



IndianOil

JOURNEY RISK MANAGEMENT (JRM) STUDY

IOCL Coimbatore Terminal to Pricol Ltd Pricol Fuel & Lube

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

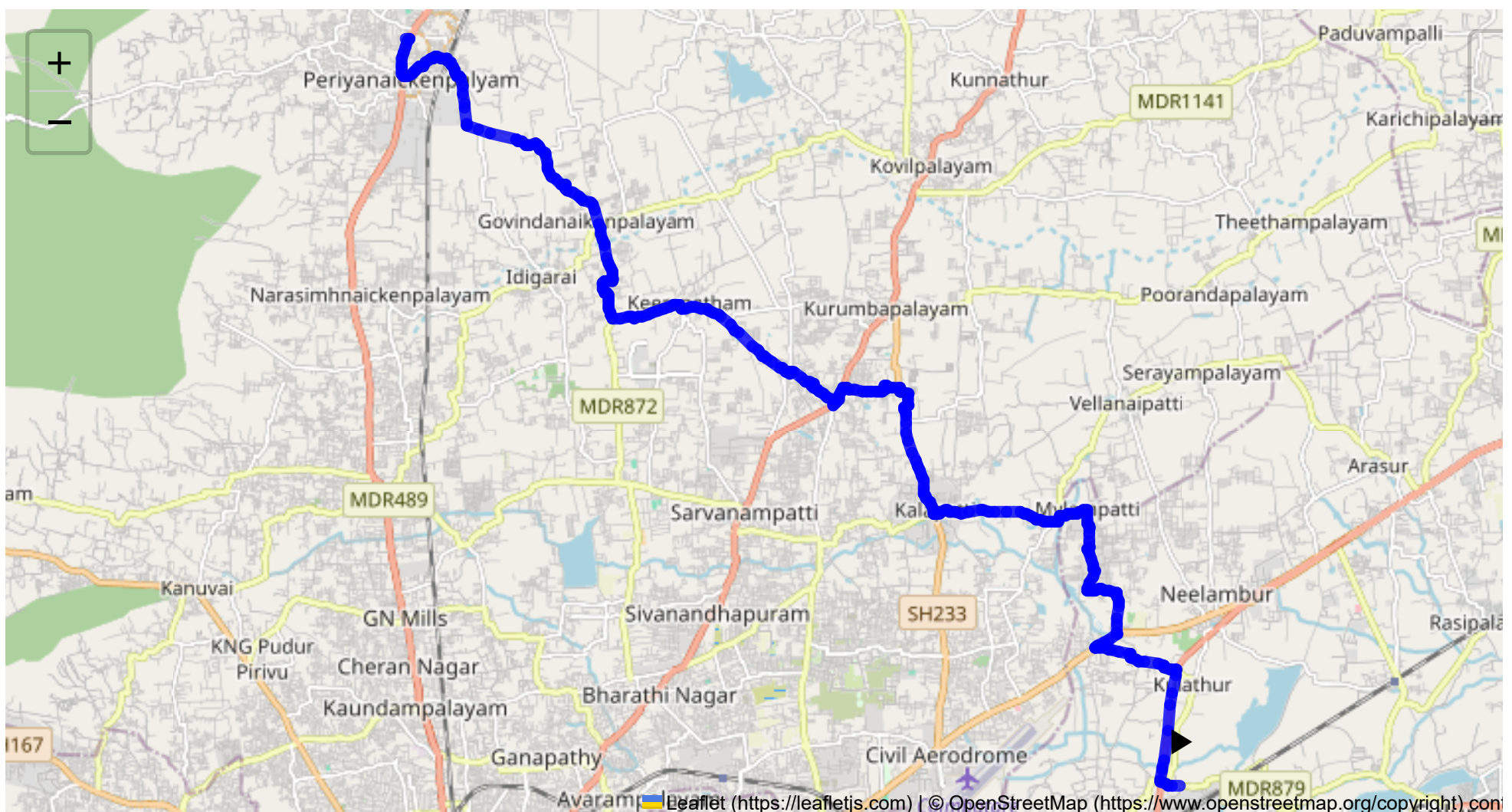
The report includes route-specific risk assessments, detailed journey charts, and defensive driving guidelines for each transport route. Integration with vehicle tracking systems guarantees real-time warnings on hazardous areas, speed limits, and mandatory stops, consistent with RTSP and CMVR safety 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: 28.87 km
Estimated Duration: 1.0 hours
Adjusted Duration (Heavy Vehicle): 1.3 hours
Start: (11.0315, 77.0797)
End: (11.15922642948031, 76.94491699999999)



Welcome to the Journey Risk Management Study

Route Overview

The route spans approximately 28.87 kilometers, traveling from Athappagoundenpudur to an area in Coimbatore, Tamil Nadu, passing through a series of suburban roads and connecting towns like Chinniyampalayam, Mylapatti, Kalapatti, and Saravanampatti. It involves navigating through key intersections and established residential and commercial zones.

