

Contract – FOBUS 6



DELHI TRANSIT

**Delhi Integrated Multi Modal Transit System Ltd.
(A Joint Venture of Govt. of Delhi & IDFC Ltd.)**

**Construction of Pedestrian Subway at Mandir Marg , New Delhi in NDMC
Area on Design & Build Basis**

CONTRACT NO: FOBUS-6

TENDER DOCUMENTS

VOLUME 3

BILL OF QUANTITIES(BOQ) and SCHEDULE OF PAYMENT

**Delhi Integrated Multi Modal Transit System Ltd.
(A Joint Venture of Government of Delhi & IDFC Ltd.)**

**1st Floor, Maharana Pratap Inter State Bus Terminus,
Kashmere Gate, Delhi-110006**

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PREAMBLE

1. The Bill of Quantities shall be read in conjunction with Instructions to tenderers, General and Special Conditions of Contract, Notice Inviting Tenders, Technical Specifications and Drawings.
2. The bill of quantities is sub-divided in three schedules as under :
 - (i) Schedule 'A' of Bill of Quantities : This schedule comprises of scope of work as covered/detailed in "Scope of Work and Site information" . The tenderer has to quote a "total lump sum amount "against scope of work under Schedule 'A' . The payment for work done under this schedule will be made as per Schedule for on account stage payment enclosed as Annexure 1 of Schedule 'A'.
 - (ii) Schedule 'B' of Bill of Quantities: Schedule 'B' comprises of Item rate Bill of Quantities related to traffic management/ traffic safety and finishing & other miscellaneous works to be executed on item rate basis. The tenderer has to quote the rate (in words and figures) against each item in Schedule "B". The payment shall be made as per the quantum of work executed at the rates quoted by Contractor for individual BOQ item. Contractor will have no right for any claims whatsoever like loss of profit etc.in case the actual quantum of work executed against any BOQ item is less than the quantities given in BOQ. Similarly, in case of increase in quantities beyond BOQ provisions, no rate revision shall be affected and quantities under variation shall be executed by Contractor at quoted BOQ rates.
 - (iii)Schedule 'C' of Bill of Quantities: This schedule comprises of DSR 2007 items related to shifting/relocation of existing utilities form the work area, which have to be identified by Contractor and will have to be executed by Contractor (excluding electrical cables/OFC). The basic amount of work considered under this schedule is Rs. 35,00,000/-[Rs. Thirty Five lakhs only]. The tenderer has to quote percentage above/below/at par rates against schedule 'C'.

The basic amount of work indicated above is provisional. The value of work executed under this schedule may be less than this amount. In such an eventuality, Contractor will have no right for any claims whatsoever like loss of profit etc. Similarly, the value of work to be executed under this schedule may be more than the amount mentioned above. However, irrespective of the quantum of work involved, the works shall be executed and paid for as per the percentage above/below/at par rates quoted by Contractor and no rate revision shall be affected in any case.

- (iv) Schedule 'D' of Bill of Quantities: This schedule comprises of DSR 2007 items related to cutting of trees, disposal of timber etc. and any other necessary work identified during course of execution, which may have to be executed during the execution of work. The basic amount of work considered under this schedule is Rs. 5,00,000/-[Rs. Five lakhs only]. The tenderer has to quote percentage above/below/at par rates against schedule 'D'.

The basic amount of work indicated above is provisional. The value of work executed under this schedule may be less than this amount. In such an eventuality, Contractor will have no right for any claims whatsoever like loss of profit etc. Similarly, the value of work to be executed under this schedule may be more than the amount mentioned above. However, irrespective of the quantum of work involved, the works shall be executed and paid for as per the percentage above/below/at par rates quoted by Contractor and no rate revision shall be affected in any case.

3. The quoted rates and prices in Priced Bill of Quantities will be deemed to include all plant, labour, supervision, materials, transport, all temporary works, erection, maintenance, taxes and duties, contractor's profit and establishment/overheads, together with preparation of design and drawings, all general risks, insurance liabilities, compliance of labour laws and obligations set out or implied in the contract.
4. If the tenderer fails to quote rate against "Schedule A of bill of quantities, the tender will be treated as incomplete and non-responsive and shall be rejected. Similarly, if the tenderer fails to quote rate against any item(for which quantity has been provided) in Schedule "B" of bill of quantities, the same will not be paid for by Employer when executed and shall be deemed to have been included by the tenderer in the rates and prices for other items in the bill of quantities.
Similarly, if the tenderer fails to quote percentage above/below/at par rates against schedules 'C' & 'D', it will be deemed to have been quoted " at par" and payment for any work undertaken under this schedule shall be made at DSR, 2007 rates.
5. General directions and descriptions of work and materials are not necessarily repeated, nor summarized in the Unit Priced Bill of Quantities. Reference to the relevant sections of the contract documentation shall be made before entering prices against each item in the Unit Priced Bill of Quantities.
6. Tenderers shall fill the Unit Priced Bill of Quantities in Rupees only.
7. Errors will be corrected by the employer for any arithmetic errors in computation or summation as per contract conditions.
8. All the unit rates should be filled both in figures and words and amounts should be filled in figures only.
9. All columns in the Bill of Quantities shall be filled in indelible ink or type written and the total tender amount shown in the bottom. The person authorized to sign on behalf of the Tenderer shall sign in full with company seal and date at the bottom of all pages and at the end of summary sheet, schedules 'A', Annexure – 1 to schedule-A, Schedule 'B', Schedule 'C' & schedule-D. Any corrections shall be made by clearly striking out the previous data, writing the correct figure/data and putting signature of the authorized signatory at the place of correction. Use of correction fluid is not allowed.

