

PRICE SCHEDULE
BILL OF QUANTITIES OF WORKS (Execution)
SEWERAGE NETWORK

A : Supply & Laying of Sewer line work					
SI No	Description of item of Work	Quantity	Unit	Rate (Rs)	Amount (Rs)
1.0	Review the client's proposal and design, Redesign the entire Sewerage Network of Said Municipal Town including preparatory Survey and Geotechnical investigation and also design all Sewage Pumping Station as per Design Build Services Schedule and detailed Technical specification in schedule 2 & 7 and direction of the Engineer-in-Charge..	1.0	LS		
2.0	Providing Sewerage Network by open cut method including all appurtenant structures and commissioning including Rehabilitation / resurfacing and restoration of roads / services etc.				
2.1	Supplying & Laying of sewer line of Double wall corrugated HDPE pipe (DWC HDPE) of stiffness class designation SN 8(conforming to I. S. 16098 (Part 2) :2013) (Spigot and Socket ended pipe) at site including bedding conforming to relevant I.S. and CPHEEO Specification jointing with rubber gasket, barricading, lighting arrangement, cutting of any type of road by mechanical/manual means and restoring permanently damaged portion of the said road in its original position to be similar to the cross sectional layers of same trench of the existing road (like either concrete road, Brick road, Bituminous Macadam road with or without Mastic Asphalt road), traffic diversion arrangement, necessary earth work in excavation in trenches and Trail pits for sewer lines and other structures etc. in all sorts of soil or loose material including rubbish, removing the spoils / surplus earth, and debris to a destination decided by E-I-C upto the jurisdiction of ULB to be arranged by bidder (No extra lead will be payable), hire and labour charges for shoring work including necessary close plank walling, framing etc by close timbering / sheet piling /MS joists acting as soldier beams with MS plate including MS joist waler beams as per approved design and drawing and retention of shoring where ever necessary ,bailing out water, dewatering from the excavated portion; hydraulic testing, making connection to old or new manholes/House Pit Connection (including dismantling and making good the manhole wall/House Pit Connection wall), filling and compaction of trenches with appropriate materials, Protection and shifting of underground and overhead utilities if necessary, temporary road restoration to be similar to the cross sectional layers of same trench with the suitable components (like WBM/WMM/Stone metal instead of Jhama & Bats) with necessary compaction all complete as per approved design, drawings, detailed Technical specification in schedule 10 and direction of the Engineer-in-Charge.				
a)	depth up to 1500 mm. from E. G. L.				
	i) 150 mm dia	7800	metre		
b)	depth above 1500 mm Up to 2500 mm. from E. G. L.				
	i. 150 mm dia	1100	metre		
c)	depth above 2500 mm Up to 3000 mm. from E. G. L.				
	i. 150 mm dia	70	metre		
d)	depth up to 1500 mm. from E. G. L.				
	i) 200 mm dia	2942	metre		

	ii) 250 mm dia	121	metre		
	iii) 300 mm dia	111			
	iv) 350 mm dia	141			
	v) 400 mm dia	93			
	vi) 450 mm dia	23			
e)	depth above 1500 mm Up to 2000 mm. from E. G. L.				
	i) 200 mm dia	9575	metre		
	ii) 250 mm dia	47	metre		
	iii) 300 mm dia	124			
	iv) 350 mm dia	25			
	v) 400 mm dia	30			
	vi) 450 mm dia	21			
f)	depth above 2000 mm Up to 3000 mm. from E. G. L.				
	i) 200 mm dia	5073	metre		
	ii) 250 mm dia	89	metre		
	iii) 300 mm dia	469			
	iv) 350 mm dia	118			
	v) 400 mm dia	88			
	vi) 450 mm dia	11			
g)	depth above 3000 mm Up to 4000 mm. from E. G. L.				
	i) 200 mm dia	3589	metre		
	ii) 250 mm dia	207	metre		
	iii) 300 mm dia	531			
	iv) 350 mm dia	27			
	v) 400 mm dia	38			
	vi) 450 mm dia	23			
h)	depth above 4000 mm Up to 5000 mm. from E. G. L.				
	i) 200 mm dia	1253	metre		
	ii) 250 mm dia	249	metre		
	iii) 300 mm dia	327			
	iv) 350 mm dia	31			
	v) 400 mm dia	226			
	vi) 450 mm dia	29			
i)	depth above 5000 mm Up to 6000 mm. from E. G. L.				
	i) 200 mm dia	199	metre		
	ii) 250 mm dia	400	metre		
	iii) 300 mm dia	33			
	iv) 350 mm dia	28			
	v) 400 mm dia	199			
	vi) 450 mm dia	31			
j)	depth above 6000 mm Up to 7000 mm. from E. G. L.				

