



भारतीय राष्ट्रीय राजमार्ग प्राधिकरण
(सड़क परिवहन एवं राजमार्ग मंत्रालय, भारत सरकार)
National Highway Authority of India
(Ministry of Road Transport and Highway Govt. of India)

परियोजना कार्यान्वयन इकाई-छपरा

Project Implementation Unit - Chhapra

मकान-श्री मति गायत्री देवी, ए1, प्रभुनाथ नगर, पोस्ट-तारी, थाना-मुफसिल, जिला-सारण (छपरा), बिहार, पिन-841301

H/o- Smt. Gayatri Devi, A1, Prabhunath Nagar, PO-Tari, PS-Mufsil, District-Saran (Chhapra), Bihar, Pin - 841301



Ph: 06152-248058 & 248052

Email: halipur@nhai.org,

nhaichhapra@gmail.com

NO.: NHAI/PIU/Chhapra/NH-85/IOCL/PP/2022/ 1295

Date: 02.03.2022

Invitation of Public Comments

Sub: Two Laning with paved shoulder of Chhapra - Gopalganj section of NH-85 from Km 0+000 to Km 93+500 (Existing Chainage) and Km. 0+000 to Km. 94+258 (Design Chainage), (Total Design length: 94.258 Kms.) in the State of Bihar under NHDP -III on EPC mode: - **(A) Permission of laying steel and MDPE gas pipeline along with OFC for city Gas Distribution project along and across NH-85. (1) Along/across NH-85 from Brahmpur, Chhapra, Saran (Proposed Chainage 0+000 km) to Kopa, Saran (Maa Petroleum-Indian Oil Pump (proposed chainage 08+556 km) (B) Installation of isolation value chamber along road.**

The General Manager (Construction), M/s Indian Oil Corporation Limited has submitted the aforesaid proposal seeking (A) Permission of laying steel and MDPE gas pipeline along with OFC for city Gas Distribution project along and across NH-85. (1) Along/across NH-85 from Brahmpur, Chhapra, Saran (Proposed Chainage 0+000 km) to Kopa, Saran (Maa Petroleum-Indian Oil Pump (proposed chainage 08+556 km) (B) Installation of isolation value chamber along road.

2. From the submitted proposal, it is seen that the carrier pipe will be of 4.625" OD and crossing pipeline will be of 4.625" (Carbon Steel confirming to API 5LX-52/65 Grade specifications). The pipeline laying along the road shall be carried out in Utility corridor or at near extreme edge with minimum of 2m from the edge of ROU. Method of crossing will be HDD (Horizontal Direction Drilling). Depth of the pipeline below the centre line of NH will be 3.0 m minimum in road crossing. Parallel pipeline shall be laid at depth of 1.2 m along the road side. Once the pipeline is laid underground, the road will be restored to its original conditions. Cost of crossing/laying along road shall be born by IOCL.

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

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

Project Director

National Highways Authority of India,
Project Implementation unit-Chhapra,
H/o-Smt. Gayatri Devi, Plot No.A1,
Parbhunath Nagar, P.O-Tari,
P.S-Muffasil, District-Saran -841301
Email:nhaichhapra@gmail.com

Manoj
02/03/22

(Manoj Kumar)

Project Director

Encl: As above.

Copy to:

(i) Web Admin, NHAI, HQ- with a request for uploading on the NHAI website.

- (ii) The Technical Director, NIC, Transport Bhawan, New Delhi- with a request for uploading on the Ministry's website.
- (iii) RO, NHAI, Patna.
- (iv) General Manager (Construction), M/s Indian Oil Corporation Limited.

इंडियन ऑयल कॉर्पोरेशन लिमिटेड

पाइपलाइन्स प्रभाग, ई.आर.पी.एल. शहरी गैस वितरण परियोजना कार्यालय- सारण,
तीसरी मंजिल, जे पी बिल्डिंग, आर डी एस स्कूल के पास, छपरा - 841301
दूरभाष: कार्यालय - 06152 296079



Indian Oil Corporation Limited

Pipelines Division, ERPL City Gas Distribution Project Office - Saran,
3rd Floor, J P Building, Near R D S School, Chhapra - 841301
Phone: Off. - 06152 296079



पाइपलाइन्स प्रभाग Pipelines Division

Ref: ERPL/CGD-SARAN/PROJ/2.1



Date: 17th Jan 2022

To,
Project Director
National Highways Authority of India
(Ministry of Road Transport and Highways, Govt. of India)
Project Implementation Unit - Chhapra, 841301 (Bihar)

Sub - A) Permission of laying steel and MDPE gas pipeline along with OFC for City Gas Distribution Project along and across NH 85

1. Along/across NH 85 - From Brahmpur, Chapra, Saran (Proposed Chainage 0+000 KM)
To Kopa, Saran (Maa Petroleum -Indian oil Petrol pump (Proposed Chainage 08+556 KM)

B) Installation of isolation valve chamber along road

Sir,

Indian Oil Corporation Limited (IOCL), a Maharatna PSU, has been awarded authorization for the Geographical area for development of Muzaffarpur, Vaishali, Saran and Samastipur districts in the 10th round of bidding for City Gas Distribution Project by Petroleum & Natural Gas Regulatory Board (PNGRB). This prestigious project was inaugurated pan India by Shri Dharmendra Pradan, Honorable Minister of Petroleum and natural gas and Minister of steel on 26.08.2019. As a part of this project it is envisaged to provide approx. 10,00,000 natural gas connections to households and open approx. 222 CNG outlets apart from building the infrastructure required to achieve the above targets in afore said district.

As a part of the project we need to lay the steel and MDPE pipeline along the NH 85 and also crossing of NH will be carried out at different location (As mentioned in the drawing). The pipeline laying along the NH shall be carried out in the utility corridor or at near extreme edge through open cut method and crossing shall be done by trenchless technology (HDD method) so as to make it safe and smooth execution. The proposed gas pipeline shall be laid as per the standards/procedures recommended by Petroleum & Natural Gas Regulatory Board (PNGRB) without causing any traffic disruption & inconvenience to public at large.

Details of pipeline laying and crossing at various locations are as follows:

Sr. No	Crossing/ Along NH	Proposed Chainage	Pipe Dia (Inch)	Chainage Description	Location
1	Along NH 85	00 + 000 KM To 08 + 556 KM	4.625"	From Brahmpur, Chapra To Kopa, Saran (Maa Petroleum -Indian oil Petrol pump)	Saran Bihar
2	Pipeline Crossing across NH 85	00+400 KM, 00+900 KM, 01+600 KM, 02+000 KM, 03+000 KM	4.625"	As mentioned in drawing	Saran Bihar

ANISH KUMAR
SM (PJ-CGD), ERPL-SARAN

मुख्य कार्यालय : ए-1, उद्योग मार्ग सेक्टर 1, नोएडा 201301. Head office: A-1 Udyog Marg Sector 1, Noida 201301
पंजीकृत कार्यालय: जी-9, अली यवर् जंग मार्ग, बान्द्रा (पूर्व), मुंबई-400 051. Regd Office G-9 Ali Yavar Jung Marg Bandra (East) Mumbai 400051
CIN: L23201MH1959GOI011388

आर. के. सिंह
सहसंचालक

Thus, IOCL propose to cross and lay along the aforesaid road as per the following norms: -

- 1) The carrier Pipe will be of 4.625" OD and crossing pipeline will be of 4.625" (Carbon Steel confirming to API 5 L X-52/65 Grade specifications).
- 2) The pipeline laying along the road shall be carried out in Utility corridor or at near extreme edge with minimum of 2m from the edge of ROU.
- 3) Method of crossing will be HDD (Horizontal Directional Drilling).
- 4) Depth of the pipeline below the centre line of NH will be 3.0 m minimum in road crossing.
- 5) Parallel pipeline shall be laid at depth of 1.2 m along the road side.
- 6) Isolation valve shall be installed at interval of 3KM.
- 7) Once the pipeline is laid underground, the Road will be restored to its original conditions.
- 8) During the execution of work, proper safety measures will be ensured.
- 9) All works will be carried out as per the approved drawings.
- 10) Cost of crossing/laying along road shall be borne by IOCL.


You are requested to kindly grant necessary permission for laying pipeline across and along the NH 85 for the above mentioned stretch. IOCL shall bear the necessary fee/charges as applicable.

Since this is a time bound project of National importance, contributing to national prosperity, we solicit your most expeditious action to grant the NOC for laying the pipeline along/under NH 85 for the above stretch.

Thanking you,

Yours truly,


ANISH KUMAR
SM (PJ-CGD), ERPL-SARAN


(R K Sahoo)
General Manager (Const.)
ERPL, PATNA

आर. के. साहू / R. K. SAHOO
महसंयोजक (निर्माण)/General Manager (Const.)
इंडियन ऑयल कॉर्पोरेशन लिमिटेड/Indian Oil Corp. Ltd.
प्रोजेक्ट निर्माण कार्यालय, पटना / Project Construction Office, Patna
हीरा निकेतन, कालिकेत नगर, बैली रोड, पटना-801503
Hira Niketan Kalikhet Nagar, Bailey Road, Patna-801503



एक कदम स्वच्छता की ओर

इंडियन ऑयल कॉर्पोरेशन लिमिटेड

पाइपलाइन्स प्रभाग, ई.आर.पी.एल. शहरी गैस वितरण परियोजना कार्यालय- सारण,
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दूरभाष: कार्यालय - 06152 296079

Indian Oil Corporation Limited

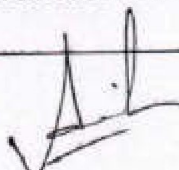
Pipelines Division, ERPL City Gas Distribution Project Office - Saran,
3rd Floor, J P Building, Near R D S School, Chhapra - 841301
Phone: Off. - 06152 296079



पाइपलाइन्स प्रभाग
Pipelines Division

List Of Documents Attached:

1.	Cover Page
2.	Application for Permission
3.	Check List
4.	Authorization Letter
5.	PNGRB Authorization Letter
6.	License Deed(2 Original Copy)
7.	Undertaking/Certificates on Non- Judicial stamp paper
8.	Brief Description of HDD/Open cut methodology
9.	Prevailing Circle Rates of revenue villages coming in the proposed route
10.	Indemnity Bond
11.	CAD Drawing of the Proposed Gas Pipe Line
12.	NHAI Circular for License Fee
13.	License Fee calculation
14.	PD Certificate format


ANISH KUMAR
SM (PJ-CGD), ERPL-SARAN


ज. क. सिंग
सहायक निदेशक



INDIAN OIL CORPORATION LIMITED

CITY GAS DISTRIBUTION PROJECT

AUTHORITY

National Highways Authority of India
PIU, Chhapra, Bihar

Details for Natural Gas Pipeline laying permission :-

Sr. No	Crossing/ Along NH	Proposed Chainage	Chainage Description	Location
1	Along NH 85	00 + 000 KM To 08 + 556 KM	From Brahmpur, Chapra To Kopa, Saran (Maa Petroleum -Indian oil Petrol pump)	Chapra , Saran Bihar
2	Pipeline Crossing across NH 85	00+400 KM, 00+900 KM, 01+600 KM, 02+000 KM, 03+000 KM	As mentioned in drawing	Chapra , Saran Bihar


ANISH KUMAR
SARAN (CD) EDDI-SARAN


आर. क. साहु
महाप्रबंधक

CHECK LIST	
Guidelines for processing the proposal for laying gas pipeline along with optical fibre cable in the land across National Highway vested with NHAI	
Relevant circulars	
1.	Ministry circular No. NH-41(58)/68 dated 31-01-1969
2.	Ministry circular No. NH-III/P/66/76 dated 18-11-1976
3.	Ministry circular No. RW-NJ-III/P/66/76 dated 01-05-1982
4.	Ministry circular No. RW/NH-11037/1/86-DOI(II) dated 28-07-1993
5.	Ministry circular No. RW/NH-11037/1/86-DOI dated 19-01-1995
6.	Ministry Circular No. RW/NH-34066/2/95/S&R dated 25-10-1999
7.	Ministry Circular No. RW/NH-34066/7/2003 S&R (B) dated 17-09-2003
8.	Ministry Circular No. RW/NH-33044/29/2015/S&R(R) dated 22.11.2016

Checklist for getting approval for laying of Gas pipeline on NH land

S.No.	Item	Information/Status	Remarks
1	General Information	<p>A) Permission of laying steel and MDPE gas pipeline along with OFC for City Gas Distribution Project along and across NH 85</p> <p>1. Along/across NH 85 - From Brahampur, chapra, Saran (Proposed Chainage 00+000 KM) To Kopa, Saran (Maa Petroleum -Indian oil Petrol pump (Proposed Chainage 08+556 KM)</p> <p>B) Installation of isolation valve chamber along road</p>	
1.1	Name and address of the Applicant/Agency	Indian Oil Corporation Limited Pipelines Division, ERPL City Gas Distribution Project Office - Saran, 3rd Floor, J P Building, Near R D S School, PIN: 841301	
1.2	National Highway Number	NH 85	
1.3	State	Bihar	
1.4	Location	From Brahampur, Chapra, Saran (Proposed Chainage 00+000 KM) To Kopa, Saran (Maa Petroleum -Indian oil Petrol pump (Proposed Chainage 08+556 KM)	
1.5	(Chainage in km)	NH Proposed Chainage 00+000 KM To Proposed Chainage 08+556 KM	
1.6	Length in Meters	Crossing Length - 150 mtr, Along length - 8556 mtr	
1.7	Width of available ROW	CH 00+000 KM TO CH 08+556 KM - ~ 30 Mtr	

