

AIRPORTS AUTHORITY OF INDIA
TRIVANDRUM INTER NATIONAL AIRPORT
COMPARITIVE CUM JUSTIFICATION STATEMENT

SI.No	DESCRIPTION	QUANTITY	UNIT	Estimate		Justified		M/s Engineers Associates	
				Rate	Amount	RATE	AMOUNT	RATE	AMOUNT
1	Carriage of Materials by mechanical transport including loading, unloading and stacking : for a lead of 1 km Lime, moorum, building rubbish .	50.00	cum	78.68	3934.00	173.16	8658	250.00	12500
2	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level 1:2:4 (1 cement : 2 coarse sand (zone-III) : 4 graded stone aggregate 20 mm nominal size).	15.00	cum	5481.95	82229.25	8015.67	120235.04	6600.00	99000
3	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level 1:3:6 (1 Cement : 3 coarse sand (zone-III): 6 graded stone aggregate 40 mm nominal size).	15.00	Cum	4814.55	72218.25	7351.63	110274.45	6000.00	90000
4	Providing and laying cement concrete in retaining walls, return walls, walls (any thickness) including attached pilasters, columns, piers, abutments, pillars, posts, struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor blocks, plain window sills, fillets, sunken floor etc., up to floor five level, excluding the cost of centering, shuttering and finishing : 1:1½:3 (1 cement : 1½ coarse sand (zone-III) : 3 graded stone aggregate 20 mm nominal size).	15.00	Cum	6990.40	104856.00	10859.61	162894.19	7850.00	117750
5	Centering and shuttering including strutting, propping etc. and removal of form work for : Foundations, footings, bases for columns	30.00	Sqm	193.95	5818.50	437.31	13119.3	300.00	9000
6	Centering and shuttering including strutting, propping etc. and removal of form work for : Retaining walls, return walls, walls (any thickness) including attached pilasters, buttresses, plinth and string courses fillets, kerbs and steps etc..	30.00	Sqm	378.60	11358.00	842.65	25279.5	300.00	9000
7	Providing and laying in position specified grade of reinforced cement concrete, excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level : 1:1.5:3 (1 cement : 1.5 coarse sand (zone-III): 3 graded stone aggregate 20 mm nominal size).	10.00	Cum	6215.35	62153.50	9172.92	91729.2	7100.00	71000
8	Centering and shuttering including strutting, propping etc. and removal of form for all heights : Foundations, footings, bases of columns, etc. for mass concrete	25.00	Sqm	193.95	4848.75	437.31	10932.75	290.00	7250

Sl.No	DESCRIPTION	QUANTITY	UNIT	Estimate	Justified	M/s Engineers Associates			
9	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete above plinth level. Thermo-Mechanically Treated bars of grade Fe-500D or more.								
10	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 6.5 in superstructure above plinth level up to floor V level in all shapes and sizes in : Cement mortar 1:6 (1 cement : 6 coarse sand)	500.00	Kg	56.60	28300.00	88.03	44013.26	65.00	32500
11	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 6.5 in foundation and plinth in: (b) Cement mortar 1:6 (1 cement : 6 coarse sand)	10.00	Cum	10004.93	100049.30	10605.23	106052.27	6600.00	66000
12	Structural steel work riveted, bolted or welded in built up sections, trusses and framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete:	5.00	Cum	8217.49	41087.45	8710.53	43552.65	6500.00	32500
13	Steel work welded in built up sections/ framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required. In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works.	1000.00	Kg	67.60	67600.00	107.88	107880	105.00	105000
14	12 mm cement plaster of mix : 1:6 (1 cement: 6 coarse sand)	2000.00	Kg	85.95	171900.00	142.41	284820	110.00	220000
15	Applying one coat of water thinnable cement primer of approved brand and manufacture on wall surface : Water thinnable cement primer	50.00	Sqm	168.25	8412.50	335.85	16792.5	250.00	12500
16	Demonishing cement concrete manually/ by mechanical means including disposal of material within 50 metres lead as per direction of Engineer - in - charge. Nominal concrete 1:3:6 or richer mix (1/c equivalent design mix) .	50.00	Sqm	36.95	1847.50	78.19	3909.5	60.00	3000
17	Demonishing 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. In cement mortar .	5.00	Cum	997.05	4985.25	2348.18	11740.9	1300.00	6500
18	Dismantling of old sign board of Aluminium or ACM sheet, including riveting without damaging the MS structure including stacking the boards at designated place.	55.00	Cum	842.75	46351.25	1987	109285	1000.00	55000
19	Painting with synthetic enamel paint of approved brand and manufacture to give an even shade: Two or more coats on new work	50.00	Sqm	36.47	1823.50	38.66	1933	300.00	15000
		50.00	Sqm	78.40	3920.00	151.33	7566.5	100.00	5000

