

| Bill of Quantities / Materials | | | | APPENDEX-B | | |
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| The approximate Bill of Quantities is indicated below to give an idea of the work which should be executed in accordance with the approved drawings and specifications to enable the bidder to furnish the lump sum price. Bidders may, however, note that no variations in the lump sum cost is acceptable (except where extra items are ordered by the Engineer). | | | | | | |
| The description of Scope of Work and preferred makes are given in Section-C | | | | | | |
| sl no | Description of Item as per CPWD SOR (E & M) 2022 | Preferred Make | Unit | | | |
| | | | | Qty | unit rate | Amount |
| 1 | 2 | 3 | 4 | 7 | 8 | 9 |
| 1.1 | Fire Pumps, Valves & Accessories | | | | | |
| | Hydrant Pump Supply, Installation, Testing & Commissioning of electrical motor driven fire water pumping set factory assembled of capacity 2850 lpm at a total head of 88 m and suitable for automatic operation, consisting of the following and complete in all respect with all labour, tools & plants, transportation, taxes, levies etc. and as per specification drawing and direction of Engineer-in-charge (fully mechanical seal by maker) - CPWD SOR 2022 Page no.P-60 (18.1.1) | | | | | |
| | a. Supply | Kirloskar /KSB | Set | 1 | | - |
| | b. Installation, Testing & Commissioning | | | 1 | | - |
| 1.1A | Sprinkler Pump Supply, Installation, Testing & Commissioning of electrical motor driven fire water pumping set factory assembled of capacity 2850 lpm at a total head of 88 m and suitable for automatic operation, consisting of the following and complete in all respect with all labour, tools & plants, transportation, taxes, levies etc. and as per specification drawing and direction of Engineer-in-charge (fully mechanical seal by maker) - CPWD SOR 2022 Page no.P-60 (18.1.1) | | | | | |
| | a. Supply | Kirloskar /KSB | Set | 1 | | - |
| | b. Installation, Testing & Commissioning | | | 1 | | - |
| 1.1 B | Water Curtain Pump Supply, Installation, Testing & Commissioning of electrical motor driven fire water pumping set factory assembled of capacity 2850 lpm at a total head of 70 m and suitable for automatic operation, consisting of the following and complete in all respect with all labour, tools & plants, transportation, taxes, levies etc. and as per specification drawing and direction of Engineer-in-charge (fully mechanical seal by maker) CPWD SOR 2022 Page no.P-60 (18.1.2) | | | | | |
| | a. Supply | Kirloskar /KSB | Set | 1 | | - |
| | b. Installation, Testing & Commissioning | | | 1 | | - |
| 1.2 | Supply, Installation, Testing & Commissioning of Diesel Engine driven fire water pumping set factory assembled of capacity 2850 lpm at a total head of 88 M. and suitable for automatic operation, consisting of the following and complete in all respect with all labour, tools & plants, transportation, taxes, levies etc. and as per specification drawing and direction of Engineer-in-charge (fully mechanical seal by maker) CPWD SOR 2022 Page no.P-60 (18.2.1) | | | | | |
| | a. Supply | Kirloskar /KSB | Set | 1 | | - |
| | b. Installation, Testing & Commissioning | | | 1 | | - |
| 1.3 | Supply, Installation, Testing & Commissioning of electrical motor driven automatic pressurization (jockey) pumping set factory assembled consisting of the following and complete in respect with all labour, tools & plants, transportation, taxes, levies etc. and as per specification, drawing and direction of Engineer-in-charge CPWD SOR 2022 Page no.P-61 (18.3.1) | | | | | |
| | a. Supply | Kirloskar /KSB | Set | 1 | | - |
| | b. Installation, Testing & Commissioning | | | | | - |
| 1.4 | Supply, Installation, Testing & Commissioning of cubical type floor/wall mounted fire pump control panel, fabricated from 14 g MS sheet duly powder coated finish of approved shade, comprising of incoming isolator with fuse, volt meter with selector switch & protection fuse, indicating lamps(one for each phase) with protection fuse, Amp. Meter with 3 nos. C.T. & selector for fire pump motor (3 Nos.) with over load relay, timer, push buttons and auto/manual selector switches & auxiliary contactor for auto impulse, fully automatic D.O.L. starters suitable for jockey pump motor (2 Nos.) with over load relay, push buttons and auto/manual selector switches & auxiliary contractor for auto impulse, On Off / Trip - neon indicating lamp, etc. duly wired & terminated to accept all incoming & outgoing cables and complete in all respect with all labour, tools & plants, transportation, taxes, levies etc. and as per specification, drawing and direction of Engineer-in-charge (100 HP) CPWD SOR 2022 Page no.P-67 (18.5.6) | | | | | |
| | a. Supply | Kirloskar /KSB | Set1.7 | 1 | | - |
| | b. Installation, Testing & Commissioning | | | 1 | | - |

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|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|----------------|-----------------|-----------|---|
