

SECTION-7: BILL OF QUANTITIES

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 Engineer 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 (Section 5 of Volume I).
8. Day work included in the Bill of Quantities shall be expended in whole or in part at the direction and discretion of the Engineer in accordance with Sub-Clause 13.5 and Sub-Clause 13.6 of the General Conditions.
9. Payment of items under Bill No. 9 – “Safety in Road Construction” shall be made only after taking and maintaining safety measures in accordance with IRC:SP:55:2001 “Guidelines on safety in road construction zones” to the satisfaction of the Engineer on completion of each designated section on proportionate basis.

B: ABBREVIATIONS

Abbreviation	For
Rs	Indian Rupees
LS or SUM	Lump Sum
Nr or No.	Number
Lm or m	Linear metre
KM or km	Kilometre
Hct or ha	Hectare
m ²	Square metre
m ³ or Cum	Cubic metre
KG or kg	Kilogram
T or MT	Tonne or Metric Tonne
HP	Horse Power
PS	Provisional Sum
IRC	Indian Roads Congress
MORTH Specification	Specifications for Road and Bridge Works (4th revision) issued by the Ministry of Roads Transport & Highways, Government of India
BIS	Bureau of India Standards
Prov.	Provisional
Eqpt. Hrs	Equipment hours
P.O.L.	Petroleum, Oil and Lubricants
Veh. Day	Vehicle Day
Cu cm – cucm	Cubic Centimetres
Mtr	Metre

C: WORK ITEMS

Widening and Strengthening of Dhansura – Meghraj Road km-38+501 to 64+583 (Dhansura-Malpur) and km-67+711 to 84+986 (Malpur to Meghraj) SH No-145

1. The Bill of Quantities contains the following part Bills

- GSHP/II/-NCB-07
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Bill	DETAILS	AMOUNT
Bill No. 1	GENERAL ITEMS	
Bill No. 2	SITE CLEARANCE AND DISMANTLING	
Bill No. 3	EARTH WORKS	
Bill No. 4	SUB-BASE, BASES AND SURFACE COURSES (NON BITUMINOUS) AND SHOULDERS	
Bill No. 5	BASE AND SURFACE COURSES (BITUMINOUS)	
Bill No. 6	STRUCTURES	
	A – CULVERTS	
	B – BRIDGES	
	C – REPAIRS AND REHABILITATION	
	D – RETAINING WALLS	
Bill No. 7	DRAINAGE AND PROTECTION WORKS	
Bill No. 8	TRAFFIC SIGNAGE AND ROAD APPURTENANCES	
Bill No. 9	SAFETY IN ROAD CONSTRUCTION ZONE	
Bill No. 10	IMPLEMENTATION OF ENVIRONMENTAL MANAGEMENT ACTION PLAN TO BE EXECUTED UNDER CIVIL WORKS CONTRAT	
Bill No. 11	DAY WORKS	
Bill No. 12	MAINTAINANCE COST	
GRAND TOTAL		

2 Bidders shall price the Bill of Quantities in Indian currency only.

**Widening and Strengthening of Dhansura – Meghraj Road km-38+501 to
64+583 (Dhansura-Malpur) and km-67+711 to
84+986 (Malpur to Meghraj) SH No-145**

- **GSHP/II/-NCB-07**

Item No.	DESCRIPTION	Unit	Quantity	Unit Rate		Amount
				Figures	Words	
1	GENERAL ITEMS					
1.02	Supply of master CD / DVD's of important site activities with four copies complete as per Technical Specifications clause 126	Set	10			
1.03	Construction of temporary diversion for passage of traffic, complete as per Technical Specifications Section Clause 112.3. (separate items are given for CD/ bridge work diversions)	Lm	2200			
	Total General Items carried to Grand Summary					
2	SITE CLEARANCE AND DISMANTLING					
2.01	Clearing and grubbing road land including uprooting rank vegetation, grass, bushes, shrubs, saplings and trees girth up to 300 mm, removal of stumps of trees cut earlier and disposal of unserviceable materials and stacking of serviceable material to be used or auctioned complete as per technical specification clause 201 or as directed by the Engineer.	ha	52			
2.02	Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, disposal of unserviceable as well serviceable material with all leads and lifts beyond the ROW complete as per technical specification clause 202.					
	a) Plain cement concrete	Cum	11			
	b) Reinforced cement concrete	Cum	12			
	c) Stone / Brick masonry structures	Cum	12			
	d) Guide/Hand rails / Fencing / kerb / NP3 Pipes / NP4 Pipes	Lm	35			
	e) Kilometre stone	Nr	35			

Item No.	DESCRIPTION	Unit	Quantity	Unit Rate		Amount
				Figures	Words	
f)	5 km stone	Nr	8			
g)	Hectometre / Boundary stones	Nr	173			
h)	Utilities	Nr	12			
i)	Bituminous Pavement	Cum	3689			
j)	Non- Bituminous Pavement	Cum	1280			
2.03	Cutting of trees from 300mm and above girth size, the work shall consist of cutting of all such trees as per the direction of the Engineer and further as per duly approved plan by the Forest Department. This shall include duly approved stacking, transport and final handing over to Forest Department with all leads and lifts. Work to comply strictly in accordance with Technical Specifications Clause 201.					
a)	above 300mm to 600mm girth	Nr	1775			
b)	above 600mm to 900mm girth	Nr	1036			
c)	above 900mm to 1800mm girth	Nr	1137			
d)	above 1800m	Nr	68			
2.04	Removal of tree stumps and roots, disposal and filling of pits complete as per Technical Specifications Clause 201. The work shall follow the directions of the Engineer and further approval of plan by the Forest Department, where necessary. This shall include all leads and lifts.					
a)	above 300mm to 600mm girth	Nr	1775			
b)	above 600mm to 900mm girth	Nr	1036			

Item No.	DESCRIPTION	Unit	Quantity	Unit Rate		Amount
				Figures	Words	
c)	above 900mm to 1800mm girth	Nr	1137			
d)	above 1800mm	Nr	68			
	Total Site Clearance and Dismantling carried to Grand Summary					
3	EARTH WORKS					
3.01	Roadway excavation necessary for construction of roadway including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and transporting to the embankment location within all leads and lifts upto 1000 m complete as per technical specification clause 301 and 305.					
b)	Ordinary soil / Hard soil	Cum	165677			
e)	Loosening and re-compacting the original ground/ sub-grade up to the required depths as directed by the Engineer and as per Technical Specifications Clause 301 & 305	Cum	6300			
3.02	Construction of embankment with approved material obtained from borrow area with all lifts and leads, transporting to site, spreading, grading to required slope and compacting complete as per drawings and technical specification clause 305.	Cum	27613			
3.03	Construction of embankment with approved materials deposited at site from roadway cutting and excavation from drain and foundation of other structures graded and compacted complete as per drawings and technical specification clause 305.	Cum	25005			

