



# IndianOil

## JOURNEY RISK MANAGEMENT (JRM) STUDY

### Salem Terminal TO COCO KODUMUDI TSA ENTERPRISES U II

#### 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.

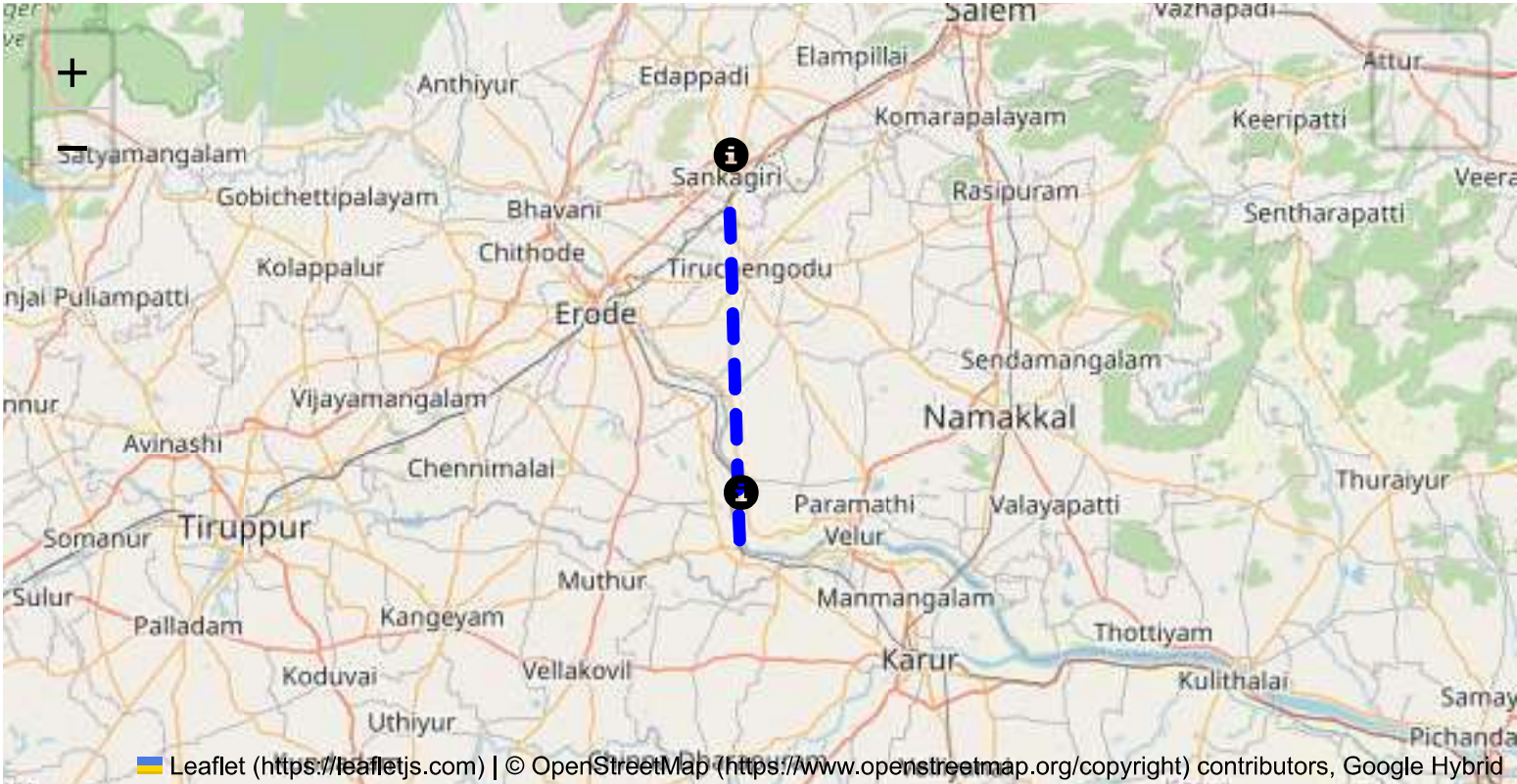
## Journey Risk Mitigation

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.

