

DEVELOPMENT OF SEWAGE TREATMENT PLANTS AND SEWERAGE NETWORK IN PATNA, BIHAR

ADDENDUM No. 1

Sl. no.	Document	Clause No.	Existing Clause	Revised Clause
1.	RFP	Glossary	<i>Digha</i> STP Facilities - means collectively, the <i>Digha</i> STP, the online monitoring system, the on-site testing laboratory facilities, <i>Digha</i> I&D works and such other facilities associated with the <i>Digha</i> STP, required to be set up by the Concessionaire, as described in greater detail in the Scope of Work and Technical Specifications.	<i>Digha</i> STP Facilities - means collectively, the <i>Digha</i> STP, the biogas Power Plant , the online monitoring system, the on-site testing laboratory facilities, <i>Digha</i> I&D works and such other facilities associated with the <i>Digha</i> STP, required to be set up by the Concessionaire, as described in greater detail in the Scope of Work and Technical Specifications.
2.	RFP	Glossary	<i>Kankarbagh</i> STP Facilities - means collectively, the <i>Kankarbagh</i> STP, the online monitoring system, the on-site testing laboratory STP Facilities, the temporary storage facility for the digested sludge and such other STP Facilities associated with the <i>Kankarbagh</i> STP, required to be set up by the Concessionaire, as described in greater detail in the Scope of Work and Technical Specifications	<i>Kankarbagh</i> STP Facilities - means collectively, the <i>Kankarbagh</i> STP, the biogas power plant , the online monitoring system, the on-site testing laboratory STP Facilities, the temporary storage facility for the digested sludge and such other STP Facilities associated with the <i>Kankarbagh</i> STP, required to be set up by the Concessionaire, as described in greater detail in the Scope of Work and Technical Specifications
3.	RFP	Clause 1.6 (e)	In order to meet its power consumption requirements for the <i>Digha</i> STP Facilities, the Concessionaire may construct and operate a biogas power plant at the <i>Digha</i> Site, to utilise the biogas generated from the treatment of raw sewage at the <i>Digha</i> STP to produce clean energy. The Concessionaire may also set up a rooftop solar project at any of the STP Sites to meet its power consumption requirements.	In order to meet its power consumption requirements for the STP Facilities, the Concessionaire shall construct and operate a biogas power plant at the <i>Digha</i> Site and <i>Kankarbagh</i> Site, to utilise the biogas generated from the treatment of raw sewage at the <i>Digha</i> STP and <i>Kankarbagh</i> STP respectively to produce clean energy. The Concessionaire may also set up a rooftop solar project at any of the STP Sites to meet its power consumption requirements.
4.	RFP	Clause 2.8	Bidders are required to submit the Bid Security along with their Bids. The Bidders shall provide the Bid Security in the form of a bank guarantee issued by a Scheduled Bank in India or by a foreign bank listed with the Reserve Bank of India having its branches in India and payable at <i>Patna</i> in favour of " <i>BUIDCO</i> " represented by the Chief General Manager, Construction and Maintenance Unit, in the format set out at Annexure II The original Bid Security must be submitted to <i>BUIDCO</i> at the address mentioned in Clause 24.11 below before the date/time of opening of the Bids	Bidders are required to submit the Bid Security along with their Bids. The Bidders shall provide the Bid Security in the form of a bank guarantee issued by a Scheduled Bank in India or by a foreign bank listed with the Reserve Bank of India having its branches in India and payable at <i>Patna</i> in favour of " <i>BUIDCO</i> " represented by the Chief General Manager, Construction and Maintenance Unit, in the format set out at Annexure II Bank Account Details: Account No: 50082087961 Bank: Allahabad Bank

Sl. no.	Document	Clause No.	Existing Clause	Revised Clause																												
			(Qualification Proposals), either by registered/speed post/courier or by hand, failing which the Bid will be declared non-responsive. A scanned copy of the Bid Security must be uploaded by the Bidders on the e-Procurement Portal along with their Bids.	Branch: IFSC - ALLA0210003 Patna main branch, Budh Marg The original Bid Security must be submitted to BUIDCO at the address mentioned in Clause 24.11 below before the date/time of opening of the Bids (Qualification Proposals), either by registered/speed post/courier or by hand, failing which the Bid will be declared non-responsive. A scanned copy of the Bid Security must be uploaded by the Bidders on the e-Procurement Portal along with their Bids.																												
5.	RFP	Clause 2.12 (c)	The Bidders must: (i) upload a soft copy/scanned copy of their Qualification Proposal, including a copy of the Bid Security on the e-Procurement Portal in PDF format; and (ii) populate the Bid Price Sheet provided on the e-Procurement Portal, before the specified time on the Bid Due Date. Upon submitting the Qualification Proposals and the Financial Proposals on the e-Procurement Portal, the Bidders must affix their digital signature both to the Qualification Proposals and the Financial Proposals. However, Bid Security, copy of online receipt towards Bid processing fee, Power of Attorney, Joint Bidding Agreement, etc. shall be submitted physically by the Bidder on or before 17.07.2018 up to 12:00 Noon	The Bidders must: (i) upload a soft copy/scanned copy of their Qualification Proposal, including a copy of the Bid Security on the e-Procurement Portal in PDF format; and (ii) populate the Bid Price Sheet provided on the e-Procurement Portal, before the specified time on the Bid Due Date. Upon submitting the Qualification Proposals and the Financial Proposals on the e-Procurement Portal, the Bidders must affix their digital signature both to the Qualification Proposals and the Financial Proposals. However, Bid Security, copy of online receipt towards Bid processing fee, Power of Attorney, Joint Bidding Agreement, etc. shall be submitted physically by the Bidder on or before 01.08.2018 up to 12.00 Noon																												
6.	RFP	Section IV. Bid Data Sheet (Clause 2.14,2.10,2.15,8.1a, 2.12)	<table><tr><th>Event</th><th>Date/Location</th></tr><tr><td>Date of issue of bid documents</td><td>From 15.05.2018 Through website www.eproc.bihar.gov.in</td></tr><tr><td>Last date for receiving queries from Bidders</td><td>Date: 02.06.2018 Time: 06:00 PM</td></tr><tr><td>Place and Date of Pre-bid meeting</td><td>Date: 05.06.2018 Time : 11:00 AM</td></tr><tr><td>Issue of Addendum/ Revised Bid Document by</td><td>Date 15.06.2018</td></tr><tr><td>Last date and time for receipt (upload) of bids</td><td>Date 16.07.2018 up to 04:00 PM</td></tr><tr><td>Last Date and time for Submission of Power of Attorney, Bid</td><td>Date 17.07.2018 up to 12:00 Noon</td></tr></table>	Event	Date/Location	Date of issue of bid documents	From 15.05.2018 Through website www.eproc.bihar.gov.in	Last date for receiving queries from Bidders	Date: 02.06.2018 Time: 06:00 PM	Place and Date of Pre-bid meeting	Date: 05.06.2018 Time : 11:00 AM	Issue of Addendum/ Revised Bid Document by	Date 15.06.2018	Last date and time for receipt (upload) of bids	Date 16.07.2018 up to 04:00 PM	Last Date and time for Submission of Power of Attorney, Bid	Date 17.07.2018 up to 12:00 Noon	<table><tr><th>Event</th><th>Date/Location</th></tr><tr><td>Date of issue of bid documents</td><td>From 15.05.2018 Through website www.eproc.bihar.gov.in</td></tr><tr><td>Last date for receiving queries from Bidders</td><td>Date: 02.06.2018 Time: 06:00 PM</td></tr><tr><td>Place and Date of Pre-bid meeting</td><td>Date: 05.06.2018 Time : 11:00 AM</td></tr><tr><td>Issue of Addendum/ Revised Bid Document by</td><td>Date 21.08.2018 up to 6.00 PM.</td></tr><tr><td>Last date and time for receipt (upload) of bids</td><td>17.09.2018 up to 04.00PM</td></tr><tr><td>Last Date and time for Submission of Power of Attorney, Bid</td><td>18.09.2018 up to 12.00 Noon</td></tr></table>	Event	Date/Location	Date of issue of bid documents	From 15.05.2018 Through website www.eproc.bihar.gov.in	Last date for receiving queries from Bidders	Date: 02.06.2018 Time: 06:00 PM	Place and Date of Pre-bid meeting	Date: 05.06.2018 Time : 11:00 AM	Issue of Addendum/ Revised Bid Document by	Date 21.08.2018 up to 6.00 PM.	Last date and time for receipt (upload) of bids	17.09.2018 up to 04.00PM	Last Date and time for Submission of Power of Attorney, Bid	18.09.2018 up to 12.00 Noon
Event	Date/Location																															
Date of issue of bid documents	From 15.05.2018 Through website www.eproc.bihar.gov.in																															
Last date for receiving queries from Bidders	Date: 02.06.2018 Time: 06:00 PM																															
Place and Date of Pre-bid meeting	Date: 05.06.2018 Time : 11:00 AM																															
Issue of Addendum/ Revised Bid Document by	Date 15.06.2018																															
Last date and time for receipt (upload) of bids	Date 16.07.2018 up to 04:00 PM																															
Last Date and time for Submission of Power of Attorney, Bid	Date 17.07.2018 up to 12:00 Noon																															
Event	Date/Location																															
Date of issue of bid documents	From 15.05.2018 Through website www.eproc.bihar.gov.in																															
Last date for receiving queries from Bidders	Date: 02.06.2018 Time: 06:00 PM																															
Place and Date of Pre-bid meeting	Date: 05.06.2018 Time : 11:00 AM																															
Issue of Addendum/ Revised Bid Document by	Date 21.08.2018 up to 6.00 PM.																															
Last date and time for receipt (upload) of bids	17.09.2018 up to 04.00PM																															
Last Date and time for Submission of Power of Attorney, Bid	18.09.2018 up to 12.00 Noon																															

Sl. no.	Document	Clause No.	Existing Clause		Revised Clause	
			Security, copy of online receipt towards Bid processing fee, and Joint Bidding Agreement		Security, copy of online receipt towards Bid processing fee, and Joint Bidding Agreement	
			Time and date of opening bids (Qualification proposals)	Date 17.07.2018 at 01:00 PM	Time and date of opening bids (Qualification proposals)	18.09.2018 at 1.00 PM
			Time and date of opening financial proposal	Date 31.07.2018 at 11:00 AM	Time and date of opening financial proposal	10.10.2018 at 11.00 AM
			Place of opening of bid:	Through website www.eproc.bihar.gov.in	Place of opening of bid:	Through website www.eproc.bihar.gov.in
			Issue of LOA	Within 21 days from the date of opening of Financial Proposals	Issue of LOA	Within 21 days from the date of opening of Financial Proposals
			Signing of the Digha-Kankarbagh Project Agreement	Within 45 days from the date of acceptance of LOA by the Selected Bidder	Signing of the Digha-Kankarbagh Project Agreement	Within 45 days from the date of acceptance of LOA by the Selected Bidder
7.	RFP	Clause 4.1.1 (a) (i)	<p>Sewage Treatment Plant (STP): The Bidder should have (A) developed and/or (B) designed and constructed one STP of at least 60 (sixty) MLD capacity, or 2 STPs of at least 40 (forty) MLD capacity each or 3 STPs of at least 30 (thirty) MLD capacity each, which shall each:</p> <p>A. have been (A) developed, and /or (B) designed and constructed, using any technology;</p> <p>B. have been (A) developed, and /or (B) designed and constructed, in the 7 (seven) years preceding the Bid Due Date, as evidenced by the issuance of a completion certificate by the relevant government authority/client, certifying that the STP(s) have been completed in terms of the concession agreement or similar contract executed for such STP(s); and</p> <p>have been successfully operational for any 24 (twenty four) consecutive months in the 7 (seven) years preceding the Bid Due Date, in accordance with the relevant concession agreement or similar contract</p>		<p>Sewage Treatment Plant (STP): The Bidder should have (I) developed and/or (II) designed and constructed one STP of at least 60 (sixty) MLD capacity, or 2 STPs of at least 40 (forty) MLD capacity each or 3 STPs of at least 30 (thirty) MLD capacity each, which shall each:</p> <p>A. have been (I) developed, and /or (II) designed and constructed, using any technology;</p> <p>B. have been (I) developed, and /or (II) designed and constructed, in the 7 (seven) years preceding the Bid Due Date, as evidenced by the issuance of a completion certificate by the relevant government authority/client, certifying that the STP(s) have been completed in terms of the concession agreement or similar contract executed for such STP(s); and</p> <p>have been successfully operational for any 24 (twenty four) consecutive months in the 7 (seven) years preceding the Bid Due Date, in accordance with the relevant concession agreement or similar contract</p>	

Sl. no.	Document	Clause No.	Existing Clause	Revised Clause
			executed for such STP(s), as evidenced by the issuance of a completion certificate by the relevant government authority/client	executed for such STP(s), as evidenced by the issuance of a completion certificate by the relevant government authority/client.
8.	RFP	Clause 4.1.1 (a) (ii)	<p>Sewerage Network: The Bidder should have</p> <p>A. developed and/or (B) designed and constructed and / or (C) constructed at least one sewerage network of minimum 150 (one hundred and fifty) km of which</p> <p>(1) at least one km should be more than or equal to 1500 (one thousand five hundred) mm diameter and</p> <p>(2) at least one sewage pumping station of minimum capacity of 55 (fifty five) MLD during the last 7 (seven) years; and</p> <p>B. built and commissioned a sewerage network of a minimum length of 200 (two hundred) m using trenchless technology during the last 7 (seven) years.</p> <p>If the Bidder does not have required experience for claiming Technical Capacity under 4.1.1(a)(ii)(A)(1) and/or 4.1.1(a)(ii)(B), the Bidder will be required to nominate an experienced contractor which meets the criteria set out in 4.1.1(a)(ii)(A)(1) and/or 4.1.1(a)(ii)(B), above. Such nominated subcontractor will be engaged to construct the relevant parts of the Sewerage Network of the proposed Project, if the Bidder is declared the Selected Bidder, and will be required to provide a consent letter in the format set out in Annexure 3 (along with certificate(s) from the relevant government authority/ client).</p> <p>With regards to the design and construction experience being claimed under 4.1.1(a)(ii)A.(B) and/or 4.1.1(a)(i)(B), if a Bidder has only construction experience but not design experience, then the same can be claimed via a nominated subcontractor. Such nominated subcontractor will be engaged for designing the proposed Project, if the Bidder is declared the Selected Bidder, and will be required to provide a consent letter in the format set out</p>	<p>Sewerage Network: The Bidder should have</p> <p>A. (I) developed and/or (II) designed and constructed and / or (III) constructed sewerage network(s), which shall satisfy each of the following criteria</p> <p>(1) at least one sewerage network of minimum 150 (one hundred and fifty) km</p> <p>(2) at least one km of sewerage network should be more than or equal to 1400 (one thousand four hundred) mm diameter and</p> <p>(3) at least one sewage pumping station of minimum capacity of 55 (fifty five) MLD during the last 7 (seven) years; and</p> <p>B. built and commissioned a sewerage network of a minimum length of 200 (two hundred) m using trenchless technology during the last 7 (seven) year</p> <p>If the Bidder does not have required experience for claiming Technical Capacity under 4.1.1(a)(ii)(A)(2) and/or 4.1.1(a)(ii)(B), the Bidder will be required to nominate an experienced contractor which meets the criteria set out in 4.1.1(a)(ii)(A)(2) and/or 4.1.1(a)(ii)(B), above. Such nominated subcontractor will be engaged to construct the relevant parts of the Sewerage Network of the proposed Project, if the Bidder is declared the Selected Bidder, and will be required to provide a consent letter in the format set out in Annexure 3 (along with certificate(s) from the relevant government authority/ client).</p> <p>The Bidder may rely on the experience of different projects for demonstrating experience under 4.1.1(a)(ii)(A)(1), 4.1.1(a)(ii)(A)(2) and 4.1.1(a)(ii)(A)(3).</p> <p>With regards to the design and construction experience being claimed under 4.1.1(a)(ii)A(II) and/or</p>

