

BILL OF QUANTITIES

	A: PREAMBLE
1	The Bill of Quantities shall be read in conjunction with the Instructions to Bidders, General and Particular Conditions, Technical Specifications, and Drawings.
2	The quantities given in the Bill of Quantities are estimated and provisional and are given to provide a common basis for bidding. The basis of payment will be the actual quantities of work ordered and carried out, as measured by the Contractor and verified by the Engineer and valued at the rates and prices bid in the priced Bill of Quantities, where applicable, and otherwise at such rates and prices as the client may fix within the terms of the Contract.
3	The rates and prices bid in the priced Bill of Quantities shall, except insofar as it is otherwise provided under the Contract, include all Constructional Plant, labour, 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 priced Bill of Quantities, whether quantities are stated or not. The cost of Items against which the Contractor has failed to enter a 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 Items 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 descriptions of work and materials are not necessarily repeated nor summarized in the Bill of Quantities. References to the relevant sections of the contract documentation shall be made before entering prices against each item in the priced Bill of Quantities.
7	The method of measurement of completed work for payment shall be in accordance with the Technical Specifications and mode of measurement.
8	The Preamble to the Bills of Quantities and Bill of Quantities must be read with the Drawings, Conditions of Contract and the Specification and the tender shall be deemed to have examined the Drawings, Specifications, Conditions of Contract and to have acquainted himself with the Works to be done and the way in which they are to be carried out. This preamble to the Bills of Quantities shall form part of the Contract
9	The Bill of Quantities includes Lump Sum items, Unit price items and Provisional Sum items. The Lump Sum price quoted will be deemed to be full compensation for completion of work items and paid in full when the work is completed. The quantities given in the Bill of Quantities for the Unit price items are estimated and provisional, and are given to provide a common basis for bidding. The unit prices will be considered full compensation for those work items. The basis of payment will be the actual quantities of work carried out, as measured by the Contractor and verified by the Engineer and valued at the rates and prices bid in the priced Bill of Quantities, where applicable.
10	The rates and prices bid in the priced Bill of Quantities shall, except as otherwise provided under the Contract, include all construction plant, equipment, labour, supervision, materials, transport, erection, maintenance, testing, insurance, overheads, profit, together with all general risks, liabilities, and obligations set out or implied in the Contract
11	A rate or price shall be entered against each item in the priced Bill of Quantities, whether quantities are stated or not. The cost of Items against which the Contractor has failed to enter a rate or price shall be deemed to be covered by other rates and prices entered in the Bill of Quantities.

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12	<p>The rates and prices entered in the Bill of Quantities shall be full compensation for completed work and shall have taken full account of all requirements and obligations, covered by all parts of the contract, including but not limited to, the following, unless expressly stated otherwise:</p> <ul style="list-style-type: none"> a. All setting out and survey works including Pre and Post Construction Surveys. b. All additional site surveys and investigations, preparation of field amendment drawings, shop drawings and As-Built drawings. c. Mobilization and Demobilization of labor, all construction plant and equipment. d. Establishment, Maintenance and Removal of all temporary facilities (Contractors and Engineers) including offices, workshops, houses, labor camps construction and storage yards, Laboratory facilities & Equipment, Transport for staff & labor etc. e. Labor and all costs in connection therewith, including but not limited to social charges or fringe. f. The supply of material and goods, storage and costs in connection there with including delivery to site and handling material within the site/sites g. Taking delivery of materials and goods supplied by others, unloading, storage, handling materials within site, and costs in connection therewith. h. Construction Plant & Equipment and all costs in connection therewith. i. Fixing, erecting and installing or placing of materials and goods in position, including usual auxiliary material etc. j. Temporary Works. k. Complying with any limitations and constraints on the use of the site/sites including maintenance of access to house holds and other users, maintenance of existing roads, waterways etc. l. Dealing with the existing flow of water from any source including wave action, groundwater, surface flow and the like.
13	<ul style="list-style-type: none"> m. General obligations, liabilities and risks involved in the execution of the Works set forth or reasonably implied in the documents on which the tender is based. n. Overheads and profit. o. Waste of material p. Attendance and transport for surveys including provision of boats and survey instruments, sampling and testing carried out by the Engineer. q. Performing all sampling and testing which are required to be carried out by the Contractor, and supplying results of such tests. r. Providing required material delivery certificates. s. Coordination with Regulatory Institutes & all stake holders including Island and Atoll Officers. t. Disposal of all waste material u. Complying with all requirements in Specifications and Conditions of Contract where separate items have not been provided
14	<p>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 Items are provided, the cost shall be deemed to be distributed among the rates and prices entered for the related Items of Work.</p>
15	<p>General directions and descriptions of work and materials are not necessarily repeated nor summarized in the Bill of Quantities. References to the relevant sections of the Contract documentation shall be made before entering prices against each item in the priced Bill of Quantities.</p>
16	<p>The method and unit of measurement of completed work for payment shall be in accordance with the method described in the specifications for each item or in the Bill of Quantities. For Lump Sum items, measurements for Interim Payment Certificates shall be based on percentage completion of such item of work or milestone as per the Contractor's proposed schedule of monthly payments, as approved by the Engineer. Payments shall be made through the monthly Interim Payment Certificates.</p>