Weather Conditions

Typical Weather: Coimbatore experiences a tropical wet and dry climate with a relatively stable year-round temperature. Summers can be hot, and monsoon months (June to September) may bring heavy rain, potentially causing flooding or waterlogging in low-lying areas.

Potential Hazards: During monsoon, the risk of slippery roads and reduced visibility is higher. Check local weather updates before traveling as some parts may be prone to waterlogging.

Traffic Patterns

Peak Hours: Traffic congestion is more likely during morning hours (8-10 AM) and evening hours (5-8 PM). Areas near commercial hubs and schools, such as near Kalapatti and Saravanampatti, experience higher congestion.

Congestion-Prone Areas: The intersections at Chinniyampalayam and major roads in Saravanampatti witness traffic jams, particularly during peak hours.

Road Quality and Infrastructure

The roads on this route vary, with certain stretches in more developed areas like Saravanampatti and Kalapatti being better maintained. However, secondary roads and those passing through dense residential areas might have potholes or narrow sections.

Alternative Routes

For emergencies, consider bypassing crowded areas via the Coimbatore Outer Ring Road, though it adds a few kilometers to the journey. Tracking real-time traffic via navigation apps can also help reroute dynamically.

Local Regulations

Transporting hazardous materials requires adherence to legal guidelines including proper labeling, documentation, and compliance with road safety measures. Restricted hours for heavy vehicle movement may apply in urban areas.

Historical Incidents

While specific historical data on incidents is hard to pinpoint, areas with frequent urban congestion, like near Saravanampatti, have reported vehicular incidents. Awareness and compliance with transport rules are critical to mitigating risks.

Environmental Considerations

Sensitive areas along the route include residential zones and schools. Ensure no spillovers or leaks occur during transit, and limit noise pollution, especially in sensitive areas.

Communication Coverage

Most urban and suburban areas have good mobile network coverage. However, occasional dead zones may occur in less developed sectors. Ensure vehicles are equipped with necessary communication tools.

Emergency Response

The proximity to urbanized areas, such as Coimbatore, generally ensures faster emergency response times, approximately 15-30 minutes depending on traffic and location severity.

Overall Risk Assessment

- Weather Risk:** Moderate, mainly during the monsoon.
- Traffic Risk:** High during peak hours, requiring careful driving and alternative routing if necessary.
- Road Quality Risk:** Moderate to High, with parts requiring cautious travel due to potential road maintenance issues.
- Regulatory Risk:** Low to moderate, provided all transport rules for hazardous materials are followed.

Having a well-prepared plan for route adjustments, understanding peak traffic trends, and ensuring compliance with local transport regulations can significantly mitigate risks along this route. Regularly updated traffic and weather monitoring can also improve journey safety and efficiency.

Risk Assessment - Turns

	Risk Type	Risk Level	Coordinates	Speed Limit
0	Roundabout	High	11.07800, 77.03707	15 KM/Hr
1	U-Turn	High	11.0549503, 77.0650284	10 KM/Hr
2	Turn	High	11.03211, 77.07640	15 KM/Hr
3	Turn	High	11.05129, 77.07919	15 KM/Hr
4	Turn	High	11.05181, 77.07696	15 KM/Hr
5	Turn	High	11.05218, 77.07692	15 KM/Hr
6	Turn	Medium	11.05281, 77.07261	30 KM/Hr
7	Turn	Medium	11.05343, 77.07106	30 KM/Hr
8	Turn	High	11.05351, 77.07099	15 KM/Hr
9	Turn	High	11.05411, 77.07097	15 KM/Hr
10	Turn	High	11.05529, 77.06566	15 KM/Hr
11	Turn	High	11.05495, 77.06503	15 KM/Hr
12	Blind Spot	Blind Spot	11.05507, 77.06496	10 KM/Hr

