



IndianOil

JOURNEY RISK MANAGEMENT (JRM) STUDY

IOCL Coimbatore Terminal to UPR Oil Trading Company

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

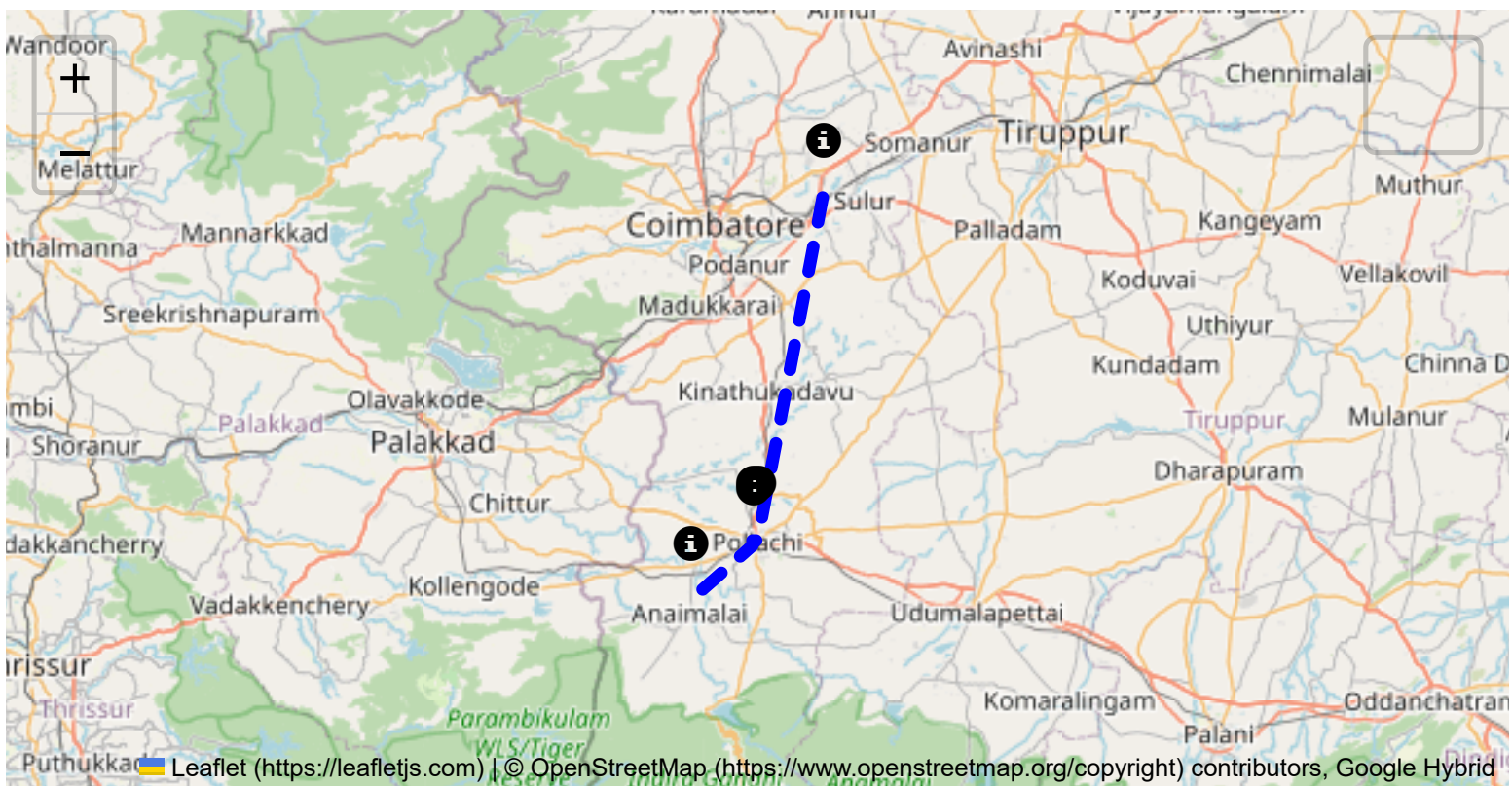
The JRM report addresses environmental risks along the route, ensuring compliance with environmental protection laws in ecologically sensitive zones. It suggests strategies such as identifying areas near water bodies, forests, or populated regions and implementing safety measures to minimize environmental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