MAHINDRA WORLD CITY , JAIPUR

BOQ FOR ROAD WORKS IN DTA-II PAHSE-I

S. No.	Description of items	Unit	Quantity	Rates (Rs.)	Amount
1	Excavation works				
1.1	Earthwork excavation in all stiff clay, stiff black cotton, hard red earth, shales, murum, gravel, and earth mixed with small size boulders and to the required depth (depth up to 1.50 m) including surveying wherever necessary with all leads and lifts for the materials as may be directed except in hard rock requiring blasting but inclusive of shoring strutting and baling out water wherever necessary, depositing the surplus earth in places shown and clearing & leveling the site all complete in all respects complying with relevant standard specification and including the cost of removing shrubs, logs, roots, jungles if any, providing barricading arrangements and adequate safety measures (excluding refilling) and as per the direction of engineer-in-charge.for the work of providing culverts.	Cum	125.42		
1.2	Earth Cutting / Dressing & levelling in green area (depth exceeding 1.50 m) including surveying wherever necessary with all leads and lifts for the materials as may be directed except in hard rock requiring blasting but inclusive of shoring strutting and baling out water wherever necessary, depositing the surplus earth in places shown and clearing & leveling the site all complete in all respects complying with relevant standard specification and including the cost of removing shrubs, logs, roots, jungles if any, providing barricading arrangements and adequate safety measures and as per the direction of engineer-in-charge. (excluding refilling) for the work of providing culverts.	Cum	900.00		
2	GSB and WMM				
2.1	Preparation and consolidation of granular sub-base (GSB) by providing close graded Material conforming to Table 400-1, Grading I of MoRT&H & H (Fifth Revision) specifications, in layers of maximum 150 mm. compacted thickness over compacted sub grade, to achieve a minimum soaked CBR value of 30% in accordance with standard specifications & Drawings including watering, mixing in a mechanical mix plant at OMC, carriage of mixed material by tippers to work site, for all leads & lifts, spreading in uniform layers of specified thickness with motor grader on prepared surface and compacting by 8-10 M.T. vibratory power roller to achieve the desired standard proctor density of 98% (IS:2720 Part - 8) including surveying wherever necessary etc. complete as per Clause 401 of MoRT&H specification and as per the direction of engineer-in-charge. (Payment to be made for finished item of work after completion based on original and finished levels)	Cum	48.41		
2.2	Providing, laying, spreading and compacting graded stone aggregate of size 75 micron- 53mm from approved quarry to Wet Mix Macadam (WMM) of 2 layers (125 mm compacted thickness of each layers laying of WMM by pavers) specification with water to OMC in mechanical mix, carriage of mixed material by tipper to site, laying in uniform layers in base course on a well prepared under base and compacting with power vibratory roller to achieve the desired density including surveying wherever necessary etc complete as per Ref. clause No 406 of MORT&H - (Fifth Revision) and as per the direction of engineer-in-charge. - (250 mm thick) / as per drawing.	Cum	55.01		
3	Prime coat to WMM				
3.1	Providing and applying prime coat over top surface of WMM, a single layer of low viscosity liquid bituminous material of medium curing cutback quality of SS (Slow setting emulsion) @ 0.7 kg. /sqm. (Ref. Clause No.502 of MORT&H-Fifth Revision) includes cost of bitumen emulsion, cleaning the surface by mechanical means and temporary covering on the Kerb to prevent bitumen spillage before applying the prime coat.	Sqm	394.14		
3.2	Providing and applying single tack coat of liquid bituminous material of RS (Rapid setting emulsion) on existing W.M.M surface which is preparatory to another bituminous construction over it as a tack coat @0.25 kg / sqm. Area, as per Table No.500-5 of MoRT&H (Fifth Revision) specifications. Including cost of bitumen emulsion, cleaning the surface by mechanical means and temporary covering on the Kerb to prevent bitumen spillage before applying the prime coat	Sqm	394.14		