Sl. no.	Document	Clause No.	Existing Clause	Revised Clause
			<p>in Annexure 3 (along with certificate(s) from the relevant government authority/ client).</p> <p>To claim development experience, the entity claiming the experience shall have held, in the company developing the sewerage network and sewage pumping station, a minimum of 26% equity share capital as on the Commercial Operations Date (COD) of such project.</p> <p>To claim design and construction experience, the entity claiming experience should have been appointed as the principal contractor (i.e., the contractor hired directly by 53 the owner of the project/entity developing the relevant STP) and any other subcontractor experience is not permitted for claiming Technical Capacity.</p>	<p>4.1.1(a)(i)(II), if a Bidder has only construction experience but not design experience, then the same can be claimed via a nominated subcontractor. Such nominated subcontractor will be engaged for designing the proposed Project, if the Bidder is declared the Selected Bidder, and will be required to provide a consent letter in the format set out in Annexure 3 (along with certificate(s) from the relevant government authority/ client).</p> <p>To claim development experience, the entity claiming the experience shall have held, in the company developing the sewerage network and sewage pumping station, a minimum of 26% equity share capital as on the Commercial Operations Date (COD) of such project.</p> <p>To claim design and construction experience, the entity claiming experience should have been appointed as the principal contractor (i.e., the contractor hired directly by the owner of the project/entity developing the relevant STP/Sewer Network) and any other subcontractor experience is not permitted for claiming Technical Capacity.</p>
9.	RFP	Clause 4.1.2 (b) (ii)	in case of a Consortium, the Development/Design and Construction experience set out in Clause 4.1.1(a) must be demonstrated by one Member and the Operation and maintenance experience set out in Clause 4.1.1(b) may be claimed by a different Member	in case of a Consortium, the Development/Design and Construction experience set out in Clause 4.1.1(a)(i) must be demonstrated by one Member and the Operation and maintenance experience set out in Clause 4.1.1(b) may be claimed by a different Member
10.	RFP	Clause 4.1.3	<p>Power Plant: If the Bidder proposes to set up a biogas power plant at the proposed STP Site in accordance with the Concession Agreement, then the Bidder will be required to demonstrate its experience (in the format set out in Annexure 2) in developing or designing and constructing a biogas power plant, which should have:</p> <ol style="list-style-type: none"> a capacity of a minimum of 0.6 MW; been based on STP effluent; been developed or designed and constructed in the 7 (seven) years preceding the Bid Due Date, as evidenced by the issuance of a completion certificate by the relevant 	<p>Power Plant: The Bidder will be required to demonstrate its experience (in the format set out in Annexure 2) in developing or designing and constructing a biogas power plant, which should have:</p> <ol style="list-style-type: none"> a capacity of a minimum of 0.6 MW; been based on STP effluent; been developed or designed and constructed in the 7 (seven) years preceding the Bid Due Date, as evidenced by the issuance of a completion certificate by the relevant government authority/ client, certifying that the biogas power plant has been completed in

Sl. no.	Document	Clause No.	Existing Clause	Revised Clause
			<p>government authority/ client, certifying that the biogas power plant has been completed in terms of the relevant agreement or contract executed for such biogas power plant; and</p> <p>D. successfully operational for any 24 (twenty four) consecutive months in the 7 (seven) years preceding the Bid Due Date, in accordance with the relevant contract executed for such biogas power plant, as evidenced by a certificate from the relevant government authority/client;</p> <p>If the Bidder or any Member of the Consortium does not have any experience of having developed or designed and constructed a biogas power plant, the Bidder will be required to nominate an experienced power plant developer which has developed and/or designed a biogas power plant, which meets the criteria set out in (A) to (D) above. The nominated subcontractor will be engaged to develop the power plant for the Project, if the Bidder is declared the Selected Bidder, and will be required to provide a consent letter in the format set out in Annexure 3 (along with certificate(s) from the relevant government authority/ client).</p>	<p>terms of the relevant agreement or contract executed for such biogas power plant; and</p> <p>D. successfully operational for any 24 (twenty four) consecutive months in the 7 (seven) years preceding the Bid Due Date, in accordance with the relevant contract executed for such biogas power plant, as evidenced by a certificate from the relevant government authority/client;</p> <p>If the Bidder or any Member of the Consortium does not have any experience of having developed or designed and constructed a biogas power plant, the Bidder will be required to nominate an experienced power plant developer which has developed and/or designed a biogas power plant, which meets the criteria set out in (A) to (D) above. The nominated subcontractor will be engaged to develop the power plant for the Project, if the Bidder is declared the Selected Bidder, and will be required to provide a consent letter in the format set out in Annexure 3 (along with certificate(s) from the relevant government authority/ client).</p>
11.	RFP	Clause 15.3	The Bidder shall provide the Bid Security in the form of a bank guarantee issued by a Scheduled Bank in India or by a foreign bank listed with the Reserve Bank of India having its branches in India. The Bid Security shall be issued in favour of the "BUIDCO", represented by the Chief General Manager, BUIDCO, #2 nd floor SFC Building, Khadya Bhavan, Daroga Rai Path, R-block, Patna-800001, payable at Patna and in the format set out in Annexure II	The Bidder shall provide the Bid Security in the form of a bank guarantee issued by a Scheduled Bank in India or by a foreign bank listed with the Reserve Bank of India having its branches in India. The Bid Security shall be issued in favour of the "BUIDCO", represented by the Chief General Manager, BUIDCO, #2 nd floor SFC Building, Khadya Bhavan, Daroga Rai Path, R-block, Patna-800001, payable at Patna and in the format set out in Annexure 1(I)
12.	RFP	Clause 16.4	If the Selected Bidder fails to cause the Concessionaire to furnish the Performance Security /Securities in accordance with this Clause 16 on or before the execution of the Digha-Kankarbagh Project Agreement, then BUIDCO shall have the right to forfeit the Bid Security of the Selected Bidder in accordance with Clause 15.5(d)	If the Selected Bidder fails to cause the Concessionaire to furnish the Performance Security /Securities in accordance with this Clause 16 on or before the execution of the Digha-Kankarbagh Project Agreement, then BUIDCO shall have the right to forfeit the Bid Security of the Selected Bidder in accordance with Clause 15.5(c)

Sl. no.	Document	Clause No.	Existing Clause	Revised Clause																												
13.	RFP	Clause 16A.4	If the Selected Bidder fails to cause the Concessionaire to furnish the ESHS Performance Security/Securities in accordance with this Clause 16A on or before the execution of the Digha-Kankarbagh Project Agreement, then <i>BUIDCO</i> shall have the right to forfeit the Bid Security of the Selected Bidder in accordance with Clause 15.5(d) .	If the Selected Bidder fails to cause the Concessionaire to furnish the ESHS Performance Security/Securities in accordance with this Clause 16A on or before the execution of the Digha-Kankarbagh Project Agreement, then <i>BUIDCO</i> shall have the right to forfeit the Bid Security of the Selected Bidder in accordance with Clause 15.5(c) .																												
14.	RFP	Clause 16B. 1. b	Kankarbagh STP O&M Security for a value equal to 4% of the <i>Kankarbagh</i> STP Bid Project Cost in the substance and form set out in Annexure 4A or in another form approved by BUIDCO	Kankarbagh STP O&M Security for a value equal to 4% of the <i>Kankarbagh</i> STP Bid Project Cost in the substance and form set out in Annexure 4B or in another form approved by BUIDCO																												
15.	RFP	Clause 20. Qualification Proposal	The Bidder shall submit Bids online in two separate folders as under: Folder I - for submission of Qualification Proposal; and Folderr II – for submission of Financial Proposals	The Bidder shall submit Bids online in two separate folders as under: Folder I - for submission of Qualification Proposal; and Folder II – for submission of Financial Proposals																												
16.	RFP	Clause 24.2	While uploading the Bid on the e-Procurement Portal, Bidder must ensure that files containing the Qualification Proposal and scanned copies of the demand draft for Bid Security in PDF format are uploaded under the relevant head on the e-Procurement Portal. The Bidder shall be required to fill all mandatory forms and fields indicated in the e-Procurement Portal at the time of uploading its Bid	While uploading the Bid on the e-Procurement Portal, Bidder must ensure that files containing the Qualification Proposal and scanned copies of the bank guarantee /demand draft for Bid Security in PDF format are uploaded under the relevant head on the e-Procurement Portal. The Bidder shall be required to fill all mandatory forms and fields indicated in the e-Procurement Portal at the time of uploading its Bid																												
17.	1C Bid Price Sheet	Bid Price Summary – Rows 18-37 in the original Bid Price Sheet Rows 18-33 in the Revised Bid Price Sheet	<table><tr><td>i</td><td>For flow upto 25 MLD and BOD upto 100 mg/L</td></tr><tr><td>ii</td><td>For flow upto 25 MLD and BOD > 100 mg/L and upto 150 mg/L</td></tr><tr><td>iii</td><td>For flow upto 25 MLD and BOD > 150 mg/L and upto 200 mg/L</td></tr><tr><td>iv</td><td>For flow upto 25 MLD and BOD > 200 mg/L and upto 250 mg/L</td></tr><tr><td>v</td><td>For flow upto 25 MLD and BOD > 250 mg/L</td></tr><tr><td>vi</td><td>For flow upto 50 MLD and BOD upto 100 mg/L</td></tr><tr><td>vii</td><td>For flow upto 50 MLD and BOD > 100 mg/L and upto 150 mg/L</td></tr><tr><td>viii</td><td>For flow upto 50 MLD and BOD > 150 mg/L and upto 200 mg/L</td></tr></table>	i	For flow upto 25 MLD and BOD upto 100 mg/L	ii	For flow upto 25 MLD and BOD > 100 mg/L and upto 150 mg/L	iii	For flow upto 25 MLD and BOD > 150 mg/L and upto 200 mg/L	iv	For flow upto 25 MLD and BOD > 200 mg/L and upto 250 mg/L	v	For flow upto 25 MLD and BOD > 250 mg/L	vi	For flow upto 50 MLD and BOD upto 100 mg/L	vii	For flow upto 50 MLD and BOD > 100 mg/L and upto 150 mg/L	viii	For flow upto 50 MLD and BOD > 150 mg/L and upto 200 mg/L	<table><tr><td>i</td><td>For flow upto 25 MLD and BOD upto 100 mg/L</td></tr><tr><td>ii</td><td>For flow upto 25 MLD and BOD > 100 mg/L and upto 150 mg/L</td></tr><tr><td>iii</td><td>For flow upto 25 MLD and BOD > 150 mg/L and upto 200 mg/L</td></tr><tr><td>iv</td><td>For flow upto 25 MLD and BOD > 200 mg/L and upto 250 mg/L</td></tr><tr><td>v</td><td>For flow upto 50 MLD and BOD upto 100 mg/L</td></tr><tr><td>vi</td><td>For flow upto 50 MLD and BOD > 100 mg/L and upto 150 mg/L</td></tr></table>	i	For flow upto 25 MLD and BOD upto 100 mg/L	ii	For flow upto 25 MLD and BOD > 100 mg/L and upto 150 mg/L	iii	For flow upto 25 MLD and BOD > 150 mg/L and upto 200 mg/L	iv	For flow upto 25 MLD and BOD > 200 mg/L and upto 250 mg/L	v	For flow upto 50 MLD and BOD upto 100 mg/L	vi	For flow upto 50 MLD and BOD > 100 mg/L and upto 150 mg/L
i	For flow upto 25 MLD and BOD upto 100 mg/L																															
ii	For flow upto 25 MLD and BOD > 100 mg/L and upto 150 mg/L																															
iii	For flow upto 25 MLD and BOD > 150 mg/L and upto 200 mg/L																															
iv	For flow upto 25 MLD and BOD > 200 mg/L and upto 250 mg/L																															
v	For flow upto 25 MLD and BOD > 250 mg/L																															
vi	For flow upto 50 MLD and BOD upto 100 mg/L																															
vii	For flow upto 50 MLD and BOD > 100 mg/L and upto 150 mg/L																															
viii	For flow upto 50 MLD and BOD > 150 mg/L and upto 200 mg/L																															
i	For flow upto 25 MLD and BOD upto 100 mg/L																															
ii	For flow upto 25 MLD and BOD > 100 mg/L and upto 150 mg/L																															
iii	For flow upto 25 MLD and BOD > 150 mg/L and upto 200 mg/L																															
iv	For flow upto 25 MLD and BOD > 200 mg/L and upto 250 mg/L																															
v	For flow upto 50 MLD and BOD upto 100 mg/L																															
vi	For flow upto 50 MLD and BOD > 100 mg/L and upto 150 mg/L																															

Sl. no.	Document	Clause No.	Existing Clause		Revised Clause	
			ix	For flow upto 50 MLD and BOD > 200 mg/L and upto 250 mg/L	vii	For flow upto 50 MLD and BOD > 150 mg/L and upto 200 mg/L
			x	For flow upto 50 MLD and BOD > 250 mg/L	vii	For flow upto 50 MLD and BOD > 200 mg/L and upto 250 mg/L
			xi	For flow upto 75 MLD and BOD upto 100 mg/L	ix	For flow upto 75 MLD and BOD upto 100 mg/L
			xii	For flow upto 75 MLD and BOD > 100 mg/L and upto 150 mg/L	x	For flow upto 75 MLD and BOD > 100 mg/L and upto 150 mg/L
			xiii	For flow upto 75 MLD and BOD > 150 mg/L and upto 200 mg/L	xi	For flow upto 75 MLD and BOD > 150 mg/L and upto 200 mg/L
			xiv	For flow upto 75 MLD and BOD > 200 mg/L and upto 250 mg/L	xii	For flow upto 75 MLD and BOD > 200 mg/L and upto 250 mg/L
			xv	For flow upto 75 MLD and BOD > 250 mg/L	xiii	For flow > 75 MLD and upto 100 MLD and BOD upto 100 mg/L
			xvi	For flow > 75 MLD and BOD upto 100 mg/L	xiv	For flow > 75 MLD and upto 100 MLD and BOD > 100 mg/L and upto 150 mg/L
			xvii	For flow > 75 MLD and BOD > 100 mg/L and upto 150 mg/L	xv	For flow > 75 MLD and upto 100 MLD and BOD > 150 mg/L and upto 200 mg/L
			xviii	For flow > 75 MLD and BOD > 150 mg/L and upto 200 mg/L	xvi	For flow > 75 MLD and upto 100 MLD and BOD > 200 mg/L and upto 250 mg/L
			xix	For flow > 75 MLD and BOD > 200 mg/L and upto 250 mg/L		
			xx	For flow > 75 MLD and BOD > 250 mg/L		
18.	1C Bid Price Sheet	Bid Price Summary – Row 64 in the original Bid Price Sheet Row 60 in the Revised Bid Price Sheet	Digha Sewerage Network Facilities The Bidder should ensure that the values entered in this section is consistent with the values mentioned in Digha Network Details and Summary sheet, else the Bid is liable to be rejected		Digha Sewerage Network Facilities	
19.	1C Bid Price Sheet	Bid Price Summary – Row 70 in the original Bid Price Sheet Row 66 in the Revised	Digha Sewerage Network Guaranteed Energy Consumption for both SPS A (capacity-104 MLD) and SPS B (capacity-103 MLD) (Note: The Bidder is required to quote the Guaranteed Energy		Digha Sewerage Network Guaranteed Energy Consumption for both SPS A (capacity-104 MLD) and SPS B (capacity-103 MLD)	

Sl. no.	Document	Clause No.	Existing Clause		Revised Clause	
		Bid Price Sheet	Consumption in kWh/MLD. The value shown in quantity is computed as - (Cumulative Flow in the Pumping Stations -100 MLD for evaluation purposes) x (365x(14+4/12)) x(Power Unit rate at Rs. 10 per kWh))= 100x5292.5x10			
20.	1C Bid Price Sheet	Bid Price Summary – Row 70 in the original Bid Price Sheet Row 66 in the Revised Bid Price Sheet	Quantity - 5231666.67 INR MLD/kWh was multiplied with value from Digha Network Details		Quantity and multiplication formula removed	
21.	1C Bid Price Sheet	Bid Price Summary – Rows 85-104 in the original Bid Price Sheet Rows 81-96 in the Revised Bid Price Sheet	i	For flow upto 12 MLD and BOD upto 100 mg/L	i	For flow upto 12 MLD and BOD upto 100 mg/L
			ii	For flow upto 12 MLD and BOD > 100 mg/L and upto 150 mg/L	ii	For flow upto 12 MLD and BOD > 100 mg/L and upto 150 mg/L
			iii	For flow upto 12 MLD and BOD > 150 mg/L and upto 200 mg/L	iii	For flow upto 12 MLD and BOD > 150 mg/L and upto 200 mg/L
			iv	For flow upto 12 MLD and BOD > 200 mg/L and upto 250 mg/L	iv	For flow upto 12 MLD and BOD > 200 mg/L and upto 250 mg/L
			v	For flow upto 12 MLD and BOD > 250 mg/L	v	For flow upto 24 MLD and BOD upto 100 mg/L
			vi	For flow upto 24 MLD and BOD upto 100 mg/L	vi	For flow upto 24 MLD and BOD > 100 mg/L and upto 150 mg/L
			vii	For flow upto 24 MLD and BOD > 100 mg/L and upto 150 mg/L	vii	For flow upto 24 MLD and BOD > 150 mg/L and upto 200 mg/L
			viii	For flow upto 24 MLD and BOD > 150 mg/L and upto 200 mg/L	viii	For flow upto 24 MLD and BOD > 200 mg/L and upto 250 mg/L
			ix	For flow upto 24 MLD and BOD > 200 mg/L and upto 250 mg/L	ix	For flow upto 36 MLD and BOD > 100 mg/L and upto 150 mg/L
			x	For flow upto 24 MLD and BOD > 250 mg/L	x	For flow upto 36 MLD and BOD > 150 mg/L and upto 200
			xi	For flow upto 75 MLD and		