10. This Schedule of Payment enclosed as Annexure 1 of Schedule 'A' is purely for the purpose of releasing 'On Account payments' for the work executed under the 'Lump Sum component' of the work i.e. scope of work under schedule A.
11. The works executed against the BOQ items in Schedule B and DSR items under schedules 'C' & 'D' would be paid on measurement basis.
12. The payment under the Payment Schedule will cover all work specified in the tender drawing and / or provided in the scope of work. The Schedule of Payment will not get modified due to alterations of any type so far as the modifications/alterations are within the scope of work and/or provided for in the tender drawings.
13. The Contractor may raise their 'On Account' payments on monthly basis as per the status of work on the last day of the respective month.

ABBREVIATIONS

<u>Abbreviations</u>		<u>For</u>
Rs or RS	:	Indian Rupees
LS or L.S or SUM	:	Lump Sum
Nr. or No. or Nos.	:	Number(s)
Lm or LM or lm	:	Linear Metre
M	:	Metre
KM or km	:	Kilometre
Hct. Or Hct	:	Hectare
m ² or sq.m or sqm	:	Square Metre
m ³ or cum or cu.m or Cum	:	Cubic Metre
cc. or c ³ or cu.cm or cucm	:	Cubic Centimetre
cum. Km. Or cum km	:	Cubic Metre Kilimetre
KG or kg or Kg	:	Kilogram
mt or t or T or tone	:	Metric Tonne
HP	:	Horse Power
IRC	:	Indian Roads Congress
IS	:	Indian Standard
P.O.L. or POL	:	Petroleum, Oil & Lubricants

Construction of Pedestrian Subway at Mandir Marg, New Delhi in NDMC Area on Design & Build Basis , Contract - FOBUS-6

Summary of Schedules A, B, C & D of BOQ		
S.No	Description	Amount (in Rs.)
	(in figures)	(in words)
1	Schedule A	
2	Schedule B	
3	Schedule C	
4	Schedule-D	
	Total Tender Sum(in Figures)[1+2+3+4]	
	Total Tender Sum(in Words)[1+2+3+4]	
	Rebate/Discount Offered ,if any =	%
	Total Tender Sum after Rebate	
	(i) In figures	
	(ii) In Words	

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Construction of Pedestrian Subway at Mandir Marg, New Delhi in NDMC Area on Design & Build Basis, Contract - FOBUS 6			
Bill of Quantities			
SCHEDULE - A			
S.No.	Item	In figures(Rs.)	Lump Sum Amount quoted In words(In Rupees)
1	Price for scope of work included under schedule-A of BOQ as defined under "Scope of Work-Functional " Volume - 1 of tender documents		
(a)	Pedestrian Subway at Mandir Marg		

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Annexure - I of Schedule - A
SCHEDULE FOR AN ACCOUNT PAYMENTS UNDER LUMP SUM PORTION

The payment would be governed by the stage payment schedule as detailed below:

Percentage Breakup of the cost component for Underpass in various components shall be as under-

S.No.	Item	Percentage of the Total Tendered Cost of Schedule- A
1	Submission of Proof checked design & drawings for various components of work, work methodology, quality assurance plan etc. duly verified & approved by Employer.	2.00%
2	Mobilization and Establishment	2.00%
3	Construction of foundations/base slabs	20.00%
4	Construction of Sub-structure/Walls	20.00%
5	Construction of Roof slabs/parapet walls	15.00%
6	Waterproofing	3.40%
7	Electrification work	19.40%
8	Drainage work	1.40%
9	Road works	10.40%
10	Stainless steel work	2.20%
11	Other Misc. works	2.20%
	Final commissioning, site clearance and handing over of site	2%
(i)	The above provisions would not mean confinement of the work for the measurable areas only. The Contractor has to carry out the entire work specified in the Tender Drawings and/or specified in the Scope of Work but only for the purpose of payment, would get paid as per the procedure specified.	
(ii)	The successful contractor will prepare the quantity schedule and submit a quantity schedule as per the details finalized by them for the components listed above. Unit payment of the items shall be governed by the quantity schedule within percentage payment specified for that item.	
(iii)	The successful contractor will prepare a quantity schedule for payment of individual items within the main item as per the payable units detailed above within the percentage payment payable on completion of individual units. All the payments would be made as per this quantity schedule after approval of the same by the Engineer. The Contractor should note that while stage payments shall be governed by the quantity schedule, total cost of the Lump Sum component would remain unchanged for the specified work.	

