



भारतीय राष्ट्रीय राजमार्ग प्राधिकरण

(सडक परिवहन और राजमार्ग मंत्रालय, भारत सरकार)

National Highways Authority of India

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

परियोजना कार्यान्वयन, इकाई. सोलापूर (महाराष्ट्र)

Project Implementation Unit, Solapur (Maharashtra)

कार्यालय : प्लॉट नं. ई-२, जय जलाराम नगर, शिवदारे कॉलेजच्या मागे, जुळे सोलापूर, सोलापूर-४१३००४ (महाराष्ट्र)

Office : Plot No. E- 2, Jai Jalaram Nagar, Behind Shivdare College, Jule Solapur, Solapur - 413 004. Tel/Fax - 0217 2303379

ई-मेल /Email : solapur@nhai.org; piusolapur@gmail.com * वेब /Web : https://nhai.gov.in



No.: NHAI/PIU/SLP/NH-13/OFC Cable/2023-24/ 3290

Date: 17/10/2023

INVITATION OF PUBLIC COMMENTS

Sub.: Four laning of Solapur to Vijayapura section of NH-13 (NEW NH-52) from Ch. 0/000 to Km. 110/542 in the state of Maharashtra & Karnataka on BOT Mode- **Proposal for erection of single circuit line along NHAI & 11Kv UG cable for road crossing on NH-52 from Solapur to Vijaypur road for location 1. Near Verna hotel Ch. No.11+900. 2. Near Appa hotel Ch. No.22+700 3. Near Canara Bank Ch. No. 24+704 4. Near water supply Ch. No.32+700 5. Near HP Arvind Petrol pump Ch. No 35+500 6. Near Mauli Laundry Ch. No.37+454 7. Near Aurad Road Ch.No. 29+206 - Reg.**

Sir

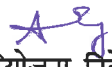
1. Executive Engineer, O & M Rural Division, Maharashtra State Electricity Distribution Co. Ltd (MSEDCL), has submitted the proposal to carry out the HDD for erection of single circuit line along NHAI & 11Kv UG cable for road crossing on NH-52 from Solapur to Vijaypur road for location 1. Near Verna hotel Ch. No.11+900. 2. Near Appa hotel Ch. No.22+700 3. Near Canara Bank Ch. No. 24+704 4. Near water supply Ch. No.32+700 5. Near HP Arvind Petrol pump Ch. No 35+500 6. Near Mauli Laundry Ch. No.37+454 7. Near Aurad Road Ch.No. 29+206 in the section of NH-13 (New NH-52).
2. 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).
3. In view of the above, comments of the public on the above application is invited to 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 Project Director

National Highways Authority of India
Project Implementation Unit, Solapur
Plot No. E-2, Jalaram Nagar,
Solapur, Maharashtra,
Pin - 413004

Thanking you,

भवदीय


परियोजना निदेशक
भा.रा.प्रा. प.का.ई, सोलापूर

Copy to:-

- i. CGM (Tech) RO Mumbai for information please.
- ii. Master file.

EE/Solapur R/Tech/

NO - 5240

Date :-

6-7 SEP 2023

To,
The Project Director,
National Highway Authority of India
Project Implementation Unit,
Solapur.

Subject:- Submission of proposal for erection of Single circuit line along NHAI and 11kv UG cable for road crossing on NH-52 from Solapur to Vijaypur road for location 1. Near Verna Hotel Chainage No.011+900. 2. Near Appa Hotel Chainage No.22-700. 3. Near Canara Bank Chainage No.24+704 4. Near water supply chainage no.32+700. 5. Near HP Arvind Petrol pump chainage no.35+500 6. Near Mauli Laundry chainage no.37+454. 7. Near Aurad Road chainage no.29+206

Ref:- CE(projects)/RDSS/LR-B/Phase-I/T-08/10179 Dt. 06/04/2023

Respected sir,

With ref.to the above cited subject, RDSS Feeder Separation scheme has been sanctioned vide above reference. The works will start soon and the newly erected line is proposed along NHAI highway crossing on NH-52 from Solapur to Vijaypur road for location 1. Near Verna Hotel Chainage No.011+900. 2. Near Appa Hotel Chainage No.22-700. 3. Near Canara Bank Chainage No.24+704 4. Near water supply chainage no.32+700. 5. Near HP Arvind Petrol pump chainage no.35+500 6. Near Mauli Laundry chainage no.37+454. 7. Near Aurad Road chainage no.29+206. 7 no of UG cable 11kv underground crossing is required at this location .Hence proposal is enclosed along with this.

Please consider the proposal and convey the administrative approval.

Thanking you


(R.S. RATHOD)

Executive Engineer

MSEDCL O&M SOLAPUR-R DIVISION

Encl: - Sets of following

1. Agreement
2. Undertaking
3. Crossing Drawing
4. HDD Boring Drawing
5. Overhead Line Drawing.

Copy S.W.R.T:-

1. The Chief Engineer (Projects), MSEDCL HO, Mumbai.
2. The Chief Engineer (Zone), MSEDCL Baramati Zone, Baramati.
3. The Superintending Engineer (Infra), MSEDCL Baramati Zone, Baramati.
4. The Superintending Engineer (O&M), MSEDCL Solapur Circle, Solapur.

Copy to:-


5. Dy.Executive Engineer (O&M), MSEDCL South Solapur Sub Dvn.

CHECK- LIST

Check list for getting approval for laying 11 kv Underground Electrical Cable across National Highway

1) Ministry circular No. RW/NHA/33044/29/2015-S& R dated 22.11.2016


SR NO.	ITEM	Information/ status
1	General Information	<p>Direction of Underground 11 kv UG Electrical Cable crossing across the NH-52 From</p> <p>1) Solapur to Vijaypur road crossing chainage No.011+900 Location – Verena Hotel, Hattur Feeder, Near Wadakbal Sub-station.</p> <p>2) Solapur to Vijaypur road crossing chainage No.22+700 Location –Appa Hotel, Hattur Feeder, Near Wadakbal Sub station.</p> <p>3) Solapur to Vijaypur road crossing chainage No.24+704 Location –canara bank, Hattur Feeder, Near Wadakbal Sub-station.</p> <p>4) Solapur to Vijaypur road crossing chainage No.32+700. Location –Near Water Supply, Nandani Feeder, Near Takali Sub-station.</p> <p>5) Solapur to Vijaypur road crossing chainage No.35+500 Location –Near HP Arvind Petrol Pump, Nandani Feeder, Near Takali Sub-station.</p> <p>6) Solapur to Vijaypur road crossing chainage No.37+454 Location –Mauli Laundry, Takali Feeder, Near Takali Sub-station.</p> <p>7) Solapur to Vijaypur road crossing chainage No.29+206 Location –Aurad Road, Basavnagar Feeder, Near Mandrup Sub-station. Tal- Solapur South. Dis- Solapur</p>
1.1	Name address of Applicant	Executive Engineer (O&M) MSEDCL, Solapur R Division Maharashtra
1.2	National Highway Number	NH-52
1.3	State	Maharashtra
1.4	Location	<p>NH-52 From</p> <p>1) Solapur to Vijaypur road crossing chainage No.011+900 Location – Verena Hotel, Hattur Feeder, Near Wadakbal Sub-station.</p> <p>2) Solapur to Vijaypur crossing chainage No.22+700 Location –Appa Hotel, Hattur Feeder, Near Wadakbal Sub station.</p> <p>3) Solapur to Vijaypur road crossing chainage No.24+704 Location –canara bank, Hattur Feeder, Near Wadakbal Sub-station.</p> <p>4) Solapur to Vijaypur road crossing chainage No.32+700. Location –Near Water Supply, Nandani Feeder, Near Takali Sub-station.</p> <p>5) Solapur to Vijaypur road crossing chainage No.35+500 Location –Near HP Arvind Petrol Pump, Nandani Feeder, Near Takali Sub-station.</p> <p>6) Solapur to Vijaypur road crossing chainage No.37+454 Location –Mauli Laundry, Takali Feeder, Near Takali Sub-station.</p> <p>7) Solapur to Vijaypur road crossing chainage No.29+206 Location –Aurad Road, Basavnagar Feeder, Near Mandrup Sub-station. Tal- Solapur South. Dis- Solapur.</p>


(Ramesh S. Rathod)
Executive Engineer
M. S. E. D. Co. Ltd.,
Rural Division, Solapur


