



**NAYA RAIPUR DEVELOPMENT AUTHORITY**

**Tender Document for the  
Integrated Infrastructure Development Works for Sector 24  
(Part-A, Phase-II) at Naya Raipur  
(Following Three-Envelope Tender Procedure)**

**Schedule – A  
Price Tender  
To be submitted in ENVELOPE-3**

**NIT No : 99/IID/S-24 (Part-A Phase-II) /EEC-III/ CE (E) / NRDA / 2016-17, Naya Raipur, Dated: 07.09.2016**

**Issued by:** Chief Executive Officer,  
Naya Raipur Development Authority (NRDA)  
Paryavas Bhawan, North Block Sector- 19,  
Naya Raipur- 492 002, Chhattisgarh  
Tel No: + 91 771 2512500; Fax No.: +91 771 2512400.  
Website: [www.nayarapur.gov.in](http://www.nayarapur.gov.in)

## Tender Document Contains

- (a) Only schedule "A" and Section-I of schedule "D" are to be filled & signed by the tenderer  
 (b) All the certificates as per pre qualification criteria shall be appended with relevant forms of schedule "D"

### 1. PART ONE (NRDA F-1)-(Attached herewith, to be submit along the tender)

#### Part (A)

- a) Press Notice  
 b) Detailed NIT

#### Part (B)

##### a) Schedule-A

- (i) Cost Abstract  
 (ii) Bill of Quantities

- b) Schedule-B –NIL  
 c) Schedule-C –NIL  
 d) Schedule-D

##### Section-I..... Technical tender forms

- (i) Letter of Technical Tender  
 (ii) Tenderer's Information Sheet  
 (iii) Annual Turnover  
 (iv) Specific Construction Experience  
 (v) Declaration  
 (vi) Check list for Technical tender evaluation

##### Section –II .....Scope of work

##### Section –III..... Technical specifications of work

##### Section –IV..... Special Conditions of Contract

##### Section –V..... List of approved makes

##### Section –VI..... Drawings

- e) Schedule-E  
 f) Schedule-F

### 2. PART TWO (NRDA F-2/3 )-Standard form (Not Attached herewith, and not to be submitted along the tender)

Important note: - Link site <http://nayaraipur.com/documents/gcc.pdf>

1. General Guidelines
2. Tender
3. General rules and directions
4. Conditions of contract
5. Clauses of contract
6. Model rules relating to labour, water supply and sanitation in labour camps safety code
7. Contract forms
  - (a) Draft Format for Performance Security
  - (b) Earnest Money Deposit Form (Bank Guarantee)
  - (c) Format of Contract Agreement
  - (d) Draft Format for Performance Guarantee for Water Proofing and Anti-termite Works
  - (e) Indemnity Bond
  - (f) Indenture Bond
  - (g) Notice for Appointment of Arbitrator
8. Proforma of schedules (Schedule 'A' to Schedule 'F')

# Naya Raipur Development Authority (NRDA) Raipur, Chhattisgarh

## Document details

Name of work : “Integrated Infrastructure Development Works for Sector 24 (Part-A, Phase-II) at Naya Raipur”

Name of Tenderer:

## Details

a) Cost of Tender Document : Rs

b) EMD : Rs

Signature of Tenderer

Date:\_\_\_\_\_

Signature of Contractor.....

Signature of NRDA.....

**Cost abstract****"Integrated Infrastructure Development Works for Sector 24 (Part-A, Phase-II) at Naya Raipur"**

Sl. No.	Description of Items	Amount ( in INR)	Amount in Words ( In INR )
A	Road Work	Rs. -	
B	Water Supply, Sewerage, Storm Water Drainage, Canal and Nala Realignment, Electrical Pipe duct and Utility Crossing Work	Rs. -	
	<b>Total Amount in INR</b>	Rs. -	

Bill of Quantity "Integrated Infrastructure Development Works for Sector 24 (Part-A, Phase-II) at Naya Raipur"						
Sr. No	Description of Item	Unit	Quantity	Rate in INR	Rate in Words ( Indian Rupee)	Amount in INR
<b>A</b>	<b>ROAD WORK</b>					
1	<b>Detailed survey of proposed road alignment</b> including chaining, leveling, with cross section at 25.0 m intervals and closing survey each day's work, fixing bench marks, boundary pillars, painting, taking trial pits and submission of road cross sections, L-sections, quantity statements in computerized prints in five copies in proper files and all type of compliance required by the Engineer-in-charge.	Km.	14.24			Rs. -
2	<b>Excavation in Soil</b> (by Mechanical Means). Excavation for roadway in soil using mechanical means including loading in tipper for carrying of cut earth to embankment site and unloading with all lifts and lead as per relevant clauses of section 300.The item is inclusive of dewatering, disposal of excess earth after utilisation in, embankment developments, median fillings and landscape area as directed by Engineer-In-Charge.	Cum.	217128.10			Rs. -
3	<b>Clearing and grubbing</b> road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned up to all lifts and lead including removal and disposal of top organic soil not exceeding 150 mm in thickness if required and as per relevant clauses of section-200.The item is inclusive of dewatering, disposal of excess earth after utilisation in, embankment developments, median fillings and landscape area as directed by Engineer-In-Charge. (A) In area of light jungle.	Hectare.	43.38			Rs. -
4	<b>Construction of embankment / sub-grade with Material Obtained from Borrow Pits</b> (Construction of embankment with approved material/selected soil having C.B.R. > 5 (unless specified otherwise in the contract) obtained from borrow pits with all lifts and leads, transporting to site, spreading, grading to required slope and compacting to meet requirement of table 300-2) as specified by in the drawings and Engineer in charge.	Cum.	256320.97			Rs. -
5	<b>Compacting Original Ground (i) Compacting original ground supporting sub-grade</b> Loosening of the ground upto a level of 500 mm below the subgrade level , watered, graded and compacted in layers to meet requirement of table 300-2 for sub grade construction.	Cum.	127719.15			Rs. -

