



JOURNEY RISK MANAGEMENT (JRM) STUDY

Gorakhpur LPG BP TO GORAKHPUR INDANE GAS

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

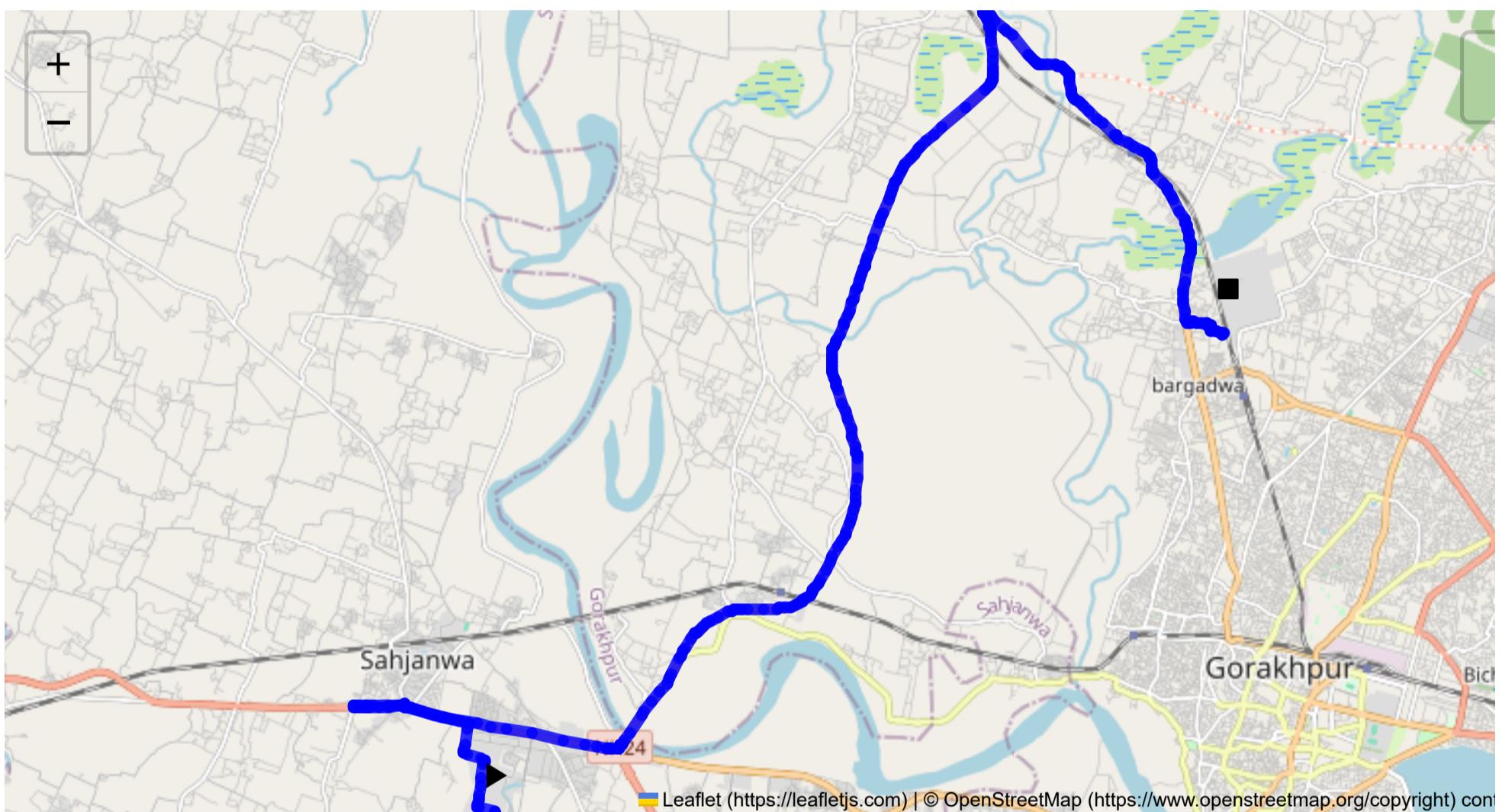
The JRM report addresses environmental risks along the route, ensuring compliance with environmental protection laws in ecologically sensitive zones. It suggests strategies such as identifying areas near water bodies, forests, or populated regions and implementing safety measures to minimize environmental 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: 32.95 km
Estimated Duration: 0.8 hours
Adjusted Duration (Heavy Vehicle): 1.0 hours
Start: (26.735959, 83.229398)
End: (26.812074, 83.357253)