Laying of Natural Gas Pipeline Along/across the NH 85 application of IOCL - City Gas Distribution Project

Location: 1. Along/across NH 85 From Brahampur, Chapra (Proposed Chainage 00+000 KM) To Kopa, Saran (Maa Petroleum -Indian oil Petrol pump (Proposed Chainage 08+556 KM)

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	(a) Left side from center line towards increasing chainage/km direction	CH 00+000 KM TO CH 08+556 KM - ~ 15 Mtr	
	(b) Right side from center line towards increasing chainage/km direction	CH 00+000 KM TO CH 08+556 KM - ~ 15 Mtr	
1.8	Proposal to lay underground gas pipeline for supply of gas products		
	(a) Left side from center line towards increasing chainage/km direction	Left side of centre line of NH 85 towards increasing chainage direction	
	(b) Right side from centre line towards increasing chainage/km direction		
1.9	Proposal to acquire land		
	(a) Left side from center line	NA	
	(b) Right side from center line	NA	
1.10	Whether proposal is in the same side where land is not to be acquired	NA	
	If not then where to lay the cable.	NA	
1.11	Details of already laid services, if any along the proposed route	NIL	
1.12	Number of existing lanes (2/4/6/8 lanes).	2	
1.13	Proposed number of lanes (2 lane with paved shoulders/4/6/8 lanes).	-	
1.14	Service road existing or not	NO	
	If yes then which side		
	(a) Left side from center line		
	(b) Right side from center line		

Laying of Natural Gas Pipeline Along/across the NH 85 application of IOCL - City Gas Distribution Project

Location: 1. Along/across NH 85 From Brahampur, Chapra (Proposed Chainage 00+000 KM) To Kopa, Saran (Maa Petroleum -Indian oil Petrol pump (Proposed Chainage 08+556 KM)

, Saran

1.15	Proposed service road	NA	
	(a) Left side from center line		
	(c) Right side from center line		
1.16	Whether proposal to lay the gas pipeline is after the service road or between the service road and main carriageway	NA	
1.17	Whether carrying of sewage/gas pipeline has been proposed on highway Bridges. If yes, then mention the methodology proposed for the same.	NA	
1.18	Whether carrying of sewage/gas pipeline has been proposed on the parapet/ any part of the bridges. If Yes, then mention the methodology proposed for the same.	NA	
1.19	If crossings of the road involved If yes, it shall be either encased in pipes or through structure or conduits specially built for the purpose at the expenses of the agency owing the line	Yes	
	(a) Whether existing drainage structures are allowed to carry gas pipeline	Yes	
	(b) It is on a line normal to NH	Yes	
	(c) What is the distance of crossing the gas pipelines from the existing structures. Crossings shall not be too near the existing structures on the National Highway, minimum distance being 15 meter.	As per site condition	

	(d) The casing pipe(or conduit pipe in the case of electric cable) carrying the gas line shall be of steel, cast iron, or reinforced cement concrete and have adequate strength and be large enough to permit ready withdrawal of the carrier pipe/cable. Mention type of casing.	4" dia duct will be used for crossing of OFC cable.	
	(e) Ends of 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 in cuts and toe of slope in the fills.	Yes	
	(g) 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 0.3m below the drain inverts. Mention the proposed details.	Yes	
	(h) Mention the methodology proposed for crossings of road for the proposed Sewage/gas pipe line. Crossings shall be by boring method (HDD)	The pipeline will be laid by Horizontal Directional Drilling (HDD) Method which is trenchless method at crossing location and Open Cut will be used for along the road section.	

	(Trenchless Technology), specially, where the existing road pavement is of cement concrete or dense bituminous concrete type.		
	(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.	Yes	
2	Document/Drawings to be enclosed with the proposal	Yes	
2.1	Cross section showing the size of trench for open trenching method	Yes and drawing attached.	
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 petroleum/Gas pipe line, chainage, width of ROW, distance of proposed pipe line from the edge of ROW, important mile stone, intersections, cross drainage works etc.	Yes	
2.4	Methodology for laying of the gas pipe line.	The pipeline will be laid by Horizontal Directional Drilling (HDD) Method and Open Cut-detailed procedure and drawing attached.	
2.4.1	Open trenching method. (May be allowed in the petroleum corridor only where pavement is neither cement concrete nor dense bituminous concrete type. If yes, what is the methodology of refilling of trench.	Yes	
	(a) The trench width should be at least 30cm, but not more	Yes	

	than 60 cm wider than the outer diameter of the pipe.		
	(b) For filling of the trench, bedding shall be at a depth of not less than 30cm. It shall consist of granular material, free of lumps, clods and cobbles and graded to yield a firm surface without a sudden change in the bearing value. Unsuitable soil and rock edged should be excavated and replaced by selected material.	Yes	
	(c) The backfill shall be completed in two stages (i) side fill to level of the top of the pipe and (ii) overfill to the bottom of the road crust.	Yes	
	(d) The side fill shall consist of granular material laid in 15cm layers each consolidated by mechanical tempering and controlled addition of moisture to 95% of the proctor's density. Overfill shall be compacted to the same density as the material that has been removed. Consolidation by saturation or ponding will not be permitted.	Yes	
	(e) The road crust shall be built to the same strength as the	Yes	

	existing crust on either side of the trench. Care shall be taken to avoid the formation of a dip at the trench.		
	(f) The excavation shall be protected by flagman, signs and barricades, and red lights during night hours.	Yes	
	(g) If required, a diversion shall be constructed at the expense of agency owing the petroleum line.	Yes	
2.4.2	Horizontal directional drilling (HDD) method.	Yes	
2.4.3	Methodology for laying of pipe line through CD works and method of laying. In cases where the carrying of gas pipe line on the bridge becomes inescapable.	NA	
3	Draft license Agreement is signed by two witnesses	Draft original 02 set is attached.	
3.1	The license fee estimate as per Ministry's guidelines issued vide circular no. RW/NH-33044/29/2015/S&R(R) dated 22.11.2016	Enclosed	
4	Whether performance Bank guarantee as per Ministry's circular no. RW/NH-33044/29/2015/S&R(R) dated 22.11.2016 is obtained	Will be submitted after receipt of demand note	
4.1	Confirmation of BG has been obtained or not as per MoRTH/NHAI guidelines		
5	Affidavit/ Undertaking from the Applicant for the following is to be furnished		
5.1	Undertaking for not to damage any other utility, if	Yes	

	damaged then to pay the losses either to NHAI or to the concerned agency.		
5.2	Undertaking for Renewal of bank guarantee as and when asked by MoRTH/NHAI.	Yes	
5.3	Undertaking for confirming all standard condition of Ministry circulars and NHAI's guidelines.	Yes	
5.4	Undertaking for Indemnity against all damages and claims.	Yes	
5.5	Undertaking for management of traffic movement during laying of gas line without hampering the traffic	Yes	
5.6	Undertaking that if any claim is raised by the concessionaire/contractor then the same has to be paid by the applicant.	Yes	
5.7	Undertaking that prior approval of the NHAI shall be obtained before undertaking any work for installation, shifting or repairs, or alterations to the gas located in the National Highway right-of-ways.	Yes	
5.8	Undertaking that expenditure, if any, incurred by NHAI for repairing any damage caused to the National Highway by the laying, maintenance or shifting of the gas line will be borne by the applicant agency owing the line.	Yes	
5.9	Undertaking that text of the text of the license deed is as per verbatim of MoRTH format (issued vide Ministry's circular no. RW/NH-33044/29/2015/S&R(R) dated 22.11.2016	Yes	
5.10	Undertaking that the applicant has obtained	Yes	

Laying of Natural Gas Pipeline Along/across the NH 85 application of IOCL – City Gas Distribution Project

Location: 1. Along/across NH 85 From Brahampur, Chapra (Proposed Chainage 00+000 KM) To Kopa, Saran (Maa Petroleum –Indian oil Petrol pump (Proposed Chainage 08+556 KM)

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	various safety clearances from the representative authorities such as Directorate of Electricity, Chief controller of Explosives, Petroleum and Explosive safety Organization, Oil Industry safety Directorate, State/Central pollution control board and any other statutory clearances as applicable, before applying to Highway Administration		
5.11	If the MoRTH/NHAI consider it necessary in future to move the gas line for any work of improvement or repairs to the road, it will be carried out as desired by the MoRTH/NHAI at the cost of the agency owing the gas line within a reasonable time (not exceeding 60 days) of the intimation given.	Yes	
5.12	Certificate from the applicant in the following format (i) Laying of Gas pipe line will not have any deleterious effects on any of the bridge components and roadway safety for traffic. (ii) "We do undertake that I/we will relocate service road/approach road/utilities at my/our own cost notwithstanding the permission granted within such time as will be stipulated by NHAI" for future six-lanning or any other development."	Enclosed	
6	Who will sign the agreement on behalf of Gas pipe line agency.	General Manager(Const.) Indian Oil Corporation Limited Project Construction Office, Patna	
	Power of Attorney to sign the agreement is available or not	Yes	
7	The project Director will submit the following		

	Certificates		
7.1	Certificate that the proposal is confirming to all standard conditions issued vide Ministry's circular No: RW/NH-33044/29/2015/S&(R) dated 22.11.2016	Yes	
7.2	<p>Certificate from PD in the following format</p> <p>(i)" It is certified that any other location of the Gas pipe line would be extremely difficult and unreasonable costly and the installation of Product pipe line within ROW will not adversely affect the design, stability & traffic safety of the Highway nor the likely future improvement such as widening of the carriageway, easing of curve etc."</p> <p>(ii)for 6-lanning</p> <p>(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".</p> <p>(b) In case feasibility report is not available "I do certify that sufficient ROW is available at site for accommodating proposed six-lining".</p>	Yes	
8	If NH section proposed to be taken up by NHAI on BOT basis – a clause is to be inserted in the agreement. "The permitted Highway on	NA	

	which License has been granted the right to lay gas Pipeline/duct has also been granted as a right of way to the concessionaire under the concession agreement for up-gradation of [-----section from Km-----to km-----of NH no.----- - on Build: operate and transfer basis] and therefore, the license shall honour the same."		
9	Who will supervise the work of laying of Gas pipe line		
	(a) On behalf of the Applicant	Yes (IOCL, pipelines division)	
	(b) On behalf of the MoRTH/NHAI	PD/Consultant	
10	Who will ensure that the defects in road portion after laying of gas pipe line are corrected and if not corrected then what action will be taken.		
	(a) On behalf of the applicant	Yes (Senior Manager , Indian Oil Corporation Limited City Gas Distribution - Saran)	
	(b) On behalf of NHAI	PD/Consultant	
11	Who will pay the claims for damage done/disruption in working of concessionaire if asked by the concessionaire	Indian Oil Corporation Limited (Pipelines Division) City Gas Distribution Project, Saran	
	On behalf of the applicant	Yes	
12	A certificate from PD that he will enter the proposed permission in the register of record of the permission in the prescribed proforma (copy enclosed)	Yes	
13	If any various approval is accorded for laying of underground gas pipe line then Photocopy of register of records of permission	No such permission is accorded	

	accorded (as maintained by PD) be enclosed.		
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Val

20 Feb 2011

INDIA NON JUDICIAL
Government of Bihar
e-Stamp

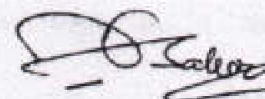
Certificate No. : IN-BR16372751596815T
Certificate Issued Date : 25-Jan-2021 12:18 PM
Account Reference : SHCIL (FI) brshcil01/ SARAN/ BR-SAR/ SRN
Unique Doc. Reference : SUBIN-BRBRSHCIL0120587652901436T
Purchased by : CHANDAN KUMAR
Description of Document : Not Applicable
Property Description : Not Applicable
Consideration Price (Rs.) : 0 (Zero)
First Party : Not Applicable
Second Party : CHANDAN KUMAR
Stamp Duty Paid By : CHANDAN KUMAR
Stamp Duty Paid (Rs.) : 100 (One Hundred only)
Reg. fee (Rs.) : 0 (Zero)
LLR & P Fee (Rs.) : 0 (Zero)
Miscellaneous Fee (Rs.) : 0 (Zero)
Discre SC (Rs.) : 0 (Zero)
Total Amount (Rs.) : 100 (One Hundred only)

UNDERTAKING

I, General Manager, Eastern Region Pipelines, Indian Oil Corporation Limited, Patna do hereby certify that

- 1.) Laying of gas pipeline along with OFC will not have any deleterious effects on any of the bridge components and roadway safety for traffic.
- 2.) For 6-laning "Indian Oil Corporation Limited do undertake that IOCL will relocate gas pipeline at its own cost notwithstanding the permission granted within such time as will be stipulated by NHAI for further six laning or any other development".

