



NCC Limited

NCC LTD.

STATE WATER AND SANITATION MISSION

CLIENT: JIM / SWSM / DWSM

GORAKHPUR-UP

SIEVE ANALYSIS OF PEA GRAVELS (SIZE-1.6 mm to 4.8 mm)

(As per IS : 460 and IS: 4097)

Date of Testing : 15/11/2021

Test report no : NCC/GKS/Bcl/025

SL NO.

DESCRIPTION

OBSERVATIONS

1

Source of material :

Lakhna, Nymital, Uttarakhnad.

2

Location :

Block Name- Jagaha
G.P Name- Sakharan

3

Date of sampling :

14/11/2021

4

Lab. Test no :

25

5

Sample no. :

25

6

Total wt. of sample (gm) :

1000 gm

SIEVE ANALYSIS

IS Sieve Size

retained

Cumulative wt. Retained (gm)

Cumulative % wt. Retained

% passing

Acceptable / Not Acceptable

6.3 mm

0

0

0

100

OK

4.75 mm

260

260

2.60

74.0

OK

2.36 mm

616

876

87.6

12.4

OK

1.18 mm

123

999

99.9

0.1

OK

Pan

01

Total(gm)=

1000

The Hardness of Material is= 8


Note:- The Hardness value should not be less than 5 in Moh's scale.

NCC LTD.
GK/BCL
Gorakhpur
Uttarakhand

PMC/TPIA

CLIENT



		NCC LTD. STATE WATER AND SANITATION MISSION CLIENT: JIM / SWSM / DWSM GORAKHPUR-UP		NCC Limited	
SPECIFIC GRAVITY OF PEA GRAVELS (SIZE- 1.6 mm to 4.8 mm) As per IS : 2386 (Part-3)					
Date of Testing-		15/11/2021			
Test report no :		NCC/GK-5/BC/25			
SL NO.	DESCRIPTION	OBSERVATIONS	1	Source of material :	Lekhuan, Nainital, Uttarakhand
2	Location :	NAME OF THE BLOCK - Gagaha	2	NAME OF THE GRAM PANCHAYAT -	Sakherau
3	Date of sampling :		3		19/11/2021
4	Lab. Test no :		4		25
5	Sample no :		5		25
SPECIFIC GRAVITY TEST AT ROOM TEMPERATURE					
6	Weight of the Jar, W1 (gm)=	252	7	Weight of Jar + Gravel, W2 (gm)=	441
8	Weight of Jar + Gravel + Water, W3 (gm)=	843	9	Weight of the Jar + Water, W4 (gm)=	724
10	Specific Gravity = $\frac{W2 - W1}{(W2 - W1) - (W3 - W4)}$	$\frac{189}{189-119}$			2.7
Note : The Specific Gravity should not be less than 2.5					
NCC LTD.		PMC/TPIA		CLIENT	

SWSM PROJECTS - UP - GORAKHPUR



Project Name : Survey, Design, Preparation of DPR, Construction, Commissioning and O&M for 10 years of Various Rural Water Supply Project in the State of Uttar Pradesh - Gorakhpur District
 Client : SWSM/DWSM-UP-GKP
 Consultant : Medhaj Techno Concept Pvt. Ltd.
 Contractor : NCC Limited

Request For Inspection

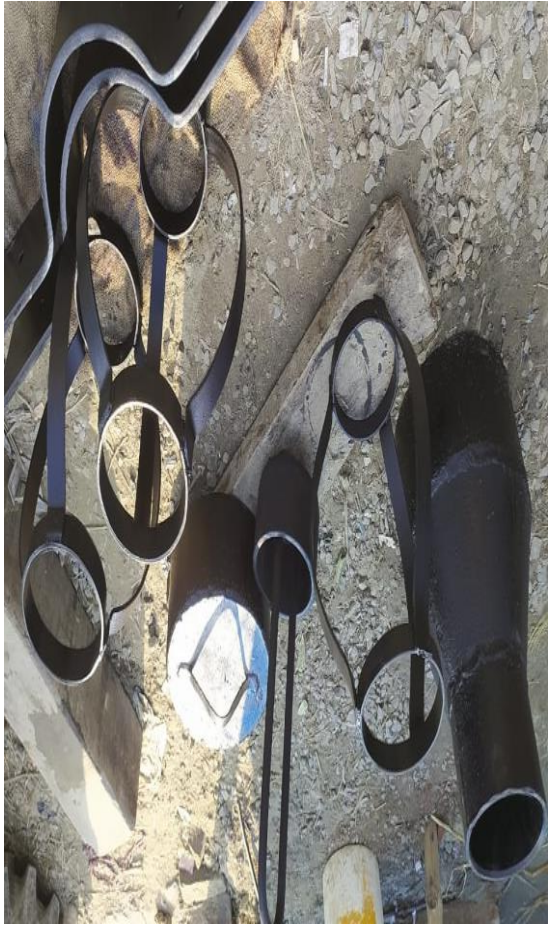
RFI No:	SWSM-UP-GKP/N/S/Tw/24/R1	Date And Time -	18/11/2021
Description:	Rectification of compliance		
Location:	Block - Jagata, G.P. - Sakharau		
Preceding RFI No.	SWSM-UP-GKP-S/Tw/24		
Commencement of work:	18/11/2021		
Submitted By:	Bant Kumar		
Signature:	 (Bant Kumar)		
Designation:			
Concessionaire:	Proceed	Hold	
Name:			
Designation:			
Comments:	① Well cap is found as per specification. ② For ground started in proper way. ③ Hoisting clamp applied as per specification. ④ Synthetic enamel found to		

Contractor Representative

Consultant Representative

Client Representative

Signature



Sakhrna

SWSM PROJECTS - UP - GORAKHPUR



Project Name : Survey, Design, Preparation of DPR, Construction, Commissioning and O&M for 10 years of Various Rural Water Supply Project in the State of Uttar Pradesh - Gorakhpur District
 Client : SWSM/DWSM-UP-GKP
 Consultant : Medhaj Techno Concept Pvt. Ltd.
 Contractor : NCC Limited

Request For Inspection

RFI No:	SWSM-UP-GKP/MS/Tw/24	Date And Time	16/11/2021 / 7:00 PM
Description:	Lowering of pipe with Assembly and Filling of Ra-Cover.		
Location:	Block-Gojaka, G.F. Sakherau		
Preceding RFI No.	NA		
Commencement of work:	18/11/2021		
Submitted By:	Amrit Kumar		
Signature:	J.E. (M.E.F.)		
Designation:			
Concessionaire:	Proceed	Hold	
Name:			
Designation:			
Comments:	Well cap. are not as per specification. Ra gravel are not stacked properly. Anti corrosion paint are not used on tube well assembly. Hoisting clamp size not found as per specification.		

Signature

Contractor Representative

Signature

 18/11/2021
 S.P.A.

Consultant Representative

Signature

 Client Representative

Aqua Xplore

(Groundwater Assessment & Allied Services)

243/5, New Colony Jiyamau, Hazratganj, Lucknow - 226001
Mob. 9918202546 / 98899323322, Email-aquaxplorelko@gmail.com

Advisor- Dr. R. A. Yadav, ex-Manager (Groundwater), U. P. Jal Nigam

Ref 1116 - S / AX - 2021 Date 16.11.2021

Geophysical Borehole Logging Report

Name of the site : Sakharau, Block- Gagaha

District : Gorakhpur

Date : 16.11.2021

Depth logged : 140.0 mbgl

Depth drilled : 150.0 mbgl

Logged by : Aqua Xplore

Presence : Representative of M/S NCC Limited, Gorakhpur - South

Based on the interpretation of geophysical logs, following information may be

deciphered, particularly with respect to salinity of the formation water;

Sl.No.	Depth range(mbgl)	Thickness(m)	Remarks
1	18.0--25.0	7.0	Good all
2	36.0--44.0	8.0	
3	48.0--61.0	13.0	
4	70.0--78.0	8.0	
5	113.0--133.0	20.0	

Note:

for Aqua Xplore

CC:

1. Executive Engineer, C.D. (E/M), U.P. Jal Nigam, Gorakhpur.
2. M/S NCC Limited, Gorakhpur - South, SWSM.





NCC LTD.
SOIL SAMPLE COLLECTION REPORT
SWSM PROJECT - GORAKHPUR, UP

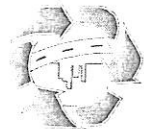


1	Name of the Block-	GAGAHA
2	Name of the Gram Panchayat-	SAKHARUA
3	Name of the Borewell Village-	SAKHARUA
4	Name of the Revenue Village-	
5	Drilling For Housing Pipe (Dia- 200 mm/300 mm)-	200
	Bore For Plain/Slotted 150 mm dia-	150
6	Hole) For Housing Pipe-	35.05
	Depth) For Plain/Slotted Pipe-	84.49M/18.05M
7	Total Drilling Depth (m)-	150M
8	Electrical Logging Test Depth	140M

