

ANNEXES FOR FEASIBILITY STUDY

ANNEX F-1

**SUMMARY OF PRESENT CONDITION OF
SURVEY ROUTE**

		KM POST																																															
		25.0	25.5	26.0	26.5	27.0	27.5	28.0	28.5	29.0	29.5	30.0	30.5	31.0	31.5	32.0	32.5	33.0	33.5	34.0	34.5	35.0	35.5	36.0	36.5	37.0	37.5	38.0	38.5	39.0	39.5	40.0	40.5	41.0	41.5	42.0	42.5	43.0	43.5	44.0	44.5	45.0							
Road Width (m)	W 2.5																																																
	2.5<W<4.5																																																
	4.5<W<7.0																																																
	7.0 W																																																
	No Road Structure																																																
Surface Type	DBST																																																
	Gravel																																																
	Earth																																																
Roughness (Vehicle Speed)	60km/hr<V																																																
	60<V<40km/hr																																																
	40<V<20km/hr																																																
	V<20km/hr																																																
	Impassable																																																
Road Structure	Level																																																
	Embankment Height (0<H<1m)																																																
	Embankment Height (1m<H)																																																
	Cut Depth (0<D<1m)																																																
	Cut Depth (1m<D)																																																
Slope Type	Earth																																																
	Grass / Turfing																																																
Slope Condition	Good																																																
	Fair																																																
	Damaged																																																
Side Ditch Type	Earth																																																
	No Ditch																																																
Side Ditch Condition	Good																																																
	Fair																																																
	Damaged																																																
Roadside Landuse	Residence																																																
	Paddy																																																
	Farm																																																
	Forest																																																
	Bush or Grass																																																
Terrain	Level																																																
	Rolling																																																
	Mountainous																																																
Flooding Condition (Height from Road Surface)	No Flood																																																
	H<0.5m																																																
	0.5<H<1.0m																																																
	1.0m<H																																																
Section		b ← Champasack Town → c				Ancient City Section																d ← Flat Paddy Field → e				NOTE f		Flat Paddy Field																					
Control Point	Location																																																
	Object					Hospital, Temple, School, Empty lot																Jct. (existing Rd)				Access to temple		Intersection (local Rd)		School, Jct. (14A1), Market, Storehouse, Access to temple																			
Photo																																																	
		Cross section (26.5km)				No road structure (33.5km)																Populated town section (B. Dontalat) (42.6km)				NOTE Populated Town Section																							

		KM POST																																			
		45.0	45.5	46.0	46.5	47.0	47.5	48.0	48.5	49.0	49.5	50.0	50.5	51.0	51.5	52.0	52.5	53.0	53.5	54.0	54.5	55.0	55.5	56.0	56.5	57.0	57.5	58.0	58.5	59.0	59.5	59.75					
Road Width (m)	W	[Grid]																																			
	2.5<W<4.5	[Grid]																																			
	4.5<W<7.0	[Grid]																																			
	7.0 W	[Grid]																																			
Surface Type	No Road Structure	[Grid]																																			
	DBST	[Grid]																																			
	Gravel	[Grid]																																			
Roughness (Vehicle Speed)	Earth	[Grid]																																			
	60km/hr<V	[Grid]																																			
	60<V<40km/hr	[Grid]																																			
	40<V<20km/hr	[Grid]																																			
Road Structure	V<20km/hr	[Grid]																																			
	Impassable	[Grid]																																			
	Level	[Grid]																																			
	Embankment Height (0<H<1m)	[Grid]																																			
	Embankment Height (1m<H)	[Grid]																																			
Slope Type	Cut Depth (0<D<1m)	[Grid]																																			
	Cut Depth (1m<D)	[Grid]																																			
	Cut / Embankment	[Grid]																																			
Slope Condition	Earth	[Grid]																																			
	Grass / Turfing	[Grid]																																			
Side Ditch Type	Good	[Grid]																																			
	Fair	[Grid]																																			
	Damaged	[Grid]																																			
Side Ditch Condition	Earth	[Grid]																																			
	No Ditch	[Grid]																																			
	Good	[Grid]																																			
Roadside Landuse	Fair	[Grid]																																			
	Damaged	[Grid]																																			
	Residence	[Grid]																																			
	Paddy	[Grid]																																			
Terrain	Farm	[Grid]																																			
	Forest	[Grid]																																			
	Bush or Grass	[Grid]																																			
Flooding Condition (Height from Road Surface)	Level	[Grid]																																			
	Rolling	[Grid]																																			
	Mountainous	[Grid]																																			
Control Point	No Flood	[Grid]																																			
	H<0.5m	[Grid]																																			
	0.5<H<1.0m	[Grid]																																			
	1.0m<H	[Grid]																																			
section		← Flat Paddy Field →																																			
Control Point	Location	[Grid]																																			
	Object	Access to temple Temple School Temple Jct. (14C1) School																																			
Photo																																					
		Jct. (14C1) (55.5km)																		Cross Section (56.1km)																	

(3/4)

KM POST		60.0	60.5	61.0	61.5	62.0	62.5	63.0	63.5	64.0	64.5	65.0	65.5	66.0	66.5	67.0	67.5	68.0	68.5	69.0	69.5	70.0	70.5	71.0	71.5	72.0	72.5	73.0	73.5	74.0	74.5		
Road Width (m)	W 2.5																																
	2.5<W<4.5																																
	4.5<W<7.0																																
	7.0 W																																
Surface Type	No Road Structure																																
	DBST																																
	Gravel																																
Roughness (Vehicle Speed)	Earth																																
	60km/hr<V																																
	60<V<40km/hr																																
	40<V<20km/hr																																
Road Structure	V<20km/hr																																
	Impassable																																
	Level																																
	Embankment Height (0<H<1m)																																
	Embankment Height (1m<H)																																
	Cut Depth (0<D<1m)																																
Slope Type	Cut Depth (1m<D)																																
	Cut / Embankment																																
	Earth																																
Slope Condition	Grass / Turfing																																
	Good																																
	Fair																																
Side Ditch Type	Damaged																																
	Earth																																
	No Ditch																																
Side Ditch Condition	Good																																
	Fair																																
	Damaged																																
Roadside Landuse	Residence																																
	Coffee																																
	Afforestation																																
	Farm																																
	Forest																																
	Bush or Grass																																
Terrain	Mountain Surface / Cliff																																
	Level																																
	Rolling																																
Flooding Condition (Height from Road Surface)	Mountainous																																
	No Flood																																
	H<0.5m																																
	0.5<H<1.0m																																
Section	1.0m<H																																
Control Point	Location	Steep mountain section ← e → Deep Forest & Rice Plantation → f																															
	Object	3 bridges section																															
Photo																																	
		Cross section (63.7km)														End point (64.5km)																	

(4/4) Alternative (ii)

KM POST		0.0	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0	10.5	11.0	11.5	12.0	12.5	13.0	13.5	14.0	14.20	
Road Width (m)	W < 2.5																															
	2.5 < W < 4.5																															
	4.5 < W < 7.0																															
	7.0 < W																															
	No Road Structure																															
Surface Type	DBST																															
	Gravel																															
	Earth																															
Roughness (Vehicle Speed)	60km/hr < V																															
	60 < V < 40km/hr																															
	40 < V < 20km/hr																															
	V < 20km/hr																															
	Impassable																															
Road Structure	Level																															
	Embankment Height (0 < H < 1m)																															
	Embankment Height (1m < H)																															
	Cut Depth (0 < D < 1m)																															
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	Cut / Embankment																															
Slope Type	Earth																															
	Grass / Turfing																															
Slope Condition	Good																															
	Fair																															
	Damaged																															
Side Ditch Type	Earth																															
	No Ditch																															
Side Ditch condition	Good																															
	Fair																															
	Damaged																															
Roadside Landuse	Residence																															
	Coffee																															
	Afforestation																															
	Farm																															
	Forest																															
	Bush or Grass																															
Terrain	Mountain Surface / Cliff																															
	Level																															
	Rolling																															
Flooding Condition (Height from Road Surface)	Mountainous																															
	No Flood																															
	H < 0.5m																															
	0.5 < H < 1.0m																															
1.0m < H																																
Section		c		Existing Road Section																								d				
Control Point	Location																															
	Object																															
Photo																																
		Access to hydro project site (5.5km)												Cross section (9.2km)																		

(3) List of Crossing Structures on Route 14A

No.	Km Post	Type	Size
1	0+802	RV	
2	1+552	RV	
3	2+157	RV	
4	2+427	RV	
5	3+227	RV	
6	3+667	RV	
7	4+257	RV	
8	4+652	RV	
9	5+057	RV	
10	5+387	RV	
11	5+632	RV	
12	6+167	RV	
13	6+332	RV	
14	6+448	RV	
15	6+637	RV	
16	7+237	RV	
17	7+432	RV	
18	7+632	RV	
19	7+649	RV	
20	7+887	RV	
21	8+022	RV	
22	8+107	RV	
23	8+197	RV	
24	8+427	RV	
25	8+512	RV	
26	8+637	RV	
27	8+849	RV	
28	9+022	RV	
29	9+087	RV	
30	9+142	RV	
31	9+167	RV	
32	9+237	RV	
33	9+377	RV	
34	9+407	RV	
35	9+472	RV	
36	9+567	RV	
37	9+757	RV	
38	10+032	RV	
39	10+297	RV	
40	10+452	RV	
41	10+555	RV	
42	10+857	RV	
43	10+997	RV	
44	11+377	RV	
45	11+562	RV	
46	11+707	RV	
47	12+057	RV	
48	12+567	RV	
49	12+622	RV	
50	12+827	RV	
51	13+037	RV	
52	13+637	RV	
53	13+848	RV	
54	14+547	RV	
55	15+397	RV	
56	15+597	RV	
57	15+995	ICD	?x?
58	15+822	RV	
59	17+037	RV	
60	17+427	ICD	?x?
61	18+307	RV	
62	18+985	RV	
63	19+887	RV	
64	20+037	PC	2@0.6x5.0
65	21+447	RV	
66	21+572	ICD	0.9x0.7
67	22+347	ICD	0.6x0.4
68	24+347	RV	
69	25+037	PC	2@0.6x?
70	25+245	PC	0.6x11.0

