



# IndianOil

## JOURNEY RISK MANAGEMENT (JRM) STUDY

### IOCL Coimbatore Terminal to SETC Coim Depot TN D I

#### 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.

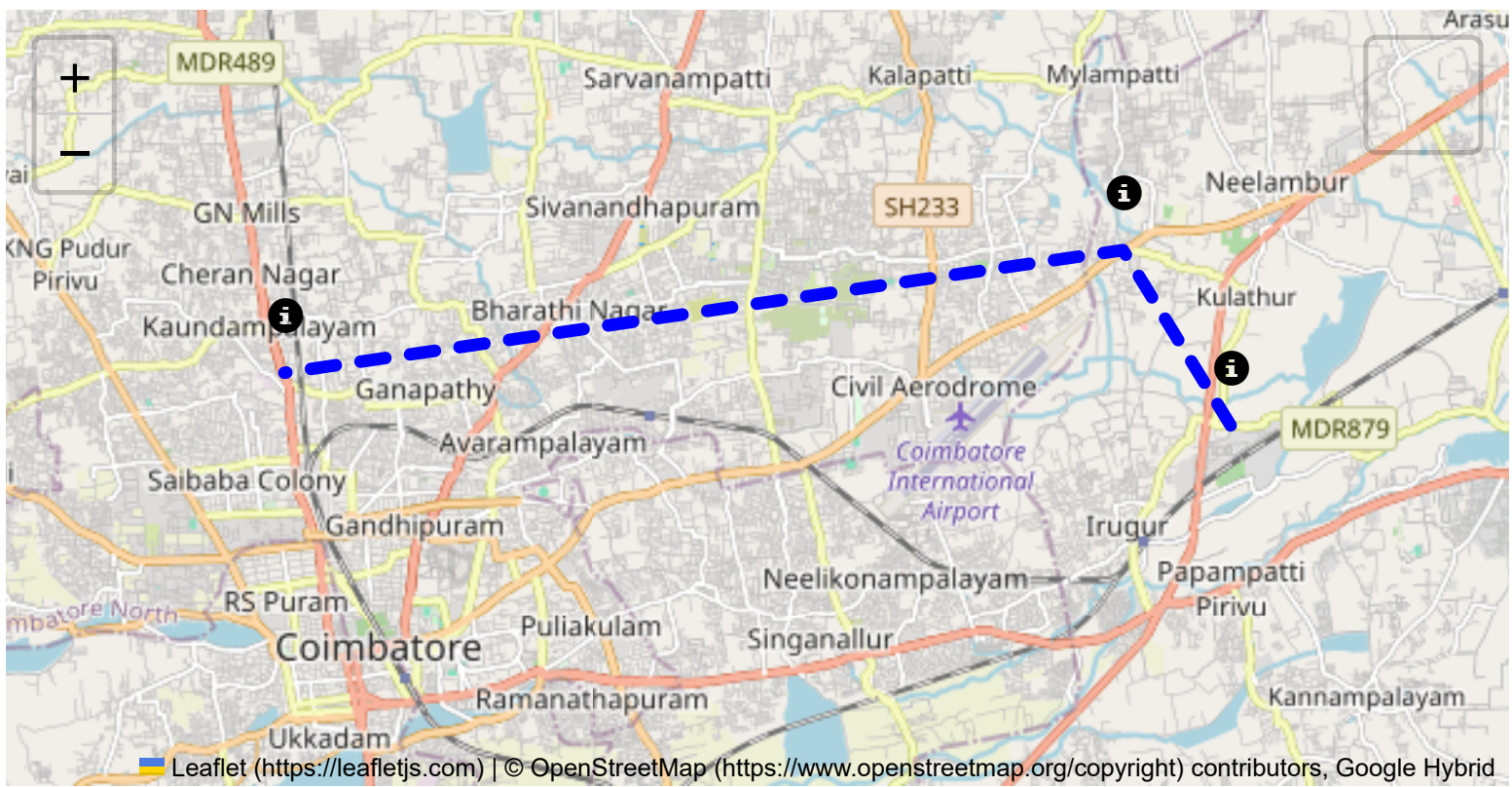
## **Journey Risk Mitigation**

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.

