

भारतीय राष्ट्रीय राजमार्ग प्राधिकरण

(अडक परिवहन और राजमार्ग मंत्रालय, भारत सरकार)

National Highways Authority of India

(Ministry of Road, Transport & Highway) परियोजना कार्यान्वयन, इकाई. सोलापूर (महाराष्ट्र) Project Implementation Unit. Solapur (Maharashtra) कार्यालय/Office:

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

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

No.: NHAI/PIU/SLP/PS-II/ 2151

Date: 18 08 2021

INVITATION OF PUBLIC COMMENTS

Sub: Four lanning of Pune Solapur section of NH-65 from Km. 150.050 to Km. 251.325 in the State of Maharashtra under NHDP Phase III Pkg. II on DBFOT basis: -Augmentation to Solapur City Water Supply Scheme (Ujani Dam as source - 110 MLD) - Proposal for laying drinking water supply pipe line along NH-65 in the state of Maharashtra - Reg.

Sir,

- The Commissioner Solapur Municipal Corporation Solapur has submitted 1. proposal regarding Augmentation to Solapur City Water Supply Scheme (Ujani Dam as source - 110 MLD) Proposal for laying drinking water supply pipe line along Pune Solapur section of NH-65 from Ch. 153/900 to 216/860 and Ch. 217/580 to 235/000 RHS total Length of 80.380 Km. Crossing at Ch. 153/900 (At Adhegaon), Ch. 180/270 and Ch. 180/275 (At Aran) total length of 180m for the total length of 80.560 Km. RMT on NHAI land.
- As per the guidelines, issued by the Ministry Circular RW-NH-33032-01-2017-2. S&R (R) dated 26.06.2020, 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).
- In view of the above, comments of the public on the above application is 3. invited to the below mentioned address, which should reach by this office within 30 days from the date of publication beyond which no comments shall be entertained.

Project Director National Highways Authority of India Project Implementation Unit, Solapur Plot No. E-2, Jai Jalaram Nagar, Jule Solapur, Behind Shivdare Pharmacy College, Solapur - 413004 (Maharashtra)

Thanking you,

भा.रा.रा.प्रा. प.का.ई, सोलापूर

Copy to:-

CGM (Tech) RO Mumbai for information please,

Executive Engineer Ujani Canal Division No. 9 Mangalwedha for information. ii.

M/s. K & J Projects Pvt. Ltd., Solation information. iii.

M/s. PSRDCL Solapur for information iv.

Master file.

D:\Pune-Solapur(Pkg-ii)\Outward letter\29.03.2021 letter to iE - Reg - No objection certificate for commercial purpose Retail Outlet Pune-Solapur at Gat no. 1981 8-10 Have i Wage Cembergi, Selected have been in 110 075



Office of the Commissioner

Solapur Municipal Corporation, 'Indrabhavan' Railway Lines, Solapur - 413 001

Tel.: (O.) (0217): 2740300

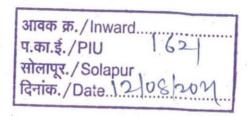
Email: smccommissioner@yahoo.com

Date:

O. No./PHE/Source/205 Date - 09/08/2021

To,

Project Director, National Highway Authority of India, Plot No. 2 jalaram Nagar, behind Shivdare College, Jule Solpaur, Solapur



Sub: Augmentation to Solapur City Water Supply Scheme (Ujjani Dam as a source – 110 MLD) on Design, Build, Maintain, Operate and TransferBasis.
Proposal for layingto layingdrinking water pipe line along PUNE – Solapur Road NH- 65

Ref: 1. This office L.No. 186 Dt.30/07/2021

2. Your office L.No.NHAI/PIU/SLP/PS-II/IE/13027/1903 Dt.03/08/2021

With reference to above subject here with submitting proposal for laying drinking water pipe line along PUNE – Solapur Road NH- 65 from CH 153/900 to 216/860 & CH 217/580 to 235/000 RHS Length = 80380 M and Road crossing at Chainage No. 153/900 (At Adegaon), 180/270 and 180/275 (At Aran) Length = 180 M for the total length of 80560 RMT on NHAI land along with necessary documents and drawings. Convey license fee for 5 years/ life long and performance security amount to be deposited as per MORTH circular as earliest to this office.

This for your information and necessary action

P. Sivasankar (LA.S.)

Commissioner

Solapur Municipal Corporation

Solpaur

Copy to – 1. Hon. Kunal Kumar, Joint Secretary, MOHUA.

2. Hon. Chairman, Smart City development corporation Ltd.

3. Hon. Principal Secretary, urban development dept. (2).

4. Chief Executive Officer, Solpaur City development corporation Ltd.

5. Executice Engineer, MJP, Solapur.

March 26.

Proposal of Augmentation to Solapur city water supply project

(Ujani Dam as a source - 110 MLD) in the land for Along the Road of National Highways vested with NHAI.