Journey Risk Mitigation

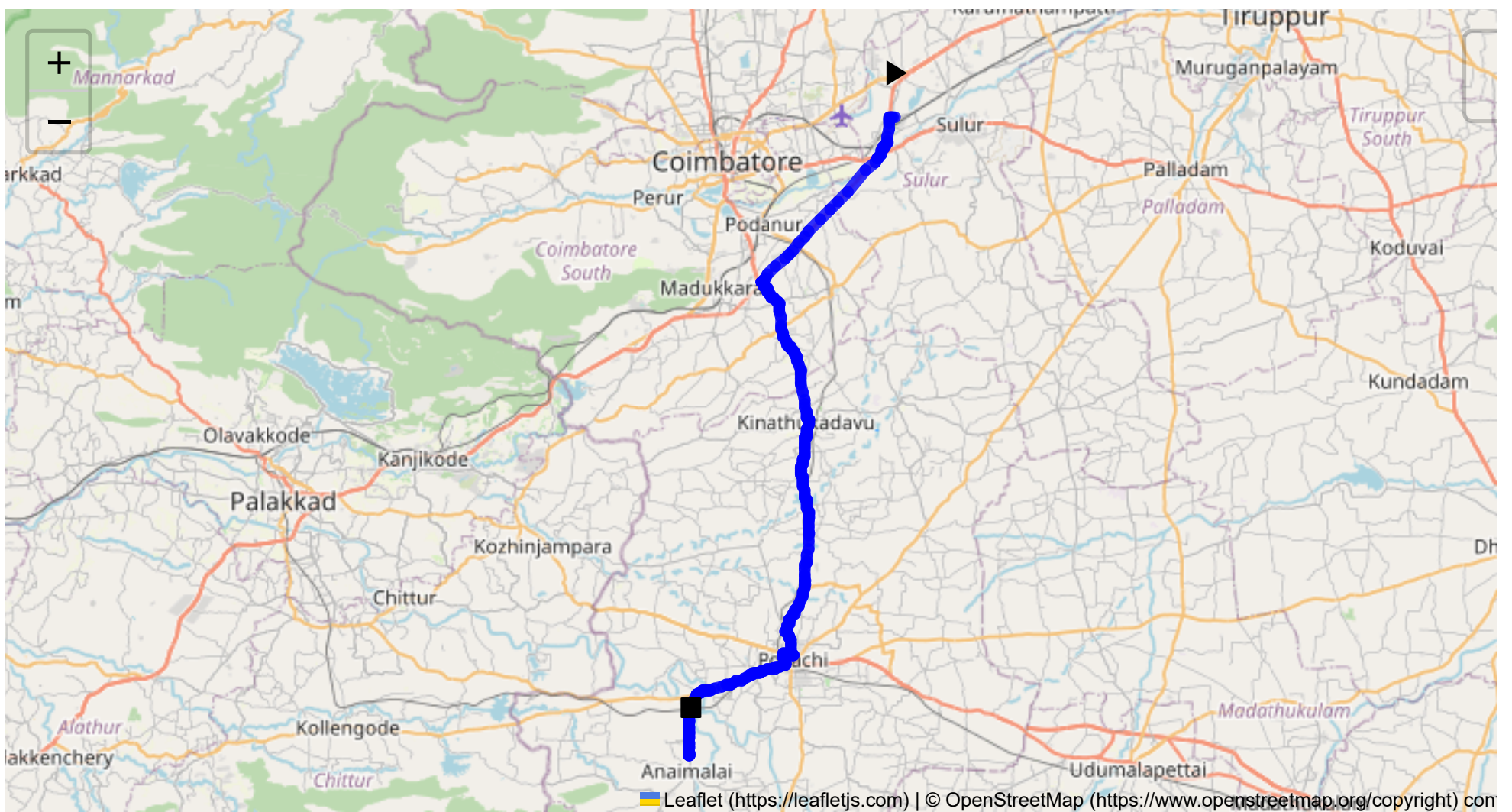
The report includes route-specific risk assessments, detailed journey charts, and defensive driving guidelines for each transport route. Integration with vehicle tracking systems guarantees real-time warnings on hazardous areas, speed limits, and mandatory stops, consistent with RTSP and CMVR safety 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: 60.75 km
Estimated Duration: 1.4 hours
Adjusted Duration (Heavy Vehicle): 1.8 hours
Start: (11.0315, 77.0797)
End: (10.595162, 76.935837)



Welcome to the Journey Risk Management Study

Route Overview

The route from Athappagoundenpudur, Coimbatore to Marchinaickenpalayam covers approximately 60.75 kilometers, passing through Pollachi. The main stretches include a combination of rural and semi-urban roads, with a mixture of highways and local roads that require careful navigation, especially when transporting hazardous materials.