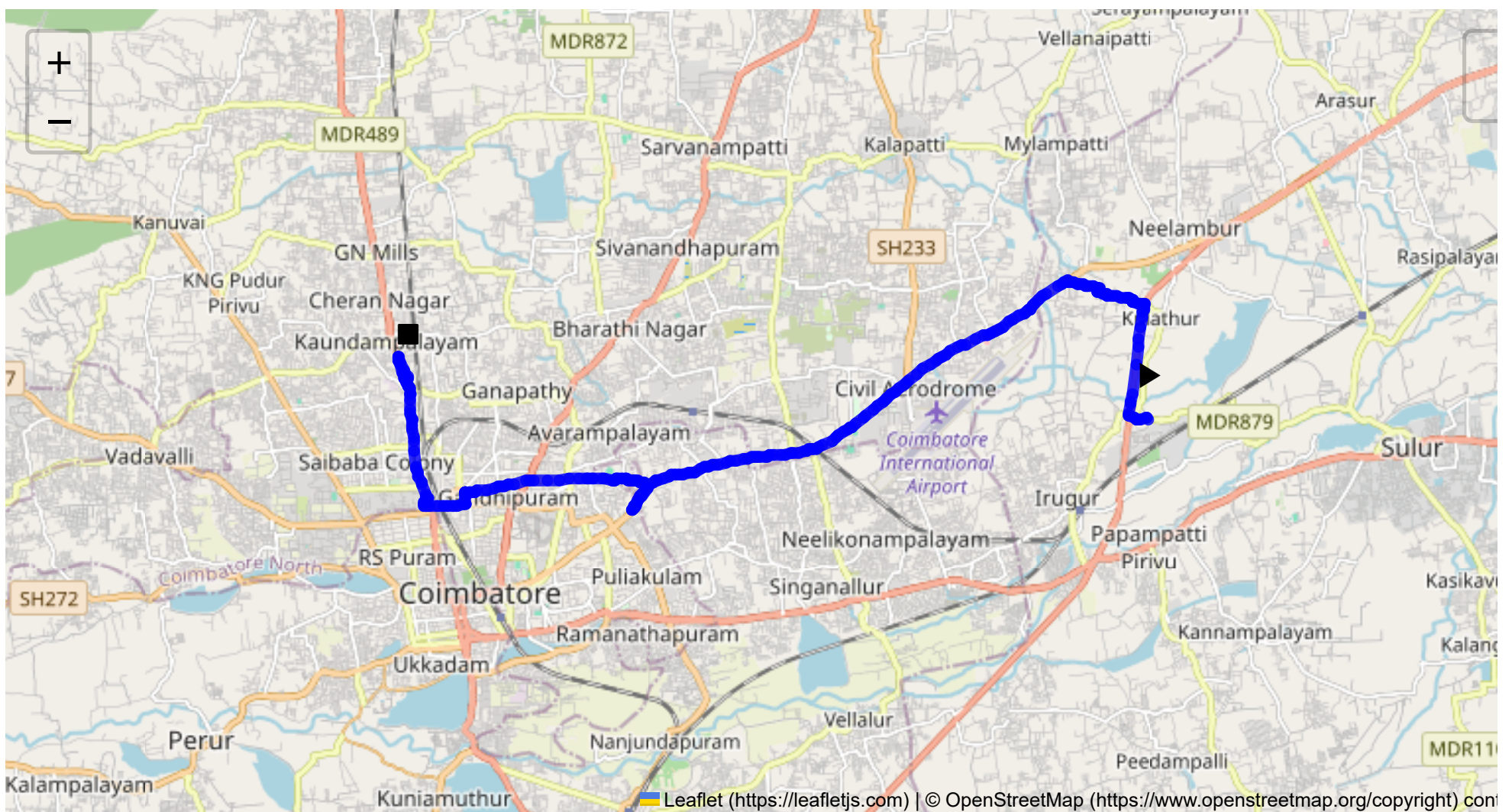
## **Compliance with Government Directives**