	Risk Type	Risk Level	Coordinates	Speed Limit
13	Turn	High	11.05751, 77.06875	15 KM/Hr
14	Turn	High	11.06437, 77.06865	15 KM/Hr
15	Turn	High	11.06490, 77.06371	15 KM/Hr
16	Turn	Medium	11.06501, 77.06366	30 KM/Hr
17	Turn	Medium	11.07201, 77.06366	30 KM/Hr
18	Turn	Medium	11.07209, 77.06370	30 KM/Hr
19	Turn	Medium	11.07220, 77.06393	30 KM/Hr
20	Turn	Medium	11.07232, 77.06400	30 KM/Hr
21	Blind Spot	Blind Spot	11.07865, 77.06377	10 KM/Hr
22	Turn	High	11.07773, 77.05884	15 KM/Hr
23	Turn	Medium	11.07655, 77.05823	30 KM/Hr
24	Turn	Medium	11.07854, 77.03872	30 KM/Hr
25	Turn	Medium	11.09589, 77.03170	30 KM/Hr
26	Turn	Medium	11.09605, 77.03172	30 KM/Hr
27	Turn	Medium	11.09655, 77.03237	30 KM/Hr
28	Turn	Medium	11.09846, 77.03245	30 KM/Hr
29	Turn	High	11.09881, 77.03093	15 KM/Hr
30	Blind Spot	Blind Spot	11.09956, 77.03089	10 KM/Hr
31	Turn	High	11.09947, 77.02907	15 KM/Hr
32	Turn	Medium	11.09970, 77.02906	30 KM/Hr
33	Turn	Medium	11.09973, 77.02904	30 KM/Hr
34	Turn	Medium	11.09984, 77.02841	30 KM/Hr
35	Turn	Medium	11.09979, 77.02831	30 KM/Hr
36	Turn	High	11.09895, 77.02806	15 KM/Hr
37	Turn	High	11.09950, 77.02101	15 KM/Hr
38	Blind Spot	Blind Spot	11.09658, 77.01920	10 KM/Hr
39	Turn	High	11.09771, 77.01929	15 KM/Hr
40	Turn	High	11.09972, 77.01571	15 KM/Hr
41	Turn	High	11.10025, 77.01583	15 KM/Hr
42	Blind Spot	Blind Spot	11.10244, 77.01189	10 KM/Hr
43	Turn	Medium	11.10225, 77.01190	30 KM/Hr
44	Turn	Medium	11.10212, 77.01181	30 KM/Hr
45	Turn	Medium	11.10210, 77.01175	30 KM/Hr
46	Turn	Medium	11.11308, 76.99303	30 KM/Hr

	Risk Type	Risk Level	Coordinates	Speed Limit
47	Turn	Medium	11.11381, 76.99222	30 KM/Hr
48	Turn	High	11.11132, 76.98083	15 KM/Hr
49	Turn	High	11.11574, 76.97993	15 KM/Hr
50	Turn	Medium	11.11575, 76.97977	30 KM/Hr
51	Turn	Medium	11.11582, 76.97965	30 KM/Hr
52	Turn	Medium	11.11738, 76.97909	30 KM/Hr
53	Turn	Medium	11.11756, 76.97916	30 KM/Hr
54	Turn	Medium	11.11786, 76.98071	30 KM/Hr
55	Turn	Medium	11.11794, 76.98083	30 KM/Hr
56	Turn	Medium	11.13108, 76.97709	30 KM/Hr
57	Turn	Medium	11.13342, 76.97285	30 KM/Hr
58	Turn	Medium	11.13430, 76.97264	30 KM/Hr
59	Turn	High	11.13437, 76.97259	15 KM/Hr
60	Turn	Medium	11.13434, 76.97187	30 KM/Hr
61	Turn	Medium	11.13568, 76.97005	30 KM/Hr
62	Turn	Medium	11.13960, 76.96905	30 KM/Hr
63	Turn	Medium	11.14130, 76.96748	30 KM/Hr
64	Turn	Medium	11.14099, 76.96604	30 KM/Hr
65	Turn	High	11.14439, 76.95542	15 KM/Hr
66	Turn	High	11.15258, 76.95445	15 KM/Hr
67	Turn	Medium	11.15529, 76.94840	30 KM/Hr
68	Turn	Medium	11.15462, 76.94793	30 KM/Hr
69	Turn	High	11.15290, 76.94430	15 KM/Hr
70	Blind Spot	Blind Spot	11.15929, 76.94535	10 KM/Hr