Sl. no.	Document	Clause No.	Existing Clause		Revised Clause	
				BOD upto 100 mg/L		mg/L
			xii	For flow upto 36 MLD and BOD > 100 mg/L and upto 150 mg/L	Xi	For flow upto 36 MLD and BOD > 200 mg/L and upto 250 mg/L
			xiii	For flow upto 36 MLD and BOD > 150 mg/L and upto 200 mg/L	Xii	For flow > 36 MLD and upto 50 MLD and BOD upto 100 mg/L
			xiv	For flow upto 36 MLD and BOD > 200 mg/L and upto 250 mg/L	xiii	For flow > 36 MLD and upto 50 MLD and BOD > 100 mg/L and upto 150 mg/L
			xv	For flow upto 36 MLD and BOD > 250 mg/L	xiv	For flow > 36 MLD and upto 50 MLD and BOD > 150 mg/L and upto 200 mg/L
			xvi	For flow > 36 MLD and BOD upto 100 mg/L	xv	For flow > 36 MLD and upto 50 MLD and BOD > 200 mg/L and upto 250 mg/L
			xvii	For flow > 36 MLD and BOD > 100 mg/L and upto 150 mg/L		
			xviii	For flow > 36 MLD and BOD > 150 mg/L and upto 200 mg/L		
			xix	For flow > 36 MLD and BOD > 200 mg/L and upto 250 mg/L		
			xx	For flow > 36 MLD and BOD > 250 mg/L		
			22.	1C Bid Price Sheet	Bid Price Summary – Row 114in the original Bid Price Sheet Rows 105 in the Revised Bid Price Sheet	Kankarbagh I&D Guaranteed Energy Consumption (Note : the Bidder is required to quote the Guaranteed Energy Consumption in kWh/MLD. The value shown in quantity is computed as - (Cumulative Flow in the Pumping Station - 50 MLD for Evaluation purposes)X(30x4)x(Power Unit Rate) - 20x210x10)
23.	1C Bid Price Sheet	Bid Price Summary – Row 118 in the original Bid Price Sheet Rows 109 in the Revised Bid Price Sheet	Kankarbagh Sewerage Network Facilities The Bidder should ensure that the values entered in this section is consistent with the values mentioned in Kankarbagh Network Details and Summary sheet, else the Bid is liable to be rejected.		Kankarbagh Sewerage Network Facilities	
24.	1C Bid Price Sheet	Bid Price Summary – Row 124 in the original Bid Price Sheet Rows 115 in the Revised Bid Price Sheet	Kankarbagh Sewerage Network Guaranteed Energy Consumption for both SPS A (capacity-90 MLD) and SPS B (capacity-110 MLD) (Note: The Bidder is required to quote the Guaranteed Energy Consumption in kWh/MLD. The value shown in		Kankarbagh Sewerage Network Guaranteed Energy Consumption for both SPS A (capacity-90 MLD) and SPS B (capacity-110 MLD)	

Sl. no.	Document	Clause No.	Existing Clause	Revised Clause																
			quantity is computed as - (Cumulative Flow in the Pumping Stations - 90 MLD for evaluation purposes) x (365x(14+4/12)) x(Power Unit rate at Rs. 10 per kWh) = 90x5292.5x10																	
25.	1C Bid Price Sheet	Bid Price Summary – Row 124 in the original Bid Price Sheet Rows 115 in the Revised Bid Price Sheet	Quantity - 4708500 INR MLD/kWh was multiplied with value from Kankarbagh Network Details	Quantity and multiplication formula removed.																
26.	1C Bid Price Sheet	Digha Network Summary – Row 4	The Bidder should ensure that the values entered in this section are consistent with the values mentioned in Digha Network BOQ Details and Summary sheet , else the Bid is liable to be rejected.	The Bidder should ensure that the values entered in this section are consistent with the values mentioned in Digha Network BOQ Details, else the Bid is liable to be rejected.																
27.	1C Bid Price Sheet	Digha Network Summary- Rows 8-16 in the original Bid Price Sheet	<table><tr><td>A</td><td>Undertaking preparatory survey, review the design and redesign for the Sewerage Network</td></tr><tr><td>B</td><td>Providing Sewerage Network including all appurtenant structures and commissioning including rehabilitation/ resurfacing and restoration of roads/ services etc</td></tr><tr><td>C</td><td>Undertaking preparatory survey and design for Providing Sewage Pumping Station(s), Rising Mains and Allied works</td></tr><tr><td>D</td><td>Providing House Connections, including construction of collection pits and their further joining with main sewer line and Supervising consumer connections</td></tr><tr><td>E</td><td>Relocation of utilities</td></tr><tr><td>F</td><td>Providing lateral/ branch/ main/ trunk Sewers by trenchless technology.</td></tr><tr><td>G</td><td>Providing 2 nos Pumping Stations including rising mains and all other civil works to function properly</td></tr><tr><td>H</td><td></td></tr></table>	A	Undertaking preparatory survey, review the design and redesign for the Sewerage Network	B	Providing Sewerage Network including all appurtenant structures and commissioning including rehabilitation/ resurfacing and restoration of roads/ services etc	C	Undertaking preparatory survey and design for Providing Sewage Pumping Station(s), Rising Mains and Allied works	D	Providing House Connections, including construction of collection pits and their further joining with main sewer line and Supervising consumer connections	E	Relocation of utilities	F	Providing lateral/ branch/ main/ trunk Sewers by trenchless technology.	G	Providing 2 nos Pumping Stations including rising mains and all other civil works to function properly	H		All rows stand deleted, and input considered from Digha Network Details for total of Part A1.
A	Undertaking preparatory survey, review the design and redesign for the Sewerage Network																			
B	Providing Sewerage Network including all appurtenant structures and commissioning including rehabilitation/ resurfacing and restoration of roads/ services etc																			
C	Undertaking preparatory survey and design for Providing Sewage Pumping Station(s), Rising Mains and Allied works																			
D	Providing House Connections, including construction of collection pits and their further joining with main sewer line and Supervising consumer connections																			
E	Relocation of utilities																			
F	Providing lateral/ branch/ main/ trunk Sewers by trenchless technology.																			
G	Providing 2 nos Pumping Stations including rising mains and all other civil works to function properly																			
H																				

Sl. no.	Document	Clause No.	Existing Clause			Revised Clause
			I	Implementation of Environmental Management Plan and ESHS-MSIP, as per particular conditions of contract		
28.	1C Bid Price Sheet	Digha Network Details				<p>Subtotal for Part I – Row 50 Subtotal for Part II – Row 76 Subtotal for Part III – Row 103 Subtotal for Part IV –Row 117 Subtotal included in Row 165, Row 212, 248 for Form3B, Form3C and B Sewage Pumping Station respectively</p> <p>Included complete total of all civil works in Row 250</p> <p>The row numbers correspond to revised Bid Price Sheet uploaded</p>
29.	1C Bid Price Sheet	Sub-sheet Digha Network Details Part III. Construction of Manholes and HH Connections Item 1- amended	Supply and construction of Precast Manhole Type placed over 200mm thick PCC (1:2:4) with 20mm & down stone chips bed laid over a layer of brick flat soling, including M-20 grade 150mm thick doubly reinforced RCC cover slab having opening for manhole, formation of channel at the invert with PCC (1:2:4) finished with 1.5mm thick neat cement finish over 15mm thick plaster in cement sand mortar (1:3) on all internal faces, including supplying and fixing polypropylene coated foot-rests, conforming to ASTM D 4101 specification, injection moulded around a 12 mm steel reinforcing bar of grade Fe 415, IS:1786 (approx. wt. 900 gm each) built into brickwork, including shuttering, reinforcement, bailing out/dewatering (by pumps or otherwise) of water [excluding supply, fitting and fixing of RCPC manhole cover with frame & packing around with PCC (1:2:4)], complete as per drawing, specification and as directed by the Engineer. (Excavation, backfilling, dismantling of road crust, shoring shall be paid separately).			Supply and construction of Precast/ Cast In-situ Manhole Type placed over 200mm thick PCC (1:2:4) with 20mm & down stone chips bed laid over a layer of brick flat soling, including M-20 grade 150mm thick doubly reinforced RCC cover slab having opening for manhole, formation of channel at the invert with PCC (1:2:4) finished with 1.5mm thick neat cement finish over 15mm thick plaster in cement sand mortar (1:3) on all internal faces, including supplying and fixing polypropylene coated foot-rests, conforming to ASTM D 4101 specification, injection moulded around a 12 mm steel reinforcing bar of grade Fe 415, IS:1786 (approx. wt. 900 gm each) built into brickwork, including shuttering, reinforcement, bailing out/dewatering (by pumps or otherwise) of water [excluding supply, fitting and fixing of RCPC manhole cover with frame & packing around with PCC (1:2:4)], complete as per drawing, specification and as directed by the Engineer. (Excavation, backfilling, dismantling of road crust, shoring shall be paid separately).
30.	1C Bid Price Sheet	Sub-sheet Digha Network Details Part III. Construction of Manholes and HH Connections Item 2 (iii)	(RCPC Manhole cover & frame (MD 15) - Loading capacity 15 MT) – No.s - 4058			(RCPC Manhole cover & frame (MD 10) - Loading capacity 10 MT) – No.s - 9602

Sl. no.	Document	Clause No.	Existing Clause	Revised Clause
31.	1C Bid Price Sheet	Sub-sheet Digha Network Details Part III. Construction of Manholes and HH Connections Item 2 (iv)	(RCPC Manhole cover & frame (MD 12) - Loading capacity 12 MT) – No.s - 4058	This row is deleted
32.	1C Bid Price Sheet	Sub-sheet Digha Network Details Part III. Construction of Manholes and HH Connections Item 9 (Row no. 99 of the old Bid Price Sheet)	<div>Supplying and laying of DWC Class SN 8 Pipes for house sewer connection upto invert depth of 1.5m below G.L. and making connection to inspection pit wherever required, including aligning, laying and joining with solvent cement joints supplied by manufacturer of pipes and placing over 150mm average thick coarse sand/crushed stone dust bedding and encasing the same with coarse sand/crushed stone dust (as per technical specification) all round, upto 100 mm above the crown of the pipe as shown in drawing, including excavation of earth, dewatering of any kind (if required), backfilling, disposal, compaction and plugging end with suitable capping (if required) and grouting the junction of pipe with manhole and inspection pit etc. complete as per drawing (into precast riser rings/cover slab), specification or/ as directed by the Engineer. (The rate includes connection to new manholes/inspection chambers etc. by grouting the annular space with special grouting material as per technical specification, including restoration of manholes, if necessary).</div> <div>150mm Dia. ---- 564240 m</div>	This row is deleted, and subsequent item numbers modified
33.	1C Bid Price Sheet	Digha Network Details – Row 364 & Row 480 in original Bid Price Sheet - Rows 369 and 486 in the revised Bid Price Sheet	N.B. The details of above item have been given in the scope of work with the technical specifications in the tender documents. The Bidders are advised to read the scope of work carefully before quoting the rates so that all work may be covered. The payment towards power connection shall be made by the ULB, Patna Municipal Corporation, as per actual bill produced	N.B. The details of above item have been given in the scope of work with the technical specifications in the tender documents. The Bidders are advised to read the scope of work carefully before quoting the rates so that all work may be covered.

Sl. no.	Document	Clause No.	Existing Clause	Revised Clause		
			directly to agency granting connection.			
34.	1C Bid Price Sheet	Digha Network Details – Row 506 in original Bid Price Sheet Row 511 in the revised Bid Price Sheet 'Column C' for SPS 'A'	Cost of electrical Energy consumption per MLD of sewage pumped over the year(Guaranteed Energy Consumption per MLD) indicative sewage flow rate shown below for reference. MLD to be multiplied is computed as (Avg. Flow capacity of SPS)x(Power Unit rate)x(365x15) For evaluation purposes computed as (50 x 10 x 5645)	Cost of electrical Energy consumption per MLD of sewage pumped over the year(Guaranteed Energy Consumption per MLD) indicative sewage flow rate shown below for reference. MLD to be multiplied is computed as (Avg. Flow capacity of SPS)x(Power Unit rate)x(365x(14+8/12)) For evaluation purposes computed as (50 x 10 x 365x14.67)		
35.	1C Bid Price Sheet	Digha Network Details – Row 506 in original Bid Price Sheet Row 511 in the revised Bid Price Sheet 'Column E' for SPS 'A'	Column E value – 2737500 with Bidder input Column F in Rate (INR)	Column E value 2676666.667 INR MLD/kWh with Bidder input Column F in Figure (kWh/MLD)		
36.	1C Bid Price Sheet	Digha Network Details – Row 519 in original Bid Price Sheet Row 524 in the revised Bid Price Sheet 'Column C' for SPS 'B'	Cost of electrical Energy consumption per MLD of sewage pumped over the year(Guaranteed Energy Consumption per MLD) indicative sewage flow rate shown below for reference. MLD to be multiplied is computed as (Avg. Flow capacity of SPS)x(Power Unit rate)x(365x15) For evaluation purposes computed as (50 x 10 x 5645)	Cost of electrical Energy consumption per MLD of sewage pumped over the year(Guaranteed Energy Consumption per MLD) indicative sewage flow rate shown below for reference. MLD to be multiplied is computed as (Avg. Flow capacity of SPS)x(Power Unit rate)x(365x(14+8/12)) For evaluation purposes computed as (50 x 10 x 365x14.67)		
37.	1C Bid Price Sheet	Digha Network Details – Row 519 in original Bid Price Sheet Row 524 in the revised Bid Price Sheet 'Column E' for SPS 'B'	Column E value – 2737500 with Bidder input Column F in Rate (INR)	Column E value 2676666.667 INR MLD/kWh with Bidder input Column F in Figure (kWh/MLD)		
38.	1C Bid Price Sheet	Kankarbagh Network Summary – Row 7	The Bidder should ensure that the values entered in this section are consistent with the values mentioned in Kankarbagh Network BOQ Details and Summary sheet , else the Bid is liable to be rejected.	The Bidder should ensure that the values entered in this section are consistent with the values mentioned in Kankarbagh Network BOQ Details, else the Bid is liable to be rejected.		
39.	1C Bid Price Sheet	Kankarbagh Network Summary – Row 11-18 in the original Bid Price Sheet	<table><tr><td>A</td><td>Undertaking preparatory survey, review the design and redesign for the Sewerage Network</td></tr></table>	A	Undertaking preparatory survey, review the design and redesign for the Sewerage Network	These rows stand deleted, and input considered from Kankarbagh Network Details for total of Part A1.
A	Undertaking preparatory survey, review the design and redesign for the Sewerage Network					

Sl. no.	Document	Clause No.	Existing Clause		Revised Clause
			B	Providing Sewerage Network including all appurtenant structures and commissioning including rehabilitation/ resurfacing and restoration of roads/ services etc	
			C	Undertaking preparatory survey and design for Providing Sewage Pumping Station(s), Rising Mains and Allied works	
			D	Providing House Connections, including construction of collection pits and their further joining with main sewer line and Supervising consumer connections	
			E	Relocation of utilities	
			F	Providing lateral/ branch/ main/ trunk Sewers by trenchless technology.	
			G	Providing 2 nos Pumping Stations including rising mains and all other civil works to function properly	
			H		
			I	Implementation of Environmental Management Plan and ESHS-MSIP, as per particular conditions of contract	
40.	1C Bid Price Sheet	Kankarbagh Network Details			Subtotal for Part I – Row 51 Subtotal for Part II – Row 76 Subtotal for Part III – Row 105 Subtotal for Part IV –Row 117 Subtotal included in Row 167, Row 215, 252 for Form3B, Form3C and B Sewage Pumping Station respectively Included complete total of all civil works in Row 254 The row numbers correspond to revised Bid Price Sheet uploaded
41.	1C Bid Price Sheet	Sub-sheet Digha Network Details Part III.Construction of	Supply and construction of precast Inspection Pits of inside measurement 450mm X 500mm X upto 1000mm depth , bottom of pit consisting of 100mm		Supply and construction of precast Inspection Pits of inside measurement 900mm X 900mm X upto 750mm depth , bottom of pit consisting of 100mm