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: 22.39 km**  
**Estimated Duration: 0.8 hours**  
**Adjusted Duration (Heavy Vehicle): 1.0 hours**  
**Start: (11.0315, 77.0797)**  
**End: (11.038752, 76.950089)**



## Welcome to the Journey Risk Management Study

**1. Route Overview:** The route from Athappagoundenpudur to Housing Unit, Koundampalayam via Chinniyampalayam is approximately 22.39 kilometers. Key points include traversing through Teachers Colony and Chinniyampalayam. This route passes through both urban and semi-urban areas, with major roadways likely including NH 544 and local roads.



- 2. Weather Conditions:** The region typically experiences a tropical climate, with hot summers, a monsoon season, and mild winters. During the monsoon (June to September), heavy rainfall can lead to road flooding and reduced visibility. This could pose hazards related to waterlogging and slippery roads.
- 3. Traffic Patterns:** Coimbatore is a significant urban center, with notable traffic congestion during morning (8 AM - 10 AM) and evening (5 PM - 7 PM) peak hours. Areas around Chinniyampalayam and other junctions often have heavy traffic. The presence of schools, colleges, and industrial areas increases congestion potential.
- 4. Road Quality and Infrastructure:** The NH 544 is generally well-maintained but might have intermittent construction or maintenance work that can cause delays. Local roads in and around Chinniyampalayam may have potholes or uneven surfaces, particularly after monsoon season, affecting road quality and vehicle handling.
- 5. Alternative Routes:** For emergencies, consider bypassing congested sections using more rural or state highways such as SH 165 or similar nearby routes, if condition assessments allow. Always check locally available updates on traffic and road conditions for real-time guidance.
- 6. Local Regulations:** Coimbatore has strict regulations on the timing and routes for hazardous material transport, often restricting these transports during peak traffic hours and in certain high-density areas. Adherence to local transport permits and route restrictions is required.
- 7. Historical Incidents:** There have been incidents involving heavy vehicles, particularly related to brake failures on steep roads and accidents at busy intersections. Historical data points to an increased risk during adverse weather and mixed traffic conditions.
- 8. Environmental Considerations:** Sections near densely populated areas require caution. There are eco-sensitive zones around, including farmlands, which necessitate caution to avoid environmental damage from potential spills or leaks.
- 9. Communication Coverage:** Mobile network coverage is generally good along NH 544 and in urban areas. Potential dead zones may exist in more rural or less developed stretches, especially around the periphery of Coimbatore city.
- 10. Emergency Response Times:** In urban sections, emergency response (ambulance or fire brigade) may take 15-30 minutes, while in rural or semi-urban parts, response can extend beyond 30 minutes depending on exact location and traffic conditions.
- 11. Overall Risk Assessment:** The route presents moderate risks primarily due to weather and traffic conditions. Adequate preparation, such as ensuring vehicles are fit for wet road travel and planning travel outside peak hours, can mitigate some risks. Attention to vehicle maintenance, especially braking systems and load securing, is crucial. Regular updates on weather and traffic conditions are recommended to ensure timely adaptations to travel plans. Proper training on handling emergency situations, including spills and vehicle breakdowns, is essential for drivers of heavy vehicles carrying hazardous materials.