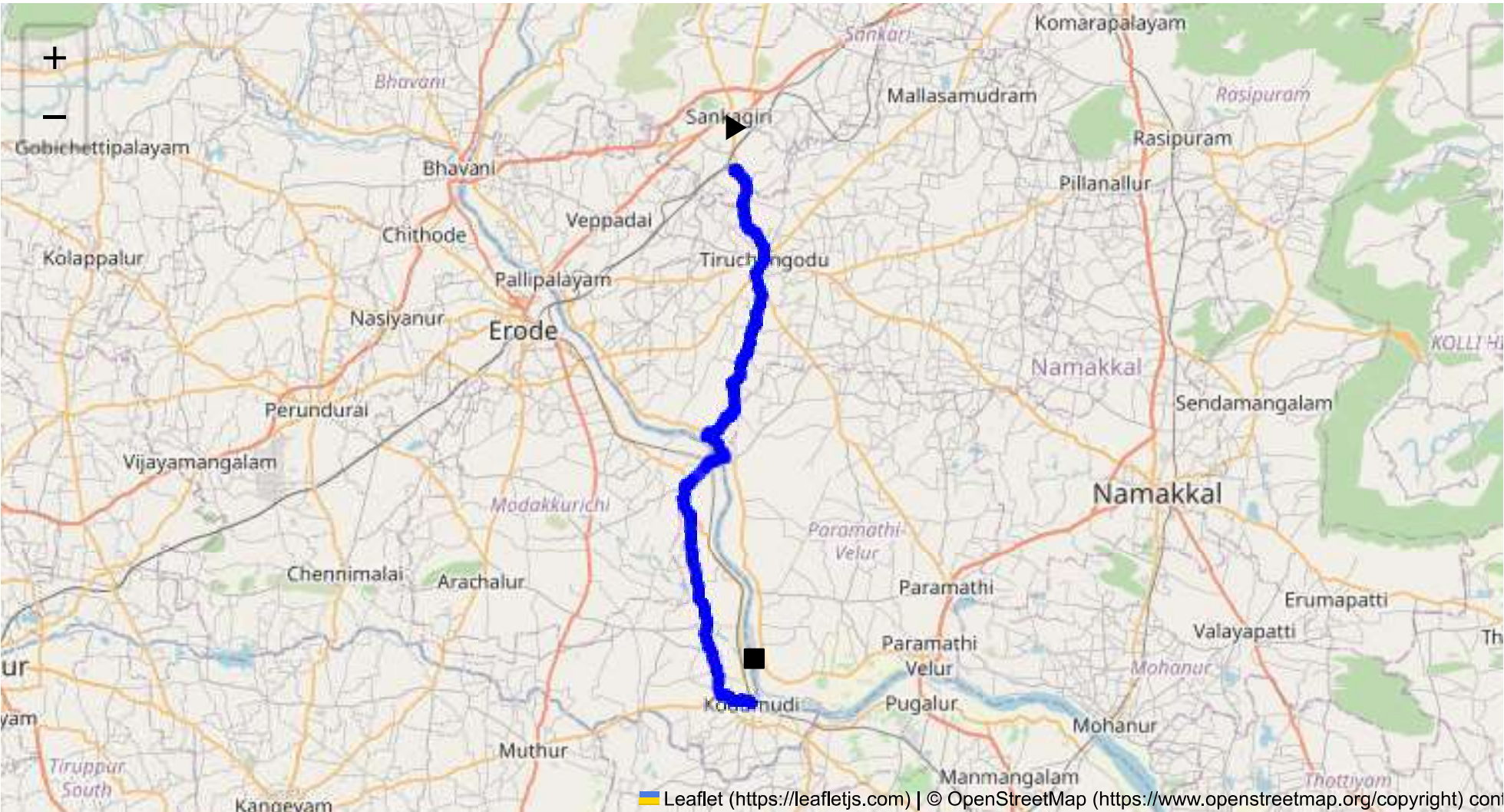
## Compliance with Government Directives

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: 48.71 km**  
**Estimated Duration: 1.2 hours**  
**Adjusted Duration (Heavy Vehicle): 1.5 hours**  
**Start: (11.4381, 77.8734)**  
**End: (11.076469, 77.885591)**



