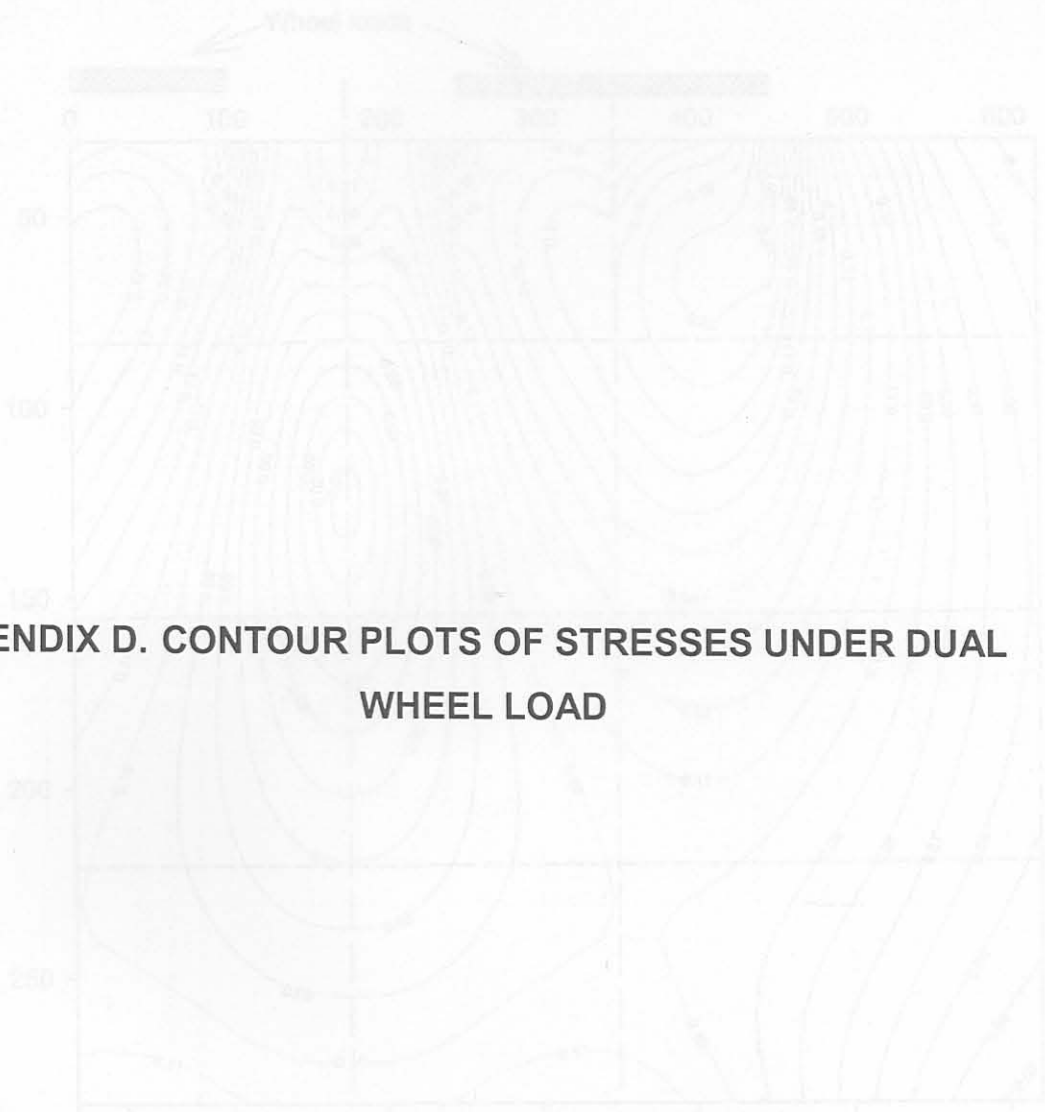
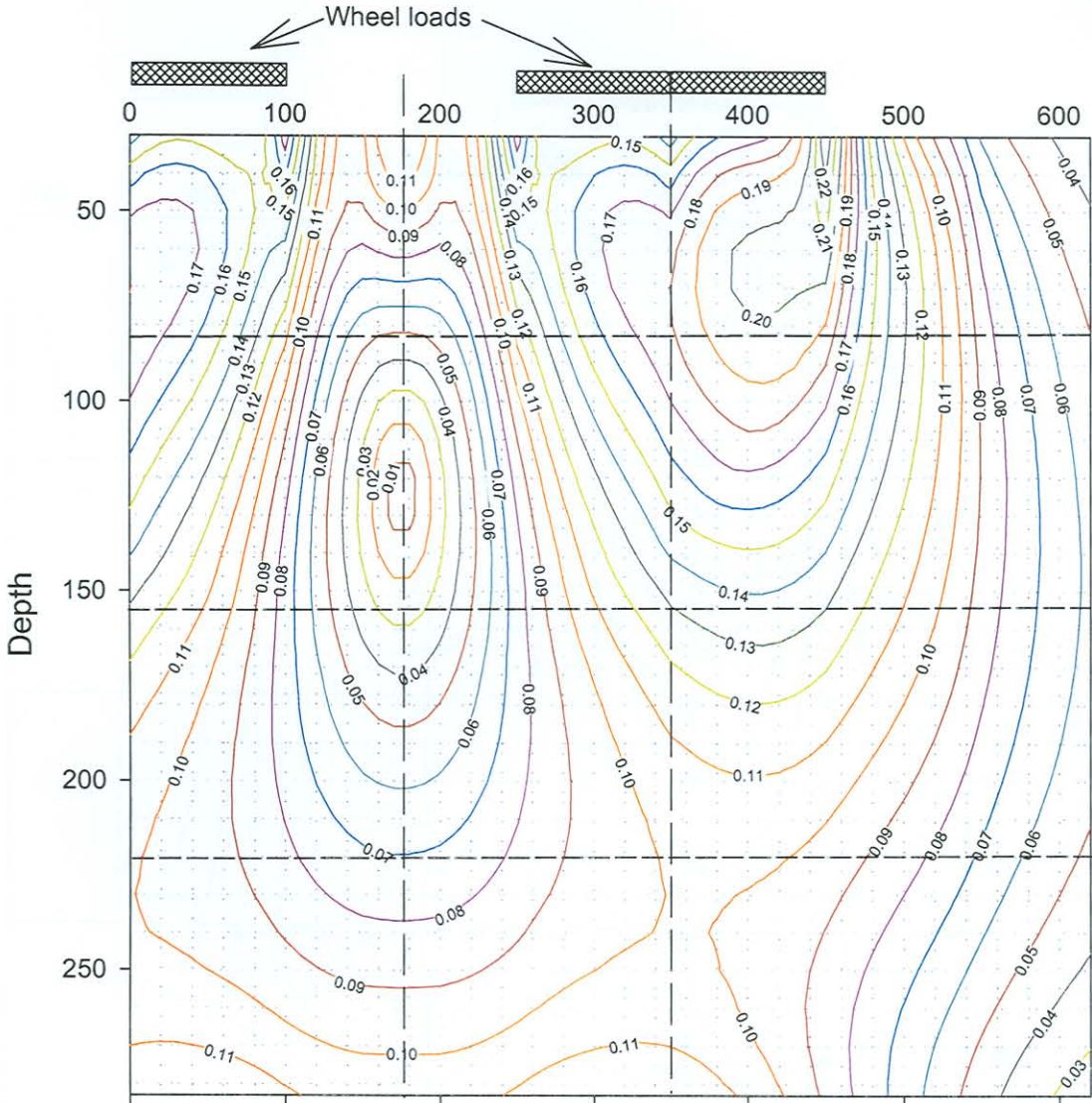


Stress Ratio under 40 kN, 600kPa dual wheel load

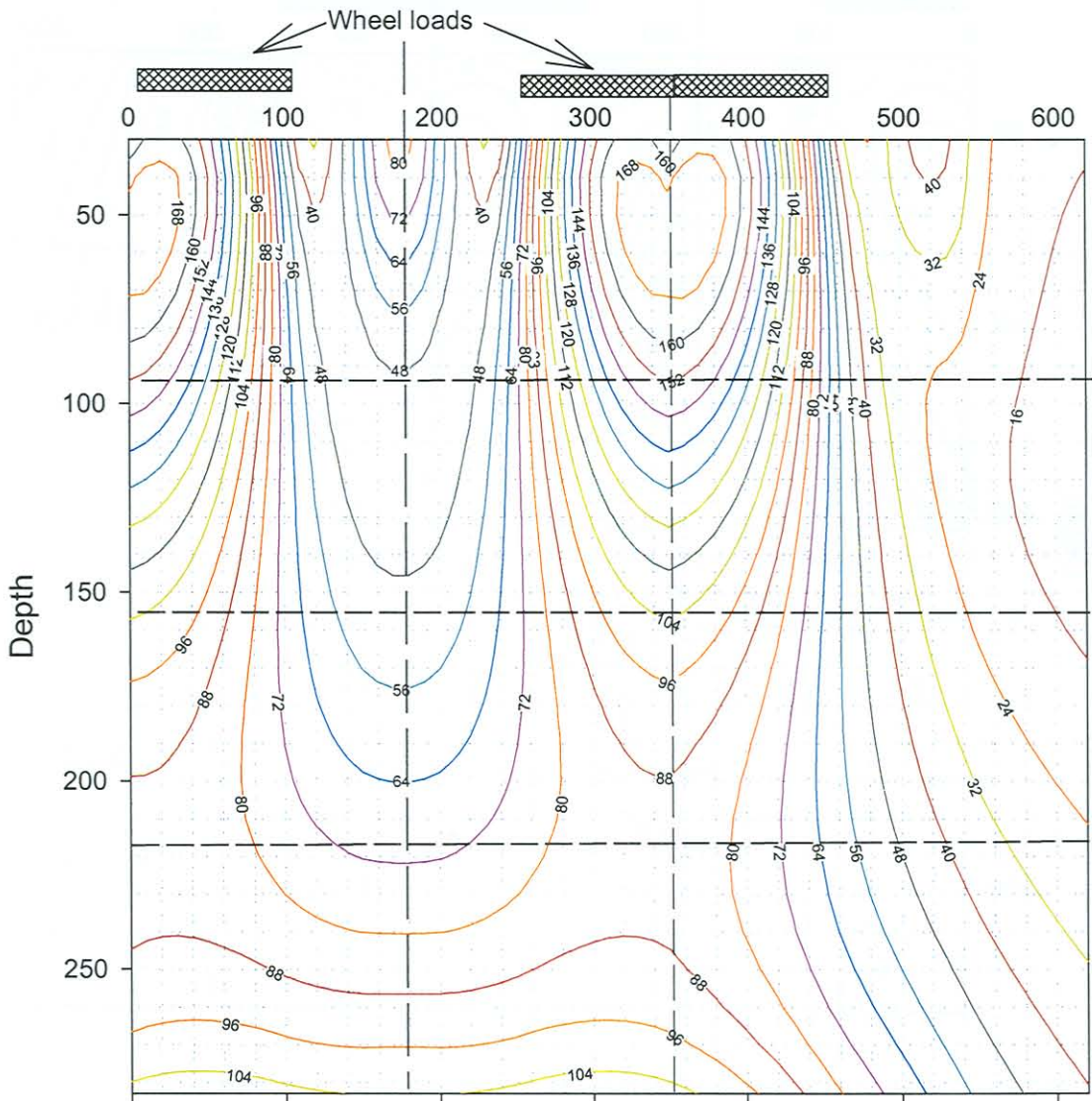


**APPENDIX D. CONTOUR PLOTS OF STRESSES UNDER DUAL WHEEL LOAD**

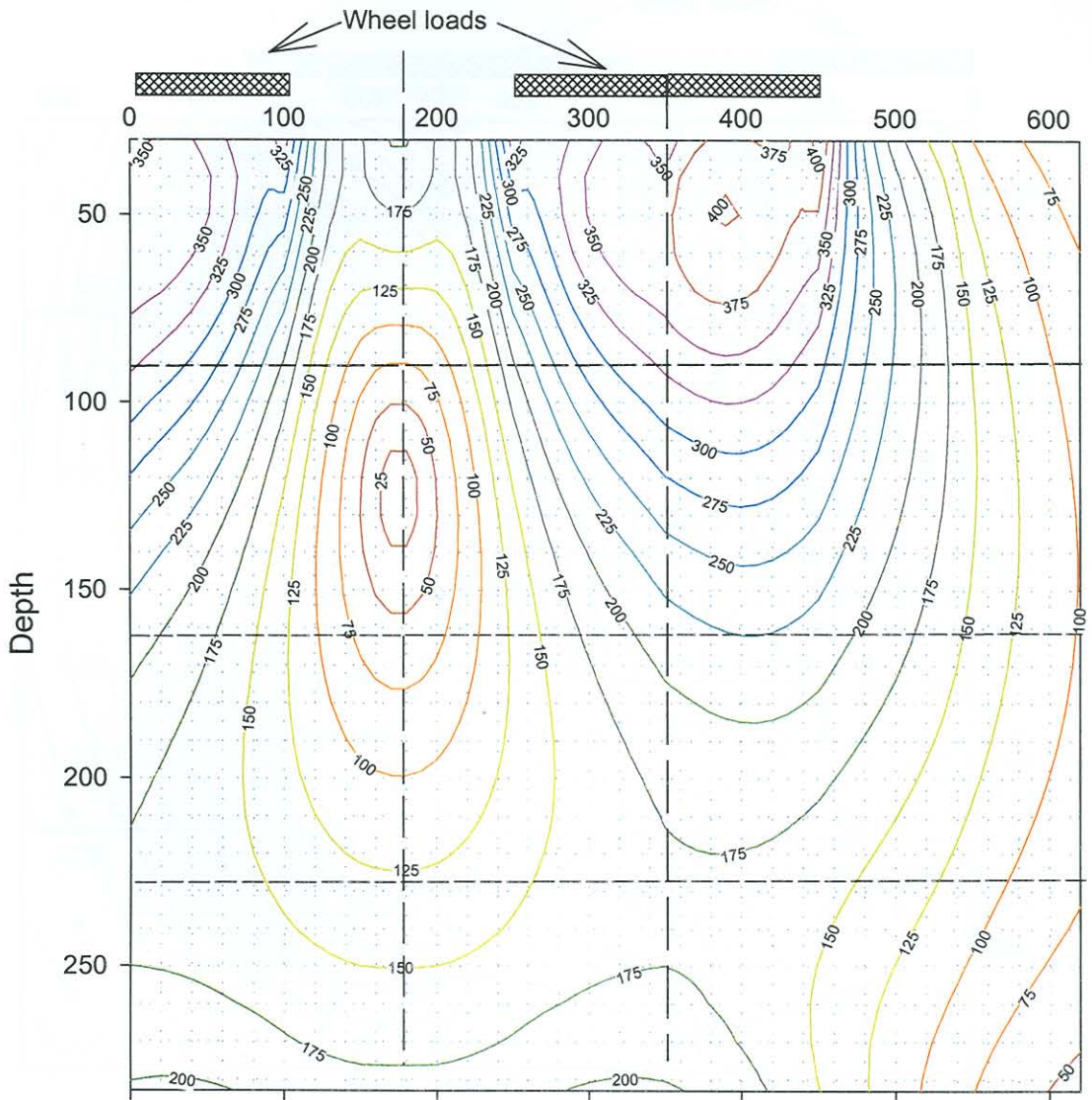
### Stress Ratio under 40 kN, 680kPa dual wheel load



