

BEML LIMITED, PALAKKAD COMPLEX

Sub:-Providing Shed for Rail side pit & Providing Hard stand for the parking HMV vehicle at BEML Ltd, Kanjikode, Palakkad.

Sl. No	Description	Unit	Quantity
1	Design of detailed foundation & superstructure (load members) for Shed for covering inspection pit (45Mx 11M x 6M)(LXWXH) as per relevant IS code considering the SBC of soil/ soil test report. Submission of structural design report with third-party certification of design from reputed Government/ semi-Government institutes. Submission of Good for construction drawings as hard copy (02 copies, A3 size paper, colour) and soft copy (both in AutoCAD & PDF) viz., plans, sections, elevations of Structural statutory requirement etc. Complete as per the Engineer in charge. Cost of soil test 2 no's also to be included.	Nos	1
2	Felling trees of girth (measured at a height of 1m above the ground level), including the cutting of trunks and branches, removing the roots and stacking of serviceable material and disposal of unserviceable material, beyond 30cm girth up to and including 60cm girth and clearing the site. complete as directed by Engineer.	Each	15
3	Felling trees of girth (measured at a height of 1m above the ground level), including the cutting of trunks and branches, removing the roots and stacking of serviceable material and disposal of unserviceable material, beyond 60cm girth up to and including 120cm girth . complete as directed by Engineer.	Each	50
4	Dismantling/Demolition/Breaking of existing concrete work at ground floor level including reinforced concrete, removing the rubbish, within a lead of 1Km., including Removal of steel bars, transportation, loading, unloading, etc. all complete as directed by Engineer.	Cum	13
5	Earth work in surface excavation not exceeding 15 cm in depth but exceeding 1.5 m in width as well as 10 sqm on plan including disposal of excavated earth within a lead of 1Km., and lift up to 1.5 m, disposed soil to be levelled and neatly dressed. For soft/loose soil complete all as specified and directed by Engineer-in-charge.	Sqm	1750
6	Earth work in excavation by mechanical means (Hydraulic excavator)/manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) Footing and plinth beam, including getting out and disposal of excavated earth lead upto 250m and lift upto 1.5 m from periphery, as directed by Engineer-in-charge. Excavation in all kind of soil below NGL to 1.5m . The rate shall include the cost of bailing out of water in pits/trenches etc as directed by Engineer-in- charge., if any. No additional payment shall be made for dewatering from the pits.	Cum	627
7	Earth work in excavation by mechanical means (Hydraulic excavator)/manual means over areas (exceeding 30 cm in depth, 1.5 m in width as well as 10 sqm on plan) Footing and plinth beam, including getting out and disposal of excavated earth lead upto 250m and lift upto 1.5 m from periphery, or part thereof in depth beyond the first 1.5 m Excavation in all kind of soil below 1.5m to 3m .The rate shall include the cost of bailing out of water in pits/trenches etc., if any. No additional payment shall be made for dewatering from the pits, as directed by Engineer-in charge.	Cum	60
8	Filling with approved earth brought from out side free from boulders and rubbish under floor etc, wherever required in layers not exceeding 20cm depth and consolidating in each layer by rammering and watering after use 1 ton roller to rolled for compaction , with water to a dense mass laid in layers and compacted to achieve the required thickness to make as a hard base for the foundation. etc, complete as per the direction of engineer in charge.	Cum	265

