



# भारतीय राष्ट्रीय राजमार्ग प्राधिकरण

(सड़क परिवहन और राजमार्ग मंत्रालय, भारत सरकार)

## National Highways Authority of India

(Ministry of Road Transport and Highways, Government of India)

श्रेणीय कार्यालय : 41-29-45A, सर्वे नं: 373/2A, कोदंडरामालयम्, चलासानी नगर,

रानीगारीतोटा, कृष्णालंका, विजयावाडा - 520 013, आन्ध्र प्रदेश

Regional Office : D.No. 41-29-45A, RS.No. : 373/2A, Kodandaramalayam, Chalasani Nagar,

Ranigari Thota, Krishna Lanka, Vijayawada - 520 013, Andhra Pradesh.

फोन / Tel : 0866-2483910, ई-मेल/e-mail: rovijayawada@nhai.org, nhairovja@gmail.com

वेब/ web: www.nhai.gov.in



Ref: NHAI/RO-VJA/11045/APTRANSCO/2022-23/1870

June 09, 2022.

To

The Sr. Technical Director,  
NIC, Transport Bhawan,  
New Delhi- 110001.

**Sub: RO - Vijayawada - Permission for crossing of Overhead electrical 400 KV Twin Moose DC line from existing 400/200KV Vemagiri substation to 400/200KV Kamavarapukota Substation (Zone-5) on Turn Key basis by APTRANSCO across NH-16 at flyover No.48 (Km 37.850) near Dubacherla Village, Nallajral Mandal (60m) for a total length of 60m in West Godavari District in the State of Andhra Pradesh - Public comments - Reg.**

Sir,

Please find enclosed herewith a proposal submitted APTRANSCO for according Permission for crossing of Overhead electrical 400 KV Twin Moose DC line from existing 400/200KV Vemagiri substation to 400/200KV Kamavarapukota Substation (Zone-5) on Turn Key basis by APTRANSCO across NH-16 at flyover No.48 (Km 37.850) near Dubacherla Village, Nallajral Mandal (60m) for a total length of 60m in West Godavari District in the State of Andhra Pradesh.

2. As per MORTH guidelines vide letter No.RW/NH-33044/29/2015/S&R® dated 22<sup>nd</sup> November 2016, the application along with the recommendations of PD, PIU- Rajamahendravaram are enclosed herewith, requesting to host the same in the Ministry's website for 30 days seeking claims and objections (on grounds of public inconvenience, safety and general public interest), for taking further necessary action.

This is issued with the approval of Competent Authority.

Encl: As above

Yours faithfully,

(R. K. Singh),

Regional Officer,

RO - Vijayawada

**Copy to:**

- (i) PD, PIU - Rajamahendravaram - for information.
- (ii) The Executive Engineer, 400 KV Construction Division, 2<sup>nd</sup> Floor Zonal Office Building, Vijayawada, cell No.9440811030 - for information.



# भारतीय राष्ट्रीय राजमार्ग प्राधिकरण

(सड़क परिवहन और राजमार्ग मंत्रालय, भारत सरकार)

## National Highways Authority of India

(Ministry of Road Transport and Highways, Government of India)

श्रेणीय कार्यालय : 41-29-45A, सर्वे नं: 373/2A, कोदंडरामालयम्, चलासानी नगर,

रानीगारीतोटा, कृष्णलंका, विजयावाडा - 520 013, आन्ध्र प्रदेश

Regional Office : D.No. 41-29-45A, RS.No. : 373/2A, Kodandaramalayam, Chalasani Nagar,

Ranigari Thota, Krishna Lanka, Vijayawada - 520 013, Andhra Pradesh.

फोन / Tel : 0866-2483910, ई-मेल/e-mail: rovijayawada@nhai.org, nhairovja@gmail.com

वेब/ web: www.nhai.gov.in



Ref: NHAI/RO-VJA/11045/APTRANSCO/2022-23/ 1869

June 09, 2022.

### INVITATION OF PUBLIC COMMENTS

**Sub: RO - Vijayawada - Permission for crossing of Overhead electrical 400 KV Twin Moose DC line from existing 400/200KV Vemagiri substation to 400/200KV Kamavarapukota Substation (Zone-5) on Turn Key basis by APTRANSCO across NH-16 at flyover No.48 (Km 37.850) near Dubacherla Village, Nallajral Mandal (60m) for a total length of 60m in West Godavari District in the State of Andhra Pradesh - Public comments - Reg.**

The Project Director, PIU - Rajamahendravaram submitted a proposal of APTRANSCO for according Permission for crossing of Overhead electrical 400 KV Twin Moose DC line from existing 400/200KV Vemagiri substation to 400/200KV Kamavarapukota Substation (Zone-5) on Turn Key basis by APTRANSCO across NH-16 at flyover No.48 (Km 37.850) near Dubacherla Village, Nallajral Mandal (60m) for a total length of 60m in West Godavari District in the State of Andhra Pradesh.

As per MORTH guidelines vide letter No. RW/NH-33044/29/2015/S&R® dated 22<sup>nd</sup> November 2016, the Highway Administration will put out the application in the Ministry's website for 30 days seeking claims and objections (on grounds of public inconvenience, safety and general public interest).

In view of the above, the comments of public, if any, on the above mentioned proposal is invited on below mentioned address.

**Regional Officer - Vijayawada,**  
**National Highways Authority of India,**  
Regional Office, Dr. No.41-29-45A, R. S. No.373/2A  
Near Kodandaramalayam, Chalasani Nagar,  
Ranigarithota, Krishnalanka, Vijayawada - 520 013.  
Email: [rovijayawada@nhai.org](mailto:rovijayawada@nhai.org)

(R. K. Singh),  
Regional Officer,  
RO - Vijayawada.



सत्यमेव जयते  
భారత ప్రభుత్వం

भारतीय राष्ट्रीय राजमार्ग प्राधिकरण  
(सड़क परिवहन और राजमार्ग मंत्रालय, भारत सरकार)  
**National Highways Authority of India**  
(Ministry of Road Transport & Highways, Govt. of India)

परियोजना कार्यान्वयन इकाई - टोयोटा फोरम के बाजू, राजमार्ग 216 ए,  
दिवान चेरुवु, राजमहेंद्रवरम - 533 102. ऑ.प्र.  
PROJECT IMPLEMENTATION UNIT - Adjacent to Toyota Showroom,  
NH-216A, Diwancheruvu, Rajamahendravaram - 533102, A.P.

दूर भाष / Phone : 0883 - 2431170 ई-मेल : raj@nhai.org / piurajahmundry@gmail.com



భారత జాతీయ రహదారుల  
ప్రాధికార సంస్థ  
రాజమహేంద్రవరము

Ref No: NHAI/PIU-RJY/UTS/GDK/2022/ 28219

Date: 17.05.2022

To  
The Regional Officer,  
National Highways Authority of India  
Vijayawada - 520 013



Sub: NHAI, PIU, Rajamahendravaram – Four laning of Gundugolanu-Devarapalli-Kovvuru section of NH - 16 (old SH-107) from Design Ch. Km 15.320 to Design Ch.85.204 in the State of Andhra Pradesh under Bharatmala Pariyojana on Hybrid Annuity Mode – **Proposal of APTRANSCO for Erection of 400KV Vemagiri – Kamavarapukota TMDC line across the project stretch - Approval – Requested - Reg.**

- Ref:
1. Executive Engineer, 400 KV Const Division, APTRANSCO, Vijayawada letter no. EE/400 k V Const/VJA/F. Venm-K. Kota /D. NO. 181/2022, dated 04.04.2022
  2. This office letter no. NHAI/PIU-RJY/UTS/2021/28091, dated 04.04.2022
  3. Executive Engineer, 400 KV Const Division, APTRANSCO, Vijayawada letter no. EE/400 k V Const/VJA/F. Venm-K. Kota /D. NO. 217/2022, dated 28.04.2022
  4. This office email dated 29.04.2022
  5. IE, M/s. MSV - ARMENGE letter no. MSVARMENGE/IE GDK/2022/1009, dated 05.05.2022
  6. Concessionaire, GRGDHPL, letter no. GRGDHPL/2021GU-DP/1830, dated 13.05.2022

Sir,

1. It is to submit that vide reference 1<sup>st</sup> cited the Executive Engineer, 400 KV Const Division, APTRANSCO, Vijayawada, has requested this office to accord approval for stringing of HT tower lines between flyover no. 45 Lakshmi nagar to fly over no. 49 Dubacharla for the project stretch of 4-laning of Gundugolanu-Devarapalli-Kovvuru section of NH - 16 (old SH-107) from Design Ch. Km 15.320 to Design Ch.85.204 in the State of Andhra Pradesh under Bharatmala Pariyojana on Hybrid Annuity Mode.