| 1.5 | Supply, Installation, Testing & Commissioning of C.I. Swing Check type non-return valves (IS:5312, PN 1.6) complete with matching flanges, rubber insertion, nuts, bolts and washer etc. of following sizes complete in all respect with all labour, tools & plants, transportation, taxes, levies etc. and as per specification, drawing and direction of Engineer-in-charge. | | | | | |
| | a. Supply | | Set | | | |
| 1.5.1 | 200 mm dia - CPWD SOR 2022 Page noP-69 (18.14.8) | Audco / NVR / Venus /Zoloto | | 1 | | - |
| 1.5.2 | 150 mm dia - CPWD SOR 2022 Page noP-69 (18.14.7) | | | 4 | | - |
| 1.5.3 | 100 mm dia - CPWD SOR 2022 Page noP-69 (18.14.5) | | | 0 | | - |
| 1.5.4 | 80 mm dia - CPWD SOR 2022 Page no P-69 (18.14.4) | | | 0 | | - |
| 1.5.5 | 65 mm dia - CPWD SOR 2022 Page noP-69 (18.14.3) | | | 0 | | - |
| 1.5.6 | 50 mm dia - CPWD SOR 2022 Page noP-69 (18.14.2) | | | 2 | | - |
| | b. Installation, Testing & Commissioning | | set -LS | 1 | | - |
| 1.6 | Supply, Installation, Testing & Commissioning of slim seal butterfly valves class PN 1.0 as per IS:14846 complete with matching flanges, rubber insertion, nuts, bolts and washer etc. following sizes and complete in all respect with all labour, tools & plants, transportation, taxes, levies etc. and as per specification, drawing and direction of Engineer-in-charge. | | | | | |
| | a. Supply | | Set | | | |
| 1.6.1 | 200 mm dia - CPWD SOR 2022 Page noP-69 (18.11.7) | | | 0 | | - |
| 1.6.2 | 150 mm dia - CPWD SOR 2022 Page noP-69 (18.11.6) | Audco / NVR/ Venus/Zoloto | | 1 | | - |
| 1.6.3 | 100 mm dia - CPWD SOR 2022 Page noP-69 (18.11.5) | | | 1 | | - |
| | b. Installation, Testing & Commissioning | | set -LS | 1 | | - |
| 1.7 | Supply, Installation, Testing & Commissioning of slim seal pressure gauge Non-Scheduled item | | | | | |
| | a. Supply | | H.Guru | Each | 9 | - |
| | b. Installation, Testing & Commissioning | | | | 9 | - |
| 1.8 | Supply, Installation, Testing & Commissioning of Y - Strainer | | | | | |
| | a. Supply | | | | | |
| 1.8.1 | 250 mm dia - CPWD SOR 2022 Page noP-69 (18.15.5) | Audco / NVR/ Venus/Zoloto | | Each | 2 | - |
| 1.8.2 | 200 mm dia - CPWD SOR 2022 Page noP-69 (18.15.4) | | | | 0 | - |
| | b. Installation, Testing & Commissioning | | | | 2 | - |
| 1.9 | Supply, Installation, Testing & Commissioning of non-rising spindle type CI gate valves class PN 1.6 as per IS14846 complete with matching flanges, rubber insertion, nuts, bolts and washer etc. of following sizes and complete in all respect with all labour, tools & plants, transportation, taxes, levies etc. and as per specification, drawing and direction of Engineer-in-charge | | | | | |
| | a. Supply | | | | | |
| 1.9.1 | 250 mm dia - CPWD SOR 2022 Page noP-69 (18.12.8) | | | Each | 2 | - |
| 1.9.2 | 200 mm dia - CPWD SOR 2022 Page noP-69 (18.12.7) | | | Each | 6 | - |
| 1.9.3 | 150 mm dia - CPWD SOR 2022 Page noP-69 (18.12.6) | Audco / NVR / Venus /Zoloto | | Each | 4 | - |
| 1.9.4 | 80 mm dia - CPWD SOR 2022 Page no P-69 (18.12.4) | | | Each | 4 | - |
| 1.9.5 | 65 mm dia - CPWD SOR 2022 Page noP-69 (18.12.3) | | | Each | 0 | - |
| 1.9.6 | 50 mm dia - CPWD SOR 2022 Page noP-69 (18.12.2) | | | Each | 2 | - |
| | b. Installation, Testing & Commissioning | | | set / LS | 1 | - |
| 1.10 | Supply, Installation, Testing & Commissioning of ball valve with hard chrome plated ball inside PTFE (Teflon) seat & ring with chrome plated center handle with female BSP threads of following sizes and complete in all respect with all labour, tools & plants, transportation, taxes, levies etc. and as per specification, drawing and direction of Engineer-in-charge Non-Schedule Item | | | | | |
| | a. Supplies | | | | | |
| 1.10.1 | | | | | | |
| 1.10.2 | | Audco / NVR / Venus /Zoloto | | | | |
| 1.10.3 | 15 mm dia nominal bore | | | Each | 16 | - |
| | b. Installation, Testing & Commissioning | | | set / LS | 1 | - |
| 1.11 | Supply, Installation, Testing & Commissioning of differential type pressure switch including piping connection and complete in all respect with labour, tools & plants, transportation, taxes, levies etc. and as per specification, drawing and direction of Engineer-in-charge CPWD SOR 2022 Page noP-69 (18..22) | | | | | |
| | a. Supply | | INDFOSS | Each | 6 | - |
| | b. Installation, Testing & Commissioning | | | | 6 | - |

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| 1.12 | Supply, Installation, Testing & Commissioning of Power Cabling with earthing for fire pump/ jockey pump/ booster pump and complete in all respect with all labour, tools & plants, transportation, taxes, levies etc. and as per specification, drawing and direction of Engineer-in-charge. Non Schedule Item | | | | | |
| | a. Supply | | | | | |
| 1.12.1 | POWER CABLING 3C X 95 mm ² | Polycab, Cords Havells | Meter | 150 | | - |
| 1.12.2 | POWER CABLING 3C X 25 mm ³ | | Meter | 100 | | - |
| | b. Installation, Testing & Commissioning | | Meter | 250 | | - |