1.5	Chainage in Km	Km 011+900, 22+700, 24+704, 32+700, 35+500, 37+454, 29+206
1.6	Length in Meters	Total length 420 mtr (7 no crossing)
1.7	Width of ROW	60 mtr total ROW
	a) Left side from Centre Centre Line towards increasing chainage/Km direction	30 m
	b) Right side from center line towards increasing chainage/Km direction	30 m
1.8	Proposal to layover Head 33Kv line.	
	a) Left side from Centre Centre Line towards increasing chainage/Km direction	NA
	b) Right side from center line towards increasing chainage/Km direction	NA
1.9	Proposal to acquire land	NA
	a) Left side from Centre line	NA
	b) Right side from center line	NA
1.10	whether proposal is in the samme side where land is nott to be acquired	Yes
	If not than where to la cable	
1.11	Details of already laid Service, if any , along the proposed route	NA
1.12	Number of lanes (2/4/6/8 lanes) existing	4 lanes
1.13	Proposed Numbar of lanes (2lane with paved shoulderr/4/6/8 lanes)	-
1.14	Service road existing or not	Available
	If yes than wich side	
	a) Left sid from centre line	
1.15	Proposed service road	NA
	a) Left side from Centre Centre Line	NA
	b) Right side from centre line	NA
1.16	Whether proposal is to lay overhead Electrical line after the service road or between the service road and main carriageway	NA
1.17	The permission for laying OH electrical cable shall be considered for approval /rejection	Yes
	(i) Where the ROW is more than 45 m than the duct cable shall be laid a the edge of right of way within the utility corridor of 2m width, duly keeping in view the future widening	NA
	(ii) Where he land is yet to be acquired for 4 laning & position of new carriageway has been decided than the cable shall be laid at the edge of right of way within the utility coridor of 2m width, on that side of existin carriage way where extra land is nott proposed to be acquired for 4 lanningg	NA
	(iii) Where the widening plan for 4-lanning is ot yet decided & available ROW is around 30m or les, a judicious decision would need to be taken for permitting the laying of cable/duct.This could be within 105m to 2m of utility corridor at the edge of existing ROW, duly keeping in view the future widening	NA
	(iv) Where the ROW is restricted and adequate only to accommodate the carriaeway ,central verge,shoulder and drains (e.g highways in cutting through hilly/rolling terrain)the cable shall be laid clear of the drain.	NA


 (Ramkishan S. Rathod)
 Executive Engineer
 M. S. E. Co. Ltd.,
 Rural Electrification, Solapur

	(v) Where lend strip for utility corridor cannot be conveniently earmarked (available ROW restricted to the toe of the embankment) for lying of cable / ducts, the permission may be refused.	NA
1.18	No. of applicants on the same stretch	1
1.19	Whether the case of multiple licenses	NO
1.20	If so furnish a joint implementation programmer to lay their respective ducts within stipulated time frame.	NA
1.21	If crossing of the road involved if yes it shall only be through trench-less technology	Yes
	a) existing drainage structures shall not be allowed to carry the lines.	NA
	b) Is it on a line normal to NH	Yes
	c) Crossing shall not be too near the existing structure on the national Highway, the Minimum Distance being 15 meters. What is the distance from the existing structures?	Yes
	d) The casing pipe (or conduit pipe in the case of electric cable) carrying the utility lines shall be of steel, cast iron, or reinforced cement concrete, and have adequate strength and large enough to permit ready withdrawal of the carrier pipe / cable	Yes
	e) Ends of the casing/conduit pipe shall be sealed from the outside, so that it does not act as a drainage path	Yes
	f) The casing/ conduit pipe should, as minimum extend from drain to drain cuts and toe of slope in the fills.	Yes
	g) The top of the casing /conduit pipe should be at least 1.2 meter below the surface of the road	Yes
	h) crossing shall be by boring method (HDD) specially where the existing road pavement is of cement concrete or dense bituminous concrete type.	Yes
	i) 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.	150mm HDPE pipe
2	Document /Drawing enclosed with the proposal	Yes
2.1	Cross section showing the size of trench for open trenching method (Is it normal size of 1.65m deep x 0.5m wide should not be greater than 1.2m in width in multiple ducts.	Single ckt over head line by erecting RSJ poles and laying Underground cable for road crossing
2.2	Cross section showing the size of pit and location of cable for HDD method.	Yes
2.3	Strip plan/ Route plan showing the electrical cable crossing chainage, width of ROW, distance of proposed cable from the edge of ROW, important mile stone, intersections, cross drainage work etc.	Yes enclosed
2.4	Methodology for laying of OH Electrical line/cable	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)	Yes
	a) The trench width should be at least 30 cm, but not more than 60 cm wider than the outer diameter of the pipe	Yes


(Ramesh S. Rathod)
 Executive Engineer
 M. S. E. D. Co. Ltd.,


	b) For filling of the trench, 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 edges should be excavated and replaced by selected material.	Yes
	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 the bottom of the road crust	NA
	d) The side-fill shall consist of granular material laid in 15 cm layers each consolidated by mechanical tamping and controlled by 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	NA
	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.	NA
	f) The excavation shall be protected by flagman, Agreed signs and barricades, red lights during night hours.	Yes
	g) If required, a diversion shall be constructed at the expense of agency owning the utility line.	Yes
2.4.2	Horizontal Direction Drilling (HDD) Method of laying	Yes
2.4.3	Laying of OFC Cable through CD works and method of laying	NA,
	a) On approaches, the water mains/ cables shall be carried along a line as close to the edge of the right-of-way as possible up to a distance of 30 cm from the bridge and subject to all other stipulations contained in this ministry's guidelines issued with letter No. NH-HI/P/66/76. Dated:19-11-1976	Yes
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 at least 50 m 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.	BG shall be submitted as soon as permission obtained/informed by NHAI
4.1	Performance BG as per above is to be obtained	BG shall be submitted as soon as permission obtained From NHAI
4.2	Confirmation of BG has been obtained as per NHAI guideline	Yes
5	Affidavit/ Undertaking from the Applicant for the following is to be furnished	
5.1	Not to Damage to other utility, if damaged then to pay the losses either to NHAI or to the concerned agency	Yes


 (Nimesh S. Rathod)
 Executive Engineer
 M. S. E. D. Co. Ltd.,
 Rural Division, Solapur

5.2	Renewal of Bank Guarantee	Yes
5.3	Conforming all standard condition of NHAI's guideline	Yes
5.4	Shifting of OH Electric line as and when required by NHAI at their own cost of agency owing the line	Yes
5.5	Shifting due to 6 lanning/ widening of NH	Yes
5.6	Indemnity against all damages and claims clause (Xiv)	Yes
5.7	Traffic movement during laying of OH 33kv Electric line to be paid by the applicant	Yes
5.8	IF any claim is raised by the concessionaires then he same has to be paid by the applicant	Yes
5.9	Prior approval of NHAI shall be obtained before undertaking any wok of installation shifting or repairs or alteration to the showing of OH 33kv Electric line located in the National Highway right -of -way	Yes
5.10	Expenditure if any incurred by NHAI for fepairing any damage caused to the National Highway by the laying maintenance or shifting of the OFC cable will become by the agency owing the line	Yes
5.11	If NHAI considers it necessary in future to move the OH Electric line for any work of improvement or repairs to the road, it will be carried out as desired by NHAI at the cast of the agency owning the Electric line and UG crossing within reasonable time (not exceeding 60 days of the intimation given)	Yes
	certificate from the applicant in the following format	
5.12	1)For-6 Lanning, "we do undertake that we will relocate service road /approch road /utilities at our own cost of the own cost notwithstanding the permission granted within such time as well as stipulated by NHAI" , for future 6-laning or any other development	Yes
6	Who will sign the agreement on behalf of OH line agency	Executive , MSEDCL, O & M Solapur R Division Maharashtra
7	Copy of DOT license	Govt off Maharashtra undertaking
8	Certificate fro the project Director	Yes attached
8.1	certificate for the confirming of all standered condition issue vide ministry circular no. Ministry circular No. Nh-41(58)/68 dated: 31/01/1969, Ministry circular No. NH -III/P/66/76 dated :11-05-1982, Ministry circular No. RW/NW-11037/1/86-DOI(ii) dated: 28-07-1993,Ministry circular No. RW/NH-11037/1/86-DOI (ii) dated :28-07-1993,Ministry circular No. RW/NH -11037/01/86-DOI dated:19-01-1995,Ministry circular No. RW/NH-34066/2/95/5 R dated :25-10-1999 and ministry circular no., RW/NH -34066/07/2007 R dated :17-09-2003	Yes
8.2	Certificate for 6lanning from PD in the following format	
	(i) "it is certified that any other location of the OFC cable would be extremely difficult and Unreasonable costly and the installation of OFC Cable within ROW will not adversely affects the design, stability and traffic safety of the highway nor the likely future improvement such as widening of the carriageway, easing of curve etc."	