Sl no.	Date of Sample Collection	Type of Soil Sample	Depth of Sample Collection (m)	Remarks
1	11/11/2021	CLAY	0-3	
2	11/11/2021	CLAY	3-6	
3	11/11/2021	CLAY	6-9	
4	11/11/2021	CLAY	09-12	
5	11/11/2021	CLAY	12-15	
6	11/11/2021	SAND	15-19	
7	11/11/2021	SAND	19-21	
8	11/12/2021	SAND	21-24	
9	11/12/2021	SAND	24-26	
10	11/12/2021	SAND	26-30	
11	11/12/2021	SILTY CLAY	30-33	
12	11/12/2021	SILTY CLAY	33-36	
13	11/12/2021	NORMAL SAND	36-39	
14	11/12/2021	SAND	39-42	
15	11/12/2021	SAND	42-44	
16	11/12/2021	SAND	44-48	
17	11/12/2021	SAND	48-50	
18	11/12/2021	SAND	50-54	
19	13/11/2021	SAND	54-57	
20	13/11/2021	SAND	57-60	
21	13/11/2021	CLAY	60-62	
22	13/11/2021	CLAY WITH SAND	62-66	
23	13/11/2021	CLAY	66-68	
24	13/11/2021	SAND	68-72	
25	13/11/2021	SAND	72-75	
26	13/11/2021	SAND	75-79	
27	13/11/2021	CLAY	79-81	
28	13/11/2021	CLAY	81-84	
29	14/11/2021	CLAY	84-87	
30	14/11/2021	CLAY	87-90	
31	14/11/2021	CLAY	90-93	
32	14/11/2021	CLAY	93-96	
33	14/11/2021	CLAY	96-99	
34	14/11/2021	CLAY	099-102	

CLIENT 		NCC LTD 
---	--	--

50	15/11/2021	CLAY	147 - 150
49	15/11/2021	CLAY	144-147
48	15/11/2021	CLAY	141 - 145
47	15/11/2021	CLAY	138 - 141
46	15/11/2021	CLAY	135 - 138
45	15/11/2021	SAND	132 - 135
44	15/11/2021	SAND	129 - 132
43	15/11/2021	SAND	126 - 129
42	15/11/2021	SAND	123 - 126
41	15/11/2021	SAND	120 - 123
40	15/11/2021	SAND	117 - 120
39	15/11/2021	SAND	114 - 117
38	15/11/2021	SAND	111 - 114
37	14/11/2021	CLAY	108 - 111
36	14/11/2021	CLAY	105 - 108
35	14/11/2021	CLAY	102 - 105



TEST REPORT

Name of Customer	: Jal Nigam, Gorakhpur
Project	: SWSM-JJM Project (Har Ghar Jal Mission) at Gorakhpur.
Reference No.	: SWSM-UP/GKP/GC/TPE/001
Sample supplied to Lab by	: Customer representative
Name of Contractor/ Agency	: NCC Ltd.
Sample Particulars	: Pea-Gravel

Sample Receipt Date	: 08-10-2021	Job No.	: MT117/1
Condition of sample	: Satisfactory	SRF No.	: 2021/55
Type of Sample	: Pea-Gravel	ULR No.	: NA
Source of sample	: Lalkuan (Uttarakhand)	Period of Testing	: 08/10/2021 to 11/10/2021

Terms & Conditions:

1. Results relate only to the test sample provided by customer.
2. This report is under copyright of Techpro Engineers Pvt. Ltd. (Laboratory Division) and is not to be reproduced, copied, handed over third party or used for any purpose other than for which it has been loaned.
3. The tested samples are retained for three months after issue of test report (if not collected by customer).
4. The unique identification of sample is as Job No. / Chainage No. /BH. No./SI. No. But only SI. No is mentioned in results.



Approved By:

[Signature]

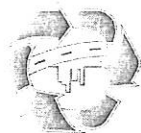
Arvind Kumar Garg
 (Quality Manager)



Checked By:

[Signature]

(Technical Manager)



I. PHYSICAL TEST RESULT

Sample Unique ID: MT117/1

SI. No.	Particular of Test	Test-1 Passing %	Test-2 Passing %	Avg. Passing %	Test Method	Remark	
1.0	Sieve Analysis (% by weight)	6.3 mm	100	100	IS 2386 (Part-1)-1963, RA- 2016	-	
		4.75 mm	49.928	52.412			51.17
		3.35 mm	18.992	23.930			21.461
		2.00 mm	13.116	17.926			15.521
		1.18 mm	6.412	8.016			7.214
		0.600 mm	2.562	3.410			2.986
		0.300 mm	0.164	0.818			0.491
		0.150 mm	0.134	0.354			0.244
		0.075 mm	0.092	0.254			0.173
		2.0	Elongation Index (% by weight)	0.0			0.0
3.0	Hardness Test (Number)	7.40	8.66	8.00	IS 13630 (Part-13)-2006	-	
4.0	Specific Gravity	2.66	2.66	2.66	IS 2386 (Part-3)-1963, RA- 2016	-	



Approved By:

(Signature)

Arvind Kumar Garg
(Quality Manager)



(Signature)

Checked By:

(Technical Manager)

END OF REPORT

Arvind Kumar Garg
(Quality Manager)

Approved By: 

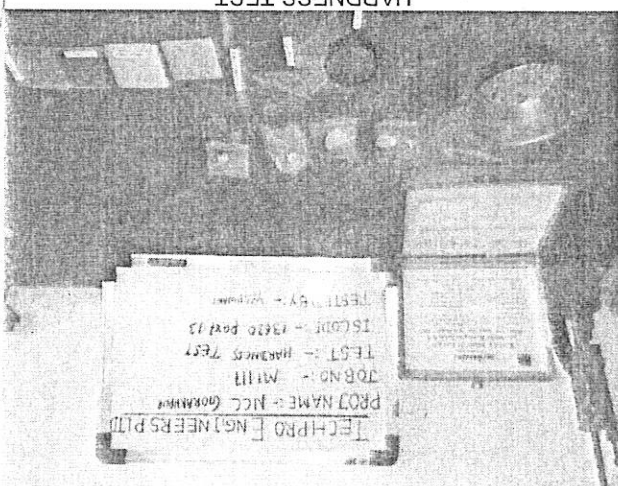


(Technical Manager)

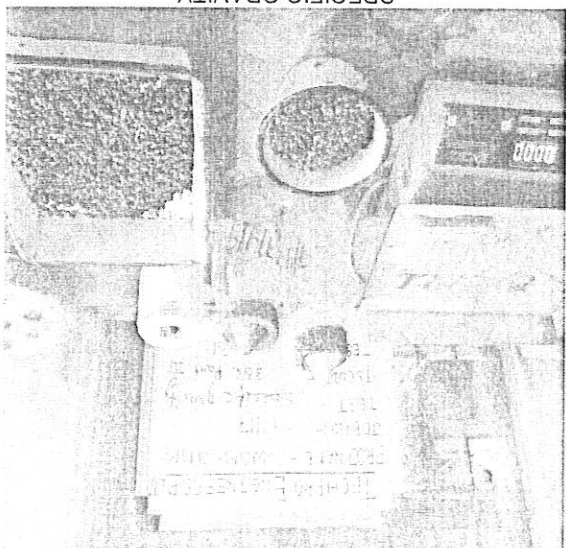
Checked By: 



HARDNESS TEST



SPECIFIC GRAVITY



SIEVE ANALYSIS



PHOTOGRAPHS

Doc No.: TEQR-36C, Issue No.: 02, Issue Date: 18/08/20, Rev. No.: 01, Rev. Date: 10/12/2020

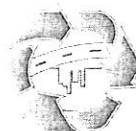
e-mail: tepllab@gmail.com, info@techproindia.com,

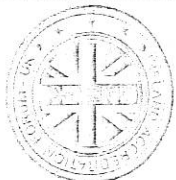
Tel.: 0512-2525759, 09793209918, Web site: www.techproindia.com

Lab Add. 131, Ram Ganga Housing Society, Naramau, Kanpur-209217,

(Laboratory Division)

TECHPRO ENGINEERS PVT. LTD.