Sr. No	Description of Item	Unit	Quantity	Rate in INR	Rate in Words ( Indian Rupee)	Amount in INR
6	<b>Construction of Embankment with Material Deposited from Roadway Cutting</b> (Construction of embankment with approved materials having C.B.R. > 5 (unless specified otherwise in the contract) deposited at site from roadway cutting and excavation from drain and foundation of other structures graded and compacted to meet requirement of table 300-2)	Cum.	41925.57			Rs. -
7	<b>Granular Sub-base</b> as per Table:- 400-1Construction of granular sub-base by providing close graded Material, , carriage of mixed Material to work site, spreading in uniform layers with motor grader on prepared surface watering, rolling and compacting with vibratory power roller at OMC to achieve the desired density, complete as per clause 401 . (A) Plant mix method (with Mechanically crushed stone only) (iii) for grading-III Material.	Cum.	48876.09			Rs. -
8	<b>Granular Sub-base</b> as per Table:- 400-1Construction of granular sub-base by providing close graded Material, , carriage of mixed Material to work site, spreading in uniform layers with motor grader on prepared surface watering, rolling and compacting with vibratory power roller at OMC to achieve the desired density, complete as per clause 401 . (B) Plant mix method (with Mechanically crushed stone only) (i) for grading-V Material.	Cum.	8656.63			Rs. -
9	<b>Wet Mix Macadam</b> (Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechanical mix plant carriage of mixed Material by tipper to site, laying in uniform layers with paver in sub- base / base course on well prepared surface and compacting with vibratory roller to achieve the desired density as per clause 406.)	Cum.	40971.55			Rs. -
10	<b>Dense Bituminous Macadam</b> (Providing and laying dense bituminous macdam with minimum 40-60 TPH capacity HMP using crushed aggregates of specified grading, premixed with bituminous binder @4.0 to 4.5% by weigth of toal mix of mix and filler, transporting the hot mix to work site laying with hydrostatic paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH specification clause N0.505 complete in all aspects.) A. with sensor paver finisher for Grading -II(26.5mm nominal size bitumen content 4.50%).	Cum	9466.73			Rs. -

Sr. No	Description of Item	Unit	Quantity	Rate in INR	Rate in Words ( Indian Rupee)	Amount in INR
11	<b>Bituminous Concrete</b> ( providing and laying bituminous concrete with minimum 40-60 TPH capacity hot mix plant using crushed aggregates of specified grading, premixed with bituminous binder @ 5.0 to 6.0% by weight of total mix of mix and filler, transporting the hot mix to work site, laying with a hydrostatic paver finisher with sensor control to the required grade, level and alignment,rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH specification clause No.507 complete in all respects) A. with sensor paver finisher for Grading -II(13.2mm nominal size) with bitumen 6.0%	Cum	7213.53			Rs. -
12	<b>Prime Coat</b> ( Providing and applying primer coat with oil based bitumen emulsion (SS-I, grade confirming to IS:8887) on prepared surface of granular Base including clearing of road surface and spraying primer using mechanical means as per clause 502.	Sqm				
(i)	<b>on WBM/WMM surface @0.85 Kg/sqm.</b>		189334.50			Rs. -
13	<b>Tack Coat</b> Providing and applying tack coat with bitumen emulsion(RS-1, grade confirming to IS:8887) using emulsion pressuredistributor on the prepared bituminous/granular surface cleaned withmechanical broom and as per clause 503.	Sqm				
(i)	<b>Bituminous surface @ 0.25 kg /Sqm</b>		189334.50			Rs. -
(ii)	<b>Granular surface treated with prime @ 0.30 kg /Sqm</b>		189334.50			Rs. -
14	<b>Providing &amp; Laying precast Interlocking concrete blocks</b> of minimum compressive strength of 300kg/sq.cm and approved size, shape /pattern over coarse sand bed of thickness upto 40mm and joints thick filled with fine sand includind leveling with surface vibrator, temping and sweeping etc .complete as per IRC-SP-63-2004. ( Make:Approved Make List)	Sqm	37803.36			Rs. -