Sr.	Description	Page		
no.		From	To	
1	Application			
2	Checklist			
3	License Agreement			
4	Undertaking -1			
5	Undertaking - 2			
6	Undertaking - 3			
7	Undertaking - 4			
8	Undertaking - 5			
9	Undertaking - 6			
10	Undertaking - 7			
11	Undertaking - 8			
12	Undertaking - 9			
13	Undertaking - 10			
14	Undertaking - 11			
15	Undertaking - 12			
16	Methodology of laying pipe line along highway and crossing pipe line.			
17	Water pipe line plan & cross section			

CHECK - LIST

Guidelines for Project Directors for processing the proposal of Augmentation to Solapur city water supply project (Ujani Dam as a source - 110 MLD) in the land for Along the Road of National Highways vested with NHAI.

Relevent Circulars

Ministry Circular No. RW/NH - 33044/29/2015-S&R (R) dated 22.11.2016. 1)

Sr. no.	Item	ting approval for laying Water Pipe line on NH Land. Information / Status	Remarks				
1	General information	Proposed Water Suply line Along the road NH - 65					
		Pune - Solapur RHS					
		1) Chainage @ 153/900 to 216/860.					
		Dia Of Pipe - 1300 mm OD M.S. Pipe Length- 62960 Rmt.					
		2) Chainage @ 217/580 to 235/000.					
		Dia Of Pipe - 1300 mm OD M.S. Pipe Length- 17420 Rmt.					
		Proposed Water Suply line Crossing the road					
		NH - 65 Pune - Solapur					
		1) At Chainage 153/900 Length - 60 M					
		2) At Chainage 180/270 Length - 60 M					
		3) At Chainage 153/275 Length - 60 M					
		Total Length - 80560 Rmt	1				
1.1	Name & Address of the Applicant	The Commissioner, Solapur Municipal Corporation					
		Indrabhuvan, Punshlok Appasaheb Varad Path, Railway					
		Lines, Solapur-413001.					
1.2	National Highway Number	NH-65					
1.3	State	Maharashtra					
1.4	Location	Along the road from Adegaon to Pakni					
1.4	Location	Crossing th road at Adegaon & Aran					
		Crossing til foad at Adegaon & Aran					
1.5	(Chainage in Km)	Water pipe line Along the Road at Chainage from 153/900 to					
		216/860 & 217/580 to 235/000 RHS.					
		Water pipe line crossing at CH 153/900, CH 180/270 & CH					
		180/275					
1.6	Length in Meters	Water pipe line Along the Road Length - 80380 RMT					
		Water pipe line Crossing the Road Length - 180 RMT					
		Total Length - 80560 Rmt					
1.7	Width of available ROW	60.0 M					
1.7	(a) Left side from center line towards	23					
	increasing chainage / km direction.						
		27					
	(b) Right side from center line towards	37					
	increasing chainage / km direction.						
1.8	Proposal to lay the pipe.						
1.0	(a) Right side from center line towards	Yes					
	increasing chainage / km direction.	103					
	increasing chamage / km direction.						
	(b) Left side from center line towards	No					
	increasing chainage / km direction.	N					
1.9	Proposal to lay acquire land.						
1.3	(a) Left side from center line.	N.A.					
4.40	(b) Right side from center line.	N.A.					
1.10	Whether proposal is in the same side	Land Acquisition not required.					
	where land is not to be acquired.						
		Projecto					



Commissione

Sr. no.	Item	Information / Status	Remarks
The second of th		Water pipe line Along the Road at Chainage from 153/900 to 216/860 & 217/580 to 235/000 RHS.	
		L = 80380 Rmt. At RHS extreme edge of ROW.	
1.11	Details of already laid services, if any,	-	
	along the proposed route.		
1.12	Number of lanes (2/4 / 6 / 8 lanes existing.	4 Lanes with paved shoulder.	
1.13	Proposed Number of lanes (2 lane with paved shoulders / 4 / 6 / 8 lanes).	N.A.	
1.14	Service road existing or not	YES	
	If yes then which side	RHS	
	(a) Left side from center line. (LHS)	N.A.	
	(b) Right side from center line. (RHS)	At 30.0M CH 153/200 to CH 192/000	
1.15	Proposed Service road.	-	
	(a) Left side from center line.	-	
	(b) Right side from center line.	-	
1.16	Wheter proposal to lay pipe is after the	After service Road	
	service road or between the service		
	road and main carriageway.		
1.17	The permission for laying pipe shall be considered for approval / rejection.	Submitted for approval.	
	, , , , , , , , , , , , , , , , , , , ,		
	(i) where the ROW is more than 45 m	Agreed	
	then the pipe shall be laid at the edge of		
	right of way within the utility corridor of		
	2 m width, duly keeping in view the		
	future widening.		
	(ii) where land is yet to be acquired for 4	N.A.	
	laning and the position of new		
	carrigeway has been decided then the		
	pipe shall be laid at the edge of right of		
	way within the utility corridor of 2 m		
	width, on that side of existing		
)	carriageway where extra land is not		
	proposed to be acquired for 4 - laning.		
	(iii) Where the widening plan for 4-	N.A.	
	laning is not yet decided and available		
	ROW is around 30 m or less, a judicious		
	decision would need to be taken for		
	permitting. The laying of cable / duct.		
	This could be within 1.50 m to 2 m of		
	utility corridor at the edge of existing		
	ROW, duly keeping in view the possible		
	widening plans.		
1.17	(iv) where ROW is restricted and	N.A.	
	adequate only to accommodate the		
	carriageway, central verge, shoulders		
	and drains (e.g. highways in cutting		
	through hilly / rolling terrain), the pipe	and a second	
	shall be laid clear of the drain.	Projects	