Sl. no.	Document	Clause No.	Existing Clause	Revised Clause
		Manholes and HH Connections Item 7 – description	thick PCC slab (1:2:4) over a 150 mm layer of hand packed stone soling, 15mm thick(1:4) cement plaster to inside walls and pointing on outside faces with cement mortar 1:4, formation of channel at the invert with PCC with cement concrete (1:2:4) with graded stone chips as per direction, neat cement finishing to entire internal surfaces, top of the pit covered with 100mm thick R.C.C. slab (M-20) with graded stone chips and necessary reinforcement and shuttering including one MD-10 RCC circular manhole cover with frame as per IS:12592 of approved make supplied, fitted and fixed on the slab with PCC (1:2:4) packing; necessary earthwork in excavation in all kinds of soil, dewatering if required, filling sides of the pit with earth and removing spoils after work, all complete	thick PCC slab (1:2:4) over a 150 mm layer of hand packed stone soling, 15mm thick(1:4) cement plaster to inside walls and pointing on outside faces with cement mortar 1:4, formation of channel at the invert with PCC with cement concrete (1:2:4) with graded stone chips as per direction, neat cement finishing to entire internal surfaces, top of the pit covered with 100mm thick R.C.C. slab (M-20) with graded stone chips and necessary reinforcement and shuttering; necessary earthwork in excavation in all kinds of soil, dewatering if required, filling sides of the pit with earth and removing spoils after work, all complete
42.	1C Bid Price Sheet	Sub-sheet Kankarbagh Network Details Part III.Construction of Manholes and HH Connections Item 1-amended	Supply and construction of Precast Manhole Type placed over 200mm thick PCC (1:2:4) with 20mm & down stone chips bed laid over a layer of brick flat soling, including M-20 grade 150mm thick doubly reinforced RCC cover slab having opening for manhole, formation of channel at the invert with PCC (1:2:4) finished with 1.5mm thick neat cement finish over 15mm thick plaster in cement sand mortar (1:3) on all internal faces, including supplying and fixing polypropylene coated foot-rests, conforming to ASTM D 4101 specification, injection moulded around a 12 mm steel reinforcing bar of grade Fe 415, IS:1786 (approx. wt. 900 gm each) built into brickwork, including shuttering, reinforcement, bailing out/dewatering (by pumps or otherwise) of water [excluding supply, fitting and fixing of RCPC manhole cover with frame & packing around with PCC (1:2:4)], complete as per drawing, specification and as directed by the Engineer. (Excavation, backfilling, dismantling of road crust, shoring shall be paid separately).	Supply and construction of Precast/ Cast In-situ Manhole Type placed over 200mm thick PCC (1:2:4) with 20mm & down stone chips bed laid over a layer of brick flat soling, including M-20 grade 150mm thick doubly reinforced RCC cover slab having opening for manhole, formation of channel at the invert with PCC (1:2:4) finished with 1.5mm thick neat cement finish over 15mm thick plaster in cement sand mortar (1:3) on all internal faces, including supplying and fixing polypropylene coated foot-rests, conforming to ASTM D 4101 specification, injection moulded around a 12 mm steel reinforcing bar of grade Fe 415, IS:1786 (approx. wt. 900 gm each) built into brickwork, including shuttering, reinforcement, bailing out/dewatering (by pumps or otherwise) of water [excluding supply, fitting and fixing of RCPC manhole cover with frame & packing around with PCC (1:2:4)], complete as per drawing, specification and as directed by the Engineer. (Excavation, backfilling, dismantling of road crust, shoring shall be paid separately).
43.	1C Bid Price Sheet	Sub-sheet Kankarbagh Network Details Part III.Construction of Manholes and HH Connections Item 2(iii)	(RCPC Manhole cover & frame (MD 15) - Loading capacity 15 MT) – No.s - 4805	(RCPC Manhole cover & frame (MD 10) - Loading capacity 10 MT) – No.s - 19221

Sl. no.	Document	Clause No.	Existing Clause	Revised Clause
44.	1C Bid Price Sheet	Sub-sheet Kankarbagh Network Details Part III.Construction of Manholes and HH Connections Item 2(iv)	(RCPC Manhole cover & frame (MD 12) - Loading capacity 12 MT) – No.s - 14416	This row is deleted
45.	1C Bid Price Sheet	Sub-sheet Kankarbagh Network Details Part III.Construction of Manholes and HH Connections Item 7 – description	Supply and construction of precast Inspection Pits of inside measurement 450mm X 500mm X upto 1000mm depth, bottom of pit consisting of 100mm thick PCC slab (1:2:4) over a 150 mm layer of hand packed stone soling, 15mm thick(1:4) cement plaster to inside walls and pointing on outside faces with cement mortar 1:4, formation of channel at the invert with PCC with cement concrete (1:2:4) with graded stone chips as per direction, neat cement finishing to entire internal surfaces, top of the pit covered with 100mm thick R.C.C. slab (M-20) with graded stone chips and necessary reinforcement and shuttering including one MD-10 RCC circular manhole cover with frame as per IS:12592 of approved make supplied, fitted and fixed on the slab with PCC (1:2:4) packing; necessary earthwork in excavation in all kinds of soil, dewatering if required, filling sides of the pit with earth and removing spoils after work, all complete	Supply and construction of precast Inspection Pits of inside measurement 900mm X 900mm X upto 750mm depth , bottom of pit consisting of 100mm thick PCC slab (1:2:4) over a 150 mm layer of hand packed stone soling, 15mm thick(1:4) cement plaster to inside walls and pointing on outside faces with cement mortar 1:4, formation of channel at the invert with PCC with cement concrete (1:2:4) with graded stone chips as per direction, neat cement finishing to entire internal surfaces, top of the pit covered with 100mm thick R.C.C. slab (M-20) with graded stone chips and necessary reinforcement and shuttering; necessary earthwork in excavation in all kinds of soil, dewatering if required, filling sides of the pit with earth and removing spoils after work, all complete
46.	1C Bid Price Sheet	Kankarbagh Network Details – Row 371 & Row 487 in original Bid Price Sheet Row 377 & Rows 493 in the revised Bid Price Sheet	N.B. The details of above item have been given in the scope of work with the technical specifications in the tender documents. The Bidders are advised to read the scope of work carefully before quoting the rates so that all work may be covered. The payment towards power connection shall be made by the ULB, Patna Municipal Corporation, as per actual bill produced directly to agency granting connection.	N.B. The details of above item have been given in the scope of work with the technical specifications in the tender documents. The Bidders are advised to read the scope of work carefully before quoting the rates so that all work may be covered.
47.	1C Bid Price Sheet	Kankarbagh Network Details – Row 510 Column ‘C’ of Original Bid Price Sheet Row 516 in the revised Bid Price Sheet ‘Column C’ for SPS ‘A’	Cost of electricalEnergy consumption per MLD of sewage pumped over the year(Guaranteed Energy Consumption per MLD) indicative sewage flow rate shown below for reference. MLD to be multiplied is computed as (Avg. Flow capacity of SPS)x(Power Unit rate)x(365x15) For evaluation purposes computed as (40 x 10 x 5645)	Cost of electrical Energy consumption per MLD of sewage pumped over the year(Guaranteed Energy Consumption per MLD) indicative sewage flow rate shown below for reference. MLD to be multiplied is computed as (Avg. Flow capacity of SPS)x(Power Unit rate)x(365x(14+8/12)) For evaluation purposes computed as (40 x 10 x 365x 14.67)

Sl. no.	Document	Clause No.	Existing Clause	Revised Clause
48.	1C Bid Price Sheet	Kankarbagh Network Details – Row 510 Column ‘E’ of Original Bid Price Sheet Row 516 in the revised Bid Price Sheet ‘Column E’ for SPS ‘A’	Column E value – 2190000 with Bidder input Column F in Rate (INR)	Column E value 2141333.333 INR MLD/kWh with Bidder input Column F in Figure (kWh/MLD)
49.	1C Bid Price Sheet	Kankarbagh Network Details – Row 524 Column ‘C’ of Original Bid Price Sheet Row 530 in the revised Bid Price Sheet ‘Column C’ for SPS ‘B’	Cost of electricalEnergy consumption per MLD of sewage pumped over the year(Guaranteed Energy Consumption per MLD) indicative sewage flow rate shown below for reference. MLD to be multiplied is computed as (Avg. Flow capacity of SPS)x(Power Unit rate)x(365x15) For evaluation purposes computed as (50 x 10 x 5645)	Cost of electrical Energy consumption per MLD of sewage pumped over the year(Guaranteed Energy Consumption per MLD) indicative sewage flow rate shown below for reference. MLD to be multiplied is computed as (Avg. Flow capacity of SPS)x(Power Unit rate)x(365x(14+8/12)) For evaluation purposes computed as (50 x 10 x 365 x 14.67)
50.	1C Bid Price Sheet	Kankarbagh Network Details – Row 524 Column ‘E’ of Original Bid Price Sheet Row 530 in the revised Bid Price Sheet ‘Column E’ for SPS ‘B’	Column E value – 2737500 with Bidder input Column F in Rate (INR)	Column E value 2676666.667 INR MLD/kWh with Bidder input Column F in Figure (kWh/MLD)
51.	Draft Concession Agreement	Glossary – KPI Adherence Report	has the meaning ascribed to it in Clause 8.12(b)(vi)	has the meaning ascribed to it in Clause 8.12(c).
52.	Draft Concession Agreement	Clause 2.2(b)	(xiii) construct a biogas Power Plant or a solar rooftop Power Plant at the Digha STP Site, at its sole option and discretion; and (xiv) construct a biogas Power Plant or a solar rooftop Power Plant at the Kankarbagh STP Site, at its sole option and discretion.	(xiii) construct biogas Power Plant at the Digha STP Site and Kankarbagh STP Site; (xiv) the concessionaire may propose to construct solar/micro hydro Power Plant at the Digha STP Site and/or Kankarbagh STP Site, at its sole option and discretion; and
53.	Draft Concession Agreement	Clause 2.3 (c)	(ii) the Concessionaire shall dry the Digested Sludge at a sludge handling facility to be provided by the Concessionaire at the STP Site, and have the option to sell the Digested Sludge to farmers/other third party buyers or	(ii) the Concessionaire shall dry the Digested Sludge at a sludge handling facility to be provided by the Concessionaire at the STP Site, and have the option to sell the Digested Sludge to farmers/other third party buyers or

Sl. no.	Document	Clause No.	Existing Clause	Revised Clause
			dispose the Digested Sludge at the relevant Waste Disposal Site. Provided that if the Concessionaire sells the Digested Sludge to any third party, the Concessionaire shall be required to share 50% of the revenues from such sale with BUIDCO.	dispose the Digested Sludge at the relevant Waste Disposal Site.
54.	Draft Concession Agreement	Clause 7.2(a)(i)(D)	The process set out in this Clause 7.2(a)(i)(iv) shall continue until the Basic Engineering Designs are certified by the Engineering Institute and are approved by BUIDCO in accordance with this Clause 7.2(a)(i)(iv).	The process set out in this Clause 7.2(a)(i)(D) shall continue until the Basic Engineering Designs are certified by the Engineering Institute and are approved by BUIDCO in accordance with this Clause 7.2(a)(i)(D).
55.	Draft Concession Agreement	Clause 7.7	<p>(a) The Concessionaire may, at its sole option and discretion, construct a biogas Power Plant at the STP Site to utilise the bio gas generated from the treatment of the Sewage at the STP Facilities to produce clean energy, or, the Concessionaire may, at its sole option and discretion, construct a rooftop solar Power Plant at the STP Facilities to produce clean energy. The Concessionaire shall utilise the energy produced by the Power Plant to operate the relevant STP Facility and sell any excess energy to third party consumers during the Term, in accordance with all Applicable Laws.</p> <p>(b) If the Concessionaire chooses to construct a Power Plant at the STP Site, then it shall undertake such construction in accordance with all Applicable Laws and after obtaining all necessary approvals and consents to construct the Power Plant at the STP Site.</p>	<p>(a) The Concessionaire shall construct a biogas Power Plant at the STP Sites to utilise the bio gas generated from the treatment of the Sewage at the STP Facilities to produce clean energy. The Concessionaire may, at its sole option and discretion, construct a rooftop solar Power Plant at the Digha STP Facilities or the Kankarbagh STP Facilities to produce clean energy. The Concessionaire shall utilise the energy produced by the Power Plant/s to operate the relevant STP Facility and sell any excess energy to third party consumers during the Term, in accordance with all Applicable Laws</p> <p>(b) The Concessionaire shall construct a Power Plant at the STP Site, then it shall undertake such construction in accordance with all Applicable Laws and after obtaining all necessary approvals and consents to construct the Power Plant at the STP Site.</p>
56.	Draft Concession Agreement	Clause 7.7	(e) In case the Concessionaire sets up a biogas Power Plant, BUIDCO and NMCG shall not be liable to the Concessionaire in any manner whatsoever if the quality or quantity of Sewage delivered to the STP Facilities is not adequate or appropriate to produce sufficient biogas to operate the Power Plant at the STP Site.	(e) BUIDCO and NMCG shall not be liable to the Concessionaire in any manner whatsoever if the quality or quantity of Sewage delivered to the STP Facilities is not adequate or appropriate to produce sufficient biogas to operate the biogas power plant at the relevant STP Sites.
57.	Draft Concession Agreement	Clause 7.11(f)(v)	the Concessionaire's decision to construct the Power Plant at the STP Site	constructing the biogas power plant at the Digha STP Site and Kankarbagh STP Site, or the Concessionaire's decision to construct any other the Power Plant/s at the relevant STP Site.

Sl. no.	Document	Clause No.	Existing Clause	Revised Clause
58.	Draft Concession Agreement	Clause 7.13(c)(ii)	(ii) If BUIDCO fails to issue the STP Construction Completion Certificate for the relevant STP Facility to the Concessionaire within 7 days from the date of satisfaction of the conditions set out in Clause 7.13(c)(i)(A) to (F) above and fails to notify the Concessionaire of any reasons for the failure to issue the STP Construction Completion Certificate for the relevant STP Facility, then, the STP Construction Completion Certificate for the relevant STP Facility shall be deemed to have been issued to the Concessionaire upon the expiry of the 7 days period	(ii) If BUIDCO fails to issue the STP Construction Completion Certificate for the relevant STP Facility to the Concessionaire within 7 days from the date of satisfaction of the conditions set out in Clause 7.13(c)(i)(A) to (G) above and fails to notify the Concessionaire of any reasons for the failure to issue the STP Construction Completion Certificate for the relevant STP Facility, then, the STP Construction Completion Certificate for the relevant STP Facility shall be deemed to have been issued to the Concessionaire upon the expiry of the 7 days period
59.	Draft Concession Agreement	Clause 7.15(a)(iv)	the Concessionaire having achieved and certified by the Project Engineer, that at least 60% of the length of the network has been laid completely, in each of the Digha Sewerage Network Facilities and the Kankarbagh Sewerage Network Facilities	the Concessionaire having achieved and certified by the Project Engineer, that at least 50% of the length of the network has been laid completely, in each of the Digha Sewerage Network Facilities and the Kankarbagh Sewerage Network Facilities
60.	Draft Concession Agreement	Clause 8.12(b)(iv)	If the Treated Effluent and/or the Digested Sludge does not meet the Discharge Standards on account of: (A) the characteristics of the Sewage being beyond the permissible Influent Standards; or (B) the volume of the Sewage being more than the Design Capacity of the relevant Patna STP, then, the Concessionaire shall not be liable to pay any Performance Liquidated Damages for a failure to meet the Discharge Standards.	If the Treated Effluent and/or the Digested Sludge does not meet the Discharge Standards on account of: (A) the characteristics of the Sewage being beyond the permissible Influent Standards; or (B) the volume of the Sewage being more than the Design Capacity of the relevant Patna STP, then, the Concessionaire shall not be liable to pay any Performance Liquidated Damages for a failure to meet the Discharge Standards. In the event of the actual volume of sewage being more than the design capacity, the concessionaire shall not be bound by guaranteed energy consumption. limit and the payment of power charges will be as per actuals.
61.	Draft Concession Agreement	Clause 8.12(c)	Within 7 days from the end of each month, the Concessionaire shall be required to provide the monthly progress report for each STP Facility (prepared in accordance with Clause 8.8(c)(iii)(E) above) on compliance of such STP Facility with the KPIs, which should indicate the periods during which such STP Facility did not meet the Guaranteed Availability or the Treated Effluent and/or the Digested Sludge did not meet the Discharge Standards and the reasons for such failure	Within 7 days from the end of each month, the Concessionaire shall be required to provide the monthly progress report for each STP Facility (prepared in accordance with Clause 8.8(b)(iii)(E) above) on compliance of such STP Facility with the KPIs, which should indicate the periods during which such STP Facility did not meet the Guaranteed Availability or the Treated Effluent and/or the Digested Sludge did not meet the Discharge Standards and the reasons for such failure
62.	Draft Concession Agreement	Clause 8.13(c)(iii)	(iii) The Concessionaire shall, subject to compliance with Applicable Laws and Applicable Permits, be free to sell the Digested Sludge, at such price and to such Persons as it may deem fit or dispose	(iii) The Concessionaire shall, subject to compliance with Applicable Laws and Applicable Permits, be free to sell the Digested Sludge, at such price and to such Persons as it may deem fit or dispose