Welcome to the Journey Risk Management Study

1. Overview of the Route Map

The route from GIDA Industrial Area Phase 1, Sahjanwa, to Gorakhpur covers approximately 32.95 kilometers. The route primarily follows local roads before connecting with NH 24, a major highway. It passes through several small towns and rural areas, linking industrial sections to urban centers.

2. Typical Weather Conditions and Potential Weather-Related Hazards

Uttar Pradesh generally experiences hot summers, monsoon rains from June to September, and cool winters. During the monsoon season, heavy rainfall could lead to water-logged roads and reduced visibility, posing a risk for heavy vehicles. In summers, high temperatures might affect vehicle performance.

3. Analysis of Traffic Patterns

- **Peak Hours:** Typically, 8-10 AM and 5-7 PM are peak traffic hours.
- **Congestion-Prone Areas:** The entrance to Gorakhpur, particularly around major junctions on NH 24, can experience significant congestion.

4. Assessment of Road Quality and Infrastructure

- **Road Quality:** The condition of local roads might vary, with some areas possibly having potholes or less maintenance. NH 24 is generally well maintained but can be busy.
- **Infrastructure:** Roadside amenities are sparse along rural stretches; gas stations and repair shops are more frequent as you approach Gorakhpur.

5. Suggestions for Alternative Routes for Emergencies

In case of road blockages, consider using the parallel roads that connect back to NH 24 at different points. Locally known paths around Sahjanwa can offer detours, but verify their conditions before use.

6. Summary of Local Regulations Affecting Hazardous Material Transport

Local regulations require adherence to specific guidelines for hazardous material transport, such as load capacity limits, specific permits, and restricted times. Ensure compliance to avoid fines or delays.

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

There have been isolated incidents involving tanker rollovers on sharp curves and during poor weather. Historical data suggests that accidents often occur near junctions or where road conditions deteriorate suddenly.

8. Environmental Considerations and Sensitive Areas

The route passes through areas close to agricultural fields and small waterways. Care must be taken to prevent spills, especially in proximity to water sources, as this region is agriculturally sensitive.

9. Analysis of Communication Coverage

Mobile network coverage is generally good along this route but can become weak in rural stretches and certain low-lying areas, leading to potential dead zones.

10. Estimated Emergency Response Times

- Rural Areas:** 30 to 60 minutes, due to sparse emergency resources and road conditions.
- Near Gorakhpur:** 15 to 30 minutes, as emergency services are more readily available.

11. Overall Summary of Risk Assessment

This route includes risks such as weather-related hazards, road condition variability, and congestion, especially entering Gorakhpur. Preparing for adverse weather, planning travel outside peak hours, and ensuring communication equipment is functional can mitigate potential issues. Compliance with local regulations is critical to avoid disruptions. Planning for emergency detours and understanding local geography increases safety and efficiency for truck drivers transporting hazardous materials. Regular updates and checks on vehicle conditions are also recommended to ensure safe transit.

Risk Assessment - Turns

	Risk Type	Risk Level	Coordinates	Speed Limit	Distance from Start
1	Turn	High	26.73690, 83.22947	15 KM/Hr	0.07 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	1.30 km
6	Turn	Medium	26.74532, 83.22740	30 KM/Hr	1.32 km
7	Turn	High	26.74654, 83.22390	15 KM/Hr	1.65 km
8	Turn	Medium	26.74661, 83.22388	30 KM/Hr	1.70 km
9	Blind Spot	Blind Spot	26.75126, 83.22476	10 KM/Hr	2.17 km
10	Blind Spot	Blind Spot	26.75353, 83.20457	10 KM/Hr	4.23 km
11	Turn	High	26.75381, 83.20466	15 KM/Hr	4.30 km
12	Blind Spot	Blind Spot	26.75377, 83.21355	10 KM/Hr	5.17 km
14	Turn	High	26.75377, 83.21355	15 KM/Hr	5.17 km
13	Blind Spot	Blind Spot	26.75407, 83.21347	10 KM/Hr	5.21 km
15	Turn	High	26.74708, 83.24935	15 KM/Hr	8.88 km
16	Turn	Medium	26.74712, 83.24938	30 KM/Hr	8.89 km
17	Turn	Medium	26.74703, 83.25096	30 KM/Hr	9.04 km