Sr. no.	no. Item Information / Status						
1.17	(V) Where land strip for utility corridor cannot be conveniently earmarked (available ROW restricted to the toe of the embankment) for laying of cable / ducts, the permission may be refused.	N.A.					
1.10	No. of applicants on the same stretch						
1.18	Period and the second s						
1.19	Whether the case of multiple licenses.	No					
1.20	If so furnish a joint implementation programme to lay their respective ducts within stipulated time frame.	to lay their respective ducts					
1.21	If crossings of the road involved if Yes it shall only be through trench - less technology.	y be through trench - less Water pipe line crossing at CH 153/900, CH 180/270 & CH					
2	Document / Drawings enclosed with the proposal.						
2.1		Yes attached.					
2.2	Cross section showing the size of pit and location of pipe for HDD method.	Yes attached.					
2.3	Strip plan / Route Plan showing the Pipeline, Chainage, Width of ROW, distance of proposed, cable from the edge of ROW, important mile stone, intersections, cross drainage works etc.	Yes attached.					
2.4	Methodology for laying Water Pipeline						
2.4.1	Open trenching method. If yes, Methodology of refilling of trench.	The available excavated stuff shall be laid in layers of 15 cm to 20 cm. Each layer shall be watered and compacted before the upper layer is laid till the required level is reached.					
2.4.2	Horizontal Directional Drilling (HDD) Method.	yes					
2.4.3	Laying Pipeline through CD works and method of laying (Whether to be hung outside parapet).	No.					
3	Draft License Agreement signed by two witnesses.	Yes.					
4	Performance Bank Guarantee	Yes. We will submit after demand from NHAI.					
4.1	Performance B. G. as per MORTH circular dt.22/11/2016 to be obtained @ Rs. 500 /- per meter length.						
4.2	Confirmation of BG has been obtained as per NHAI guidelines.	Yes. Projects					





Sr. no.	Item	Information / Status	Remarks
5	Affidavit / Undertaking from the Applicant for		
5.1	Not to damage to other utility, if damaged then to pay the losses either to NHAI or to the concerned agency.	Yes attached.	
5.2	Renewal of Bank Guarantee	Yes attached.	
5.3	Confirming all standard condition of NHAI's guideline.	Yes attached.	
5.4	Shifting of Pipeline as and when required by NHAI.	Yes attached.	
5.5	Shifting due to 6 lanning / widening of NH.	Yes attached.	
5.6	Indemnity against all damages and claims clause (xxiv).	Yes attached.	
5.7	Traffic movement during laying of pipe to be managed by the applicant.	Yes attached.	
5.8	If any claim is raised by the Concessionaire then the same has to be paid by the applicant.	Yes attached.	
5.9	Certificate for 6 - laning from the applicant in the following format. "We do undertake that I will relocate service road / approach road / utilities at my own cost notwithstanding the permission granted within such time as will be stipulated by NHAI " for future six - laning or any other development."		
5.10	Expenditure, if any, incurred by NHAI for repairing any damage caused to the national highway by the laying, maintenance or shifting of the pipe will be borne by the agency owning the line.		
5.11	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 owning the utility line within a reasonable time (not exceeding 60 days) of the intimation given.		
5.12	Certificate from the applicant in the following Format: (i) Laying the pipe will not have any deleterious effects on any of the bridge Components and roadway safety for traffic.		





Sr. no.	Item	Information / Status	Remarks
5.12	(ii) For 6 - Lanning "We do undertake that I will relocate service road/approach road/utilities at my own cost notwithstanding the permission granted within such time as will be stipulated by NHAI" for future 6-lanning or any other development."		
6	Who will Sign the agreement on behalf of pipe laying agency	The Commissioner, Solapur Municipal Corporation	
7	Certificate from the project Director		
7.1	Certificate for the confirming of all standard condition issued vide ministry circular no. Ministry circular No. NH-41(58)/68 dated: 31/01/1969, Ministry Circular No. NH - III/P/66/76, dated: 18/19-11- 1976, Ministry Circular No. RW/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 dated: 19-1-1995, Ministry Circular No. RW/NH-34066/2/95/5 & R dated:25-10-1999 and Ministry Circular No.RW/NH-34066/7/ 2007 S & R dated:17-09-2003		
7.2	(i) "it is certified that any other location of the pipe would be extremely difficult and unreasonable costly and the installation of pipe 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."(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 accommodation proposed six - laning		





