Tacis

TRACECA - Project

Trade and Transport Sectors

Implementation of Pavement Management Systems

Feasibility Study for Rehabilitation of Transit Roads in Azerbaijan

Final Feasibility Report Volume III

December 1997

KOCKS CONSULT GMBH
Consulting Engineers
Koblenz / Germany

in association with

TECNECON, Economic and Transport Consultants
London / U. K.

PHØNIX
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APPENDICES

VOLUME III

APPENDIX 6.6

EXISTING ROAD WIDTH

- Width of the Road -

Section 1 - M 4:
Alyat - Gazi Mammad
km 0+000 to km 43+450

Chainage m	Width m
0	11.40
1,067	14.30
1,240	7.45
2,000	8.00
3,000	7.70
4,000	7.50
5,260	7.45
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
8,922	28.30
9,601	25.00
11,172	7.50
12,402	7.50
13,004	7.50
13,934	8.50
14,784	8.50
15,822	8.00
16,855	8.60
17,919	8.00
19,086	7.70
20,156	7.80
21,074	7.80
22,107	7.80
23,162	7.80
24,199	7.80
25,312	7.80
26,350	8.30
27,408	7.60
28,444	7.50
29,479	7.80
30,679	7.50
31,574	7.80
32,631	7.50
33,678	7.80
34,678	7.50
35,699	7.80
36,874	7.70
37,794	7.50
38,773	7.65
39,833	8.00
41,062	8.60
42,043	8.50
43,103	9.00
43,450	9.00
Average	8.14

Section 2 - M 4:
Bypass Gazi-Mammad
km 43+450 to km 58+980

Chainage m	Width m
43,450	9.00
45,363	8.80
45,943	11.50
46,236	10.29
46,307	10.00
46,530	20.00
46,915	9.00
47,200	9.00
47,262	9.00
48,270	8.80
49,308	8.70
49,971	9.00
50,976	8.50
52,001	9.00
52,700	9.00
53,029	9.00
54,044	9.00
54,700	9.00
55,105	9.00
56,123	9.00
57,143	9.00
57,200	8.95
58,183	8.00
58,778	8.00
58,980	8.26
Average	9.47

Section 3 - M 4:
Gazi Mammad - Kyurdamir
km 58+980 to km 124+300

Chainage m	Width m
58,980	8.26
59,543	9.00
59,700	8.93
60,660	8.50
61,681	8.50
63,597	8.50
64,877	8.20
65,877	8.60
66,891	7.70
67,903	7.80
68,906	8.00
69,700	7.43
69,884	7.30
71,116	8.30
71,741	7.00
72,700	7.00
72,934	7.00
73,941	7.30
75,052	7.00
76,057	7.00

Section 3 - M 4:

Chainage m	Width m
76,200	7.00
77,087	7.00
78,109	7.20
78,200	7.18
79,109	7.00
80,113	7.20
81,118	7.30
81,200	7.36
82,124	8.00
83,124	8.50
84,139	8.50
85,180	7.20
85,550	15.00
85,740	16.50
86,077	16.50
86,977	15.70
87,200	11.39
87,427	7.00
88,027	7.00
89,014	7.00
89,200	7.04
89,934	7.20
90,926	7.00
91,700	7.00
91,951	7.00
92,916	8.30
93,916	8.00
95,112	8.00
96,792	9.00
97,862	9.00
98,700	9.00
98,960	9.00
99,960	9.00
100,200	8.97
103,755	8.50
104,753	8.70
105,700	8.51
105,753	8.50
106,856	7.50
109,200	8.88
109,396	9.00
111,894	8.50
112,700	8.91
112,874	9.00
113,968	9.00
114,868	9.00
115,832	9.00
116,839	9.00
117,859	9.00
118,840	8.50
119,200	8.31
119,778	8.00
122,837	7.70
123,337	14.00
124,300	12.35
Average	8.62

- Width of the Road -

Section 4 - M 4:
Kyurdamir - Ujar
km 124+300 to km 170+500

Chainage m	Width m
124,300	12.35
127,227	8.50
128,813	8.50
129,813	9.00
130,866	8.75
131,868	8.50
132,861	9.00
133,959	8.80
135,137	9.00
136,232	8.00
137,204	8.00
138,180	9.00
139,198	9.00
141,348	9.00
142,098	9.00
143,361	9.00
144,281	9.00
145,266	9.00
146,406	9.30
147,412	9.00
148,562	9.00
149,612	9.00
150,662	9.00
151,712	9.00
152,862	9.00
154,862	9.00
155,862	9.00
156,778	8.30
157,778	8.80
159,033	8.80
160,033	8.80
161,033	8.80
162,033	9.00
162,954	9.00
163,982	8.85
164,982	9.00
166,082	8.50
167,082	9.00
168,082	9.00
168,972	9.00
169,972	9.00
170,500	9.00
Average	8.94

Section 5 - M 4:
Ujar -Yevlakh
km 170+500 to km 216+500

Chainage m	Width m
170,500	9.00
170,972	9.00
171,972	8.80
173,972	9.00
174,972	9.00
175,972	8.90
176,972	8.80
177,972	9.00
178,972	9.00
179,972	9.00
180,972	9.30
181,972	9.20
182,972	9.00
183,972	9.30
184,972	9.00
185,972	9.50
186,972	9.50
188,372	8.90
189,372	9.00
190,318	9.00
191,318	9.00
192,666	8.80
193,666	9.00
194,361	8.80
195,361	9.00
196,338	9.00
197,353	9.00
198,329	9.00
199,329	9.00
200,329	9.00
201,329	9.00
202,329	9.00
203,329	9.00
204,329	9.00
205,329	9.00
206,329	9.00
207,329	9.00
208,329	9.00
209,329	9.00
210,229	8.80
211,229	9.00
212,229	9.00
213,332	8.50
214,410	8.70
215,368	7.70
216,368	19.00
216,500	19.00
Average	9.39

Section 6 - M 4:
Bypass Yevlakh
km 216+500 to km 223+468

Chainage m	Width m
216,500	19.00
217,368	8.70
218,368	9.00
219,368	9.00
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
223,468	9.00
Average	10.94

Section 7 - M 1:
Yevlakh - Mingechevir
km 280+683 to km 288+700

Chainage m	Width m
280,683	9.0
281,687	9.0
282,687	9.0
283,687	8.8
284,687	8.8
285,847	8.5
286,932	9.0
287,973	9.0
288,700	8.3
Average	8.82

- Width of the Road -

Section 8 - M 1:
Mingechevir - Ganja
km 288+700 to km 333+500

Chainage m	Width m
288,700	8.30
288,992	10.30
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
293,083	9.00
294,098	8.70
295,094	9.00
296,094	9.00
297,174	9.00
298,172	9.00
299,117	9.00
300,117	9.00
301,117	9.40
302,195	9.00
303,083	9.00
304,158	9.00
305,209	9.00
306,215	9.00
307,215	9.00
308,208	9.00
309,414	9.00
310,242	9.00
311,181	9.00
312,264	9.00
313,217	9.00
314,237	9.00
315,237	9.00
316,237	9.00
317,226	9.00
318,226	9.00
319,224	9.00
320,111	9.00
321,238	8.20
322,238	9.20
323,019	8.50
323,994	9.20
325,215	9.80
326,215	9.00
327,255	8.10
328,346	8.15
329,287	7.60
330,287	8.00
331,202	8.00
332,202	7.40
333,273	22.60
333,500	7.00
Average	9.12

Section 9 - M 1:
Bypass Ganja
km 333+500 to km 369+500

Chainage m	Width m
333,500	7.00
334,330	7.00
335,475	7.00
336,275	7.00
337,295	7.00
338,662	6.80
339,574	7.00
341,270	8.00
343,357	7.00
344,362	7.00
345,282	6.80
346,204	6.60
347,114	6.90
348,042	6.50
350,055	7.00
350,960	9.00
352,056	8.40
354,097	7.00
356,051	7.00
357,019	7.00
360,225	7.50
361,213	7.50
362,170	7.00
363,170	6.40
364,132	6.50
365,252	7.00
366,190	6.50
367,153	7.00
368,153	7.20
369,131	7.50
369,500	8.34
Average	7.14

Section 10 - M 1:
Ganja - Tovuz
km 369+500 to km 431+000

Chainage m	Width m
369,500	8.34
369,925	9.30
370,920	9.30
371,888	9.10
373,158	8.90
375,107	9.00
376,084	9.20
377,075	9.20
378,043	8.80
379,040	9.10
380,013	9.00
382,100	9.00
383,054	9.00
384,774	9.00
385,878	9.20
386,824	9.00
387,790	8.90
388,736	8.80
389,827	8.80
390,932	10.00
391,940	9.00
392,955	9.00
393,955	8.60
394,839	9.00
395,960	9.00
396,939	9.00
398,000	9.00
399,059	10.00
400,033	9.00
401,053	9.00
402,076	9.00
403,854	8.80
404,854	9.00
405,735	9.00
407,045	9.00
408,054	9.00
409,054	8.60
410,140	8.30
412,387	7.00
414,482	7.00
415,658	7.40
416,460	7.50
417,230	7.40
418,547	7.50
419,534	7.50
420,528	7.50
421,546	7.50
422,596	7.40
423,485	7.50
424,562	7.50
425,542	7.30
426,563	8.50
427,633	7.96
428,538	7.50
429,596	7.50
430,678	9.00
431,000	9.00
Average	8.56

- Width of the Road -

Section 11 - M 1:
Tovuz - Gazakh
km 431+000 to km 456+500

Chainage m	Width m
431,000	9.00
431,660	9.00
434,152	7.60
434,812	7.20
438,013	8.20
439,163	8.00
440,163	8.00
441,063	8.00
442,063	8.20
443,063	8.50
444,063	8.30
445,063	8.50
446,063	7.50
447,973	8.00
448,973	8.50
449,853	8.00
450,901	7.00
451,811	8.00
452,741	7.00
453,260	12.00
453,741	12.00
454,741	9.30
455,741	9.20
456,500	9.15
Average	8.51

Section 12 - M 1:
Bypass Gazakh
km 456+500 to km 463+500

Chainage m	Width m
456,500	9.15
456,741	9.00
457,741	8.68
458,643	8.40
459,643	7.50
460,647	7.40
461,663	7.20
462,665	8.20
463,500	8.04
Average	8.17

Section 13 - M 1:
Gazakh - Georgien Border
km 463+500 to km 501+350

Chainage m	Width m
463,500	8.04
463,705	8.00
464,691	9.00
465,691	9.00
466,689	9.00
467,657	7.00
468,657	7.24
469,757	7.50
470,725	7.50
471,753	7.00
472,851	7.50
473,791	8.00
474,789	7.80
475,751	7.50
476,751	7.50
477,601	7.50
478,601	7.80
479,601	7.50
480,601	7.50
481,601	7.00
482,601	7.50
483,601	7.20
484,601	7.50
485,601	7.80
486,601	7.50
487,701	7.50
488,799	7.50
489,820	7.50
490,820	8.00
491,820	7.50
492,820	7.50
493,820	7.50
494,820	7.20
495,820	7.00
496,820	7.20
497,820	7.60
498,820	8.00
499,820	7.50
500,000	7.50
501,000	7.00
501,350	7.00
Average	7.59

APPENDIX 6.7

SURFACE DEFICIENCIES

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

- Surface Deficiencies -

Section 1 - M 4: Alyat - Gazi Mammad; km 0+000 to km 43+450

KOCKS
INGENIEURE

from Chainage	to Chainage	Width	Width	Length	Area (single)	Area (added)	Cracks	Cracks	Alligator Cracks	Alligator Cracks	Spalls Potholes	Spalls Potholes	Settlements	Settlements	Rutting < = 10mm	Rutting < = 10mm	Rutting > 10mm	Rutting > 10mm	Patched Area	Patched Area
(m)	(m)	(m)	(m)	(m)	(m^2)	(m^2)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)
0	1.067	11,40	14,30	1067,0		13711,0	17	0,1	250	1,8	56	0,4	48	0,4	0	0,0		0,0	11	0,1
1.067	1.240	14,30	7,45	173,0	1881,4	7752,4	14,5	0,2	62	0,8	18	0,2	42	0,5	0	0,0		0,0	20	0,3
1.240	2.000	7,45	8,00	760,0	5871,0															
2.000	3.000	8,00	7,70	1000,0		7850,0	32	0,4	110	1,4	9,5	0,1	11	0,1	0	0,0		0,0	4,4	0,1
3.000	4.000	7,70	7,50	1000,0		7600,0	14	0,2	82	1,1	13	0,2	65	0,9	0	0,0		0,0	22	0,3
4.000	5.260	7,50	7,45	1260,0		9418,5	11,4	0,1	92	1,0	3,5	0,0	23	0,2	0	0,0		0,0	6	0,1
5.260	5.350	7,45	27,95	90,0	1593,0	29752,2	39	0,1	179	0,6	21	0,1	62	0,2	0	0,0		0,0	66	0,2
5.350	6.353	27,95	28,20	1003,0	28159,2															
6.353	7.311	28,20	28,00	958,0		26919,8	42	0,2	254	0,9	40	0,1	55	0,2	0	0,0		0,0	54	0,2
7.311	7.542	28,00	26,00	231,0	6237,0	27414,0	31	0,1	90	0,3	13	0,0	64	0,2	0	0,0		0,0	3	0,0
7.542	8.322	26,00	28,30	780,0	21177,0															
8.322	9.601	28,30	28,00	1279,0		36003,9	70	0,2	250	0,7	15	0,0	250	0,7	0	0,0		0,0	10	0,0
9.601	11.172	28,00	7,50	1571,0		27885,3	34	0,1	41	0,1	24	0,1	88	0,3	0	0,0		0,0	0	0,0
11.172	12.402	7,50	7,50	1230,0		9225,0	43,5	0,5	102	1,1	36	0,4	57	0,6	0	0,0		0,0	13	0,1
12.402	13.004	7,50	7,50	602,0		4515,0	25	0,6	66	1,5	13	0,3	176	3,9	0	0,0		0,0	27	0,6
13.004	13.934	7,50	8,50	930,0		7440,0	19,2	0,3	38	0,5	10	0,1	13	0,2	0	0,0		0,0	34	0,5
13.934	14.784	8,50	8,50	850,0		7225,0	17,2	0,2	70	1,0	13	0,2	70	1,0	0	0,0		0,0	12	0,2
14.784	15.822	8,50	8,00	1038,0		8563,5	18	0,2	90	1,1	0	0,0	45	0,5	0	0,0		0,0	0	0,0
15.822	16.855	8,00	8,60	1033,0		8573,9	37	0,4	132	1,5	3,5	0,0	157	1,8	0	0,0		0,0	0	0,0
16.855	17.919	8,60	8,00	1064,0		8831,2	29,7	0,3	78	0,9	2	0,0	52	0,6	0	0,0		0,0	0	0,0
17.919	19.086	8,00	7,70	1167,0		9161,0	37	0,4	114	1,2	6	0,1	77	0,8	0	0,0		0,0	0	0,0
19.086	20.156	7,70	7,80	1070,0		8292,5	30	0,4	88	1,1	3	0,0	29	0,3	0	0,0		0,0	0	0,0
20.156	21.074	7,80	7,80	918,0		7160,4	44,6	0,6	127	1,8	10,5	0,1	65	0,9	0	0,0		0,0	0	0,0
21.074	22.107	7,80	7,80	1033,0		8057,4	37	0,5	97	1,2	3,5	0,0	56	0,7	0	0,0		0,0	0	0,0
22.107	23.162	7,80	7,80	1055,0		8229,0	7,8	0,1	45	0,5	1	0,0	0	0,0	0	0,0		0,0	0	0,0
23.162	24.199	7,80	7,80	1037,0		8088,6	5	0,1	10	0,1	0	0,0	0	0,0	0	0,0		0,0	12	0,1
24.199	25.312	7,80	7,80	1113,0		8681,4	7	0,1	55	0,6	3	0,0	0	0,0	0	0,0		0,0	0	0,0

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

- Surface Deficiencies -

Section 1 - M 4: Alyat - Gazi Mammad; km 0+000 to km 43+450

KOCKS
INGENIEURE

from Chainage	to Chainage	Width	Width	Length	Area (single)	Area (added)	Cracks	Cracks	Alligator Cracks	Alligator Cracks	Spalls Potholes	Spalls Potholes	Settlements	Settlements	Rutting < = 10mm	Rutting < = 10mm	Rutting > 10mm	Rutting > 10mm	Patched Area	Patched Area
(m)	(m)	(m)	(m)	(m)	(m^2)	(m^2)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)
25.312	26.350	7,80	8,30	1038,0		8355,9	5	0,1	40	0,5	0	0,0	0	0,0	0	0,0		0,0	0	0,0
26.350	27.408	8,30	7,60	1058,0		8411,1	18	0,2	52	0,6	3	0,0	10	0,1	0	0,0		0,0	0	0,0
27.408	28.444	7,60	7,50	1036,0		7821,8	27	0,3	46	0,6	4,5	0,1	28	0,4	0	0,0		0,0	0	0,0
28.444	29.479	7,50	7,80	1035,0		7917,8	18	0,2	48	0,6	0	0,0	40	0,5	0	0,0		0,0	0	0,0
29.479	30.679	7,80	7,50	1200,0		9180,0	20	0,2	48	0,5	1	0,0	62	0,7	0	0,0		0,0	18	0,2
30.679	31.574	7,50	7,80	895,0		6846,8	28	0,4	45	0,7	6	0,1	0	0,0	0	0,0		0,0	0	0,0
31.574	32.631	7,80	7,50	1057,0		8086,1	32	0,4	115	1,4	3	0,0	20	0,2	0	0,0		0,0	0	0,0
32.631	33.678	7,50	7,80	1047,0		8009,6	17	0,2	57	0,7	4	0,0	17	0,2	0	0,0		0,0	0	0,0
33.678	34.678	7,80	7,50	1000,0		7650,0	17	0,2	12	0,2	0	0,0	70	0,9	0	0,0		0,0	22	0,3
34.678	35.699	7,50	7,80	1021,0		7810,7	105	1,3	600	7,7	8	0,1	120	1,5	0	0,0		0,0	50	0,6
35.699	36.874	7,80	7,70	1175,0		9106,3	106	1,2	636	7,0	25	0,3	180	2,0	0	0,0		0,0	16	0,2
36.874	37.794	7,70	7,50	920,0		6992,0	38	0,5	440	6,3	3,5	0,1	315	4,5	0	0,0		0,0	23	0,3
37.794	38.773	7,50	7,65	979,0		7415,9	17	0,2	69	0,9	11,5	0,2	30	0,4	0	0,0		0,0	22	0,3
38.773	39.833	7,65	8,00	1060,0		8294,5	37	0,4	418	5,0	5,5	0,1	148	1,8	0	0,0		0,0	33	0,4
39.833	41.062	8,00	8,60	1229,0		10200,7	21	0,2	85	0,8	3	0,0	216	2,1	0	0,0		0,0	62	0,6
41.062	42.043	8,60	8,50	981,0		8387,6	6	0,1	50	0,6	0	0,0	35	0,4	0	0,0		0,0	0	0,0
42.043	43.103	8,50	9,00	1060,0		9275,0	12	0,1	68	0,7	6,5	0,1	30	0,3	0	0,0		0,0	0	0,0
43.103	43.450	9,00	9,00	347,0		3123,0	3,4	0,1	37,8	1,2	0,8	0,0	18,5	0,6	0	0,0		0,0	2,6	0,1
Total						449235,3	1190,3	0,3	5388,8	1,2	402,8	0,1	2844,5	0,6	0,0	0,0	0,0	0,0	543,0	0,1

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

- Surface Deficiencies -

Section 2 - M 4: Bypass Gazi-Mammad; km 43+450 to km 58+980

KOCKS
INGENIEURE

from Chainage	to Chainage	Width	Width	Length	Area (single)	Area (added)	Cracks	Cracks	Alligator Cracks	Alligator Cracks	Spalls Potholes	Spalls Potholes	Settlements	Settlements	Rutting < = 10mm	Rutting < = 10mm	Rutting > 10mm	Rutting > 10mm	Patched Area	Patched Area
(m)	(m)	(m)	(m)	(m)	(m^2)	(m^2)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)
43.450	45.363	9,00	8,80	1913,0		17025,7	18,6	0,1	208,2	1,2	4,2	0,0	101,5	0,6	0	0,0	0	0,0	14,4	0,1
45.363	45.943	8,80	11,50	580,0	5887,0	9800,0	11	0,1	36	0,4	0	0,0	20	0,2	0	0,0	0	0,0	0	0,0
45.943	46.307	11,50	10,00	364,0	3913,0															
46.307	46.530	10,00	20,00	223,0	3345,0	12050,5	13	0,1	98	0,8	11	0,1	45	0,4	0	0,0	0	0,0	0	0,0
46.530	46.915	20,00	9,00	385,0	5582,5															
46.915	47.262	9,00	9,00	347,0	3123,0															
47.262	48.270	9,00	8,80	1008,0		8971,2	12	0,1	73	0,8	4,3	0,0	14	0,2	0	0,0	600	6,7	20	0,2
48.270	49.308	8,80	8,70	1038,0		9082,5	29	0,3	366	4,0	5	0,1	82	0,9	0	0,0	0	0,0	0	0,0
49.308	49.971	8,70	9,00	663,0		5867,6	64	1,1	150	2,6	38	0,6	155	2,6	0	0,0	0	0,0	45	0,8
49.971	50.976	9,00	8,50	1005,0		8793,8	56	0,6	340	3,9	0	0,0	161	1,8	0	0,0	0	0,0	0	0,0
50.976	52.001	8,50	9,00	1025,0		8968,8	18	0,2	67	0,7	10	0,1	155	1,7	0	0,0	0	0,0	14	0,2
52.001	53.029	9,00	9,00	1028,0		9252,0	15	0,2	70	0,8	7	0,1	208	2,2	0	0,0	0	0,0	95	1,0
53.029	54.044	9,00	9,00	1015,0		9135,0	10	0,1	42	0,5	10	0,1	176	1,9	0	0,0	0	0,0	0	0,0
54.044	55.105	9,00	9,00	1061,0		9549,0	15	0,2	55	0,6	16	0,2	290	3,0	0	0,0	0	0,0	180	1,9
55.105	56.123	9,00	9,00	1018,0		9162,0	8	0,1	50	0,5	11	0,1	146	1,6	0	0,0	0	0,0	21	0,2
56.123	57.143	9,00	9,00	1020,0		9180,0	0	0,0	20	0,2	19	0,2	202	2,2	0	0,0	0	0,0	62	0,7
57.143	58.183	9,00	8,00	1040,0		8840,0	0	0,0	64	0,7	11	0,1	316	3,6	0	0,0	0	0,0	3	0,0
58.183	58.778	8,00	8,00	595,0		4760,0	2	0,0	24	0,5	1,5	0,0	10	0,2	0	0,0	0	0,0	0	0,0
58.778	58.980	8,00	8,26	202,0		1642,3	12	0,7	28	1,7	3	0,2	8	0,5	0	0,0	0	0,0	2	0,1
Total						142080,2	283,6	0,2	1691,2	1,2	151,0	0,1	2089,5	1,5	0,0	0,0	600,0	0,4	456,4	0,3

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
- Surface Deficiencies -

Section 3 - M 4: Gazi-Mammad -Kyurdamir; km 58+980 to km 124+300

KOCKS
INGENIEURE

from Chainage	to Chainage	Width	Width	Length	Area (single)	Area (added)	Cracks	Cracks	Alligator Cracks	Alligator Cracks	Spalls Potholes	Spalls Potholes	Settlements	Settlements	Rutting < = 10mm	Rutting < = 10mm	Rutting > 10mm	Rutting > 10mm	Patched Area	Patched Area
(m)	(m)	(m)	(m)	(m)	(m^2)	(m^2)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)
58.980	59.543	8,26	9,00	563,0		4858,7	35	0,7	79	1,6	9	0,2	22	0,5	0	0,0	0	0,0	4	0,1
59.543	60.660	9,00	8,50	1117,0		9773,8	14	0,1	37	0,4	2	0,0	120	1,2	0	0,0	250	2,6	0	0,0
60.660	61.681	8,50	8,50	1021,0		8678,5	22	0,3	15	0,2	2	0,0	48	0,6	0	0,0	0	0,0	0	0,0
61.681	63.597	8,50	8,50	1916,0		16286,0	34	0,2	158	1,0	2,5	0,0	130	0,8	0	0,0	600	3,7	0	0,0
63.597	64.877	8,50	8,20	1280,0		10688,0	68	0,6	190	1,8	29	0,3	210	2,0	0	0,0	100	0,9	0	0,0
64.877	65.877	8,20	8,60	1000,0		8400,0	49	0,6	375	4,5	21	0,3	298	3,5	0	0,0	120	1,4	73	0,9
65.877	66.891	8,60	7,70	1014,0		8264,1	39	0,5	70	0,8	17	0,2	170	2,1	0	0,0	135	1,6	10	0,1
66.891	67.903	7,70	7,80	1012,0		7843,0	44	0,6	225	2,9	9,5	0,1	108	1,4	0	0,0	260	3,3	0	0,0
67.903	68.906	7,80	8,00	1003,0		7923,7	39	0,5	450	5,7	6	0,1	135	1,7	0	0,0	600	7,6	110	1,4
68.906	69.884	8,00	7,30	978,0		7481,7	24	0,3	95	1,3	8,5	0,1	265	3,5	0	0,0	0	0,0	43	0,6
69.884	71.116	7,30	8,30	1232,0		9609,6	35	0,4	323	3,4	29	0,3	226	2,4	0	0,0	0	0,0	40	0,4
71.116	71.741	8,30	7,00	625,0		4781,3	24	0,5	150	3,1	5	0,1	45	0,9	0	0,0	0	0,0	40	0,8
71.741	72.934	7,00	7,00	1193,0		8351,0	34	0,4	475	5,7	6	0,1	50	0,6	0	0,0	0	0,0	27	0,3
72.934	73.941	7,00	7,30	1007,0		7200,1	20	0,3	460	6,4	4,5	0,1	120	1,7	0	0,0	0	0,0	0	0,0
73.941	75.052	7,30	7,00	1111,0		7943,7	14	0,2	252	3,2	7	0,1	20	0,3	0	0,0	0	0,0	9	0,1
75.052	76.057	7,00	7,00	1005,0		7035,0	42	0,6	296	4,2	17	0,2	90	1,3	0	0,0	0	0,0	24	0,3
76.057	77.087	7,00	7,00	1030,0		7210,0	100	1,4	1130	15,7	19	0,3	159	2,2	0	0,0	50	0,7	25	0,3
77.087	78.109	7,00	7,20	1022,0		7256,2	230	3,2	295	4,1	24	0,3	185	2,5	0	0,0	0	0,0	69	1,0
78.109	79.109	7,20	7,00	1000,0		7100,0	210	3,0	792	11,2	27	0,4	195	2,7	0	0,0	0	0,0	55	0,8
79.109	80.113	7,00	7,20	1004,0		7128,4	116	1,6	660	9,3	62	0,9	240	3,4	0	0,0	0	0,0	12	0,2
80.113	81.118	7,20	7,30	1005,0		7286,3	40	0,5	1270	17,4	58	0,8	165	2,3	0	0,0	0	0,0	27	0,4
81.118	82.124	7,30	8,00	1006,0		7695,9	80	1,0	380	4,9	48	0,6	130	1,7	0	0,0	0	0,0	25	0,3
82.124	83.124	8,00	8,50	1000,0		8250,0	85	1,0	245	3,0	25	0,3	230	2,8	0	0,0	0	0,0	600	7,3
83.124	84.139	8,50	8,50	1015,0		8627,5	192	2,2	435	5,0	27	0,3	115	1,3	0	0,0	0	0,0	0	0,0
84.139	85.180	8,50	7,20	1041,0		8171,9	96	1,2	560	6,9	9	0,1	230	2,8	0	0,0	0	0,0	62	0,8
85.180	85.550	7,20	15,00	370,0	4107,0	12660,0	125	1,0	455	3,6	10	0,1	50	0,4	0	0,0	0	0,0	0	0,0
85.550	85.740	15,00	16,50	190,0	2992,5															

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

- Surface Deficiencies -

Section 3 - M 4: Gazi-Mammad -Kyurdamir; km 58+980 to km 124+300

KOCKS INGENIEURE

from Chainage	to Chainage	Width	Width	Length	Area (single)	Area (added)	Cracks	Cracks	Alligator Cracks	Alligator Cracks	Spalls Potholes	Spalls Potholes	Settlements	Settlements	Rutting < = 10mm	Rutting < = 10mm	Rutting > 10mm	Rutting > 10mm	Patched Area	Patched Area
(m)	(m)	(m)	(m)	(m)	(m^2)	(m^2)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)
85.740	86.077	16,50	16,50	337,0	5560,5															
86.077	86.977	16,50	15,70	900,0		14490,0	14	0,1	48	0,3	5	0,0	0	0,0	0	0,0	0	0,0	0	0,0
86.977	87.427	15,70	7,00	450,0	5107,5	9307,5	25	0,3	350	3,8	9	0,1	100	1,1	0	0,0	160	1,7	0	0,0
87.427	88.027	7,00	7,00	600,0	4200,0															
88.027	89.014	7,00	7,00	987,0		6909,0	6	0,1	230	3,3	2	0,0	32	0,5	0	0,0	340	4,9	0	0,0
89.014	89.934	7,00	7,20	920,0		6532,0	7	0,1	200	3,1	3	0,0	0	0,0	0	0,0	0	0,0	2	0,0
89.934	90.926	7,20	7,00	992,0		7043,2	16	0,2	117	1,7	8,5	0,1	40	0,6	0	0,0	0	0,0	0	0,0
90.926	91.951	7,00	7,00	1025,0		7175,0	126	1,8	490	6,8	10	0,1	25	0,3	0	0,0	0	0,0	0	0,0
91.951	92.916	7,00	8,30	965,0		7382,3	16	0,2	180	2,4	0	0,0	10	0,1	0	0,0	0	0,0	0	0,0
92.916	93.916	8,30	8,00	1000,0		8150,0	30	0,4	395	4,8	2	0,0	30	0,4	0	0,0	0	0,0	0	0,0
93.916	95.112	8,00	8,00	1196,0		9568,0	99	1,0	360	3,8	10	0,1	140	1,5	0	0,0	0	0,0	10	0,1
95.112	96.792	8,00	9,00	1680,0	14280,0	23910,0	113	0,5	457	1,9	11,5	0,0	210	0,9	0	0,0	300	1,3	16	0,1
96.792	97.862	9,00	9,00	1070,0	9630,0															
97.862	98.960	9,00	9,00	1098,0		9882,0	20	0,2	150	1,5	10	0,1	26	0,3	0	0,0	160	1,6	0	0,0
98.960	99.960	9,00	9,00	1000,0	9000,0	42206,3	64	0,2	705	1,7	66	0,2	171	0,4	0	0,0	300	0,7	52	0,1
99.960	103.755	9,00	8,50	3795,0	33206,3															
103.755	104.753	8,50	8,70	998,0		8582,8	10	0,1	86	1,0	12	0,1	70	0,8	0	0,0	0	0,0	5	0,1
104.753	105.753	8,70	8,50	1000,0		8600,0	8	0,1	105	1,2	9	0,1	82	1,0	0	0,0	200	2,3	6	0,1
105.753	106.856	8,50	7,50	1103,0		8824,0	18	0,2	120	1,4	4,5	0,1	85	1,0	0	0,0	0	0,0	6	0,1
106.856	109.396	7,50	9,00	2540,0		20955,0	28	0,1	200	1,0	4	0,0	85	0,4	0	0,0	0	0,0	20	0,1
109.396	111.894	9,00	8,50	2498,0		21857,5	8	0,0	95	0,4	16	0,1	6	0,0	0	0,0	0	0,0	50	0,2
111.894	112.874	8,50	9,00	980,0		8575,0	6	0,1	70	0,8	11	0,1	150	1,7	0	0,0	0	0,0	0	0,0
112.874	113.968	9,00	9,00	1094,0		9846,0	5	0,1	10	0,1	14	0,1	160	1,6	0	0,0	0	0,0	0	0,0
113.968	114.868	9,00	9,00	900,0		8100,0	6	0,1	32	0,4	4	0,0	0	0,0	0	0,0	0	0,0	6	0,1
114.868	115.832	9,00	9,00	964,0		8676,0	4	0,0	30	0,3	12	0,1	10	0,1	0	0,0	0	0,0	0	0,0
115.832	116.839	9,00	9,00	1007,0		9063,0	18	0,2	60	0,7	16	0,2	61	0,7	0	0,0	0	0,0	7	0,1

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
- Surface Deficiencies -

KOCKS
INGENIEURE

Section 3 - M 4: Gazi-Mammad -Kyurdamir; km 58+980 to km 124+300

from Chainage	to Chainage	Width	Width	Length	Area (single)	Area (added)	Cracks	Cracks	Alligator Cracks	Alligator Cracks	Spalls Potholes	Spalls Potholes	Settlements	Settlements	Rutting < = 10mm	Rutting < = 10mm	Rutting > 10mm	Rutting > 10mm	Patched Area	Patched Area
(m)	(m)	(m)	(m)	(m)	(m^2)	(m^2)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)
116.839	117.859	9,00	9,00	1017,0		9153,0	37	0,4	30	0,3	7	0,1	50	0,5	0	0,0	0	0,0	0	0,0
117.859	118.840	9,00	8,50	984,0		8610,0	29	0,3	105	1,2	7,2	0,1	166	1,9	0	0,0	0	0,0	20	0,2
118.840	119.778	8,50	8,00	938,0		7738,5	14	0,2	40	0,5	8	0,1	30	0,4	0	0,0	0	0,0	0	0,0
119.778	122.837	8,00	7,70	3059,0		24013,2	23	0,1	194	0,8	40,5	0,2	45	0,2	0	0,0	0	0,0	0	0,0
122.837	123.337	7,70	14,00	500,0	5425,0	15124,7	78	0,5	38	0,3	0	0,0	130	0,9	0	0,0	0	0,0	0	0,0
123.337	124.062	14,00	12,76	725,0	9699,7															
124.062	124.300	12,76	12,35	238,0		2987,8	30	1,0	6	0,2	2	0,1	110	3,7	0	0,0	0	0,0	0	0,0
Total						549765,8	2669,0	0,5	14775,0	2,7	788,2	0,1	5780,0	1,1	0,0	0,0	3575,0	0,7	1455,0	0,3

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

- Surface Deficiencies -

Section 4 - M 4: Kyurdamir - Ujar ; km 124+300 to km 170+500

KOCKS
INGENIEURE

from Chainage	to Chainage	Width	Width	Length	Area (single)	Area (added)	Cracks	Cracks	Alligator Cracks	Alligator Cracks	Spalls Potholes	Spalls Potholes	Settlements	Settlements	Rutting < = 10mm	Rutting < = 10mm	Rutting > 10mm	Rutting > 10mm	Patched Area	Patched Area
(m)	(m)	(m)	(m)	(m)	(m^2)	(m^2)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)
124.300	127.227	12,35	8,50	2927,0		30514,0	265	0,9	240	0,8	20	0,1	200	0,7	0	0,0	0	0,0	0	0,0
127.227	128.813	8,50	8,50	1586,0		13481,0	74	0,5	55	0,4	8	0,1	5	0,0	0	0,0	0	0,0	0	0,0
128.813	129.813	8,50	9,00	1000,0		8750,0	174	2,0	112	1,3	8	0,1	10	0,1	0	0,0	0	0,0	0	0,0
129.813	130.866	9,00	8,75	1053,0		9345,4	128	1,4	174	1,9	2	0,0	236	2,5	0	0,0	0	0,0	0	0,0
130.866	131.868	8,75	8,50	1002,0		8642,3	84	1,0	136	1,6	4	0,0	35	0,4	0	0,0	20	0,2	2	0,0
131.868	132.861	8,50	9,00	993,0		8688,8	24	0,3	23	0,3	0	0,0	25	0,3	0	0,0	0	0,0	0	0,0
132.861	133.959	9,00	8,80	1098,0		9772,2	98	1,0	240	2,5	6	0,1	70	0,7	0	0,0	0	0,0	0	0,0
133.959	135.137	8,80	9,00	1178,0		10484,2	103	1,0	350	3,3	4	0,0	100	1,0	0	0,0	0	0,0	0	0,0
135.137	136.232	9,00	8,00	1095,0		9307,5	78	0,8	131	1,4	14	0,2	30	0,3	0	0,0	0	0,0	0	0,0
136.232	137.204	8,00	8,00	972,0		7776,0	128	1,6	434	5,6	16	0,2	80	1,0	0	0,0	0	0,0	30	0,4
137.204	138.180	8,00	9,00	976,0		8296,0	86	1,0	340	4,1	14	0,2	50	0,6	0	0,0	100	1,2	0	0,0
138.180	139.198	9,00	9,00	1018,0		9162,0	87	0,9	620	6,8	20	0,2	28	0,3	0	0,0	200	2,2	0	0,0
139.198	141.348	9,00	9,00	2150,0		19350,0	144	0,7	568	2,9	28	0,1	135	0,7	0	0,0	230	1,2	4	0,0
141.348	142.098	9,00	9,00	750,0		6750,0	6	0,1	25	0,4	0,5	0,0	50	0,7	0	0,0	40	0,6	0	0,0
142.098	143.361	9,00	9,00	1263,0		11367,0	22	0,2	290	2,6	12	0,1	156	1,4	0	0,0	40	0,4	0	0,0
143.361	144.281	9,00	9,00	920,0		8280,0	6	0,1	81	1,0	2	0,0	420	5,1	0	0,0	0	0,0	0	0,0
144.281	145.266	9,00	9,00	985,0		8865,0	21	0,2	260	2,9	11	0,1	30	0,3	0	0,0	0	0,0	0	0,0
145.266	146.406	9,00	9,30	1140,0		10431,0	38	0,4	361	3,5	8	0,1	60	0,6	0	0,0	0	0,0	0	0,0
146.406	147.412	9,30	9,00	1006,0		9204,9	24	0,3	653	7,1	24	0,3	60	0,7	0	0,0	0	0,0	21	0,2
147.412	148.562	9,00	9,00	1150,0		10350,0	12	0,1	470	4,5	12,6	0,1	30	0,3	0	0,0	0	0,0	190	1,8
148.562	149.612	9,00	9,00	1050,0		9450,0	4	0,0	87	0,9	12,5	0,1	80	0,8	0	0,0	0	0,0	7	0,1
149.612	150.662	9,00	9,00	1050,0		9450,0	9	0,1	236	2,5	51,5	0,5	20	0,2	0	0,0	0	0,0	0	0,0
150.662	151.712	9,00	9,00	1050,0		9450,0	62	0,7	174	1,8	1	0,0	150	1,6	0	0,0	0	0,0	0	0,0
151.712	152.862	9,00	9,00	1150,0		10350,0	26	0,3	215	2,1	8	0,1	24	0,2	0	0,0	0	0,0	0	0,0
152.862	154.862	9,00	9,00	2000,0		18000,0	22	0,1	90	0,5	10	0,1	110	0,6	0	0,0	0	0,0	0	0,0
154.862	155.862	9,00	9,00	1000,0		9000,0	18	0,2	40	0,4	18	0,2	30	0,3	0	0,0	0	0,0	0	0,0
155.862	156.778	9,00	8,30	916,0		7923,4	24	0,3	130	1,6	6	0,1	80	1,0	0	0,0	0	0,0	0	0,0

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
- Surface Deficiencies -

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Section 4 - M 4: Kyurdamir - Ujar ; km 124+300 to km 170+500

from Chainage	to Chainage	Width	Width	Length	Area (single)	Area (added)	Cracks	Cracks	Alligator Cracks	Alligator Cracks	Spalls Potholes	Spalls Potholes	Settlements	Settlements	Rutting < = 10mm	Rutting < = 10mm	Rutting > 10mm	Rutting > 10mm	Patched Area	Patched Area
(m)	(m)	(m)	(m)	(m)	(m^2)	(m^2)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)
156.778	157.778	8,30	8,80	1000,0		8550,0	170	2,0	830	9,7	10	0,1	60	0,7	0	0,0	0	0,0	0	0,0
157.778	159.033	8,80	8,80	1255,0		11044,0	156	1,4	790	7,2	52	0,5	110	1,0	0	0,0	28	0,3	12	0,1
159.033	160.033	8,80	8,80	1000,0		8800,0	44	0,5	80	0,9	10	0,1	0	0,0	0	0,0	0	0,0	0	0,0
160.033	161.033	8,80	8,80	1000,0		8800,0	108	1,2	730	8,3	8	0,1	60	0,7	0	0,0	0	0,0	20	0,2
161.033	162.033	8,80	9,00	1000,0		8900,0	124	1,4	540	6,1	16	0,2	50	0,6	0	0,0	0	0,0	22	0,2
162.033	162.954	9,00	9,00	921,0		8289,0	140	1,7	410	4,9	14	0,2	95	1,1	0	0,0	0	0,0	0	0,0
162.954	163.982	9,00	8,85	1028,0		9174,9	34	0,4	230	2,5	4,5	0,0	52	0,6	0	0,0	0	0,0	0	0,0
163.982	164.982	8,85	9,00	1000,0		8925,0	186	2,1	250	2,8	32	0,4	90	1,0	0	0,0	0	0,0	0	0,0
164.982	166.082	9,00	8,50	1100,0		9625,0	118	1,2	170	1,8	7	0,1	50	0,5	0	0,0	0	0,0	0	0,0
166.082	167.082	8,50	9,00	1000,0		8750,0	50	0,6	218	2,5	7,5	0,1	165	1,9	0	0,0	0	0,0	13	0,1
167.082	168.082	9,00	9,00	1000,0		9000,0	38	0,4	218	2,4	12,5	0,1	85	0,9	0	0,0	0	0,0	52	0,6
168.082	168.972	9,00	9,00	890,0		8010,0	4	0,0	265	3,3	0	0,0	20	0,2	0	0,0	0	0,0	13	0,2
168.972	169.972	9,00	9,00	1000,0		9000,0	156	1,7	160	1,8	5,8	0,1	30	0,3	0	0,0	0	0,0	52	0,6
169.972	170.500	9,00	9,00	528,0		4752,0	48,4	1,0	4	0,1	0	0,0	5	0,1	0	0,0	0	0,0	10	0,2
Total						414060,5	3143,4	0,8	11430,0	2,8	500,4	0,1	3176,0	0,8	0,0	0,0	658,0	0,2	448,0	0,1

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
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Section 5 - M 4: Ujar -Yevlakh ; km 170+500 to km 216+500

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from Chainage	to Chainage	Width	Width	Length	Area (single)	Area (added)	Cracks	Cracks	Alligator Cracks	Alligator Cracks	Spalls Potholes	Spalls Potholes	Settlements	Settlements	Rutting < = 10mm	Rutting < = 10mm	Rutting > 10mm	Rutting > 10mm	Patched Area	Patched Area
(m)	(m)	(m)	(m)	(m)	(m^2)	(m^2)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)
170.500	170.972	9,00	9,00	472,0		4248,0	43,2	1,0	4	0,1	0	0,0	5	0,1	0	0,0	0	0,0	9	0,2
170.972	171.972	9,00	8,80	1000,0		8900,0	16	0,2	90	1,0	0	0,0	40	0,4	0	0,0	0	0,0	18	0,2
171.972	173.972	8,80	9,00	2000,0		17800,0	20	0,1	55	0,3	0,5	0,0	40	0,2	0	0,0	0	0,0	0	0,0
173.972	174.972	9,00	9,00	1000,0		9000,0	14	0,2	88	1,0	0	0,0	46	0,5	0	0,0	0	0,0	0	0,0
174.972	175.972	9,00	8,90	1000,0		8950,0	34	0,4	263	2,9	2,5	0,0	82	0,9	0	0,0	0	0,0	0	0,0
175.972	176.972	8,90	8,80	1000,0		8850,0	14	0,2	50	0,6	1	0,0	120	1,4	0	0,0	0	0,0	20	0,2
176.972	177.972	8,80	9,00	1000,0		8900,0	34	0,4	190	2,1	2	0,0	160	1,8	0	0,0	0	0,0	0	0,0
177.972	178.972	9,00	9,00	1000,0		9000,0	44	0,5	150	1,7	5	0,1	120	1,3	0	0,0	0	0,0	30	0,3
178.972	179.972	9,00	9,00	1000,0		9000,0	10	0,1	95	1,1	3	0,0	60	0,7	0	0,0	0	0,0	0	0,0
179.972	180.972	9,00	9,30	1000,0		9150,0	22	0,2	94	1,0	0,5	0,0	85	0,9	0	0,0	0	0,0	0	0,0
180.972	181.972	9,30	9,20	1000,0		9250,0	32	0,3	150	1,6	3	0,0	120	1,3	0	0,0	0	0,0	0	0,0
181.972	182.972	9,20	9,00	1000,0		9100,0	28	0,3	116	1,3	4,5	0,0	68	0,7	0	0,0	0	0,0	25	0,3
182.972	183.972	9,00	9,30	1000,0		9150,0	12	0,1	78	0,9	1,5	0,0	20	0,2	0	0,0	0	0,0	0	0,0
183.972	184.972	9,30	9,00	1000,0		9150,0	10	0,1	67	0,7	0,5	0,0	50	0,5	0	0,0	0	0,0	0	0,0
184.972	185.972	9,00	9,50	1000,0		9250,0	2	0,0	26	0,3	2	0,0	10	0,1	0	0,0	0	0,0	0	0,0
185.972	186.972	9,50	9,50	1000,0		9500,0	16	0,2	80	0,8	0	0,0	60	0,6	0	0,0	0	0,0	40	0,4
186.972	188.372	9,50	8,90	1400,0		12880,0	18	0,1	70	0,5	4	0,0	40	0,3	0	0,0	0	0,0	0	0,0
188.372	189.372	8,90	9,00	1000,0		8950,0	92	1,0	145	1,6	8	0,1	0	0,0	0	0,0	0	0,0	3	0,0
189.372	190.318	9,00	9,00	946,0		8514,0	94	1,1	320	3,8	12	0,1	55	0,6	0	0,0	0	0,0	2	0,0
190.318	191.318	9,00	9,00	1000,0		9000,0	74	0,8	150	1,7	10	0,1	0	0,0	0	0,0	0	0,0	4	0,0
191.318	192.666	9,00	8,80	1348,0		11997,2	182	1,5	165	1,4	64	0,5	0	0,0	0	0,0	0	0,0	2	0,0
192.666	193.666	8,80	9,00	1000,0		8900,0	152	1,7	520	5,8	42	0,5	20	0,2	0	0,0	0	0,0	12	0,1
193.666	194.361	9,00	8,80	695,0		6185,5	90	1,5	1310	21,2	36	0,6	0	0,0	0	0,0	0	0,0	0	0,0
194.361	195.361	8,80	9,00	1000,0		8900,0	74	0,8	115	1,3	12	0,1	0	0,0	0	0,0	0	0,0	2	0,0
195.361	196.338	9,00	9,00	977,0		8793,0	88	1,0	90	1,0	8	0,1	15	0,2	0	0,0	0	0,0	0	0,0
196.338	197.353	9,00	9,00	1015,0		9135,0	142	1,6	835	9,1	84	0,9	90	1,0	0	0,0	0	0,0	32	0,4
197.353	198.329	9,00	9,00	976,0		8784,0	104	1,2	460	5,2	32	0,4	10	0,1	0	0,0	0	0,0	4	0,0

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

- Surface Deficiencies -

Section 5 - M 4: Ujar -Yevlakh ; km 170+500 to km 216+500

KOCKS
INGENIEURE

from Chainage	to Chainage	Width	Width	Length	Area (single)	Area (added)	Cracks	Cracks	Alligator Cracks	Alligator Cracks	Spalls Potholes	Spalls Potholes	Settlements	Settlements	Rutting < = 10mm	Rutting < = 10mm	Rutting > 10mm	Rutting > 10mm	Patched Area	Patched Area
(m)	(m)	(m)	(m)	(m)	(m^2)	(m^2)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)
198.329	199.329	9,00	9,00	1000,0		9000,0	92	1,0	365	4,1	22	0,2	20	0,2	0	0,0	40	0,4	0	0,0
199.329	200.329	9,00	9,00	1000,0		9000,0	26	0,3	0	0,0	4	0,0	0	0,0	0	0,0	0	0,0	0	0,0
200.329	201.329	9,00	9,00	1000,0		9000,0	58	0,6	175	1,9	8	0,1	20	0,2	0	0,0	0	0,0	0	0,0
201.329	202.329	9,00	9,00	1000,0		9000,0	54	0,6	107	1,2	26	0,3	0	0,0	0	0,0	20	0,2	6	0,1
202.329	203.329	9,00	9,00	1000,0		9000,0	30	0,3	146	1,6	10	0,1	180	2,0	0	0,0	40	0,4	12	0,1
203.329	204.329	9,00	9,00	1000,0		9000,0	40	0,4	50	0,6	4	0,0	0	0,0	0	0,0	0	0,0	4	0,0
204.329	205.329	9,00	9,00	1000,0		9000,0	49	0,5	148	1,6	6	0,1	0	0,0	0	0,0	30	0,3	11	0,1
205.329	206.329	9,00	9,00	1000,0		9000,0	24	0,3	74	0,8	8	0,1	20	0,2	0	0,0	70	0,8	8	0,1
206.329	207.329	9,00	9,00	1000,0		9000,0	55	0,6	93	1,0	8	0,1	0	0,0	0	0,0	30	0,3	14	0,2
207.329	208.329	9,00	9,00	1000,0		9000,0	32	0,4	87	1,0	4	0,0	50	0,6	0	0,0	0	0,0	11	0,1
208.329	209.329	9,00	9,00	1000,0		9000,0	24	0,3	105	1,2	6	0,1	0	0,0	0	0,0	30	0,3	10	0,1
209.329	210.229	9,00	8,80	900,0		8010,0	42	0,5	55	0,7	5	0,1	0	0,0	0	0,0	0	0,0	4	0,0
210.229	211.229	8,80	9,00	1000,0		8900,0	13	0,1	41	0,5	8	0,1	22	0,2	0	0,0	0	0,0	2	0,0
211.229	212.229	9,00	9,00	1000,0		9000,0	7	0,1	10	0,1	6	0,1	20	0,2	0	0,0	0	0,0	4	0,0
212.229	213.332	9,00	8,50	1103,0		9651,3	42	0,4	81	0,8	36	0,4	4	0,0	0	0,0	20	0,2	12	0,1
213.332	214.410	8,50	8,70	1078,0		9270,8	33	0,4	22	0,2	5	0,1	14	0,2	0	0,0	40	0,4	0	0,0
214.410	215.368	8,70	7,70	958,0		7855,6	52	0,7	247	3,1	5	0,1	0	0,0	0	0,0	40	0,5	10	0,1
215.368	216.368	7,70	19,00	1000,0		13350,0	41	0,3	110	0,8	10	0,1	0	0,0	0	0,0	0	0,0	0	0,0
216.368	216.500	19,00	19,00	132,0		2508,0	5	0,2	10	0,4	1	0,0	2	0,1	0	0,0	13	0,5	0	0,0
Total						418782,4	2180,2	0,5	7702,0	1,8	520,0	0,1	1668,0	0,4	0,0	0,0	373,0	0,1	311,0	0,1

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

- Surface Deficiencies -

Section 6 - M 4: Bypass Yevlakh; km 216+500 to km 223+468

KOCKS
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from Chainage	to Chainage	Width	Width	Length	Area (single)	Area (added)	Cracks	Cracks	Alligator Cracks	Alligator Cracks	Spalls Potholes	Spalls Potholes	Settlements	Settlements	Rutting < = 10mm	Rutting < = 10mm	Rutting > 10mm	Rutting > 10mm	Patched Area	Patched Area
(m)	(m)	(m)	(m)	(m)	(m^2)	(m^2)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)
216.500	217.368	19,00	8,70	868,0		12021,8	32	0,3	63	0,5	9	0,1	10	0,1	0	0,0	87	0,7	0	0,0
217.368	218.368	8,70	9,00	1000,0		8850,0	20	0,2	40	0,5	16	0,2	32	0,4	0	0,0	60	0,7	0	0,0
218.368	219.368	9,00	9,00	1000,0		9000,0	30	0,3	117	1,3	11	0,1	30	0,3	0	0,0	100	1,1	3	0,0
219.368	220.368	9,00	21,40	1000,0		15200,0	47	0,3	78	0,5	3	0,0	6	0,0	0	0,0	24	0,2	3	0,0
220.368	221.368	21,40	21,00	1000,0		21200,0	40	0,2	110	0,5	4,5	0,0	768	3,6	0	0,0	0	0,0	2	0,0
221.368	222.368	21,00	21,00	1000,0	21000,0	35200,0	18	0,1	80	0,2	16	0,0	555	1,6	0	0,0	0	0,0	0	0,0
222.368	223.078	21,00	19,00	710,0	14200,0															
223.078	223.468	19,00	9,00	390,0		5460,0	30	0,5	250	4,6	4,8	0,1	120	2,2	0	0,0	0	0,0	0	0,0
Total						106931,8	217,0	0,2	738,0	0,7	64,3	0,1	1521,0	1,4	0,0	0,0	271,0	0,3	8,0	0,0

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

- Surface Deficiencies -

Section 7 - M 1: Yevlakh - Mingechevir; km 280+683 to km 288+700

KOCKS
INGENIEURE

from Chainage	to Chainage	Width	Width	Length	Area (single)	Area (added)	Cracks	Cracks	Alligator Cracks	Alligator Cracks	Spalls Potholes	Spalls Potholes	Settlements	Settlements	Rutting < = 10mm	Rutting < = 10mm	Rutting > 10mm	Rutting > 10mm	Patched Area	Patched Area
(m)	(m)	(m)	(m)	(m)	(m^2)	(m^2)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)
280.683	281.687	9,00	9,00	1004,0		9036,0	6	0,1	48	0,5	6	0,1	85	0,9	0	0,0	0	0,0	7	0,1
281.687	282.687	9,00	9,00	1000,0		9000,0	8	0,1	10	0,1	3,5	0,0	66	0,7	0	0,0	0	0,0	3	0,0
282.687	283.687	9,00	8,80	1000,0		8900,0	27	0,3	320	3,6	25	0,3	45	0,5	0	0,0	0	0,0	10	0,1
283.687	284.687	8,80	8,80	1000,0		8800,0	42	0,5	206	2,3	58	0,7	468	5,3	0	0,0	0	0,0	70	0,8
284.687	285.847	8,80	8,50	1160,0		10034,0	18	0,2	77	0,8	11	0,1	20	0,2	0	0,0	44	0,4	17	0,2
285.847	286.932	8,50	9,00	1085,0		9493,8	40	0,4	100	1,1	5	0,1	166	1,7	0	0,0	360	3,8	29	0,3
286.932	287.973	9,00	9,00	1041,0		9369,0	14	0,1	130	1,4	16	0,2	150	1,6	0	0,0	0	0,0	16	0,2
287.973	288.700	9,00	8,30	727,0		6288,6	12,8	0,2	14,3	0,2	2,9	0,0	7,1	0,1	0	0,0	0	0,0	2,9	0,0
Total						70921,3	167,8	0,2	905,3	1,3	127,4	0,2	1007,1	1,4	0,0	0,0	404,0	0,6	154,9	0,2

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

- Surface Deficiencies -

Section 8 - M 1: Mingechevir - Ganja; km 288+700 to km 333+500

KOCKS
INGENIEURE

from Chainage	to Chainage	Width	Width	Length	Area (single)	Area (added)	Cracks	Cracks	Alligator Cracks	Alligator Cracks	Spalls Potholes	Spalls Potholes	Settlements	Settlements	Rutting < = 10mm	Rutting < = 10mm	Rutting > 10mm	Rutting > 10mm	Patched Area	Patched Area
(m)	(m)	(m)	(m)	(m)	(m^2)	(m^2)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)
288.700	288.992	8,30	10,30	292,0		2715,6	5,2	0,2	5,7	0,2	1,1	0,0	2,9	0,1	0	0,0	0	0,0	1,1	0,0
288.992	289.992	10,30	20,70	1000,0		15500,0	20	0,1	45	0,3	8	0,1	0	0,0	0	0,0	0	0,0	0	0,0
289.992	290.992	20,70	16,50	1000,0		18600,0	34	0,2	494	2,7	17	0,1	37	0,2	0	0,0	90	0,5	2	0,0
290.992	292.077	16,50	16,30	1085,0		17794,0	21	0,1	28	0,2	6	0,0	0	0,0	0	0,0	50	0,3	15	0,1
292.077	293.083	16,30	9,00	1006,0		12725,9	17	0,1	36	0,3	9	0,1	0	0,0	0	0,0	280	2,2	0	0,0
293.083	294.098	9,00	8,70	1015,0		8982,8	17	0,2	20	0,2	1	0,0	0	0,0	0	0,0	30	0,3	0	0,0
294.098	295.094	8,70	9,00	996,0		8814,6	12	0,1	22	0,2	50	0,6	70	0,8	0	0,0	0	0,0	12	0,1
295.094	296.094	9,00	9,00	1000,0		9000,0	24	0,3	68	0,8	8	0,1	25	0,3	0	0,0	110	1,2	26	0,3
296.094	297.174	9,00	9,00	1080,0		9720,0	22	0,2	65	0,7	30	0,3	30	0,3	0	0,0	110	1,1	14	0,1
297.174	298.172	9,00	9,00	998,0		8982,0	19	0,2	72	0,8	16	0,2	30	0,3	0	0,0	0	0,0	8	0,1
298.172	299.117	9,00	9,00	945,0		8505,0	17	0,2	56	0,7	12	0,1	45	0,5	0	0,0	60	0,7	13	0,2
299.117	300.117	9,00	9,00	1000,0	9000,0	18200,0	56	0,3	94	0,5	7	0,0	35	0,2	0	0,0	0	0,0	0	0,0
300.117	301.117	9,00	9,40	1000,0	9200,0															
301.117	302.195	9,40	9,00	1078,0		9917,6	12	0,1	78	0,8	4	0,0	90	0,9	0	0,0	0	0,0	0	0,0
302.195	303.083	9,00	9,00	888,0		7992,0	10	0,1	70	0,9	3	0,0	30	0,4	0	0,0	0	0,0	0	0,0
303.083	304.158	9,00	9,00	1075,0		9675,0	5	0,1	25	0,3	5	0,1	20	0,2	0	0,0	0	0,0	0	0,0
304.158	305.209	9,00	9,00	1051,0		9459,0	6	0,1	31	0,3	2	0,0	25	0,3	0	0,0	0	0,0	14	0,1
305.209	306.215	9,00	9,00	1006,0		9054,0	5,5	0,1	17	0,2	15,5	0,2	83	0,9	0	0,0	230	2,5	0	0,0
306.215	307.215	9,00	9,00	1000,0		9000,0	20	0,2	320	3,6	16	0,2	248	2,8	0	0,0	0	0,0	0	0,0
307.215	308.208	9,00	9,00	993,0		8937,0	16	0,2	83	0,9	0	0,0	95	1,1	0	0,0	0	0,0	39	0,4
308.208	309.414	9,00	9,00	1206,0		10854,0	13	0,1	56	0,5	2,5	0,0	188	1,7	0	0,0	180	1,7	0	0,0
309.414	310.242	9,00	9,00	828,0		7452,0	47	0,6	305	4,1	1,5	0,0	25	0,3	0	0,0	0	0,0	0	0,0
310.242	311.181	9,00	9,00	939,0		8451,0	33	0,4	525	6,2	7	0,1	130	1,5	0	0,0	0	0,0	0	0,0
311.181	312.264	9,00	9,00	1083,0		9747,0	10	0,1	389	4,0	20	0,2	70	0,7	0	0,0	0	0,0	0	0,0
312.264	313.217	9,00	9,00	953,0		8577,0	24	0,3	150	1,7	7,5	0,1	60	0,7	0	0,0	0	0,0	0	0,0
313.217	314.237	9,00	9,00	1020,0		9180,0	21	0,2	595	6,5	3	0,0	70	0,8	0	0,0	0	0,0	0	0,0
314.237	315.237	9,00	9,00	1000,0		9000,0	36	0,4	104	1,2	5,5	0,1	0	0,0	0	0,0	0	0,0	0	0,0

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

- Surface Deficiencies -

Section 8 - M 1: Mingechevir - Ganja; km 288+700 to km 333+500

KOCKS
INGENIEURE

from Chainage	to Chainage	Width	Width	Length	Area (single)	Area (added)	Cracks	Cracks	Alligator Cracks	Alligator Cracks	Spalls Potholes	Spalls Potholes	Settlements	Settlements	Rutting < = 10mm	Rutting < = 10mm	Rutting > 10mm	Rutting > 10mm	Patched Area	Patched Area
(m)	(m)	(m)	(m)	(m)	(m^2)	(m^2)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)
315.237	316.237	9,00	9,00	1000,0		9000,0	31	0,3	130	1,4	14,5	0,2	40	0,4	0	0,0	0	0,0	0	0,0
316.237	317.226	9,00	9,00	989,0		8901,0	9,4	0,1	75	0,8	2	0,0	0	0,0	0	0,0	0	0,0	0	0,0
317.226	318.226	9,00	9,00	1000,0		9000,0	11	0,1	39	0,4	0	0,0	0	0,0	0	0,0	0	0,0	4	0,0
318.226	319.224	9,00	9,00	998,0		8982,0	13	0,1	33	0,4	3	0,0	0	0,0	0	0,0	40	0,4	0	0,0
319.224	320.111	9,00	9,00	887,0		7983,0	15	0,2	23	0,3	4	0,1	0	0,0	0	0,0	460	5,8	0	0,0
320.111	321.238	9,00	8,20	1127,0		9692,2	40	0,4	31	0,3	7	0,1	0	0,0	0	0,0	0	0,0	0	0,0
321.238	322.238	8,20	9,20	1000,0		8700,0	22	0,3	22	0,3	4	0,0	0	0,0	0	0,0	0	0,0	0	0,0
322.238	323.019	9,20	8,50	781,0		6911,9	24	0,3	0	0,0	1	0,0	0	0,0	0	0,0	100	1,4	0	0,0
323.019	323.994	8,50	9,20	975,0		8628,8	27	0,3	5	0,1	1	0,0	0	0,0	0	0,0	0	0,0	0	0,0
323.994	325.215	9,20	9,80	1221,0		11599,5	102	0,9	50	0,4	8	0,1	0	0,0	0	0,0	0	0,0	0	0,0
325.215	326.215	9,80	9,00	1000,0		9400,0	138	1,5	35	0,4	11	0,1	10	0,1	0	0,0	0	0,0	6	0,1
326.215	327.255	9,00	8,10	1040,0		8892,0	65	0,7	32	0,4	15	0,2	15	0,2	0	0,0	220	2,5	0	0,0
327.255	328.346	8,10	8,15	1091,0		8864,4	50	0,6	131	1,5	8	0,1	15	0,2	0	0,0	110	1,2	0	0,0
328.346	329.287	8,15	7,60	941,0		7410,4	32	0,4	185	2,5	3	0,0	35	0,5	0	0,0	200	2,7	7	0,1
329.287	330.287	7,60	8,00	1000,0		7800,0	64	0,8	330	4,2	6	0,1	130	1,7	0	0,0	0	0,0	0	0,0
330.287	331.202	8,00	8,00	915,0		7320,0	44	0,6	85	1,2	2	0,0	30	0,4	0	0,0	180	2,5	10	0,1
331.202	332.202	8,00	7,40	1000,0		7700,0	86	1,1	340	4,4	4	0,1	115	1,5	0	0,0	300	3,9	8	0,1
332.202	333.273	7,40	22,60	1071,0		16065,0	93	0,6	378	2,4	16,5	0,1	355	2,2	0	0,0	280	1,7	0	0,0
333.273	333.500	22,60	7,00	227,0		3359,6	17,2	0,5	373,3	11,1	4,7	0,1	51,1	1,5	0	0,0	0	0,0	0	0,0
Total						433045,1	1406,3	0,3	6051,0	1,4	372,3	0,1	2205,0	0,5	0,0	0,0	3030,0	0,7	179,1	0,0

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

- Surface Deficiencies -

Section 9 - M 1: Bypass Ganja; km 333+500 to km 369+500

KOCKS
INGENIEURE

from Chainage	to Chainage	Width	Width	Length	Area (single)	Area (added)	Cracks	Cracks	Alligator Cracks	Alligator Cracks	Spalls Potholes	Spalls Potholes	Settlements	Settlements	Rutting < = 10mm	Rutting < = 10mm	Rutting > 10mm	Rutting > 10mm	Patched Area	Patched Area
(m)	(m)	(m)	(m)	(m)	(m^2)	(m^2)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)
333.500	334.330	7,00	7,00	830,0		5810,0	62,8	1,1	1364,7	23,5	17,3	0,3	186,9	3,2	0	0,0	0	0,0	0	0,0
334.330	335.475	7,00	7,00	1145,0		8015,0	58	0,7	2911	36,3	10	0,1	0	0,0	0	0,0	0	0,0	0	0,0
335.475	336.275	7,00	7,00	800,0		5600,0	54	1,0	45	0,8	0	0,0	30	0,5	0	0,0	0	0,0	0	0,0
336.275	337.295	7,00	7,00	1020,0		7140,0	52	0,7	460	6,4	4	0,1	25	0,4	0	0,0	0	0,0	0	0,0
337.295	338.662	7,00	6,80	1367,0		9432,3	24	0,3	860	9,1	3,5	0,0	60	0,6	0	0,0	0	0,0	0	0,0
338.662	339.574	6,80	7,00	912,0		6292,8	37	0,6	1930	30,7	1,5	0,0	30	0,5	0	0,0	0	0,0	0	0,0
339.574	341.270	7,00	8,00	1696,0		12720,0	68	0,5	490	3,9	6	0,0	47	0,4	0	0,0	0	0,0	0	0,0
341.270	343.357	8,00	7,00	2087,0		15652,5	66	0,4	290	1,9	16	0,1	120	0,8	0	0,0	0	0,0	0	0,0
343.357	344.362	7,00	7,00	1005,0		7035,0	8	0,1	635	9,0	4	0,1	0	0,0	0	0,0	0	0,0	0	0,0
344.362	345.282	7,00	6,80	920,0		6348,0	24	0,4	90	1,4	24	0,4	100	1,6	0	0,0	0	0,0	0	0,0
345.282	346.204	6,80	6,60	922,0		6177,4	34	0,6	120	1,9	2	0,0	120	1,9	0	0,0	0	0,0	0	0,0
346.204	347.114	6,60	6,90	910,0		6142,5	22	0,4	55	0,9	4	0,1	50	0,8	0	0,0	0	0,0	0	0,0
347.114	348.042	6,90	6,50	928,0		6217,6	48	0,8	80	1,3	0	0,0	0	0,0	0	0,0	0	0,0	0	0,0
348.042	350.055	6,50	7,00	2013,0		13587,8	204	1,5	368	2,7	7	0,1	0	0,0	0	0,0	0	0,0	3	0,0
350.055	350.960	7,00	9,00	905,0	7240,0	16775,2	77	0,5	70	0,4	9	0,1	0	0,0	0	0,0	0	0,0	0	0,0
350.960	352.056	9,00	8,40	1096,0	9535,2															
352.056	354.097	8,40	7,00	2041,0		15715,7	79	0,5	201	1,3	18	0,1	0	0,0	0	0,0	0	0,0	2	0,0
354.097	356.051	7,00	7,00	1954,0		13678,0	78	0,6	131	1,0	2	0,0	30	0,2	0	0,0	0	0,0	0	0,0
356.051	357.019	7,00	7,00	968,0		6776,0	36	0,5	54	0,8	3	0,0	50	0,7	0	0,0	0	0,0	0	0,0
357.019	360.225	7,00	7,50	3206,0		23243,5	258	1,1	116	0,5	3	0,0	0	0,0	0	0,0	0	0,0	0	0,0
360.225	361.213	7,50	7,50	988,0		7410,0	107	1,4	115	1,6	1	0,0	0	0,0	0	0,0	0	0,0	0	0,0
361.213	362.170	7,50	7,00	957,0		6938,3	138	2,0	43	0,6	1	0,0	0	0,0	0	0,0	0	0,0	0	0,0
362.170	363.170	7,00	6,40	1000,0	6700,0	12904,9	64	0,5	61	0,5	2	0,0	0	0,0	0	0,0	0	0,0	0	0,0
363.170	364.132	6,40	6,50	962,0	6204,9															

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

- Surface Deficiencies -

Section 9 - M 1: Bypass Ganja; km 333+500 to km 369+500

KOCKS
INGENIEURE

from Chainage	to Chainage	Width	Width	Length	Area (single)	Area (added)	Cracks	Cracks	Alligator Cracks	Alligator Cracks	Spalls Potholes	Spalls Potholes	Settlements	Settlements	Rutting < = 10mm	Rutting < = 10mm	Rutting > 10mm	Rutting > 10mm	Patched Area	Patched Area
(m)	(m)	(m)	(m)	(m)	(m^2)	(m^2)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)
364.132	365.252	6,50	7,00	1120,0		7560,0	90	1,2	56	0,7	8	0,1	0	0,0	0	0,0	0	0,0	0	0,0
365.252	366.190	7,00	6,50	938,0		6331,5	72	1,1	70	1,1	4	0,1	0	0,0	0	0,0	0	0,0	2	0,0
366.190	367.153	6,50	7,00	963,0		6500,3	87	1,3	18	0,3	3	0,0	0	0,0	0	0,0	0	0,0	0	0,0
367.153	368.153	7,00	7,20	1000,0		7100,0	71	1,0	141	2,0	19	0,3	0	0,0	0	0,0	0	0,0	0	0,0
368.153	369.131	7,20	7,50	978,0		7188,3	72	1,0	13	0,2	2	0,0	60	0,8	0	0,0	0	0,0	0	0,0
369.131	369.500	7,50	8,34	369,0		2922,5	50,3	1,7	117	4,0	3,2	0,1	18,3	0,6	0	0,0	0	0,0	0	0,0
Total						257214,9	2041,1	0,8	10904,7	4,2	177,5	0,1	927,2	0,4	0,0	0,0	0,0	0,0	7,0	0,0

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

- Surface Deficiencies -

Section 10 - M 1: Ganja - Tovuz; km 369+500 to km 431+000

KOCKS
INGENIEURE

from Chainage	to Chainage	Width	Width	Length	Area (single)	Area (added)	Cracks	Cracks	Alligator Cracks	Alligator Cracks	Spalls Potholes	Spalls Potholes	Settlements	Settlements	Rutting < = 10mm	Rutting < = 10mm	Rutting > 10mm	Rutting > 10mm	Patched Area	Patched Area
(m)	(m)	(m)	(m)	(m)	(m^2)	(m^2)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)
369.500	369.925	8,34	9,30	425,0		3748,5	59,7	1,6	139	3,7	3,8	0,1	21,7	0,6	0	0,0	0	0,0	0	0,0
369.925	370.920	9,30	9,30	995,0		9253,5	273	3,0	2050	22,2	1	0,0	80	0,9	0	0,0	120	1,3	0	0,0
370.920	371.888	9,30	9,10	968,0		8905,6	144	1,6	785	8,8	2	0,0	0	0,0	0	0,0	0	0,0	0	0,0
371.888	373.158	9,10	8,90	1270,0		11430,0	98	0,9	145	1,3	3	0,0	0	0,0	0	0,0	90	0,8	0	0,0
373.158	375.107	8,90	9,00	1949,0		17443,6	68	0,4	256	1,5	6	0,0	60	0,3	0	0,0	100	0,6	0	0,0
375.107	376.084	9,00	9,20	977,0		8890,7	75	0,8	161	1,8	2	0,0	40	0,4	0	0,0	30	0,3	0	0,0
376.084	377.075	9,20	9,20	991,0		9117,2	53	0,6	148	1,6	4	0,0	80	0,9	0	0,0	0	0,0	0	0,0
377.075	378.043	9,20	8,80	968,0		8712,0	60	0,7	570	6,5	4	0,0	60	0,7	0	0,0	0	0,0	12	0,1
378.043	379.040	8,80	9,10	997,0		8923,2	50	0,6	182	2,0	16	0,2	75	0,8	0	0,0	0	0,0	11	0,1
379.040	380.013	9,10	9,00	973,0		8805,7	28	0,3	260	3,0	0,5	0,0	110	1,2	0	0,0	0	0,0	0	0,0
380.013	382.100	9,00	9,00	2087,0		18783,0	42	0,2	276	1,5	1	0,0	35	0,2	0	0,0	0	0,0	0	0,0
382.100	383.054	9,00	9,00	954,0		8586,0	20	0,2	134	1,6	3	0,0	160	1,9	0	0,0	0	0,0	0	0,0
383.054	384.774	9,00	9,00	1720,0		15480,0	44	0,3	278	1,8	3	0,0	96	0,6	0	0,0	200	1,3	6	0,0
384.774	385.878	9,00	9,20	1104,0		10046,4	40	0,4	294	2,9	6	0,1	100	1,0	0	0,0	160	1,6	1	0,0
385.878	386.824	9,20	9,00	946,0		8608,6	52	0,6	328	3,8	7	0,1	90	1,0	0	0,0	200	2,3	0	0,0
386.824	387.790	9,00	8,90	966,0		8645,7	48	0,6	461	5,3	6,5	0,1	310	3,6	0	0,0	150	1,7	0	0,0
387.790	388.736	8,90	8,80	946,0		8372,1	28	0,3	334	4,0	1	0,0	28	0,3	0	0,0	0	0,0	0	0,0
388.736	389.827	8,80	8,80	1091,0		9600,8	43	0,4	60	0,6	2,5	0,0	218	2,3	0	0,0	100	1,0	0	0,0
389.827	390.932	8,80	10,00	1105,0		10387,0	22	0,2	30	0,3	2,5	0,0	96	0,9	0	0,0	40	0,4	0	0,0
390.932	391.940	10,00	9,00	1008,0		9576,0	18	0,2	460	4,8	18	0,2	260	2,7	0	0,0	0	0,0	0	0,0
391.940	392.955	9,00	9,00	1015,0		9135,0	20	0,2	280	3,1	5,5	0,1	94	1,0	0	0,0	0	0,0	0	0,0
392.955	393.955	9,00	8,60	1000,0		8800,0	30	0,3	294	3,3	2	0,0	50	0,6	0	0,0	0	0,0	0	0,0
393.955	394.839	8,60	9,00	884,0		7779,2	28	0,4	38	0,5	4	0,1	30	0,4	0	0,0	0	0,0	0	0,0
394.839	395.960	9,00	9,00	1121,0		10089,0	160	1,6	38	0,4	2	0,0	80	0,8	0	0,0	0	0,0	1	0,0
395.960	396.939	9,00	9,00	979,0		8811,0	36	0,4	113	1,3	4	0,0	25	0,3	0	0,0	0	0,0	0	0,0
396.939	398.000	9,00	9,00	1061,0	9549,0	19609,5	90	0,5	198	1,0	10	0,1	70	0,4	0	0,0	0	0,0	0	0,0
398.000	399.059	9,00	10,00	1059,0	10060,5										0					

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

- Surface Deficiencies -

Section 10 - M 1: Ganja - Tovuz; km 369+500 to km 431+000

KOCKS
INGENIEURE

from Chainage	to Chainage	Width	Width	Length	Area (single)	Area (added)	Cracks	Cracks	Alligator Cracks	Alligator Cracks	Spalls Potholes	Spalls Potholes	Settlements	Settlements	Rutting < = 10mm	Rutting < = 10mm	Rutting > 10mm	Rutting > 10mm	Patched Area	Patched Area
(m)	(m)	(m)	(m)	(m)	(m^2)	(m^2)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)
399.059	400.033	10,00	9,00	974,0		9253,0	74	0,8	65	0,7	4	0,0	54	0,6	0	0,0	0	0,0	0	0,0
400.033	401.053	9,00	9,00	1020,0		9180,0	34	0,4	26	0,3	1,5	0,0	0	0,0	0	0,0	0	0,0	0	0,0
401.053	402.076	9,00	9,00	1023,0		9207,0	34	0,4	123	1,3	6	0,1	0	0,0	0	0,0	0	0,0	0	0,0
402.076	403.854	9,00	8,80	1778,0		15824,2	81	0,5	80	0,5	15	0,1	60	0,4	0	0,0	40	0,3	4	0,0
403.854	404.854	8,80	9,00	1000,0		8900,0	43	0,5	120	1,3	6	0,1	35	0,4	0	0,0	0	0,0	0	0,0
404.854	405.735	9,00	9,00	881,0		7929,0	46	0,6	410	5,2	22	0,3	40	0,5	0	0,0	0	0,0	0	0,0
405.735	407.045	9,00	9,00	1310,0		11790,0	36	0,3	350	3,0	8	0,1	0	0,0	0	0,0	0	0,0	0	0,0
407.045	408.054	9,00	9,00	1009,0		9081,0	72	0,8	1040	11,5	28	0,3	50	0,6	0	0,0	0	0,0	0	0,0
408.054	409.054	9,00	8,60	1000,0		8800,0	74	0,8	510	5,8	26	0,3	30	0,3	0	0,0	100	1,1	2	0,0
409.054	410.140	8,60	8,30	1086,0		9176,7	92	1,0	260	2,8	10	0,1	60	0,7	0	0,0	140	1,5	0	0,0
410.140	412.387	8,30	7,00	2247,0		17189,6	166	1,0	470	2,7	42	0,2	95	0,6	0	0,0	200	1,2	0	0,0
412.387	414.482	7,00	7,00	2095,0		14665,0	182	1,2	764	5,2	16	0,1	272	1,9	0	0,0	40	0,3	6	0,0
414.482	415.658	7,00	7,40	1176,0		8467,2	106	1,3	520	6,1	24	0,3	155	1,8	0	0,0	260	3,1	8	0,1
415.658	416.460	7,40	7,50	802,0		5974,9	120	2,0	275	4,6	18	0,3	65	1,1	0	0,0	30	0,5	0	0,0
416.460	417.230	7,50	7,40	770,0		5736,5	66	1,2	310	5,4	16	0,3	50	0,9	0	0,0	20	0,3	4	0,1
417.230	418.547	7,40	7,50	1317,0		9811,7	110	1,1	215	2,2	32	0,3	75	0,8	0	0,0	0	0,0	0	0,0
418.547	419.534	7,50	7,50	987,0		7402,5	96	1,3	180	2,4	8	0,1	25	0,3	0	0,0	0	0,0	0	0,0
419.534	420.528	7,50	7,50	994,0		7455,0	142	1,9	130	1,7	12	0,2	60	0,8	0	0,0	0	0,0	0	0,0
420.528	421.546	7,50	7,50	1018,0		7635,0	110	1,4	240	3,1	22	0,3	25	0,3	0	0,0	0	0,0	0	0,0
421.546	422.596	7,50	7,40	1050,0		7822,5	162	2,1	190	2,4	6	0,1	50	0,6	0	0,0	0	0,0	0	0,0
422.596	423.485	7,40	7,50	889,0		6623,1	26	0,4	20	0,3	2	0,0	5	0,1	0	0,0	0	0,0	0	0,0
423.485	424.562	7,50	7,50	1077,0		8077,5	48	0,6	66	0,8	4	0,0	30	0,4	0	0,0	30	0,4	0	0,0
424.562	425.542	7,50	7,30	980,0		7252,0	43	0,6	130	1,8	7,5	0,1	200	2,8	0	0,0	0	0,0	0	0,0
425.542	426.563	7,30	8,50	1021,0		8065,9	20	0,2	145	1,8	5	0,1	90	1,1	0	0,0	0	0,0	0	0,0
426.563	427.633	8,50	7,96	1070,0		8805,2	26	0,3	80	0,9	2,5	0,0	100	1,1	0	0,0	0	0,0	0	0,0
427.633	428.538	7,96	7,50	905,0		6994,8	74	1,1	129	1,8	4	0,1	90	1,3	0	0,0	0	0,0	0	0,0
428.538	429.596	7,50	7,50	1058,0		7935,0	64	0,8	315	4,0	11	0,1	0	0,0	0	0,0	0	0,0	14	0,2

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

- Surface Deficiencies -

Section 10 - M 1: Ganja - Tovuz; km 369+500 to km 431+000

KOCKS
INGENIEURE

from Chainage	to Chainage	Width	Width	Length	Area (single)	Area (added)	Cracks	Cracks	Alligator Cracks	Alligator Cracks	Spalls Potholes	Spalls Potholes	Settlements	Settlements	Rutting < = 10mm	Rutting < = 10mm	Rutting > 10mm	Rutting > 10mm	Patched Area	Patched Area
(m)	(m)	(m)	(m)	(m)	(m^2)	(m^2)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)
429.596	430.678	7,50	9,00	1082,0		8926,5	34	0,4	185	2,1	11	0,1	70	0,8	0	0,0	0	0,0	0	0,0
430.678	431.000	9,00	9,00	322,0		2898,0	15,4	0,5	30	1,0	4,3	0,1	13	0,4	0	0,0	0	0,0	3,6	0,1
Total						524417,8	3826,1	0,7	15690,0	3,0	494,1	0,1	4067,7	0,8	0,0	0,0	2050,0	0,4	72,6	0,0

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

- Surface Deficiencies -

Section 11 - M 1: Tovuz - Gazakh; km 431+000 to km 456+500

KOCKS
INGENIEURE

from Chainage	to Chainage	Width	Width	Length	Area (single)	Area (added)	Cracks	Cracks	Alligator Cracks	Alligator Cracks	Spalls Potholes	Spalls Potholes	Settlements	Settlements	Rutting < = 10mm	Rutting < = 10mm	Rutting > 10mm	Rutting > 10mm	Patched Area	Patched Area
(m)	(m)	(m)	(m)	(m)	(m^2)	(m^2)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)
431.000	431.660	9,00	9,00	660,0		5940,0	31,6	0,5	46	0,8	8,7	0,1	27	0,5	0	0,0		0,0	7,4	0,1
431.660	434.152	9,00	7,60	2492,0		20683,6	40	0,2	130	0,6	4	0,0	80	0,4	0	0,0		0,0	0	0,0
434.152	434.812	7,60	7,20	660,0		4884,0	33	0,7	142	2,9	1	0,0	100	2,0	0	0,0		0,0	0	0,0
434.812	438.013	7,20	8,20	3201,0		24647,7	135	0,5	280	1,1	13	0,1	200	0,8	0	0,0		0,0	51	0,2
438.013	439.163	8,20	8,00	1150,0		9315,0	43	0,5	58	0,6	1	0,0	30	0,3	0	0,0		0,0	0	0,0
439.163	440.163	8,00	8,00	1000,0		8000,0	16	0,2	220	2,8	18	0,2	30	0,4	0	0,0		0,0	16	0,2
440.163	441.063	8,00	8,00	900,0		7200,0	22	0,3	250	3,5	12	0,2	59	0,8	0	0,0		0,0	0	0,0
441.063	442.063	8,00	8,20	1000,0		8100,0	38	0,5	100	1,2	12	0,1	30	0,4	0	0,0		0,0	0	0,0
442.063	443.063	8,20	8,50	1000,0		8350,0	36	0,4	80	1,0	6	0,1	60	0,7	0	0,0		0,0	0	0,0
443.063	444.063	8,50	8,30	1000,0		8400,0	76	0,9	95	1,1	8	0,1	70	0,8	0	0,0		0,0	0	0,0
444.063	445.063	8,30	8,50	1000,0		8400,0	24	0,3	95	1,1	4	0,0	170	2,0	0	0,0		0,0	0	0,0
445.063	446.063	8,50	7,50	1000,0		8000,0	36	0,5	230	2,9	18	0,2	140	1,8	0	0,0		0,0	0	0,0
446.063	447.973	7,50	8,00	1910,0		14802,5	136	0,9	460	3,1	23	0,2	150	1,0	0	0,0		0,0	0	0,0
447.973	448.973	8,00	8,50	1000,0		8250,0	70	0,8	90	1,1	6	0,1	120	1,5	0	0,0		0,0	0	0,0
448.973	449.853	8,50	8,00	880,0		7260,0	14	0,2	120	1,7	4	0,1	118	1,6	0	0,0		0,0	0	0,0
449.853	450.901	8,00	7,00	1048,0		7860,0	70	0,9	75	1,0	4	0,1	40	0,5	0	0,0		0,0	0	0,0
450.901	451.811	7,00	8,00	910,0		6825,0	55	0,8	145	2,1	10	0,1	150	2,2	0	0,0		0,0	0	0,0
451.811	452.741	8,00	7,00	930,0		6975,0	45	0,6	90	1,3	10	0,1	50	0,7	0	0,0		0,0	0	0,0
452.741	453.260	7,00	12,00	519,0	4930,5	10702,5	70	0,7	60	0,6	20	0,2	40	0,4	0	0,0		0,0	4	0,0
453.260	453.741	12,00	12,00	481,0	5772,0															
453.741	454.741	12,00	9,30	1000,0		10650,0	84	0,8	140	1,3	42	0,4	130	1,2	0	0,0		0,0	4	0,0
454.741	455.741	9,30	9,20	1000,0		9250,0	40	0,4	80	0,9	30	0,3	80	0,9	0	0,0		0,0	82	0,9
455.741	456.000	9,20	9,15	259,0		2376,3	14	0,6	15,5	0,7	4	0,2	13,5	0,6	0	0,0		0,0	0	0,0
Total						206871,6	1128,6	0,5	3001,5	1,5	258,7	0,1	1887,5	0,9	0,0	0,0	0,0	0,0	164,4	0,1

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

- Surface Deficiencies -

Section 12 - M 1: Bypass Gazakh; km 456+500 to km 463+500

KOCKS
INGENIEURE

from Chainage	to Chainage	Width	Width	Length	Area (single)	Area (added)	Cracks	Cracks	Alligator Cracks	Alligator Cracks	Spalls Potholes	Spalls Potholes	Settlements	Settlements	Rutting < = 10mm	Rutting < = 10mm	Rutting > 10mm	Rutting > 10mm	Patched Area	Patched Area
(m)	(m)	(m)	(m)	(m)	(m^2)	(m^2)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)
456.000	456.741	9,15	9,00	241,0		2187,1	40	1,8	44,5	2,0	12	0,5	36,5	1,7	0	0,0		0,0	0	0,0
456.741	457.741	9,00	8,68	1000,0	8842,3	16547,4	104	0,6	236	1,4	26	0,2	230	1,4	0	0,0		0,0	18	0,1
457.741	458.643	8,68	8,40	902,0	7705,1															
458.643	459.643	8,40	7,50	1000,0		7950,0	46	0,6	100	1,3	6	0,1	600	7,5	0	0,0		0,0	7	0,1
459.643	460.647	7,50	7,40	1004,0		7479,8	42	0,6	83	1,1	6	0,1	100	1,3	0	0,0		0,0	0	0,0
460.647	461.663	7,40	7,20	1016,0		7416,8	48	0,6	30	0,4	7	0,1	20	0,3	0	0,0		0,0	0	0,0
461.663	462.665	7,20	8,20	1002,0		7715,4	29	0,4	42	0,5	14	0,2	30	0,4	0	0,0		0,0	0	0,0
462.665	463.500	8,20	8,04	835,0		6780,2	118	1,7	76	1,1	0	0,0	128,5	1,9	0	0,0		0,0	0	0,0
Total						56076,7	427,0	0,8	611,5	1,1	71,0	0,1	1145,0	2,0	0,0	0,0	0,0	0,0	25,0	0,0

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

- Surface Deficiencies -

Section 13 - M 1: Gazakh - Georgien Border; km 463+500 to km 501+350

KOCKS
INGENIEURE

from Chainage	to Chainage	Width	Width	Length	Area (single)	Area (added)	Cracks	Cracks	Alligator Cracks	Alligator Cracks	Spalls Potholes	Spalls Potholes	Settlements	Settlements	Rutting < = 10mm	Rutting < = 10mm	Rutting > 10mm	Rutting > 10mm	Patched Area	Patched Area
(m)	(m)	(m)	(m)	(m)	(m^2)	(m^2)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)
463,500	463,705	8.04	8.00	205.0		1644.1	29	1.8	19	1.2	0	0.0	31.5	1.9	0	0.0	0	0.0	0	0.0
463,705	464,691	8.00	9.00	986.0		8381.0	35	0.4	55	0.7	16	0.2	65	0.8	0	0.0	0	0.0	0	0.0
464,691	465,691	9.00	9.00	1000.0		9000.0	22	0.2	135	1.5	17	0.2	95	1.1	0	0.0	0	0.0	0	0.0
465,691	466,689	9.00	9.00	998.0		8982.0	23	0.3	85	0.9	3	0.0	120	1.3	0	0.0	0	0.0	0	0.0
466,689	467,657	9.00	7.00	968.0		7744.0	48	0.6	110	1.4	11	0.1	120	1.5	0	0.0	0	0.0	22	0.3
467,657	468,657	7.00	7.24	1000.0		7119.0	43	0.6	145	2.0	15	0.2	110	1.5	0	0.0	0	0.0	10	0.1
468,657	469,757	7.24	7.50	1100.0		8106.0	68	0.8	75	0.9	12	0.1	60	0.7	0	0.0	0	0.0	0	0.0
469,757	470,725	7.50	7.50	968.0		7260.0	28	0.4	170	2.3	7.5	0.1	110	1.5	0	0.0	0	0.0	0	0.0
470,725	471,753	7.50	7.00	1028.0		7453.0	35	0.5	155	2.1	12	0.2	130	1.7	0	0.0	0	0.0	0	0.0
471,753	472,851	7.00	7.50	1098.0		7960.5	70	0.9	110	1.4	8	0.1	90	1.1	0	0.0	0	0.0	0	0.0
472,851	473,791	7.50	8.00	940.0		7285.0	22	0.3	212	2.9	17	0.2	120	1.6	0	0.0	0	0.0	0	0.0
473,791	474,789	8.00	7.80	998.0		7884.2	70	0.9	290	3.7	4	0.1	120	1.5	0	0.0	0	0.0	2	0.0
474,789	475,751	7.80	7.50	962.0		7359.3	74	1.0	110	1.5	10	0.1	140	1.9	0	0.0	0	0.0	0	0.0
475,751	476,751	7.50	7.50	1000.0		7500.0	82	1.1	80	1.1	12	0.2	80	1.1	0	0.0	0	0.0	0	0.0
476,751	477,601	7.50	7.50	850.0		6375.0	25	0.4	95	1.5	7	0.1	100	1.6	0	0.0	0	0.0	0	0.0
477,601	478,601	7.50	7.80	1000.0		7650.0	52	0.7	185	2.4	10	0.1	160	2.1	0	0.0	0	0.0	0	0.0
478,601	479,601	7.80	7.50	1000.0		7650.0	54	0.7	120	1.6	17	0.2	200	2.6	0	0.0	0	0.0	17	0.2
479,601	480,601	7.50	7.50	1000.0		7500.0	66	0.9	140	1.9	12	0.2	100	1.3	0	0.0	0	0.0	21	0.3
480,601	481,601	7.50	7.00	1000.0		7250.0	64	0.9	120	1.7	21	0.3	130	1.8	0	0.0	0	0.0	12	0.2
481,601	482,601	7.00	7.50	1000.0		7250.0	90	1.2	129	1.8	8	0.1	30	0.4	0	0.0	0	0.0	0	0.0
482,601	483,601	7.50	7.20	1000.0		7350.0	30	0.4	125	1.7	33	0.4	110	1.5	0	0.0	0	0.0	5	0.1
483,601	484,601	7.20	7.50	1000.0		7350.0	22	0.3	90	1.2	1	0.0	75	1.0	0	0.0	0	0.0	0	0.0
484,601	485,601	7.50	7.80	1000.0		7650.0	34	0.4	508	6.6	0	0.0	170	2.2	0	0.0	0	0.0	0	0.0
485,601	486,601	7.80	7.50	1000.0		7650.0	36	0.5	820	10.7	2	0.0	90	1.2	0	0.0	0	0.0	0	0.0
486,601	487,701	7.50	7.50	1100.0		8250.0	20	0.2	440	5.3	8	0.1	105	1.3	0	0.0	0	0.0	0	0.0
487,701	488,799	7.50	7.50	1098.0		8235.0	66	0.8	35	0.4	6	0.1	50	0.6	0	0.0	0	0.0	0	0.0
488,799	489,820	7.50	7.50	1021.0		7657.5	70	0.9	90	1.2	6	0.1	80	1.0	0	0.0	0	0.0	0	0.0

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

- Surface Deficiencies -

Section 13 - M 1: Gazakh - Georgien Border; km 463+500 to km 501+350

KOCKS
INGENIEURE

from Chainage	to Chainage	Width	Width	Length	Area (single)	Area (added)	Cracks	Cracks	Alligator Cracks	Alligator Cracks	Spalls Potholes	Spalls Potholes	Settlements	Settlements	Rutting < = 10mm	Rutting < = 10mm	Rutting > 10mm	Rutting > 10mm	Patched Area	Patched Area
(m)	(m)	(m)	(m)	(m)	(m^2)	(m^2)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)	(m^2)	(%)
489,820	490,820	7.50	8.00	1000.0		7750.0	32	0.4	50	0.6	6	0.1	130	1.7	0	0.0	0	0.0	0	0.0
490,820	491,820	8.00	7.50	1000.0		7750.0	44	0.6	160	2.1	8	0.1	60	0.8	0	0.0	0	0.0	0	0.0
491,820	492,820	7.50	7.50	1000.0		7500.0	28	0.4	30	0.4	2	0.0	140	1.9	0	0.0	0	0.0	0	0.0
492,820	493,820	7.50	7.50	1000.0		7500.0	58	0.8	370	4.9	28	0.4	70	0.9	0	0.0	0	0.0	0	0.0
493,820	494,820	7.50	7.20	1000.0		7350.0	60	0.8	360	4.9	17	0.2	50	0.7	0	0.0	0	0.0	0	0.0
494,820	495,820	7.20	7.00	1000.0		7100.0	18	0.3	65	0.9	7	0.1	90	1.3	0	0.0	40	0.6	24	0.3
495,820	496,820	7.00	7.20	1000.0		7100.0	27	0.4	285	4.0	8	0.1	105	1.5	0	0.0	80	1.1	8	0.1
496,820	497,820	7.20	7.60	1000.0		7400.0	63	0.9	500	6.8	7	0.1	115	1.6	0	0.0	60	0.8	0	0.0
497,820	498,820	7.60	8.00	1000.0		7800.0	16	0.2	230	2.9	4	0.1	60	0.8	0	0.0	40	0.5	0	0.0
498,820	499,820	8.00	7.50	1000.0		7750.0	24	0.3	68	0.9	25	0.3	150	1.9	0	0.0	0	0.0	0	0.0
499,820	500,000	7.50	7.50	180.0		1350.0	40	3.0	130	9.6	9	0.7	145	10.7	0	0.0	0	0.0	0	0.0
500,000	501,000	7.50	7.00	1000.0	7250.0	9700.0	24	0.2	113	1.2	2	0.0	60	0.6	0	0.0	0	0.0	0	0.0
501,000	501,350	7.00	7.00	350.0	2450.0															
Total						287545.6	1712.0	0.6	7009.0	2.4	398.5	0.1	3966.5	1.4	0.0	0.0	220.0	0.1	121.0	0.0

APPENDIX 6.8

RISE AND FALL

Alyat - Ganja - Georgian Border (M 4/M 1)

- Rise and Fall -

Section 1 - M 4:
Alyat - Gazi Mammad; km 0+000 to km 43+450

Chainage from	Chainage to	Rise and Fall %
0	20,156	+0.10
20,156	25,312	+0.20
25,312	28,444	-0.35
28,444	28,944	+0.60
28,944	29,244	+1.00
29,244	29,479	-1.30
29,479	29,529	+2.50
29,529	30,100	+0.20
30,100	31,200	+0.00
31,200	31,250	-0.80
31,250	32,250	+1.20
32,250	35,700	+0.10
35,700	36,300	-0.80
36,300	37,800	-1.20
37,800	38,750	-1.30
38,750	39,100	-1.50
39,100	39,300	-0.50
39,300	39,450	-0.80
39,450	39,850	+1.20
39,850	40,050	-0.50
40,050	40,150	+2.20
40,150	40,300	+1.50
40,300	40,880	-1.80
40,880	41,062	+2.00
41,062	41,762	-2.80
41,762	42,062	+1.10
42,062	42,112	+1.00
42,112	42,132	+0.50
42,132	43,350	-1.00
43,350	43,450	-3.20

Section 2 - M 4:
Bypass Gazi-Mammad ; km 43+450 to km 58+980

Chainage from	Chainage to	Rise and Fall %
43,450	43,950	-0.80
43,950	45,263	+0.00
45,263	45,363	-0.60
45,363	45,467	+0.00
45,467	45,667	-0.40
45,667	45,787	-1.20
45,787	46,700	-2.60
46,700	47,000	-1.50
47,000	48,270	+0.80
48,270	50,000	+0.30
50,000	58,800	+0.20
58,800	58,980	+0.30

Section 3 - M 4:
Gazi Mammad - Kyrdamir; km 58+980 to km 124+300

Chainage from	Chainage to	Rise and Fall %
58,980	63,600	+0.30
63,600	122,800	+0.10

Section 4 - M 4:
Kyrdamir - Ujar; km 124+300 to km 170+500

Chainage from	Chainage to	Rise and Fall %
124,300	130,866	-0.20
130,866	135,137	+0.10
135,137	136,232	-0.10
136,232	137,700	-0.30
137,700	139,200	+0.20
139,200	139,900	-0.10
139,900	141,400	+0.30
141,400	142,100	-0.40
142,100	142,600	-0.30
142,600	142,729	+0.20
142,729	143,100	-0.20
143,100	143,900	+0.10
143,900	145,570	+0.00
145,570	146,500	-0.10
146,500	147,800	-0.15
147,800	152,862	+0.20
152,862	154,360	+0.00
154,360	157,800	-0.10
157,800	159,000	-0.20
159,000	159,600	+0.40
159,600	160,000	+0.20
160,000	164,800	-0.10
164,800	165,000	+0.00
165,000	167,500	+0.20
167,500	168,000	+0.00
168,000	170,500	-0.10

Section 5 - M 4:
Ujar -Yevlakh; km 170+500 to km 216+500

Chainage from	Chainage to	Rise and Fall %
170,500	171,000	-0.10
171,000	172,972	-0.30
172,972	179,000	-0.20
179,000	183,472	-0.10
183,472	183,600	+0.00
183,600	188,350	+0.20
188,350	188,400	+0.00
188,400	189,400	-0.20
189,400	191,318	+0.10
191,318	194,361	-0.20
194,361	201,329	+0.00
201,329	210,300	+0.15
210,300	213,300	-0.20
213,300	215,400	+0.10
215,400	216,400	-0.10
216,400	216,500	+0.20

- Rise and Fall -

122,800	124,300	+0.00

Section 6 - M 4:
Bypass Yevlakh; km 216+500 to km 223+468

Chainage from	Chainage to	Rise and Fall %
216,500	219,400	+0.20
219,400	220,400	-0.20
220,400	223,468	+0.20

Section 7 - M 1:
Yevlakh - Mingechevir; km 280+683 to km 288+700

Chainage from	Chainage to	Rise and Fall %
280,687	282,000	+0.20
282,000	284,000	-0.30
284,000	285,900	-0.20
285,900	287,973	+0.00
287,973	288,700	+0.20

Section 8 - M 1:
Mingechevir - Ganja; km 288+700 to km 333+500

Chainage from	Chainage to	Rise and Fall %
288,700	289,000	+0.20
289,000	289,500	+0.00
289,500	291,000	-0.25
291,000	292,000	+0.20
292,000	297,000	+0.10
297,000	299,117	+0.00
299,117	302,195	-0.15
302,195	303,083	+0.20
303,083	304,000	-0.20
304,000	306,215	+0.10
306,215	309,414	+0.00
309,414	310,242	+0.20
310,242	311,181	-0.15
311,181	314,237	+0.00
314,237	315,200	+0.20
315,200	315,700	+0.00
315,700	316,237	-3.00
316,237	317,226	+0.20
317,226	321,000	+0.10
321,000	321,238	-0.15
321,238	325,215	+0.00
325,215	330,287	+0.20
330,287	331,200	+0.30
331,200	331,800	+0.00
331,800	332,202	-0.30
332,202	332,702	+0.00
332,702	333,500	+0.20

