



भारतीय राष्ट्रीय राजमार्ग प्राधिकरण

(सड़क परिवहन एवं राजमार्ग मंत्रालय, भारत सरकार)

National Highways Authority of India

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

क्षेत्रीय कार्यालय-पश्चिम उ०प्र०, लखनऊ

Regional Office - West UP, Lucknow.

3/248, विशाल खण्ड, गोमती नगर, लखनऊ-226010 (उ.प्र.)

3/248, Vishal Khand, Gomti Nagar, Lucknow-226010 (UP)

19001/1/RO-W-UP/NH-19/Km. 82+320/132KV/393

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वेबसाइट / Website : www.nhai.gov.in

Dated: 22.09.2020

Invitation of Public Comments

Sub: Permission/NOC for crossing of 132KV TSS Railway-Jakhaura-Kalyanpura, Lalitpur (220 KV Substation) Transmission Line on Over Head at NH-44 (Old NH-26) at Chainage 82+320 km near village-Nadanwara, Tehsil & District - Lalitpur.

The Executive Engineer, UP Power Transmission Corporation Ltd., Jhansi has submitted the proposal through PD, PIU-Jhansi for NOC for overhead crossing of 132KV TSS Railway-Jakhaura-Kalyanpura, Lalitpur (220 KV Substation) Transmission Line on Over Head at NH-44 (Old NH-26) at Chainage 82+320 km near village-Nadanwara, Tehsil & District - Lalitpur in the State of Uttar Pradesh.

2. From the submitted proposal, it is seen that the height of both proposed structures (Transmission Towers) on which the proposed overhead line is hanging is 38.205m & 39.165m respectively. The structures (Transmission Towers) on either side are being erected at distance of 70m & 92m from either side of NH boundary. Further, the minimum clearance of 18.200m between the lowest conductor of the proposed line and NH carriageway shall be maintained. However, the proposed transmission line shall be crossing the National Highway at 90° 00' 00" degree.

3. As per the guidelines, issued by the Ministry vide OM No.RW/NH-33044/29/2015/S&R(R) dated 22.11.2016, the application shall be put out in the public domain for 30 days for seeking claims and objections (on grounds of public inconvenience, safety and general public interest).

4. In view of the above, comments of the public on the above application is invited to the below mentioned address, which should reach by this office within 30 days from the date of publication beyond which no comments shall be entertained

**The General Manager cum Regional Officer,
National Highways Authority of India
Regional Office, UP-West, Lucknow
3/248, Vishal Khand, Gomti Nagar
Lucknow-226 010**

This issues with the approval of RO-UP (West), Lucknow.

Encl: As above.


(A. R. Chitranshi)
DGM (T)
For RO-West, UP

Copy to:

1. Web Admin, NHAI, HQ - with a request for uploading on the NHAI website.
2. The Technical Director, NIC, Transport Bhawan, New Delhi - with a request for uploading on Ministry's website.
3. The Executive Engineer, UPPTCL, Jhansi for information.
4. The PD, PIU-Jhansi for information.

"Building a nation, not just Roads."

मुख्यालय : प्लॉट सं० जी-5 एवं 6, सेक्टर-10, द्वारका, नई दिल्ली - 110 075, दूरभाष : 91-11-25074100 / 200

Head Office : Plot No. G-5 & 6, Sector - 10, Dwarka, New Delhi - 110 075 Phone : 91-11-25074100/200

1.	Situation of the EHV transmission line crossing on national highway.	On National Highway – 44 crossing chainage 82+320 KM. from jhansi
2.	Angle of crossing of the transmission line with the national highway at crossing Point	90° 00' 00"
3.	The length of the span at the crossing and also those on either side of the crossing	A) Crossing span 196 Mtr. B) Preceding span 175 Mtr. C) Succeeding span 320 Mtr.
4.	In the event of the transmission line deviating at any of the supports of the crossing necessitating one of the structures to be corner structures, state angle of such deviation the deviation of the span on either side of crossing shall be illustrated in the sketch mentioned in the clause 2 above.	Location No. 30 DC+10 < 01° 25' 36' RT' 31 DC+10 < 21° 14' 42' RT'
5.	The number, size and the material of the conductors and wires crossing the NH each wire under phase, neutral each, guard, bearer and ground cross wire should be separately described and their disposition indicated by means of sketch.	A) Panther Conductor dia 21.00 mm, No. of Conductor –04 Nos. Unit Weight 0.976 Kg/m, Ultimate Strength 1682 kg. B) Aluminum – 30/3 mm, Steel –7/3.00 mm C) Overall Diameter of Earth wire – 0.976 mm (Steel 7/3.00mm)), no. of Earth wire - 1 Nos.
6.	Indicate whether the proposed guard is to be restricted to the crossing span or it is to be continued over the adjacent span.	Not Applicable
7.	The deviation of the span on either side on the crossing shall be illustrated in the sketch mentioned in the clause 2 above.	Enclosed in sketch.
8.	System of supply (i.e. Voltage) frequency, No. of phases, whether neutral is earthed or not.	132 KV, 50 Hz, 04 Phase with 1 earth wire.
9.	Height of structure above ground and below ground separately and details of foundation.	A) Location No.30 (DC+10) height above GL 38.205 M depth below GL 3.74 M. A) Location No.31 (DC+10) height above GL 39.165 M depth below GL 2.78 M.
10.	Height above ground level of (1) Lowest conductor on insulator and (2) guard wire on bracket above ground level.	Location No. 30 DC+10 = 26.80.00 M. Location No. 31 DC+10 = 26.80 M