 (Karanesh S. Rathod)
 Executive Engineer
 M. S. E. & Co. Ltd.,
 Solapur, Maharashtra

	(ii) For 6- Lanning :- a) Where feasibility is available "I do certify that there will be no hindrance to proposed six-laning based on the feasibility report considering proposed structures at the said location."	
	(b) In case feasibility report is not available "I do certify that sufficient ROW is available at site for accommodating proposed six-laning"	
9	If NH section proposed to be taken by NHAI on BOT basis -a clause in para 17 to be inserted in the agreement ."The permitted Highway on which Licensee Hs been granted as a right to lay cable /duct has also been granted as a right of way to the concessionaire under the concession agreemen for up-gradation of [Mohol to Aalandi crossing chainage No.13+920, 27+920,30+860 of NH no.965 on build operate and Transfer basis] and therefore, the licensee shall honour the same'	Agreed
10	who will supervise the work of laying of OH Electric line	MSEDCL, Sub Division, Solapur South, MSEDCL – Solapur R Division.
11	who will ensure that the defects in road portion after laying of OH Electric line are corrected	Executive Engineer, (O&M), Solapur R Division, Maharashtra
12	who will pay the claims for damages done /disruption in working of concessionaire if asked by the concessionaire	Executive Engineer, (O&M), Solapur R Division, Maharashtra
13	A Certificate from PD that he will enter the proposed permission in the register of records off the permission in the prescribed proforma (copy enclosed)	Yes
14	If any previous approval is accorded for laying of cable then photocopy of register of records of permission accorded as maintained by pd then copy be enclosed	NA


(Ramesh S. Rathod)
 Executive Engineer
 M. S. E. D. Co. Ltd.,
 Rural Division, Solapur

**AGREEMENT REGARDING GRANTING OF RIGHT OF WAY
PERMISSIONS
FOR LAYING UTILITY SERVICES ON NATIONAL HIGHWAYS**


(Kamesh S. Rathod)
Assistant Engineer
M. S. E. & C. Co. Ltd.,
Bridg Division, Solapur

Agreement For laying 11 kv Underground Electrical Cable across NH-52 From

- 1) Solapur to Vijaypur road crossing chainage No.011+900 Location – Verena Hotel, Hattur Feeder, Near Wadakbal Sub-station.
- 2) Solapur to Vijaypur road crossing chainage No.22+700 Location –Appa Hotel, Hattur Feeder, Near Wadakbal Sub-station.
- 3) Solapur to Vijaypur road crossing chainage No.24+704 Location –canara bank, Hattur Feeder, Near Wadakbal Sub-station.
- 4) Solapur to Vijaypur road crossing chainage No.32+700. Location –Near Water Supply, Nandani Feeder, Near Takali Sub-station.
- 5) Solapur to Vijaypur road crossing chainage No.35+500 Location –Near HP Arvind Petrol Pump, Nandani Feeder, Near Takali Sub-station.
- 6) Solapur to Vijaypur road crossing chainage No.37+454 Location –Mauli Laundry, Takali Feeder, Near Takali Sub-station.
- 7) Solapur to Vijaypur road crossing chainage No.29+206 Location –Aurad Road, Basavnagar Feeder, Near Mandrup Sub-station. Tal- Solapur South. Dis- Solapur.

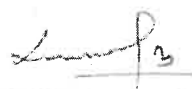
This Agreement made this _____ day of _____ Month of **2023 (year)** between **National Highway** acting in his executive capacity through

_____ (hereinafter referred to as “**NHAI**” which expression shall unless excluded by or repugnant to the context, include his successors in office and assigns) on the one part, and **Maharashtra State Electricity Distribution Company Limited.** a company registered under the companies Act,1956 and having its registered office at **Mumbai** (Herein called the License) which expression shall unless excluded by or repugnant to the context, include his successors / administrator assignees on second part.

Whereas National Highway Authority of India (NHAI) is responsible, inter-alia, for development and maintenance of lands in Km _____ to NH – 52 Row.


Whereas the Licensee proposes to Permission for Laying Electrical Underground cable from Solapur to Vijaypur Road

And whereas the Authority has agreed to grant such permission for way leave on NH RoW as per terms and conditions hereinafter mentioned.


(**Ramesh S. Rathod**)
Executive Engineer
M. S. E. D. C. L.

Now this agreement witnessed that in consideration of the conditions hereinafter contained and on the part of the Licensee to be observed and performed, the Authority hereby grants to the Licensee permission to lay utility services as per the approved drawing attached hereto subject to the following conditions, namely.

1. RoW permissions are only enabling in nature. The purpose of extending the way leave facility on the National Highway RoW is not for enhancing the scope of activity of a utility service provider, either by content or by intent. Further, enforceability of the permission so granted shall be restricted only to the extent of provisions/scope of activities defined in the license agreement & for the purpose for which it is granted.
2. No Licensee shall claim exclusive right on the RoW and any subsequent user will be permitted to use the RoW, either above or below, or by the side of the utilities laid by the first user, subject to technical requirements being fulfilled. Decision of the Authority in relation to fulfillment of technical requirements shall be final and binding on all concerned parties. In case any disruption / damage is caused to any existing user by the subsequent user, the Authority shall not be held accountable or liable in any manner.
3. The Licensee shall be responsible for undertaking all activities including, but not limited to site identification, survey, design, engineering, arranging finance, project management, obtaining regulatory approvals & necessary clearances, supply of equipment, material, construction, erection, testing and commissioning, maintenance and operation and all other activities essential or required for efficient functioning of their own utility / industrial infrastructure facilities.
4. The Licensee shall pay license fees @ Rs. /sq m/month to the Authority. The License fee shall become payable from the date of handing over of RoW land to the Licensee, for laying of utilities / cables / conduits / pipelines for Infrastructure / service provider. As regards Tariff and Terms and conditions for providing common utility ducts along National Highways, there shall be a separate agreement regime.
5. Fee shall have to be paid in advance for the period for which permission is granted for entering into a license agreement. In case of renewal, rate prevailing at the time of renewal shall be charged. Delay in deposition of fee shall attract interest @ 15% per annum compounded annually.
6. Present policy of the MoRTH is to provide a 2.00 m wide utility corridor on either side of the extreme edge of RoW. In cases where utility ducts with sufficient space are already available along NH, the utility services shall be laid in such ducts subject to technical requirements being fulfilled.


(Ramesh S. Rathod)
Executive Engineer
M. S. E. D. Co. Ltd

7. The utility services shall be laid at the edge of the RoW. In case of restricted width of RoW, which may be adequate only to accommodate the carriageway, central verge, shoulders, slopes of embankment, drains, other road side furniture etc; the utility services shall be laid beyond the toe line of the embankments and clear of the drain.

8. The Licensee shall make his own arrangement for crossing of cross drainage structure, rivers, etc. below the bed. In case, this is not feasible, the utility services may be carried outside the railings / parapets and the bridge superstructure. The fixing and supporting arrangement with all details shall be required to be approved in advance from the concerned Highway Administration. Additional cost on account of fixing and supporting arrangement as assessed by the Authority shall be payable by the Licensee.

9. In exceptional cases, where RoW is restricted the utility services can be allowed beneath the carriageway of service road, if available, subject to the condition that the utility services be laid in concrete ducts, which will be designed to carry traffic on top. The width of the duct shall not be less than one lane. In such cases, it also needs to ensure that maintenance of the utility services shall not interfere with the safe and smooth flow of traffic. The cost of operation and maintenance will have to be borne by the Licensee.

10. It is to be ensured that at no time there is interference with the drainage of the road land and maintenance of the National Highways. Towards this, the top of the utility services shall be at least 0.60 meter below the ground level. However, any structure above ground shall be aesthetically provided for / landscaped with required safety measures as directed by the concerned Authority;

11. The utility services shall be permitted to cross the National Highway either through structure or conduits specially built for that purpose. The casing / conduit pipe should, as minimum, extend from drain to drain in cuts and toe of slope to toe of slope in the fills and shall be designed in accordance with the provision of IRE and executed following the Specifications of the Ministry.

12. Existing drainage structures shall not be allowed to carry the lines across.

13. The top of the casing / conduit pipe containing the utility services to cross the road shall be at least 1.2m below the top of the sub grade or the existing ground level whichever is lower, subject to being at least 0.30 m below the drain inverts. A typical sketch showing the clearances is given in Attachment-I.

14. The utility services shall cross the National Highway preferable on a line normal to it or as nearly so as practicable.


(Manish S. Rathod)
Executive Engineer
H. S. & O. Co. Ltd.,
Rajkot, Gujarat

15. The casing/conduit pipe for crossing the road may be installed under the road embankment either by boring or digging a trench. Installation by boring method shall be preferred.

16. In case of trenching, 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 cms wider than the outer diameter of the pipe. Filling of the trench shall conform to the specifications contained here-in-below or as supplied by the Highway Authority.

a. Bedding shall be to a depth 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 edges should be excavated and replaced by selected material.

b. The backfill shall be completed in two stages

(i) Side-fill to the level of the top of the pipe

(ii) Overfill to the bottom of the road crust.

c. The side fill shall consist of granular material laid in 15 cm. Layers each consolidated by mechanical tamping 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.

d. 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 Highway Authority.

17. The Licensee shall ensure making good the excavated trench for laying utility services by proper filling and compaction, so as to restore the land in to the same condition 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;

18. All required restoration work subsequent to laying of the cable shall be required to be undertaken by the Licensee at its cost either by itself or through its authorized representative in consultation with the Authority as per predetermined time schedule and quality standards.

19. Prior to commencement of any work on the ground, a performance Bank Guarantee @ Rs. per route meter / Rs per sq m with a validity of one year initially (extendable if required till satisfactory completion of work) shall have to be furnished by the Licensee to the Authority / its designated agency as a security against improper restoration of ground in terms of filling / unsatisfactory compaction damages caused to other underground installations / utility services & interference, interruption, disruption or failure caused thereof to any services etc. In case of the Licensee failing to discharge the obligation of making good of the excavated trench / other restoration work, the Authority shall have a right to make good the damages caused by excavation, at the cost of the Licensee and recover the amount by forfeiture of the Bank Guarantee.

20. In case, the Performance Bank Guarantee is invoked as mentioned above, the Licensee shall be required to replenish and reinstate the required Performance Bank

(Ramesh S. Rathod)
Executive Engineer

Guarantee within one month of such invoking. In case the work contemplated herein is not completed to the satisfaction of the Authority, 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. Notwithstanding this, the Licensee shall be liable to pay full compensation to the aggrieved Authority / its designated agency for any damage sustained by them by reason of the exercise of the RoW facility;

21. The Licensee shall shift the utility services within 90 days (or as specified by the respective Authority) from the date of issue of the notice by the concerned Authority to shift / relocate the utility services, in case it is so required for the purpose of improvement / widening of the road/route / highway or construction of flyover / bridge and restore the road / land to its original condition at his own cost and risk.

