



JOURNEY RISK MANAGEMENT (JRM) STUDY

Gorakhpur LPG BP TO PDRAM ADHAR MISHRA

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

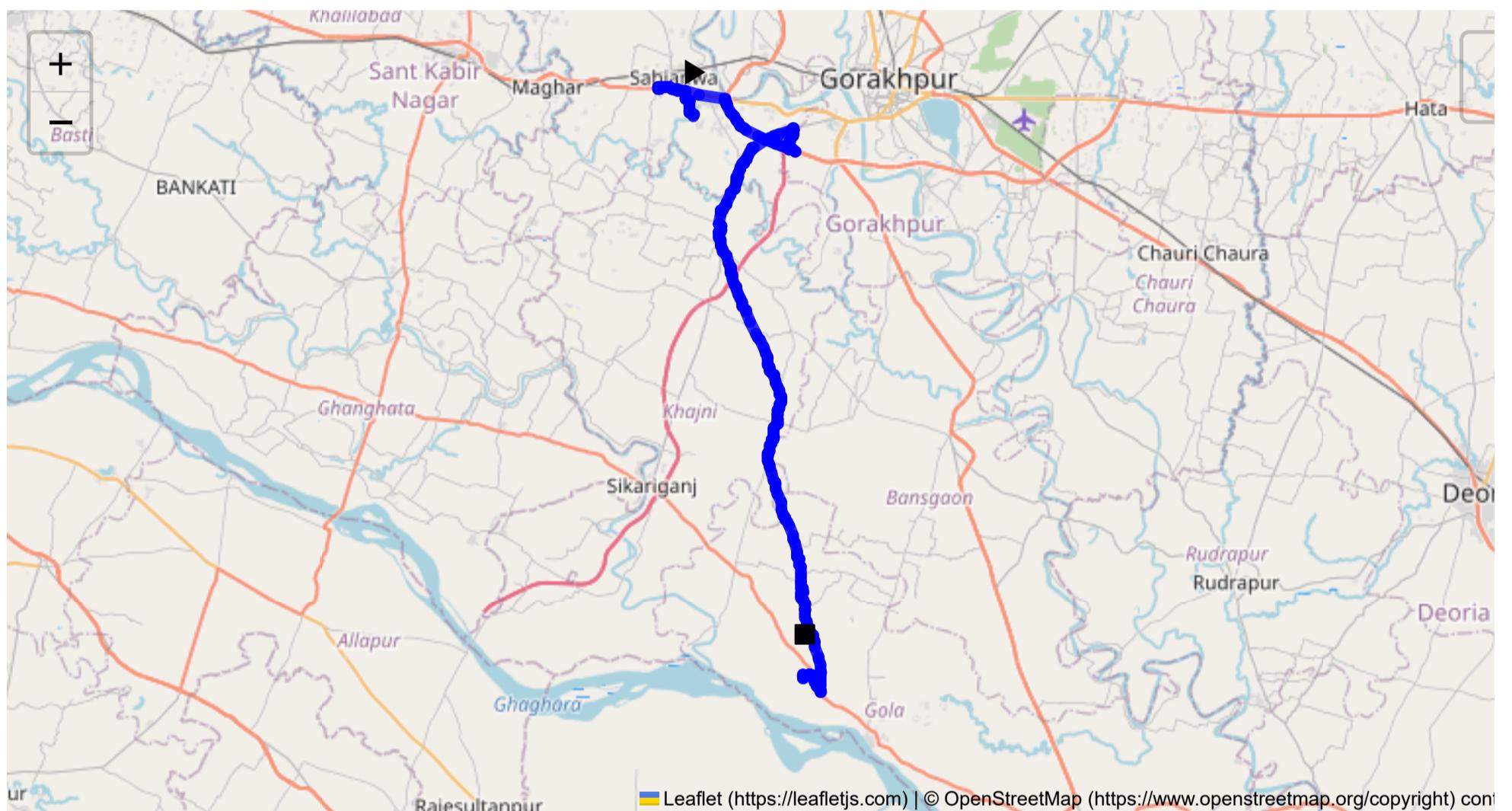
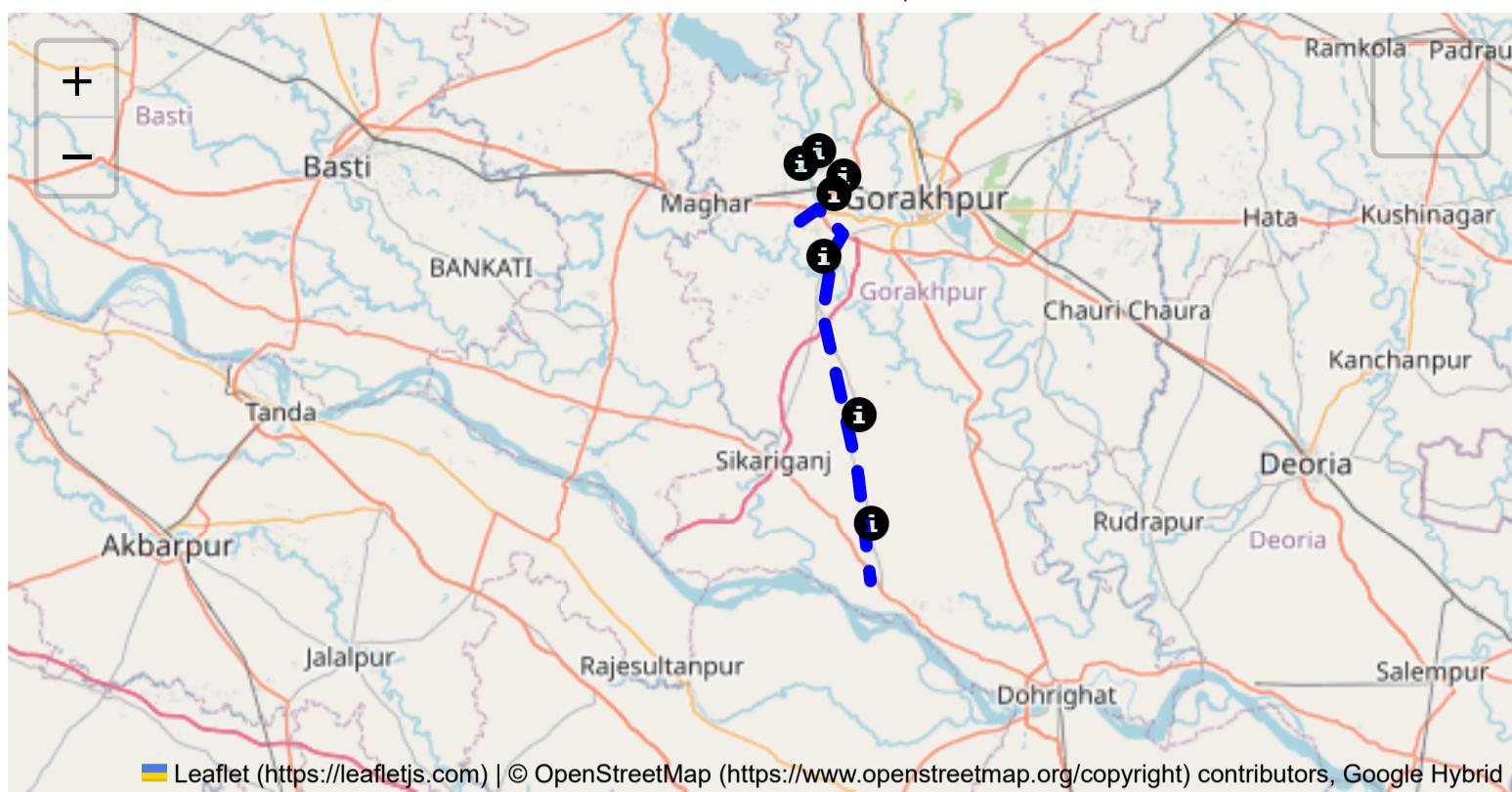
The JRM report addresses environmental risks along the route, ensuring compliance with environmental protection laws in ecologically sensitive zones. It suggests strategies such as identifying areas near water bodies, forests, or populated regions and implementing safety measures to minimize environmental 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: 63.20 km
Estimated Duration: 1.8 hours
Adjusted Duration (Heavy Vehicle): 2.2 hours
Start: (26.735959, 83.229398)
End: (26.383586, 83.306343)