	Risk Type	Risk Level	Coordinates	Speed Limit	Distance from Start
18	Turn	Medium	26.74767, 83.25139	30 KM/Hr	9.13 km
19	Turn	High	26.74769, 83.25146	15 KM/Hr	9.14 km
0	Roundabout	High	26.86209, 83.31517	15 KM/Hr	24.94 km
20	Turn	Medium	26.83738, 83.34440	30 KM/Hr	29.26 km
21	Turn	High	26.81376, 83.35042	15 KM/Hr	32.08 km
22	Turn	High	26.81379, 83.35119	15 KM/Hr	32.17 km
23	Turn	Medium	26.81387, 83.35126	30 KM/Hr	32.19 km
24	Turn	High	26.81369, 83.35391	15 KM/Hr	32.46 km
25	Turn	High	26.81350, 83.35386	15 KM/Hr	32.48 km
26	Turn	Medium	26.81334, 83.35415	30 KM/Hr	32.50 km
27	Turn	High	26.81329, 83.35418	15 KM/Hr	32.52 km
28	Turn	High	26.81326, 83.35456	15 KM/Hr	32.56 km
29	Turn	High	26.81253, 83.35458	15 KM/Hr	32.64 km
30	Turn	Medium	26.81209, 83.35673	30 KM/Hr	32.85 km
31	Turn	High	26.81206, 83.35677	15 KM/Hr	32.87 km
32	Blind Spot	Blind Spot	26.81186, 83.35672	10 KM/Hr	32.88 km

