



IndianOil

JOURNEY RISK MANAGEMENT (JRM) STUDY

IOCL Coimbatore Terminal to Sri Skanda Agencies

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

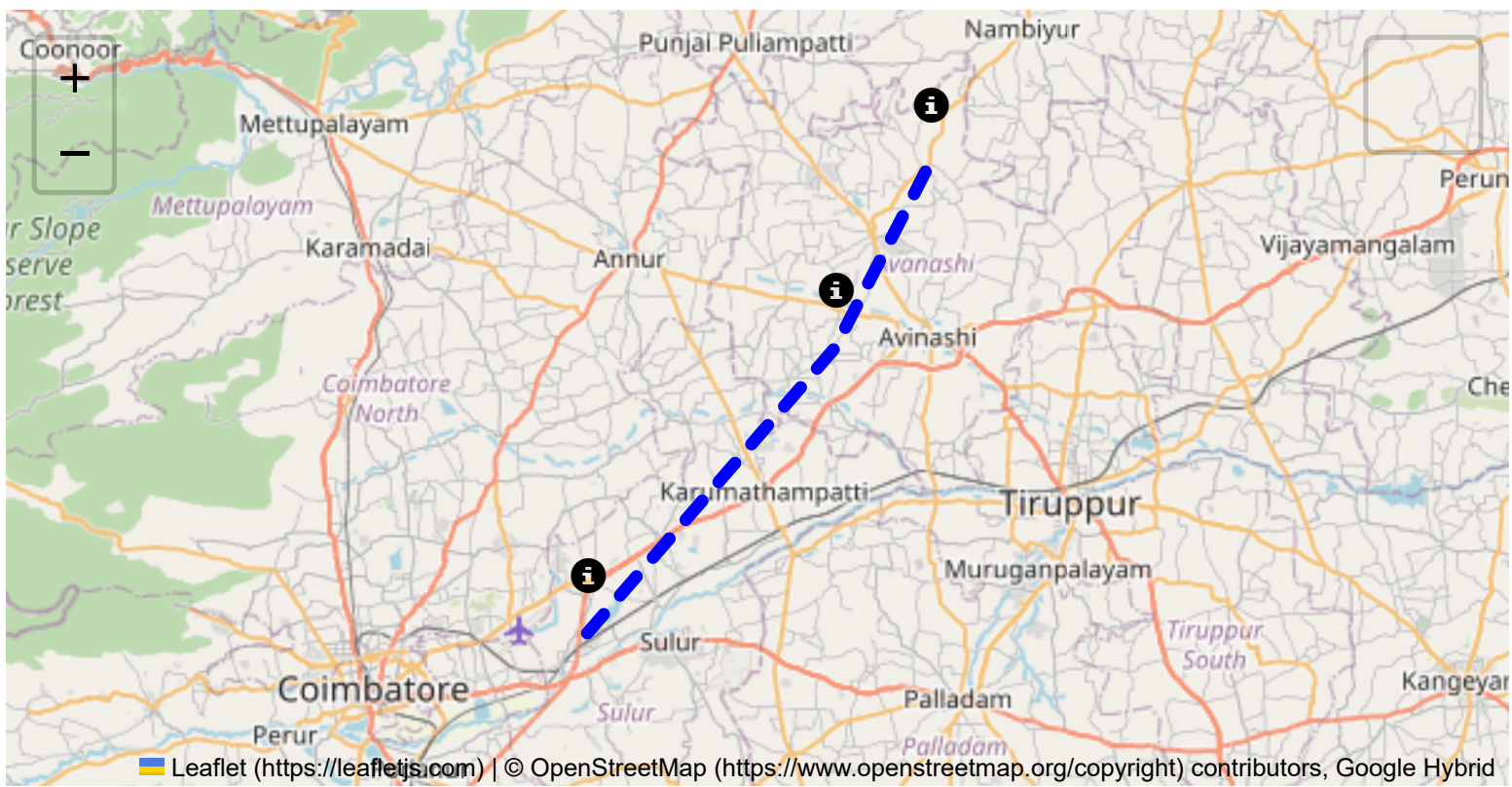
The JRM report addresses environmental risks along the route, ensuring compliance with environmental protection laws in ecologically sensitive zones. It suggests strategies such as identifying areas near water bodies, forests, or populated regions and implementing safety measures to minimize environmental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

