

# BILL OF QUANTITIES

## Preamble

1. The bill of Quantities shall be read in conjunction with the Conditions of Contract, Technical Specifications, and Drawings.
2. The quantities given in the bill of Quantities are estimate and provisional only, and are given to provide a common basis for bidding. The basis of payment will be on the actual quantities of work carried out, as measured by the contractor and the employer's representatives jointly and valued at the rates and prices rendered in the priced bill of Quantities, where applicable, and otherwise at such rates and prices as the engineer may fix within the terms of the contract. No quantity and price variation will be applicable for this contract.
3. The rates and prices tendered in the priced bill of quantities shall except in so far as it is otherwise provided under the contract, include all constructional plant, labor, supervision, materials, erection, maintenance, insurance, profit, taxes and duties, together with all general risks, liabilities and obligations set out or implied in the contract.
4. A rate or price shall be entered against each item in the bill of quantities, whether quantities are stated or not. The cost of item against which the contractor has failed to enter rate or price shall be deemed to be covered by other rates and prices entered in the bill of quantities.
5. The whole cost of complying with the provisions of the contract shall be included in the items provided in the priced bill of quantities, and where no rates are provided the cost shall be deemed to be distributed among the rates and prices entered for the related items of work.
6. General directions and description of work and materials are not necessarily repeated or summarized in the bill of quantities are not necessarily repeated or summarized in the bill of quantities. References to the relevant sections of the contract documentation shall be made before entering rates or prices against each item in the bill of quantities.
7. Provision sums include and so designated in the bill of quantities shall be expanded in whole or in part at the direction and discretion of the employer.
8. The method of measurement of completed work for payment shall be in accordance with the SI system of measure

**Detail Design and Construction of Private Jet Apron, GSE Shed and rehabilitation of Parallel Taxiway**

**Summary of Price**

Schedule	Description	Amount
<b>A. Phase-I: Detail Design Work</b>		
Schedule-1	Preliminary Works	
	a) Site survey for private jet apron, Domestic Terminal Building, General Aviation Building, GSE parking and shed	
	b) Geotechnical Investigation for parallel taxiway, private jet apron and GSE shed	
Schedule-2	Design and Testing work	
	a) Detailed design, drawings, and quantity estimation of private jet apron	
	b) Detailed drawings, design, quantity estimation of GSE parking and shed	
	c) Detailed report, drawings, design and quantity estimation for parallel taxiway rehabilitation	
	(d) PCN evaluation of existing runway, Cargo apron, Link Taxiways and parallel taxiway.	
<b>Sub Total for Phase I Work (A)</b>		
<b>B. Phase-II: Construction Works</b>		
Schedule -3	a) Occupational Health and Safety	
	b) Construction of Private Jet Apron	
	c) Construction of GSE Parking and shed	
	d) Rehabilitation of Parallel Taxiway	
<b>Sub Total for Phase II Work (B)</b>		
<b>Grand Total (A + B)</b>		

Nu: -

**Project: Detail Design and Construction of Private Jet Apron, GSE Shed and rehabilitation of Parallel Taxiway**

**Schedule-3 : Phase-II : Construction Works**

**a) Occupational Health and Safety**

Sl.No	BSR Code	Description	Provisional Quantity	Unit	Rate	Amount
1	OHS001	Incorporation of Occupational Health and Safety measures at construction sites as per requirements listed under Section VIII: Specifications and Performance Requirements of the Contract Document. The standards and specifications for the Insurance, OHS materials and (or) equipment shall be in compliance with the Labour and Employment Act - 2007, Regulation on Occupational Health, Safety and Welfare - 2012, and other relevant national documents. All OHS items will remain as the property of the bidder upon completion of the project.	1.00	L/S		
2	OHS002	Providing temporary living accommodation with minimum basic requirements such as electricity with proper safety, safe drinking water, toilet facilities, etc. The accommodation facilities must be dismantled and cleaned upon the completion of project. All reusable materials of the accommodation facilities will remain as the property of the bidder upon completion of the project.	1.00	L/S		
Total for Occupational Health and Safety (a) Nu:						

**Project: Detail Design and Construction of Private Jet Apron, GSE Shed and rehabilitation of Parallel Taxiway**  
**Schedule-3 : Phase-II : Construction Works**