| 1.13 | Supply, Installation, Testing & Commissioning of Control Cabling for connection between pressure switch and pump control panel by 1.5 Sq. mm PVC insulated copper wire with PVC conduit including earthing and complete in all respect with all labour, tools & plants, transportation, taxes levies etc. and as per specification, drawing and direction of Engineer-in-charge. Non Schedule Item | | | | | |
| | a. Supply | | | | | |
| 1.13.1 | CONTROL CABLE 3C X 2.5 sqmm | Polycab, Cords Havells | Meter | 60 | | - |
| 1.13.2 | CONTROL CABLE 3C X 1.5 sqmm | | Meter | 250 | | - |
| | b. Installation, Testing & Commissioning | | Meter | 310 | | - |
| 1.14 | Supply, Installation and fixing 25 mm x 6 mm GI strip in on surface (or) in recess for earth connection of motors Non Schedule Item | Reputed | Meter | 200 | | - |
| 1.15 | Installation and fixing 25 mm x 3 mm GI strip in on surface (or) in recess for earth connection etc., as required. Non-Scheduled item | Reputed | Meter | 100 | | - |
| 1.16 | Supply, installing, testing and commissioning of black steel 'MS' pipes conforming to IS : 1239 Heavy Duty up to 150 mm dia and IS : 3589 Gr 330 for 200mm and above (from minimum 6mm thick for pipes up to 500 mm dia) including all fittings like anchor fasteners, couplings, bends, elbows, tees, flanges, etc. welding as required painting with one coat of red-oxide primer and two or more coats of synthetic enamel paints to give an even shade including all civil breakages, cutting holes and chases in brick or RCC walls and making good complete. CPWD SOR 2022 Page no P-68.7..... | | | | | |
| | a Supply | | | | | |
| 1.16.1 | 50 mm dia. --- CPWD SOR 2022 Page no P-68.7.4 . | TATA /Jindal / Nezone | Meter | 6 | | - |
| 1.16.2 | 65 mm dia. --- CPWD SOR 2022 Page no P-68.7.5 | | Meter | 0 | | - |
| 1.16.3 | 80 mm dia. --- CPWD SOR 2022 Page no P-68.7.6 | | Meter | 12 | | - |
| 1.16.4 | 100 mm dia. --- CPWD SOR 2022 Page no P-68.7.7 | | Meter | 6 | | - |
| 1.16.5 | 150 mm dia. --- CPWD SOR 2022 Page no P-68.7.8 | | Meter | 18 | | - |
| 1.16.6 | 200 mm dia. (6.3 mm thickness) - Page P-68.7.9 | | Meter | 12 | | - |
| 1.16.7 | 250 mm dia. (6.3 mm thickness) --Page P-68.7.10 | | Meter | 12 | | - |
| 1.16.8 | 300 mm dia. (7.1 mm thickness) - Page P-68.7.11 | | Meter | 0 | | - |
| | b. Installation, Testing & Commissioning | | Meter | 66 | | - |
| 1.17 | Supply, Installation, Testing & Commissioning of Four way fire brigade inlet connection consisting of 63 mm dia instantaneous type of alloy steel male coupling with built-in check valve and 150 mm dia flanged outlet including bolts, nuts & rubber insertion as required as IS:904 and complete in all respect with all labour, tools & plants, transportation, taxes, levies etc. and as per specification, drawing and direction of Engineer-in-charge. CPWD SOR 2022 Page no P-70 (18..19.2) | Attasee / Fire shield | Each | 1 | | - |
| 1.18 | Supply, Installation, Testing & Commissioning of Two way fire brigade draw-out connection consisting of 63 mm dia instantaneous type of alloy steel male coupling with built in check valve and 100 mm dia flanged outlet including bolts, nuts & rubber insertion as required as IS:904 and complete in all respect with all labour, tools & plants, transportation, taxes, levies etc and as per specification, drawing and direction of Engineer-in-charge. CPWD SOR 2022 Page no P-70 (18..19.1) | Attasee / Fire shield | Each | 1 | | - |
| 1.19 | Supply, Installation, Testing & Commissioning of Foot Valve and as per specification, drawing and direction of Engineer-in-charge Non-Scheduled item | | | | | |
| 1.19.1 | 100 mm dia | Zoloto / Venus | Each | 1 | | - |
| 1.20 | Supply, Installation, Testing & Commissioning of Power Cabling for supply of power to pump house from second point Non-Schedule Item | Polycab / Cords /Havells | | | | |
| 1.20.1 | a. Supply of POWER CABLING 3.5C X 300 mm ² | | Meter | 700 | | - |
| | b. Installation, Testing & Commissioning | | | 700 | | - |

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| 2 | Fire Hydrant & Wet Riser System | | | | | | |
| 2.1 | Supply, Installation, Testing & Commissioning of single headed, ISI marked oblique pattern hydrant/landing valve of gun metal with 80 mm dia flanged inlet and 63 mm dia instantaneous type female outlet with PVC cap & GI chain including all accessories as per IS:5290 (type A) and complete in all respect with all labour, tools & plants, and complete in all respect with all labour, tools & plants, transportation, taxes, levies etc. and as per specification, drawing and direction of Engineer-in-charge CPWD SOR 2022 Page no P-70 (18..19.1) | | | | | | |
| | a. Supply | Attasee / Fire shield | Each | 86 | | | - |
| | b. Installation, Testing & Commissioning | | | 86 | | | - |
