



IndianOil

JOURNEY RISK MANAGEMENT (JRM) STUDY

Gorakhpur LPG BP to MAHENDRA GAS SERVICE

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

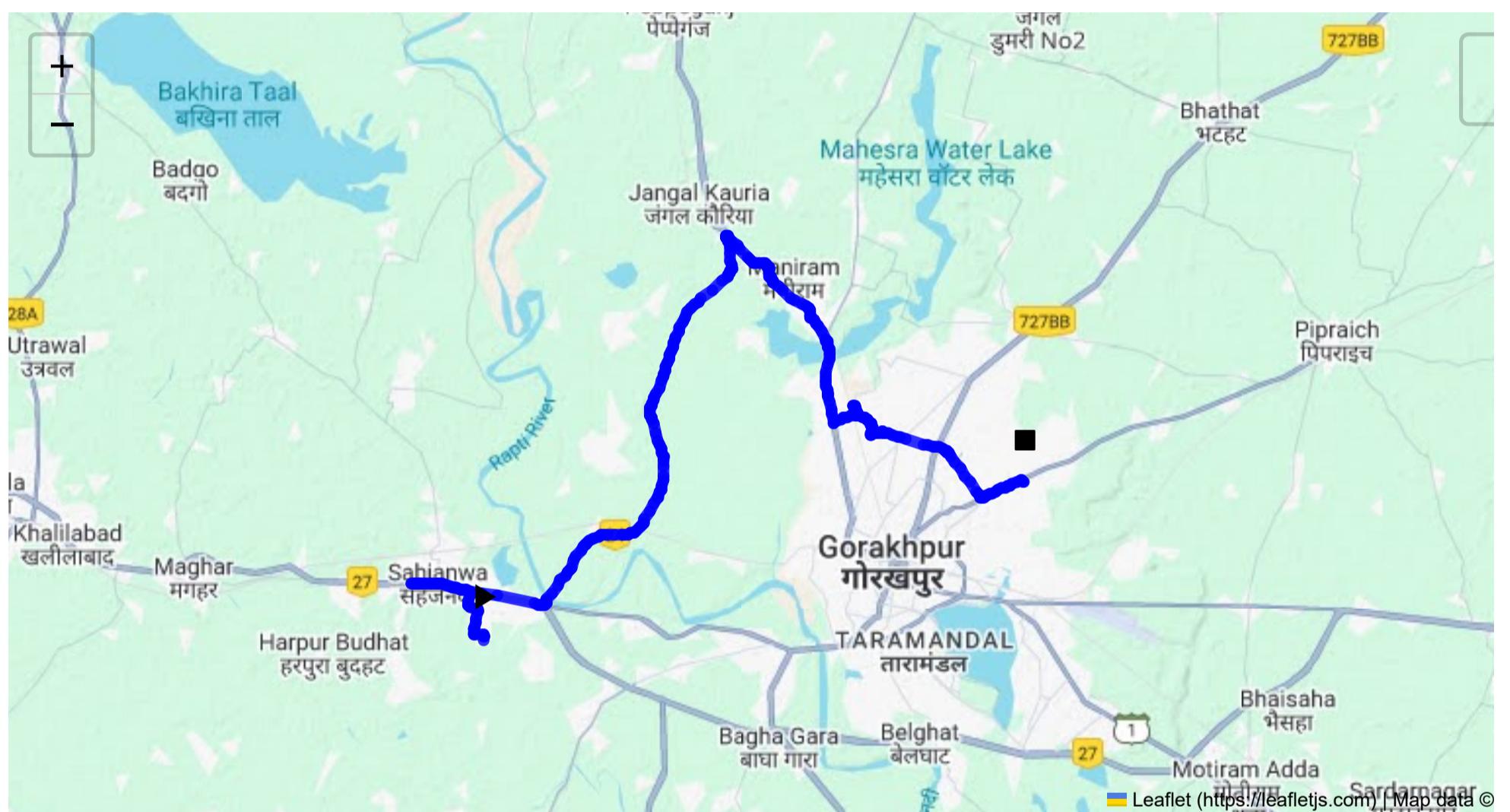
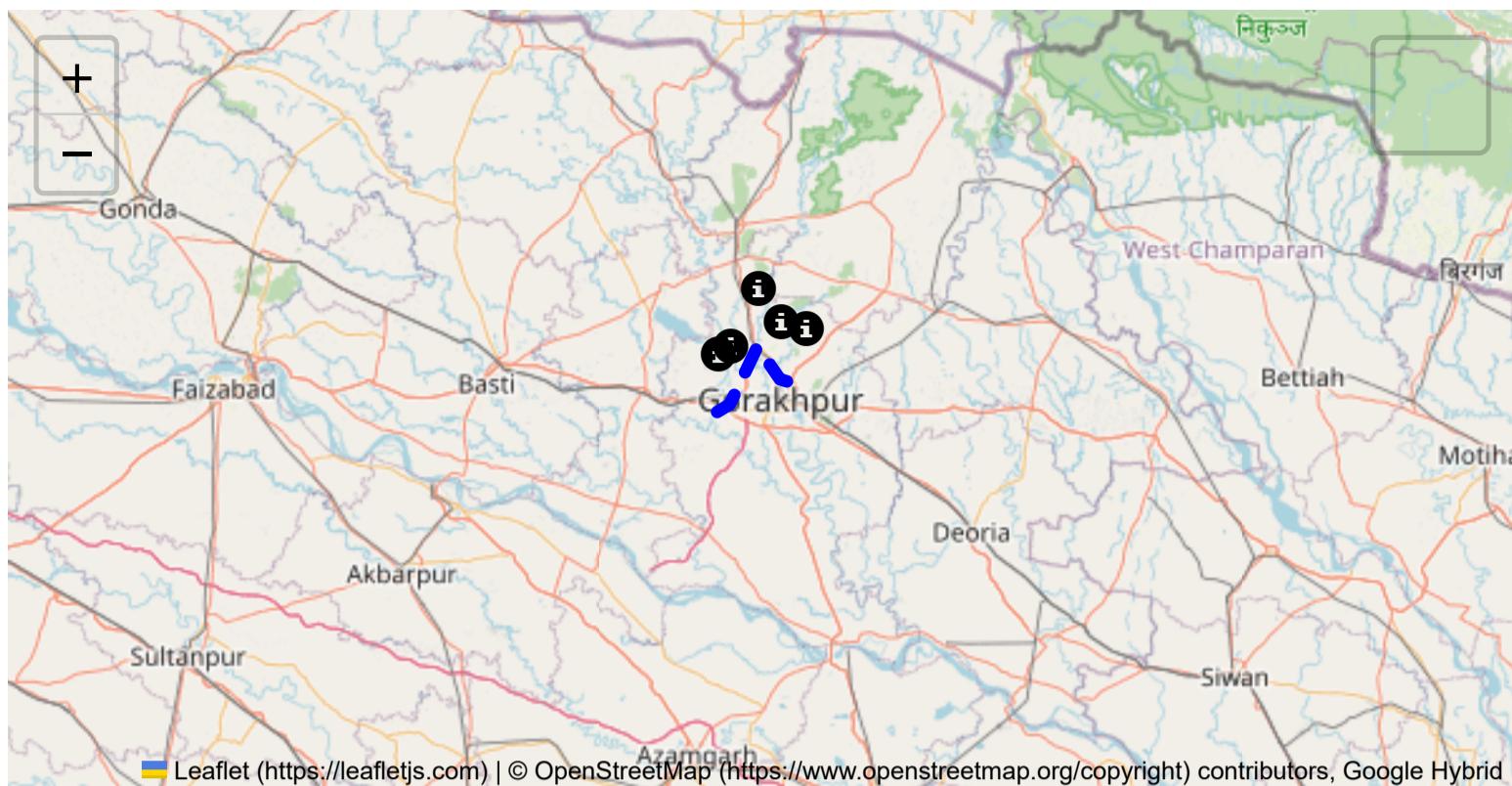
The JRM report addresses environmental risks along the route, ensuring compliance with environmental protection laws in ecologically sensitive zones. It suggests strategies such as identifying areas near water bodies, forests, or populated regions and implementing safety measures to minimize environmental 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: 42.17 km
Estimated Duration: 1.2 hours
Adjusted Duration (Heavy Vehicle): 1.5 hours
Start: (26.735959, 83.229398)
End: (26.78514, 83.4195)