2. Vide reference 2<sup>nd</sup> cited, this office has requested the Executive Engineer, 400 KV Const Division, APTRANSCO, Vijayawada to furnish the proposals for crossing NH as per MORT&H guidelines dated 22.11.2016 for obtaining the approval of the Competent Authority of NHAI in this regard.

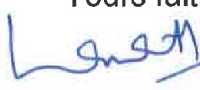
3. Accordingly, Executive Engineer, 400 KV Const Division, APTRANSCO, Vijayawada vide reference 3<sup>rd</sup> cited, has submitted the proposals as per MORT&H guidelines with the following undertakings and requested to accord approval for crossing of NH.

a) Undertaking for compliance to safety norms during execution of stringing work.

- b) Undertaking to compensate or pay for the damages during execution of the work.
  - c) Undertaking to relocate the tower at own cost during the 6-laning or further development works of the project stretch.
  - d) Indemnity against all damages and claim.
  - e) Draft license deed for laying of overhead of electric power line across NH land.
  - f) Methodology of laying of overhead electric power line.
  - g) Check list for getting approval for laying of overhead electric power line across NH land.
4. Vide reference 4<sup>th</sup> cited, this office has requested the Independent Engineer & Concessionaire of the project stretch to inspect the site and furnish necessary report to this office.
5. Vide reference 5<sup>th</sup> cited, the Independent Engineer, M/s. MSV-ARMENGE for the project stretch has informed this office that they have inspected the site along with Concessionaire and submitted that the tower line crossing the Main Carriageway Service Roads at Ch. 37+785. The LHS tower has been erected 77 m beyond the RoW and RHS tower has been erected 50.5 m beyond RoW and informed that the permission may be accorded.
6. The Concessionaire, M/s. GDGDHPL vide reference 6<sup>th</sup> cited has furnished their consent for according permission to APTANSCO for the subject work.
7. In this regard, it is to submit the proposal submitted by the Executive Engineer, 400 KV Const Division, APTRANSCO, Vijayawada was examined as per MORT&H guidelines dated 22.11.2016 and the following is submitted:
- The tower line is crossing the Main Carriageway and Service Roads at Ch. 37+785.
  - The LHS tower has been erected at a distance of 77 mts beyond the RoW of NH boundary.
  - The RHS tower has been erected at 50.5 mts beyond the RoW of NH boundary.
  - APTRANSCO proposed to erect the towers on both sides of NH in the private lands and proposed strings will have 23.0 mts clearance from the existing FRL at the crossing location.
8. Under the circumstance stated above, it is recommended that necessary approval may please be accorded to APTRANSCO for erection of HT tower line across the project highway at Km. 37+875 to 6 Gudugolanu – Deverapalli - Kovvur section of NH-16 in the state of Andhra Pradesh.
9. Submitted for orders.

Thanking You

Encl : As above

Yours faithfully,  
  
17/05/2022  
(D. Surendra Nath)  
Project Director





**G R GUNDUGOLANU DEVARAPALLI  
HIGHWAY PRIVATE LIMITED**

Ref. No. GRGDHPL/2021/GU-DP/1830

Date: 13.05.2022

To  
The Project Director  
National Highways Authority of India,  
Sy No. 560/3, Adjacent to Toyota Showroom,  
NH-216A, Diwancheruvu,  
Rajahmundry-533102  
Telefax: 0883-2431170  
Email: [piurjy@nhai.org](mailto:piurjy@nhai.org)

Kind Attention: Shri. D. Surendra Nath,

Sub: Four laning of Gundugolanu-Devarapalli-Kovvuru section of NH - 16 (old SH-107) from Design Ch. Km 15.320 (Existing Km 15.700) to Design Ch. 85.204 (Existing Km 81.400) in the State of Andhra Pradesh under Bharatmala Pariyojana on Hybrid Annuity Mode - Grant of permission to APTRANSCO for shifting of 400KV line at Ch 37+785- Reg.

Ref: Authority Email No. NHAI-PIU-RJY-66423 dated 29.04.2022.

Dear Sir,

With reference to the subject matter and letter cited above, Concessionaire inspected the site along with independent engineer at Ch 37+785 for tower line crossing the Main Carriage Way and Service road, where the LHS tower has been erected 77 m beyond Row and RHS tower has been erected 50.5m beyond ROW. Hence may Accord Permission for above subject.

Thanking you and assuring you of best attention all the time.

For GR Gundugolanu Devarapalli Highway Pvt. Ltd.

Authorised Signatory

CC: Authorized Signatory, MSV International INC in association with ARMENGE Engineering and Management Consultancy Pvt Ltd.

<b>INWARD</b>			
No. 65456			
Date: 14/05/2022			
Time:			
M(T)		AM(F)	
PS-P		PS-V	✓
SE-I		SE-II	
HOU		LAO	Page 1 of 1
NHAI, PIU, RAJAMAHENDRAVARAM			

20  
14/5/22

**Registered Office :**

G R House, Hiran Magri, Sector-11, Udaipur-313 002 (Raj.)

Ph.: +91-294-2487370, 2483033, Fax : +91-294-2487749

CIN : U45206RJ2018PTC060749



ISO 9001: 2015  
Certified Company

# MSV INTERNATIONAL INC.

In Association with

**ARMENGE ENGINEERING AND  
MANAGEMENT CONSULTANTS PVT. LTD.**

**MSV International, Inc.**

Door No: 79-14-8  
Prashanthi Estate, Tilak Road  
Rajamahendravaram - 533103  
East Godavari (Dt), Andhra Pradesh  
CIN: F04214  
Email: [msv.gundugolanu@gmail.com](mailto:msv.gundugolanu@gmail.com)  
[msvarmengegdk@gmail.com](mailto:msvarmengegdk@gmail.com)  
Mob: +91 8118876958

IE FOR FOUR LANEING OF GUNDUGOLANU-DEVARAPALLI-KOVVURU SECTION OF NH-16, BHARATMALA RAYOJANA IN ANDHRA PRADESH

**MSVARMENGE/IEGDK/2022/1009**

**May 5, 2022**

To,  
**The Project Director**  
National Highways Authority of India  
Project Implementation Unit  
Door No.78-14-21, Shyamala Nagar  
Rajamahendravaram – 533103, Andhra Pradesh  
Email: [piurajahmundry@gmail.com](mailto:piurajahmundry@gmail.com)  
Tel: +91 0883-2431170

INWARD			
No.	86580		
Date:	06/05/2022		
Time:			
M(T)		AM(F)	
PS-P		PS-V	<input checked="" type="checkbox"/>
SE-I		SE-II	
HOU		LAO	
NHAI, PIU, RAJAMAHENDRAVARAM.			

pl. put up  
80  
6/5/22

**Sub:** Consultancy Services for Independent Engineer Services for Supervision of four laning of Gundugolanu – Devarapalli-Kovvuru section of NH-16 (old SH 107) from Km 15.320 (Existing Km 15.700) to Km 85.204 (Existing Km 81.400) (Design Length=69.884 Km) in the state of Andhra Pradesh – **Grant of Permission to APTRANSCO for shifting of 400KV line at Ch.37+785**  
**D - Regarding**

**Ref 1:** - Authority Email No. NHAI-PIU-RJY-66423 dated 29.04.2022.

Dear Sir,

In continuation to the above cited subject, we inspected the site along with concessionaire and the tower line crossing the Main Carriage Way and Service Roads at Ch.37+785. The LHS tower has been erected 77m beyond our RoW and RHS tower has been erected 50.5m from our RHS RoW.

Hence the permission may be accorded.

Thanking you and looking forward to render our best of services all the times

**For MSV International Inc in association with ARMENGE Engineering and Management Consultants Pvt Ltd**

  
05/05/22

**Y Radha Krishna Rao**

**(Resident Engineer cum Acting Team Leader)**

**Copy To:** M/s GR Gundugolanu Devarapalli Highway Private Limited for information.

**NHAI - PIU - RJY - 66423 - EE - APTRANSCO - VJA - 400KV TWIN MOSE DC LINE FROM VEMAGIRI TO KAMAVARAPUKOTA ON TURNKEY BASIS - CROSSING AT FLYOVER AT DUBACHARLA - REPORT - REG**

PIU - RAJAMAHENDRAVARAM NHAI <piurajahmundry@gmail.com>  
To: msvarmenge.gdk <msvarmenge.gdk@gmail.com>  
Cc: PLANNING GULI <planning.guli@grinfra.com>

Fri, Apr 29, 2022 at 7:06 PM

**MOST URGENT**

Sir,

PLEASE FIND THE ATTACHMENT RECEIVED FROM APTRANSCO, VIJAYAWADA, A SUBMITTED PROPOSAL FOR SHIFTING OF 400KV LINE AT DUBACHARLA VILLAGE, IN THIS REGARD IS REQUESTED INSPECT THE SITE AND FURNISH THE INSPECTION REPORT TO THIS OFFICE BY 1:00 PM ON TOMORROW (I.E., 30-04-2022) WITHOUT FAIL AND TREAT AS MOST URGENT.