## Risk Assessment - Turns

	Risk Type	Risk Level	Coordinates	Speed Limit
0	Roundabout	High	11.01891, 76.96036	15 KM/Hr
1	U-Turn	High	11.0161282, 76.9896128	10 KM/Hr
2	U-Turn	High	11.0421633, 76.9484931	10 KM/Hr
3	Turn	High	11.03211, 77.07640	15 KM/Hr
4	Turn	High	11.05129, 77.07919	15 KM/Hr
5	Turn	Medium	11.05181, 77.07696	30 KM/Hr
6	Turn	High	11.05222, 77.07690	15 KM/Hr
7	Turn	Medium	11.05343, 77.07106	30 KM/Hr
8	Turn	Medium	11.05351, 77.07099	30 KM/Hr
9	Turn	Medium	11.05411, 77.07097	30 KM/Hr
10	Turn	High	11.05529, 77.06566	15 KM/Hr
11	Turn	High	11.01613, 76.98961	15 KM/Hr
12	Blind Spot	Blind Spot	11.01618, 76.98951	10 KM/Hr
13	Turn	High	11.02014, 76.99212	15 KM/Hr
14	Turn	Medium	11.02051, 76.99177	30 KM/Hr
15	Turn	Medium	11.02133, 76.98668	30 KM/Hr
16	Turn	Medium	11.02098, 76.98650	30 KM/Hr
17	Turn	Medium	11.02095, 76.98646	30 KM/Hr
18	Turn	Medium	11.02132, 76.98270	30 KM/Hr
19	Turn	Medium	11.01703, 76.96026	30 KM/Hr
20	Turn	Medium	11.01698, 76.96020	30 KM/Hr
21	Turn	High	11.01801, 76.95367	15 KM/Hr
22	Turn	High	11.03863, 76.94972	15 KM/Hr
23	Turn	Medium	11.03867, 76.94965	30 KM/Hr
24	Blind Spot	Blind Spot	11.04216, 76.94849	10 KM/Hr
25	Turn	High	11.04223, 76.94869	15 KM/Hr
26	Turn	Medium	11.03849, 76.94990	30 KM/Hr
27	Turn	Medium	11.03843, 76.94988	30 KM/Hr
28	Blind Spot	Blind Spot	11.03833, 76.94992	10 KM/Hr
29	Turn	High	11.03851, 76.95026	15 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
7	hospital	Park Hospital, Coimbatore	11.0419411, 77.0379131	30 km/h	Medium
13	hospital	St Lukes Hospital, Coimbatore	11.0335424, 77.0376261	30 km/h	Medium
15	hospital	Coimbatore Medical College Hospital	11.0289285, 77.0237553	30 km/h	Medium
17	hospital	Rajah Hospital, Coimbatore	11.0270299, 77.0187333	30 km/h	Medium
18	hospital	Sumith Hospital	11.0261493, 77.0176752	30 km/h	Medium
19	police	Peelamedu E2 Police Station	11.0253639, 77.0101634	30 km/h	Medium
25	hospital	Hindusthan Hospital, Coimbatore	11.019682, 76.9947731	30 km/h	Medium
26	hospital	Sri Ramakrishna Dental Hospital	11.0212988, 76.9883526	30 km/h	Medium
32	hospital	Sri Ramakrishna Hospital, Coimbatore	11.0231203, 76.9776419	30 km/h	Medium
33	hospital	Sri Ramakrishna Hospital	11.0236015, 76.976512	30 km/h	Medium
35	clinic	Shark Clinic	11.0188961, 76.9744842	30 km/h	Medium
36	hospital	Ramakrishna Hospital	11.0207084, 76.972413	30 km/h	Medium
37	hospital	Ellen Multispeciality Hospital	11.0213634, 76.9708723	30 km/h	Medium