Item No.		DESCRIPTION	Unit	Quantity	Unit Rate		Amount
					Figures	Words	
3.04		Construction of subgrade and Earthen shoulder with approved material obtained from borrow area with all lifts & leads, transporting to site, spreading, grading to required slope and compacted complete as per drawings and technical specification clause 305.	Cum	278676			
3.08		Construction of Median and Island above road level with approved material deposited at site from roadway cutting and excavation for drain and foundation of other structures, spread, graded and compacted complete as per drawings and technical specification clause 407.	Cum	713			
		Total Earth Works carried to Grand Summary					
4		SUB-BASE, BASE COURSES (NON-BITUMINOUS) AND SHOULDERS					
4.01		Constructing Hard shoulder with Naturally obtained Granular sub-base (GSB) complete as per drawings and Technical Specification Clause 401 (Grading I, Table 400-1)	Cu.m.	73568			
4.02		Construction of granular sub-base with Naturally Obtained Granual sub base (GSB), carriage of mixed Material to work site, spreading in uniform layers with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per technical specification clause 401					
	b)	As per Table 400-1, Coarse- Graded Grading I	Cum	74250			

Item No.	DESCRIPTION	Unit	Quantity	Unit Rate		Amount
				Figures	Words	
4.03	Providing, laying, spreading and compacting graded stone aggregate to wet mix macadam specification including premixing the Material with water at OMC in mechanical mix plant carriage of mixed Material by tipper to site, laying in uniform layers with paver in sub- base / base course on well prepared surface and compacting with vibratory roller to achieve the desired density complete as per drawing and technical specification clause 406.					
	a)	Mechanically laid base (Spread by motor grader) including profile corrective course and access roads if applicable	Cum	23816		
	b)	Mechanically laid base (laid by Electronic Sensor Paver)	Cum	29186		
		Total Sub-Base, Base Courses (Non-Bituminous) and Shoulders carried to Grand Summary				
5		BASE AND SURFACE COURSES (BITUMINOUS)				
5.01	Providing and applying primer coat with bitumen emulsion(SS1) on prepared surface of granular Base including clearing of road surface and spraying primer at the rate of 0.60 kg/sqm using mechanical means complete as per drawings and technical specification clause 502.	Sqm	205624			
5.02	Providing surface dressing with aggregate using Bitumen(SS2) over primed water bound macadam/ wet mix macadam complete as per Technical Specifications Clause 510					
	b)	Second Coat Surface Dressing	Sqm	14000		
5.03	Providing and applying tack coat with bitumen(RS1) complete as per drawings and Technical Specification clause 503.					
	a)	@ 2.0 to 2.5 kg/10m2 on bituminous surface	Sqm	1072298		

Item No.		DESCRIPTION	Unit	Quantity	Unit Rate		Amount
					Figures	Words	
	b)	@ 2.5 to 3.0 kg/10m ² on granular surface treated with primer/hungry bituminous surface.	Sqm	205624			
5.04		Providing and laying bituminous macadam (Grading II) with 100-120 TPH batch type hot mix plant producing an average output of 75 tonnes per hour using crushed aggregates of specified grading premixed with bituminous binder, transported to site, laid over a previously prepared surface with paver finisher with sensor control to the required grade, level and alignment and rolled complete as per drawings and Technical Specification clauses 501.6 and 501.7 or as directed by the Engineer.(VG-30)	cum	28823			
5.08		Providing and laying semi dense bituminous concrete with 100-120 TPH batch type HMP producing an average output of 75 tonnes per hour using crushed aggregates of specified grading, premixed with bituminous binder as per approved mixed design, 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 complete as per drawings and Technical Specification clause 508.(VG-30)	Cum	8981			
5.10		Variation of quantity of VG 30 grade bitumen in bituminous courses as per Technical Specification Clause 507.9 and 509.9	MT	230			
5.11		Variation of quantity of rapid emulsion (RS1) in Tack coat as per Technical Specification Clause 503.					
	a)	0.5 kg extra for normal bituminous surface	MT	54			
	b)	0.5 kg extra for Granular Surface	MT	10			
5.12		Variation of quantity of slow emulsion(SS1) for prime coat as per Technical Specification clause 502.	MT	21			

Item No.	DESCRIPTION	Unit	Quantity	Unit Rate		Amount
				Figures	Words	
5.13	Removal of all failed material, trimming of completed excavation to provide firm vertical faces, cleaning of surface, painting of tack coat on the sides and base of excavation as per clause 503, back filling the pot holes with hot bituminous material of grading I as per clause 504, compacting, trimming and finishing the surface to form a smooth continuous surface, all as per clause 3004.2	sqm	8548			
5.14	Providing and applying low viscosity bitumen emulsion for sealing cracks less than 3 mm wide or incipient fretting or disintegration in an existing bituminous surfacing.	sqm	11967			
5.15	Providing and laying slurry seal consisting of a mixture of fine aggregates, Portland cement filler, bituminous emulsion and water on a road surface including cleaning of surface, mixing of slurry seal in a suitable mobile plant, laying and compacting to provide even riding surface	sqm	17096			
5.16	Full depth repair of section in case of poor pavement complete as per drawings or as directed by the engineer	sqm	1710			
	Total Base and Surface Courses (Bituminous) carried to Grand Summary					
6	STRUCTURES					
6A	CULVERTS:					
6A01	Construction of temporary diversion, including across waterway, for passage of traffic, complete as per drawings and Technical Specifications Clause 112.3,	Lm	200			
6A02	Excavation of foundation for culverts including preparation of foundation bed complete as per drawing and Technical Specifications Clause 304 in the following strata					

