भारतीय राष्ट्रीय राजमार्ग प्राधिकरण

(सड़क परिवहन और राजमार्ग मंत्रालय, भारत सरकार)

NATIONAL HIGHWAYS AUTHORITY OF INDIA

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

क्षेत्रीय कार्यालय / REGIONAL OFFICE

ई-2/167, अरेरा कॉलोनी, हबीबगंज रेल्वे स्टेशन के पास, भोपाल (म.प्र.) 462016

E-2/167, Arera Colony, Near Habibganj Railway Station, Bhopal (M.P.) 462016

दूरभाष/Phone : 0755-2426638, फैक्स /Fax : 0755-2426698, ई-मेल/E-mail : robhopal@nhai.org

भारतमाला
प्रगति के पथ पर अग्रसर
BHARATMALA
ROAD TO PROSPERITY

NHAI/RO-MP/CHHP/132KV/2021/42270 Date: 26.02.2021

Invitation of Public Comments

Sub: Proposal for NOC for the overhead crossing of Jhansi-Khajuraho NH-39 by LiLO of 132 KV RTS-Niwari near at Village-Devendrapura Distt.-Niwari.

Ref: PD, PIU-Chhatarpur letter no. no. CHHP/26010/11/Jha-Khaju/132KV RTS-Niwari Line km 26+450/2021/5832 dated 09.02.2021

The Project Director, PIU-Chhatarpur NHAI vide their letter dated 09.02.2021 has submitted the Proposal for NOC for the overhead crossing of Jhansi-Khajuraho NH-39 by LiLO of 132 KV RTS-Niwari near at Village-Devendrapura Distt.-Niwari.

2. As per Ministry vide OM No. RW/NH-33044/29/2015/S&R (R) dated 22.11.2016, the Highways Administrator will make available the proposal seeking permission for utility laying for public comments for **30 days** on ground of public interest.

3. In view of the above the comments of public are invited on captioned proposal (copy of application is enclosed) and the same should reach to below mentioned address till **28.03.2021** beyond which no comments will be considered.

The Highway Administrator
O/o Regional Officer,
National Highways Authority of India
E-2/167, Arera Colony,
Near Habibganj Railway Station,
Bhopal (MP)-462016
E-mail ID:robhopal@nhai.org

4. This issues with the approval of Highways Administrator Cum Regional Officer, NHAI, Bhopal (MP).

(Anand Prasad)
Manager (T)

Copy to:

(i) Web-Admin, nhai.org@gmail.com, NHAI-HQ for uploading on NHAI website.

(ii) The Senior Technical Director, NIC, Transport Bhawan, New Delhi-110001 for uploading on Ministry's Website.

(iii) The Project Director, PIU-Chhatarpur (MP) for information please.

(iv) The MP Power Transmission Company Ltd. for information & furnishing the vetted drawing of overhead crossing on plan & profile of NHAI with clear cut indicating the line at the end of 60m ROW.

Annexure-A(a)