No.	Km Post	Type	Size
71	25+777	PC	0.6x11.0
72	26+337	PC	1.2x13.0
73	26+824	PC	1.2x12.0
74	27+327	PC	0.45x13.0
75	27+547	PC	0.6x8.5
76	27+822	PC	0.45x11.0
77	27+922	PC	0.45x?
78	28+125	PC	0.45x13.0
79	28+227	PC	0.6x13.0
80	28+967	PC	0.4x11.0
81	29+447	RV	
82	29+527	ICP	?
83	30+004	ICP	1.0
84	30+185	ICP	1.0
85	30+344	ICP	1.0
86	30+449	ICD	1.0
87	31+227	RV	
88	32+217	RV	
89	32+627	RV	
90	33+127	RV	
91	33+537	RV	
92	33+767	RV	
93	34+347	RV	
94	35+237	PC	0.6x11.0
95	35+342	PC	2@0.6x11.0
96	35+867	BC	2.0x2.5x9.0
97	36+213	PC	2@0.6x11.0
98	36+625	BC	2.0x2.5x8.0
99	36+867	PC	2@0.6x11.0
100	37+167	PC	1.0x12.0
101	37+515	BC	2.0x2.5x8.0
102	37+823	BC	2.0x2.5x7.0
103	38+427	PC	1.0x10.0
104	38+434	PC	0.8x10.0
105	38+441	PC	1.0x11.0
106	38+734	PC	1.0x10.0
107	38+880	PC	2@0.8x10.0
108	39+295	PC	1.0x11.0
109	39+653	PC	0.8x11.0
110	39+707	PC	0.8x11.0
111	39+854	PC	2@1.0x10.0
112	39+899	PC	2@0.8x?
113	39+941	PC	2@1.0x11.0
114	40+362	PC	2@0.6x11.0
115	40+617	RV	
116	41+647	BC	2.0x2.5x7.7
117	41+657	PC	1.5x12.0
118	41+727	PC	1.0x11.0
119	41+937	PC	2@1.0x11.0
120	43+187	PC	2@1.5x10.5
121	44+137	PC	1.0x7.0
122	44+157	PC	1.0x7.0
123	44+669	PC	1.2x9.0
124	45+307	PC	1.2x11.0
125	45+497	RV	
126	46+967	PC	0.6x8.0
127	47+937	PC	2@0.8x7.0
128	49+239	PC	0.6x8.0
129	49+736	PC	1.0x11.0
130	50+736	PC	1.5x10.8
131	51+645	PC	0.9x9.5
132	52+587	PC	0.8x10.0
133	53+447	PC	0.8x9.0
134	53+844	PC	0.6x9.0
135	54+143	PC	0.8x8.0
136	55+922	PC	0.8x9.0
137	59+303	PC	1.4x9.6
138	59+679	PC	1.0x11.0

NOTE

(Unit: m)

PC: Pipe Culvert (diameter x length)	BC: Box Culvert (height x width x length)
ICD: Irrigation Canal (ditch type: height x width)	RV: River / Stream
ICP: Irrigation Canal (pipe type: diameter)	

(4) List of Crossing Structures on Route 16A

(i) For Shortcut Route

No.	Km Post	Type	Size
1	0+065	PC	1.0x9.4
2	1+043	PC	0.8x?
3	1+993	PC	1.0x?
4	2+562	PC	0.6x?
5	2+868	PC	0.8x?
6	3+259	PC	1.0x?
7	3+655	PC	0.6x14
8	4+001	PC	2@0.8x?
9	5+040	PC	0.8x?
10	5+448	PC	0.8x?
11	5+828	PC	0.8x?
12	6+745	PC	0.8x?
13	7+800	PC	0.8x?
14	10+064	PC	3@0.6x?
15	13+834	PC	0.6x?
16	17+665	RV	
17	17+926	PC	0.8x?
18	18+705	PC	0.6x12.0
19	19+780	PC	0.6x11.5
20	21+314	PC	0.8x?
21	22+260	PC	0.6x11.5
22	23+630	PC	0.6x11.2
23	29+460	PC	0.6x?
24	31+784	PC	2@0.6x14.0
25	35+525	RV	
26	36+620	RV	
27	38+120	RV	
28	38+715	RV	
29	42+505	PC	0.8x8.8
30	42+675	PC	1.0x?
31	43+362	PC	1.0x10.0
32	44+080	PC	1.0x10.0
33	44+591	PC	1.0x?
34	45+990	RV	
35	46+183	PC	1.0x?
36	46+925	PC	1.0x9.0
37	47+203	PC	0.2x8.0
38	47+884	PC	1.0x?
0	51+600	RV	
40	51+825	RV	
41	52+160	RV	
42	53+022	PC	1.5x9.0
43	53+365	PC	1.0x?
44	53+713	PC	1.0x?
45	54+300	PC	0.8x11.0
46	54+380	PC	1.0x?
47	54+470	PC	1.0x?
48	54+560	PC	0.6x10.0
49	54+960	PC	1.0x?
50	55+230	PC	0.6x8.0
51	55+416	PC	0.6x8.0
52	55+692	PC	1.0x5.0
53	55+750	PC	0.4x4.0
54	55+860	PC	0.4x6.0
55	55+967	PC	0.4x6.0
56	55+997	PC	0.4x6.0
57	56+225	PC	1.5x6.0
58	61+480	PC	2.0x6.0
59	61+924	PC	0.4x6.0
60	63+715	PC	0.4x6.0
61	63+910	PC	0.4x8.0

(ii) Existing Road Section excluded from Shortcut Route

No.	Km Post	Type	Size
1	1+718	PC	1.5x13.0
2	5+4750	PC	0.2x?
3	6+399	PC	0.6x8.0
4	6+795	PC	0.6x8.0
5	7+980	PC	1.0x10.0
6	8+540	PC	0.4x8.0
7	8+775	PC	1.0x10.0
8	9+280	PC	2.25x9.0
9	10+420	RV	
10	10+790	PC	0.6x8.0
11	12+190	PC	2.25x9.0
12	12+597	PC	0.4x9.0
13	13+275	PC	2@2.25x12.1

NOTE

(Unit: m)

PC: Pipe Culvert (diameter x length)	BC: Box Culvert (height x width x length)
BC: Box Culvert (height x width x length)	RV: River / Stream

(5) List of Villages on Route 14A

No.	Name	Location (km post)
1	Ban HouayPhek	0.0 – 0.25
2	Ban Takou	5.3 – 5.55
3	Ban Houpakho	13.75 – 14.45
4	Ban Khonken	17.45 – 17.85
5	Ban Khanneng	20.35 – 20.75
6	Ban Vataxay	21.55 – 22.55
7	Ban Phatthanakham	24.45 – 24.9
8	Ban Vatthong	27.35 – 27.75
9	Ban Watlakhone	28.25 – 28.65
10	Ban Phonepheng	28.65 – 29.05
11	Ban Phonngam	34.6 – 35.8
12	Ban Maidonthangkhouay	36.15 – 36.45
13	Ban Nong-Nokkhian	37.95 – 38.25
14	Ban Thangbeng	39.05 – 39.45
15	Ban Nongthon	40.05 – 40.25
16	Ban Dontalat	42.55 – 43.55
17	Ban Chikthango	46.5 – 47.3
18	Ban Nong Bouakhao	47.55 – 48.0
19	Ban Bak	52.1 – 52.4
20	Ban Samkha	54.45 – 54.95
21	Ban Samyak	55.45 – 55.75
22	Ban Soukhouma	59.55 – 59.75

(6) List of Villages on Route 16A

(i) For Shortcut Route

No.	Name	km
1	Ban Nonchan	8.1 – 9.0
2	Ban Lak 11	9.9 – 10.6
3	Ban Lak 12	11.7 – 12.8
4	Ban Lak 15	15.3 – 16.0
5	Ban Chansavang	16.5 – 17.8
6	Ban Nongkhaung-Gnai	21.45 – 22.4
7	Ban Nongkin	24.9 – 25.4
8	Ban Lak 27	27.6 – 28.1
9	Ban Houaykong	32.0 – 32.4
10	Ban Nong I-Oy	33.0 – 34.0
11	Ban Namtouat	40.1 – 40.35
12	Ban Lak 52	64.4 – 64.5

(ii) Existing Road Section excluded from Shortcut Route

No.	Name	km
1	Ban Oupaxa	1.8 – 2.0
2	Ban Ta-Ot	5.2 – 5.5
3	Ban Tagnuksua	7.2 – 7.7
4	Resettlement Village	10.7 – 11.7

(7) **List of Control Points on Route 14A**

No.	Point Type	Location (km post)
1	Cemetery	0.15 – 0.25km
2	Cemetery	0.3 – 0.4km
3	Access Rd. to Village	4.8km
4	Jct. with Existing Rd.	5.3km
5	Access Rd. to Village	6.75km
6	Access Rd. to Temple	12.95km
7	School	B. Houpakho (13.9 – 14.0km)
8	School	B. Khoneken (17.0 – 17.1km)
9	School	19.35 – 19.5km
10	Borders Mekong River	18.05 – 19.95km
11	Borders Mekong River	20.6 – 21.3km
12	Temple	B. Vataxay (21.6 – 21.7km)
13	School	B. Vataxay (22.6 – 22.7km)
14	Borders Mekong River	22.55 – 23.7km
15	Temple	B. Phatthanakham (24.5 – 24.55km)
16	Empty Lot (possible telecom office & district office)	27.1 – 27.3km
17	Temple	B. Vatthong (27.45 – 27.55km)
18	School	27.55 – 27.8km
19	Temple	27.8 – 28.0km
20	Hospital	28.0 – 28.1km
21	Jct. with Existing Rd.	35.8km
22	Intersection with District Rd.	B. Thangbeng (39.15km)
23	School	42.05 – 42.25km
24	Jct. with Rt. 14A1	42.3km
25	Storehouse & Local Market	42.5 – 42.75km
26	Temple	B. Nong Bouakhao (47.95km)
27	School	B. Bak (52.3 – 52.4km)
28	Temple	B. Samkha (54.75km)
29	Jct. with Rt. 14C1	B. Samyak (55.55km)
30	School	57.95 – 58.15km