For & on behalf of Indian Oil Corporation Ltd.



(R K SAHOO)
General Manager (Const)
IOCL, Patna

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आर.के. साहू/R. K. SAHOO
महामन्थक (निर्माण)/General Manager (Const.)
इंडियन ऑयल कॉर्पोरेशन लिमिटेड/Indian Oil Corp. Ltd.
प्रोजेक्ट निर्माण कार्यालय, पटना/Project Construction Office, Patna
हिरा निकेतन, बसस्टैंड नगर, बेसी रोड, पटना-801503
Hira Niketan, Bus Stand Nagar, Bessy Road, Patna-801503

LB 0000140881

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Certificate No. : IN-BR28015234415927U
Certificate Issued Date : 13-Jan-2022 02:50 PM
Document Reference : SHCIL (FI)/ brshcil01/ SARAN/ BR-SAR/ SRN
Unique Doc. Reference : SUBIN-BRBRSHCIL0139087762514569U
Purchased by : INDIAN OIL CORPORATION LTD
Description of Document : Not Applicable
Property Description : Not Applicable
Consideration Price (Rs.) : 0 (Zero)
First Party : Not Applicable
Second Party : INDIAN OIL CORPORATION LTD
Stamp Duty Paid By : INDIAN OIL CORPORATION LTD
Stamp Duty Paid (Rs.) : 100 (One Hundred only)
Reg. fee (Rs.) : 0 (Zero)
LLR & P Fee (Rs.) : 0 (Zero)
Miscellaneous Fee (Rs.) : 0 (Zero)
Discore SC (Rs.) : 0 (Zero)
Total Amount (Rs.) : 100 (One Hundred only)

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

Agreement to lay gas pipeline along with NH 85 from proposed chainage 00+000 KM To 08 + 556 KM
And across the NH 85 at proposed chainage 00+400 KM, 00+900 KM, 01+600 KM, 02+000 KM,
03+000 KM of NH 85 land.

This Agreement made this _____ day of _____, 2021 between _____ acting in his
executive capacity through the President of India/ National Highways Authority of India (hereinafter
referred to as the Authority" which expression shall unless excluded by or repugnant to the context,
include his successors in office and assigns) on the one part, and **INDIAN OIL CORPORATION
LIMITED, City Gas Distribution, Saran** (hereinafter called the "Licensee") which expression shall
unless excluded by repugnant to the context, include his successors/administrator assignees on the
second part.

Whereas the Authority is responsible, inter-alia, for development and maintenance of lands in
proposed chainage 00+000 KM To 08 + 556 KM NH No. 85 ROW.

Whereas the Licensee proposes to lay gas pipeline referred to as utility services in subsequent
paras. Whereas the Licensee has applied to the Authority for permission to lay the underground gas
pipeline along with OFC along and across NH 85 between chainage 00+000 KM To 08 + 556 KM from
Brahampur, Chapra, Saran to Kopa, Saran (Maa Petroleum - Indian oil Petrol pump).

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आर. के. साहू / R. K. SAHOO
महानिर्देशक (निर्माण) / General Manager (Const.)
डियन ऑयल कॉर्पोरेशन लिमिटेड / Indian Oil Corp. Ltd.
K.C. 00132911997


And whereas the Authority has agreed to grant such permission for way leave on the 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 fulfilment 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 MoRT&H 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.


AAD

आर.के. साहू/R. K. SAHOO
महानिर्वाहक (निर्माण)/General Manager (Const.)



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 0.6 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 IRC 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 0.3m 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 cm 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 50m 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 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 co-ordination 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 co-ordination 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.
35. Three copies of 'as laid drawings' of utilities (hard and soft copies) with geo-tagged 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 authorised 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 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 50m 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. MoRTH/ NHAI/ implementing authorities for the project shall not be liable to the concessionaire in any way in this regard.


ANISH KUMAR
A (PJ-CGD), ERPL-SARAN

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 WHEREOF THE PARTIES HERETO HAVE CAUSED THIS AGREEMENT TO BE EXECUTED THROUGH THEIR RESPECTIVE AUTHORISED REPRESENTATIVES THE DAY AND THE YEAR FIRST ABOVE WRITTEN.

SIGNED SEALED AND DELIVERED FOR AND ON BEHALF OF AUTHORITY.

BY SHRI.....

(Signature, name & address with stamp)

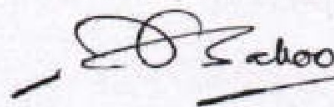
SIGNED ON BEHALF OF M/S(LICENSEE)

BY SHRI

(Signature, name & address with stamp)

HOLDER OF GENERAL POWER OF ATTORNEY DATED.....

EXECUTED IN ACCORDANCE WITH THE RESOLUTION NO. DATED PASSED BY HTE BOARD OF DIRECTORS IN THE MEETING HELD ON



आर के साहू / R. K. SAHOO
महाप्रबंधक (निर्माण) / General Manager (Const.)
इंडियन ऑयल कॉर्पोरेशन लिमिटेड / Indian Oil Corp. Ltd.
प्रोजेक्ट निर्माण कार्यालय, पटना / Project Construction Office, Patna
हिरा निकेतन, कालिकेत नगर, बेल्ही रोड, पटना-801503
Hira Niketan Kaliket Nagar, Bailey Road, Patna-801503

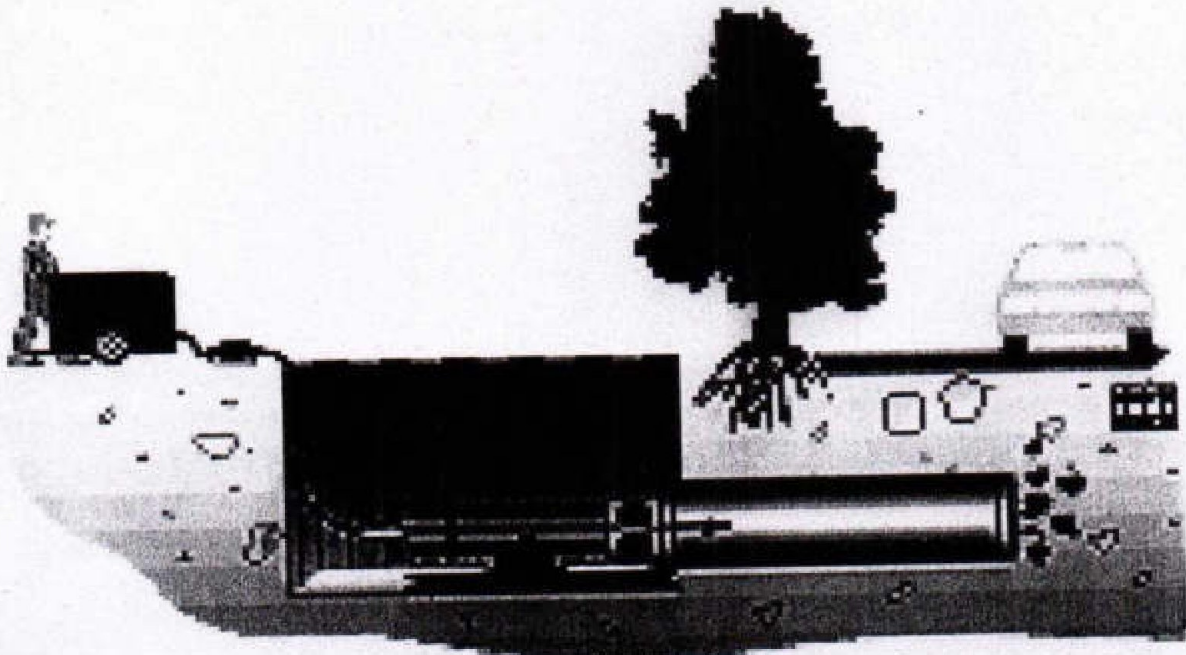


IndianOil

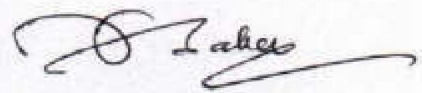
Indian Oil Corporation Limited

CONSTRUCTION METHODOLOGY:

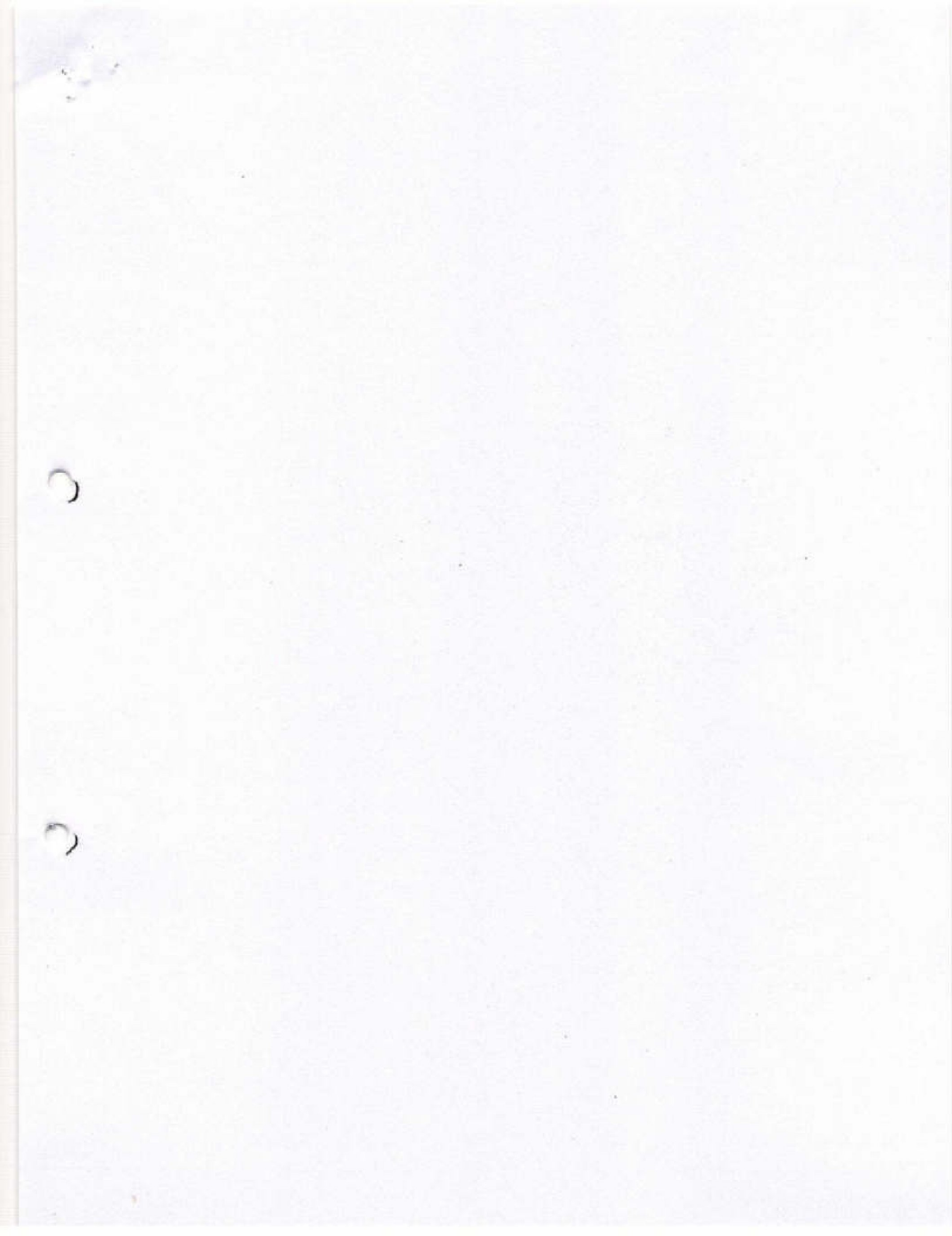
For laying underground pipeline
Crossing National highways by
Horizontal Boring Method




ANISH KUMAR
SM (PJ-CGD), ERPL-SARAN



आर. के. साहू / R. K. SAHOO
महाप्रबंधक (निर्माण) / General Manager (Const.)
इंडियन ऑयल कॉर्पोरेशन लिमिटेड / Indian Oil Corp. Ltd.
प्रोजेक्ट निर्माण कार्यालय, पटना / Project Construction Office, Patna
हिरा निकेतन, कलिकेत नगर, बैली रोड, पटना-801503
Hira Niketan Kaliket Nagar, Bailey Road, Patna-801503



HORIZONTAL DIRECTIONAL DRILLING

GENERAL

Horizontal Directional Drilling or HDD, is a steerable trenchless method of installing underground pipes, conduits and cables in a shallow arc along a prescribed bore path by using a surface launched drilling rig, with minimal impact on the surrounding area. HDD is used when trenching or open excavation is not possible/practical. Directional boring minimizes environmental disruption. It is suitable for a variety of soil conditions and jobs including road, landscape and river crossings. Pipes can be made of materials such as Steel, PVC, etc. if the pipes can be pulled through the drilled hole.