Sr. No	Description of Item	Unit	Quantity	Rate in INR	Rate in Words ( Indian Rupee)	Amount in INR
15	<b>Cast in Situ Cement Concrete M20 Kerb with Channel</b> (Construction of cement concrete kerb with channel with top and bottom width 115 and 165 mm respectively, 250 mm high in M20 grade PCC on M10 grade foundation 150 mm thick, kerb channel 300 mm wide, 50 mm thick in PCC M20 grade, sloped towards the kerb, kerb stone with channel laid with kerb laying machine, foundation concrete laid manually, all complete as per clause 409).	Meter	11114.03			Rs. -
16	<b>Cast in Situ Cement Concrete M20 kerb</b> (Construction of cement concrete kerb with top and bottom width 115 and 165 mm respectively, 250 mm high in M20 grade PCC on M10 grade foundation 150 mm thick, foundation having 50 mm projection beyond kerb stone, kerb stone laid with kerb laying machine, foundation concrete laid manually, all complete as per clause 408).	Meter	45669.09			Rs. -
17	<b>Painting on Concrete Surfaces</b> (A)Two coats on new surfaces (Painting two coats after filling the surface with synthetic enamel paint in all shades on new plastered concrete surfaces)	Sqm	9137.38			Rs. -
18	<b>Road Marking with Hot Applied Thermoplastic Compound with Reflectorizing Glass Beads on Bituminous Surface</b> (Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorizing glass beads @ 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35-1997. The finished surface to be level, uniform and free from streaks and holes).	Sqm	6644.36			Rs. -
19	<b>Retro-reflectorized Traffic signs</b> (Providing and fixing of retro- reflectorized cautionary, mandatory and informatory sign as per IRC:67-2012 made of encapsulated lens type reflective sheeting vide clause 801.3, fixed over aluminum sheeting, 1.5 mm thick supported on a mild steel frame of size 40 x 40 x 5 mm and mild steel angle iron post 75 mm x75 mm x 6mm firmly fixed to the ground by means of properly designed foundation with M15 grade cement concrete 45 cm x 45cm x 60cm, 60 cm below ground level as per approved drawing)					
a	60 cm x 45 cm rectangular	Each	60.00			Rs. -
b	60 cm equilateral triangle	Each	60.00			Rs. -



Sr. No	Description of Item	Unit	Quantity	Rate in INR	Rate in Words ( Indian Rupee)	Amount in INR
c	90 cm high octagon	Each	60.00			Rs. -
20	Providing and laying cement concrete for plain concrete/ reinforced concrete i/c form work, shuttering complete in as per drawings and specifications.(P.C.C M-25).	Cum	1328.61			Rs. -
21	Providing applying and finishing the top surface of concrete of approved color and pattern, in accordance with manufactureres specification of approved brand of color hardener @ of 2.7 kgs/sqmt. Including floating of color hardener over concrete surface with different types of floaters, including application of release agent @ of 0.113kg/sqmeter.stamping over the concrete surface with stamping tools including cleaning of sruface with water and cutting of finished concrete including application of two coats of acrylic based sealer for finishing color hardeness and release agents shall be tested for abrasion resistance for a depth of wear should not be more than 0.025mm. Coverage of sealer coat could not be less than 7.53Sqmt per one liter coat including cost of skilled manpower, cutting machine sprayer and all tools tackles for all activities complete smooth & finish as per th directions of engineer incharge.	Sqm.	13286.06			Rs. -
22	<b>Type - A, "W" : Metal Beam Crash Barrier</b> (Providing and erecting a "W" metal beam crash barrier comprising of 3 mm thick corrugated sheet metal beam rail, 70 cm above road/ground level, fixed on ISMC series channel vertical post, 150 x 75 x 5 mm spaced 2 m centre to centre, 1.8 m high, 1.1 m below ground/road level, all steel parts and fitments to be galvanized by hot dip process, all fittings to conform to IS:1367 and IS:1364, metal beam rail to be fixed on the vertical post with a spacer of channel section 150 x 75 x 5 mm, 330 mm long complete as per clause 811.3)	Meter	50.00			Rs. -
<b>Sub Total of Road Work</b>						Rs. -

**Bill of Quantity**  
**"Integrated Infrastructure Development Works for Sector 24 (Part-A, Phase-II) at Naya Raipur"**

Sl. No.	Description of Items	Unit	Quantity	Rate in INR	Rate in words (in INR)	Amount in INR
<b>B</b>	<b>Water Supply, Sewerage, Storm Water Drainage, Canal and Nala Realignment, Electrical Pipe duct and Utility Crossing Work etc.</b>					
1	Earth work in excavation for pipe trench in <b>all type soil</b> areas including dressing, watering and ramming and disposal of excavated earth with all lead and lift, disposal earth to be leveled, neatly dressed including clearing of vegetation, shoring, strutting, de-watering, bailing of water met due to all causes including lowering of water table required to keep the trench in the dry condition to facilitate for laying, jointing and testing of works and <b>backfilling</b> with approved materia, all complete as per technical Specifications and as per direction of Engineer.					
i	upto 1.5 m deep	Cum	113437.00			Rs. -
2	Earth work in excavation for pipe trench in <b>ordinary soil areas</b> including dressing, watering and ramming and disposal of excavated earth with all lead and lift, disposal earth to be leveled, neatly dressed including clearing of vegetation, shoring, strutting, de-watering, bailing of water met due to all causes including lowering of water table required to keep the trench in the dry condition to facilitate for laying, jointing and testing of works all complete as per technical Specifications and as per direction of Engineer.					
i	>1.5m and upto3.0m deep	Cum	33766.00			Rs. -
ii	>3.0m and upto 4.5m deep	Cum	7686.00			Rs. -
3	Earth work in excavation for pipe trench in <b>Hard Soil areas</b> including dressing, watering and ramming and disposal of excavated earth with all lead and lift, disposal earth to be leveled, neatly dressed including clearing of vegetation, shoring, strutting, de-watering, bailing of water met due to all causes including lowering of water table required to keep the trench in the dry condition to facilitate for laying, jointing and testing of works all complete as per technical Specifications and as per direction of Engineer.					