(8) List of Control Points on Route 16A

(i) For Shortcut Route

No.	Point Type	Location (km post)
1	Jct. with Local Rd.	0.15km
2	Cemetery	0.7 – 0.9km
3	High Tension Line	3.2 – 3.4km
4	Access Rd. to UXO Disposal Site	4.55km
5	School	B. Nonchan (8.1 – 8.25km)
6	School	B. Lak 11 (10.35 – 10.5km)
7	School	B. Lak 12 (12.7 – 12.8km)
8	School	B. Bak (7.35 – 7.45km)
9	Temple	B. Nong Bouakhao (11.8km)
10	Cemetery	14.55 – 14.7km
11	Access Rd. to School	B. Lak 15 (15.5km)
12	School	B. Chansavang (17.2 – 17.3km)
13	Temple	B. Chansavang (17.3 – 17.4km)
14	Dispensary Center	B. Chansavang (17.35km)
15	School	B. Nongkhaung (21.45 – 21.6km)
16	Cemetery	23.1 – 23.2km
17	Access Rd. to Village	23.8km
18	School	23.9 – 24.0km
19	Cemetery	24.6 – 24.9km
20	Cemetery	31.1 – 31.25km
21	Jct. with Existing Rd.	B. Nong I-Oy (33.8km)
22	Cliff (Left)	42.0 – 44.2km
23	Steep Mountain Surface (Right)	42.0 – 44.3km
24	Cliff (Left)	44.8 – 44.9km
25	Inadequate Alignment (Bridge Section)	45.7 – 46.1km
26	Steep Mountain Surface (Left)	46.1 – 46.3km
27	Cliff (Right)	46.0 – 46.4km
28	Steep Mountain Surface (Left)	47.0 – 47.8km
29	Cliff (Right)	47.6 – 47.8km
30	Steep Mountain Slope (Right)	49.0 – 51.2km
31	Cliff (Left)	49.0 – 51.2km
32	3 Bridge Section	51.5 – 52.5km
33	Steep Mountain Slope (Right)	52.3 – 54.9km
34	Cliff (Left)	52.3 – 55.2km

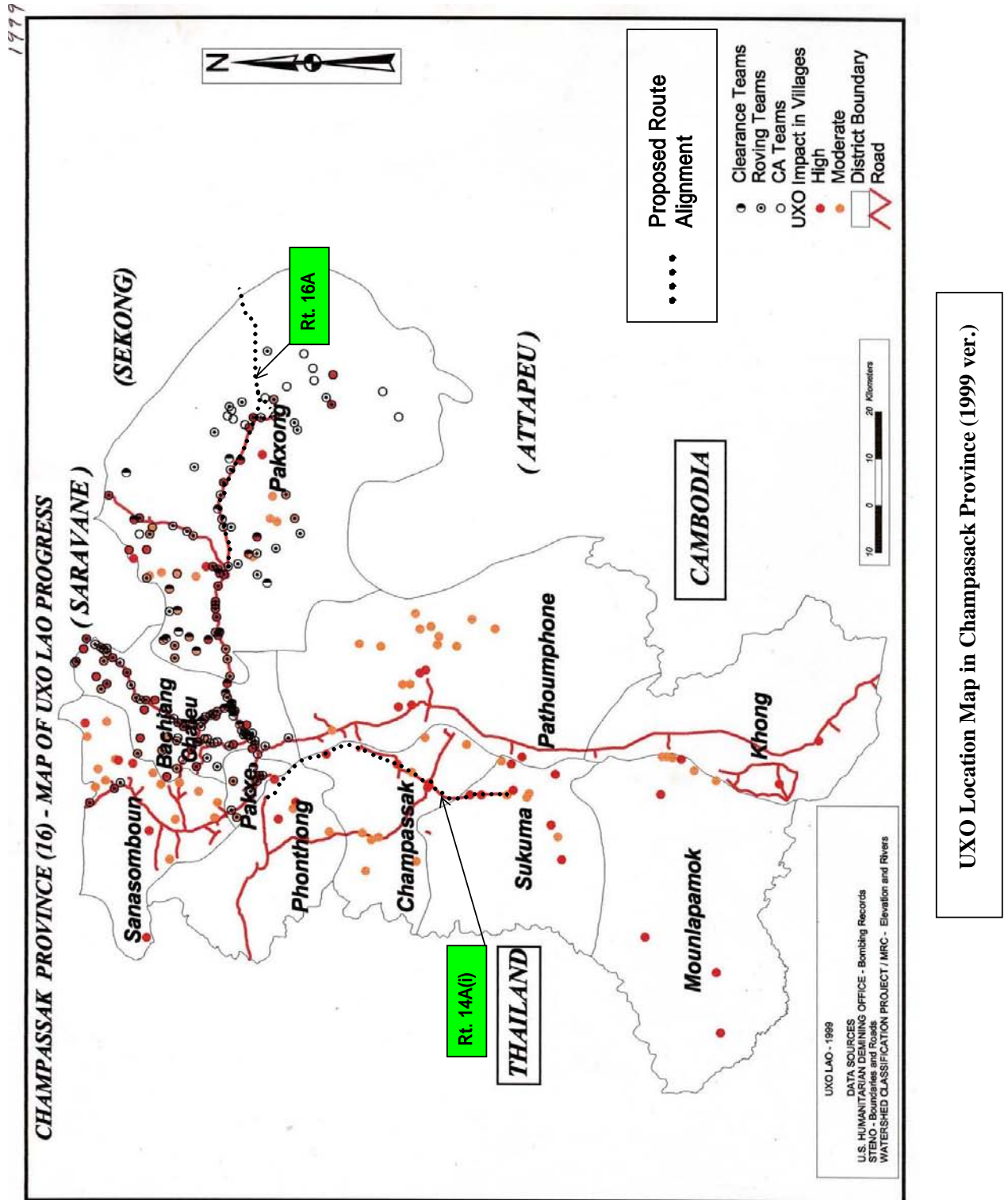
(ii) Existing Road Section excluded from Shortcut Route

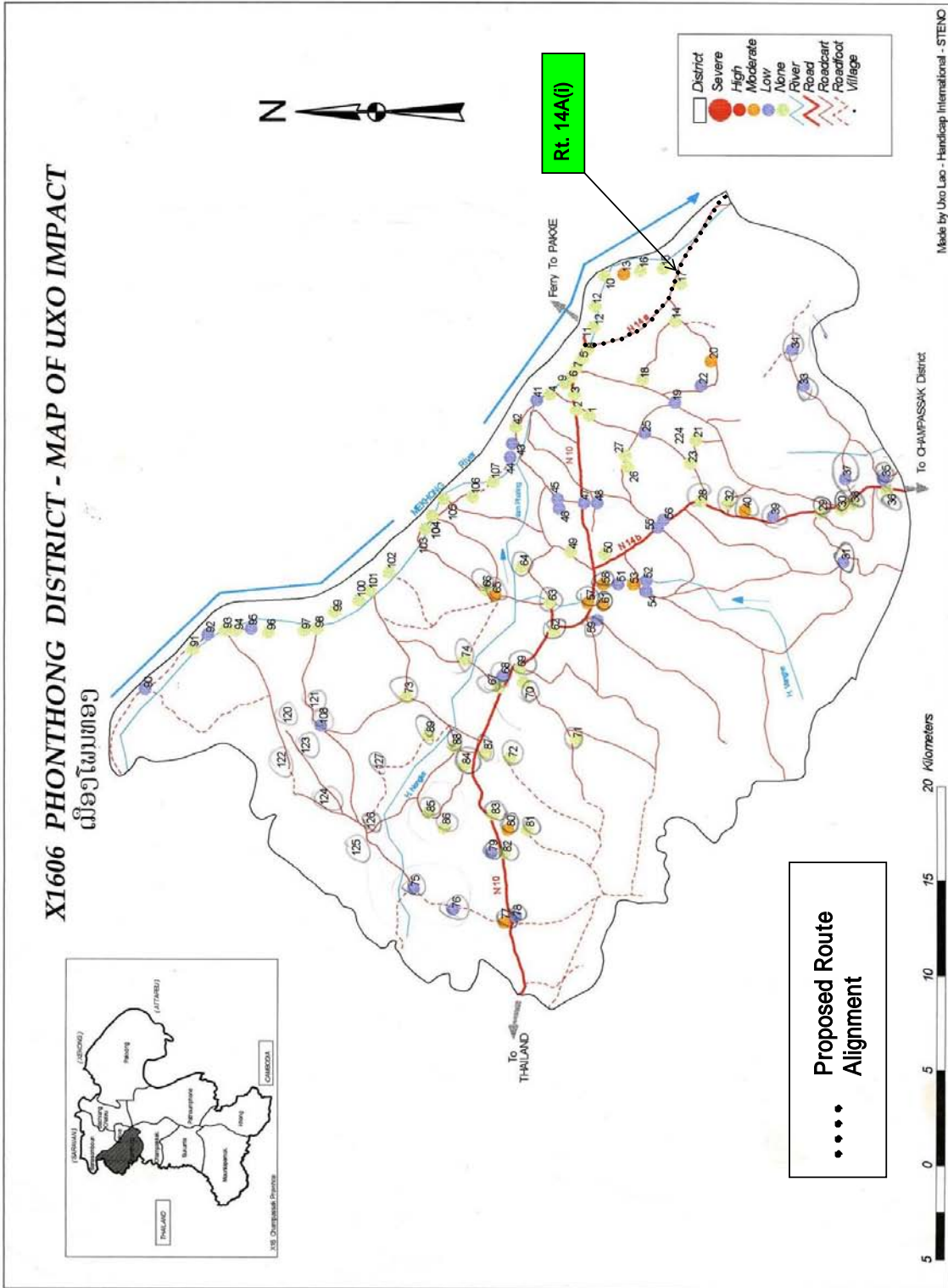
No.	Point Type	Location (km post)
1	Cliff (Right)	1.4 – 1.8km
2	Access Rd. to Hydro Project Site	5.45km
3	Cliff (Right)	8.4 – 8.55km
4	Cliff (Right)	9.4 – 9.8km
5	School	10.05 – 10.15km
6	Inadequate Alignment (Bridge Section)	10.3 – 10.7km
7	Cliff (Right)	10.5 – 10.7km
8	Cliff (Right)	12.0 – 12.2km
9	School	13.55 – 13.65km