Technique

Directional boring is used for installing infrastructure such as telecommunications and power cable conduits, water lines, sewer lines, gas lines, oil lines, product pipelines and environmental remediation casings. It is used for crossing waterways, roadways, shore approaches, congested areas, environmentally sensitive areas, and areas where other methods are costlier. It is used instead of other techniques to provide less traffic disruption, lower cost, deeper and/or longer installation, no access pit, shorter completion times, directional capabilities, and environmental safety. The technique has extensive use in urban areas for developing subsurface utilities as it helps in avoiding extensive open cut trenches.

The method comprises a three stage process wherein first stage drills a pilot hole on the designed path and the second stage enlarges the hole by passing a larger cutting tool known as the back reamer. The third stage places the product or casing pipe in the enlarged hole. The directional control capabilities assist the rig operator in making necessary changes in the directions of the drilling head.

Horizontal directional drilling is done with the help of a viscous fluid known as drilling fluid. It is a mixture of water and, usually, bentonite or polymer continuously pumped to the cutting head or drill bit to facilitate the removal of cuttings, stabilize the bore hole, cool the cutting head, and lubricate the passage of the product pipe.

Location and guidance of the drilling is a very important part of the drilling operation, as the drilling head is under the ground while drilling and, in most cases, not visible from the ground surface.

Advantages

HDD offers several advantages when compared to other trenchless construction methods:

- (a) Complicated crossings can be quickly and economically accomplished with a great degree of accuracy since it is possible to monitor and control the drilling operation.
- (b) Sufficient depth can be accomplished to avoid other utilities.
- (c) In river crossing applications, danger of river bed erosion and possible damage from river traffic is eliminated.
- (d) Requires only a small construction footprint.

The Horizontal Directional Drilling Process

The tools and techniques used in the horizontal directional drilling (HDD) process are an outgrowth of the oil well drilling industry. The components of a horizontal drilling rig used for pipeline construction are similar to those of an oil well drilling rig with the major exception being that a horizontal drilling rig is equipped with an inclined ramp as opposed to a vertical mast. HDD



आर. के. साहू / R. K. SAHOO

महाराष्ट्र (निर्माण) / General Manager (Const.)

pilot hole operations are not unlike those involved in drilling a directional oil well. Drill pipe and downhole tools are generally interchangeable and drilling fluid is used throughout the operation to transport drilled spoil, reduce friction, stabilize the hole, etc. Because of these similarities, the process is generally referred to as drilling as opposed to boring.

Installation of a pipeline by HDD is generally accomplished in three stages as illustrated in Figure 1. The first stage consists of directionally drilling a small diameter pilot hole along a designed directional path. The second stage involves enlarging this pilot hole to a diameter suitable for installation of the pipeline. The third stage consists of pulling the pipeline back into the enlarged hole.

Pilot Hole Directional Drilling

Pilot hole directional control is achieved by using a non-rotating drill string with an asymmetrical leading edge.

It is common in soft soils to achieve drilling progress by hydraulic cutting with a jet nozzle. In this case, the direction of flow from the nozzle can be offset from the central axis of the drill string thereby creating a steering bias. This may be accomplished by blocking selected nozzles on a standard roller cone bit or by custom fabricating a jet deflection bit. If hard spots are encountered, the drill string may be rotated to drill without directional control until the hard spot has been penetrated.

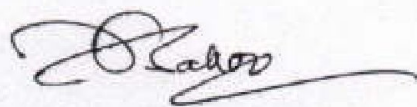
Pre-reaming

For a pre-reaming pass, reamers attached to the drill string at the exit point are rotated and drawn to the drilling rig thus enlarging the pilot hole. Drill pipe is added behind the reamers as they progress toward the drill rig. This insures that a string of pipe is always maintained in the drilled hole.

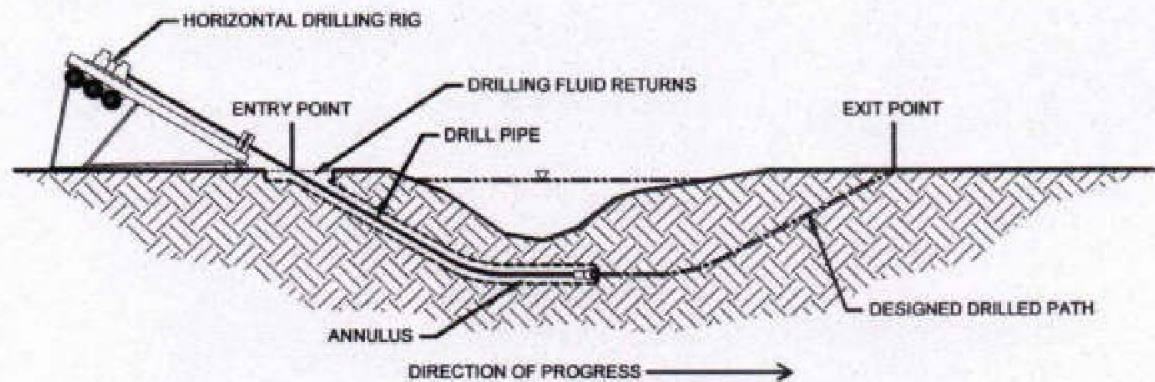
Pullback

Pipe installation is accomplished by attaching the prefabricated pipeline pull section behind a reaming assembly at the exit point and pulling the reaming assembly and pull section back to the drilling rig. This is undertaken after completion of pre-reaming or, for smaller diameter lines in soft soils, directly after completion of the pilot hole. A swivel is utilized to connect the pull section to the leading reaming assembly to minimize torsion transmitted to the pipe.

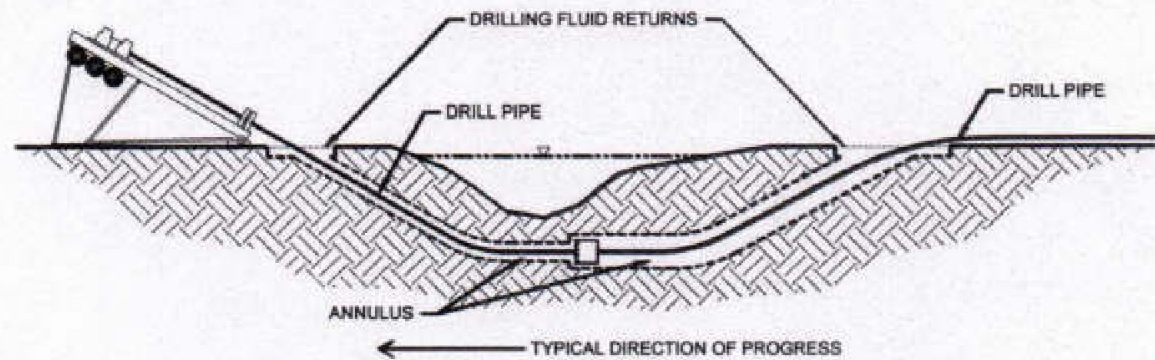

ANISH KUMAR
SM (P-CGD), ERPL-SARAN


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महाप्रबंधक (निर्माण) / General Manager (Const.)
इंडियन ऑयल कॉर्पोरेशन लिमिटेड / Indian Oil Corp. Ltd.
प्रोजेक्ट निर्माण कार्यालय, पटना / Project Construction Office, Patna
हिरा निकेतन, कालिकेत नगर, बेली रोड, पटना-801503
Hira Niketan Kaliket Nagar, Bailey Road, Patna-801503

PILOT HOLE



PREREAMING



PULLBACK

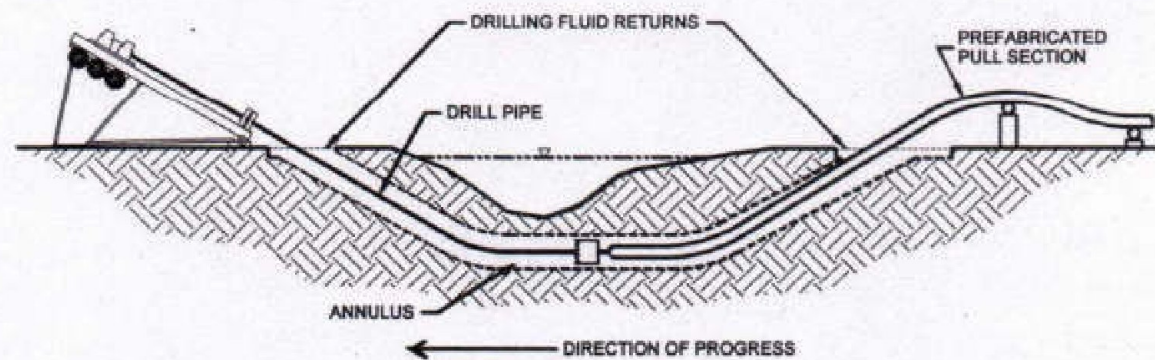

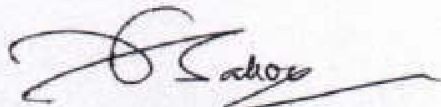


Figure 1
The HDD Process


ANISH KUMAR
SM (PJ-CGD), ERPL-SARAN



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इंडियन ऑयल कॉर्पोरेशन लिमिटेड / Indian Oil Corp. Ltd.
प्रोजेक्ट निर्माण कार्यालय, पटना / Project Construction Office, Patna

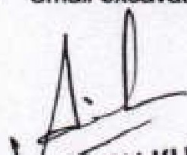
Disadvantages of Cased Crossing:

Cased Crossings are being worldwide discouraged due to technical & operational issues/problems being faced by people involved in installing & maintaining pipelines. Some of the points going against cased crossings are as follows:

- For installing a pipeline by cased crossing method, large launching & receiving pits are required to be excavated on both sides of the crossing (highway/ railway etc.). In case of high water table conditions, it is very difficult to keep these pits in stable/ dry condition. De-watering and sheet piling / shoring methods may be required especially for higher depth crossings.
- Collapse of the pits may lead to severe accidents. Several such accidents, fatal in some cases, have been reported in the past due to collapse of deep pits excavated at cased crossing locations.
- Due to requirement of deep pits and water table, depths more than of 3-4m are practically difficult to be achieved by this technique and may be risky.
- The installation is done by horizontal auger boring machine placed in the launching pit. The boring process is un-guided and at times may deviate considerably from the intended straight path due to soft soil conditions and/or presence of rock/ hard strata beneath the road/ rail surface. Under such conditions the hole may have to be abandoned and a new boring at a separate location may be required. Filling the abandoned hole is very difficult and settlement of road/ ground surface may occur in future.
- Maximum length of boring which can be practically achieved depends on the soil conditions and size of boring. However any length beyond 50-60m is difficult, risky & time consuming. As highway crossings, especially NH & SH are of longer lengths, this method has got limitations of installation.
- Problems of short-circuiting between casing & carrier pipes is another problem prevalent in cased crossings. This leads to loss of cathodic protection current thereby reducing the secondary protection to the carrier pipe. Any damage to pipe coating at such locations may lead to development of corrosion spots and potential areas for leakage of petroleum products in future.
- In case widening of the highway is undertaken in future, the low depth of the pipe may become a hindrance. Extension of the casing to cover the new width of crossing is very cumbersome and time consuming.

Advantages of HDD Technique:

- Horizontal Directional Drilling (HDD) technique is a trenchless technique used worldwide for crossing of obstacles like rivers, canals, drains, highways etc. by petroleum pipelines (liquid / gas), sewer lines etc.
- It is a environment friendly technique for pipeline crossings
- It is a much safer technique as compared to other techniques of pipeline crossings.
- Small excavation is required at both ends

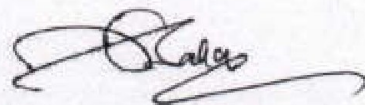

VANISH KUMAR
(DL-CGD), ERPL-SARAN


आर.के. साहू / R. K. SAHOO
सहायक (निर्माण) / General Manager

- By the use of this technique the pipeline can be installed at a much greater depth from the obstacle as per requirement of client. In PRRPL project, the depth below highway has been kept more than 5m. Such depths may not be possible by cased crossing technique.
- In this technique, use of casing pipe is not required as the hole drilled for installation of the carrier pipe is kept stable due to presence of drilling fluid (bentonite) under pressure and the drill pipe / product pipe being always present in the hole.
- Much longer crossing lengths can be achieved by HDD technique. Thus highway widening activities can be carried out without any hindrance as the pipeline is laid at much higher depth and for longer length as compared to cased crossing. In PRRPL project HDD crossing length of more than 100m have been envisaged. Such lengths cannot be obtained by cased crossing method.
- Success rate of HDD technique is much higher than auger boring. Problems of abandonment of hole which have been mentioned above in cased crossings are almost nil in case of HDD crossings of small lengths for highways, small canals etc.



