



IndianOil

JOURNEY RISK MANAGEMENT (JRM) STUDY

IOCL Coimbatore Terminal to India Land Tech Park
Pvt Ltd

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

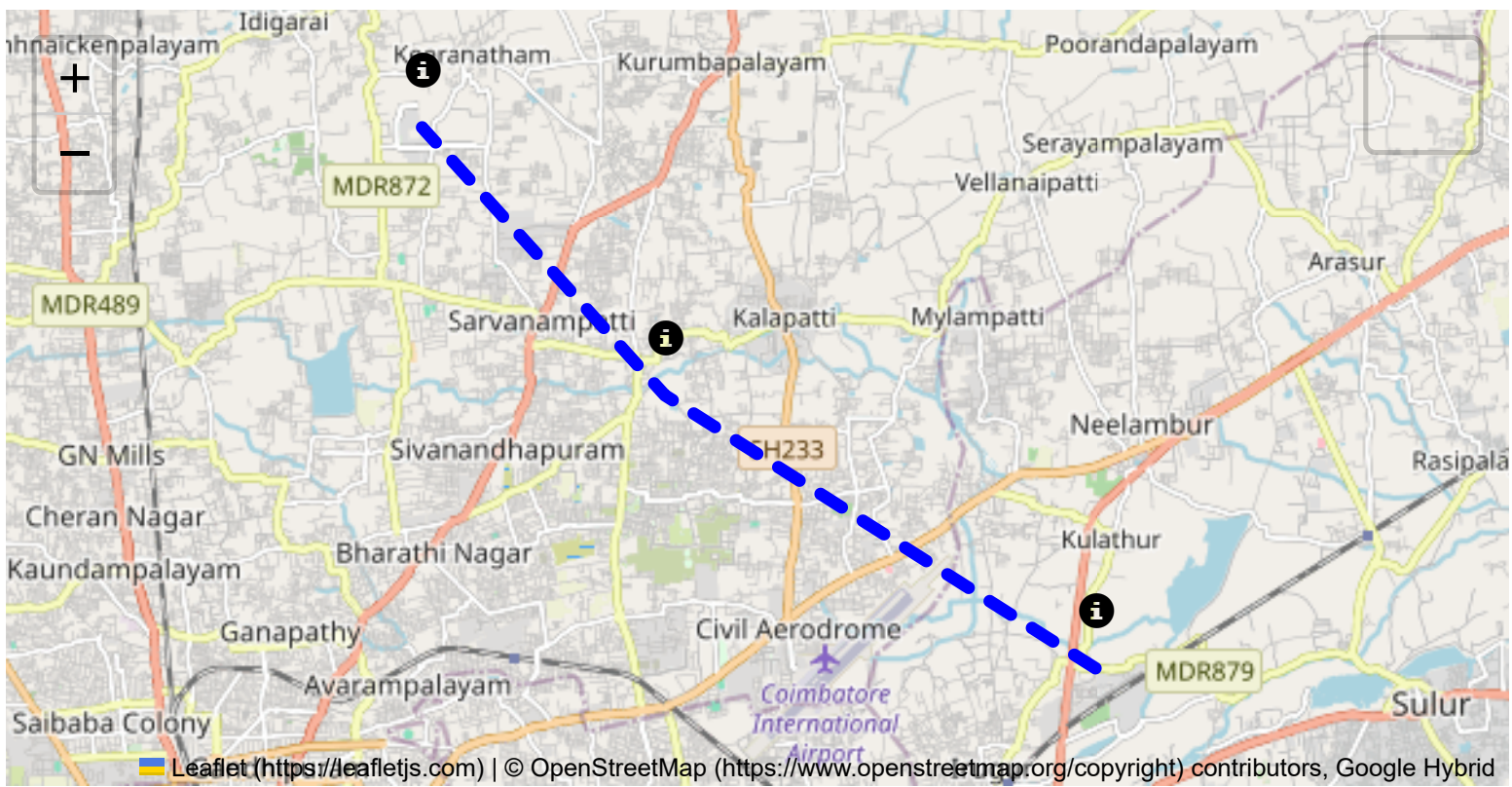
The JRM report addresses environmental risks along the route, ensuring compliance with environmental protection laws in ecologically sensitive zones. It suggests strategies such as identifying areas near water bodies, forests, or populated regions and implementing safety measures to minimize environmental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

