



भारतीय राष्ट्रीय राजमार्ग प्राधिकरण
(सड़क परिवहन और राजमार्ग मंत्रालय)
NATIONAL HIGHWAYS AUTHORITY OF INDIA
(Ministry of Road Transport and Highways)
उप महाप्रबंधक (तकनीकी) सह परियोजना निदेशक के कार्यालय
परियोजना कार्यान्वयन इकाई
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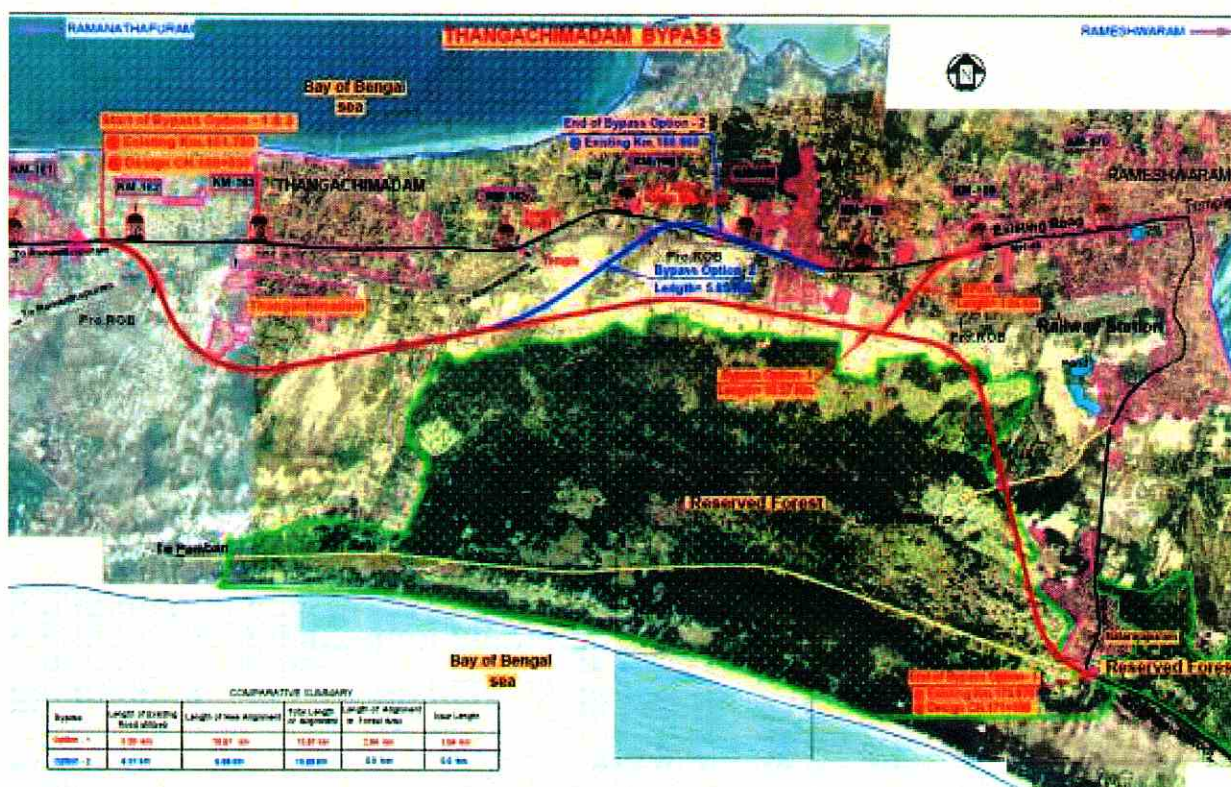
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CERTIFICATE FOR ALTERNATIVE ASSESSMENT

National Highways Authority of India (NHAI) has been entrusted with the assignment of Development / Improvement of 4/6 laning of Paramakudi - Ramanathapuram - Rameshwaram - Dhanushkodi section of NH 49 in the State of Tamil Nadu

The expansion of roads in Rameshwaram through the town is a cumbersome task, since it is an island. However, NHAI had acquired enough land for the expansion up to Rameshwaram Bus stand (Ex.km.169.000), beyond that heavy built-up towards the core of the town with more traffic towards the temple and imposed restriction on expansion of National Highway. This lead to the identification of bypass proposals for Rameshwaram town derived from the preliminary survey.

The two built-ups are very nearby and separate bypass for both the built-up is not economical and socially feasible. Hence, a combined bypass for both Thangachimadam and Rameshwaram is proposed.