ANISH KUMAR
SM (PJ-CGD), ERPL-SARAN



आर. के. साहू / R. K. SAHOO
महाप्रबंधक (निर्माण) / General Manager (Const.)
इंडियन ऑयल कॉर्पोरेशन लिमिटेड / Indian Oil Corp. Ltd.
प्रोजेक्ट निर्माण कार्यालय, पटना / Project Construction Office, Patna
हिरा निकेतन, कालिकेत नगर, बेली रोड, पटना-801503
Hira Niketan Kaliket Nagar, Bailey Road, Patna-801503

INDIA NON JUDICIAL
Government of Bihar
e-Stamp

Certificate No.	: IN-BR28015251985087U
Certificate Issued Date	: 13-Jan-2022 02:50 PM
Account Reference	: SHCIL (FI)/ brshcil01/ SARAN/ BR-SAR/ SRN
Unique Doc. Reference	: SUBIN-BRBRSHCIL0139088000146166U
Purchased by	: INDIAN OIL CORPORATION LTD
Destination of Document	: Not Applicable
Property Description	: Not Applicable
Consideration Price (Rs.)	: 0 (Zero)
First Party	: Not Applicable
Second Party	: INDIAN OIL CORPORATION LTD
Stamp Duty Paid By	: INDIAN OIL CORPORATION LTD
Stamp Duty Paid (Rs.)	: 100(One Hundred only)
Reg. fee (Rs.)	: 0 (Zero)
LLR & P Fee (Rs.)	: 0 (Zero)
Miscellaneous Fee (Rs.)	: 0 (Zero)
Discore SC (Rs.)	: 0 (Zero)
Total Amount (Rs.)	: 100 (One Hundred only)

INDEMNITY BOND

I, R K Sahoo, aged 54 years, working as General Manager (Construction), Indian Oil Corporation Limited, Project Construction Office, Patna is hereby give the following undertaking to the MoRTH / NHAI in connection with the permission for laying of Natural Gas pipeline along with OFC along the NH 85 from proposed chainage 00+000 KM To 08 + 556 KM And across the NH 85 at proposed chainage 00+400 KM, 00+900 KM, 01+600 KM, 02+000 KM, 03+000 KM for City Gas Distribution Project being executed by Indian Oil Corporation Limited, Pipelines Division.

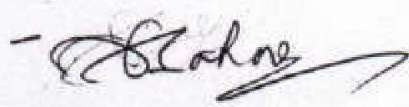
1. Not to damage other utility, if damaged then to pay the losses either to MoRTH/NHAI or to the concerned authority.
2. Renewal of bank guarantees for the further period if the work is not completed to the satisfaction of authority.
3. Confirming all standard condition of MoRTH/NHAI guidelines issued by Ministry of Road Transport & Highways/ NHAI vide Ministry circle no NH -41 .58/68 dated 31.01.1969, Ministry circle no NH-III/P/66/76 dated 19.11.1976, Ministry circle no RW/NH-III/P/66/76 dated 11.05.1982, Ministry circle no RW/NH-11037/1/86-DOI(ii) dated 28.07.1993, Ministry circle no RW/NH-11037/86/DOI dated 19.01.1995, ministry circle no.RW/NH-34066/2/95 dated 25.10.1999 and Ministry circle no.RW/NH-34066/7/2003 S&R (B) dated 17.09.2003, Ministry circular no.RW/NH-33044/27/2005/S & R (Pt.) dated 06.08.2013 and Ministry Circular No.RW/NH-33044/29/2015/S&R(R) dated 22.11.2016.

Do not write or type below this line

आर. के. साहू/R. K. SAHOO
महाप्रबंधक (निर्माण)/General Manager (Const.)
इंडियन ऑयल कॉर्पोरेशन लिमिटेड/Indian Oil Corp. Ltd.
प्रोजेक्ट निर्माण कार्यालय /Project Construction Office, Patna
हिरा विमानतल कालिका नगर, बाiley Road, Patna-801503

4. Indemnity against all damage and claims.
5. Traffic moving during laying of gas pipeline to be managed by the applicant.
6. If any claims raised by the concessionaire, then the same has to be paid by us.
7. Prior approval of the MoRTH / NHAI shall be obtained before undertaking any Work of installation, shifting or repairs or alteration to the showing gas pipeline in the National Highway right of ways.
8. Expenditure, if any incurred by MoRTH / NHAI for repairing any damage caused to the NH by the laying, maintenance or shifting of the gas pipeline will be borne by us.
9. The text of the license deed is as per verbatim of MoRTH / NHAI format (issued vide Ministry's circular no. RW/NH-33044/29/2015/S&R(R) dated 22.11.2016).
10. The applicant has obtained various safety clearances from the representative authorities such as Directorate of Electricity, Chief controller of Explosives, Petroleum and Explosive Safety Organization, Oil Industry Safety Directorate, State/Central pollution control board and any other statutory clearances as applicable, before applying to Highway Administration
11. If MoRTH / 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 desire by the MoRTH / NHAI at the cost us within reasonable time (not exceeding 60 days) of the intimation given.
12. Laying of gas pipeline will not have any deleterious effects on any of the bridge / culvert / underpasses components and roadway safety for traffic.
13. For 6 lanning we do undertake that, we will relocate our utility line on service road / approach road at our own cost notwithstanding the permission granted within such time as will be stipulated by MoRTH / NHAI for future six lanning or any other development
14. Performance Bank Guarantee for any amount of Rs..... lakh in favour of MoRTH / NHAI will be furnished once the proposal is approved.

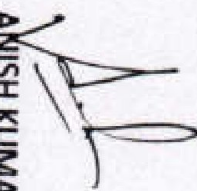

ANISH KUMAR
SM (PJ-CGD), ERPL-SARAN



आर. के. साहू / R. K. SAHOO
महाप्रबंधक (निर्माण)/General Manager (Const.)
इंडियन ऑयल कॉर्पोरेशन लिमिटेड/Indian Oil Corp. Ltd.
प्रोजेक्ट निर्माण कार्यालय, पटना/Project Construction Office, Patna
हीरा निकेतन, कालिकेत नगर, बैली रोड, पटना-801503
Hira Niketan Kaliket Nagar, Bailey Road, Patna-801503

License Fee For Laying steel and MDPE Natural gas pipeline along/across NH 85

Agency : Indian Oil Corporation Limited

SL. NO.	Type of Activity	Area Utilized (Sq. Meter)	Cost of Utilized Area as per circle rate	RS/SQ.METER/MONTH (As per NHAI Formula)	5 Year License Fee
1	Laying Along the Road	978	734089	6.255333431	367045
2	Crossing of Road	18	16710	7.859904609	8355
3	Valve Installation	36.00	24000	5.555555556	12000
Total License Fee					387400
33 % of Total License Fee					129120


ANISH KUMAR
SM (P-CGD), ERPL-SARAN


आर.के. साहू/R. K. SAHOO
नगरपालका (निर्माण)/General Manager (Const.)
एडिटर ऑफिस भारतीय तेल निगम/Indian Oil Corp. Ltd.
डिप्टी प्रोजेक्ट कन्स्ट्रक्शन ऑफिस/Project Construction Office, Patna
हिरा निकेतन, कालिदास मार्ग, बेबी रोड, पटना-801503
Hira Niketan Kalidasa Marg, Baby Road, Patna-801503

ANNEXURE - I (License Fee Calculation)

Sl. No.	Name of Mouja	Circle Name	Thana No	Rate /dismil (Rs.)	From (CH) KM	To (CH) KM	Length Mouja Wise (Meter)	Diameter of Pipeline (Meter)	Area(Sq. Meter)	Area in Dismil	Cost of Used Land Rs.)
For NH 85											
1	Medhwalija	Chapra Sadar Periphera	343	50000	0.000	1.350	1350	0.1143	154.305	3.81	190500
2	Mukhera	Rivilganj	270	32500	1.350	2.950	1600	0.1143	182.88	4.515555556	146755.5556
3	Pachpatra	Rivilganj	265	26000	2.950	3.792	842	0.1143	96.2406	2.376311111	61784.08889
4	Dewarhya	Rivilganj	264	45000	3.792	5.000	1208	0.1143	138.0744	3.409244444	153416
5	Tekniwash	Rivilganj	263	28500	5.000	5.597	597	0.1143	68.2371	1.684866667	48018.7
6	Nawada	Jalaipur	190	16000	5.597	8.556	2959	0.1143	338.2137	8.350955556	133615.2889
Total								8556	977.9508	24.14693333	734089.6333

ANISH KUMAR
SM (PI-CGD), CRPL-SARAN

आर.के. साहू/R. K. SAHOO
सहायक (निर्माण)/General Manager (Const.)
एन.एन.डी.सी. लिमिटेड/Indian Oil Corp. Ltd.
राज्य निर्माण, रासायनिक/Proved Constuction Office, Patna
मिर्माण, कनिष्ठ रासायनिक, रासायनिक-801503
Hina Niketan Kailash Nagar, Bailey Road, Patna-801503

ANNEXURE - II (License Fee Calculation)

1 Dismil =

40.5

sq. meter

ROW

30

For NH 85

1	Methwalla	Chapra Sadar Peripherel	343	50000	0.400	31	0.1143	3.5433	0.087488889	4374
2	Methwalla	Chapra Sadar Peripherel	343	50000	0.900	31	0.1143	3.5433	0.087488889	4374
3	Mukhera	Rivilganj	270	32500	1.600	31	0.1143	3.5433	0.087488889	2843
4	Mukhera	Rivilganj	270	32500	2.000	31	0.1143	3.5433	0.087488889	2843
5	Pachpatra	Rivilganj	265	26000	3.000	31	0.1143	3.5433	0.087488889	2275
Total								17.7165	0.437444444	16710


ANISH KUMAR
SM (PJ-GGD), ERPL-SARAN

आर.के. साहू/R. K. SAHOO
सहायक (निर्माण)/General Manager (Const.)
राज्य औद्योगिक निगम लिमिटेड/Indian Oil Corp. Ltd.
प्रमुख प्रायोजक, पटना/Project Construction Office, Patna
हिरा निवेशक, कालिका नगर, बैली रोड, पटना-801503
Hira Niveshan Kallikat Nagar, Bailey Road, Patna-801503



ANNEXURE - III (License Fee Calculation)

Sl. No.	Name of Mouja	Circle Name	Thana Number	Rate /disml	Vai (CH) KM	1 Disml = 40.5 sq. meter	Cost of Used Land (In Rs.)
1	Methwalya	Chapra Sadar Peripherai	343	50000	0.000	0.22	11111
2	Pachpatra	Riviganj	265	26000	3.000	0.22	5778
3	Nawada	Jalaipur	190	16000	6.000	0.22	3556
4	Nawada	Jalaipur	190	16000	8.556	0.22	3556
Total							24000.00

For NH 85

area In Sq. Meter	Cost
36	24000

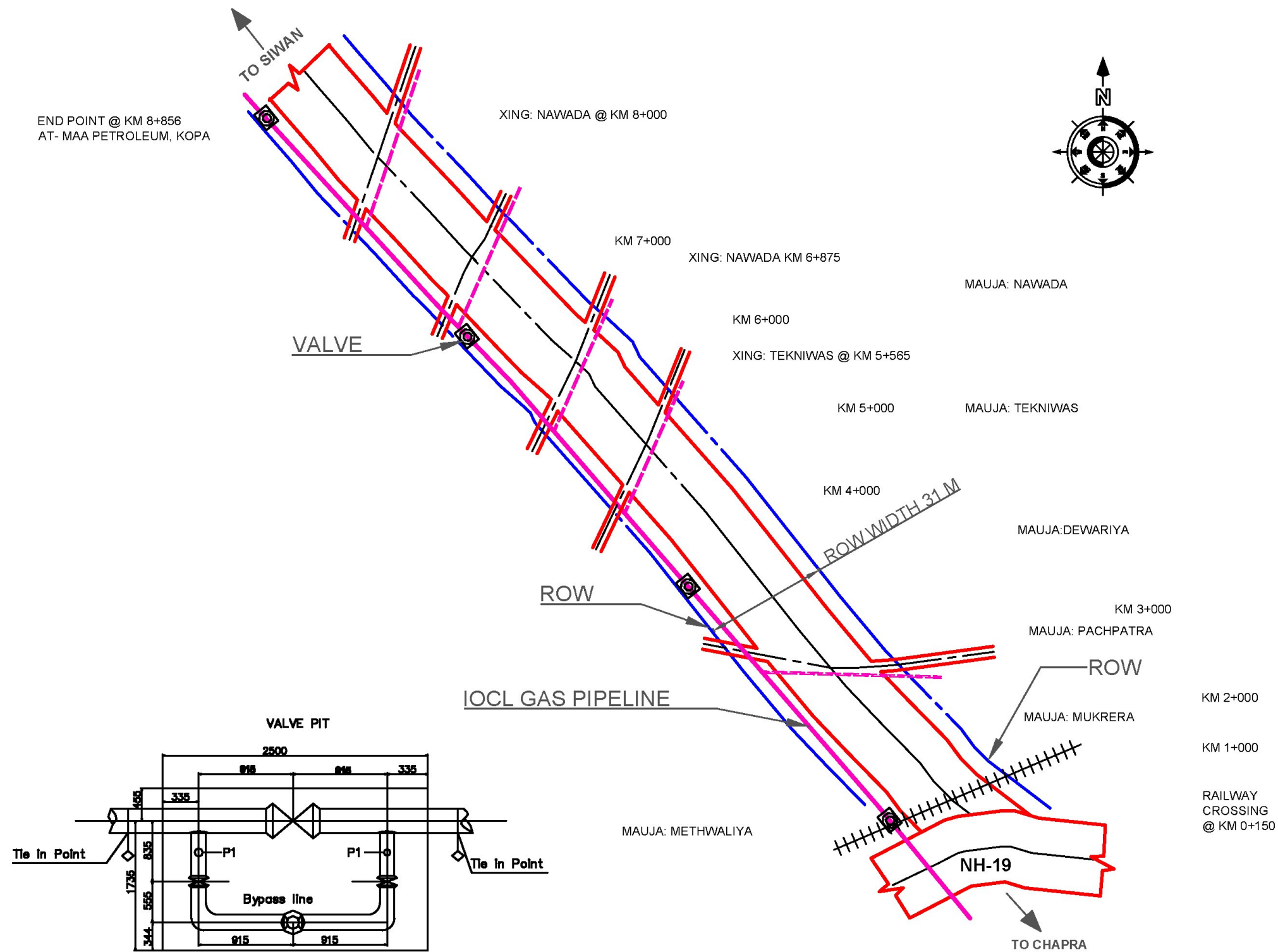
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ANISH KUMAR
SM (P)-CGD, ERPL-SARAN