Sl. No	Description	Unit	Quantity
9	Supply, Laying and compacting WMM laid in layers of thickness not more than 150 mm laid in 2 layers of 75mm each. Wet mix macadam (WMM) grading as per table 400-13 of MoRTH specifications for road and bridge works 2013 manufactured in WMM plant, material comprising of clean, crushed graded aggregate and granular material premixed with water & and rolling with vibratory roller of capacity 80-100 KN static weight and for compaction to a dense mass laid in layers and compacted to achieve the required thickness to make as a hard base for the foundation. The finished tolerances as per Table 900-1 of MORTH specifications for Roads and Bridges.	SqM	1750
10	Providing and laying PCC M-10 (1:4:8) Grade using 40/20mm down size aggregates below flooring in foundations, Footing base concrete, flooring foundations, Plinth beam sides, walls or retaining walls etc, including, base preparation, proper compaction, vibration, curing, tools and tackles, necessary dewatering, etc complete at all levels as directed by Engineer-in-charge.	Cum	201
11	Providing & laying controlled R.C.C. confirming to grades as specified (IS 456-2000) as per specifications using 20mm down size aggregates at any depth or heights excluding the cost of steel reinforcement. Cost also including preparing the base by hacking and making rough concrete surface wherever the concrete is done on the existing flooring. Providing and placing RMC concrete work in RCC 1:1:2 (M-25) The rate shall including Flooring, Footings, Foundations beams, bases for Columns, plinth beams, and basement to the required shape, compaction, levelling, vibrating, curing, excluding form work and Steel reinforcement ,etc., complete.	Cum	88
12	Providing & laying controlled 150mm of M30 Grade RMC R.C.C. (for Hardstand concrete) confirming to grades as specified (IS 456-2000) as per specifications using 20mm down size aggregates for Hardstand concrete flooring. including sub-base and LDPE Sheet layers for the floors. Design mix to be provided. The rate shall including M30 grade concrete, finishing with power trowelling to rough finish by applying floor hardener of 2kg/sqM , necessary groove cutting and filling with expansion joint fillers/PU sealant, levelling, vibrating, curing, excluding form work and Steel reinforcement ,etc., complete. In addition to above, cost also inclusive of supply, mixing and laying of secondary reinforcement of 12mm high dispersion polymer/glass fibres at dosage of 600-900g/CuM in RMC concrete as per manufacturers recommendation dosage and procedure during laying of concrete. Note: Curing is mandatory by adopting Pond with gunny bag curing to be done and testing as per standards	Cum	263
13	Supplying and Fixing of Steel reinforcement R.C.C. work for TMT bars conforming to IS : 1786(Latest) and the yield strength of 0.2% proof stress shall not to be less than 500N/Sqmm (Fe415/500/550 D Grade of steel) Rates include for Straightening, cutting, bending, placing at any level, binding in position high yield strength steel reinforcements including cost of reinforcement and binding wire, labour and scaffolding at all levels and heights etc. complete all as per specifications & drawings. Note: a) The TMT bars required shall be procured from the reputed manufacturers confirming to relevant IS specification. b) The contractor shall arrange for testing of TMT bars for physical properties from an authorized agency as per the relevant IS code. The test reports shall be submitted for our records. c) The quoted rate shall deem to include for the cost of testing. d) Any Reputed make shall be used for the work.	Kgs	5500