ISO 9001:2015

Manufacturers & Exporters of MS ERW Black Pipes, Steel Tubular Poles & Hollow Sections

DADU PIPES (P) LIMITED

CIN: U28111DL2006PTC148810

Corporate Office : C-101, Dadu Dayal House, RDC, Raj Nagar, Gaziabad-201002 (U.P.) India.
 Email: info@dadupipes.com, Website: www.dadupipes.com
 Regd. Office : B-251, Okhla Industrial Area, Phase-1, New Delhi-110020

Contractor Name: NCC Limited

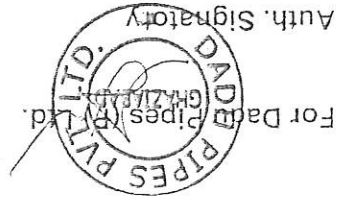
Client Name: State Water and Sanitation Mission

Project Name: Gorakhpur South Project

PO No.: NCC/ROK/SWSMUP-G(S)/PO/23 Dt.: 19.08.2021

TECHNICAL DATASHEET OF STEEL TUBES USED FOR WATER WELLS

S.No.	Parameter	Unit	Requirement	Vendor data
1.	Name of Manufacturer			M/S Dadu Pipes Ltd
2.	Ref IS No.		IS:4270-2001	IS:4270-2001
3.	Type		ERW/HFIW	ERW/HFIW
4.	Ends (Plain/Bevel/Screwed)		Plain	Plain
5.	Size	mm	300mm, 200mm, 150mm	300mm, 200mm, 150mm
6.	Specified Thickness	mm	7.1mm	7.1mm
7.	Tolerance on thickness	%	As per BIS	As per BIS
8.	Tolerance on OD	mm	± 1% of OD	± 1% of OD
9.	Length of Pipe	Mtr	As per order	As per order
10.	Tolerance on Mass	%	± 10%	± 10%
11.	Tensile strength	MPa	410 MPa (Min.)	410 MPa (Min.)
12.	Yield Strength	MPa	235 MPa (Min.)	235 MPa (Min.)
13.	Elongation percent	%	15% (Min.)	15% (Min.)
14.	Flattening Test	%	On weld = 66% remaining On material = 33% remaining	On weld = 66% remaining On material = 33% remaining
15.	Embossing details	--	Embossing on every metre of Manufacturer Name/logo, IS:4270, Grade & ISI Logo with CML No. and Size, Thickness, Grade & Batch No. stenciling on each pipe	Embossing on every metre of Manufacturer Name/logo, IS:4270, Grade & ISI Logo with CML No. and Size, Thickness, Grade & Batch No. stenciling on each pipe
16.	Bituminous Coating	°C	At 0°C & 65°C	At 0°C & 65°C
17.	Bead Height	%	60% Max. of specified thickness	60% Max. of specified thickness
18.	Straightness	mm	Max 1 in 600 of any length	Max 1 in 600 of any length
19.	Make of Steel		Tata/SAIL/Reputed make	SAIL TC to be submitted
20.	Chemical composition certificate	%	As per IS 10748, Grade-3	Raw material certificate & manufacturer test certificate to be provided
21.	Leak Proof Test	MPa	7 MPa for at least 5 sec.	7 MPa for at least 5 sec.



Recommended for approval with conditions is not allowed
 C.D. (E/M) UPJN
 Gorakhpur

अज्ञेय अज्ञेय
 23वां महीना (190
 20 20 वां महीना
 अज्ञेय

DADU PIPES PVT. LTD.

A-72, Industrial Area, Sikandrabad, Bulandshahar (U.P)

QUALITY PLAN FOR ERW M.S. ERW PIPES (DADU MAKE)

SIZE :- 100 MM NB TO 300 MM NB CONFORMING AS PER IS:4270-2001.

Contractor Name:- NCC Limited.

Client Name:- UP Jal Nigam

Project Name:- State Water & Sanitation Mission Gorakhpur

DOCUMENT NO. DPPI/OP/01 REV. 0
 NO. OF PAGES 2
 PAGE NO. 1/2

Sr. NO.	COMPONENT/ OPERATION	CHARACTERISTICS	CLASS	TYPE OF CHECK	EXTENT OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE CRITERIA	FORMAT OF RECORDS	Scope of Inspection		REMARKS	
									ETPL	ETPL (If Any)		
1	RAW MATERIALS HR CIOL SKELP	1	CHEMICAL COMPOSITION	5	6	7	8	9	10	11	12	
		2	PHYSICAL PROPERTIES	MAJOR	CHEMICAL ANALYSES	VERIFICATION OF SUPPLIER T.C	IS:10748 & IS:4270	AS PER IS:4270	SUPPLIER T.C & DPPL TEST REPORT	DPPL QC	R	
		3	DIMENSIONS THICK & WIDTH.	MAJOR	MECHANICAL	DPPL QC REPORT	100%	DO	DO	DPPL TEST REPORT	DO	R
		4	VISUAL	MINOR	VISUAL	100%	DO	DO	DO	DO	DO	R
2	IN PROCESS INSPECTION	1	DIMENSIONS	CRITICAL	DIMENSIONAL	ONE HOUR PRODUCTION	AS PER IS:4270	DO	DPPL TEST REPORT	DPPL QC	R	
		2	PHYSICAL PROPERTIES	CRITICAL	MECH. TEST	TWO SAMPLE PER SHIFT	DO	DO	DO	DO	R	
		3	TENSILE STRENGTH / LEAK TEST	MAJOR	DO	100%	DO	DO	DO	DO	R	
		4	WORKMANSHIP & PROTECTIVE COATING	MAJOR	VISUAL	RANDOM	AS PER IS:4270	AS PER IS:4270	DO	DO	DO	R

AE

13

STATE WATER SANITATION MISSION, UTTAR PRADESH

EXECUTIVE SUMMARY

Salient Features
 Name of the state
 Name of the District
 Name of the Tehsil
 Name of the Block
 Name of the Programme
 Name of the GP
 No. of Village/Habitations
 UTTAR PRADESH
 GORAKHPUR
 GAGHA
 GAGHA
 Under Jal Jeevan Mission Programme
 SAKHARAU
 3/0

Table 1: List of Village and Habitations

S. No	District Name	Sub District Name	Block Name	Gram Panchayat Name	2011 Census Code	Revenue Village Name	Habitations Name
1	GORAKHPUR	GAGHA	GAGHA	SAKHARAU	187930	Sakharua Bujurg	Sakharua Bujurg
2	GORAKHPUR	GAGHA	GAGHA	SAKHARAU	187928	Barwal Diggar	Barwal Diggar
3	GORAKHPUR	GAGHA	GAGHA	SAKHARAU	187929	Sakharua Khurd	Sakharua Khurd

Village Population Summary

Table 2: Population, SC/ST and House hold Data
 GP/VILLAGE-POPULATION DETAILS

S. NO	DESCRIPTION	GROWTH FACTOR WRT Y-2011	POPULATION	SC/ST	HOUSE HOLDS
1.	As per Census 2011	1	1512	466	236
2.	Initial Stage 2022	1.2	1820	561	284
3.	Middle Stage 2037	1.61	2430	749	379
4.	Ultimate Stage 2052	2.17	3280	1011	512

Rate of water supply
 Nature of Sources
 Source of Development
 Daily Water Demand Summary
 Base year 2022
 Intermediate year 2037
 Design year 2052
 a) :
 b) :
 c) :
 Number of Tube wells
 Nature of Treatments
 Average Dosing Capacity
 Pumping plant for Tube Well
 a) No. and Type of Plant
 b) Anticipated Discharge
 c) Total working Head
 d) Motor (HP)
 Service Storage
 a) Quantity
 b) Capacity
 c) Staging
 64.7 LPCD (added 15% losses over 55 LPCD)
 Ground water
 Tube-Well
 1 No.
 Chlorinator through HDPE Tank (100L) and Dosing metering pump (0-6LPH)
 0.5 PPM
 1 Number of Submersible Pump
 450 LPM
 41 M
 10.0 HP
 1 No
 150 KL
 12 M

STATE WATER SANITATION MISSION, UTTAR PRADESH

Pipeline Summary

Pipeline Type	Details of Tube well Location	Material	Class	Diameter (mm)-OD	Length (m)
Rising Mains	In Water Works	DI	K-9	100	35
New Tube Well					
Total Length (m)					35

Table 3: Rising Main Summary

Pipeline Type	Material	Class	Diameter(mm)	Length (m)
Distribution Mains	HDPE	PN-6 PE100	63	1,977
Distribution Mains	HDPE	PN-6 PE100	75	69
Distribution Mains	HDPE	PN-6 PE100	90	564
Distribution Mains	HDPE	PN-6 PE100	110	130
Distribution Mains	HDPE	PN-6 PE100	125	0
Distribution Mains	HDPE	PN-6 PE100	140	19
Distribution Mains	HDPE	PN-6 PE100	160	0
Distribution Mains	HDPE	PN-6 PE100	180	0
Total Length (m)				8,759