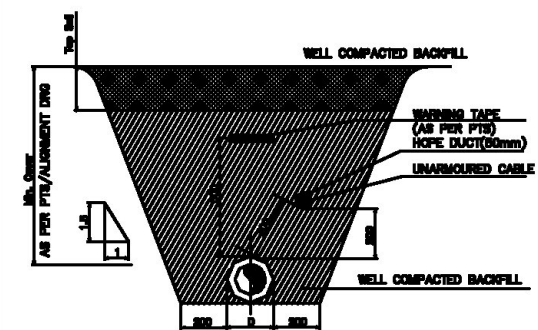
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आर.के. साहू/R. K. SAHOO
सहायक (प्रौद्योगिकी)/General Manager (Const.)
राष्ट्रीय तेल निर्यात निगम/Indian Oil Corp. Ltd.
प्रमुख निर्माण स्थल, राय/Project Construction Office, Patna
हिरा निकेतन कॉलेज नगर, बैली रोड, राय-801503
Hira Niketan Kailash Nagar, Bailey Road, Patna-801503

KEYPLAN : CHAPRA TO KOPA (NH- 85)



NOTE : DRAWING IS NOT TO SCALE



TYPICAL TRENCH DETAIL IN NORMAL SOIL TYPE-1

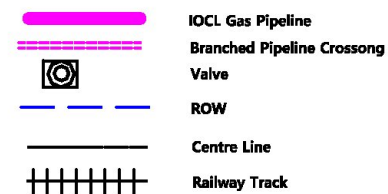
NOTE:

1. The pipeline laying along the road shall be carried out in Utility corridor or at near extreme edge with minimum of 2m from the edge of RDU.
2. Method of road crossing will be HDD(Horizontal Directional Drilling).
3. All the existing NHAI facilities shall be crossed below the bottom of said facility.
4. All dimensions are in mm if not specified.

Layout Details:-

1. Road Name : NH 85
2. Route : Chapra (Brahmpur) to Kopa (Near Maa Petroleum, IOCL Petrol Pump)
3. From Proposed CH 0+000 to Proposed CH 8+556 ROAD CROSSING AT KM 0.400, 0.900, 1.600, 2.000 and 3.000
4. Isolation Valve at CH 0+000,3+000,6+000 and 8+556
5. Railway Crossing at CH 0+150

LEGEND: —



INDIAN OIL CORPORATION LTD
(PIPELINES DIVISION)

PROJECT: CITY GAS DISTRIBUTION

AUTHORITY: NATIONAL HIGHWAY AUTHORITY OF INDIA,
PIU, CHAPRA

KEY PLAN FOR PIPELINE

A3 DEC' 21

SCALE-NTS

DWN_i

CGD SARAN/NH 85/MISC-01

Rev-0

- 1) To sign all documents/MoUs, Agreements/Deeds required to be signed between Indian Oil Corporation Limited and Departments under Central Government/State Governments (Uttar Pradesh, Bihar, and Jharkhand) and Public Sector Undertakings, for example District Administration, PWD, Irrigation Department, Forest Department, Railways, Airport Authority of India, National Highway Authority of India etc in respect of construction of the (a) Augmentation of Paradip-Haldia- Durgapur LPG Pipeline and its extension upto Patna and Muzaffarpur in Bihar and Jharkhand (b) 18" Haldia Barauni Pipeline conversion to natural gas in Bihar and Jharkhand (c) Branch Pipeline from Patna to Baitalpur on Barauni-Kanpur Pipeline and its extension to Raxaul (d) Motihari- Amlekhganj Pipeline (e) 30" Haldia Barauni Pipeline in Bihar and Jharkhand (f) City Gas Distribution Projects in Bihar and Jharkhand (g) LKO ATF Pipeline (h) any other projects approved by Board and executed in Bihar and Jharkhand.
- 2) To consider and after obtaining due approvals from Competent Authorities negotiate/release/hold payment/s for any advance/claim/demand which is raised/payable in connection and context of the stipulations of the MoUs/Agreements entered into between Indian Oil Corporation Limited and Departments under Central Government/State Governments (Uttar Pradesh, Bihar, and Jharkhand) and Public Sector Undertakings, for example District Administration, PWD, Irrigation Department, Forest Department, Railways, Airport Authority of India, National Highway Authority of India etc.


It is also advised that **Shri R. K. Sahoo, General Manager (Construction), Patna**, holder of this Special Power of Attorney shall observe the following limitations on the powers delegated to him:-

- a. To not sub-delegate further the powers conferred hereinabove, under this SPoA.
- b. Original Power of Attorney shall be surrendered upon the completion of the purpose for which the Attorney has been given and/or event of transfer/retirement or relinquishment of the post or on ceasing to be the employee of the Corporation.
- c. The delegation shall not provide any additional financial powers to the delegates over and above to what they are entitled to as per the extant DOP.
- d. The delegation is being extended to facilitate administrative functions only.
- e. It needs to be also ensured that before executing documents or committing anything on behalf of the Corporation, particularly the items that could have financial implications, the delegatee should seek advice from his superiors and obtain appropriate requisite approvals.
- f. Any prior Power of Attorney held by the holder in the above mentioned context shall have to be surrendered/withdrawn and possession of dual Power of Attorney shall not be permissible.

And I, **J.P. Sinha, Executive Director, Eastern Region Pipelines, Indian Oil Corporation Limited, Kolkata - 700 020** and duly appointed Constituted Attorney for and on behalf of Indian Oil Corporation Limited do hereby undertake to ratify and confirm all acts and whatsoever the said Attorney or his sub-delegates shall lawfully do or cause to be done in or about the premises aforesaid of the Corporation by virtue of these presents.

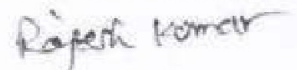


IN WITNESS WHEREOF, I, J.P.Sinha, Executive Director, Eastern Region Pipelines, Indian Oil Corporation Limited, and duly appointed Constituted Attorney of Indian Oil Corporation Limited have hereunto affixed my hand and seal this the 30 day of Aug. 2021.



(J.P.Sinha)
Executive Director

IN THE PRESENCE OF

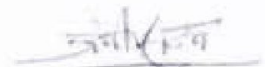


(RAJESH KUMAR)

Dy. General Manager (HR) ERPL Kolkata
SPECIAL POWER OF ATTORNEY

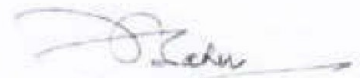
(J.P.Sinha)

Executive Director
CONSTITUTED ATTORNEY OF
INDIAN OIL CORPORATION LIMITED



.... DONOR

I ACCEPT THE POWER HEREBY GIVEN



R. K. Sahoo
General Manager (Construction), Patna
PIPELINES DIVISION
..... DONEE



पेट्रोलियम एवं प्राकृतिक गैस विनियामक बोर्ड
Petroleum and Natural Gas Regulatory Board
 प्रथम-तल, वर्ल्ड ट्रेड सेंटर, बाबर रोड, नयी दिल्ली - 110001
 1st Floor, World Trade Centre, Babar Road, New Delhi - 110001

PNGRB/CGD/BID/10/2018/GA/10.08/Schedule-D

29th March 2019

To
 Indian Oil Corporation Limited,
 Pipeline Division,
 A-1, Udyog Marg, Sector-1,
 Noida - 201301

(Kind Attn: Shri S K Sharma, ED (CGD))

Subject: Grant of Authorisation to Indian Oil Corporation Limited for development of City Gas Distribution Network in the Geographical Area of Muzaffarpur, Valshali, Saran and Samastipur Districts (GA 10.08).

Sir,

With reference to submission of Performance Bank Guarantee for Rs. 50 crore vide your letter dated 29.03.2019, as per the requirement under Regulation 10 (1) of the Petroleum and Natural Gas Regulatory Board (Authorizing Entities to Lay, Build, Operate or Expand City or Local Natural Gas Distribution Networks) Regulations, 2008, please find enclosed authorization in Schedule D for the GA of Muzaffarpur, Valshali, Saran and Samastipur Districts in duplicate.

2. The tariff applicability is as per the Judgement of Hon'ble Supreme Court of India in the SLP No. 22273 of 2012.
3. You are requested to put your stamp & signature on each page of the document and return one copy, within 7 days of receipt of this communication, to the PNGRB for records.
4. The enclosed authorization issues with the approval of the Board.

Yours faithfully,

Encl: As above

f. 24.04.2019
 एस. के. शर्मा / S. K. Sharma
 कार्यकारी निदेशक (सीजीडी)
 Executive Director (CGD)
 इंडियन ऑयल कॉर्पोरेशन लिमिटेड
 INDIAN OIL CORPORATION LIMITED
 पाइपलाइन विभाग / Pipeline Division

29/3/2019
 Arvind Kumar
 (Additional Adviser)
 ARVIND KUMAR
 अवर सलाहकार
 Additional Adviser
 पेट्रोलियम और प्राकृतिक गैस विनियामक बोर्ड
 Petroleum & Natural Gas Regulatory Board
 प्रथम तल, नयी दिल्ली रोड
 1st Floor, World Trade Centre

जिला निबधन कार्यालय, सारण (छपरा)

पत्रांक:- 43 / निबधन

प्रेषक,

जिला अवर निबधक,
सारण, छपरा।

सेवा में,

Sr. Project Engineer (CGD),
Indian Oil Corporation Limited,
Pipelines Division, ERPL City Distribution
Project Office-Saran

विषय:- M.V.R. उपलब्ध कराने के संबंध में।

छपरा/दिनांक:- 07/01/22

प्रसंग:- आपका पत्रांक-ERPL/CGD-Saran/PROJ/2.4/02, दिनांक:-06.01.2022

महाशय,

उपर्युक्त विषयक प्रसंगाधीन पत्र के आलोक में अंचल छपरा सदर पेरिफेरल, छपरा नगर क्षेत्र, अंचल रिविलगंज, रिविलगंज पेरिफेरल, नगर पंचायत रिविलगंज, अंचल जलालपुर एवं अंचल मांझी के सभी मौजों का वर्तमान में प्रभावी न्यूनतम प्राक्कलित मूल्य मार्गदर्शिका पंजी (M.V.R.) (मूल्य रु. प्रति डिसमिल में) इस पत्र के साथ संलग्न कर आवश्यक कार्यार्थ हेतु भेजी जा रही है।

कृपया, प्राप्ति स्वीकार की जाय।

अनुलग्नक:-

यथावर्णित-(28) पृष्ठों में।

विश्वासभाजन

07/01/22
जिला अवर निबधक,
सारण, छपरा।

जिला अवर निबंधन कार्यालय, सारण(छपरा)

(न्युनतम प्राक्कलित मूल्य मार्गदर्शिका पंजी) (मूल्य रु० प्रति डिसमिल में)

कार्यालय- सारण
(कोड-1700)

नगर परिषद् छपरा (कोड-01)