22. The Licensee shall be responsible to ascertain from the respective agency in coordination with Authority, regarding the location of other utilities / underground Installations / facilities etc. The Licensee shall ensure the safety and security of already existing underground installations / utilities / facilities etc. before commencement of the excavation / using the existing cable ducts. The Licensee shall procure insurance from a reputed insurance company against damages to already existing underground installations / utilities / facilities etc.

23. The Licensee shall be solely responsible / liable for full Compensation / indemnification of concerned agency / aggrieved Authority for any direct, indirect or consequential damage caused to them / claims or replacements sought for, at the cost and risk of the Licensee. The concerned agency in coordination with Authority shall also have a right make good such damages / recover the claims by forfeiture of Bank Guarantee.

24. If the Licensee fails to comply with any condition to the satisfaction of the Authority, the same shall be executed by the Authority at the cost and risk of the Licensee.

25. Grant of License is subject to the Licensee satisfying (a) minimum disruption of traffic and (b) no damage to the highways. As far as possible, the Licensee should avoid cutting of the road for crossing highway, and other roads and try to carry out the work by **trenchless technology**. In case any damage is caused to the road pavement in this process, the Licensee will be required to restore the road to the original condition at its cost. If due to unavoidable reasons the road needs to be cut for crossing or laying utility services, the Licensee has to execute the restoration work in a time bound manner at its cost either by itself or through its authorized representative in consultation with the Authority as per predetermined time schedule and quality standards. In case of the Licensee failing to discharge the obligation of making good of the excavated trench/other restoration work, the Authority shall have a right to make good the damages caused by

excavation, at the cost of the Licensee and recover the amount by forfeiture of the Bank Guarantee.

26. The Licensee shall inform / give a notice to the concerned agency designated by the Authority at least 15 day in advance with route details prior to digging trenches, for fresh or maintenance / repair works. A separate performance Bank Guarantee for maintenance / repair works shall have to be furnished by the Licensee.

27. Each day, the extent of digging the trenches should be strictly regulated so that utility services is laid and trenches filled up before the close of the work that day. Filling should be completed to the satisfaction of the concerned agency designated by the Authority.

28. The licensee shall indemnify the concerned agency in co-ordination with Authority against all damages and claims, if any due to the digging of trenches for laying cables / ducts.

29. The permission for laying utility services is granted maximum for 5 years at a time, which can thereafter be considered for renewal. On payment of additional fee at the time of renewal, the permission shall automatically be renewed, unless defaults exist. In case of renewal, rate prevailing at the time of renewal shall be charged. Delay in deposition of fee shall attract interest @ 15% per annum compounded annually.

30. The permission shall be valid only for the period it is issued and fee deposited. However, the Authority also has a right to terminate the permission or to extend the period of Agreement.

31. That the Licensee shall not undertake any work of shifting, repairs or alterations to the utility services without prior written permission of the concerned agency in coordination with the Authority.

32. 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. No use of NH RoW will be permitted for any purpose other than that specified in the Agreement.

33. During the subsistence of this Agreement, the utility services located in highway land / property shall be deemed to have been constructed and continued only by the consent and permission of the Authority so that the right of the Licensee to the use thereof shall not become absolute and indefeasible by lapse of time.

34. The Licensee shall bear the Stamp Duty charged on this Agreement.


(Ramesh S. Rathod)
Executive Engineer
M. S. E. D. Co. Ltd.,
Rural Engineering

35. Three copies of 'as laid drawings' of utilities (hard and soft copies) with geotagged photographs and geo-tagged video recordings of laying of cables in the trench (with respect to the NH) and after complete restoration shall be submitted to the Authority for verification and record within a month of completion of works.

36. The Licensee shall allow free access to the Site at all times to the authorized Representatives of Authority to inspect the Project Facilities and to investigate any matter within their Authority, and upon reasonable notice, shall provide reasonable assistance necessary to carry out their respective duties and functions.

37. The utility services shall not be made operational by the Licensee unless a completion certificate to the effect that the utility services 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 co-ordination with the Authority has been obtained. Notwithstanding anything contained herein, this Agreement may be cancelled at any time by Authority for 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.

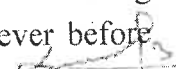

38. The Licensee shall ensure adherence to relevant Indian standards and follow best industry practices, methods and standards for the purpose of ensuring the safe, efficient and economic design, construction, commissioning, operation, repair and maintenance of any part of the utility lines / industrial infrastructure facilities and which practices, methods and standards shall be adjusted as necessary, to take account of:

- a. operation, repair and maintenance guidelines given by the manufacturers,
- b. the requirements of Law,
- c. the physical conditions at the Site, and
- d. The safety of operating personnel and human beings.

39. The Licensee shall have to provide safety measures like barricading, danger lighting and other necessary caution boards while executing the work.

40. While laying utility services, at least one lane of road shall be kept open to traffic at all times. In case of single lane roads, a diversion shall be constructed. If any traffic diversion works are found necessary during the working period such diversion shall be provided at the cost of Licensee.

41. After the termination / expiry of the agreement, the Licensee shall remove the utility services within 90 days and the site shall be brought back to the original condition failing which the Licensee will lose the right to remove the utility services. However before


Witnessed by: 
Project Engineer

taking up the work of removal of utility services the Licensee shall furnish a Bank Guarantee to the Authority for a period of one year for an amount assessed by the Authority as a security for making good the excavated trench by proper filling and compaction, clearing debris, loose earth produced due to excavation of trenching at least 50 m away from the edge of the RoW.

42. Any disputes in interpretation of the terms and conditions of this Agreement or their implementation shall be referred to the redress mechanism prevailing in the Ministry and the decision of the redress mechanism shall be final and binding on all.

43. For PPP Projects, in case of any financial loss incurred by the respective project concessionaires due to such laying / shifting of utility services by the Licensee, compensation for the same shall be required to be borne by the Licensee in mutual agreement with the respective project concessionaires. MoRT &H / NHAI implementing authorities for the project shall not be liable to the concessionaire in any way in this regard.

This agreement has been made in duplicate, each on a Stamp Paper, Each party to this Agreement has retained one stamped copy each.

IN WITNESS WHERE OF THE PARTIES HERE TO HAVE CAUSED THIS AGREEMENT TO BE EXECUTED THROUGH THEIR RESPECTIVE AUTHORISED REPRESENTATIVES THE DAY AND THE YEAR FIRSTABOVE WRITTEN.SIGNED SEALED AND DELIVERED FOR AND ON BEHALF OF AUTHORITY BY Shri

(Signature, name & Address with Stamp)

SIGNED ON BEHALF OF Maharashtra state Electricity Distribution Company Ltd.


BY

(Signature, name & Address with Stamp)


IN THE PRESENCE OF (WITNESSES)

1.

2.


(Ramesh S. Rathod)
Executive Engineer
M. S. E. D. Co. Ltd.


UNDERTAKING


(Ramesh S. Rathod)
Executive Engineer
M. S. E. D. Co. Ltd.,
Rural Division, Solapur

We, and Maharashtra State Electricity Distribution Company Limited. a company registered under the companies Act,1956 and having its registered office at Mumbai. hereby do undertake in reference to our Application for laying 11 kv underground Electrical cable line across NH-52 From

- 1) Solapur to Vijaypur road crossing chainage No.011+900 Location – Verena Hotel, Hattur Feeder, Near Wadakbal Sub-station.
 - 2) Solapur to Vijaypur road crossing chainage No.22+700 Location –Appa Hotel, Hattur Feeder, Near Wadakbal Sub-station.
 - 3) Solapur to Vijaypur road crossing chainage No.24+704 Location –canara bank, Hattur Feeder, Near Wadakbal Sub-station.
 - 4) Solapur to Vijaypur road crossing chainage No.32+700. Location –Near Water Supply, Nandani Feeder, Near Takali Sub-station.
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 - 7) Solapur to Vijaypur road crossing chainage No.29+206 Location –Aurad Road, Basavnagar Feeder, Near Mandrup Sub-station. Tal- Solapur South. Dis- Solapur.
- Crossing 7 Nos. (At Utility Passing of NHAI) Total Length =420 Mtrs. in the state of Maharashtra, that

We will not damage other utility while laying water pipe line, in case if it is damaged then the losses will be paid to NHAI or the concerned owning agency as per direction by NHAI.


(Manish S. Rathod)
Executive Engineer
M. S. E. D. Co., Ltd.
Solapur

UNDERTAKING




(Ramesh S. Rathod)
Executive Engineer
M. S. E. D. Co. Ltd.,
Rural Division, Solapur


We, and **Maharashtra State Electricity Distribution Company Limited**, a company registered under the companies Act, 1956 and having its registered office at **Mumbai**, hereby do undertake in reference to our Application for laying 11 kv underground Electrical cable line across NH-52 From

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- Crossing 7 Nos. (At Utility Passing of NHAI) Total Length =420 Mtrs.in the state of Maharashtra, that

1. **Maharashtra State Electricity Distribution Company Limited, Mumbai** shall submit the performance Bank Guarantee for the proposed as and when the demand note is raised by NHAI.
2. **Maharashtra State Electricity Distribution Company Limited, Mumbai**, Shall renew the performance Bank Guarantee as and when required if work is not completed in two-year time of the submission of the BG.