Emergency Locations

	type	name	coordinates	speed_limit	risk_level
0	hospital	KGM, Chinniampalayam	11.0570076, 77.067239	30 km/h	Medium
1	hospital	Chinniampalayam Venkateshwara Hospital	11.0545152, 77.0652106	30 km/h	Medium

	type	name	coordinates	speed_limit	risk_level
3	hospital	R V Hospital, Coimbatore	11.0546916, 77.0639178	30 km/h	Medium
4	hospital	Kamalaprakasam, Kalapatti	11.0778, 77.035681	30 km/h	Medium
5	hospital	Government Hospital, Perianaickenpalaym	11.1520934, 76.9465875	30 km/h	Medium
6	hospital	K.R. Hospital	11.1564875, 76.944041	30 km/h	Medium
7	hospital	Dj Jothipuram, Coimbatore	11.16107, 76.946818	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

Route Photos of Risky Spots



Risk Type: Roundabout

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.07800, 77.03707



Risk Type: U-Turn

Risk Level: High

Speed Limit: 10 KM/Hr

Coordinates: 11.0549503, 77.0650284



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: High

Speed Limit: 15 KM/Hr

Coordinates: 11.05181, 77.07696



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.05218, 77.07692



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.05281, 77.07261



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.05343, 77.07106



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.05351, 77.07099



Risk Type: Turn

Risk Level: High

Speed Limit: 15 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: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.05495, 77.06503