Thanking you,

**National Highways Authority of India  
Project Implementation Unit,  
Sy. No. 560/3, Adjacent to Toyota Showroom,  
NH-216A, Diwancheruvu,  
Rajamahendravaram,  
Andhra Pradesh - 533102**

66423 - EE - APTRANSCO - VJA - 400KV TWIN MOSE DC LINE FROM VEMAGIRI TO  
KAMAVARAPUKOTA ON TURNKEY BASIS - CROSSING AT FLYOVER AT DUBACHARLA - REPORT -  
REG.pdf  
2098K

**TRANSMISSION CORPORATION OF ANDHRA PRADESH LIMITED**



From  
The Executive Engineer,  
400kV Const. Division,  
2<sup>nd</sup> Floor Zonal Office building,  
VIJAYAWADA.  
Cell No. 9440 811030.

To  
The Project Director,  
National Highway authority of India,  
Sy no.560/3, Adjacent Toyota Showroom,  
NH-216A, Diwancheruvu,  
Rajahmundry - 533 102, E.G. Dist.  
Email : piurjy@nhai.org

Lr. No.EE/400kV Const./VJA/F.Vem.-K.kota/D. No. 217/ 2022. Dt. 28-04-2022.

Sir,  
Sub:- APTRANSCO - 400KV Const. Division/Vijayawada - Supply, Erection, Testing and commissioning of 400KV Twin Moose DC line from existing 400/220KV Vemagiri Substation to 400/220KV Kamavarapukota Substation (Zone-5) on Turn key basis - NH-16 Gundugolanu to Kovvuru - Crossing at fly over no.48 near Dubacharla (V), Nallajarla(M) for stringing works between tower location No.74A/0 & 74B/0 - Permission requested - Reg.  
Ref:- 1) Lr. No. EMC / 656 / AP Transco / 140 / 2022, Dt. 04-04-2022.  
2) Lr. No. EE/400KV Const./VJA/F.Vem.-K.kota/D. No.181/2022, dt.04-04-2022.  
3) Lr. No. NHAI/PIU-RJY/UTS/2021/28091, Dt.04.04.2022.

\*\*\* \*\*

The APTRANSCO is erecting 400KV Twin Moose DC line from existing 400/220KV Vemagiri Substation to 400/220KV Kamavarapukota Substation. Accordingly, APTRANSCO has made arrangements for overhead crossing at flyover no.48 of NH-16 Gundugolanu to Kovvuru between tower location No.74A/0 & 74B/0.

This office vide ref 2<sup>nd</sup> cited has requested for the Road Blockage on NH-16 Gundugolanu to Kovvuru between Fly over No.45 at Lakshminagar to Fly over no.49 at Dubacharla village, Nallajarla Mandal, West Godavari District. In the Ref 3<sup>rd</sup> cited, the NHAI has informed this office to submit the necessary proposals for crossing NH as per MORT&H guidelines dated 22.11.2016 for obtaining the approval of the Competent Authority of NHAI.

In this connection, the proposals for crossing NH is here with submitted duly following the above mentioned guidelines. The details of the documents enclosed are as follows:

1. Power of Attorney on Non- Judicial stamped Paper of Rs. 100/-
2. Certificate on Non- Judicial stamped Paper of Rs. 100/-
3. Undertaking on Non- Judicial stamped Paper of Rs. 100/-
4. License deed for laying overhead electric power line across NH land on Non- Judicial stamped Paper of Rs. 100/-
5. Crossing details at NH (Plan) & Sketch showing crossing of overhead line.
6. Picture showing NH Crossing ( Google image)
7. Methodology of laying of overhead electric power line.
8. Checklist for getting approval for laying of overhead electric power line across NH land

It is requested to kindly examine the proposal and convey your approval at the earliest so as to enable us to complete the stringing of the crossing section NH-16 Gundugolanu to Kovvuru at fly over No.48, Dubacharla (V), Nallajerla Mandal, West Godavari District between tower location No.74 A/0 to 74 B/0 of the subject line for completing the line works within the stipulated time.

Considering the National Importance of the Project, your early action and kind co-operation is solicited in this regard.

<b>INWARD</b>	
No.	66423
Date:	28/04/2022
Time:	11:30A
M(T)	AM(F)
PS-P	PS-V
SE-I	SE-II
HOU	LAO

Yours Sincerely,

28/04/2022  
Executive Engineer  
400KV Construction,  
APTRANSCO : Vijayawada.

Copy submitted to the Superintending Engineer / 400KV OMC Circle / APTRANSCO / Vijayawada -- for favour of information.

Copy to the Dy. Exccutive Engineer / 400KV Const. / SD-III / Vijayawada.





ఆంధ్ర ప్రదేశ్ ఆంధ్ర ప్రదేశ్ ANDHRA PRADESH

CU 553180

Serial No:5034  
Purchased By :  
M SUDHAKAR  
S/O M SIVAJI  
RAMAVARAPPADU

Denomination: 100

Date:26-04-2022

Stamp S. no CU 553180

For :  
BURIDI VENKATA SRINIVAS  
S/O [LATE] SREERAMULU  
GANNAVARAM

Sub Registrar  
Ex. Office Stamp Vendor  
SRO Gunadala

TRANSMISSION CORPORATION OF ANDHRA PRADESH LIMITED

Date: 27-04-2022.

POWER OF ATTORNEY

Sub:- Permission for laying of Transmission Line "400KV Twin Moose DC line from existing 400/220KV Vemagiri Substation to 400/220KV Kamavarapukota Substation" 100Km (approx.)  
- Crossing NH-16 Gundugolanu to Kovvuru at fly over No.48, Dubacharla Village, Nallajarla Mandal, West Godavari District, Andhra Pradesh. Power of attorney Signatory.

\*\*\*

This is to certify that Sri. B V Srinivas, Executive Engineer, APTRANSCO, 400KV Construction Division, Vijayawada. is authorised to sign and submit applications and other correspondences on behalf of Transmission corporation of Andhra Pradesh limited to National High ways authority of India for obtaining clearances / Crossing permission in connection with the laying of overhead electric power

transmission line viz., "400KV Twln Moose DC line from existing 400/220KV Vemagiri Substation to 400/220KV Kamavarapukota Substation -100Kms (approx.). Transmission Line across National Highway No-16 Gundugolanu to Kovvuru at fly over No.48, Dubacharla Village, Nallajarla Mandal, West Godavari District, Andhra Pradesh.

Specimen Signature



B V SRINIVAS,  
Emp ID No.1026111,  
Executive Engineer,  
400KV Construction Division,  
APTRANSCO : Vijayawada.

For TRANSMISSION CORPORATION OF AP Ltd.



Superintending Engineer,  
400KV OMC Circle / Vijayawada.



ఆంధ్ర ప్రదేశ్ ఆంధ్ర ప్రదేశ్ ANDHRA PRADESH

CU 553177

Serial No: 503  
Purchased By :  
M SUDHAKAR  
S/O M SIVAJI  
RAMAVARAPPADU

Denomination: 100

Date: 26-04-2022

For:  
BURIDI VENKATA SRINIVAS  
S/O [LATE] SREERAMULU  
GANNAVARAM

Stamp S. no CU 553177  
Ch.  
Sub Registrar  
Ex. Office Stamp Vendor  
SRO Gunadala

## CERTIFICATE

**Name of the work:-** Proposal to lay overhead Electric Power Transmission line, Viz., "400KV Twin Moose DC line from existing 400/220KV Vemagiri Substation to 400/220KV Kamavarapukota Substation". Transmission Line Crossing NH-16 Gundugolanu to Kovvuru at fly over No.48, Dubacharla Village, Nallajarla Mandal, West Godavari District, Andhra Pradesh.

Undersigned, B.V. Srinivas, Executive Engineer, on behalf of Transmission Corporation Of Andhra Pradesh Limited, certify that

1. Laying of overhead Electric power transmission line will not have any deleterious effects on any of the bridge components and roadway safety for traffic.

Page 1 of 2

  
Executive Engineer  
400KV Construction Division  
APTRANSCO-VIJAYAWADA

2. For six-laning " We do undertake that we will relocate service road / approach road / utilities at our own cost notwithstanding the permission granted within such time as will be stipulated by NHA" for future six-laning or any other development.
3. This proposal implemented now will not affect any likely future improvement to geometrics.
4. We undertake that permission does not lead to the adverse impact on the safety and stability of the Highway structure.