	i) 200 mm dia	33	metre		
	ii) 250 mm dia	110	metre		
	iii) 300 mm dia	43			
	iv) 350 mm dia	37			
	v) 400 mm dia	18			
	vi) 450 mm dia	19			
2.2	Supplying & Laying of sewer line of Double wall corrugated HDPE pipe (DWC HDPE) of stiffness class designation SN 8(conforming to I. S. 16098 (Part 2) :2013) (Spigot and Socket ended pipe) at site including bedding conforming to relevant I. S. Code and CPHEEO Specification jointing with rubber gasket, barricading, lighting arrangement, cutting of any type of road by mechanical/manual means and restoring damaged portion of the said road up to temporary restoration to be similar to the cross sectional layers of same trench of the existing road with the suitable components (like WBM /WMM / Stone metal or stone dust instead of Jhama & Bats) with necessary compaction all complete to make the same traffic worthy for smooth running of vehicle, traffic diversion arrangement, necessary earth work in excavation in trenches and Trail pits for sewer lines and other structures etc. in all sorts of soil or loose material including rubbish, removing the spoils / surplus earth, and debris to a destination decided by Owner upto the jurisdiction of ULB to be arranged by bidder (No extra lead will be payable),hire and labour charges for shoring work including necessary close plank walling, framing etc by close timbering / sheet piling /MS joists acting as soldier beams with MS plate including MS joist waler beams as per approved design and drawing and retention of shoring where ever necessary ,bailing out water, dewatering from the excavated portion; hydraulic testing, making connection to old or new manholes/House Pit Connection (including dismantling and making good the manhole wall/House Pit Connection wall), filling and compaction of trenches with appropriate materials, Protection and shifting of underground and overhead utilities if necessary all complete as per approved design, drawings, detailed Technical specification in schedule 10 and direction of the Engineer-in-Charge.				
a)	depth Up to 1500 mm. from E. G. L.				
	vii. 150 mm dia	1142	metre		
b)	b) depth above 1500mm Up to 2500 mm. from E. G. L..				
	ii. 150 mm dia	801	metre		
c)	c) depth above 2500mm Up to 3000 mm. from E. G. L..				
	ii. 150 mm dia	59	metre		
d)	depth up to 1500 mm. from E. G. L.				
	i) 200 mm dia	1247	metre		
	ii) 250 mm dia	111	metre		
	iii) 300 mm dia	157			
	iv) 350 mm dia	89			
	v) 400 mm dia	39			
	vi) 450 mm dia	23			
e)	depth above 1500 mm Up to 2000 mm. from E. G. L.				
	i) 200 mm dia	7007	metre		
	ii) 250 mm dia	37	metre		
	iii) 300 mm dia	69			

	iv) 350 mm dia	25			
	v) 400 mm dia	41			
	vi) 450 mm dia	21			
f)	depth above 2000 mm Up to 3000 mm. from E. G. L.				
	i) 200 mm dia	2044	metre		
	ii) 250 mm dia	89	metre		
	iii) 300 mm dia	380			
	iv) 350 mm dia	44			
	v) 400 mm dia	78			
	vi) 450 mm dia	11			
g)	depth above 3000 mm Up to 4000 mm. from E. G. L.				
	i) 200 mm dia	751	metre		
	ii) 250 mm dia	207	metre		
	iii) 300 mm dia	64			
	iv) 350 mm dia	22			
	v) 400 mm dia	28			
	vi) 450 mm dia	31			
h)	depth above 4000 mm Up to 5000 mm. from E. G. L.				
	i) 200 mm dia	715	metre		
	ii) 250 mm dia	77	metre		
	iii) 300 mm dia	271			
	iv) 350 mm dia	33			
	v) 400 mm dia	100			
	vi) 450 mm dia	19			
i)	depth above 5000 mm Up to 6000 mm. from E. G. L.				
	i) 200 mm dia	81	metre		
	ii) 250 mm dia	133	metre		
	iii) 300 mm dia	33			
	iv) 350 mm dia	18			
	v) 400 mm dia	89			
	vi) 450 mm dia	29			
j)	depth above 6000 mm Up to 7000 mm. from E. G. L.				
	i) 200 mm dia	22	metre		
	ii) 250 mm dia	47	metre		
	iii) 300 mm dia	43			
	iv) 350 mm dia	34			
	v) 400 mm dia	16			
	vi) 450 mm dia	13			