| 2.2 | Supply, Installation, Testing & Commissioning of swinging type First-Aid fire hose reel with drum, fabricated base, 20 mm dia x 30 M long high-pressure rubber hose reel tubing (Dunlop or equivalent make), ABC triple purpose nozzle as per IS:884 and complete in all respect with all labour, tools & plants, transportation, taxes levies etc. and as per specification, drawing and direction of Engineer-in-charge. CPWD SOR 2022 Page no P-70 (18..17.1) | | | | | | |
| | a. Supply of suitable for 150 mm NB pipe | Attasee / Fire shield | Each | 8 | | | - |
| | b. Installation, Testing & Commissioning | | | 8 | | | - |
| 2.3 | Supply, Installation, Testing & Commissioning of RRL hose ISI marked (IS:8423) 63 mm dia x 15 M long complete with instantaneous type gun metal 63 mm dia ISI marked male & female couplings (IS:903) bounded & riveted to hose pipe with copper rivets & 1.5 mm copper wire and complete in all respect with all labour, tools & plants, transportation, taxes, levies etc. and as per specification, drawing and direction of Engineer-in-charge. CPWD SOR 2022 Page no P-70 (18..16.1) | | | | | | |
| | a. Supply | Attasee / Fire shield | Each | 172 | | | - |
| | b. Installation, Testing & Commissioning | | | 172 | | | - |
| 2.4 | Supply, Installation, Testing & Commissioning of RRL hose ISI marked (IS:8423) 63 mm dia x 15 M long complete with instantaneous type gun metal 63 mm dia ISI marked male & female couplings (IS:903) bounded & riveted to hose pipe with copper rivets & 1.5 mm copper wire and complete in all respect with all labour, tools & plants, transportation, taxes, levies etc. and as per specification, drawing and direction of Engineer-in-charge. CPWD SOR 2022 Page no P-70 (18..18.1) | | | | | | |
| | a. Supply | Attasee / Fire shield | Each | 86 | | | - |
| | b. Installation, Testing & Commissioning | | | 86 | | | - |
| 2.5 | Supply, Installation, Testing & Commissioning of RRL hose ISI marked (IS:8423) 63 mm dia x 15 M long complete with instantaneous type gun metal 63 mm dia ISI marked male & female couplings (IS:903) bounded & riveted to hose pipe with copper rivets & 1.5 mm copper wire and complete in all respect with all labour, tools & plants, transportation, taxes, levies etc. and as per specification, drawing and direction of Engineer-in-charge. CPWD SOR 2022 Page no P-70 (18..19.2) | | | | | | |
| | a. Supply | Attasee / Fire shield | Each | 1 | | | - |
| | b. Installation, Testing & Commissioning | | | 1 | | | - |
| 2.6 | Supply, Installation and fixing MS fire hose cabinet of approximate size 750 x 600 x 300 mm deep fabricated from 2.0 mm thick and 16-gauge Apodised aluminum sheet with single or double glazed front door and pad locking arrangement, painted Fire Red with Stove enameled paint Fire Hose written on front including necessary supports complete. (For Internal Commercial area) accommodate 1 nos. 15 m long 63 mm dia hose as per specification. Non Schedule Item | | | | | | |
| | a. Supply | Attasee / Fire shield | Each | 8 | | | - |
| | b. Installation, Testing & Commissioning | | | 8 | | | - |
| 2.7 | Supply, Installation and fixing MS fire hose cabinet of approximate size 750x600x300 mm deep fabricated from 2.0mm thick and 16 gauge anodized aluminum sheet with single or double glazed front door and pad locking arrangement, painted Fire Red with Stove enameled paint Fire Hose written on front including necessary supports complete. (For terrace and external hydrants) Non-Scheduled item | | | | | | |
| | a. Supply | Attasee / Fire shield | Each | 78 | | | - |
| | b. Installation, Testing & Commissioning | | | 78 | | | - |
| 2.7 | Supply, Installation, Testing & Commissioning of mild steel black pipe Heavy Duty (IS:1239 Part I, for sizes 150 mm mild steel black pipe Heavy Duty (IS:1239 Part I, for sizes 150 mm dia and below IS:3589 for sizes above 150 MM dia) of following sizes including cutting, threading, welding etc. bends, elbows, reducers, clamps hangers etc. including pipe supports, brackets etc. and cutting hole in brick or RCC walls / slabs including painting with one coat of primer and two or more coats of synthetic enamel paint of approved make and said including all steel work and complete in all respect with all labour, tools & plants, transportation, taxes, levies etc. and as per specification, drawing and direction of Engineer-in-charge. CPWD SOR 2022 Page no P-68 (18..7.9 to 18.7.6) | | | | | | |
| | a. Supply | | | | | | |
| 2.7.1 | 200 mm dia, -- CPWD SOR 2022 Page no P-68 (18..7.9) | TATA/Jindal / Nezone | Meter | 2067 | | | - |
| 2.7.2 | 150 mm dia, -- CPWD SOR 2022 Page no P-68 (18..7.8) | | Meter | 1014 | | | - |
| 2.7.3 | 100 mm dia, -- CPWD SOR 2022 Page no P-68 (18..7.7) | | Meter | 222 | | | - |
| 2.7.4 | 80 mm dia, -- CPWD SOR 2022 Page no P-68 (18..7.6) | | Meter | 60 | | | - |
| | b. Installation, Testing & Commissioning | | Meter | 3363 | | | - |

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| 2.7 A | Under Ground Piping (External) Installation and fixing black steel pipes Heavy Class confirming to IS: 1239 (Part-I) 2004, amended up to date including all fittings like bends, elbows, tees, flanges, etc., welding as required including painting, wrapping and coating of the pipes as per IS: 10221-2008 in all kinds of soil at a depth 1.0 m including excavation and refilling the trench all complete. CPWD SOR 2022 Page no P-67 (18.6.1) & P-67 (18.6.2) | | | | | | |
