



IndianOil

JOURNEY RISK MANAGEMENT (JRM) STUDY

Salem Terminal TO RABA KRR AUTO GAS

Objective of the JRM Report

This JRM report is designed to ensure compliance with the Central Motor Vehicle Rules, 1989 (CMVR), AIS 140 standards, and the Road Transport Safety Policy (RTSP). It provides a comprehensive risk assessment for the transportation of hazardous materials along specified routes. By integrating these legal frameworks, the report offers a broad strategy for identifying and mitigating route-specific risks.

Regulatory Compliance

The report complies with the Central Motor Vehicles (Eleventh Amendment) Rules, 2022, mandating safe transportation practices for N2 and N3 category vehicles carrying hazardous materials. These rules require detailed route assessments, especially regarding road conditions, speed limits, and risk areas, to ensure safety compliance.

Risk Management Strategy

This report categorizes transportation routes into high-risk and medium-risk areas, with a focus on factors such as sharp turns, accident-prone regions, and elevation changes. The goal is to provide actionable

recommendations to minimize these risks, including speed regulations, driver warnings for hazardous zones, and the option of alternate routes.

Compliance with the Road Transport Safety Policy (RTSP)

The report integrates RTSP provisions, including mandatory driving hours, rest periods, and nighttime driving restrictions. It ensures that drivers follow official guidelines, such as taking prescribed rest breaks and avoiding dangerous road conditions like poor visibility, heavy crowds, or high-traffic areas during peak hours.

Emergency Preparedness and Response

The report highlights the significance of predetermined emergency stops for refueling, rest, and overnight stays. It includes protocols for safe responses to road hazards, alternative routes, and rerouting processes if roads are closed or severe weather arises. This aligns with the RTSP emphasis on driver safety and rapid emergency response.

Environmental Considerations

The JRM report addresses environmental risks along the route, ensuring compliance with environmental protection laws in ecologically sensitive zones. It suggests strategies such as identifying areas near water bodies, forests, or populated regions and implementing safety measures to minimize environmental impacts during transport.

Journey Risk Mitigation

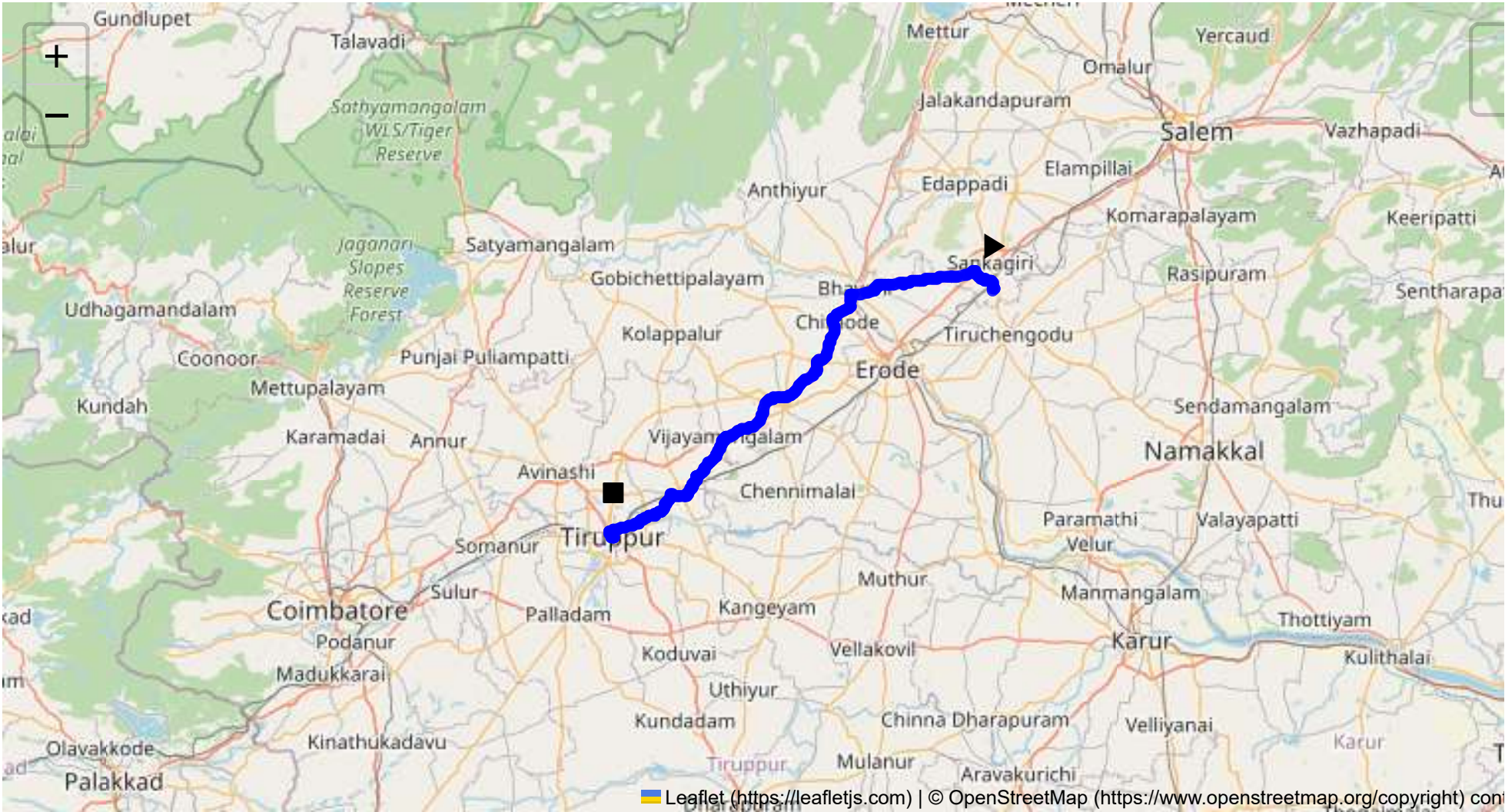
The report includes route-specific risk assessments, detailed journey charts, and defensive driving guidelines for each transport route. Integration with vehicle tracking systems guarantees real-time warnings on hazardous areas, speed limits, and mandatory stops, consistent with RTSP and CMVR safety norms.