2.3	<p>Supplying & Laying of sewer line of Double wall corrugated HDPE pipe (DWC HDPE) of stiffness class designation SN 8(conforming to I. S. 16098 (Part 2) :2013) (Spigot and Socket ended pipe) at site including bedding conforming to relevant I. S. Code and CPHEEO Specification jointing with rubber gasket, barricading, lighting arrangement, cutting of any type of road by mechanical/manual means and restoring damaged portion of the said road up to temporary restoration to be similar to the cross sectional layers of same trench of the existing road with necessary compaction all complete to make the same traffic worthy for smooth running of vehicle, traffic diversion arrangement, necessary earth work in excavation in trenches and Trail pits for sewer lines and other structures etc. in all sorts of soil or loose material including rubbish, removing the spoils / surplus earth, and debris to a destination decided by client upto the jurisdiction of ULB to be arranged by bidder (No extra lead will be payable),bailing out water, dewatering from the excavated portion; making connection to old or new manholes/House Pit Connection (including dismantling and making good the manhole wall/House Pit Connection wall), filling and compaction of trenches with appropriate materials, Protection and shifting of underground and overhead utilities if necessary, all complete as per approved design, drawings & detailed Technical specification in schedule 7 and direction of the Engineer-in-Charge.</p>				
	depth Up to 1500 mm. from E. G. L.				
	vii. 150 mm dia	803	metre		
2.4	<p>Supplying & Laying of sewer line of R. C. C. (Class NP3) Spigot and Socket ended pipe at site including bedding conforming to relevant I. S. and CPHEEO Specification (either cast-in-situ or precast concrete including nominal reinforcement if required as per design consideration) jointing with rubber gasket, barricading, lighting arrangement, cutting of any type of road by mechanical/manual means and restoring permanently damaged portion of the said road in its original condition to be similar to the cross sectional layers of same trench of the existing road (like either concrete road, Brick road, Bituminous Macadam road with or without Mastic Asphalt road), traffic diversion arrangement, necessary earth work in excavation in trenches and Trail pits for sewer lines and other structures etc. in all sorts of soil or loose material including rubbish, removing the spoils / surplus earth, and debris to a destination decided by E-I-C upto the jurisdiction of ULB to be arranged by bidder (No extra lead will be payable), hire and labour chargesfor shoring work including necessary close plank walling, framing etc by close timbering / sheet piling /MS joists acting as soldier beams with MS plate including MS joist waler beams as per approved design and drawing and retention of shoring where ever necessary ,bailing out water, dewatering from the excavated portion; hydraulic testing, making connection to old or new manholes/House Pit Connection (including dismantling and making good the manhole wall/House Pit Connection wall), filling and compaction of trenches with appropriate materials, Protection and shifting of underground and overhead utilities if necessary, temporary road restoration to be similar to the cross sectional layers of same trench with the suitable components (like WBM/WMM/Stone metal instead of Jhama & Bats) with necessary compaction all complete as per approved design, drawings, detailed Technical specification in schedule 10 and direction of the Engineer-in-Charge.</p>				
a)	depth Up to 1500 mm. from E. G. L				
	i) 500 mm dia	27	metre		
	ii) 600 mm dia	24	metre		
	iii) 700 mm dia	18			
	iv) 800 mm dia	15			

