



भारतीय राष्ट्रीय राजमार्ग प्राधिकरण (सड़क परिवहन और राजमार्ग मंत्रालय, भारत सरकार)

परियोजना कार्यान्वयन इकाई : डी-81, गोविन्दपुरी, सचिन तेंदुलकर मार्ग, ग्वालियर (म. प्र.)-474011

National Highways Authority of India

(Ministry of Road Transport & Highways, Govt. of India)

Project Implementation Unit : D-81, Govindpuri, Sachin Tendulkar Marg, Gwalior (M.P.)-474011

फोन/Phone : 0751-2231485, ई-मेल/E-mail : gwalior@nhai.org; nhai@ghwalior@gmail.com



BHARATMALA
ROAD TO PROSPERITY

File No. 20019/01/2018-Western Bypass/12603

Date 30.01.2024

To,

The Divisional Forest Officer-Gwalior
Central Nursery, near Captain Roop Singh Stadium
City Centre Gwalior (MP)
Email: dfotgwa@mp.gov.in

Sub: Preparation of Detailed Project Report for Construction of Bypass on Western Side of Gwalior City in the State of Madhya Pradesh - **Compliance to the Observations in the Forest clearance proposal (Proposal No. FP/MP/Road/149532/2021)-Reg.**

Ref.:

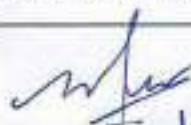
1. This office letter no. 12359 dated 28.12.2023.
2. APCCF, Bhopal letter no. 5279 dated 13.12.2023.
3. Technical Officer (Forest), MoEFCC, New Delhi letter no. 6-MPR015/2022-BHO/ dated 11.12.2023
4. APCCF, Bhopal letter no. 4690 dated 19.10.2023
5. CCF, Gwalior letter no. 1062 dated 28.04.2023
6. DFO, Gwalior letter no. 2902 dated 18.04.2023
7. This office letter no. 10224 dated 03.04.2023

Sir,

This is in continuation to this office letter dated 28.12.2023 vide which the compliance to the various observation raised by MoEF&CC letter dated 11.12.2023 was submitted by this office. The updated para wise compliances are being submitted herewith as under:-

Sr. No.	Observation	Reply/Compliance
1	The State Govt. shall submit the complete KML file of proposed Forest land and non Forest land involved in this road project.	Already attached in the proposal in Parivesh Portal. However, for ready reference, again being attached.
2	The State Govt. shall explore the possibilities of minimising the area proposed for diversion.	The various alignment options were examined by NHAI and following is submitted: -
3	The State Govt./User Agency shall submit detailed reasons for not choosing alternative one in which the affected forest length is minimum and submit the detail Alternative route maps along with KML files.	<p>(i) Alternative Alignment No. 1</p> <ul style="list-style-type: none"> • It was observed that the alternative Alignment-01 has significantly poor vertical geometry and cross slope which shall require significant cutting and filling the wildlife section. • On account of undulation in the vertical profile of the ground, the height of various cross-drainage structures and other underpass structures shall be significant. • Further, the project alignment passes through the close proximity of the submergence zone of the Tighra Dam, causing profile and height of the structures on the project highway to be comparatively higher. • The Alternative Alignment-01 has higher total length of 30.127 Km and shall require higher resettlement and land acquisition cost, thereby increasing the capital cost of the project significantly.

		<p>(ii) Alternative Alignment No. 2</p> <ul style="list-style-type: none"> It was observed that Alternative Alignment-02 has significantly poor vertical geometry and cross slope which shall require significant cutting and filling the wildlife section. On account of undulation in the vertical profile which Tunnels/Cut& Cover shall be required which will increase the construction cost manifold and construction will be extremely difficult. On account of undulation in the vertical profile of the ground, the height of various cross-drainage structures and other underpass structures shall be significant. The Alternative Alignment-02 has higher total length of 29.5 Km and shall require higher resettlement and land acquisition cost and utility shifting, thereby increasing the capital cost of the project significantly. <p>On account of above, recommended alignment of length 28.800 KM has been found suitable in comparison to Alignment option-01 and option-02 with respect geometry (vertical and horizontal), minimum Land Acquisition Impact and resettlement and Cost, Cross Slope of Ground, ease of construction along with Cost of Construction.</p> <p>With respect to recommended alignment of the length 28.800 KM, it is pertinent to inform that the said alignment also bears the consent and recommendation of the District Administration/Govt of MP and Public Representative. (Please refer Collector-Gwalior letter dated 25.10.2021 and PS-PWD letter dated 29.10.2021)</p> <p>In furtherance to above, it is submitted that details of the alternative alignment are already enclosed in the proposal on Parivesh Portal and were again submitted vide this office letter dated 12.09.2022 which was also submitted by PCCF(LM)-Bhopal to IRO, MoEF&CC in compliance to observation of MoEF&CC dated 22.06.2022.</p> <p>However, for ready reference the details along with relevant documents/Kmz are again being enclosed.</p>
4	The State Govt. shall submit the status of clearance form SCNBWL (part of Ghatguon WLS)	<p>The agenda was listed on 72nd meeting of NBWL dated 25.04.2023 whereby NBWL has <u>recommended</u> the proposal subjected to incorporation of condition of WII-Dehradun as per report dated 31.03.2023 in the project.</p> <p>WII Dehradun has submitted the details site visit of the project highway, and the report has been received from WII on 24.08.2023. Accordingly, the revised mitigation plan has been submitted to DFO on 23.10.2023. DFO Gwalior has further submitted the mitigation plan to APCCF(W/L) vide letter dated 28.11.2023.</p>
5	The State Govt. shall submit the documentary evidence of existence of this road prior to 1980.	<p>It is submitted that the length of the project is 28.800 Km i.e from Design Chainage Km 0+000 to Km 28+800. The section from Km 0+000 to Km 16+500 is brownfield and follows the alignment of existing road in SADA, Region. As per the available records, the existing road has been constructed after 1980 by SADA, Gwalior.</p> <p>NHAI while preparing the proposal for forest clearance incorporated the area of the existing road section developed by SADA Gwalior from Km 5.960 to Km 6.420 (1.38 Hac) and from Km 10+600 to Km 11+360 (3.42 Hac.) falling in the proposed ROW of NH in the forest clearance proposal.</p>

-2/3-  30/01/24

		<p>The section from Km 16+500 to Km 28+800 is greenfield alignment, out of which section from Km 16+500 to Km 24+800 (38.03 Hac) passes through Wildlife Sanctuary, which has been incorporated in the proposal and the section from 24+800 to Km 28+800 is revenue land. It is clarified here that no existing road exists from Km 16+500 to Km 28+800, as the section is greenfield.</p> <p>Thus, the entire forest land proposed for diversion for the western bypass of the Gwalior has been incorporated in the Forest Clearance proposal and tabulated as under:-</p> <table><tr><th>Sr. No.</th><th>Chainage</th><th>Area</th><th>Remark</th></tr><tr><td>1</td><td>Km 5.960 to Km 6.420</td><td>1.38 Hac</td><td>Including part of Existing Road</td></tr><tr><td>2</td><td>Km 10+600 to Km 11+360</td><td>3.42 Hac</td><td>Including part of Existing Road</td></tr><tr><td>3</td><td>Km 16+500 to Km 24+800</td><td>38.03 Hac</td><td>Green field alignment</td></tr></table>	Sr. No.	Chainage	Area	Remark	1	Km 5.960 to Km 6.420	1.38 Hac	Including part of Existing Road	2	Km 10+600 to Km 11+360	3.42 Hac	Including part of Existing Road	3	Km 16+500 to Km 24+800	38.03 Hac	Green field alignment
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2	Km 10+600 to Km 11+360	3.42 Hac	Including part of Existing Road															
3	Km 16+500 to Km 24+800	38.03 Hac	Green field alignment															
6	Details of existing ROW's proposed ROW and land width (ROW) availability for road side plantation needs to be submitted and accordingly plantation scheme for roadside plantation needs to be submitted	<p>The section from KM 0+000 to 16+500 is brownfield, whereby the existing ROW is primarily 30-60 Meter which is being utilised for proposed project highway and the rest of the section is green field. The proposed ROW varies from 45-60 Meter. As per the available ROW, the roadside (avenue) plantation scheme has been prepared and is attached with the letter.</p> <p>It is clarified here that no avenue plantation has been proposed in the protected area as per the report of the WII-Dehradun dated 24.08.2023. Further, other mitigation measures such as noise/sound barriers and other requirements as brought out in the WII report shall also be ensured.</p>																

5. In view of the above, the updated para wise compliance of the observations raised by IRO, MoEF&CC is again being submitted for para wise onward submission to APPCF(L/M) so that further necessary action can be taken in the subject proposal please. It is submitted that all the necessary compliances have been submitted by this office.

Encl: As above


 Project Director
 NHAI, PIU-Gwalior(M.P.)

Copy To:

1. PCCF(LM)- Bhopal for kind information and necessary action please.
2. APCCF (LM)-Bhopal for kind information and necessary action please.
3. Regional Officer, NHAI, Jabalpur for kind information please.
4. CCF, Gwalior for kind information and necessary action please.



सत्यमेव जयते

भारतीय राष्ट्रीय राजमार्ग प्राधिकरण

(सड़क परिवहन और राजमार्ग मंत्रालय, भारत सरकार)

प्रियोजना कार्यान्वयन इकाई : डी-81, गोविन्दपुरी, सचिव तेन्दुलकर मार्ग, ग्वालियर (म.प्र.)-474011

National Highways Authority of India

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फोन/Phone : 0751-2231485, ई-मेल/E-mail : gwalior@nhai.org, nhai@nhai.org



भारतमाला
ROAD TO PROSPERITY

File No. 20019/01/2018-Western Bypass/12359

Date 28.12.2023

To,

The Divisional Forest Officer-Gwalior
Central Nursery, near Captain Roop Singh Stadium
City Centre Gwalior (MP)
Email: dfotgwa@mp.gov.in

Sub: Preparation of Detailed Project Report for Construction of Bypass on Western Side of Gwalior City in the State of Madhya Pradesh - *Compliance to the Observations in the Forest clearance proposal (Proposal No. FP/MP/Road/149532/2021)-Reg.*

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4. CCF, Gwalior letter no. 1062 dated 28.04.2023
5. DFO, Gwalior letter no. 2902 dated 18.04.2023
6. This office letter no. 10224 dated 03.04.2023

Sir,

This is in reference to the proposed Western Bypass of the Gwalior City for which NHAI has applied for Forest Clearance vide Proposal No. FP/MP/Road/149532/2021.

2. IRO, MoEF&CC has raised 6 no. of observations in the proposal vide letter dated 14.02.2023 which was replied point wise by this office vide letter dated 03.04.2023 and subsequently forwarded by your office to APCCF, Bhopal vide letter dated 18.04.2023 and same was forwarded by APCCF, Bhopal to MoEF&CC, New Delhi vide letter dated 19.10.2023.

3. MoEF&CC vide their letter dated 11.12.2023 has sought a para wise reply to the observation raised vide letter dated 14.02.2023 from the state government. In furtherance to this, vide letter dated 20.02.2023 APCCF (LM) has again sought compliance report from this office to the observations to be submitted to State Government through DFO, Gwalior.

4. In view of the above, the updated point wise compliance report on the observation raised by IRO, MoEF&CC is as under:-

Sr. No.	Observation	Reply/Compliance
1	The State Govt. shall submit the complete KML file of proposed Forest land and non Forest land involved in this road project.	Already attached in the proposal in Parivesh Portal. However, for ready reference, again being attached.
2	The State Govt. shall explore the possibilities of minimising the area proposed for diversion.	The alignment of length 28.800 Km has been recommended and forest clearance has accordingly been sought by NHAI as said alignment is suitable with respect to aspect of geometry (vertical and horizontal), minimum tree cutting, minimum affected structures, minimum Land Acquisition impact and Cost, Cross Slope of Ground, ease of construction along with Cost of Construction. The said alignment also bears the consent and recommendation of the District Administration and Public Representative.
3	The State Govt./User Agency shall submit detailed reasons for not choosing alternative one in which the affected forest length is minimum and submit the detail Alternative route maps along with KML files.	

7/3-

Head Office : Plot No. G-5/6, Sector-10, Dwarka, New Delhi-110075 Website : www.nhai.gov.in

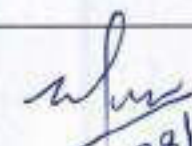
Regional Office : 109, Aadarsh Nagar, Narmada Road, Jabalpur (M.P.) - 482008 E-mail : rjabalpur@nhai.org

Phone : 011-25074100, 200

Phone : 0761-3585028

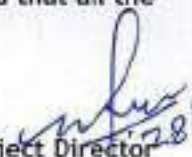
सड़कें ही नहीं, राष्ट्र का निर्माण भी | Building a Nation, Not Just Roads

		<p>On account of above, the alignment of length 28.800 Km is recommended over other alternative alignments and minimum diversion of the forest area has already been ensured with respect to the said alignment.</p> <p>In furtherance to above, it is submitted that details of the alternative alignment are already enclosed in the proposal on Parivesh Portal and were again submitted vide this office letter dated 12.09.2022 which was also submitted by PCCF(LM)-Bhopal to IRO, MoEF&CC in compliance to observation of MoEF&CC dated 22.06.2022.</p> <p>However, for ready reference the details along with relevant documents/Kmz are again being enclosed.</p>																
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-2/3- 
28/12/2023

5. In view of the above, the updated para wise compliance of the observations raised by IRO, MoEF&CC is again being submitted for para wise onward submission to APPCF(L/M) so that further necessary action can be taken in the subject proposal please. It is submitted that all the necessary compliances have been submitted by this office.

Encl: As above


Project Director
NHAI, PIU-Gwalior(M.P.) 28/12/23

Copy To:

1. PCCF(LM)- Bhopal for kind information and necessary action please.
2. APCCF (LM)-Bhopal for kind information and necessary action please.
3. Regional Officer, NHAI, Jabalpur for kind information please.
4. CCF, Gwalior for kind information and necessary action please.

- 3/3 -

मध्यप्रदेश शासन
लोक निर्माण विभाग
संभारालय

क्र. 11442/लो.नि.वि. (2021)

भोपाल, दिनांक 29.10.2021

प्रति,

संजीव अधिकारी,
भारतीय राष्ट्रीय राजमार्ग प्राधिकरण,
भोपाल।

विषय :- ग्वालियर पश्चिम बायपास रोड के संबंध में।




आपके पत्र क्रमांक NHA/RO-MP/Gwl/Western Bypass/2021/44641 दिनांक 22.10.2021 को कृपया अवलोकन करें।

ग्वालियर पश्चिम बायपास रोड के संबंध में जिला प्रशासन द्वारा दिए गए निर्देशों को बैठक के कार्यवाही विवरण के रूप में दिनांक 22.10.2021 को जारी किया गया है, जिसकी प्रति आपको भी पृष्ठबद्ध की गई है। इसके अतिरिक्त कलेक्टर, ग्वालियर द्वारा इस संबंध में आपको पृष्ठक से निर्देश भी जारी किए गए हैं, जो संलग्न है।

कृपया तदनुसार आवश्यक कार्यवाही करने का कष्ट करें।


संलग्न : उपरोक्तानुसार।


(वीरज मण्डलोई)
प्रमुख सचिव
म.प्र. शासन
लोक निर्माण विभाग

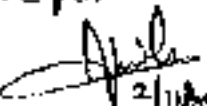
To,

PD PW Gwalior,

Govt of MP & Collector Gwalior letter dated 25.10.21. has directed to proceed on already approved alignment of NHAI. Therefore fresh proposal be formed accordingly and put up to APCCFWL Govt of MP for clearance. And then take up the revision of GAD of ROB with Railways. Please ensure submission of proposal of diversion of forest land & with the clearance by 4th Nov. 2021. Please keep the status ready for next meeting as per instructions of Collector Gwalior. dt 25.10.21.


29/10/21

Copy to : 1. CGM (T) NHAI HQ.
2. Sh. Manoj Joshi, Mgt. R.R. Bhopal to keep record.


2/11/2021
R.B. Bhopal

कार्यालय कलेक्टर, जिला ग्वालियर

क. क्यू./स्टेनो/कले./2021

ग्वालियर दिनांक 22.10.2021
25

प्रति,

परियोजना संचालक
भारतीय राष्ट्रीय राजमार्ग प्राधिकरण
डी-81 गोविन्दपुरी, ग्वालियर, म.प्र.

विषय :- साडा बाईपास रोड अलाइनमेंट परिवर्तन किये जाने के संबंध में।

विषयांतर्गत दिनांक 23.09.2021 को माननीय केन्द्रीय मंत्री, नागर विमानन मंत्रालय, भारत सरकार की अध्यक्षता में आयोजित हुई बैठक, जिसमें कि आप भी उपस्थित थे, में साडा बाईपास रोड अलाइनमेंट के मूल ले-आउट में परिवर्तन किये जाने के विषय पर चर्चा के दौरान संज्ञान में आया कि अलाइनमेंट परिवर्तित किये जाने से कार्य में विलम्ब होने के साथ-साथ कार्य की लागत में भी वृद्धि हो रही है। इस संबंध में माननीय केन्द्रीय मंत्री द्वारा अप्रसन्नता व्यक्त की गई थी।

अतः उक्त के आलोक में माननीय केन्द्रीय मंत्री, नागर विमानन मंत्रालय, भारत सरकार के द्वारा दिये गये निर्देशों के क्रम में पूर्व स्वीकृत ले-आउट अनुसार उचित कार्यवाही करें एवं कृत कार्यवाही का प्रतिवेदन 15 दिवस में प्रस्तुत किया जाना सुनिश्चित करें।

संलग्न:- दिनांक 23.09.2021 की बैठक का कार्यवाही विवरण।


कलेक्टर
जिला ग्वालियर

कार्यालय कलेक्टर, जिला ग्वालियर

क्रमांक क्यू/स्टेनो/कले./2021

ग्वालियर, दिनांक 12.10.2021

क्र.	बैठक का कार्यवृत्त
01	दिनांक
02	स्थान एवं समय
03	विषय

माननीय नागर विमानन मंत्री, भारत सरकार श्री ज्योतिरादित्य सिंधिया की अध्यक्षता में ग्वालियर शहर के विकास कार्यों के संबंध में आयोजित बैठक में निम्नानुसार माननीय जनप्रतिनिधिगण एवं शासकीय सेवक उपस्थित रहे :-

01. माननीय मंत्री, श्री तुलसीराम सिलावट, प्रमारी एवं जल संसाधन मंत्री
02. माननीय मंत्री, श्री प्रद्युम्न सिंह, तोमर, ऊर्जा मंत्री, म.प्र. शासन
03. माननीय संसद सदस्य श्री विवेक नारायण शेजवलकर, संसदीय क्षेत्र ग्वालियर
04. माननीय राज्यमंत्री, नगरीय विकास एवं आवास श्री ओ.पी.एस. मदीरिया, म.प्र. शासन
05. माननीय राज्यमंत्री, लोक निर्माण विभाग श्री सुरेश धाकड़ म.प्र. शासन
06. माननीय जिला अध्यक्ष, भाजपा, श्री कमल माखीजानी, जिला ग्वालियर
07. आयुक्त, ग्वालियर संभाग, ग्वालियर
08. पुलिस महानिरीक्षक, ग्वालियर रेंज, ग्वालियर
09. कलेक्टर, जिला ग्वालियर
10. पुलिस अधीक्षक, जिला ग्वालियर
11. आयुक्त, नगर निगम, ग्वालियर
12. मुख्य कार्यपालन अधिकारी, जिला पंचायत, ग्वालियर
13. मुख्य कार्यपालन अधिकारी, ग्वालियर स्मार्ट सिटी डबलपमेंट कॉ.लि.
14. कुलपति, जीवाजी विश्वविद्यालय, ग्वालियर
15. प्रबंध निदेशक, एम.पी.आई.डी.सी. ग्वालियर
16. समीक्षा बैठक में उपरोक्त के अतिरिक्त माननीय जनप्रतिनिधिगण एवं अन्य संबंधित अधिकारी भी उपस्थित रहे।

बैठक में निम्नानुसार निर्देश प्रसारित किये गये -

01. माननीय मंत्री द्वारा निर्देशित किया गया कि ग्वालियर शहर के ऐतिहासिक, सांस्कृतिक स्थलों, पर्यटन स्थल, हस्तशिल्प कला, खान-पान स्थल, को सम्मिलित कर शहर के आधुनिकीकरण हेतु विस्तृत कार्ययोजना तैयार की जावे, जिसमें शहर की अतिप्राचीन डीडवाना ओली, मोचीओली, दर्जीओली, दानाओली सहित अन्य पारंपरिक संस्कृतियों व प्राचीन परंपराओं को पुनर्जीवित किये जाने के उपायों को भी सम्मिलित किये जाने हेतु निर्देशित किया गया।

02. ग्वालियर शहर व जिले में स्थित पर्यटन स्थल व खान-पान स्थलों का विस्तृत आकर्षक मानचित्र मय सुगम पहुँच के ब्यौरा के साथ तैयार कर शहर के मुख्य स्थलों/पर्यटन स्थलों पर स्थापित कराये जावें साथ ही शहर के मुख्य मार्गों पर पर्यटन स्थल एवं मुख्य बाजारों तक पहुँचने हेतु आवश्यक आकर्षक साईनेज स्थापित कराये जावें।

(कार्यवाही-जिला प्रशासन, नगर निगम एवं स्मार्ट सिटी, ग्वालियर)

03. ग्वालियर शहर अंतर्गत पेयजल योजना की समीक्षा के दौरान निर्देशित किया गया कि निकाय के कुल 66 वार्डों अंतर्गत दीर्घकालीन पेयजल आपूर्ति हेतु विस्तृत कार्ययोजना तैयार की जावे जिसमें शहर के समस्त वार्ड/कॉलोनी/मोहल्ला/गली में पेयजल व्यवस्था हेतु डाली गई पाइपलाइन एवं स्थापित चैम्बर का ब्यौरा इत्यादि सम्मिलित हो जिससे निकाय की सम्पूर्ण आवादी की पेयजल आपूर्ति सुनिश्चित हो सके। उक्तानुसार की डी.पी.आर. अमृत 2.0 योजना के आरंभ होने के 03 माह में पूर्ण की जावे।

04. वर्ष 2050 तक शहर की पेयजल आपूर्ति हेतु 225 करोड़ रु. की लागत की डी.पी.आर. जिसके तहत चम्बल नदी और कोतवाल डेम से कुल 180 एम.एल.डी. पानी शहर को प्राप्त होगा के संबंध में समीक्षा कर आगामी कार्यवाही किये जाने हेतु निर्देशित किया गया।

(कार्यवाही- नगर निगम, ग्वालियर)

05. शहर की जीर्ण-क्षीर्ण/पुरानी सड़कों की मरम्मत एवं नवीन सड़कों के निर्माण हेतु निर्देशित किया गया। उक्त कार्य हेतु राशि उपलब्धता के लिए के माननीय प्रमारी मंत्री एवं माननीय ऊर्जा मंत्री की उपस्थिति में वीडियो कॉन्फ्रेंसिंग के माध्यम से माननीय मंत्री नगरीय विकास एवं आवास विभाग, म.प्र. भोपाल से चर्चा किये जाने हेतु निर्देशित किया गया।

(कार्यवाही- नगर निगम, लोकनिर्माण विभाग एवं स्मार्ट सिटी, ग्वालियर)

06. ग्वालियर शहर में मेट्रो ट्रेन संचालन के संबंध में चर्चा के दौरान निर्देशित किया गया कि मेट्रो ट्रेन संचालन हेतु अनुभवी विशेषज्ञों की राय लेकर ऐसे प्रोजेक्ट का चुनाव किया जावे जिससे कि शहर के अधिकांश भागों में आवागमन सुगम होकर प्रोजेक्ट का सफल क्रियान्वयन हो सके।

इस संबंध में माननीय सांसद महोदय द्वारा पुराने शहर के साथ-साथ सिटी सेंटर शहर एवं नवनिर्मित क्षेत्रों को भी सम्मिलित करते हुए सिटी मेट्रो प्रोजेक्ट तैयार किये जाने का सुझाव दिया गया।

(कार्यवाही- स्मार्ट सिटी, ग्वालियर, इंडियन रेल्वे स्टेशन डबलपमेंट कॉर्पोरेशन)

07. शहर के ऐतिहासिक दुर्ग, महाराज बाड़ा, पुरातात्विक इमारतों, मोती महल, लघेडी गेट, नदीगेट, गोले का मंदिर, जल बिहार, बैजाताल एवं कटोराताल एवं अन्य ऐतिहासिक स्थलों पर की गई फसाड लाइटिंग की सराहना करते हुए निर्देशित किया गया कि महाराज बाड़ा स्थित समस्त प्राचीन इमारतों पर एकरूपता एवं आकर्षण की दृष्टि से फसाड लाइटिंग की जावे साथ ही शासकीय मुद्रणालय का भी अन्य इमारतों की तरह जीर्णोद्धार किया जावे।

बैठक में निर्देशित किया गया कि टाउन हॉल का आवश्यक रख-रखाव कर संचालन किया जावे जिससे अधिकाधिक राजस्व एकत्रित किया जा सके।

(कार्यवाही- स्मार्ट सिटी, ग्वालियर)

08. ग्वालियर रेल्वे स्टेशन पुर्नविकास समीक्षा बैठक के दौरान अवगत कराया गया कि 250 करोड रु. की लागत से हैरिटेज एवं आधुनिकता से युक्त पी.पी.पी. मोडल आधारित ग्वालियर रेल्वे स्टेशन पुर्नविकास योजना अंतर्गत किये जाने वाले कार्यों हेतु निविदा प्रकिया प्रारंभ की जा चुकी है, जो कि संभवतः अक्टूबर माह के अंत तक जारी की जावेंगी।

(कार्यवाही- स्मार्ट सिटी, ग्वालियर, इंडियन रेल्वे स्टेशन डबलपमेंट कॉर्पोरेशन)

अन्य बिन्दु एवं प्रसारित निर्देश :-

01. विशेष क्षेत्र विकास प्राधिकरण को बढ़ावा दिये जाने के उद्देश्य से क्षेत्रांतर्गत आई.टी. बी.पी. द्वारा वेपन ट्रेनिंग स्कूल व एस.एस.बी. केन्द्र स्थापित गतिविधियां प्रारंभ किये जाने हेतु माननीय गृहमंत्री महोदय से चर्चा किये जाने संबंधी आश्वासन दिया गया।

(कार्यवाही- मुख्य कार्यपालन अधिकारी, विशेष क्षेत्र विकास प्राधिकरण)

02. ठाटीपुर पुर्नघनत्वीकरण योजना अंतर्गत ठाटीपुर विकास हेतु आमंत्रित निविदा अक्टूबर माह में प्रारंभ एवं योजना का कार्य दिसम्बर माह में प्रारंभ होने के संबंध में अवगत कराया गया। उक्त संबंध में नियमानुसार आवश्यक कार्यवाही हेतु निर्देशित किया गया।

(कार्यवाही- म.प्र. हाउसिंग बोर्ड)

03. रेडीमेंड गार्वमेंट पार्क व प्लास्टिक पार्क में की जाने वाली गतिविधियों को अधिक से अधिक बढ़ावा दिये जाने के निर्देश गये जिसके तहत संबंधित उद्योगों के निवेशकों के साथ बैठक कर उन्हें स्थानांतरित किया जाना है।

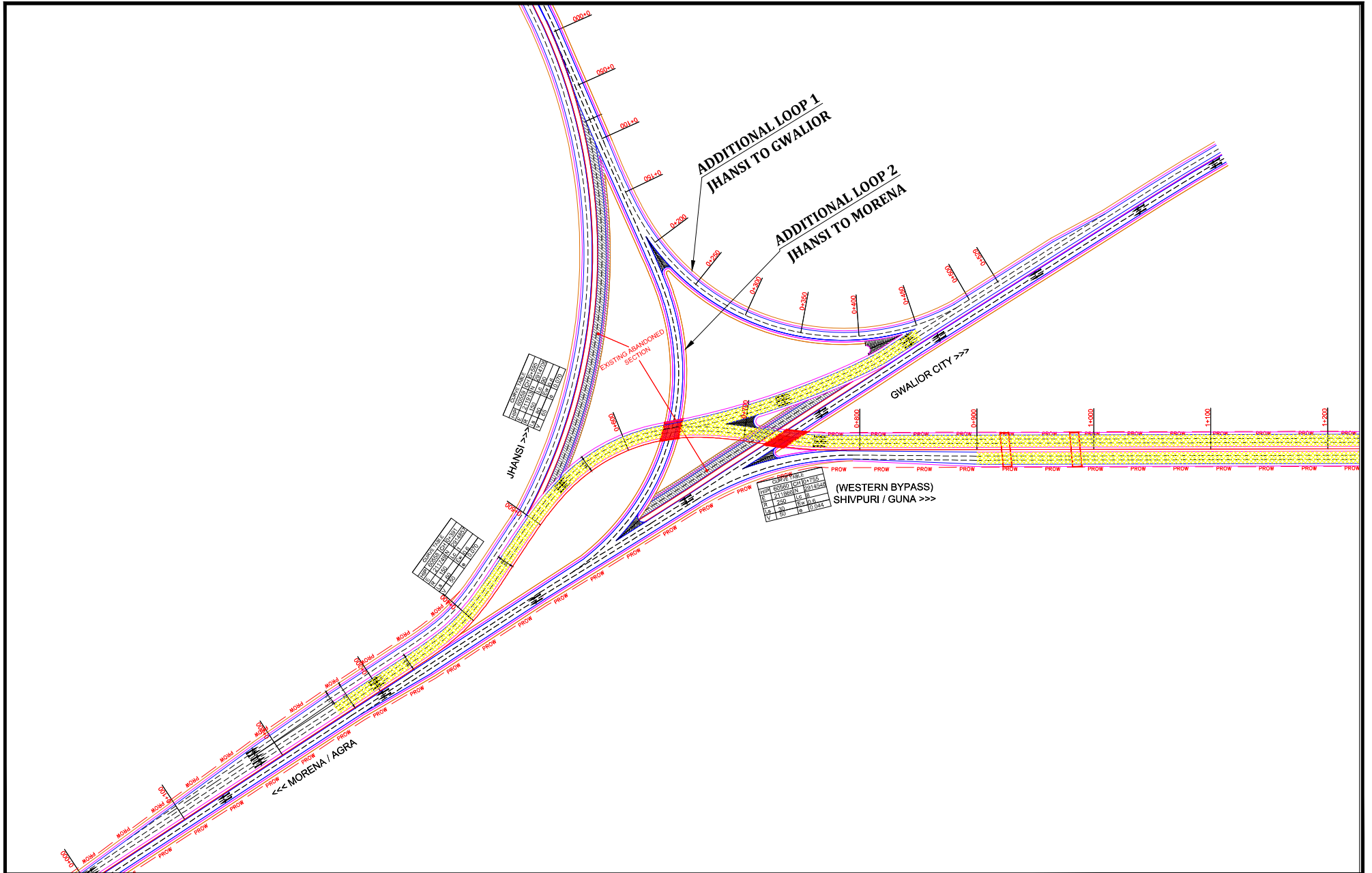
(कार्यवाही- एम.पी.आई.डी.सी.)