ANNEX F-2

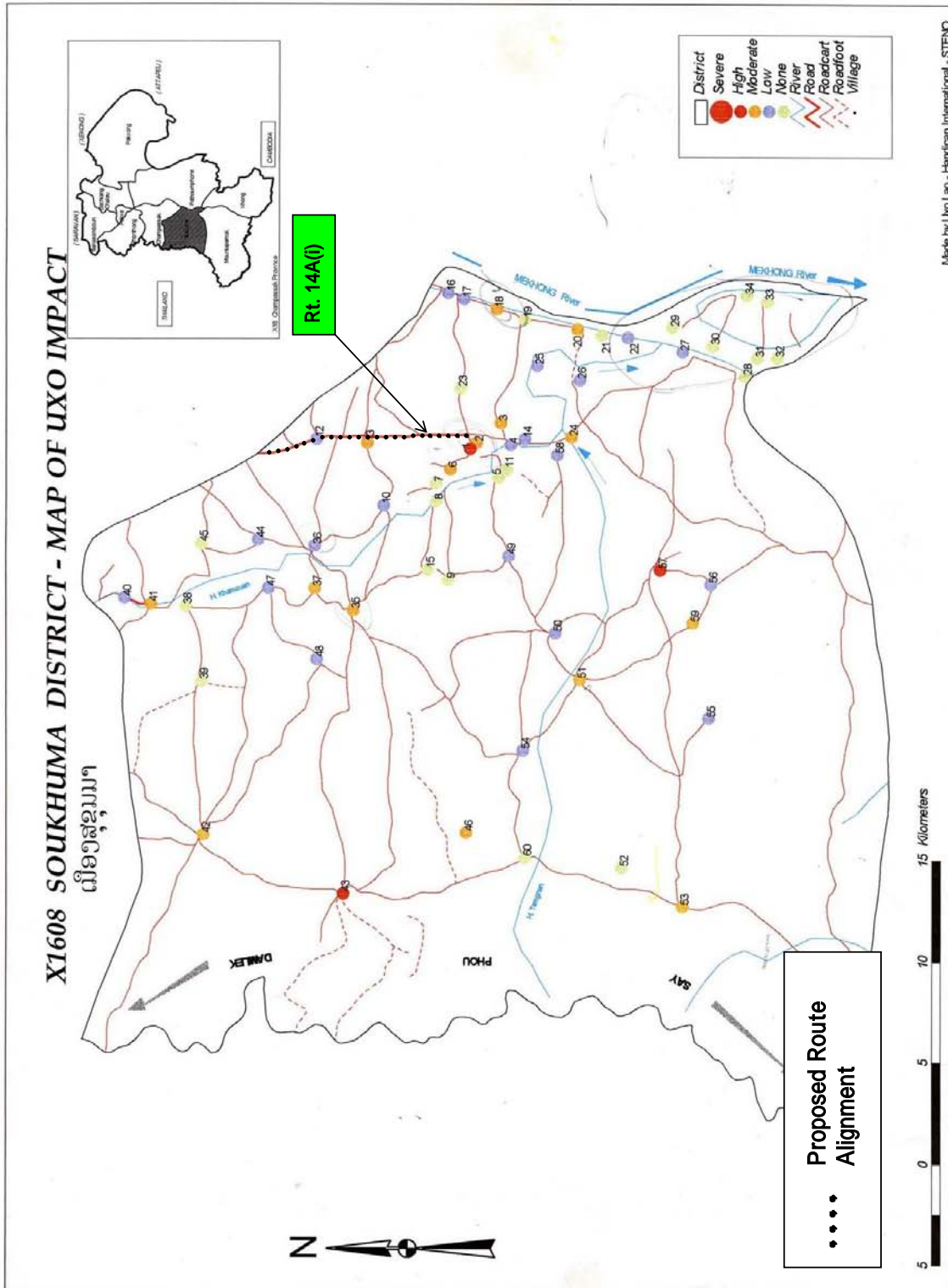
**UXO LOCATION MAP IN CHAMPASACK
PROVINCE**

ANNEX F-2 UXO LOCATION MAP IN CHAMPASSACK PROVINCE

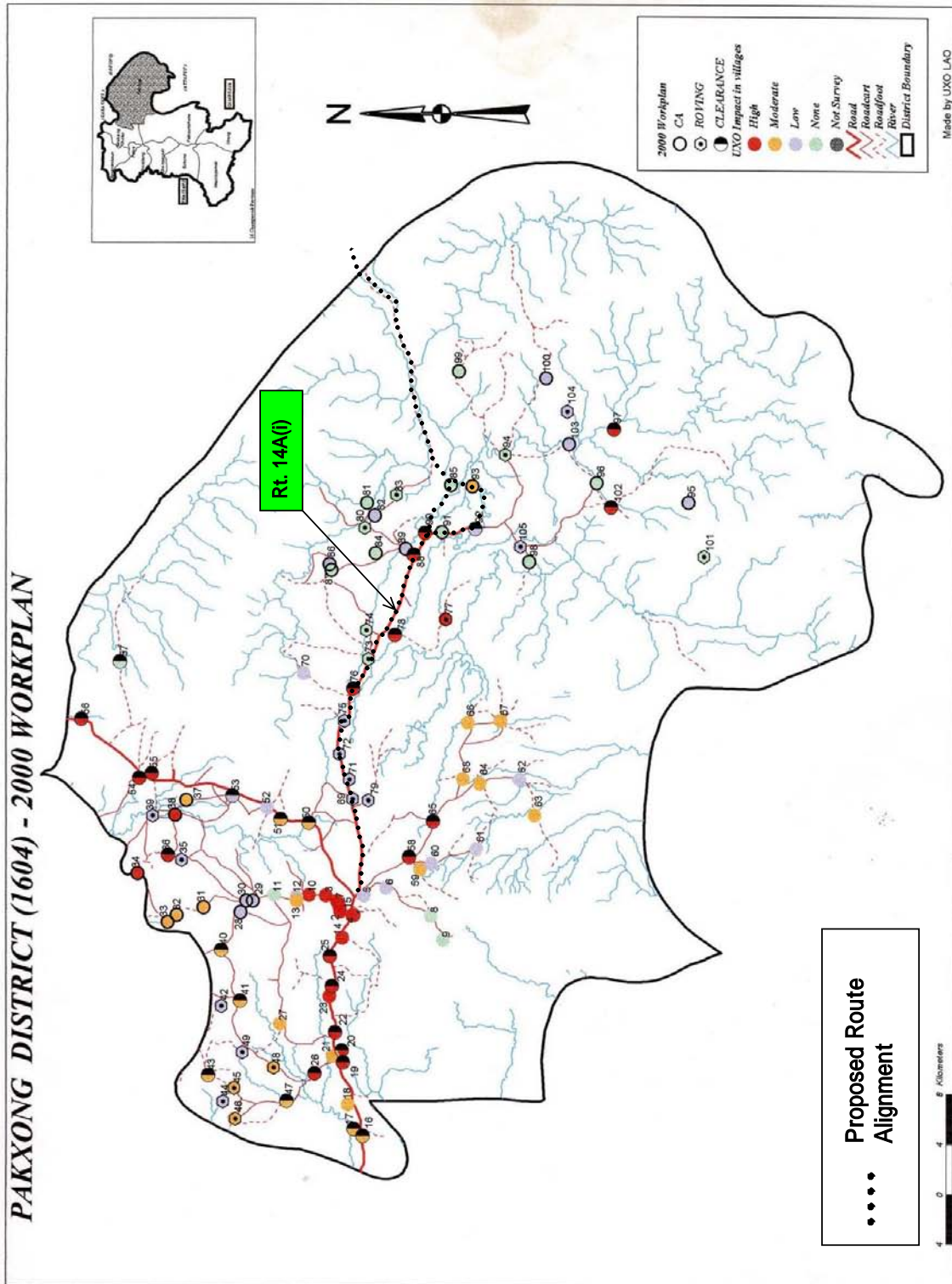




UXO Location Map in Phonthong District (1999 ver.)



UXO Location Map in Soukhouma District (1999 ver.)





UXO Location Map in Paksong District (1999 ver.)