Journey Risk Mitigation

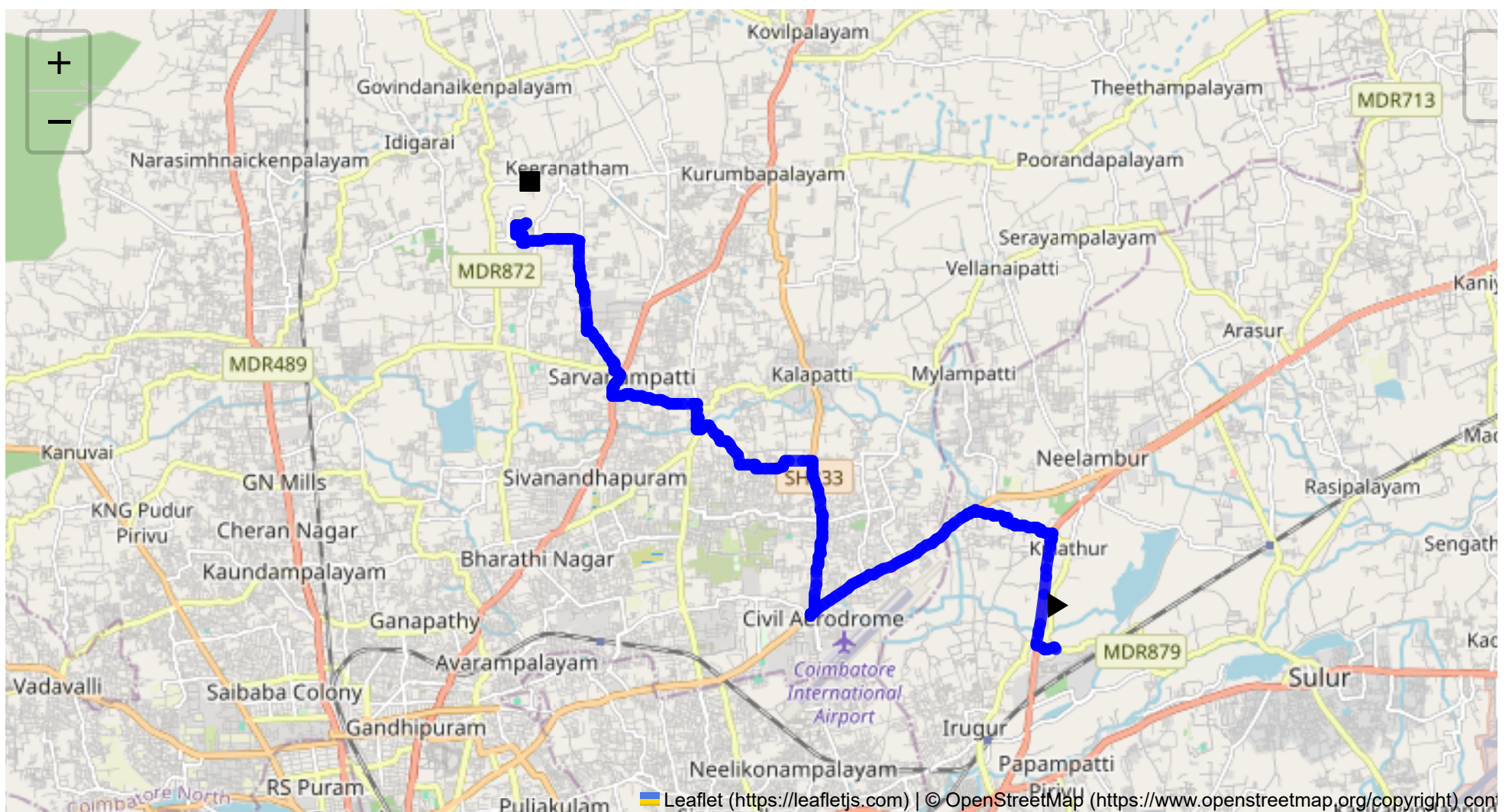
The report includes route-specific risk assessments, detailed journey charts, and defensive driving guidelines for each transport route. Integration with vehicle tracking systems guarantees real-time warnings on hazardous areas, speed limits, and mandatory stops, consistent with RTSP and CMVR safety 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: 20.98 km
Estimated Duration: 0.8 hours
Adjusted Duration (Heavy Vehicle): 1.0 hours
Start: (11.0315, 77.0797)
End: (11.104315, 76.987242)