Item No.	DESCRIPTION	Unit	Quantity	Unit Rate		Amount
				Figures	Words	
a)	Ordinary soil / Hard soil	Cum	410			
b)	Ordinary rock / Soft rock	Cum	146			
c)	Hard Rock (Blasting Prohibited)	Cum	29			
6A03	Providing and laying granular material for pipe bedding of Hume Pipe culverts and replacement of soft and loose patches in the bearing area of the Box structure with layers not exceeding 300 mm as per drawing and Technical Specifications Clause 2904	Cum	198			
6A04	Plain cement concrete in levelling course in open foundation, concrete pipe bedding and apron complete as per drawing and Technical Specifications Section 1500 and 1700					
a)	M15 grade	Cum	29			
6A16	Providing, laying and jointing RCC. NP-4 Hume Pipes for culverts or equivalent pipes under IS:458-1988, approved by the Engineer complete as per Technical Specifications section 2900					
d)	Diameter 1200mm	Lm	211			
6A17	Plain cement concrete grade M-20 in Headwall of Access Road Culverts complete as per drawing and Technical Specifications Clause 1500 and 1700	Cum	270			
6A18	Painting of culvert reference number complete as per Technical Specifications section 800 or as directed by the Engineer.	Sqm	10			
6A22	Geo textiles filter membrane underneath pitching complete as per drawings and technical specification clause 2504 and as directed by the Engineer.	Sqm	222			

Item No.	DESCRIPTION	Unit	Quantity	Unit Rate		Amount
				Figures	Words	
6A23	Filter media beneath the pitching/revetment on slopes for protection of embankment as per drawings and Technical Specifications clause 2504 and as directed by the Engineer	cum	33			
6A24	Pitching/revetment on slopes with Cement Concrete blocks in M15 grade conforming to Section 1700 complete as per drawings Technical Specifications 2504 and as directed by the Engineer.	Cum	67			
6A27	750 thick flexible stone apron as per Clause No. 2503.1 of Technical Specification and as directed by the Engineer	Cum	93			
6A29	Construction and fixing of PCC Pillar with M15 grade of concrete of size 400 x 400 x 1000 mm for inscribing Structure Number as per drawing and Technical Specification section 1500, 1700 or as directed by the Engineer	Nr	20			
	Total Culverts carried to Grand Summary					
6B	BRIDGES					
6B01	Construction of temporary diversion, including across waterway, for passage of traffic, complete as per drawing and Technical Specifications Clause 112.3, including temporary cross drainage	Lm	100			
	Foundation					
6B03	Earthwork in excavation of foundations for structures including all leads and lifts complete as per drawings and Technical specifications clause 304.					
	a) In all types of soil	Cum	140			
	b) In soft/ordinary rock	Cum	50			
	c) In hard rock (Blasting Prohibited)	Cum	10			

Item No.		DESCRIPTION	Unit	Quantity	Unit Rate		Amount
					Figures	Words	
6B04		Plain cement concrete garde M15 in foundation and fill around foundation to protect from erosion complete as per drawing and Technical Specifications Section 1500 and 1700	Cum	18			
6B05		Providing & laying Plain cement concrete levelling course in foundation and fill around foundation to protect from erosion including form work but excluding the cost of reinforcement complete as per drawing and Technical Specifications sections 1500, 1700 and 2100.					
	b)	M-20 grade	Cum	106			
6B17		Supplying, placing and fixing TMT Fe 500 bar reinforcement complete as per drg. and Technical specifications section 1600.					
	a)	For Foundation	MT	3			
	b)	For sub-structure	MT	1			
	c)	For super-structure	MT	2			
		Sub-Structure					
6B19		Providing & laying Reinforced Cement Concrete in sub-structure including form work but excluding the cost of reinforcement complete as per drg. and Technical specifications sections 1500, 1700 & 2200.					
	a)	M-20 grade	Cum	110			
		Bearing					
6B20		Supply & fixing of bearings complete as per drg. and Technical specifications section 2000.					
	a)	Tar paper bearing	Sqm	5			

Item No.		DESCRIPTION	Unit	Quantity	Unit Rate		Amount
					Figures	Words	
6B22		Providing & fixing of expansion joints complete as per drg. and Technical specifications section 2600					
	a)	Providing and fixing filler type expansion joint with 2mm thick copper plate, 20mm thick compressible fiber board, 20mm thick premoulded joint filler in expansion joint and filling joint sealant compound complete as per drawings and Technical specification section 2600.	Lm	48			
		Super Structure					
6B23		Providing & laying Reinforced Cement Concrete in super-structure including form work but excluding the cost of reinforcement complete as per drg. and Technical specifications sections 1500, 1700 & 2300.					
	a)	Solid slab					
	ii)	M-30 grade	Cum	20			
6B26		Providing 25 mm thick mastic asphalt over the top of the deck after applying prime coat underneath wearing course complete as per Technical Specifications Clause 2702, 503 and 515 (Cost of Prime Coat Included)	Sqm	324			
6B27		Providing 40 mm thick Bituminous concrete in one layer in wearing course complete as directed by the Engineer and as per Technical Specifications Clause 2702/509 (Cost of Tack Coat Included)	Cum	13			
6B29		Providing cement concrete crash barrier in M-40 grade including safety kerb, reinforcement and G.I. pipe complete as per drawing & Technical Specifications sections 1500, 1600, 1700, 2200 & clause 809.	Lm	59			
		Misc. Items					

Item No.	DESCRIPTION	Unit	Quantity	Unit Rate		Amount
				Figures	Words	
6B30	Providing weep holes in brick masonry / plain / reinforced concrete abutments, wing walls / return walls etc. with 100mm dia A.C. pipe, extending through the full width of structure with slope of IV:20H towards draining face including porous concrete blocks complete as per drawing and Technical Specifications clause 2706.	Nr	20			
6B31	Providing & fixing drainage Spouts complete as per drawing and Technical Specifications Clause 2705.	Nr	4			
6B32	Back filling behind abutment with selected granular material of approved quality as per Technical Specifications Clause 305	Cum	149			
6B33	Filter media behind abutments, wing walls, & return walls, including all material, labour, equipment carriage etc. all complete as per drawing and Technical Specification Clauses 305, 309 & 2504.	Cum	85			
6B34	Providing & laying plain cement concrete M-15 grade in levelling course under the approach slab complete as per drg. and Technical specifications sections 1700, 2100 and 2700.	Cum	26			
6B35	Providing & laying reinforced cement concrete M-30 grade in approach slab including form work and reinforcement complete as per drg. and Technical specifications sections 1500, 1600, 1700 & 2100 and clause 2704.	Cum	50			
6B40	Painting of Bridge No. and span arrangement as per drg., IRC:7-1971 and Technical specifications section 800.	Nr	6			
	Total Bridges carried to Grand Summary					
6C	REPAIR & REHABILITATION					
6C01	Construction of temporary diversion, including across waterway, for passage of traffic, complete as per drawings and Technical Specifications Section Clause 112.3, including temporary cross drainage	Lm	61			