ANNEX F-3


BRIDGE INVENTORY SURVEY DATA

ANNEX F-3 BRIDGE INVENTORY SURVEY DATA

Route : 14A(i)	Km Post: 5+390 m	Village Name: Ban Natakou	
Bridge or River Name: 1 Houy Thok River			
Existence of Bridge:	Yes / No	Within or Outside of Village: Within / Outside	
Existing Bridge Condition	Bridg Length.(m):	Span Arrangement(m):	
	Carriageway & Pede. Width(m):		
	Superstructure type:	Load Capacity(t):	
	Girder Description:		
	Substructure Type:	Pier: Abutment:	
	Protection Work:		
	Damage Condition	Girder:	
		Slab:	
		Substructure:	-
		Bank Protection:	
	Others: -		
River Condition	Yearly Low Water Level(m): No water	Yearly High Water Level (m): GL+0.0	
	Highest Water Level(m): GL+1.5m(1978)	River Width(m): 22 m	
	Riverbed Material: Silt	Gradient: 1/1000 (V=0.2m/s Existing)	
	Height between Riverbed and Riverbanks: 6 m		
Surrounding Conditions	Land Use: Agricultural field	No. Houses Affected: Noting	
	UXO: Not reported		
Other Info.	-A proposed bridge site will be affected by backwater from Mekong. - The highest water level is reported in 1978		
Comments	-Since the river is meandering, alignment should be set at the point which the river channel is stable and flood water level is relatively high. - New alignment will be set at north side of the village to avoid relocation of houses		
			

View from Right Bank to Left Bank

View to Downstream Side

Route : 14A(i)	Km Post: 7+450 m	Village Name: Ban Nonghoy	
Bridge or River Name: 2 Huay Maknao River			
Existence of Bridge:	Yes / No	Within or Outside of Village: Within / Outside	
Existing Bridge Condition	Bridg Length.(m):	Span Arrangement(m):	
	Carriageway & Pede. Width(m):		
	Superstructure type:	Load Capacity(t):	
	Girder Description:		
	Substructure Type:	Pier: Abutment:	
	Protection Work:		
	Damage Condition	Girder:	
		Slab:	
		Substructure:	-
		Bank Protection:	
	Others: -		
River Condition	Yearly Low Water Level(m): No water	Yearly High Water Level (m): 1.5m	
	Highest Water Level(m):	River Width(m): 5m	
	Riverbed Material: Silt	Gradient: 1/1000	
	Height between Riverbed and Riverbanks: 2 m		
Surrounding Conditions	Land Use: Agricultural field	No. Houses Affected: Noting	
	UXO: Not reported		
Other Info.	- No affection of backwater from Mekong River		
Comments	- Box culvert shall be appropriate for this crossing point in consideration with narrow river width and low river height.		
			

View to Downstream


Route :14A(i)	Km Post: 7+950 m	Village Name: -	
Bridge or River Name: 3 Huay Namsan River			
Existence of Bridge:	Yes / No	Within or Outside of Village: Within / Outside	
Existing Bridge Condition	Bridg Length.(m):	Span Arrangement(m):	
	Carriageway & Ped. Width(m):		
	Superstructure type:	Load Capacity(t):	
	Girder Description:		
	Substructure Type:	Pier: Abutment:	
	Protection Work:		
	Damage Condition	Girder:	
		Slab:	
		Substructure:	-
		Bank Protection:	
Others: -			
River Condition	Yearly Low Water Level(m): No water	Yearly High Water Level (m): 1.5m	
	Highest Water Level(m): not available	River Width(m): 8m	
	Riverbed Material: Silt	Gradient: 1/1000	
	Height between Riverbed and Riverbanks: 2 m		
Surrounding Conditions	Land Use: agricultural area	No. Houses Affected: Noting	
	UXO: Not reported		
Other Info.	- Little affection of backwater from Mekong River		
Comments	- Box culvert shall be appropriate for this crossing point in consideration with narrow river width and lower HWL.		



View from Right Bank



View to Downstream

Route : 14A(i)	Km Post: 9+480 m	Village Name: -	
Bridge or River Name: 7: No name			
Existence of Bridge:	Yes / No	Within or Outside of Village: Within / Outside	
Existing Bridge Condition	Bridge Length.(m):	Span Arrangement(m):	
	Carriageway & Ped. Width(m):		
	Superstructure type:	Load Capacity(t):	
	Girder Description:		
	Substructure Type:	Pier: Abutment:	
	Protection Work:		
	Damage Condition	Girder:	
		Slab:	
		Substructure:	-
		Bank Protection:	
	Others: -		
River Condition	Yearly Low Water Level(m): No water	Yearly High Water Level (m): 0.5m	
	Highest Water Level(m): 1.0m	River Width(m): 8m	
	Riverbed Material: boulders	Gradient: 1/20	
	Height between Riverbed and Riverbanks: 1.0 m		
Surrounding Conditions	Land Use: bush	No. Houses Affected: Nothing	
	UXO: Not reported		
Other Info.	- No affection of backwater from Mekong River		
Comments	- Box culvert shall be appropriate at this crossing point in consideration with narrow river width and lower HWL.		
			

View to Upstream

Route : 14A(i)	Km Post:	Village Name: -	
Bridge or River Name: 8 Huay Imet (Nangnam) River			
Existence of Bridge:	Yes / No	Within or Outside of Village: Within / Outside	
Existing Bridge Condition	Bridg Length.(m):	Span Arrangement(m):	
	Carriageway & Ped. Width(m):		
	Superstructure type:	Load Capacity(t):	
	Girder Description:		
	Substructure Type:	Pier: Abutment:	
	Protection Work:		
	Damage Condition	Girder:	
		Slab:	
		Substructure:	-
		Bank Protection:	
Others: -			
River Condition	Yearly Low Water Level(m): 0 m	Yearly High Water Level (m):	
	Highest Flood Water Level(m):	River Width(m): 10 m	
	Riverbed Material: Boulders & sand	Gradient: 1/500	
	Height between Riverbed & River bank or Bridge Surface(m): 2m (LB), 5m(RB)		
Surrounding Conditions	Land Use: Forest & Bush	No. Houses Affected: No houses around river	
	UXO: Not Reported		
Other Info.	- Bedrock exposed at the right bank - The river menders near the proposed bridge site. Some branch stream come together?		
Comments	-The bridge length should be carefully examined based on hydrological analysis. - The crossing point should be also carefully examined considering the stability of the channel.		



View from Right Bank to Left Bank



View to Downstream Side

Route : 14A(i)	Km Post: 11+580 m	Village Name: -	
Bridge or River Name: 9: Huay Kaunam River			
Existence of Bridge:	Yes / No	Within or Outside of Village: Within / Outside	
Existing Bridge Condition	Bridge Length.(m):	Span Arrangement(m):	
	Carriageway & Ped. Width(m):		
	Superstructure type:	Load Capacity(t):	
	Girder Description:		
	Substructure Type:	Pier: Abutment:	
	Protection Work:		
	Damage Condition	Girder:	
		Slab:	.
		Substructure:	-
		Bank Protection:	
	Others: -		
River Condition	Yearly Low Water Level(m): No water	Yearly High Water Level (m): 0.5m	
	Highest Water Level(m): 1.0m	River Width(m): 8m	
	Riverbed Material: boulders	Gradient: 1/100	
	Height between Riverbed and Riverbanks: 1.0 m		
Surrounding Conditions	Land Use: bush	No. Houses Affected: Nothing	
	UXO: Not reported		
Other Info.	- No affection of backwater from Mekong River		
Comments	- Box culvert shall be appropriate at this crossing point in consideration with narrow river width and lower HWL.		

Route : 14A(i)	Km Post: 12+120 m	Village Name: -	
Bridge or River Name: 10: Huay Khao Dam River			
Existence of Bridge:	Yes / No	Within or Outside of Village: Within / Outside	
Existing Bridge Condition	Bridge Length.(m):	Span Arrangement(m):	
	Carriageway & Ped. Width(m):		
	Superstructure type:	Load Capacity(t):	
	Girder Description:		
	Substructure Type:	Pier: Abutment:	
	Protection Work:		
	Damage Condition	Girder:	
		Slab:	.
		Substructure:	-
		Bank Protection:	
	Others: -		
River Condition	Yearly Low Water Level(m): No water	Yearly High Water Level (m): 1.0m	
	Highest Water Level(m): 1.0m	River Width(m): 8m	
	Riverbed Material: Silt	Gradient: 1/100	
	Height between Riverbed and Riverbanks: 1.0 m		
Surrounding Conditions	Land Use: bush	No. Houses Affected: Nothing	
	UXO: Not reported		
Other Info.	- No affection of backwater from Mekong River		
Comments	- Box culvert shall be appropriate at this crossing point in consideration with narrow river width and lower HWL.		

Route : 14A(i)	Km Post: 13+630m	Village Name: B Houapakho	
Bridge or River Name: 11 Huay Thakhong River			
Existence of Bridge:	Yes / No	Within or Outside of Village: Within / Outside	
Existing Bridge Condition	Bridg Length.(m):	Span Arrangement(m):	
	Carriageway & Pede. Width(m):		
	Superstructure type:	Load Capacity(t):	
	Girder Description:		
	Substructure Type:	Pier: Abutment:	
	Protection Work:		
	Damage Condition	Girder:	
		Slab:	.
		Substructure:	-
		Bank Protection:	
	Others: -		
River Condition	Yearly Low Water Level(m): 0 m	Yearly High Water Level (m): RB+3-4m	
	Highest Water Level(m): RB+5m (2000)	River Width(m): 30 m	
	Riverbed Material: Silt	Gradient: 1/1000	
	Height between Riverbed & River bank or Bridge Surface(m): 4.8 m		
Surrounding Conditions	Land Use: Agricultural Use(banana trees)	No. Houses Affected: Nothing	
	UXO: Not Reported		
Other Info.	-The water level at the crossing point will be affected by backwater from Mekong -The crossing point is located just north of the village.		
Comments	- A bridge structure will be appropriate and the bridge level should be carefully examined based on the hydrological analysis		



View from Left Bank to Right Bank



View to Upstream Side

Route : 14A(i)	Km Post: 14+540m	Village Name: B Houapakho	
Bridge or River Name: 12 Huay Tabxan River			
Existence of Bridge:	Yes / No	Within or Outside of Village: Within / Outside	
Existing Bridge Condition	Bridg Length.(m):	Span Arrangement(m):	
	Carriageway & Pede. Width(m):		
	Superstructure type:	Load Capacity(t):	
	Girder Description:		
	Substructure Type:	Pier: Abutment:	
	Protection Work:		
	Damage Condition	Girder:	
		Slab:	.
		Substructure:	-
		Bank Protection:	
	Others: -		
River Condition	Yearly Low Water Level(m): 0.2 m	Yearly High Water Level (m): RB+3-4m	
	Highest Water Level(m): GL+0 (2000)	River Width(m): 40m	
	Riverbed Material: Silt	Gradient: 1/1000	
	Height between Riverbed & River bank or Bridge Surface(m): 4.7m		
Surrounding Conditions	Land Use: Agricultural Use	No. Houses Affected: Nothing	
	UXO: Not Reported		
Other Info.	-The water level at the crossing point will be affected by backwater from Mekong - A branch stream enters into this river just upstream side of the crossing point. - This river is located just south of the village, in which more than 500 residences live.		
Comments	- The crossing point will be carefully examined considering the meeting point of the branch stream.		



