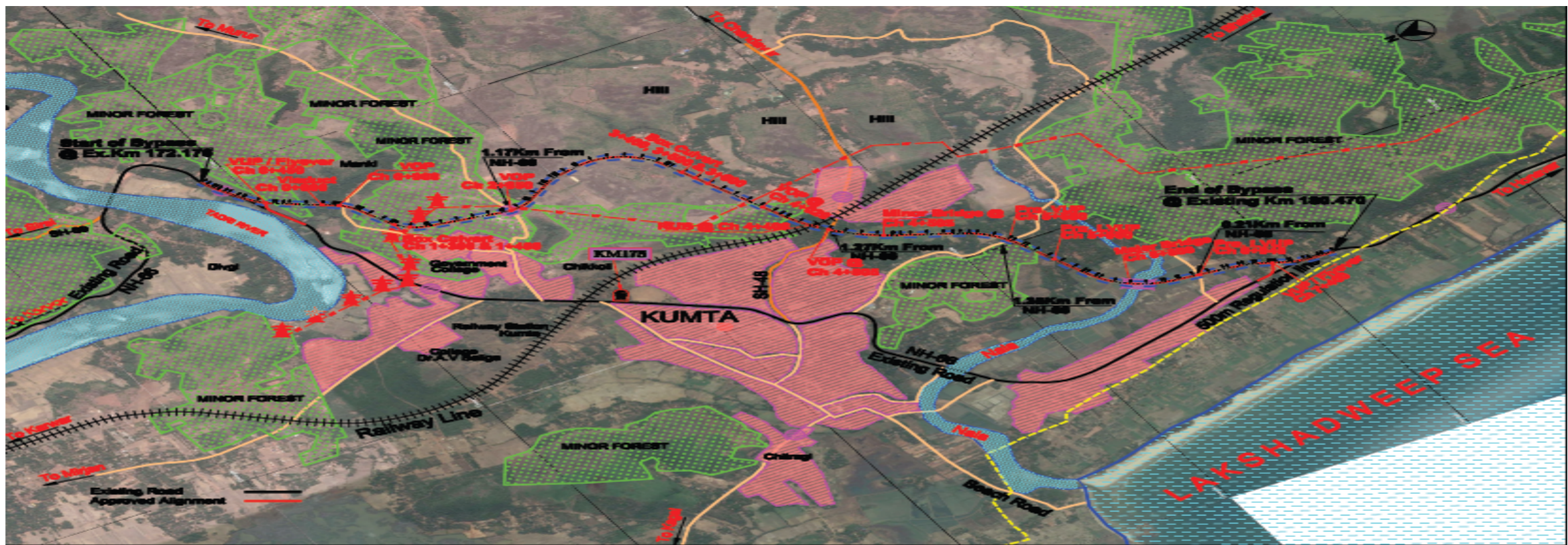


National Highways Authority of India (Ministry of Road Transport & Highways) Government of India

Consultancy services for preparation of feasibility cum Detailed Project Report (DPR) For Kumta Bypass for 4 laning of Goa-Karnataka border to Kundapur section of NH-66 (formerly NH-17) tentatively from Km172.80 to Km180.50 under NHDP Phase – III in the State of Karnataka



Alignment Options Report
November 2020

Sl. No.	Description	Option-1	Option-2	Option-3	Option-4
1	Starting	Existing km 172.540 on NH-66	Existing km 172.540 on NH-66	Existing km 173.875 on NH-66	Existing km 172.540 on NH-66
2	Ending	Existing km 181.300 on NH-66	Existing km 181.300 on NH-66	Existing km 180.870 on NH-66	Existing km 181.300 on NH-66
3	Route Alignment	LHS	LHS	RHS	LHS
4	Bypass Length	7.79Km	7.82 Km	7.62 Km	8.45 Km
5	Length of existing alignment bypassed	8.76 Km	8.76 Km	7.00 Km	8.76 Km
6	Builtup stretch	1.50 Km	1.50 Km	1.00 Km	1.50 Km
7	Terrain	Rolling and Hilly	Rolling and Hilly	Plain and Rolling	Rolling and Hilly
8	Speed	50 -60 kmph	80 - 100 kmph	80 - 100 kmph	50 -60 kmph
9	Geometrics	Smooth curves with standard geometrics of Mountainous and Steep Terrain	Smooth curves with standard geometrics.	Smooth curves with standard geometrics.	Smooth curves with standard geometrics.
		No of Curves = 9	No of Curves = 6	No of Curves = 3	No of Curves = 8
10	At-grade Junction Improvement	7 Nos	7 Nos	3 Nos	7 Nos
11	Existing land use pattern through proposed alignment	Alignment passes through hilly, forest areas, cultivated land with paddy, coconut, areca nut, banana fields, Fish ponds and Scattered built-up area.	Alignment passes through hilly, forest areas, cultivated land with paddy, coconut, areca nut, banana fields and Scattered built-up area.	Alignment passes through hilly, forest areas, cultivated land with paddy, coconut, areca nut, banana fields, Fish ponds and Scattered built-up area.	Alignment passes through hilly, forest areas, cultivated land with paddy, coconut, areca nut, banana fields and Scattered built-up area.
12	No. of Structures	Major Bridge - 3 Flyover - 2 Box Culvert - 8 Pipe Culvert - 7 ROB with Viaduct - 1 VUP /LVUP/VOP - 6	Major Bridge - 3 Flyover - 2 Box Culvert - 8 Pipe Culvert - 9 ROB with Viaduct - 1 VUP /LVUP/VOP - 6	Major Bridge - 1 Minor Bridge - 2 Box Culvert - 11 Pipe Culvert - 11 ROB - 1 VUP /VOP - 2	Major Bridge - 3 Flyover- 2 Box Culvert - 10 Pipe Culvert - 9 ROB - 1 VUP /LVUP/VOP - 6
		Total no of Structures = 27 nos	Total no of Structures = 29 nos	Total no of Structures = 28 nos	Total no of Structures = 30 nos
13	Proposed ROW	60.0 m	60.0 m	60.0 m	60.0 m
14	Total Additional land required in Ha	46.09 Hec	46.92 Hec	45.72 Hec	50.76 Hec
15	No of Structure affected	17 Nos	20 Nos	25 Nos	30 Nos
16	Social Impact	Moderate - as the alignment passes through Scattered Builtup, agricultural land.	Moderate - as the alignment passes through Scattered Built-up, agricultural land.	Moderate - as the alignment passes through Scattered Built-up, agricultural land.	Moderate - as the alignment passes through Scattered Built-up, agricultural land.