	v) 900 mm dia	10			
b)	depth above 1500mm Up to 2000 mm from E. G. L.				
	i) 500 mm dia	31	metre		
	ii) 600 mm dia	25	metre		
	iii) 700 mm dia	17	metre		
	iv) 800 mm dia	15			
	v) 900 mm dia	20			
c)	depth above 2000mm Up to 3000 mm from E. G. L.				
	i) 500 mm dia	10	metre		
	ii) 600 mm dia	19	metre		
	iii) 700 mm dia	26	metre		
	iv) 800 mm dia	61			
	v) 900 mm dia	17	metre		
	v) 1000 mm dia	143			
d)	depth above 3000mm Up to 4000 mm from E. G. L.				
	i) 500 mm dia	34	metre		
	ii) 600 mm dia	21	metre		
	iii) 700 mm dia	26	metre		
	iv) 800 mm dia	15			
	v) 900 mm dia	22	metre		
	vi) 1000 mm dia	11			
e)	depth above 4000mm Up to 5000 mm from E. G. L.				
	i) 500 mm dia	41	metre		
	ii) 600 mm dia	23	metre		
	iii) 700 mm dia	32	metre		
	iv) 800 mm dia	16			
	v) 900 mm dia	190	metre		
	vi) 1000 mm dia	22			
f)	depth above 5000mm Up to 6000 mm from E. G. L.				
	i) 500 mm dia	21	metre		
	ii) 600 mm dia	32	metre		
	iii) 700 mm dia	14	metre		
	iv) 800 mm dia	24	metre		
	v) 900 mm dia	286	metre		
	vi) 1000 mm dia	274	metre		
g)	depth above 6000mm Up to 6500 mm from E. G. L.				
	i) 500 mm dia	33	metre		
	ii) 600 mm dia	23	metre		
	iii) 700 mm dia	32	metre		
	iv) 800 mm dia	13	metre		
	v) 900 mm dia	16	metre		

	vi) 1000 mm dia	150	metre		
2.5	Supplying & Laying of sewer line of R. C. C. (Class NP3) Spigot and Socket ended pipe at site including bedding conforming to relevant I. S. and CPHEEO Specification (either cast-in-situ or precast concrete including nominal reinforcement if required as per design consideration) jointing with rubber gasket, barricading, lighting arrangement, cutting of any type of road by mechanical/manual means and restoring damaged portion of the said road upto temporary restoration to be similar to the cross sectional layers of same trench of the existing road with the suitable components (like WBM /WMM / Stone metal or stone dust instead of Jhama & Bats) with necessary compaction all complete to make the same traffic worthy for smooth running of vehicle,traffic diversion arrangement, necessary earth work in excavation in trenches and Trail pits for sewer lines and other structures etc. in all sorts of soil or loose material including rubbish, removing the spoils / surplus earth, and debris to a destination decided by Owner upto the jurisdiction of ULB to be arranged by bidder (No extra lead will be payable),hire and labour charges for shoring work including necessary close plank walling, framing etc by close timbering / sheet piling /MS joists acting as soldier beams with MS plate including MS joist waler beams as per approved design and drawing and retention of shoring where ever necessary,bailing out water, dewatering from the excavated portion; hydraulic testing, making connection to old or new manholes/House Pit Connection (including dismantling and making good the manhole wall/House Pit Connection wall), Protection and shifting of underground and overhead utilities if necessary, filling and compaction of trenches with appropriate materials all complete as per approved design, drawings, detailed Technical specification in schedule 10 and direction of the Engineer-in-Charge.				
	a) depth Up to 1500 mm. from E. G. L				
	i) 500 mm dia	27	metre		
	ii) 600 mm dia	24	metre		
	iii) 700 mm dia	18			
	iv) 800 mm dia	15			
	v) 900 mm dia	10			
	b) depth above 1500mm Up to 2000 mm from E. G. L.				
	i) 500 mm dia	27	metre		
	ii) 600 mm dia	24	metre		
	iii) 700 mm dia	18	metre		
	iv) 800 mm dia	15			
	v) 900 mm dia	10			
	c) depth above 2000mm Up to 3000 mm from E. G. L.				
	i) 500 mm dia	27	metre		
	ii) 600 mm dia	24	metre		
	iii) 700 mm dia	11	metre		
	iv) 800 mm dia	34			
	v) 900 mm dia	9	metre		
	vi) 1000 mm dia	115			
	d) depth above 3000mm Up to 4000 mm from E. G. L.				
	i) 500 mm dia	13	metre		
	ii) 600 mm dia	11	metre		
	iii) 700 mm dia	10	metre		
	iv) 800 mm dia	18			

	v) 900 mm dia	11	metre		
	vi) 1000 mm dia	13			
e)	depth above 4000mm Up to 5000 mm from E. G. L.				
	i) 500 mm dia	27	metre		
	ii) 600 mm dia	14	metre		
	iii) 700 mm dia	12	metre		
	iv) 800 mm dia	8			
	v) 900 mm dia	119	metre		
	vi) 1000 mm dia	10			
f)	depth above 5000mm Up to 6000 mm from E. G. L.				
	i) 500 mm dia	7	metre		
	ii) 600 mm dia	11	metre		
	iii) 700 mm dia	15	metre		
	iv) 800 mm dia	15	metre		
	v) 900 mm dia	10	metre		
	vi) 1000 mm dia	11	metre		
g)	depth above 6000mm Up to 6500 mm from E. G. L.				
	i) 500 mm dia	18	metre		
	ii) 600 mm dia	18	metre		
	iii) 700 mm dia	14	metre		
	iv) 800 mm dia	11	metre		
	v) 900 mm dia	10	metre		
	vi) 1000 mm dia	117	metre		