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: 4.30 km

Coordinates: 26.75381, 83.20466



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 5.17 km

Coordinates: 26.75377, 83.21355



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 5.17 km

Coordinates: 26.75377, 83.21355



Risk Type: Blind Spot

Risk Level: Blind Spot

Speed Limit: 10 KM/Hr

Distance from Start: 5.21 km

Coordinates: 26.75407, 83.21347



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 8.88 km

Coordinates: 26.74708, 83.24935



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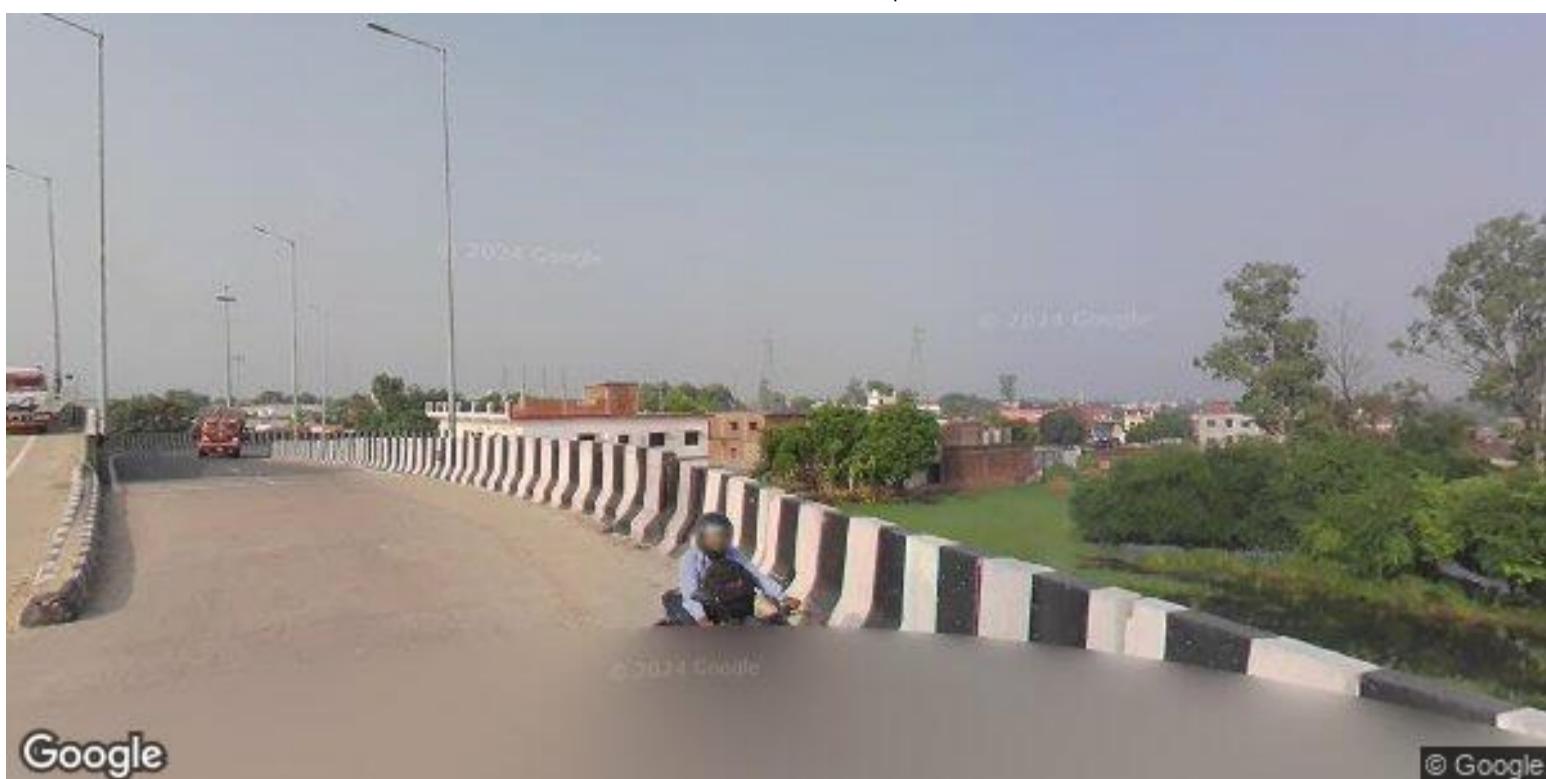
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Risk Type: Turn**Risk Level:** Medium**Speed Limit:** 30 KM/Hr**Distance from Start:** 8.89 km**Coordinates:** 26.74712, 83.24938

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Risk Type: Turn**Risk Level:** Medium**Speed Limit:** 30 KM/Hr**Distance from Start:** 9.04 km**Coordinates:** 26.74703, 83.25096



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Risk Type: Turn**Risk Level:** Medium**Speed Limit:** 30 KM/Hr**Distance from Start:** 9.13 km**Coordinates:** 26.74767, 83.25139

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Risk Type: Turn**Risk Level:** High**Speed Limit:** 15 KM/Hr**Distance from Start:** 9.14 km**Coordinates:** 26.74769, 83.25146



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Risk Type: Roundabout**Risk Level: High****Speed Limit: 15 KM/Hr****Distance from Start: 24.94 km****Coordinates: 26.86209, 83.31517**