**Risk Spots**

	RiskSpotType	Coordinates	Speed Limit	Distance from Start
1	Turn	11.43822, 77.87348	15 KM/Hr	0.01 km
2	Turn	11.43968, 77.87345	15 KM/Hr	0.14 km
3	Turn	11.44022, 77.87546	15 KM/Hr	0.40 km



	RiskSpotType	Coordinates	Speed Limit	Distance from Start
0	Roundabout	11.38395, 77.89480	15 KM/Hr	7.33 km
4	Turn	11.37868, 77.89498	15 KM/Hr	7.99 km
5	Turn	11.35743, 77.89195	15 KM/Hr	10.64 km
6	Turn	11.33268, 77.88827	15 KM/Hr	13.50 km
7	Turn	11.33071, 77.88660	15 KM/Hr	13.75 km
8	Turn	11.32155, 77.88499	15 KM/Hr	14.83 km
9	Turn	11.31205, 77.88131	15 KM/Hr	15.98 km
10	Turn	11.31151, 77.88008	15 KM/Hr	16.11 km
11	Turn	11.30805, 77.87934	15 KM/Hr	16.50 km
12	Turn	11.30625, 77.87776	15 KM/Hr	16.78 km
13	Turn	11.29763, 77.87710	15 KM/Hr	17.76 km
14	Turn	11.29668, 77.87515	15 KM/Hr	17.94 km
15	Turn	11.29585, 77.87457	15 KM/Hr	18.13 km
16	Turn	11.27057, 77.86827	15 KM/Hr	21.35 km
17	Turn	11.26017, 77.85606	15 KM/Hr	23.24 km
18	Turn	11.25802, 77.85511	15 KM/Hr	23.47 km
19	Turn	11.25287, 77.86220	15 KM/Hr	24.43 km
20	Turn	11.24384, 77.86689	15 KM/Hr	25.61 km
21	Turn	11.24100, 77.86030	15 KM/Hr	26.34 km
22	Turn	11.24196, 77.85902	15 KM/Hr	26.54 km
23	Turn	11.23960, 77.85563	15 KM/Hr	27.01 km
24	Turn	11.22377, 77.83980	15 KM/Hr	29.54 km
25	Turn	11.14828, 77.84956	15 KM/Hr	38.09 km
26	Turn	11.12714, 77.85403	15 KM/Hr	40.62 km
27	Blind Spot	11.08086, 77.86453	10 KM/Hr	45.98 km
28	Turn	11.07781, 77.87246	15 KM/Hr	46.98 km
29	Turn	11.07811, 77.87934	15 KM/Hr	47.78 km
30	Turn	11.07766, 77.88453	15 KM/Hr	48.39 km
31	Turn	11.07630, 77.88540	15 KM/Hr	48.54 km

## Emergency Services

	type	name	coordinates	side_of_road
0	hospital	Tiruchengode, Goverment Hospital	11.3903328, 77.8920627	Driver's Side

	type	name	coordinates	side_of_road
1	hospital	SPM Medical Centre,Tiruchengode	11.3881331, 77.8931963	Opposite Side
3	clinic	Kongu Nursing Home	11.3783065, 77.8961134	Driver's Side
4	hospital	T.C.A Hospital Tiruchengode	11.3791885, 77.8965774	Driver's Side
5	hospital	Soorya Multispecialty Hospital	11.3786429, 77.8931912	Opposite Side
6	hospital	Tiruchengode Government Hospital	11.37645, 77.89426	Driver's Side
7	hospital	Tirukumaran Hospitals	11.3782118, 77.8914933	Opposite Side
8	hospital	Krishna Hospital, Namakkal	11.3754811, 77.8931817	Opposite Side
9	police	கரட்டுப்பாளையம் காவல் நிலையம்	11.357586, 77.8922539	Driver's Side
10	clinic	Jai Sri Amman Clinic	11.1102489, 77.8579522	Opposite Side
11	hospital	Natraj Doctor Hospital	11.0778856, 77.8838909	Driver's Side
12	hospital	PP Hospital	11.0780799, 77.8841112	Driver's Side
13	hospital	RS Hospital	11.0778911, 77.8842359	Driver's Side
14	hospital	Akila Hospital	11.0766996, 77.8849172	Opposite Side
15	hospital	Thirumurugan Hospital	11.0771152, 77.8845769	Opposite Side
16	hospital	Chitra Hospital	11.0779188, 77.8845563	Driver's Side
17	hospital	Saravana Hospital	11.0759985, 77.8853959	Opposite Side
18	hospital	Dr. Banumathy Hospital	11.0751666, 77.8860226	Opposite Side
19	clinic	Hari Health Care	11.0788962, 77.8868224	Driver's Side