  
Executive Engineer  
400KV Construction Division  
APTRANSCO:VIJAYAWADA





ఆంధ్రప్రదేశ్ ఆంధ్ర ప్రదేశ్ ANDHRA PRADESH

CU 555086

Serial No: 5244

Denomination: 100

Date: 28-04-2022

Stamp S. no CU 555086

Purchased By :  
BURIDI VENKATA  
SRINIVASARAO  
S/O SREERAMULU  
GANNAVARAM

For :  
\*\*SELF\*\*

Sub Registrar  
Ex. Office Stamp Vendor  
SRO Gunadala

## UNDERTAKING

**Name of the work:-** Proposal to lay overhead Electric Power Transmission line, Viz., "400KV Twin Moose DC line from existing 400/220KV Vemagiri Substation to 400/220KV Kamavarapukota Substation". Transmission Line Crossing NH-16 Gundugolanu to Kovvuru at fly over No.48, Dubacharla Village, Nallajarla Mandal, West Godavari District, Andhra Pradesh.

Undersigned, B.V. Srinivas, Executive Engineer, on behalf of Transmission Corporation Of Andhra Pradesh Limited, undertake that

1. Not to damage other utility; If damaged then to pay losses either to NHAI or to the concerned agency.

  
Executive Engineer  
400KV Construction Division  
APTRANSCO : VJAYAWADA

2. The work will be carried out, conforming to all standard conditions of NHAI's guidelines.
3. Shifting of overhead power transmission line as and when required by NHAI at the cost of the Transmission Corporation Of Andhra Pradesh Limited.
4. For six-laning / widening, we do undertake that we will relocate the overhead power transmission line at our own cost notwithstanding the permission granted within such time as will be stipulated by NHAI for future six-laning or any other development.
5. Indemnity against all damages and claim.
6. Traffic movement during laying of overhead power transmission line to be managed by Transmission Corporation Of Andhra Pradesh Limited.
7. If any claim is raised by the Concessionaire then the same has to be paid by Transmission Corporation Of Andhra Pradesh Limited.
8. Prior approval of the NHAI shall be obtained before undertaking any work of installation, Shifting, repair or alterations to the shown overhead electric power transmission line in the National Highway right-of-ways.
9. Expenditure, if any, incurred by NHAI for repairing any damage caused to the National Highway by the laying, maintenance or shifting of the overhead power transmission line will be borne by the agency owning the line.



**Executive Engineer**  
**400KV Construction Division**  
**APTRANSCO:VIJAYAWADA**



ఆంధ్ర ప్రదేశ్ ఆంధ్ర ప్రదేశ్ ANDHRA PRADESH

CU 553179

Serial No:5033  
Purchased By :  
M SUDHAKAR  
S/O M SIVAJI  
RAMAVARAPPADU

Denomination: 100

Date:26-04-2022

For :  
BURIDI VENKATA SRINIVAS  
S/O [LATE] SREERAMULU  
GANNAVARAM

Stamp S. no CU 553179  
Sub Registrar  
Ex. Office Stamp Vendor  
SRO Gunadala

**LICENSE DEED FOR LAYING OVERHEAD ELECTRIC POWER TRANSMISSION LINE  
ACROSS NATIONAL HIGHWAY LAND**

Agreement to lay overhead Electric Power Transmission line across National Highway No-16 Gundugolanu to Kovvuru at fly over No.48, Dubacharla village, Nallajarla Mandal, West Godavari District, Andhra Pradesh .

1. An agreement made on this day of 26<sup>th</sup> April, 2022 between the President of India/ National Highway Authority of India ( herein after called the Government which expression shall unless excluded by or repugnant to the context include his successor in office and assigns ) of the one part and Transmission Corporation Of Andhra Pradesh Limited, Executive Engineer, 400KV Construction Division, APTRANSCO, 2<sup>nd</sup> Floor Zonal Office building, Gunadala, VIJAYAWADA, Andhra Pradesh-520 004 ( herein after called in 'Licensee' which expression shall, unless excluded by or repugnant to the context, include his heirs its successors / their successors and assigns ) of the other part.

2. WHEREAS the Licensee has / Licensees have applied to the Government / NHAI for permissions to lay overhead electric power transmission line Viz., "400KV Twin Moose DC line from existing 400/220KV Vemagiri Substation to 400/220KV Kamavarapukota Substation". Transmission Line Crossing NH-16 Gundugolanu to Kovvuru at fly over No.48, Dubacharla Village, Nallajarla Mandal, West Godavari District, Andhra Pradesh.
3. And whereas the Government / NHAI has agreed to grant such permissions on the terms and conditions hereinafter mentioned.
4. Now, this agreement witnesses that in consideration of the conditions hereinafter contained and on the part of the Licensee / Licensees to be observed and performed the Government / NHAI hereby grants to the Licensee / Licensees permission to lay overhead Electric Power Transmission line as per the approved drawing attached here to subject to the following conditions, namely.,
- (i) That the Licensee / Licensees shall within three months from the date hereof, but without interfering with the road traffic complete the laying of Overhead Power Transmission line to the satisfaction of the Divisional Engineer / Project Director incharge of the National Highways in accordance with the drawings and specifications approved by the Project Director.
  - (ii) That the Licensee / Licensees shall be responsible for restoring the road at his / their own cost to its original condition after laying the overhead power transmission line or, after any damage caused due to inadequate maintenance / operation of the overhead transmission line.
  - (iii) That in case of any breakdown of transmission line the licensee / licensees shall bear the entire cost of restoration of damage caused to the road.
  - (iv) That the Licensee / Licensees shall not without the prior permission in writing of the Project Director undertake any work of shifting, repairs or alteration to the said overhead transmission line.
  - (v) That the licensee / Licensees shall at all time permit any duty authorized officer or servant of the Government / NHAI to inspect the said overhead transmission line.
  - (vi) That the Licensee / Licensees shall be liable for any loss or damages caused to the Government / NHAI by drainage obstruction or any other cause due to the said overhead transmission line.
  - (vii) That the Licensee / Licensees within two months of a notice duly given to him to this behalf by the NHAI / Government shall at his / their own cost remove the overhead transmission line and restore the road land to its original condition when required to do so by the Government / NHAI or by any person authorized on its behalf. The Licensee / Licensees shall not be entitled to any compensation on account of such removal or restoration.

  
Executive Engineer  
400KV Construction Division  
APTRANSCO: VIJAYAWADA



- (viii) That if the Licensee fails / Licensees fail to execute any work which he has/they have agreed to execute under this agreement to the entire satisfaction of the Project Director NHAI, the work shall be executed by the Project Director NHAI / Government at the cost of the Licensee / Licensees and the amount shall be recoverable from the Licensee / Licensees as arrears of land revenue without prejudice to any other remedies which may be open to the Government / NHAI in this behalf.
- (ix) That the Licensee / Licensees shall not sell, transfer or otherwise dispose of the premises without obtaining the previous consent of the Government / NHAI in writing.
- (x) That this agreement will remain in force for a period of five years from the date of execution in the first instance and be terminated by a notice of Two months and the permission may not be renewed after the expiry of the said period.
- (xi) That the permission granted by this License shall not in any way to be deemed to convey to the Licensee / Licensees any right to or over any interest in Government land other than what is herein expressly granted.
- (xii) That during the subsistence of this Licensee, that overhead transmission line located on the road shall be deemed to have been constructed and contained only by the consent and permission of Government so that the right of the Licensee / Licensees to the use thereof shall not become absolute and defeasible by lapse of time.
- (xiii) That the Licensee / Licensees shall bear the stamp duty charges on this agreement.
- (xiv) Govt. of India / NHAI will not be responsible for any damage of any kind whatsoever means natural or otherwise to the overhead transmission line.
- 5 The overhead transmission line shall not be brought into use by the Licensee / Licensees unless a completion certificate to the effect that the overhead transmission line have been laid in accordance with the approved specification and drawings has been obtained from the Project Director, NHAI.
6. The Licensee shall abide by the conditions enclosed herewith as annexure – 1.
7. Notwithstanding anything contained in Clause – 4 ( vii) the License may be cancelled at any time by the government / NHAI for a breach of any condition of the license and the license / licensees shall not be entitled to any loss caused to it by such cancellation, nor shall it be absolved from any liability already incurred under this agreement.
8. The permitted Highway on which Licensee has been granted the right to lay overhead electric power transmission line has also been granted as a right of way to the concessionaire under the concession agreement for upgradation of (National Highway No-16 Gundugolanu to Kovvuru at fly over No.48, Dubacharla Village, Nallajarla Mandal, West Godavari District, Andhra Pradesh -- on Build, Operate and Transfer Basis ) and therefore, the Licensee shall honour the same.

This agreement has been executed in duplicate and each party to this agreement has retained one stamped copy each.

