

**KITCO LTD**  
**NATIONAL GAMES SECRETARIAT**  
**CONSTRUCTION OF MUNICIPAL STADIUM AT PALA**  
**SPECIFICATION AND SCHEDULE OF QUANTITIES - PART A- CIVIL WORKS**

| SI.No                  | Description Of Items  | Unit | Quantity | Rate(Rs) | Amount(Rs) |
|------------------------|---|------|----------|----------|------------|
| <b>SH :1 EARTHWORK</b> |   |      |          |          |            |
| 1.01                   | Clearing grass and removal of the rubbish up to a distance of 50 m outside the periphery of the area cleared.   | sqm  | 21971.00 | 4.43     | 97,332     |
| 1.02                   | Surface dressing of the ground including removing vegetation and inequalities not exceeding 15cm deep and disposal of rubbish, lead upto 50m and lift upto 1.5m.<br>All kinds of soil   | sqm  | 21971.00 | 16.43    | 360,984    |
| 1.03                   | Felling trees of the girth(measured at a height of 1m above ground level) including cutting of trunks and branches removing the roots and stacking of serviceable material and disposal of unserviceable materials as directed by the Engineer-in-Charge.   |      |          |          |            |
| 1.03.01                | Beyond 30cm girth upto and including 60cm girth   | no   | 2.00     | 261.57   | 523        |
| 1.03.02                | Beyond 60cm girth upto and including 120cm girth  | no   | 2.00     | 1162.21  | 2,324      |
| 1.03.03                | Beyond 120cm girth upto and including 240cm girth   | no   | 4.00     | 5381.54  | 21,526     |
| 1.04                   | Earth work in excavation by means (Hydraulic excavator)/manual means in foundation trenches or drains (not exceeding 1.5m in width or 10 sqm on plan) including dressing of sides and ramming of bottoms, lift upto 1.5m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within the site as directed by the Engineer- in-Charge.<br>All kinds of soil | cum  | 1083.00  | 301.03   | 326,015    |
| 1.05                   | Do same as above <b>item no1.04</b> but for every additional lift of 1.5m to 3.00m or part there of<br>All kinds of soil.   | cum  | 189.00   | 365.59   | 69,097     |
| 1.06                   | Earth work in excavation by means (Hydraulic excavator)/manual means over areas (exceeding 30cm in depth.1.5m in width as well as 10 sqm on plan) including disposal of excavated earth, lead upto 50 m and lift upto 1.5 m; disposed earth to be levelled and neatly dressed, as directed by the Engineer- in-Charge<br>All kinds of soil.   | cum  | 40.00    | 301.03   | 12,041     |
| 1.07                   | Do same as above <b>item no. 1.06</b> but for every additional lift of 1.5m to 3.00m or part there of :All kinds of soil  | cum  | 6.00     | 365.59   | 2,194      |
| 1.08                   | Filling in plinth or trenches, under floors, foundations, in areas etc. with red earth including watering, ramming consolidating and dressing, cost and conveyance of all materials,labour charges,lead,lift etc complete at all levels as directed by the Engineer- in-Charge  | cum  | 20.00    | 771.34   | 15,427     |
| 1.09                   | Filling available excavated earth(excluding rock) in trenches, under floors,plinth,sides of foundation,in areas etc. in layers not exceeding 20cm in depth,consoldating each deposited layer by ramming and watering,lead upto 50m and lift upto 1.5m including cost and conveyance of all materials,labour charges, etc complete at all levels as directed by the Engineer-in-Charge               | cum  | 207.00   | 126.99   | 26,287     |

| SI.No                              | Description Of Items  | Unit | Quantity | Rate(Rs) | Amount(Rs)        |
|------------------------------------|---|------|----------|----------|-------------------|
| 1.10                               | Excavating trenches of required width for pipes, cables, etc. including excavation for sockets, and dressing of sides, ramming of bottoms, depth up to 1.5m including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil and unserviceable material as directed, within a lead of 50 m<br><br>All kinds of soil<br>Pipes, cables etc. not exceeding 80mm dia   | m    | 180.00   | 202.24   | 36,403            |
| 1.11                               | Bailing out water from well with 5HP Engine and pump set including conveyance to the site and erection, cost of fuel, lubricating oil and other stores etc. complete as directed by the Engineer- in-Charge.  | hr   | 110.00   | 206.76   | 22,744            |
| 1.12                               | Consolidation of earth by ramming in 15 cm layers including watering cost and conveyance of all materials ,labour charges etc complete as directed by the Engineer- in-Ccharge.   | cum  | 20.00    | 30.66    | 613               |
| 1.13                               | Extra for additional lead upto 100m over initial lead of 50m for disposing surplus excavated earth as per the direction of Engineer-in-Charge.  | cum  | 322.00   | 74.45    | 23,973            |
| 1.14                               | Providing and filling the areas with good quality red earth brought from outside with all leads and lifts, transporting to site, spreading, grading to the required slope and compacting as per MORT&H specification Section 305 including cost and conveyance of all materials,labour charges ,lead,lift etc complete as directed by the Engineer- in-Charge   | cum  | 21971.00 | 797.00   | 17,510,887        |
| 1.15                               | Providing and filling the areas with good quality earth available at site with all leads and lifts, transporting to site, spreading, grading to the required slope and compacting as per MORT&H specification Section 305 including cost and conveyance of all materials,labour charges ,lead,lift etc complete as directed by the Engineer- in-Charge  | cum  | 594.00   | 797.00   | 473,420           |
| <b>1.16 ( PILE WORK)</b>           |   |      |          |          |                   |
| 1.16.01                            | Boring, providing and installing bored cast - in - situ reinforced cement concrete pile of specified diameter and length below the pile cap in <b>M35 mix</b> ( with min cement content : 420 kg/ cum) in cement concrete, to carry a safe working load not less than specified, excluding the cost of steel reinforcement but including the cost of boring with, bentonite solution and temporary casing of appropriate length for setting out and removal of same and the length of the pile to be embedded in the pile cap.chipping the pile, etc complete. including removal of excavated earth with all lifts and leads (Length of pile for payment shall be measured up to bottom of pile cap.) |      |          |          |                   |
| 1.16.01.01                         | 500mm dia   | m    | 896.00   | 3173.91  | 2,843,823         |
| 1.16.02                            | Arranging and conducting vertical load testing of piles in accordance with IS.2911 (Part IV ) including installation of loading platform and preparation of pile head or construction of test cap and dismantling of test cap after test etc complete as per specification & the direction of Engineer - in - Charge.<br>Single pile up to 50 Tonne capacity  |      |          |          |                   |
| 1.16.02.01                         | Initial test<br>Single pile up to 50 Tonne capacity   | no   | 2.00     | 47110.44 | 94,221            |
| 1.16.02.02                         | Routine test.   | no   | 2.00     | 27783.08 | 55,566            |
| <b>TOTAL OF SUB HEAD -1.0</b>      |   |      |          |          | <b>21,995,399</b> |
| <b>(SH: - 2.0 - CONCRETE WORK)</b> |   |      |          |          |                   |

| SI.No                            | Description Of Items  | Unit | Quantity | Rate(Rs) | Amount(Rs)       |
|----------------------------------|---|------|----------|----------|------------------|
| 2.01                             | Providing and laying cement concrete of specific grade properly mixed and consolidated with hand rammers, including cost and conveyance of all materials, labour, curing, lead lift , etc. complete for all work up to plinth levels as directed by Engineer- in-Charge.  |      |          |          |                  |
| 2.01.01                          | 1:4:8 (1 Cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size)  | cum  | 263.00   | 5581.29  | 1,467,879        |
| 2.01.02                          | 1:2:4 (1 Cement : 2coarse sand : 4 graded stone aggregate 20mm nominal size)  | cum  | 7.00     | 6826.50  | 47,786           |
| 2.02                             | Extra for providing and mixing water proofing liquid in cement concrete work, masonry work, plastering etc in the proportion recommended by the manufacturers including cost and conveyance of all materials, labour, curing, lead lift , etc. complete as directed by Engineer-in-Charge at all levels.  | ltr  | 1069.00  | 75.50    | 80,710           |
| 2.03                             | Providing and laying damp-proof course 50mm thick with cement concrete1:2:4 (1 cement: 2coarse sand : 4 graded stone aggregate of 20mm nominal size) including cost and conveyance of all materials,labour charges,lead,lift etc complete at all levels as directed by the Engineer- in-Charge  | sqm  | 56.00    | 444.83   | 24,910           |
| 2.04                             | Applying a coat of residual petroleum bitumen of penetration 80/100 of approved quality using 1.7kg per square metre on damp -proof course after cleaning the surface with brushes and finally with a piece of cloth lightly soaked in kerosene oil including cost and conveyance of all materials,labour charges,lead,lift etc complete at all levels as directed by the Engineer-in-Charge  | sqm  | 56.00    | 114.43   | 6,408            |
| <b>TOTAL OF SUB HEAD -2.0</b>    |   |      |          |          | <b>1,627,693</b> |
| <b>(SH: - 3.0 - R.C.C. WORK)</b> |   |      |          |          |                  |
| 3.01                             | Providing and laying in position machine batched, machine mixed and machine vibrated design mix cement concrete of M-25 grade for reinforced cement concrete structural elements, excluding the cost of centering, shuttering, finishing and reinforcement including admixtures in recommended proportion (as per IS 9103) to accelerate,retard setting of concrete to improve workability without impairing strength and durability as per direction of Engineer-in-Charge . |      |          |          |                  |
|                                  | All work upto plinth level.   | cum  | 416.00   | 8163.38  | 3,395,966        |
| 3.02                             | Providing and laying in position machine batched, machine mixed and machine vibrated design mix cement concrete of M-30 grade for reinforced cement concrete structural elements, excluding the cost of centering, shuttering, finishing and reinforcement including admixtures in recommended proportion (as per IS 9103) to accelerate,retard setting of concrete to improve workability without impairing strength and durability as per direction of Engineer-in-Charge   |      |          |          |                  |
|                                  | All work upto plinth level.   | cum  | 221.00   | 8314.10  | 1,837,416        |
| 3.03                             | Providing and laying in position machine batched, machine mixed and machine vibrated design mix cement concrete of M-25 grade for reinforced cement concrete structural elements, excluding the cost of centering, shuttering, finishing and reinforcement including admixtures in recommended proportion (as per IS 9103) to accelerate,retard setting of concrete to improve workability without impairing strength and durability as per direction of Engineer-in-Charge   |      |          |          |                  |
|                                  | All work upto floor V level.  | cum  | 465.00   | 8163.38  | 3,795,972        |

| SI.No                             | Description Of Items  | Unit | Quantity  | Rate(Rs) | Amount(Rs)        |
|-----------------------------------|---|------|-----------|----------|-------------------|
| 3.04                              | Providing ,hoisting and fixing upto floor five level precast cement concrete string or lacing courses, copings, bed plates, anchor blocks, plain window sills, shelves, louvers, steps, stair cases, slabs,brackets etc. including hoisting and setting in position with cement mortar 1:3 (1 Cement : 3 coarse sand), cost of required centering, shuttering and finishing smooth with 6mm thick cement plaster 1:3 (1 Cement : 3 fine sand) on exposed surfaces complete.but excluding the cost of reinforcement with<br><br>1:2:4 (1 Cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) | cum  | 37.00     | 15533.14 | 574,726           |
| 3.05                              | Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding with 16 gauge GI binding wire etc complete including cost, conveyance, lead, lift of all materials for all types of RCC works as per drawing/specification and as directed by Engineer-in-Charge at all levels.<br>Thermo-Mechanically Treated bars  | kg   | 147643.00 | 76.50    | 11,294,690        |
| 3.06                              | Centering and shuttering including strutting, propping etc. and removal of form for :   |      |           |          |                   |
| 3.06.01                           | Foundations, footings, bases of columns etc. for mass concrete.   | sqm  | 424.00    | 279.20   | 118,381           |
| 3.06.02                           | Suspended floors, roofs, landings, balconies and access platform.   | sqm  | 1491.00   | 510.36   | 760,947           |
| 3.06.03                           | Lintels, beams, plinth beams, girders, bressumers and cantilevers.  | sqm  | 2080.00   | 418.59   | 870,667           |
| 3.06.04                           | Columns, Pillars, Piers, Abutments, Posts and Struts.   | sqm  | 619.00    | 630.18   | 390,081           |
| 3.06.05                           | Vertical and horizontal fins individually or forming box louvers band,fasias, and eaves board   | sqm  | 30.00     | 722.66   | 21,680            |
| 3.06.06                           | Stairs, (excluding landings) except spiral staircases.  | sqm  | 171.00    | 474.27   | 81,100            |
| 3.06.07                           | Edges of slab and breaks in floors and walls under 20 cms wide  | m    | 743.00    | 144.50   | 107,364           |
| 3.06.08                           | Weather shade, Chajjas, corbels etc., including edges.  | sqm  | 148.00    | 601.94   | 89,087            |
| 3.06.09                           | Cornices and mouldings  | sqm  | 15.00     | 679.63   | 10,194            |
| 3.06.10                           | Walls of (any thickness)including attached pilasters butteresses plinth and string course etc.  | sqm  | 1011.00   | 483.19   | 488,505           |
| 3.06.11                           | Small surfaces such as cantelever ends,brackets, ends of steps caps and bases to pilasters and column and the like.   | sqm  | 10.00     | 594.58   | 5,946             |
| 3.07                              | Extra for additional height in centering, shuttering where ever required with adequate bracing propping, etc. including cost of deshuttering and decentering at all levels ,over a height of 3.5 m for every additional height of 1m or part there of (plan area to be measured)  | sqm  | 795.00    | 283.89   | 225,693           |
| <b>TOTAL SUB HEAD-3.0</b>         |   |      |           |          | <b>24,068,414</b> |
| <b>(SH: - 4.0 - MASONRY WORK)</b> |   |      |           |          |                   |
| 4.01                              | Providing and constructing Solid block masonry M-10 grade(mix 1:3:6)(1;cement ,3:crusher sand,6: 6mm metal) in C.M1:6(1cement, 6 coarse sand) with Solid blocks of 30x20x15 cm size and approved quality including scaffolding, raking out of joints,curing, cost and conveyance of all materials,labour, lead, lift, etc. complete for all types of masonry works in below the highest plinth level as directed by Engineer-in-Charge  | cum  | 27.00     | 5106.49  | 137,875           |

| SI.No                     | Description Of Items  | Unit | Quantity | Rate(Rs) | Amount(Rs)       |
|---------------------------|---|------|----------|----------|------------------|
| 4.02                      | Providing and constructing Solid block masonry M-10 grade(mix 1:3:6) (1;cement ,3:crusher sand,6: 6mm metal)in CM1:6(1cement, 6 coarse sand) with Solid blocks of 30x20x15 cm size and approved quality including scaffolding, raking out of joints,curing, cost and conveyance of all materials,labour, lead, lift, etc. complete for all types of masonry works in super structure above the highest plinth level as directed by Engineer-in-Charge at all levels   | cum  | 279.00   | 6361.67  | 1,774,906        |
| 4.03                      | Providing and constructing 115mm thick brick masonry in CM 1:4 (1 cement, 4 coarse sand) in partition walls, parapets, etc. with bricks of standard sizes and of approved quality (average compressive strength not less than 50 Kg/cm2) including scaffolding, raking out of joints, curing, cost and conveyance of all materials, lead,lift, etc.complete including providing 2 Nos. of 8mm dia bars as reinforcement at every third layer wherever specified (Reinforcement shall be measured and paid for under relevent item ) and as directed by Engineer-in-Charge             | sqm  | 171.00   | 690.66   | 118,103          |
| 4.04                      | Extra for providing and placing in position 2 Nos. 6 mm dia M.S. bars at every third course of single block masonry at all levels including cost and conveyance of MS bars etc complete as directed by Engineer-in-Charge   | sqm  | 171.00   | 80.82    | 13,820           |
| 4.05                      | Random rubble masonry with hard stone in foundation and plinth including levelling up with cement concrete 1:6:12 (1 cement : 6 coarse sand : 12 graded stone aggregate 20mm nominal size) at plinth level with cement mortar 1:6 (1 cement : 6 coarse sand)including raking out of joints,filling the joints /hollows with suitable sizes of split stones,filling the joints clearly, curing,cost and conveyance of all materials, cost of bond stone (should be provided at every 0.5 sqm of face area) , lead, lift etc. complete as directed by Engineer-in-Charge at all levels. | cum  | 364.00   | 4874.27  | 1,774,234        |
| <b>TOTAL SUB HEAD 4.0</b> |   |      |          |          | <b>3,818,939</b> |

**(SH: - 5.0 - JOINERY WORKS )**

|      |  |  |       |         |         |
|------|--|--|-------|---------|---------|
| 5.01 | Providing and fixing doors fabricated from unplasticized poly vinyl chloride (UPVC) sections. Profiles should be three chamber system which provides high insulation properties with outer frame 60 x 55 x 35 mm with an outer wall thickness of 2.4mm. The door unit will be design with all corner joints mitred and fusion welded. Doors should be steel reinforcement with 25 x 24 x 25 mm steel reinforcement with a thickness of 1 mm to have dimensional stability. The sash should be of 102 x 60 x 62 mm and the mullion should be of 74 x 60 x 34 mm respectively. The profile should have co extruded seal. All the hardware should be screwed with self tapping screws. The lock should be with 2D multipoint locking system. The entire unit should be supplied with all standard accessories and gaskets. The door can be half glazed, full glazed and fully with panel boards of 5mm, 6mm and 10 to 20mm respectively, Complete. The rate shall include the cost and conveyance of all materials labour charges ,lead lift etc complete as directed by the Engineer-in-Charge at all levels |  | 44.00 | 6808.00 | 299,552 |
| 5.02 | Providing and fixing casement windows,ventilators fabricated from unplasticized poly vinyl chloride (UPVC) sections. Profiles should be three chamber system which provides high insulation properties with outer frame 60 x 55 mm with an outer wall thickness of 2.4mm. The window unit will be design with all corner joints mitred and fusion welded. Windows should be steel reinforcement with 25 x 24 x 25 mm steel   |  |       |         |         |

| SI.No                           | Description Of Items   | Unit | Quantity | Rate(Rs) | Amount(Rs)       |
|---------------------------------|--|------|----------|----------|------------------|
|                                 | reinforcement with a thickness of 1 mm to have dimensional stability. The sash should be of 60x75 mm and the mullion should be of 60x74 mm respectively. The profile should have co extruded seal. All the hardware like friction stayshandles should be screwed with self tapping screws. The handles, lock should be designed so that they cannot be released from out side. The window system should be glazed with 5 mm plain float glass and ventilators should be glazed with 3 mm plain float glass The profiles should be cut to length and welded 45 degrees. The window should be designed such that the water drainage does not pass through the reinforcement chamber. The window system should be fixed directly to the plastered brick wall using self expanding nylon plug and driving ms electroplated screws into plug The rate shall include the cost and conveyance of all materials labour charges ,lead lift etc complete as directed by the Engineer-in-Charge at all levels | sqm  | 163.00   | 5658.00  | 922,254          |
| 5.03                            | Providing and fixing IS : 3564 marked aluminium extruded section body tubular type universal hydraulic door closer with double speed adjustment with necessary accessories and screws etc. complete as directed by the Engineer- in- Charge.   | no   | 13.00    | 1445.07  | 18,786           |
| 5.04                            | Supply and installation of merino model type ZMS series or equivalent Changing cubicles consisting of high pressure 12mm thick compact laminate board with phenolic core panels for partitions of intermediate divider, doors and pilasters. The cubicle shall have dimensions of 1000mm depth x 1500mm width x 2003mm height with a door size of 650mm width , the assembly shall be supported by black satin finish aluminium head rail on top of panels and panels shall fixed on the floor with a clearance of maximum 150mm using aluminium alloy satin finish adjustable legs screwed to the floor.  | no   | 26.00    | 29624.89 | 770,247          |
| 5.05                            | Providing and fixing gyprex tile false ceiling using 9 mm thick wall paper finish tiles of approved colour and design and of size 595x595mm in line and horizontal level suspended on interlocking metal grid of hot dipped galvanised steel sections consisting of "T", runner suitably spaced at joints to get required length and of size 24x38mm and cross "T" of size 24x28mm fixed at a spacing of 600mmx600mm cutting/making opening for services like diffusers, grills, light fittings, fixtures, smoke, detectors etc. Main "T" runner shall be suspended from ceiling using GI slotted cleats fixed to ceiling with expansion bolt/metal rawl plug, 4mm GI rodes with galvanised spring steel level clips spaced at 1200mm centre along mai "T", bottom, exposed width of 24mm of all "T" sections shall centre along main be polyester stove enamelled finish, all complete at all heights as per specifications, drawings and as directed by Engineer-in-Charge.                      | sqm  | 515.00   | 754.98   | 388,815          |
| <b>TOTAL OF SUB HEAD-5.0</b>    |  |      |          |          | <b>2,399,654</b> |
| <b>(SH: - 6.0 - STEEL WORK)</b> |  |      |          |          |                  |
| 6.01                            | Steel work welded in built up sections/framed work including cutting hoisting, fixing in position and applying two coats of approved make and colour synthetic enamel paint over two coats of approved make anticorrosive yellow zinc chromate primer, etc. including cost and conveyance of all materials, labour, lead, lift etc. complete as directed by Engineer- in-Charge at all levels.   |      |          |          |                  |
| 6.01.01                         | In stringers, treads, landings etc of staircases including use of chequered plate wherever required, all complete  | kg   | 1334.00  | 91.26    | 121,741          |
| 6.01.02                         | In gratings, frames, guard bar, ladders, railings, brackets, gates & similar works.  | kg   | 570.00   | 98.39    | 56,082           |