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Construction of Pedestrian Subway at Mandir Marg, New Delhi in NDMC Area on Design & Build Basis , Contract - FOBUS 6						
Bill of Quantities						
Schedule - B						
Item No.	Description of item	Unit	Quantity	Rate (Rs.)		Amount (Rs.) In figures
				(in figures)	(in words)	
Section 1 - Civil Work						
1.0	Providing 2.0 m high temporary barricade and arrangement for traffic diversion such as traffic signals during construction at site, for day and night as per requirement and drawings. During construction, barricading and arrangement for traffic diversion has to be kept continuously and maintained properly till the completion of all the activities. The construction barricading will have different width in different portion of the alignment as directed by the engineer keeping in view the movement of traffic at the ground level and minimum inconvenience to and safety of public. Dismantling and re-erecting the above barricading and other arrangements at the new location as per instruction of Engineer is included in this item. Nothing extra shall be payable.. Note : The payment schedule for item shall be as follows: (i) Providing barricading for a given stage and approval of the same by Engineer : 85% of the accepted rate (ii) After completion of all activities of stage for which barricading was erected : 15% of the accepted rate	Metre	500.00			
2.0	Deployment of adequate manpower for 8 hrs. shift for day and night management of traffic in intersection, roadway influenced by contractor and traffic diversions at various levels.					
	(a) Supervisor	Shifts	1095.00			
	(b) Traffic Guards/Marshals Note : The deployment to be done with prior approval of Employer. The personnel above should be familiar with traffic rules and regulations, should be in uniform and should be equipped with reflective jackets/hand flashers etc. especially during night operations .	Shifts	6570.00			

Item No.	Description of Item	Unit	Quantity	Rate (Rs.)		Amount (Rs.) in figures
				(in figures)	(in words)	
3.0	Manufacturing supplying and fixing signage boards made of 2mm thick aluminum sheets face to be covered with etching/ as per design and as approved by Engineer in charge in silver white pasted on substrate by adhesive backing and fixing the same to the plate of structural frame work by means of suitable sized aluminum alloys, rivets bolts or nuts @ 300mm c/c. all along periphery as well as in two vertical rows along with theft resistant measures. The rate includes cost of rounding off the corners, lowering down the structural frame work, fixing and erecting the same in position all complete as per drawings and specifications and direction of engineer-in-charge.	sqm	6			
4.0	Manufacturing supplying and fixing retro-reflective sign boards made up of 3 mm thick M.S 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 or other colour combination including subject matter, message (di-lingual), symbols etc. and borders 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 by welding suitably to back support frame of M.S angle iron of size 25x25x3mm along with anti-thrift measures, mounted and fixed with 2 nos. M.S angles of size 35x35x5mm to a vertical post made up to M.S Tee section ISMT 50x50x6mm welded with a base plate of size 100x100x5mm 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 primer (vertical MS Tee support to be painted in black and white colours). Backside of M.S sheet to be painted with two or more coats of epoxy paint over and including appropriate priming coat including all leads, lifts etc. complete as per drawing, specification and direction of engineer-in-charge.	Sqm	27.00			
5.0	Providing and laying 25 mm thick granite stone(polished or sand blasted and machine cut) in flooring & treads/risers of steps as per drawings and design and of combination of two colours and required shade as per approval of the Engineer-in-Charge(colour/pattern to be decided/approved by Engineer-in-Charge at the time of execution) laid over 20 mm thick (average) base of cement mortar 1: 4(1 cement : 4 coarse sand) with grey cement slurry and with joints treated with white/grey cement, mixed with matching pigment complete to give high gloss finish	Sqm	556.00			