**b) Construction of Private Jet Apron**

SL.No	BSR Code	Description	Provisional Quantity	Unit	Rate	Amount
1		Earth work in excavation over areas, exceeding 300mm indepth, 1.5m in width as well as 10sq.m on plan including disposal of excavated earth (disposed earth to be levelled and neatly dressed)	78860.10	Cum		
	RW0007	All types of soil				
2	RW0030	Construction of embankment by laying dry earth in horizontal layers not exceeding 200mm in depth (compacted), including watering, power rolling, dressing and preparation of site with selected excavated earth within 50mm lead	47794.00	Cum		
3	RW0121	Consolidation of sub-grade with roller, and making good the undulation with earth and re-rolling the sub grade	47794.00	Sqm		
		All types of Soil				
4	RW0130	Providing and laying Granular sub-base course (GSB) to required degree of compaction with proper formation of cross fall using motor grader for laying and compacted to required density as per material gradation and aggregate quality specified	9558.80	Cum		
5	RW0131	Providing and laying wet mix macadam graded aggregate base course to required degree of compaction with proper formation of cross fall by using well graded crushed aggregates premixed with OMC using suitable mixer, motor grader as per material gradation and a aggregates quality specified	7169.10	Cum		
6		Providing & laying in position reinforced cement concrete excluding the cost of centering, shuttering and reinforcement - all work upto plinth level	14338.20	Cum		
	RC0001	1:1:2 (1 cement: 1 sand: 2 graded crushed rock 20 mm nominal size)				

7		Providing and fixing centering and shuttering (form work), including strutting, propping etc. And removal of form work	44488.00	Cum		
	RC0090	Foundation and plinth etc.				
8	RC0083	Providing & fixing Thermo-Mechanically Treated reinforcement bar (Yield Strength 500 MPa) for R.C.C work including cutting, bending, binding and placing in position complete	1003674.00	Kg		
9		Transport of loose spoil materials in designated locations including loading/unloading, dressing of dump sites and plantation of vegetation after completion of dumping	31066.10	Cum		
	RW0019	Beyond 50 m				
10	AR	Polysuplhide sealant ( pouring grade) of approved make conforming to BS-5212-1990 or IS 11433-1995 in expansion/construction/dummy joints including rounding off edges	1975400.00	Cu.Cm		
11	AR	Painting Apron marking with adequate no. of coats to give uniform finish with road marking paint of superior make as approved by the Engineer-in-Charge including cleaning the surface of all dirt, scales, oil grease and other foreign material etc., and lining out complete. New work (Two or more coats)	2100.00	Sqm		
Total for Construction of Private Jet Apron (b) Nu:						

**Project: Detail Design and Construction of Private Jet Apron, GSE Shed and rehabilitation of Parallel Taxiway**  
**Schedule-3 : Phase-II : Construction Works**

**c) Construction of GSE Parking and Shed**

SL.No	BSR Code	Description	Provisional Quantity	Unit	Rate	Amount
1		Preparation of subgrade with proper camber by excavating earth to depth equal to pavement thickness, consolidation with roller, disposal of surplus earth up to 50m	1722.15	Cum		
	RW0121	All types of soil				
2	RW0019	Transport of loose spoil materials in designated locations including loading/unloading, dressing of dump sites and plantation of vegetation after completion of dumping: - Beyond 50 m	1722.15	Cum		
3	RW0130	Providing and laying Granular sub-base course (GSB) to required degree of compaction with proper formation of cross fall using motor grader for laying and compacted to required density as per material gradation and aggregate quality specified	765.40	Cum		
4	RW0131	Providing and laying wet mix macadam graded aggregate base course to required degree of compaction with proper formation of cross fall by using well graded crushed aggregates premixed with OMC using suitable mixer, motor grader as per material gradation and aggregates quality specified	574.05	Cum		
5	RW0280	Providing and applying prime coat using bitumen emulsion conforming to IS:8887, using asphalt/bitumen sprayer including preparing the surface and cleaning with road broom. On W.M.M @ 0.75kg/sqm	3827.00	Sqm		
6	RW0133	Providing and Laying Dense Bituminous Macadam (DBM) to required degree of compaction based on mixture design (jobmix formula) approved by the supervising engineer by mechanized method using asphalt plant, paver, steel roller, tyre roller etc. complete-60mm	3827.00	Sqm		