Sl. no.	Document	Clause No.	Existing Clause	Revised Clause
			the Digested Sludge at the Waste Disposal Sites. Provided that if the Concessionaire sells the Digested Sludge to any third party, the Concessionaire shall be required to share 50% of the revenues from such sale with BUIDCO	the Digested Sludge at the Waste Disposal Sites.
63.	Conditions of Contract for Network	Glossary – Tests on Completion	means those tests set out in Article 5 to Schedule 23 of the Contract (Technical Specifications)as conducted pursuant to Schedule 15 DBSS Section 5.2(1)	means those tests set out in Article 5 to Schedule 23 of the Contract (Technical Specifications)as conducted pursuant to Schedule 15 DBSS Section 5.2(a)
64.	Conditions of Contract for Network	Article 5.2(1)	The Contract Price shall be paid as specified in SCC Clause 17	The Contract Price shall be paid as specified in SCC
65.	Conditions of Contract for Network	SCC –3 - Clause 1.3.14 – Survival of Obligations (g)	(g) The Parties’ rights and obligations with respect to defect liability set out in GC Section 9.1;	(g) The Parties’ rights and obligations with respect to defect liability set out in GC Section 9.1, if any;
66.	Conditions of Contract for Network	SCC – 17 - Clause 2.3.6 (2) Delay of Completion - Liquidated Damages- Delay	Clause below table with numbering 16.1, 16.2 and 16.3	Clause below table with numbering 17.1, 17.2 and 17.3
67.	Conditions of Contract for Network	SCC	18 - Clause 5.4 – Liquidated Damages - Operations	25. Clause 5.4 – Liquidated Damages – Operations
68.	Conditions of Contract for Network	SCC	19. Clause 5.5.1 (2) (a) and 5.5.1 (4)– Performance Security	26. Clause 5.5.1 (2) (a) and 5.5.1 (4)– Performance Security
69.	Conditions of Contract for Network	SCC	20. Clause 5.5.2 (2) – Advance Payment Security	27. Clause 5.5.2 (2) – Advance Payment Security
70.	Conditions of Contract for Network	SCC	21. Clause 5.6 – Taxes and Duties	28. Clause 5.6 – Taxes and Duties
71.	Conditions of Contract for Network	SCC	22. Clause 7.2 Design-Build Supervision	29. Clause 7.2 Design-Build Supervision
72.	Conditions of Contract for Network	SCC	23. Clause 7.3.2	30. Clause 7.3.2
73.	Conditions of Contract for Network	SCC	24. Clause 8.1.1(1)(b)	31. Clause 8.1.1(1)(b)
74.	Conditions of Contract for Network	SCC	25. Clause 8.1.2 (1) Concessionaire’s Representative	32. Clause 8.1.2 (1) Concessionaire’s Representative

Sl. no.	Document	Clause No.	Existing Clause	Revised Clause
75.	Conditions of Contract for Network	SCC	23.Clause 8.3 Concessionaire's Personnel	33. Clause 8.3 Concessionaire's Personnel
76.	Conditions of Contract for Network	SCC	24. Clause 8.5- Representatives	34. Clause 8.5- Representatives
77.	Conditions of Contract for Network	SCC	25. Clause 8.6 (1) - Maximum Percentage of Sub contracting	35. Clause 8.6 (1) - Maximum Percentage of Sub contracting
78.	Conditions of Contract for Network	SCC	26. Clause 9.1 (b) Defect Liability Period	36. Clause 9.1 (b) Defect Liability Period
79.	Conditions of Contract for Network	SCC	25.Clause 9.2(b) Limitation of Liability	37. Clause 9.2(b) Limitation of Liability
80.	Conditions of Contract for Network	SCC	26. Clause 9.6 – Insurance	38. Clause 9.6 – Insurance
81.	Conditions of Contract for Network	SCC	27. Clause 10.2 Change to Operations Services	39. Clause 10.2 Change to Operations Services
82.	Conditions of Contract for Network	SCC	28. Clause 11.2.2 Payment upon Termination by BUIDCO for Convenience	40. Clause 11.2.2 Payment upon Termination by BUIDCO for Convenience
83.	Conditions of Contract for Network	SCC	29. Clause 11.2.3.1 - Corrupt or Fraudulent Practices	41. Clause 11.2.3.1 - Corrupt or Fraudulent Practices
84.	Conditions of Contract for Network	Schedule 15 – Design Build Services Schedules – 3.2.9(c)	c) Prior to notifying the BUIDCO pursuant to DBSS 6.2(1), the Concessionaire shall remove products, tools, construction machinery and equipment, and waste products and debris, including the Concessionaire's Equipment (Design-Build)	c) Prior to notifying the BUIDCO pursuant to DBSS 6.2(a) , the Concessionaire shall remove products, tools, construction machinery and equipment, and waste products and debris, including the Concessionaire's Equipment (Design-Build)
85.	Conditions of Contract for Network	Schedule 15 – Design Build Services Schedules – 4.1(h)	h) If any Plant and Equipment or any part of the Sewerage Network fails to pass any test or inspection, the Concessionaire shall either rectify or replace such Plant and Equipment or part of the Sewerage Network and shall repeat the test or inspection upon giving a notice under DBSS Section 5.1(3)	h) If any Plant and Equipment or any part of the Sewerage Network fails to pass any test or inspection, the Concessionaire shall either rectify or replace such Plant and Equipment or part of the Sewerage Network and shall repeat the test or inspection upon giving a notice under DBSS Section 5.1(c)
86.	Conditions of Contract for Network	Schedule 19 – Terms & procedures of Payment – 2.7	The Concessionaire shall submit his claim for the price adjustment, if applicable to this contract as per SCC 5.1(1)(a) , along with his claim for payment for the work done during the month, and price adjustment will	The Concessionaire shall submit his claim for the price adjustment, if applicable to this contract, along with his claim for payment for the work done during the month, and price adjustment will be allowed as per formulae

Sl. no.	Document	Clause No.	Existing Clause	Revised Clause
			be allowed as per formulae stipulated in Schedule 21 of the Contract	stipulated in Schedule 21 of the Contract
87.	Conditions of Contract for Network	Page 152 of Schedule 19 – Terms & procedures of Payment – Payment Breakup Schedule	Part III (Breakup of Payment for Sewage Pumping Station) of the existing Payment Breakup Schedule	Part III (Breakup of Payment for Sewage Pumping Station) of the existing Payment Breakup Schedule is deleted and replaced with the table below

PAYMENT BREAK UP SCHEDULE OF CIVIL WORKS (EXECUTION)

This will be modified upon the approval of the Design-Build Time Schedule submitted by the Concessionaire, to include monthly milestones and corresponding timelines for achievement

BREAK UP OF PAYMENT FOR SEWAGE PUMPING STATION

I. CONSTRUCTION OF WET WELL

I	Approval of design & drawing	3%
Ii	Initial open excavation	1%
Iii	Erection & fixing of cutting shoe	5%
Iv	Construction of well staining and its sinking up to 50% depth BGL	25%
V	Construction of well staining & sinking upto 100% depth BGL	26%
Vi	Plugging of well, boulder filing etc.	5%
Vii	R.C.C. work in bottom of well including bottom finishing with required slopes with cement concrete.	5%
Viii	Walkway and platform	5%
Ix	Beam, column including fixing of gantry girder	7%
X	Stair case, M.S. ladder, grill & other miscellaneous work	3%
Xi	water tightness test	5%
Xii	After commissioning & trial run	10%
Total		100%

II. INLET CHAMBER AND SCREEN CHANNELS

I	Approval of design & drawing	2%
Ii	Construction of supporting columns	5%
Iii	Constructions of base slab	18%
Iv	Construction of side walls including partition wall	25%
V	Interconnection with incoming gravity sewer	5%
Vi	Construction of Walkway, platform and RCC stair case for accessibility	30%
Vii	water tightness test	5%
Viii	After commissioning & trial run	10%
Total		100%

iii. DISTRIBUTION CHAMBER AND VALVE CHAMBER

I	Approval of design & drawing	3%
Ii	Initial open excavation	2%
Iii	M-10 grade Lean concrete	5%
Iv	Construction of RCC Raft	20%
V	Construction of RCC side walls	35%
Vi	Construction of cover blocks.	10%
Vii	Supply and fixing of M.S. platform for operation of sluice valve & other miscellaneous work	10%
Viii	water tightness test	5%
Ix	After commissioning & trial run	10%
Total		100%

iv. LT/HT PANEL / METERING ROOM, TRANSFORMER ROOM AND DIESEL GENERATOR ROOM

i.	Approval of designs and drawings	2%
ii.	Excavation	2%
iii.	Sub Structure & Super structure	
A	Raft footing/ pile foundation	10%
B	Construction of columns and beams	15%
C	Wall up to plinth level including plinth beam	3%
D	Wall up to lintel level including lintel beam	10%
E	Wall up to slab level	5%
F	Roof slab & beams including support for fixing gantry girders	13%
iv.	Doors / Windows/Ventilators/Rolling shutter	

A	Supply at site	3%
B	Fixing in position	2%
V	Flooring/ cable trunk	5%
Vi	Plastering	5%
vii.	Internal electrification	2%
Viii	Painting/ varnishing	5%
Ix	Stair case/ M.S. ladder	5%
X	Drainage including construction of apron around the building	3%
Xii	Commissioning including site clearance & Misc. finishing items	10%
	Total	100%

v. DUTY ROOM AND GUARD ROOM

i.	Approval of designs and drawings	2%
ii.	Excavation	2%
iii.	Sub Structure & Super structure	
A	Raft footing/ pile foundation/footing	7%
B	Wall up to plinth level including plinth beam	3%
C	Wall up to lintel level including lintel beam	10%
D	Wall up to slab level	5%
E	Roof slab	10%
iv.	Doors / Windows/Ventilators/Rolling shutter	
A	Supply at site	3%
B	Fixing in position	2%
V	Flooring/ cable trunk	5%
Vi	Plastering	5%
Viii	Painting/ varnishing	5%
Ix	Water supply & Sanitary fittings.	12.50%
X	Stair case	6%
Xii	Internal electrification.	12.50%
Xiii	Commissioning including site clearance & Misc. finishing items	10%
	Total	100%

vi. INTER PATHWAY, 3.75 M APPROACH ROAD, BOUNDARY WALL & FENCING WITH GATES, FIREFIGHTING ARRANGEMENTS< LANDSCAPING AND SITE DEVELOPMENT

i.	Approval of designs and drawings	10%
ii.	Completion of Construction	90%
	Total	100%

Sl · n o	Document	Clause No.	Existing Clause	Revised Clause
88.	Conditions of Contract for Network	Schedule 23 - TECHNICAL SPECIFICATION S – 21.12	Necessary bedding (granular, concrete cradle, concrete arch etc.) shall be provided in accordance with approved construction drawings and specifications in the following clauses 24.1 to 24.6 of this specifications before laying of RCC sewer pipes	Necessary bedding (granular, concrete cradle, concrete arch etc.) shall be provided in accordance with approved construction drawings and specifications in the following clauses 23.1 to 23.6 of this specifications before laying of RCC sewer pipes
89.	Conditions of Contract for Network	Schedule 23 - TECHNICAL SPECIFICATION S – 21.13	All pipes, fittings and material shall be tested and approved by the Engineer before being laid. Any pipes, fittings or material placed before they are tested and approved shall be removed and replaced with tested and approved material. Before laying the pipe, necessary bedding shall be provided wherever required as per Sub-Clauses 24.1 to 24.6 of this section	All pipes, fittings and material shall be tested and approved by the Engineer before being laid. Any pipes, fittings or material placed before they are tested and approved shall be removed and replaced with tested and approved material. Before laying the pipe, necessary bedding shall be provided wherever required as per Sub-Clauses 23.1 to 23.6 of this section
90.	Conditions of Contract for Network	Schedule 23 - TECHNICAL SPECIFICATION S – 21.17	Backfilling shall be in accordance with requirements specified in clause 24.9 & 24.10 of backfilling	Backfilling shall be in accordance with requirements specified in clause 23.9 & 23.10 of backfilling
91.	Conditions of Contract for Network	Schedule 23 - TECHNICAL SPECIFICATION S – 22.5.4	The type of bedding (granular, concrete cradle, concrete arch etc.) shall be as per approved construction drawings and specifications in the following clauses 24.1 to 24.6 of this section	The type of bedding (granular, concrete cradle, concrete arch etc.) shall be as per approved construction drawings and specifications in the following clauses 23.1 to 23.6 of this section
92.	Conditions of Contract for Network	Schedule 23 - TECHNICAL SPECIFICATION S – 22.8	Field testing shall conform to clause 27	Field testing shall conform to clause 26
93.	Conditions of Contract for Network	Schedule 23 - TECHNICAL SPECIFICATION S 24.2.1	Wire cut Brick Manholes	Wire cut Brick Manholes / Fly Ash Brick Manholes
94.	Conditions of Contract for Network	Schedule 23 - TECHNICAL SPECIFICATION S – 24.2.3	All Brick Manholes shall be tested as per relevant provisions in CPHEEO Manual & relevant IS with latest revisions & amendments and specifications in clause 27 of Testing and commissioning	All Brick Manholes shall be tested as per relevant provisions in CPHEEO Manual & relevant IS with latest revisions & amendments and specifications in clause 26 of Testing and commissioning
95.	Conditions of Contract for Network	Schedule 23 - TECHNICAL SPECIFICATION S – 24.3.1	The construction of RCC manholes shall be by Cast In-situ of Circular in shape or approved type Pre-Cast RCC, constructed using form vibrators of standard type, using SRC Cement confirming to IS: 12330.	The construction of RCC manholes shall be by Precast / Cast In-situ of Circular / Rectangular in shape or approved type Pre-Cast RCC, constructed using form vibrators of standard type, using SRC Cement confirming to IS: 12330.
96.	Conditions of Contract for Network	Schedule 23 - TECHNICAL SPECIFICATION	All RCC Manholes shall be tested as in specifications in clause 27 of Testing and commissioning	All RCC Manholes shall be tested as in specifications in clause 26 of Testing and commissioning

Sl · n o	Document	Clause No.	Existing Clause	Revised Clause										
		S – 24.3.2												
97.	Conditions of Contract for Network	Schedule 23 - TECHNICAL SPECIFICATION S – 39.4	Liquid retaining/conveying structures including the members covering the same (such as roof of a chamber, channel etc.) shall be designed by uncracked method of design as per BIS: 3370 and 6494 . Basement RC walls and slabs below ground shall also be designed by uncracked method of design as liquid retaining structures . Shear shall be checked by working stress method as per BIS: 456	Liquid retaining/conveying structures including the members covering the same (such as roof of a chamber, channel etc.) shall be designed either as un-cracked sections in accordance with the recommendation of IS 3370 or using limit state design for reinforced concrete in accordance with IS 3370 with a design crack width of 0.1mm . Basement RC walls and slabs below ground shall also be designed either as un-cracked sections in accordance with the recommendation of IS 3370 or using limit state design for reinforced concrete in accordance with IS 3370 with a design crack width of 0.1mm as liquid retaining structures . Shear shall be checked by working stress method as per BIS: 456										
98.	Conditions of Contract for Network	Schedule 23 - TECHNICAL SPECIFICATION S – 39.6	<div><div><input type="checkbox"/> All blinding and leveling concrete shall be minimum 100 mm thick in concrete grade M15 for Building & 150 mm thick in concrete grade M 30 for Water Retaining Structures as per IS -3370 (Part- 1)-2009 latest version..</div><div><input type="checkbox"/> All structural reinforced concrete shall be with a maximum 25 mm aggregate size for footings and base slabs and with a maximum 20 mm aggregate size for all the Water Retaining Structures & other structural members.</div><div><input type="checkbox"/> All liquid retaining structures shall be designed as per IS: 3370. The minimum grade of concrete shall be M30 using Sulphate resistant Cement.</div></div>	<div><div><input type="checkbox"/> All blinding and leveling concrete shall be minimum 100 mm thick in concrete grade M10 for Building & 150 mm thick in concrete grade M15 for Water Retaining Structures as per IS -3370 (Part- 1)-2009 latest version..</div><div><input type="checkbox"/> All structural reinforced concrete shall be with a maximum 25 mm aggregate size for footings and base slabs and with a maximum 20 mm aggregate size for all the Water Retaining Structures & other structural members.</div><div><input type="checkbox"/> All liquid retaining structures shall be designed as per IS: 3370. The minimum grade of concrete shall be M30 using Sulphate resistant Cement.</div></div>										
99.	Conditions of Contract for Network	Schedule 23 – TECHNICAL SPECIFICATION S – 49.3 - ILLUMINATION	Existing section describing Illumination is deleted	<div>Existing section describing Illumination is deleted and replaced with below:</div> <div>Lighting</div> <div>The illumination levels proposed for various areas are as follows:</div> <div><table><tr><td>Area</td><td>Illumination level(Lux)</td></tr><tr><td>Pump House</td><td>300</td></tr><tr><td>Office/Conference Room</td><td>500</td></tr><tr><td>Switchboard Room</td><td>300</td></tr><tr><td>All other indoor areas</td><td>150</td></tr></table></div>	Area	Illumination level(Lux)	Pump House	300	Office/Conference Room	500	Switchboard Room	300	All other indoor areas	150
Area	Illumination level(Lux)													
Pump House	300													
Office/Conference Room	500													
Switchboard Room	300													
All other indoor areas	150													

