

**Section - VI Price BID**

**BYPL NIT NO: CMC/BY/23-24/RS/Svs/VK/11 DT: 16.05.2023**

**Work : Laying of Sewerline at BSES Colony, Delhi**

S.No	Item Description	Unit	Quantity	Rate	Value ( Rs) Ex GST
1	Demolishing cement concrete manually/ by mechanical means including disposal of material within 50 metres lead as per direction of Engineer - in - charge. Nominal concrete 1:3:6 or richer mix (i/c equivalent design mix) .as per direction of the engineer-in-charge.	Cum	549.45		
2	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m. All kinds of soil.as per direction of the engineer-in-charge.	Cum	6,109.40		
3	Extra for every additional lift of 1.5 m or part thereof in excavation / banking excavated or stacked materials.All kinds of soil. as per direction of the engineer-in-charge.	Cum	1,172.60		
4	Demolishing brick work manually/ by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-charge.In cement mortar .	Cum	419.51		
5	Providing and laying in position ready mixed or site batched design mix cement concrete for plain cement concrete work; using coarse aggregate and fine aggregate derived from natural sources and using recycled concrete aggregate (RCA) as coarse aggregate and fine aggregate within the permissible utilization, Portland Pozzolana / Ordinary Portland/Portland Slag cement, admixtures in recommended proportions as per IS: 9103 to accelerate / retard setting of concrete to improve durability and workability without impairing strength; including pumping of concrete to site of laying, curing, carriage for all leads; but excluding the cost of centering, shuttering and finishing as per direction of the engineer-in-charge; for the following grades of concrete. Note: Extra cement up to 10% of the minimum specified cement content in design mix shall be payable separately. In case the cement content in design mix is more than 110% of the minimum specified cement content, the contractor shall have discretion to either re-design the mix or bear the cost of extra cement.All works upto plinth level Concrete of M10 grade with minimum cement content of 220 kg /cum. (Note: The permissible utilization of Recycled Concrete Aggregate (RCA) as coarse aggregate and fine aggregate is 100% each).	Cum	159.23		
6	Providing and laying in position ready mixed or site batched design mix cement concrete for plain cement concrete work; using coarse aggregate and fine aggregate derived from natural sources and using recycled concrete aggregate (RCA) as coarse aggregate and fine aggregate within the permissible utilization, Portland Pozzolana / Ordinary Portland/Portland Slag cement, admixtures in recommended proportions as per IS: 9103 to accelerate / retard setting of concrete to improve durability and workability without impairing strength; including pumping of concrete to site of laying, curing, carriage for all leads; but excluding the cost of centering, shuttering and finishing as per direction of the engineer-in-charge; for the following grades of concrete. Note: Extra cement up to 10% of the minimum specified cement content in design mix shall be payable separately. In case the cement content in design mix is more than 110% of the minimum specified cement content, the contractor shall have discretion to either re-design the mix or bear the cost of extra cement.All works upto plinth level Concrete of M20 grade with minimum cement content of 270 kg /cum. (Note: The permissible utilization of Recycled Concrete Aggregate (RCA) as coarse aggregate and fine aggregate is 25% each).	Cum	423.50		
7	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m. as per direction of the engineer-in-charge.	Cum	5,660.02		
8	Constructing brick masonry chamber for underground C.I. inspection chamber and bends with bricks in cement mortar 1:4 (1 cement : 4 coarse sand) C.I. cover with frame (light duty) 455x610 mm internal dimensions, total weight of cover with frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg), R.C.C. top slab with 1:1.5:3 mix (1 cement : 1.5 fine sand : 3 graded stone aggregate 20 mm nominal size), foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand), finished smooth with a floating coat of neat cement on walls and bed concrete etc. complete as per standard design: Inside dimensions 500x700 mm and 45 cm deep for pipe line with one or two inlets :With common burnt clay F.P.S. (non modular) bricks of class designation 7.5 as per direction of the engineer-in-charge.	Ea	95.70		
9	Extra for depth beyond 45 cm of brick masonry chamber : For 500x700 mm size With common burnt clay F.P.S. (non modular) bricks of class designation 7.5 as per direction of the engineer-in-charge.	Mtr	52.64		
10	Constructing brick masonry circular type manhole 0.91 m internal dia at bottom and 0.56m dia at top in cement mortar 1:4 (1 cement : 4 coarse sand), inside cement plaster 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement, foundation concrete 1:3:6 mix (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size), and making necessary channel in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement, all complete as per standard design :0.91 m deep with S.F.R.C. cover and frame (heavy duty,HD-20 grade designation) 560 mm internal diameter con_x0002_forming to I.S. 12592, total weight of cover and frame to be not less than 182 kg., fixed in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) including centering, shuttering all complete. (Excavation, foot rests and 12mm thick cement plaster at the external surface shall be paid for separately) : With common burnt clay F.P.S. (non modular) bricks of class designation 7.5 as per direction of the engineer-in-charge.	Ea	80.30		
11	Extra depth for circular type manhole 0.91m internal dia (at bottom) beyond 0.91 m to 1.67 m With Sewer bricks conforming IS : 4885 .With common burnt clay F.P.S. (non modular) bricks of class designation 7.5 as per direction of the engineer-in-charge.	Mtr	49.79		