Sl. No.	Description of Items	Unit	Quantity	Rate in INR	Rate in words (in INR)	Amount in INR
i	>1.5m and upto 3.0m deep	Cum	3752			Rs. -
ii	>3.0m and upto4.5m deep	Cum	854			Rs. -
4	Filling available excavated earth in trenches, plinth sides of foundation in layers not exceeding 20cm. in depth including consolidation of each layer by ramming watering, all lead and lift in all kinds of soils as per technical Specifications and as per direction of Engineer.	cum	46058.00			Rs. -
5	Providing and laying nominal mix plain cement concrete with crushed stone aggregate using concrete mixer in all works upto plinth level excluding cost of form work all complete as per technical Specifications and as per direction of Engineer.					
i	1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40mm nominal size).	Cum	2329.00			Rs. -
6	Construction of RCC drain/chamber cover, placing in position, including formwork shuttering and concreting by using concrete mixer, compaction by vibration etc complete as per drawings and technical specifications excluding reinforcement. with <b>RCC M-20</b> all complete as per technical Specifications and as per direction of Engineer.	Cum	4223.00			Rs. -
7	Providing and fixing formwork i/c centering shuttering, strutting, staging, propping, bracing etc. complete and i/c removal of formwork all complete as per technical Specifications and as per direction of Engineer.					
i	Foundation /footing /column base/ plinth beam of any shape and size up to plinth level	Sqm	720.00			Rs. -

Sl. No.	Description of Items	Unit	Quantity	Rate in INR	Rate in words (in INR)	Amount in INR
8	Providing and placing in position reinforcement for R.C.C. work including straightening, cutting, bending, binding etc. complete as per drawings including cost of binding wire in foundation and plinth all complete as per technical Specifications and as per direction of Engineer.					
i	Thermo-Mechanically Treated bars FE -500D	kg	353505.00			Rs. -
9	Providing, laying, jointing, testing and commissioning of High Density Polyethylene pipes, (HDPE) Conforming to IS4984/ 14151/ 12786/ 13488 including all accessories (for specials 10kg/sq.cm) i.e. tees, bends, reducers, end caps etc. and fittings with necessary jointing material like mechanical connector or jointing pipes by heating to the ends of pipes with the help of Teflon coated electric mirror/ heater to the required temperature and then pressing the ends together against each other, to form a monolithic & leak proof joint by thermo setting process. It may be required to be done with Jacks/ Hydraulic Jacks /But fusion machine. (50mm & above fusion jointed & below 50 mm mechanical jointed) all complete as per technical Specifications and as per direction of Engineer. ( Blue striped marked on pipe) ( Make: KML Classic/ Duraline/ Approved Make)					
i	110 mm dia.(PE-100) 6 Kg/sq.cm	Rm	2540.00			Rs. -
ii	160 mm dia.(PE-100) 6 Kg/sq.cm	Rm	2300.00			Rs. -
iii	200 mm dia.(PE-100) 6 Kg/sq.cm	Rm	8550.00			Rs. -
10	Providing, laying, jointing, testing and commissioning of socket & spigot centrifugally cast (Spun) Ductile Iron pressure pipes with inside cement mortar lining ( <b>classK-7</b> ) Conforming to IS8329/2000 with suitable Rubber Gasket (Pushon) joints as per IS:5382/85 including testing of joint (laying Conforming to IS 12288 : 1987)					

Sl. No.	Description of Items	Unit	Quantity	Rate in INR	Rate in words (in INR)	Amount in INR
i	300mm diameter	Rm	1600.00			Rs. -
11	Providing, laying, jointing, testing and commissioning of following UPVC pipes with solvent cement joint for 6kg/sq.cm. Pressures including testing of joints, cost of jointing materials etc. complete in all respect. [Conform to IS 4985:2000 and IS 7634 (PT-3) . The work is inclusive of all specials & all accessories (for specials 10kg/sq.cm) i.e. tees, bends, reducers, end caps etc. and fittings with necessary jointing material all complete as per technical Specifications and as per direction of Engineer. ( Make: KML Classic/ Approved Make)					
i	75 mm dia.(PE-100) 6 Kg/sq.cm	Rm	2800.00			Rs. -
ii	110 mm dia.(PE-100) 6 Kg/sq.cm	Rm	2020.00			Rs. -
iii	160 mm dia.(PE-100) 6 Kg/sq.cm	Rm	5330.00			Rs. -
iv	200 mm dia.(PE-100) 6 Kg/sq.cm	Rm	1800.00			Rs. -
v	315 mm dia.(PE-100) 6 Kg/sq.cm	Rm	1500.00			Rs. -

Sl. No.	Description of Items	Unit	Quantity	Rate in INR	Rate in words (in INR)	Amount in INR
12	Providing, laying, jointing, testing and commissioning of DWC HDPE Pipes (with external annular corrugation and smooth internal walls) duly tested Conforming to IS 16098 (PART-II): 2013 having stiffness class of SN 8 with ring stiffness not less than 8.00KN/SQM. and impact resistance TIR valve not more than 10% including necessary jointing materials for non-pressure underground sewerage, drainage & cross drainage application. Inclusive of all taxes related to central, state and municipal, inclusive of excise duty, inspection charges, transportation charges, transit insurance, loading/unloading and stacking at site/store etc. and as per Technical Specifications and as per direction of Engineer.This is also inclusive of Jointing material i.e Pipe with online/offline coupler and elastomeric sealing ring. All the joints shall be confirmed water tight as per standards all complete as per technical Specifications and as per direction of Engineer.( Make: Tirupati plastomatics Ltd. /Approved Make)					
i	250 ( ID) / 295(OD) mm dia.	RM	1980.00			Rs. -
ii	300 ( ID) /345 ( OD) mm dia.	RM	2267.00			Rs. -
iii	400 ( ID )/480 ( OD) mm dia.	RM	5300.00			Rs. -
iv	600 ( ID) / 715 (OD) mm dia.	RM	5700.00			Rs. -
13	Providing, laying, jointing, testing and commissioning of D.I. Specials & Fittings For all types of specials, bends, reducers, tees. etc. all complete as per technical Specifications and as per direction of Engineer.					
i	80 to 300 mm dia.	Kg	1000.00			Rs. -
ii	350 mm and above dia.	Kg	4000.00			Rs. -