Weather Conditions

Typical Weather:

- The region experiences a tropical climate, with a majority of rainfall occurring from October to December due to the Northeast Monsoon.
- Temperatures are generally high throughout the year, reaching up to 35°C (95°F) in summer months.

Potential Hazards:

- Monsoon rains can cause slippery roads and potential flooding, especially in low-lying areas.
- Dust and heat during the dry season can affect visibility and vehicle performance.

Traffic Patterns

Peak Hours:

- Traffic congestion is most likely during morning (8:00 - 10:00 AM) and evening (5:00 - 7:00 PM) rush hours, particularly in and around Pollachi.

Congestion-Prone Areas:

- Urban stretches near Pollachi Municipal Office Rd are prone to congestion.
- Main intersections where local traffic converges with highway traffic can present delays.

Road Quality and Infrastructure

Assessment:

- The main roads are usually in fair condition, but secondary roads may have potholes and uneven surfaces.
- Watch for pedestrian crossings in urban areas and cattle crossings in rural stretches.

Alternative Routes

Emergencies:

- Consider alternative routes via State Highway 19 (SH-19) for bypassing Pollachi if congestion due to unforeseen events occurs.

Local Regulations

- Specific permits are required for transporting hazardous materials.
- There are designated routes and time restrictions in place for such transport, often avoiding high-traffic urban centers during peak hours.

Historical Incidents

- There have been occasional incidents involving heavy vehicles in weather-affected conditions, often during the monsoon season.
- General care is advised, particularly where major roads meet in Pollachi due to past traffic jams.

Environmental Considerations

Sensitive Areas:

- The route passes through agricultural land; therefore, spillage of hazardous materials could affect local water sources and crops.
- Noise and vibration concerns are heightened near residential zones.

Communication Coverage

Dead Zones:

- Rural stretches may experience patchy mobile network coverage.
- Pollachi and other inhabited regions typically have strong coverage.

Emergency Response Times

- Generally, emergency services are more prompt in urban stretches, averaging 15-30 minutes.
- Response time may extend beyond 45 minutes in rural and remote areas.

Overall Risk Assessment

Transporting hazardous materials along this route requires alertness to potential traffic delays, weather conditions, and road quality. Adhering to local regulations and monitoring weather forecasts can mitigate risks. Pre-planned alternative routes and communication strategies in case of emergencies will help ensure safety. The route's overall risk level can be considered moderate, warranting continuous vigilance.

Risk Assessment - Turns

	Risk Type	Risk Level	Coordinates	Speed Limit
0	Roundabout	High	10.66177, 77.00801	15 KM/Hr
1	Blind Spot	Blind Spot	11.03211, 77.07640	10 KM/Hr
2	Blind Spot	Blind Spot	10.91785, 76.98617	10 KM/Hr
3	Turn	Medium	10.66174, 77.00698	30 KM/Hr
4	Turn	High	10.66167, 77.00687	15 KM/Hr
5	Blind Spot	Blind Spot	10.66318, 77.00202	10 KM/Hr
6	Turn	High	10.66033, 77.00205	15 KM/Hr

	Risk Type	Risk Level	Coordinates	Speed Limit
7	Turn	High	10.66026, 77.00309	15 KM/Hr
8	Turn	High	10.65535, 77.00337	15 KM/Hr
9	Turn	Medium	10.63535, 76.94117	30 KM/Hr
10	Turn	Medium	10.63512, 76.94099	30 KM/Hr
11	Turn	Medium	10.61724, 76.93572	30 KM/Hr
12	Blind Spot	Blind Spot	10.59367, 76.93651	10 KM/Hr
13	Turn	Medium	10.59365, 76.93625	30 KM/Hr
14	Turn	Medium	10.59367, 76.93620	30 KM/Hr
15	Turn	Medium	10.59373, 76.93616	30 KM/Hr
16	Turn	Medium	10.59474, 76.93605	30 KM/Hr

Emergency Locations

	type	name	coordinates	speed_limit	risk_level
0	hospital	Saraswathi Hospital	11.0069868, 77.071368	30 km/h	Medium
4	hospital	Ambal Malumichampatty, Coimbatore	10.90265, 76.997586	30 km/h	Medium
11	hospital	Sri Venkateswara Kinnathukadavu	10.8241085, 77.0191884	30 km/h	Medium
12	hospital	Government Hospital, Kinathukadavu	10.82107, 77.017406	30 km/h	Medium
13	hospital	The Pollachi Cardiac Center	10.6742907, 77.0081305	30 km/h	Medium
14	hospital	K.G.M. Hospital Paavhai Women's Cente, Pollachi	10.67023, 77.007418	30 km/h	Medium
15	hospital	Arathana Hospital	10.6682257, 77.0070174	30 km/h	Medium
16	clinic	Andavar Clinic and Nursing Home	10.6679726, 77.0081641	30 km/h	Medium
17	clinic	A.S.D. Nursing Home	10.6665361, 77.0084792	30 km/h	Medium
18	clinic	Neuro Poly Clinic, Pollachi	10.6662216, 77.0073506	30 km/h	Medium
19	hospital	Vasan Eye Care Hospital, Pollachi	10.6643938, 77.0057119	30 km/h	Medium