Table 4: Distribution Summary

Estimate for Sakharau Gram Panchayat
Water Supply Scheme
Under - SWSM
Block- Gagha, Distric- Gorakhpur

BOQ Item No.	Description	Unit	Qty	Rate	Amount
1.01	All the works including Hydrological survey, topographical survey, Design charges including preparation and approval of DPR	LS	1.00	216336.00	216336
2.00	Drilling of Borehole for Tubewell construction by DC/RC/DTH Rig Machine including transportation, erection, dismantling of Rig and associated T&P complete in all respect including required all material labour etc				
2.01	RIG Transportation for Tube Well Construction Transportation, Installation Dismantling of Rig machine and fogging of bore hole Tube Well Construction- Drilling of Borehole	Job	1.00	159478.88	159479
2.03	DC/RC Drilling up to 100Mtr.				
2.04	400 MMØ	Mtr.		1638.27	
2.05	450 MMØ	Mtr.		1834.20	
2.06	500 MMØ	Mtr.	100.00	2013.00	201300
2.07	600 MMØ	Mtr.		2422.00	
2.08	DC/RC Drilling from 101 Mtr. To 200 Mtr.Deep				
2.09	450 MMØ	Mtr.		1960.88	
2.10	500 MMØ	Mtr.	80.00	2144.00	171520
2.11	600 MMØ	Mtr.		2510.25	
2.12	DC/RC Drilling from 201 Mtr. To 300 Mtr.Deep				
2.13	450 MMØ	Mtr.		2831.63	
2.14	500 MMØ	Mtr.		3014.75	
2.15	600 MMØ	Mtr.		3381.00	
2.16	DC/RC Drilling from 301 Mtr. To 400 Mtr.Deep & above				
2.17	450 MMØ	Mtr.		3319.35	
2.18	500 MMØ	Mtr.		3502.48	
2.19	600 MMØ	Mtr.		3868.72	
2.20	DTH Drilling upto 200.0 Mtr.Deep				
2.21	200/165 MMØ (in over burden/Hard Rock)	Mtr.		1250.00	
2.22	Development / Flushing of tubewell Tubewell Assembly (Supply + Fittings & Specials)	Hr.		2900.00	
3.01	100 MMØ MISERW plain pipe,As per IS 4270	Mtr.		927.50	
3.02	150 MMØ	Mtr.		1900.00	207100
3.03	200 MMØ	Mtr.	109.00	2550.00	91800
3.04	300 MMØ	Mtr.		3800.00	
3.05	MISERW Pipe slotted pipe as per IS 8110				
3.06	100 MMØ	Mtr.		1366.85	
3.07	150 MMØ	Mtr.	18.00	2800.00	50400
3.08	200 MMØ	Mtr.		3833.80	
3.09	300 MMØ	Mtr.		5188.59	
3.10	MS fittings such as clamp, ball plug, reducer, well cap, girder & support structure	LS	1.00	32295.00	32295
3.11	MS fittings such as ring & centre guide	RM	163.00	471.68	76884
3.12	Tubewell Assembly Lowering Works Lowering of above assembly with welding of parts complete in all respect with all required material, T&P, labour, etc.				
4.01	Lowering up to 100 Mtr. Deep				
4.02	100 MMØ MISERW Plain/Slotted Pipe	Mtr.		129.45	
4.03	150 MMØ MISERW Plain/Slotted Pipe	Mtr.	64.00	281.00	17984
4.04	200 MMØ MISERW Plain/Slotted Pipe	Mtr.	36.00	376.50	13554
4.05	300 MMØ MISERW Plain/Slotted Pipe	Mtr.		472.00	
4.06	Lowering from 101 Mtr. To 200 Mtr. Deep				
4.07	150 MMØ MISERW Plain/Slotted Pipe	Mtr.	63.00	376.00	23688

BOQ Item No.	Description	Unit	Qty	Rate	Amount
4.08	200 MMØ MSERW Plane/Slotted Pipe	Mtr		499.19	
4.09	300 MMØ MSERW Plane/Slotted Pipe	Mtr		745.58	
4.10	Lowering from 201 Mtr. To 300 Mtr. Deep				
4.11	150 MMØ MSERW Plane/Slotted Pipe	Mtr		385.19	
4.12	200 MMØ MSERW Plane/Slotted Pipe	Mtr		459.00	
4.13	300 MMØ MSERW Plane/Slotted Pipe	Mtr		606.62	
4.14	Lowering from 301 Mtr. To 400 Mtr. Deep & above				
4.15	150 MMØ MSERW Plane/Slotted Pipe	Mtr		426.53	
4.16	200 MMØ MSERW Plane/Slotted Pipe	Mtr		499.00	
4.17	300 MMØ MSERW Plane/Slotted Pipe	Mtr		643.94	
5.00	Supply and Packing of Gravel Works Supply and unconsolidated packing of gravel with suitable size Development of Tube well	Cum	47.00	7500.00	352500
6.01	Transportation, Installation Dismantling of 150 PSI Compressor	Job		42120.00	
6.02	Charges for Development by 150 PSI Compressor per hour	Hr.		2544.52	
6.03	Transportation, Installation Dismantling of 250/400/600 PSI Compressor	Job	1.00	42120.00	42120
6.04	Charges for Development by 250 PSI Compressor per hour	Hr.		3027.00	
6.05	Charges for Development by 400 PSI Compressor per hour	Hr.		3154.10	
6.06	Charges for Development by 600 PSI Compressor per hour	Hr.	60.00	4062.20	189246
6.07	Transportation, Installation Dismantling of 0.5 Cusec OP Unit and Yield test, water test	Job		22321.28	
6.08	Charges for Development of TW by 0.5 Cusec OP Unit	Hr.		785.42	
6.09	Transportation, Installation Dismantling of 1 Cusec to 3 Cusec OP Unit and Yield test, water test	Job	1.00	67225.00	67225
6.10	Charges for Development of TW by 1 cusec OP Unit	Hr.		959.00	
6.11	Charges for Development of TW by 3 cusec OP Unit	Hr.	100.00	1196.00	95900
6.12	Transportation, Installation Dismantling of 2 Cusec OP Unit and Yield test, water test	Job		89317.00	
6.13	Charges for Development of TW by 2 cusec OP Unit	Hr.		1119.00	
7.00	Pumping Plant:- SITC of Pumping plant including pumps with motors starter, pannel, cable, complete in all respect with all required material T&P labour etc.				
7.01	1 HP	Nos		32518.98	
7.02	2 HP	Nos		35843.14	
7.03	3 HP	Nos		46249.21	
7.04	5 HP	Nos		65037.95	
7.05	7.5HP	Nos		228500	
7.06	10 HP	Nos	1.00	230200	230200
7.07	12.5 HP	Nos		238800	
7.08	15 HP	Nos		252100	
7.09	17.5 HP	Nos		276504.56	
7.10	20 HP	Nos		295500	
7.11	25 HP	Nos		334043.48	
7.12	30 HP	Nos		366163.04	
7.13	35 HP	Nos		393723.7	
7.14	40 HP	Nos		426547.83	
7.15	Variation in HP due to change of site locations increased/decreased in per HP of the proposed pumping plants.	Rate/HP		30467	
8.00	Pressure Transmitter	Nos	1.00	43120	43120
9.00	Electrically operated Sluice Valve:- Electrically operated Sluice Valve PN 1.0 dia 100 mm	Nos		125000	
9.01	Electrically operated Sluice Valve PN 1.0 dia 150 mm	Nos	1.00	125000	125000
9.02	Electrically operated Sluice Valve PN 1.0 dia 200 mm	Nos	2.00	125000	250000
9.03	Check Valve PN 1.0 DPCV dia 100 mm	Nos		27519.8	
9.04	Check Valve PN 1.0 DPCV dia 150 mm	Nos		51145.45	
9.05	Check Valve PN 1.0 DPCV dia 200 mm	Nos		73485.9	