| | a. Supply | | | | | | |
| | b. Installation & Fixing of | | | | | | |
| 2.7.A.1 | 150 mm dia (For Yard Hydrant - P-67 (18..6.2) | TATA/Jindal / | Meter | 90 | | | - |
| 2.7.A.2 | 200 mm dia (For Yard Hydrant Line) - P-67 (18..6.1) | Nezone | Meter | 150 | | | - |
| 2.8 | Supply, Installation, Testing & Commissioning of 250 mm dia Air Vessel with 25 mm Air Release Valve CPWD SOR 2022 Page no P-70(18.20) | | | | | | |
| | a. Supply | Audco / NVR /Venus/Zoloto | Each | 2 | | | - |
| | b, Installation, Testing & Commissioning | | | 2 | | | - |
| 2.9 | Installation and fixing Cast Iron wafer type butterfly valves of C.I / S.S (304) disc, Nitrile/EPDM rubber lining of PN-16 pressure rating complete with bolts, nuts, 3.0 mm thick compressed asbestos gasket, companion flanges as per table 'E' complete in all respects. CPWD SOR 2022 Page no P-69 (18.11.5) | | | | | | |
| | a. Supply | | | 0 | | | - |
| 2.9.a | b, Installation, Testing & Commissioning | | Audco / NVR /Venus/Zoloto | Each | | | |
| | 100 mm dia with lever (For Landing Valve) | | | 6 | | | - |
| 2.10 | Supply, Installation and fixing dial type pressure gauge with isolation cock and chrome plated copper pipe at hydrant station. Non-Schedule Item | | | | | | |
| | a. Supply | | H Guru | Each | 0 | | - |
| 2.10.a | b, Installation, Testing & Commissioning | | | | | | |
| | Dial diameter 150 mm calibration 0-15 kg/cm ² . | | | | 6 | | - |
| 2.11 | SSupply, Installation, Testing & Commissioning of non-rising spindle type CI gate valves class PN 1.6 as per IS14846 complete with matching flanges, rubber insertion, nuts, bolts and washer etc. of following sizes and complete in all respect with all labour, tools & plants, transportation, taxes, levies etc. and as per specification, drawing and direction of Engineer-in-charge CPWD SOR 2022 Page no P-69 (18.12.7) & (18.12.6) | | | | | | |
| | a. Supply | | | Each | 0 | | - |
| 2.11.1 | 200 mm dia | | Audco / NVR /Venus/Zoloto | | 6 | | - |
| 2.11.2 | 150 mm dia | | | | 3 | | - |
| | b, Installation, Testing & Commissioning | | | LS | 1 | | - |
| 2.12 | Supply, Installation, Testing & Commissioning of NP4 Hume Pipe Non Schedule Item | | | | | | |
| | a. Supply | | | | | | |
| 2.12.1 | 400 mm dia | | Audco / NVR /Venus/Zoloto | Meter | 150 | | - |
| 2.12.2 | 300 mm dia | | | | 75 | | - |
| | b, Installation, Testing & Commissioning | | | LS | 1 | | - |
| 3.0 | Sprinkler System Supply, Installation, Testing & Commissioning of 15 mm size (Male threaded, BSP) Quartzoid bulb type G.M. Sprinkler head suitable to operate at 68 deg. C/79 deg. C (UL/FM/LOC listed/ approved) and complete in all respect with all labour, tools & plants, transportation, taxes levies etc. and as per specification, drawing and direction of Engineer-in-charge CPWD SOR 2022 Page no P-70 (18.21.1) & (18.21.3) | | | | | | |
| | a. Supply | | | | | | |
| 3.1.1 | Standard pendent type in chrome finish P-70 (18.21.1) | | HD / Viking | Each | 650 | | - |
| 3.1.2 | Standard side throw type in chrome finish (Extended Coverage) P-70 (18.21.3) | | | | 18 | | - |
| | b, Installation, Testing & Commissioning | | | LS | 1 | | - |

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| | 3.2 | Installation, Testing & Commissioning of mild steel black pipe Heavy Duty (IS:1239 Part I, for sizes 150 mm dia and below IS:3589 for sizes above 150 MM dia) of following sizes including cutting, threading, welding etc. bends, elbows, reducers, clamps hangers etc. including pipe supports, brackets etc. and cutting hole in brick or RCC walls / slabs including painting with one coat of primer and two or more coats of synthetic enamel paint of approved make and said including all steel work and complete in all respect with all labour, tools & plants, transportation, taxes, levies etc. and as per specification, drawing and direction of Engineer-in-charge CPWD SOR 2022 Page no P-68 (18.7.1) to (18.7.8) | | | | |
| | | a. Supply | | | nil | |
| | | b. Installation, Testing & Commissioning | | | | |
| | 3.2.1 | 150 mm dia .. CPWD SOR 2022 Page no P-68 (18.7.8) | TATA/Jindal / Nezone | Meters | 924 | - |
| | 3.2.2 | 100 mm dia .. CPWD SOR 2022 Page no P-68 (18.7.7) | | Meters | 18 | - |
| | 3.2.3 | 80 mm dia .. CPWD SOR 2022 Page no P-68 (18.7.6) | | Meters | 492 | - |
| | 3.2.4 | 65 mm dia .. CPWD SOR 2022 Page no P-68 (18.7.5) | | Meters | 324 | - |
| | 3.2.5 | 50 mm dia, .. CPWD SOR 2022 Page no P-68 (18.7.4) | | Meters | 384 | - |
| | 3.2.6 | 40 mm dia .. CPWD SOR 2022 Page no P-68 (18.7.3) | | Meters | 282 | - |
| | 3.2.7 | 32 mm dia, .. CPWD SOR 2022 Page no P-68 (18.7.2) | | Meters | 120 | - |
| | 3.2.8 | 25mm dia, .. CPWD SOR 2022 Page no P-68 (18.7.1) | | Meters | 474 | - |