Journey Risk Mitigation

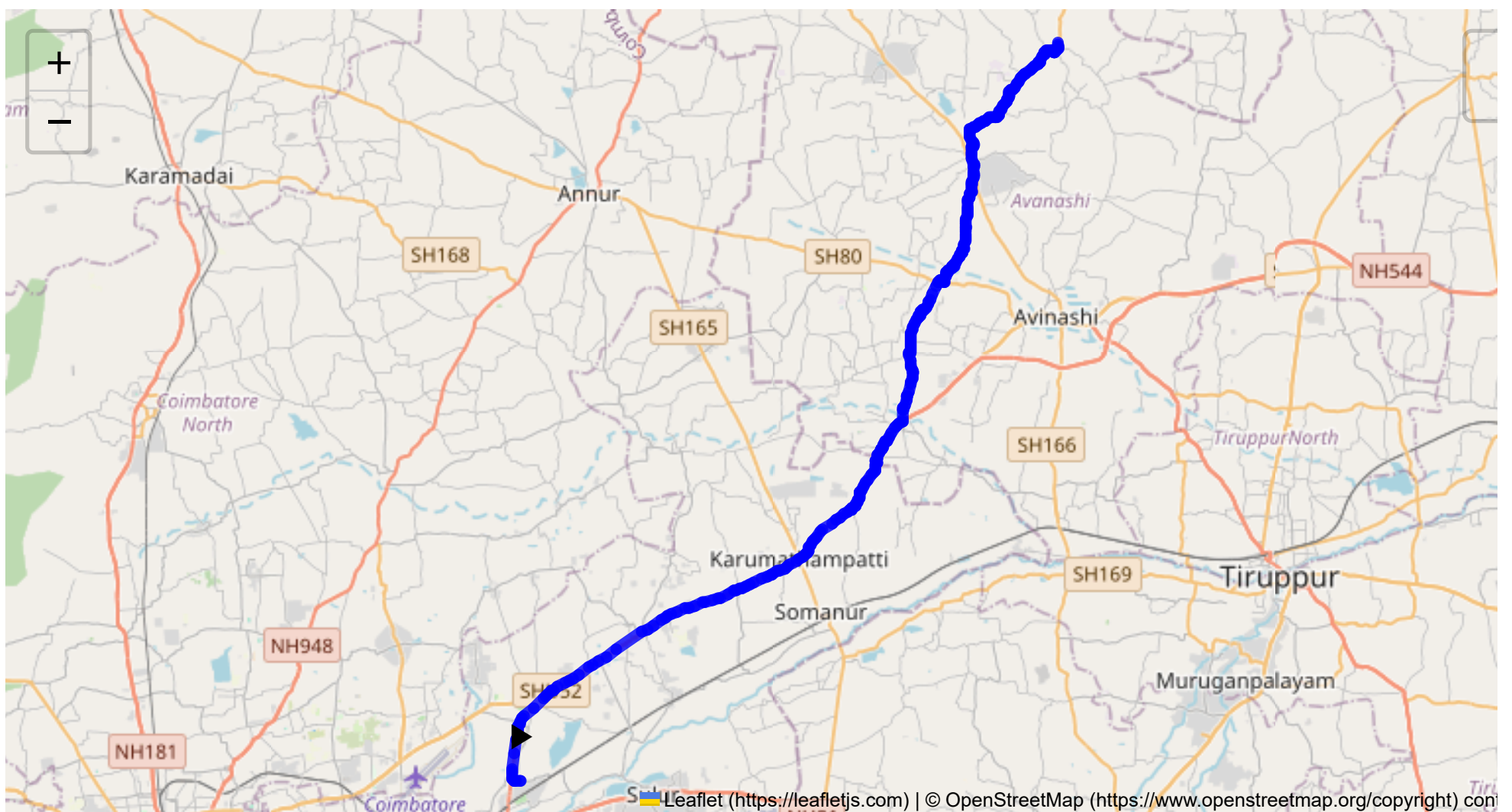
The report includes route-specific risk assessments, detailed journey charts, and defensive driving guidelines for each transport route. Integration with vehicle tracking systems guarantees real-time warnings on hazardous areas, speed limits, and mandatory stops, consistent with RTSP and CMVR safety 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: 39.02 km
Estimated Duration: 1.0 hours
Adjusted Duration (Heavy Vehicle): 1.3 hours
Start: (11.0315, 77.0797)
End: (11.284527, 77.267993)