Signed by Shri B. V. SRIVIVAS

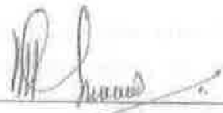
For TRANSMISSION CORPORATION OF AP LTD

  
Executive Engineer  
400KV Construction Division  
APTRANSCO:VIJAYAWADA

Signed by Shri \_\_\_\_\_

Project Director  
National Highways Authority of India  
For and on behalf of President of India

In the presence of

1.   
(P. VISAYA KUMAR)

Name in full (Signature) with designation  
**Deputy Executive Engineer**  
400K V Construction SD -III  
APTRANSCO : VIJAYAWADA

1. \_\_\_\_\_

Name in full (Signature) with Designation

2.   
Satileti Sivakumar

Name in full (Signature) with designation  
**Asst. Executive Engineer**  
400KV Construction/SD-II  
APTRANSCO:VIJAYAWADA

2. \_\_\_\_\_

Name in full (Signature) with Designation

**CONDITIONS TO BE ENCLOSED / INCORPORATED IN THE APPROVAL LETTER FOR  
PERMISSION FOR LAYING OF OVERHEAD ELECTRIC POWER TRANSMISSION LINE.**

1. The overhead electric power transmission line shall be located as close to the extreme edge of the right-of-way as possible but not less than 15 metre from the centre-lines of the nearest carriageway.
2. The overhead electric power transmission line shall not be permitted to run along the National Highway when the road formation is suitable in double cutting Nor shall these be laid over the existing culverts and bridges without the prior approval of NHAI / Government of India.
3. The overhead electric power transmission line shall be so placed that at no time there is interference with the maintenance of the National Highways.
4. These should be so laid that their top is at least 1.5 meter below the ground level so as not to obstruct drainage of the road land.
5. The authority / owner of the overhead electric power transmission utility shall ensure that laying overhead electric power transmission line should not have any deleterious effects on any of the bridge components and roadway safety for traffic.
6. The Lines shall cross the National Highways preferably on a line normal to it or as nearly as practicable.
7. Crossings shall not be too near the existing structures on the National Highway, the minimum distance being 15 meter.
8. The Overhead Power Transmission line is permitted to cross the National Highway either encased in pipes or through structure of conduits specially built for that purpose at the expense of the agency owning the line. Existing drainages structures shall not be allowed to carry the line across.
9. The casing pipe (or conduit pipe in the case of electric cable) carrying the overhead electric power transmission line shall be of steel, cast iron or reinforced cement concrete and have adequate strength and be large enough to permit ready withdrawal of the carrier pipe /cable. Ends of the casing/conduit pipe shall be sealed from the outside, so that it does not act as a drainage path.
10. The casing/conduit pipe should, as minimum extend from drain to drain in cuts and toe of slope toe of slope in the fills.
11. The top of the casing/conduit pipe should be at least 1.2 meter below the structure of the road subject to being at least 0.3 m below the drain inverts.
12. The casing/conduit pipe may be installed under the road embankment either by boring or digging a trench. Installation by boring method shall only be permitted where the existing road pavement is of cement concrete or dense bituminous concrete type.
13. The casing/conduit pipe shall be installed with an even bearing throughout its length and in such a manner as to prevent the formation of a waterway along it.

14. Open a trench method.(May be allowed in utility corridor only where pavement is neither cement concrete nor dense bituminous concrete type)
- (a) The sides of the trench should be done as nearly vertical as possible; The trench width should be at least 30 cm, but not more than 60 cm wider than outer diameter of the pipe.
  - (b) Filling of the trench shall confirm to the specifications contained herein below.
  - (c) Bedding shall be to a depth of not less than 30 cm, It shall consist of granular material, free of lumps, clods and cobbles and graded to yield a firm surface without sudden change in the bearing value. Unsuitable Soil and rock edged should be excavated and replaced by selected material.
  - (d) The backfill shall be completed in two stages (i) side- fill to the level of the top of the pipe and (ii) overfill to the bottom of the road crust.
  - (e) The side fill shall consist of granular material laid in 15 cm layers each consolidated by mechanical tempering and controlled addition of moisture to 95% of the Proctor's Density. Overfill shall be compacted to the same density as the material that had been removed. Consolidation by saturation or ponding will not be permitted.
  - (f) The road crust shall be built to the same strength as the existing crust on either side of the trench or to thickness and specifications stipulated by the Highways Authority. Care shall be taken to avoid the formation of a dip at the trench.
  - (g) The excavation shall be protected by flagman, signs and barricades and red lights during night hours
15. If needed, a diversion shall be constructed at the expense of agency owning the overhead electric power transmission line.
16. Prior approval of NHAI shall be obtained before undertaking any work of installation, shifting or repairs or alterations to the overhead electric power transmission line located in the National Highway right-of-ways.
17. Expenditure, if any, incurred by the Highway Authority for repairing any damage caused to the National Highway by the laying, maintenance or shifting of the overhead electric power transmission line will be borne by the agency owning the overhead electric power transmission line.
18. If the NHAI considers it necessary in future to move the overhead electric power transmission line for any work of improvement of repairs to the road, it will be carried out as desired by the Highway Authority at the cost of the agency owning the overhead electric power transmission line within a reasonable time ( not exceeding 60 days ) of the intimation given.
19. The licensee shall ensure making good the excavated trench for laying overhead electric power transmission line by proper filling and compaction, so as to restore the land in to the same conditions as it was before digging the trench, clearing



debris/loose earth produced due to execution of trenching at least 50 m away from the edge of the right of way.

20. The licensee shall furnish a bank Guarantee to the NHAI @100/- per running meter (parallel to NH) and Rs 1,00,000/- per crossing of NH for a period of one year initially (extendable if required till satisfactory completion of work) as a security for ensuring/making good the excavated trench for laying the overhead electric power transmission line /ducts by proper filling and compaction , clearing debris/loose earth produced due to execution of trenching at least 50m away from the edge of the right of way .No payment shall be payable by the NHAI to the licensee for clearing debris/loose earth.
21. In case of work contemplated herewith is not completed to the satisfaction of the NHAI, which has granted the permission, within a period of 11 months from the date of issue of the bank guarantee, the licensee shall either furnish a fresh guarantee or extend the guarantee for a further period of one year. In case of the licensee failing to discharge the obligation of making good the excavated trench, the NHAI shall have a right to make good the damages caused by excavation, at the cost of the licensee and recover the amount by invoking the bank guarantee furnished by the licensee.
22. The licensee shall shift the overhead electric power transmission line within 60 days ( or as specified by the respective agency / owner ) from the date of issue of the notice by the NHAI / Govt of India to shift / relocate the overhead electric power transmission line, in case it is so required for the purpose of improvement / widening of the road / route / highway or construction of flyover / bridges and restore the road / land to its original conditions at his own cost and risk.
23. Regarding the location of other cables, underground installation/Utilities etc, the licensee shall be responsible to ascertain from the respective agency in coordination with NHAI. The licensee shall ensure the safety and security of already existing cables/Underground installation/Utilities facilities etc. before commencement of the excavation.
24. The Licensee shall be solely responsible / liable for fully compensation / indemnification of concerned agency / aggrieved owner for any direct, indirect or consequential damage caused to them / claims or replacement sought for at the cost and risk of the Licensee. The concerned agency in coordination with NHAI shall also have a right to make good such damage / recover the claims by way of invoking of bank guarantee furnished by the licensee.
25. If the Licensee fails to comply with the condition 22 and 23 above to the satisfaction of the NHAI, the same shall be got executed by the NHAI at the risk and cost of the licensee.
26. The licensee shall procure insurance from reputed insurance company against damages to already existing cables/underground installation/utilities/facilities etc. during trenching.
27. The licensee has to cross the NH by horizontal drilling method (trenchless technology only).In case any damage is caused to the road pavement in this

process; the licensee will be required to restore the same to the original condition at his own cost.