Section 9 - M 1:
Bypass Ganja; km 333+500 to km 369+500

Chainage from	Chainage to	Rise and Fall %
333,500	334,330	+0.20
334,330	335,475	-0.30
335,475	341,270	-0.20
341,270	341,570	-1.50
341,570	341,770	+2.00
341,770	345,282	+0.35
345,282	347,114	+0.20
347,114	348,042	-0.10
348,042	350,000	-0.20
350,000	350,960	+0.00
350,960	351,428	-4.50
351,428	351,528	+9.00
351,528	352,300	+7.00
352,300	353,400	+0.25
353,400	354,200	-3.00
354,200	354,700	+2.00
354,700	354,900	+0.00
354,900	355,500	-3.00
355,500	357,000	+0.50
357,000	360,500	+0.20
360,500	362,300	+0.10
362,300	363,100	-2.00
363,100	367,153	-0.20
367,153	368,153	-2.00
368,153	369,500	-2.00

Alyat - Ganja - Georgian Border (M 4/M 1)

- Rise and Fall -

Section 10 - M 1:
Ganja - Tovuz; km 369+500 to km 431+000

Chainage from	Chainage to	Rise and Fall %
369,500	370,920	-2.00
370,920	372,750	-0.20
372,750	373,250	-1.80
373,250	374,800	+0.00
374,800	375,400	-2.00
375,400	375,550	+3.00
375,550	375,900	+2.00
375,900	375,950	+0.20
375,950	376,084	-1.50
376,084	378,650	+2.00
378,650	379,500	+0.20
379,500	380,013	-0.20
380,013	381,000	+0.20
381,000	381,450	-0.40
381,450	381,950	-3.00
381,950	382,100	+0.60
382,100	382,500	-4.00
382,500	383,300	+5.00
383,300	384,800	+0.00
384,800	386,178	-2.00
386,178	386,378	+0.00
386,378	388,736	+3.00
388,736	391,940	+0.20
391,940	394,960	+0.10
394,960	395,960	-0.20
395,960	397,000	+0.00
397,000	397,500	+2.00
397,500	398,000	+0.00
398,000	400,033	+3.00
400,033	401,053	+0.30
401,053	402,854	-0.20
402,854	405,735	-0.10
405,735	406,075	-3.00
406,075	406,185	+4.00
406,185	406,600	+0.00
406,600	406,900	-3.00
406,900	407,245	+5.00
407,245	409,454	+0.00
409,454	410,140	-3.00
410,140	414,482	+0.00
414,482	415,658	-0.20
415,658	416,460	-0.10
416,460	417,230	-2.00
417,230	418,230	+0.00
418,230	419,000	-4.00
419,000	419,534	+3.00
419,534	426,242	+0.00
426,242	426,563	+3.00
426,563	427,633	+0.20
427,633	428,600	-7.00
428,600	429,138	+5.00
429,138	431,000	+0.30

Section 11 - M 1:
Tovuz - Gazakh; km 431+000 to km 456+500

Chainage from	Chainage to	Rise and Fall %
431,000	434,152	+3.00
434,152	435,812	+0.20
435,812	438,013	-1.50
438,013	440,163	-1.30
440,163	441,063	+0.80
441,063	441,213	-4.00
441,213	441,463	-3.50
441,463	447,063	+0.20
447,063	447,363	-2.50
447,363	447,763	+3.00
447,763	448,973	-0.80
448,973	450,901	+0.25
450,901	454,741	+0.20
454,741	456,500	+0.00

Section 12 - M 1:
Bypass Gazakh; km 456+500 to km 463+500

Chainage from	Chainage to	Rise and Fall %
456,500	463,500	+0.00

Section 13 - M 1:
Gazakh - Georgien Border; km 463+500 to km 501+35

Chainage from	Chainage to	Rise and Fall %
463,500	463,705	+0.00
463,705	464,205	-4.50
464,205	467,657	+2.50
467,657	475,751	+0.50
475,751	478,601	-2.50
478,601	481,601	-1.50
481,601	489,820	+0.40
489,820	500,000	+0.15
500,000	501,350	+0.10

APPENDIX 6.9

HORIZONTAL CURVATURE

Alyat - Ganja - Georgian Border (M 4/M 1)

- Horizontal Curvature (degree per km of road) -

Section 1 - M 4:
Alyat - Gazi Mammad; km 0+000 to km 43+450

Chainage (m) from	to	Length (km)	Curvature (°)
0	5,200	5.2	
5,200	7,300	2.1	31
7,300	14,400	7.1	20
14,400	17,000	2.6	3
17,000	18,000	1.0	32
18,000	33,500	15.5	34
33,500	40,000	6.5	23
40,000	43,400	3.4	23
43,400	43,450	0.1	64
	Total	**43.5**	**230**

Mean Curvature (°/km) **5.29**

Section 2 - M 4:
Bypass Gazi-Mammad; km 43+450 to km 58+980

Chainage (m) from	to	Length (km)	Curvature (°)
43,450	45,500	2.1	
45,500	48,300	2.8	80
48,300	49,600	1.3	25
49,600	52,400	2.8	90
52,400	56,100	3.7	16
56,100	58,300	2.2	14
58,300	58,980	0.7	35
	Total	**15.5**	**260**

Mean Curvature (°/km) **16.74**

Section 3 - M 4:
Gazi-Mammad -Kyurdamir; km 58+980 to km 124+300

Chainage (m) from	to	Length (km)	Curvature (°)
58,980	62,000	3.0	4
62,000	69,500	7.5	9
69,500	74,700	5.2	6
74,700	83,900	9.2	3
83,900	109,000	25.1	7
109,000	116,800	7.8	3
116,800	117,100	0.3	16
117,100	124,300	7.2	16
	Total	**65.3**	**64**

Mean Curvature (°/km) **0.98**

Section 4 - M 4:
Kyurdamir - Ujar ; km 124+300 to km 170+500

Chainage (m) from	to	Length (km)	Curvature (°)
124,300	126,400	2.1	
126,400	138,100	11.7	11
138,100	156,600	18.5	5
156,600	157,000	0.4	6
157,000	160,700	3.7	5
160,700	162,000	1.3	4
162,000	167,400	5.4	12
167,400	169,500	2.1	4
169,500	170,500	1.0	3
	Total	**46.2**	**50**

Mean Curvature (°/km) **1.08**

Section 5 - M 4:
Ujar -Yevlakh ; km 170+500 to km 216+500

Chainage (m) from	to	Length (km)	Curvature (°)
170,500	172,300	1.8	
172,300	175,300	3.0	9
175,300	180,300	5.0	5
180,300	187,500	7.2	19
187,500	193,000	5.5	5
193,000	203,800	10.8	4
203,800	215,800	12.0	15
215,800	216,500	0.7	5
	Total	**46.0**	**62**

Mean Curvature (°/km) **1.35**

Section 6 - M 4:
Bypass Yevlakh; km 216+500 to km 223+468

Chainage (m) from	to	Length (km)	Curvature (°)
216,500	220,600	4.1	30
220,600	223,468	2.9	33
	Total	**7.0**	**63**

Mean Curvature (°/km) **9.04**

Section 7 - M 1:
Yevlakh - Mingechevir; km 280+683 to km 288+700

Chainage (m) from	to	Length (km)	Curvature (°)
280,683	288,700	8.0	33
	Total	**8.0**	**33**

Mean Curvature (°/km) **4.12**

Section 8 - M 1:
Mingechevir - Ganja; km 288+700 to km 333+500

Chainage (m) from	to	Length (km)	Curvature (°)
288,700	303,500	14.8	10
303,500	315,700	12.2	39
315,700	326,800	11.1	37
326,800	333,500	6.7	45
	Total	**44.8**	**131**

Mean Curvature (°/km) **2.92**

Alyat - Ganja - Georgian Border (M 4/M 1)

- Horizontal Curvature (degree per km of road) -

Section 9 - M 1:
Bypass Ganja; km 333+500 to km 369+500

Chainage (m) from	to	Length (km)	Curvature (°)
333,500	340,000	6.5	
340,000	342,800	2.8	24
342,800	346,400	3.6	10
346,400	349,100	2.7	5
349,100	350,200	1.1	20
350,200	351,200	1.0	51
351,200	352,700	1.5	21
352,700	353,600	0.9	47
353,600	357,000	3.4	13
357,000	359,000	2.0	24
359,000	361,100	2.1	21
361,100	361,900	0.8	17
361,900	363,000	1.1	23
363,000	364,400	1.4	16
364,400	369,500	5.1	18
	Total	**36.0**	**310**

Mean Curvature (°/km) **8.61**

Section 10 - M 1:
Ganja - Tovuz; km 369+500 to km 431+000

Chainage (m) from	to	Length (km)	Curvature (°)
369,500	383,200	13.7	
383,200	394,900	11.7	3
394,900	397,100	2.2	53
397,100	403,100	6.0	67
403,100	412,500	9.4	14
412,500	414,000	1.5	32
414,000	420,200	6.2	44
420,200	431,000	10.8	2
	Total	**61.5**	**215**

Mean Curvature (°/km) **3.50**

Section 11 - M 1:
Tovuz - Gazakh; km 431+000 to km 456+500

Chainage (m) from	to	Length (km)	Curvature (°)
431,000	432,000	1.0	
432,000	432,400	0.4	37
432,400	433,000	0.6	48
433,000	435,600	2.6	33
435,600	436,100	0.5	12
436,100	437,300	1.2	32
437,300	438,300	1.0	13
438,300	441,400	3.1	4
441,400	442,600	1.2	13
442,600	448,200	5.6	26
448,200	449,500	1.3	27
449,500	451,400	1.9	18
451,400	452,700	1.3	7
452,700	453,700	1.0	2
453,700	454,300	0.6	19
454,300	454,600	0.3	59
454,600	454,900	0.3	50
454,900	455,800	0.9	12
455,800	456,500	0.7	48
	Total	**25.5**	**460**

Mean Curvature (°/km) **18.04**

Section 12 - M 1:
Bypass Gazakh; km 456+500 to km 463+500

Chainage (m) from	to	Length (km)	Curvature (°)
456,500	460,400	3.9	
460,400	460,800	0.4	31
460,800	461,800	1.0	28
461,800	462,600	0.8	36
462,600	462,900	0.3	20
462,900	463,500	0.6	49
	Total	**7.0**	**164**

Mean Curvature (°/km) **23.43**

Section 13 - M 1:
Gazakh - Georgien Border; km 463+500 to km 501+350

Chainage (m) from	to	Length (km)	Curvature (°)
463,500	464,400	0.9	
464,400	465,000	0.6	31
465,000	471,400	6.4	40
471,400	475,400	4.0	13
475,400	476,500	1.1	22
476,500	479,000	2.5	27
479,000	485,800	6.8	44
485,800	486,300	0.5	24
486,300	487,000	0.7	46
487,000	488,000	1.0	18
488,000	489,500	1.5	22
489,500	492,700	3.2	13
492,700	493,600	0.9	44
493,600	493,900	0.3	37
493,900	495,100	1.2	40
495,100	501,350	6.3	49
	Total	**37.9**	**470**

Mean Curvature (°/km) **12.42**

APPENDIX 6.10

ROAD ROUGHNESS

Section 1- M 4: Alyat - Gazi -Mammad (KM 0+000 - 43+450)

Chainage from km	Chainage to km	Road Length (km)	IRI (m/km) from Baku	IRI (m/km) to Baku	**IRI mean (m/km)**
0,0	1,0	1,0	5,7	3,6	**4,7**
1,0	2,0	1,0	5,6	5,1	**5,3**
2,0	3,0	1,0	7,7	6,3	**7,0**
3,0	4,0	1,0	6,4	5,7	**6,0**
4,0	5,0	1,0	5,1	5,5	**5,3**
5,0	6,0	1,0	9,1	7,1	**8,1**
6,0	7,0	1,0	8,3	9,0	**8,6**
7,0	8,0	1,0	8,7	7,6	**8,1**
8,0	9,0	1,0	8,7	8,8	**8,8**
9,0	10,0	1,0	7,8	6,4	**7,1**
10,0	11,0	1,0	6,7	6,8	**6,8**
11,0	12,0	1,0	6,7	7,2	**7,0**
12,0	13,0	1,0	6,7	9,0	**7,8**
13,0	14,0	1,0	8,1	6,2	**7,1**
14,0	15,0	1,0	9,2	8,0	**8,6**
15,0	16,0	1,0	6,6	6,9	**6,8**
16,0	17,0	1,0	6,1	4,0	**5,1**
17,0	18,0	1,0	6,1	5,2	**5,7**
18,0	19,0	1,0	5,9	5,1	**5,5**
19,0	20,0	1,0	5,4	4,5	**5,0**
20,0	21,0	1,0	6,2	4,9	**5,5**
21,0	22,0	1,0	6,1	5,4	**5,8**
22,0	23,0	1,0	6,0	5,0	**5,5**
23,0	24,0	1,0	5,5	5,9	**5,7**
24,0	25,0	1,0	5,2	5,2	**5,2**
25,0	26,0	1,0	5,1	5,4	**5,2**
26,0	27,0	1,0	5,1	5,5	**5,3**
27,0	28,0	1,0	5,5	5,5	**5,5**
28,0	29,0	1,0	5,6	5,7	**5,7**
29,0	30,0	1,0	6,9	5,3	**6,1**
30,0	31,0	1,0	5,8	5,0	**5,4**
31,0	32,0	1,0	7,5	6,8	**7,2**
32,0	33,0	1,0	8,2	6,0	**7,1**
33,0	34,0	1,0	5,0	4,5	**4,8**
34,0	35,0	1,0	5,2	5,7	**5,5**
35,0	36,0	1,0	7,1	5,7	**6,4**
36,0	37,0	1,0	6,7	5,7	**6,2**
37,0	38,0	1,0	6,9	6,1	**6,5**
38,0	39,0	1,0	7,4	5,4	**6,4**
39,0	40,0	1,0	6,8	7,4	**7,1**
40,0	41,0	1,0	7,5	6,9	**7,2**
41,0	42,0	1,0	8,1	7,5	**7,8**
42,0	43,0	1,0	6,6	9,7	**8,1**
43,0	43,5	0,5	8,9	8,6	**8,8**
Mean (Section)					**6,5**

▼ 4 lanes to km 9.6

Section 2- M 4, Bypass Gazi-Mammad (KM 43+450 - 58+980)

Chainage		Road Length	IRI (m/km)		**IRI mean**
from km	to km	(km)	from Baku	to Baku	**(m/km)**
43,5	44,0	0,5	8,9	8,6	**8,8**
44,0	45,0	1,0	7,1	6,7	**6,9**
45,0	46,0	1,0	7,3	5,3	**6,3**
46,0	47,0	1,0	6,3	8,0	**7,2**
47,0	48,0	1,0	8,9	9,5	**9,2**
48,0	49,0	1,0	9,5	9,3	**9,4**
49,0	50,0	1,0	9,4	8,0	**8,7**
50,0	51,0	1,0	4,1	5,4	**4,8**
51,0	52,3	1,3	4,0	4,8	**4,4**
52,3	53,0	0,7	5,9	4,2	**5,1**
53,0	54,2	1,2	5,2	4,5	**4,8**
54,2	55,0	0,8	5,5	4,9	**5,2**
55,0	56,1	1,1	5,9	6,2	**6,1**
56,1	57,0	0,9	6,6	6,8	**6,7**
57,0	58,0	1,0	7,0	6,2	**6,6**
58,0	59,0	1,0	5,8	6,7	**6,3**
Mean (Section)					**6,6**

Section 3 - M 4, Gazi-Mammed - Kyurdamir (KM 58+980 - 124+300)

Chainage		Road Length	IRI (m/km)		IRI mean
from km	to km	(km)	from Baku	to Baku	(m/km)
59,0	60,0	1,0	6,6	6,8	**6,7**
60,0	61,0	1,0	6,2	6,1	**6,2**
61,0	62,0	1,0	7,0	6,7	**6,9**
62,0	63,0	1,0	9,8	7,0	**8,4**
63,0	64,0	1,0	8,0	7,1	**7,5**
64,0	65,0	1,0	7,9	8,0	**7,9**
65,0	66,0	1,0	8,2	7,8	**8,0**
66,0	67,0	1,0	8,0	7,6	**7,8**
67,0	68,0	1,0	9,8	8,9	**9,3**
68,0	69,0	1,0	8,8	6,2	**7,5**
69,0	70,0	1,0	6,6	6,4	**6,5**
70,0	71,0	1,0	9,0	8,7	**8,8**
71,0	72,0	1,0	8,9	6,8	**7,8**
72,0	73,0	1,0	8,1	6,6	**7,4**
73,0	74,0	1,0	7,0	5,8	**6,4**
74,0	75,0	1,0	6,2	4,8	**5,5**
75,0	76,0	1,0	6,1	7,3	**6,7**
76,0	77,0	1,0	6,4	7,3	**6,8**
77,0	78,0	1,0	7,2	7,3	**7,3**
78,0	79,0	1,0	8,4	7,0	**7,7**
79,0	80,0	1,0	6,6	5,2	**5,9**
80,0	81,0	1,0	7,8	5,4	**6,6**
81,0	82,0	1,0	7,7	7,7	**7,7**
82,0	83,4	1,4	8,7	7,5	**8,1**
83,4	84,0	0,6	8,3	7,8	**8,0**
84,0	85,0	1,0	7,1	6,7	**6,9**
85,0	86,0	1,0	6,0	4,0	**5,0**
86,0	87,0	1,0	5,2	5,1	**5,1**
87,0	88,0	1,0	5,4	5,6	**5,5**
88,0	89,0	1,0	8,0	6,2	**7,1**
89,0	90,0	1,0	6,0	6,7	**6,4**
90,0	91,0	1,0	7,8	5,8	**6,8**
91,0	92,0	1,0	5,8	7,0	**6,4**
92,0	93,0	1,0	6,0	7,4	**6,7**
93,0	94,1	1,1	6,3	6,9	**6,6**
94,1	95,0	0,9	6,6	5,9	**6,2**
95,0	96,0	1,0	4,2	5,4	**4,8**
96,0	97,0	1,0	4,9	4,8	**4,9**
97,0	98,0	1,0	5,0	5,4	**5,2**
98,0	99,0	1,0	5,1	5,1	**5,1**
99,0	100,0	1,0	5,2	5,5	**5,3**
100,0	101,0	1,0	5,1	5,3	**5,2**
101,0	102,0	1,0	3,0	4,8	**3,9**
102,0	103,0	1,0	4,3	3,5	**3,9**
103,0	104,7	1,7	3,6	4,3	**4,0**
104,7	105,0	0,3	5,4	4,1	**4,7**
105,0	106,3	1,3	4,9	4,0	**4,4**

Section 3 - M 4, Gazi-Mammed - Kyurdamir (KM 58+980 - 124+300)

Chainage		Road Length	IRI (m/km)		**IRI mean**
from km	to km	(km)	from Baku	to Baku	**(m/km)**
106,3	107,0	0,7	5,8	3,6	**4,7**
107,0	108,2	1,2	3,9	4,6	**4,2**
108,2	109,0	0,8	5,4	4,5	**4,9**
109,0	110,0	1,0	3,7	4,2	**3,9**
110,0	111,0	1,0	3,7	3,5	**3,6**
111,0	112,0	1,0	3,5	4,9	**4,2**
112,0	113,0	1,0	4,1	4,2	**4,2**
113,0	114,0	1,0	4,5	6,4	**5,4**
114,0	115,0	1,0	6,8	5,1	**5,9**
115,0	116,0	1,0	6,1	5,1	**5,6**
116,0	117,0	1,0	4,8	5,0	**4,9**
117,0	118,0	1,0	4,1	5,0	**4,5**
118,0	119,2	1,2	4,0	3,7	**3,8**
119,2	120,0	0,8	4,7	4,2	**4,4**
120,0	121,0	1,0	4,7	4,2	**4,4**
121,0	122,0	1,0	4,4	4,3	**4,3**
122,0	123,0	1,0	3,4	4,3	**3,8**
123,0	124,0	1,0	4,2	4,3	**4,2**
124,0	124,3	0,3	5,4	4,5	**4,9**
Mean (Section)					**5,9**

Section 4 - M 4, Kyurdamir - Ujar (KM 124+300 - 170+500)

Chainage		Road Length	IRI (m/km)		**IRI mean**
from km	to km	(km)	from Baku	to Baku	**(m/km)**
124,3	125,0	0,7	5,4	4,6	**5,0**
125,0	126,0	1,0	4,8	5,5	**5,2**
126,0	127,0	1,0	6,1	6,7	**6,4**
127,0	128,0	1,0	6,7	7,0	**6,9**
128,0	129,0	1,0	7,5	6,3	**6,9**
129,0	130,0	1,0	5,8	6,7	**6,3**
130,0	131,0	1,0	5,5	6,3	**5,9**
131,0	132,0	1,0	4,5	5,9	**5,2**
132,0	133,0	1,0	5,9	4,5	**5,2**
133,0	134,1	1,1	6,1	6,8	**6,5**
134,1	135,0	0,9	5,3	5,8	**5,6**
135,0	136,0	1,0	6,0	5,4	**5,7**
136,0	137,0	1,0	6,4	5,2	**5,8**
137,0	138,0	1,0	5,5	6,1	**5,8**
138,0	139,0	1,0	5,5	5,7	**5,6**
139,0	140,0	1,0	7,7	6,3	**7,0**
140,0	141,0	1,0	6,4	5,7	**6,1**
141,0	142,0	1,0	6,9	5,7	**6,3**
142,0	143,0	1,0	6,0	6,6	**6,3**
143,0	144,0	1,0	6,3	6,5	**6,4**
144,0	145,0	1,0	6,6	7,1	**6,8**
145,0	146,2	1,2	4,9	5,1	**5,0**
146,2	147,0	0,8	6,1	6,8	**6,4**
147,0	148,0	1,0	6,0	6,0	**6,0**
148,0	149,0	1,0	4,6	5,5	**5,1**
149,0	150,0	1,0	5,5	4,7	**5,1**
150,0	151,0	1,0	5,3	4,8	**5,1**
151,0	152,0	1,0	5,2	5,1	**5,1**
152,0	153,0	1,0	3,5	4,1	**3,8**
153,0	154,0	1,0	5,1	4,7	**4,9**
154,0	155,0	1,0	3,9	4,7	**4,3**
155,0	156,0	1,0	5,3	4,7	**5,0**
156,0	157,0	1,0	5,1	5,5	**5,3**
157,0	158,0	1,0	6,4	6,7	**6,5**
158,0	159,0	1,0	5,1	4,9	**5,0**
159,0	160,0	1,0	4,8	5,1	**4,9**
160,0	161,0	1,0	5,3	3,5	**4,4**
161,0	162,0	1,0	6,6	4,4	**5,5**
162,0	163,2	1,2	5,0	5,3	**5,2**
163,2	164,0	0,8	5,6	5,5	**5,6**
164,0	165,0	1,0	5,7	5,8	**5,7**
165,0	166,0	1,0	6,1	5,3	**5,7**
166,0	167,0	1,0	5,7	5,8	**5,7**
167,0	168,0	1,0	5,0	5,1	**5,0**
168,0	169,0	1,0	7,4	5,8	**6,6**
169,0	170,0	1,0	3,5	4,7	**4,1**
170,0	170,5	0,5	4,7	4,2	**4,4**
Mean (Section)					**5,6**

Section 5 - M 4, Ujar - Yevlakh (KM 170+500 - 216+500)

Chainage		Road Length	IRI (m/km)		**IRI mean**
from km	to km	(km)	from Baku	to Baku	**(m/km)**
170,5	171,3	0,8	4,7	4,3	**4,5**
171,3	172,0	0,7	4,2	4,5	**4,4**
172,0	172,9	1,0	5,0	4,9	**5,0**
172,9	173,9	1,0	5,5	5,2	**5,3**
173,9	174,9	1,0	6,8	5,5	**6,1**
174,9	175,9	1,0	5,0	5,8	**5,4**
175,9	176,8	1,0	5,7	4,3	**5,0**
176,8	177,8	1,0	5,2	5,6	**5,4**
177,8	178,9	1,1	7,0	4,9	**5,9**
178,9	179,8	0,9	5,2	4,4	**4,8**
179,8	180,7	1,0	4,6	5,1	**4,8**
180,7	181,7	1,0	3,9	3,8	**3,8**
181,7	182,7	1,0	3,4	2,9	**3,2**
182,7	183,7	1,0	3,3	3,9	**3,6**
183,7	184,6	1,0	4,3	4,0	**4,1**
184,6	185,6	1,0	4,8	4,6	**4,7**
185,6	186,6	1,0	3,8	3,5	**3,6**
186,6	187,6	1,0	3,4	3,7	**3,5**
187,6	188,5	1,0	4,1	4,3	**4,2**
188,5	189,5	1,0	5,3	5,3	**5,3**
189,5	190,5	1,0	5,0	5,0	**5,0**
190,5	191,5	1,0	5,8	4,6	**5,2**
191,5	192,4	1,0	6,2	5,0	**5,6**
192,4	193,4	1,0	4,0	5,5	**4,8**
193,4	194,4	1,0	7,1	5,3	**6,2**
194,4	195,4	1,0	5,1	5,6	**5,4**
195,4	196,0	0,6	7,0	6,0	**6,5**
196,0	196,3	0,4	4,1	6,0	**5,1**
196,3	197,3	1,0	4,3	5,6	**5,0**
197,3	198,3	1,0	5,6	5,2	**5,4**
198,3	199,3	1,0	6,6	4,7	**5,6**
199,3	200,2	1,0	7,2	6,4	**6,8**
200,2	201,2	1,0	6,0	5,7	**5,9**
201,2	202,2	1,0	4,5	5,4	**5,0**
202,2	203,2	1,0	4,3	5,2	**4,7**
203,2	204,1	1,0	4,9	3,7	**4,3**
204,1	205,1	1,0	4,7	4,9	**4,8**
205,1	206,3	1,2	3,5	5,3	**4,4**
206,3	207,1	0,8	3,1	2,8	**2,9**
207,1	208,0	1,0	4,0	3,8	**3,9**
208,0	209,0	1,0	4,1	3,2	**3,7**
209,0	210,0	1,0	6,2	4,6	**5,4**
210,0	211,0	1,0	3,8	5,0	**4,4**
211,0	212,0	1,0	3,9	3,9	**3,9**
212,0	212,9	1,0	3,6	3,9	**3,7**
212,9	213,9	1,0	4,5	3,8	**4,2**
213,9	214,9	1,0	7,0	3,2	**5,1**
214,9	215,4	0,5	5,9	4,1	**5,0**
215,4	215,9	0,5	6,0	4,1	**5,1**
215,9	216,5	0,6	4,8	7,5	**6,1**
Mean (Section)					**4,8**

Section 6 - M 4, Bypass Yevlakh (KM 216+500 - 223+468)

Chainage		Road Length	IRI (m/km)		**IRI mean**
from km	to km	(km)	from Baku	to Baku	**(m/km)**
216,5	216,8	0,3	4,6	7,4	6,0
216,8	217,8	1,0	7,4	6,4	6,9
217,8	218,8	1,0	5,9	5,9	5,9
218,8	219,8	1,0	6,9	7,9	7,4
219,8	220,8	1,0	5,6	6,6	6,1
220,8	221,8	1,0	8,5	7,8	8,2
221,8	222,1	0,3	6,2	5,9	6,1
222,1	222,8	0,7	6,2	8,9	7,5
222,8	223,5	0,6	7,1	8,1	7,6
Mean (Section)					**6,9**

Section 7 - M 1, Yevlakh - Mingechevir (KM 280+683 - 288+700)

Chainage		Road Length	IRI (m/km)		**IRI mean**
from km	to km	(km)	from Baku	to Baku	**(m/km)**
280,7	281,1	0,4	7,1	8,1	**7,6**
281,1	281,6	0,5	7,2	6,7	**7,0**
281,6	282,1	0,5	6,2	5,2	**5,7**
282,1	282,6	0,5	6,4	5,4	**5,9**
282,6	283,6	1,0	5,2	5,7	**5,4**
283,6	284,6	1,0	7,2	6,0	**6,6**
284,6	285,6	1,0	5,8	4,6	**5,2**
285,6	286,6	1,0	7,0	5,8	**6,4**
286,6	287,6	1,0	4,7	6,8	**5,8**
287,6	288,6	1,0	6,7	6,1	**6,4**
288,6	288,7	0,1	6,7	5,4	**6,0**
Mean (Section)					**6,2**

Section 8 - M 1, Mingechevir - Ganja (KM 288+700 - 333+500)

Chainage		Road Length	IRI (m/km)		IRI mean
from km	to km	(km)	from Baku	to Baku	(m/km)
288,7	288,9	0,2	6,7	5,1	**5,9**
288,9	289,6	0,7	6,7	7,7	**7,2**
289,6	290,6	1,0	5,3	6,2	**5,7**
290,6	291,6	1,0	5,4	5,0	**5,2**
291,6	292,6	1,0	8,1	6,2	**7,1**
292,6	293,6	1,0	5,5	4,4	**5,0**
293,6	294,6	1,0	6,4	10,3	**8,3**
294,6	295,6	1,0	4,4	5,2	**4,8**
295,6	296,6	1,0	4,5	4,5	**4,5**
296,6	298,1	1,5	4,3	3,9	**4,1**
298,1	298,6	0,5	7,9	5,3	**6,6**
298,6	300,3	1,7	4,4	4,3	**4,4**
300,3	300,6	0,3	3,9	5,2	**4,6**
300,6	301,9	1,3	3,5	4,9	**4,2**
301,9	302,6	0,7	4,3	4,3	**4,3**
302,6	303,6	1,0	3,9	3,9	**3,9**
303,6	304,6	1,0	3,7	4,7	**4,2**
304,6	305,6	1,0	4,6	4,1	**4,4**
305,6	306,2	0,6	4,7	7,1	**5,9**
306,2	306,6	0,4	4,7	4,2	**4,5**
306,6	307,6	1,0	5,2	4,7	**4,9**
307,6	308,6	1,0	4,9	4,7	**4,8**
308,6	309,3	0,8	5,2	4,9	**5,0**
309,3	310,4	1,1	5,2	5,2	**5,2**
310,4	310,6	0,2	9,3	5,2	**7,3**
310,6	311,6	1,0	5,5	5,2	**5,3**
311,6	312,6	1,0	5,5	5,0	**5,2**
312,6	313,6	1,0	5,5	4,8	**5,1**
313,6	314,6	1,0	5,1	6,4	**5,7**
314,6	315,6	1,0	5,8	5,2	**5,5**
315,6	316,6	1,0	5,0	5,3	**5,1**
316,6	317,6	1,0	5,5	5,5	**5,5**
317,6	318,6	1,0	5,8	6,3	**6,1**
318,6	319,6	1,0	6,0	7,1	**6,5**
319,6	320,6	1,0	4,7	5,8	**5,3**
320,6	321,6	1,0	7,1	4,6	**5,9**
321,6	322,6	1,0	6,5	8,8	**7,7**
322,6	323,6	1,0	5,8	6,3	**6,1**
323,6	324,8	1,2	6,3	7,1	**6,7**
324,8	325,6	0,8	7,0	7,5	**7,3**
325,6	326,6	1,0	6,4	7,4	**6,9**
326,6	327,6	1,0	5,1	7,4	**6,2**
327,6	328,6	1,0	5,5	5,7	**5,6**
328,6	329,6	1,0	5,8	6,8	**6,3**
329,6	330,9	1,3	5,1	5,5	**5,3**
330,9	331,9	1,0	5,2	5,7	**5,5**
331,9	332,6	0,7	4,0	4,9	**4,5**
332,6	333,5	0,9	5,1	0,1	**2,6**
Mean (Section)					**5,5**

Section 9 - M 1, Bypass Ganja (KM 333+500 - 369+500)

Chainage		Road Length	IRI (m/km)		IRI mean
from km	to km	(km)	from Baku	to Baku	(m/km)
333,5	334,0	0,5	5,1	5,1	**5,1**
334,0	334,6	0,6	11,8	5,8	**8,8**
334,6	335,6	1,0	6,9	9,2	**8,0**
335,6	336,6	1,0	4,4	7,3	**5,8**
336,6	337,6	1,0	4,4	4,9	**4,7**
337,6	338,6	1,0	4,9	4,9	**4,9**
338,6	339,6	1,0	5,3	4,4	**4,8**
339,6	340,6	1,0	5,1	4,6	**4,9**
340,6	341,6	1,0	4,8	4,9	**4,8**
341,6	342,6	1,0	5,9	4,9	**5,4**
342,6	343,6	1,0	5,8	5,6	**5,7**
343,6	344,6	1,0	5,4	5,6	**5,5**
344,6	345,6	1,0	5,5	4,2	**4,9**
345,6	346,9	1,3	5,4	10,6	**8,0**
346,9	347,6	0,7	5,6	5,7	**5,7**
347,6	348,0	0,4	4,0	4,9	**4,5**
348,0	349,1	1,1	4,0	3,6	**3,8**
349,1	349,6	0,5	3,7	5,2	**4,4**
349,6	350,6	1,0	5,3	5,2	**5,3**
350,6	351,6	1,0	5,2	6,3	**5,8**
351,6	352,6	1,0	6,7	6,7	**6,7**
352,6	353,6	1,0	8,9	7,2	**8,1**
353,6	354,6	1,0	6,4	7,9	**7,1**
354,6	355,6	1,0	4,4	5,5	**5,0**
355,6	356,6	1,0	5,4	5,9	**5,7**
356,6	357,6	1,0	5,8	6,3	**6,1**
357,6	358,6	1,0	5,2	6,3	**5,7**
358,6	359,6	1,0	6,3	5,5	**5,9**
359,6	360,6	1,0	4,7	5,8	**5,3**
360,6	361,6	1,0	4,3	5,5	**4,9**
361,6	362,8	1,2	4,4	4,7	**4,6**
362,8	363,6	0,8	4,1	4,4	**4,3**
363,6	364,6	1,0	7,0	6,2	**6,6**
364,6	365,1	0,5	7,0	5,0	**6,0**
365,1	365,6	0,5	7,0	8,2	**7,6**
365,6	366,6	1,0	8,0	9,0	**8,5**
366,6	367,6	1,0	6,5	8,7	**7,6**
367,6	368,6	1,0	6,4	7,9	**7,2**
368,6	369,4	0,8	5,0	4,0	**4,5**
369,4	369,5	0,1	5,8	4,0	**4,9**
Mean (Section)					**5,8**

Section 10 - M 1, Ganja - Tovuz (KM 369+500 - 431+000)

Chainage		Road Length	IRI (m/km)		IRI mean
from km	to km	(km)	from Baku	to Baku	(m/km)
369,5	369,7	0,2	5,8	4,5	**5,1**
369,7	369,8	0,1	5,8	4,5	**5,1**
369,8	370,6	0,8	5,6	4,5	**5,0**
370,6	371,6	1,0	6,4	5,5	**6,0**
371,6	372,6	1,0	4,2	4,7	**4,4**
372,6	373,6	1,0	3,8	4,3	**4,0**
373,6	374,6	1,0	5,8	6,1	**5,9**
374,6	375,6	1,0	3,4	3,8	**3,6**
375,6	376,6	1,0	4,4	3,6	**4,0**
376,6	377,6	1,0	3,9	4,2	**4,0**
377,6	378,6	1,0	4,0	3,9	**3,9**
378,6	379,6	1,0	4,4	4,3	**4,3**
379,6	380,9	1,3	4,1	4,5	**4,3**
380,9	381,8	0,9	3,5	3,8	**3,6**
381,8	382,6	0,8	4,5	4,1	**4,3**
382,6	383,6	1,0	4,2	3,9	**4,0**
383,6	384,6	1,0	5,2	5,3	**5,2**
384,6	385,6	1,0	5,2	4,3	**4,8**
385,6	386,6	1,0	4,7	5,2	**5,0**
386,6	387,6	1,0	5,2	5,8	**5,5**
387,6	388,6	1,0	4,7	4,6	**4,7**
388,6	389,6	1,0	3,8	4,4	**4,1**
389,6	390,9	1,3	4,8	4,7	**4,8**
390,9	391,6	0,7	5,7	5,0	**5,4**
391,6	392,6	1,0	8,0	6,1	**7,1**
392,6	393,6	1,0	4,6	4,7	**4,7**
393,6	394,6	1,0	6,1	7,0	**6,5**
394,6	395,6	1,0	5,5	7,6	**6,6**
395,6	396,6	1,0	7,0	6,4	**6,7**
396,6	397,6	1,0	5,8	5,0	**5,4**
397,6	398,6	1,0	5,0	6,6	**5,8**
398,6	399,1	0,5	6,4	6,6	**6,5**
399,1	399,6	0,5	5,1	5,7	**5,4**
399,6	400,8	1,2	4,7	4,7	**4,7**
400,8	401,6	0,8	4,4	4,9	**4,6**
401,6	402,6	1,0	5,8	6,5	**6,1**
402,6	404,0	1,4	4,8	6,4	**5,6**
404,0	404,9	0,9	4,5	4,9	**4,7**
404,9	405,6	0,7	4,7	4,2	**4,5**
405,6	406,6	1,0	5,8	6,7	**6,3**
406,6	407,6	1,0	5,0	5,4	**5,2**
407,6	408,9	1,3	5,7	7,4	**6,6**
408,9	409,6	0,7	6,9	6,9	**6,9**
409,6	410,6	1,0	5,0	6,5	**5,7**
410,6	411,7	1,1	6,6	5,7	**6,1**
411,7	412,6	0,9	10,1	8,2	**9,1**
412,6	413,9	1,3	7,1	6,8	**6,9**
413,9	414,6	0,7	8,8	7,8	**8,3**
414,6	415,6	1,0	8,0	8,5	**8,3**
415,6	416,6	1,0	8,5	8,3	**8,4**
416,6	417,6	1,0	8,8	8,2	**8,5**
417,6	419,1	1,5	6,9	7,7	**7,3**
419,1	420,1	1,0	5,8	7,3	**6,6**
420,1	420,6	0,5	5,7	6,6	**6,2**

Section 10 - M 1, Ganja - Tovuz (KM 369+500 - 431+000)

Chainage		Road Length	IRI (m/km)		**IRI mean**
from km	to km	(km)	from Baku	to Baku	**(m/km)**
420,6	421,9	1,3	5,9	6,0	**5,9**
421,9	422,6	0,7	5,4	5,6	**5,5**
422,6	424,1	1,5	5,5	5,7	**5,6**
424,1	424,6	0,5	5,1	5,5	**5,3**
424,6	425,8	1,2	5,7	5,6	**5,7**
425,8	426,6	0,8	5,9	4,9	**5,4**
426,6	427,6	1,0	4,9	5,3	**5,1**
427,6	428,7	1,1	4,8	4,9	**4,9**
428,7	429,6	0,9	6,5	7,0	**6,7**
429,6	430,6	1,0	5,1	5,2	**5,2**
430,6	431,0	0,4	7,0	6,5	**6,7**
Mean (Section)					**5,6**

Section 11 - M 1, Tovuz - Gazakh (KM 431+000 - 456+500)

Chainage		Road Length	IRI (m/km)		IRI mean
from km	to km	(km)	from Baku	to Baku	(m/km)
431,0	431,6	0,6	7,0	6,5	**6,8**
431,6	431,8	0,3	5,3	7,1	**6,2**
431,8	432,6	0,8	8,5	7,1	**7,8**
432,6	433,6	1,0	5,1	4,8	**4,9**
433,6	434,6	1,0	5,2	4,6	**4,9**
434,6	435,6	1,0	4,6	5,3	**4,9**
435,6	436,6	1,0	5,2	5,1	**5,1**
436,6	438,1	1,5	3,8	5,1	**4,5**
438,1	438,9	0,8	6,1	6,1	**6,1**
438,9	439,6	0,7	7,0	7,0	**7,0**
439,6	440,6	1,0	5,8	7,8	**6,8**
440,6	441,6	1,0	7,7	9,3	**8,5**
441,6	442,6	1,0	5,2	6,7	**5,9**
442,6	443,6	1,0	6,3	6,8	**6,5**
443,6	444,6	1,0	5,3	7,1	**6,2**
444,6	445,6	1,0	6,4	7,9	**7,2**
445,6	446,6	1,0	6,4	7,2	**6,8**
446,6	447,6	1,0	5,4	7,4	**6,4**
447,6	448,6	1,0	6,7	7,9	**7,3**
448,6	449,7	1,1	6,8	8,2	**7,5**
449,7	450,6	0,9	6,8	7,4	**7,1**
450,6	451,6	1,0	6,5	6,9	**6,7**
451,6	453,1	1,5	5,1	5,3	**5,2**
453,1	453,6	0,5	7,7	7,1	**7,4**
453,6	454,8	1,3	3,7	4,5	**4,1**
454,8	455,1	0,3	4,1	5,2	**4,7**
455,1	456,5	1,4	4,1	5,9	**5,0**
Mean (Section)					**6,2**

Section 12 - M1, Bypass Gazakh (KM456+500 - 463+500)

Chainage		Road Length	IRI (m/km)		**IRI mean**
from km	to km	(km)	from Baku	to Baku	**(m/km)**
456,5	457,1	0,6	4,1	9,5	**6,8**
457,1	457,6	0,5	6,9	7,7	**7,3**
457,6	458,6	1,0	8,2	5,9	**7,0**
458,6	459,6	1,0	7,2	5,2	**6,2**
459,6	460,6	1,0	5,5	6,2	**5,9**
460,6	461,6	1,0	6,3	6,5	**6,4**
461,6	462,6	1,0	6,8	8,8	**7,8**
462,6	463,5	0,9	7,0	0,4	**3,7**
Mean (Section)					**6,4**

Section 13 - M 1, Gazakh - Georgian Border (KM 463+500 - 501+350)

Chainage		Road Length	IRI (m/km)		IRI mean
from km	to km	(km)	from Baku	to Baku	(m/km)
463,5	463,6	0,1	6,7	5,7	**6,2**
463,6	464,6	1,0	6,4	6,2	**6,3**
464,6	465,6	1,0	8,6	5,0	**6,8**
465,6	466,6	1,0	6,4	4,8	**5,6**
466,6	467,6	1,0	5,6	6,4	**6,0**
467,6	468,6	1,0	5,7	6,5	**6,1**
468,6	469,6	1,0	5,3	5,7	**5,5**
469,6	470,6	1,0	4,9	6,6	**5,8**
470,6	471,6	1,0	6,1	6,3	**6,2**
471,6	472,6	1,0	5,3	3,8	**4,6**
472,6	473,6	1,0	3,2	4,8	**4,0**
473,6	474,6	1,0	3,9	4,3	**4,1**
474,6	475,6	1,0	3,5	4,5	**4,0**
475,6	476,6	1,0	5,1	5,3	**5,2**
476,6	477,6	1,0	3,5	4,0	**3,8**
477,6	478,6	1,0	4,2	5,2	**4,7**
478,6	479,8	1,2	4,2	5,3	**4,8**
479,8	480,6	0,8	5,0	4,4	**4,7**
480,6	481,6	1,0	6,9	5,9	**6,4**
481,6	482,1	0,6	5,0	6,8	**5,9**
482,1	482,8	0,6	5,0	4,5	**4,8**
482,8	483,6	0,8	4,7	4,5	**4,6**
483,6	484,6	1,0	4,3	5,6	**4,9**
484,6	485,6	1,0	4,5	4,7	**4,6**
485,6	486,6	1,0	6,1	7,3	**6,7**
486,6	487,6	1,0	5,9	5,6	**5,8**
487,6	488,6	1,0	5,4	6,3	**5,8**
488,6	489,6	1,0	5,0	5,4	**5,2**
489,6	490,6	1,0	3,6	5,8	**4,7**
490,6	491,6	1,0	3,8	4,1	**4,0**
491,6	492,6	1,0	4,1	5,0	**4,6**
492,6	493,6	1,0	4,6	4,7	**4,7**
493,6	494,6	1,0	5,0	6,0	**5,5**
494,6	495,6	1,0	5,7	6,3	**6,0**
495,6	496,6	1,0	4,3	4,9	**4,6**
496,6	497,6	1,0	5,6	6,7	**6,1**
497,6	498,6	1,0	4,4	6,2	**5,3**
498,6	499,6	1,0	3,9	3,6	**3,8**
499,6	500,6	1,0	4,5	5,3	**4,9**
500,6	501,4	0,8	7,3	6,6	**7,0**
Mean (Section)					**5,2**

APPENDIX 6.11

DRAINAGE STRUCTURES LIST

TRACECA -Feasibility Study for Road Rehabilitation in Azerbaijan
- DRAINAGE STRUCTURES LIST -

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Section 1 - M 4: Alyat - Gazi Mammad; km 0+000 to km 43+450

No	Station	EXISTING STRUCTURE				DEFICIENCIES									MAINTENANCE ACTIVITY				REQUIRED CULVERT LENGTH					
		Type	Material	Length	Size/Diameter	Silted/Blocked		Scour			Structural Damage				Cleaning	Backfill of scoured areas and Protection	Repair of Inlet/ Outlet	Reconstr./ Replace-ment	500 mm Dia.	750 mm Dia.	1000 mm Dia.	1250 mm Dia.	1500 mm Dia.	Other
						Partial	Total	Minor Erosion	Erosion/ Scouring	Severe Scouring/ Underm.	Minor Damage	Settle-ment	Damaged Inlet/ Outlet	Damaged Culvert										
	(m)			(m)	(mm)				m^2	m^2		m^2	m^2	m	m	m^2	m^2		m	m	m	m	m	m
1	3.081	P	RC	22,0	1200						●													
2	4.932	S	RC	12,0	3800x1700																			
3	6.293	P	RC	33,0	1000	●									33,00									
4	7.577	P	M	41,5	1500		●●								41,50									
5	9.429	B	RC	32,0	2000x2000	●									32,00									
6	10.615	B/S	RC	12.0 + 15.0	3800x1700 + 2000x2000	●									27,00									
7	11.786	S	RC	12,0	3800x1700																			
8	13.133	S	RC	10,0	2000x1700	●					●		2,00		10,00		2,00							
9	14.574	P	RC	18,0	750		●●								18,00									
10	15.151	S	RC	11,5	3800x1700																			
11	15.746	P	RC	18,0	750		●●								18,00									
12	15.948	P	RC	17,0	750		●●								17,00									
13	16.084	P	RC	17,0	750	●									17,00									
14	16.985	P	RC	16,0	750		●●								16,00									
15	17.571	P	RC	16,0	750	●									16,00									
16	18.070	P	RC	16,0	750		●●								16,00									
17	18.240	P	RC	14,0	750		●●								14,00									
18	18.369	P	RC	17,0	1250		●●								17,00									
19	18.590	P	RC	16,0	750		●●								16,00									
20	19.329	P	RC	18,0	750	●									18,00									
21	21.773	P	RC	17,0	1000	●									17,00									
22	22.450	P	M	31,0	1250		●●								31,00									
23	23.487	P	M	35,0	1250 + 1500	●									35,00									
24	24.582	P	RC	15,0	1000		●●				●		2,50		15,00		2,50							
25	25.084	P	RC/M	16.0+22.0	750 + 1250(2)						●		1,50				1,50							
26	25.560	P	RC	14,0	1000		●●				●		2,00		14,00		2,00							
27	26.644	P	RC	16,0	750		●●								16,00									
28	27.145	P	RC	17,0	750		●●								17,00									
29	29.394	S	RC	9,6	2200x1800																			
30	29.833	P	RC	16,0	1200(2)																			
31	30.306	P	RC	16,0	1200																			
32	30.639	S	RC	9,0	2000x1700	●					●		0,50		9,00		0,50							
33	31.115	S	RC	40,0	5000x2800																			
34	31.365	P	RC	16,0	1200																			
35	31.924	P	RC	16,0	1200	●					●		0,50		16,00		0,50							
36	32.352	P	RC	16,0	1200																			
37	32.703	P	RC	24,0	1250(2)																			
38	33.174	P	RC	15,5	1000	●									15,50									
39	33.348	P	RC	21,0	1000(2)	●					●		0,60		21,00		0,60							
40	33.503	P	RC	16,0	1200																			
41	33.836	P	RC	16,0	1250																			
42	37.431	P	RC	16,0	1250						●		0,40				0,40							

Type: P= PIPE CULVERT B= BOX CULVERT S= SLAVINSKI CULVERT
Material: RC= REINFORCED CONCRETE M= METAL AC=ASBESTOS CEMENT

Section 1 - M 4: Alyat - Gazi Mammad; km 0+000 to km 43+450

No	Station	EXISTING STRUCTURE				DEFICIENCIES									MAINTENANCE ACTIVITY				REQUIRED CULVERT LENGTH					
		Type	Material	Length	Size/Diameter	Silted/Blocked		Scour			Structural Damage				Cleaning	Backfill of scoured areas and Protection	Repair of Inlet/ Outlet	Reconstr./ Replace-ment	500 mm Dia.	750 mm Dia.	1000 mm Dia.	1250 mm Dia.	1500 mm Dia.	Other
						Partial	Total	Minor Erosion	Erosion/ Scouring	Severe Scouring/ Underm.	Minor Damage	Settle-ment	Damaged Inlet/ Outlet	Damaged Culvert										
	(m)			(m)	(mm)				m^2	m^2		m^2	m^2	m	m	m^2	m^2		m	m	m	m	m	m
43	39.097	P	RC	22,0	1000 + 750 + 1000																			
44	39.636	B	RC	20,0	2000x2000(2)																			
45	40.393	B	RC	26,0	2000x2000																			
46	40.720	B	RC	46,0	2000x2000																			
47	41.702	B	RC	52,0	2000x2000																			
48	42.788	P	RC	22,0	1000(2)																			

Type: P= PIPE CULVERT B= BOX CULVERT S= SLAVINSKI CULVERT
Material: RC= REINFORCED CONCRETE M= METAL AC=ASBESTOS CEMENT

TRACECA -Feasibility Study for Road Rehabilitation in Azerbaijan
- DRAINAGE STRUCTURES LIST -

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Section 2 - M 4: Bypass Gazi-Mammad; km 43+450 to km 58+980

No	Station	EXISTING STRUCTURE				DEFICIENCIES									MAINTENANCE ACTIVITY				REQUIRED CULVERT LENGTH					
		Type	Material	Length	Size/Diameter	Silted/Blocked		Scour			Structural Damage				Cleaning	Backfill of scoured areas and Protection	Repair of Inlet/ Outlet	Reconstr / Replace-ment	500 mm Dia.	750 mm Dia.	1000 mm Dia.	1250 mm Dia.	1500 mm Dia.	Other
						Partial	Total	Minor Erosion	Erosion/ Scouring	Severe Scouring/ Underm.	Minor Damage	Settle-ment	Damaged Inlet/ Outlet	Damaged Culvert										
	(m)			(m)	(mm)				m^2	m^2		m^2	m^2	m	m	m^2	m^2		m	m	m	m	m	m
1	44.218	P	RC	21,0	1000																			
2	44.479	P	RC	24,5	1000																			
3	44.806	P	RC	24,5	1000																			
4	45.178	P	RC	24,5	1000	●									24,50									
5	45.431	P	RC	22,0	1000																			
6	45.610	P	RC	20,0	1000	●		●	1,68		●		0,50		20,00	1,68	0,50							
7	46.907	P	RC	22,0	1250		●●								22,00									
8	47.367	P	RC	20,0	1500	●		●	4,00		●		1,00		20,00	4,00	1,00							
9	49.708	P	RC	19,0	1500	●									19,00									
10	51.016	P	RC	24,0	1000		●●								24,00									
11	51.232	P	RC	24,0	1250		●●								24,00									
12	51.911	P	RC	22,0	1000	●									22,00									
13	52.503	P	RC	19,0	1200	●									19,00									
14	52.154	P	RC	19,0	1000																			
15	53.253	P	RC	21,5	1000		●●								21,50									
16	53.489	P	RC	21,5	1500																			
17	53.847	P	RC	21,5	1500		●●				●			0,50	21,50			RR					1,00	
18	54.903	P	RC	21,0	1000		●●				●		1,00	0,50	21,00		1,00	RR			1,00			
19	55.182	P	RC	26,0	1000	●					●		1,50		26,00		1,50							
20	55.792	P	RC	19,0	1250		●●								19,00									
21	56.141	P	RC	21,0	1000	●									21,00									
22	57.456	P	RC	21,5	1000	●									21,50									
23	58.892	P	RC	24,0	1000																			

Type: P= PIPE CULVERT B= BOX CULVERT S= SLAVINSKI CULVERT
Material: RC= REINFORCED CONCRETE M= METAL AC=ASBESTOS CEMENT

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Section 3 - M 4: Gazi-Mammad -Kyurdamir; km 58+980 to km 124+300

No	Station	EXISTING STRUCTURE				DEFICIENCIES									MAINTENANCE ACTIVITY				REQUIRED CULVERT LENGTH					
		Type	Material	Length	Size/Diameter	Silted/Blocked		Scour			Structural Damage				Cleaning	Backfill of scoured areas and Protection	Repair of Inlet/ Outlet	Reconstr./ Replace-ment	500 mm Dia.	750 mm Dia.	1000 mm Dia.	1250 mm Dia.	1500 mm Dia.	Other
						Partial	Total	Minor Erosion	Erosion/ Scouring	Severe Scouring/ Underm.	Minor Damage	Settle-ment	Damaged Inlet/ Outlet	Damaged Culvert										
	(m)			(m)	(mm)				m^2	m^2		m^2	m^2	m	m	m^2	m^2		m	m	m	m	m	m
1	59.600	P	RC	26,0	1250																			
2	59.986	P/S	RC	28,0	1250(4) + 2000x2000+1250(4)																			
3	62.256	P/S	RC	30,0	1250 + 2000x2000 + 1250																			
4	63.572	P	RC	12,0	1000	●																		
5	64.912	P	RC	29,0	1000(3)										12,00									
6	66.090	P	RC	41,5	1500																			
7	68.218	B	RC	30,0	2000x2000																			
8	69.086	P	RC	32,0	1000																			
9	70.016	S	RC	12,0	2000x1750																			
10	70.664	S	RC	12,0	2000x1500																			
11	71.748	P	RC	19,0	1000																			
12	72.254	S	RC	12,0	2000x2000																			
13	72.727	S	RC	12,0	4200x1700																			
14	73.118	S	RC	12,0	2000x2000																			
15	74.594	P	RC	14,0	750		●●																	
16	75.589	S	RC	13,0	2100x1500										14,00									
17	75.903	P	M	18,0	300																			
18	76.458	S	RC	13,0	2100x1500																			
19	77.075	P	RC	15,0	1000	●																		
20	77.668	S	RC	12,0	2000x2000										15,00									
21	77.798	P	RC	14,0	1000	●																		
22	78.691	P	RC	15,0	1000										14,00									
23	81.093	S	RC	13,0	2000x1600																			
24	84.394	S	RC	15,0	1850x1800																			
25	88.067	S	RC	16,0	4000x1500																			
26	88.447	S	RC	16,0	4000x1500																			
27	89.005	P	RC	14,0	1000	●																		
28	91.337	S	RC	12,0	2000x1800						●				14,00									
29	92.117	S	RC	31,0	2000x2000																			
30	93.116	P/S	RC	16,0	1250(2)+4000x1700+1250(2)																			
31	94.148	P/S	RC	16,0	1250(2)+2500x1700+1250(2)																			
32	95.178	B/S	RC	17,0	2000x2000(4) + 8600x1700 + 2000x2000(4)	●																		
33	95.497	P	RC	15,0	1250(2)										17,00									
34	95.792	P	RC	16,0	1000																			
35	96.392	P	RC	18,0	1250																			
36	96.652	P	RC	15,0	750																			
37	97.480	P	RC	18,0	750																			
38	97.929	P	RC	16,5	1250																			
39	99.100	B/S	RC	19,0	2000x2000(2)+4000x2000+2000x2000(2)																			
40	100.240	P/S	RC	20,0	1250(2) + 2000x1500 + 1250(2)						●		2,20				2,20							
41	100.719	P/S	RC	19,0	1000 + 2000x1500 + 1000	●									19,00									
42	103.120	P	RC	16,0	1000																			

Type: P= PIPE CULVERT B= BOX CULVERT S= SLAVINSKI CULVERT
Material: RC= REINFORCED CONCRETE M= METAL AC=ASBESTOS CEMENT

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Section 3 - M 4: Gazi-Mammad -Kyurdamir; km 58+980 to km 124+300

No	Station	EXISTING STRUCTURE				DEFICIENCIES								MAINTENANCE ACTIVITY				REQUIRED CULVERT LENGTH					
		Type	Material	Length	Size/Diameter	Silted/Blocked		Scour			Structural Damage				Cleaning	Backfill of scoured areas and Protection	Repair of Inlet/ Outlet	Reconstr./ Replace-ment	500 mm Dia.	750 mm Dia.	1000 mm Dia.	1250 mm Dia.	1500 mm Dia.	Other
						Partial	Total	Minor Erosion	Erosion/ Scouring	Severe Scouring/ Underm.	Minor Damage	Settle-ment	Damaged Inlet/ Outlet	Damaged Culvert										
	(m)			(m)	(mm)				m^2	m^2		m^2	m^2	m	m	m^2	m^2		m	m	m	m	m	m
43	104.405	P	RC	16,0	1000	●									16,00									
44	104.973	S	RC	13,0	3000x1700	●					●		2,00		13,00		2,00							
45	105.876	P	RC	16,0	1500		●●								16,00									
46	107.536	P	RC	12,0	1250		●●								12,00									
47	107.954	P	RC	15,0	1250		●●								15,00									
48	109.616	P	RC	18,0	1250		●●								18,00									
49	111.296	P/S	RC	17,0	1000(3) + 4000x1500 + 1000(3)		●●								17,00									
50	111.576	S	RC	30,0	2000x2000	●									30,00									
51	111.844	P	RC	14,0	3x1250	●									14,00									
52	112.294	P	RC	16,0	3x1250		●●								16,00									
53	113.474	S	RC	15,0	5000x1700	●									15,00									
54	115.019	P	RC	16,0	1000																			
55	115.923	P	RC	17,0	1250																			
56	116.936	P	RC	16,0	1000		●●				●		1,50	0,50	16,00		1,50	RR			1,00			
57	117.539	P	RC	25,0	750																			
58	118.262	P	RC	24,0	1500	●		●	3,00		●		1,70	1,00	24,00	3,00	1,70	RR					1,00	
59	118.291	P	RC	14,0	1000																			
60	118.764	S	RC	12,0	4000x1700						●		0,50				0,50							
61	119.289	S	RC	12,0	4000x1700		●●								12,00									
62	119.808	P	RC	14,0	1250		●●								14,00									
63	120.658	P	RC	16,0	1000																			
64	121.268	P	RC	17,0	1200(2)	●									17,00									
65	121.378	S	RC	18,0	1800x1300		●●								18,00									
66	122.017	S	RC	16,0	1800x1300		●●								16,00									
67	123.152	S	RC	13,0	1500x1500																			
68	123.737	P	RC	25,0	750																			
69	124.211	P	RC	19,0	750		●●								19,00									

Type: P= PIPE CULVERT B= BOX CULVERT S= SLAVINSKI CULVERT
Material: RC= REINFORCED CONCRETE M= METAL AC=ASBESTOS CEMENT

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Section 4 - M 4: Kyurdamir - Ujar ; km 124+300 to km 170+500

No	Station	EXISTING STRUCTURE				DEFICIENCIES									MAINTENANCE ACTIVITY				REQUIRED CULVERT LENGTH					
		Type	Material	Length	Size/Diameter	Silted/Blocked		Scour			Structural Damage				Cleaning	Backfill of scoured areas and Protection	Repair of Inlet/ Outlet	Reconstr./ Replace-ment	500 mm Dia.	750 mm Dia.	1000 mm Dia.	1250 mm Dia.	1500 mm Dia.	Other
						Partial	Total	Minor Erosion	Erosion/ Scouring	Severe Scouring/ Underm.	Minor Damage	Settle-ment	Damaged Inlet/ Outlet	Damaged Culvert										
	(m)			(m)	(mm)				m^2	m^2		m^2	m^2	m	m	m^2	m^2		m	m	m	m	m	m
1	124.413	P	RC	43,0	1250	●									43,00									
2	126.882	P	RC	28,0	1000		●●								28,00									
3	127.715	P	RC	18,0	1000																			
4	128.163	P	RC	18,0	1000		●●								18,00									
5	128.513	P	RC	21,5	1000		●●								21,50									
6	128.559	P	M	22,0	1500		●●								22,00									
7	129.020	P	RC	19,5	1000		●●								19,50									
8	129.583	P	RC	13,0	1000																			
9	131.084	P	RC	15,0	1000																			
10	131.851	P	RC	16,0	1000	●									16,00									
11	133.302	P	RC	22,0	750		●●								22,00									
12	133.901	P	RC	25,0	1250		●●								25,00									
13	136.290	P	RC	21,0	1000	●									21,00									
14	136.625	P	RC	15,0	1000	●									15,00									
15	137.969	P	RC	16,0	1000	●					●		0,80	0,50	16,00		0,80	RR			1,00			
16	139.085	P	RC	20,0	750(2)	●									20,00									
17	142.588	S	RC	12,0	5600x1700		●●								12,00									
18	143.056	S	RC	12,0	5600x1700		●●								12,00									
19	145.067	P	RC	17,5	1000	●									17,50									
20	147.877	S	RC	28,0	2800x1400		●●								28,00									
21	148.294	P	RC	16,0	1000(2)																			
22	149.699	P	RC	14,0	1000																			
23	152.169	P	RC	18,0	1000																			
24	152.672	P	RC	18,0	1000																			
25	154.706	P	RC	18,0	1250		●●								18,00									
26	156.207	B	RC	11,0	2000x1500	●									11,00									
27	157.138	P	RC	30,0	750(3)																			
28	157.878	P	RC	28,0	750																			
29	158.378	P	RC	25,0	750																			
30	158.975	P	RC	16,0	750	●									16,00									
31	159.269	P	RC	15,0	750	●									15,00									
32	159.621	P	RC	16,0	700																			
33	160.157	P	RC	14,0	750	●									14,00									
34	160.354	P	RC	12,0	750		●●								12,00									
35	160.558	P	RC	20,0	750																			
36	160.855	P	RC	18,0	1000																			
37	160.887	P	RC	18,0	1000	●									18,00									
38	160.912	P	RC	20,0	750(2)																			
39	160.927	P	RC	19,0	750		●●								19,00									
40	161.078	P	RC	17,0	750		●●								17,00									
41	161.333	P	RC	15,0	1000		●●								15,00									
42	163.718	P	RC	16,0	1000																			

Type: P= PIPE CULVERT B= BOX CULVERT S= SLAVINSKI CULVERT
Material: RC= REINFORCED CONCRETE M= METAL AC=ASBESTOS CEMENT

Section 4 - M 4: Kyurdamir - Ujar ; km 124+300 to km 170+500

No	Station	EXISTING STRUCTURE				DEFICIENCIES									MAINTENANCE ACTIVITY				REQUIRED CULVERT LENGTH					
		Type	Material	Length	Size/Diameter	Silted/Blocked		Scour			Structural Damage				Cleaning	Backfill of scoured areas and Protection	Repair of Inlet/ Outlet	Reconstr./ Replace-ment	500 mm Dia.	750 mm Dia.	1000 mm Dia.	1250 mm Dia.	1500 mm Dia	Other
						Partial	Total	Minor Erosion	Erosion/ Scouring	Severe Scouring/ Underm.	Minor Damage	Settle-ment	Damaged Inlet/ Outlet	Damaged Culvert										
	(m)			(m)	(mm)				m^2	m^2		m^2	m^2	m	m	m^2	m^2		m	m	m	m	m	m
43	164.387	P	RC	16,0	1000	●									16,00									
44	164.707	P	RC	15,0	1000	●									15,00									
45	164.912	P	RC	14,3	1000																			
46	165.090	P	RC	15,0	1000		●●								15,00									
47	165.400	P	RC	17,0	1000	●									17,00									
48	165.531	P	RC	17,0	1000			●	0,70							0,70								
49	165.722	P	RC	14,5	1000																			
50	165.930	P	RC	17,8	1000	●									17,80									
51	166.394	P	RC	15,0	1000																			
52	166.934	P	RC	16,0	1000	●					●			0,50	16,00			RR			1,00			
53	168.004	B	RC	16,0	2000x2000																			
54	169.146	P	RC	19,0	1000																			
55	169.547	P	RC	21,0	1000																			
56	169.737	P	RC	18,0	1000	●									18,00									
57	169.782	S	RC	24,0	5600x2000																			
58	170.240	P	RC	19,0	1000																			
59	170.307	B	RC	24,0	2000x2000(2)		●●								24,00									

Type: P= PIPE CULVERT B= BOX CULVERT S= SLAVINSKI CULVERT
Material: RC= REINFORCED CONCRETE M= METAL AC=ASBESTOS CEMENT

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Section 5 - M 4: Ujar -Yevlakh ; km 170+500 to km 216+500

No	Station	EXISTING STRUCTURE				DEFICIENCIES									MAINTENANCE ACTIVITY				REQUIRED CULVERT LENGTH					
		Type	Material	Length	Size/Diameter	Silted/Blocked		Scour			Structural Damage				Cleaning	Backfill of scoured areas and Protection	Repair of Inlet/ Outlet	Reconstr./ Replace-ment	500 mm Dia.	750 mm Dia.	1000 mm Dia.	1250 mm Dia.	1500 mm Dia.	Other
						Partial	Total	Minor Erosion	Erosion/ Scouring	Severe Scouring/ Underm.	Minor Damage	Settle-ment	Damaged Inlet/ Outlet	Damaged Culvert										
	(m)			(m)	(mm)				m^2	m^2		m^2	m^2	m	m	m^2	m^2		m	m	m	m	m	m
1	171.050	P	RC	18,6	750		●●								18,60									
2	172.147	P	RC	16,5	1000		●●								16,50									
3	173.407	P	RC	23,0	1000	●									23,00									
4	173.986	P	RC	19,0	1000		●●								19,00									
5	174.576	P	RC	18,0	1000																			
6	175.122	P	RC	21,0	1000		●●								21,00									
7	175.514	P	RC	19,8	1000		●●								19,80									
8	176.897	P	RC	20,0	1000(2)																			
9	177.239	S	RC	29,0	4750x2200																			
10	177.412	B	RC	14,0	2400x1500																			
11	178.572	P	RC	14,5	1000(2)																			
12	178.870	P	RC	19,0	1000																			
13	180.514	P	RC	18,0	1000	●									18,00									
14	180.951	B	RC	51,0	2000x2000																			
15	181.538	P	RC	18,3	1000(2)																			
16	183.222	P	RC	17,0	1000(2)		●●								17,00									
17	183.610	P	RC	21,0	1000	●					●		0,50		21,00		0,50							
18	186.972	B	RC	19,0	2000x2000																			
19	187.957	P	RC	18,5	1000																			
20	189.948	P	RC	17,0	1000																			
21	190.413	P	RC	19,0	1250																			
22	191.019	P	RC	26,0	1000	●									26,00									
23	191.748	B	RC	15,0	2000x2000																			
24	192.294	P	RC	16,0	750																			
25	192.329	P	RC	15,0	750																			
26	192.608	P	RC	16,0	1000	●									16,00									
27	192.768	P	RC	22,0	1000	●									22,00									
28	192.980	P	RC	17,0	750	●									17,00									
29	194.422	P	RC	17,0	750	●									17,00									
30	194.578	S	RC	27,0	3000x1700																			
31	195.421	P	RC	16,0	750																			
32	196.353	P	RC	16,0	1000	●									16,00									
33	196.914	P	RC	15,0	1000	●									15,00									
34	197.540	P	RC	29,0	1250		●●								29,00									
35	197.670	P	RC	18,0	1000	●									18,00									
36	198.767	P	RC	18,0	1250																			
37	201.009	S	RC	17,0	3000x1750																			
38	202.856	B	RC	25,0	2000x2000		●●								25,00									
39	205.534	P	RC	16,0	1000	●									16,00									
40	205.941	P	RC	26,0	1250																			
41	206.728	P	RC	25,0	1000		●●								25,00									
42	207.210	P	RC	28,0	1000		●●								28,00									

Type: P= PIPE CULVERT B= BOX CULVERT S= SLAVINSKI CULVERT
Material: RC= REINFORCED CONCRETE M= METAL AC=ASBESTOS CEMENT

Section 5 - M 4: Ujar -Yevlakh ; km 170+500 to km 216+500

No	Station	EXISTING STRUCTURE				DEFICIENCIES									MAINTENANCE ACTIVITY				REQUIRED CULVERT LENGTH					
		Type	Material	Length	Size/Diameter	Silted/Blocked		Scour			Structural Damage				Cleaning	Backfill of scoured areas and Protection	Repair of Inlet/ Outlet	Reconstr./ Replace-ment	500 mm Dia.	750 mm Dia.	1000 mm Dia.	1250 mm Dia.	1500 mm Dia.	Other
						Partial	Total	Minor Erosion	Erosion/ Scouring	Severe Scouring/ Underm.	Minor Damage	Settle-ment	Damaged Inlet/ Outlet	Damaged Culvert										
	(m)			(m)	(mm)				m^2	m^2		m^2	m^2	m	m	m^2	m^2		m	m	m	m	m	m
43	207.428	P	RC	21,0	1000		●●								21,00									
44	208.375	P	RC	16,0	1000	●									16,00									
45	208.729	P	RC	21,0	1000	●									21,00									
46	209.782	P	RC	15,0	1000																			
47	209.853	P	RC	15,0	1000																			
48	210.492	P	RC	17,0	1000	●									17,00									
49	211.469	P	RC	24,0	1000																			
50	212.338	P	RC	16,0	1000	●									16,00									
51	213.155	P	RC	26,0	1000(3)	●									26,00									
52	216.267	P	RC	24,0	1250																			

Type: P= PIPE CULVERT B= BOX CULVERT S= SLAVINSKI CULVERT
Material: RC= REINFORCED CONCRETE M= METAL AC=ASBESTOS CEMENT

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Section 6 - M 4: Bypass Yevlakh; km 216+500 to km 223+468

No	Station	EXISTING STRUCTURE				DEFICIENCIES									MAINTENANCE ACTIVITY				REQUIRED CULVERT LENGTH					
		Type	Material	Length	Size/Diameter	Silted/Blocked		Scour			Structural Damage				Cleaning	Backfill of scoured areas and Protection	Repair of Inlet/ Outlet	Reconstr./ Replace-ment	500 mm Dia.	750 mm Dia.	1000 mm Dia.	1250 mm Dia.	1500 mm Dia.	Other
						Partial	Total	Minor Erosion	Erosion/ Scouring	Severe Scouring/ Underm.	Minor Damage	Settle-ment	Damaged Inlet/ Outlet	Damaged Culvert										
	(m)			(m)	(mm)				m^2	m^2		m^2	m^2	m	m	m^2	m^2		m	m	m	m	m	m
1	216.267	P	RC	24,0	1250																			
2	220.098	P	RC	30,0	1000																			
3	222.827	B/P	RC	29,0	2200x1750 + 1250																			
4	223.078	P	M	47,0	700																			
5	223.198	B	RC	103,0	2000x2000																			

Type: P= PIPE CULVERT B= BOX CULVERT S= SLAVINSKI CULVERT
Material: RC= REINFORCED CONCRETE M= METAL AC=ASBESTOS CEMENT

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Section 7 - M 1: Yevlakh - Mingechevir; km 280+683 to km 288+700

No	Station	EXISTING STRUCTURE				DEFICIENCIES									MAINTENANCE ACTIVITY				REQUIRED CULVERT LENGTH					
		Type	Material	Length	Size/Diameter	Silted/Blocked		Scour			Structural Damage				Cleaning	Backfill of scoured areas and Protection	Repair of Inlet/ Outlet	Reconstr./ Replace-ment	500 mm Dia.	750 mm Dia.	1000 mm Dia.	1250 mm Dia.	1500 mm Dia.	Other
						Partial	Total	Minor Erosion	Erosion/ Scouring	Severe Scouring/ Underm.	Minor Damage	Settle-ment	Damaged Inlet/ Outlet	Damaged Culvert										
	(m)			(m)	(mm)				m^2	m^2		m^2	m^2	m	m	m^2	m^2		m	m	m	m	m	m
1	281.615	P	RC	16,0	700		●●								16,00									
2	282.387	P	RC	16,0	750																			
3	282.605	P	RC	16,5	1000		●●								16,50									
4	282.907	P	RC	19,0	750																			
5	283.496	P	RC	18,0	1000		●●								18,00									
6	284.097	P	RC	15,0	1000																			
7	285.702	P	M	16,0	1000		●●								16,00									
8	285.787	P	RC	17,0	750		●●								17,00									
9	286.066	P	RC	16,0	750																			
10	286.545	P	RC	17,5	750		●●								17,50									
11	286.927	P	RC	16,0	750	●									16,00									
12	288.667	P	RC	16,0	750																			

Type: P= PIPE CULVERT B= BOX CULVERT S= SLAVINSKI CULVERT
Material: RC= REINFORCED CONCRETE M= METAL AC=ASBESTOS CEMENT

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- DRAINAGE STRUCTURES LIST -

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Section 8 - M 1: Mingechevir - Ganja; km 288+700 to km 333+500

No	Station	EXISTING STRUCTURE				DEFICIENCIES									MAINTENANCE ACTIVITY				REQUIRED CULVERT LENGTH					
		Type	Material	Length	Size/Diameter	Silted/Blocked		Scour			Structural Damage				Cleaning	Backfill of scoured areas and Protection	Repair of Inlet/ Outlet	Reconstr./ Replace-ment	500 mm Dia.	750 mm Dia.	1000 mm Dia.	1250 mm Dia.	1500 mm Dia.	Other
						Partial	Total	Minor Erosion	Erosion/ Scouring	Severe Scouring/ Underm.	Minor Damage	Settle-ment	Damaged Inlet/ Outlet	Damaged Culvert										
	(m)			(m)	(mm)				m^2	m^2		m^2	m^2	m	m	m^2	m^2		m	m	m	m	m	m
1	290.771	P	RC	33,0	750	●									33,00									
2	291.147	P	RC	34,0	1000																			
3	292.816	P	RC	45,0	1000																			
4	292.867	P	RC	32,0	1000(2)																			
5	295.545	P	RC	15,0	1000	●									15,00									
6	297.134	P	RC	16,0	1000	●									16,00									
7	297.454	P	RC	16,0	1000	●									16,00									
8	301.139	P	RC	16,0	1000		●●								16,00									
9	302.404	P	RC	29,0	1250																			
10	303.023	P	RC	30,0	1000		●●								30,00									
11	303.297	P	RC	22,0	1000																			
12	306.653	P	RC	29,0	1250																			
13	306.930	P	RC	29,0	1200																			
14	307.047	B	RC	21,0	2000x2000(2)																			
15	307.657	B	RC	21,0	2000x2000																			
16	307.752	B	RC	22,0	2000x2000(2)						●		0,70				0,70							
17	309.858	P	RC	30,0	1000	●									30,00									
18	310.334	P	RC	17,0	750																			
19	310.519	P	RC	24,0	750		●●								24,00									
20	310.681	P	RC	32,0	750	●									32,00									
21	310.988	P	RC	???	????																			
22	311.103	P	RC	32,0	750		●●								32,00									
23	311.175	P	RC	32,0	700		●●								32,00									
24	311.438	P	RC	18,0	1000		●●								18,00									
25	312.873	P	RC	17,0	750		●●								17,00									
26	313.742	P	RC	18,0	750																			
27	314.529	P	RC	16,0	750																			
28	315.080	P	RC	18,0	750		●●								18,00									
29	315.803	P	RC	21,0	1000	●									21,00									
30	315.890	S	RC	17,0	1600x1200																			
31	316.307	P	RC	29,0	1000		●●								29,00									
32	316.721	P	RC	29,0	1250																			
33	316.888	P	RC	17,0	1000	●									17,00									
34	317.127	P	RC	19,0	1250	●					●			1,50	19,00			RR				2,00		
35	317.169	P	RC	20,0	1250		●●				●			1,00	20,00			RR				1,00		
36	317.271	P	RC	19,0	1000	●									19,00									
37	317.367	P	RC	19,0	1000		●●								19,00									
38	317.499	B	RC	20,0	2000x2000	●									20,00									
39	317.642	P	RC	25,0	1000		●●								25,00									
40	317.646	P	RC	17,0	1000	●									17,00									
41	317.990	P	RC	33,0	750	●									33,00									
42	318.261	P	RC	31,0	750	●					●		2,00		31,00		2,00							

Type: P= PIPE CULVERT B= BOX CULVERT S= SLAVINSKI CULVERT
Material: RC= REINFORCED CONCRETE M= METAL AC=ASBESTOS CEMENT

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Section 8 - M 1: Mingechevir - Ganja; km 288+700 to km 333+500

No	Station	EXISTING STRUCTURE				DEFICIENCIES									MAINTENANCE ACTIVITY				REQUIRED CULVERT LENGTH					
		Type	Material	Length	Size/Diameter	Silted/Blocked		Scour			Structural Damage				Cleaning	Backfill of scoured areas and Protection	Repair of Inlet/ Outlet	Reconstr./ Replace-ment	500 mm Dia.	750 mm Dia.	1000 mm Dia.	1250 mm Dia.	1500 mm Dia.	Other
						Partial	Total	Minor Erosion	Erosion/ Scouring	Severe Scouring/ Underm.	Minor Damage	Settle-ment	Damaged Inlet/ Outlet	Damaged Culvert										
	(m)			(m)	(mm)				m^2	m^2		m^2	m^2	m	m	m^2	m^2		m	m	m	m	m	m
43	318.423	P	RC	30,0	1000	●									30,00									
44	319.010	P	RC	33,0	1000	●									33,00									
45	319.476	P	RC	20,0	700																			
46	319.890	P	RC	16,0	750(2)																			
47	320.549	P	RC	32,0	1000																			
48	321.561	P	RC	32,0	1000																			
49	321.826	P	RC	30,0	750	●									30,00									
50	321.856	P	RC	30,0	1000	●									30,00									
51	322.714	P	RC	30,0	1000																			
52	323.505	P	RC	15,0	1000		●●								15,00									
53	323.935	P	RC	17,0	750		●●								17,00									
54	324.406	P	RC	19,0	1000																			
55	324.636	P	RC	13,0	1000																			
56	324.887	P	M/RC	23,0	700 + 1000																			
57	325.035	P	RC	31,0	1000		●●								31,00									
58	325.171	P	M/RC	28,0	750 +750																			
59	325.206	B	RC	20,0	2000x2000																			
60	325.829	P	RC	24,0	750	●									24,00									
61	326.214	P	RC	14,0	1000		●●								14,00									
62	326.855	P	RC	22,0	1000	●									22,00									
63	327.140	P	RC	27,0	1000		●●								27,00									
64	327.328	P	M/RC	18,0	700 + 750	●									18,00									
65	327.431	P	RC	19,0	1000(2)	●									19,00									
66	327.446	P	RC	19,0	1000		●●								19,00									
67	327.589	P	RC	20,0	750		●●								20,00									
68	327.811	P	M/RC	18,0	700 + 1000		●●								18,00									
69	328.262	P	RC	20,0	750		●●								20,00									
70	328.280	P	RC	21,0	750(2)		●●								21,00									
71	328.381	P	RC	24,0	1000		●●								24,00									
72	328.474	F	RC	24,0	1000		●●								24,00									
73	328.715	P	RC	23,0	1000		●●								23,00									
74	328.890	P	RC	30,0	1000	●									30,00									
75	329.245	P	RC	31,0	1000		●●								31,00									
76	329.352	P	RC	15,0	1000	●									15,00									
77	329.659	P	RC	32,0	1000	●									32,00									
78	329.985	P	RC	32,0	1000	●									32,00									
79	330.465	P	RC	14,0	750	●									14,00									
80	331.784	P	RC	13,0	1000	●									13,00									
81	331.974	P	RC	12,0	750(2)																			
82	332.591	P	RC	14,0	750	●									14,00									
83	332.997	P	RC	19,0	1000		●●								19,00									
84	333.032	B	RC	19,0	2000x2000(2)																			

Type: P= PIPE CULVERT B= BOX CULVERT S= SLAVINSKI CULVERT
Material: RC= REINFORCED CONCRETE M= METAL AC=ASBESTOS CEMENT

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Section 9 - M 1: Bypass Ganja; km 333+500 to km 369+500

No	Station	EXISTING STRUCTURE				DEFICIENCIES									MAINTENANCE ACTIVITY				REQUIRED CULVERT LENGTH					
		Type	Material	Length	Size/Diameter	Silted/Blocked		Scour			Structural Damage				Cleaning	Backfill of scoured areas and Protection	Repair of Inlet/ Outlet	Reconstr./ Replace-ment	500 mm Dia.	750 mm Dia.	1000 mm Dia.	1250 mm Dia.	1500 mm Dia.	Other
						Partial	Total	Minor Erosion	Erosion/ Scouring	Severe Scouring/ Underm.	Minor Damage	Settle-ment	Damaged Inlet/ Outlet	Damaged Culvert										
	(m)			(m)	(mm)				m^2	m^2		m^2	m^2	m	m	m^2	m^2		m	m	m	m	m	m
1	333.743	P	RC	14,5	750	●									14,50									
2	333.798	P	RC	15,0	1000		●●								15,00									
3	333.815	P	RC	15,0	750		●●								15,00									
4	334.180	P	RC	14,0	1000	●									14,00									
5	334.805	P	RC	14,0	750		●●								14,00									
6	335.029	P	RC	18,0	1250																			
7	335.166	P	RC	18,0	1250																			
8	336.227	B	RC	35,0	2000x2000																			
9	337.257	P	RC	15,0	1000																			
10	337.643	P	RC	19,1	1000		●●								19,10									
11	338.109	P	RC	22,0	1250																			
12	338.546	P	RC	22,0	1250	●									22,00									
13	339.225	P	RC	28,0	1000		●●								28,00									
14	339.816	P	RC	28,0	1250																			
15	340.062	P	RC	19,0	1250	●									19,00									
16	340.467	P	RC	23,0	1000																			
17	341.072	B	RC	28,0	2000x2000																			
18	341.924	P	RC	28,0	1250		●●								28,00									
19	342.954	P	RC	14,0	1000		●●								14,00									
20	343.421	P	RC	14,0	1000(2)		●●								14,00									
21	344.712	P	RC	18,0	1250																			
22	345.422	P	RC	14,0	1000	●									14,00									
23	345.618	P	RC	30,0	1250	●									30,00									
24	346.968	P	RC	14,0	1000																			
25	349.544	P	RC	15,0	750						●		1,50				1,50							
26	350.077	P	RC	14,0	750																			
27	351.250	P	RC	13,0	1250(2)																			
28	351.775	S	RC	14,0	3000x1800																			
29	353.765	S	RC	32,0	3000x4000																			
30	354.678	S	RC	61,0	3000x4000																			
31	355.333	S	RC	14,0	3000x4000																			
32	355.620	P	RC	33,0	1500																			
33	356.100	S	RC	20,0	2000x1800																			
34	356.458	P	RC	22,0	1500																			
35	357.100	S	RC	45,0	3700x4000																			
36	357.297	P	RC	34,0	750	●									34,00									
37	358.043	P	RC	30,0	1500	●									30,00									
38	358.121	P	RC	12,0	750		●●								12,00									
39	360.616	P	RC	14,0	100	●					●		0,50		14,00		0,50							
40	361.315	P	RC	28,0	125																			
41	361.488	P	RC	17,0	750	●									17,00									
42	361.717	P	RC	23,0	1000	●									23,00									

Type: P= PIPE CULVERT B= BOX CULVERT S= SLAVINSKI CULVERT
Material: RC= REINFORCED CONCRETE M= METAL AC=ASBESTOS CEMENT

Section 9 - M 1: Bypass Ganja; km 333+500 to km 369+500

No	Station	EXISTING STRUCTURE				DEFICIENCIES									MAINTENANCE ACTIVITY				REQUIRED CULVERT LENGTH					
		Type	Material	Length	Size/Diameter	Silted/Blocked		Scour			Structural Damage				Cleaning	Backfill of scoured areas and Protection	Repair of Inlet/ Outlet	Reconstr./ Replace-ment	500 mm Dia.	750 mm Dia.	1000 mm Dia.	1250 mm Dia.	1500 mm Dia.	Other
						Partial	Total	Minor Erosion	Erosion/ Scouring	Severe Scouring/ Underm.	Minor Damage	Settle-ment	Damaged Inlet/ Outlet	Damaged Culvert										
	(m)			(m)	(mm)				m^2	m^2		m^2	m^2	m	m	m^2	m^2		m	m	m	m	m	m
43	361.998	P	RC	29,0	1200																			
44	362.377	P	RC	13,0	750																			
45	362.556	B	RC	13,0	2000x800																			
46	363.792	S	RC	28,0	3000x1700																			
47	364.236	P	RC	21,0	1250(2)																			
48	364.440	P	RC	18,0	1250(2)		●●								18,00									
49	364.669	P	RC	25,0	1000(2)																			
50	364.885	P	RC	20,0	1200																			
51	364.976	P	RC	16,0	1000																			
52	365.123	P	RC	23,0	1100																			
53	365.172	P	RC	16,0	750	●									16,00									
54	365.263	P	RC	17,0	1250		●●								17,00									
55	365.533	P	RC	20,0	1250																			
56	366.088	P	RC	13,0	1000																			
57	366.300	P	RC	15,0	1100		●●								15,00									
58	366.400	P	RC	15,0	1100(2)		●●								15,00									
59	366.702	P	RC	15,0	1100(2)		●●								15,00									
60	366.885	P	RC	20,0	1100(2)		●●								20,00									
61	367.164	P	RC	20,0	1100																			
62	368.325	P	RC	18,0	1250																			
63	368.562	P	RC	18,0	1100																			

Type: P= PIPE CULVERT B= BOX CULVERT S= SLAVINSKI CULVERT
Material: RC= REINFORCED CONCRETE M= METAL AC=ASBESTOS CEMENT

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Section 10 - M 1: Ganja - Tovuz; km 369+500 to km 431+000

No	Station	EXISTING STRUCTURE				DEFICIENCIES									MAINTENANCE ACTIVITY				REQUIRED CULVERT LENGTH					
		Type	Material	Length	Size/Diameter	Silted/Blocked		Scour			Structural Damage				Cleaning	Backfill of scoured areas and Protection	Repair of Inlet/ Outlet	Reconstr / Replace-ment	500 mm Dia.	750 mm Dia.	1000 mm Dia.	1250 mm Dia.	1500 mm Dia.	Other
						Partial	Total	Minor Erosion	Erosion/ Scouring	Severe Scouring/ Underm.	Minor Damage	Settle-ment	Damaged Inlet/ Outlet	Damaged Culvert										
	(m)			(m)	(mm)				m^2	m^2		m^2	m^2	m	m	m^2	m^2		m	m	m	m	m	m
1	369.588	B/P	RC	54,0	2000x2000 + 1000																			
2	370.645	B	RC	25,0	1500x1000		●●								25,00									
3	371.002	S	RC	34,0	3000x1300 + 1100																			
4	371.193	P	RC	29,0	1000																			
5	371.562	S	RC	27,0	2000x1300	●									27,00									
6	372.000	P	RC	55,0	1100																			
7	372.479	P	RC	35,0	1250																			
8	373.040	P	RC	45,0	1000																			
9	373.091	P	RC	55,0	1000																			
10	373.489	P	RC	34,0	1250																			
11	373.607	P	RC	20,0	1000		●●								20,00									
12	373.716	P	RC	18,0	1000	●									18,00									
13	373.922	P	RC	20,0	1000	●									20,00									
14	373.971	P	RC	26,0	????		●●								26,00									
15	374.212	P	RC	22,0	1000		●●								22,00									
16	374.415	P	RC	18,0	1000																			
17	374.468	P	RC	21,0	1250	●									21,00									
18	374.640	P	RC	19,0	1000		●●								19,00									
19	374.724	P	RC	20,0	1000																			
20	374.870	P	RC	30,0	1250	●									30,00									
21	376.000	P	RC	36,0	1250																			
22	376.288	P	RC	19,0	1000		●●								19,00									
23	376.629	P	RC	17,0	750																			
24	376.713	P	RC	19,0	750	●									19,00									
25	377.246	P	RC	19,0	1000																			
26	377.463	P	RC	18,0	750																			
27	377.775	P	RC	39,0	1250		●●								39,00									
28	378.228	P	RC	30,0	1000																			
29	378.446	B	RC	36,0	2000x2000	●									36,00									
30	378.793	P	RC	36,0	1000		●●								36,00									
31	378.929	P	RC	21,0	1250																			
32	379.430	P	RC	17,0	1000	●									17,00									
33	379.727	P	RC	17,0	1000	●									17,00									
34	379.780	P	RC	14,0	1000	●									14,00									
35	380.410	P	RC	15,0	1000	●									15,00									
36	381.005	P	RC	19,0	1000	●									19,00									
37	382.098	P	RC	27,0	1000		●●								27,00									
38	382.801	P	M	12,0	400																			
39	382.991	S	RC	28,0	5000x1700																			
40	383.575	P	RC	18,0	1000																			
41	384.118	P	RC	22,0	1000																			
42	384.498	P	RC	20,0	1000						●													

Type: P= PIPE CULVERT B= BOX CULVERT S= SLAVINSKI CULVERT
Material: RC= REINFORCED CONCRETE M= METAL AC=ASBESTOS CEMENT

Section 10 - M 1: Ganja - Tovuz; km 369+500 to km 431+000

No	Station	EXISTING STRUCTURE				DEFICIENCIES									MAINTENANCE ACTIVITY				REQUIRED CULVERT LENGTH					
		Type	Material	Length	Size/Diameter	Silted/Blocked		Scour			Structural Damage				Cleaning	Backfill of scoured areas and Protection	Repair of Inlet/ Outlet	Reconstr./ Replace-ment	500 mm Dia.	750 mm Dia.	1000 mm Dia.	1250 mm Dia.	1500 mm Dia.	Other
						Partial	Total	Minor Erosion	Erosion/ Scouring	Severe Scouring/ Underm.	Minor Damage	Settle-ment	Damaged Inlet/ Outlet	Damaged Culvert										
	(m)			(m)	(mm)				m^2	m^2		m^2	m^2	m	m	m^2	m^2		m	m	m	m	m	m
43	384.613	P	RC	19,0	1000		●●								19,00									
44	385.020	B	RC	13,0	1500x1200																			
45	385.214	P	RC	18,0	1000																			
46	385.585	P	RC	18,0	1000																			
47	386.036	P	RC	16,0	1000			●	9,00															
48	386.357	P	RC	18,0	1000		●●								18,00									
49	386.674	P	RC	18,0	1000						●		0,50				0,50							
50	387.222	P	RC	20,0	1000																			
51	388.402	P	RC	16,0	1000	●									16,00									
52	388.829	P	RC	14,0	1000		●●								14,00									
53	388.835	P	RC	14,0	1000	●									14,00									
54	389.452	P	RC	15,0	1000		●●								15,00									
55	389.811	P	RC	15,0	1000		●●								15,00									
56	390.355	P	RC	15,0	1000		●●								15,00									
57	390.573	P	RC	15,0	1000	●									15,00									
58	391.134	P	RC	21,0	1000	●									21,00									
59	391.604	P	RC	16,0	1000	●									16,00									
60	392.248	P	RC	17,0	1000		●●								17,00									
61	393.937	P	RC	20,0	1000		●●								20,00									
62	394.626	P	RC	18,0	1000	●									18,00									
63	395.246	P	RC	16,0	1000		●●								16,00									
64	395.947	P	RC	18,0	1000	●									18,00									
65	396.158	P	RC	21,0	1000		●●								21,00									
66	396.754	P	RC	17,0	1000										17,00									
67	397.177	P	RC	15,0	1000	●									15,00									
68	397.436	P	RC	21,0	1000																			
69	397.518	P	RC	18,0	1000																			
70	398.117	P	RC	17,0	1250	●									17,00									
71	398.546	P	RC	16,0	1000	●									16,00									
72	398.837	P	RC	15,0	1000	●									15,00									
73	399.151	P	RC	15,0	1000																			
74	399.901	P	RC	16,0	1250	●									16,00									
75	400.722	P	RC	15,0	1000																			
76	400.926	P	RC	17,0	1000	●									17,00									
77	401.086	B	RC	18,0	2000x2000		●●								18,00									
78	401.963	P	RC	47,0	1000																			
79	402.135	P	RC	14,0	1000		●●								14,00									
80	402.232	P	RC	16,0	1250		●●								16,00									
81	403.048	P	RC	15,0	750	●									15,00									
82	403.636	P	RC	13,0	1000		●●								13,00									
83	404.069	P	RC	15,0	750		●●								15,00									
84	404.271	P	RC	18,0	1000		●●								18,00									

Type: P= PIPE CULVERT B= BOX CULVERT S= SLAVINSKI CULVERT
Material: RC= REINFORCED CONCRETE M= METAL AC=ASBESTOS CEMENT

Section 10 - M 1: Ganja - Tovuz; km 369+500 to km 431+000

No	Station	EXISTING STRUCTURE				DEFICIENCIES									MAINTENANCE ACTIVITY				REQUIRED CULVERT LENGTH					
		Type	Material	Length	Size/Diameter	Silted/Blocked		Scour			Structural Damage				Cleaning	Backfill of scoured areas and Protection	Repair of Inlet/ Outlet	Reconstr./ Replace-ment	500 mm Dia.	750 mm Dia.	1000 mm Dia.	1250 mm Dia.	1500 mm Dia.	Other
						Partial	Total	Minor Erosion	Erosion/ Scouring	Severe Scouring/ Underm.	Minor Damage	Settle-ment	Damaged Inlet/ Outlet	Damaged Culvert										
	(m)			(m)	(mm)				m^2	m^2		m^2	m^2	m	m	m^2	m^2		m	m	m	m	m	m
85	404.854	P	RC	31,0	1250																			
86	405.644	P	RC	14,0	750																			
87	406.023	P	RC	17,0	750		●●								17,00									
88	406.309	P	RC	22,0	750	●									22,00									
89	406.833	P	RC	21,0	750		●●								21,00									
90	406.913	P	RC	22,0	1000																			
91	407.319	P	RC	17,0	1000																			
92	408.265	P	RC	16,0	1000						●		1,00				1,00							
93	408.299	P	RC	24,0	750		●●								24,00									
94	408.367	P	RC	16,0	1500		●●								16,00									
95	408.681	B	RC	20,0	2000x2000																			
96	409.093	P	RC	17,0	1000																			
97	409.365	P	RC	21,0	1000																			
98	409.570	P	RC	21,0	1000	●									21,00									
99	411.894	S	RC	15,0	2000x1500																			
100	411.968	P	RC	16,0	1000	●									16,00									
101	412.053	P	RC	17,0	1000	●									17,00									
102	412.137	P	RC	18,0	750		●●								18,00									
103	412.309	P	RC	18,0	750		●●								18,00									
104	412.670	P	RC	16,0	750		●●								16,00									
105	412.921	S	RC	24,0	2000x1500	●									24,00									
106	413.115	P	RC	15,0	1000		●●								15,00									
107	413.127	P	RC	16,0	1000	●					●			1,00	16,00			RR			1,00			
108	413.363	P	RC	16,0	1000																			
109	413.730	P	RC	16.0 + 8.0	750 + 800	●									24,00									
110	413.907	P	RC	13,0	750	●									13,00									
111	414.008	P	RC	15,0	1000		●●								15,00									
112	414.355	P	RC	16,0	750																			
113	414.367	S	RC	18,0	2000x1500																			
114	414.935	P	RC	17,0	750		●●								17,00									
115	415.011	P	RC	14,0	750	●									14,00									
116	415.519	P	RC	18,0	1500	●									18,00									
117	415.686	P	RC	14,0	750		●●								14,00									
118	415.962	P	RC	15,0	1000	●									15,00									
119	416.113	P	RC	16,0	1000																			
120	416.718	P	RC	15,0	1000						●		0,50				0,50							
121	417.150	P	RC	17,0	1000	●									17,00									
122	417.468	P	RC	14,0	1000																			
123	418.018	P	RC	15,0	1000	●									15,00									
124	418.122	P	RC	13,0	1500																			
125	418.179	P	RC	14,0	1000		●●																	
126	418.532	B	RC	35,0	2000x2000	●									35,00									

Type: P= PIPE CULVERT B= BOX CULVERT S= SLAVINSKI CULVERT
Material: RC= REINFORCED CONCRETE M= METAL AC=ASBESTOS CEMENT

Section 10 - M 1: Ganja - Tovuz; km 369+500 to km 431+000

No	Station	EXISTING STRUCTURE				DEFICIENCIES									MAINTENANCE ACTIVITY				REQUIRED CULVERT LENGTH					
		Type	Material	Length	Size/Diameter	Silted/Blocked		Scour			Structural Damage				Cleaning	Backfill of scoured areas and Protection	Repair of Inlet/ Outlet	Reconstr./ Replace-ment	500 mm Dia.	750 mm Dia.	1000 mm Dia.	1250 mm Dia.	1500 mm Dia.	Other
						Partial	Total	Minor Erosion	Erosion/ Scouring	Severe Scouring/ Underm.	Minor Damage	Settle-ment	Damaged Inlet/ Outlet	Damaged Culvert										
	(m)			(m)	(mm)				m^2	m^2		m^2	m^2	m	m	m^2	m^2		m	m	m	m	m	m
127	418.637	B	RC	40,0	2000x2000(2)																			
128	418.665	P	RC	44,0	1100																			
129	418.941	P	RC	14,0	1000																			
130	419.043	P	RC	19,0	1000																			
131	419.194	P	RC	16,0	1000																			
132	419.475	P	RC	15,0	750																			
133	419.615	P	RC	16,0	750																			
134	419.784	P	RC	16,0	750	●									16,00									
135	419.994	P	RC	16,0	1000																			
136	420.127	P	RC	14,0	1000																			
137	420.395	S	RC	14,0	2000x1200	●									14,00									
138	420.459	P	RC	19,0	750		●●								19,00									
139	420.602	P	RC	16,0	1000	●									16,00									
140	420.945	P	RC	14,0	1000																			
141	421.876	P	RC	14,0	750	●									14,00									
142	422.133	P	RC	18,0	750		●●								18,00									
143	422.221	P	M	16,0	500																			
144	422.436	P	RC	14,0	1000		●●								14,00									
145	422.496	P	RC	15,0	1250		●●								15,00									
146	422.598	P	RC	15,0	1000																			
147	422.944	P	RC	14,0	1000	●									14,00									
148	423.079	S	RC	15,0	2500x1600	●									15,00									
149	423.596	P	RC	15,0	1000																			
150	423.852	P	RC	16,0	1000																			
151	424.073	P	RC	14,0	1000																			
152	424.205	P	RC	17,0	1000																			
153	424.329	P	RC	14,0	1000																			
154	424.589	S	RC	13,0	2000x1000	●									13,00									
155	426.519	P	RC	22,0	1000	●					●		1,00		22,00		1,00							
156	427.145	P	RC	22,0	1000	●									22,00									
157	427.323	P	RC	21,0	1000	●									21,00									
158	427.653	P	RC	20,0	1000		●●								20,00									
159	429.608	S	RC	13,0	2500x1500																			

Type: P= PIPE CULVERT B= BOX CULVERT S= SLAVINSKI CULVERT
Material: RC= REINFORCED CONCRETE M= METAL AC=ASBESTOS CEMENT

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Section 11 - M 1: Tovuz - Gazakh; km 431+000 to km 456+500