(Ramesh S. Rathod)
Executive Engineer
M. S. E. D., Co. Ltd.,
Pune District, Maharashtra


UNDERTAKING


(Ramesh S. Rathod)
Executive Engineer
M. S. E. D. Co. Ltd.,
Rural District


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Crossing 7 Nos. (At Utility Passing of NHAI) Total Length =420 Mtrs.in the state of Maharashtra, that We will be carrying out the water pipe line work as per the specifications and standards of NHAI and the executed work will confirm all the standard conditions of NHAI guidelines.



(Pramod S. Rathod)
Operative Engineer
M. S. E. D. Co. Ltd.,
Talent Education Society

UNDERTAKING

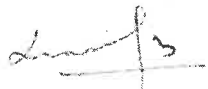

(Ramesh S. Rathod)
Executive Engineer
M. S. E. D. Co. Ltd.,
Rural Division, Solapur

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- Crossing 7 Nos. (At Utility Passing of NHAI) Total Length =420 Mtrs.in the state of Maharashtra, that We will shift water pipe line at our own cost as & when required by NHAI Authority within such time as stipulated by NHAI.



(Ramesh S. Rathod)
Executive Engineer
M. S. E. D. Co. Ltd.,
Rural Division, Solapur

UNDERTAKING



(Ramesh S. Rathod)
Executive Engineer
M. S. E. D. Co. Ltd.,
Rural Division, Solapur

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- Crossing 7 Nos. (At Utility Passing of NHAI) Total Length =420 Mtrs. in the state of Maharashtra, that We will relocate water pipe line at our own cost, notwithstanding the permission granted within such time as will be stipulated by NHAI for further expansion or any other development.


(Munish S. Rathod)
Executive Engineer
M. S. E. D. Co. Ltd.
and Power, Solapur

UNDERTAKING


(Ramesh S. Rathod)
Executive Engineer
M. S. E. D. Co. Ltd.,
Rural Division, Solapur


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1. **Maharashtra State Electricity Distribution Company Limited.** Shall be solely responsible / liable for full compensation / indemnification of concerned agency / aggrieved owners for any direct or indirect or consequential damages caused to them / claim or replacements sought for at our cost and risk.
2. Water pipe line would be laid keeping in mind future expansion 2/4/6 laning of the N.H. however, we also agree that we shall shift the water pipe line within 30 days (or as specified by the respective agency / owner) from the date of issue of Notice by the concerned owner to shift / relocate the water pipe line in case it is required for the purpose of improvement / widening of the road / route / highway or construction of flyover / bridge and restore the road / land to its original condition at our own cost and risk.



(Ramesh S. Rathod)
P. O. Box 111111
Mumbai - 400 001

3. We will not violate the instruction of NHAI (National Highway Authority of India), New Delhi.
4. Water pipe line will be laid under Road by HDD Method.
5. The agency will notify the concerned authority at least 15 days in advance before HDD Method.
6. Adequate arrangement for cautioning the traffic by way of caution board during daytime and danger light at night will be provided by the agency.
7. During the extent of work trenches should be strictly regulated so that the water pipe line are laid and trenches filled up before the close of work. The filling should be completed to the satisfaction of Engineer – in- charge.
8. The agency shall indemnify the road all the damages, if any, due to the Excavation of trenches for the laying of the water pipe line.



(Ramesh S. Rathod)
Executive Engineer
M. S. E. D. Co. Ltd.,
Rural Division, Solapur

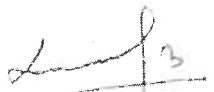
UNDERTAKING


(Rupert S. Friend)
Executive Director
N. J. & U. Co., Ltd.
1000 N. 10th Street

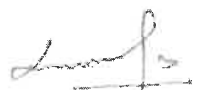
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Crossing 7 Nos. (At Utility Passing of NHAI) Total Length =420 Mtrs. in the state of Maharashtra, that the traffic movement during water pipe line will be managed by **Maharashtra State Electricity Distribution Company Limited.** in co – ordination with traffic police. Adequate arrangement for cautioning the traffic by way of caution boards during daytime and danger light at night will be provided by **Maharashtra State Electricity Distribution Company Limited.**


(**Ramesh S. Rathod**)
Executive Engineer
M. S. E. D. Co. Ltd.,
Rural Division, Solapur

UNDERTAKING

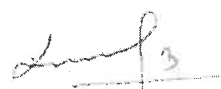


(Ramesh S. Rathod)
Vice President
P. S. R. D. Co. Ltd.
Bhopal, Madhya Pradesh

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Crossing 7 Nos. (At Utility Passing of NHAI) Total Length =420 Mtrs. in the state of Maharashtra, that If any claim is raised by concessionaries of the project than the same will be paid by **Maharashtra State Electricity Distribution Company Limited.**


(Ramesh S. Rathod)
Executive Engineer
M. S. E. D. Co. Ltd.,
Rural Division, Solapur

UNDERTAKING




(Ramesh S. Rathod)
Executive Director
M. S. E. G. S. Ltd.,
Kundiyani, 421 298

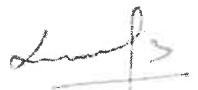
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- 5) Solapur to Vijaypur road crossing chainage No.35+500 Location –Near HP Arvind Petrol Pump, Nandani Feeder, Near Takali Sub-station.
- 6) Solapur to Vijaypur road crossing chainage No.37+454 Location –Mauli Laundry, Takali Feeder, Near Takali Sub-station.
- 7) Solapur to Vijaypur road crossing chainage No.29+206 Location –Aurad Road, Basavnagar Feeder, Near Mandrup Sub-station. Tal- Solapur South. Dis- Solapur.

Crossing 7 Nos. (At Utility Passing of NHAI) Total Length =420 Mtrs.in the state of Maharashtra, that Prior approval of NHAI shall be obtained before undertaking any work of installation, shifting or repairs, or alterations to the showing water pipe line located in the ROW of National Highway.


(Ramesh S. Rathod)
Executive Engineer
M. S. E. D. Co. Ltd.,
Rural Division, Solapur,


UNDERTAKING


(Ramesh S. Rathod)
Executive Engineer
M. S. E. D. Co. Ltd.,
Rural Division, Solapur

We, **Maharashtra State Electricity Distribution Company Limited.** a company registered under the companies Act,1956 and having its registered office at **Mumbai.** hereby do undertake in reference to our Application for laying 11 kv underground Electrical cable line across NH-52 From

- 1) Solapur to Vijaypur road crossing chainage No.011+900 Location – Verena Hotel, Hattur Feeder, Near Wadakbal Sub-station.
- 2) Solapur to Vijaypur road crossing chainage No.22+700 Location –Appa Hotel, Hattur Feeder, Near Wadakbal Sub-station.
- 3) Solapur to Vijaypur road crossing chainage No.24+704 Location –canara bank, Hattur Feeder, Near Wadakbal Sub-station.
- 4) Solapur to Vijaypur road crossing chainage No.32+700. Location –Near Water Supply, Nandani Feeder, Near Takali Sub-station.
- 5) Solapur to Vijaypur road crossing chainage No.35+500 Location –Near HP Arvind Petrol Pump, Nandani Feeder, Near Takali Sub-station.
- 6) Solapur to Vijaypur road crossing chainage No.37+454 Location –Mauli Laundry, Takali Feeder, Near Takali Sub-station.
- 7) Solapur to Vijaypur road crossing chainage No.29+206 Location –Aurad Road, Basavnagar Feeder, Near Mandrup Sub-station. Tal- Solapur South. Dis- Solapur.

Crossing 7 Nos. (At Utility Passing of NHAI) Total Length =420 Mtrs. in the state of Maharashtra, that Expenditure, if any incurred by NHAI for repairing any damage caused to the National Highway by the laying, maintenance or shifting of the water pipe line will be borne by **Maharashtra State Electricity Distribution Company Limited.**


(Ramesh S. Rathod)
Executive Engineer
M. S. E. D. Co. Ltd.,
Rural Division, Solapur

UNDERTAKING




(Munesh S. Rathod)
Ex. Sr. Engg
M. S. E. D. Co. Ltd.
Aural Dist. Solapur

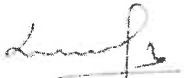
We, **Maharashtra State Electricity Distribution Company Limited.** a company registered under the companies Act,1956 and having its registered office at **Mumbai.** hereby do undertake in reference to our Application for laying 11 kv underground Electrical cable line across NH-52 From

- 1) Solapur to Vijaypur road crossing chainage No.011+900 Location – Verena Hotel, Hattur Feeder, Near Wadakbal Sub-station.
- 2) Solapur to Vijaypur road crossing chainage No.22+700 Location –Appa Hotel, Hattur Feeder, Near Wadakbal Sub-station.
- 3) Solapur to Vijaypur road crossing chainage No.24+704 Location –canara bank, Hattur Feeder, Near Wadakbal Sub-station.
- 4) Solapur to Vijaypur road crossing chainage No.32+700. Location –Near Water Supply, Nandani Feeder, Near Takali Sub-station.
- 5) Solapur to Vijaypur road crossing chainage No.35+500 Location –Near HP Arvind Petrol Pump, Nandani Feeder, Near Takali Sub-station.
- 6) Solapur to Vijaypur road crossing chainage No.37+454 Location –Mauli Laundry, Takali Feeder, Near Takali Sub-station.
- 7) Solapur to Vijaypur road crossing chainage No.29+206 Location –Aurad Road, Basavnagar Feeder, Near Mandrup Sub-station. Tal- Solapur South. Dis- Solapur.