| SI.No | Description Of Items   | Unit | Quantity | Rate(Rs) | Amount(Rs) |
|-------|--|------|----------|----------|------------|
| 6.02  | Providing and fixing Stainless Steel handrail 316 grade using 50 mm dia pipe as top rail, 40 mm dia pipe with ball as vertical member, 3 nos 25 mm dia pipes for horizontal members. The vertical base is bolted to the step using SS plate and anchor bolts. The joints in SS are welded, grinded and buffed to approved finish. The rate shall include the cost and conveyance of all materials, labour charges, fixing the hand rail properly to the existing frame work, finishing etc. complete as per specification and as directed by the Engineer-in-charge  | m    | 32.00    | 7607.83  | 243,450    |
| 6.03  | Structural steel work welded in single sections, trusses and framed work including cutting, hoisting, fixing in position and applying two coats of Synthetic enamel paint over two coats of anticorrosive Yellow zinc chromate primer including cost and conveyance of all materials, labour charges, lead, lift etc complete as directed by Engineer in Charge at all levels.   | kg   | 766.00   | 67.64    | 51,812     |
| 6.04  | Supplying and fixing rolling shutters of approved make, made of required size M.S laths interlocked together through their entire length and jointed together at the end by end locks mounted on specially designed pipe shaft with brackets, side guides and arrangements for inside and outside locking with push and pull operation complete including the cost of providing and fixing necessary 27.5cm long wire springs grade No.2 and M.S top cover of required thickness for rolling shutters including two coats of approved make and colour synthetic enamel paint over two coats of approved make anticorrosive yellow zinc chromate primer, including cost and conveyance of all materials, labour charges, lead, lift etc complete as directed by Engineer in Charge at all levels. 80 X 1.25 mm M.S. Laths with 1.25mm thick top cover | sqm  | 36.00    | 3199.04  | 115,165    |
| 6.05  | Providing and fixing ball bearing for rolling shutters including cost and conveyance of all materials, labour, etc. as directed by the Engineer-in-Charge at all levels.   | no   | 6.00     | 448.31   | 2,690      |
| 6.06  | Steel work in built up tubular sections YST 310 grade as per IS: 4923 including cutting, hoisting, fixing in position, welded and bolted including special shaped washers etc. complete with electric resistance or induction butt welded tubes including painting with two coats of approved make and colour synthetic enamel paint over two coats of approved make anticorrosive yellow zinc chromate primer, closing all the open ends properly with same material cost and conveyance of all materials, labour, etc., complete as directed by the Engineer-in-Charge at all levels   | kg   | 4094.00  | 182.52   | 747,237    |
| 6.07  | Providing and fixing CI manhole cover with frame 560 mm dia heavy duty (the weight of the cover to be not less than 108 kg) in concrete slab over manholes/Inspection Chambers/Drains, including cost and conveyance of all materials, all labour charges, all taxes, lead, lift, sundries, etc., complete. as directed by the Engineer-in-Charge  | no   | 3.00     | 9614.78  | 28,844     |
| 6.08  | Providing and fixing G.I. chain link fabric fencing of required width in mesh size 50 x 50mm including strengthening with 2mm dia wire or nuts, bolts and washers as required complete as per the direction of Engineer-in-Charge.   | sqm  | 648.00   | 706.33   | 457,702    |
| 6.09  | Design, Supply and installation of tensile membrane structures using Fabric with required tensile strength, tear strength, adhesion, flame retardancy etc, including mild steel, pre-finished and epoxy painted supporting structures designed as per the directions of the architect, including framework, clamp plates, bolts, cables etc. as per design For the roof  | sqm  | 2634.00  | 9988.99  | 26,311,005 |

| <b>Sl.No</b>                 | <b>Description Of Items</b>   | <b>Unit</b> | <b>Quantity</b> | <b>Rate(Rs)</b> | <b>Amount(Rs)</b> |
|------------------------------|---|-------------|-----------------|-----------------|-------------------|
| 6.10                         | Providing cast iron Gate as per drawing and fixing in position including painting with two coat of anticorrosive yellow zinc chromate primer and two coats of synthetic enamel paint of approved quality and colour, including cost and conveyance of all materials, labour charges etc, complete as directed by the Engineer in Charge | kg          | 2108.00         | 92.92           | 195,875           |
| <b>TOTAL OF SUB HEAD-6.0</b> |   |             |                 |                 | <b>28,331,604</b> |



| SI.No | Description Of Items  | Unit | Quantity | Rate(Rs) | Amount(Rs) |
|-------|---|------|----------|----------|------------|
|       | <b>(SH: - 7.0 - FLOORING WORK)</b>  |      |          |          |            |
| 7.01  | Providing and laying best quality vitrified tiles 10mm thick of approved colour ,make and patterns in flooring skirting, treads of steps, landings etc., including an underlayer of cement mortar 1:4 (1 cement : 4 coarse sand) 20mm thick and cement slurry @ 3.3kg of cement per sqm. Finished with flush cost and conveyance of all materials labour etc.complete as directed by Engineer-in-Charge at all levels   |      |          |          |            |
|       | <b>Size of Tile 60x60 cm</b>  | sqm  | 267.00   | 1340.83  | 358,002    |
| 7.02  | Providing and fixing Vitrified wall tiles in skirting,dados etc 600x600x9 mm of 1st quality conforming to IS : 15622 of approved make,shade,and pattern laid on 12 mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) and jointed with grey cement slurry @ 3.3 kg/sqm including pointing in white cement mixed with pigment of matching shade .including cost and conveyance of all materials,labour charges,lead,lift etc, complete as directed by the Engineer in Charge.(The purchase price of tiles should be taken as Rs.655/sqm and any deviation plus or minus in the purchase price in approved shade will be adjusted in the price quoted).                   | sqm  | 15.00    | 1421.29  | 21,319     |
| 7.03  | Providing and laying Antiskid Ceramic floor tiles 300x300x7 mm of 1st quality conforming to IS : 15622 of approved make,shade,and pattern laid on 20mm thick cement mortar 1:4 (1 cement : 4 coarse sand) and jointed with grey cement slurry @ 3.3 kg/sqm including pointing the joints with white cement and matching pigment etc.including cost and conveyance of all materials,labour charges,lead,lift etc, complete as directed by the Engineer in Charge at all levels.(The purchase price of tiles should be taken as Rs.368/sqm and any deviation plus or minus in the purchase price in approved shade will be adjusted in the price quoted)                            | sqm  | 97.00    | 1007.01  | 97,680     |
| 7.04  | Providing and fixing 1st quality ceramic glazed wall tiles conforming to IS : 15622(thickness to be specified by the manufacture of approved make in all colours , shades except burgundy, bottle green, black of any size as approved by Engineer-in- charge in skirting, risers of steps and dados over 12mm thick bed of cement Mortar 1:3 (1 cement: 3 coarse sand) and jointing with grey cement slurry@ 3.3kg per sqm including pointing in white cement mixed with pigment of matching shade complete  | sqm  | 262.00   | 1062.94  | 278,490    |
| 7.05  | 52 mm thick cement concrete flooring with hardcare concrete hardener topping under layer 40mm thick cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) and top layer 12mm thick Hardcrete cement hardener consisting of mix 1:2 (1 cement hardener mix : 2 graded stone aggregate 6 mm nominal size) by volume with which Hardcrete hardening compound of approved make is mixed as per manufactures specification and providing and fixing 4 mm thick glass strips in approved pattern including cost of cement slurry, but excluding the cost of nosing of steps etc. complete as directed by the Engineer-in-Charge at all levels. | sqm  | 184.00   | 674.06   | 124,027    |
| 7.06  | Cement plaster skirting 18 mm thick with cement mortar 1:3 (1 cement: 3 coarse sand) finished with a floating coat of neat cement etc. complete as directed by the Engineer in Charge at all levels.  | sqm  | 83.00    | 420.95   | 34,939     |

| Sl.No | Description Of Items   | Unit | Quantity | Rate(Rs) | Amount(Rs) |
|-------|--|------|----------|----------|------------|
| 7.07  | Providing and laying in sunken floors with brick jelly concrete using well burnt broken brick bat 40mm size in layers in cement concrete in the ratio 1:4:8(1 cement: 4 coarse sand :8 brickbats of 40 mm size) including consolidating, curing, watering ,cost and conveyance of all materials,labour charges,lead,lift etc., complete as directed by the Engineer-in-Charge at all levels.   | cum  | 54.00    | 4743.67  | 256,158    |
| 7.08  | Providing and applying 2 coats of brush applicated water proofing membrane in sunken slab etc after thoroughly cleaning the surface by making it free of any loose mortar,unsound substrate, filling the joints of slab/wall, cracks in the slab ( if any ) including cost and conveyance of all materials,labour charges etc complete as directed by the Engineer in Charge . <b>The above work shall be carried by an agency having sufficient experience in membrane water proofing and should ensure a guarantee of 5 years. .Only skilled and experienced persons shall be employed for this purpose.</b>   | sqm  | 54.00    | 175.03   | 9,452      |
| 7.09  | Providing and laying 16 to 20 mm thick polished granite slab with edge rounding & polishing if required of approved colour,make and pattern on floors, top of counter slabs, skirting, treads of steps, landings etc., including an underlayer of cement mortar 1:4 ( 1 cement : 4 coarse sand) 20mm thick and cement slurry @ 3.3kg of cement per sqm, finished with flush pointing using approved joint filler of matching shade including cost and conveyance of all materials labour etc.complete as directed by Engineer-in-Charge at all levels  | sqm  | 124.00   | 3523.17  | 436,873    |
| 7.10  | Supplying and laying approved quality machine cut sadharali granite stone slab , 18mm thick mat finish in CM 1:4 ,25mm thick and neatly pointing in CM 1:3, including cost of all materials and labour lead,lift,joints finished with cement as per direction of Engineer-in-charge.   | sqm  | 750.00   | 3543.85  | 2,657,888  |
| 7.11  | Extra for providing edge moulding to 16 to 20mm thick marble/granite counters, Vanities etc. including machine polishing to edge to give high gloss finish,triple step groove etc. complete as per design and as approved by Engineer-in-Charge at all levels.   | m    | 36.00    | 280.14   | 10,085     |
| 7.12  | Extra for providing opening of required size & shape for wash basins/ kitchen sink in kitchen platform, vanity counters and similar location in marble/granite work including providing necessary holes for pillar taps etc. including rubbing and polishing of cut edges etc. complete as directed by the Engineer-in-Charge at all levels.   | no   | 8.00     | 511.33   | 4,091      |
| 7.13  | Providing and laying 80 mm thick High density cement concrete interlocking paver block of M - 40 grade as per IS:15658 2006 made by block making machine with strong vibratory compaction and of approved size and design/shape laid in required colour and pattern over and including 50 mm thick compacted bed of coarse sand, filling the joints with coarse sand etc., all complete as directed by the Engineer-in- Charge   | sqm  | 1684.00  | 842.09   | 1,418,075  |
| 7.14  | Providing and laying pool tiles in different sizes (thickness to be specified by the manufacturer) with water absorption's less than 0.08% and conforming to IS:15622 of approved make in all colours and shades, laid on cement base high polymer modified quick set tile adhesive (water based ) conforming to IS:15477, using 5kg. adhesive per sqm of tile area, in average 3mm thickness, filling the joints with matching epoxy filler complete as directed by Engineer in charge, complete.(The purchase price considered for tiles is as indicated below. Any deviations plus or minus in the purchase price will be adjusted in the price quoted) | sqm  |          |          |            |

| SI.No                               | Description Of Items  | Unit | Quantity | Rate(Rs) | Amount(Rs)       |
|-------------------------------------|---|------|----------|----------|------------------|
| 7.14.1                              | Tiles of approved colour and design , 247x122x8mm or equivalent for pool tiles (Base rate -Rs.56/sq.ft)   | sqm  | 425.00   | 2242.89  | 953,228          |
| 7.14.2                              | Antiskid Tiles of approved colour and design, 300x300x10mm or equivalent for pool deck(Rs.42/sq.ft)   | sqm  | 247.00   | 2244.13  | 554,300          |
| <b>TOTAL OF SUB HEAD-7.0</b>        |   |      |          |          | <b>7,214,607</b> |
| <b>(SH: - 8.0 - ROOFING WORK)</b>   |   |      |          |          |                  |
| 8.01                                | Providing and fixing on wall face unplasticised - Rigid PVC rain water pipes conforming to IS : 13592 Type-A including jointing with seal ring conforming to IS:5382 leaving 10mm gap for thermal expansion.  |      |          |          |                  |
| 8.01.01                             | Single socketed pipes   |      |          |          |                  |
| 8.01.01.01                          | 110mm diameter OD   | m    | 58.00    | 289.46   | 16,789           |
| 8.02                                | Providing and fixing on masonry wall / RCC face unplasticised - PVC moulded fittings/accessories for unplasticised - Rigid PVC rain water pipes conforming to IS :13592 Type-A including jointing with seal ring conforming to IS:5382 leaving 10mm gap for thermal expansion.  |      |          |          |                  |
| 8.02.01                             | Coupler   |      |          |          |                  |
| 8.02.01.01                          | 110mm diameter OD   | no   | 10.00    | 163.92   | 1,639            |
| 8.02.02                             | Single Tee with door  |      |          |          |                  |
| 8.02.02.01                          | 110 x 110 x 110mm diameter OD   | no   | 7.00     | 317.11   | 2,220            |
| 8.02.03                             | Bend 87.5 degree  |      |          |          |                  |
| 8.02.03.01                          | 110mm diameter OD   | no   | 7.00     | 211.54   | 1,481            |
| 8.02.04                             | Shoe (Plain)  |      |          |          |                  |
| 8.02.04.01                          | 110mm diameter OD   | no   | 7.00     | 300.97   | 2,107            |
| 8.03                                | Providing and fixing to the inlet mouth of rain water pipe cast iron grating 15cm diameter and weighing not less than 440 grams.  |      |          |          |                  |
|                                     |   | no   | 7.00     | 64.65    | 453              |
| <b>TOTAL OF SUB HEAD-8.0</b>        |   |      |          |          | <b>24,688</b>    |
| <b>(SH: - 9.0 - FINISHING WORK)</b> |   |      |          |          |                  |
| 9.01                                | 6 mm cement plaster to ceiling of mix 1:3 (1 Cement : 3 fine sand) including cost and conveyance of all materials, labour charges, scaffolding, sundries etc complete as directed by the Engineer in charge at all levels.  | sqm  | 1254.00  | 167.88   | 210,522          |
| 9.02                                | 12mm cement plaster of mix 1:4 (1 cement : 4 fine sand)including cost and conveyance of all materials, labour charges, scaffolding, sundries etc complete as directed by the Engineer in charge at all levels.  | sqm  | 2355.00  | 219.62   | 517,205          |
| 9.03                                | 15mm cement plaster of mix 1:4 (1 cement : 4 fine sand)including cost and conveyance of all materials, labour charges, scaffolding, sundries etc complete as directed by the Engineer in charge at all levels.  | sqm  | 2302.00  | 256.25   | 589,888          |
| 9.04                                | 18 mm cement plaster in two coats under layer 12 mm thick cement plaster 1:5 (1 cement :5 coarse sand) finished with a top layer of 6mm thick cement plaster 1:3(1 cement:3 fine sand) finished rough with sponge including cost and conveyance of all materials, labour charges, scaffolding, sundries etc complete as directed by the Engineer in charge at all levels. | sqm  | 629.00   | 332.05   | 208,859          |

| SI.No                        | Description Of Items   | Unit | Quantity | Rate(Rs) | Amount(Rs)       |
|------------------------------|--|------|----------|----------|------------------|
| 9.05                         | 15mm cement plaster of mix, 1:3 (1 cement : 3 fine sand) finished with a floating coat of neat cement 2 kg/sqm including mixing water proofing material in separately).proportion recommended by manufacturer over roof at all heights including cost and conveyance of all materials, labour charges, scaffolding, sundries etc complete as directed by the Engineer in charge at all levels. (water proofing liquid will be paid extra)  | sqm  | 1148.00  | 316.51   | 363,353          |
| 9.06                         | Extra for plastering exterior walls of height more than 10m from GL for every additional height of 3m or part thereof including cost and conveyance of all materials, labour charges, scaffolding, sundries etc complete as directed by the Engineer in charge at all levels.  | sqm  | 74.00    | 43.87    | 3,246            |
| 9.07                         | Applying one coat of cement primer of approved brand and manufacture on wall surface including cost and conveyance of all materials, labour charges, scaffolding, sundries etc complete as directed by the Engineer in charge at all levels.   | sqm  | 4129.00  | 42.67    | 176,184          |
| 9.08                         | Finishing walls with acrylic smooth exterior paint for new work (Two or more coat applied @1.67 ltr/10 sqm over and including base coat of water proofing cement paint applied @ 2.20kg/ 10sqm including cost and conveyance of all materials, labour charges, scaffolding s etc complete as directed by the Engineer in Charge at all levels.   | sqm  | 1806.00  | 84.97    | 153,456          |
| 9.09                         | Providing and applying water proof cement paint of approved brand and colour two coats on walls after scraping and cleaning the surface including cost and conveyance of all materials,labour charges,hire charges for scaffolding etc.complete at all levels  | sqm  | 556.00   | 53.49    | 29,740           |
| 9.10                         | Painting the inside walls with ready mix plastic emulsion paint of approved quality two or more coats to smooth even finish on ceiling and walls including cost and conveyance of all materials to site, labour charges, hire charges for scaffolding, etc as directed by Engineer-in-Charge at all levels   | sqm  | 1453.00  | 87.59    | 127,268          |
| 9.11                         | Pointing on stone work with cement mortar 1:3 (1cement:3 sand) Flush and ruled pointing  | sqm  | 216.00   | 178.64   | 38,586           |
| 9.12                         | Providing and applying 2 coats of brush applicated water proofing membrane in roof slab etc after thoroughly cleaning the surface by making it free of any loose mortar,unsound substrate ,filling the joints of slab/wall, cracks in the slab ( if any ) including cost and conveyance of all materials,labour charges etc complete as directed by the Engineer in Charge . <b>The above work shall be carried by an experienced agency having sufficient experience in membrane water proofing and should ensure a guarantee of 5 years. .Only skilled and experienced persons shall be employed for purpose</b> | sqm  | 219.00   | 300.06   | 65,713           |
| 9.13                         | Supply and installation of decorative wall cladding, 6mm thick exterior grade (High Pressure Panels (HPL)) quality panels of standard size with both sides decor as per standard specifications. The rate to include cost of all rivets, aluminium box sections, MS brackets, standard Hilti/ fisher anchor fastners along with thermal and bi metallic separator, all labour etc complete. The work has to be completed taking in to consideration all wind loads and dead loads, as per specifications and as directed by Engineer - in - charge.  | sqm  | 1117.00  | 6251.20  | 6,982,590        |
| <b>TOTAL OF SUB HEAD-9.0</b> |  |      |          |          | <b>9,466,612</b> |