04. बैठक के दौरान सुझाव दिया गया कि ग्वालियर में केन्द्रीय विश्वविद्यालय प्रारंभ कराया जाना आवश्यक है इस संबंध में आवश्यक कार्यवाही एवं गंभीर प्रयास किये जाने हेतु निर्देशित किया गया।

(कार्यवाही- कुलपति जीवाजी विश्वविद्यालय ग्वालियर)

Plantation to be carried out on Project Highway (Except Protected Area)									
Sr.No.	Design Length	length	Details of typical cross section	Median Plantation		2nd row from ROW edge	1st row from ROW edge	2nd row from ROW edge	1st row from ROW edge
				LHS	RHS	LHS		RHS	
1	From km 0.000 to 16.500 & km 24.800 to 28.800	20.500	4 Lane with paved shoulder	1552	1552	840	1660	840	1660
TOTAL NO OF TREES PLANTATION (Nos.)				1552	1552	840	1660	840	1660

Note: As per WII Dehradun report dated 24.08.2023, no avenue plantation or planting of fruit-bearing trees should be done along the highway within the protected area. However, as per the recommendation of the WII-Dehradun, Post-construction rehabilitation of uprooted grassland vegetation shall be done using native flora in collaboration with forest department.



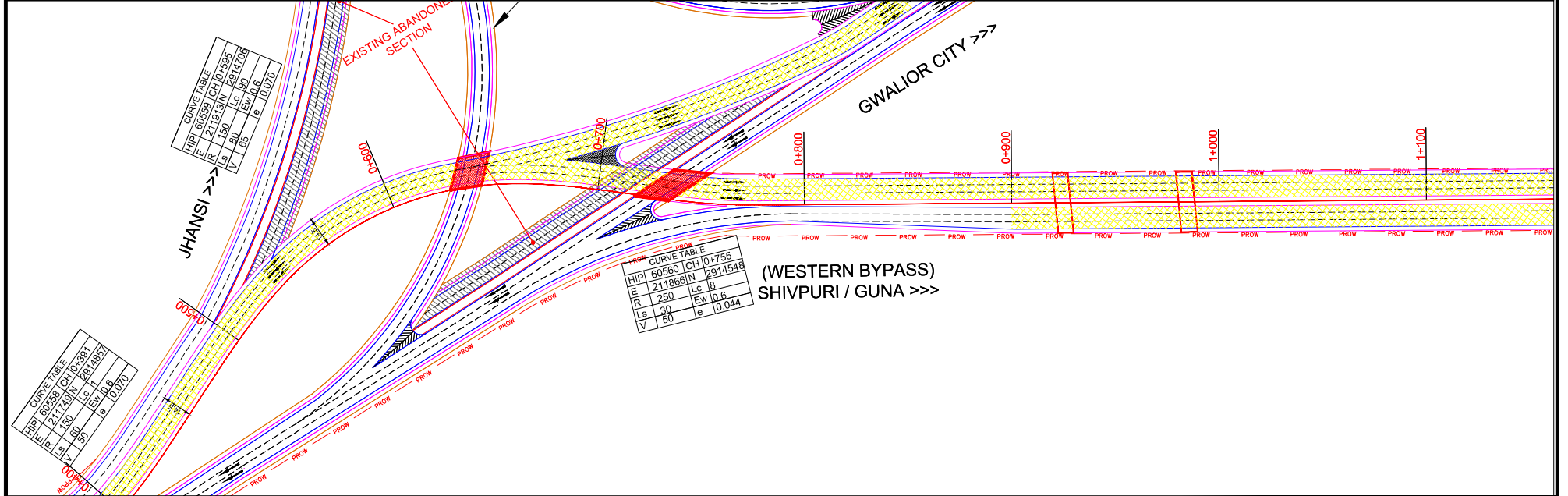
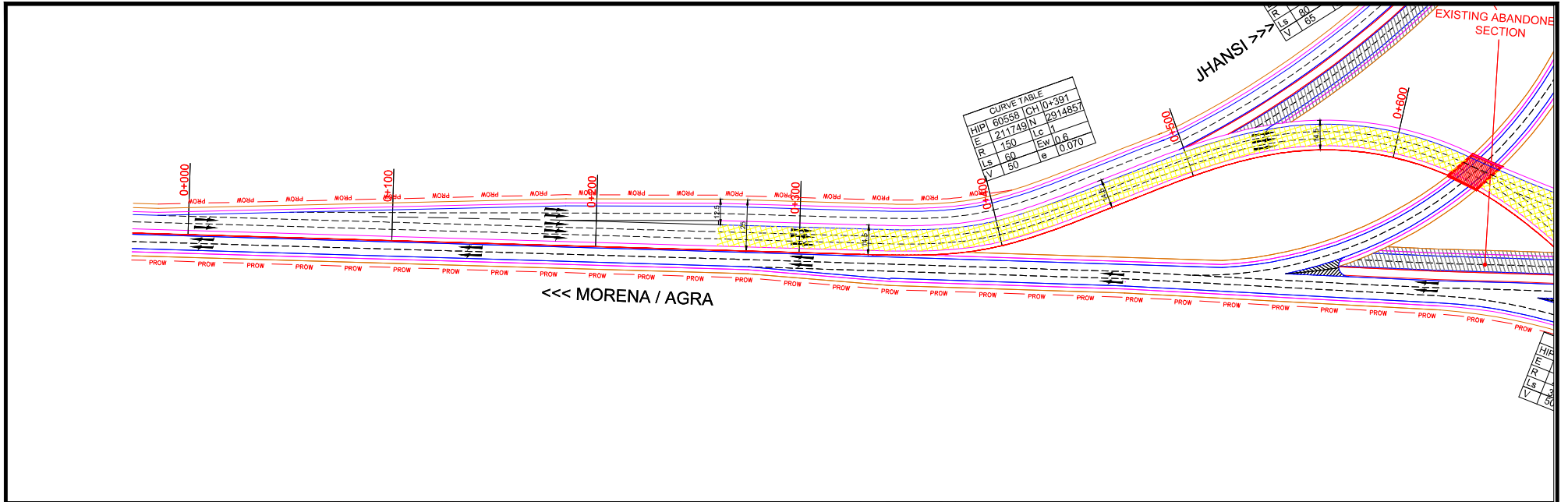
CLIENT :- NATIONAL HIGHWAYS AUTHORITY OF INDIA
(Ministry of Transport and Highways)
Consultancy Services for Preparation of Detailed Project Report for Bypass on Western Side of Gwalior city in the State of Madhya Pradesh

CONSULTANTS :- LION ENGINEERING CONSULTANTS PVT. LTD.
Corporate Office :- "LION TOWER",
Plot Number-97, Elegant Estate,
Near Mother Teresa School,
Kolar Road, Bhopal
e-mail : dpr@liongroup.in
Phone No.: 0755-3246521



DRAWING TITLE :- Junction
(Ch:0+000)
PROJECT TITLE :- Bypass on Western side of Gwalior city

DRAWN BY	Poonam	DRAWING NO :- LECPL/NHAI/S&P/ (
CHECKED BY	Deepak	DATE :- March 2023
APPROVED BY	T.L.	SCALE :- N.T.S



CLIENT :- NATIONAL HIGHWAYS AUTHORITY OF INDIA
(Ministry of Transport and Highways)

Consultancy Services for Preparation of Detailed Project Report for Bypass on Western Side of Gwalior city in the State of Madhya Pradesh

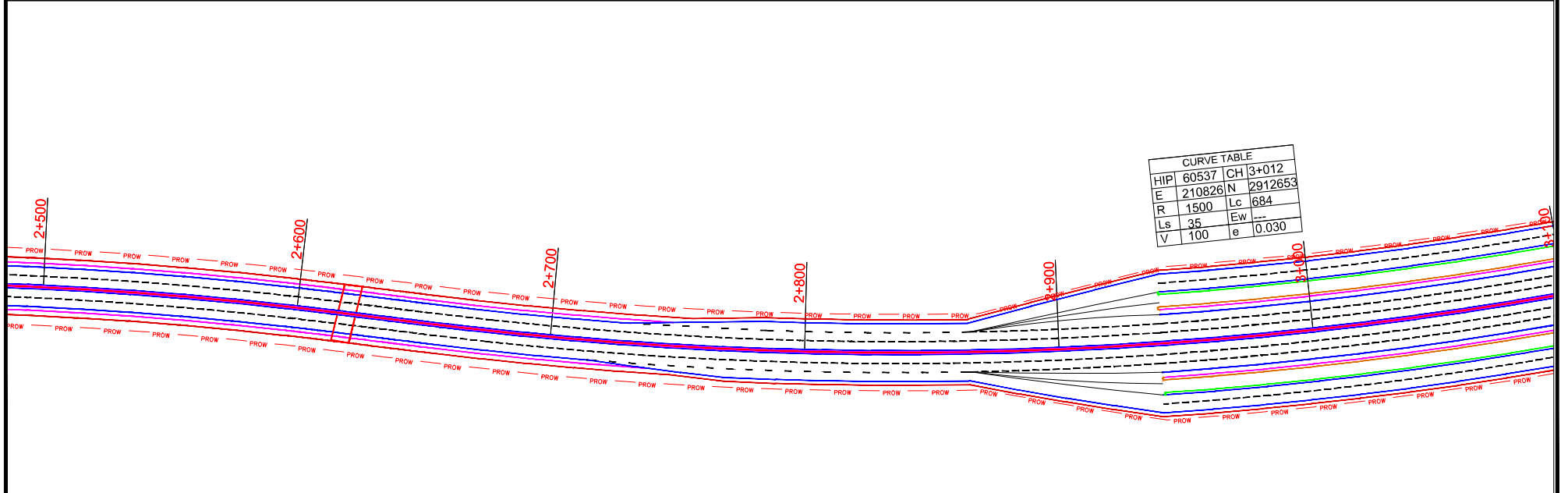
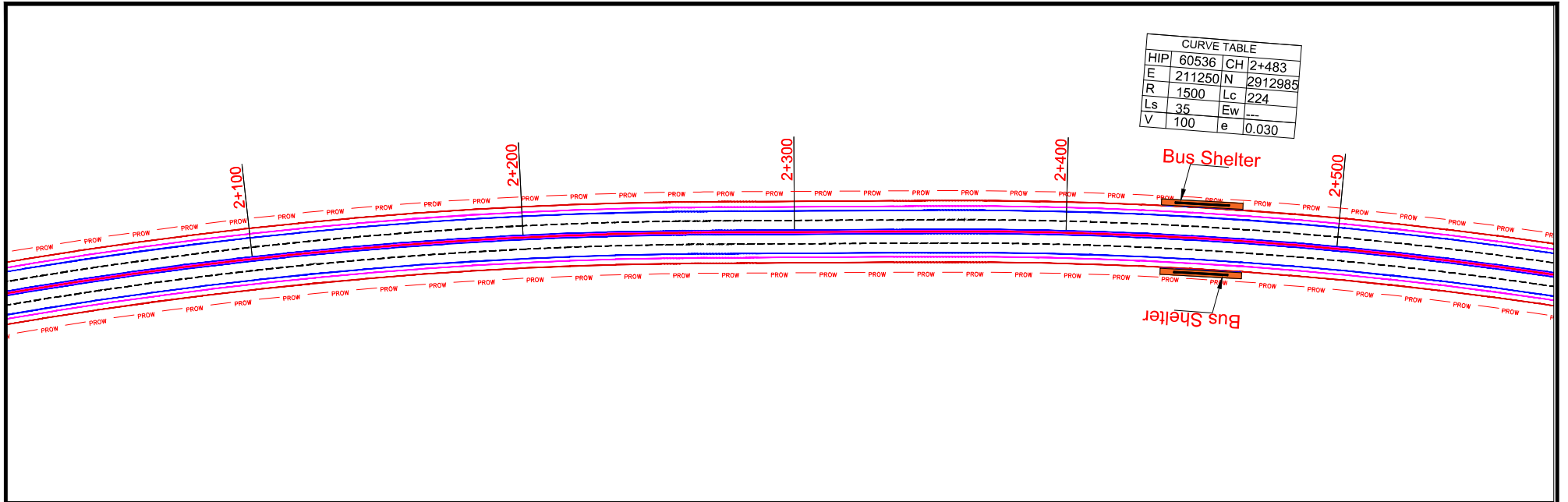
CONSULTANTS :- LION ENGINEERING CONSULTANTS PVT. LTD.

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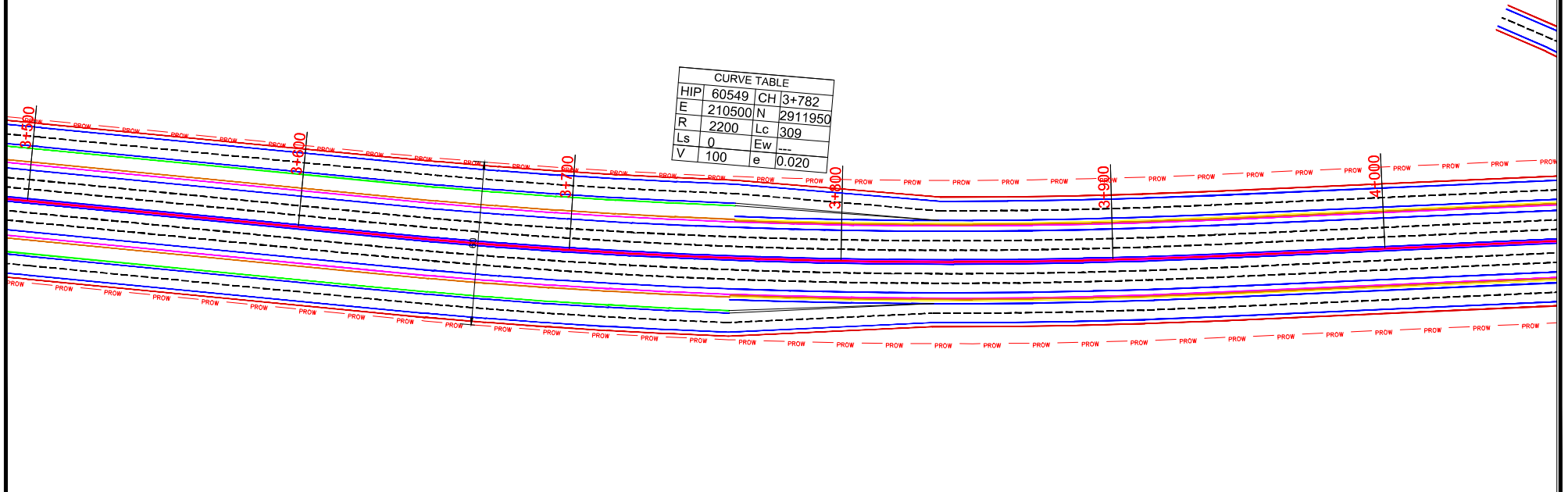
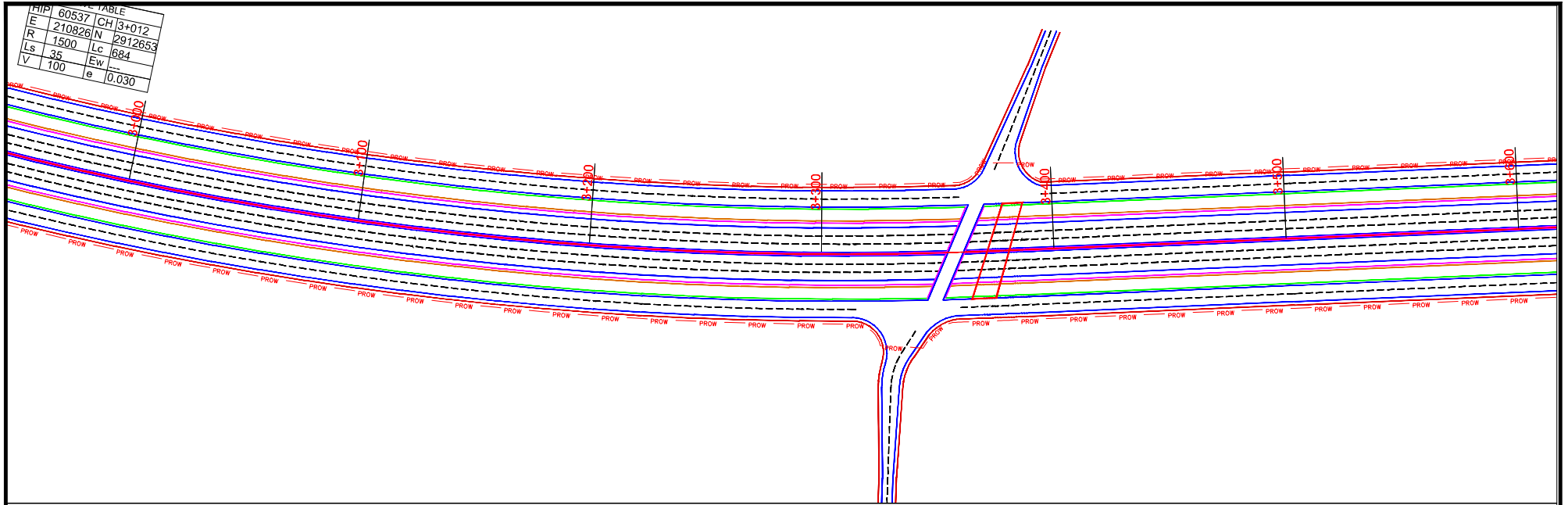
DRAWING TITLE :- Strip Plan Plantation
(Ch:0+000 - 1+000)

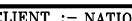

PROJECT TITLE :- Bypass on Western side of Gwalior city

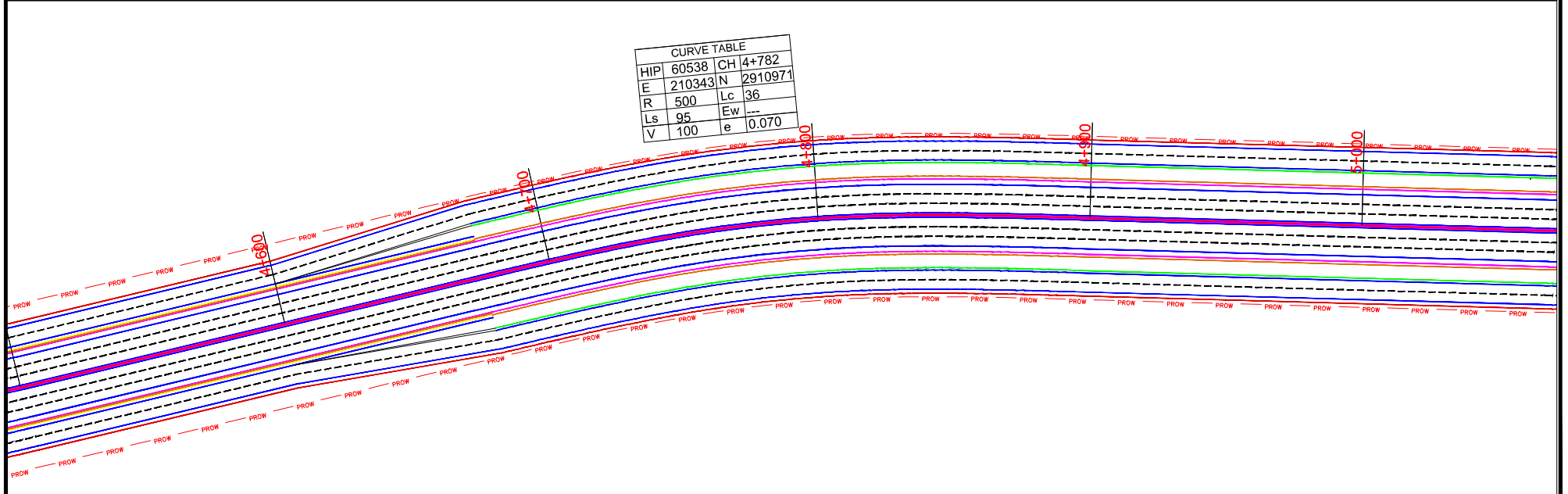
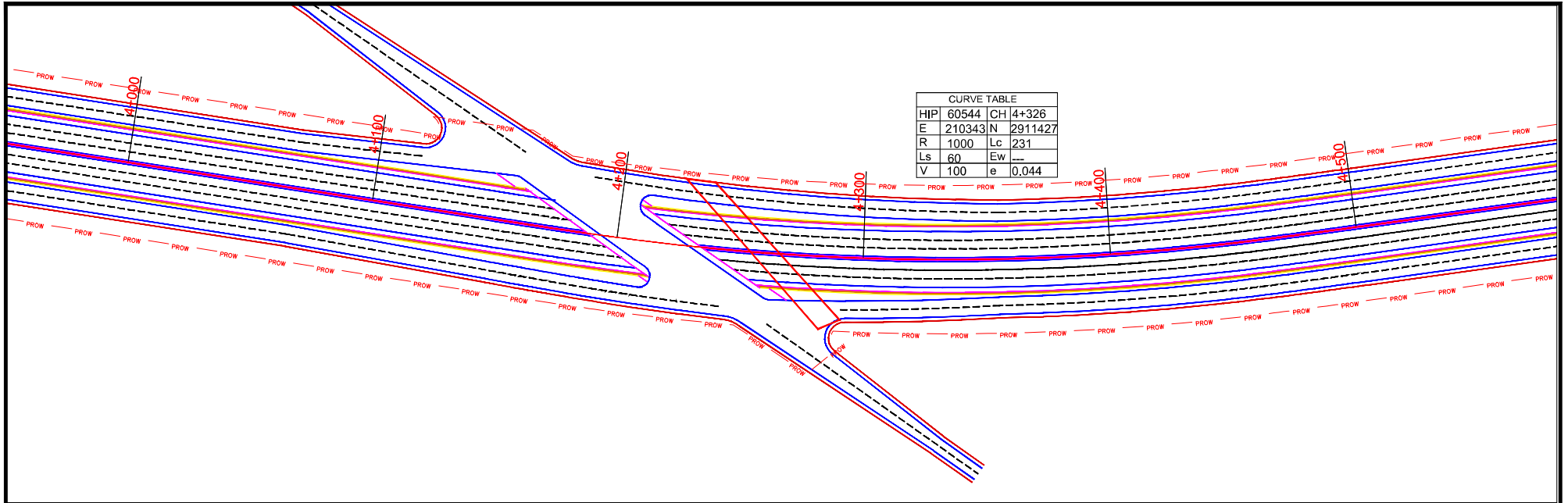
DRAWN BY	Poonam	DRAWING NO :- LECPL/NHAI/S&P / (1)
CHECKED BY	Deepak	DATE :- March 2023
APPROVED BY	T.L.	SCALE :- N.T.S