No	Station	EXISTING STRUCTURE				DEFICIENCIES									MAINTENANCE ACTIVITY				REQUIRED CULVERT LENGTH					
		Type	Material	Length	Size/Diameter	Silted/Blocked		Scour			Structural Damage				Cleaning	Backfill of scoured areas and Protection	Repair of Inlet/ Outlet	Reconstr./ Replace-ment	500 mm Dia.	750 mm Dia.	1000 mm Dia.	1250 mm Dia.	1500 mm Dia.	Other
						Partial	Total	Minor Erosion	Erosion/ Scouring	Severe Scouring/ Underm.	Minor Damage	Settle-ment	Damaged Inlet/ Outlet	Damaged Culvert										
	(m)			(m)	(mm)				m^2	m^2		m^2	m^2	m	m	m^2	m^2		m	m	m	m	m	m
1	433.254	P	RC	14,0	1000																			
2	433.362	P	RC	14,0	1000																			
3	433.627	P	RC	15,0	750																			
4	434.162	P	RC	14,0	1000	●									14,00									
5	434.337	P	RC	14,0	1000	●									14,00									
6	434.914	P	RC	13,0	1000																			
7	435.215	P	RC	14,0	1000	●									14,00									
8	437.022	P	RC	17,0	750	●									17,00									
9	437.198	P	RC	13,0	750		●●								13,00									
10	437.769	P	RC	20,0	750(2)																			
11	438.111	S/P	RC	25,0	2000x2000 + 1000																			
12	438.161	P	M	12,0	700	●									12,00									
13	438.549	P	RC	20,0	750		●●				●		1,20		20,00		1,20							
14	438.580	P	M	14,0	700	●									14,00									
15	438.961	S	RC	14,0	2000x2500						●		1,40				1,40							
16	439.328	P	RC	17,0	750																			
17	439.655	B	RC	18,0	2000x2000 (2)																			
18	439.863	P	RC	18,0	750		●●								18,00									
19	439.963	P	RC	18,0	750																			
20	440.163	P	RC	13,0	1250	●									13,00									
21	440.961	P	RC	16,0	750		●●								16,00									
22	440.968	P	RC	14,0	750	●									14,00									
23	441.463	S	RC	28,0	3000x2000						●		1,50				1,50							
24	442.075	P	RC	13,0	750	●									13,00									
25	442.213	P	RC	17,0	500																			
26	442.643	P	RC	13,0	750		●●								13,00									
27	442.847	P	RC	13,0	1000	●									13,00									
28	442.957	P	RC	13,0	750	●									13,00									
29	443.361	P	RC	13,0	750	●									13,00									
30	443.833	P	RC	14,0	1000		●●								14,00									
31	444.813	P	RC	13,0	1250	●									13,00									
32	444.827	P	RC	13,0	750																			
33	445.213	P	RC	14,0	750																			
34	445.391	P	RC	14,0	750																			
35	445.543	P	RC	12,0	750																			
36	445.763	P	RC	13,0	1000	●									13,00									
37	445.958	P	RC	14,0	1000	●									14,00									
38	446.018	P	RC	13,0	1250	●									13,00									
39	446.373	P	RC	21,0	1250																			
40	446.622	P	RC	15,0	1000	●									15,00									
41	446.895	P	RC	30,0	1000		●●								30,00									
42	448.033	P	RC	13,0	750																			

Type: P= PIPE CULVERT B= BOX CULVERT S= SLAVINSKI CULVERT
Material: RC= REINFORCED CONCRETE M= METAL AC=ASBESTOS CEMENT

Section 11 - M 1: Tovuz - Gazakh; km 431+000 to km 456+500

No	Station	EXISTING STRUCTURE				DEFICIENCIES									MAINTENANCE ACTIVITY				REQUIRED CULVERT LENGTH					
		Type	Material	Length	Size/Diameter	Silted/Blocked		Scour			Structural Damage				Cleaning	Backfill of scoured areas and Protection	Repair of Inlet/ Outlet	Reconstr./ Replace-ment	500 mm Dia.	750 mm Dia.	1000 mm Dia.	1250 mm Dia.	1500 mm Dia.	Other
						Partial	Total	Minor Erosion	Erosion/ Scouring	Severe Scouring/ Underm.	Minor Damage	Settle-ment	Damaged Inlet/ Outlet	Damaged Culvert										
	(m)			(m)	(mm)				m^2	m^2		m^2	m^2	m	m	m^2	m^2		m	m	m	m	m	m
43	448.568	P	RC	14,0	1000	●									14,00									
44	448.655	P	RC	14,0	1000	●									14,00									
45	449.075	P	RC	13,0	7750	●									13,00									
46	449.505	B	RC	14,0	1000x1000																			
47	449.783	P	RC	14,0	750	●					●		0,50		14,00		0,50							
48	450.133	P	RC	14,0	1000																			
49	450.151	P	RC	16,0	1000 (2)																			
50	450.361	P	RC	13,0	750	●									13,00									
51	450.703	P	RC	14,0	1000	●					●				14,00									
52	451.129	B	RC	18,0	800x800	●							0,80		18,00		0,80							
53	453.923	R/B	RC	21,0	1000 + 2000x1000																			
54	454.101	P	RC	22,0	1000																			
55	455.141	P	RC	22,0	1000																			
56	455.601	P	RC	23,0	1000																			
57	456.043	P	RC	25,0	1100	●									25,00									

Type: P= PIPE CULVERT B= BOX CULVERT S= SLAVINSKI CULVERT
Material: RC= REINFORCED CONCRETE M= METAL AC=ASBESTOS CEMENT

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Section 12 - M 1: Bypass Gazakh; km 456+500 to km 463+500

No	Station	EXISTING STRUCTURE				DEFICIENCIES									MAINTENANCE ACTIVITY				REQUIRED CULVERT LENGTH					
		Type	Material	Length	Size/Diameter	Silted/Blocked		Scour			Structural Damage				Cleaning	Backfill of scoured areas and Protection	Repair of Inlet/ Outlet	Reconstr./ Replace-ment	500 mm Dia.	750 mm Dia.	1000 mm Dia.	1250 mm Dia.	1500 mm Dia.	Other
						Partial	Total	Minor Erosion	Erosion/ Scouring	Severe Scouring/ Underm.	Minor Damage	Settle-ment	Damaged Inlet/ Outlet	Damaged Culvert										
	(m)			(m)	(mm)				m^2	m^2		m^2	m^2	m	m	m^2	m^3		m	m	m	m	m	m
1	456.613	S	RC	13,0	4000x2000																			
2	457.588	S	RC	16,0	1500x2000																			
3	458.682	P	M	19,0	700		●●								19,00									
4	458.747	P	RC	32,0	1000		●●								32,00									
5	459.065	P	RC	32,0	1000																			
6	459.333	P	RC	34,0	1000																			
7	459.581	P	RC	30,0	1000																			
8	459.853	P	RC	32,0	1000		●●								32,00									
9	460.363	S	RC	26,0	3500x4000																			
10	460.628	P	RC	26,0	1000		●●				●		1,00		26,00		1,00							
11	461.107	B	RC	70,0	2000x3000 (3)																			
12	461.349	P	RC	13,0	1000																			
13	461.877	S	RC	15,0	2000x1500		●●								15,00									
14	462.046	S	RC	26,0	2500x3000																			
15	463.407	S	RC	24,0	2000x2000																			

Type: P= PIPE CULVERT B= BOX CULVERT S= SLAVINSKI CULVERT
Material: RC= REINFORCED CONCRETE M= METAL AC=ASBESTOS CEMENT

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Section 13 - M 1: Gazakh - Georgien Border; km 463+500 to km 501+350

No	Station	EXISTING STRUCTURE				DEFICIENCIES								MAINTENANCE ACTIVITY				REQUIRED CULVERT LENGTH					
		Type	Material	Length	Size/Diameter	Silted/Blocked		Scour			Structural Damage				Cleaning	Backfill of scoured areas and Protection	Repair of Inlet/ Outlet	Reconstr./ Replace-ment	500 mm Dia.	750 mm Dia.	1000 mm Dia.	1250 mm Dia.	1500 mm Dia.	Other
						Partial	Total	Minor Erosion	Erosion/ Scouring	Severe Scouring/ Underm.	Minor Damage	Settle-ment	Damaged Inlet/ Outlet	Damaged Culvert										
	(m)			(m)	(mm)				m^2	m^2		m^3	m^2	m	m	m^2	m^2		m	m	m	m	m	m
1	463.557	S	RC	18,0	1500x1200																			
2	464.793	P	RC	13,0	750		●●								13,00									
3	464.999	P	RC	11,0	500	●									11,00									
4	465.883	P	RC	30,0	1100	●									30,00									
5	466.336	P	RC	15,0	750																			
6	466.773	P	M/AC	11,0	300 + 300																			
7	466.899	P	RC	12,0	1000	●									12,00									
8	467.607	P	RC	12,0	1000		●●								12,00									
9	467.907	P	RC	12,0	750		●●				●		1,00		12,00		1,00							
10	468.275	P	RC	12,0	750	●									12,00									
11	468.773	P	RC	12,0	1000	●									12,00									
12	468.907	S	RC	13,0	250x3000																			
13	469.041	B	RC	13,0	1000x1000	●									13,00									
14	470.149	P	RC	13,0	750	●									13,00									
15	470.714	P	RC	15,0	1000 (2)																			
16	471.175	B/P	RC/M	12,0	1000x1000 + 300	●									12,00									
17	471.355	P	RC	12,0	750		●●								12,00									
18	472.003	P	RC	22,0	1000	●									22,00									
19	472.553	B	RC	11,0	1000x1000		●●								11,00									
20	473.151	P	RC	12,0	750	●									12,00									
21	475.469	P	RC	30,0	1250																			
22	475.687	P	RC	22,0	1000																			
23	476.029	S	RC	20,0	2000x3000																			
24	476.451	P	RC	21,0	1000 (2)	●									21,00									
25	476.706	P	RC	17,0	1250																			
26	476.816	P	RC	14,0	1250		●●								14,00									
27	476.820	P	M	16,0	500																			
28	477.099	S	RC	20,0	1500x1500																			
29	478.519	S	RC	22,0	5000x4000						●		1,00				1,00							
30	478.629	P	RC	11,0	750																			
31	478.781	P	RC	12,0	750	●									12,00									
32	478.903	P	RC	11,0	750																			
33	479.302	P	RC	11,0	750	●									11,00									
34	479.581	P	RC	12,0	1000	●									12,00									
35	480.003	P	RC	15,0	1000	●									15,00									
36	480.182	P	RC	12,0	750																			
37	480.386	P	RC	12,0	1000		●●								12,00									
38	480.503	B	RC	14,0	300x300	●									14,00									
39	480.719	P	RC	14,0	750	●									14,00									
40	481.315	P	RC	11,0	750	●									11,00									
41	481.322	P	RC	14,0	1250																			
42	481.402	B	RC	12,0	1000x1000	●									12,00									

Type: P= PIPE CULVERT B= BOX CULVERT S= SLAVINSKI CULVERT
Material: RC= REINFORCED CONCRETE M= METAL AC=ASBESTOS CEMENT

Section 13 - M 1: Gazakh - Georgien Border; km 463+500 to km 501+350

No	Station	EXISTING STRUCTURE				DEFICIENCIES									MAINTENANCE ACTIVITY				REQUIRED CULVERT LENGTH					
		Type	Material	Length	Size/Diameter	Silted/Blocked		Scour			Structural Damage				Cleaning	Backfill of scoured areas and Protection	Repair of Inlet/ Outlet	Reconstr./ Replace-ment	500 mm Dia.	750 mm Dia.	1000 mm Dia.	1250 mm Dia.	1500 mm Dia.	Other
						Partial	Total	Minor Erosion	Erosion/ Scouring	Severe Scouring/ Underm.	Minor Damage	Settle-ment	Damaged Inlet/ Outlet	Damaged Culvert										
	(m)			(m)	(mm)				m^2	m^2		m^2	m^2	m	m	m^2	m^2		m	m	m	m	m	m
43	481.492	P	M	15,0	1000																			
44	481.816	P	M	16,0	700																			
45	482.985	P	RC	12,0	700																			
46	483.309	P	RC	14,0	1000	●									14,00									
47	483.751	B	RC	14,0	1000x1000																			
48	484.599	P	RC	15,0	1000																			
49	484.739	P	RC	16,0	1000 (2)																			
50	485.931	P	RC	14,0	1000	●									14,00									
51	486.172	P	RC	13,0	1000	●									13,00									
52	486.915	P	RC	15,0	1000																			
53	487.216	B	RC	16,0	2000x2000																			
54	487.243	P	RC	14,0	1000																			
55	488.151	P	RC	14,0	1100		●●								14,00									
56	489.494	P	RC	14,0	750		●●								14,00									
57	489.611	P	RC	14,0	750		●●								14,00									
58	490.512	P	M	13,5	700		●●								13,50									
59	490.720	P	RC	13,5	1000																			
60	491.312	P	RC	17,0	1000 (2)	●									17,00									
61	492.319	B	RC	41,0	2000x2000 (2)			●	7,50						41,00	7,50								
62	492.930	P	RC	14,0	750		●●								14,00									
63	493.160	P	RC	14,0	1000		●●								14,00									
64	493.310	P	RC	14,0	1000		●●								14,00									
65	493.580	P	RC	14,0	750	●									14,00									
66	494.844	P	RC	16,0	1000 (2)	●									16,00									
67	495.651	P	RC	13,0	1000						●		0,50				0,50							
68	496.078	P	RC	14,0	1000	●									14,00									
69	496.589	P	RC	13,0	1250	●									13,00									
70	496.948	P	RC	21,0	1000						●		1,00				1,00							
71	497.194	B	RC	13,0	800x800	●									13,00									
72	497.365	P	RC	14,0	1250	●									14,00									
73	497.833	P	RC	14,0	750																			
74	498.191	P	RC	15,0	1100	●									15,00									
75	498.249	P	RC	16,0	1000		●●								16,00									
76	498.933	B	RC	14,0	800x800	●									14,00									
77	499.274	P	RC	16,0	1000	●									16,00									
78	499.648	P	RC	13,0	1000 (2)		●●								13,00									
79	499.773	B	RC	13,0	700x700	●									13,00									
80	500.268	P	RC	13,0	1250	●									13,00									
81	500.691	P	RC	14,0	1250	●									14,00									
82	501.075	P	RC	21,0	1000 (2)						●		0,50				0,50							
83	501.250	S	RC	21,0	2500x1500																			

Type: P= PIPE CULVERT B= BOX CULVERT S= SLAVINSKI CULVERT
Material: RC= REINFORCED CONCRETE M= METAL AC=ASBESTOS CEMENT

APPENDIX 6.12

STRAIGHT LINE DIAGRAMS

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

KOCKS
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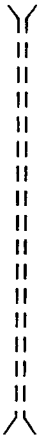
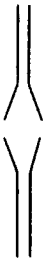
Alyat - Ganja - Georgian Border (M 4/M 1)

-Legend of signs -



Bridge

Culvert



Junction

Crossing railway

POL — **Police station**

BUS — **Bus stop**

134 — **km - post**

S — **Service / Garage**

P — **Petrol station**

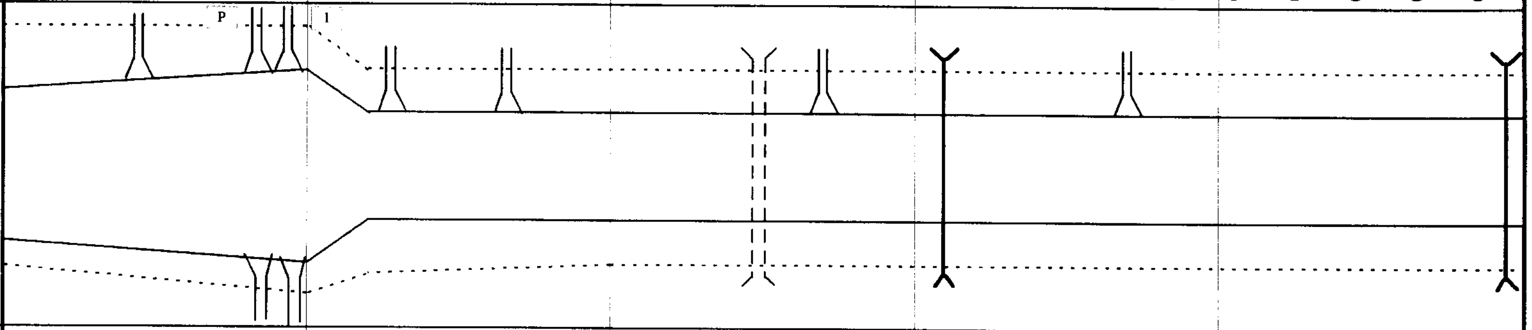
R — **Repair ramp**

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Alyat - Ganja - Georgian Border (M 4/M 1) : Section 1 - M 4, Alyat - Gazi Mammad km 0+000 to km 43+450

Location
- Junction km 0+470
- Junction km 0+890
- Junction km 0+942
- Junction km 1+240
- Junction km 1+623
- Bridge km 2+420
- Junction km 2+715
- Culvert km 3+081
- Junction km 3+755
- Culvert km 4+932

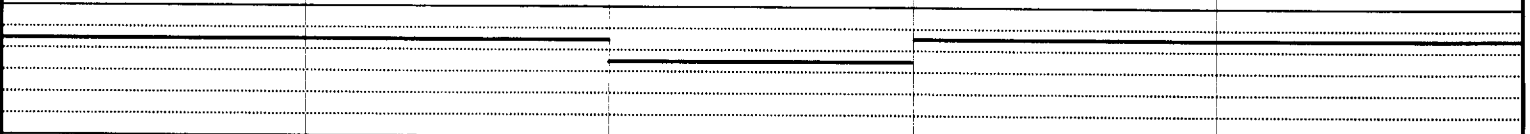
Chainage km: 0 +000, 0 +200, 0 +400, 0 +600, 0 +800, 1 +000, 1 +200, 1 +400, 1 +600, 1 +800, 2 +000, 2 +200, 2 +400, 2 +600, 2 +800, 3 +000, 3 +200, 3 +400, 3 +600, 3 +800, 4 +000, 4 +200, 4 +400, 4 +600, 4 +800

Layout



			0 +000	1 +000	1 +200	2 +000	3 +000	4 +000
Width of Carriageway		m	11.40	14.30	7.45	8.00	7.70	7.50
Width of Shoulders	L	m	5.35	2.15	3.00	3.20	3.00	3.00
	R	m	1.80	2.35	4.00	3.00	3.00	3.00
Rise/Fall +/-		%	+0.1					
Surface Condition	Cracks	%	0.1	0.2		0.4	0.2	0.1
	Alligator Cracks	%	1.8	0.8		1.4	1.1	1.0
	Potholes	%	0.4	0.2		0.1	0.2	0.0
	Settlement	%	0.4	0.5		0.1	0.9	0.2
	Rutting	%	0.0	0.0		0.0	0.0	0.0

Roughness (IRI)

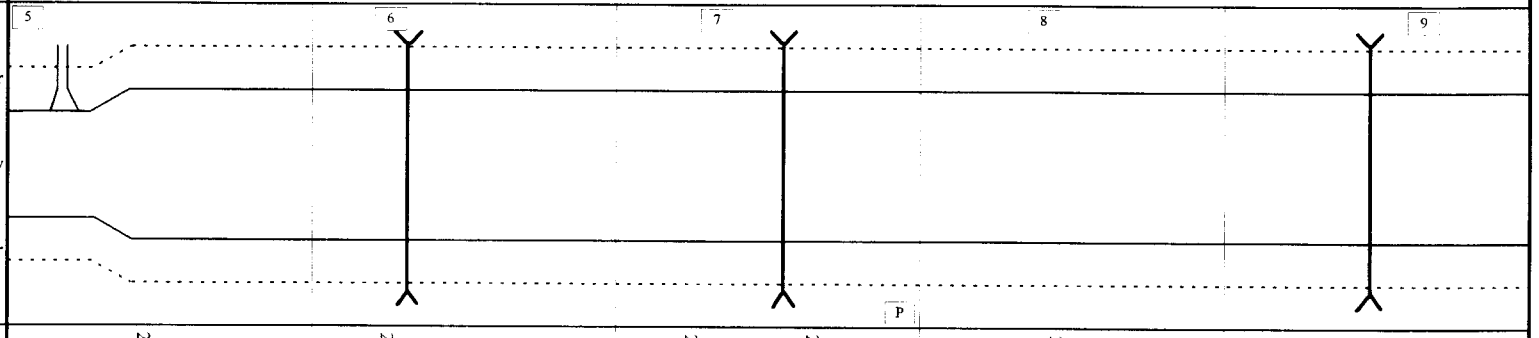


Pavement

New mm
- 50 Asphalt - concrete
- 175 Bituminous roadbase
- 225 Granular sub-base, CBR >30

Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain

Existing mm
- 30 asphalt - concrete
- 60 -70 asphalt - concrete
- 100 gravel / sand

Location			Junction km 5+180 / Culvert km 6+293 / Culvert km 7+577 / Culvert km 9+429
Chainage		km	5 +000 / 5 +200 / 5 +400 / 5 +600 / 5 +800 / 6 +000 / 6 +200 / 6 +400 / 6 +600 / 6 +800 / 7 +000 / 7 +200 / 7 +400 / 7 +600 / 7 +800 / 8 +000 / 8 +200 / 8 +400 / 8 +600 / 8 +800 / 9 +000 / 9 +200 / 9 +400 / 9 +600 / 9 +800
Layout			
Width of Carriageway		m	7.45 / 27.95 / 28.20 / 28.00 / 26.00 / 28.30 / 28.00
Width of Shoulders	L	m	2.50 / 2.00 / 1.35 / 2.00 / 1.00 / 0.50 / 1.00
	R	m	2.70 / 2.00 / 1.30 / 1.80 / 2.15 / 1.20 / 1.20
Rise/Fall +/-		%	+0.1
Roughness (IRI)	< 4.0	m/km	
	> 4.0 - 6.0	m/km	
	> 6.0 - 8.5	m/km	
	> 8.5 - 10.5	m/km	
	> 10.5 - 12.0	m/km	
	> 12.0	m/km	
Surface Condition	Cracks	%	0.1 / 0.2 / 0.1 / 0.2 / 0.1
	Alligator Cracks	%	0.6 / 0.9 / 0.3 / 0.7 / 0.1
	Potholes	%	0.1 / 0.1 / 0.0 / 0.0 / 0.1
	Settlement	%	0.2 / 0.2 / 0.2 / 0.7 / 0.3
	Rutting	%	0.0 / 0.0 / 0.0 / 0.0 / 0.0
Pavement	New	mm	50 Asphalt - concrete 175 Bituminous roadbase 225 Granular sub-base, CBR >30 Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain
	Existing	mm	

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Alyat - Ganja - Georgian Border (M 4/M 1) : Section 1 - M 4, Alyat - Gazi Mammad km 0+000 to km 43+450

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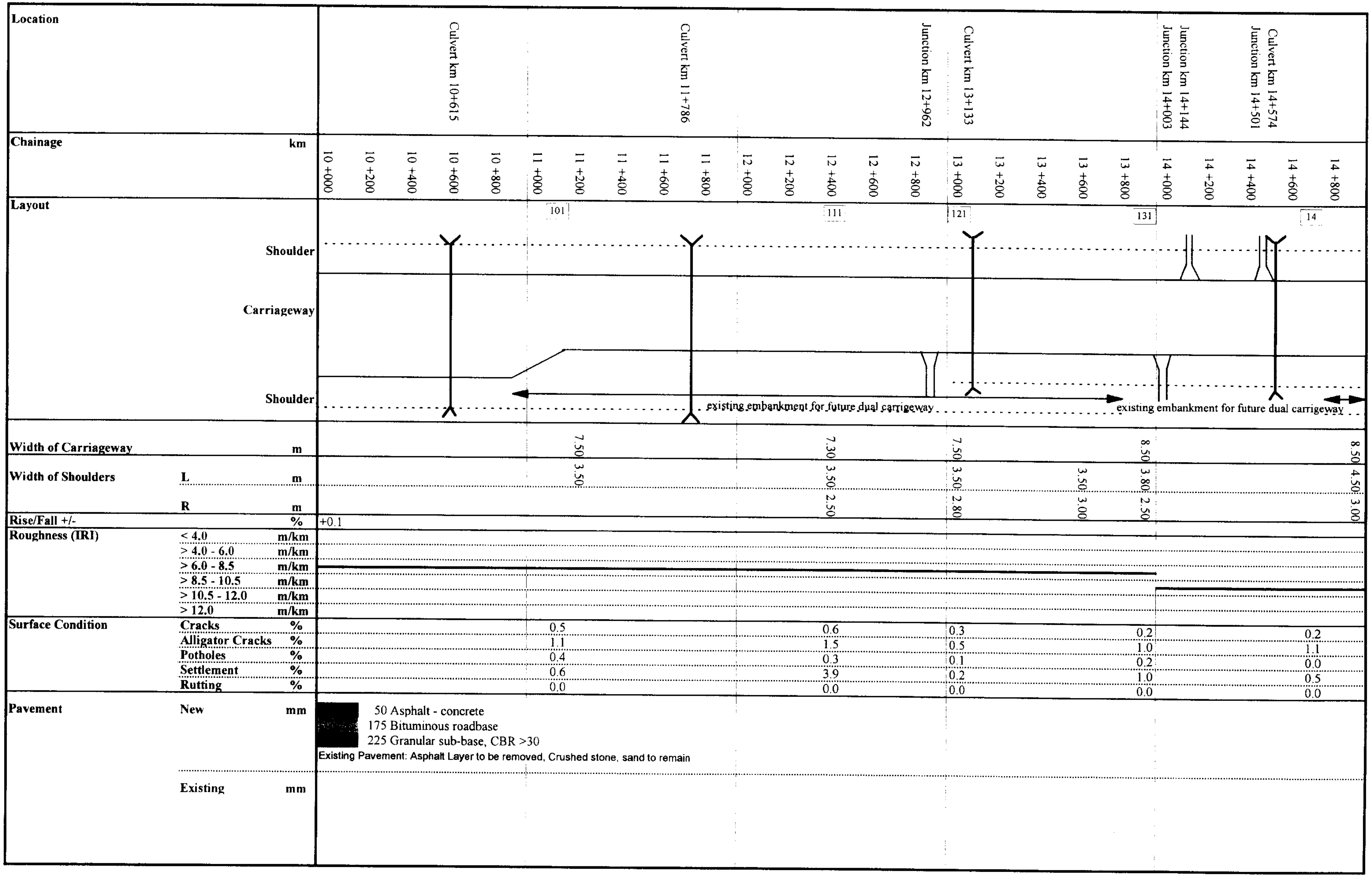


TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

Alyat - Ganja - Georgian Border (M 4/M 1) : Section 1 - M 4, Alyat - Gazi Mammad km 0+000 to km 43+450

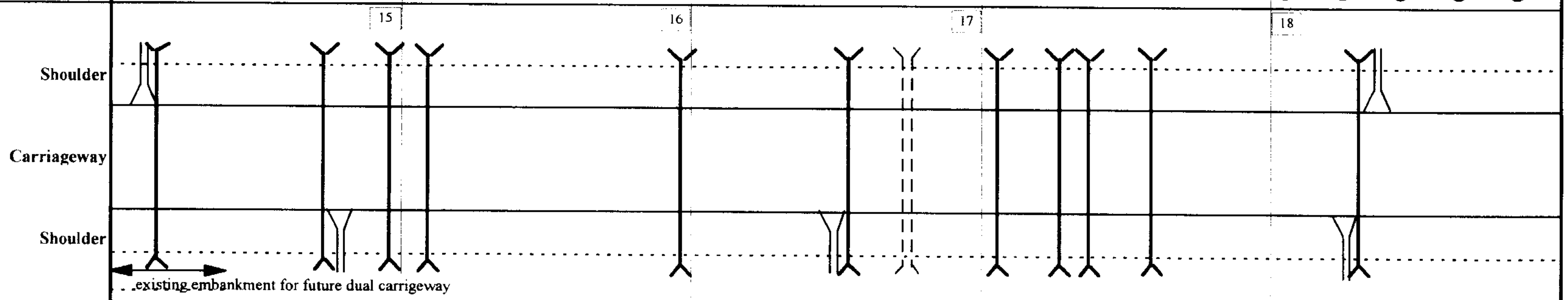
Location

- Junction km15+114
- Culvert km15+151
- Culvert km 15+746
- Junction km 15+794
- Culvert km 15+948
- Culvert km 16+084
- Culvert km 16+985
- Junction km 17+485
- Culvert km 17+571
- Bridge km 17+723
- Culvert km 18+070
- Culvert km 18+240
- Culvert km 18+369
- Culvert km 18+590
- Junction km 19+276
- Culvert km 19+329
- Junction km 19+366

Chainage km

15 +000, 15 +200, 15 +400, 15 +600, 15 +800, 16 +000, 16 +200, 16 +400, 16 +600, 16 +800, 17 +000, 17 +200, 17 +400, 17 +600, 17 +800, 18 +000, 18 +200, 18 +400, 18 +600, 18 +800, 19 +000, 19 +200, 19 +400, 19 +600, 19 +800

Layout



			15	16	17	18
Width of Carriageway		m	8.00	8.60	8.00	7.70
Width of Shoulders	L	m	3.50	3.20	3.00	3.60
	R	m	3.20	2.80	3.00	3.00
Rise/Fall +/-		%	+0.1			
Roughness (IRI)	< 4.0	m/km				
	> 4.0 - 6.0	m/km		━	━	━
	> 6.0 - 8.5	m/km	━			
	> 8.5 - 10.5	m/km				
	> 10.5 - 12.0	m/km				
	> 12.0	m/km				
Surface Condition	Cracks	%	0.4	0.3	0.4	0.4
	Alligator Cracks	%	1.5	0.9	1.2	1.1
	Potholes	%	0.0	0.0	0.1	0.0
	Settlement	%	1.8	0.6	0.8	0.3
	Rutting	%	0.0	0.0	0.0	0.0

Pavement

New mm

■	50 Asphalt - concrete
▨	175 Bituminous roadbase
■	225 Granular sub-base, CBR >30

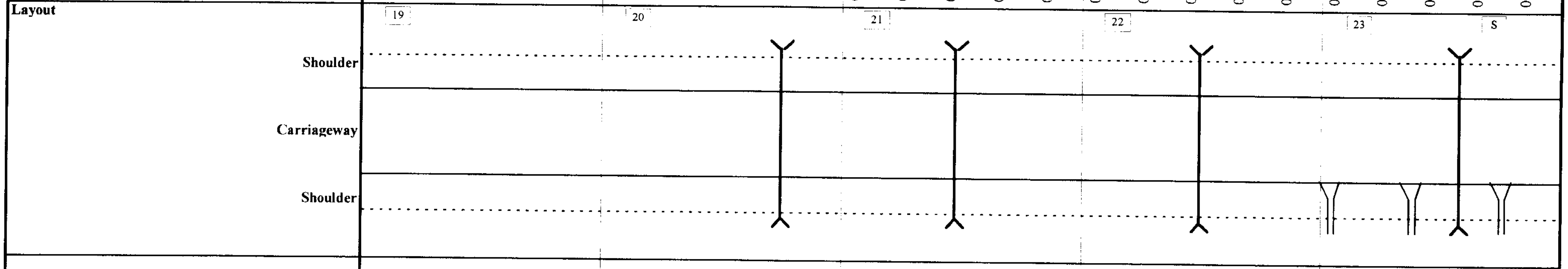
Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain

Existing mm

■	30 asphalt - concrete
▨	40 asphalt - concrete
■	200 gravel / sand

			20	21	22	23	24
Location				Culvert km 21+773	Culvert km 22+450	Culvert km 23+487	Junction km 24+007 Junction km 24+389 Culvert km 24+582 Junction km 24+774
Chainage		km	20 +000 20 +200 20 +400 20 +600 20 +800	21 +000 21 +200 21 +400 21 +600 21 +800	22 +000 22 +200 22 +400 22 +600 22 +800	23 +000 23 +200 23 +400 23 +600 23 +800	24 +000 24 +200 24 +400 24 +600 24 +800

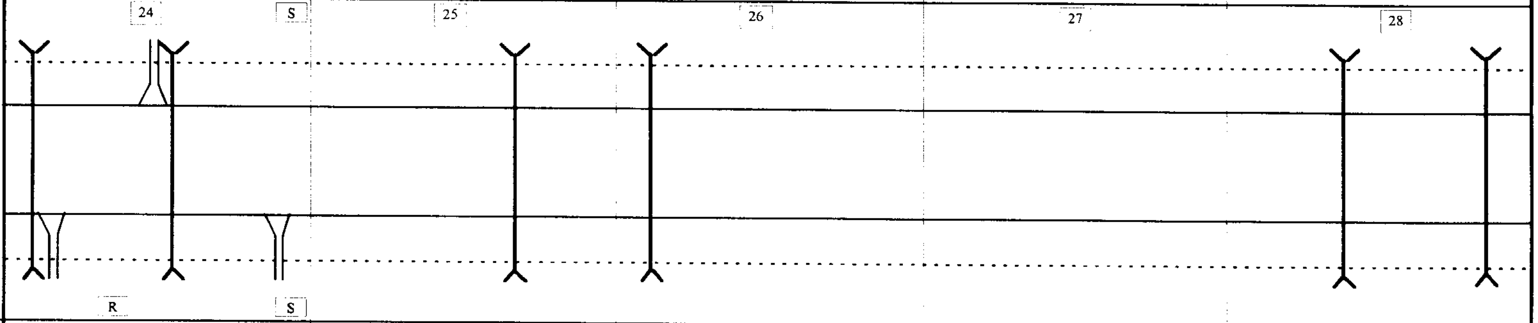
Layout

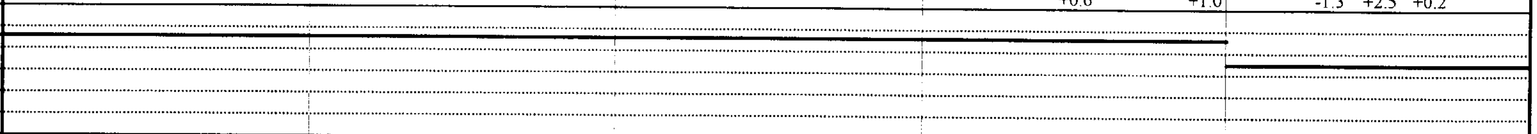


			20	21	22	23	24
Width of Carriageway		m	7.80	7.80	7.80	7.80	7.80
Width of Shoulders	L	m	3.50	3.20	4.00	3.00	3.50
	R	m	4.00	3.10	4.00	3.00	3.50
Rise/Fall +/-		%	+0.2				
Roughness (IRI)	< 4.0	m/km					
	> 4.0 - 6.0	m/km					
	> 6.0 - 8.5	m/km					
	> 8.5 - 10.5	m/km					
	> 10.5 - 12.0	m/km					
	> 12.0	m/km					
Surface Condition	Cracks	%	0.6	0.5	0.1	0.1	0.1
	Alligator Cracks	%	1.8	1.2	0.5	0.1	0.6
	Potholes	%	0.1	0.0	0.0	0.0	0.0
	Settlement	%	0.9	0.7	0.0	0.0	0.0
	Rutting	%	0.0	0.0	0.0	0.0	0.0
Pavement	New	mm	■ 50 Asphalt - concrete ▨ 175 Bituminous roadbase ■ 225 Granular sub-base, CBR >30 Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain				
	Existing	mm					

Location			Culvert km 25+084 Junction km 25+165 Culvert km 225+560 Junction km 25+529 Junction km 25+882	Culvert km 26+644	Culvert km 27+145		Culvert km 29+394 Culvert km 29+833
Chainage		km	25 +000 25 +200 25 +400 25 +600 25 +800	26 +000 26 +200 26 +400 26 +600 26 +800	27 +000 27 +200 27 +400 27 +600 27 +800	28 +000 28 +200 28 +400 28 +600 28 +800	29 +000 29 +200 29 +400 29 +600 29 +800
Width of Carriageway		m	7.80	8.30	7.60	7.50	7.80
Width of Shoulders	L	m	3.80	2.80	3.00	3.00	2.60
	R	m	3.70	3.50	3.00	3.00	3.00
Rise/Fall +/-		%	+0.2/-0.3			+0.6 +1.0	-1.3 +2.5 +0.2
Roughness (IRI)	< 4.0	m/km					
	> 4.0 - 6.0	m/km					
	> 6.0 - 8.5	m/km					
	> 8.5 - 10.5	m/km					
	> 10.5 - 12.0	m/km					
	> 12.0	m/km					
Surface Condition	**Cracks**	%	0.1	0.2	0.3	0.2	0.2
	Alligator Cracks	%	0.5	0.6	0.6	0.6	0.5
	Potholes	%	0.0	0.0	0.1	0.0	0.0
	Settlement	%	0.0	0.1	0.4	0.5	0.7
	Rutting	%	0.0	0.0	0.0	0.0	0.0
Pavement	**New**	mm	■ 50 Asphalt - concrete 175 Bituminous roadbase 225 Granular sub-base, CBR >30 Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain				
	Existing	mm					

Layout

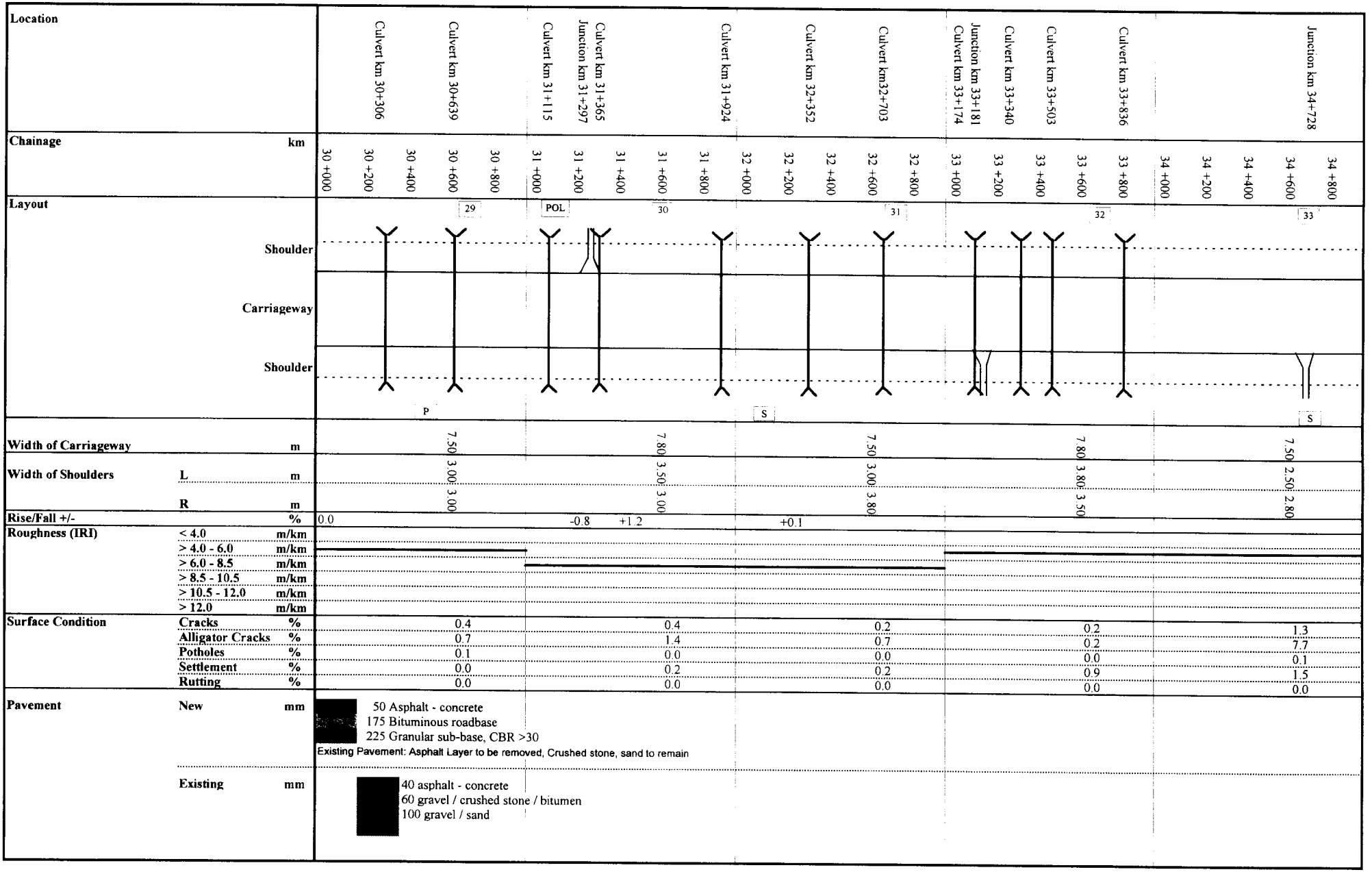




TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

Alyat - Ganja - Georgian Border (M 4/M 1) : Section 1 - M 4, Alyat - Gazi Mammad km 0+000 to km 43+450

KOCKS INGENIEURE



TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

Alyat - Ganja - Georgian Border (M 4/M 1) : Section 1 - M 4, Alyat - Gazi Mammad km 0+000 to km 43+450

KOCKS INGENIEURE

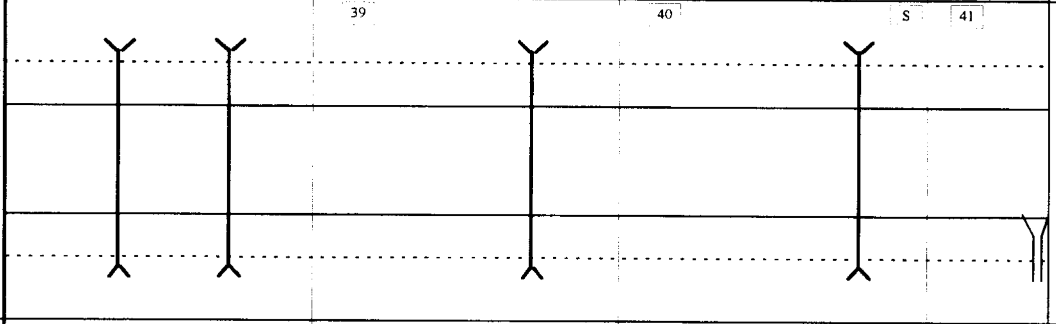
Location			Junction km 35+453 / Junction km 35+778 / Culvert km 37+431 / Culvert km 39+097 / Junction km 39+548 / Culvert km 39+636
Chainage		km	35 +000 / 35 +200 / 35 +400 / 35 +600 / 35 +800 / 36 +000 / 36 +200 / 36 +400 / 36 +600 / 36 +800 / 37 +000 / 37 +200 / 37 +400 / 37 +600 / 37 +800 / 38 +000 / 38 +200 / 38 +400 / 38 +600 / 38 +800 / 39 +000 / 39 +200 / 39 +400 / 39 +600 / 39 +800
Layout			34 / 35 / 36 / 37 / 38
			Shoulder / Carriageway / Shoulder
Width of Carriageway		m	7.80 / 7.70 / 7.50 / 7.65 / 8.00
Width of Shoulders	L	m	3.80 / 3.30 / 3.00 / 3.50 / 4.00
	R	m	3.30 / 3.30 / 3.00 / 3.50 / 3.50
Rise/Fall +/-		%	-0.8 / -1.2 / -1.3 / -1.5 / -0.5 / -0.8 / +1.2 / -0.5
Roughness (IRI)	< 4.0	m/km	
	> 4.0 - 6.0	m/km	
	> 6.0 - 8.5	m/km	
	> 8.5 - 10.5	m/km	
	> 10.5 - 12.0	m/km	
	> 12.0	m/km	
Surface Condition	**Cracks**	%	1.2 / 0.5 / 0.2 / 0.4 / 0.2
	Alligator Cracks	%	7.0 / 6.3 / 0.9 / 5.0 / 0.8
	Potholes	%	0.3 / 0.1 / 0.2 / 0.1 / 0.0
	Settlement	%	2.0 / 4.5 / 0.4 / 1.8 / 2.1
	Rutting	%	0.0 / 0.0 / 0.0 / 0.0 / 0.0
Pavement	**New**	mm	50 Asphalt - concrete 175 Bituminous roadbase 225 Granular sub-base, CBR >30
			Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain
	Existing	mm	

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Alyat - Ganja - Georgian Border (M 4/M 1) : Section 1 - M 4, Alyat - Gazi Mammad km 0+000 to km 43+450

KOCKS
INGENIEURE

Item	Unit	40 +000	40 +200	40 +400	40 +600	40 +800	41 +000	41 +200	41 +400	41 +600	41 +800	42 +000	42 +200	42 +400	42 +600	42 +800	43 +000	43 +200	43 +450
Location				Culvert km 40+393	Culvert km 40+720					Culvert km 41+702						Culvert km 42+788		Junction km 43+445	
Chainage	km	40 +000	40 +200	40 +400	40 +600	40 +800	41 +000	41 +200	41 +400	41 +600	41 +800	42 +000	42 +200	42 +400	42 +600	42 +800	43 +000	43 +200	43 +450
Width of Carriageway	m						8.60					8.50					9.00		
Width of Shoulders L	m						3.00					4.00					2.80		
Width of Shoulders R	m						2.70					3.50					3.50		
Rise/Fall +/-	%	+2.2 +1.5 -1.8				+2.0	-2.8			+1.1		+1.0	+0.5	-1.0				-3.2	
Roughness (IRI) < 4.0	m/km																		
> 4.0 - 6.0	m/km																		
> 6.0 - 8.5	m/km	━	━	━	━	━	━	━	━	━	━	━	━	━	━	━			
> 8.5 - 10.5	m/km																━	━	
> 10.5 - 12.0	m/km																		
> 12.0	m/km																		
Surface Condition Cracks	%						0.1					0.1					0.1		
Alligator Cracks	%						0.6					0.7					1.2		
Potholes	%						0.0					0.1					0.0		
Settlement	%						0.4					0.3					0.6		
Rutting	%						0.0					0.0					0.0		
Pavement New	mm	■ 50 Asphalt - concrete ▒ 175 Bituminous roadbase ■ 225 Granular sub-base, CBR >30 Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain																	
Existing	mm																		

Layout



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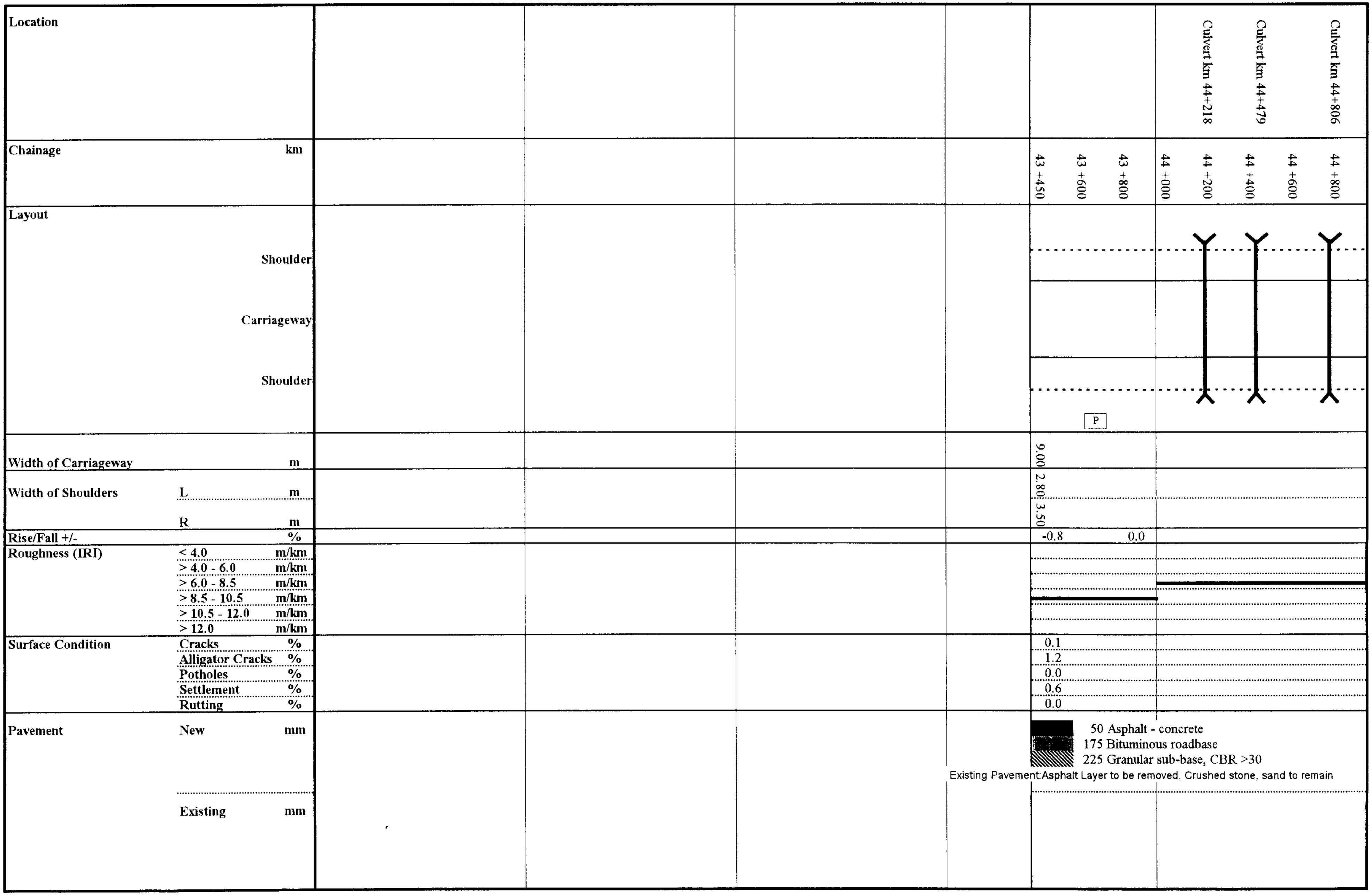
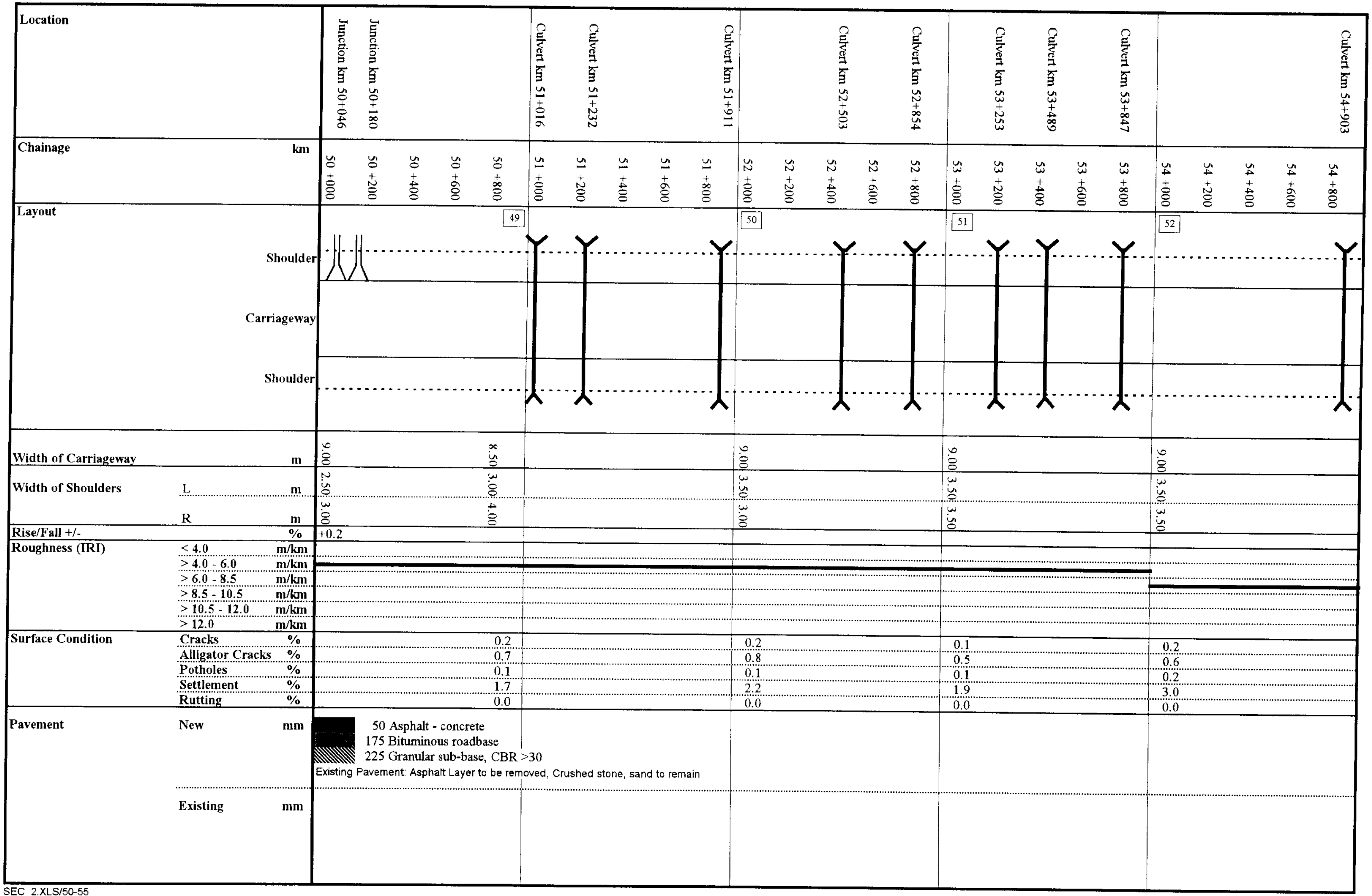
Alyat - Ganja - Georgian Border (M 4/M 1) : Section 2 - M 4, Bypass Gazi-Mammad km 43+450 to km 58+980



Location			Culvert km 44+178	Culvert km 45+431	Culvert km 45+610	Bridge km 46+012	Junction km 46+250	Junction km 46+530	Bridge km 46+657	Junction km 46+807	Culvert km 46+907	Culvert km 47+367	Culvert km 49+708	Junction km 49+800
Chainage		km	45 +000 / 45 +200 / 45 +400 / 45 +600 / 45 +800	46 +000 / 46 +200 / 46 +400 / 46 +600 / 46 +800	47 +000 / 47 +200 / 47 +400 / 47 +600 / 47 +800	48 +000 / 48 +200 / 48 +400 / 48 +600 / 48 +800	49 +000 / 49 +200 / 49 +400 / 49 +600 / 49 +800							
Layout			43			44						45	46	47 / R / 48
	Shoulder													
	Carriageway													
	Shoulder													
Width of Carriageway		m	8.80		11.50	10.00	20.00		9.00			9.00	8.80	8.70 / 9.00
Width of Shoulders	L	m	3.50		2.50	1.00	1.50		1.50			3.50	3.50	3.50 / 2.50
	R	m	3.50		2.50	1.00	1.50		1.50			4.00	3.00	3.00 / 3.00
Rise/Fall +/-		%	-0.6 / 0.0 / -0.4 / -1.2 / -2.6			-1.5						+0.8	+0.3	
Roughness (IRI)	< 4.0	m/km												
	> 4.0 - 6.0	m/km												
	> 6.0 - 8.5	m/km												
	> 8.5 - 10.5	m/km												
	> 10.5 - 12.0	m/km												
	> 12.0	m/km												
Surface Condition	Cracks	%	0.1			0.1						0.1	0.3	1.1 / 0.6
	Alligator Cracks	%	0.4			0.8						0.8	4.0	2.6 / 3.9
	Potholes	%	0.0			0.1						0.0	0.1	0.6 / 0.0
	Settlement	%	0.2			0.4						0.2	0.9	2.6 / 1.8
	Rutting	%	0.0			0.0						6.7	0.0	0.0 / 0.0
Pavement	New	mm	50 Asphalt - concrete 175 Bituminous roadbase 225 Granular sub-base, CBR >30 Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain											
	Existing	mm	40 asphalt - concrete 60 asphalt - concrete 100 gravel / crushed stone / bitumen 220 crushed stone / sand											


Location
Junction km 50+046
Junction km 50+180
Culvert km 51+016
Culvert km 51+232
Culvert km 51+911
Culvert km 52+503
Culvert km 52+854
Culvert km 53+253
Culvert km 53+489
Culvert km 53+847
Culvert km 54+903
Chainage km
50 +000
50 +200
50 +400
50 +600
50 +800
51 +000
51 +200
51 +400
51 +600
51 +800
52 +000
52 +200
52 +400
52 +600
52 +800
53 +000
53 +200
53 +400
53 +600
53 +800
54 +000
54 +200
54 +400
54 +600
54 +800
Layout
49
50
51
52
Shoulder
Carriageway
Shoulder
Width of Carriageway m
9.00
8.50
9.00
9.00
9.00
Width of Shoulders L m
2.50
3.00
3.50
3.50
3.50
R m
3.00
4.00
3.00
3.50
3.50
Rise/Fall +/- %
+0.2
Roughness (IRI)
< 4.0 m/km
> 4.0 - 6.0 m/km
> 6.0 - 8.5 m/km
> 8.5 - 10.5 m/km
> 10.5 - 12.0 m/km
> 12.0 m/km
Surface Condition
Cracks %
Alligator Cracks %
Potholes %
Settlement %
Rutting %
0.2
0.7
0.1
1.7
0.0
0.2
0.8
0.1
2.2
0.0
0.1
0.5
0.1
1.9
0.0
0.2
0.6
0.2
3.0
0.0
Pavement
New mm
50 Asphalt - concrete
175 Bituminous roadbase
225 Granular sub-base, CBR >30
Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain
Existing mm

Location			Culvert km 55+182	Culvert km 55+792	Culvert km 56+141	Culvert km 57+456	Culvert km 58+892	Junction km 58+980	
Chainage		km	55 +000	55 +200 / 55 +400 / 55 +600 / 55 +800	56 +000	56 +200 / 56 +400 / 56 +600 / 56 +800	57 +000	57 +200 / 57 +400 / 57 +600 / 57 +800	58 +000 / 58 +200 / 58 +400 / 58 +600 / 58 +800	58 +980
Layout			53		54	55	56	57		
	Shoulder									
	Carriageway									
	Shoulder									
Width of Carriageway		m	9.00		9.00	9.00	8.00	8.00		
Width of Shoulders	L	m	3.50		3.50	3.50	3.50	3.50		
	R	m	3.50		3.00	3.00	3.20	3.50		
Rise/Fall +/-		%	+0.2							
Roughness (IRI)	< 4.0	m/km								
	> 4.0 - 6.0	m/km								
	> 6.0 - 8.5	m/km								
	> 8.5 - 10.5	m/km								
	> 10.5 - 12.0	m/km								
	> 12.0	m/km								
Surface Condition	Cracks	%	0.1		0.0	0.0	0.0	0.7		
	Alligator Cracks	%	0.5		0.2	0.7	0.5	1.7		
	Potholes	%	0.1		0.2	0.1	0.0	0.2		
	Settlement	%	1.6		2.2	3.6	0.2	0.5		
	Rutting	%	0.0		0.0	0.0	0.0	0.0		
Pavement	New	mm	50 Asphalt - concrete 175 Bituminous roadbase 225 Granular sub-base, CBR >30							
			Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain							
	Existing	mm								

KOCKS INGENIEURE

Location							Culvert km 59+600 / Culvert km 59+986
Chainage		km					58 +980 / 59 +200 / 59 +400 / 59 +600 / 59 +800
Layout							58
		Shoulder					
		Carriageway					
		Shoulder					
Width of Carriageway		m					8.00 / 9.00
Width of Shoulders	L	m					3.50 / 3.00
	R	m					3.50 / 3.00
Rise/Fall +/-		%					+0.3
Roughness (IRI)	< 4.0	m/km					
	> 4.0 - 6.0	m/km					
	> 6.0 - 8.5	m/km					
	> 8.5 - 10.5	m/km					
	> 10.5 - 12.0	m/km					
	> 12.0	m/km					
Surface Condition	Cracks	%					0.7 / 0.1
	Alligator Cracks	%					1.6 / 0.4
	Potholes	%					0.2 / 0.0
	Settlement	%					0.5 / 1.2
	Rutting	%					0.0 / 2.6
Pavement	New	mm					50 Asphalt - concrete 175 Bituminous roadbase 225 Granular sub-base, CBR >30
							Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain
	Existing	mm					

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Alyat - Ganja - Georgian Border (M 4/M 1) : Section 3 - M 4, Gazi-Mammad - Kyrdamir km 58+980 to km 124+300

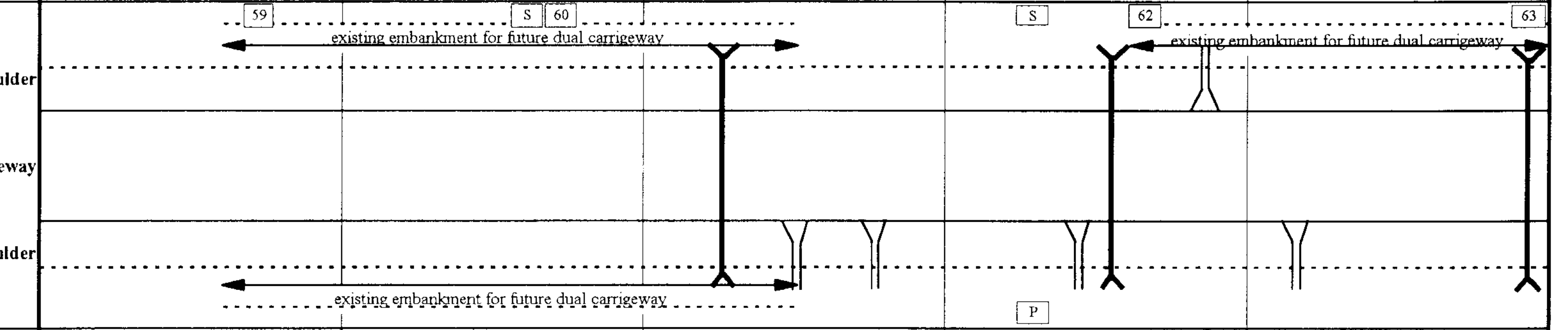
Location				Culvert km 62+256 Junction km 62+507 Junction km 62+785	Junction km 63+411 Culvert km 63+572 Junction km 63+842	Junction km 64+177 Culvert km 64+912
Chainage	km	60 +000 60 +200 60 +400 60 +600 60 +800	61 +000 61 +200 61 +400 61 +600 61 +800	62 +000 62 +200 62 +400 62 +600 62 +800	63 +000 63 +200 63 +400 63 +600 63 +800	64 +000 64 +200 64 +400 64 +600 64 +800

Layout

Shoulder

Carriageway

Shoulder

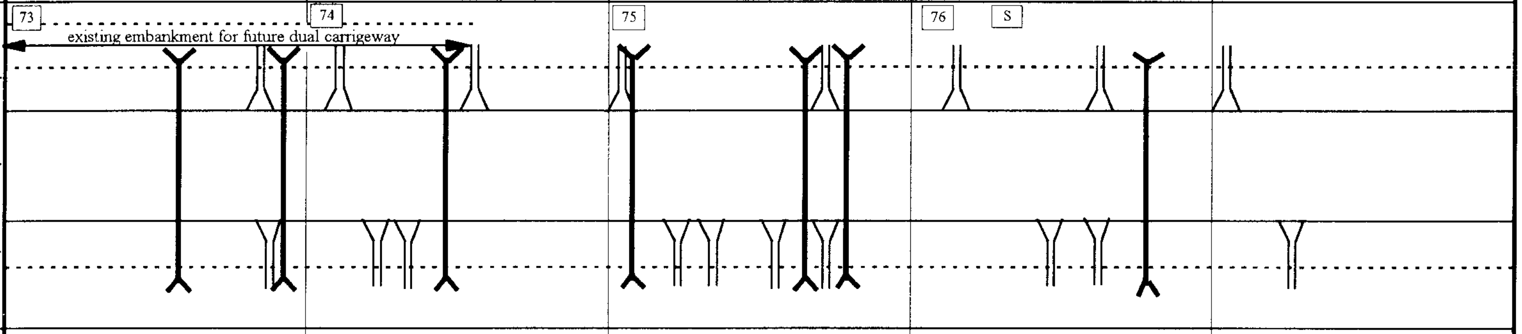


Width of Carriageway		m	8.50	8.50		8.50	8.20
Width of Shoulders	L	m	3.00	3.00		3.50	2.50
	R	m	3.00	3.00		3.50	3.20
Rise/Fall +/-		%	+0.3			+0.1	
Roughness (IRI)	< 4.0	m/km					
	> 4.0 - 6.0	m/km					
	> 6.0 - 8.5	m/km	━	━	━	━	━
	> 8.5 - 10.5	m/km					
	> 10.5 - 12.0	m/km					
	> 12.0	m/km					
Surface Condition	Cracks	%	0.3	0.2		0.6	0.6
	Alligator Cracks	%	0.2	1.0		1.8	4.5
	Potholes	%	0.0	0.0		0.3	0.3
	Settlement	%	0.6	0.8		2.0	3.5
	Rutting	%	0.0	3.7		0.9	1.4
Pavement	New	mm	■ 50 Asphalt - concrete ▦ 175 Bituminous roadbase ▨ 225 Granular sub-base, CBR >30 Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain				
	Existing	mm	■ 30 asphalt - concrete ▦ 70 asphalt - concrete ▨ 70 crushed stone / sand				

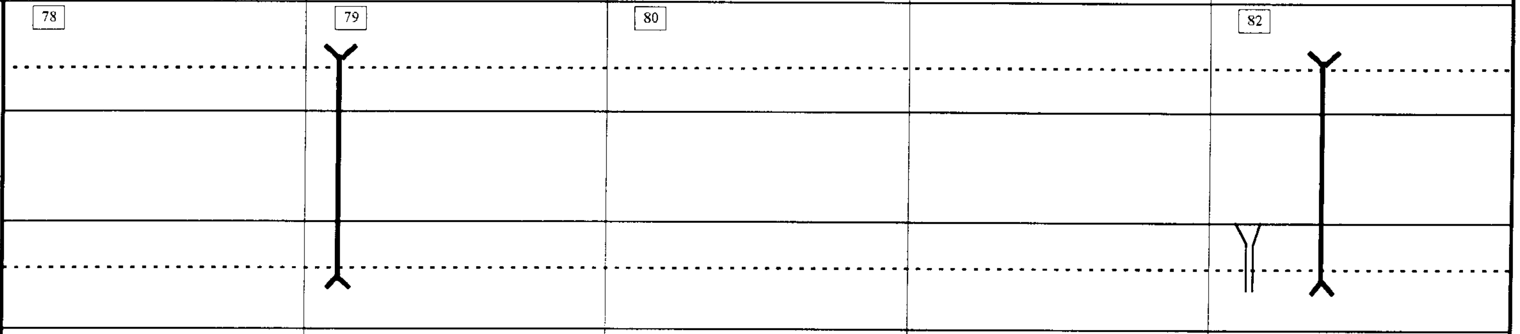
Location			Bridge km 65+055					Culvert km 66+090									Culvert km 68+218					Culvert km 69+086				
Chainage		km	65 +000	65 +200	65 +400	65 +600	65 +800	66 +000	66 +200	66 +400	66 +600	66 +800	67 +000	67 +200	67 +400	67 +600	67 +800	68 +000	68 +200	68 +400	68 +600	68 +800	69 +000	69 +200	69 +400	69 +600	69 +800
Layout			64					65					66					67					68				
	Shoulder		existing embankment for future dual carrigeway																								
	Carriageway																										
	Shoulder																										
			existing embankment for future dual carrigeway																								
			R																								
Width of Carriageway		m	8.20				8.60					7.70					7.80					8.00					7.30
Width of Shoulders	L	m	2.50				3.75					3.50					2.50					2.50					2.65
	R	m	3.20				3.00					3.30					3.75					4.00					3.50
Rise/Fall +/-		%	+0.1																								
Roughness (IRI)	< 4.0	m/km																									
	> 4.0 - 6.0	m/km																									
	> 6.0 - 8.5	m/km																									
	> 8.5 - 10.5	m/km																									
	> 10.5 - 12.0	m/km																									
	> 12.0	m/km																									
Surface Condition	Cracks	%					0.5					0.6					0.5					0.3					0.4
	Alligator Cracks	%					0.8					2.9					5.7					1.3					3.4
	Potholes	%					0.2					0.1					0.1					0.1					0.3
	Settlement	%					2.1					1.4					1.7					3.5					2.4
	Rutting	%					1.6					3.3					7.6					0.0					0.0
Pavement	New	mm	50 Asphalt - concrete 175 Bituminous roadbase 225 Granular sub-base, CBR >30 Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain																								
	Existing	mm																									

Location			Culvert km 70+016	Culvert km 70+664	Culvert km 71+748	Culvert km 72+254	Culvert km 72+727	Culvert km 73+118	Culvert km 74+594
Chainage		km	70 +000 / 70 +200 / 70 +400 / 70 +600 / 70 +800		71 +000 / 71 +200 / 71 +400 / 71 +600 / 71 +800	72 +000 / 72 +200 / 72 +400 / 72 +600 / 72 +800		73 +000 / 73 +200 / 73 +400 / 73 +600 / 73 +800	74 +000 / 74 +200 / 74 +400 / 74 +600 / 74 +800
Layout									
Width of Carriageway		m	7.30		8.30 / 7.00	7.00		7.30	7.00
Width of Shoulders	L	m	2.65		2.90 / 2.30	3.15		2.60	3.00
	R	m	3.50		2.90 / 3.00	3.15		3.00	3.00
Rise/Fall +/-		%	+0.1						
Roughness (IRI)	< 4.0	m/km							
	> 4.0 - 6.0	m/km							
	> 6.0 - 8.5	m/km							
	> 8.5 - 10.5	m/km							
	> 10.5 - 12.0	m/km							
	> 12.0	m/km							
Surface Condition	Cracks	%			0.5 / 0.4	0.3		0.2	
	Alligator Cracks	%			3.1 / 5.7	6.4		3.2	
	Potholes	%			0.1 / 0.1	0.1		0.1	
	Settlement	%			0.9 / 0.6	1.7		0.3	
	Rutting	%			0.0 / 0.0	0.0		0.0	
Pavement	New	mm	50 Asphalt - concrete 175 Bituminous roadbase 225 Granular sub-base, CBR >30 Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain						
	Existing	mm							

Location			Culvert km 75+589 Junction km 75+832 Junction km 75+867 Culvert km 75+903	Junction km 76+117 Junction km 76+207 Junction km 76+357 Culvert km 76+458 Junction km 76+532	Junction km 77+012 Culvert km 77+075 Junction km 77+201 Junction km 77+321 Junction km 77+577 Culvert km 77+668 Junction km 77+697 Culvert km 77+798	Junction km 78+164 Junction km 78+450 Junction km 78+609 Culvert km 78+691	Junction km 79+049 Junction km 79+239
Chainage		km	75 +000 75 +200 75 +400 75 +600 75 +800	76 +000 76 +200 76 +400 76 +600 76 +800	77 +000 77 +200 77 +400 77 +600 77 +800	78 +000 78 +200 78 +400 78 +600 78 +800	79 +000 79 +200 79 +400 79 +600 79 +800
Layout	Shoulder Carriageway Shoulder						
Width of Carriageway		m	7.00	7.00	7.00	7.20	7.00
Width of Shoulders	L	m	3.00	3.00	3.00	3.00	3.00
	R	m	3.00	3.00	3.00	3.00	3.00
Rise/Fall +/-		%	+0.1				
Roughness (IRI)	< 4.0	m/km					
	> 4.0 - 6.0	m/km					▬
	> 6.0 - 8.5	m/km	▬	▬	▬	▬	
	> 8.5 - 10.5	m/km					
	> 10.5 - 12.0	m/km					
	> 12.0	m/km					
Surface Condition	Cracks	%	0.6	1.4	3.2	3.0	1.6
	Alligator Cracks	%	4.2	15.7	4.1	11.2	9.3
	Potholes	%	0.2	0.3	0.3	0.4	0.9
	Settlement	%	1.3	2.2	2.5	2.7	3.4
	Rutting	%	0.0	0.7	0.0	0.0	0.0
Pavement	New	mm	■ 50 Asphalt - concrete ▒ 175 Bituminous roadbase ▨ 225 Granular sub-base, CBR >30 Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain				
	Existing	mm	■ 50 asphalt - concrete ▒ 70 asphalt - concrete ▨ 180 crushed stone / sand				



Location				Culvert km 81+093			Junction km 84+169 Culvert km 84+394
Chainage		km	80 +000 80 +200 80 +400 80 +600 80 +800	81 +000 81 +200 81 +400 81 +600 81 +800	82 +000 82 +200 82 +400 82 +600 82 +800	83 +000 83 +200 83 +400 83 +600 83 +800	84 +000 84 +200 84 +400 84 +600 84 +800
Layout	Shoulder Carriageway Shoulder		78	79	80		82
Width of Carriageway		m	7.20	7.30	8.00	8.50	8.50
Width of Shoulders	L	m	3.00	3.00	3.50	3.40	2.50
	R	m	3.00	3.30	3.50	3.50	3.50
Rise/Fall +/-		%	+0.1				
Roughness (IRI)	< 4.0	m/km					
	> 4.0 - 6.0	m/km					
	> 6.0 - 8.5	m/km					
	> 8.5 - 10.5	m/km					
	> 10.5 - 12.0	m/km					
	> 12.0	m/km					
Surface Condition	Cracks	%	0.5	1.0	1.0	2.2	1.2
	Alligator Cracks	%	17.4	4.9	3.0	5.0	6.9
	Potholes	%	0.8	0.6	0.3	0.3	0.1
	Settlement	%	2.3	1.7	2.8	1.3	2.8
	Rutting	%	0.0	0.0	0.0	0.0	0.0
Pavement	New	mm	■ 50 Asphalt - concrete ■ 175 Bituminous roadbase ▨ 225 Granular sub-base, CBR >30 Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain				
	Existing	mm					



Location			Junction km 85+575					Junction km 86+077									Culvert km 88+067					Culvert km 88+447					Culvert km 89+005					Junction km 89+764				
Chainage		km	85 +000	85 +200	85 +400	85 +600	85 +800	86 +000	86 +200	86 +400	86 +600	86 +800	87 +000	87 +200	87 +400	87 +600	87 +800	88 +000	88 +200	88 +400	88 +600	88 +800	89 +000	89 +200	89 +400	89 +600	89 +800									
Layout			83					84					85					86					87					88								
			Shoulder										existing embankment for future dual carrigeway																							
			Carriageway																																	
			Shoulder										existing embankment for future dual carrigeway																							
Width of Carriageway		m	7.20		15.00	16.50		16.50				15.70			7.00			7.00					7.00				7.20								
Width of Shoulders	L	m	3.00		3.00	3.00		3.00				4.00			4.00			4.00					3.50				4.00								
	R	m	3.50		3.00	3.00		3.00				4.00			4.00			4.00					3.50				4.00								
Rise/Fall +/-		%	+0.1																																
Roughness (IRI)	< 4.0	m/km																																	
	> 4.0 - 6.0	m/km																																	
	> 6.0 - 8.5	m/km																																	
	> 8.5 - 10.5	m/km																																	
	> 10.5 - 12.0	m/km																																	
	> 12.0	m/km																																	
Surface Condition	**Cracks**	%	1.0					0.1				0.3						0.1					0.1				0.2								
	Alligator Cracks	%	3.6					0.3				3.8						3.3					3.1				1.7								
	Potholes	%	0.1					0.0				0.1						0.0					0.0				0.1								
	Settlement	%	0.4					0.0				1.1						0.5					0.0				0.6								
	Rutting	%	0.0					0.0				1.7						4.9					0.0				0.0								
Pavement	**New**	mm	50 Asphalt - concrete 175 Bituminous roadbase 225 Granular sub-base, CBR >30 Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain																																	
	Existing	mm																																	

Location			Culvert km 91+337	Culvert km 92+117	Junction km 92+231	Culvert km 93+116	Culvert km 94+148
Chainage		km	90 +000 / 90 +200 / 90 +400 / 90 +600 / 90 +800 / 91 +000 / 91 +200 / 91 +400 / 91 +600 / 91 +800 / 92 +000 / 92 +200 / 92 +400 / 92 +600 / 92 +800 / 93 +000 / 93 +200 / 93 +400 / 93 +600 / 93 +800 / 94 +000 / 94 +200 / 94 +400 / 94 +600 / 94 +800					
Layout			89 (R) / 90	POL / P / 91			
	Shoulder						
	Carriageway						
	Shoulder						
Width of Carriageway		m	7.20 / 7.00	7.00	8.30	8.00	8.00
Width of Shoulders	L	m	4.00 / 3.80	3.50	3.00	3.80	3.00
	R	m	4.00 / 4.00	3.50	3.75	3.20	3.00
Rise/Fall +/-		%	+0.1				
Roughness (IRI)	< 4.0	m/km					
	> 4.0 - 6.0	m/km					
	> 6.0 - 8.5	m/km					
	> 8.5 - 10.5	m/km					
	> 10.5 - 12.0	m/km					
	> 12.0	m/km					
Surface Condition	Cracks	%	1.8	0.2	0.4	1.0	
	Alligator Cracks	%	6.8	2.4	4.8	3.8	
	Potholes	%	0.1	0.0	0.0	0.1	
	Settlement	%	0.3	0.1	0.4	1.5	
	Rutting	%	0.0	0.0	0.0	0.0	
Pavement	New	mm	50 Asphalt - concrete 175 Bituminous roadbase 225 Granular sub-base, CBR >30 Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain				
	Existing	mm		50 asphalt - concrete 230 crushed stone / sand			

Location			Culvert km 95+178	Culvert km 95+497	Culvert km 95+792	Culvert km 96+392	Culvert km 96+652	Culvert km 97+480	Culvert km 97+929	Junction km 98+562	Culvert km 99+100
Chainage		km	95+000 / 95+200 / 95+400 / 95+600 / 95+800			96+000 / 96+200 / 96+400 / 96+600 / 96+800		97+000 / 97+200 / 97+400 / 97+600 / 97+800		98+000 / 98+200 / 98+400 / 98+600 / 98+800	99+000 / 99+200 / 99+400 / 99+600 / 99+800
Layout			93			BUS			97	98	
	Shoulder										
	Carriageway										
	Shoulder										
Width of Carriageway		m	8.00				9.00		9.00	9.00	9.00
Width of Shoulders	L	m	3.00				2.80		3.30	3.00	3.00
	R	m	3.00				3.00		3.50	3.50	3.00
Rise/Fall +/-		%	+0.1								
Roughness (IRI)	< 4.0	m/km									
	> 4.0 - 6.0	m/km									
	> 6.0 - 8.5	m/km									
	> 8.5 - 10.5	m/km									
	> 10.5 - 12.0	m/km									
	> 12.0	m/km									
Surface Condition	Cracks	%	0.5						0.2	0.2	
	Alligator Cracks	%	1.9						1.5	1.7	
	Potholes	%	0.0						0.1	0.2	
	Settlement	%	0.9						0.3	0.4	
	Rutting	%	1.3						1.6	0.7	
Pavement	New	mm	50 Asphalt - concrete 175 Bituminous roadbase 225 Granular sub-base, CBR >30 Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain								
	Existing	mm									

Location			Culvert km 100+240			Culvert km 100+719										Junction km 102+060					Culvert km 103+120		Junction km 103+440			Culvert km 104+405			Culvert km 104+973	
Chainage		km	100 +000	100 +200	100 +400	100 +600	100 +800	101 +000	101 +200	101 +400	101 +600	101 +800	102 +000	102 +200	102 +400	102 +600	102 +800	103 +000	103 +200	103 +400	103 +600	103 +800	104 +000	104 +200	104 +400	104 +600	104 +800				
Layout													S	P							103							104		
		Shoulder																												
		Carriageway																												
		Shoulder																												
Width of Carriageway		m	9.00																		8.50					8.70				
Width of Shoulders	L	m	3.00																		2.80					3.00				
	R	m	3.00																		3.00					3.00				
Rise/Fall +/-		%	+0.1																											
Roughness (IRI)	< 4.0	m/km																												
	> 4.0 - 6.0	m/km																												
	> 6.0 - 8.5	m/km																												
	> 8.5 - 10.5	m/km																												
	> 10.5 - 12.0	m/km																												
	> 12.0	m/km																												
Surface Condition	Cracks	%																			0.1					0.1				
	Alligator Cracks	%																			1.0					1.2				
	Potholes	%																			0.1					0.1				
	Settlement	%																			0.8					1.0				
	Rutting	%																			0.0					2.3				
Pavement	New	mm	50 Asphalt - concrete 175 Bituminous roadbase 225 Granular sub-base, CBR >30 Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain																												
	Existing	mm																												

Location			Junction km 105+495	Junction km 105+803	Culvert km 105+876	Bridge km 106+886	Culvert km 107+536	Culvert km 107+954	Culvert km 109+616
Chainage		km	105 +000 / 105 +200 / 105 +400 / 105 +600 / 105 +800	106 +000 / 106 +200 / 106 +400 / 106 +600 / 106 +800	107 +000 / 107 +200 / 107 +400 / 107 +600 / 107 +800	108 +000 / 108 +200 / 108 +400 / 108 +600 / 108 +800	109 +000 / 109 +200 / 109 +400 / 109 +600 / 109 +800		
Layout				S	106	BUS R			108 P R
Width of Carriageway		m	8.50		7.50				9.00
Width of Shoulders	L	m	3.50		2.60				3.00
	R	m	4.00		3.00				3.00
Rise/Fall +/-		%	+0.1						
Roughness (IRI)	< 4.0	m/km							
	> 4.0 - 6.0	m/km							
	> 6.0 - 8.5	m/km							
	> 8.5 - 10.5	m/km							
	> 10.5 - 12.0	m/km							
	> 12.0	m/km							
Surface Condition	Cracks	%	0.2		0.1				0.0
	Alligator Cracks	%	1.4		1.0				0.4
	Potholes	%	0.1		0.0				0.1
	Settlement	%	1.0		0.4				0.0
	Rutting	%	0.0		0.0				0.0
Pavement	New	mm	50 Asphalt - concrete 175 Bituminous roadbase 225 Granular sub-base, CBR >30 Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain						
	Existing	mm	30 asphalt - concrete 70 asphalt - concrete 250 crushed stone / sand						

Location			Junction km 110+576					Culvert km 111+296	Culvert km 111+576	Culvert km 111+844	Culvert km 112+294					Culvert km 113+474									
Chainage		km	110 +000	110 +200	110 +400	110 +600	110 +800	111 +000	111 +200	111 +400	111 +600	111 +800	112 +000	112 +200	112 +400	112 +600	112 +800	113 +000	113 +200	113 +400	113 +600	113 +800	114 +000	114 +200	114 +400	114 +600	114 +800
Layout										111							112					113					114
	Shoulder																										
	Carriageway																										
	Shoulder																										
										S																	
Width of Carriageway		m	9.00							8.50			9.00					9.00					9.00				
Width of Shoulders	L	m	3.00							2.00			3.00					3.00					3.00				
	R	m	3.00							3.00			3.80					3.00					3.20				
Rise/Fall +/-		%	+0.1																								
Roughness (IRI)	< 4.0	m/km																									
	> 4.0 - 6.0	m/km																									
	> 6.0 - 8.5	m/km																									
	> 8.5 - 10.5	m/km																									
	> 10.5 - 12.0	m/km																									
	> 12.0	m/km																									
Surface Condition	Cracks	%								0.1			0.1					0.1					0.0				
	Alligator Cracks	%								0.8			0.1					0.4					0.3				
	Potholes	%								0.1			0.1					0.0					0.1				
	Settlement	%								1.7			1.6					0.0					0.1				
	Rutting	%								0.0			0.0					0.0					0.0				
Pavement	New	mm	50 Asphalt - concrete 175 Bituminous roadbase 225 Granular sub-base, CBR >30 Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain																								
	Existing	mm																									

Location			Junction km 115+016	Culvert km 115+019	Culvert km 115+923	Culvert km 116+936	Culvert km 117+539	Culvert km 118+262	Culvert km 118+291	Culvert km 118+764	Culvert km 119+289	Culvert km 119+808
Chainage		km	115 +000	115 +200	115 +400	115 +600	115 +800	116 +000	116 +200	116 +400	116 +600	116 +800	117 +000	117 +200	117 +400	117 +600	117 +800	118 +000	118 +200	118 +400	118 +600	118 +800	119 +000	119 +200	119 +400	119 +600	119 +800
Layout			POL				115					116					117					R 118					119
	Shoulder																										
	Carriageway																										
	Shoulder		S																								
Width of Carriageway		m	9.00				9.00					9.00					9.00					8.50					8.00
Width of Shoulders	L	m	3.00				3.00					2.50					3.50					3.00					3.00
	R	m	3.20				3.00					3.50					3.00					3.00					3.00
Rise/Fall +/-		%	+0.1																								
Roughness (IRI)	< 4.0	m/km																									
	> 4.0 - 6.0	m/km																									
	> 6.0 - 8.5	m/km																									
	> 8.5 - 10.5	m/km																									
	> 10.5 - 12.0	m/km																									
	> 12.0	m/km																									
Surface Condition	Cracks	%			0.2			0.4					0.3					0.2					0.1				
	Alligator Cracks	%			0.7			0.3					1.2					0.5					0.8				
	Potholes	%			0.2			0.1					0.1					0.1					0.2				
	Settlement	%			0.7			0.5					1.9					0.4					0.2				
	Rutting	%			0.0			0.0					0.0					0.0					0.0				
Pavement	New	mm	50 Asphalt - concrete 175 Bituminous roadbase 225 Granular sub-base, CBR >30 Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain																								
	Existing	mm																									

Location			Junction km 120+488	Culvert km 120+658	Culvert km 121+268	Culvert km 121+378	Culvert km 122+017	Culvert km 123+152	Culvert km 123+737	Culvert km 124+211	
Chainage		km	120 +400	120 +600	121 +200	121 +400	122 +800	123 +000	123 +600	124 +000	124 +300
Layout			S			P	122		P		
Width of Carriageway		m	8.00				7.70	14.00		14.00	
Width of Shoulders	L	m	3.00				2.20	1.50		1.00	
	R	m	3.00				2.80	1.20		1.00	
Rise/Fall +/-		%	+0.1				0.0				
Roughness (IRI)	< 4.0	m/km									
	> 4.0 - 6.0	m/km									
	> 6.0 - 8.5	m/km									
	> 8.5 - 10.5	m/km									
	> 10.5 - 12.0	m/km									
	> 12.0	m/km									
Surface Condition	Cracks	%					0.5			1.0	
	Alligator Cracks	%					0.3			0.2	
	Potholes	%					0.0			0.1	
	Settlement	%					0.9			3.7	
	Rutting	%					0.0			0.0	
Pavement	New	mm	50 Asphalt - concrete 175 Bituminous roadbase 225 Granular sub-base, CBR >30 Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain								
	Existing	mm					50 asphalt - concrete 70 asphalt - concrete 300 crushed stone / sand				

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Alyat - Ganja - Georgian Border (M 4/M 1) : Section 4 - M 4, Kyrdamir - Ujar km 124+300 to km 170+500

KOCKS INGENIEURE

Location			Junction km 124+367 / Culvert km 124+413 / Junction km 124+478 / Railway Crossing / Junction km 124+862 / Junction km 124+994
Chainage		km	124 +300 / 124 +400 / 124 +600 / 124 +800
Layout			Shoulder / Carriageway / Shoulder; BUS
Width of Carriageway		m	14.00
Width of Shoulders	L	m	1.00
	R	m	1.00
Rise/Fall +/-		%	-0.2
Roughness (IRI)	< 4.0	m/km	
	> 4.0 - 6.0	m/km	
	> 6.0 - 8.5	m/km	
	> 8.5 - 10.5	m/km	
	> 10.5 - 12.0	m/km	
	> 12.0	m/km	
Surface Condition	**Cracks**	%	0.9
	Alligator Cracks	%	0.8
	Potholes	%	0.1
	Settlement	%	0.7
	Rutting	%	0.0
Pavement	**New**	mm	50 Asphalt - concrete 175 Bituminous roadbase 225 Granular sub-base, CBR >30
	Existing	mm	Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

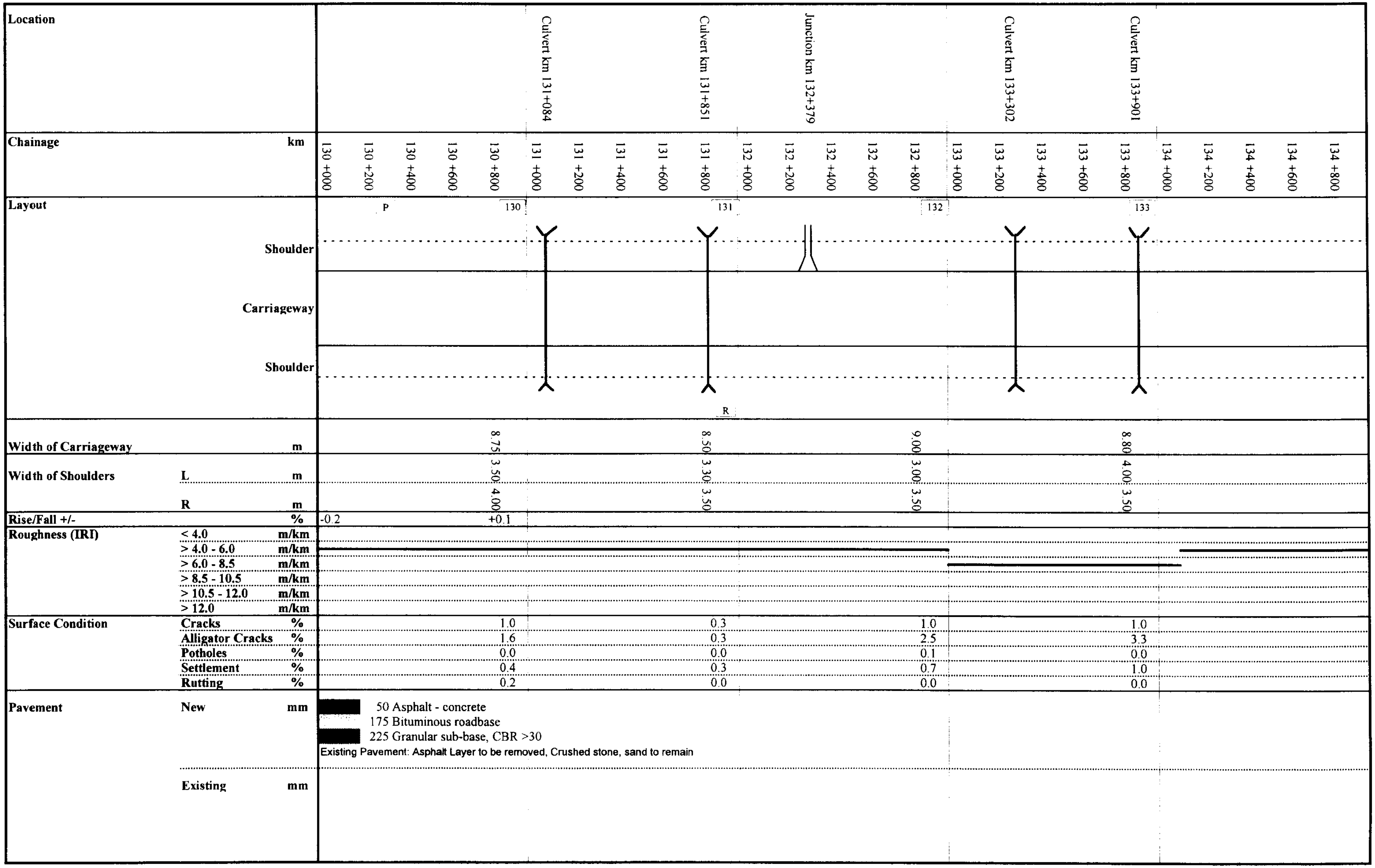
Alyat - Ganja - Georgian Border (M 4/M 1) : Section 4 - M 4, Kyrdamir - Ujar km 124+300 to km 170+500

KOCKS INGENIEURE

Location			Culvert km 126+882 / Junction km 127+167 / Culvert km 127+715 / Culvert km 128+163 / Culvert km 128+513 / Culvert km 128+559 / Culvert km 129+020 / Junction km 129+133 / Culvert km 129+583
Chainage		km	125 +000 / 125 +200 / 125 +400 / 125 +600 / 125 +800 / 126 +000 / 126 +200 / 126 +400 / 126 +600 / 126 +800 / 127 +000 / 127 +200 / 127 +400 / 127 +600 / 127 +800 / 128 +000 / 128 +200 / 128 +400 / 128 +600 / 128 +800 / 129 +000 / 129 +200 / 129 +400 / 129 +600 / 129 +800
Layout			126 S 127 128 P S Shoulder / Carriageway / Shoulder
Width of Carriageway		m	9.00 / 8.50 / 8.50 / 8.50
Width of Shoulders	**L**	m	3.00 / 2.70 / 3.00 / 3.00
	R	m	3.00 / 3.00 / 4.00 / 4.00
Rise/Fall +/-		%	-0.2
Roughness (IRI)	**< 4.0**	m/km	
	> 4.0 - 6.0	m/km	
	> 6.0 - 8.5	m/km	
	> 8.5 - 10.5	m/km	
	> 10.5 - 12.0	m/km	
	> 12.0	m/km	
Surface Condition	**Cracks**	%	0.5 / 2.0 / 1.4
	Alligator Cracks	%	0.4 / 1.3 / 1.9
	Potholes	%	0.1 / 0.1 / 0.0
	Settlement	%	0.0 / 0.1 / 2.5
	Rutting	%	0.0 / 0.0 / 0.0
Pavement	**New**	mm	50 Asphalt - concrete 175 Bituminous roadbase 225 Granular sub-base, CBR >30
	Existing	mm	Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

Alyat - Ganja - Georgian Border (M 4/M 1) : Section 4 - M 4, Kyrdamir - Ujar km 124+300 to km 170+500



			130	131	132	133	134
Width of Carriageway		m	8.75	8.50	9.00	8.80	
Width of Shoulders	L	m	3.50	3.30	3.00	4.00	
	R	m	4.00	3.50	3.50	3.50	
Rise/Fall +/-		%	-0.2 +0.1				
Surface Condition	Cracks	%	1.0	0.3	1.0	1.0	
	Alligator Cracks	%	1.6	0.3	2.5	3.3	
	Potholes	%	0.0	0.0	0.1	0.0	
	Settlement	%	0.4	0.3	0.7	1.0	
	Rutting	%	0.2	0.0	0.0	0.0	

Pavement

New mm

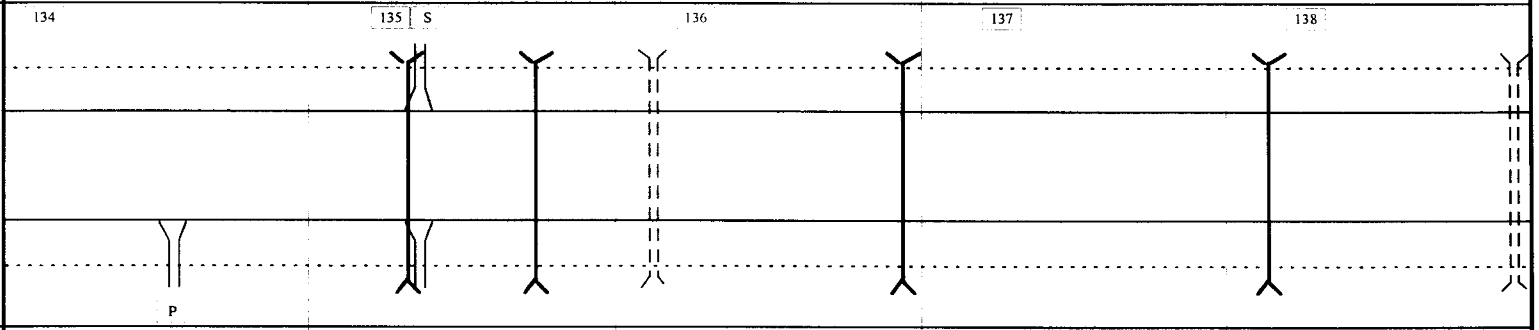
▇ 50 Asphalt - concrete
▒ 175 Bituminous roadbase
▇ 225 Granular sub-base, CBR >30

Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain

Existing mm

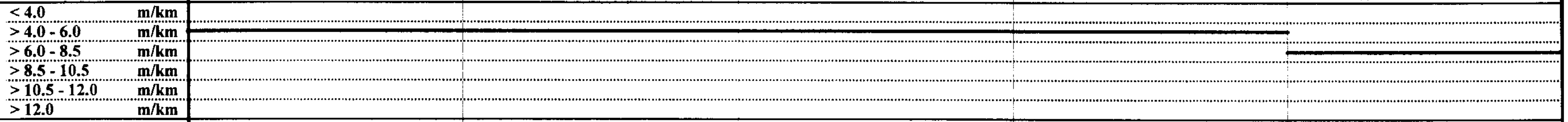
Location	Chainage km
	135 +000
	135 +200
	135 +400
Junction km 135+552	135 +600
	135 +800
	136 +000
Culvert km 136+290	136 +200
Junction km 136+322	136 +400
Culvert km 136+625	136 +600
	136 +800
Bridge km 137+112	137 +000
	137 +200
	137 +400
	137 +600
Culvert km 137+969	137 +800
	138 +000
	138 +200
	138 +400
	138 +600
	138 +800
Culvert km 139+085	139 +000
	139 +200
	139 +400
	139 +600
Bridge km 139+946	139 +800

Layout



		Unit	135 +000	136 +000	136 +200	137 +200	137 +600	138 +000	139 +000	139 +200	139 +800
Width of Carriageway		m	9.00		8.00			9.00	9.00		
Width of Shoulders	L	m	3.00		4.00			3.50	3.20		
	R	m	4.00		3.50			3.00	3.20		
Rise/Fall +/-		%	+0.1 /-0.1	-0.3			+0.2			-0.1	+0.3

Roughness (IRI)



Surface Condition	Unit	135 +000	136 +200	137 +200	138 +000	139 +000
Cracks	%	0.8	1.6	1.0	0.9	0.7
Alligator Cracks	%	1.4	5.6	4.1	6.8	2.9
Potholes	%	0.2	0.2	0.2	0.2	0.1
Settlement	%	0.3	1.0	0.6	0.3	0.7
Rutting	%	0.0	0.0	1.2	2.2	1.2

Pavement

New mm

■ 50 Asphalt - concrete
▨ 175 Bituminous roadbase
■ 225 Granular sub-base, CBR >30
Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain

Existing mm

■ 30 asphalt - concrete
▨ 60 asphalt - concrete
■ 220 gravel / sand

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

Alyat - Ganja - Georgian Border (M 4/M 1) : Section 4 - M 4, Kyrdamir - Ujar km 124+300 to km 170+500

KOCKS
INGENIEURE

Location			Junction km 140+969 · Bridge km 141+953 · Bridge km 142+020 · Culvert km 142+588 · Culvert km 143+056 · Junction km 143+075 · Junction km 144+621
Chainage		km	140 +000 · 140 +200 · 140 +400 · 140 +600 · 140 +800 · 141 +000 · 141 +200 · 141 +400 · 141 +600 · 141 +800 · 142 +000 · 142 +200 · 142 +400 · 142 +600 · 142 +800 · 143 +000 · 143 +200 · 143 +400 · 143 +600 · 143 +800 · 144 +000 · 144 +200 · 144 +400 · 144 +600 · 144 +800
Layout			141 · 142 · S · 143 · POL
	Shoulder		
	Carriageway		
	Shoulder		
Width of Carriageway		m	9.00 · 9.00 · 9.00 · 9.00 · 9.00 · 9.00
Width of Shoulders	L	m	3.50 · 3.20 · 2.80 · 2.50 · 2.40 · 2.30
	R	m	3.50 · 2.60 · 2.50 · 2.50 · 2.80 · 2.60
Rise/Fall +/-		%	+0.3 · -0.4 · -0.3 · +0.2 · -0.2 · +0.1 · 0.0
Roughness (IRI)	< 4.0	m/km	
	> 4.0 - 6.0	m/km	
	> 6.0 - 8.5	m/km	
	> 8.5 - 10.5	m/km	
	> 10.5 - 12.0	m/km	
	> 12.0	m/km	
Surface Condition	Cracks	%	0.1 · 0.2 · 0.1 · 0.2
	Alligator Cracks	%	0.4 · 2.6 · 1.0 · 2.9
	Potholes	%	0.0 · 0.1 · 0.0 · 0.1
	Settlement	%	0.7 · 1.4 · 5.1 · 0.3
	Rutting	%	0.6 · 0.4 · 0.0 · 0.0
Pavement	New	mm	50 Asphalt - concrete 175 Bituminous roadbase 225 Granular sub-base, CBR >30
			Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain
	Existing	mm	

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

Alyat - Ganja - Georgian Border (M 4/M 1) : Section 4 - M 4, Kyrdamir - Ujar km 124+300 to km 170+500