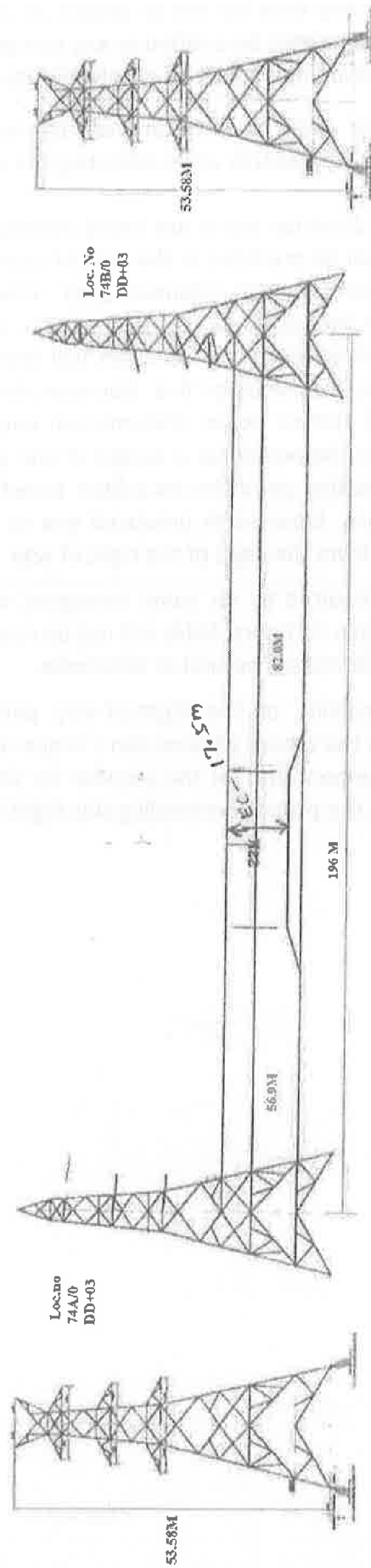
28. No trenching will be done on pucca road, boring method will be issued in pucca road and overhead electric power transmission line will be laid at the extreme edge of the road in the non-BT surface only.
29. The licensee shall inform/give a notice to the NHAI, Govt. of India or its authorized agency at least 15 days in advance with route details prior to digging trenches for fresh or maintenance/repair work. A separate work plan and a separate performance Bank Guarantee @Rs 100/- per meter length for maintenance/repair work shall have to be furnished by the licensee.
30. Each day, the extent of digging the trenches should be strictly regulated so that cables are laid and trenches be filled up before the close of the work that day. Filling should be completed to the satisfaction of the concerned agency designated by the NHAI.
31. The Licensee shall indemnify the concerned agency in coordination with NHAI, against all damages and claims, if any, due to construction of overhead electric power transmission line.
32. The NHAI has a right to terminate the permission or to extend the period of agreement. In case the licensee wants shifting, repairs or alteration to overhead electric power transmission line, he will have to furnish a separate Bank Guarantee.
33. The Licensee shall not without prior permission in writing from the NHAI / Govt. of India or its authorized agency undertake any work or shifting, repairs or alterations to the said overhead electric power transmission line.
34. The permission granted shall not in any way be deemed to convey to the Licensee any ownership right or any interest in route / road / highway / land / property, other than what is herein expressly granted.
35. During the subsistence of this agreement, the laying of overhead electric power transmission line located in Highway land / property shall be deemed to have been constructed and continued only by the consent and permission of the NHAI so that the right of the Licensee to the use thereof shall not become absolute and indefeasible by lapse of time.
36. The Licensee shall bear the stamp duty charged for the agreement.
37. The overhead electric power transmission line shall not be brought into use by the Licensee unless a completion certificate to the effect that the laying of overhead electric power transmission line has been laid in accordance with the approved specifications and drawings and the trenches have been filled up to the satisfaction of the concerned agency in coordination with the owner has been obtained.

38. Notwithstanding anything NHAJ contained herein this agreement may be cancelled at any time by the or breach of any condition of the same and the Licensee shall neither be entitled to any compensation for any loss caused to it by such cancellation nor shall it be absolved from any liability already incurred.
39. The Licensee shall have to provide barricading, Danger Lighting and other necessary caution boards while executing the work and during maintenance.
40. If any traffic diversion works are found necessary during the working period, such diversion shall be provided at the cost of Licensee. After the termination/ expire of the agreement, the Licensee shall remove the overhead electric power transmission line within 60 days and the site shall be brought back to the original condition failing which the Licensees will lose the right to remove the overhead electric power transmission line. However, before taking up the work of removal of overhead electric power transmission line the Licensee shall furnish a Bank Guarantee to the owner for a period of one year for an amount assessed by the owner for making good the excavated trench by proper filling and compaction, clearing debris, loose earth produced due to excavation of trenching at least 50 meter away from the edge of the right of way.
42. If NHAJ is required to do some emergent work, the Licensee will provide an observer within 24 hours. NHAJ will not be responsible for any damage of any kind by whatsoever means natural or otherwise.
43. The enforceability of the Right-of-way permission granted here in shall be restricted to the extent of provision / scope of service contained / defined in the License agreement and for the purpose for which it is granted. Either by content or by intent, the purpose extending this Right-of-way facility is not to enhance the scope.



Executive Engineer  
400KV Construction Division  
APTRANSCO:VIJAYAWADA

400KV Twin Moose DC line from existing 400/220KV Vemagiri Substation to 400/220KV Kamavarapukota Substation". Transmission Line Crossing NH-16 Gundugolanu to Kovvuru at fly over No.48, Dubacharla Village, Nallajarla Mandal, West Godavari District, Andhra Pradesh.



*[Signature]*

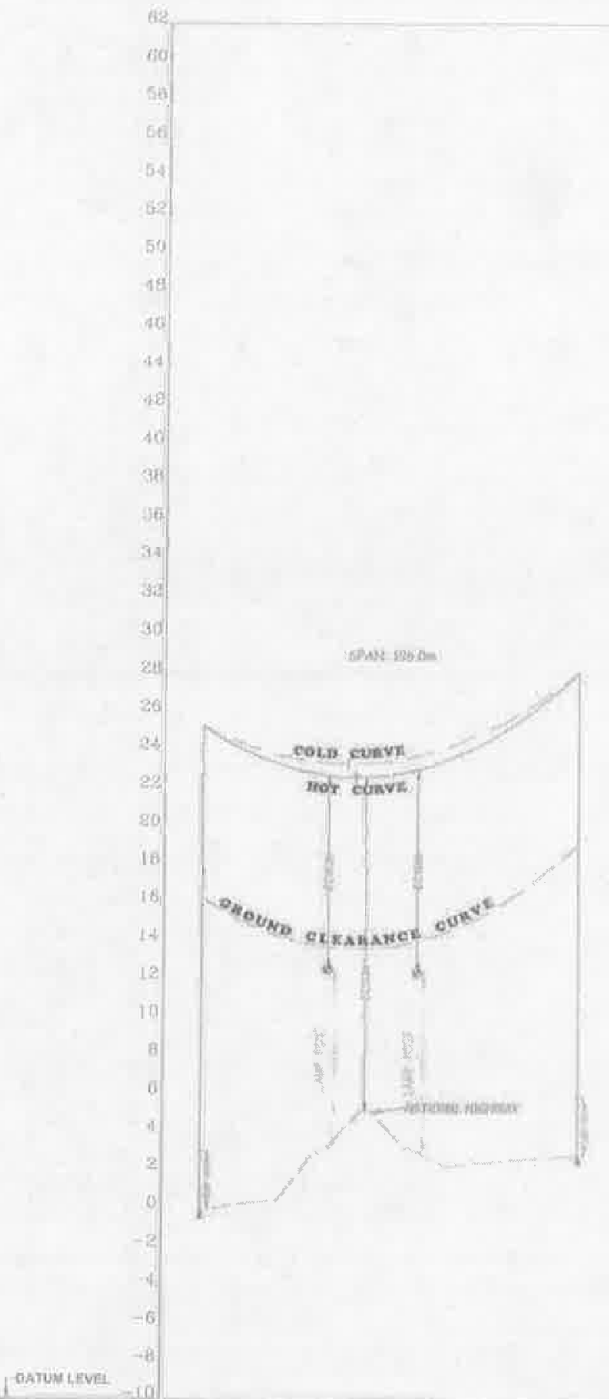
Executive Engineer  
400KV Construction Division  
APTRANSCO:VJAYAWADA

*[Signature]*

Deputy Executive Engineer  
400K V Construction SD -III  
APTRANSCO:VJAYAWADA

LOC NO:	AP74A
TOWER TYPE:	DD+03
WIND SPAN:	(L:0.0+R:196.0)/2=98.0m
WT. SPAN (C):	(L:0.0+R:76.0)=76.0m
WT. SPAN (H):	(L:0.0+R:90.0)=90.0m
Grid Coordinate:	X:1000.000; Y:1000.000
Elevation:	0.000m

LOC NO:	AP74B
TOWER TYPE:	DD+03
WIND SPAN:	(L:196.0+R:0.0)/2=98.0m
WT. SPAN (C):	(L:120.0+R:0.0)=120.0m
WT. SPAN (H):	(L:116.0+R:0.0)=116.0m
Grid Coordinate:	X:1000.000; Y:1196.000
Elevation:	2.873m



GROUND LEVEL (m)	0.000	0.241	0.421	2.874	4.585	9.742	2.610	2.385	2.559	2.733	2.873
CHARGE (m)	0.0	20.0	40.0	60.0	80.0	100.0	120.0	140.0	160.0	180.0	196.0

TURNING ANGLE:  
41°02'41" RT



Executive Engineer  
100KV Construction Division  
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Deputy Executive Engineer  
400K V Construction SD -III  
APTRANSCO:VIJAYAWADA




AP75  
AP75B

AP74B  
AP74B

AP74A  
AP74A

Google Earth

44 Q 537413.73 mE 1870391.05 mN Elev. 0m Eye alt. 944m

  
Executive Engineer  
400KV Construction Division  
AP73A/MSCC-VUSA VADA

  
Deputy Executive Engineer  
400KV Construction SD-111

## TRANSMISSION CORPORATION OF ANDHRAPRADESH LIMITED

Construction of "400KV Twin Moose DC line from existing 400/220KV Vemagiri Substation to 400/220KV Kamavarapukota Substation" for a length of 100Km (approx.) on turnkey Basis.