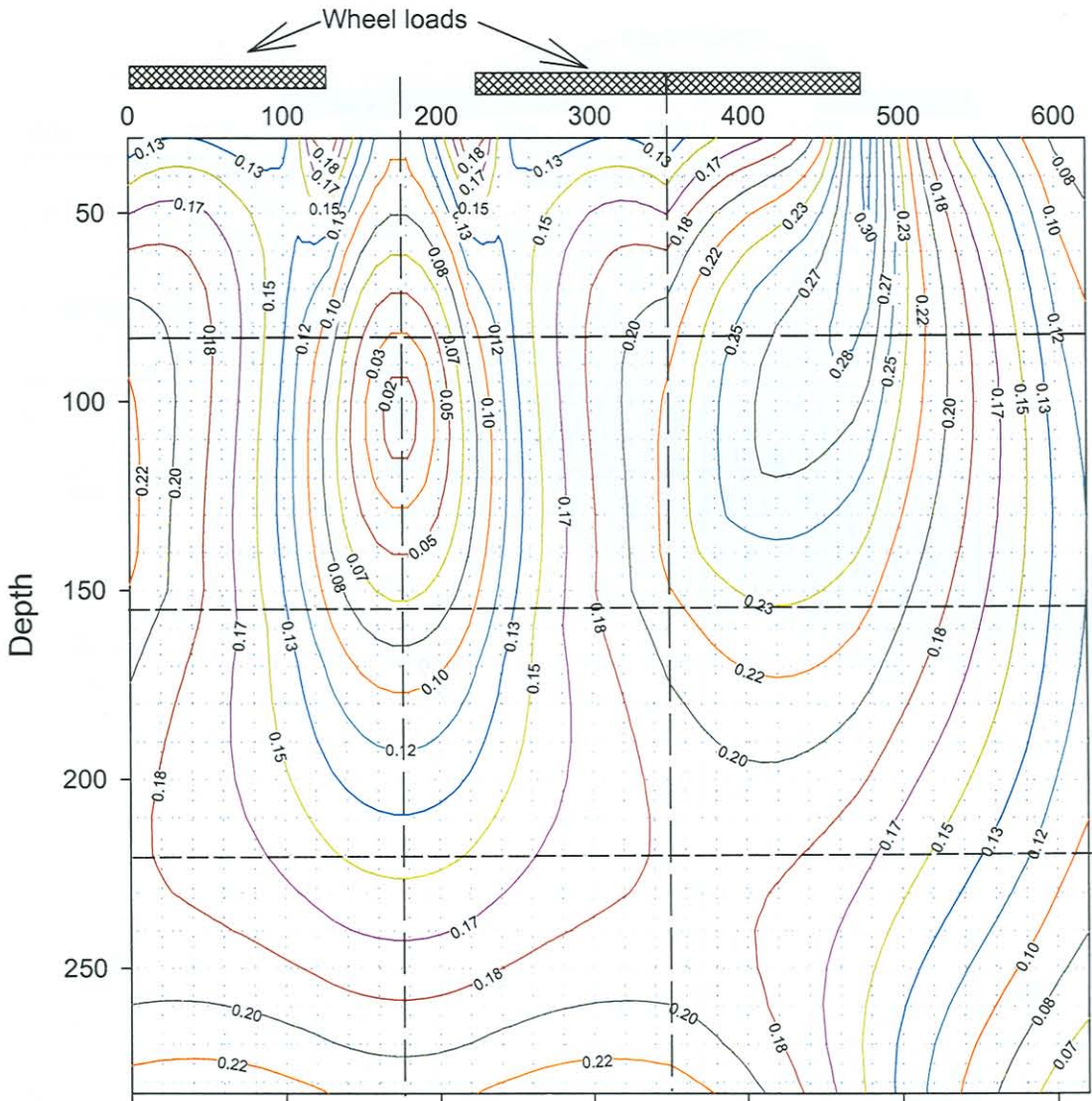
### Octahedral shear stress under 40 kN, 680 kPa dual wheel load



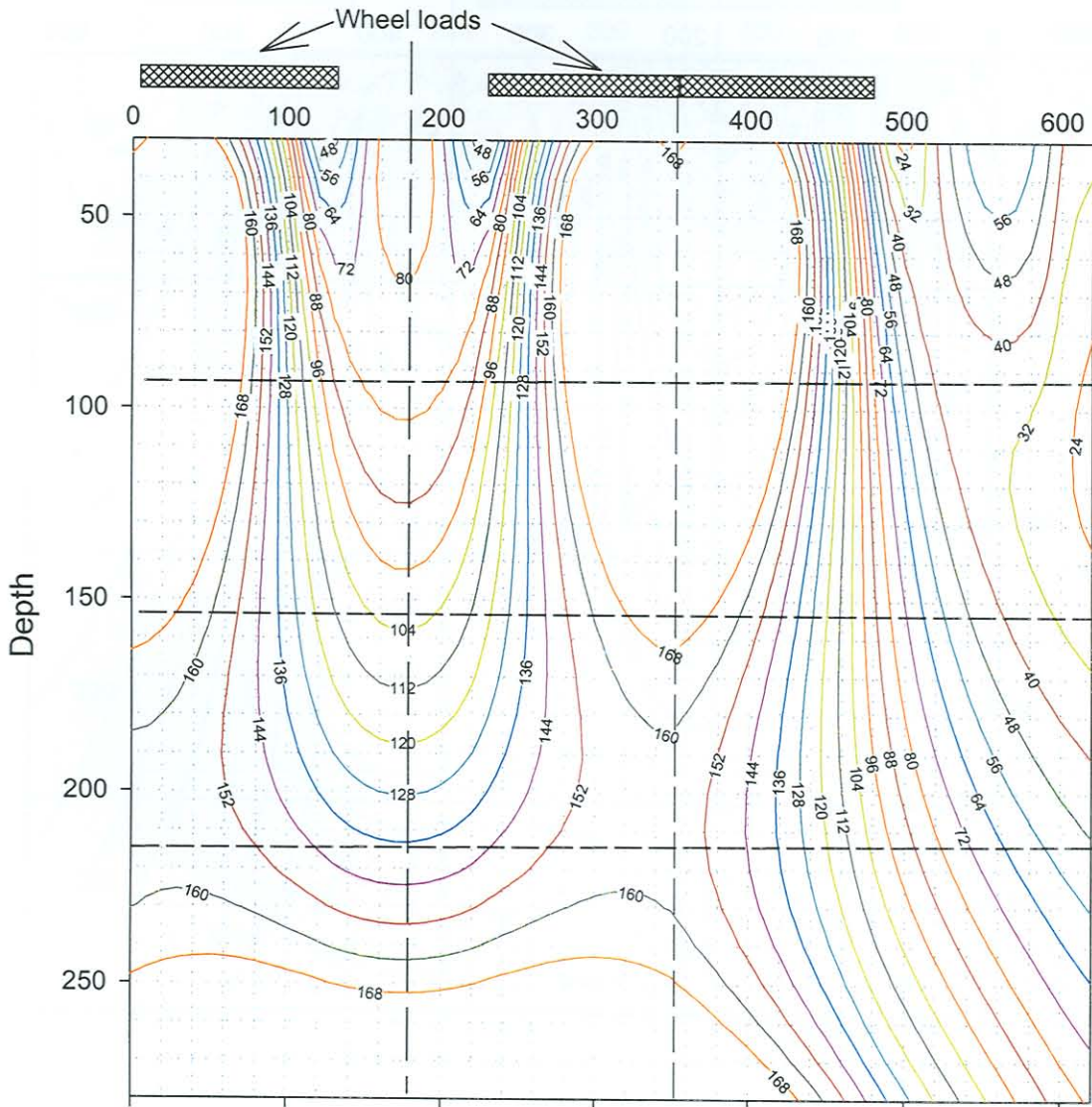
### Deviator stress under 40 kN, 680 kPa dual wheel load



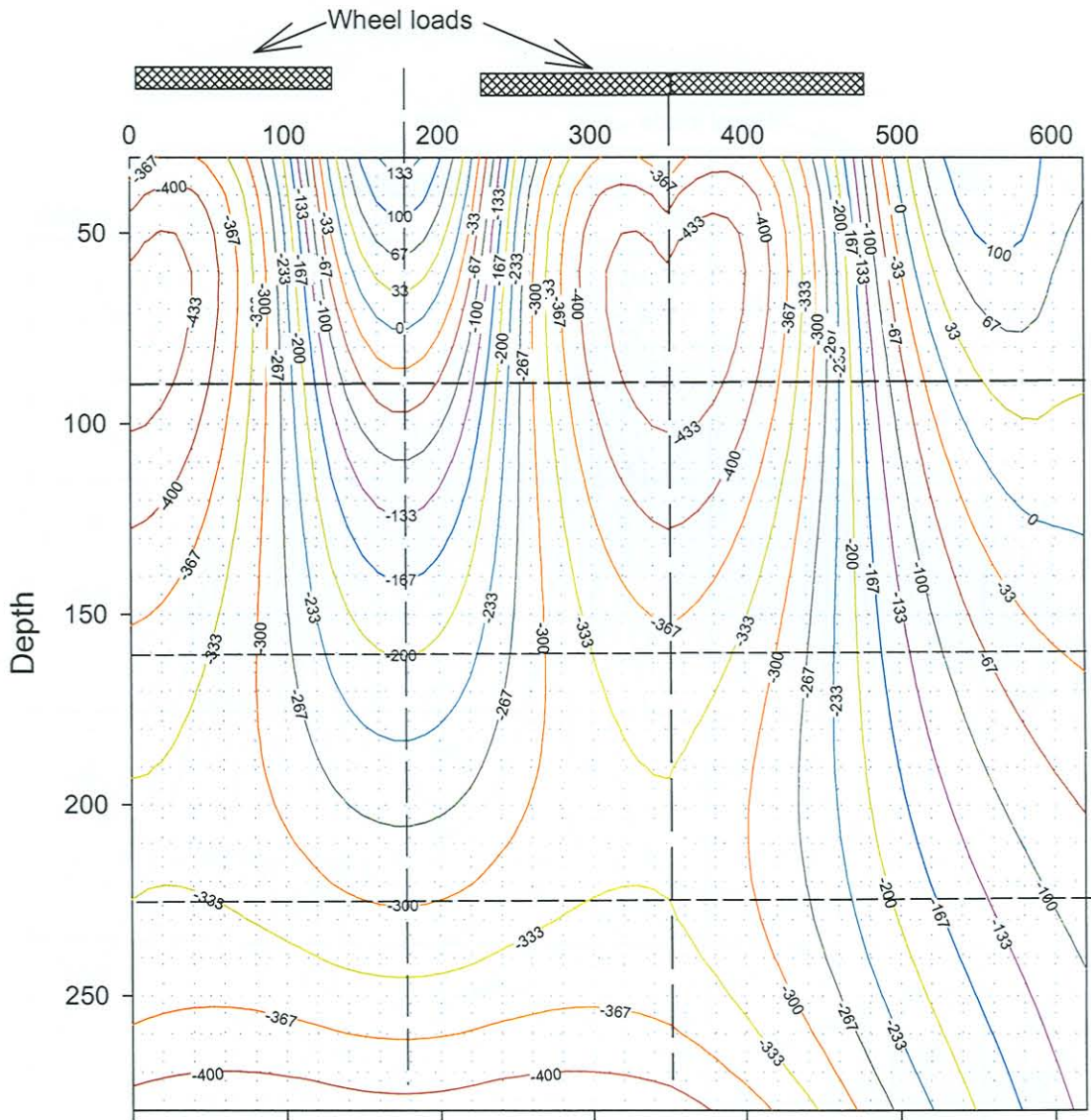
### Stress Ratio under 80 kN, 800kPa dual wheel load