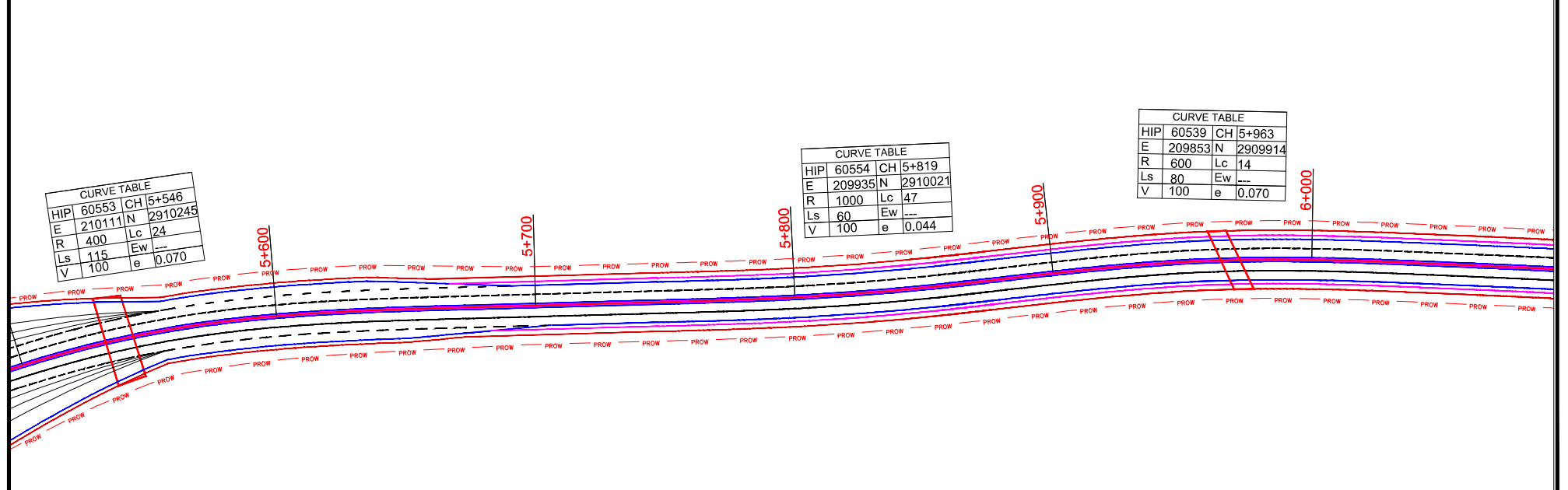
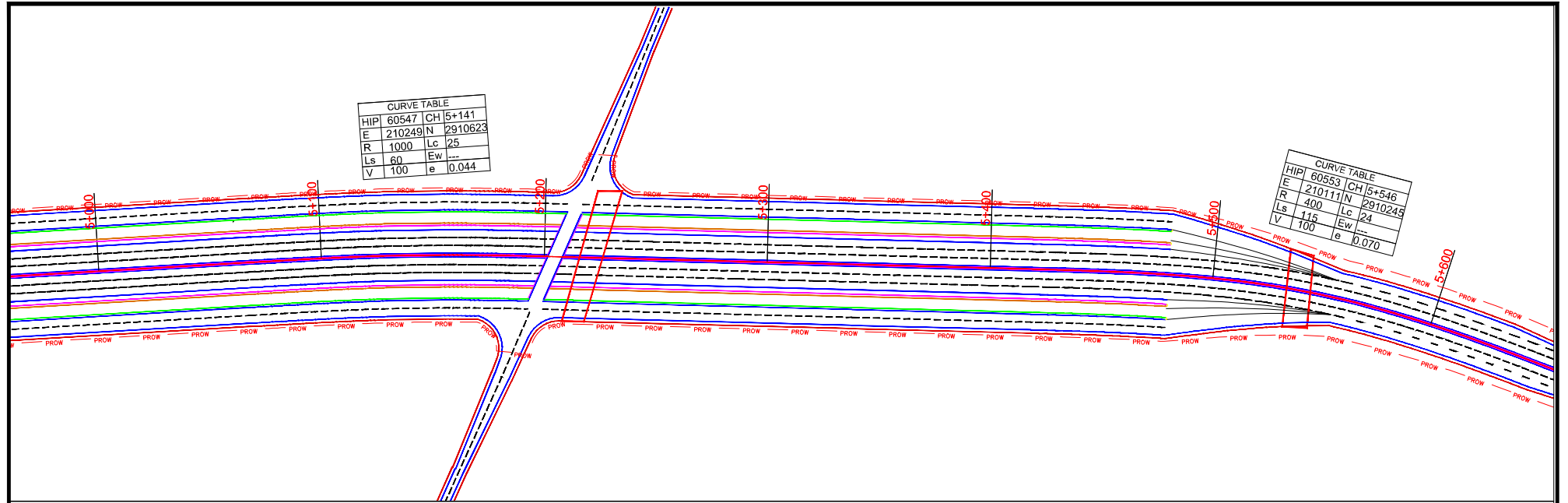
CLIENT :- NATIONAL HIGHWAYS AUTHORITY OF INDIA (Ministry of Transport and Highways) Consultancy Services for Preparation of Detailed Project Report for Bypass on Western Side of Gwalior city in the State of Madhya Pradesh	CONSULTANTS :- LION ENGINEERING CONSULTANTS PVT. LTD. Corporate Office :- "LION TOWER", Plot Number-97, Elegant Estate, Near Mother Teresa School, Kolar Road, Bhopal e-mail : dpr@liongroup.in Phone No.: 0755-3246521	DRAWING TITLE :- Strip Plan Plantation (Ch:2+000 - 3+000)		DRAWN BY Poonam	DRAWING NO :- LECPL/NHAI/S&P/ (3)
		PROJECT TITLE :- Bypass on Western side of Gwalior city		CHECKED BY Deepak	DATE :- March 2023
				APPROVED BY T.L.	SCALE :- N.T.S



 <div>CLIENT :- NATIONAL HIGHWAYS AUTHORITY OF INDIA (Ministry of Transport and Highways) Consultancy Services for Preparation of Detailed Project Report for Bypass on Western Side of Gwalior city in the State of Madhya Pradesh</div>	 <div>CONSULTANTS :- LION ENGINEERING CONSULTANTS PVT. LTD. Corporate Office :- "LION TOWER", Plot Number-97, Elegant Estate, Near Mother Teresa School, Kolar Road, Bhopal e-mail : dpr@liongroup.in Phone No.: 0755-3246521</div>	DRAWING TITLE :- Strip Plan Plantation (Ch:3+000 - 4+000)	DRAWN BY	Poonam	DRAWING NO :- LECPL/NHAI/S&P/ (4)	
		PROJECT TITLE :- Bypass on Western side of Gwalior city	CHECKED BY	Deepak	DATE :-	March 2023
			APPROVED BY	T.L.	SCALE :-	N.T.S



CLIENT :- NATIONAL HIGHWAYS AUTHORITY OF INDIA (Ministry of Transport and Highways) Consultancy Services for Preparation of Detailed Project Report for Bypass on Western Side of Gwalior city in the State of Madhya Pradesh	CONSULTANTS :- LION ENGINEERING CONSULTANTS PVT. LTD. Corporate Office :- "LION TOWER", Plot Number-97, Elegant Estate, Near Mother Teresa School, Kolar Road, Bhopal e-mail : dpr@liongroup.in Phone No.: 0755-3246521	DRAWING TITLE :- Strip Plan Plantation (Ch:4+000 - 5+000)		DRAWN BY Poonam	DRAWING NO :- LECPL/NHA/S&P/ (5)
		PROJECT TITLE :- Bypass on Western side of Gwalior city		CHECKED BY Deepak	DATE :- March 2023
				APPROVED BY T.L.	SCALE :- N.T.S



CLIENT :- NATIONAL HIGHWAYS AUTHORITY OF INDIA
(Ministry of Transport and Highways)



Consultancy Services for Preparation of Detailed Project Report for Bypass on Western Side of Gwalior city in the State of Madhya Pradesh

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Plot Number-97, Elegant Estate,
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Kolar Road, Bhopal
e-mail : dpr@liongroup.in
Phone No.: 0755-3246521

DRAWING TITLE :-

Strip Plan Plantation
(Ch:5+000 - 6+000)

PROJECT TITLE :-

Bypass on Western side of Gwalior city

DRAWN BY

Poonam

CHECKED BY

Deepak

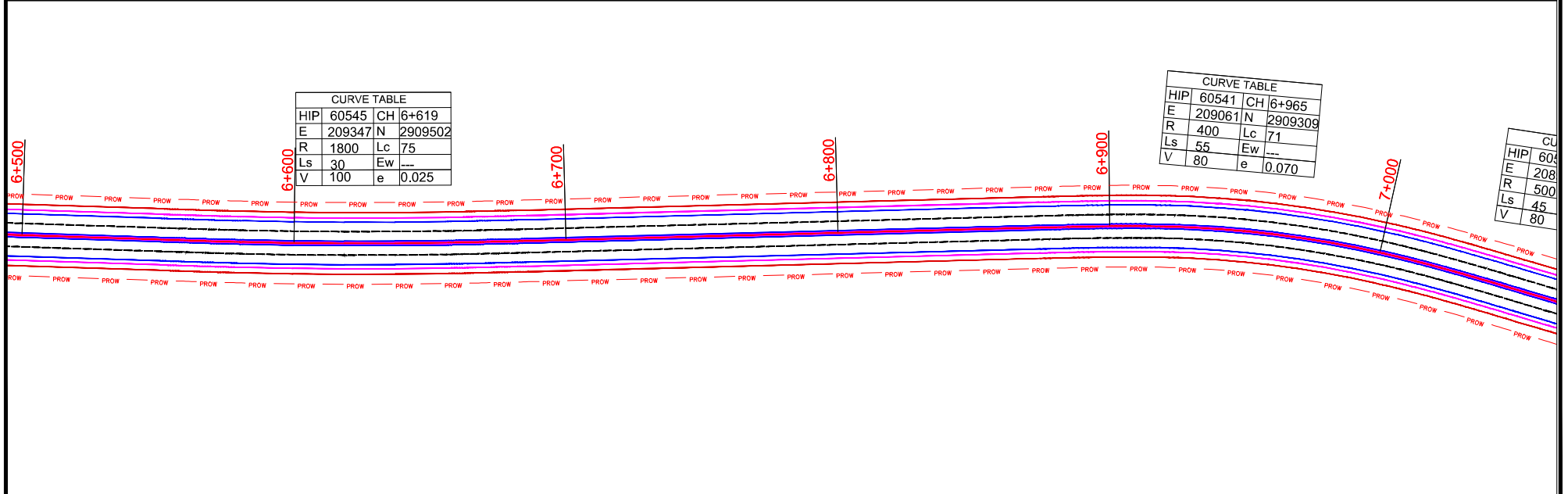
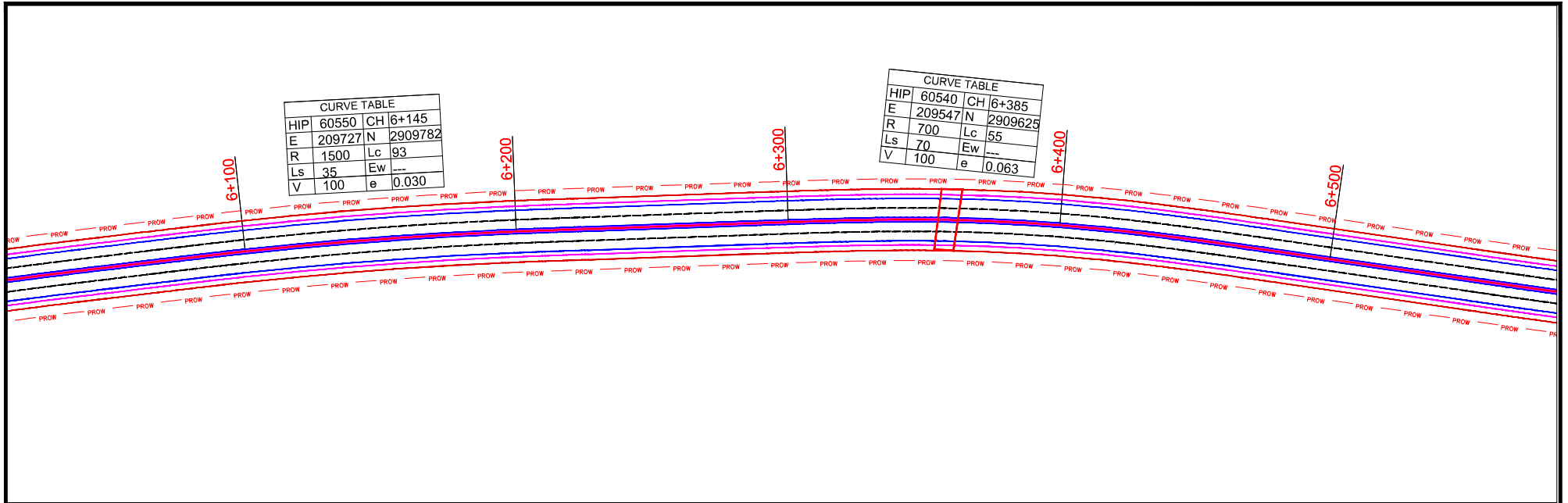
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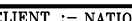

T.L.

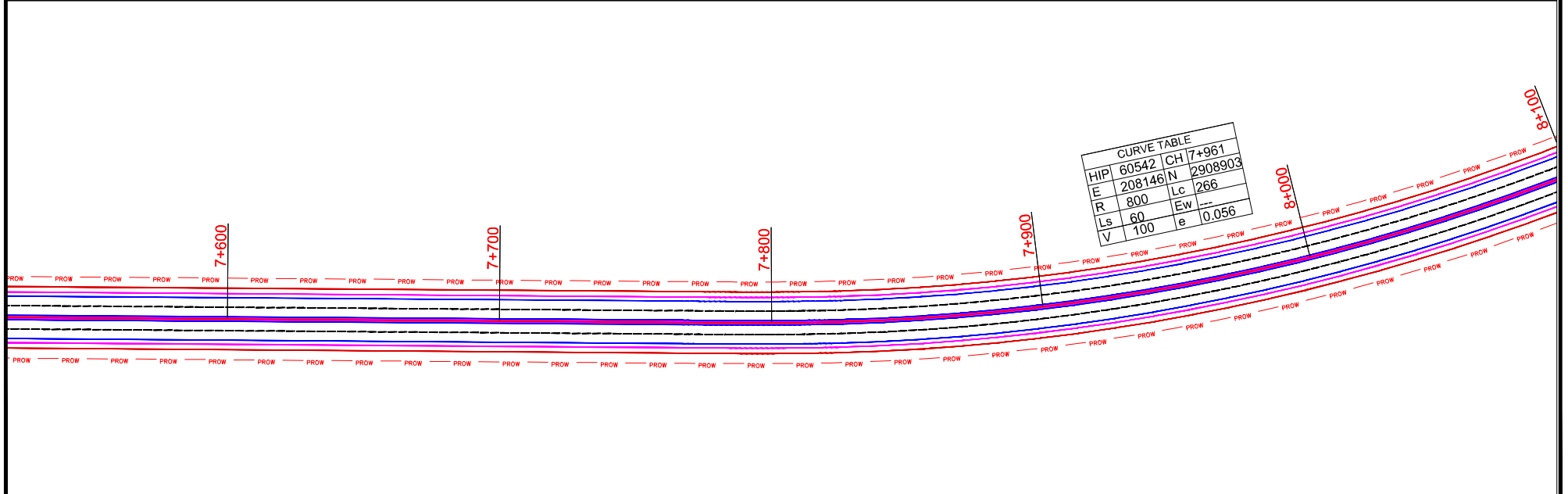
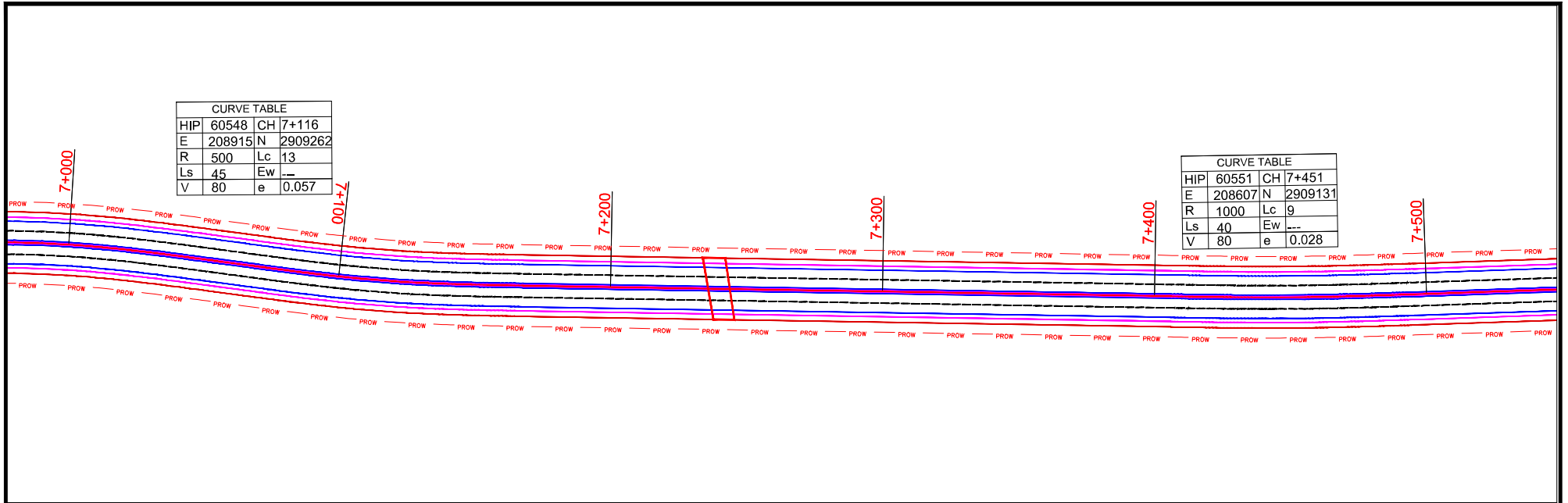
DRAWING NO :- LECPL/NHAI/S&P/ (6)



DATE :- March 2023

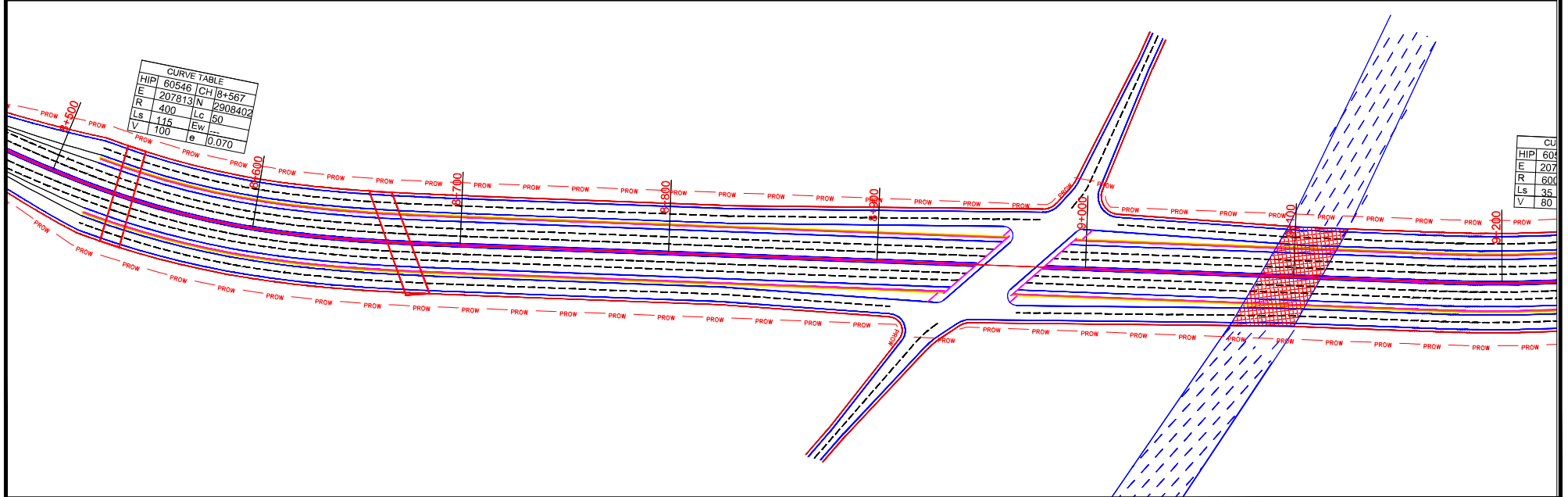
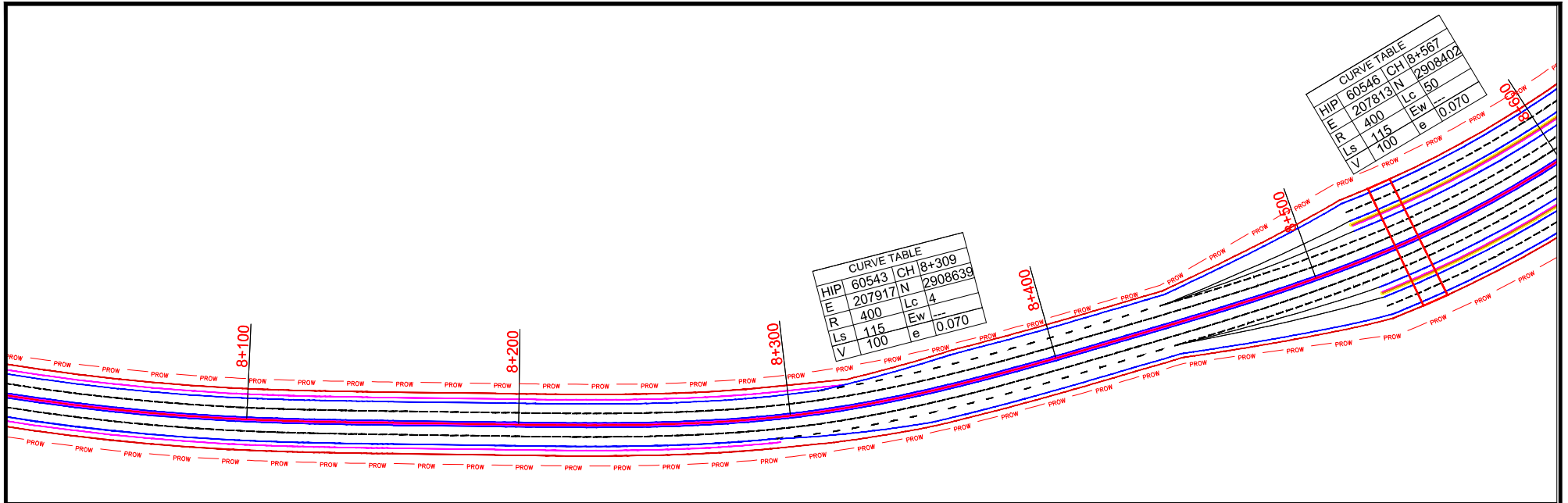
SCALE :- N.T.S



 <div>CLIENT :- NATIONAL HIGHWAYS AUTHORITY OF INDIA (Ministry of Transport and Highways) Consultancy Services for Preparation of Detailed Project Report for Bypass on Western Side of Gwalior city in the State of Madhya Pradesh</div>	 <div>CONSULTANTS :- LION ENGINEERING CONSULTANTS PVT. LTD. Corporate Office :- "LION TOWER", Plot Number-97, Elegant Estate, Near Mother Teresa School, Kolar Road, Bhopal e-mail : dpr@liongroup.in Phone No.: 0755-3246521</div>	DRAWING TITLE :- <div>Strip Plan Plantation (Ch:6+000 - 7+000)</div>	DRAWN BY <div>Poonam</div>	DRAWING NO :- LECPL/NHAI/S&P/ (7)
		PROJECT TITLE :- <div>Bypass on Western side of Gwalior city</div>	CHECKED BY <div>Deepak</div>	DATE :- <div>March 2023</div>
			APPROVED BY <div>T.L.</div>	SCALE :- <div>N.T.S</div>



 <div>CLIENT :- NATIONAL HIGHWAYS AUTHORITY OF INDIA (Ministry of Transport and Highways) Consultancy Services for Preparation of Detailed Project Report for Bypass on Western Side of Gwalior city in the State of Madhya Pradesh</div>	 <div>CONSULTANTS :- LION ENGINEERING CONSULTANTS PVT. LTD. Corporate Office :- "LION TOWER", Plot Number-97, Elegant Estate, Near Mother Teresa School, Kolar Road, Bhopal e-mail : dpr@liongroup.in Phone No.: 0755-3246521</div>	DRAWING TITLE :- Strip Plan Plantation (Ch:7+000 - 8+000)	DRAWN BY	Poonam	DRAWING NO :- LECPL/NHAI/S&P/ (8)	
		PROJECT TITLE :- Bypass on Western side of Gwalior city	CHECKED BY	Deepak	DATE :-	March 2023
			APPROVED BY	T.L.	SCALE :-	N.T.S



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 Report for Bypass on Western Side of Gwalior city in the
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 Phone No.: 0755-3246521

DRAWING TITLE :- Strip Plan_Plantation
 (Ch:8+000 - 9+000)
PROJECT TITLE :- Bypass on Western side of Gwalior city

DRAWN BY

Poonam

DRAWING NO :- LECPL/NHAI/S&P/ (9)