| | 3.3 | Under Ground Piping (External) Installation and fixing black steel pipes Heavy Class conforming to IS: 1239 (Part-I) 2004, amended up to date including all fittings like bends, elbows, tees, flanges, etc., welding as required including painting, wrapping and coating of the pipes as per IS: 10221-2008 in all kinds of soil at a depth 1.0 m including excavation and refilling the trench all complete. CPWD SOR 2022 Page no P-67 (18.6.2) | | | | |
| | | a. Supply | | | nil | |
| | 3.3.1 | 150 mm dia (For Yard Sprinkler Line) .. P-67 (18.6.2) | TATA/Jindal / Nezone | meters | 90 | - |
| | 3.4 | Supply, Installation and fixing of stainless steel (A1S1 304) unbraided flexible pipe for dropping sprinklers below false ceiling of 25mm dia of the following length and rated working pressure of 16 Kg/cm2 with all accessories like union, reducer, collar, clamp etc. as required. The flexible pipe shall be UL approved. CPWD SOR 2022 Page no P-71 (18.25.1 to 18.25.3) | | | | |
| | | a. Supply | HD / Viking | each | | |
| | 3.4.1 | 700 mm Page no P-71 (18.25.1) | | | 0 | - |
| | 3.4.2 | 1000 mm Page no P-71 (18.25.2) | | | 0 | - |
| | 3.4.3 | 500 mm ... Page no P-71 (18.25.3) | | | 184 | - |
| | | b. Installation and fixing | | | 184 | - |
| | 3.5 | Supply, Installation and fixing of stainless steel (A1S1 304) unbraided flexible pipe for dropping sprinklers below false ceiling of 25mm dia of the following length and rated working pressure of 16 Kg/cm2 with all accessories like union, reducer, collar, clamp etc. as required. The flexible pipe shall be UL approved. CPWD SOR 2022 Page no P-70 (18.23.1 to 18.23.2) | | | | |
| | | a. Supply | HD / Viking | each | | |
| | 3.5.1 | 65 mm Page no P-70 (18.23.) | | | 0 | - |
| | 3.5.2 | 80 mm ... Page no P-70 (18.23.) | | | 0 | - |
| | 3.5.3 | 100 mm ... Page no P-70 (18.23.1) | | | 6 | - |
| | 3.5.4 | 150 mm ... Page no P-70 (18.23.2) | | | 2 | - |
| | | b. Installation and fixing | | | 8 | - |
| | 3.6 | Supply, Installation, Testing and Commissioning of 150 mm dia. Installation Control Valve assembly comprising of vertical wet alarm valve, hydraulic alarm motor & gong, 15 mm dia test valve, 50 mm dia drain valve and all necessary connections as per manufacturer's specifications complete as required. (UL / FM / LPC / TAC listed / approved). CPWD SOR 2022 Page no P-71 (18.24.3) | | | | |
| | | a. Supply | Attasee/ Fire shield | each | 1 | - |
| | | b. Installation Testing and Commissioning | | | 1 | - |

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| 3.7 | Installation and fixing brass ball valve full bore type tested for 20 kg/cm² with lever and screwed female ends. Non Schedule Item | | | | | |
| | a. Supply | | | nil | | |
| 3.7.1 | b. Installation and fixing of 25 mm Dia | TATA/Jindal / Nezone | Each | 8 | | - |
| 3.7.2 | 50 mm dia | | | 4 | | - |
| 3.8 | Installation and fixing Cast Iron wafer type butterfly valves of C.I / S.S (304) disc, Nitrile/EPDM rubber lining of PN-16 pressure rating complete with bolts, nuts, 3.0 mm thick compressed asbestos gasket, companion flanges as per table 'E' complete in all respects. CPWD SOR 2022 Page no P-69(18.11.3) to (18.11.6) | | | | | |
| | a. Supply | | | nil | | |
| | b. Installastion Testing and Commissioning | | | | | |
| 3.8.1 | a. 65 mm dia with lever | Audco / NVR/ Venus / Zoloto | each | 1 | | - |
| 3.8.2 | b. 80 mm dia with lever | | | 3 | | - |
| 3.8.3 | c. 100 mm dia with lever | | | 1 | | - |
| 3.8.4 | d. 150 mm dia with lever | | | 5 | | - |
| 3.9 | Installation and fixing Cast Iron Swing Type with Natural Rubber Flap non return valves conforming to IS: 5312-1984 (Part-I) of PN-16 pressure rating with flanged ends to IS: 1538 including washer, nuts bolts, 1.5 mm thick coppedsed asbestos gasket companion flanges as per table "E" complete in all respects. CPWD SOR 2022 Page no P-69(18.14.5) & (18.14.7) | | | | | |
| | a. Supply | | | nil | | |
| | b. Installastion Testing and Commissioning | | | | | |
| 3.9.1 | a. 100 mm dia with lever | Audco / NVR/ Venus / Zoloto | each | 1 | | - |
| 3.9.2 | b. 150 mm dia with lever (For FB Connection & @ Terrace) | | | 1 | | - |
| 3.10 | Supply, Installation, Testing & Commissioning of 250 mm dia Air Vessel with 25 mm Air Release Valve CPWD SOR 2022 Page no P-70 18.20.) | | | | | |
| | a. Supply | | | nil | | |
| 3.10.1 | 25 mm Dia | Audco / NVR/ Venus/Zoloto | Each | 5 | | - |
| | b. Installation Testing & Commissioning | | | 5 | | - |
| 3.11 | Supply, Installation and fixing dial type pressure gauge with isolation cock and chrome plated copper pipe at hydrant station. Non-Schedule Item | | | | | |
| | a. Supply | | | 0 | | - |
| 3.11.1 | Dial diameter 150 mm calibration 0-15 kg/cm ² | Audco / NVR/ Venus/Zoloto | Each | 2 | | - |
| 3.11.2 | Dial diameter 100 mm calibration 0-15 kg/cm ² . | | | 2 | | - |
| | b. Installation Testing & Commissioning | | | 4 | | - |
| 3.12 | Supply, Installation, Testing & Commissioning of NP4 Hume Pipe of 300 mm Dia Non-Scheduled item | | Meters | 90 | | - |