Item No.		DESCRIPTION	Unit	Quantity	Unit Rate		Amount
					Figures	Words	
6C02		Dismantle of various items of structures complete as per Technical specification clause 202 or as directed by the Engineer.					
		a) RCC	Cum	10			
		c) Existing Wearing coat	sqm	2433			
		d) Stone/Brick masonry	Cum	107			
		f) NP4 Pipe	Lm	153			
6C16		Providing and fixing filler type expansion joint with 2mm thick copper plate, 20mm thick compressible fiber board, 20mm thick premoulded joint filler in expansion joint and filling joint sealant compound complete as per drawings and Technical specification section 2600.	Lm	80			
6C17		Replacement of drainage spout wherever broken including necessary gratings and drainage assembly complete as per drawing and Technical Specification clause 2705 as directed by the Engineer	Nr	80			
6C18		Cleaning of the Weep holes of Abutment and wing wall as per Technical specification section 200 or as directed by the Engineer.	Nr	20			
6C19		Cleaning and removal of vegetation growth from structures channel and protective works complete as per Technical specification clause 202 or as directed by the Engineer.	Sqm	6790			
6C20		Replacement of RCC railing including reinforcement as per Technical Specifications Section 1500, 1600, 1700, 2200, 2815 and Clause 2703.					
	a)	Railing in M30 grade	Lm	133			
	c)	Mild Steel Railing	Lm	344			

Item No.		DESCRIPTION	Unit	Quantity	Unit Rate		Amount
					Figures	Words	
6C30		Providing 25 mm thick mastic asphalt over the top of the deck after applying prime coat underneath wearing course complete as per Technical Specifications Clause 2702, 503 and 515 (Cost of Prime Coat Included)	Sqm	2450			
6C31		Providing 40 mm thick asphaltic concrete in one layer in wearing course complete as directed by the Engineer and as per Technical Specifications Clause 2702/509 (Cost of Tack Coat Included)	Cum	98			
6C38		Providing & laying Brick masonry in cement mortar 1:3 (1 cement : 3 coarse sand) in floor protection, foundation, sub-structure complete as per drg. and Technical Specification Section 1300.	Cum	19			
6C39		Providing & laying random rubble stone masonry in cement mortar 1:3 (1 cement : 3 coarse sand) works complete as per drg. and Technical Specifications Section 1400.	Cum	13			
6C44		Repair of spalling and patches by PMC mortar 50 to 70mm thick at soffit of slab as per clause 2804 of specification and additional specification A-3 and as directed by the Engineer	Sqm	172			
6C51		Guniting concrete surface with cement mortar applied with compressor after cleaning surface and spraying with epoxy complete as per Technical Specification clause 2807. [Assumed thickness 25mm]	Sqm	70			
6C55		Jacketing					
	a)	Providing and casting in situ controlled cement concrete 300 for RCC work with jacketing as directed with necessary formwork vibrating, curing, finishing complete as per Technical specification section 1700 or as directed by the Engineer with all lead & lift.	Cum	54			

Item No.		DESCRIPTION	Unit	Quantity	Unit Rate		Amount
					Figures	Words	
	b)	Providing & placing in position TMT Fe-500 bar reinforcement incl. curing, bending, hooking and tying complete as per Technical Specification section 1600.	MT	4			
6C56		Plain cement concrete grade M-20 in Headwall of Access Road Culverts complete as per drawing and Technical Specifications Clause 1500 and 1700	Cum	72			
6C57		Cement plaster 12mm thick in cement mortar 1:3 complete as per drawing and Technical Specifications Section 1000 and 1300 and as directed by the Engineer	Sqm	1447			
6C58		Cement pointing with cement mortar 1:3 on brick/stone work complete as per drawings and Technical Specifications section 1000 and 1300	Sqm	167			
6C59		Removal of accumulated debris in Pipe Culverts complete as per Technical Specification clause 202.	Lm	13			
6C61		Providing and laying boulders apron without wire crates on river bed for protection against scour with stone boulders weighing not less than 40 kg each complete as per drawing and Technical specification section 2500	Cum	96			
		Total Repair & Rehabilitation carried to Grand Summary					
7		DRAINAGE AND PROTECTION WORK					
7.01		Earthwork in excavation in all types of soil including rock complete as per Technical Specification Clauses 304 & 309.	Cum	1624			
7.02		Plain Cement concrete M-15 grade in levelling course in drain including centering and shuttering all complete as per drawing and Technical Specification Sections 309, 1500 & 1700.	Cum	63			
7.03		Construction of open unlined drains as per proper slope and dimension as shown in drawing and technical specification clause 309.	Lm	70283			

Item No.	DESCRIPTION	Unit	Quantity	Unit Rate		Amount
				Figures	Words	
7.06	Construction of covered lined drains of concrete grade M 20 including cover slab and reinforcement as per proper slope and dimension as shown in drawing and technical specification clause 309.	Lm	946			
7.07	Construction of brick lined trapezoidal drain complete as per drawings and Technical Specifications section 300and 1300.	cum	4441			
7.08	Construction of chute drain in cement concrete M-15 with M-15 foundation concrete including construction of bell mouth at entry as per drawings and Technical Specification Sections 309, 1500 and 1700.	Lm	170			
7.09	Construction of energy dissipation basin in M-15 as per drawing and Technical Specification Sections 309, 1500 & 1700.	Nr	20			
7.11	Providing. laying and jointing RCC. NP-4 hume pipes under IS:458-1988, Hume Pipes to discharge storm water from catch basins as per drawings and complete as per Technical Specifications section 2900	Lm				
	a) 450 mm diameter	Lm	138			
	b) 900 mm diameter	Lm	665			
7.12	Providing and laying granular material for pipe bedding of Hume Pipe culverts and replacement of soft and loose patches in the bearing area of the Box structure with layers not exceeding 300 mm as per drawing and Technical Specifications Clause 2904	Cum	450			
7.13	Plain cement concrete grade M-20 in Headwall of Access Road Culverts complete as per drawing and Technical Specifications Clause 1500 and 1700	Cum	568			