Details of Construction of LILO of 132 RTS-Niwari Line at 132 Kv Sub-Station Niwari Across NH-39 Between Location No. AP/8 to AP/9		
Sr.No.	Particulars	Description
1	Details of User Agency	
1.1	Name of Company Asking for Permission	M.P. Power Transmission co. Ltd.
1.2	Full address	O/o Executive Engineer EHT-C Dn. MPPTCL Sagar Narsinghpur Road Makronia Sagar
1.3	Telephone No. & Fax	9425806897/7987624790 Email Id:- ehtbina@gmail.com
1.4	Details and purpose for Erecting Tower	Construction of LILO of 132 RTS-Niwari Line at 132 Kv Sub-Station Niwari
1.5	**Any other details regading overhead line**	
(a)	Situation of crossing	Between Loc.No. AP/8 to AP/9
(b)	Distance of proposed structure from center of the Road	From AP/8 = 82 Mtr. From AP/9 = 102 Mtr.
(c)	Span at the crossing	Crossing Span = 184 Mtr.
(d)	Angle of crossing	85°00'00"
(e)	Structure used to cross the existing NH its devation Anlge	AP/8 (E-60+10) = 31°52"34" RT AP/9 (E-60+10) = 15°08"56" LT
2	**Details regarding road aligment**	
2.1	Name of Road	NH-39 Jhansi-Khajuraho Road (Under Construction)
2.2	Category of Road	NH-39
2.3	Width of the Road	60 Mtr.
2.4	Black topped carriage way width	Under Construction
2.5	Road bounday from center of Road	One Side = 30 Mtr. Other Side = 30 Mtr.
2.6	All these detail are to be shown on the Drawing	Yes
2.7	location of LILO of 132 RTS-Niwari Line at 132 Kv Sub-Station Niwari	Between Loc.No. AP/8 to AP/ 9 (B/w Milestone)
3	Details to be supplied on layout drawing (6copies)	Deawing in 6 copies attached
4	Ground clearence under maximum sag condition between lowest conductore of proposed line and existing National Highway	17.2 Mtr. Against the Stipulation 10.85 Mtr. (From top of Bottam Surface of NH)
5	Conductor used to cross the National Highway with complete Technical details of conductor	1) Name : ACSR Panther 2) Diameter : 21.00mm 3) Cross- sectional area : 251.5mm 4) Weight of conductor : 974kg/km 5) Modulas of Elasticity : 815Skg/mm^2 6) Ultimate Tensile strength : 89.67kn 7) Co-efficient of linear expension : $17.80x10^{-6}$/°C
6	**Certification**	
6.1	This is to certify that no. Govt. Road shall be occupied by Bhopal dhule Transmission Company Ltd. Except for the purpose of Electric line across or along the road.	Confirmed
6.2	This is to certify that the work shall be done in accordance with Govt. Rules and regulations.	Confirmed
6.3	This is to certify that all required cost and fees as per Rules and regulation of the Govt. will be deposited timely	Confirmed

Executive Engineer
(EHT-C)
MPPTCL, Sagar (M.P.)

Annexure –B(b)

Information to be furnished alongwith the proposal for construction of LILO of 132 Kv RTS-Niwari line at 132 Kv Sub-Station Niwari Across the National Highway-39 between Km 23.99 to 27.84 & Between Location No. AP/8 to AP/9

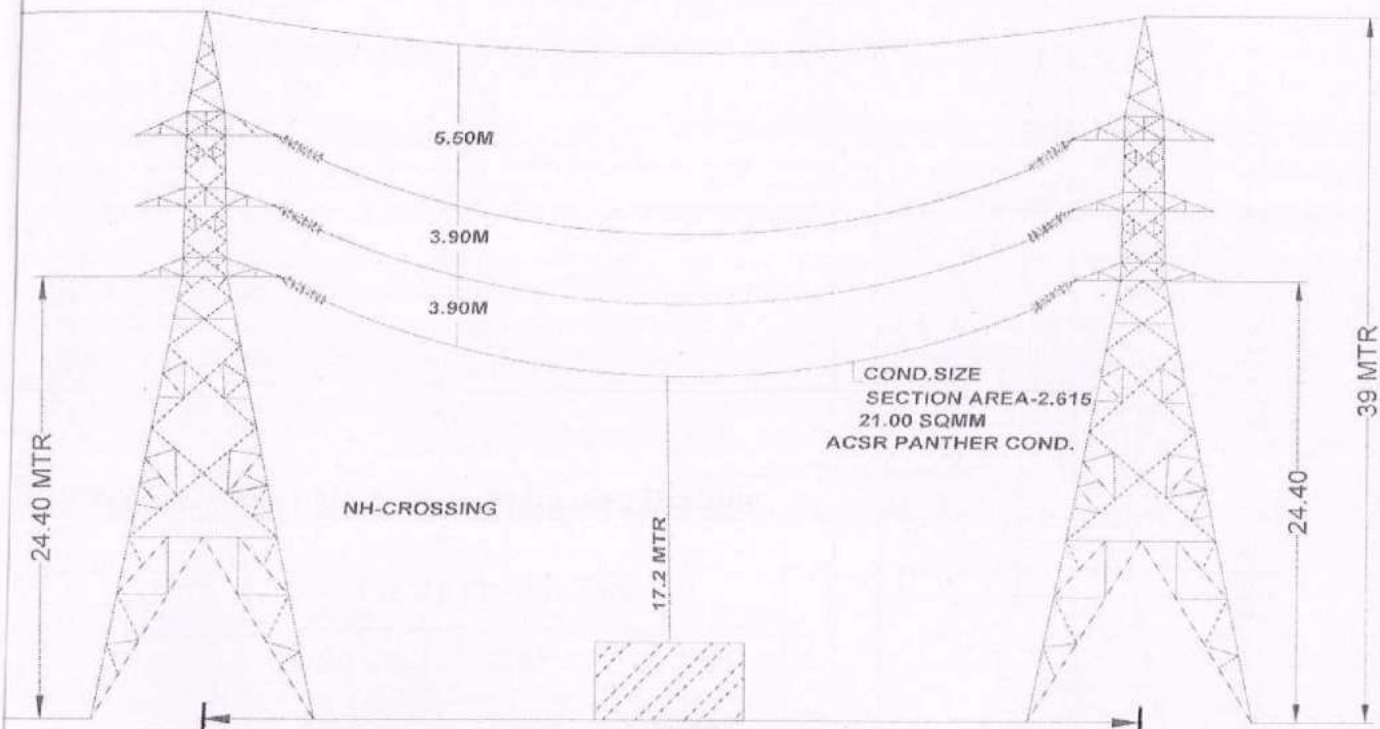
Sr. No.	Particulars	Description
1	Exact location of crossing with chain age of national highway and Right of way of NHAI at crossing point	National Highway 39 between Km 23.990 to 27.840 & Between Location No. AP/8 to AP/9 at Span 184 Meter
2	Methodology of crossing in NH.	Stringing of Overhead conductor by T & E
3	Crossing details : plan & cross section	Attached
4	Route index plan along the showing following	
	(a) Existing ROW of NHAI/NH land	Attached
5	Undertaking that you shall take care of existing services lines that have been laid previously	Yes Attached