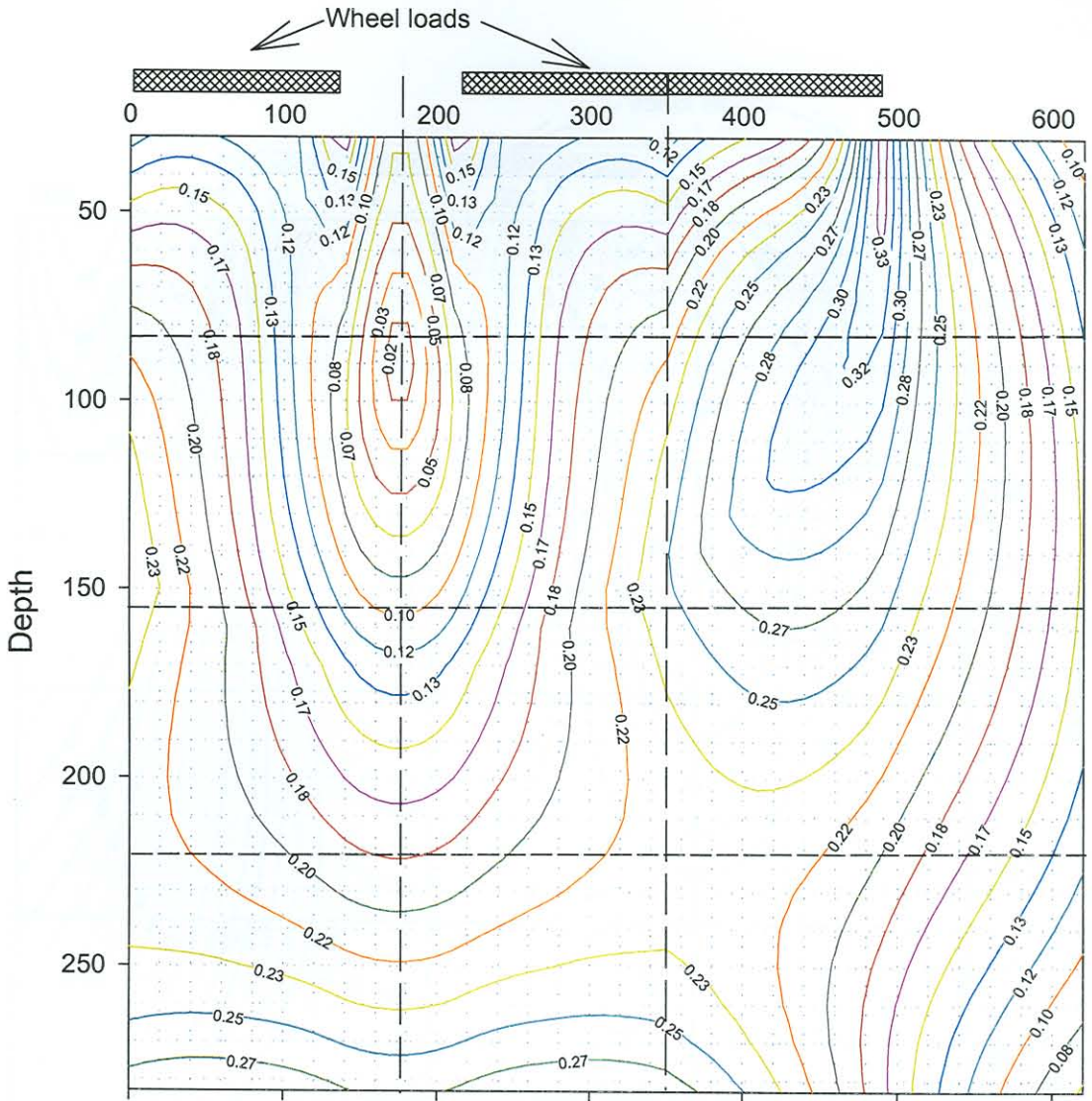
### Octahedral shear stress under 80 kN, 800 kPa dual wheel load



### Deviator stress under 80 kN, 800 kPa dual wheel load

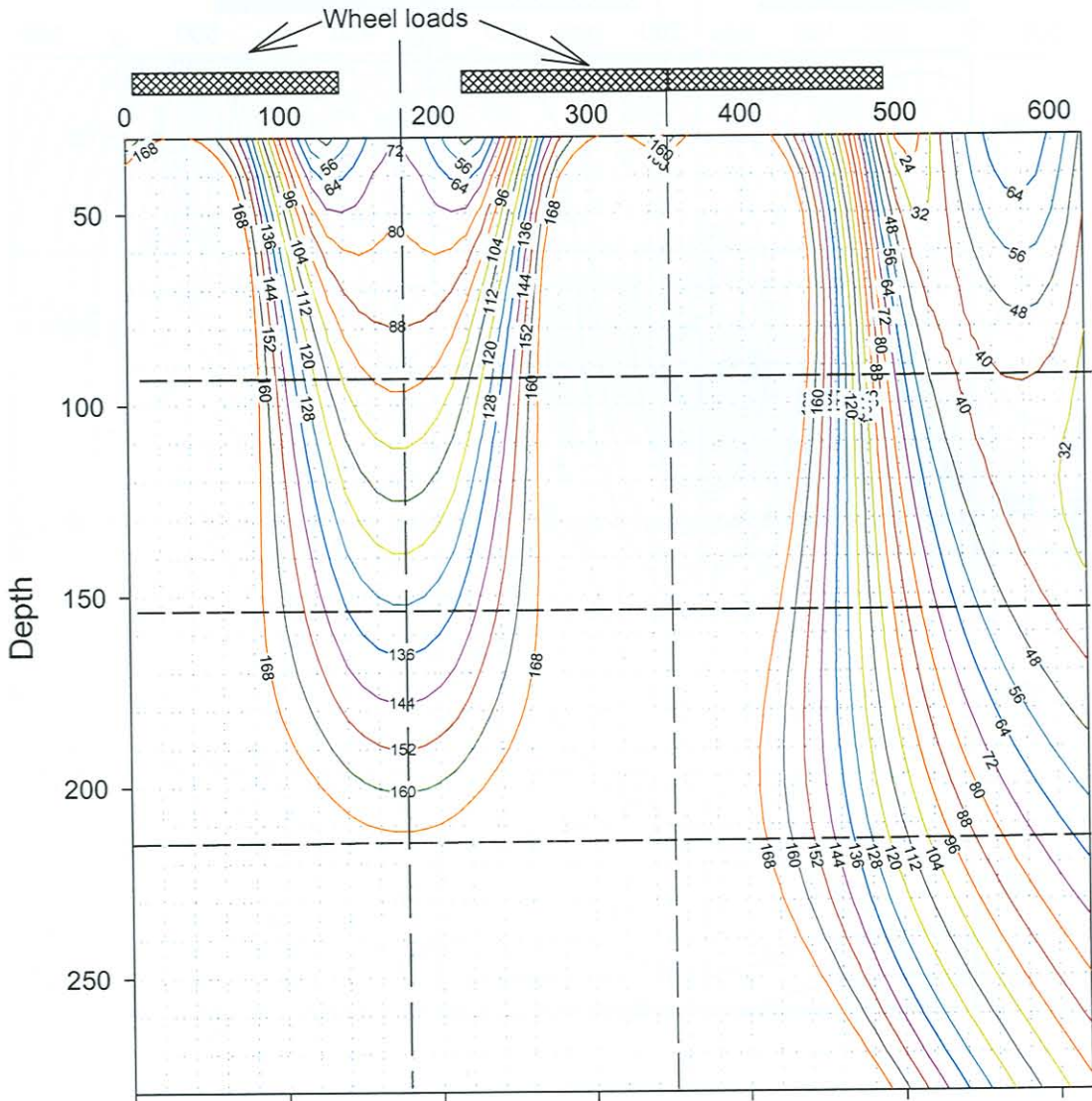


### Stress Ratio under 100 kN, 850kPa dual wheel load

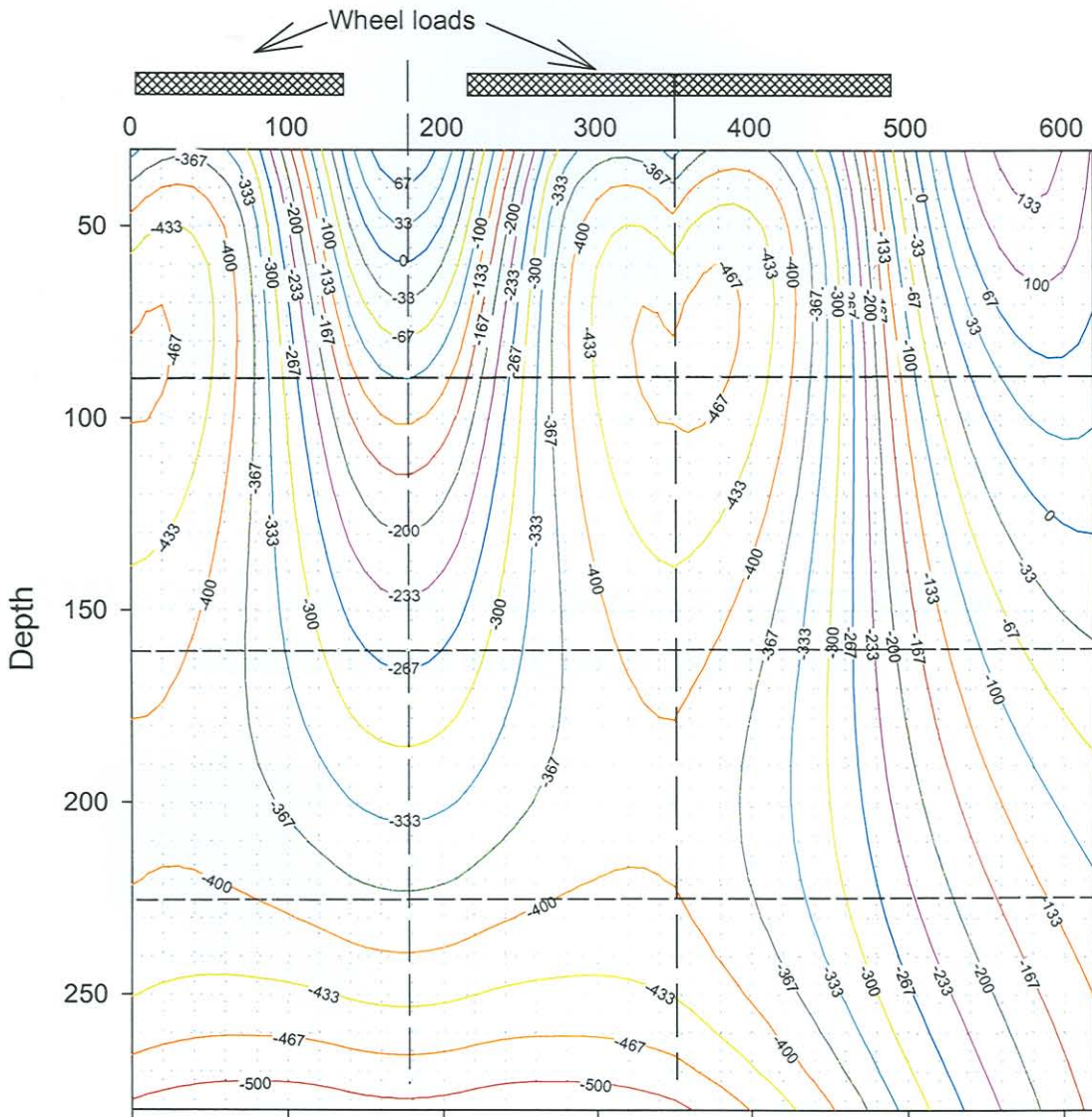




### Octahedral shear stress under 100 kN, 850 kPa dual wheel load



### Deviator stress under 100 kN, 850 kPa dual wheel load





## Emulsion treated bases - Design catalogue

ETB1

ET1 Bases

Road category = A

Expected pavement life = 11.8E+6

	Phase 1				Phase 2				Phase 3				Phase 4							
	Thickness	Layer characteristics			E moduli	eb/phi	c/A	poisson	E moduli	eb/phi	c/A	poisson	E moduli	eb/phi	c/A	poisson				
		E moduli	eb/phi	c/A													E moduli	eb/phi	c/A	E moduli
AC Surfacing	40	3000			0.35			3000				0.35				3000				0.35
ET1 Base	150	1800	230		0.35			1800	230			0.35				500	6.55	1374		0.35
125 C4	125	1500	145		0.35			1500	145			0.35				225	2.8	100		0.35
125 C4	125	1500	145		0.35			225	2.8	100		0.35				225	2.8	100		0.35
G7 Selected	150	120		36.3	0.35			120		36.3		0.35				120		36.3		0.35
G9 Subbase	inf	70																		
	Critical parameters				Critical parameters				Critical parameters				Critical parameters							
	S1	S3	ev/et		S1	S3	ev/et		S1	S3	ev/et		S1	S3	ev/et					
AC Surfacing			26				21				16				176					
ET1 Base			44				58				174									
125 C4			41				105		61.45	-5.71			88.03	-11.43						
125 C4			70		30.37	-9.65			39.66	-10.78			51.21	-16.31						
G7 Selected			171				214				274				352					
	Expected layer life (E80's)				Expected layer life (E80's)				Expected layer life (E80's)				Expected layer life (E80's)							
	Neff	FOS	SF	Nt	Neff	FOS	SF	Nt	Neff	FOS/SR	SF	Nt	Neff	FOS/SR	SF	Nt				
AC Surfacing		14.4E+9		1.75	25.2E+9	43.0E+9		1.75	75.2E+9	172.9E+9		1.75	302.5E+9	809.6E+3		1.75	1.4E+6			
ET1 Base		47.2E+6		1	47.2E+6	39.5E+6		1	39.5E+6	9.0E+6		1	9.0E+6		0.21453		3.0E+6			
125 C4		2.9E+6		1.1567779	3.4E+6	1.2E+6		1.1567779	1.4E+6		1.4889815		22.9E+6		1.005429		1.3E+6			
125 C4		1.9E+6		1.1567779	2.2E+6		2.4987506		9.8E+9		1.9825535		441.5E+6		1.481043		21.8E+6			
G7 Selected					93.3E+12				9.9E+12				836.6E+9				68.3E+9			
	Neff	R	EG	Fn	AR	L	Neff	R	EG	Fn	AR	L	Neff	R	EG	Fn	AR	L		
AC Surfacing	2.2E+6	25.2E+9	000.0E+0	0.3352104	75.2E+9	75.2E+9	2.7E+6	75.2E+9	000.0E+0	0.2486473	302.5E+9	302.5E+9	11.0E+6	302.5E+9	000.0E+0	213534.7	1.4E+6	12.5E+6		
ET1 Base	2.2E+6	45.0E+6	000.0E+0	1.1960818	37.6E+6	39.8E+6	2.7E+6	37.1E+6	000.0E+0	4.4496531	8.3E+6	11.0E+6	11.0E+6	000.0E+0	3.0E+6		3.0E+6	14.1E+6		
125 C4	2.2E+6	1.1E+6	000.0E+0	2.4888795	460.3E+3	2.7E+6	2.7E+6	000.0E+0	22.9E+6		22.9E+6	25.6E+6	11.0E+6	14.5E+6	000.0E+0	20.33252	713.9E+3	11.8E+6		
125 C4	2.2E+6	000.0E+0	9.8E+9		9.8E+9	9.8E+9	2.7E+6	9.8E+9	000.0E+0	22.12361	441.3E+6	444.0E+6	11.0E+6	433.0E+6	000.0E+0	20.37161	21.3E+6	32.3E+6		
G7 Selected	2.2E+6	93.3E+12	000.0E+0	9.4227275	9.9E+12	9.9E+12	2.7E+6	9.9E+12	000.0E+0	11.840444	836.6E+9	836.6E+9	11.0E+6	836.5E+9	000.0E+0	12.24397	68.3E+9	68.3E+9		