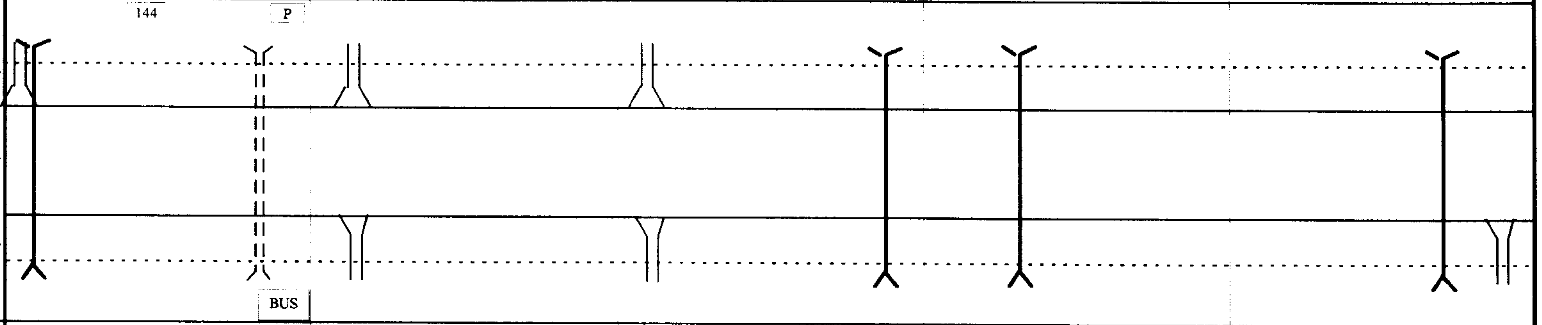
KOCKS
INGENIEURE

Location

- Junction km 145+026
- Culvert km 145+067
- Bridge km 145+813
- Junction km 146+156
- Junction km 147+119
- Culvert km 147+877
- Culvert km 148+294
- Culvert km 149+699
- Junction km 149+837

Chainage km: 145 +000, 145 +200, 145 +400, 145 +600, 145 +800, 146 +000, 146 +200, 146 +400, 146 +600, 146 +800, 147 +000, 147 +200, 147 +400, 147 +600, 147 +800, 148 +000, 148 +200, 148 +400, 148 +600, 148 +800, 149 +000, 149 +200, 149 +400, 149 +600, 149 +800

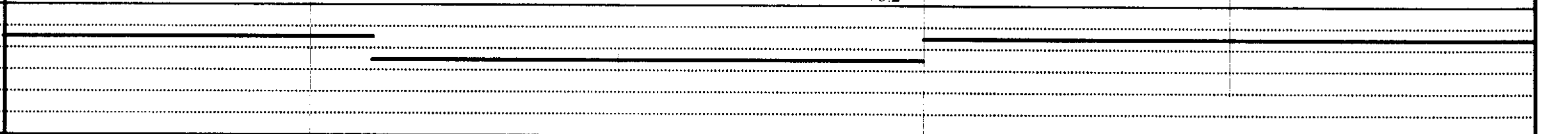
Layout



		145 +200	146 +400	147 +400	148 +400	149 +600
Width of Carriageway	m	9.00	9.00	9.00	9.00	9.00
Width of Shoulders L	m	2.00	2.00	3.00	2.75	3.00
Width of Shoulders R	m	2.80	2.75	2.75	3.10	3.00

		145 +000	145 +400	147 +800
Rise/Fall +/-	%	0.0	-0.1	+0.2

Roughness (IRI)



Surface Condition		145 +200	146 +400	147 +400	148 +400	149 +600
Cracks	%	0.4	0.3	0.1	0.0	0.1
Alligator Cracks	%	3.5	7.1	4.5	0.9	2.5
Potholes	%	0.1	0.3	0.1	0.1	0.5
Settlement	%	0.6	0.7	0.3	0.8	0.2
Rutting	%	0.0	0.0	0.0	0.0	0.0

Pavement

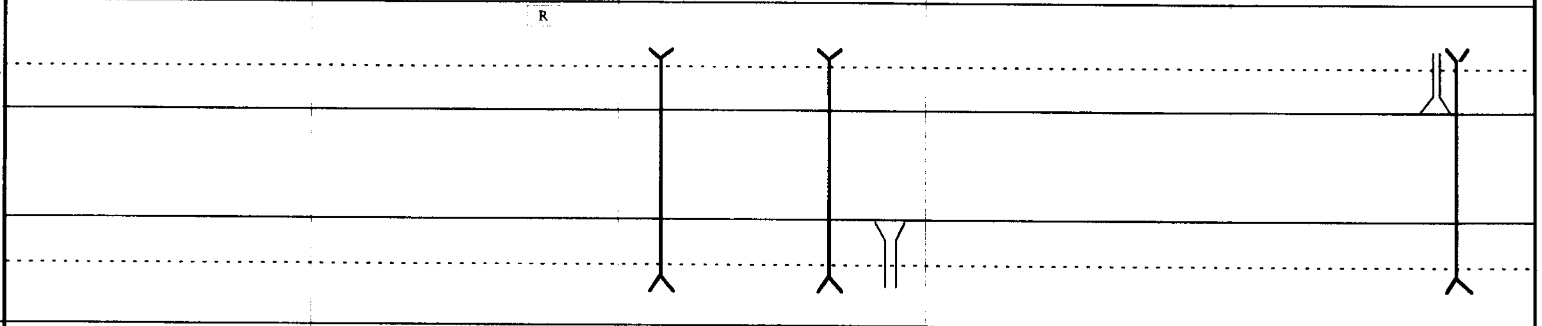
New mm

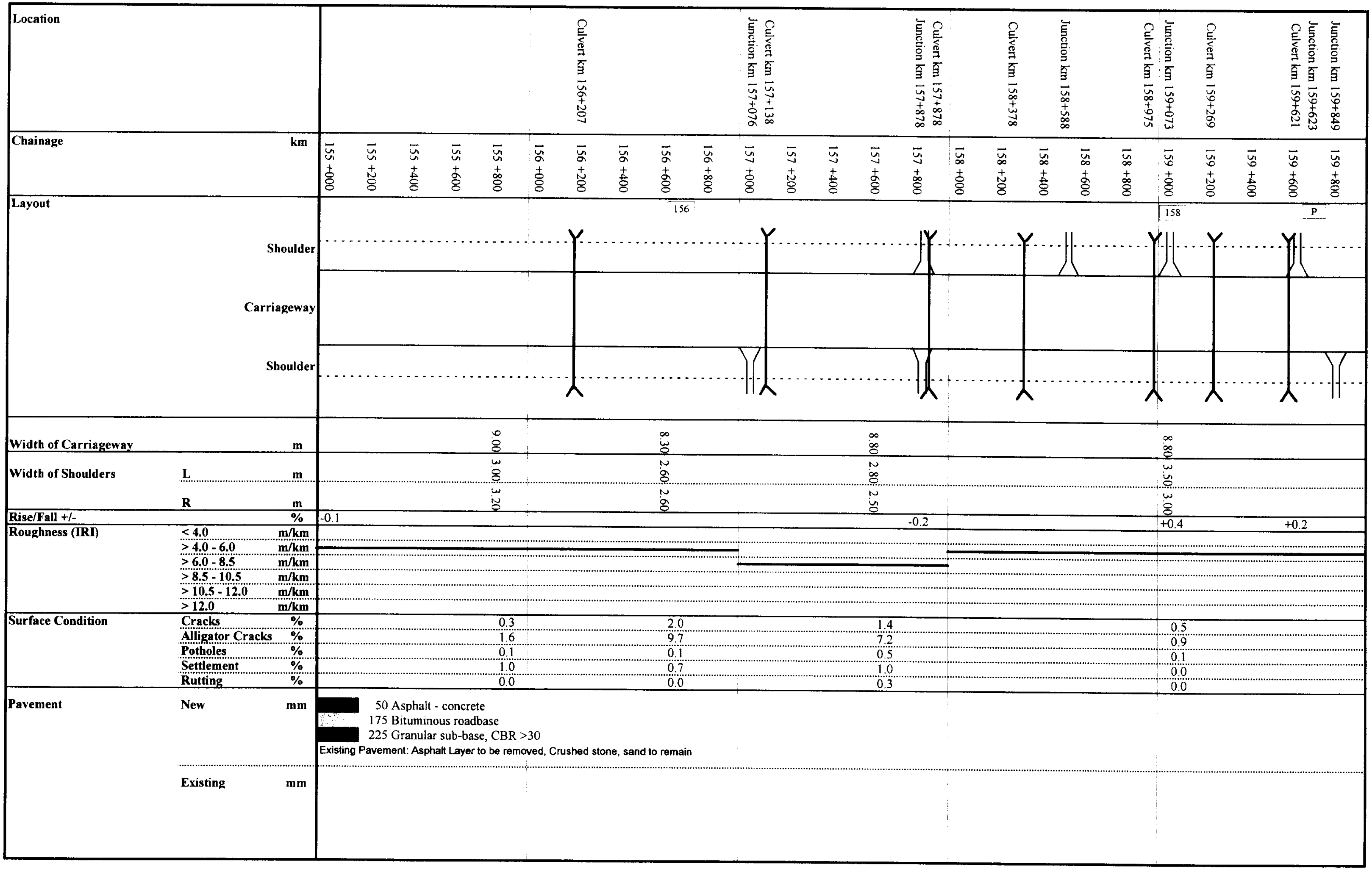
■	50 Asphalt - concrete
▨	175 Bituminous roadbase
■	225 Granular sub-base, CBR >30

Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain

Existing mm

			150+000 – 151+000	151+000 – 152+000	152+000 – 153+000	153+000 – 154+000	154+000 – 154+800
Location					Culvert km 152+169 Culvert km 152+672 Junction km 152+865		Junction km 154+662 Culvert km 154+706
Chainage		km	150 +000 150 +200 150 +400 150 +600 150 +800	151 +000 151 +200 151 +400 151 +600 151 +800	152 +000 152 +200 152 +400 152 +600 152 +800	153 +000 153 +200 153 +400 153 +600 153 +800	154 +000 154 +200 154 +400 154 +600 154 +800
Layout	Shoulder Carriageway Shoulder			R			
Width of Carriageway		m	9.00	9.00	9.00	9.00	9.00
Width of Shoulders	L	m	2.00	3.00	2.50	2.80	2.80
	R	m	3.00	3.00	3.00	2.80	3.50
Rise/Fall +/-		%	+0.2		0.0		-0.1
Roughness (IRI)	< 4.0	m/km			▬		
	> 4.0 - 6.0	m/km	▬	▬		▬	▬
	> 6.0 - 8.5	m/km					
	> 8.5 - 10.5	m/km					
	> 10.5 - 12.0	m/km					
	> 12.0	m/km					
Surface Condition	Cracks	%	0.7	0.3	0.1		0.2
	Alligator Cracks	%	1.8	2.1	0.5		0.4
	Potholes	%	0.0	0.1	0.1		0.2
	Settlement	%	1.6	0.2	0.6		0.3
	Rutting	%	0.0	0.0	0.0		0
Pavement	New	mm	■ 50 Asphalt - concrete □ 175 Bituminous roadbase ■ 225 Granular sub-base, CBR >30 Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain				
	Existing	mm			■ 40 asphalt - concrete □ 50 asphalt - concrete ■ 200 gravel / sand		

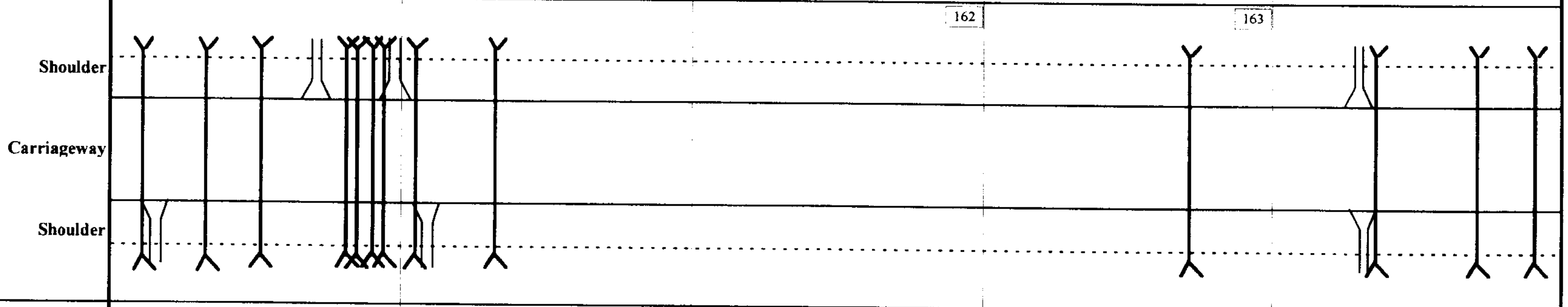



Location
Culvert km 156+207
Culvert km 157+138
Junction km 157+076
Culvert km 157+878
Junction km 157+878
Culvert km 158+378
Junction km 158+588
Junction km 159+073
Culvert km 158+975
Culvert km 159+269
Junction km 159+849
Junction km 159+623
Culvert km 159+621
Chainage km
155 +000
155 +200
155 +400
155 +600
155 +800
156 +000
156 +200
156 +400
156 +600
156 +800
157 +000
157 +200
157 +400
157 +600
157 +800
158 +000
158 +200
158 +400
158 +600
158 +800
159 +000
159 +200
159 +400
159 +600
159 +800
Layout
156
158
P
Shoulder
Carriageway
Shoulder
Width of Carriageway m
9.00
8.30
8.80
8.80
Width of Shoulders L m
3.00
2.60
2.80
3.50
R m
3.20
2.60
2.50
3.00
Rise/Fall +/- %
-0.1
-0.2
+0.4
+0.2
Roughness (IRI)
< 4.0 m/km
> 4.0 - 6.0 m/km
> 6.0 - 8.5 m/km
> 8.5 - 10.5 m/km
> 10.5 - 12.0 m/km
> 12.0 m/km
Surface Condition
Cracks %
Alligator Cracks %
Potholes %
Settlement %
Rutting %
0.3
1.6
0.1
1.0
0.0
2.0
9.7
0.1
0.7
0.0
1.4
7.2
0.5
1.0
0.3
0.5
0.9
0.1
0.0
0.0
Pavement
New mm
50 Asphalt - concrete
175 Bituminous roadbase
225 Granular sub-base, CBR >30
Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain
Existing mm

Location

- Culvert km 160+157
- Junction km 160+178
- Culvert km 160+354
- Culvert km 160+558
- Junction km 160+734
- Culvert km 160+855
- Culverts km 160+887, 160+912, 160+927
- Junction 160+970
- Culvert km 161+078
- Junction km 161+093
- Culvert km 161+333
- Culvert km 163+718
- Junction km 164+282
- Culvert km 164+387
- Culvert km 164+707
- Culvert km 164+912

Layout



Chainage km	Width of Carriageway m	Width of Shoulders L m	Width of Shoulders R m	Rise/Fall +/- %	Cracks %	Alligator Cracks %	Potholes %	Settlement %	Rutting %
160 +000	8.80	2.80	2.90	-0.1	1.2	8.3	0.1	0.7	0.0
160 +200									
160 +400									
160 +600									
160 +800									
161 +000	8.80	2.60	2.60		1.4	6.1	0.2	0.6	0.0
161 +200									
161 +400									
161 +600									
161 +800									
162 +000	9.00	3.00	3.00		1.7	4.9	0.2	1.1	0.0
162 +200									
162 +400									
162 +600									
162 +800	9.00	3.00	3.00		0.4	2.5	0.0	0.6	0.0
163 +000									
163 +200									
163 +400									
163 +600									
163 +800	8.85	2.40	2.80	0.0	2.1	2.8	0.4	1.0	0.0
164 +000									
164 +200									
164 +400									
164 +600									
164 +800	9.00	2.50	2.60		1.2	1.8	0.1	0.5	0

Roughness (IRI)

- < 4.0 m/km
- > 4.0 - 6.0 m/km
- > 6.0 - 8.5 m/km
- > 8.5 - 10.5 m/km
- > 10.5 - 12.0 m/km
- > 12.0 m/km

Pavement

New mm

▇ 50 Asphalt - concrete
▒ 175 Bituminous roadbase
▇ 225 Granular sub-base, CBR >30

Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain

Existing mm

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

Alyat - Ganja - Georgian Border (M 4/M 1) : Section 4 - M 4, Kyrdamir - Ujar km 124+300 to km 170+500

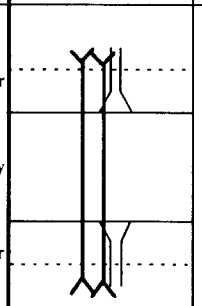
KOCKS INGENIEURE

Location			Culvert km 165+090	Junction km 165+109	Culvert km 165+400	Culvert km 165+531	Junction km 165+722	Culvert km 165+722	Culvert km 165+930	Bridge km 166+021	Culvert km 166+394	Junction km 166+630	Culvert km 166+934	Junction km 167+062	Junction km 167+982	Culvert km 168+004	Junction km 168+021	Culvert km 169+146	Culvert km 169+547	Culvert km 169+737	Culvert km 169+782
Chainage		km	165 +000	165 +200	165 +400	165 +600	165 +800	166 +000	166 +200	166 +400	166 +600	166 +800	167 +000	167 +200	167 +400	167 +600	167 +800	168 +000	168 +200	168 +400	168 +600	168 +800	169 +000	169 +200	169 +400	169 +600	169 +800
Layout	Shoulder																168										
	Carriageway																										
	Shoulder								BUS																		
Width of Carriageway		m								8.50				9.00			9.00					9.00					9.00
Width of Shoulders	L	m								2.75				2.40			2.00					2.50					3.00
	R	m								2.75				2.10			2.80					2.80					2.00
Rise/Fall +/-		%	+0.2												0.0		-0.1										
Roughness (IRI)	< 4.0	m/km																									
	> 4.0 - 6.0	m/km																									
	> 6.0 - 8.5	m/km																									
	> 8.5 - 10.5	m/km																									
	> 10.5 - 12.0	m/km																									
	> 12.0	m/km																									
Surface Condition	**Cracks**	%								0.6				0.4			0.0					1.7					1.0
	Alligator Cracks	%								2.5				2.4			3.3					1.8					0.1
	Potholes	%								0.1				0.1			0.0					0.1					0.0
	Settlement	%								1.9				0.9			0.2					0.3					0.1
	Rutting	%								0.0				0.0			0.0					0.0					0.0
Pavement	**New**	mm	50 Asphalt - concrete 175 Bituminous roadbase 225 Granular sub-base, CBR >30 Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain																									
	Existing	mm	30 asphalt - concrete 60 - 80 asphalt - concrete 80 - 100 gravel / sand																									

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

Alyat - Ganja - Georgian Border (M 4/M 1) : Section 4 - M 4, Kyrdamir - Ujar km 124+300 to km 170+500

KOCKS INGENIEURE

Location			Culvert km 170+240 Culvert km 170+307 Junction km 170+372	
Chainage		km	170 +000 170 +200 170 +400	170 +500
Layout				
Width of Carriageway		m		
Width of Shoulders	L	m		
	R	m		
Rise/Fall +/-		%	-0.3	
Roughness (IRI)	< 4.0	m/km		
	> 4.0 - 6.0	m/km		
	> 6.0 - 8.5	m/km		
	> 8.5 - 10.5	m/km		
	> 10.5 - 12.0	m/km		
	> 12.0	m/km		
Surface Condition	Cracks	%		
	Alligator Cracks	%		
	Potholes	%		
	Settlement	%		
	Rutting	%		
Pavement	New	mm	50 Asphalt - concrete 175 Bituminous roadbase 225 Granular sub-base, CBR >30 Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain	
	Existing	mm		

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

Alyat - Ganja - Georgian Border (M 4/M 1) : Section 5 - M 4, Ujar - Yevlakh km 170+500 to km 216+500

KOCKS INGENIEURE

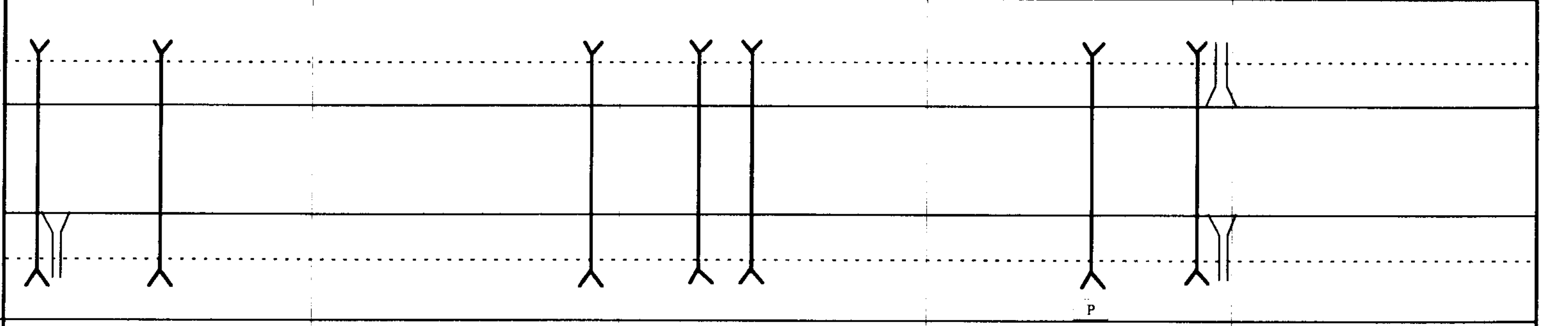
Location				Bridge km 170+632	Culvert km 171+050	Junction km 171+037	Junction km 172+093	Culvert km 172+147	Junction km 172+132	Bridge km 173+248	Culvert km 173+407	Junction km 173+627	Culvert km 173+986	Culvert km 174+576	Junction km 174+951
Chainage		km		170 +500	170 +600	170 +800	171 +000	171 +200	171 +400	171 +600	171 +800	172 +000	172 +200	172 +400	172 +600	172 +800	173 +000	173 +200	173 +400	173 +600	173 +800	174 +000	174 +200	174 +400	174 +600	174 +800
Layout	Shoulder																									
	Carriageway																									
	Shoulder																									
								BUS																		
Width of Carriageway		m				9.00					8.80				9.00						9.00					9.00
Width of Shoulders	L	m				4.00					2.85				3.00						2.75					3.00
	R	m				3.00					2.40				3.00						3.00					3.00
Rise/Fall +/-		%		-0.3											-0.2											
Roughness (IRI)	< 4.0	m/km																								
	> 4.0 - 6.0	m/km																								
	> 6.0 - 8.5	m/km																								
	> 8.5 - 10.5	m/km																								
	> 10.5 - 12.0	m/km																								
	> 12.0	m/km																								
Surface Condition	Cracks	%		1.0		0.2					0.1										0.2					0.4
	Alligator Cracks	%		0.1		1.0					0.3										1.0					2.9
	Potholes	%		0.0		0.0					0.0										0.0					0.0
	Settlement	%		0.1		0.4					0.2										0.5					0.9
	Rutting	%		0.0		0.0					0.0										0.0					0.0
Pavement	New	mm		50 Asphalt - concrete 175 Bituminous roadbase 225 Granular sub-base, CBR >30 Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain																							
	Existing	mm																								

Location

- Culvert km 175+122
- Junction km 175+194
- Culvert km 175+514
- Culvert km 176+897
- Culvert km 177+239
- Culvert km 177+412
- Culvert km 178+572
- Culvert km 178+870
- Junction km 178+989

Chainage km: 175 +000, 175 +200, 175 +400, 175 +600, 175 +800, 176 +000, 176 +200, 176 +400, 176 +600, 176 +800, 177 +000, 177 +200, 177 +400, 177 +600, 177 +800, 178 +000, 178 +200, 178 +400, 178 +600, 178 +800, 179 +000, 179 +200, 179 +400, 179 +600, 179 +800

Layout



			175+000 – 176+000	176+000 – 177+000	177+000 – 178+000	178+000 – 179+000	179+000 – 180+000
Width of Carriageway		m	8.90	8.80	9.00	9.00	9.00
Width of Shoulders	L	m	3.00	3.00	3.00	2.80	3.00
	R	m	3.00	3.00	3.10	2.80	3.00
Surface Condition	Cracks	%	0.2	0.4	0.5	0.1	0.2
	Alligator Cracks	%	0.6	2.1	1.7	1.1	1.0
	Potholes	%	0.0	0.0	0.1	0.0	0.0
	Settlement	%	1.4	1.8	1.3	0.7	0.9
	Rutting	%	0.0	0.0	0.0	0.0	0.0

Rise/Fall +/- %: -0.2 (from 175 +000); -0.1 (from 179 +000)

Roughness (IRI)

- < 4.0 m/km
- > 4.0 - 6.0 m/km
- > 6.0 - 8.5 m/km
- > 8.5 - 10.5 m/km
- > 10.5 - 12.0 m/km
- > 12.0 m/km

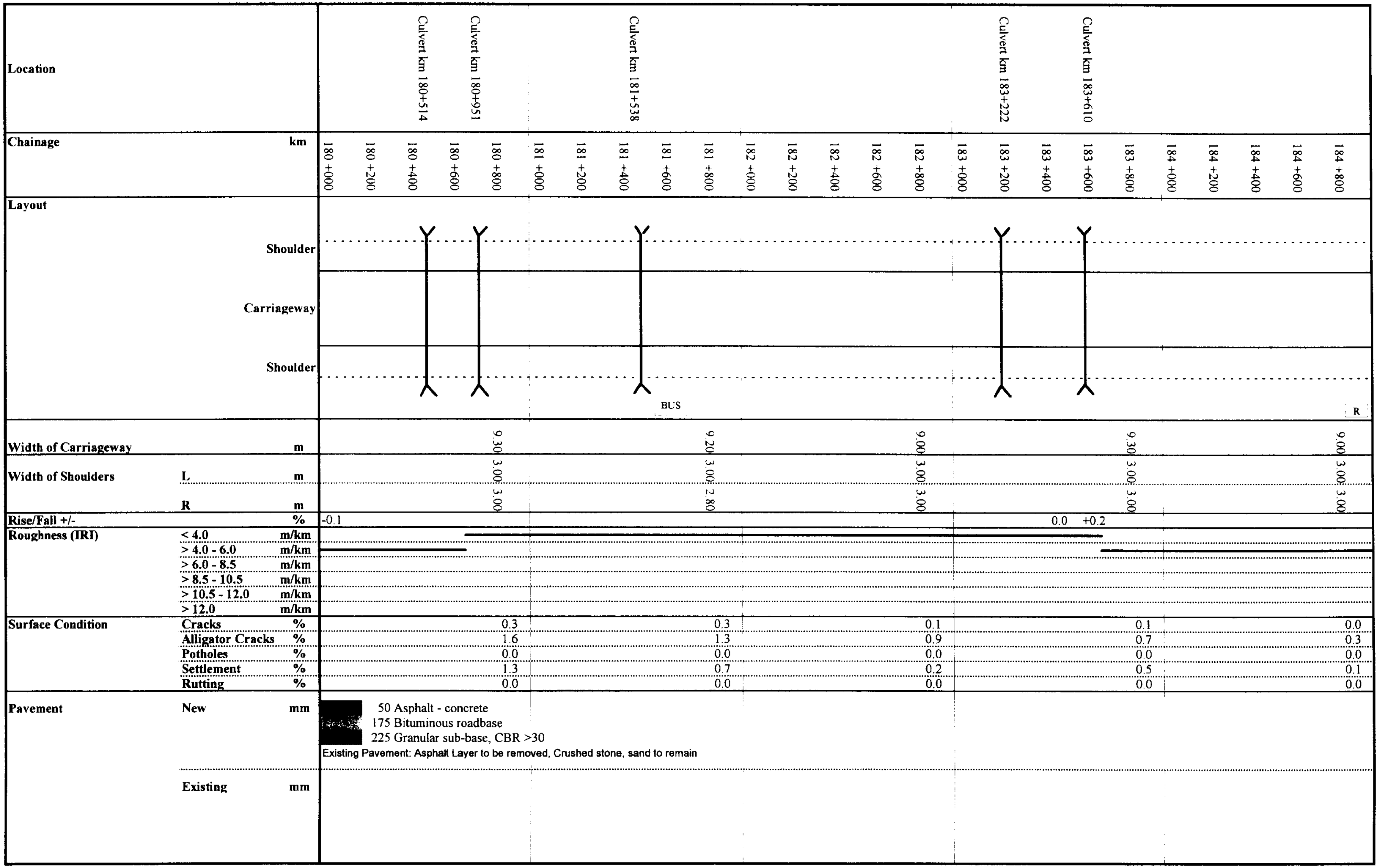
Pavement

New mm

- ■ 50 Asphalt - concrete
- ▨ 175 Bituminous roadbase
- ■ 225 Granular sub-base, CBR >30

Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain

Existing mm



			180 +800	181 +800	182 +800	183 +800	184 +800
Width of Carriageway		m	9.30	9.20	9.00	9.30	9.00
Width of Shoulders	L	m	3.00	3.00	3.00	3.00	3.00
	R	m	3.00	2.80	3.00	3.00	3.00
Surface Condition	Cracks	%	0.3	0.3	0.1	0.1	0.0
	Alligator Cracks	%	1.6	1.3	0.9	0.7	0.3
	Potholes	%	0.0	0.0	0.0	0.0	0.0
	Settlement	%	1.3	0.7	0.2	0.5	0.1
	Rutting	%	0.0	0.0	0.0	0.0	0.0

Pavement

New mm

50 Asphalt - concrete
175 Bituminous roadbase
225 Granular sub-base, CBR >30

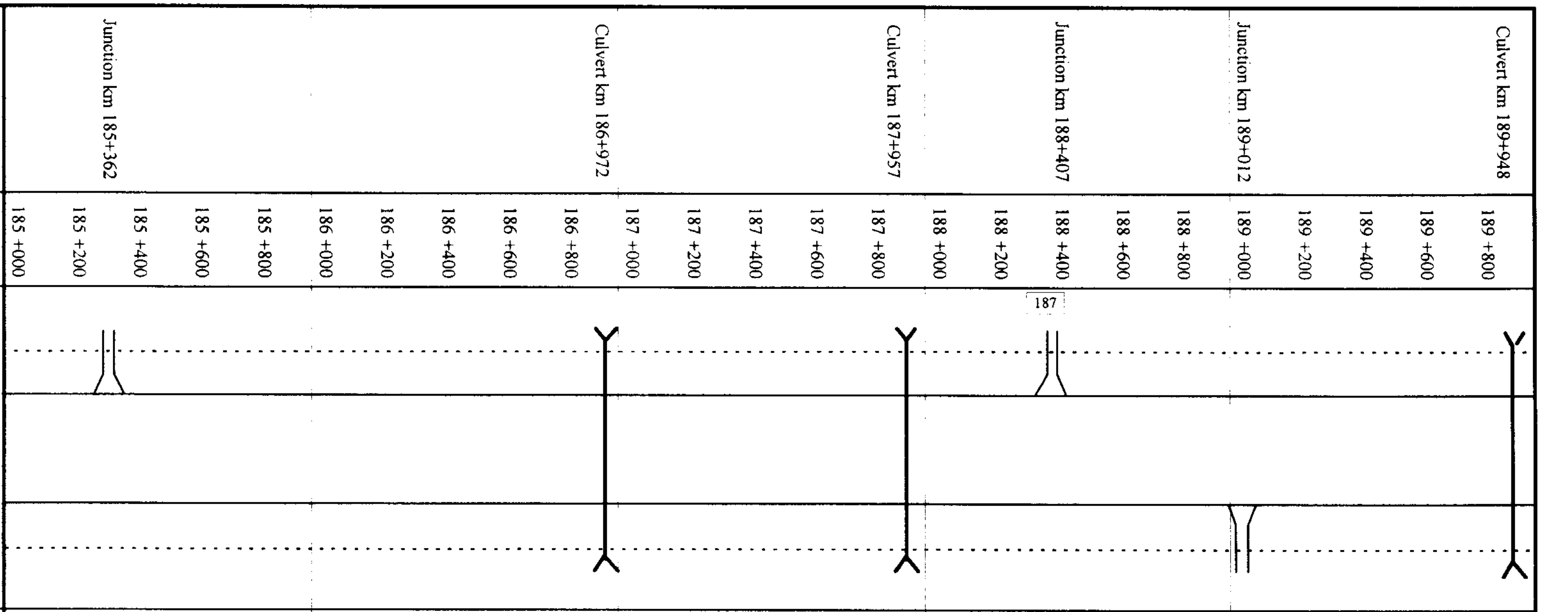
Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain

Existing mm

Location

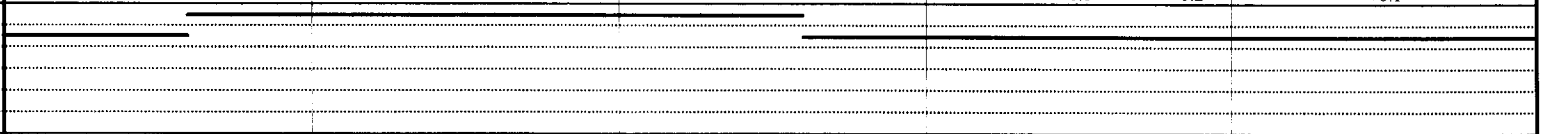
Chainage km

Layout



			km 185	km 186	km 187	km 188	km 189
Width of Carriageway		m	9.50	9.50		8.90	9.00
Width of Shoulders	L	m	3.00	3.20		3.00	2.50
	R	m	3.20	3.20		3.20	2.00
Rise/Fall +/-		%	+0.2			0.0 -0.2	+0.1

Roughness (IRI)



Surface Condition		km 185	km 186	km 187	km 188	km 189
Cracks	%	0.2	0.1		1.0	1.1
Alligator Cracks	%	0.8	0.5		1.6	3.8
Potholes	%	0.0	0.0		0.1	0.1
Settlement	%	0.6	0.3		0.0	0.6
Rutting	%	0.0	0.0		0.0	0.0

Pavement

New mm

■ 50 Asphalt - concrete
▨ 175 Bituminous roadbase
■ 225 Granular sub-base, CBR >30

Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain

Existing mm

■ 50 asphalt - concrete
▨ 70 asphalt - concrete
■ 300 gravel / sand

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

Alyat - Ganja - Georgian Border (M 4/M 1) : Section 5 - M 4, Ujar - Yevlakh km 170+500 to km 216+500

KOCKS
INGENIEURE

Location			Junction km 190+119	Bridge km 190+168	Junction km 190+205	Junction km 190+410	Culvert km 190+413	Culvert km 191+019	Culvert km 191+748	Culvert km 192+294	Culvert km 192+329	Culvert km 192+608	Culvert km 192+768	Junction km 192+796	Culvert km 192+980	Junction km 194+321	Culvert km 194+422	Culvert km 194+578
Chainage		km	190 +000	190 +200	190 +400	190 +600	190 +800	191 +000	191 +200	191 +400	191 +600	191 +800	192 +000	192 +200	192 +400	192 +600	192 +800	193 +000	193 +200	193 +400	193 +600	193 +800	194 +000	194 +200	194 +400	194 +600	194 +800
Layout			189													191								193			
	Shoulder																										
	Carriageway																										
	Shoulder															P											
Width of Carriageway		m			9.00				9.00							8.80				9.00			8.80				
Width of Shoulders	L	m			2.85				3.00							3.30				2.80			2.80				
	R	m			3.80				3.00							3.00				2.80			3.50				
Rise/Fall +/-		%	+0.1						-0.2														0.0				
Roughness (IRI)	< 4.0	m/km																									
	> 4.0 - 6.0	m/km																									
	> 6.0 - 8.5	m/km																									
	> 8.5 - 10.5	m/km																									
	> 10.5 - 12.0	m/km																									
	> 12.0	m/km																									
Surface Condition	**Cracks**	%			0.8				1.5							1.7				1.5			0.8				
	Alligator Cracks	%			1.7				1.4							5.8				21.2			1.3				
	Potholes	%			0.1				0.5							0.5				0.6			0.1				
	Settlement	%			0.0				0.0							0.2				0.0			0.0				
	Rutting	%			0.0				0.0							0.0				0.0			0.0				
Pavement	**New**	mm	50 Asphalt - concrete 175 Bituminous roadbase 225 Granular sub-base, CBR >30 Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain																								
	Existing	mm																									

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

Alyat - Ganja - Georgian Border (M 4/M 1) : Section 5 - M 4, Ujar - Yevlakh km 170+500 to km 216+500

KOCKS INGENIEURE

Location			Junction km 195+416	Culvert km 195+421	Junction km 196+331	Culvert km 196+353	Culvert km 196+914	197+540 Culvert km 197+593 Junction km	Culvert km 197+670	Culvert km 198+767
Chainage		km	195 +000 / 195 +200 / 195 +400 / 195 +600 / 195 +800 / 196 +000 / 196 +200 / 196 +400 / 196 +600 / 196 +800 / 197 +000 / 197 +200 / 197 +400 / 197 +600 / 197 +800 / 198 +000 / 198 +200 / 198 +400 / 198 +600 / 198 +800 / 199 +000 / 199 +200 / 199 +400 / 199 +600 / 199 +800								
Layout			195				196	P	197	
		Shoulder								
		Carriageway								
		Shoulder								
Width of Carriageway		m	9.00		9.00		9.00		9.00	9.00
Width of Shoulders	L	m	3.50		3.55		3.20		3.00	3.00
	R	m	3.00		3.00		3.50		3.50	2.50
Rise/Fall +/-		%	0.0							
Roughness (IRI)	< 4.0	m/km								
	> 4.0 - 6.0	m/km								
	> 6.0 - 8.5	m/km								
	> 8.5 - 10.5	m/km								
	> 10.5 - 12.0	m/km								
	> 12.0	m/km								
Surface Condition	**Cracks**	%	1.0		1.6		1.2		1.0	0.3
	Alligator Cracks	%	1.0		9.1		5.2		4.1	0.0
	Potholes	%	0.1		0.9		0.4		0.2	0.0
	Settlement	%	0.2		1.0		0.1		0.2	0.0
	Rutting	%	0.0		0.0		0.0		0.4	0.0
Pavement	**New**	mm	50 Asphalt - concrete 175 Bituminous roadbase 225 Granular sub-base, CBR >30							
			Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain							
	Existing	mm								

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

Alyat - Ganja - Georgian Border (M 4/M 1) : Section 5 - M 4, Ujar - Yevlakh km 170+500 to km 216+500

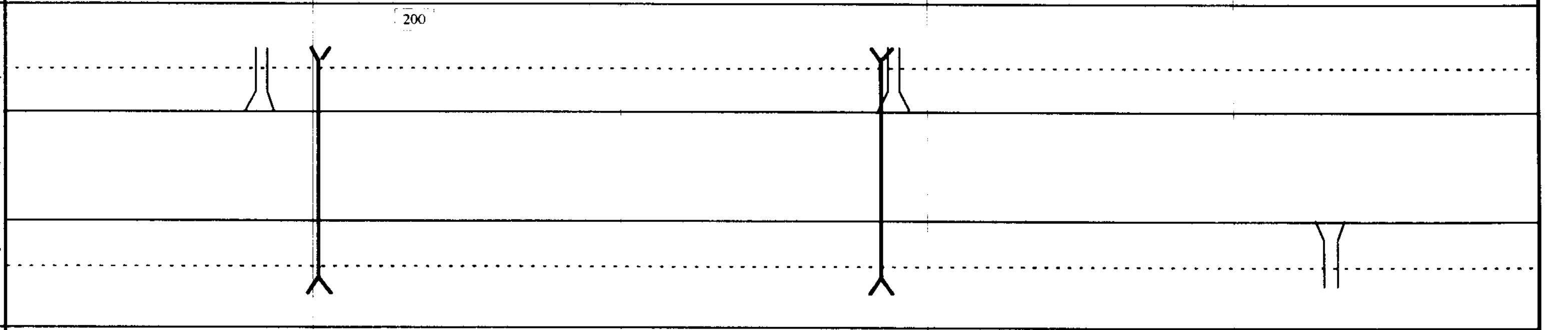
Location

Junction km 200+810
Culvert km 201+009
Junction km 202+880
Culvert km 202+856
Junction km 204+312

Chainage km

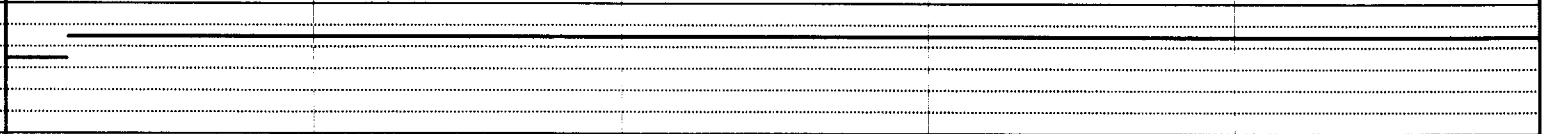
200 +000, 200 +200, 200 +400, 200 +600, 200 +800, 201 +000, 201 +200, 201 +400, 201 +600, 201 +800, 202 +000, 202 +200, 202 +400, 202 +600, 202 +800, 203 +000, 203 +200, 203 +400, 203 +600, 203 +800, 204 +000, 204 +200, 204 +400, 204 +600, 204 +800

Layout



			200 +200	201 +200	202 +200	203 +200	204 +200
Width of Carriageway		m	9.00	9.00	9.00	9.00	9.00
Width of Shoulders	L	m	3.00	3.50	3.00	3.00	3.20
	R	m	3.00	3.00	3.00	2.80	3.50
Rise/Fall +/-		%	0.0	+0.15			
Surface Condition	Cracks	%	0.6	0.6	0.3	0.4	0.5
	Alligator Cracks	%	1.9	1.2	1.6	0.6	1.6
	Potholes	%	0.1	0.3	0.1	0.0	0.1
	Settlement	%	0.2	0.0	2.0	0.0	0.0
	Rutting	%	0.0	0.2	0.4	0.0	0.3

Roughness (IRI)



Pavement

New mm

50 Asphalt - concrete
175 Bituminous roadbase
225 Granular sub-base, CBR >30
Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain

Existing mm

40 asphalt - concrete
60 asphalt - concrete
100 gravel / sand

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

Alyat - Ganja - Georgian Border (M 4/M 1) : Section 5 - M 4, Ujar - Yevlakh km 170+500 to km 216+500

KOCKS INGENIEURE

Location			Bridge km 205+309	Culvert km 205+534	Culvert km 205+941	Culvert km 206+728	Culvert km 207+210	Culvert km 207+428	Culvert km 208+375	Culvert km 208+729	Culvert km 209+782	Culvert km 209+853
Chainage		km	205 +200	205 +400	205 +600	205 +800	206 +000	206 +200	206 +400	206 +600	206 +800	207 +000	207 +200	207 +400	207 +600	207 +800	208 +000	208 +200	208 +400	208 +600	208 +800	209 +000	209 +200	209 +400	209 +600	209 +800
Layout																				P						
	Shoulder																									
	Carriageway																									
	Shoulder																									
Width of Carriageway		m	9.00				9.00						9.00				9.00					9.00				
Width of Shoulders	L	m	3.00				2.50						3.50				3.00					3.00				
	R	m	3.00				2.50						3.50				3.20					3.00				
Rise/Fall +/-		%	+0.15																							
Roughness (IRI)	< 4.0	m/km																								
	> 4.0 - 6.0	m/km																								
	> 6.0 - 8.5	m/km																								
	> 8.5 - 10.5	m/km																								
	> 10.5 - 12.0	m/km																								
	> 12.0	m/km																								
Surface Condition	**Cracks**	%	0.3				0.6						0.4				0.3					0.5				
	Alligator Cracks	%	0.8				1.0						1.0				1.2					0.7				
	Potholes	%	0.1				0.1						0.0				0.1					0.1				
	Settlement	%	0.2				0.0						0.6				0.0					0.0				
	Rutting	%	0.8				0.3						0.0				0.3					0.0				
Pavement	**New**	mm	50 Asphalt - concrete 175 Bituminous roadbase 225 Granular sub-base, CBR >30																							
			Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain																							
	Existing	mm																								

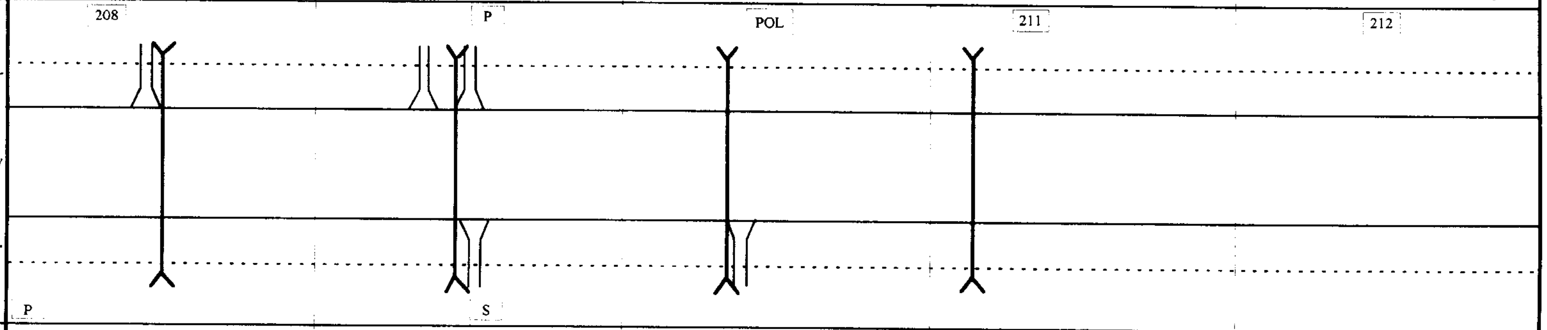
TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

Alyat - Ganja - Georgian Border (M 4/M 1) : Section 5 - M 4, Ujar - Yevlakh km 170+500 to km 216+500

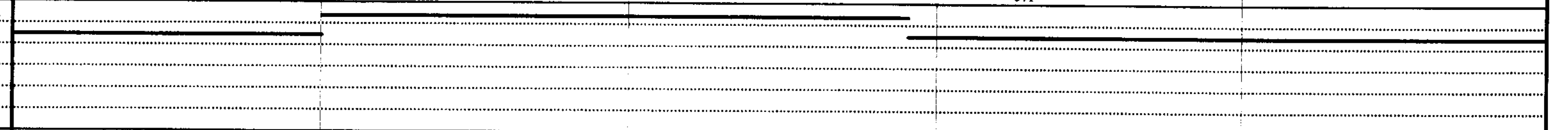
KOCKS INGENIEURE

Location		Culvert km 210+492 Junction 210+438	Junction km 211+487 Culvert km 211+469 Junction km 211+337	Junction km 212+383 Culvert km 212+338	Culvert km 213+155	
Chainage	km	210 +000 210 +200 210 +400 210 +600 210 +800	211 +000 211 +200 211 +400 211 +600 211 +800	212 +000 212 +200 212 +400 212 +600 212 +800	213 +000 213 +200 213 +400 213 +600 213 +800	214 +000 214 +200 214 +400 214 +600 214 +800
Width of Carriageway	m	8.80	9.00	9.00	8.50	8.70
Width of Shoulders L	m	3.00	3.00	2.50	3.00	2.90
R	m	3.50	2.70	2.80	3.00	3.50
Rise/Fall +/-	%	+0.15 -0.2			+0.1	
Surface Condition Cracks	%	0.1	0.1	0.4	0.4	0.7
Alligator Cracks	%	0.5	0.1	0.8	0.2	3.1
Potholes	%	0.1	0.1	0.4	0.1	0.1
Settlement	%	0.2	0.2	0.0	0.2	0.0
Rutting	%	0.0	0.0	0.2	0.4	0.5

Layout



Roughness (IRI)



Pavement New mm

▆ 50 Asphalt - concrete
▨ 175 Bituminous roadbase
▆ 225 Granular sub-base, CBR >30

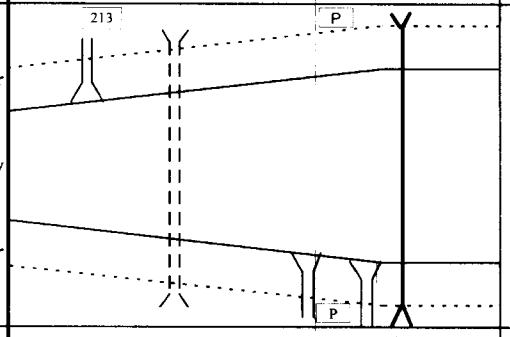
Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain

Existing mm

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

Alyat - Ganja - Georgian Border (M 4/M 1) : Section 5 - M 4, Ujar - Yevlakh km 170+500 to km 216+500

KOCKS INGENIEURE

Location			Junction km 215+230		Bridge km 215+567		Junction km 215+990	Junction km 216+194	Culvert km 216+267		
Chainage		km	215 +000	215 +200	215 +400	215 +600	215 +800	216 +000	216 +200	216 +400	216 +500
Layout											
Width of Carriageway		m		7.70					19.00		
Width of Shoulders	**L**	m		3.00					2.80		
	R	m		2.50					2.10		
Rise/Fall +/-		%			-0.1					+0.2	
Roughness (IRI)	**< 4.0**	m/km									
	> 4.0 - 6.0	m/km									
	> 6.0 - 8.5	m/km									
	> 8.5 - 10.5	m/km									
	> 10.5 - 12.0	m/km									
	> 12.0	m/km									
Surface Condition	**Cracks**	%		0.3					0.2		
	Alligator Cracks	%		0.8					0.4		
	Potholes	%		0.1					0.0		
	Settlement	%		0.0					0.1		
	Rutting	%		0.0					0.5		
Pavement	**New**	mm	50 Asphalt - concrete 175 Bituminous roadbase 225 Granular sub-base, CBR >30								
			Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain								
	Existing	mm									

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

Alyat - Ganja - Georgian Border (M 4/M 1) : Section 6 - M 4, Bypass Yevlakh km 216+500 to km 223+468

KOCKS INGENIEURE

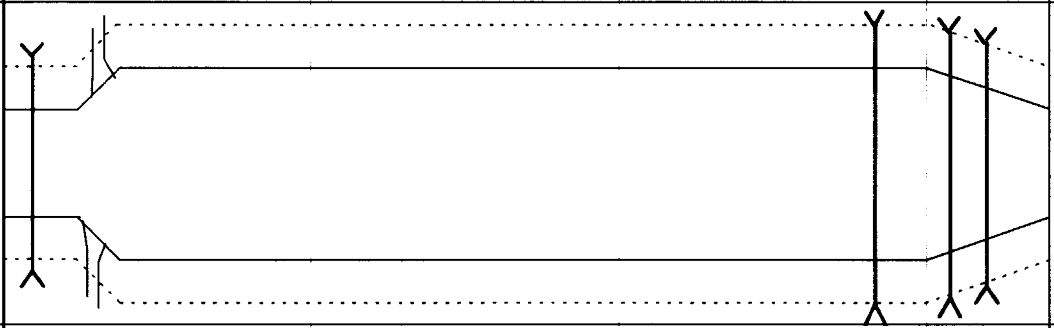
Location			Junction km 217+742 · Junction km 218+146 · Junction km 218+891 · Junction km 218+990 · Bridge km 219+461
Chainage		km	216+500 · 216+600 · 216+800 · 217+000 · 217+200 · 217+400 · 217+600 · 217+800 · 218+000 · 218+200 · 218+400 · 218+600 · 218+800 · 219+000 · 219+200 · 219+400 · 219+600 · 219+800
Layout			Shoulder / Carriageway / Shoulder; BUS
Width of Carriageway		m	19.00 · 19.00 · 8.70 · 9.00
Width of Shoulders	L	m	2.80 · 2.40 · 2.40 · 3.00
	R	m	2.10 · 2.00 · 3.50 · 2.40
Rise/Fall +/-		%	+0.2 · -0.2 · +0.2
Roughness (IRI)	< 4.0	m/km	
	> 4.0 - 6.0	m/km	
	> 6.0 - 8.5	m/km	
	> 8.5 - 10.5	m/km	
	> 10.5 - 12.0	m/km	
	> 12.0	m/km	
Surface Condition	Cracks	%	0.3 · 0.2 · 0.3 · 0.3
	Alligator Cracks	%	0.5 · 0.5 · 1.3 · 0.5
	Potholes	%	0.1 · 0.2 · 0.1 · 0.0
	Settlement	%	0.1 · 0.4 · 0.3 · 0.0
	Rutting	%	0.7 · 0.7 · 1.1 · 0.2
Pavement	New	mm	50 Asphalt - concrete 175 Bituminous roadbase 225 Granular sub-base, CBR >30 Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain
	Existing	mm	40 asphalt - concrete 60 asphalt - concrete 100 gravel / sand

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Alyat - Ganja - Georgian Border (M 4/M 1) : Section 6 - M 4, Bypass Yevlakh km 216+500 to km 223+468

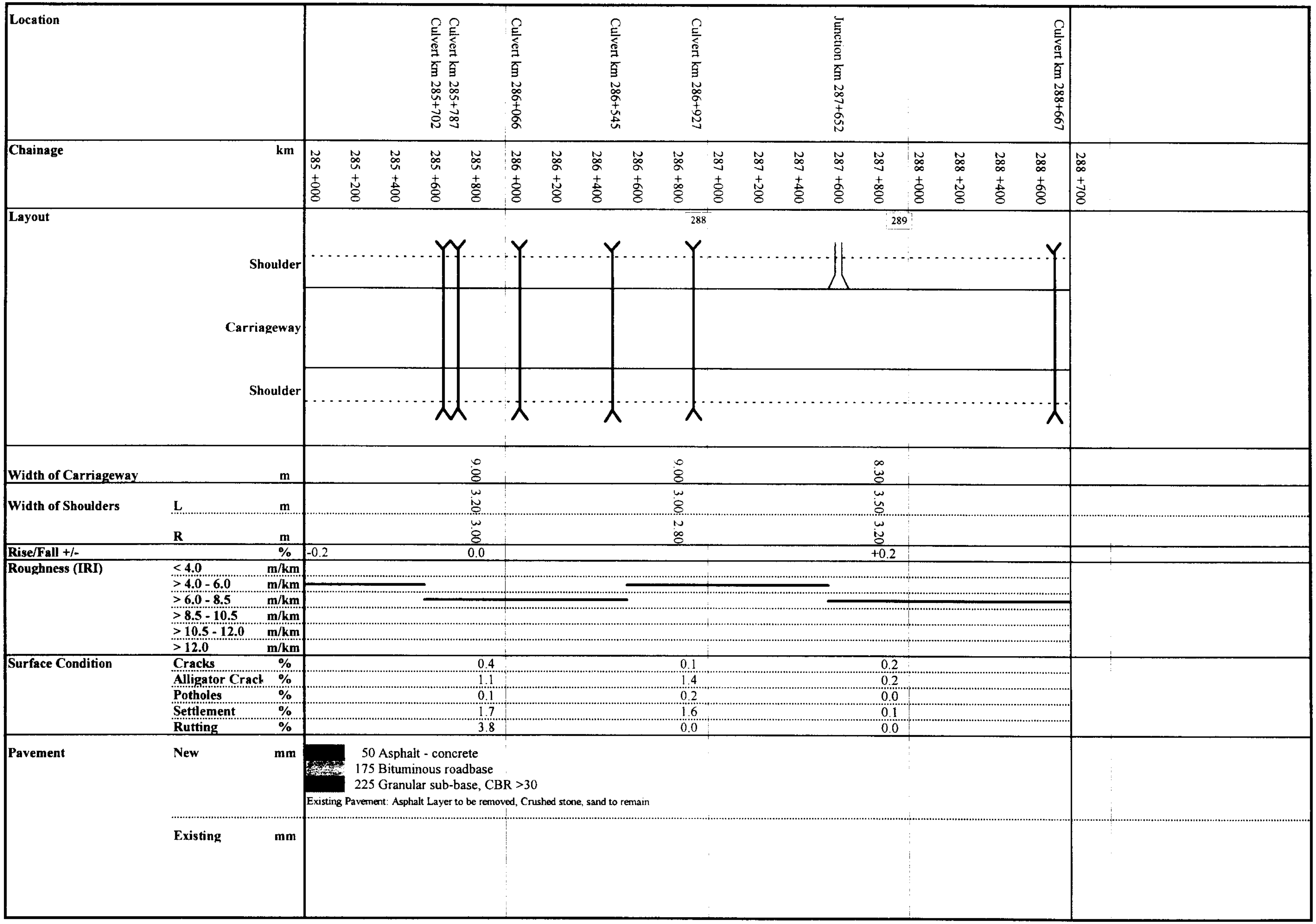
KOCKS
INGENIEURE

Location			Culvert km 220+098	Junction km 220+270													Culvert km 222+827	Culvert km 223+078	Culvert km 223+198	
Chainage		km	220 +000	220 +200	220 +400	220 +600	220 +800	221 +000	221 +200	221 +400	221 +600	221 +800	222 +000	222 +200	222 +400	222 +600	222 +800	223 +000	223 +200	223 +468
Width of Carriageway		m		21.40 9.00					21.00					21.00				19.00	9.00	
Width of Shoulders	L	m		2.75 3.50					2.70					3.00				3.00	3.00	
	R	m		3.00 3.50					2.80					3.10				3.00	3.00	
Rise/Fall +/-		%	+0.2																	
Roughness (IRI)	< 4.0	m/km																		
	> 4.0 - 6.0	m/km																		
	> 6.0 - 8.5	m/km																		
	> 8.5 - 10.5	m/km																		
	> 10.5 - 12.0	m/km																		
	> 12.0	m/km																		
Surface Condition	Cracks	%		0.2					0.1									0.5		
	Alligator Cracks	%		0.5					0.2									4.6		
	Potholes	%		0.0					0.0									0.1		
	Settlement	%		3.6					1.6									2.2		
	Rutting	%		0.0					0.0									0.0		
Pavement	New	mm	■ 50 Asphalt - concrete ▨ 175 Bituminous roadbase ■ 225 Granular sub-base, CBR >30 Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain																	
	Existing	mm																		

Layout



Location			Culvert km 281+615 / Junction km 282+287 / Culvert km 282+387 / Culvert km 282+605 / Culvert km 282+907 / Junction km 283+100 / Culvert km 283+496 / Culvert km 284+097 / Junction km 284+616
Chainage		km	280 +683 / 280 +800 / 281 +000 / 281 +200 / 281 +400 / 281 +600 / 281 +800 / 282 +000 / 282 +200 / 282 +400 / 282 +600 / 282 +800 / 283 +000 / 283 +200 / 283 +400 / 283 +600 / 283 +800 / 284 +000 / 284 +200 / 284 +400 / 284 +600 / 284 +800
Layout			BUS / P / P / BUS Shoulder Carriageway Shoulder
Width of Carriageway		m	9.00 / 9.00 / 9.00 / 8.80 / 8.80
Width of Shoulders	L	m	3.00 / 3.00 / 3.50 / 3.00 / 3.30
	R	m	3.10 / 3.00 / 3.20 / 3.00 / 3.00
Rise/Fall +/-		%	+0.2 / -0.3 / -0.2
Roughness (IRI)	< 4.0	m/km	
	> 4.0 - 6.0	m/km	
	> 6.0 - 8.5	m/km	
	> 8.5 - 10.5	m/km	
	> 10.5 - 12.0	m/km	
	> 12.0	m/km	
Surface Condition	**Cracks**	%	0.1 / 0.1 / 0.3 / 0.5 / 0.2
	Alligator Crack	%	0.5 / 0.1 / 3.6 / 2.3 / 0.8
	Potholes	%	0.1 / 0.0 / 0.3 / 0.7 / 0.1
	Settlement	%	0.9 / 0.7 / 0.5 / 5.3 / 0.2
	Rutting	%	0.0 / 0.0 / 0.0 / 0.0 / 0.4
Pavement	**New**	mm	50 Asphalt - concrete 175 Bituminous roadbase 225 Granular sub-base, CBR >30
	Existing	mm	Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain



			285+000 – 286+000	286+000 – 287+000	287+000 – 288+000
Width of Carriageway		m	9.00	9.00	8.30
Width of Shoulders	L	m	3.20	3.00	3.50
	R	m	3.00	2.80	3.20
Rise/Fall +/-		%	-0.2 0.0		+0.2
Surface Condition	Cracks	%	0.4	0.1	0.2
	Alligator Crack	%	1.1	1.4	0.2
	Potholes	%	0.1	0.2	0.0
	Settlement	%	1.7	1.6	0.1
	Rutting	%	3.8	0.0	0.0

Pavement New mm

▆ 50 Asphalt - concrete
▒ 175 Bituminous roadbase
▆ 225 Granular sub-base, CBR >30

Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain

Existing mm

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

Alyat - Ganja - Georgian Border (M 4/M 1) : Section 8 - M 1, Mingechevir - Ganja km 288+700 to km 333+500

KOCKS INGENIEURE

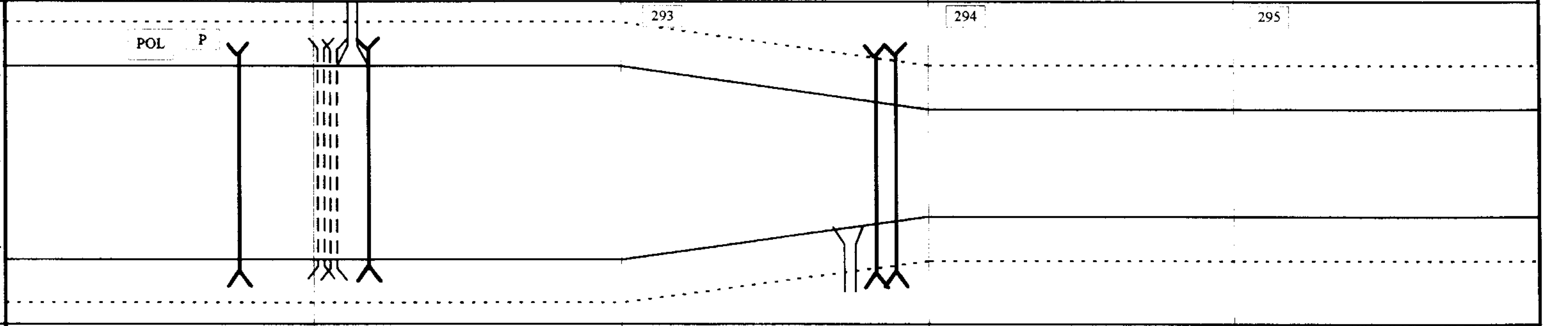
Location				Junction km 288+750 / Junction km 288+935 / Junction km 289+046 / Junction km 289+302 / Junction km 289+842
Chainage		km		288 +700 / 288 +800 / 289 +000 / 289 +200 / 289 +400 / 289 +600 / 289 +800
Layout				290
		Shoulder		
		Carriageway		
		Shoulder		S / P
Width of Carriageway		m		10.30 / 20.70
Width of Shoulders	L	m		2.80 / 3.30
	R	m		4.00 / 2.80
Rise/Fall +/-		%		+0.2 / 0.0 / -0.25
Roughness (IRI)	< 4.0	m/km		
	> 4.0 - 6.0	m/km		
	> 6.0 - 8.5	m/km		
	> 8.5 - 10.5	m/km		
	> 10.5 - 12.0	m/km		
	> 12.0	m/km		
Surface Condition	Cracks	%		0.2 / 0.1 / 0.2
	Alligator Cracks	%		0.2 / 0.3 / 2.7
	Potholes	%		0.0 / 0.1 / 0.1
	Settlement	%		0.1 / 0.0 / 0.2
	Rutting	%		0.0 / 0.0 / 0.5
Pavement	New	mm		50 Asphalt - concrete 175 Bituminous roadbase 225 Granular sub-base, CBR >30
				Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain
	Existing	mm		60 asphalt - concrete 60 asphalt - concrete 500 gravel / sand

Location

- Culvert km 290+771
- Bridges km 291+033
- Junction km 291+068
- Culvert km 2911+147
- Junction km 292+766
- Culvert km 292+816
- Culvert km 292+867

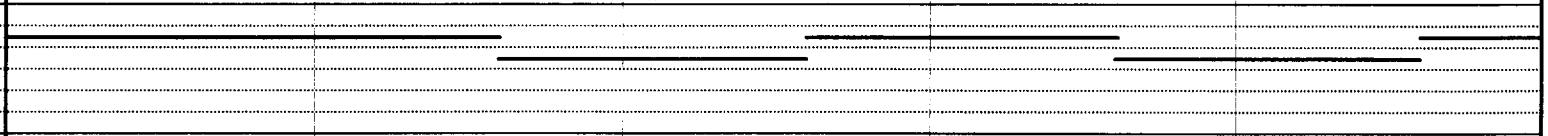
Chainage km: 290 +000, 290 +200, 290 +400, 290 +600, 290 +800, 291 +000, 291 +200, 291 +400, 291 +600, 291 +800, 292 +000, 292 +200, 292 +400, 292 +600, 292 +800, 293 +000, 293 +200, 293 +400, 293 +600, 293 +800, 294 +000, 294 +200, 294 +400, 294 +600, 294 +800

Layout



Chainage (km)		290 +000	290 +800	291 +000	292 +000	293 +000	294 +000
Width of Carriageway	m	16.60	16.50		16.30	9.00	8.70
Width of Shoulders L	m	3.30	3.30		3.00	3.50	3.50
Width of Shoulders R	m	3.00	3.00		3.00	3.00	1.50
Rise/Fall +/-	%	+0.25		+0.2	+0.1		
Surface Condition: Cracks	%		0.1		0.1	0.2	0.1
Alligator Cracks	%		0.2		0.3	0.2	0.2
Potholes	%		0.0		0.1	0.0	0.6
Settlement	%		0.0		0.0	0.0	0.8
Rutting	%		0.3		2.2	0.3	0.0

Roughness (IRI)



Pavement New mm

■	50 Asphalt - concrete
▨	175 Bituminous roadbase
■	225 Granular sub-base, CBR >30

Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain

Existing mm

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

Alyat - Ganja - Georgian Border (M 4/M 1) : Section 8 - M 1, Mingechevir - Ganja km 288+700 to km 333+500

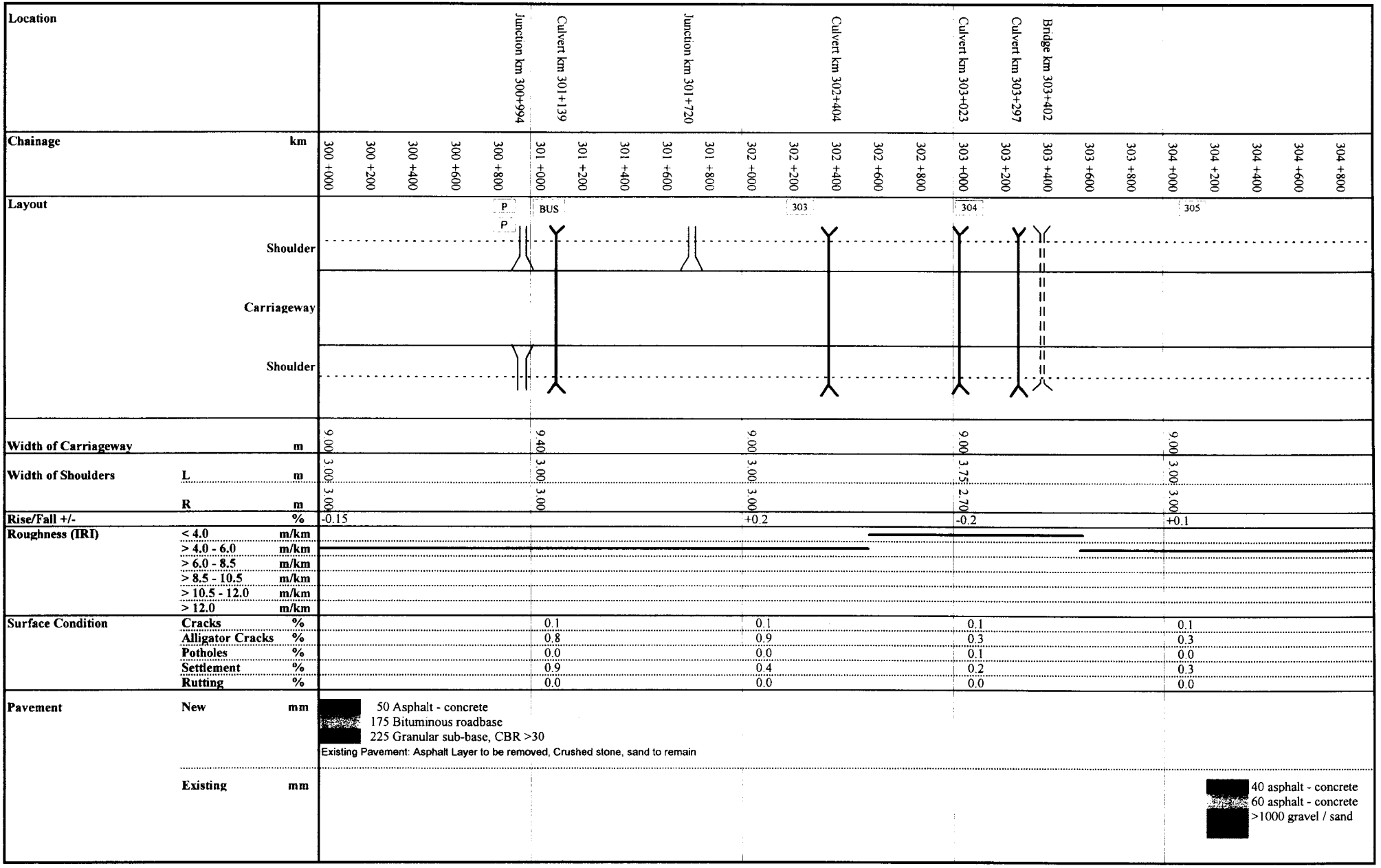
KOCKS INGENIEURE

Location			Culvert km 295+545; Culvert km 297+134; Culvert km 297+454
Chainage		km	295 +000; 295 +200; 295 +400; 295 +600; 295 +800; 296 +000; 296 +200; 296 +400; 296 +600; 296 +800; 297 +000; 297 +200; 297 +400; 297 +600; 297 +800; 298 +000; 298 +200; 298 +400; 298 +600; 298 +800; 299 +000; 299 +200; 299 +400; 299 +600; 299 +800
Layout			296; 298; 299; 300 — Shoulder / Carriageway / Shoulder
Width of Carriageway		m	9.00; 9.00; 9.00; 9.00; 9.00
Width of Shoulders	L	m	2.80; 3.00; 3.00; 3.00; 2.50
	R	m	1.70; 3.00; 3.00; 3.00; 2.00
Rise/Fall +/-		%	+0.1; 0.0; -0.15
Roughness (IRI)	< 4.0	m/km	
	> 4.0 - 6.0	m/km	
	> 6.0 - 8.5	m/km	
	> 8.5 - 10.5	m/km	
	> 10.5 - 12.0	m/km	
	> 12.0	m/km	
Surface Condition	**Cracks**	%	0.3; 0.2; 0.2; 0.2; 0.3
	Alligator Cracks	%	0.8; 0.7; 0.8; 0.7; 0.5
	Potholes	%	0.1; 0.3; 0.2; 0.1; 0.0
	Settlement	%	0.3; 0.3; 0.3; 0.5; 0.2
	Rutting	%	1.2; 1.1; 0.0; 0.7; 0.0
Pavement	**New**	mm	50 Asphalt - concrete 175 Bituminous roadbase 225 Granular sub-base, CBR >30 Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain
	Existing	mm	

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

Alyat - Ganja - Georgian Border (M 4/M 1) : Section 8 - M 1, Mingechevir - Ganja km 288+700 to km 333+500

KOCKS INGENIEURE



Location			Culvert km 306+653; Culvert km 306+930; Culvert km 306+930; Culvert km 307+657; Culvert km 307+752; Junction km 309+357; Culvert km 309+858
Chainage		km	305 +000; 305 +200; 305 +400; 305 +600; 305 +800; 306 +000; 306 +200; 306 +400; 306 +600; 306 +800; 307 +000; 307 +200; 307 +400; 307 +600; 307 +800; 308 +000; 308 +200; 308 +400; 308 +600; 308 +800; 309 +000; 309 +200; 309 +400; 309 +600; 309 +800
Layout			306; 307; 308; 309; 310
			Shoulder / Carriageway / Shoulder
Width of Carriageway		m	9.00 | 9.00 | 9.00 | 9.00 | 9.00
Width of Shoulders	**L**	m	3.00 | 3.00 | 3.00 | 3.00 | 3.00
	R	m	2.50 | 2.50 | 3.00 | 3.00 | 3.00
Rise/Fall +/-		%	+0.1 | 0.0 | +0.2
Roughness (IRI)	**< 4.0**	m/km	
	> 4.0 - 6.0	m/km	
	> 6.0 - 8.5	m/km	
	> 8.5 - 10.5	m/km	
	> 10.5 - 12.0	m/km	
	> 12.0	m/km	
Surface Condition	**Cracks**	%	0.1 | 0.2 | 0.2 | 0.1 | 0.6
	Alligator Cracks	%	0.2 | 3.6 | 0.9 | 0.5 | 4.1
	Potholes	%	0.2 | 0.2 | 0.0 | 0.0 | 0.0
	Settlement	%	0.9 | 2.8 | 1.1 | 1.7 | 0.3
	Rutting	%	2.5 | 0.0 | 0.0 | 1.7 | 0.0
Pavement	**New**	mm	50 Asphalt - concrete 175 Bituminous roadbase 225 Granular sub-base, CBR >30 Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain
	Existing	mm	

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

Alyat - Ganja - Georgian Border (M 4/M 1) : Section 8 - M 1, Mingechevir - Ganja km 288+700 to km 333+500

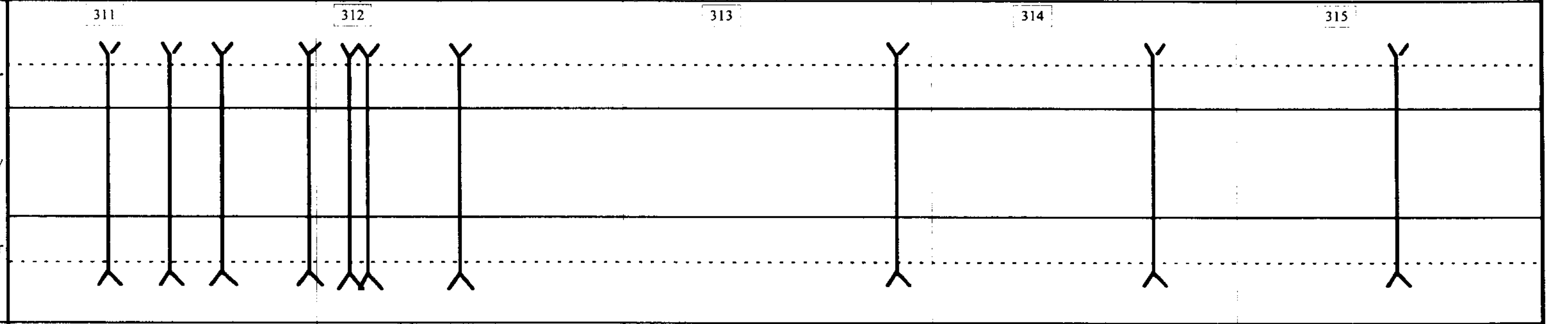
KOCKS
INGENIEURE

Location

- Culvert km 310+334
- Culvert km 310+519
- Culvert km 310+681
- Culvert km 310+998
- Culvert km 311+103
- Culvert km 311+175
- Culvert km 311+438
- Culvert km 312+873
- Culvert km 313+742
- Culvert km 314+529

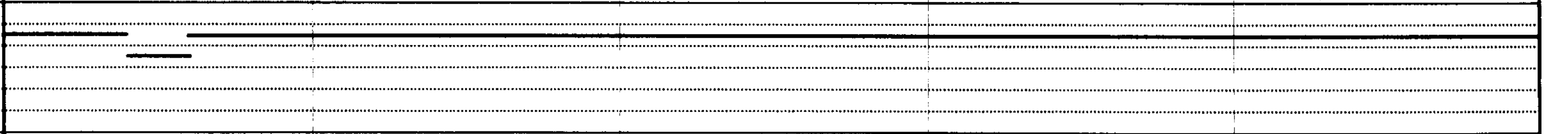
Chainage km: 310 +000, 310 +200, 310 +400, 310 +600, 310 +800, 311 +000, 311 +200, 311 +400, 311 +600, 311 +800, 312 +000, 312 +200, 312 +400, 312 +600, 312 +800, 313 +000, 313 +200, 313 +400, 313 +600, 313 +800, 314 +000, 314 +200, 314 +400, 314 +600, 314 +800

Layout



			311	312	313	314	315
Width of Carriageway		m	9.00	9.00	9.00	9.00	9.00
Width of Shoulders	L	m	3.00	3.00	3.00	2.60	3.00
	R	m	3.00	3.00	2.80	2.70	3.00
Rise/Fall +/-		%	+0.2 -0.15	0.0			+0.2
Surface Condition	Cracks	%	0.4	0.1	0.3	0.2	0.4
	Alligator Cracks	%	6.2	4.0	1.7	6.5	1.2
	Potholes	%	0.1	0.2	0.1	0.0	0.1
	Settlement	%	1.5	0.7	0.7	0.8	0.0
	Rutting	%	0.0	0.0	0.0	0.0	0.0

Roughness (IRI)



Pavement

New mm

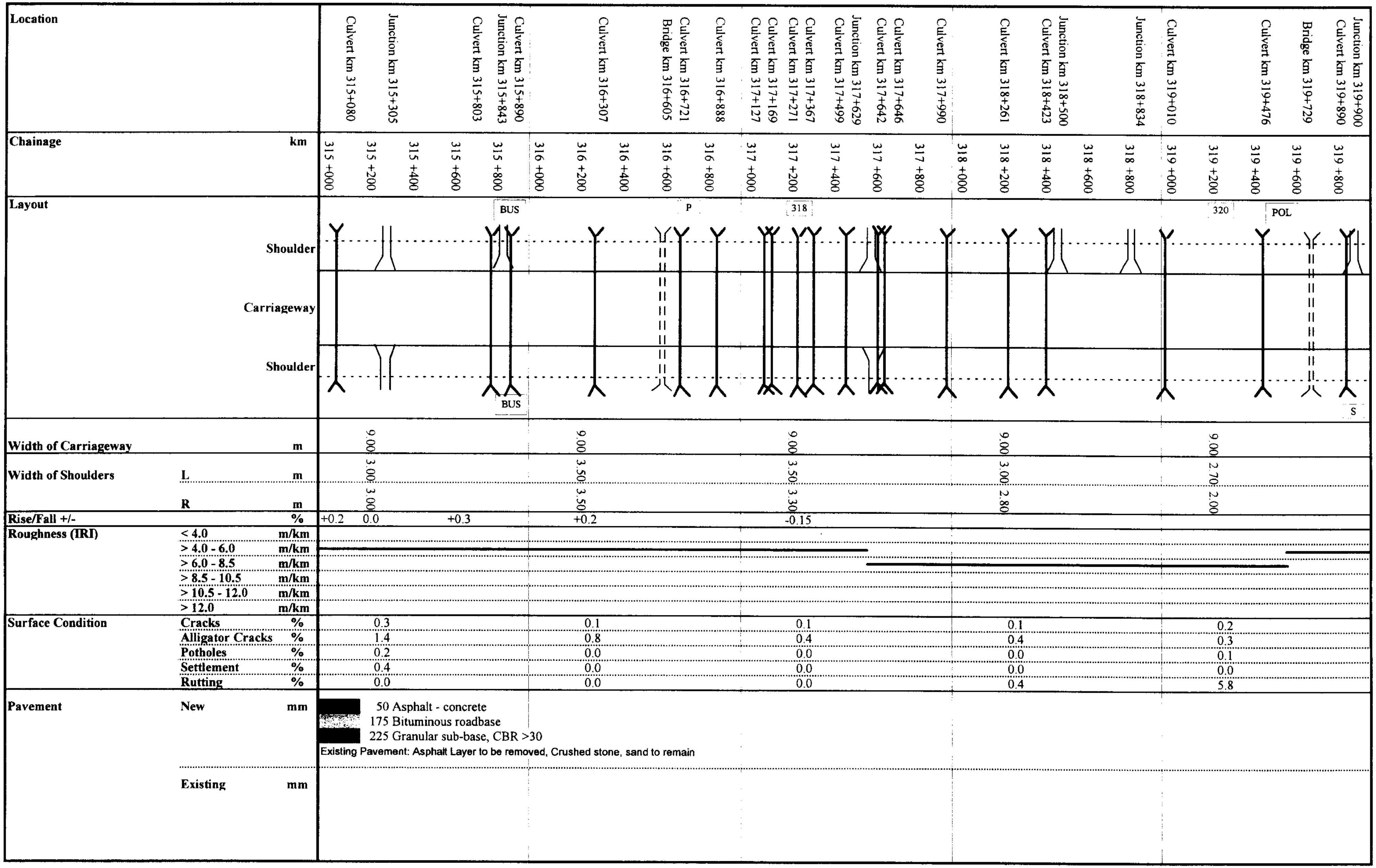
- ■ 50 Asphalt - concrete
- ▨ 175 Bituminous roadbase
- ■ 225 Granular sub-base, CBR >30

Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain

Existing mm

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Alyat - Ganja - Georgian Border (M 4/M 1) : Section 8 - M 1, Mingechevir - Ganja km 288+700 to km 333+500

KOCKS
INGENIEURE



TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

Alyat - Ganja - Georgian Border (M 4/M 1) : Section 8 - M 1, Mingechevir - Ganja km 288+700 to km 333+500

KOCKS INGENIEURE

Location			Junction km 320+410 / Culvert km 320+549 / Culvert km 321+561 / Culvert km 321+826 / Culvert km 321+856 / Junction km 322+700 / Culvert km 322+714 / Junction km 323+104 / Culvert km 323+505 / Culvert km 323+935 / Culvert km 324+406 / Culvert km 324+636 / Culvert km 324+887
Chainage		km	320 +000 / 320 +200 / 320 +400 / 320 +600 / 320 +800 / 321 +000 / 321 +200 / 321 +400 / 321 +600 / 321 +800 / 322 +000 / 322 +200 / 322 +400 / 322 +600 / 322 +800 / 323 +000 / 323 +200 / 323 +400 / 323 +600 / 323 +800 / 324 +000 / 324 +200 / 324 +400 / 324 +600 / 324 +800
Layout			321 / 322 / 323 / 324 / 325
	Shoulder		
	Carriageway		
	Shoulder		
Width of Carriageway		m	9.00 / 8.20 / 9.20 / 8.50 / 9.20
Width of Shoulders	L	m	3.50 / 3.50 / 3.50 / 3.00 / 3.30
	R	m	3.80 / 3.00 / 3.30 / 3.00 / 3.00
Rise/Fall +/-		%	-0.15 / 0.0
Roughness (IRI)	< 4.0	m/km	
	> 4.0 - 6.0	m/km	
	> 6.0 - 8.5	m/km	
	> 8.5 - 10.5	m/km	
	> 10.5 - 12.0	m/km	
	> 12.0	m/km	
Surface Condition	**Cracks**	%	0.4 / 0.3 / 0.3 / 0.3 / 0.9
	Alligator Cracks	%	0.3 / 0.3 / 0.0 / 0.1 / 0.4
	Potholes	%	0.1 / 0.0 / 0.0 / 0.0 / 0.1
	Settlement	%	0.0 / 0.0 / 0.0 / 0.0 / 0.0
	Rutting	%	0.0 / 0.0 / 1.4 / 0.0 / 0.0
Pavement	**New**	mm	50 Asphalt - concrete 175 Bituminous roadbase 225 Granular sub-base, CBR >30 Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain
	Existing	mm	60 asphalt - concrete 40 gravel / crushed stone / bitumen > 1000 gravel / sand

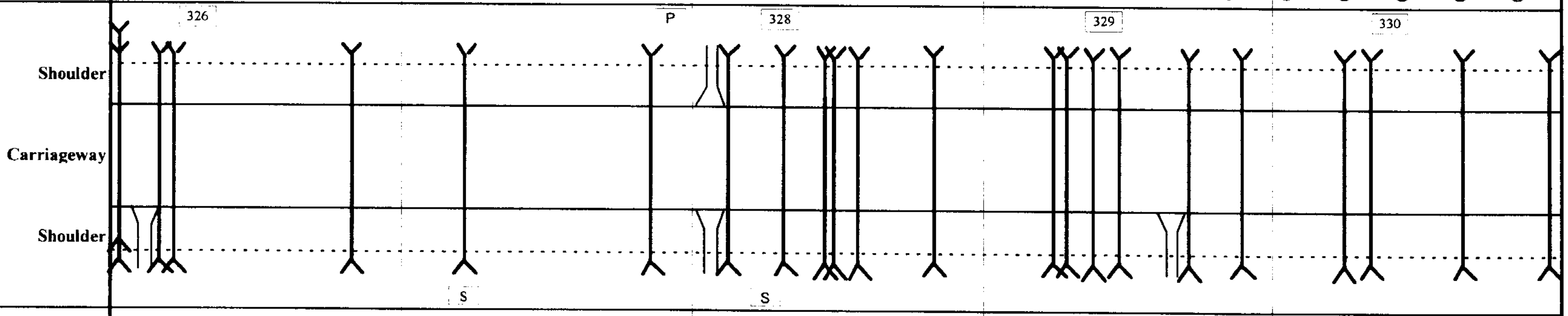
Location

- Culvert km 325+035
- Junction km 325+140
- Culvert km 325+171
- Culvert km 325+206
- Culvert 325+829
- Culvert km 326+214
- Culvert km 326+855
- Junction km 327+078
- Culvert km 327+140
- Culvert km 327+328
- Culvert km 327+431
- Culvert km 327+446
- Culvert km 327+589
- Culvert km 327+811
- Culvert km 328+262
- Culvert km 328+280
- Culvert km 328+381
- Culvert km 328+474
- Junction km 328+607
- Culvert km 328+715
- Culvert km 328+890
- Culvert km 329+245
- Culvert km 329+352
- Culvert km 329+659
- Culvert km 329+985

Chainage km

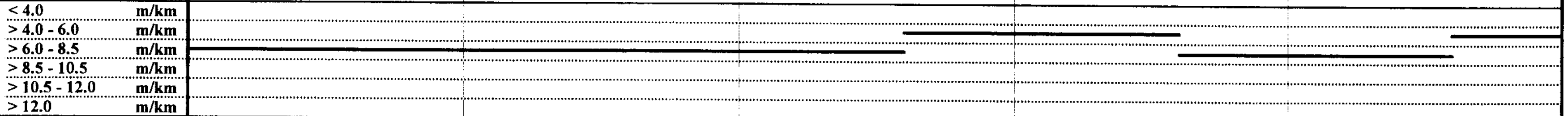
325 +000, 325 +200, 325 +400, 325 +600, 325 +800, 326 +000, 326 +200, 326 +400, 326 +600, 326 +800, 327 +000, 327 +200, 327 +400, 327 +600, 327 +800, 328 +000, 328 +200, 328 +400, 328 +600, 328 +800, 329 +000, 329 +200, 329 +400, 329 +600, 329 +800

Layout



Width of Carriageway		m	9.80	9.00	8.10	8.15	7.60
Width of Shoulders	L	m	2.70	2.50	3.00	4.00	2.60
	R	m	3.80	2.00	2.50	3.50	2.60
Rise/Fall +/-		%	0.0 +0.2				
Surface Condition	Cracks	%	1.5	0.7	0.6	0.4	0.8
	Alligator Cracks	%	0.4	0.4	1.5	2.5	4.2
	Potholes	%	0.1	0.2	0.1	0.0	0.1
	Settlement	%	0.1	0.2	0.2	0.5	1.7
	Rutting	%	0.0	2.5	1.2	2.7	0.0

Roughness (IRI)



Pavement

New mm

- ▇ 50 Asphalt - concrete
- ▒ 175 Bituminous roadbase
- ▇ 225 Granular sub-base, CBR >30

Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain

Existing mm

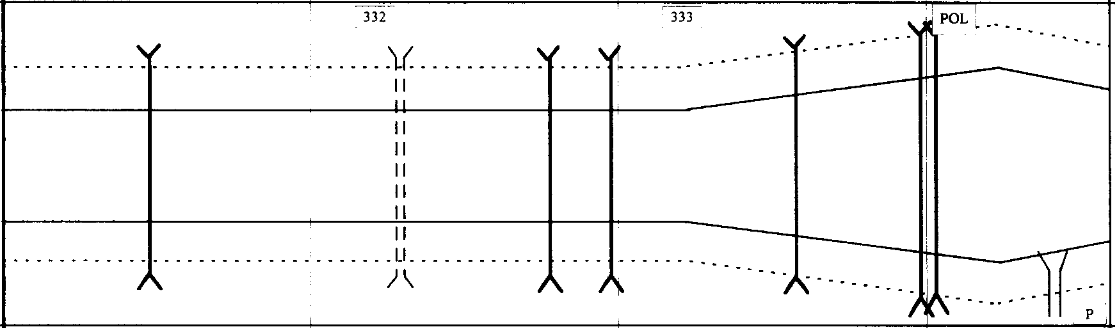
Location

- Culvert km 330+465
- Bridge km 331+293
- Culvert km 331+784
- Culvert km 331+974
- Culvert km 332+591
- Culvert km 332+997
- Culvert km 333+032
- Junction km 333+408

Chainage km

330 +000, 330 +200, 330 +400, 330 +600, 330 +800, 331 +000, 331 +200, 331 +400, 331 +600, 331 +800, 332 +000, 332 +200, 332 +400, 332 +600, 332 +800, 333 +000, 333 +200, 333 +400, 333 +500

Layout



			330+000 – 331+000	331+000 – 332+000	332+000 – 333+000	333+000 – 333+500
Width of Carriageway		m	8.00	8.00	7.40	22.60
Width of Shoulders	L	m	2.70	3.00	3.00	4.00
	R	m	2.80	3.00	3.00	4.00
Rise/Fall +/-		%	+0.2 +0.3	0.0 -0.3	0.0 +0.2	
Roughness (IRI)	< 4.0	m/km				
	> 4.0 - 6.0	m/km	━━━	━━━	━━━	━━━
	> 6.0 - 8.5	m/km				
	> 8.5 - 10.5	m/km				
	> 10.5 - 12.0	m/km				
	> 12.0	m/km				
Surface Condition	Cracks	%	0.6	1.1	0.6	0.5
	Alligator Cracks	%	1.2	4.4	2.4	11.1
	Potholes	%	0.0	0.1	0.1	0.1
	Settlement	%	0.4	1.5	2.2	1.5
	Rutting	%	2.5	3.9	1.7	0.0

Pavement New mm

- ■ 50 Asphalt - concrete
- ▨ 175 Bituminous roadbase
- ■ 225 Granular sub-base, CBR >30

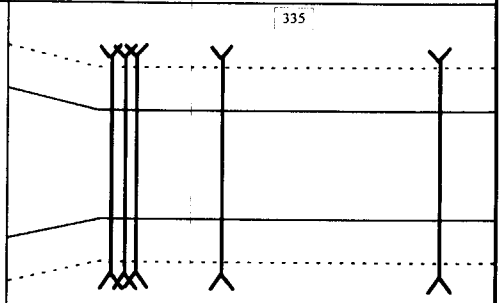
Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain

Existing mm

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

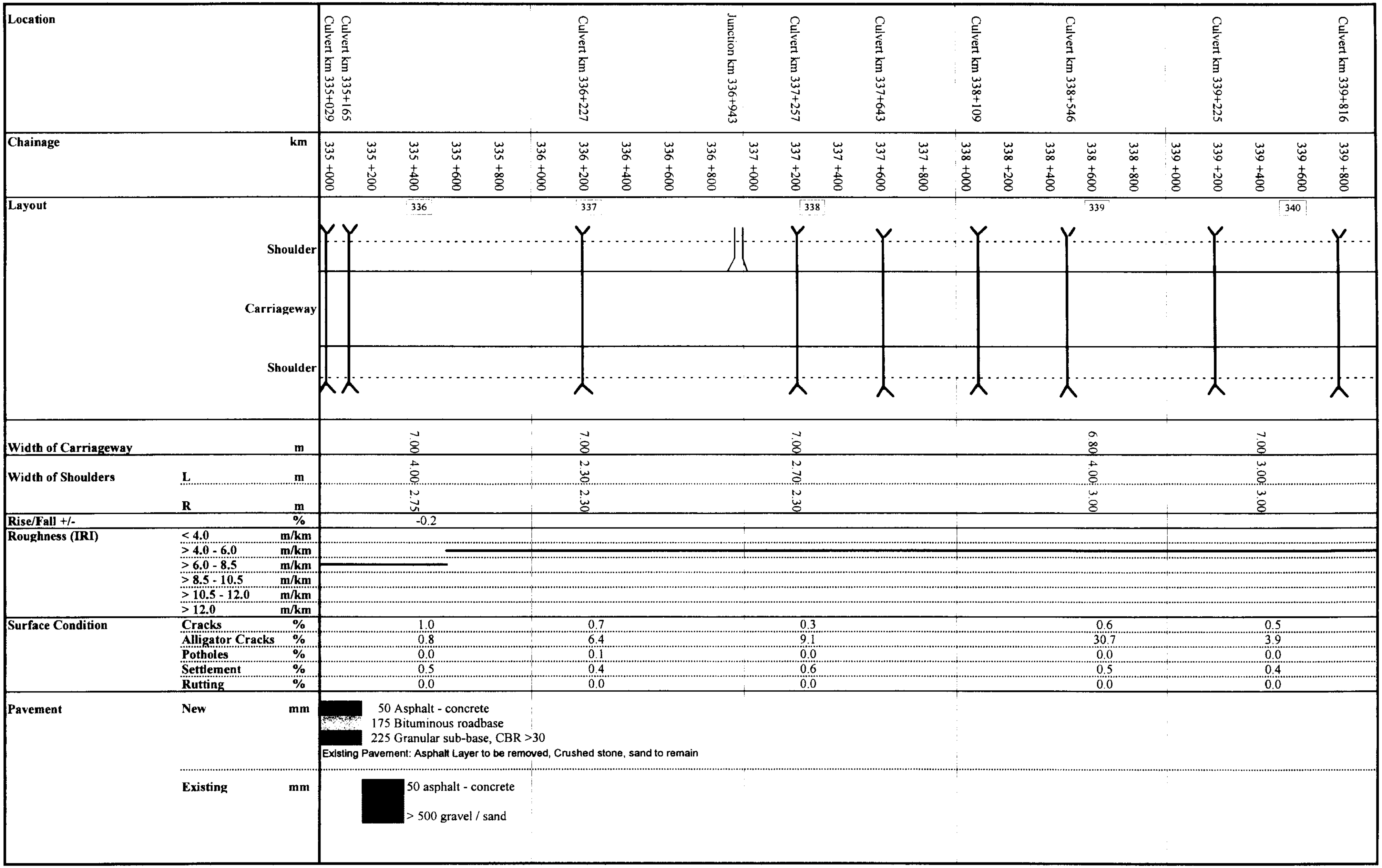
Alyat - Ganja - Georgian Border (M 4/M 1) : Section 9 - M 1, Bypass Ganja km 333+500 to km 369+500

KOCKS INGENIEURE

Location			Culvert km 333+743 / Culvert km 333+798 / Culvert km333+815 / Culvert km 334+180 / Culvert km 334+805
Chainage		km	333 +500 / 333 +600 / 333 +800 / 334 +000 / 334 +200 / 334 +400 / 334 +600 / 334 +800
Layout			335 
Width of Carriageway		m	7.00 / 7.00
Width of Shoulders	L	m	3.00 / 3.00
	R	m	3.00 / 2.50
Rise/Fall +/-		%	+0.2 / -0.3
Roughness (IRI)	< 4.0	m/km	
	> 4.0 - 6.0	m/km	
	> 6.0 - 8.5	m/km	
	> 8.5 - 10.5	m/km	
	> 10.5 - 12.0	m/km	
	> 12.0	m/km	
Surface Condition	Cracks	%	1.1 / 0.7
	Alligator Cracks	%	23.5 / 36.3
	Potholes	%	0.3 / 0.1
	Settlement	%	3.2 / 0.0
	Rutting	%	0.0 / 0.0
Pavement	New	mm	50 Asphalt - concrete 175 Bituminous roadbase 225 Granular sub-base, CBR >30
	Existing	mm	Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

Alyat - Ganja - Georgian Border (M 4/M 1) : Section 9 - M 1, Bypass Ganja km 333+500 to km 369+500



Chainage	335 +400	336 +200	337 +200	338 +600	339 +400
Width of Carriageway (m)	7.00	7.00	7.00	6.80	7.00
Width of Shoulders L (m)	4.00	2.30	2.70	4.00	3.00
Width of Shoulders R (m)	2.75	2.30	2.30	3.00	3.00
Rise/Fall +/- (%)	-0.2				
Surface Condition: Cracks (%)	1.0	0.7	0.3	0.6	0.5
Alligator Cracks (%)	0.8	6.4	9.1	30.7	3.9
Potholes (%)	0.0	0.1	0.0	0.0	0.0
Settlement (%)	0.5	0.4	0.6	0.5	0.4
Rutting (%)	0.0	0.0	0.0	0.0	0.0

Pavement

New (mm)

- 50 Asphalt - concrete
- 175 Bituminous roadbase
- 225 Granular sub-base, CBR >30

Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain

Existing (mm)

- 50 asphalt - concrete
- > 500 gravel / sand

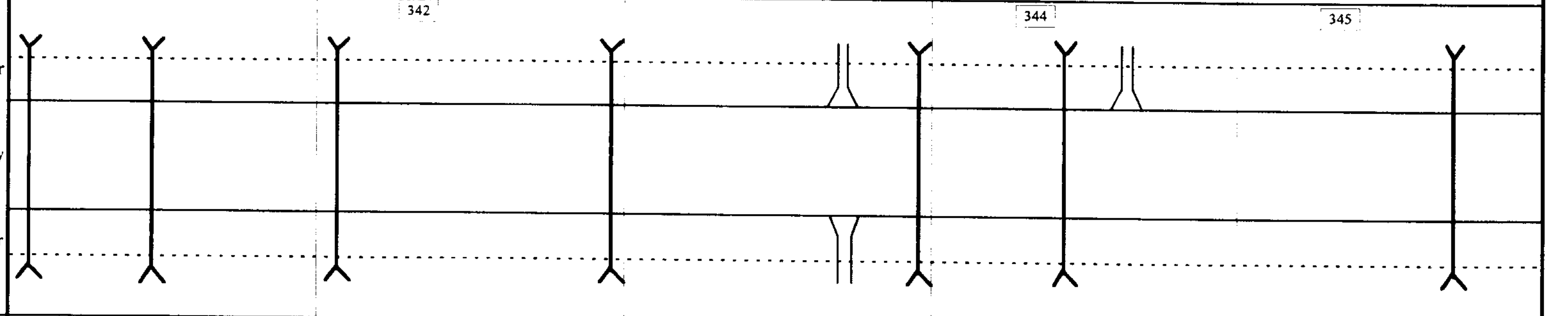
Location

- Culvert km 340+062
- Culvert km 340+467
- Culvert km 341+072
- Culvert km 341+924
- Junction km 342+708
- Culvert km 342+954
- Culvert km 343+421
- Junction km 344+612
- Culvert km 344+712

Chainage km

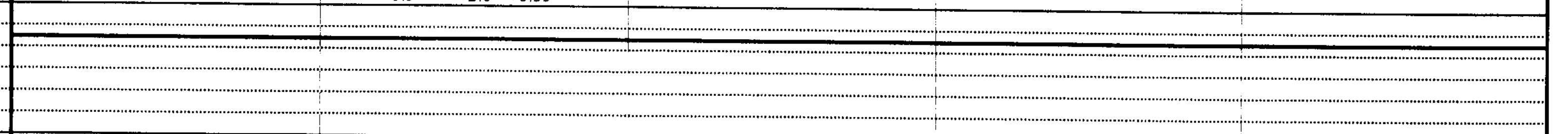
340 +000, 340 +200, 340 +400, 340 +600, 340 +800, 341 +000, 341 +200, 341 +400, 341 +600, 341 +800, 342 +000, 342 +200, 342 +400, 342 +600, 342 +800, 343 +000, 343 +200, 343 +400, 343 +600, 343 +800, 344 +000, 344 +200, 344 +400, 344 +600, 344 +800