Executive Engineer
EHT-C Divn. MPPTCL Sagar

Executive Engineer
(EHT-C)
MPPTCL, Sagar (M.P.)

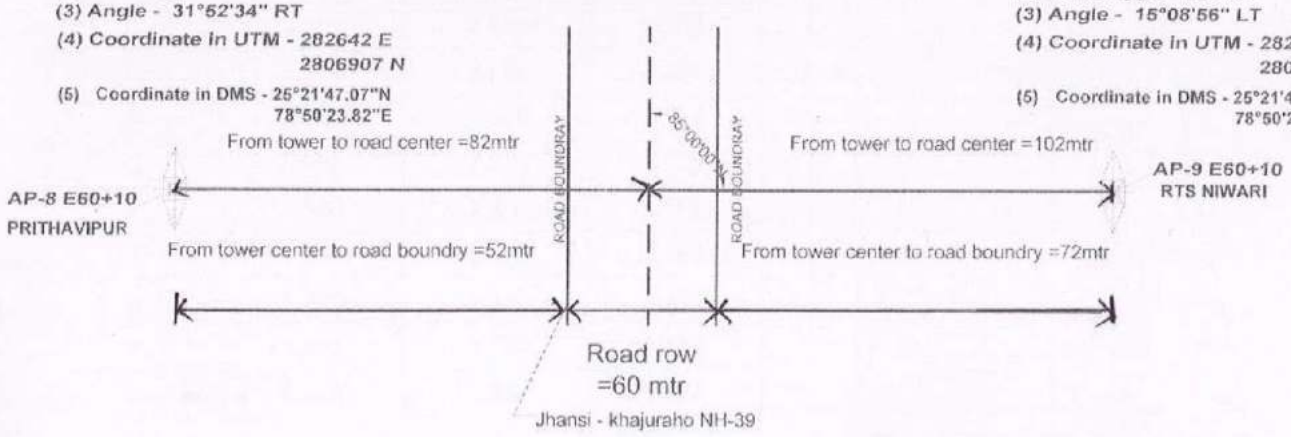
Work:- Lilo of 132kv RTS- Niwari Line at 132kv S/S Niwari

Name of Road:- Jhansi - Khajraho (under Construction) NH-39



(1) Loc No.- AP-8
(2) Tower type - E60+10
(3) Angle - 31°52'34" RT
(4) Coordinate in UTM - 282642 E
2806907 N
(5) Coordinate in DMS - 25°21'47.07"N
78°50'23.82"E

(1) Loc No.- AP-9
(2) Tower type - E60+10
(3) Angle - 15°08'56" LT
(4) Coordinate in UTM - 282588 E
2806731 N
(5) Coordinate in DMS - 25°21'41.32"N
78°50'21.99"E