7	RW0140	Providing and fixing centering and shuttering (form work), including strutting, propping etc. And removal of form work	3827.00	Sqm		
8		Steel work welded, in built up sections, trusses, frame-works including cutting, hoisting, fixing and appl. priming coat of red lead paint				
	SW0020	In R.S. joists	15000.00	Kg		
	SW0021	In Tees, angles, flats and channels	7600.00	Kg		
	SW0022	In Tubular sections	7500.00	Kg		
9	SW0081	Providing & fixing bolts of various sizes including nuts & washers	1200.00	Kg		
10	SW0090	Providing, making and fixing M.S. straps, flats, sole plates etc.	2100.00	Kg		
11	RF0004	Providing & fixing Pre Painted Galvalume (PPGL) sheeting, including necessary accessories for fixing sheet (excluding the cost of purlins, rafter and trusses) - 25g (0.50mm)	4975.10	Sqm		
12	RF0008	Providing & fixing 600 mm ridges or hips in Pre-Painted Galvalume (PPGL) sheets, including necessary accessories for fixing sheet: 25g. (0.50mm)	313.00	Mtrs		
13	WW0030	Providing & fixing Eaves board (225x25mm) with moulding fitted and fixed with necessary screws: - Class 'B' (conifer)	536.00	Mtrs		
14	PT0047	Providing and applying finishing coats Synthetic enamel, for steel & wood work, two coats on new work	3200.00	Sqm		
Total for Construction of GSE Parking and Shed (c) Nu:						

**Project: Detail Design and Construction of Private Jet Apron, GSE Shed and rehabilitation of Parallel Taxiway**  
**Schedule-3 : Phase-II : Construction Works**  
**d) Rehabilitation of Parallel Taxiway**

SL.No	BSR Code	Description	Provisional Quantity	Unit	Rate	Amount
1	AR	Providing and applying primer coat with RS1 grade bitumen emulsion on prepared surface of granular Base including clearing of road surface and spraying primer at the rate of 0.70 to 1.00 kg/sqm using mechanical means - 5.1(502)- MoRTH	44758.00	Sqm		
2	AR	Providing and applying tack coat with bitumen emulsion using emulsion pressure distributor at the rate of 0.40 to 0.50 kg per sqm on the prepared bituminous surface cleaned with mechanical broom.- 5.2(503) - MoRTH	44758.00	Sqm		
3	AR	Providing and laying of Hot Mix Semi Dense Asphaltic Concrete(SDAC) using crushed stone aggregate of quality, size and grading as specified and 2% cement by weight of aggregates as filler of quality as specified and Viscosity Grade Bitumen (supplied in bulk) in proportions as per job mix formula and laid to specified levels, grade and camber as per specification, drawings and as directed by the Engineer-in-Charge including compacting with 8-10 tonne, preferably vibratory road roller of adequate capacity to achieve the specified values compaction, strength, surface accuracy complete [for tendering purpose VG bitumen of grade VG-10 content shall be taken as 114 kg/m <sup>3</sup> of mix supplied in bulk produced by Govt. Refineries and 2% cement by weight of aggregates as filler material].	2237.90	Cum		



4	AR	<p>Providing and laying of Hot Mix Dense Asphaltic Concrete (DAC) using crushed stone aggregate of quality, size and grading as specified and 2% cement by weight of aggregates as filler of quality as specified and Viscosity Grade Bitumen (supplied in bulk) in proportions as per job mix formula and laid to specified levels, grade and camber as per specification, drawings and as directed by the Engineer-in-Charge including compacting with 8-10 tonne, preferably vibratory road roller of adequate capacity to achieve the specified values of compaction, strength, surface accuracy complete [for tendering purpose VG bitumen of grade VG-10 content shall be taken as 135 kg/m<sup>3</sup> of mix supplied in bulk produced by Govt. Refineries and 2% cement by weight of aggregates as filler material].</p>	2237.90	Cum		
5	AR	<p>Painting taxiway/taxi track with adequate no. of coats to give uniform finish with road marking paint of superior make as approved by the Engineer-in-charge including cleaning the surface of all dirt, scales, oil grease and other foreign material etc., and lining out complete.</p>	9000.00	Sqm		
Total for Rehabilitation of Parallel Taxiway (d) Nu:						