Sl. No.	Description of Items	Unit	Quantity	Rate in INR	Rate in words (in INR)	Amount in INR
14	Providing lead caulked joints to S.C.I or C.I. (spun) pipes and specials including testing of joints but excluding the cost of pig lead, all complete as per technical Specifications and as per direction of Engineer.					
i	200 mm diameter pipe	Each	2.00			Rs. -
15	Supplying pig lead at site of work all complete as per technical Specifications and as per direction of Engineer.	quintal	0.10			Rs. -
16	Providing, laying, jointing, testing and commissioning of Cast iron double flanged sluice valves as per I.S.:14846-2000 fitted with cast iron cap including jointing & testing with cost of jointing material such as bolts, nuts, rubber insertions etc. all complete. (Steel Spindle) as per technical Specifications and as per direction of Engineer.					
i	100 mm diameter (Pressure rating PN - 1.6)	Each	55.00			Rs. -
ii	150 mm diameter (Pressure rating PN - 1.6)	Each	13.00			Rs. -
iii	200 mm diameter (Pressure rating PN - 1.6)	Each	26.00			Rs. -
iv	350 mm diameter (Pressure rating PN - 1.6)	Each	3.00			Rs. -
v	300 mm diameter (Pressure rating PN - 1.6)	Each	3.00			Rs. -

Sl. No.	Description of Items	Unit	Quantity	Rate in INR	Rate in words (in INR)	Amount in INR
17	Providing, laying, jointing, testing and commissioning of cast iron double air valves, flanged without in-built isolating valve as per IS:14845-2000 including jointing & testing with cost of jointing material and rubber insertion all complete as per IS :13095-1991 all complete as per technical Specifications and as per direction of Engineer.					
i	100 mm dia PN-1.6	Each	6.00			Rs. -
18	Providing, laying, jointing, testing and commissioning of D.I Dismantling joint with M.S. Nut stud & washers coated for rust prevention & internal rubber rings etc. complete assembly set as per type design inclusive of all taxes & duties, insurance, loading/unloading & stacking FOR at site all complete as per technical Specifications and as per direction of Engineer.					
i	100 mm diameter	Each	55.00			Rs. -
ii	150 mm diameter	Each	13.00			Rs. -
iii	200 mm diameter	Each	26.00			Rs. -
iv	300 mm diameter	Each	3.00			Rs. -
v	350 mm diameter	Each	3.00			Rs. -
	<b>Mechanical Joints / Fittings</b>					



Sl. No.	Description of Items	Unit	Quantity	Rate in INR	Rate in words (in INR)	Amount in INR
19	Providing, laying, jointing, testing and commissioning of C.I. Mechanical Compression flanged/socket tail piece (Popularly known as 1TM Flanged/Socket Tail piece) suitable for making flanged connection with the plain barrel of C.I. Spun Pipes (as per IS-1536/2001) and D.I. Pipes (as per IS 8329/2000). The Tail piece to be supplied complete with sealing rubber gasket of S.B.R., C.I. Follower Gland sand M.S.Nut Bolts. The whole assembly should be mechanically and hydraulically tested to the provisions as laid down in IS : 1538/1993. all complete as per technical Specifications and as per direction of Engineer.					
i	100 mm	Each	10.00			Rs. -
ii	150 mm	Each	10.00			Rs. -
iii	200 mm	Each	10.00			Rs. -
iv	350 mm	Each	6.00			Rs. -
v	300 mm	Each	6.00			Rs. -
20	Providing, laying, jointing, testing and commissioning of C.I. Mechanical Compression Collar Coupling (Popularly known as Jiffy TM collar coupling) suitable for C.I. Spun pipe (as per IS 1536/2001) and D.I. pipes (as per IS 8329/2000). complete with sealing rubber gasket of SBR, C.I., Follower Gland sand M.S. Nut Bolts. The whole assembly should be mechanically and hydraulically tested to the provisions as laid down in IS : 1538/1993 all complete as per technical Specifications and as per direction of Engineer.					
i	100 mm	Each	10.00			Rs. -