Sl. No	Description	Unit	Quantity
14	Supplying and Fixing of Glass Fibre Reinforced Polymer (GFRP)/ Fibre glass composite (FGC) 8mm dia rebars of high-strength, corrosion-resistant composite reinforcement bars made from continuous glass fibres embedded in a polymer resin matrix, conforming to IS 18256:2023 standards for hardstand flooring reinforcement . FRP bars are to be fixed using steel binding wire, requiring pre-cut lengths bent on site, and should be available in standard coil or straight bar form with rates including transport, labour, fixing accessories etc complete as directed by Engineer in Charge	Rmt	24500
15	Supplying and Fixing of Glass Fibre Reinforced Polymer (GFRP)/ Fibre glass composite (FGC) 10mm dia rebars of high-strength, corrosion-resistant composite reinforcement bars made from continuous glass fibres embedded in a polymer resin matrix, conforming to IS 18256:2023 standards for hardstand flooring reinforcement. FRP bars are to be fixed using steel binding wire, requiring pre-cut lengths bent on site, and should be available in standard coil or straight bar form with rates including transport, labour, fixing accessories etc complete as directed by Engineer in charge	Rmt	1000
16	Back filling with available earth free from boulders and rubbish in trenches, plinth beam, foundation under floor etc, wherever required in layers not exceeding 30cm depth and consolidating in each layer by rammering and watering after use 1 ton roller to rolled for compaction (If the roller is not accessible, proper ramming shall be ensured with earth rammer) etc, complete as per the direction of engineer in charge.	Cum	100
17	Providing and constructing 200mm thick Concrete Brick work in cement mortar 1:6 using approved quality brick and average compressive strength including raking out joints, scaffolding, curing etc. complete as directed at all levels.	Cum	21.5
18	Providing Rubble Stone Boulder pitching, laid dry, hand packed tightly, uncoursed 200mm thk, well bonded, bedded and solidly hearted, built in CM 1:6 with hard stone where ever required, including scaffolding, dressing of stones, packing interstices, levelling, joints, Slope, curing etc. complete as directed at all levels.	Cum	10
19	Rendering/Plastering to internal/external wall surfaces 15mm thick in Cement Mortar 1:4 on fair faces of brick or concrete surfaces including finishing the surfaces even & smooth, curing, tools & tackles etc., complete all as specified and directed by Engineer in charge. Note: The rate quoted is deemed to include for providing and removal of scaffolding/staging wherever necessary.	Sqm	230
20	Preparing the internal/external wall surfaces , by scrapping with sand paper, providing necessary repairs to cracks and cleaning the surface free from dust, dirt and filling/ closing the cracks with crack filling compound and applying two coats of Exterior Emulsion paint (ACE) over a one coat of primer of first quality, approved colour and touch up putty wherever necessary etc., complete all as specified and as directed by Engineer- in charge.	Sqm	375
21	Providing and fixing Window Grill Supply and fixing M.S Grill Mild steel (Grade 250) for window openings with necessary fixtures.- Grills using 12mm unpolished square rods. The process of welding adopted may be flash butt welding or any other suitable method which gives the desired requirements, All the steel surfaces shall be thoroughly cleaned free of rust, dirt, oil, etc (Max weight-2 kg/sft)	Kgs	250
22	Supplying and erecting CENTERING for sides and soffits including supports and Shuttering in all floors with all cross bracings using marine plywood's or Equivalent mild steel sheets and supported by steel props and bracing etc., complete and as directed. Steel Form work for footings, flooring, drain wall & raft, Column up to basement and Column basement to Lintel level, plinth beams, sunshades tie beams as per specification up to GL	Sqm	660

Sl. No	Description	Unit	Quantity
23	Supply, Fabrication, Erection, alignment and levels as per approved shop drawing of structural steel work in single or built-up section for Column, principal rafters, gantry girders and its stiffeners, walkway, staircase, ladder, main entry doors, lightening supports, pipe supports, cable tray and platform, rain water pipe protections and misc. clamps, cleats comprising of Grade 345 Mpa plates of required thickness or single stanchions, built up of one beam or channel section with flange plates, caps, bases, splices, angle brackets, cleats (ISMB/ISMC/ISA) and other connections, etc., comprising of Grade 310mPa / 250mpa as per the drawing, conforming to IS:2062 and IS 226. Including Necessary permanent rivets, bolts, washers and nuts (HFSG 8.8 Gr OR EQUAL), handling, straightening, cutting, drilling holes, welding, shop assembly, transport to erection site, storing, leading to erection site and apply a coat of anti-corrosive epoxy primer paint of approved make with two coats of epoxy paint of approved make as per specifications prior to erection. (payment to be made on the basis of standard section weights for net weight erected in position excluding the weight of permanent bolts, nuts, all types of washers and packing plates etc.,) The rates quoted shall be including the cost of painting.	Kgs	12500
24	Supplying, fabricating, erecting structural steel work for roofing welded or bolted type using Rolled and cold formed sections (Purlin) as in framing for cladding, glazing and the like fixed with angle cleats and connecting plates, etc. Complete as directed by Engineer.	Kgs	3800
25	Supplying, fabricating, erecting and fixing in position GP tube sections Hollow Tube sections(SHS,RHS, CHS) etc., cleaning the rust, scales if any to the satisfaction of the engineer in charge, erecting the MS Flats, base plates, cleats, channels to the required line and level to match with the adjoining structure etc., all lead, lift, materials, labour, tools & tackles, etc., complete all as specified and as directed by Officer in charge. Cost also including painting of structural steel with 1 coat of primer and 2 coats of enamel paint, anchor fastner (if required) . complete as directed by Engineer. Note: The contractor quoted rate is deemed to include for labour, welding machine, welding rods, gas etc.	Kgs	2700
26	Supplying fixing & installation of colour coated 0.5 mm thick TCT galvalume roofing sheet for parking shed roof with 550 mpa minimum tensile stress inclusive of all transportation charges, taxes & levies, & including all fixtures like nylon head self-tapping corrosion protected mechanically galvanised fasteners with integral washer etc , complete all as specified and as directed by Officer in charge. Note: The measurement shall be based on per unit of finished/covered surface area only. Lap will not be measured for payment	Sqm	500
27	Supplying fixing & installation of colour coated 0.45 mm thick TCT galvalume Side Cladding sheet manufactured by M/s. JSW/TATA blue scope/Bhushan for parking shed roof with 550 mpa minimum tensile stress inclusive of all transportation charges, taxes & levies, & including all fixtures like nylon head self-tapping corrosion protected mechanically galvanised fasteners with integral washer etc , complete all as specified and as directed by Officer in charge. Note: The measurement shall be based on per unit of finished/covered surface area only. Lap will not be measured for payment	Sqm	590