CHECKED BY

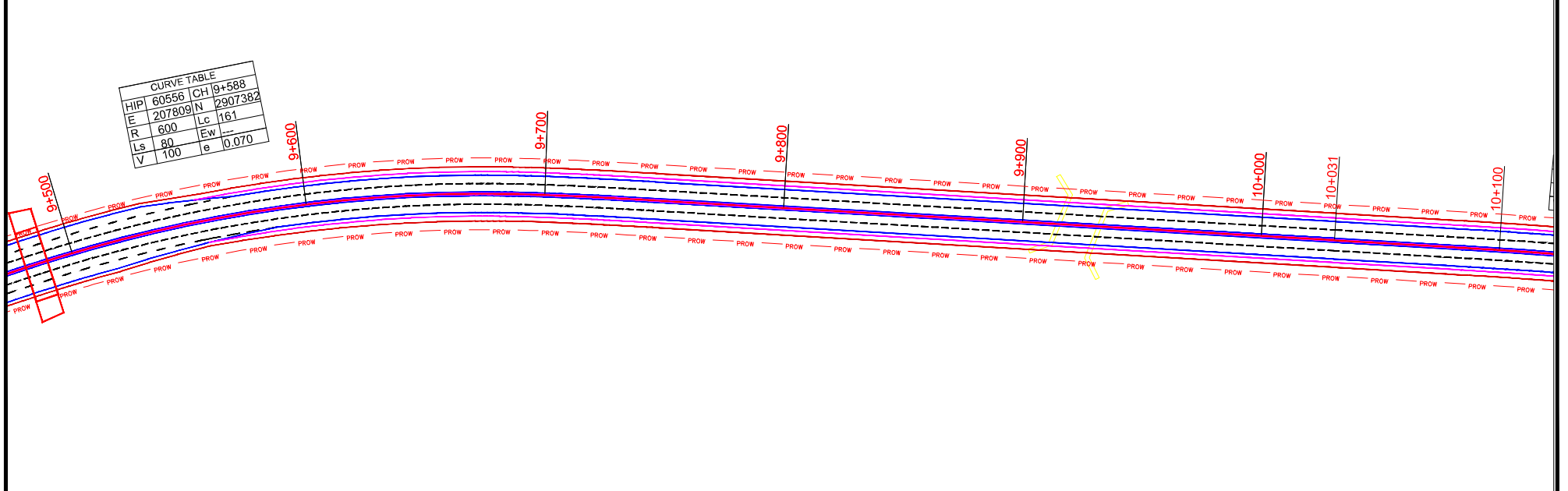
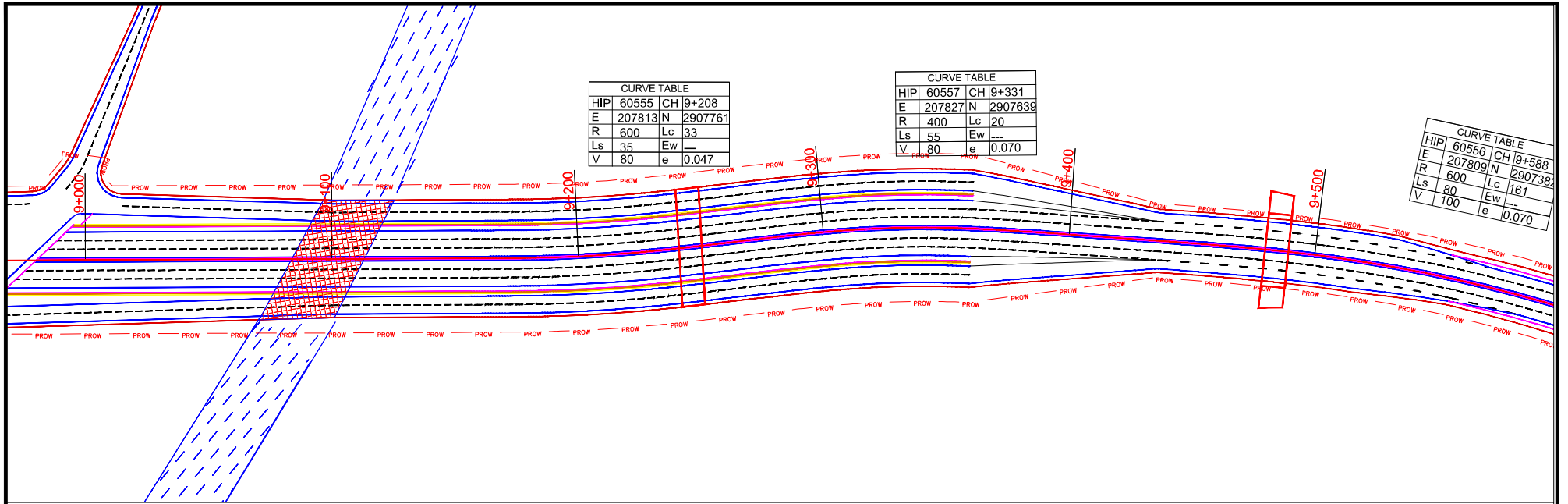
Deepak



DATE :- March 2023

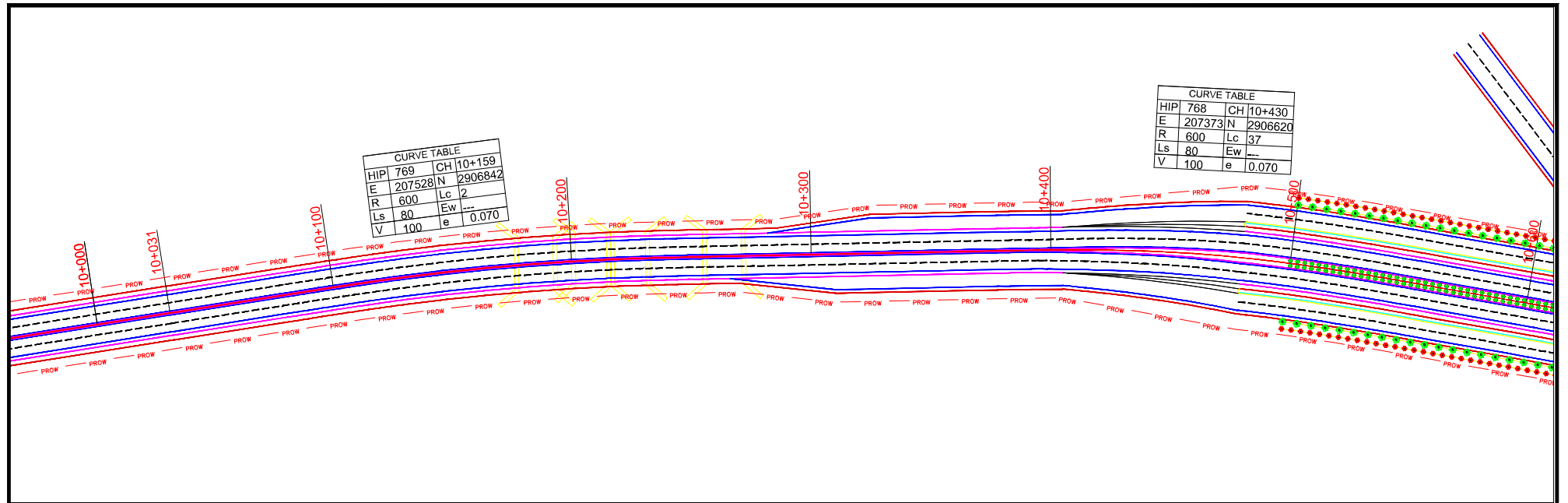
APPROVED BY

T.L.

SCALE :- N.T.S



 <div>CLIENT :- NATIONAL HIGHWAYS AUTHORITY OF INDIA (Ministry of Transport and Highways) Consultancy Services for Preparation of Detailed Project Report for Bypass on Western Side of Gwalior city in the State of Madhya Pradesh</div>	 <div>CONSULTANTS :- LION ENGINEERING CONSULTANTS PVT. LTD. Corporate Office :- "LION TOWER", Plot Number-97, Elegant Estate, Near Mother Teresa School, Kolar Road, Bhopal e-mail : dpr@liongroup.in Phone No.: 0755-3246521</div>	DRAWING TITLE :- Strip Plan Plantation (Ch:9+000 - 10+000)	DRAWN BY	Poonam	DRAWING NO :- LECPL/NHAI/S&P/ (10)	
		PROJECT TITLE :- Bypass on Western side of Gwalior city	CHECKED BY	Deepak	DATE :-	March 2023
			APPROVED BY	T.L.	SCALE :-	N.T.S



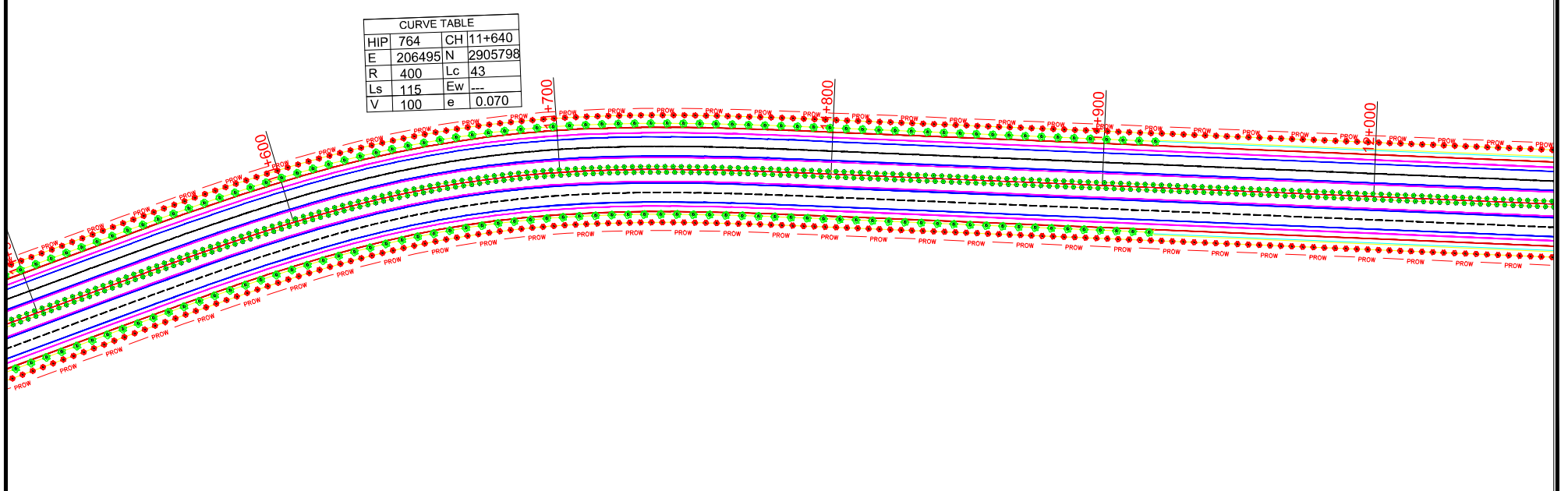
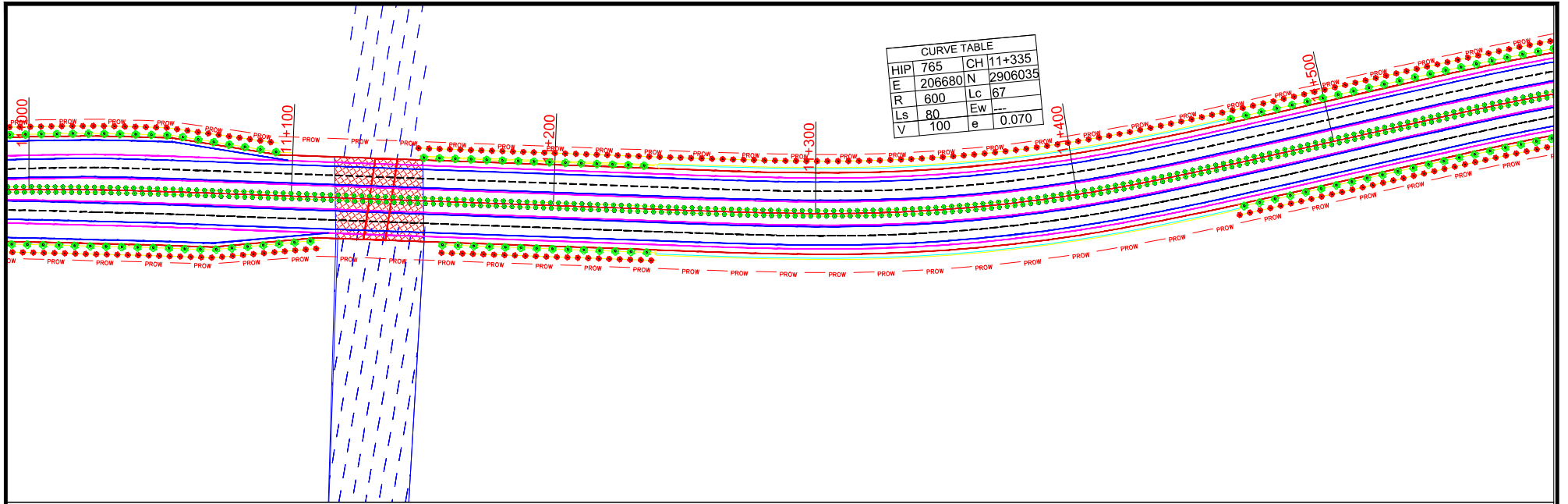
CLIENT :- NATIONAL HIGHWAYS AUTHORITY OF INDIA
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Phone No.: 0755-3246521



DRAWING TITLE :- Strip Plan Plantation
(Ch.10+000 - 11+000)
PROJECT TITLE :- Bypass on Western side of Gwalior city

DRAWN BY	Poonam	DRAWING NO :- LECP/NHAI/S&P/ (11)
CHECKED BY	Deepak	DATE :- March 2023
APPROVED BY	T.L.	SCALE :- N.T.S



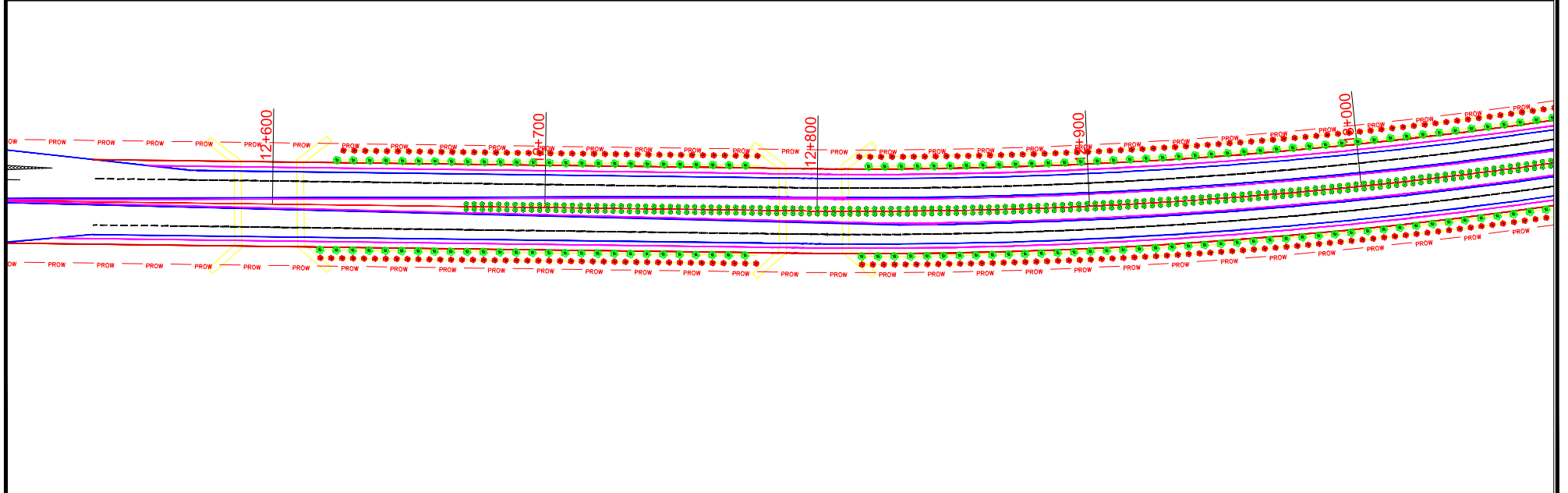
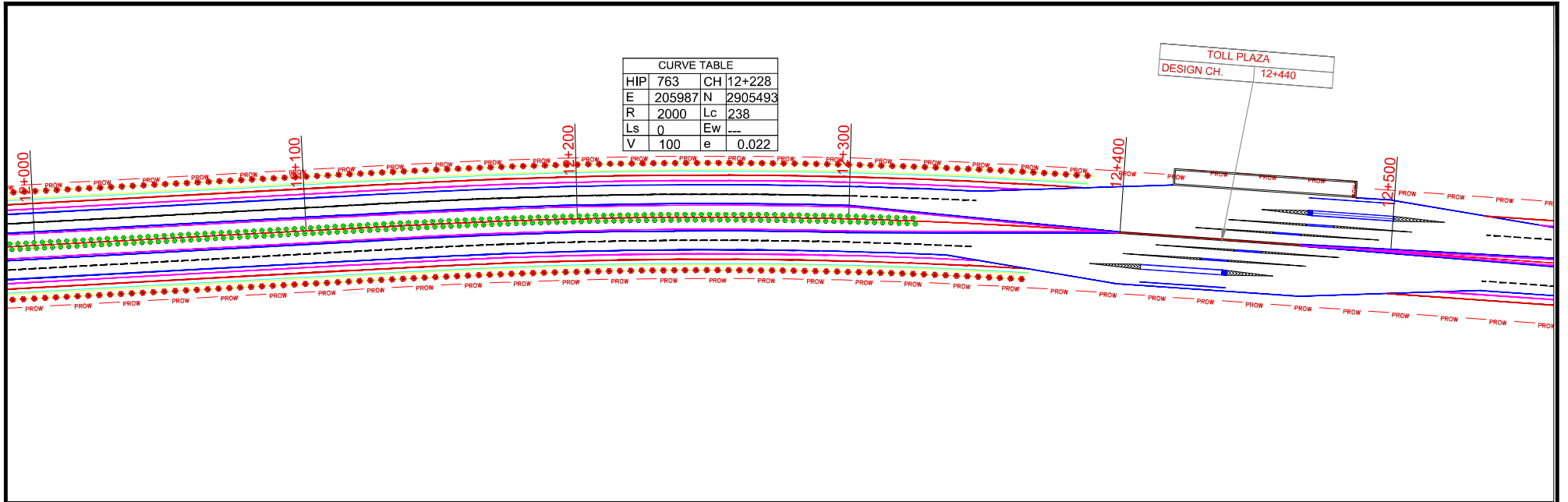
CLIENT :- NATIONAL HIGHWAYS AUTHORITY OF INDIA
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Consultancy Services for Preparation of Detailed Project
Report for Bypass on Western Side of Gwalior city in the
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e-mail : dpr@liongroup.in
Phone No.: 0755-3246521

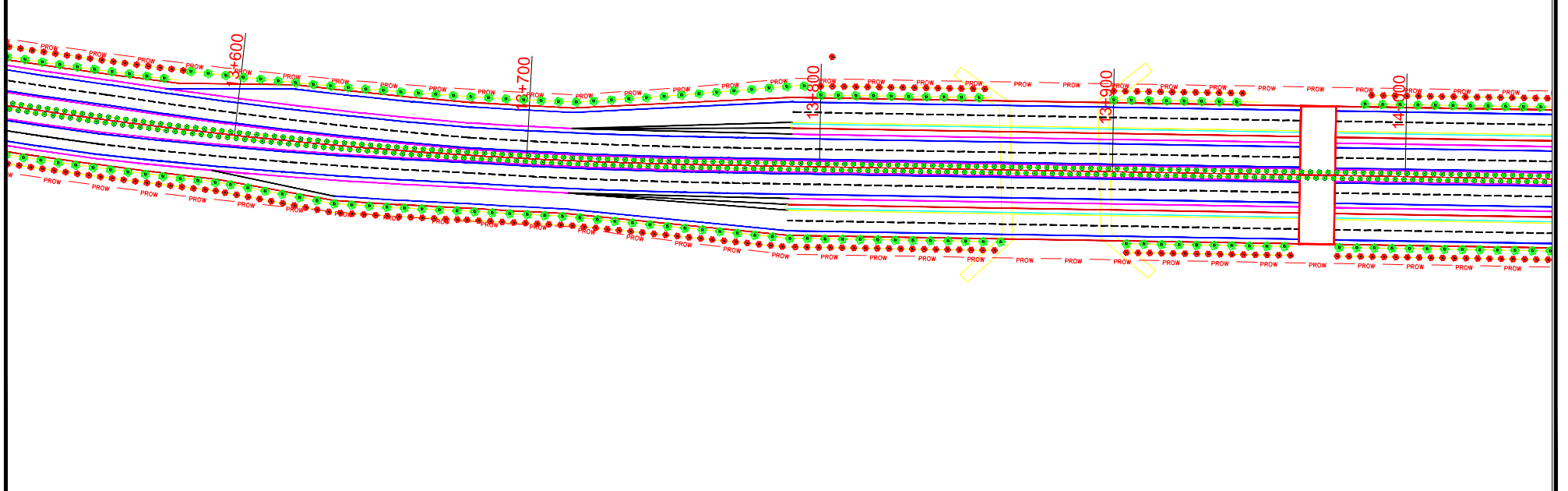
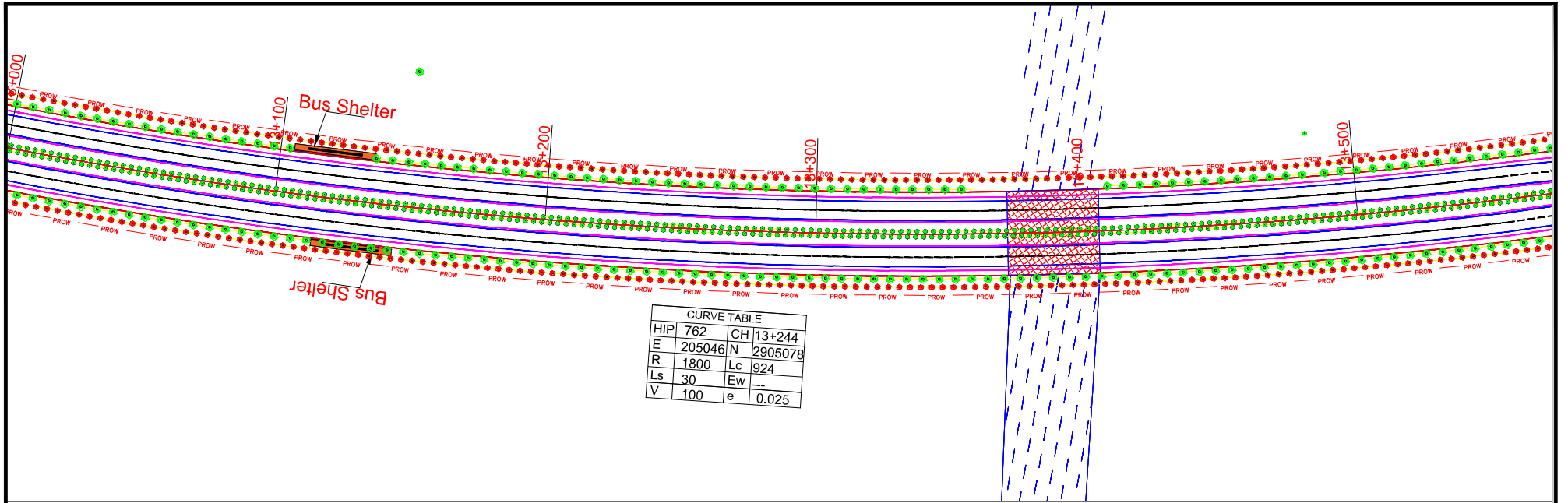


DRAWING TITLE :- Strip Plan Plantation
(Ch:11+000 - 12+000)
PROJECT TITLE :- Bypass on Western side of Gwalior city

DRAWN BY	Poonam	DRAWING NO :- LECPL/NHAI/S&P/ (12)
CHECKED BY	Deepak	DATE :- March 2023
APPROVED BY	T.L.	SCALE :- N.T.S

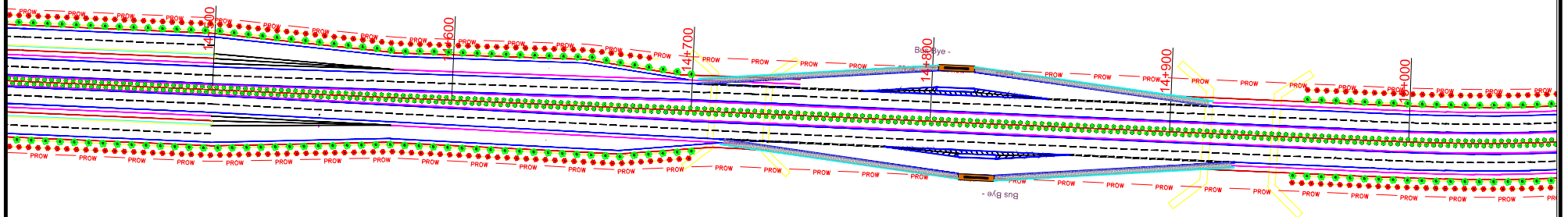
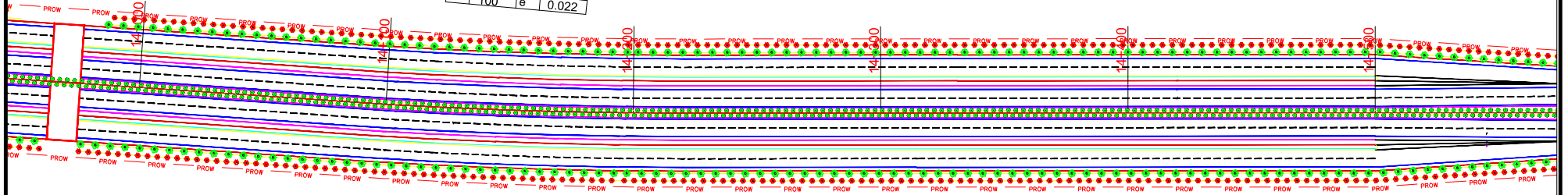


 <div>CLIENT :- NATIONAL HIGHWAYS AUTHORITY OF INDIA (Ministry of Transport and Highways) Consultancy Services for Preparation of Detailed Project Report for Bypass on Western Side of Gwalior city in the State of Madhya Pradesh</div>	 <div>CONSULTANTS :- LION ENGINEERING CONSULTANTS PVT. LTD. Corporate Office :- "LION TOWER", Plot Number-97, Elegant Estate, Near Mother Teresa School, Kolar Road, Bhopal e-mail : dpr@liongroup.in Phone No.: 0755-3246521</div>	DRAWING TITLE :- Strip Plan Plantation (Ch.12+000 - 13+000)	DRAWN BY	Poonam	DRAWING NO :- LECPL/NHAI/S&P/ (13)	
		PROJECT TITLE :- Bypass on Western side of Gwalior city	CHECKED BY	Deepak	DATE :-	March 2023
			APPROVED BY	T.L.	SCALE :-	N.T.S



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		PROJECT TITLE :- Bypass on Western side of Gwalior city		CHECKED BY Deepak	DATE :- March 2023
				APPROVED BY T.L.	SCALE :- N.T.S

CURVE TABLE			
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R	2000	Lc	144
Ls	0	Ew	---
V	100	e	0.022



CLIENT :- NATIONAL HIGHWAYS AUTHORITY OF INDIA
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Consultancy Services for Preparation of Detailed Project Report for Bypass on Western Side of Gwalior city in the State of Madhya Pradesh

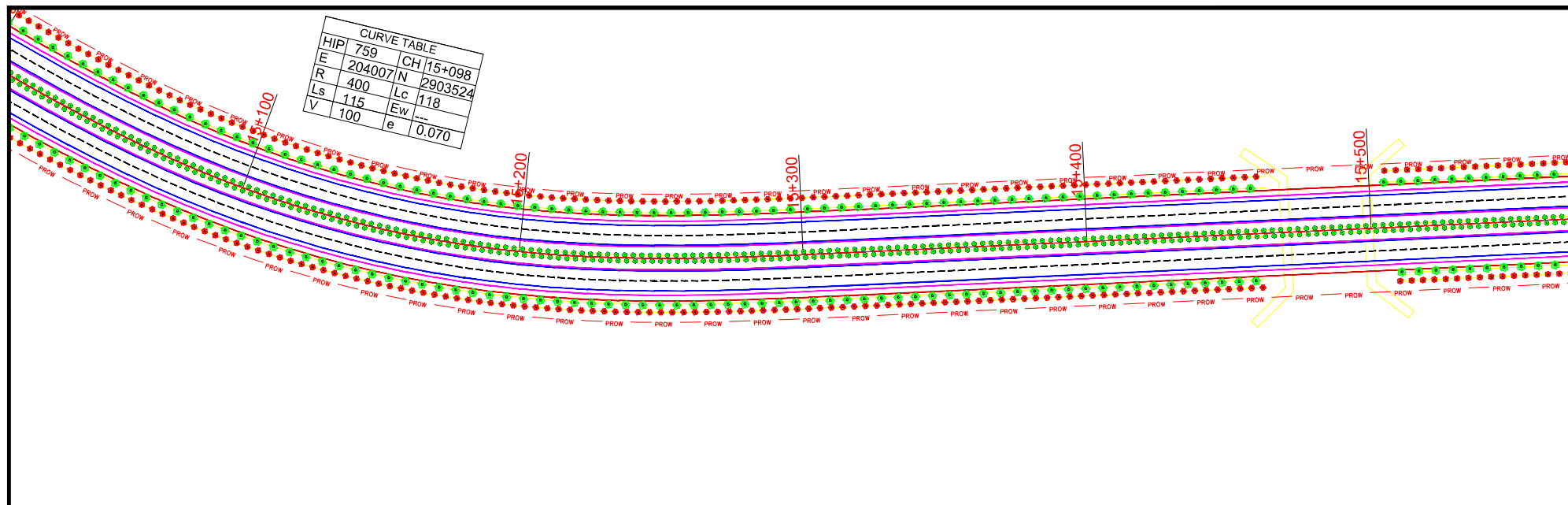
CONSULTANTS :- LION ENGINEERING CONSULTANTS PVT. LTD.
Corporate Office :- "LION TOWER",
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Near Mother Teresa School,
Kolar Road, Bhopal
e-mail : dpr@liongroup.in
Phone No.: 0755-3246521