Welcome to the Journey Risk Management Study

1. Overview of the Route Map

The route from Athappagoundenpudur to Koottapalli via Sevr-Thekkalur Rd is approximately 39.02 kilometers. Starting from Athappagoundenpudur in Coimbatore, Tamil Nadu, the route travels eastward, passing through Nambiampalayam and reaching Koottapalli, Sevr, Pulipar in Tamil Nadu. The route primarily follows regional roads, providing connectivity between rural and semi-urban areas.

2. Typical Weather Conditions and Potential Weather-Related Hazards

The area typically experiences a tropical climate with a distinct wet and dry season. Monsoon runs from June to September, which might lead to heavy rain and occasional flooding. During the monsoon, roads may become slippery and visibility may decrease, increasing the risk of accidents. Summer temperatures are generally high, with potential for wear on both vehicles and infrastructure.

3. Analysis of Traffic Patterns

Traffic is generally moderate, with increased activity during local market hours and peak commute times in the morning (7:30 AM - 9:30 AM) and evening (5:00 PM - 7:00 PM). Traffic can be heavier near Nambiampalayam due to local traffic. Congestion is also possible around school and workplace zones, especially during opening and closing hours.

4. Assessment of Road Quality and Infrastructure

The roads in this region are variable in quality. Major concerns include:

- Some stretches may lack proper signage and markings.
- Potholes and uneven surfaces in certain sections, particularly on less maintained stretches near smaller villages.
- Limited lighting in rural sections may affect night driving safety.

5. Suggestions for Alternative Routes for Emergencies

In case of heavy traffic or road blockages, routes such as the Nambiyur-Kunnathur Rd can provide alternative paths, though these might be longer. It is critical to have a GPS with live traffic updates to adjust routes as needed dynamically.

6. Summary of Local Regulations Affecting Hazardous Material Transport

Transporting hazardous materials generally requires prior permissions and adhering to specific routes designated by the local transport authority. This can include designated timings and specified roadways. Vehicles must clearly display hazard placarding and be equipped with safety equipment.

7. Overview of Historical Incidents Involving Heavy Vehicles or Hazardous Materials

Data on historical incidents in this region suggest occasional accidents due to poor road conditions and weather-related hazards. However, significant hazardous material incidents are rare. Prevention measures focus on enhancing driver awareness and preparedness.

8. Environmental Considerations and Sensitive Areas

The route passes through agricultural zones, where spillage or accidents involving hazardous materials could impact crops and local water bodies. Care should be taken near these areas to prevent environmental contamination.

9. Analysis of Communication Coverage

Mobile network coverage is generally reliable in larger villages and towns but may have weak spots in more rural sections between settlements like Nambiampalayam. Drivers should ensure they have a reliable communication means and pre-download necessary maps and data.

10. Estimated Emergency Response Times

Emergency services in urban centers like Coimbatore respond within 15-20 minutes. However, in rural stretches, response times might extend to 30-45 minutes due to distance and road accessibility issues. Drivers should be trained in basic first aid and equipped to manage initial responses.