S.No	Item Description	Unit	Quantity	Rate	Value ( Rs) Ex GST
12	Constructing brick masonry circular manhole 1.52 m internal dia at bottom and 0.56 m dia at top in cement mortar 1:4 (1 cement : 4 coarse sand) inside cement plaster 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement, foundation concrete 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40 mm nominal size) and making necessary channel in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement, all complete as per standard design : 2.30 m deep with SFRC Cover and frame (heavy duty HD- 20 grade designation) 560 mm internal diameter conform _x005f_x005f_x005f_x005f_x0002_ing to I.S. 12592, total weight of cover and frame to be not less than 182 kg. fixed in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) including centering, shuttering all complete. (Excavation, foot rests and 12 mm thick cement plaster at the external surface shall be paid for separately) : With Sewer bricks conforming IS : 4885	Ea	19.80		
13	Extra depth for circular type manhole 1.52 m internal dia (at bottom) beyond 2.30 m : With Sewer bricks conforming IS : 4885	Mtr	33.66		
14	DISPOSAL OF BUILDING RUBBISH / MALBA / SIMILAR UNSERVICEABLE, DISMANTLED OR WASTE MATERIALS BY MECHANICAL MEANS, INCLUDING LOADING, TRANSPORTING, UNLOADING TO APPROVED MUNICIPAL DUMPING GROUND OR AS APPROVED BY ENGINEER-IN-CHARGE, BEYOND 50 M INITIAL LEAD, FOR ALL LEADS INCLUDING ALL LIFTS INVOLVED (1560-AR292) as per direction of the engineer-in-charge.	Cum	1,616.34		
15	Centering and shuttering including strutting, propping etc. and removal of form for Foundations, footings, bases of columns, etc. for mass concrete DSR-2021-5.9.1	Sqm	220.00		
16	Providing and laying 60mm thick factory made cement concrete interlocking paver block of M -30 grade made by block making machine with strong vibratory compaction, of approved size, design & shape, laid in required colour and pattern over and including 50mm thick compacted bed of coarse sand, filling the joints with line sand etc. all complete as per the direction of Engineer-in-charge.	Sqm	687.50		
17	Providing & supplying of class SN 8 structured wall Polyethylene piping systems (Pipe with online/offline coupler and elastometric sealing ring) with non-smooth External Annular Surfaces (Double wall) for non-pressure underground sewerage & drainage application as per EN:13476-3 / IS:16098(Part-2)-2013 i/c all local and central taxes, transortation, freight charges, octroi, inspection charges, loading, unloading, conveyance to the departmental stores etc. complete. 300 mm I.D.	MTR	1,232.00		
18	Lowering, Laying and Jointing of class SN-8 structure wall (External Annular Corrugated & Smooth Internal Surface) Polyethylene piping and fitting with the help of coupler (online/offline) attached with one end of pipes, sliding over the elastometric sealing rubber ring placed on the specified vally of the corrugation at the spigot end, lowering the same into the trench, laying on the lower bedding (constructed at bottom of trenches) at prescribed gradient, depth & alignment, testing the water tightness of the joints, ensuring the continuity tests of specified pipe segments etc. complete as per drawing, specifications & detailed engineering, i/c carriage of pipes & fittings from stacks to the place of laying etc. as per direction of E-n-C. 300 mm I.D.	MTR	1,232.00		