Welcome to the Journey Risk Management Study

1. Overview of the Route Map

The route begins at the GIDA Industrial Area in Sahjanwa and passes through various towns and landmarks, including Vokta, National Highway 29 at Gay Ghat, and Ghosipurwa, ultimately concluding at Vishwakarmapuram, Gorakhpur. The journey spans approximately 42.17 kilometers, primarily using regional roads and highways.

2. Typical Weather Conditions and Potential Weather-Related Hazards

- **Weather Patterns:** This region experiences a subtropical climate, with hot summers, monsoon rains, and mild winters.
- **Hazards:** Monsoon season (June to September) can result in heavy rains, leading to flooding and waterlogging, especially on low-lying roads. Foggy conditions prevail in winter months (December to February) which can affect visibility.

3. Traffic Patterns

- **Peak Hours:** Traffic congestion is typically observed during morning (8:00-10:00 AM) and evening (5:00-7:00 PM) rush hours.
- **Congestion-Prone Areas:** The sections of National Highway 29, particularly near Gay Ghat, are often congested due to high commercial traffic density.

4. Assessment of Road Quality and Infrastructure

- **Road Quality:** Roads in urban sections are generally well-maintained; however, rural segments and those under construction or repair may have potholes or uneven surfaces.
- **Infrastructure:** Adequate signage and road markings are crucial, but may be lacking in some rural areas, impacting navigation and safety.

5. Suggestions for Alternative Routes for Emergencies

- In the event of severe congestion or road closures, consider using local roads parallel to NH 29, but assess for accessibility and road conditions prior to use.
- Collaborate with local traffic authorities for real-time updates on viable bypass routes.

6. Summary of Local Regulations Affecting Hazardous Material Transport

- Transport of hazardous materials is regulated by the Petroleum and Explosives Safety Organisation (PESO) norms. Compliance with specific licensing, vehicle signage, and safety equipment regulations is mandatory.

7. Overview of Historical Incidents

- Recent years have seen sporadic incidents involving heavy vehicles, primarily due to overloading and poor road conditions during monsoons. Fortunately, major incidents involving hazardous materials on this route are rare.

8. Environmental Considerations and Sensitive Areas

- Several areas along the route are close to agricultural zones; accidental spills can severely affect these ecosystems. Given the proximity to populated regions, adherence to environmental safety protocols is critical.

9. Analysis of Communication Coverage

- Coverage:** Mobile network coverage is typically robust in urban and semi-urban regions but can be spotty in rural zones.
- Dead Zones:** Notable issues can occur in remote stretches or due to infrastructure issues, affecting communication reliability.

10. Estimated Emergency Response Times

- Urban Areas:** Emergency response services can typically reach within 20-30 minutes.
- Rural Segments:** Delays are possible, with response times extending up to 45 minutes to an hour due to less-developed infrastructure.

12. Overall Summary of Risk Assessment

This route presents moderate risks predominantly from weather-related challenges, potential traffic congestion, and rural roadway conditions. Adequate preparation, including monitoring weather forecasts, following traffic updates, and ensuring communication equipment functionality, can mitigate these risks. Awareness of alternative routes and familiarity with local regulations significantly bolster safety during transport of hazardous materials.