12. Overall Summary of Risk Assessment

The route has moderate risk levels primarily due to variable road quality, potential weather hazards, and rural areas with longer emergency response times. Key mitigation strategies include careful route planning, regular updates on weather and traffic conditions, and adherence to safety regulations for transporting hazardous materials. Regular maintenance checks for vehicles and communication preparedness are also recommended to enhance overall safety.

Risk Assessment - Turns

	Risk Type	Risk Level	Coordinates	Speed Limit
0	Turn	High	11.03211, 77.07640	15 KM/Hr
1	Turn	Medium	11.14084, 77.20403	30 KM/Hr
2	Turn	Medium	11.14110, 77.20394	30 KM/Hr
3	Turn	High	11.15497, 77.21322	15 KM/Hr
4	Turn	High	11.20298, 77.22563	15 KM/Hr
5	Turn	High	11.20290, 77.22764	15 KM/Hr
6	Turn	Medium	11.23543, 77.23700	30 KM/Hr
7	Turn	Medium	11.23929, 77.23789	30 KM/Hr
8	Turn	High	11.23953, 77.23817	15 KM/Hr
9	Turn	Medium	11.24260, 77.23782	30 KM/Hr
10	Turn	High	11.24271, 77.23777	15 KM/Hr
11	Turn	Medium	11.24280, 77.23782	30 KM/Hr

	Risk Type	Risk Level	Coordinates	Speed Limit
12	Turn	High	11.24281, 77.23785	15 KM/Hr
13	Turn	Medium	11.24910, 77.23723	30 KM/Hr
14	Turn	Medium	11.24927, 77.23739	30 KM/Hr
15	Turn	Medium	11.24940, 77.23788	30 KM/Hr
16	Turn	High	11.24949, 77.23797	15 KM/Hr
17	Turn	Medium	11.25949, 77.24611	30 KM/Hr
18	Turn	Medium	11.25963, 77.24639	30 KM/Hr
19	Turn	Medium	11.28168, 77.26648	30 KM/Hr

Emergency Locations

	type	name	coordinates	speed_limit	risk_level
0	hospital	Royal Care Hospital, Coimbatore	11.059106, 77.0893479	30 km/h	Medium
4	police	Karumathampatti Police Station	11.1093464, 77.1802095	30 km/h	Medium

Crowded Spots

	type	name	coordinates	speed_limit	risk_level
1	college	PSG Institute of Technology and Applied Research	11.0677118, 77.0945744	30 km/h	Medium
2	school	GRD-CPF Matriculation Higher Secondary School	11.0610217, 77.0933504	30 km/h	Medium
3	school	M. Nanjappa Chettiar Matriculation Hr. Sec. School	11.0715394, 77.1039133	30 km/h	Medium
5	marketplace	Thekkalur Weekly market	11.1537037, 77.2126685	30 km/h	Medium
6	marketplace	Thekalur weekly market	11.1547211, 77.2140187	30 km/h	Medium