Layout



		Unit	340+000	341+000	342+000	343+000	344+000
Width of Carriageway		m	7.00	8.00		7.00	7.00
Width of Shoulders	L	m	3.00	3.00		2.00	2.50
	R	m	3.00	3.00		2.30	2.50
Rise/Fall +/-		%	-0.2	-1.5 +2.0 +0.35			
Surface Condition	Cracks	%		0.4		0.1	0.4
	Alligator Cracks	%		1.9		9.0	1.4
	Potholes	%		0.1		0.1	0.4
	Settlement	%		0.8		0.0	1.6
	Rutting	%		0.0		0.0	0.0

Roughness (IRI)



Pavement

New mm

50 Asphalt - concrete
175 Bituminous roadbase
225 Granular sub-base, CBR >30
Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain

Existing mm

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

Alyat - Ganja - Georgian Border (M 4/M 1) : Section 9 - M 1, Bypass Ganja km 333+500 to km 369+500

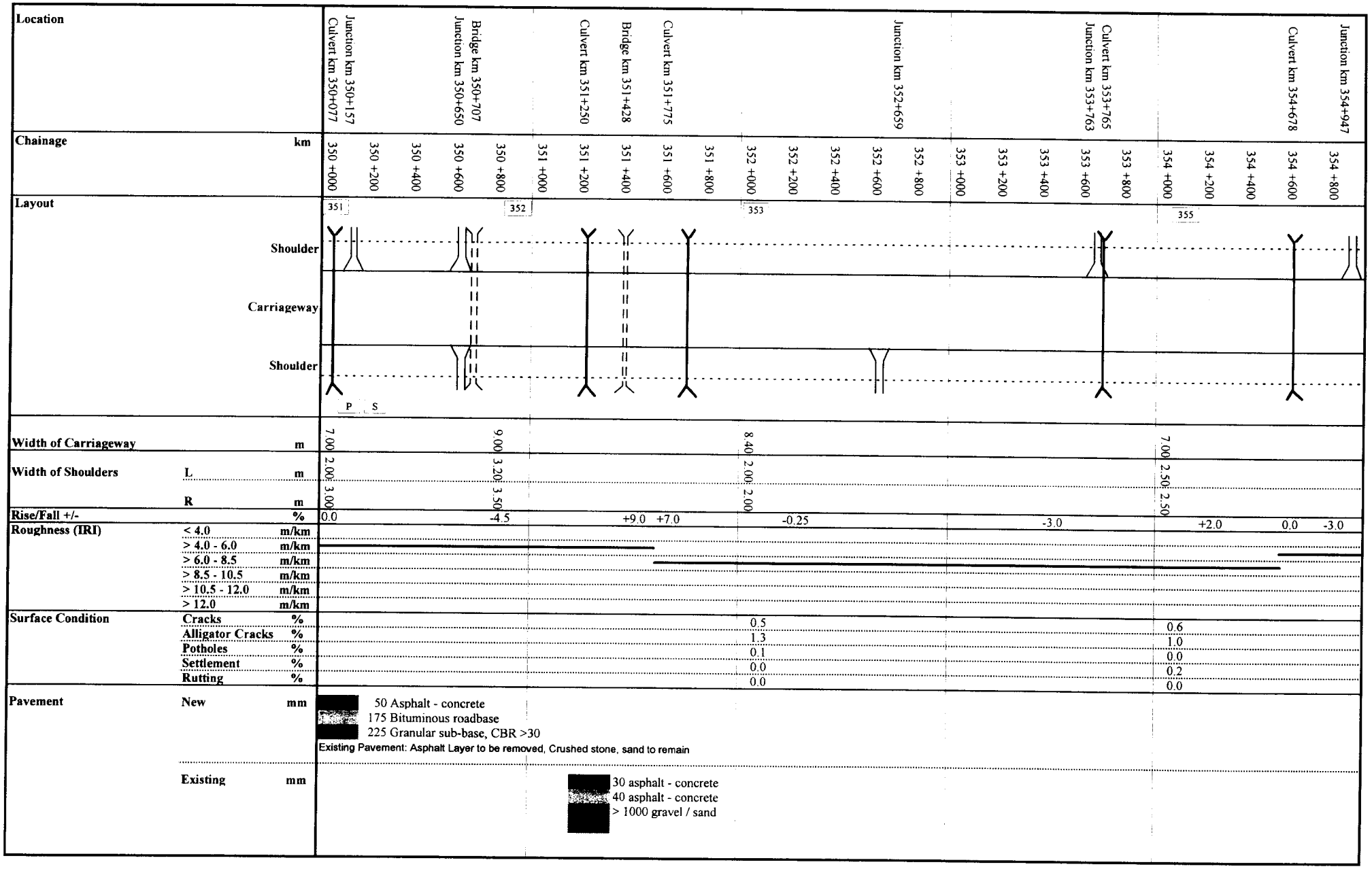
KOCKS INGENIEURE

Location			Culvert km 345+422 / Culvert km 345+618 / Junction km 345+870 / Culvert km 346+968 / Junction km 349+152 / Culvert km 349+544
Chainage		km	345 +000 / 345 +200 / 345 +400 / 345 +600 / 345 +800 / 346 +000 / 346 +200 / 346 +400 / 346 +600 / 346 +800 / 347 +000 / 347 +200 / 347 +400 / 347 +600 / 347 +800 / 348 +000 / 348 +200 / 348 +400 / 348 +600 / 348 +800 / 349 +000 / 349 +200 / 349 +400 / 349 +600 / 349 +800
Layout			346 / 347 / 348 / 349
	Shoulder		
	Carriageway		
	Shoulder		
Width of Carriageway		m	6.80 / 6.60 / 6.90 / 6.50
Width of Shoulders	L	m	3.00 / 3.30 / 3.30 / 3.50
	R	m	2.00 / 2.20 / 2.20 / 3.50
Rise/Fall +/-		%	+0.35 / +0.2 / -0.1 / -0.2
Roughness (IRI)	< 4.0	m/km	
	> 4.0 - 6.0	m/km	
	> 6.0 - 8.5	m/km	
	> 8.5 - 10.5	m/km	
	> 10.5 - 12.0	m/km	
	> 12.0	m/km	
Surface Condition	**Cracks**	%	0.6 / 0.4 / 0.8 / 1.5 / 0.5
	Alligator Cracks	%	1.9 / 0.9 / 1.3 / 2.7 / 0.4
	Potholes	%	0.0 / 0.1 / 0.0 / 0.1 / 0.1
	Settlement	%	1.9 / 0.8 / 0.0 / 0.0 / 0.0
	Rutting	%	0.0 / 0.0 / 0.0 / 0.0 / 0.0
Pavement	**New**	mm	50 Asphalt - concrete 175 Bituminous roadbase 225 Granular sub-base, CBR >30 Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain
	Existing	mm	

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

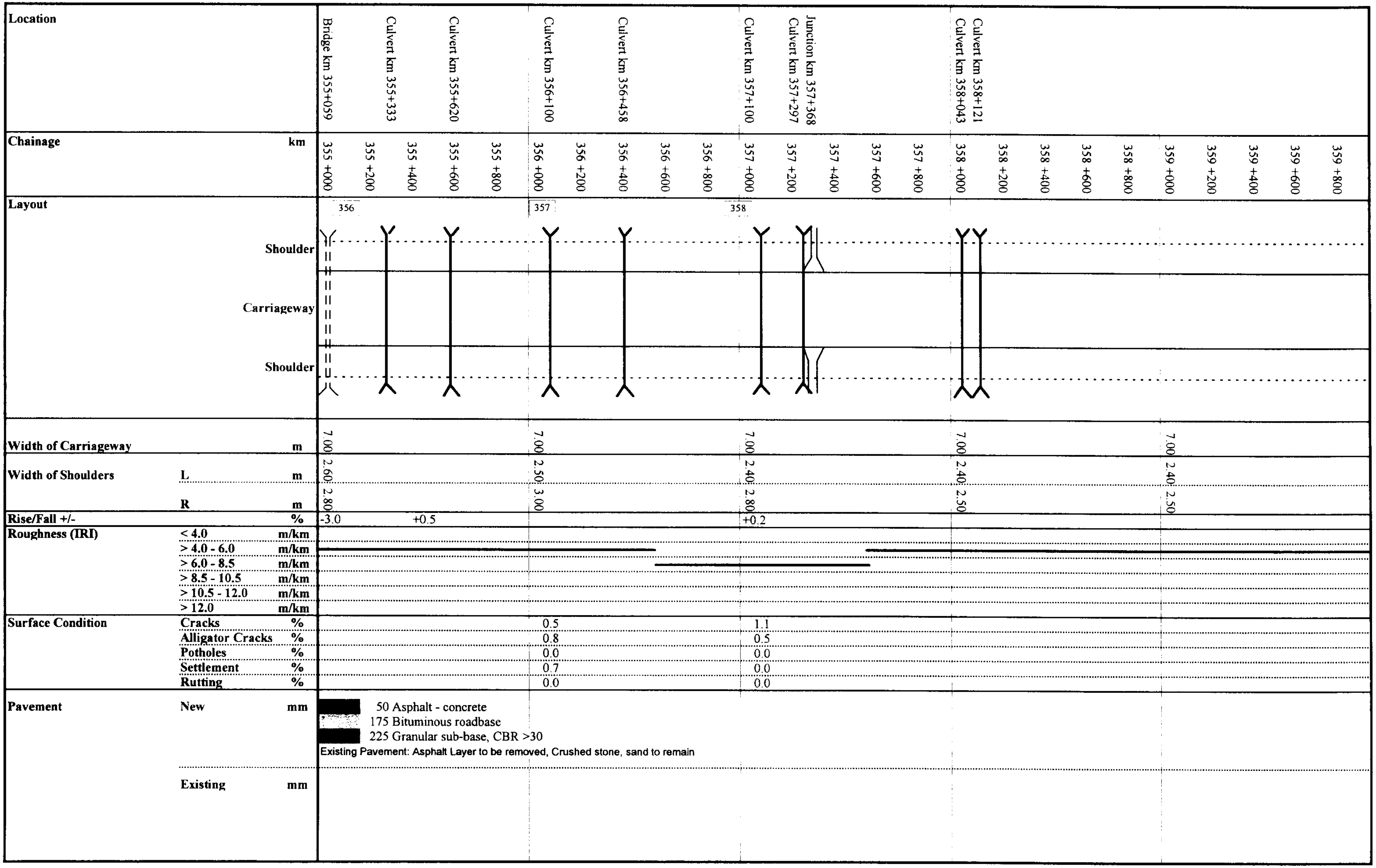
Alyat - Ganja - Georgian Border (M 4/M 1) : Section 9 - M 1, Bypass Ganja km 333+500 to km 369+500

KOCKS INGENIEURE



TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

Alyat - Ganja - Georgian Border (M 4/M 1) : Section 9 - M 1, Bypass Ganja km 333+500 to km 369+500



Chainage (km)	Location	Width of Carriageway (m)	Width of Shoulders L (m)	Width of Shoulders R (m)	Rise/Fall +/- (%)	Cracks (%)	Alligator Cracks (%)	Potholes (%)	Settlement (%)	Rutting (%)
355 +000	Bridge km 355+059	7.00	2.60	2.80	-3.0					
355 +200	Culvert km 355+333									
355 +400					+0.5					
355 +600	Culvert km 355+620									
355 +800										
356 +000	Culvert km 356+100	7.00	2.50	3.00		0.5	0.8	0.0	0.7	0.0
356 +200										
356 +400	Culvert km 356+458									
356 +600										
356 +800										
357 +000	Culvert km 357+100	7.00	2.40	2.80	+0.2	1.1	0.5	0.0	0.0	0.0
357 +200	Junction km 357+368 Culvert km 357+297									
357 +400										
357 +600										
357 +800										
358 +000	Culvert km 358+121 Culvert km 358+043	7.00	2.40	2.50						
358 +200										
358 +400										
358 +600										
358 +800										
359 +000		7.00	2.40	2.50						
359 +200										
359 +400										
359 +600										
359 +800										

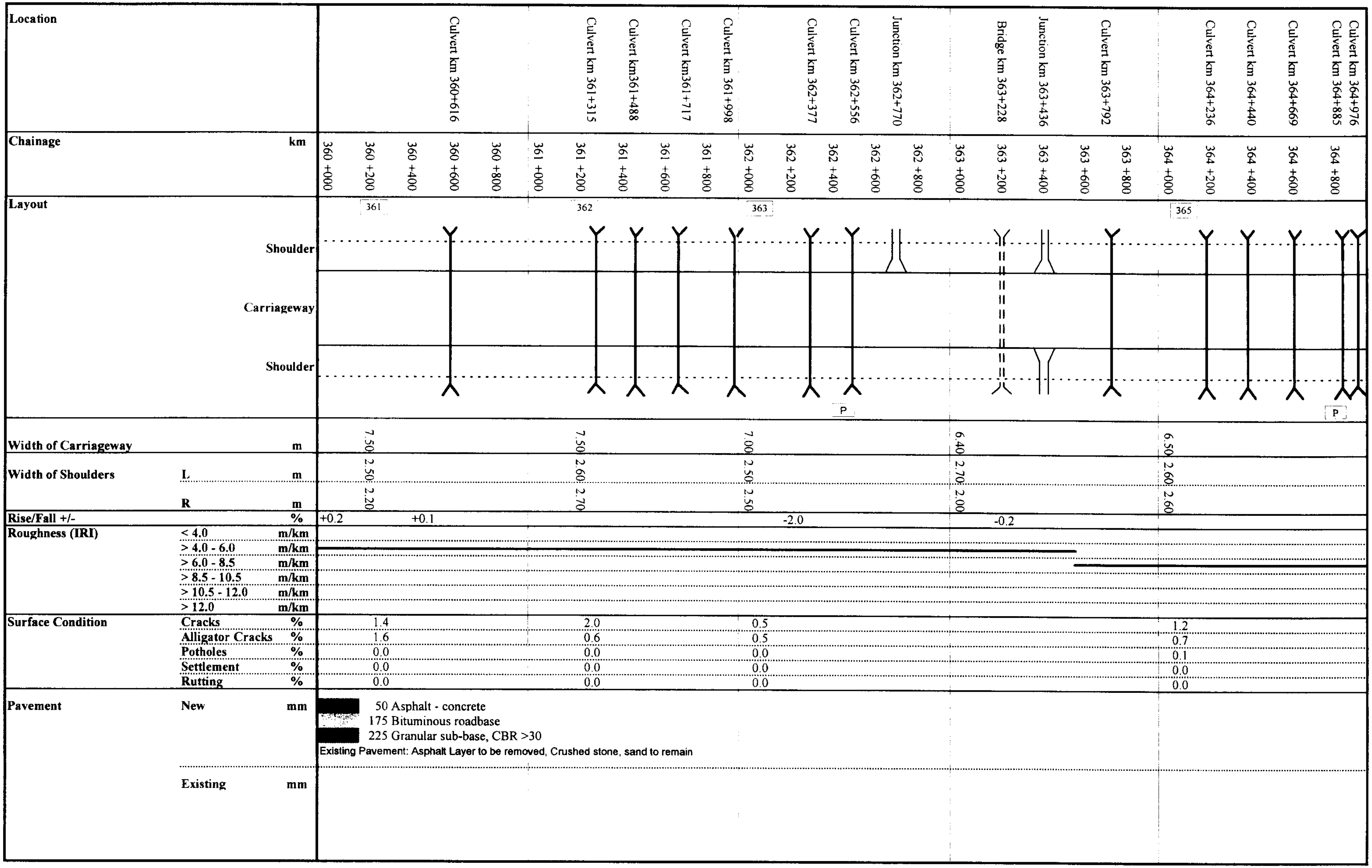
Pavement — New (mm):

- ■ 50 Asphalt - concrete
- ▨ 175 Bituminous roadbase
- ■ 225 Granular sub-base, CBR >30

Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

Alyat - Ganja - Georgian Border (M 4/M 1) : Section 9 - M 1, Bypass Ganja km 333+500 to km 369+500



TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

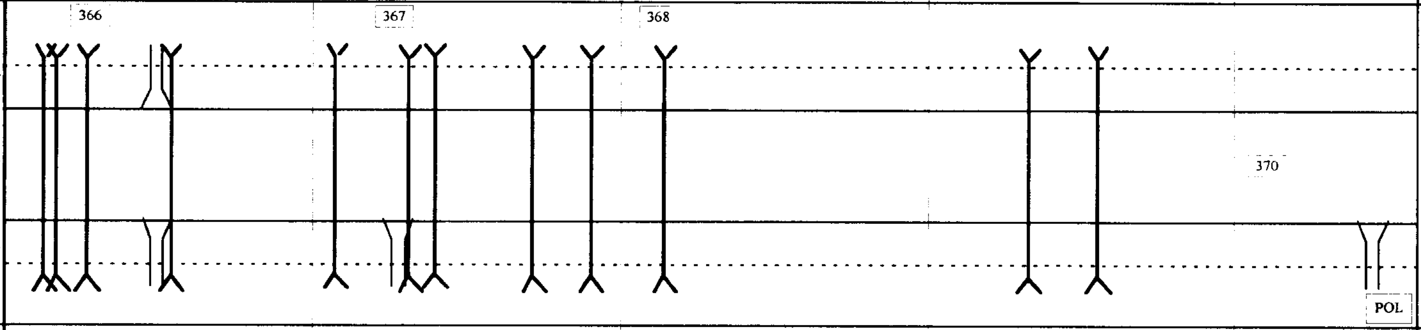
Alyat - Ganja - Georgian Border (M 4/M 1) : Section 9 - M 1, Bypass Ganja km 333+500 to km 369+500

Location

- Culvert km 365+123
- Culvert km 365+172
- Culvert km 365+263
- Junction km365+491
- Culvert km 365+533
- Culvert km 366+088
- Junction km 366+271
- Culvert km 366+300
- Culvert km 366+400
- Culvert km 366+702
- Culvert km 366+885
- Culvert km 367+164
- Culvert km 368+325
- Culvert km 368+562
- Junction km 369+421

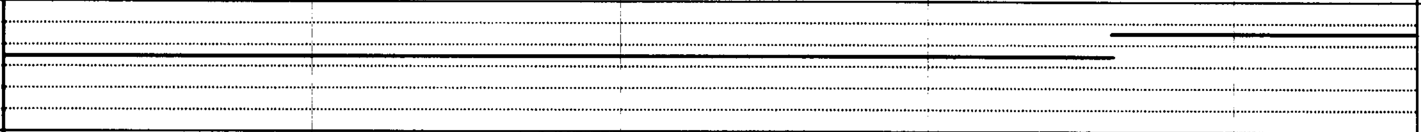
Chainage km: 365 +000, 365 +200, 365 +400, 365 +600, 365 +800, 366 +000, 366 +200, 366 +400, 366 +600, 366 +800, 367 +000, 367 +200, 367 +400, 367 +600, 367 +800, 368 +000, 368 +200, 368 +400, 368 +600, 368 +800, 369 +000, 369 +200, 369 +400, 369 +500

Layout



Chainage	Width of Carriageway (m)	Width of Shoulders L (m)	Width of Shoulders R (m)	Rise/Fall +/- (%)	Cracks (%)	Alligator Cracks (%)	Potholes (%)	Settlement (%)	Rutting (%)
365 +000	7.00	2.50	2.80	-0.2	1.1	1.1	0.1	0.0	0.0
366 +000	6.50	2.60	2.60		1.3	0.3	0.0	0.0	0.0
367 +000	7.00	2.50	2.50	-2.0	1.0	2.0	0.3	0.0	0.0
368 +000	7.20	2.60	2.40		1.0	0.2	0.0	0.8	0.0
369 +000	7.50	2.30	2.30		1.7	4.0	0.1	0.6	0.0

Roughness (IRI)



Pavement

New (mm):

■	50 Asphalt - concrete
▨	175 Bituminous roadbase
■	225 Granular sub-base, CBR >30

Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain

Existing (mm):

■	50 asphalt - concrete
▨	30 asphalt - concrete
■	300 gravel / sand

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

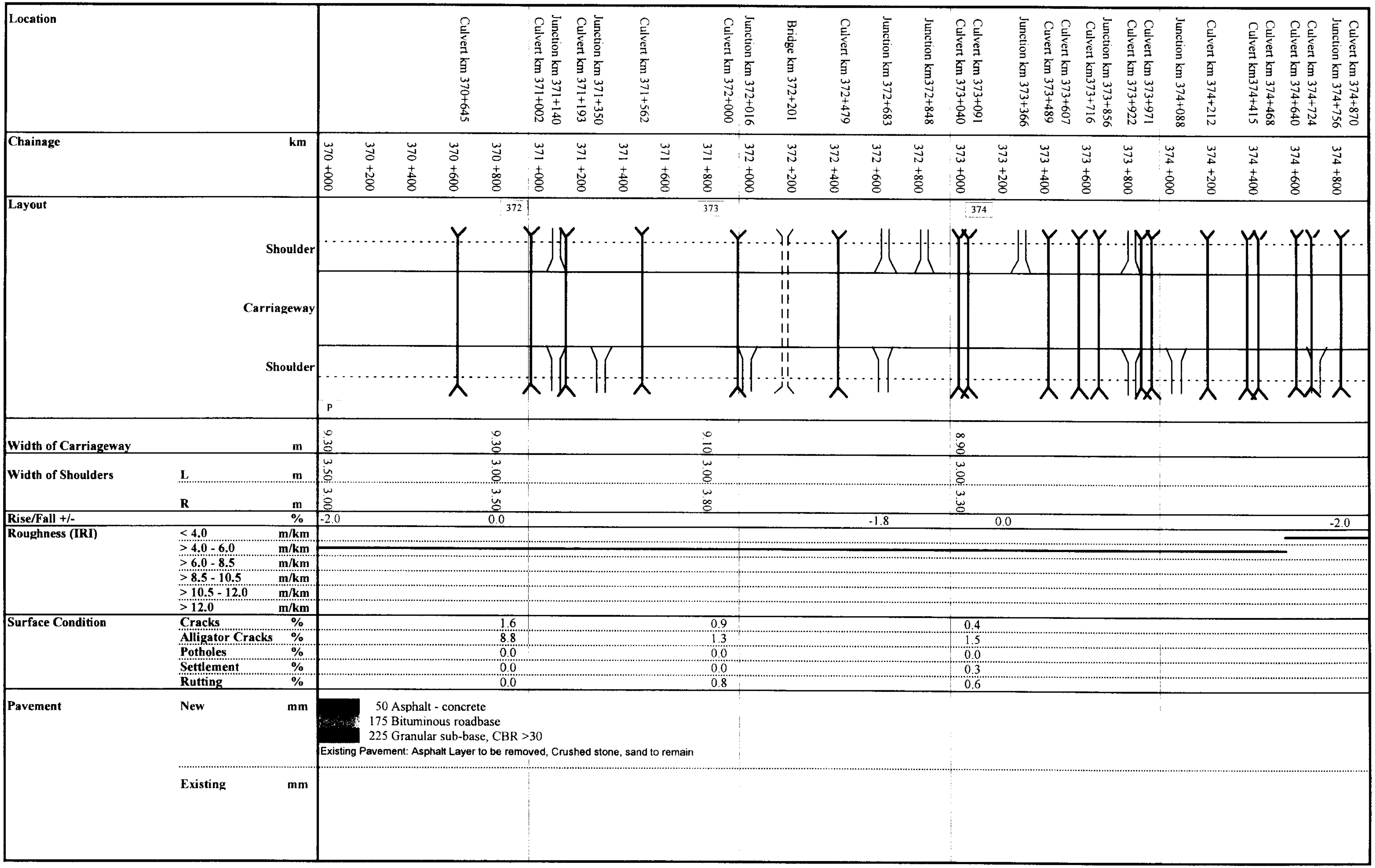
Alyat - Ganja - Georgian Border (M 4/M 1) : Section 10 - M 1, Ganja - Tovuz km 369+500 to km 431+000

KOCKS
INGENIEURE

Location				Junction km 369+536	Culvert km 369+588 / Bridge km 369+804
Chainage		km		369 +500	369 +600 / 369 +800
Layout					371
		Shoulder			
		Carriageway			
		Shoulder			
Width of Carriageway		m			9.30
Width of Shoulders	L	m			3.50
	R	m			3.00
Rise/Fall +/-		%			-2.0
Roughness (IRI)	< 4.0	m/km			
	> 4.0 - 6.0	m/km			
	> 6.0 - 8.5	m/km			
	> 8.5 - 10.5	m/km			
	> 10.5 - 12.0	m/km			
	> 12.0	m/km			
Surface Condition	Cracks	%		1.6	3.0
	Alligator Cracks	%		3.7	22.2
	Potholes	%		0.1	0.0
	Settlement	%		0.6	0.9
	Rutting	%		0.0	1.3
Pavement	New	mm	50 Asphalt - concrete 175 Bituminous roadbase 225 Granular sub-base, CBR >30		
	Existing	mm	Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain		

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

Alyat - Ganja - Georgian Border (M 4/M 1) : Section 10 - M 1, Ganja - Tovuz km 369+500 to km 431+000



50 Asphalt - concrete
175 Bituminous roadbase
225 Granular sub-base, CBR >30
Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

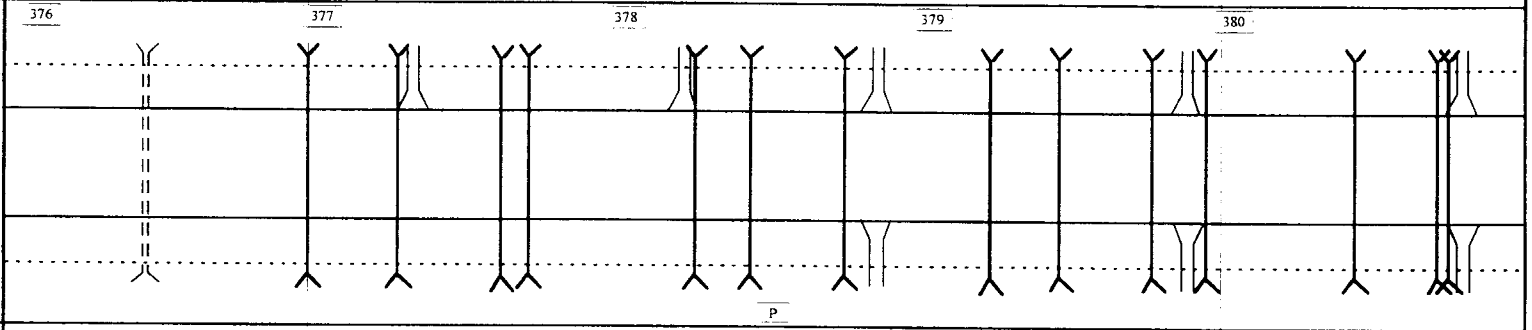
Alyat - Ganja - Georgian Border (M 4/M 1) : Section 10 - M 1, Ganja - Tovuz km 369+500 to km 431+000

KOCKS
INGENIEURE

Location

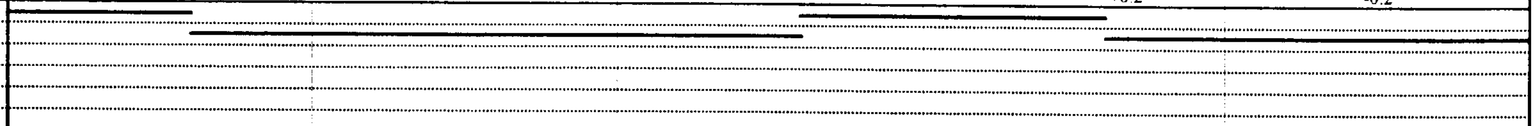
- Bridge km 375+461
- Culvert km 376+000
- Culvert km 376+288
- Junction km 376+368
- Culvert km 376+629
- Culvert km 376+713
- Junction km 377+233
- Culvert km 377+246
- Culvert km 377+463
- Culvert km 377+775
- Junction km 377+864
- Culvert km 378+228
- Culvert km 378+446
- Culvert km 378+793
- Junction km 378+880
- Culvert km 378+929
- Culvert km 379+430
- Culvert km 379+727
- Culvert km 379+780
- Junction km 379+790

Layout



Chainage km	Width of Carriageway m	Width of Shoulders L m	Width of Shoulders R m	Rise/Fall +/- %	Cracks %	Alligator Cracks %	Potholes %	Settlement %	Rutting %
375 +000	9.00	3.00	3.00	-2.0	0.8	1.8	0.0	0.4	0.3
375 +200									
375 +400				+3.0/+2.0					
375 +600									
375 +800				+0.2/-1.5/+2.0					
376 +000	9.20	3.00	3..5		0.6	1.6	0.0	0.9	0.0
376 +200									
376 +400									
376 +600									
376 +800									
377 +000	9.20	3.00	3.00		0.7	6.5	0.0	0.7	0.0
377 +200									
377 +400									
377 +600									
377 +800									
378 +000	8.80	2.30	3.50		0.6	2.0	0.2	0.8	0.0
378 +200									
378 +400									
378 +600				+0.2					
378 +800									
379 +000	9.10	4.00	3.00		0.3	3.0	0.0	1.2	0.0
379 +200									
379 +400				-0.2					
379 +600									
379 +800									

Roughness (IRI)



Pavement

New mm
- 50 Asphalt - concrete
- 175 Bituminous roadbase
- 225 Granular sub-base, CBR >30

Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain

Existing mm
- 50 asphalt - concrete
- 30 asphalt - concrete
- 300 gravel / sand

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

Alyat - Ganja - Georgian Border (M 4/M 1) : Section 10 - M 1, Ganja - Tovuz km 369+500 to km 431+000

KOCKS INGENIEURE

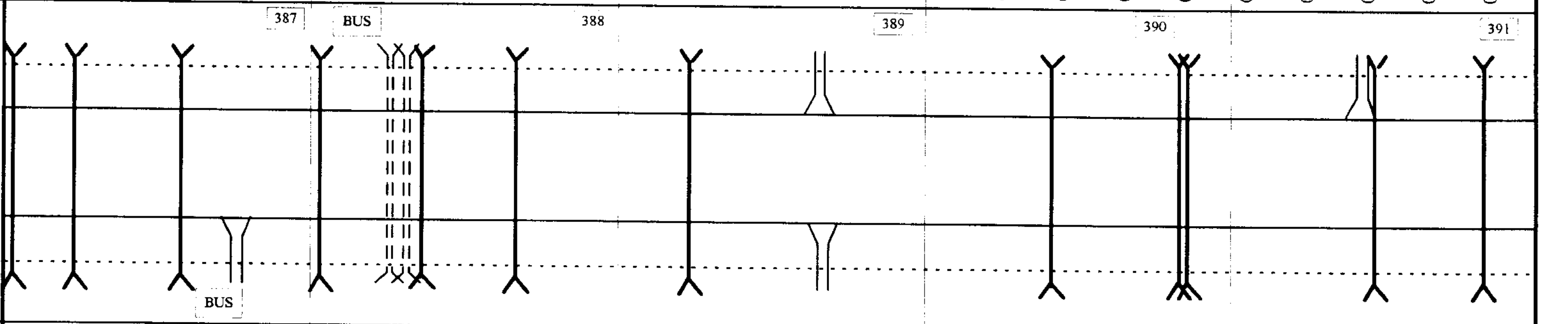
Location			Junction km 380+400 · Culvert km 380+410 · Culvert km 381+005 · Junction km 382+090 · Culvert km 382+098 · Junction km 382+390 · Bridge km 382+690 · Culvert t km 382+801 · Culvert km 382+991 · Culvert km 383+575 · Junction km 384+113 · Culvert km 384+118 · Culvert km 384+498 · Culvert km 384+613
Chainage		km	380 +000 · 380 +200 · 380 +400 · 380 +600 · 380 +800 · 381 +000 · 381 +200 · 381 +400 · 381 +600 · 381 +800 · 382 +000 · 382 +200 · 382 +400 · 382 +600 · 382 +800 · 383 +000 · 383 +200 · 383 +400 · 383 +600 · 383 +800 · 384 +000 · 384 +200 · 384 +400 · 384 +600 · 384 +800
Layout			381 · S · 383 · S · P · BUS · 384 · 385 · 386 · Shoulder · Carriageway · Shoulder · S · BUS · BUS
Width of Carriageway		m	9.00 · 9.00 · 9.00 · 9.00 · 9.00
Width of Shoulders	**L**	m	3.00 · 3.00 · 3.50 · 3.00 · 3.00
	R	m	3.00 · 3.00 · 2.75 · 2.70 · 2.80
Rise/Fall +/-		%	+0.2 · -0.4 · -3.0 · +0.6 · -4.0 · +5.0 · 0.0 · -2.0
Roughness (IRI)	**< 4.0**	m/km	
	> 4.0 - 6.0	m/km	
	> 6.0 - 8.5	m/km	
	> 8.5 - 10.5	m/km	
	> 10.5 - 12.0	m/km	
	> 12.0	m/km	
Surface Condition	**Cracks**	%	0.2 · 0.2 · 0.3 · 0.4
	Alligator Cracks	%	1.5 · 1.6 · 1.8 · 2.9
	Potholes	%	0.0 · 0.0 · 0.0 · 0.1
	Settlement	%	0.2 · 1.9 · 0.6 · 1.0
	Rutting	%	0.0 · 0.0 · 1.3 · 1.6
Pavement	**New**	mm	50 Asphalt - concrete 175 Bituminous roadbase 225 Granular sub-base, CBR >30 Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain
	Existing	mm	

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Alyat - Ganja - Georgian Border (M 4/M 1) : Section 10 - M 1, Ganja - Tovuz km 369+500 to km 431+000

KOCKS
INGENIEURE

Chainage (km)	Location
385 +000	Culvert km 385+020
385 +200	Culvert km 385+214
385 +400	
385 +600	Culvert km 385+585
	Junction km 385+785
385 +800	
386 +000	Culvert km 386+036
386 +200	Bridge km 386+269 Bridge km 386+312
386 +400	Culvert km 386+357
386 +600	Culvert km 386+674
386 +800	
387 +000	
387 +200	Culvert km 387+222
387 +400	
387 +600	Junction km 387+654
387 +800	
388 +000	
388 +200	
388 +400	Culvert km 388+402
388 +600	
388 +800	Culvert km 388+829 Culvert km 388+835
389 +000	
389 +200	
389 +400	Junction km 389+426 Culvert km 389+452
389 +600	
389 +800	Culvert km 389+811

Layout



			385 +000	385 +800	386 +800	387 +600	388 +600	389 +800
Width of Carriageway		m		9.20	9.00		8.80	8.80
Width of Shoulders	L	m		3.00	3.00		3.00	3.00
	R	m		2.30	2.00		2.50	2.00
Rise/Fall +/-		%	-2.0/0.0 +3.0				+0.2	
Roughness (IRI)	< 4.0	m/km						
	> 4.0 - 6.0	m/km						
	> 6.0 - 8.5	m/km						
	> 8.5 - 10.5	m/km						
	> 10.5 - 12.0	m/km						
	> 12.0	m/km						
Surface Condition	Cracks	%		0.6	0.6	0.3	0.4	0.2
	Alligator Cracks	%		3.8	5.3	4.0	0.6	0.3
	Potholes	%		0.1	0.1	0.0	0.0	0.0
	Settlement	%		1.0	3.6	0.3	2.3	0.9
	Rutting	%		2.3	1.7	0.0	1.0	0.4

Pavement

New mm

■ 50 Asphalt - concrete
▨ 175 Bituminous roadbase
■ 225 Granular sub-base, CBR >30

Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain

Existing mm

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

KOCKS
INGENIEURE

Alyat - Ganja - Georgian Border (M 4/M 1) : Section 10 - M 1, Ganja - Tovuz km 369+500 to km 431+000

Location

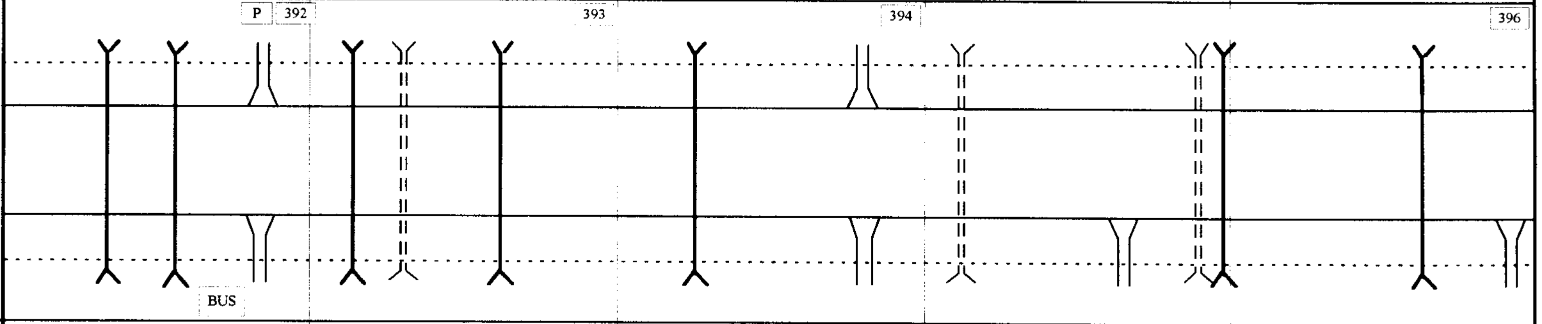
- Culvert km 390+355
- Culvert km 390+573
- Junction km 390+814
- Culvert km 391+134
- Bridge km 391+293
- Culvert km 391+604
- Culvert km 392+248
- Junction km 392+800
- Bridge km 393+132
- Junction km 393+639
- Bridge km 393+895
- Culvert km 393+937
- Culvert km 394+626
- Junction km 394+930

Chainage km

390 +000, 390 +200, 390 +400, 390 +600, 390 +800, 391 +000, 391 +200, 391 +400, 391 +600, 391 +800, 392 +000, 392 +200, 392 +400, 392 +600, 392 +800, 393 +000, 393 +200, 393 +400, 393 +600, 393 +800, 394 +000, 394 +200, 394 +400, 394 +600, 394 +800

Layout

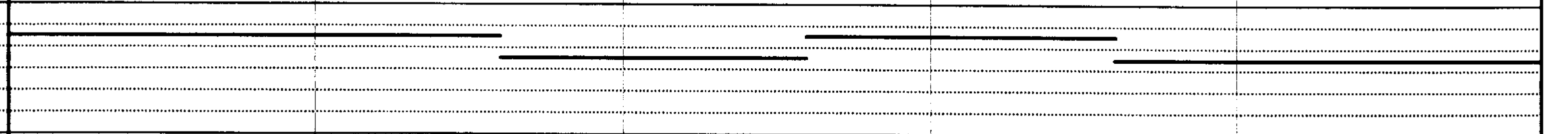
Shoulder
Carriageway
Shoulder



			390 +000	390 +800	391 +800	392 +800	393 +800	394 +800
Width of Carriageway		m	9.00	10.00	9.00	9.00	8.60	9.00
Width of Shoulders	L	m	3.00	4.00	2.70	2.75	3.00	3.20
	R	m	3.00	6.20	2.70	3.00	3.00	3.70
Rise/Fall +/-		%	+0.2		+0.1			

Roughness (IRI)

- < 4.0 m/km
- > 4.0 - 6.0 m/km
- > 6.0 - 8.5 m/km
- > 8.5 - 10.5 m/km
- > 10.5 - 12.0 m/km
- > 12.0 m/km



Surface Condition		km 390	km 391	km 392	km 393	km 394
Cracks	%	0.2	0.2	0.3	0.4	1.6
Alligator Cracks	%	4.8	3.1	3.3	0.5	0.4
Potholes	%	0.2	0.1	0.0	0.1	0.0
Settlement	%	2.7	1.0	0.6	0.4	0.8
Rutting	%	0.0	0.0	0.0	0.0	0.0

Pavement

New mm

50 Asphalt - concrete
175 Bituminous roadbase
225 Granular sub-base, CBR >30
Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain

Existing mm

30 asphalt - concrete
50 asphalt - concrete
100 gravel / sand

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

Alyat - Ganja - Georgian Border (M 4/M 1) : Section 10 - M 1, Ganja - Tovuz km 369+500 to km 431+000

KOCKS INGENIEURE

Location			Culvert km 395+246	Culvert km 395+947	Culvert km 396+158	Bridge km 396+418	Culvert km 396+754	Junction km 396+815	Culvert km 397+177	Culvert km 397+436	Junction km 397+443	Culvert km 397+518	Junction km 397+849	Culvert km 398+117	Culvert km 398+546	Culvert km 398+837	Culvert km 399+151	Junction km 399+879	Culvert km 399+901	Junction km 399+929
Chainage		km	395 +000	395 +200	395 +400	395 +600	395 +800	396 +000	396 +200	396 +400	396 +600	396 +800	397 +000	397 +200	397 +400	397 +600	397 +800	398 +000	398 +200	398 +400	398 +600	398 +800	399 +000	399 +200	399 +400	399 +600	399 +800
Layout				397					398 R														400				
	Shoulder																										
	Carriageway																										
	Shoulder				P								S														
Width of Carriageway		m	9.00	9.00				9.00					9.00										10.00				
Width of Shoulders	L	m	3.20	3.80				3.20					3.00										3.00				
	R	m	3.70	3.70				3.50					3.00										3.00				
Rise/Fall +/-		%	-0.2	0.0					+2.0		0.0			+3.0													
Roughness (IRI)	< 4.0	m/km																									
	> 4.0 - 6.0	m/km																									
	> 6.0 - 8.5	m/km																									
	> 8.5 - 10.5	m/km																									
	> 10.5 - 12.0	m/km																									
	> 12.0	m/km																									
Surface Condition	Cracks	%		0.4				0.5															0.8				
	Alligator Cracks	%		1.3				1.0															0.7				
	Potholes	%		0.0				0.1															0.0				
	Settlement	%		0.3				0.4															0.6				
	Rutting	%		0.0				0.0															0.0				
Pavement	New	mm	50 Asphalt - concrete 175 Bituminous roadbase 225 Granular sub-base, CBR >30																								
	Existing	mm	Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain																								

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

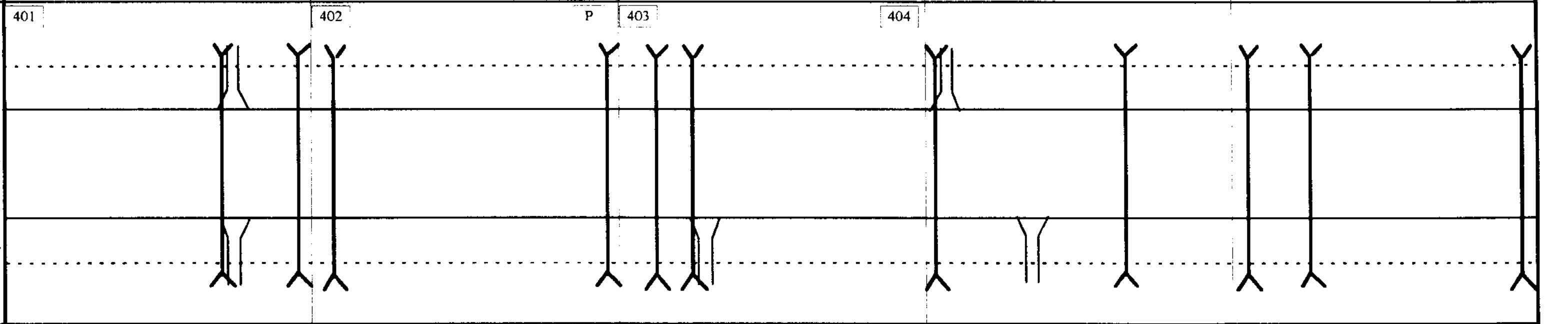
KOCKS
INGENIEURE

Alyat - Ganja - Georgian Border (M 4/M 1) : Section 10 - M 1, Ganja - Tovuz km 369+500 to km 431+000

Location

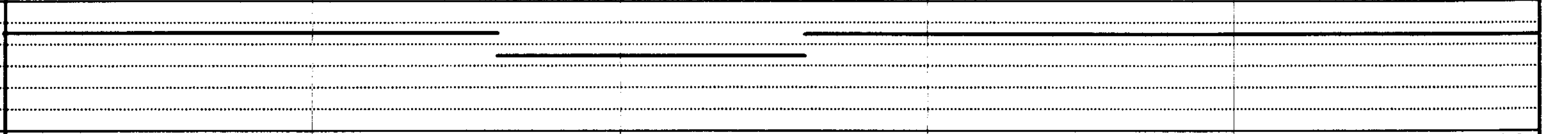
- Junction km 400+725
- Culvert km 400+722
- Culvert km 400+926
- Culvert km 401+086
- Culvert km 401+963
- Junction km 402+250
- Culvert km 402+232
- Culvert km 402+135
- Junction km 403+057
- Culvert km 403+057
- Junction km 403+379
- Culvert km 403+636
- Culvert km 404+069
- Culvert km 403+271
- Culvert km 404+854

Layout



Chainage km	Width of Carriageway m	Width of Shoulders L m	Width of Shoulders R m	Rise/Fall +/- %	Cracks %	Alligator Cracks %	Potholes %	Settlement %	Rutting %
400 +000	9.00	3.00	3.00	+0.3	0.4	0.3	0.0	0.0	0.0
400 +200									
400 +400									
400 +600									
400 +800									
401 +000	9.00	3.00	3.00	-0.2	0.4	1.3	0.1	0.0	0.0
401 +200									
401 +400									
401 +600									
401 +800									
402 +000	9.00	2.70	2.70		0.5	0.5	0.1	0.4	0.3
402 +200									
402 +400									
402 +600									
402 +800	8.80	3.50	3.50	-0.1					
403 +000									
403 +200									
403 +400									
403 +600									
403 +800	9.00	4.00	2.80		0.5	1.3	0.1	0.4	0.0
404 +000									
404 +200									
404 +400									
404 +600									
404 +800	9.00	3.00	2.80		0.6	5.2	0.3	0.5	0.0

Roughness (IRI)



Pavement

New mm

■ 50 Asphalt - concrete
▨ 175 Bituminous roadbase
■ 225 Granular sub-base, CBR >30

Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain

Existing mm

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

Alyat - Ganja - Georgian Border (M 4/M 1) : Section 10 - M 1, Ganja - Tovuz km 369+500 to km 431+000

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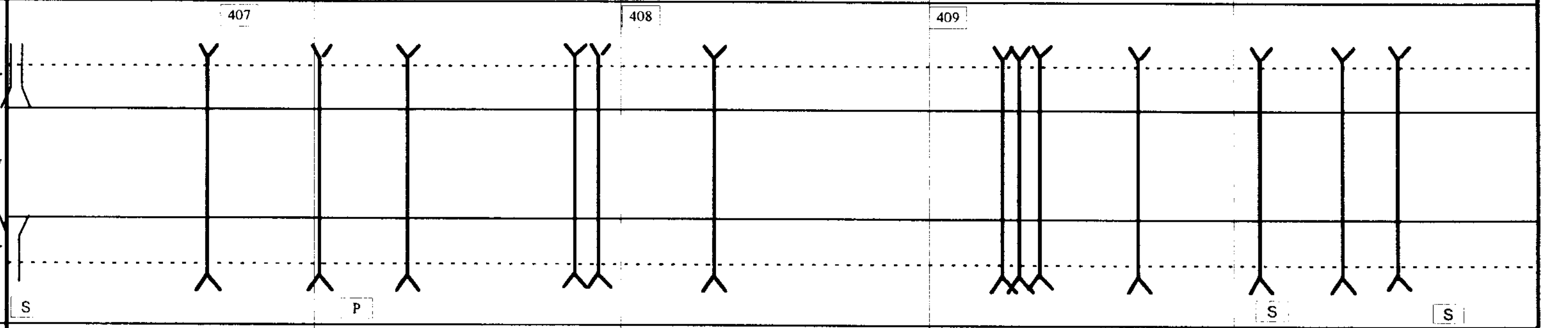
INGENIEURE

Location

- Junction km 405+000
- Culvert km 405+644
- Culvert km 406+023
- Culvert km 406+309
- Culvert km 406+833
- Culvert km 406+913
- Culvert km 407+319
- Culvert km 408+265
- Culvert km 408+299
- Culvert km 408+367
- Culvert km 408+681
- Culvert km 409+093
- Culvert km 409+365
- Culvert km 409+570

Chainage km: 405 +000, 405 +200, 405 +400, 405 +600, 405 +800, 406 +000, 406 +200, 406 +400, 406 +600, 406 +800, 407 +000, 407 +200, 407 +400, 407 +600, 407 +800, 408 +000, 408 +200, 408 +400, 408 +600, 408 +800, 409 +000, 409 +200, 409 +400, 409 +600, 409 +800

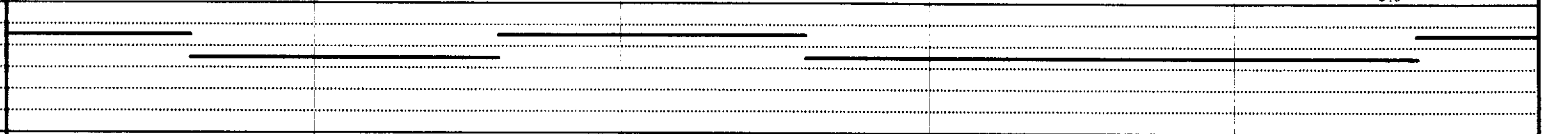
Layout



			405 +000	405 +600	406 +000	407 +000	408 +000	409 +000
Width of Carriageway		m		9.00		9.00	8.00	8.60
Width of Shoulders	L	m		3.00		3.00	3.40	3.70
	R	m		3.00		3.00	3.00	3.80
Surface Condition	**Cracks**	%		0.3		0.8	0.8	1.0
	Alligator Cracks	%		3.0		11.5	5.8	2.8
	Potholes	%		0.1		0.3	0.3	0.1
	Settlement	%		0.0		0.6	0.3	0.7
	Rutting	%		0.0		0.0	1.1	1.5

Rise/Fall +/- %: -0.1, -3.0, +4.0, 0.0, -3.0, +5.0, 0.0, -3.0

Roughness (IRI)



Pavement

New mm

- ■ 50 Asphalt - concrete
- ▨ 175 Bituminous roadbase
- ■ 225 Granular sub-base, CBR >30

Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain

Overlay 60 mm

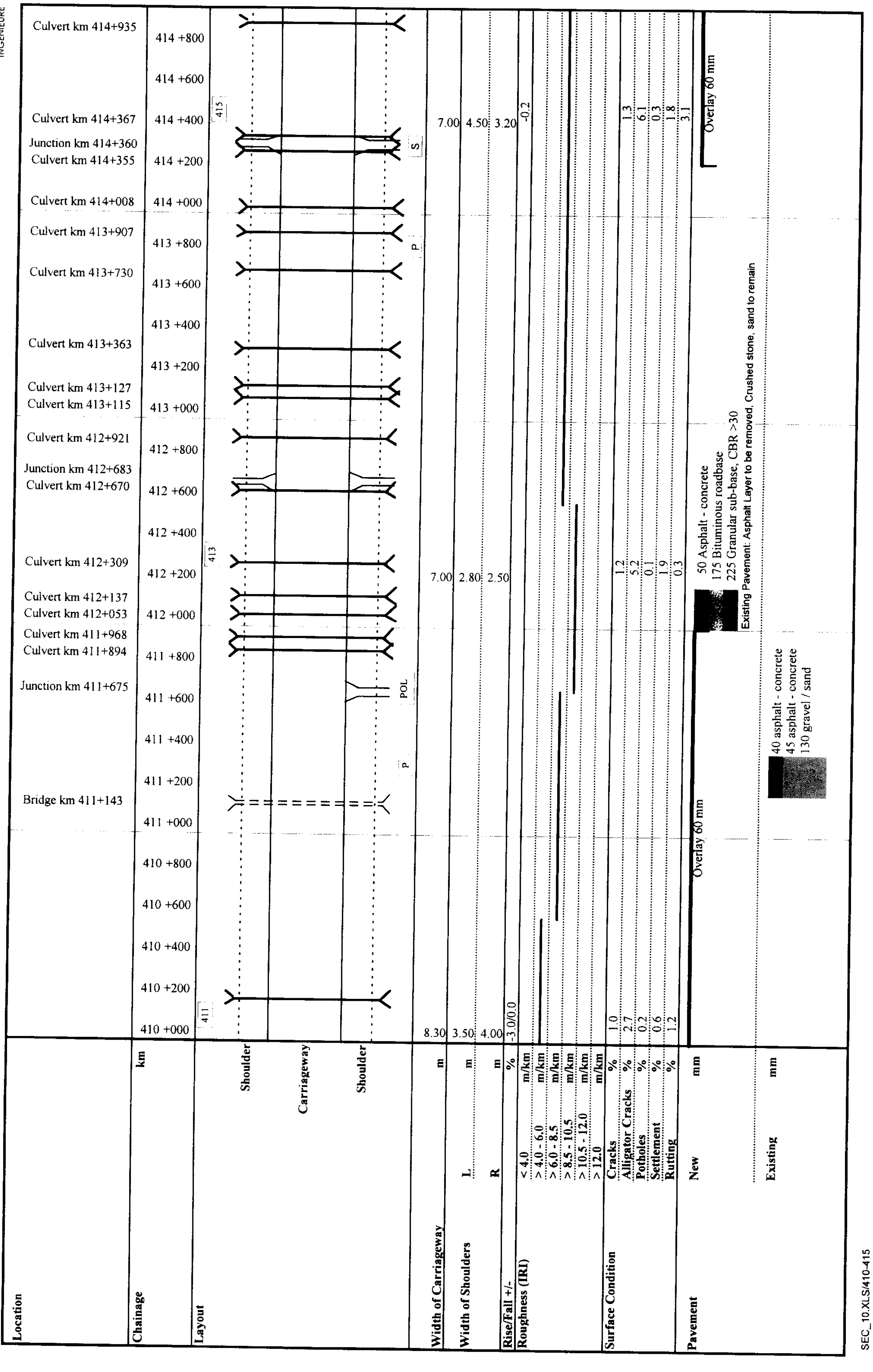
Existing mm

- ■ 30 asphalt - concrete
- ▨ 50 asphalt - concrete
- ■ 100 gravel / sand

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

Alyat - Ganja - Georgian Border (M 4/M 1) : Section 10 - M 1, Ganja - Tovuz km 369+500 to km 431+000

KOCKS
INGENIEURE

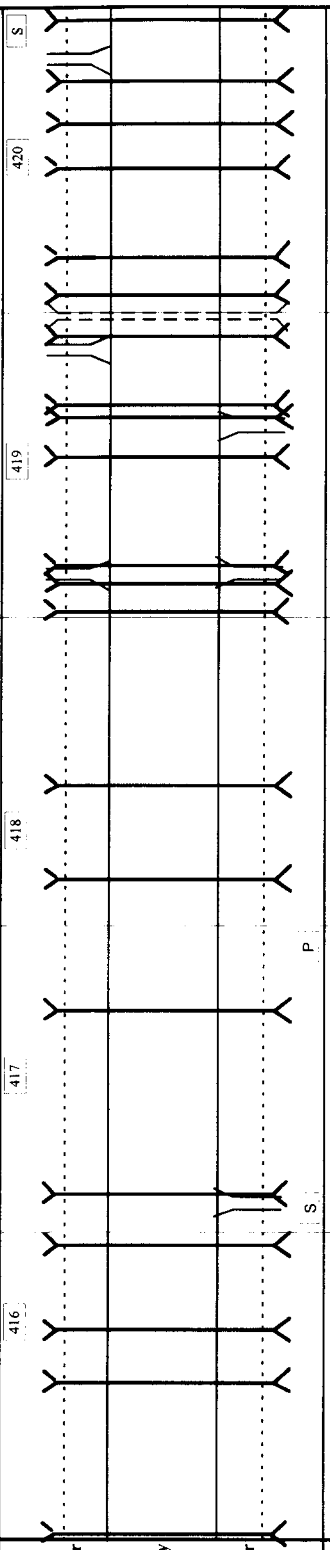


TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

Alyat - Ganja - Georgian Border (M 4/M 1) : Section 10 - M 1, Ganja - Tovuz km 369+500 to km 431+000

Location	Chainage km
Culvert km 419+994	
Junction km 419+819	419 +800
Culvert km 419+784	
Culvert km 419+615	419 +600
Culvert km 419+475	419 +400
Culvert km 419+194	419 +200
Culvert km 419+043	
Bridge km 418+994	419 +000
Culvert km 418+941	
Junction km 418+870	418 +800
Culvert km 418+665	
Culver t km 418+637	418 +600
Junction km 418+635	
Culvert km 418+532	418 +400
Culvert km 418+179	418 +200
Junction km 418+138	
Culvert km 418+122	418 +000
Culvert km 418+018	
	417 +800
	417 +600
Culvert km 417+468	417 +400
	417 +200
Culvert km 417+150	
	417 +000
	416 +800
Culvert km 416+718	
	416 +600
	416 +400
	416 +200
Culvert km 416+113	
Junction km 416+105	416 +000
Culvert km 415+962	
	415 +800
Culvert km 415+686	
	415 +600
Culvert km 415+519	
	415 +400
	415 +200
Culvert km 415+011	415 +000

Layout

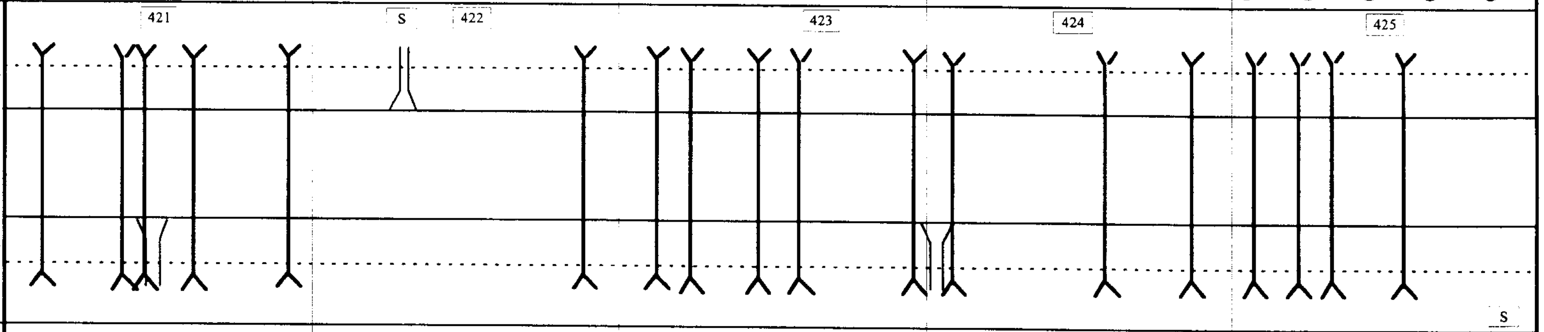


		420	419	418	417	416
Width of Carriageway	m	7.50	7.50	7.40	7.50	7.40
Width of Shoulders L	m	2.70	3.50	3.30	3.50	3.50
Width of Shoulders R	m	2.70	3.00	3.00	3.00	3.50
Rise/Fall +/-	%	0.0 +3.0	-4.0	0.0	-2.0	-0.1 -0.2
Roughness (IRI) < 4.0	m/km					
> 4.0 - 6.0	m/km					
> 6.0 - 8.5	m/km					
> 8.5 - 10.5	m/km					
> 10.5 - 12.0	m/km					
> 12.0	m/km					
Surface Condition Cracks	%	1.9	1.3	1.1	1.2	2.0
Alligator Cracks	%	1.7	2.4	2.2	5.4	4.6
Potholes	%	0.2	0.1	0.3	0.3	0.3
Settlement	%	0.8	0.3	0.8	0.9	1.1
Rutting	%	0.0	0.0	0.0	0.3	0.5
Pavement New	mm	Overlay 90 mm	Overlay 90 mm	Overlay 60 mm	Overlay 60 mm	Overlay 60 mm
Existing	mm					

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Alyat - Ganja - Georgian Border (M 4/M 1) : Section 10 - M 1, Ganja - Tovuz km 369+500 to km 431+000

Location	Chainage (km)
Culvert km 420+127	420 +000
Culvert km 420+395	420 +200
Junction km 420+461 Culvert km 420+459	420 +400
Culvert km 420+602	420 +600
Culvert km 420+945	420 +800
	421 +000
Junction km 421+302	421 +200
	421 +400
	421 +600
Culvert km 421+876	421 +800
Culvert km 422+133	422 +000
Culvert km 422+222	422 +200
Culvert km 422+598 Culvert km 422+436	422 +400
	422 +600
Culvert km 422+944	422 +800
Culvert km 423+079 Junction km 423+076	423 +000
	423 +200
Culvert km423+596	423 +400
	423 +600
Culvert km 423+852	423 +800
Culvert km 424+073	424 +000
Culvert km 424+329 Culvert km424+205	424 +200
Culvert km 424+589	424 +400
	424 +600
	424 +800

Layout



		Unit	421	422	423	424	425
Width of Carriageway		m	7.50	7.50	7.40	7.50	7.50
Width of Shoulders	L	m	3.00	3.00	2.50	4.70	3.20
	R	m	2.80	2.80	3.00	3.00	3.00
Rise/Fall +/-		%	0.0				
Surface Condition	Cracks	%	1.4	2.1	0.4	0.6	0.6
	Alligator Cracks	%	3.1	2.4	0.3	0.8	1.8
	Potholes	%	0.3	0.1	0.0	0.0	0.1
	Settlement	%	0.3	0.6	0.1	0.4	2.8
	Rutting	%	0.0	0.0	0.0	0.4	0.0

Roughness (IRI)	Unit	420+000 – approx. 420+600	approx. 420+600 – 424+800
< 4.0	m/km		
> 4.0 - 6.0	m/km		✓
> 6.0 - 8.5	m/km	✓	
> 8.5 - 10.5	m/km		
> 10.5 - 12.0	m/km		
> 12.0	m/km		

Pavement	Unit		
New	mm	Overlay 90 mm	Overlay 40 mm
Existing	mm		

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

Alyat - Ganja - Georgian Border (M 4/M 1) : Section 10 - M 1, Ganja - Tovuz km 369+500 to km 431+000

KOCKS INGENIEURE

Location			Bridge km 425+827 · Culvert km 426+519 · Culvert km 427+145 · Junction km 427+223 · Culvert km 427+323 · Culvert k 427+653 · Junction km 427+665 · Bridge km 428+608 · Junction km 428+758 · Junction km 429+408 · Culvert km 429+608
Chainage		km	425 +000 · 425 +200 · 425 +400 · 425 +600 · 425 +800 · 426 +000 · 426 +200 · 426 +400 · 426 +600 · 426 +800 · 427 +000 · 427 +200 · 427 +400 · 427 +600 · 427 +800 · 428 +000 · 428 +200 · 428 +400 · 428 +600 · 428 +800 · 429 +000 · 429 +200 · 429 +400 · 429 +600 · 429 +800
Layout			426 · P · 427 · 428 · 4296 · 430 · POL · P
	Shoulder		
	Carriageway		
	Shoulder		
Width of Carriageway		m	7.30 · 8.00 · 7.50 · 7.50
Width of Shoulders	L	m	3.00 · 3.00 · 2.50 · 3.00
	R	m	3.00 · 3.00 · 2.50 · 3.00
Rise/Fall +/-		%	0.0 · +3.0 · +0.2 · -3.0 · -7.0 · +5.0 · +0.3
Roughness (IRI)	< 4.0	m/km	
	> 4.0 - 6.0	m/km	
	> 6.0 - 8.5	m/km	
	> 8.5 - 10.5	m/km	
	> 10.5 - 12.0	m/km	
	> 12.0	m/km	
Surface Condition	Cracks	%	0.2 · 0.3 · 1.1 · 0.8 · 0.4
	Alligator Cracks	%	1.8 · 0.9 · 1.8 · 4.0 · 2.1
	Potholes	%	0.1 · 0.0 · 0.1 · 0.1 · 0.1
	Settlement	%	1.1 · 1.1 · 1.3 · 0.0 · 0.8
	Rutting	%	0.0 · 0.0 · 0.0 · 0.0 · 0.0
Pavement	New	mm	Overlay 40 mm 50 Asphalt - concrete 175 Bituminous roadbase 225 Granular sub-base, CBR >30 Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain Overlay 60 mm
	Existing	mm	70 asphalt - concrete 50 asphalt - concrete 30 gravel / crushed stone / bitumen 200 gravel / sand

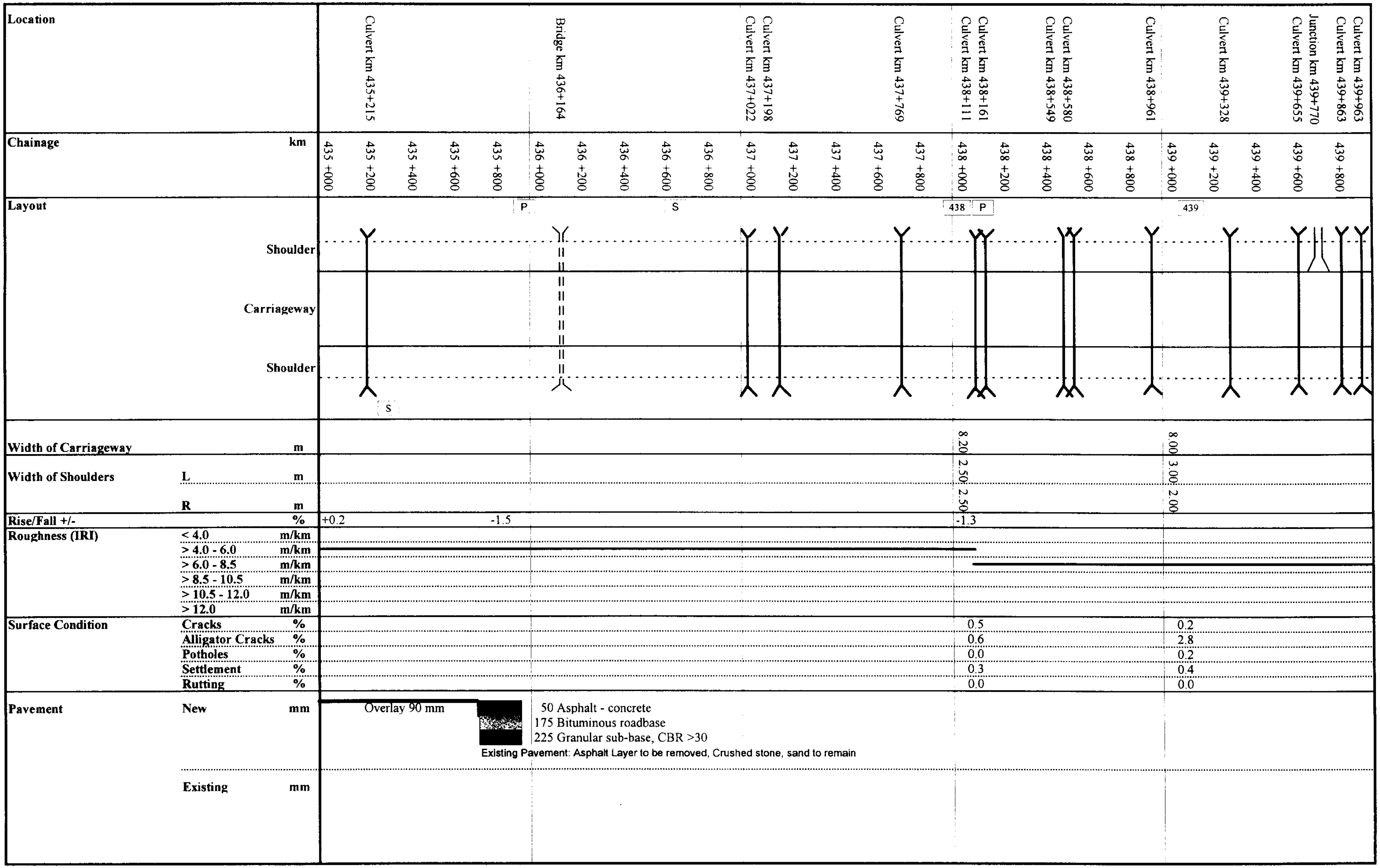
Location									
Chainage		km	430 +000	430 +200	430 +400	430 +600	430 +800	431 +000	
Layout						431			
		Shoulder							
		Carriageway							
		Shoulder							
Width of Carriageway		m				9.00			
Width of Shoulders	L	m				1.00			
	R	m				1.00			
Rise/Fall +/-		%	+0.3						
Roughness (IRI)	< 4.0	m/km							
	> 4.0 - 6.0	m/km							
	> 6.0 - 8.5	m/km							
	> 8.5 - 10.5	m/km							
	> 10.5 - 12.0	m/km							
	> 12.0	m/km							
Surface Condition	**Cracks**	%				0.5			
	Alligator Cracks	%				1.0			
	Potholes	%				0.1			
	Settlement	%				0.4			
	Rutting	%				0.0			
Pavement	**New**	mm				Overlay 60 mm			
	Existing	mm							

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

Alyat - Ganja - Georgian Border (M 4/M 1) : Section 11 - M 1, Tovuz - Gazakh km 431+000 to km 456+500

KOCKS INGENIEURE

Location			Culvert km 433+254 / Culvert km 433+362 / Junction km 433+620 / Culvert km 433+627 / Culvert km 434+162 / Culvert km 434+337 / Culvert km 434+914	
Chainage		km	431 +000 / 431 +200 / 431 +400 / 431 +600 / 431 +800 / 432 +000 / 432 +200 / 432 +400 / 432 +600 / 432 +800 / 433 +000 / 433 +200 / 433 +400 / 433 +600 / 433 +800 / 434 +000 / 434 +200 / 434 +400 / 434 +600 / 434 +800	
Layout			432 / 434 / 435	
		Shoulder		
		Carriageway		
		Shoulder		
Width of Carriageway		m	9.00	7.60 / 7.20
Width of Shoulders	L	m	2.50	2.00 / 3.10
	R	m	2.50	2.00 / 3.10
Rise/Fall +/-		%	+0.3	+0.2
Roughness (IRI)	< 4.0	m/km		
	> 4.0 - 6.0	m/km		
	> 6.0 - 8.5	m/km		
	> 8.5 - 10.5	m/km		
	> 10.5 - 12.0	m/km		
	> 12.0	m/km		
Surface Condition	Cracks	%	0.5 / 0.2	0.7 / 0.5
	Alligator Cracks	%	0.8 / 0.6	2.9 / 1.1
	Potholes	%	0.1 / 0.0	0.0 / 0.1
	Settlement	%	0.5 / 0.4	2.0 / 0.8
	Rutting	%	0.0 / 0.0	0.0 / 0.0
Pavement	New	mm	Overlay 60 mm	Overlay 90 mm
	Existing	mm		


Location
Culvert km 435+215
Bridge km 436+164
Culvert km 437+022
Culvert km 437+198
Culvert km 437+769
Culvert km 438+111
Culvert km 438+161
Culvert km 438+549
Culvert km 438+580
Culvert km 438+961
Culvert km 439+328
Culvert km 439+655
Junction km 439+770
Culvert km 439+863
Culvert km 439+963
Chainage km
435 +000
435 +200
435 +400
435 +600
435 +800
436 +000
436 +200
436 +400
436 +600
436 +800
437 +000
437 +200
437 +400
437 +600
437 +800
438 +000
438 +200
438 +400
438 +600
438 +800
439 +000
439 +200
439 +400
439 +600
439 +800
Layout
P
S
438
P
439
S
Shoulder
Carriageway
Shoulder
Width of Carriageway m
8.20
8.00
Width of Shoulders L m
R m
2.50
2.50
3.00
2.00
Rise/Fall +/- %
+0.2
-1.5
-1.3
Roughness (IRI)
< 4.0 m/km
> 4.0 - 6.0 m/km
> 6.0 - 8.5 m/km
> 8.5 - 10.5 m/km
> 10.5 - 12.0 m/km
> 12.0 m/km
Surface Condition
Cracks %
Alligator Cracks %
Potholes %
Settlement %
Rutting %
0.5
0.6
0.0
0.3
0.0
0.2
2.8
0.2
0.4
0.0
Pavement
New mm
Existing mm
Overlay 90 mm
50 Asphalt - concrete
175 Bituminous roadbase
225 Granular sub-base, CBR >30
Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

Alyat - Ganja - Georgian Border (M 4/M 1) : Section 11 - M 1, Tovuz - Gazakh km 431+000 to km 456+500

KOCKS
INGENIEURE

Location			Culvert km 440+163 · Culvert km 440+961 · Culvert km 440+968 · Culvert km 441+463 · Culvert km 442+075 · Culvert km 442+213 · Culvert km 442+643 · Culvert km 442+847 · Culvert km 442+957 · Culvert km 443+361 · Culvert km 443+833 · Culvert km444+813 · Culvert km 444+827
Chainage		km	440 +000 · 440 +200 · 440 +400 · 440 +600 · 440 +800 · 441 +000 · 441 +200 · 441 +400 · 441 +600 · 441 +800 · 442 +000 · 442 +200 · 442 +400 · 442 +600 · 442 +800 · 443 +000 · 443 +200 · 443 +400 · 443 +600 · 443 +800 · 444 +000 · 444 +200 · 444 +400 · 444 +600 · 444 +800
Layout			441 · Shoulder · Carriageway · Shoulder
Width of Carriageway		m	8.00 · 8.00 · 8.20 · 8.50 · 8.30
Width of Shoulders	**L**	m	3.00 · 3.00 · 3.00 · 3.00 · 2.80
	R	m	2.50 · 3.00 · 3.00 · 2.80 · 2.50
Rise/Fall +/-		%	+0.8 · -4.0 · -3.5 · +0.2
Roughness (IRI)	< 4.0	m/km	
	> 4.0 - 6.0	m/km	
	> 6.0 - 8.5	m/km	
	> 8.5 - 10.5	m/km	
	> 10.5 - 12.0	m/km	
	> 12.0	m/km	
Surface Condition	**Cracks**	%	0.3 · 0.5 · 0.4 · 0.9 · 0.3
	Alligator Cracks	%	3.5 · 1.2 · 1.0 · 1.1 · 1.1
	Potholes	%	0.2 · 0.1 · 0.1 · 0.1 · 0.0
	Settlement	%	0.8 · 0.4 · 0.7 · 0.8 · 2.0
	Rutting	%	0.0 · 0.0 · 0.0 · 0.0 · 0.0
Pavement	**New**	mm	50 Asphalt - concrete 175 Bituminous roadbase 225 Granular sub-base, CBR >30 Overlay 90 mm
	Existing	mm	Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

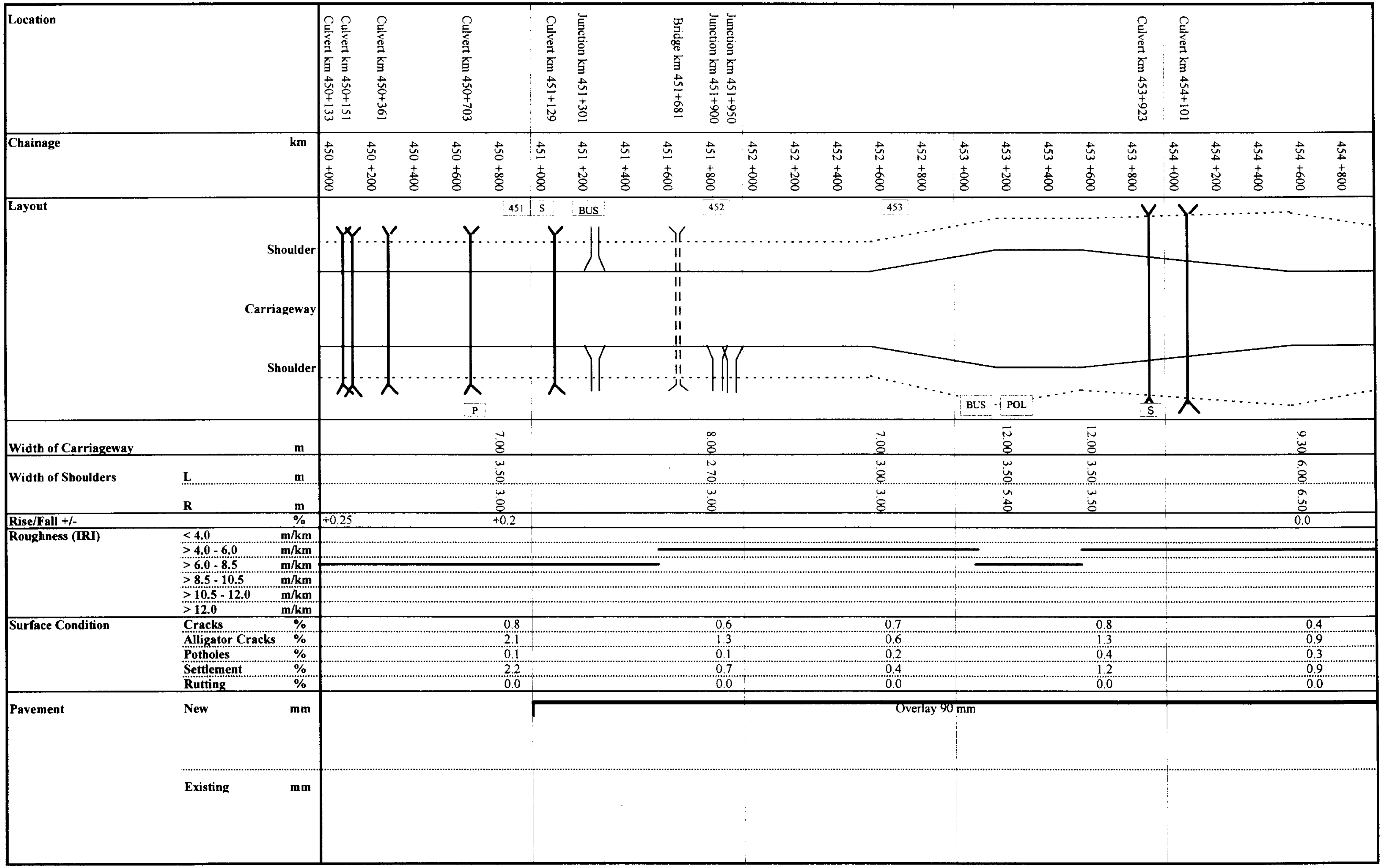
Alyat - Ganja - Georgian Border (M 4/M 1) : Section 11 - M 1, Tovuz - Gazakh km 431+000 to km 456+500

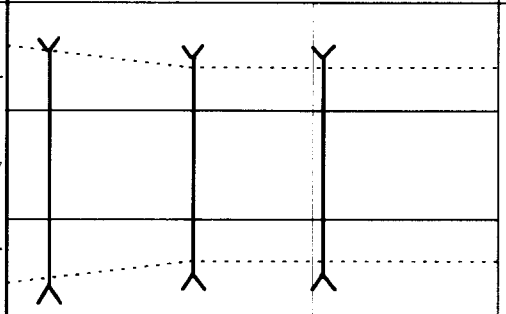
KOCKS INGENIEURE

Location			Culvert km 445+263	Culvert km 445+391	Culvert km 445+543	Culvert km 445+763	Culvert km 446+018	Culvert km 446+373	Junction km 446+415	Culvert km 446+895	Junction km 447+345	Bridge km 447+650	Culvert km 448+033	Culvert km 448+568	Culvert km 448+655	Culvert km 449+075	Culvert km 449+505	Junction km 449+573	Culvert km 449+783
Chainage		km	445 +000	445 +200	445 +400	445 +600	445 +800	446 +000	446 +200	446 +400	446 +600	446 +800	447 +000	447 +200	447 +400	447 +600	447 +800	448 +000	448 +200	448 +400	448 +600	448 +800	449 +000	449 +200	449 +400	449 +600	449 +800
Layout								S									448						449				450
	Shoulder																										
	Carriageway																										
	Shoulder																										
Width of Carriageway		m	8.50				7.50				8.00				8.00					8.50					8.00		
Width of Shoulders	L	m	2.80				3.00				2.50				2.50					3.00					3.00		
	R	m	2.50				3.00				2.50				2.50					3.00					3.00		
Rise/Fall +/-		%	+0.2								-2.5	+3.0	-0.8							+0.25							
Roughness (IRI)	< 4.0	m/km																									
	> 4.0 - 6.0	m/km																									
	> 6.0 - 8.5	m/km																									
	> 8.5 - 10.5	m/km																									
	> 10.5 - 12.0	m/km																									
	> 12.0	m/km																									
Surface Condition	Cracks	%	0.5				1.0				0.8					0.2									0.9		
	Alligator Cracks	%	2.9				3.1				1.1					1.7									1.0		
	Potholes	%	0.2				0.2				0.1					0.1									0.1		
	Settlement	%	1.8				1.0				1.5					1.6									0.5		
	Rutting	%	0.0				0.0				0.0					0.0									0.0		
Pavement	New	mm	Overlay 90 mm 50 Asphalt - concrete 175 Bituminous roadbase 225 Granular sub-base, CBR >30 Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain																								
	Existing	mm	40 asphalt - concrete 100 asphalt - concrete 120 gravel / sand																								

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

Alyat - Ganja - Georgian Border (M 4/M 1) : Section 11 - M 1, Tovuz - Gazakh km 431+000 to km 456+500



Location			Culvert km 455+141	Culvert km 455+601	Culvert km 456+043	
Chainage		km	455 +000 / 455 +200 / 455 +400 / 455 +600 / 455 +800 / 456 +000 / 456 +200 / 456 +400			456 +500
Layout						
	Shoulder					
	Carriageway					
	Shoulder					
Width of Carriageway		m		9.20		
Width of Shoulders	L	m		4.00		
	R	m		4.00		
Rise/Fall +/-		%	0.0			
Roughness (IRI)	< 4.0	m/km				
	> 4.0 - 6.0	m/km				
	> 6.0 - 8.5	m/km				
	> 8.5 - 10.5	m/km				
	> 10.5 - 12.0	m/km				
	> 12.0	m/km				
Surface Condition	Cracks	%		0.6		
	Alligator Cracks	%		0.7		
	Potholes	%		0.2		
	Settlement	%		0.6		
	Rutting	%		0.0		
Pavement	New	mm		Overlay 90 mm		
	Existing	mm				

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

Alyat - Ganja - Georgian Border (M 4/M 1) : Section 12 - M 1, Bypass Gazakh km 456+500 to km 463+500

KOCKS INGENIEURE

Location			Culvert km 456+613 / Junction km 456+615 / Culvert km 457+588 / Bridge km 457+839 / Junction km 458+000 / Culvert km 458+682 / Culvert km 458+747 / Culvert km 459+065 / Culvert km 459+333 / Culvert km 459+581 / Culvert km 549+853
Chainage		km	456 +500 / 456 +600 / 456 +800 / 457 +000 / 457 +200 / 457 +400 / 457 +600 / 457 +800 / 458 +000 / 458 +200 / 458 +400 / 458 +600 / 458 +800 / 459 +000 / 459 +200 / 459 +400 / 459 +600 / 459 +800
Layout			P / R / 459
		Shoulder	
		Carriageway	
		Shoulder	
Width of Carriageway		m	9.00 / 8.00 / 8.40 / 7.50
Width of Shoulders	L	m	2.00 / 3.00 / 3.00 / 4.00
	R	m	3.00 / 3.00 / 3.00 / 4.00
Rise/Fall +/-		%	0.0
Roughness (IRI)	< 4.0	m/km	
	> 4.0 - 6.0	m/km	
	> 6.0 - 8.5	m/km	
	> 8.5 - 10.5	m/km	
	> 10.5 - 12.0	m/km	
	> 12.0	m/km	
Surface Condition	**Cracks**	%	1.8 / 0.6 / 0.6 / 0.6
	Alligator Cracks	%	2.0 / 1.4 / 1.3 / 1.1
	Potholes	%	0.5 / 0.2 / 0.1 / 0.1
	Settlement	%	1.7 / 1.4 / 7.5 / 1.3
	Rutting	%	0.0 / 0.0 / 0.0 / 0.0
Pavement	**New**	mm	Overlay 90 mm 50 Asphalt - concrete 175 Bituminous roadbase 225 Granular sub-base, CBR >30
	Existing	mm	Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

Alyat - Ganja - Georgian Border (M 4/M 1) : Section 12 - M 1, Bypass Gazakh km 456+500 to km 463+500

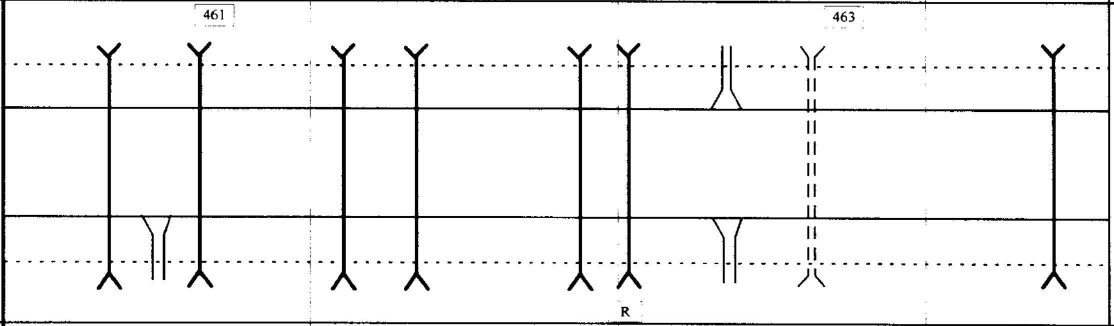
KOCKS
INGENIEURE

Location

- Culvert km 460+363
- Junction km 460+500
- Culvert km 460+628
- Culvert km 461+107
- Culvert km 461+349
- Culvert km 461+877
- Culvert km 462+046
- Junction km 462+350
- Bridge km 462+610
- Culvert km 463+407

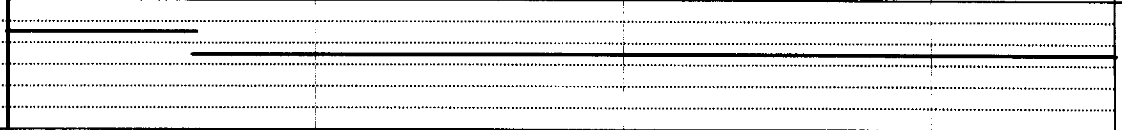
Chainage km: 460 +000, 460 +200, 460 +400, 460 +600, 460 +800, 461 +000, 461 +200, 461 +400, 461 +600, 461 +800, 462 +000, 462 +200, 462 +400, 462 +600, 462 +800, 463 +000, 463 +200, 463 +400, 463 +500

Layout



			460 +000	460 +600	461 +600	462 +600
Width of Carriageway		m		7.40	7.20	8.20
Width of Shoulders	L	m		3.50	3.20	3.00
	R	m		3.00	3.00	3.00
Rise/Fall +/-		%	0.0			
Surface Condition	Cracks	%		0.6	0.4	1.7
	Alligator Cracks	%		0.4	0.5	1.1
	Potholes	%		0.1	0.2	0.0
	Settlement	%		0.3	0.4	1.9
	Rutting	%		0.0	0.0	0.0

Roughness (IRI)



Pavement

New mm

50 Asphalt - concrete
175 Bituminous roadbase
225 Granular sub-base, CBR >30

Overlay 60 mm

Overlay 90 mm

Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain

Existing mm

40 asphalt - concrete
120 asphalt - concrete
180 gravel / sand

Location					Culvert km 463+557 / Bridge km 463+863 / Junction km 464+340 / Culvert km 464+793 / Culvert km 464+999
Chainage		km			463 +500 / 463 +600 / 463 +800 / 464 +000 / 464 +200 / 464 +400 / 464 +600 / 464 +800
Layout					464 / 465
		Shoulder			
		Carriageway			
		Shoulder			
Width of Carriageway		m			8.00 / 9.00
Width of Shoulders	L	m			2.00 / 2.50
	R	m			2.00 / 2.50
Rise/Fall +/-		%			0.0 -4.5 +2.5
Roughness (IRI)	< 4.0	m/km			
	> 4.0 - 6.0	m/km			
	> 6.0 - 8.5	m/km			
	> 8.5 - 10.5	m/km			
	> 10.5 - 12.0	m/km			
	> 12.0	m/km			
Surface Condition	Cracks	%			1.8 0.4 0.2
	Alligator Cracks	%			1.2 0.7 1.5
	Potholes	%			0.0 0.2 0.2
	Settlement	%			1.9 0.8 1.1
	Rutting	%			0.0 0.0 0.0
Pavement	New	mm			Overlay 90 mm
	Existing	mm			

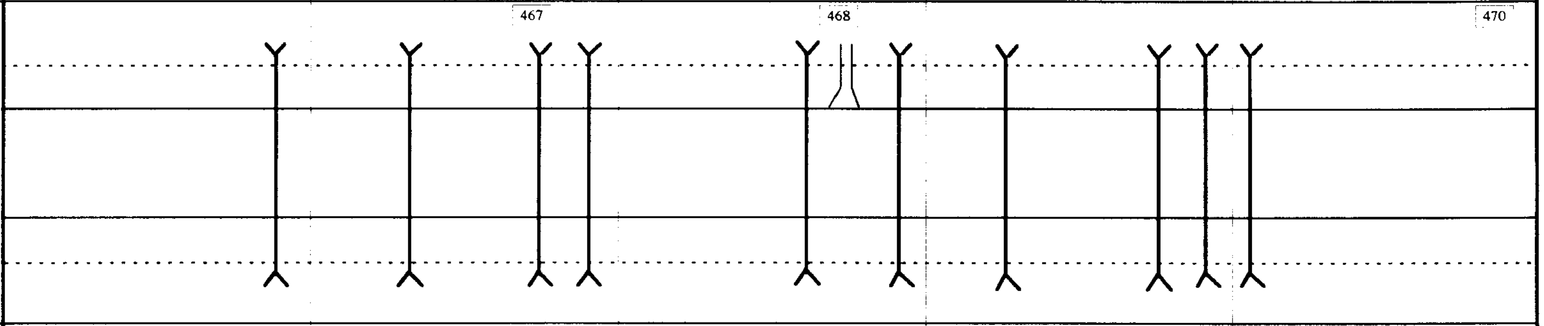
TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

Alyat - Ganja - Georgian Border (M 4/M 1) : Section 13 - M 1: Gazakh - Georgien Border; km 463+500 to km 501+350

KOCKS
INGENIEURE

			465+000 – 466+000	466+000 – 467+000	467+000 – 468+000	468+000 – 469+000	469+000 – 469+800
Location			Culvert km 465+883	Culvert km 466+336 Culvert km 466+773 Culvert km 466+899	Culvert km 467+607 Junction km 467+755 Culvert km 467+907	Culvert km 468+275 Culvert km 468+773 Culvert km 468+907	Culvert km 469+041
Chainage		km	465 +000 465 +200 465 +400 465 +600 465 +800	466 +000 466 +200 466 +400 466 +600 466 +800	467 +000 467 +200 467 +400 467 +600 467 +800	468 +000 468 +200 468 +400 468 +600 468 +800	469 +000 469 +200 469 +400 469 +600 469 +800
Width of Carriageway		m	9.00	9.00	7.00	7.50	7.50
Width of Shoulders	L	m	3.00	3.00	3.00	2.50	3.00
	R	m	3.00	3.00	2.50	2.50	2.50
Rise/Fall +/-		%	+2.5		+0.5		
Roughness (IRI)	< 4.0	m/km					
	> 4.0 - 6.0	m/km	465+600 – 466+000	466+000 – 466+600		468+600 – 469+000	469+000 – 469+800
	> 6.0 - 8.5	m/km	465+000 – 465+600	466+600 – 467+000	467+000 – 468+000	468+000 – 468+600	
	> 8.5 - 10.5	m/km					
	> 10.5 - 12.0	m/km					
	> 12.0	m/km					
Surface Condition	Cracks	%	0.3	0.6	0.6	0.8	0.4
	Alligator Cracks	%	0.9	1.4	2.0	0.9	2.3
	Potholes	%	0.0	0.1	0.2	0.1	0.1
	Settlement	%	1.3	1.5	1.5	0.7	1.5
	Rutting	%	0.0	0.0	0.0	0.0	0.0
Pavement	New	mm	Overlay 90 mm				
	Existing	mm					

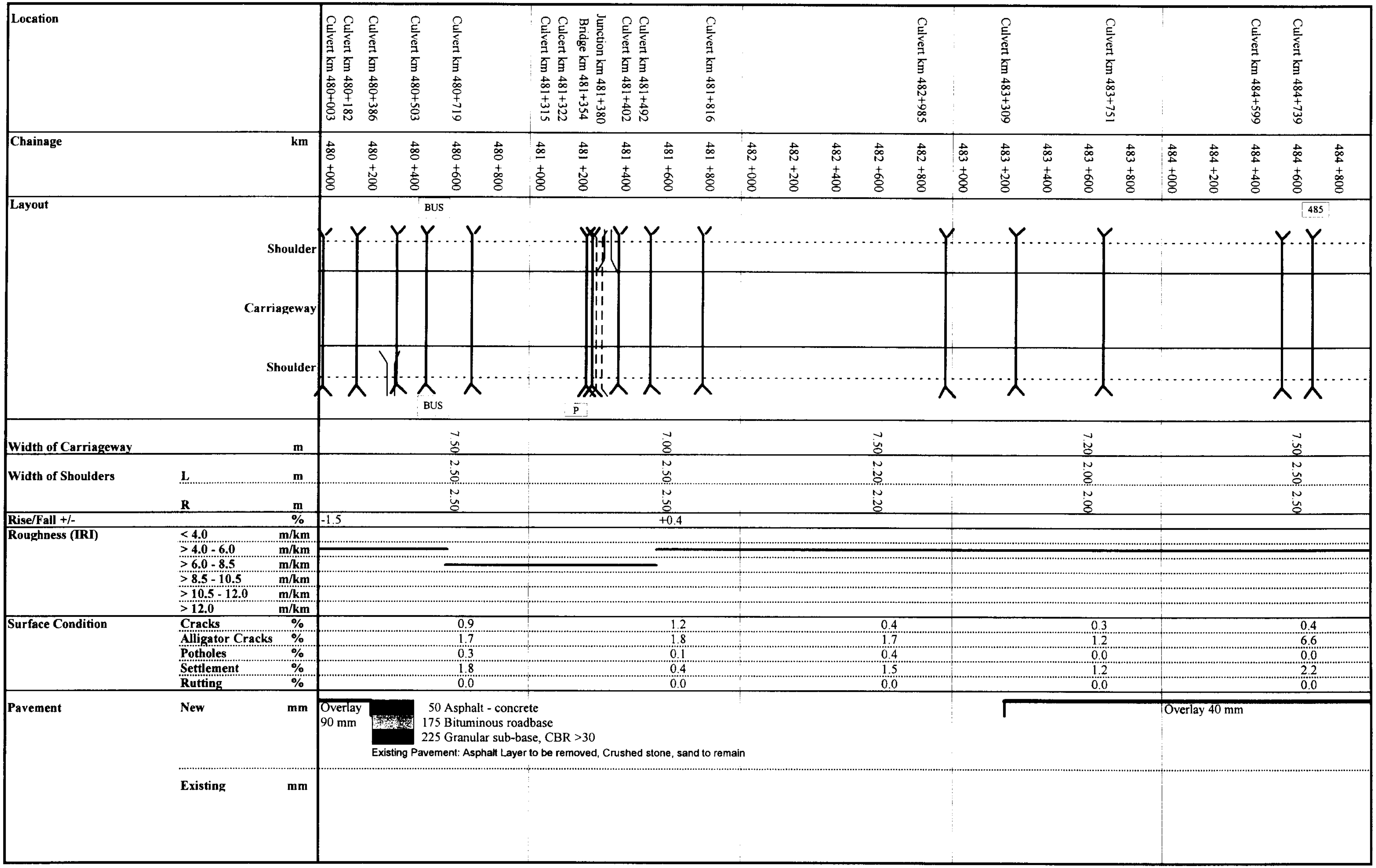
Layout



Location			Culvert km 470+149	Junction km 470+707	Culvert km 470+714	Culvert km 471+175	Culvert km 471+355	Junction km471+367	Culvert km 472+003	Culvert km 472+553	Culvert km 473+151
Chainage		km	470 +000 / 470 +200 / 470 +400 / 470 +600 / 470 +800	471 +000 / 471 +200 / 471 +400 / 471 +600 / 471 +800	472 +000 / 472 +200 / 472 +400 / 472 +600 / 472 +800	473 +000 / 473 +200 / 473 +400 / 473 +600 / 473 +800	474 +000 / 474 +200 / 474 +400 / 474 +600 / 474 +800				
Layout			S 471	472	473	474	475				
		Shoulder									
		Carriageway									
		Shoulder		BUS			P				
Width of Carriageway		m	7.50	7.50	7.50	8.00	7.80				
Width of Shoulders	L	m	3.00	3.50	3.00	2.50	2.50				
	R	m	3.00	3.00	3.00	2.50	3.00				
Rise/Fall +/-		%	+0.5								
Roughness (IRI)	< 4.0	m/km									
	> 4.0 - 6.0	m/km									
	> 6.0 - 8.5	m/km									
	> 8.5 - 10.5	m/km									
	> 10.5 - 12.0	m/km									
	> 12.0	m/km									
Surface Condition	Cracks	%	0.5	0.9	0.3	0.9	1.0				
	Alligator Cracks	%	2.1	1.4	2.9	3.7	1.5				
	Potholes	%	0.2	0.1	0.2	0.1	0.1				
	Settlement	%	1.7	1.1	1.6	1.5	1.9				
	Rutting	%	0.0	0.0	0.0	0.0	0.0				
Pavement	New	mm	Overlay 90 mm	50 Asphalt - concrete 175 Bituminous roadbase 225 Granular sub-base, CBR >30 Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain							Overlay 40 mm
	Existing	mm									

Location			Culvert km 475+469	Culvert km 475+687	Culvert km 476+029	Culvert km 476+451	Culvert km 476+706	Culvert km 476+816	Culvert km 476+820	Culvert km 477+099	Culvert km 478+519	Culvert km 478+629	Culvert km 478+781	Junction km 478+821	Culvert km 478+903	Culvert km 479+302	Culvert km 479+581
Chainage		km	475 +400	475 +600	476 +000	476 +400	476 +600	476 +800	477 +000	477 +600	478 +400	478 +600	478 +800	479 +000	479 +200	479 +400	479 +600
Layout				476						478	P						
	Shoulder																
	Carriageway																
	Shoulder																
Width of Carriageway		m		7.50			7.50			7.50		7.80					7.50
Width of Shoulders	L	m		2.50			2.80			3.00		2.50					2.60
	R	m		3.00			2.80			3.00		2.50					2.60
Rise/Fall +/-		%	+0.5	-2.5								-1.5					
Roughness (IRI)	< 4.0	m/km															
	> 4.0 - 6.0	m/km															
	> 6.0 - 8.5	m/km															
	> 8.5 - 10.5	m/km															
	> 10.5 - 12.0	m/km															
	> 12.0	m/km															
Surface Condition	**Cracks**	%		1.1			0.4			0.7		0.7					0.9
	Alligator Cracks	%		1.1			1.5			2.4		1.6					1.9
	Potholes	%		0.2			0.1			0.1		0.2					0.2
	Settlement	%		1.1			1.6			2.1		2.6					1.3
	Rutting	%		0.0			0.0			0.0		0.0					0.0
Pavement	**New**	mm			Overlay 40 mm							Overlay 90 mm					
	Existing	mm															

40 asphalt - concrete
60 asphalt - concrete
300 gravel / sand



		480 +000 – 480 +800	481 +000 – 481 +800	482 +000 – 482 +800	483 +000 – 483 +800	484 +000 – 484 +800
Location		Culvert km 480+003 Culvert km 480+182 Culvert km 480+386 Culvert km 480+503 Culvert km 480+719	Culvert km 481+315 Culcert km 481+322 Bridge km 481+354 Junction km 481+380 Culvert km 481+402 Culvert km 481+492 Culvert km 481+816	Culvert km 482+985	Culvert km 483+309 Culvert km 483+751	Culvert km 484+599 Culvert km 484+739
Width of Carriageway	m	7.50	7.00	7.50	7.20	7.50
Width of Shoulders L	m	2.50	2.50	2.20	2.00	2.50
R	m	2.50	2.50	2.20	2.00	2.50
Rise/Fall +/-	%	-1.5	+0.4			
Surface Condition Cracks	%	0.9	1.2	0.4	0.3	0.4
Alligator Cracks	%	1.7	1.8	1.7	1.2	6.6
Potholes	%	0.3	0.1	0.4	0.0	0.0
Settlement	%	1.8	0.4	1.5	1.2	2.2
Rutting	%	0.0	0.0	0.0	0.0	0.0

