



DELHI TRANSIT

Delhi Integrated Multi Modal Transit System Ltd.

(A Joint Venture of Govt. of Delhi & IDFC Ltd.)

Subject: Road Restoration Work on BRT Corridor.

**Sub Head: Restoration of Service Road/ Footpath/ Cycle track at
Delhi Gate.**

BID DOCUMENTS

VOLUME 2

TECHNICAL SPECIFICATIONS

BILL OF QUANTITY

Delhi Integrated Multi-Modal Transit System Ltd.

(A Joint Venture of Government of Delhi & IDFC Ltd.)

Kashmere Gate, Delhi-110006

TECHNICAL SPECIFICATIONS

- 1.0 The work shall include supply of all materials and ingredients for construction, erection/installation at site, commissioning/performance of desired function, handing over of works to the designated persons.
- 2.0 The work shall include providing scaffolding wherever required as well as necessary measures to be taken for the safety of the workers and the passer byes.
- 3.0 Works shall be carried out at all heights and at all depths/levels.
- 4.0 The item of works curing and bonding arrangement by way of application suitable components on junctions of old and new materials.
- 5.0 Works shall be carried out without disrupting the supply of municipal/other services and shall include making temporary arrangements for continuance of water, drainage, sewer, electricity, telecom/communication, gas etc to the occupants during the construction period.
- 6.0 Concreting shall be done with all safety precautions as the work is to be done in important area, which has large volume of vehicular & human traffic movement.
- 7.0 Contractor shall maintain all environmental protection norms during entire construction & safety precautions.
- 8.0 As per provisions of contract, Cement of OPC 43 grade is permissible. However under special conditions i.e. In case of non availability of same cement 53 grade shall be allowed without any additional financial implication.

- 9.0 The contractor/agency has to ensure that all necessary safety measures other than specified in the items is provided without any additional cost for smooth execution of works.
- 10.0 All items of works shall be executed in accordance with the drawings and technical specifications enclosed in part – I of tender.
- 11.0 SW pipes, RCC pipes GI/CI pipes dismantled /retrieved during construction work shall be disposed off as per instructions of the site in-charge. The rates may be quoted after considering the same. No additional payments shall be made for dismantling and shifting of these pipes/materials.
- 12.0 Agency/contractor has to work in co – ordination with the telecom operators/service providers and provide necessary assistance in relocation of their services. No extra payments shall be made on this account by owner.

Bill of Quantities

Subject: Road Restoration Work On BRT Corridor.

Subhead: Restoration of Service Road/ Footpath/ Cycle track at Delhi Gate.

S.No.	Item	Qty	Rate	Unit	Amount (in Rs.)
1	Earth work in excavation by mechanical 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 50m and lift upto 1.5m, disposed earth to be levelled and neatly dressed. All kinds of soil	151.90		Cum	
2	Preparation and consolidation of sub grade with power road roller of 8 to 12 tonne capacity after excavating earth to an average of 22.5 cm. depth, dressing to amber and consolidating with road roller including making good the undulations etc. and re-rolling the sub grade and disposal of surplus earth lead up to 50 m	434.00		Sqm	
3	Extra for compaction of earth work in embankment under optimum moisture conditions to give at least 95% of the maximum dry density (proctor density)	651.00		Cum	
4	Supplying and stacking at site.				
a	90 mm to 45 mm size stone aggregate.	65.10		Cum	
b	63 mm to 45 mm size stone aggregate.	43.40		Cum	
c	53 mm to 22.40 mm size stone aggregate	43.40		Cum	
d	Stone Screening 11.20 mm	21.70		Cum	
e	Red bazri	21.70		Cum	

5	Laying spreading and compacting stone aggregate of specified sizes to WBM specifications including spreading in uniform thickness, hand picking , rolling with 3 wheeled road / vibratory roller 8-10 tonne in stages to proper grade and camber, applying and brooming requisite type of screening / binding material to fill up interstices of coarse aggregate watering and compacting to the required density .	151.90		Cum	
6	Providing and applying tack coat using hot straight run bitumen of grade 80/ 100 including heating the bitumen, spraying the bitumen with mechanically operated spray unit fitted on bitumen boiler, cleaning and preparing the existing road surface as per specifications :				
a	On W.B.M. @ 0.75 kg / sqm.	434.00		Sqm	
7	Providing and laying Bituminous Macadam on prepared surface with specified graded crushed stone aggregate for profile corrective base/ binder course including loading of aggregate with F.E. loader , hot mixing of stone aggregates and bitumen in hot mix plant, transporting the mixed material by tippers to paver and laying the mixed material with paver finisher fitted with electronic sensing device to the required level and grade and rolling with road rollers, as per MORTH specification to achieve the desired density and compaction but excluding the cost of primer/ tack coat. 50 mm / 75 mm average compacted thickness with bitumen of 60/ 70 grade @ 3.5%	32.55		Cum	

	(percentage by weight of total mix.)				
8	Providing and laying Dense Bituminous Concrete on prepared surface with specified graded stone aggregate for wearing course including loading of aggregate with F.E. loader, and hot mixing of bitumen with filler and stone aggregate in hot mix plant, transporting the mixed material by tippers to paver and laying the mixed material with mechanical paverfinisher fitted with electronic sensing device to the required level and grade and rolling with road rollers, as per MORTH specifications, to achieve the desired density and compaction but excluding cost of primer/tack coat. 40 mm / 50 mm compacted thickness with bitumen of grade CRMB- 60 @ 5.5% and lime @ 3% (percentage by weight of total mix.)	21.70		Cum	
9	Supply and Filling in plinth with jamuna sand under floors i/c watering, ramming, consolidating and dressing complete.	24.54		Cum	
10	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level:				
(a)	1:4:8 (1 Cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size).	35.10		Cum	
11	Providing and laying CC pavement of mix M25 with read mix concrete from batching plant. The ready-mix concrete shall be laid and finished with screed board vibrator, vacuum dewatering	18.60		Cum	

	process and finally finished by floating , brooming with wire brush etc. complete as per specification and direction of Engineer-in-Charge. (The panel shuttering work shall be paid for separately.)				
12	Providing and laying 60mm thick factory made cement concrete interlocking paver block of M -30 grade 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 50mm thick compacted bed of coarse sand, filling the joints with coarse sand etc. all complete as per the direction of Engineer-in-charge.	96.00		Sqm	
13	Disposal of surplus mulba by Mechanical transportation up to lead of 25 Km	334.00		Cum	
	Total				

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Sr. Manager (Civil)