Sl. No.	Description of Items	Unit	Quantity	Rate in INR	Rate in words (in INR)	Amount in INR
ii	150 mm	Each	10.00			Rs. -
iii	200 mm	Each	10.00			Rs. -
iv	350 mm	Each	6.00			Rs. -
v	300 mm	Each	6.00			Rs. -
21	Providing and laying of 1st class bedding below pipes with graded sand or other granular materials passing through 5.6 mm sieve as per clause 2904 all complete as per technical Specifications and as per direction of Engineer.	Cum	10145.00			Rs. -
22	<b>Construction of RCC valve chamber</b> internal size 1.2m x 1.2m x 1.5m, 100mm thick PCC- M10 and RCC M20 grade 150mm thick wall, precast cover 125mm thick slab on top for protection of valve coming under traffic & extended MS valve operating spindle rod as reqd etc. Including steel reinforcement on 10mm dia. 150mm c/c bothways wall & precast cover, shuttering, labour charges etc as per drawing and as per direction of Engineer complete etc.	No.	62.00			Rs. -
	<b>Construction of prefabricated HDPE manhole:</b>					
	Supplying , Installation testing and commissioning of prefabricated HDPE manhole: Providing, lowering, laying, aligning, fixing in position at all level/ depths High Density Poly Ethylene (HDPE) manhole conforming to EN 13598-2:2009, man entry type of 1000mm diameter for depth specified below, shall be of single wall construction OR modular construction conforming to EN 681-1 with triple safety seal (three side lip/element) made of 100% virgin PE material without recycling or foam content, including connecting the according to EN 681-1 and the manholes shall be safeguarded against uplift pressure with solid horizontal reinforcement ribs of appropriate thickness and with at regular intervals all along the outside of the manhole. The manhole shall have inlet and outlet as per site requirement and manhole shall have inbuilt steps at vertical distance 25cm. (Make: VECTUS INDUSTRIES LTD / Approved Make)					

Sl. No.	Description of Items	Unit	Quantity	Rate in INR	Rate in words (in INR)	Amount in INR
23	The item is inclusive of Excavation, Dewatering, Layer wise backfilling and compaction of granular material , Provision of corrosion resistant steps at a vertical distance of 25cm .Providing and fixing of FRP Manhole frame and cover with locking arrangement fitting to 600mm dia. manhole openings and load should be carry 20tone approved brand and as per IS:1726:1991etc. Providing and fixing of Precast RCC M35 grade load distribution ring 1050mm OD & 710mm ID and designed to handle heavy load as approved by Engineer placed around the neck of the manhole of 150mm thickness including reinforcement. Load distribution ring bottom base should be providing RCC M20 grade concrete thick 200mm slab (Dia. 1500mm outer dia. and inner dia. 710mm) around the manhole. Manhole bottom base should be PCC (1:3:6) of 200mm thick and 1.5m dia. All the inlet, outlet connections to the manhole shall be complete with all accessories/ fittings, material, labour, jointing materials, testing and commissioning as per detailed drawing, as per Technical specifications and all complete as directed by Engineer in charge.					
a	<b>1000 mm diameter circular manhole</b>					
i	Manhole of depth up to 1.2m	No	50.00			Rs. -
ii	For depth above 1.2m and up to 1.8m	No	70.00			Rs. -
iii	For depth above 1.8m and up to 2.1m	No	80.00			Rs. -
iv	For depth above 2.1m and up to 2.4m	No	70.00			Rs. -
v	For depth above 2.4m and up to 2.7m	No	80.00			Rs. -
vi	For depth above 2.7m and up to 3.0m	No	80.00			Rs. -
vii	For depth above 3.0m and up to 3.6m	No	30.00			Rs. -

Sl. No.	Description of Items	Unit	Quantity	Rate in INR	Rate in words (in INR)	Amount in INR
viii	For depth above 3.6m and up to 4.2m	No	30.00			Rs. -
ix	For depth above 4.2m and up to 4.8m	No	20.00			Rs. -
24	Providing, laying, jointing, testing and commissioning of sand cast iron drop connection externally for 60 cm drop from branch sewer line to main sewer manhole including inspection and cleaning eye with chain and lid, sand cast iron drop pipe and bend encased all-round with cement concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) with all centring and shuttering required, cutting holes in walls and making good with brick work in cement mortar 1:4 (1 cement : 4 coarse sand) plastered with cement mortar 1:3 (1 cement : 3 coarse sand) on inside of the manhole wall lead caulked joints between sand cast iron pipes and fittings, stiff cement mortar 1:1 (1 cement : 1 fine sand) joints between sand cast iron tee and S.W. pipe, making required channels complete as per standard design and specifications :					
i	150 mm dia. sand cast iron drop connection	Each	5.00			Rs. -
25	Extra for depths beyond 60 cm of sand cast iron drop connection all complete as per technical Specifications and as per direction of Engineer.					
i	For 150 mm dia. sand cast iron drop connection	meter	5.00			Rs. -
26	Providing and constructing brick masonry chamber for underground C.I. <b>inspection chamber</b> and bends with well burnt modular clay bricks crushing strength not less than 35kg/cm <sup>2</sup> 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 1:2:4 mix (1 cement : 2 coarse sand : 4 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 :					

Sl. No.	Description of Items	Unit	Quantity	Rate in INR	Rate in words (in INR)	Amount in INR
i	Inside dimensions 600x850 mm and 45 cm deep for pipe line with one or two inlets	Each	20.00			Rs. -
27	Providing, laying, jointing, testing and commissioning of Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings, specials & all accessories i.e. tees, bends, reducers, end caps etc and fittings with necessary jointing of pipes & fittings with one step CPVC solvent cement, trenching, refilling & testing of joints all complete as per direction of Engineer in Charge.( Make: KML Classic/ Finolex/ Approved Make)					
a	EXTERNAL WORK					
i	15 mm nominal outer dia pipes	Rm	50.00			Rs. -
ii	20 mm nominal outer dia pipes	Rm	300.00			Rs. -
iii	25 mm nominal outer dia pipes	Rm	460.00			Rs. -
iv	32 mm nominal outer dia pipes	Rm	760.00			Rs. -
v	40 mm nominal outer dia pipes	Rm	450.00			Rs. -
vi	50 mm nominal outer dia pipes	Rm	310.00			Rs. -
vii	62.50 mm nominal inner dia pipes	Rm	180.00			Rs. -