Welcome to the Journey Risk Management Study

1. Overview of the Route Map

The route begins in the GIDA Industrial Area Phase 1, Sahjanwa, and proceeds through several villages and towns including Kaalesar, Mujaila, Nandapar, Gaudhar Mangal, and Uruwa Bazar, before terminating in Baranagar, Uttar Pradesh. The total distance is approximately 63.20 kilometers.

2. Typical Weather Conditions and Potential Weather-Related Hazards

Uttar Pradesh experiences a humid subtropical climate. This region often has hot summers, monsoon rains, and mild winters. Monsoon season, from June to September, poses the greatest hazard due to heavy rains, which can lead to flooding and reduced visibility. Winter fog (December to February) can also impair visibility.

3. Analysis of Traffic Patterns

Traffic is generally moderate with peak hours aligning with typical work hours, roughly between 8-10 AM and 5-7 PM. Congestion may particularly occur around major intersections and towns such as GIDA Industrial Area and Uruwa Bazar.

4. Assessment of Road Quality and Infrastructure

The road quality varies significantly. Urban areas may have better-maintained roads, while rural stretches may include narrow, uneven paths and potholes. Maintenance concerns should be anticipated, particularly during the rainy season.

5. Suggestions for Alternative Routes for Emergencies

In the event of an emergency or road blockage, an alternative route would be to divert via NH27 at Gorakhpur, which connects with other national highways and offers better infrastructure and services, although it might increase travel time.

6. Summary of Local Regulations Affecting Hazardous Material Transport

Transportation of hazardous materials is subject to strict regulations requiring proper documentation, safety signage on the vehicle, and adherence to speed limits. Night-time travel restrictions for such vehicles may also apply, necessitating planning for day travel.

7. Overview of Historical Incidents

There are occasional incidents involving heavy vehicles attributed to poor road conditions and driver error, particularly during adverse weather. Instances involving hazardous material are relatively rare but could be severe due to resultant spills or fires.

8. Environmental Considerations and Sensitive Areas

The route passes through rural and semi-urban areas with agricultural fields nearby. Care should be taken to avoid spills to prevent contamination. Additionally, some regions may be sensitive due to local wildlife or ecosystems.

9. Analysis of Communication Coverage

Mobile network coverage is generally reliable in urban and semi-urban areas but can become weak or spotty in remote rural segments, particularly between Mujaila and Gaudhar Mangal.

10. Estimated Emergency Response Times

Emergency services response times can vary. Expect timely responses in urban areas like Sahjanwa and Gorakhpur, possibly within 30 minutes, but slower reaction in rural areas where it could extend to an hour or more.

11. An Overall Summary of Risk Assessment

The route presents several risks, particularly during inclement weather. The primary concerns are road conditions, weather-related issues, traffic congestion during peak hours, and communication lapses. While regulatory measures are in place for hazardous transport, driver vigilance and adherence to safety protocols are crucial. Emergency route planning and regular vehicle inspections are recommended to mitigate risks. Proactive communication with emergency services might also enhance safety readiness.

Risk Assessment - Turns

	Risk Type	Risk Level	Coordinates	Speed Limit	Distance from Start
1	Turn	High	26.73746, 83.22938	15 KM/Hr	0.15 km
2	Blind Spot	Blind Spot	26.73791, 83.22625	10 KM/Hr	0.47 km
3	Turn	High	26.74524, 83.22746	15 KM/Hr	1.16 km
4	Turn	High	26.74654, 83.22390	15 KM/Hr	1.65 km
5	Blind Spot	Blind Spot	26.75126, 83.22476	10 KM/Hr	2.16 km
6	Blind Spot	Blind Spot	26.75353, 83.20457	10 KM/Hr	4.22 km
7	Turn	High	26.75377, 83.20465	15 KM/Hr	4.27 km
0	Roundabout	High	26.74681, 83.25111	15 KM/Hr	8.13 km
8	Blind Spot	Blind Spot	26.71404, 83.30102	10 KM/Hr	15.33 km
9	Turn	High	26.71412, 83.30103	15 KM/Hr	15.42 km
10	Turn	High	26.71607, 83.29589	15 KM/Hr	15.96 km
11	Turn	Medium	26.71767, 83.29636	30 KM/Hr	16.11 km
12	Turn	Medium	26.71773, 83.29634	30 KM/Hr	16.17 km
13	Turn	Medium	26.71783, 83.29615	30 KM/Hr	16.18 km
14	Turn	High	26.71796, 83.29609	15 KM/Hr	16.20 km
15	Turn	High	26.71930, 83.29669	15 KM/Hr	16.29 km
16	Turn	High	26.71930, 83.29698	15 KM/Hr	16.39 km