Item No.	DESCRIPTION	Unit	Quantity	Unit Rate		Amount
				Figures	Words	
7.14	Providing and laying interlocking paver blocks of high density 65 mm thick M-25 grade in pedestrian pathway and in Island of major intersections areas as shown in the drawing, close jointed over bed of 50mm thick river sand to a tight pattern, laid to proper line and level including bedding down the completed surface with a plate vibrator or by firmly topping level with mallet and a large flat piece of timber, finishing by brushing clean dry sand over the surface to fill all the joints thoroughly and as per Additional Technical Specification A 15 or as directed by the Engineer.	sqm	11685			
7.16	Providing and laying Grade M15 Concrete perforated erosion protection scour blocks laid on the slopes and bed of the river including the rebar, trimming of earth to required lines and levels, including capping with concrete on the tops of slopes as per drawings and Specifications	cum	201			
7.17	Providing and laying plain cement concrete in medians and in sidewalks, foundations complete as per respective drawings, Technical Specifications section 1500 and 1700 and as directed by the Engineer					
	b) Construction of median kerb and island kerb Type B grade M20 (including base preparation, foundation and haunch concrete)	Lm	1913			
7.19	Pitching/revetment on slopes with Cement Concrete blocks in M15 grade conforming to Section 1700 complete as per drawings, technical Specifications 2504 and as directed by the Engineer	Cum	492			
7.21	Geo textile filters membrane as per Technical Specifications Clause 2504 and as directed by the Engineer.	Sqm	3665			
7.22	Filter media beneath the pitching/revetment on slopes for protection of embankment as per drawings and Technical Specifications clause 2504 and as directed by the Engineer					

Item No.		DESCRIPTION	Unit	Quantity	Unit Rate		Amount
					Figures	Words	
	b)		Granular Material	Cum	612		
7.24			Providing and fixing of man hole including excavation, concrete, C.I. Cover, C.I. Steps complete as per drawing and Technical Specifications sections 300, 1500, 1600, 1700 and manufacture specification approved by the Engineer.	Nr	5		
			Total Drainage and Protection Work rates carried to Grand Summary				
8			TRAFFIC SIGNAGE AND ROAD APPURTENANCES				
8.01			Providing and erecting a "W" metal beam crash barrier comprising of 3 mm thick corrugated sheet metal beam rail, 70 cm above road/ground level, fixed on ISMC series channel vertical post, 150 x 75 x 5 mm spaced 2 m centre to centre, 1.8 m high, 1.1 m below ground/road level, all steel parts and fitments to be galvanised by hot dip process, all fittings to conform to IS:1367 and IS:1364, metal beam rail to be fixed on the vertical post with a spacer of channel section 150 x 75 x 5 mm, 330 mm long complete as per clause 810	Lm	7621		

Item No.	DESCRIPTION	Unit	Quantity	Unit Rate		Amount
				Figures	Words	
8.02	Providing and fixing of retro-reflectorised cautionary, mandatory and informatory sign made of 1.5mm thick Aluminium Sheet/3mm Aluminium Composite Material , face to be fully covered with Class B Type-IV High Intensity Micro Prismatic Grade Sheeting as defined in IRC: 67-2010 having approved messages e.g. letter, numerals,symbols/legend/arrow etc. in Regional and/or Hindi and /or English as per drawing and Technical Specifications for Road and Bridge works (Fourth Revision). The sign plate will be fixed with minimum 6 mm dia aluminium rivets back supported on a mild steel angle iron frame 35x35x5 mm and one vertical Mild Steel post of NB65 Dia Pipe (height from crown level of the road and bottom of the sign board shall not be less than 2.10 m.) firmly fixed to the ground by means of properly designed foundation with M - 15 grade cement concrete 45 cm x 45 cm x 60 cm, 60 cm below ground level as per approved drawing including painting of vertical post as per specification.					
	a)		Informatory Signs			
	i)		Facility information 800 mm x 600 mm complete as per drawings and Technical Specifications Clause 801	Nr	78	
	ii)		Advance direction sign complete as per drawings and Technical Specifications Clause 801	Sq m	363	
	iii)		Route marker sign 450mm x 600 mm complete as per drawings and Technical Specifications Clause 801	Nr	25	
	iv)		Direction sign less than 0.9 sqm of area complete as per drawings and Technical Specification clause 801.	Sq m	11	
	b)		Cautionary Signs			

Item No.	DESCRIPTION	Unit	Quantity	Unit Rate		Amount
				Figures	Words	
	i)	Triangular 900 mm side complete as per drawings and Technical Specifications Clause 801	Nr	303		
	iii)	Hazard marker 300 x 900 mm complete as per drawings and Technical Specifications Clause 801	Nr	4		
	c)	Mandatory Signs				
	i)	Triangular 900 mm side (for "GIVE WAY" sign) complete as per drawings and Technical Specifications Clause 801	Nr	50		
	ii)	Stop sign - Octagon of size 900 mm complete as per drawings and Technical Specifications Clause 801	Nr	209		
	iii)	Speed limit compulsory keep left 600 mm dia meter complete as per drawings and Technical Specifications Clause 801	Nr	52		
8.03		Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads @ 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35 .The finished surface to be level, uniform and free from streaks and holes complete as per drawings and technical specification clause 803.				
	a)	Lane/centerline/edge marking or any other marking	Sqm	16983		
	b)	Directional arrows, lettering etc				
	i)	Straight (nr) RM13	Nr	293		
	ii)	Left/right (nr) RM14 & 15	Nr	178		
	iii)	Comb (nr) RM 16& 17	Nr	628		
	iv)	Lettering	Nr	95		
	v)	Chevron Marking	Sqm	1310		

Item No.		DESCRIPTION	Unit	Quantity	Unit Rate		Amount
					Figures	Words	
	vi)	Diagonal Marking	Sqm	210			
	vii)	Pedestrian Crossing	Sqm	2734			
8.04		Reinforced cement concrete M15 grade kilometre stone of standard design as per IRC:8-1980, fixing in position including painting and printing etc complete as per drawings and technical specification clause 804.					
	a)	Hectometer Stone	Nr	173			
	b)	Kilometer Stone	Nr	35			
	c)	5th kilometer stone	Nr	16			
8.05		Supplying and fixing of boundary stones of M15 grade concrete complete as per drawing and Technical Specifications clause 806	Nr	216			
8.06		Providing and fixing retro-reflectorised road delineators complete as per drawing and Technical Specification Clause 805.					
	a)	Cluster of Red Reflectors.	Nr	7			
	b)	Road way delineators.	Nr	1734			
8.08		Providing, fixing and erecting 50 mm dia steel pipe railing in 3 rows duly painted on medium weight steel channels (ISMC series) 100 mm x 50 mm, 1.2 metres high above ground, 2 m centre to centre, complete as per approved drawings and Technical Specification section 800.	Lm	7644			