View from Left Bank to Right Bank



View to Upstream Side

Route : 14A(i)	Km Post: 15+820m	Village Name: -	
Bridge or River Name: 13 Huay Khoneliao River			
Existence of Bridge:	Yes / No	Within or Outside of Village: Within / Outside	
Existing Bridge Condition	Bridg Length.(m):	Span Arrangement(m):	
	Carriageway & Pede. Width(m):		
	Superstructure type:	Load Capacity(t):	
	Girder Description:		
	Substructure Type:	Pier: Abutment:	
	Protection Work:		
	Damage Condition	Girder:	
		Slab:	.
		Substructure:	-
		Bank Protection:	
	Others: -		
River Condition	Yearly Low Water Level(m): 0 m	Yearly High Water Level (m):	
	Highest Water Level(m): RB+6m (2000)	River Width(m): 15-20 m	
	Riverbed Material: Bedrock & silt	Gradient: 1/1000	
	Height between Riverbed & River bank or Bridge Surface(m): 5 m		
Surrounding Conditions	Land Use: Bush & banana field	No. Houses Affected: Nothing	
	UXO: Not Reported		
Other Info.	- The water level at the crossing point will be affected by backwater from Mekong - Sandstone, bedrock, exposed at the riverbed.		
Comments	- A bridge structure will be appropriate for this site.		



View from Right Bank to Left Bank



View toward Upstream Side

Route : 14A(i)	Km Post: 17+040m	Village Name: Ban Khoneken	
Bridge or River Name: 14 Huay Khoneken River			
Existence of Bridge:	Yes / No	Within or Outside of Village: Within / Outside	
Existing Bridge Condition	Bridge Length.(m):	Span Arrangement(m):	
	Carriageway & Ped. Width(m):		
	Superstructure type:	Load Capacity(t):	
	Girder Description:		
	Substructure Type:	Pier: Abutment:	
	Protection Work:		
	Damage Condition	Girder:	
		Slab:	
		Substructure:	-
		Bank Protection:	
	Others: -		
River Condition	Yearly Low Water Level(m): 0.3 m	Yearly High Water Level (m): 6.0m	
	Highest Water Level(m): 9.0m	River Width(m): 22-40 m	
	Riverbed Material: Silt	Gradient: 1/1000	
	Height between Riverbed & River bank or Bridge Surface(m): 5 m		
Surrounding Conditions	Land Use: Agricultural Use (paddy field)	No. Houses Affected: Nothing	
	UXO: Not Reported		
Other Info.	<ul style="list-style-type: none"> - The water level at the crossing point will be affected by backwater from Mekong - The crossing point is located just north of the village and the river menders - The flood water level in 1978 is quite high at this point (GL+1.2m(2000)) 		
Comments	- A bridge structure will be appropriate and the bridge level should be carefully examined based on the hydrological analysis		



View from Right Bank to Left Bank



View toward Downstream Side

Route : 14A(i)	Km Post: 18+320 m	Village Name: Ban Khonken	
Bridge or River Name: 15 Huay Hong River			
Existence of Bridge:	Yes / No	Within or Outside of Village: Within / Outside	
Existing Bridge Condition	Bridge Length.(m):	Span Arrangement(m):	
	Carriageway & Ped. Width(m):		
	Superstructure type:	Load Capacity(t):	
	Girder Description:		
	Substructure Type:	Pier: Abutment:	
	Protection Work:		
	Damage Condition	Girder:	
		Slab:	.
		Substructure:	-
		Bank Protection:	
Others:		-	
River Condition	Yearly Low Water Level(m): 0 m	Yearly High Water Level (m): 6.0m	
	Highest Water Level(m): 9.0m	River Width(m): 15-35 m	
	Riverbed Material: Silt	Gradient: 1/1000	
	Height between Riverbed & River bank or Bridge Surface(m): 10 m		
Surrounding Conditions	Land Use: Agricultural Use (banana field)	No. Houses Affected:	
	UXO: Not Reported		
Other Info.	-The water level at the crossing point will be affected by backwater from Mekong -The crossing point is located just south of the village and a vehicle can not pass this river. -Sugarcane is cultivated on the river slope.		
Comments	- A bridge structure will be appropriate and the bridge level should be carefully examined based on the hydrological analysis		



View from Right Bank to Left Bank



View toward Upstream Side

Route : 14A(i)	Km Post: 19+890 m	Village Name: Ban Khangneng	
Bridge or River Name: 17 Huay Dua River			
Existence of Bridge:	Yes / No	Within or Outside of Village: Within / Outside	
Existing Bridge Condition	Bridge Length.(m):	Span Arrangement(m):	
	Carriageway & Ped. Width(m):		
	Superstructure type:	Load Capacity(t):	
	Girder Description:		
	Substructure Type:	Pier: Abutment:	
	Protection Work:		
	Damage Condition	Girder:	
		Slab:	.
		Substructure:	-
		Bank Protection:	
	Others: -		
River Condition	Yearly Low Water Level(m): 0 m	Yearly High Water Level (m): 3.2m	
	Highest Water Level(m): GL+1.0m(2000)	River Width(m): 10 m	
	Riverbed Material: Silt	Gradient: 1/1000	
	Height between Riverbed & River bank or Bridge Surface(m): 4.2m		
Surrounding Conditions	Land Use: Agricultural Use (paddy field)	No. Houses Affected: a few houses may	
	UXO: Not Reported		
Other Info.	- The water level at the crossing point will be affected by backwater from Mekong - The crossing point is located just north of the village.		
Comments	- A culvert structure will be appropriate because of small catchment area.		



View from Right Bank to Left Bank



View toward Upstream Side

Route : 14A(i)	Km Post: 21+430m	Village Name: Ban Vaxai	
Bridge or River Name: 18 Huay Sai River			
Existence of Bridge:	Yes / No	Within or Outside of Village: Within / Outside	
Existing Bridge Condition	Bridge Length.(m):	Span Arrangement(m):	
	Carriageway & Ped. Width(m):		
	Superstructure type:	Load Capacity(t):	
	Girder Description:		
	Substructure Type:	Pier: Abutment:	
	Protection Work:		
	Damage Condition	Girder:	
		Slab:	
		Substructure:	-
		Bank Protection:	
	Others: -		
River Condition	Yearly Low Water Level(m): 0.3 m	Yearly High Water Level (m): 6.5m	
	Highest Water Level(m): GL-1m (2000)	River Width(m): 50 m	
	Riverbed Material: Silt	Gradient: 1/5000 (V=0.1m/s)	
	Height between Riverbed & River bank or Bridge Surface(m): 8.1 m		
Surrounding Conditions	Land Use: Agricultural Use (paddy field)	No. Houses Affected: Nothing	
	UXO: Not Reported		
Other Info.	- The water level at the crossing point will be affected by backwater from Mekong - The crossing point is located just north of the village and the river menders moderately.		
Comments	- A bridge structure will be appropriate and abutment location should be examined. - The bridge level should be carefully examined based on the hydrological analysis		



View from Right Bank to Left Bank



View toward Upstream Side

Route : 14A(i)	Km Post: 28.9 km	Village Name: Champasack Town	
Bridge or River Name: 20 Huay Phaban Bridge			
Existence of Bridge:	Yes / No	Within or Outside of Village: Within / Outside	
Existing Bridge Condition	Bridge Length.(m): 49.0 m	Span Arrangement(m): 24.5 m x 2	
	Carriageway & Pede. Width(m): 3.6 m		
	Superstructure type: Bailey	Load Capacity(t): 15 ton	
	Girder Description: Double panel is applied		
	Substructure Type:	Pier: RC H-Frame Type Abutment: RC	
	Protection Work: Not observed		
	Damage Condition	Girder: Minor corrosion is observed	
		Wooden slab has minor damages with loss of a part of	
		Slab: slab wood.	
		Substructure: Sound	
	Bank Protection: -		
	Others: Corrosion on other steel parts but not serious damage		
River Condition	Yearly Low Water Level(m): 0 m	Yearly High Water Level (m): 6 m	
	Highest Water Level(m): Top of pier or Bridge surface-0.75m(2000)	River Width(m): 36-75 m	
	Riverbed Material: Silt	Gradient: 1/1000	
	Height between Riverbed & River bank or Bridge Surface(m): 8 m		
Surrounding Conditions	Land Use: Fruit trees and bush	No. Houses Affected: Nothing	
	UXO: Not Reported		
Other Info.	<ul style="list-style-type: none"> - Since new alignment will be set at 200m upstream side, the bridge site will be moved. -The water level at the crossing point will be affected by backwater from Mekong. - Previous flood records are marked on a pier of the existing bridge. 		
Comments	-The proposed bridge is required with similar scale of the existing bridge. Since the river menders at upstream side, the crossing point should be set at a place where the channel is stable.		