	type	name	coordinates	speed_limit	risk_level
38	hospital	GP Hospital	11.0201233, 76.9710726	30 km/h	Medium
39	pharmacy	Chinnaiah Medicals	11.0207714, 76.9688485	30 km/h	Medium
40	hospital	Becker Manual Hospital	11.020659, 76.968611	30 km/h	Medium
41	pharmacy	Pasumai Pharmacy	11.0203554, 76.966338	30 km/h	Medium
42	clinic	C.S.R. Nursing Home, Coimbatore	11.0209812, 76.9661131	30 km/h	Medium
43	hospital	Jeevan Clinic and Hospital, Coimbatore	11.019947, 76.9670891	30 km/h	Medium
44	hospital	Nithya Hospital	11.0210366, 76.9665217	30 km/h	Medium
48	clinic	Aiswarya Clinic	11.0228593, 76.9656034	30 km/h	Medium
49	hospital	Preethi Medical Centre	11.0208486, 76.9649585	30 km/h	Medium
50	hospital	City Hospital	11.0193391, 76.9635166	30 km/h	Medium
51	hospital	Bethel Hospital	11.0190021, 76.962084	30 km/h	Medium
52	hospital	Bethel Hospital Pvt. Ltd. - Coimbatore	11.0187223, 76.9612328	30 km/h	Medium
53	hospital	The Balakrishnan Hospital	11.0190567, 76.9625585	30 km/h	Medium
54	hospital	Lalitha Hospital	11.0174139, 76.9617565	30 km/h	Medium
55	hospital	Roselet Medical ObgandSurgical Centre	11.0177943, 76.9612482	30 km/h	Medium
56	pharmacy	Apollo	11.0187962, 76.9603231	30 km/h	Medium
57	hospital	Kongunad Hospital, Coimbatore	11.018058, 76.9604883	30 km/h	Medium
58	hospital	Sheela Clinic	11.01843, 76.9604642	30 km/h	Medium
59	pharmacy	arya vaidhya salai	11.0193537, 76.9603411	30 km/h	Medium
60	hospital	Seesha Karunya Community Hospital	11.0160619, 76.9593814	30 km/h	Medium

	type	name	coordinates	speed_limit	risk_level
61	hospital	Kovai Diabetes Speciality Centre and Hospital	11.0159329, 76.9613153	30 km/h	Medium
62	hospital	Ganga Medical Centre and Hospitals Pvt. Ltd ,Ramnagar	11.0158724, 76.9594235	30 km/h	Medium
63	hospital	Krishna Nursing Home	11.0152327, 76.9593766	30 km/h	Medium
65	hospital	Spt Hospitals	11.0143493, 76.9614293	30 km/h	Medium
66	hospital	Sengaliappan Nursing Home	11.0165542, 76.955239	30 km/h	Medium
67	hospital	Coimbatore Bone and Joint Foundation (P) Ltd.	11.0149404, 76.9543844	30 km/h	Medium
68	hospital	Aravind Eye Hospital (City Centre)	11.0153158, 76.9539881	30 km/h	Medium
71	clinic	Kumaran Clinic	11.0152582, 76.9519379	30 km/h	Medium
72	hospital	Veeku Hospital	11.0150799, 76.9517022	30 km/h	Medium
73	hospital	Parvathy Hospitals	11.01472, 76.952299	30 km/h	Medium
74	hospital	PGS Hospital	11.0153485, 76.9524368	30 km/h	Medium
76	hospital	Lotus Eye Care Hospital, Coimbatore	11.0140006, 76.9543624	30 km/h	Medium
77	hospital	Kumaran Hospital, Coimbatore	11.0150812, 76.95132	30 km/h	Medium
78	hospital	Vedanayagam Hospital (P) Limited	11.0144375, 76.9504979	30 km/h	Medium
81	hospital	Aswin Hospital	11.0255271, 76.9515108	30 km/h	Medium
83	hospital	Ganga Hospital	11.026129, 76.9524873	30 km/h	Medium
87	hospital	K T V R Group Hospital	11.026167, 76.9499384	30 km/h	Medium
88	police	C-3 Saibaba Colony Police Station	11.0266348, 76.9515967	30 km/h	Medium
89	hospital	Onecare Ortho Hospital	11.026568, 76.948798	30 km/h	Medium
90	clinic	Shree Kanna Clinic	11.026359, 76.948803	30 km/h	Medium