Welcome to the Journey Risk Management Study

Route Safety Analysis: Athappagoundenpudur to India Land Tech Park, Coimbatore

1. **Overview of the Route Map:** The route involves traveling from Athappagoundenpudur in Coimbatore through Vilankurichi Road, Cheran Ma Nagar, to reach Tower C at India Land Tech Park in the CHIL SEZ area, Saravanampatti, Coimbatore. This approximately 21-kilometer stretch is a mix of suburban and urban roads.

2. **Typical Weather Conditions:** Coimbatore experiences a tropical wet and dry climate with a wet season from October to December and a dry season from January to September. Potential hazards include heavy rain during the monsoon, which could lead to waterlogging or reduced visibility on roads.
3. **Traffic Patterns:** Traffic congestion is typically severe during weekday peak hours (8:00-10:00 AM and 5:00-8:00 PM) on major roads such as Vilankurichi Road. The IT park area experiences significant congestion, especially during shift changes.
4. **Road Quality and Infrastructure:** The roads are generally in good condition, with major improvements along main transport arteries. Minor roads may have potholes and require caution. Be wary of sudden speed bumps or uneven road surfaces, especially in residential areas.
5. **Alternative Routes for Emergencies:** In case of roadblocks or accidents, alternatives include taking the Avinashi Road or the Mettupalayam Road, depending on the location of the disruption.
6. **Local Regulations Affecting Hazardous Material Transport:** Transport of hazardous materials is regulated by the Petroleum and Explosives Safety Organisation (PESO). These materials should comply with labeling, packaging, and handling regulations and timing restrictions in densely populated areas.
7. **Historical Incidents:** There have been minor incidents involving heavy vehicles, often due to driver fatigue or mechanical failure. Hazardous material-specific incidents are rare but involve stringent checks and adherence to regulations to avoid environmental contamination.
8. **Environmental Considerations:** Sensitive areas include densely populated residential zones near Cheran Ma Nagar and educational institutions along the route. Noise and air pollution should be minimized.
9. **Communication Coverage:** Communication network coverage is strong along the entire route, with rare dead zones. Major telecom providers cover the route, ensuring reliable communication for updates and emergencies.
10. **Estimated Emergency Response Times:** Emergency services in urban Coimbatore are robust, with estimated response times of 10-15 minutes in the city area and slightly longer during peak traffic hours. Remote stretches might experience slightly delayed responses.
11. **Overall Summary of Risk Assessment:** The route is considered moderately safe for transporting hazardous materials. Major risks involve traffic congestion, especially during peak times and monsoon-related weather conditions, which may affect visibility and road conditions. Compliance with safety regulations and route planning considering peak traffic and weather forecasts will mitigate most risks. Emergency services are adequately equipped to handle incidents efficiently, and alternative routes offer viable options during unexpected disruptions. Regular vehicle maintenance and adherence to best driving practices will further enhance safety.