Crossing 7 Nos. (At Utility Passing of NHAI) Total Length =420 Mtrs. in the state of Maharashtra, that If NHAI considers it necessary in future to move the water pipe line for any work of improvement or repairs to the road, it will be carried out as desired by NHAI at the cost of **Maharashtra State Electricity Distribution Company Limited.** Within stipulated reasonable time (Not exceeding 60 days) of the intimation given.


(**Ramesh S. Rathod**)
Executive Engineer
M. S. E. D. Co. Ltd.,
Rural Division, Solapur

UNDERTAKING



(Ramesh S. Rathod)
Executive Engineer
M. S. E. D. Co. Ltd.,
Rural Division, Solapur

We, **Maharashtra State Electricity Distribution Company Limited.** a company registered under the companies Act,1956 and having its registered office at **Mumbai.** hereby do undertake in reference to our Application for laying 11 kv underground Electrical cable line across NH-52 From

- 1) Solapur to Vijaypur road crossing chainage No.011+900 Location – Verena Hotel, Hattur Feeder, Near Wadakbal Sub-station.
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 - 4) Solapur to Vijaypur road crossing chainage No.32+700. Location –Near Water Supply, Nandani Feeder, Near Takali Sub-station.
 - 5) Solapur to Vijaypur road crossing chainage No.35+500 Location –Near HP Arvind Petrol Pump, Nandani Feeder, Near Takali Sub-station.
 - 6) Solapur to Vijaypur road crossing chainage No.37+454 Location –Mauli Laundry, Takali Feeder, Near Takali Sub-station.
 - 7) Solapur to Vijaypur road crossing chainage No.29+206 Location –Aurad Road, Basavnagar Feeder, Near Mandrup Sub-station. Tal- Solapur South. Dis- Solapur.
- Crossing 7 Nos. (At Utility Passing of NHAI) Total Length =420 Mtrs.in the state of Maharashtra, that

- i) Water pipe line will not have any deleterious effects on any of bridge components & roadway safety for traffic.
- ii) For 6 – lanning, “We do undertake that we will relocate service road / approach road / utilities at our own cost notwithstanding the permission granted within such time as well as stipulated by NHAI”, for future 6- lanning or any other development.





(Ramesh S. Rathod)
Executive Engineer
M. S. E. D. Co. Ltd.,
Rural Division, Solapur

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Figure 1. The effect of the concentration of the *Agrobacterium* suspension on the transformation efficiency of *Agrobacterium* strains. The number of transformed cells was determined by the number of colonies obtained on the selective medium. The results are the mean of three independent experiments. Error bars represent standard deviation.

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~~SECRET~~

PROJECT - RDSS(T-08) FEEDER SEPERATION SCHEME

CABLE LAYING ARRANGEMENT

(Ramash S. Rathod)
Executive Engineer
M. S. E. D. Co. Ltd.,
Rural Division, Solapur

1200

GL

GL

1050

1200

— EARTH SOIL

HDPE PIPE
Ø 150 MM,
HT XLPE CABLE

TRENCH FOR LAYING CABLE
AT ROAD CROSS H.D.D BOARING

Ramesh S. Rathod
(Ramesh S. Rathod)
Executive Engineer
M. S. E. D. Co. Ltd.,
Rural Division, Solapur

DEVELOPER :- EXECUTIVE ENGINEER, SOLAPUR - RURAL DIV.

PROJECT :- RDSS (T-08) FEEDER SEPERATION SCHEME

CUSTOMER :-
 **MAHAVITRAN**
M. S. E. D. Co. Ltd. Rural Division, Solapur

MAHARASHTRA RURAL ELECTRIFICATION CORPORATION

33/11 KV S/S

1
2
3
4

CH 50

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

STRUCTURE
10000 LONG

CH 100

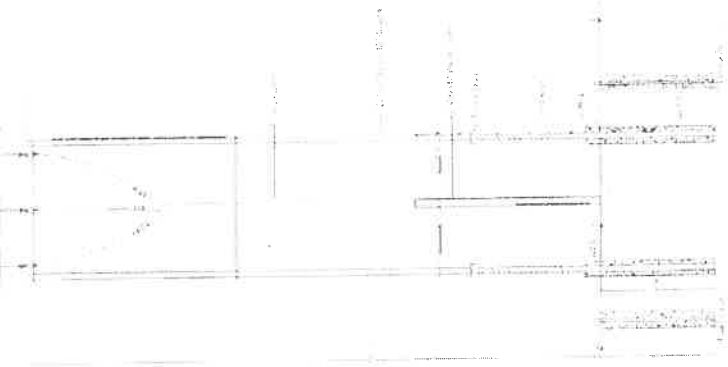
11 KV 300SQMM XLPE CABLE CROSSING
10000 HORIZONTAL BOARDING

CH 50

TO

CH NO.

STRUCTURE
10000 LONG



SEE ALSO DRAWING OF STRUCTURE

LEGEND :-

D.P STRUCTURE

SINGLE CIRCUIT
SUSPENSION

DEVELOPER : EXECUTIVE ENGINEER SOLAPUR - RURAL DIV
PROJECT : RDSS(T-08) FEEDER SEPERATION SCHEME
CUSTOMER : MAHAVITRAN
PROJECT : CABLE LAYING ARRANGEMENT THROUGH NHAI HIGHWAY

1200

GL

GL

---EARTH SOIL

1200
1050

HDPE PIPE
Ø 150 MM,
HT XLPE CABLE




TRENCH FOR LAYING CABLE AT ROAD CROSS H.D.D BOARING

DEVELOPER:-EXECUTIVE ENGINEER, SOLAPUR - RURAL DIV.

PROJECT:-RDSS(T-08) FEEDER SEPERATION SCHEME

CUSTOMER:-
 MAHAVITRAN
M.S. STATE ROAD TRANSPORT CORPORATION


(Ramesh S. Rathod)
Executive Engineer
M.S. E. D. Co. Ltd.,
Rural Division, Solapur

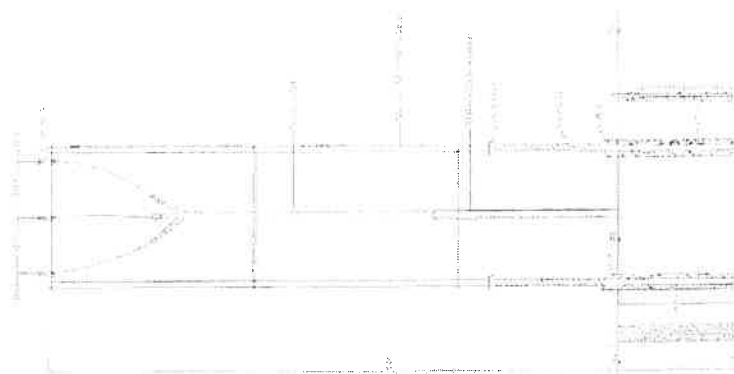
White

Year	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100
1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	

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10



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[Signature]
(Ratnash S. Rathod)
Executive Engineer
M. S. P. O. Co. Ltd.,
Rural Planning, Solapur

LEUNG

D.P. STRUCTURE

single copy
supernova

DEVELOPER: EXECUTIVE ENGINEER, SOLAPUR - RURAL DIST.

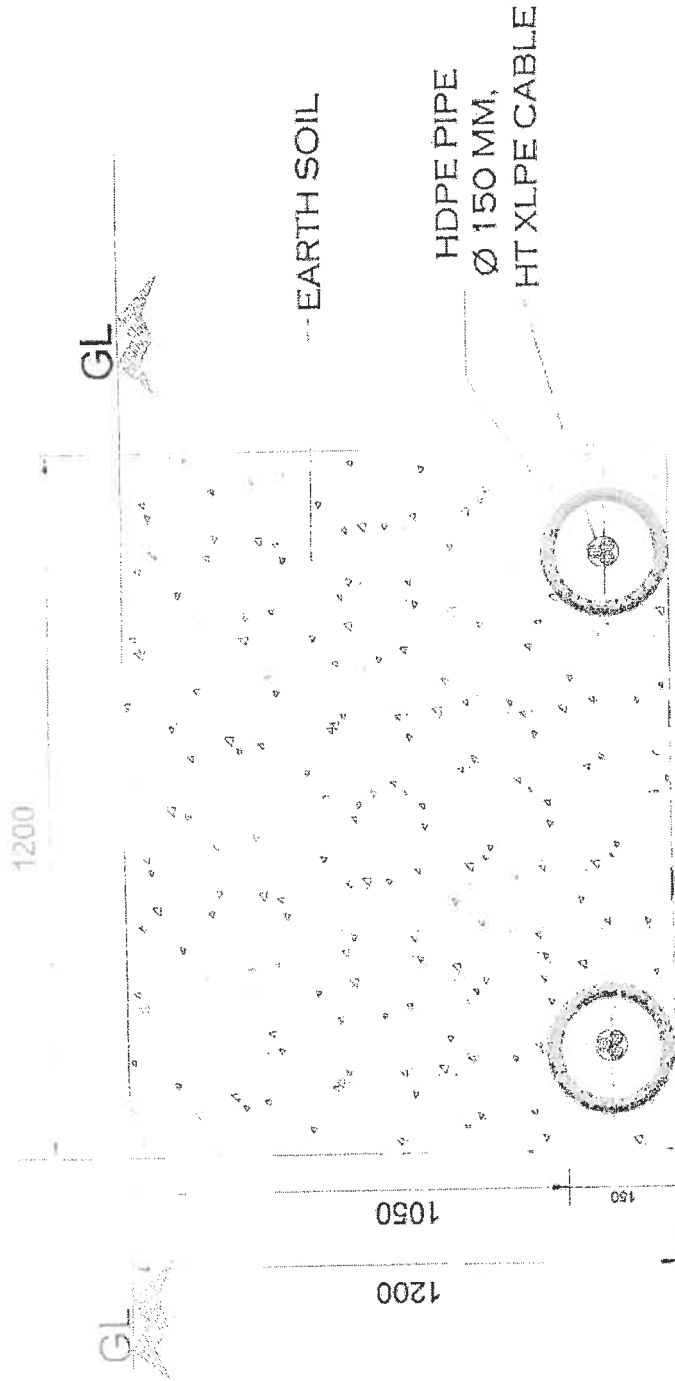
PROJECT: RDSS(T-08) FEEDER SEPARATION SCHEME