	type	name	coordinates	speed_limit	risk_level
91	clinic	Akshaya Clinic	11.0271033, 76.9496102	30 km/h	Medium
92	hospital	Dr.Sengaliappan Nursing Home, Coimbatore	11.0272375, 76.9501348	30 km/h	Medium
96	hospital	Womens Medical Centre, Coimbatore	11.0337824, 76.9517175	30 km/h	Medium
97	hospital	Dr. BRJ Ortho Centre	11.0340354, 76.9512209	30 km/h	Medium
98	hospital	H. S. Hospital	11.0418035, 76.9477855	30 km/h	Medium
99	hospital	Krithika Hospital , Tiruppur	11.0424742, 76.9476856	30 km/h	Medium
100	hospital	Padmavathy Hospital	11.0427427, 76.9477212	30 km/h	Medium
101	hospital	Malar Hpl Goundanpalayam	11.0437293, 76.9475494	30 km/h	Medium
102	fire_station	Tamilnadu fire and rescue services	11.0440949, 76.9485156	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
8	school	Park Global School	11.0424178, 77.038601	30 km/h	Medium
9	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
12	school	RAK's Pallikoodam	11.0381253, 77.0329064	30 km/h	Medium

	type	name	coordinates	speed_limit	risk_level
14	college	Government Polytechnic	11.0300874, 77.0308517	30 km/h	Medium
16	traffic_signals	Hope College Signal	11.0263851, 77.0208783	30 km/h	Medium
20	school	Sardar Vallabhbhai Patel International School of Textiles & Management	11.0253598, 77.0082319	30 km/h	Medium
21	college	PSG College of Technology	11.024807, 77.0029194	30 km/h	Medium
22	school	PSG Sarva Jana Higher Secondary School	11.0227214, 77.0040432	30 km/h	Medium
23	college	PSG Institute of Management	11.0228112, 77.0030943	30 km/h	Medium
24	college	PSG Grounds	11.0203887, 77.0047109	30 km/h	Medium
27	college	Sri Ramakrishna Dental College	11.0213038, 76.9883559	30 km/h	Medium
28	college	SNR College of Arts and Science	11.0219743, 76.9877109	30 km/h	Medium
29	college	Sri Ramakrishna College of Arts & Science	11.022171, 76.98703	30 km/h	Medium
30	school	Sri Ramakrishna Matric Higher Secondary School	11.023175, 76.9847233	30 km/h	Medium
31	college	Sri Ramakrishna Arts and Science College for Womens	11.0223964, 76.9780502	30 km/h	Medium
34	school	P.R.Sidha Naidu Memorial Matriculation School	11.0221084, 76.9765552	30 km/h	Medium
45	school	St. Mary's Primary School	11.0218649, 76.9672728	30 km/h	Medium
46	school	St. Mar's High School	11.0221987, 76.9674321	30 km/h	Medium
47	school	Brindisi Matric. Ir. Sec. School	11.0226114, 76.9672831	30 km/h	Medium
64	school	North Coimbatore Corporation Higher Secondary School	11.0154056, 76.958268	30 km/h	Medium
69	college	Tamilnadu Forest Academy	11.0167662, 76.946606	30 km/h	Medium
70	university	Avinasilingam Deemed University for Home Sciences	11.0191444, 76.9515442	30 km/h	Medium
75	college	Institute of Forest Genetics & Tree Breeding (IFGTB)	11.0176359, 76.9514724	30 km/h	Medium

	type	name	coordinates	speed_limit	risk_level
79	school	Avinashilingam Vocational Training Institute	11.0225375, 76.9515029	30 km/h	Medium
80	school	Ramalinga Chettiar hr sec school	11.0239711, 76.9485703	30 km/h	Medium
82	school	Ramalingam Primary School	11.0256049, 76.9510321	30 km/h	Medium
84	marketplace	Saibaba Colony Vegetable Market	11.0261428, 76.951784	30 km/h	Medium
85	traffic_signals	Saibaba Temple Signal	11.0269678, 76.9512074	30 km/h	Medium
86	traffic_signals	Saibaba Temple Signal	11.0269695, 76.9513556	30 km/h	Medium
93	school	Amrit Special needs school	11.0298208, 76.9503161	30 km/h	Medium
94	marketplace	M.G.R.Wholesale Market	11.0304613, 76.9497095	30 km/h	Medium