01-02-2016 से प्रभावी

थाना कोड	नया वार्ड	पुराना वार्ड सं०	सर्किल संख्या	मौजा / मुहल्ला	व्यवसायिक		आवासीय		विकासशील आवासीय	अधिसूचना सं०
					मुख्य सड़क	शाखा सड़क	मुख्य सड़क	शाखा सड़क		
1	44	1	1	रौजा पुरवारी	660000	431000	344000	294000	196000	1
2	44	1	1	रौजा पश्चिमारी	680000	425000	342000	306000	196000	2
3	43	1	1	बड़का तेलपा पुरवारी	695000	435000	344000	310000	196000	3
4	43	1	1	रौजा पश्चिमारी	680000	439000	363000	312000	203000	4
5	42	2	1,2	रौजा पश्चिम	680000	442000	367000	314000	202000	5
6	42	2	1,2	बड़का तेलपा	695000	443000	368000	342000	188000	6
7	41	3	3	बड़का तेलपा	795000	483000	410000	342000	196000	7
8	41	3	3	पुरवारी तेलपा	757000	488000	403000	354000	196000	8
9	41	3	3	भिखाड़ी चौक	787000	523000	420000	402000		9
10	40	4	4	बिचला तेलपा	900000	534000	455000	402000	189000	10
11	40	4	4	छोटा तेलपा	900000	534000	455000	417000	192000	11
12	40	4	4	तेलपा बस स्टैण्ड	905000	540000	478000	414000		12
13	39	4	4	छोटा तेलपा	750000	502000	466000	414000	210000	13
14	39, 40	4	4	बिचला तेलपा दक्षिणी भाग	720000	502000	466000	441000	210000	14
15	38	3	3,5	बिचला तेलपा	847000	534000	504000	436000	210000	15
16	38	3	3,5	छोटा तेलपा	847000	546000	504000	426000		16
17	38	3	3,5	बैंक कॉलोनी	931000	561000	528000	432000		17
18	37, 39	5	5	छोटा तेलपा	998000	623000	560000	436000		18
19	37, 39	5	5	पश्चिमारी तेलपा	998000	626000	573000	390000		19
20	37, 39	5	5	पुलिस लाइन	998000	573000	437000	432000		20
21	37, 39	5	5	कुटिया टोली	998000	603000	572000	432000		21
22	36, 39	6	6,5	छोटा तेलपा	998000	591000	550000	456000	420000	22
23	36	6	6,5	ईमामगंज	1016000	660000	596000	558000		23
24	36	6	6,5	कटहरी बाग	1125000	741000	685000	882000		24
25	35	10	5,6,7	वालदली बाजार	2512000	1557000	932000	825000		25
26	35	10	5,6,7	छोटा तेलपा	1328000	1098000	915000	825000		26
27	35	10	5,6,7	गौधी चौक	2250000	1132000	1064000	894000		27
28	34	11	5,12	छोटा तेलपा	1707000	975000	823000	789000		28

30/1/16

कार्यालय- सारण (कोड-1700)				अंचल गड़खा (कोड-07)			वर्ष:- 2014-15		
थाना कोड	मौजा	थाना नं.	व्यवसायिक	मुख्य सड़क आवासीय	आवासीय	विकासशील	दो फसला	एक फसला	अधिसूचना सं०
26	माबारकपुर	407	48000	45000	35500	25500	14500	11500	457
27	अलियासपुर	408	48000	45000	35500	27500	13000	9500	458
28	पथरा	417	48000	38500	33500	27500	15500	9000	459
29	बंगरा	418	82000	55000	42000	35500	13000	11000	460
30	रसीदपुर	419	61000	48000	41000	35500	14000	10500	461
31	साधपुर	421	82000	55000	48000	45000	13000	11000	462
32	मोतिराजपुर	422	99000	81000	52200	43000	14800	12300	463
33	औड़ा मिल्की	423	0	51000	42000	32500	12500	9500	464
34	औड़ा माला	424	68000	45600	40000	31000	11900	9500	465
35	सैद सराय	425	58000	45500	39000	34000	14800	12900	466
36	सहो सराय	426	45000	42000	35500	32500	15000	12500	467
37	कंवानी	427	45000	42000	35500	32500	15000	12500	468
38	सैकी	428		42800	36500	33800	14200	11800	469
39	वाजितपुर	429	58000	52500	43000	40000	13800	11800	470
40	मैकी	430	85500	77000	35500	32000	13500	11000	471
41	मैकिमपुर	431	72000	65000	55000	45500	17500	14500	472
42	मरीचा	432	64500	62000	49500	33500	14000	13000	473
43	फुरसतपुर	433	107500	62000	45000	27000	14000	8500	474
44	कुचाह	434		43500	25600	19500	13500	6700	475
45	हसनपुर	435	51000	45000	35500	25500	12500	7000	476
46	मिनापुर	436	81000	51000	42000	35500	16000	12500	477
47	खदन्ता	437		49000	43500	32000	13500	8100	478
48	पिडारी	438			45500	35500	15500	8000	479
49	हकमा	439	95000	52000	35500	32500	15500	9200	480
50	गड़खा	440	725000	85000	75500	42000	32500	16000	481
51	बीबीपुर	441	485000	85000	55000	48000	19000	12500	482
52	मिठेपुर	442	86000	65000	52000	45000	16500	12500	483

जिला अवर निबंधन कार्यालय, सारण(छपरा)

(न्यूनतम प्राक्कलित मूल्य मार्गदर्शिका पंजी) (मूल्य ₹0 प्रति डिसमिल में) अधिसूचना की तिथि—

कार्यालय- सारण (कोड-1700)				अंचल गड़खा (कोड-07)			वर्ष:- 2014-15		
थाना कोड	गौजा	थाना नं.	व्यवसायिक	मुख्य सड़क आवासीय	आवासीय	विकासशील	दो फसला	एक फसला	अधिसूचना सं०
1	पिड़ारी	306		33500	29500	25500	9500	6800	432
2	सर्वाडीह	307		33500	29500	26500	9500	6800	433
3	मुवारकपुर	317	49000	39500	29500	23500	12500	6800	434
4	पिड़ौना	318	57500	49600	47500	29500	12500	7900	435
5	बरबकपुर	319	45000	35500	27000	19500	8200	6100	436
6	पचपतरा	320	57500	47500	39500	26000	9000	6500	437
7	जीगना	321	54000	51500	42500	35000	14500	9200	438
8	मजलिशपुर	322	49000	39500	29500	25000	12500	8500	439
9	मजलिशपुर	323	49000	39500	29500	25000	12500	8500	440
10	अलांनी	324	68000	55500	47500	35000	11000	8000	441
11	सरगढ़ी	325	58500	51500	41000	31500	12600	9500	442
12	माघोपुर	326	49000	42000	34000	25000	12500	8500	443
13	कमालपुर	327	93000	65500	34000	25000	15000	10500	444
14	पोहिया	328	93000	73500	52000	35500	15000	10500	445
15	फतनपुर	329	49000	42000	34000	25000	11000	8500	446
16	भैसमारा	330	49000	42000	34000	25000	11000	8500	447
17	पहाड़पुर	331	88000	63500	39000	33200	17000	9100	448
18	फेरुसा	332	65000	56500	40500	27000	12500	10500	449
19	रेड़िया	333	68000	48000	40500	27000	21000	9500	450
20	महम्मदा	334	110000	95000	45000	35500	15500	11500	451
21	बेलवनिया	335		45000	36000	35000	13500	7500	452
22	लाढ़पुर	326		42000	25500	23500	13500	7500	453
23	दुर्ग टोला	404		48000	42000	28500	15000	12500	454
24	बगही	405	48000	45000	39000	28500	15000	12500	455
25	फुलवरिया	406	49500	43500	36500	32000	14000	13000	456



**GOVERNMENT OF INDIA
MINISTRY OF ROAD TRANSPORT & HIGHWAYS
AN ISO 9001:2008 CERTIFIED MINISTRY**

S&R(R) ZONE

**IAHE Campus,
A-5, Sector-62,
Noida-201301.**

F. No. RW/NH-33044/29/2015/S&R(R)

Dated: 22nd November, 2016

To,

1. The Chief Secretaries of all the State Governments/ UTs
2. The Principal Secretaries/ Secretaries of all States/ UTs Public Works Department dealing with National Highways, other centrally sponsored schemes.
3. All Engineers-in-Chief and Chief Engineers of Public Works Department of States/ UTs dealing with National Highways, other centrally sponsored schemes.
4. The Director General (Border Roads), Seema Sadak Bhawan, Ring Road, New Delhi-110 010.
5. The Chairman, National Highways Authority of India, G-5 & 6, Sector-10, Dwarka, New Delhi-110 075.
6. The Managing Director, NHIDCL, PTI Building, New Delhi-110001

Subject: Accommodation of Public and Industrial Utility Services along and across National Highways – Policy guidelines regarding.

Sir,

The Government has realized that development of infrastructure across the Country on a sustainable and integrated manner continues to be an imperative for improving the state of economy, enhancing quality of life of the citizens and ensuring equitable development throughout the country.

Land being among the most precious of natural resources available, optimum utilization of land shall play a critical role in integrated development of infrastructure. One of the ways to effect such optimum utilization is leveraging land within National Highway (NH) Right of Way (ROW) for laying utility services. This may be achieved through granting permissions for laying utility services along and /or across the ROW. However, environment and safety of the road users are the prime factors in deciding permission for utility services. Permission may be denied, if it is not feasible to ensure safety and environment through requisite safeguards. The Administration of ROW, has been defined in the National Highway Land and traffic Control Act 2002 and relevant Rules 2004.

Keeping in view the need for consistency and clarity, in supersession of all the instructions contained in the earlier previous circulars on the subject, following guidelines shall apply for accommodation of Utility Services along and across National Highways.

2. Laying of Utility Services along the National Highways:

- 2.1 There shall be a provision for utility ducts for appropriate categories/combination of utilities in the construction of new/4-6 laning of National Highways. The ducts shall be located at appropriate location preferably as close to the extreme edge of ROW.
- 2.2 Utility services shall be laid in the utility ducts, if provided for the purpose.
- 2.3 In stretches where utility ducts have not been provided, the utility services shall be located, beyond the toe line of the embankment and drains, as close to the extreme edge of the RoW as possible. While granting permission, requirement of up-gradation also needs to be kept in view.

Mamij Kumar

2.4 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 0.6 metre below the ground level.

2.5 No utility service shall be laid over existing culverts and bridges except through the utility ducts where such provision exists. In case of absence of such provisions, the Licensee shall make his own arrangement for crossing of cross drainage structure, rivers, etc. below the bed.

2.6 In exceptional cases, where ROW is restricted the utility services can be allowed beneath the carriageway of service road, 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 in such case shall not be less than one lane. In such cases, it also needs to be ensured 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 as per the agreement.

3. Laying of Utility Services across the National Highway:

3.1 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 IRC and executed following the Specifications of the Ministry.

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

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

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

3.5 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 wider, (but not more than 60 cm wider), than the outer diameter of the utility pipe. Filling of the trench shall conform to the specifications contained here-in-below or as supplied by the Highway Authority.

3.5.1 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.

3.5.2 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.

3.5.3 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 modified 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.

3.5.4 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.

3.6 When utilities are allowed overhead, the horizontal and vertical clearance in accordance with the IRC shall be maintained.

4. Procedure for processing application for granting permission for use of highway land: Any person who intends to obtain permission shall make an application online in the prescribed form to Highway Administration or an officer authorized by Highway Administration on his behalf. The application must mention details the various safety clearances from the respective authorities such as Directorate of Electricity, Chief Controller of Explosives, Petroleum and Explosives Safety Organization, Oil Industry Safety

Manoj Kumar

Directorate, State/Central Pollution Control Board and any other statutory clearances as applicable, which must be obtained by the Applicant before applying to the Highway Administration.

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). The permission for laying utility services is to be normally granted within 30 days from the day of closure of public objections and claims. If no communication is received from the Highway Administration within 30 days from the day of closure of public objections and claims, the permission shall be deemed to be granted. The initial permission would be valid for a maximum of 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.

5. Charges for granting licence for use of highway land: For the purpose of license fee/lease rentals, the utilities have been divided into two categories; i) Public utilities and b) Industrial utilities as per the details given in **Annexure I**.

License Fee/lease rentals described below is for Industrial utilities. The license fee for Public utilities shall be 33% of the fee prescribed for Industrial utilities.

5.1 The following methodology shall be followed for license fees/lease rental determination for utility service lines other than localized infrastructure facilities like towers, repeaters and junction boxes).

License Fees (Rs/sq m/ month) = (Utilized NH land area X prevailing Circle Rate of land per unit area) / (10 x 12) where,

Utilized NH land area = Outer diameter/width of the concerned utility line X length

5.2 The following methodology shall be followed for license fees/lease rental determination for utility services such as towers/repeaters/ junction boxes etc.

License Fees (Rs/sq m/ month) = (Utilized NH land area X prevailing Circle Rate of land per unit area) / (10 x 12) where,

Utilized NH land area = Projection of utility on the ground including area of support system/tower

However, for public utilities, area below the support system/tower shall only be charged.

5.3 Fee shall have to be paid in advance for the period for which permission is granted. 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.

5.4 A system to redress grievances and to consider relaxation from the guidelines, in exceptional cases, shall be notified separately and shall be effective from the date of notification.

6. All required restoration, maintenance work subsequent to laying of utility services 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. To process for the granting of permission and prior to signing of Lease agreement, a Performance Bank Guarantee for an amount based on per route metre with a validity of one year initially, in the prescribed format (extendable if required till satisfactory completion of work) shall have to be furnished by the utility service provider/ Licensee, as a security against improper restoration of ground in terms of

Manoj Kumar

filling/unsatisfactory compaction damages caused to other underground installations/utility services & interference, interruption, disruption or failure caused thereof to any services etc.;	
Utility services such as pipes etc (rate in per m)	
provided in the ducts already provided	Rs 50
<= 300 mm dia/width	Rs 100
> 300 mm dia/width but <=1000 mm	Rs 250
> 1000 mm	Rs 500
Utility services such as towers etc (rate in Rs per sq m)	Rs 100

In case the Licensee fails 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. 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.