CUSTOMER:-

MAHAVITRAN

MAHAVITRAN, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912

PROJECT :- CABLE LAYING ARRANGEMENT THROUGH NHAI HIGHWAY



TRENCH FOR LAYING CABLE AT ROAD CROSS H.D.D BOARING

DEVELOPER :- EXECUTIVE ENGINEER, SOLAPUR - RURAL DIV.

PROJECT :- RDSS(T-08) FEEDER SEPERATION SCHEME

CUSTOMER :- **MAHAVITRAN**
KARNATAKA STATE ELECTRICITY BOARD, BANGALORE

[Signature]
Sd/-
Executive Engineer
Solapur - Rural Division
Karnataka State Electricity Board

11. *Journal of the American Medical Association*, 277, 1996, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674,

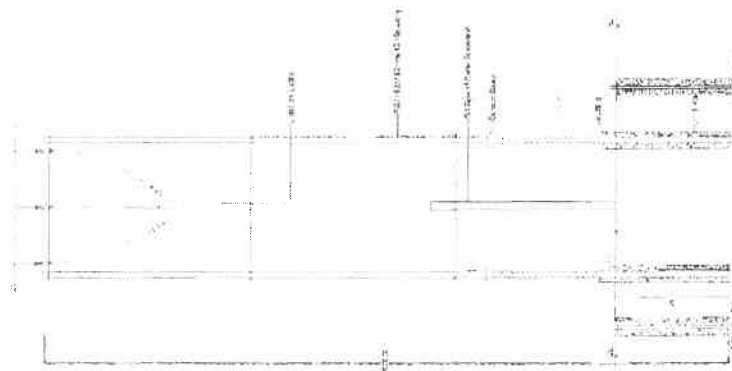
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11 KV 303050MM X LPE CABLE CROSSING THROUGH HORIZONTAL BOARDING

1. 1996-1997
 2. 1997-1998

1. *g* is a function from \mathcal{A} to \mathcal{B} .
 2. *g* is a function from \mathcal{B} to \mathcal{A} .
 3. *g* is a function from \mathcal{A} to \mathcal{A} .
 4. *g* is a function from \mathcal{B} to \mathcal{B} .
 5. *g* is a function from \mathcal{A} to \mathcal{B} .
 6. *g* is a function from \mathcal{B} to \mathcal{A} .
 7. *g* is a function from \mathcal{A} to \mathcal{A} .
 8. *g* is a function from \mathcal{B} to \mathcal{B} .



1000

LEGEND :-

D.P. STRUCTURE

SINGLE CIRCUIT SUSPENSION

DEVELOPER:-EXECUTIVE ENGINEER SOLAPUR-RURAL DIST.

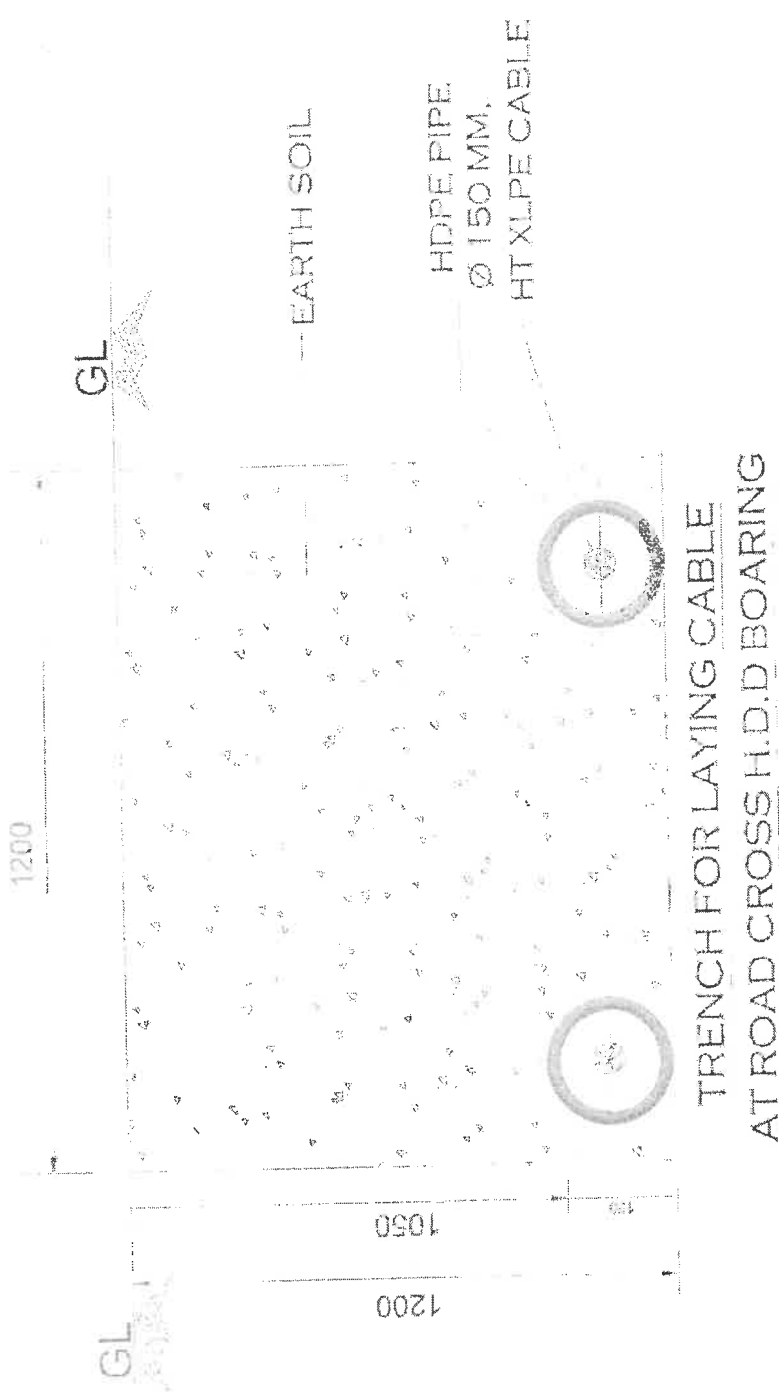
PROJECT :- RDSS(T-08) FEEDER SEPARATION SCHEME

CUSTOMER:-

FAH-VITRAN

PROJECT :- CABLE LAYING ARRANGEMENT THROUGH NHAI HIGHWAY

(Ramesh S. Rathod)
Executive Engineer
M. S. E. L. Co. Ltd.,
Rural Division, Solapur



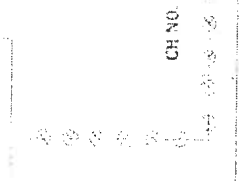
DEVELOPER - EXECUTIVE ENGINEER, SOLAPUR - RURAL DIV.

PROJECT - RDSS(T-08) FEEDER SEPERATION SCHEME

CUSTOMER :- **MAHAVITRAN**
M. S. E. Co. Ltd.
Rural Division, Solapur

[Signature]
(Ramesh S. Rathod)
Executive Engineer
M. S. E. Co. Ltd.
Rural Division, Solapur

33/11 KV S/S



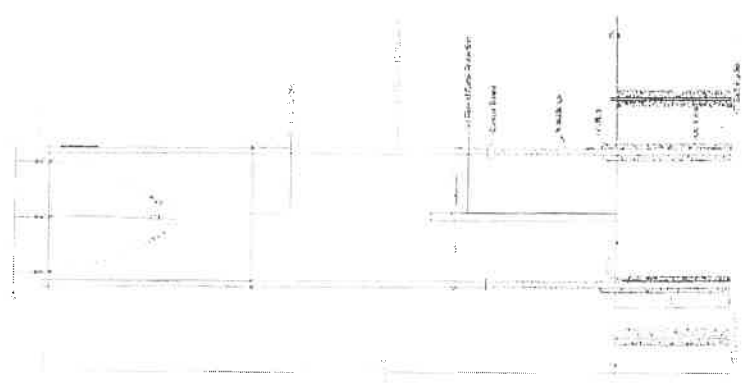
CH NO.