## Route Photos of Risky Spots



**Risk Type:** Roundabout

**Risk Level:** High

**Speed Limit:** 15 KM/Hr

**Coordinates:** 11.01891, 76.96036





**Risk Type:** U-Turn

**Risk Level:** High

**Speed Limit:** 10 KM/Hr

**Coordinates:** 11.0161282, 76.9896128



**Risk Type:** U-Turn

**Risk Level:** High

**Speed Limit:** 10 KM/Hr

**Coordinates:** 11.0421633, 76.9484931





**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:** Turn

**Risk Level:** High

**Speed Limit:** 15 KM/Hr

**Coordinates:** 11.01613, 76.98961



**Risk Type:** Blind Spot

**Risk Level:** Blind Spot

**Speed Limit:** 10 KM/Hr

**Coordinates:** 11.01618, 76.98951





**Risk Type:** Turn  
**Risk Level:** High  
**Speed Limit:** 15 KM/Hr  
**Coordinates:** 11.02014, 76.99212



**Risk Type:** Turn  
**Risk Level:** Medium  
**Speed Limit:** 30 KM/Hr  
**Coordinates:** 11.02051, 76.99177



**Risk Type:** Turn  
**Risk Level:** Medium  
**Speed Limit:** 30 KM/Hr  
**Coordinates:** 11.02133, 76.98668





**Risk Type:** Turn

**Risk Level:** Medium

**Speed Limit:** 30 KM/Hr

**Coordinates:** 11.02098, 76.98650



**Risk Type:** Turn

**Risk Level:** Medium

**Speed Limit:** 30 KM/Hr

**Coordinates:** 11.02095, 76.98646





**Risk Type:** Turn

**Risk Level:** Medium

**Speed Limit:** 30 KM/Hr

**Coordinates:** 11.02132, 76.98270



**Risk Type:** Turn

**Risk Level:** Medium

**Speed Limit:** 30 KM/Hr

**Coordinates:** 11.01703, 76.96026



**Risk Type:** Turn

**Risk Level:** Medium

**Speed Limit:** 30 KM/Hr

**Coordinates:** 11.01698, 76.96020





**Risk Type:** Turn

**Risk Level:** High

**Speed Limit:** 15 KM/Hr

**Coordinates:** 11.01801, 76.95367



**Risk Type:** Turn

**Risk Level:** High

**Speed Limit:** 15 KM/Hr

**Coordinates:** 11.03863, 76.94972





**Risk Type: Turn**

**Risk Level: Medium**

**Speed Limit: 30 KM/Hr**

**Coordinates: 11.03867, 76.94965**



**Risk Type: Blind Spot**

**Risk Level: Blind Spot**

**Speed Limit: 10 KM/Hr**

**Coordinates: 11.04216, 76.94849**



**Risk Type: Turn**

**Risk Level: High**

**Speed Limit: 15 KM/Hr**

**Coordinates: 11.04223, 76.94869**





**Risk Type:** Turn

**Risk Level:** Medium

**Speed Limit:** 30 KM/Hr

**Coordinates:** 11.03849, 76.94990



**Risk Type:** Turn

**Risk Level:** Medium

**Speed Limit:** 30 KM/Hr

**Coordinates:** 11.03843, 76.94988





**Risk Type:** Blind Spot  
**Risk Level:** Blind Spot  
**Speed Limit:** 10 KM/Hr  
**Coordinates:** 11.03833, 76.94992



**Risk Type:** Turn  
**Risk Level:** High  
**Speed Limit:** 15 KM/Hr  
**Coordinates:** 11.03851, 76.95026

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