Sr. no.	Item	Information / Status	Remarks	
8	If NH section proposed to be taken up by NHAI on BOT basis - a clause in para 17 to be inserted in the agreement. "The permitted Highway on which Licensee has been granted the right to lay pipeline has also been granted as a right of way to the concessionaire under the concesion agreement for up - gradation of 150.050 to 251.325 on Build, operate and Transfer Basis and therefore, the licensee shall honour the same".	Yes		
9	Who will supervise the work of laying of OFC Cable			
	a. on behalf of applicant	Executive Engineer, Maharashtra Jeevan Pradhikaran, Division Solapur.		
	b. On behalf of NHAI			
10	Who will ensure that the work of laying of Pipe line work			
	a. on behalf of applicant	Executive Engineer, Maharashtra Jeevan Pradhikaran, Division Solapur.		
	b. On behalf of NHAI			
11	Who will pay the claims for damages done /disruption in working of Concessionaire if asked by the concessionaire			
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) issued vide Ministry Circular No. RW/NH/33044/17/2000/S&R dated 23.7.2003.			
13	if any previous approval is accorded for laying of pipeline then Photocopy of register of records of permissions accorded as maintained by PD (as per Ministry Circular No. RW/NH/33044/17/2000/S&R dated 23.07.2003) as referred in para 13 above is enclosed or not.			





(Enclosure to Ministry Circular No. RW/NH-33044/17/2000 S&R dated 29.9.2000) Format for Maintaining Records of Right - Way permission granted for laying Water pipeline (to be maintained separately for every NH and State, every PWD Division or equivalent)

1 Name of State

Maharashtra

2 Name of Agency (PWD/BRO/NHAI)

NHAI

Name of PWD Division of Equivalent

NHAI, Solapur.

NH Number

NH No. 65 (Pune to Solapur)

Sr. no.	Location change in Km	Left or right side of NH towards increasing chainage / Km direction	Section and reach	Kind of service	Name of licensee and contact address	Date of signing of agreement	Date of validity of agreement	Date of last inspection of site	Any deviation from MORTH standard norms	Remarks
1)	Proposed Water Suply line Along the road NH - 65 Pune - Solapur RHS 1) Chainage @ 153/900 to 216/860. Dia Of Pipe - 1300 mm OD M.S. Pipe Length- 62960 Rmt. 2) Chainage @ 217/580 to 235/000. Dia Of Pipe - 1300 mm OD M.S. Pipe Length- 17420 Rmt. Proposed Water Suply line Crossing the road NH - 65 Pune - Solapur 1) At Chainage 153/900 Length - 60 M 2) At Chainage 180/270 Length - 60 M 3) At Chainage 153/275 Length - 60 M Total Length - 80560 Rmt	Right Side	Pune to Solapur	Water Pipe line	The Commissioner,So lapur Municipal Corporation, Indrabhuvan, Punshlok Appasaheb Varad Path, Railway Lines, Solapur-413001.				No.	





AGREEMENT REGARDING GRANTING OF RIGHT OF WAY PERMISSIONS

FOR LAYING UTILITY SERVICES ON NATIONAL HIGHWAYS

Agreement to lay Drinking water pipe line **along** PUNE – Solapur Road NH- 65 from CH 153/900 to 216/860 & CH 217/580 to 235/000 **RHS** Length = 80380 M and **Road crossing** at Chainage No. 153/900 (At Adegaon), 180/270 and 180/275 (At Aran) Length = 180 M for the total length of 80560 RMT on NHAI land.

This Agreement made this ____ day of ____ Month of 2021 (year) between National Highway acting in his executive capacity through

which expression shall unless excluded by or repugnant to the context, include his successors in office and assigns) on the one part, and SOLAPUR MUNICIPAL

Correctioner
Solapur Municipal Corporation

CORPORATION, having its registered office at Indrabhuvan, Punshlok Appasaheb Varad Path, Railway Lines, Solapur -413001, (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 on section of Pune – Solapur at Ch 153 + 900 to CH 235 + 000 km of NH 65 RoW.

Whereas the Licensee proposes to Permission for Laying water pipe line referred to as utility services in subsequent paras.

Whereas the Licensee has applied to the Authority for the permission to lay utility services along the road from CH 153 + 900 to CH 235 + 000 km and crossing at CH 153+900,180+270 & 180+275.

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

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.
- 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 metre 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 lease 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.
- 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 herein-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.
- Rs. per route metre / 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 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 shall not have to terminate the permission without giving 90 days prior notice to the licensee in writing and Authority has right 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.
- 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 not 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 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 / NHAII 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

(Signature, name & address with stamp)

Signed on Behalf of Solapur Municipal Corporation

By

(P. Sivasankar) Commissioner Solapur Municipal Corporation Solapur

HOLDER OF GENERAL POWER OF ATTORNEY. DATED _____ EXECUTED IN ACCORDANCE WITH THE RESOLUTION NO. ____ DATED ____ PASSED BY THE BOARD OF DIRECTORS IN THE MEETING HELD ON IN THE PRESENCE OF WITNESSES:

1. Santosh S. Gadelcar Gatelcal

2. Mathapati N.J



0 2021 0

483621

AUG 2021

सोलापुर अनुक्रमांक - 932 ह् ट्रिह्नांक - 61 (102) neinsi रपालक) रा ल्यार कार्यालय सोला यांनी रु....प्रि. चा जनरल स्टॅम्प माग्रित्रलेवरुन हा रु..... २०० चा व भरतीस रु. चे जनरल स्टॅम्प ब्रिलें.