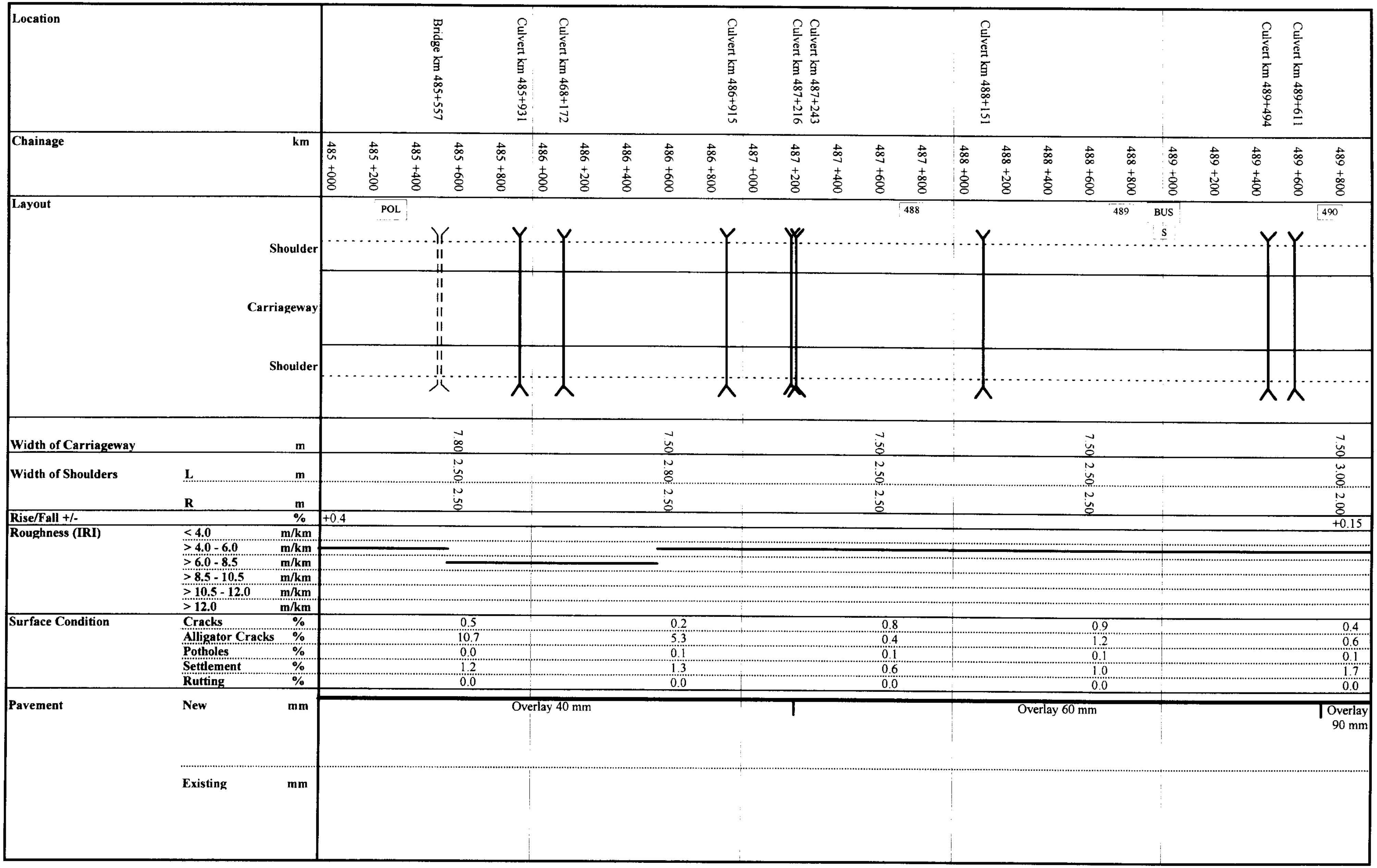
Pavement New mm

Overlay 90 mm

50 Asphalt - concrete
175 Bituminous roadbase
225 Granular sub-base, CBR >30
Existing Pavement: Asphalt Layer to be removed, Crushed stone, sand to remain

Overlay 40 mm

Existing mm


Location
Bridge km 485+557
Culvert km 485+931
Culvert km 468+172
Culvert km 486+915
Culvert km 487+243
Culvert km 487+216
Culvert km 488+151
Culvert km 489+494
Culvert km 489+611
Chainage km
485 +000
485 +200
485 +400
485 +600
485 +800
486 +000
486 +200
486 +400
486 +600
486 +800
487 +000
487 +200
487 +400
487 +600
487 +800
488 +000
488 +200
488 +400
488 +600
488 +800
489 +000
489 +200
489 +400
489 +600
489 +800
Layout
POL
488
489
BUS
S
490
Shoulder
Carriageway
Shoulder
Width of Carriageway m
7.80
7.50
7.50
7.50
7.50
Width of Shoulders L m
2.50
2.80
2.50
2.50
3.00
R m
2.50
2.50
2.50
2.50
2.00
Rise/Fall +/- %
+0.4
+0.15
Roughness (IRI)
< 4.0 m/km
> 4.0 - 6.0 m/km
> 6.0 - 8.5 m/km
> 8.5 - 10.5 m/km
> 10.5 - 12.0 m/km
> 12.0 m/km
Surface Condition
Cracks %
Alligator Cracks %
Potholes %
Settlement %
Rutting %
0.5
10.7
0.0
1.2
0.0
0.2
5.3
0.1
1.3
0.0
0.8
0.4
0.1
0.6
0.0
0.9
1.2
0.1
1.0
0.0
0.4
0.6
0.1
1.7
0.0
Pavement
New mm
Existing mm
Overlay 40 mm
Overlay 60 mm
Overlay 90 mm

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

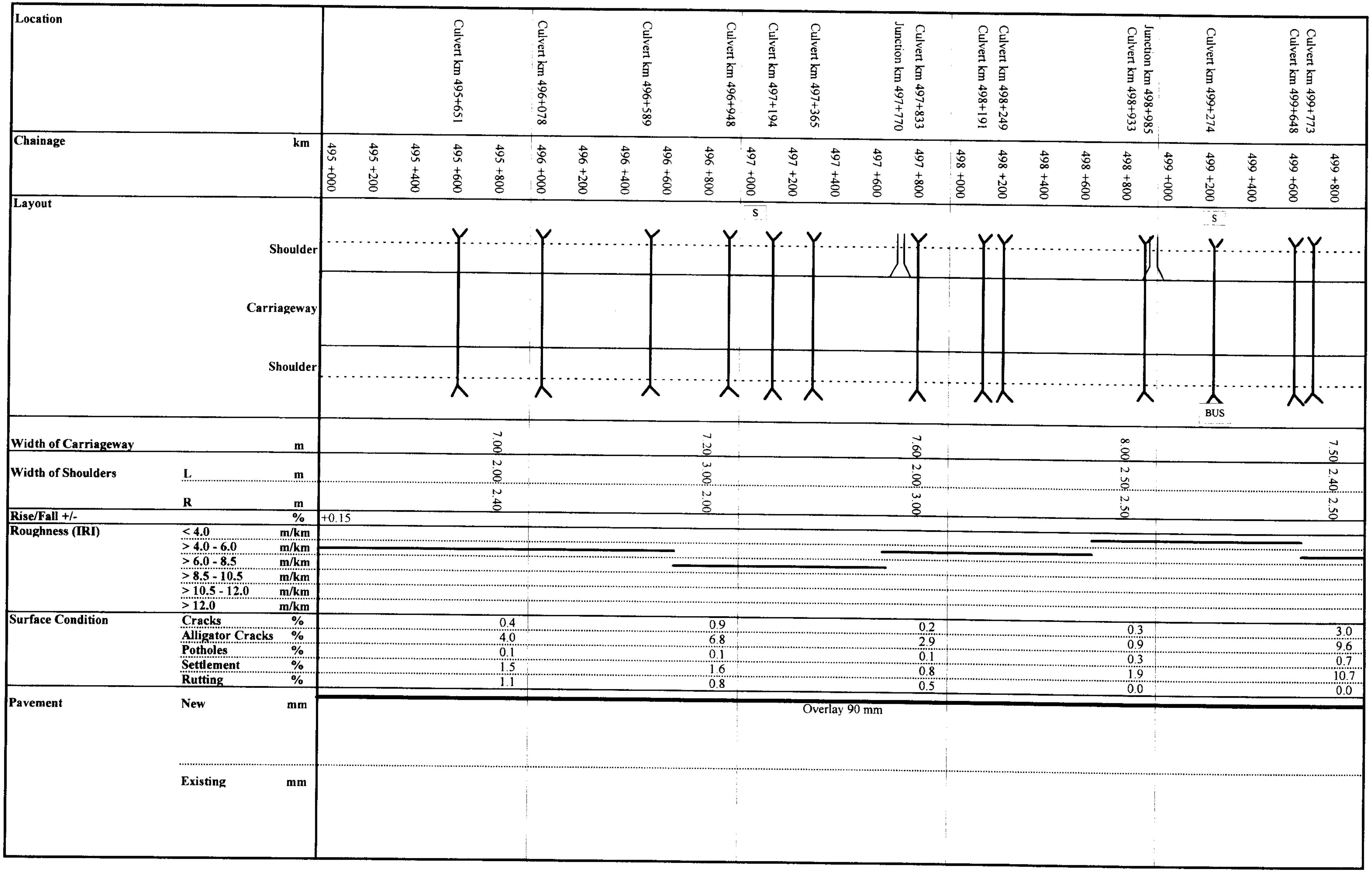
Alyat - Ganja - Georgian Border (M 4/M 1) : Section 13 - M 1: Gazakh - Georgien Border; km 463+500 to km 501+350

KOCKS INGENIEURE

Location			Culvert km 490+512	Culvert km 490+720	Culvert km 491+312	Bridge km 491+643	Culvert km 492+319	Culvert km 492+930	Culvert km 493+160	Culvert km 493+310	Culvert km 493+580	Junction km 494+858 Culvert km 494+844
Chainage		km	490 +400	490 +600	491 +000	491 +600	492 +000	492 +800	493 +000	493 +200	493 +600	494 +800
Layout	Shoulder / Carriageway / Shoulder			S							P	
Width of Carriageway		m	8.00		7.50		7.50				7.50	7.20
Width of Shoulders	L	m	3.00		2.50		2.00				2.50	3.00
	R	m	2.80		2.50		2.30				2.50	3.00
Rise/Fall +/-		%	+0.15									
Roughness (IRI)	< 4.0	m/km										
	> 4.0 - 6.0	m/km										
	> 6.0 - 8.5	m/km										
	> 8.5 - 10.5	m/km										
	> 10.5 - 12.0	m/km										
	> 12.0	m/km										
Surface Condition	Cracks	%	0.6		0.4		0.8				0.8	0.3
	Alligator Cracks	%	2.1		0.4		4.9				4.9	0.9
	Potholes	%	0.1		0.0		0.4				0.2	0.1
	Settlement	%	0.8		1.9		0.9				0.7	1.3
	Rutting	%	0.0		0.0		0.0				0.0	0.6
Pavement	New	mm	Overlay 90 mm									
	Existing	mm	40 asphalt - concrete 230 gravel / sand									

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

Alyat - Ganja - Georgian Border (M 4/M 1) : Section 13 - M 1: Gazakh - Georgien Border; km 463+500 to km 501+350



Location	
Culvert km 495+651	
Culvert km 496+078	
Culvert km 496+589	
Culvert km 496+948	
Culvert km 497+194	
Culvert km 497+365	
Culvert km 497+833	
Junction km 497+770	
Culvert km 498+191	
Culvert km 498+249	
Culvert km 498+933	
Junction km 498+985	
Culvert km 499+274	
Culvert km 499+648	
Culvert km 499+773	

Chainage km			495 +000 – 496 +000	496 +000 – 497 +000	497 +000 – 498 +000	498 +000 – 499 +000	499 +000 – 500 +000
Width of Carriageway		m	7.00	7.20	7.60	8.00	7.50
Width of Shoulders	L	m	2.00	3.00	2.00	2.50	2.40
	R	m	2.40	2.00	3.00	2.50	2.50
Rise/Fall +/-		%	+0.15				
Surface Condition	Cracks	%	0.4	0.9	0.2	0.3	3.0
	Alligator Cracks	%	4.0	6.8	2.9	0.9	9.6
	Potholes	%	0.1	0.1	0.1	0.3	0.7
	Settlement	%	1.5	1.6	0.8	1.9	10.7
	Rutting	%	1.1	0.8	0.5	0.0	0.0
Pavement	New	mm	Overlay 90 mm				
	Existing	mm					

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

Alyat - Ganja - Georgian Border (M 4/M 1) : Section 13 - M 1: Gazakh - Georgien Border; km 463+500 to km 501+350

KOCKS INGENIEURE

Location			Culvert km 500+268		Culvert km 500+691			Junction km 501+030	Culvert km 501+075	Georgien Border Culvert km 501+250	Red Bridge km 501+350
Chainage		km	500 +000	500 +200	500 +400	500 +600	500 +800	501 +000		501 +200	501 +350
Layout			500					POL			
		Shoulder									
		Carriageway									
		Shoulder									
Width of Carriageway		m	7.50					7.00			
Width of Shoulders	L	m	2.50					2.00			
	R	m	2.50					2.50			
Rise/Fall +/-		%	+0.1								
Roughness (IRI)	< 4.0	m/km									
	> 4.0 - 6.0	m/km									
	> 6.0 - 8.5	m/km									
	> 8.5 - 10.5	m/km									
	> 10.5 - 12.0	m/km									
	> 12.0	m/km									
Surface Condition	Cracks	%	0.2								
	Alligator Cracks	%	1.2								
	Potholes	%	0.0								
	Settlement	%	0.6								
	Rutting	%	0.0								
Pavement	New	mm	Overlay 90 mm								
	Existing	mm									

APPENDIX 6.13

FACILITIES

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan

KOCKS INGENIEURE

Alyat - Ganja - Georgian Border (M 4/M 1)

- Facilities -

Section 1 - M 4: Alyat - Gazi Mammad; km 0+000 to km 43+450

km -post		Police		Bus stop		Repair ramp		Service station		Petrol station	
No.	Chainage (m)	left/right	Chainage (m)	left/right	Chainage (m)	left/right	Chainage (m)	left/right	Chainage (m)	left/right	Chainage (m)
1	1,067									left	720
5	5,260										
6	6,353										
7	7,311									right	7,692
8	8,322										
9	9,601										
10	11,172										
11	12,402										
12	13,004										
13	13,934										
14	14,784										
15	15,822										
16	16,855										
17	17,919										
18	19,086										
19	20,156										
20	21,074										
21	22,107										
22	23,162										
23	24,199							left	24,750		
24	25,312					right	25,250	left/right	25,942		
25	26,350										
26	27,408										
27	28,444										
28	29,479										
29	30,679									right	30,445
30	31,574	left	31,135								
31	32,631							right	32,121		
32	33,678										
33	34,678							right	34,778		
34	35,699										
35	36,874										
36	37,794										
37	38,773										
38	39,833										
39	41,062										
40	42,045							left	42,910		
41	43,105										

Section 2 - M 4: Bypass Gazi-Mammad; km 43+450 to km 58+980

km -post		Police		Bus stop		Repair ramp		Service station		Petrol station	
No.	Chainage (m)	left/right	Chainage (m)	left/right	Chainage (m)	left/right	Chainage (m)	left/right	Chainage (m)	left/right	Chainage (m)
43	45,363									right	43,650
44	46,307										
45	47,262										
46	48,270										
47	49,308										
48	49,971					right	49,200				
49	50,976										
50	52,001										
51	53,029										
52	54,044										
53	55,105										
54	56,123										
55	57,143										
56	58,183										
57	58,778										

Alyat - Ganja - Georgian Border (M 4/M 1)

- Facilities -

Section 3 - M 4: Gazi-Mammad -Kyurdamir; km 58+980 to km 124+300

km - post		Police		Bus stop		Repair ramp		Service station		Petrol station	
No.	Chainage (m)	left/right	Chainage (m)	left/right	Chainage (m)	left/right	Chainage (m)	left/right	Chainage (m)	left/right	Chainage (m)
58	59,543										
59	60,660										
60	61,681							left	61,625		
62	63,597							right	63,222	right	63,222
63	64,877										
64	65,877					right	65,500				
65	66,891										
66	67,903										
67	68,906										
68	69,884										
69	71,116										
70	71,741										
71	72,934										
72	73,941			left	74,250					left	74,366
73	75,052										
74	76,047										
75	77,087										
76	78,109							left	78,259		
78	80,113										
79	81,118										
80	82,124										
82	84,139										
83	85,180										
84	86,077										
85	86,977										
86	88,027										
87	89,014										
88	89,934										
89	90,926					right	90,334				
90	91,951										
91	92,916	left	92,200							left	92,530
93	95,112			right	96,410						
97	97,862										
98	98,960										
103	103,755							left	102,060	left	102,260
104	104,753							right	105,810		
106	106,856			left	107,016	right	107,120				
108	109,396					right	109,646			left	109,646
111	111,894							right	111,596		
112	112,874										
113	113,968										
114	114,868										
115	115,832	left	115,068					right	115,020		
116	116,839										
117	117,856										
118	118,840					left	118,840				
119	119,778							left	120,498	right	121,388
122	122,837			right	124,421					left	123,743

Alyat - Ganja - Georgian Border (M 4/M 1)

- Facilities -

Section 4 - M 4: Kyurdamir - Ujar ; km 124+300 to km 170+500

km - post		Police		Bus stop		Repair ramp		Service station		Petrol station	
No.	Chainage (m)	left/right	Chainage (m)	left/right	Chainage (m)	left/right	Chainage (m)	left/right	Chainage (m)	left/right	Chainage (m)
126	127,227			right	124,421			left	127,421		
127	127,813										
128	128,813							right	129,133	right	129,063
130	130,866									left	130,263
131	131,868					right	131,956				
132	132,861										
133	133,959										
134	135,137									right	135,497
135	136,232							left	136,337		
136	137,204										
137	138,180										
138	139,198										
141	142,098										
142	142,729										
143	144,281	right	144,352					left	144,111		
144	145,266			right	145,980	left	151,700			left	145,980
156	156,778										
158	159,033									left	159,793
162	162,954										
163	163,982			right	165,882						
168	168,972										

Section 5 - M 4: Ujar -Yevlakh ; km 170+500 to km 216+500

km - post		Police		Bus stop		Repair ramp		Service station		Petrol station	
No.	Chainage (m)	left/right	Chainage (m)	left/right	Chainage (m)	left/right	Chainage (m)	left/right	Chainage (m)	left/right	Chainage (m)
				right	171,300						
				right	181,600	right	184,900			right	178,472
187	188,372										
189	190,318										
191	192,666									right	192,866
193	194,361										
195	196,338										
196	197,353									left	197,793
197	198,329										
200	201,329										
										left	208,599
208	210,229									right	210,050
211	213,332	left	212,440					right	211,480	left	211,523
212	214,410										
213	215,368										
										left	216,060
										right	216,065

Section 6 - M 4: Bypass Yevlakh; km 216+500 to km 223+468

km - post		Police		Bus stop		Repair ramp		Service station		Petrol station	
No.	Chainage (m)	left/right	Chainage (m)	left/right	Chainage (m)	left/right	Chainage (m)	left/right	Chainage (m)	left/right	Chainage (m)
				right	217,514						

Section 7 - M 1: Yevlakh - Mingechevir; km 280+683 to km 288+700

km - post		Police		Bus stop		Repair ramp		Service station		Petrol station	
No.	Chainage (m)	left/right	Chainage (m)	left/right	Chainage (m)	left/right	Chainage (m)	left/right	Chainage (m)	left/right	Chainage (m)
				left	282,227					left	282,787
				left	283,100					left	282,958

Alyat - Ganja - Georgian Border (M 4/M 1)

- Facilities -

Section 8 - M 1: Mingechevir - Ganja; km 288+700 to km 333+500

km -post		Police		Bus stop		Repair ramp		Service station		Petrol station	
No.	Chainage (m)	left/right	Chainage (m)	left/right	Chainage (m)	left/right	Chainage (m)	left/right	Chainage (m)	left/right	Chainage (m)
288	286,932										
289	287,973										
290	288,992							right	288,731	right	289,732
293	292,077	left	290,426							left	290,640
294	293,083										
295	294,098										
296	295,094										
298	297,174										
299	298,172										
300	299,117									left	300,803
303	302,195			left	301,089					left	300,819
304	303,089										
305	304,158										
306	305,209										
307	306,215										
308	307,215										
309	308,208										
310	309,414										
311	310,242										
312	311,181										
313	312,264										
314	313,217										
315	314,237			right	315,940						
318	317,226									left	316,667
320	319,224	left/right	319,497					right	319,920		
321	320,111										
322	321,238										
323	322,238										
324	323,019										
325	323,994										
326	325,215							right	326,166		
328	327,255							right	327,152	left	326,890
329	328,346										
330	329,287										
332	331,202										
333	332,202	left	333,093								

- Facilities -

Section 9 - M 1: Bypass Ganja; km 333+500 to km 369+500

km -post		Police		Bus stop		Repair ramp		Service station		Petrol station	
No.	Chainage (m)	left/right	Chainage (m)	left/right	Chainage (m)	left/right	Chainage (m)	left/right	Chainage (m)	left/right	Chainage (m)
335	334,330										
336	335,475										
337	336,275										
338	337,295										
339	338,662										
340	339,574										
342	341,270										
344	343,357										
345	344,362										
346	345,282										
347	346,204										
348	347,114										
349	348,042										
351	350,055							right	350,160	right	350,100
352	350,966										
353	352,056										
355	354,097										
356	355,139										
357	356,051										
358	357,019										
361	360,225										
362	361,213										
363	362,170									right	362,410
365	364,132									right	364,790
366	365,252										
367	366,190										
368	367,153										
370	369,131	right	369,470								

- Facilities -

Section 10 - M 1: Ganja - Tovuz; km 369+500 to km 431+000

km - post		Police		Bus stop		Repair ramp		Service station		Petrol station	
No.	Chainage (m)	left/right	Chainage (m)	left/right	Chainage (m)	left/right	Chainage (m)	left/right	Chainage (m)	left/right	Chainage (m)
371	369,925										
372	370,920									right	370,000
373	371,888										
374	373,158										
376	375,108										
377	376,084										
378	377,075									right	377,503
379	378,043										
380	379,040										
381	380,013							left	381,861		
383	382,100			left	382,800			right	381,881	left	382,395
384	383,054			right	383,045			left	382,324		
385	383,943										
386	384,774			right	384,169						
387	385,878			right	385,775						
388	386,824			left	386,187						
389	387,790										
390	388,736										
391	389,827										
392	390,932			left	390,728					left	390,902
393	392,940										
394	392,955										
396	394,839										
397	395,960									right	396,152
398	396,939					right	396,950	right	397,937		
400	399,059										
401	400,033										
402	401,053									left	401,980
403	402,076										
404	402,854										
407	405,735							right	405,075	right	406,157
408	407,045										
409	408,954							right	409,116		
411	410,140	right	411,610					right	409,684		
413	412,387									right	411,308
415	414,482							right	414,297	left	413,728
416	415,658										
417	416,460							right	416,040	right	416,930
418	417,230										
419	418,547										
420	419,534							left	419,802		
421	420,528										
422	421,546							left	421,266		
423	422,596										
424	423,485										
425	424,562							right	424,800		
426	425,542									left	425,752
427	426,563										
428	427,633										
429	428,538	right	428,174							right	428,328
430	429,596										
431	430,678										
432	431,660										

Facility/section combinated

- Facilities -

Section 11 - M 1: Tovuz - Gazakh; km 431+000 to km 456+500

km - post		Police		Bus stop		Repair ramp		Service station		Petrol station	
No.	Chainage (m)	left/right	Chainage (m)	left/right	Chainage (m)	left/right	Chainage (m)	left/right	Chainage (m)	left/right	Chainage (m)
432	431,660										
434	434,152										
435	434,812										
								right	435,318	left	435,970
								left	436,672		
438	438,013									left	438,100
439	439,163										
441	441,063										
								left	446,265		
448	447,973										
449	448,973										
450	449,853										
451	450,901									right	450,755
452	451,811			left	451,220			left	451,050		
453	452,741	right	453,253	right	453,151			right	453,861		

Section 12 - M 1: Bypass Gazakh; km 456+500 to km 463+500

km - post		Police		Bus stop		Repair ramp		Service station		Petrol station	
No.	Chainage (m)	left/right	Chainage (m)	left/right	Chainage (m)	left/right	Chainage (m)	left/right	Chainage (m)	left/right	Chainage (m)
459	458,643					left	458,391			left	458,340
461	460,647										
463	462,665										
464	463,705					right	462,060				

Section 13 - M 1: Gazakh - Georgien Border; km 463+500 to km 501+350

km - post		Police		Bus stop		Repair ramp		Service station		Petrol station	
No.	Chainage (m)	left/right	Chainage (m)	left/right	Chainage (m)	left/right	Chainage (m)	left/right	Chainage (m)	left/right	Chainage (m)
465	464,691										
467	466,689										
468	467,657										
470	469,757										
471	470,725										
472	471,753			right	470,700			left	470,657		
473	472,851										
474	473,791									right	473,911
475	474,789										
476	475,751										
478	477,601										
										left	478,363
				left	480,500						
				right	480,600						
										right	481,200
485	484,701	left	485,351								
488	487,701										
489	488,799			left	489,000			left	489,000		
490	489,820										
								right	490,650		
										right	494,100
								left	497,172		
				right	499,240			left	499,210		
500	500,000										
		left	501,070								
		right	501,190								
		left	501,200								

APPENDIX 6.14

CUMULATIVE NUMBER OF STANDARD AXLES

M 4, Section Alyat - Gazi-Mammad (km 0+000 - km 43+450)

CUMULATIVE NUMBER OF STANDARD AXLES

Vehicle Category	Equivalence Factor	ESA 1997	ESA 1998	ESA 1999	ESA 2000	ESA 2001	ESA 2002	ESA 2003	ESA 2004	ESA 2005	ESA 2006	ESA 2007	ESA 2008	ESA 2009	ESA 2010	ESA 2011	ESA 2012
Car	0.0007	1,036	1,063	1,091	1,119	1,206	1,300	1,402	1,511	1,629	1,756	1,893	2,041	2,200	2,371	2,556	2,756
Utility	0.0011	135	138	142	145	156	168	180	194	209	224	241	259	279	299	322	346
Bus	2.0040	346,712	354,340	362,135	370,102	394,159	419,779	447,065	476,124	507,072	540,032	575,134	612,517	652,331	694,733	739,890	787,983
Truck 2-axle	0.6687	83,230	84,395	85,576	86,775	92,155	97,868	103,936	110,380	117,224	124,491	132,210	140,407	149,112	158,357	168,175	178,602
Truck 3-axle	1.2446	234,408	240,034	245,795	251,694	269,816	289,242	310,068	332,393	356,325	381,980	409,483	438,966	470,571	504,452	540,773	579,708
Truck > 3-axle	1.6084	216,040	223,386	230,981	238,834	258,419	279,609	302,537	327,345	354,187	383,230	414,655	448,657	485,447	525,254	568,324	614,927
TOTAL		**881,561**	**903,355**	**925,719**	**948,669**	**1,015,910**	**1,087,967**	**1,165,188**	**1,247,947**	**1,336,645**	**1,431,714**	**1,533,616**	**1,642,847**	**1,759,940**	**1,885,466**	**2,020,041**	**2,164,322**
CUMULATIVE			**1,784,916**	**2,710,636**	**3,659,304**	**4,675,214**	**5,763,181**	**6,928,368**	**8,176,315**	**9,512,960**	**10,944,674**	**12,478,290**	**14,121,137**	**15,881,077**	**17,766,543**	**19,786,584**	**21,950,906**

M 4, Section Gazi-Mammad - Kyurdamir (km 43+450 - km 124+300)

CUMULATIVE NUMBER OF STANDARD AXLES

Vehicle Category	Equivalence Factor	ESA 1997	ESA 1998	ESA 1999	ESA 2000	ESA 2001	ESA 2002	ESA 2003	ESA 2004	ESA 2005	ESA 2006	ESA 2007	ESA 2008	ESA 2009	ESA 2010	ESA 2011	ESA 2012
Car	0.0007	887	910	934	958	1,033	1,113	1,200	1,293	1,394	1,503	1,620	1,747	1,883	2,030	2,188	2,359
Utility	0.0011	93	95	98	100	108	116	125	134	144	155	166	179	192	207	222	239
Bus	2.0040	378,165	386,484	394,987	403,677	429,916	457,860	487,621	519,317	553,072	589,022	627,308	668,083	711,509	757,757	807,011	859,467
Truck 2-axle	0.6687	85,182	86,375	87,584	88,810	94,317	100,164	106,374	112,970	119,974	127,412	135,312	143,701	152,610	162,072	172,121	182,792
Truck 3-axle	1.2446	264,390	270,736	277,233	283,887	304,327	326,238	349,728	374,908	401,901	430,838	461,859	495,112	530,760	568,975	609,941	653,857
Truck > 3-axle	1.6084	290,011	299,871	310,067	320,609	346,899	375,344	406,123	439,425	475,458	514,445	556,630	602,273	651,660	705,096	762,914	825,473
TOTAL		**1,018,728**	**1,044,471**	**1,070,903**	**1,098,041**	**1,176,598**	**1,260,836**	**1,351,170**	**1,448,046**	**1,551,943**	**1,663,375**	**1,782,895**	**1,911,096**	**2,048,615**	**2,196,137**	**2,354,397**	**2,524,187**
CUMULATIVE			**2,063,200**	**3,134,102**	**4,232,143**	**5,408,742**	**6,669,578**	**8,020,749**	**9,468,795**	**11,020,738**	**12,684,114**	**14,467,009**	**16,378,104**	**18,426,719**	**20,622,856**	**22,977,253**	**25,501,440**

M 4, Section Kyurdamir - Yevlakh (km 124+300 - km 223+468)

CUMULATIVE NUMBER OF STANDARD AXLES

Vehicle Category	Equivalence Factor	ESA 1997	ESA 1998	ESA 1999	ESA 2000	ESA 2001	ESA 2002	ESA 2003	ESA 2004	ESA 2005	ESA 2006	ESA 2007	ESA 2008	ESA 2009	ESA 2010	ESA 2011	ESA 2012
Car	0.0007	938	962	987	1,013	1,092	1,177	1,269	1,368	1,474	1,589	1,713	1,847	1,991	2,146	2,314	2,494
Utility	0.0011	98	101	103	106	114	122	132	141	152	163	176	189	203	218	235	252
Bus	2.0040	438,145	447,784	457,635	467,703	498,104	530,480	564,962	601,684	640,794	682,445	726,804	774,046	824,359	877,943	935,009	995,785
Truck 2-axle	0.6687	111,298	112,857	114,437	116,039	123,233	130,874	138,988	147,605	156,756	166,475	176,797	187,758	199,399	211,762	224,891	238,835
Truck 3-axle	1.2446	283,470	290,273	297,240	304,374	326,289	349,781	374,966	401,963	430,905	461,930	495,189	530,842	569,063	610,035	653,958	701,043
Truck > 3-axle	1.6084	169,075	174,824	180,768	186,914	202,241	218,824	236,768	256,183	277,190	299,919	324,513	351,123	379,915	411,068	444,776	481,247
TOTAL		**1,003,024**	**1,026,800**	**1,051,169**	**1,076,148**	**1,151,072**	**1,231,259**	**1,317,083**	**1,408,944**	**1,507,271**	**1,612,522**	**1,725,191**	**1,845,805**	**1,974,930**	**2,113,173**	**2,261,182**	**2,419,655**
CUMULATIVE			**2,029,824**	**3,080,994**	**4,157,141**	**5,308,213**	**6,539,472**	**7,856,555**	**9,265,499**	**10,772,770**	**12,385,292**	**14,110,484**	**15,956,289**	**17,931,220**	**20,044,392**	**22,305,574**	**24,725,230**

M 1, Section Yevlakh - Mingechevir (km 280+683 [= km 223+468 M 4] - km 288+700)

CUMULATIVE NUMBER OF STANDARD AXLES

Vehicle Category	Equivalence Factor	ESA 1997	ESA 1998	ESA 1999	ESA 2000	ESA 2001	ESA 2002	ESA 2003	ESA 2004	ESA 2005	ESA 2006	ESA 2007	ESA 2008	ESA 2009	ESA 2010	ESA 2011	ESA 2012
Car	0.0007	863	886	909	932	1,005	1,083	1,168	1,259	1,357	1,463	1,577	1,700	1,833	1,976	2,130	2,296
Utility	0.0011	80	82	84	86	92	99	107	115	124	133	143	153	165	177	191	205
Bus	2.0040	366,461	374,524	382,763	391,184	416,611	443,691	472,530	503,245	535,956	570,793	607,895	647,408	689,489	734,306	782,036	832,868
Truck 2-axle	0.6687	78,348	79,445	80,557	81,685	86,750	92,128	97,840	103,906	110,348	117,190	124,456	132,172	140,367	149,069	158,312	168,127
Truck 3-axle	1.2446	225,777	231,195	236,744	242,426	259,881	278,592	298,651	320,153	343,204	367,915	394,405	422,802	453,244	485,877	520,861	558,363
Truck > 3-axle	1.6084	61,642	63,738	65,905	68,146	73,734	79,780	86,322	93,400	101,059	109,346	118,312	128,014	138,511	149,869	162,158	175,455
TOTAL		**733,171**	**749,869**	**766,962**	**784,459**	**838,072**	**895,373**	**956,617**	**1,022,078**	**1,092,048**	**1,166,839**	**1,246,787**	**1,332,249**	**1,423,608**	**1,521,274**	**1,625,686**	**1,737,313**
CUMULATIVE			**1,483,040**	**2,250,002**	**3,034,461**	**3,872,533**	**4,767,906**	**5,724,523**	**6,746,601**	**7,838,649**	**9,005,489**	**10,252,275**	**11,584,524**	**13,008,132**	**14,529,406**	**16,155,092**	**17,892,406**

M 1, Section Mingechevir - Ganja bypass (km 288+700 - km 333+500)

CUMULATIVE NUMBER OF STANDARD AXLES

Vehicle Category	Equivalence Factor	ESA 1997	ESA 1998	ESA 1999	ESA 2000	ESA 2001	ESA 2002	ESA 2003	ESA 2004	ESA 2005	ESA 2006	ESA 2007	ESA 2008	ESA 2009	ESA 2010	ESA 2011	ESA 2012
Car	0.0007	1,069	1,097	1,126	1,155	1,245	1,342	1,447	1,560	1,681	1,812	1,954	2,106	2,270	2,447	2,638	2,844
Utility	0.0011	53	54	56	57	61	66	71	76	82	88	95	102	109	118	126	136
Bus	2.0040	343,786	351,349	359,079	366,979	390,833	416,237	443,292	472,106	502,793	535,474	570,280	607,349	646,826	688,870	733,646	781,333
Truck 2-axle	0.6687	59,066	59,893	60,732	61,582	65,400	69,455	73,761	78,334	83,191	88,349	93,826	99,644	105,822	112,382	119,350	126,750
Truck 3-axle	1.2446	157,635	161,418	165,292	169,259	181,446	194,510	208,515	223,528	239,622	256,874	275,369	295,196	316,450	339,234	363,659	389,843
Truck > 3-axle	1.6084	270,050	279,232	288,726	298,543	323,023	349,511	378,171	409,181	442,734	479,038	518,319	560,821	606,809	656,567	710,405	768,659
TOTAL		**831,660**	**853,044**	**875,010**	**897,575**	**962,008**	**1,031,120**	**1,105,256**	**1,184,785**	**1,270,102**	**1,361,636**	**1,459,843**	**1,565,217**	**1,678,286**	**1,799,619**	**1,929,826**	**2,069,565**
CUMULATIVE			**1,684,704**	**2,559,714**	**3,457,289**	**4,419,297**	**5,450,417**	**6,555,673**	**7,740,458**	**9,010,560**	**10,372,196**	**11,832,040**	**13,397,257**	**15,075,543**	**16,875,162**	**18,804,988**	**20,874,553**

M 1, Section Ganja bypass (km 333+500 - km 369+500)

CUMULATIVE NUMBER OF STANDARD AXLES

Vehicle Category	Equivalence Factor	ESA 1997	ESA 1998	ESA 1999	ESA 2000	ESA 2001	ESA 2002	ESA 2003	ESA 2004	ESA 2005	ESA 2006	ESA 2007	ESA 2008	ESA 2009	ESA 2010	ESA 2011	ESA 2012
Car	0.0007	771	791	811	832	897	967	1,043	1,124	1,212	1,306	1,408	1,518	1,636	1,764	1,901	2,050
Utility	0.0011	62	64	65	67	72	77	83	89	96	103	111	120	128	138	148	160
Bus	2.0040	251,622	257,158	262,815	268,597	286,056	304,650	324,452	345,541	368,002	391,922	417,397	444,527	473,422	504,194	536,967	571,870
Truck 2-axle	0.6687	44,422	45,044	45,674	46,314	49,185	52,235	55,473	58,913	62,565	66,444	70,564	74,939	79,585	84,519	89,759	95,324
Truck 3-axle	1.2446	169,446	173,513	177,677	181,941	195,041	209,084	224,138	240,276	257,576	276,121	296,002	317,314	340,161	364,653	390,907	419,053
Truck > 3-axle	1.6084	358,110	370,286	382,876	395,894	428,357	463,482	501,488	542,610	587,104	635,246	687,336	743,698	804,681	870,665	942,059	1,019,308
TOTAL		**824,433**	**846,855**	**869,919**	**893,645**	**959,608**	**1,030,495**	**1,106,677**	**1,188,553**	**1,276,554**	**1,371,143**	**1,472,818**	**1,582,115**	**1,699,613**	**1,825,932**	**1,961,743**	**2,107,764**
CUMULATIVE			**1,671,288**	**2,541,207**	**3,434,852**	**4,394,461**	**5,424,956**	**6,531,632**	**7,720,185**	**8,996,739**	**10,367,882**	**11,840,700**	**13,422,815**	**15,122,429**	**16,948,361**	**18,910,104**	**21,017,868**

M 1, Section Ganja bypass - Tovuz (km 369+500 - km 431+000)

CUMULATIVE NUMBER OF STANDARD AXLES

Vehicle Category	Equivalence Factor	ESA 1997	ESA 1998	ESA 1999	ESA 2000	ESA 2001	ESA 2002	ESA 2003	ESA 2004	ESA 2005	ESA 2006	ESA 2007	ESA 2008	ESA 2009	ESA 2010	ESA 2011	ESA 2012
Car	0.0007	1,047	1,075	1,102	1,131	1,219	1,314	1,417	1,528	1,647	1,775	1,914	2,063	2,224	2,397	2,584	2,786
Utility	0.0011	89	91	93	96	103	110	119	128	137	147	159	170	183	197	212	228
Bus	2.0040	349,638	357,330	365,191	373,225	397,485	423,322	450,837	480,142	511,351	544,589	579,987	617,686	657,836	700,595	746,134	794,633
Truck 2-axle	0.6687	73,955	74,990	76,040	77,105	81,885	86,962	92,354	98,080	104,161	110,619	117,477	124,760	132,496	140,710	149,434	158,699
Truck 3-axle	1.2446	210,785	215,844	221,025	226,329	242,625	260,094	278,821	298,896	320,416	343,486	368,217	394,729	423,149	453,616	486,276	521,288
Truck > 3-axle	1.6084	171,423	177,252	183,278	189,510	205,049	221,864	240,056	259,741	281,040	304,085	329,020	356,000	385,192	416,777	450,953	487,931
TOTAL		**806,938**	**826,582**	**846,730**	**867,396**	**928,367**	**993,666**	**1,063,604**	**1,138,513**	**1,218,751**	**1,304,701**	**1,396,773**	**1,495,408**	**1,601,079**	**1,714,293**	**1,835,594**	**1,965,565**
CUMULATIVE			**1,633,519**	**2,480,249**	**3,347,644**	**4,276,011**	**5,269,677**	**6,333,281**	**7,471,794**	**8,690,545**	**9,995,246**	**11,392,020**	**12,887,428**	**14,488,507**	**16,202,800**	**18,038,394**	**20,003,959**

M 1, Section Tovuz - Gazakh (km 431+000 - km 456+500)

CUMULATIVE NUMBER OF STANDARD AXLES

Vehicle Category	Equivalence Factor	ESA 1997	ESA 1998	ESA 1999	ESA 2000	ESA 2001	ESA 2002	ESA 2003	ESA 2004	ESA 2005	ESA 2006	ESA 2007	ESA 2008	ESA 2009	ESA 2010	ESA 2011	ESA 2012
Car	0.0007	725	744	763	783	844	910	981	1,057	1,140	1,229	1,324	1,428	1,539	1,659	1,789	1,928
Utility	0.0011	195	200	205	210	225	242	261	280	301	324	348	374	402	432	465	499
Bus	2.0040	304,287	310,982	317,823	324,815	345,928	368,414	392,361	417,864	445,025	473,952	504,759	537,568	572,510	609,723	649,355	691,563
Truck 2-axle	0.6687	71,026	72,020	73,029	74,051	78,642	83,518	88,696	94,195	100,035	106,238	112,824	119,819	127,248	135,138	143,516	152,414
Truck 3-axle	1.2446	259,393	265,619	271,994	278,521	298,575	320,072	343,118	367,822	394,305	422,695	453,129	485,755	520,729	558,221	598,413	641,499
Truck > 3-axle	1.6084	195,493	202,140	209,012	216,119	233,841	253,016	273,763	296,211	320,501	346,782	375,218	405,986	439,277	475,297	514,272	556,442
TOTAL		**831,119**	**851,704**	**872,826**	**894,499**	**958,056**	**1,026,172**	**1,099,178**	**1,177,430**	**1,261,307**	**1,351,219**	**1,447,603**	**1,550,930**	**1,661,705**	**1,780,471**	**1,907,810**	**2,044,346**
CUMULATIVE			**1,682,823**	**2,555,649**	**3,450,148**	**4,408,204**	**5,434,375**	**6,533,554**	**7,710,984**	**8,972,291**	**10,323,510**	**11,771,113**	**13,322,042**	**14,983,747**	**16,764,218**	**18,672,028**	**20,716,374**

M 1, Section Gazakh - Georgian border (km 456+500 - km 501+350)

CUMULATIVE NUMBER OF STANDARD AXLES

Vehicle Category	Equivalence Factor	ESA 1997	ESA 1998	ESA 1999	ESA 2000	ESA 2001	ESA 2002	ESA 2003	ESA 2004	ESA 2005	ESA 2006	ESA 2007	ESA 2008	ESA 2009	ESA 2010	ESA 2011	ESA 2012
Car	0.0007	690	708	727	746	804	866	934	1,007	1,085	1,170	1,261	1,360	1,466	1,580	1,703	1,836
Utility	0.0011	272	279	286	293	315	339	364	391	421	452	486	523	562	604	650	698
Bus	2.0040	288,195	294,536	301,015	307,638	327,634	348,930	371,611	395,765	421,490	448,887	478,065	509,139	542,233	577,478	615,014	654,990
Truck 2-axle	0.6687	80,789	81,920	83,067	84,230	89,452	94,998	100,888	107,143	113,786	120,841	128,333	136,289	144,739	153,713	163,243	173,365
Truck 3-axle	1.2446	204,426	209,332	214,356	219,500	235,304	252,246	270,408	289,877	310,748	333,122	357,107	382,819	410,382	439,929	471,604	505,560
Truck > 3-axle	1.6084	198,428	205,175	212,151	219,364	237,352	256,815	277,873	300,659	325,313	351,989	380,852	412,082	445,872	482,434	521,994	564,797
TOTAL		**772,801**	**791,950**	**811,601**	**831,770**	**890,861**	**954,195**	**1,022,078**	**1,094,843**	**1,172,844**	**1,256,461**	**1,346,104**	**1,442,212**	**1,545,254**	**1,655,739**	**1,774,208**	**1,901,246**
CUMULATIVE			**1,564,750**	**2,376,352**	**3,208,122**	**4,098,983**	**5,053,178**	**6,075,256**	**7,170,100**	**8,342,944**	**9,599,405**	**10,945,509**	**12,387,721**	**13,932,975**	**15,588,714**	**17,362,923**	**19,264,169**

APPENDIX 6.15

BRIDGE CONDITION

B R I D G E C O N D I T I O N S U R V E Y

Road-No. Bridge-No.	km	Bridge Name	Year of Constr.	Statical System Number of Spans	Typ of Cross Section	Bridge-Length [m]	Bridge-Width [m]	Bridgearea and Sizeclass [m²]	Length of Spans [m]	Width of Carriageway and Sidewalks [m]	Bearing Capacity according Design Loads	Mark of Condition
M-4 Br.: 1	2+420	Bridge across Railway Baku-Nakhchivan	1960	simply supported 3 Spans	multiwebed cross section 6 webs with cross beams cast in place concrete reinforced concrete	35.10	8.50	298,35 Class B	10,00 + 15,00 + 10,00	7 + 2 x 0,75	**H - 13 НГ - 60**	**3**
M-4 Br.: 2	17+723,5	Bridge across River Pirsaat	1962	simply supported 3 Spans	slab cast in place concrete reinforced concrete	17.05	8.46	148,05 Class B	3 x 5,60	6 + 2 x 1,30	**H - 13 НГ - 60**	**3**
M-4 Br.: 3	46+012	Bridge across Railway Baku-Nakhchivan	1976	simply supported 3 Spans	multiwebed cross section 8 webs without cross beams precast T-beams reinforced concrete	40.20	13.00	522,60 Class C	12,00 + 15,00 + 12,00	11,5 + 2 x 0,75	**H - 30 НК - 80**	**2**
M-4 Br.: 4	46+657	Bridge across Road Gazi-Mammad - Ali Bairamly	1978	simply supported 4 Spans	multiwebed cross section 13 webs without cr. beam precast T-beams reinforced concrete	74.01	21.00	1554,21 Class C	4 x 18,00	19 + 2 x 1,00	**H - 30 НК - 80**	**4**
M-4 Br.: 5	65+055	Railway bridge across the Road M-4		simply supported 3 Spans	Main span: Steel other spans: multiwebed cross section with 2 webs precast T-beams				clear width of the main span: 23,50 m	clear hight: 4,50 m		
M-4 Br.: 6	106+886	Bridge across River Girdiman	1965	simply supported 4 Spans	multiwebed cross section 6 webs with cross beams cast in place concrete reinforced concrete	65.30	8.50	555,05 Class C	16,40 + 16,76 + 16,72 + 16,26	7 + 2 x 0,75	**H - 13 НГ - 60**	**3**
M-4 Br.: 7	137+112	Bridge across irrigation chanal	1965	simply supported 3 Spans	multiwebed cross section 6 webs with cross beams precast T-beams reinforced concrete	25.20	7.50	189,00 Class B	3 x 8,00	6 + 2 x 0,75	**H - 13 НГ - 60**	**3**
M-4 Br.: 8	139+946	Bridge across Suchodol	1965	simply supported 1 Span	slab cast in place concrete reinforced concrete	5.60	11.20	62,72 Class A	5.60	7 + 2 x 2,10	**H - 13 НГ - 60**	**3**
M-4 Br.: 9	141+953	Bridge across dry chanal	1964	simply supported 2 Span	slab cast in place concrete reinforced concrete	11.25	7.80	87,75 Class A	2 x 5,60	7 + 2 x 0,4	**H - 13 НГ - 60**	**3**

B R I D G E C O N D I T I O N S U R V E Y

Road-No. Bridge-No.	km	Bridge Name	Year of Constr.	Statical System Number of Spans	Typ of Cross Section	Bridge-Length [m]	Bridge-Width [m]	Bridgearea and Sizeclass [m²]	Length of Spans [m]	Width of Carriageway and Sidewalks [m]	Bearing Capacity according Design Loads	Mark of Condition
M-4 Br.: 10	142+020	Bridge across chanal	1965	simply supported 3 Spans	multiwebed cross section 6 webs without cross beams precast T-beams reinforced concrete	26.78	8.50	227,63 Class B	3 x 8,66	7 + 2 x 0,75	**Н - 30 НК - 80**	3
M-4 Br.: 11	145+813	Bridge across irrigation chanal	1965	simply supported 1 Span	slab precast elements reinforced concrete	5.60	9.34	52,31 Class A	5.60	8,64 + 2 x 0,4	**Н - 13 НГ - 60**	3
M-4 Br.: 12	166+021	Bridge across River Geok-Tshaj	1965	simply supported 4 Spans	multiwebed cross section 6 webs with cross beams precast T-beams reinforced concrete	68.29	8.50	580,47 Class C	4 x 16,76	7 + 2 x 0,75	**Н - 13 НГ - 60**	3
M-4 Br.: 13	170+632	Bridge across irrigation chanal	1965	simply supported 1 Span	slab precast elements reinforced concrete	5.60	8.50	47,60 Class A	5.60	7,7 + 2 x 0,4	**Н - 13 НГ - 60**	3
M-4 Br.: 14	173+248	Bridge across irrigation chanal	1965	simply supported 1 Span	slab precast elements reinforced concrete	5.60	12.00	67,20 Class A	5.60	10,5 + 2 x 0,75	**Н - 13 НГ - 60**	3
M-4 Br.: 15	190+168	Bridge across River Turjan-Tshaj	1961	simply supported 3 Spans	multiwebed cross section 6 webs with cross beams precast T-beams reinforced concrete	52.07	9.00	468,63 Class B	3 x 16,76	7 + 2 x 1,00	**Н - 10 НГ - 30**	3
M-4 Br.: 16	205+309	Bridge across Nametahadskij Chanal	1965	simply supported 1 Span	multiwebed cross section 7 webs with cross beams precast T-beams reinforced concrete	17.54	10.00	175,40 Class B	1 x 16,76	8 + 2 x 1,0	**Н - 13 НГ - 60**	2
M-1 Br.: 17	215+567	Bridge across River Kura	1978	simply supported 8 Spans	multiwebed cross section 5 webs without cross beams precast T-beams prestressed concrete	265.60	11.00	2921,60 Class C	8 x 33,00	8 + 2 x 1,50	**Н - 30 НК - 80**	2
M-1 Br.: 18	219+461	Bridge across Railway Yevlakh-Aghdam	1979	simply supported 3 Spans	multiwebed cross section 6 webs with cross beams precast T-beams reinforced concrete	51.48	8.50	437,58 Class B	3 x 16,76	7 + 2 x 0,75	**Н - 13 НГ - 60**	3

B R I D G E C O N D I T I O N S U R V E Y

Road-No. Bridge-No.	km	Bridge Name	Year of Constr.	Statical System Number of Spans	Typ of Cross Section	Bridge-Length [m]	Bridge-Width [m]	Bridgearea and Sizeclass [m²]	Length of Spans [m]	Width of Carriageway and Sidewalks [m]	Bearing Capacity according Design Loads	Mark of Condition
M-1 Br.: 19 a	291+033	Bridge across Upper Garabakh Chanal old Bridge / left hand side	1950	simply supported 5 Spans	multiwebed cross section 6 webs without cross beams precast T-beams reinforced concrete	50.30	9.00	452,70 Class B	5 x 9,80	7,0 + 2 x 1,00	**H - 13 НГ - 60**	3
M-1 Br.: 19 b	291+033	Bridge across Upper Garabakh Chanal new Bridge / right hand side	1994	simply supported 3 Spans	multiwebed cross section 7 webs without cross beams precast T-beams reinforced concrete	55.20	12.00	662,40 Class C	3 x 18,00	10 + 2 x 0,75	**H - 30 НК - 80**	2
M-1 Br.: 20 a	303+402	Bridge across River Geran-Tshaj old Bridge / left hand side	1959	simply supported 3 Spans	multiwebed cross section 6 webs with cross beams precast T-beams reinforced concrete	35.28	8.50	299,88 Class B	3 x 11,36	7 + 2 x 0,75	**H - 13 НГ - 60**	3
M-1 Br.: 20 b	303+402	Bridge across River Geran-Tshaj new Bridge / right hand side	1994 not finished	simply supported 2 Spans	multiwebed cross section 7 webs without cross beams precast T-beams reinforced concrete	37.15	13.50	501,53 Class C	2 x 18,00	11,5 + 2 x 1,00	**H - 30 НК - 80**	3
M-1 Br.: 21 a	316+605	Bridge across Suchudol old Bridge / left hand side	1970	simply supported 1 Span	slab precast elements reinforced concrete	5.60	8.64	48,38 Class A	1 x 5,60	7 + 2 x 0,75	**H - 13 НГ - 60**	3
M-1 Br.: 21 b	316+605	Bridge across Suchudol new Bridge / right hand side	1993 not finished	simply supported 1 Span	multiwebed cross section 8 webs without cross beams precast T-beams reinforced concrete	13.10	12.50	163,75 Class B	1 x 12,00	11,5 + 2 x 0,5	**H - 30 НК - 80**	3
M-1 Br.: 22	319+729	Bridge across River Kjurek-Tshaj	1968	simply supported 2 Spans	multiwebed cross section 8 webs without cross beams precast T-beams prestressed concrete	45.62	13.50	615,87 Class C	2 x 22,16	11,5 + 2 x 1,00	**H - 30 НК - 80**	3
M-1 Br.: 23	331+293	Bridge across chanal	1965	simply supported 1 Span	slab precast elements reinforced concrete	5.60	10.56	59,14 Class A	5.60	8,0 + 2 x 1,28	**H - 13 НГ - 60**	3
M-1 Br.: 24	350+707	Road bridge across the M-1		simply supported 3 Spans	multiwebed cross section 6 webs without cross beams precast T-beams reinforced concrete				clear width of the main span: 15,00m	clear hight: 4,50 m		

B R I D G E C O N D I T I O N S U R V E Y

Road-No. Bridge-No.	km	Bridge Name	Year of Constr.	Statical System Number of Spans	Typ of Cross Section	Bridge-Length [m]	Bridge-Width [m]	Bridgearea and Sizeclass [m²]	Length of Spans [m]	Width of Carriageway and Sidewalks [m]	Bearing Capacity according Design Loads	Mark of Condition
M-1 Br.: 25	351+428	Bridge across River Ganja	1970	simply supported 2 Spans	multiwebed cross section 7 webs without cross beams precast T-beams prestressed concrete	45.62	10.00	456,62 Class B	2 x 22,16	8 + 2 x 1,00	**H - 30 НК - 80**	**3**
M-1 Br.: 26	355+053	Bridge across River Guru-Dere	1958	simply supported 3 Spans	multiwebed cross section 7 webs without cross beams precast T-beams reinforced concrete	35.23	10.00	352,30 Class B	3 x 11,36	8 + 2 x 1,00	**H - 13 НГ - 60**	**3**
M-1 Br.: 27	363+067	Bridge across River Koshkar-Tshaj	1970	simply supported 3 Spans	multiwebed cross section 7 webs with cross beams precast T-beams prestressed concrete	67.88	10.00	678,80 Class C	3 x 22,16	8 + 2 x 1,00	**H - 30 НК - 80**	**3**
M-1 Br.: 28	363+228	Bridge across Railway Ganja - Dashkesan	1964	simply supported 3 Spans	multiwebed cross section 6 webs without cross beams precast T-beams reinforced concrete	39.98	10.00	399,80 Class B	11,36+16,76+11,36	8 + 2 x1,00	**H - 13 НГ - 60**	**3**
M-1 Br.: 29	369+904	Bridge across Suchodol	1964	simply supported 1 Span	cast in place concrete slab widening: 2 precast concrete elements on both sides reinforced concrete	5.60	12.60	70,56 Class A	5.60	8,5 + 2 x 0,75	**H - 13 НГ - 60**	**2**
M-1 Br.: 30	372+201	Bridge across road with lokal distinction	1965	continuous 2 Spans	slab cast in place concrete reinforced concrete	12.30	33.50	412,05 Class B	5,90 + 5,95	7 m Carriageway the rest unpaved	**H - 13 НГ - 60**	**2**
M-1 Br.: 31	375+461	Bridge across Suchodol	1965	simply supported 1 Span	cast in place concrete slab widening: 2 precast concrete elements on both sides reinforced concrete	5.60	13.00	72,80 Class A	5.60	8,5 + 2 x 2,25	**H - 13 НГ - 60**	**3**
M-1 Br.: 32	382+690	Bridge across River Shamchor-Tshaj	1964	simply supported 3 Spans	multiwebed cross section 6 webs with cross beams precast T-beams reinforced concrete	67.88	8.50	576,98 Class C	3 x 22,16	7 + 2 x 0,75	**H - 13 НГ - 60**	**3**
M-1 Br.: 33	386+264	Bridge across irrigation chanal	1964	simply supported 1 Span	slab cast in place concrete reinforced concrete	3.60	12.90	46,44 Class A	3.60	8 + 2 x 2,45	**H - 13 НГ - 60**	**3**

B R I D G E C O N D I T I O N S U R V E Y

Road-No. Bridge-No.	km	Bridge Name	Year of Constr.	Statical System Number of Spans	Typ of Cross Section	Bridge-Length [m]	Bridge-Width [m]	Bridgearea and Sizeclass [m²]	Length of Spans [m]	Width of Carriageway and Sidewalks [m]	Bearing Capacity according Design Loads	Mark of Condition
M-1 Br.: 34	386+312	Bridge across irrigation chanal	1964	simply supported 1 Span	slab cast in place concrete reinforced concrete	3.60	12.90	46,44 Class A	3.60	8 + 2 x 2,45	**H - 13 НГ - 60**	**3**
M-1 Br.: 35	391+293	Road bridge across the M-1		simply supported 3 Spans	multiwebed cross section 7 webs without cross beams precast T-beams reinforced concrete				clear width of the main span: 16,50 m	clear hight: 4,50 m		
M-1 Br.: 36	393+132	Bridge across Railway Baku - Tbilisi	1964	simply supported 3 Spans	multiwebed cross section 5 webs without cross beams precast T-beams reinforced concrete	43.68	8.00	349,44 Class B	3 x 14,16	7 + 2 x 0,5	**H - 13 НГ - 60**	**3**
M-1 Br.: 37	393+895	Bridge across River Dshagri-Tshaj	1965	simply supported 1 Span	multiwebed cross section 6 webs with cross beams precast T-beams reinforced concrete	23.36	8.50	198,56 Class B	22.16	7 + 2 x 0,75	**H - 13 НГ - 60**	**3**
M-1 Br.: 38	396+418	Bridge across Valley Ganli-Gobu	1965	simply supported 1 Span	multiwebed cross section 10 webs without cr. beams precast T-beams reinforced concrete	19.10	15.00	286,50 Class B	6 beams: 14,16 Widening with 2 beams on each side: 18,00	13 + 2 x 1,00	**H - 13 НГ - 60**	**3**
M-1 Br.: 39	411+143	Bridge across River Dsegam-Tshaj	1967	simply supported 3 Spans	multiwebed cross section 6 webs with cross beams precast T-beams reinforced concrete	67.88	8.50	576,98 Class C	3 x 22,16	7 + 2 x 0,75	**H - 13 НГ - 60**	**2**
M-1 Br.: 40	418+994	Bridge across Suchodol	1966	simply supported 1 Span	slab cast in place concrete reinforced concrete	5.60	10.00	56,00 Class A	5.60	8 + 2 x 2,00	**H - 13 НГ - 60**	**3**
M-1 Br.: 41	425+827	Bridge across River Asrik-Tshaj	1963	simply supported 1 Span	multiwebed cross section 6 webs with cross beams precast T-beams reinforced concrete	23.36	8.50	198,56 Class B	22.16	7 + 2 x 0,75	**H - 13 НГ - 60**	**3**
M-1 Br.: 42	428+603	Bridge across River Touz-Tshaj	1969	simply supported 6 Spans	multiwebed cross section 7 webs without cross beams precast T-beams prestressed concrete	134.66	12.00	1615,92 Class C	6 x 22,16	9 + 2 x 1,50	**H - 13 НГ - 60**	**2**

B R I D G E C O N D I T I O N S U R V E Y

Road-No. Bridge-No.	km	Bridge Name	Year of Constr.	Statical System Number of Spans	Typ of Cross Section	Bridge-Length [m]	Bridge-Width [m]	Bridgearea and Sizeclass [m²]	Length of Spans [m]	Width of Carriageway and Sidewalks [m]	Bearing Capacity according Design Loads	Mark of Condition
M-1 Br.: 43	436+164	Bridge across irrigation chanal	1965	frame 2 Spans	slab cast in place concrete reinforced concrete	6.60	16.00	105,60 Class B	2 x 3,30	8,2 m Carriageway the rest unpaved	**H - 13 НГ - 60**	3
M-1 Br.: 44	447+650	Bridge across River Gasan-Su	1926	simply supported 1 Span with cantilevers on both sides all girders with haunches	multiwebed cross section 4 webs with cross beams cast in place concrete reinforced concrete	37.94	8.50	322,49 Class B	7,87 + 22,20 + 7,87	7 + 2 x 0,75	**H - 13 НГ - 60**	3
M-1 Br.: 45	451+681	Bridge across Railway Baku - Tbilisi	1964	simply supported 3 Spans	multiwebed cross section 6 webs with cross beams precast T-beams reinforced concrete	39.20	8.50	333,20 Class B	10,70 + 16,00 + 10,70	7 + 2 x 0,75	**H - 13 НГ - 60**	3
M-1 Br.: 46	457+839	Bridge across valley (ravine)	1965	simply supported 1 Span	multiwebed cross section 6 webs without cross beams cast in place concrete reinforced concrete	14.60	8.50	124,10 Class B	13.40	7 + 2 x 0,75	**H - 13 НГ - 60**	3
M-1 Br.: 47	462+610	Bridge across River Aghstafa-Tshaj	1965/ 1975	simply supported 6 Spans	multiwebed cross section Span 1-3: 7 webs with cross beams cast in place concrete reinforced concrete Span 4-6: 4 webs without cross beams precast T-beams prestressed concrete	131.18	10.00	1311,80 Class C	Span 1-3: 3 x 22,16 Span 4-6: 3 x 21,00	7 + 2 x 1,50	**H - 13 НГ - 60**	3
M-1 Br.: 48	463+863	Railway bridge across the M-1		simply supported 3 Spans	multiwebed cross section precast T-beams reinforced concrete				clear width of the main span: 24,00 m	clear hight: 4,50 m		
M-1 Br.: 49	481+354	Bridge across valley (ravine)	1970	simply supported 3 Spans	slab precast elements reinforced concrete	16.80	15.65	262,92 Class B	3 x 5,60	13,2 + 1,0 + 0,25	**H - 13 НГ - 60**	3

B R I D G E C O N D I T I O N S U R V E Y

Road-No. Bridge-No.	km	Bridge Name	Year of Constr.	Statical System Number of Spans	Typ of Cross Section	Bridge-Length [m]	Bridge-Width [m]	Bridgearea and Sizeclass [m²]	Length of Spans [m]	Width of Carriageway and Sidewalks [m]	Bearing Capacity according Design Loads	Mark of Condition
M-1 Br.: 50	485+557	Bridge across River Indza-Tshaj	1969	simply supported 3 Spans	multiwebed cross section 6 webs without cross beams precast T-beams prestressed concrete	67.88	10.00	678,80 Class C	3 x 22,16	8 + 2 x 1,00	**H - 30 HK - 80**	**2**
M-1 Br.: 51	491+643	Bridge across valley (ravine)	1996	simply supported 2 Spans	multiwebed cross section 8 webs without cross beams precast T-beams reinforced concrete	31.20	14.00	436,80 Class B	2 x 15,00	11 + 2 x 1,00	**H - 30 HK - 80**	**3**
M-1 Br.: 52	501+350	Red Bridge across River Chram-Tshaj		Arch bridge 3 Spans	Arches made of artifical stones	175.00	5.20	910,00 Class C		4.00		

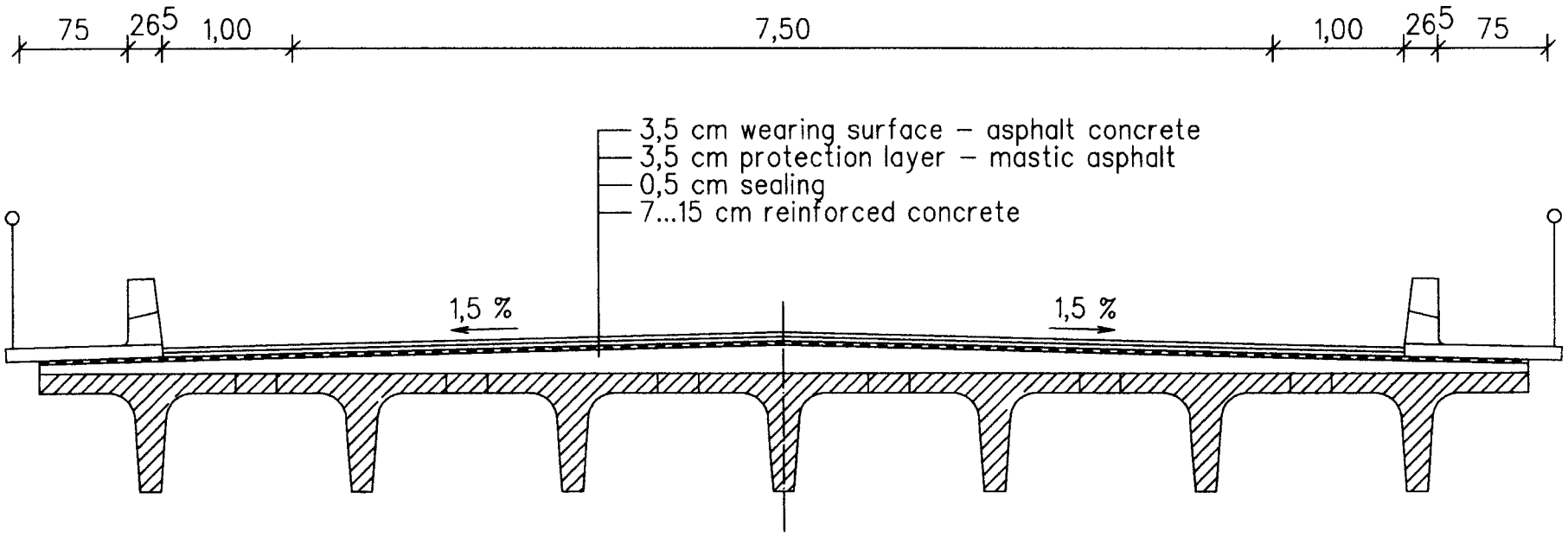
APPENDIX 6.16

TYPICAL CROSS SECTION

Rehabilitaton with new carriageway and new sidewalks

Cross section

M 1 : 50



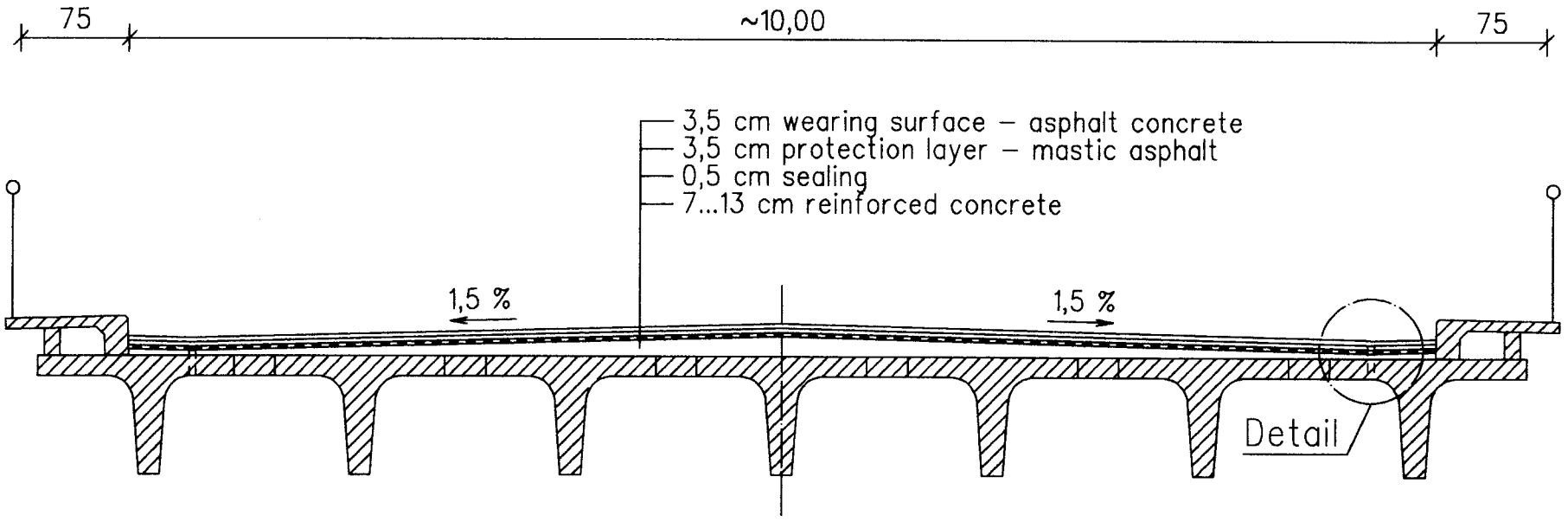
legend:

remainig parts of the structure

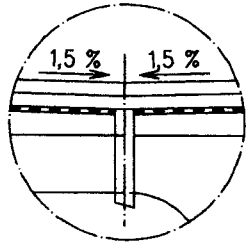
Rehabilitation with new carriageway

Cross section

M 1 : 50



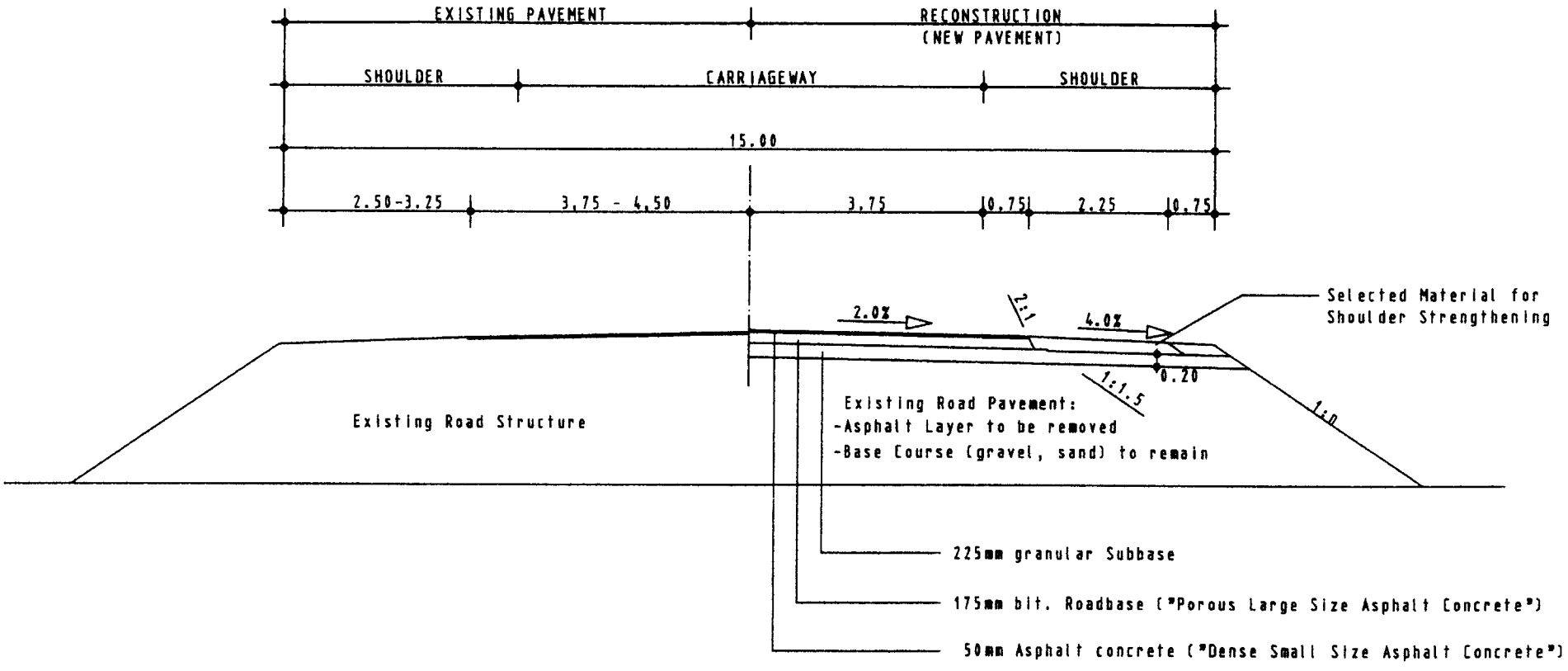
Detail



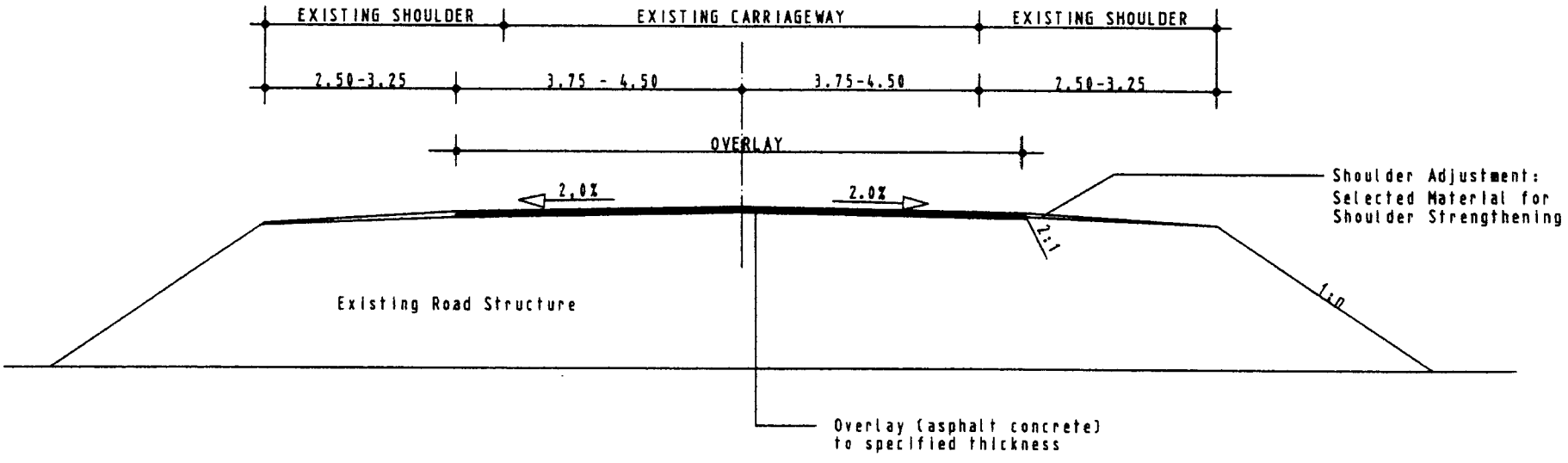
legend:

remainig parts of the structure

Preliminary Road Relabilitation Design
Case: Reconstruction of Pavement (New Pavement)



Preliminary Road Rehabilitation Design
Case: Overlay



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APPENDIX 7

APPENDIX 7.1

UNIT OPERATING COSTS

UNIT OPERATING COSTS: Surface Dressing

Equipment costs per month:

Item	No.	Price US $	Service life years	Interest Rate %	Costs per month US $
Bitumen Distributor	1	60,000	8	7.0	4,200
Chipping Spreader	1	30,000	8	7.0	2,100
Rollers	2	60,000	8	7.0	8,400
Loader	1	150,000	8	3.5	5,250
Trucks	6	30,000	8	3.5	6,300
Miscellaneous	1	5,000		7.0	350
Tools					500
Total					**27,100**
Subtotal costs per month					**41,151**
Overhead (30 %)					12,345
Equipment and Labor Costs per month					**53,496**

Operating Costs per month:

Item			Unit Price US $	Costs per month US $
Fuel	640 l / month	21 working days	0.32	4301
Labor costs	25 persons		260	6500
50 % administrative costs				3250
Total				**14051**

Unit Costs per m²:

Estimated Output per month: 160000 m²

Costs per m² **0.33**

UNIT OPERATING COSTS: Mixing

Equipment costs per month:

Item	No.	Price US $	Service life years	Interest Rate %	Costs per month US $
Asphalt Plant	1	1,700,000	15	4.0	68,000
Loader	1	150,000	8	3.5	5,250
Total					**73,250**

Operating Costs per month:

Item		Unit Price US $	Costs per month US $
Fuel	130 t / month	125	16,250
Electricity			1,000
Labor costs	10 persons	260	2,600
50 % administrative costs			1,300
Total			**21,150**

Subtotal costs per month	**94,400**
Overhead (25 %)	23,600
Equipment and Labor Costs per month	**118,000**

Unit Costs per ton:

Estimated Output per month: 11500 ton/month

Costs per ton: **10.26**

UNIT OPERATING COSTS: Asphalt Laying

Equipment costs per month:

Item	No.	Price US $	Service life years	Interest Rate %	Costs per month US $
Paver	1	200,000	8	7.0	14,000
Rollers	3	60,000	8	7.0	12,600
Spreader	1	30,000	8	7.0	2,100
Trucks	10	30,000	8	3.5	10,500
Miscellaneous	1	20,000	8	7.0	1,400
Tools					1,500
Total					**42,100**

Operating Costs per month:

Item			Unit Price US $	Costs per month US $
Fuel	1120 l / day	21 working days	0.32	7,526
Labor costs	30 persons		260	7,800
50 % administrative costs				3,900
Total				**19,226**

Subtotal costs per month	**61,326**
Overhead (30 %)	18,398
Equipment and Labor Costs per month	**79,724**

Unit Costs per m²:

Estimated Output per month: 95,000 m²/month

Costs per m²: 0.84

UNIT OPERATING COSTS: Base Course Laying (granular)

Equipment costs per month:

Item	No.	Price US $	Service life years	Interest Rate %	Costs per month US $
Grader	2	200,000	8	7.0	28,000
Rollers	2	60,000	8	7.0	8,400
Excavator	1	150,000	8	7.0	10,500
Trucks	8	30,000	8	3.5	8,400
Miscellaneous	1	30,000	8	7.0	2,100
Tools					1,500
Total					**58,900**

Operating Costs per month:

Item			Unit Price US $	Costs per month US $
Fuel	960 l / day	21 working days	0.32	6,451
Labor costs	40 persons		260	10,400
50 % administrative costs				5,200
Total				**22,051**

Subtotal costs per month	**80,951**
Overhead (30 %)	24,285
Equipment and Labor Costs per month	**105,237**

Unit Costs per m²:

Estimated Output per month: 16,000 m²/month (depense of the average output of reconstruction)

Costs per m²: 6.58

UNIT OPERATING COSTS: Patching (replacing wearing and base course)

Equipment costs per month:

Item	No.	Price US $	Service life years	Interest Rate %	Costs per month US $
Trucks	2	30,000	8	3.5	2,100
Compactor	1	15,000	8	7.0	1,050
Miscellaneous	1	30,000	8	7.0	2,100
Tools					2,000
Total					**7,250**
Subtotal costs per month					**14,175**
Overhead (30 %)					4,253
Equipment and Labor Costs per month					**18,428**

Operating Costs per month:

Item			Unit Price US $	Costs per month US $
Fuel	160 l / day	21 working days	0.32	1,075
Labor costs	15 persons		260	3,900
50 % administrative costs				1,950
Total				**6,925**

Unit Costs per m²:

Estimated Output per month: 1,900 m²/month

Costs per m²: 9.70

UNIT OPERATING COSTS: Bitumen distribution

Equipment costs per month:

Item	No.	Price US $	Service life years	Interest Rate %	Costs per month US $
Bitumen Distributor	1	60,000	8	7.0	4,200
Miscellaneous	1	500		7.0	35
Tools					50
Total					**4,285**
Subtotal costs per month					**5,452**
Overhead (30 %)					1,636
Equipment and Labor Costs per month					**7,088**

Operating Costs per month:

Item			Unit Price US $	Costs per month US $
Fuel	20 l / day	21 working days	0.10	42
Labor costs	3 persons		250	750
50 % administrative costs				375
Total				**1167**

Unit Costs per m²:

Estimated Output per month: 16,000 m² (depense of the average output of reconstruction)

Costs per m² **0.44**

APPENDIX 7.2

ROAD MAINTENANCE UNIT COSTS

Road Maintenance Unit Costs

Composition of Asphalt Overlay

Bitumen	6 %
Filler	7 %
Sand	30 %
Aggregate	57 %

Composition of Levelling Course

Bitumen	5 %
Filler	2 %
Sand / Aggregate	93 %

Composition of Bituminous Roadbase

Bitumen	6 %
Filler	5 %
Sand	35 %
Aggregate	54 %

Approximate material densities

- Bitumen	1.1 ton/m³
- Sand	1.5 ton/m³
- Aggregate	1.7 ton/m³
- Asphalt concrete	2.4 ton/m³

Weights of Overlay courses

- 30 mm	72 kg/m²
- 40 mm	96 kg/m²
- 50 mm	120 kg/m²
- 60 mm	144 kg/m²
- 90 mm	216 kg/m²

Sealing

- Bitumen (emulsion) 2 kg/m²	0.002 x 121.00 US $ /t =	0.24 US $/m²
- Chipping 18 kg/m²	0.018 x 13.65 US $/t =	0.25 US $/m²
	Total Material Cost =	0.49 US $/m²
- Assumed Equipment and Labour Costs		0.32 US $/m²
	Total	**0.81 US $/m²**

Overlay

- Aggregate 54%	0.57 x 11.80 US $/t =	6.72 US $/t
- Sand 30 %	0.30 x 12.33 US $/t =	3.70 US $/t
- Filler 7%	0.07 x 40.00 US $/t =	2.80 US $/t
- Bitumen 6 %	0.06 x 121.00 US $/t =	7.26 US $/t
	Total Material Cost =	**20.48 US $/t**

Overlay 40 mm

- Material Costs	(96/1000) x 20.48 US $/t =	1.97 US $/m²
- Assumed Mixing Costs	(96/1000) x 10.26 US $/t) =	0.98 US $/m²
- Assumed Laying Costs		0.83 US $/m²
- Tack Coat		0.54 US $/m²
	Cost of finished Overlay	**8.22 US $/m²**

Overlay 50 mm

- Material Costs	(120/1000)x 20.48 US $/t =	2.46 US $/m²
- Assumed Mixing Costs	(120/1000)x10.26 US $/t) =	1.23 US $/m²
- Assumed Laying Costs		0.83 US $/m²
- Tack Coat		0.54 US $/m²
	Cost of finished Overlay	**8.96 US $/m²**

Overlay 60 mm

- Material Costs	(144/1000)x 20.48 US $/t =	2.95 US $/m²
- Assumed Mixing Costs	(144/1000)x10.26 US $/t) =	1.48 US $/m²
- Assumed Laying Costs		0.83 US $/m²
- Tack Coat		0.54 US $/m²
	Cost of finished Overlay	**9.70 US $/m²**

Overlay 90 mm

- Material Costs 1st layer 40 mm		3.78 US $/m²
- Material Costs 2nd layer 50 mm		4.53 US $/m²
- Assumed Mixing Costs	(216/1000)x10.26 US $/t) =	2.22 US $/m²
- Assumed Laying Costs	(2 x 0.83 US $/m²)	1.66 US $/m²
- Tack Coat	(2 x 0.54 US $/m²)	1.08 US $/m²
	Cost of finished Overlay	**21.07 US $/m²**

Levelling Course

- Aggregate / Sand 93 %	0.93 x 11.80 US $/t =	10.97 US $/t
- Filler 2%	0.02 x 40.00 US $/t =	0.80 US $/t
- Bitumen 5 %	0.05 x 121.00 US $/t =	6.05 US $/t
	Total Material Cost =	**17.82 US $/t**

Levelling Course 30 mm

- Material Costs	(74/1000) x 17.82 US $/t =	1.32 US $/m²
- Assumed Mixing Costs	(74/1000) x 10.26 US $/t) =	0.76 US $/m²
- Assumed Laying Costs		0.83 US $/m²
- Tack Coat		0.54 US $/m²
	Cost of finished Levelling	**7.35 US $/m²**

Bituminous Roadbase

- Aggregate 54%	0.54 x 11.80 US $/t =	6.37 US $/t
- Sand 35 %	0.35 x 12.33 US $/t =	4.32 US $/t
- Filler 5%	0.05 x 40.00 US $/t =	2.00 US $/t
- Bitumen 6 %	0.06 x 121.00 US $/t =	7.26 US $/t
	Total Material Cost =	**19.95 US $/t**

Reconstruction

- Bituminous Surface 50 mm		8.96 US $/m²
- Bituminous roadbase 175 mm		
Material Costs	(420/1000)x19.95 US $/t =	8.38 US $/m²
Assumed Mixing Costs	(420/1000)x10.26 US $/t) =	4.31 US $/m²
Assumed Laying Costs		0.83 US $/m²
	Cost of finished Roadbase	13.52 US $/m²
- Granular subbase 225 mm		
	(225/1000)x19.70 US $/m³=	4.43 US $/m²
Assumed Laying Costs		6.57 US $/m²
- Granular capping layer 200 mm		
	(200/1000)x13.33 US $/m³=	2.67 US $/m²
Assumed Laying Costs		6.57 US $/m²
	Total	**42.72 US $/m²**
- Remove of existing bit. Overlay		3.21 US $/m²
	Total Reconstruction	**45.93 US $/m²**

Construction (Upgrading)

- Bituminous Surface 50 mm		8.96 US $/m²
- Bituminous roadbase 200 mm		
Material Costs	(480/1000)x19.95 US $/t =	9.58 US $/m²
Assumed Mixing Costs	(480/1000)x10.26 US $/t) =	4.92 US $/m²
Assumed Laying Costs		0.83 US $/m²
	Cost of finished Roadbase	15.33 US $/m²
- Granular subbase 250 mm		
	(250/1000)x19.70 US $/m³=	4.93 US $/m²
Assumed Laying Costs		6.57 US $/m²
- Granular capping layer 200 mm		
	(200/1000)x13.33 US $/m³=	2.67 US $/m²
Assumed Laying Costs		6.57 US $/m²
	Total Construction	**45.03 US $/m²**

Patching

Patching comprises replacing of the wearing and base course.