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BOQ FOR ROAD WORKS IN DTA-II PAHSE-I

S. No.	Description of items	Unit	Quantity	Rates (Rs.)	Amount
3.3	Providing and laying evenly graded Dense Bituminous Macadam (DBM) 100-120 TPH batch type HMP producing an average output of 75 tones per hour using crushed aggregates of specified grading, premixed with bituminous binder of grade 60/70 @ 4.0 to 4.5 per cent by weight of total mix and filler by weight of total mix and transporting the hot mix to work site, laying with a hydrostatic paver finisher with sensor control to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers of 8-10 M.T. static weight including all material, labour and machinery with all leads and lifts including surveying wherever necessary etc. complete including cost of bitumen as per clause 505 of MoRT&H (Fifth Revision) specification and drawing, as per the direction of engineer-in-charge.	Cum	34.98		
4	BC				
4.1	Providing and applying single tack coat of liquid bituminous material of RS (Rapid setting emulsion) over the first layer of DBM surface which is preparatory to lay another layer of DBM as a tack coat @ 0.2 kg / sqm. area and applying another layer of single tack coat over the finished layer of DBM surface which is preparatory to lay bituminous concrete as a tack coat @0.20 kg/sqm. Area, as per Table No.500-5 of MORT & H (Fifth Revision) specifications. Including cost of bitumen and cleaning the surface by mechanical means as per the direction of engineer-in-charge.	Sqm	17,316.41		
4.2	Providing and laying Bituminous concrete (BC) of specified thickness with 100-120 TPH batch type HMP producing an average output of 75 tones per hour using crushed aggregates of specified grading, premixed with VG-40 @ 5.5% (percentage by weight of total mix) and lime filler @ 3% (percentage by weight of Aggregate) filler as per Job Mix Formula, transporting the hot mix to work site, laying with a hydrostatic paver finisher with sensor control to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per Clause No. 507 of MORTH specification, drawings, complete in all respects as per the direction of engineer-in-charge.	Cum	806.52		
5	Misc road works				
5.1	Concrete Kerb Stone- Providing and fixing Pre-cast cement concrete kerb stone with top and bottom width 115 and 150 mm respectively, 300 mm high of M-25 grade 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 100 mm thick, M10 bedding concrete foundation having 75 mm projection beyond kerb stone , making drainage opening wherever required complete including finish the surface neatly, shape and dimensions as per drawing, curing and groove cutting for expansion at regular intervals all complete as per clause 409 of MoRT&H (Fifth Revision) specification and as per the direction of engineer-in-charge. (length of finished kerb edging shall be measured for payment). (precast C.C kerb shall be approved by Engineer in charge)	Mtr	76.00		
5.2	Providing and fixing at or near ground level factory made RCC (Kerb) channel slab of M-30 concrete grade using fly ash and cement content as per approved design mix and manufactured in fully automatic batching plant of size 300x600x50 mm, including reinforcement with 6 mm dia M.S. bars 4 nos. on each side, including setting in position in drain at the end of the road to the required level and line over 100 mm thick, M10 bedding concrete foundation, having joint thickness not more than 5mm except on curve, including filling of joints with same cement mortar (1:3) and making grooves etc. complete as per drawings and direction of Engineering-charge.	Mtr	76.00		
5.3	Providing and applying 2.5 mm thick road marking strips for center line and stop line (retro reflective) of specified shade/ colour using hot thermoplastic material by fully/ semi automatic thermoplastic paint applicator machine fitted with profile shoe, glass beads dispenser, propane tank heater and profile shoe heater, driven by experienced operator on road surface including cost of material, labour, T&P, cleaning the road surface of all dirt, seals, oil, grease and foreign material etc. complete as per drawings and direction of Engineer-in-charge and accordance with applicable specifications.	Sqm	3,697.47		