11 KV CABLES AND CABLE CROSSING
THROUGH HORIZONTAL POLE

CH NO.

11 KV TOWER
STRUCTURE



LEGEND



11 KV STRAC HEAD



SINGLE CIRCUIT
SUSPENSION

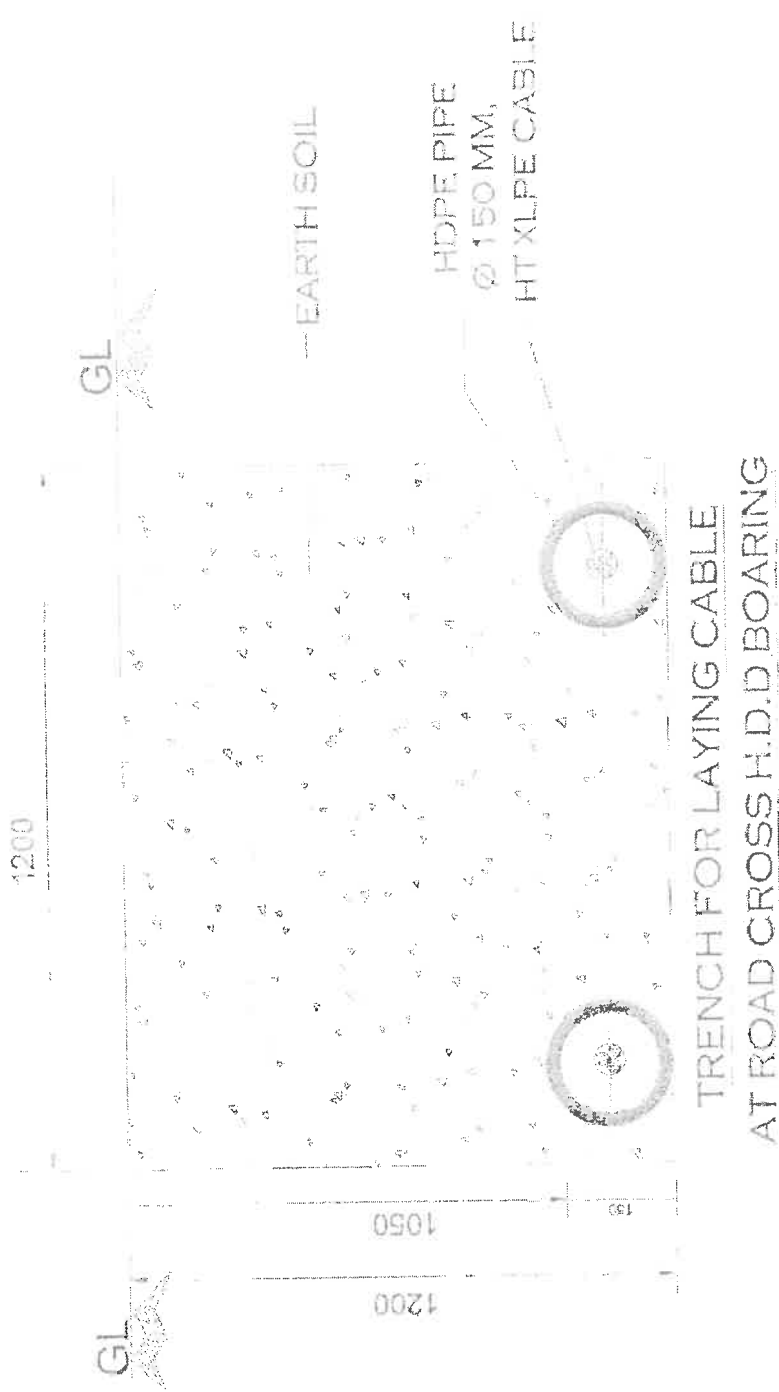
DEVELOPER: EXECUTIVE ENGINEER, SOLAPUR - RURAL DIV.

PROJECT: RDSS(T-08) FEEDER SEPERATION SCHEME

CUSTOMER: MAHA/VITRAN

PROJECT: CABLE LAYING ARRANGEMENT THROUGH NHAI HIGHWAY

[Signature]
(Ramesh S. Rathod)
Executive Engineer
M. S. D. Co. Ltd.,
Rural Division, Solapur



DEVELOPER :- EXECUTIVE ENGINEER, SOLAPUR - RURAL DIV.

PROJECT :- RDSS(T-08) FEEDER SEPERATION SCHEME

CUSTOMER :- **MAHAVITRAN**
MAHARASHTRA STATE ELECTRICITY SUPPLY BOARD

[Signature]
Ramesh S. Bhatnagar
Executive Engineer
RDSS(T-08) Solapur - Rural
Div. II, Solapur

BRIDGE

SECTION

CH NO. 1

CH NO. 2

CH NO. 3

CH NO. 4

CH NO. 5

CH NO. 6

CH NO. 7

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CH NO. 99

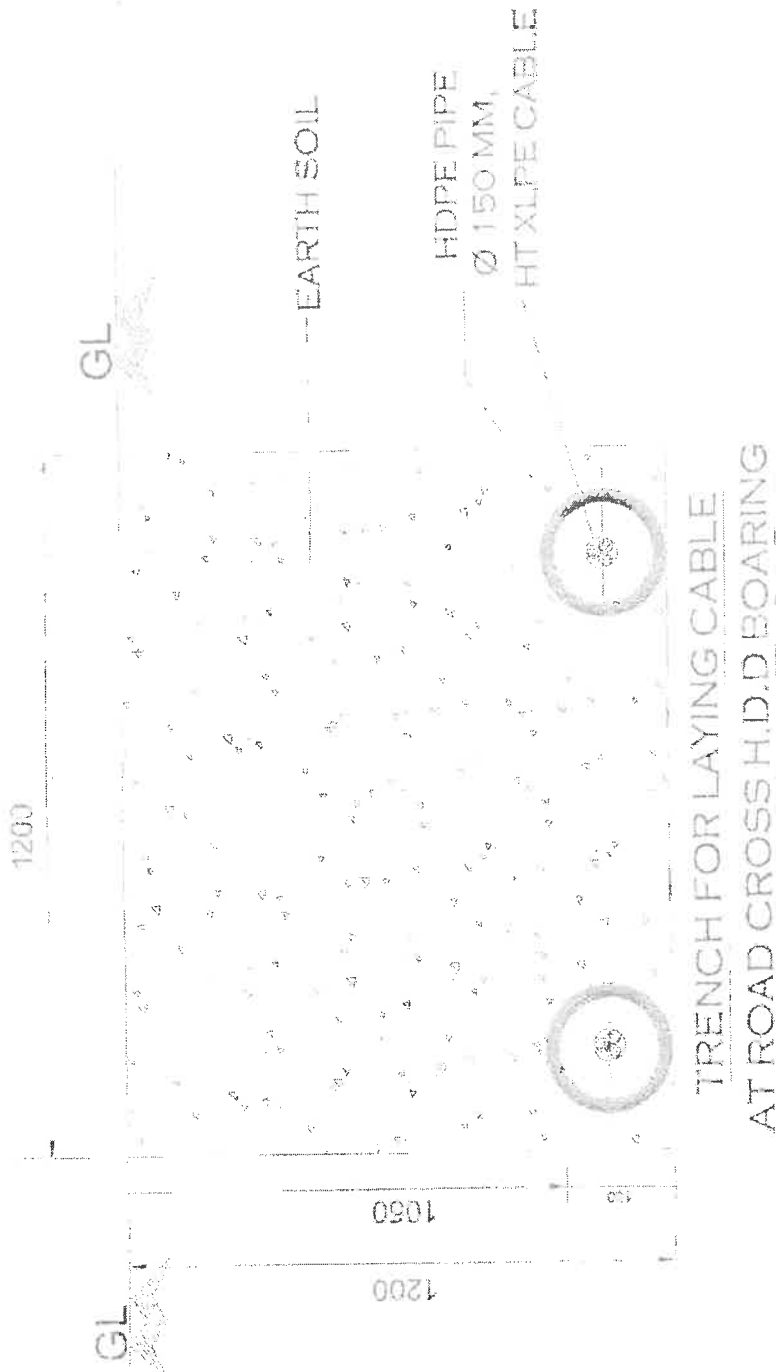
CH NO. 100

PROJECT : RDSS(T-08) FEEDER SEPARATION SCHEME

MAHLE VITRAN

PROJECT :- CABLE LAYING ARRANGEMENT THROUGH NHAI HIGHWAY

(Name: S. Rathod)
Executive Engineer
M. S. E. D. Co. Ltd.,
Rural Division, Solapur



DEVELOPER :- EXECUTIVE ENGINEER, SOLAPUR - RURAL DIV.

PROJECT :- RDSS(T-08) FEEDER SEPERATION SCHEME

CUSTOMER :- **MAHAVITRAN**
M. S. E. Co. Ltd.,
Rural Division, Solapur

(Ramesh S. Rathod)
Executive Engineer
M. S. E. Co. Ltd.,
Rural Division, Solapur