Sl · n o	Document	Clause No.	Existing Clause				Revised Clause			
							Outdoor plant area and Road 10-20 Component of luminaries shall be ‘energy efficient low loss’ type. LED type of luminaries shall be used for office/ all indoor areas. LED luminaries shall be used for pump house area and other outdoor areas. Decorative fixtures/ receptacles shall be used for office areas and industrial type fixtures/ receptacles shall be used for remaining areas. Street/ area lighting shall be controlled by time switch/ photocell for automatic switching of luminaries. Emergency light shall be provided for safe evacuation of the people in case of fire or panic (blackout, total power failure, etc.) Emergency lighting shall be automatically switched ON when mains power supply fails.			
100.	Schedule to Concession Agreement	Schedule 1 Scope of Work 1-I. Digha STP: a.	-				Added sub-points xxi. Power Generation through Biogas (mandatory for Digha STP)			
101.	3B Schedule to Concession Agreement	Schedule 1 Scope of Work 1-II. Kankarbagh STP: b.	-				Added sub-points xxii. Power Generation through Biogas (mandatory for Kankarbagh STP)			
102.	3B Schedule to Concession Agreement	Schedule 11 (Part A) Process Requirements 1.1 Flows and raw sewage characteristics First Table	Item/ Parameter/ Description	Units	Values for Patna STPs: Digha and Kankarbagh		Item/ Parameter/ Description	Units	Values for Patna STPs: Digha and Kankarbagh	
			Design Capacity	MLD	Refer below table		Design Capacity	MLD	Refer below table	
			pH		6.0-8.5		pH		6.0-8.5	
			BOD	mg/L	100 - 250		BOD	mg/L	100-250	
			COD	mg/L	550		COD	mg/L	500	
103.	Schedule to Concession Agreement	Schedule 1 Scope of Work 2.III.	Provision and Installation of flowmeter on the rising main of pumping station and display at suitable location				Supply and erection of flowmeter on the rising main of pumping station and display at suitable location			

Sl · n o	Document	Clause No.	Existing Clause	Revised Clause
		D. I&D SPS-A and I&D SPS-B for Digha shall include all civil, mechanical and electrical & I&C works Sub-point viii.		
104.	Schedule to Concession Agreement	Schedule 1 Scope of Work 2.III. E. Flow Diversion Works at Kankarbagh STP (Kankarbagh I&D Works) Sub-point v.	<p>Provide SPS-B and the associated rising main as detailed in the Supporting Volume 2 including all civil, mechanical and electrical and I&C works along with completion of the Flow Diversion Works</p> <p>a. Civil Work for Sewage Pumping Station shall include of wet well to be designed to accommodate peak flows of 170 MLD, construction of loading and unloading bay, rising main of approximate diameter 1000 mm and length of 3.8 km.</p> <p>b. E&M for Sewage Pumping Station shall include the following:</p> <p>i. pumping system as per CPHEEO for the peak flow discharge of 109 MLD capacity, average flow of 49 MLD.</p> <p>ii. Inlet chamber of SPS-B shall include mechanical coarse bar screens along with manual bypass screens.</p> <p>iii. CI flush bottom, rising spindle type wall mounted Sluice Gate at the upstream & downstream side of the screens, for maintenance purpose</p> <p>iv. The pumping station wet well shall have two compartments with provision for isolation</p> <p>v. Provide permanent lifting system for pumps</p> <p>vi. Ventilation system to be provided for SPS-B</p> <p>vii. Power connection from the grid and electrical system for the SPS including HV/LV systems, APFC, cabling, earthing, lighting, engine-generators, lightning protection etc.</p> <p>viii. PC based SCADA HMI station with GSM interface at SPS B or FO cable communication interface of SPS B remote</p>	Deleted

Sl · n o	Document	Clause No.	Existing Clause	Revised Clause																											
			<div>terminal unit (RTU) with STP SCADA HMI system</div> <div>ix. Fire alarm System</div> <div>x. Close Circuit Television (CCTV) System</div> <div>xi. Provision and Installation of flowmeter on the rising main of SPS B and display at suitable location</div>																												
105.	Schedule to Concession Agreement	Schedule 9 ESHS Standards	Existing Schedule is deleted	Existing Schedule is deleted and replaced with Schedule in Appendix 1 below																											
106.	Schedule to Concession Agreement	Schedule 10 Key Performance Indicators 1.2 Treated Effluent Quality	<div>Details of Influent Standards</div> <div>The Concessionaire shall not be responsible for adherence to the above requirements of Treated Effluent in an event the values of the Influent Standards are as per table below</div> <table><tr><th>Parameter</th><th>Unit</th><th>Value</th></tr><tr><td>pH</td><td>--</td><td>> 9</td></tr><tr><td>BOD₅ at 20°C</td><td>mg/L</td><td>>250</td></tr><tr><td>COD</td><td>mg/L</td><td>>500</td></tr></table>	Parameter	Unit	Value	pH	--	> 9	BOD ₅ at 20°C	mg/L	>250	COD	mg/L	>500	<div>Details of Influent Standards</div> <div>The Concessionaire shall not be responsible for adherence to the above requirements of Treated Effluent in an event the values of the Influent Standards are as per table below</div> <table><tr><th>Parameter</th><th>Unit</th><th>Value</th></tr><tr><td>pH</td><td>--</td><td>> 9</td></tr><tr><td>BOD₅ at 20°C</td><td>mg/L</td><td><100 and >250</td></tr><tr><td>COD</td><td>mg/L</td><td>>500</td></tr><tr><td>Total Suspended Solids (TSS)</td><td>mg/L</td><td>>500</td></tr></table>	Parameter	Unit	Value	pH	--	> 9	BOD ₅ at 20°C	mg/L	<100 and >250	COD	mg/L	>500	Total Suspended Solids (TSS)	mg/L	>500
Parameter	Unit	Value																													
pH	--	> 9																													
BOD ₅ at 20°C	mg/L	>250																													
COD	mg/L	>500																													
Parameter	Unit	Value																													
pH	--	> 9																													
BOD ₅ at 20°C	mg/L	<100 and >250																													
COD	mg/L	>500																													
Total Suspended Solids (TSS)	mg/L	>500																													
107.	Schedule to Concession Agreement	Schedule 10 Key Performance Indicators 1.3 Dewatered Digested Sludge	<table><tr><th>Units</th><th>Digested Sludge Consistency</th></tr><tr><td>Outlet Concentration of dewatered sludge</td><td>More than 20% solids (95%ile of the time)</td></tr><tr><td>Fecal coliform limit</td><td>Less than 20,00,000 Most Probable Number per gram of total dry solids (20,00,000 MPN / gTS).</td></tr></table>	Units	Digested Sludge Consistency	Outlet Concentration of dewatered sludge	More than 20% solids (95%ile of the time)	Fecal coliform limit	Less than 20,00,000 Most Probable Number per gram of total dry solids (20,00,000 MPN / gTS).	<table><tr><th>Units</th><th>Digested Sludge Consistency</th></tr><tr><td>Outlet Concentration of dewatered sludge</td><td>More than 20% solids (95%ile of the time)</td></tr><tr><td>Volatile Solids in Dewatered</td><td>Less than 38% Volatile Solids</td></tr></table>	Units	Digested Sludge Consistency	Outlet Concentration of dewatered sludge	More than 20% solids (95%ile of the time)	Volatile Solids in Dewatered	Less than 38% Volatile Solids															
Units	Digested Sludge Consistency																														
Outlet Concentration of dewatered sludge	More than 20% solids (95%ile of the time)																														
Fecal coliform limit	Less than 20,00,000 Most Probable Number per gram of total dry solids (20,00,000 MPN / gTS).																														
Units	Digested Sludge Consistency																														
Outlet Concentration of dewatered sludge	More than 20% solids (95%ile of the time)																														
Volatile Solids in Dewatered	Less than 38% Volatile Solids																														

Sl · n o	Document	Clause No.	Existing Clause	Revised Clause	
				Fecal coliform limit	Less than 20,00,000 Most Probable Number per gram of total dry solids (20,00,000 MPN / gTS).
108.	Schedule to Concession Agreement	Schedule 11 (Part A) Process Requirements 1.5 Process requirements	1.5 Process requirements The following main treatment processes and requirements must be provided: <ul style="list-style-type: none"> • Preliminary treatment (screenings & grit removal) • Fat, Oil and Grease Removal • Primary Sedimentation (mandatory for Digha STP) • Secondary biological treatment • Disinfection • Disposal line to Outlet Point • Sludge digestion • Sludge thickening, dewatering & storage • Power generation through Biogas • Chemical House • Potable fire extinguishers and safety equipment as per guidelines • Transportation of Screenings, Residual Grit and Digested Sludge from the Patna STPs to the Waste Disposal Site. 	This clause stands deleted	
109.	Schedule to Concession Agreement	Schedule 11 (Part A) Process Requirements 1.6 Description of process and components of Patna STPs	This section outlines the major processes and components that the Concessionaire is required to design, construct, and operate at the Patna STPs as per this Concession Agreement. The Concessionaire shall provide a complete, fully functional facility designed for proper, easy, operation and to meet the stated performance requirements. This shall include any and all additional, ancillary, supporting, or other processes, components, equipment, or other items necessary to achieve these objectives, regardless of whether such items are explicitly listed in these bid documents or not.	This clause stands deleted	

Sl · n o	Document	Clause No.	Existing Clause	Revised Clause
			<p>The Patna STPs shall be designed by the Concessionaire to receive and treat all combinations of Sewage influent flows and loads arriving at the inlet to the STPs in accordance with the Influent Parameters specified above.</p> <p>The peak factor for the design shall be as per CPHEEO manual</p>	
110.	Schedule to Concession Agreement	Schedule 11 (Part A) Process Requirements 1.6.1 Stilling Chamber	A stilling chamber shall be provided at the inlet of the Patna STPs to receive the raw Sewage. The stilling chamber shall reduce the turbulence of raw water entering into it. The stilling chamber should be kept clean by removing silt, sand deposited and the algae growth at the bottom and sides.	This clause stands deleted
111.	Schedule to Concession Agreement	Schedule 11 (Part A) Process Requirements 1.6.2 Fine Screens	<p>The raw sewage from Inlet shall flow by gravity through Screen channels designed as per CPHEEO manual guidelines.</p> <p>The raw sewage from Inlet shall flow to fine screen inlet channel/s by gravity which shall be designed for 100 % peak flow. The mechanical fine screen shall be either bar/drum type/perforated screen. The screens shall have clear openings not exceeding 6 mm. The screens shall be equipped with an automatic cleaning system and can be controlled by both an adjustable timed cycle and a pre-set differential head across the screen using ultrasonic level sensors. All screens shall be provided with thimble mounted isolation sluice gates (actuator operated with manual override) both on upstream and downstream. The Concessionaire should provide a bypass channel with manual screen considering the overall screening capacity shall be 100% peak flow with one screen out of service.</p>	This clause stands deleted
112.	Schedule to Concession Agreement	Schedule 11 (Part A) Process Requirements 1.6.3 Grit basins with Grit washers and classifiers	The Concessionaire shall provide Grit separators downstream of the screens. The Grit separators shall be capable of removing at least 95% of particles with a specific gravity of 2.65 g/cm ³ and with a diameter of at least 0.2 mm. A Parshall Flume shall be provided downstream of Grit separators to measure the flow and the flow measurement shall be instantaneous. All grit basins shall be provided with isolation manual sluice gates on upstream.	This clause stands deleted

Sl · n o	Document	Clause No.	Existing Clause	Revised Clause
113.	3B Schedule to Concession Agreement	Schedule 11 (Part A) Process Requirements 1.6.4 Primary Clarifiers	If Concessionaire proposes (Primary Clarifiers are mandatory for Digha STP) primary clarifiers, the arrangement shall include scum removal system complete with Primary Sludge Pumps etc. The Concessionaire shall provide minimum of 2 clarifiers.	This clause stands deleted
114.	Schedule to Concession Agreement	Schedule 11 (Part A) Process Requirements 1.6.5 Biological Treatment	<p>The Biological treatment system should be suitable for continuous feed of raw sewage and operation without any break. The Concessionaire shall provide an anoxic tank prior to Oxidic tank as mandatory. The Anoxic tank shall be provided with aeration units and mixing units/ aspirators for flexibility to convert to Oxidic zone.</p> <p>The Concessionaire shall provide suitable arrangements for draining the aeration tanks.</p> <p>If MBBR technology is provided, the Concessionaire shall provide equalization tank as minimum requirements of at-least 6 hours HRT.</p>	This clause stands deleted
115.	Schedule to Concession Agreement	Schedule 11 (Part A) Process Requirements 1.6.6 Aeration systems	The aeration system shall be designed to maximise oxygen transfer and to adapt to the changing oxygen demands in biological treatment systems. The aeration system shall be capable of complete and uniform mixing and suspension of mixed liquor suspended solids.	This clause stands deleted
116.	Schedule to Concession Agreement	Schedule 11 (Part A) Process Requirements 1.6.7 Disinfection	Disinfection shall be provided to comply with KPIs as required by the Concession Agreement, through chlorination systems or UV disinfection or ozonation. The Concessionaire shall ensure that disinfectants used shall not exceed the limits as per the provisions of the Environment (Protection) Rules, 1986. Such excess disinfectant levels, if any, need to be neutralized before disposal to inland surface water or land for irrigation.	This clause stands deleted
117.	Schedule to Concession Agreement	Schedule 11 (Part A) Process Requirements 1.6.9	<p>1.6.9 <u>Aerobic or Anaerobic Sludge digestion</u></p> <p>The Concessionaire shall design the sludge digester as per CPHEEO manual. The design of the sludge digestion system shall ensure that maintenance of all equipment and components can be safely and easily accomplished from outside the digester and without draining its contents.</p> <p>If anaerobic digestion is proposed, the Concessionaire</p>	<p>1.6.9 <u>Sludge digestion</u></p> <p>If anaerobic digestion is proposed, the Concessionaire shall provide gas holders, gas flares. If provided, the sludge heating system may be complete with heat exchangers, sludge re-circulation pumps, hot water pumps. The heat requirement of digesters during winter season will be met through the heat available from bio gas engine and additional requirement to be fulfilled through boiler, if required.</p>

Sl · n o	Document	Clause No.	Existing Clause	Revised Clause
			<p>shall provide gas holders, gas flares. If provided, the sludge heating system may be complete with heat exchangers, sludge re-circulation pumps, hot water pumps. The heat requirement of digesters during winter season will be met through the heat available from bio gas engine and additional requirement to be fulfilled through boiler, if required.</p> <p>The Concessionaire shall ensure safety and security of operation as the result of the presence of biogas in both normal and abnormal operation.</p> <p>The concessionaire shall ensure at least 38% of reduction of Volatile solids for Vector Attraction Reduction during sludge treatment. The Concessionaire shall also ensure less than 20,00,000 most probable number per gram of total dry solids (20,00,000 MPN/gTS) in sludge before disposal.</p>	<p>The Concessionaire shall ensure safety and security of operation as the result of the presence of biogas in both normal and abnormal operation.</p> <p>The concessionaire shall ensure at least 38% of reduction of Volatile solids for Vector Attraction Reduction during sludge treatment. The Concessionaire shall also ensure less than 20,00,000 most probable number per gram of total dry solids (20,00,000 MPN/gTS) in sludge before disposal.</p> <p>Concessionaire will have to ensure that the dewatered sludge should have less than 38% Volatile solids</p>
118.	Schedule to Concession Agreement	Schedule 11 (Part A) Process Requirements 1.6.15 Optional Facilities within Patna STPs	<p>1.1 Optional facilities within Patna STPs</p> <p>1.1.1 Energy generation (for Digha STP)</p> <p>The Concessionaire may generate heat and electrical energy from the biogas produced by the sludge digestion process. The Concessionaire shall design the energy generation system to be capable of using the maximum biogas produced by the sludge digestion process at design loadings to produce energy. The Concessionaire shall provide 2 numbers (1working /1 standby) gas engines. The Concessionaire shall utilize electrical power generated by the energy recovery system where possible within the Facilities.</p> <p>The design and specification of the units shall take into account the contaminants that will be present in the biogas from the digesters, such as hydrogen sulphide (H₂S) and ammonia (NH₃), and any harmful effects resulting from their combustion. The Concessionaire shall provide a H₂S gas scrubbing system, to protect the engine and maintain its design life.</p>	<p>1.6.15 Optional facilities within Patna STPs</p> <p>1.6.15.1 Energy generation (mandatory for Digha STP and Kankarbagh STP)</p> <p>The Concessionaire shall generate heat and electrical energy from the biogas produced by the sludge digestion process. The Concessionaire shall design the energy generation system to be capable of using the maximum biogas produced by the sludge digestion process at design loadings to produce energy. The Concessionaire shall provide 2 numbers (1working /1 standby) gas engines. The Concessionaire shall utilize electrical power generated by the energy recovery system where possible within the Facilities.</p> <p>The design and specification of the units shall take into account the contaminants that will be present in the biogas from the digesters, such as hydrogen sulphide (H₂S) and ammonia (NH₃), and any harmful effects resulting from their combustion. The Concessionaire shall provide a H₂S gas scrubbing system, to protect the engine and maintain its design life.</p>