Route Photos of Risky Spots

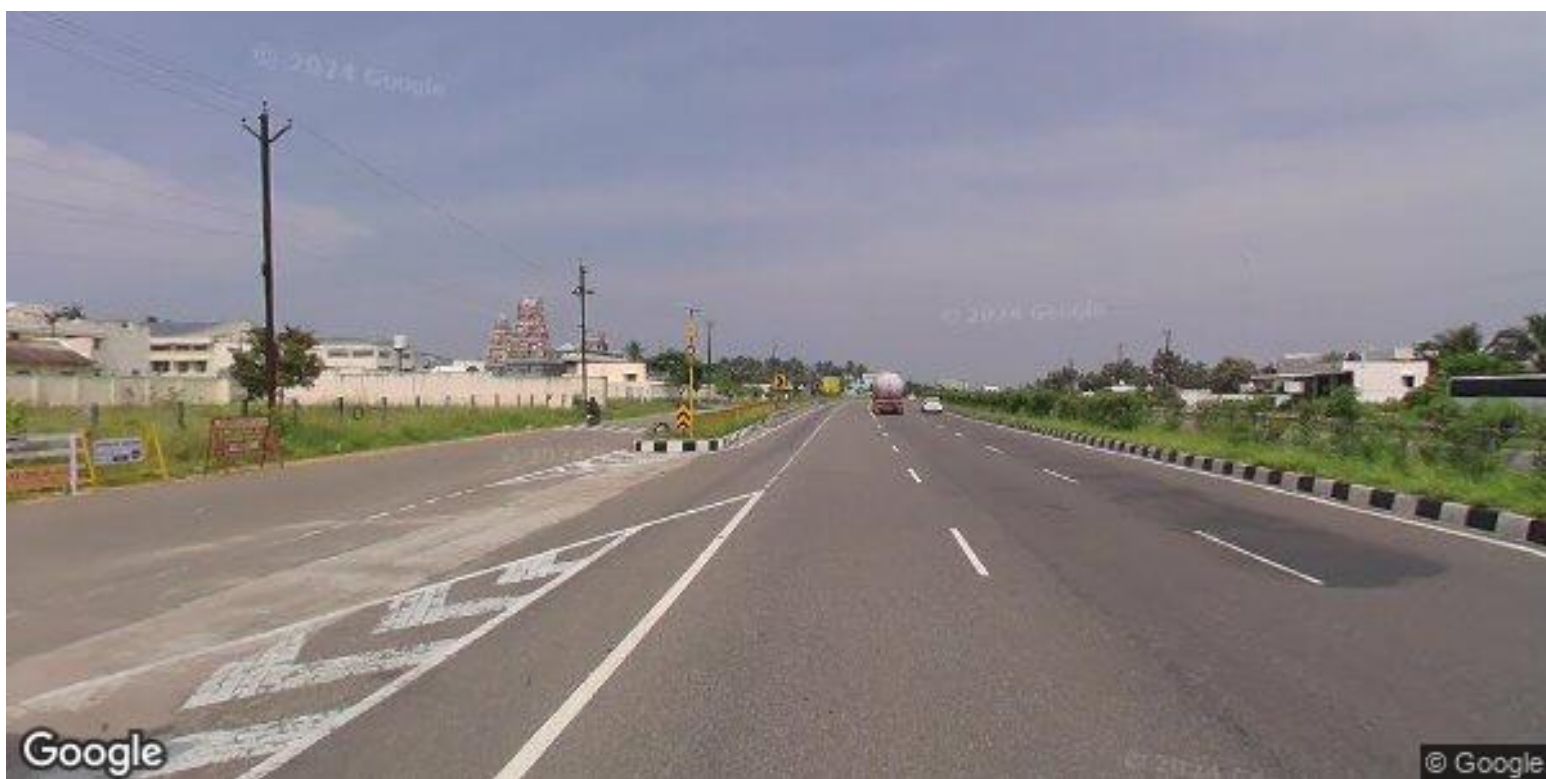


Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.03211, 77.07640

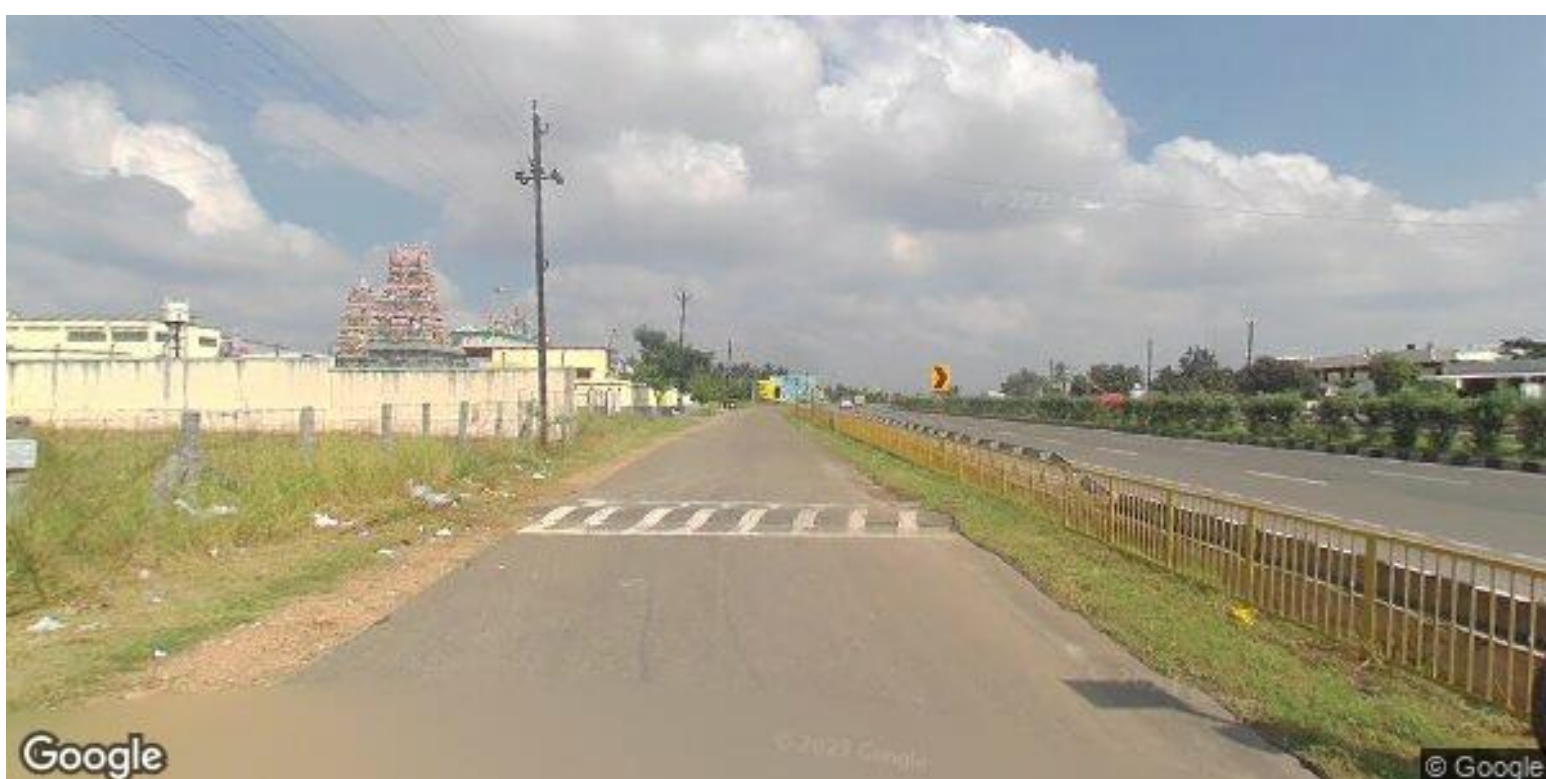


Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.14084, 77.20403



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Coordinates: 11.14110, 77.20394



Risk Type: Turn
Risk Level: High
Speed Limit: 15 KM/Hr
Coordinates: 11.15497, 77.21322



Risk Type: Turn
Risk Level: High
Speed Limit: 15 KM/Hr
Coordinates: 11.20298, 77.22563



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.20290, 77.22764



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.23543, 77.23700



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.23929, 77.23789



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.23953, 77.23817



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.24260, 77.23782



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.24271, 77.23777



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.24280, 77.23782



Risk Type: Turn
Risk Level: High
Speed Limit: 15 KM/Hr
Coordinates: 11.24281, 77.23785



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Coordinates: 11.24910, 77.23723



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Coordinates: 11.24927, 77.23739



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Coordinates: 11.24940, 77.23788



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Coordinates: 11.24949, 77.23797



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Coordinates: 11.25949, 77.24611



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Coordinates: 11.25963, 77.24639



Risk Type: Turn
Risk Level: Medium
Speed Limit: 30 KM/Hr
Coordinates: 11.28168, 77.26648