**(SH: - 10.0 - SANITARY INSTALLATION)**

| SI.No | Description Of Items   | Unit | Quantity | Rate(Rs) | Amount(Rs) |
|-------|--|------|----------|----------|------------|
| 10.01 | Supplying and fixing European type floor mounted white glazed WC with trap including seat cover, with CP brass hinges and rubber buffers, 10 litres capacity PVC low level white flushing cistern with fittings and brackets, 40mm dia PVC flush bend over flow pipe with mosquito proof arrangements,with all necessary fittings complete including cutting and making good the walls and floors etc. complete as directed by the Engineer-in-Charge. (The purchase price considered for EWC is Rs.920, seat cover is Rs.427,cistern is Rs1027,fittings is Rs 762 and any deviation plus or minus in the purchase price will be adjusted in the price quoted) | no   | 10.00    | 5688.10  | 56,881     |
| 10.02 | Providing and fixing coloured vitreous china counter top round wash basin 470 mm or nearest size of approved make including one CP brass pillar cock 15 mm NB including connecting pipes with all fittings 32 mm dia rubber plugs 32 mm dia CP brass waste coupling, 32 mm dia CP brass bottle trap, 15mm angle valve, etc. complete as directed by the Engineer-in-charge. (The purchase price considered for washbasin is Rs.1580, pillar cock is Rs.1100,bottle trap is Rs 1050,angle valve is Rs 550 and any deviation plus or minus in the purchase price will be adjusted in the price quoted).  | no   | 10.00    | 5928.40  | 59,284     |
| 10.03 | Providing and fixing CP brass long body bib cock of approved quality conforming to IS standards and weighing not less than 690 gms including cost and conveyance of all materials, labour charges, sundries etc complete as directed by the Engineer in charge at all levels (The purchase price considered is Rs 850/-any deviation plus or minus in the purchase price will be adjusted in the price quoted).<br>15 mm nominal bore  | no   | 18.00    | 1020.89  | 18,376     |
| 10.04 | Providing and fixing floor trap of PVC,110 mm outer dia(multi trap) including CP cockroach free floor grating with cup etc including cost and conveyance of all materials, labour charges, sundries etc complete as directed by the Engineer in charge at all levels   | no   | 22.00    | 353.10   | 7,768      |
| 10.05 | Providing and fixing CP Towel rail of approved make including cost and conveyance of all materials, labour charges, sundries etc complete as directed by the Engineer in charge at all levels.(The purchase price considered is Rs 800/-any deviation plus or minus in the purchase price will be adjusted in the price quoted).   | no   | 12.00    | 978.20   | 11,738     |
| 10.06 | Providing and fixing CP Toilet paper holder with flap of approved make as directed by Engineer in charge(The purchase price considered is Rs 975/-any deviation plus or minus in the purchase price will be adjusted in the price quoted).   | no   | 10.00    | 1210.53  | 12,105     |
| 10.07 | Providing and fixing CP brass health faucets with 8mm dia 1 meter long flexible tube and wall hook with all fittings and fixtures complete including cutting and making good the walls and floors wherever required including cost and conveyance of all materials, labour charges, sundries etc complete as directed by the Engineer in charge at all levels.(The purchase price considered including all accessories is Rs 1400/-any deviation plus or minus in the purchase price will be adjusted in the price quoted).  | no   | 10.00    | 1704.17  | 17,042     |
| 10.08 | Providing and fixing premium quality C.P. brass overhead shower 4" and wall flange of approved make and model including cost of all materials, labour etc., complete as directed by the Engineer-in-Charge at all levels. (The purchase price considered including all accessories is Rs. 820/- including all accessories any deviation plus or minus in the purchase price will be adjusted in the price quoted.)   | no   | 8.00     | 968.77   | 7,750      |

| SI.No    | Description Of Items   | Unit | Quantity | Rate(Rs) | Amount(Rs) |
|----------|--|------|----------|----------|------------|
| 10.09    | Supplying, laying and jointing hard PVC pipes with PVC specials such as tees, bends, door bend, door tee, elbows,unions, etc. with clamps testing the lines rectifying any leakages or defects,etc. complete as directed by the Engineer-in-Charge for soil, waste, rain water,drains, vent pipe, etc. concealed or open at all levels including cost and conveyance of all materials, labour charges, sundries etc complete for internal work-exposed on walls as directed by the Engineer in charge                              |      |          |          |            |
| 10.09.01 | 110mm OD(6 kg/cm2)   | m    | 20.00    | 456.44   | 9,129      |
| 10.09.02 | 75mm OD (6 kg/cm2)   | m    | 20.00    | 304.17   | 6,083      |
| 10.09.03 | 75mm OD (4 kg/cm2)   | m    | 9.00     | 260.09   | 2,341      |
| 10.10    | Supplying, laying and jointing hard PVC pipes with PVC specials such as tees, bends, door bend, door tee, elbows,unions, etc. with clamps including cutting and making good the walls,testing the lines rectifying any leakages or defects,etc. complete as directed by the Engineer-in-Charge for soil, waste, rain water,drains, vent pipe, etc. concealed or open at all levels including cost and conveyance of all materials, labour charges, sundries etc complete for concealed work as directed by the Engineer- in-Charge |      |          |          |            |
| 10.10.01 | 110mm OD (6 kg/cm2)  | m    | 54.00    | 496.38   | 26,805     |
| 10.10.02 | 75mm OD(6kg/cm2)   | m    | 90.00    | 344.11   | 30,970     |
| 10.10.03 | 50mm OD(6 kg/cm2)  | m    | 18.00    | 263.97   | 4,751      |
| 10.11    | Supplying, laying and jointing hard PVC pipes with PVC specials such as tees, bends, door bend, door tee, elbows,unions, etc. with clamps including earth work, refilling, ,testing the lines rectifying any leakages or defects,etc. complete as directed by the Engineer-in-Charge for soil, waste, rain water,drains, vent pipe, etc. concealed or open at all levels including cost and conveyance of all materials, labour charges, sundries etc complete for external works as directed by the Engineer - in-Charge          |      |          |          |            |
| 10.11.01 | 160mm OD(6 kg/cm2)   | m    | 42.00    | 813.07   | 34,149     |
| 10.11.02 | 110mm OD(6 kg/cm2)   | m    | 36.00    | 436.06   | 15,698     |
| 10.11.03 | 75mm OD(6 kg/cm2)  | m    | 18.00    | 253.30   | 4,559      |
| 10.12    | Providing and fixing PVC vent cowl to pipe already fixed as directed by Engineer-in-Charge at all levels.  |      |          |          |            |
| 10.12.01 | 75 mm dia  | no   | 1.00     | 22.42    | 22         |
| 10.12.02 | 110 mm dia   | no   | 2.00     | 31.08    | 62         |
| 10.13    | Providing and fixing CP brass wall mixer/ divertor, with provision for over head shower with 115mm long bend pipeon upper side connecting legs and wall flanges of approved premium make and model including cost of materials, labour etc. complete as directed by the Engineer in charge.(The purchase price considered including all accessories is Rs.2900/- and any deviation plus or minus in the purchase price will be adjusted in the price quoted )  | no   | 8.00     | 3383.61  | 27,069     |
| 10.14    | CP brass Soap tray (The purchase price considered including all accessories is Rs.610/- and any deviation plus or minus in the purchase price will be adjusted in the price quoted)  | no   | 12.00    | 809.86   | 9,718      |

| SI.No                              | Description Of Items   | Unit | Quantity | Rate(Rs) | Amount(Rs)     |
|------------------------------------|--|------|----------|----------|----------------|
| 10.15                              | Providing and fixing Chlorinated Polyvinyl chloride( CPVC) pipes,having thermal stability for hot and cold water supply including all CPVC plain & brass threaded fittings i/c fixing the pipe with clamps at 1.00 m spacing.This includes jointing of pipes & fittings with one step CPVC solvent cement and the cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer-in-charge.(Concealed work including cutting chases and making good the walls etc )   |      |          |          |                |
| 10.15.01                           | 15 mm nominal OD pipes   | m    | 12.00    | 255.46   | 3,066          |
| 10.15.02                           | 20 mm nominal OD pipes   | m    | 36.00    | 268.24   | 9,657          |
| 10.15.03                           | 25 mm nominal OD pipes   | m    | 24.00    | 278.69   | 6,689          |
| 10.16                              | Supplying and fixing of CI single flanged wall casting pipe with puddle, 0.6m length   |      |          |          |                |
| 10.16.01                           | 150 mm   | no   | 4.00     | 4544.51  | 18,178         |
| 10.17                              | Supplying and fixing of CI double flanged wall casting pipe with puddle, 0.6m length   |      |          |          |                |
| 10.17.01                           | 65 mm dia  | no   | 3.00     | 2491.76  | 7,475          |
| 10.17.02                           | 80 mm  | no   | 4.00     | 2902.31  | 11,609         |
| 10.17.03                           | 100 mm   | no   | 2.00     | 3415.50  | 6,831          |
| 10.17.04                           | 150 mm dia   | no   | 1.00     | 3956.46  | 3,956          |
| <b>TOTAL OF SUB HEAD-10.0</b>      |  |      |          |          | <b>429,763</b> |
| <b>(SH: - 11.0 - WATER SUPPLY)</b> |  |      |          |          |                |
| 11.01                              | Supplying, laying, and jointing schedule 40 UPVC ASTM pipe and Schedule 80 ASTM-UPVC specials of approved make such as tees elbows, unions,bends,sockets bends,flanges, reducers, end caps,saddles, plugs,coupling, etc. including cost of all jointing materials like solvent cement, bolts, nuts, rubber washers,ferrule,pipe supports, cost of extra wastage of fittings during laying of pipe line such as rectification and recharging of the existing line as and when required etc.hire of tools and plant, cost and conveyance of water for testing after connecting to mains including all testing pipe line to the specified hydrostatic test pressure,rectifying any leakage or defects etc. complete.as directed by Engineer-in-Charge for water supply. |      |          |          |                |
| 11.01.01                           | 100mm dia ID   | m    | 6.00     | 738.56   | 4,431          |
| 11.01.02                           | 75 mm dia ID   | m    | 6.00     | 540.37   | 3,242          |
| 11.01.03                           | 63 mm dia ID   | m    | 6.00     | 408.34   | 2,450          |
| 11.01.04                           | 50 mm dia ID   | m    | 36.00    | 269.05   | 9,686          |
| 11.01.05                           | 40 mm dia ID   | m    | 184.00   | 190.74   | 35,096         |
| 11.01.06                           | 32 mm dia ID   | m    | 6.00     | 163.56   | 981            |
| 11.01.07                           | 25 mm dia ID   | m    | 6.00     | 124.22   | 745            |

| SI.No    | Description Of Items   | Unit | Quantity | Rate(Rs) | Amount(Rs) |
|----------|--|------|----------|----------|------------|
| 11.02    | Supplying, laying, jointing and hydrostatically testing ISI marked PVC pipes as per IS 4985 and specials such as Tees, elbows,bends,flanges, reducers, end caps,saddles, plugs,coupling, etc. as per IS 7834 or IS 10124as the case may be including cost of all jointing materials like solvent cement, bolts, nuts, rubber washers,ferrule,pipe supports, cost of extra wastage of fittings during laying of pipe line such as rectification and recharging of the existing line as and when required etc.hire of tools and plant, cost and conveyance of water for testing after connecting to mains including all testing charges,rectifying any leakage or defects, cutting and making good the walls etc. complete.as directed by Engineer-in-Charge for concealed lines for water supply. |      |          |          |            |
| 11.02.01 | 40 mm OD (10 kg/cm <sup>2</sup> )  | m    | 9.00     | 267.98   | 2,412      |
| 11.02.02 | 32 mm OD (10 kg/cm <sup>2</sup> )  | m    | 36.00    | 244.93   | 8,817      |
| 11.02.03 | 25 mm OD (10 kg/cm <sup>2</sup> )  | m    | 54.00    | 226.90   | 12,253     |
| 11.02.04 | 20 mm OD (10 kg/cm <sup>2</sup> )  | m    | 36.00    | 216.88   | 7,808      |
| 11.03    | Supplying, laying, jointing and hydrostatically testing ISI marked PVC pipes as per IS 4985 and specials such as Tees, elbows, bends,flanges, reducers, end caps,saddles, plugs,coupling, etc. as per IS 7834 or IS 10124as the case may be including cost of all jointing materials like solvent cement, bolts, nuts, rubber washers,ferrule,pipe supports, cost of extra wastage of fittings during laying of pipe line such as rectification and recharging of the existing line as and when required etc hire of tools and plant, cost and conveyance of water for testing after connecting to mains including all testing charges,rectifying any leakage or defects etc. complete.as directed by Engineer-in-Charge for exposed lines for water supply.                                     |      |          |          |            |
| 11.03.01 | 50 mm OD (10 kg/cm <sup>2</sup> )  | m    | 7.80     | 256.78   | 2,003      |
| 11.03.02 | 40 mm OD (10 kg/cm <sup>2</sup> )  | m    | 16.80    | 222.02   | 3,730      |
| 11.03.03 | 32 mm OD (10 kg/cm <sup>2</sup> )  | m    | 9.00     | 165.40   | 1,489      |
| 11.03.04 | 25 mm OD (10 kg/cm <sup>2</sup> )  | m    | 6.00     | 148.59   | 892        |
| 11.04    | Providing and fixing gun metal gate valve with C.I. Wheel of approved quality (screwed end) including cost and conveyance of all materials, labour charges, sundries etc complete as directed by the Engineer- in-Charge at all levels   |      |          |          |            |
| 11.04.01 | 65 mm dia nominal bore   | no   | 1.00     | 8378.53  | 8,379      |
| 11.04.02 | 50 mm dia nominal bore   | no   | 3.00     | 5517.31  | 16,552     |
| 11.04.03 | 40 mm dia nominal bore   | no   | 4.00     | 3780.60  | 15,122     |
| 11.04.04 | 32 mm dia nominal bore   | no   | 4.00     | 2749.19  | 10,997     |
| 11.04.05 | 25 mm dia nominal bore   | no   | 4.00     | 1840.06  | 7,360      |



| SI.No    | Description Of Items  | Unit | Quantity | Rate(Rs) | Amount(Rs) |
|----------|---|------|----------|----------|------------|
| 11.05    | Supplying approved make PVC gully trap and CI grating 300mmx300mm size and light duty C.I cover and frames 500mmx500mm of weight not less than 21kg each(CI MH cover and frame as per IS:1726) single sealed of size conveying to size the above mentioned items and constructing 50cmx50cm internal size gully trap chamber and depth upto 60cm,230 thk brick wall in CM 1:6 on a foundation of PCC 1:4:8.100mm thick plastering inside with CM 1:3,12mm thk with a neat cement flushing coat and conveying to site,cleaning ,installing and testing approved make PVC gully trap with 160mm outlet(Fabricated),surrounding with CC 1:1.5:3, 150x150mm,top with CI grating above the PVC gully trap and light duy CI cover and frame over the chamber including cost of all materials, etc complete as per approved drawing and as directed by Engineer-in- Charge | no   | 2.00     | 2909.32  | 5,819      |
| 11.05.01 | Inside size 90x80 cm and 45 cm deep including C.I. cover with frame (light duty) 455x610 mm internal dimensions total weight of cover and frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kd) :   |      |          |          |            |
|          | With bricks.Class designation 75  | no   | 6.00     | 10800.03 | 64,800     |

| SI.No   | Description Of Items   | Unit | Quantity | Rate(Rs) | Amount(Rs)     |
|---|--|------|----------|----------|----------------|
| 11.06   | Extra for depth for manholes.  |      |          |          |                |
| 11.07   | Constructing soak pit 2 x 1.5 x1.5 m filled with brickbats including S.W. drain pipe 100 mm diameter and 1.20 m long complete as per standard design.  | no   | 1.00     | 5791.13  | 5,791          |
| 11.08   | Providing & fixing angle valve for geyser points (The purchase price considered including all accessories is Rs 820/- and any deviation plus or minus in the purchase price will be adjusted in the price quoted)  | no   | 8.00     | 964.05   | 7,712          |
| 11.10   | Supplying and fixing of centrifugal pump, with CI construction, CI impeller complete with motor, base plate, foundation bolts, nuts, pressure guage and all accessories. and working with 415V, 3ph and 50 Hz frequency<br><br>Capacity : 7m <sup>3</sup> /hr.<br>Head : 30 m  | no   | 4.00     | 12066.18 | 48,265         |
| 11.11   | Providing and fixing GM footvalve, flanged type, CI construction including all necessary fittings as per the direction of Engineer-in-Charge.  | no   | 4.00     | 2188.39  | 8,754          |
| 11.12   | Providing and fixing gun metal non-return valve of approved quality, screwed and including all necessary fittings.   |      |          |          |                |
| 11.12.01  | 40 mm dia  | no   | 4.00     | 1296.91  | 5,188          |
| 11.12.02  | 50 mm  | no   | 2.00     | 2123.13  | 4,246          |
| <b>TOTAL OF SUB HEAD-11.0</b>                     |  |      |          |          | <b>305,019</b> |
| <b>(SH: - 12.0 - MISCELLANEOUS BUILDING WORK)</b> |  |      |          |          |                |
| 12.01   | Providing and applying Antitermite treatment by injecting chemical emulsion Imidacloprid emulsiable concentrate 1% for pre-constructional treatment and creating a chemical barrier as per IS 6313 (Part II) 1981 for wall trenches, foundation, top surface of plinth filling, foundation of wall and floor, along the external perimeter of the building, etc. complete conforming to manufacturers specification and as directed by the Engineer-in-Charge. (Plinth area only to be measured for the payment )  | sqm  | 265.00   | 80.92    | 21,444         |
| 12.02   | Providing and applying acrylic reinforced cementitious waterproof coating Masterseal 550 EL, in two coats to achieve 1mm thickness. Concrete surfaces should be free of dust, oil and other contaminants. All high spots should be removed. Moss and lichen must be removed physically. After treatment wash down thoroughly with clean water and allow to dry. Prewetting the surface before applying the water proofing material. The rate shall including cost and conveyance of all materials, all labour charges, all taxes, lead, lift, sundries, etc., etc complete as directed by the Engineer - in - charge | sqm  | 288.00   | 476.22   | 137,151        |
| 12.03   | Providing and laying at or near ground level factory made kerb stone of M-25 grade cement in position to the required line, level and curvature jointed with cement mortar 1:3 (1 cement: 3 coarse sand) including making joints with or without grooves(thickness of joints except at sharp curve shall not to more than 5mm) including making drainage opening wherever required complete etc. as per direction of Engineer-in-Charge (length of finished kerb edging shall be approved by Engineer-in-Charge)   | cum  | 29.00    | 9088.74  | 263,573        |
| <b>TOTAL OF SUB HEAD-12.0</b>                     |  |      |          |          | <b>422,169</b> |
| <b>(SH: - 13.0 - DISMANTLING WORKS)</b>           |  |      |          |          |                |

| SI.No                         | Description Of Items   | Unit | Quantity | Rate(Rs) | Amount(Rs)         |
|-------------------------------|--|------|----------|----------|--------------------|
| 13.01                         | Demolishing cement concrete manually/by mechanical means including disposal of material within 50 metres lead as per direction of Engineer-in-Charge.  | cum  | 75.00    | 726.97   | 54,523             |
| 13.02                         | Demolishing R.C.C work, including stacking of steel bars and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-Charge   | cum  | 63.00    | 1549.69  | 97,630             |
| 13.03                         | Demolishing R.B work manually/by mechanical means including stacking of steel bars and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-Charge.  | cum  | 15.00    | 1565.19  | 23,478             |
| 13.04                         | 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.  | cum  | 20.00    | 979.96   | 19,599             |
| 13.05                         | Demolishing stone rubble masonry 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:                                | cum  | 25.00    | 1173.19  | 29,330             |
| 13.06                         | Dismantling doors, windows and clerestory windows (steel or wood) shutter including chowkhats, architrave, holdfasts etc. complete and stacking within 50 metres lead:   | each | 2.00     | 182.77   | 366                |
| 13.07                         | Dismantling doors, windows and clerestory windows (steel or wood) shutter including chowkhats, architrave, holdfasts etc. Complete and stacking within 50 metres lead  | each | 2.00     | 251.07   | 502                |
| 13.08                         | Dismantling steel work in single sections including dismembering and stacking within 50 metres lead in:<br>R.S. Joists   | kg   | 1000.00  | 1.59     | 1,590              |
| 13.09                         | Dismantling steel work in single sections including dismembering and stacking within 50 metres lead in:<br>Channels, angles, tees and flats  | kg   | 10.00    | 1.10     | 11                 |
| 13.10                         | Dismantling steel work in built up sections in angles, tees, flats and channels including all gusset plates, bolts, nuts, sutting rivets, welding etc. including dismembering and stacking within 50 metres lead.                            | kg   | 10.00    | 2.70     | 27                 |
| 13.11                         | Extra for dismantling trusses, rafters, purlins etc. of steel work for every additional span of one metre or part thereof beyond 10 metres   | kg   | 250.00   | 0.43     | 108                |
| 13.12                         | Dismantling tile work in floors and roofs laid in cement mortar including stacking material within 50 metre lead.<br>For thickenss of tiles above 10mm and upto 25mm   | sqm  | 13.00    | 34.15    | 444                |
| 13.13                         | Dismantling precast concrete or stone slab in walls, partition walls etc, including stacking within 50 metres lead.<br>Thickness upto 40 mm  | sqm  | 5.00     | 145.49   | 727                |
| 13.14                         | Dismantling aluminium/Gypsum partitions, doors, windows, fixed glazing and false ceiling including disposal of unserviceable surplus material and stacking of serviceable material with in 50 metres lead as directed by Engineer-in-Charge. | sqm  | 2.00     | 28.17    | 56                 |
| <b>TOTAL OF SUB HEAD-14.0</b> |  |      |          |          | <b>228,391</b>     |
| <b>GRAND TOTAL</b>            |  |      |          |          | <b>100,332,951</b> |