Sl. No.	Description of Items	Unit	Quantity	Rate in INR	Rate in words (in INR)	Amount in INR
viii	75 mm nominal inner dia pipes	Rm	560.00			Rs. -
28	Providing, laying, jointing, testing and commissioning of Saddle Piece, duly tested from certified agencies for usage in Drinking water inclusive of all materials, Central, State and Municipal taxes and duties inspection charges, transit insurance, loading / unloading FOR site unloading & stacking etc. complete as per direction of Engineer-in-Charge.					
i	160 x 32 mm dia	Each	60.00			Rs. -
ii	110 x 32 mm dia.	Each	160.00			Rs. -
iii	75 x 32 mm dia.	Each	160.00			Rs. -
29	Providing, laying, jointing, testing and commissioning of following G.I. Specials as per relevant IS1239, ISI marked for usage in Drinking water inclusive of all materials, Central, State and Municipal taxes and duties inspection charges, transit insurance, loading/unloading FOR site unloading & stacking etc. complete as per direction of Engineer-in-Charge.					
a	M.S.Saddle Piece					
i	15 mm dia.	Each	10.00			Rs. -
ii	20 mm dia.	Each	30.00			Rs. -

Sl. No.	Description of Items	Unit	Quantity	Rate in INR	Rate in words (in INR)	Amount in INR
iii	25 mm dia.	Each	46.00			Rs. -
iv	32 mm dia.	Each	76.00			Rs. -
v	40 mm dia.	Each	45.00			Rs. -
vi	50 mm dia.	Each	31.00			Rs. -
vii	65 mm dia.	Each	18.00			Rs. -
viii	75 mm dia.	Each	224.00			Rs. -
ix	100 mm dia.	Each	10.00			Rs. -
30	Providing, laying, jointing, testing and commissioning of GM or brass ferrules Conforming to IS-2692/1984 (Reaffirmed2005), tested to 21.00kg/sq.cm. i/c boring and tapping the main all complete as per technical Specifications and as per direction of Engineer.					
i	200x32 mm dia.	Each	10.00			Rs. -
ii	200x40 mm dia.	Each	10.00			Rs. -

Sl. No.	Description of Items	Unit	Quantity	Rate in INR	Rate in words (in INR)	Amount in INR
31	Providing, laying, jointing, testing and commissioning of ball valve (brass) of approved quality, High or low pressure, with plastic floats all complete as per technical Specifications and as per direction of Engineer.					
i	15 mm dia.	each	10.00			Rs. -
ii	20 mm dia.	each	30.00			Rs. -
iii	25 mm dia.	each	46.00			Rs. -
32	Providing, laying, jointing, testing and commissioning of brass/ gun metal gate valve with C.I. wheel of approved quality (screwed end) all complete as per technical Specifications and as per direction of Engineer.					
i	32 mm dia	Each	76.00			Rs. -
ii	40 mm dia	Each	45.00			Rs. -
iii	50 mm dia	Each	31.00			Rs. -
iv	65 mm dia	Each	18.00			Rs. -



Sl. No.	Description of Items	Unit	Quantity	Rate in INR	Rate in words (in INR)	Amount in INR
33	Constructing masonry Chamber 90x90x100 cm, inside with <b>modular well burnt clay bricks</b> of 35 kg/ cm <sup>2</sup> in cement mortar 1:4 (1 cement : 4 coarse sand) for sluice valve, with C.I. surface box 100mm. top diameter, 160 mm bottom diameter and 180 mm deep (inside) with chained lid and RCC top slab 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) necessary excavation foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick finished with a floating coat of neat cement complete as per standard design :	Each	224.00			Rs. -
34	Supply, installation, testing and commissioning of Multi Jet, dry-dial, inferential type, horizontal, Magetically coupled, class 'B'water meters Conforming to IS-779: 1994 and ISO 4064:1993 standard with EEC/MID certification mark, with IP68 protection class copper can register with 5 mm tempered mineral glass cover, successful Life Cycle Test Certificate from FCRI and AMR compatibility with 5 years warranty complete with brass nuts and nipples. Instrument shall be complete in all respects according to technical specifications including all specials and as per direction of Engineer.					
i	15 mm nominal outer dia pipes	Each	10			Rs. -
ii	20 mm nominal outer dia pipes	Each	10			Rs. -
iii	25 mm nominal outer dia pipes	Each	10			Rs. -
iv	40 mm nominal outer dia pipes	Each	10			Rs. -