Compliance with Government Directives

This report fully adheres to governmental directives regarding hazardous material transportation, implementing mandatory speed limits, nighttime driving restrictions, and comprehensive driver briefings and real-time alerts about route-related risks.



Route Summary:
Total Distance: 84.14 km
Estimated Duration: 1.9 hours
Adjusted Duration (Heavy Vehicle): 2.3 hours
Start: (11.4381, 77.8734)
End: (11.0994629, 77.3445346)



Risk Spots

	RiskSpotType	Coordinates	Speed Limit	Distance from Start
0	Turn	11.43961, 77.87341	15 KM/Hr	0.08 km
1	Turn	11.44029, 77.87544	15 KM/Hr	0.28 km
2	Turn	11.44893, 77.87413	15 KM/Hr	1.29 km

	RiskSpotType	Coordinates	Speed Limit	Distance from Start
3	Turn	11.45127, 77.86734	15 KM/Hr	2.15 km
4	Turn	11.45350, 77.85700	15 KM/Hr	3.28 km
5	Turn	11.45845, 77.85141	15 KM/Hr	4.11 km
6	Turn	11.46303, 77.84945	15 KM/Hr	4.64 km
7	Turn	11.45542, 77.81725	15 KM/Hr	8.36 km
8	Blind Spot	11.45634, 77.81673	10 KM/Hr	8.50 km
9	Turn	11.45081, 77.77034	15 KM/Hr	13.82 km
10	Turn	11.43192, 77.67803	15 KM/Hr	24.40 km
11	Turn	11.23716, 77.50666	15 KM/Hr	56.55 km
12	Blind Spot	11.23687, 77.50213	10 KM/Hr	57.02 km
13	Turn	11.23386, 77.50098	15 KM/Hr	57.42 km
14	Turn	11.23319, 77.49954	15 KM/Hr	57.61 km
15	Turn	11.23054, 77.49777	15 KM/Hr	57.93 km
16	Turn	11.18389, 77.46306	15 KM/Hr	64.51 km
17	Turn	11.17834, 77.46162	15 KM/Hr	65.25 km
18	Turn	11.17518, 77.45976	15 KM/Hr	65.65 km
19	Turn	11.17366, 77.45728	15 KM/Hr	65.91 km
20	Turn	11.17144, 77.45602	15 KM/Hr	66.16 km
21	Turn	11.15693, 77.44742	15 KM/Hr	68.21 km
22	Turn	11.15727, 77.44546	15 KM/Hr	68.44 km
23	Turn	11.15557, 77.44475	15 KM/Hr	68.63 km
24	Turn	11.15595, 77.43624	15 KM/Hr	69.57 km
25	Turn	11.15642, 77.43541	15 KM/Hr	69.71 km
26	Turn	11.15781, 77.43115	15 KM/Hr	70.18 km
27	Turn	11.15839, 77.42789	15 KM/Hr	70.58 km
28	Turn	11.15226, 77.42425	15 KM/Hr	71.29 km
29	Turn	11.15141, 77.42304	15 KM/Hr	71.53 km
30	Turn	11.14904, 77.42031	15 KM/Hr	72.00 km
31	Turn	11.13860, 77.41623	15 KM/Hr	73.20 km
32	Turn	11.12993, 77.40310	15 KM/Hr	75.02 km
33	Turn	11.12236, 77.38293	15 KM/Hr	77.33 km
34	Blind Spot	11.10798, 77.34071	10 KM/Hr	82.39 km
35	Turn	11.10288, 77.34646	15 KM/Hr	83.14 km
36	Turn	11.10108, 77.34655	15 KM/Hr	83.45 km