Item No.	DESCRIPTION	Unit	Quantity	Unit Rate		Amount
				Figures	Words	
8.09	Providing and fixing Raised Pavement Marker (Cats Eye, Road Stud), made of high strength engineering Plastic Body having at least 13 tons load bearing capacity of pneumatic tyre. Size of marker 9 cms x 10 cms x 1.6 cm having shape so that no water penetration or dust accumulation takes place on reflective surface, fitted with electronically welded tough polycarbonate micro prismatic reflective panels having 16 sq.cms surface area of each side having long distance visibility at night and in wet weather condition. The body of the marker having finger grip for easy and accurate placement fitted with two number polymer shanks to anchor the marker with the road for avoiding dislocation of the marker where the road is bleeding or made with softer grade of bitumen and application with adhesive on Bituminous road complete as per Additional Technical Specification Clause A-16	Nr	10206			
8.10	Solar Powered Traffic Blinkers LED based 300 mm/200 mm dia signal head with In built blinker unit having battery & battery charger unit with photo electric switch complete as per technical specification clause 112 and as directed by the Engineer.	Nr	16			
8.11	Construction of bus shelters for commuters including all building and furnishing works, etc. complete as per drawings and additional Technical Specifications A-17 or as directed by the Engineer.	Nr	26			
8.12	Repairing of existing Bus Shelter complete as per drawings and Technical Specifications section 800, 1300, 2500 or as directed by the Engineer.					
	a) Painting	sqm	80			
	b) Plastering	sqm	160			
8.13	Providing and fixing of liter bins complete as per Manufacturer drawing and specification and approved by the Engineer.	Nr	36			

Item No.	DESCRIPTION	Unit	Quantity	Unit Rate		Amount
				Figures	Words	
8.14	Providing and Fixing of water kioks complete as per Manufacturer drawing and specification and approved by the Engineer.	Nr	2			
8.16	Construction of Toilets in rest area complete as per Manufacturer drawing and specification and approved by the Engineer.	Sqm	35			
8.19	Rest Area for Drivers complete as per Manufacturer drawing and specification and approved by the Engineer.	Sqm	128			
8.20	Plantation of shrubs in central median including planting with manure, gardening and maintenance complete as per Technical Specifications Clause 308.	Nr	224			
8.25	Providing and Construction of Rain water Harvesting complete as per drawings and Technical Specification section 300, 1300, 1500, 1700 or as directed by the Engineer.	Nr	87			
8.26	Providing and construction of Raised Pedestrian Crossing / Speed Hump across the road of 150 mm height and width of 2.5 m with M25 grade concrete considering side slope in 1:10. 100mm dia steel bollard to be fixed on sides. The surface to be painted with brick red colour complete as per drawings and Additional Technical Specification clause A15 or as directed by the Engineer.	sqm	528			
8.27	Providing and laying Tactile Block of yellow colour conforming to IS 13801:1993 (Reaffirmed 1998) of size 250 x 250 x 65 mm on pedestrian pathway as shown in drawing and directed by Eng in charge. The tile should be subjected to a pressure of not less than 14N/sqmm. Sample must be approved complete as per Additional Technical Specification A18	sqm	1518			

Item No.	DESCRIPTION	Unit	Quantity	Unit Rate		Amount
				Figures	Words	
8.28	Providing and Construction of speed hump across the road of 100mm height with Bituminous concrete of 3.7m Length and raidus of 17m for the entire width of carriageway complete as per drawings and IRC: 99 or as directed by the Engineer.	Lin.m	30			
8.29	Providing and Construction of raised Rumble strip complete as per drawings and technical specifications section 500 and 800 or as directed by the Engineer.	Lin.m	5684			
8.30	Providing and fixing Aluminum backed flexible prismatic sheeting , consisting of yellow/black colored flexible prismatic sheet with non-mettalic prismatic lens as retro reflective elements and confirming to ASTM D4946 Type VI specifications for reboundable retro reflective sheeting. The prismatic sheet shall be laminated at the back with 50micron aluminum Foil sensitive adhesive and liner with screen printed arrow/slant pattern in yellow/black color. The AFP shall be applied with adhesive , the edge of the sheeting shall be sealed all around with epoxy based structural adhesive and shall be extremely resistant to pill-off complete as per manufacturer drawings approved by the Engineer.	sqm	23			
8.31	Providing and applying Geru paint of approved brand on Trees withing ROW complete as per drawings and Technical Specification section 800 or as directed by the Engineer	Nr	145			
8.32	Providing and Constructing Welcome Sign at Start and End of Project corridor complete as drawings and Technical Specification 300, 800, 1500, 1700 and 1900 or as directed by the Engineer.	Nr	2			
8.33	Street Lighting in urban areas					
	xxix) Solar Street Light					

Item No.	DESCRIPTION	Unit	Quantity	Unit Rate		Amount
				Figures	Words	
	a) Supplying and erecting MNES certified SOLAR STREET LIGHT fitting made from M.S. Body powder coated / painted with corrosion resistant paint with gasket & transparent cover with following CFL non retro lamp with choke, holder & accessories. Fitting shall be mounted on 75/80 mm B class G.I. pipe pole up to 5.5 mtr load complete erected with C.C. Foundation duly painted with two coats of red oxide and corrosive resistant paint. Complete with tubular battery, inverter, charge controller with photo sensor switch & necessary wiring complete erected connected & commissioned in approved manner.					
	b) 2 x 11 W CFL (Single luminaire with 2 CFL) PV Module:120 W Battery Capacity 12V, 100 AH	Ea.	882			
	b) Supplying & erecting Solar Home light system with structure as per MNES specification consisting of following non retrofit CFL fitting complete with following CFL lamps & battery capacity dully connected with built in inverter & commissioned as per directed with necessary wiring & fittings.					
	(b) Two No CFL 11 watt non retrofit ceiling / wall mounting features with battery capacity 12 watt, 40 AH	Ea.	882			
	Total Traffic Signage and Road Appurtenances carried to Grand Summary					
9	SAFETY IN ROAD CONSTRUCTION ZONE					
9.01	Supplying and fixing sign boards including the cost of posts, fixtures, foundation, fitting and fixing. Sheeting will be made of encapsulated lens type of Retro-reflective type and messages/ borders will be screen printed complete as per Technical Specification clause 801 and as directed by Engineer.					