Proposed combined bypass for Thangachimadam and Rameshwaram

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Comparative statement of various Options for combined Thangachimadam and Rameshwaram Bypass

Sl. No.	Description	Through Existing Road	Option-1 (Recommended)	Option-2
1	Starting	Existing km.161.780 on NH-49 Design Chainage 160+340 on NH-49	Existing km.161.780 on NH-49 Design Chainage 160+620 on NH-49	Existing km.161.780 on NH-49 Design Chainage 160+340 on NH-49
2	Ending	Existing km.174.870 on NH-49 Design Chainage 171+100 on NH-49	Existing km.173.300 on NH-49 Design Chainage 170+700 on NH-49	Existing km.166.860
3	Route Alignment	Through Existing Road	RHS	RHS
4	Length of Bypass (A)	-	10.08 Km	5.85 Km
5	Length of existing alignment bypassed	0.00 Km	13.09 Km	5.08 Km
6	Length of existing road utilized(B)	13.09 Km	0.00 Km	8.01 Km
7	Spur road(C)	-	1.04 Km	-
7	Total Length of alignment (D=A+B+C)	13.09 Km	11.12 Km	13.86 Km
8	Built-up stretch	8.77 Km	Nil	6.94 Km
9	Terrain	Plain	Plain	Plain
10	Speed	40-60 kmph	100 kmph	100 kmph
11	Geometrics	Smooth curves without standard geometrics.	Smooth curves with standard geometrics.	Smooth curves with standard geometrics.
		No of Curves = 15	No of Curves = 5	No of Curves = 13
12	At-grade Junction Improvement	13 Nos	1 Nos	5 Nos
13	Existing land use pattern through proposed alignment	Highly Built-up and residential/commercial land	Sea shore and barren land	Sea shore, barren land and built-up
14	No. of Structures	Box Culvert - 26 VUP/VOP - 2	Elevated Rotary with VOP - 1 Box Culvert - 13 ROB - 1 LVUP-2 VOP-1	Box Culvert - 10 ROB - 2 VUP/VOP - 1
		Total no of Structures = 28 no's	Total no of Structures = 18no's	Total no of Structures = 13 no's
15	Proposed ROW	50.0 m	50.0 m	50.0 m
16	Total Additional land required in Ha	32.72 Ha	55.60 Ha	69.30 Ha

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Sl. No.	Description	Through Existing Road	Option-1 (Recommended)	Option-2
17	No of Structure affected	403 Nos	1 Nos	230 Nos
18	Social Impact	Very high - As the Alignment needs to be widened in Built-up area. Will have very serious social impact.	Moderate - as the alignment passes through Sea shore & barren land.	Very high - As the Alignment needs to be widened in Built-up area. Will have very serious social impact.
19	Environmental Impact	Severe due to high level of air pollution and noise pollution within the built up area due to increase of traffic and congestion.	Moderate as the through traffic is diverted away from the built up area.	Severe due to high level of air pollution and noise pollution within the built up area due to increase of traffic and congestion.
20	Proposed Improvement as per 4 lane Manual	4 lane divided carriageway with service road	4 Lane divided carriageway with service road	4 Lane divided carriageway with service road
21	Land acquisition + Structure Cost	242.88 Cr	86.44 Cr	216.89 Cr
22	Construction Civil cost	332.22 Cr	282.22 Cr	351.76 Cr
23	Total Project Cost	575.10 Cr	368.67 Cr	568.66 Cr
24	Merits	<ol style="list-style-type: none"> Utilizing the existing ROW The extent of land acquisition is less by following the existing alignment which is having an existing ROW of 15-25 m. 	<ol style="list-style-type: none"> Provides better connectivity and smooth passage to through traffic and trucks. Act as combined bypass for both Thangachimadam and Rameshwaram built-up with a spur road. Structures affecting are less. 	<ol style="list-style-type: none"> Provides better connectivity and smooth passage to through traffic and trucks. Structures affecting are less compared to Option 1.
25	Demerits	<ol style="list-style-type: none"> Though the extent of land to be acquired is less, cost of land and cost of structures to be acquired and demolished will be very high to achieve 50m ROW. Travel time will be more due to reduction in speed due to congestion and mixing of local traffic. Prone to 	<ol style="list-style-type: none"> Alignment passing through reserve forest. One Road and ROB cum VUP required for spur road. 	<ol style="list-style-type: none"> Alignment passes through Partial built-up Length of the bypass is more 2 new ROB required Skew angle is more, leads to more cost ROW of railway is very near

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Sl. No.	Description	Through Existing Road	Option-1 (Recommended)	Option-2
		accidentsseverely affects safety of pedestrian and local traffic. 4. Rehabilitation & Resettlement Cost (R&R) will be very high.		
26	Recommendation	Not Recommended	Recommended	Not Recommended



(M.S.Pandian)
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