BOQ Item No.	Description	Unit	Qty	Rate	Amount
9.06	Dismantling Joint PN 1.0 dia 100 mm	Nos	2.00	3923.92	7848
9.07	Dismantling Joint PN 1.0 dia 150 mm	Nos	1.00	5605.6	5606
9.08	Dismantling Joint PN 1.0 dia 200 mm	Nos		7367.36	
9.09	SITC of Chain Pulley Blocks	Nos			
9.10	1 Tonne	Nos		46305	
9.11	2 Tonne	Nos	1.00	58432.5	58433
10.00	Turbidity & Chlorine analyzer	Nos		273000	
11.00	Hydrostatic Level Sensor:- Providing and installation hydrostatic level sensor at all tubewell pumping system including all accessories etc. complete in all respect as per instructions of Engineer-in-charge.	Nos	1.00	126000	126000
12.00	Stabilizer				
12.01	2 KVA	Nos	12777.78	12777.78	
12.02	5 KVA	Nos	25555.56	25555.56	
12.03	7.5 KVA	Nos	44722.22	44722.22	
12.04	10 KVA	Nos	12777.78	12777.78	
12.05	15 KVA	Nos	16611.11	16611.11	
12.06	20 KVA	Nos	19166.67	19166.67	
12.07	25 KVA	Nos	20444.44	20444.44	
12.08	30 KVA	Nos	23000	23000	
12.09	40 KVA	Nos	28111.11	28111.11	
12.10	50 KVA	Nos	31944.44	31944.44	
12.11	60 KVA	Nos	34500	34500	
13.00	Column Pipe:- SITC of Column pipe of MS pipe for connecting submersible pumps				
13.01	32 mm Dia size - MS pipe	Mtr.	500	500	
13.02	40 mm dia size - MS pipe	Mtr.	666.67	666.67	
13.03	50 mm dia size - MS pipe	Mtr.	921	921	
13.04	65 mm Dia size - MS pipe	Mtr.	1066.67	1066.67	
13.05	80 mm Dia size - MS pipe	Mtr.	1400	1400	
13.06	100 mm Dia size - MS pipe	Mtr.	1567	1567	
13.07	150 mm Dia size - MS pipe	Mtr.	2167	2167	
14.00	Chlorinating System:- Supply, installation of chlorinating system with dosing pump 0-6 LPH capacity with 100 Litres(1wt+1s) tanks, valves, pipes with required accessories (Automatic dosing system for chemical injection)	JOB	1.00	112000	112000
15.00	Fluoride Removal Plant:- Supplying, installation, testing, commissioning of Fluoride removal plant for required capacity including transportation and labour charges as complete. (Vendor have to select the technology based on capacity (Electrolytic-de fluoridation plant or media based system). Rates for 400 KLD/ 500 LPM	LS		8062500	
16.00	Iron Removal Plant:- Supplying, installation, testing, commissioning of Iron removal plant which includes vessel, media, piping valves etc. for required capacity including transportation and labour charges as complete. Rates for 400 KLD/ 500 LPM	LS		6062500	
17.00	Arsenic Removal Plant:- Supplying, installation, testing, commissioning of Arsenic removal plant which include vessel, media, piping valves etc. for required capacity including transportation and labour charges as complete. Rates for 400 KLD/ 500 LPM	LS		9000000	

BoQ Item No.	Description	Unit	Qty	Rate	Amount
18.00	TDS and Hardness Removal Plant:- Supplying, installation, testing, commissioning of reverse osmosis plant which includes pump, micron cartridge filter, high pressure pump, reverse osmosis membrane, cleaning system and required piping and valves etc. complete for required capacity including transportation and labour charges as complete. Rates for 400 KLD/ 500 LPM	LS		13125000	
19.00	Tube Well Electrification:- Internal electrification of tube well	LS	1.00	20000	20000
20.00	Solar Power Plant:- SITC of Solar power plant (for complete plant) including solar panel, structure, inverter etc. complete in all respect with required material, T&P labour	KW	19.00	86800	1649200
21.00	Boundary Wall:- Construction of 1.3 m high and 15mm thick boundary wall with 230 mmx230 mm thick pillar made in Brick masonry in 1 cement and 4 sand mortar, the spacing between two pillar should not be more than 3.0 m etc and the depth of foundation should not be less than 0.60m, all the site of water works as per departmental type design and drawing, and, as per specifications given in the bid document including supply of all materials, labour T&P etc. for proper completion of work as per instructions of Engineer-in-charge. (Drawing No. D-1)	Rmt	135.20	6400	865280
22.00	MS Gate:- Supply and fixing of 3.6 m x 1.20 m MS gate including fabrication and supply of steel and construction of boundary wall pillars of size 1.35mx0.23mx0.23m with ornamental brick work 15mm th. around RCC, as per departmental type design and drawing (Drawing No. D-1) and as per specifications laid down in the bid document, including supply of all material, labour, T&P etc. required for proper completion of work as per instructions of Engineer-in-charge.	No.	1.00	52000	52000
23.00	MS Wicket Gate :- Supply and fixing of 1.2m wide MS wicket gate including fabrication and supply of steel and construction of boundary wall pillars etc. as per specifications laid down in the bid document, including supply of all material, labour, T&P etc. required for proper completion of work as per instructions of Engineer-in-charge.	No.	1.00	19000	19000
24.00	Interlocking Pavement:- Construction of interlocking pavement for approach to water works, as per departmental type design and drawing and as per specifications laid down in the bid document, including supply of all materials, labour, T&P etc. required for proper completion of work as per instructions of Engineer-in-charge.	Sqm.	242.40	1070.5	259489
25.00	Granular Sub Base:- Construction of granular sub base by providing coarse grade materials, spreading in uniform layers including watering and compaction complete.	Cum	48.48	2800	135744
26.00	Construction of WBM:- Construction of WBM by providing grade materials, spreading in uniform layers including watering and compaction complete.	Cum	60.60	3029	183557

BoQ Item No.	Description	Unit	Qty	Rate	Amount
27.00	Earth Filling:- with the contour map and Grid map of existing site enclosed (Drawing no.D-1), including levelling, dressing, excavation and filling of earth where necessary and also including all labour, materials, T&P etc. required for proper completion of works and also including carriage of earth from within a distance of about 8 km. from the site of works as per instructions of Engineer -in - charge.	Cum		890	
28.00	Semicircular Drain:- Provision for inside semicircular drain 200mm dia including supply of all materials, labour and T & P etc. complete.	Rmt	120.00	1607.14	192857
29.00	Pump House (3.6x3.0x3.0):- Provide all materials, labour, T&P etc. complete and construct Pump house size (3.6x3.0x3.0)m Chlorinating room size (2.5x1.8x3.0)m as per departmental type design and drawing (drawing no-D-2) and as per specifications for civil work given in the bid document, including supply of all material, labour and T&P etc complete as per instructions of Engineer -in - charge.	Job	1.00	597000	597000
30.00	Pump House (2.5x3.0x3.0):- Provide all materials, labour, T&P etc. complete and construct Pump house size (2.5x3.0x3.0)m Chlorinating room size (1.5x1.3x3.0)m as per departmental type design and drawing (drawing no-D-2) and as per specifications for civil work given in the bid document, including supply of all material, labour and T&P etc complete as per instructions of Engineer -in - charge.	Job		404000	
31.00	By-pass Chamber:- Provide all materials, labour, T&P etc. complete and constructed Bye-pass chamber for pump house (1000 (L) x 1000 (W) x 1150 (H) mm) drawing (drawing no.D-3) and as per the specifications for civil work given in the bid document, including supply of all material, labour and T&P etc complete as per instructions of Engineer -in - charge.	No.	1.00	14600	14600
32.00	OHT:- Supply of all materials labour T&P etc. for complete construction of R.C.C. Over Head Tank of following capacity and staging above ground level with main components, including cost of soil testing and assuming bearing capacity of soil as 8 MT, with supply of design and drawings. All the water retaining components of OHT shall be casted in M-30 concrete and minimum grade of concrete of foundation and staging should be M-25 with approved cement, coarse sand and stone grit as per I.S. 11682 and I.S.456 Seismic effects and wind load should be taken into consideration as per I.S. 1893 for earthquake resistance and I.S. 875 part-III for wind load on structure and including 1M wide RCC staircase, 1 m wide R.C.C. M30 balcony, M.S. ladder made of 50x50x6 mm angle section and 20mm plain M.S. bars with hand rails tank from top dome to bottom dome, R.C.C. railing with 20mm dia medium class G.I. pipe (in 3 rows) on both sides of stair case, supported on 50x50x6mm M.S. angle section, spaced at intervals not more than 1.5m, Proper ventilator at top dome in circular shape of 1.2 m dia, Water level indicator fabricated with sensor connecting to automation, Lighting conductor as per I.S.S.2309 or its latest amendments of latest electricity rules, consisting of proper elevation	Job			
32.01	50 KL 10 M Staging	Job		1712500.00	
32.02	50 KL 12 M Staging	Job		1788750.00	
32.03	75 KL 10 M Staging	Job		2150000.00	
32.04	75 KL 12 M Staging	Job		2242500.00	