- Material Costs	(288/1000)x 20.48 US $/t =	5.90 US $/m²
- Assumed Mixing Costs	(288/1000)x10.26 US $/t) =	2.95 US $/m²
- Assumed Equipment and Labour Costs		9.60 US $/m²
- Tack Coat		0.54 US $/m²
	Total	**22.89 US $/m²**

APPENDIX 7.3

COST ESTIMATES

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 1 - M4: Alyat - Gazi-Mammad; km 0+000 - km 43+450
Cost Estimate
-Pavement-

Geometry			Repair / Reconstruction										Recon-struction
Chainage	Width	Added Area	Maintenance	Sealing	Overlay			Potholes	Settlements	Milling	Patching	Recon-struction	- Complete -
					40mm	60mm	90mm						
km	m	m^2	km	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2
0	11.40												
1,067	14.30	350											14061
1,240	7.45												1881
2,000	8.00												5871
3,000	7.70												7850
4,000	7.50												7600
5,260	7.45												9419
5,350	27.95												1593
6,353	28.20												28159
7,311	28.00												26920
7,542	26.00												6237
8,322	28.30	500											21677
9,601	28.00												36004
11,172	7.50												27885
12,402	7.50												9225
13,004	7.50												4515
13,934	8.50												7440
14,784	8.50												7225
15,822	8.00												8564
16,855	8.60												8574
17,919	8.00												8831
19,086	7.70												9161
20,156	7.80												8293
21,074	7.80												7160
22,107	7.80												8057
23,162	7.80												8229
24,199	7.80												8089
25,312	7.80	1420											10101
26,350	8.30	2200											10556
27,408	7.60												8411
28,444	7.50												7822
29,479	7.80												7918
30,679	7.50	9120											18300
31,574	7.80	1800											8647
32,631	7.50	2900											10986
33,678	7.80												8010
34,678	7.50												7650
35,699	7.80	1000											8811
36,874	7.70												9106
37,794	7.50												6992
38,773	7.65												7416
39,833	8.00												8295
41,062	8.60												10201
42,043	8.50												8388
43,103	9.00	875											10150

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 1 - M4: Alyat - Gazi-Mammad; km 0+000 - km 43+450
Cost Estimate
-Pavement-

Geometry			Repair / Reconstruction										Recon-struction
Chainage	Width	Added Area	Maintenance	Sealing	Overlay			Potholes	Settlements	Milling	Patching	Recon-struction	- Complete -
					40mm	60mm	90mm						
km	m	m^2	km	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2
43,450	9.00	2000											5123
Subtotal Km 0+000 - 43+450		22165											471400

Calculation											
Unit Price											45.93
Subtotal Km 0+000 - 43+450											**21,651,414.63**

Total Bill No. Pavement repair/reconstruction Km 0+000 - 43+450	**US $**	

Total Bill No. Pavement reconstruction (complete) Km 0+000 - 43+450	**US $**	**21,651,414.63**

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 1 - M4: Alyat - Gazi-Mammad; km 0+000 - km 43+450
Cost Estimate
-Earthwork-

Repair / Reconstruction								Shoulder	Reconstruction				
Chainage	Width left	Width right	Shoulder Adjustment				Earthworks	Regravelling	Chainage	Width	Added Area	Shoulder Adjustment	Earthworks
			Overlay 40 mm	Overlay 60 mm	Overlay 90 mm	Reconstruction							
km	m	m	m^3	m^3	m^3	m^3	m^3	m^2	km	m	m^2	m^3	m^3
0	5.35	1.80							0	11.40	0		
1,067	2.15	2.35						6215	1,067	14.30	350	2534	5050
1,240	3.00	4.00						995	1,240	7.45	0	419	739
2,000	3.20	3.00						5016	2,000	8.00	0	2040	2768
3,000	3.00	3.00						6100	3,000	7.70	0	2545	3667
4,000	3.00	3.00						6000	4,000	7.50	0	2515	3617
5,260	2.50	2.70						7056	5,260	7.45	0	3006	4527
5,350	2.00	2.00						414	5,350	27.95	0	182	507
6,353	1.35	1.30						3335	6,353	28.20	0	1476	7736
7,311	2.00	1.80						3090	7,311	28.00	0	1364	7393
7,542	1.00	2.15						803	7,542	26.00	0	355	1732
8,322	0.50	1.20						1892	8,322	28.30	500	779	5971
9,601	1.00	1.20						2494	9,601	28.00	0	976	9883
11,172	3.50	2.50						6441	11,172	7.50	0	2849	8872
12,402	3.50	2.50						7380	12,402	7.50	0	3056	4425
13,004	3.50	2.80						3702	13,004	7.50	0	1528	2166
13,500	3.50	3.00						3174	13,934	8.50	0	1301	3439
13,934	3.80	2.50						2778	14,784	8.50	0	1132	3228
14,784	4.50	3.00						5865	15,822	8.00	0	2303	3890
15,822	3.50	3.20						7370	16,855	8.60	0	2901	3881
16,855	3.20	2.80						6560	17,919	8.00	0	2702	3998
17,919	3.00	3.00						6384	19,086	7.70	0	2674	4280
19,086	3.60	3.00						7352	20,156	7.80	0	3036	3903
20,156	3.50	4.00						7544	21,074	7.80	0	3003	3358
21,074	3.20	3.10						6334	22,107	7.80	0	2541	3778
22,107	4.00	4.00						7386	23,162	7.80	0	2924	3859
23,162	3.00	3.00						7385	24,199	7.80	0	2948	3793
24,199	3.50	3.50						6741	25,312	7.80	1420	2760	4355
25,312	3.80	3.70						8069	26,350	8.30	2200	3177	4288
26,350	2.80	3.50						7162	27,408	7.60	0	2871	3901
27,408	3.00	3.00						6507	28,444	7.50	0	2705	3737
28,444	3.00	3.00						6216	29,479	7.80	0	2605	3754
29,479	2.60	3.00						6003	30,679	7.50	9120	2536	6177
30,679	3.00	3.00						6960	31,574	7.80	1800	2940	3607
31,574	3.50	3.00						5594	32,631	7.50	2900	2316	4414
32,631	3.00	3.80						7029	33,678	7.80	0	2856	3798
33,678	3.80	3.50						7381	34,678	7.50	0	2936	3627
34,678	2.50	2.80						6300	35,699	7.80	1000	2605	3904
35,699	3.80	3.30						6330	36,874	7.70	0	2629	4286
36,874	3.30	3.30						8049	37,794	7.50	0	3236	3328
37,794	3.00	3.00						5796	38,773	7.65	0	2396	3537
38,773	3.50	3.50						6364	39,833	8.00	0	2606	3882
39,833	4.00	3.50						7685	41,062	8.60	0	3024	4618
41,062	3.00	2.70						8111	42,043	8.50	0	3299	3735

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 1 - M4: Alyat - Gazi-Mammad; km 0+000 - km 43+450
Cost Estimate
-Earthwork-

Repair / Reconstruction								Shoulder	Reconstruction				
Chainage	Width left	Width right	Shoulder Adjustment: Overlay 40 mm	Overlay 60 mm	Overlay 90 mm	Reconstruction	Earthworks	Regravelling	Chainage	Width	Added Area	Shoulder Adjustment	Earthworks
km	m	m	m^3	m^3	m^3	m^3	m^3	m^2	km	m	m^2	m^3	m^3
42,043	4.00	3.50						6475	43,103	9.00	875	2634	4253
43,103	2.80	3.50						7314	43,450	9.00	2000	2935	1752
43,450	2.91	3.50						2205				905	
Average	3.07	2.93											
Subtotal Km 0+00 - 43+450			0	0	0	0	0	261354			22165	107061	185415

Calculation									
Unit Price						0.75		13.33	1.46
Subtotal Km 0+000 - 43+450						**196,015.32**		**1,427,119.53**	**270,705.96**

Total Bill No. Earthwork repair/reconstruction
Km 0+000 - 43+450 **US $**

Total Bill No. Earthwork reconstruction (complete)
Km 0+000 - 43+450 **US $** **1,893,840.82**

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 1 - M4: Alyat - Gazi-Mammad; km 0+000 - km 43+450
Cost Estimate

-Drainage-

No	Station	EXISTING STRUCTURE				EXISTING DAMAGE									MAINTENANCE ACTIVITY				REQUIRED CULVERT LENGTH					
		Type	Mat.	Length	Size/Dia	Silted/Blocked		Scour			Structural Damage				Cleaning	Backfill of scoured areas	Repair	Reconst	500 mm Dia.	750 mm Dia.	1000 mm Dia.	1250 mm Dia.	1500 mm Dia.	Other
						Partial	Total	Little Erosion	Erosion without Settlement	Erosion with Underm.	Small	Uneven Settlement	Damaged Inlet/ Outlet	Broken Culvert										
	(km)			(m)	(mm)				m^2	m^2		m^2	m^2	m	m	m^2	m^2		m	m	m	m	m	m
1	3,081	P	RC	22.0	1200						●													
2	4,932	S	RC	12.0	3800x1700																			
3	6,293	P	RC	33.0	1000	●									33.00									
4	7,577	P	M	41.5	1500		●●								41.50									
5	9,429	B	RC	32.0	2000x2000	●									32.00									
6	10,615	B/S	RC	12.0 + 15.0	3800x1700 + 2000x2000	●									27.00									
7	11,786	S	RC	12.0	3800x1700																			
8	13,133	S	RC	10.0	2000x1700	●					●		2.00		10.00		2.00							
9	14,574	P	RC	18.0	750		●●								18.00									
10	15,151	S	RC	11.5	3800x1700																			
11	15,746	P	RC	18.0	750		●●								18.00									
12	15,948	P	RC	17.0	750		●●								17.00									
13	16,084	P	RC	17.0	750	●									17.00									
14	16,985	P	RC	16.0	750		●●								16.00									
15	17,571	P	RC	16.0	750	●									16.00									
16	18,070	P	RC	16.0	750		●●								16.00									
17	18,240	P	RC	14.0	750		●●								14.00									
18	18,369	P	RC	17.0	1250		●●								17.00									
19	18,590	P	RC	16.0	750		●●								16.00									
20	19,329	P	RC	18.0	750	●									18.00									
21	21,773	P	RC	17.0	1000	●									17.00									
22	22,450	P	M	31.0	1250		●●								31.00									
23	23,487	P	M	35.0	1250 + 1500	●									35.00									
24	24,582	P	RC	15.0	1000		●●				●		2.50		15.00		2.50							
25	25,084	P	RC/M	16.0+22.0	750 + 1250(2)						●		1.50				1.50							
26	25,560	P	RC	14.0	1000		●●				●		2.00		14.00		2.00							
27	26,644	P	RC	16.0	750		●●								16.00									
28	27,145	P	RC	17.0	750		●●								17.00									
29	29,394	S	RC	9.6	2200x1800																			
30	29,833	P	RC	16.0	1200(2)																			
31	30,306	P	RC	16.0	1200																			
32	30,639	S	RC	9.0	2000x1700	●					●		0.50		9.00		0.50							
33	31,115	S	RC	40.0	5000x2800																			
34	31,365	P	RC	16.0	1200																			
35	31,924	P	RC	16.0	1200	●					●		0.50		16.00		0.50							
36	32,352	P	RC	16.0	1200																			
37	32,703	P	RC	24.0	1250(2)																			
38	33,174	P	RC	15.5	1000	●									15.50									
39	33,348	P	RC	21.0	1000(2)	●					●		0.60		21.00		0.60							
40	33,503	P	RC	16.0	1200																			
41	33,836	P	RC	16.0	1250																			
42	37,431	P	RC	16.0	1250						●		0.40				0.40							
43	39,097	P	RC	22.0	1000 + 750 + 1000																			
44	39,636	B	RC	20.0	2000x2000(2)																			
45	40,393	B	RC	26.0	2000x2000																			
46	40,720	B	RC	46.0	2000x2000																			

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 1 - M4: Alyat - Gazi-Mammad; km 0+000 - km 43+450
Cost Estimate

-Drainage-

No	Station	EXISTING STRUCTURE				EXISTING DAMAGE									MAINTENANCE ACTIVITY				REQUIRED CULVERT LENGTH					
		Type	Mat.	Length	Size/Dia	Silted/Blocked		Scour			Structural Damage				Cleaning	Backfill of scoured areas	Repair	Reconst.	500 mm Dia.	750 mm Dia.	1000 mm Dia.	1250 mm Dia.	1500 mm Dia.	Other
						Partial	Total	Little Erosion	Erosion without Settlement	Erosion with Underm.	Small	Uneven Settlement	Damaged Inlet/ Outlet	Broken Culvert										
	(km)			(m)	(mm)				m^2	m^2		m^2	m^2	m	m	m^2	m^2		m	m	m	m	m	m
47	41,702	B	RC	52.0	2000x2000																			
48	42,788	P	RC	22.0	1000(2)																			
Subtotal 0+000 - 43+450															533.00	0.00	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Calculation																			
Unit Price											4.20	5.93	64.20				237.00		345.70	
Subtotal Km 0+000 - 43+450											**2,238.60**	**0.00**	**642.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Improvement of Sidedrainages Km 0+000 - 43+450	**Length x 4.20 US $/m**																			**182,490.00**

Total Bill No. Drainage Km 0+000 - 43+450	**US $**	**185,370.60**

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 1 - M4: Alyat - Gazi-Mammad; km 0+000 - km 43+450
Cost Estimate

-Marking & Safety-

Station	Length	Embankment Height	Crash barrier (R + L)
km	km	m	m
0		1.4	
1,067	1.067	2.0	
1,240	0.173	8.0	346
2,000	0.760	2.5	1,520
3,000	1.000	2.0	
4,000	1.000	2.8	2,000
5,260	1.260	2.0	
5,350	0.090	1.8	
6,353	1.003	1.2	
7,311	0.958	0.8	
7,542	0.231	1.0	
8,322	0.780	1.2	
9,601	1.279	1.7	
11,172	1.571	1.4	
12,402	1.230	2.1	2,460
13,004	0.602	1.7	
13,934	0.930	1.2	
14,784	0.850	1.2	
15,822	1.038	1.1	
16,855	1.033	1.5	
17,919	1.064	1.0	
19,086	1.167	1.2	
20,156	1.070	1.0	
21,074	0.918	0.8	
22,107	1.033	0.8	
23,162	1.055	1.0	
24,199	1.037	2.0	
25,312	1.113	1.6	
26,350	1.038	1.0	
27,408	1.058	1.0	
28,444	1.036	0.8	
29,479	1.035	0.9	
30,679	1.200	0.2	
31,574	0.895	0.4	
32,631	1.057	0.6	
33,678	1.047	1.0	
34,678	1.000	0.8	
35,699	1.021	0.5	
36,874	1.175	0.5	
37,794	0.920	0.8	
38,773	0.979	9.5	1,958
39,833	1.060	10.5	2,120
41,062	1.229	13.5	2,458
42,043	0.981	2.5	1,962
43,103	1.060	0.8	
43,450	0.347	2.2	694
Average		2.08	
	43.450		15,518

Calculation			
Crash Barrier	23.20		360,017.60
Marking	321.75	43.450	13,980.04
Marker post Total	1382.80	43.450	60,082.66
Km - post Total	148.00	43.450	6,430.60
Sign Total	674.00	43.450	29,285.30

TOTAL Marking & Safety Works		
Km 0+000 - 43+450	**US $**	**469,796.20**

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 1 - M 4: Alyat - Gazi-Mammad; km 0+000 - km 43+450

Summary of estimated Construction costs

Bill No.	Description	Amount (USD)
1	General Items (5% of Bill Nos. 2 - 6)	1,222,923.86
2	Earthworks	1,893,840.82
3	Drainage	185,370.60
4	Bridges	258,055.00
5	Pavement	21,651,414.63
6	Marking & Safety Works	469,796.20
7	Landacquisition	0.00
Total		**25,681,401.11**

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 2 3 - M4: Gazi-Mammad - Kyurdamir; km 43+450 - km 124+300
Cost Estimate

-Pavement-

Geometry			Repair/Reconstruction										Recon-struction -Complete-
Chainage	Width	Added Area	Maintenance	Sealing	Overlay			Potholes	Settlements	Milling	Patching	Recon-struction	
					40mm	60mm	90mm						
km	m	m^2	km	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2
43,450	9.00												
45,363	8.80												17026
45,943	11.50												5887
46,236	10.29												3193
Subtotal Km 43+450 - 46+236													26105
46,236	10.29												
46,307	10.00												720
46,530	20.00												3345
46,915	9.00												5583
47,200	9.00												2565
47,262	9.00												558
48,270	8.80												8971
49,308	8.70												9083
49,971	9.00												5868
50,976	8.50												8794
52,001	9.00												8969
52,700	9.00												6291
53,029	9.00												2961
54,044	9.00												9135
54,700	9.00												5904
55,105	9.00												3645
56,123	9.00												9162
57,143	9.00												9180
57,200	8.95												511
58,183	8.00												8329
58,778	8.00												4760
59,543	9.00												6503
59,700	8.93												1407
60,660	8.50	2000											10366
61,681	8.50	2870											11549
63,597	8.50												16286

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 2 3 - M4: Gazi-Mammad - Kyurdamir; km 43+450 - km 124+300
Cost Estimate

-Pavement-

Geometry			Repair/Reconstruction										Recon-struction -Complete-
Chainage	Width	Added Area	Maintenance	Sealing	Overlay			Potholes	Settlements	Milling	Patching	Recon-struction	
					40mm	60mm	90mm						
km	m	m^2	km	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2
64,877	8.20	2000											12688
65,877	8.60												8400
66,891	7.70												8264
67,903	7.80												7843
68,906	8.00												7924
69,700	7.43												6126
69,884	7.30												1355
71,116	8.30												9610
71,741	7.00												4781
72,700	7.00												6713
72,934	7.00												1638
73,941	7.30	1800											9000
75,052	7.00												7944
76,057	7.00												7035
76,200	7.00												1001
77,087	7.00												6209
78,109	7.20	2500											9756
78,200	7.18												654
79,109	7.00												6446
80,113	7.20												7128
81,118	7.30												7286
81,200	7.36												601
82,124	8.00												7095
83,124	8.50												8250
84,139	8.50												8628
85,180	7.20												8172
85,550	15.00												4107
85,740	16.50												2993
86,077	16.50												5561
86,977	15.70												14490
87,200	11.39												3020
87,427	7.00												2087
88,027	7.00												4200

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 2 3 - M4: Gazi-Mammad - Kyurdamir; km 43+450 - km 124+300
Cost Estimate

-Pavement-

Geometry			Repair/Reconstruction										Recon-struction -Complete-
Chainage	Width	Added Area	Maintenance	Sealing	Overlay			Potholes	Settlements	Milling	Patching	Recon-struction	
					40mm	60mm	90mm						
km	m	m^2	km	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2
89,014	7.00												6909
89,200	7.04												1306
89,934	7.20	2000											7226
90,926	7.00												7043
91,700	7.00												5418
91,951	7.00	4790											6547
92,916	8.30												7382
93,916	8.00												8150
95,112	8.00	1400											10968
96,792	9.00												14280
97,862	9.00												9630
98,700	9.00												7542
98,960	9.00												2340
99,960	9.00												9000
100,200	8.97												2156
103,755	8.50	2500											33550
104,753	8.70												8583
105,700	8.51												8149
105,753	8.50	150											601
106,856	7.50	1060											9884
109,200	8.88												19202
109,396	9.00	2700											4453
111,894	8.50												21858
112,700	8.91												7017
112,874	9.00												1558
113,968	9.00												9846
114,868	9.00	500											8600
115,832	9.00												8676
116,839	9.00												9063
117,859	9.00												9180
118,840	8.50	1000											9584
119,200	8.31												3025

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 2 3 - M4: Gazi-Mammad - Kyurdamir; km 43+450 - km 124+300
Cost Estimate

-Pavement-

Geometry			Repair/Reconstruction										Recon-struction -Complete-
Chainage	Width	Added Area	Maintenance	Sealing	Overlay			Potholes	Settlements	Milling	Patching	Recon-struction	
					40mm	60mm	90mm						
km	m	m^2	km	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2
119,778	8.00	2060											6773
122,837	7.70												24013
123,337	14.00	4500											9925
124,300	12.35												12688
Subtotal Km 46+236 - 124+300		33830	0	0	0	0	0	0	0	0	0		699573

Calculation												
Unit Price												45.93
Subtotal Km 43+450 - 46+236												**1,199,017.04**
Subtotal 46+236 - 124+300												**32,131,386.13**

Total Bill No. Pavement Km 43+450 - 46+236	**US $**	
Total Bill No. Pavement Km 46+236 - 124+300	**US $**	
Total Bill No. Pavement repair/reconstruction Km 43+450 - 124+300	**US $**	

Total Bill No. Pavement Km 43+450 - 46+236	**US $**	**1,215,437.92**
Total Bill No. Pavement Km 46+236 - 124+300	**US $**	**32,582,185.99**
Total Bill No. Pavement reconstruction (complete) Km 43+450 - 124+300	**US $**	**33,797,623.91**

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 2 3 - M4: Gazi-Mammad - Kyurdamir; km 43+450 - km 124+300
Cost Estimate

-Earthwork-

Repair/Reconstruction								Shoulder Regravelling	Reconstruction				
Chainage	Width left	Width right	Shoulder Adjustment				Earthworks		Chainage	Width	Added Area	Shoulder adjustment	Earthworks
			Overlay 40 mm	Overlay 60 mm	Overlay 90 mm	Reconstruction							
km	m	m	m^3	m^3	m^3	m^3		m^2	km	m	m2		m3
43,450	3.50	3.50							43,450	9.00	0		0
45,363	3.50	3.50						13391	45,363	8.80	0	5345	7543
45,943	1.00	2.50						3045	45,943	11.50	0	1304	2432
46,236	1.40	1.29							46,236	10.29	0		1272
Subtotal Km 43+450 - 46+236								16436			0	6649	11247
46,236	1.40	1.29							46,236	10.29	0		0
46,307	1.50	1.00						1092	46,307	10.00	0	476	298
46,530	3.50	1.50						836	46,530	20.00	0	361	1151
46,915	1.50	4.00						2021	46,915	9.00	0	871	1949
47,200	3.14	3.18						1685	47,200	9.00	0	695	1129
47,262	3.50	3.00						397	47,262	9.00	0	163	246
48,270	3.50	3.00						6552	48,270	8.80	0	2675	3975
49,308	3.50	3.00						6747	49,308	8.70	0	2755	4062
49,971	2.50	4.00						4310	49,971	9.00	0	1760	2608
50,976	3.00	3.00						6281	50,976	8.50	0	2586	3933
52,001	3.50	3.50						6663	52,001	9.00	0	2728	4011
52,700	3.50	3.50						4893	52,700	9.00	0	1953	2770
53,029	3.50	3.50						2303	53,029	9.00	0	919	1304
54,044	3.50	3.50						7105	54,044	9.00	0	2836	4022
55,105	3.50	3.50						7427	54,700	9.00	0	2964	2600
56,123	3.50	3.00						6872	55,105	9.00	0	2777	1605
57,143	3.50	3.00						6630	56,123	9.00	0	2707	4034
57,200	3.50	3.01						371	57,143	9.00	0	151	4042
58,183	3.50	3.20						6493	57,200	8.95	0	2641	226
58,778	3.50	3.50						4076	58,183	8.00	0	1639	3792
59,543	3.00	3.00						4973	58,778	8.00	0	2036	2239
59,700	3.00	3.00						942	59,543	9.00	0	395	2955
60,660	3.00	3.00						5760	59,700	8.93	0	2414	621
61,681	3.00	3.00						6126	60,660	8.50	2000	2567	4150
63,597	3.50	3.50						12454	61,681	8.50	2870	5100	4518
64,877	3.75	3.20						8928	63,597	8.50	0	3565	7402
65,877	3.75	3.00						6850	64,877	8.20	2000	2743	5306
66,891	3.50	3.30						6870	65,877	8.60	0	2768	3843
67,903	2.50	3.75						6603	66,891	7.70	0	2692	3846
68,906	2.50	4.00						6394	67,903	7.80	0	2577	3758
69,700	2.62	3.59						5048	68,906	8.00	0	2045	3754
69,884	2.65	3.50						1138	69,700	7.43	0	468	2943
71,116	2.90	2.90						7361	69,884	7.30	0	3082	669
71,741	2.30	3.00						3469	71,116	8.30	0	1478	4587
72,700	2.98	3.12						5468	71,741	7.00	0	2315	2308
72,934	3.15	3.15						1451	72,700	7.00	0	603	3417
73,941	2.60	3.00						5992	72,934	7.00	0	2515	834

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 2 3 - M4: Gazi-Mammad - Kyurdamir; km 43+450 - km 124+300
Cost Estimate

-Earthwork-

Repair/Reconstruction								Shoulder Regravelling	Reconstruction				
Chainage	Width left	Width right	Shoulder Adjustment				Earthworks		Chainage	Width	Added Area	Shoulder adjustment	Earthworks
			Overlay 40 mm	Overlay 60 mm	Overlay 90 mm	Reconstruction							
km	m	m	m^3	m^3	m^3	m^3		m^2	km	m	m2		m3
75,052	3.00	3.00						6444	73,941	7.30	1800	2722	3978
76,057	3.00	3.00						6030	75,052	7.00	0	2527	3992
76,200	3.00	3.00						858	76,057	7.00	0	360	3581
77,087	3.00	3.00						5322	76,200	7.00	0	2230	510
78,109	3.00	3.00						6132	77,087	7.00	0	2570	3160
78,200	3.00	3.00						546	78,109	7.20	2500	229	4162
79,109	3.00	3.00						5454	78,200	7.18	0	2286	328
80,113	3.00	3.00						6024	79,109	7.00	0	2525	3255
81,118	3.00	3.30						6181	80,113	7.20	0	2572	3597
81,200	3.04	3.32						519	81,118	7.30	0	214	3631
82,124	3.50	3.50						6171	81,200	7.36	0	2504	298
83,124	3.40	3.50						6950	82,124	8.00	0	2781	3418
84,139	2.50	3.50						6547	83,124	8.50	0	2678	3813
85,180	3.00	3.50						6506	84,139	8.50	0	2679	3921
85,550	3.00	3.00						2313	85,180	7.20	0	958	3886
85,740	3.00	3.00						1140	85,550	15.00	0	478	1622
86,077	3.00	3.00						2022	85,740	16.50	0	847	1009
87,200	3.83	3.83						7672	86,077	16.50	0	3090	1841
87,427	4.00	4.00						1778	86,977	15.70	0	677	4845
88,027	4.00	4.00						4800	87,200	11.39	0	1808	1086
89,014	3.50	3.50						7403	87,427	7.00	0	2873	908
89,200	3.60	3.60						1321	88,027	7.00	0	524	2138
89,934	4.00	4.00						5579	89,014	7.00	0	2153	3517
90,926	3.80	4.00						7837	89,200	7.04	0	2970	663
91,700	3.57	3.62						5803	89,934	7.20	2000	2253	3033
91,951	3.50	3.50						1782	90,926	7.00	0	707	3554
92,916	3.00	3.75						6634	91,700	7.00	0	2662	2758
93,916	3.80	3.20						6875	91,951	7.00	4790	2762	1852
95,112	3.00	3.00						7774	92,916	8.30	0	3180	3564
96,792	2.80	3.00						9912	93,916	8.00	0	4171	3793
97,862	3.30	3.50						6741	95,112	8.00	1400	2786	4781
98,700	3.07	3.50						5602	96,792	9.00	0	2271	6490
98,960	3.00	3.50						1699	97,862	9.00	0	693	4240
99,960	3.00	3.00						6250	98,700	9.00	0	2588	3321
100,200	2.99	3.00						1438	98,960	9.00	0	603	1030
103,755	2.80	3.00						20952	99,960	9.00	0	8820	3963
104,753	3.00	3.00						5888	100,200	8.97	0	2478	950
105,700	3.47	3.95						6355	103,755	8.50	2500	2573	14399
105,753	3.50	4.00						395	104,753	8.70	0	153	3875
106,856	2.60	3.00						7225	105,700	8.51	0	2945	3678
109,200	2.97	3.00						13559	105,753	8.50	150	5731	235
109,396	3.00	3.00						1173	106,856	7.50	1060	492	4363
111,894	2.00	3.00						13739	109,200	8.88	0	5857	8911

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 2 3 - M4: Gazi-Mammad - Kyurdamir; km 43+450 - km 124+300
Cost Estimate

-Earthwork-

Repair/Reconstruction								Shoulder Regravelling	Reconstruction				
Chainage	Width left	Width right	Shoulder Adjustment				Earthworks		Chainage	Width	Added Area	Shoulder adjustment	Earthworks
			Overlay 40 mm	Overlay 60 mm	Overlay 90 mm	Reconstruction							
km	m	m	m^3	m^3	m^3	m^3		m^2	km	m	m2		m3
112,700	2.82	3.66						4627	109,396	9.00	2700	1940	1314
112,874	3.00	3.80						1155	111,894	8.50	0	466	9775
113,968	3.00	3.00						7002	112,700	8.91	0	2876	3147
114,868	3.00	3.20						5490	112,874	9.00	0	2290	688
116,839	2.50	3.50						12023	113,968	9.00	0	4995	4336
117,859	3.50	3.00						6375	114,868	9.00	500	2640	3667
118,840	3.00	3.00						6131	115,832	9.00	0	2539	3820
119,200	2.93	2.98						2144	116,839	9.00	0	900	3991
122,837	2.20	2.80						19840	117,859	9.00	0	8488	4042
123,152	1.50	1.20						1213	118,840	8.50	1000	539	4039
124,062	3.75	3.75						4641	119,200	8.31	0	2012	1384
124,300	1.00	1.00						1131	119,778	8.00	2060	495	2605
									122,837	7.70	0		11419
									123,337	14.00	4500		3067
									124,300	12.35	0		4620
Subtotal km 46+236 - 124+300			0.00	0.00	0.00	0.00		491695			33830	202185	308767

Calculation									
Unit Price						0.75		13.33	1.46
Subtotal 43+450 - 46+236						**12,327.00**		**88,632.83**	**16,420.88**
Subtotal 46+236 - 124+300						**368,771.25**		**2,695,121.87**	**450,799.86**

Subtotal Bill No. Earthwork Km 43+450 - 46+236	**US $**	
Subtotal Bill No. Earthwork Km 46+236 - 124+300	**US $**	
Total Bill No. Earthwork Repair/reconstruction km 43+450 - 124+330	**US $**	

Subtotal Bill No. Earthwork Km 43+450 - 46+236	**US $**	**117,380.71**
Subtotal Bill No. Earthwork Km 46+236 - 124+300	**US $**	**3,514,692.97**
Total Bill No. Earthwork reconstruction (complete) km 43+450 - 124+330	**US $**	**3,632,073.69**

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 2 3 - M4: Gazi-Mammad - Kyurdamir; km 43+450 - km 124+300
Cost Estimate

-Drainage-

No	Station	EXISTING STRUCTURE				EXISTING DAMAGE									MAINTENANCE ACTIVITY				REQUIRED CULVERT LENGTH					
		Type	Mat.	Length	Size/Dia	Silted/Blocked		Scour			Structural Damage				Cleaning	Backfill of scoured areas	Repair	Reconst.	500 mm Dia.	750 mm Dia.	1000 mm Dia	1250 mm Dia	1500 mm Dia.	Other
						Partial	Total	Little Erosion	Erosion without Settlement	Erosion with Underm.	Small	Uneven Settlement	Damaged Inlet/ Outlet	Broken Culvert										
	(km)			(m)	(mm)				m^2	m^2		m^2	m^2	m	m	m^2	m^2		m	m	m	m	m	m
1	44,218	P	RC	21.0	1000																			
2	44,479	P	RC	24.5	1000																			
3	44,806	P	RC	24.5	1000																			
4	45,178	P	RC	24.5	1000	●									24.50									
5	45,431	P	RC	22.0	1000																			
6	45,610	P	RC	20.0	1000	●		●	1.68		●		0.50		20.00	1.68	0.50							
Subtotal Km 43+450 - 46+236															44.50	1.68	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00
7	46,907	P	RC	22.0	1250		●●								22.00									
8	47,367	P	RC	20.0	1500	●		●	4.00		●		1.00		20.00	4.00	1.00							
9	49,708	P	RC	19.0	1500	●									19.00									
10	51,016	P	RC	24.0	1000		●●								24.00									
11	51,232	P	RC	24.0	1250		●●								24.00									
12	51,911	P	RC	22.0	1000	●									22.00									
13	52,503	P	RC	19.0	1200	●									19.00									
14	52,154	P	RC	19.0	1000																			
15	53,253	P	RC	21.5	1000		●●								21.50									
16	53,489	P	RC	21.5	1500																			
17	53,847	P	RC	21.5	1500		●●				●			0.50	21.50			RR					1.0	
18	54,903	P	RC	21.0	1000		●●				●		1.00	0.50	21.00		1.00	RR			1.0			
19	55,182	P	RC	26.0	1000	●					●		1.50		26.00		1.50							
20	55,792	P	RC	19.0	1250		●●								19.00									
21	56,141	P	RC	21.0	1000	●									21.00									
22	57,456	P	RC	21.5	1000	●									21.50									
23	58,892	P	RC	24.0	1000																			
24	59,600	P	RC	26.0	1250																			
25	59,986	P/S	RC	28.0	1250(4) + 2000x2000+1250(4)																			
26	62,256	P/S	RC	30.0	1250 + 2000x2000 + 1250																			
27	63,572	P	RC	12.0	1000	●									12.00									
28	64,912	P	RC	29.0	1000(3)																			
29	66,090	P	RC	41.5	1500																			
30	68,218	B	RC	30.0	2000x2000																			
31	69,086	P	RC	32.0	1000																			
32	70,016	S	RC	12.0	2000x1750																			
33	70,664	S	RC	12.0	2000x1500																			
34	71,748	P	RC	19.0	1000																			
35	72,254	S	RC	12.0	2000x2000																			
36	72,727	S	RC	12.0	4200x1700																			
37	73,118	S	RC	12.0	2000x2000																			
38	74,594	P	RC	14.0	750		●●								14.00									
39	75,589	S	RC	13.0	2100x1500																			
40	75,903	P	M	18.0	300																			
41	76,458	S	RC	13.0	2100x1500																			
42	77,075	P	RC	15.0	1000	●									15.00									
43	77,668	S	RC	12.0	2000x2000																			
44	77,798	P	RC	14.0	1000	●									14.00									
45	78,691	P	RC	15.0	1000																			
46	81,093	S	RC	13.0	2000x1600																			
47	84,394	S	RC	15.0	1850x1800																			
48	88,067	S	RC	16.0	4000x1500																			
49	88,447	S	RC	16.0	4000x1500																			

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 2 3 - M4: Gazi-Mammad - Kyurdamir; km 43+450 - km 124+300
Cost Estimate

-Drainage-

No	Station	EXISTING STRUCTURE				EXISTING DAMAGE									MAINTENANCE ACTIVITY				REQUIRED CULVERT LENGTH					
		Type	Mat.	Length	Size/Dia	Silted/Blocked		Scour			Structural Damage				Cleaning	Backfill of scoured areas	Repair	Reconst.	500 mm Dia.	750 mm Dia.	1000 mm Dia.	1250 mm Dia.	1500 mm Dia.	Other
						Partial	Total	Little Erosion	Erosion without Settlement	Erosion with Underm.	Small	Uneven Settlement	Damaged Inlet/ Outlet	Broken Culvert										
	(km)			(m)	(mm)				m^2	m^2		m^2	m^2	m	m	m^2	m^2		m	m	m	m	m	m
50	89,005	P	RC	14.0	1000	●									14.00									
51	91,337	S	RC	12.0	2000x1800						●													
52	92,117	S	RC	31.0	2000x2000																			
53	93,116	P/S	RC	16.0	1250(2)+4000x1700+1250(2)																			
54	94,148	P/S	RC	16.0	1250(2)+2500x1700+1250(2)																			
55	95,178	B/S	RC	17.0	2000x2000(4) + 8600x1700 + 2000x2000(4)	●									17.00									
56	95,497	P	RC	15.0	1250(2)																			
57	95,792	P	RC	16.0	1000																			
58	96,392	P	RC	18.0	1250																			
59	96,652	P	RC	15.0	750																			
60	97,480	P	RC	18.0	750																			
61	97,929	P	RC	16.5	1250																			
62	99,100	B/S	RC	19.0	2000x2000(2)+4000x2000+2000x2000(2)																			
63	100,240	P/S	RC	20.0	1250(2) + 2000x1500 + 1250(2)						●		2.20				2.20							
64	100,719	P/S	RC	19.0	1000 + 2000x1500 + 1000	●									19.00									
65	103,120	P	RC	16.0	1000																			
66	104,405	P	RC	16.0	1000	●									16.00									
67	104,973	S	RC	13.0	3000x1700	●					●		2.00		13.00		2.00							
68	105,876	P	RC	16.0	1500		●●								16.00									
69	107,536	P	RC	12.0	1250		●●								12.00									
70	107,954	P	RC	15.0	1250		●●								15.00									
71	109,616	P	RC	18.0	1250		●●								18.00									
72	111,296	P/S	RC	17.0	1000(3) + 4000x1500 + 1000(3)		●●								17.00									
73	111,576	S	RC	30.0	2000x2000	●									30.00									
74	111,844	P	RC	14.0	3x1250	●									14.00									
75	112,294	P	RC	16.0	3x1250		●●								16.00									
76	113,474	S	RC	15.0	5000x1700	●									15.00									
77	115,019	P	RC	16.0	1000																			
78	115,923	P	RC	17.0	1250																			
79	116,936	P	RC	16.0	1000		●●				●		1.50	0.50	16.00		1.50	RR			1.0			
80	117,539	P	RC	25.0	750																			
81	118,262	P	RC	24.0	1500	●		●	3.00		●		1.70	1.00	24.00	3.00	1.70	RR					1.0	
82	118,291	P	RC	14.0	1000																			
83	118,764	S	RC	12.0	4000x1700						●		0.50				0.50							
84	119,289	S	RC	12.0	4000x1700		●●								12.00									
85	119,808	P	RC	14.0	1250		●●								14.00									
86	120,658	P	RC	16.0	1000																			
87	121,268	P	RC	17.0	1200(2)	●									17.00									
88	121,378	S	RC	18.0	1800x1300		●●								18.00									
89	122,017	S	RC	16.0	1800x1300		●●								16.00									
90	123,152	S	RC	13.0	1500x1500																			
91	123,737	P	RC	25.0	750																			
92	124,211	P	RC	19.0	750		●●								19.00									
Subtotal 46+236 - 124+300															724.50	7.00	11.40	0.00	0.00	0.00	2.00	0.00	2.00	0.00

Calculation																		
Unit Price										4.20	5.93	64.20				237.00		345.70	
Subtotal Km 43+450 - 46+236										**186.90**	**9.96**	**32.10**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Subtotal Km 46+236 - 124+300										**3,042.90**	**41.51**	**731.88**	**0.00**	**0.00**	**0.00**	**474.00**	**0.00**	**691.40**	**0.00**
Improvement of Sidedrainages Km 43+450 - 46+236	**Length x 4.20 US $/m**																		**11,701.20**

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 2 3 - M4: Gazi-Mammad - Kyurdamir; km 43+450 - km 124+300
Cost Estimate

-Drainage-

No	Station	EXISTING STRUCTURE				EXISTING DAMAGE								MAINTENANCE ACTIVITY				REQUIRED CULVERT LENGTH					
		Type	Mat.	Length	Size/Dia	Silted/Blocked		Scour			Structural Damage			Cleaning	Backfill of scoured areas	Repair	Reconst.	500 mm Dia	750 mm Dia	1000 mm Dia	1250 mm Dia	1500 mm Dia	Other
						Partial	Total	Little Erosion	Erosion without Settlement	Erosion with Underm.	Small	Uneven Settlement	Damaged Inlet/ Outlet	Broken Culvert									
	(km)			(m)	(mm)				m^2	m^2		m^2	m^2	m	m	m^2	m^2		m	m	m	m	m	m
Improvement of Sidedrainages Km 46+236 - 124+300						**Length x 4.20 US $/m**																	**327,868.80**

Total Bill No. Drainage Km 43+450 - 46+236	**US $**	**11,930.16**
Total Bill No. Drainage Km 46+236 -124+300	**US $**	**332,850.49**
Total Bill No. Drainage	**US $**	**344,780.65**

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 2 3 - M4: Gazi-Mammad - Kyurdamir; km 43+450 - km 124+300
Cost Estimate
-Marking & Safety-

Station	Length	Embankment Height	Crash barrier (R + L)
km	km	m	m
43,450		2.2	
45,363	1.913	2.2	3,826
45,943	0.580	2.2	1,160
46,236	0.293	2.2	1,172
46,307	0.071	3.0	142
46,530	0.223	3.5	446
46,915	0.385	3.5	770
47,262	0.347	2.0	
48,270	1.008	1.8	
49,308	1.038	1.0	
49,971	0.663	1.0	
50,976	1.005	1.0	
52,001	1.025	1.0	
53,029	1.028	1.0	
54,044	1.015	1.0	
55,105	1.061	1.0	
56,123	1.018	1.0	
57,143	1.020	1.0	
58,183	1.040	1.0	
58,778	0.595	1.0	
59,543	0.765	1.0	
60,660	1.117	1.5	
61,681	1.021	1.5	
63,597	1.916	1.6	
64,877	1.280	2.0	
65,877	1.000	2.0	
66,891	1.014	2.0	
67,903	1.012	2.0	
68,906	1.003	2.0	
69,884	0.978	1.8	
71,116	1.232	1.8	
71,741	0.625	2.0	
72,934	1.193	2.0	
73,941	1.007	2.0	
75,052	1.111	1.2	
76,057	1.005	1.5	
77,087	1.030	2.0	
78,109	1.022	2.0	
79,109	1.000	2.3	2,000
80,113	1.004	2.0	
81,118	1.005	2.2	2,010
82,124	1.006	2.2	2,012
83,124	1.000	1.8	
84,139	1.015	0.2	
85,180	1.041	2.5	2,082
85,550	0.370	1.0	
85,740	0.190	0.9	
86,077	0.337	0.5	
86,977	0.900	2.5	1,800
87,427	0.450	2.5	900
88,027	0.600	2.0	
89,014	0.987	2.0	
89,934	0.920	2.0	
90,926	0.992	2.0	
91,951	1.025	2.0	
92,916	0.965	2.0	
93,916	1.000	2.0	

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 2 3 - M4: Gazi-Mammad - Kyurdamir; km 43+450 - km 124+300
Cost Estimate

Station	Length	Embankment Height	Crash barrier (R + L)
km	km	m	m
95,112	1.196	2.0	
96,792	1.680	1.8	
97,862	1.070	1.8	
98,960	1.098	2.0	
99,960	1.000	2.0	
103,755	3.795	1.8	
104,753	0.998	1.8	
105,753	1.000	1.8	
106,856	1.103	1.8	
109,396	2.540	2.0	
111,894	2.498	1.8	
112,874	0.980	1.8	
113,968	1.094	1.5	
114,868	0.900	1.5	
115,832	0.964	1.7	
116,839	1.007	1.7	
117,859	1.020	1.7	
118,840	0.981	1.8	
119,778	0.938	1.8	
122,837	3.059	1.8	
123,337	0.500	1.8	
124,300	0.963	0.5	
Average		1.75	
Subtotal Km 46+236 - 124+300	80.850		18,320

Calculation			
Crash barrier	23.20		**425,024.00**
Marking	321.75	80.72	25,971.66
Marker post Total	1382.80	80.72	111,619.62
Km - post Total	148.00	81.00	11,988.00
Sign Total	674.00	80.72	54,464.00

TOTAL Marking & Safety Works		
Km 43+450 - 124+300	**US $**	629,067.28

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 2 3 - M4: Gazi-Mammad - Kyurdamir; km 43+450 - km 124+300
Cost Estimate
- Pavement upgrade-

Station	Pavement Width	Shoulder Width		Additional Width	Length	Embankment Height	Pavement
		left	right				
km	m	m	m	m	km	m	m^2
43,450	9.00	3.50	3.50			2.2	
45,363	8.80	3.50	3.50		1.913	2.2	17,695
45,943	11.50	1.00	2.50		0.580	2.2	5,365
46,236	10.29	1.40	1.29		0.293	2.8	2,710
Subtotal km 43+450 - 46+236							**25,771**

46,236	10.29	1.40	1.29			2.8	
46,307	10.00	1.50	1.00		0.071	3.0	657
46,530	20.00	3.50	1.50		0.223	3.5	2,063
46,915	9.00	1.50	4.00		0.385	3.5	3,561
47,262	9.00	3.50	3.00		0.347	2.0	3,210
48,270	8.80	3.50	3.00		1.008	1.8	9,324
49,308	8.70	3.50	3.00		1.038	1.0	9,602
49,971	9.00	2.50	4.00		0.663	1.0	6,133
50,976	8.50	3.00	3.00		1.005	1.0	9,296
52,001	9.00	3.50	3.50		1.025	1.0	9,481
53,029	9.00	3.50	3.50		1.028	1.0	9,509
54,044	9.00	3.50	3.50		1.015	1.0	9,389
55,105	9.00	3.50	3.50		1.061	1.0	9,814
56,123	9.00	3.50	3.00		1.018	1.0	9,417
57,143	9.00	3.50	3.00		1.020	1.0	9,435
58,183	8.00	3.50	3.20		1.040	1.0	9,620
58,778	8.00	3.50	3.50		0.595	1.0	5,504
59,543	9.00	3.00	3.00		0.765	1.0	7,076
60,660	8.50	3.00	3.00		1.117	1.1	10,332
61,681	8.50	3.00	3.00		1.021	1.1	9,444
63,597	8.50	3.50	3.50		1.916	1.5	17,723
64,877	8.20	3.75	3.20		1.280	1.0	11,840
65,877	8.60	3.75	3.00		1.000	0.3	9,250
66,891	7.70	3.50	3.30		1.014	0.3	9,380
67,903	7.80	2.50	3.75		1.012	0.0	9,361
68,906	8.00	2.50	4.00		1.003	0.0	9,278
69,884	7.30	2.65	3.50		0.978	1.0	9,047
71,116	8.30	2.90	2.90		1.232	1.0	11,396
71,741	7.00	2.30	3.00		0.625	0.2	5,781
72,934	7.00	3.15	3.15		1.193	0.9	11,035
73,941	7.30	2.60	3.00		1.007	0.9	9,315
75,052	7.00	3.00	3.00		1.111	1.3	10,277
76,057	7.00	3.00	3.00		1.005	1.5	9,296
77,087	7.00	3.00	3.00		1.030	2.0	9,528
78,109	7.20	3.00	3.00		1.022	2.0	9,454
79,109	7.00	3.00	3.00		1.000	2.3	9,250
80,113	7.20	3.00	3.00		1.004	2.0	9,287
81,118	7.30	3.00	0.30		1.005	2.2	9,296
82,124	8.00	3.50	3.50		1.006	2.2	9,306
83,124	8.50	3.40	3.50		1.000	1.8	9,250
84,139	8.50	2.50	3.50		1.015	0.2	9,389
85,180	7.20	3.00	3.50		1.041	0.2	9,629
85,550	15.00	3.00	3.00		0.370	0.2	3,423
85,740	16.50	3.00	3.00		0.190	0.2	1,758
86,077	16.50	3.00	3.00		0.337	0.4	3,117
86,977	15.70	3.00	3.00		0.900	0.8	8,325
87,427	7.00	4.00	4.00		0.450	0.8	4,163
88,027	7.00	4.00	4.00		0.600	2.0	5,550
89,014	7.00	3.50	3.50		0.987	2.0	9,130

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 2 3 - M4: Gazi-Mammad - Kyurdamir; km 43+450 - km 124+300
Cost Estimate
- Pavement upgrade-

Station	Pavement Width	Shoulder Width		Additional Width	Length	Embankment Height	Pavement
		left	right				
km	m	m	m	m	km	m	m^2
89,934	7.20	4.00	4.00		0.920	2.0	8,510
90,926	7.00	3.80	4.00		0.992	2.0	9,176
91,951	7.00	3.50	3.50		1.025	2.0	9,481
92,916	8.30	3.00	3.75		0.965	2.0	8,926
93,916	8.00	3.80	3.20		1.000	2.0	9,250
95,112	8.00	3.00	3.00		1.196	2.0	11,063
96,792	9.00	2.80	3.00		1.680	1.8	15,540
97,862	9.00	3.30	3.50		1.070	1.8	9,898
98,960	9.00	3.00	3.50		1.098	2.0	10,157
99,960	9.00	3.00	3.00		1.000	2.0	9,250
103,755	8.50	2.80	3.00		3.795	1.8	35,104
104,753	8.70	3.00	3.00		0.998	1.8	9,232
105,753	8.50	3.50	4.00		1.000	1.8	9,250
106,856	7.50	2.60	3.00		1.103	1.8	10,203
109,396	9.00	3.00	3.00		2.540	2.0	23,495
111,894	8.50	2.00	3.00		2.498	1.8	23,107
112,874	9.00	3.00	3.80		0.980	1.8	9,065
113,968	9.00	3.00	3.00		1.094	1.5	10,120
114,868	9.00	3.00	3.20		0.900	1.5	8,325
115,832	9.00	3.00	3.20		0.964	1.7	8,917
116,839	9.00	2.50	3.50		1.007	1.7	9,315
117,859	9.00	3.50	3.00		1.020	1.7	9,435
118,840	8.50	3.00	3.00		0.981	1.8	9,074
119,778	8.00	2.20	2.80		0.938	1.8	8,677
122,837	7.70	1.50	1.20		3.059	1.8	28,296
123,337	14.00	3.75	3.75		0.500	1.8	4,625
124,300	12.35	1.00	1.00		0.963	0.5	8,908
Total					80.850		722,092
Average	8.97	3.00	3.09			1.50	
Unit Price							45.03
Subtotal (Section km 43+450 - km 46+236)							**1,160,445.62**
Subtotal (Section km 46+236 - km 124+300)							**32,515,802.76**

Total Bill No. Pavement Upgrade	**US $**	**33,676,248.38**

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 2 3 - M4: Gazi-Mammad - Kyurdamir; km 43+450 - km 124+300
Cost Estimate
- Earthwork Upgrade -

Station	Shoulder		Shoulder Adjustment Reconstruction	Shoulder Regravelling	Station	Embankment Height	Removal of top soil	Cut	Fill
	width left	width right							
km	m	m	m^3	m^2	km	m	m^3	m^3	m^3
43,450	3.00	3.00			43,450	2.20			
45,363	3.00	3.00	2405		45,363	2.20	2,219		37,317.85
45,943	3.00	3.00	729		45,943	2.20	702		11,952.35
46,236	3.00	3.00	368		46,236	2.84	396		8,218.59
Subtotal km 34+450 - 46+236			**3503**				**3,317**		57,488.79
46,236	3.00	3.00			46,236	2.84			
46,307	3.00	3.00	89		46,307	3.00	105		2,634.44
46,530	3.00	3.00	280		46,530	3.50	195		5,000.78
46,915	3.00	3.00	484		46,915	3.50	298		8,128.31
47,200	3.00	3.00	358		47,262	2.00	434		9,841.79
47,262	3.00	3.00	78		48,270	1.80	1,220		17,113.32
48,270	3.00	3.00	1267		49,308	1.00	1,272		11,560.73
49,308	3.00	3.00	1305		49,971	1.00	806		4,069.16
49,971	3.00	3.00	834		50,976	1.00	1,256		6,519.94
50,976	3.00	3.00	1264		52,001	1.00	1,256		6,393.44
52,001	3.00	3.00	1289		53,029	1.00	1,182		5,641.15
52,700	3.00	3.00	879		54,044	1.00	1,167		5,569.81
53,029	3.00	3.00	414		55,105	1.00	1,220		5,822.24
54,044	3.00	3.00	1276		56,123	1.00	1,196		5,840.78
55,105	3.00	3.00	1334		57,143	1.00	1,224		6,107.25
56,123	3.00	3.00	1280		58,183	1.00	1,290		6,643.00
57,143	3.00	3.00	1282		58,778	1.00	753		3,949.31
57,200	3.00	3.00	72		59,543	1.00	956		4,962.94
58,183	3.00	3.00	1236		60,660	1.10	1,424		8,237.88
58,778	3.00	3.00	748		61,681	1.10	1,327		8,461.54
59,543	3.00	3.00	962		63,597	1.50	2,395		19,615.05
59,700	3.00	3.00	197		64,877	1.00	1,558		11,784.00
60,660	3.00	3.00	1207		65,877	0.30	1,225		1,950.00
61,681	3.00	3.00	1284		66,891	0.30	1,275	2,271.36	0.00
63,597	3.00	3.00	2409		67,903	0.00	1,338	4,077.10	0.00
64,877	3.00	3.00	1609		68,906	0.00	1,326	6,030.54	0.00
65,877	3.00	3.00	1257		69,884	1.00	1,323		733.50
66,891	3.00	3.00	1275		71,116	1.00	1,691		9,501.80

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 2 3 - M4: Gazi-Mammad - Kyurdamir; km 43+450 - km 124+300
Cost Estimate
- Earthwork Upgrade -

Station	Shoulder		Shoulder Adjustment Reconstruction	Shoulder Regravelling	Station	Embankment Height	Removal of top soil	Cut	Fill
	width left	width right							
km	m	m	m^3	m^2	km	m	m^3	m^3	m^3
67,903	3.00	3.00	1272		71,741	0.20	894		1,604.69
68,906	3.00	3.00	1261		72,934	0.90	1,754		2,472.49
69,700	3.00	3.00	998		73,941	0.90	1,450		6,996.13
69,884	3.00	3.00	231		75,052	1.30	1,617		11,101.67
71,116	3.00	3.00	1549		76,057	1.50	1,457		14,358.94
71,741	3.00	3.00	786		77,087	2.00	1,494		19,943.38
72,700	3.00	3.00	1206		78,109	2.00	1,472		23,288.83
72,934	3.00	3.00	294		79,109	2.30	1,440		24,947.50
73,941	3.00	3.00	1266		80,113	2.00	1,446		25,047.29
75,052	3.00	3.00	1397		81,118	2.20	1,568		26,881.24
76,057	3.00	3.00	1264		82,124	2.20	1,479		26,485.47
76,200	3.00	3.00	180		83,124	1.80	1,230		18,587.50
77,087	3.00	3.00	1115		84,139	0.19	1,274		6,571.87
78,109	3.00	3.00	1285		85,180	0.20	1,395	3,538.88	0.00
78,200	3.00	3.00	114		85,550	0.20	376	1,473.53	0.00
79,109	3.00	3.00	1143		85,740	0.20	109	923.88	0.00
80,113	3.00	3.00	1262		86,077	0.40	169	1,520.71	0.00
81,118	3.00	3.00	1264		86,977	0.80	486	2,495.25	0.00
81,200	3.00	3.00	103		87,427	0.80	412		588.38
82,124	3.00	3.00	1162		88,027	2.00	750		6,892.50
83,124	3.00	3.00	1257		89,014	2.00	1,283		19,727.66
84,139	3.00	3.00	1276		89,934	2.00	1,187		18,204.50
85,180	3.00	3.00	1309		90,926	2.00	1,240		18,835.60
85,550	3.00	3.00	465		91,951	2.00	1,343		20,692.19
85,740	3.00	3.00	239		92,916	2.00	1,252		19,239.69
86,077	3.00	3.00	424		93,916	2.00	1,248		18,937.50
87,200	3.00	3.00	1412		95,112	2.00	1,555		23,905.05
87,427	3.00	3.00	285		96,792	1.80	2,201		31,714.20
88,027	3.00	3.00	754		97,862	1.80	1,305		17,063.83
89,014	3.00	3.00	1241		98,960	2.00	1,301		18,119.75
89,200	3.00	3.00	234		99,960	2.00	1,225		18,487.50
89,934	3.00	3.00	923		103,755	1.80	4,877		69,837.49
90,926	3.00	3.00	1247		104,753	1.80	1,297		17,352.73
91,700	3.00	3.00	973		105,753	1.80	1,215		15,857.50
91,951	3.00	3.00	316		106,856	1.80	1,428		19,079.14

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 2 3 - M4: Gazi-Mammad - Kyurdamir; km 43+450 - km 124+300
Cost Estimate
- Earthwork Upgrade -

Station	Shoulder		Shoulder Adjustment	Shoulder	Station	Embankment	Removal of	Cut	Fill
	width left	width right	Reconstruction	Regravelling		Height	top soil		
km	m	m	m^3	m^2	km	m	m^3	m^3	m^3
92,916	3.00	3.00	1213		109,396	2.00	3,416		49,637.95
93,916	3.00	3.00	1257		111,894	1.80	3,310		47,867.93
95,112	3.00	3.00	1504		112,874	1.80	1,259		16,775.15
96,792	3.00	3.00	2112		113,968	1.50	1,324		15,264.04
97,862	3.00	3.00	1345		114,868	1.50	1,116		11,328.75
98,700	3.00	3.00	1054		115,832	1.70	1,186		13,175.47
98,960	3.00	3.00	327		116,839	1.70	1,249		15,172.97
99,960	3.00	3.00	1257		117,859	1.70	1,250		15,108.75
100,200	3.00	3.00	302		118,840	1.80	1,226		15,561.11
103,755	3.00	3.00	4470		119,778	1.80	1,290		17,575.78
104,753	3.00	3.00	1255		122,837	1.80	4,833		68,605.72
105,700	3.00	3.00	1191		123,337	1.80	578		7,388.75
105,753	3.00	3.00	67		124,300	0.50	922		4,813.80
106,856	3.00	3.00	1387						
109,200	3.00	3.00	2947						
109,396	3.00	3.00	246						
111,894	3.00	3.00	3141						
112,700	3.00	3.00	1013						
112,874	3.00	3.00	219						
113,968	3.00	3.00	1375						
114,868	3.00	3.00	1132						
116,839	3.00	3.00	2478						
117,859	3.00	3.00	1282						
118,840	3.00	3.00	1233						
119,200	3.00	3.00	453						
122,837	3.00	3.00	4573						
123,152	3.00	3.00	396						
124,062	3.00	3.00	1144						
124,300	3.00	3.00	299						
Total			98,146	0.00			99,895.71	22331	1,037,180
Unit Price			13.33				6.01	6.01	9.50
Subtotal km 43+450 - km 46+236			**46,690.97**				**19,932.83**	**0**	**546,143.47**
Subtotal km 46+236 - km 124+300			**1,308,285.70**				**600,373.20**	**134,210.80**	**9,853,214.36**

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 2 3 - M4: Gazi-Mammad - Kyurdamir; km 43+450 - km 124+300
Cost Estimate
- Earthwork Upgrade -

Station	Shoulder		Shoulder Adjustment	Shoulder	Station	Embankment	Removal of	Cut	Fill
	width left	width right	Reconstruction	Regravelling		Height	top soil		
km	m	m	m^3	m^2	km	m	m^3	m^3	m^3

Subtotal km 43+450 - km 46+236	**US $**	**612,767.28**
Subtotal km 46+236 - km 124+300	**US $**	**11,896,084.05**
Total Bill No. Earthwork Upgrade	**US $**	**12,508,851.33**

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 2 3 - M4: Gazi-Mammad - Kyurdamir; km 43+450 - km 124+300
Cost Estimate
- Drainage Upgrading -

Station	EXISTING STRUCTURE				REQUIRED CULVERT LENGTH m								
	Type	Mat.	Length	Size/Dia	Number			300 mm Dia.	750 mm Dia.	1000 mm Dia.	1250 mm Dia.	1500 mm Dia.	Other
km			m	mm									
44,218	P	RC	21.0	1000	1					13.00			
44,479	P	RC	24.5	1000	1					13.00			
44,806	P	RC	24.5	1000	1					13.00			
45,178	P	RC	24.5	1000	1					13.00			
45,431	P	RC	22.0	1000	1					13.00			
45,610	P	RC	20.0	1000	1					13.00			
Subtotal (Section km 43+450 - km 46+236)										**78.00**			
46,907	P	RC	22.0	1250	1						13.00		
47,367	P	RC	20.0	1500	1							13.00	
49,708	P	RC	19.0	1500	1							13.00	
51,016	P	RC	24.0	1000	1					13.00			
51,232	P	RC	24.0	1250	1						13.00		
51,911	P	RC	22.0	1000	1					13.00			
52,503	P	RC	19.0	1200	1						13.00		
52,154	P	RC	19.0	1000	1					13.00			
53,253	P	RC	21.5	1000	1					13.00			
53,489	P	RC	21.5	1500	1							13.00	
53,847	P	RC	21.5	1500	1							13.00	
54,903	P	RC	21.0	1000	1					13.00			
55,182	P	RC	26.0	1000	1					13.00			
55,792	P	RC	19.0	1250	1						13.00		
56,141	P	RC	21.0	1000	1					13.00			
57,456	P	RC	21.5	1000	1					13.00			
58,892	P	RC	24.0	1000	1					13.00			
59,600	P	RC	26.0	1250	1						13.00		
59,986	P/S	RC	28.0	1250(4)+2000x2000+1250(4)	4						52.00		
62,256	P/S	RC	30.0	1250 + 2000x2000 + 1250	1						13.00		

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 2 3 - M4: Gazi-Mammad - Kyurdamir; km 43+450 - km 124+300
Cost Estimate
- Drainage Upgrading -

Station	EXISTING STRUCTURE				REQUIRED CULVERT LENGTH m								
km	Type	Mat.	Length m	Size/Dia mm	Number			300 mm Dia.	750 mm Dia.	1000 mm Dia.	1250 mm Dia.	1500 mm Dia.	Other
63,572	P	RC	12.0	1000	1					13.00			
64,912	P	RC	29.0	1000(3)	3					39.00			
66,090	P	RC	41.5	1500	1							13.00	
68,218	B	RC	30.0	2000x2000	1	2.00	2.00						15.60
69,086	P	RC	32.0	1000	1					13.00			
70,016	S	RC	12.0	2000x1750	1	2.00	1.75						14.63
70,664	S	RC	12.0	2000x1500	1	2.00	1.50						13.65
71,748	P	RC	19.0	1000	1					13.00			
72,254	S	RC	12.0	2000x2000	1	2.00	2.00						15.60
72,727	S	RC	12.0	4200x1700	1	4.20	1.70						23.01
73,118	S	RC	12.0	2000x2000	1	2.00	2.00						15.60
74,594	P	RC	14.0	750	1				13.00				
75,589	S	RC	13.0	2100x1500	1	1.50	2.10						14.04
75,903	P	M	18.0	300	1			13.00					
76,458	S	RC	13.0	2100x1500	1	21.00	1.50						87.75
77,075	P	RC	15.0	1000	1					13.00			
77,668	S	RC	12.0	2000x2000	1	2.00	2.00						15.60
77,798	P	RC	14.0	1000	1					13.00			
78,691	P	RC	15.0	1000	1					13.00			
81,093	S	RC	13.0	2000x1600	1	2.00	1.60						14.04
84,394	S	RC	15.0	1850x1800	1	1.85	1.80						14.24
88,067	S	RC	16.0	4000x1500	1	4.00	1.50						21.45
88,447	S	RC	16.0	4000x1500	1	4.00	1.50						21.45
89,005	P	RC	14.0	1000	1				13.00				
91,337	S	RC	12.0	2000x1800	1	2.00	1.80						14.82
92,117	S	RC	31.0	2000x2000	1	2.00	2.00						15.60
93,116	P/S	RC	16.0	1250(2)+4000x1700+1250(2)	2					26.00			
94,148	P/S	RC	16.0	1250(2)+2500x1700+1250(2)	2					26.00			
95,178	B/S	RC	17.0	2000x2000(4)+8600x1700+2000x2000(4)	4	2.00	2.00						62.40
95,497	P	RC	15.0	1250(2)	2						26.00		

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 2 3 - M4: Gazi-Mammad - Kyurdamir; km 43+450 - km 124+300
Cost Estimate
- Drainage Upgrading -

Station	EXISTING STRUCTURE				REQUIRED CULVERT LENGTH m								
km	Type	Mat.	Length m	Size/Dia mm	Number			300 mm Dia.	750 mm Dia.	1000 mm Dia.	1250 mm Dia.	1500 mm Dia.	Other
95,792	P	RC	16.0	1000	1					13.00			
96,392	P	RC	18.0	1250	1						13.00		
96,652	P	RC	15.0	750	1				13.00				
97,480	P	RC	18.0	750	1				13.00				
97,929	P	RC	16.5	1250	1						13.00		
99,100	B/S	RC	19.0	2000x2000(2)+4000x2000+2000x2000(2)	2	2.00	2.00						31.20
100,240	P/S	RC	20.0	1250(2)+2000x1500+1250(2)	2						26.00		
100,719	P/S	RC	19.0	1000+2000x1500+1000	1					13.00			
103,120	P	RC	16.0	1000	1					13.00			
104,405	P	RC	16.0	1000	1					13.00			
104,973	S	RC	13.0	3000x1700	1	3.00	1.70						18.33
105,876	P	RC	16.0	1500	1							13.00	
107,536	P	RC	12.0	1250	1						13.00		
107,954	P	RC	15.0	1250	1						13.00		
109,616	P	RC	18.0	1250	1						13.00		
111,296	P/S	RC	17.0	1000(3)+4000x1500+1000(3)	3					39.00			
111,576	S	RC	30.0	2000x2000	1	2.00	2.00						15.60
111,844	P	RC	14.0	1250(3)	3						39.00		
112,294	P	RC	16.0	1250(3)	3						39.00		
113,474	S	RC	15.0	5000x1700	1	5.00	1.70						26.13
115,019	P	RC	16.0	1000	1					13.00			
115,923	P	RC	17.0	1250	1						13.00		
116,936	P	RC	16.0	1000	1					13.00			
117,539	P	RC	25.0	750	1				13.00				
118,262	P	RC	24.0	1500	1							13.00	
118,291	P	RC	14.0	1000	1					13.00			
118,764	S	RC	12.0	4000x1700	1	4.00	1.70						22.23
119,289	S	RC	12.0	4000x1700	1	4.00	1.70						22.23
119,808	P	RC	14.0	1250	1						13.00		
120,658	P	RC	16.0	1000	1					13.00			

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 2 3 - M4: Gazi-Mammad - Kyurdamir; km 43+450 - km 124+300
Cost Estimate
- Drainage Upgrading -

Station	EXISTING STRUCTURE				REQUIRED CULVERT LENGTH m								
km	Type	Mat.	Length m	Size/Dia mm	Number			300 mm Dia.	750 mm Dia.	1000 mm Dia.	1250 mm Dia.	1500 mm Dia.	Other
121,268	P	RC	17.0	1200(2)	2						26.00		
121,378	S	RC	18.0	1800x1300	1	1.80	1.30						12.09
122,017	S	RC	16.0	1800x1300	1	1.80	1.30						12.09
123,152	S	RC	13.0	1500x1500	1	1.50	1.50						11.70
123,737	P	RC	25.0	750	1				13.00				
124,211	P	RC	19.0	750	1				13.00				
Total					112.00			13.00	91.00	429.00	377.00	91.00	551.07
Unit Price								237.00	237.00	237.00	296.30	345.70	732.00
Subtotal (Section km 43+450 - km 46+236)								0.00	0.00	18,486.00	0.00	0.00	0.00
Subtotal (Section km 46+236 - km 124+300)								3,081.00	21,567.00	101,673.00	111,705.10	31,458.70	403,383.24
Improvement of Sidedrainage (Section km 43+450 - km 46+236)					Lenght x 4.20 US $/m								11,701.20
Improvement of Sidedrainage (Section km 46+236 - km 124+300)					Lenght x 4.20 US $/m								327,868.80

Subtotal km 43+450 - km 46+236	**US $**	**30,187.20**
Subtotal km 46+236 - km 124+300	**US $**	**1,000,736.84**
Total Bill No. Drainage Upgrading	**US $**	**1,030,924.04**

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 2 + 3 M 4: Gazi - Mammad - Kyurdamir; km43+450 - km 124+300

Summary of estimated Construction costs

Bill No.	Description	Amount (USD)
1	General Items (5% of Bill Nos. 2 - 6)	1,954,991.43
2	Earthworks	3,632,073.69
3	Drainage	344,780.65
4	Bridges	696,283.00
5	Pavement	33,797,623.91
6	Marking & Safety Works	629,067.28
7	Landacquisition	0.00
Total		**41,054,819.95**

Summary of estimated Construction costs (Upgrade)

Bill No.	Description	Amount (USD)
1	General Items (5% of Bill Nos. 2 - 6)	2,737,010.52
2	Earthworks	12,508,851.33
3	Drainage	1,030,924.04
4	Bridges	5,435,643.71
5	Pavement	33,676,248.38
6	Marking & Safety Works	2,088,543.00
7	Landacquisition	8,791.00
Total		**57,486,011.98**

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 4 - M4: Kyurdamir - Ujar; km 124+300 - 170+500
Cost Estimate

-Pavement-

Geometry			Repair / Reconstuction									Recon-struction - Complete -
Chainage	Width	Added Area	Maintenance	Sealing	Overlay			Potholes	Settlements	Milling	Patching	Recon-struction	
					40mm	60mm	90mm						
km	m	m^2	km	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2
124,300	12.35												
127,227	8.50	4500											35014
128,813	8.50	1000											14481
129,813	9.00												8750
130,866	8.75	1600											10945
131,868	8.50												8642
132,861	9.00												8689
133,959	8.80												9772
135,137	9.00												10484
136,232	8.00	800											10108
137,204	8.00	500											8276
138,180	9.00												8296
139,198	9.00												9162
141,348	9.00												19350
142,098	9.00												6750
143,361	9.00												11367
144,281	9.00	1400											9680
145,266	9.00	1000											9865
146,406	9.30	3550											13981
147,412	9.00												9205
148,562	9.00												10350
149,612	9.00												9450
150,662	9.00												9450
151,712	9.00												9450
152,862	9.00	1000											11350
154,862	9.00												18000
155,862	9.00												9000
156,778	8.30												7923
157,778	8.80												8550
159,033	8.80												11044
160,033	8.80	1100											9900
161,033	8.80												8800
162,033	9.00												8900
162,954	9.00												8289
163,982	8.85												9175
164,982	9.00												8925
166,082	8.50	5000											14625
167,082	9.00												8750
168,082	9.00												9000
168,972	9.00												8010

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 4 - M4: Kyurdamir - Ujar; km 124+300 - 170+500
Cost Estimate

-Pavement-

Geometry			Repair / Reconstuction									Recon-struction
Chainage	Width	Added Area	Maintenance	Sealing	Overlay			Potholes	Settlements	Milling	Patching	Recon-struction	- Complete -
					40mm	60mm	90mm						
km	m	m^2	km	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2
169,972	9.00	4800											13800
170,500	9.00												4752
Subtotal Km 124+300 - 170+500		26250											440310

Calculation											
Unit Price											45.93
Subtotal Km 124+300 - 170+500											20,223,458.97

Total Bill No. Pavement repair/reconstruction Km 124+300 - 170+500	**US $**	

Total Bill No. Pavement reconstruction (complete) Km 124+300 - 170+500	**US $**	**20,223,458.97**

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 4 - M4: Kyurdamir - Ujar; km 124+300 - 170+500
Cost Estimate

-Earthwork-

Repair / Reconstruction								Shoulder Regravelling	Reconstruction				
Chainage	Width left	Width right	Shoulder Adjustment: Overlay 40 mm	Overlay 60 mm	Overlay 90 mm	Reconstruction	Earthworks		Chainage	Width	Added Area	Shoulder Adjustment	Earthworks
km	m	m	m^3	m^3	m^3	m^3	m^3	m^2	km	m	m^2	m^3	m^3
124,300	1.00	1.00							124,300	12.35	0		
127,227	2.70	3.00						11269	127,227	8.50	4500	5004	12915
127,813	3.00	4.00						3721	128,813	8.50	1000	1527	6100
128,813	3.00	4.00						7000	129,813	9.00	0	2764	3770
129,813	2.75	3.50						6625	130,866	8.75	1600	2673	4316
130,866	3.50	4.00						7239	131,868	8.50	0	2896	3752
131,868	3.30	3.50						7164	132,861	9.00	0	2833	3744
132,861	3.00	3.50						6603	133,959	8.80	0	2680	4172
133,959	4.00	3.50						7686	135,137	9.00	0	3068	4476
135,137	3.00	4.00						8541	136,232	8.00	800	3360	4233
136,232	4.00	3.50						7939	137,204	8.00	500	3124	3619
138,180	3.50	3.00						13636	138,180	9.00	0	5428	3631
139,198	3.20	3.20						6566	139,198	9.00	0	2693	3889
140,198	3.50	3.50						6700	141,348	9.00	0	2716	8213
141,348	3.20	2.60						7360	142,098	9.00	0	3025	2865
142,098	2.80	2.50						4163	143,361	9.00	0	1772	4825
142,729	2.50	2.50						3250	144,281	9.00	1400	1407	3794
143,361	2.40	2.80						3223	145,266	9.00	1000	1397	3963
144,281	2.30	2.60						4646	146,406	9.30	3550	2015	5099
145,266	2.00	2.80						4777	147,412	9.00	0	2078	3873
146,406	2.00	2.75						5444	148,562	9.00	0	2362	4393
147,412	3.00	2.75						5282	149,612	9.00	0	2277	4011
148,562	2.75	3.10						6670	150,662	9.00	0	2819	4011
149,612	3.00	3.00						6221	151,712	9.00	0	2615	4011
150,662	2.00	3.00						5775	152,862	9.00	1000	2462	4593
151,712	3.00	3.00						5775	154,862	9.00	0	2462	7640
152,862	2.50	3.00						6613	155,862	9.00	0	2798	3820
153,862	2.80	2.80						5550	156,778	8.30	0	2367	3435
154,862	2.80	3.50						5950	157,778	8.80	0	2495	3730
155,862	3.00	3.20						6250	159,033	8.80	0	2584	4744
156,778	2.60	2.60						5221	160,033	8.80	1100	2215	4000
157,778	2.80	2.50						5250	161,033	8.80	0	2265	3780
159,033	3.50	3.00						7405	162,033	9.00	0	3110	3800
160,033	2.80	2.90						6100	162,954	9.00	0	2544	3518
161,033	2.60	2.60						5450	163,982	8.85	0	2335	3912
162,033	3.00	3.00						5600	164,982	9.00	0	2386	3805
162,954	3.00	3.00						5526	166,082	8.50	5000	2316	5147
163,982	2.40	2.80						5757	167,082	9.00	0	2451	3770
164,982	2.50	2.60						5150	168,082	9.00	0	2228	3820
166,082	2.75	2.50						5693	168,972	9.00	0	2462	3400

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 4 - M4: Kyurdamir - Ujar; km 124+300 - 170+500
Cost Estimate

-Earthwork-

Repair / Reconstruction								Shoulder Regravelling	Reconstruction				
Chainage	Width left	Width right	Shoulder Adjustment: Overlay 40 mm	Overlay 60 mm	Overlay 90 mm	Reconstruction	Earthworks		Chainage	Width	Added Area	Shoulder Adjustment	Earthworks
km	m	m	m^3	m^3	m^3	m^3	m^3	m^2	km	m	m^2	m^3	m^3
167,082	2.40	2.10						4875	169,972	9.00	4800	2126	4780
168,082	2.00	2.80						4650	170,500	9.00	0	2040	2017
168,972	2.50	2.80						4495				1944	
169,972	3.00	2.00						5150				2226	
170,500	3.53	2.53						2920				1232	
Average	2.82	2.95											
Subtotal Km 124+300 - 170+500											26250	111586	181385

Calculation									
Unit Price								13.33	1.46
Subtotal Km 124+500 - 170+500								**1,487,439.22**	**264,821.44**

Total Bill No. Earthwork repair/reconstruction Km 124+300 - 170+500 US $

Total Bill No. Earthwork reconstruction (complete) Km 124+300 - 170+500 US $ **1,952,418.58**

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 4 - M4: Kyurdamir - Ujar; km 124+300 - 170+500
Cost Estimate

-Drainage-

No	Station	EXISTING STRUCTURE				EXISTING DAMAGE									MAINTENANCE ACTIVITY				REQUIRED CULVERT LENGTH					
		Type	Mat.	Length	Size/Dia	Silted/Blocked		Scour			Structural Damage				Cleaning	Backfill of scoured areas	Repair	Reconst.	500 mm Dia.	750 mm Dia.	1000 mm Dia.	1250 mm Dia.	1500 mm Dia.	Other
						Partial	Total	Little Erosion	Erosion without Settlement	Erosion with Underm.	Small	Uneven Settlement	Damaged Inlet/ Outlet	Broken Culvert										
	(km)			(m)	(mm)				m^2	m^2		m^2	m^2	m	m	m^2	m^2		m	m	m	m	m	m
1	124,413	P	RC	43.0	1250	●									43.00									
2	126,882	P	RC	28.0	1000		●●								28.00									
3	127,715	P	RC	18.0	1000																			
4	128,163	P	RC	18.0	1000		●●								18.00									
5	128,513	P	RC	21.5	1000		●●								21.50									
6	128,559	P	M	22.0	1500		●●								22.00									
7	129,020	P	RC	19.5	1000		●●								19.50									
8	129,583	P	RC	13.0	1000																			
9	131,084	P	RC	15.0	1000																			
10	131,851	P	RC	16.0	1000	●									16.00									
11	133,302	P	RC	22.0	750		●●								22.00									
12	133,901	P	RC	25.0	1250		●●								25.00									
13	136,290	P	RC	21.0	1000	●									21.00									
14	136,625	P	RC	15.0	1000	●									15.00									
15	137,969	P	RC	16.0	1000	●					●		0.80	0.50	16.00		0.80	RR			1.00			
16	139,085	P	RC	20.0	750(2)	●									20.00									
17	142,588	S	RC	12.0	5600x1700		●●								12.00									
18	143,056	S	RC	12.0	5600x1700		●●								12.00									
19	145,067	P	RC	17.5	1000	●									17.50									
20	147,877	S	RC	28.0	2800x1400		●●								28.00									
21	148,294	P	RC	16.0	1000(2)																			
22	149,699	P	RC	14.0	1000																			
23	152,169	P	RC	18.0	1000																			
24	152,672	P	RC	18.0	1000																			
25	154,706	P	RC	18.0	1250		●●								18.00									
26	156,207	B	RC	11.0	2000x1500	●									11.00									
27	157,138	P	RC	30.0	750(3)																			
28	157,878	P	RC	28.0	750																			
29	158,378	P	RC	25.0	750																			
30	158,975	P	RC	16.0	750	●									16.00									
31	159,269	P	RC	15.0	750	●									15.00									
32	159,621	P	RC	16.0	700																			
33	160,157	P	RC	14.0	750	●									14.00									
34	160,354	P	RC	12.0	750		●●								12.00									
35	160,558	P	RC	20.0	750																			
36	160,855	P	RC	18.0	1000																			
37	160,887	P	RC	18.0	1000	●									18.00									
38	160,912	P	RC	20.0	750(2)																			
39	160,927	P	RC	19.0	750		●●								19.00									
40	161,078	P	RC	17.0	750		●●								17.00									
41	161,333	P	RC	15.0	1000		●●								15.00									
42	163,718	P	RC	16.0	1000																			
43	164,387	P	RC	16.0	1000	●									16.00									
44	164,707	P	RC	15.0	1000	●									15.00									
45	164,912	P	RC	14.3	1000																			
46	165,090	P	RC	15.0	1000		●●								15.00									
47	165,400	P	RC	17.0	1000	●									17.00									
48	165,531	P	RC	17.0	1000			●	0.70							0.70								
49	165,722	P	RC	14.5	1000																			
50	165,930	P	RC	17.8	1000	●									17.80									
51	166,394	P	RC	15.0	1000																			
52	166,934	P	RC	16.0	1000	●					●			0.50	16.00			RR			1.00			
53	168,004	B	RC	16.0	2000x2000																			
54	169,146	P	RC	19.0	1000																			
55	169,547	P	RC	21.0	1000																			

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 4 - M4: Kyurdamir - Ujar; km 124+300 - 170+500
Cost Estimate

-Drainage-

No	Station	EXISTING STRUCTURE				EXISTING DAMAGE								MAINTENANCE ACTIVITY				REQUIRED CULVERT LENGTH					
		Type	Mat.	Length	Size/Dia	Silted/Blocked		Scour			Structural Damage			Clearing	Backfill of scoured areas	Repair	Reconst.	500 mm Dia.	750 mm Dia.	1000 mm Dia.	1250 mm Dia.	1500 mm Dia.	Other
						Partial	Total	Little Erosion	Erosion without Settlement	Erosion with Underm.	Small	Uneven Settlement	Damaged Inlet/ Outlet	Broken Culvert									
	(km)			(m)	(mm)				m^2	m^2		m^2	m^2	m	m	m^2	m^2		m	m	m	m	m	m
56	169,737	P	RC	18.0	1000	●								18.00									
57	169,782	S	RC	24.0	5600x2000																		
58	170,240	P	RC	19.0	1000																		
59	170,307	B	RC	24.0	2000x2000(2)		●●							24.00									
Subtotal 124+300 + 170+500														650.30	0.70	0.80	0.00	0.00	0.00	2.00	0.00	0.00	0.00

Calculation																		
Unit Price										4.20	5.93	64.20				237.00		345.70	
Subtotal Km 124+300 + 170+500										2,731.26	4.15	51.36	0.00	0.00	0.00	474.00	0.00	0.00	0.00
Improvement of Sidedrainages Km 124+300 + 170+500	**Length x 4.20 US $/m**																		**194,040.00**

Total Bill No. Drainage Km 124+300 + 170+500	**US $**	**197,300.77**

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 4 - M4: Kyurdamir - Ujar; km 124+300 - 170+500
Cost Estimate
-Marking & Safety-

Station	Length	Embankment Height	Crash barrier (R + L)
km	km	m	m
124,300		1.0	
127,227	2.927	1.4	
128,813	1.586	1.3	
129,813	1.000	1.2	
130,866	1.053	1.2	
131,868	1.002	1.4	
132,861	0.993	1.0	
133,959	1.098	1.2	
135,137	1.178	1.2	
136,232	1.095	1.2	
137,204	0.972	1.5	
138,180	0.976	1.3	
139,198	1.018	1.6	
141,348	2.150	1.8	
142,098	0.750	1.5	
143,361	1.263	1.5	
144,281	0.920	1.8	
145,266	0.985	1.6	
146,406	1.140	1.6	
147,412	1.006	1.5	
148,562	1.150	1.5	
149,612	1.050	1.5	
150,662	1.050	2.0	
151,712	1.050	2.0	
152,862	1.150	2.0	
154,862	2.000	2.2	4,000
155,862	1.000	2.4	2,000
156,778	0.916	2.6	1,832
157,778	1.000	2.5	2,000
159,033	1.255	2.6	2,510
160,033	1.000	2.5	2,000
161,033	1.000	2.4	2,000
162,033	1.000	2.0	
162,954	0.921	2.3	1,842
163,982	1.028	2.3	2,056
164,982	1.000	2.0	
166,082	1.100	1.5	
167,082	1.000	1.6	
168,082	1.000	1.5	
168,972	0.890	1.5	
169,972	1.000	1.7	
170,500	0.528	1.6	
Average		1.71	
	46.200		20,240

Calculation			
Crash Barrier	23.20		469,568.00
Marking	321.75	46.200	14,864.85
Marker post Total	1382.80	46.200	63,885.36
Km - post Total	148.00	46.200	6,837.60
Sign Total	674.00	46.200	31,138.80

TOTAL Marking & Safety Works		
Km 124+300 -170+500	**US $**	**586,294.61**

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 4 - M 4: Kyurdamir - Ujar; km 124+300 - km 170+500

Summary of estimated Construction costs

Bill No.	Description	Amount (USD)
1	General Items (5% of Bill Nos. 2 - 6)	1,175,001.80
2	Earthworks	1,952,418.58
3	Drainage	197,300.77
4	Bridges	540,563.00
5	Pavement	20,223,458.97
6	Marking & Safety Works	586,294.61
7	Landacquisition	0.00
Total		**24,675,037.72**

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 5 - M 5: Ujar - Yevlakh; km 170+500 - km 216+500
Cost Estimate

-Pavement-

Geometry			Repair / Reconstuction										Recon-struction
Chainage	Width	Added Area	Maintenance	Sealing	Overlay			Potholes	Settlements	Milling	Patching	Recon-struction	- Complete -
					40mm	60mm	90mm						
km	m	m^2	km	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2
170,500	9.00												
170,972	9.00												4248
171,972	8.80	3000											11900
173,972	9.00												17800
174,972	9.00												9000
175,972	8.90												8950
176,972	8.80												8850
177,972	9.00												8900
178,972	9.00	1000											10000
179,972	9.00												9000
180,972	9.30												9150
181,972	9.20	2025											11275
182,972	9.00												9100
183,972	9.30												9150
184,972	9.00	2800											11950
185,972	9.50												9250
186,972	9.50												9500
188,372	8.90												12880
189,372	9.00												8950
190,318	9.00												8514
191,318	9.00												9000
192,666	8.80												11997
193,666	9.00	1000											9900
194,361	8.80												6186
195,361	9.00												8900
196,338	9.00												8793
197,353	9.00												9135
198,329	9.00	1500											10284
199,329	9.00												9000
200,329	9.00												9000
201,329	9.00												9000
202,329	9.00												9000
203,329	9.00												9000
204,329	9.00												9000
205,329	9.00												9000
206,329	9.00												9000
207,329	9.00												9000
208,329	9.00												9000
209,329	9.00	1200											10200
210,229	8.80	700											8710
211,229	9.00												8900
212,229	9.00	500											9000
213,332	8.50	200											9651
214,410	8.70												9271
215,368	7.70												7856
216,368	19.00	500											14550

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 5 - M 5: Ujar - Yevlakh; km 170+500 - km 216+500
Cost Estimate

-Pavement-

Geometry			Repair / Reconstuction										Recon-struction
Chainage	Width	Added Area	Maintenance	Sealing	Overlay			Potholes	Settlements	Milling	Patching	Recon-struction	- Complete -
					40mm	60mm	90mm						
km	m	m^2	km	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2
216,500	19.00												3208
Subtotal Km 170+500 - 216+500		14425											433907

Calculation											
Unit Price											45.93
Subtotal Km 170+500 - 216+500											**19,929,364.59**

Total Bill No. Pavement repair/reconstruction
Km 170+500 - 216+500 **US $**

Total Bill No. Pavement reconstruction (complete)
Km 170+500 - 216+500 **US $** **19,929,364.59**

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 5 - M 5: Ujar - Yevlakh; km 170+500 - km 216+500
Cost Estimate

-Earthwork-

Repair / Reconstruction								Shoulder Regravelling	Reconstruction				
Chainage	Width left	Width right	Shoulder Adjustment				Earthworks		Chainage	Width	Added Area	Shoulder Adjustment	Earthworks
			Overlay 40 mm	Overlay 60 mm	Overlay 90 mm	Reconstruction							
km	m	m	m^3	m^3	m^3	m^3	m^3	m^2	km	m	m^2	m^3	m^3
170,500	3.53	2.53							170,500	9.00	0		
170,972	4.00	3.00						3082	170,972	9.00	0	1246	1847
171,972	2.85	2.40						6125	171,972	8.80	3000	2537	4493
172,972	3.00	3.00						5625	173,972	9.00	0	2393	7786
173,972	2.75	3.00						5875	174,972	9.00	0	2475	3913
174,972	3.00	3.00						5875	175,972	8.90	0	2475	3903
175,972	3.00	3.00						6000	176,972	8.80	0	2515	3883
176,972	3.00	3.00						6000	177,972	9.00	0	2515	3893
177,972	3.00	3.10						6050	178,972	9.00	1000	2530	4113
178,972	2.80	2.80						5850	179,972	9.00	0	2467	3913
179,972	3.00	3.00						5800	180,972	9.30	0	2451	3943
180,972	3.00	3.00						6000	181,972	9.20	2025	2515	4368
181,972	3.00	2.80						5900	182,972	9.00	0	2483	3933
182,972	3.00	3.00						5900	183,972	9.30	0	2483	3943
183,972	3.00	3.00						6000	184,972	9.00	2800	2515	4503
184,972	3.00	3.00						6000	185,972	9.50	0	2515	3963
185,972	3.00	3.20						6100	186,972	9.50	0	2545	4013
186,972	3.20	3.20						6300	188,372	8.90	0	2604	5534
188,372	3.00	3.20						8820	189,372	9.00	0	3646	3903
189,372	3.50	3.00						6350	190,318	9.00	0	2618	3701
190,318	2.85	3.80						6220	191,318	9.00	0	2536	3913
191,318	3.00	3.00						6325	192,666	8.80	0	2605	5247
192,666	3.30	3.00						8290	193,666	9.00	1000	3450	4093
193,666	2.80	2.80						5950	194,361	8.80	0	2498	2705
194,361	2.80	3.50						4135	195,361	9.00	0	1734	3893
195,361	3.50	3.00						6400	196,338	9.00	0	2633	3823
196,338	3.50	3.00						6351	197,353	9.00	0	2593	3971
197,353	3.20	3.50						6699	198,329	9.00	1500	2729	4119
198,329	3.00	3.50						6442	199,329	9.00	0	2620	3913
199,329	3.00	2.50						6000	200,329	9.00	0	2515	3913
200,329	3.00	3.00						5750	201,329	9.00	0	2433	3913
201,329	3.50	3.00						6250	202,329	9.00	0	2588	3913
202,329	3.00	3.00						6250	203,329	9.00	0	2588	3913
203,329	3.00	2.80						5900	204,329	9.00	0	2483	3913
204,329	3.20	3.50						6250	205,329	9.00	0	2590	3913
205,329	3.00	3.00						6350	206,329	9.00	0	2618	3913
206,329	2.50	2.50						5500	207,329	9.00	0	2352	3913
207,329	3.50	3.50						6000	208,329	9.00	0	2515	3913
208,329	3.00	3.20						6600	209,329	9.00	1200	2689	4153
209,329	3.00	3.00						6100	210,229	8.80	700	2545	3643
210,229	3.00	3.50						5625	211,229	9.00	0	2329	3893
211,229	3.00	2.70						6100	212,229	9.00	500	2545	4013
212,229	2.50	2.80						5500	213,332	8.50	200	2352	4301
213,332	3.00	3.00						6232	214,410	8.70	0	2649	4132
214,410	2.90	3.50						6684	215,368	7.70	0	2773	3595
215,368	3.00	2.50						5700	216,368	19.00	500	2394	4883

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 5 - M 5: Ujar - Yevlakh; km 170+500 - km 216+500
Cost Estimate

-Earthwork-

Repair / Reconstruction								Shoulder Regravelling	Reconstruction				
Chainage	Width left	Width right	Shoulder Adjustment: Overlay 40 mm	Shoulder Adjustment: Overlay 60 mm	Shoulder Adjustment: Overlay 90 mm	Shoulder Adjustment: Reconstruction	Earthworks		Chainage	Width	Added Area	Shoulder Adjustment	Earthworks
km	m	m	m^3	m^3	m^3	m^3	m^3	m^2	km	m	m^2	m^3	m^3
216,368	2.80	2.10						5200	216,500	19.00	0	2237	780
216,500	2.75	2.09						643				279	
Average	3.05	2.99											
Subtotal Km 170+500 - 216+500								279097			14425	116401	183828

Calculation									
Unit Price						0.75		13.33	1.46
Subtotal Km 170+500 - 216+500						**209,322.86**		**1,551,626.55**	**268,389.54**

Total Bill No. Earthwork repair/reconstruction
Km 170+500 - 216+500 **US $**

Total Bill No. Earthwork reconstruction (complete)
Km 170+500 - 216+500 **US $** **2,029,338.95**

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 5 - M 5: Ujar - Yevlakh; km 170+500 - km 216+500
Cost Estimate

-Drainage-

No	Station	EXISTING STRUCTURE				EXISTING DAMAGE								MAINTENANCE ACTIVITY				REQUIRED CULVERT LENGTH					
		Type	Mat.	Length	Size/Dia	Silted/Blocked		Scour			Structural Damage				Cleaning	Backfill of scoured areas	Repair	Reconst.	500 mm Dia.	750 mm Dia.	1000 mm Dia.	1250 mm Dia.	1500 mm Dia.	Other
						Partial	Total	Little Erosion	Erosion without Settlement	Erosion with Underm.	Small	Uneven Settlement	Damaged Inlet/ Outlet	Broken Culvert										
	(km)			(m)	(mm)				m^2	m^2		m^2	m^2	m	m	m^2	m^2		m	m	m	m	m	m
1	171,050	P	RC	18.6	750		●●								18.60									
2	172,147	P	RC	16.5	1000		●●								16.50									
3	173,407	P	RC	23.0	1000	●									23.00									
4	173,986	P	RC	19.0	1000		●●								19.00									
5	174,576	P	RC	18.0	1000																			
6	175,122	P	RC	21.0	1000		●●								21.00									
7	175,514	P	RC	19.8	1000		●●								19.80									
8	176,897	P	RC	20.0	1000(2)																			
9	177,239	S	RC	29.0	4750x2200																			
10	177,412	B	RC	14.0	2400x1500																			
11	178,572	P	RC	14.5	1000(2)																			
12	178,870	P	RC	19.0	1000																			
13	180,514	P	RC	18.0	1000	●									18.00									
14	180,951	B	RC	51.0	2000x2000																			
15	181,538	P	RC	18.3	1000(2)																			
16	183,222	P	RC	17.0	1000(2)		●●								17.00									
17	183,610	P	RC	21.0	1000	●					●		0.50		21.00		0.50							
18	186,972	B	RC	19.0	2000x2000																			
19	187,957	P	RC	18.5	1000																			
20	189,948	P	RC	17.0	1000																			
21	190,413	P	RC	19.0	1250																			
22	191,019	P	RC	26.0	1000	●									26.00									
23	191,748	B	RC	15.0	2000x2000																			
24	192,294	P	RC	16.0	750																			
25	192,329	P	RC	15.0	750																			
26	192,608	P	RC	16.0	1000	●									16.00									
27	192,768	P	RC	22.0	1000	●									22.00									
28	192,980	P	RC	17.0	750	●									17.00									
29	194,422	P	RC	17.0	750	●									17.00									
30	194,578	S	RC	27.0	3000x1700																			
31	195,421	P	RC	16.0	750																			
32	196,353	P	RC	16.0	1000	●									16.00									
33	196,914	P	RC	15.0	1000	●									15.00									
34	197,540	P	RC	29.0	1250		●●								29.00									
35	197,670	P	RC	18.0	1000	●									18.00									
36	198,767	P	RC	18.0	1250																			
37	201,009	S	RC	17.0	3000x1750																			
38	202,856	B	RC	25.0	2000x2000		●●								25.00									
39	205,534	P	RC	16.0	1000	●									16.00									
40	205,941	P	RC	26.0	1250																			
41	206,728	P	RC	25.0	1000		●●								25.00									
42	207,210	P	RC	28.0	1000		●●								28.00									
43	207,428	P	RC	21.0	1000		●●								21.00									
44	208,375	P	RC	16.0	1000	●									16.00									
45	208,729	P	RC	21.0	1000	●									21.00									
46	209,782	P	RC	15.0	1000																			
47	209,853	P	RC	15.0	1000																			
48	210,492	P	RC	17.0	1000	●									17.00									
49	211,469	P	RC	24.0	1000																			
50	212,338	P	RC	16.0	1000	●									16.00									

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 5 - M 5: Ujar - Yevlakh; km 170+500 - km 216+500
Cost Estimate

-Drainage-

No	Station	EXISTING STRUCTURE				EXISTING DAMAGE								MAINTENANCE ACTIVITY				REQUIRED CULVERT LENGTH					
		Type	Mat.	Length	Size/Dia	Silted/Blocked		Scour			Structural Damage			Cleaning	Backfill of scoured areas	Repair	Reconst.	500 mm Dia.	750 mm Dia.	1000 mm Dia.	1250 mm Dia.	1500 mm Dia.	Other
						Partial	Total	Little Erosion	Erosion without Settlement	Erosion with Underm.	Small	Uneven Settlement	Damaged Inlet/ Outlet	Broken Culvert									
	(km)			(m)	(mm)				m^2	m^2		m^2	m^2	m	m	m^2	m^2		m	m	m	m	m	m
51	213,155	P	RC	26.0	1000(3)	●									26.00								
52	216,267	P	RC	24.0	1250																		
Subtotal 170+500 - 216+500															560.90	0.00	0.50	0.00	0.00	0.00	0.00	0.00	0.00

Calculation																			
Unit Price											4.20	5.93	64.20				237.00		345.70	
Subtotal Km 170+500 - 216+500											**2,355.78**	**0.00**	**32.10**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Improvement of Sidedrainages Km 170+500 - 216+500	**Length x 4.20 US $/m**																			**193,200.00**

Total Bill No. Drainage Km 170+500 - 216+500	**US $**	**195,587.88**

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 5 - M 5: Ujar - Yevlakh; km 170+500 - km 216+500
Cost Estimate
-Marking & Safety-

Station	Length	Embankment Height	Crash barrier (R + L)
km	km	m	m
170,500		1.6	
170,972	0.472	1.8	
171,972	1.000	1.6	
173,972	2.000	2.0	
174,972	1.000	2.0	
175,972	1.000	1.8	
176,972	1.000	1.8	
177,972	1.000	1.4	
178,972	1.000	1.6	
179,972	1.000	1.5	
180,972	1.000	1.5	
181,972	1.000	1.5	
182,972	1.000	1.8	
183,972	1.000	1.8	
184,972	1.000	2.0	
185,972	1.000	2.0	
186,972	1.000	2.0	
188,372	1.400	2.0	
189,372	1.000	2.0	
190,318	0.946	2.0	
191,318	1.000	2.0	
192,666	1.348	2.2	2,696
193,666	1.000	2.5	2,000
194,361	0.695	2.5	1,390
195,361	1.000	2.3	2,000
196,338	0.977	2.2	1,954
197,353	1.015	2.8	2,030
198,329	0.976	2.3	1,952
199,329	1.000	2.0	
200,329	1.000	1.5	
201,329	1.000	1.8	
202,329	1.000	1.5	
203,329	1.000	1.4	
204,329	1.000	1.5	
205,329	1.000	1.5	
206,329	1.000	1.5	
207,329	1.000	1.8	
208,329	1.000	1.8	
209,329	1.000	2.0	
210,229	0.900	1.8	
211,229	1.000	1.8	
212,229	1.000	2.0	
213,332	1.103	2.5	2,206
214,410	1.078	3.0	2,156
215,368	0.958	2.8	1,916
216,368	1.000	1.2	
216,500	0.132	1.8	
Average		1.91	
	46.000		20,300

Calculation			
Crash Barrier	23.20		470,960.00
Marking	321.75	46.000	14,800.50
Marker post Total	1382.80	46.000	63,608.80
Km - post Total	148.00	46.000	6,808.00
Sign Total	674.00	46.000	31,004.00

TOTAL Marking & Safety Works		
Km 170+500 - 216+500	**US $**	**587,181.30**

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 5 - M 4: Ujar - Yevlakh; km 170+500 - km 216+500

Summary of estimated Construction costs

Bill No.	Description	Amount (USD)
1	General Items (5% of Bill Nos. 2 - 6)	1,187,689.84
2	Earthworks	2,029,338.95
3	Drainage	195,587.88
4	Bridges	1,012,324.00
5	Pavement	19,929,364.59
6	Marking & Safety Works	587,181.30
7	Landacquisition	0.00
Total		**24,941,486.55**

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 6 - M 4: Bypass Yevlakh; km 216+500 - 223+468
Cost Estimate
-Pavement-

Geometry			Repair / Reconstuction										Recon-struction - Complete -
Chainage	Width	Added Area	Maintenance	Sealing	Overlay			Potholes	Settlements	Milling	Patching	Recon-struction	
					40mm	60mm	90mm						
km	m	m^2	km	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2
216,500	19.00												
217,368	8.70												12022
218,368	9.00	2000											10850
219,368	9.00												9000
220,368	21.40												15200
221,368	21.00												21200
222,368	21.00												21000
223,078	19.00												14200
223,468	9.00												5460
Subtotal Km 216+500 - 223+468		2000											108932

Calculation											
Unit Price											45.93
Subtotal Km 216+500 - 223+468											**5,003,237.57**

Total Bill No. Pavement repair/reconstruction
Km 216+500 - 223+468 **US $**

Total Bill No. Pavement reconstruction (complete)
Km 216+500 - 223+468 **US $** **5,003,237.57**

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 6 - M 4: Bypass Yevlakh; km 216+500 - 223+468
Cost Estimate

-Earthwork-

Repair / Reconstruction								Shoulder	Reconstruction				
Chainage	Width left	Width right	Shoulder Adjustment				Earthworks	Regravelling	Chainage	Width	Added Area	Shoulder Adjustment	Earthworks
			Overlay 40 mm	Overlay 60 mm	Overlay 90 mm	Reconstruction							
km	m	m	m^3	m^3	m^3	m^3	m^3	m^2	km	m	m^2	m^3	m^3
216,500	2.75	2.09							216,500	19.00	0		
217,368	2.40	2.00						4010	217,368	8.70	0	1755	4134
218,368	2.40	3.50						5150	218,368	9.00	2000	2226	4163
219,368	3.00	2.40						5650	219,368	9.00	0	2401	3793
220,296	3.50	3.50						5754	220,368	21.40	0	2387	5033
220,368	2.75	3.00						459	221,368	21.00	0	189	6233
221,368	2.70	2.80						5625	222,368	21.00	0	2393	6193
222,368	3.00	3.10						5800	223,078	19.00	0	2451	4255
223,078	3.00	3.04						4310	223,468	9.00	0	1800	1869
223,468	3.00	3.00						2348				983	
Average	2.85	2.84											
Subtotal Km 216+500 - 223+468								39105			2000	16586	35670

Calculation									
Unit Price						0.75		13.33	1.46
Subtotal Km 216+500 - 223+468						**29,328.95**		**221,090.32**	**52,078.85**

Total Bill No. Earthwork repair/reconstruction
Km 216+500 - 223+468 **US $**

Total Bill No. Earthwork reconstruction (complete)
Km 216+500 - 223+468 **US $** **302,498.12**

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 6 - M 4: Bypass Yevlakh; km 216+500 - 223+468
Cost Estimate
-Drainage-

No	Station	EXISTING STRUCTURE				EXISTING DAMAGE									MAINTENANCE ACTIVITY				REQUIRED CULVERT LENGTH					
		Type	Mat.	Length	Size/Dia	Silted/Blocked		Scour			Structural Damage				Cleaning	Backfill of scoured areas	Repair	Reconst.	500 mm Dia.	750 mm Dia.	1000 mm Dia.	1250 mm Dia.	1500 mm Dia.	Other
						Partial	Total	Little Erosion	Erosion without Settlement	Erosion with Underm.	Small	Uneven Settlement	Damaged Inlet/ Outlet	Broken Culvert										
	(km)			(m)	(mm)				m^2	m^2		m^2	m^2	m	m	m^2	m^2		m	m	m	m	m	m
1	216,267	P	RC	24.0	1250																			
2	220,098	P	RC	30.0	1000																			
3	222,827	B/P	RC	29.0	2200x1750 + 1250																			
4	223,078	P	M	47.0	700																			
5	223,198	B	RC	103.0	2000x2000																			
Subtotal 216+500 - 223+468															0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Calculation																				
Unit Price											4.20	5.93	64.20				237.00		345.70	
Subtotal Km 216+500 - 223+468											**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Improvement of Sidedrainages Km 216+500 - 223+468	**Length x 4.20 US $/m**																			**29,265.60**

Total Bill No. Drainage Km 216+500 - 223+468	**US $**	**29,265.60**

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 6 - M 4: Bypass Yevlakh; km 216+500 - 223+468
Cost Estimate

-Marking & Safety-

Station	Length	Embankment Height	Crash barrier (R + L)
km	km	m	m
216,500		1.8	
217,368	0.868	1.1	
218,368	1.000	1.1	
219,368	1.000	1.8	
220,368	1.000	2.0	
221,368	1.000	2.4	2,000
222,368	1.000	2.2	2,000
223,078	0.710	2.0	
223,468	0.390	1.1	
Average		1.72	
	6.968		4,000

Calculation			
Crash Barrier	23.20		92,800.00
Marking	321.75	6.968	2,241.95
Marker post Total	1382.80	6.968	9,635.35
Km - post Total	148.00	6.968	1,031.26
Sign Total	674.00	6.968	4,696.43

TOTAL Marking & Safety Works		
Km 216+500 - 223+468	**US $**	**110,405.00**

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 6 - M 4: Bypass Yevlakh; km 216+500 - km 223+468

Summary of estimated Construction costs

Bill No.	Description	Amount (USD)
1	General Items (5% of Bill Nos. 2 - 6)	281,406.11
2	Earthworks	302,498.12
3	Drainage	29,265.60
4	Bridges	182,716.00
5	Pavement	5,003,237.57
6	Marking & Safety Works	110,405.00
7	Landacquisition	0.00
Total		**5,909,528.41**

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 7 - M 1: Yevlakh - Mingechevir; km 280+683 - km 288+700
Cost Estimate

-Pavement-

Geometry			Repair / Reconstuction										Recon-struction - Complete -
Chainage	Width	Added Area	Maintenance	Sealing	Overlay			Potholes	Settlements	Milling	Patching	Recon-struction	
					40mm	60mm	90mm						
km	m	m^2	km	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2
280,683	9.00												
281,687	9.00												9036
282,687	9.00												9000
283,687	8.80	1050											9950
284,687	8.80	1100											9900
285,847	8.50												10034
286,932	9.00												9494
287,973	9.00												9369
288,700	8.30												6289
Subtotal Km 280+683 - 288+700		2150											73071

Calculation											
Unit Price											45.93
Subtotal Km 280+683 - 288+700											**3,356,164.81**

Total Bill No. Pavement repair/reconstruction
Km 280+683 - 288+700 **US $**

Total Bill No. Pavement reconstruction (complete)
Km 280+683 - 288+700 **US $** **3,356,164.81**

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 7 - M 1: Yevlakh - Mingechevir; km 280+683 - km 288+700
Cost Estimate

-Earthwork-

Repair / Reconstruction								Shoulder	Reconstruction				
Chainage	Width left	Width right	Shoulder Adjustment				Earthworks	Regravelling	Chainage	Width	Added Area	Shoulder Adjustment	Earthworks
			Overlay 40 mm	Overlay 60 mm	Overlay 90 mm	Reconstruction							
km	m	m	m^3	m^3	m^3	m^3	m^3	m^2	km	m	m^2	m^3	m^3
280,683	2.75	2.09							280,683	9.00	0		
281,687	3.00	3.00						5442	281,687	9.00	0	2331	4042
282,687	3.50	3.20						6350	282,687	9.00	0	2618	4026
283,687	3.00	3.30						6500	283,687	8.80	1050	2662	4216
284,687	3.30	3.30						6450	284,687	8.80	1100	2647	4206
285,837	4.20	3.50						8223	285,847	8.50	0	3251	4589
285,847	3.20	3.00						70	286,932	9.00	0	28	4314
286,932	3.00	2.80						6510	287,973	9.00	0	2727	4191
287,973	3.50	3.20						6506	288,700	8.30	0	2694	2876
288,700	3.00	3.77						4896				1980	
Average	3.25	3.12											
Subtotal Km 280+683 - 288+700								50946			2150	20939	32463

Calculation									
Unit Price						0.75		13.33	1.46
Subtotal Km 280+683 - 288+700						38,209.71		279,112.35	47,395.85

Total Bill No. Earthwork repair/reconstruction Km 280+683 - 288+700	US $	Total Bill No. Earthwork reconstruction (complete) Km 280+683 - 288+700	US $ 364,717.90

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 7 - M 1: Yevlakh - Mingechevir; km 280+683 - km 288+700
Cost Estimate

-Drainage-

No	Station	EXISTING STRUCTURE				EXISTING DAMAGE									MAINTENANCE ACTIVITY				REQUIRED CULVERT LENGTH					
		Type	Mat.	Length	Size/Dia	Silted/Blocked		Scour			Structural Damage				Cleaning	Backfill of scoured areas	Repair	Reconst.	500 mm Dia	750 mm Dia.	1000 mm Dia.	1250 mm Dia.	1500 mm Dia.	Other
						Partial	Total	Little Erosion	Erosion without Settlement	Erosion with Underm.	Small	Uneven Settlement	Damaged Inlet/ Outlet	Broken Culvert										
	(km)			(m)	(mm)				m^2	m^2		m^2	m^2	m	m	m^2	m^2		m	m	m	m	m	m
1	281,615	P	RC	16.0	700		●●								16.00									
2	282,387	P	RC	16.0	750																			
3	282,605	P	RC	16.5	1000		●●								16.50									
4	282,907	P	RC	19.0	750																			
5	283,496	P	RC	18.0	1000		●●								18.00									
6	284,097	P	RC	15.0	1000																			
7	285,702	P	M	16.0	1000		●●								16.00									
8	285,787	P	RC	17.0	750		●●								17.00									
9	286,066	P	RC	16.0	750																			
10	286,545	P	RC	17.5	750		●●								17.50									
11	286,927	P	RC	16.0	750	●									16.00									
12	288,667	P	RC	16.0	750																			
Subtotal 280+683 - 288+700															117.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Calculation																				
Unit Price											4.20	5.93	64.20				237.00		345.70	
Subtotal Km 280+683 - 288+700											**491.40**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Improvement of Sidedrainages Km 280+683 - 288+700	**Length x 4.20 US $/m**																			**33,671.40**

Total Bill No. Drainage Km 280+683 - 288+700	**US $**	**34,162.80**

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 7 - M 1: Yevlakh - Mingechevir; km 280+683 - km 288+700
Cost Estimate

-Marking & Safety-

Station	Length	Embankment Height	Crash barrier (R + L)
km	km	m	m
280,683		1.1	
281,687	1.004	0.8	
282,687	1.000	1.0	
283,687	1.000	1.3	
284,687	1.000	1.5	
285,847	1.160	1.0	
286,932	1.085	1.2	
287,973	1.041	1.0	
288,700	0.727	1.1	
Average		1.11	
	8.017		0

Calculation			
Crash Barrier	23.20		0.00
Marking	321.75	8.017	2,579.47
Marker post Total	1382.80	8.017	11,085.91
Km - post Total	148.00	8.017	1,186.52
Sign Total	674.00	8.017	5,403.46

TOTAL Marking & Safety Works		
Km 280+683 - 288+700	**US $**	**20,255.35**

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 7 - M 4: Yevlakh - Mingechevir; km 280+683 - km 288+700

Summary of estimated Construction costs

Bill No.	Description	Amount (USD)
1	General Items (5% of Bill Nos. 2 - 6)	188,765.04
2	Earthworks	364,717.90
3	Drainage	34,162.80
4	Bridges	0.00
5	Pavement	3,356,164.81
6	Marking & Safety Works	20,255.35
7	Landacquisition	0.00
Total		**3,964,065.90**

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 8 - M 1: Mingechevir - Ganja; km 288+700 - 333+500
Cost Estimate
-Pavement-

Geometry			Repair / Reconstruction										Recon-struction - Complete -
Chainage	Width	Added Area	Maintenance	Sealing	Overlay			Potholes	Settlements	Milling	Patching	Recon-struction	
					40mm	60mm	90mm						
km	m	m^2	km	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2
288,700	8.30												
288,992	10.30	1000											3716
289,992	20.70												15500
290,992	16.50	1000											19600
292,077	16.30												17794
293,083	9.00												12726
294,098	8.70												8983
295,094	9.00												8815
296,094	9.00												9000
297,174	9.00												9720
298,172	9.00												8982
299,117	9.00												8505
300,117	9.00												9000
301,117	9.40	4420											13620
302,195	9.00												9918
303,083	9.00												7992
304,158	9.00												9675
305,209	9.00												9459
306,215	9.00												9054
307,215	9.00												9000
308,208	9.00												8937
309,414	9.00												10854
310,242	9.00												7452
311,181	9.00												8451
312,264	9.00												9747
313,217	9.00												8577
314,237	9.00												9180
315,237	9.00												9000
316,237	9.00	400											9400
317,226	9.00												8901
318,226	9.00	7200											16200
319,224	9.00												8982
320,111	9.00	1500											9483
321,238	8.20												9692
322,238	9.20												8700
323,019	8.50												6912
323,994	9.20												8629
325,215	9.80												11600
326,215	9.00	500											9900
327,255	8.10	1900											10792
328,346	8.15												8864
329,287	7.60												7410
330,287	8.00												7800

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 8 - M 1: Mingechevir - Ganja; km 288+700 - 333+500
Cost Estimate
-Pavement-

Geometry			Repair / Reconstruction										Recon-struction
Chainage	Width	Added Area	Maintenance	Sealing	Overlay			Potholes	Settlements	Milling	Patching	Recon-struction	- Complete -
					40mm	60mm	90mm						
km	m	m^2	km	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2
331,202	8.00												7320
332,202	7.40												7700
333,273	22.60	200											16565
333,500	7.00												5260
Subtotal Km 288+700 - 333+500		18120											453365

Calculation										
Unit Price										45.93
Subtotal Km 288+700 - 333+500										**20,823,059.04**

Total Bill No. Pavement repair/reconstruction Km 288+700 - 333+500	**US $**	

Total Bill No. Pavement reconstruction (complete) Km 288+700 - 333+500	**US $**	**20,823,059.04**

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 8 - M 1: Mingechevir - Ganja; km 288+700 - 333+500
Cost Estimate
-Earthwork-