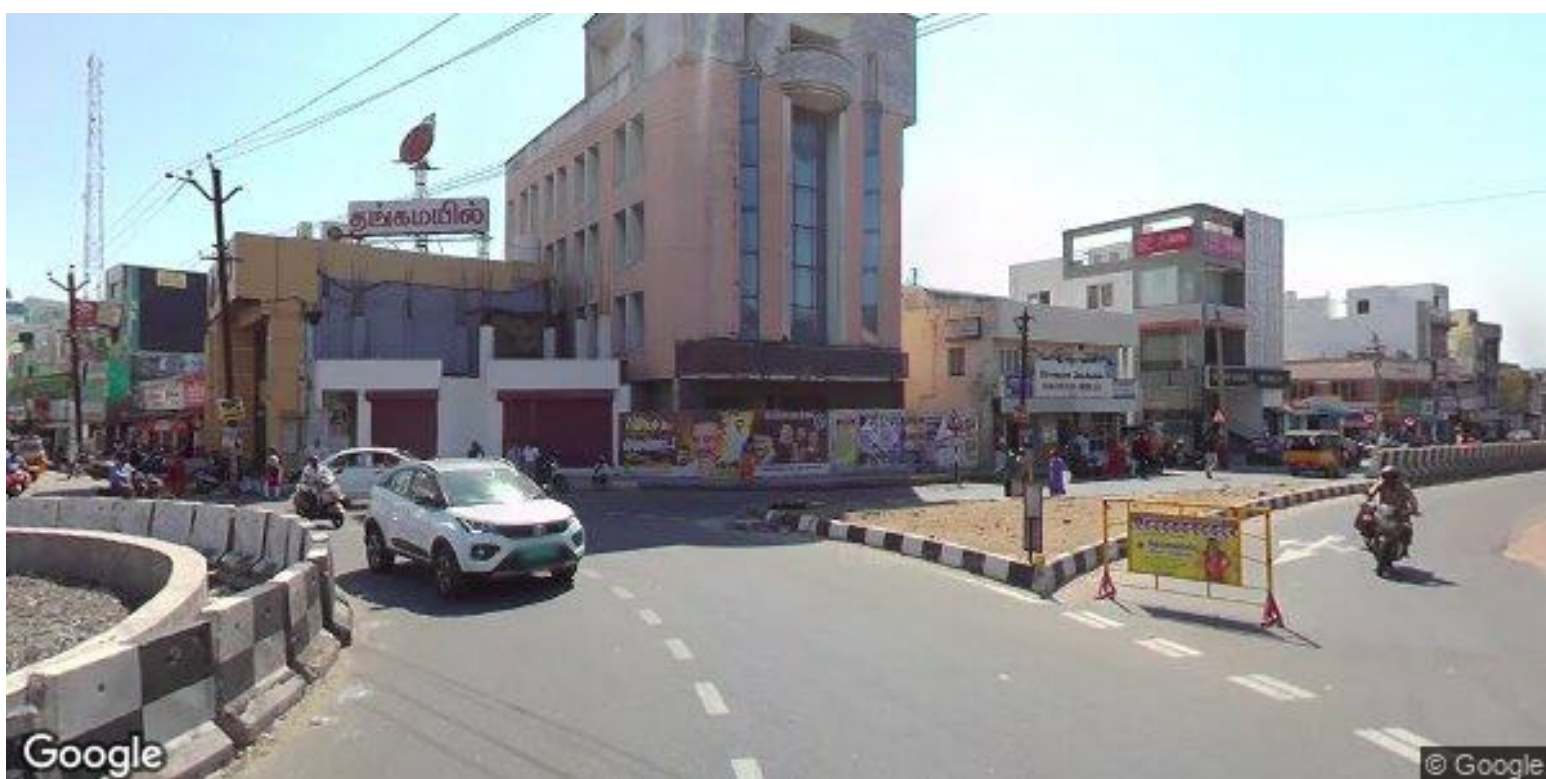
	type	name	coordinates	speed_limit	risk_level
20	hospital	Siva Meds Multispeciality Hospital	10.6633006, 77.0100774	30 km/h	Medium
21	clinic	Ram Poly Clinic	10.6627299, 77.0090626	30 km/h	Medium
22	hospital	MRS Hospital & Fertility centre	10.6647489, 77.0050326	30 km/h	Medium
23	clinic	Prabhu Poly Clinic	10.6627285, 77.0096353	30 km/h	Medium
24	hospital	Prabhu Hospital, Pc Pollachi	10.66269, 77.009684	30 km/h	Medium
25	hospital	Kowsalya Medical Centre, Pollachi	10.66299, 77.010025	30 km/h	Medium
26	hospital	Thirumalai Hospital	10.6650579, 77.005872	30 km/h	Medium
27	clinic	Rc Poly Clinic, Pollachi	10.66442, 77.005669	30 km/h	Medium
28	hospital	Pills Hospital	10.66419, 77.010376	30 km/h	Medium
29	clinic	Sindhia Ortho Clinic	10.6634521, 77.0105284	30 km/h	Medium
30	hospital	Sakthi Hospital, Pollachi	10.6629552, 77.0106019	30 km/h	Medium
31	hospital	JP Hospital, Pollachi	10.66024, 77.0049	30 km/h	Medium
32	hospital	K.M. Hospitals	10.6625561, 77.003421	30 km/h	Medium
33	hospital	Avm Hospital- Pollachi	10.66242, 77.0030365	30 km/h	Medium
34	hospital	Mcv Memorial Ent Trust Hospital	10.6627918, 76.9995756	30 km/h	Medium
35	hospital	S.N. Hospital, Pollachi	10.659567, 77.0005675	30 km/h	Medium
39	hospital	Aalva Hospital	10.6378336, 76.950131	30 km/h	Medium