## Emulsion treated bases - Design catalogue

ETB35

Road category = A      Expected pavement life = 7.3E+6

	Thickness	Phase 1				Phase 2				Phase 3			
		Layer characteristics				Layer characteristics				Layer characteristics			
		E moduli	eb/phi	c/A	poisson	E moduli	eb/phi	c/A	poisson	E moduli	eb/phi	c/A	poisson
AC Surfacing	40	3000			0.35	3000			0.35	3000			0.35
ET1 Base	150	1800	230		0.35	1800	145		0.35	500	6.55	1374	0.35
150 C4	200	1500	145		0.35	200	2.8	100	0.35	200	2.8	100	0.35
150 G7	150	120		36.3	0.35	120		36.3	0.35	120		36.3	0.35
G9 Subgrade	inf	70		36.3	0.35	70		36.3	0.35	70		36.3	0.35
		Critical parameters				Critical parameters				Critical parameters			
		S1	S3	ev/et		S1	S3	ev/et		S1	S3	ev/et	
AC Surfacing				19				10				170	
ET1 Base				48				183		373.83	34.71		
150 C4				93		47.19	-13.79			66.69	-20.26		
150 G7				193				305				399	
G9 Subgrade				274				406				495	
		Expected layer life (E80's)				Expected layer life (E80's)				Expected layer life (E80's)			
		Neff	FOS	SF	Nt	Neff	FOS	SF	Nt	Neff	FOS/SR	SF	Nt
AC Surfacing		71.7E+9			1.75	1.9E+12			1.75	966.8E+3			1.75
ET1 Base		44.8E+6			1	2.0E+6			1		0.2117713		
150 C4		1.4E+6		1.8923436	2.6E+6		1.6398819				1.1500863		
150 G7					27.8E+12								56.5E+6
G9 Subgrade					836.6E+9								286.4E+9
													16.4E+9
		Expected pavement life (E80's)											
		Neff	R	EG	Fn	AR	L	Neff	R	EG	Fn	AR	L
AC Surfacing		2.6E+6	125.6E+9	000.0E+0	0.03744876	3.4E+12	3.4E+12	4.5E+6	3.4E+12	000.0E+0	1981502	1.7E+6	6.2E+6
ET1 Base		2.6E+6	42.2E+6	000.0E+0	22.1658509	1.9E+6	4.5E+6	4.5E+6	000.0E+0	3.2E+6		3.2E+6	7.7E+6
150 C4		2.6E+6	000.0E+0	56.5E+6		56.5E+6	59.2E+6	4.5E+6	54.6E+6	000.0E+0	19.760681	2.8E+6	7.3E+6
150 G7		2.6E+6	27.8E+12	000.0E+0	97.1460851	286.4E+9	286.4E+9	4.5E+6	286.4E+9	000.0E+0	14.680286	19.5E+9	19.5E+9
G9 Subgrade		2.6E+6	836.6E+9	000.0E+0	51.0216745	16.4E+9	16.4E+9	4.5E+6	16.4E+9	000.0E+0	7.2587226	2.3E+9	2.3E+9

## Emulsion treated bases - Design catalogue

ETB6

ET1 Bases

Road category = A

Expected pavement life =

3.0E+6

	Thickness	Phase 1				Phase 2				Phase 3			
		Layer characteristics				Layer characteristics				Layer characteristics			
		E moduli	eb/phi	c/A	poisson	E moduli	eb/phi	c/A	poisson	E moduli	eb/phi	c/A	poisson
AC Surfacing	40	3000			0.35	3000			0.35	3000			0.35
ET1 Base	125	1800	230		0.35	1800	145		0.35	500	6.55	1374	0.35
150 C4	150	1500	145		0.35	200	2.8	100	0.35	200	2.8	100	0.35
150 G7	150	120		36.3	0.35	120		36.3	0.35	120		36.3	0.35
G9 Subgrade	inf	70		36.3	0.35	70		36.3	0.35	70		36.3	0.35
		Critical parameters				Critical parameters				Critical parameters			
		S1	S3	ev/et		S1	S3	ev/et		S1	S3	ev/et	
AC Surfacing				19				14				182	
ET1 Base				60				212		385.68	32.38		
150 C4				116		65.15	-11.99			89.93	-20.22		
150 G7				198				284				346	
G9 Subgrade				274				406				495	
		Expected layer life (E80's)				Expected layer life (E80's)				Expected layer life (E80's)			
		Neff	FOS	SF	Nt	Neff	FOS	SF	Nt	Neff	FOS/SR	SF	Nt
AC Surfacing		71.7E+9			1.75	125.6E+9			1.75	599.2E+9			1.2E+6
ET1 Base		38.5E+6			1	38.5E+6			1	1.1E+6			3.4E+6
150 C4		1.0E+6		1.363013		1.4E+6		1.2963443		7.2E+6		0.2227492	700.1E+3
150 G7						21.5E+12				584.5E+9		0.9078529	81.1E+9
G9 Subgrade						836.6E+9				16.4E+9			2.3E+9
		Expected pavement life (E80's)											
		Neff	R	EG	Fn	AR	L	Neff	R	EG	Fn	AR	L
AC Surfacing		1.4E+6	125.6E+9	000.0E+0	0.20954107	599.2E+9	599.2E+9	2.5E+6	599.2E+9	000.0E+0	502071.04	1.2E+6	3.6E+6
ET1 Base		1.4E+6	37.1E+6	000.0E+0	34.23988	1.1E+6	2.5E+6	2.5E+6	000.0E+0	3.4E+6		3.4E+6	5.9E+6
150 C4		1.4E+6	000.0E+0	7.2E+6		7.2E+6	8.6E+6	2.5E+6	6.1E+6	000.0E+0	12.238699	499.6E+3	3.0E+6
150 G7		1.4E+6	21.5E+12	000.0E+0	36.8579773	584.5E+9	584.5E+9	2.5E+6	584.5E+9	000.0E+0	7.2040808	81.1E+9	81.1E+9
G9 Subgrade		1.4E+6	836.6E+9	000.0E+0	51.0216745	16.4E+9	16.4E+9	2.5E+6	16.4E+9	000.0E+0	7.2581716	2.3E+9	2.3E+9

## Emulsion treated bases - Design catalogue

Road category = B      Expected pavement life = 7.0E+6

ETB7

	Thickness	Phase 1				Phase 2				Phase 3			
		Layer characteristics				Layer characteristics				Layer characteristics			
		E moduli	eb/phi	c/A	poisson	E moduli	eb/phi	c/A	poisson	E moduli	eb/phi	c/A	poisson
AC Surfacing	40	3000			0.35	3000			0.35	3000			0.35
ET1 Base	125	1800	230		0.35	1800	145		0.35	500	6.55	1374	0.35
200 C4	200	1500	145		0.35	200	2.8	100	0.35	200	2.8	100	0.35
150 G7	150	120		36.38	0.35	120		36.38	0.35	120		36.38	0.35
G9 Subgrade	inf	70		36.38	0.35	70		36.38	0.35	70		36.38	0.35
		Critical parameters				Critical parameters				Critical parameters			
		S1	S3	ev/et		S1	S3	ev/et		S1	S3	ev/et	
AC Surfacing				22				15				182	
ET1 Base				53				208		386.67	33.67		
200 C4				94		60.2	-9.56			81.18	-15.86		
150 G7				228				363				456	
G9 Subgrade				225				361				432	
		Expected layer life (E80's)				Expected layer life (E80's)				Expected layer life (E80's)			
		Neff	FOS	SF	Nt	Neff	FOS	SF	Nt	Neff	FOS/SR	SF	Nt
AC Surfacing		38.6E+9			1.75	67.5E+9			1.75	479.9E+9			1.4E+6
ET1 Base		54.8E+6			1	54.8E+6			1	1.6E+6	0.221381		4.3E+6
200 C4		1.8E+6		1.892344		3.4E+6	1.433486			27.7E+6	1.030503		2.5E+6
150 G7						6.3E+12				60.4E+9			6.2E+9
G9 Subgrade						7.2E+12				63.8E+9			10.6E+9
		Expected pavement life (E80's)											
		Neff	R	EG	Fn	AR	L	Neff	R	EG	Fn	AR	L
AC Surfacing		3.4E+6	67.5E+9	000.0E+0	0.1407162	479.9E+9	479.9E+9	4.9E+6	479.9E+9	000.0E+0	354987.9	1.4E+6	6.3E+6
ET1 Base		3.4E+6	51.4E+6	000.0E+0	34.5279894	1.5E+6	4.9E+6	4.9E+6	000.0E+0	4.3E+6		4.3E+6	9.2E+6
200 C4		3.4E+6	000.0E+0	27.7E+6		27.7E+6	31.1E+6	4.9E+6	26.2E+6	000.0E+0	12.60741	2.1E+6	7.0E+6
150 G7		3.4E+6	6.3E+12	000.0E+0	104.644831	60.4E+9	60.4E+9	4.9E+6	60.4E+9	000.0E+0	9.786032	6.2E+9	6.2E+9
G9 Subgrade		3.4E+6	7.2E+12	000.0E+0	113.043823	63.8E+9	63.8E+9	4.9E+6	63.8E+9	000.0E+0	6.022664	10.6E+9	10.6E+9

## Emulsion treated bases - Design catalogue

ETB14

Road category = B Expected pavement life = 2.4E+6

	Thickness	Phase 1				Phase 2				Phase 3			
		Layer characteristics				Layer characteristics				Layer characteristics			
		E moduli	eb/phi	c/A	poisson	E moduli	eb/phi	c/A	poisson	E moduli	eb/phi	c/A	poisson
ET1 Base	125	1800	230		0.35	500	6.55	1374	0.35				
150 G5 Sbase	150	200	3.5	120	0.35	200	3.5	120	0.35				
150 G7 SSG	150	120		36.38	0.35	120		36.38	0.35				
G9 Subgrade	inf	70		36.38	0.35	70		36.38	0.35				
		Critical parameters				Critical parameters				Critical parameters			
		S1	S3	ev/et		S1	S3	ev/et		S1	S2	ev/et	
ET1 Base				303		466.78	41.77						
150 G5 Sbase		93.93	-19.19			138.49	-20.79						
150 G7 SSG				542				718					
G9 Subgrade				551				679					
		Expected layer life (E80's)				Expected layer life (E80's)				Expected layer life (E80's)			
		Neff	FOS	SF	Nt	Neff	FOS/SR	SF	Nt	Neff	FOS	SF	Nt
ET1 Base		2.2E+6			1	2.2E+6			2.8E+6				
150 G5 Sbase			1.06082		3.0E+6		0.257958		468.1E+3				
150 G7 SSG					1.1E+9		0.75339		65.9E+6				
G9 Subgrade					930.0E+6				115.2E+6				
		Expected pavement life (E80's)											
		Neff	R	EG	Fn	AR	L	Neff	R	EG	Fn	AR	L
ET1 Base		2.2E+6	000.0E+0	2.8E+6		2.8E+6	5.1E+6	2.4E+6	2.7E+6	000.0E+0	#DIV/0!	#DIV/0!	#DIV/0!
150 G5 Sbase		2.2E+6	720.2E+3	000.0E+0	6.3E+0	113.9E+3	2.4E+6	2.4E+6	000.0E+0	000.0E+0	#DIV/0!	#DIV/0!	#DIV/0!
150 G7 SSG		2.2E+6	1.1E+9	000.0E+0	16.6E+0	65.7E+6	68.0E+6	2.4E+6	65.6E+6	000.0E+0	#DIV/0!	#DIV/0!	#DIV/0!
G9 Subgrade		2.2E+6	927.8E+6	000.0E+0	8.1E+0	114.9E+6	117.1E+6	2.4E+6	114.8E+6	000.0E+0	#DIV/0!	#DIV/0!	#DIV/0!