Repair / Reconstruction								Shoulder Regravelling	Reconstruction				
Chainage	Width left	Width right	Shoulder Adjustment: Overlay 40 mm	Overlay 60 mm	Overlay 90 mm	Reconstruction	Earthworks		Chainage	Width	Added Area	Shoulder Adjustment	Earthworks
km	m	m	m^3	m^3	m^3	m^3	m^3	m^2	km	m	m^2	m^3	m^3
288,700	3.00	3.77							288,700	8.30	0		
288,992	2.80	4.00						1981	288,992	10.30	1000	791	1363
289,992	3.30	2.80						6450	289,992	20.70	0	2644	5222
290,992	3.30	3.00						6200	290,992	16.50	1000	2570	6042
292,077	3.00	3.00						6673	292,077	16.30	0	2777	5861
293,083	3.50	3.00						6288	293,083	9.00	0	2604	4680
294,098	3.50	1.50						5836	294,098	8.70	0	2424	3951
295,094	2.80	1.70						4731	295,094	9.00	0	2001	3877
296,094	3.00	3.00						5250	296,094	9.00	0	2256	3922
297,174	3.00	3.00						6480	297,174	9.00	0	2716	4236
298,172	3.00	3.00						5988	298,172	9.00	0	2509	3914
299,117	2.50	2.00						4961	299,117	9.00	0	2139	3707
300,117	3.00	3.00						5250	300,117	9.00	0	2264	3922
301,117	3.00	3.00						6000	301,117	9.40	4420	2515	4846
302,195	3.00	3.00						6468	302,195	9.00	0	2711	4271
303,083	3.75	2.70						5528	303,083	9.00	0	2286	3483
304,158	3.00	3.00						6692	304,158	9.00	0	2767	4216
305,209	3.00	2.50						6043	305,209	9.00	0	2557	4122
306,215	3.00	2.50						5533	306,215	9.00	0	2359	3946
307,215	3.00	3.00						5750	307,215	9.00	0	2433	3922
308,208	3.00	3.00						5958	308,208	9.00	0	2497	3895
309,414	3.00	3.00						7236	309,414	9.00	0	3032	4730
310,242	3.00	3.00						4968	310,242	9.00	0	2082	3248
311,181	3.00	3.00						5634	311,181	9.00	0	2361	3683
312,264	3.00	2.80						6390	312,264	9.00	0	2689	4248
313,217	2.60	2.70						5289	313,217	9.00	0	2258	3738
314,237	3.00	3.00						5763	314,237	9.00	0	2450	4001
315,237	3.00	3.00						6000	315,237	9.00	0	2515	3922
316,237	3.50	3.50						6500	316,237	9.00	400	2662	4002
317,140	3.50	3.30						6231	317,226	9.00	0	2500	3879
317,226	3.30	3.50						585	318,226	9.00	7200	236	5362
318,226	3.00	2.80						6300	319,224	9.00	0	2605	3914
318,300	3.00	3.00						437	320,111	9.00	1500	184	3779
319,224	2.70	2.00						4943	321,238	8.20	0	2122	4330
320,111	3.50	3.80						5322	322,238	9.20	0	2229	3862
321,238	3.50	3.00						7776	323,019	8.50	0	3120	3040
321,940	3.50	3.00						4563	323,994	9.20	0	1863	3795
322,238	3.50	3.30						1982	325,215	9.80	0	804	4911
323,019	3.00	3.00						4998	326,215	9.00	500	2057	4102
323,994	3.30	3.00						5996	327,255	8.10	1900	2496	4366
325,215	2.70	3.80						7814	328,346	8.15	0	3210	4088
326,215	2.50	2.00						5500	329,287	7.60	0	2350	3479
327,255	3.00	2.50						5200	330,287	8.00	0	2254	3682
328,346	4.00	3.50						7092	331,202	8.00	0	2896	3406
329,287	2.60	2.60						5975	332,202	7.40	0	2463	3662
330,287	2.70	2.80						5350	333,273	22.60	200	2301	5526
331,202	3.00	3.00						5261	333,500	7.00	0	2228	1154

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 8 - M 1: Mingechevir - Ganja; km 288+700 - 333+500
Cost Estimate
-Earthwork-

Repair / Reconstruction								Shoulder Regravelling	Reconstruction				
Chainage	Width left	Width right	Shoulder Adjustment: Overlay 40 mm	Shoulder Adjustment: Overlay 60 mm	Shoulder Adjustment: Overlay 90 mm	Shoulder Adjustment: Reconstruction	Earthworks		Chainage	Width	Added Area	Shoulder Adjustment	Earthworks
km	m	m	m^3	m^3	m^3	m^3	m^3	m^2	km	m	m^2	m^3	m^3
332,202	3.00	3.00						6000				2515	
333,273	4.00	4.00						7497				2992	
333,500	3.48	3.48						1698				660	
Average	3.11	2.96											
Subtotal Km 288+700 - 333+500								268360			18120	111953	185310

Calculation									
Unit Price						0.75		13.33	1.46
Subtotal Km 288+700 - 333+500						201,270.27		1,492,335.41	270,552.99

Total Bill No. Earthwork repair/reconstruction
Km 288+700 - 333+500 **US $**

Total Bill No. Earthwork reconstruction (complete)
Km 288+700 - 333+500 **US $** **1,964,158.67**

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 8 - M 1: Mingechevir - Ganja; km 288+700 - 333+500
Cost Estimate
-Drainage-

No	Station	EXISTING STRUCTURE				EXISTING DAMAGE									MAINTENANCE ACTIVITY				REQUIRED CULVERT LENGTH					
		Type	Mat	Length	Size/Dia	Silted/Blocked		Scour			Structural Damage				Cleaning	Backfill of scoured areas	Repair	Reconst.	500 mm Dia.	750 mm Dia.	1000 mm Dia.	1250 mm Dia.	1500 mm Dia.	Other
						Partial	Total	Little Erosion	Erosion without Settlement	Erosion with Underm.	Small	Uneven Settlement	Damaged Inlet/ Outlet	Broken Culvert										
	(km)			(m)	(mm)				m^2	m^2		m^2	m^2	m	m	m^2	m^2		m	m	m	m	m	m
1	290,771	P	RC	33.0	750	●									33.00									
2	291,147	P	RC	34.0	1000																			
3	292,816	P	RC	45.0	1000																			
4	292,867	P	RC	32.0	1000(2)																			
5	295,545	P	RC	15.0	1000	●									15.00									
6	297,134	P	RC	16.0	1000	●									16.00									
7	297,454	P	RC	16.0	1000	●									16.00									
8	301,139	P	RC	16.0	1000		●●								16.00									
9	302,404	P	RC	29.0	1250																			
10	303,023	P	RC	30.0	1000		●●								30.00									
11	303,297	P	RC	22.0	1000																			
12	306,653	P	RC	29.0	1250																			
13	306,930	P	RC	29.0	1200																			
14	307,047	B	RC	21.0	2000x2000(2)																			
15	307,657	B	RC	21.0	2000x2000																			
16	307,752	B	RC	22.0	2000x2000(2)						●		0.70				0.70							
17	309,858	P	RC	30.0	1000	●									30.00									
18	310,334	P	RC	17.0	750																			
19	310,519	P	RC	24.0	750		●●								24.00									
20	310,681	P	RC	32.0	750	●									32.00									
21	310,988	P	RC	32.0	750																			
22	311,103	P	RC	32.0	750		●●								32.00									
23	311,175	P	RC	32.0	700		●●								32.00									
24	311,438	P	RC	18.0	1000		●●								18.00									
25	312,873	P	RC	17.0	750		●●								17.00									
26	313,742	P	RC	18.0	750																			
27	314,529	P	RC	16.0	750																			
28	315,080	P	RC	18.0	750		●●								18.00									
29	315,803	P	RC	21.0	1000	●									21.00									
30	315,890	S	RC	17.0	1600x1200																			
31	316,307	P	RC	29.0	1000		●●								29.00									
32	316,721	P	RC	29.0	1250																			
33	316,888	P	RC	17.0	1000	●									17.00									
34	317,127	P	RC	19.0	1250	●					●			1.50	19.00			RR				2.00		
35	317,169	P	RC	20.0	1250		●●				●			1.00	20.00			RR				1.00		
36	317,271	P	RC	19.0	1000	●									19.00									
37	317,367	P	RC	19.0	1000		●●								19.00									
38	317,499	B	RC	20.0	2000x2000	●									20.00									
39	317,642	P	RC	25.0	1000		●●								25.00									
40	317,646	P	RC	17.0	1000	●									17.00									
41	317,990	P	RC	33.0	750	●									33.00									
42	318,261	P	RC	31.0	750	●					●		2.00		31.00		2.00							
43	318,423	P	RC	30.0	1000	●									30.00									
44	319,010	P	RC	33.0	1000	●									33.00									
45	319,476	P	RC	20.0	700																			
46	319,890	P	RC	16.0	750(2)																			
47	320,549	P	RC	32.0	1000																			
48	321,561	P	RC	32.0	1000																			
49	321,826	P	RC	30.0	750	●									30.00									
50	321,856	P	RC	30.0	1000	●									30.00									
51	322,714	P	RC	30.0	1000																			
52	323,505	P	RC	15.0	1000		●●								15.00									
53	323,935	P	RC	17.0	750		●●								17.00									
54	324,406	P	RC	19.0	1000																			

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 8 - M 1: Mingechevir - Ganja; km 288+700 - 333+500
Cost Estimate
-Drainage-

No	Station	EXISTING STRUCTURE				EXISTING DAMAGE								MAINTENANCE ACTIVITY				REQUIRED CULVERT LENGTH					
		Type	Mat.	Length	Size/Dia	Silted/Blocked		Scour			Structural Damage												
						Partial	Total	Little Erosion	Erosion without Settlement	Erosion with Underm.	Small	Uneven Settlement	Damaged Inlet/ Outlet	Broken Culvert	Cleaning	Backfill of scoured areas	Repair	Reconst.	500 mm Dia.	750 mm Dia.	1000 mm Dia.	1250 mm Dia.	1500 mm Dia.	Other
	(km)			(m)	(mm)				m^2	m^2		m^2	m^2	m	m	m^2	m^2		m	m	m	m	m	m
55	324,636	P	RC	13.0	1000																		
56	324,887	P	M/RC	23.0	700 + 1000																		
57	325,035	P	RC	31.0	1000		●●								31.00								
58	325,171	P	M/RC	28.0	750 +750																		
59	325,206	B	RC	20.0	2000x2000																		
60	325,829	P	RC	24.0	750	●									24.00								
61	326,214	P	RC	14.0	1000		●●								14.00								
62	326,855	P	RC	22.0	1000	●									22.00								
63	327,140	P	RC	27.0	1000		●●								27.00								
64	327,328	P	M/RC	18.0	700 + 750	●									18.00								
65	327,431	P	RC	19.0	1000(2)	●									19.00								
66	327,446	P	RC	19.0	1000		●●								19.00								
67	327,589	P	RC	20.0	750		●●								20.00								
68	327,811	P	M/RC	18.0	700 + 1000		●●								18.00								
69	328,262	P	RC	20.0	750		●●								20.00								
70	328,280	P	RC	21.0	750(2)		●●								21.00								
71	328,381	P	RC	24.0	1000		●●								24.00								
72	328,474	P	RC	24.0	1000		●●								24.00								
73	328,715	P	RC	23.0	1000		●●								23.00								
74	328,890	P	RC	30.0	1000	●									30.00								
75	329,245	P	RC	31.0	1000		●●								31.00								
76	329,352	P	RC	15.0	1000	●									15.00								
77	329,659	P	RC	32.0	1000	●									32.00								
78	329,985	P	RC	32.0	1000	●									32.00								
79	330,465	P	RC	14.0	750	●									14.00								
80	331,784	P	RC	13.0	1000	●									13.00								
81	331,974	P	RC	12.0	750(2)																		
82	332,591	P	RC	14.0	750	●									14.00								
83	332,997	P	RC	19.0	1000		●●								19.00								
84	333,032	B	RC	19.0	2000x2000(2)																		
Subtotal 288+700 - 333+500															1278.00	0.00	2.70	0.00	0.00	0.00	0.00	3.00	0.00	0.00

Calculation																				
Unit Price											4.20	5.93	64.20				237.00		345.70	
Subtotal Km 288+700 - 333+500											**5,367.60**	**0.00**	**173.34**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Improvement of Sidedrainages Km 288+700 - 333+500	**Length x 4.20 US $/m**																			**188,160.00**

Total Bill No. Drainage Km 288+700 - 333+500	**US $**	**193,700.94**

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 8 - M 1: Mingechevir - Ganja; km 288+700 - 333+500
Cost Estimate
-Marking & Safety-

Station	Length	Embankment Height	Crash barrier (R + L)
km	km	m	m
288,700		1.1	
288,992	0.292	1.0	
289,992	1.000	0.5	
290,992	1.000	0.8	
292,077	1.085	1.0	
293,083	1.006	1.2	
294,098	1.015	1.2	
295,094	0.996	1.0	
296,094	1.000	1.0	
297,174	1.080	1.2	
298,172	0.998	1.2	
299,117	0.945	1.0	
300,117	1.000	1.0	
301,117	1.000	1.1	
302,195	1.078	1.4	
303,083	0.888	1.5	
304,158	1.075	1.5	
305,209	1.051	2.0	
306,215	1.006	2.3	2,012
307,215	1.000	1.8	
308,208	0.993	1.5	
309,414	1.206	2.0	
310,242	0.828	2.2	1,656
311,181	0.939	2.5	1,878
312,264	1.083	2.4	2,166
313,217	0.953	2.0	
314,237	1.020	1.8	
315,237	1.000	1.5	
316,237	1.000	1.0	
317,226	0.989	1.2	
318,226	1.000	1.0	
319,224	0.998	0.8	
320,111	0.887	1.1	
321,238	1.127	1.2	
322,238	1.000	1.2	
323,019	0.781	2.0	
323,994	0.975	1.0	
325,215	1.221	1.0	
326,215	1.000	1.0	
327,255	1.040	0.8	
328,346	1.091	0.5	
329,287	0.941	0.0	
330,287	1.000	0.0	
331,202	0.915	0.5	
332,202	1.000	0.8	
333,273	1.071	0.5	
333,500	0.227	2.0	
Average		1.24	
	44.800		7,712

Calculation			
Crash Barrier	23.20		178,918.40
Marking	321.75	44.800	14,414.40
Marker post Total	1382.80	44.800	61,949.44
Km - post Total	148.00	44.800	6,630.40
Sign Total	674.00	44.800	30,195.20

TOTAL Marking & Safety Works		
Km 288+700 - 333+500	**US $**	**292,107.84**

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 8 - M 1: Mingechevir - Ganja; km 288+700 - km 333+500

Summary of estimated Construction costs

Bill No.	Description	Amount (USD)
1	General Items (5% of Bill Nos. 2 - 6)	1,220,512.22
2	Earthworks	1,964,158.67
3	Drainage	193,700.94
4	Bridges	1,137,218.00
5	Pavement	20,823,059.04
6	Marking & Safety Works	292,107.84
7	Landacquisition	0.00
Total		**25,630,756.72**

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 9 - M 1: Bypass Ganja; km 333+500 - km 369+500
Cost Estimate

-Pavement-

Geometry			Repair / Reconstruction									Recon-struction
Chainage	Width	Added Area	Maintenance	Sealing	Overlay			Potholes	Settlements	Milling	Patching	Recon-struction	- Complete -
					40mm	60mm	90mm						
km	m	m^2	km	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2
333,500	7.00												
334,330	7.00												5810
335,475	7.00												8015
336,275	7.00												5600
337,295	7.00												7140
338,662	6.80												9432
339,574	7.00												6293
341,270	8.00												12720
343,357	7.00												15653
344,362	7.00												7035
345,282	6.80												6348
346,204	6.60												6177
347,114	6.90												6143
348,042	6.50												6218
350,055	7.00												13588
350,960	9.00	500											7740
352,056	8.40												9535
354,097	7.00												15716
356,051	7.00												13678
357,019	7.00												6776
360,225	7.50												23244
361,213	7.50												7410
362,170	7.00												6938
363,170	6.40	1000											7700
364,132	6.50												6205
365,252	7.00	800											8360
366,190	6.50												6332
367,153	7.00												6500
368,153	7.20												7100
369,131	7.50												7188
369,500	8.34	1000											3922
Subtotal Km 333+500 - 369+500		3300											260515

Calculation											
Unit Price											45.93
Subtotal Km 333+500 - 369+500											**11,965,450.73**

Total Bill No. Pavement repair/reconstruction
Km 333+500 - 369+500 **US $**

Total Bill No. Pavement reconstruction (complete)
Km 333+500 - 369+500 **US $** **11,965,450.73**

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 9 - M 1: Bypass Ganja; km 333+500 - km 369+500
Cost Estimate

-Earthwork-

Repair / Reconstruction								Shoulder Regravelling	Reconstruction				
Chainage	Width left	Width right	Shoulder Adjustment				Earthworks		Chainage	Width	Added Area	Shoulder Adjustment	Earthworks
			Overlay 40 mm	Overlay 60 mm	Overlay 90 mm	Reconstruction							
km	m	m	m^3	m^3	m^3	m^3	m^3	m^2	km	m	m^2	m^3	m^3
333,500	3.48	3.48							333,500	7.00	0		
334,330	3.00	2.50						5171	334,330	7.00	0	2143	2725
335,475	4.00	2.50						6870	335,475	7.00	0	2845	3759
336,275	2.30	2.30						4440	336,275	7.00	0	1882	2626
337,295	2.70	2.30						4896	337,295	7.00	0	2141	3349
338,662	4.00	3.00						8202	338,662	6.80	0	3417	4460
339,574	3.00	3.00						5928	339,574	7.00	0	2421	2976
341,270	3.00	3.00						10176	341,270	8.00	0	4265	5737
343,357	2.00	2.30						10748	343,357	7.00	0	4652	7060
344,362	2.50	2.50						4673	344,362	7.00	0	2052	3299
345,282	3.00	2.00						4600	345,282	6.80	0	1994	3002
346,204	3.30	2.20						4841	346,204	6.60	0	2058	2972
347,114	3.30	2.20						5005	347,114	6.90	0	2108	2942
348,042	3.50	3.50						5800	348,042	6.50	0	2395	2991
350,055	2.00	3.00						12078	350,055	7.00	0	5047	6508
350,960	3.20	3.50						5294	350,960	9.00	500	2222	3252
352,056	2.00	2.00						5864	352,056	8.40	0	2521	3971
354,097	2.50	2.50						9185	354,097	7.00	0	4047	6986
355,139	2.60	2.80						5418	356,051	7.00	0	2342	6415
356,051	2.50	3.00						4970	357,019	7.00	0	2126	3178
357,019	2.40	2.80						5179	360,225	7.50	0	2221	10685
360,225	2.50	2.20						15870	361,213	7.50	0	6913	3342
361,213	2.60	2.70						4940	362,170	7.00	0	2149	3190
362,170	2.50	2.50						4929	363,170	6.40	1000	2134	3423
363,170	2.70	2.00						4850	364,132	6.50	0	2115	3052
364,132	2.60	2.60						4762	365,252	7.00	800	2071	3781
365,252	2.50	2.80						5880	366,190	6.50	0	2537	3032
366,190	2.60	2.60						4925	367,153	7.00	0	2124	3113
367,153	2.50	2.50						4911	368,153	7.20	0	2130	3303
368,153	2.60	2.40						5000	369,131	7.50	0	2175	3279
369,131	2.30	2.30						4694	369,500	8.34	1000	2053	1479
369,500	2.86	2.63						1862				809	
Average	2.77	2.61											
Subtotal Km 333+500 - 369+500								191960			3300	82106	119887

Calculation									
Unit Price						0.75		13.33	1.46
Subtotal Km 333+500 - 369+500						143,969.70		1,094,472.89	175,035.09

Total Bill No. Earthwork repair/reconstruction
Km 333+500 - 369+500 **US $**

Total Bill No. Earthwork reconstruction (complete)
Km 333+500 - 369+500 **US $** 1,413,477.69

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 9 - M 1: Bypass Ganja; km 333+500 - km 369+500
Cost Estimate

-Drainage-

No	Station	EXISTING STRUCTURE				EXISTING DAMAGE									MAINTENANCE ACTIVITY				REQUIRED CULVERT LENGTH					
		Type	Mat.	Length	Size/Dia	Silted/Blocked		Scour			Structural Damage				Cleaning	Backfill of scoured areas	Repair	Reconst.	500 mm Dia.	750 mm Dia.	1000 mm Dia.	1250 mm Dia.	1500 mm Dia.	Other
						Partial	Total	Little Erosion	Erosion without Settlement	Erosion with Underm.	Small	Uneven Settlement	Damaged Inlet/ Outlet	Broken Culvert										
	(km)			(m)	(mm)				m^2	m^2		m^2	m^2	m	m	m^2	m^2		m	m	m	m	m	m
1	333,743	P	RC	14.5	750	●									14.50									
2	333,798	P	RC	15.0	1000		●●								15.00									
3	333,815	P	RC	15.0	750		●●								15.00									
4	334,180	P	RC	14.0	1000	●									14.00									
5	334,805	P	RC	14.0	750		●●								14.00									
6	335,029	P	RC	18.0	1250																			
7	335,166	P	RC	18.0	1250																			
8	336,227	B	RC	35.0	2000x2000																			
9	337,257	P	RC	15.0	1000																			
10	337,643	P	RC	19.1	1000		●●								19.10									
11	338,109	P	RC	22.0	1250																			
12	338,546	P	RC	22.0	1250	●									22.00									
13	339,225	P	RC	28.0	1000		●●								28.00									
14	339,816	P	RC	28.0	1250																			
15	340,062	P	RC	19.0	1250	●									19.00									
16	340,467	P	RC	23.0	1000																			
17	341,072	B	RC	28.0	2000x2000																			
18	341,924	P	RC	28.0	1250		●●								28.00									
19	342,954	P	RC	14.0	1000		●●								14.00									
20	343,421	P	RC	14.0	1000(2)		●●								14.00									
21	344,712	P	RC	18.0	1250																			
22	345,422	P	RC	14.0	1000	●									14.00									
23	345,618	P	RC	30.0	1250	●									30.00									
24	346,968	P	RC	14.0	1000																			
25	349,544	P	RC	15.0	750						●		1.50				1.50							
26	350,077	P	RC	14.0	750																			
27	351,250	P	RC	13.0	1250(2)																			
28	351,775	S	RC	14.0	3000x1800																			
29	353,765	S	RC	32.0	3000x4000																			
30	354,678	S	RC	61.0	3000x4000																			
31	355,333	S	RC	14.0	3000x4000																			
32	355,620	P	RC	33.0	1500																			
33	356,100	S	RC	20.0	2000x1800																			
34	356,458	P	RC	22.0	1500																			
35	357,100	S	RC	45.0	3700x4000																			
36	357,297	P	RC	34.0	750	●									34.00									
37	358,043	P	RC	30.0	1500	●									30.00									
38	358,121	P	RC	12.0	750		●●								12.00									
39	360,616	P	RC	14.0	100	●					●		0.50		14.00		0.50							
40	361,315	P	RC	28.0	125																			
41	361,488	P	RC	17.0	750	●									17.00									
42	361,717	P	RC	23.0	1000	●									23.00									
43	361,998	P	RC	29.0	1200																			
44	362,377	P	RC	13.0	750																			
45	362,556	B	RC	13.0	2000x800																			
46	363,792	S	RC	28.0	3000x1700																			
47	364,236	P	RC	21.0	1250(2)																			
48	364,440	P	RC	18.0	1250(2)		●●								18.00									
49	364,669	P	RC	25.0	1000(2)																			
50	364,885	P	RC	20.0	1200																			
51	364,976	P	RC	16.0	1000																			
52	365,123	P	RC	23.0	1100																			
53	365,172	P	RC	16.0	750	●									16.00									
54	365,263	P	RC	17.0	1250		●●								17.00									

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 9 - M 1: Bypass Ganja; km 333+500 - km 369+500
Cost Estimate

-Drainage-

No	Station	EXISTING STRUCTURE				EXISTING DAMAGE								MAINTENANCE ACTIVITY				REQUIRED CULVERT LENGTH					
		Type	Mat.	Length	Size/Dia	Silted/Blocked		Scour			Structural Damage			Cleaning	Backfill of scoured areas	Repair	Reconst.	500 mm Dia.	750 mm Dia.	1000 mm Dia.	1250 mm Dia.	1500 mm Dia.	Other
						Partial	Total	Little Erosion	Erosion without Settlement	Erosion with Underm.	Small	Uneven Settlement	Damaged Inlet/ Outlet	Broken Culvert										
	(km)			(m)	(mm)				m^2	m^2		m^2	m^2	m	m	m^2	m^2		m	m	m	m	m	m
55	365,533	P	RC	20.0	1250																		
56	366,088	P	RC	13.0	1000																		
57	366,300	P	RC	15.0	1100		●●								15.00								
58	366,400	P	RC	15.0	1100(2)		●●								15.00								
59	366,702	P	RC	15.0	1100(2)		●●								15.00								
60	366,885	P	RC	20.0	1100(2)		●●								20.00								
61	367,164	P	RC	20.0	1100																		
62	368,325	P	RC	18.0	1250																		
63	368,562	P	RC	18.0	1100																		
Subtotal 333+500 -369+500															506.60	0.00	2.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Calculation																				
Unit Price											4.20	5.93	64.20				237.00		345.70	
Subtotal Km 333+500 -369+500											**2,127.72**	**0.00**	**128.40**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Improvement of Sidedrainages Km 333+500 -369+500	**Length x 4.20 US $/m**																			**151,200.00**

Total Bill No. Drainage Km 333+500 - 369+500	**US $**	**153,456.12**

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 9 - M 1: Bypass Ganja; km 333+500 - km 369+500
Cost Estimate
-Marking & Safety-

Station	Length	Embankment Height	Crash barrier (R + L)
km	km	m	m
333,500		2.0	
334,330	0.830	1.8	
335,475	1.145	3.0	2,290
336,275	0.800	1.0	
337,295	1.020	0.5	
338,662	1.367	0.5	
339,574	0.912	1.5	
341,270	1.696	0.5	
343,357	2.087	1.0	
344,362	1.005	1.2	
345,282	0.920	3.0	1,840
346,204	0.922	0.8	
347,114	0.910	1.0	
348,042	0.928	1.0	
350,055	2.013	1.0	
350,960	0.905	1.0	
352,056	1.096	0.0	
354,097	2.041	1.2	
356,051	1.954	2.0	
357,019	0.968	1.0	
360,225	3.206	1.2	
361,213	0.988	1.5	
362,170	0.957	2.0	
363,170	1.000	0.5	
364,132	0.962	2.0	
365,252	1.120	2.0	
366,190	0.938	1.5	
367,153	0.963	1.0	
368,153	1.000	0.8	
369,131	0.978	1.0	
369,500	0.369	2.0	
Average		1.31	
	36.000		4,130

Calculation			
Crash Barrier	23.20		95,816.00
Marking	321.75	36.000	11,583.00
Marker post Total	1382.80	36.000	49,780.80
Km - post Total	148.00	36.000	5,328.00
Sign Total	674.00	36.000	24,264.00

TOTAL Marking & Safety Works		
Km 333+500 - 369+500	**US $**	**186,771.80**

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 9 - M 1: Bypass Ganja; km 333+500 - km 369+500

Summary of estimated Construction costs

Bill No.	Description	Amount (USD)
1	General Items (5% of Bill Nos. 2 - 6)	714,580.82
2	Earthworks	1,413,477.69
3	Drainage	153,456.12
4	Bridges	572,460.00
5	Pavement	11,965,450.73
6	Marking & Safety Works	186,771.80
7	Landacquisition	0.00
Total		**15,006,197.16**

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 10 - M 1: Ganja -Tovuz; km 369+500 - 431+000
Cost Estimate

-Pavement-

Geometry			Repair / Reconstruction										Recon-struction
Chainage	Width	Added Area	Maintenance	Sealing	Overlay			Potholes	Settlements	Milling	Patching	Recon-struction	- Complete -
					40mm	60mm	90mm						
km	m	m^2	km	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2
369,500	8.34												
369,925	9.30												3,749
370,920	9.30	1100											10,354
371,888	9.10												8,906
373,158	8.90												11,430
375,107	9.00												17,444
376,084	9.20												8,891
377,075	9.20												9,117
378,043	8.80	1200											9,912
379,040	9.10												8,923
380,013	9.00												8,806
382,100	9.00	160											18,943
383,054	9.00	10850											19,436
384,774	9.00	450											15,930
385,878	9.20	2000											12,046
386,824	9.00	800											9,409
387,790	8.90												8,646
388,736	8.80												8,372
389,827	8.80												9,601
390,932	10.00	1500											11,887
391,940	9.00												9,576
392,955	9.00												9,135
393,955	8.60												8,800
394,839	9.00												7,779
395,960	9.00												10,089
396,939	9.00	1100											9,911
398,000	9.00												9,549
399,059	10.00												10,061
400,033	9.00												9,253
401,053	9.00												9,180
402,076	9.00	1200											10,407
403,854	8.80												15,824
404,854	9.00												8,900
405,735	9.00	800											8,729
407,045	9.00	1000											12,790
407,250	9.00												1,845
Subtotal Km 369+500 - 407+250													**363,627**

407,250	9.00												
408,054	9.00					7236		28	50	0	0		
409,054	8.60					8800		26	30	100	100		
410,140	8.30	2000				11177		10	60	140	140		
412,000	7.22					14437							
412,387	7.00	1100										3852	
414,250	7.00											13041	
414,482	7.00	1200				2824		16	272	40	40		
415,658	7.40					8467		24	155	260	260		
416,460	7.50	500				6475		18	65	30	30		

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 10 - M 1: Ganja -Tovuz; km 369+500 - 431+000
Cost Estimate

-Pavement-

Geometry			Repair / Reconstruction										Recon-struction
Chainage	Width	Added Area	Maintenance	Sealing	Overlay			Potholes	Settlements	Milling	Patching	Recon-struction	- Complete -
					40mm	60mm	90mm						
km	m	m^2	km	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2
417,230	7.40	700				6437		16	50	20	20		
418,000	7.46					5721							
418,547	7.50						4091	32	75	0	0		
419,534	7.50						7403	8	25	0	0		
420,250	7.50						5370						
420,528	7.50	1200					3285	12	60	0	0		
420,750	7.50						1665						
421,546	7.50				5970			22	25	0	0		
422,596	7.40				7823			6	50	0	0		
423,485	7.50				6623			2	5	0	0		
424,562	7.50				8078			4	30	30	30		
425,250	7.36				5112								
425,542	7.30	600										2740	
426,563	8.50											8066	
427,633	7.96											8805	
428,538	7.50	1500										8495	
429,596	7.50											7935	
429,750	7.71											1171	
430,678	9.00					7755		11	70	0	0		
431,000	9.00					2898		4	13	0	0		
Subtotal Km 407+250 - 431+000		30960	0	0	33605	82226	21814	211	985	620	620	54106	

Calculation										
Unit Price		0.81	8.22	9.70	21.07	22.89	22.89	2.72	22.89	45.93	45.93
Subtotal Km 369+500 - 407+250		0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	16,701,404.19
Subtotal Km 407+250 - 431+000		0.00	276,231.04	797,593.13	459,613.41	4,836.66	22,546.65	1,686.40	14,191.80	2,485,086.92	42,209,907

Total Bill No. Pavement repair/reconstruction Km 407+250 - 431+000	**US $**	**4,061,786.00**

Total Bill No. Pavement reconstruction (complete) Km 369+500 - 407+250	**US $**	**16,701,404.19**

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 10 - M 1: Ganja -Tovuz; km 369+500 - 431+000
Cost Estimate

-Earthwork-

Repair / Reconstruction								Shoulder	Reconstruction (complete)				
Chainage	Width left	Width right	Shoulder Adjustment				Earthworks	Regravelling	Chainage	Width	Added Area	Shoulder Adjustment	Earthworks
			Overlay 40 mm	Overlay 60 mm	Overlay 90 mm	Reconstruction							
km	m	m	m^3	m^3	m^3	m^3	m^3	m^2	km	m	m^2	m^3	m^3
369,500	2.86	2.63							369,500	8.34	0		
369,925	3.50	3.00						2548	369,925	9.30	0	1,066	1,657
370,920	3.00	3.50						6468	370,920	9.30	1,100	2,648	4,194
371,888	3.00	3.80						6437	371,888	9.10	0	2,604	3,847
373,158	3.00	3.30						8319	373,158	8.90	0	3,387	4,996
375,107	3.00	3.00						11986	375,107	9.00	0	4,989	7,648
376,084	3.00	3.50						6106	376,084	9.20	0	2,529	3,863
377,075	3.00	3.00						6194	377,075	9.20	0	2,565	3,938
378,043	2.30	3.50						5711	378,043	8.80	1,200	2,393	4,048
379,040	4.00	3.00						6381	379,040	9.10	0	2,625	3,912
380,013	3.00	3.00						6325	380,013	9.00	0	2,583	3,838
382,100	3.00	3.00						12522	382,100	9.00	160	5,248	8,243
383,054	3.50	2.75						5843	383,054	9.00	10,850	2,431	5,923
383,943	3.00	2.70						5312	384,774	9.00	450	2,221	6,857
384,774	3.00	2.80						4778	385,878	9.20	2,000	2,022	4,765
385,878	3.00	2.30						6127	386,824	9.00	800	2,609	3,901
386,824	3.00	2.00						4872	387,790	8.90	0	2,089	3,791
388,736	3.00	2.50						10038	388,736	8.80	0	4,299	3,693
389,827	3.00	2.00						5728	389,827	8.80	0	2,453	4,249
390,932	4.00	6.20						8398	390,932	10.00	1,500	3,229	4,736
391,940	2.70	2.70						7862	391,940	9.00	0	2,962	4,066
392,955	2.75	3.00						5659	392,955	9.00	0	2,413	3,993
393,955	3.00	3.00						5875	393,955	8.60	0	2,475	3,894
394,839	3.20	3.70						5702	394,839	9.00	0	2,339	3,442
395,960	3.80	3.70						8071	395,960	9.00	0	3,185	4,410
396,939	3.20	3.50						6951	396,939	9.00	1,100	2,759	4,072
398,000	3.00	3.00						6737	398,000	9.00	0	2,778	4,174
399,059	3.00	3.00						6354	399,059	10.00	0	2,663	4,272
400,033	3.00	3.00						5844	400,033	9.00	0	2,449	3,929
401,053	3.00	3.00						6120	401,053	9.00	0	2,565	4,013
402,076	2.70	2.70						5831	402,076	9.00	1,200	2,475	4,265
402,854	3.30	3.50						4746	403,854	8.80	0	1,980	6,959
403,854	4.00	2.80						6800	404,854	9.00	0	2,735	3,914
404,854	3.00	2.80						6300	405,735	9.00	800	2,590	3,626
405,735	3.00	3.00						5198	407,045	9.00	1,000	2,187	5,354
407,045	3.00	3.00						7860	407,250	9.00	0	3,294	807
407,250	3.08	3.00						1238					
Subtotal Km 369+500 - 407+250								233240			22,160	95,839	153,290

407,250	3.08	3.00											
408,054	3.40	3.00		151				5017					
409,054	3.70	3.80		209				6950					
410,140	3.50	4.00		244				8145					
412,000	2.92	2.76		368				12256					
412,387	2.80	2.50				908	1692	2124					
414,250	4.31	3.12				4858	7042	11862					
414,482	4.50	3.20		53				1756					
415,658	3.50	3.50		259				8644					
416,460	3.50	3.00		162				5414					
417,230	3.30	3.00		148				4928					
418,000	3.42	3.00		147				4896					
418,547	3.50	3.00			58			3533					
419,534	2.70	2.70			208			5873					

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 10 - M 1: Ganja -Tovuz; km 369+500 - 431+000
Cost Estimate

-Earthwork-

Repair / Reconstruction								Shoulder Regravelling	Reconstruction (complete)				
Chainage	Width left	Width right	Shoulder Adjustment: Overlay 40 mm	Overlay 60 mm	Overlay 90 mm	Reconstruction	Earthworks		Chainage	Width	Added Area	Shoulder Adjustment	Earthworks
km	m	m	m^3	m^3	m^3	m^3	m^3	m^2	km	m	m^2	m^3	m^3
420,250	2.92	2.77			267			3970					
420,528	3.00	2.80			264			1597					
420,750	3.00	2.80			337			1288					
421,546	3.00	2.80	92					4617					
422,596	2.50	3.00	119					5933					
423,485	4.70	3.00	117					5867					
424,562	3.20	3.00	150					7485					
425,250	3.06	3.00	84					4217					
425,542	3.00	3.00				737	1243	1761					
426,563	3.00	3.00				2567	4043	6126					
428,538	2.50	2.50				4646	4308	10863					
429,596	3.00	3.00				2489	3853	5819					
429,750	2.72	2.72				373	4703	880					
430,678	1.00	1.00		103				3448					
431,000	1.49	1.49		24				802					
Average	3.11	2.99											
Subtotal Km 407+250 - 431+000			562	1868	1134	16578	26883	146068					

Calculation									
Unit Price	13.33	13.33	13.33	13.33	1.46	0.75		13.33	1.46
Subtotal Km 369+500 - 407+250						174,930.34		1,277,536.47	223,803.24
Subtotal Km 407+250 - 431+000	7,496.57	24,895.84	15,109.89	220,982.91	39,249.04	109,551.34			

Total Bill No. Earthwork repair/reconstuction Km 407+250 - 431+000	**US $**	**417,285.58**

Total Bill No. Earthwork reconstruction (complete) Km 369+500 - 407+250	**US $**	**1,676,270.06**

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 10 - M 1: Ganja -Tovuz; km 369+500 - 431+000
Cost Estimate

-Drainage-

No	Station	EXISTING STRUCTURE				EXISTING DAMAGE								MAINTENANCE ACTIVITY				REQUIRED CULVERT LENGTH					
		Type	Mat.	Length	Size/Dia	Silted/Blocked		Scour			Structural Damage				Backfill of scoured areas	Repair	Reconst.	500 mm Dia.	750 mm Dia.	1000 mm Dia.	1250 mm Dia.	1500 mm Dia.	Other
						Partial	Total	Little Erosion	Erosion without Settlement	Erosion with Underm.	Small	Uneven Settlement	Damaged Inlet/ Outlet	Broken Culvert	Cleaning									
	(km)			(m)	(mm)				m^2	m^2		m^2	m^2	m	m	m^2	m^2		m	m	m	m	m	m
1	369,588	B/P	RC	54.0	2000x2000 + 1000																		
2	370,645	B	RC	25.0	1500x1000		●●								25.00								
3	371,002	S	RC	34.0	3000x1300 + 1100																		
4	371,193	P	RC	29.0	1000																		
5	371,562	S	RC	27.0	2000x1300	●									27.00								
6	372,000	P	RC	55.0	1100																		
7	372,479	P	RC	35.0	1250																		
8	373,040	P	RC	45.0	1000																		
9	373,091	P	RC	55.0	1000																		
10	373,489	P	RC	34.0	1250																		
11	373,607	P	RC	20.0	1000		●●								20.00								
12	373,716	P	RC	18.0	1000	●									18.00								
13	373,922	P	RC	20.0	1000	●									20.00								
14	373,971	P	RC	26.0	????		●●								26.00								
15	374,212	P	RC	22.0	1000		●●								22.00								
16	374,415	P	RC	18.0	1000																		
17	374,468	P	RC	21.0	1250	●									21.00								
18	374,640	P	RC	19.0	1000		●●								19.00								
19	374,724	P	RC	20.0	1000																		
20	374,870	P	RC	30.0	1250	●									30.00								
21	376,000	P	RC	36.0	1250																		
22	376,288	P	RC	19.0	1000		●●								19.00								
23	376,629	P	RC	17.0	750																		
24	376,713	P	RC	19.0	750	●									19.00								
25	377,246	P	RC	19.0	1000																		
26	377,463	P	RC	18.0	750																		
27	377,775	P	RC	39.0	1250		●●								39.00								
28	378,228	P	RC	30.0	1000																		
29	378,446	B	RC	36.0	2000x2000	●									36.00								
30	378,793	P	RC	36.0	1000		●●								36.00								
31	378,929	P	RC	21.0	1250																		
32	379,430	P	RC	17.0	1000	●									17.00								
33	379,727	P	RC	17.0	1000	●									17.00								
34	379,780	P	RC	14.0	1000	●									14.00								
35	380,410	P	RC	15.0	1000	●									15.00								
36	381,005	P	RC	19.0	1000	●									19.00								
37	382,098	P	RC	27.0	1000		●●								27.00								
38	382,801	P	M	12.0	400																		
39	382,991	S	RC	28.0	5000x1700																		
40	383,575	P	RC	18.0	1000																		
41	384,118	P	RC	22.0	1000																		
42	384,498	P	RC	20.0	1000						●												
43	384,613	P	RC	19.0	1000		●●								19.00								
44	385,020	B	RC	13.0	1500x1200																		
45	385,214	P	RC	18.0	1000																		
46	385,585	P	RC	18.0	1000																		
47	386,036	P	RC	16.0	1000			●	9.00														
48	386,357	P	RC	18.0	1000		●●								18.00								
49	386,674	P	RC	18.0	1000						●		0.50				0.50						
50	387,222	P	RC	20.0	1000																		
51	388,402	P	RC	16.0	1000	●									16.00								

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 10 - M 1: Ganja -Tovuz; km 369+500 - 431+000
Cost Estimate

-Drainage-

No	Station	EXISTING STRUCTURE				EXISTING DAMAGE									MAINTENANCE ACTIVITY				REQUIRED CULVERT LENGTH					
		Type	Mat.	Length	Size/Dia	Silted/Blocked		Scour			Structural Damage				Cleaning	Backfill of scoured areas	Repair	Reconst.	500 mm Dia.	750 mm Dia.	1000 mm Dia.	1250 mm Dia.	1500 mm Dia.	Other
						Partial	Total	Little Erosion	Erosion without Settlement	Erosion with Underm.	Small	Uneven Settlement	Damaged Inlet/ Outlet	Broken Culvert										
	(km)			(m)	(mm)				m^2	m^2		m^2	m^2	m	m	m^2	m^2		m	m	m	m	m	m
52	388,829	P	RC	14.0	1000		●●								14.00									
53	388,835	P	RC	14.0	1000	●									14.00									
54	389,452	P	RC	15.0	1000		●●								15.00									
55	389,811	P	RC	15.0	1000		●●								15.00									
56	390,355	P	RC	15.0	1000		●●								15.00									
57	390,573	P	RC	15.0	1000	●									15.00									
58	391,134	P	RC	21.0	1000	●									21.00									
59	391,604	P	RC	16.0	1000	●									16.00									
60	392,248	P	RC	17.0	1000		●●								17.00									
61	393,937	P	RC	20.0	1000		●●								20.00									
62	394,626	P	RC	18.0	1000	●									18.00									
63	395,246	P	RC	16.0	1000		●●								16.00									
64	395,947	P	RC	18.0	1000	●									18.00									
65	396,158	P	RC	21.0	1000		●●								21.00									
66	396,754	P	RC	17.0	1000										17.00									
67	397,177	P	RC	15.0	1000	●									15.00									
68	397,436	P	RC	21.0	1000																			
69	397,518	P	RC	18.0	1000																			
70	398,117	P	RC	17.0	1250	●									17.00									
71	398,546	P	RC	16.0	1000	●									16.00									
72	398,837	P	RC	15.0	1000	●									15.00									
73	399,151	P	RC	15.0	1000																			
74	399,901	P	RC	16.0	1250	●									16.00									
75	400,722	P	RC	15.0	1000																			
76	400,926	P	RC	17.0	1000	●									17.00									
77	401,086	B	RC	18.0	2000x2000		●●								18.00									
78	401,963	P	RC	47.0	1000																			
79	402,135	P	RC	14.0	1000		●●								14.00									
80	402,232	P	RC	16.0	1250		●●								16.00									
81	403,048	P	RC	15.0	750	●									15.00									
82	403,636	P	RC	13.0	1000		●●								13.00									
83	404,069	P	RC	15.0	750		●●								15.00									
84	404,271	P	RC	18.0	1000		●●								18.00									
85	404,854	P	RC	31.0	1250																			
86	405,644	P	RC	14.0	750																			
87	406,023	P	RC	17.0	750		●●								17.00									
88	406,309	P	RC	22.0	750	●									22.00									
89	406,833	P	RC	21.0	750		●●								21.00									
90	406,913	P	RC	22.0	1000																			
Subtotal 369+500 + 407+250															1056.00	0.00	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00
91	407,319	P	RC	17.0	1000																			
92	408,265	P	RC	16.0	1000						●		1.00				1.00							
93	408,299	P	RC	24.0	750		●●								24.00									
94	408,367	P	RC	16.0	1500		●●								16.00									
95	408,681	B	RC	20.0	2000x2000																			
96	409,093	P	RC	17.0	1000																			
97	409,365	P	RC	21.0	1000																			
98	409,570	P	RC	21.0	1000	●									21.00									
99	411,894	S	RC	15.0	2000x1500																			
100	411,968	P	RC	16.0	1000	●									16.00									

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 10 - M 1: Ganja -Tovuz; km 369+500 - 431+000
Cost Estimate

-Drainage-

No	Station	EXISTING STRUCTURE				EXISTING DAMAGE								MAINTENANCE ACTIVITY				REQUIRED CULVERT LENGTH					
		Type	Mat.	Length	Size/Dia	Silted/Blocked		Scour			Structural Damage												
						Partial	Total	Little Erosion	Erosion without Settlement	Erosion with Underm.	Small	Uneven Settlement	Damaged Inlet/ Outlet	Broken Culvert	Cleaning	Backfill of scoured areas	Repair	Reconst.	500 mm Dia.	750 mm Dia.	1000 mm Dia.	1250 mm Dia.	1500 mm Dia.	Other
	(km)			(m)	(mm)				m^2	m^2		m^2	m^2	m	m	m^2	m^2		m	m	m	m	m	m
101	412,053	P	RC	17.0	1000	●									17.00									
102	412,137	P	RC	18.0	750		●●								18.00									
103	412,309	P	RC	18.0	750		●●								18.00									
104	412,670	P	RC	16.0	750		●●								16.00									
105	412,921	S	RC	24.0	2000x1500	●									24.00									
106	413,115	P	RC	15.0	1000		●●								15.00									
107	413,127	P	RC	16.0	1000	●					●			1.00	16.00			RR			1.00			
108	413,363	P	RC	16.0	1000																			
109	413,730	P	RC	16.0 + 8.0	750 + 800	●									24.00									
110	413,907	P	RC	13.0	750	●									13.00									
111	414,008	P	RC	15.0	1000		●●								15.00									
112	414,355	P	RC	16.0	750																			
113	414,367	S	RC	18.0	2000x1500																			
114	414,935	P	RC	17.0	750		●●								17.00									
115	415,011	P	RC	14.0	750	●									14.00									
116	415,519	P	RC	18.0	1500	●									18.00									
117	415,686	P	RC	14.0	750		●●								14.00									
118	415,962	P	RC	15.0	1000	●									15.00									
119	416,113	P	RC	16.0	1000																			
120	416,718	P	RC	15.0	1000						●		0.50				0.50							
121	417,150	P	RC	17.0	1000	●									17.00									
122	417,468	P	RC	14.0	1000																			
123	418,018	P	RC	15.0	1000	●									15.00									
124	418,122	P	RC	13.0	1500																			
125	418,179	P	RC	14.0	1000		●●																	
126	418,532	B	RC	35.0	2000x2000	●									35.00									
127	418,637	B	RC	40.0	2000x2000(2)																			
128	418,665	P	RC	44.0	1100																			
129	418,941	P	RC	14.0	1000																			
130	419,043	P	RC	19.0	1000																			
131	419,194	P	RC	16.0	1000																			
132	419,475	P	RC	15.0	750																			
133	419,615	P	RC	16.0	750																			
134	419,784	P	RC	16.0	750	●									16.00									
135	419,994	P	RC	16.0	1000																			
136	420,127	P	RC	14.0	1000																			
137	420,395	S	RC	14.0	2000x1200	●									14.00									
138	420,459	P	RC	19.0	750		●●								19.00									
139	420,602	P	RC	16.0	1000	●									16.00									
140	420,945	P	RC	14.0	1000																			
141	421,876	P	RC	14.0	750	●									14.00									
142	422,133	P	RC	18.0	750		●●								18.00									
143	422,221	P	M	16.0	500																			
144	422,436	P	RC	14.0	1000		●●								14.00									
145	422,496	P	RC	15.0	1250		●●								15.00									
146	422,598	P	RC	15.0	1000																			
147	422,944	P	RC	14.0	1000	●									14.00									
148	423,079	S	RC	15.0	2500x1600	●									15.00									
149	423,596	P	RC	15.0	1000																			
150	423,852	P	RC	16.0	1000																			
151	424,073	P	RC	14.0	1000																			

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 10 - M 1: Ganja -Tovuz; km 369+500 - 431+000
Cost Estimate

-Drainage-

No	Station	EXISTING STRUCTURE				EXISTING DAMAGE									MAINTENANCE ACTIVITY				REQUIRED CULVERT LENGTH					
		Type	Mat.	Length	Size/Dia	Silted/Blocked		Scour			Structural Damage				Cleaning	Backfill of scoured areas	Repair	Reconst.	500 mm Dia.	750 mm Dia.	1000 mm Dia.	1250 mm Dia.	1500 mm Dia.	Other
						Partial	Total	Little Erosion	Erosion without Settlement	Erosion with Underm.	Small	Uneven Settlement	Damaged Inlet/ Outlet	Broken Culvert										
	(km)			(m)	(mm)				m^2	m^2		m^2	m^2	m	m	m^2	m^2		m	m	m	m	m	m
152	424,205	P	RC	17.0	1000																			
153	424,329	P	RC	14.0	1000																			
154	424,589	S	RC	13.0	2000x1000	●									13.00									
155	426,519	P	RC	22.0	1000	●					●		1.00		22.00		1.00							
156	427,145	P	RC	22.0	1000	●									22.00									
157	427,323	P	RC	21.0	1000	●									21.00									
158	427,653	P	RC	20.0	1000		●●								20.00									
159	429,608	S	RC	13.0	2500x1500																			
Subtotal 407+250 + 431+000															651.00	0.00	2.50	0.00	0.00	0.00	1.00	0.00	0.00	0.00

Calculation																				
Unit Price											4.20	5.93	64.20				237.00		345.70	
Subtotal Km 369+500 + 407+250											**4,435.20**	**0.00**	**32.10**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Improvement of Sidedrainages Km 369+500 + 407+250	**Length x 4.20 US $/m**																			**158,550.00**
Subtotal Km 407+250 + 431+000											**2,734.20**	**0.00**	**160.50**	**0.00**	**0.00**	**0.00**	**237.00**	**0.00**	**0.00**	**0.00**
Improvement of Sidedrainages Km 407+250 + 431+000	**Length x 4.20 US $/m**																			**99,750.00**

Total Bill No. Drainage Km 369+500 + 407+250	**US $**	**102,881.70**

Total Bill No. Drainage Km 407+250 + 431+000	**US $**	**163,017.30**

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 10 - M 1: Ganja -Tovuz; km 369+500 - 431+000
Cost Estimate

-Marking & Safety-

Station	Length	Embankment Height	Crash barrier (R + L)
km	km	m	m
369,500		2.0	
369,925	0.425	2.0	
370,920	0.995	2.0	
371,888	0.968	1.5	
373,158	1.270	1.0	
375,107	1.949	1.5	
376,084	0.977	1.1	
377,075	0.991	1.2	
378,043	0.968	1.5	
379,040	0.997	2.0	
380,013	0.973	2.2	1,946
382,100	2.087	1.0	
383,054	0.954	2.5	1,908
384,774	1.720	2.2	3,440
385,878	1.104	2.0	
386,824	0.946	1.8	
387,790	0.966	1.8	
388,736	0.946	1.5	
389,827	1.091	2.0	
390,932	1.105	1.5	
391,940	1.008	1.5	
392,955	1.015	1.0	
393,955	1.000	1.5	
394,839	0.884	1.2	
395,960	1.121	1.5	
396,939	0.979	1.0	
398,000	1.061	1.2	
399,059	1.059	1.5	
400,033	0.974	1.1	
401,053	1.020	1.5	
402,076	1.023	1.2	
403,854	1.778	1.1	
404,854	1.000	1.1	
405,735	0.881	1.1	
407,045	1.310	2.2	2,620
407,250	0.205	2.2	
Average		1.6	
	37.545		9,914
407,250		2.2	
408,054	0.804	2.3	1,608
409,054	1.000	1.2	
410,140	1.086	1.4	
412,387	2.247	2.0	
414,482	2.095	3.0	4,190
415,658	1.176	1.6	
416,460	0.802	1.6	
417,230	0.770	1.5	
418,547	1.317	1.5	
419,534	0.987	1.8	
420,528	0.994	2.0	
421,546	1.018	2.0	
422,596	1.050	1.5	
423,485	0.889	1.2	
424,562	1.077	1.1	

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 10 - M 1: Ganja -Tovuz; km 369+500 - 431+000
Cost Estimate

-Marking & Safety-

Station	Length	Embankment Height	Crash barrier (R + L)
km	km	m	m
425,542	0.980	1.4	
426,563	1.021	1.1	
427,633	1.070	0.0	
428,538	0.905	0.0	
429,596	1.058	0.6	
430,678	1.082	1.0	
431,000	0.322	1.0	
Average		1.43	
	23.750		5,798

Calculation Km 369+500 - 407+250			
Crash Barrier	23.20		134,513.60
Marking	321.75	37.545	12,080.10
Marker post Total	1382.80	37.545	51,917.23
Km - post Total	148.00	37.545	5,556.66
Sign Total	674.00	37.545	25,305.33

Calculation Km 407+250 - 431+000			
Crash Barrier	23.20		128,914.51
Marking	321.75	23.750	7,641.56
Marker post Total	1382.80	23.750	32,841.50
Km - post Total	148.00	23.750	3,515.00
Sign Total	674.00	23.750	16,007.50

TOTAL Marking & Safety Works		
Km 369+500 - 407+250	**US $**	**229,372.92**
Km 407+250 - 431+000	**US $**	**188,920.07**

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 10 - M 1: Ganja - Tovuz; km 369+500 - km 431+000

Summary of estimated Construction costs
Section 10.1; km 369+500 - km 407+250

Bill No.	Description	Amount (USD)
1	General Items (5% of Bill Nos. 2 - 6)	964,396.99
2	Earthworks	1,676,270.06
3	Drainage	102,881.70
4	Bridges	578,011.00
5	Pavement	16,701,404.19
6	Marking & Safety Works	229,372.92
7	Landacquisition	0.00
Total		**20,252,336.85**

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 10 - M 1: Ganja - Tovuz; km 369+500 - km 431+000

Summary of estimated Construction costs
Section 10.2; km 407+250 - 431+000

Bill No.	Description	Amount (USD)
1	General Items (5% of Bill Nos. 2 - 6)	274,954.05
2	Earthworks	417,285.58
3	Drainage	163,017.30
4	Bridges	668,072.00
5	Pavement	4,061,786.00
6	Marking & Safety Works	188,920.07
7	Landacquisition	0.00
Total		**5,774,035.00**

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 11 - M 1: Tovuz - Gazakh; km 431+000 - km 456+500
Cost Estimate
-Pavement-

Geometry			Repair / Reconstruction										Recon-struction - Complete -
Chainage	Width	Added Area	Maintenance	Sealing	Overlay			Potholes	Settlements	Milling	Patching	Recon-struction	
					40mm	60mm	90mm						
km	m	m^2	km	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2
431,000	9.00												
431,660	9.00					5940		8.7	27	0	0		
433,250	8.11					13600							
434,152	7.60						7084	4	80	0	0		
434,812	7.20						4884	1	100	0	0		
435,750	7.49						6891						
438,013	8.20	2300										20057	
439,163	8.00											9315	
440,163	8.00											8000	
441,063	8.00											7200	
441,250	8.04											1499	
442,063	8.20						6601	12	30	0	0		
443,063	8.50						8350	6	60	0	0		
444,063	8.30						8400	8	70	0	0		
444,250	8.34						1556						
445,063	8.50						6844	4	170	0	0		
445,250	8.31						1572						
446,063	7.50											6428	
447,973	8.00											14803	
448,250	8.14											2235	
448,973	8.50											6015	
449,853	8.00											7260	
450,901	7.00											7860	
451,000	7.11											698	
451,811	8.00						6127	10	150	0	0		
452,741	7.00						6975	10	50	0	0		
453,260	12.00						4931	20	40	0	0		
453,741	12.00						5772						
454,741	9.30						10650	42	130	0	0		
455,741	9.20						9250	30	80	0	0		
456,500	9.15						6964	4	13.5	0	0		
Subtotal Km 431+000 - 456+500		2300	0	0	0	19540	102849	160	1001	0	0	91370	

Calculation										
Unit Price		0.81	8.22	9.70	21.07	22.89	22.89	2.72	22.89	45.93
Subtotal Km 431+000 - 456+500		**0.00**	**0.00**	**189,536.64**	**2,167,033.31**	**3,655.53**	**22,901.45**	**0.00**	**0.00**	**4,196,625.66**

Total Bill No. Pavement repair/reconstruction
Km 431+000 - 456+500 **US $** **6,579,752.58**

Total Bill No. Pavement reconstruction (complete)
Km 431+000 - 456+500 **US $**

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 11 - M 1: Tovuz - Gazakh; km 431+000 - km 456+500
Cost Estimate
-Earthwork-

Repair / Reconstruction								Shoulder Regravelling	Reconstruction				
Chainage	Width left	Width right	Shoulder Adjustment: Overlay 40 mm	Shoulder Adjustment: Overlay 60 mm	Shoulder Adjustment: Overlay 90 mm	Shoulder Adjustment: Reconstruction	Earthworks		Chainage	Width	Added Area	Shoulder Adjustment	Earthworks
km	m	m	m^3	m^3	m^3	m^3	m^3	m^2	km	m	m^2	m^3	m^3
431,000	1.49	1.49											
431,660	2.50	2.50		79				2633					
433,250	2.18	2.18		223				7443					
434,152	2.00	2.00			170			3771					
434,812	3.10	3.10			151			3366					
435,750	2.92	2.92			254			5651					
438,013	2.50	2.50				5,264	3318	12275					
439,163	3.00	2.00				2,493	8690	5750					
440,163	3.00	2.50				2,249	4241	5250					
441,063	3.00	3.00				2,190	3668	5175					
441,250	3.00	3.00				470	3301	1122					
442,063	3.00	3.00			220			4878					
443,063	3.00	2.80			266			5900					
444,063	2.80	2.50			250			5550					
444,250	2.80	2.50			45			991					
445,063	2.80	2.50			194			4309					
445,250	2.84	2.59			45			1003					
446,063	3.00	3.00				1,970	2966	4647					
447,063	2.50	2.50				2,352	6909	5500					
447,973	2.50	2.50				1,979	1020	4550					
448,250	2.64	2.64				616	2698	1423					
448,973	3.00	3.00				1,734	3271	4077					
449,853	3.00	3.00				2,213	3739	5280					
450,901	3.50	3.00				2,712	344	6550					
451,000	3.41	3.00				262		639					
451,811	2.70	3.00			221			4912					
452,741	3.00	3.00			245			5441					
453,260	3.50	5.40			174			3867					
453,741	3.50	3.50			172			3824					
454,741	6.00	6.50			439			9750					
455,741	4.00	4.00			461			10250					
456,500	2.48	3.24			234			5207					
Average	2.96	2.95											
Subtotal Km 431+000 - 456+500			0	302	1594	26505	44165	107733					

Calculation									
Unit Price	13.33	13.33	13.33	13.33	1.46	0.75			
Subtotal Km 431+000 - 456+500	0.00	4,029.46	21,246.24	353,316.95	64,480.50	80,799.89			

Total Bill No. Earthwork repair/reconstruction
Km 431+000 - 456+500 US $ 523,873.05

Total Bill No. Earthwork reconstruction (complete)
Km 431+000 - 456+500 US $

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 11 - M 1: Tovuz - Gazakh; km 431+000 - km 456+500
Cost Estimate
-Drainage-

No	Station	EXISTING STRUCTURE				EXISTING DAMAGE								MAINTENANCE ACTIVITY				REQUIRED CULVERT LENGTH					
		Type	Mat.	Length	Size/Dia	Silted/Blocked		Scour			Structural Damage			Cleaning	Backfill of scoured areas	Repair	Reconst	500 mm Dia.	750 mm Dia.	1000 mm Dia.	1250 mm Dia.	1500 mm Dia.	Other
						Partial	Total	Little Erosion	Erosion without Settlement	Erosion with Underm.	Small	Uneven Settlement	Damaged Inlet/ Outlet	Broken Culvert										
	(km)			(m)	(mm)				m^2	m^2		m^2	m^2	m	m	m^2	m^2	m	m	m	m	m	m
1	433,254	P	RC	14.0	1000																		
2	433,362	P	RC	14.0	1000																		
3	433,627	P	RC	15.0	750									14.00									
4	434,162	P	RC	14.0	1000	●								14.00									
5	434,337	P	RC	14.0	1000	●																	
6	434,914	P	RC	13.0	1000									14.00									
7	435,215	P	RC	14.0	1000	●								17.00									
8	437,022	P	RC	17.0	750	●								13.00									
9	437,198	P	RC	13.0	750		●●																
10	437,769	P	RC	20.0	750(2)																		
11	438,111	S/P	RC	25.0	2000x2000 + 1000									12.00									
12	438,161	P	M	12.0	700	●					●		1.20	20.00		1.20							
13	438,549	P	RC	20.0	750		●●							14.00									
14	438,580	P	M	14.0	700	●										1.40							
15	438,961	S	RC	14.0	2000x2500						●		1.40										
16	439,328	P	RC	17.0	750																		
17	439,655	B	RC	18.0	2000x2000 (2)									18.00									
18	439,863	P	RC	18.0	750		●●																
19	439,963	P	RC	18.0	750									13.00									
20	440,163	P	RC	13.0	1250	●								16.00									
21	440,961	P	RC	16.0	750		●●							14.00									
22	440,968	P	RC	14.0	750	●										1.50							
23	441,463	S	RC	28.0	3000x2000						●		1.50	13.00									
24	442,075	P	RC	13.0	750	●																	
25	442,213	P	RC	17.0	500									13.00									
26	442,643	P	RC	13.0	750		●●							13.00									
27	442,847	P	RC	13.0	1000	●								13.00									
28	442,957	P	RC	13.0	750	●								13.00									
29	443,361	P	RC	13.0	750	●								14.00									
30	443,833	P	RC	14.0	1000		●●							13.00									
31	444,813	P	RC	13.0	1250	●																	
32	444,827	P	RC	13.0	750																		
33	445,213	P	RC	14.0	750																		
34	445,391	P	RC	14.0	750																		
35	445,543	P	RC	12.0	750									13.00									
36	445,763	P	RC	13.0	1000	●								14.00									
37	445,958	P	RC	14.0	1000	●								13.00									
38	446,018	P	RC	13.0	1250	●																	
39	446,373	P	RC	21.0	1250									15.00									
40	446,622	P	RC	15.0	1000	●								30.00									
41	446,895	P	RC	30.0	1000		●●																
42	448,033	P	RC	13.0	750									14.00									
43	448,568	P	RC	14.0	1000	●								14.00									
44	448,655	P	RC	14.0	1000	●								13.00									
45	449,075	P	RC	13.0	7750	●																	
46	449,505	B	RC	14.0	1000x1000						●		0.50	14.00		0.50							
47	449,783	P	RC	14.0	750	●																	
48	450,133	P	RC	14.0	1000																		
49	450,151	P	RC	16.0	1000 (2)									13.00									
50	450,361	P	RC	13.0	750	●					●			14.00									
51	450,703	P	RC	14.0	1000	●							0.80	18.00		0.80							
52	451,129	B	RC	18.0	800x800	●																	
53	453,923	R/B	RC	21.0	1000 + 2000x1000																		
54	454,101	P	RC	22.0	1000																		

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 11 - M 1: Tovuz - Gazakh; km 431+000 - km 456+500
Cost Estimate
-Drainage-

No	Station	EXISTING STRUCTURE				EXISTING DAMAGE									MAINTENANCE ACTIVITY				REQUIRED CULVERT LENGTH					
		Type	Mat.	Length	Size/Dia	Silted/Blocked		Scour			Structural Damage				Cleaning	Backfill of scoured areas	Repair	Reconst.	500 mm Dia.	750 mm Dia.	1000 mm Dia.	1250 mm Dia.	1500 mm Dia.	Other
						Partial	Total	Little Erosion	Erosion without Settlement	Erosion with Underm.	Small	Uneven Settlement	Damaged Inlet/ Outlet	Broken Culvert										
	(km)			(m)	(mm)				m^2	m^2		m^2	m^2	m	m	m^2	m^2		m	m	m	m	m	m
55	455,141	P	RC	22.0	1000																			
56	455,601	P	RC	23.0	1000																			
57	456,043	P	RC	25.0	1100	●									25.00									
Subtotal 431+000 - 456+500															481.00	0.00	5.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Calculation																			
Unit Price											4.20	5.93	64.20				237.00		345.70	
Subtotal Km 431+000 - 456+500											**2,020.20**	**0.00**	**346.68**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Improvement of Sidedrainages Km 431+000 - 456+500	**Length x 4.20 US $/m**																			**107,100.00**

Total Bill No. Drainage Km 431+000 - 456+500	**US $**	**109,466.88**

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 11 - M 1: Tovuz - Gazakh; km 431+000 - km 456+500
Cost Estimate

-Marking & Safety-

Station	Length	Embankment Height	Crash barrier (R + L)
km	km	m	m
431,000		1.0	
431,660	0.660	1.1	
434,152	2.492	1.5	
434,812	0.660	1.0	
438,013	3.201	1.6	
439,163	1.150	0.5	
440,163	1.000	1.0	
441,063	0.900	1.2	
442,063	1.000	0.8	
443,063	1.000	1.0	
444,063	1.000	1.0	
445,063	1.000	0.8	
446,063	1.000	1.0	
447,973	1.910	1.0	
448,973	1.000	1.0	
449,853	0.880	0.0	
450,901	1.048	1.0	
451,811	0.910	0.5	
452,741	0.930	0.8	
453,260	0.519	1.0	
453,741	0.481	1.0	
454,741	1.000	1.2	
455,741	1.000	1.8	
456,500	0.759	1.8	
Average		1.03	
	25.500		0

Calculation			
Crash Barrier	23.20		0.00
Marking	321.75	25.500	8,204.63
Marker post Total	1382.80	25.500	35,261.40
Km - post Total	148.00	25.500	3,774.00
Sign Total	674.00	25.500	17,187.00

TOTAL Marking & Safety Works		
Km 431+000 - 456+500	**US $**	**64,427.03**

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 11 - M 1: Tovuz - Gazakh; km 431+000 - km 456+500

Summary of estimated Construction costs

Bill No.	Description	Amount (USD)
1	General Items (5% of Bill Nos. 2 - 6)	376,675.23
2	Earthworks	523,873.05
3	Drainage	109,466.88
4	Bridges	255,985.00
5	Pavement	6,579,752.58
6	Marking & Safety Works	64,427.03
7	Landacquisition	0.00
Total		**7,910,179.76**

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 12 - M 1: Bypass Gazakh; km 456+500 - 463+500
Cost Estimate
-Pavement-

Geometry			Repair / Reconstruction										Recon-struction - Complete -
Chainage	Width	Added Area	Maintenance	Sealing	Overlay			Potholes	Settlements	Milling	Patching	Recon-struction	
					40mm	60mm	90mm						
km	m	m^2	km	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2
456,500	9.15												
456,741	9.00						2187	12	36.5	0	0		
456,750	9.00						81						
457,741	8.68											8759	
458,643	8.40											7703	
458,750	8.30											894	
459,643	7.50											7056	
460,250	7.44											4534	
460,647	7.40					2946		6	100	0	0		
461,663	7.20					7417		7	20	0	0		
462,665	8.20					7715		14	30	0	0		
463,250	8.09					4764							
463,500	8.04						2016	0	128.5	0	0		
Subtotal Km 456+500 - 463+500		0	0	0	0	22842	4284	39	315	0	0	28946	

Calculation										
Unit Price		0.81	8.22	9.70	21.07	22.89	22.89	2.72	22.89	45.93	
Subtotal Km 456+500 - 463+500		**0.00**	**0.00**	**221,567.99**	**90,264.93**	**892.71**	**7,210.35**	**0.00**	**0.00**	**1,329,500.98**	

Total Bill No. Pavement repair/reconstruction
Km 456+500 - 463+500 US $ 1,649,436.97

Total Bill No. Pavement reconstruction (complete)
Km 456+500 - 463+500 US $

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 12 - M 1: Bypass Gazakh; km 456+500 - 463+500
Cost Estimate

-Earthwork-

Repair / Reconstruction								Shoulder Regravelling	Reconstruction				
Chainage	Width left	Width right	Shoulder Adjustment: Overlay 40 mm	Overlay 60 mm	Overlay 90 mm	Reconstruction	Earthworks		Chainage	Width	Added Area	Shoulder Adjustment	Earthworks
km	m	m	m^3	m^3	m^3	m^3	m^3	m^2	km	m	m^2	m^3	m^3
456,500	2.48	3.24											
456,741	2.00	3.00			58			1292					
456,750	2.01	3.00			2			45					
457,741	3.00	3.00				2,325	3,807	5455					
458,643	3.00	3.00				2,268	3,411	5412					
458,750	3.11	3.11				273	401	653					
459,643	4.00	4.00				2,519	3,263	6347					
460,250	3.70	3.40				1,773	2,165	4581					
460,647	3.50	3.00		81				2698					
461,663	3.20	3.00		194				6452					
462,665	3.00	3.00		183				6112					
463,250	2.44	2.44		95				3182					
463,500	2.20	2.20			52			1160					
Average	2.89	3.03											
Subtotal Km 456+500 - 463+500			0	553	112	9157	13046	43389					

Calculation									
Unit Price	13.33	13.33	13.33	13.33	1.46	0.75			
Subtotal Km 456+500 - 463+500	0.00	7,375.82	1,497.63	122,067.92	19,047.81	32,541.42			

Total Bill No. Earthwork repair/reconstruction
Km 456+500 - 463+500 **US $** 182,530.61

Total Bill No. Earthwork reconstruction (complete)
Km 456+500 - 463+500 **US $**

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 12 - M 1: Bypass Gazakh; km 456+500 - 463+500
Cost Estimate
-Drainage-

No	Station	EXISTING STRUCTURE				EXISTING DAMAGE								MAINTENANCE ACTIVITY				REQUIRED CULVERT LENGTH					
		Type	Mat	Length	Size/Dia	Silted/Blocked		Scour			Structural Damage												
						Partial	Total	Little Erosion	Erosion without Settlement	Erosion with Underm.	Small	Uneven Settlement	Damaged Inlet/ Outlet	Broken Culvert	Cleaning	Backfill of scoured areas	Repair	Reconst.	500 mm Dia.	750 mm Dia.	1000 mm Dia.	1250 mm Dia	1500 mm Dia.	Other
	(km)			(m)	(mm)				m^2	m^2		m^2	m^2	m	m	m^2	m^2		m	m	m	m	m	m
1	456,613	S	RC	13.0	4000x2000																			
2	457,588	S	RC	16.0	1500x2000										19.00									
3	458,682	P	M	19.0	700		●●								32.00									
4	458,747	P	RC	32.0	1000		●●																	
5	459,065	P	RC	32.0	1000																			
6	459,333	P	RC	34.0	1000																			
7	459,581	P	RC	30.0	1000										32.00									
8	459,853	P	RC	32.0	1000		●●																	
9	460,363	S	RC	26.0	3500x4000						●		1.00		26.00		1.00							
10	460,628	P	RC	26.0	1000		●●																	
11	461,107	B	RC	70.0	2000x3000 (3)																			
12	461,349	P	RC	13.0	1000										15.00									
13	461,877	S	RC	15.0	2000x1500		●●																	
14	462,046	S	RC	26.0	2500x3000																			
15	463,407	S	RC	24.0	2000x2000																			
Subtotal 456+500 - 463+500															124.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Calculation																			
											4.20	5.93	64.20				237.00		345.70	
Unit Price																				**0.00**
Subtotal Km 456+500 - 463+500											**520.80**	**0.00**	**64.20**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	
Improvement of Sidedrainages Km 456+500 - 463+500	**Length x 4.20 US $/m**																			**29,400.00**

Total Bill No. Drainage Km 456+500 - 463+500	**US $**	**29,985.00**

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 12 - M 1: Bypass Gazakh; km 456+500 - 463+500
Cost Estimate

-Marking & Safety-

Station	Length	Embankment Height	Crash barrier (R + L)
km	km	m	m
456,500		1.8	
456,741	0.241	2.0	
457,741	1.000	2.0	
458,643	0.902	2.2	1,804
459,643	1.000	4.0	2,000
460,647	1.004	3.0	2,008
461,663	1.016	2.0	
462,665	1.002	3.5	2,004
463,500	0.835	3.0	1,670
Average		2.61	
	7.000		9,486

Calculation			
Crash Barrier	23.20		220,075.20
Marking	321.75	7.000	2,252.25
Marker post Total	1382.80	7.000	9,679.60
Km - post Total	148.00	7.000	1,036.00
Sign Total	674.00	7.000	4,718.00

TOTAL Marking & Safety Works		
Km 456+500 - 463+500	**US $**	**237,761.05**

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 12 - M 1: Bypass Gazakh; km 456+500 - km 463+500

Summary of estimated Construction costs

Bill No.	Description	Amount (USD)
1	General Items (5% of Bill Nos. 2 - 6)	123,818.03
2	Earthworks	182,530.61
3	Drainage	29,985.00
4	Bridges	376,647.00
5	Pavement	1,649,436.97
6	Marking & Safety Works	237,761.05
7	Landacquisition	0.00
Total		**2,600,178.66**

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 13: Gazakh - Georgian Border; km 463+500 - km 501+350
Cost Estimate

-Pavement-

Geometry			Repair / Reconstruction									Recon-struction
Chainage	Width	Added Area	Maintenance	Sealing	Overlay			Potholes	Settlements	Milling	Patching	Recon-struction	- Complete -
					40mm	60mm	90mm						
km	m	m^2	km	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2
463,500	8.04												
463,705	8.00						1644	0	31.5	0	0		
464,691	9.00						8381	16	65	0	0		
465,691	9.00						9000	17	95	0	0		
466,689	9.00						8982	3	120	0	0		
467,657	7.00						7744	11	120	0	0		
467,750	7.02						652						
468,657	7.24						6468	15	110	0	0		
469,757	7.50						8107	12	60	0	0		
470,725	7.50	1000					8260	7.5	110	0	0		
470,750	7.49						187						
471,753	7.00											7266	
472,851	7.50											7961	
473,750	7.98											6957	
473,791	8.00											328	
474,250	7.91											3651	
474,789	7.80	800			5033			4	120	0	0		
475,751	7.50				7359			10	140	0	0		
476,751	7.50				7500			12	80	0	0		
477,250	7.50				3743								
477,601	7.50						2633	7	100	0	0		
478,601	7.80	800					8450	10	160	0	0		
479,601	7.50						7650	17	200	0	0		
480,250	7.50						4868						
480,601	7.50											2633	
481,601	7.00											7250	
482,250	7.32											4648	
482,601	7.50											2602	
483,250	7.31											4804	
483,601	7.20				2546			33	110	0	0		
484,250	7.39				4736								
484,601	7.50				2614			1	75	0	0		
485,250	7.69				4931								
485,601	7.80	600			3319			0	170	0	0		
486,601	7.50				7650			2	90	0	0		
487,250	7.50				4868								
487,701	7.50					3383		8	105	0	0		
488,799	7.50					8235		6	50	0	0		
489,750	7.50					7133							
489,820	7.50						525	6	80	0	0		
490,820	8.00	400					8150	6	130	0	0		
491,820	7.50						7750	8	60	0	0		
492,820	7.50						7500	2	140	0	0		
493,820	7.50						7500	28	70	0	0		
494,820	7.20	500					7850	17	50	0	0		
495,820	7.00						7100	7	90	40	40		

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 13: Gazakh - Georgian Border; km 463+500 - km 501+350
Cost Estimate

-Pavement-

Geometry			Repair / Reconstruction										Recon-struction - Complete -
Chainage	Width	Added Area	Maintenance	Sealing	Overlay			Potholes	Settlements	Milling	Patching	Recon-struction	
					40mm	60mm	90mm						
km	m	m^2	km	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2	m^2
496,820	7.20						7100	8	105	80	80		
497,820	7.60	400					7800	7	115	60	60		
498,820	8.00						7800	4	60	40	40		
499,820	7.50	1500					9250	25	150	0	0		
500,000	7.50						1350	9	145	0	0		
501,000	7.00						7250	2	60	0	0		
501,350	7.00	1000					3450						
Subtotal Km 463+500 - 501+350		7000	0	0	54298	18750	173400	321	3367	220	220	48099	

Calculation											
Unit Price		0.81	8.22	9.70	21.07	22.89	22.89	2.72	22.89	45.93	
Subtotal Km 463+500 - 501+350		**0.00**	**446,331.95**	**181,875.00**	**3,653,547.44**	**7,336.25**	**77,059.19**	**598.40**	**5,035.80**	**2,209,180.71**	

Total Bill No. Pavement repair/reconstruction
Km 463+500 - 501+350 **US $** **6,580,964.73**

Total Bill No. Pavement reconstruction (complete)
Km 463+500 - 501+350 **US $**

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 13: Gazakh - Georgian Border; km 463+500 - km 501+350
Cost Estimate

-Earthwork-

Repair / Reconstruction								Shoulder Regravelling	Reconstruction				
Chainage	Width left	Width right	Shoulder Adjustment				Earthworks		Chainage	Width	Added Area	Shoulder Adjustment	Earthworks
			Overlay 40 mm	Overlay 60 mm	Overlay 90 mm	Reconstruction							
km	m	m	m^3	m^3	m^3	m^3	m^3	m^2	km	m	m^2	m^3	m^3
463,500	2.20	2.20											
463,705	2.00	2.00			39			861					
464,691	2.50	2.50			200			4437					
465,691	3.00	3.00			248			5500					
466,689	3.00	3.00			269			5988					
467,657	3.00	2.50			250			5566					
467,750	2.95	2.50			23			509					
468,657	2.50	2.50			213			4741					
469,757	3.00	2.50			260			5775					
470,725	3.00	3.00			250			5566					
470,750	3.01	3.00			7			150					
471,753	3.50	3.00				2598	3211	6275					
472,851	3.00	3.00				2842	3516	6863					
473,750	2.52	2.52				2121	2967	4964					
473,791	2.50	2.50				90	137	206					
474,250	2.50	2.73				1017	1534	2348					
474,789	2.50	3.00	58					2892					
475,751	2.50	3.00	106					5291					
476,751	2.80	2.80	111					5550					
477,250	2.92	2.92	57					2853					
477,601	3.00	3.00			93			2077					
478,601	2.50	2.50			248			5500					
479,601	2.60	2.60			230			5100					
480,250	2.54	2.54			150			3333					
480,601	2.50	2.50				768	1142	1767					
481,601	2.50	2.50				2175	3202	5000					
482,250	2.31	2.31				1364	2067	3119					
482,601	2.20	2.20				697	1135	1581					
483,250	2.07	2.07				1226	2098	2771					
483,601	2.00	2.00	29					1429					
484,250	2.30	2.30	56					2787					
484,701	2.50	2.50	43					2163					
485,250	2.50	2.50	55					2745					
485,701	2.50	2.50	45					2255					
486,701	2.80	2.50	103					5150					
487,250	2.64	2.50	57					2864					
487,701	2.50	2.50		69				2286					
488,701	3.00	2.50		158				5250					
489,750	3.00	2.03		166				5524					
489,820	3.00	2.00			16			351					
490,820	3.00	2.80			243			5400					
490,900	1.20	1.20			15			328					
491,820	2.50	2.50			153			3404					
492,820	2.00	2.30			209			4650					
493,820	2.50	2.50			209			4650					
494,820	3.00	3.00			248			5500					
495,820	2.00	2.40			234			5200					
496,820	3.00	2.00			212			4700					

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 13: Gazakh - Georgian Border; km 463+500 - km 501+350
Cost Estimate

-Earthwork-

Repair / Reconstruction								Shoulder Regravelling	Reconstruction				
Chainage	Width left	Width right	Shoulder Adjustment: Overlay 40 mm	Shoulder Adjustment: Overlay 60 mm	Shoulder Adjustment: Overlay 90 mm	Shoulder Adjustment: Reconstruction	Earthworks		Chainage	Width	Added Area	Shoulder Adjustment	Earthworks
km	m	m	m^3	m^3	m^3	m^3	m^3	m^2	km	m	m^2	m^3	m^3
497,820	2.00	3.00			225			5000					
498,820	2.50	2.50			225			5000					
499,820	2.40	2.50			223			4950					
500,000	2.50	2.50			40			891					
501,000	2.00	2.50			214			4750					
501,350	0.00	0.00			35			788					
Average	2.53	2.48											
Subtotal Km 463+500 - 501+350			720	392	3572	14898	21010	163318					

Calculation									
Unit Price	13.33	13.33	13.33	13.33	1.46	0.75			
Subtotal Km 463+500 - 501+350	**9,591.96**	**5,222.36**	**47,619.65**	**198,585.40**	**30,674.01**	**122,488.31**			

Total Bill No. Earthwork repair/reconstruction
Km 463+500 - 501+350 **US $** 414,181.70

Total Bill No. Earthwork reconstruction (complete)
Km 463+500 - 501+350 **US $**

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 13: Gazakh - Georgian Border; km 463+500 - km 501+350
Cost Estimate

-Drainage-

No	Station	EXISTING STRUCTURE				EXISTING DAMAGE								MAINTENANCE ACTIVITY				REQUIRED CULVERT LENGTH					
		Type	Mat.	Length	Size/Dia	Silted/Blocked		Scour			Structural Damage			Cleaning	Backfill of scoured areas	Repair	Reconst.	500 mm Dia.	750 mm Dia.	1000 mm Dia.	1250 mm Dia.	1500 mm Dia.	Other
						Partial	Total	Little Erosion	Erosion without Settlement	Erosion with Underm.	Small	Uneven Settlement	Damaged Inlet/ Outlet	Broken Culvert									
	(km)			(m)	(mm)				m^2	m^2		m^2	m^2	m	m	m^2	m^2	m	m	m	m	m	m
1	463,557	S	RC	18.0	1500x1200																		
2	464,793	P	RC	13.0	750		●●							13.00									
3	464,999	P	RC	11.0	500	●								11.00									
4	465,883	P	RC	30.0	1100	●								30.00									
5	466,336	P	RC	15.0	750																		
6	466,773	P	M/AC	11.0	300 + 300																		
7	466,899	P	RC	12.0	1000	●								12.00									
8	467,607	P	RC	12.0	1000		●●							12.00									
9	467,907	P	RC	12.0	750		●●				●		1.00	12.00		1.00							
10	468,275	P	RC	12.0	750	●								12.00									
11	468,773	P	RC	12.0	1000	●								12.00									
12	468,907	S	RC	13.0	250x3000																		
13	469,041	B	RC	13.0	1000x1000	●								13.00									
14	470,149	P	RC	13.0	750	●								13.00									
15	470,714	P	RC	15.0	1000 (2)																		
16	471,175	B/P	RC/M	12.0	1000x1000 + 300	●								12.00									
17	471,355	P	RC	12.0	750		●●							12.00									
18	472,003	P	RC	22.0	1000	●								22.00									
19	472,553	B	RC	11.0	1000x1000		●●							11.00									
20	473,151	P	RC	12.0	750	●								12.00									
21	475,469	P	RC	30.0	1250																		
22	475,687	P	RC	22.0	1000																		
23	476,029	S	RC	20.0	2000x3000																		
24	476,451	P	RC	21.0	1000 (2)	●								21.00									
25	476,706	P	RC	17.0	1250																		
26	476,816	P	RC	14.0	1250		●●							14.00									
27	476,820	P	M	16.0	500																		
28	477,099	S	RC	20.0	1500x1500																		
29	478,519	S	RC	22.0	5000x4000						●		1.00			1.00							
30	478,629	P	RC	11.0	750																		
31	478,781	P	RC	12.0	750	●								12.00									
32	478,903	P	RC	11.0	750																		
33	479,302	P	RC	11.0	750	●								11.00									
34	479,581	P	RC	12.0	1000	●								12.00									
35	480,003	P	RC	15.0	1000	●								15.00									
36	480,182	P	RC	12.0	750																		
37	480,386	P	RC	12.0	1000		●●							12.00									
38	480,503	B	RC	14.0	300x300	●								14.00									
39	480,719	P	RC	14.0	750	●								14.00									
40	481,315	P	RC	11.0	750	●								11.00									
41	481,322	P	RC	14.0	1250																		
42	481,402	B	RC	12.0	1000x1000	●								12.00									
43	481,492	P	M	15.0	1000																		
44	481,816	P	M	16.0	700																		
45	482,985	P	RC	12.0	700																		
46	483,309	P	RC	14.0	1000	●								14.00									
47	483,751	B	RC	14.0	1000x1000																		
48	484,599	P	RC	15.0	1000																		
49	484,739	P	RC	16.0	1000 (2)																		
50	485,931	P	RC	14.0	1000	●								14.00									
51	486,172	P	RC	13.0	1000	●								13.00									
52	486,915	P	RC	15.0	1000																		
53	487,216	B	RC	16.0	2000x2000																		
54	487,243	P	RC	14.0	1000																		

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 13: Gazakh - Georgian Border; km 463+500 - km 501+350
Cost Estimate

-Drainage-

No	Station	EXISTING STRUCTURE				EXISTING DAMAGE								MAINTENANCE ACTIVITY				REQUIRED CULVERT LENGTH					
		Type	Mat.	Length	Size/Dia	Silted/Blocked		Scour			Structural Damage												
						Partial	Total	Little Erosion	Erosion without Settlement	Erosion with Underm.	Small	Uneven Settlement	Damaged Inlet/ Outlet	Broken Culvert	Cleaning	Backfill of scoured areas	Repair	Reconst.	500 mm Dia.	750 mm Dia.	1000 mm Dia.	1250 mm Dia.	1500 mm Dia.	Other
	(km)			(m)	(mm)				m^2	m^2		m^2	m^2	m	m	m^2	m^2		m	m	m	m	m	m
55	488,151	P	RC	14.0	1100		●●								14.00									
56	489,494	P	RC	14.0	750		●●								14.00									
57	489,611	P	RC	14.0	750		●●								14.00									
58	490,512	P	M	13.5	700		●●								13.50									
59	490,720	P	RC	13.5	1000																			
60	491,312	P	RC	17.0	1000 (2)	●									17.00									
61	492,319	B	RC	41.0	2000x2000 (2)			●	7.50						41.00	7.50								
62	492,930	P	RC	14.0	750		●●								14.00									
63	493,160	P	RC	14.0	1000		●●								14.00									
64	493,310	P	RC	14.0	1000		●●								14.00									
65	493,580	P	RC	14.0	750	●									14.00									
66	494,844	P	RC	16.0	1000 (2)	●									16.00									
67	495,651	P	RC	13.0	1000						●		0.50				0.50							
68	496,078	P	RC	14.0	1000	●									14.00									
69	496,589	P	RC	13.0	1250	●									13.00									
70	496,948	P	RC	21.0	1000						●		1.00				1.00							
71	497,194	B	RC	13.0	800x800	●									13.00									
72	497,365	P	RC	14.0	1250	●									14.00									
73	497,833	P	RC	14.0	750																			
74	498,191	P	RC	15.0	1100	●									15.00									
75	498,249	P	RC	16.0	1000		●●								16.00									
76	498,933	B	RC	14.0	800x800	●									14.00									
77	499,274	P	RC	16.0	1000	●									16.00									
78	499,648	P	RC	13.0	1000 (2)		●●								13.00									
79	499,773	B	RC	13.0	700x700	●									13.00									
80	500,268	P	RC	13.0	1250	●									13.00									
81	500,691	P	RC	14.0	1250	●									14.00									
82	501,075	P	RC	21.0	1000 (2)						●		0.50				0.50							
83	501,250	S	RC	21.0	2500x1500																			
Subtotal 463+500 -501+350															751.50	7.50	4.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Calculation																			
Unit Price											4.20	5.93	64.20				237.00		345.70	
Subtotal Km 463+500 -501+350											**3,156.30**	**44.48**	**256.80**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Improvement of Sidedrainages Km 463+500 -501+350	**Length x 4.20 US $/m**																			**158,970.00**

Total Bill No. Drainage Km 463+500 - 501+350	**US $**	**162,427.58**

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 13: Gazakh - Georgian Border; km 463+500 - km 501+350
Cost Estimate
-Marking & Safety-

Station	Length	Embankment Height	Crash barrier (R + L)
km	km	m	m
463,500		3.0	
463,705	0.205	2.5	410
464,691	0.986	0.2	
465,691	1.000	2.0	
466,689	0.998	1.5	
467,657	0.968	0.5	
468,657	1.000	1.2	
469,757	1.100	0.8	
470,725	0.968	1.4	
471,753	1.028	1.0	
472,851	1.098	1.2	
473,791	0.940	0.6	
474,789	0.998	1.0	
475,751	0.962	2.0	
476,751	1.000	2.0	
477,601	0.850	3.0	1,700
478,601	1.000	1.2	
479,601	1.000	1.1	
480,601	1.000	1.1	
481,601	1.000	0.0	
482,601	1.000	0.0	
483,601	1.000	1.0	
484,601	1.000	0.8	
485,601	1.000	0.8	
486,601	1.000	0.2	
487,701	1.100	1.2	
488,799	1.098	1.0	
489,820	1.021	0.8	
490,820	1.000	1.0	
491,820	1.000	0.8	
492,820	1.000	0.4	
493,820	1.000	0.0	
494,820	1.000	1.2	
495,820	1.000	1.0	
496,820	1.000	1.0	
497,820	1.000	1.2	
498,820	1.000	1.8	
499,820	1.000	1.2	
500,000	0.180	1.0	
501,000	1.000	0.0	
501,350	0.350	0.0	
Average		1.07	
	37.850		2,110

Calculation			
Crash Barrier	23.20		48,952.00
Marking	321.75	37.850	12,178.24
Marker post Total	1382.80	37.850	52,338.98
Km - post Total	148.00	37.850	5,601.80
Sign Total	674.00	37.850	25,510.90

TOTAL Marking & Safety Works		
Km 463+500 - 501+350	**US $**	**144,581.92**

TRACECA - Feasibility Study for Road Rehabilitation in Azerbaijan
Section 13 - M 1:Gazakh - Georgian Border; km 463+500 - km 501+350

Summary of estimated Construction costs

Bill No.	Description	Amount (USD)
1	General Items (5% of Bill Nos. 2 - 6)	391,290.55
2	Earthworks	414,181.70
3	Drainage	162,427.58
4	Bridges	523,655.00
5	Pavement	6,580,964.73
6	Marking & Safety Works	144,581.92
7	Landacquisition	0.00
Total		**8,217,101.46**

T R A C E C A - Feasibility Study for Road Rehabilitation in Azerbaijan

COST ESTIMATE FOR BRIDGE REHABILITATION WORKS

Road-No. Bridge-No.	Bridge Name [Sizeclass]	Costs for Rehabilitation	Costs for Widening	Costs for Improvement (Rehabilitation + Widening)	New bridge	New culvert
		US $	US $	US $	US $	US $
M-4 Br.: 1	Bridge across Railway Baku - Nakhchivan [Sizeclass B]	164,675	266,514	431,189	931,215	-
M-4 Br.: 2	Bridge across River Pirsaat [Sizeclass B]	93,380	154,771	248,151	450,053	-
M-4 Br.: 3	Bridge across Railway Baku - Nakhchivan [Sizeclass C]	205,728	-	205,728	-	-
M-4 Br.: 4	Bridge across Road Gazi-Mammad - Ali Bairamly [Sizeclass C]	447,325	-	447,325	-	-
M-4 Br.: 5	Railway bridge across the Road M-4	-	-	-	-	-
M-4 Br.: 6	Bridge across River Girdiman [Sizeclass C]	247,640	396,698	644,338	1,524,643	-
M-4 Br.: 7	Bridge across irrigation chanal [Sizeclass B]	100,370	255,125	355,495	668,579	-
M-4 Br.: 8	Bridge across Suchodol [Sizeclass A]	80,634	-	80,634	-	21,111

T R A C E C A - Feasibility Study for Road Rehabilitation in Azerbaijan

COST ESTIMATE FOR BRIDGE REHABILITATION WORKS

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Road-No. Bridge-No.	Bridge Name [Sizeclass]	Costs for Rehabilitation	Costs for Widening	Costs for Improvement (Rehabilitation + Widening)	New bridge	New culvert
		US $	US $	US $	US $	US $
M-4 Br.: 9	Bridge across dry chanal [Sizeclass A]	11,960	205,020	216,980	537,217	-
M-4 Br.: 10	Bridge across chanal [Sizeclass B]	144,565	203,341	347,906	710,480	-
M-4 Br.: 11	Bridge across irrigation chanal [Sizeclass A]	30,469	51,027	81,496	-	21,111
M-4 Br.: 12	Bridge across River Geok-Tshaj [Sizeclass C]	172,565	414,862	587,427	1,449,567	-
M-4 Br.: 13	Bridge across irrigation chanal [Sizeclass A]	37,420	76,541	113,961	-	21,111
M-4 Br.: 14	Bridge across irrigation chanal [Sizeclass A]	58,029	-	58,029	-	21,972
M-4 Br.: 15	Bridge across River Turjan-Tshaj [Sizeclass B]	155,210	329,486	484,696	1,381,451	-
M-4 Br.: 16	Bridge across Nametahadskij chanal [Sizeclass B]	58,695	-	58,695	-	-

T R A C E C A - Feasibility Study for Road Rehabilitation in Azerbaijan

COST ESTIMATE FOR BRIDGE REHABILITATION WORKS

Road-No. Bridge-No.	Bridge Name [Sizeclass]	Costs for Rehabilitation	Costs for Widening	Costs for Improvement (Rehabilitation + Widening)	New bridge	New culvert
		US $	US $	US $	US $	US $
M-1 Br.: 17	Bridge across River Kura [Sizeclass C]	702,970	-	702,970	-	-
M-1 Br.: 18	Bridge across Railway Yevlakh - Aghdam [Sizeclass B]	182,716	390,888	573,604	1,365,782	-
M-1 Br.: 19 a	Upper Garabakh Chanal old Bridge / left hand side [Sizeclass B]	157,190	318,273	475,463	1,334,488	-
M-1 Br.: 19 b	Upper Garabakh Chanal new Bridge / right hand side [Sizeclass C]	168,125	-	168,125	-	-
M-1 Br.: 20 a	River Geran - Tshaj old Bridge / left hand side [Sizeclass B]	110,885	267,881	378,766	936,001	-
M-1 Br.: 20 b	River Geran - Tshaj new Bridge / right hand side [Sizeclass C]	136,190	-	136,190	-	-
M-1 Br.: 21 a	Bridge across Suchodol old Bridge / left hand side [Sizeclass A]	122,311	76,541	122,311	-	21,111
M-1 Br.: 21 b	Bridge across Suchodol new Bridge / right hand side [Sizeclass B]	177,400	-	177,400	-	-

COST ESTIMATE FOR BRIDGE REHABILITATION WORKS

Road-No. Bridge-No.	Bridge Name [Sizeclass]	Costs for Rehabilitation	Costs for Widening	Costs for Improvement (Rehabilitation + Widening)	New bridge	New culvert
		US $	US $	US $	US $	US $
M-1 Br.: 22	Bridge across River Kjurek-Tshaj [Sizeclass C]	219,960	-	219,960	-	-
M-1 Br.: 23	Bridge across chanal [Sizeclass A]	45,157	-	45,157	-	21,111
M-1 Br.: 24	Road bridge across the M-1 [Sizeclass A]	-	-	-	-	-
M-1 Br.: 25	Bridge across River Ganja [Sizeclass B]	102,120	-	102,120	-	-
M-1 Br.: 26	Bridge across River Guru-Dere [Sizeclass B]	182,115	-	182,115	-	-
M-1 Br.: 27	Bridge across River Koshkar-Tshaj [Sizeclass C]	144,375	-	144,375	-	-
M-1 Br.: 28	Bridge across Railway Gandja - Dashkesan [Sizeclass B]	143,850	-	143,850	-	-
M-1 Br.: 29	Bridge across Suchodol [Sizeclass A]	49,620	-	49,620	-	23,071

COST ESTIMATE FOR BRIDGE REHABILITATION WORKS

Road-No. Bridge-No.	Bridge Name [Sizeclass]	Costs for Rehabilitation	Costs for Widening	Costs for Improvement (Rehabilitation + Widening)	New bridge	New culvert
		US $	US $	US $	US $	US $
M-1 Br.: 30	Bridge across road with lokal distinction [Sizeclass B]	44,580	-	44,580	-	-
M-1 Br.: 31	Bridge across Suchodol [Sizeclass A]	34,604	-	34,604	-	23,803
M-1 Br.: 32	Bridge across River Shamchor-Tshaj [Sizeclass C]	127,498	412,371	539,869	1,440,877	-
M-1 Br.: 33	Bridge across irrigation chanal [Sizeclass A]	18,220	-	18,220	-	23,620
M-1 Br.: 34	Bridge across irrigation chanal [Sizeclass A]	18,220	-	18,220	-	23,620
M-1 Br.: 35	Road bridge across the M-1 [Sizeclass A]	-	-	-	-	-
M-1 Br.: 36	Bridge across Railway Baku - Tbilisi [Sizeclass B]	117,041	386,939	503,980	1,158,853	-
M-1 Br.: 37	Bridge across River Dshagri-Tshaj [Sizeclass B]	95,768	177,372	273,140	619,751	-

T R A C E C A - Feasibility Study for Road Rehabilitation in Azerbaijan

COST ESTIMATE FOR BRIDGE REHABILITATION WORKS

Road-No. Bridge-No.	Bridge Name [Sizeclass]	Costs for Rehabilitation	Costs for Widening	Costs for Improvement (Rehabilitation + Widening)	New bridge	New culvert
		US $	US $	US $	US $	US $
M-1 Br.: 38	Bridge across Valley Ganli-Gobu [Sizeclass B]	72,460	-	72,460	-	-
M-1 Br.: 39	Bridge across River Dsegam-Tshaj [Sizeclass C]	133,025	411,885	544,910	1,440,877	-
M-1 Br.: 40	Bridge across Suchodol [Sizeclass A]	48,152	-	48,152	-	21,111
M-1 Br.: 41	Bridge across River Asrik-Tshaj [Sizeclass B]	92,120	177,372	269,492	619,751	-
M-1 Br.: 42	Bridge across River Tovuz-Tshaj [Sizeclass C]	394,775	-	394,775	-	-
M-1 Br.: 43	Bridge across irrigation chanal [Sizeclass B]	41,940	-	41,940	-	-
M-1 Br.: 44	Bridge across River Gasan-Su [Sizeclass B]	55,120	288,078	343,198	1,006,572	-
M-1 Br.: 45	Bridge across Railway Baku - Tbilisi [Sizeclass B]	158,925	297,646	456,571	1,040,006	-

COST ESTIMATE FOR BRIDGE REHABILITATION WORKS

Road-No. Bridge-No.	Bridge Name [Sizeclass]	Costs for Rehabilitation	Costs for Widening	Costs for Improvement (Rehabilitation + Widening)	New bridge	New culvert
		US $	US $	US $	US $	US $
M-1 Br.: 46	Bridge across valley (ravine) [Sizeclass B]	49,177	110,858	160,035	387,350	-
M-1 Br.: 47	Bridge across River Aghstafa-Tshaj [Sizeclass C]	327,470	-	327,470	-	-
M-1 Br.: 48	Railway bridge across the M-1	-	-	-	-	-
M-1 Br.: 49	Bridge across valley (ravine) [Sizeclass B]	69,010	-	69,010	-	-
M-1 Br.: 50	Bridge across River Indza-Tshaj [Sizeclass C]	282,918	-	282,918	-	-
M-1 Br.: 51	Bridge across valley (ravine) [Sizeclass B]	171,727	-	171,727	-	-
M-1 Br.: 52	Red Bridge across River Chram-Tshaj [Sizeclass C]	-	-	-	-	-