Crowded Spots

	type	name	coordinates	speed_limit	risk_level
1	school	Kadri Mills Higher Secondary School	11.0058181, 77.0664118	30 km/h	Medium

	type	name	coordinates	speed_limit	risk_level
2	college	Karpagam Academy of Higher Education	10.9175939, 76.9882369	30 km/h	Medium
3	college	Karpagam Polytechnic College	10.9185202, 76.99131	30 km/h	Medium
5	college	DJ Academy of Design and Management	10.8740175, 77.0042594	30 km/h	Medium
6	college	Coimbatore Marine College	10.8627423, 77.0107491	30 km/h	Medium
7	school	Sasi Creative School for Architecture	10.8613583, 77.0118878	30 km/h	Medium
8	school	Vivek Vidyalaya Matric Hr. Sec. School	10.8451346, 77.015443	30 km/h	Medium
9	school	Vivek Vidya Mandir	10.8448467, 77.01614	30 km/h	Medium
10	college	VSB College of Engineering Technical Campus=Coimbatore	10.8430943, 77.0180336	30 km/h	Medium
36	school	Shenbagam Matriculation Higher Secondary School	10.6492585, 76.9829288	30 km/h	Medium
37	school	Nachiar Vidyalam Higher Secondary School	10.6481192, 76.980423	30 km/h	Medium
38	school	Panchayat Union Elementary School	10.650858, 76.9794118	30 km/h	Medium

Route Photos of Risky Spots



Risk Type: Roundabout

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 10.66177, 77.00801



Risk Type: Blind Spot
Risk Level: Blind Spot
Speed Limit: 10 KM/Hr
Coordinates: 11.03211, 77.07640



Risk Type: Blind Spot
Risk Level: Blind Spot
Speed Limit: 10 KM/Hr
Coordinates: 10.91785, 76.98617



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Coordinates: 10.66174, 77.00698



Risk Type: Turn
Risk Level: High
Speed Limit: 15 KM/Hr
Coordinates: 10.66167, 77.00687



Risk Type: Blind Spot
Risk Level: Blind Spot
Speed Limit: 10 KM/Hr
Coordinates: 10.66318, 77.00202



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 10.66033, 77.00205



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 10.66026, 77.00309



Risk Type: Turn
Risk Level: High
Speed Limit: 15 KM/Hr
Coordinates: 10.65535, 77.00337



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Coordinates: 10.63535, 76.94117



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Coordinates: 10.63512, 76.94099



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 10.61724, 76.93572



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Coordinates: 10.59367, 76.93651



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Coordinates: 10.59365, 76.93625



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Coordinates: 10.59367, 76.93620



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Coordinates: 10.59373, 76.93616



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 10.59474, 76.93605