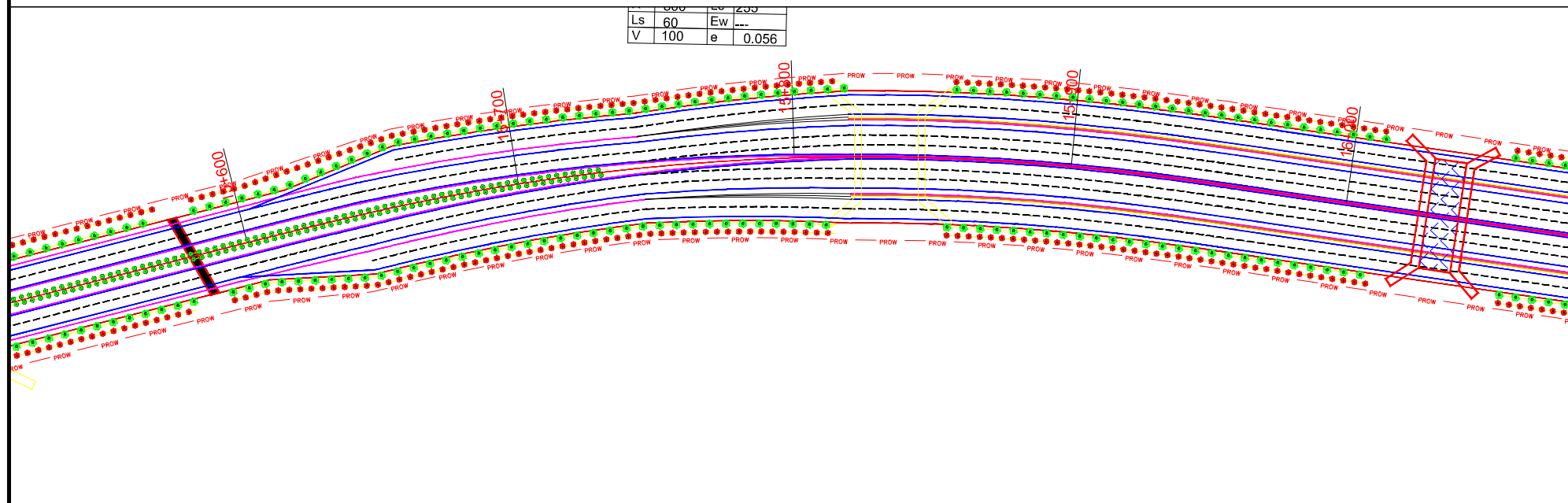
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(Ch.14+000 - 15+000)
PROJECT TITLE :- Bypass on Western side of Gwalior city

DRAWN BY	Poonam	DRAWING NO :- LECPL/NHA/S&P/ (15)
CHECKED BY	Deepak	DATE :- March 2023
APPROVED BY	T.L.	SCALE :- N.T.S

CURVE TABLE			
HIP	759	CH	15+098
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Ls	115	Ew	---
V	100	e	0.070



Ls	60	Ew	---
V	100	e	0.056



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Phone No.: 0755-3246521

DRAWING TITLE :-

Strip Plan Plantation
(Ch.15+000 - 16+000)

PROJECT TITLE :-

Bypass on Western side of Gwalior city

DRAWN BY

Poonam

CHECKED BY

Deepak

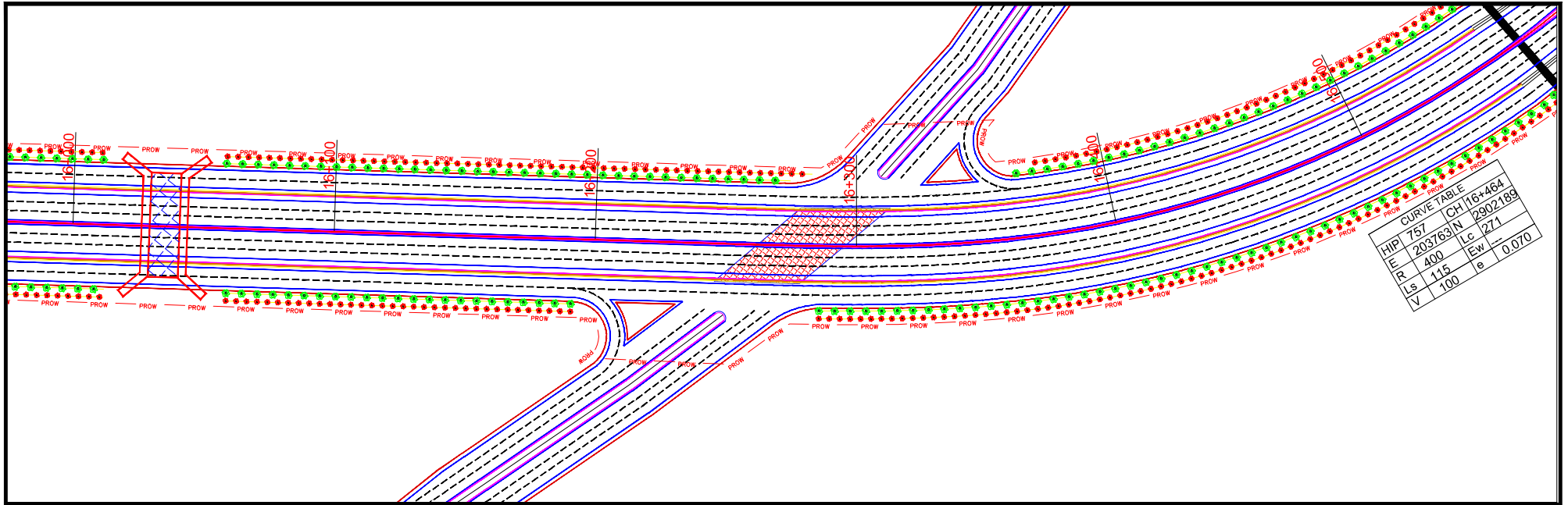
APPROVED BY

T.L.

DRAWING NO :- LECPL/NHAI/S&P/ (16)

DATE :- March 2023

SCALE :- N.T.S



CLIENT :- NATIONAL HIGHWAYS AUTHORITY OF INDIA
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Report for Bypass on Western Side of Gwalior city in the
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Phone No.: 0755-3246521

DRAWING TITLE :- Strip Plan Plantation
(Ch.16+000 - 17+000)

PROJECT TITLE :- Bypass on Western side of Gwalior city

DRAWN BY

Poonam

CHECKED BY

Deepak

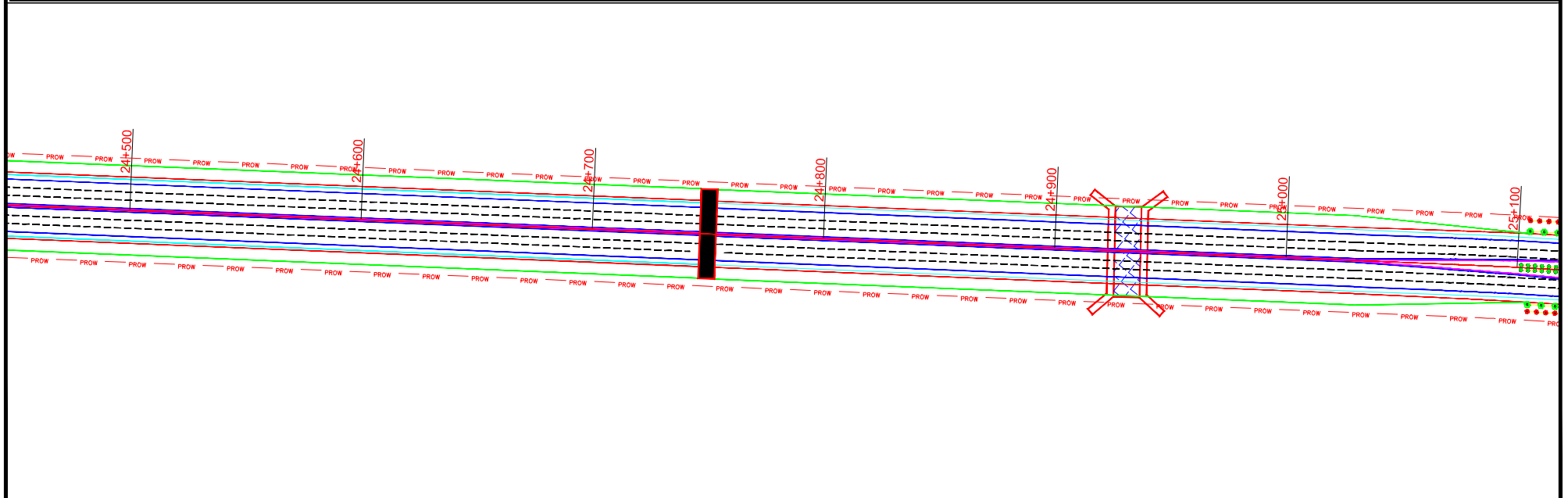
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T.L.

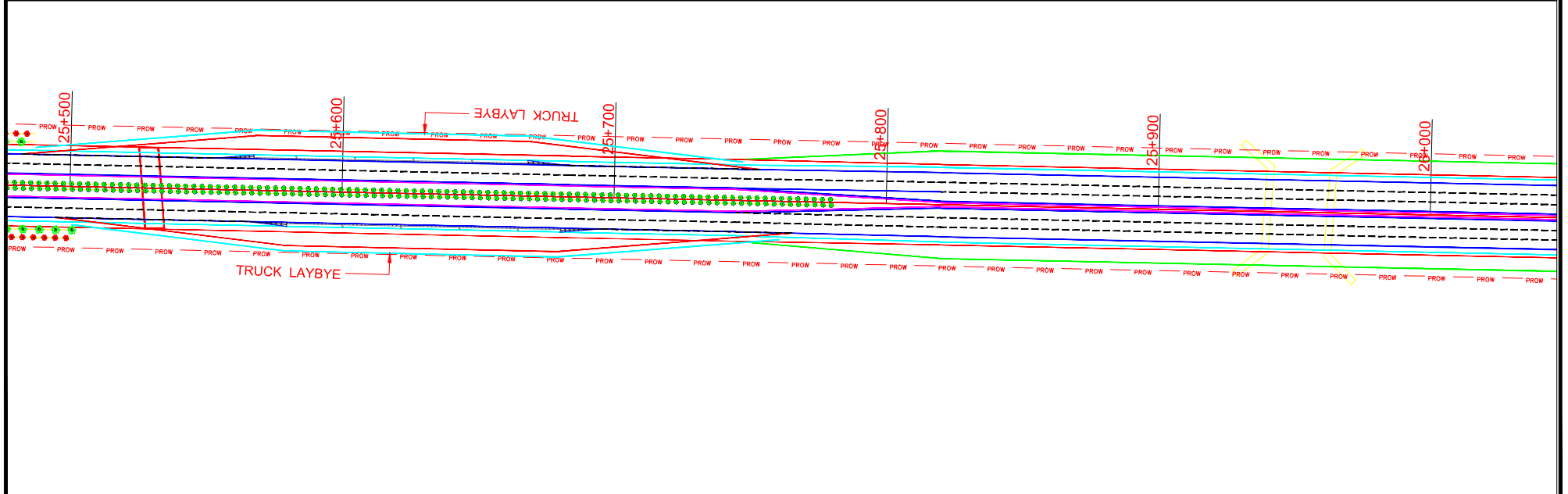
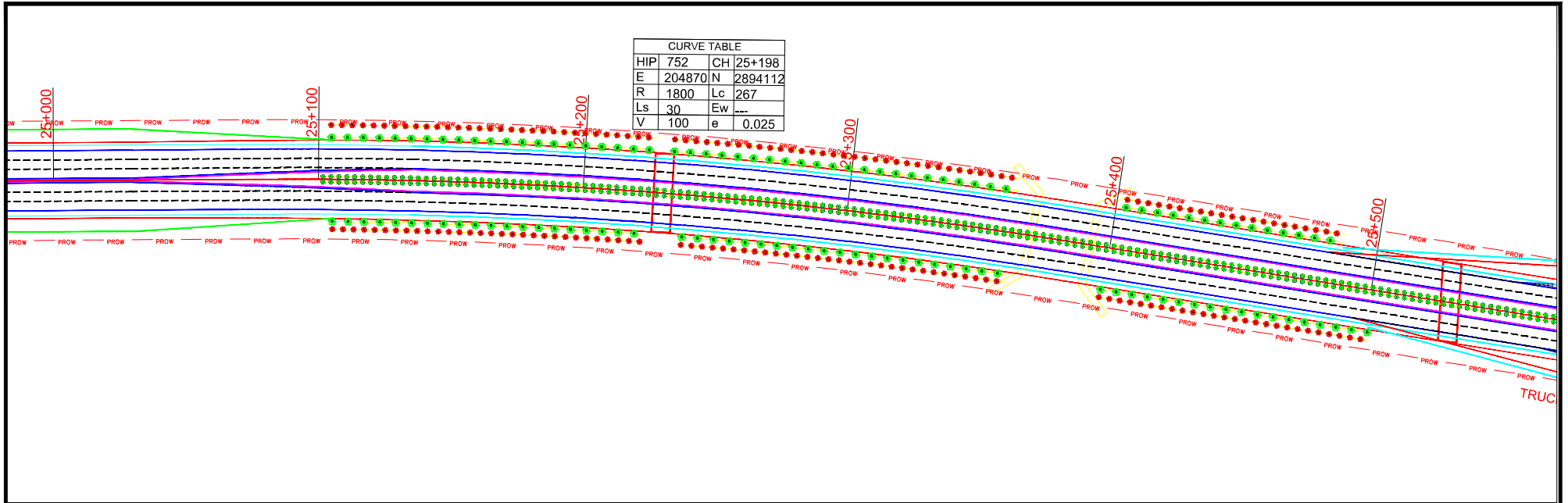
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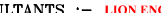
DATE :- March 2023

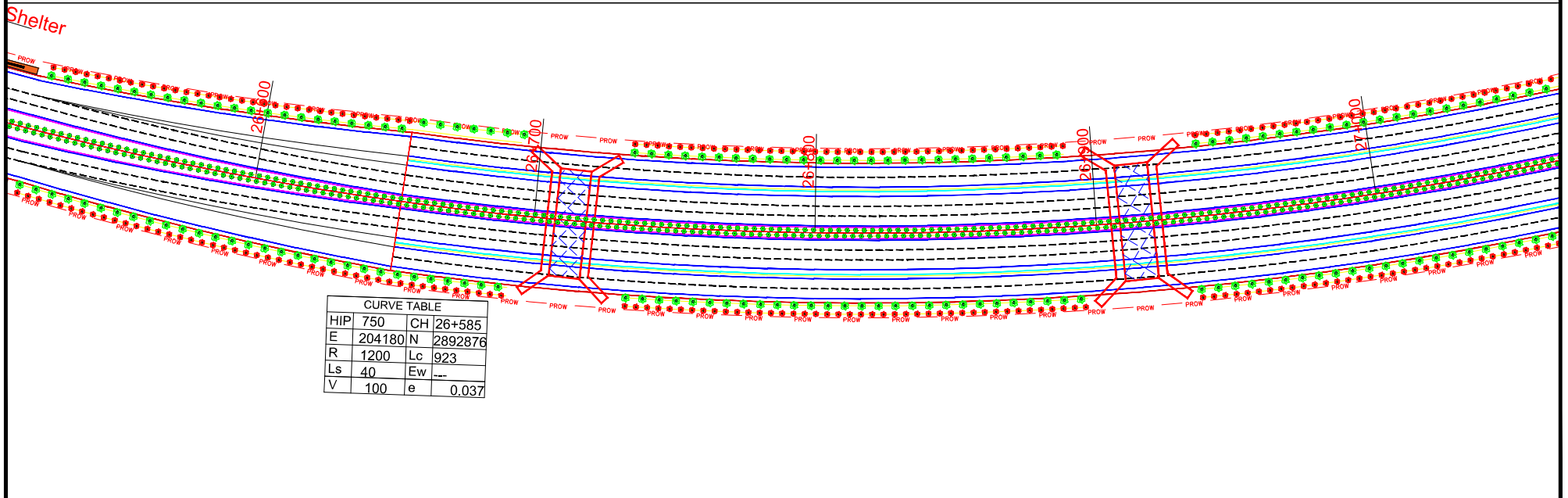
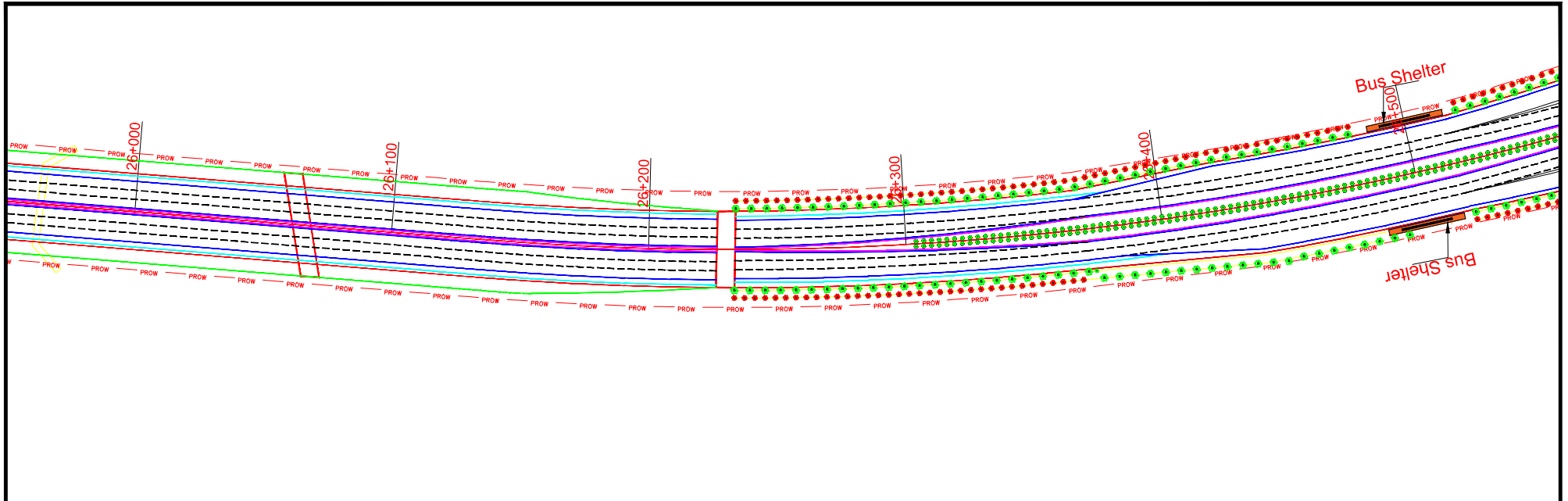
SCALE :- N.T.S





 <div>CLIENT :- NATIONAL HIGHWAYS AUTHORITY OF INDIA (Ministry of Transport and Highways)</div> <div>Consultancy Services for Preparation of Detailed Project Report for Bypass on Western Side of Gwalior city in the State of Madhya Pradesh</div>	 <div>CONSULTANTS :- LION ENGINEERING CONSULTANTS PVT. LTD.</div> <div><div>Lion ENGINEERING CONSULTANTS</div><div>Corporate Office :- "LION TOWER", Plot Number-97, Elegant Estate, Near Mother Teresa School, Kolar Road, Bhopal e-mail : dpr@liongroup.in Phone No.: 0755-3246521</div></div>	DRAWING TITLE :- <div>Strip Plan Plantation (Ch.24+000 - 25+000)</div>		DRAWN BY	Poonam	DRAWING NO :- LECPL/NHAI/S&P/ (25)	
		PROJECT TITLE :- <div>Bypass on Western side of Gwalior city</div>		CHECKED BY	Deepak		DATE :- <div>March 2023</div>
				APPROVED BY	T.L.		SCALE :- <div>N.T.S</div>

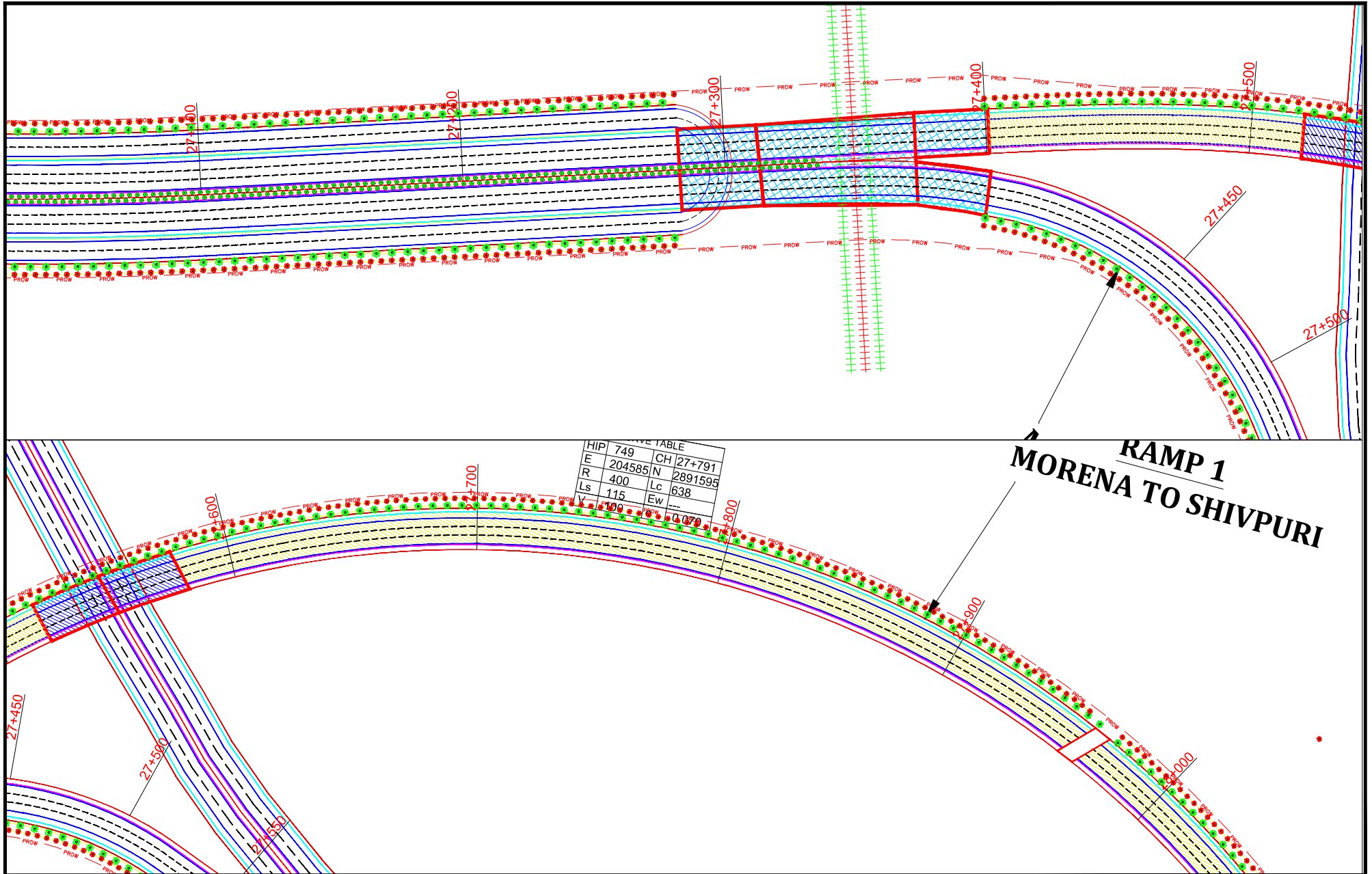


 <div>CLIENT :- NATIONAL HIGHWAYS AUTHORITY OF INDIA (Ministry of Transport and Highways) Consultancy Services for Preparation of Detailed Project Report for Bypass on Western Side of Gwalior city in the State of Madhya Pradesh</div>	 <div>CONSULTANTS :- LION ENGINEERING CONSULTANTS PVT. LTD. Corporate Office :- "LION TOWER", Plot Number-97, Elegant Estate, Near Mother Teresa School, Kolar Road, Bhopal e-mail : dpr@liongroup.in Phone No.: 0755-3246521</div>	DRAWING TITLE :- <div>Strip Plan Plantation (Ch.25+000 - 26+000)</div>	DRAWN BY	Poonam	DRAWING NO :-LECPL/NHAI/S&P/ (26)
		PROJECT TITLE :- <div>Bypass on Western side of Gwalior city</div>	CHECKED BY	Deepak	DATE :- <div>March 2023</div>
			APPROVED BY	T.L.	SCALE :- <div>N.T.S</div>



CURVE TABLE			
HIP	750	CH	26+585
E	204180	N	2892876
R	1200	Lc	923
Ls	40	Ew	---
V	100	e	0.037

 CLIENT :- NATIONAL HIGHWAYS AUTHORITY OF INDIA (Ministry of Transport and Highways) Consultancy Services for Preparation of Detailed Project Report for Bypass on Western Side of Gwalior city in the State of Madhya Pradesh	 CONSULTANTS :- LION ENGINEERING CONSULTANTS PVT. LTD. Corporate Office :- "LION TOWER", Plot Number-97, Elegant Estate, Near Mother Teresa School, Kolar Road, Bhopal e-mail : dpr@liongroup.in Phone No.: 0755-3246521	DRAWING TITLE :- Strip Plan_Plantation (Ch.26+000 - 27+000)	DRAWN BY	Poonam	DRAWING NO :- LECPL/NHAI/S&P/ (27)	
		PROJECT TITLE :- Bypass on Western side of Gwalior city	CHECKED BY	Deepak		DATE :- March 2023
			APPROVED BY	T.L.		SCALE :- N.T.S



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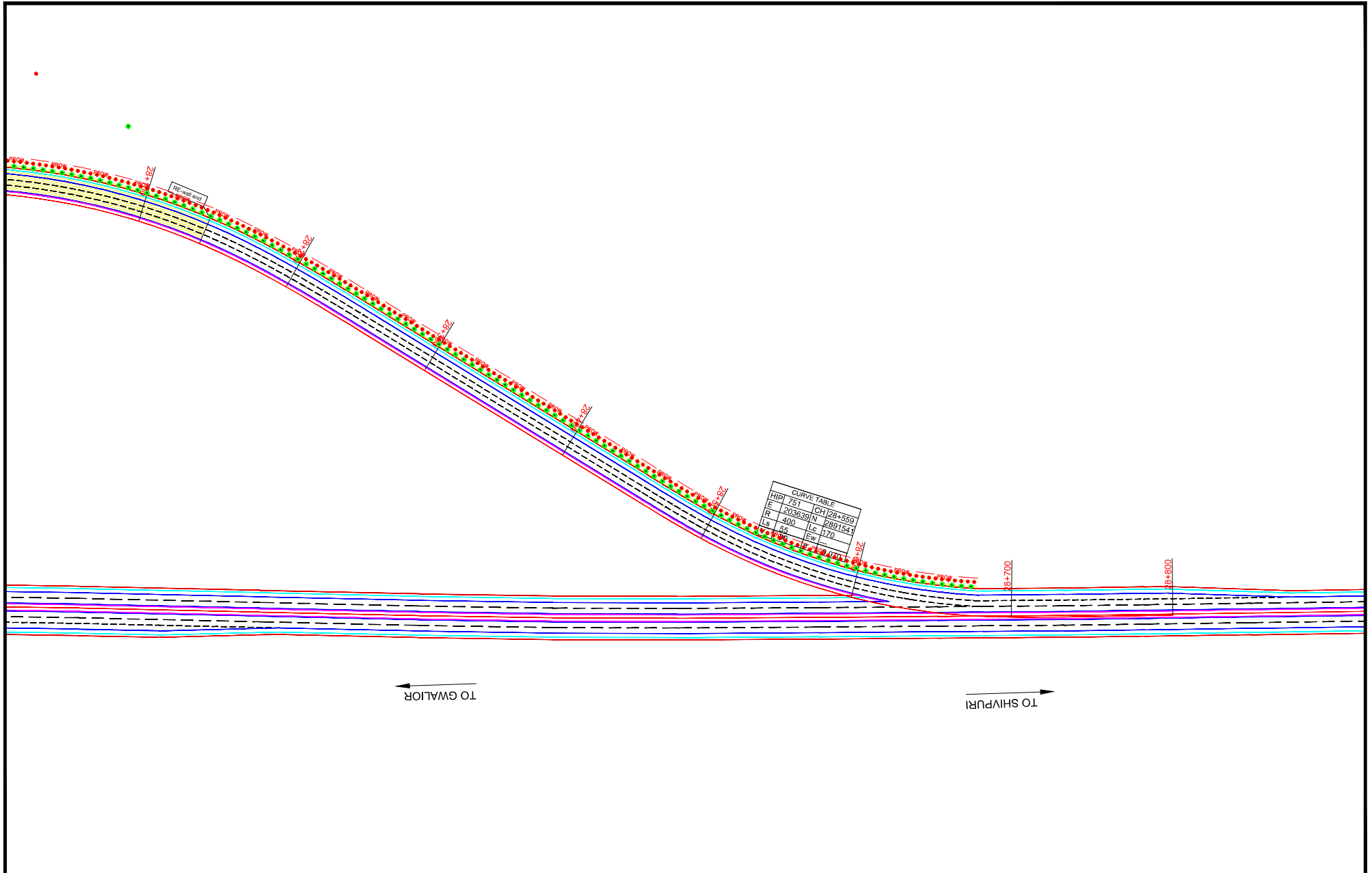




DRAWING TITLE :- Strip Plan Plantation
(Ch.27+000 - 28+000)
PROJECT TITLE :- Bypass on Western side of Gwalior city

DRAWN BY
CHECKED BY
APPROVED BY

Poonam
Deepak
T.L.