## Emulsion treated bases - Design catalogue

Road category = B      Expected pavement life = 1.2E+6

ETB29

	Thickness	Phase 1				Phase 2				Phase 3			
		Layer characteristics				Layer characteristics				Layer characteristics			
		E moduli	eb/phi	c/A	poisson	E moduli	eb/phi	c/A	poisson	E moduli	eb/phi	c/A	poisson
ET1 Base	125	1800	230		0.35	1800	145		0.35	500	6.55	1374	0.35
150 C4	150	1500	145		0.35	200	2.8	100	0.35	200	2.8	100	0.35
150 G7	150	120		36.38	0.35	120		36.38	0.35	120		36.38	0.35
G9 Subgrade	inf	70		36.38	0.35	70		36.38	0.35	70		36.38	0.35
		Critical parameters				Critical parameters				Critical parameters			
		S1	S3	ev/et		S1	S3	ev/et		S1	S3	ev/et	
ET1 Base				60				303		466	41.77		
150 C4				164		92.93	-19.19			138.49	-20.79		
150 G7				341				542				718	
G9 Subgrade				356				551				679	
		Expected layer life (E80's)				Expected layer life (E80's)				Expected layer life (E80's)			
		Neff	FOS	SF	Nt	Neff	FOS	SF	Nt	Neff	FOS/SR	SF	Nt
ET1 Base		50.1E+6			1	231.0E+3			1	231.0E+3			2.8E+6
150 C4		670.0E+3		1.363013	913.2E+3		0.891902				0.627825		220.4E+3
150 G7					112.8E+9								65.9E+6
G9 Subgrade					73.4E+9								115.2E+6
		Expected pavement life (E80's)				Expected pavement life (E80's)				Expected pavement life (E80's)			
		Neff	R	EG	Fn	AR	L	Neff	R	EG	Fn	AR	L
ET1 Base		913.2E+3	49.2E+6	000.0E+0	216.907023	226.8E+3	1.1E+6	1.1E+6	000.0E+0	2.8E+6		2.8E+6	4.0E+6
150 C4		913.2E+3	000.0E+0	1.1E+6		1.1E+6	2.0E+6	1.1E+6	847.7E+3	000.0E+0	9.018003	94.0E+3	1.2E+6
150 G7		913.2E+3	112.8E+9	000.0E+0	102.907985	1.1E+9	1.1E+9	1.1E+6	1.1E+9	000.0E+0	16.65749	65.8E+6	67.0E+6
G9 Subgrade		913.2E+3	73.4E+9	000.0E+0	78.8889197	930.0E+6	930.9E+6	1.1E+6	929.8E+6	000.0E+0	8.083559	115.0E+6	116.2E+6

## Emulsion treated bases - Design catalogue

ETB9

Road category = B

Expected pavement life = 846.4E+3

	Thickness	Phase 1				Phase 2				Phase 3			
		E moduli	eb/phi	c/A	poisson	E moduli	eb/phi	c/A	poisson	E moduli	eb/phi	c/A	poisson
ET1 Base	125	1800	230		0.35	1800	145		0.35	500	6.55	1374	0.35
150 C4	125	1500	145		0.35	200	2.8	100	0.35	200	2.8	100	0.35
150 G7	150	120		36.38	0.35	120		36.38	0.35	120		36.38	0.35
G9 Subgrade	inf	70		36.38	0.35	70		36.38	0.35	70		36.38	0.35
		Critical parameters				Critical parameters				Critical parameters			
		S1	S3	ev/et		S1	S3	ev/et		S1	S3	ev/et	
ET1 Base				67				309		468.6	41.69		
150 C4				185		97.6	-21.84			148.29	-24.45		
150 G7				394				584				811	
G9 Subgrade				402				590				733	
		Expected layer life (E80's)				Expected layer life (E80's)				Expected layer life (E80's)			
		Neff	FOS	SF	Nt	Neff	FOS	SF	Nt	Neff	FOS/SR	SF	Nt
ET1 Base		45.8E+6			1	204.5E+3			1		0.259194		2.8E+6
150 C4		496.9E+3		1.156778	574.8E+3		0.83724		774.1E+3		0.578905		164.4E+3
150 G7					26.6E+9				519.8E+6				19.5E+6
G9 Subgrade					21.8E+9				469.3E+6				53.6E+6
		Expected pavement life (E80's)				Expected pavement life (E80's)				Expected pavement life (E80's)			
		Neff	R	EG	Fn	AR	L	Neff	R	EG	Fn	AR	L
ET1 Base		574.8E+3	45.2E+6	000.0E+0	224.003729	201.9E+3	776.7E+3	776.7E+3	000.0E+0	2.8E+6		2.8E+6	3.6E+6
150 C4		574.8E+3	000.0E+0	774.1E+3		774.1E+3	1.3E+6	776.7E+3	572.1E+3	000.0E+0	8.206803	69.7E+3	846.4E+3
150 G7		574.8E+3	26.6E+9	000.0E+0	51.1877751	519.8E+6	520.4E+6	776.7E+3	519.6E+6	000.0E+0	26.70242	19.5E+6	20.2E+6
G9 Subgrade		574.8E+3	21.8E+9	000.0E+0	46.3724013	469.3E+6	469.9E+6	776.7E+3	469.1E+6	000.0E+0	8.77081	53.5E+6	54.3E+6

## Emulsion treated bases - Design catalogue

Road category = B

Expected pavement life = 774.1E+3

ETB36

	Thickness	Phase 1				Phase 2				Phase 3			
		Layer characteristics				Layer characteristics				Layer characteristics			
		E moduli	eb/phi	c/A	poisson	E moduli	eb/phi	c/A	poisson	E moduli	eb/phi	c/A	poisson
ET1 Base	125	1800	230		0.35	500	6.55	1374	0.35				
125 G5 Sbase	125	200	3.4	100	0.35	200	3.4	100	0.35				
150 G7 SSG	150	120		36.38	0.35	120		36.38	0.35				
G9 Subgrade	inf	70		36.38	0.35	70		36.38	0.35				
		Critical parameters				Critical parameters				Critical parameters			
		S1	S3	ev/et		S1	S3	ev/et		S1	S2	ev/et	
ET1 Base				309		468.6	41.69						
125 G5 Sbase		97.6	-21.84			148.29	-24.45						
150 G7 SSG				584				811					
G9 Subgrade				590				733					
		Expected layer life (E80's)				Expected layer life (E80's)				Expected layer life (E80's)			
		Neff	FOS	SF	Nt	Neff	FOS/SR	SF	Nt	Neff	FOS	SF	Nt
ET1 Base		2.1E+6			1	2.1E+6	0.259194		2.8E+6				
125 G5 Sbase			0.83724		774.1E+3		0.578905		164.4E+3				
150 G7 SSG					519.8E+6				19.5E+6				
G9 Subgrade					469.3E+6				53.6E+6				
		Expected pavement life (E80's)				Expected pavement life (E80's)				Expected pavement life (E80's)			
		Neff	R	EG	Fn	AR	L	Neff	R	EG	Fn	AR	L
ET1 Base		774.1E+3	1.3E+6	000.0E+0	746.1E-3	1.7E+6	2.5E+6	774.1E+3	1.7E+6	000.0E+0	#DIV/0!	#DIV/0!	#DIV/0!
125 G5 Sbase	Fail	774.1E+3	000.0E+0	164.4E+3		164.4E+3	774.1E+3	774.1E+3	000.0E+0	000.0E+0	#DIV/0!	#DIV/0!	#DIV/0!
150 G7 SSG		774.1E+3	519.1E+6	000.0E+0	26.7E+0	19.5E+6	20.2E+6	774.1E+3	19.5E+6	000.0E+0	#DIV/0!	#DIV/0!	#DIV/0!
G9 Subgrade		774.1E+3	468.6E+6	000.0E+0	8.8E+0	53.5E+6	54.3E+6	774.1E+3	53.5E+6	000.0E+0	#DIV/0!	#DIV/0!	#DIV/0!

## Emulsion treated bases - Design catalogue

Road category = C      Expected pavement life = 1.6E+6

ETB11	Thickness	Phase 1				Phase 2				Phase 3			
		Layer characteristics				Layer characteristics				Layer characteristics			
		E moduli	eb/phi	c/A	poisson	E moduli	eb/phi	c/A	poisson	E moduli	eb/phi	c/A	poisson
ET1 Base	125	1800	230		0.35	500	6.55	1374	0.35				
150 G6 Sbase	150	150	2.32	84	0.35	150	2.32	84	0.35				
150 G7 SSG	150	120		36.47	0.35	120		36.47	0.35				
G9 Subgrade	inf	70		36.47	0.35	70		36.47	0.35				
		Critical parameters				Critical parameters				Critical parameters			
		S1	S3	ev/et		S1	S3	ev/et		S1	S2	ev/et	
ET1 Base				338		475.09	35.55						
150 G6 Sbase		89.96	-8.1			135.43	-10.75						
150 G7 SSG				547				731					
G9 Subgrade				570				708					
		Expected layer life (E80's)				Expected layer life (E80's)				Expected layer life (E80's)			
		Neff	FOS	SF	Nt	Neff	FOS/SR	SF	Nt	Neff	FOS	SF	Nt
ET1 Base		2.0E+6			1	2.0E+6			3.6E+6				
150 G6 Sbase			0.856618				0.273541		302.2E+3				
150 G7 SSG							0.574634		67.7E+6				
G9 Subgrade									93.3E+6				
		Expected pavement life (E80's)											
		Neff	R	EG	Fn	AR	L	Neff	R	EG	Fn	AR	L
ET1 Base		1.6E+6	342.7E+3	000.0E+0	548.8E-3	624.6E+3	2.3E+6	1.6E+6	624.6E+3	000.0E+0	#DIV/0!	#DIV/0!	#DIV/0!
150 G6 Sbase	Fail	1.6E+6	000.0E+0	302.2E+3		302.2E+3	1.6E+6	1.6E+6	000.0E+0	000.0E+0	#DIV/0!	#DIV/0!	#DIV/0!
150 G7 SSG		1.6E+6	1.2E+9	000.0E+0	18.2E+0	67.6E+6	69.3E+6	1.6E+6	67.6E+6	000.0E+0	#DIV/0!	#DIV/0!	#DIV/0!
G9 Subgrade		1.6E+6	813.5E+6	000.0E+0	8.7E+0	93.1E+6	94.7E+6	1.6E+6	93.1E+6	000.0E+0	#DIV/0!	#DIV/0!	#DIV/0!

## Emulsion treated bases - Design catalogue

ETB30

Road category = C

Expected pavement life = 741.0E+3

	Thickness	Phase 1				Phase 2				Phase 3			
		Layer characteristics				Layer characteristics				Layer characteristics			
		E moduli	eb/phi	c/A	poisson	E moduli	eb/phi	c/A	poisson	E moduli	eb/phi	c/A	poisson
ET1 Base	125	1800	230		0.35	500	6.55	1374	0.35				
150 G6 Sbase	150	150	2.32	75	0.35	150	2.32	75	0.35				
150 G7 SSG	150	120		36.47	0.35	120		36.47	0.35				
G9 Subgrade	inf	70		36.47	0.35	70		36.47	0.35				
		Critical parameters				Critical parameters				Critical parameters			
		S1	S3	ev/et		S1	S3	ev/et		S1	S2	ev/et	
ET1 Base				342		476.29	35.6						
150 G6 Sbase		94.6	-8.97			145.21	-12.1						
150 G7 SSG				579				822					
G9 Subgrade				608				762					
		Expected layer life (E80's)				Expected layer life (E80's)				Expected layer life (E80's)			
		Neff	FOS	SF	Nt	Neff	FOS/SR	SF	Nt	Neff	FOS	SF	NI
ET1 Base		1.9E+6			1	1.9E+6			3.6E+6				
150 G6 Sbase			0.724148				0.476766		168.0E+3				
150 G7 SSG									21.0E+6				
G9 Subgrade									44.7E+6				
		Expected pavement life (E80's)				Expected pavement life (E80's)				Expected pavement life (E80's)			
		Neff	R	EG	Fn	AR	L	Neff	R	EG	Fn	AR	L
ET1 Base		741.0E+3	1.1E+6	000.0E+0	524.9E-3	2.2E+6	2.9E+6	741.0E+3	2.2E+6	000.0E+0	#DIV/0!	#DIV/0!	#DIV/0!
150 G6 Sbase	Fail	741.0E+3	000.0E+0	168.0E+3		168.0E+3	741.0E+3	741.0E+3	000.0E+0	000.0E+0	#DIV/0!	#DIV/0!	#DIV/0!
150 G7 SSG		741.0E+3	696.2E+6	000.0E+0	33.3E+0	20.9E+6	21.7E+6	741.0E+3	20.9E+6	000.0E+0	#DIV/0!	#DIV/0!	#DIV/0!
G9 Subgrade		741.0E+3	426.8E+6	000.0E+0	9.6E+0	44.6E+6	45.4E+6	741.0E+3	44.6E+6	000.0E+0	#DIV/0!	#DIV/0!	#DIV/0!

## Emulsion treated bases - Design catalogue

ETB33

Road category = C

Expected pavement life = 311.4E+3

	Thickness	Phase 1				Phase 2				Phase 3			
		Layer characteristics				Layer characteristics				Layer characteristics			
		E moduli	eb/phi	c/A	poisson	E moduli	eb/phi	c/A	poisson	E moduli	eb/phi	c/A	poisson
ET1 Base	100	1800	230		0.35	500	6.55	1374	0.35				
150 G6 Sbase	125	150	2.32	75	0.35	150	2.32	75	0.35				
150 G7 SSG	150	120		36.47	0.35	120		36.47	0.35				
G9 Subgrade	inf	70		36.47	0.35	70		36.47	0.35				
		Critical parameters				Critical parameters				Critical parameters			
		S1	S3	ev/et		S1	S3	ev/et		S1	S2	ev/et	
ET1 Base				412		505.95	36.38						
150 G6 Sbase		121.51	-7.88			180.11	-8.84						
150 G7 SSG				714				976					
G9 Subgrade				714				847					
		Expected layer life (E80's)				Expected layer life (E80's)				Expected layer life (E80's)			
		Neff	FOS	SF	Nt	Neff	FOS/SR	SF	Nt	Neff	FOS	SF	Nt
ET1 Base		769.7E+3			1	769.7E+3			4.2E+6				
150 G6 Sbase			0.579643						104.1E+3				
150 G7 SSG									3.8E+6				
G9 Subgrade									15.5E+6				
		Expected pavement life (E80's)											
		Neff	R	EG	Fn	AR	L	Neff	R	EG	Fn	AR	L
ET1 Base		311.4E+3	458.2E+3	000.0E+0	185.3E-3	2.5E+6	2.8E+6	311.4E+3	2.5E+6	000.0E+0	#DIV/0!	#DIV/0!	#DIV/0!
150 G6 Sbase	Fail	311.4E+3	000.0E+0	104.1E+3		104.1E+3	311.4E+3	311.4E+3	000.0E+0	000.0E+0	#DIV/0!	#DIV/0!	#DIV/0!
150 G7 SSG		311.4E+3	85.4E+6	000.0E+0	22.8E+0	3.7E+6	4.1E+6	311.4E+3	3.7E+6	000.0E+0	#DIV/0!	#DIV/0!	#DIV/0!
G9 Subgrade		311.4E+3	85.4E+6	000.0E+0	5.5E+0	15.5E+6	15.8E+6	311.4E+3	15.5E+6	000.0E+0	#DIV/0!	#DIV/0!	#DIV/0!