Risk Assessment - Turns

	Risk Type	Risk Level	Coordinates	Speed Limit
0	U-Turn	High	11.037353, 77.0367219	10 KM/Hr
1	Turn	High	11.03211, 77.07640	15 KM/Hr
2	Turn	High	11.05129, 77.07919	15 KM/Hr
3	Turn	Medium	11.05181, 77.07696	30 KM/Hr
4	Turn	High	11.05222, 77.07690	15 KM/Hr
5	Turn	Medium	11.05343, 77.07106	30 KM/Hr
6	Turn	Medium	11.05351, 77.07099	30 KM/Hr
7	Turn	Medium	11.05411, 77.07097	30 KM/Hr
8	Turn	High	11.05529, 77.06566	15 KM/Hr
9	Blind Spot	Blind Spot	11.03735, 77.03672	10 KM/Hr
10	Turn	High	11.03746, 77.03666	15 KM/Hr
11	Turn	High	11.03805, 77.03742	15 KM/Hr
12	Turn	High	11.06370, 77.03708	15 KM/Hr
13	Turn	High	11.06387, 77.03223	15 KM/Hr
14	Turn	High	11.06278, 77.03213	15 KM/Hr
15	Turn	Medium	11.06257, 77.02744	30 KM/Hr
16	Turn	High	11.06262, 77.02734	15 KM/Hr
17	Turn	High	11.06325, 77.02732	15 KM/Hr
18	Turn	High	11.06322, 77.02449	15 KM/Hr
19	Turn	Medium	11.06531, 77.02379	30 KM/Hr
20	Blind Spot	Blind Spot	11.07004, 77.01891	10 KM/Hr
21	Turn	Medium	11.06925, 77.01745	30 KM/Hr
22	Turn	High	11.06931, 77.01691	15 KM/Hr
23	Turn	High	11.07097, 77.01695	15 KM/Hr
24	Turn	Medium	11.07110, 77.01714	30 KM/Hr
25	Turn	Medium	11.07368, 77.01680	30 KM/Hr
26	Blind Spot	Blind Spot	11.07496, 77.00208	10 KM/Hr
27	Turn	High	11.07859, 77.00367	15 KM/Hr
28	Turn	High	11.07948, 77.00249	15 KM/Hr
29	Turn	Medium	11.08072, 77.00238	30 KM/Hr
30	Turn	High	11.08604, 76.99845	15 KM/Hr
31	Turn	Medium	11.08616, 76.99773	30 KM/Hr

	Risk Type	Risk Level	Coordinates	Speed Limit
32	Blind Spot	Blind Spot	11.10176, 76.99644	10 KM/Hr
33	Turn	High	11.10159, 76.98713	15 KM/Hr
34	Turn	High	11.10143, 76.98713	15 KM/Hr
35	Turn	High	11.10142, 76.98634	15 KM/Hr
36	Turn	High	11.10168, 76.98634	15 KM/Hr
37	Turn	High	11.10168, 76.98643	15 KM/Hr
38	Turn	High	11.10258, 76.98640	15 KM/Hr
39	Turn	High	11.10260, 76.98535	15 KM/Hr
40	Turn	Medium	11.10361, 76.98528	30 KM/Hr
41	Turn	High	11.10373, 76.98516	15 KM/Hr
42	Turn	Medium	11.10413, 76.98518	30 KM/Hr
43	Turn	High	11.10418, 76.98521	15 KM/Hr
44	Turn	Medium	11.10425, 76.98588	30 KM/Hr
45	Turn	Medium	11.10430, 76.98592	30 KM/Hr