Item No.	Description of Item	Unit	Quantity	Rate (Rs.)		Amount (Rs.) in figures
				(in figures)	(in words)	
6.0	Extra for pre finished nosing in treads of steps of granite stone.	Metre	352			
7.0	Providing and fixing 25 mm thick rubbed and polished granite stone copings on parapet walls(any colour and shade) with nosing as per drawing(design and colour to be decided/approved by Engineer-in-Charge at the time of execution), over 20 mm thick (average) base of cement mortar 1:4 (1 cement : 4 coarse sand) with grey cement slurry with joints treated with white/grey cement, mixed with matching pigment complete to give high gloss finish.	Sqm	52			
8.0	Providing and fixing 40 mm thick granite stone grating(colour matching with colour of adjacent flooring/trads) on intercepting drains/drainage chambers including cutting, making machine drilled holes and fixing in position and resting on continuous 50x50x5 mm MS angle strips frame painted with epoxy primer & paint, grouted in bearing concrete along the length of gratings, as per drawing and design and as per direction of Engineer-in-Charge complete.	sqm	48			
9.0	Providing and fixing Polished and machine cut granite of approved shade & colour (about 25% surface to be calibrated) of 20 mm thickness for wall lining (veneer work) in cement mortar 1:3 (1 cement : 3 coarse sand) including pointing with pigmented white cement mortar 1:2 (1 white cement : 2 marble dust) with an admixture of pigment to match the granite shade (to be secured to the backing by means of stainless steel cramps which shall be paid separately)(shade and colour and calibration pattern to be decided/approved by Engineer-in-Charge at the time of execution).	Sqm	782			
10.0	Extra for making calibrated/etched design/specified pattern for making a mural/ornamental pattern on walls as decided by Engineer-in-Charge	sqm	12			
11.0	Extra for fixing cramps of required size and shape in RCC/CC backing with cement mortar 1:2 (1 cement : 2 coarse sand) including drilling necessary hole in stones and embedding the cramp in the hole.	Kg	300			

Item No.	Description of Item	Unit	Quantity	Rate (Rs.)		Amount (Rs.) In figures
				(in figures)	(in words)	
12.0	Stainless steel cramps 120 mm thick Delhi Quartzite Stone cladding filled with a grout of 12 mm thick cement mortar 1:3 (1 cement : 3 coarse sand) including pointing in cement mortar 1:2 (1 cement : 2 stone dust) with an admixture of pigment matching the stone shade.	Sqm	178			
13.0	Providing and fixing trail (flooring tiles) for visual impaired as per drawing and design complete.	Sqm	92.00			
14.0	Providing and fixing at or near ground level precast cement concrete in kerbs, edgings etc. as per approved pattern and setting in position with cement mortar 1:3 (1 Cement : 3 coarse sand) including the cost of required centering, shuttering and finishing smooth with 6mm thick cement plaster 1:3 (1 cement : 3 fine sand) on exposed surfaces complete. 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size).	cum	35			
15.0	Preparation of subgrade by excavating earth to an average of 22.5cm depth, dressing to camber and consolidating with mechanical compactor including making good the undulating etc. and disposal of surplus earth .	Cum	96.00			
16.0	Providing and laying in position cement concrete of grade 1:2:4(1 cement : 2 coarse sand : 4 graded stone aggregate 20mm nominal size) 100mm thick below stone flooring in landscape area	cum	30.00			
17.0	Providing and laying 40 mm thick fine dressed sand stone flooring over 20 mm thick (average) base of cement mortar 1:5(1 cement : 5 coarse sand) with joints finished flush((colour of sand stone/pattern to be decided/approved by Engineer-in-Charge at the time of execution)	Sqm	300.00			

Item No.	Description of Item	Unit	Quantity	Rate (Rs.)		Amount (Rs.) In figures
				(in figures)	(in words)	
18.0	Fabrication & supply of Stainless Steel Dustbin with single bins with pivot system (Conforming to SS-304 Grade, Satin finish) of size 470X300X1147 mm as per drawings & scope of work	No.	6.00			
19.0	Providing and fixing hand chisel dressed red sandstone benches on soft ground with bed concrete, stainless steel pins and 1:2 pigmented cement sand mortar as shown in drawings complete.	No.	4			
				Total Amount(Rs.)(In figures)		
Total Amount(Rupees)(In words)						

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Schedule C

The tenderer has to quote a single percentage above/below/at par for following items

S. No.	Any DSR 2007 items Description	Unit	Basic Amount	% above/below/at par DSR 2007	Amount(in figures)
1	All items of work related to Relocation/Shifting of all Utilities(like Sewer Lines, Storm Water lines, Water supply lines etc. but excluding electrical cables/OFC which shall be got shifted by NDMC) under DSR 2007.	LS	35,00,000		

Total cost of schedule C

in figures Rs

in words Rupees

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Bill of Quantities

Schedule D

The tenderer has to quote a single percentage above/below/at par for following items

S. No.	Any DSR 2007 items Description	Unit	Basic Amount	% above/below/at par DSR 2007	Amount(in figures)
1	Items of work related to cutting of Trees, disposal of timber and any other necessary work identified during course of execution, under DSR 2007.	LS	5,00,000		

Total cost of schedule D

in figures Rs

in words Rupees

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