	Risk Type	Risk Level	Coordinates	Speed Limit	Distance from Start
17	Turn	High	26.72532, 83.30017	15 KM/Hr	17.12 km
18	Turn	High	26.72611, 83.29902	15 KM/Hr	17.25 km
19	Turn	High	26.72617, 83.29900	15 KM/Hr	17.29 km
20	Blind Spot	Blind Spot	26.72790, 83.29999	10 KM/Hr	17.51 km
21	Turn	Medium	26.69729, 83.26012	30 KM/Hr	22.99 km
22	Turn	Medium	26.66820, 83.24780	30 KM/Hr	26.20 km
23	Turn	Medium	26.66789, 83.24789	30 KM/Hr	26.59 km
24	Turn	Medium	26.66328, 83.24770	30 KM/Hr	27.19 km
25	Turn	Medium	26.64062, 83.25524	30 KM/Hr	29.84 km
26	Turn	Medium	26.57568, 83.28377	30 KM/Hr	37.58 km
27	Turn	Medium	26.48493, 83.29304	30 KM/Hr	48.23 km
28	Turn	Medium	26.43791, 83.30619	30 KM/Hr	53.64 km
29	Turn	Medium	26.37492, 83.31900	30 KM/Hr	60.92 km
30	Blind Spot	Blind Spot	26.37482, 83.31896	10 KM/Hr	61.01 km
31	Turn	High	26.38477, 83.31358	15 KM/Hr	62.23 km
32	Turn	High	26.38512, 83.30682	15 KM/Hr	62.93 km
33	Blind Spot	Blind Spot	26.38374, 83.30605	10 KM/Hr	63.09 km

Emergency Locations

Found: 1 hospital(s)

	type	name	coordinates	speed_limit	risk_level	Distance from Start
0	hospital	Government. hospital khajni	26.6652993, 83.2497154	30 km/h	Medium	26.83 km

Crowded Spots

Route Photos of Risky Spots



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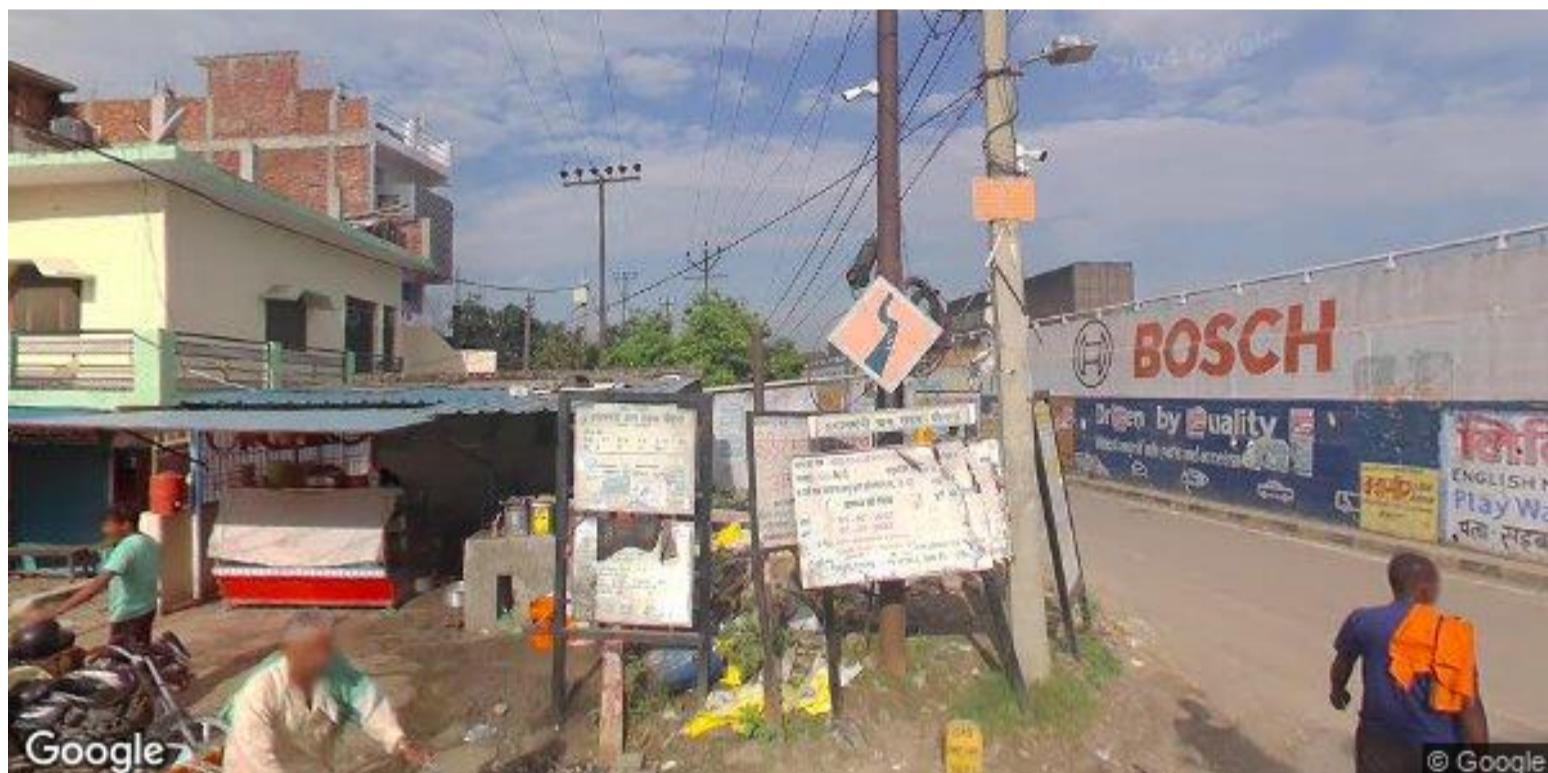
Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 2.16 km