Sl · n o	Document	Clause No.	Existing Clause	Revised Clause																								
			1.1.2 Gas holders The gas holders capacity shall be as per CPHEEO manual . A flame arrestor and flow meter shall be provided on the gas line from each digester. 1.1.3 Biogas burner The bio gas burner shall be designed as per CPHEEO manual and should be provided in 2 numbers (1working /1 standby) for complete destruction of all contaminants in the gas. All gas pipework and weld on flanges shall be stainless steel 316L or as per latest environmental norms.	1.6.15.2 Gas holders The gas holders capacity shall be as per CPHEEO manual . A flame arrestor and flow meter shall be provided on the gas line from each digester. 1.6.15.3 Biogas burner The bio gas burner shall be designed as per CPHEEO manual and should be provided in 2 numbers (1working /1 standby) for complete destruction of all contaminants in the gas. All gas pipework and weld on flanges shall be stainless steel 316L or as per latest environmental norms.																								
119.	Schedule to Concession Agreement	Schedule 11 (Part B) General Civil Specifications 1.3.2 Design Requirements First Line	The civil & structural design shall be carried out in accordance with IS:456, and IS:3370 and other relevant Indian Standard codes. For the seismic forces, the structure should be designed as per IS:1893 and all the factors as applicable for Zone II.	The civil & structural design shall be carried out in accordance with IS:456, and IS:3370 and other relevant Indian Standard codes. For the seismic forces, the structure should be designed as per IS:1893 and all the factors as applicable for Zone IV.																								
120.	Schedule to Concession Agreement	Schedule 11 (Part D) Electrical System General and Particular Specifications 1.5 Distribution Transformers - Dry type (C) Tests ii) Routine Tests Sub-points k and l	k) Repeat measurement of no load current and losses after dielectric tests l) Measurement of the capacitance and tan δ test	Deleted																								
121.	Schedule to Concession Agreement	Schedule 11 (Part D) Electrical System General and Particular Specifications 1.6 MV Indoor Switchboard Table related to HV Switchboard Rated Insulation	<table><tr><td colspan="4">Rated Insulation Levels</td></tr><tr><td>- Rated short duration power frequency withstand voltage</td><td>kV (rms)</td><td colspan="2">70</td></tr><tr><td>- Rated lightning impulse withstand voltage</td><td>kV (peak)</td><td colspan="2">170</td></tr></table>	Rated Insulation Levels				- Rated short duration power frequency withstand voltage	kV (rms)	70		- Rated lightning impulse withstand voltage	kV (peak)	170		<table><tr><td colspan="4">Rated Insulation Levels</td></tr><tr><td>- Rated short duration power frequency withstand voltage</td><td>kV (rms)</td><td colspan="2">28</td></tr><tr><td>- Rated lightning impulse withstand voltage</td><td>kV (peak)</td><td colspan="2">75</td></tr></table>	Rated Insulation Levels				- Rated short duration power frequency withstand voltage	kV (rms)	28		- Rated lightning impulse withstand voltage	kV (peak)	75	
Rated Insulation Levels																												
- Rated short duration power frequency withstand voltage	kV (rms)	70																										
- Rated lightning impulse withstand voltage	kV (peak)	170																										
Rated Insulation Levels																												
- Rated short duration power frequency withstand voltage	kV (rms)	28																										
- Rated lightning impulse withstand voltage	kV (peak)	75																										

Sl · n o	Document	Clause No.	Existing Clause	Revised Clause
		Levels		
122.	Schedule to Concession Agreement	Schedule 11 (Part D) Electrical System General and Particular Specifications 1.28 Tests Added line at the end of sub-point (i) of (ix)	(ix) Insulation resistance tests All circuit breakers shall be subject to the following tests: (i) Routine tests including HV pressure test, millivolt drop tests and mechanical tests.	(ix) Insulation resistance tests All circuit breakers shall be subject to the following tests: (i) Routine tests including HV pressure test, millivolt drop tests and mechanical tests. If HV pressure test and millivolt drop test are performed as routine test during manufacturing stage of breaker, test report of same shall be provided for review on or before inspection.
123.	Schedule to Concession Agreement	Schedule 11 (Part D) Electrical System General and Particular Specifications 1.29 Motors Sub-point m amended	m. The locked rotor withstand time under hot conditions at 110% rated voltage shall be more than the starting time at minimum permissible voltage by at least two seconds or 15% of the accelerating time, whichever is greater. The locked rotor current of motors shall not exceed 600% of full load current of motor, which is inclusive of 20% tolerance.	m. The locked rotor withstand time under hot conditions at 110% rated voltage shall be more than the starting time at minimum permissible voltage by at least two seconds or 15% of the accelerating time, whichever is greater. The locked rotor current of motors shall not exceed 600% of full load current of motor and for IE3 motors the current shall not exceed 800% , which is inclusive of 20% tolerance.
124.	Schedule to Concession Agreement	Schedule 11 (Part D) Electrical System General and Particular Specifications 1.29 Motors Sub-point m amended	q. Motors shall have space heaters suitable for 230 V, single phase 50 Hz AC supply. These shall be placed in easily accessible positions in the lower part of motor frame. Provision shall be made to measure temperature of bearing by inserting hand held temperature measuring device.	q. Motors above 30 KW shall have space heaters suitable for 230 V, single phase 50 Hz AC supply. These shall be placed in easily accessible positions in the lower part of motor frame. Provision shall be made to measure temperature of bearing by inserting hand held temperature measuring device.
125.	Schedule to Concession Agreement	Schedule 11 (Part D) Electrical System General and Particular Specifications 1.41 MV and LV Cables sub-bullet Tests Amended	<ul style="list-style-type: none"> <u>Tests</u> All HV, and LV cables shall be subject to routine tests in accordance with the relevant Indian Standard Specifications. Test certificates shall be provided against each drum and/or cable length. The tests carried out on every cable length and / or drum at manufacturer's premises shall include following tests as applicable but not limited to: - High Voltage DC insulation pressure test, between	<ul style="list-style-type: none"> <u>Tests</u> All HV, and LV cables shall be subject to routine tests in accordance with the relevant Indian Standard Specifications. Test certificates shall be provided against each drum and/or cable length. The tests carried out on every cable length and / or drum at manufacturer's premises shall include following tests as applicable but not limited to: - High Voltage DC insulation pressure test, between

Sl · n o	Document	Clause No.	Existing Clause	Revised Clause
			cores, each core to earth, metallic sheath or armour as applicable; - insulation resistance test; - core continuity and identification; - conductor resistance test - Elongation test - Smoke density test - HCl gas generation test - Anti rodent test (Presence of lead)	cores, each core to earth, metallic sheath or armour as applicable; - insulation resistance test; - core continuity and identification; - conductor resistance test - Elongation test Other tests carried out on sample cable length and / or drum at manufacturer's premises shall include following tests as applicable but not limited to: - Smoke density test - HCl gas generation test - Anti rodent test (Presence of lead)
126.	Schedule to Concession Agreement	Schedule 11 (Part D) Electrical System General and Particular Specifications 1.43 Moulded Case Circuit Breaker (MCCB) Last line amended	Motor protection circuit breaker (MPCB) shall be used for motor feeder instead of MCCBs.	Motor protection circuit breaker (MPCB) shall be provided for motors less than 30 KW. For motors above 30 KW and below 90 KW, MCCB shall be provided.
127.	Schedule to Concession Agreement	Schedule 11 (Part D) Electrical System General and Particular Specifications 1.46 DC Equipment <u>110 V Battery</u> Third paragraph amended	The battery shall be rated on 5-hour basis and for the specified ambient temperature. The battery shall have maximum recharge time of 8 hours. The batteries shall be sized for a backup of 24 hours, incase of power failure. The ampere-hour capacity shall be selected to cater to all the emergency loads, operation of control gear, indication lamps, annunciation panels, emergency lighting, incoming breaker(s) spring charging currents, short time loads etc. A margin of about 25% shall be taken to cater to the contingencies	The battery shall be rated on 5-hour basis and for the specified ambient temperature. The battery shall have maximum recharge time of 8 hours. The batteries shall be sized for a backup of 2 hours, incase of power failure. The ampere-hour capacity shall be selected to cater to all the emergency loads, operation of control gear, indication lamps, annunciation panels, emergency lighting, incoming breaker(s) spring charging currents, short time loads etc. A margin of about 25% shall be taken to cater to the contingencies.
128.	Schedule to Concession Agreement	Schedule 11 (Part D) Electrical System General and Particular Specifications 1.47 Variable Frequency Drives	<ul style="list-style-type: none"> <u>Tests</u> Each unit of Variable frequency drive shall be tested at the manufacturer's work with the motor they have been assigned to work for at the STP. Test result must satisfy the efficiencies on various loads and at different frequency levels against their quoted values.	<ul style="list-style-type: none"> <u>Tests</u> Each unit of Variable frequency drive shall be tested at the manufacturer's work with the motor they have been assigned to work for at the STP. If variable frequency drive is tested with sample motor at manufacturer's work then the selected sample motor shall have same characteristic/ratings as that of the motor for which

Sl · n o	Document	Clause No.	Existing Clause	Revised Clause
		(VFD) <u>Tests</u> Second Line amended		the variable frequency drive is being supplied. Test result must satisfy the efficiencies on various loads and at different frequency levels against their quoted values.
129.	Schedule to Concession Agreement	Schedule 11 (Part D) Electrical System General and Particular Specifications 1.54 Fire Proof Sealing (FPS) System Performance Tests: b)	b) Type tests shall be conducted on different fire stop test specimens described above as per IEEE-634. The sizes of the fire stop test specimens shall be similar to the largest of the sizes being used in the plant.	b) Type tests shall be conducted on different fire stop test specimens described above as per IEEE-634. The sizes of the fire stop test specimens shall be similar to the largest of the sizes being used in the plant. Type test reports shall be provided for review of the Project Engineer / BUIDCO.
130.	Schedule to Concession Agreement	Schedule 11 (Part D) Electrical System General and Particular Specifications 1.57 General Specifications for Distribution Transformer 33/0.433 kv Amended sub-clause 1.57.12	<p>1.57.12 Documents to Be Submitted: The following documents shall be provided along with offer by the manufacturer:</p> <ol style="list-style-type: none"> 1. Guaranteed technical particulars 2. Bill of materials & quantities offered 3. Technical catalogues & brochures of the offered equipment 4. Valid type test reports 5. Credentials of satisfactory functioning & operation <p>The following documents shall be provided after award of order for consultant /</p> <ol style="list-style-type: none"> 1. Customer / end user approval and manufacturing clearance: 2. Detailed Technical Data Sheets 3. Dimensional General Arrangement Drawings 4. Wiring diagrams 5. Detailed Bill of Materials & Quantities 6. Termination Schedules 7. Technical Literatures, Catalogues etc. for all the provided components 8. Manufacturing Quality Assurance Plans 9. Schedule of shop floor inspections <p>Additional documents shall be provided after shop floor inspection for material as required.</p>	<p>1.57.12 Documents to Be Submitted: The following documents shall be provided along with offer by the manufacturer:</p> <ol style="list-style-type: none"> 1. Guaranteed technical particulars 2. Credentials of satisfactory functioning & operation <p>The following documents shall be provided after award of order for consultant /</p> <ol style="list-style-type: none"> 1. Customer / end user approval and manufacturing clearance: 2. Detailed Technical Data Sheets 3. Dimensional General Arrangement Drawings 4. Wiring diagrams 5. Detailed Bill of Materials & Quantities 6. Termination Schedules 7. Technical Literatures, Catalogues etc. for all the provided components 8. Manufacturing Quality Assurance Plans 9. Schedule of shop floor inspections <p>Additional documents shall be provided after shop floor inspection for material as required.</p>

Sl · n o	Document	Clause No.	Existing Clause			Revised Clause		
131.	Schedule to Concession Agreement	Schedule 11 (Part E) Instrumentation Works 1.4.1.3 Pressure Gauges and Switches Analysers / Quality Instruments amended sub point for Power Supply	Sub-point Power Supply : 230 V AC ± 10%, 50 Hz			Sub-point Power Supply : 24 V DC Loop Powered		
132.	Schedule to Concession Agreement	Schedule 11 (Part E) Instrumentation Works 1.8 SCADA System 1.8.1 General Added line at the end of this sub-point	-			All SPS shall have PC based SCADA HMI station with GSM or FO cable communication interface with its corresponding STP for exchange of information, control and diagnostic.		
133.	Schedule to Concession Agreement	Schedule 11 (Part E) Instrumentation Works 1.8 SCADA System 1.8.6 Hardware Details Table for LOCAL AREA NETWORK SUBSYSTEM replaced	Local Area Network Subsystem			Local Area Network Subsystem		
			Qty	Hardware Component	Remarks	Qty	Hardware Component	Remarks
			1	LAN Switch	Ethernet switch 14 ports (10/100 Base TX)+2 Fibre Port	Lot	LAN Switch	Ethernet switch 12/24 ports (10/100 Base TX)+2 Fibre Port
			6	Remote Location LAN switch	Ethernet switch 14 ports (10/100 Base TX)+2 Fibre Port	Lot	Remote Location LAN switch	Ethernet switch 12/24 ports (10/100 Base TX)+2 Fibre Port
			1	Router	2 LAN+2 WAN, all are 10/100 with 2 V.35 Port			
			2	Firewall	4LAN+2 WAN, all Wan are 10/100Mbps and LAN are 10/100/1000 Mbps	1	Router	2 LAN+2 WAN, all are 10/100 with 2 V.35 Port

Sl · n o	Document	Clause No.	Existing Clause			Revised Clause			
			Lot	12C Single Mode Fibre armored cable	For Connectivity		2	Firewall	4LAN+2 WAN, all Wan are 10/100Mbps and LAN are 10/100/1000 Mbps
							Lot	12C Single Mode Fibre armored cable	For Connectivity
134.	Schedule to Concession Agreement	Schedule 11 (Part E) Instrumentation Works 1.8 SCADA System 1.8.6 Hardware Details Table for UPS	UPS			UPS			
			Qty	Hardware Component	Remarks	Qty	Hardware Component	Remarks	
			1	10 KVA UPS for Control room Hardware	The UPS is designed for 10 KVA with two hours backup.	1	10 KVA UPS for Control room Hardware	The UPS is designed for 10 KVA with two hours backup.	
135.	Schedule to Concession Agreement	Schedule 11 (Part E) Instrumentation Works 1.8 SCADA System 1.8.6 Hardware Details Table for IP Camera	2	3 KVA UPS at all Remote location	The UPS is designed for 2 KVA with two hours backup.	Lot	3 KVA UPS at all Remote location	The UPS is designed for 3 KVA with two hours backup.	
			Qty	Hardware Component	Remarks	Qty	Hardware Component	Remarks	
			1	IP Camera	Each Camera is connected to Ethernet network for Remote location surveillance		IP Camera	Each Camera is connected to Ethernet network for Remote location surveillance	
136.	Schedule to Concession Agreement	Schedule 11 (Part E) Instrumentation	Input/output Modules shall be intelligent I/O modules. Each module should be able to communicate with the CPU in a dedicated fashion without requirement of any			Input/output Modules shall be intelligent I/O modules. Each module should be able to communicate with the CPU in a dedicated fashion without requirement of any			

Sl · n o	Document	Clause No.	Existing Clause	Revised Clause												
		Works 1.8 SCADA System 1.8.7 Hardware Components Description 5. Input / Output Devices First paragraph	additional interfacing hardware so as to reduce the common cause of the Failure. Each module should have its own microprocessor to execute its input/output function, maintain BUIDCO of its configured data, and perform module diagnostics.	additional interfacing hardware so as to reduce the common cause of the Failure. Each module should have its own microprocessor to execute its input/output function, maintain its configured data, and perform module diagnostics.												
137.	Project Information Memorandum	Project Details - Table	Existing Digha STP Facilities Table with Row 1 <table><tr><td>1</td><td>Digha STP</td><td>100 MLD</td><td>21 months from Effective Date of STP Facilities</td></tr></table>	1	Digha STP	100 MLD	21 months from Effective Date of STP Facilities	Including Biogas Power Plant, <table><tr><td>1</td><td>Digha STP</td><td>100 MLD</td><td>21 months from Effective Date of STP Facilities</td></tr><tr><td></td><td>Biogas Plant</td><td>As required</td><td></td></tr></table>	1	Digha STP	100 MLD	21 months from Effective Date of STP Facilities		Biogas Plant	As required	
1	Digha STP	100 MLD	21 months from Effective Date of STP Facilities													
1	Digha STP	100 MLD	21 months from Effective Date of STP Facilities													
	Biogas Plant	As required														
138.	Project Information Memorandum	Project Details - Table	Item 4 – Digha Sewerage Network – O&M Period Column is empty	Item 4 – Digha Sewerage Network – O&M Period Column “From OSD till End of Concession”												
139.	Project Information Memorandum	Project Details - Table	Existing Digha STP Facilities Table with Row 1 <table><tr><td>7</td><td>Kankarbagh STP</td><td>50 MLD</td><td>21 months from Effective Date of STP Facilities</td></tr></table>	7	Kankarbagh STP	50 MLD	21 months from Effective Date of STP Facilities	Including Biogas Power Plant, <table><tr><td>7</td><td>Kankarbagh STP</td><td>50 MLD</td><td>21 months from Effective Date of STP Facilities</td></tr><tr><td></td><td>Biogas Plant</td><td>As required</td><td></td></tr></table>	7	Kankarbagh STP	50 MLD	21 months from Effective Date of STP Facilities		Biogas Plant	As required	
7	Kankarbagh STP	50 MLD	21 months from Effective Date of STP Facilities													
7	Kankarbagh STP	50 MLD	21 months from Effective Date of STP Facilities													
	Biogas Plant	As required														
140.	Project Information Memorandum	Project Details - Table	Existing Table	Footnote for the Table – on Capacity - *Capacity of STP mentioned is based on average flow in MLD, while capacity of Pumping stations is based on Peak flow in MLD; Sewerage Network length is overall network length in km												
141.	Project Information Memorandum	Flow Details of Nala - Kankarbagh Nala Details	Wastewater quality for the design of proposed STP for Digha & Kankarbagh zone is as tabulated below <table><tr><th>Quality Parameters</th><th>Range (mg/l) except for pH</th></tr><tr><td>Ph</td><td>5.5 – 9.90</td></tr><tr><td>Bio chemical Oxygen Demand (BOD)</td><td>250</td></tr><tr><td>Chemical Oxygen Demand (COD)</td><td>450</td></tr></table>	Quality Parameters	Range (mg/l) except for pH	Ph	5.5 – 9.90	Bio chemical Oxygen Demand (BOD)	250	Chemical Oxygen Demand (COD)	450	Deleted Table and the relevant paragraphs				
Quality Parameters	Range (mg/l) except for pH															
Ph	5.5 – 9.90															
Bio chemical Oxygen Demand (BOD)	250															
Chemical Oxygen Demand (COD)	450															