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.

7. The Authority shall enter into a License Agreement with the respective utility service provider in the format enclosed (**Appendix**) including any other conditions imposed by Highway Administration, to ensure safe and uninterrupted flow of traffic. Post signing of the agreement, the utility service provider shall be designated as 'Licensee' for the purpose of this project and will be authorized to install and operate utility services within the NH RoW. However, utility services shall be made operational by the Licensee only after a completion certificate to the effect is issued by the Highway Administration.

Encls: As above.

Manoj Kumar

(Manoj Kumar)

**Executive Engineer(NFSG) (S,R&T) (Roads)
For Director General (Road Development) & SS**

Copy to:

1. All Technical Officers in the Ministry of Road Transport & Highways
2. All ROs and ELOs of the Ministry
3. The Secretary General, Indian Roads Congress
4. The Director, IAHE
5. Technical circular file of S&R (R) Section
6. NIC-for uploading on Ministry's website under "What's new"

Copy for kind information to:

7. PS to Hon'ble Minister (RTH&S)
8. PS to Hon'ble MOS (RTH&S)
9. Sr. PPS to Secretary (RT&H)
10. PPS to DG (RD) & SS
11. PPS to SS&FA
12. PS to ADG-I/ ADG-II
13. PS to JS (T)/ JS (H)/ JS (LA&C)/ JS (EIC)

Public Utility provider and Industrial infrastructure

A. Public Utility Provider

A **Public Utility Provider** in context of this Guideline shall mean any organization that provides and maintains the infrastructure for a public service like electricity, gas, water supply, telecom cables and sewage disposal subject to applicable regulation.

B. Eligible activities for Industrial Units or 'Industrial Infrastructure'

Industrial Infrastructure in context of this Guideline shall mean any physical infrastructure that is required to facilitate industrial operations and is constructed, operated and maintained along/across Right of Way of National Highways. Such infrastructure shall include the following:

- a. Underground & above ground pipelines including provisions for booster pumping facilities, maintenance bays and other required support infrastructure for transport of legally permitted materials for industrial usage by a business entity having valid license for industrial operations.
- b. Conveyor Belts including provisions for maintenance bays and other required support infrastructure for transport of legally permitted materials, by a business entity having valid license for industrial operations.
- c. Power cables/wires etc. meant for industrial usage by a business entity having valid license for industrial operations.
- d. Any other such associated industrial infrastructure facility.

Draft

Enclosure to Ministry of Road Transport & Highways letter No. 33044 / 29 / 2015
/S&R(R) dated 22.11.2016.

**AGREEMENT REGARDING GRANTING OF RIGHT OF WAY
PERMISSIONS**

FOR LAYING UTILITY SERVICES ON NATIONAL HIGHWAYS

Agreement to lay Telecom cable / OFC cable / electrical cable / pipe line/ ducts etc.
from to Km of land.

This Agreement made this _____ day of _____ (month) _____ of (year) between _____ acting in his executive capacity through _____ (hereinafter referred to as the "Authority" which expression shall unless excluded by or repugnant to the context, include his successors in office and assigns) on the one part, and M/s _____, a company registered under the Companies Act, 1956 and having its Registered Office at _____ (hereinafter called the "Licensee") which expression shall unless excluded by repugnant to the context, include his successors/administrator assignees on the second part.

Whereas the Authority is responsible, inter-alia, for development and maintenance of lands in Km to of NH No.....RoW.

Whereas the Licensee proposes to lay Telecom cable / OFC cable / electrical cable / pipe line / ducts etc. referred to as utility services in subsequent paras.

Whereas the Licensee has applied to the Authority for permission to lay utility services from Km _____ to Km _____ of road/route up to _____ and from km _____ to km _____ of road/route up to _____.

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

Now this agreement witnesseth 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 fulfilment 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 MoRT&H 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 0.6 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 IRC 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 0.3m 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 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 50m 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 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 co-ordination 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 co-ordination 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 co-ordination 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 geo-tagged 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 authorised 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 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 50m 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 WHEREOF THE PARTIES HERETO HAVE CAUSED THIS AGREEMENT TO BE EXECUTED THROUGH THEIR RESPECTIVE AUTHORISED REPRESENTATIVES THE DAY AND THE YEAR FIRST ABOVE WRITTEN.

SIGNED SEALED AND DELIVERED FOR AND ON BEHALF OF AUTHORITY.

BY SHRI _____

(Signature, name & address with stamp)

SIGNED ON BEHALF OF M/S _____ (LICENSEE)

BY SHRI _____

(Signature, name & address with stamp)

HOLDER OF GENERAL POWER OF ATTORNEY DATED _____

EXECUTED IN ACCORDANCE WITH THE RESOLUTION NO. _____

DATED _____ PASSED BY HTE BOARD OF DIRECTORS IN THE
MEETING HELD ON _____

IN THE PRESENCE OF (WITNESSES):

1.

2.

Enclosure to Ministry of Road Transport & Highways letter No.RW/NH-33044/
29/2015) Sd(R(R) dated 22.11.16.

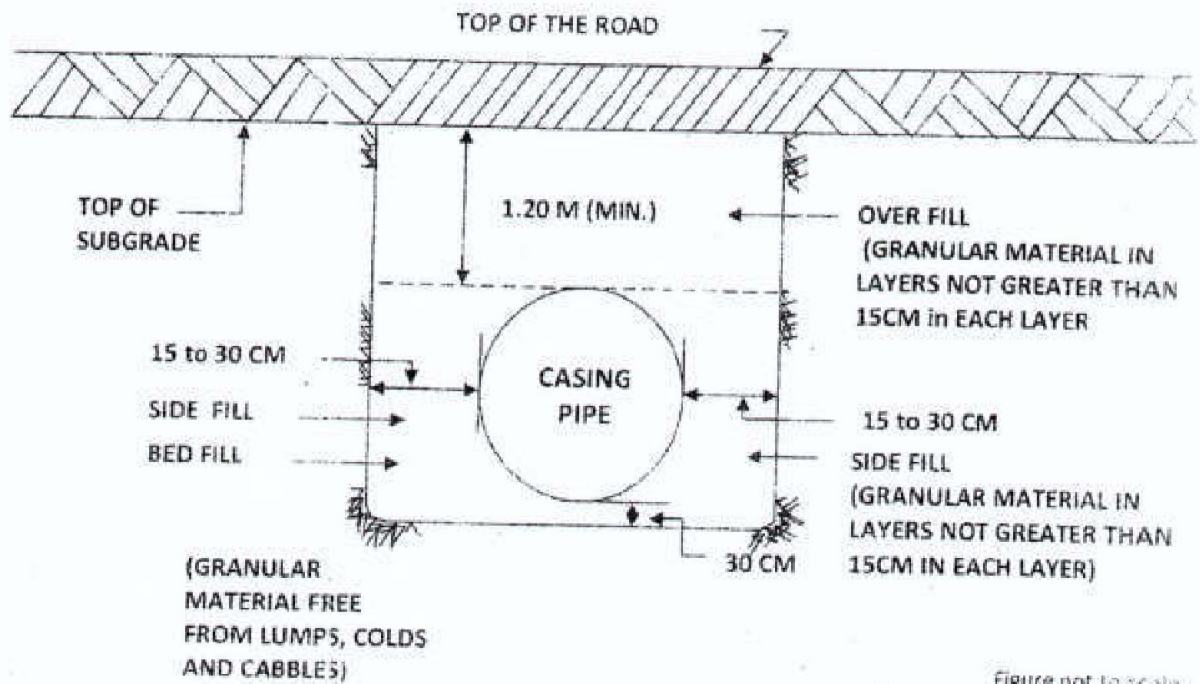
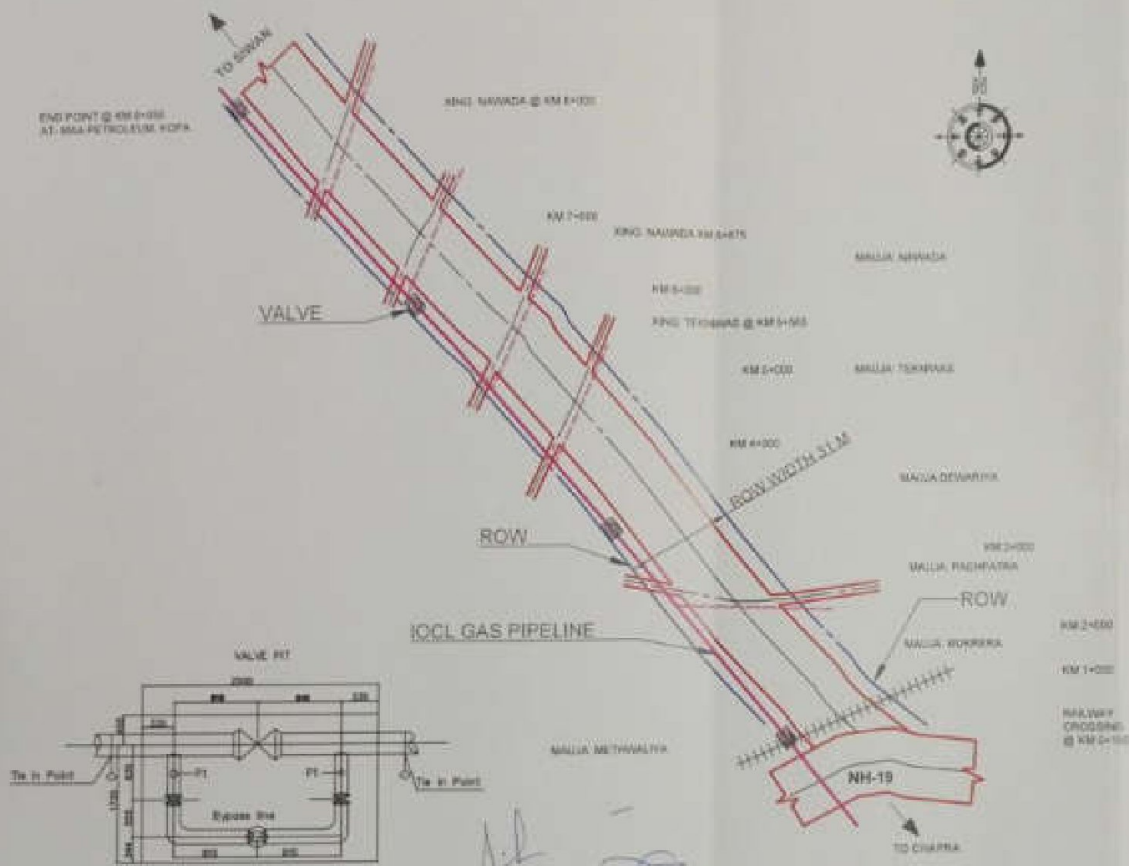


Figure not to scale

FIGURE-1 INSTALLATION OF CASING PIPE FOR
CROSSING THE ROAD

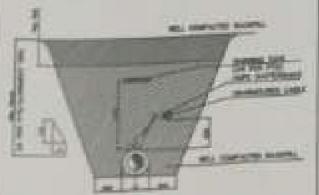
KEYPLAN : CHAPRA TO KOPA (NH- 85)



NOTE: DRAWING IS NOT TO SCALE

ANISH KUMAR
SM (H-CO), ENPL, IANA

आर. के. साहू/R. K. SAHOO
 सहायक निदेशक, Commercial Manager (Distt.)
 भारत अन्न अर्थात् फीडा, Cuttack Distt. Office, Cuttack,
 Odisha, India-753 005, India. E-mail: rsahoo@rediffmail.com
 या आपका निदेशक, भारत अन्न अर्थात् फीडा, Cuttack Distt. Office, Cuttack,
 Odisha, India-753 005, India. E-mail: rsahoo@rediffmail.com



TOTAL FRENCH DETAIL IN NORMAL BOX
TYPE-1

NOTE

3. The pipeline laying along the road shall be carried out in Utility Corridor or at near extreme edge with minimum of 2m from the edge of road.
4. Method of road crossing will be Horizontal/Directional Drilling.
5. At the existing rail facilities shall be crossed below the bottom of main facility.
6. All dimensions are in mm if not specified.

Layout Details:-

1. Road Name: Nw 22
2. Route: Chicago (Bramington to Kopee (Near
Mike Petroleum, 10015 Petrol Pump))
3. From Proposed CH 2-000.56 - Proposed CH
2-554.00AD CH2005.90 at KM 0.400, 0.800,
1.200, 2.000 and 3.000
4. Tolerance Value at CH 2-000.5+000.6+000
and 0.556
5. Railway Crossing at CH 2-150

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Statistical Algebra Learning
Notes
2020
Update 2021
Authors: Frank |
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INDIAN OIL CORPORATION LTD
(PIPELINE DIVISION)

PROJECT-CITY GAS DISTRIBUTION

[illegible]

NET LOSS FROM OPERATIONS

DOI: 10.1002/for

276/277

1998

Figure 10

Figure 10

Figure 10