Side View of Existing Bridge



Upstream View at Proposed Bridge Site

Route : 14A(i)	Km Post: 32+210m	Village Name: Ban Khoneken	
Bridge or River Name: 21-1 Huay Sahoua River			
Existence of Bridge:	Yes / No	Within or Outside of Village: Within / Outside	
Existing Bridge Condition	Bridge Length.(m): 48.7 m	Span Arrangement(m): 24.5 m x 2	
	Carriageway & Ped. Width(m): 4.2 m		
	Superstructure type: Bailey Type	Load Capacity(t): ?	
	Girder Description: Double panel is mainly applied (a double panel with beam at some parts)		
	Substructure Type:	Pier: RC Frame Type Abutment: RC Frame type	
	Protection Work: Not observed		
	Damage Condition	Girder: Minor corrosion is observed.	
		Slab: Small damages with loss of wooden slab are observed	
		Substructure: Sound	
		Bank Protection: -	
Others: Corrosion on cross-beams and bracings but not serious			
River Condition (Proposed site)	Yearly Low Water Level(m): 0.2 m	Yearly High Water Level (m): 5m	
	Highest Water Level(m): 7.0m	River Width(m): 35 m	
	Riverbed Material: gravels, sand & silt	Gradient: 1/1000	
	Height between Riverbed & River bank or Bridge Surface(m): 5.5 m		
Surrounding Conditions	Land Use: Paddy Field	No. Houses Affected	
	UXO: Not Reported		
Other Info.	- The river menders significantly. - Alignment will be shifted to 1km upstream side due to detouring the ancient city area		
Comments	- The crossing point should be selected the place where the channel is stable. Backwater from Mekong may not be affected at the proposed bridge site.		



Side View of Existing Bridge



Downstream Side View at Proposed Bridge Site

Route : 14A(i)	Km Post: 32+620 m	Village Name: -	
Bridge or River Name: 21-2 Huay Sahoua River			
Existence of Bridge:	Yes / No	Within or Outside of Village: Within / Outside	
Existing Bridge Condition	Bridge Length.(m): 48.7 m	Span Arrangement(m): 24.5 m x 2	
	Carriageway & Ped. Width(m): 4.2 m		
	Superstructure type: Bailey Type	Load Capacity(t): ?	
	Girder Description: Double panel is mainly applied (a double panel with beam at some parts)		
	Substructure Type:	Pier: RC Frame Type Abutment: RC Frame type	
	Protection Work: Not observed		
	Damage Condition	Girder: Minor corrosion is observed.	
		Slab: Small damages with loss of wooden slab are observed	
		Substructure: Sound	
		Bank Protection: -	
Others: Corrosion on cross-beams and bracings but not serious			
River Condition (Proposed site)	Yearly Low Water Level(m): 0 m	Yearly High Water Level (m): 3 m	
	Highest Water Level(m): 4.1m	River Width(m): 10 m	
	Riverbed Material: sand	Gradient: 1/500	
	Height between Riverbed & River bank or Bridge Surface(m): 3.6 m		
Surrounding Conditions	Land Use: Paddy Field	No. Houses Affected: Nothing	
	UXO: Not Reported		
Other Info.	- Alignment will be shifted to 1km upstream side due to detouring the ancient city area		
Comments	- The crossing point should be selected the place where the channel is stable. Backwater from Mekong may not be affected at the proposed bridge site.		



Side View of Existing Bridge



Downstream Side View at Proposed Bridge Site



Route : 14A(i)	Km Post: 39+600m	Village Name: Ban Dontalat	
Bridge or River Name: 22-1 No name			
Existence of Bridge:	Yes / No	Within or Outside of Village: Within / Outside	
Existing Bridge Condition	Bridge Length.(m): 15m	Span Arrangement(m): 15m (slab:12.2m)	
	Carriageway & Ped. Width(m): 3.5 m		
	Superstructure type: Bailey	Load Capacity(t): Not indicated	
	Girder Description: Single panel is utilized		
	Substructure Type:	Pier: - Abutment: -	
	Protection Work: Not observed		
	Damage Condition	Girder: Minor corrosion is observed	
		Slab: No damage	
		Substructure: -	
		Bank Protection: -	
Others: -			
River Condition	Yearly Low Water Level(m): 0 m	Yearly High Water Level (m): Br surface-0.5m	
	Highest Water Level(m): Br. surface -0.5m (2002)	River Width(m): 10 m	
	Riverbed Material: Silt	Gradient: 1/50	
	Height between Riverbed & River bank or Bridge Surface(m): 2 m		
Surrounding Conditions	Land Use: Agricultural Use (paddy field)	No. Houses Affected: nothing	
	UXO: Not Reported		
Other Info.	- Two pipe culvers of 0.8 m in diameter were originally installed at this crossing point but those were destroyed due to lack of flow capacity of the culverts and replaced by a bailey bridge. One pipe is observed not to function due to maybe debris in the pipe.		
Comments	- The structure type should be studied on the basis of an analysis on causes of destruction.		



View from Left Bank to Right Bank



Downstream Side View

Route : 14A(i)	Km Post: 40+610m	Village Name: Ban Dontalat	
Bridge or River Name: 22-2 Huay Thateng River			
Existence of Bridge:	Yes / No	Within or Outside of Village: Within / Outside	
Existing Bridge Condition	Bridge Length.(m): 18.5m	Span Arrangement(m): 18.5m (slab:12.2m)	
	Carriageway & Ped. Width(m): 3.9 m		
	Superstructure type: Bailey	Load Capacity(t): Not indicated	
	Girder Description: Single panel is utilized		
	Substructure Type:	Pier: - Abutment: RC frame type	
	Protection Work: Not observed		
	Damage Condition	Girder: Minor corrosion is observed	
		Slab: Small damages such as loss of parts of wooden slab	
		Substructure: -	
		Bank Protection: -	
Others: 1-2 mm corrosion on cross beam & braising not serious			
River Condition	Yearly Low Water Level(m): 0.5 m	Yearly High Water Level (m): Br surface-0.5m	
	Highest Water Level(m): Br. surface -0.5m (2000)	River Width(m): 12 m	
	Riverbed Material: Silt	Gradient: 1/5000 (almost no flow)	
	Height between Riverbed & River bank or Bridge Surface(m): 3.2 m		
Surrounding Conditions	Land Use: Agricultural Use (paddy field)	No. Houses Affected: a few houses	
	UXO: Not Reported		
Other Info.	- The water level at the crossing point won't be affected by backwater from Mekong and the surrounding area is inundated during rainy season. - Drainage works including cross-sectional culverts have been improved along the road.		
Comments	-The new bridge should be set at the same position considering the straight alignment -The bridge length should be considered on the basis of hydrological analysis		
			

View from Left Bank to Right Bank

Upstream Side View

Route : 14A(i)	Km Post: 45+490 m	Village Name: Ban Nongbeng	
Bridge or River Name: 23 Huay Manpha River			
Existence of Bridge:	Yes / No	Within or Outside of Village: Within / Outside	
Existing Bridge Condition	Bridge Length.(m): 24.5 m	Span Arrangement(m): 24.5m	
	Carriageway & Ped. Width(m): 4.2 m		
	Superstructure type: Bailey Type	Load Capacity(t): ?	
	Girder Description: Single panel with beam is applied.		
	Substructure Type:	Pier: - Abutment: RC frame type	
	Protection Work: Not observed		
	Damage Condition	Girder: Minor corrosion is observed	
		Slab: Fair condition with small damages	
		Substructure: Not observed	
		Bank Protection: -	
River Condition	Yearly Low Water Level(m): 0.2 m but no water at upstream side	Yearly High Water Level (m): Br.surface-1.5m	
	Highest Water Level(m): Br.surface-1.5m	River Width(m): 22m	
	Riverbed Material: Silt	Gradient: 1/1000	
	Height between Riverbed & River bank or Bridge Surface(m): 4 m		
Surrounding Conditions	Land Use: Bush & agricultural use	No. Houses Affected: Nothing	
	UXO: Not Reported		
Other Info.	- Previous abutments inclined due to scouring under the bridge so that the bridge was replaced by one with the longer span. - Backwater from Mekong is not affected at the bridge site.		
Comments	- The proposed bridge should be set at the same position to keep good alignment. The surrounding area is sometimes inundated in rainy season.		



View from Right Bank to Left Bank



Side View of Existing Bridge

Route : 16A	Km Post: 17.8km	Village Name: Nkh.l No.34	
Bridge or River Name: Huay Mckchan-Gunai			
Existence of Bridge:	Yes / No	Within or Outside of Village: Within / Outside	
Existing Bridge Condition	Bridg Length.(m): 25.0 m	Span Arrangement(m): 12.5m x 2	
	Carriageway & Pede. Width(m):	0 m + 4.5m + 0 m	
	Superstructure type: Bailey	Load Capacity(t): not indicated	
	Girder Description: Single truss panel is applied.		
	Substructure Type:	Pier: Steel-frame pier Abutment: Gravity concrete	
	Height between Riverbed & Bridge Surface(m): 3.2m		
	Damage Condition	Girder: Minor corrosion is observed	
		Slab: Wooden slab keeps relatively fair condition.	
		Substructure: -	
		Bank Protection: No protection work	
Others: -			
River Condition	Yearly Low Water Level(m): 0.3-0.5m	Yearly High Water Level (m):	
	Highest Flood Water Level(m): RB+2.0m	River Width(m): 20-25 m	
	Riverbed Material: Boulders & sand	Gradient: 1/200	
Surrounding Conditions	Land Use: Residential area	No. Houses Affected: No	
	UXO: not reported		
Other Info.	-River water is utilized for washing or water supply by local people. -Two streams come together at upstream side of the bridge.		
Comments	-Existing Bridge should be replaced by permanent bridge with 2 lane carriageway. -New bridge center should be kept at same position in order to keep good road alignment		



Route :16A	Km Post:39.5km	Village Name: No Village	
Bridge or River Name: Huay Namtang River			
Existence of Bridge:	Yes / No	Within or Outside of Village: Within / Outside	
Existing Bridge Condition	Bridg Length.(m):	Span Arrangement(m):	
	Carriageway & Ped. Width(m):		
	Superstructure type:	Load Capacity(t):	
	Girder Description:		
	Substructure Type:	Pier: Abutment:	
	Height between Riverbed & Bridge Surface(m):		
	Damage Condition	Girder:	
		Slab:	
		Substructure: -	
		Bank Protection:	
Others: -			
River Condition	Yearly Low Water Level(m): 0.5 m	Yearly High Water Level (m):	
	Highest Flood Water Level(m): 2.0m	River Width(m): 25-30 m	
	Riverbed Material: Boulders and sand	Gradient: 1/500	
Surrounding Conditions	Land Use: Forest	No. Houses Affected: Nothing	
	UXO: Not reported		
Other Info.	- The height between riverbed and ground level at left bank is approximately 10m. - River channel at the proposed bridge site is straight and stable.		
Comments	-Approach road alignment should be carefully studied to meet geometry standard.		