**KITCO LIMITED**  
**NATIONAL GAMES SECRETARIAT**  
**CONSTRUCTION OF MUNICIPAL STADIUM AT PALA**  
**SPECIFICATION AND SCHEDULE OF QUANTITIES - PART B-NATURAL TURFING FOR FOOTBALL GROUND**

| SI No.   | Description  | Unit | Quantity | Rate(Rs)   | Amount (Rs) |
|----------|--|------|----------|------------|-------------|
| 1        | <p>Clear the site of approximately 7500 sq. meter in area of debris, rubbish and the obstruction</p> <p>a. which interfere with execution of works.</p> <p>b. Sub-base formation including trim, grade and roll sub-grade to required chambers and gradients.</p> <p>c. The entire sub-grade shall be covered with a layer of clean, washed crushed stone or gravel to a minimum thickness of 100mm. Firm the layer by rolling and grade to the required level, chambers and gradients.</p> <p>d. Install intermediate layer consists of coarse graded washed river sand to aluminium thickness of 50mm. Firm the layer by rolling &amp; grade to the required level, chambers and gradients.</p> <p>e. Install soil and manure mix layer consists of fine garded washed river sand blended with redsoil, bio fibre and bio soil @ 7 kg./100sq.mtr. to a minimum thickness of 150mm. Mixing of the above to ensure a homogenous mix and accurate mix of components.</p> <p>Firm the soil and manure mix by rolling and grade to required level, chambers &amp; gradients utilizing laser levelling equipment for final contours, irrigate for settlement and repeat levelling process.</p> <p>Apply pre-mergence herbicide to the entire area at a rate specified by the manufacturer.</p> <p>Apply pre-plant fertilizer to the entire area at a rate of 12.5 kg per 100m2. These fertilizer is applied just prior to planting.</p> <p>Establish turf grass La Prima variety by seeding or dibbling.</p> | no   | 1.00     | 8500000.00 | 8500000     |
| 2        | <p>Seeded area groomed &amp; maintained which involved following until 100% cover of turf over the planted area (3 months) The rate includes the cost of all Irrigation, Mowing, Fertilizing, Weeding, Disease and insect control , Surface grooming and restoration, scarifying etc complete</p>  | no   | 1.00     | 1250000.00 | 1250000     |
| <b>3</b> | <p><b>Subsoil drainage</b></p> <p>Excavate and get out trench for drain pipe commencing at formation level and not exceeding 3.0m deep.</p> <p>Excavated trench for 100mm diameter perforated pipe average 300mm deep and 300mm width</p> <p>100mm diameter perforated HDPE sub-soil drain pipe including joints in the running length, laid on 50mm gravel bedding and backfill same gravel to top drain level</p> <p>Pipes to be connected to existing drain.</p>  | no   | 1.00     | 2215500.00 | 2215500     |
| <b>4</b> | <p><b>Irrigation</b></p> <p>Excavate and get out trench for pipe commencing at sub-base level.</p> <p>Supply &amp; install high density polyethylene (HDPE) pressure pipe including joints in running length and backfill with sand.</p> <p>93mm sprinkle pipe, including joints &amp; fittings</p> <p>63mm sprinkler pipe, including joints &amp; fittings</p> <p>50mm sprinkler pipe, including joints &amp; fittings</p> <p>32mm sprinkler pipe, including joints &amp; fittings</p> <p>Extra for 2 in Q.C.V</p> <p>To supply and install Variable Speed pressure Boosting System with incorporation of.</p> <p>The pump is a non-self - priming, vertical multistage centrifugal pump fitted with standard motor. Suction and discharge ports on the same level and pump equipped with maintenance - free mechanical shaft seal. The pump head &amp; base made out of cast iron, shaft, impeller chamber &amp; outer sleeve made of stainless steel. The duty pump capable of delivering 18cub.m/at50m.head.</p> <p>The motor is 5.5kwMGE 3ph/415V/50hz Frequency inverter integrated motor providing full variable speed operation. The motor in</p>  |      |          |            |             |

| SI No. | Description   | Unit | Quantity | Rate(Rs)   | Amount (Rs)     |
|--------|---|------|----------|------------|-----------------|
|        | <p>three-phase, totally enclosed, fan-cooled<br/> 1.8 liters CIMM pre-pressurized pneumatic tank. Pressure transmitter for discharge pressure monitoring with pressure gauge, and 2 nos pressure switch for hydro-pneumatic operation.<br/> Dry-running protection device to protect pump &amp; to monitor motor temperatures.<br/> One lot of 75mm common suction/discharge manifolds with pump check value and isolating value with all components mounted on a common steel base frame.<br/> 1x5.5kw starting circuit as per design requirement with emergency switches for manual operation.<br/> Lighting arrestor to control panel 15KA with 30A TPMCB The starter panel shall be housed in a lockable, weatherproof, powder coated metal box mounted above ground.<br/> The Pressure Boosting station should be mounted on a steel frame &amp; secured onto a concrete slab.<br/> To supply and install electromechanical Four Program Hybrid controller with alphanumeric LCD display, four independent programs, 365 day calendar, variable test program, programmable rain delay, surge protection, 9V Ni-MH rechargeable backup battery and lockable heavy duty plastic cabinet<br/> To supply and install electric Remote-control valve with rugged PVC construction, globe configuration, normally closed forward flow design, 15 to 150 psi operating pressure,<br/> 2 to 150 gpm flow and 24VAC 50/60 cycle solenoid - 7 nos for 7 circuits<br/> To place valve in 250mm Round Valve Box with lid - 7 nos. To supply and install 7 core 1.5mm double insulated field wire from valves or controller with PVC casing. To supply &amp; install 25mm swing arm riser<br/> To supply &amp; install gear driver Rotor Pop-Up sprinkler with Non-Strippable drive mechanism, true full and part-circle operation in one unit, standard rubber cap, precipitation rate: 0.48 to 0.98, inches per hour, radius: 39 to 71 feet, pressure: 50 to 90<br/> Test &amp; commission the Irrigation System</p> | no   | 1.00     | 2600000.00 | 2600000         |
|        | <b>TOTAL</b>  |      |          |            | <b>14565500</b> |

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**CONSTRUCTION OF MUNICIPAL STADIUM AT PALA**  
**SPECIFICATION AND SCHEDULE OF QUANTITIES**  
**PART C- RECIRCULATION AND FILTRATION SYSTEM**

| SI No.  | Description   | Unit | Quantity | Rate(Rs)  | Amount(Rs) |
|---|---|------|----------|-----------|------------|
| <b>(SH:-1.00-RECIRCULATION TANK &amp; OTHER EQUIPMENTS)</b> |   |      |          |           |            |
|   | Design, Supply, Fabrication, Erection & Commissioning of Water Treatment and Recycling Plant comprising of filter units, Ozonator with accessories, Plumbing with specials, valves for the complete recycling system and chemical dosing system as detailed   |      |          |           |            |
|   | Note: Filtration system and equipment shall have 2 years replacement guarantee from the date of commissioning and the contractor shall provide required chemicals and labour for the initial testing and commissioning of the same.   |      |          |           |            |
| 1.01  | <b>FILTERS: -</b>   |      |          |           |            |
|   | Supplying to Site and installing in position, testing and commissioning Bobbin Wound Filter manufactured from fibreglass and polyester, approx. 2000mm diameter. complete with pressure gauge panel, manual air bleeder, water drain and emptying plug, collector arms and diffuser made from unplasticized PVC /polypropelene. Filtration velocity 40m <sup>3</sup> /hr/m <sup>2</sup> . Max. working pressure : 2.5 kg/cm <sup>2</sup> . Flow rate - 125m <sup>3</sup> /hr. The quoted rate will include the cost of all necessary control valves manufactured from PP as per DIN Standards, and connected to filters, including the required butterfly valves , non return valves, for carrying out filtration, back washing, rinsing and shutdown of filters and with required valve battery supports manufactured from electroplated galvanized steel. |      |          |           |            |
|   |   | no   | 1.00     | 685000.00 | 685000     |
| 1.02  | <b>FILTER MEDIA: -</b>  |      |          |           |            |
|   | Supplying to Site and filling media in filter vessels as per standard specification   |      |          |           |            |
|   | Silica Sand : 0.4-0.8mm   | kg.  | 3,800.00 | 12.00     | 45600      |
|   | Gravel : 1 - 2 mm   | kg.  | 1,050.00 | 11.00     | 11550      |
| 1.03  | <b>RE-CIRCULATING PUMPS &amp; PREFILTERS: -</b>   |      |          |           |            |
|   | Supplying to Site and fixing in position, testing and commissioning Cast Iron Pump, 1440 r.p.m., Mechanical Seal in Cast Iron, CI Impeller, IP-44 motor protection. Flowrate : 125m <sup>3</sup> /h @ 15mtr. head. Voltage 415V / 3 phase, (1 Working + 1 Standby) with Pre-filter made in thermo-plastic with easily removable lid. Connections: As per design or 160mm (1 working and 1 standby)  |      |          |           |            |
|   |   | no   | 2.00     | 95000.00  | 190000     |
| 1.04  | <b>DOSING PUMPS: -</b>  |      |          |           |            |
|   | Supplying to Site and fixing in position, Electronic Dosing Pump with IP-55 protection. Flow Rate - 6 LPH@4 Kg./cm <sup>2</sup>   |      |          |           |            |
|   |   | no   | 2.00     | 15000.00  | 30000      |
| 1.05  | <b>CHEMICAL STORAGE TANKS: -</b>  |      |          |           |            |
|   | Supplying to Site and fixing in position, Made in HDPE. Capacity - 500 Liters   |      |          |           |            |
|   |   | no   | 2.00     | 4000.00   | 8000       |
| 1.06  | <b>POOL BASIN EQUIPMENT</b>   |      |          |           |            |
| 1.06.01   | <b>POOL DRAINS: -</b>   |      |          |           |            |

| SI No.  | Description  | Unit | Quantity | Rate(Rs) | Amount(Rs) |
|---------|--|------|----------|----------|------------|
|         | Supplying to Site and fixing in position, Main Drains with Frame in ABS with screws Dimension 500 x 500 mm (In diving area and in Shallow portion)   | no   | 2.00     | 38500.00 | 77000      |
| 1.06.02 | <b>SUCTION INLET: -</b>  |      |          |          |            |
|         | Supplying to Site and fixing in position, Suction inlet in ABS with cap internal thread of 1 1/2" dia and external thread 2".  | no   | 20.00    | 750.00   | 15000      |
| 1.06.03 | <b>PVC WALL CONDUITS: -</b>  |      |          |          |            |
|         | Supplying to Site and fixing in position, PVC wall conduits 150mm long. Rear connection to pipe by 2" female adaptor   | no   | 20.00    | 900.00   | 18000      |
| 1.07    | <b>FLOOR INLETS: -</b>   |      |          |          |            |
|         | Supplying to Site and fixing in position, White ABS floor inlet for concrete with S.S. screws and regulable flow. Max. Flow/ inlet = 9,000l/hr   | no   | 15.00    | 1250.00  | 18750      |
| 1.08    | <b>POOL LADDER: -</b>  |      |          |          |            |
|         | Supplying to Site and fixing in position, Ladder in stainless steel 304 Handrails dia 43mm stainless steel non-slip safety steps, provided with electrical earthing connection and anchoring fixtures. No. of treads - 5       | no   | 6.00     | 23500.00 | 141000     |
| 1.09    | <b>MAINTENANCE ACCESSORIES</b>   |      |          |          |            |
| 1.09.01 | Supplying to Site and fixing in position, Double length metal head in polished Al and chrome bronze 2" length 800mm. Trailed via cable   | no   | 1.00     | 30000.00 | 30000      |
| 1.09.02 | Supplying to Site and fixing in position, Extensible handles for cleaning attachments in anodized aluminium which can be adapted to the entire range of cleaning equipment, brushes, leaf skimmers and scoops. 13.00 mts. Long | no   | 1.00     | 20000.00 | 20000      |
| 1.09.03 | Supplying to Site and fixing in position, Handle Adaptor for matching wingnut with wishbone connection   | no   | 1.00     | 1300.00  | 1300       |
| 1.09.04 | Supplying to Site and fixing in position, Transparent blue plastic vacuum hose 2" dia 30mtrs long including hose cuffs for connection to suction inlets.   | no   | 1.00     | 9500.00  | 9500       |
| 1.09.05 | Supplying to Site and fixing in position, Deep bag net made in polypropelene and white polyester netting shark series  | no   | 1.00     | 1400.00  | 1400       |
| 1.09.06 | Supplying to Site and fixing in position, Curved brushes made in polypropelene for pool basins and scum liners shark series  | no   | 1.00     | 1000.00  | 1000       |
| 1.09.07 | Supplying to Site and fixing in position, Straight brushes made in polypropelene for pool basins and scum liners shark series  | no   | 1.00     | 950.00   | 950        |
| 1.09.08 | Supplying to Site and fixing in position, Algae brushes with stainless steel bristles clip type  | no   | 1.00     | 8800.00  | 8800       |
| 1.09.09 | Supplying to Site Test kit for free chlorine & pH  | no   | 1.00     | 2400.00  | 2400       |
| 1.10    | <b>INTER-CONNECTING PIPING: -</b>  |      |          |          |            |
| 1.10.01 | Supplying to Site and fixing in position, testing and commissioning, Inter-connecting Piping in PVC (6 kg./cm2) with PVC Fittings (PN6)  |      |          |          |            |
| 1.10.02 | 110mm dia  | m    | 240.00   | 436.06   | 104654     |

| SI No.    | Description  | Unit | Quantity | Rate(Rs)  | Amount(Rs) |
|-----------|--|------|----------|-----------|------------|
| 1.10.03   | 160mm dia  | m    | 30.00    | 813.07    | 24392      |
| 1.10.04   | 200mm dia  | m    | 30.00    | 1178.95   | 35369      |
| 1.10.05   | 315mm dia  | m    | 110.00   | 2635.12   | 289863     |
| 1.11      | Supplying to Site and fixing in position, testing and commissioning Ball Valves, Butterfly Valves & Butterfly Check Valves with all accessories like flanges, tail piece, nuts, bolts, washers etc   |      |          |           |            |
| 1.11.01   | Providng and fixing of CI butterfly valve,screwed/flanged type, appropriate with PVC lines including supplying and fixing necessary tail pieces, flanges with bolts, nuts, etc. complete   |      |          |           |            |
| 1.11.01.1 | 150 mm   | no   | 14.00    | 4965.23   | 69513      |
| 1.11.01.2 | 200 mm   | no   | 1.00     | 11741.30  | 11741      |
| 1.11.01.3 | 300 mm   | no   | 2.00     | 22771.54  | 45543      |
| 1.11.02   | Providing and fixing CI non-return valve of approved quality, screwed and including all necessary fittings   |      |          |           |            |
|           | 150 mm   | no   | 7.00     | 6846.87   | 47928      |
|           | 200 mm   | no   | 1.00     | 12584.68  | 12585      |
|           | 300 mm   | no   | 9.00     | 25956.80  | 233611     |
| 1.15      | Supplying to Site, Installation, testing and Commissioning of OZONE GENERATOR suitable for generating 16 gms of Ozonr per hour Venturi for continuos Air/Water mixture, Air Compressor, 1/3 H.P. (Heavy Duty) Venturi Drive Pump in SS304, Flow Rate: 10m3/hour@40 mtr Head. The rate to include cost of all materials, labour, lead, lift etc complete. | set  | 1.00     | 402000.00 | 402000     |
| 1.16      | Alum Dozer for coagulation comprising electronic dosing pumps, with pipes, fittings etc. complete with 100 ltr Sintex tank   | set  | 1.00     | 45000.00  | 45000      |
| 1.17      | Soda Ash Dosing Plant for PH correction comprising electronic dosing pumps, with fittings etc. complete, 100 ltr Sintex tank.  | set  | 1.00     | 45000.00  | 45000      |
| 1.18      | Chlorine Dosing plant for maintaining residual chlorine in water comprising electronic dosing pumps, with fittings etc. complete, 100 ltr Sintex tank  | set  | 1.00     | 45000.00  | 45000      |
| 1.19      | Overflow Grating PP antiskid white Modular Grating 295mm width to be placed on all 4 sides of pool   | m    | 100.00   | 1800.00   | 180000     |
| 1.20      | <b>UNDERWATER ILLUMINATION</b>   |      |          |           |            |
| 1.20.01   | <b>UNDERWATER LIGHTS: -</b>  |      |          |           |            |
|           | Supplying to Site and fixing in position, Underwater Light "STANDARD" model. Niche in polypropylene and glass fibre. ABS rim. 300W 12V Lamp with 3 mtr. Cable(sample shall be approved by the Engineer- in-Charge)   | no   | 26.00    | 7500.00   | 195000     |
| 1.21      | <b>JUNCTION BOXES: -</b>   |      |          |           |            |
|           | Supplying to Site and fixing in position, Junction Boxes, made in ABS, composed of 3 entries 3/4" or PG-16 coupling(Sample shall be approved by the engineer in charge)  | no   | 26.00    | 1400.00   | 36400      |
| 1.22      | <b>TRANSFORMERS: -</b>   |      |          |           |            |