Sl · n o	Document	Clause No.	Existing Clause		Revised Clause						
			<table><tr><td>Total Suspended Solids (TSS)</td><td>400</td></tr><tr><td>Total Kjeldahl Nitrogen (TKN as N)</td><td>45</td></tr><tr><td>Total Phosphorous (TP as P)</td><td>5</td></tr></table>	Total Suspended Solids (TSS)	400	Total Kjeldahl Nitrogen (TKN as N)	45	Total Phosphorous (TP as P)	5		
Total Suspended Solids (TSS)	400										
Total Kjeldahl Nitrogen (TKN as N)	45										
Total Phosphorous (TP as P)	5										
			The quality parameters mentioned above are indicative for information purposes only; the Bidder will need to undertake appropriate assessments to ascertain the quality of influent wastewater								
142.	Project Information Memorandum	Page 21 after the drawings	-		<p>I&D SPS-A (Capacity 53 MLD) – to be constructed as part of I&D Works</p> <p>I&D SPS-B (Capacity 2 MLD) – to be constructed as part of I&D Works</p> <p>SPS-A (Capacity 104 MLD) – to be constructed as part of sewerage network facilities and to be used for interception and diversion as part of I&D Option 2</p> <p>SPS-B (Capacity 103 MLD) – to be constructed as part of sewerage network facilities and to be used for interception and diversion as part of I&D Option 1 and Option 2</p>						
143.	Project Information Memorandum	-	-		Kankarbagh Contour plan and long section drawings are provided.						
144.	Schedules to Concession agreement	Schedule - 9	Existing Schedule - 9		Please refer to revised Schedule as appended						

Appendix 1

Schedule 9 – ESHS Requirements

Part 1 – Link to the Environment and Social Management Framework (ESMF) to be followed for NGRBA Projects

1. Environmental and Social Management Framework of NGRBA Project: <http://nmcg.nic.in/Disclosure.aspx>

Part 2 – The World Bank Group Safeguard Policies and Performance Standards

Given below are the links to relevant World Bank Group Safeguard Policies and Performance Standards with respect to Environment, Social, Health and Safety requirements to be followed while developing the ESHS Documents -

2. WBG Safeguard Policies / Performance Standards:
<https://policies.worldbank.org/sites/PPF3/Pages/Manuals/Operational%20Manual.aspx>
3. WBG Guidance Note on Project Induced Labor Influx: <http://pubdocs.worldbank.org/en/497851495202591233/Managing-Risk-of-Adverse-impact-from-project-labor-influx.pdf>

Part 3 - Requirements for preparation of ESHS Management Strategies and Implementation Plans (ESHS-MSIP)

The Concessionaire shall submit comprehensive and concise Environmental, Social, Health and Safety Management Strategies and Implementation Plans (ESHS-MSIP). These strategies and plans shall describe in detail the actions, materials, equipment, management processes etc. that will be implemented by the Concessionaire, and its subcontractors.

In developing these strategies and plans, the Concessionaire shall have regard to the ESHS provisions of the Concession Agreement including those as may be more fully described in the following:

- a. Works Requirements described in Concession Agreement;
- b. Environmental and Social Impact Assessment (ESIA);
- c. Environmental and Social Management Plan (ESMP);
- d. Consent Conditions (regulatory authority conditions attached to any permits or approvals for the project).

.....

Metrics for Progress Reports

The following Metrics should be used for regular reporting:

- a. *environmental incidents or non-compliances with Concession Agreement requirements, including contamination, pollution or damage to ground or water supplies;*

health and safety incidents, accidents, injuries and all fatalities that require treatment;

interactions with regulators: identify agency, dates, subjects, outcomes (report the negative if none);

status of all permits and agreements:

work permits: number required, number received, actions taken for those not received;

status of permits and consents:

list areas/facilities with permits required (quarries, asphalt & batch plants), dates of application, dates issued (actions to follow up if not issued), dates submitted to resident engineer (or equivalent), status of area (waiting for permits, working, abandoned without reclamation, decommissioning plan being implemented, etc.);

list areas with landowner agreements required (borrow and spoil areas, camp sites), dates of agreements, dates submitted to resident engineer (or equivalent);

identify major activities undertaken in each area this month and highlights of environmental and social protection (land clearing, boundary marking, topsoil salvage, traffic management, decommissioning planning, decommissioning implementation);

for quarries: status of relocation and compensation (completed, or details of monthly activities and current status).

health and safety supervision:

- i. safety officer: number days worked, number of full inspections & partial inspections, reports to construction/project management;*
- ii. number of workers, work hours, metric of PPE use (percentage of workers with full personal protection equipment (PPE), partial, etc.), worker violations observed (by type of violation, PPE or otherwise), warnings given, repeat warnings given, follow-up actions taken (if any);*

worker accommodations:

- iii. number of expats housed in accommodations, number of locals;*
- iv. date of last inspection, and highlights of inspection including status of accommodations' compliance with national and local law and good practice, including sanitation, space, etc.;*
- v. actions taken to recommend/require improved conditions, or to improve conditions.*

HIV/AIDS: provider of health services, information and/or training, location of clinic, number of non-safety disease or illness treatments and diagnoses (no names to be provided);

gender (for expats and locals separately): number of female workers, percentage of workforce, gender issues raised and dealt with (cross-reference grievances or other sections as needed);.

training:

- vi. number of new workers, number receiving induction training, dates of induction training;*

vii. *number and dates of toolbox talks, number of workers receiving Occupational Health and Safety (OHS), environmental and social training;*

viii. *number and dates of HIV/AIDS sensitization training, no. workers receiving training (this month and in the past); same questions for gender sensitization, flaglady/flagman training.*

environmental and social supervision:

ix. *environmentalist: days worked, areas inspected and numbers of inspections of each part of the Facilities created, highlights of activities/findings (including violations of environmental and/or social best practices, actions taken), reports to environmental and/or social specialist/construction/site management;*

sociologist: days worked, number of partial and full site inspections of each part of the Facilities created, highlights of activities (including violations of environmental and/or social requirements observed, actions taken), reports to environmental and/or social specialist/construction/site management; and

community liaison person(s): days worked (hours community center open), number of people met, highlights of activities (issues raised, etc.), reports to environmental and/or social specialist /construction/site management.

Grievances: list this month's and unresolved past grievances by date received, complainant, how received, to whom referred to for action, resolution and date (if completed), data resolution reported to complainant, any required follow-up (Cross-reference other sections as needed):

x. *Worker grievances;*

xi. *Community grievances*

Traffic and vehicles/equipment:

xii. *traffic accidents involving project vehicles & equipment: provide date, location, damage, cause, follow-up;*

accidents involving non-project vehicles or property (also reported under immediate metrics): provide date, location, damage, cause, follow-up;

overall condition of vehicles/equipment (subjective judgment by environmentalist); non-routine repairs and maintenance needed to improve safety and/or environmental performance (to control smoke, etc.).

Environmental mitigations and issues (what has been done):

xiii. *dust: number of working bowlers, number of waterings/day, number of complaints, warnings given by environmentalist, actions taken to resolve; highlights of quarry dust control (covers, sprays, operational status); % of rock/muram/spoil lorries with covers, actions taken for uncovered vehicles;*

erosion control: controls implemented by location, status of water crossings, environmentalist inspections and results, actions taken to resolve issues, emergency repairs needed to control erosion/sedimentation;

quarries, borrow areas, spoil areas, asphalt plants, batch plants: identify major activities undertaken this month at each, and highlights of environmental and social protection: land clearing, boundary marking, topsoil salvage, traffic management, decommissioning planning, decommissioning implementation;

blasting: number of blasts (and locations), status of implementation of blasting plan (including notices, evacuations, etc.), incidents of off-site damage or complaints (cross-reference other sections as needed);

spill cleanups, if any: material spilled, location, amount, actions taken, material disposal (report all spills that result in water or soil contamination);

waste management: types and quantities generated and managed, including amount taken offsite (and by whom) or reused/recycled/disposed on-site;

details of tree plantings and other mitigations required undertaken this month;

details of water and swamp protection mitigations required undertaken this month.

compliance:

xiv. compliance status for conditions of all relevant consents/permits, for the Work, including quarries, etc.): statement of compliance or listing of issues and actions taken (or to be taken) to reach compliance;

compliance status of ESMP/ESIP requirements: statement of compliance or listing of issues and actions taken (or to be taken) to reach compliance

other unresolved issues from previous months related to environmental and social: continued violations, continued failure of equipment, continued lack of vehicle covers, spills not dealt with, continued compensation or blasting issues, etc. Cross-reference other sections as needed.

Part 4 – Requirements for the preparation of the Code of Conduct

The Concessionaire shall submit the Code of Conduct that will apply to the Concessionaire's employees and subcontractors. The Code of Conduct shall ensure compliance with the ESHS provisions of the Concession Agreement, including those as may be more fully described in the following:

- a. Works Requirements described in Concession Agreement;
- b. Environmental and Social Impact Assessment (ESIA);
- c. Environmental Management Plan (EMP);
- d. Consent Conditions (regulatory authority conditions attached to any permits or approvals for the project).

MINIMUM REQUIREMENTS FOR THE CODE OF CONDUCT

A minimum requirement for the Code of Conduct should be set out, taking into consideration the issues, impacts, and mitigation measures identified in:

- project reports e.g. ESIA/ESMP
- consent/permit conditions
- required standards including World Bank Group EHS Guidelines and Performance Standards
- national legal and/or regulatory requirements and standards (where these represent higher standards than the WBG EHS Guidelines and PS)
- relevant standards e.g. Workers' Accommodation: Process and Standards (Indian Standards, and in the absence of such Indian Standards those of IFC and EBRD)
- relevant sector standards e.g. workers accommodation
- grievances redress mechanisms.

The types of issues identified could include risks associated with: labor influx, spread of communicable diseases, sexual harassment, gender based violence, illicit behavior and crime, and maintaining a safe environment etc.

A satisfactory code of conduct will contain obligations on all project staff (including sub-contractors and day workers) that are suitable to address the following issues, as a minimum.

Compliance with applicable laws, rules, and regulations of the jurisdiction

1. Compliance with applicable health and safety requirements (including wearing prescribed personal protective equipment, preventing avoidable accidents and a duty to report conditions or practices that pose a safety hazard or threaten the environment)
2. The use of illegal substances
3. Non-Discrimination (for example on the basis of family status, ethnicity, race, gender, religion, language, marital status, birth, age, disability, or political conviction)
4. Interactions with community members (for example to convey an attitude of respect and non-discrimination)
5. Sexual harassment (for example to prohibit use of language or behavior, in particular towards women or children, that is inappropriate, harassing, abusive, sexually provocative, demeaning or culturally inappropriate)
6. Violence or exploitation (for example the prohibition of the exchange of money, employment, goods, or services for sex, including sexual favors or other forms of humiliating, degrading or exploitative behavior)
7. Protection of children (including prohibitions against abuse, defilement, or otherwise unacceptable behavior with children, limiting interactions with children, and ensuring their safety in project areas)
8. Sanitation requirements (for example, to ensure workers use specified sanitary facilities provided by their employer and not open areas)
9. Avoidance of conflicts of interest (such that benefits, Concession Agreement, or employment, or any sort of preferential treatment or favors, are not provided to any person with whom there is a financial, family, or personal connection)
10. Respecting reasonable work instructions (including regarding environmental and social norms)
11. Protection and proper use of property (for example, to prohibit theft, carelessness or waste)
12. Duty to report violations of this Code
13. Non retaliation against workers who report violations of the Code, if that report is made in good faith.

The Code of Conduct should be written in plain language and signed by each worker to indicate that they have:

- received a copy of the code;
- had the code explained to them;
- acknowledged that adherence to this Code of Conduct is a condition of employment; and

- understood that violations of the Code can result in serious consequences, up to and including dismissal, or referral to legal authorities.

Part 5 – Guidelines for staffing of a Core team of 3 people for implementation of the Concessionaire's ESHS obligations as per Clause 7.5 (b) (iii) of the Concession Agreement

SN	Key Position	Minimum Qualifying Requirement		
		Total Work Experience (years)	Experience in Similar Works (years)	Minimum Education Qualification
1.	Health Expert & Safety Specialist*	10	5	B.E. /B. Tech or Equivalent with Specialization / additional qualification in EHS related field.
2.	Environmental Specialist *	10	5	B.E./B. Tech or Equivalent with Specialization / additional qualification in Environment related field
3.	Social Specialist*	10	5	Master's degree in Social Work or equivalent

* He/she should have worked as a sole expert for Urban Infrastructure projects. Experience in environment / safety / Social Risk Assessment, resettlement and rehabilitation and Management plans related to similar project would be preferred.

Part 6 – Minimum Requirements and Guidelines for the preparation of the Screening Report as per Clause 7.2 (a) (ii) of the Concession Agreement

The extent of assessment required to identify and mitigate the impacts largely depends upon the complexities of project activities. The scrutiny and screening will be based on a detailed Environment and Social Screening exercise, summarized in the following Format:

Environment and Social information format for screening			
	Project Title: Implementing agency: Project cost: Project components: Project location (Area/ district)		
	Screening Criteria	Assessment of category (High/ low)	Explanatory note for categorisation
1	Is the project in an eco-sensitive area or adjoining an eco-sensitive area? (Yes/No) If Yes, which is the area? Elaborate impact accordingly.		
2	Will the project create significant/ limited/ no social impacts? <ul style="list-style-type: none"> • Involuntary land taking resulting in loss of income from agricultural land, plantation or other existing land-use. • Involuntary land taking resulting in relocation of title holder or non-titleholder households. • Any reduction of access to traditional and river dependent communities (to river and areas where they earn for their primary or substantial livelihood). • Any displacement or adverse impact on tribal settlement(s). • Any specific gender issues. 		
3	Will the project create significant / limited / no environmental impacts during the construction stage? (Significant / limited / no impacts) <ul style="list-style-type: none"> • Clearance of vegetation/ tree-cover • Direct discharge of construction run-off, improper storage and disposal of excavation spoils, wastes and other construction materials adversely affecting water quality and flow regimes. • Flooding of adjacent areas • Improper storage and handling of substances leading to contamination of soil and water • Elevated noise and dust emission • Disruption to traffic movements • Damage to existing infrastructure, public utilities, amenities etc. • Failure to restore temporary construction sites • Possible conflicts with and/or disruption to local community • Health risks due to unhygienic conditions at workers' camps • Safety hazards during construction 		
4	Will the project create significant / limited / no environmental impacts during the operational stage? (Significant / limited / no impacts) <ul style="list-style-type: none"> • Flooding of adjacent areas • Impacts to water quality due to effluent discharge 		

	<ul style="list-style-type: none"> • Gas emissions • Safety hazards 		
5	Do projects of this nature / type require prior environmental clearance either from the MOEF&CC or from a relevant state Government department? (MOEF&CC/ relevant State Government department/ No clearance at all)		
6	Does the project involve any prior clearance from the MOEF&CC or State Forest department for either the conversion of forest land or for tree-cutting? (Yes/ No). If yes, which?		
7	Please attach photographs and location maps along with this completed Environmental Information Format For Screening.		
Overall assessment			

*Detailed explanation/ justification for arriving at specific category (high/ low) to be provided in the specified column