Sl. No.	Description of Items	Unit	Quantity	Rate in INR	Rate in words (in INR)	Amount in INR
35	Supply, installation, testing and commissioning of Woltman Type, dry dial, inferential type, Magnetically coupled, class 'B' accuracy water meters in any position with interchangeable mechanism. Confirming to ISO 4064:1993 standard with EEC certification mark, with IP 68 protection class copper can register with 5 mm tempered mineral glass cover, AMR compatibility with 5 years warranty complete and successful accuracy test certificate from FCRI, Palakkad with C.I. Body 'T' Type strainer. Instrument shall be complete in all respects according to technical specifications and as per direction of Engineer.					
i	50 mm nominal outer dia pipes	Each	10			Rs. -
ii	62.50 mm nominal inner dia pipes	Each	10			Rs. -
36	Supply, installation, testing and commissioning of Dirt Box with S.S. Strainer as per specifications (Dia in mm) as required all complete as per technical Specifications and as per direction of Engineer.					
i	15 mm nominal outer dia pipes	Each	10			Rs. -
ii	20 mm nominal outer dia pipes	Each	10			Rs. -
iii	25 mm nominal outer dia pipes	Each	10			Rs. -
iv	40 mm nominal outer dia pipes	Each	10			Rs. -

Sl. No.	Description of Items	Unit	Quantity	Rate in INR	Rate in words (in INR)	Amount in INR
v	50 mm nominal outer dia pipes	Each	10			Rs. -
vi	62.50 mm nominal inner dia pipes	Each	10			Rs. -
37	<b>Meter box and cover</b> : Supply, installation, testing and commissioning of UV resistant, high density polyethylene material size: length 870mmx width=655mm x depth 690mm, yet lightweight, specially designed to withstand light vehicle load. Ease of opening and closing of top cover shall be ensured with locking arrangement and enclosure shall have enough mechanical strength including cement concrete foundation 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 40mm nominal size), size of foundation= 1100X900X400mm and formwork shuttering & removing all complete as per standered specifications, and as per direction of Engineer. (Make: VECTUS INDUSTRIES LTD / Approved Make)	Each	60			Rs. -
	<b>Drain work</b>					
38	Providing, laying, jointing, testing and commissioning of following non-pressure (NP3) RCC socket & spigot pipes with rubber gasket joint including testing of joints. [Conforming to IS ; 458-1988, ISI marked laying as per IS 783:1985)					
i	450 mm dia.	Meter	2498.00			Rs. -
ii	600 mm dia.	Meter	8328.00			Rs. -
iii	900 mm dia.	Meter	4514.00			Rs. -

Sl. No.	Description of Items	Unit	Quantity	Rate in INR	Rate in words (in INR)	Amount in INR
iv	1000 mm dia.	Meter	1110.00			Rs. -
39	Providing, laying, jointing, testing and commissioning of following Reinforced Cement Concrete pipe NP 3 /prestressed concrete pipe on first class bedding. (Laying Reinforced cement concrete pipe NP3 /prestressed concrete pipe for culverts on first class bedding of granular material including fixing collar with cement mortar 1:2 but excluding excavation, protection works, backfilling, concrete and masonry works in head walls and parapets) all complete as per technical Specifications and as per direction of Engineer.					
i	600 mm dia.	Meter	100.00			Rs. -
ii	1200 mm dia.	Meter	1000.00			Rs. -
40	Providing, laying, jointing, testing and commissioning of cast iron grating for drain inlet all complete as per technical Specifications and as per direction of Engineer.					
i	300x150mm rectangle	Each	924.00			Rs. -
41	Supplying and laying following size RCC Hume pipe class NP-2 (in standard length of 2 metre) with collar in ground below road, path etc at a depth not less than 50 cm and upto 90 cm including excavation, dismantling of road if required and refilling the trench with excavated material, ramming and making the surface good etc. as required all complete as per technical Specifications and as per direction of Engineer.					
i	300 mm dia. R.C.C. pipe	Rmt	120.00			Rs. -

Sl. No.	Description of Items	Unit	Quantity	Rate in INR	Rate in words (in INR)	Amount in INR
ii	200 mm dia. R.C.C. pipe	Rmt	3744.00			Rs. -
iii	100 mm dia. R.C.C. pipe	Rmt	3744.00			Rs. -
42	Providing and laying Pitching Stone/Boulder on slopes laid over prepared filter media including boulder apron laid in Cement Mortar 1:6 complete as per drawing and Technical specification as per relevant clauses of section 2503	Cum	576.00			Rs. -
	<b>Electrical pipe duct</b>					
43	Providing, laying, jointing, testing and commissioning of ISI marked double wall HDPE pipe (IS 14930 Part II) having corrugation on the outer wall and plan surface on inner wall in ground below road, path etc at a depth not less than 40 cm and upto 90 cm including excavation, dismantling of road if required and refilling the trench with excavated material, ramming and making the surface good etc. as required all complete as per technical Specifications and as per direction of Engineer.( Make: Tirupati plastomatics Ltd. /Approved Make)					
i	200 mm outer dia.	Meter	34815.00			Rs. -
ii	120 mm outer dia.	Meter	45620.00			Rs. -
44	Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts and lead up to 1000 meters and as per relevant clauses of section-200 in, as required all complete as per technical Specifications and as per direction of Engineer.					
a	<b>Lime / Cement Concrete</b>					

Sl. No.	Description of Items	Unit	Quantity	Rate in INR	Rate in words (in INR)	Amount in INR
i	Cement Concrete Grade M-15 & M-20	cum	200			Rs. -
b	<b>Brick / Tile work</b>					
i	In cement mortar	cum	100			Rs. -
c	<b>Stone Masonry</b>					
i	Rubble stone masonry in cement mortar.	cum	200			Rs. -
	<b>Sub Total of Water Supply, Sewerage, Storm Water Drainage, Canal Nala Realignment, Electrical Pipe duct and Utility Crossing Work</b>					<b>Rs. -</b>