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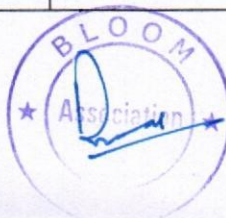


Executive Engineer
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11.	Height of road level above ground level measured at the foot of the structure.	Location No.
		30 DC+10 = 3.74 M.
		Location No.
		31 DC+10 = 2.72 M.
12.	Clearance under maximum sag condition between road level and the lowest live conductors & between road level and lowest guard wire (State if "box" type guarding is provided in case of adoptions of unearthed neutral system).	At Null Point At Road = 18.200 M
13.	Ultimate Tensile stress of the steel wire used for guard for earth wire in tones per Sq. Cms.	Not applicable
14.	Approximate distance of each of the structures to the nearest NH Boundary (marked by pillars/ Fencing) measured along the alignment of the transmission line.	Location No.
		30 DC+10 = 70 M.
		Location No.
		31 DC+10 = 92 M.
15.	Are the proposed structure is in NH boundary.	Outside NH boundary.
16.	Are approved anticlimbing devices and warning notices provided on the structures erected.	Danger boards are provided on both the Towers.
17.	Dimensions and types of brackets used for the cross arms as well as for the guards wires.	Not applicable for transmission Line.
18.	In each structure of the crossing span independently earthed by means of an earth plate.	Yes, each structure is earthed.
19.	In each structure supported by means of stage in three directions give the size of guy wires, (the neglected in calculating the strength of structure).	No. guys or stays are provided structures are self supporting.
20.	If no guard is provided, in the transmission line protected by device to ensure instantaneous isolation is conduction?	Yes, the transmission line is protected instantaneously by high speed protection relays with carrier equipment.
21.	Type of insulators used.	Glass discs of electromechanical strength if single disc = 120 KN.
22.	State the method of maintenance to be employed to ensure the following protections.	
a)	From overhanging or decaying trees which might fall on the line.	a) Tree clearance to a width of 13.5 M is done.
b)	To reduce the hazard to life and property.	b) Warning boards are provided.
c)	Supporting structure including guys, from the danger of being struck by moving road vehicle.	c) Structures are at safe distance from road.
23.	Drawing showing details of crossing disturbance of road, ground or attachment that may be necessary (To be supplied in quadruplicate.)	Enclosed.

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CHECK-LIST**FOR NH -44 ROAD CROSSING BY****132 KV DC kalyanpura -jakhaura TSS LINE**

S.NO.	DESCRIPTION	DETAILS
1.	National Highway Number	NH-44
2.	Crossing Chainage	82+320 KM FROM JHANSI
3.	SYSTEM OF SUPPLY (i.e VOLTAGE) FREQUENCY NO.OF PHASES,WHETHER NEUTRAL IS EARTHED OR NOT	132 KV.D/C 4 phase 50 cycles A.C. AND 1 EARTH WIRE
4.	Position of towers	BETWEEN LOC. NO. 30 (DC+10) & 31 (DC+10)
5.	NORMAL SPAN OF PANTHER CONDUCTOR	380 M.
6.	MAX.SAG AT NORMAL SPAN	10.473 M.
7.	CROSSING SPAN	196 M.
8.	Preceding span AP-29 & AP-30	175 M.
9.	Succeeding span- AP-31 & AP-31/1	320 M.
10.	Height of tower structure above ground and below ground separately and details of foundation	A) Location No.30 (DC+10) height above GL 3.74 M depth below GL 3.00M. B) Location No.31 (DC+10) height above GL 2.720 M depth below GL 3.00M
11.	SAG OF 2*2 PANTHER CONDUCTOR SIZE 30/3.00 + 7/3.00 MM	$6.520 * (196)^2 / (380)^2 + 0.420 (\text{sag error}) = 1.73$
12.	CLEARANCE OVER ROAD	18.200 M.
13.	Height above ground level of (1) Lowest conductor on insulator and (2) guard wire on	18.200 M.

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	bracket above ground level	
14.	Height of road level above ground level measured at the foot of the structure.	Location No. 30 DC+10= 3.74.M. Location No. 31 DC+10 = 2.72 M
15.	Angle of road crossing	90° 00' 00"
16.	Distance from NH Boundary From center of tower	Loc. No. 30 (DC+10) = 70 M. Loc. No. 31 (DC+10) = 92 M
17.	Perpendicular distance from center of tower to center of road	Loc. No. 30 (DC+10) = 87.00 M. Loc. No. 31 (DC+10) = 109.0 M
18.	Protection of assembly to the line	Anti Climbing devices provided
19.	No. of stay required	NO.
20.	Minimum Factor of Safety	
21.	Size of power conductor mm.	Panther (Conductor dia.21 MM)
22.	Size of Earth Wire	Steel 7/3.00 (Overall Diameter - 21 mm)
23.	FOUNDATION TYPE	FS
24.	PLAN PAPER DIAGRAM	PROFILE (ENCLOSED)
25.	EARTHING	PIPE TYPE EARTHED

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DESIGN DETAILS

1.Voltage	: 132 KV
2.Size of H.T.G.S. Earth Wire	: 7/3.15 mm
3.Size of Conductor	: ACSR Panther 30 Al + 7st/3.00 mm
4.Ultimate Tension strength of conductor	: 1682 Kgs.
5.Wind pressure on conductor	: 49.2 Kg/m ²
6.Normal Span	: 380 Mtr.
7.Max sag on Normal span	: 10.475 mtr
8.Height of lowest conductor above railway track:	23.00 Mtr.
9.Temperature range	: 0°-32° C -75°C
10.Type of protection.	: High Speed impedance relays (DPP)
11.Transmission line will be controlled by	: Sensitive relay


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