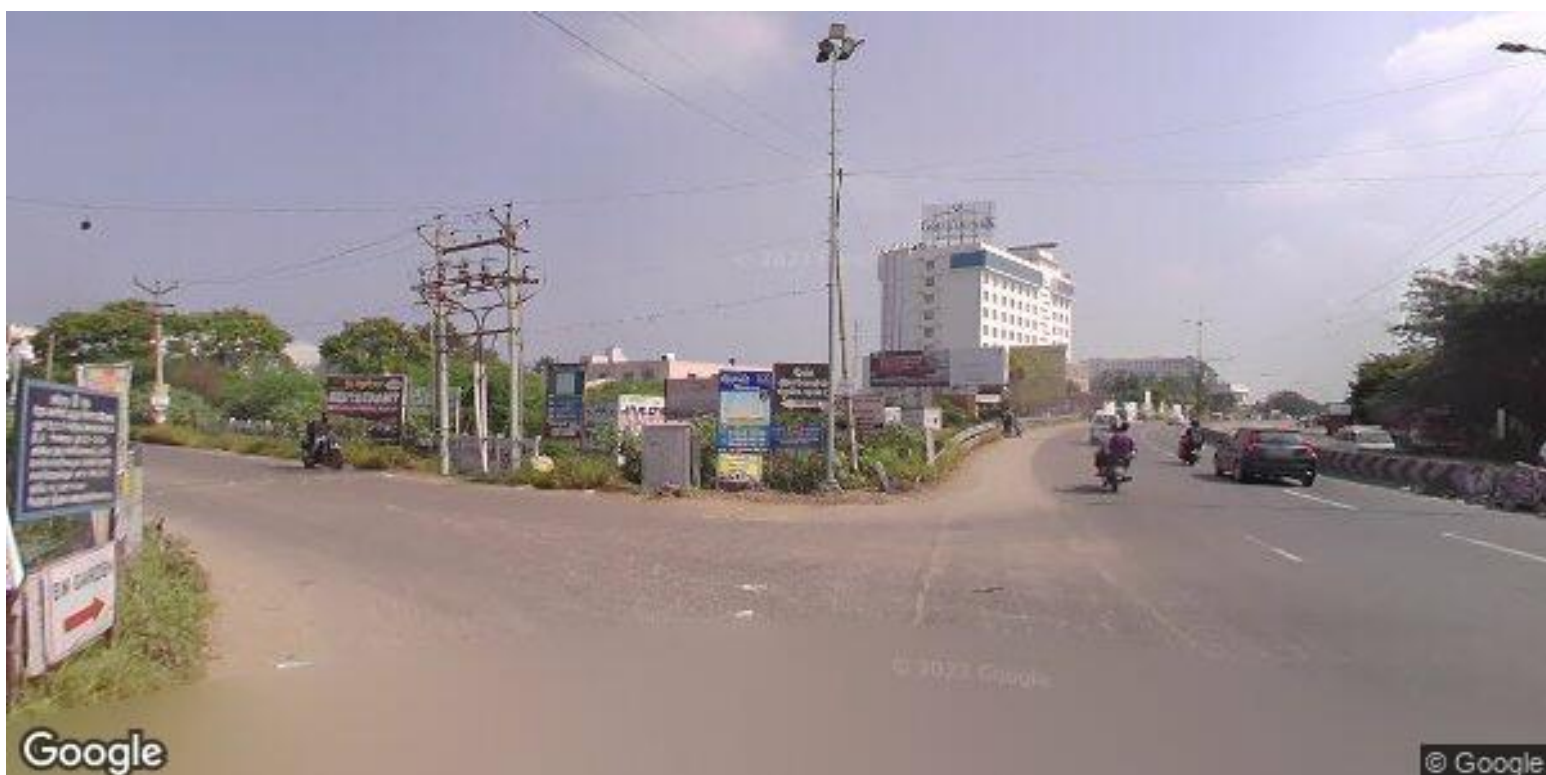


Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Coordinates: 11.05507, 77.06496



Risk Type: Turn
Risk Level: High
Speed Limit: 15 KM/Hr
Coordinates: 11.05751, 77.06875



Risk Type: Turn
Risk Level: High
Speed Limit: 15 KM/Hr
Coordinates: 11.06437, 77.06865



Risk Type: Turn
Risk Level: High
Speed Limit: 15 KM/Hr
Coordinates: 11.06490, 77.06371



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.06501, 77.06366



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.07201, 77.06366



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Coordinates: 11.07209, 77.06370



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Coordinates: 11.07220, 77.06393



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Coordinates: 11.07232, 77.06400



Risk Type: Blind Spot
Risk Level: Blind Spot
Speed Limit: 10 KM/Hr
Coordinates: 11.07865, 77.06377



Risk Type: Turn
Risk Level: High
Speed Limit: 15 KM/Hr
Coordinates: 11.07773, 77.05884



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.07655, 77.05823



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.07854, 77.03872



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.09589, 77.03170



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.09605, 77.03172



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.09655, 77.03237



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Coordinates: 11.09846, 77.03245



Risk Type: Turn
Risk Level: High
Speed Limit: 15 KM/Hr
Coordinates: 11.09881, 77.03093



Risk Type: Blind Spot
Risk Level: Blind Spot
Speed Limit: 10 KM/Hr
Coordinates: 11.09956, 77.03089



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.09947, 77.02907



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.09970, 77.02906



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Coordinates: 11.09973, 77.02904



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Coordinates: 11.09984, 77.02841



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Coordinates: 11.09979, 77.02831



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.09895, 77.02806



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.09950, 77.02101



Risk Type: Blind Spot
Risk Level: Blind Spot
Speed Limit: 10 KM/Hr
Coordinates: 11.09658, 77.01920



Risk Type: Turn
Risk Level: High
Speed Limit: 15 KM/Hr
Coordinates: 11.09771, 77.01929



Risk Type: Turn
Risk Level: High
Speed Limit: 15 KM/Hr
Coordinates: 11.09972, 77.01571



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.10025, 77.01583



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Coordinates: 11.10244, 77.01189



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Coordinates: 11.10225, 77.01190



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Coordinates: 11.10212, 77.01181



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Coordinates: 11.10210, 77.01175



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.11308, 76.99303



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.11381, 76.99222



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.11132, 76.98083



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.11574, 76.97993



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.11575, 76.97977



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.11582, 76.97965



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.11738, 76.97909



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Coordinates: 11.11756, 76.97916



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Coordinates: 11.11786, 76.98071



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Coordinates: 11.11794, 76.98083



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.13108, 76.97709



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.13342, 76.97285



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Coordinates: 11.13430, 76.97264



Risk Type: Turn
Risk Level: High
Speed Limit: 15 KM/Hr
Coordinates: 11.13437, 76.97259



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Coordinates: 11.13434, 76.97187



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.13568, 76.97005



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.13960, 76.96905



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Coordinates: 11.14130, 76.96748



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Coordinates: 11.14099, 76.96604



Risk Type: Turn
Risk Level: High
Speed Limit: 15 KM/Hr
Coordinates: 11.14439, 76.95542



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.15258, 76.95445



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.15529, 76.94840



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.15462, 76.94793



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.15290, 76.94430



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Coordinates: 11.15929, 76.94535