Sl.No	DESCRIPTION	QUANTITY	UNIT	Estimate		Justified		M/s Engineers Associates	
20	Providing and laying factory made chamfered edge Cement Concrete paver blocks In foot path, park & lawns driveway or light & traffic parking etc. of required strength, thickness & size/ shape, made by table vibratory method using PU mould, laid in required colour & pattern over 50mm thick compacted bed of course sand, compacting and proper embedding/laying of inter locking paver blocks into the sand bedding layer through vibratory compaction by using plate vibrator, filling the joints with sand and cutting of paver blocks as per required size and pattern, finishing and sweeping extra sand, all complete as per manufacturer's specifications & direction of Engineer-in-Charge.80mm thick Cement concrete paver block of M-40 grade with approved colour, design & pattern	100.00	sqm	1104.34	110434.00	1170.6	117060.08	800.00	80000
21	Providing and fixing Convex Mirror 1000mm Dia etc complete all asper the direction of Engineer in charge. (The rate shall include the cost of necessary accessories such as adhesives, screws ,double side tapes,etc wherever required)	7.00	Nos	6626.36	46384.52	7023.94	49167.57	7000.00	49000
22	Painting road surface marking with adequate nos of coats to give uniform finish with ready mixed road marking paint conforming to IS : 164, on bituminous surface in white/yellow shade, including cleaning the surface of all dirt, scales, oil, grease and foreign material etc. complete. New work (Two or more coats)	825.00	sqm	133.10	109807.50	307.68	253836	160.00	132000
23	Providing and fixing PVC pasted pipes of ISI marked Finolex or equivalent make and jointing with necessary sockets, elbows, solvent cement etc all complete as per the direction and satisfaction of Engineer in charge. 50mm Ø pipe 6 kg/cm2	50.00	mtr	84.32	4216.00	89.37	4468.7	110.00	5500
24	Manufacturing, supplying and fixing retro reflective sign boards made up of 2 mm thick aluminium sheet, face to be fully covered with high intensity encapsulated type heat activated retro reflective sheeting conforming to type - IV of ASTM-D 4956-01 in blue and silver white or other colour combination including subject matter, message (bilingual), symbols and borders etc. as per IRC : 67/2001, pasted on substrate by an adhesive backing which shall be activated by applying heat and pressure conforming to class -2 of ASTM-D-4956-01 and fixing the same with suitable sized aluminium alloy rivets @ 20 cm c/c to back support frame of M.S. angle iron of size 25x25x3 mm along with theft resistant measures, mounted and fixed with 2 Nos. M.S. angles of size 35x35x5 mm to a vertical post made up to M.S. Tee section ISMT 50x50x6 mm welded with base plate of size 100x100x5 mm at the bottom end and including making holes in pipes, angles flats, providing & fixing M.S.-message plate of required size, steel work to be painted with two or more coats of synthetic enamel paint of required shade and of approved brand & manufacture over priming coat of zinc chromate yellow primer (vertical MS-Tee support to be painted in black and white colours).Backside of aluminium sheet to be painted with two or more coats of epoxy paint over and including appropriate priming coat including all leads and lifts etc. complete as per drawing, specification and direction of Engineer-in-charge. 1. Mandatory/ Regulatory sign boards of 900 mm diameter with support length of 3750 mm	12.00	each	4786.35	57436.20	6255.05	75060.6	11874.00	142488

SI.No	DESCRIPTION	QUANTITY	UNIT	Estimate		Justified		M/s Engineers Associates	
25	Manufacturing, supplying and fixing retro reflective sign boards made up of 2 mm thick aluminium sheet, face to be fully covered with high intensity encapsulated type heat activated retro reflective sheeting conforming to type - IV of ASTM-D 4956-01 in blue and silver white or other colour combination including subject matter, message (bilingual), symbols and borders etc. as per IRC ; 67:2001, pasted on substrate by an adhesive backing which shall be activated by applying heat and pressure conforming to class -2 of ASTM-D-4956-01 and fixing the same with suitable sized aluminium alloy rivets @ 20 cm c/c to back support frame of M.S. angle iron of size 25x25x3 mm along with theft resistant measures, mounted and fixed with 2 Nos. M.S. angles of size 35x35x5 mm to a vertical post made up to M.S. Tee section ISMT 50x50x6 mm welded with base plate of size 100x100x5 mm at the bottom end and including making holes in pipes, angles flats, providing & fixing M.S. message plate of required size, steel work to be painted with two or more coats of synthetic enamel paint of required shade and of approved brand & manufacture over priming coat of zinc chromate yellow primer (vertical MS-Tee support to be painted in black and white colours).Backside of aluminium sheet to be painted with two or more coats of epoxy paint over and including appropriate priming coat including all leads and lifts etc. complete as per drawing, specification and direction of Engineer--in-charge. 2. Cautionary /warning sign boards of equilateral triangular shape having each side of 900 mm with support length of 3650 mm								
		15.00	each	3464.05	51960.75	4803.17	72047.55	11874.00	178110
Total Rs.					1203931.97				
Add 56.86% on DSR items					511704.29				
Add 5% operational Hindrance on Rs 1715636.26					1715636.26				
Add 1% Cess on 1715636.26					85781.81				
					17156.36				
					1818574.44		1852308.5		1555598 ✓

Estimated amount
Justified amount

1818574.44
1852308.52

below 14.46% of EC
below 16.02% of JC

MANAGER (ENGG-C)

DY GENERAL MANAGER (ENGG-C)

JTGM ENGG (CIVIL)