19	Providing at Site ISI Marked NP-4 class (Heavy duty) R.C.C. pipes HDPE Lining (2-3mm thick ) (heavy duty ) having stainless steel collar joint with rubber ring as per IS 458-2003 (rates for rubber rings are included ) into trenches in depths upto 1.5m , below ground level true to alignment , material testing etc. complete (for microtunnelling ) 6.1.1 600mm internal dia pipe .6.1.1.1 Providing at site ISI marked NP-4 markedNP-4 Class RCC pipe HDPE lining 3mm thick heavy duty having stainless steel collar joint with rubber ring as per IS 458-2003	MTR	825.00		
20	Close timbering in case of shafts, wells, cesspits, manholes and the like including strutting, shoring and packing cavities (wherever required) etc. complete. (Measurements to be taken of the face area timbered).Depth exceeding 1.5 m but not exceeding 3 m	Sqm	1,470.70		
21	Installation of product of pipe by micro tunnlling method including concrete structural saft of sheet piles /RCC Retaining Wall /Well sinking /secant pilling as per respective site requirement (up to 100m installation length and 5m depth) all I/C as per the Ind STT :102-2018: Code of pactice for Micro tunneling for Slurry bases Microtunneling for Steel /RCC jacking pipes Suiting Indian Condition.above 450mm Dia upto 600mm Dia 2.7.3.2 Mixed strata 600mm dia , including making power supply arrangement etc complete.	MTR	600.00		
22	C/R Providing orange colour safety foot rest of minimum 6 mm thick plastic encapsulated as per IS : 10910, on12 mm dia steel bar conforming to IS : 1786, having minimum cross section as 23 mmx25 mm and over all minimum length 263 mm and width as 165 mm with minimum 112 mm space between protruded legs having 2 mm tread on top surface by ribbing or chequering besides necessary 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 manufactures permanent identification mark to be visible even after fixing, including fixing in manholes with 30x20x15 cm cement concrete block 1:3:6 (1 cement : 3coarse sand : 6 graded stone aggregate 20 mm nominal size) complete as per design.	Each	522.50		
23	P/F on UPVC pipe (Type B) for sewerage system 110mm Dia as per IS code-	MTR	2,200.00		
24	Supplying and stacking & laying at site 90mm to45mm size stone aggregate .	Cum	261.80		
25	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings This includes jointing of pipes & fittings with one step CPVC solvent cement, trenching, refilling & testing of joints complete as per direction of Engineer in Charge. External work 20 mm nominal dia Pipes .	MTR	1,320.00		
26	C/R Providing and fixing 2.0m high MS sheet barricading with frame of angle 40X40X6 mm every post to be Welded with MS channel ISLC 100X50X6.4 mm Horizontal icl making of hole in the channel for providing in embedding of 16mm dia round torgue bars in the rod as per drawing & dirction engineer in charge	Rmt	3,872.00		
27	12 mm cement plaster of mix : 1:6 (1 cement: 6 fine sand)	Sqm	163.62		
28	Construction of granular sub-base by providing close graded Material conforming to specifications, mixing in a mechanical mix plant at OMC, carriage of mixed material by tippers to work site, for all leads & lifts, spreading in uniform layers of specified thickness with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge. With material conforming to Grade-III (size range 26.5 mm to 0.075 mm ) having CBR Value-20"	Cum	242.00		