Crossing National Highway No-16 Fly over no.48, Dubacharla Village, Nallajarla Mandal of West Godavari District, Andhra Pradesh.

### **METHODOLOGY FOR LAYING OF OVERHEAD POWER LINE**

The methodology for laying of overhead power line can be broadly classified as 3 types.

- I. Foundation    II. Erection    III. Stringing.

#### **I. FOUNDATION ( SUBSTRUCTURE )**

1. The route for laying of power line is selected using Bee line method connecting both substations for selecting best route technically and economically.
2. Upon selection of route, tower spotting is done considering nominal span of 400 metre, utilising tower spotting data, angle of deviation, statutory / critical crossings and terrain conditions.
3. Upon spotting of tower on the site, a test pit is excavated and the foundation classification is decided based on the soil strata encountered .
4. Appropriate foundation design is selected and 4 nos of pits for four legs of the tower as per the design for tower / foundation type are excavated.
5. A Cement concrete bed of 50mm is cast initially on the bed of the pit.
6. Stubs ( base leg of tower ) are erected in the pits using template/ Prop, aligned to the route and reinforcement steel as per foundation design is erected in the pit
7. Reinforcement Cement concrete of mix M20 ( 1 : 1½ : 3 ) is used for casting the foundation of each leg of tower using form work to achieve required size and shape .
8. After casting all the four legs, the form work is removed and the pits are backfilled with excavated earth. The concrete work is cured for a period of 15 days.
9. In case of undulations in the terrain at the tower location or where extra protection is to be given due to site conditions, same is done using revetment and/or benching etc.

Now, the location ( 4 legs ) foundation activity completed.

#### **II. ERECTION ( SUPERSTRUCTURE )**

1. The superstructure or tower forms the supports for overhead power conductor charged to appropriate voltage level for transmission of electrical power.
2. The height of tower is so designed to withstand mechanical load and provide adequate electrical & statutory clearances for the safe transmission of power, safety to men and material in the vicinity.
3. The tower is erected using MS / HT steel angles of different sections which are fastened using Bolt and nuts to form a lattice structure of required height.

Now, the tower is ready for stringing activity.

  
Executive Engineer  
400KV Construction Division  
APTRANSCO: VJAYAWADA



### III.STRINGING

Stringing is a process involving hoisting and fixing of power conductor along with hardware fittings and making the overhead power line ready for transfer of power. This process involves the following activities.

1. Once the tower is completely erected and ready for stringing, Insulator strings are hoisted on to the tower. The strings are firmly fixed to the cross arm of the tower using appropriate hardware.
2. Aerial Rollers are hoisted on to the tower and fixed to the bottom of the insulator string to receive Pilot wire.
3. A tensioner fitted with a conductor drum at one end and a puller at the other end of the section are used for drawing of the power conductor for the stringing section.
4. Now a Pilot wire is run through the rollers from one end of the section to the other end where stringing activity is planned. Both the ends of pilot wire are connected to Puller and Tensioner equipment to commence the stringing activity.
5. Pilot wire at the Tensioner end is connected to the conductor and when the pilot wire is pulled out by the Puller, the Pilot wire is drawn out and conductor passes through the rollers on the tower to get into the final position.
6. Once the Pilot wire is pulled out completely, conductor gets into position on the rollers in all the towers. The sag / tensile load on the conductor is adjusted to near final value and is called "Rough Sag".
7. Using Sag template and Dynamometer the sag / tension load of the conductor is adjusted to the specified value as per sag chart. This is called "Final Sag" and forms the final shape of the line maintaining the clearances as per the design.
8. Now, the Aerial rollers are removed and the conductors are clipped to the Hardware of the insulator string.
9. Other accessories like spacers, dampers, Jumpers, copper bonds etc are fixed to the line.
10. The Tower is properly earthed using appropriate type of earthing for protection.

Now the construction activity of the line is completed and ready to charge for transfer of power after obtaining required statutory clearances.

  
Executive Engineer  
400KV Construction Division  
APTRANSCO:VIJAYAWADA

## CHECK - LIST

Guidelines for project Directors for processing the proposal of laying Overhead Electrical Power Transmission Line in the land across National Highways vested with NHAI.

### Relevant circulars

- 1) Ministry Circular No.NH-III/P/66/76 dated 19.11.1976
- 2) Ministry Circular No. NH-III/P/20/77 dt. 08.04.1982
- 3) Ministry Circular No.RW/NH/-III/P/66/76 Date 11.5.1982
- 4) Ministry Circular No.RW/NH-11037/1/86/DOI/dated 19.01.1995

### Check list for getting approval for laying of Overhead Electric Power Transmission Line on NH land

Sl. no	Item	Information/status	Remarks
1	General Information		
1.1	Name and Address of the Applicant	The Executive Engineer, 400KV Construction Division APTRANSCO, 2nd Floor, Zonal Office Building, Gunadala, VIJAYAWADA. Andhra Pradesh-520 004.	
1.2	National Highway Number	NH - 16	
1.3	State	ANDHRA PRADESH	
1.4	Location	Crossing National Highway No-16 Gundugolanu to Kovvuru at fly over No.48, Dubacharla village, Nallajarla Mandal, West Godavari District, Andhra Pradesh.	
1.5	(Chainage in km)	Across at KM 37.850	
1.6	Length in Meter	NA, as the proposal is for crossing of NH	
1.7	Width of available ROW	- N.A -	
	(a) Left side from center line towards increasing chainage/km direction	30 mts	
	(b) Right side from center line towards increasing chainage/km direction	30 mts .	
1.8	Proposal to lay overhead Electric Power Transmission line	- N.A -	
	(a) Left side from center line towards increasing chainage/km direction	---	
	(b) Right side from center line towards increasing chainage/km direction	---	
1.9	Proposal to acquire land	- N.A -	
	(a) Left side from center line	---	
	(b) Right side from center line	---	
1.10	Whether proposal is in the same side where land is not to be acquired if not then where to lay the cable	NA, as the proposal is for crossing of NH only.	
1.11	Details of already laid services, if any, along the proposal route	- Nil -	
1.12	Number of lanes (2/4/6/8 lanes) existing	4 Lane	

  
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**Check list for getting approval for laying of Overhead Electric Power Transmission Line on NH land**

I. no	Item	Information/status	Remarks
1.13	Proposed Number of lane (2 lane with paved shoulders/4/6/8 lanes)	4 Lane	
1.14	Service road existing or not	Yes	
	If yes then which side	Existing on either side of NH	
	(a) Left side from center line	Yes	
	(b) Right side from center line	Yes	
1.15	Proposed service road	- N.A -	
	(a) Left side from center line	---	
	(b) Right side from center line	---	
1.16	Whether proposal to lay Overhead Power Transmission line is after the service road in between the service road between the service road and main carriage away	Over head Tower line is crossing NH	
1.17	The permission for laying Overhead Power Transmission line shall be considered for approval/rejection based in the ministry circulars mentioned as above	Request to consider the approval.	
1.18	If crossings of the road involved	Yes	
	If yes, it shall be either encased in pipes or through structure or conduits specially built for that purpose at the expenses of the agency owning the line	Yes. Overhead Electrical line by arranging towers.	
	(a) Existing drainage structures shall not be allowed to carry the lines.	- N.A -	
	(b) Is it on the line normal to NH	Yes	
	(c) Crossings shall not be too near the existing structures on the National Highway, the minimum distance being 15 metre. What is the distance from the existing structures. (Tower locations)	From 74A/0 - <sup>50.50</sup> 55.9 Mtrs. (RHS) From 74B/0 - <sup>52.0</sup> 62.0 Mtrs. (LHS) 77.00	
	(d) The casing pipe (or conduit pipe in the case of electric cable) carrying the utility line shall be of steel, cast iron or reinforced cement concrete and have adequate strength and be large enough to permit ready with drawal of the carrier pipe /cable.	- N.A -	
	(e) Ends of the casing / conduit pipe shall be sealed from the outside, so that it does not act as a drainage path	- N.A -	
	(f) The casing/conduit pipe should as minimum extended from drain to drain in cuts and toe of slope toe of slopes in the fills.	- N.A -	
	(g) The top of the casing /conduit pipe should be atleast 1.2 meter below the surface of the road subject to being atleast 0.3metr below the drain inverts.	- N.A -	
	(h) Crossing shall be by boring method HDD, specially where the existing road pavement is of cement concrete or dense bituminous concrete type .	NA as crossing is overhead. Methodology is enclosed.	