Item No.	DESCRIPTION	Unit	Quantity	Unit Rate		Amount
				Figures	Words	
a)	Speed Limit sign (600mm dia)	Nr	22			
b)	Overtaking Prohibited (900 mm dia)	Nr	22			
c)	Diversion Board (450mm x 600mm)	Nr	66			
d)	Men at Work Sign (900mm triangular)	Nr	44			
e)	Direction Sign (Right / Left) (600 mm Circular)	Nr	22			
9.02	Providing of red fluorescent with white reflective sleeve traffic cone made of low density polyethylene(LDPE) material with a square base of 390x390x35mm and a height of 770mm, 4Kg in weight, placed at 1.5m interval, all as per BS 873 including cost of all materials, labour, loading, unloading, lead, lift, transporting etc complete Technical Specification section & IRC SP 55-2001.	Nr	3256			
9.03	Installation of a steel portable barricade with horizontal rail 300mm wide,2.5m in length fitted on a frame made with 45X45X5 mm angle iron section, 1.5m in height, horizontal rail painted(2coat) with yellow and white strips,150mm in width at angle of 45degree, A frame painted with 2 coats of yellow paint, complete as per IRC:SP:55-2001 including cost of all materials, labour, loading, unloading, lead, lift, transporting etc complete as per drawings or as directed by the Engineer.	Nr	3256			
9.04	Construction of a permanent type barricade made of steel components, 1.5 m high from road level, fitted with 3 horizontal rails 200 mm wide and 4 m long on 50 x 50 x 5 mm angle iron vertical support, painted with yellow and white strips, 150 mm in width at an angle of450, complete as per IRC:SP:55-2001	Nr	20			
9.08	Solar Street Light					

Item No.		DESCRIPTION	Unit	Quantity	Unit Rate		Amount
					Figures	Words	
	i)	Supplying and erecting MNES certified SOLAR STREET LIGHT fitting made from M.S. Body powder coated / painted with corrosion resistant paint with gasket & transparent cover with following CFL non retro lamp with choke, holder & accessories. Fitting shall be mounted on 75/80 mm B class G.I. pipe pole up to 5.5 mtr load complete erected with C.C. Foundation duly painted with two coats of red oxide and corrosive resistant paint. Complete with tubular battery, inverter, charge controller with photo sensor switch & necessary wiring complete erected connected & commissioned in approved manner.					
		a) 1 x 11 w CFL PV Module : 74 W Battery Capacity : 12V, 75 AH	Ea.	88			
	ii)	Supplying & erecting Solar Home light system with structure as per MNES specification consisting of following non retrofit CFL fitting complete with following CFL lamps & battery capacity dully connected with built in inverter & commissioned as per directed with necessary wiring & fittings.					
		(a) One No CFL 11 watt non retrofit ceiling / wall mounting features with battery capacity 12 watt, 20 AH	Ea.	88			
		Total of Safety in Road Construction Zone carried to Grand Summary					
10		Implementation of Environmental Management Action Plan to be executed under Civil Works Contract					

Item No.	DESCRIPTION	Unit	Quantity	Unit Rate		Amount
				Figures	Words	
10.03	Periodic air quality monitoring during construction stage at construction camp sites, bitumen hot mix plants, crusher plants (if specifically established for Project), at major settlement areas along project road. The parameters to be monitored are SPM, RPM, SO ₂ , NO _x and CO, Lead. Each monitoring schedule shall be over a duration of 24 hours (in 8 hour shifts) for three seasons per year. (as per the Environmental monitoring plan referred in the EMP)					
	a) Construction Phase	Nr	36			
	b) Operation Phase	Nr	18			
10.04	Water quality monitoring during construction phase at locations . The sampling shall be carried out for three seasons per year and cover all parameters as per IS10500 including heavy metals . (as per the Environmental monitoring plan referred in the EMP).					
	a) Construction Phase	Nr	36			
10.05	Noise quality monitoring at specified silent receptors along Project Road, at construction camp sites, bitumen hot mix plants, crusher plants(if specifically established for Project), and at major settlement areas along project road. – Each monitoring schedule shall be over a duration of 12hours (6Am to 6PM) for three seasons per year. (as per the Environmental monitoring plan refered in the EMP)The monitoring shall be carried out in accordance with CPCB norms at locations given .					
	a) Construction Phase	Nr	42			
	b) Operation Phase	Nr	18			

Item No.	DESCRIPTION	Unit	Quantity	Unit Rate		Amount
				Figures	Words	
10.06	Soil quality monitoring at construction camp sites, work shop areas, oil/lubricant handling areas, bitumen hot mix plants, at all parking lay byes, vehicle servicing stations along Project Road. Parameters shall include N, P, oil and grease, heavy metals, C/N ratio, pH, organic matter to be monitored for three seasons per year.(as per the Environmental monitoring plan refered in the EMP)					
	a) Construction Phase	Nr	6			
10.13	HIV prevention / alleviation programme comprising of conduction information, Education and comunication (IEC) campaigns at least every other month, providing male and female condoms, providing STI and HIV / AIDS screening, diagnosis and referal to dedicated national STI and HIV / AIDS programme and programme management support throughout the contract period (including the defect notification period).					
	a) IEC materials - printing, publishing	Nr	24			
	b) Healthcare clinic	Nr.	8			
	c) Condom vending machines	Nr.	3			
	d) condom supplies	Nr.	24			
	e) Testing	Nr.	500			
	f) Signages and hoardings	Nr.	15			
	Total Implementation of Environmental Management Action Plan to be executed under Civil Works Contract carried to Grand Summary					
11	DAY WORKS					
11.01	Providing labour at site supplied with all necessary hand tools inclusive of all costs, overheads and profit margin complete as directed by the Engineer	As per details in Schedule "A"	1			

Item No.		DESCRIPTION	Unit	Quantity	Unit Rate		Amount
					Figures	Words	
11.02		Providing equipment at site with operators, P.O.L. etc. complete in good working condition including all types of maintenance during contract period	As per details in Schedule "B"	1			
11.03		Providing material at site inclusive of all costs, overheads and profit margin complete as directed by the Engineer	As per details in Schedule "C"	1			
		Total Day work rates carried to Grand Summary					
12		MAINTENANCE					
12.01		Maintenance of project road for first year of maintenance period after Defect Liability Periodas directed by the Engineers	per km	44			
12.02		Maintenance of project road for 2nd year of maintenance period afterDefect Liability Periodas directed by the Engineers	per km	44			
		Total for maintenance cost					

BILLOFQUANTITIES CONTRACTPACKAGE-GSHPII/

SUMMARYOFDAYWORKS

Sr.No.	Item	Amount Rs.
11.1	Schedule "A"ofDayworks,Labour	
112	Schedule "B"ofDayworks,Materials	
11.3	Schedule "C"ofDayworks, ConstructionPlant	
	TotalDayworkratescarriedtoGrandSu mmary	