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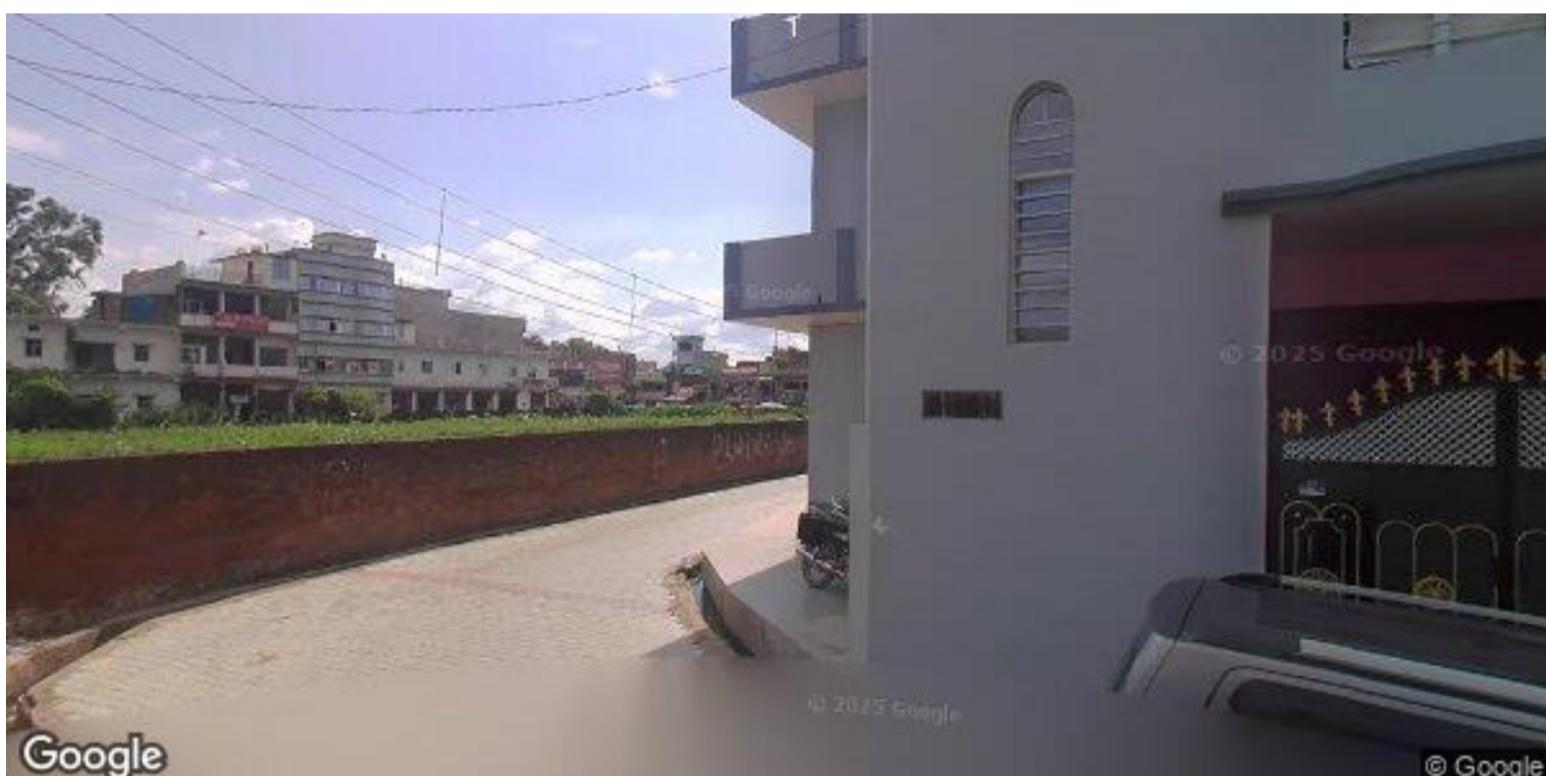
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Risk Type: Turn**Risk Level: High****Speed Limit: 15 KM/Hr****Distance from Start: 32.08 km****Coordinates: 26.81376, 83.35042**