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S. No.	Description of items	Unit	Quantity	Rates (Rs.)	Amount
5.4	Providing and applying two or more coats of Synthetic enamel Paint on kerb stone of approved brand and shade on concrete surface including priming coat with Dulux Weathershield Primer after thoroughly brooming the surface free from mortar drops and other foreign matter including preparing the surface even and sand paper smooth, cost of materials, labour etc. complete as per specifications, drawings and direction of Engineering-charge.	Sqm	1,605.64		
5.5	Constructing of circular type manhole 1.22 m internal dia at bottom and 0.6 m dia at top and deep beyond 1.68 m to 2.29 m and 600 mm dia S.F.R.C cover with frame (heavy duty,HD-20 grade designation) confirming to I.S 12592,, total weight of cover and frame to be not less than 182 kg brick masonry in cement mortar 1:4 (1 cement :4 coarse sand) inside cement plaster 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement foundation concrete PCC M15 grade Plain Cement Concrete (PCC) using Min. 300kg Total cementitious content (upto 35% flyash or upto 70% GGBS allowed) and making necessary channel in cement concrete PCC M15 grade Plain Cement Concrete (PCC) using Min. 300kg Total cementitious content (upto 35% flyash or upto 70% GGBS allowed) finished with a floating coat of neat cement, including earth work excavation and refilling with the excavated earth after completion of the work necessary water proofing and centering, shuttering etc all complete as per as per drawing (Sulphate resistant cement should be used for all cement works).	Nos	4.00		
5.6	Providing orange colour safety foot rest of minimum 6 mm thick plastic ,encapsulated as per IS : 10910, on 12 mm dia steel bar conforming to IS: 1786, having minimum cross section as 23 mm x25 mm and over all minimum length 263 mm and width as 165 mm with minimum 112 mm space between protruded legs having 2 mm tread on top surface by ribbing or chequering besides necessary and adequate anchoring projections on tail length on 138 mm as per standard drawing and suitable to with stand the bend test and chemical resistance test as per specifications and having manufacture's permanent identification mark to be visible even after fixing, including fixing in manholes with 30x20x15 cm cement concrete block 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20 mm nominal size) complete as per design.	Nos	40.00		
5.7	Dry stone Pitching 22.5 cm thich laid in courses and required profile with hammer dressed stones having no side less than 15cm, with minimum depth of 20 cm including preparing the bedding surface etc complete as per drawing and as instructed by engineer in-charge complete. Spec : MORTH 306. For over flow weir. (Cost of supply of stone to be considered in the quoted rate)	Sqm	736.25		
5.8	Providing and Fixing of Road Reflective Studs with fastener with test certificate of load capacity not less than 45 Tons. Size- 100X100X20mm.	Nos	2,500.00		
5.9	Dismantle work as per direction of Engr.-In-Charge- Item involves Cutting of Existing Road surface of approx. 1 meter width and 700 mm deep across the identified road pavement .	SQM	7.20		
Total Amount For Service (Rs.)					
CGST on Services @ 9%					
SGST on Services @ 9%					
Total with tax For Service (Rs.)					

Note:-

- Rate should be inclusive of cess,all charges ,labour charges except GST, which shall be paid extra as applicable.
- Time is essence of the Contract. Work to be completed within 90 days.
Any extra Items /increase in qtys. other than BOQ shall be pre-intimated before execution. Such Items shall be recorded in Site Instruction book and same shall be paid as per approval by Engineer-in Charge based on proper rate analysis (in case of extra items) by Contracts Deptt and the same shall be paid in final invoice.
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