Emergency Services

	type	name	coordinates	side_of_road
2	hospital	Dhanvantri Multi Speciality Hospital	11.451362, 77.766602	Opposite Side
3	hospital	Dhanvanthri Hospital	11.4496712, 77.7593772	Opposite Side
4	hospital	J.K.K. Trust Hospital	11.4445841, 77.7307962	Driver's Side
5	hospital	Shri Sathyanarayana Hospital	11.4291297, 77.6913408	Driver's Side
8	hospital	Thanish Siddha Hospital	11.430003, 77.674964	Opposite Side
9	clinic	Harshitha Clinic	11.4313207, 77.674718	Opposite Side
10	hospital	Sri Kaalangi Siddhar Mooligai Vaithiya Nilayam	11.432369, 77.674894	Opposite Side
11	clinic	G.K Clinic	11.4297244, 77.6749715	Opposite Side
13	clinic	Erode Cancer Centre	11.3732, 77.649152	Opposite Side
27	hospital	Irt Hospital	11.2803603, 77.5644118	Driver's Side
31	hospital	Gen Siddha Hospital	11.2375033, 77.5059797	Opposite Side
32	hospital	Vijayamangalm Government Hospital	11.2382827, 77.501687	Opposite Side
33	hospital	Aravind Eye Care Hospital	11.1729469, 77.4574467	Driver's Side
34	clinic	Sri Maha Annai Clinic	11.1707162, 77.4536498	Opposite Side
35	hospital	Ram Doctor Hospital	11.1709391, 77.4532808	Opposite Side
36	clinic	Vasumathi Health Care	11.1576405, 77.4436732	Opposite Side
37	clinic	Jeeva Health Care	11.155934, 77.444441	Opposite Side
38	clinic	Sri Kumaran Clinic	11.155488, 77.443657	Driver's Side
39	clinic	Dr. Raja Clinic	11.1278464, 77.3927768	Opposite Side
40	hospital	Sakthi Sugam Hospital - Tiruppur	11.1151517, 77.3621541	Opposite Side
41	hospital	AG Hospital, Tiruppur	11.1090267, 77.3528045	Driver's Side
42	hospital	Nallini Hospital	11.1091685, 77.353517	Driver's Side
43	police	TIRUPPUR NORTH	11.107892, 77.3450511	Driver's Side
44	hospital	Tirupur Medical Foundation (P) Limited	11.1090003, 77.3449825	Driver's Side
45	clinic	S R Nursing Home, Tiruppur	11.111432, 77.3489019	Opposite Side
46	police	Tiruppur North	11.1066254, 77.3427939	Driver's Side
48	hospital	Lotus Eye Hospital	11.1031666, 77.3474352	Driver's Side
49	clinic	Ramasamy Skin Clinic	11.104714, 77.348272	Driver's Side
50	hospital	Sankara Hospital , Tiruppur	11.0996262, 77.3440224	Driver's Side
51	clinic	Eswaran Poly Clinic	11.097679, 77.3470729	Driver's Side
52	clinic	Ramya Children's Clinic	11.0993206, 77.342525	Driver's Side
53	hospital	RJR Herbal Hospitals	11.096753, 77.346988	Driver's Side

	type	name	coordinates	side_of_road
54	clinic	Miracle Healing Zone	11.0972324, 77.3470134	Driver's Side