2.6	<p>Construction of Brick masonry Rectangular manholes in accordance with the provisions laid down in latest version of IS 4111 (Part 1) with chamber of size 900mm x 900mm or equivalent area (inside measurement) including supplying and fixing of polypropylene coated foot-rests / cast iron make foot-rest, shuttering, staging, reinforcement, bailing out/ dewatering (by pumps or other means) of water, supply, fitting and fixing with Steel Fibre Reinforced Concrete(SFRC) / Plastic Fibre Reinforced Concrete(PFRC) /Polypropylene Fibre Reinforced Concrete(PPFRC) Manhole cover (conforming to latest version of IS 12592)of clear opening 600 mm. with matching frame of grade HD-20/EHD-35 as per site requirement & packing around with PCC (1:2:4), complete as per design, drawing, specification and as directed by the Engineer-in-Charge. (Excavation in all sorts of soil, barricading, lighting arrangement, traffic diversion arrangement, hire and labour charges of close timbering / sheet piling /MS joists acting as soldier beams with MS plate including MS joist Waller beams, temporary road restoration as per approved design and drawing and retention of shoring where ever necessary, backfilling and compaction of trenches with appropriate materials, Protection and shifting of underground and overhead utilities if necessary, dismantling of any type of road crust by mechanical/manual means, restoration of damaged portion of the said road in its original position and disposal of spoils / surplus earth, and debris to a destination decided by Owner upto the jurisdiction of ULB to be arranged by bidder (No extra lead will be payable). The work shall be complete as per standard design, drawing, Technical specification in schedule 7 and as direct by the Engineer-in-charge. [Note: The rate for any fractional variation (increase or decrease) in the depth of invert level of the Manhole on decimeter basis, shall be paid as per actual, by adding the difference in rates between the immediate preceding and succeeding depths of invert level of such fractional depth of manhole on linear basis as per Measurement & Payment of Ancillary structures- Manholes, Drop Manholes and ventilating shafts in Technical Specification for construction in schedule - 7.]</p>				
	a) Depth of invert upto 1500 mm below GL	224	No.		
	b) Depth of invert beyond 1500 mm & upto 2000mm below GL.	328			
	c) Depth of invert beyond 2000 mm & upto 3000mm below GL.	645	No.		
	d) Depth of invert beyond 3000 mm & upto 4000mm below GL.	275			
	e) Depth of invert beyond 4000 mm & up to 5000mm below GL.	128	No.		
	f) Depth of invert beyond 5000 mm & up to 6000mm below GL.	120			
	g) Depth of invert above 6000 mm & up to 7500mm below GL.	118	No.		