| SI No. | Description  | Unit | Quantity | Rate(Rs)  | Amount(Rs) |
|--------|--|------|----------|-----------|------------|
|        | Supplying to Site and fixing in position, Step-down Transformers, 300 VA,220 V-12 V complies with EN-60742 standard.(Sample shall be approved by the engineer in charge)   | no   | 26.00    | 4800.00   | 124800     |
| 1.23   | <b>TRANSFORMER PROTECTION BOX: -</b>   | no   | 26.00    | 900.00    | 23400      |
| 1.24   | <b>CONTROL PANEL: -</b>  |      |          |           |            |
| 1.24.1 | <b>Pump Panel</b><br>Supply, installation, testing and commissioning of totally enclosed free standing floor mounting dust and vermin proof indoor cubicle type Pump panel suitable for 415 V, 3 phase, 50 HZ supply, fabricated of 14 SWG CRCA sheet steel Powder coated complete with busbars having 125A rating, indicating lamps (LED type) with 2A control MCBs, CT's, connections & interconnections with suitable size of copper leads/solid aluminium strips/rod and having following incoming and outgoing MCCBs as per the drawing and specifications(Refer particular specification and Drawing).<br><br><b>Incomer</b><br>125A, TPN SDFU with HRC fuse - 1no.<br>125A TPN busbar chamber with Aluminium busbar<br>RYB Indicating lamps LED type -3 Nos.<br>Digital Voltmeter - 1 No.<br>Digital Ammeter - 1NO.<br>KWH meter - 1 No.<br>120/5A,15 VA CTs for metering - 3 Nos<br>Outgoing<br>32A, TPN SDFU with HRC fuse - 4 nos<br>63A, TPN SDFU with HRC fuse - 3 nos<br>12.5 HP Fully automatic star Delta Starter with illuminated ON-OFF push buttons (LED type) having thermal over load relay, single phasing preventer and auxillary contactors - 2 Nos | no   | 1.00     | 101125.00 | 101125     |
| 1.24.2 | Supply, installation,testing and commissioning of DOL starter for 0.5-3 HP motors with illuminated ON-OFF push buttons ( LED type) having suitably rated thermal over load relay and single phasing preventer with auxillary contactors  | no   | 2.00     | 2440.00   | 4880       |
| 1.24.3 | Supply and installation of totally enclosed dust and vermin proof outdoor type IP65 polycarbonate emergency ON-OFF Push button station mounted on suitable MS angle for 230V, 1phase, 50Hz supply with accessories as required. (Hensel PBS 0201 or equivalent). Necessary foundation for MS angle shall also be considered if mounted directly in ground.   | no   | 2.00     | 2278.00   | 4556       |
| 1.24.4 | Supply and installation of sheet steel, phosphatised and painted, dust and vermin proof enclosure of MCB DB including copper/brass bus bar, neutral link, earth bus and DIN rail suitable for fixing MCB/isolator etc. fixed on wall using suitable anchor bolts or fixed in recess including cutting hole on the wall, making good the damages, colour washing etc. as required.<br>6 way (8+18 ) - double cover TPN vertical DB with provision for fixing Isolator /RCBO as incomer and SP/TP MCB as outgoing (IP42/43)  | no   | 1.00     | 6057.00   | 6057       |
| 1.25   | <b>CABLING AND EARTHING FOR SWIMMING POOL</b>  |      |          |           |            |

| SI No.             | Description   | Unit | Quantity | Rate(Rs) | Amount(Rs)     |
|--------------------|---|------|----------|----------|----------------|
| 1.25.1             | Supply and laying of following size 1.1 KV grade XLPE insulated, PVC sheathed, armoured Aluminium /copper conductor cable conforming to IS 7098 (Part 1) amended upto date.   |      |          |          |                |
|                    | 4C 16 sqmm Al   | m    | 25       | 221.00   | 5525           |
|                    | 3C 10 sqmm Al   | m    | 60       | 179.00   | 10740          |
|                    | 3C 4 sqmm Al  | m    | 20       | 140.00   | 2800           |
|                    | 3C 4 sqmm submercible Cu cable  | m    | 200      | 179.00   | 35800          |
|                    | 3C 2.5 sqmm Cu cable  | m    | 80       | 209.00   | 16720          |
| 1.25.2             | Supplying and making end termination with brass compression gland and aluminium/Copper lugs for following size of XLPE insulated PVC sheathed aluminium conductor cable of 1.1 kV grade as required.                        |      |          |          |                |
|                    | 4C 16 sqmm Al   | no   | 2.00     | 347.00   | 694            |
|                    | 3C 10 sqmm Al   | no   | 2.00     | 309.00   | 618            |
|                    | 3C 4 sqmm Al  | no   | 2.00     | 290.00   | 580            |
|                    | 3C 2.5 sqmm Cu cable  | no   | 8.00     | 286.00   | 2288           |
| 1.25.3             | Supplying and laying following GI or copper strip / wire at 0.6m below ground level including excavation and refilling or on surface with mounting saddles for conductor earth electrode including welding etc as required. |      |          |          |                |
|                    | 25x3 mm copper strip tinned at the points of contacts   | m    | 50.00    | 476.00   | 23800          |
|                    | 3.15mm copper conductor (10 SWG)  | m    | 150.00   | 83.00    | 12450          |
| <b>Grand Total</b> |   |      |          |          | <b>3515683</b> |

**KITCO LTD**  
**NATIONAL GAMES SECRETARIAT**  
**CONSTRUCTION OF PROPOSED PALA STADIUM**  
**SPECIFICATION AND SCHEDULE OF QUANTITIES- PART D - ELECTRICAL WORKS**

| Item. No. | Description of Items  | Unit | Qty | Rate(Rs)  | Amount (Rs) | Amount (Rs) |
|-----------|---|------|-----|-----------|-------------|-------------|
|           | <b>PART A</b>   |      |     |           |             |             |
| 1.0       | <b>HT EQUIPMENT</b>   |      |     |           |             |             |
| 1.1       | <b>11 KV DP STRUCTURE</b><br>Supply,fabrication, erection, testing and commissioning of 11 KV DP structure using 200x100 mm ISMB for poles and cross channel of ISMC 100x50mm and supporting structure for 11 KV components with 65x65x6 mm MS angle bracings between consumer and supplier structure,cross arms,11 KV pin,disc and stay insulators,supports,jumpering/interconnecting conductors with 'O'SWG Cu,earthing etc. on a suitable concrete foundation excluding the construction of civil foundation .The DP structure shall consists of the following   |      |     |           |             |             |
|           | 11 KV,400A ,TP,AB switch - 1 No.<br>11 KV Lighting Arrestor -1 set of 3 Nos<br>11 KV Drop out fuses-1 set of 3 Nos<br>11 KV Pin,Disc insulators etc.  | set  | 1   | 112210.00 | 112210      | 112210      |
| 1.2       | Supply, installation, testing and commissioning of 11 KV,630 A , 20 KA , Motor operated Compact,outdoor extensible non draw out type (CVV) with 1 No. Load break switch incomer and two no. fixed type motor operated vacuum circuit breaker . The whole assembly shall be enclosed in a compact gas insulated ring main unit , all live parts enclosed in a robotically welded stainless steel tank of IP 67 class of protection with all the necessar accessories as required.  | set  | 1   | 790130.00 | 790130      | 790130      |
| 1.3       | <b>160 kVA INDOOR USS</b><br>Supply, installation, testing and commissioning of indoor Unitised Substation consisting of<br>11KV, 26.2KA, 630A Load Break Switch with earth switch and 3 No.s of HT HRC fuses as incomer with shunt trip (separate emergency pushbutton shall be provided as per statutory requirements) - 1 No<br><br>160KVA,11KV/433V, 3 phase, Vector DYN-11,Dry type ,Cast resin transformer with tappings from +5% to -10% in steps of 2.5%, operatable on offcircuit by tap links provided.<br>1No.<br>Resin Cast CT 10/5,15VA,CL0.5 for TOD-2 Nos<br>Resin Cast Fixed type three phase PT of ratio 11/.110KV,100VA,CL0.5<br>Seal of bushings-1 set<br>ON-OFF push button,RYB indicating lamps,Trip push button-1 set<br>Space Heater withThermostat- 1 set<br>Shunt Trip coil - 230 V AC<br>- 1 No<br>Cubicle Illumination Lamp with Door limits switch-1 set<br><br>250A aluminium busbars for linking to transformer HT side with necessary support insulators-1set<br>Cable End Boxes for incoming and outgoing cables. |      |     |           |             |             |

|     |   |     |      |           |                |                |
|-----|---|-----|------|-----------|----------------|----------------|
|     | MS sheet enclosure and all the necessary accessories as required complete.  | no  | 1.00 | 628701.00 | 628701         | 628701         |
| 1.4 | <b>OUT DOOR CUBICLE WITH TOD METER</b><br><b>Outdoor metering cubicle</b> Supply,installation and commissioning of 11 KV Metering Cubicle Kiosk suitable for Outdoor application with MS Sheet steel enclosure with Resin Cast 3 phase PT, 100 VA, 11KV/110V, CI 0.5 for TOD meter,Resin Cast CTs – 15/ 5 A, 15 VA, CI 0.5 for TOD meter,Provision for fixing Electronic TOD Meter,Bus connection – 250 A TP, Aluminium, suitable for Outdoor installation,Common base frame.   | no  | 1.00 | 121182.00 | 121182         | 121182         |
|     | <b>SUB TOTAL (PART A)</b>   |     |      |           | <b>1652223</b> | <b>1652223</b> |
|     | <b>PART B</b>   |     |      |           |                |                |
|     | <b>LT EQUIPMENTS</b>  |     |      |           |                |                |
|     | <b>DG -82.5 kVA</b>   |     |      |           |                |                |
|     | Supply, installation, testing and commissioning of 1 No. 82.5 kVA, 415V, 3 phase, 1500 R.P.M, 0.8 PF(Continuous duty), water cooled, floor mounted Diesel Generator set with acoustic enclosure (outdoor duty) and all accessories including supply and installation of standard control panel with metering and protections,controls and interlocks, suitable MCCB, CTs and transducers for all metering and protection, Antivibration mountings, exhaust silencer and exhaust pipe along with Acoustic Enclosure(sound pressure level as per ISO standards), electric starter, batteries & battery charger, fuel tank with level indicator, radiator, necessary control wiring with control cables, first fill of lubricating oil, and Diesel for testing and commissioning, earthing as per standards and all accessories as required. The rate shall be inclusive of all lift,lead, first fill of oil etc.(Refer particular specification.) The work should be as per Electrical Inspectorate/ Pollution control board  | set | 1.00 | 739549.00 | 739549         | 739549         |
| 2.1 | <b>MSB</b><br>Supply, installation, testing and commissioning of totally enclosed free standing floor mounting dust and vermin proof indoor cubicle type Main Switch Board (MSB) suitable for 415 V, 3 phase, 50 HZ supply, fabricated of 14 SWG CRCA sheet steel Powder coated complete with busbars having 250 A rating, indicating lamps (LED type) with 2A control MCBs, CT's, connections & interconnections with suitable size of copper leads/solid aluminium strips/rod and having following incoming and outgoing MCCBs as per the drawing and specifications(Refer particular specification and Drawing).<br><br><b>Incomer</b><br><br>250A, FP, 35kA, Microprocessor based,motorised MCCB ( EB) with provision for interlock and adjustable over load 0.4In to 1 In and adjustable short circuit 1.5 to 8 Ir and earth fault release,shunt trip,auxiliary and trip alarm contacts - 1 no. (KSEB INCOMER)<br><br>50A, FP, 35kA, Microprocessor based,motorised MCCB ( DG) with provision for interlock and adjustable over load 0.4In to 1 In and adjustable short circuit 1.5 to 8 Ir and earth fault release,shunt trip,auxiliary and trip alarm contacts - 1 no. (As DG INCOMER) |     |      |           |                |                |

250A, FP, 35kA, Microprocessor based, motorised MCCB with provision for interlock and adjustable over load 0.4In to 1 In and adjustable short circuit 1.5 to 8 Ir- 1 no. for bus coupler  
250A TPN busbar chamber with Aluminium busbar

RYB Indicating lamps LED type -6Nos.  
Digital Voltmeter - 2 set  
Digital Ammeter - 2 set  
150/5A, 15 VA CTs for metering - 3 Nos  
250/5A, 15 VA CTs for metering - 3 Nos  
250/5 CT s for IPFCR-1No.  
ON/OFF Push button-1No

**Outgoing**

200A, FP Isolater -1 no.  
125A, 25 kA, FP MCCB with thermal release having adjustable over load 0.8 In to 1 In, adjustable short circuit 3 to 6 Ir, auxiliary contacts -5 no.  
63A, 25 kA, FP MCCB with thermal release having adjustable over load 0.8 In to 1 In, adjustable short circuit 3 to 6 Ir, auxiliary contacts -1 no.

|    |      |           |        |        |
|----|------|-----------|--------|--------|
| no | 1.00 | 295080.00 | 295080 | 295080 |
|----|------|-----------|--------|--------|

**2.2 CAPACITOR PANEL**

Supply, Installation, testing and commissioning of totally enclosed, free standing, floor mounting, dust and vermin proof, cubicle type capacitor panel board of total **40 KVAR** capacity to be fabricated out of 14 guage CRCA sheet steel Powder coated with provision for capacitor mounted inside the panel with adequate number of louvers and powder coated with approved shade and having following specific components(refer particular specification)

**Incomer**

100A, 25 kA, FP MCCB with thermal release having adjustable over load -1 no.

100A TPN busbar chamber with Aluminium busbars

RYB Indicating lamps LED type - 3 Nos.  
Digital Voltmeter - 1 set  
Digital Ammeter - 1 set  
ON-OFF indication lamps (LED type)- 1 Set  
Microprocessor based intelligent, 6 step IPFC relay with PF display - 1 No.

**Out goings**

25A, 16 kA, 3P, MCCB with adjustable over load 0.8In to 1 In - 2 Nos.

16A, 16 kA, 3P, MCCB with adjustable over load 0.8In to 1 In -4 Nos.

10 kVAr capacitor duty contactor(AC6B) with illuminated ON- OFF push buttons (LED type)- 2 No.

5 kVAr capacitor duty contactor(AC6B)with illuminated ON-OFF push buttons (LED type)- 4 No.

10 kVAr, 480 V, 50 Hz heavy duty dry type capacitor(MPP-H) WITH 7% series reactor - 2 No.

5 kVAr, 480 V, 50 Hz heavy duty dry type capacitor(MPP-H) with 7% series reactor - 4 No.

|    |      |           |        |        |
|----|------|-----------|--------|--------|
| no | 1.00 | 211767.00 | 211767 | 211767 |
|----|------|-----------|--------|--------|

**1.2 SSB 1**

Supply, installation, testing and commissioning of totally enclosed free standing floor mounting dust and vermin proof indoor cubicle type Sub Switch Board (SSB- Phase 1) suitable for 415 V, 3 phase, 50 HZ supply, fabricated of 14 SWG CRCA sheet steel Powder coated complete with busbars having 160 A rating, indicating lamps (LED type) with 2A control MCBs, CT's, connections & interconnections with suitable size of copper leads/solid aluminium strips/rod and having following incoming and outgoing MCCBs as per the drawing and specifications(Refer particular specification and Drawing).

**Incomer**

125A FP isolator  
125A TPN busbar chamber with Aluminium busbar

RYB Indicating lamps LED type -3Nos.  
Digital Voltmeter - 1 set  
Digital Ammeter - 1 set  
200/5A,15 VA CTs for metering - 3 Nos

**Outgoing**

63A,25kA 4P MCCB with thermal magnetic release and adjustable OL- 3 Nos  
40A,25kA 4P MCCB with thermal magnetic release and adjustable OL- 5 Nos

|    |   |           |        |        |
|----|---|-----------|--------|--------|
| no | 1 | 130170.00 | 130170 | 130170 |
|----|---|-----------|--------|--------|

2.5 **Pump panel**

Supply, installation, testing and commissioning of totally enclosed free standing floor mounting dust and vermin proof indoor cubicle type Pump panel suitable for 415 V, 3 phase, 50 HZ supply, fabricated of 14 SWG CRCA sheet steel Powder coated complete with busbars having 63A rating, indicating lamps (LED type) with 2A control MCBs, CT's, connections & interconnections with suitable size of copper leads/solid aluminium strips/rod and having following incoming and outgoing MCCBs as per the drawing and specifications(Refer particular specification and Drawing).

**Incomer**

63A,25kA Four Pole MCCB with thermal magnetic release and adjustable OL - 1No.

63A TPN busbar chamber with Aluminium busbar

RYB Indicating lamps LED type -3Nos.

Digital Voltmeter - 1 set

Digital Ammeter - 1 set

**Outgoing**

32A , 25kA 4P MCCB with thermal magnetic release and adjustable OL -3Nos. 25A,25kA 4P MCCB with thermal magnetic release and adjustable OL - 5No.s

|    |   |           |        |        |
|----|---|-----------|--------|--------|
| no | 1 | 102760.00 | 102760 | 102760 |
|----|---|-----------|--------|--------|

**SUB TOTAL (PART B)**

|                |                |
|----------------|----------------|
| <b>1479326</b> | <b>1479326</b> |
|----------------|----------------|

**PART C**

3.0 **WIRING AND ACCESSORIES**

|     |  |    |         |         |        |        |
|-----|--|----|---------|---------|--------|--------|
| 3.1 | Supply & wiring for following points in surface/recessed mounted rigid medium gauge 20mm PVC conduit with all accessories, using 3 runs of 1.5 sqmm FRLS PVCinsulated stranded copper conductor single core wire for phase, neutral & earth, with modular 6A one way switch, modular front plate, suitable GI box, ceiling rose etc asrequired. The total distance from the switch box to the point will not exceed 5mtr, incase if length increases above 5 metres, the wiring shall be measured under item 3.4   |    |         |         |        |        |
|     | Light point/ exhaust fan point/call bell point   | no | 125.00  | 1170.00 | 146250 | 146250 |
| 3.2 | Copper plug point wiring - Wiring for power plug with 2x4 sq. mm., PVC insulated, copper conductor, stranded cable (FRLS) along with 1x2.5 sq. mm., PVC insulated, copper conductor, stranded cable for loop earthing in surface/recessed PVC conduit etc.as required complete.  | m  | 500.00  | 272.00  | 136000 | 136000 |
| 3.3 | <b>Copper circuit wiring</b> - Wiring for circuit with 2x2.5 sq. mm., PVC insulated, copper conductor, stranded cable along with 1x1.5 sq. mm., PVC insulated, copper conductor, stranded cable for loop earthing in surface/recessed pvc conduit etc as required complete   | m  | 1185.00 | 222.00  | 263070 | 263070 |
| 3.4 | <b>Copper circuit wiring</b> - Wiring for circuit wiring with 2x1.5 sq. mm., PVC insulated, copper conductor, stranded cable (FRLS) along with 1x1.5 sq. mm., PVC insulated, copper conductor, stranded cable for loop earthing in surface/recessed PVC conduit etc. as required complete.   | m  | 205.00  | 202.00  | 41410  | 41410  |
| 3.5 | Group controlled light point with 1.5 sq. mm wire - Wiring for Group controlled light point (from one point to another point) with 1.5 sq. mm PVC insulated, (FRLS), copper conductor cable along with 1x1.5 sq. mm., PVC insulated, copper conductor, stranded cable for loop earthing in surface / recessed PVC conduit. Note:- This item does not include the cost of MCB or 16Amp/ 6Amp one way switches. The total distance from one point to another point will not exceed 5meters. In case if the total length increases 5meters, the additional length shall be measured under item 2.4. The distance from DB to 1st point will be measured under item circuit wiring. | no | 50.00   | 1047.00 | 52350  | 52350  |
| 3.6 | Supply and fixing suitable size GI box with modular front plate and cover on surface or in recess, including providing and fixing 2/3 pin combined 6A modular socket outlet and 6 A modular switch with connection etc as required.  | no | 47.00   | 464.00  | 21808  | 21808  |
| 3.7 | Supply & fixing suitable size GI box with modular front plate and cover on surface or in recess, including providing & fixing of 16A modular switch with connection etc as required.   | no | 15.00   | 367.00  | 5505   | 5505   |
| 3.8 | Supply & fixing suitable size GI box with modular front plate and cover on surface or in recess, including providing and fixing of 3pin 16A modular socket outlet with connection etc as required.   | no | 15.00   | 440.00  | 6600   | 6600   |