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28	Supplying and fixing of 8mm thick Flexible XLPE Thermal Insulator with Minimum Density of 25Kg per cubic metre and laminating both sides Aluminium Foil. The surfaces of purling shall be clean and remove all grease, oil, dirt, etc. Necessary SS/GI wire 18gauge to be laid uniformly centre of the 0.6m interval and perpendicular to the purlin. (To avoid sagging between purlin to purlin) Including insulation accessories materials of 3" Dia nylon wheel along with 45mm/60mm SDS HEX tapping screws. Also, insulation joints finishing with 50mm/75mm width Reinforced Aluminium foil tape. The rate shall include fixing tape, Screwing, and scaffolding etc., all materials and labour complete.	Sqm	480
29	Supply and fixing of new 2mm Polycarbonate sheet has and 1% of tolerance, specified and as directed by Engineer- in charge. . Rate shall inclusive of fixing accessories like self-tapping screw with washer, cutting sheet to required sizes and providing sealant for leakage arresting if any. Note: The measurement shall be based on per unit of finished/covered surface area only. Lap will not be measured for payment.	Sqm	36
30	Supplying & Fixing of Turbo Ventilators , Air Volume 600mm/ 24", Speed 4m/s, Fan Diameter 600MM/ 24", Var pitch height 190 to 215 mm, including necessary cuttings and fitting at all heights with cost of all materials and labour charges etc., complete.	Nos	6
31	Supplying fixing & installation of colour coated 0.50 mm thick Flashing & Drip flashing manufactured by M/s. JSW/TATA blue scope/Bhushan for parking shed roof inclusive of all transportation charges, taxes & levies, & including all fixtures like nylon head self-tapping corrosion protected mechanically galvanised fasteners with integral washer etc, complete all as specified and as directed by Engineer in charge. Note: The measurement shall be based on per unit of finished/covered surface area only. Lap will not be measured for payment	SQM	45
32	Supplying,making box type and fixing of colour coated Eaves Gutter Galvalume mild steel sheeting, in gutters of 5inch Box tube (size as per site conditions) with grade of zinc coating 275 1.00mm thick. Which includes proper slope and joint sealing. made for rain water, inclusive of all transportation charges & including all fixtures like self-tapping screws, MS supports etc. Firm shall also include cost of end fittings inclusive of provision to fix down take pipes to the gutter. Complete as per the Engineer in charge.	RMT	45
33	Supplying,making box type and fixing of colour coated 5"x 5" Square Hollow section Galvalume sheet with 0.45mm thk rain water down take box type pipe including necessary cutting and fitting at all heights with cost of all materials and labour charges etc.complete. Downtake pipe to be provide as per drawing and shall be clamped in wall cladding and masonry wall.Complete as per the Engineer in charge.	RMT	54