

Name of work:-		Providing and Laying HDPE pipe line from STP RCDF Saras Sankul to S-W corner MNIT (near ROB on JLN Marg) at MNIT Campus, Jaipur.				
<u>H-Schedule</u>						
S.No	PHED BSR No.	Items	Qty	Rate	Unit	Amount
1	4.1	Earth work in excavation by mechanical means (Hydraulic Excavator)/ manual means in trenches for water supply pipe lines, shoring and strutting if required as per required gradient and line including safety provisions using site rails and stacking excavated stuff including up to all required lead cleaning the site etc. complete for lifts up to 1.5 depth and strata as specified. The work also includes depositing and refilling of trench with watering & ramming /compacting in layers and disposal of surplus excavated soil as directed for lead up to 50 mtr.				
	4.1.1	In all type of soil				
	4.1.1.3	For dia of pipe above 150 mm and up to 350 mm nominal.	600.00		RMT	
2	1.5	Providing, lowering, laying and jointing in trenches, standard lengths HDPE ISI marked Pipes as per IS-4984: 1995 (amended upto date) with necessary jointing material like mechanical connectors, i.e. thread/ insert joint/ quick release coupler joint/ compression fitting joint or flanged joint and specials jointing pipe by butt fusion/ electro fusion welding method, including all taxes , transportation and freight charges, inspection charges, loading/ unloading charges, stacking of pipes, including cost of labour and material, specials (Tee, bend etc.), satisfactory hydraulic testing, disinfection etc. complete as per technical specifications and direction of Engineer-in-charge of following class and diameter. (excluding earth work). Note : Providing and fixing of all requisite specials as per drawing, design and layout are inclusive in RM measurement of the item and shall not be paid separately. Supply of pipe shall be in straight length in 6/12 M.				
	1.5.1	HDPE PE-80 PN-6				
	1.5.1.3	160 mm dia	600.00		RMT	
3		Pump set with Starter				

		<p>Vertical, multistage centrifugal pump with inlet and outlet ports on same the level (inline). The pump head and base are in cast iron – all other wetted parts are in stainless steel. A cartridge shaft seal ensures high reliability, safe handling, and easy access and service. Power transmission is via a rigid split coupling. Pipe connection is via DIN flanges.</p> <p>The pump is fitted with a 3-phase, fan-cooled asynchronous motor.</p> <p>Liquid: Pumped liquid: Water Liquid temperature range: 243 .. 393 K Selected liquid temperature: 293 K Density: 998.2 kg/m³</p> <p>Technical: Rated pump speed: 2919 rpm Actual calculated flow: 39.38 m³/h Resulting head of the pump: 43 m Pump orientation: Vertical Shaft seal arrangement: Single Code for shaft seal: HQQE Approvals on nameplate: CE, EAC,ACS Curve tolerance: ISO9906:2012 3B</p> <p>Materials: Base: Cast iron EN 1563 EN-GJS-500-7 ASTM A536 80-55-06 Impeller: Stainless steel</p>				
		<p>EN 1.4301 AISI 304 Bearing: SIC Support bearing: Graflon Bearing: SIC Installation: Maximum ambient temperature: 333 K Maximum operating pressure: 1600 kPa Max pressure at stated temperature: 1600 kPa / 393 K 1600 kPa / 243 K Type of connection: DIN Size of inlet connection: DN 80 Size of outlet connection: DN 80 Pressure rating for connection: PN 40 Flange size for motor: FF265</p> <p>Electrical data: Motor standard: IEC Motor type: 132SB IE Efficiency class: IE3 Rated power - P2: 7.5 kW Power (P2) required by pump: 7.5 kW Main frequency: 50 Hz Rated voltage: 3 x 380-415D/660-690Y V Rated current: 14,4-14,0/8,30-8,10 A Starting current: 780-910 % Cos phi - power factor: 0.88-0.82 Rated speed: 2910-2920 rpm IE efficiency: IE3 90,1%</p>	1.00		EACH	
		<p>Motor efficiency at full load: 90.1-90.4 % Motor efficiency at 3/4 load: 90.8 % Motor efficiency at 1/2 load: 90.8 % Number of poles: 2 Enclosure class (IEC 34-5): 55 Dust/Jetting Insulation class (IEC 85): F Motor Number: 85U17522 Controls: Frequency converter: NONE Others: Minimum efficiency index, MEI ≥: 0.70 Net weight: 114 kg Gross weight: 137 kg Shipping volume: 0.309 m³ Danish VVS No.: 385907020 Finnish LVI No.: 4925485</p>				

4	6.5	<p>Providing, lowering, aligning, fixing in position and Jointing in pipe line, CI single Air Valve Flanged/ Screwed type of approved makes for following pressure rating & dia complete, confirming to IS: 14845-2000 (amended upto date) and of following specifications: Body , Cover and Cowl - Grey Cast Iron as per IS:210- FG 200 ,Float - Stainless Steel AISI 304 / IS: 3444 ,Float Guide- HBT1,Body seat ring - Leaded tin bronze/ SS , Seal ring and face ring - EPDM/NBR, Ends flanged according to IS:6418 or screwed type shall have external pipe threads conforming to IS:554,</p> <p>Fasteners - CS. All exposed machined ferrous surfaces shall be painted with one coat of aluminium red oxide primer conforming to IS:5660 and two coats of paint conforming to IS:9862 or IS:2932(Non-Toxic- suitable for drinking water) applied inside and outside. Valves including all material, labour, testing and commissioning as per Technical Specifications and as per direction of Engineer in charge.</p> <p>Note: Rates are exclusive of connecting tee, pipe piece and earth work.</p>				
	6.5.2	Class PN 1.6				
	6.5.2.2	25 mm S-1 Type	1.00		EACH	
5	6.80	<p>Providing, lowering, aligning, fixing in position in pipe line at work site, DI D/F Resilient seated (soft seated) Sluice Valves (Gate Valves) , Vacuum tight(bubble tight), straight and pocket less body passage of approved make of following class & dia complete confirming to BS-EN-1171/ AWWA C-509 and of following specifications: Body & bonnet of Ductile cast iron of grade GGG40/GGG50 as per DIN 1693 or GR SG-400/12 as per IS 1865 or equivalent grade as per IS :3896-part2-1985 and subsequent revisions, Wedge of same material as body & shall vulcanised rubber lined with EPDM (food grade quality) and seals of NBR Face to face dimensions as per BS 5163-89/ IS 14846/2000 (amended up to date) /Din 3202 F4, Stem/ spindle of SS (AISI 316 or equivalent) Electrostatic epoxy powder(EP-P)/ Fusion bond epoxy (Non-Toxic- suitable for drinking water) coated with minimum thickness of 250 microns inside and outside, Drilled as per IS 1538. Nut-Bolt confirming to IS:1363 and IS: 1367 (Galvanised steel) Inersion rubber of black EPDM 6mm thick. Suitable support structure as per directions of EIC, Sluice valves including all jointing & jointing material, labour, testing and commissioning along with pipe line as per Technical Specifications and as per direction of Engineer-in-charge. Note: Rates are exclusive of tail piece/ dismantling joints and earth work.</p>				
	6.8.1	Manually Operated Resilient Seated Sluice Valves of Class PN 1.0/1.6				
	6.8.1.4	150 mm dia	1.00		EACH	
					Total	
					Say Rs	

EXECUTIVE ENGINEER
ESTATE SECTION
MNIT JAIPUR

SEAL & SIGNATURE OF THE CONTRACTOR
WITH FULL POSTAL ADDRESS

