

## COST ANALYSIS OF VARIOUS ROADS IN SINDH

S.NO	Category of Roads	Specification	Cost in Rs (M)/km
1.	<u>Provincial Highways</u>		
1.	New Construction 12' wide Road	1. Embankment (85% Compaction , with 2.5 ft height ) 2. Sub grade (95 - 100% Compaction in 1 ft depth ) 3. Sub - base 6''(WBM) 4. Base course 6''(WBM) 5. T. S. T(Manual) Unit 100 sft With 9.75 cft bajri & 79 lbs Bitumen a. 1 <sup>st</sup> Coat with 5.5 cft bajri & 40lbs Bitumen b. 2 <sup>nd</sup> coat with 2.75cft bajri & 25 lbs Bitumen c. 3 <sup>rd</sup> coat 1.5 cft bajri with 14 lbs Bitumen 6. Shoulder (Earthen)	4.5918
2.	<u>Improvement</u>		
	a. 12' Reconditioning	1. Base Course 6'' (WBM) 2. T. S. T (Manual) With 9.75 bajri & 79 lbs Bitumen	2.748
	b. W/R 12' - 18'	1. Sub Base Course 6'' (WBM) (in widening portion) 2. Base Course 6'' (WBM) 3. T. S.T(Manual) With 9.75 bajri & 79 lbs Bitumen	4.28
			5.306

	c. W/R 18' - 24'	<ol style="list-style-type: none"> <li>1. Sub Base Course 6" (WBM) (in widening portion)</li> <li>2. Base Course 6" (WBM)</li> <li>3. T.S.T(Manual) With 9.75 bajri &amp; 79 lbs Bitumen</li> </ol>	5.827
	d. W/R 12' - 24'	<ol style="list-style-type: none"> <li>1. Sub Base Course 6" (WBM) (in widening portion)</li> <li>2. Base Course 6" (WBM)</li> <li>3. T.S.T(Manual) With 9.75 bajri &amp; 79 lbs Bitumen</li> </ol>	
3.	<u>Desert Roads</u>	<ol style="list-style-type: none"> <li>1. Sub grade 95 - 100% Compaction</li> <li>2. Sub - base 6" (WBM)</li> <li>3. Base course 6" (WBM)</li> <li>4. 1-1/2" Thick Pre Mixed Carpet (With 15 cft bajri , 5cft sand &amp; 93lbs Bitumen)</li> <li>I/C Single Surface Treatment (with 4cft bajri &amp; 30lbs Bitumen)</li> </ol>	13.989
4.	<u>Coastal Highways</u>	<ol style="list-style-type: none"> <li>1. Embankment with 95-100% Compaction.</li> <li>2. Sub Grade in 1ft depth</li> <li>3. Sub - base 8" (WBM)</li> <li>4. Base course 6" (WBM)</li> <li>5. Double Surface Treatment With 6.75 cft bajri &amp; 55 lbs Bitumen</li> <li>6. Asphalt concrete (2" thick)with Thermoplastic paint &amp; cat eyes</li> </ol>	25.63665

II.	<u>District Roads</u>		
1	New Construction 12' wide Roads	<ol style="list-style-type: none"> <li>1. Embankment (85% Compaction with 2ft height )</li> <li>2. Sub grade (95 - 100% Compaction in 1 ft depth )</li> <li>3. Sub - base 6"(WBM)</li> <li>4. Base course 6"(WBM)</li> <li>5. 1" thick Premixed Carpet with 10cft bajri 5 cft sand &amp; 67 lbs Bitumen i/c Single Surface Dressing with 4cft bajri &amp; 30 lbs Bitumen.</li> <li>6. Shoulders (Earthen)</li> </ol>	5.894
2	Improvement (Reconditioning)	<ol style="list-style-type: none"> <li>1. Base course 6"(WBM)</li> <li>2. 1" thick Premixed Carpet with 10cft bajri 5 cft sand &amp; 67 lbs Bitumen i/c Single Surface Dressing with 4cft bajri &amp; 30 lbs Bitumen.</li> </ol>	2.55
III.	<u>Asian Development Bank Assisted Roads</u>		
1	New Construction 12' wide Road	<ol style="list-style-type: none"> <li>1. Embankment with Borrowed Earth(95-100% Compaction &amp; 2.75ft height)</li> <li>2. Improved Sub Grade with mixing Of sand in 1ft depth.</li> <li>3. Sub Base (Granular) 7"</li> <li>4. Base Course (WBM) 6"</li> <li>5. T.S.T(Mechanised) Unit 100 Sft With 11cft bajri &amp; 90 lbs Bitumen               <ol style="list-style-type: none"> <li>a. 1<sup>st</sup> Coat with 5.75 cft bajri &amp;</li> </ol> </li> </ol>	7.366

		40lbs Bitumen b. 2 <sup>nd</sup> coat with 3.25cft bajri & 40 lbs Bitumen c. 3 <sup>rd</sup> coat 2 cft bajri with 20 lbs Bitumen. 6. Shoulders (Granular)	
2	Improvement 24ft wide Road (Reconditioning/rehabilitation)	1. Earth work with Borrowed Earth in variable thickness (95 -100% Compaction) 2. Sub Base Course (Granular) in variable thickness upto 12" maximum 3. Base Course (well graded Crushed aggregate) 8" thick 4. Asphaltic Base Course 6" 5. Asphalt Concrete Wearing Course 2" 6. Shoulders (Aggregate Base Course Material with Double Surface Treatment)	22.676 (As per original contract)  27.0 (with escalated amount)