Risk Assessment - Turns

| | Risk Type | Risk Level | Coordinates | Speed Limit | Distance from Start |
|----|------------|------------|--------------------|-------------|---------------------|
| 1 | Turn | High | 26.73690, 83.22947 | 15 KM/Hr | 0.05 km |
| 2 | Turn | High | 26.73697, 83.22939 | 15 KM/Hr | 0.11 km |
| 3 | Turn | High | 26.73746, 83.22938 | 15 KM/Hr | 0.15 km |
| 4 | Blind Spot | Blind Spot | 26.73791, 83.22625 | 10 KM/Hr | 0.48 km |
| 5 | Turn | Medium | 26.74524, 83.22746 | 30 KM/Hr | 1.28 km |
| 6 | Turn | Medium | 26.74532, 83.22740 | 30 KM/Hr | 1.31 km |
| 7 | Turn | High | 26.74654, 83.22390 | 15 KM/Hr | 1.65 km |
| 8 | Blind Spot | Blind Spot | 26.75126, 83.22476 | 10 KM/Hr | 2.17 km |
| 9 | Blind Spot | Blind Spot | 26.75353, 83.20457 | 10 KM/Hr | 4.23 km |
| 10 | Turn | High | 26.75377, 83.20465 | 15 KM/Hr | 4.28 km |
| 11 | Turn | Medium | 26.74709, 83.24930 | 30 KM/Hr | 8.79 km |

| | Risk Type | Risk Level | Coordinates | Speed Limit | Distance from Start |
|----|------------|------------|--------------------|-------------|---------------------|
| 12 | Turn | Medium | 26.74703, 83.25096 | 30 KM/Hr | 8.97 km |
| 13 | Turn | Medium | 26.74767, 83.25139 | 30 KM/Hr | 9.04 km |
| 14 | Turn | High | 26.74769, 83.25146 | 15 KM/Hr | 9.06 km |
| 0 | Roundabout | High | 26.86209, 83.31517 | 15 KM/Hr | 24.86 km |
| 15 | Turn | Medium | 26.83738, 83.34440 | 30 KM/Hr | 29.18 km |
| 16 | Blind Spot | Blind Spot | 26.80409, 83.35261 | 10 KM/Hr | 33.09 km |
| 17 | Turn | Medium | 26.80694, 83.36047 | 30 KM/Hr | 33.96 km |
| 18 | Turn | Medium | 26.80715, 83.36058 | 30 KM/Hr | 33.99 km |
| 19 | Blind Spot | Blind Spot | 26.80941, 83.35979 | 10 KM/Hr | 34.25 km |
| 20 | Turn | Medium | 26.80938, 83.35977 | 30 KM/Hr | 34.27 km |
| 21 | Turn | Medium | 26.80718, 83.36013 | 30 KM/Hr | 34.50 km |
| 22 | Turn | Medium | 26.80711, 83.36020 | 30 KM/Hr | 34.52 km |
| 23 | Turn | Medium | 26.80707, 83.36036 | 30 KM/Hr | 34.54 km |
| 24 | Turn | Medium | 26.80692, 83.36052 | 30 KM/Hr | 34.56 km |
| 25 | Turn | Medium | 26.80678, 83.36055 | 30 KM/Hr | 34.58 km |
| 26 | Turn | Medium | 26.80651, 83.36043 | 30 KM/Hr | 34.60 km |
| 27 | Turn | High | 26.80645, 83.36044 | 15 KM/Hr | 34.62 km |
| 28 | Turn | High | 26.80378, 83.36588 | 15 KM/Hr | 35.23 km |
| 29 | Turn | High | 26.80043, 83.36589 | 15 KM/Hr | 35.61 km |
| 30 | Turn | High | 26.80035, 83.36595 | 15 KM/Hr | 35.64 km |
| 31 | Turn | Medium | 26.80114, 83.36990 | 30 KM/Hr | 36.03 km |
| 32 | Blind Spot | Blind Spot | 26.78025, 83.40418 | 10 KM/Hr | 40.40 km |
| 33 | Turn | High | 26.78621, 83.41871 | 15 KM/Hr | 42.00 km |