SCHEDULE "A" OF DAY WORKS RATES

11.1 - LABOUR

Sr. No.	Description	Unit	Nominal	Rate Rs.		Amount
			Quantity	Figures	Words	Rs.
1	Mazdoor	Day	30			
2	Mason	Day	15			
3	Carpenter	Day	6			
4	Fabricator/Blacksmith/Welder	Day	6			
5	Operator for Tractor	Day	6			
6	Electrician	Day	3			
7	Operator for Dozer	Day	3			
8	Operator for Roller	Day	3			
9	Driver LMV	Day	90			
10	Driver HMV	Day	3			
11	Operator for Excavator/Crane	Day	3			
12	Computer Operator	Day	480			
13	Watchman	Day	480			
Sub total						
Allow 25 % Contractor's Overhead and Profits etc.						
Total For Day works: Labour						

SCHEDULE "B" OF DAY WORKS RATES

11.2 - MATERIALS

Sr. No.	Description	Unit	Nominal	Rate Rs		Amount Rs.
			Quantity	Figure	Words	
1	Bitumen VG 30 grade (bulk)	T	1			
2	Cement	T	3			
3	M 15 Concrete	Cu.m	7			
4	M 20 Concrete	Cu.m	7			
5	M 25 Concrete	Cu.m	3			
6	TMT Bars	T	3			
7	Sand	Cu.m	7			
8	Aggregate 40 mm down size	Cu.m	7			
9	Aggregate 20 mm down size	Cu.m	7			
10	Aggregate 10 mm down size	Cu.m	7			
11	Hume pipe (NP 4)1000 mm dia 2.5 m Long	Lm	30			
12	Boulders	Cu.m	90			
13	Selected Earth	Cu.m	230			
	Sub total					
	Allow 25% Contracotor's Overhead and Profits etc.					
	Total For Day works: Materials					

SCHEDULE “C” OF DAYWORKS RATES

11.3 - CONSTRUCTION PLANT

Sr. No.	Description	Unit	Nominal	Rate Rs.		Amount
			Quantity	Figure	Words	Rs.
1	Bull Dozer Size up to 200KW	Hour	30			
2	Front End Loader back hoe	Hour	30			
3	Motor Grader	Hour	12			
4	Pneumatic Tyred Roller (20 tonne)	Hour	12			
5	Tractor with trailer	Hour	12			
6	Bull dozer (D7 or equivalent)	Hour	10			
7	Roller Static (8-10 tonne)	Hour	3			
8	Roller Vibratory (8-10 tonne static)	Hour	3			
9	Truck (10/12 tonne)	Hour	30			
10	Truck mounted water tanker (10 tonne)	Hour	15			
11	DG set (125 KVA)	Hour	15			
12	Concrete Mixer (mobile)	Hour	3			
13	Drilling equipment with compressor	Hour	3			
	Sub total					
	Allow 25 % Contractor's Overhead and Profits etc.					
	Total For Day works: Construction Plant					

BILL OF QUANTITIES

C.DayworkSchedule

General

1. Reference should be made to Sub-Clause 13.6 of the General Conditions of Contract.

Work shall not be executed on a Daywork basis except by written order of the Engineer. Bidders shall enter basic rates for Daywork items in the Schedules, which rates shall apply to any quantity of Daywork ordered by the Engineer. Nominal quantities shall be indicated against each item of Daywork, and the extended total for Daywork shall be carried forward as a Provisional sum to the Summary Total Bid Amount (for items priced competitively).

Unless otherwise adjusted, payments for Daywork shall be subject to price adjustment in accordance with the provisions in the Conditions of Contract.

Daywork Labour

- 2.

In calculating payments due to the Contractor for the execution of Daywork, the hours of labour will be reckoned from the time of arrival of the labour at the job site to execute the particular item of Daywork to the time of return to the original place of departure, but excluding meal breaks and rest periods.

Only the time of classes of labour directly doing work ordered by the Engineer and for which they are competent to perform will be measured. The time of gangers (charge hands) actually doing work with the gangs will also be measured but not the time of foremen or other supervisory personnel.

3. The Contractor shall be entitled to payment in respect of the total time that labour is employed on Daywork, calculated at the basic rates entered by him in the SCHEDULE OF DAYWORK RATES: LABOUR, together with an additional percentage payment on basic rates representing the Contractor's profit, overheads, etc., as described below:

- (a) The basic rates for labour shall cover all direct costs to the Contractor, including (but not limited to) the amount of wages paid to such labour, transportation time, overtime, subsistence allowances, and any sum paid to or on behalf of such labour for social benefits in accordance with Indian law. The basic rates will be payable in Indian currency only;
- (b) The additional percentage payment to be quoted by the Bidder and applied to costs incurred under (a) above shall be deemed to cover the Contractor's profit, overheads,

superintendence, liabilities, and insurances and allowance to labour, time keeping, and clerical and office work, the use of consumable stores, water, lighting, and power; the use and repair of stagings, scaffolding, workshops and stores, portable power tools, manual plant, and tools; supervision by the Contractor's staff, foremen, and other supervisory personnel; and charges incidental to the foregoing.

Daywork Materials

4. The Contractor shall be entitled to payment in respect of materials used for Daywork (except for materials for which the cost is included in the percentage addition to labour costs as detailed heretofore), at the basic rates entered by him in the SAMPLE SCHEDULE OF DAYWORK RATES: MATERIALS, together with an additional percentage payment on the basic rates to cover overhead charges and profit, as follows:

(a)

The basic rates for materials shall be calculated on the basis of the invoiced price, freight, insurance, handling expenses, damage, losses, etc., and shall provide for delivery to store for stock piling at the Site. The basic rates and payments shall be in Indian currency.

(b)

The cost of hauling materials for use on work ordered to be carried out as Daywork from the store or stock pile on the Site to the place where it is to be used will be paid in accordance with the terms for Labour and Constructional Plant in this schedule.

Daywork Constructional Plant

5. The Contractor shall be entitled to payments in respect of Constructional Plant already on Site and employed on Daywork at the basic rental rates entered by him in the SAMPLE SCHEDULE OF DAYWORK RATES: CONSTRUCTIONAL EQUIPMENT. Said rates shall be deemed to include due and complete allowance for depreciation, interest, indemnity, and insurance, repairs, maintenance, supplies, fuel, lubricants, and other consumables, and all overhead, profit, and administrative costs related to the use of such equipment. The cost of drivers, operators, and assistants will be paid for separately as described under this section on Daywork Labour.
6. In calculating the payment due to the Contractor for Constructional Plant employed in Daywork, only the actual number of working hours will be eligible for payment, except that where applicable and agreed with the Engineer, the travelling time from the part of

theSitewheretheConstructionalPlantwaslocatedwhenorderedbytheEngineertobe employedonDayworkandthetimeforreturnjourneytheretoshallbeincludedfor payment.