## Emulsion treated bases - Design catalogue

Road category = D      Expected pavement life = 747.2E+3

ETB13

	Thickness	Phase 1				Phase 2				Phase 3			
		Layer characteristics				Layer characteristics				Layer characteristics			
		E moduli	eb/phi	c/A	poisson	E moduli	eb/phi	c/A	poisson	E moduli	eb/phi	c/A	poisson
ET1 Base	100	1800	230		0.35	500	6.55	1374	0.35				
150 G7 Sbase	150	120	1.4	60	0.35	120	1.4	60	0.35				
G9 Subgrade	inf	70		36.7	0.35	70		36.7	0.35				
		Critical parameters				Critical parameters				Critical parameters			
		S1	S3	ev/et		S1	S3	ev/et		S1	S2	ev/et	
ET1 Base				466		521	30.48						
150 G7 Sbase		103.91	-10.8			153.29	-15.83						
G9 Subgrade				1004				1328					
		Expected layer life (E80's)				Expected layer life (E80's)				Expected layer life (E80's)			
		Neff	FOS	SF	Nt	Neff	FOS/SR	SF	Nt	Neff	FOS	SF	Nt
ET1 Base		828.5E+3			1 828.5E+3		0.31171		9.2E+6				
150 G7 Sbase			0.523058		747.2E+3		0.354778		272.3E+3				
G9 Subgrade					4.8E+6				293.8E+3				
		Expected pavement life (E80's)				Expected pavement life (E80's)				Expected pavement life (E80's)			
		Neff	R	EG	Fn	AR	L	Neff	R	EG	Fn	AR	L
ET1 Base		747.2E+3	81.2E+3	000.0E+0	89.9E-3	903.3E+3	1.7E+6	747.2E+3	903.3E+3	000.0E+0	#DIV/0!	#DIV/0!	#DIV/0!
150 G7 Sbase		747.2E+3	000.0E+0	272.3E+3		272.3E+3	747.2E+3	747.2E+3	000.0E+0	000.0E+0	#DIV/0!	#DIV/0!	#DIV/0!
G9 Subgrade	Fail	747.2E+3	4.1E+6	000.0E+0	16.4E+0	248.2E+3	995.4E+3	747.2E+3	248.2E+3	000.0E+0	#DIV/0!	#DIV/0!	#DIV/0!

## Emulsion treated bases - Design catalogue

ETB31

Road category = D Expected pavement life = 140.4E+3

	Thickness	Phase 1				Phase 2				Phase 3			
		Layer characteristics				Layer characteristics				Layer characteristics			
		E moduli	eb/phi	c/A	poisson	E moduli	eb/phi	c/A	poisson	E moduli	eb/phi	c/A	poisson
ET1 Base	125	1800	230		0.35	500	6.55	1374	0.35				
150 G9 Sbase	150	70	0	36.3	0.35	70	0	36.3	0.35				
G10 Subgrade	inf	70		36.7	0.35	70		36.7	0.35				
		Critical parameters				Critical parameters				Critical parameters			
		S1	S3	ev/et		S1	S3	ev/et		S1	S2	ev/et	
ET1 Base				441		504.45	20.24						
150 G9 Sbase				1304				2416					
G10 Subgrade				822				1293					
		Expected layer life (E80's)				Expected layer life (E80's)				Expected layer life (E80's)			
		Neff	FOS	SF	Nt	Neff	FOS/SR	SF	Nt	Neff	FOS	SF	Nt
ET1 Base		1.1E+6			1		0.321399		6.2E+6				
150 G9 Sbase					140.4E+3				294.5E+0				
G10 Subgrade					35.6E+6				383.7E+3				
		Expected pavement life (E80's)											
		Neff	R	EG	Fn	AR	L	Neff	R	EG	Fn	AR	L
ET1 Base		140.4E+3	1.0E+6	000.0E+0	185.3E-3	5.4E+6	5.5E+6	140.4E+3	5.4E+6	000.0E+0	#DIV/0!	#DIV/0!	#DIV/0!
150 G9 Sbase	Fail	140.4E+3	000.0E+0	294.5E+0		294.5E+0	140.4E+3	140.4E+3	000.0E+0	000.0E+0	#DIV/0!	#DIV/0!	#DIV/0!
G10 Subgrade		140.4E+3	35.4E+6	000.0E+0	92.7E+0	382.2E+3	522.6E+3	140.4E+3	382.2E+3	000.0E+0	#DIV/0!	#DIV/0!	#DIV/0!



## Emulsion treated bases - Design catalogue

Road category = A      Expected pavement life = 5.9E+6

ETB1

ET2 Bases

	Phase 1				Phase 2				Phase 3				Phase 4							
	Thickness	Layer characteristics			Layer characteristics			Layer characteristics			Layer characteristics									
		E moduli	eb/phi	c/A	poisson	E moduli	eb/phi	c/A	poisson	E moduli	eb/phi	c/A	poisson	E moduli	eb/phi	c/A	poisson			
AC Surfacing	40	3000			0.35	3000			0.35	3000			0.35	3000			0.35			
ET2 Base	150	1800	145		0.35	1800	145		0.35	1800	145		0.35	500	6.55	1374	0.35			
125 C4	125	1500	145		0.35	1500	145		0.35	225	2.8	100	0.35	225	2.8	100	0.35			
125 C4	125	1500	145		0.35	225	2.8	100	0.35	225	2.8	100	0.35	225	2.8	100	0.35			
G7 Selected	150	120		36.3	0.35	120		36.3	0.35	120		36.3	0.35	120		36.3	0.35			
G9 Subbase	inf	70																		
		Critical parameters				Critical parameters				Critical parameters				Critical parameters						
		S1	S3	ev/et		S1	S3	ev/et		S1	S3	ev/et		S1	S3	ev/et				
AC Surfacing				26				21				16					176			
ET2 Base				44				58				174		375.29	33.48					
125 C4				41				105		61.45	-5.71			88.03	-11.43					
125 C4				70		30.37	-9.65			39.66	-10.78			51.21	-16.31					
G7 Selected				171				214				274				352				
		Expected layer life (E80's)					Expected layer life (E80's)					Expected layer life (E80's)					Expected layer life (E80's)			
		Neff	FOS	SF	Nt	Neff	FOS	SF	Nt	Neff	FOS/SR	SF	Nt	Neff	FOS/SR	SF	Nt			
AC Surfacing		14.4E+9			1.75	25.2E+9			1.75	75.2E+9			1.75	302.5E+9			1.75			
ET2 Base		33.9E+6		1	33.9E+6	43.0E+9		1	25.5E+6	2.4E+6		1	2.4E+6		0.21453		3.0E+6			
125 C4		2.9E+6		1.1567779	3.4E+6	25.5E+6		1.1567779	1.4E+6	1.4889815		22.9E+6		1.005429		1.3E+6				
125 C4		1.9E+6		1.1567779	2.2E+6	1.2E+6		2.4987506	9.8E+9	1.9825535		441.5E+6		1.481043		21.8E+6				
G7 Selected					93.3E+12				9.9E+12			836.6E+9				68.3E+9				
		Neff	R	EG	Fn	AR	L	Neff	R	EG	Fn	AR	L	Neff	R	EG	Fn	AR	L	
AC Surfacing		2.2E+6	25.2E+9	000.0E+0	0.3352104	75.2E+9	75.2E+9	2.7E+6	75.2E+9	000.0E+0	0.2486473	302.5E+9	302.5E+9	4.9E+6	302.5E+9	000.0E+0	213534.7	1.4E+6	6.3E+6	
ET2 Base		2.2E+6	31.7E+6	000.0E+0	1.3284488	23.9E+6	26.1E+6	2.7E+6	23.4E+6	000.0E+0	10.747623	2.2E+6	4.9E+6	4.9E+6	000.0E+0	3.0E+6		3.0E+6	7.9E+6	
125 C4		2.2E+6	1.1E+6	000.0E+0	2.4888795	460.3E+3	2.7E+6	2.7E+6	000.0E+0	22.9E+6		22.9E+6	25.6E+6	4.9E+6	20.7E+6	000.0E+0	20.33252	1.0E+6	5.9E+6	
125 C4		2.2E+6	000.0E+0	9.8E+9		9.8E+9	9.8E+9	2.7E+6	9.8E+9	000.0E+0	22.12361	441.3E+6	444.0E+6	4.9E+6	439.2E+6	000.0E+0	20.37161	21.6E+6	26.4E+6	
G7 Selected		2.2E+6	93.3E+12	000.0E+0	9.4227275	9.9E+12	9.9E+12	2.7E+6	9.9E+12	000.0E+0	11.840444	836.6E+9	836.6E+9	4.9E+6	836.6E+9	000.0E+0	12.24397	68.3E+9	68.3E+9	

## Emulsion treated bases - Design catalogue

ETB6

ET2 Bases Road category = A

Expected pavement life = 2.9E+6

	Thickness	Phase 1				Phase 2				Phase 3			
		Layer characteristics				Layer characteristics				Layer characteristics			
		E moduli	eb/phi	c/A	poisson	E moduli	eb/phi	c/A	poisson	E moduli	eb/phi	c/A	poisson
AC Surfacing	40	3000			0.35	3000			0.35	3000			0.35
ET2 Base	125	1800	145		0.35	1800	145		0.35	500	6.55	1374	0.35
150 C4	150	1500	145		0.35	200	2.8	100	0.35	200	2.8	100	0.35
150 G7	150	120		36.3	0.35	120		36.3	0.35	120		36.3	0.35
G9 Subgrade	inf	70		36.3	0.35	70		36.3	0.35	70		36.3	0.35
		Critical parameters				Critical parameters				Critical parameters			
		S1	S3	ev/et		S1	S3	ev/et		S1	S3	ev/et	
AC Surfacing				19				14				182	
ET2 Base				60				212		385.68	32.38		
150 C4				116		65.15	-11.99			89.93	-20.22		
150 G7				198				284				346	
G9 Subgrade				274				406				495	
		Expected layer life (E80's)				Expected layer life (E80's)				Expected layer life (E80's)			
		Neff	FOS	SF	Nt	Neff	FOS	SF	Nt	Neff	FOS/SR	SF	Nt
AC Surfacing		71.7E+9			1.75 125.6E+9	342.4E+9			1.75 599.2E+9	681.9E+3			1.75 1.2E+6
ET2 Base		24.5E+6			1 24.5E+6	1.1E+6			1 1.1E+6		0.2227492		3.4E+6
150 C4		1.0E+6		1.363013	1.4E+6		1.2963443		7.2E+6		0.9078529		700.1E+3
150 G7					21.5E+12				584.5E+9				81.1E+9
G9 Subgrade					836.6E+9				16.4E+9				2.3E+9
		Expected pavement life (E80's)											
		Neff	R	EG	Fn	AR	L	Neff	R	EG	Fn	AR	L
AC Surfacing		1.4E+6	125.6E+9	000.0E+0	0.20954107	599.2E+9	599.2E+9	2.4E+6	599.2E+9	000.0E+0	502071.04	1.2E+6	3.6E+6
ET2 Base		1.4E+6	23.2E+6	000.0E+0	21.8359662	1.1E+6	2.4E+6	2.4E+6	000.0E+0	3.4E+6		3.4E+6	5.9E+6
150 C4		1.4E+6	000.0E+0	7.2E+6		7.2E+6	8.6E+6	2.4E+6	6.1E+6	000.0E+0	12.238699	501.5E+3	2.9E+6
150 G7		1.4E+6	21.5E+12	000.0E+0	36.8579773	584.5E+9	584.5E+9	2.4E+6	584.5E+9	000.0E+0	7.2040808	81.1E+9	81.1E+9
G9 Subgrade		1.4E+6	836.6E+9	000.0E+0	51.0216745	16.4E+9	16.4E+9	2.4E+6	16.4E+9	000.0E+0	7.2581716	2.3E+9	2.3E+9

## Emulsion treated bases - Design catalogue

ETB7

Road category = B

Expected pavement life = 7.0E+6

	Thickness	Phase 1				Phase 2				Phase 3			
		Layer characteristics				Layer characteristics				Layer characteristics			
		E moduli	eb/phi	c/A	poisson	E moduli	eb/phi	c/A	poisson	E moduli	eb/phi	c/A	poisson
AC Surfacing	40	3000			0.35	3000			0.35	3000			0.35
ET2 Base	125	1800	145		0.35	1800	145		0.35	500	6.55	1374	0.35
200 C4	200	1500	145		0.35	200	2.8	100	0.35	200	2.8	100	0.35
150 G7	150	120		36.38	0.35	120		36.38	0.35	120		36.38	0.35
G9 Subgrade	inf	70		36.38	0.35	70		36.38	0.35	70		36.38	0.35
		Critical parameters				Critical parameters				Critical parameters			
		S1	S3	ev/et		S1	S3	ev/et		S1	S3	ev/et	
AC Surfacing				22				15				182	
ET2 Base				53				208		386.67	33.67		
200 C4				94		60.2	-9.56			81.18	-15.86		
150 G7				228				363				456	
G9 Subgrade				225				361				432	
		Expected layer life (E80's)				Expected layer life (E80's)				Expected layer life (E80's)			
		Neff	FOS	SF	Nt	Neff	FOS	SF	Nt	Neff	FOS/SR	SF	Nt
AC Surfacing		38.6E+9			1.75	67.5E+9			1.75	479.9E+9			1.75
ET2 Base		36.8E+6			1	36.8E+6			1	1.6E+6	0.221381		4.3E+6
200 C4		1.8E+6		1.892344		3.4E+6		1.433486		27.7E+6	1.030503		2.5E+6
150 G7						6.3E+12				60.4E+9			6.2E+9
G9 Subgrade						7.2E+12				63.8E+9			10.6E+9
		Expected pavement life (E80's)											
		Neff	R	EG	Fn	AR	L	Neff	R	EG	Fn	AR	L
AC Surfacing		3.4E+6	67.5E+9	000.0E+0	0.1407162	479.9E+9	479.9E+9	4.9E+6	479.9E+9	000.0E+0	354987.9	1.4E+6	6.2E+6
ET2 Base		3.4E+6	33.4E+6	000.0E+0	23.2061689	1.4E+6	4.9E+6	4.9E+6	000.0E+0	4.3E+6		4.3E+6	9.1E+6
200 C4		3.4E+6	000.0E+0	27.7E+6		27.7E+6	31.1E+6	4.9E+6	26.2E+6	000.0E+0	12.60741	2.1E+6	7.0E+6
150 G7		3.4E+6	6.3E+12	000.0E+0	104.644831	60.4E+9	60.4E+9	4.9E+6	60.4E+9	000.0E+0	9.786032	6.2E+9	6.2E+9
G9 Subgrade		3.4E+6	7.2E+12	000.0E+0	113.043823	63.8E+9	63.8E+9	4.9E+6	63.8E+9	000.0E+0	6.022664	10.6E+9	10.6E+9