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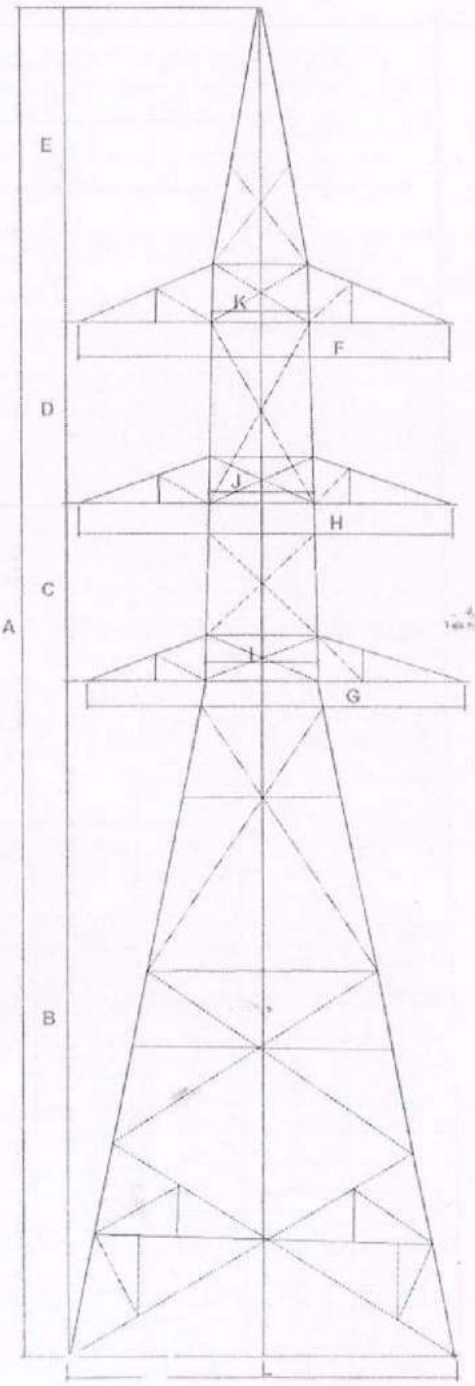
132 KV TOWER TYPE -E



Transmission Line Towers Optimised Designe

REF.	132 KV Double Circuit		
	E0	E30	E60
A	28.882	28.631	29.394
B	16.089	14.667	14.705
C	4.041	3.902	3.900
D	3.981	3.902	3.900
E	4.771	6.158	6.800
F	7.310	7.230	8.055
G	7.510	7.230	8.055
H	7.990	7.490	8.112
I	1.670	2.070	2.460
J	1.470	1.910	2.229
K	1.261	1.752	2.143
L	6.245	7.687	8.487

Executive Engineer
EHT Const. (MPPTCL)

Executive Engineer
(EHT-C)
MPPTCL, Sagar (M.P.)

	Arcon Powertrans Pvt Ltd	CONTRACT NO.
	TOWER SPOTTING DATA FOR 132 KV D/C TRANSMISSION LINE PROJECTS CONDUCTOR - ACSR Panther	C0945

No.			REV.	PREP. BY	CHKD BY	DATE	DRAWING NO.
	PROJECT	132 KV D/C Transmission Lines	0	VINITA	MKK	5-Feb-14	C0945/TS/132/Dcal-01
	CLIENT	Madhya Pradesh Power Trans. Co. Op. Ltd, Jabalpur	1				
			2				

TOWER SPOTTING DATA

Basic Wind Speed (in M/Sec)	47
Reliability Level (50 yr return period)	1
Terrain Category	2
Design wind Pressure Pd (in N/m^2)	701
Design Code Referance	IS 802(all part/sections) - 1995
Type of Conductor	ACSR Panther (30/3.00al + 7/3.00st)
Type of Ground wire	GSSW-GW8

Sl No	Description		Tower E0		Tower E30		Tower E60	
1	Maximum Angle of Deviation		0° ~ 2°		0° ~ 30°		0° ~ 60° & Dead End	
2	Normal Span (m)		350		350		350	
			Max Downward	Min Downward	Max Downward	Min Upward	Max Downward	Min Upward
3	Vertical load Limitation on weight span for both (GW & Conductor)							
	I	On both Span (m)	525	0	525	0	525	-150
	II	On one span (m)	315	0	315	0	315	-150
			Dev Angle	Span (m)	Dev Angle	Span (m)	Dev Angle	Span (m)
4	Permissible sum of Adjacent spans (in m) subject to availability of Minimum specified live metal clearance Permissible one span for various deviation angle shall not exceed 50% the value shown for sum of adjacent span		2 & below	700	30	700	60	700
					29	752	59	747
					28	804	58	794
					27	857	57	841
					26	909	56	888
					25	962	55	936
					24	1014	54	984
					23	1067	53	1032
					22	1120	52	1080
					21	1173	51	1128
					20	1226	50	1176
					19	1279	49	1225
					18	1332	48	1276
					17&below	1385	47	1325
							46&below	1374

Executive Engineer
(EHT-C)
MPPTCL, Sagar (M.P.)