DRAWING NO :- LEOPL/NHAI/S&P/ (28)
DATE :- March 2023
SCALE :- N.T.S



 <div>CLIENT :- NATIONAL HIGHWAYS AUTHORITY OF INDIA (Ministry of Transport and Highways) Consultancy Services for Preparation of Detailed Project Report for Bypass on Western Side of Gwalior city in the State of Madhya Pradesh</div>	 <div>CONSULTANTS :- LION ENGINEERING CONSULTANTS PVT. LTD. Corporate Office :- "LION TOWER", Plot Number-97, Elegant Estate, Near Mother Teresa School, Kolar Road, Bhopal e-mail : dpr@liongroup.in Phone No.: 0755-3246521</div>	DRAWING TITLE :- Strip Plan_Plantation (Ch.28+000 - 28+750)	DRAWN BY	Poonam	DRAWING NO :- LEOCLP/NHA/S&P/ (29)
		PROJECT TITLE :- Bypass on Western side of Gwalior city	CHECKED BY	Deepak	DATE :- March 2023
			APPROVED BY	T.L.	SCALE :- N.T.S

कार्यालय वनमण्डलाधिकारी, सामान्य वनमण्डल ग्वालियर (म.प्र.)

सेन्ट्रल नर्सरी, केप्टन रूप सिंह स्टेडियम के पास, सिटी सेन्टर, ग्वालियर (म.प्र.)

Phone : 0751-2341166, Fax : 0751-2341166, E-Mail : dfo@mp.gov.in

क्रमांक/मा.चि./23/ 7730

ग्वालियर, दिनांक 28/11/2023

प्रति,

अपर प्रधान मुख्य वन संरक्षक (वन्यप्राणी)
वन भवन, तुलसी नगर, लिंक रोड-2
भोपाल (म.प्र.)

विषय :- ग्वालियर जिले के अन्तर्गत बेस्टर्न बायपास मार्ग निर्माण में घाटीगांव हुकना (सोनचिडिया) पक्षी अभयारण्य की प्रभावित होने वाली 38.025 हेक्टेयर आरक्षित वन भूमि एवं ईको सेसेटिव जोन की 0.900 हेक्टेयर गैर वन भूमि भारतीय राष्ट्रीय राजमार्ग प्राधिकरण, ग्वालियर को उपयोग पर देने हेतु वन्यप्राणी (संरक्षण) अधिनियम, 1972 के तहत अनुमति। (FP/MP/ROAD/120435/2021)

संदर्भ :- 1-आपका पत्र क्रमांक/मा.चि./म.प्र.रा.व.प्रा.बो./12-1/22.11/4628 दिनांक 19-05-2023
2-आवेदक विभाग,परियोजना निदेशक, भारतीय राष्ट्रीय राजमार्ग प्राधिकरण, पी.आई.यू., गोविन्दपुरी सचिन तेन्दुलकर मार्ग, ग्वालियर का पत्र क्रमांक/20019/02/2018-Western Bypass/11928 दिनांक 23-10-2023

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विषयोंकित प्रकरण में निवेदन है कि आपके कार्यालय के संदर्भित पत्र के संलग्न भारत सरकार द्वारा राष्ट्रीय वन्यप्राणी बोर्ड की 72वीं बैठक दिनांक 25-04-2023 का कार्यवाही विवरण प्राप्त हुआ है। उक्त कार्यवाही विवरण के एजेण्डा क्रमांक 72.2.16 में विषयोंकित प्रस्ताव में भारतीय वन्यजीव संस्थान, देहरादून द्वारा मार्ग में वन्यप्राणी संरक्षण हेतु सुझाये गये सुझावों को सम्मिलित कर प्रस्ताव में आवेदक विभाग से तदनुसार पैसेज प्लान तैयार कराकर प्रेषित करने हेतु निर्देशित किया गया था। जिसके तारतम्य में इस कार्यालय के पत्र क्रमांक 3912 दिनांक 26-05-2023 से आवेदक विभाग को उपरोक्तनुसार संशोधित पैसेज प्लान तैयार करने हेतु लेख किया गया। जिसके परिपेक्ष्य में आवेदक विभाग द्वारा भारतीय वन्यजीव संस्थान, देहरादून से सहयोग प्राप्त कर उनके द्वारा सुझाये गये सुझावों को सम्मिलित करते हुये संशोधित मिटिगेशन पैसेज प्लान तैयार कर अपने पत्र क्रमांक/20019/02/2018-Western Bypass/11928 दिनांक 23-10-2023 से इस कार्यालय में प्रस्तुत किया गया है।

संशोधित मिटिगेशन पैसेज प्लान का परीक्षण किया गया, जिसमें निम्नानुसार स्थिति होना पाई गई है :-

1- एजेण्डा क्रमांक 72.2.16 में भारतीय वन्यजीव संस्थान, देहरादून द्वारा वन्यजीवों के आवागमन हेतु सुझाये गये सुझावों को पैसेज प्लान में सम्मिलित किया गया है।

2- मार्ग निर्माण में प्रभावित होने वाले चारागाहों को जेनलिक फेन्सिंग के माध्यम से घेरते हुये पुनर्स्थापित करने हेतु योजना एवं होने वाले व्यय की राशि उपलब्ध कराने के संबंध में कोई उल्लेख नहीं किया गया है।

अतः आवेदक विभाग से प्राप्त संशोधित पैसेज प्लान आगामी कार्यवाही हेतु संलग्न संप्रेषित है।
संलग्न-उपरोक्तानुसार

(अंकित पाण्डेय)

वनमण्डलाधिकारी

सामान्य वनमण्डल ग्वालियर

ग्वालियर, दिनांक 28/11/2023

पू.क्रमांक/मा.चि./23/ 7731

प्रतिलिपि:-

1-मुख्य वन संरक्षक, ग्वालियर वृत्त, ग्वालियर की ओर सूचनार्थ संप्रेषित।

2-आवेदक विभाग,परियोजना निदेशक, भारतीय राष्ट्रीय राजमार्ग प्राधिकरण, पी.आई.यू., गोविन्दपुरी सचिन तेन्दुलकर मार्ग, ग्वालियर की ओर आपके पत्र क्रमांक/20019/02/2018-Western Bypass /11928 दिनांक 23-10-2023 के संदर्भ में सूचनार्थ।

वनमण्डलाधिकारी

सामान्य वनमण्डल ग्वालियर



सत्यमेव जयते

भारतीय राष्ट्रीय राजमार्ग प्राधिकरण

(सड़क परिवहन और राजमार्ग मंत्रालय, भारत सरकार)

प्राधिकार प्राप्त कार्यालय ईकाई : डी-81, गोकुलपुरी, सचिन तेंदुलकर मार्ग, खालिदा (प. प्र.)-474011

National Highways Authority of India

(Ministry of Road Transport & Highways, Govt. of India)

Project Implementation Unit : D-81, Gokulpuri, Sachin Tendulkar Marg, Gwalior (M.P.)-474011

फोन/Phone : 0753-2231485, ई-मेल/E-mail : gwalior@nhai.org; nhai.gwalior@gmail.com



BHARATMALA
A NEW TRANSFORMITY

File No. 20019/02/2018-Western Bypass/ 11928

Date 23.10.2023

To,

The Divisional Forest Officer-Gwalior
Central Nursery,
near Captain Roop Singh Stadium
City Centre Gwalior (MP)
Email: dfotgwa@mp.gov.in

Sub: Proposal for use of 38.025 ha of forest land from Son Chirya Hukna Bird (Great Indian Bustard) Sanctuary for construction of Western Bypass Road of Gwalior City, Madhya Pradesh (Proposal No. FP/MP/ROAD/120435/2021): - *Submission of the Mitigation Plan: - Reg*

Ref.:

1. DPR Consultant letter no 11264 dated 23.10.2023.
2. Wildlife Institute of India report dated 24.08.2023.
3. APCCF (W/L) letter no. 4628 dated 19.05.2023.
4. MoEF&CC(Wildlife Division) letter no. F.No.6-173/2022/WL dated 16.05.2023.
5. 72nd Meeting of the Standing Committee of NBWL held on 25.04.2023.
6. Wildlife Institute of India report dated 31.03.2023.

Sir,

Please refer APCCF (W/L), Bhopal letter dated 19.05.2023 vide which it was informed that the subject proposal has been recommended by the Standing Committee of National Board for Wildlife (NBWL) in the 72nd meeting held on 25.04.2023 with the condition that suggestions given by the WII in its report dated 31.03.2023, with regard to the animal passage and mitigation plan will be incorporated in the proposal. Further, this office was directed to submit the mitigation passage plan through, DFO-Gwalior for further necessary approval in the matter.

WII-Dehradun in report dated 31.03.2023 has indicated that the "exact passage and mitigation plan (Placement, structure and design) would require detailed study of landscape". Accordingly, this office requested WII-Dehradun vide letter 24.05.2023 for carrying out detailed studies at site for finalization of the exact mitigation plan.

3. The site visit was accordingly carried out by WII-Dehradun from 31.07.2023 to 04.08.2023 and report was accordingly submitted vide letter dated 24.08.2023. The mitigation report provided for the mitigation structures for passage of animals and other mitigation measures to be ensured on the project highway.

4. In light of the recommendation contained in the report of the WII-Dehradun dated 24.08.2023, a mitigation plan has been prepared by NHAI which is enclosed for kind consideration please. It is requested that the mitigation passage plan may please be submitted to PCCF(W/L) and Govt of India for issuance of permission, as per the recommendation of the 72th meeting of the Standing Committee of National Board for Wildlife (NBWL) held on 25.04.2023.

Encl: As above

खालिदा (म.प्र.)
आवक क्रमांक 9315
दिनांक 01-11-23

Project Director
NHAI, PIU-Gwalior (M.P.)

Copy To:

1. PCCF(W/L), Bhopal-MP for kind information please and necessary action please.
2. GM(T), MP-Division, NHAI-HQ for kind information please.
3. RO-Jabalpur, NHAI for kind information please.
4. Jt. Advisor (Env), NHAI-HQ for kind information and necessary action please.
5. Team Leader, M/s Lion Engineering Consultant Pvt Ltd (Western Bypass) for kind information please.



LION ENGINEERING CONSULTANTS PVT. LTD.

"Contributing to Building the Infrastructure of the Nation"

MISME No. MP30E0042343 ISO/IEC 27001:2022 CERTIFIED COMPANY
LECPL/DPR2720/NHAI/MP/Western Side/Bypass/2023-24/11264

23rd October, 2023

To,
The Project Director
National Highway Authority of India
Gwalior, Madhya Pradesh
Email :- gwalior@nhai.org, nhaigwalior@gmail.com

Sub.: Consultancy Services for the Preparation of Detailed Project Report for Construction of Bypass on Western Side of Gwalior City in the State of Madhya Pradesh.

Reg. : Submission of Mitigation Measures Plan for Forest/Wildlife area

Ref. :

1. Commencement of services NHAI/MP/DPR/Gwalior City (Western Side)/ Bypass/2020/ 153589, dated 17.06.2020
2. LAC MOM reg. alignment approval vide letter no. 5369/LA/11013/LAC/2020 dtd 12.01.2021
3. This office L.no. 2380, Dated 22.11.2021 (Reg. Information of Alignment change)
4. Meeting at HQ, NHAI, New Delhi, Dated 01.09.2022
5. This office L.no. 5618, dtd 10.09.2022 (Reg. Submission of Revised Draft DPR of LAC Alignment)
6. This office L.no. 6296, dtd 15.11.2022 (Reg. Submission of LAC-II Proposal)
7. This office L.no. 7117, dtd 16.01.2023 (Reg. Submission of Bidding documents)
8. This office L.no. 8188, dtd 07.04.2023 (Reg. Submission of Draft 3(D) of 02 villages)
9. This office L.no. 9855, dtd 26.07.2023 (Reg. Submission of Revised Draft 3(D) of 11 village)
10. This office L.no. 10898, dtd 29.09.2023 (Reg. Submission of GAD of ROB at Km 0+970)
11. This office L.no. 11163, dtd 16.10.2023 (Reg. Submission of GAD of ROB at Km 0+970)
12. This office L.no. 11226 dtd 19.10.2023 (Reg. Submission of Final DPR)

Dear Sir,


It is brought to you kind notice that the assignment of Consultancy Services for preparation of Detailed Project Report for Construction of Bypass on Western Side of Gwalior City in the State of Madhya Pradesh is entrusted to us vide letter under reference (i).

In this regard, with reference to above subject, we are submitting herewith the "Mitigation Measures Plan for Forest/Wildlife Area" coming under Bypass on Western Side of Gwalior City in hard and soft copy for your kind information and further necessary approval please.

Thank you and assuring our best services as at all times, we remain.

Yours faithfully,

For & On Behalf of Lion Engineering Consultants Pvt. Ltd.


(Sushil Nimbark)
Vice President (T)



Encl.: Mitigation Measures Plan

Copy to; 1. The Regional Officer, NHAI Jabalpur, Madhya Pradesh

KEY MAP OF FOREST SECTION



MORENA

START POINT 16-500
(29.82188, 25N, 20.4916, 16E)

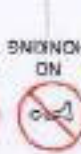
16+500



17+000



17+500



18+000



18+500

ROAD SITE FENCING

UTILITY DUCT 1X0.6M

ALP 10X30(L)x4(H)M

UTILITY DUCT 1X0.6M

ALP 30(L)x4(H)M

UTILITY DUCT 1X0.6M

ALP 1X10(L)x4.5(H)M

ALP 1X 10(L)x4(H)M

UTILITY DUCT 1X0.6M

LEGEND

ALP

COLLECT

HPC

FENCING

SOUND & LIGHT

BARBERS

L = LENGTH

H = HEIGHT

D = DIAMETER



Signature

Signature

4-LANE DIVIDED CARRIAGEWAY
ROAD WIDTH = 31M
PROPOSED RIGHT OF WAY = 45M
FOREST AREA FROM KM. 16+500 TO KM. 24+800

21+500		101.7757 04.13.5367.2757	21+450 128.9128 04.13.5367.2757	HPE 1X1200MM	
22+000		128.9128 04.13.5367.2757	21+400 128.9128 04.13.5367.2757	AUP 10X250L 1X400MM	
22+500		128.9128 04.13.5367.2757	22+390 128.9128 04.13.5367.2757	HPE 1X1200MM	
		128.9128 04.13.5367.2757	22+300 128.9128 04.13.5367.2757	BUX 1200SSING 1X304MM MIN.	
23+000		128.9128 04.13.5367.2757	23+130 128.9128 04.13.5367.2757	UTILITY DUCT 1X0.6	
23+500		128.9128 04.13.5367.2757	23+500 128.9128 04.13.5367.2757	AUP 1X300L 1X400MM	
24+000		128.9128 04.13.5367.2757	24+430 128.9128 04.13.5367.2757	UTILITY DUCT 1X0.6	
24+500		128.9128 04.13.5367.2757		HPE 1X1200MM	
				UTILITY DUCT 1X0.6	

LEGENDS
 L = LENGTH
 H = HEIGHT
 D = DIAMETER

AUP
 CULVERT
 HPE
 ZENCHO
 ADDED & 12H
 RAPIDC

Handwritten signature

Handwritten signature

Handwritten signature



SHIYUPTU

HPLC 1X12.5 μM

ROAD SIDE
SOUND AND NOISE
BARRIERS

END POINT 24+000
128,94516,72624,5015546.

QUESTION

1. The following are the chemical structures of some organic compounds:

(A) CH_3COOH

(B) $\text{C}_6\text{H}_5\text{CHO}$

(C) CH_3COCl

(D) $\text{C}_6\text{H}_5\text{COCl}$

Which of the above compounds will give a positive result in the following test?

Test: Addition of sodium metal followed by acidification.

ANSWER

(A)

SOLUTION

The reaction of sodium metal with carboxylic acids produces hydrogen gas, which is evolved upon acidification.

(A) $\text{CH}_3\text{COOH} + \text{Na} \rightarrow \text{CH}_3\text{COONa} + \text{H}_2$

(B) $\text{C}_6\text{H}_5\text{CHO} + \text{Na} \rightarrow \text{C}_6\text{H}_5\text{CH}_2\text{OH}$

(C) $\text{CH}_3\text{COCl} + \text{Na} \rightarrow \text{CH}_3\text{COONa} + \text{HCl}$

(D) $\text{C}_6\text{H}_5\text{COCl} + \text{Na} \rightarrow \text{C}_6\text{H}_5\text{COONa} + \text{HCl}$

Therefore, only (A) will give a positive result in the test.



भारतीय वन्यजीव संस्थान
Wildlife Institute of India

(An Autonomous Institute under Ministry of Environment, Forest & Climate Change, Govt. of India)
पञ्चम नं.-१६, बस स्ट. १८, अन्तर्गत, कलकत्ता-७०००५५, भारत। Email: info@itishiksha.ac.in

75th
Azadi Ka
Amrit Mahotsav

File No. WII/AE&CB/BH/GIB-SCHB/2023/01

Dehradun, the August 24, 2023

To

The Project Director
National Highways Authority of India
Project Implementation Unit: d-81, Govindpuri
Sachin Tendulkar Marg
Gwalior (M.P.) – 474011
Email: gwalior@nhai.org

N.H.A.I. PIU-GWALIOR (M.P.)
DAIRY NO. 29348
DATE- 24/08/2023
M (T) - I ☐ / II ☒ / DY, M (T) ☐
S.E. - I ☐ / II ☐ / III ☐ / IV ☐
PS ☐ / PA ☐ / STENO ☐ / Actt. ☐ / LA ☐

Sub.: Submission of Final Passage and Mitigation Plan - for the construction of Western Bypass Road of Gwalior City, Madhya Pradesh passing through Son Chirya Hukna Bird (Great Indian Bustard) Sanctuary - reg.

In reference to the above subject, a team from the Wildlife Institute of India visited the Son Chiriya Hukna Bird (Great Indian Bustard) Sanctuary from 31st July 2023 to 4th August 2023 for a site visit along with the team from NHAI and State Forest Department. Based on the site visit WII has prepared a draft mitigation plan which was shared with NHAI and State Forest Department on 15th August 2023 for comments and suggestions. WII received comments from NHAI on 21st August 2023.

After observations from NHA1, the report has been finalized and the same is being submitted for kind perusal.

Pl. put up appx detailed
Comments received from
the consultant on this report

Copy to:

(Virendra Tiwari)
Director

Principal Chief Conservators of Forests (WL)/Chief Wildlife Warden, Govt. of Madhya Pradesh; E-mail: pcfcwl@mp.gov.in.

Western
Wildlife

[Signature]

05/10

framed

File

Varry

**MITIGATION MEASURES ON THE WESTERN
BYPASS ROAD PASSING THROUGH THE
GHATIGAON WILDLIFE SANCTUARY (PART
OF THE SON CHIRIYA HUKNA GIB
SANCTUARY), GWALIOR**

August 2023



भारतीय वन्यजीव संस्थान
Wildlife Institute of India

Mitigation measures
on the Western
Bypass Road passing
through the
Chatigaon Wildlife
Sanctuary (part of the
Son Chiriya Hukna GIB
Sanctuary), Gwalior

August, 2023

WII Team

Dr. Bilal Habib

Akanksha Saxena

Dr. Indranil Mondal

Manisha Bishnoi

Daniel Miranda



भारतीय वन्यजीव संस्थान
Wildlife Institute of India



Introduction

The Ghatigaon Bustard Sanctuary, which is part of the Son Chiriya Hukna Bird (Great Indian Bustard) Sanctuary, was established on 1981 to protect the habitat of the critically endangered (*IUCN Red List of Threatened Species*, 2018)¹ Great Indian Bustard (*Ardeotis nigriceps*). The number of GIB individuals in the Sanctuary has steadily declined in the past 3 decades (*BirdLife International*, 2023)². However, protecting GIB habitat in the Sanctuary is important for individuals emanating from GIB recovery programmes in different states. This is more important given the recent denotification of the Karera Wildlife Sanctuary, that also formed part of the Son Chiriya Hukna Bird Sanctuary in 2022. Moreover, the site is about 50 km away from the Kuno-Palpur Wildlife Sanctuary, which is home to reintroduced cheetahs, that may disperse eastwards.

In addition, the sanctuary is presently home to other birds and wildlife species such as hyena (*Hyena hyena*), leopard (*Panthera pardus*), wolf (*Canis lupus pallipes*), golden jackal (*Canis aureus*), blackbuck (*Antelope nigriceps*), chital (*Axis axis*), nilgai or bluebull (*Boselaphus tragocamelus*), and chinkara (*Gazella bennettii*). The dominant vegetation type of the Sanctuary is both shrubland and woodland, both having different ecological values and equally important habitats for different types of wildlife species.

Bypass road construction

The National Highways Authority of India (NHAI) has proposed the construction of the Western Bypass Road of Gwalior City in Madhya Pradesh (Ch. 0+000 to Ch. 28+800). According to the proposal, 8.3 km of the proposed road passes through the Ghatigaon Bustard Sanctuary, which is part of the Son Chiriya Hukna Bird (Great Indian Bustard) Sanctuary.

WII's involvement in the project

Considering the potential of the sanctuary for GIB conservation and for the conservation of other important wild fauna in the sanctuary and adjoining areas, the SC-NBWL in its 71st meeting in December 2022 mandated WII to examine the proposal and report its observations on the proposal. Subsequently, WII submitted its observations on the proposal to the MoEF&CC (vide letter dated 31st March 2023) based on examination of the project details and understanding of the landscape. The SC-NBWL in its 72nd meeting held on 25th April 2023 subsequently recommended the proposal with the following conditions:

- (i) ***Suggestions given by the WII in its report with regard to the animal passage and mitigation plan will be incorporated in the proposal.***
- (ii) ***The compensation/offset plan given by WII is to be incorporated in the proposal.***

¹ IUCN Red List of Threatened Species. (2018, August 17). IUCN Red List of Threatened Species: *Ardeotis Nigriceps*. <https://www.iucnredlist.org/en>

² BirdLife International. (2023). Important Bird Area Factsheet: Ghatigaon Bustard Sanctuary. <http://datazone.birdlife.org/site/factsheet/ghatigaon-bustard-sanctuary-iba-india>

Accordingly, NHAI has requested WII to carry out site visit/studies for finalisation of the site-specific exact passage and mitigation plan, vis-a-viz placement, structure, and design (vide letter File No. 20019/01/2018-Western Bypass/10734 dated 24th May 2023).

Subsequently a field visit was conducted by a team from WII consisting of the following team members: -

- | | | |
|-------|---------------------|-------------------|
| (i) | Akanksha Saxena | Project Scientist |
| (ii) | Dr. Indranil Mondal | Project Scientist |
| (iii) | Manisha Bishnoi | Project Associate |
| (iv) | Daniel Miranda | Project Associate |

The main objectives of the field visit were to:

- 1. Identify key wildlife species and habitats vulnerable to the impacts of construction of the bypass along the proposed alignment; and***
- 2. Prescribe site-specific mitigation measures for the identified species and habitats.***

Methods:

Prior to the field visit, we collated information on the status of biodiversity in the Sanctuary and nearby landscape, including a checklist of the fauna of the region. During the field visit, we conducted the following activities:

- a)*** Reviewed the proposed mitigation measures with respect to their locations and dimensions in consultation with the NHAI officials;
- b)*** Searched for animal signs and collated information on species presence in the vicinity of the proposed alignment in consultation with local Forest Department staff; and
- c)*** MSTrIPES data from the Gwalior Forest Division office.

Observations and Recommendations:

1. Biodiversity Values of Ghatigaon Wildlife Sanctuary

During the survey and from the forest department monitoring data, we found that the grasslands are used by a variety of species. Among herbivores, we found signs of chinkara, nilgai, chital and wild pig. Among carnivores, signs of golden jackal, wolf, hyena, and jungle cat signs among other species were recorded. The grassland habitat along the approved alignment is intensively used by wildlife species, that require large open habitats.