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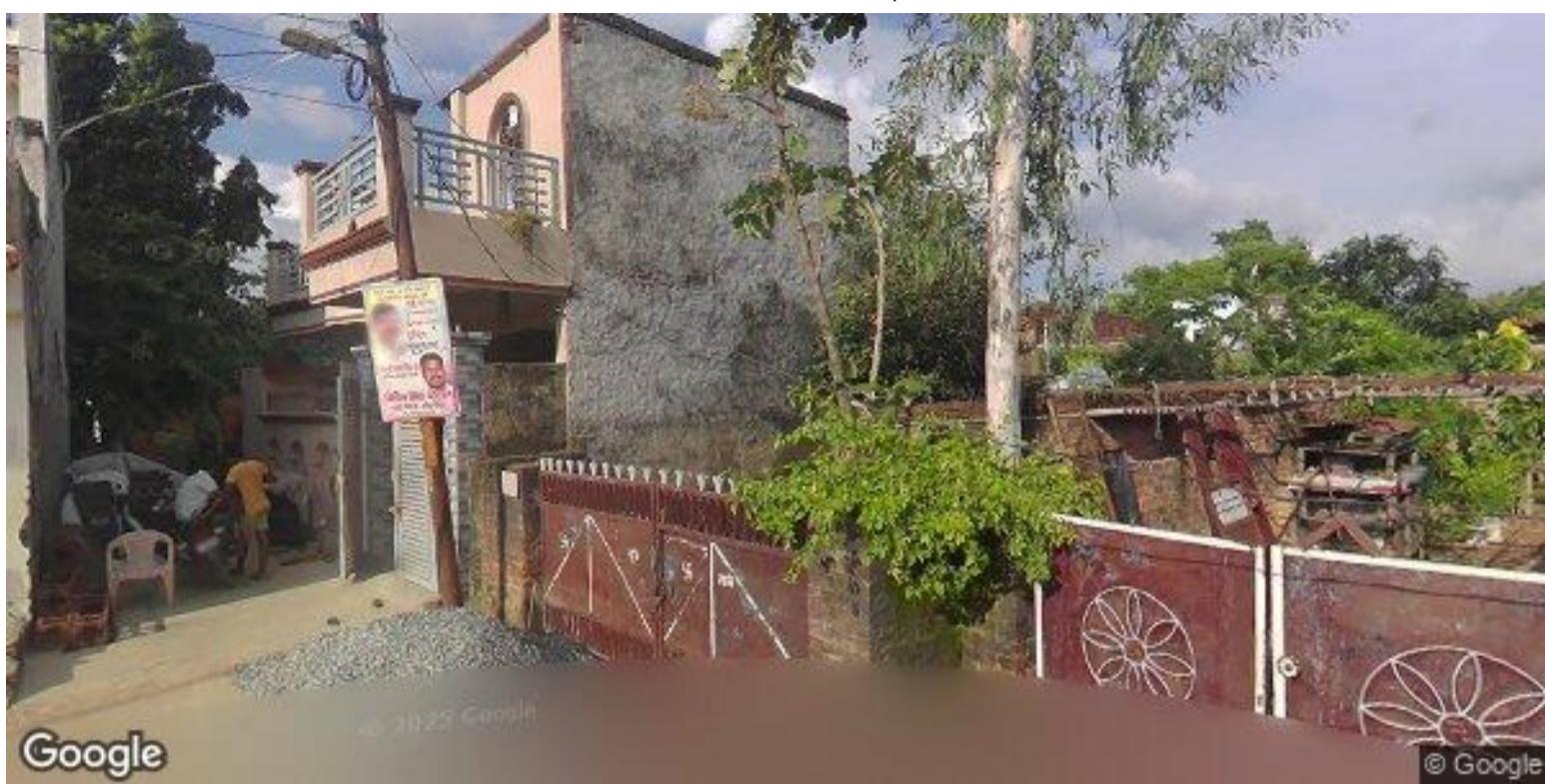
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Risk Type: Turn**Risk Level: High****Speed Limit: 15 KM/Hr****Distance from Start: 32.17 km****Coordinates: 26.81379, 83.35119**

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Risk Type: Turn**Risk Level: Medium****Speed Limit: 30 KM/Hr****Distance from Start: 32.19 km****Coordinates: 26.81387, 83.35126**



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Risk Type: Turn**Risk Level: High****Speed Limit: 15 KM/Hr****Distance from Start: 32.46 km****Coordinates: 26.81369, 83.35391**

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Risk Type: Turn**Risk Level: High****Speed Limit: 15 KM/Hr****Distance from Start: 32.48 km****Coordinates: 26.81350, 83.35386**