2.7	<p>Construction of precast RCC Circular manholes and transportation, lowering and fixing the same in accordance with the provisions laid down in latest version of IS code having 0.56m dia at top made up of precast monolithic base, modular riser, and top cone in M-40 grade Cement Concrete placed, reinforcement as per drawing (minimum 100Kg/ Cum of Concrete) and aligned to provide vertical sides, with O ring rubber gasket at each joint, water tight and adjustment rings over top cone, including supplying and fixing of polypropylene coated foot-rests / cast iron make foot-rest, shuttering, staging, reinforcement, bailing out/ dewatering (by pumps or otherwise) of water , supply, fitting and fixing with Steel Fibre Reinforced Concrete(SFRC) / Plastic Fibre Reinforced Concrete(PFRC) / Polypropylene Fibre Reinforced Concrete(PPFRC) Manhole cover of clear opening 600 mm. with matching frame of grade HD-20/EHD-35 as per site requirement& packing around with PCC (1:2:4),and adequate anchoring projections on tail length on 138 mm as per standard drawing and suitable to with stand the bend test and chemical resistance test as per specifications and having manufacture's permanent identification mark to be visible even after fixing as per drawing and all connections shall have a watertight seal between the pipe and the manhole complete as per standard design for depth of 0.91m including benching cement concrete of 1 : 2 : 4 as per site requirements complete as per Technical specification in schedule 10, design, drawing, and as direct by the DBO Engineer. (Excavation in all sorts of soil, barricading, lighting arrangement, traffic diversion arrangement, hire and labour charges of close timbering / sheet piling /MS joists acting as soldier beams with MS plate including MS joist Waller beams, temporary road restoration as per approved design and drawing and retention of shoring where ever necessary, backfilling and compaction of trenches with appropriate materials, Protection and shifting of underground and overhead utilities if necessary, dismantling of any type of road crust by mechanical/manual means, restoration of damaged portion of the said road in its original position to be similar to the cross sectional layers of same trench of the existing road with the suitable components (like WBM /WMM / Stone metal/stonedust instead of Jhama & Bats) with necessary compaction all complete to make the same traffic worthy for smooth running of vehicle,traffic diversion arrangement, and disposal of spoils / surplus earth, and debris to a destination decided by E-I-C upto the jurisdiction of ULB to be arranged by bidder (No extra lead will be payable). The work shall be complete as per standard design, drawing, Technical specification in schedule 7 and as direct by the Engineer-in-Charge.</p>				
	a) Internal diameter 0.91m at bottom and Depth of invert upto 1500 mm below GL	10	No.		
	b) Internal diameter 1.52m at bottom and Depth of invert beyond 1500 mm & upto 3000mm below GL.	7	No.		
	c) Internal diameter 2.42m at bottom and Depth of invert beyond 3000 mm & up to 5000mm below GL.	6	No.		
	d) Internal diameter 2.42m at bottom and Depth of invert above 5000 mm & up to 7500mm below GL.	4	No.		

2.8	Construction of House connection pit/inspection chamber of 0.2 sq.mtr to 0.81 sq.mtr (inside dimension) and upto 1200 mm. (depth) with minimum 250 mm thick Brick work (1:4)with 15 mm plastering (1:4), neat cement punning and supply, fitting and fixing with Plastic Fibre Reinforced Concrete (PFRC)/ Steel Fibre Reinforced Concrete (SFRC) / Polypropylene Fibre Reinforced Concrete (PPFRC) Manhole cover (conforming to latest version of IS 12592)of matching diameter with matching frame of gradeMD-10/HD-20/EHD-35 as per loading condition at site & packing around with PCC (1:2:4), complete as per design, drawing, specification and as directed by the E-I-C including connection with nearby manhole chamber by 150 mm. dia. double wall corrugated (DWC) HDPE pipe of stiffness class designation SN 8(conforming to relevant IS. Specification)including excavation in all sorts of soil, barricading, lighting arrangement, hire and labour charges for shoring work including necessary close plank walling, framing etc by close timbering / sheet piling /MS joists, temporary road restoration as per approved design and drawing and retention of shoring where ever necessary, backfilling and compaction of trenches with appropriate materials, Protection and shifting of underground and overhead utilities if necessary, dismantling of any type of road crust, restoration of damaged portion of the said road in its original position to be similar to the cross sectional layers of same trench of the existing road with the suitable components (like WBM /WMM / Stone metal instead of Jhama & Bats, if required) with necessary compaction all complete to make the same traffic worthy for smooth running of vehicle,traffic diversion arrangement, and disposal of surplus and debris to a destination decided by E-I-C upto the jurisdiction of ULB to be arranged by bidder (No extra lead will be payable). The work shall be complete as per drawing, Technical specification in schedule 10 and as directed by the E-I-C. The rate shall include connection to new manholes/ pits by grouting the annular space with 1:2:4 cement concrete complete in all respect.	3000	No.		
2.9	Permanent restoration of major road upto Bituminous Macadam over temporary road restoration with 250mm thick Wet Mix Macadam, 75mm thick Bituminous Macadam and				
	a) 40 mm thick Semi Dense Bituminous Concrete	100	Sq. meter		
	b) 25 mm thick Mastic Asphalt	100	Sq. meter		
2.1	Permanent restoration of major road upto Bituminous Macadam over temporary road restoration with 250mm thick Wet Mix Macadam and 75mm thick Bituminous Macadam	100	Sq. meter		
2.11	Mechanical desilting cleaning of existing sewer, inspection pit, manholes and other appatenant structure at any depth upto 7.0 meter below GL including CCTV Survey.				
	i) 150 mm dia	62	metre		
	ii) 200 mm dia	47	metre		
	iii) 250 mm dia	58	metre		
	iv) 300 mm dia	45	metre		
	v) 350 mm dia	22	metre		
	vi) 400 mm dia	52	metre		

	vii) 450 mm dia	23	metre
	viii) 500 mm dia	63	metre
	ix) 600 mm dia	33	metre
	x) 700 mm dia	28	metre
	xi) 750 mm dia	19	metre
	xii) 800 mm dia	44	metre
	xiii) 900 mm dia	41	metre
	xiv) 1000 mm dia	37	metre