BOQ Item No.	Description	Unit	Qty	Rate	Amount
32.05	100 K.L 12 M Staging	Job		2886250.00	
32.06	100 K.L 16 M Staging	Job		3073750.00	
32.07	150 K.L 12 M Staging	Job	1.00	3241250.00	3241250
32.08	150 K.L 16 M Staging	Job		3457500.00	
32.09	175 K.L 12 M Staging	Job		3441250.00	
32.10	175 K.L 16 M Staging	Job		3732500.00	
32.11	200 K.L 12 M Staging	Job		3843750.00	
32.12	200 K.L 16 M Staging	Job		4040000.00	
32.13	200 K.L 18 M Staging	Job		4105000.00	
32.14	225 K.L 12 M Staging	Job		4170000.00	
32.15	250 K.L 12 M Staging	Job		4537500.00	
32.16	300 K.L 12 M Staging	Job		4877500.00	
32.17	300 K.L 16 M Staging	Job		5508750.00	
32.18	350 K.L 14 M Staging	Job		6093750.00	
32.19	400 K.L 14 M Staging	Job		6830000.00	
32.20	400 K.L 16 M Staging	Job		7021250.00	
32.21	500 K.L 14 M Staging	Job		7457500.00	
32.22	25 K.L 10 M Staging	Job		1296250.00	
32.23	25 K.L 12 M Staging	Job		1363750.00	
32.24	For 2 m Staging (5% additional per Meter)	Rm		162062.50	
33.00	Excavation:- and rising main trenches including lift upto 1.50 m and lead upto 50 m and refilling watering, ramming of the excavated earth into the trench and also disposal of surplus earth upto 50m from the center of the trenches including supply of all material labour, T&P etc complete as per instructions of Engineer-in-charge.				
34.00	Ordinary Soil	Cum	3121.39	214.61	669881
35.00	Mixed Soil with Kankar	Cum	3121.39	249.27	778068
36.00	Soft Rock	Cum		943.82	
37.00	Hard Rock	Cum		1319.18	
Additional	Disposal of Surplus Earth top 300 mm ht.	Cum			
38.00	Sand Bedding:- Sand Bedding in trenches in layers not exceeding 10 cm. in depth, consolidating each deposited layer by ramming and watering complete as per instructions of Engineer.	Cum	9.70	1656.00	16057
39.00	Retaining Wall:- Construction of Retaining Wall for Protection Survey, Investigation, Soil Testing, Planning, construction, commissioning etc. as per design and drawing provided by the contractor all in accordance with the relevant latest I.S. Codes and approved by the Engineer as per conditions of the bid documents. The design and drawings provided by the contractor should be belted by any IIT Institute or Government Engineering College approved by the Engineer, on contractor's cost. For construction of R.C.C. retaining wall including excavation of earth in hard rock/soft rock/ Kankar /morrum /bajri etc. for foundation, Plain Cement Concrete 1:4:8 (one cement four fine aggregates and eight coarse aggregates) and supply of steel as per drawing including bending, binding with all type of binding materials including wastage of steel Reinforced Cement Concrete (M20) 1:1½:3(one cement one and half fine aggregates and three coarse aggregates) including cost of all arrangement of shuttering, scaffolding and water with supply of all materials, labors T&P etc. required for proper completion of works as per the directions of the Engineer (Provisional)	Cum		16400.00	

BOQ Item No.	Description	Unit	Qty	Rate	Amount
40.00	Supply of following sizes (D.I.) pipes for rising main/distribution system conforming to latest/relevant IS. 8329/2000 Specifications with all joining materials such as specials conforming to latest/relevant IS. specifications, suitable for D.I pipes, as per IS-1239/2000 and IS 8329/2000 or their latest amendment including F.O.R. destination and all taxes and insurance etc. with loading, unloading and carting up to site of work, also including specials for these pipes and lowering them into the trenches and laying true to alignment and gradient and joining etc. complete (including testing of pipe lines and cutting of pipes for making up the length but excluding trenches) all complete as per instructions of Engineer-in-charge.				
40.01	Ductile Iron Pipe (K-9)	m		3877.6	
40.02	250 mm dia Ductile Iron K-9	m		3103.5	
40.03	200 mm dia Ductile Iron K-9	m		2332.32	
40.04	150 mm dia Ductile Iron K-9	m		1728.48	
40.05	125 mm dia Ductile Iron K-9	m		1411.41	
40.06	100 mm dia Ductile Iron K-9	m	35.00	1191.41	41699
40.07	80 mm dia Ductile Iron K-9	m		905.41	
40.08	Ductile Iron Pipe (K-7)				
40.08	300 mm dia Ductile Iron K-7	m		3151.6	
40.09	250 mm dia Ductile Iron K-7	m		2564.5	
40.10	200 mm dia Ductile Iron K-7	m		1848.32	
40.11	150 mm dia Ductile Iron K-7	m		1497.48	
40.12	125 mm dia Ductile Iron K-7	m		1301.41	
40.13	100 mm dia Ductile Iron K-7	m		1007.11	
40.14	80 mm dia Ductile Iron K-7	m		909.49	
41	Supply of following sizes pipes for distribution system conforming to latest/relevant IS. 4984/1995 Specifications with all joining materials and specials conforming to latest/relevant IS. specifications including F.O.R. destination and all taxes and insurance etc. with loading, unloading and carting up to site of work, also including specials for these pipes and lowering them into the trenches and laying true to alignment and gradient and joining etc. complete (including testing of pipe lines and cutting of pipes for making up the length but excluding the cost of trenches) all complete as per instructions of Engineer-in-charge.				
41.01	90 mm dia HDPE Pipe PN6, PE 100	m	564.00	229.5	129438
41.02	75 mm dia HDPE Pipe PN6, PE 100	m	69.00	169.2	11675
41.03	63 mm dia HDPE Pipe PN6, PE 100	m	7977.00	125.8	1003507
42.00	Valves:- Supply and carting up to site of work of the following dia DI butterfly /sluice valves, class I, working pressure 10 Kg/cm2 conforming to IS: 780/1969 or its latest amendments, including valve fittings & dismantling joints as per requirement F.O.R. destination, and lowering them into the already prepared trenches, fixing in position and joining them with pipelines and testing etc. complete and also including supply of joining materials etc. complete including all taxes and insurance, as per instructions of Engineer-in-charge.				
42.01	Sluice valve - 300 mm dia	Nos		64042.00	
42.02	Sluice valve - 250 mm dia	Nos		48109.00	
42.03	Sluice valve - 200 mm dia	Nos		27304.00	
42.04	Sluice valve - 150 mm dia	Nos		17626.00	
42.05	Sluice valve - 125 mm dia	Nos		14505.00	
42.06	Sluice valve - 100 mm dia	Nos	3.00	14455.00	43365

BOQ Item No.	Description	Unit	Qty	Rate	Amount
42.07	Sluice valve - 80 mm dia	Nos	4.00	12401.00	49604
42.07.1	Sluice valve - 65 mm dia	Nos		10650.00	
42.07.2	Sluice valve - 50 mm dia	Nos		9700.00	
42.08	Scour Valve	Nos	4.00	10160.84	40643
42.08	Scour valve - 80 mm dia	Nos		10160.84	
42.09	Scour valve - 100 mm dia	Nos		12535.28	
42.10	Scour valve - 150 mm dia	Nos		17625.57	
42.11	Scour valve - 200 mm dia	Nos		27304.03	
42.12	Scour valve - 250 mm dia	Nos		48109.48	
42.13	Pressure Relief Valve	Nos		54219.00	
42.14	RV 80 mm dia	Nos		80025.00	
42.15	RV 100 mm dia	Nos		124575.00	
42.16	RV 150 mm dia	Nos			
42.17	Single / Double ball type Air Valve:- Supply and installation, testing etc. of single/double ball type air valve conforming to latest/relevant I.S. specifications including all taxes and insurance, carting up to site of work and lowering them into the trenches, fixing in position and joining them with pipelines and testing etc. complete (including supply of joining materials and Valve fittings as per instructions of Engineer.				
42.18	20 mm	Nos	4.00	10229.21	40917
42.19	50 mm	Nos		23170.33	
42.20	80 mm	Nos		23170.33	
42.21	150 mm	Nos		41024.88	
42.22	Fire Hydrant:- Supply of under ground sluice valve type fire hydrant consisting of 80 mm dia sluice valve, 80mm dia tail pieces, 80mm dia duck foot bend and 80 mm dia standard makes iron coupling with cap and etc. complete conforming to latest/relevant I.S. specifications including all taxes and insurance up to site of work and lowering them into the trenches, fixing in position and joining them with pipelines and testing etc. complete (including supply of joining materials and Valve fittings as per instructions of Engineer - in - charge.	Nos	4.00	24500.00	98000
43.00	Valve Chambers:- Construction of following type chambers as per department type design and drawing including Heavy duty M.S. Manhole Cover and all materials, labour, T&P etc complete for proper completion of work as per instructions of Engineer - in - charge.				
43.01-43.02	Sluice Valve Chamber (Masonry Type):- Dia upto 200 mm - 1000 (L) x 1200 (W) x 1300 (H) mm	No.	5.00	25800.00	129000
43.03	(L) x 1200 (W) x 1300 (H) mm	No.		5000.00	
43.04	Fire Hydrant chamber (800 (L) X 1250 (W) X 1000 (H) mm)	No.	4.00	18500.00	74000
43.05	Air Valve Chamber	No.	4.00	9000.00	36000
43.06	350 (L) x 350 (W) x 500 (H) mm	No.			
43.07	Scour Valve Chamber	No.			
43.08	dia upto 200 mm - 1000 (L) x 1200 (W) x 1300 (H) mm	No.	4.00	29670.00	118680
43.09	RV Valve Chamber - 1000 (L) x 1200 (W) x 1300 (H) mm	No.		28380.00	
44.00	Design and construct Thrust Block made in R.C.C. with cement, coarse sand & 20 mm gauge stone ballast in proportion of 1:1.5:3, for pipe line, including supply of M/S reinforcement wrought to equired shape as necessary, its bending, fixing & binding the same with 0.50 mm thick binding wire in position & necessary centering & shuttering including curing and supply of all materials, labour, T & P etc. RCC work as per instructions of Engineer - in - charge.				