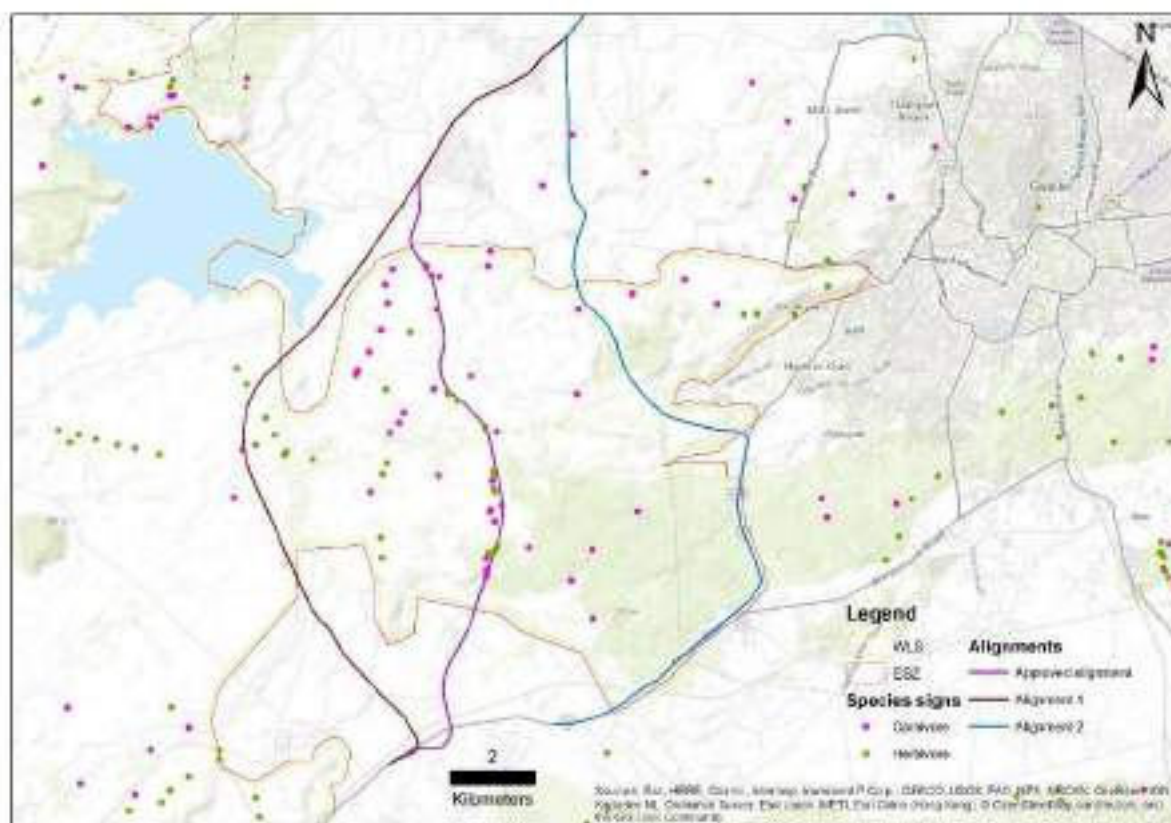


Figure 1. Carnivore and herbivore signs along the proposed alignments of the Western Bypass Road passing through the Ghatigaon Wildlife Sanctuary.

2. Alignment Choice: WII's Observations

The approved alignment was chosen by the NHAI from three alternative options. The approved alignment was chosen as it had the least length (28.75 km), least length of road in forest (1.13 km), and least land to be diverted in forest area (4.8 ha). However, the alignment involves highest length of road in wildlife area (8.5 km) and most land to be diverted in wildlife area (38.05 ha), as compared to the other two alternatives (Table 1), according to the information provided by NHAI during the site visit.

Table 1. Comparative statement of three alignment options of the Western Bypass Road passing through the Ghatigaon Wildlife Sanctuary as provided by NHAI.

S. No.	Particulars	LAC Approved Alignment	Alternate Alignment 1	Alternate Alignment 2
1.	Length (km)	28.75	30.127	29.5
2.	Proposed ROW (m)	45	45	45
3.	Forest length (km)	1.13	1.13	8.85
4.	Wildlife length (km)	8.50	5.73	5.05
5.	Land to be diverted in forest area	4.8 Ha	4.8 Ha	39.825 Ha
6.	Land to be diverted in wildlife area	38.05 Ha	25.785 Ha	19.07 Ha
7.	Total area required for the diversion	42.85 Ha	30.585 Ha	58.895 Ha

The Approved Alignment cuts through the habitat of the Sanctuary and would break the contiguous patch of grassland into two patches. This would cause fragmentation of the habitat and decrease the amount of habitat available to the wildlife of the Sanctuary, that is already under pressure from anthropogenic activities in the Sanctuary.

Alternative alignment 1, although involves lesser length of the highway passing through the Sanctuary, also intersects the Sanctuary, fragmenting the habitat into two large patches.

Comparison of Approved alignment and Alternative alignment 2:

Alternative alignment 2 has the shortest length through wildlife habitat (5.05 km) and involves least area to be diverted in wildlife area (19.07 ha). The approved alignment cuts through important grassland and scrub habitat, where we found multiple animal signs through field survey and from Forest Department records (Fig. 2).

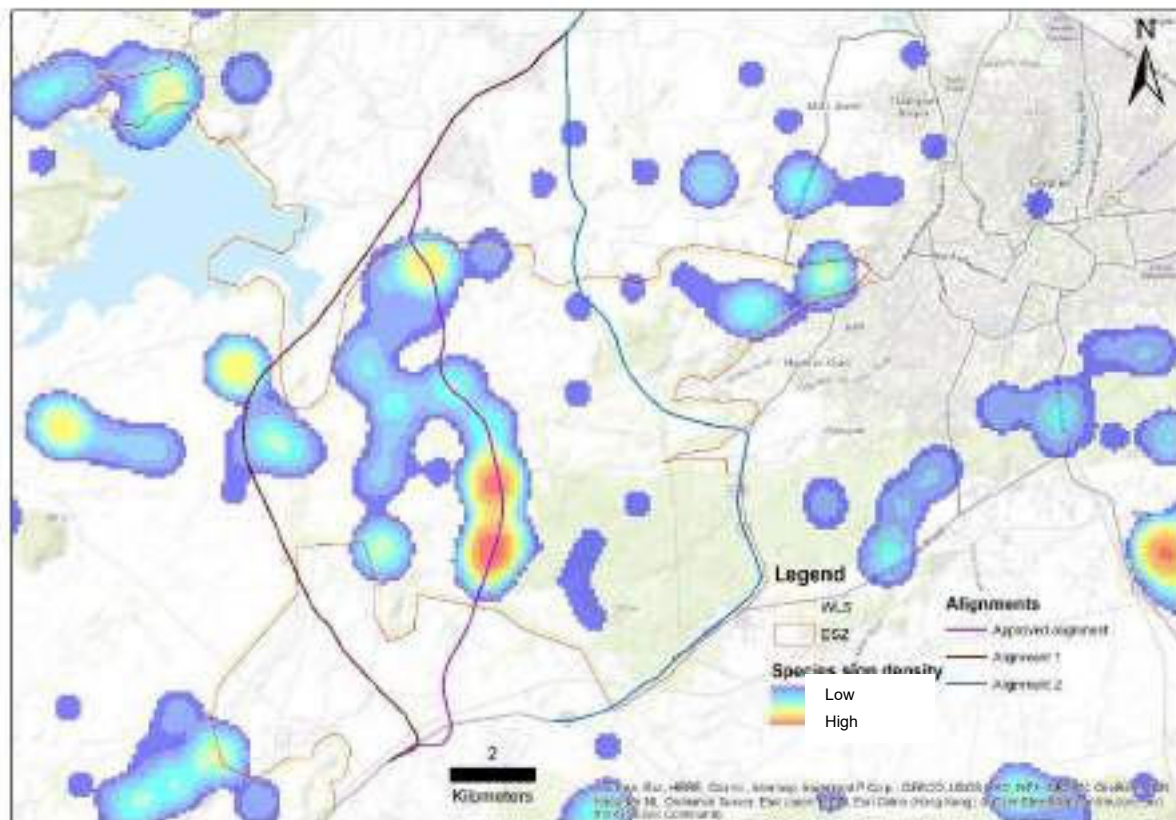


Figure 2. Intensity of wild animal signs collected by WII team on field and from Forest Department records along the three alignments of the Western Bypass Road passing through the Ghatigaon Wildlife Sanctuary.

Moreover, as compared to the approved alignment that requires mitigation along 8 km of the highway, Alternative alignment 2 requires mitigation measures in the form of crossing structures and fencing along three segments of 2.3 km, 2.1 km and 2 km in the Sanctuary area (including ESZ) and fencing along 1.5 km of forested/grassland patch (Fig. 3). The Alternative alignment 2 also divides the Sanctuary into a smaller patch as compared to the Approved alignment. We have therefore made recommendations for both the Approved alignment and Alternative alignment 2. The

alternative alignment 2 would also provide a barrier to further encroachment of Sanctuary land, thus reinforcing protection.



Figure 3. Mitigation measures required along alignment of the Western Bypass Road, including crossing structures and fencing (white rectangles), and fencing (green rectangle).

3. Mitigation Measures on Approved Alignment:

The table below includes our comments on the mitigation plan proposed by NHA for the approved alignment, with recommendations for additional measures and changes in dimensions of proposed structures. The mitigation structures under the category 'Utility ducts' (measuring 1 x 0.6 m diameter) are not recommended as mitigation/crossing structures. However, they may be built as per requirements. Changes in dimensions have been suggested based on hotspots of wild animal presence (Fig. 4). The height provided in Table 2 is the minimum height to be achieved at all crossing structures.

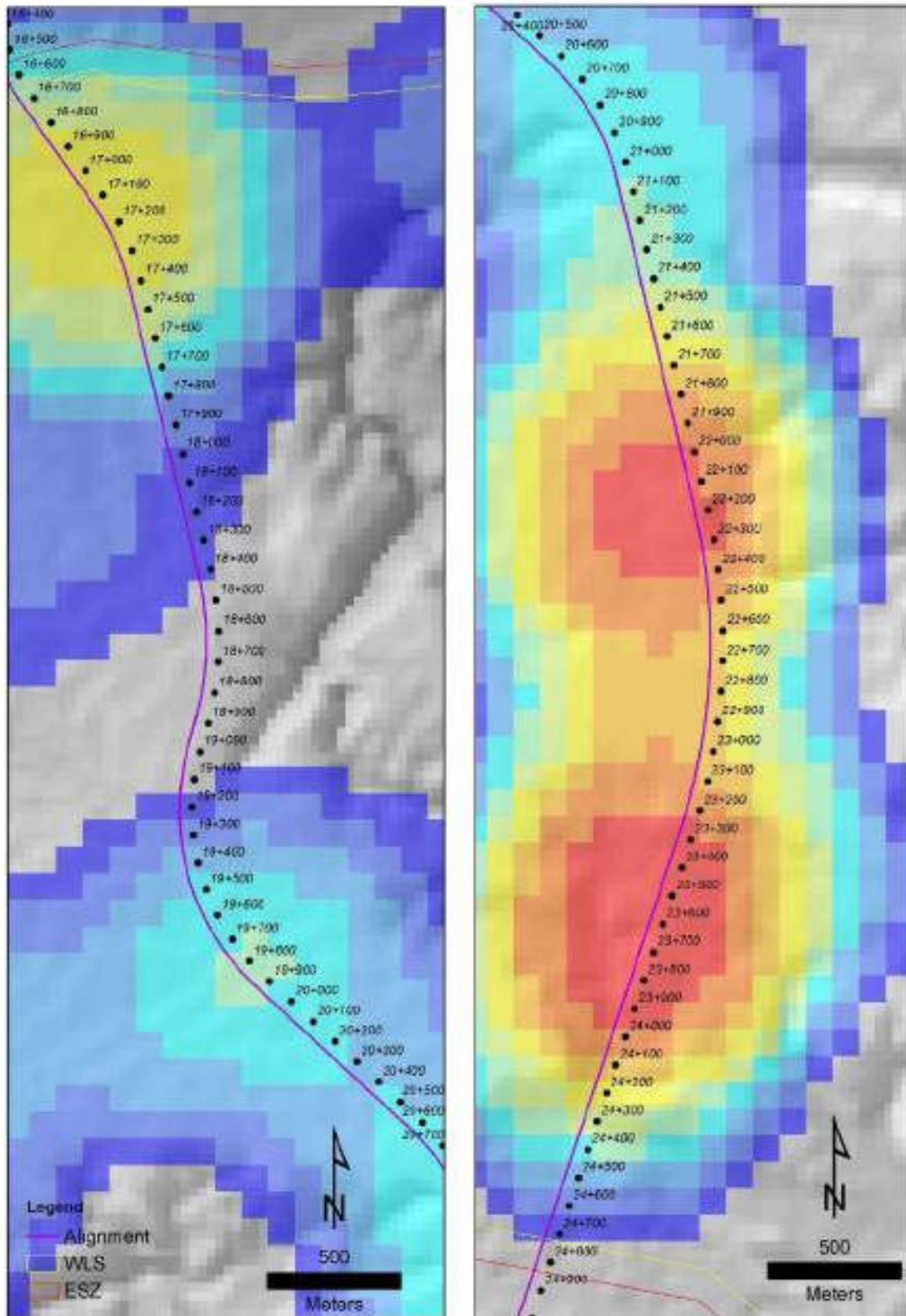


Figure 4. Combined map depicting hotspots of wild animal signs along the approved alignment of the Western Bypass Road passing through the Ghatigaon Wildlife Sanctuary (Red colour indicates high intensity of animal use).

Table 2. Details of proposed mitigation measures on the approved alignment of the Western Bypass Road passing through the Ghatigaon Wildlife Sanctuary, and WII suggestions for additional mitigation measures for wildlife.

Proposed mitigation structures					Recommendation		
S. No.	Design Chainage	Type of Structure	Span (m)	Height (m)	Remarks	Span (m)	Height (m)
1	16+540	VUP	1X20	5.5	Not recommended as mitigation structure.	-	-
2	17+000	AUP	1X15	4	The three structures may be merged as one crossing structure.	300	4
3	17+200	BOX	1X4	4.34			
4	17+500	AUP	1X15	4			
5	17+960	AUP	1X15	4	Increase width as minimum requirement for wildlife.	30	4
6	18+250	BOX	1X5	4.59	Increase width as minimum requirement for wildlife.	10	4.59
7	18+400	AUP	1X15	4	Increase width.	30	4
8	18+850	BOX	1X2	4.74	Increase width as minimum requirement for wildlife.	10	4.74
9	19+000	AUP	1X15	4	Increase width.	30	4
10	19+300	BOX	1X2	6.31	Combine as one crossing structure.	100	4
11	19+500	AUP	1X15	4			
12	19+600	VUP	1X20	5.5	Not recommended as mitigation structure.	-	-
13	19+800	BOX	1X2	6.57	Combine as one crossing structure.	100	4
14	20+050	AUP	1X15	4			
15	20+400	AUP	1X15	4	Increase width.	30	4
16	20+900	AUP	1X15	4	Increase width.	30	4
7	21+400	AUP	1X15	4	Critical hotspot of animal movement; combine structures as one.	250	4
18	21+750	BOX	1X2	3.25			
19	21+980	AUP	1X15	4			
20	22+350	BOX	1X2	4.31			
21	22+500	AUP	1X15	4	Not recommended as mitigation structure.	-	-
22	22+650	LVUP	1X12	4			
23	22+910	AUP	1X15	4	Increase width.	30	4
24	23+400	BOX	1X5	6.19	Critical hotspot of animal movement; combine structures as one.	250	4
25	23+570	AUP	1X15	4			
26	24+010	BOXMNB	1X15	2.97			
27	24+720	VUP	1X20	5.5	Not recommended as mitigation structure.	-	-

4. Mitigation Measures on the Alternative Alignment 2:

Given below are the recommendations for segments I, III and IV of the Alternative alignment 2 of the Western Bypass Road. GPS locations of the mid-points of mitigation measures are provided since the chainages for the alignment were not available. Fencing is recommended along the entire length of segment 2. The GPS locations are indicative and finalisation of exact sites for mitigation measures may require a field visit. As a rule, the opening of the underpass should avoid any human habitation on either side, as this would decrease the efficacy of the underpass. Segment-wise locations of mitigation measures are provided in Figs. 5, 6 and 7. The requirement of mitigation measures on this segment is 33.3% less than the requirement on the

approved alignment, which would reduce the overall cost of construction of mitigation measures.

Table 2. Details of recommended mitigation measures on the Alternative alignment 2 of the Western Bypass Road passing through the Ghatigaon Wildlife Sanctuary.

Structure ID	GPS location (mid-point)	Dimensions (m)
Segment I		
1	26.195414° 78.075215°	Width: 200 Height: 4
2	26.186352° 78.080517°	Width: 200 Height: 4
Segment II		
Segment III		
Fencing along entire segment		
3	26.160109° 78.105122°	Width: 100 Height: 4
4	26.154066° 78.106169°	Width: 200 Height: 4
Segment IV		
5	26.125803° 78.087892°	Width: 100 Height: 4

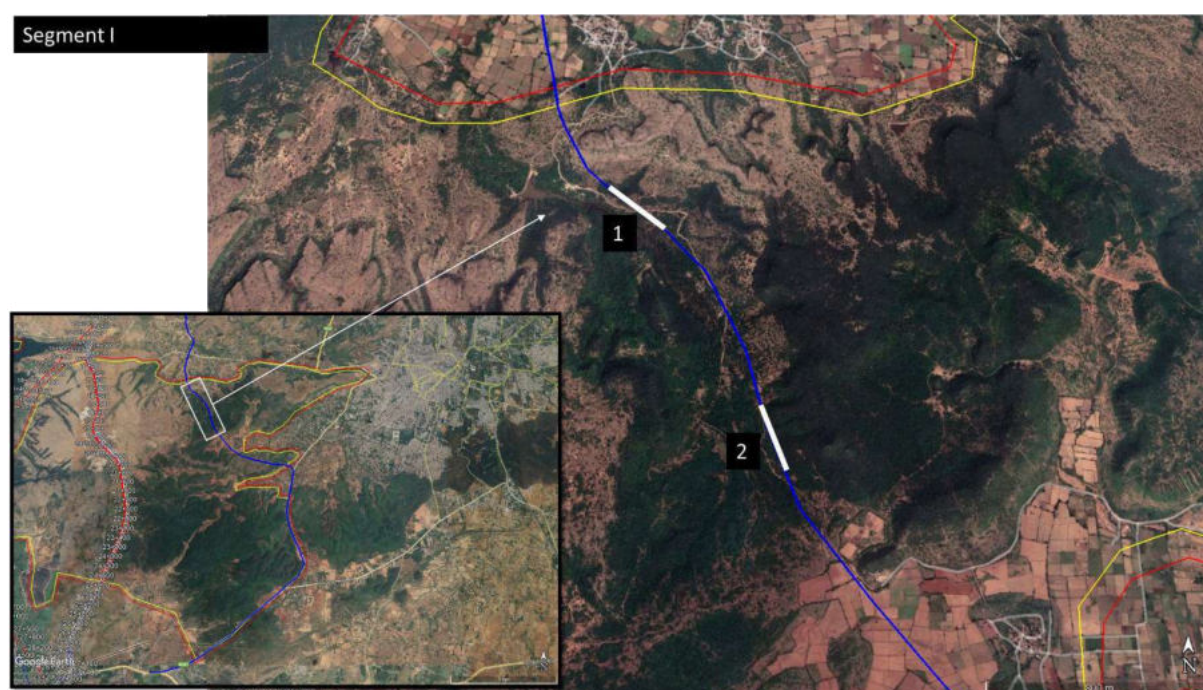


Figure 5. Location of mitigation measures on Segment I of the Alternative alignment 2 of the Western Bypass Road passing through the Ghatigaon Wildlife Sanctuary.



Figure 6. Location of mitigation measures on Segment III of the Alternative alignment 2 of the Western Bypass Road passing through the Ghatigaon Wildlife Sanctuary.

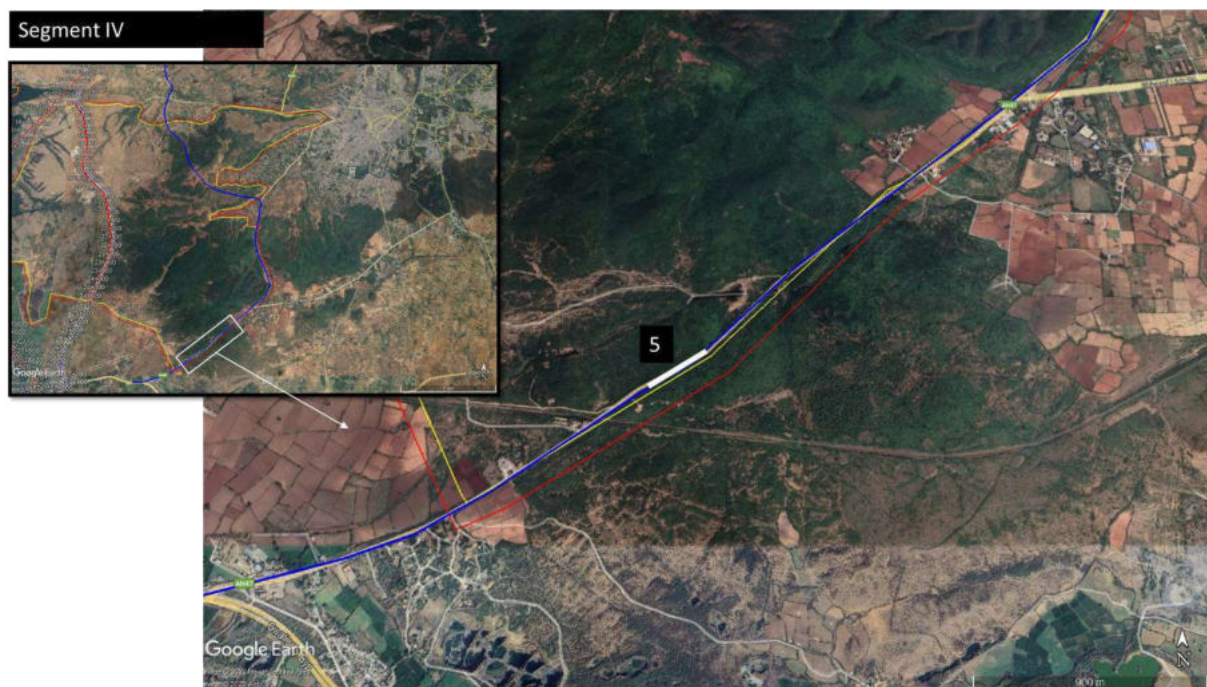


Figure 7. Location of mitigation measure on Segment IV of the Alternative alignment 2 of the Western Bypass Road passing through the Ghatigaon Wildlife Sanctuary.

General Recommendations:

1. The height of all bridges, box culverts and other drainage structures should not be less than 4 m in protected area. The minimum height should not be achieved by ground excavation, but by elevating the road.
2. Divisions between the crossing structures should be of pillar type, instead of wall-type (Fig. 8).

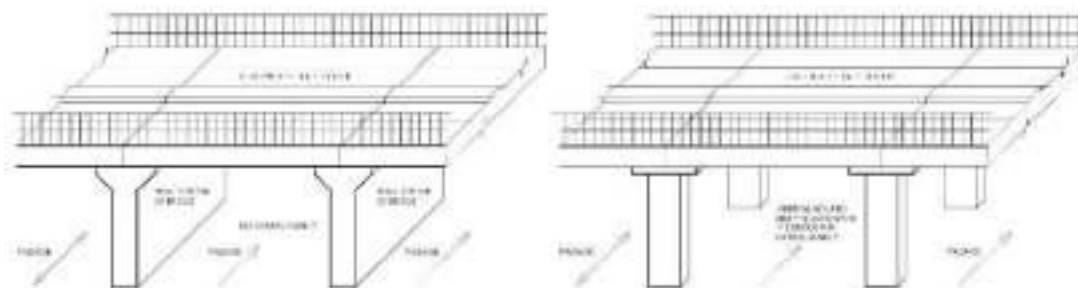


Figure 8. Wall-type division of bridge and (b) pillar-type division

3. Noise and sound barriers 2 m high should be installed along the entire stretch of the highway passing through the Sanctuary, which would also act as fencing to prevent animals from entering the road corridor.
4. The underpasses must be kept free of all human-related activities and disturbances including foot-trails and roads, as these have a negative influence on the use of crossing structures by wildlife. In case of the Dev Kho Road passing near the approved alignment, traffic should be kept to a minimum, and night-time traffic should be prohibited.
5. Disturbance during construction in the Sanctuary area is to be kept minimum by the following mechanisms:
 - Use of prefabricated materials for construction,
 - Use of water from sources other than waterbodies and water holes in the Sanctuary,
 - Disposal of construction-related debris away from the Sanctuary,
 - Prohibition on camping of construction personnel within the Sanctuary.
6. Post-construction rehabilitation of uprooted grassland vegetation is to be done using native flora in collaboration with forest department. No avenue plantation or planting of fruit-bearing trees should be done along the highway within the protected area.
7. Light and sound barriers are to be installed along all crossing structures. The top ends of the barrier should be turning outwards or be slightly tilted/angled outwards (Fig. 9), to reduce inward propagation of noise (and subsequently within the crossing structure via the gap in the median). Additionally, a fibre glass covering should be installed on top of the median opening to reduce ingress of noise into the crossing structures.