Rest Stops

	type	name	coordinates	side_of_road
2	restaurant	Lijo	11.3805115, 77.8946385	Opposite Side

Welcome to the Journey Risk Management Study

Route Safety Analysis: Sangagiri to Kodumudi

1. Overview of the Route Map

The route from CVQF+23W, Sangagiri to 3VGP+H55, Kodumudi in Tamil Nadu covers approximately 48.71 kilometers. This drive primarily traverses regional highways and rural roads, passing through a mix of agricultural areas and small towns.

## 2. Typical Weather Conditions and Hazards

- **Weather Patterns:** Tamil Nadu generally experiences a tropical climate, with hot and dry conditions most of the year. From October to December, the region sees the northeast monsoon, bringing heavy rainfall.
- **Potential Hazards:** During the monsoon, waterlogging and reduced visibility can pose risks. Dry seasons may lead to dust, affecting clarity and mechanical function.

## 3. Traffic Patterns

- **Peak Hours:** Traffic generally peaks in the morning hours (8 AM – 10 AM) and evening hours (5 PM – 7 PM), primarily due to local commuting and school timings.
- **Congestion-Prone Areas:** Small towns along the route may experience congestion, particularly at market areas or near school zones. Plan for slight delays in these areas.

## 4. Road Quality and Infrastructure

- **Condition:** Roads are mostly two-lane, with some sections well-maintained and others prone to potholing, especially post-monsoon.
- **Infrastructure:** Limited rest stops; drivers should prepare for few amenities. Agricultural equipment may occasionally slow down traffic.

## 5. Alternative Routes for Emergencies

- **Primary Detour:** If the main route is blocked, State Highway 84 provides an alternative, though it may increase travel time. Ensure to check current road conditions before transit via this route.

## 6. Hazardous Material Transport Regulations

- **Tamil Nadu Regulations:** Requires permits for transporting hazardous materials, adherence to specified routes, and clear labeling of vehicles. Drivers must hold valid licenses and certifications for handling such materials.

## 7. Historical Incidents

- **Incident Reports:** In the past, some accidents have involved overturns due to abrupt stops or avoiding obstacles. However, major incidents are infrequent.

## 8. Environmental Considerations

- **Sensitive Areas:** Route passes through agricultural lands; spills could be devastating. Preventive measures and emergency protocols are crucial.

## 9. Communication Coverage

- **Dead Zones:** Intermittent mobile signals in rural stretches, especially in remote areas near farmland. Ensure radio communication as a backup.

## 10. Estimated Emergency Response Times

- **Response Times:** In less populated areas, emergency services may take up to 45-60 minutes to arrive, while closer to towns, it is approximately 15-30 minutes.

## 11. Overall Summary of Risk Assessment

The route from Sangagiri to Kodumudi, while largely straightforward, presents moderate risks during weather extremes and in contexts requiring immediate emergency response. Road conditions are variable; maintaining speed control and readiness for sudden stops is vital. Ensure strict adherence to hazardous material transport regulations and anticipate possible communication gaps. Drivers should be adequately trained in emergency response techniques and environmental protection measures. Preparedness for unexpected delays is essential for safer operations.