## Work : Laying of Sewerline at BSES Colony, Delhi

S.No	Item Description	Unit	Quantity	Rate	Value ( Rs) Ex GST
29	Providing, laying, spreading and compacting graded stone aggregate (size range 53 mm to 0.075 mm ) to wet mix macadam (WMM) specification including premixing the material with water at OMC in for all leads & lifts, laying in uniform layers with mechanical paverfinisher in sub- base / base course on well prepared surface and compacting with vibratory roller of 8 to 10 tonne capacity to achieve the desired density, complete as per specifications and directions of Engineer-in-Charge.	Cum	181.50		
30	Providing and laying 5cm. Thick dense bituminous concrete surface course using mineral aggregate satisfying the gradation set out in the specification with 6% binder content 80/100 or equivalent (by weight of total mix) with the aid of hot mix plant and paver finisher including rolling with road roller to achieve the required compaction and density.	Cum	60.50		
31	Dismantling of flexible pavement (bituminous courses) by mechanical means and disposal of dismantled material up to a lead of 1 kilometre, as per direction of Engineer-in-charge.	Cum	198.00		
32	Providing leak proof ROKA in 150mm dia to 300mm dia in running sewer line with earth filled in empty cement (PVC) bags including removal of the same after completion of the work	Per Job	5.50		
33	Hire and running charge for Generator 62.5 KVA	Shift	66.00		
34	Hire and running charge for Dewatering submersible pump 15 Hp	Shift	132.00		
35	Dismantling of manhole including R.C.C. top slab, C.I. cover with frame, including stacking of useful materials near the site and disposal of unserviceable materials within 50 m lead as per direction of Engineer-in-charge: Rectangular manhole 120x90 cm and 90 cm deep	Per Job	22.00		
36	Plugging of existing sewer line and main hole with 2nos MS sheet 6mm thick with angle iron frame and braces shutters to be strutted with wooden struts and filling the manhole with empty cement bags filled up with earth up to suitable depth to avoid leakage the sewerage on upstream side to be pumped with suitable nos and capacity of pumps till the work is completed so as to keep reduce the pressure to be required extent to the plugged manhole. Necessary arrangements to be made for pumping of any leakage noticed in the mainhole or to replug in case of heavy leakage . the steel shutters and the earth filled pvc cement bag shall be removed after completion of work and then the manhole connection	Per Job	1.10		
37	Neat Cement punning	Sqm	163.62		
38	Providing and laying cement concrete 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size) up to haunches of S.W. pipes including bed concrete as per standard design : 100 mm diameter S.W. pipe	MTR	2,200.00		
39	Providing and laying cement concrete 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size) up to haunches of S.W. pipes including bed concrete as per standard design : 300 mm diameter S.W. pipe	MTR	1,012.00		
40	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in foundation and plinth in: Cement mortar 1:4 (1 cement : 4 coarse sand)	Cum	10.12		
41	Design of sewer line from reputed consultant and submission of design calculation and drawings to BYPY for Vetting	Job	1.00		
42	Recovery for using flyash Concrete in place of Specified Mix grade	Rate Cum	-		
43	Making arrangement for shoring /support to sides of the trench by providing /driving/installation in position by driving of ISMB of size 300x140 @ the distance of 1.2m c/c with guide channels of angles iron of 50x50x6 upto depth of 2 m lower than excavation level of trench or upto design depth fixing /placing MS plate in between ISMB guide angle welded. MS plate having frame of MS plate of suitable length and width on each face of trench MS ISMB shall be strutted /propped by 50 NB MS pipe at 1.5 m c/c i/c nut and bolts, plates to join member etc. i/c other arrangements required to completed system i/c removal of entire arrangements after laying of sewer line in parts or in a whole (detail as per drawing attached ) the payment will be made on sqm. Basis of face area of the supported by MS plate no extra payment in any condition. All the above arrangement shall be installed as per drawings or as directed by engineer-in-charge.	Sqm	1,182.50		
44	Providing and laying Dense Graded Bituminous Macadam using crushed stone aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site by tippers, laying with paver finisher equipped with electronic sensor to the required grade, level and alignment and rolling with smooth wheeled, vibratory and tandem rollers as per specifications to achieve the desired compaction and density, complete as per specifications and directions of Engineer-in-Charge. 50 to 100 mm average compacted thickness with bitumen of grade VG-30 @ 5% (percentage by weight of total mix) and lime filler @ 2% (percentage by weight of Aggregate) prepared in Batch Type Hot Mix Plant of 100-120 TPH capacity.	Cum	84.70		
45	Providing and applying Tack coat using hot straight run bitumen of grade 80/100 including heating the bitumen spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning and preparing the existing road surface as per specification. On WBM @ 0.76 Kg/sqm.	Sqm	1,210.00		
46	Providing and fixing square-mouth UPVC gully trap class SP-1 complete with C.I. grating brick masonry chamber with water tight C.I. cover with frame of 450 x450 mm size (inside) the weight of cover to be not less than 5 kg and frame to be not less than 3.5Kg kg as per standard design: 160x100 mm size P type. With common burnt clay F.P.S. (non modular) bricks of class designation 7.5	Each	95.70		
<b>Total Amount</b>					
<b>18% GST</b>					
<b>Grand Total Amount</b>					