प्रताप सत्यवान सूर्यवंशी

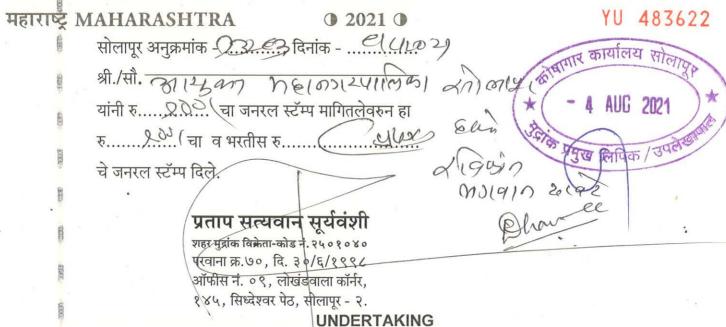
शहर मुद्रांक विक्रेता-कोड नं. २५०१०४० प्रवाना क्र.७०, दि. ३०/६/१९९८ ऑफीस नं. ०९, लोखंडवाला कॉर्नर, १४५, सिध्देश्वर पेठ, सोलापूर - २.

UNDERTAKING

We, SOLAPUR MUNICIPAL CORPORATION, having its registered office at Indrabhuvan, Appasaheb Varad Path, Railway Lines, Solapur, Maharashtra 413001, hereby do undertake in reference to our Application for laying water pipe line along section of NH 65 from CH 153+900 to 216+860 & CH 217+580 to 235+000 (RHS) and crossing of water pipe line across Pune - Solapur section of NH- 65 at CH 153+900, 180+270 and 180+275 km for the total length of 80560 RMT 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.





We, SOLAPUR MUNICIPAL CORPORATION, having its registered office at Indrabhuvan, Appasaheb Varad Path, Railway Lines, Solapur, Maharashtra 413001,

hereby do undertake in reference to our Application for laying water pipe line along section of NH 65 from CH 153+900 to 216+860 & CH 217+580 to 235+000 (RHS) and crossing of water pipe line across Pune - Solapur section of NH- 65 at CH 153+900, 180+270 and

180+275 km for the total length of 80560 RMT in the state of Maharashtra, that

1. SOLAPUR MUNICIPAL CORPORATION shall submit the performance Bank Guarantee for the proposed as and when the demand note is raised by NHAI.

2. **SOLAPUR MUNICIPAL CORPORATION** 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.



महाराष्ट्र MAHARASHTRA

① 2021 ①

सोलापूर अनुक्रमांक - 🔎 🕮 ६ १ दिनांक - 🤐 ८ १ प्राप्त कार्यालय सोलापूर कार्यालय सोलापुर कार्यालय साम्यालय सोलापुर कार्यालय साम्यालय साम्याल

शहर मुद्रांक विक्रेता-कोड नं.२५०१०४० परवाना क्र.७०, दि. ३०/६/१९९८ ऑफीस नं. ०९, लोखंडबाला कॉर्नर, १४५, सिध्देश्वर पेठ, सोस्ट्रिस्ट्रिस्टराजि

We, SOLAPUR MUNICIPAL CORPORATION, having its registered office at Indrabhuvan, Appasaheb Varad Path, Railway Lines, Solapur, Maharashtra 413001, hereby do undertake in in reference to our Application for laying water pipe line along section of NH 65 from CH 153+900 to 216+860 & CH 217+580 to 235+000 (RHS) and crossing of water pipe line across Pune - Solapur section of NH- 65 at CH 153+900, 180+270 and 180+275 km for the total length of 80560 RMT 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.



0 2021 0

YU 483624

कार्यालय सोल

सोलापूर अनुक्रमांक - १२२ हिंसी दिनांक - ... १८८८ अ श्री./सी. ७०१ मुळा १६ (व ठ १ ८ पा १०००) व यांनी रु..... १८८८ चा जनरल स्टॅम्प मागितलेवरुन हा रु..... १८८८ चा व भरतीस रु.................. १८९४) चे जनरल स्टॅम्प दिले.

4)(41) 8102

प्रताप सत्यवान सूर्यवंशी

शहर मुझंक विक्रेता-कोड नं.२५०१०४० परवाना क्र.७०, द्वि. ३०/६/१९९८ ऑफीस नं. ०९, लोखंडवाला कॉर्नर, १४५, सिध्देश्वर पेठ, सोलापूर - २.

UNDERTAKING

We, SOLAPUR MUNICIPAL CORPORATION, having its registered office at Indrabhuvan, Appasaheb Varad Path, Railway Lines, Solapur, Maharashtra 413001, hereby do undertake in reference to our Application for laying water pipe line along section of NH 65 from CH 153+900 to 216+860 & CH 217+580 to 235+000 (RHS) and crossing of water pipe line across Pune - Solapur section of NH- 65 at CH 153+900, 180+270 and 180+275 km for the total length of 80560 RMT 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.