|   |   |    |        |          |               |               |
|---|---|----|--------|----------|---------------|---------------|
| 3.9   | Supply and fixing <b>Telephone socket outlet</b> (RJ11) modular type with shutter in suitable size GI box with modular plate & cover in front in recess with all connection & necessary accessories as required.  | no | 11.00  | 338.00   | 3718          | 3718          |
| 3.10  | Supply & fixing of following rigid medium gauge PVC conduit along with all accessories in surface/recess including cutting the wall and making good the same in case of recess mounting as required.  |    |        |          |               |               |
| 3.10.1                                      | 20 mm   | m  | 50.00  | 114.00   | 5700          | 5700          |
| 3.10.2                                      | 25 mm   | m  | 50.00  | 124.00   | 6200          | 6200          |
| 3.11  | Supply and laying 2 pair telephone cable through 20 mm PVC conduit, including the PVC conduit and necessary junction box, bends etc as required complete.   | m  | 600.00 | 140.00   | 84000         | 84000         |
| 3.12  | Supply and laying Cat 6 cable, including the PVC conduit and necessary junction box, bends etc as required complete.  | m  | 600.00 | 61.00    | 36600         | 36600         |
| 3.13  | Supply and fixing RJ 45 computer socket ,modular type with shutter in suitable GI box with modular plate and cover in front on recess with all necessary connections as required  | No | 11.00  | 628.00   | 6908          | 6908          |
| <b>SUB TOTAL (PARTC)</b>                    |   |    |        |          | <b>816119</b> | <b>816119</b> |
| <b>PART D</b>                               |   |    |        |          |               |               |
| <b>4.0 MCBs AND MCB DISTRIBUTION BOARDS</b> |   |    |        |          |               |               |
| 4.1   | Supply and installation of sheet steel, phosphatised and painted, dust and vermin proof enclosure of MCB DB including copper/brass bus bar, neutral link, earth bus and DIN rail suitable for fixing MCB/isolator etc. fixed on wall using suitable anchor bolts or fixed in recess including cutting hole on the wall, making good the damages, colour washing etc as required |    |        |          |               |               |
| 4.2   | 6 way (8+18 ) - double cover TPN vertical DB with provision for fixing Isolator /RCBO as incomer and SP/TP MCB as outgoing (IP54) Note: There should be facility to terminate incoming cables of size upto 35 sq.mm AYFY and outgoing cables of size upto 4x16 sq.mm AYFY   | no | 1.00   | 10358.00 | 10358         | 10358         |
| 4.3   | 6 way (8+18) -three phase double cover horizontal (IP 42/43)  | no | 5.00   | 2824.00  | 14120         | 14120         |
| 4.4   | 6 way (8+18 ) - double cover TPN vertical DB with provision for fixing Isolator /RCBO as incomer and SP/TP MCB as outgoing (IP42/43)  | no | 1.00   | 6057.00  | 6057          | 6057          |
| 4.3   | 12 way SPN DB with provision for fixing Isolator /RCBO as incomer and SP MCB as outgoing (IP42/43)  | no | 3.00   | 1655.00  | 4965          | 4965          |
| 4.4   | FP enclosure for independent mounting of MCB  | no | 4.00   | 315.00   | 1260          | 1260          |
| 4.5   | Supply and fixing of following rating residual current circuit breaker having earth leakage protection ( <b>RCCB+MCB</b> ) as per specification as required   |    |        |          |               |               |
| 4.5.1                                       | 4 pole 32 amps. (415 Volts), 100mA sensitivity.   | no | 2.00   | 3707.00  | 7414          | 7414          |
| 4.5.2                                       | 4 pole 25 amps. (415 Volts), 30mA sensitivity.  | no | 3.00   | 3741.00  | 11223         | 11223         |
| 4.5.3                                       | 4 pole 63 amps. (415 Volts), 30mA sensitivity.  | no | 1.00   | 4616.00  | 4616          | 4616          |
| 4.5.4                                       | 4 pole 63 amps. (415 Volts), 300mA sensitivity.   | no | 1.00   | 4492.00  | 4492          | 4492          |
| 4.5.5                                       | 2 pole 32 amps. (230 Volts), 100mA sensitivity.   | no | 1.00   | 2657.00  | 2657          | 2657          |



|                                    |   |    |        |         |               |               |
|------------------------------------|---|----|--------|---------|---------------|---------------|
| 4.5.6                              | 2 pole 32 amps. (230 Volts), 30mA sensitivity.  | no | 2.00   | 2675.00 | 5350          | 5350          |
| 4.6                                | Supply and fixing of following rating, 10 KA, <b>Miniature circuit breakers</b> of the following serie in the existing enclosure as required.   |    |        |         |               |               |
| 4.6.1                              | 6A to 32A TP MCB, B/C-CURVE MCB   | no | 12.00  | 846.00  | 10152         | 10152         |
| 4.6.2                              | 6A to 32A SP MCB, B/C-CURVE MCB   | no | 116.00 | 213.00  | 24708         | 24708         |
| 4.6.3                              | 40A FP MCB, B/C-CURVE MCB   | no | 4.00   | 1512.00 | 6048          | 6048          |
| 4.7                                | Supply and fixing of following rating, 10 KA, <b>Miniature circuit breakers</b> of the following series etc. as required.<br>Supply and fixing of SP MCB blanking plate   | no | 4.00   | 25.00   | 100           | 100           |
| 4.8                                | Supply and fixing cable end boxes for the following types of DB with necessary bolts and nuts etc. as required .  |    |        |         |               |               |
| 4.8.1                              | Suitable for all types of vertical DB   | no | 2.00   | 916.00  | 1832          | 1832          |
| 4.8.2                              | Suitable for IP 43, 6way, TPN DB  | no | 3.00   | 1219.00 | 3657          | 3657          |
| <b>SUB TOTAL (PART D)</b>          |   |    |        |         | <b>119009</b> | <b>119009</b> |
| <b>PART E</b>                      |   |    |        |         |               |               |
| <b>5.0 LIGHT FIXTURES AND FANS</b> |   |    |        |         |               |               |
| 5.1                                | Supply of 1x28W surface mounted slim, robust ,non corrosive decorative fluorescent lamp fixture with T5 electronic batten, including 28W T5 lamp,prewired complete with all necessary accessories as required (Sample shall be approved by the Engineer- in-Charge)   | no | 64.00  | 634.00  | 40576         | 40576         |
| 5.2                                | Supply of 1x14W surface mounted slim, robust ,non corrosive decorative fluorescent lamp fixture with T5 electronic batten, including 14W T5 lamp,prewired complete with all necessary accessories as required (Sample shall be approved by the Engineer- in-Charge)   | no | 2.00   | 539.00  | 1078          | 1078          |
| 5.3                                | Supply of 2x18W recess mounted, low depth down lighter with frosted diffuser and fresnel lens with high frequency electronic ballast. including 2 nos of 18W CFL lamp, prewired complete with all necessary accessories as required. (sample shall be approved by the Engineer- in-Charge)  | no | 42.00  | 2364.00 | 99288         | 99288         |
| 5.3                                | Supply of 1x18W recess mounted, low depth down lighter with frosted diffuser and fresnel lens with high frequency electronic ballast. including 1 no. of 18W CFL lamp, prewired complete with all necessary accessories as required. (sample shall be approved by the Engineer- in-Charge)  | no | 30.00  | 1506.00 | 45180         | 45180         |
| 5.4                                | Supply of 2x36W recess mounted,mirror optic luminaire with CRCA powder coated housing , preanodised aluminum reflector and paralite P5 louvres with high frequency electronic ballast. including 2 nos of 36W CFL lamp, prewired complete with all necessary accessories as required. (Sample shall be approved by the Engineer- in-Charge) | no | 12.00  | 5215.00 | 62580         | 62580         |
| 5.5                                | Supply of 1x 26W recess mounted pathfinder luminaire including 1 no 26W CFL lamp, pre wired complete with all necessary accessories as required. (Sample shall be approved by the Engineer- in-Charge)  | no | 34.00  | 3404.00 | 115736        | 115736        |

|  |  |    |       |         |        |        |
|--|--|----|-------|---------|--------|--------|
| 5.6  | Supply of 1x 18W decorative luminaire (bollard)with housing made of die-cast aluminum having antique silver colour with built in control gear suitable for 1 no 18W CFL , pre wired complete with all necessary accessories including civil foundation as required.(sample shall be approved by the Engineer- in-Charge)   | no | 47.00 | 5550.00 | 260850 | 260850 |
| 5.7  | Supply, of the following sizes of exhaust fans in the existing opening, fixing necessary bolt and nuts, making good the damages etc. as required including giving connections with required length of 24/0.20mm PVC insulated and PVC sheathed 3 core round copper conductor flex wire conforming to relevant ISS (Sample shall be approved by the Engineer- in-Charge)<br>250mm, single phase, light duty exhaust fan in plastic body with self opening louvers | no | 5.00  | 1338.00 | 6690   | 6690   |
| 5.8  | Supply of ceiling fan, with double ball bearing, Aluminium pressure die cast body with Aluminium blades, canopies, hanging shackle, 30 cm down rod and without speed regulator suitable for 230 V/240 V 50 HZ, AC supply confirms to IS 374/1979 as required complete. (Sample shall be approved by the Engineer- in-Charge)<br>1200mm sweep   | no | 7.00  | 1734.00 | 12138  | 12138  |
| 5.9  | Supply of wall mounting fan of the following sizes using mounting brackets supplied along with the fan and giving connection with existing wire.<br>400mm sweep  | no | 7.00  | 2022.00 | 14154  | 14154  |
| 5.10   | Supply, installation, testing and commissioning of <b>axial propeller type exhaust fans</b> with single phase direct driven motor of following capacities for ventilation complete as required etc.<br>550cfm-10 mm SP   | no | 4.00  | 3692.00 | 14768  | 14768  |
| <b>INSTALLATION, TESTING AND COMMISSIONING OF LIGHT FIXTURES AND FAN</b> |  |    |       |         |        |        |
| 5.11   | Installation, testing and commissioning of ceiling fan wiring the down rod of standard length (upto 30cm) with 1.5 sq.mm PVC insulated copper conductor single core cable including earthing the regulator etc. as required.   | no | 7.00  | 136.00  | 952    | 952    |
| 5.12   | Supply and providing every additional length of down rod of suitable size heavy gauge GI/WI pipe with 16/0.20mm PVC insulated and PVC sheathed 3 core round copper conductor flex wire conforming in relevant ISS or with original wiring extended including painting as required. (for extending the length of down rod for ceiling fan)  | no | 11.00 | 17.00   | 187    | 187    |
| 5.13   | Installation, testing and commissioning of exhaust fan upto 450mm sweep in the existing opening, including making the hole to suit the size of the above fan, making good the damage, connections, testing & commissioning etc as required.  | no | 5.00  | 675.00  | 3375   | 3375   |
| 5.14   | Installation, testing & commissioning of wall mounted fan upto 400mm sweep in the wall / column making good the damage, connections, testing & commissioning etc as required.  | no | 7.00  | 183.00  | 1281   | 1281   |

|                           |   |    |        |        |               |               |
|---------------------------|---|----|--------|--------|---------------|---------------|
| 5.15                      | Installation, testing and commissioning of prewired fluorescent fitting of all types complete with all accessories and fluorescent lamps of all types directly on wall, false ceiling and giving connections with 16/0.20 mm 3 core PVC insulated and sheathed round copper conductor flex wire or extending the original wiring and giving connections as required.  | no | 108.00 | 127.00 | 13716         | 13716         |
| 5.16                      | Installation, testing and commissioning of prewired, fluorescent / CFL light fittings of all types, with chain mounted complete with all accessories and tubes etc recess mounted to false ceiling, including connection with 1.5sqmm PVC insulated copper conductor single / three core cable etc as required.   | no | 12.00  | 176.00 | 2112          | 2112          |
| 5.17                      | Installation, testing and commissioning of CFL Bollard fitting of all types complete with all accessories and CFL lamps of all types with suitable mounting accessories and foundation and giving connections with 16/0.20 mm 3 core PVC insulated and sheathed round copper conductor flex wire or extending the original wiring and giving connections as required. | no | 47.00  | 742.00 | 34874         | 34874         |
| 5.18                      | Installation, testing and commissioning of CFL Path finder fitting complete with all accessories and CFL lamps of all types concealed in wall connections with 16/0.20 mm 3 core PVC insulated and sheathed round copper conductor flex wire or extending the original wiring and giving connections as required.   | no | 34.00  | 272.00 | 9248          | 9248          |
| 5.19                      | Supply and fixing of 2 module type, 5 speed electronic fan regulator 120watts rating with non metallic front plate including providing and fixing suitable size metal box in surface/ recess with all necessary accessories as required.  | no | 7.00   | 532.00 | 3724          | 3724          |
| 5.20                      | Numbering of ceiling fan / exhaust fan/ fluorescent fitting as required.  | no | 124.00 | 29.00  | 3596          | 3596          |
| <b>SUB TOTAL (PART E)</b> |   |    |        |        | <b>746103</b> | <b>746103</b> |

## PART F

### 6.0 CABLES AND CABLING HT CABLING

|       |   |   |        |         |        |        |
|-------|---|---|--------|---------|--------|--------|
| 6.1   | Supply of following sizes of XLPE insulated PVC sheathed, Aluminium conductor armoured power cable of 11 KV grade conforming to IS 7098 amended upto date.  |   |        |         |        |        |
| 6.1.1 | 3C X 300 sq.mm.   | m | 20.00  | 2536.00 | 50720  | 50720  |
| 6.1.2 | 3C X 150 sq.mm.   | m | 200.00 | 1544.00 | 308800 | 308800 |
| 6.2   | Laying of one number 11 kV grade XLPE cable insulated and PVC sheathed/XLPE power cable to the following sizes in ground including excavation of trench of size 35X 120 cm, sand cushioning up to a height of 25 cm, providing protective covering with country burnt bricks laid breathwise refilling the trench etc. as required.(in hard soil) |   |        |         |        |        |
|       | Cable size exceeding 120 Sq.mm but not exceeding 400 sq.mm  | m | 193.00 | 328.00  | 63304  | 63304  |

|        |  |    |        |          |       |       |
|--------|--|----|--------|----------|-------|-------|
| 6.3    | Laying of one number 11 kV grade XLPE cable of size not exceeding 400 sq.mm in the existing RCC/ HUME/ STONEWARE/ METAL pipe as required.  | m  | 17.00  | 90.00    | 1530  | 1530  |
| 6.4    | Laying of one number 11 kV grade XLPE cable of size not exceeding 400 sq.mm in the existing masonry open duct as required.   | m  | 10.00  | 72.00    | 720   | 720   |
| 6.5    | Supplying and making outdoor cable end termination with push on end termination kit complete with all accessories including lugs for the following size of 3 core, armoured, XLPE aluminium conductor cable of 11kV grade as required. |    |        |          |       |       |
|        | 3C X300 sq.mm.   | no | 1.00   | 14191.00 | 14191 | 14191 |
| 6.6    | Supplying and making indoor cable end termination with push-on end termination complete with all accessories including lugs for the following size of 3 core, armoured, XLPE aluminium conductor cable of 11kV grade as required.      |    |        |          |       |       |
| 6.6.1  | 3C X300sq.mm.  | no | 2.00   | 12714.00 | 25428 | 25428 |
| 6.6.2  | 3C X 150 sq.mm.  | no | 4.00   | 10565.00 | 42260 | 42260 |
| 6.7    | <b>LT CABLING</b><br>Supply of following size 1.1 KV grade XLPE insulated, PVC sheathed, armoured Aluminium /copper conductor cable conforming to IS 7098 (Part 1) amended upto date.  |    |        |          |       |       |
| 6.7.1  | 3.5C 185 Sq.mm Al  | m  | 25.00  | 986.00   | 24650 | 24650 |
| 6.7.2  | 3.5C 95 Sq.mm Al   | m  | 95.00  | 544.00   | 51680 | 51680 |
| 6.7.3  | 3.5C 35 Sq.mm Al   | m  | 65.00  | 255.00   | 16575 | 16575 |
| 6.7.4  | 4C 25 Sq.mm Al   | m  | 160.00 | 229.00   | 36640 | 36640 |
| 6.7.5  | 4C 16 Sq.mm Al   | m  | 225.00 | 176.00   | 39600 | 39600 |
| 6.7.6  | 4C 10 Sq.mm Al   | m  | 15.00  | 141.00   | 2115  | 2115  |
| 6.7.7  | 3C 6 Sq.mm Al  | m  | 40.00  | 122.00   | 4880  | 4880  |
| 6.7.8  | 3C 4 Sq.mm Al  | m  | 60.00  | 95.00    | 5700  | 5700  |
| 6.7.9  | 3C 2.5 Sq.mm Cu  | m  | 410.00 | 164.00   | 67240 | 67240 |
| 6.7.10 | 2C 10 Sq.mm Cu   | m  | 60.00  | 349.00   | 20940 | 20940 |
| 6.8    | Supplying and making end termination with brass compression gland and aluminium/Copper lugs for following size of XLPE insulated PVC sheathed aluminium/copper conductor cable of 1.1 kV grade as required.                            |    |        |          |       |       |
| 6.8.1  | 3.5C 185 Sq.mm Al  | no | 2.00   | 714.00   | 1428  | 1428  |
| 6.8.2  | 3.5C 95 Sq.mm Al   | no | 6.00   | 556.00   | 3336  | 3336  |
| 6.8.3  | 3.5C 35Sq.mm Al  | no | 2.00   | 407.00   | 814   | 814   |
| 6.8.4  | 4C 25 Sq.mm Al   | no | 4.00   | 368.00   | 1472  | 1472  |
| 6.8.5  | 4C 16 Sq.mm Al   | no | 14.00  | 347.00   | 4858  | 4858  |
| 6.8.6  | 4C 10 Sq.mm Al   | no | 4.00   | 312.00   | 1248  | 1248  |
| 6.8.7  | 3C 6 Sq.mm Al  | no | 6.00   | 298.00   | 1788  | 1788  |
| 6.8.8  | 3C 4 Sq.mm Al  | no | 6.00   | 290.00   | 1740  | 1740  |
| 6.8.9  | 3C 2.5 Sq.mm Cu  | no | 94.00  | 286.00   | 26884 | 26884 |
| 6.8.10 | 2C 10 Sq.mm Cu   | no | 6.00   | 320.00   | 1920  | 1920  |
| 6.9    | Laying & fixing of one no. XLPE insulated & PVC sheathed power or control cable of 1.1kV grade of following size in recess/ surface/ cable tray/ wall with saddles, clamps and all other accessories as required                       |    |        |          |       |       |
| 6.9.1  | Cable size not exceeding 25Sq mm   | m  | 365.00 | 95.00    | 34675 | 34675 |
| 6.9.2  | Above 25 Sq.mm upto 120 Sq.mm  | m  | 115.00 | 145.00   | 16675 | 16675 |
| 6.9.3  | Above 120 Sq.mm upto 400 Sq.mm   | m  | 20.00  | 151.00   | 3020  | 3020  |

|                          |  |    |        |        |                |                |
|--------------------------|--|----|--------|--------|----------------|----------------|
| 6.10                     | Laying of one number PVC insulated and PVC sheathed armoured power cable of 1.1kV grade fo the following sizes in ground including excavation of trench of size 35x75cm, sand cushioning up to a height of 25cm (8cm+17cm), providing protective covering with country burnt bricks laid breadth wise, refilling the trench etc. as required   |    |        |        |                |                |
| 6.10.1                   | Cable size not exceeding 25Sq mm   | m  | 333.00 | 234.00 | 77922          | 77922          |
| 6.10.2                   | Above 25 Sq.mm upto 120 Sq.mm  | m  | 30.00  | 251.00 | 7530           | 7530           |
| 6.10.3                   | Above 120 Sq.mm upto 400 Sq.mm   | m  | 0.00   | 269.00 | 0              | 0              |
| 6.11                     | Laying of one number additional PVC insulated and PVC sheathed armoured power cable of 1.1KV grade of the following sizes in ground in the same trench in one tier horizontal formation including widening the trench by 20 cm,sand cushioning up to the height of 25 cm,providing protective covering with country burnt bricks laid breadth wise refilling the trench etc. as required |    |        |        |                |                |
| 6.11.1                   | Upto 25 Sq.mm  | m  | 216.00 | 149.00 | 32184          | 32184          |
| 6.11.2                   | Above 25 Sq.mm upto 120 Sq.mm  | m  | 0.00   | 157.00 | 0              | 0              |
| 6.11.2                   | Above 120 Sq.mm upto 400 Sq.mm   | m  | 5.00   | 166.00 | 830            | 830            |
| 6.12                     | Laying of one number PVC insulated and PVC sheathed armoured power cable of 1.1kV grade fo the following sizes in the existing RCC/HUME/STONEWARE/GI/DWC pipe as required  |    |        |        |                |                |
| 6.12.1                   | Upto 25 sq.mm  | m  | 36.00  | 45.00  | 1620           | 1620           |
| 6.12.2                   | Above 25 Sq.mm upto 120 Sq.mm  | m  | 10.00  | 62.00  | 620            | 620            |
| 5.70                     | Laying of one number PVC insualted and PVC sheathed armoured power cable of 1.1KV grade of the following sizes in the existing masonry open duct as required.  |    |        |        |                |                |
| 5.7.1                    | Cable size not exceeding 25Sq mm   | m  | 0.00   | 36.00  | 0              | 0              |
| 5.7.2                    | Above 25 Sq.mm upto 400 Sq.mm  | m  | 0.00   | 49.00  | 0              | 0              |
| 6.13                     | Laying of one number PVC insualted and PVC sheathed armoured power cable of 1.1KV grade of the following sizes in the existing masonry open duct as required.  |    |        |        |                |                |
| 6.13.1                   | Upto 25 Sq.mm  | m  | 20     | 36.00  | 720            | 720            |
| 6.13.2                   | Above 25 Sq.mm upto 400 Sq.mm  | m  | 5      | 49.00  | 245            | 245            |
| 6.14                     | Supply, fabricating and installing MS items such as Tees/ angles/ channels etc. on floor/ ceiling/ wall including necessary civil work such as grouting, finishing etc. and painting with two coats of primer and two coats of synthetic enamel paint as required  | kg | 500.00 | 95.00  | 47500          | 47500          |
| 6.15                     | Supplying, threading, laying and jointing of the following sizes of 'B' class GI pipe with all required accessories in ground in the existing trench as protective covering to earth leads.  |    |        |        |                |                |
| 6.15.1                   | 40 mm  | m  | 50.00  | 259.00 | 12950          | 12950          |
| 6.15.2                   | 50 mm  | m  | 20.00  | 304.00 | 6080           | 6080           |
| <b>SUB TOTAL PART -F</b> |  |    |        |        | <b>1065032</b> | <b>1065032</b> |