BOQ Item No.	Description	Unit	Qty	Rate	Amount
44.01	Reinforced Cement Concrete:- Design and construct Thrust Block made in Reinforced Cement concrete (1:1.5:3), with graded stone chips (20 mm nominal size) excluding shuttering and reinforcement, as per technical requirements.	Cum	1.60	13656.33	21850
44.02	Shuttering:- Providing shuttering for Thrust block using approved stout props and thick hard wood planks of approved thickness with required bracing for concrete works curved or straight including fitting fixing and striking out after completion of works.	Sqm	16.00	420.00	6720
44.03	Reinforcement of Thrust Block:- Providing reinforcement of Thrust block for reinforced concrete work including distribution bars, stirrups, binders etc. initial straightening and removal of loose rust (if necessary), cutting to requisite length, hooking and bending to correct shape, placing in proper position and binding with wire at every inter-section, complete as per drawing and direction.	MT	0.08	109838.98	8787
45.00	Staff Quarter / Office Room:- Provide all materials labour, T&P etc. and construct single room staff quarter / office room at water works site identified by the Engineer-in-charge as per department type design and drawing and specifications of civil works laid down in the bid document, including all material labour, T&P etc complete for proper completion of work as per instructions of Engineer -in -charge. (Drawing No.D-7)	No	1.00	970600	970600
46.00	Recharge Mechanism:- Water recharge Mechanism within the water works campus	Sqm	16.00	52500.00	840000
47.00	Backfilling of Earth:- Backfilling of abandoned tube well with available Earth	Cum		107.00	
48.00	Assess replacement items				
48.01	Pumping Plant:- SITC of Pumping plant including pumps with motors, starter, panel, cable, complete in all respect with all required material T&P labour etc.				
48.02	1 HP	Nos		32518.98	
48.03	2 HP	Nos		35843.14	
48.04	3 HP	Nos		46249.21	
48.05	5 HP	Nos		65037.95	
48.06	7.5HP	Nos		228500.00	
48.07	10 HP	Nos		230200.00	
48.08	12.5 HP	Nos		238800.00	
48.09	15 HP	Nos		252100.00	
48.10	17.5 HP	Nos		276504.56	
48.11	20 HP	Nos		295500.00	
48.12	25 HP	Nos		334043.48	
48.13	30 HP (discharge 1000 LPM Head 62 m)	Nos		366163.04	
48.14	35 HP	Nos		393723.70	
48.15	40 HP	Nos		426547.83	
48.16	Turbidity & Chlorine analyzer	Nos		273000.00	
48.17	Hydrostatic Level Sensor:- Providing and installation hydrostatic level sensor at all tubewell pumping system including all accessories etc. complete in all respect as per instructions of Engineer -in -charge.	Nos		126000.00	
48.18	3Mtr. Long Column Pipe				
48.19	32 mm Dia size - MS pipe	Nos		1500.00	
48.20	40 mm dia size - MS pipe	Nos		2000.01	
48.21	50 mm dia size - MS pipe	Nos		2763.00	
48.22	65 mm Dia size - MS pipe	Nos		3200.01	
48.23	80 mm Dia size - MS pipe	Nos		4200.00	
48.24	100 mm Dia size - MS pipe	Nos		4701.00	
48.25	150 mm Dia size - MS pipe	Nos		6501.00	

BOQ Item No.	Description	Unit	Qty	Rate	Amount
49.00	Installation of suitable capacity T.W. automation system to control operation of the pumping plant with respect to high/low water level in OHT with RTU panel, 7" HMI screen, surge device including energy meter inside the pump house with arrangement for communication of data with GSM and GPRS system to show required parameters including all accessories etc. complete in all respect as per instructions of Engineer-in-charge.	Job	1.00	375000	375000
50.00	Dismantling of Following type of surfaces including sorting out and stacking of servicable materials and disposal of unservicable materials upto a distance of 50m as per instructions of Engineer-in-charge.				
50.01	B.O.E. Surface	Sqm	2390.00	100.00	239000
50.02	Bituminous Surface	Sqm	1411.00	200.00	282200
50.03	Interlocking Road	Sqm		155.00	
50.04	C.C. Road	Sqm	460.00	329.96	151782
51.00	Restoration of Roads:- Reinstatement of the following type of road surface with old and new materials including supply of all materials, labour, T&P etc. required for proper completion of the work as per instructions of Engineer-in-charge.				
51.01	B.O.E. Surface (50% of existing bricks to be reused)	Sqm	2390.00	350	836500
51.02	Bituminous surface	Sqm	1411.00	1534.82	2165631
51.03	Interlocking Road	Sqm		1070.5	
51.04	C.C. Road	Sqm	460.00	1560.71	717927
52.00	Nala/Culvert Crossing:- Provision for following types of Culvert crossing -along the alignment of pipe line complete as per instructions of Engineer-in-charge. (casing of pipe is done by concreting)				
52.01	Nala/Culvert Crossing (width -3.5 m) upto Dia 300 mm	Nos	2.00	19000	38000
52.02-52.03	Trenchless Crossings:- Survey site Investigation Planning, design Drawings as per State Road manual and vetting / checked from State Road Divisional Office and taking NOC for trenchless crossing of National highway road and Railway track(crossing length 15m to 25m), Road for of required dia Rising main pipe with casing pipe as required for proper completion of work required size of M5 casing pipe as per drawing and as per (S:3589 & made from confining to IS:2062) with 750 Micron PU coating internally and 250 micron anti corrosive bituminous paint externally by trenchless technology method at an average depth 3.60 mtr from normal ground level up to top of casing pipe including excavation & filling of Pit, Dewatering arrangement, Supporting system for soil, also including supply and fixing of 2 no Sluice valve ISI Mark, construction of sluice valve chamber etc. all complete work including supply & fixing specials in carrier pipe over main pipe, as per specification given in the bid documents including supply of all materials, labour T&P etc. for proper completion of work as per instruction of Engineer.				
52.04	Railway Line crossing (Upto Dia 350 mm)	Nos		60000	
52.05	National Highway road crossing (Upto Dia 350 mm)	Nos		40000	
52.06	State Highway road crossing (Upto Dia 350 mm)	Nos		27000	