2021

YU 483625

सोलापूर अनुक्रमांक - १२३०-६-६ दिनांक - १५०००) श्री./सौ. नुता १५००० १ १६ १ १०००० १ यांनी रु..... चा जनरल स्टॅम्प मागितलेवरुन हा रु..... १५००० चे जनरल स्टॅम्प दिले.

प्रताप सत्यवान सूर्यवंशी शहर मुद्रांक विक्रेता-कोड नं. २५०१०४० परवाना क्र.७०, दि. ३०/६/१९९८ ऑफीस नं. ०९, लोखंडवाला कॉर्नर, १४५, सिध्देश्वर पेठ, सोलापर - २. Phon

कार्यालय स

UNDERTAKING

We, SOLAPUR MUNICIPAL CORPORATION, having its registered office at Indrabhuvan, Appasaheb Varad Path, Railway Lines, Solapur, Maharashtra 413001, hereby do undertake in reference to our Application for laying water pipe line along section of NH 65 from CH 153+900 to 216+860 & CH 217+580 to 235+000 (RHS) and crossing of water pipe line across Pune - Solapur section of NH- 65 at CH 153+900, 180+270 and 180+275 km for the total length of 80560 RMT 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.



0 2021 0

YU 483626

> प्रताप सत्यवान सूर्यवंशी शहर मुद्रांक विक्रेता-कोड नं. २५०१०४० परवासा क्र.७०, दि. ३०/६/१९९८ ऑफीस नं. ०९, लोखंडवाला कॉर्नर, १४५, सिध्देश्वर पेठ, सोलापूर - २.

Phon ee

कार्यालय सं

AUG 2021

UNDERTAKING

We, SOLAPUR MUNICIPAL CORPORATION, having its registered office at Indrabhuvan, Appasaheb Varad Path, Railway Lines, Solapur, Maharashtra 413001, hereby do undertake in reference to our Application for laying water pipe line along section of NH 65 from CH 153+900 to 216+860 & CH 217+580 to 235+000 (RHS) and crossing of water pipe line across Pune - Solapur section of NH- 65 at CH 153+900, 180+270 and 180+275 km for the total length of 80560 RMT in the state of Maharashtra, that

1. SOLAPUR CITY DEVELOPMENT CORPORATION 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 issued 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.
- 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.
- The agency will notify the concerned authority at least 15 days in advance before HDD Method.
- Adequate arrangement for cautioning the traffic by way of caution board during daytime and danger light at night will be provided by the agency.
- 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.



2021

YU 483627

AUG 2021

सोलापूर अनुक्रमांक - <u>१२३</u>६, दिनांक - <u>१८८१, १०५</u> श्री./सौ. <u>१८११</u> १६१००७ ८५११ एक । यांनी रु..... चा जनरल स्टॅम्प मागितलेवरून हा रु.... १५४० चे जनरल स्टॅम्प दिले.

प्रताप सत्यवान सूर्यवंशी

शहर मुद्रांक विकेता-कोड नं २५०१०४० परवाना क्र.७०, दि. ३०/६/१९८८ ऑफीस नं. ०९, लोखंडवाला कॉर्नर १४५, सिध्देश्वर पेठ, सीलापर - १.

We, SOLAPUR MUNICIPAL CORPORATION, having its registered office at Indrabhuvan, Appasaheb Varad Path, Railway Lines, Solapur, Maharashtra 413001, hereby do undertake in reference to our Application for laying water pipe line along section of NH 65 from CH 153+900 to 216+860 & CH 217+580 to 235+000 (RHS) and crossing of water pipe line across Pune - Solapur section of NH- 65 at CH 153+900, 180+270 and 180+275 km for the total length of 80560 RMT in the state of Maharashtra, that The traffic movement during water pipe line will be managed by SOLAPUR CITY

The traffic movement during water pipe line will be managed by **SOLAPUR CITY DEVELOPMENT CORPORATION 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 **SOLAPUR CITY DEVELOPMENT CORPORATION LIMITED.**



UNDERTAKING

१४५, सिध्देश्वर पेठ, सोलापर - २.

We, SOLAPUR MUNICIPAL CORPORATION, having its registered office at Indrabhuvan, Appasaheb Varad Path, Railway Lines, Solapur, Maharashtra 413001, hereby do undertake in reference to our Application for laying water pipe line along section of NH 65 from CH 153+900 to 216+860 & CH 217+580 to 235+000 (RHS) and crossing of water pipe line across Pune - Solapur section of NH- 65 at CH 153+900, 180+270 and 180+275 km for the total length of 80560 RMT in the state of Maharashtra, that If any claim is raised by concessionaries of the project than the same will be paid by SOLAPUR MUNICIPAL CORPORATION.



YU 483629 महाराष्ट्र MAHARASHTRA 0 2021 0 सोलापूर अनुक्रमांक -9.32.4.19, दिनांक - ... स. 1.1.1.1.192) कार्यालय सोलार श्री./सौ. ला 14 का 05124110001 यांनी रु..... १०० चा जनरल स्टॅम्प मागितलेव्रुन हा AUG 2021 रु..... रिव्या व भरतीस रु.. चे जनरल स्टॅम्प दिले. प्रताप सत्यवाने सूर्यवंशी शहर मुद्रांक विक्रेता-कोड ने. २५०१०४० परवाना क्र.७०, दि. ३ व/६/१९९८ ऑफीस नं. ०९, लोखंडवाला कॉर्नर, १४५, सिध्देश्वर पेठ, सौलापुर - २.