**PART G**  
**7.0 EARTHING AND SAFETY EQUIPMENTS**

|       |  |      |        |          |        |        |
|-------|--|------|--------|----------|--------|--------|
| 7.1   | Supply & providing ISI plate earthing as per IS 3043 with 1200x1200x12.5mm GI / CI earth plate with 20mm dia B class GI pipe for watering, 50x6mm GI strip welded to the plate, GI funnel with weld mesh, fixing GI strip of size 50x6mm with min. length of 20cm clamped with 50x5mm GI flat using 12x10mm GI bolt & nut at top of the GI pipe as test joint, filling around the GI pipe at a radius of 15cm with a homogeneous mixture of charcoal, & river sand upto a height of 2.5 meter from the bottom, filling the rest of the portion with excavated soil including watering & ramming providing brick work (20cm) masonry at top in 1:6 cement mortar, plastering the inside & top of the manhole with 12mm thick 1:6 cement mortar and providing gully trap with 450x450x10mm CI covering at the top. |      |        |          |        |        |
|       |  | set  | 10     | 13347.00 | 133470 | 133470 |
| 7.2   | Supply and providing ISI pipe earthing as per IS 3043 with 3.5 meter long 40mm dia B class GI pipe with 12mm dia holes, providing GI funnel with weld mesh, fixing GI strip of size 50x6mm with min. length of 20cm clamped with 50x5mm GI flat using 12x10mm GI bolt & nut at top of the GI pipe as test joint, filling around the GI pipe at a radius of 15cm with a homogeneous of charcoal, & sieved earth upto a height of 2.0 meter from the bottom, filling the rest of the portion with excavated soil including watering and ramming providing brick work (20cm) masonry at top in 1:6 cm cement mortar, plastering the inside and top of the manhole with 12mm thick 1:6 cement mortar and providing 300x300x6mm CI covering at the top.   |      |        |          |        |        |
|       |  | set  | 12.00  | 5635.00  | 67620  | 67620  |
| 7.3   | Supplying and laying following GI or copper strip / wire at 0.6m below ground level including excavation and refilling or on surface with mounting saddles for conductor earth electrode including welding etc as required.  |      |        |          |        |        |
| 7.3.1 | 25x3 mm copper strip tinned at the points of contacts  | m    | 180.00 | 476.00   | 85680  | 85680  |
| 7.3.2 | 25x6 mm GI strip   | m    | 160.00 | 146.00   | 23360  | 23360  |
| 7.3.3 | copper conductor (10 SWG)  | m    | 700.00 | 83.00    | 58100  | 58100  |
| 7.3.4 | GI conductor (8 SWG)   | m    | 820.00 | 32.00    | 26240  | 26240  |
| 7.4   | Supply and providing 2mx1mx6mm thick electrical grade chequered type rubber mat to withstand 1.1KV dielectric strength conforming to IS 5429/1969.   |      |        |          |        |        |
|       |  | no   | 4.00   | 927.00   | 3708   | 3708   |
| 7.3.2 | Supply and providing 2mx1mx6mm thick electrical grade chequered type rubber mat to withstand 11KV dielectric strength conforming to IS 5429/1969.  |      |        |          |        |        |
|       |  | No   | 3.00   |          |        |        |
| 7.5   | Supplying of Rubber hand gloves suitable for 1.1 KV.   |      |        |          |        |        |
|       |  | pair | 1.00   | 297.00   | 297    | 297    |
| 7.6   | Supply and providing First Aid Chart with glass frame and placed in a conspicuous location for clear vision.   |      |        |          |        |        |
|       |  | no   | 2.00   | 532.00   | 1064   | 1064   |

|     |  |     |      |         |      |      |
|-----|--|-----|------|---------|------|------|
| 7.7 | Supply and providing GI Fire Bucket ( 3 Nos) painted in post office red with primer coat of red oxide and written with white paint 'FIRE' mounted on MS angle frame work/wall bracket filled with fine sand painting the bracket/floor stand including making good the damages, colour washing etc. as required. | set | 2.00 | 1336.00 | 2672 | 2672 |
| 7.8 | Supply and fixing ABC Dry chemical powder type fire extinguisher with ISI mark( store pressure) 4 Kq capacity  | no  | 1.00 | 2613.00 | 2613 | 2613 |
| 7.9 | Supply and fixing Carbon dioxide extinguisher with ISI mark, 4.5 Kq capacity   | no  | 1.00 | 7055.00 | 7055 | 7055 |

**SUB TOTAL PART G**

**411879      411879**

**PART H**

**8.0 LIGHTNING PROTECTION**

|     |  |   |        |       |       |       |
|-----|--|---|--------|-------|-------|-------|
| 8.1 | Supply and clamping the following sizes of strips on surface of wall/parapet/existing cable tray using clamps fabricated from 20x3 mm Gi flat duly painted or heavy duty GI spacer saddles, spacing of clamps not exceeding 1 m, making good the damages, colour washing etc. as required.(for horizontal run) | m | 150.00 | 95.00 | 14250 | 14250 |
|-----|--|---|--------|-------|-------|-------|

|     |  |   |       |        |      |      |
|-----|--|---|-------|--------|------|------|
| 8.2 | Supply and clamping the following sizes of strips on surface of wall/parapet/existing cable tray using clamps fabricated from 20x3 mm Gi flat duly painted or heavy duty GI spacer saddles, spacing of clamps not exceeding 1 m, making good the damages, colour washing etc. as required.(for vertical run) | m | 40.00 | 120.00 | 4800 | 4800 |
|-----|--|---|-------|--------|------|------|

|     |  |     |      |       |    |    |
|-----|--|-----|------|-------|----|----|
| 8.3 | Providing and fixing testing joint made of 20mm x 3mm thick GI strip 125mm long with 4No. G.I. bolts, nuts, check nuts, spring washer etc. complete as required. | set | 2.00 | 49.00 | 98 | 98 |
|-----|--|-----|------|-------|----|----|

|     |   |     |      |         |       |       |
|-----|---|-----|------|---------|-------|-------|
| 8.4 | Supply and providing ISI pipe earthing as per IS 3043 with 3.5 meter long 40mm dia B class GI pipe with 12mm dia holes, providing GI funnel with weld mesh, fixing GI strip of size 50x6mm with min. length of 20cm clamped with 50x5mm GI flat using 12x10mm GI bolt & nut at top of the GI pipe as test joint, filling around the GI pipe at a radius of 15cm with a homogeneous of charcoal, & sieved earth upto a height of 2.0 meter from the bottom, filling the rest of the portion with excavated soil including watering and ramming providing brick work (20cm) masonry at top in 1:6 cement mortar, plastering the inside and top of the manhole with 12mm thick 1:6 cement mortar and providing 300x300x6mm CI covering at the top. | set | 2.00 | 5635.00 | 11270 | 11270 |
|-----|---|-----|------|---------|-------|-------|

**SUB TOTAL PART H**

**30418      30418**

**PART I**

**9 MISCELLANIOUS ITEMS**

|     |  |     |      |          |       |       |
|-----|--|-----|------|----------|-------|-------|
| 9.1 | Supply, installation, testing and commissioning of single phase input phase output, 2.5 kVA sine wave inverter with 100 AH tubular battery prewired complete with all necessary accessories, interconnection cables as required. | set | 1.00 | 66035.00 | 66035 | 66035 |
|-----|--|-----|------|----------|-------|-------|

|                         |  |     |      |         |                |                |
|-------------------------|--|-----|------|---------|----------------|----------------|
| 9.2                     | Supply and installation of totally enclosed dust and vermin proof outdoor type IP65 polycarbonate emergency ON-OFF Push button station mounted on suitable MS angle for 230V, 1phase, 50Hz supply with accessories as required. (Hensel PBS 0201 or equivalent). Necessary foundation for MS angle shall also be considered if mounted directly in ground. | no  | 5.00 | 2278.00 | 11390          | 11390          |
| 9.3                     | Supply & fixing of DOL starter suitable for 1.5HP motor in a suitable enclosure & giving all other necessary connections as required   | set | 3.00 | 1945.00 | 5835           | 5835           |
| 9.4                     | Supply & fixing of fully automatic star delta starter suitable for 5HP motor with SPP in a suitable enclosure & giving all other necessary connections as required   | set | 1.00 | 7414.00 | 7414           | 7414           |
| 9.5                     | Supply & fixing of fully automatic star delta starter suitable for 7.5HP motor with SPP in a suitable enclosure & giving all other necessary connections as required   | set | 1.00 | 7414.00 | 7414           | 7414           |
| 9.6                     | Supply , installation, testing and commissioning of 24 Port loaded Patch panel 1U  | no  | 1.00 | 6736.00 | 6736           | 6736           |
| 9.7                     | Supply, installation, testing and commissioning of 4U networking RackPower supply unit 3x6Amps (1 nos),Hardware Screws( 10 nos), cable Manager (1 nos)   | no  | 1.00 | 5111.00 | 5111           | 5111           |
| 9.8                     | Supply, installation, tesitng and commissioning of 10 pair MDF Box with krone module   | no  | 1.00 | 475.00  | 475            | 475            |
| 9.9                     | Supply,installation,testing and commissioning of 20 pair MDF box with Krone Modules  | no  | 1.00 | 849.00  | 849            | 849            |
| <b>SUB TOTAL PART I</b> |  |     |      |         | <b>111259</b>  | <b>111259</b>  |
| <b>GRAND TOTAL</b>      |  |     |      |         | <b>6431368</b> | <b>6431368</b> |



**KITCO LTD**  
**NATIONAL GAMES SECRETARIAT**  
**CONSTRUCTION OF PROPOSED PALA STADIUM**  
**SCHEDULE OF QUANTITIES - PART E- AIR CONDITIONING SYSTEM**

| Sl. No                                      | Particulars  | Unit | QTY    | Rate (Rs) | Amount (Rs)      |
|---|--|------|--------|-----------|------------------|
| <b>PART A SITC OF NEW SYSTEM EQUIPMENTS</b> |  |      |        |           |                  |
| 1   | Supply, Installation, testing and commissioning (SITC) of <b>8.5 TR</b> or higher capacity aircooled ductable split air conditioner with ceiling suspended IDU and all standard fittings, IDU SS drain pan, as per specifications complete with suitable capacity drive motor, air cooled condenser with all accessories, hermetically sealed scroll compressor, electronic microprocessor pendant controller with digital display, first charge refrigerent gas, vibration isolator pads, structural supports for fixing IDU/ ODU, safety devices including thermal protector, pressure relief valve, over load relays single phase preventor etc, power and control cabling, drain piping, high-low pressure cut out, suitable for three phase 440V supply etc complete as required. | no   | 1.00   | 190000.00 | 190000.00        |
| 2   | Supply, installation, testing and commissioning of suitable hard drawn copper refrigerant pipes(both suction and liquid piping) including insulation between indoor & outdoor units as per site conditions   | m    | 15.00  | 1500.00   | 22500.00         |
| 3   | Supply, Installation, testing and commissioning (SITC) of <b>5.5 TR</b> or higher capacity aircooled ductable split air conditioner with ceiling suspended IDU and all standard fittings, IDU SS drain pan, as per specifications complete with suitable capacity drive motor, air cooled condenser with all accessories, hermetically sealed scroll compressor, electronic microprocessor pendant controller with digital display, first charge refrigerent gas, vibration isolator pads, structural supports for fixing IDU/ ODU, safety devices including thermal protector, pressure relief valve, over load relays single phase preventor etc, power and control cabling, drain piping, high-low pressure cut out, suitable for three phase 440V supply etc complete as required. | no   | 1.00   | 129938.00 | 129938.00        |
| 4   | Supply, installation, testing and commissioning of suitable hard drawn copper refrigerant pipes(both suction and liquid piping) including insulation between indoor & outdoor units as per site conditions   | m    | 15.00  | 1300.00   | 19500.00         |
| 5   | Supply, installation, testing and commissioning <b>PVC drain pipe</b> of suitable dia connecting the drain lines from the indoor units to nearest drain point, with suitable insulation as per specification   | m    | 10.00  | 200.00    | 2000.00          |
| <b>TOTAL FOR PART A</b>                     |  |      |        |           | <b>363938.00</b> |
| <b>PART B AIR DISTRIBUTION</b>              |  |      |        |           |                  |
| 9   | Supply, installation, testing and commissioning of <b>GSS sheet metal ducting</b> for Supply air collar from indoor unit, Exhaust Air, Fresh Air as per ducting specifications and with suitable supports using MS angles, channels, rods, anchor bolts, etc to roof /truss as per IS 655 and as per specifications.   |      |        |           |                  |
| 9.1   | 22 G   | sqm  | 25.00  | 850.00    | 21250.00         |
| 9.2   | 24 G   | sqm  | 90.00  | 720.00    | 64800.00         |
| 10  | Supply and fixing of <b>External Thermal insulation</b> on ducts with 13mm thick, 55kg/m <sup>3</sup> density, regular closed cell nitrile rubber with anti-microbial protection class O insulation using self adhesive as per specification. Quoted price shall be inclusive of adhesive, tapes etc.  | sqm  | 115.00 | 650.00    | 74750.00         |
| 11  | Supply and fixing of <b>Acoustic lining</b> inside sheet metal ducts with 10mm thick Open Cell nitrile rubber class 1, having density 140 kg/m <sup>3</sup> insulation using manufacturers recommended adhesive, tapes etc and applications. Quoted price shall be inclusive of adhesive, tapes etc.   | sqm  | 25.00  | 900.00    | 22500.00         |
| 12  | SITC of Powder coated extruded aluminium <b>Supply Air Diffusers</b> with aluminium VCD  | sqm  | 1.50   | 11000.00  | 16500.00         |

| <b>Sl. No</b>           | <b>Particulars</b>  | <b>Unit</b> | <b>QTY</b> | <b>Rate (Rs)</b> | <b>Amount (Rs)</b> |
|-------------------------|---|-------------|------------|------------------|--------------------|
| 13                      | SITC of Powder coated extruded aluminium <b>Return Air Diffusers</b> without VCD  | sqm         | 1.50       | 9000.00          | 13500.00           |
| 14                      | SITC of multi blade type louver dampers of steel sheet for ducts, collars etc. to be provided with suitable links, levers and quadrants for manual control of volume of air flow and for proper balancing of the air distributions system in rooms & other area as per specification. | sqm         | 1.00       | 4750.00          | 4750.00            |
| <b>TOTAL FOR PART B</b> |   |             |            |                  | <b>218050.00</b>   |
| <b>GRAND TOTAL</b>      |   |             |            |                  | <b>581988.00</b>   |

**NATIONAL GAMES SECRETARIAT**  
**CONSTRUCTION OF PROPOSED PALA STADIUM**

**SPECIFICATION AND SCHEDULE OF QUANTITIES - PART F- FIRE HYDRANT AND DETECTION SYSTEM**

| Sl. No.    | Description   | Unit | Qty. | Rate<br>(Rs.) | Amount<br>(Rs.) |
|------------|---|------|------|---------------|-----------------|
| <b>1.0</b> | <b>FIRE HYDRANT SYSTEM</b>  |      |      |               |                 |
| 1.1        | Supplying, Installation, Testing and Commissioning of <b>electric driven main fire pump</b> suitable for automatic operation and consisting of following: complete in all respect as required.  |      |      |               |                 |
| a)         | Horizontal type, centrifugal, split casing pump of cast iron body & bronze impeller with stainless steel shaft, mechanical seal to ensure a minimum pressure of 3.5 kg/sq.cm. at highest and farthest outlet at specified flow of 2280 lpm at 80m. head conforming to IS 1520.  |      |      |               |                 |
| b)         | Suitable HP Squirrel cage induction motor, TEFC, synchronous speed 1500 RPM, suitable for operation on 415 volts, 3 phase 50 Hz. AC with IP 55 protection for enclosure, horizontal foot mounted type with Class-'F' insulation, conforming to IS-325.  |      |      |               |                 |
| c)         | M.S. fabricated Common base plate, coupling, coupling guard, foundation bolts etc. as required.   |      |      |               |                 |
| d)         | Suitable cement concrete foundation duly plastered with anti vibration pads (Lot).  | set  | 1    | 401559.00     | 401559.00       |
| 1.2        | Supplying, Installation, Testing and Commissioning of <b>diesel engine driven main fire pump</b> suitable for automatic operation and consisting of following: complete in all respect as required.   |      |      |               |                 |
| a)         | Horizontal type, centrifugal, split casing pump of cast iron body & bronze impeller with stainless steel shaft, mechanical seal to ensure a minimum pressure of 3.5 kg/sq.cm. at highest and farthest outlet at specified flow of 2280 lpm at 80 m. head conforming to IS 1520.   |      |      |               |                 |
| b)         | Suitable HP, 1500 RPM water cooled with radiator, diesel engine conforming to relevant BS & IS standard complete with auto starting mechanism, 12 volts/24 Volts electric starting equipment, 2x12v 180AH Batteries and leads, Diesel Tank Fabricated from MS sheet of 4mm Thick (Minimum Capacity 300 Litres) with level indicator, By-pass line, MS Piping to diesel tank from engine, exhaust pipe extended upto 1 m. outside pump house duly insulated with 50 mm. thick glass wool with 1.0 mm. thick aluminium sheet cladding, residential silencer, instruments and protection as per specification, stop solenoid for auto stop in the event of fault with audio indications, painted with post office red colour etc. as required. |      |      |               |                 |
| c)         | M.S. fabricated Common base plate, coupling, coupling guard, foundation bolts etc. as required.   |      |      |               |                 |
| d)         | Suitable cement concrete foundation duly plastered with anti vibration pads (Lot).  | set  | 1    | 747249.00     | 747249.00       |
| 1.3        | Supplying, Installation, Testing and Commissioning of <b>electric driven pressurisation pump ( Jockey Pump )</b> suitable for automatic operation and consisting of following: complete in all respect as required.   |      |      |               |                 |
| a)         | Horizontal type, centrifugal, pump of cast iron body & bronze impeller with stainless steel shaft, mechanical seal and flow of 180 lpm at 80 m. head conforming to IS 1520.   |      |      |               |                 |

