	IOTAL COST	(without Hair	ntenancel	274,785,600	33,976,200	308,741,80
( Overhead : 15% )	1	IDTAL COST	(Tisber Brid	ge)	316,003,440	39,072,630	355,076,07
			(Concrete Br		, ,	0	, ,
· ·	,	total coor	(without Hair	•	316,003,440	39,072,630	355,076,07