Emergency Locations

Found: 7 hospital(s), 1 clinic(s)

| | type | name | coordinates | speed_limit | risk_level | Distance from Start |
|---|----------|----------------|-----------------------|-------------|------------|---------------------|
| 0 | hospital | Kanha Hospital | 26.8035, 83.352362 | 30 km/h | Medium | 33.09 km |

| | type | name | coordinates | speed_limit | risk_level | Distance from Start |
|---|----------|---------------------------------------|------------------------|-------------|------------|---------------------|
| 1 | clinic | Rama Fracture Clinic and Nursing Home | 26.7979764, 83.3804677 | 30 km/h | Medium | 36.78 km |
| 3 | hospital | Lokpriya Hospital | 26.7956989, 83.3846463 | 30 km/h | Medium | 37.60 km |
| 2 | hospital | Jansewa Hospital | 26.7959247, 83.389322 | 30 km/h | Medium | 38.03 km |
| 4 | hospital | Astha Hospital, Gorakhpur | 26.7943878, 83.3922892 | 30 km/h | Medium | 38.39 km |
| 5 | hospital | Fatima Hospital, Gorakhpur | 26.7872957, 83.3999861 | 30 km/h | Medium | 39.30 km |
| 6 | hospital | RNSN Sewa Sadan Hospital | 26.7825864, 83.4099165 | 30 km/h | Medium | 41.04 km |
| 7 | hospital | Kamala Hospital and Trauma Centre | 26.7834614, 83.412825 | 30 km/h | Medium | 41.31 km |

Crowded Spots

Route Photos of Risky Spots



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 2.17 km
Coordinates: 26.75126, 83.22476



Risk Type: Blind Spot
Risk Level: Blind Spot
Speed Limit: 10 KM/Hr
Distance from Start: 4.23 km
Coordinates: 26.75353, 83.20457



Risk Type: Turn
Risk Level: High
Speed Limit: 15 KM/Hr
Distance from Start: 4.28 km
Coordinates: 26.75377, 83.20465



Google

© Google

Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 8.79 km

Coordinates: 26.74709, 83.24930



Google

© Google

Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 8.97 km

Coordinates: 26.74703, 83.25096



Google

© Google

Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 9.04 km

Coordinates: 26.74767, 83.25139



Google

© Google

Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 9.06 km

Coordinates: 26.74769, 83.25146



Google

© Google

Risk Type: Roundabout

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 24.86 km

Coordinates: 26.86209, 83.31517



Google

© Google

Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 33.09 km

Coordinates: 26.80409, 83.35261



Google

© Google

Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 33.96 km

Coordinates: 26.80694, 83.36047



Google

© Google

Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 33.99 km

Coordinates: 26.80715, 83.36058



Google

© 2025 Google

© Google

Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 34.25 km

Coordinates: 26.80941, 83.35979



Google

© 2025 Google

Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 34.27 km

Coordinates: 26.80938, 83.35977



Google

© Google

Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 34.50 km

Coordinates: 26.80718, 83.36013



Google

© Google

Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 34.52 km

Coordinates: 26.80711, 83.36020



Google

© Google

Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 34.54 km

Coordinates: 26.80707, 83.36036



Google

© Google

Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 34.56 km

Coordinates: 26.80692, 83.36052



Google

© Google

Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 34.58 km

Coordinates: 26.80678, 83.36055



Google

© Google

Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 34.60 km

Coordinates: 26.80651, 83.36043



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 34.62 km

Coordinates: 26.80645, 83.36044



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 35.23 km

Coordinates: 26.80378, 83.36588



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 35.61 km

Coordinates: 26.80043, 83.36589



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 35.64 km

Coordinates: 26.80035, 83.36595



Google

© Google

Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 36.03 km

Coordinates: 26.80114, 83.36990



Google

© Google

Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 40.40 km

Coordinates: 26.78025, 83.40418



Google

© Google

Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 42.00 km

Coordinates: 26.78621, 83.41871

Download Reports

 Download Excel Report

 Download Interactive Map