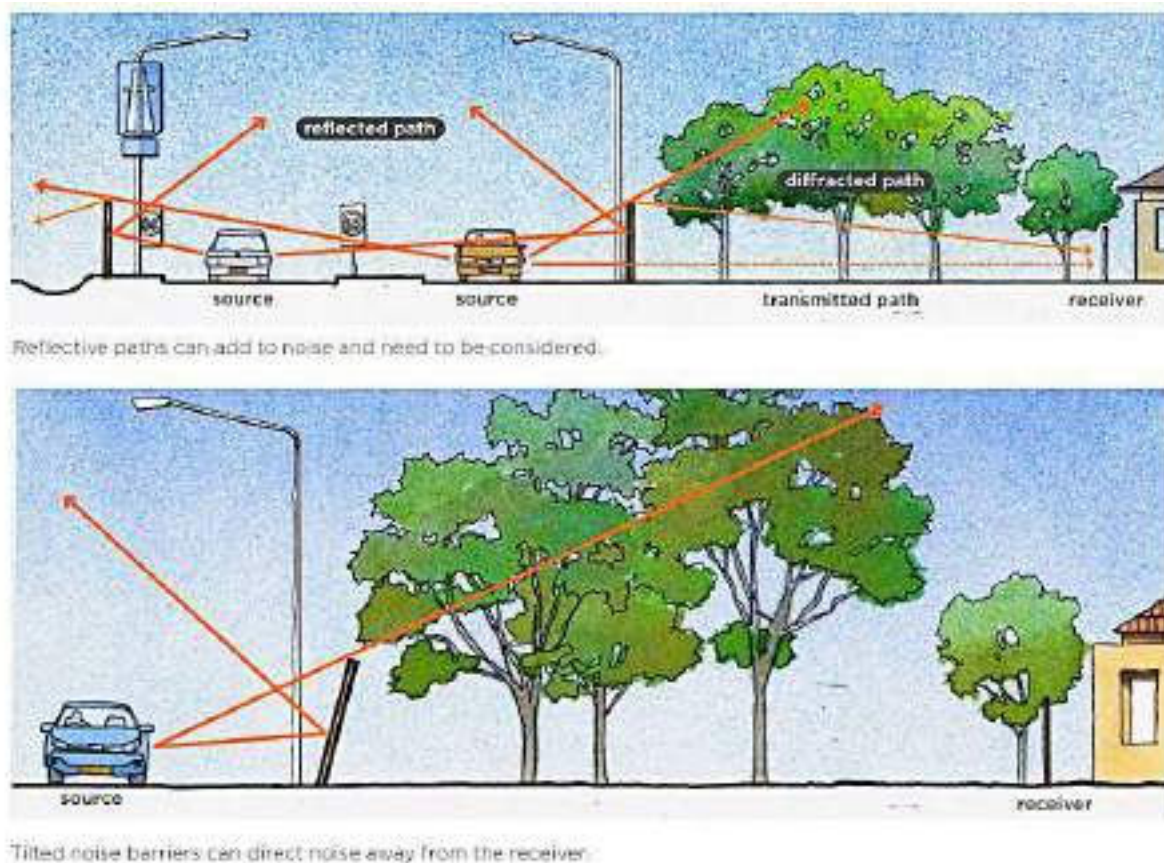


Figure 9. Barriers for attenuating noise along the highway showing reflected noise (top); tilted noise barriers for minimising reflected noise (bottom). (Source: Noise wall design guideline, Centre for Urban Design, NSW Government).

8. Site-specific measures to avoid water pollution and siltation are to be employed including use of oil interceptors.
9. Warning and information boards for awareness should be erected along the highway regarding the ecological importance of the area.
10. The sensitive stretches of the highway passing through the Sanctuary should be declared no honking and no stopping/parking zones.
11. If the approved alignment is to be considered, the plan should include a compensation component as offset for the serious habitat loss (25 sq. km eastern patch of the WLS rendered ecologically non-viable and potentially dysfunctional for sensitive species) to be caused by the proposed road. This compensation/offset plan should include, inter-alia,
 - (a) Funds for enclosing two grassland patches of >25 sq. km cumulative area using chain-link fencing and restoring the enclosed habitat by scientifically informed management practices that benefit grassland species, and
 - (b) Expanding grassland habitat within the Sanctuary by suitable restoration activities, to consolidate ~200 sq. km. habitat suitable for GIB for future re-establishment of birds, that will benefit associated grassland taxa. This

means that the User Agency must contribute to grassland development wherever required so that a total of ~200 sq.km of GIB habitat may be ready for possible future reintroduction of the species.

12. If the Alternate Alignment 2 is considered for the Western Bypass Road, the restoration of the grassland is not required by the NHAI, because this alignment would not fragment the habitat but will serve as protection against further encroachment into the Sanctuary.
13. In spite of higher land requirement for alternate alignment 2 (58.895 ha) as compared to approved alignment (42.85 ha), the alternate alignment is both economically and ecologically viable considering less number of mitigation measures required, no need for chainlink fencing of two grassland patches, very less habitat fragmentation and will serve as protection against further encroachment into the Sanctuary.

It is up to NHAI to take the final call regarding the implementation of the mitigation measures on the approved alignment or the alternative alignment 2.



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भारतीय वन्यजीव संस्थान
Wildlife Institute of India



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F.No.WL-6/20/2023-WL
Government of India
Ministry of Environment, Forest and Climate Change
(Wild Life Division)

2nd Floor, Vayu Wing,
Indira Paryavaran Bhawan,
Jor Bag Road, New Delhi-110003.

Date: 11th May, 2023

To
All Members
Standing Committee of NBWL

Sub: Minutes of 72nd Meeting of the Standing Committee of National Board for Wild Life-reg

Sir/Madam,

Kindly find enclosed copy of the Minutes of 72nd Meeting of the Standing Committee of National Board for Wild Life held on 25th April, 2023 under the chairmanship of Hon'ble Minister of Environment, Forest and Climate Change, Government of India.

Yours faithfully,
SUDHEER CHINTALAPATI
Digitally signed by SUDHEER CHINTALAPATI
Date: 2023.05.11 12:03:35 +05'30'
(Dr. Sudheer Chintalapati)
Scientist 'E'
Email: adwl-mefco@gov.in.

Encl: As above

Distribution:

1. Secretary, MoEF & CC
2. DGF&SS, MoEF&CC.
3. ADGF(WL), MoEF&CC.
4. ADGF(FC), MoEF&CC.
5. Member Secretary, NTCA.
6. Director/IGF, PE Division, MoEF&CC.
7. Director, WII, Dehradun.
8. Director, GEER Foundation, Gandhinagar.
9. Dr. R. Sukumar, Member, NBWL.
10. Dr. H.S. Singh, Member, NBWL.
11. Secretary, Environment, Forest, Science and Technology Department, Govt. of Andhra Pradesh.

Copy to:

1. PS to Hon'ble MoEF&CC.
2. PS to Hon'ble MoS, EF&CC.
3. PPS to Secretary, MoEF & CC
4. PPS to DGF&SS, MoEF&CC.

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Mundeshwari Temple in Bhagwanpur Block, Kaimur District, Bihar was discussed in the 71st meeting of SCNBWL held on 29.12.2022. After discussions, the Standing Committee decided that the proposal needs to be examined further. It was therefore decided to defer the proposal.

The proposal was further examined in the Ministry. As per the justification provided by the User Agency, Mundeshwari Temple is one of the most ancient functional temples in the world. This tourist destination has no feasible access other than traversing through the sanctuary area. As such, provision of an access route for visitors allowing minimum incursion in the Sanctuary is essential in the interest of wildlife. Bihar Rajya Pul Nirman Nigam Ltd has proposed the use of 1.309 ha of protected forest land for construction of Mundeshwari ropeway work project under the Forest (Conservation) Act, 1980. The requirement of forest land is unavoidable due to non-availability of any alternate land.

The proposal was discussed in the 72nd meeting SC-NBWL.

Decision Taken: After discussions, the Standing Committee recommended the proposal with the following conditions:

1. The operation of Ropeway carriage/transit facility for tourism purpose shall be regulated under directions of the Chief Wildlife Warden, Bihar and shall be coordinated as per eco-tourism guidelines so that any adverse impact on wildlife interests are prevented or mitigated.
2. The user/work agency shall ensure that any type of pollution, including sound pollution, in the area during the operation of ropeway is checked and appropriate steps are taken for waste management.
3. During the construction and installation of the ropeway facility in the sanctuary area, the practicable restrictions and precautionary measures as prescribed by the Chief Wildlife Warden, Bihar shall be complied with.
4. The annual compliance certificate on the stipulated conditions should be submitted by the project proponent to the State Chief Wildlife Warden and an annual compliance certificate shall be submitted by the State Chief Wildlife Warden to GoI.

✓ 72.2.16 Proposal for use of 38.025 ha of forest land from Son Chirya Hukna Bird (Great Indian Bustard) Sanctuary for construction of Western Bypass road, Madhya Pradesh.

FP/MP/ROAD/120435/2021

The proposal for use of 38.025 ha of forest land from Son Chirya Hukna Bird (Great Indian Bustard) Sanctuary, Madhya Pradesh for construction of Western Bypass road with 8.3 km length and 45 m to 60 m in width, was discussed in the 71st meeting held on 29.12.2022 and was deferred for re-examination of the mitigation plan including animal passage plan.

Wildlife Institute of India has forwarded its report on the proposal with the following recommendations:

- a. Long underpasses (viaduct) of about 300 m width x 5 m height with noise attenuation at approximately every 3 km along the road through open habitat for crossings of all species, particularly ungulates and large carnivores.
- b. Long overpasses (land bridge) of about 150 m width x 4 m height and underpasses of about 300 m width x 5 m height alternately and with noise attenuation at approximately every 3 km along the road through forest habitat for crossings of all species, particularly ungulates and large carnivores.
- c. Box culverts of 30 m width x 4 m height at every 1 km along the road for medium-size animals (meso-carnivores, small mammals and reptiles).
- d. Pipe culvert of 1.5 m diameter at every approximately 250 m along the road for small animals (hedgehogs, rodents, reptiles, amphibians etc.)
- e. All the above crossing structures need to be appropriately landscaped to make them appear naturalistic for facilitating passage.
- f. Fencing of road sections without passages using 2 m height chain-link-fence buried in concrete 30 cm above and 60 cm below ground (to deter digging by semi/fossorial animals), to reduce vehicle-animal collisions.

The report further mentions that the exact passage and mitigation plan (placement, structures and designs) would require a detailed study of the landscape. Additionally, the plan should include a compensation component as offset for the serious habitat loss (25 sq.km. eastern patch of the WLS rendered ecologically non-viable and potentially dysfunctional for sensitive species) to be caused by the proposed road, as per the hierarchy of measures recommended in WII's guidelines. This compensation /offset plan should include recommendations for the following:

- a. funds for enclosing two grassland patches of >25sq km cumulative area using chain-link-fencing and restoring the enclosed habitat by scientifically informed management practices that benefit grassland species,
- b. expanding grassland habitat within the Sanctuary by suitable restoration activities, so as to consolidate ~200 sq km habitat suitable for GIB for future re-establishment of birds that will benefit associated grassland taxa.

The proposal was discussed in the 72nd meeting SC-NBWL.

Chief Wild Warden, Madhya Pradesh agreed with the recommendations of WII.

Decision Taken: After discussions, the Standing Committee recommended the proposal with the following conditions:

1. Suggestions given by the WII in its report with regard to the animal passage and mitigation plan will be incorporated in the proposal.
2. The compensation /offset plan given by WII will to be incorporated in the proposal.

3. Annual compliance certificate on the stipulated conditions will be submitted by the project proponent to the State Chief Wildlife Warden and an annual compliance certificate shall be submitted by the State Chief Wildlife Warden to the Government of India.

72.2.17 Proposal for use of 2,2634 ha of forest land in tiger corridor linking Kawal Tiger Reserve with Indravati Tiger Reserve and Tadoba Andheri TR in Maharashtra for widening and strengthening of Kagaznagar to Penchikalpet road from km 20/0 to 25/0 and 25/0 to 30/0 in Kadamba Ext-X RF in Kagaznagar Forest Division of KB Asifabad district, Telangana

FP/TG/ROAD/144272/2021

The proposal were discussed in the 72nd meeting of SCNBWL.

Dr. H.S Singh observed that the violations of FC Act, 1980 and Wild Life (Protection) Act, 1972 had been committed by the user agencies who had submitted these proposals. He suggested that a holistic view be taken by the Committee with regard to these proposals.

Dr. Sukumar noted that the violations indicate that the linear infrastructures proposed may not have incorporated proper mitigative measures thus posing greater risk for wildlife.

Decision Taken: After discussion, the Standing Committee recommended that all proposals relating to the Telangana may be discussed in a meeting with the Telangana Chief Secretary and officials of the State Forest Department. The District Magistrate and Divisional Forest Officer of the area during the period when the violations were committed should also be present in the meeting.

72.2.18 Re-notifying the boundaries of Shettihalli Wildlife Sanctuary without reducing the area and extent from 700 sq km to 395,608 sq.km, Karnataka

The proposal for re-notification/rationalization of Shettihalli Wildlife Sanctuary with an area of 395,608 sq. km by excluding ~300 sq.km from the area of 695,608 sq. km was considered by the Standing Committee in its 50th meeting held on 7th September, 2018. The justification provided for rationalization of the wildlife sanctuary boundaries mentioned that an area of more than 300 sq km comprising townships, villages and agricultural lands was included inadvertently in the notification of the sanctuary in 1974.

After discussions in the 50th meeting held on 7th September, 2018, the Standing Committee recommended the proposal in principle subject to the conditions that the State Government will submit the draft notification to the MoEF&CC clearly specifying the revised boundaries prepared by the committee constituted by the State Government for the alteration of boundaries giving justification for addition or deletion of the area.

The State Government of Karnataka has submitted the draft notification vide letter dated 19.08.2022 along with the report of the boundary revision



Fig 1, Proposed alignment overlaid on (a) topa-sheet with alternative routes (top), (b) Ghatigaon Bustard Sanctuary map (middle), (c) Google Earth imagery showing vegetation types (bottom), as per Project document (Annexure i).

Observations on the proposed road

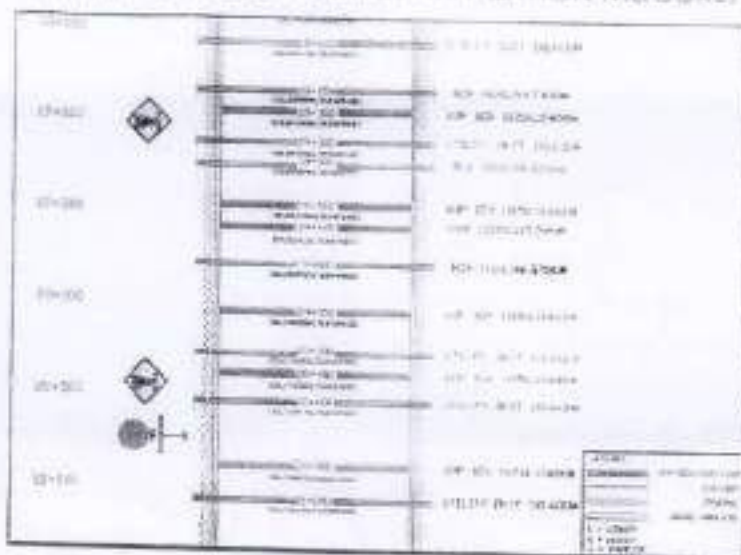
1. Son Chirya Hukna (Great Indian Bustard) Bird Sanctuary in Ghatigaon, as the name suggests, was established for the conservation of the Critically Endangered Great Indian Bustard (GIB). The last confirmed GIB sightings in this sanctuary dates back to 2010. Based on Forest Department counts, the GIB population in and around the Sanctuary had declined over the past three decades from 20-25 individuals during 1985-1990 to <5 during 2005-2010. However, the Sanctuary retains ideal habitat for GIB and associated grasslands / open-habitat species, of about 140 sq.km. area (link file of GIB core habitat), that has the potential of re-establishing a small population from conservation bred and rewilded GIB in foreseeable future, as per the vision of the Memorandum of Agreement between MoEFCC, Rajasthan Forest Department and WII for GIB conservation breeding program. This will only be possible if the habitat is maintained, following actions recommended in the MoEFCC's National Bustard Recovery Plans. Whereas, the approximate alignment of the proposed road cuts through this ideal bustard habitat and about 25 sq.km. of this habitat on the eastern side of this road would become ecologically dysfunctional, if this road is constructed, as bustards are highly sensitive to such infrastructural development and consequent disturbances.
2. The Sanctuary is a mix of grassland, open thorn scrub and dry deciduous forests that supports a wide spectrum of species because of the habitat heterogeneity. Notable wildlife in this area includes the leopard, wolf, golden jackal, Indian fox, sloth bear, striped hyena [carnivores], chinkara, blackbuck, chausingha, nilgai, cheetah, wild pig [ungulates] and Indian pangolin. The sanctuary has several prospective measures under land use conversion, which includes strengthening of the existing roads and constructing new roads after appropriate environment impact assessment (Govt. of India, 2015). However, management of remnant grassland patches is neglected, which is a threat for several bird species herein (Birdlife International, 2021).
3. If the proposed road is permitted, it will have severe negative impacts on the ecology of Ghatigaon Sanctuary because of:
 - a. Barrier effect of the road to animal movements, causing fragmentation of populations
 - b. Habitat loss because of this large infrastructure. In particular, ecological isolation and dysfunctionality of the eastern fragment
 - c. Vehicle-animal mortality because of heavy traffic volume
 - d. General disturbance and pollution (Forman et al. 2003).

- 5
- e. Species of conservation concern found in the Sanctuary area that will be particularly impacted by the road includes chinkara, blackbuck, nilgai, cheetal, wild pig, golden jackal, Indian fox, and several ground-dwelling birds.
 4. However, the above impacts caused by the selected route (in blue in fig 1a) will be comparatively less than the alternative alignments through the Sanctuary, shown in Annexure I.
 5. It is noted that a similar road was earlier proposed by the Special Area Development Authority (SADA), Gwalior. As per the decision of the 43rd meeting of the Standing Committee of NBWL held on 27 June 2017 and the communication from MoEFCC (Letter F, No. 6-118/2013 WL dated 29 June 2017), a committee comprising of representatives of WII and MoEFCC (WL) Division, conducted a rapid site inspection of the proposed bypass road of National Highway 3 (Agra to Mumbai) through Ghatigaon Bustard Sanctuary on August 30-31, 2017. The draft site inspection report prepared by WII's representative is enclosed as Annexure II.

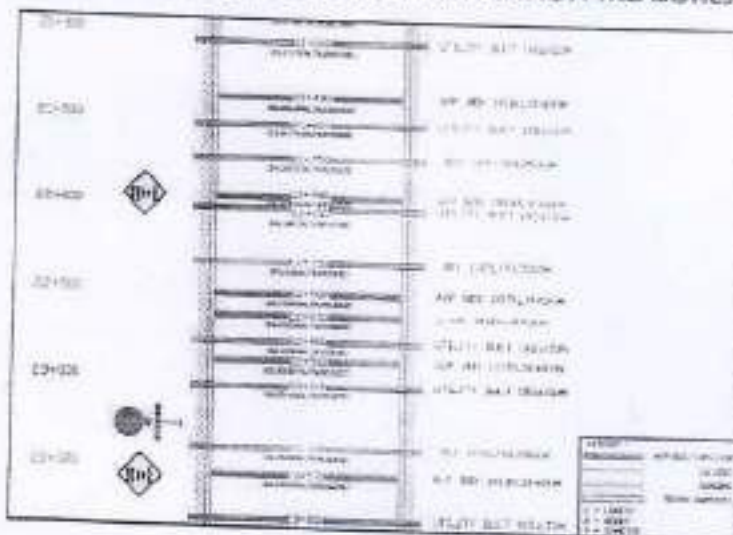
Observations on the animal passage plan

1. Spatial information (Google Earth / Kml file) of the road has not been provided and the online link in Annexure I is not functional. Hence, the exact lay of the proposed road with respect to local eco-geographical features cannot be understood. Without a Kml file, specific recommendations on the animal passage plan of the proposed road cannot be provided.
2. The proposed passage plan submitted by the user agency is provided below (figure 2; details in Annexure I).

KEY MAP OF FOREST SECTION MITIGATION MEASURES



KEY MAP OF FOREST SECTION MITIGATION MEASURES



KEY MAP OF FOREST SECTION MITIGATION MEASURES

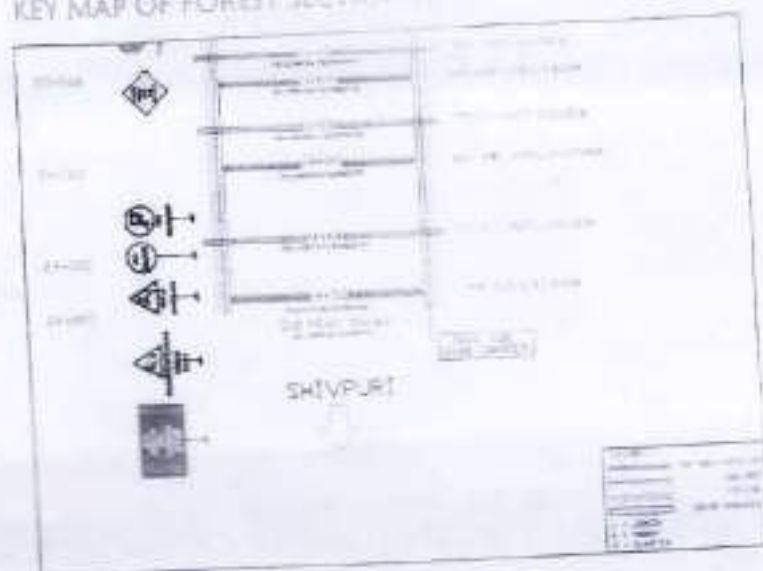


Figure 2 Details of mitigation measures proposed by NHA for the proposed Western Bypass of NH 3 through Ghatigaon Bustard Sanctuary, as per Project document (Annexure I)

3. After examining the Project document, it was found that the passage plan has not been developed keeping in mind relevant ecological and geographical aspects, and is not focused on enabling wildlife crossings, as detailed below:

- a. The plan proposes Animal UnderPass (AUP) of 15 m width and 4 m height (14 nos) at ~500 m intervals, and box culverts of 2-5 m (8 nos) width. Given that the road will have four lanes and considerable width, these small passage spans will result in poor 'openness ratio' and the structures will appear as 'tunnel like'. Whereas, open habitat species and large-bodied animals require wider visibility and clear sight of view of the other side, to pass through. Hence, the proposed structures will be inadequate for wildlife crossings.
- b. The passage plan is not in line with Guidelines on Eco-friendly Measures for linear infrastructure developed by WII (2016). The mitigation hierarchy (pg 53, chapter 5 of WII 2016) recommends exploring alternative routes of the proposed linear infrastructure that avoids passing through the Protected Area. Exploration of such options and unavailability of feasible routes outside PA have not been clearly explained in the NHA document. Further, WII (2016) guidelines recommend >70 m overpasses and >30 m underpasses for less-sensitive species in forest areas, and 300 m wide underpasses for more sensitive species or important forest connectivity

patches. Studies in open-habitats recommend larger dimensions of underpasses, such as 200-300 m width (preferably 500-1000 m width) and 5-7 m height, or overpass of the same dimension for species such as the Black-tailed gazelle, Mongolian gazelle, Khulan, Argali sheep and other ungulates (Huijser et al., 2013). The beeline distance between the ends of the road cutting through the WLS is perhaps >10 km. WII's guidelines recommend 300 m wide underpasses at every 1 km interval when the road is severing a wildlife habitat / corridor of >3 km (pg 76, chapter 8 of WII 2016). Considering that this road, if permitted, will sever the eastern fragment from the rest of the Sanctuary and will make it dysfunctional if animal movement is not enabled, the proposed road route should be treated as a sensitive habitat / corridor for mitigation planning.

- c. Utility ducts of 1 m diameter (15 nos) have also been proposed and may be used by reptiles and rodents, if landscaping and substrate materials are carefully designed.
 - d. Thus, the proposed crossing structures appear inadequate to facilitate movements and mitigate the barrier effect of the road.
4. Further, the mitigation plan does not include any measure for reducing animal mortality due to vehicle collisions. Depending on the traffic volume, animals find it difficult to cross a road or collide with vehicles (figure 3). The expected traffic in the proposed road will be 20000 - 60000 / day or 40 vehicles / minute (as reported in Annexure II). At this traffic volume, the potential vehicle-collision probability of species present in this area can be predicted from the Traversability model (van Langevelde and Jaarsma 2005), as follows:

$$P_i = 1 - e^{(-\lambda \frac{L_i + B}{V_i})}$$

Where, P_i is the probability of a collision event;

λ is traffic volume (vehicle/second), i.e. 0.20-0.40 vehicles / second for the proposed road; B is the width of the road (i.e., ~15 m), L_i is the body length of the animal and V_i is the speed of the animal while crossing the road.

Given the above biological traits of species in the road impact zone, the predicted collision probability for any attempted crossing would be approximately 52-77% for chinkara and blackbuck, 76-94% for Indian fox, 46%-71% for striped hyena and similar for Cheetal. This will cause near certain mortality, if animals attempt to cross, and eventually, total barrier to wildlife movements.

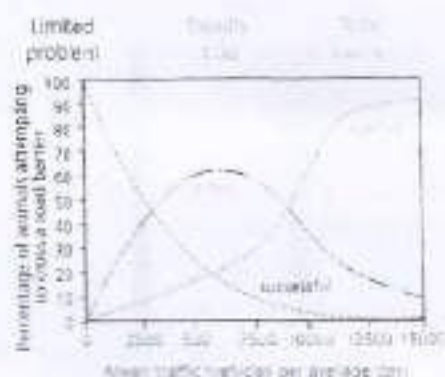


Figure 3. Barrier effect along increasing traffic volume (Graph by Andreas Sellen, unpubl. reproduced from Sellen et al. 2003).

Recommendations

Based on an indicative route, the road crosses partly through open habitat (grassland / savannah / scrub) and forest areas that are inhabited by different taxa, some exploiting the edge / ecotone habitat, having different requirements. A one-size-fits-all approach of mitigation will not suffice in reducing barrier effect or vehicle-animal collisions in this case. Therefore, careful on-ground examination of the habitat to develop a scientifically informed passage and mitigation plan is required, if the proposed road is permitted, that should include, inter alia,

- Long underpasses (viaduct) of about 300 m width x 5 m height with noise attenuation at approximately every 3 km along the road through open habitat for crossings of all species, particularly ungulates and large carnivores
- Long overpasses (land bridge) of about 150 m width x 4 m height and underpasses of about 300 m width x 5 m height alternately and with noise attenuation at approximately every 3 km along the road through forest habitat for crossings of all species, particularly ungulates and large carnivores
- Box culverts of 30 m width x 4 m height at every 1 km along the road for medium-size animals (meso-carnivores, small mammals and reptiles)
- Pipe culvert of 1.5 m diameter at every approximately 250 m along the road for small animals (hedgehogs, rodents, reptiles, amphibians etc.)
- All the above crossing structures need to be appropriately landscaped to make them appear naturalistic for facilitating passage

- (3)
- f) Fencing of road sections without passages using 2 m height chain-link-fence buried in concrete 30 cm above and 60 cm below ground (to deter digging by semi/fossorial animals), to reduce vehicle-animal collisions.

The exact passage and mitigation plan (placement, structures and designs) would require a detailed study of the landscape. Additionally, the plan should include a compensation component as offset for the serious habitat loss (25 sq.km. eastern patch of the WLS rendered ecologically non-viable and potentially dysfunctional for sensitive species) to be caused by the proposed road, as per the hierarchy of measures recommended in WII's guidelines (pg 53, chapter 5 of WII 2016). This compensation / offset plan should include, inter alia, a) funds for enclosing two grassland patches of >25 sqkm cumulative area using chain-link-fencing and restoring the enclosed habitat by scientifically informed management practices that benefit grassland species, and b) expanding grassland habitat within the Sanctuary by suitable restoration activities, so as to consolidate ~200 sqkm habitat suitable for GIB for future re-establishment of birds, that will benefit associated grassland taxa.

List of annexures

1. Annexure I: MoEFCC correspondence with project document
https://drive.google.com/file/d/1Uc1M3PHhH4wCkxm70_50x1QwADhEi/view?usp=share_link
2. Annexure II: Draft site inspection report of SADA proposed NH3 bypass road
https://drive.google.com/file/d/1FhblDAK92ToPHN6g4LPOZCea0c8fu3R/view?usp=share_link
3. Kml file of Great Indian Bustard core habitat in Ghatigaon Bustard Sanctuary
https://drive.google.com/file/d/1u8h-TIADjvUT8BSySPCQvNSHkoHCFhT/view?usp=share_link

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