We, SOLAPUR MUNICIPAL CORPORATION, having its registered office at Indrabhuvan, Appasaheb Varad Path, Railway Lines, Solapur, Maharashtra 413001, hereby do undertake in reference to our Application for laying water pipe line along section of NH 65 from CH 153+900 to 216+860 & CH 217+580 to 235+000 (RHS) and crossing of water pipe line across Pune - Solapur section of NH- 65 at CH 153+900, 180+270 and 180+275 km for the total length of 80560 RMT 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.

UNDERTAKING



We, SOLAPUR MUNICIPAL CORPORATION, having its registered office at Indrabhuvan, Appasaheb Varad Path, Railway Lines, Solapur, Maharashtra 413001, hereby do undertake in reference to our Application for laying water pipe line along section of NH 65 from CH 153+900 to 216+860 & CH 217+580 to 235+000 (RHS) and crossing of water pipe line across Pune - Solapur section of NH- 65 at CH 153+900, 180+270 and 180+275 km for the total length of 80560 RMT 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 **SOLAPUR MUNICIPAL CORPORATION.**



2021

YU 483631

त्र कार्यालय सोलापुर

AUG 2021

सोलापूर अनुक्रमांक - क्रिक्टिश्रिट्टिनांक - स्ट्राप्टिश्रिट्ट श्री./सौ. क्रिक्ट्रिट्टिनांक - स्ट्राप्टिश्रिट्टिनांक - स्ट्राप्टिश्रिट्टिनांक - स्ट्राप्टिश्रिट्टिनांक - स्ट्राप्टिश्रिट्टिनांक - स्ट्राप्टिटिनांक - स्ट्राप्टिटिनांक - स्ट्राप्टिटिनांक - स्ट्राप्टिटिनांक - स्ट्राप्टिटिनांक - स्ट्राप्टिटिनांक - स्ट्राप्टिनांक - स्ट्

> प्रताप सत्यवान सूर्यवंशी शहर मुद्रांक विक्रेता-कोड मं. २५०१०४०

> परवाना क्र.७०, दि. ३०/६/१९९८ ऑफीस नं. ०९, लोखंडवाला कॉर्नर, १४५, सिध्देश्वर पेठ, सोलापुर - २.

> > UNDERTAKING

We, SOLAPUR MUNICIPAL CORPORATION, having its registered office at Indrabhuvan, Appasaheb Varad Path, Railway Lines, Solapur, Maharashtra 413001, hereby do undertake in reference to our Application for laying water pipe line along section of NH 65 from CH 153+900 to 216+860 & CH 217+580 to 235+000 (RHS) and crossing of water pipe line across Pune - Solapur section of NH- 65 at CH 153+900, 180+270 and 180+275 km for the total length of 80560 RMT 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 SOLAPUR MUNICIPAL CORPORATION Within stipulated reasonable time (Not

exceeding 60 days) of the intimation given.



We, SOLAPUR MUNICIPAL CORPORATION, having its registered office at Indrabhuvan, Appasaheb Varad Path, Railway Lines, Solapur, Maharashtra 413001, hereby do undertake in reference to our Application for laying water pipe line along section of NH 65 from CH 153+900 to 216+860 & CH 217+580 to 235+000 (RHS) and crossing of water pipe line across Pune - Solapur section of NH- 65 at CH 153+900, 180+270 and 180+275 km for the total length of 80560 RMT 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.

Methodology of laying 1422 mm of casing of MS pipe & 1300 mm dia. M.S.carrying Pipes by HDD method.

> As per MJP CSR Specification -

Pushing of 1422 mm dia. Of MS Casing pipe with water pipe line of 1168 mm for Road crossing by push through method in all types of strata by using hydraulic jack and drilling machines M.S. casing pipes, lowering, laying, jointing of material, required welding machinery, tripod, chain pulley block Crain blower, compressor, loading and unloading of machinery into the trench etc. transportation and dewatering etc. complete. Lowering,

Actual Field Methodology –

b)

- > The pilot hole is drilled with a diameter of 100 mm along the proposed design centerline.
- ➤ Then, the pilot hole is enlarged by backreaming to the desired 1422 mm dia. Of MS Casing pipe with MS water pipe line of 1168 mm diameter by successive passes of different-sized back reamers, to install the desired utility product pipe.
- > The product pipe is connected to the end of the drilling rod and back reamer assembly by a swivel and pulled through the enlarged pilot hole.
- ➤ The pilot hole is normally drilled by a surface launched rig with an inclined carriage, that is typically adjusted at an angle of 8 to 18 degrees from the surface of the ground for entrance and between 8 and 12 degrees at the exit. Rotating the drill bit, assisted by the thrust force transferred from the drill string, performs soil cutting in the mechanical drilling process. The mechanical drill bits may vary from a slim cutting head with a slanted face for small and short bore applications to a diamond mounted roller cutter used with mud motors for large and long crossings.
- > The utility boring method utilizes high pressure, low-volume drilling fluid, usually bentonite mud, to jet through shallow, soft soil formations to ensure the surrounding formation will not become saturated and unstable.