| 4.0 | Water Curtain System Installation, Testing & Commissioning of mild steel black pipe Heavy Duty (IS:1239 Part I , for sizes 150 mm dia and below IS:3589 for sizes above 150 MM dia) of following sizes including cutting, threading, welding etc. bends, elbows, reducers, clamps hangers etc. including pipe supports, brackets etc. and cutting hole in brick or RCC walls / slabs including painting with one coat of primer and two or more coats of synthetic enamel paint of approved make and said including all steel work and complete in all respect with all labour, tools & plants, transportation, taxes, levies etc. and as per specification, drawing and direction of Engineer-in-charge CPWD SOR 2022 Page no P-68 (18.7.8) & (18.7.7) | | | | | |
| | a. Supply | | | 0 | | - |
| | b. Installation, Testing & Commissioning | | | | | |
| 4.1.1 | 150 mm dia .. CPWD SOR 2022 Page no P-68 (18.7.8) | TATA/Jindal / Nezone | Meters | 786 | | - |
| 4.1.2 | 100 mm dia .. CPWD SOR 2022 Page no P-68 (18.7.7) | | | 60 | | - |

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| | 4.2 | Under Ground Piping (External) Installation and fixing black steel pipes Heavy Class confirming to IS: 1239 (Part-I) 2004, amended up to date including all fittings like bends, elbows, tees, flanges, etc., welding as required including painting, wrapping and coating of the pipes as per IS: 10221-2008 in all kinds of soil at a depth 1.0 m including excavation and refilling the trench all complete. CPWD SOR 2022 Page no P-67 (18.6.2) & (18.27) | | | | | |
| | | a. Supply | | | 0 | | - |
| | | b. Installation, Testing & Commissioning | TATA/Jindal / Nezone | | | | |
| | 4.2.1 | 150 mm dia (For Yard Water Curtain Line) P-67(18.6.2) | | Meters | 90 | | - |
| | 4.2 | Supply, Installation, Testing & Commissioning of Water Curtain Nozzle CPWD SOR 2022 Page no P-71 (18.27) | | | | | |
| | | a. Supply | HD/ Viking | each | 72 | | - |
| | | b. Installation, Testing & Commissioning | | | 72 | | - |
| | 4.2.A | Supply, Installation, Testing & Commissioning of Open Nozzle CPWD SOR 2022 Page no | | | | | |
| | | a. Supply | | each | 28 | | - |
| | | b. Installation, Testing & Commissioning | | | 28 | | - |
| | 4.3 | Deluge valve 150 NB CPWD SOR 2022 Page no P-71 (18.26.4) | | each | 4 | | - |
| | 4.4 | Solenoid Valve CPWD SOR 2022 Page no P-71 (18.28.) | | each | 4 | | - |
| | 4.5 | Installation and fixing Cast Iron wafer type butterfly valves of C.I / S.S (304) disc, Nitrile/EPDM rubber lining of PN-16 pressure rating complete with bolts, nuts, 3.0 mm thick compressed asbestos gasket, companion flanges as per table 'E' complete in all respects. CPWD SOR 2022 Page no P-69 (18.11.6) | | | | | |
| | | a. Supply | Audco / NVR/Venus/Zolo to | | 0 | | - |
| | 4.5.1 | b. Installation, Testing & Commissioning | | each | 8 | | - |
| | 4.6 | Supply, Installation, Testing & Commissioning of NP4 Hume Pipe 300 mm dia | | Meters | 90 | | - |
| | 4.7 | Supply, Installation, Testing & Commissioning of Panel for Water Curtain System | | | | | |
| | | a. Supply | EAT / SYSTEM CONTROL | each | 1 | | - |
| | | b. Installation, Testing & Commissioning | | | 1 | | - |
| | 5 | Fire Alarm System Supply, Installation, Testing & Commissioning of PVC insulated 2C x 1.5 sq. mm multistrand copper FRLS Armored cable to be laid through concealed PVC conduit Medium Duty and complete in all respect with all labour, tools & plants, transportation, taxes, levies etc. and as per specification, drawing and direction of Engineer-in-charge . CPWD SOR 2022 Page no P-59 (17.5.1) | | | | | |
| | 5.1 | a. Supply | Finolex, Havells, Cords | Meters | 2500 | | - |
| | | b. Installation, Testing & Commissioning | | | 2500 | | - |
| | 5.2 | Supply, Installation, Testing & Commissioning of Electronic Sounder / Strobe with gland, lugs, etc. and complete in all respect with labour, tools & plants, transportation, taxes, levies etc. and as per specification, drawing and direction of Engineer-in-charge CPWD SOR 2022 Page no P-58 (17.2.16) | | | | | |
| | | a. Supply | Honeywell, Hochiki, Apollo, GST | each | 20 | | - |
| | | b. Installation, Testing & Commissioning | | | 20 | | - |
| | 5.3 | Fire alarm panel 2 loop panel suitable to accommodate at least 190 detector & 190 Devices and complete Fire Alarm Control Panel with minimum 6 inch The panel shall have 240 volts AC power ., automatic battery charger, 24 volts, sealed lead acid maintenance free batteries sufficient for 24 hours normal working and then be capable of operating the system for 60 minutes during emergency condition with all necessary display, power pack unit i.e. with battery & battery charger and complete in all respect with all labour, tools & plants, transportation, taxes, levies etc. and as per specification, drawing and direction of Engineer-in-charge. Note: FDA Panel should be capable for integration with BMS System Modbus / BACnet is Inclusive CPWD SOR 2022 Page no P-57 (17.2.1. 2) | | | | | |