  
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**Check list for getting approval for laying of Overhead Electric Power Transmission Line on NH land**

no	Item	Information/status	Remarks
	(i) The casting / conduit pipe shall be installed with an even bearing throughout its length and in such a manner as to prevent the formation of a waterway along it.	- N.A -	
2	Documents / Drawings enclosed with the proposal		
2.1	<p>Cross section showing the size of trench for open trenching method (is it normal size of 1.2m deep x 0.3m wide )</p> <p>(i) Should not be greater than 60cm wider than the outer diameter of the pipe.</p> <p>(ii) Located as closed to the extreme edge of the right of way as possible but not less than 15m from the centre lines of the nearest carriage way.</p> <p>(iii) Shall not be permitted to run along the national highways when the road formation is situated in double cutting. Nor shall these be laid over the existing culverts and bridges.</p> <p>(iv) These should be so laid that their top is atleast 0.6meter below the ground level so as not to obstruct drainage of the road land.</p>	- N. A - as the crossing is overhead and across NH.	
2.2	Cross section showing the size of pit and location of cable for HDD method	- N.A - as crossing is overhead.	
2.3	Strip plan / route plan showing Overhead Power Transmission Line Chainage, width of ROW ,distance of proposed cable from the edge of ROW , important mile stone, intersections, cross drainage works etc.	Yes, Enclosed.	
2.4	Methodology for laying of Overhead Power Transmission Line.	Yes, Enclosed.	
2.4.1	Open Trenching Method. ( May be allowed in utility corridor only where pavement is neither cement concrete nor dense bituminous concrete type ). If yes, Methodology of refilling of trench .	- N.A -	
	(a) The trench width should be atleast 30cm, but not more than 60cm wider than the outer diameter of the pipe.	- N.A -	
	(b) For filling of the trench, Bedding shall be to a depth of not less than 30cm. It shall consist of granular material, free of lumps, clods and cobbles and graded to yield a firm surface without sudden change in the bearing value. Unsuitable soil and rock edged should be excavated and replaced by selected material.	- N.A -	
	(c) The Backfill shall be completed in two stages (i) side - fill to the level of the top of the pipe and (ii) overfill to th bottom of the road crust.	- N.A -	
	(d) The sidefill shall consist of granular material laid in 15cm layers each consolidated by mechanical tampering and controlled addition of moisture to 95% of the Proctor's Density. Overfill shall be compacted to the same density as the material that had been removed. Consolidation by saturation or ponding will not be permitted.	- N.A -	
	(e) The road crust shall be built to the same strength as the existing crust on either side of the trench. Care shall be taken to avoid the formation of a dip at the trench.		
	(f) The excavation shall be protected by flagman, signs and barricades, and red lights during night hours.	- N.A -	
	(g) If required, a diversion shall be constructed at the expense of agency owning the utility line.	- N.A -	
2.4.2	Horizontal Direction Drilling (HDD) method	- N.A -	
2.4.3	Laying of Overhead electrical line through CD works and method of laying	- N.A -	

  
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**Check list for getting approval for laying of Overhead Electric Power Transmission Line on NH land**

Sl. no	Item	Information/status	Remarks
3	Draft License Agreement signed by two witnesses	Yes	
4	Performance Bank Guarantee in favour of NHAI has to be obtained @ Rs. 50/- per running meter ( parallel to NH ) and Rs. 1,00,000/- per crossing of NH, for a period of one year initially ( extendable if required till satisfactory completion of work ) as a security for ensuring / making good the excavated trench for laying the cables / ducts by proper filling and compaction, clearing debris / loose earth produced due to execution of trenching atleast 50m away from the edge of the right of way. No payment shall be payable by the NHAI to the licensee for clearing debris / loose earth.	'- N. A - due to over head line crossing	
5	<b>Affidavit /Undertaking from the applicant for</b>		
5.1	Not to damage to other utility, if damaged then to pay the losses either to NHAI or to the concerned agency.	Yes, Enclosed.	
5.2	Conforming all standard condition of NHAI guidelines	Yes, Enclosed.	
5.3	Shifting of Overhead Power Transmission as and when required by NHAI at their own cost.	Yes, Enclosed.	
5.4	Shifting due to 6 laning /widening of NH	Yes, Enclosed.	
5.5	Indemnity against all damages and claims clause (XXIV)	Yes, Enclosed.	
5.6	Traffic movement during laying of Overhead Power Transmission line to be managed by the applicant	Yes, Enclosed.	
5.7	If any claim is raised by the concessionaire then the same has to be paid by the applicant	Yes, Enclosed.	
5.8	Prior approval of the NHAI shall be obtained before undertaking any work of installation shifting or repairs, alteration to the over head power Transmission line located in the National Highway Right-of - ways.	Yes, Enclosed.	
5.9	Expenditure ,if any, incurred by NHAI for repairing any damage caused to the national highway by the laying, maintenance or shifting of the over head power Transmission line will be borne by the agency owing the line.	Yes, Enclosed.	
5.10	If the NHAI considers it necessary in future to move the utility line for any work of improvement or repairs to the road ,it will be carried out as desired by the NHAI at the cost of the agency owing the utility line within a reasonable time (not exceeding 60 days) of the intimation given.	Yes, Enclosed.	
5.11	Certificate from the applicant in the following format		
	(i) Laying of Overhead Power Transmission Line will not have any deleterious effects on any of the bridge components and road way safety for traffic. (ii) For 6 laning "We do undertake that I will relocate service road / approach road / utilities at my own cost notwithstanding the permission granted within such time as well be stipulated by NHAI for future four / six laning of any other development."	Yes, Enclosed.	
6	Who will sign the agreement on behalf of Overhead Power Transmission Line agency.	Executive Engineer, APTRANSCO	
7	Certificate from the Project Director.		

  
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**Check list for getting approval for laying of Overhead Electric Power Transmission Line on NH land**

Sl. no	Item	Information/status	Remarks
7	Certificate from the Project Director.		
7.1	Certificate for conforming of all standard condition issued vide Ministry circular no. NH-II/P/66/76, Dt 19.11.1976, Ministry Circular No. NH-III/P/20/77 Dt 8-04-1982, Ministry circular no. RW/NH-III/p/66/76 Dt 11.5.1982 and Ministry circular no. RW/NH-11037/1 /86/DOL, dated 19-01-1995.	Yes, Enclosed.	
7.2	Certificate from the P D in the following Format		
	(i) "It is certified that any other location of the Overhead Power Transmission line would be extremely difficult and unreasonable costly and the installation of Overhead Power Transmission Line within ROW will not adversely affect the design, stability and traffic safety of the Highway nor the likely future improvement such as widening of the carriage way, easing of curve etc."	<del>Yes, Enclosed.</del> N/A	
	(ii) For 6 laning (a) Where feasibility is available " I do certify that there will be no hinderance to proposed six laning based on the feasibility report considering proposed structures at said location" (b) In case feasibility report is not available " I do certify that sufficient ROW is available at side for accommodating proposed six laning".	NA	
8	If NH Section proposed to be taken up by NHA/ on BOT basis a clause is to be inserted in the agreement. "The permitted Highway on which licensee has been granted the right to lay over head power transmission line has also been granted as a right of way to the concessionaire under the concession agreement for upgradation of (National Highway No-16 Gundugolanu to Kovvuru at fly over No.48, Dubacharla Village, Nallajarla Mandal, West Godavari District, Andhra Pradesh -- on Build, Operate and Transfer Basis ) and therefore, the Licensee shall honour the same".	Yes, Inserted (The Structure is under NHA/ concessionaire)	
9	Who will supervise the work of laying Overhead Power Transmission Line.	APTRANSCO and Project Director, NHA/	
10	Who will ensure that the defects in road portion after laying of Overhead Power Transmission Line are corrected and if not corrected then what action will be taken.	APTRANSCO & NHA/	
11	Who will pay the claims for damages done/disruption in working of concessionaire if asked by the concessionaire.	APTRANSCO	
12	A certificate from PD that he will enter the proposed permission in the register of records of the permissions in the prescribed proforma (copy enclosed).	Yes, Enclosed.	
13	If any previous approval is accorded for laying of Overhead Power Transmission then photocopy of register of records of permissions accorded as maintained by PD may be enclosed.	<del>Yes, Enclosed.</del> - ML -	

  
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