| Sl. No. | Description   | Unit | Qty. | Rate (Rs.) | Amount (Rs.) |
|---------|---|------|------|------------|--------------|
| b)      | Suitable HP Squirrel cage induction motor, TEFC, synchronous speed 2900 RPM, suitable for operation on 415 volts, 3 phase 50 Hz. AC with IP 55 protection for enclosure, horizontal foot mounted type with Class-'F' insulation, conforming to IS-325.  |      |      |            |              |
| c)      | M.S. fabricated Common base plate, coupling, coupling guard, foundation bolts etc. as required.   |      |      |            |              |
| e)      | Suitable cement concrete foundation duly plastered with anti vibration pads (Lot).  | set  | 1    | 117899.00  | 117899.00    |
| 1.4     | a) Supplying, Installation, testing and commissioning of <b>electric driven pump (terrace pump)</b> set and consisting of following: complete in all respect as required.<br>Monoblock Pump rated for 450lpm, 35m head C.I body, SS shaft, stainless steel impeller, mechanical seal, volute type with suitable HP SQ cage induction motor, suitable for operation on 415V, 3phase 50Hz, AC with IP 55 class of protection for enclosure, horizontal foot mounted type with class F insulation,<br><br>M.S. fabricated common base plate, foundation bolts, anti vibration pads etc. as required. | no   | 1    | 39700.00   | 39700.00     |
| 1.5     | Supply, installation, testing and commissioning of industrial type <b>pressure switch</b> having 1/4" BSP(F) connection IP:32 enclosure protection, phosphor bronze bellows as sensing element, SDPT contact system, switch rating 6A inductive/IOA resistive 380 V A   | no   | 3    | 2320.00    | 6960.00      |
| 1.6     | Supplying and fixing <b>air vessel</b> made of 250mm dia, 8mm thick MS sheet, 1200mm in height with air release valve on top and flanged connection to riser, drain arrangement with 25mm dia Gun metal wheel valve, with required accessories, pressure gauge and painting with synthetic enamel paint of approved shade as required.  | no   | 1    | 21752.00   | 21752.00     |
| 1.7     | Supply, installation, testing and commissioning of <b>pressure gauge</b> 0-200 PSI ( 0 - 14 Kg ) range, 3/8" BSP bottom entry, 4" dial weather proof with stainless steel internals, siphon tube and ball valve including fittings, etc. complete as required   | no   | 3    | 2030.00    | 6090.00      |
| 1.8     | Supplying, fixing, testing and commissioning of <b>butterfly valve</b> PN 16, with Bronze/Gunmetal seat duly ISI marked complete with Nuts, Bolts, washers, gaskets, conforming to IS 13095, of following sizes as required.  |      |      |            |              |
| 1.8.1   | 150mm dia   | no   | 2    | 4830.00    | 9660.00      |
| 1.8.2   | 125mm dia   | no   | 2    | 4404.00    | 8808.00      |
| 1.8.3   | 100 mm dia  | no   | 1    | 3438.00    | 3438.00      |
| 1.8.4   | 80 mm dia.  | no   | 2    | 2645.00    | 5290.00      |
| 1.8.5   | 65mm dia  | no   | 2    | 2472.00    | 4944.00      |
| 1.8.6   | 50 mm dia.  | no   | 4    | 2185.00    | 8740.00      |
| 1.8.7   | 40 mm dia.  | no   | 1    | 2185.00    | 2185.00      |
| 1.9     | Providing, Installation, testing and commissioning of <b>dual plate non-return valve</b> of following size confirming to IS : 5312 complete with rubber gasket, GI bolts, nuts, washers etc. as required.   |      |      |            |              |

| Sl. No.  | Description  | Unit | Qty. | Rate (Rs.) | Amount (Rs.) |
|----------|--|------|------|------------|--------------|
| 1.9.1    | 150 mm dia   | no   | 2    | 10302.00   | 20604.00     |
| 1.9.2    | 100 mm dia   | no   | 1    | 5155.00    | 5155.00      |
| 1.9.3    | 65 mm dia  | no   | 1    | 2963.00    | 2963.00      |
| 1.9.4    | 50 mm dia  | no   | 3    | 2336.00    | 7008.00      |
| 1.10     | Providing, Installation, testing and commissioning of <b>Foot valve</b> of following size confirming to IS specifications complete with gaskets, seal and accessories as required.   |      |      |            |              |
| 1.10.1   | 150 mm dia   | no   | 2    | 5494.00    | 10988.00     |
| 1.10.2   | 80 mm dia  | no   | 1    | 2330.00    | 2330.00      |
| 1.11     | SITC of <b>priming tank</b> of capacity 1500 lit. made out of HDPE material with outlet/ inlet connection, water level indicator, over flow arrangement, float valve, etc. completed as required.  | no   | 1    | 8997.00    | 8997.00      |
| 1.12     | Providing and laying <b>M.S. (Heavy C' Class) pipe</b> IS:1239/ IS:3589 marked including all accessories such as screwed/welded flanges, tees, reducers etc. conforming to IS standards complete including painting, welding, jointing and neoprene gaskets, nuts, bolts etc. as required.   |      |      |            |              |
| 1.21.1   | M.S. (Heavy C' Class) pipe painted with one coat of primer & two coats of post office red enamel paint fixed in ceiling, walls, columns for all heights with hangers/supports and fasteners all as per drawing including chasing of walls/columns/ ceiling etc. and making good the same complete as required. (For internal hydrant system) |      |      |            |              |
| 1.21.1.1 | 150 mm dia   | m    | 55   | 1780.00    | 97900.00     |
| 1.21.1.2 | 125 mm dia   | m    | 27   | 1546.00    | 41742.00     |
| 1.21.1.3 | 100 mm dia   | m    | 20   | 1232.00    | 24640.00     |
| 1.21.1.4 | 80 mm dia  | m    | 66   | 865.00     | 57090.00     |
| 1.21.1.5 | 65 mm dia  | m    | 17   | 741.00     | 12597.00     |
| 1.21.1.6 | 50mm dia   | m    | 33   | 580.00     | 19140.00     |
| 1.21.1.7 | 40mm dia   | m    | 17   | 411.00     | 6987.00      |
| 1.21.1.8 | 25 mm dia  | m    | 10   | 307.00     | 3070.00      |
| 1.22     | Supply,installation,testing and commissioning of <b>gun metal fire hydrant valve</b> ,single head oblique type with 63 mm instantaneous outlets with female socket for hose connection and inlet side with flange suitable for 80 mm pipe flange, valve conforming to IS:5290 complete with blank cap. Chain etc.                            | no   | 3    | 7831.00    | 23493.00     |
| 1.23     | Supplying and fixing 63mm dia, 15mtr. Long <b>RRL hose pipe</b> with 63mm dia Male and Female Gun metal couplings duly binded with GI wire, rivets etc. conforming to IS 636 (type-A) as required.   | no   | 6    | 5412.00    | 32472.00     |
| 1.24     | Supply and fixing 63mm dia <b>Gun Metal branch pipe</b> with 20mm (nominal internal diameter) size Gun Metal nozzle conforming to IS 903, suitable for instantaneous connection to interconnect hose pipe coupling as required.  | no   | 3    | 2286.00    | 6858.00      |
| 1.25     | Supplying and fixing <b>First-Aid-Hose Reel</b> with MS construction spray painted in Post office Red, conforming to IS 884 with upto date amendments, complete with the following as required.  |      |      |            |              |
| a)       | 30 m. long 20mm (nominal internal) dia water hose Thermoplastic (Textile reinforced) Type-2 as per IS : 12585  |      |      |            |              |
| b)       | 20mm (nominal internal) dia gun metal globe valve & nozzle.  |      |      |            |              |

| Sl. No. | Description  | Unit | Qty. | Rate (Rs.) | Amount (Rs.) |
|---------|--|------|------|------------|--------------|
| c)      | Drum and brackets for fixing the equipments on wall.   |      |      |            |              |
| d)      | Connections from riser with 40mmdia stop valve (gun metal) & G.I. Pipe.  | no   | 3    | 8991.00    | 26973.00     |
| 1.26    | Supply, installation, testing and commissioning of <b>hose boxes</b> wall/pedestal type of size 750 x 250 x 600 mm made out of 16 SWG MS sheet, with front side glass, locking arrangement and painted with approved colour completed as required and as per specifications. The hose box should have provisions to accomodate two RRL hoses of length 15 Mtr each and a branch pipe.  | no   | 3    | 5260.00    | 15780.00     |
| 1.27    | Supplying and fixing 4 way <b>fire brigade connection</b> of cast iron body with 4 Nos. Gun metal male instantaneous inlet couplings complete with cap and chain as required for 150mm dia GI pipe connection, conforming to IS 903 as required  | no   | 1    | 10382.00   | 10382.00     |
| 1.28    | Supply, installation, testing and commissioning of <b>Air release valve</b>  | no   | 1    | 1450.00    | 1450.00      |
| 1.29    | <p><b>Main Fire Pump Panel and cabling</b></p> <p>Fabricating, supplying of cubicle type floor mounted panel complete with contactors, auxiliary contacts, indicating lamps, ammeters with selector switches, voltmeters with selector switches, fuses, DOL starter including connections complete as required :</p> <p>for 1 no Fire Hydrant Pump, 1 No Jockey Pump, 1 no battery charger and 1 no as spare for battery charger complete in all respects including necessary control wiring as per the details given below</p> <p><b>Incoming</b></p> <p>200Amps FP Switch Disconnecter Unit (isolators) AC 23 A - 1 no<br/> Voltmeter 0 - 500 ( size 96 mm x 96 mm ) - 1 no<br/> Voltmeter Selector Switch - 1 no<br/> Indication Lamps (LED type )- 1 set ( 1 set of 3 Nos RYB )<br/> Ammeter ( 0 - 200A ) - 1 no<br/> Ammeter Selector Switch - 1 No<br/> Current Transformer ( 200/5 ) - 3 nos</p> <p>Bus bar chamber with 200 Amps Aluminium Bus Bar, suitable for 3 phase and neutral system- 1 set<br/> Required no of auxiliary contacts</p> <p><b>Outgoing</b></p> <p>1) 120 Amps FP Switch Disconnecter Unit (isolators) AC 23 A - 1 no<br/> 2) 63 Amps FP Switch Disconnecter Unit (isolators) AC 23 A - 2 no for Jockey ( 1 spare )<br/> 3) 32 Amps FP Switch Disconnecter Unit (isolators) - 1 no for battery charger<br/> 4) 32 Amps Switch Disconnecter Unit (isolators) - 1 No (Spare )</p> <p>5)Star delta Starter without overload and single phasing preventor protection (60 HP) with LED illuminated On OFF push button - 1 No<br/> 6) DOL Starter( 12.5 HP ) with LED illuminated ON OFF push button - 1 no<br/> 7) Auxiliary contacts for Main &amp; Jockey Pumps<br/> 8) Auto Manual Selector Switch with Control wiring for Main &amp; Jockey Pump<br/> 9) Annunciator with hooter accept / reset &amp; control wiring<br/> Above panel to be supplied with 2x12 V, 180 AH battery charger and control wiring to provide control power supply in case of power failure</p> |      |      |            |              |

| Sl. No. | Description   | Unit | Qty.  | Rate (Rs.) | Amount (Rs.) |
|---------|---|------|-------|------------|--------------|
|         | <b>Diesel Engine Control</b>  |      |       |            |              |
|         | Diesel engine control consisting of: Diesel engine control consisting of: Auto / manual selector switch, 3 attempt starting device, push button etc. All required timers, relays, fuses and accessories for automatic operation of diesel engine. Indication lamp for high water temperature, engine fail to start, engine On indication, high/low lube oil pressure. Necessary control wiring for start / stop solinoid, line / oil pressure switch, temperature switch etc. 6 panel annunciation window for fault indication with hooter, accept & reset push button. The system shall include all accessories to control the operation of main electric pump, diesel pump, jockey pump in sequence as per the specification. | no   | 1.00  | 136861.00  | 136861.00    |
|         | <b>Cabling and Earthing</b>   |      |       |            |              |
| 1.23    | Supply and laying of following size 1.1 KV grade XLPE insulated, PVC sheathed, armoured Aluminium /copper conductor cable conforming to IS 7098 (Part 1) amended upto   |      |       |            |              |
| 1.23.1  | 3.5C 70 Sq.mm Al  | m    | 15.00 | 587.00     | 8805.00      |
| 1.23.2  | 3C 10 Sq.mm Al  | m    | 15.00 | 229.00     | 3435.00      |
| 1.23.2  | 3C 6 Sq.mm Al   | m    | 10.00 | 217.00     | 2170.00      |
| 1.23.4  | 3C 2.5 sqmm Cu  | m    | 60.00 | 225.00     | 13500.00     |
| 1.24    | Supplying and making end termination with brass compression gland and aluminium/Copper lugs for following size of XLPE insulated PVC sheathed aluminium conductor cable of 1.1 kV grade as required.  |      |       |            |              |
| 1.24.1  | 3.5C 70 Sq.mm Al  | no   | 2.00  | 464.00     | 928.00       |
| 1.24.2  | 3C 10 Sq.mm Al  | no   | 2.00  | 309.00     | 618.00       |
| 1.24.3  | 3C 6 Sq.mm Al   | no   | 2.00  | 298.00     | 596.00       |
| 1.24.4  | 3C 2.5 sqmm Cu  | no   | 6.00  | 286.00     | 1716.00      |
| 1.25    | Providing and fixing 25mm X3mm copper strip on surface or in recess or in ground along the cables for connections etc. as required.   | m    | 25.00 | 477.00     | 11925.00     |
| 1.26    | Providing and fixing 10 SWG copper wire on surface or in recess for loop earthing as required.  | m    | 50.00 | 84.00      | 4200.00      |
| 1.27    | Providing and fixing 4 SWG copper wire on surface or in recess for loop earthing as required.   | m    | 25.00 | 193.00     | 4825.00      |
| 1.28    | Supply and installation of totally enclosed dust and vermin proof outdoor type IP65 polycarbonate emergency OFF Push button station 230V, 1phase, 50Hz supply with accessories as required. Push button station shall be suitable for wall / plate / pedestal mounting.   | no   | 1.00  | 2551.00    | 2551.00      |

| Sl. No.    | Description   | Unit | Qty. | Rate (Rs.) | Amount (Rs.)      |
|------------|---|------|------|------------|-------------------|
| 1.29       | Supply & fixing of DOL starter suitable for 7.5HP motor with SPP in a suitable enclosure & giving all other necessary connections as required   | no   | 1.00 | 2784.00    | 2784.00           |
|            | <b>TOTAL</b>  |      |      |            | <b>2017807.00</b> |
| <b>2.0</b> | <b>HAND APPLIANCES</b>  |      |      |            |                   |
| 2.1        | Supply and installation of <b>ABC Dry Chemical powder type</b> , each made of high pressure steel cylinder wall mounting type with hook plate and anchor fastening, ISI marked, complete with wheel type valve internal discharge tube 1 M long high pressure wire braided discharge hose having a discharge length of 8 m with discharge time of 10 sec fully charged with ABC powder including all accessories complete as required. Capacity 5 kg. | no   | 3.00 | 3807.00    | 11421.00          |
| 2.2        | Supply and installation on wall with hook plate and anchor fastening of ISI marked 9 liters water type Fire Extinguisher with internal plastic lining and solid drawn body with 60 grams CO2 cartridge with gun metal plunger and 1.0 M long discharge hose and complete in all respects including initial fill with CO2 gas.<br><br>Capacity 9 litre   | no   | 3.00 | 4360.00    | 13080.00          |
| 2.3        | Supply of carbon-dioxide extinguisher of ISI marked 4.5kg capacity (CCE marked) complete with wheel type valve with one meter long braided high pressure discharge hose complete in all respects including initial fill with CO2 gas<br>Capacity 4.5Kg  | no   | 2.00 | 9690.00    | 19380.00          |
|            | <b>TOTAL OF HAND APPLIANCES</b>   |      |      |            | <b>43881.00</b>   |
|            | <b>TOTAL FOR FIRE HYDRANT SYSTEM</b>  |      |      |            | <b>2061688.00</b> |



| SL. NO.                      | DESCRIPTION OF ITEMS   | UNIT | Qty   | RATE(Rs) | AMOUNT (Rs) |
|------------------------------|--|------|-------|----------|-------------|
| <b>FIRE DETECTION SYSTEM</b> |  |      |       |          |             |
| 3.1                          | Supply, installation, testing and commissioning of Analogue Addressable type Optical <b>Smoke Detector</b> (photoelectric type) complete with all accessories like base. base box, etc. to be installed under/above false ceiling, roof and concealed space, etc. interconnecting to loop cable complete as required   | no   | 19.00 | 3815.00  | 72485.00    |
| 3.2                          | Supply, installation, testing and commissioning of addressable type <b>Manual Call Point Re-setable type via special key</b> (non-breaking glass type) complete with push button, enclosed in box with provision for cable or conduit coupling. The unit to be painted fire red outside, white inside and having illustrations of operational instructions in case of fire.  | no   | 3.00  | 5451.00  | 16353.00    |
| 3.3                          | Supply, installation, testing and commissioning of <b>Loop powered Hooter cum Speaker</b> at different locations complete with all fixing accessories, etc. under false ceiling, roof, wall, etc. interconnecting lo loop cable complete as required.  | no   | 3.00  | 8641.00  | 25923.00    |
| 3.4                          | Supply, Installation, Testing & Commissioning of 16 bit intelligent Addressable <b>Fire Alarm Panel</b><br>with one loop ( accessing at least 99 detectors),including battery backup. The panel shall be microprocessor based with its own micro controller, memory, communication module and fire device loop<br>interface cards for intelligent initiating and indicating devices and should also be networkable in peer-to-peer basis with other Addressable Fire Alarm Panels.<br>The Panel shall be able to give pin point location of all Fire/Fault conditions of addressable units via the address codes for each unit. The Panel shall also be able to automatically switch off all Control Switches when ever any Alarm is triggered.<br>The panel shall have 54 Ah SMF Battery, Keypad operation, L C D unit to indicate Fire / Fault Signal of individual unit, in built printer to log all incoming data etc complete in all respects. operation of speakers. Panel shall have :<br>The Panel shall also have Logic hardware and software built into it for initiating specific, time delay operation of hooter and others as follows :<br>(a) programming software for the system<br>(b) automatic system test activates<br>(c) detector sensitivity adjustments<br>(d) alarm verification |      |       |          |             |

| SL. NO.  | DESCRIPTION OF ITEMS  | UNIT | Qty    | RATE(Rs)  | AMOUNT (Rs)       |
|--|---|------|--------|-----------|-------------------|
|  | (e) Alpha/numerical display<br>(f) provision to connect to PCs , external printers, Repeater panels.<br>(g) Support modbus and bacnet protocol.<br>(h) Provision for automatic operation of smoke extractors in case of fire.   | no   | 1.00   | 100305.24 | 100305.24         |
| 3.5  | Supply, installation, testing and commissioning of addressable <b>Loop Isolators</b> to protect one area or a number of devices with complete set to be installed under/above false ceiling, roof, concealed space, wall, etc. interconnecting to loop cable complete as required | no   | 1.00   | 1663.00   | 1663.00           |
| 3.6  | Supply and laying of 2x 1.5sq.mm armoured Copper <b>FRLS cable</b> ISI marked with proper clamping, supports and terminations.  | m    | 600.00 | 131.00    | 78600.00          |
| <b>TOTAL FOR FIRE DETECTION SYSTEM</b>                   |   |      |        |           | <b>295329.24</b>  |
| <b>GRAND TOTAL FOR FIRE HYDRANT AND DETECTION SYSTEM</b> |   |      |        |           | <b>2357017.24</b> |

**KITCO LIMITED**

**CONSTRUCTION OF MUNICIPAL STADIUM AT PALA**

**ABSTRACT OF COST**

| SI.No.             | Description                          | Amount (Rs.)       |
|--------------------|--------------------------------------|--------------------|
| PART A             | Civil works                          | 100,332,951        |
| PART B             | Natural Turfing for Foot ball ground | 14,565,500         |
| PART C             | Recirculation Systems                | 3,515,683          |
| PART D             | Electrical Works                     | 6,431,368          |
| PART E             | Air Conditioning Works               | 581,988            |
| PART F             | Fire Fighting Works                  | 2,357,017          |
|                    | <b>TOTAL</b>                         | <b>127,784,507</b> |
|                    | Value of market rate items           | 61,584,420         |
|                    | Value of PWD SOR items               | 66,200,087         |
| <b>Grand total</b> |                                      | <b>127784507</b>   |

**(Rupees Twelve Crore Sevn Lakhs Eighty four Thousand Five Hundred and Seven Only)**

I/We agree to carry out the work at par with estimate (.....  
 .....% below the estimate (in figure & words)  
 .....% above the estimate (in figure & words). Based on this the total value of  
 tender is Rs(in figure & words).....

\*\* Tender excess/Deduction will not be applicable for market rate items in the schedule of contract

Signature of Contractor

Witness

Name.....

Address.....