View from left bank



Upstream side

Route : 16A	Km Post: 52.4 km	Village Name: -	
Bridge or River Name: Xe Katam River Bridge			
Existence of Bridge:	Yes / No	Within or Outside of Village: Within / Outside	
Existing Bridge Condition	Bridg Length.(m): 48.4 m	Span Arrangement(m): 12.1m x 4	
	Carriageway & Ped. Width(m): 0 m + 4.5 m + 0 m		
	Superstructure type: Steel-I Girder	Load Capacity(t): Not indicated	
	Girder Description: 4-girders with 0.8m in depth		
	Substructure Type:	Pier: RC T shaped Abutment: RC Reversed T	
	Protection Work: Dry masonry with large boulders protects around abutments		
	Height between Riverbed & Bridge Surface(m): 10.2 m		
	Damage Condition	Girder: Minor corrosion under the drainage pipe is observed	
		Slab: No damage	
		Substructure: Sound	
Bank Protection: No damage			
Others: Handrail has no damage. No expansion joint is set.			
River Condition	Yearly Low Water Level(m): 0.5 m	Yearly High Water Level (m):	
	Highest Flood Water Level(m):	River Width(m): 40 m	
	Riverbed Material: Boulders and sand	Gradient: 1/500	
Surrounding Conditions	Land Use: forest	No. Houses Affected: Nothing	
	UXO: Unknown		
Other Info.	- The bridge was constructed by Daewoo as a part of an access road to the dam site in 1995. - Horizontal alignment of the approach roads should be improved.		
Comments	- The existing bridge shall be examined with designated design live load for this project. If it bears the live load, additional one-lane bridge is required at either up or down streamside.		

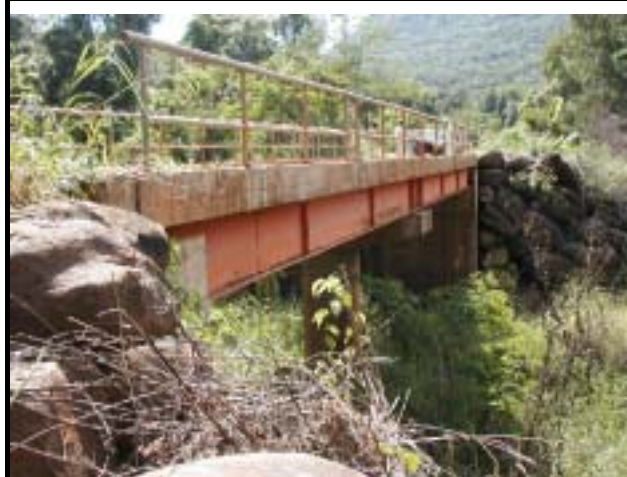


Route : 16A	Km Post: 58.1 km	Village Name: -	
Bridge or River Name: Xe Namnoy River 1			
Existence of Bridge:	Yes / No	Within or Outside of Village: Within / Outside	
Existing Bridge Condition	Bridg Length.(m): 50.4 m	Span Arrangement(m): 12.3 + 18.0 + 18.0 + 12.1	
	Carriageway & Ped. Width(m): 0 m + 4.5 m + 0 m		
	Superstructure type: Steel-I Girder	Load Capacity(t): Not indicated	
	Girder Description: Side span : 4-girders with 0.8m in depth are arranged. : Center span: 6-girders with 0.8m in depth are arranged.		
	Substructure Type:	Pier: RC T shaped Abutment: RC Reversed T	
	Protection Work: Dry masonry with large boulders protect around abutments.		
	Height between Riverbed & Bridge Surface(m): 9.1-10.7 m		
	Damage Condition	Girder: Minor corrosion under the drainage pipes are observed	
		Slab: No cracks and looks sound	
		Substructure: No damage	
Bank Protection: No damage			
Others: Handrail has no damage and no expansion joint.			
River Condition	Yearly Low Water Level(m): 1.0 m	Yearly High Water Level (m):	
	Highest Flood Water Level(m): 7m +RB	River Width(m): 40-45m	
	Riverbed Material: Boulders and sand	Gradient: 1/300 (V=1-1.5m/s)	
Surrounding Conditions	Land Use: Forest and bush	No. Houses Affected: Nothing	
	UXO: Unknown		
Other Info.	- The bridge was constructed by Daewoo as a part of an access road to the dam site in 1995. - River has detour stream route at flooding. A few houses are located 200m upstream side		
Comments	- The existing bridge shall be examined with designated design live load for this project. If it bears the live load, additional one-lane bridge is required at either up or down streamside.		



Upstream View

Route : 16A	Km Post: 58.3 km	Village Name: -	
Bridge or River Name: Xe Namnoy 2			
Existence of Bridge:	Yes / No	Within or Outside of Village: Within / Outside	
Existing Bridge Condition	Bridg Length.(m): 24.2 m	Span Arrangement(m): 12.1 m x 2	
	Carriageway & Ped. Width(m): 0 m + 4.5 m + 0 m		
	Superstructure type: Steel-I Girder	Load Capacity(t): Not indicated	
	Girder Description: 4-girders with 0.8 m in depth are arranged		
	Substructure Type:	Pier: RC T-shaped Abutment: RC Reversed T	
	Protection Work: Dry masonry with large boulders protect around abutments.		
	Height between Riverbed & Bridge Surface(m): 7.1 m		
	Damage Condition	Girder: Minor corrosion under the drainage pipe are observed	
		Slab: -	
		Substructure: No damage	
Bank Protection: Looks stable			
Others: No damages on handrail. No expansion joints			
River Condition	Yearly Low Water Level(m): No water	Yearly High Water Level (m):	
	Highest Flood Water Level(m):	River Width(m): 20 m	
	Riverbed Material: medium boulders & sand	Gradient: ?	
Surrounding Conditions	Land Use: Bush	No. Houses Affected: Nothing	
	UXO: Not reported		
Other Info.	- The bridge was constructed by Daewoo as a part of an access road to the dam site in 1995. - This river is a detour stream of Xe Namnoy at flooding so that there is no water in dry season		
Comments	- The existing bridge shall be examined with designated design live load for this project. If it bears the live load, additional one-lane bridge is required at either up or down streamside.		



Upstream View

Route : 16A	Km Post: 58.6 km	Village Name: -	
Bridge or River Name: Xe Katak-Tok River			
Existence of Bridge:	Yes / No	Within or Outside of Village: Within / Outside	
Existing Bridge Condition	Bridg Length.(m): 24.2 m	Span Arrangement(m): 12.1 m x 2	
	Carriageway & Ped. Width(m): 0 m + 4.5 m + 0 m		
	Superstructure type: Steel-I Girder	Load Capacity(t): Not indicated	
	Girder Description: 4-girders with 0.8m in depth are arranged		
	Substructure Type:	Pier: RC T-shaped Abutment: RC Reversed-T	
	Protection Work: Dry Masonry with large boulders protect around abutments		
	Height between Riverbed & Bridge Surface(m): 7.4 m		
	Damage Condition	Girder: Minor corrosion under the drainage pipes are observed	
		Slab: Looks sound	
		Substructure: No damage	
Bank Protection: Stable			
Others: Damage on handrail at upstream side due to vehicle collision. No expansion joint.			
River Condition	Yearly Low Water Level(m): 0.2 m	Yearly High Water Level (m):	
	Highest Flood Water Level(m):	River Width(m): 20 m	
	Riverbed Material: Sand rock exposes	Gradient: 1/500	
Surrounding Conditions	Land Use: Forest and bush	No. Houses Affected: Nothing	
	UXO: Not reported		
Other Info.	-Hydro dam is located at 13 km upstream but discharge from the dam maybe not affected to HWL at the bridge site due to no water level adjusting gate at the dam		
Comments	- Alignment of the approach road at the right bank should be improved. -The existing bridge shall be examined with designated design live load for this project. If it bears the live load, additional one-lane bridge is required at either up or down streamside.		



Route : 16A	Km Post: 61+473	Village Name: -	
Bridge or River Name: No name			
Existence of structure:	Yes / No	2.0m pipe culvert	
Existing Bridge Condition	Bridg Length.(m):	Span Arrangement(m):	
	Carriageway & Ped. Width(m):		
	Superstructure type:	Load Capacity(t):	
	Girder Description:		
	Substructure Type:	Pier: Abutment:	
	Protection Work:		
	<u>Damage Condition</u>	Girder:	
		Slab:	.
		Substructure:	-
		Bank Protection:	
Others:		-	
River Condition	Yearly Low Water Level(m):	Yearly High Water Level (m): GL+1.0m	
	Highest Flood Water Level(m): GL+1.0m	River Width(m): 10m	
	Riverbed Material: boulder+silt	Gradient: 1/100	
	Height between Riverbed & River bank or Bridge Surface(m): 3.0m		
Surrounding Conditions	Land Use: forest	No. Houses Affected: No	
	UXO: not reported		
Other Info.	2.0m in diameter of pipe culvert is set at the crossing point. However, the overflow of the stream was observed in rainy season. The overflowed area spread 20m in length and 1m in the maximum depth. This occurs 3 to 4 times a year.		
Comments	The type of crossing structure shall be well examined in consideration with river condition and its characteristics.		



View from Left Bank to Right Bank



View to Downstream