3.0	Providing Sewerage Network by trenchless method including all appurtenant structures and commissioning including Rehabilitation / resurfacing and restoration of roads / services etc.				
3.1	Supply & Laying of lateral/branch/trunk Sewers by trenchless method, installation of HDPE pipe for Sewerage line by Horizontal Direction Drilling (HDD) method including preparing and setting up the plant and equipment, preparing new pipe work materials, installing new pipe string and making the system ready for commission by HDD operation including all related civil & Mechanical works like excavation of driving and reception pits , shoring, strutting, drilling , stringing, reaming and pulling back the new pipe work on the designed bore path alignment proper disposal of drilling fluid and temporary restoration of excavated pits and site, pressure grouting, welding, and maintaining the shaft during constriction operation and restoration of site including Utility services if any after project completion including connection from Manhole/House pit to intermediate manhole provided in the sewer line, including backfilling of holes by approved material to 95% original density after completion all inclusive as per IndSTT: 101-2007: code of practice for Horizontal Direction Drilling Technique suiting for Indian conditions. For sections details as below:				
	depth of pipe to be calculated as per design requirement and all are external diameter				
	i. 225 mm dia	257	metre		
	ii) 250 mm dia	219	metre		
	iii) 280 mm dia	47	metre		
	iv) 315 mm dia	30	metre		
	v) 355 mm dia	57	metre		
	vi) 400 mm dia	89	metre		
	vii)450 mm dia	31	metre		
	viii)500 mm dia	49	metre		
	ix)560 mm dia	61	metre		
	x)600 mm dia	28	metre		
	xi) 710 mm dia	33	metre		
	xii) 800 mm dia	38	metre		
	xiii) 900 mm dia	43	metre		
	xiv) 1000 mm dia	21	metre		

SPS : LS-4(exst)

For Civil Structure Design Year: 2047

Peak Flow in MLD = 2.07

Avg. Flow in
MLD = 0.92

For Pump & Elec. Equipment Design Year: 2032

Peak Flow in MLD = 1.73

Avg. Flow in
MLD = 0.77

Sewage Pumping Station : LS -4(exst)

SI No	Description of item of Work	Quantity	Unit	Rate (Rs)	Amount (Rs)
				In Figs	
1	Design, Construction, renovation and commissioning of Sewage Pumping Station complete in all respect including boundary wall.				
i.	Construction of wet well as per design requirement	1	Job		
ii.	Construction of Inlet Chamber	1	Job		
iii.	Construction of Screen Channels	1	Job		
iv.	Construction of Distribution Chamber	1	Job		
v.	Construction of Valve chamber	1	Job		
vi.	Renovation of LT/ HT panel/ metering room	1	Job		
vii.	Renovation of Transformer room	1	Job		
viii.	Renovation of Diesel Generator Room	1	Job		
ix.	Construction of Internal pathway	1	Job		
x.	Construction of Approach road	1	Job		
xi.	Construction of Boundary wall & fencing with gates.	1	Job		
xii.	Firefighting arrangements, landscaping, site development etc.	1	Job		
xiii	Demolishing any type of R.C.C work / Brick work underground or above ground manually / by mechanical means including stacking of steel bar and disposal of unserviceable material with all lead and lift as directed and also as per specifications and direction of Engineer-in-charge	1	Job		
xiv	Miscellaneous works as approved & directed by Engineer-in-Charge	1	Job		