## Emulsion treated bases - Design catalogue

ETB8

Road category = B

Expected pavement life = 1.5E+6

	Thickness	Phase 1				Phase 2				Phase 3			
		Layer characteristics				Layer characteristics				Layer characteristics			
		E moduli	eb/phi	c/A	poisson	E moduli	eb/phi	c/A	poisson	E moduli	eb/phi	c/A	poisson
ET2 Base	150	1800	145		0.35	500	6.55	1374	0.35				
150 G5 Sbase	150	200	3.5	120	0.35	200	3.5	120	0.35				
150 G7 SSG	150	120		36.38	0.35	120		36.38	0.35				
G9 Subgrade	inf	70		36.38	0.35	70		36.38	0.35				
		Critical parameters				Critical parameters				Critical parameters			
		S1	S3	ev/et		S1	S3	ev/et		S1	S2	ev/et	
ET2 Base				256		443.4	-39.09						
150 G5 Sbase		75.05	-18.41			115.24	-21.86						
150 G7 SSG				466				625					
G9 Subgrade				477				614					
		Expected layer life (E80's)				Expected layer life (E80's)				Expected layer life (E80's)			
		Neff	FOS	SF	Nt	Neff	FOS/SR	SF	Nt	Neff	FOS	SF	Nt
ET2 Base		599.3E+3			1 599.3E+3		0.351157		989.8E+3				
150 G5 Sbase			1.283972		11.3E+6		0.875274		972.4E+3				
150 G7 SSG					5.0E+9				263.8E+6				
G9 Subgrade					3.9E+9				315.0E+6				
		Expected pavement life (E80's)											
		Neff	R	EG	Fn	AR	L	Neff	R	EG	Fn	AR	L
ET2 Base		599.3E+3	000.0E+0	989.8E+3		989.8E+3	1.6E+6	1.5E+6	69.0E+3	000.0E+0	#DIV/0!	#DIV/0!	#DIV/0!
150 G5 Sbase		599.3E+3	10.7E+6	000.0E+0	11.6E+0	920.8E+3	1.5E+6	1.5E+6	000.0E+0	000.0E+0	#DIV/0!	#DIV/0!	#DIV/0!
150 G7 SSG		599.3E+3	5.0E+9	000.0E+0	18.8E+0	263.7E+6	264.3E+6	1.5E+6	262.8E+6	000.0E+0	#DIV/0!	#DIV/0!	#DIV/0!
G9 Subgrade		599.3E+3	3.9E+9	000.0E+0	12.5E+0	315.0E+6	315.6E+6	1.5E+6	314.0E+6	000.0E+0	#DIV/0!	#DIV/0!	#DIV/0!

## Emulsion treated bases - Design catalogue

ETB29

Road category = B Expected pavement life = 1.2E+6

	Thickness	Phase 1				Phase 2				Phase 3			
		Layer characteristics				Layer characteristics				Layer characteristics			
		E moduli	eb/phi	c/A	poisson	E moduli	eb/phi	c/A	poisson	E moduli	eb/phi	c/A	poisson
ET2 Base	125	1800	145		0.35	1800	145		0.35	500	6.55	1374	0.35
150 C4	150	1500	145		0.35	200	2.8	100	0.35	200	2.8	100	0.35
150 G7	150	120		36.38	0.35	120		36.38	0.35	120		36.38	0.35
) Subgrade	inf	70		36.38	0.35	70		36.38	0.35	70		36.38	0.35
		Critical parameters				Critical parameters				Critical parameters			
		S1	S3	ev/et		S1	S3	ev/et		S1	S3	ev/et	
ET2 Base				60				303		466	41.77		
150 C4				164		92.93	-19.19			138.49	-20.79		
150 G7				341				542				718	
) Subgrade				356				551				679	
		Expected layer life (E80's)				Expected layer life (E80's)				Expected layer life (E80's)			
		Neff	FOS	SF	Nt	Neff	FOS	SF	Nt	Neff	FOS/SR	SF	Nt
ET2 Base		32.0E+6			1 32.0E+6	231.0E+3			1 231.0E+3		0.257485		2.8E+6
150 C4		670.0E+3		1.363013	913.2E+3		0.891902		1.1E+6		0.627825		220.4E+3
150 G7					112.8E+9				1.1E+9				65.9E+6
) Subgrade					73.4E+9				930.0E+6				115.2E+6
		Expected pavement life (E80's)				Expected pavement life (E80's)				Expected pavement life (E80's)			
		Neff	R	EG	Fn	AR	L	Neff	R	EG	Fn	AR	L
ET2 Base		913.2E+3	31.0E+6	000.0E+0	138.329177	224.4E+3	1.1E+6	1.1E+6	000.0E+0	2.8E+6		2.8E+6	4.0E+6
150 C4		913.2E+3	000.0E+0	1.1E+6		1.1E+6	2.0E+6	1.1E+6	850.1E+3	000.0E+0	9.018003	94.3E+3	1.2E+6
150 G7		913.2E+3	112.8E+9	000.0E+0	102.907985	1.1E+9	1.1E+9	1.1E+6	1.1E+9	000.0E+0	16.65749	65.8E+6	66.9E+6
) Subgrade		913.2E+3	73.4E+9	000.0E+0	78.8889197	930.0E+6	930.9E+6	1.1E+6	929.8E+6	000.0E+0	8.083559	115.0E+6	116.2E+6

## Emulsion treated bases - Design catalogue

Road category = B      Expected pavement life = 844.9E+3

ETB9

	Thickness	Phase 1				Phase 2				Phase 3			
		Layer characteristics				Layer characteristics				Layer characteristics			
		E moduli	eb/phi	c/A	poisson	E moduli	eb/phi	c/A	poisson	E moduli	eb/phi	c/A	poisson
ET2 Base	125	1800	145		0.35	1800	145		0.35	500	6.55	1374	0.35
150 C4	125	1500	145		0.35	200	2.8	100	0.35	200	2.8	100	0.35
150 G7	150	120		36.38	0.35	120		36.38	0.35	120		36.38	0.35
G9 Subgrade	inf	70		36.38	0.35	70		36.38	0.35	70		36.38	0.35
		Critical parameters				Critical parameters				Critical parameters			
		S1	S3	ev/et		S1	S3	ev/et		S1	S3	ev/et	
ET2 Base				67				309		468.6	41.69		
150 C4				185		97.6	-21.84			148.29	-24.45		
150 G7				394				584				811	
G9 Subgrade				402				590				733	
		Expected layer life (E80's)				Expected layer life (E80's)				Expected layer life (E80's)			
		Neff	FOS	SF	Nt	Neff	FOS	SF	Nt	Neff	FOS/SR	SF	Nt
ET2 Base		27.7E+6			1 27.7E+6	204.5E+3			1 204.5E+3		0.259194		2.8E+6
150 C4		496.9E+3		1.156778	574.8E+3		0.83724		774.1E+3		0.578905		164.4E+3
150 G7					26.6E+9				519.8E+6				19.5E+6
G9 Subgrade					21.8E+9				469.3E+6				53.6E+6
		Expected pavement life (E80's)				Expected pavement life (E80's)				Expected pavement life (E80's)			
		Neff	R	EG	Fn	AR	L	Neff	R	EG	Fn	AR	L
ET2 Base		574.8E+3	27.1E+6	000.0E+0	135.551225	200.3E+3	775.0E+3	775.0E+3	000.0E+0	2.8E+6		2.8E+6	3.6E+6
150 C4		574.8E+3	000.0E+0	774.1E+3		774.1E+3	1.3E+6	775.0E+3	573.8E+3	000.0E+0	8.206803	69.9E+3	844.9E+3
150 G7		574.8E+3	26.6E+9	000.0E+0	51.1877751	519.8E+6	520.4E+6	775.0E+3	519.6E+6	000.0E+0	26.70242	19.5E+6	20.2E+6
G9 Subgrade		574.8E+3	21.8E+9	000.0E+0	46.3724013	469.3E+6	469.9E+6	775.0E+3	469.1E+6	000.0E+0	8.77081	53.5E+6	54.3E+6

## Emulsion treated bases - Design catalogue

Road category = B      Expected pavement life = 662.5E+3

ETB14

	Thickness	Phase 1				Phase 2				Phase 3			
		Layer characteristics				Layer characteristics				Layer characteristics			
		E moduli	eb/phi	c/A	poisson	E moduli	eb/phi	c/A	poisson	E moduli	eb/phi	c/A	poisson
ET2 Base	125	1800	145		0.35	500	6.55	1374	0.35				
150 G5 Sbase	150	200	3.5	120	0.35	200	3.5	120	0.35				
150 G7 SSG	150	120		36.38	0.35	120		36.38	0.35				
G9 Subgrade	inf	70		36.38	0.35	70		36.38	0.35				
		Critical parameters				Critical parameters				Critical parameters			
		S1	S3	ev/et		S1	S3	ev/et		S1	S2	ev/et	
ET2 Base				303		466.78	41.77						
150 G5 Sbase		93.93	-19.19			138.49	-20.79						
150 G7 SSG				542				718					
G9 Subgrade				551				679					
		Expected layer life (E80's)				Expected layer life (E80's)				Expected layer life (E80's)			
		Neff	FOS	SF	Nt	Neff	FOS/SR	SF	Nt	Neff	FOS	SF	Nt
ET2 Base		231.0E+3			1 231.0E+3		0.257958		2.8E+6				
150 G5 Sbase			1.06082		3.0E+6		0.75339		468.1E+3				
150 G7 SSG					1.1E+9				65.9E+6				
G9 Subgrade					930.0E+6				115.2E+6				
		Expected pavement life (E80's)				Expected pavement life (E80's)				Expected pavement life (E80's)			
		Neff	R	EG	Fn	AR	L	Neff	R	EG	Fn	AR	L
ET2 Base		231.0E+3	000.0E+0	2.8E+6		2.8E+6	3.0E+6	662.5E+3	2.4E+6	000.0E+0	#DIV/0!	#DIV/0!	#DIV/0!
150 G5 Sbase		231.0E+3	2.7E+6	000.0E+0	6.3E+0	431.6E+3	662.5E+3	662.5E+3	000.0E+0	000.0E+0	#DIV/0!	#DIV/0!	#DIV/0!
150 G7 SSG		231.0E+3	1.1E+9	000.0E+0	16.6E+0	65.9E+6	66.1E+6	662.5E+3	65.4E+6	000.0E+0	#DIV/0!	#DIV/0!	#DIV/0!
G9 Subgrade		231.0E+3	929.8E+6	000.0E+0	8.1E+0	115.1E+6	115.4E+6	662.5E+3	114.7E+6	000.0E+0	#DIV/0!	#DIV/0!	#DIV/0!

## Emulsion treated bases - Design catalogue

Road category = C      Expected pavement life = 430.6E+3

ETB11

	Thickness	Phase 1				Phase 2				Phase 3			
		Layer characteristics				Layer characteristics				Layer characteristics			
		E moduli	eb/phi	c/A	poisson	E moduli	eb/phi	c/A	poisson	E moduli	eb/phi	c/A	poisson
ET2 Base	125	1800	145		0.35	500	6.55	1374	0.35				
150 G6 Sbase	150	150	2.32	84	0.35	150	2.32	84	0.35				
150 G7 SSG	150	120		36.47	0.35	120		36.47	0.35				
G9 Subgrade	inf	70		36.47	0.35	70		36.47	0.35				
		Critical parameters				Critical parameters				Critical parameters			
		S1	S3	ev/et		S1	S3	ev/et		S1	S2	ev/et	
ET2 Base				338		475.09	35.55						
150 G6 Sbase		89.96	-8.1			135.43	-10.75						
150 G7 SSG				547				731					
G9 Subgrade				570				708					
		Expected layer life (E80's)				Expected layer life (E80's)				Expected layer life (E80's)			
		Neff	FOS	SF	Nt	Neff	FOS/SR	SF	Nt	Neff	FOS	SF	Nt
ET2 Base		157.3E+3			1 157.3E+3		0.273541		3.6E+6				
150 G6 Sbase			0.856618		1.6E+6		0.574634		302.2E+3				
150 G7 SSG					1.2E+9				67.7E+6				
G9 Subgrade					815.2E+6				93.3E+6				
		Expected pavement life (E80's)											
		Neff	R	EG	Fn	AR	L	Neff	R	EG	Fn	AR	L
ET2 Base	Fail	157.3E+3	000.0E+0	3.6E+6		3.6E+6	3.8E+6	430.6E+3	3.3E+6	000.0E+0	#DIV/0!	#DIV/0!	#DIV/0!
150 G6 Sbase		157.3E+3	1.5E+6	000.0E+0	5.4E+0	273.2E+3	430.6E+3	430.6E+3	000.0E+0	000.0E+0	#DIV/0!	#DIV/0!	#DIV/0!
150 G7 SSG		157.3E+3	1.2E+9	000.0E+0	18.2E+0	67.7E+6	67.9E+6	430.6E+3	67.5E+6	000.0E+0	#DIV/0!	#DIV/0!	#DIV/0!
G9 Subgrade		157.3E+3	815.0E+6	000.0E+0	8.7E+0	93.2E+6	93.4E+6	430.6E+3	93.0E+6	000.0E+0	#DIV/0!	#DIV/0!	#DIV/0!