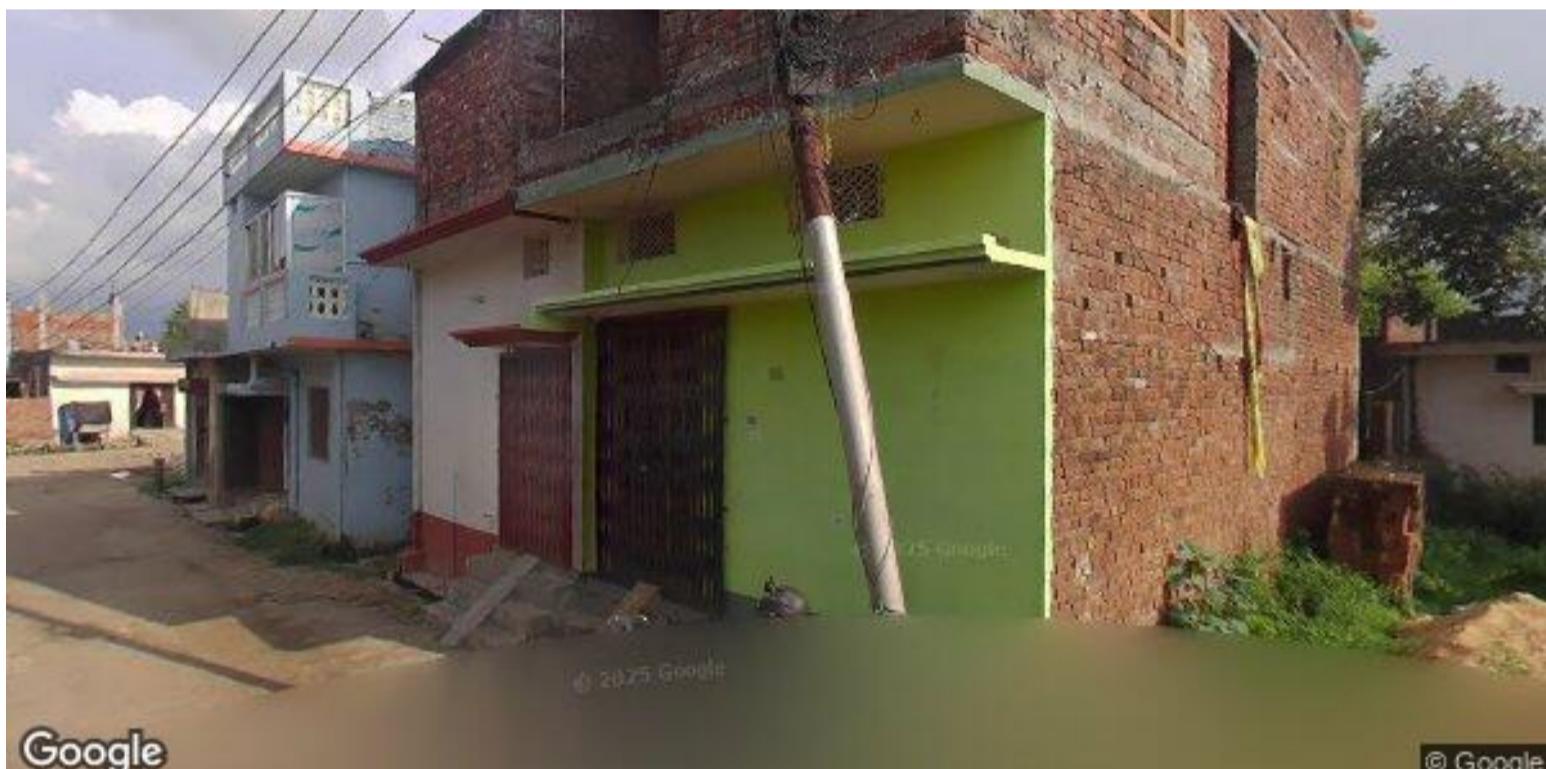
Risk Type: Turn

Risk Level: Medium

Speed Limit: 30 KM/Hr

Distance from Start: 32.50 km

Coordinates: 26.81334, 83.35415



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 32.52 km

Coordinates: 26.81329, 83.35418



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 32.56 km

Coordinates: 26.81326, 83.35456



Risk Type: Turn

Risk Level: High

Speed Limit: 15 KM/Hr

Distance from Start: 32.64 km

Coordinates: 26.81253, 83.35458

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