Emergency Locations

	type	name	coordinates	speed_limit	risk_level
0	hospital	KGM, Chinnampalayam	11.0570076, 77.067239	30 km/h	Medium
1	hospital	Chinnampalayam Venkateshwara Hospital	11.0545152, 77.0652106	30 km/h	Medium
3	hospital	R V Hospital, Coimbatore	11.0546916, 77.0639178	30 km/h	Medium
5	hospital	Kovai Medical Centre,Coimbatore	11.0426077, 77.0406074	30 km/h	Medium
6	hospital	Lotus Eye Care Hospital Ltd, Coimbatore	11.0406116, 77.0401856	30 km/h	Medium
9	hospital	Park Hospital, Coimbatore	11.0419411, 77.0379131	30 km/h	Medium
12	police	Saravanampatti Police Station	11.0747296, 77.0027116	30 km/h	Medium
13	police	B9 Saravanampatty Police Station	11.0747167, 77.0027098	30 km/h	Medium

	type	name	coordinates	speed_limit	risk_level
15	clinic	Sri Loga Clinic	11.072535, 77.0017429	30 km/h	Medium
21	hospital	KG Eye Hospital	11.0825506, 76.997422	30 km/h	Medium

Crowded Spots

	type	name	coordinates	speed_limit	risk_level
2	school	Government school	11.0554435, 77.0653927	30 km/h	Medium
4	school	Sri Vivekananda Matriculation Higher Secondary School	11.054695, 77.0572126	30 km/h	Medium
7	school	Park Global School	11.0424178, 77.038601	30 km/h	Medium
8	traffic_signals	SITRA Junction	11.0380037, 77.0374143	30 km/h	Medium
10	college	South India Textile Research Association - SITRA	11.0396478, 77.0355493	30 km/h	Medium
11	college	PSG College of Arts and Science	11.0328471, 77.034909	30 km/h	Medium
14	school	Saravanampatty Elementary School	11.0763477, 77.0017133	30 km/h	Medium
16	school	Ruby Matriculation School	11.0824185, 77.0017383	30 km/h	Medium
17	school	SeaSkills Maritime Academy	11.0829794, 76.998578	30 km/h	Medium
18	college	KGISL Institute of Technology	11.0849024, 76.9981798	30 km/h	Medium
19	college	KGISL IIM	11.0834337, 76.99715	30 km/h	Medium
20	school	KGISL Institute of Information Management	11.0834393, 76.997046	30 km/h	Medium
22	college	KG College of Arts and Science	11.0835993, 76.9974565	30 km/h	Medium

Route Photos of Risky Spots



Risk Type: U-Turn

Risk Level: High

Speed Limit: 10 KM/Hr

Coordinates: 11.037353, 77.0367219



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.03211, 77.07640



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.05129, 77.07919



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.05181, 77.07696



Risk Type: Turn
Risk Level: High
Speed Limit: 15 KM/Hr
Coordinates: 11.05222, 77.07690



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Coordinates: 11.05343, 77.07106



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Coordinates: 11.05351, 77.07099



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.05411, 77.07097



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.05529, 77.06566



Risk Type: Blind Spot
Risk Level: Blind Spot
Speed Limit: 10 KM/Hr
Coordinates: 11.03735, 77.03672



Risk Type: Turn
Risk Level: High
Speed Limit: 15 KM/Hr
Coordinates: 11.03746, 77.03666



Risk Type: Turn
Risk Level: High
Speed Limit: 15 KM/Hr
Coordinates: 11.03805, 77.03742



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.06370, 77.03708



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.06387, 77.03223



Risk Type: Turn
Risk Level: High
Speed Limit: 15 KM/Hr
Coordinates: 11.06278, 77.03213



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Coordinates: 11.06257, 77.02744



Risk Type: Turn
Risk Level: High
Speed Limit: 15 KM/Hr
Coordinates: 11.06262, 77.02734



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.06325, 77.02732



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.06322, 77.02449



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.06531, 77.02379



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.07368, 77.01680



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Coordinates: 11.07496, 77.00208



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.07859, 77.00367



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.07948, 77.00249



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.08072, 77.00238



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.08604, 76.99845



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.08616, 76.99773



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Coordinates: 11.10176, 76.99644



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.10373, 76.98516