### Route Photos of Risky Spots



**Risk Type:** Turn  
**Speed Limit:** 15 KM/Hr  
**Distance from Start:** 0.40 km  
**Coordinates:** 11.44022, 77.87546





**Risk Type: Roundabout**

**Speed Limit: 15 KM/Hr**

**Distance from Start: 7.33 km**

**Coordinates: 11.38395, 77.89480**



**Risk Type: Turn**

**Speed Limit: 15 KM/Hr**

**Distance from Start: 7.99 km**

**Coordinates: 11.37868, 77.89498**





**Risk Type:** Turn  
**Speed Limit:** 15 KM/Hr  
**Distance from Start:** 10.64 km  
**Coordinates:** 11.35743, 77.89195



**Risk Type:** Turn  
**Speed Limit:** 15 KM/Hr  
**Distance from Start:** 13.50 km  
**Coordinates:** 11.33268, 77.88827



**Risk Type:** Turn  
**Speed Limit:** 15 KM/Hr  
**Distance from Start:** 13.75 km  
**Coordinates:** 11.33071, 77.88660





**Risk Type: Turn**

**Speed Limit: 15 KM/Hr**

**Distance from Start: 14.83 km**

**Coordinates: 11.32155, 77.88499**



**Risk Type: Turn**

**Speed Limit: 15 KM/Hr**

**Distance from Start: 15.98 km**

**Coordinates: 11.31205, 77.88131**





**Risk Type:** Turn  
**Speed Limit:** 15 KM/Hr  
**Distance from Start:** 16.11 km  
**Coordinates:** 11.31151, 77.88008



**Risk Type:** Turn  
**Speed Limit:** 15 KM/Hr  
**Distance from Start:** 16.50 km  
**Coordinates:** 11.30805, 77.87934



**Risk Type:** Turn  
**Speed Limit:** 15 KM/Hr  
**Distance from Start:** 16.78 km  
**Coordinates:** 11.30625, 77.87776





**Risk Type: Turn**

**Speed Limit: 15 KM/Hr**

**Distance from Start: 17.76 km**

**Coordinates: 11.29763, 77.87710**



**Risk Type: Turn**

**Speed Limit: 15 KM/Hr**

**Distance from Start: 21.35 km**

**Coordinates: 11.27057, 77.86827**





**Risk Type: Turn**

**Speed Limit: 15 KM/Hr**

**Distance from Start: 23.24 km**

**Coordinates: 11.26017, 77.85606**



**Risk Type: Turn**

**Speed Limit: 15 KM/Hr**

**Distance from Start: 23.47 km**

**Coordinates: 11.25802, 77.85511**



**Risk Type: Turn**

**Speed Limit: 15 KM/Hr**

**Distance from Start: 24.43 km**

**Coordinates: 11.25287, 77.86220**





**Risk Type:** Turn  
**Speed Limit:** 15 KM/Hr  
**Distance from Start:** 25.61 km  
**Coordinates:** 11.24384, 77.86689



**Risk Type:** Turn  
**Speed Limit:** 15 KM/Hr  
**Distance from Start:** 26.34 km  
**Coordinates:** 11.24100, 77.86030





**Risk Type:** Turn  
**Speed Limit:** 15 KM/Hr  
**Distance from Start:** 26.54 km  
**Coordinates:** 11.24196, 77.85902



**Risk Type:** Turn  
**Speed Limit:** 15 KM/Hr  
**Distance from Start:** 27.01 km  
**Coordinates:** 11.23960, 77.85563



**Risk Type:** Turn  
**Speed Limit:** 15 KM/Hr  
**Distance from Start:** 29.54 km  
**Coordinates:** 11.22377, 77.83980





**Risk Type:** Turn  
**Speed Limit:** 15 KM/Hr  
**Distance from Start:** 38.09 km  
**Coordinates:** 11.14828, 77.84956



**Risk Type:** Turn  
**Speed Limit:** 15 KM/Hr  
**Distance from Start:** 40.62 km  
**Coordinates:** 11.12714, 77.85403





**Risk Type:** Blind Spot  
**Speed Limit:** 10 KM/Hr  
**Distance from Start:** 45.98 km  
**Coordinates:** 11.08086, 77.86453



**Risk Type:** Turn  
**Speed Limit:** 15 KM/Hr  
**Distance from Start:** 46.98 km  
**Coordinates:** 11.07781, 77.87246



**Risk Type:** Turn  
**Speed Limit:** 15 KM/Hr  
**Distance from Start:** 47.78 km  
**Coordinates:** 11.07811, 77.87934





Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 48.39 km

Coordinates: 11.07766, 77.88453



Risk Type: Turn

Speed Limit: 15 KM/Hr

Distance from Start: 48.54 km

Coordinates: 11.07630, 77.88540

[Download Interactive Map](#)