| | | a. Supply | Honeywell, Hochiki, Apollo, GST | Each | 5 | | - |
| | | b. Installation, Testing & Commissioning | | | 5 | | - |

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| 5.4 | Supply, Installation, Testing & Commissioning of type Optical smoke detector addressable with base, gland, lugs etc. and complete in all respect with labour, tools & plants, transportation, taxes, levies etc. and as per specification, drawing and direction of Engineer-in-charge CPWD SOR 2022 Page no P-57 (17.2.4) | | | | | |
| | a. Supply | Honeywell, Hochiki, Apollo, GST | Each | 80 | | - |
| | b. Installation, Testing & Commissioning | | | 80 | | - |
| 5.5 | Supply, Installation, Testing & Commissioning of type manual call point with push type etc. and complete in all respect with labour, tools & plants, transportation, taxes, levies etc. and as per specification, drawing and direction of Engineer-in-charge CPWD SOR 2022 Page no P-58 (17.2.4) | | | | | |
| | a. Supply | Honeywell, Hochiki, Apollo, GST | Each | 14 | | - |
| | b. Installation, Testing & Commissioning | | | 14 | | - |
| 5.6 | Control Module CPWD SOR 2022 Page no P-58 (17.2.10) | | | | | |
| | a. Supply | Honeywell, Hochiki, Apollo, GST | Each | 20 | | - |
| | b. Installation, Testing & Commissioning | | | 20 | | - |
| 5.7 | Monitor Module Non- Schedule Item | | | | | |
| | a. Supply | Honeywell, Hochiki, Apollo, GST | Each | 7 | | - |
| | b. Installation, Testing & Commissioning | | | 7 | | - |
| 5.8 | Supply, transportation, unloading, storing at work site, handling, termination of cable, installation, testing and commissioning of addressable Fault Isolation module with housing. The job includes the . of fixing arrangement & all necessary accessories, chase cut and filling with mortar to complete in all respect. | | | | | |
| | a. Supply | | | | | - |
| | b. Installation, Testing & Commissioning | | | | | - |
| 5.9 | Supply, Installation, Testing & Commissioning of Beam Detector CPWD SOR 2022 Page no P-58 (17.2.12) | | | | | |
| | a. Supply | Honeywell, Hochiki, Apollo, GST | Each | 12 | | - |
| | b. Installation, Testing & Commissioning | | | 12 | | - |
| 5.10 | STROBES CUM DUAL TONE Speaker Supply, installation, testing and commissioning of Strobes cum Dual tone hooters with minimum of 110cd and 93 dB complete as required. CPWD SOR 2022 Page no P-58 (17.2.16) | | | | | |
| | a. Supply | Honeywell, Hochiki, Apollo, GST | Each | 20 | | - |
| | b. Installation, Testing & Commissioning | | | 20 | | - |
| 5.11 | Supply, transportation, unloading, storing at work site, handling, laying and termination of 20mm dia FRLS PVC conduit Medium Duty ISI Mark with conduit accessories, Clamps including, of all consumables and fittings, chase cutting, mortar filling. CPWD SOR 2022 Page no P-115 (4143) | | | | | |
| | a. Supply | AKG. Cords Polycab | meters | 1500 | | - |
| | b. Installation, Testing & Commissioning | | | 1500 | | - |
| 5.12 | Supplying, installation, testing & commissioning of 6 zone, voice alarm controller with USB, MP3 Player (including 6 zone) CPWD SOR 2022 Page no P- 58 (17.3.1) | | | | | |
| | a. Supply | AHUJA | each | 5 | | - |
| | b. Installation, Testing & Commissioning | | | 5 | | - |

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| 6 | CIVIL WORK | | | | | | |
| 6.1 | Under Ground Pump Room (Size: 10 Mts. X 6 Mts.) Height: 4 Mtr. Including Foundation ; Clear Height: 3.0 Mtr. ; Including Painting, Roof water proofing, Plinth protection, rolling shutter, Fixed glass window, Electrical fittings and Fixtures - Please confirm Non - SCHEDULE Item | | LS | 1 | | | - |
| 6.2 | Pedestal with proper foundation as per NBC for Over Ground Pipe 6.0 MT load bearing capacity Non - SCHEDULE Item | | | | | | |
| 6.2.1 | Pedestal Size 1550 x 300 x 1600 | | each | 391 | | | - |
| 6.2.2 | Pedestal Size 1000 x 300 x 1600 | | each | 72 | | | - |
| 6.2.3 | Pedestal Size 500 x 300 x 1600 | | each | 204 | | | - |
| 7 | Repairing Work | | | | | | |
| 7.1 | False Ceiling Repairing & Replacing | | Sq m | 734 | | | - |
| 7.2 | Road Cutting & Repairing (Mentioned in the drawing | | RM | 205 | | | - |
| 8 | Exhaust System | | | | | | |
| 8.1 | 2500 cfm Axial Fan = 15 static Pressure | SIWENT | each | 2 | | | - |
| 8.2 | Cabling | POLYCAB | LOT | 1 | | | - |
| 8.3 | Panel for Exhaust Fan | EAT / SYSTEM CONTROL | Each | 1 | | | - |
| Total (Supply + Erection) = | | | Sub -Total Supply | | S | | |
| | | | Sub -Total Erection | | E | | |
| | | | GST % considered - Value | | GST | | |
| | | | Grand Total | | | | |
| | | We agree to execute the works in accordance with the approved drawings and technical specifications at a total fixed contract price of (Supplies + Erection) Rs..... (Amount in figures) and (Rs..... amount in words). Without GST and Rswith GST. | | | | | |
| | | Signature of Contractor | | | | | |
| Note :- the Total Stated above should tally & should be same as stated at ON-Line BOQ .xls format as a. Supply Amount b. Erection Amount c. GST Amount. | | | | | | | |