Rest Stops

	type	name	coordinates	side_of_road
0	fuel	SLOA Bunk - Unit II	11.4543854, 77.8052665	Driver's Side
1	restaurant	Canteen	11.4478386, 77.7705441	Driver's Side
6	fuel	Reliance	11.4325168, 77.6912865	Opposite Side
7	fuel	Indian Oil	11.4321177, 77.6765153	Opposite Side
12	fuel	KR Fuels - Auto LPG	11.4127737, 77.6747462	Driver's Side
14	hotel	Athithi cafe	11.3756993, 77.6516401	Driver's Side
15	restaurant	Athithi Cafe	11.3756705, 77.6516565	Driver's Side
16	restaurant	Canteen	11.3725755, 77.6466465	Opposite Side
17	restaurant	Kumki Restaurant	11.3523614, 77.644608	Driver's Side
18	parking	Kumki Restaurant	11.352414, 77.644492	Driver's Side
19	restaurant	Paradise Biriyani	11.3291744, 77.6297833	Driver's Side
20	hotel	Hotel Annachi	11.3020259, 77.600017	Opposite Side
21	hotel	Adayar Ananda Bhavan(a2b)	11.3018451, 77.599909	Opposite Side
22	restaurant	Ambur Star Biriyani	11.3017372, 77.5999546	Opposite Side
23	parking	NHAI parking	11.3030168, 77.6009269	Opposite Side
24	restaurant	Arukkaniyammal Mess	11.2982771, 77.5967424	Opposite Side
25	fuel	HP	11.2909675, 77.5815262	Driver's Side
26	cafe	Backery and Cafe	11.2893987, 77.565338	Opposite Side
28	fuel	Reliance	11.2575595, 77.5511245	Driver's Side
29	fuel	Bharat Petroleum	11.255444, 77.5457729	Opposite Side
30	fuel	Auto LPG	11.2523222, 77.5400243	Opposite Side
47	fuel	Bharat Petroleum	11.1087695, 77.3434507	Driver's Side

Welcome to the Journey Risk Management Study

1. Overview of the Route Map:

The route from Sangagiri to Tiruppur through Puthur, Padaiveedu, Perundurai, and Vadugapalayam covers approximately 84.14 kilometers. It traverses through several towns and rural areas, mainly via

major and minor highways that handle a mix of local and through traffic. The route typically involves some bypass roads to avoid congested towns.

2. Typical Weather Conditions and Potential Weather-Related Hazards:

Tamil Nadu generally experiences a tropical climate. The region can be quite dry throughout much of the year with significant rainfall during the monsoon season between October and December. During monsoon, heavy rains might lead to waterlogging, reduced visibility, and slippery roads, making driving hazardous, especially for heavy vehicles. Additionally, summer months can be extremely hot, which may increase road fatigue among drivers.

3. Analysis of Traffic Patterns:

Traffic congestion is expected primarily in town centers, particularly in Sangagiri, Perundurai, and Tiruppur. Peak traffic hours often align with morning (8-10 AM) and evening (5-7 PM) rush hours. The Perundurai Bypass is typically less congested but could see an increase in traffic during the evenings as commuters head home.

4. Assessment of Road Quality and Infrastructure:

The major connecting roads are fairly well-maintained, but some local roads within smaller towns and rural stretches can be narrower and may have potholes. The Perundurai Bypass is in good condition and designed to facilitate smoother traffic flow. However, heavy vehicle drivers should be cautious at intersections and near market areas where pedestrian activity is higher.

5. Suggestions for Alternative Routes for Emergencies:

For emergencies, where bypasses or highways are blocked, using local roads such as those through nearby villages may help circumvent major obstructions. However, this can be slower due to limited road quality. Local knowledge and updated GPS maps can assist in identifying practicable alternatives.

6. Summary of Local Regulations Affecting Hazardous Material Transport:

Transport of hazardous materials in Tamil Nadu requires adherence to specific safety protocols as per the state's transport department guidelines. Vehicles should be equipped with warning labels, and drivers must have appropriate training. Restrictions may apply during festival times or special events, and it's crucial to check for any temporary regulations before commencing the journey.

7. Overview of Historical Incidents:

There have been incidents involving heavy vehicles primarily attributed to driver fatigue, mechanical failure, and road conditions during adverse weather. Specific data on hazardous material incidents might be less available but generally requires careful adherence to safety protocols to prevent spillage or accidents.