Sl. No.	Description	Option-1	Option-2	Option-3	Option-4
17	Environmental Impact	Very high as the alignment negotiates huge hills and deep valleys, cultivated paddy, coco nut, areca nut, banana fields etc.	Very high as the alignment negotiates huge hills and deep valleys, cultivated paddy, coco nut, areca nut, banana fields etc.	Very high as the alignment negotiates natural ponds, fish ponds, cultivated paddy, coco nut, areca nut, banana fields etc.	Very high as the alignment negotiates natural ponds, fish ponds, cultivated paddy, coco nut, areca nut, banana fields etc.
18	Proposed Improvement as per IRC SP 84 2014 four lane Manual	4 Lane divided carriageway	4 Lane divided carriageway	4 Lane divided carriageway	4 Lane divided carriageway
19	Archeological Monument Clearance	No	No	No	No
20	CRZ Clearance and Mongrooes Trees Affecting	Yes	Yes	Yes (Alignment Passes inside the Regulation line of 500m from High water line)	Yes
21	Forest Clearance and Tentative Forest length affecting as per Topo Sheet	Yes (1.73 km)	Yes (2.1 km)	Yes (1 km)	Yes (2 km)
22	Wild Life Clearance	Nil	Nil	Nil	Nil
23	Environmental Clearance	Nil	Nil	Nil	Nil
24	Land acquisition + Structure Cost	113.53 Cr	125.24 Cr	123.50 Cr	143.37 Cr
25	Construction Civil cost	271.49 Cr	271.96 Cr	268.86 Cr	281.87 Cr
26	Total Project Cost	403.86 Cr	416.12 Cr	410.80 Cr	445.71 Cr
27	Merits	<p>1. Provides better connectivity and smooth passage to through traffic and trucks.</p> <p>2. Only a few buildings are under impact due to this alignment</p> <p>3. Though the bypass length is more compared to the other alignments, the land to be required is lesser as the alignment utilises the existing cart track for around 1km</p> <p>4. Gives direct access to the SHs approaching Muroor, Siddapur, Baggon</p>	<p>1. Provides better connectivity and smooth passage to through traffic and trucks.</p> <p>2. Only a few buildings are under impact due to this alignment</p> <p>3. Gives direct access to the SHs approaching Muroor, Siddapur, Baggon</p>	<p>1. Provides better connectivity and smooth passage to through traffic and trucks.</p>	<p>1. Provides better connectivity and smooth passage to through traffic and trucks.</p> <p>2. Only a few buildings are under impact due to this alignment</p> <p>3. Though the bypass length is more compared to the other alignments, the land to be acquired is lesser as the alignment utilises the existing cart track for around 1km</p> <p>4. Gives direct access to the SHs approaching Muroor, Siddapur, Baggon Road</p>

Sl. No.	Description	Option-1	Option-2	Option-3	Option-4
28	Demerits	<p>1. The Alignment is passing over a big hill(Muroor) hill and deep valley.</p> <p>2. Alignment is passing through Rly Track and Siddapur Road, as per site condition Rly line is on Embankment around 4 to 5m , ROB cum Flyover to be proposed, So civil cost is more.</p> <p>3. Alignment is crossing the railway track, ROB/RUB will be required leading to additional cost and delay in getting railway approvals</p> <p>4. CRZ Clearance is required, as the alignment passes through the CRZ and Mangroves trees.</p> <p>5. Huge cutting is required at start of the project stretch.</p> <p>6. Alignment crosses siddapur and Baggon Road, crossing locations Built-up is affecting.</p>	<p>1. The Alignment is passing over a big hill(Muroor) hill and deep valley.</p> <p>2. Alignment is passing through the pond which will requires additional structure such as Viaduct/ Major bridge</p> <p>3. Alignment is crossing the railway track, ROB/RUB will be required leading to additional cost and delay in getting railway approvals</p> <p>4. Muroor hill is proposed to be acquired by the Civil Aviation Department to develop it as an airport.</p>	<p>1. Alignment is crossing the railway track, ROB/RUB will be required leading to additional cost and delay in getting railway approvals</p> <p>2. Alignment crossing canal twice which requires two major bridges leads to increase in cost</p> <p>3. Construction cost and LA cost is more compared to other alternatives.</p> <p>4. CRZ Clearance is difficult to get, alignment passes through within the regulation line of 500m.</p>	<p>1. the Alignment is passing over a big hill(Muroor) hill and deep valley.</p> <p>2. Alignment is crossing the railway track, ROB/RUB will be required leading to additional cost and delay in getting railway approvals</p> <p>3. CRZ Clearance is required, as the alignment passes through the CRZ and Mongrooves trees.</p> <p>4. Huge cutting is required at start of the project stretch.</p> <p>5. Alignment crosses siddapur and Baggon Road, crossing locations Built-up is affecting.</p>
29	Recommendation	Recommended	Not Recommended	Not Recommended	Not Recommended