5

Boq Item No.	Description	Unit	Qty	Rate	Amount
52.08	50 mm dia. Pipe	Nos		1400	
52.09	100 mm dia. Pipe	Nos		1700	
52.10	150 mm dia. Pipe	Nos		2000	
52.11	200 mm dia. Pipe	Nos		2400	
52.12	250 mm dia. Pipe	Nos		3600	
52.13	300 mm dia. Pipe	Nos		3900	
52.14	350 mm dia. Pipe	Nos		4386	
52.15	400 mm dia. Pipe	Nos		4700	
52.16	450 mm dia. Pipe	Nos		5200	
52.17	500 mm dia. Pipe	Nos		6200	
52.18	600 mm dia. Pipe	Nos		7600	
52.07	Road Crossing:- Excavation in foundation of trench of proper size in soil mixed with moorum, Shingle, Kanakar, soft rock, hard rock, including refilling, dressing and ramming earth or sand or bajri, ballast, including providing, supply, carting, lowering, laying and jointing of casing pipe of RCC NP-3 with appropriate size, with rubber ring joint, sand filling in gap inside RCC pipe, insertion of distribution pipe into the casing pipe including supply of T&F, including concrete of 150 mm thick in pipe with 40mm gauge brick ballast local sand and cement in proportion of 8:4:1, provision for barricading, labour for traffic diversion etc. Complete for proper completion of work as per instruction of Engineer.				
53.00	Functional House Tap Connection:- Making house connection should be done atleast 2 m inside the boundary wall with provision of tap from distribution line to outer wall of house, with supply of 1 m G.I. pipe (15 mm) (above ground) & average 5 mtr. MDPE Pipe (20 mm) (below ground) including specials, saddle, Tap, etc. of suitable size, T&F etc. including excavation, laying and jointing for proper completion of work as per instructions of Engineer as per Dwg 12 (excluding road restoration)	Nos.	284.00	3500	994000
54.00	Stand Post:- Construction of single tap pillar type stand post as per type design	Nos.	4.00	10000	40000
55.00	Operation and Maintenance:- Operation and Maintenance for 10 years of water supply schemes after completion including staff required for operation and maintenance, chemicals, all materials, specials T & P for operation and maintenance, excluding electricity charges. (2% of Capex cost for first year of O&M) Note:- 6% Inflation Factor considered for arriving the O&M Cost from Second Year onwards. Cost of DPR Preparation @ 1% of CAPEX Cost of DPR Electromagnetic flow meters	Rs			
55.01	150mm	Nos.		150000	
56.02	200mm	Nos.		190000	
56.03	250mm	Nos.		225000	
56.04	300mm	Nos.		260000	
56.05	350mm	Nos.		330000	
56.06	400mm	Nos.		420000	
56.07	450mm	Nos.		500000	
56.08	500mm	Nos.	1.00	800000	800000
57.00	Soft Starter :-				
57.01	soft starter with RS485 port -400V,7.5KW Rating	Nos		60000	
57.02	soft starter with RS485 port -400V,15KW Rating	Nos		70000	
57.03	soft starter with RS485 port -400V,22KW Rating	Nos		85000	
57.04	soft starter with RS485 port -400V,30KW Rating	Nos		100000	
57.05	soft starter with RS485 port -400V,45KW Rating	Nos		125000	

h

BOQ Item No.	Description	Unit	Qty	Rate	Amount
57.06	soft starter with RS485 port -400V,55KW Rating	Nos		140000	
57.07	soft starter with RS485 port -400V,75KW Rating	Nos		150000	
57.08	soft starter with RS485 port -400V,90KW Rating	Nos		175000	
57.09	soft starter with RS485 port -400V,110KW Rating	Nos		225000	
57.10	soft starter with RS485 port -400V,132KW Rating	Nos		250000	
57.11	soft starter with RS485 port -400V,220KW Rating	Nos		275000	
57.12	soft starter with RS485 port -400V,250KW Rating	Nos		325000	
57.13	soft starter with RS485 port -400V,312KW Rating	Nos		375000	
57.14	soft starter with RS485 port -400V,450KW Rating	Nos		550000	
58.00	Auto Phase Reversal Unit:-				
58.01	100 Amp rating	Nos		45000	
58.02	125 Amp rating	Nos		50000	
58.03	160 Amp rating	Nos		70000	
58.04	200 Amp rating	Nos		120000	
58.05	250 Amp rating	Nos		135000	
58.06	315 Amp rating	Nos		140000	
58.07	400 Amp rating	Nos		150000	
58.08	500 Amp rating	Nos		190000	
58.09	630 Amp rating	Nos		225000	
59.00	Radar type Level transmitter	Nos	1.00	120000	120000
60.00	Control Panel:- control panel for all power equipments with IP 54 protection	Nos	1.00	120000	120000
61.00	Cabling for Tube Well:- complete cabling for tubewell including all power and control cables of all equipments at pump house and OHT	Nos	1.00	60000	60000
62.00	Master Control PLC:- Master control plc with CPU, SCADA software including GSM / GPRS modem, necessary firewall, ethernet switch, CCTV system	Nos	1.00	2665000	
63.00	Installation testing and commissioning	Nos	1.00	60000	60000
A1-1	110 mm dia HDPE Pipe PN6, PE 100	m	130.00	321	41730
A1-2	125 mm dia HDPE Pipe PN6, PE 100	m		378	
A1-3	140 mm dia HDPE Pipe PN6, PE 100	m	19.00	498	9462
A1-4	160 mm dia HDPE Pipe PN6, PE 100	m		630	
A1-5	180 mm dia HDPE Pipe PN6, PE 100	m		779	
A1-6	200 mm dia HDPE Pipe PN6, PE 100	m		951	
A1-7	Supply Installation of Display board of Size 2M X 1 M for Providing details of proposal of water supply scheme	LS	1.00	25000	25000
A1-8	Provision for arboriculture for development of water works	LS	1.00	50000	50000
A1-9	Battery Backup with Accessories for 2 Kw Load	Nos	2.00	92800	185600
A1-10	40 Watts Solar Street Lights inbuilt with all accessories	Nos	4.00	30000	120000
A1-11-1	7.5 KVA	Nos		240000	
A1-11-2	10 KVA	Nos		260000	
A1-11-3	15 KVA	Nos		306000	
A1-11-3	20 KVA	Nos	1.00	370000	370000
A1-11-3	25 KVA	Nos		389000	
A1-11-3	30 KVA	Nos		405000	
A1-11-3	40 KVA	Nos		483000	
A1-11-3	45 KVA	Nos		495000	
A1-11-3	50 KVA	Nos		555000	
A1-11-3	62.5 KVA	Nos		569000	

Estimate for Sakharau Gram Panchayat	
Water Supply Scheme	
Under - SWSM	
Block - Gajha, District - Gorakhpur	
General Abstract of Cost (Comprehensive)	
Estimate Number	Description of Sub-Estimate
Amount (Rs. Lacs)	
E-1	Construction of Pump House
E-2	Pipelines - Raw Water Rising Main
E-3	Construction of Over Head Tank - 1 Nos
E-4	Pipelines - Distribution Network
E-5	Construction of Boundary Wall
E-6	Construction of Approach Road & Ancillary Civil Works
E-7	Construction of Staff Quarters
E-8	Survey, Investigation & Preparation of Detailed Project Report
Net Cost of the Civil Works of the Scheme	
	160.75
Net Cost of the Electrical & Mechanical Works of the Scheme	
167.55	
(B) Electrical & Mechanical Works	
E-9	Drilling Construction & Development of Tube Well - 1 Nos
E-10	Pumping Plant & Chlorination Plant
E-11	Solar Power Plant
E-12	Electrical & Instrumentation
Net Cost of the Electrical & Mechanical Works of the Scheme	
56.80	
Total Net Cost of the Scheme (A + B)	
217.55	
221.35	

EXECUTIVE ENGINEER
CONSTRUCTION DIVISION
(E/M) U.P. JAL NIGAM
GORAKHPUR

(डॉ. शोभा शर्मा)
श्रीत कर्मिणी
शुभ प्रयोग एवं कर्मिणी

Forwarded As Recommended
by DWSSM For SLSSC
(डॉ. शोभा शर्मा)
श्रीत कर्मिणी
शुभ प्रयोग एवं कर्मिणी

शुभ प्रयोग एवं कर्मिणी
श्रीत कर्मिणी
शुभ प्रयोग एवं कर्मिणी
Executive Engineer,
Construction Division,
U.P. Jal Nigam, 10 TH Div. Gorakhpur

A.E.

J.E.T. Assistant Engineer



PREPARED BY

CHECKED BY

3280	TOTAL POPULATION A (ULTIMATE YEAR 2052)
3280	PER CAPITA COST (NET COST+CONTINGENCY+GST)
7803	

Sr. No.	Description of Work	Amount (Rs. in Lacs)	%	Amount (Rs. in Lacs)	Govt of U.P. Share	Govt of India Share
1	2	3	4	5	6	7
1	Cost of Work	217.55		224.35		
2	0.14% Discount as per Contract on Cost of work	217.55	-0.14%	-0.31		
	Net Cost of Work	217.24		224.04		
3	Add Contingency 2%	217.24	2.00%	4.34		
	Sub Total (A)	221.58		228.38	114.26	114.26
4	Add GST 12 % -B	221.58	12.00%	27.42	13.71	13.71
	Add 12.5% Cengage-C	228.52	12.50%	28.57	28.57	
	Grand Total (A+B+C)	275.88		284.51	156.54	127.97
6	1st O&M Cost (after DLP)	275.88	2%	5.52	2.24	2.24
				55.74		

शुभ प्रयोग एवं कर्मिणी
(श्रीत कर्मिणी)