SPS : UGLS-4a

For Civil Structure Design Year: 2047

Peak Flow in MLD = 2.99

Avg. Flow in
MLD = 1.33

For Pump & Elec. Equipment Design Year: 2032

Peak Flow in MLD = 2.5

Avg. Flow in
MLD = 1.11

Sewage Pumping Station(underground) : UGLS -4a

1	Design, Construction, and commissioning of Sewage Pumping Station complete in all respect.				
i.	Construction of wet well including screen facility	1	Job		
ii.	Construction of LT/ HT panel/ metering arrangement including power back up facility	1	Job		
	Demolishing any type of R.C.C work / Brick work underground or above ground manually / by mechanical means including stacking of steel bar and disposal of unserviceable material with all lead and lift as directed and also as per specifications and direction of Engineer-in-charge	1	Job		
iii.	Miscellaneous works as approved & directed by Engineer-in-Charge	1	Job		

SPS : UGLS-4b

For Civil Structure Design Year: 2047

Peak Flow in MLD = 5.96

Avg. Flow in
MLD = 2.65

For Pump & Elec. Equipment Design Year: 2032

Peak Flow in MLD = 5.0

Avg. Flow in
MLD = 2.22

Sewage Pumping Station(underground) : UGLS -4b

1	Design, Construction, and commissioning of Sewage Pumping Station complete in all respect.				
i.	Construction of wet well including screen facility	1	Job		
ii.	Construction of LT/ HT panel/ metering arrangement including power back up facility	1	Job		
	Demolishing any type of R.C.C work / Brick work underground or above ground manually / by mechanical means including stacking of steel bar and	1	Job		
iii.	Miscellaneous works as approved & directed by Engineer-in-Charge	1	Job		

SPS : UGLS-4c

For Civil Structure Design Year: 2047

Peak Flow in MLD = 2.25

Avg. Flow in
MLD = 1.00

For Pump & Elec. Equipment Design Year: 2032

Peak Flow in MLD = 1.87

Avg. Flow in
MLD = 0.83

Sewage Pumping Station(underground) : UGLS -4c

1	Design, Construction, and commissioning of Sewage Pumping Station complete in all respect.				
i.	Construction of wet well including screen facility	1	Job		
ii.	Construction of LT/ HT panel/ metering arrangement including power back up facility	1	Job		
	Demolishing any type of R.C.C work / Brick work underground or above ground manually / by mechanical means including stacking of steel bar and disposal of unserviceable material with all lead and lift as directed and also as per specifications and direction of Engineer-in-charge	1	Job		
iii.	Miscellaneous works as approved & directed by Engineer-in-Charge	1	Job		

C Laying of Rising main

1	<p>Supplying & Laying DI K7 Socket / spigot pipes, rubber rings jointing materials and specials lowering the same in to the trenches up to depth as specified below G.L. true to alignment barricading, lighting arrangement, cutting of any type of road by mechanical/manual means and restoring damaged portion of the said road in its original position to be similar to the cross sectional layers of same trench of the existing road , traffic diversion arrangement, necessary earth work in excavation in trenches and Trail pits or sewer lines and other structures etc. in all sorts of soil or loose material including rubbish, removing the spoils / surplus earth, and debris to a destination decided by owner upto ULB jurisdiction to be arranged by bidder (No extra lead will be payable),hire and labour charges for shoring with close timbering/ sheet piling/MS joists acting as soldier beams with MS plate including MS joist waler beams as per approved design and drawing and retention of shoring where ever necessary ,bailing out water, dewatering from the excavated portion; filling and compaction of trenches with appropriate materials, Protection and shifting of underground and overhead utilities if necessary, temporary road restoration,cost of all jointing material, testing & commissioning including supply of all material, labour, T&P etc. required for proper completion of work including supply & fixing of same size sluice valves & 100/ 150 mm size air valves all complete as per approved design, drawings, detailed Technical specification in schedule 10 and direction of Engineer-in-Charge. Diameter of DI K7 pipe & depth to be provided as per design requirements.</p>				
i.	From LS-4(exst) to sewer line	25	m		
ii.	From UGLS-4a to sewer line	25	m		
iii.	From UGLS-4b to sewer line	25	m		
iv.	From UGLS-4c to sewer line	30	m		
	Any other item not included above but required for the satisfactory completion of the job as per specification.				
		Total Amount in Words :			
<p>N.B. The bidders are advised to read the scope of work, Design Build Services Schedule and Technical specification for construction schedule 2 & 7 in conjunction with above BOQ before quoting the rates so that comprehensive sewer network is made functional.</p>					
<p>N.B. The details of above item have been given in the scope of work with the Technical specification for construction schedule 7. The bidders are advised to read the scope of work carefully before quoting the rates so that all work may be covered.</p>					