## Emulsion treated bases - Design catalogue

ETB30

Road category = C Expected pavement life = 280.2E+3

	Thickness	Phase 1				Phase 2				Phase 3			
		Layer characteristics				Layer characteristics				Layer characteristics			
		E moduli	eb/phi	c/A	poisson	E moduli	eb/phi	c/A	poisson	E moduli	eb/phi	c/A	poisson
ET2 Base	125	1800	145		0.35	500	6.55	1374	0.35				
150 G6 Sbase	150	150	2.32	75	0.35	150	2.32	75	0.35				
150 G7 SSG	150	120		36.47	0.35	120		36.47	0.35				
G9 Subgrade	inf	70		36.47	0.35	70		36.47	0.35				
		Critical parameters				Critical parameters				Critical parameters			
		S1	S3	ev/et		S1	S3	ev/et		S1	S2	ev/et	
ET2 Base				342		476.29	35.6						
150 G6 Sbase		94.6	-8.97			145.21	-12.1						
150 G7 SSG				579				822					
G9 Subgrade				608				762					
		Expected layer life (E80's)				Expected layer life (E80's)				Expected layer life (E80's)			
		Neff	FOS	SF	Nt	Neff	FOS/SR	SF	Nt	Neff	FOS	SF	Nt
ET2 Base		145.1E+3			1 145.1E+3		0.274201		3.6E+6				
150 G6 Sbase			0.724148		741.0E+3		0.476766		168.0E+3				
150 G7 SSG					697.0E+6				21.0E+6				
G9 Subgrade					427.5E+6				44.7E+6				
		Expected pavement life (E80's)				Expected pavement life (E80's)				Expected pavement life (E80's)			
		Neff	R	EG	Fn	AR	L	Neff	R	EG	Fn	AR	L
ET2 Base	Fail	145.1E+3	000.0E+0	3.6E+6		3.6E+6	3.7E+6	280.2E+3	3.5E+6	000.0E+0	#DIV/0!	#DIV/0!	#DIV/0!
150 G6 Sbase		145.1E+3	595.9E+3	000.0E+0	4.4E+0	135.1E+3	280.2E+3	280.2E+3	000.0E+0	000.0E+0	#DIV/0!	#DIV/0!	#DIV/0!
150 G7 SSG		145.1E+3	696.8E+6	000.0E+0	33.3E+0	21.0E+6	21.1E+6	280.2E+3	20.8E+6	000.0E+0	#DIV/0!	#DIV/0!	#DIV/0!
G9 Subgrade		145.1E+3	427.4E+6	000.0E+0	9.6E+0	44.7E+6	44.8E+6	280.2E+3	44.6E+6	000.0E+0	#DIV/0!	#DIV/0!	#DIV/0!

## Emulsion treated bases - Design catalogue

Road category = C      Expected pavement life = 127.4E+3

ETB33

	Thickness	Phase 1				Phase 2				Phase 3			
		Layer characteristics				Layer characteristics				Layer characteristics			
		E moduli	eb/phi	c/A	poisson	E moduli	eb/phi	c/A	poisson	E moduli	eb/phi	c/A	poisson
ET2 Base	100	1800	145		0.35	500	6.55	1374	0.35				
150 G6 Sbase	125	150	2.32	75	0.35	150	2.32	75	0.35				
150 G7 SSG	150	120		36.47	0.35	120		36.47	0.35				
G9 Subgrade	inf	70		36.47	0.35	70		36.47	0.35				
		Critical parameters				Critical parameters				Critical parameters			
		S1	S3	ev/et		S1	S3	ev/et		S1	S2	ev/et	
ET2 Base				412		505.95	36.38						
150 G6 Sbase		121.51	-7.88			180.11	-8.84						
150 G7 SSG				714				976					
G9 Subgrade				714				847					
		Expected layer life (E80's)				Expected layer life (E80's)				Expected layer life (E80's)			
		Neff	FOS	SF	Nt	Neff	FOS/SR	SF	Nt	Neff	FOS	SF	Nt
ET2 Base		35.1E+3			1	35.1E+3	0.291244		4.2E+6				
150 G6 Sbase			0.579643			311.4E+3	0.39693		104.1E+3				
150 G7 SSG						85.7E+6			3.8E+6				
G9 Subgrade						85.7E+6			15.5E+6				
		Expected pavement life (E80's)											
		Neff	R	EG	Fn	AR	L	Neff	R	EG	Fn	AR	L
ET2 Base	Fail	35.1E+3	000.0E+0	4.2E+6		4.2E+6	4.2E+6	127.4E+3	4.1E+6	000.0E+0	#DIV/0!	#DIV/0!	#DIV/0!
150 G6 Sbase		35.1E+3	276.4E+3	000.0E+0	3.0E+0	92.4E+3	127.4E+3	127.4E+3	000.0E+0	000.0E+0	#DIV/0!	#DIV/0!	#DIV/0!
150 G7 SSG		35.1E+3	85.7E+6	000.0E+0	22.8E+0	3.8E+6	3.8E+6	127.4E+3	3.7E+6	000.0E+0	#DIV/0!	#DIV/0!	#DIV/0!
G9 Subgrade		35.1E+3	85.7E+6	000.0E+0	5.5E+0	15.5E+6	15.6E+6	127.4E+3	15.4E+6	000.0E+0	#DIV/0!	#DIV/0!	#DIV/0!

## Emulsion treated bases - Design catalogue

ETB12

Road category = D

Expected pavement life = 750.0E+3

	Thickness	Phase 1				Phase 2				Phase 3			
		Layer characteristics				Layer characteristics				Layer characteristics			
		E moduli	eb/phi	c/A	poisson	E moduli	eb/phi	c/A	poisson	E moduli	eb/phi	c/A	poisson
ET2 Base	125	1800	145		0.35	500	6.55	1374	0.35				
150 G7 Sbase	150	120	1.45	70	0.35	120	1.45	70	0.35				
G9 Subgrade	inf	70		36.7	0.35	70		36.7	0.35				
		Critical parameters				Critical parameters				Critical parameters			
		S1	S3	ev/et		S1	S3	ev/et		S1	S2	ev/et	
ET2 Base				382		487.4	31.05						
150 G7 Sbase		81.11	-10.26			124.1	-16.74						
G9 Subgrade				834				1125					
		Expected layer life (E80's)				Expected layer life (E80's)				Expected layer life (E80's)			
		Neff	FOS	SF	Nt	Neff	FOS/SR	SF	Nt	Neff	FOS	SF	Nt
ET2 Base		138.4E+3			1	138.4E+3			8.4E+6				
150 G7 Sbase			0.766116						639.2E+3				
G9 Subgrade									1.5E+6				
		Expected pavement life (E80's)											
		Neff	R	EG	Fn	AR	L	Neff	R	EG	Fn	AR	L
ET2 Base	Fail	138.4E+3	000.0E+0	8.4E+6		8.4E+6	8.6E+6	750.0E+3	7.8E+6	000.0E+0	#DIV/0!	#DIV/0!	#DIV/0!
150 G7 Sbase		138.4E+3	3.1E+6	000.0E+0	5.0E+0	611.6E+3	750.0E+3	750.0E+3	000.0E+0	000.0E+0	#DIV/0!	#DIV/0!	#DIV/0!
G9 Subgrade		138.4E+3	30.6E+6	000.0E+0	19.9E+0	1.5E+6	1.7E+6	750.0E+3	924.8E+3	000.0E+0	#DIV/0!	#DIV/0!	#DIV/0!

# Emulsion treated bases - Design catalogue

ETB13

Road category = D Expected pavement life = 288.3E+3

	Thickness	Phase 1				Phase 2				Phase 3			
		Layer characteristics				Layer characteristics				Layer characteristics			
		E moduli	eb/phi	c/A	poisson	E moduli	eb/phi	c/A	poisson	E moduli	eb/phi	c/A	poisson
ET2 Base	100	1800	145		0.35	500	6.55	1374	0.35				
150 G7 Sbase	150	120	1.4	60	0.35	120	1.4	60	0.35				
G9 Subgrade	inf	70		36.7	0.35	70		36.7	0.35				
		Critical parameters				Critical parameters				Critical parameters			
		S1	S3	ev/et		S1	S3	ev/et		S1	S2	ev/et	
ET2 Base				466		521	30.48						
150 G7 Sbase		103.91	-10.8			153.29	-15.83						
G9 Subgrade				1004				1328					
		Expected layer life (E80's)				Expected layer life (E80's)				Expected layer life (E80's)			
		Neff	FOS	SF	Nt	Neff	FOS/SR	SF	Nt	Neff	FOS	SF	Nt
ET2 Base		25.2E+3			1	25.2E+3			9.2E+6				
150 G7 Sbase			0.523058		747.2E+3		0.354778		272.3E+3				
G9 Subgrade					4.8E+6				293.8E+3				
		Expected pavement life (E80's)				Expected pavement life (E80's)				Expected pavement life (E80's)			
		Neff	R	EG	Fn	AR	L	Neff	R	EG	Fn	AR	L
ET2 Base	Fail	25.2E+3	000.0E+0	9.2E+6		9.2E+6	9.2E+6	288.3E+3	8.9E+6	000.0E+0	#DIV/0!	#DIV/0!	#DIV/0!
150 G7 Sbase		25.2E+3	722.0E+3	000.0E+0	2.7E+0	263.1E+3	288.3E+3	288.3E+3	000.0E+0	000.0E+0	#DIV/0!	#DIV/0!	#DIV/0!
G9 Subgrade		25.2E+3	4.8E+6	000.0E+0	16.4E+0	292.2E+3	317.4E+3	288.3E+3	29.1E+3	000.0E+0	#DIV/0!	#DIV/0!	#DIV/0!

## Emulsion treated bases - Design catalogue

Road category = D      Expected pavement life = 42.0E+3

ETB31

	Thickness	Phase 1				Phase 2				Phase 3			
		Layer characteristics				Layer characteristics				Layer characteristics			
		E moduli	eb/phi	c/A	poisson	E moduli	eb/phi	c/A	poisson	E moduli	eb/phi	c/A	poisson
ET2 Base	125	1800	145		0.35	500	6.55	1374	0.35				
150 G9 Sbase	150	70	0	36.3	0.35	70	0	36.3	0.35				
G10 Subgrade	inf	70		36.7	0.35	70		36.7	0.35				
		Critical parameters				Critical parameters				Critical parameters			
		S1	S3	ev/et		S1	S3	ev/et		S1	S2	ev/et	
ET2 Base				441		504.45	20.24						
150 G9 Sbase				1304				2416					
G10 Subgrade				822				1293					
		Expected layer life (E80's)				Expected layer life (E80's)				Expected layer life (E80's)			
		Neff	FOS	SF	Nt	Neff	FOS/SR	SF	Nt	Neff	FOS	SF	Nt
ET2 Base		41.8E+3			1		0.321399		6.2E+6				
150 G9 Sbase					140.4E+3				294.5E+0				
G10 Subgrade					35.6E+6				383.7E+3				
		Expected pavement life (E80's)											
		Neff	R	EG	Fn	AR	L	Neff	R	EG	Fn	AR	L
ET2 Base	Fail	41.8E+3	000.0E+0	6.2E+6		6.2E+6	6.2E+6	42.0E+3	6.2E+6	000.0E+0	#DIV/0!	#DIV/0!	#DIV/0!
150 G9 Sbase		41.8E+3	98.5E+3	000.0E+0	476.6E+0	206.8E+0	42.0E+3	42.0E+3	000.0E+0	000.0E+0	#DIV/0!	#DIV/0!	#DIV/0!
G10 Subgrade		41.8E+3	35.5E+6	000.0E+0	92.7E+0	383.3E+3	425.1E+3	42.0E+3	383.1E+3	000.0E+0	#DIV/0!	#DIV/0!	#DIV/0!

## Emulsion treated bases - Design catalogue

ETB34

Road category = D Expected pavement life = 4.3E+3

	Thickness	Phase 1				Phase 2				Phase 3			
		Layer characteristics				Layer characteristics				Layer characteristics			
		E moduli	eb/phi	c/A	poisson	E moduli	eb/phi	c/A	poisson	E moduli	eb/phi	c/A	poisson
ET2 Base	100	1800	145		0.35	500	6.55	1374	0.35				
150 G9 Sbase	150	70	0	36.3	0.35	70	0	36.3	0.35				
G10 Subgrade	inf	70		36.7	0.35	70		36.7	0.35				
		Critical parameters				Critical parameters				Critical parameters			
		S1	S3	ev/et		S1	S3	ev/et		S1	S2	ev/et	
ET2 Base				553		323.18	-213.22						
150 G9 Sbase				1708				3065					
G10 Subgrade				1009				1360					
		Expected layer life (E80's)				Expected layer life (E80's)				Expected layer life (E80's)			
		Neff	FOS	SF	Nt	Neff	FOS/SR	SF	Nt	Neff	FOS	SF	Nt
ET2 Base		4.3E+3			1	4.3E+3							
150 G9 Sbase							0.390393						4.6E+6
G10 Subgrade													27.3E+0
													231.5E+3
		Expected pavement life (E80's)											
		Neff	R	EG	Fn	AR	L	Neff	R	EG	Fn	AR	L
ET2 Base	Fail	4.3E+3	000.0E+0	4.6E+6		4.6E+6	4.6E+6	4.3E+3	4.6E+6	000.0E+0	#DIV/0!	#DIV/0!	#DIV/0!
150 G9 Sbase		4.3E+3	5.1E+3	000.0E+0	346.3E+0	14.8E+0	4.3E+3	4.3E+3	000.0E+0	000.0E+0	#DIV/0!	#DIV/0!	#DIV/0!
G10 Subgrade		4.3E+3	4.6E+6	000.0E+0	19.8E+0	231.3E+3	235.6E+3	4.3E+3	231.3E+3	000.0E+0	#DIV/0!	#DIV/0!	#DIV/0!