Coordinates: 26.75126, 83.22476



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Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 4.22 km

Coordinates: 26.75353, 83.20457



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 4.27 km

Coordinates: 26.75377, 83.20465



Risk Type: Roundabout

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 8.13 km

Coordinates: 26.74681, 83.25111



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Risk Type: Blind Spot**Risk Level:** Blind Spot**Speed Limit:** 10 KM/Hr**Distance from Start:** 15.33 km**Coordinates:** 26.71404, 83.30102

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Risk Type: Turn**Risk Level:** High**Speed Limit:** 15 KM/Hr**Distance from Start:** 15.42 km**Coordinates:** 26.71412, 83.30103



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Risk Type: Turn**Risk Level: High****Speed Limit: 15 KM/Hr****Distance from Start: 15.96 km****Coordinates: 26.71607, 83.29589**

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Risk Type: Turn**Risk Level: Medium****Speed Limit: 30 KM/Hr****Distance from Start: 16.11 km****Coordinates: 26.71767, 83.29636**



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Risk Type: Turn**Risk Level:** Medium**Speed Limit:** 30 KM/Hr**Distance from Start:** 16.17 km**Coordinates:** 26.71773, 83.29634

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Risk Type: Turn**Risk Level:** Medium**Speed Limit:** 30 KM/Hr**Distance from Start:** 16.18 km**Coordinates:** 26.71783, 83.29615



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Risk Type: Turn**Risk Level:** High**Speed Limit:** 15 KM/Hr**Distance from Start:** 16.20 km**Coordinates:** 26.71796, 83.29609

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Risk Type: Turn**Risk Level:** High**Speed Limit:** 15 KM/Hr**Distance from Start:** 16.29 km**Coordinates:** 26.71930, 83.29669



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Risk Type: Turn**Risk Level: High****Speed Limit: 15 KM/Hr****Distance from Start: 16.39 km****Coordinates: 26.71930, 83.29698**

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Risk Type: Turn**Risk Level: High****Speed Limit: 15 KM/Hr****Distance from Start: 17.12 km****Coordinates: 26.72532, 83.30017**



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 17.25 km

Coordinates: 26.72611, 83.29902



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 17.29 km

Coordinates: 26.72617, 83.29900



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 17.51 km

Coordinates: 26.72790, 83.29999



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 22.99 km

Coordinates: 26.69729, 83.26012



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 26.20 km

Coordinates: 26.66820, 83.24780



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 26.59 km

Coordinates: 26.66789, 83.24789



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 27.19 km

Coordinates: 26.66328, 83.24770



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 29.84 km

Coordinates: 26.64062, 83.25524



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 37.58 km

Coordinates: 26.57568, 83.28377



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 48.23 km

Coordinates: 26.48493, 83.29304



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 53.64 km

Coordinates: 26.43791, 83.30619



Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 60.92 km

Coordinates: 26.37492, 83.31900



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 61.01 km

Coordinates: 26.37482, 83.31896



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 62.23 km

Coordinates: 26.38477, 83.31358

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