8. Environmental Considerations and Sensitive Areas:

The route does not pass directly through major environmentally sensitive areas, but drivers should be mindful of water bodies near Padaiveedu and agricultural land along the way. It's essential to avoid contamination of these areas by maintaining vehicle integrity and avoiding spills.

9. Analysis of Communication Coverage:

Most of the route has adequate mobile network coverage due to its proximity to major towns. However, short stretches in rural sections or amidst dense foliage might have temporary dead zones. Drivers should be prepared for brief communication outages.

10. Estimated Emergency Response Times:

Emergency response in urban areas like Tiruppur and Sangagiri is quicker, typically within 20-30 minutes, supported by local fire, medical, and police services. Rural stretches might experience longer response times, potentially up to an hour, due to distance from emergency facilities.

12. Overall Summary of Risk Assessment:

The route is reasonably safe with regular commercial traffic, though care must be taken during transitions through towns and in adverse weather. Adequate preparation for communication gaps, emergency scenarios, and adherence to local regulations significantly mitigate risks. Overall, with the appropriate caution, the route can be navigated safely for transporting hazardous materials.

Route Photos of Risky Spots



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 0.28 km

Coordinates: 11.44029, 77.87544



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 1.29 km

Coordinates: 11.44893, 77.87413



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 2.15 km

Coordinates: 11.45127, 77.86734



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 3.28 km

Coordinates: 11.45350, 77.85700



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 4.11 km

Coordinates: 11.45845, 77.85141



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 4.64 km

Coordinates: 11.46303, 77.84945



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 8.36 km

Coordinates: 11.45542, 77.81725



Risk Type: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 8.50 km

Coordinates: 11.45634, 77.81673



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 13.82 km

Coordinates: 11.45081, 77.77034



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 24.40 km

Coordinates: 11.43192, 77.67803



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 56.55 km

Coordinates: 11.23716, 77.50666



Risk Type: Blind Spot
Speed Limit: 10 KM/Hr
Distance from Start: 57.02 km
Coordinates: 11.23687, 77.50213



Risk Type: Turn
Speed Limit: 15 KM/Hr
Distance from Start: 57.42 km
Coordinates: 11.23386, 77.50098



Risk Type: Turn
Speed Limit: 15 KM/Hr
Distance from Start: 57.61 km
Coordinates: 11.23319, 77.49954



Risk Type: Turn
Speed Limit: 15 KM/Hr
Distance from Start: 57.93 km
Coordinates: 11.23054, 77.49777



Risk Type: Turn
Speed Limit: 15 KM/Hr
Distance from Start: 64.51 km
Coordinates: 11.18389, 77.46306



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 65.25 km

Coordinates: 11.17834, 77.46162



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 65.65 km

Coordinates: 11.17518, 77.45976



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 65.91 km

Coordinates: 11.17366, 77.45728



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 66.16 km

Coordinates: 11.17144, 77.45602



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 68.21 km

Coordinates: 11.15693, 77.44742



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 68.44 km

Coordinates: 11.15727, 77.44546



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 68.63 km

Coordinates: 11.15557, 77.44475



Risk Type: Turn
Speed Limit: 15 KM/Hr
Distance from Start: 69.57 km
Coordinates: 11.15595, 77.43624



Risk Type: Turn
Speed Limit: 15 KM/Hr
Distance from Start: 69.71 km
Coordinates: 11.15642, 77.43541



Risk Type: Turn
Speed Limit: 15 KM/Hr
Distance from Start: 70.18 km
Coordinates: 11.15781, 77.43115



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 70.58 km

Coordinates: 11.15839, 77.42789



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 71.29 km

Coordinates: 11.15226, 77.42425



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 71.53 km

Coordinates: 11.15141, 77.42304



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 72.00 km

Coordinates: 11.14904, 77.42031



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 73.20 km

Coordinates: 11.13860, 77.41623



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 75.02 km

Coordinates: 11.12993, 77.40310



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 77.33 km

Coordinates: 11.12236, 77.38293



Risk Type: Blind Spot
Speed Limit: 10 KM/Hr
Distance from Start: 82.39 km
Coordinates: 11.10798, 77.34071



Risk Type: Turn
Speed Limit: 15 KM/Hr
Distance from Start: 83.14 km
Coordinates: 11.10288, 77.34646



Risk Type: Turn
Speed Limit: 15 KM/Hr
Distance from Start: 83.45 km
Coordinates: 11.10108, 77.34655

[Download Interactive Map](#)