Methodology of laying 1321/1296/1168 mm OD of MS pipe M.S. Pipes by Open trench method.

The pipeline shall be generally buried except for rocky hillocks in alignment. Soil cover shall not be less than 1000 mm. Minimum cover specified is obligatory. The trench width shall be equal to pipeline outside diameter +600 mm. The pipeline shall be laid in proper slope without any kink or dip in profile so as to facilitate air flow towards air valve for further release to atmosphere. The slope shall generally not be less than 1:500 for ascending section and 1:400 for descending section. Where such minimum slope cannot be achieved, the lesser slope shall be adopted with prior approval of Employer's representative. Spacing between air valves in section with lesser slope shall be less than general spacing detailed for air valve. Bedding shall be granular as specified in standard specifications. Sand boxing for pipeline shall be provided for Black cotton (BC) soil portion and rubble soling of minimum 300 mm shall be provide for slush muddy/ marshy/ slushy soil.

Air Valve -

200 mm diameter of rating PN 1.6, tamperproof air valve with isolating sluice valve shall be provided. The location of air valve shall at every peak on pipe section and peak on hydraulic grade line, on upstream end of pipe section for crossing river, nala and other minor crossings and on inlet and outlet shafts of tunnels. Spacing between two air valves shall be 500 m for all diameter pipeline. Above spacing is for pipeline section with minimum slope of 1:500 for ascending section and 1:400 mm for descending section. Air valves shall be in properly designed BBM chamber having Clear Size 1.50 x 1.50 x 2.1 m.

Line Valve -

The line valve shall generally be provided at 5 km interval so as to isolate pipeline and prevent unnecessary draining of pipeline during repairs and maintenance. Diameter of line valves shall be 1000 mm. Line valves shall be short body butterfly valve and of rating PN1.6. Flange adapter of adequate pressure rating shall be provided in combination with BFV to facilitate repairs, seal replacement and maintenance of BFV. The line valve shall be in BBM chamber having Clear Size 1.50 x 1.50 x 2.1 m.

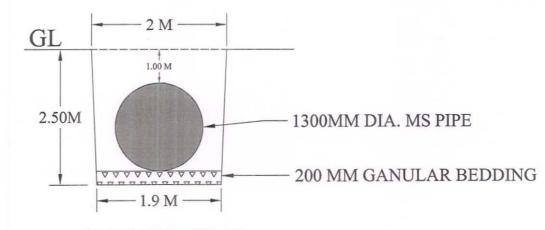
Wash Out Valves -

Wash outs are required to drain the pipeline for repairs and maintenance. Location of wash out shall be at dippiest point and near natural stream so as to dispose drained quantity. For wash out, sluice valve of rating PN1.6 shall be used in conjunction with flange adapter. Size of washout shall be 300 mm. Due to very small width available between pipeline and edge of ROW, the wash out needs to be located very close to the pipeline. In view of above, BBM chamber need to accommodate both pipeline and wash out.

REFILLING OF TRENCHES OF PIPELINE -

After lowering, laying, jointing and welding of pipe line, coating for welded joints, refilling of trenches with available excavated stuff shall be done. The available excavated stuff shall be laid in layers of 15 cm to 20 cm. Each layer shall be watered and compacted before the upper layer is laid till the required level is reached. First 2 layers of 15 to 20 cms shall be free from stones or chips or any harmful material, to protect the pipe from damage. Only soil or soft murum shall be used for filling. Originally filling shall be done 30 to 40 cm. above natural ground or road level. Sinking below the road or ground level, if noticed till the completion of work, the contractor shall have to make it level at his cost.

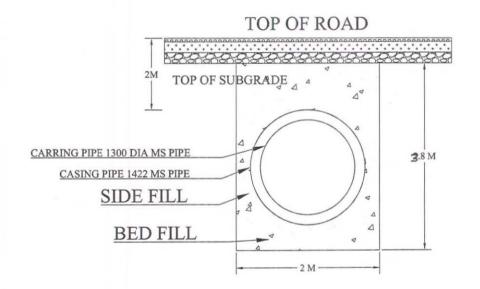
AUGMENTATION TO SOLAPUR CITY WATER SUPPLY SCHEME PROPOSAL FOR LAYING PIPELINE ALONG (RHS) PUNE TO SOLAPUR-NH 65



CROSS SECTION OF PROPOSED PIPELINE ALONG NH

Deputy Executive Engineer
Maharashtra Jeevan Pradhikaran
Division, Solapur.

AUGMENTATION TO SOLAPUR CITY WATER SUPPLY SCHEME PROPOSAL FOR LAYING PIPELINE ALONG (RHS) PUNE TO SOLAPUR-NH 65



CROSS SECTION OF CROSSING PIPE LINE @CHAINAGE 153+900, 180+270 &180+275

Deputy Executive Engineer
Maharashtra Jeevan Pradhikaran
Division, Solapur.