Arcon Powertrans Pvt Ltd						CONTRACT NO.
TOWER SPOTTING DATA FOR 132 KV D/C TRANSMISSION LINE PROJECTS CONDUCTOR - ACSR Panther						C0945
No.	PROJECT	132 KV D/C Transmission Lines	REV.	PREP. BY	CHKD BY	DATE	DRAWING NO.
			0	VINITA	MKK	5-Feb-14	
	CLIENT	Madhya Pradesh Power Trans.	1				C0945/TS/132/Dcal-01
		Co. Op. Ltd, Jabalpur	2				

General Details

1) All spans are in meter

2) All loads are in kgs

3)

	Tower E30		Tower E60		Tower E60	
Normal Span	350		350		350	
Wind Span	NC	BWC	NC	BWC	NC	BWC
	350	210	350	210	350	210

4) Tower are classified as given below as per specification:

Type of tower	Deviation angle (in degree)	Typical use
Tower E0	0 - 2	To be used as suspension tower with Single/Double suspension Insulator strings.
Tower E30	0 - 30	To be used as angle tower with Single/Double tension Insulator strings.
Tower E60	0 - 60	To be used as angle tower and also as dead end tower, with Single/Double tension Insulator strings.

Executive Engineer
(EHT-C)
MPPTCL, Sagar (M.P.)

ACSR Panther Conductor Technical Specification

Madhya Pradesh Power Transmission Compant Limited

Name of Line :- LILO of 132 Kv RTS-Niwari Line at 132 Kv Sub-Station Niwari under M.P. Power Transmission Company Limited Sagar

Basic Span			
Sr.No.	**Particulars**	**Description**	
1	Characteristic of Wire	Conductor	Ground Wire
2	Name	ACSR Panther	Earth wire
3	Strands in Aluminum in No.	30/3 mm.	-
4	Strands in Steel in No.	-	7/3 mm.
5	Diameter in mm.	21.00 mm.	1.23 mm.
6	Area in mm^2	261.5 mm^2	0.6166 mm^2
7	Unit Weight in Kg/Km	974 Kg/Km	0.49 Kg/km
8	Ultimate Tensile Strength in kn	89.67 Kn	6526 Kn
9	Modulus of Elastacity in Kg/mm^2	8155 Kg/mm^2	1386800 Kg/mm^2
10	Coefficient of Linear Expansionper in °C	17.80 x 10^{-6}/°C	14 x 10^{-6} /°C
11	Full Wind Pressure in Kg/m^2	133.6 kg/m^2	169.4
12	Exposure Facror	1	1

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ACSR Panther Conductor Sag

Sr.No.	Temprature	Wind Factor	ICE Thickness (Cm.)	Wind Pressure	Tension	Sag in Meter	Factor of Seafty Available	Factor of Seafty Recorded
1	0	0	0	0	3915	11.14	4.01	
2	0	0.36	0	48	4745	-	3.31	1.43
3	32	1	0	138	7164	-	2.19	1.43
4	32	0.75	0	100	5963	-	2.63	
5	32	0	0	0	3455	12.63	4.55	4.55
6	85	0	0	0	2934	14.67	5.35	

Executive Engineer
EHT-C Dn. MPPTCL Sagar

Executive Engineer
(EHT-C)
MPPTCL, Sagar (M.P.)

Conductor OPGW Sag

Sr.No.	Temprature	Wind Factor	ICE Thickness (Cm.)	Wind Pressure	Tension	Sag in Meter	Factor of Seafty Available	Factor of Seafty Recorded
1	0	0	0	0	1320	7.42	4.94	
2	0	0.36	0	61	1921	-	3.40	1.43
3	32	1	0	169	3184	-	2.05	1.43
4	32	0.75	0	127	2652	-	2.46	
5	32	0	0	0	1148	8.36	5.69	5.00
6	53	0	0	0	1058	8.90	6.17	

Executive Engineer
EHT-C Dn. MPPTCL Sagar

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